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Xerox® AltaLink® B8090 Family Multifunction Printer Service Manual



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About This Manual

This manual is part of a multinational service documentation system that is structured in the standard Xerox service manual format.

Organization

The service manual is the document used as the primary information source for repairing and maintaining this family of products and is available as EDOC on a CDROM, or in PDF format on a CDROM. The information within the manual is divided into an introduction and 8 other sections.

Section 1 Service Call Procedures

This section is used to start and complete a service call. The procedures in this section will either direct you to a Repair Analysis Procedure (RAP), or identify a faulty component or sub-assembly.

Section 2 Status Indicator Repair Analysis Procedures

This section contains the Repair Analysis Procedures (RAPs) and checkouts necessary to diagnose, isolate and repair faults other than image quality faults.

Section 3 Image Quality

This section contains the Image Quality Repair Analysis Procedures (IQ RAPs), checkouts and setup procedures necessary to diagnose, isolate and repair image quality faults.

Section 4 Repairs/Adjustments

This section contains the instructions for removal, replacement, and adjustment of parts within the machine.

Section 5 Parts List

This section contains the detailed and illustrated spare parts list. Any part that is spared or that must be removed to access a spared part is illustrated.

Section 6 General Procedures/Information

This section contains all other procedures, product specifications and general information. It also contains Tag/MOD information. The abbreviations used in this Manual are in [GP 40](#) Glossary of Terms, Acronyms and Abbreviations.

Section 7 Wiring Data

This section contains [PJ Locations](#) and [Wiring Diagrams](#).

Section 8 Accessories

This section contains details of any accessories that the machine may have.

Publication Comments Sheet

A Publication Comment Sheet is provided at the rear of the PDF version of the manual.

How To Use This Manual

Always start with the Service Call Procedures, Section 1. Perform Initial Actions and verify the problem, then follow the directions given.

How to Differentiate Between Machine Variants

When a procedure, parts list description or other reference is unique across different speeds of machine, the appropriate speed will be quoted. For example, 45ppm or 55ppm. Any artwork will also be specific.

NOTE: *This manual services all configurations of the machine. Ignore references to options not installed on the machine.*

Warnings, Cautions And Notes



A warning is used whenever an operating or maintenance procedure, practice, condition or statement, if not strictly observed, could result in personal injury.

A translated version of all warnings is in [Translation of Warnings](#).



A caution is used whenever an operation or maintenance procedure, practice, condition or statement, if not strictly observed, could result in damage to the equipment.

NOTE: *A note is used where it is essential to highlight a procedure, practice, condition or statement.*

Remote Control Panel

The AltaLink® B8090F is equipped with a remote control panel feature to allow remote user access to the UI.

The remote control panel feature enables users the ability to:

- Remotely view the local UI display graphics.
- Operate both hard and soft buttons on the control panel.

The remote control panel on the remote user PC mimics the device control panel enabling the remote user to operate the device as though they were standing at the machine. Remote access to service mode (diagnostics) is also possible. Refer to [GP 15 Remote Diagnostics](#).

Change History

This page gives information on major changes to the service manual. Go to the relevant update.

- [Bus Update September 2017](#)

Bus Update September 2017

The following procedures are updated:

- SCP 3 Fault Analysis
- 305-100-00 SPDH EEPROM Failure RAP
- 305-253-00 SPDH Communications Error RAP
- 305-330-00, 305-331-00 Feed Sensor Paper Jam RAP
- 310-170-00 Lead Edge Late to Horizontal Transport Entry Sensor RAP
- 312-369-00-171 to 312-377-00-171 HVF Stapler Position and Priming RAP
- 312-451-00-171 to 312-455-00-171 HVF Ejector Roll and Lower Paddle Fault RAP
- 316A Workflow Scanning Error Entry RAP
- 316B FTP or SMB Unable to Connect to Remote Server RAP
- 320A Fax Entry RAP
- 320F Fax Icon Not Available RAP
- 391-365-00 Humidity Sensor Failure RAP
- 391-375-00 Ambient Temperature Sensor Failure RAP
- OF15 Xerox Secure Access RAP
- IQ1 Image Quality Entry RAP
- IQ2 IOT IQ Defects RAP
- IQ11 Print Quality Improvement RAP
- REP 5.16 Mid Scan Roll Assembly
- REP 5.19 SPDH FFC Harness Assembly
- REP 5.23 Complete Input Tray Assembly
- REP 12.5-171 HVF Upper Right Side Cover
- REP 12.61-171 BM Module
- REP 28.3 Inner Machine Cover
- REP 60.1 Scanner Rear Cover and Faraday Shield
- REP 60.3 Top Cover Assembly
- REP 60.6 Side 2 Scan Assembly
- REP 60.7 Scanner FFC Harness Assembly
- REP 70.27 Tray 6 Elevator Rack Assembly
- REP 80.5 Duplex Transport Assembly
- REP 80.7 Left Door Assembly
- REP 80.41 Tray 6 Takeaway Roller
- ADJ 80.5 Tray 4 Closing Alignment
- PL 1.10 Power and Control Assembly
- PL 5.20 SPDH Top Cover Assembly
- PL 10.15 Horizontal Transport Assembly (1 of 2)

- PL 12.140 HVF Power and Control
- PL 31.12 Maintenance Installation Removal Kits (2 of 3)
- PL 31.14 Maintenance Installation Removal Kits (3 of 3)
- PL 70.21 Elevator motor and control PWB
- PL 75.64 Tray 6 Guides
- PL 75.68 Tray 6 Lift Assembly (1 of 2)
- PL 80.25 Tray 1 and 2 Paper Feed
- GP 4 Machine Software
- GP 39 Service Plans and Consumables
- Wiring Diagram 39
- Principles of Operation, Paper Supply

The following procedures are removed:

- 312H-171 Pause to Unload (PTU) RAP
- REP12.97-171 HVF Pause to Unload PWB
- PJ Locations, pause to unload (PTU) PWB removed

The following procedures are new:

- REP 80.42 Tray 6 Upper Feeder Assembly
- TAG 013
- TAG 015
- TAG 016
- TAG 017
- TAG 030
- TAG V-010

Mod/Tag Identification

Figure 1 shows the Mod/Tag identification symbols.



These with tag symbols are used to identify the components or configurations that are part of a machine change covered by this tag number.



These without tag symbols are used to identify the components or configurations that are used when this tag is not fitted.



X-1-1148-A

Figure 1 Mod/Tag identification symbols

Voltages Resistances and Tolerances

For AC power specifications, refer to [GP 22](#) Electrical Power Requirements.

DC Voltage Levels and Tolerances

DC voltages should be measured between an available test point and a machine ground.

[Table 1](#) shows the range of the common voltages.

Table 1 DC Voltage Levels

Nominal Voltage	Voltage Tolerance Range	RAP Reference
0V	0.00 to 0.10V	301B 0V Distribution RAP
+3.3V standby	+3.23V to +3.43V	301J Power On and LVPS Control Signals RAP
+3.3V	+3.23V to +3.43V	301D +3.3V Distribution RAP. See notes below
+5V and +5V standby	+4.75V to +5.25V	301E +5V and +5VSB Distribution RAP
+12V	+11.4V to +12.6V	301F +12V Distribution RAP
+24V	+23.28V to +25.73V	301G +24V Distribution RAP

Non-standard voltage levels will be quoted on the relevant circuit diagram. All other voltage levels are plus or minus 10%.

Resistance Tolerances

All resistance measurement tolerances are plus or minus 10%, unless otherwise stated in the procedure.

DC Signal Nomenclature

[Figure 1](#) shows the signal nomenclature used in this manual.

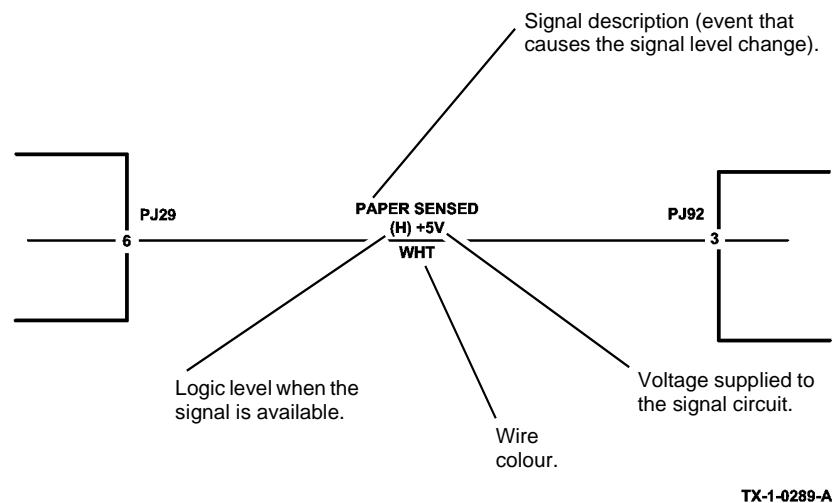


Figure 1 Signal Nomenclature

[Table 2](#) shows the signal tolerances.

Table 2 Signal tolerances

Signal Voltage	(H) Logic Level	(L) Logic Level
+5V	+3.85V or greater	At or near 0.8V
+3.3V	+2V or greater	At or near 0.8V

Non standard signal tolerances will be quoted on the relevant circuit diagram.

NOTE: The logic level shown with the signal name will be the actual signal as measured with a service meter. This will not necessarily be the same as the logic state shown on the diagnostic screen.

Samples of RAP Reference Text

Throughout the manual there are linked references that extend the diagnostic procedure or add more information.

- Go to [Flag 1](#). Check Q08-300.

NOTE: This links to a particular part of the circuit diagram within a RAP.

Refer to:

- [GP 11](#) How to Check a Sensor.

NOTE: This links to General Procedures information.

- [Figure 1](#), [P/J6](#), [IOT PWB](#)

NOTE: The [Figure](#) links to the relevant illustration. The [P/J](#) links to the connector location on the PWB in a circuit diagram. The [PWB](#) links to the pin layout on the PWB, referenced in the [Wiring Diagram](#) section.

- [301D](#) +3.3V Distribution RAP.

NOTE: This links to a RAP.

- Install new components as necessary:
 - Tray 1 empty sensor, [PL 80.26 Item 7](#).

NOTE: This links to the parts list. If installation of the new component is simple, the parts list artwork is sufficient to show how the component is assembled in the machine. If installation of the new component is not simple, the parts listing will contain cross references to repair procedures and adjustments, as necessary.

Symbols Used in Circuit Diagrams

Refer to [Figure 2](#).

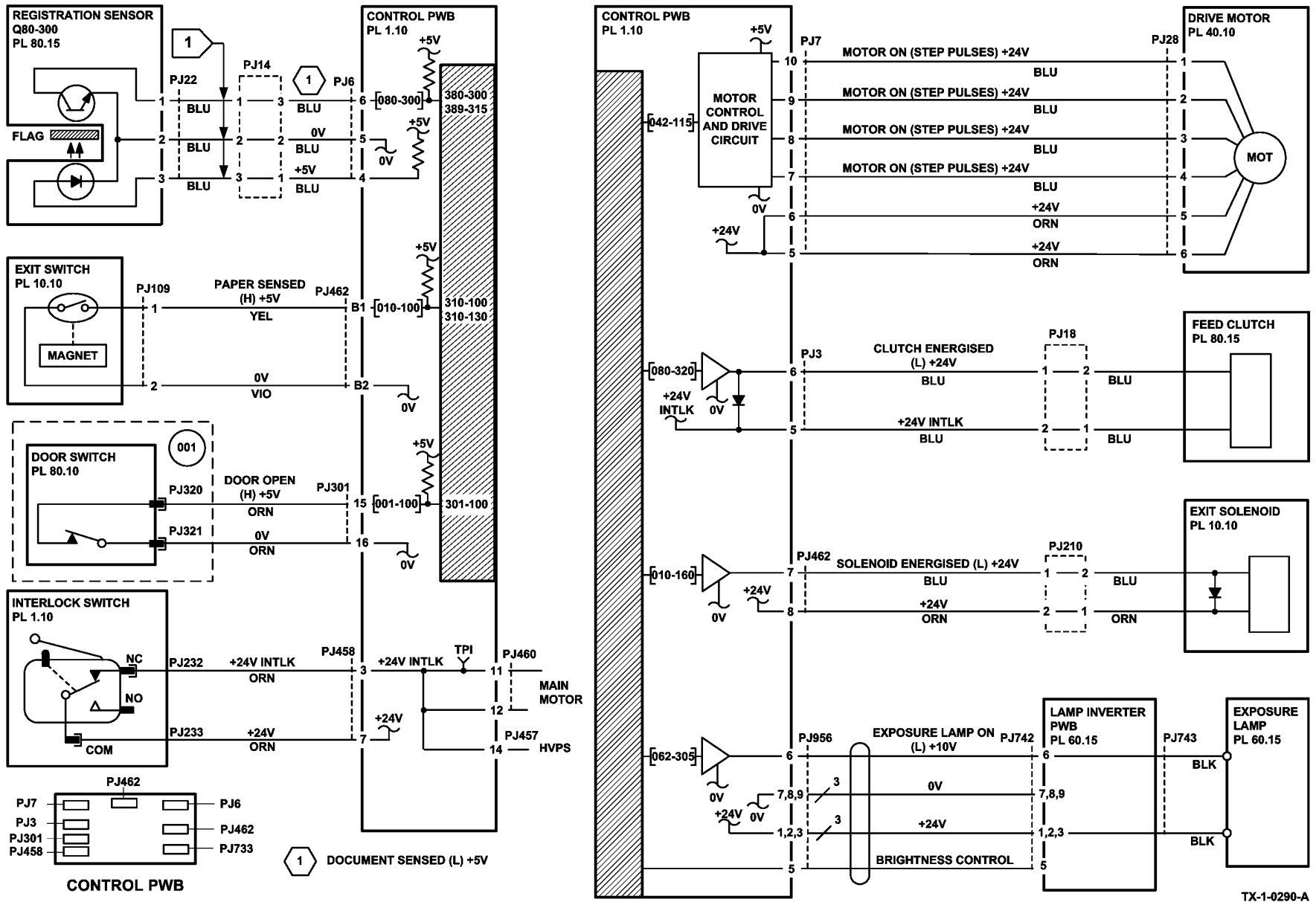


Figure 2 Symbols used in circuit diagrams

Connector Pin Numbers in Circuit Diagrams

The connector pin numbers shown in the circuit diagrams depict the location of the pins as marked on the PWB. If the pin numbers marked on a harness connector differ, the PWB pin numbers take precedence.

Safety Information

The WARNING that follows is for general guidance when live working.



WARNING

Do not work in a confined space. 1m (39 inches) space is needed for safe working.

Safety Icons

The safety icons that follow are displayed on the machine:

ESD Caution Symbol



CAUTION

Certain components in this product are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

Location Arrow Symbol

The location arrow symbol points to the location to install, to gain access to, or to release an object.



Hot Surface Symbol

This symbol indicates hot surfaces. Take care when servicing the machine.



Lethal Voltage Symbol

This symbol indicates potentially lethal voltages. Take care when servicing the machine when the power cord is connected.



Toner Cartridge

The product contains a toner cartridge that is recyclable. Under various state and local laws, it may be illegal to dispose of the cartridge into the municipal waste. Check with the local waste officials for details on recycling options or the proper disposal procedures.

Fuses



Do not install a fuse of a different type or rating. Installing the wrong type or rating of fuse can cause overheating and a risk of fire.

Part Replacement

Only use genuine Xerox approved spare parts or components to maintain compliance with legislation and safety certification. Also refer to [GP 26](#) Restriction of Hazardous Substances (RoHS).

Disassembly Precautions

Do not leave the machine with any covers removed at a customer location.

Reassembly Precautions

Use extreme care during assembly. Check all harnesses to ensure they do not contact moving parts and do not get trapped between components.

General Procedures

Observe all warnings displayed on the machine and written in the service procedures. Do not attempt to perform any task that is not specified in the service procedures.

Health and Safety Incident reporting

I. Summary

This section defines requirements for notification of health and safety incidents involving Xerox products (equipment and materials) at customer locations.

II. Scope

Xerox Corporation and subsidiaries worldwide.

III. Objective

To enable prompt resolution of health and safety incidents involving Xerox products and to ensure Xerox regulatory compliance.

IV. Definitions

Incident:

An event or condition occurring in a customer account that has resulted in injury, illness or property damage. Examples of incidents include machine fires, smoke generation, physical injury to an operator or service representative. Alleged events and product conditions are included in this definition.

V. Requirements

Initial Report:

1. Xerox organizations shall establish a process for individuals to report product incidents to Xerox Environment Health and Safety within 24 hours of becoming aware of the event.
2. The information to be provided at the time of reporting is contained in Appendix A (Health and Safety Incident Report involving a Xerox product).
3. The initial notification may be made by the method that follows:
 - Email Xerox EH&S at: usa.product.incident@xerox.com.
 - Fax Xerox EH&S at: 1-585-422-8217 (internet 8*222-8217).

NOTE: *If sending a fax, please also send the original via internal mail.*

Responsibilities for resolution:

1. Business Groups/Product Design Teams responsible for the product involved in the incident shall:
 - a. Manage field bulletins, customer correspondence, product recalls, safety retrofits.
 - b. Fund all field retrofits.
2. Field Service Operations shall:
 - a. Preserve the Xerox product involved and the scene of the incident inclusive of any associated equipment located in the vicinity of the incident.
 - b. Return any affected equipment/part(s) to the location designated by Xerox EH&S and/or the Business Division.
 - c. Implement all safety retrofits.
3. Xerox EH&S shall:
 - a. Manage and report all incident investigation activities.
 - b. Review and approve proposed product corrective actions and retrofits, if necessary.
 - c. Manage all communications and correspondence with government agencies.
 - d. Define actions to correct confirmed incidents.

VI. Appendices

The Health and Safety Incident Report involving a Xerox Product (Form # EH&S-700) is available in the locations that follow:

- On electronic documentation (EDOC), located in the Library.
- In the hardcopy, located at the end of the manual.

Translation of Warnings



WARNING

A warning is used whenever an operating or maintenance procedure, practice, condition or statement, if not strictly observed, could result in personal injury.

DANGER: Une note Danger est utilisée chaque fois qu'une procédure d'utilisation ou de maintenance peut être cause de blessure si elle n'est pas strictement respectée.

AVVERTENZA: Un segnale di avvertenza è utilizzato ogni volta che una procedura operativa o di manutenzione, una pratica, una condizione o un'istruzione, se non strettamente osservata, potrebbe causare lesioni personali.

VORSICHT: Weist darauf hin, dass ein Abweichen von den angeführten Arbeits- und Wartungsanweisungen gesundheitliche Schäden, möglicherweise sogar schwere Verletzungen zur Folge haben kann.

AVISO: Un aviso se utiliza siempre que un procedimiento de operación o mantenimiento, práctica o condición puede causar daños personales si no se respetan estrictamente.



WARNING

Do not work in a confined space. 1 m (39 inches) space is needed for safe working.

DANGER: Ne pas travailler dans un espace restreint. 1 mètre d'espace est nécessaire pour un dépannage en toute sécurité.

AVVERTENZA: Non lavorare in uno spazio limitato; è necessario uno spazio di almeno un metro attorno alla macchina per la sicurezza dell'operatore.

VORSICHT: Nur mit ausreichendem Bewegungsspielraum (1 m) arbeiten.

AVISO: No trabaje en un espacio reducido. Se necesita 1 metro de espacio para trabajar con seguridad.



WARNING

Do not install a fuse of a different type or rating. Installing the wrong type or rating of fuse can cause overheating and a risk of fire.

DANGER: Ne pas installer de fusible de type ou de calibre différent. Il existe un risque de surchauffe voire d'incendie.

AVVERTENZA: Per evitare rischi di surriscaldamento o d'incendio, non installare un fusibile di tipo o carica diversi da quelli esistenti.

VORSICHT: Keine Sicherungen anderer Art oder anderer Leistung auf dem IOT-PWB installieren - Überhitzungs- und Brandgefahr.

AVISO: No instale un fusible de potencia o tipo distinto. Un fusible de potencia o tipo distinto puede producir sobrecalentamiento y el riesgo de incendio.



WARNING

Switch off the electricity to the machine. Refer to **GP 14**. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

DANGER : Mettez la machine hors tension. Reportez-vous à **GP 14**. Déconnectez le cordon d'alimentation de l'alimentation du client lorsque vous réalisez des tâches qui ne nécessitent pas d'électricité. L'électricité peut être à l'origine de blessures, voire d'un accident mortel. Les pièces amovibles peuvent être à l'origine de blessures.

AVVERTENZA: Spegner la macchina. Vedere **GP 14**. Scollegare il cavo di alimentazione dall'alimentatore quando si eseguono attività che non richiedono elettricità. L'elettricità può causare morte o lesioni personali. Le parti in movimento possono causare lesioni personali.

VORSICHT: Schalten Sie die Stromversorgung der Maschine ab. Siehe auch **GP 14**. Ziehen Sie das Stromkabel ab, wenn Sie Aufgaben ausführen, für die keine Stromversorgung benötigt wird. Stromschläge können Todesfällen oder Verletzungen verursachen. Bewegliche Teile können zu Verletzungen führen.

AVISO: Apague la electricidad de la máquina. Consulte el **GP 14**. Desconecte el cable de alimentación eléctrica de la toma de pared mientras esté realizando tareas que no necesiten corriente. La electricidad puede causar daños o la muerte. Las partes móviles pueden causar daños.



WARNING

Do not switch on the electricity to the machine while a ground circuit is disconnected. Ground circuits ensure that the machine remains safe during a fault condition.

DANGER : Ne pas mettre la machine sous tension si un circuit de mise à la masse est déconnecté. Les circuits de mise à la masse permettent de garantir la sécurité de la machine lors d'un incident.

AVVERTENZA: Non accendere la macchina se uno dei conduttori di terra non è connesso. In caso di guasti elettrici, tali conduttori garantiscono la sicurezza del sistema.

VORSICHT: Stromzufuhr zum Gerät nicht einschalten, wenn keine Erdung gegeben ist.

AVISO: No encienda la máquina mientras esté desconectado algún circuito de tierra. Los circuitos de tierra mantienen la seguridad de la máquina en las situaciones de averías o errores.



WARNING

Take care when measuring AC mains (line) voltage. Electricity can cause death or injury.

DANGER: Prendre des précautions lors du relevé de la tension de la prise de courant alternatif. L'électricité peut entraîner des blessures graves voire mortelles.

AVVERTENZA: Procedere con cautela durante la misurazione della tensione CA della rete. L'elettricità può causare infortuni o morte.

VORSICHT: Bei der Netzspannungsprüfung stets vorsichtig vorgehen

AVISO: Tenga cuidado al medir la tensión de la línea de alimentación de corriente alterna. La electricidad puede causar lesiones e incluso la muerte.



WARNING

Ensure that the ground plate is located between the Fax PWB and the front cover. The ground plate provides a ground path for lightning strikes. Electricity can cause death or injury.

DANGER: Assurez-vous que la plaque de masse est positionnée entre la carte de câblage imprimé (PWB) du fax et le panneau avant. La plaque de masse fournit un chemin de mise à la terre pour la foudre. L'électricité peut tuer ou blesser.

AVVERTENZA: Assicurarsi che la piastra di messa a terra venga posizionata tra la scheda di collegamenti stampata (PWB) del fax e la copertura anteriore. Tale piastra fornisce un percorso di messa a terra per la protezione contro le scariche atmosferiche. L'elettricità può causare lesioni o morte.

VORSICHT: Sicherstellen, dass sich die Grundplatte zwischen Fax PWB und vorderer Abdeckung befindet. Die Grundplatte dient als Blitzableiter. Elektrischer Strom kann lebensgefährlich sein.

AVISIO: Asegúrese de que la placa de conexión a tierra esté situada entre la tarjeta del fax y la cubierta frontal. La placa de conexión a tierra facilita una ruta de conexión a tierra para los rayos. La electricidad puede provocar lesiones graves e incluso mortales.



WARNING

Take care during this procedure. Motors will become hot during normal operation.

DANGER : Exécuter cette procédure avec précaution. Les moteurs peuvent devenir très chauds en fonctionnement normal.

AVVERTENZA: Procedere con cautela durante questa procedura. I motori si riscaldano molto durante il funzionamento.

VORSICHT: Bei diesem Vorgang vorsichtig vorgehen, da Motoren im Normalbetrieb heiß werden können.

AVISO: Tenga cuidado al efectuar este procedimiento. Los motores alcanzan altas temperaturas durante su funcionamiento normal.



WARNING

Do not touch the fuser while it is hot.

DANGER : Ne pas toucher au four pendant qu'il est encore chaud.

AVVERTENZA: Non toccare il fonditore quando è caldo.

VORSICHT: Fixierbereich erst berühren, wenn dieser abgekühlt ist.

AVISO: No toque el fusor mientras está caliente.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

DANGER: Attention à ne pas faire tomber la trieuse/agrafeuse petite capacité. Elle n'est pas stable lorsqu'elle est détachée de la machine. Ne pas montrer au client comment détacher la trieuse/agrafeuse.

AVVERTENZA: Fare attenzione a non destabilizzare il modulo della pinzatrice/impilatore da 2000 fogli. Quando è sganciato dalla macchina, il modulo è instabile: non mostrare al cliente come sganciarlo

VORSICHT: Stapler nicht umstoßen. Nach Trennung des Staplers vom Document Centre ist dieser sehr instabil

AVISO: Tenga cuidado de que no se caiga el apilador/grapadora de baja capacidad. Cuando no está acoplada a la máquina es inestable. No le muestre al cliente como desacoplar el apilador/grapadora de baja capacidad.



Take care not to topple the LVF BM. The LVF BM is unstable when undocked from the machine. Do not show the customer how to undock the LVF BM

DANGER : Attention à ne pas faire tomber la plieuse/brocheuse du module de finition petite capacité. Elle n'est pas stable lorsqu'elle est détachée de la machine. Ne pas montrer au client comment détacher la plieuse/brocheuse du module de finition petite capacité.

AVVERTENZA: Fare attenzione a non destabilizzare la stazione libretto della stazione di finitura per bassi volumi. Quando è sganciata dalla macchina, la stazione libretto è instabile: non mostrare al cliente come sganciarla.

VORSICHT: Finisher-Booklet Maker für kleine Auflagen (LVF BM) nicht kippen. Nach der Trennung vom Drucker steht das Endverarbeitungsgerät nicht stabil. Kunden nicht in der Abkopplung des Endverarbeitungsgeräts vom Drucker einweisen.

AVISO: Tenga cuidado de que no se caiga el realizador de folletos de la acabadora de bajo volumen. Cuando no está acoplado a la máquina es inestable. No le muestre al cliente como desacoplar el realizador de folletos de la acabadora de bajo volumen.



Keep away from the crease blade mechanism when working in close proximity to the booklet maker while the machine is powered on. The crease blade mechanism activates quickly and with great force.

DANGER: Ne pas s'approcher du mécanisme de la lame de pliage lors d'une activité à proximité de la plieuse/brocheuse pendant que la machine est sous tension. Ce mécanisme s'active rapidement et avec force.

AVVERTENZA: Quando la macchina è accesa, tenersi a debita distanza dalla lama di piegatura mentre si opera in prossimità della stazione libretto. Il meccanismo della lama di piegatura si attiva con velocità e forza notevoli.

VORSICHT: Wenn bei eingeschaltetem Gerät nahe am Booklet Maker gearbeitet wird, von der Schneidevorrichtung fernhalten. Die Schneidevorrichtung wird schnell und mit viel Druck ausgelöst.

AVISO: Manténgase apartado del mecanismo de la cuchilla hendedora cuando trabaje junto al realizador de folletos si la máquina está encendida. Dicho mecanismo se activa de forma rápida y con mucha fuerza.



Ensure that the ground plate is located between the fax PWB and the front cover. The ground plate provides a ground path for lightning strikes. Electricity can cause death or injury.

DANGER: Assurez-vous que la plaque de masse est positionnée entre la carte de câblage imprimé (PWB) du fax et le panneau avant. La plaque de masse fournit un chemin de mise à la terre pour la foudre. L'électricité peut tuer ou blesser.

AVVERTENZA: Assicurarsi che la piastra di messa a terra venga posizionata tra la scheda di collegamenti stampata (PWB) del fax e la copertura anteriore. Tale piastra fornisce un percorso di messa a terra per la protezione contro le scariche atmosferiche. L'elettricità può causare lesioni o morte.

VORSICHT: Sicherstellen, dass sich die Grundplatte zwischen Fax PWB und vorderer Abdeckung befindet. Die Grundplatte dient als Blitzableiter. Elektrischer Strom kann lebensgefährlich sein.

AVISO: Asegúrese de que la placa de conexión a tierra esté situada entre la tarjeta del fax y la cubierta frontal. La placa de conexión a tierra facilita una ruta de conexión a tierra para los rayos. La electricidad puede provocar lesiones graves e incluso mortales.



Only use the correct plug to connect a power lead to a power outlet.

DANGER : Toujours utiliser la fiche appropriée pour connecter le cordon d'alimentation à la prise.

AVVERTENZA: Usare la spina corretta per connettere il cavo elettrico alla presa.

VORSICHT: Nur Netzkabel mit dem für die vorhandenen Netzsteckdose geeigneten Netzstecker verwenden.

AVISO: Utilice solamente un enchufe apropiado para conectar el cable de alimentación a la toma de corriente.



Take care during this procedure. Sharp edges may be present that can cause injury.

DANGER : Exécuter cette procédure avec précaution. La présence de bords tranchants peut entraîner des blessures.

AVVERTENZA: Procedere con cautela durante questa procedura. Possono essere presenti oggetti con bordi taglienti pericolosi.

VORSICHT: Bei diesem Vorgang vorsichtig vorgehen, damit keine Verletzungen durch die scharfen Kanten entstehen.

AVISO: Tenga cuidado al efectuar este procedimiento. Puede haber bordes afilados que podrían producir lesiones.



Do not attempt any repairs to the power cord or safety ground harness/conductor.

DANGER : Ne pas tenter de réparer le faisceau/conducteur de mise à la masse ou du cordon d'alimentation.

AVVERTENZA: Non eseguire riparazioni sul cavo dell'alimentazione o sul conduttore di terra di sicurezza.

VORSICHT: Keine Reparaturen am Netzkabel oder am Schutzleiter vornehmen.

AVISO: No intente reparar el cable de alimentación ni el conductor/mazo de tierra de protección.



WARNING

Do not remove the SPDH while the SPDH is lowered. In the lowered position the counterbalance springs are compressed and can cause injury when released.

DANGER : Ne pas retirer le CAD monopasse alors qu'il est en position basse. Dans cette position, les ressorts compensateurs sont comprimés et peuvent entraîner des blessures s'ils se relâchent.

AVVERTENZA: Non rimuovere l'alimentatore automatico a passaggio singolo quando è abbassato. In questa posizione, le molle del contrappeso sono compresse e possono causare lesioni al rilascio.

VORSICHT: Vorlageneinzug nicht in abgesenkter Position entfernen. Bei abgesenktem Vorlageneinzug sind die Ausgleichsfedern zusammengedrückt und können bei Freigabe Verletzungen verursachen.

AVISO: No quite el alimentador de documentos de pasada única si está bajado. Cuando está bajado, los resortes de contrapeso están comprimidos y pueden causar lesiones al soltarse.



WARNING

Use safe handling procedures when removing the module. Refer to **GP 16**. The module is heavy.

DANGER: Conformez-vous aux procédures de manipulation de sécurité pour le retrait du module. Reportez-vous à **GP 16**. Le module est lourd.

AVVERTENZA: Utilizzare procedure di gestione sicure durante la rimozione del modulo. Vedere **GP 16**. Il modulo è pesante.

VORSICHT: Verwenden Sie sichere Vorgehensweisen zum Entfernen des Moduls. Siehe auch **GP 16**. Das Modul ist sehr schwer.

AVISO: Utilice los procedimientos de seguridad cuando elimine el módulo. Consulte el **GP 16**. El módulo es pesado.



WARNING

Wear protective gloves, **PL 26.10 Item 10** and eye protection when using solvents and cleaning agents.

DANGER : Mettez des gants protecteurs, **PL 26.10 Item 10** et des lunettes de protection quand vous utilisez des solvants et des produits de nettoyage.

AVVERTENZA: Indossare guanti protettivi, **PL 26.10 Item 10** e una protezione per gli occhi durante l'utilizzo di solventi e prodotti detergenti.

VORSICHT: Bitte tragen Sie Schutzhandschuhe, **PL 26.10 Item 10** und Augenschutz bei der Verwendung von Lösungs- und Reinigungsmitteln.

AVISO: Póngase guantes protectores, **PL 26.10 Item 10** y la protección ocular cuando use disolventes y productos de limpieza.



WARNING

USA and Canada. Do not install this machine in a hallway or exit route that does not have 1.12 m (44 inches) of space additional to the normal space requirements in front of the machine. To conform with fire regulations this additional 1.12 m (44 inches) of space is needed in front of the machine in hallway and exit routes.

DANGER : États-Unis et Canada. Si cette machine est installée dans un couloir ou une voie de sortie, 1,12 m (44 pouces) d'espace supplémentaire à l'espace normal doit être disponible devant la machine conformément aux normes de sécurité d'incendie.

AVVERTENZA: N/A

VORSICHT: N/A

AVISO: Estados Unidos y Canadá. No instale esta máquina en un corredor o ruta de salida que no tenga 1.12 m (44 pulgadas) de ancho delante de la máquina, sin incluir el espacio que ocupe la máquina. Este espacio adicional de 1.12 m (44 pulgadas) delante de la máquina en corredores y rutas de salida es necesario para cumplir los requisitos de las normas sobre incendios.



WARNING

Isolate the machine from the customer's network before performing tasks that do not need network access. Isolating the machine will prevent remote diagnostic access, **GP 15**.

AVERTISSEMENT: Isolez la machine du réseau des clients avant d'effectuer les tâches qui ne nécessitent pas l'accès au réseau. Cette isolation bloquera l'accès diagnostique à distance, **GP 15**.

AVVERTENZA: Prima di eseguire attività che non richiedono l'accesso alla rete, isolare la macchina dalla rete del cliente. L'isolamento della macchina impedisce l'accesso alla diagnostica remota (**GP 15**).

ACHTUNG: Für Aufgaben, bei denen kein Netzwerkzugriff erforderlich ist, das Gerät vom Kundennetzwerk trennen. Hinweis: Bei Trennung des Geräts ist keine Ferndiagnose möglich (**GP 15**).

AVISO: Desconecte la máquina de la red del cliente para realizar operaciones que no necesiten acceso a red. Desconectar la máquina de la red evitará que se genere el diagnóstico de acceso remoto, **GP 15**.



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

DANGER : Assurez-vous que la machine est hors tension lorsque vous effectuez des tâches ne nécessitant pas d'alimentation électrique. Reportez-vous à **GP 14**. Débranchez le câble d'alimentation pour prévenir tout risque d'électrocution. Les chocs électriques peuvent présenter un danger de mort ou entraîner des blessures graves. De plus, certaines pièces, lorsqu'elles sont en mouvement, peuvent être source de blessures graves.

AVVERTENZA: Accertarsi di isolare la macchina dall'alimentazione elettrica quando si eseguono attività che non richiedono elettricità. Vedere **GP 14**. Scollegare il cavo di alimentazione. L'elettricità può causare morte o lesioni personali. Le parti in movimento possono causare lesioni personali.

VORSICHT: Sicherstellen, dass die Stromversorgung des Geräts bei Arbeiten, die keinen Strom erfordern, ausgeschaltet ist. Siehe auch **GP 14**. Den Netzstecker ziehen. Andernfalls besteht Stromschlaggefahr und Verletzungsgefahr durch bewegliche Teile.

AVISO: Asegúrese de mantener la máquina aislada de la energía eléctrica mientras realiza tareas que no necesitan electricidad. Consulte **GP 14**. Desconecte el cable de alimentación. La energía eléctrica puede producir lesiones o incluso la muerte. Las piezas sueltas pueden producir lesiones.



WARNING

Use eye protection when using air dusters. Failure to wear eye protection could result in serious personal injury. Do not use air dusters in the presence of customers. Customers could be struck by debris and not have the benefit of eye protection.

AVERTISSEMENT: Veillez à protéger vos yeux lors de l'utilisation de bombe à gaz dépoussiérant afin d'éviter de vous blesser. N'utilisez pas de bombe à gaz dépoussiérant en présence de vos clients. Vos clients ne sont pas équipés de protection au niveau des yeux.

WARNUNG: Bei der Verwendung von Druckluftreinigern eine Schutzbrille tragen. Die Verwendung ohne Schutzbrille kann zu schweren Verletzungen führen. Druckluftreiniger nicht in Gegenwart von Kunden verwenden. Kunden können von Partikeln getroffen werden und tragen keine Schutzbrille.

AVISO: Use dispositivos de protección ocular para utilizar aerosoles. La no utilización de dispositivos de protección ocular puede derivar en daños personales graves. No use aerosoles en presencia de clientes, ya que estos pueden carecer de protección ocular y podrían sufrir el impacto de residuos.

AVVERTENZA: Quando si utilizzano bombolette antipolvere ad aria compressa, indossare occhiali di protezione oculare. La mancata osservanza di questa norma potrebbe causare gravi lesioni personali. Non utilizzare bombolette antipolvere ad aria compressa vicino ai clienti perché questi potrebbero essere colpiti da polvere e altri residui senza essere protetti.

1 Service Call Procedures

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SCP 4 Subsystem Maintenance 1-6
SCP 5 Final Actions 1-8
SCP 6 Machine Features 1-8

SCP 1 Initial Actions

Service Call Procedures are used at the beginning of a service call. Use Initial Actions to collect information about the machine performance.

Also refer to [SCP 6 Machine Features](#).

Remote Service Actions

Some RAPs include Remote Service Actions that may be used by remote support specialists to analyze faults without the need for a service engineer visit.

Where a remote service action is described in a RAP use the steps described under Remote Service Actions to resolve the fault or gain information in advance of a service engineer visit. Use the remote control panel to interrogate the status of the machine. Where stated, ask the customer to perform actions that are described in the Remote Service Actions that cannot be performed remotely.

Customers may not be asked to perform any action that requires the use of a tool or any other equipment. Customer performed actions may include:

- Jam clearance.
- Checks of the condition of original documents or the status of paper supply.
- Adjustment of manually set machine components such as guides in paper trays or the feeder.
- Performance of tasks that may trigger a change in status of a sensor while a remote support specialist observes [dC330](#) Component Control via the remote control panel. These tasks are likely to be limited to actions such as opening and closing machine doors and panels or passing a piece of paper over a sensor or similar actions.
- Observation of machine components while the remote support specialist uses [dC330](#) Component Control to activate machine components via the remote control panel.
- Other actions that may assist a remote support specialist as described in the RAP.

If Remote Service Actions resolve the fault go to [SCP 5 Final Actions](#) and perform any applicable actions that may be performed via the remote control panel.

If Remote Service Actions do not resolve the fault a site visit by a service engineer will be required. Details of the remote service actions and the result should be communicated to the service engineer. A service engineer present at the customer site should take note of the results of any remote support actions performed before continuing with the RAP. The engineer should then move on to On Site Initial Actions or the main Procedure as indicated by the RAP for the specific fault code.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Do not work in a confined space. 1m (39 inches) space is needed for safe working.

1. Take note of problems, error messages or error codes. If necessary, refer to [Machine Status](#).
2. Switch off, then switch on the machine, [GP 14](#).
3. Ask the operator to describe or demonstrate the problem.

NOTE: If the machine is password protected, log in to service copy mode, refer to [GP 1](#).

4. If the problem is the result of an incorrect action by the operator, refer the operator to the user documentation.
5. Check the steps that follow:
 - a. The power lead is connected to the wall outlet and to the machine.
 - b. Documents are not loaded in the SPDH or on the document glass.
 - c. The paper is loaded correctly.
 - d. All paper trays are closed.
 - e. All doors are closed.
 - f. If a telephone line cable is installed, ensure that the cable is connected between the line socket and the wall jack.
 - g. If a telephone line cable is installed, ensure that the customer telephone line is functioning.
6. Check the machine service log book for previous actions that are related to this call.
7. Go to [SCP 2 Call Actions](#).

Machine Status

To display a list of the most recent fault codes, perform the steps that follow:

1. Touch the Device icon on the UI.
2. Touch the Notifications tab on the UI.
3. Touch the Fault History button on the UI.

NOTE: If the Machine Status screen is not accessible, go to [dC122](#) to view the fault history.

To display the active messages on the UI, perform the steps that follow:

1. Touch the Device icon on the UI.
2. Touch the Notifications tab on the UI
3. Touch Faults & Alerts from the drop down menu.

SCP 2 Call Actions

Use Call Actions to perform any general actions before starting to diagnose the fault.

Procedure

1. If the reason for the service call is to disable the RFID functionality of the toner cartridge CRUM, go to [GP 42](#) How to Disable the Toner Cartridge CRUM RFID Reader.
2. If this is the first service call to this machine, if possible, perform the actions that follow:
 - a. If the Install Wizard has failed to install the information from the SIM card, perform the [303-405-00](#), [303-406-00](#) SIM Card Fault RAP.
 - b. Check the machine configuration with the customer. Check that all the required hardware and software is installed. Check that all the required hardware and software is enabled.
 - c. Check that all the machine settings are entered correctly.
 - d. Mark off the hardware options, software options or Tags installed on the Tag matrix cards.
 - e. Enter the machine information and the customer information in the service log book.
3. Review the copy, print and fax samples.
4. Ensure the user access settings are correct. If necessary refer to the user documentation.
5. To prevent the deletion of the customer information and soft machine settings, save the NVM. Refer to [dC361](#) NVM Save and Restore.
6. If necessary, perform [GP 19](#) Network Clone Procedure.

NOTE: The clone file must be taken whenever the customer changes the network controller setting or after the system software is changed.

7. Before switching off the machine or clearing the memory, check for a customer job in the memory.
8. Check and record the total impressions usage counter. If the usage counters are reset during the call, refer to [GP 41](#) Reporting Usage Counter Resets.
9. Go to [SCP 3](#) Fault Analysis.

SCP 3 Fault Analysis

Use Fault Analysis to identify the appropriate RAP to perform based on the machine fault or symptoms.

Procedure



WARNING

Isolate the machine from the customer's network before performing tasks that do not need network access. Isolating the machine will prevent remote diagnostic access, [GP 15](#).



CAUTION

Do not expose the print cartridge, [PL 90.17](#) Item 9 to light for more than 30 minutes. If necessary, remove the print cartridge, then place in a black bag.

Based on the machine fault or symptoms, go to the relevant procedure:

NOTE: Use the machine in all modes until the fault is found.

- [Messages, Fault Codes and Status Codes.](#)
- [Power Up Problems.](#)
- [Sleep Mode Problems.](#)
- [Image Quality Problems.](#)
- [User Interface Problems.](#)
- [SPDH Problems.](#)
- [Paper Supply and Paper Feed Problems.](#)
- [Centre Output Tray Problems.](#)
- [2K LCSS Problems.](#)
- [LVF BM Problems.](#)
- [HVF, HVF BM, Inserter and Tri-Folder Problems.](#)
- [Fax Problems.](#)
- [Other Problems.](#)

Messages, Fault Codes and Status Codes

- If a fault code is displayed, perform the Status Indicator RAP for that code.
- If a status code or message is displayed, but not a fault code, perform the [OF4](#) Status Code and Messages RAP.
- Perform the [319-401-00](#), [319-402-00](#) Stress Out of Memory RAP if the machine has the problems that follow:
 - A message that there is not enough memory to complete the job.
 - The machine does not print a complex job.
 - The customer reports that the print speed is slow.
- If a fault code and the message 'Mark Service Unavailable' is displayed, perform the Status Indicator RAP for that code. If the fault continues after the RAP is performed, perform the [303B](#) Mark Service Unavailable RAP.

Power Up Problems

- If the UI has stalled and shows the splash-logo screen, or the system appears to have power but the UI is blank, perform the [OF2](#) Post Error RAP.
- Perform the [OF3](#) Dead Machine RAP if the machine has the problems that follow:
 - The machine will not power up.
 - There is no information on the UI.
 - There is no LED illumination on the UI.
 - If all the touch screen LEDs are on, the UI touch screen is illuminated and the machine then powers off.
- If the UI displays 'system unavailable' or the machine does not come to a 'Ready to scan your job' state. Perform the [OF5](#) Boot Up Failure RAP.

Sleep Mode Problems

- If the machine fails to enter or exit sleep mode, perform the [301K](#) Sleep Mode RAP.

Image Quality Problems

- If the machine has an image quality fault, perform the [IQ1](#) Image Quality Entry RAP.

User Interface Problems

- If the UI is not illuminated, perform the [302A](#) Touch Screen Failure RAP.
- If the UI is illuminated, but there is no information, perform the [302B](#) UI Control Panel Button or Touch Screen RAP.

SPDH Problems

- If the SPDH has detected a document of the wrong size, perform the [305A](#) Document Size Sensors Failure RAP.
- If the SPDH does not detect the documents in the SPDH input tray, perform the [305B](#) Document Present Failure RAP.
- If the SPDH is damaging documents, perform the [305C](#) Damaged Documents RAP.

Paper Supply and Paper Feed Problems

- For the paper supply problems that do not have a fault code, perform the procedures that follow, as appropriate:
 - [370A](#) Tray Out of Service RAP.
 - [371A](#) Tray 1 and Tray 2 Empty RAP.
 - [373A](#) Tray 3 False Low Paper Level RAP.
 - [373B](#) Tray 3 Out of Paper RAP.
 - [374A](#) Tray 4 False Low Paper Level RAP.
 - [374B](#) Tray 4 Out of Paper RAP.
 - [375A](#) Bypass Tray RAP.
 - [376A](#) Tray 6 Empty RAP.
- If the paper fed from tray 1 or tray 2 does not match the paper size indicated on the UI, perform the procedures that follow, as appropriate:
 - [371-500-00](#) Tray 1 Open During Run RAP.
 - [372-500-00](#) Tray 2 Open During Run RAP.
- If the machine produces a multifeed, perform the [OF8](#) Multi-feed RAP.
- If the machine produces the symptoms that follow, perform the [381A](#) Paper Feed Retries RAP.
 - Intermittent paper jams at different points in the paper path from registration to IOT exit.
 - Paper jams at any point in the paper path from registration to IOT exit, but only from one specific paper tray.

Centre Output Tray Problems

- If there is poor stacking in the centre output tray, perform the [310A](#) Centre Output Tray Poor Stacking RAP.

2K LCSS Problems

- If the machine has a 2K LCSS fault, but not a fault code, perform the procedures that follow, as appropriate:
 - [312A-110](#) Chad Bin Present and Bin Full RAP.
 - [312B-110](#) Bin 1 Overload RAP.
 - [312C-110](#) 2K LCSS Initialization Failure RAP.
 - [312D-110](#) 2K LCSS Power Distribution RAP.
 - [312E-110](#) Staple Head Operation Failure RAP.
 - [312F-110](#) 2K LCSS PWB DIP Switch Settings RAP.
 - [312G-110](#) 2K LCSS PWB Damage RAP.
 - [312G-110](#) Copy Damage in the 2K LCSS RAP.
 - [312H-110](#) Mis-Registration in Stapled Sets and Non-Stapled Sets RAP.
 - [312J-110](#) 2K LCSS Poor Stacking RAP.
 - [312K-110](#) Stapling Prime Failure RAP.
- If the machine has the problems that follow, perform the [312F-110](#) 2K LCSS PWB DIP Switch Settings RAP:
 - False jam clearance messages.
 - Communication errors between the 2K LCSS and the machine.
- If the staples of a stapled set are not correct, perform the [312K-110](#) Stapling Failure RAP.
- If the prints bond together in the 2K LCSS trays, perform the [OF6](#) Air Systems RAP.

LVF BM Problems

- If the machine has an LVF BM fault, but not a fault code, perform the procedures that follow, as appropriate:
 - [312A-150](#) Poor Stacking RAP.
 - [312B-150](#) Bin 1 Overload RAP.
 - [312C-150](#) LVF BM Initialization Failure RAP.
 - [312D-150](#) LVF BM Power Distribution RAP.
 - [312F-150](#) LVF PWB and LVF BM PWB DIP Switch Settings RAP.
 - [312G-150](#) LVF BM Mis-Registration in Stapled Sets and Non-Stapled Sets RAP.
 - [312H-150](#) Copy Damage in the LVF BM RAP.
 - [312J-150](#) Booklet Quality RAP.
- If the staples of a stapled set are not correct, perform the [312-377-00-150](#) LVF BM Stapling Failure RAP.
- If the prints bond together in the LVF BM trays, perform the [OF6](#) Air Systems RAP.

HVF, HVF BM, Inserter and Tri-Folder Problems

- If the machine has a fault in the HVF or HVF BM, but with no fault code, perform the procedures that follow, as appropriate:
 - [312A-171](#) HVF Power Distribution RAP.
 - [312B-171](#) HVF BM to Machine Communication Interface and BM Present RAP.
 - [312C-171](#) HVF BM Bin 2 Failure RAP.
 - [312D-171](#) Booklet Quality RAP.
 - [312E-171](#) Copy Damage in the HVF BM RAP.
 - [312F-171](#) Mis-Registration in Stapled and Unstapled Sets RAP.

- 312G-171 HVF BM Poor Stacking RAP.
- 312J-171 Inserter Paper Sensing and +5V Supply RAP.
- 312K-171 HVF Initialization Failure RAP.
- 312L-171 Tri-Folder Not Detected RAP.
- 312M-171 Buffer Path Clamp Problems RAP.
- 312N-171 Chad Bin Present and Bin Full RAP.
- If the staples of a booklet are not correct, perform the appropriate procedure that follows:
 - 312-063-00-171, 312-411-00-171 HVF BM Staple Unit 1 Failure RAP.
 - 312-403-00-171, 312-413-00-171, 312-414-00-171 HVF BM Stapler head 2 and Staple Module RAP.
- If the tri-folder paper fold is not in the correct position, perform ADJ 12.2-171 Tri-Folder Paper Settings.

Fax Problems

For fax problems with no fault code, perform the 320A Fax Entry RAP.

Other Problems

- Hot machine. Perform the OF6 Air Systems RAP.
- Convenience stapler faults. Perform the OF13 Convenience Stapler RAP.
- Unusual machine noise. Perform the OF1 Unusual Noise RAP.
- Ozone type machine odour. Perform the 391A HVPS RAP.
- If the UI displays 'system not available' or the machine continues to boot up, perform the OF5 Boot Up Failure RAP.
- The machine will not switch off. Perform the 303C Switch Off Failure RAP.
- Foreign interface device fault. Perform the 303E Foreign Device PWB Fault RAP.
- Xerox Extensible Interface Platform (XEIP) faults. Perform the OF14 Xerox Extensible Interface Platform RAP.
- Xerox secure access faults. Perform the OF15 Xerox Secure Access RAP.
- Scan to file failure when using the FTP or SMB protocols. Perform the 316A Workflow Scanning Entry RAP.
- The date and time appearing on the customer's banner sheets or the configuration report is incorrect. Perform the 303A SBC PWB Battery RAP.
- Multiple error messages are displayed on the UI after a IOT PWB, scanner PWB, hard disk or SD card has been installed. Refer to GP 27 Machine Configuration Control and Recovery.
- The machine displays incompatible print cartridge or fuser module. Check the 4 main configuration parameters, GP 27. Ensure that the machine settings are correct.
- Failure of wireless printing. Perform the 316D Wireless Connectivity RAP.
- If the fuser module has prematurely reached its end of life, 250,000 prints, perform the OF9 False Fuser End of Life RAP.
- If the print cartridge has prematurely reached its end of life, 147,000 prints, perform the OF12 False Print Cartridge End of Life RAP.
- If the machine scans the originals but then fails to start printing, and does not shut down with a fault, perform the 303-316-00 CCM Cannot Communicate with IOT RAP.
- Failure of an external USB keyboard. Go to the OF16 USB Keyboard RAP.
- For a thorough understanding of the machine's operation refer to the Principles of Operation-section 8.

SCP 4 Subsystem Maintenance

Use Subsystem Maintenance to identify potentially worn components that should be replaced to prevent further faults, and to perform routine cleaning and lubrication of the machine.

Procedure



Switch off the electricity to the machine, GP 14. Disconnect the power lead from the customer supply while performing tasks that do not need electricity. Electricity can cause the death or injury. Moving components can cause the injury.

Go to the correct procedure:

- All Service Checks
- Installation of New Parts
- HFSI
- Lubrication
- How to Clean the Machine
- Print Cartridge Handling

All Service Checks

Perform the actions that follow at every service call:

1. Clean the relevant optical sensors:
 - Side 2 reg sensor, PL 5.18 Item 9.
 - SPDH feed sensor, PL 5.20 Item 10.
 - SPDH takeaway sensor, PL 5.20 Item 10.
 - SPDH length sensor 2, PL 5.30 Item 9.
 - Post fuser sensor, PL 10.11 Item 7.
 - Horizontal transport entry sensor, PL 10.15 Item 7.
 - Tray 1 TAR sensor, PL 80.10 Item 5.
 - Tray 2 TAR sensor, PL 80.10 Item 5.
 - Tray 3 feed sensor, PL 80.32 Item 3.
 - Tray 4 feed sensor, PL 80.33 Item 6.
 - Tray 4 exit sensor, PL 80.33 Item 6.
 - HCF Exit sensor, PL 80.32 Item 3.
 - Registration sensor, PL 80.17 Item 7.
 - (2K LCSS) entry sensor, PL 12.70 Item 3.
 - (LVF BM) BM paper present sensor, PL 12.380 Item 5.
 - (LVF BM) finisher entry sensor, PL 12.385 Item 7.
 - Chad bin level sensor (Q12-193), PL 12.125 Item 17.
 - Punch sensor 1 (Q12-078), PL 12.125 Item 17.
 - Punch sensor 2 (Q12-075), PL 12.125 Item 17.
 - Punch sensor 3 (Q12-076), PL 12.125 Item 17.
 - Chad bin present sensor (Q12-118), PL 12.125 Item 18.
 - Entry sensor (Q12-077), PL 12.135 Item 2.
 - Compiler exit sensor (Q12-106), PL 12.135 Item 2.

- Buffer path sensor (Q12-321), [PL 12.135 Item 2](#).
- Inserter standby sensor (Q12-320), [PL 12.135 Item 2](#).
- Top tray exit sensor (Q12-107), [PL 12.135 Item 3](#).
- HVF Booklet exit sensor (Q12-087), [PL 12.135 Item 3](#).
- BM Entry sensor (Q12-089), [PL 12.150 Item 16](#).
- BM Paper present sensor (Q12-170), [PL 12.185 Item 5](#).
- BM exit sensor (Q12-213), [PL 12.185 Item 5](#).
- Tri folder exit sensor (Q12-166), [PL 12.215 Item 12](#).

2. Check the staple cartridges.

- If necessary, install new LVF BM staple cartridges, [PL 12.365 Item 7](#).
- If necessary, install new LVF BM staple cartridges (booklet maker), [PL 12.395 Item 8](#)
- If necessary, install new HVF BM staple cartridges, [PL 12.111 Item 6](#).
- If necessary, install new HVF BM staple cartridges (booklet maker), [PL 12.185 Item 8](#)

Installation of New Parts

The design life of the major components is shown in [Table 1](#).

Table 1 Component design life

Part	Life	Parts List Reference
Fuser module (at 45 ppm)	264k prints	PL 10.8 Item 1
Fuser module (at 55 ppm)	300k prints	PL 10.8 Item 1
Fuser module (at 65 ppm)	315k prints	PL 10.8 Item 1
Fuser module (at 75 ppm)	330k prints	PL 10.8 Item 1
Fuser module (at 90 ppm)	345k prints	PL 10.8 Item 1
Bias transfer roll	500k prints	PL 80.15 Item 3
Pressure blade	350k prints	PL 80.17 Item 12
Drive pulley	350k prints	PL 80.25 Item 3
Transport roll	350k prints	PL 80.25 Item 7
Transport drive belt kit	350k prints	PL 80.25 Item 11
Print cartridge (at 45 ppm)	155k prints	PL 90.17 Item 9
Print cartridge (at 55 ppm)	190k prints	PL 90.17 Item 9
Print cartridge (at 65 to 90 ppm)	200k prints	PL 90.17 Item 9
Toner cartridge	88k prints per 2 bottle carton. Measured by ISO/IEC 19752 standard.	PL 90.17 Item 2
LED print head	2.5M prints	PL 60.35 Item 1
SPDH feed roll kit	170k feeds	PL 31.12 Item 15
Tray 1 and 2 feed rolls	750k feeds	PL 80.26
Transport drive belt kit	300k feeds	PL 80.25 Item 11
Tray 3 feed rolls	400k feeds	PL 80.32 Item 9
Tray 4 feed rolls	400k feeds	PL 80.33 Item 11
HCF transport roll	2.5M prints	PL 80.33 Item 4

Table 1 Component design life

Part	Life	Parts List Reference
Bypass tray feed rolls and retard pad	100k feeds	PL 70.35
Tray 6 feed rolls	750k feeds	PL 80.41
2K LCSS staple cartridge	5k staples	PL 12.55 Item 7
LVF BM staple cartridge	5k staples	PL 12.365 Item 7
LVF BM staple cartridge (booklet maker)	2k staples	PL 12.395 Item 8
HVF BM staple cartridge	5k staples	PL 12.111 Item 6
HVF BM staple cartridge (booklet maker)	2k staples	PL 12.185 Item 8
VOC filter (65/785/90 ppm only)	2M prints	PL 10.9 Item 6

HFSI

For High Frequency Service Items (HFSI), refer to [dC135 CRU/HFSI Status](#).

Lubrication

To lubricate the machine, refer to [ADJ 40.1 Machine Lubrication](#).

How to Clean the Machine

- Refer to [ADJ 90.1 Xerographics Cleaning](#).
- Refer to [ADJ 5.3 SPDH Cleaning Procedure](#).
- Clean the upper surfaces of the CVT glass and document glass. Refer to [ADJ 60.1 Scanner Cleaning Procedure](#).
- Refer to [ADJ 60.4 LED Print Head Cleaning](#).
- For special tools and consumables, refer to [GP 8 Special Tools and Consumables](#).

Print Cartridge Handling

- The print cartridge must be protected from light shock and mechanical damage.
- Do not expose the photoreceptor drum to bright lights for extended periods.
- Whenever the print cartridge is removed, place the print cartridge in the black plastic bag supplied with the machine. Store the print cartridge in a safe place on a clean flat surface, to avoid damage to the photoreceptor drum surface.
- Place the print cartridge in the black bag if the left door is opened for long periods.

SCP 5 Final Actions

Use Final Actions to verify the correct operation of the machine and to complete the service call.

Procedure

Perform the steps that follow. If a fault is identified, go to [SCP 3 Fault Analysis](#):

1. If necessary, re-connect the machine to the customer's network.
2. If necessary, restore the NVM to the machine. Refer to [dC361 NVM Save and Restore](#).
3. If necessary, perform [GP 19 Network Clone Procedure](#).

NOTE: *The clone file will need to be taken whenever the system software is changed.*

4. Perform the relevant maintenance procedures. Refer to [SCP 4 Subsystem Maintenance](#).
5. Ensure that the machine has the latest available software loaded.
6. Operate the machine in all modes. Make the copies and prints from all trays. Use the SPDH and the document glass.
7. Make copies and/or prints from all trays. Check the registration and image quality. To reset the registration, perform [dC604 Registration Setup Procedure](#). For image quality defects, perform the [IQ1 Image Quality Entry RAP](#).
8. Make a proof copy or print of a customer document.
9. If some of the customer's selections were changed, return the selections to the customer settings.
10. Mark off the hardware options, software options or Tags installed on the Tag matrix cards.
11. If some changes were made to the configuration or options were added, print the configuration report. Store the configuration report with the machine log book. Discard the previous version of the configuration report.
12. To clear all fault counters, go to [GP 1 Service Mode](#).
13. Log the usage counters. If the usage counters are reset during the call, refer to [GP 41 Reporting Usage Counter Resets](#)
14. If a new IOT PWB, scanner PWB, hard disk or SD card has been installed, check that the machine's configuration is correct. Refer to [GP 27](#).
15. Save the NVM of the machine to the hard disk. Refer to [dC361 NVM Save and Restore](#).
16. If necessary, provide the customer with training.
17. Remove and destroy all copies of test patterns.
18. Ensure the machine and service area are clean.

SCP 6 Machine Features

Go to Principles of Operation [Configuration Options](#)

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Chain 60 - Imaging		381-136-00 Lead Edge Late to Tray 3 Feed Sensor RAP	2-584
361-100-00 LED Print Head Data Integrity Failure RAP	2-513	381-146-00 Lead Edge Late to Tray 4 Feed Sensor RAP	2-587
362-310-00, 362-492-00, 362-790-00 to 362-792-00, 366-492-00 to 366-792-00 Scanner to SBC Communications Failure RAP	2-514	381-151-00 Lead Edge Late to Registration Sensor RAP	2-590
362-396-00, 362-397-00, 362-399-00, 366-396-00, 366-397-00 Scanner Data Connection Failure RAP	2-515	381-152-00 Trail Edge Late from Registration Sensor RAP	2-591
362-450-00 to 362-472-00, 362-781-00 Scanner Calibration Faults RAP	2-516	381-155-00 Lead Edge Late to Registration Sensor from the Bypass Tray RAP	2-595
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362-474-00, 362-475-00 Stepper Speed/Reset Error RAP	2-519	381-161-00 Lead Edge Late to Registration Sensor Duplex Mode RAP	2-600
362-476-00 Scan Carriage Home Sensor RAP	2-519	381-162-00 Trail Edge Late from Registration Sensor Duplex Mode RAP	2-602
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362-484-00 Apps Code Not Present RAP	2-521	381-180-00 Lead Edge Late to TAR 1 Sensor from Tray 6 RAP	2-609
362-485-00 +12V Supply Error RAP	2-522	381-182-00 Lead Edge Late to Registration from Tray 6	2-612
362-486-00 +24V Supply Error RAP	2-522	381-184-00 Lead Edge Late to Tray 6 Feed Sensor RAP	2-616
362-487-00 System Phase Lock Loop Error RAP	2-523	381-190-00 Lead Edge Late to Registration Sensor from Tray 1 RAP	2-619
362-490-00, 362-491, 366-490-00, 366-491 Side 1 and Side 2 Data Steerer Error RAP ..	2-523	381-191-00 Lead Edge Late to Registration Sensor from Tray 2 RAP	2-621
362-777-00, 362-778-00 Motor Communications Failure RAP	2-524	381-192-00 Lead Edge Late to Registration Sensor from Tray 3 RAP	2-623
362-779-00, 362-780-00 Scanner Software Problem or Upgrade Error RAP	2-525	381-193-00 Lead Edge Late to Registration Sensor from Tray 4 RAP	2-627

381-194-00 Lead Edge Late to TAR 1 Sensor from Tray 2 RAP	2-631
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381-196-00 Lead Edge Late to TAR 1 Sensor from Tray 4 RAP	2-636
381-197-00 Lead Edge Late to TAR 2 Sensor from Tray 3 RAP	2-638
381-198-00 Lead Edge Late to TAR 2 Sensor from Tray 4 RAP	2-640
381-199-00 Lead Edge Late to HCF Exit Sensor from Tray 4 RAP	2-642
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301-300-00 Front Door Open RAP

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter [dC330](#), code 001-300, front door interlock, [Figure 1](#). Open and close the front door. The display changes.

Y N

Use an interlock cheater to actuate the front door interlock switch, S01-300. The display changes.

Y N

Go to [Flag 1](#) and [Flag 2](#). Check S01-300.

Refer to:

- [P/J656](#), [P/J653](#), [P/J764](#), [IOT PWB](#).
- [GP 13](#) How to Check a Switch.
- [REP 1.2](#) Wiring Harness Repairs.

If necessary install a new front door interlock switch, [PL 1.12 Item 1](#).

If the fault persists, perform [OF7](#) IOT PWB Diagnostics RAP.

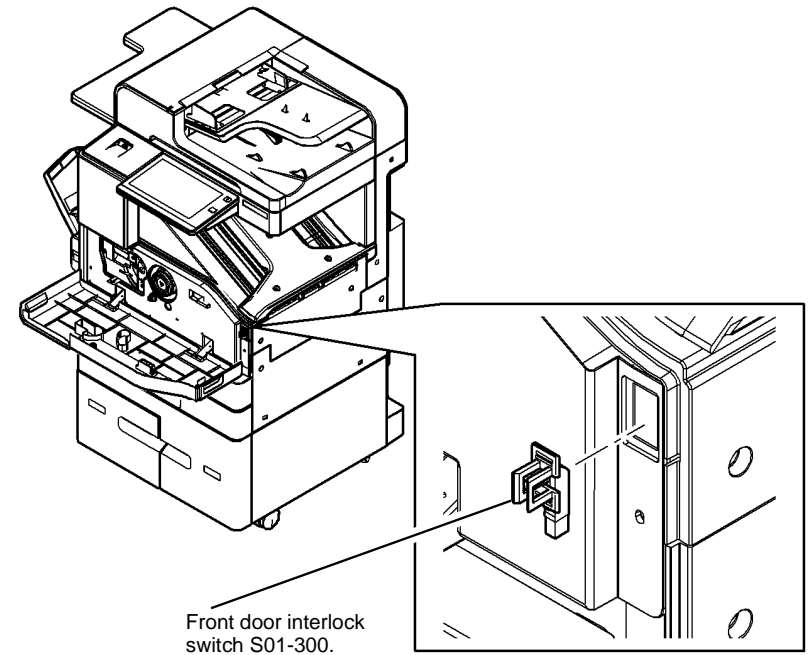
Check that the front door assembly, [PL 28.11 Item 1](#) closes correctly. If not, check the components that follow:

- The toner dispense latch is in the latched position, [PL 90.17 Item 5](#).
- The LED print head module latch is in the latched position, [PL 60.35 Item 2](#).
- The switch actuating flag on the front door for damage, if necessary install a new front door assembly, [PL 28.11 Item 1](#).

Check the components that follow:

- The switch actuating flag on the front door for damage.
- The front door assembly, [PL 28.11 Item 1](#) is not distorted or damaged.
- The magnet, [PL 28.11 Item 3](#) is not damaged or missing.

If necessary install a new front door assembly, [PL 28.11 Item 1](#).



X-1-0988-A

Figure 1 Component location

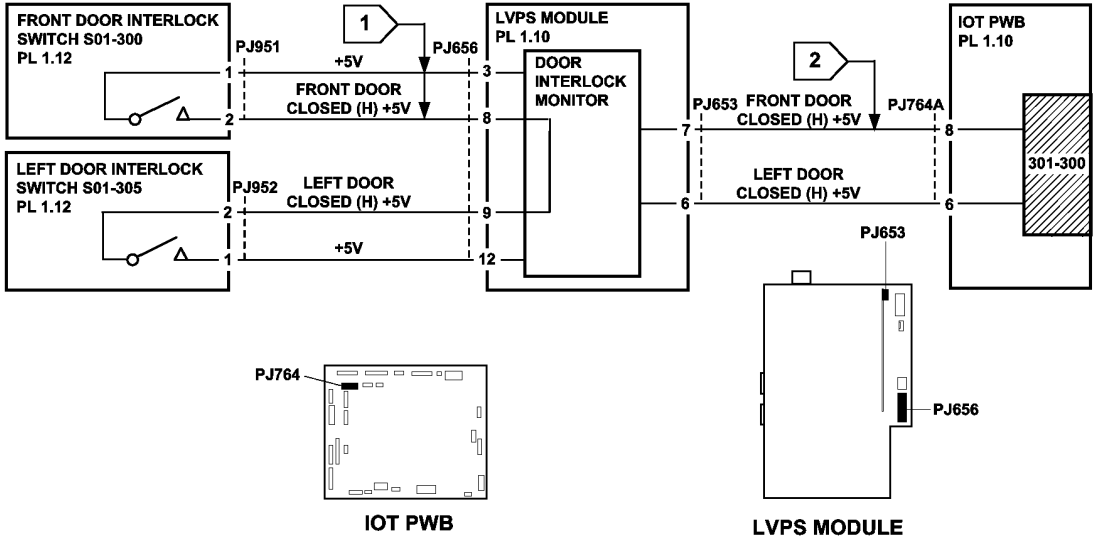


Figure 2 Circuit diagram

TX-1-0250-A

301-305-00 Left Door Open RAP

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter dC330, code 001-305, left door interlock. Open and close the left door, Figure 1. The display changes.

Y N

Use an interlock cheater to actuate the left door interlock switch, S01-305. The display changes.

Y N

Go to Flag 1 and Flag 2. Check S01-305.

Refer to:

- P/J656, P/J653, P/J764, IOT PWB.
- GP 13 How to Check a Switch.
- REP 1.2 Wiring Harness Repairs.

If necessary, install a new left door interlock switch, PL 1.12 Item 1.

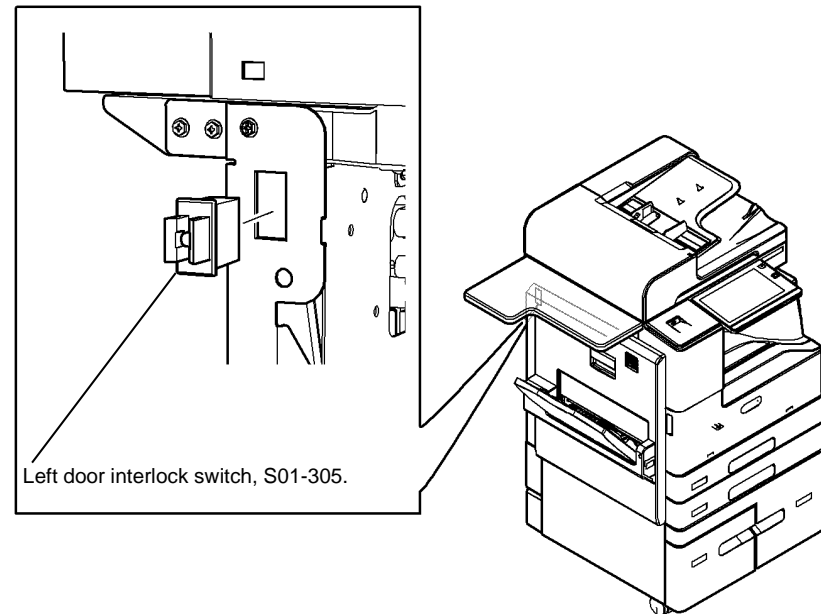
If the fault persists, perform OF7 IOT PWB Diagnostics RAP.

Check that the left door assembly, PL 80.10 Item 1 closes correctly. If not, check the components that follow:

- Rear latch cam, PL 80.11 Item 11.
- Rear latch, PL 80.11 Item 10.
- Front latch cam, PL 80.11 Item 5.
- Front latch, PL 80.11 Item 4.
- Damper spring (2), PL 80.11 Item 2.
- Damper cable (2), PL 80.11 Item 3.

Check that the left door assembly, PL 80.10 Item 1 closes correctly. If not, check the components that follow:

- Rear latch cam, PL 80.11 Item 11.
- Rear latch, PL 80.11 Item 10.
- Front latch cam, PL 80.11 Item 5.
- Front latch, PL 80.11 Item 4.
- Damper spring (2), PL 80.11 Item 2.
- Damper cable (2), PL 80.11 Item 3.



X-1-0989-A

Figure 1 component location

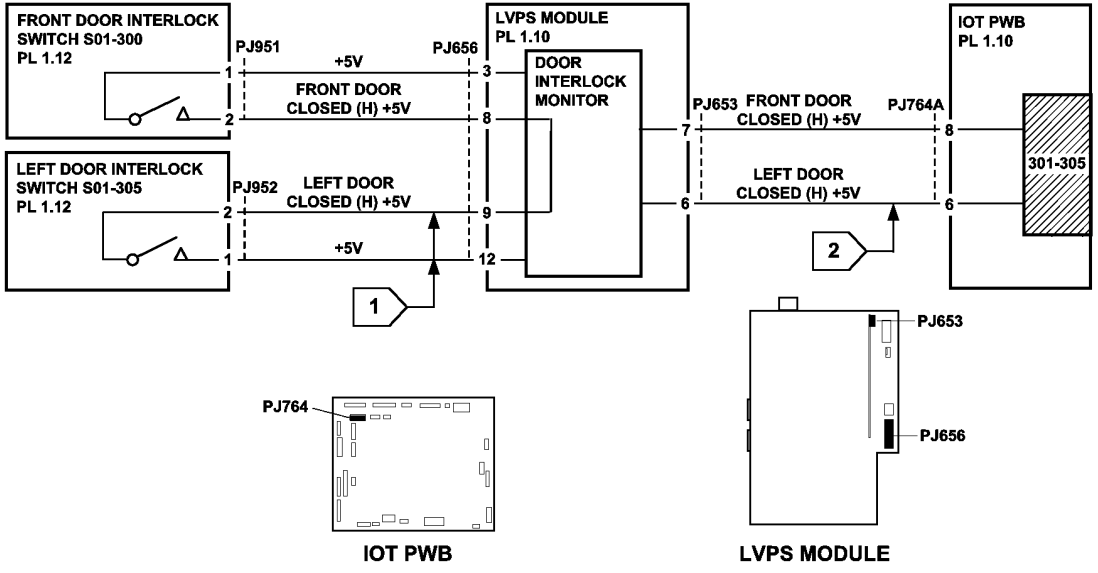


Figure 2 Circuit diagram

TX-1-0251-A

301A Ground Distribution RAP

Use this RAP to identify ground distribution faults.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Do not switch on the electricity to the machine while a ground circuit is disconnected. Ground circuits ensure that the machine remains safe during a fault condition.

NOTE: Ground distribution faults must be isolated by continuity checks and visual inspection. Check all circuits between each connection and ground.

Ground distribution faults can cause the faults that follow:

- Image quality faults.
- Paper feed faults.
- Paper path faults.
- Random logic faults

To diagnose a suspected ground distribution fault, the points that follow must be considered:

- Ensure that all the connectors are not damaged. Check crimping for suspect electrical connections or any mechanical failure that could cause a failed or poor electrical contact. Refer to REP 1.2 Wiring Harness Repairs.
- When making a continuity check on a harness, disconnect the harness at both ends, to ensure that other wiring does not cause continuity readings to be incorrect. Ensure that any in-line connectors are installed correctly.
- When making a check between connectors and ground, preferably use the main frame ground connection, Figure 5. Alternatively use any unpainted metal part of the machine frame.
- Check the ground conductor of the main power cord for continuity or damage, if necessary install a new main power cord, PL 1.10 Item 8.
- Check that the ground connections that follow are secure:
 - Bypass Tray Ground.
 - Duplex Transport Ground.
 - Fax Module Ground.
 - Fuser Module Ground.
 - LED Print Head Module Ground.
 - Main Frame Ground.
 - Paper Transport Rolls Ground.
 - Print Cartridge Ground.
 - Registration Transfer Ground
 - Scanner Module Ground.

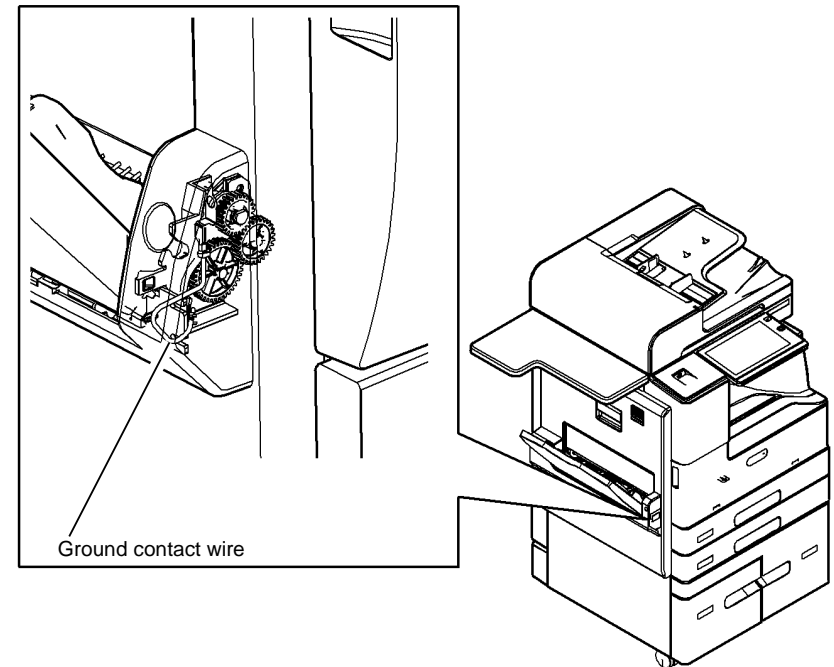
- SPDH Ground.
- Tray 3 and 4 Ground.

Bypass Tray Ground

Refer to Figure 1. Check for continuity of less than 10k ohms between the bypass tray feed roll shaft, PL 70.35 Item 14 and the left door frame.

To improve continuity, perform the steps that follow:

1. Remove the feed roll assembly, REP 80.15.
2. Remove the ground wire, Figure 1 and clean the terminals at both ends of the wire.
3. Clean the bearings, PL 70.35 Item 10 and the parts of the feed roll shaft where the bearings locate.
4. Reassemble the bypass tray assembly



X-1-0995-A

Figure 1 Bypass ground connections

Duplex Transport Ground

The ground connection between the left door frame and the machine frame is through the left door hinges. Check for continuity of less than 10 ohms between the left door frame and the machine frame, if necessary remove the left door assembly, [REP 80.7](#), clean the hinge components, then re-install the left door.

Refer to [Figure 2](#). Check the tightness of the screw holding the ground spring strip to the duplex motor bracket. Check for continuity of less than 10 ohms between the duplex motor bracket and the machine frame. If necessary remove the ground spring strip, clean the contact faces and re-assemble, to improve continuity.

Refer to [Figure 2](#). Check for continuity of less than 10 ohms between the duplex transport ground strip and the machine frame. If necessary remove the duplex transport ground strip, clean the contact faces and re-assemble, to improve continuity.

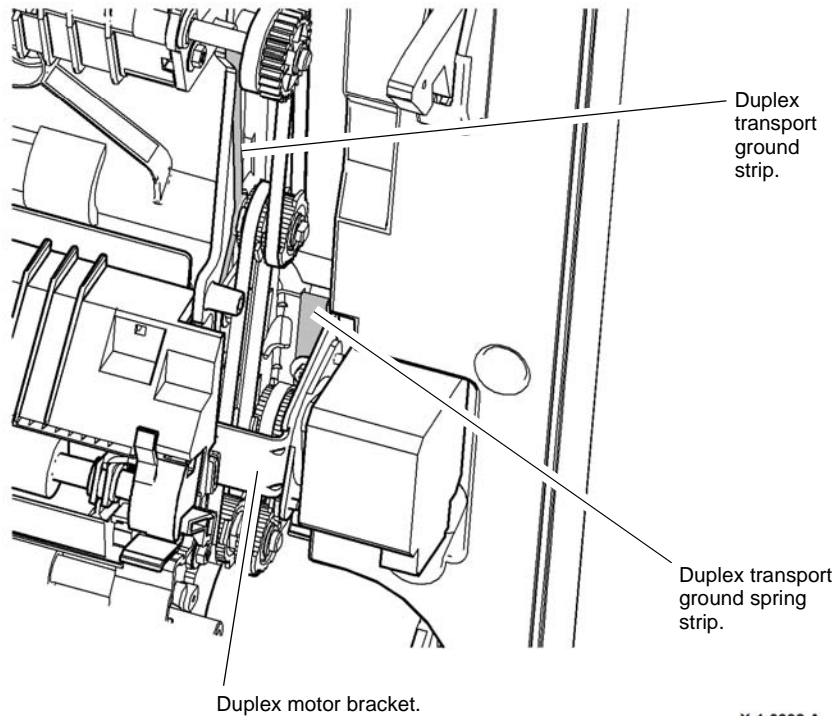


Figure 2 Duplex transport ground

Fax Module Ground

Refer to [Figure 3](#). Ensure the face of the Fax module ground plate and the mounting area of the SBC cage are clean.

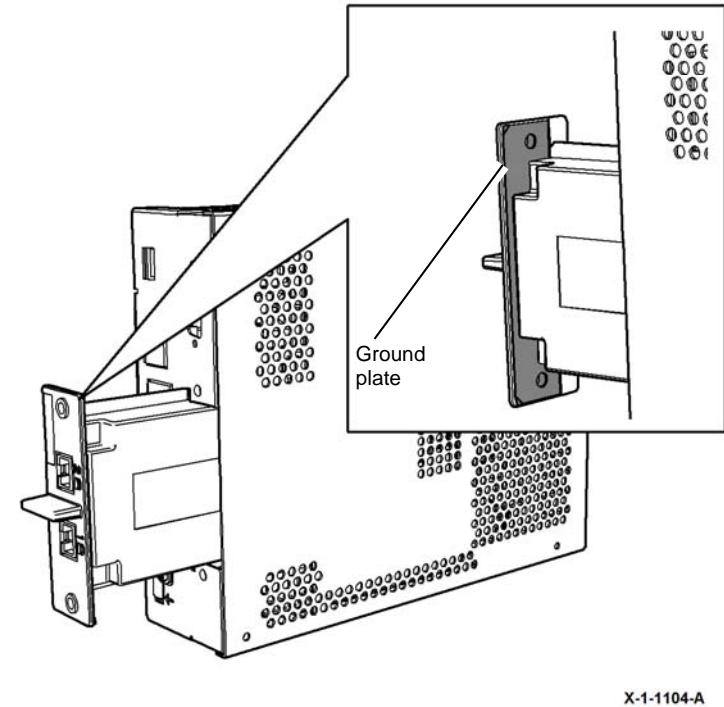


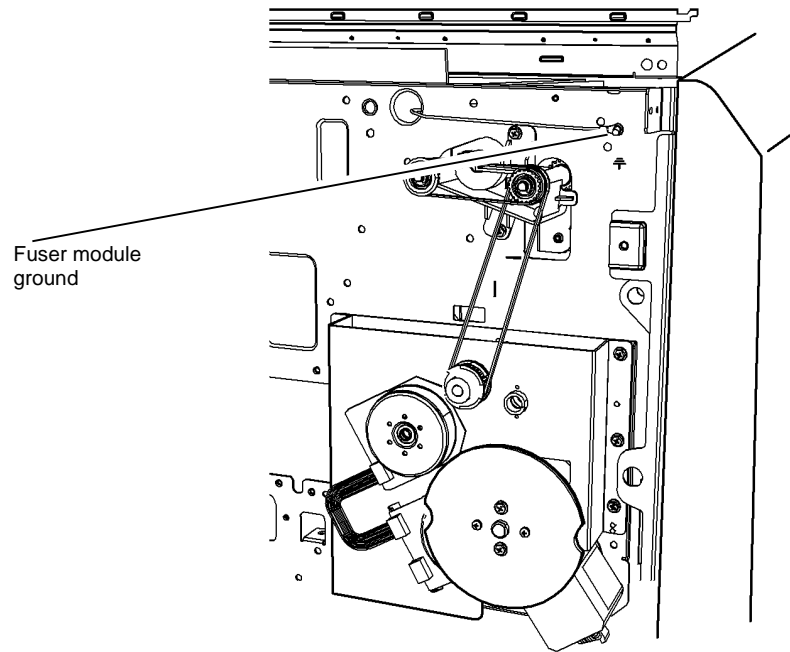
Figure 3 Fax module ground

Fuser Module Ground

Check for continuity of less than 1 ohm between the fuser frame and the fuser module ground, [Figure 4](#).

Refer to [Figure 4](#). Perform the steps that follow:

- To improve continuity, disconnect the fuser module ground terminal, clean the contact faces and re-assemble.
- Remove the fuser. Check the drawer connector contacts are clean and undamaged. If necessary install new components.

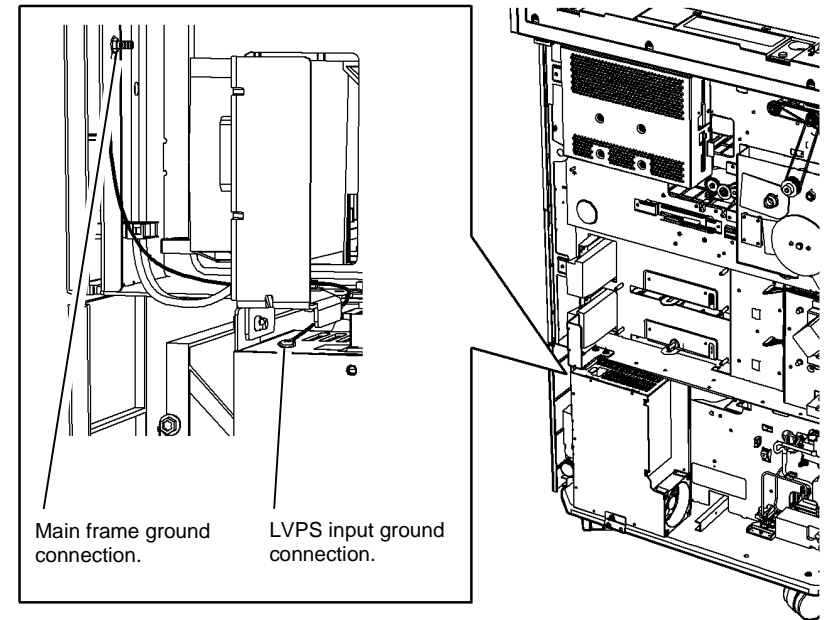


X-1-1005-A

Figure 4 Fuser module ground

Main Frame Ground

Refer to [Figure 5](#), check for continuity of less than 1 ohm between the LVPS input ground connection and the main frame ground. Also check for a continuity of less than 1 ohm between the scanner module ground connection and the main frame ground. Check that the hardware is tight and the harness crimping is good. To improve continuity, disconnect the terminals, clean the contact faces then re-assemble.

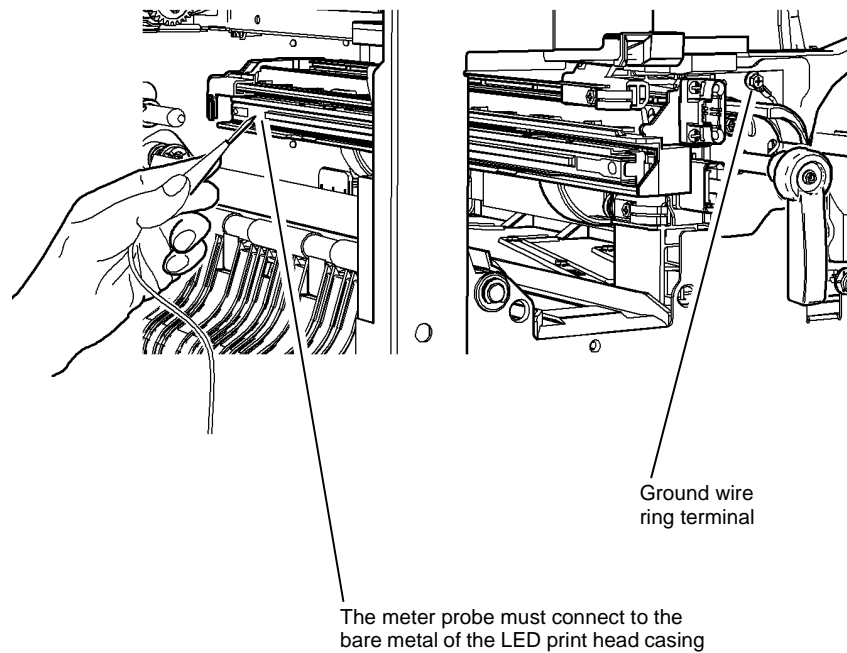


X-1-0990-A

Figure 5 Component location

LED Print Head Module Ground

Check for continuity of less than 10 ohms between the LED print head casing, [Figure 6](#) and the main frame ground connection.

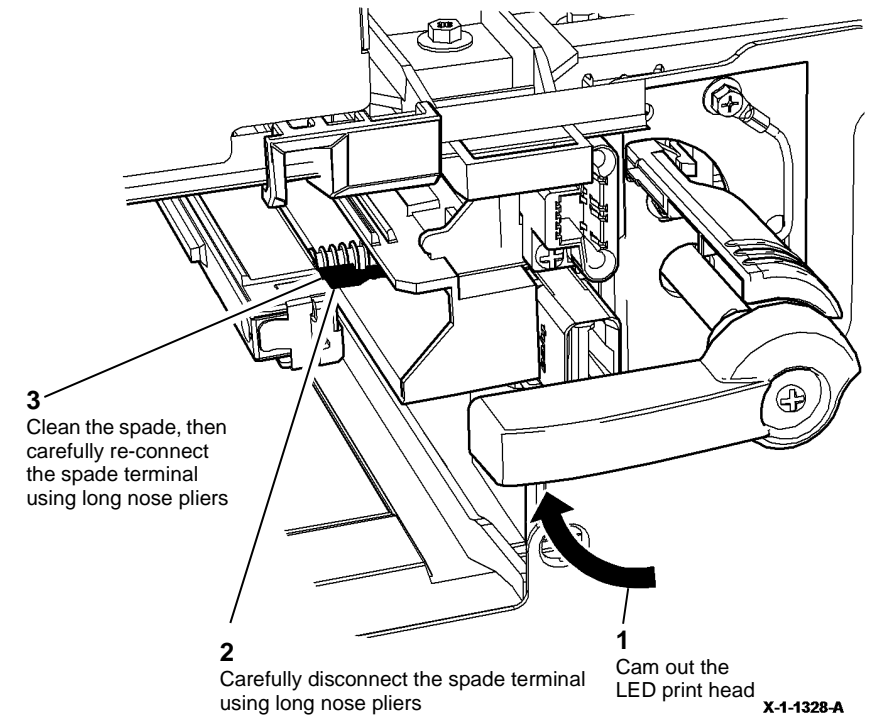


X-1-1327-A

Figure 6 LPH ground connection

To improve continuity, perform the actions that follow:

1. Remove the LED print head module, [REP 60.12](#).
2. Clean the contact faces of the ground wire ring terminal.
3. [Figure 7](#), clean the contact faces of the LPH ground spade connector.



X-1-1328-A

Figure 7 LPH ground spade connection

4. Install the LED print head module, [REP 60.12](#).

Paper Transport Rolls Ground

Refer to [Figure 8](#). Open the left door. Rotate the transport rolls by hand and check for continuity of less than 10k ohms between the tray 1 and tray 2 transport roll shafts and the main frame ground connection, [Figure 5](#). To improve continuity for the tray 1 and tray 2 transport roll shafts, remove, clean and re-install the shaft and bearings, [REP 80.10](#).

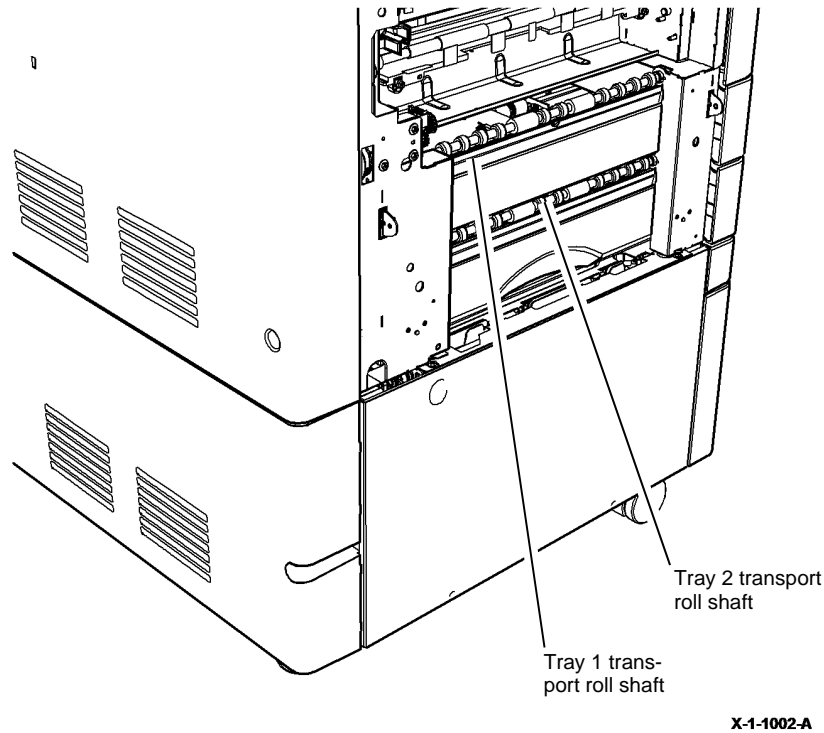


Figure 8 Paper transport rolls

Print Cartridge Ground

Refer to [Figure 9](#). Ensure the machine is switched off, [GP 14](#). Check for continuity of less than 10 ohms between the machine frame and photoreceptor drive shaft. To improve continuity, remove the ground contact strip, [Figure 9](#) and clean the contact areas of the strip, frame bracket and drive shaft, then re-assemble and test.

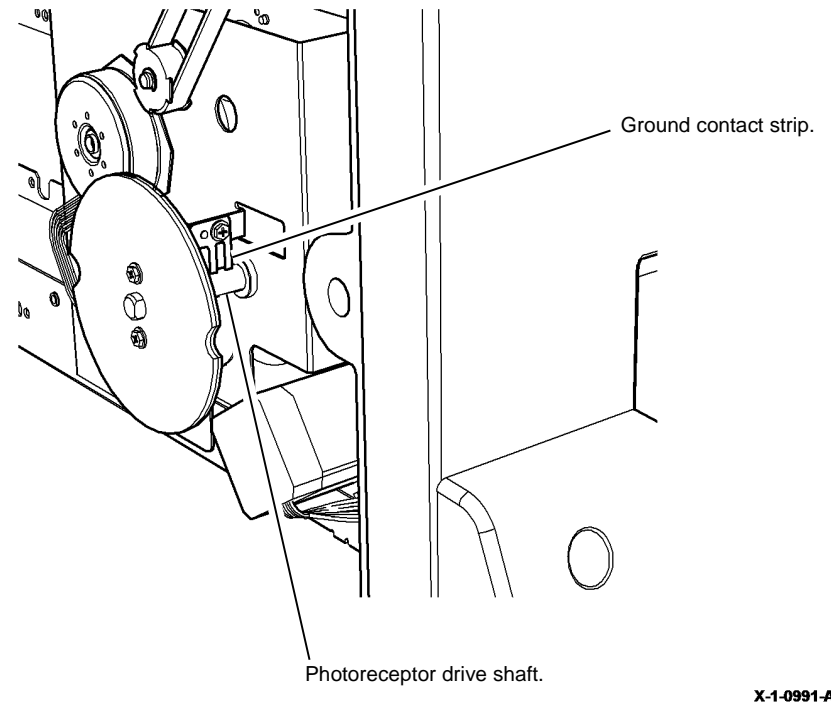


Figure 9 Print cartridge ground



CAUTION

Take care not to damage the surface of the photoreceptor drum when checking the resistance.

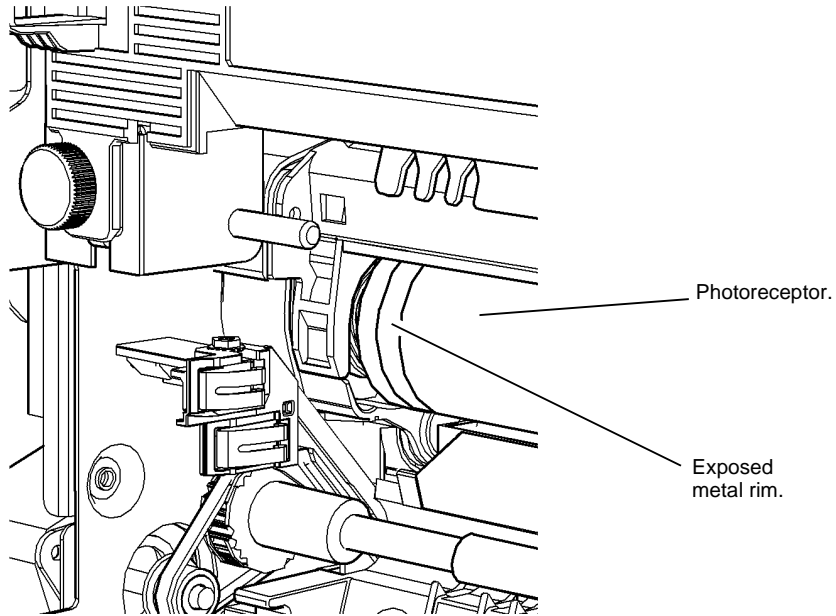
Refer to [Figure 10](#). Check for continuity of less than 20 ohms between the machine frame and the exposed metal rim at each end of the photoreceptor.

NOTE: *The print cartridge may have a residual coating on the exposed metal rim. Make sure good contact is made.*

To improve continuity, perform the steps that follow:

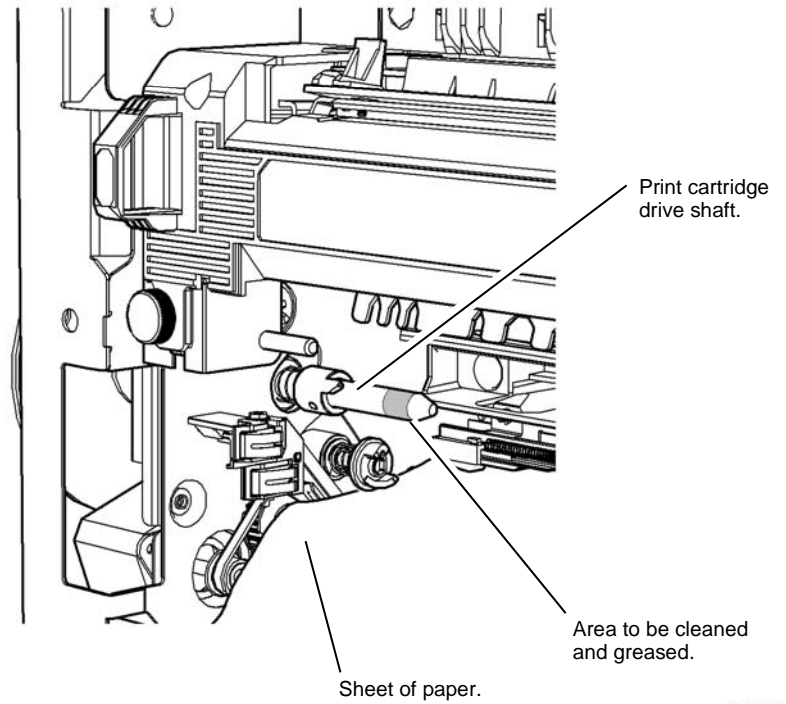
1. Remove the print cartridge, [PL 90.17 Item 9](#).
2. Put a sheet of paper beneath the print cartridge drive shaft, [Figure 11](#).

3. Use an abrasive cloth, [PL 26.10 Item 1](#) to clean the front end of the print cartridge drive shaft. Lubricate the cleaned area with high conductive grease, [PL 26.11 Item 9](#).
4. Re-assemble and test. If necessary, install a new print cartridge, [PL 90.17 Item 9](#).



X-1-1403-A

Figure 10 Print cartridge ground

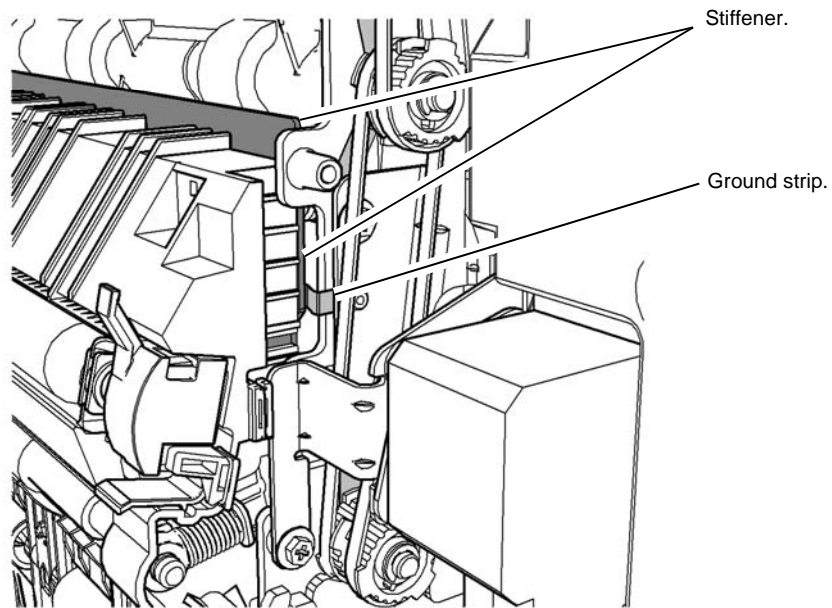


X-1-1402-A

Figure 11 Print cartridge drive shaft

Registration Transfer Ground

Refer to [Figure 12](#). Check for continuity of less than 10 ohms between the stiffener and the ground strip, [PL 80.22 Item 18](#). If necessary remove the stiffener (4 screws), clean the contact faces and re-assemble, to improve continuity.



X-1-1251-A

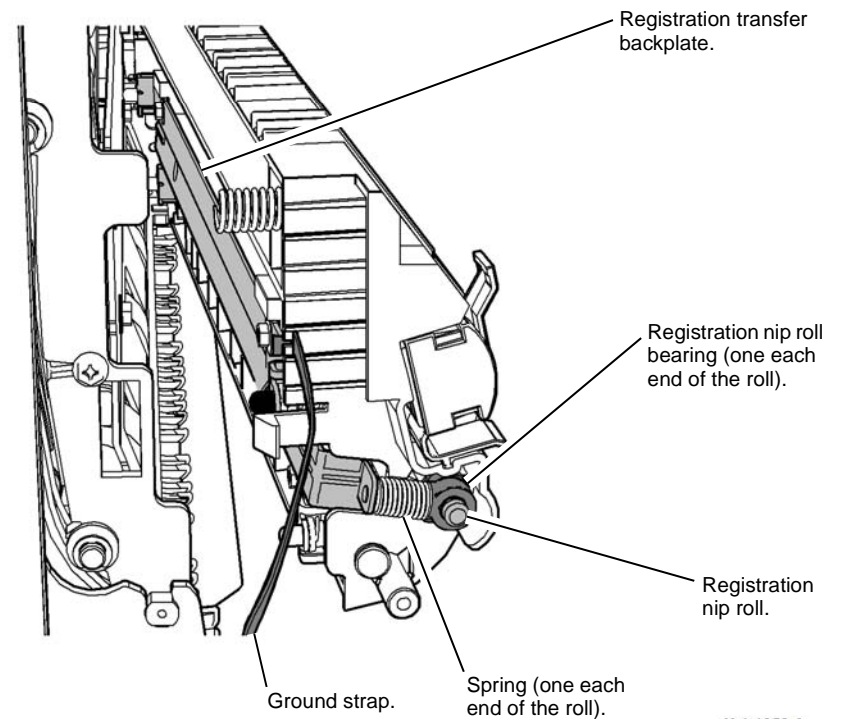
Figure 12 Stiffener ground

Refer to [Figure 12](#) and [Figure 13](#). Check for continuity of less than 10 ohms between the stiffener and the ground strap, [PL 80.15 Item 17](#). If necessary clean the contact faces to improve continuity.

Refer to [Figure 13](#). Check for continuity of less than 10 ohms between the registration transfer backplate and the ground strap, [PL 80.15 Item 17](#). If necessary remove the ground strap (1 screw), clean the contact faces and re-assemble, to improve continuity.

Refer to [Figure 13](#). Check for continuity of less than 10 ohms between the registration transfer backplate and the springs, [PL 80.15 Item 10](#). If necessary remove the springs, clean the contact faces and re-assemble, to improve continuity.

Refer to [Figure 13](#). Check for continuity of less than 2k ohms between the springs and the registration nip roll, [PL 80.15 Item 4](#). If necessary remove the springs, registration nip roll and registration nip roll bearings. Clean the contact faces and re-assemble, to improve continuity.

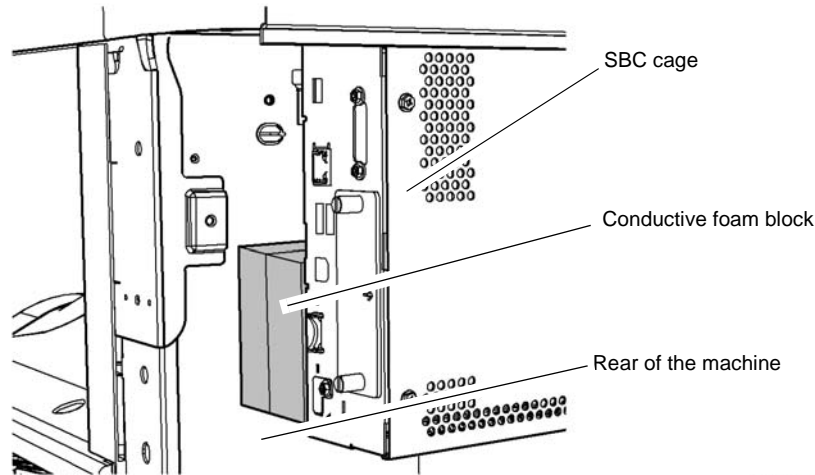


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Figure 13 Transfer ground

SBC Cage Ground

Refer to [Figure 14](#). The conductive foam blocks are installed only on european 50Hz machines for the protection of the SBC PWB. Ensure the the blocks are in good condition and making secure contact between the rear of the machine and the SBC cage. If necessary install a new conductive foam block, [PL 3.22 Item 26](#).



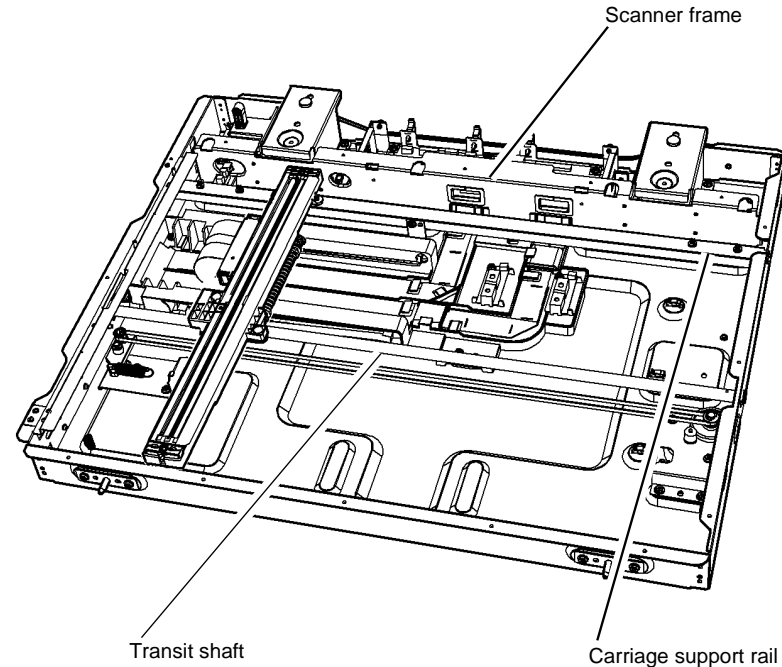
X-1-2021-A

Figure 14 SBC Cage

Scanner Module Ground

Refer to [Figure 15](#). Check the connections that follow:

- For continuity of less than 10 ohms between the scanner frame and the transit shaft. To improve continuity disassemble the parts, clean the contact faces and re-assemble.
- For continuity of less than 10 ohms between the scanner frame and the carriage support rail. To improve continuity disassemble the parts, clean the contact faces and re-assemble.
- The cleanliness of the foam pad between the scan carriage and the carriage support rail. If necessary clean the pad using film remover, [PL 26.10 Item 4](#).



X-1-1004-A

Figure 15 Scanner ground connections

SPDH Ground

Refer to [Figure 16](#) and [Figure 17](#). Perform the checks that follow:

- Check for continuity of less than 1 ohm between the SPDH frame and the Scanner module frame. The SPDH ground connection to the scanner module is via the left counterbalance, [PL 5.10 Item 4](#) and the right counterbalance, [PL 5.10 Item 2](#). To improve continuity, remove the SPDH, [REP 5.18](#) and clean the contact faces between the left and right counterbalance and the scanner frame, [Figure 15](#). Also remove the SPDH frame to the left counterbalance ground spring, [Figure 17](#) and clean the contact faces, then re-assemble.
- Check for continuity between the SPDH takeaway roll assembly, [PL 5.17 Item 1](#), the mid scan roll assembly, [PL 5.17 Item 3](#), the pre scan roll assembly, [PL 5.17 Item 4](#) and the ground terminals shown in [Figure 16](#). To improve continuity disconnect, clean and re-assemble the connections.
- Check for continuity between the feed motor housing and the left counterbalance. To improve continuity, remove the feed motor, [REP 5.12](#), clean the mounting surfaces and re-assemble.
- Check for continuity between the read motor housing and the left counterbalance. To improve continuity, remove the read motor, [REP 5.13](#), clean the mounting surfaces and re-assemble.

- Remove the input tray upper assembly, [REP 5.4](#), but do not disconnect the harness. Check for continuity between the ground point on the sensor mounting bracket, [PL 5.30 Item 12](#) and the input tray ground connection indicated in [Figure 17](#). To improve continuity disconnect, clean and reassemble the connections.
- Check for continuity between the frame ground point and the SPDH PWB ground point [Figure 17](#). To improve continuity disconnect, clean and reassemble the connections.

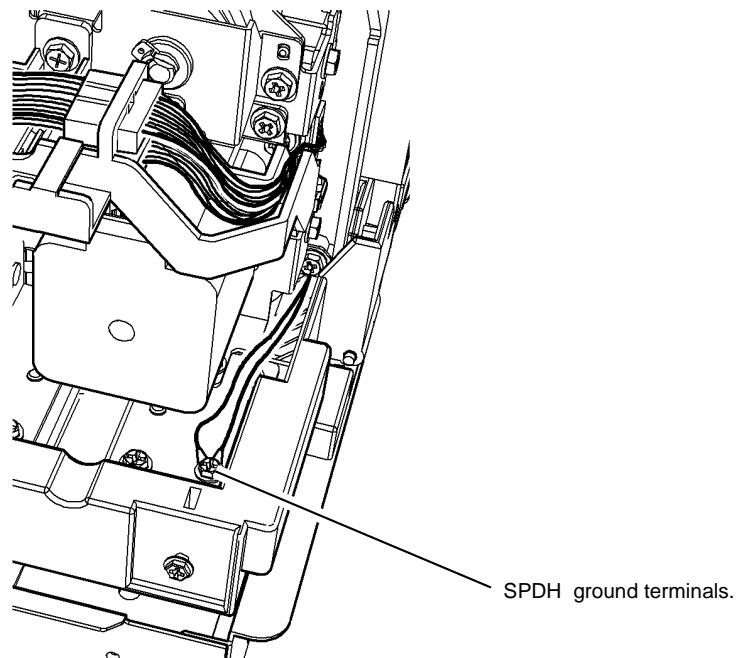


Figure 16 SPDH ground connections 1

X-1-0993-A

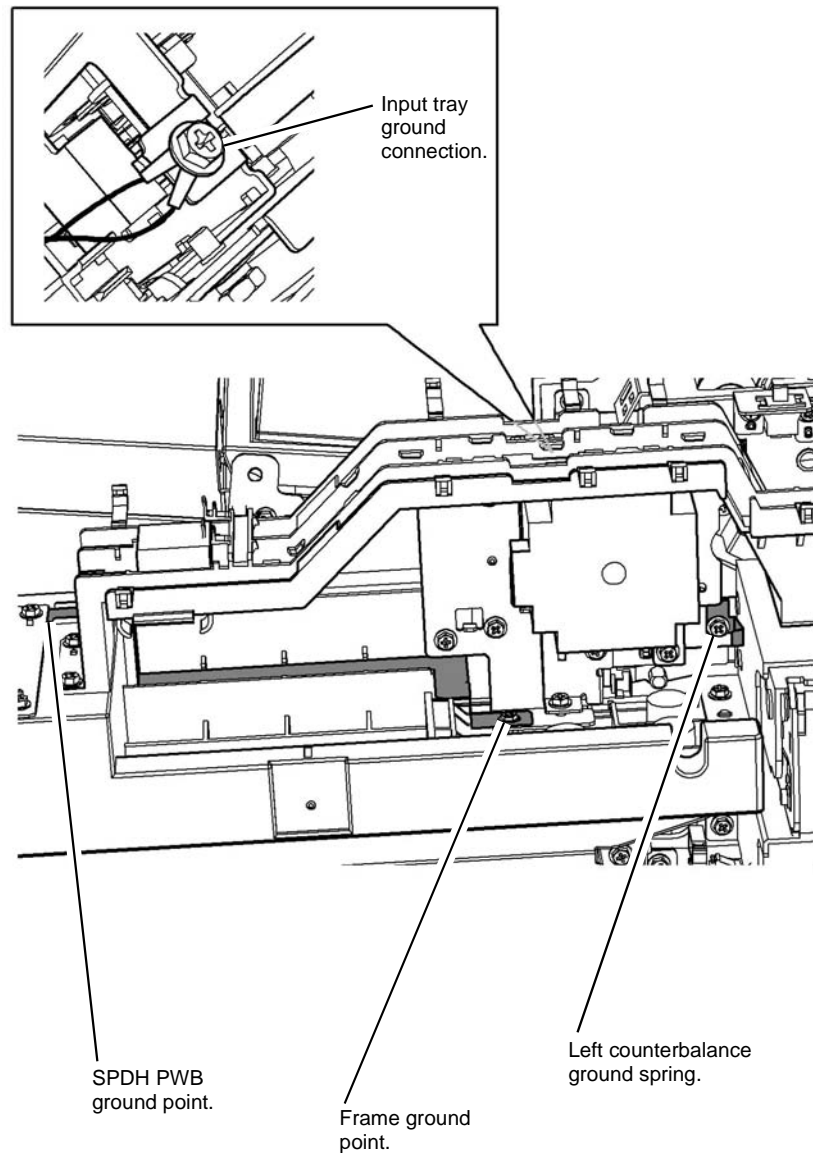
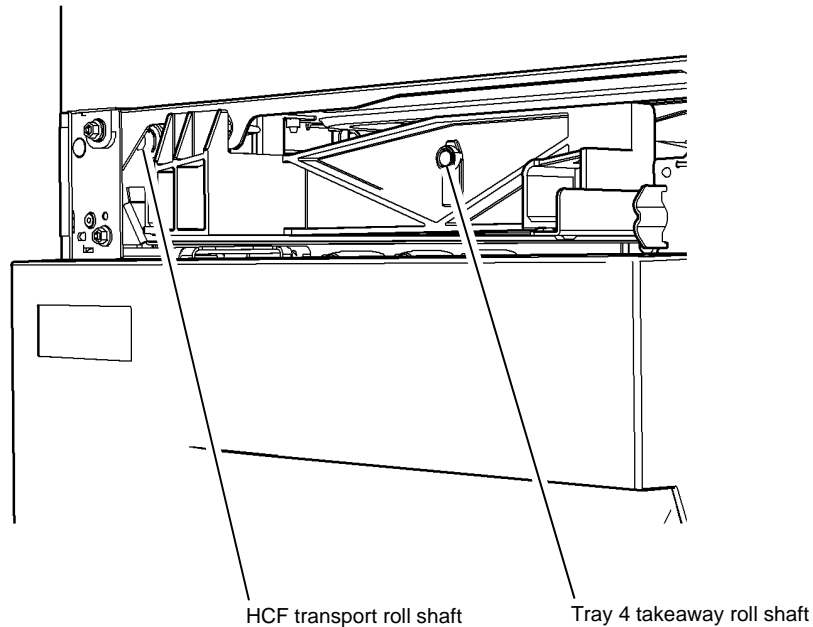


Figure 17 SPDH ground connections 2

X-1-0994-A

Tray 3 and 4 Ground

Remove the tray 4 front cover, [PL 70.26 Item 5](#) (4 screws). Refer to [Figure 18](#). With tray 4 closed, check for continuity of less than 10k ohms between the tray 4 takeaway roll shaft and the main frame ground connection, also between the HCF transport roll shaft and the main frame ground connection, [Figure 5](#).

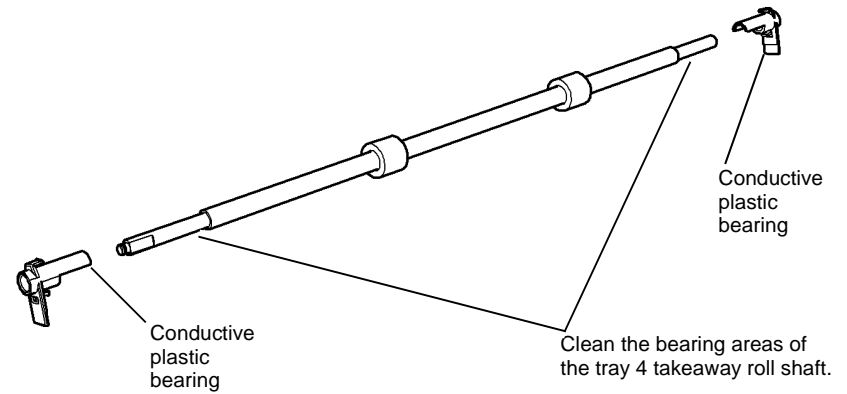


X-1-0997-A

Figure 18 Continuity check points

1. If necessary, open the tray then rotate the shafts. Close the tray and repeat the measurements.
2. To improve continuity, remove the tray 4 takeaway roll, [REP 80.26](#). Refer to [Figure 19](#). Clean the conductive plastic bearings and shaft. Then install the removed components.

Clean inside and outside of the conductive plastic bearings.

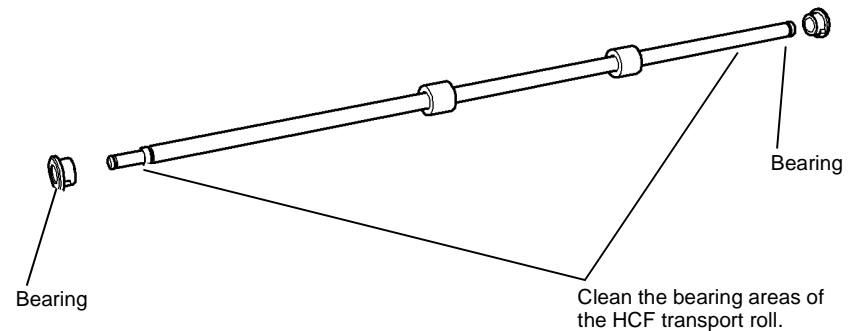


X-1-0998-A

Figure 19 Component cleaning

3. To improve continuity, remove the HCF transport roll and bearings, [REP 80.27](#). Refer to [Figure 20](#). Clean the bearings and shaft. Then install the removed components.

Clean inside and outside of the conductive plastic bearings.

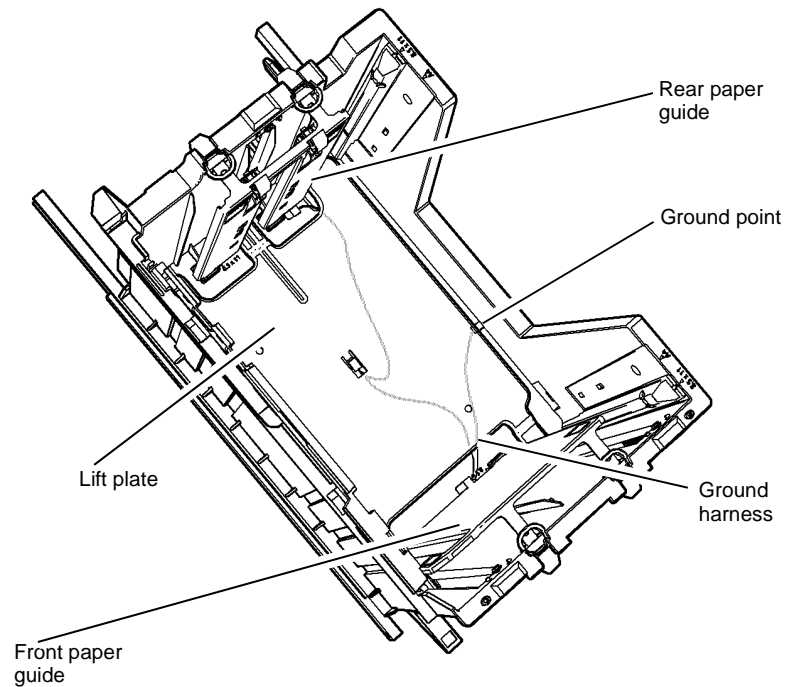


X-1-0999-A

Figure 20 Component cleaning

4. Empty tray 4 of paper. Refer to [Figure 21](#). Check for continuity of less than 10k ohms between the ground point and the points that follow:
- Lift plate.
 - Front paper guide
 - Rear paper guide.

To improve continuity, disconnect and clean the ground harness connectors, then re-connect.

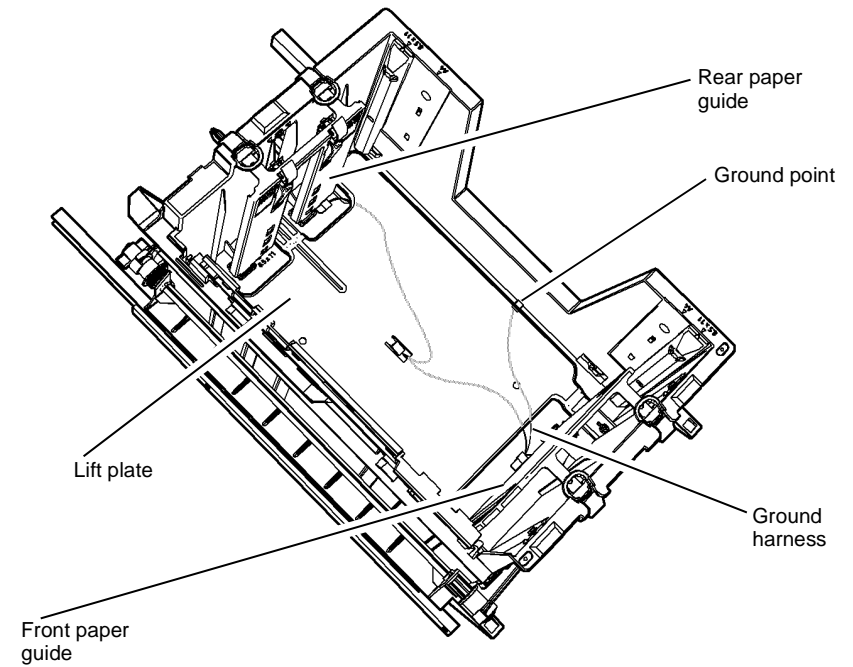


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Figure 21 Tray 4 grounding

5. Empty tray 3 of paper. Refer to [Figure 22](#). Check for continuity of less than 10k ohms between the ground point and the points that follow:
- Lift plate.
 - Front paper guide
 - Rear paper guide.

To improve continuity, disconnect and clean the ground harness connectors, then re-connect.



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Figure 22 Tray 3 grounding

Tray 6 Ground

Refer to [Figure 23](#). Check the ground connection on the frame, the elevator motor and on the base of the paper tray. Ensure that the in-line connectors are fully connected.

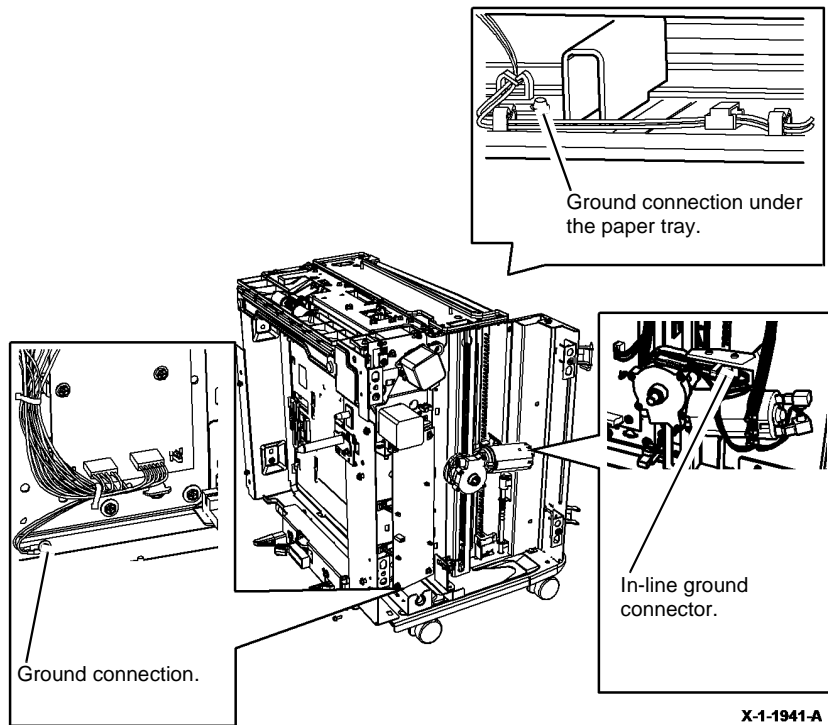


Figure 23 Tray 6 grounding

301B 0V Distribution RAP

Use this RAP to identify 0V distribution faults.

Procedural Notes

- If a voltage is measured between ground and a return 0V line, then the continuity of that 0V circuit must be checked.
- To isolate a 0V distribution fault, perform the checks that follow:
 1. Check the continuity of a harness while the harness is disconnected at both ends. This is to ensure that other wiring does not cause false continuity readings.
 2. Check the continuity and perform a visual inspection of each connection sequentially, back to its source.
 3. Check that any in-line connectors are installed correctly.
 4. Check that all connectors are mechanically good. Check crimping for suspect electrical connections or any mechanical failure that could cause a failed or poor electrical contact, [GP 7](#). Refer to [REP 1.2](#) for information concerning wiring harness repairs.
- The expression 'return' is used to identify the 0V line that completes the circuit for a particular voltage.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Go to the 0V circuit that has the suspect problem:

- +3.3V Return
- +5V Return
- +12V Return
- +24V Return

+3.3V Return

Go to the appropriate component in the list that follows that has the suspect 0V supply. Check the wiring [GP 7](#).

- IOT PWB, [PL 1.10 Item 2](#).
 - [Flag 1](#), [P/J776](#), [P/J654](#).
- Bypass tray width sensor, [Q74-350, PL 70.35 Item 8](#).
 - [Flag 3](#), [P/J585](#), [P/J709](#), [P/J708](#), [P/J706](#), [P/J705](#), [P/J750](#).
 - [Flag 1](#), [P/J776](#), [P/J654](#).
- SBC PWB [PL 3.22 Item 3](#).
 - [Flag 2](#), [P/J850](#), [P/J655](#).
- Fax connector PWB, [PL 20.05 Item 4](#).
 - [Flag 4](#), [P/J1](#), [P/J880](#).
 - [Flag 2](#), [P/J850](#), [P/J655](#).
- Fax module, [PL 20.05 Item 1](#).
 - [Flag 4](#), [P/J1](#), [P/J880](#).

- Flag 2, P/J850, P/J655.
- Foreign device interface PWB, PL 3.22 Item 18.
 - Flag 5, P/J16, P/J881.
 - Flag 2, P/J850, P/J655.
- Foreign device.
 - Flag 7, PJ124 , P/J100.
 - Flag 5, P/J16, P/J881.
 - Flag 2, P/J850, P/J655.
- Scanner PWB, PL 60.20 Item 4.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- DH angle sensor, Q62-301, PL 60.20 Item 7.
 - Flag 9, CN9.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Platen down sensor, Q62-019, PL 60.20 Item 7.
 - Flag 10, CN9.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Carriage home sensor, Q62-100, PL 60.20 Item 7.
 - Flag 11, CN9.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- SPDH PWB, PL 5.10 Item 5.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Width sensor 1, Q05-325, PL 5.30 Item 5.
 - Flag 12, CN35.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Width sensor 2, Q05-326, PL 5.30 Item 5.
 - Flag 13, CN35.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Width sensor 3, Q05-327, PL 5.30 Item 5.
 - Flag 14, CN35.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Length sensor 1, Q05-315, PL 5.30 Item 5.
 - Flag 15, CN35.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Length sensor 2, Q05-320, PL 5.30 Item 5.
 - Flag 16, CN35.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Registration sensor, Q05-340, PL 5.18 Item 9.
 - Flag 17, CN36.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Side 2 registration sensor, Q05-343, PL 5.18 Item 9.
 - Flag 18, CN36.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Calibration home position sensor, Q05-360, PL 5.18 Item 10.
 - Flag 19, CN36.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Document present LED PWB, PL 5.19 Item 22.
 - Flag 20, CN36.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Feed sensor, Q05-330, PL 5.20 Item 9.
 - Flag 21, CN37.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Takeaway sensor, Q05-335, PL 5.20 Item 9.
 - Flag 22, CN37.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Stack height sensor, Q05-310, PL 5.20 Item 4.
 - Flag 23, CN37.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.

- Flag 2, P/J850, P/J655.
- Top cover interlock switch, S05-305, PL 5.10 Item 13.
 - Flag 24, CN38.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Document present sensor, Q05-309, PL 5.30 Item 6.
 - Flag 25, CN40.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Lift home position sensor, Q05-307, PL 5.30 Item 5.
 - Flag 26, CN40.
 - Flag 8, CN12, CN3.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.

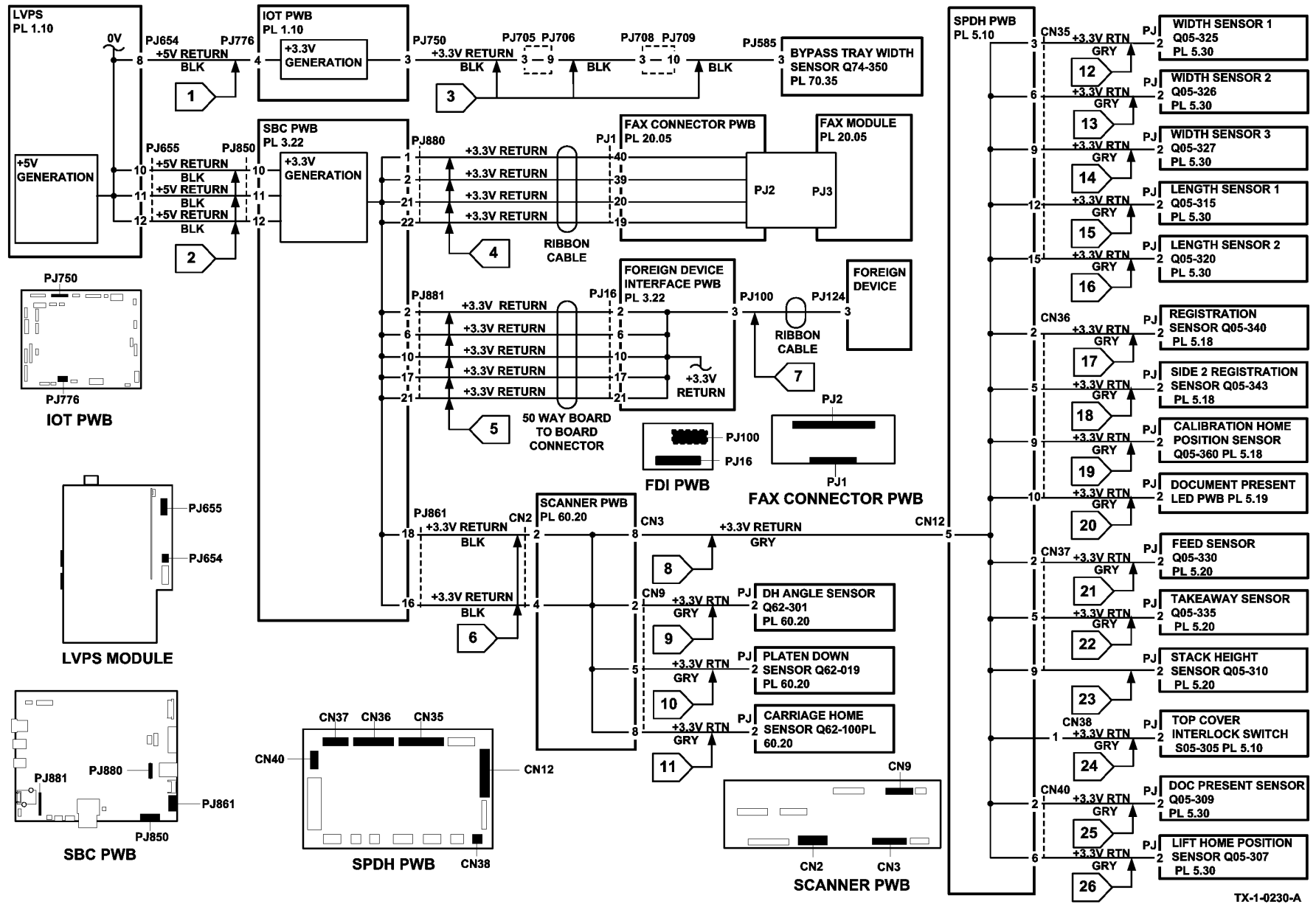


Figure 1 +3.3V return

+5V Return

Go to the appropriate component in the list that follows that has the suspect 0V supply. Check the wiring GP 7.

- IOT PWB, PL 1.10 Item 2.
 - Flag 27, P/J776, P/J654.
- Tray 1 stack height sensor, Q71-330, PL 80.26 Item 8.
 - Flag 38, P/J541, P/J279.
 - Flag 29, P/180, P/J751.
 - Flag 27, P/J776, P/J654.
- Tray 1 empty sensor, Q71-320, PL 80.26 Item 7.
 - Flag 39, P/J542, P/J279.
 - Flag 30, P/J180, P/J751.
 - Flag 27, P/J776, P/J654.
- Tray 2 stack height sensor, Q72-330, PL 80.26 Item 8.
 - Flag 40, P/J546, P/J200.
 - Flag 31, P/J177, P/J751.
 - Flag 27, P/J776, P/J654.
- Tray 2 empty sensor, Q72-320, PL 80.26 Item 7.
 - Flag 41, P/J547, P/J200.
 - Flag 32, P/J177, P/J751.
 - Flag 27, P/J776, P/J654.
- USB harness (left column upper cover), PL 2.10 Item 8.
 - Flag 33, P/J911, P/J935.
 - Flag 33, P/J911, P/J867.
 - Flag 28, P/J850, P/J655.
- Scanner PWB, PL 60.20 Item 4.
 - Flag 34, CN2, P/J861.
 - Flag 28, P/J850, P/J655.
- Document size sensor 2, Q62-253, PL 60.20 Item 3.
 - Flag 42, CN9.
 - Flag 34, CN2, P/J861.
 - Flag 28, P/J850, P/J655.
- Document size sensor 1, Q62-251, PL 60.20 Item 3.
 - Flag 43, CN9.
 - Flag 34, CN2, P/J861.
 - Flag 28, P/J850, P/J655.
- SPDH PWB, PL 5.10 Item 5.
 - Flag 44, CN3, CN12.
 - Flag 34, CN2, P/J861.
 - Flag 28, P/J850, P/J655.
- User interface PWB, PL 2.10 Item 15.
 - Flag 35, P/J921, P/J864.
 - Flag 28, P/J850, P/J655.
- Fax connector PWB, PL 20.05 Item 4.
 - Flag 36, P/J1, P/J880.
 - Flag 28, P/J850, P/J655.
- Fax module PL 20.05 Item 1.
 - Flag 45, P/J3, P/J2.
 - Flag 36, P/J1, P/J880.
 - Flag 28, P/J850, P/J655.
- Hard disk drive PL 3.22 Item 2.
 - Flag 37, P/J211, P/J852.
 - Flag 28, P/J850, P/J655.
- HCF exit sensor, Q81-108, PL 80.32 Item 3.
 - Flag 54, P/J516, P/J755.
 - Flag 27, P/J776, P/J654.
- Tray 3 empty sensor, Q73-320, PL 80.32 Item 3.
 - Flag 55, P/J517, P/J713.
 - Flag 47, P/J712, P/J755.
 - Flag 27, P/J776, P/J654.
- Tray 3 feed sensor, Q81-103, PL 80.32 Item 3.
 - Flag 56, P/J518, P/J713.
 - Flag 46, P/J712, P/J755.
 - Flag 27, P/J776, P/J654.
- Tray 3 stack height sensor, Q73-330, PL 80.32 Item 6.
 - Flag 57, P/J519, P/J713.
 - Flag 48, P/J712, P/J755.
 - Flag 27, P/J776, P/J654.
- Tray 3 home sensor, Q73-300, PL 70.21 Item 4.
 - Flag 58, P/J520, P/J713.
 - Flag 49, P/J712, P/J755.
 - Flag 27, P/J776, P/J654.
- Tray 4 exit sensor, Q81-150, PL 80.33 Item 6.
 - Flag 59, P/J572, P/J786.
 - Flag 27, P/J776, P/J654.
- Tray 4 feed sensor, Q81-104, PL 80.33 Item 6.
 - Flag 60, P/J201, P/J4.
 - Flag 50, P/J571, P/J786.
 - Flag 27, P/J776, P/J654.
- Tray 4 empty sensor, Q74-320, PL 80.33 Item 6.
 - Flag 61, P/J201, P/J3.
 - Flag 51, P/J571, P/J786.
 - Flag 27, P/J776, P/J654.
- Tray 4 stack height sensor, Q74.330, PL 80.33 Item 7.
 - Flag 62, P/J201, P/J5.
 - Flag 52, P/J571, P/J786.

- Flag 27, P/J776, P/J654.
- Tray 4 home sensor, Q74-300, PL 70.21 Item 4.
 - Flag 63, P/J201, P/J2.
 - Flag 53, P/J571, P/J786.
 - Flag 27, P/J776, P/J654.
- Toner cartridge PWB, PL 90.17 Item 12.
 - Flag 64, P/J245, P/J782.
 - Flag 27, P/J776, P/J654.
- CRUM, part of the fuser module, PL 10.8 Item 1.
 - Flag 75, P/J141, P/J741, P/J740, P/J513, P/J187.
 - Flag 65, P/J188, P/J766.
 - Flag 27, P/J776, P/J654.
- CRUM, part of the print cartridge assembly, PL 90.17 Item 9.
 - Flag 75, P/J513, P/J187.
 - Flag 65, P/J188, P/J766.
 - Flag 27, P/J776, P/J654.
- Toner concentration sensor, part of the print cartridge assembly, PL 90.17 Item 9.
 - Flag 76, P/J510, P/J187.
 - Flag 66, P/J188, P/J766.
 - Flag 27, P/J776, P/J654.
- Duplex sensor, Q83-160, PL 80.10 Item 8.
 - Flag 77, P/J580, P/J226.
 - Flag 67, P/J711, P/J759.
 - Flag 27, P/J776, P/J654.
- Tray 1 TAR sensor, Q81-001, PL 80.10 Item 5.
 - Flag 78, P/J584, P/J226.
 - Flag 68, P/J711, P/J750.
 - Flag 27, P/J776, P/J654.
- Tray 2 TAR sensor, Q82-001, PL 80.10 Item 5.
 - Flag 79, P/J583, P/J226.
 - Flag 69, P/J711, P/J750.
 - Flag 27, P/J776, P/J654.
- Bypass tray empty sensor, Q75-320 PL 70.35 Item 5.
 - Flag 80, P/J586, P/J709.
 - Flag 87, P/J708, P/J706.
 - Flag 70, P/J705, P/J750.
 - Flag 27, P/J776, P/J654.
- Bypass tray elevate sensor, Q75-040, PL 70.35 Item 20.
 - Flag 81, P/J587, P/J709.
 - Flag 88, P/J708, P/J706.
 - Flag 71, P/J705, P/J750.
 - Flag 27, P/J776, P/J654.
- Post fuser sensor, Q10-120, PL 10.11 Item 7.
 - Flag 82, P/J972, P/J185.
 - Flag 72, P/J184, P/J761.
 - Flag 27, P/J776, P/J654.
- Offset sensor, Q10-300, PL 10.11 Item 8.
 - Flag 83, P/J971, P/J185.
 - Flag 73, P/J184, P/J761.
 - Flag 27, P/J776, P/J654.
- Horizontal transport entry sensor, Q10-041, PL 10.15 Item 7.
 - Flag 84, P/J960, P/J959.
 - Flag 74, P/J958, P/J773.
 - Flag 27, P/J776, P/J654.
- Registration sensor, Q82-150, PL 80.17 Item 7.
 - Flag 85, P/J984, P/J763.
 - Flag 27, P/J776, P/J654.
- Environmental sensors PWB, PL 90.15 Item 4.
 - Flag 86, P/J982, P/J763.
 - Flag 27, P/J776, P/J654.

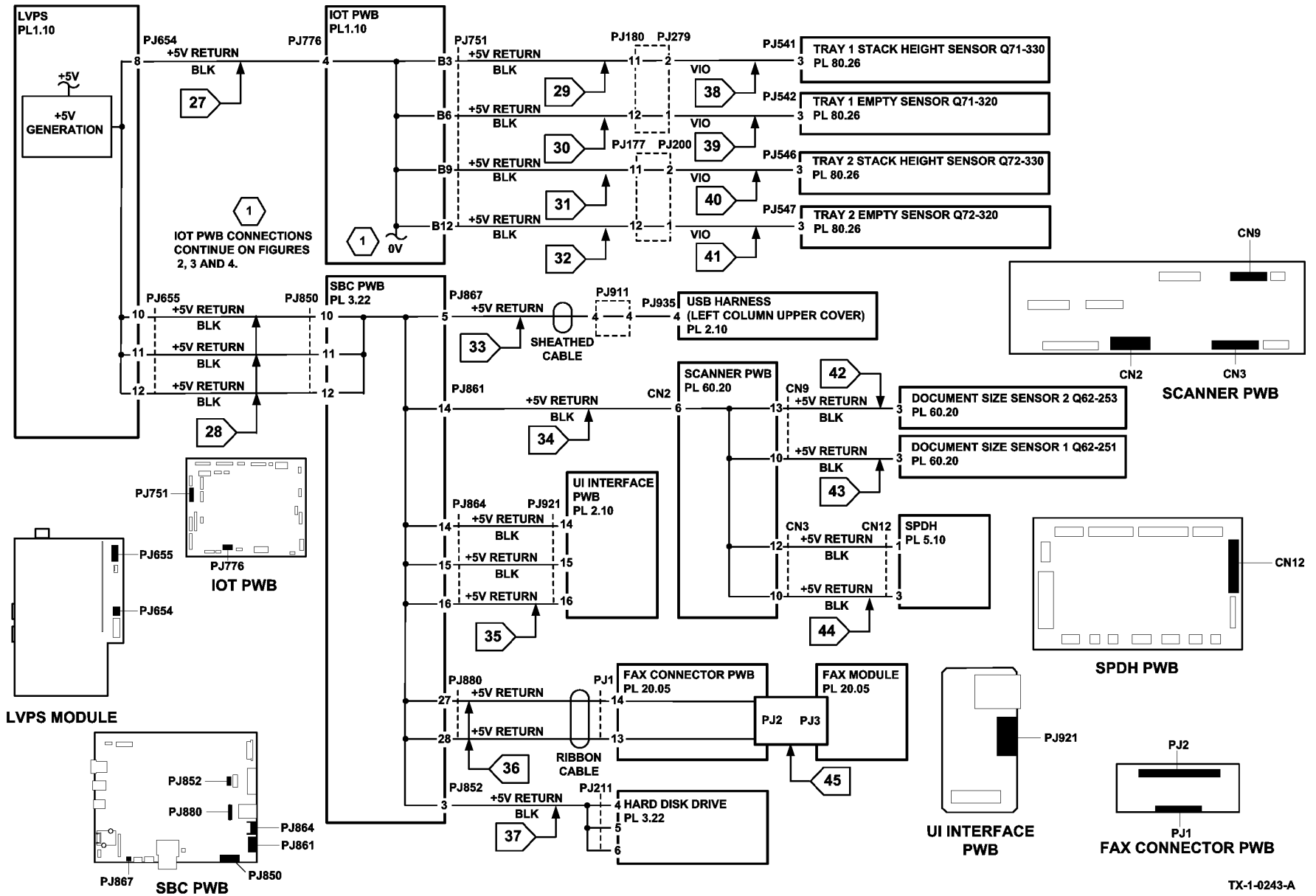
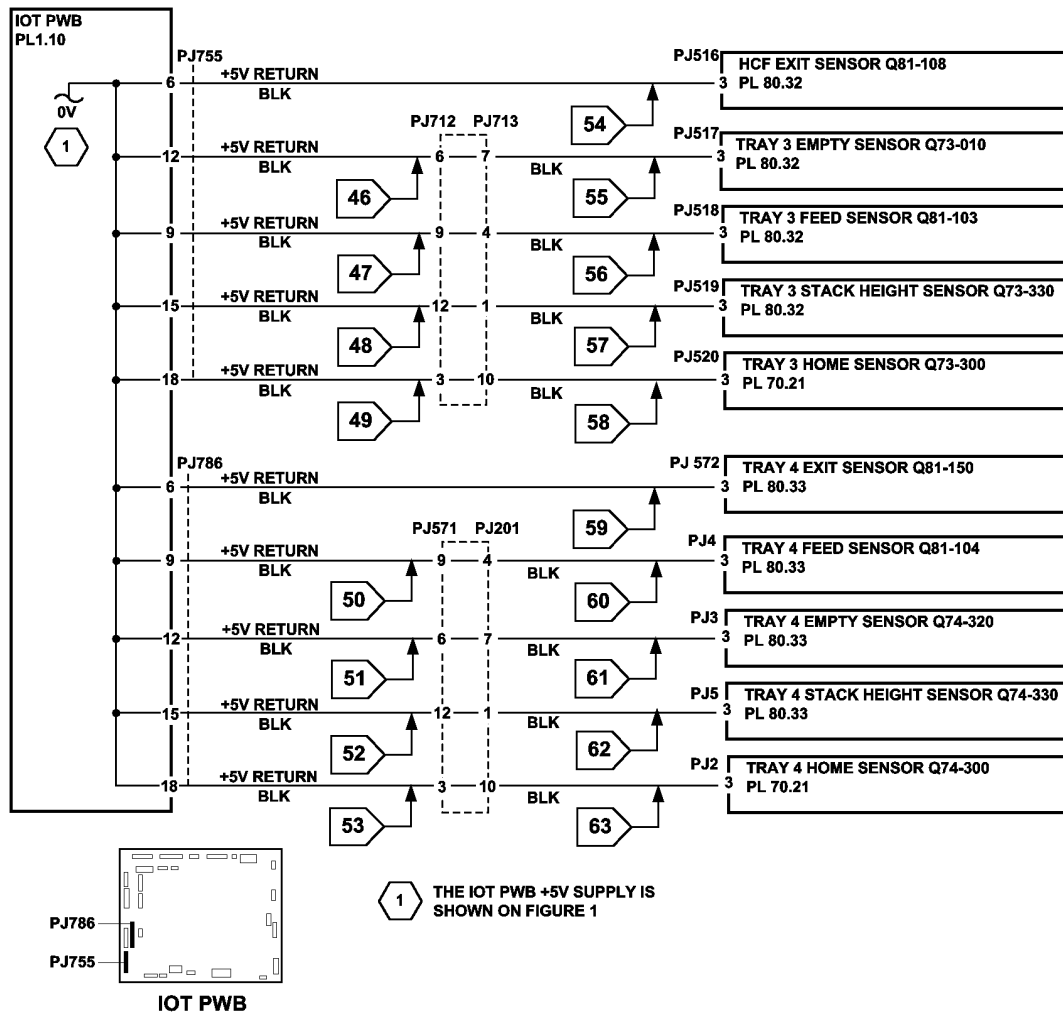
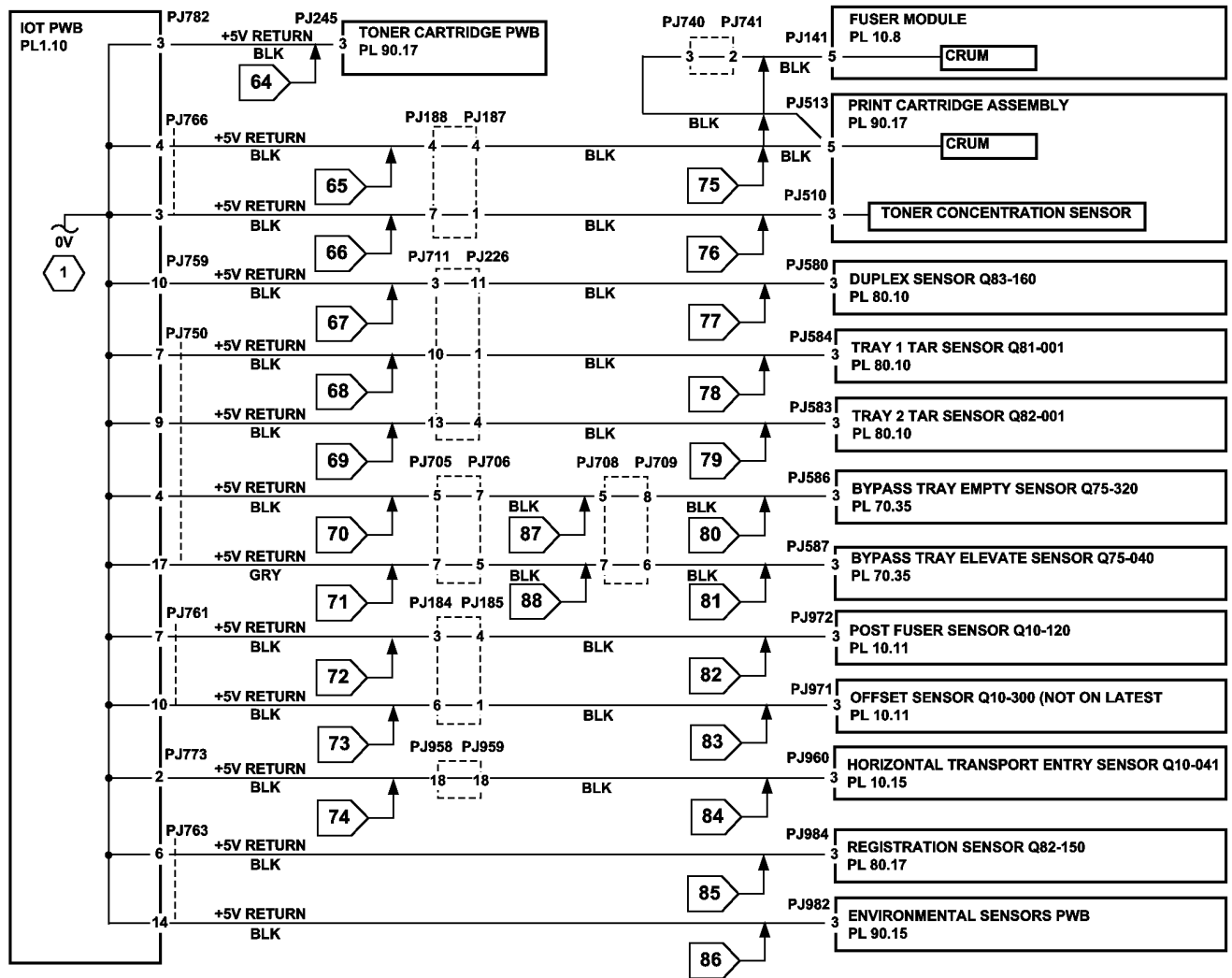


Figure 2 +5V return 1 of 3



TX-1-0244-A

Figure 3 +5V return 2 of 3



1 THE IOT PWB +5V SUPPLY IS SHOWN ON FIGURE 1

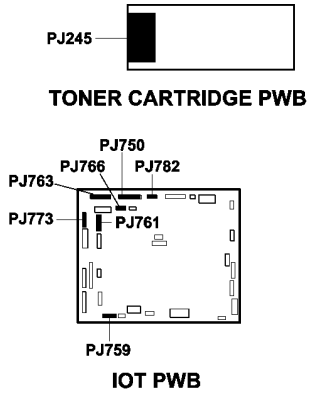


Figure 4 +5V return 3 of 3

+12V Return

Go to the appropriate component in the list that follows that has the suspect 0V supply. Check the wiring GP 7.

- SPDH PWB, PL 5.10 Item 5.
 - Flag 90, CN3, CN12.
 - Flag 89, CN2, P/J861.
- Scanner PWB, PL 60.20 Item 4.
 - Flag 89, CN2, P/J861.

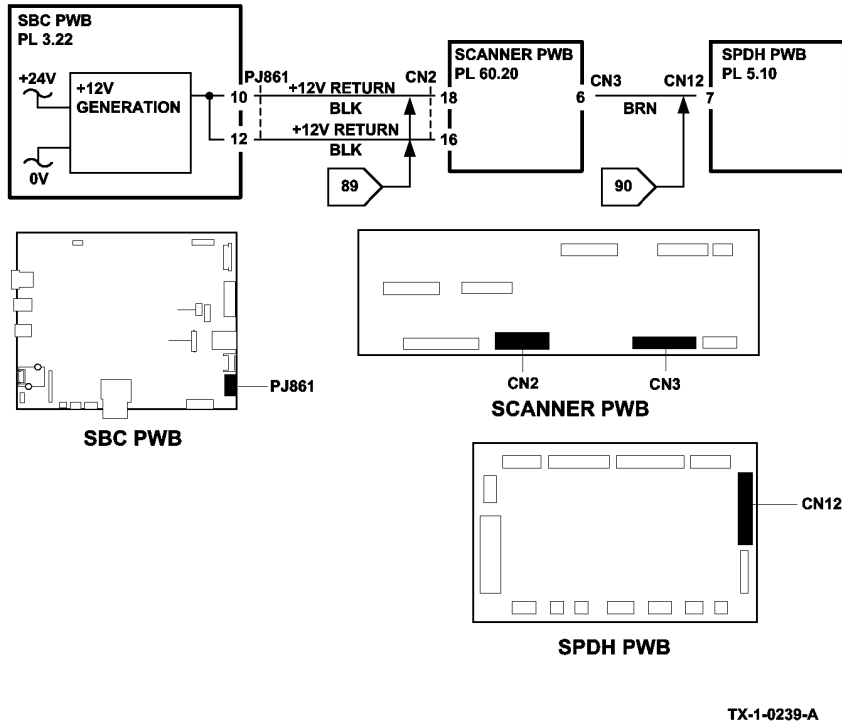


Figure 5 +12V Return

+24V Return

Go to the appropriate component in the list that follows that has the suspect 0V supply. Check the wiring GP 7.

- IOT PWB, PL 1.10 Item 2.
 - Flag 91, P/J776, P/J654.
- HVPS, PL 1.10 Item 3.
 - Flag 92, P/J830, P/J769.
 - Flag 91, P/J776, P/J654.

- Toner cartridge motor, part of the toner dispense module, PL 90.17 Item 1.
 - Flag 93, P/J512, P/J767.
 - Flag 91, P/J776, P/J654.
- SBC PWB, PL 3.22 Item 3.
 - Flag 94, P/J850, P/J655.
- Scanner PWB, PL 60.20 Item 4.
 - Flag 95, CN2, P/J861.
 - Flag 94, P/J850, P/J655.
- SPDH PWB, PL 5.10 Item 5.
 - Flag 96, CN12, CN3.
 - Flag 95, CN2, P/J861.
 - Flag 94, P/J850, P/J655.

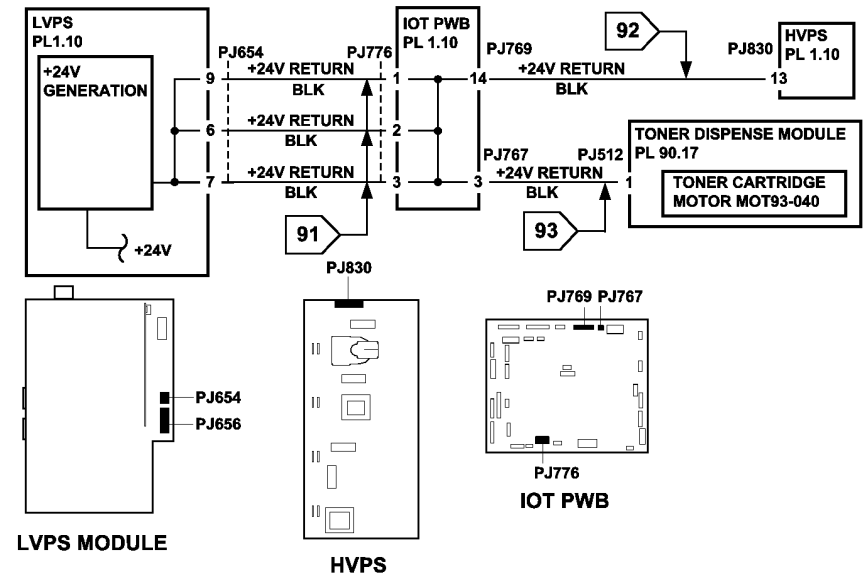
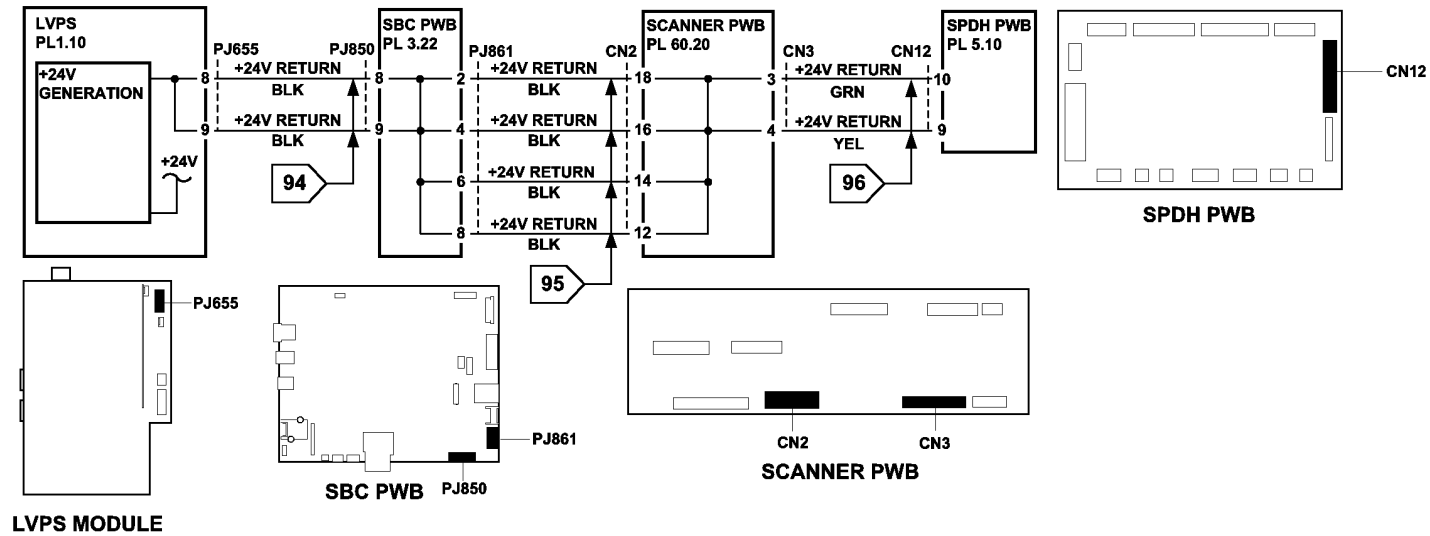


Figure 6 +24V return 1 of 2



TX-1-0247-A

Figure 7 +24V return 2 of 2

301C AC Power RAP

Use this RAP to identify AC power input and output failures.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



CAUTION

Incorrect voltage may damage the machine. The machine must not be connected to the power outlet if the voltage is incorrect.



WARNING

Take care when measuring AC mains (line) voltage. Electricity can cause death or injury.

Check the AC mains (line) voltage at the customer power outlet. The voltage measured is within the electrical power requirements, GP 22.

Y N

If the voltage is incorrect, or the wiring of the main supply is found to be defective, inform your technical manager and the customer. Do not attempt to repair or adjust the customer supply.

Check the main power cord for continuity and damage. The main power cord is good.

Y N

Install a new main power cord, PL 1.10 Item 8.

Switch on the machine, GP 14. Go to Flag 1. Measure the voltage at the power outlet, P/J652, Figure 1. The voltage measured is within the electrical power requirements, GP 22.

Y N

Go to Flag 2. Check for the AC voltage at P/J650 on the LVPS, Figure 1. The AC voltage is present.

Y N

Switch off the machine, GP 14. Disconnect the power cord from the LVPS. Measure the resistance between ACL and ACN at P/J651 on the LVPS, Figure 1. The resistance reading is greater than 1M Ohms.

Y N

Remove the fuser module. On the fuser module, measure the resistance between pins 8 and 7 and 8 and 9. Refer to Figure 3. The reading is 3 to 9 ohms.

Y N

Install a new fuser module, PL 10.8 Item 1. If the fault persists, perform the 301L LVPS RAP.

Go to Flag 2. Check the wire harness between P/J650 and PJ100, Figure 2. The harness is good.

A B C

A B C

Y N

Install a new fuser connector assembly, PL 10.8 Item 3. If the fault persists, perform the 301L LVPS RAP.

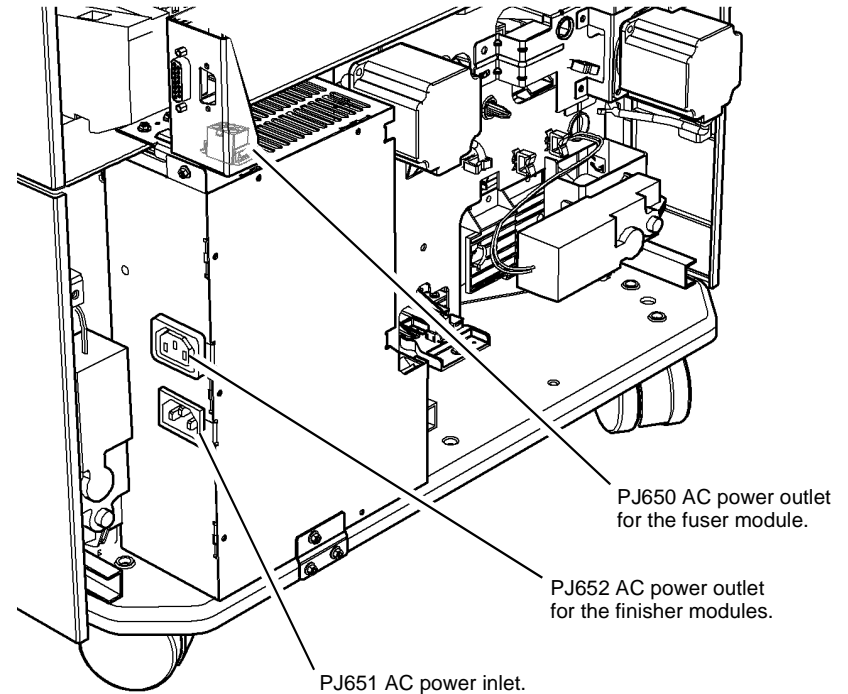
Perform the 301L LVPS RAP.

Perform the 301L LVPS RAP.

Perform the 301L LVPS RAP.

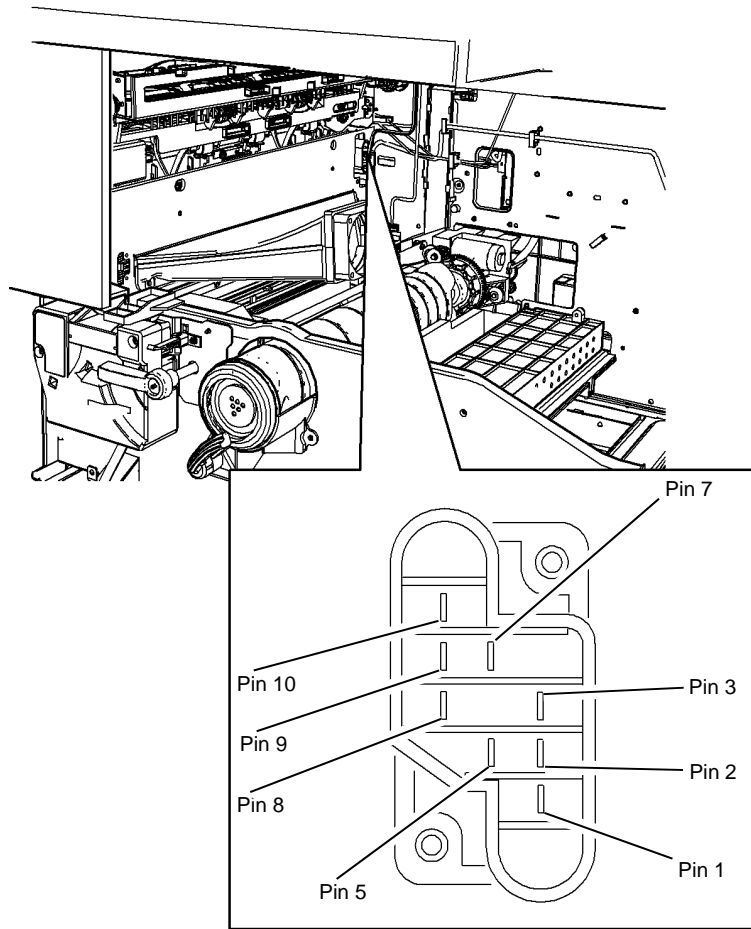
Check the power cords to the output device:

- 2K LCSS, PL 12.75 Item 8.
- HVF BM, PL 12.140 Item 4.
- LVF BM, PL 12.425 Item 4.



X-1-1006-A

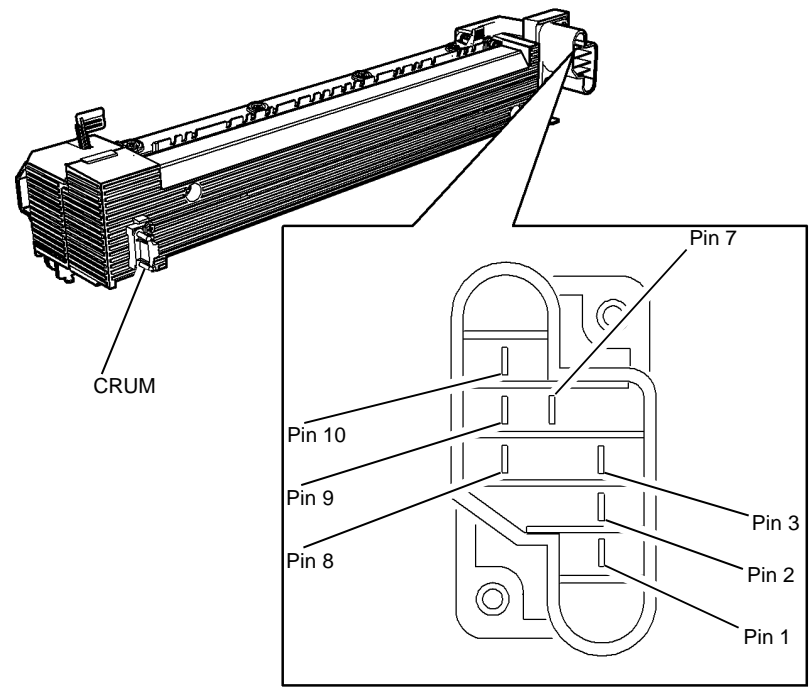
Figure 1 AC input and output



P/J100

X-1-1007-A

Figure 2 Supply to the fuser module



CRUM

P/J 100

X-1-1008-A

Figure 3 Fuser module

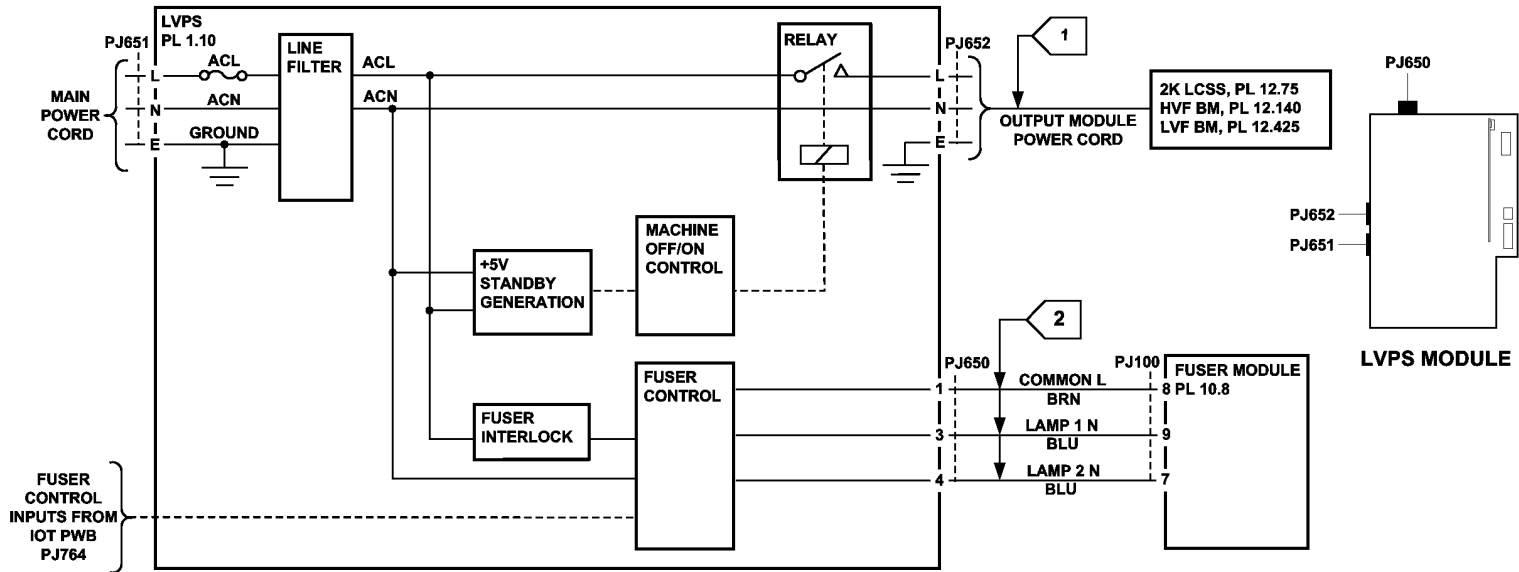


Figure 4 AC circuit diagram

TX-1-0242-A

301D +3.3V Distribution RAP

Use this RAP to identify +3.3V distribution problems.

NOTE: Short circuit or overload of the +3.3V supply from the IOT PWB will result in all +3.3V outputs off from IOT PWB only.

NOTE: Short circuit or overload of the +3.3V supply from the SBC PWB will result in all +3.3V outputs off from SBC PWB only.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to Figure 1. Go to the appropriate component in the list that follows that has a suspect +3.3V supply. Check the wiring, GP 7.

- IOT PWB, PL 1.10 Item 2.
 - Flag 1, P/J776, P/J654.
- Bypass tray width sensor Q75-601, part of the bypass tray, PL 70.35 Item 8.
 - Flag 3, P/J585, P/J218, P/J217, P/J199, P/J198, P/J750.
 - Flag 1, P/J776, P/J654.
- SBC PWB, PL 3.22 Item 3.
 - Flag 2, P/J850, P/J655.
- Fax connector PWB, PL 20.05 Item 4.
 - Flag 4, P/J1, P/J880.
 - Flag 2, P/J850, P/J655.
- Fax module, PL 20.05 Item 1.
 - Flag 4, P/J3, P/J2, P/J1, P/J880.
 - Flag 2, P/J850, P/J655.
- Foreign device interface PWB, PL 3.22 Item 18.
 - Flag 5, P/J16, P/J881.
 - Flag 2, P/J850, P/J655.
- Foreign device.
 - Flag 11, P/J124, P/J100.
 - Flag 5, P/J16, P/J881.
 - Flag 2, P/J850, P/J655.
- Scanner PWB, PL 60.20 Item 4.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- DH angle sensor, Q62-301, PL 60.20 Item 7.
 - Flag 8, CN9.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.

- Platen down sensor, Q62-019, PL 60.20 Item 7.
 - Flag 9, CN9.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Carriage home sensor, Q62-100, PL 60.20 Item 7.
 - Flag 10, CN9.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- SPDH PWB, PL 5.10 Item 5.
 - Flag 7, CN3, CN12.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Width sensor 1, Q05-325, PL 5.30 Item 5.
 - Flag 12, CN35.
 - Flag 7, CN3, CN12.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Width sensor 2, Q05-326, PL 5.30 Item 5.
 - Flag 13, CN35.
 - Flag 7, CN3, CN12.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Width sensor 3, Q05-327, PL 5.30 Item 5.
 - Flag 14, CN35.
 - Flag 7, CN3, CN12.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Length sensor 1, Q05-315, PL 5.30 Item 5.
 - Flag 15, CN35.
 - Flag 7, CN3, CN12.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Length sensor 2, Q05-320, PL 5.30 Item 5.
 - Flag 16, CN35.
 - Flag 7, CN3, CN12.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Registration sensor, Q05-340, PL 5.18 Item 9.
 - Flag 17, CN36.
 - Flag 7, CN3, CN12.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Side 2 registration sensor, Q05-343, PL 5.18 Item 9.

- Flag 18, CN36.
- Flag 7, CN3, CN12.
- Flag 6, CN2, P/J861.
- Flag 2, P/J850, P/J655.
- Calibration home position sensor, Q05-360, PL 5.18 Item 10.
 - Flag 19, CN36.
 - Flag 7, CN3, CN12.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Document present LED PWB, PL 5.19 Item 22.
 - Flag 20, CN36.
 - Flag 7, CN3, CN12.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Feed sensor, Q05-330, PL 5.20 Item 9.
 - Flag 21, CN37.
 - Flag 7, CN3, CN12.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Takeaway sensor, Q05-335, PL 5.20 Item 9.
 - Flag 22, CN37.
 - Flag 7, CN3, CN12.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Stack height sensor, Q05-310, PL 5.20 Item 4.
 - Flag 23, CN37.
 - Flag 7, CN3, CN12.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Top cover interlock switch, S05-305, PL 5.10 Item 13.
 - Flag 24, CN38.
 - Flag 7, CN3, CN12.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Document present sensor, Q05-309, PL 5.30 Item 6.
 - Flag 25, CN40.
 - Flag 7, CN3, CN12.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Lift home position sensor, Q05-307, PL 5.30 Item 5.
 - Flag 26, CN40.
 - Flag 7, CN3, CN12.
 - Flag 6, CN2, P/J861.
 - Flag 2, P/J850, P/J655.

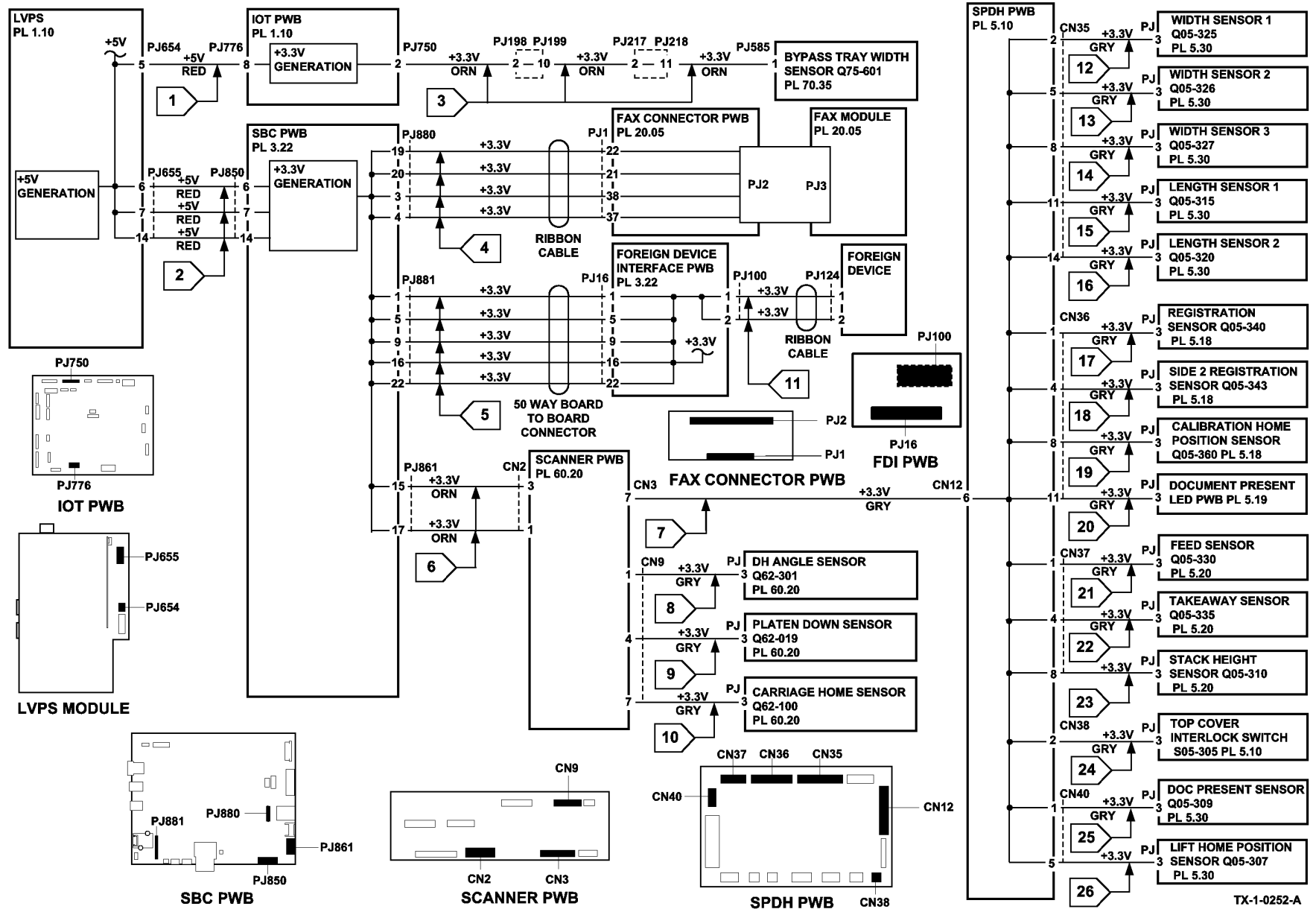


Figure 1 +3.3V distribution

301E +5V and +5VSB Distribution RAP

Use this RAP to identify +5V and +5VSB distribution problems.

NOTE:

- Short circuit or overload of +5VSB (standby) will result in all voltage outputs from the LVPS off. When the short circuit or overload is removed all the outputs will recover to normal operating voltages after 10 seconds.
- Short circuit or overload of +5V will result in +5V output from the LVPS off. When the short circuit or overload is removed the output will recover to normal operating voltage after 10 seconds.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Go to the appropriate component in the list that follows that has the suspect +5V supply. Check the wiring GP 7.

- IOT PWB, PL 1.10 Item 2.
 - Flag 1, P/J776, P/J654.
- Tray 1 stack height sensor, Q71-330, PL 80.26 Item 8.
 - Flag 7, P/J541, P/J279.
 - Flag 3, P/J180, P/J751.
 - Flag 1, P/J776, P/J654.
- Tray 1 empty sensor, Q71-320, PL 80.26 Item 7.
 - Flag 8, P/J542, P/J279.
 - Flag 4, P/J180, P/J751.
 - Flag 1, P/J776, P/J654.
- Tray 2 stack height sensor, Q72-330, PL 80.26 Item 8.
 - Flag 9, P/J546, P/J200.
 - Flag 5, P/J177 P/J751.
 - Flag 1, P/J776, P/J654.
- Tray 2 empty sensor, Q72-320, PL 80.26 Item 7.
 - Flag 10, P/J547, P/J200.
 - Flag 6, P/J180, P/J751.
 - Flag 1, P/J776, P/J654.
- SBC PWB (+5V and +5VSB), PL 3.22 Item 3.
 - Flag 2, P/J850, P/J655.
- Left column upper cover USB, PL 2.10 Item 8.
 - Flag 11, P/J935, P/J911, P/J867.
 - Flag 2, P/J850, P/J655.
- Scanner PWB, PL 60.20 Item 4.
 - Flag 12, CN2, P/J861.
- Flag 2, P/J850, P/J655.
- Document size sensor 2, Q62-253, PL 60.20 Item 3.
 - Flag 16, CN9.
 - Flag 12, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- Document size sensor 1, Q62-251, PL 60.20 Item 3.
 - Flag 17, CN9.
 - Flag 12, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- SPDH PWB, PL 5.10 Item 5.
 - Flag 18, CN3, CN12.
 - Flag 12, CN2, P/J861.
 - Flag 2, P/J850, P/J655.
- UI Interface PWB, PL 2.10 Item 15 .
 - Flag 13, P/J921, P/J864.
 - Flag 2, P/J850, P/J655.
- Fax connector PWB, PL 20.05 Item 4.
 - Flag 14, P/J1, P/J880.
 - Flag 2, P/J850, P/J655.
- Fax module, PL 20.05 Item 1.
 - Flag 19, P/J3, P/J2.
 - Flag 14, P/J1, P/J880.
 - Flag 2, P/J850, P/J655.
- Hard disk drive, PL 3.22 Item 2.
 - Flag 15, P/J211, P/J852.
 - Flag 2, P/J850, P/J655.
- HCF exit sensor, Q81-108, PL 80.32 Item 3.
 - Flag 28, P/J516, P/J755.
 - Flag 1, P/J776, P/J654.
- Tray 3 empty sensor, Q73-320, PL 80.32 Item 3.
 - Flag 29, P/J3, P/J713.
 - Flag 20, P/J712, P/J755.
 - Flag 1, P/J776, P/J654.
- Tray 3 feed sensor, Q81-103, PL 80.32 Item 3.
 - Flag 30, P/J4, P/J713.
 - Flag 21, P/J712, P/J755.
 - Flag 1, P/J776, P/J654.
- Tray 3 stack height sensor, Q73-330, PL 80.32 Item 6.
 - Flag 31, P/J5, P/J713.
 - Flag 22, P/J712, P/J755.
 - Flag 1, P/J776, P/J654.
- Tray 3 home sensor, Q73-300, PL 70.21 Item 4.
 - Flag 32, P/J2, P/J713.

- Flag 23, P/J712, P/J755.
- Flag 1, P/J776, P/J654.
- Tray 4 exit sensor, Q81-150, PL 80.33 Item 6.
 - Flag 33, P/J572, P/J786.
 - Flag 1, P/J776, P/J654.
- Tray 4 feed sensor, Q81-104, PL 80.33 Item 6.
 - Flag 34, P/J4, P/J201.
 - Flag 24, P/J571, P/J786.
 - Flag 1, P/J776, P/J654.
- Tray 4 empty sensor, Q74-320, PL 80.33 Item 6.
 - Flag 35, P/J3, P/J201.
 - Flag 25, P/J571, P/J786.
 - Flag 1, P/J776, P/J654.
- Tray 4 stack height sensor, Q74-330, PL 80.33 Item 7.
 - Flag 36, P/J5, P/J201.
 - Flag 26, P/J571, P/J786.
 - Flag 1, P/J776, P/J654.
- Tray 4 home sensor, Q74-300, PL 70.21 Item 4.
 - Flag 37, P/J2, P/J201.
 - Flag 27, P/J571, P/J786.
 - Flag 1, P/J776, P/J654.
- Toner cartridge PWB, PL 90.17 Item 12.
 - Flag 38, P/J245, P/J782.
 - Flag 1, P/J776, P/J654.
- Fuser module (CRUM), PL 10.8 Item 1.
 - Flag 49, P/J409, P/J741, P/J740, P/J513, P/J187.
 - Flag 39, P/J188, P/J766.
 - Flag 1, P/J776, P/J654.
- Print cartridge assembly (CRUM), PL 90.17 Item 9.
 - Flag 49, P/J513, P/J187.
 - Flag 39, P/J188, P/J766.
 - Flag 1, P/J776, P/J654.
- Toner concentration sensor, part of the print cartridge assembly, PL 90.17 Item 9.
 - Flag 50, P/J510, P/J187.
 - Flag 40, P/J188, P/J766.
 - Flag 1, P/J776, P/J654.
- Duplex sensor, Q83-160, PL 80.10 Item 8.
 - Flag 51, P/J580, P/J226.
 - Flag 41, P/J711, P/J759.
 - Flag 1, P/J776, P/J654.
- Tray 1 TAR sensor, Q81-001, PL 80.10 Item 5.
 - Flag 52, P/J584, P/J226.
 - Flag 42, P/J711, P/J750.
- Flag 1, P/J776, P/J654.
- Tray 2 TAR sensor, Q82-001, PL 80.10 Item 5.
 - Flag 53, P/J583, P/J226.
 - Flag 43, P/J711, P/J750.
 - Flag 1, P/J776, P/J654.
- Bypass tray paper empty sensor, Q75-320, PL 70.35 Item 5.
 - Flag 54, P/J586, P/J709.
 - Flag 47, P/J708, P/J706.
 - Flag 44, P/J705, P/J750.
 - Flag 1, P/J776, P/J654.
- Bypass tray elevate sensor, Q75-040, PL 70.35 Item 20.
 - Flag 55, P/J587, P/J709.
 - Flag 48, P/J708, P/J706.
 - Flag 45, P/J705, P/J750.
 - Flag 1, P/J776, P/J654.
- Post fuser sensor, Q10-120, PL 10.11 Item 7.
 - Flag 56, P/J972, P/J185.
 - Flag 46, P/J184, P/J761.
 - Flag 1, P/J776, P/J654.
- Offset sensor, Q10-300, PL 10.11 Item 8.
 - Flag 57, P/J971, P/J185.
 - Flag 47, P/J184, P/J761.
 - Flag 1, P/J776, P/J654.
- Horizontal transport entry sensor, Q10-041, PL 10.15 Item 7.
 - Flag 58, P/J960, P/J959.
 - Flag 48, P/J958, P/J773.
 - Flag 1, P/J776, P/J654.
- Registration sensor, Q82-150, PL 80.17 Item 7.
 - Flag 59, P/J984, P/J763.
 - Flag 1, P/J776, P/J654.
- Environmental sensors, ambient temperature sensor, Q91-602 and humidity sensor, Q91-601, PL 90.15 Item 4.
 - Flag 60, P/J982, P/J763.
 - Flag 1, P/J776, P/J654.

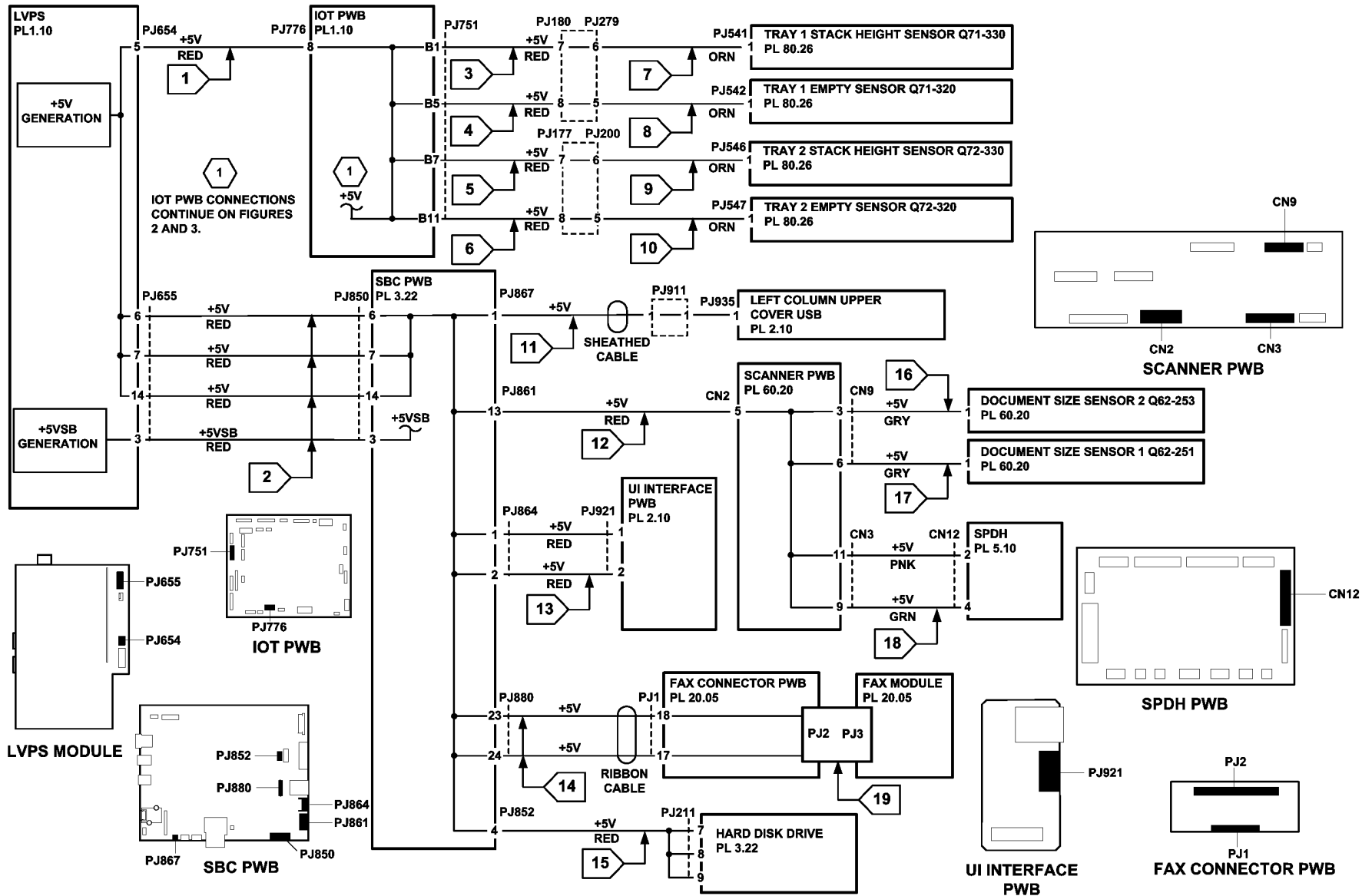
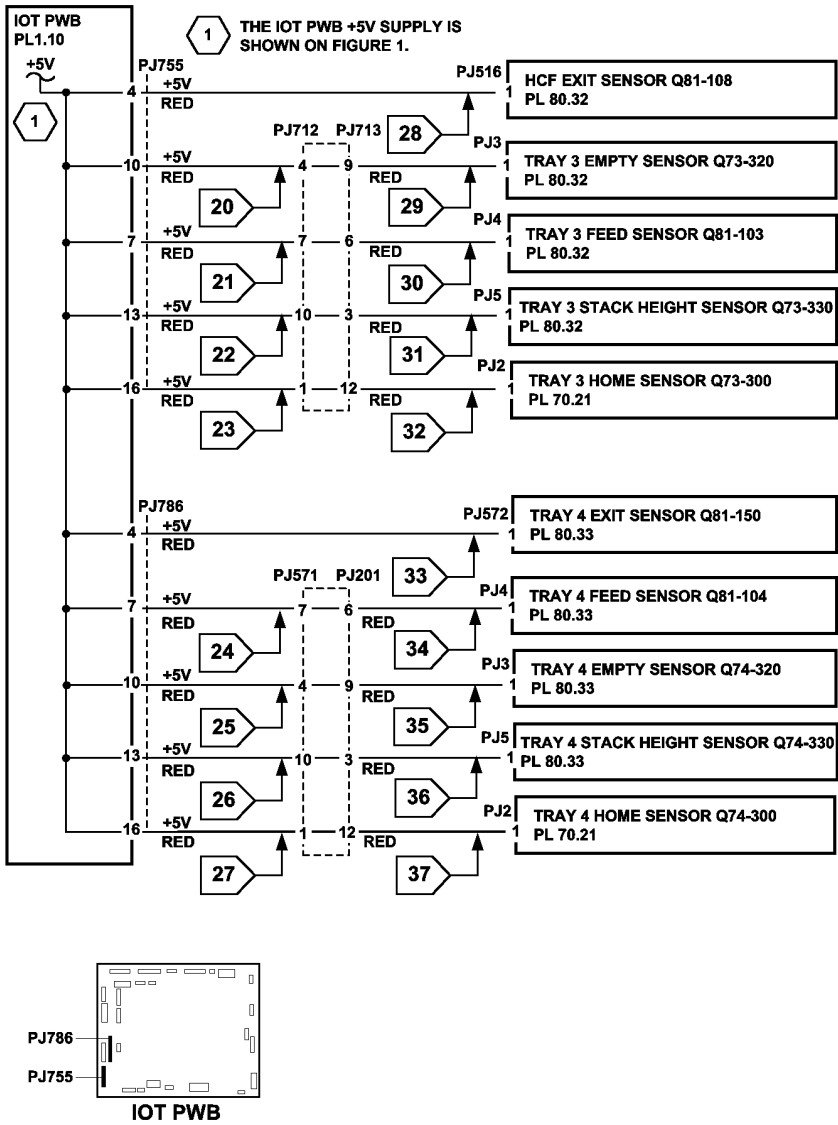


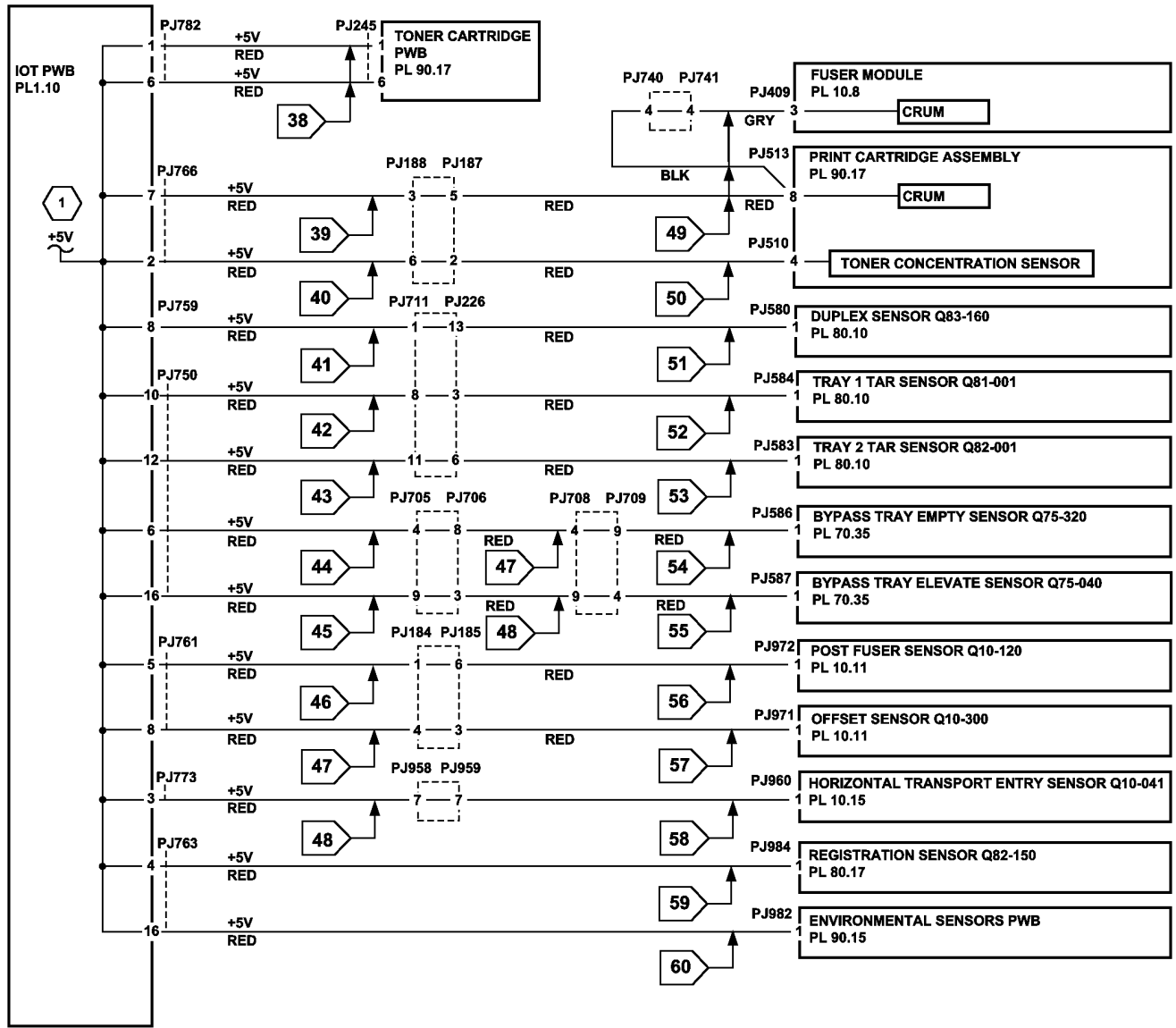
Figure 1 +5V distribution 1 of 3

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TX-1-0262-A

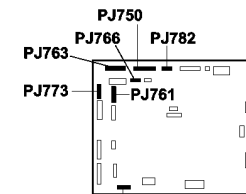
Figure 2 +5V distribution 2 of 3



1 THE IOT PWB +5V SUPPLY IS SHOWN ON FIGURE 1



TONER CARTRIDGE PWB



IOT PWB

TX-1-0263-A

Figure 3 +5V distribution 3 of 3

301F +12V Distribution RAP

Use this RAP to identify +12V distribution problems.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Go to the appropriate component in the list that follows that has the suspect +12V supply. Check the wiring [GP 7](#).

- SPDH PWB, PL 5.10 Item 5.
 - [Flag 1, P/J861, CN2.](#)
- Scanner PWB, PL 60.20 Item 4.
 - [Flag 2, CN3, CN12.](#)

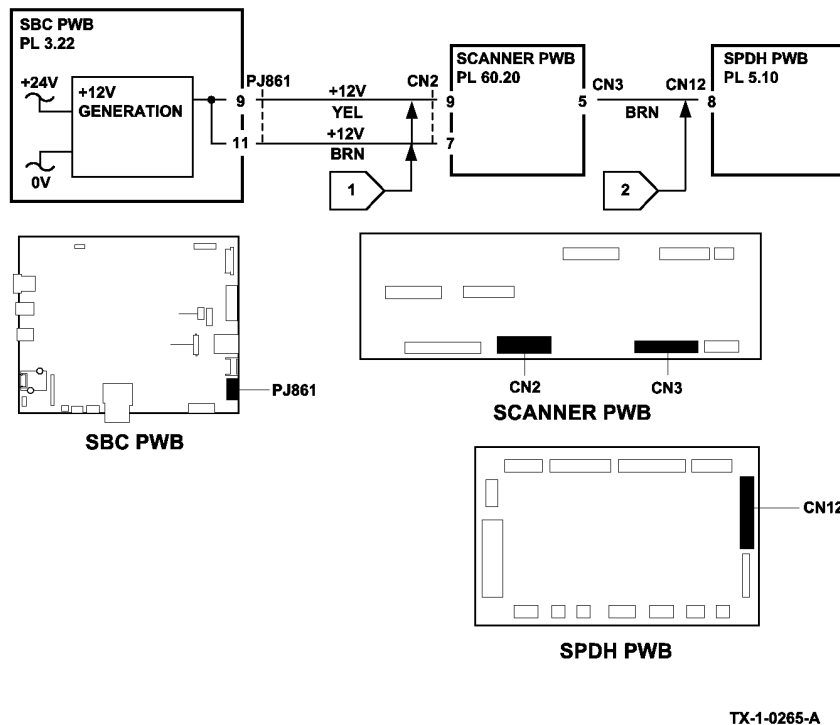


Figure 1 +12V Distribution

301G +24V Distribution RAP

Use this RAP to identify +24V distribution problems.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Go to the appropriate component in the list that follows that has the suspect +24V supply. Check the wiring [GP 7](#).

- IOT PWB, PL 1.10 Item 2.
 - [Flag 1, P/J776, P/J654.](#)
- HVPS, PL 1.10 Item 3.
 - [Flag 2, P/J830, P/J769.](#)
 - [Flag 1, P/J776, P/J654.](#)
- Toner cartridge motor, MOT93-040, part of the main drive module, [PL 40.15 Item 1](#).
 - [Flag 3, P/J512, P/J767.](#)
 - [Flag 1, P/J776, P/J654.](#)
- Tray 1 elevate/feed motor, MOT71-010, [PL 80.26 Item 6](#).
 - [Flag 5, P/J540, P/J279.](#)
 - [Flag 4, P/J180, P/J752.](#)
 - [Flag 1, P/J776, P/J654.](#)
- Tray 2 elevate/feed motor, MOT72-010, [PL 80.26 Item 6](#).
 - [Flag 7, P/J545, P/J200.](#)
 - [Flag 6, P/J177, P/J752.](#)
 - [Flag 1, P/J776, P/J654.](#)
- TAR/bypass tray motor, [PL 80.25 Item 5](#).
 - [Flag 8, P/J539, P/J754.](#)
 - [Flag 1, P/J776, P/J654.](#)
- Bypass tray clutch, [PL 70.35 Item 9](#).
 - [Flag 9, P/J595, P/J709, P/J708, P/J706, P/J705, P/J757.](#)
 - [Flag 1, P/J776, P/J654.](#)
- Inverter gate solenoid, SOL10-045, [PL 10.13 Item 8](#).
 - [Flag 10, P/J970, P/J762.](#)
 - [Flag 1, P/J776, P/J654.](#)
- Left door fan 2, [PL 80.11 Item 9](#).
 - [Flag 11, P/J581, P/J226, P/J227, P/J759.](#)
 - [Flag 1, P/J776, P/J654.](#)
- Left door fan 1, [PL 80.11 Item 9](#).

- Flag 12, P/J582, P/J226, P/J227, P/J759.
- Flag 1, P/J776, P/J654.
- Print cartridge fan, MOT80-016, PL 90.15 Item 2.
 - Flag 13, P/J759.
 - Flag 1, P/J776, P/J654.
- Tray 3 elevator motor, MOT73-010, PL 70.21 Item 1.
 - Flag 15, P/J508, P/J756.
 - Flag 14, P/J776, P/J654.
- Tray 3 feed clutch, CL81-033, PL 80.32 Item 19.
 - Flag 16, P/J507, P/J756.
 - Flag 14, P/J776, P/J654.
- Tray 3 feed motor, MOT81-030, PL 80.32 Item 8.
 - Flag 17, P/J505, P/J756.
 - Flag 14, P/J776, P/J654.
- HCF transport motor, MOT81-045, PL 80.36 Item 13.
 - Flag 18, P/J506, P/J756.
 - Flag 14, P/J776, P/J654.
- Tray 4 elevator motor, MOT74-010, PL 70.21 Item 1.
 - Flag 19, P/J575, P/J785.
 - Flag 14, P/J776, P/J654.
- Tray 4 feed clutch, CL81-043, PL 80.33 Item 21.
 - Flag 20, P/J574, P/J785.
 - Flag 14, P/J776, P/J654.
- Tray 4 feed motor, MOT81-040, PL 80.33 Item 10.
 - Flag 21, P/J573, P/J785.
 - Flag 14, P/J776, P/J654.
- Main drive module, PL 40.15 Item 1.
 - Flag 23, P/J973, P/J623.
 - Flag 22, P/J621, P/J656.
- SBC PWB, PL 3.22 Item 3.
 - Flag 24, P/J850, P/J655.
- Scanner PWB, PL 60.20 Item 4.
 - Flag 25, CN2, P/J861.
 - Flag 24, P/J850, P/J655.
- SPDH PWB, PL 5.10 Item 5.
 - Flag 26, CN12, CN3.
 - Flag 25, CN2, P/J861.
 - Flag 24, P/J850, P/J655.
- Elevator tray motor, MOT05-390, PL 5.30 Item 14.
 - Flag 27, SPDH CN3.
 - Flag 26, CN12, CN3.
 - Flag 25, CN2, P/J861.
 - Flag 24, P/J850, P/J655.
- Takeaway clutch, CL05-425, PL 5.18 Item 4.
 - Flag 28, CN33.
 - Flag 26, CN12, CN3.
 - Flag 25, CN2, P/J861.
 - Flag 24, P/J850, P/J655.
- Feed clutch, CL05-025, PL 5.18 Item 4.
 - Flag 29, CN34.
 - Flag 26, CN12, CN3.
 - Flag 25, CN2, P/J861.
 - Flag 24, P/J850, P/J655.

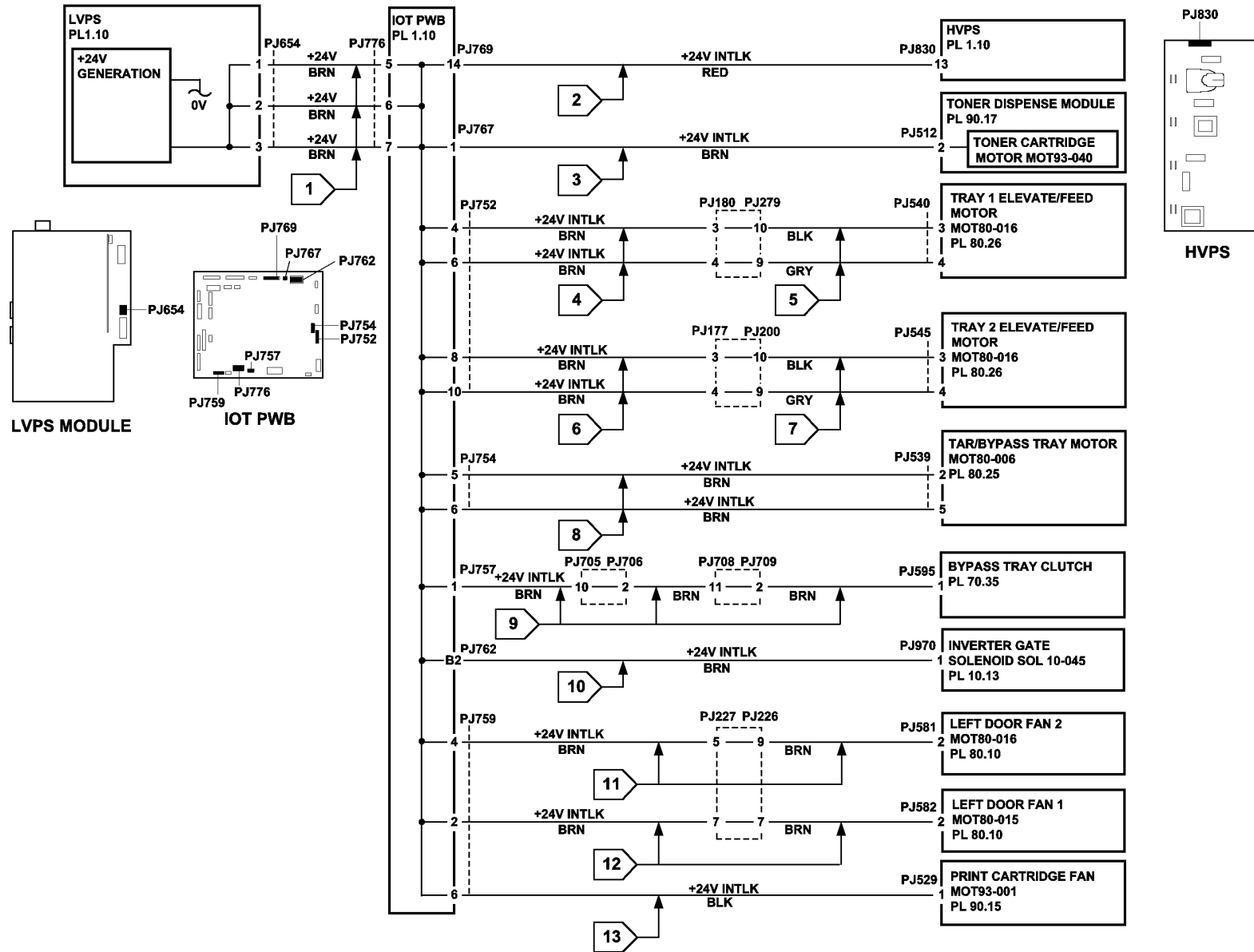
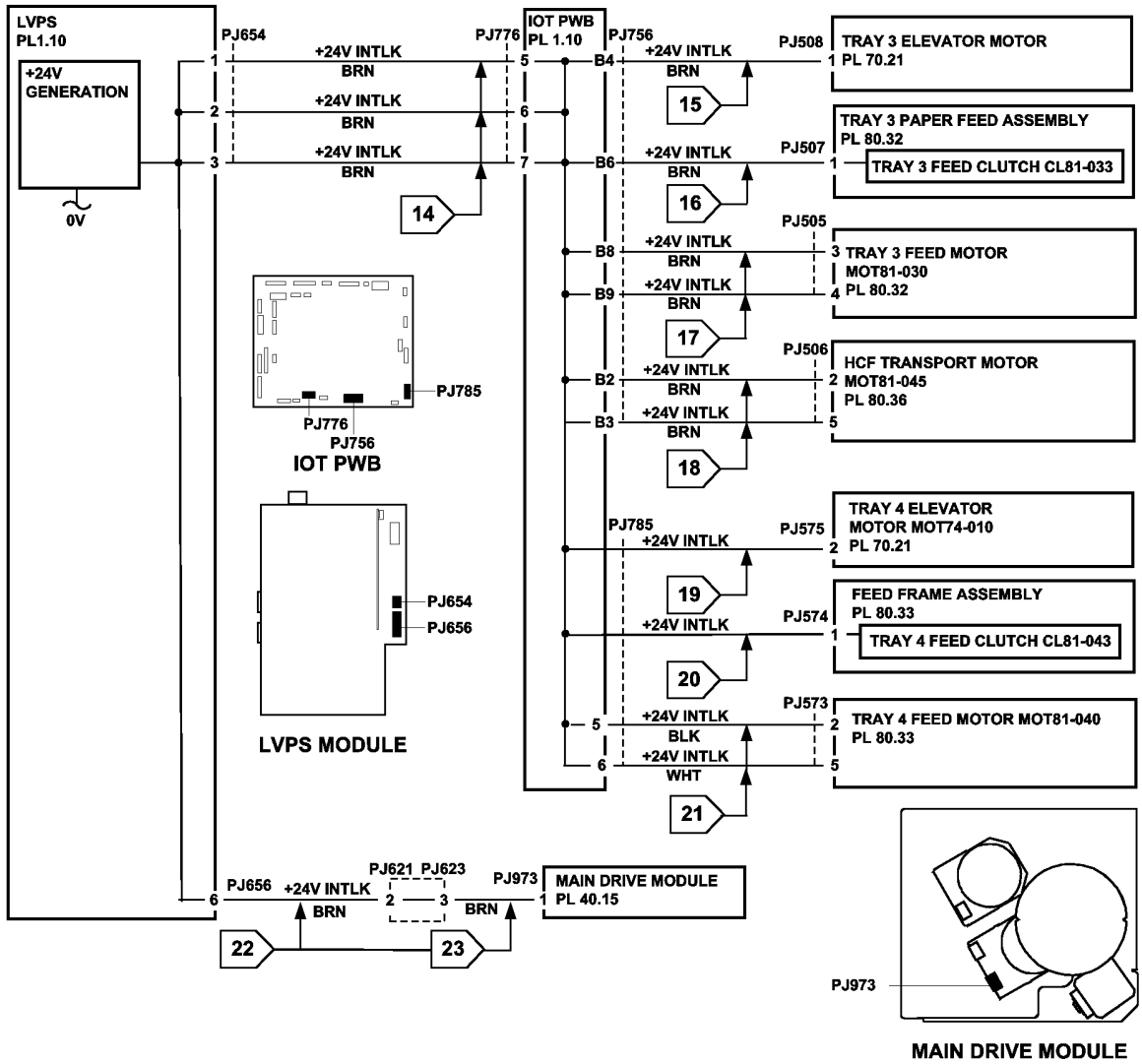


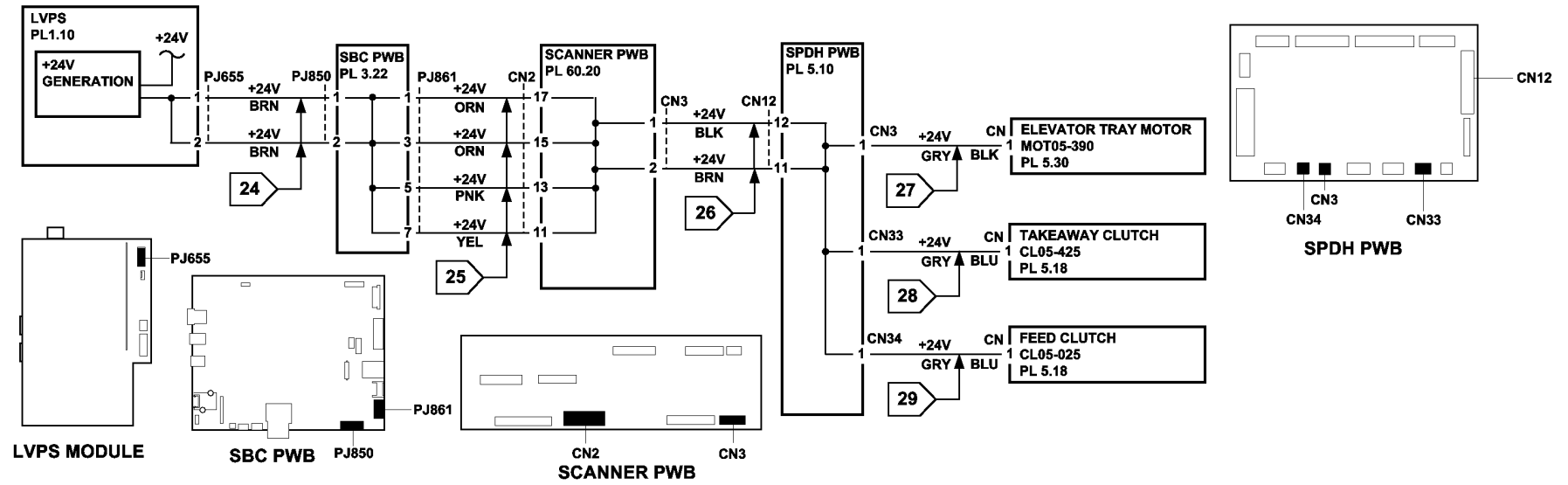
Figure 1 +24V Distribution 1 of 3

TX-1-0266-A



TX-1-0323-A

Figure 2 +24V Distribution 2 of 3



TX-1-0267-A

Figure 3 +24V Distribution 3 of 3

301H Short Circuit and Overload RAP

Use this RAP to locate the source of short circuits or overloads that cause the LVPS to shut down. Refer to the [Procedural Notes](#) to understand the behaviour of the LVPS when a short circuit, overload or over voltage exists.

Initial Actions

Perform the [301L](#) LVPS RAP to ensure the voltage outputs from the LVPS are good.

Procedural Notes

- The LEDs, [Figure 1](#), CR13, CR16 and CR51 on the IOT PWB are used to indicate that a supply voltage is available. Refer to the [OF7](#) IOT PWB Diagnostics RAP.
- Short circuit or overload of +5VSB (standby) results in all voltage outputs from the LVPS shutting down. When the short circuit or overload is removed all the outputs will recover to normal operating voltages after 10 seconds.
- Short circuit or overload of +5V results in all outputs from the LVPS shutting down except the +5VSB. The green LVPS indicator LED will extinguish and the red LVPS indicator LED will flash code 2 or 5. When the short circuit or overload is removed the output will recover to normal operating voltage after 10 seconds, the red LVPS indicator LED will extinguish and the green LVPS indicator LED will illuminate.
- Short circuit or overload of +24V or +24V INTLK results in +24V and +24V INTLK outputs from the LVPS shutting down. The green LVPS indicator LED will extinguish and the red LVPS indicator LED will flash code 1 or code 3. When the short circuit or overload is removed the outputs will recover to normal operating voltage after 10 seconds, the red LVPS indicator LED will extinguish and the green LVPS indicator LED will illuminate.
- If +5VSB or +5V are over voltage, all LVPS outputs will shut off except the +5VSB. The green LVPS indicator LED will extinguish and the red LVPS indicator LED will flash code 8. To restore to normal voltages, switch off the machine, [GP 14](#). Wait 20 seconds. Switch on the machine, the red LVPS indicator LED will extinguish and the green LVPS indicator LED will illuminate.
- If the +24V or +24V INTLK is over voltage, all outputs from the LVPS will shut down except the +5VSB. The green LVPS indicator LED will extinguish and the red LVPS indicator LED will flash code 9. To restore to normal voltage, switch off the machine, [GP 14](#). Wait 20 seconds. Switch on the machine, the red LVPS indicator LED will extinguish and the green LVPS indicator LED will illuminate.
- +3.3V is generated on the IOT PWB to supply internal components and sensors.
- +3.3V is generated on the SBC PWB to supply internal components and sensors, also to supply the scanner PWB, SPDH PWB and sensors.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Do not install a fuse of a different type or rating. Installing the wrong type or rating of fuse can cause overheating and a risk of fire.

NOTE: Refer to [Figure 3](#) and [Figure 4](#) for an overview of the low voltage distribution harnesses within the machine.

NOTE: Refer to [GP 7](#) *Miscellaneous Checks at every disconnection and check that follows. If necessary, perform [REP 1.2](#) Wiring Harness Repairs. If the wiring check proves that the wiring connectors are good, install new components that are at the end of the wiring.*

Switch off the machine [GP 14](#). Remove the power cord. Remove the rear cover, Reconnect the power cord, then switch on the machine [GP 14](#). Refer to the [OF2](#) POST Error RAP. A pulsating decimal point on the 7 segment displays indicates the SBC microprocessor is functioning correctly. **The 7 segment display shows a pulsing decimal point.**

Y N
Perform the [301J](#) Power On and LVPS Control Signal RAP.

Press the power button on the UI. **CR13 (+5V), CR51 (+3.3V) and CR16 (+24V interlocked) on the IOT PWB are illuminated, [Figure 1](#).**

Y N
CR13 and CR16 on the IOT PWB are illuminated, [Figure 1](#).

Y N
CR13 on the IOT PWB is illuminated, [Figure 1](#).

Y N
This indicates a short circuit in the +5V distribution. Perform the checks that follow until the short circuit is found:

1. Go to [Flag 10](#). Disconnect [P/J751](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the tray 1 and tray 2 paper sensors. Refer to [WD 5](#). If after 10 seconds the LEDs remain off, reconnect [P/J751](#) and continue at the next check.
2. Go to [Flag 12](#). Disconnect [P/J755](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the tray 3 paper sensors. Refer to [WD 6](#). If after 10 seconds the LEDs remain off, reconnect [P/J755](#) and continue at the next check.
3. Go to [Flag 13](#). Disconnect [P/J786](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the tray 4 paper sensors. Refer to [WD 15](#). If after 10 seconds the LEDs remain off, reconnect [P/J786](#) and continue at the next check.

A B C

4. Go to [Flag 15](#). Disconnect [P/J766](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the fuser CRUM and print cartridge CRUM. Refer to [WD 9](#). If after 10 seconds the LEDs remain off, reconnect [P/J766](#) and continue at the next check.
5. Go to [Flag 17](#). Disconnect [P/J759](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the duplex sensor. Refer to [WD 7](#). If after 10 seconds the LEDs remain off, reconnect [P/J759](#) and continue at the next check.
6. Go to [Flag 18](#). Disconnect [P/J750](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the TAR 1 sensor, TAR 2 sensor and bypass tray sensors. Refer to [WD 5](#). If after 10 seconds the LEDs remain off, reconnect [P/J750](#) and continue at the next check.
7. Go to [Flag 19](#). Disconnect [P/J761](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the post fuser sensor and the offset sensor. Refer to [WD 7](#). If after 10 seconds the LEDs remain off, reconnect [P/J761](#) and continue at the next check.
8. Go to [Flag 20](#). Disconnect [P/J773](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the horizontal transport sensor. Refer to [WD 10](#). If after 10 seconds the LEDs remain off, reconnect [P/J773](#) and continue at the next check.
9. Go to [Flag 23](#). Disconnect [P/J763](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the registration sensor and the environmental sensors. Refer to [WD 8](#). If after 10 seconds the LEDs remain off, reconnect [P/J763](#) and continue at the next check.
10. Go to [Flag 3](#). Disconnect [P/J655](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the SBC PWB. Refer to [WD 2](#). If after 10 seconds the LEDs remain off, reconnect [P/J655](#) and continue at the next check.
11. Go to [Flag 25](#). Disconnect [P/J851](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the LED print head. Refer to [WD 2](#). If after 10 seconds the LEDs remain off, reconnect [P/J851](#) and continue at the next check.
12. Go to [Flag 27](#). Disconnect [P/J867](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the left column upper cover USB connector. Refer to [WD 4](#). If after 10 seconds the LEDs remain off, reconnect [P/J867](#) and continue at the next check.
13. Go to [Flag 32](#). Disconnect [CN4](#), [CN5](#), [CN6](#), [CN8](#), [CN9](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the scanner PWB. Refer to [WD 16](#). If after 10 seconds the LEDs remain off, reconnect the CN connectors, then continue at the next check.
14. Go to [Flag 35](#) and [Flag 26](#). Disconnect [P/J864](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the UI Interface PWB through the UI Control PWB. Refer to [WD 4](#). If after 10 seconds the LEDs remain off, reconnect [P/J864](#) and continue at the next check.
15. Go to [Flag 39](#). Disconnect [CN36](#), [CN37](#) and [CN40](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the registration feed and takeaway sensors. Refer to [WD 14](#). If after 10 seconds the LEDs remain off, reconnect [CN36](#) and [CN37](#). Continue at the next check.

16. Go to [Flag 33](#) and [Flag 34](#). Disconnect [CN3](#) and [CN4](#). If D10 now illuminated, repair the short circuit in the wiring to the SPDH PWB. Refer to [WD 12](#). If the wiring is good, install a new SPDH PWB, [PL 5.10 Item 5](#). If after 10 seconds the LEDs remain off, reconnect [CN3](#) and [CN4](#). Install a new SBC PWB, [PL 3.22 Item 3](#).
17. Go to [Flag 28](#). Disconnect [P/J861](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the scanner PWB. Refer to [WD 3](#). If the wiring is good, install a new scanner PWB, [PL 60.20 Item 4](#). If after 10 seconds the LEDs remain off, reconnect [P/J861](#). Continue at the next check.
18. Go to [Flag 30](#), disconnect [P/J880](#). If D10 is now illuminated, repair the short circuit in the wiring to the Fax module. Refer to [WD 4](#). If after 10 seconds the LED remains off, reconnect [P/J880](#) and continue at the next check.
19. Go to [Flag 7](#). Check the harness for a short circuit between [P/J654](#) and [P/J776](#). If the harness is good, disconnect all PJs from the IOT PWB except for [P/J764](#) and [P/J776](#). If after 10 seconds the LEDs remain off, install a new IOT PWB, [PL 1.10 Item 2](#).

This indicates a short circuit in the +24V distribution. Perform the checks that follow until the short circuit is found:

1. Go to [Flag 41](#). Disconnect [P/J785](#). If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the tray 4 elevator motor, tray 4 feed motor and tray 4 feed clutch. Refer to [WD 15](#). If after 10 seconds the LEDs remain off, reconnect [P/J785](#) and continue at the next check.
2. Go to [Flag 2](#). Disconnect [P/J656](#). If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the fuser exit motor and print cartridge motor. Refer to [WD 1](#). If after 10 seconds the LEDs remain off, reconnect [P/J656](#) and continue at the next check.
3. Go to [Flag 4](#). Disconnect [P/J656](#). If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the front door interlock switch. Refer to [WD 1](#). If after 10 seconds the LEDs remain off, reconnect [P/J656](#) and continue at the next check.
4. Go to [Flag 5](#). Disconnect [P/J656](#). If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the left door interlock switch. Refer to [WD 1](#). If after 10 seconds the LEDs remain off, reconnect [P/J656](#) and continue at the next check.
5. Go to [Flag 9](#). Disconnect [P/J752](#). If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the tray 1 and tray 2 elevate/feed motors. Refer to [WD 6](#). If after 10 seconds the LEDs remain off, reconnect [P/J752](#) and continue at the next check.
6. Go to [Flag 14](#). Disconnect [P/J756](#). If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the tray 3 motors and clutch. Refer to [WD 7](#). If after 10 seconds the LEDs remain off, reconnect [P/J756](#) and continue at the next check.
7. Go to [Flag 16](#). Disconnect [P/J767](#). If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the toner cartridge motor. Refer to [WD 9](#). If after 10 seconds the LEDs remain off, reconnect [P/J767](#) and continue at the next check.

8. Go to **Flag 17**. Disconnect **P/J759**. If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the left door fans. Refer to **WD 7**. If after 10 seconds the LEDs remain off, reconnect **P/J759** and continue at the next check.
9. Go to **Flag 21**. Disconnect **P/J754**. If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the TAR/bypass tray motor. Refer to **WD 6**. If after 10 seconds the LEDs remain off, reconnect **P/J754** and continue at the next check.
10. Go to **Flag 38**. Disconnect **P/J757**. If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the bypass tray clutch. Refer to **WD 7**. If after 10 seconds the LEDs remain off, reconnect **P/J757** and continue at the next check.
11. Go to **Flag 22**. Disconnect **P/J762**. If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the invert gate solenoid. Refer to **WD 8**. If after 10 seconds the LEDs remain off, reconnect **P/J762** and continue at the next check.
12. Go to **Flag 24**. Disconnect **P/J769**. If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the HVPS. Refer to **WD 10**. If after 10 seconds the LEDs remain off, reconnect **P/J769** and continue at the next check.
13. Go to **Flag 1**. Disconnect **P/J770**. If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the horizontal transport motor. Refer to **WD 10**. If after 10 seconds the LEDs remain off, reconnect **P/J770** and continue at the next check.
14. Go to **Flag 8**. Disconnect **P/J791**. If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the offset motor. Refer to **WD 11**. If after 10 seconds the LEDs remain off, reconnect **P/J791** and continue at the next check.
15. Go to **Flag 32**. Disconnect **CN5**. If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the scan carriage motor. Refer to **WD 16**. If after 10 seconds the LEDs remain off, reconnect **CN5**, then continue at the next check.
16. Go to **Flag 40**. Disconnect **CN33** and **CN34**. If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the feed clutch and TAR clutch. Refer to **WD 13**. If after 10 seconds the LEDs remain off, reconnect **CN33**, and **CN34** and continue at the next check.
17. Go to **Flag 33**. Disconnect **CN3**. If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the SPDH PWB. Refer to **WD 12**. If the wiring is good, install a new SPDH PWB, **PL 5.10 Item 5**. If after 10 seconds the LEDs remain off, reconnect **CN3**. Continue at the next check.
18. Go to **Flag 28**. Disconnect **P/J861**. If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the scanner PWB. Refer to **WD 3**. If the wiring is good, install a new scanner PWB, **PL 60.20 Item 4**. If after 10 seconds the LEDs remain off, reconnect **P/J861**. Continue at the next check.
19. Go to **Flag 7**. Check the harness for a short circuit between **P/J654** and **P/J776**. If the harness is good, disconnect all PJs from the IOT PWB except for **P/J764** and **P/J776**. If after 10 seconds the LEDs remain off, install a new IOT PWB, **PL 1.10 Item 2**.

This indicates a short circuit in the +3.3V distribution from the IOT PWB. Go to **Flag 11**. Disconnect **P/J751**. **CR51 is now illuminated**.

Y N

Switch off, then switch on the machine, **GP 14**. **CR51 is now illuminated**.

Y N

Install a new IOT PWB, **PL 1.10 Item 2**.

Check the tray 1 and tray 2 size sensors and the harness to the sensors for a short circuit. Repair the wiring or install new components as necessary.

Check the tray 1 and tray 2 size sensors and the harness to the sensors for a short circuit. Repair the wiring or install new components as necessary.

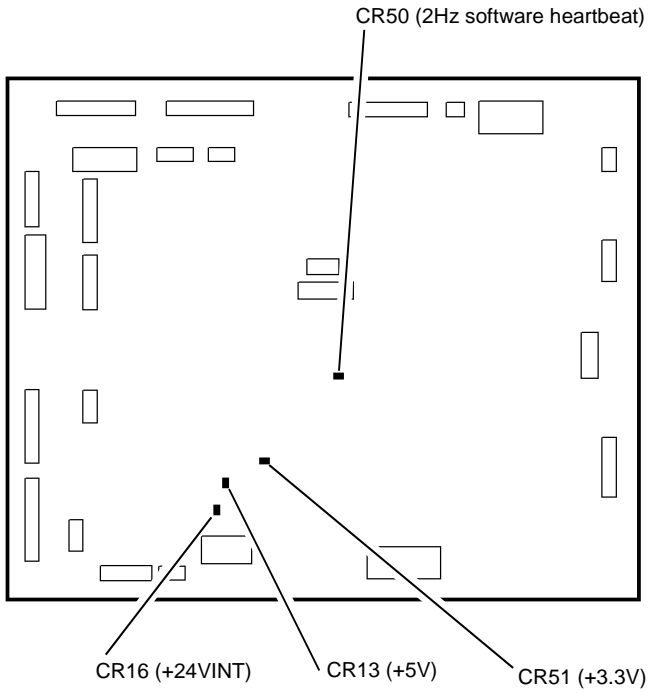
D10 on the SBC PWB, Figure 2 is illuminated.

Y N

This indicates a short circuit in the +3.3V distribution from the SBC PWB. Perform the checks that follow until the short circuit is found:

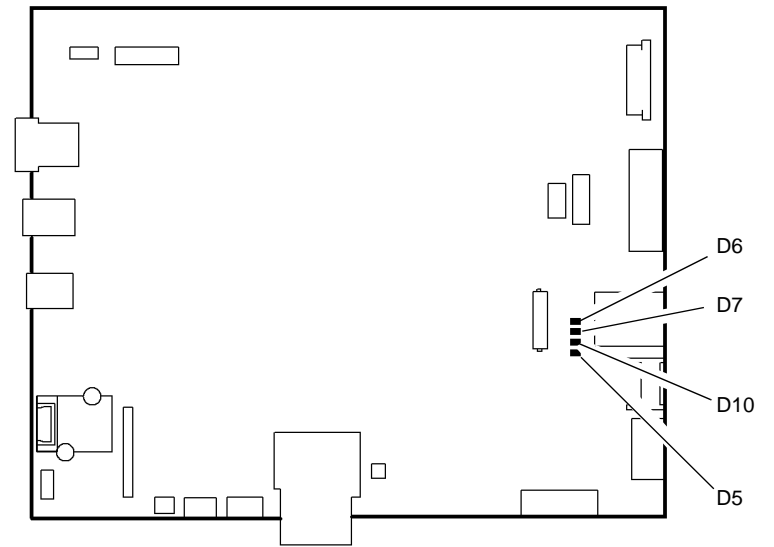
1. Go to **Flag 26**. Disconnect **P/J864**. If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the UI Interface PWB through the UI Control PWB. Refer to **WD 4**. If after 10 seconds the LEDs remain off, reconnect **P/J864** and continue at the next check.
2. Go to **Flag 30**, disconnect **P/J880**. If D10 is now illuminated, repair the short circuit in the wiring to the Fax module. Refer to **WD 4**. If after 10 seconds the LED remains off, reconnect **P/J880** and continue at the next check.
3. Go to **Flag 32**. Disconnect **CN4**, **CN5**, **CN6**, **CN8** and **CN9**. If CR13 and D10 is now illuminated, repair the short circuit in the wiring to the scanner components. Refer to **WD 16**. If after 10 seconds the LED remains off, reconnect **CN4**, **CN5**, **CN6**, **CN8** and **CN9** and continue at the next check.
4. Go to **Flag 37**, disconnect **CN35**, **CN36**, **CN37**, **CN8** and **CN38**. If D10 is now illuminated, repair the short circuit in the wiring to the SPDH paper sensors. Refer to **WD 13** and **WD 14**. If after 10 seconds the LED remains off, reconnect **CN35**, **CN36**, **CN37**, **CN8** and **CN38**. Continue at the next check.
5. Go to **Flag 33** and **Flag 34**. Disconnect **CN3** and **CN4**. If D10 now illuminated, repair the short circuit in the wiring to the SPDH PWB. Refer to **WD 12**. If the wiring is good, install a new SPDH PWB, **PL 5.10 Item 5**. If after 10 seconds the LEDs remain off, reconnect **CN3** and **CN4**. Install a new SBC PWB, **PL 3.22 Item 3**.

No short circuits have been found. Perform **SCP 5** Final Actions.



X-1-1082-A

Figure 1 IOT PWB LEDs



X-1-1083-A

Figure 2 SBC PWB LEDs

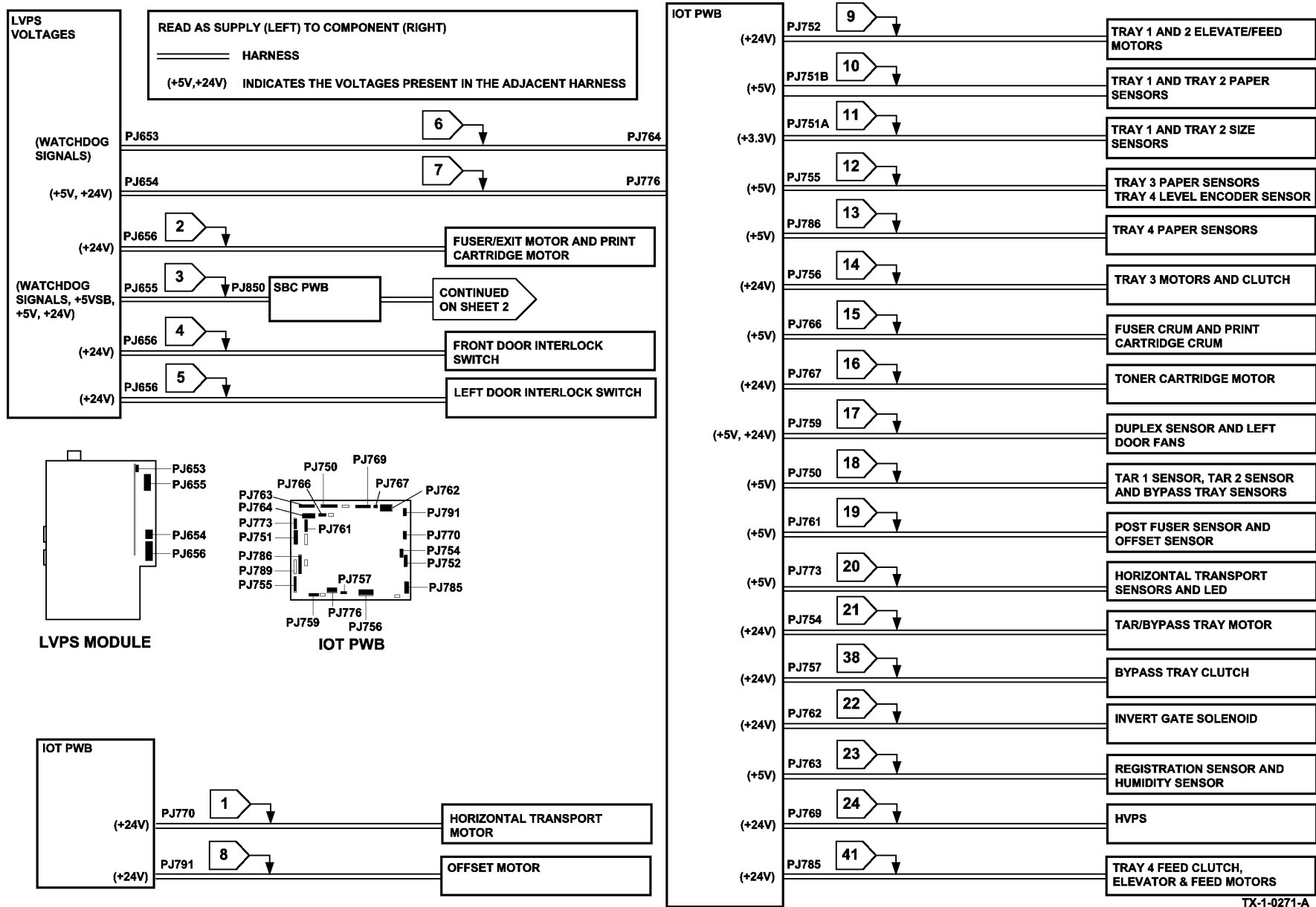


Figure 3 Low voltage distribution 1 of 2

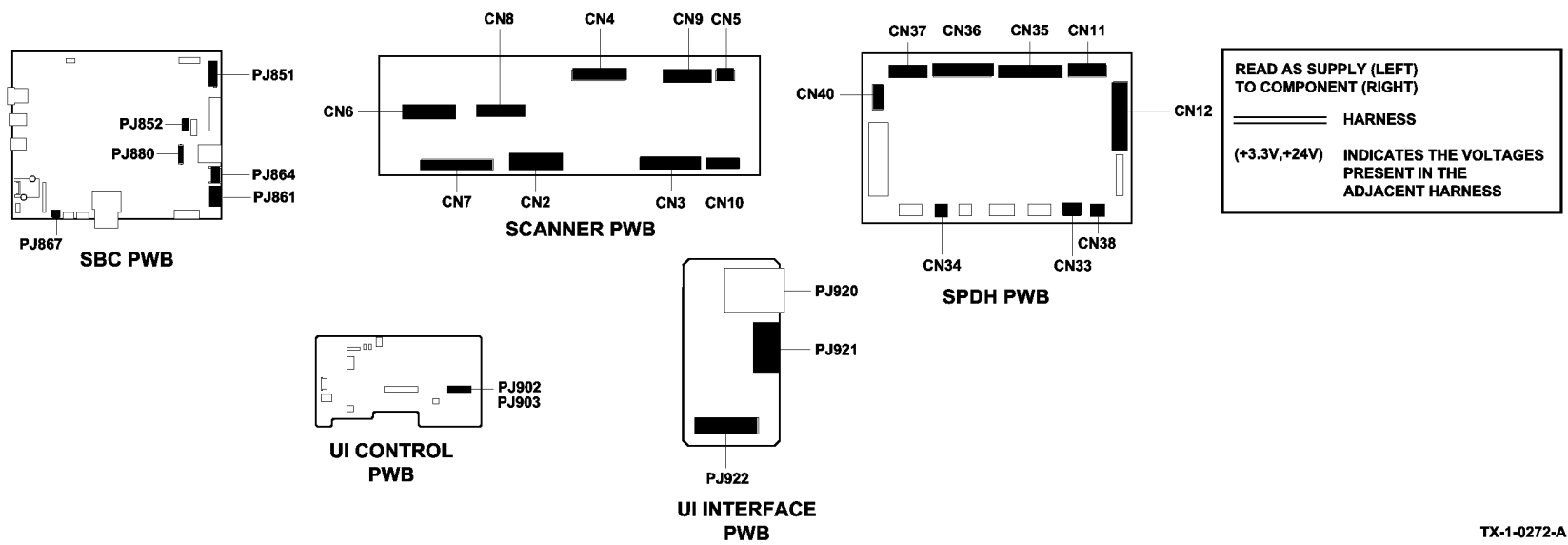
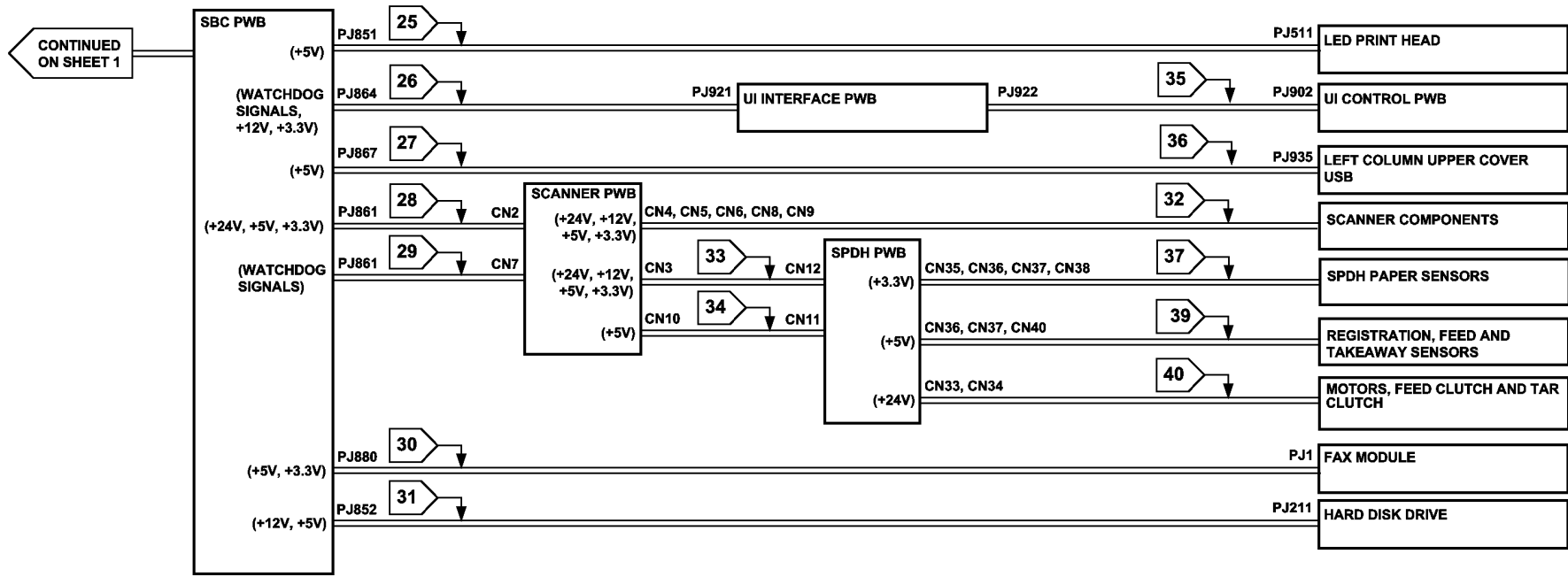


Figure 4 Low voltage distribution 2 of 2

TX-1-0272-A

301J Power On and LVPS Control Signal RAP

Use this RAP to check the power on and standby signals to the LVPS.

Ensure the 301C AC Power RAP is performed before starting this RAP.

Procedural Notes

- Short circuit or overload of +5VSB (standby) will result in all voltage outputs from the LVPS shutting off. When the short circuit or overload is removed, all the outputs will recover to normal operating voltages after 10 seconds.
- Short circuit or overload of +5V will result in +5V output from the LVPS shutting off. When the short circuit or overload is removed, the output will recover to normal operating voltage after 10 seconds.
- Short circuit or overload of +24V will result in +24V output from the LVPS shutting off. When the short circuit or overload is removed the output will recover to normal operating voltage after 10 seconds.
- If +5VSB or +5V are over voltage, all LVPS outputs will shut off. To restore to normal voltages, switch off the machine, GP 14. Wait 20 seconds. Switch on the machine.
- If the +24V is over voltage, only the +24V the output will shut off. To restore to normal voltage, switch off the machine, GP 14. Wait 20 seconds. Switch on the machine.
- +3.3V is generated on the IOT PWB to supply internal components and sensors.
- +3.3V is generated on the SBC PWB to supply internal components and sensors, also the SPDH PWB and sensors.

If a short circuit is suspected, perform the 301H Short Circuit and Overload RAP.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off the machine GP 14. Remove the power cord. Remove the rear cover, Reconnect the power cord, then switch on the machine GP 14. Refer to the OF2 POST Error RAP. A pulsating decimal point on the 7 segment displays indicates the SBC microprocessor is functioning correctly. The 7 segment display shows a pulsing decimal point.

Y N
Go to Flag 3. +5V is available at P/J850 on the SBC PWB between pins 3 and 10.
Y N
Disconnect P/J850. +5V is available at the disconnected end of the harness, P/J850 between pins 3 and 10.
Y N
+5V is available at P/J655 on the LVPS between pins 3 and 10.
Y N
Perform the 301L LVPS RAP.
Check the wiring and connectors between P/J655 and P/J850. Refer to REP 1.2 Wiring Harness Repairs.

A B C

A B C

Repair the connector P/J850, if necessary install a new SBC PWB, PL 3.22 Item 3.

Install a new SBC PWB, PL 3.22 Item 3.

Figure 1, CR13 and CR 16 on the IOT PWB are illuminated

Y N

Go to Flag 2. +3.3V is available at P/J921 on the UI Interface PWB between pins 5 and 14.

Y N

Disconnect P/J921. +3.3V is available at the disconnected end of the harness, P/J921 between pins 5 and 14.

Y N

+3.3V is available at P/J864 on the SBC PWB between pins 5 and 14.

Y N

Install a new SBC PWB, PL 3.22 Item 3.

Check the wiring and connectors between P/J921 and P/J864. Refer to REP 1.2 Wiring Harness Repairs.

Perform the steps that follow:

- Check the operation of the Power button on the UI module. Ensure that the button is not sticking in the UI surround. If necessary, install a new UI module, PL 2.10 Item 1.
- Repair the connector P/J921. If necessary install a new UI interface PWB, PL 2.10 Item 15.

Press the power button on the UI module. The voltage at P/J921 pin 5 changes from +3.3V to 0V.

Y N

Go to Flag 1. Check the ribbon cable and connectors P/J922 and P/J902. Refer to REP 1.2 Wiring Harness Repairs.

If necessary install new components:

- UI module, PL 2.10 Item 1.
- UI interface PWB, PL 2.10 Item 15.

Go to Flag 3. The voltage at P/J655 pin 4 is 0V.

Y N

The voltage at P/J850 pin 4 is 0V.

Y N

Install a new SBC PWB, PL 3.22 Item 3.

Check the harness and connectors between P/J850 and P/J655. Refer to REP 1.2 Wiring Harness Repairs.

Go to Flag 4. The voltage at P/J764 pin 3B is 0V.

Y N

The voltage at P/J653 pin 4 is 0V.

Y N

Perform the 301L LVPS RAP.

D E F

D E F
Check the harness and connectors between P/J764 and P/J653. Refer to REP 1.2 Wiring Harness Repairs.

Go to Flag 5. +24V is available at P/J654 between pins 2 and 9, also +5V is available between pins 5 and 8.

Y N
Perform the 301L LVPS RAP.

Go to Flag 5. +24V is available at P/J776 between pins 6 and 1, also +5V is available between pins 8 and 4.

Y N
Check the harness and connectors between P/J654 and P/J776. Refer to REP 1.2 Wiring Harness Repairs.

Install a new IOT PWB, PL 1.10 Item 2.

The power on and LVPS control signals are working correctly. Perform SCP 5 Final Actions.

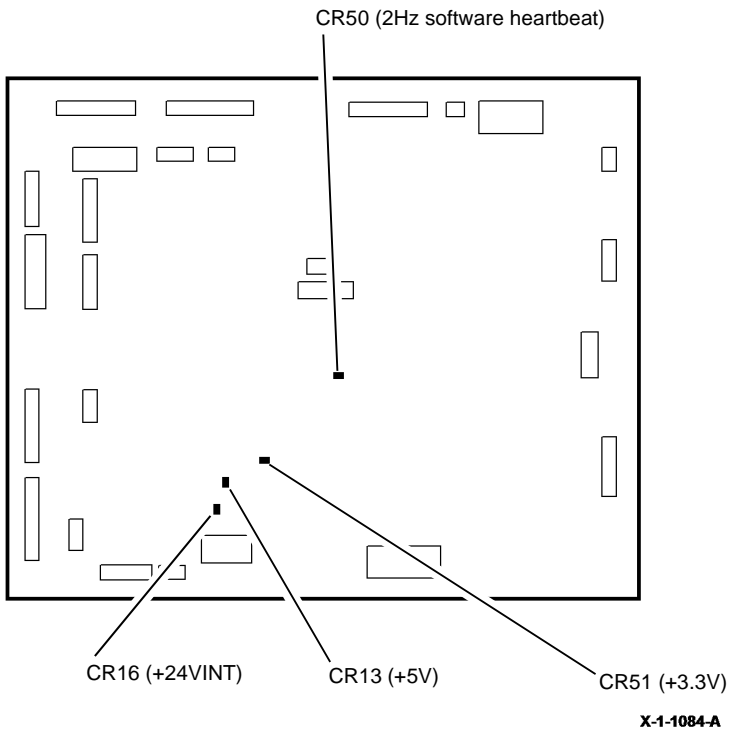
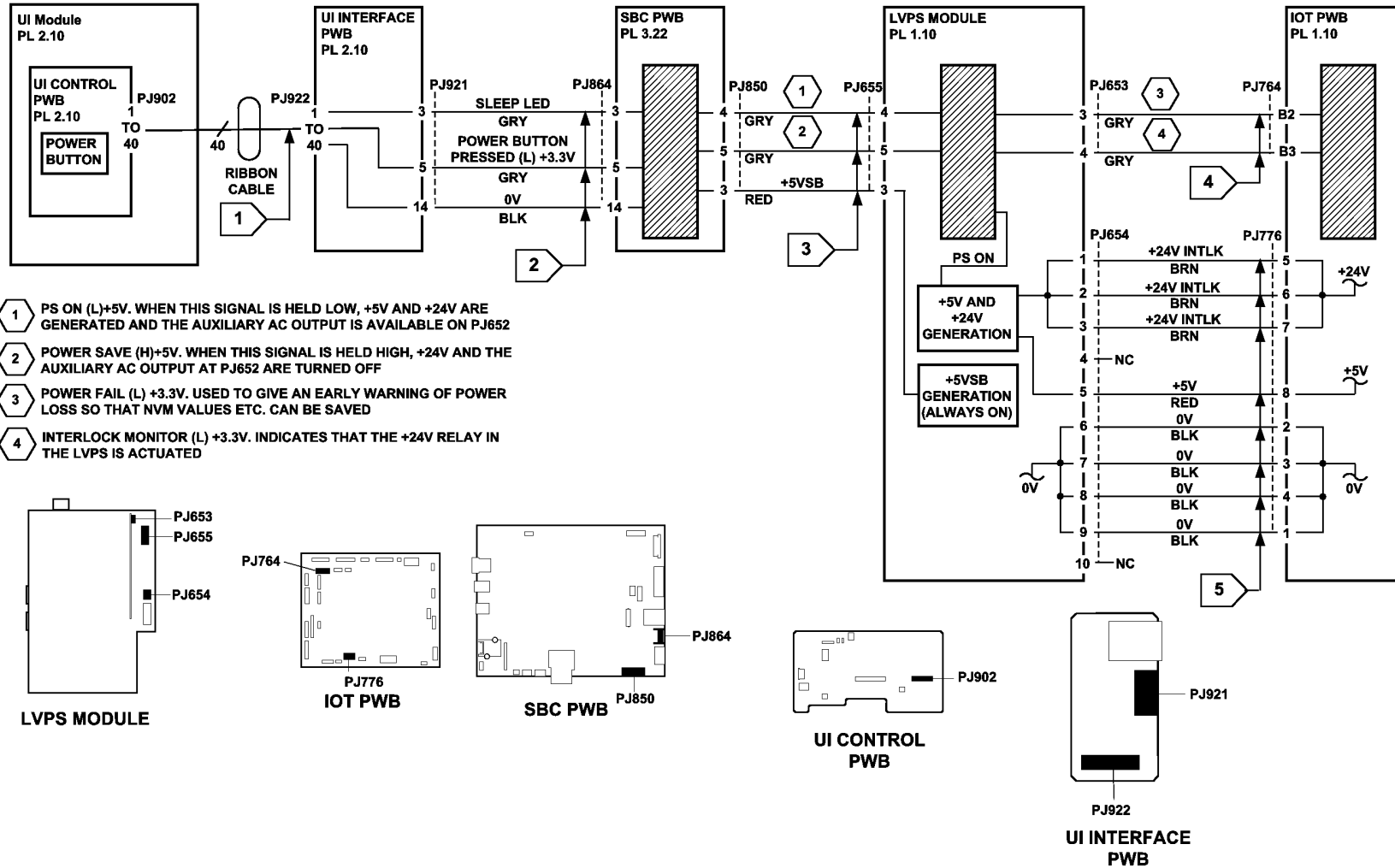


Figure 1 IOT PWB LEDs



TX-1-0274-A

Figure 2 Circuit diagram

301K Sleep Mode RAP

Use this RAP to diagnose problems entering or exiting sleep mode.

Sleep Mode Operation

The machine is designed to be energy efficient by reducing the power consumption after periods of inactivity. Refer to the Principles of Operation: [Power Generation and Distribution](#).

NOTE: When the machine is connected to mains power, +5VSB is supplied from an always on power supply located within the LVPS.

Reading or Setting the Power Save Duration Times

Access the energy saver feature by performing the steps that follow:

1. Log into the embedded web server as an administrator, [GP 24](#).
2. Touch **Properties / General Setup / Energy Saver**.
3. Select from the items that follow:
 - **Intelligent Ready** - wakes up and sleeps automatically based on previous usage.
 - **Job Activated** - wakes up when activity is detected.
 - **Sleep and wake up at scheduled times**- wakes up and sleeps at set times on a daily basis.
 - **Auto Power Off**- Allows the device to power off after a period of time in sleep mode.
4. To change the timing values, touch the appropriate input area, then touch the **Apply** button to confirm the change.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the Principles of Operation [From Deep Sleep Mode or Semi Conscious Mode: The machine remains in sleep mode after a wake event](#).

Y N
Refer to the Principles of Operation [From Ready \(Ready to Scan\) Mode: The machine remains in standby mode or low power mode after the power save duration time has elapsed](#).

Y N
The machine switches off when it should enter sleep mode.

Y N
The system is operating correctly, perform [SCP 5](#) Final Actions.

Perform the steps that follow:

- Refer to [Reading or Setting the Power Save Duration Times](#). Ensure only Job Activated is selected, then set the Ready Mode to Sleep Mode value to 10 minutes.
- To prevent a power management event, disconnect the following as necessary:
 - Fax telephone lines.
 - Network cable or USB wireless network adapter, [PL 3.22 Item 20](#).

A B

Go to [Flag 3](#). Check the voltage at [P/J850](#) pin 4 on the SBC PWB. After 11 minutes the voltage changes from 0V to +5V.

Y N
Perform the [303D](#) SBC PWB Diagnostics RAP. Return the power save settings to the previous values and reconnect the Fax and network. Perform [SCP 5](#) Final Actions.

Perform the [301L](#) LVPS RAP. Return the power save settings to the previous values and reconnect the Fax and network lines. Perform [SCP 5](#) Final Actions.

Perform the steps that follow:

- If the fax option is installed, ensure it has been enabled and set up. If the customer does not use this option, it may be disabled via the tools menu, but the fax option must be set up to allow the operation of the Sleep Mode.
- Refer to [Reading or Setting the Power Save Duration Times](#). Ensure only Job Activated is selected, then set the Ready Mode to Sleep Mode value to 10 minutes.
- To prevent a power management event, disconnect the following as necessary:
 - Fax telephone lines.
 - Network cable or USB wireless network adapter, [PL 3.22 Item 20](#).
- Leave the machine untouched and observe the user interface.

After 11 minutes the power button illuminates in a low rate breathing pattern.

Y N
Perform the [303D](#) SBC PWB Diagnostics RAP. Return the power save settings to the previous values and reconnect the Fax and network lines. Perform [SCP 5](#) Final Actions.

The system is operating correctly. Return the power save settings to the previous values and reconnect the Fax and network lines. Perform [SCP 5](#) Final Actions.

Perform the [OF2](#) POST Error RAP. A decimal point is pulsing on the 7 segment display.

Y N
Perform the [303D](#) SBC PWB Diagnostics RAP. Return the power save settings to the previous values and reconnect the Fax and network lines. Perform [SCP 5](#) Final Actions. The fault may be intermittent. If the fault re-occurs, perform an AltBoot, [GP 4](#).

The wake event was from the network.

Y N
The wake event was from the Fax PWB.

Y N
Go to the [301J](#) Power On and LVPS Control Signals RAP. Check the operation of the power button.

Perform the steps that follow:

1. Refer to [320A](#) Fax Entry RAP and complete all of the initial actions.
2. Remove and re-seat the Fax module and the harnesses to the Fax connection PWB, [REP 3.2](#).
3. Refer to [Reading or Setting the Power Save Duration Times](#). Ensure only Job Activated is selected, then set the Ready Mode to Sleep Mode value to 10 minutes.
4. Go to [Flag 3](#). Measure the voltage at [P/J850](#) pin 4 on the SBC PWB.

A B

Status Indicator RAPs

301K

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Xerox® AltaLink® B8090 Family Multifunction Printer

C

5. Leave the machine untouched, allow the machine to enter sleep mode.
6. Arrange for a fax job to be sent from another machine to this machine.

The voltage measured changes from +5V to 0V when the fax arrives at the machine.

Y N

Go to **Flag 3**, disconnect **P/J850**. Arrange for a Fax job to be sent from another machine to this machine. **The voltage measured at J850 pin 4 on the SBC PWB changes from +5V to 0V when the print job arrives at the machine.**

Y N

Go to **Flag 4**. Check that the ribbon cable between **P/J880** on the SBC PWB and **P/J1** on the Fax connector PWB is fully connected and undamaged. **The cable is good.**

Y N

Remove and reconnect the cable. If necessary install a new SBC PWB to Fax connector PWB ribbon cable, **PL 3.22 Item 14**.

Perform the **303D SBC PWB Diagnostics RAP**. Return the power save settings to the previous values and reconnect the Fax and network lines. Perform **SCP 5 Final Actions**.

Check the wiring and connectors between **P/J850** and **P/J655**. Repair the wiring as necessary, **REP 1.2**. If the wiring and connectors are good, perform the **301L LVPS RAP**. Return the power save settings to the previous values and reconnect the fax and network lines. Perform **SCP 5 Final Actions**.

Check the wiring and connectors between **P/J850** and **P/J655**. Repair the wiring as necessary, **REP 1.2**. If the wiring and connectors are good, perform the **301L LVPS RAP**. Return the power save settings to the previous values and reconnect the fax and network lines. Perform **SCP 5 Final Actions**.

Go to **Flag 5**. Check the network connection **P/J14** on the SBC PWB. **The harness and connectors are good.**

Y N

Install a new components as necessary:

- Ethernet harness.
- SBC PWB, **PL 3.22 Item 3**.

Perform the steps that follow:

1. Refer to **Reading or Setting the Power Save Duration Times**. Ensure only Job Activated is selected, then set the Ready Mode to Sleep Mode value to 10 minutes.
2. Disconnect the telephone network harness from the fax module to prevent a power management event.
3. Go to **Flag 3**. Measure the voltage at **P/J850** pin 4 on the SBC PWB.
4. Leave the machine untouched, allow the machine to enter sleep mode.
5. Arrange for a print job to be sent from a PC to the machine.

The voltage measured changes from +5V to 0V, when the print job arrives at the machine.

Y N

Go to **Flag 3**. Disconnect **P/J850**. Arrange for a print job to be sent from a PC to the machine. **The voltage measured at J850 pin 4 on the SBC PWB changes from +5V to 0V, when the print job arrives at the machine.**

D

D

Y N

Perform the **303D SBC PWB Diagnostics RAP**. Return the power save settings to the previous values and reconnect the fax and network lines. Perform **SCP 5 Final Actions**.

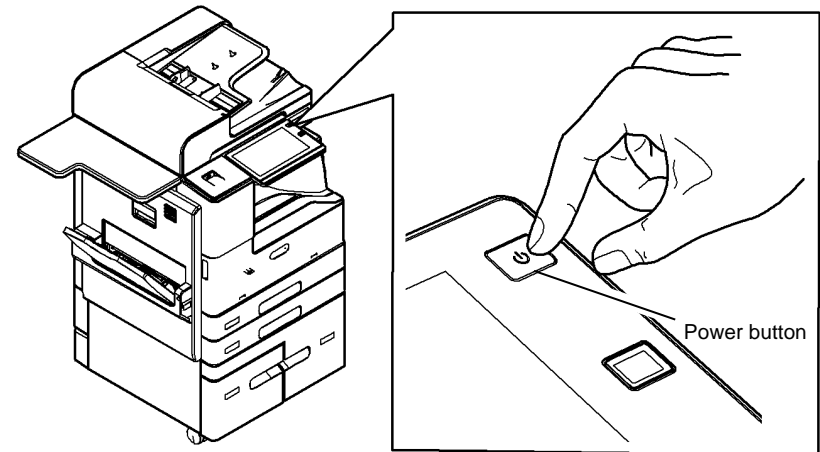
Check the wiring and connectors between **P/J850** and **P/J655**. Repair the wiring as necessary, **REP 1.2**. If the wiring and connectors are good, perform the **301L LVPS RAP**. Return the power save settings to the previous values and reconnect the fax and network lines. Perform **SCP 5 Final Actions**.

Go to **Flag 3**. Measure the voltage at **P/J655** pin 4 on the LVPS. Arrange for a print job to be sent from a PC to the machine. **The voltage measured changes from +5V to 0V when the print job arrives at the machine.**

Y N

Check the wiring and connectors between **P/J655** and **P/J850**. Repair the wiring as necessary, **REP 1.2**.

Perform the **301L LVPS RAP**. Return the power save settings to the previous values and reconnect the fax and network lines. Perform **SCP 5 Final Actions**.



X-1-1086-A

Figure 1 Power button location

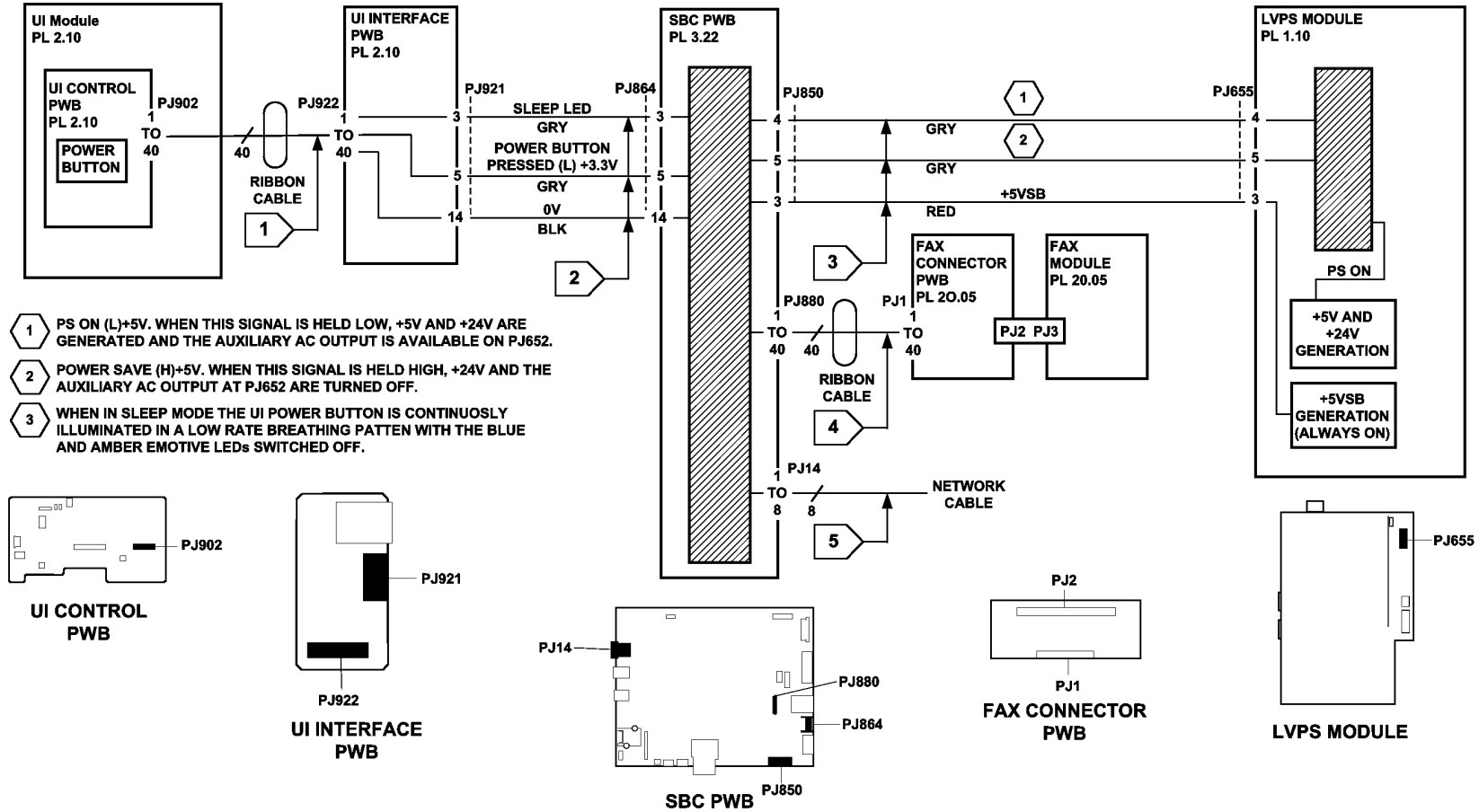


Figure 2 Circuit diagram

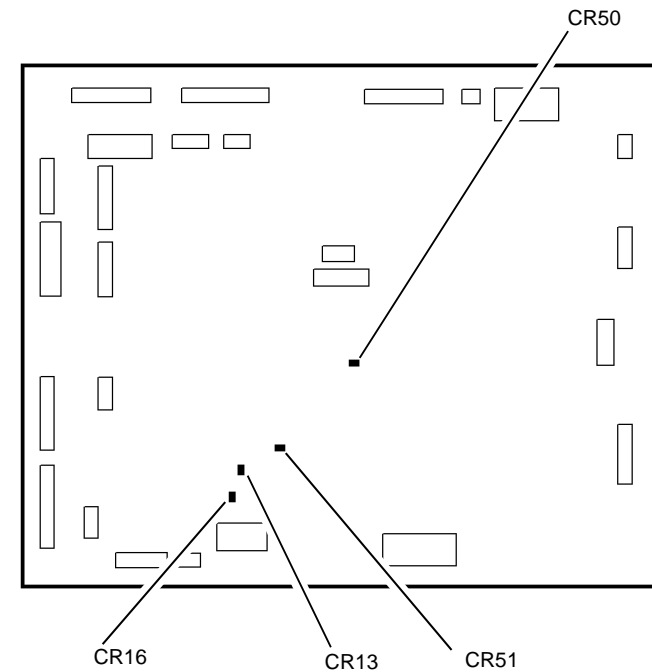
TX-1-0278-A

301L LVPS RAP

Use this RAP to diagnose problems with the LVPS that may give the symptoms that follow:

- The machine does not respond after the power button on the UI has been pressed. The LEDs that follow may be observed on the SBC PWB, [Figure 2](#):
 - D6, if this LED is lit the 5V supply is good.
 - D7, if this LED is lit the 5V supply is off.
 - D10, if this LED is lit the 3.3V supply is good.
 - There is no 24V LED indicator on the SBC PWB. Refer to the [301G +24V Distribution RAP](#) to identify +24V distribution problems.
 - There is no SBC PWB heartbeat LED indicator on the SBC PWB. Refer to the [OF2 POST Error RAP](#). A pulsating decimal point on the 7 segment displays indicates the SBC microprocessor is functioning correctly.
- The machine may respond for an instant to the power button on the UI having been pressed, with a beep, a click or a momentary LED flash, but no power or lights on the UI, no fans on, no motors on and no solenoids on. The LEDs that follow may be observed on the IOT PWB, [Figure 1](#):
 - CR13 is illuminated yellow to indicate the presence of +5V.
 - CR 16 is not illuminated, indicating that there is no +24V on the IOT PWB.
 - CR50 is flashing yellow at 2Hz to indicate the IOT heartbeat.
 - CR51 is illuminated yellow to indicate the presence of +3.3V (generated on the IOT PWB).

This indicates a loss of +24V from the LVPS.



X-1-1314-A

Figure 1 IOT PWB LED locations

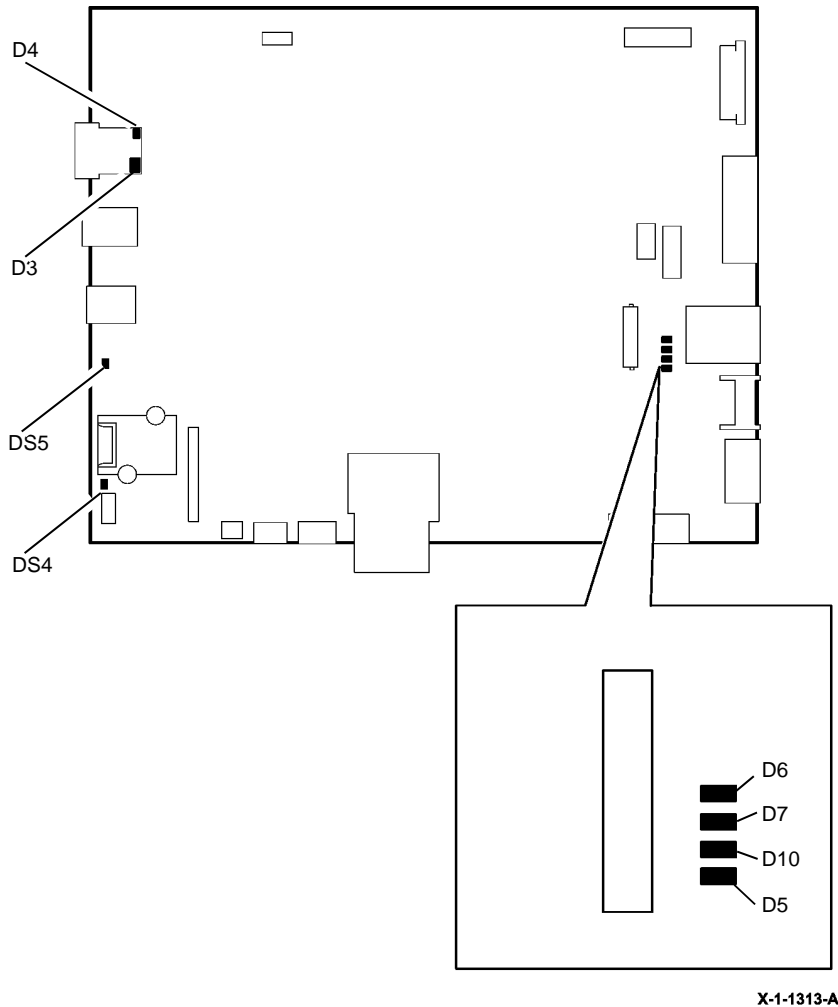


Figure 2 SBC PWB LED locations

Initial Actions

- If the UI touch screen is black or blank, but the LVPS fan is running, or there is an LED lit on the UI, perform the 302A Touch Screen Failure RAP.
- The LVPS can shut down in response to a power surge, requiring a reset. Disconnect the machine from the AC power supply and leave it disconnected for 2 minutes, then re-connect and switch on the machine, GP 14, to restart the LVPS.

LVPS Self Test Feature

There are two indicator LEDs on the LVPS, Figure 3. When the LVPS is operating normally, the green LED is on and the red LED is off. If there is a fault in the LVPS or the voltage distribution from the LVPS, the green LED is off and the red LED is flashing.

The red LED will flash in sequences that signify a fault code, for example, fault code 2 is shown as two short flashes followed by a longer off time, then the sequence is repeated.

LED fault indication is only visible when the PS on signal, Flag 1 is enabled from the SBC PWB. When the PS on signal is not enabled, the LEDs will be off and the LVPS will be in sleep mode. The LVPS will only restart when the PS on signal is enabled once more.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

A LVPS module test tool, PL 26.11 Item 7 is available.

Y	N	Remove the rear cover, PL 28.10 Item 1. The red LED on the LVPS is flashing a code.
Y	N	The green LED on the LVPS is illuminated.
Y	N	Switch off the machine, GP 14 and disconnect the power cord at the LVPS. Disconnect the connectors that follow: <ul style="list-style-type: none"> • P/J650 - fuser power. • P/J655 - SBC PWB power. • P/J654 - IOT PWB power. • P/J656 - main drive module power and door interlocks. At J656 on the LVPS, create a link between pins 3 and 12 (to simulate the door interlocks being made). Switch on the machine, GP 14. Connect J655 pin 4 on the LVPS to 0V or machine frame, (to simulate the PS on signal). The LVPS turns on (the cooling fan runs and +24V is available at P/J655 pin 1).
Y	N	Check the AC voltage supply from the customer's supply to the LVPS connector. If necessary install new components: <ul style="list-style-type: none"> • Main power cord, PL 1.15 Item 1. • LVPS module, PL 1.10 Item 1. Perform the actions that follow: <ul style="list-style-type: none"> • Go to Flag 2. Check the wiring and connectors between P/J656 and PJ951. Also check the mechanical operation of the front door interlock switch using a service meter. • Go to Flag 3. Check the wiring and connectors between P/J656 and PJ952. Also check the mechanical operation of the left door interlock switch using a service meter.

A B C

A B C

- Go to **Flag 1**. Check the wiring and connectors between **P/J655** and **P/J850**.

Repair any damaged wiring or connectors, **REP 1.2**.

If necessary, install new components:

- Front door interlock switch, **PL 1.12 Item 1**.
- Left door interlock switch, **PL 1.12 Item 1**.

The LVPS appears to be working correctly, perform the **OF3 Dead Machine RAP**.

Observe and count the number of flashes of the red LED between the longer pauses, then refer to **Table 1** and perform the remedial actions for the fault code.

The LVPS module test tool contains two LVPS jumper connectors:

- PJ655 connector (to simulate the PS_ON signal from the IOT PWB).
 - PJ656 connector (to simulate the 24V Interlocks made).
1. Remove the LVPS module, **REP 1.1**.
 2. Connect the PJ 655 connector into J655 on the LVPS module.
 3. Connect the PJ656 connector into J656 on the LVPS module.
 4. Connect the main power cord to the LVPS module and the wall outlet. The LVPS will power on.
 5. Observe the red and green LEDs and the cooling fan.

The green LED is on, the red LED is off and the LVPS cooling fan is running.

Y N

The LVPS is defective, if:

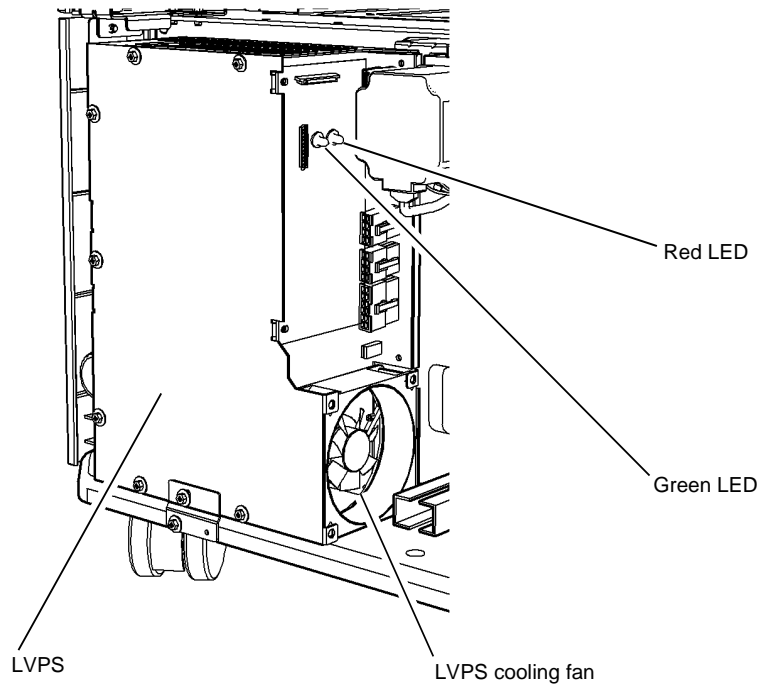
- The green LED is off, the red LED is flashing and the LVPS cooling fan is running.
- The green LED is off, the red LED is off and the LVPS cooling fan is running.
- The green LED is off, the red LED is off and the LVPS cooling fan is inactive.
- The green LED is flickering, the red LED is off and the LVPS cooling fan is inactive

Install a new LVPS, **PL 1.10 Item 1**.

Perform the 301H Short Circuit and Overload RAP.

Table 1 LVPS Fault Descriptions

Fault code (number of flashes)	Fault description	Cause	LVPS outputs affected	Remedial action
1	Under-voltage is detected on either +24V or +24V INTLK outputs	LVPS failure or a short circuit in the +24V or +24V INTLK distribution	All +24V outputs will be shut down. +5V and +5V SB will remain active.	Go to the 301H Short Circuit and Overload RAP , troubleshoot the +24V distribution. If the distribution wiring and components are good, install a new LVPS module, PL 1.10 Item 1 .
2	Peak over-current is detected on the +5V output	A short circuit in the +5V distribution or the system peak current is too high	All outputs will be shut down except +5VSB which will remain active.	Go to the 301H Short Circuit and Overload RAP , troubleshoot the +5V distribution. If the distribution wiring and components are good, install a new LVPS module, PL 1.10 Item 1 .
3	Peak over-current is detected on the +24V or +24V INTLK outputs	A short circuit on the +24V or +24V INTLK distribution or the system peak current is too high	All +24V outputs will be shut down. +5V and +5VSB will remain active.	Go to the 301H Short Circuit and Overload RAP , troubleshoot the +24V and +24V INTLK distribution. If the distribution wiring and components are good, install a new LVPS module, PL 1.10 Item 1 .
4	Over-temperature is detected	The LVPS cooling fan is not running, the LVPS cooling fan is blocked, the vent openings in the rear cover are blocked or the ambient temperature is too high	All outputs will be shut down except +5VSB which will remain active.	Figure 3 , check that the LVPS cooling fan runs in standby and run mode, if necessary install a new LVPS module, PL 1.10 Item 1 . If the fan does run, check that the ventilation grilles in the rear covers are clear. Refer to GP 21 , check that the installation space requirements are met. Refer to GP 23 , check that the environmental conditions are met.
5	Under-voltage is detected on the +5V output	LVPS failure or a short circuit on the +5V distribution	All outputs will be shut down except +5VSB which will remain active.	Go to the 301H Short Circuit and Overload RAP , troubleshoot the +5V distribution. If the distribution wiring and components are good, install a new LVPS module, PL 1.10 Item 1 .
6	Average over-load is detected on the +24V or +24V INTLK outputs	Too much +24V power is being used	All +24V outputs will be shut down. +5V and +5VSB will remain active.	Go to the 301H Short Circuit and Overload RAP , check all the +24V motors and their driven components are correctly installed, are not binding and that drive belts are not over tensioned. Install new components as necessary.
7	Average over-load is detected on the +5V output	Too much +5V power is being used	All outputs will be shut down except +5VSB which will remain active.	Go to the 301H Short Circuit and Overload RAP , troubleshoot the +5V distribution and components. Install new components as necessary.
8	Over-voltage is detected on the +5V output	LVPS failure or a short circuit between the +5V and +24V distribution	All outputs will be shut down except +5VSB which will remain active.	Go to the 301H Short Circuit and Overload RAP , check for a short circuit between the +5V and +24V distribution either in the wiring harnesses or a component that uses both voltages. Repair the wiring or install new components as necessary.
9	Over-voltage is detected on either the +24V or +24V INTLK outputs	LVPS failure	All outputs will be shut down except +5VSB which will remain active.	Install a new LVPS module, PL 1.10 Item 1 .
10	+24V INTLK output stays on when the interlock line is open	LVPS failure	+5V and +24V outputs will be shut down.	Install a new LVPS module, PL 1.10 Item 1 .



X-1-1307-A

Figure 3 Component location

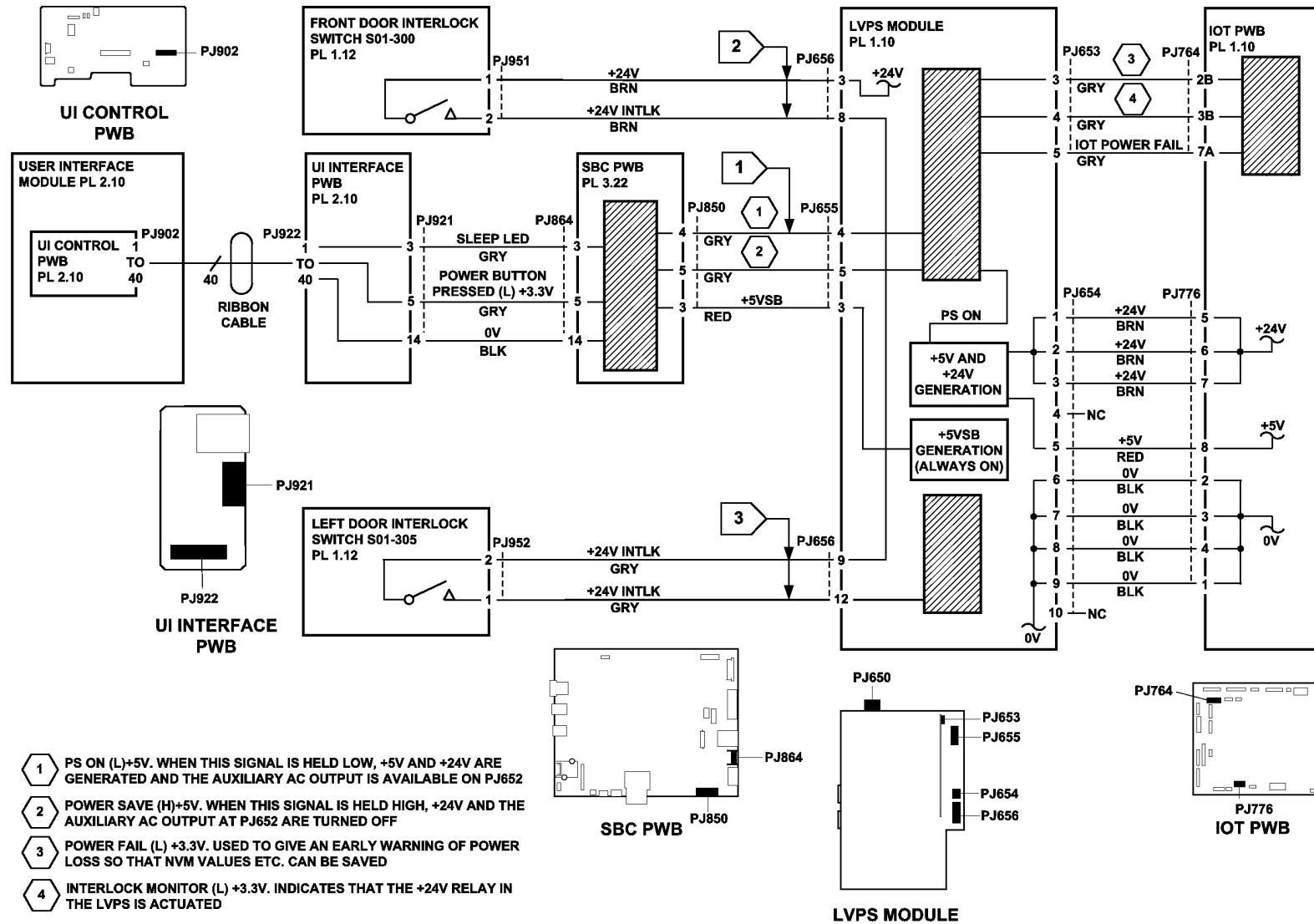


Figure 4 Circuit diagram

TX-1-0253-A

302-302-00, 302-306-00, 303-308-00 Flash Failure RAP

- **302-302-00** Flash rewrite failure.
- **302-306-00** Flash erase failure.
- **303-308-00** Flash download failure.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, **GP 14**. If the fault continues, perform the procedure.

Procedure

1. Perform an AltBoot, **GP 4**.
2. If the fault persists, install a new hard disk drive, **PL 3.22 Item 2**.

302-315-00 Service Registry Bad Data RAP

302-315-00 Service registry bad or corrupted data.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, **GP 14**. If the fault continues, perform the procedure.

Procedure

1. Perform an AltBoot, **GP 4**.
2. If the fault persists, install a new hard disk drive, **PL 3.22 Item 2**.

302-316-00, 302-317-00 SRS Error RAP

302-316-00 SRS returns UI Invalid fields, invalid data, or missing data.

302-317-00 The UI received no response from SRS.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 14](#). If the fault continues, perform the procedure.

Procedure

1. Perform an AltBoot, [GP 4](#).
2. If the fault persists, install a new hard disk drive, [PL 3.22 Item 2](#).

302-320-00, 321-00, 380-00, 381-00, 302B UI Communication RAP

302-320-00 The UI failed to receive requested data from the CCM within the specified time out window.

302-321-00 The UI detected that the Xerox Extensible Interface Platform (XEIP) browser failed to respond, or is known to be not working.

302-380-00 Communication via H-H USB net path connection between NC and UI panel failed.

302-381-00 Communication via USB connection between CC and UI panel failed.

302B Use this RAP if the user interface buttons are illuminated, but there is no information.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 14](#). If the fault continues, perform the procedure.

Procedure

1. Go to [Flag 1](#) and [Flag 2](#). Check the wiring between the UI interface PWB and the SBC PWB. There are two harnesses from the SBC PWB to the UI Interface PWB, the two harnesses are identified together on [PL 3.22 Item 15](#). Repair the wiring or install new components as necessary.
 - [PJ921](#) on the UI interface PWB and [PJ864](#) on the SBC PWB
 - [PJ920](#) on the UI interface PWB and [PJ865](#) on the SBC PWB
2. Got to [Flag 3](#). Check the ribbon cable between the UI interface PWB and the UI module. Repair the wiring or install new components as necessary.
 - [PJ922](#) to [PJ902](#). PJ 902 is embedded within the user interface module, [PL 2.10 Item 1](#).
3. Perform an AltBoot, [GP 4](#).
4. Install new components as necessary:
 - Hard disk drive, [PL 3.22 Item 2](#).
 - UI module, [PL 2.10 Item 1](#).
5. If the fault persists, perform the [303D](#) SBC PWB Diagnostics RAP.

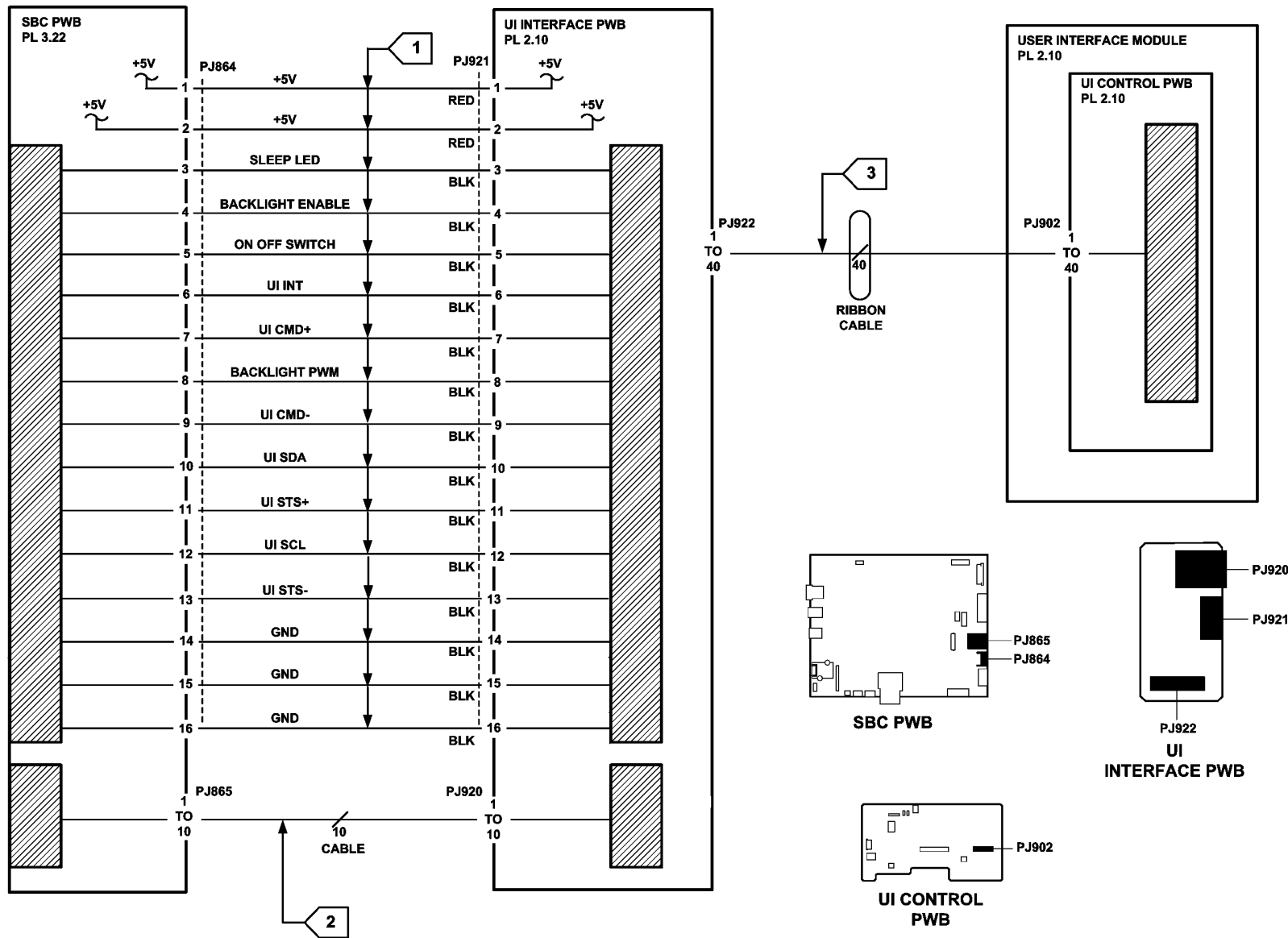


Figure 1 Circuit diagram

TX-1-0399-A

302-390-00 Configurable Services RAP

302-390-00 During power up all configurable services failed to achieve a stable state after 5 minutes from power up.

Initial Actions

Switch off then switch on the machine, [GP 14](#). If the fault continues, perform the procedure.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Reload the software, [GP 4](#).

302A Touch Screen Failure RAP

Use this RAP to solve UI touch screen problems when the machine has power, but either the display is missing, is too dark, or the UI screen responds incorrectly, or does not refresh.

Initial Actions

Switch off then switch on the machine, [GP 14](#). If the fault continues, perform the procedure.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Go to [Flag 1](#) and [Flag 2](#). Check the wiring between the UI interface PWB and the SBC PWB. There are two harnesses from the SBC PWB to the UI Interface PWB, the two harnesses are identified together on [PL 3.22 Item 15](#). Repair the wiring or install new components as necessary:
 - [PJ921](#) on the UI interface PWB and [PJ864](#) on the SBC PWB.
 - [PJ920](#) on the UI interface PWB and [PJ865](#) on the SBC PWB.
2. Got to [Flag 3](#). Check the ribbon cable between the UI interface PWB and the UI module. Repair the wiring or install new components as necessary.
 - [PJ922](#) to [PJ902](#). PJ 902 is embedded within the user interface module, [PL 2.10 Item 1](#).
3. Perform an AltBoot, [GP 4](#).
4. Install new components as necessary:
 - Hard disk drive, [PL 3.22 Item 2](#).
 - UI module, [PL 2.10 Item 1](#).
5. If the problem occurs while entering or exiting sleep mode, perform the [301K Sleep Mode RAP](#).

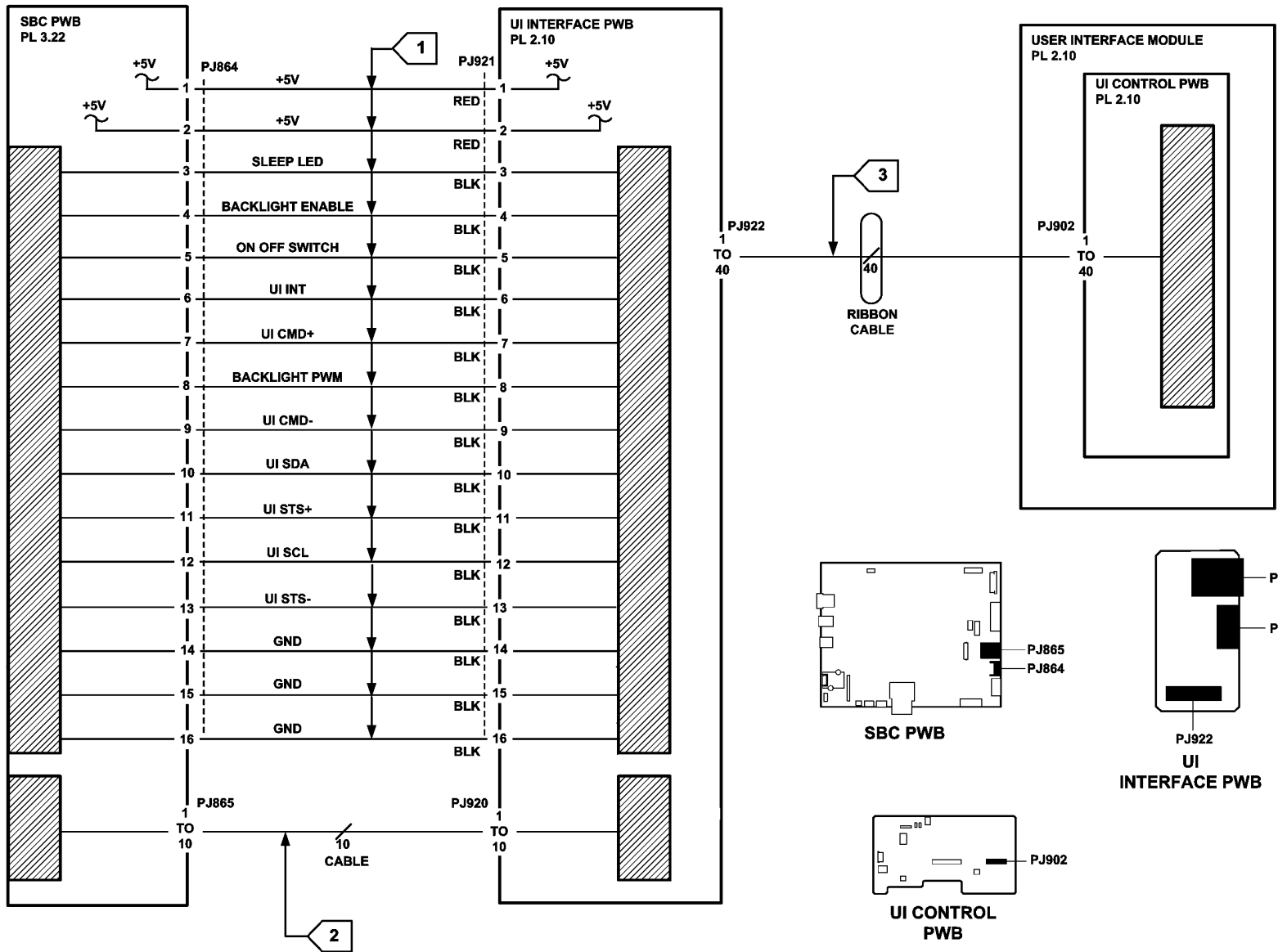


Figure 1 Circuit diagram

TX-1-0399-A

302B UI Control Panel Button or Touch Screen RAP

302B Use this RAP if the user interface buttons are illuminated, but there is no information.

Procedure

Perform the [302-320-00](#), [321-00](#), [380-00](#), [381-00](#), [302B UI Communication RAP](#)

302C Start Button is Greyed-Out RAP

Use this RAP if the start button on the user interface is greyed out and will not function when there is a message on the UI "Start is not available"

Procedure

Switch off, then switch on the machine, [GP 14](#).

303-306-00 Software Downgrade Not Permitted RAP

303-306-00 Software downgrade failed due to downgrade not permitted.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y N

Perform the **395-303-00** Software DLM Downgrade Error RAP.

The cause may be due to electrical noise, perform the **OF10** Intermittent Failure RAP.

303-307-00 Software Upgrade Synchronization Failure RAP

303-307-00 Software upgrade synchronization failure.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y N

Perform the actions that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Reload the software, **GP 4**.

The cause may be due to electrical noise, perform the **OF10** Intermittent Failure RAP.

303-315-00 DC Platform Internal Interface Fault RAP

303-315-00 The DC platform software interface has timed out.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y N
Switch off, then switch on the machine, [GP 14](#). **The fault persists.**

Y N
Perform [SCP 5](#) Final Actions.

Perform the [PWS AltBoot](#) and [PWS Forced AltBoot](#), refer to [GP 4](#) Software Loading Procedures:

NOTE: At Step12 of the [PWS AltBoot](#) and [PWS Forced AltBoot](#) select option 11 from the actions menu, Forced Install ESS software, then follow the remaining steps to complete the procedure.

The cause may be due to electrical noise, perform the [OF10](#) Intermittent Failure RAP.

303-316-00 CCM Cannot Communicate with IOT RAP

303-316-00 CCM failed to communicate with the IOT PWB.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y N
Switch off, then switch on the machine, [GP 14](#). **The fault persists.**

Y N
Perform [SCP 5](#) Final Actions.

Check the wiring between PJ866 on the [SBC PWB](#) and PJ768 on the [IOT PWB](#). Refer to [WD 10](#). **The wiring is good.**

Y N
Repair as necessary, [REP 1.2](#).

Perform the procedures that follow, as necessary:

- [303D](#) SBC PWB Diagnostics RAP.
- [OF7](#) IOT PWB Diagnostics RAP.

The cause may be due to electrical noise, perform the [OF10](#) Intermittent Failure RAP.

303-324-00, 303-327-00, 303-390-00 Software Upgrade Failure RAP

303-324-00 Software upgrade file transfer failed.

303-327-00 Software upgrade failed.

303-390-00 Software upgrade automation failed.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y N
Switch off, then switch on the machine, **GP 14**. **The fault persists.**
Y N
Perform **SCP 5** Final Actions.
Reload the software, **GP 4**. **The fault persists.**
Y N
Perform **SCP 5** Final Actions.
The software.dlm file may be corrupt. Source another .dlm file, then reload the software, **GP 4**.

The cause may be due to electrical noise, perform the **OF10** Intermittent Failure RAP.

303-325-00 System Detects the Machine Clock Failed to Increment During Power On RAP

303-325-00 The software detected that the machine clock failed to increment within 1.5 seconds during the power on self test operation.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y N
Switch off, then switch on the machine, **GP 14**. **The fault persists.**
Y N
Perform **SCP 5** Final Actions.
Reload the software, **GP 4**. **The fault persists.**
Y N
Perform **SCP 5** Final Actions.
Perform the **303D** SBC PWB Diagnostics RAP.

The cause may be due to electrical noise, perform the **OF10** Intermittent Failure RAP.

303-326-00 Software Upgrade Not Required RAP

303-326-00 Software upgrade not required, the same version is already on the machine.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. 303-XXX-XX fault codes occur randomly.

Y N

The fault code shown is for information only. No service action is necessary.

The cause may be due to electrical noise, perform the OF10 Intermittent Failure RAP.

303-329-00, 303-330-00 Software Upgrade Request RAP

303-329-00 Software upgrade requested during active diagnostics.

303-330-00 Software upgrade requested during active security feature.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. 303-XXX-XX fault codes occur randomly.

Y N

Exit diagnostics or the active security feature, then reload the software, GP 4.

The cause may be due to electrical noise, perform the OF10 Intermittent Failure RAP.

303-331-00, 303-332-00 Main Controller and Network Controller on the SBC PWB Cannot Communicate RAP

303-331-00 Integral network communication error on the single board controller PWB.

303-332-00 The main controller and network controller (integral components of the SBC PWB) were unable to communicate within 12 minutes.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y	N
	Switch off, then switch on the machine, GP 14 . The fault persists.
Y	N
	Perform SCP 5 Final Actions.
	Reload the software, GP 4 . The fault persists.
Y	N
	Perform SCP 5 Final Actions.
	Perform the 303D SBC PWB Diagnostics RAP.

The cause may be due to electrical noise, perform the **OF10** Intermittent Failure RAP.

303-338-00 SBC Main Controller Reset RAP

303-338-00 System detected that the software in the SBC PWB has been reset. This was due either to the watchdog timing out or the software writing to an illegal address.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y	N
	Switch off, then switch on the machine, GP 14 . The fault persists.
Y	N
	Perform SCP 5 Final Actions.
	Reload the software, GP 4 . The fault persists.
Y	N
	Perform SCP 5 Final Actions.
	Perform the 303D SBC PWB Diagnostics RAP.

The cause may be due to electrical noise, perform the **OF10** Intermittent Failure RAP.

303-346-00, 303-347-00 Single Board Controller PWB to UI Error RAP

303-346-00 Unable to re-establish communication with the UI after 30 seconds.

303-347-00 The SBC PWB to UI control PWB communications failed.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. If the 303-XXX-XX fault codes occur randomly, the cause may be due to electrical noise. Perform the [OF10](#) Intermittent Failure RAP.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y N
Go to [Flag 1](#) and [Flag 2](#). Check the wiring between the UI interface PWB and the SBC PWB. **The wiring is good.**

Y N
Repair the wiring or install new components as necessary. Refer to:

- [REP 1.2](#) Wiring Harness.
- SBC PWB to UI interface PWB power/comms harness, [PL 3.22 Item 15](#).

Got to [Flag 3](#). Check the ribbon cable between the UI interface PWB and the UI module. **The ribbon cable is good.**

Y N
Install a new UI Module, [PL 2.10 Item 1](#).

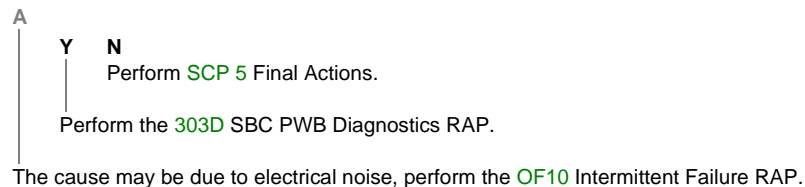
Perform an AltBoot, [GP 4](#). **The fault persists.**

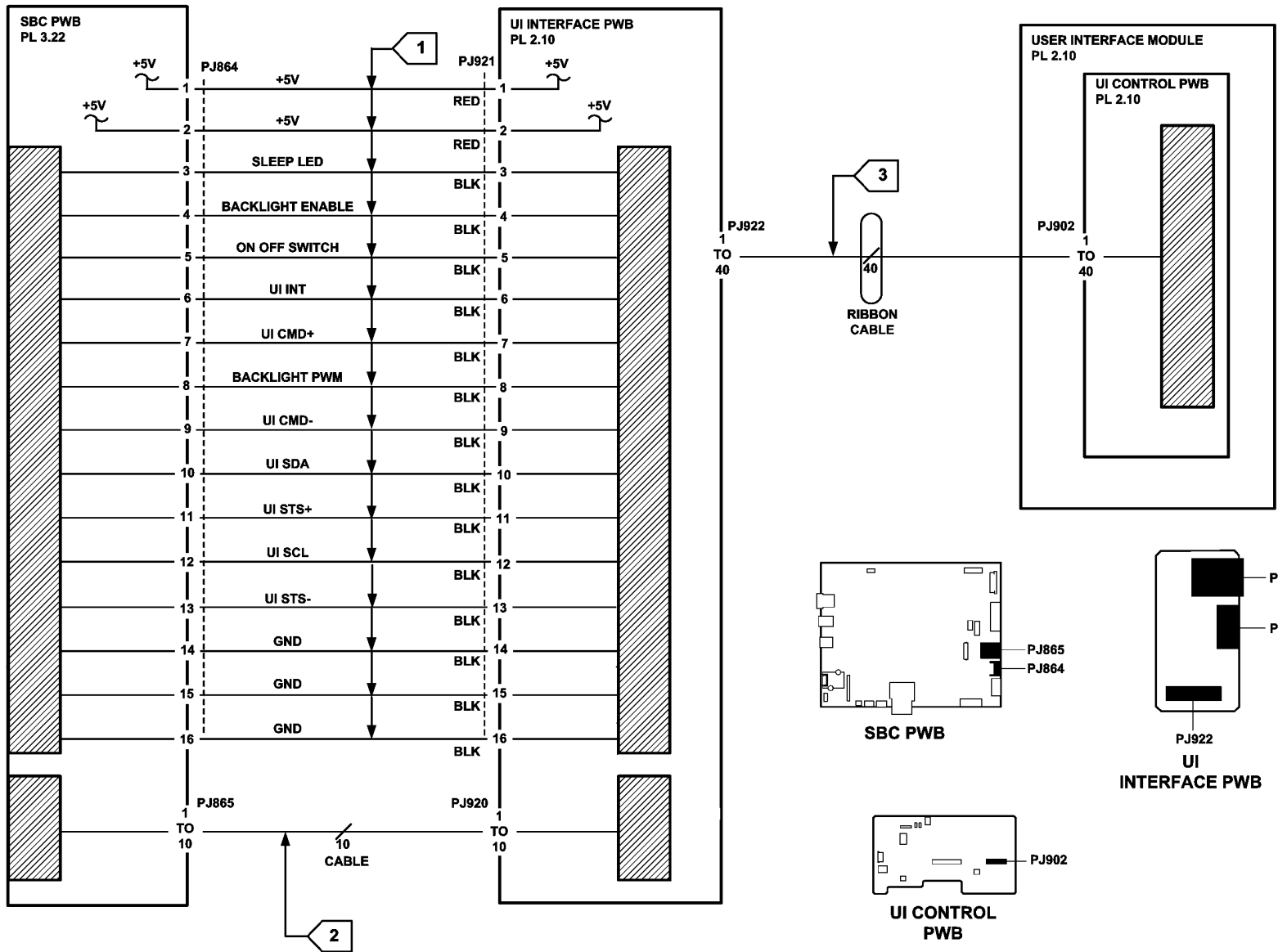
Y N
Perform [SCP 5](#) Final Actions.

Install new components as necessary:

- Hard disk drive, [PL 3.22 Item 2](#).
- UI interface PWB, [PL 2.10 Item 15](#).
- UI module, [PL 2.10 Item 1](#).

The Fault persists.





TX-1-0178-A

Figure 1 Circuit diagram

303-355-00 CCM POST Failure Detected RAP

303-355-00 The software detected a CCM POST failure during the NVM integrity test.

Remote Service Actions

Ask the customer to switch off the machine, re-seat the SD card, then switch on the machine, GP 14. If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: The machine may continue to boot with this fault, but printing may be disabled. The status code, 303-505 is raised with this fault code.

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y	N
	Switch off, then switch on the machine, GP 14. The fault persists.
Y	N
	Perform SCP 5 Final Actions.
	Reload the software, GP 4. The fault persists.
Y	N
	Perform SCP 5 Final Actions.
	Re-seat the SD Card, PL 3.22 Item 6. The fault persists.
Y	N
	Perform SCP 5 Final Actions.
	Install a new SD card, PL 3.22 Item 6. The fault persists.
Y	N
	Perform SCP 5 Final Actions.
	Perform the 303D SBC PWB Diagnostics RAP.

The cause may be due to electrical noise, perform the OF10 Intermittent Failure RAP.

303-360-00, 303-455-00, 303-800-00 IOT to Finisher RAP

303-360 The IOT PWB to output device communications failed.

303-455 An incorrect sheet ID response from the finisher has occurred.

303-800 Finisher communications reset after a machine crash.

Remote Service Actions

Ask the customer to check the items that follow:

- Ensure the finisher power cord is connected to PJ652 on the LVPS.
- Ensure the finisher communications harness is connected to PJ996 on the rear of the machine.
- Switch off, then switch on the machine, GP 14.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



CAUTION

Do not connect the output device power cord directly to the AC wall outlet. The output device cannot operate without the machine. The machine controls the distribution of electricity to the output device for correct power on and power off sequencing.

- **(2K LCSS only).** Check the 2K LCSS PWB DIP switch settings. Refer to the 312F-110 2K LCSS PWB DIP Switch Settings RAP.
- **(2K LCSS only).** Perform REP 12.13-110 2K LCSS Un-docking. Check that the docking actuator, PL 12.15 Item 7 is correctly installed.
- **(LVF BM only).** Check the LVF PWB and LVF BM PWB DIP switch settings. Refer to 312F-150 LVF PWB DIP Switch Settings RAP.
- **(LVF BM only).** Perform REP 12.13-150 LVF BM Un-docking. Check that the docking actuator, PL 12.325 Item 7 is correctly installed.
- **(HVF and HVF BM only).** Perform REP 12.13-171 HVF/HVF BM Un-docking. Check that the docking actuator, PL 12.100 Item 17 is correctly installed.

Procedure

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y	N
	Go to the appropriate finisher procedure:
	<ul style="list-style-type: none">• 2K LCSS Finisher.• LVF BM Finisher.• HVF or HVF BM Finisher.

The cause may be due to electrical noise, perform the OF10 Intermittent Failure RAP.

2K LCSS Finisher

Procedure

Remove **Fuse F1** from the 2K LCSS PWB. Check the fuse. **The fuse is good.**

Y N
Install a new 2K LCSS PWB, **PL 12.75 Item 1**.

Observe the software heartbeat LED (LED 1) on the 2K LCSS PWB, **Figure 1**. **LED 1 is flashing at 1Hz (0.5 seconds on, 0.5 seconds off).**

Y N
LED 1 is flashing at 0.25Hz (2 seconds on, 2 seconds off), this indicates that the finisher software is corrupt. Reload the finisher software, **GP 4**. If necessary install a new 2K LCSS PWB, **PL 12.75 Item 1**.

Go to **Flag 1** and **Flag 2**. Check the wiring and connectors between **P/J772** and **P/J301**. **The wiring and connectors are good.**

Y N
Repair the wiring or connectors, **REP 1.2**.

Perform the steps that follow:

- Go to the **312D-110** 2K LCSS Power Distribution RAP. Check the +5V and +24V supply from the power supply module to the 2K LCSS PWB. Ensure that the voltages are steady. Ensure that there is a good ground continuity between the power supply module, **PL 12.75 Item 2** and the 2K LCSS frame. Install new components as necessary:
 - Power supply module, **PL 12.75 Item 2**.
 - 2K LCSS PWB, **PL 12.75 Item 1**.
- Reload the software using the forced AltBoot procedure, **GP 4**.
- The **OF7** IOT PWB Diagnostics RAP.

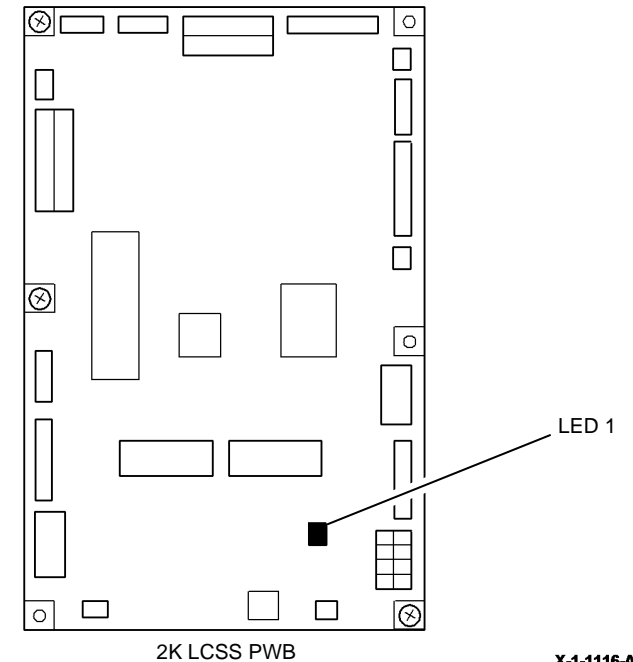


Figure 1 2L LCSS component location

LVF BM Finisher

Procedure

Remove fuse F1 from the [LVF PWB](#). Check the fuse, [PL 12.425 Item 3](#). **The fuse is good.**

Y N
Install a new LVF PWB, [PL 12.425 Item 8](#).

Observe the software heartbeat LED (LED 1) on the LVF PWB, [Figure 2](#). **LED 1 is flashing at 1Hz (0.5 seconds on, 0.5 seconds off).**

Y N
If LED 1 is flashing at 0.25Hz (2 seconds on, 2 seconds off) this indicates that the finisher software is corrupt. Reload the finisher software, [GP 4](#). If necessary install a new LVF PWB, [PL 12.425 Item 8](#).

Observe the software heartbeat LED (LED 1) on the LVF BM PWB, [Figure 2](#). **LED 1 is flashing at 1Hz (0.5 seconds on, 0.5 seconds off).**

Y N
If LED 1 is flashing at 0.25Hz (2 seconds on, 2 seconds off) this indicates that the booklet maker software is corrupt. Reload the finisher software, [GP 4](#). If necessary install a new LVF BM PWB, [PL 12.425 Item 1](#).

Go to [Flag 3](#). Check the wiring and connectors between [P/J101](#) and [P/J401](#). **The wiring and connectors are good.**

Y N
Repair the wiring or connectors, [REP 1.2](#).

Go to [Flag 1](#) and [Flag 2](#). Check the wiring and connectors between [P/J772](#) and [P/J301](#). **The wiring and connectors are good.**

Y N
Repair the wiring or connectors, [REP 1.2](#).

Perform the steps that follow:

- Go to the [312D-150 LVF Power Distribution RAP](#). Check the +5V and +24V supply from the power supply module to the LVF PWB. Ensure that the voltages are steady. Ensure that there is a good ground continuity between the power supply module, [PL 12.425 Item 2](#) and the LVF BM frame. Install new components as necessary:
 - Power supply module, [PL 12.425 Item 2](#).
 - LVF PWB, [PL 12.425 Item 8](#).
- Reload the software using the forced AltBoot procedure, [GP 4](#).
- The [OF7 IOT PWB Diagnostics RAP](#).

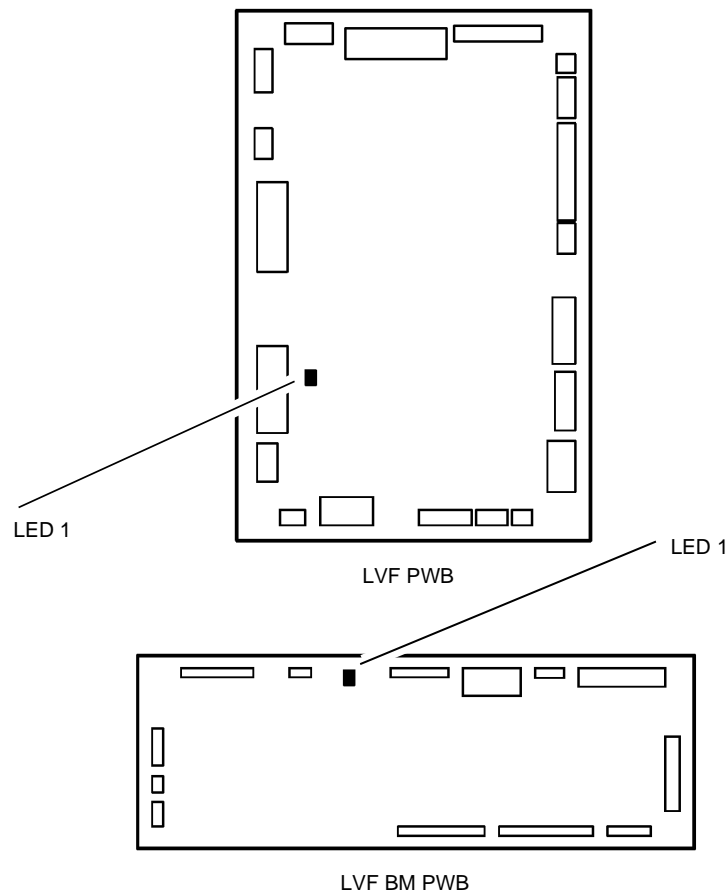


Figure 2 Component location

X-1-1066-A

HVF or HVF BM Finisher

Procedure

Observe the software heartbeat LED (LED 3) on the HVF control PWB, [Figure 3](#). **LED 3 is flashing at 1Hz (0.5 seconds on, 0.5 seconds off).**

Y N
LED 3 is flashing at 0.25Hz (2 seconds on, 2 seconds off) this indicates that the finisher software is corrupt. Re-load the finisher software, [GP 4](#). If necessary install a new HCF PWB, [PL 12.140 Item 2](#).

Observe the software heartbeat LED (LED 1) on the BM PWB, [Figure 3](#). **LED 1 is flashing at 1Hz (0.5 seconds on, 0.5 seconds off).**

Y N
LED 1 is flashing at 0.25Hz (2 seconds on, 2 seconds off) this indicates that the booklet maker software is corrupt. Re-load the finisher software, [GP 4](#). If necessary install a new BM PWB, [PL 12.175 Item 10](#).

Go to [Flag 4](#), check the wiring and connectors between [P/J562](#) and [P/J133](#). **The wiring and connectors are good.**

Y N
Repair the wiring or connectors, [REP 1.2](#).

Go to [Flag 1](#) and [Flag 2](#), check the wiring and connectors between [P/J121](#) and [P/J772](#). **The wiring and connectors are good.**

Y N
Repair the wiring or connectors, [REP 1.2](#).

The UI indicates that the booklet maker is present (booklet maker options are available).

Y N
Check that [P/J133](#), pin 6 is held at 0V. If necessary, repair the wiring, [REP 1.2](#) or install a new HCF control PWB, [PL 12.140 Item 2](#).

The finisher checks are good. Switch off the machine, then switch on the machine, [GP 14](#). If the fault remains, perform the Forced Altboot Software Loading Procedure, [GP 4](#).

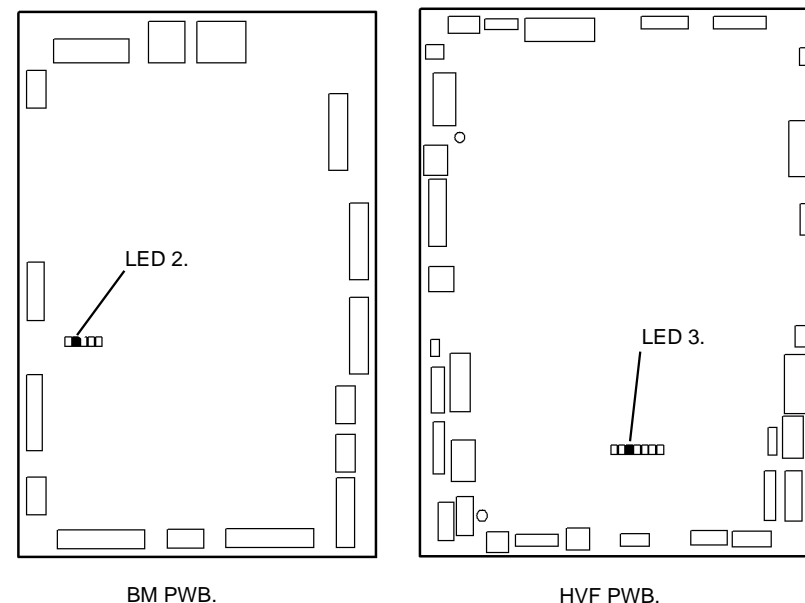


Figure 3 Component location

X-1-2010-A

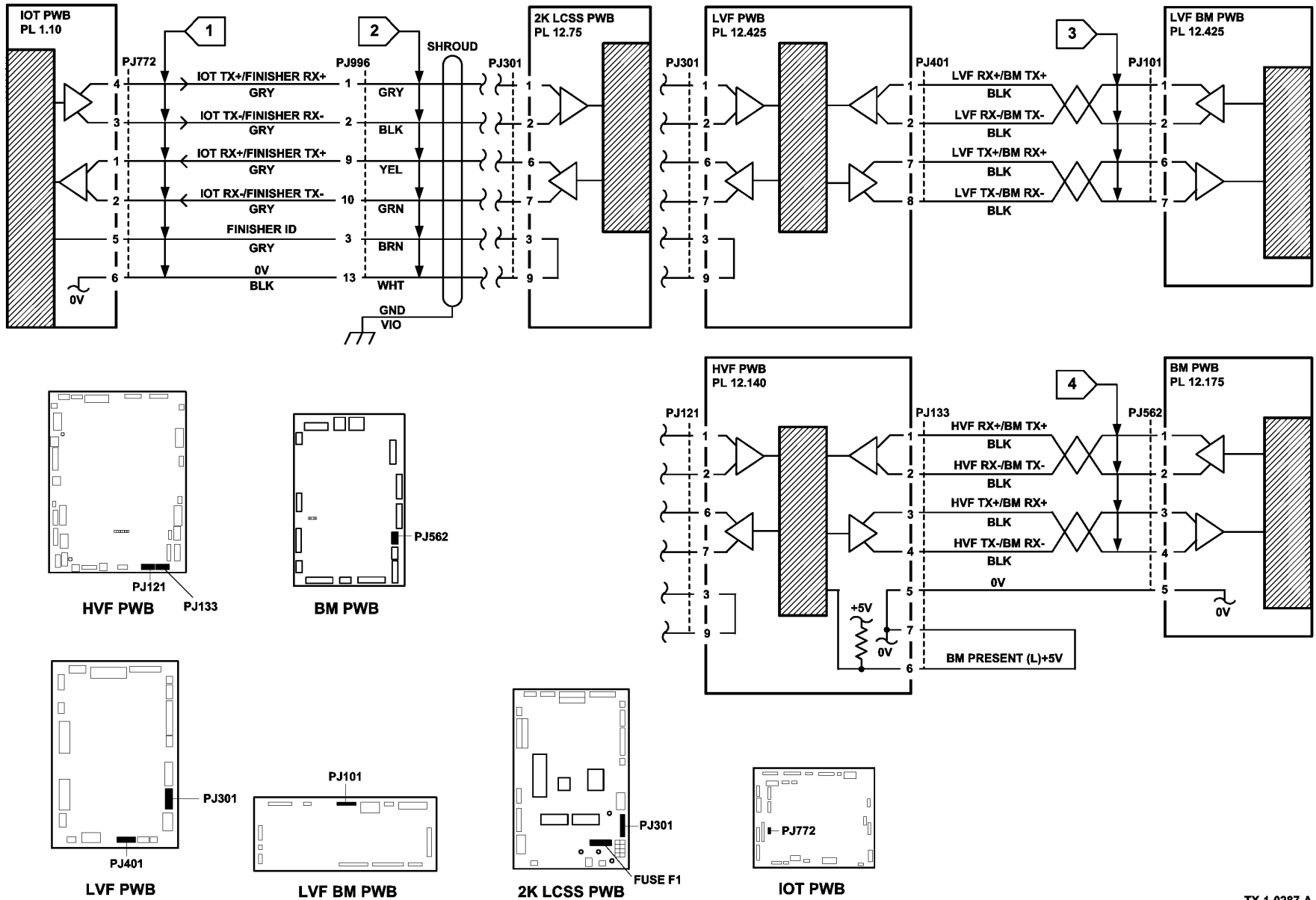


Figure 4 Circuit diagram

TX-1-0287-A

303-362-00 CCS Power Fault RAP

303-362-00 The SBC software failed to exit from a timer loop and detected that this was caused by an abnormal power condition.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 14](#). The fault persists.

Y N
Perform [SCP 5](#) Final Actions.

Go to [Flag 1](#), check the wiring and connections between [P/J655](#) on the LVPS and [P/J850](#) on the SBC PWB. **The wiring and connectors are good.**

Y N
Repair the wiring as necessary, [REP 1.2](#). If necessary, install a new SBC PWB to LVPS harness, [PL 3.22](#) Item 17.

Go to the RAPs that follow. Check the low voltage supplies to the SBC PWB:

- [301E](#) +5V and +5VSB Distribution RAP.
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If the fault persists, perform the procedures that follow:

- [303D](#) SBC PWB Diagnostics RAP.
- [301L](#) LVPS RAP.

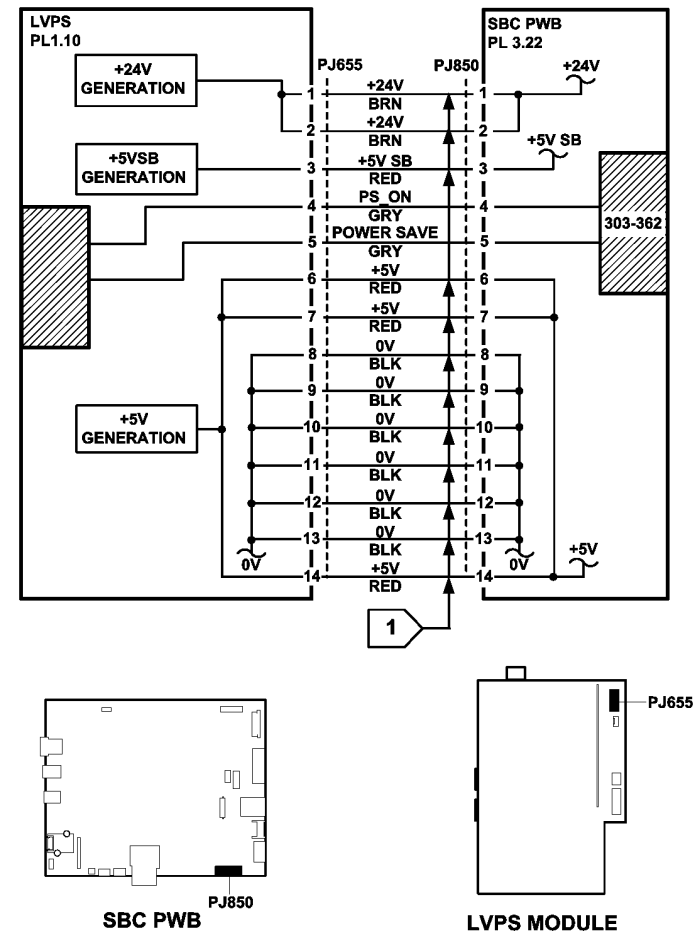


Figure 1 Circuit diagram

TX-1-0401-A

303-397-00 System Configuration Recovery Attempt RAP

303-397-00 Machine speed was lost and an attempted recovery made (from SIM).

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. 303-XXX-XX fault codes occur randomly.

Y N
Switch off, then switch on the machine, GP 14. The fault persists.
Y N
Perform SCP 5 Final Actions.
Go to the 303-405-00, 303-406-00 SIM Card Fault RAP.

The cause may be due to electrical noise, perform the OF10 Intermittent Failure RAP.

303-398-00, 303-399-00 SOK 1 Not Detected RAP

303-398-00 SIM card serial number did not match the serial number in the system.

303-399-00 Unable to establish communications with the SIM card.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, GP 14. If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

For 303-399-00 only, perform the 303-405-00, 303-406-00 SIM Card Fault RAP.

For 303-398-00 only, perform the steps that follow: The original SIM card that was supplied with the machine is available.

Y N
Install a SIM card, PL 3.22 Item 5 that is compatible with the speed of machine and the PagePack requirement. Refer to GP 9 Machine SIM Card Matrix and GP 27 Machine Configuration Control and Recovery. Enter the correct serial number. Refer to dC132 Serial Number.

Install the original SIM card that was supplied with the machine. Enter the correct serial number. Refer to dC132 Serial Number. The fault persists.

Y N
Perform SCP 5 Final Actions.

Perform the 303-405-00, 303-406-00 SIM Card Fault RAP.

303-401-00, 303-403-00 Fax Not Detected RAP

303-401-00 The basic (1 line) fax module was not detected or confirmed.

303-403-00 The extended (2 line) fax module was not detected or confirmed.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y	N	Switch off, then switch on the machine, GP 14. The fault persists.
Y	N	Perform SCP 5 Final Actions.
		Check that the Fax module, PL 20.05 Item 1, is correctly installed. The fault persists.
Y	N	Perform SCP 5 Final Actions.
		Perform the Initial Actions in 320A Fax Entry RAP. The fault persists.
Y	N	Perform SCP 5 Final Actions.
		Perform the 320G Fax Module Checkout RAP. The fault persists.
Y	N	Perform SCP 5 Final Actions.
		Perform the 303D SBC PWB Diagnostics RAP. The fault persists.
Y	N	Perform SCP 5 Final Actions.
		Install new components as necessary:
		<ul style="list-style-type: none">• Fax PWB, PL 20.05 Item 7.• Fax connector PWB, PL 20.05 Item 4.• SBC PWB to fax connector ribbon cable, PL 3.22 Item 14.

The cause may be due to electrical noise, perform the OF10 Intermittent Failure RAP.

303-405-00, 303-406-00 SIM Card Fault RAP

303-405-00 Machine class not set (unknown).

303-406-00 SIM speed did not match machine class.

Initial Actions

- Go to dC131, ensure the locations that follow are correctly set:
 - NVM location 616-328 is set to 2 for 45/55 ppm, 3 for 65/75/90 ppm or 0 for default (unknown).
 - NVM location 510-055 is set to 2 for 45/55 ppm, 3 for 65/75/90 ppm or 0 for default (unknown).
 - NVM location 801-215 is set to 2 for 45/55 ppm, 3 for 65/75/90 ppm or 0 for default (unknown).
- Check that the machine serial number is correct. Refer to dC132 Serial Number.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y	N	Switch off, then switch on the machine, GP 14. Observe the LEDs on either side of the SIM card slot (CR15 and CR16). At initial power on, both LEDs should illuminate for approximately 1 minute and then switch off. The SIM card is then read. If a compatible SIM card is detected, the green LED (CR16) is illuminated. The green LED (CR16) is illuminated.
Y	N	The red LED (CR15) is illuminated.
Y	N	Neither LED is illuminated. This indicates that the SIM card has not been detected. Remove the SIM card. Clean the contact face. Re-insert the SIM card. The fault is fixed.
Y	N	Perform the steps that follow: <ul style="list-style-type: none">• Check the 7-segment LED display for POST errors. If a POST error is indicated, go to the OF2 POST Error RAP.• Check dC122 Fault History. Perform the appropriate RAP.• If the fault persists, perform the 303D SBC PWB Diagnostics RAP.
		Go to SCP 5 Final actions.

A B C

A B C

This indicates that the SIM card is not compatible with the system. (It is either from another machine or another system.) Install a new SIM card, [PL 3.22 Item 5](#), that is compatible with the speed of the machine and the PagePack requirement. **The fault is fixed.**

Y N

Perform the [303D SBC PWB Diagnostics RAP](#).

Go to [SCP 5 Final actions](#).

This indicates that the inserted SIM card is compatible with the machine configuration. Go to [SCP 5 Final Actions](#).

The cause may be due to electrical noise, perform the [OF10 Intermittent Failure RAP](#).

303-417-00 Incompatible Fax Software RAP

303-417-00 The fax software version supplied at power up is not compatible with the image processing software.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y N

Switch off, then switch on the machine, [GP 14](#). **The fault persists.**

Y N

Perform [SCP 5 Final Actions](#).

Reload the software, [GP 4](#). **The fault persists.**

Y N

Perform [SCP 5 Final Actions](#).

Install a new Fax PWB, [PL 20.05 Item 7](#).

The cause may be due to electrical noise, perform the [OF10 Intermittent Failure RAP](#).

303-460-00 IOT DMA Fault RAP

303-460-00 The IOT PWB has experienced a direct memory access Fault.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for 303-450-00 and 381-XXX-XX fault codes. **303-450-00 and 381-XXX-XX fault codes occur at the same time as this fault.**

Y N

Switch off, then switch on the machine, GP 14.

Perform the 381-XXX-XX RAP, then switch off, then switch on the machine, GP 14.

303-777-00, 303-450-00 Power Loss Detected RAP

303-777-00 This fault code in the fault history file indicates that the system has previously detected a power input loss.

303-450 The IOT has reset unexpectedly. There are no service action to perform for this fault code.

Remote Service Actions

Ask the customer to check the items that follow:

- If the AC mains (line) input power supply is experiencing interruptions.
- That the machine does not share a power supply with any other equipment. Sharing a power supply may cause the safety over-current device to switch off the electrical supply to the machine. This would cause a 303-777-00 fault. If possible, ensure the machine is connected to a dedicated power supply.

If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y N

Perform the 301C AC Power RAP. Check the power input circuit and its connectors.

The cause may be due to electrical noise, perform the OF10 Intermittent Failure RAP.

303-788-00 Failed to Exit Power Save Mode RAP

303-788-00 The operating system failed to return the system to Ready mode after request from Power Saver System Manager

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the **303-346-00**, **303-347-00** Single Board Controller PWB to UI Error RAP.

303-790-00 Time Zone Cannot Be Set RAP

303-790-00 At power up, the time zone was not valid due to NVM corruption, or an OS file system problem. Time zone overridden to GMT. DST disabled.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fault history file for other 303-XXX-XX fault codes. **303-XXX-XX fault codes occur randomly.**

Y N

Reset the time zone in Customer Administration Tools, refer to **GP 24**.

The cause may be due to electrical noise, perform the **OF10** Intermittent Failure RAP.

303A SBC PWB Battery RAP

Use this RAP when the machine exhibits any of the symptoms that follow:

- The date and time appearing on the customer's banner sheets and configuration report is 1st January 2000.
- The machine constantly reboots.
- The machine may not power up.
- The software cannot reference the time and date and may behave erratically.
- The HDD checking software will run at every reboot delaying the completion of the boot-up.
- If the machine is set to pick up the time from an NTP server, it will cause a reboot and a disk check. This action may cycle continuously.

Procedure

NOTE: If directed here from any other procedure, always return to that procedure.



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol



Observe ESD procedures during this procedure.

Switch off the machine, [GP 14](#), but do not disconnect the power cord. Open the SBC PWB module. Refer to [REP 3.2](#). Without removing the battery from the holder, check the voltage of the battery, [Figure 2](#). **The battery voltage is below +2.6V.**

Y N
Observe the decimal point of the seven segment display. This represents the SBC microprocessor heartbeat and should flash at approximately 0.5Hz to show that the microprocessor is running correctly. **The decimal point is flashing correctly.**

Y N
Press and hold the power button on the UI for 15 seconds. This should reset the SBC microprocessor heartbeat. Observe the decimal point. **The decimal point is flashing correctly.**

Y N
Install a new SBC PWB, [PL 3.22 Item 3](#), then [Set the Correct Date and Time](#).

Switch on the machine, [GP 14](#). [Set the Correct Date and Time](#).

A B
The battery and SBC PWB are good. If necessary [Set the Correct Date and Time](#).

Install a new battery, [PL 3.22 Item 19](#). Connect the power lead from the power supply outlet to the machine. Observe the decimal point of the seven segment display. This represents the SBC microprocessor heartbeat and should flash at approximately 0.5Hz to show that the microprocessor is running correctly. **The decimal point is flashing correctly.**

Y N
Press and hold the power button on the UI for 15 seconds. This should reset the SBC microprocessor heartbeat. **the decimal point is flashing correctly.**

Y N
Install a new SBC PWB, [PL 3.22 Item 3](#), then [Set the Correct Date and Time](#).

Switch on the machine, [GP 14](#). [Set the Correct Date and Time](#).

Switch on the machine, [GP 14](#). [Set the Correct Date and Time](#).

Set the Correct Date and Time

1. Login to Customer Administrator Tools, [GP 24](#).
2. Select **Device Settings**.
3. Select **Date and Time**.
4. Make the necessary changes to correct the date and time.

A B

303B Mark Service Unavailable RAP

Before performing this RAP, any relevant status code RAP must have been performed.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, GP 14. If the fault continues, a site visit will be necessary.

Procedure

Switch off the machine, GP 14. Disconnect the power cord. Access the IOT PWB and the SBC PWB, ensure all the P/Js are properly connected on both PWBs. **The P/Js are good.**

Y N
Re-connect or repair any defective P/Js, refer to REP 1.2 Wiring harness. Install new PWBs if necessary:

- IOT PWB, PL 1.10 Item 2.
- SBC PWB, PL 3.22 Item 3.

Reseat the output device communications cord at PJ966 at the rear of the machine. **The fault persists.**

Y N
Perform SCP 5 Final Actions.

Check the wiring between PJ966 at the rear of the machine and PJ772 on the IOT PWB. **The wiring and connectors are good.**

Y N
Repair the wiring, refer to REP 1.2 Wiring harness.

Reload the software, GP 4. **The fault persists.**

Y N
Perform SCP 5 Final Actions.

Perform the procedures that follow as necessary:

- OF7 IOT PWB Diagnostics RAP.
- 303D SBC PWB Diagnostics RAP.

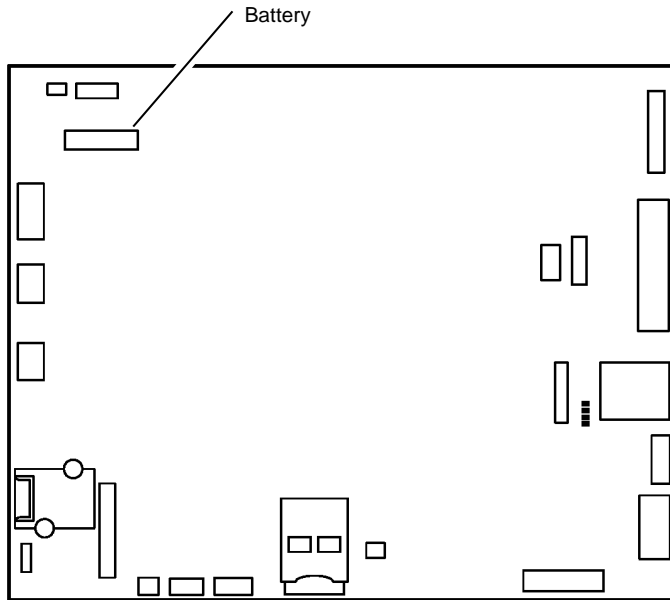


Figure 2 SBC PWB

X-1-1070-A

303C Switch Off Failure RAP

The machine failed to respond when the power button was pressed on the UI.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Press and hold the power button on the UI for more than 6 seconds. **The machine switches off.**

Y N

Press and hold the power button on the UI for 15 seconds. This should reset the SBC microprocessor. **The machine switches off, then on.**

Y N

Disconnect the main power cord from the power and control assembly.

Go to Flag 3. Disconnect and check the ribbon cable end where it connects to the UI interface PWB at P/J922. Check that the cable locks on P/J922 is working effectively. **The ribbon cable end and P/J922 are good.**

Y N

Clean the ribbon cable end or repair any damage. Install new components as necessary:

- UI module, PL 2.10 Item 1.
- UI interface PWB, PL 2.10 Item 15.

Go to Flag 2. Disconnect P/J922 and P/J864. Check the harness and both P/Js. **The harness and P/Js are good.**

Y N

Perform the steps that follow as necessary:

- Repair the harness, REP 1.2.
- 303D SBC PWB Diagnostics RAP.
- Install a new UI control PWB, PL 2.10 Item 6.

Go to Flag 3. Disconnect P/J850 and P/J655. Check the harness and both P/Js. **The harness and P/Js are good.**

Y N

Perform the steps that follow as necessary:

- Repair the harness, REP 1.2.
- 303D SBC PWB Diagnostics RAP.
- 301L LVPS RAP.

Perform the steps that follow as necessary:

- 303D SBC PWB Diagnostics RAP.
- OF7 IOT PWB Diagnostics RAP.

Set the correct date and time. Perform the steps that follow:

1. Login to Customer Administrator Tools, GP 24.

2. Select **Tools**.
3. Select **General**.
4. Select **Date and Time**.
5. Make the necessary changes to correct the date and time.

The switch off circuit is working correctly. Switch on the machine, GP 14. Perform several normal machine switch off then switch on cycles. If the power button proves unreliable, install a new UI module, PL 2.10 Item 1.

A

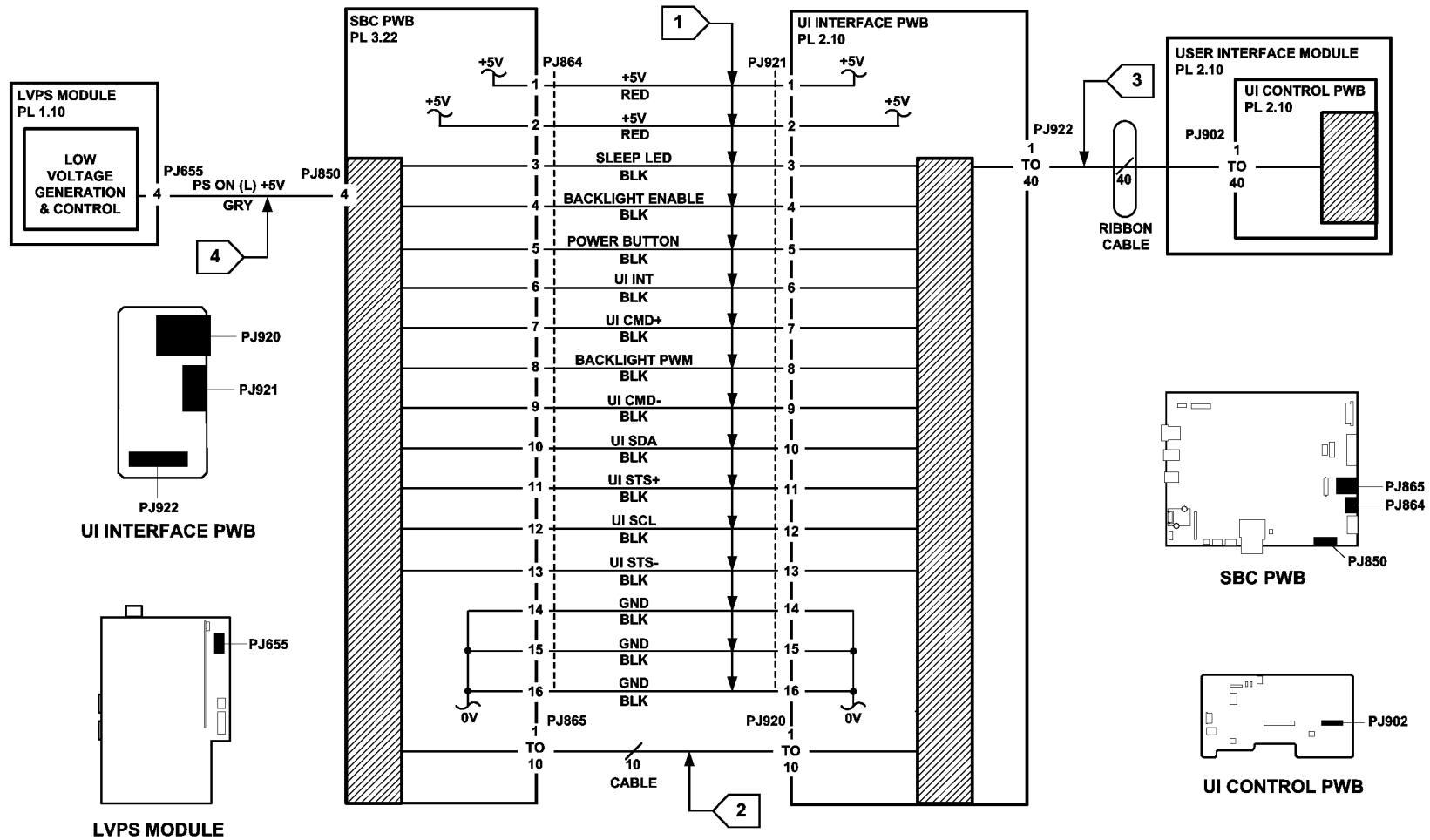


Figure 1 Circuit diagram

TX-1-0180-A

303D SBC PWB Diagnostics RAP

Purpose

To assist in identifying any suspected problems with the SBC PWB.

Procedure

NOTE: If directed here from any other procedure, always return to that procedure.



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol



CAUTION

Observe ESD procedures during this procedure.

Perform the checks that follow:

1. SBC PWB Voltage Check.

2. SBC PWB LED Indicator Check.
3. SBC PWB Connections Check.

SBC PWB Voltage Check

Refer to WD 2. Perform the steps that follow:

1. Check for +24V at PJ850 pins 1 and 2 on the SBC PWB.
 - If the +24V is not within the tolerance of +21.6 to +26.4V, install a new LVPS module, PL 1.10 Item 1.
 - If the +24V is not present, perform the 301G +24V Distribution RAP and the 301B 0V Distribution RAP.
2. Check for +5V at PJ850 pins 6, 7 and 14 on the SBC PWB.
 - If the +5V is not within the tolerance of +4.75V to +5.25V, install a new LVPS module, PL 1.10 Item 1.
 - If the +5V is not present, perform the 301E +5V and +5VSB Distribution RAP and the 301B 0V Distribution RAP.
3. Check for +5VSB at PJ850 pin 3 on the SBC PWB.
 - If the +5VSB is not within the tolerance of +4.75V to +5.25V, install a new LVPS module, PL 1.10 Item 1.
 - If the +5V is not present, perform the 301E +5V and +5VSB Distribution RAP and the 301B 0V Distribution RAP.

SBC PWB LED Indicator Check

Perform the steps that follow:

1. Check the 7-segment display on the rear of the SBC PWB. If the display is blank with a flashing decimal point or showing a zero with a flashing decimal point, no action is required. For all other display readings, perform the OF2 POST Error RAP.
2. Check the state of the LEDs on the SBC PWB, refer to Table 1 and Figure 2. Perform the relevant service actions.

Table 1 LED identifiers

LED Identifier	Signal Name	LED Color	Description
D5	FPGA_CONFIG_NOT_DONE	Red	This LED indicates the status of the FPGA Configuration. The LED is lit in a fault condition and indicates that the FPGA is not configured. During power up this LED will blink for a second to indicate that the FPGA is configured. If the LED stays lit switch off, then switch on the machine, GP 14. If the fault persists, install a new SBC PWB, PL 3.22 Item 3.
D6	VCC5V0_Always	Green	This LED indicates the status of the VCC 5V supply and should always be lit when the device is connected to an AC mains supply. If this LED is lit the supply is good. If this LED is not lit a fault is indicated. Check the connections between the SBC PWB, PL 3.22 Item 3 and the LVPS PL 1.10 Item 1.
D7	VCC5V0_Off	Green	This LED indicates the status of the VCC 5V off supply. If this LED is lit the supply is good. This LED is not lit if the system is in sleep mode or is connected to mains power but the power button has not been pressed. If this LED is not lit when the system is powered on and out of sleep a fault is indicated. Switch off then switch on the machine, GP 14, if the fault persists perform the 301L LVPS RAP or install a new SBC PWB PL 3.22 Item 3.

Table 1 LED identifiers

LED Identifier	Signal Name	LED Color	Description
D10	VCC3V3_SW	Green	This LED indicates the status of the VCC 3.3V SW supply. If this LED is lit the supply is good. This LED is not lit if the system is in sleep mode. If this LED is not lit when the system is out of sleep a fault is indicated. Switch off then switch on the machine, GP 14 , if the fault persists perform the 301L LVPS RAP , reinstall the software, GP 4 or install a new SBC PWB PL 3.22 Item 3 .
DS4	SOC_ACT0_N	Red	SIM card socket - this LED is lit during initialisation at power on, and then stays on if an incompatible SIM card is detected. If the LED illuminates when a SIM card is inserted in the correct orientation, Figure 3 , check that the card and socket contacts are clean. If necessary, install a SIM card, PL 3.22 Item 5 that is compatible with the speed of machine and the PagePack requirement. Refer to GP 9 Machine SIM Card Matrix. If the fault persists, install a new SBC PWB, PL 3.22 Item 3 .
DS5	SOC_ACT1_N	Green	SIM card socket - this LED is lit during initialisation at power on, and then stays on if a compatible SIM card is detected. If the LED does not light when a SIM card is inserted, check that the card and socket contacts are clean. If necessary, install a SIM card, PL 3.22 Item 5 that is compatible with the speed of machine and the PagePack requirement. Refer to GP 9 Machine SIM Card Matrix. If the fault persists, install a new SBC PWB, PL 3.22 Item 3 .
D4	ETHERNET_LED1	Green	Ethernet link/activity. LED not lit = no link. LED lit = linked but no activity. LED blinking = linked with RX/TX activity. If the LED does not indicate as expected, check all network connections.
D3	ETHERNET_LED0	Green or Yellow	Ethernet speed. LED not lit = 10 Base-T or No Link. LED lit Yellow = 100 Base-T. LED lit Green = Gigabit Ethernet. If the LED does not indicate the expected speed, check all network connections.
D15	PROCHOT_N	Red	This LED indicates the thermal status of the processor If the LED is not lit the processor is within normal temperatures. If the LED is lit the processor is outside the normal temperature range or there is a power failure in VCC1P0_S_SS rail. Note: If D1 LED is lit disregard D15 LED.

SBC PWB Connections Check

Perform the steps that follow:

1. Switch off the machine, [GP 14](#).
2. Open the SBC PWB module. Refer to [REP 3.3](#). Disconnect all connectors from the SBC PWB. Ensure the connectors on the harnesses are clean and undamaged.
3. Remove the SBC PWB. Refer to [REP 3.3](#). Ensure the connectors on the PWB are clean and undamaged.
4. Remove the SD card, [PL 3.22 Item 6](#). Ensure the contacts on the card and PWB are clean. Install the SD card.
5. Install the SBC PWB. Refer to [REP 3.3](#).
6. Connect all connectors on the SBC PWB.
7. Switch on the machine, [GP 14](#). If the problem with the SBC PWB persists, install a new SBC PWB, [PL 3.22 Item 3](#).

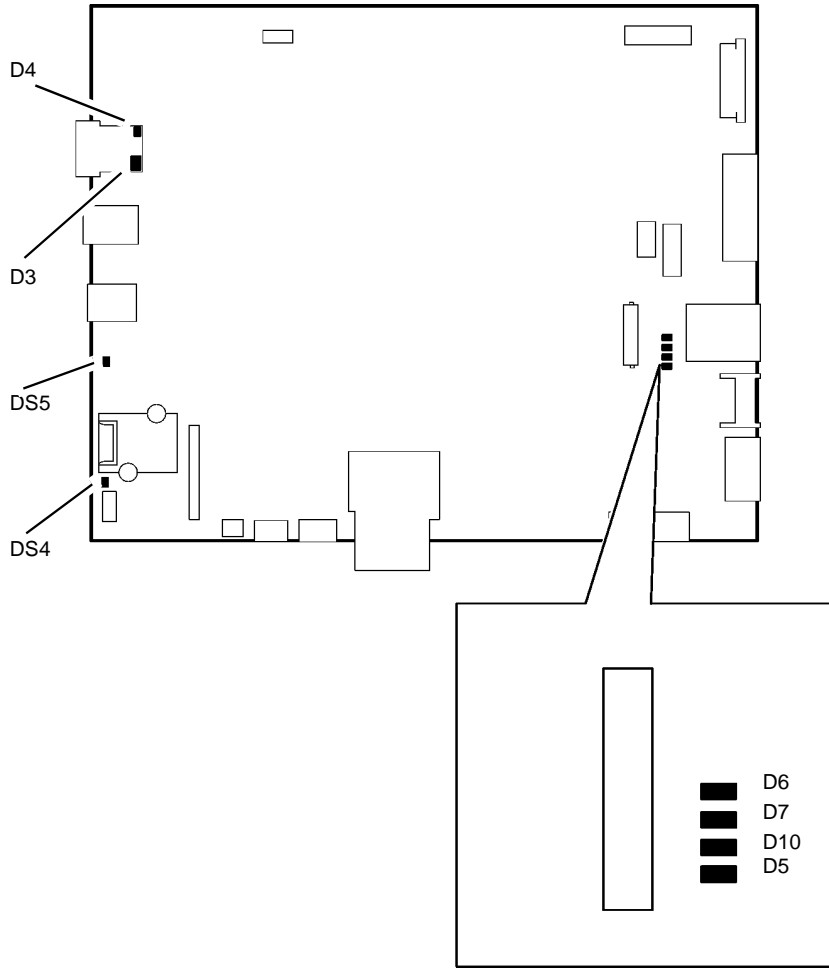


Figure 2 SBC PWB LED locations

X-1-1158-A

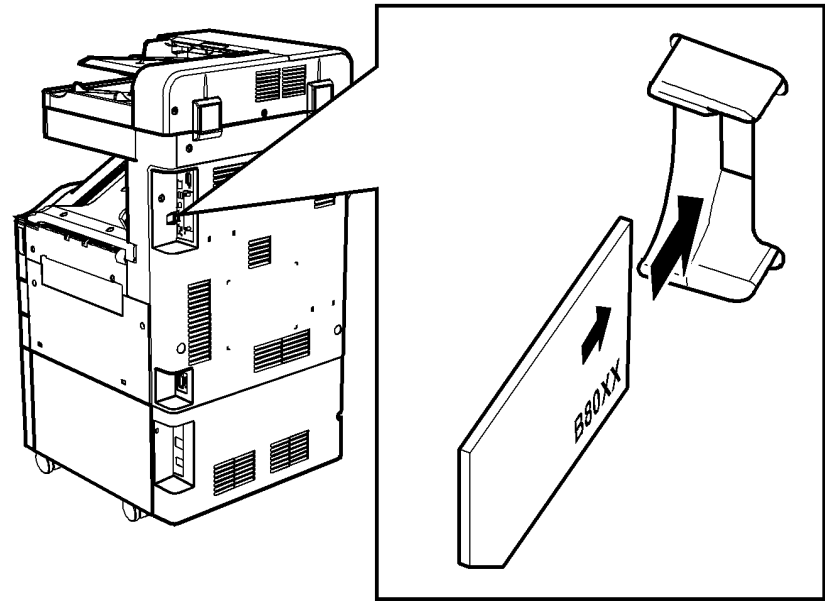


Figure 3 SIM Card orientation

X-1-2020-A

303E Foreign Device PWB Fault RAP

Use this RAP when the foreign interface device is not detected at power on.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



CAUTION

Do not show the customer how to install a temporary shorting link. Do not leave a shorting link installed.

- Switch off, then switch on the machine, [GP 14](#).
- Ensure that the foreign device is enabled in tools:
 1. Log in as administrator.
 2. Select **Tools / Accounting Settings / Accounting Mode / Auxiliary Access / Auxiliary Device Type**.
 3. Select the device type.
 4. Select **Save**.
 5. Exit tools.
 6. Switch off, then switch on the machine, [GP 14](#).
- Ensure the foreign interface PWB, [PL 3.22 Item 18](#) is securely connected to the SBC PWB, [PL 3.22 Item 3](#).

NOTE: Do not attach a foreign interface vend adaptor with this configuration of foreign interface PWB.

Procedure

Go to [Flag 1](#). **+3.3V is available at P/J100 between pins 2 and 3, also between pins 1 and 3.**

A	N	Disconnect the foreign device from P/J124 . +3.3V is available at P/J100 between pins 2 and 3, also between pins 1 and 3.	
Y	N	Disconnect P/J100 . +3.3V is available at J100 on the foreign interface PWB between pins 2 and 3, also between pins 1 and 3.	
	Y	N	Disconnect the foreign interface PWB. +3.3V is available at P/J881 on the SBC PWB at pins 1, 5, 9, 16 and 22.
		Y	N
			Check the voltages that follow:
			<ul style="list-style-type: none">• +5V supply to the +3V generator on the SBC PWB. Refer to the 301D +3.3V Distribution RAP.• +5V return supply to the +3V generator on the SBC PWB. Refer to the 301B 0V Distribution RAP.
			If the supplies are good, perform the 303D SBC PWB Diagnostics RAP.

A	B	C	D
			Install a new foreign interface PWB, PL 3.22 Item 18 .
			Install a new foreign device interface harness, PL 3.22 Item 24 .
			The foreign device is faulty.

Disconnect the foreign device. Install a temporary shorting link between pins 2 and 3 on [P/J124](#). Check the voltage at PJ124 pin 1. **0V is measured.**

Y	N	Install a new foreign interface PWB, PL 3.22 Item 18 . If the fault persists, the foreign device is faulty.
---	---	---

Disconnect the foreign device. Install a temporary shorting link between pins 1 and 3 on [P/J124](#). Check the display. Ensure the machine is now enabled to scan or print. **The machine is enabled.**

Y	N	Install a new foreign interface PWB, PL 3.22 Item 18 . If the fault persists, perform the 303D SBC PWB Diagnostics RAP.
---	---	---

The enable circuits are working correctly.

NOTE: Currently the signals used for billing, e.g. machine function, or premium tray, cannot be adequately measured with a standard meter.

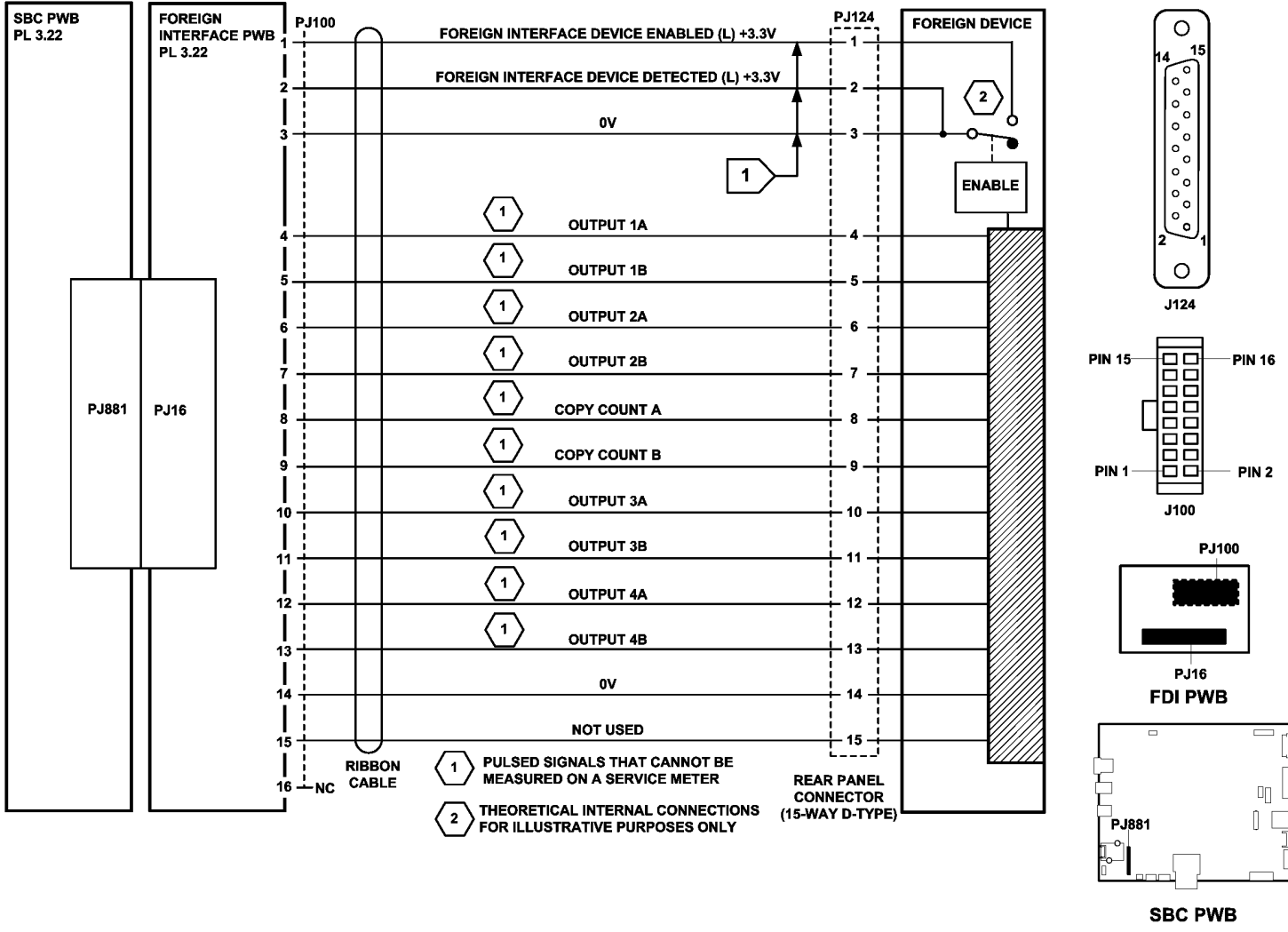


Figure 1 Circuit diagram

TX-1-0179-A

305-100-00 SPDH EEPROM Failure RAP

305-100-00 The SPDH EEPROM failed.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 14](#). **The fault persists.**

Y N
| Perform [SCP 5](#) Final Actions.

Perform [SCP 5](#) Final Actions.

305-253-00 SPDH Communications Error RAP

305-253-00 The scanner PWB to SPDH PWB communications failed.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 14](#). **The fault is fixed.**

Y N
| [Flag 1](#). Disconnect, then check the ribbon cable between [CN11](#) on the [SPDH PWB](#) and [CN10](#) on the Scanner PWB. **The ribbon cable and connectors are good.**

Y N
| Clean or repair the ribbon cable or connectors. If necessary, install new components:

- Side 2 scan assembly data ribbon cable, [PL 5.10 Item 16](#).
- Scanner PWB, [PL 60.20 Item 4](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Reconnect the CN10 to CN11 ribbon cable. Perform an AltBoot, [GP 4](#). If the fault persists, install new components as necessary:

- Scanner PWB, [PL 60.20 Item 4](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Perform [SCP 5](#) Final Actions.

305-300-00 SPDH Open RAP

305-300-00 The SPDH platen down sensor detected that the SPDH opened during run.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the operation of the DH angle sensor actuator, [PL 60.20 Item 12](#) and the actuator spring, [PL 60.20 Item 15](#). Ensure that they operate the DH platen down sensor correctly.

Enter [dC330](#), code 062-019, DH platen down sensor, Q62-019. Actuate Q62-019. The display changes.

Y N

Go to [Flag 1](#). Check Q62-019.

Refer to:

- [Figure 1](#).
- [GP 11](#), How to Check a Sensor.
- [CN9](#), [Scanner PWB](#).
- [301D](#) +3.3V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- DH platen down sensor, [PL 60.20 Item 7](#).
- Scanner PWB, [PL 60.20 Item 4](#).

Check that Q62-019 is installed correctly.

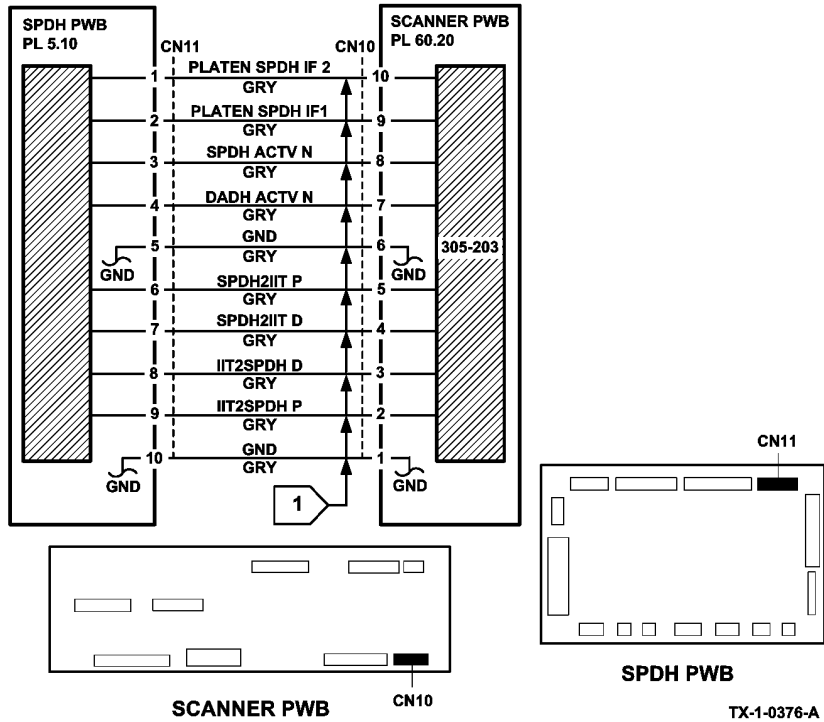


Figure 1 Circuit diagram

305-305-00 SPDH Top Cover Open RAP

305-305-00 The SPDH top cover interlock switch detected that the top cover is open.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Remove all documents from the SPDH.
- Check the top cover interlock actuator, [Figure 1](#). If the actuator is damaged, install a new SPDH top cover, [PL 5.10 Item 8](#).

Procedure

Enter [dC330](#), code 005-305, top cover interlock, S05-305, [Figure 1](#). Actuate S05-305. **The display changes.**

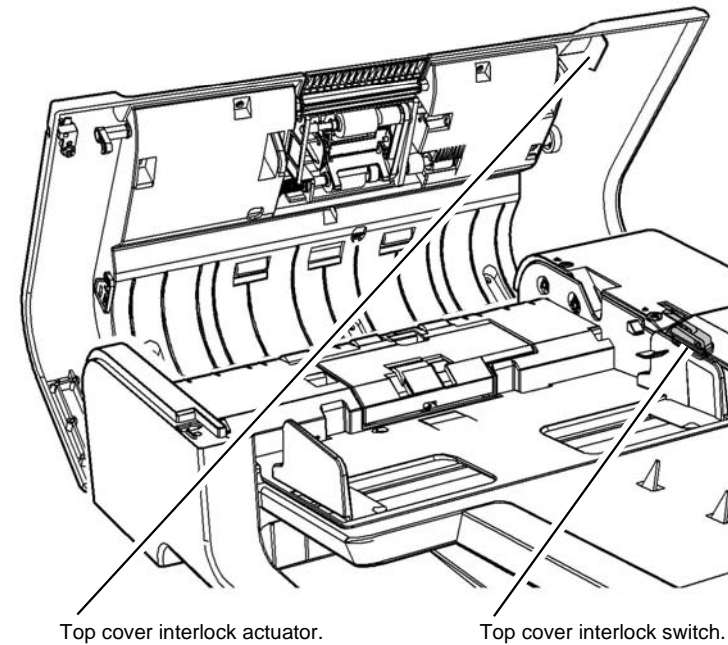
Y N
Go to [Flag 1](#). Check S05-305.
Refer to:

- [GP 13](#) How to Check a Switch.
- [CN38](#), SPDH PWB.
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Top cover interlock switch, [PL 5.10 Item 13](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Check that Q05-305 is installed correctly and is undamaged.



X-1-1943-A

Figure 1 Component location

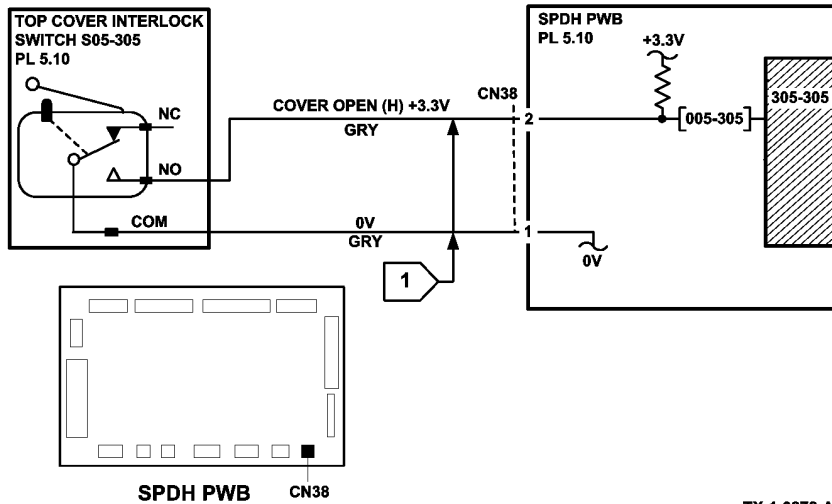


Figure 2 Circuit diagram

TX-1-0378-A

305-330-00, 305-331-00 Feed Sensor Paper Jam RAP

305-330-00 The SPDH feed sensor failed to detect the lead edge of the document within the correct time.

305-331-00 The SPDH feed sensor failed to detect the trail edge of the document within the correct time.

Remote Service Action

Ask the customer to check the items that follow:

- Remove all documents from the SPDH.
- Check the document path of the SPDH. Remove any obstructions such as paper debris, staples or paper clips.

If the fault persists, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the following:

- Remove the feed assembly, PL 5.20 Item 13, check the components move freely and reinstall.
- If necessary, install either the SPDH mylar kit, PL 31.14 Item 14 or the separation assembly kit, PL 31.14 Item 15.

Procedure

Open the SPDH top cover, PL 5.10 Item 8. Place a sheet of paper over the separation assembly, PL 5.25 Item 13. Enter dC330, code 005-330, feed sensor, Q05-330, Figure 1. Actuate Q05-335 by opening and closing the SPDH top cover. **The display changes.**

Y N
Go to Flag 1. Check Q05-335.

Refer to:

- CN37, SPDH PWB.
- 301D +3.3V Distribution RAP.

Install new components as necessary:

- Feed sensor, PL 5.20 Item 9.
- SPDH PWB, PL 5.10 Item 5.

Open the SPDH top cover, PL 5.10 Item 8. Actuate top cover interlock switch using the shank of a standard interlock cheater. Enter dC330, code 005-020 to run the feed motor, MOT05-020. **The motor runs.**

Y N
Go to Flag 2. Check MOT05-020.

Refer to:

- GP 10 How to Check a Motor.
- CN4, SPDH PWB.

A

A

- 301G +24V Distribution RAP.
- 301B 0V Distribution RAP.

Install new components as necessary:

- Feed motor, [PL 5.18 Item 2](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Place a sheet of paper over the separation assembly. Close the top cover. Enter [dC330](#), code 005-020 to run the feed motor, MOT05-020. Add the code 005-025 to energize the feed clutch, CL05-025. **The feed, nudger and retard rolls rotate and feed the sheet under the SPDH top cover.**

Y N

Go to [Flag 3](#). Check CL05-025.

Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [CN34](#), [SPDH PWB](#).
- 301G +24V Distribution RAP.
- 301B 0V Distribution RAP.

Check the condition and operation of the items that follow. Refer to [GP 7](#) Miscellaneous Checks:

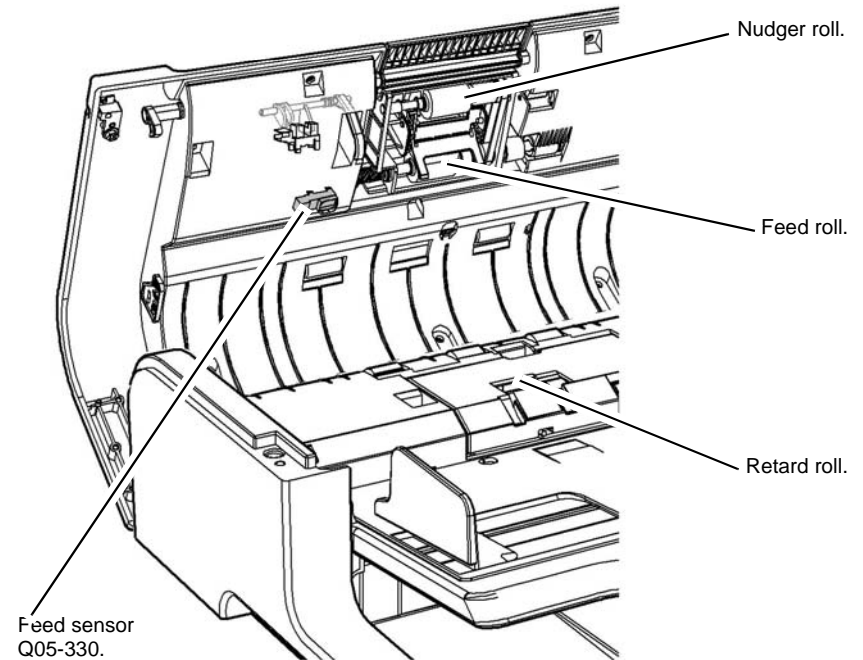
- Feed motor belt, [PL 5.19 Item 10](#).
- Feed assembly, [PL 5.20 Item 13](#).
- Separation assembly, [PL 5.25 Item 13](#).

Install new components as necessary:

- Feed clutch, CL05-025, [PL 5.18 Item 4](#).
- SPDH PWB, [PL 5.10 Item 5](#).
- Feed assembly, [PL 5.20 Item 13](#).
- Separation assembly, [PL 5.25 Item 13](#).

Perform the steps that follow:

- Ensure that the SPDH is connected to ground correctly. Refer to [301A](#) Ground Distribution RAP.
- Check the condition and operation of the items that follow. If necessary clean the items or install new components:
 - Feed roll, [PL 5.20 Item 17](#).
 - Nudger roll, [PL 5.20 Item 6](#).
 - Retard roll, [PL 5.25 Item 3](#).
- Check for a malfunction of the doc present sensor, Q05-309. Perform the [305B](#) Doc Present Failure RAP.
- Check the correct location and mechanical operation of the stack height sensor, Q05-310 and the stack height sensor actuating arm, [Figure 1](#). Refer to [REP 5.8](#).



X-1-2015-A

Figure 1 Component location

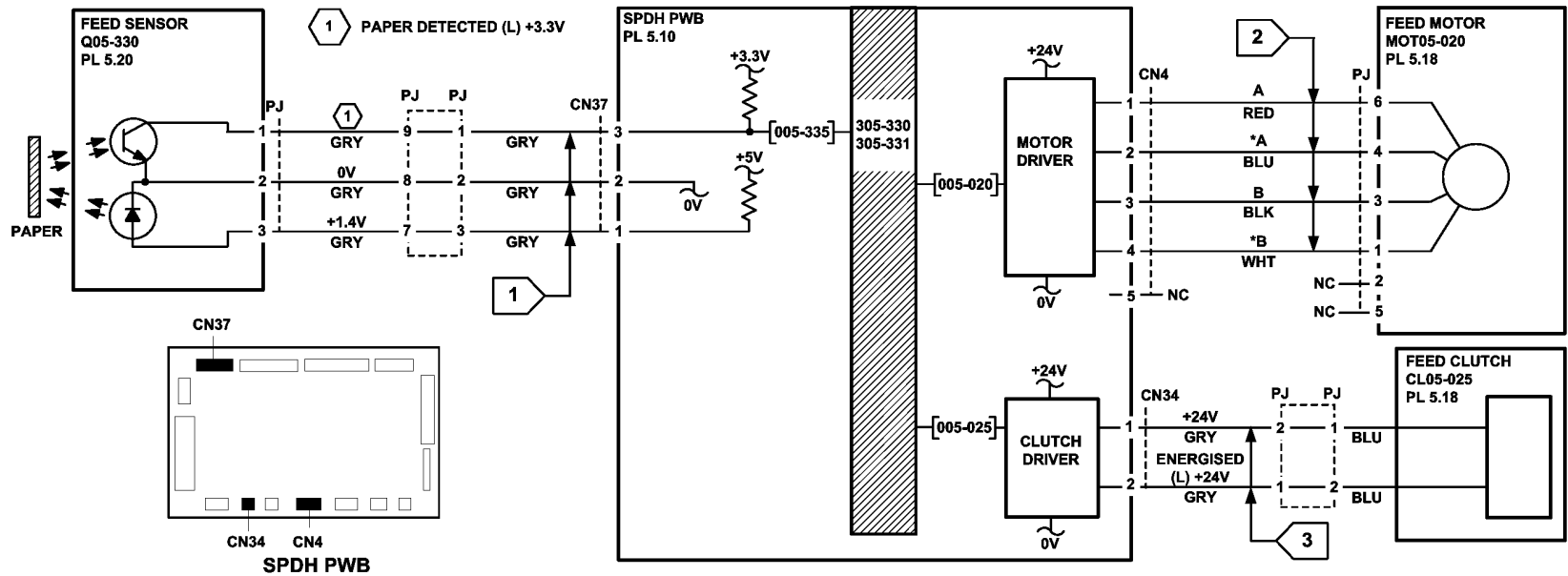


Figure 2 Circuit diagram

TX-1-0437-A

305-335-00, 305-336-00 SPDH Takeaway Sensor Paper Jam RAP

305-335-00 The SPDH takeaway sensor failed to detect the lead edge of the document within the correct time.

305-336-00 The SPDH takeaway sensor detected a paper jam.

Remote Service Action

Ask the customer to check the items that follow:

- Remove all documents from the SPDH.
- Check the document path of the SPDH. Remove any obstructions such as paper debris, staples or paper clips.

If the fault persists, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

If necessary, install either the SPDH mylar kit, [PL 31.14 Item 14](#) or the separation assembly kit, [PL 31.14 Item 15](#).

Procedure

Open the SPDH top cover, [PL 5.10 Item 8](#). Enter **dC330**, code 005-335, takeaway sensor, Q05-335, [Figure 2](#). Actuate Q05-335 by opening and closing the SPDH top cover. **The display changes.**

Y N

Go to [Flag 1](#). Check Q05-335.

Refer to:

- [CN37](#), [SPDH PWB](#).
- [301D](#) +3.3V Distribution RAP.

Install new components as necessary:

- Takeaway sensor, [PL 5.20 Item 9](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Open the SPDH top cover, [PL 5.10 Item 8](#). Actuate top cover interlock switch using the shank of a standard interlock cheater. Enter **dC330**, code 005-020 to run the feed motor, MOT05-020. **The motor runs.**

Y N

Go to [Flag 2](#). Check MOT05-020.

Refer to:

- [GP 10](#) How to Check a Motor.
- [CN4](#), [SPDH PWB](#).
- [301G](#) +24V Distribution RAP.

- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Feed motor, [PL 5.18 Item 2](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Actuate the top cover interlock switch. Enter **dC330**, code 005-020 to run the feed motor, MOT05-020. Add the code 005-425 to energize the takeaway clutch, CL05-425. **The takeaway roll rotates.**

Y N

Go to [Flag 5](#). Check CL05-425.

Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [CN33](#), [SPDH PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Check the condition and operation of the items that follow. Refer to [GP 7](#) Miscellaneous Checks:

- Feed motor belt, [PL 5.19 Item 10](#). Perform [ADJ 5.1](#) SPDH Drive Belts if necessary.
- Takeaway roll, [PL 5.17 Item 1](#).
- Takeaway roll gear, [PL 5.17 Item 8](#).
- Takeaway roll idlers (part of [PL 5.20](#)).
- Feed clutch drive gear/pulley, [PL 5.19 Item 4](#).

Install new components as necessary:

- Takeaway clutch, CL05-425, [PL 5.18 Item 4](#).
- SPDH PWB, [PL 5.10 Item 5](#).
- Takeaway roll, [PL 5.17 Item 1](#).
- Takeaway roll gear, [PL 5.17 Item 8](#).
- Top cover assembly, [PL 5.20 Item 15](#).

Place a sheet of paper over the separation assembly. Close the top cover. Enter **dC330**, code 005-020 to run the feed motor, MOT05-020. Add the code 005-025 to energize the feed clutch, CL05-025. **The feed, nudger and retard rolls rotate and feed the sheet under the SPDH top cover.**

Y N

Go to [Flag 3](#). Check CL05-025.

Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [CN34](#), [SPDH PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Check the condition and operation of the items that follow. Refer to [GP 7](#) Miscellaneous Checks:

- Feed motor belt, [PL 5.19 Item 10](#). Perform [ADJ 5.1](#) SPDH Drive Belts if necessary.
- Feed assembly, [PL 5.20 Item 13](#).
- Separation assembly, [PL 5.25 Item 13](#).

B

Install new components as necessary:

- Feed clutch, CL05-025, PL 5.18 Item 4.
- SPDH PWB, PL 5.10 Item 5.
- Feed assembly, PL 5.20 Item 13.
- Separation assembly, PL 5.25 Item 13.

Enter dC330 code 005-310, stack height sensor, Q05-310. Actuate Q05-310 using the sensor actuating arm, Figure 2. The display changes.

Y N

Go to Flag 4. Check Q05-310.

Refer to:

- GP 11 How to Check a Sensor.
- CN40, SPDH PWB.
- 301D +3.3V Distribution RAP.
- 301B 0V Distribution RAP.

Install new components as necessary:

- Stack height sensor, PL 5.20 Item 4.
- Sensor actuating arm (part of PL 5.20 Item 11).
- SPDH PWB, PL 5.10 Item 5.

Close the top cover. Enter dC330, code 005-020 to run the feed motor, MOT05-020. Add the code 005-025 to energize the feed clutch, CL05-025. The nudger roll drops towards the input tray.

Y N

Check the nudger roll housing will both latch in the up position and drop to the lowered position without binding. Check around the housing for paper debris or misplaced components that could prevent correct operation.

Check the items that follow:

- Feed assembly drive belt, PL 5.19 Item 13.
- Nudger roll housing, PL 5.20 Item 13.
- Shaft, PL 5.20 Item 5.
- Shaft, PL 5.20 Item 8.
- Shaft, PL 5.20 Item 21.

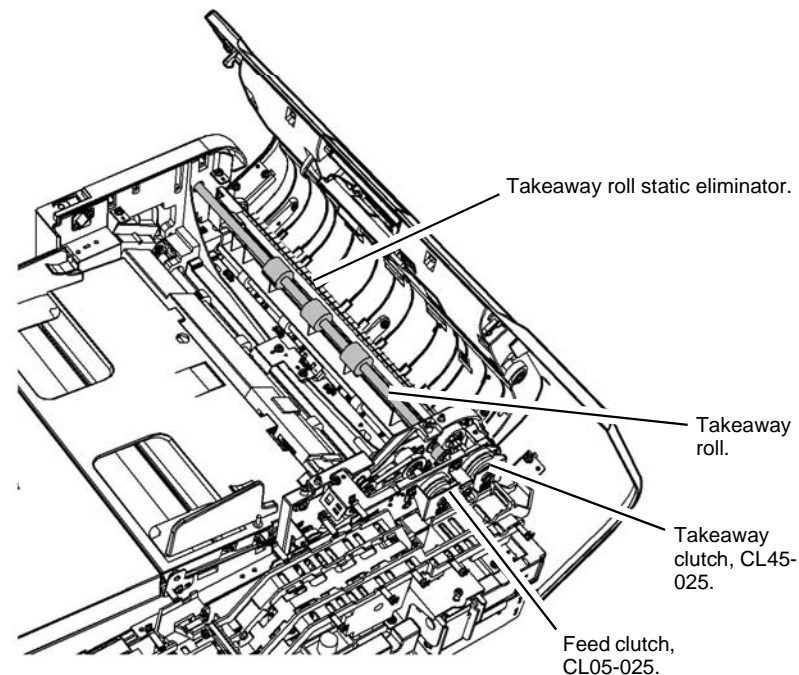
Install new components as necessary:

- Feed assembly drive belt, part of the SPDH drive kit, PL 5.19 Item 23.
- Top cover assembly, PL 5.20 Item 15.

Perform the steps that follow:

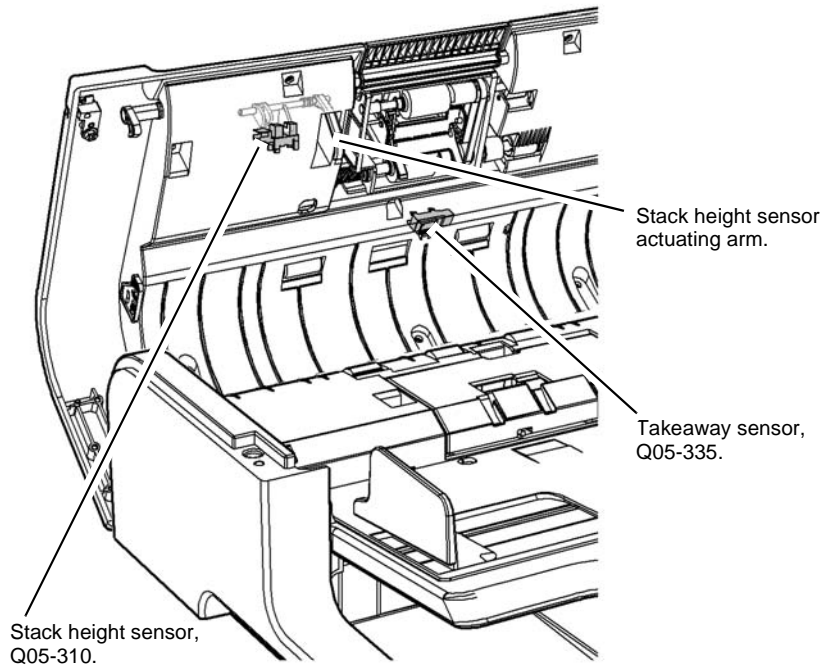
- Check the takeaway roll static eliminator, Figure 1.
- Ensure that the SPDH is connected to ground correctly. Refer to 301A Ground Distribution RAP.
- Check the condition and operation of the items that follow. If necessary clean the items or install new components:
 - Feed roll, PL 5.20 Item 17.
 - Nudger roll, PL 5.20 Item 6.
 - Retard roll, PL 5.25 Item 3.

- Check for a malfunction of the doc present sensor, Q05-309. Perform the 305B Doc Present Failure RAP.
- Check the correct location and mechanical operation of the stack height sensor, Q05-310 and the stack height sensor actuating arm, Figure 1. Refer to REP 5.8.



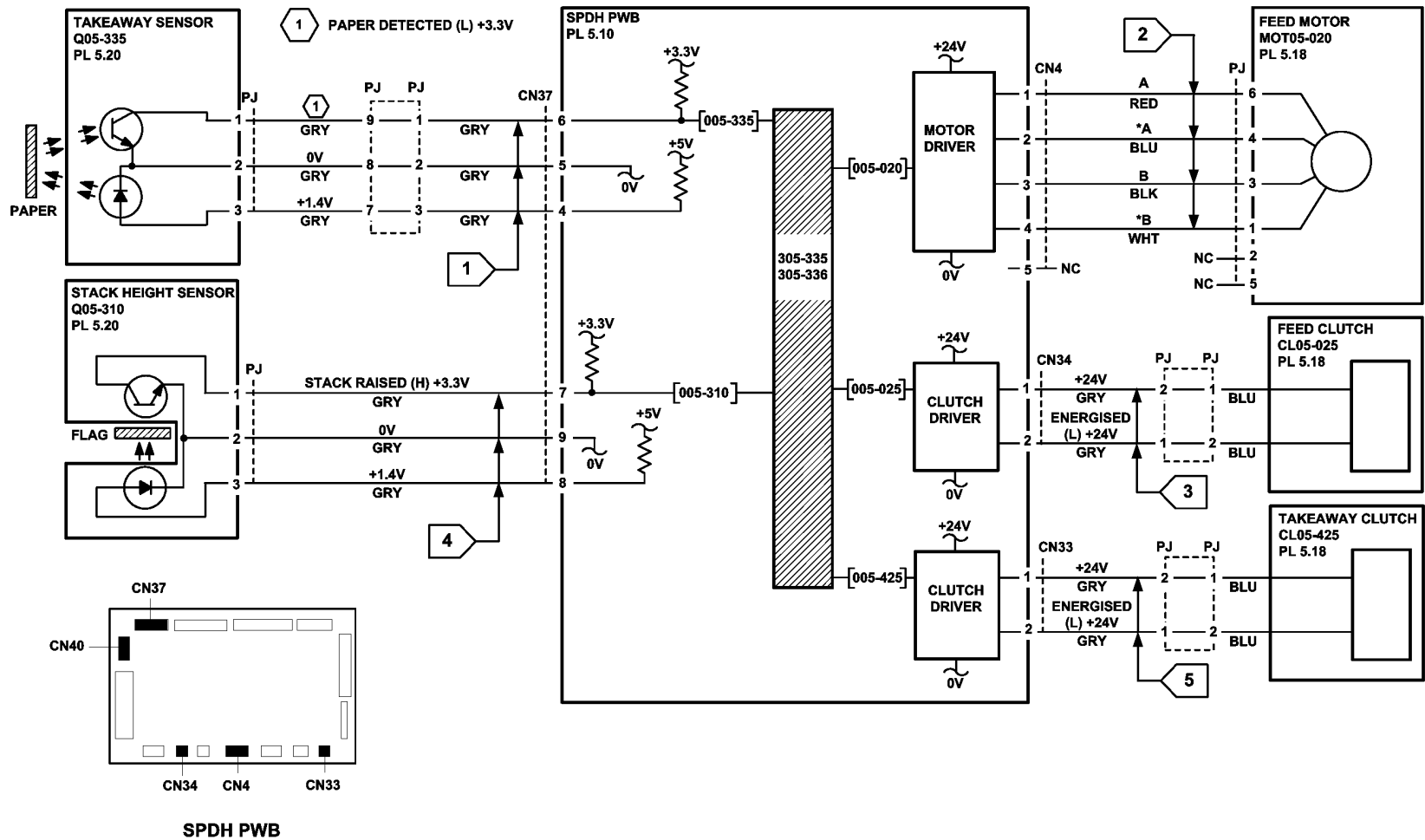
X-1-1944-A

Figure 1 Component location



X-1-1993-A

Figure 2 Component location



TX-1-0379-A

Figure 3 Circuit diagram

305-340-00, 305-341-00 SPDH Reg Sensor Failure RAP

305-340-00 The SPDH reg sensor failed to detect the lead edge of the document within the correct time.

305-341-00 The SPDH reg sensor detected a paper jam.

Remote Service Actions

Ask the customer to check the items that follow:

- Remove all documents from the SPDH.
- Check the document path of the SPDH. Remove any obstructions such as paper debris, staples or paper clips.

If the fault persists, a site visit will be necessary.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter **dC330**, code 005-340, reg sensor, Q05-340, **Figure 1**. Open the SPDH top cover. Feed a piece of paper around the document path. Lift the SPDH slightly and use the exit jam clearance knob, **PL 5.17 Item 5**, to feed the paper until it actuates Q05-340. **The display changes.**

Y N
Go to **Flag 1**. Check Q05-340.

Refer to:

- **CN36**, **SPDH PWB**.
- **301D** +3.3V Distribution RAP.

Install new components as necessary:

- Reg sensor, **PL 5.18 Item 9**.
- SPDH PWB, **PL 5.10 Item 5**.

Remove the SPDH rear cover, **PL 5.10 Item 1**. Hold the top cover interlock switch closed. Enter **dC330**, code 005-030 to run the read motor, MOT05-030. **The motor runs.**

Y N
Go to **Flag 2**. Check MOT05-030.

Refer to:

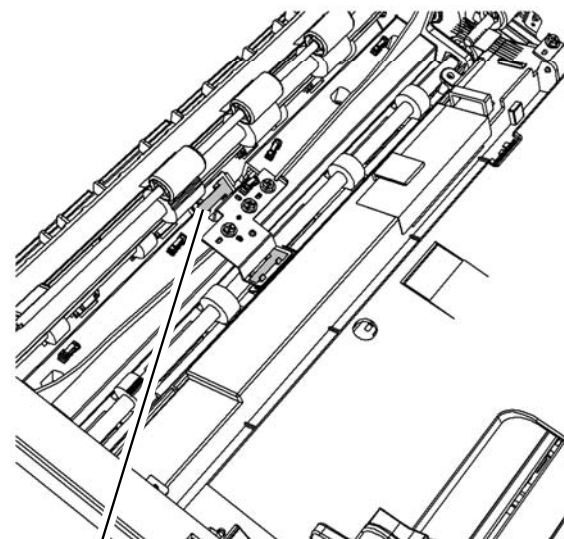
- **GP 10** How to Check a Motor.
- **CN1**, **SPDH PWB**.
- **301G** +24V Distribution RAP.
- **301B** 0V Distribution RAP.

Install new components as necessary:

- Read motor, **PL 5.18 Item 1**.
- SPDH PWB, **PL 5.10 Item 5**.

A
Perform the steps that follow:

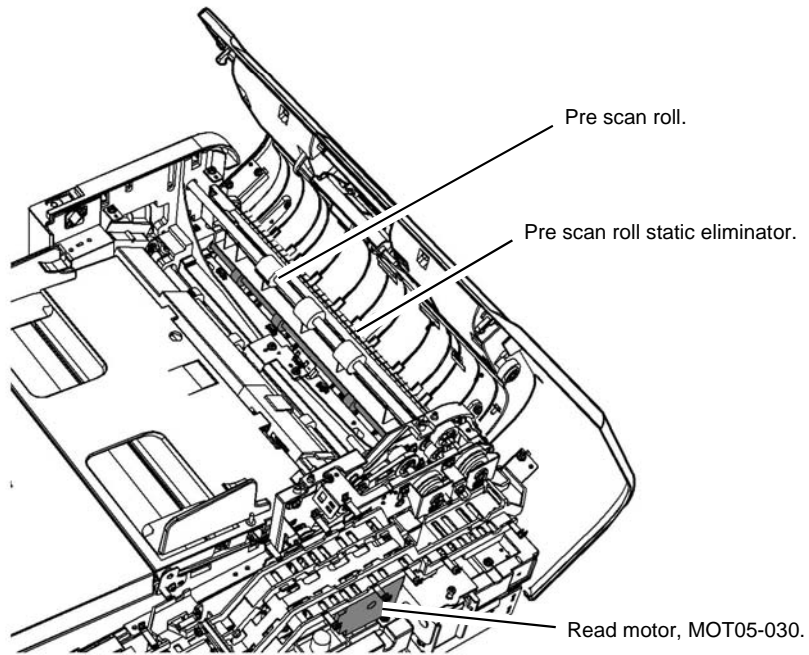
- Check the items that follow. Refer to **GP 7** Miscellaneous Checks:
 - Pre scan roll drive gear **PL 5.19 Item 11**.
 - Mid scan drive gear **PL 5.19 Item 12**.
 - Read motor idler gear **PL 5.19 Item 16**.
 - Pre scan roll assembly, **PL 5.17 Item 4**.
 - Mid scan roll assembly **PL 5.17 Item 3**.
 - Pre scan drive gear **PL 5.17 Item 7**.
 - Mid scan drive gear **PL 5.17 Item 7**.
- Check the pre scan roll static eliminator, **Figure 2**.
- Ensure that the SPDH is connected to ground correctly. Refer to the **301A** Ground Distribution RAP.



Reg sensor, Q05-340.

X-1-1948-A

Figure 1 Component location



X-1-1945-A

Figure 2 Component location

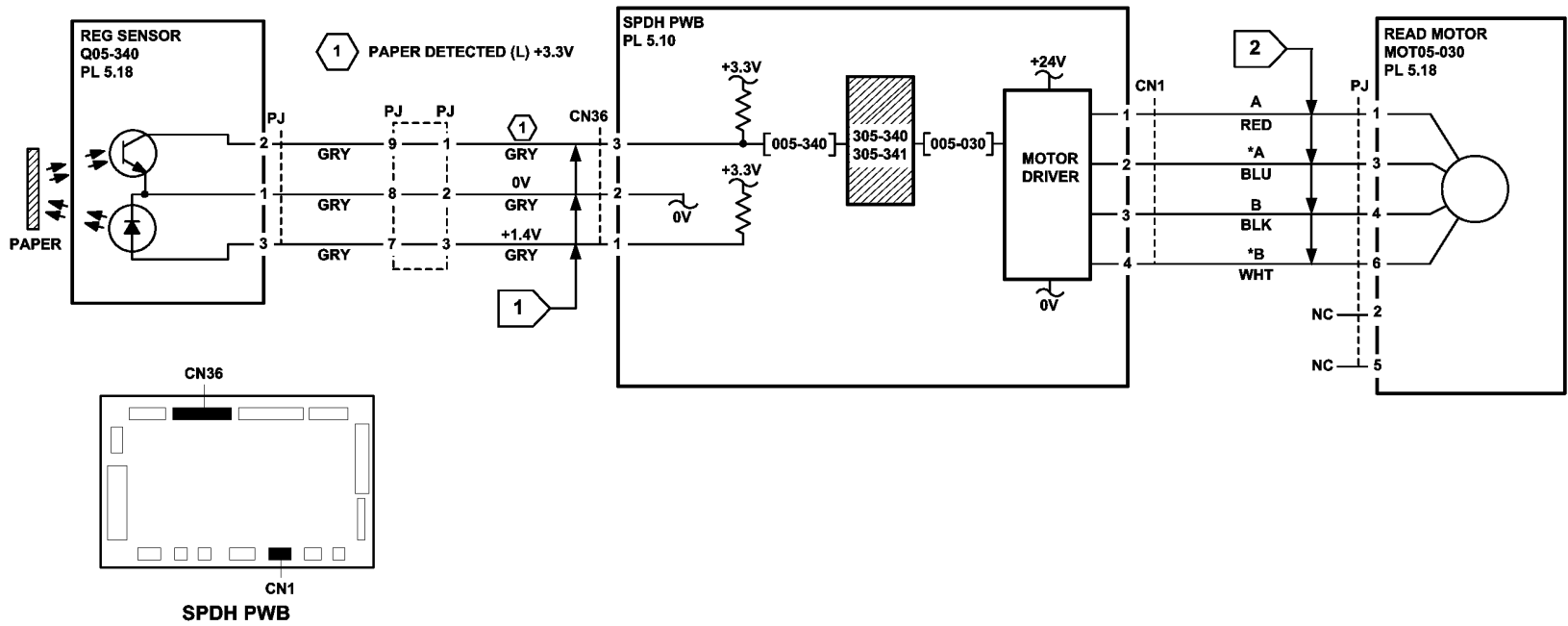


Figure 3 Circuit diagram

TX-1-0380-A

305-342-00, 305-343-00 SPDH Side 2 Reg Sensor Failure RAP

305-342-00 The SPDH side 2 reg sensor failed to detect the lead edge of the document within the correct time.

305-343-00 The SPDH side 2 reg sensor detected a paper jam.

Remote Service Actions

Ask the customer to check the items that follow:

- Remove all documents from the SPDH.
- Check the paper path of the SPDH. Remove any obstructions such as paper debris, staples or paper clips.

If the fault persists, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter dC330, code 005-343, side 2 reg sensor, Q05-343. Open the SPDH top cover. Feed a piece of paper around the document path. Lift the SPDH slightly and use the exit jam clearance knob, PL 5.17 Item 5, to feed the paper until it actuates Q05-343, Figure 1. The display changes.

Y N

Go to Flag 1. Check Q05-343.

Refer to:

- CN36, SPDH PWB.
- 301D +3.3V Distribution RAP.

Install new components as necessary:

- Side 2 reg sensor, PL 5.18 Item 9.
- SPDH PWB, PL 5.10 Item 5.

Remove the SPDH rear cover, PL 5.10 Item 1. Hold the top cover interlock switch closed. Enter dC330, code 005-030 to run the read motor, MOT05-030, Figure 2. The motor runs.

Y N

Go to Flag 2. Check MOT05-030.

Refer to:

- GP 10 How to Check a Motor.
- CN1, SPDH PWB.
- 301G +24V Distribution RAP.
- 301B 0V Distribution RAP.

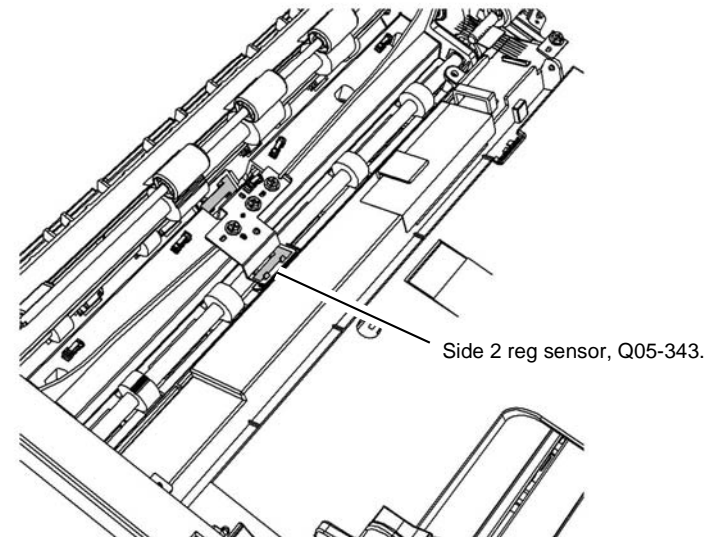
Install new components as necessary:

- Read motor, PL 5.18 Item 1.
- SPDH PWB, PL 5.10 Item 5.

A

Perform the steps that follow:

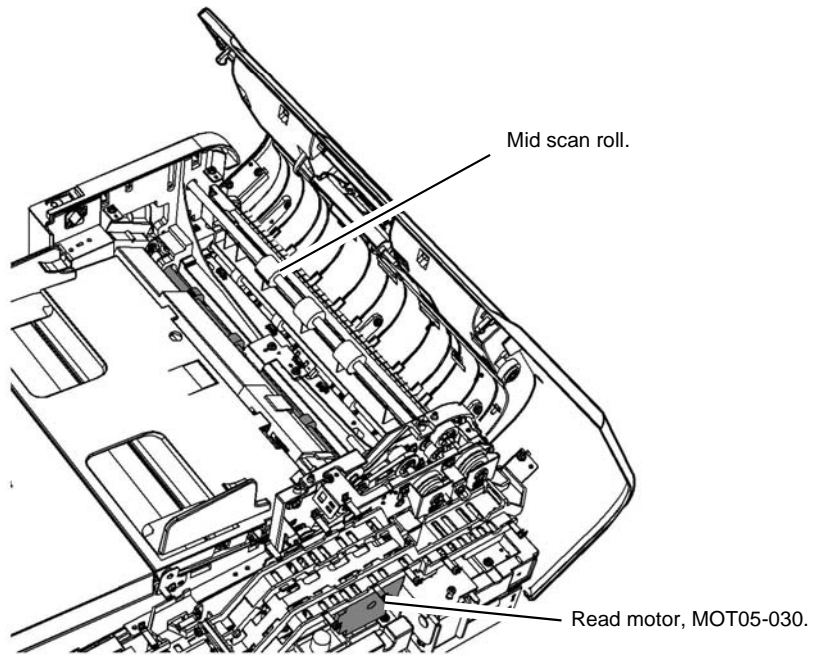
- Check the items that follow. Refer to GP 7 Miscellaneous Checks:
 - Pre scan roll drive gear PL 5.19 Item 11.
 - Mid scan drive gear PL 5.19 Item 12.
 - Read motor idler gear PL 5.19 Item 16.
 - Pre scan roll assembly, PL 5.17 Item 4.
 - Mid scan roll assembly PL 5.17 Item 3.
 - Pre scan drive gear PL 5.17 Item 7.
 - Mid scan drive gear PL 5.17 Item 7.
- Ensure that the SPDH is connected to ground correctly. Refer to the 301A Ground Distribution RAP.



X-1-1949-A

Figure 1 Component location

A



X-1-1946-A

Figure 2 Component location

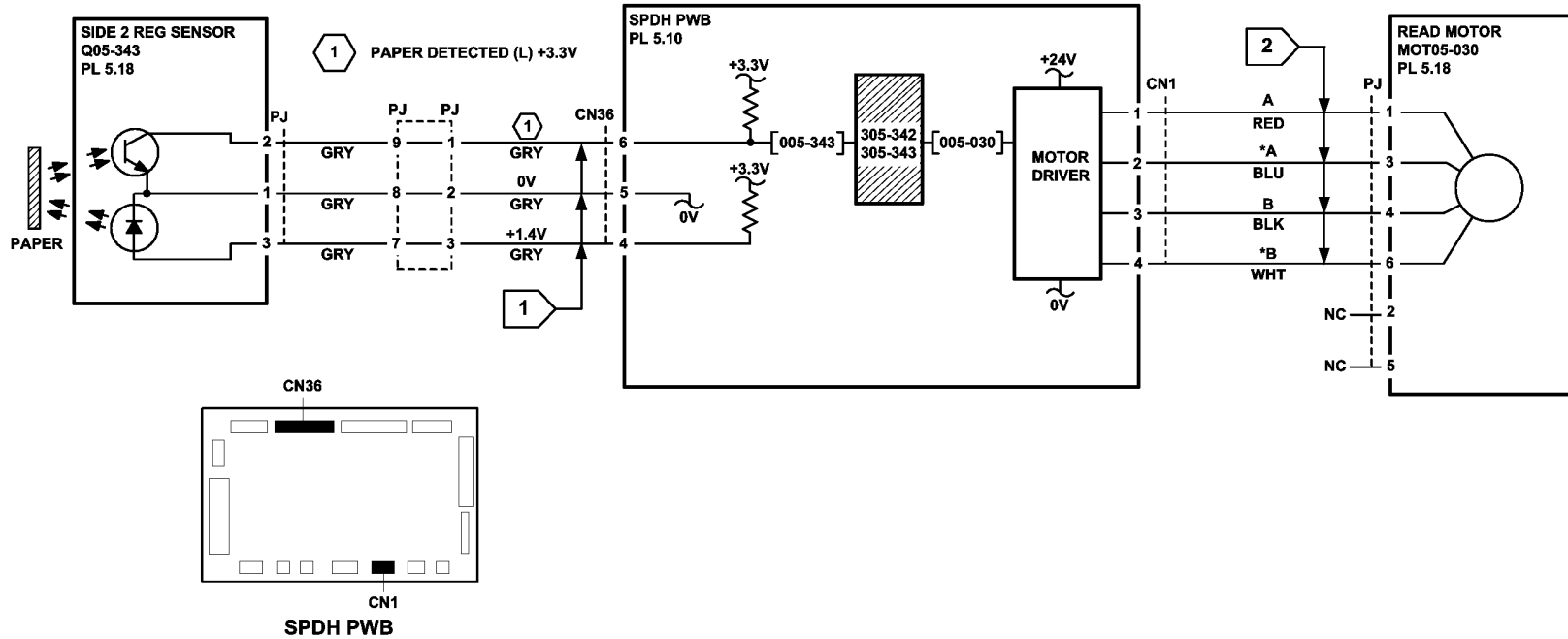


Figure 3 Circuit diagram

TX-1-0381-A

305-940-00, 305-941-00 Originals RAP

305-940-00 The machine detected that the original has been removed.

305-941-00 The machine detected that too few originals were re-loaded after jam clearance.

Remote Service Actions

Perform the steps that follow:

1. Re-sort then reload all originals.
2. If the fault persists, clear the job, then start again.

305-958-00 SPDH Lift Home Position Sensor Failure RAP

305-958-00 The lift home position sensor failed to sense the home position after the tray elevate motor drove the input tray to the home position.

Remote Service Actions

Ask the customer to check the items that follow:

- Remove all documents from the SPDH.
- Check around the input tray. Remove any obstructions such as paper debris, staples or paper clips.

If the fault persists a site visit will be necessary.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter **dC330**, code 005-390 to run the tray elevator motor, MOT05-390. **The motor runs and cycles the tray between the raised and lowered positions.**

Y

N
Enter **dC330** code 005-307, lift home position sensor, Q05-307. Open the SPDH top cover, **PL 5.10 Item 8**. Grasp one of the document width guides, **Figure 1** on the SPDH upper tray assembly, **PL 5.30 Item 2** to lift the upper tray and actuate Q05-307. **The display changes.**

Y

N
Go to **Flag 1**. Check Q05-307.
Refer to:

- **GP 11** How to Check a Sensor.
- **CN40, SPDH PWB.**
- **301D** +3.3V Distribution RAP.
- **301B** 0V Distribution RAP.

Install new components as necessary:

- Lift home position sensor, **PL 5.30 Item 5**.
- SPDH PWB, **PL 5.10 Item 5**.

Enter **dC330**, code 005-309, document present sensor, Q05-309. Actuate Q05-309 by passing a piece of paper across the sensor, **Figure 1**. **The display changes.**

Y

N
Go to **Flag 3**. Check Q05-309.
Refer to:

- **GP 11** How to Check a Sensor.
- **CN40, SPDH PWB.**
- **301D** +3.3V Distribution RAP.
- **301B** 0V Distribution RAP.

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Install new components as necessary:

- Document present sensor, **PL 5.30 Item 6**.
- SPDH PWB, **PL 5.10 Item 5**.

Actuate the stack height sensor, Q05-310, **Figure 2**. Enter **dC330**, code 005-310, stack height sensor, Q05-310. Actuate Q05-310 using the stack height sensor actuator. **The display changes.**

Y

N
Go to **Flag 4**. Check Q05-310.

Refer to:

- **GP 11** How to Check a Sensor.
- **CN37, SPDH PWB.**
- **301D** +3.3V Distribution RAP.
- **301B** 0V Distribution RAP.

Install new components as necessary:

- Stack height sensor, **PL 5.20 Item 4**.
- Sensor actuating arm (part of top cover assembly, **PL 5.20 Item 11**).
- SPDH PWB, **PL 5.10 Item 5**.

Go to **Flag 2**. Check MOT05-390.

Refer to:

- **GP 10** How to Check a Motor.
- **CN3, SPDH PWB.**
- **301G** +24V Distribution RAP.
- **301B** 0V Distribution RAP.

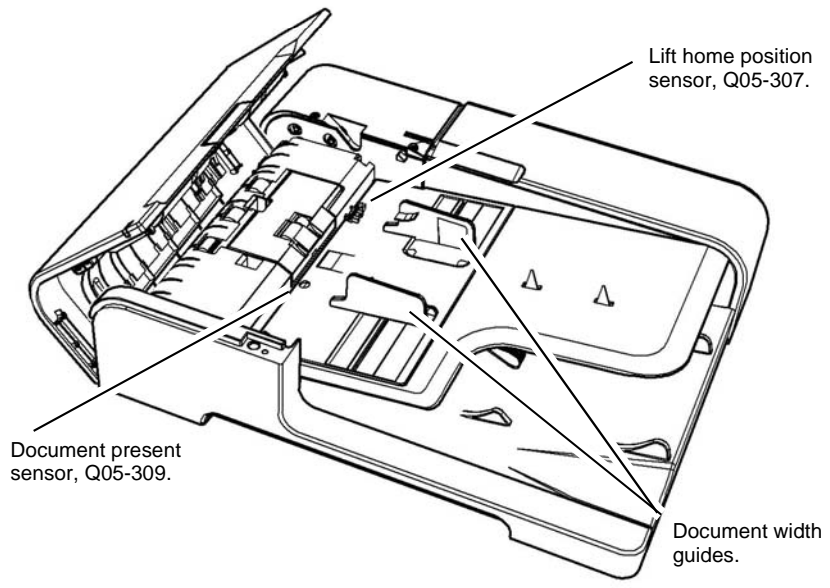
Install new components as necessary:

- Tray elevator motor, **PL 5.30 Item 14**.
- SPDH PWB, **PL 5.10 Item 5**.

Check the drive components between MOT05-390 and the tray elevator actuators. If necessary install new tray elevator actuators, **REP 5.21**.

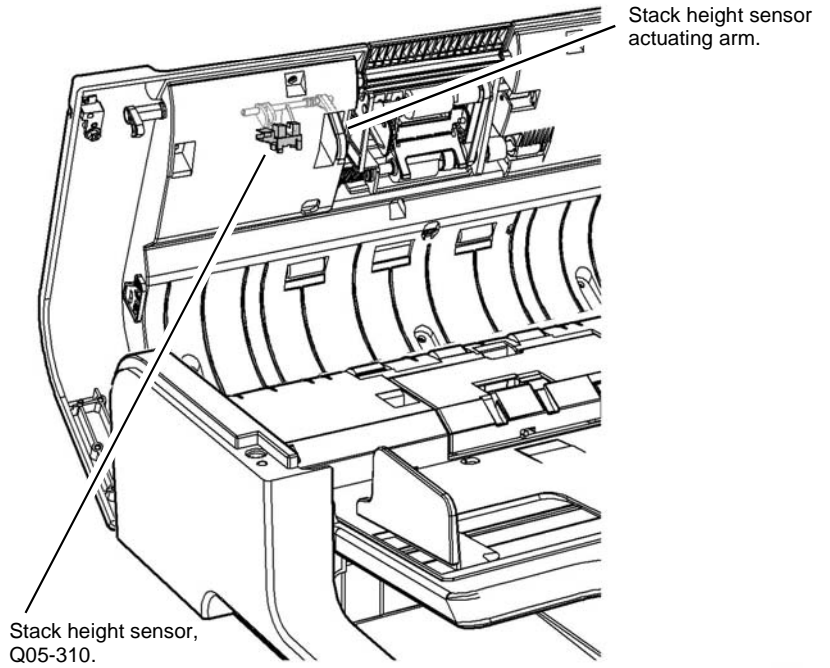
Perform **SCP 5** Final actions.

A



X-1-1991-A

Figure 1 Component location



X-1-1992-A

Figure 2 Component location

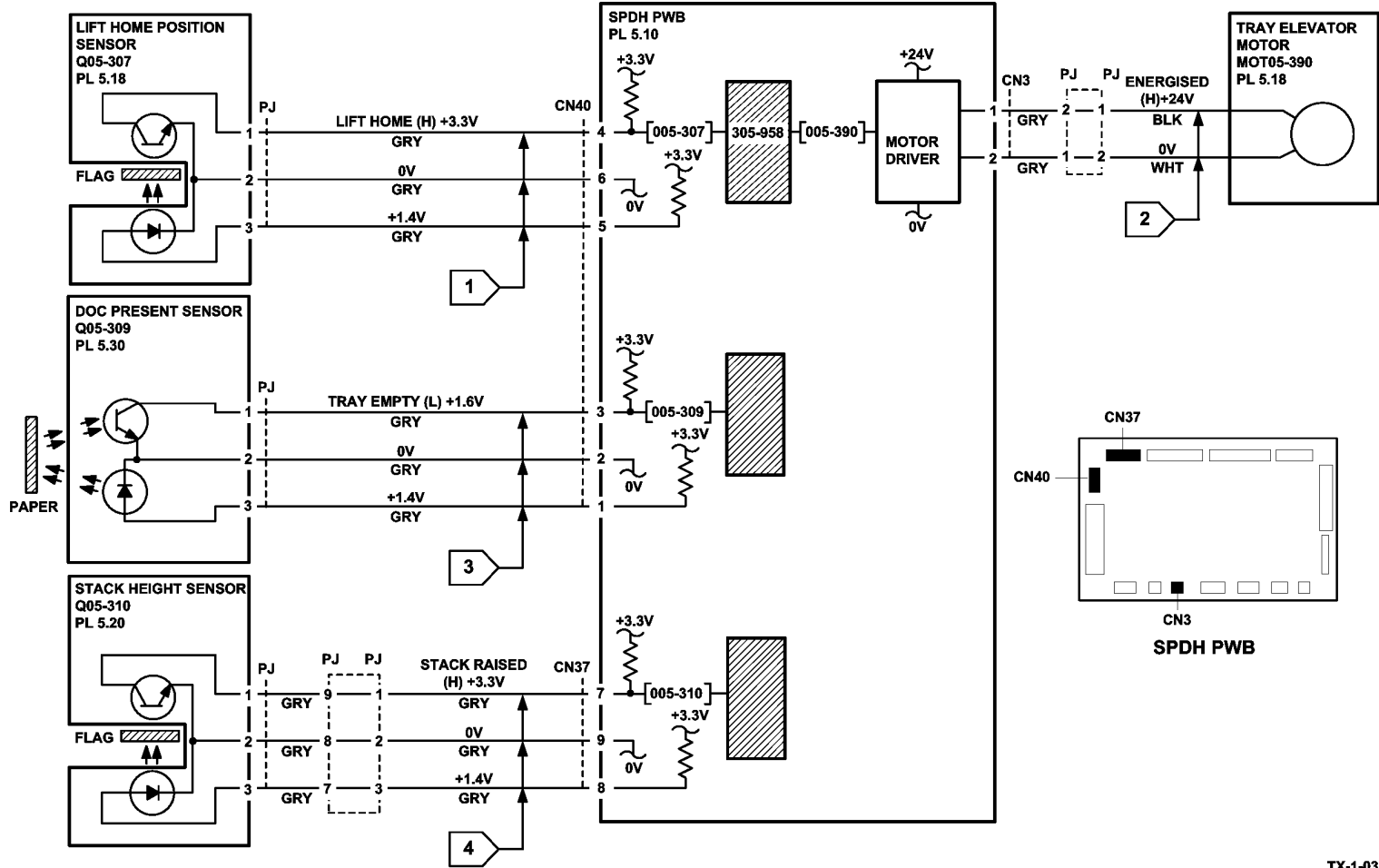


Figure 3 Circuit diagram

TX-1-0383-A

305-959-00 SPDH Calibration Home Position Sensor Failure RAP

305-959-00 The calibration home position sensor failed to sense the home position after the read motor drove the calibration mechanism to the home position. Refer also to Principles of Operation [Side 2 Scan Assembly Calibration](#).

Remote Service Action

Ask the customer to remove all documents from the SPDH. If the fault persists, a site visit will be necessary.

On Site Initial Actions

Check around the calibration mechanism. Remove any obstructions such as paper debris, staples or paper clips.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Remove the SPDH rear cover [PL 5.10 Item 1](#). Observe the calibration home position sensor and the sensor flag, [Figure 1](#). Enter [dC330](#), code 005-360, calibration home position sensor, Q05-360. Actuate Q05-360 by rotating the exit jam clearance knob at the front left underside of the SPDH, [PL 5.17 Item 5](#) and observing the position of the flag. **The display changes.**

Y N

Go to [Flag 1](#). Check Q05-360.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [CN36](#), [SPDH PWB](#).
- [301D](#) +3.3V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Calibration home position sensor, [PL 5.18 Item 10](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Enter [dC330](#), code 005-430 to run the read motor, MOT05-030, in reverse to drive the calibration shutter mechanism. **The motor runs and the exit jam clearance knob turns in a clockwise direction.**

Y N

The motor runs but the jam clearance knob remains stationary.

Y N

Go to [Flag 2](#). Check MOT05-030.

Refer to:

- [Figure 1](#).
- [GP 10](#) How to Check a Motor.
- [CN1](#), [SPDH PWB](#).

A B

- [301G](#) +24V Distribution RAP.

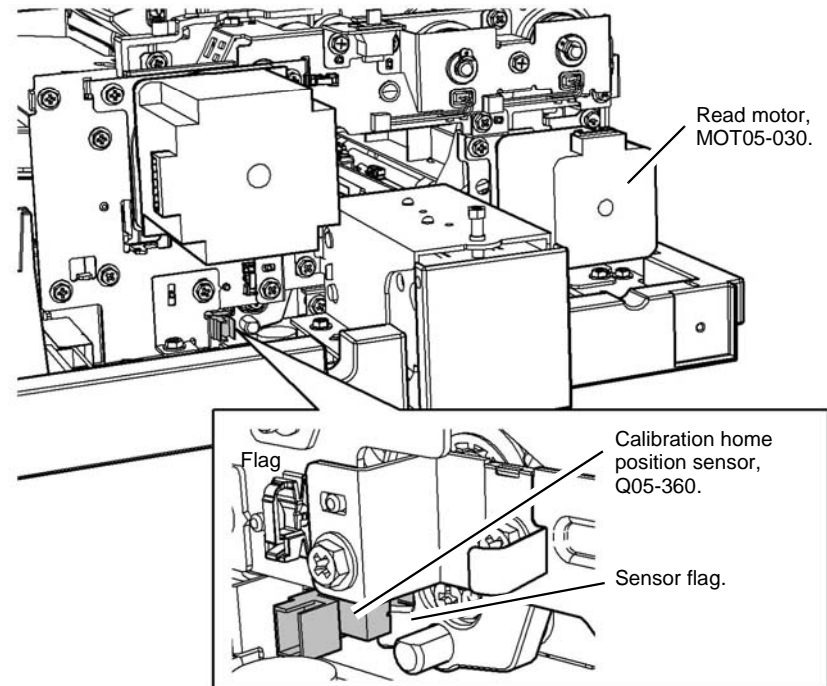
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Read motor, [PL 5.18 Item 1](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Check the drive components between the read motor and the calibration mechanism. Refer to the Principles of Operation ([Side 2 Scan Assembly Calibration Drive Train](#)) for a full description and explanation of the calibration mechanism drive train. Repair any damaged components if possible. If necessary install a new SPDH, [PL 5.10 Item 9](#).

Check the calibration shutter mechanism. Refer to the Principles of Operation ([Side 2 Scan Assembly Calibration](#)) for a full description and explanation of the calibration mechanism. Repair any damaged components if possible. If necessary install a new SPDH, [PL 5.10 Item 9](#).



X-1-1950-A

Figure 1 Component location

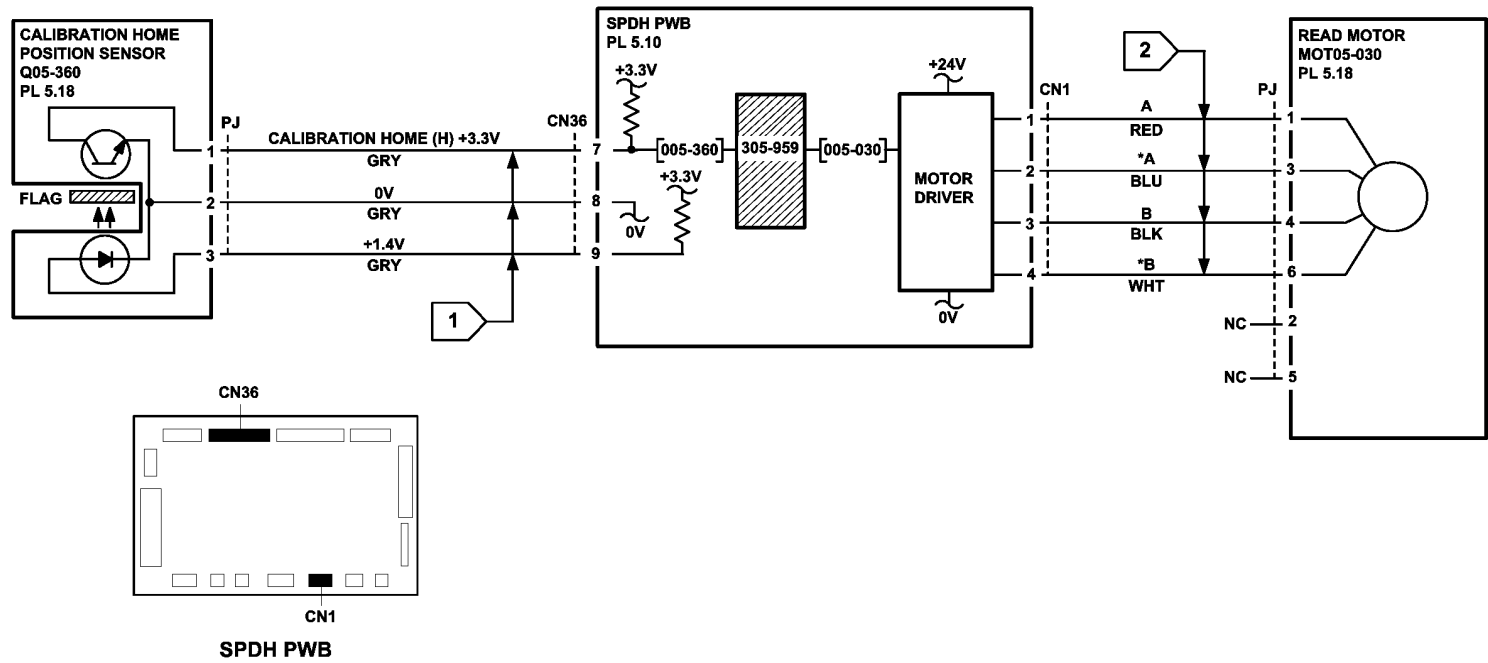


Figure 2 Circuit diagram

TX-1-0384-A

305A Document Size Sensors Failure RAP

Use this RAP when the SPDH is in the Auto Paper Select mode and fails to detect the correct size of paper.

Remote Service Actions

- Remove all documents from the SPDH and input tray.
- Ensure that the sensors and the area around the sensors are clean.
- If the fault persists a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to [Figure 1](#). Enter [dC330](#), code 005-315 to check the length sensor 1, Q05-315, [PL 5.30 Item 5](#). Actuate Q05-315. **The display changes.**

Y N

Go to [Flag 1](#). Check Q05-315.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [CN35](#), [SPDH PWB](#).
- [301D](#) +3.3V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Length sensor 1, [PL 5.30 Item 5](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Enter [dC330](#), code 005-320 to check the length sensor 2, Q05-320, [PL 5.30 Item 5](#). Actuate Q05-320. **The display changes.**

Y N

Go to [Flag 2](#). Check Q05-320.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [CN35](#), [SPDH PWB](#).
- [301D](#) +3.3V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Length sensor 2, [PL 5.30 Item 5](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Enter [dC330](#), code 005-325 to check the width sensor 1, Q05-325, [PL 5.30 Item 5](#). Actuate Q05-325. **The display changes.**

Y N

Go to [Flag 3](#). Check Q05-325.

A

Refer to:

- [GP 11](#) How to Check a Sensor.
- [CN35](#), [SPDH PWB](#).
- [301D](#) +3.3V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Width sensor 1, [PL 5.30 Item 5](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Enter [dC330](#), code 005-326 to check the width sensor 2, Q05-326, [PL 5.30 Item 5](#). Actuate Q05-326. **The display changes.**

Y N

Go to [Flag 4](#). Check Q05-326.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [CN35](#), [SPDH PWB](#).
- [301D](#) +3.3V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Width sensor 2, [PL 5.30 Item 5](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Enter [dC330](#), code 005-327 to check the width sensor 3, Q05-327, [PL 5.30 Item 5](#). Actuate Q05-327. **The display changes.**

Y N

Go to [Flag 5](#). Check Q05-327.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [CN35](#), [SPDH PWB](#).
- [301D](#) +3.3V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Width sensor 3, [PL 5.30 Item 5](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Install new components as necessary:

- SPDH PWB, [PL 5.10 Item 5](#).
- Tray lower assembly, [PL 5.30 Item 3](#).
- SPDH input tray assembly, [PL 5.30 Item 1](#).

A

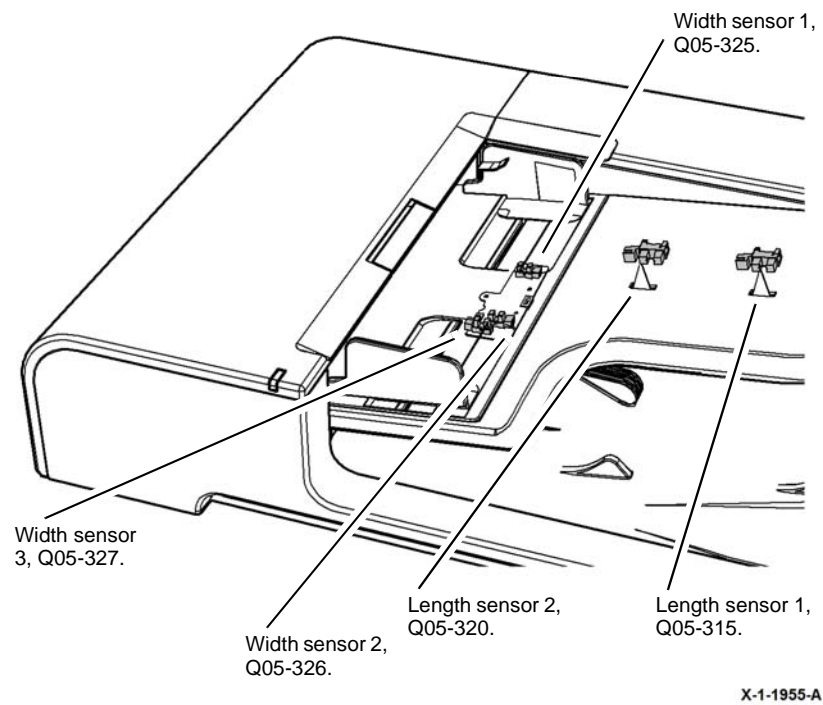


Figure 1 Component location

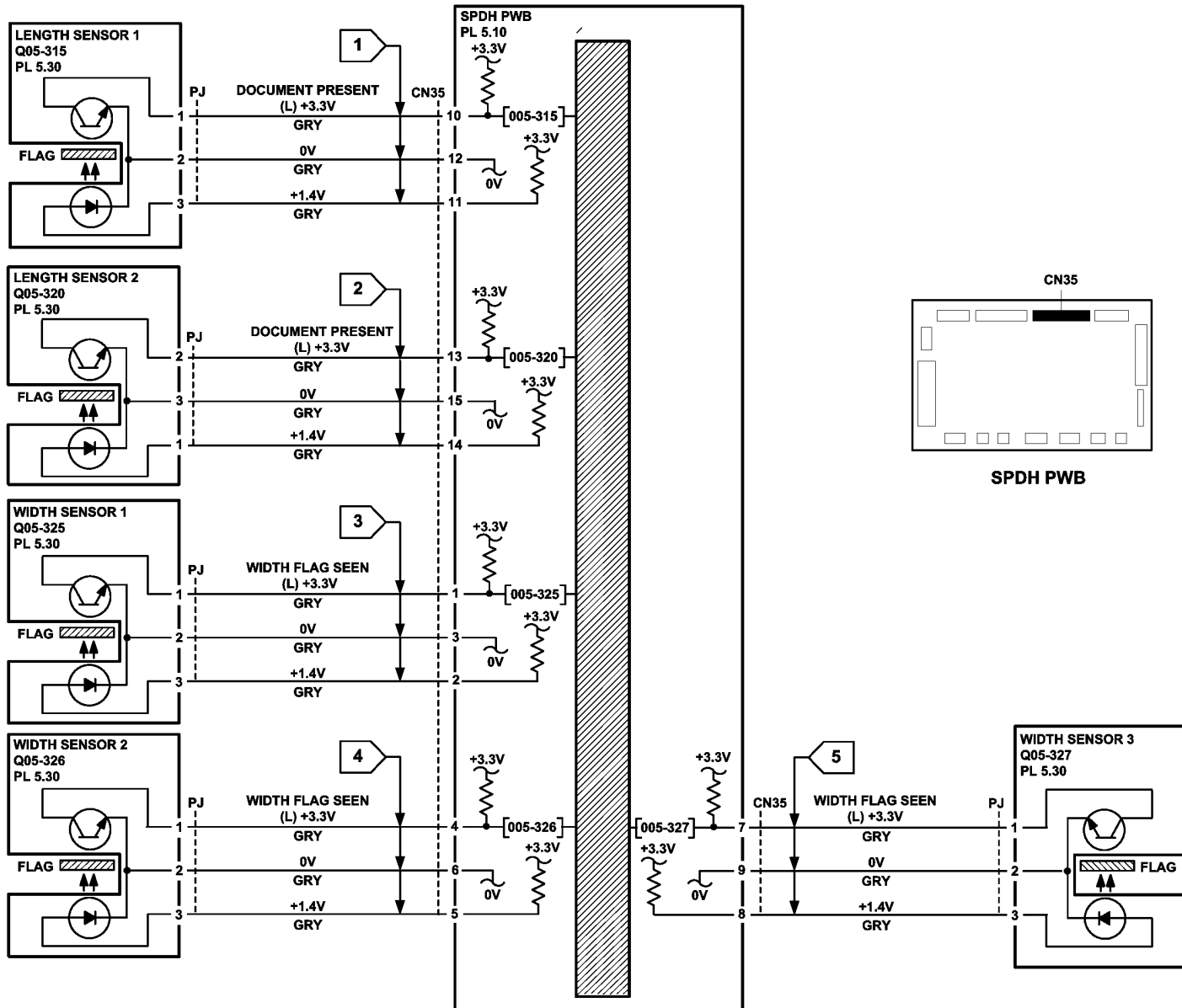


Figure 2 Circuit diagram

TX-1-0390-A

305B Document Present Failure RAP

Use this RAP when the SPDH behaves as follows:

- The SPDH detects a document when a document is not present in the input tray during the startup procedure.
- The SPDH detects a document when a document is not present in the input tray after a jam.

NOTE: Documents placed on the top cover of the SPDH can overhang the input tray and trigger the sensors. This can cause the SPDH to falsely detect a document, causing a feed error.

- The SPDH does not detect a document when a document is present in the input tray.

Procedure

Check the doc present sensor, Q05-309. Go to [305-958-00](#) SPDH Lift Home Sensor Failure RAP.

305C Damaged Documents RAP

Use this RAP if the documents are damaged by the SPDH.

Procedure

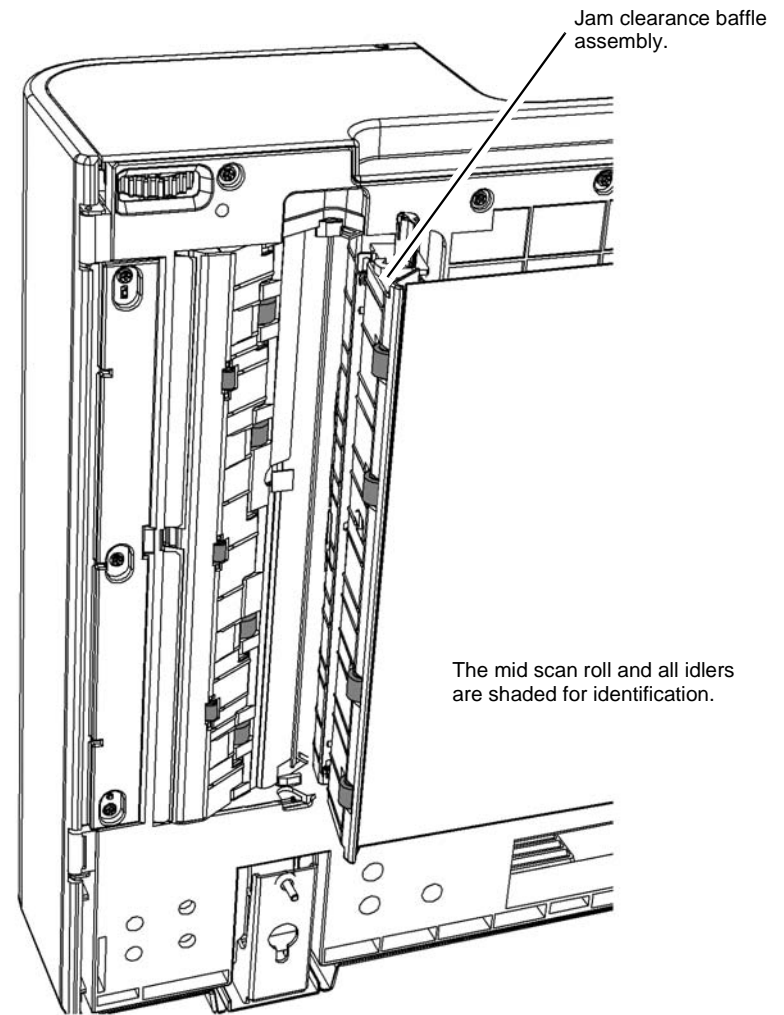


WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. ADJ 5.1 SPDH Height.
2. Check the input tray assembly for damage, PL 5.30 Item 1.
 - Ensure that the document width guides move freely, PL 5.30 Item 2.
 - Check the restack arm for damage, PL 5.30 Item 7.
3. Open the SPDH top cover, PL 5.10 Item 8.
 - Check the document path for damage.
 - Check the takeaway roll assembly, PL 5.17 Item 1 and idlers for damage and contamination, refer to ADJ 5.3.
 - Check the feed roll, PL 5.20 Item 17, nudger roll, PL 5.20 Item 6 and retard roll, PL 5.25 Item 3 for contamination or damage, refer to ADJ 5.3 SPDH Cleaning Procedure.
4. Raise the SPDH. Lower the jam clearance baffle assembly, Figure 1.
 - Check for, and remove any pieces of paper.
 - Check the document path in the baffle area for damage.
 - Check the jam clearance baffle assembly for damage.
 - Check the mid scan roll, PL 5.17 Item 3 and the surrounding idlers, Figure 1 for contamination or damage. Ensure that the roll and idlers are clean and rotate freely, ADJ 5.3 SPDH Cleaning Procedure.
5. Check the CVT ramp assembly for contamination or damage. Refer to the Principles of Operation (Scanning Process, Figure 9) for the location of the CVT ramp.
6. Check the exit roll assembly and idlers, PL 5.17 Item 2. Remove the input tray assembly, REP 5.4 to access the exit roll.
7. Remove the lower pre scan roller assembly, REP 5.6. Check the pre scan roll assembly, PL 5.17 Item 4 and the lower pre scan rollers for contamination or damage. Ensure that the roll and idlers are clean and rotate freely, ADJ 5.3 SPDH Cleaning Procedure.
8. Ensure that the customer's documents are within the specification, refer to GP 20.



X-1-1956-A

Figure 1 Component location

310-153-00, 310-163-00 Lead Edge Late to Post Fuser Sensor RAP

310-153-00 The lead edge of the paper failed to actuate the post fuser sensor within the correct time for a simplex sheet.

310-163-00 The lead edge of the paper failed to actuate the post fuser sensor within the correct time for a duplex sheet.

Remote Service Actions

Ask the customer to check the items that follow:

- That the paper size information on the UI matches the paper used in the paper trays.
- The paper path for obstructions.
- That the left door latches correctly.
- The condition of the paper in all trays. Refer to [IQ1](#) and [GP 20](#).
- For paper in the fuser module, [PL 10.8 Item 1](#).

If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Do not touch the fuser while it is hot.

Check the items that follow:

- The fuser module, [PL 10.8 Item 1](#) for damage.
- The fuser stripper fingers for contamination, [Figure 1](#).
- The fuser settings in [dC131](#). Refer to NVM locations 502-292 through to 502-296. Ensure that the values are set to the default level.
- For paper skew. Refer to [IQ8 Skew RAP](#).
- For worn, damaged or missing photoreceptor stripper fingers. If necessary install a new print cartridge, [PL 90.17 Item 9](#).

Procedure

NOTE: Ensure that the door interlock switches are cheated when checking +24V components.

Open the left door. Enter [dC330](#) code 010-120, post fuser sensor, Q10-120, [Figure 2](#). Use a piece of paper to actuate Q10-120. **The display changes.**

Y N
Go to [Flag 1](#). Check Q10-120.
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J761](#), [IOT PWB](#).

- A**
- [301E](#) +5V and +5VSB Distribution RAP.
 - [301B](#) 0V Distribution RAP.

If necessary, install a new post fuser sensor, [PL 10.11 Item 7](#).
If the fault persists, perform [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 010-020, fuser drive motor, MOT10-020. Observe the fuser roll and the pressure roll through the top of the fuser. **The fuser rolls turn.**

Y N
Go to [Flag 2](#). Check MOT10-020.
Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J761](#), [IOT PWB](#).
- [P/J656](#), [LVPS](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new main drive module, [PL 40.15 Item 1](#).
If the fault persists, perform [OF7](#) IOT PWB Diagnostics RAP and [301L](#) LVPS RAP.

Enter [dC330](#) code 093-045, print cartridge motor, MOT93-045. Observe the photoreceptor. **The photoreceptor turns.**

Y N
Go to [Flag 2](#). Check MOT93-045.
Refer to:

- [GP 10](#), How to check a Motor.
- [P/J761](#), [IOT PWB](#).
- [P/J656](#), [LVPS](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Main drive module, [PL 40.15 Item 1](#).
- Print cartridge, [PL 90.17 Item 9](#).

If the fault persists, perform [OF7](#) IOT PWB Diagnostics RAP and [301L](#) LVPS RAP.

Enter [dC330](#) code 080-040, registration motor, MOT80-040. Observe the registration roll, [PL 80.17 Item 5](#). **The registration roll turns.**

Y N
Go to [Flag 3](#). Check MOT80-040.
Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J762](#), [IOT PWB](#).

If necessary, install a new registration motor, [PL 40.15 Item 6](#).
If the fault persists, perform [OF7](#) IOT PWB Diagnostics RAP.

The jam occurs when feeding sheets from the bypass tray.

A

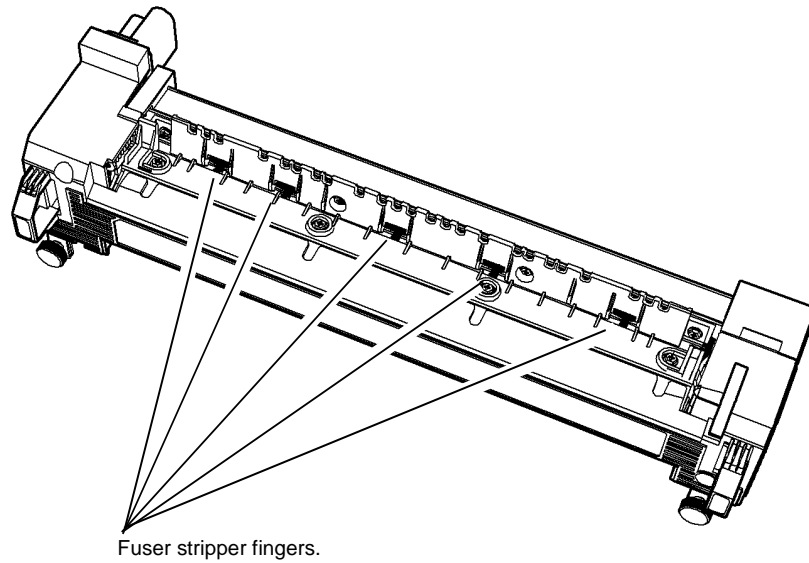
Y N

Refer to **GP 7** and **OF10** Intermittent Fault RAP. Check the components that follow:

- Registration idler roll, **PL 80.15 Item 4**.
- Bias transfer roll, **PL 80.15 Item 3**.
- Registration roll, **PL 80.17 Item 6**.
- Registration drive gear, **PL 80.17 Item 3**.
- Track (DTS), **PL 90.10 Item 6**, from the detack saw to the HVPS.

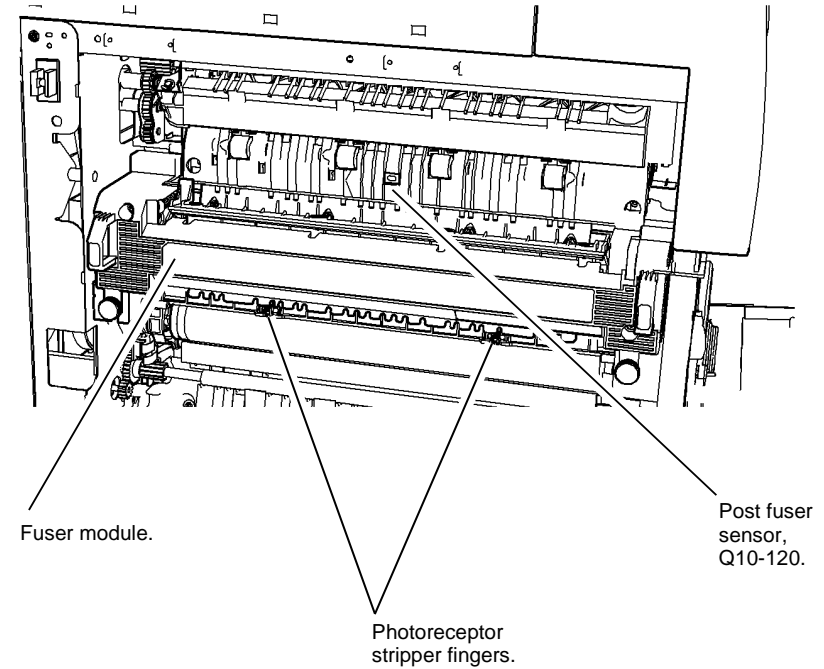
If the fault persists, perform the **381A** Paper Feed Retries RAP.

Perform the **381-155-00** Lead Edge Late to Registration Sensor from the Bypass Tray RAP.



X-1-1081-A

Figure 1 Component location



X-1-1080-A

Figure 2 Component location

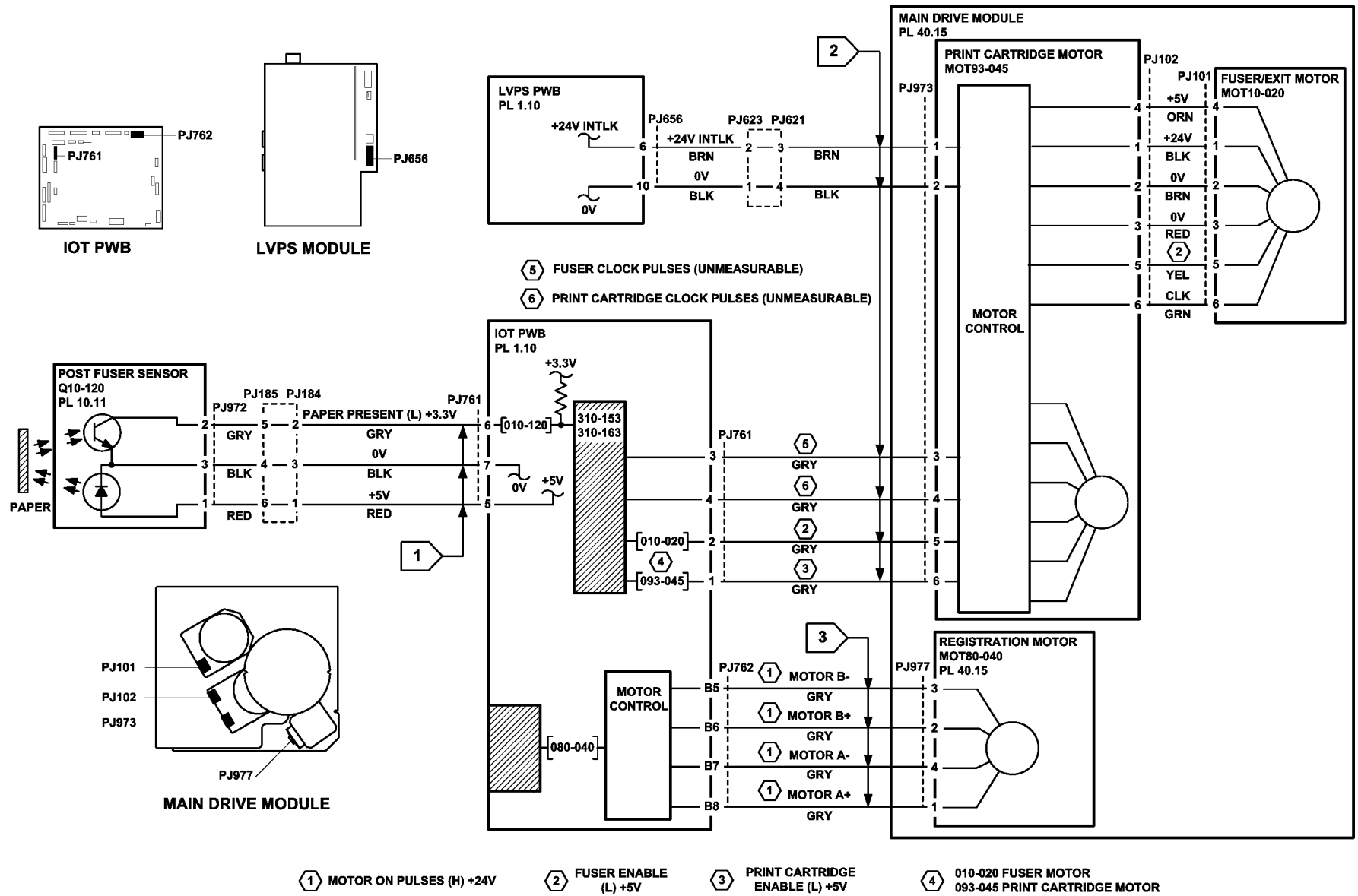


Figure 3 Circuit diagram

TX-1-0280-A

310-154-00, 310-164-00 Trail Edge Late from Post Fuser Sensor RAP

310-154-00 The trail edge of the paper failed to de-actuate the post fuser sensor within the correct time for a simplex sheet.

310-164-00 The trail edge of the paper failed to de-actuate the post fuser sensor within the correct time for a duplex sheet.

Remote Service Actions

Ask the customer to check the items that follow:

- That the paper size information on the UI matches the paper used in the paper trays.
- That the left door latches correctly.
- The condition of the paper in all trays. Refer to [IQ1](#) and [GP 20](#).
- For paper in the fuser module, [PL 10.8 Item 1](#).

Dependent on the machine configuration, check the components that follow:

- The horizontal transport, [PL 10.15 Item 1](#) for obstructions.
- The centre output tray, [PL 28.10 Item 9](#) for obstructions.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Do not touch the fuser while it is hot.

Check the items that follow:

- The fuser module, [PL 10.8 Item 1](#) for damage.
- The fuser settings in [dC131](#). Refer to NVM locations 502-292 through to 502-296. Ensure that the values are set to the default level.
- The fuser stripper fingers for contamination, [Figure 1](#).
- The inverter assembly, [PL 10.10 Item 1](#) for obstructions.
- The paper for skew. Refer to [IQ8 Skew RAP](#).

Dependent on the machine configuration, check the components that follow:

- The diverter output guide, [PL 10.10 Item 3](#), is correctly located.
- The centre output tray bail arm assembly, [PL 10.11 Item 25](#), is correctly installed and undamaged.

Procedure

NOTE: Ensure that the door interlock switches are cheated when checking +24V components.

Open the left door. Enter [dC330](#) code 010-120, post fuser sensor, Q10-120, [Figure 2](#). Use a piece of paper to actuate Q10-120. **The display changes.**

Y N

Go to [Flag 1](#). Check Q10-120.

Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J761,IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new post fuser sensor, [PL 10.11 Item 7](#).

If the fault persists, perform [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 010-020, fuser drive motor, MOT10-020. Observe the fuser roll and the pressure roll through the top of the fuser. **The fuser rolls turn.**

Y N

Go to [Flag 2](#). Check MOT10-020.

Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J761, IOT PWB](#).
- [P/J656, LVPS](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Main drive module, [PL 40.15 Item 1](#).
- Fuser module, [PL 10.8 Item 1](#).

If the fault persists, perform [OF7](#) IOT PWB Diagnostics RAP and [301L](#) LVPS RAP.

Enter [dC330](#) code 010-020, MOT10-020. Observe the exit roll and exit drive gears, [Figure 2](#). **The motor runs and drives the exit drive roll.**

Y N

Check the components that follow:

- Exit drive assembly, [PL 10.14 Item 1](#).
- Exit drive belts, [PL 10.14 Item 2](#) and [PL 10.14 Item 3](#).
- Inverter assembly, [PL 10.10 Item 1](#).

Enter [dC330](#) code 010-045, inverter gate solenoid, SOL10-045. Observe the solenoid and inverter gate, [Figure 3](#). **The solenoid energizes and the inverter gate is pulled down.**

Y N

Go to [Flag 3](#). Check SOL10-045.

Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [P/J762,IOT PWB](#).
- [301G](#) +24V Distribution RAP.

A

A

- 301B 0V Distribution RAP.

If necessary, install a new inverter gate solenoid, PL 10.13 Item 8.

If the fault persists, perform OF7 IOT PWB Diagnostics RAP.

Remove the centre exit cover, REP 28.1. Enter dC330 code 010-030, inverter motor forward, MOT10-030, PL 10.11 Item 9. **The motor runs and turns the inverter drive roll.**

Y N

Go to Flag 4. Check MOT10-030.

Refer to:

- GP 10, How to Check a Motor.
- P/J762, IOT PWB.

Install new components as necessary:

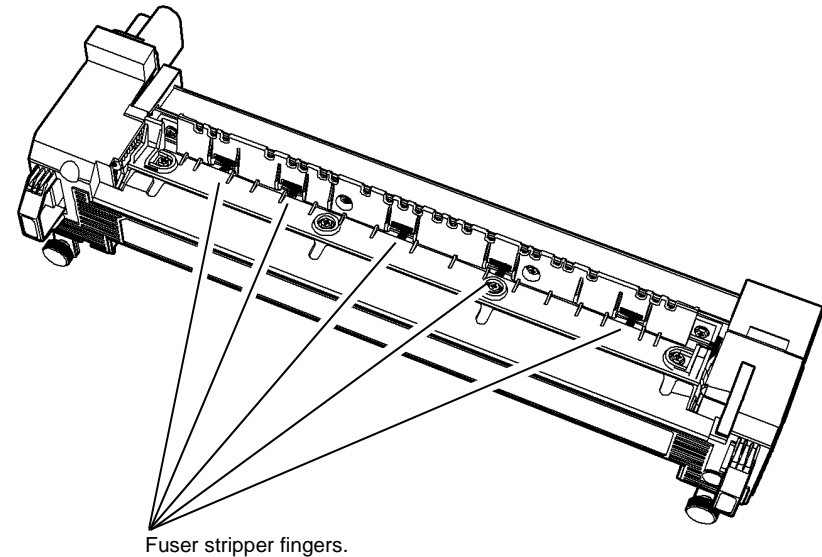
- Inverter motor, PL 10.11 Item 9 (centre output tray) or PL 10.11 Item 21 (horizontal transport).
- Drive belt, PL 10.11 Item 4 (centre output tray) or PL 10.16 Item 2 (horizontal transport).

If the fault persists, perform OF7 IOT PWB Diagnostics RAP.

Refer to GP 7. Check the components that follow:

- Post fuser roll, PL 80.22 Item 12.
- Horizontal transport assembly, PL 10.15 Item 1.
- Inverter assembly, PL 10.10 Item 1.

If the fault persists, perform the 381A Paper Feed Retries RAP.



X-1-1090-A

Figure 1 Component location

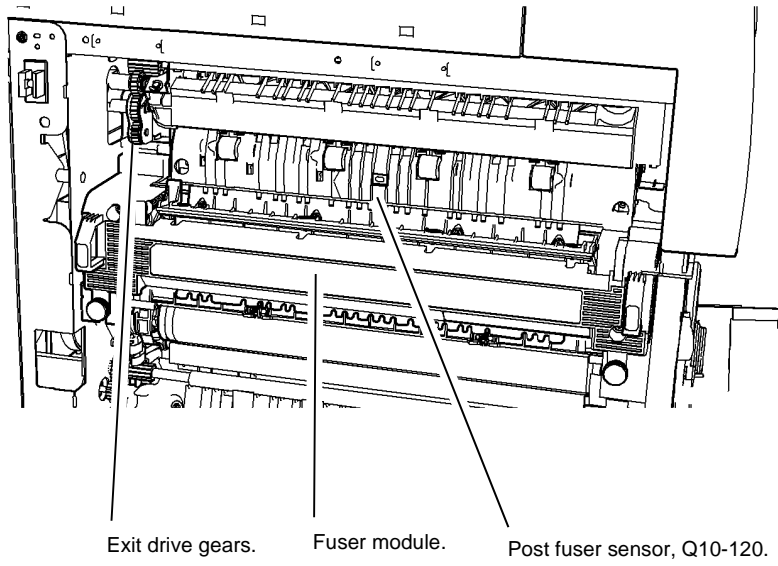


Figure 2 Component location

X-1-1091-A

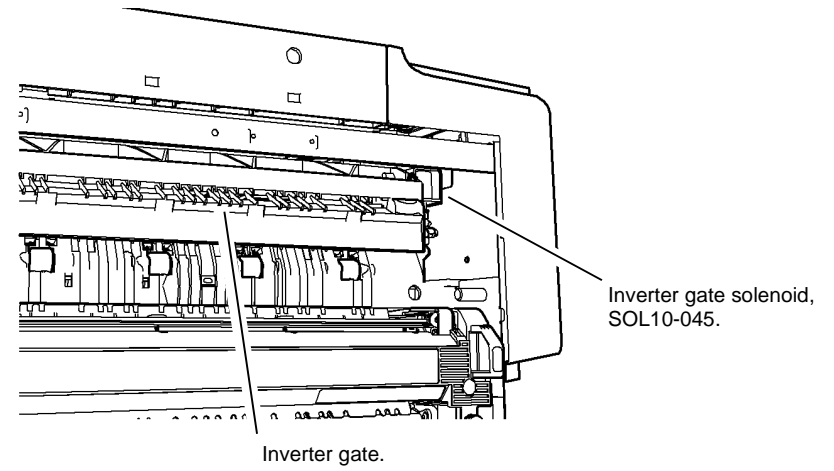
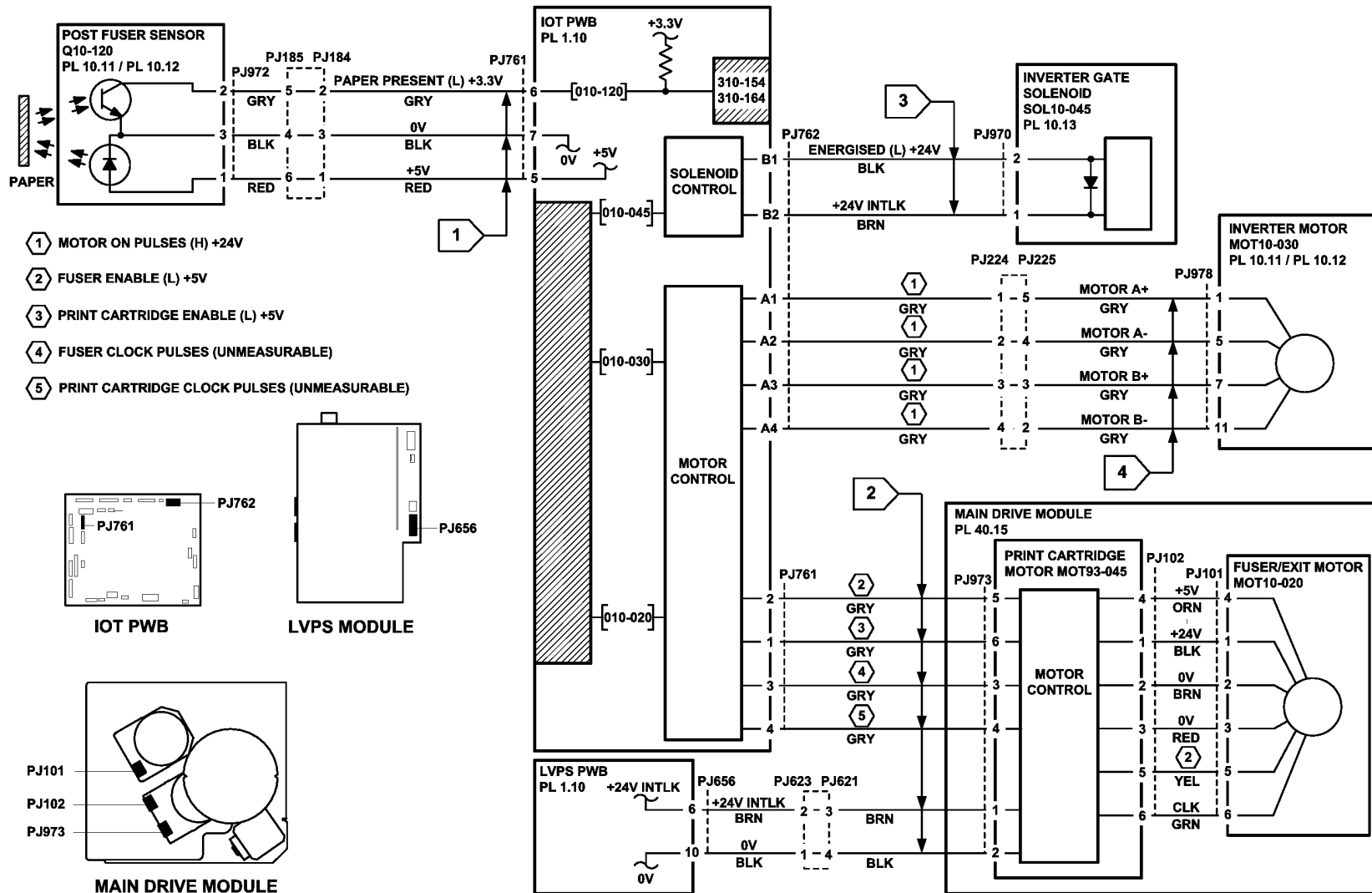


Figure 3 Component location

X-1-1092-A



TX-1-0281-A

Figure 4 Circuit diagram

310-170-00 Lead Edge Late to Horizontal Transport Entry Sensor RAP

310-170-00 The lead edge of the paper failed to actuate the horizontal transport entry sensor within the correct time.

Remote Service Actions

Ask the customer to check the items that follow:

- That the paper size information on the UI matches the paper used in the paper trays.
- The condition of the paper in all trays. Refer to [IQ1](#) and [GP 20](#).
- That the left door latches correctly.
- The horizontal transport, [PL 10.15 Item 1](#) for obstructions.
- For paper in the fuser module, [PL 10.8 Item 1](#).

If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Do not touch the fuser while it is hot.

Check the items that follow:

- The fuser module, [PL 10.8 Item 1](#) for damage.
- The fuser stripper fingers for contamination, [Figure 1](#).
- The fuser settings in [dC131](#). Refer to NVM locations 502-292 through to 502-296. Ensure that the values are set to the default level.
- The inverter assembly, [PL 10.10 Item 1](#) for obstructions.
- For paper skew refer to [IQ8 Skew RAP](#).

NOTE: Moisture levels for media outside of the recommended range can cause paper jams. It may not be possible to measure moisture levels of media but checking the temperature and humidity of the machine may give an indication that media moisture levels are causing problems. If moisture levels of media are suspected try a fresh supply of media. Discuss possible storage options with the customer.

- Check the following NVM values:
 - 091-601 humidity
 - 091-602 temperature

Procedure

NOTE: Ensure that the door interlock switches are cheated when checking +24V components.

Enter [dC330](#) code 010-041, horizontal transport entry sensor, Q10-041, [PL 10.15 Item 7](#). Use a piece of paper to actuate Q10-041. **The display changes.**

Y N

Go to [Flag 1](#). Check Q10-041.
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J773, IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new horizontal transport entry sensor, [PL 10.15 Item 7](#).
If the fault persists, perform [OF7 IOT PWB Diagnostics RAP](#).

Open the left door. Enter [dC330](#) code 010-020, fuser drive motor, MOT10-020. Observe the fuser roll and pressure roll through the top of the fuser. **The fuser rolls turn.**

Y N

Go to [Flag 2](#). Check MOT10-020.
Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J773, IOT PWB](#).
- [P/J656, LVPS](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new main drive module, [PL 40.15 Item 1](#).
If the fault persists, perform [OF7 IOT PWB Diagnostics RAP](#) and [301L LVPS RAP](#).

Enter [dC330](#) code 010-020, MOT010-020. Observe the exit roll and exit drive gears, [Figure 2](#). **The motor runs and turns the exit drive roll.**

Y N

Check the components that follow:

- Exit drive assembly, [PL 10.14 Item 1](#).
- Exit drive belts, [PL 10.14 Item 2](#) and [PL 10.14 Item 3](#).
- Inverter assembly, [PL 10.10 Item 1](#).

Enter [dC330](#) code 010-045, inverter gate solenoid, SOL10-045. Observe the solenoid and inverter gate, [Figure 3](#). **The solenoid energizes and the inverter gate is pulled down.**

Y N

Go to [Flag 3](#). Check SOL10-045.
Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [P/J762, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new inverter gate solenoid, [PL 10.13 Item 8](#).

A

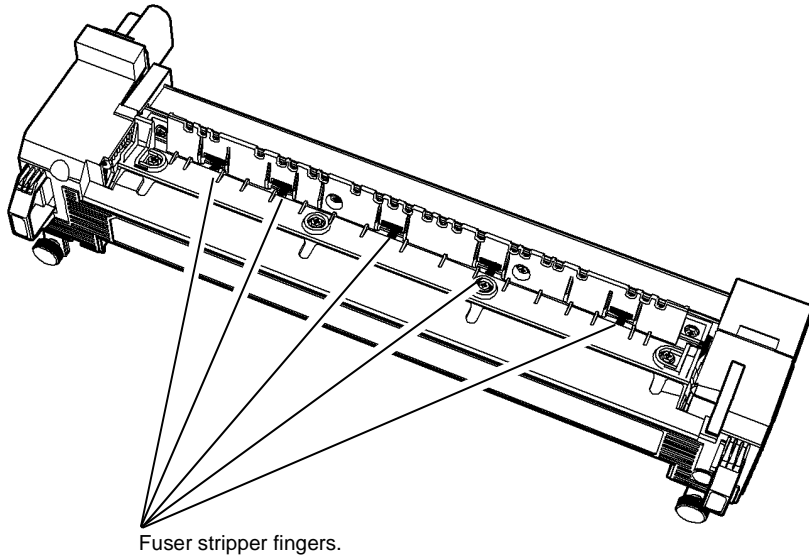
A

If the fault persists, perform **OF7** IOT PWB Diagnostics RAP.

Refer to **GP 7**. Check the components that follow:

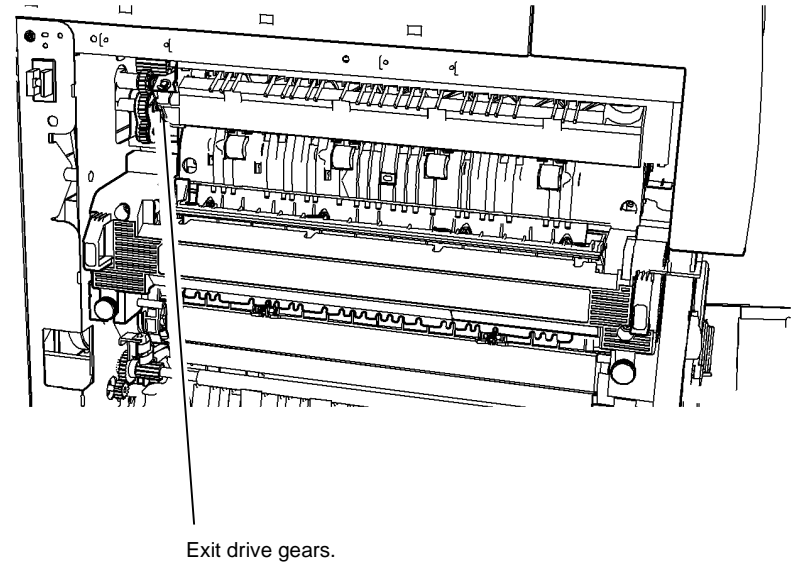
- Post fuser roll, **PL 80.22 Item 12**.
- Inverter assembly, **PL 10.10 Item 1**.

If the fault persists, perform the **381A** Paper Feed Retries RAP.



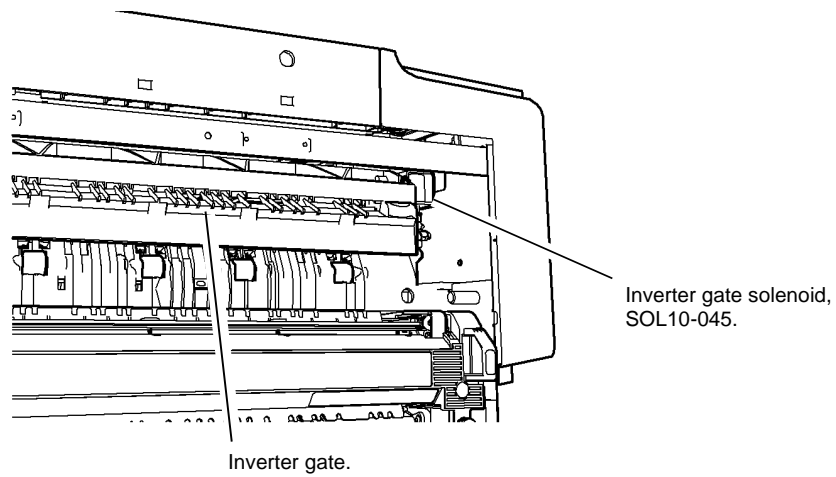
X-1-1093-A

Figure 1 Component location



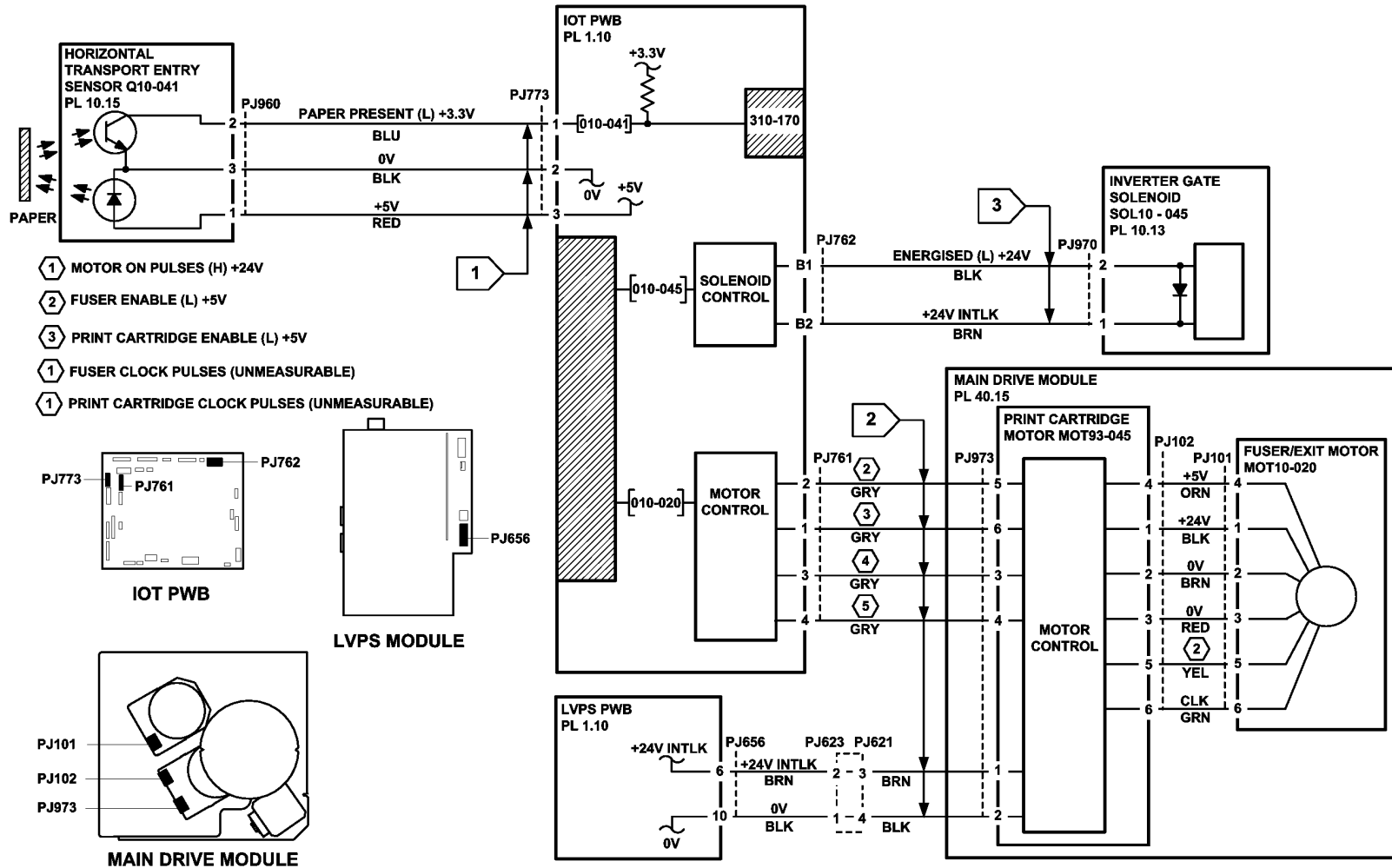
X-1-1105-A

Figure 2 Component location



X-1-1094-A

Figure 3 Component location



TX-1-0282-A

Figure 4 Circuit diagram

310-171-00 Trail Edge Late from Horizontal Transport Entry Sensor RAP

310-171-00 The trail edge of the paper failed to de-actuate the horizontal transport entry sensor within the correct time.

Remote Service Actions

Ask the customer to check the items that follow:

- That the paper size information on the UI matches the paper used in the paper trays.
- The condition of the paper in all trays. Refer to [IQ1](#) and [GP 20](#).
- The horizontal transport, [PL 10.15 Item 1](#) for obstructions.
- The inverter assembly, [PL 10.10 Item 1](#) for obstructions.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the paper for skew. Refer to [IQ8](#) Skew RAP.

Procedure

NOTE: Ensure that the door interlock switches are cheated when checking +24V components.

Enter [dC330](#) code 010-041, horizontal transport entry sensor, Q10-041, [PL 10.15 Item 7](#). Use a piece of paper to actuate Q10-041. **The display changes.**

Y N

Go to [Flag 1](#). Check Q10-041.

Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J773](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new horizontal transport entry sensor, [PL 10.15 Item 7](#).

If the fault persists, perform [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 010-040, horizontal transport motor, MOT10-040, [PL 10.16 Item 1](#). Observe the horizontal transport rolls, [PL 10.16 Item 4](#). **The motor runs and the rolls turn.**

Y N

Go to [Flag 2](#). Check MOT10-041.

Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J770](#), [IOT PWB](#).

Check the components that follow:

- Horizontal transport belt, [PL 10.16 Item 2](#).

- Horizontal transport rolls, [PL 10.16 Item 4](#).
- Transport roll pulleys, [PL 10.16 Item 6](#).

If necessary, install a new horizontal transport motor, [PL 10.16 Item 1](#).

If the fault persists, perform [OF7](#) IOT PWB Diagnostics RAP.

Open the left door. Enter [dC330](#) code 010-020, fuser drive motor, MOT10-020. Observe the exit roll and exit drive gears, [Figure 1](#). **The gear and roll turns.**

Y N

Go to [Flag 3](#). Check MOT10-020.

Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J773](#), [IOT PWB](#).
- [P/J656](#), [LVPS](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

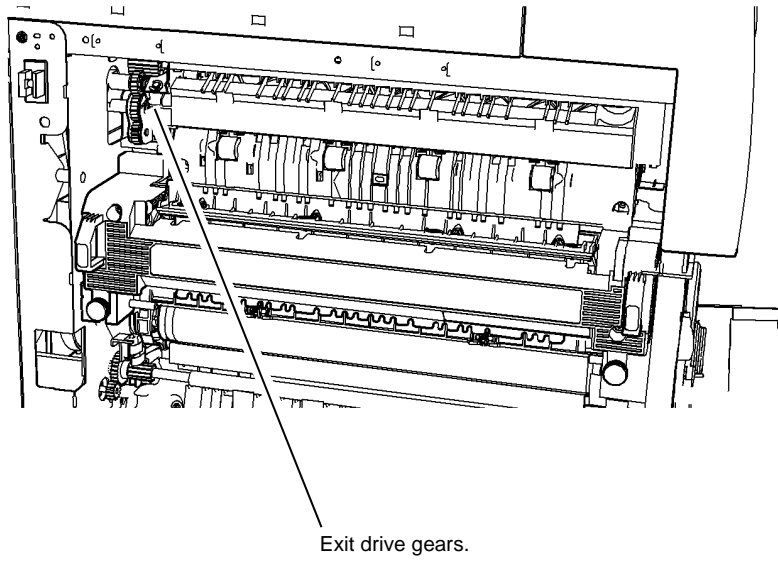
Check the components that follow:

- Exit roll, [PL 10.11 Item 21](#).
- Exit drive gear, [PL 10.11 Item 18](#).
- Exit drive assembly, [PL 10.14 Item 1](#).
- Exit drive belts, [PL 10.14 Item 2](#) and [PL 10.14 Item 3](#).

If necessary, install a new main drive module, [PL 40.15 Item 1](#).

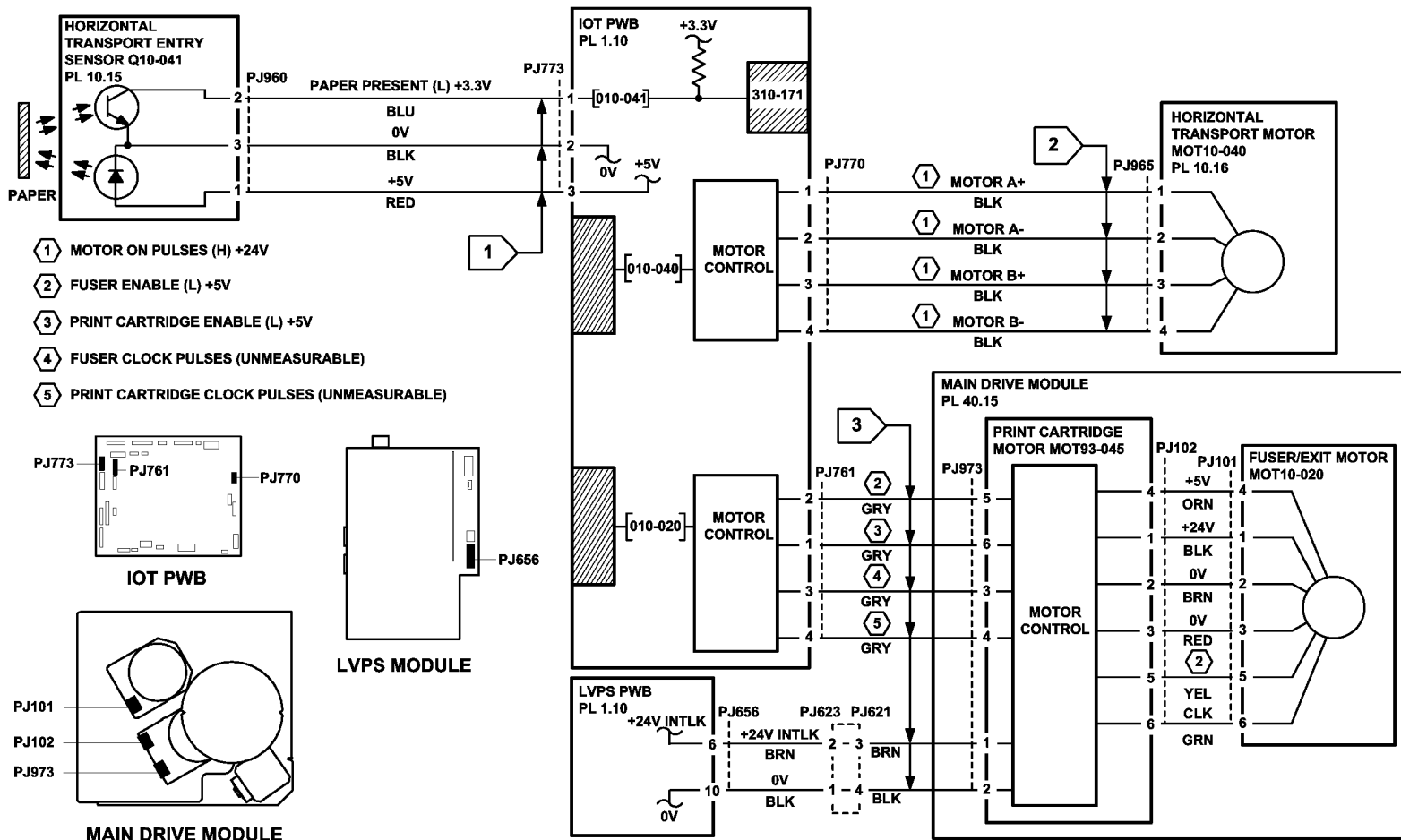
If the fault persists, perform [OF7](#) IOT PWB Diagnostics RAP and [301L](#) LVPS RAP.

If the fault persists, perform the [381A](#) Paper Feed Retries RAP.



X-1-1106-A

Figure 1 Component location



TX-1-0283-A

Figure 2 Circuit diagram

310-172-00 Unexpected Sheet in Horizontal Transport RAP

310-172-00 A stray sheet was detected in the horizontal transport after jam clearance.

Remote Service Actions

Ask the customer to check the items that follow:

- For paper or paper fragments in the horizontal transport, [PL 10.15 Item 1](#).
- For paper in the machine paper path at all the sensor locations.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Select **Machine Status**. Select **Active Messages**. Refer to [OF4](#) Status Codes and Message RAP for the jam clearance procedure.

Procedure

If the Initial Actions failed to fix the problem, switch off, then switch on the machine, [GP 14](#). If a fault code is then displayed, go to the appropriate RAP.

310-201-00 Unexpected Sheet at Post Fuser Sensor RAP

310-201-00 A stray sheet was detected at the post fuser sensor after jam clearance.

Remote Service Actions

Ask the customer to check the items that follow:

- For paper or paper fragments in the locations that follow:
 - Fuser module, [PL 10.8 Item 1](#).
 - Inverter assembly, [PL 10.10 Item 1](#).
- For paper in the machine paper path at all the sensor locations.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Select **Machine Status** button. Select **Active Messages**. Refer to [OF4](#) Status Codes and Messages RAP for the jam clearance instruction.

Procedure

If the Initial Actions failed to fix the problem, switch off, then switch on the machine, [GP 14](#). If a fault code is then displayed, go to the appropriate RAP.

310-320-00 Fuser Control Failure RAP

310-320-00 One or more fuser lamps is above the maximum temperature, or the temperature difference between any of the lamps is greater than 25 degrees C.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Do not touch the fuser while it is hot.

Check the items that follow:

- The fuser fans, [PL 80.11 Item 9](#) in the left door are working correctly and that the direction of air flow is out of the machine.
- The fuser module connector, [Figure 1](#) and fuser connector assembly, [Figure 2](#) are not damaged.
- The fuser temperature settings in [dC131](#). Refer to NVM locations 502-292 through to 502-296 and 502-313. Ensure that the values are set to the default level.

Procedure

Switch off, then switch on the machine, [GP 14](#). The display shows 'Ready to Copy'.

Y N

Go to [Flag 1](#). The voltage at the front and mid fuser temperature sensors should be 3.2 volts when the sensors are cold. In standby mode the voltage should be 0.72 to 0.96 volts.

Refer to:

- [P/J764, IOT PWB](#).
- [PJ100, Figure 2](#).
- [301D +3.3V Distribution RAP](#).
- [301B 0V Distribution RAP](#).

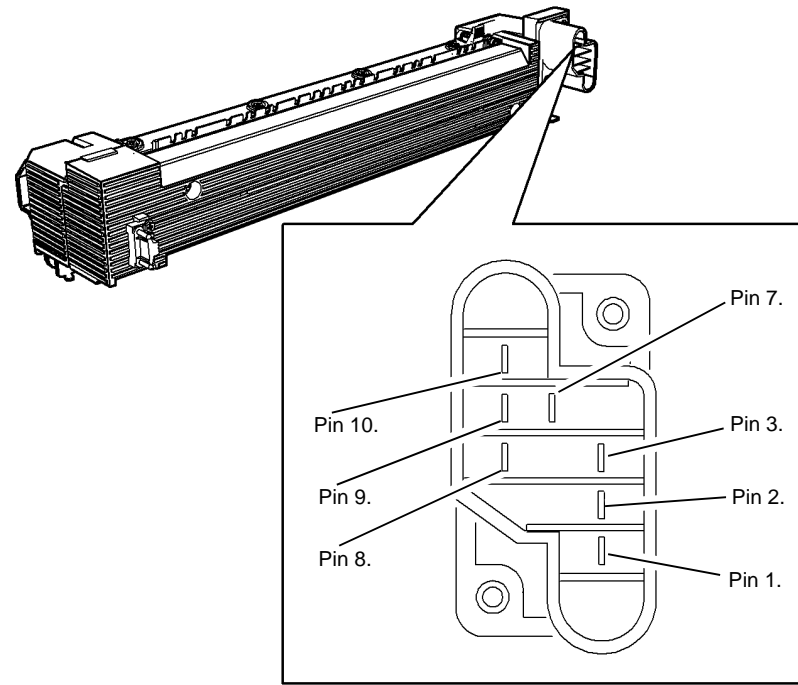
Before new components are installed, restore the NVM values to default.

As necessary, perform the actions that follow:

- Repair the harness between [P/J764](#) and [PJ100](#), [REP 1.2](#).
- Install a new fuser connector, [PL 10.8 Item 3](#).
- Perform the [OF7 IOT PWB Diagnostics RAP](#).

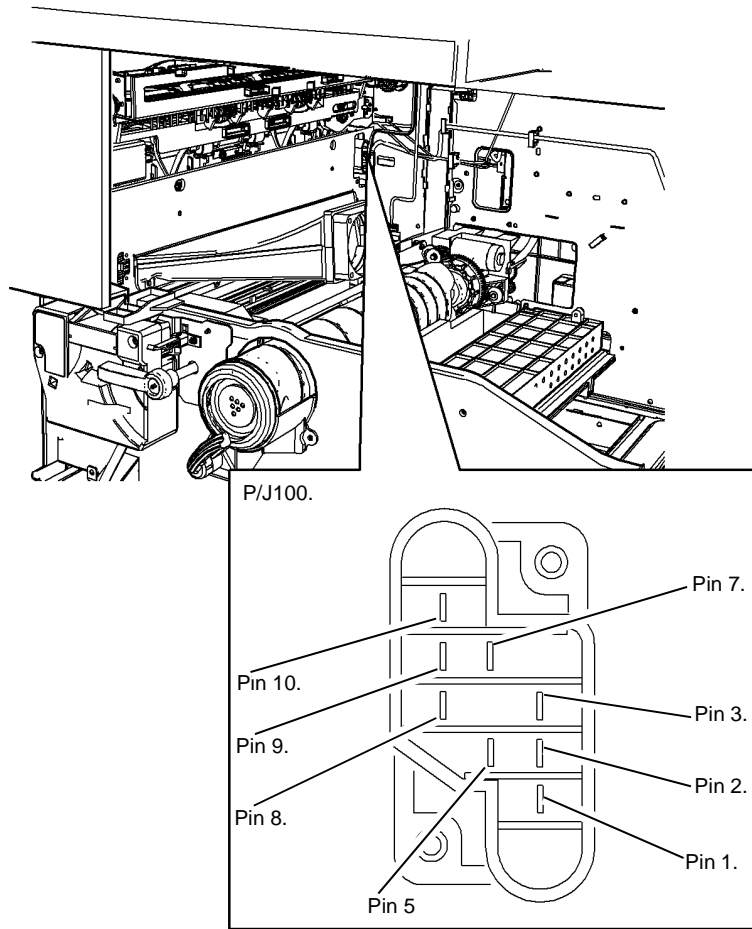
If the fault persists, install a new fuser module, [PL 10.8 Item 1](#).

Perform [SCP 5](#) Final Actions.



X-1-0959-A

Figure 1 Component location



X-1-0961-A

Figure 2 Component location

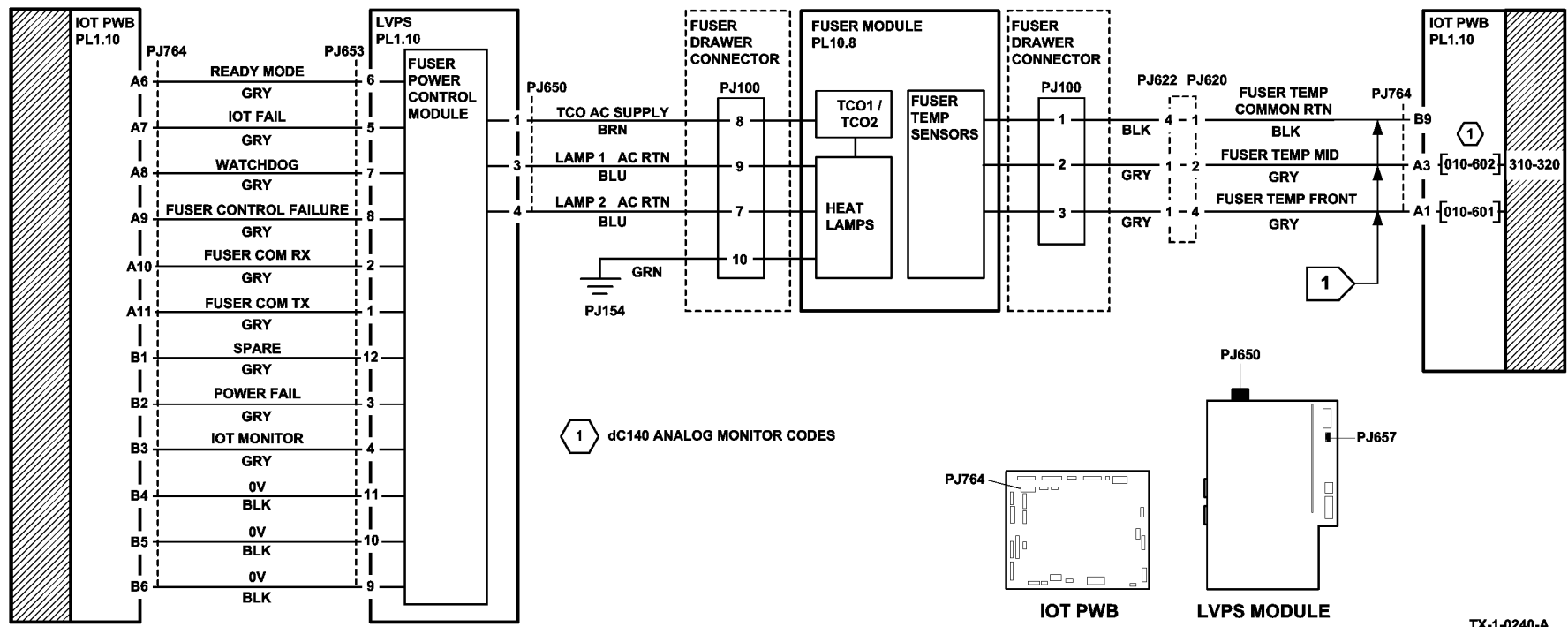


Figure 3 Circuit diagram

TX-1-0240-A

310-330-00, 310-340-00 Fuser Warm Up Failure RAP

310-330-00 The Initial fuser temperature rise was not achieved within 40 seconds from start of warm up mode.

310-340-00 The temperature reported by each thermistor failed to rise by 10 degrees C within 10 seconds from start of warm up mode when the starting temperature was less than 150 degrees C.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, GP 14. If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Do not touch the fuser while it is hot.

- Check the fuser settings in dC131. Refer to NVM locations 502-292 through to 502-296, 502-315, 502-352 and 302-353. Ensure that the values are set to their defaults.
- Check that the fuser module matches the machine's market region configuration. Perform the 310-399-00 Fuser CRUM Authorization Failure RAP.

Procedure

Switch off the machine, GP 14. Remove the fuser module. Check the fuser module connector, Figure 1, for continuity between the pins that follow:

- Pin 8 and pin 7.
- Pin 8 and pin 9.

There is continuity.

Y N
Install a new fuser module, PL 10.8 Item 1.

Install the fuser module. Disconnect P/J650, Figure 2. Go to Flag 2. Check for continuity between pin 1 and pin 3, and between pin 1 and pin 4 at the harness end. **There is continuity.**

Y N
Check the fuser connector assembly, Figure 3. If necessary install a new fuser connector assembly, PL 10.8 Item 3.

Go to Flag 3. Check the wiring and connectors.
Refer to:

- P/J764, IOT PWB.
- P/J653, LVPS.
- 301B 0V Distribution RAP.

The wiring and connectors are good.

Y N
Repair the harness between P/J764 and P/J653, REP 1.2.



Take care when measuring AC mains (line) voltage. Electricity can cause death or injury.

NOTE: It will take approximately 10 seconds after switch on before AC voltage is applied to the fuser. The voltage will be 100% of the ACL voltage when the machine is switched on from cold, and will pulse between 0% and 30% during standby.

Connect P/J650. Switch on the machine, GP 24. Go to Flag 2. Check for ACL at P/J650 between pin 1 and pin 3, and between pin 1 and pin 6. **ACL is measured.**

Y N
Perform the OF7 IOT PWB Diagnostics RAP. If the fault persists, install a new LVPS, PL 1.10 Item 1.

Go to Flag 1. With the fuser cold, check for +3.2V at P/J764 pin A1 and pin A3. **+3.2V is available at both pins.**

Y N
Go to Flag 1. Check the wiring and connectors.

NOTE: Do not insert the service meter probes into the PJ100 pins from the left door side. This may damage the pins. Access the pins from the wire side of the connector.

Refer to:

- P/J764, IOT PWB.
- PJ100, Figure 3.
- 301D +3.3V Distribution RAP.
- 301B 0V Distribution RAP.

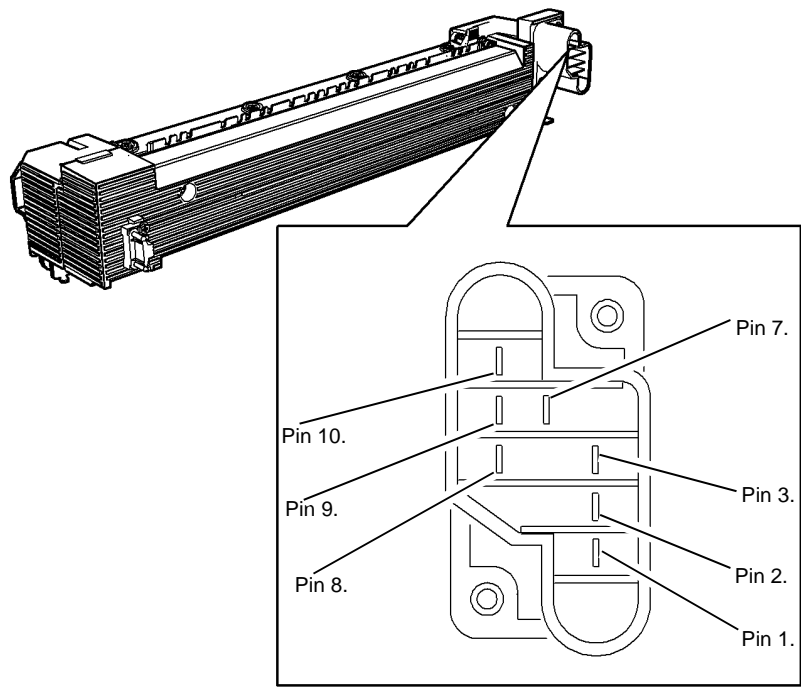
The wiring and connectors are good.

Y N
As necessary, perform the actions that follow:

- Repair the harness between P/J764 and PJ100, REP 1.2.
- Install a new fuser connector, PL 10.8 Item 3.

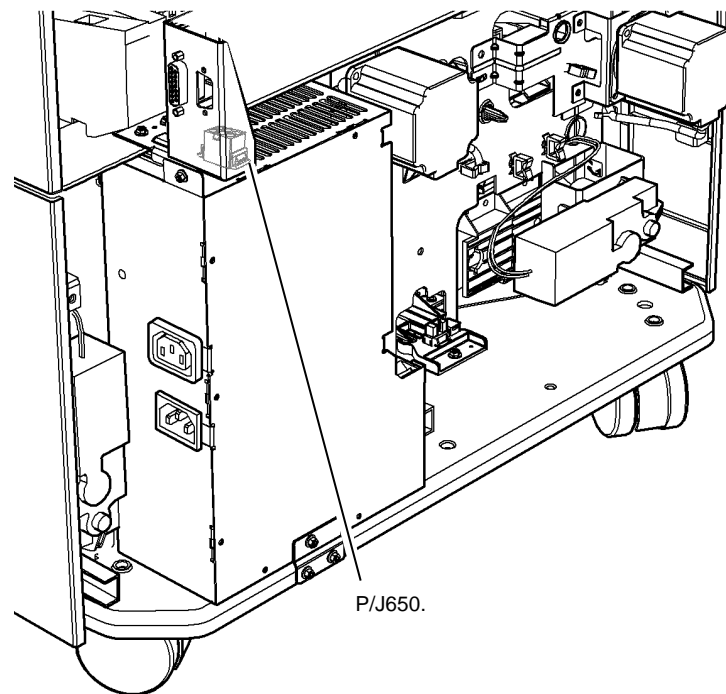
Perform the OF7 IOT PWB Diagnostics RAP. If the fault persists, install a new fuser module, PL 10.8 Item 1.

If the fault persists, install a new fuser module, PL 10.8 Item 1.



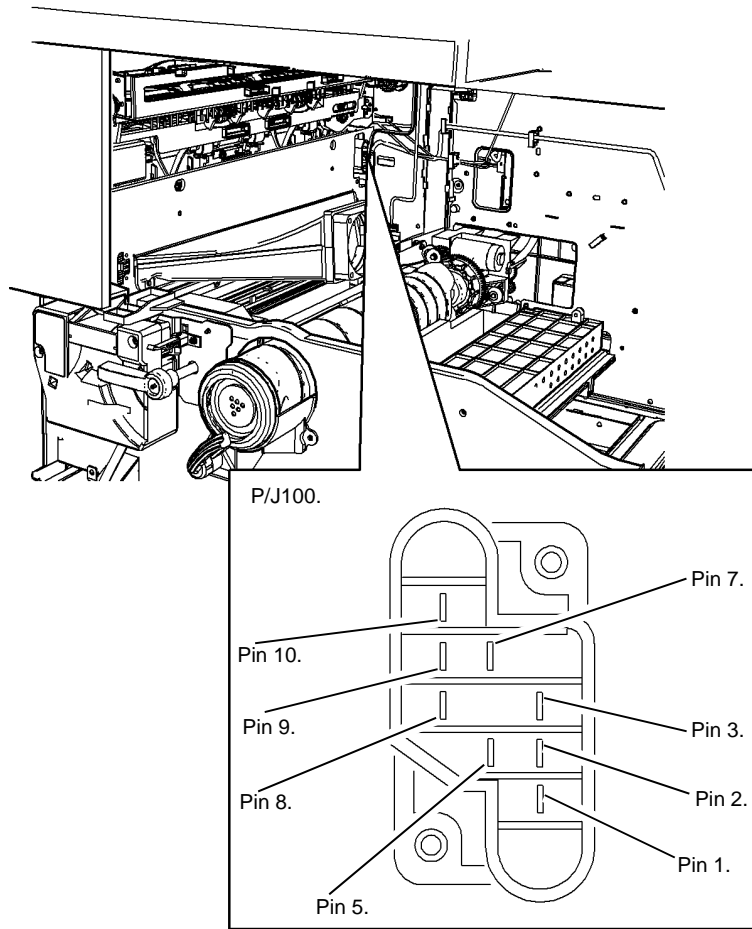
X-1-0960-A

Figure 1 Component location



X-1-0963-A

Figure 2 Component location



X-1-0962-A

Figure 3 Component location

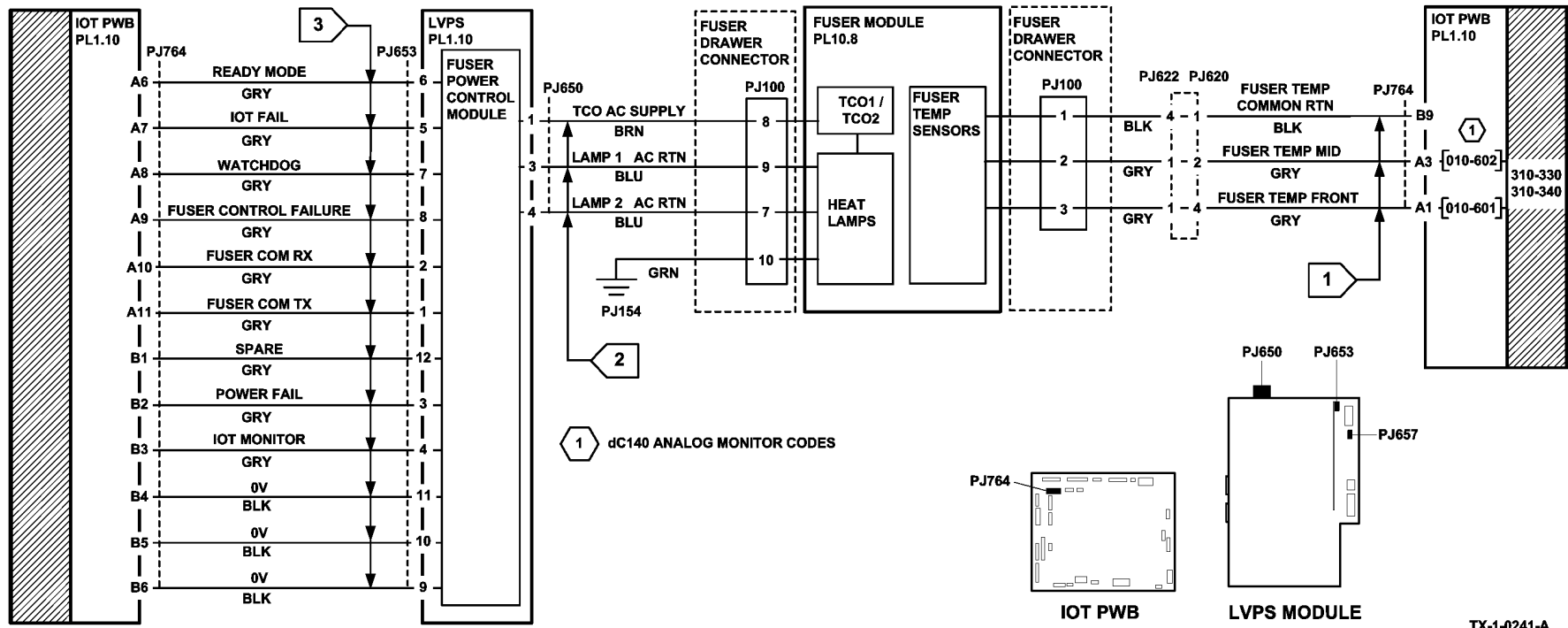


Figure 4 Circuit diagram

310-399-00 Fuser CRUM Authorization Failure RAP

310-399-00 The fuser CRUM failed the authorization check.

The authorization check is performed to ensure that the fuser installed in the system is compatible with the machine configuration: 50Hz or 60Hz.



Do not touch the fuser while it is hot.

Procedure

- Check that the machine market region is correct, [dC134](#).
- Check that the service plan is correct, [dC136](#).
- If necessary, install a new fuser module that matches the machine configuration, [PL 10.8 Item 1](#).

310-400-00 Fuser CRUM Communication Fault RAP

310-400-00 The fuser CRUM communications have failed.

Remote Service Actions

Ask the customer to check the items that follow:

- Ensure that the fuser module, [PL 10.8 Item 1](#) is correctly installed.
- Ensure that the print cartridge, [PL 90.17 Item 9](#) is correctly installed.
- Switch off, then switch on the machine, [GP 14](#).

If the fault continues, a site visit will be necessary.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Remove the fuser module and print cartridge to prevent damage to the CRUMs when checking for continuity.

Procedure

Ensure that [P/J766](#) on the IOT PWB is correctly and securely connected. Go to [Flag 1](#). Check the harness, [GP 7](#), and measure the voltages. **The voltages are good.**

Y N

Go to the procedures that follow:

- [301B](#) 0V Distribution RAP.
- [301E](#) +5V and +5VSB Distribution RAP.

Go to [Flag 2](#), check the harness between PJ141 on the Fuser CRUM to PJ513 on the print cartridge CRUM. **The wiring and connectors are good.**

Y N

Repair the wiring as necessary.

Refer to

- [GP 7](#) Miscellaneous Checks. Repair as necessary, [REP 1.2](#).
- [REP 1.2](#) Wiring Harness.

Go to [Flag 3](#), check the harness between PJ766 on the IOT PWB and PJ513 on the print cartridge CRUM. **The wiring and connectors are good.**

Y N

Repair the wiring as necessary.

Refer to

- [GP 7](#) Miscellaneous Checks. Repair as necessary, [REP 1.2](#).
- [REP 1.2](#) Wiring Harness.

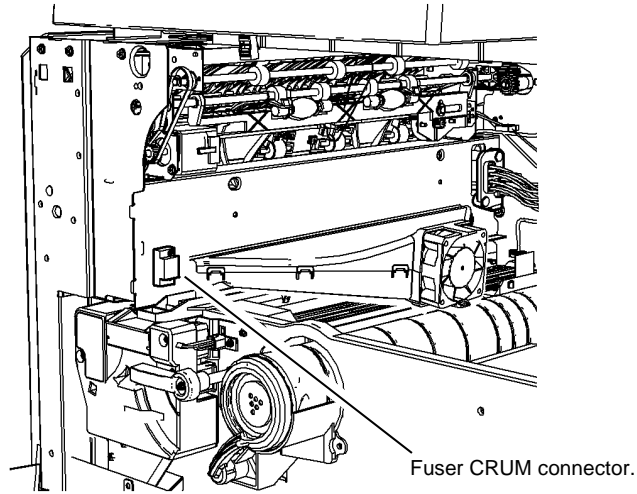
Perform the [OF7](#) IOT PWB Diagnostics RAP. **The fault persists.**

Y N
GO to SCP 5 Final Actions.

If the fault is intermittent, the cause may be due to electrical noise. Go to OF10 Intermittent Failure RAP.

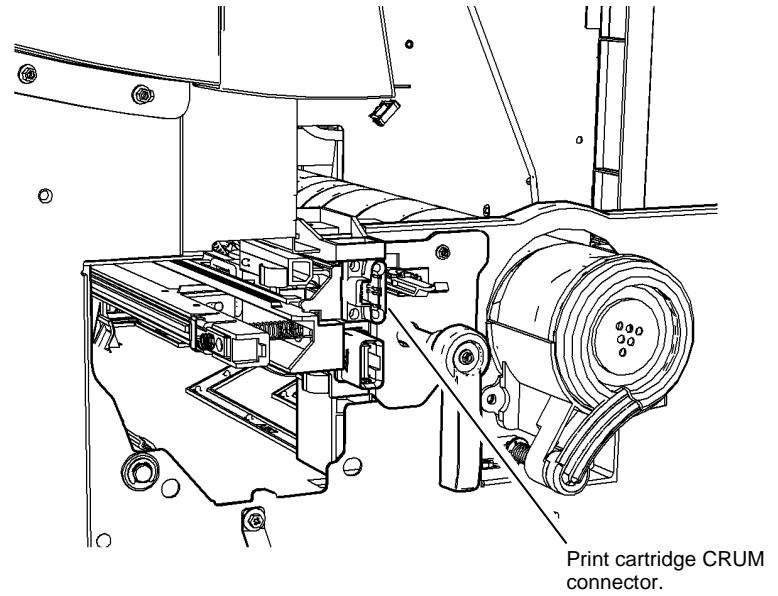
If necessary install new components:

- Fuser module, PL 10.8 Item 1.
- Print cartridge, PL 90.17 Item 9.



X-1-1074-A

Figure 1 Fuser CRUM connector location



X-1-1075-A

Figure 2 Print cartridge CRUM connector location

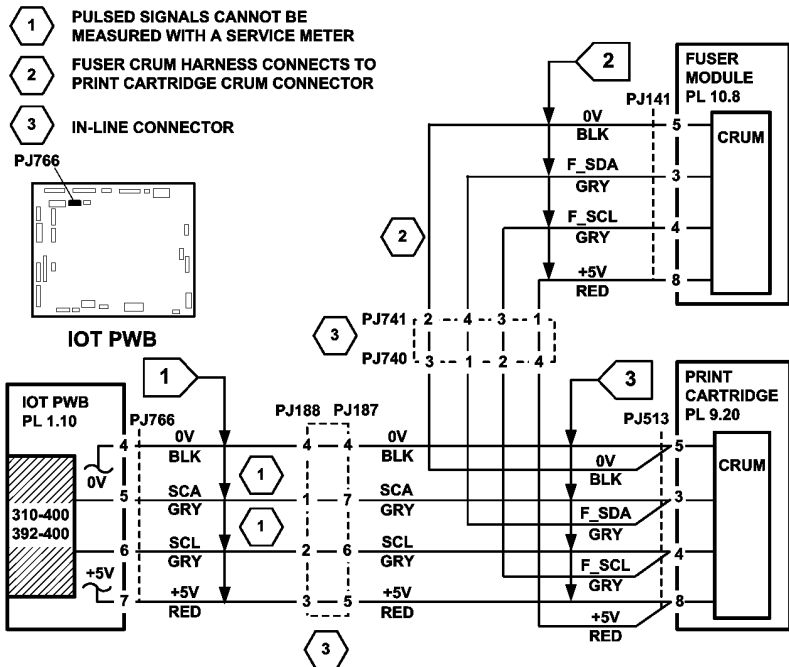


Figure 3 Circuit diagram

TX-1-0275-A

310-702-00 Offset Motor Fault RAP

310-702-00 The offset shuttle failed to return to the home position.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the inverter assembly, [PL 10.10 Item 1](#), and centre output tray, [PL 28.10 Item 9](#) for obstructions.

Procedure

Enter [dC330](#) code 010-300, offset sensor, Q10-300. Move the offset shuttle slowly backwards and forwards, [Figure 1](#). The display changes.

Y N

Go to [Flag 1](#). Check Q10-300.

Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J791, IOT PWB](#).
- [301E +5V and +5VSB Distribution RAP](#).
- [301B 0V Distribution RAP](#).

If necessary, install a new offset sensor, [PL 10.11 Item 8](#).

If the fault persists, perform [OF7 IOT PWB Diagnostics RAP](#).

Remove the centre output tray, [REP 10.9](#). Enter [dC330](#) code 010-500, offset motor forward or code 010-501, offset motor reverse, MOT10-500, [Figure 2](#). The motor operates.

Y N

Go to [Flag 2](#). Check MOT10-500.

Refer to:

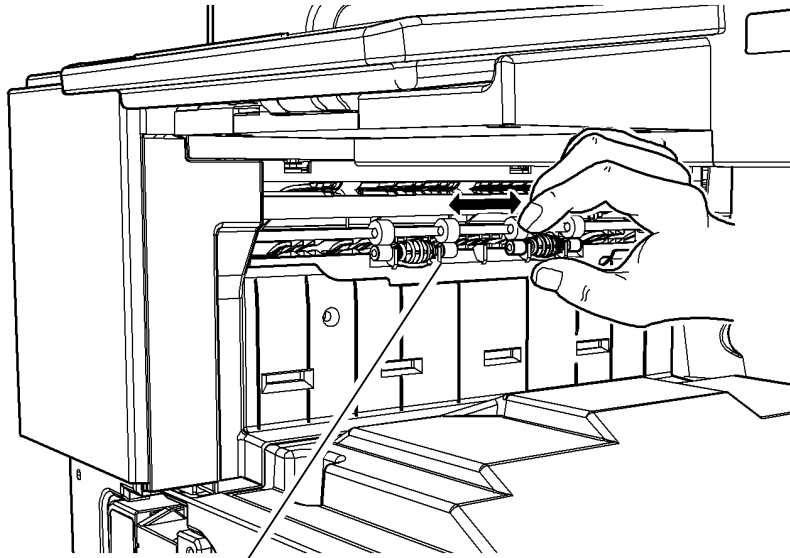
- [GP 10](#), How to Check a Motor.
- [P/J791, IOT PWB](#).

If necessary, install a new offset motor, [PL 10.11 Item 14](#).

If the fault persists, perform [OF7 IOT PWB Diagnostics RAP](#).

Refer to [GP 7](#). Check the components that follow:

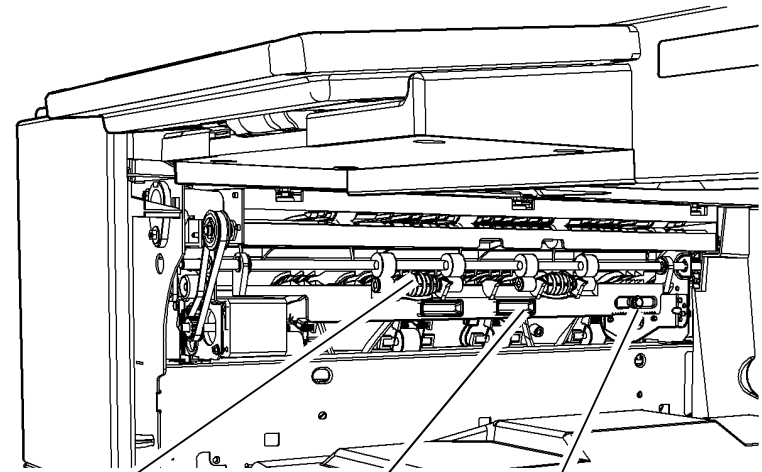
- Check for an incorrect mesh between the offset motor pinion, [PL 10.11 Item 14](#) and the shuttle rack teeth, [PL 10.11 Item 22](#). Loosen the two screws securing the offset motor bracket, [PL 10.11 Item 15](#) to the exit guide housing, [PL 10.11 Item 2](#). Move the motor bracket up as far as possible, then re-tighten the screws.
- Offset shuttle, [PL 10.11 Item 22](#).
- Inverter assembly, [PL 10.10 Item 1](#).



Offset shuttle and rolls.

X-1-1117-A

Figure 1 Component location



Offset shuttle.

Offset sensor, Q10-300.

Offset motor, MOT10-500.

X-1-1118-A

Figure 2 Component location

310A Centre Output Tray Poor Stacking RAP

Use this RAP to identify the cause of poor stacking in the centre output tray.

Procedure

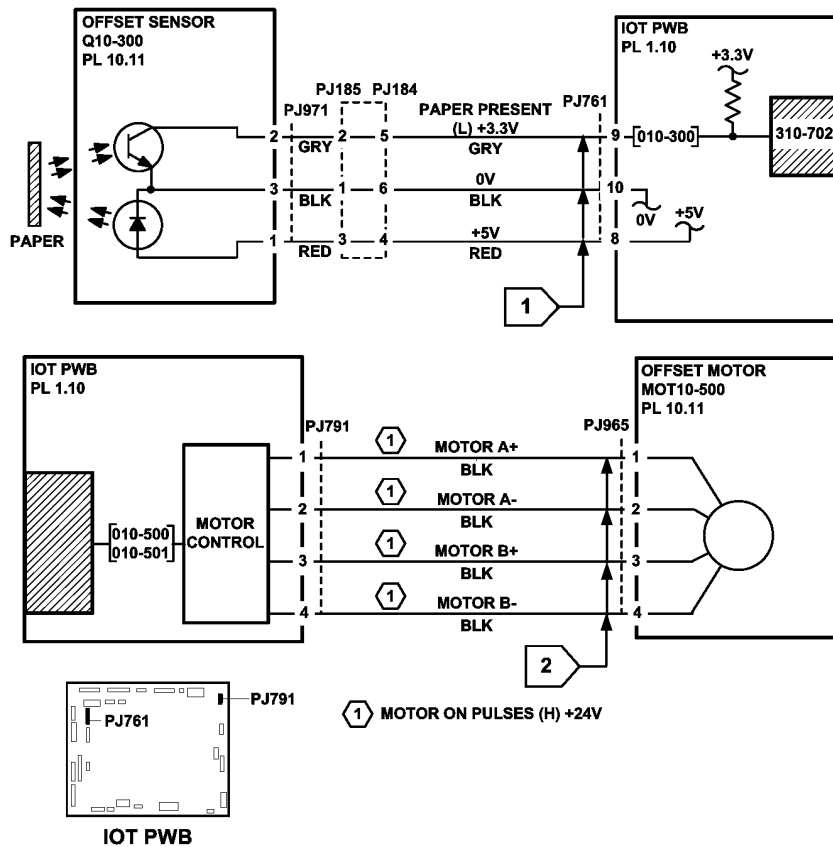


WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- Ensure that all paper or other copy stock being used is within the size and weight specifications. Refer to [GP 20](#) Paper and Media Size Specifications.
- Ensure that the edge guides of all paper trays are adjusted correctly for the paper size and that the trays are fully closed.
- Ensure that the paper stack in each paper tray has been fanned.
- Turn over the paper stack in each paper tray.
- Use a new ream of paper, if available.
- Check the output copies/prints for curl. Refer to the [IQ5 Print Damage RAP](#).
- Check the offset motor, [PL 10.11 Item 14](#). Refer to [310-702-00 Offset Motor Fault RAP](#).
- Check the inverter assembly, [PL 10.10 Item 1](#) for wear or damage.
- Check the bail arm assembly, [PL 10.11 Item 25](#) for wear or damage.
- Check the bail arm assembly, [PL 10.11 Item 25](#) is installed correctly with the Mylar towards the paper.



TX-1-0286-A

Figure 3 Circuit diagram

312-024-00-110, 312-025-00-110 Paddle Roll Failure RAP

312-024-00-110 The paddle shaft failed to return to the home position within the required time.

312-025-00-110 The paddle shaft failed to leave the home position within the required time.

Remote Service Actions

Ask the customer to check the items that follow:

- That there is no paper or other obstructions in the vicinity of the paddles.
- That the paper type is set correctly. If heavyweight paper is used but not set in the UI, the compiler capacity can be exceeded. Refer to [312H-110 Mis-Registration in Stapled Sets and Non-stapled Sets RAP](#).

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

Perform the checks that follow:

- The paddle home sensor bracket is holding the sensor in the correct position, i.e. the flag is in the middle of the sensor gap and the sensor does not touch any moving components.
- The position of the paddles. With the paddle shaft in the home position both sets of paddles must be within the output cover. If they are not, perform [REP 12.12-110 Paddle Shaft Assembly](#). If any paddles are out of alignment to other paddles, install a new set of 4 paddles, [PL 12.25 Item 3](#).
- The 2K LCSS PWB DIP switch settings. Refer to the [312F-110 2K LCSS PWB DIP Switch Settings RAP](#).

Procedure

NOTE: All 2K LCSS interlocks must be made to supply +24V to the motors.

Enter [dC330](#) code 012-238 paddle roll motor run, MOT12-238, [Figure 1](#). The paddle rotates correctly.

Y N

Go to [Flag 2](#). Check MOT12-238.

Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J310, 2K LCSS PWB](#).
- [312D-110 2K LCSS Power Distribution RAP](#).

Install new components as necessary:

- Paddle roll motor assembly, [PL 12.25 Item 10](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

A

Add the code 012-186 paddle home sensor, Q12-186. The display cycles high/low.

Y N

Go to [Flag 1](#). Check Q12-186.

Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J314, 2K LCSS PWB](#).
- [Figure 1](#), Component location.
- [312D-110 2K LCSS Power Distribution RAP](#).

Install new components as necessary:

- Paddle roll home sensor, [PL 12.25 Item 11](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Perform [SCP 5](#) Final Actions.

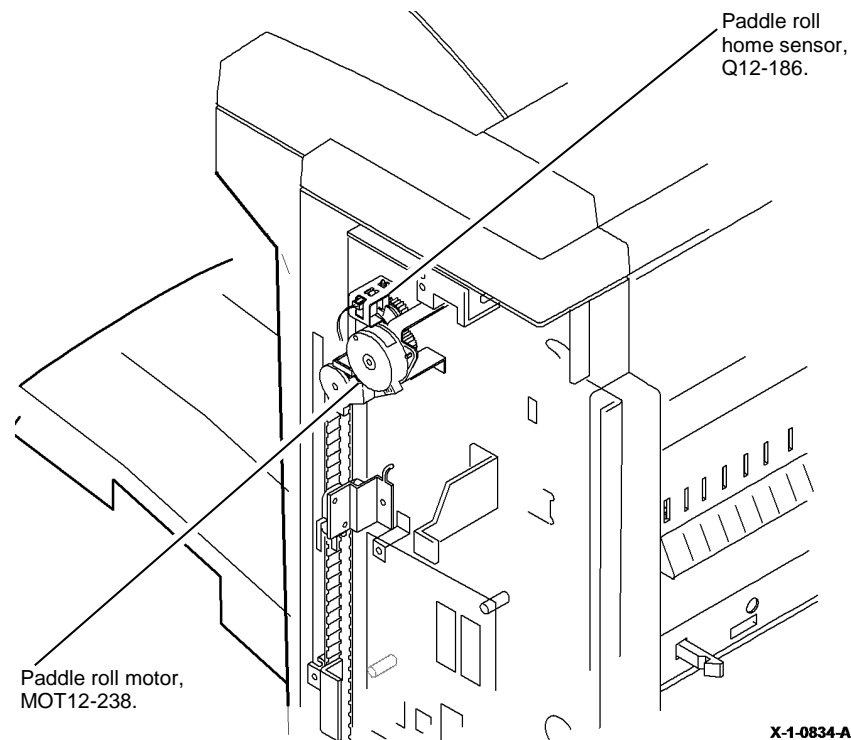


Figure 1 Component location

A

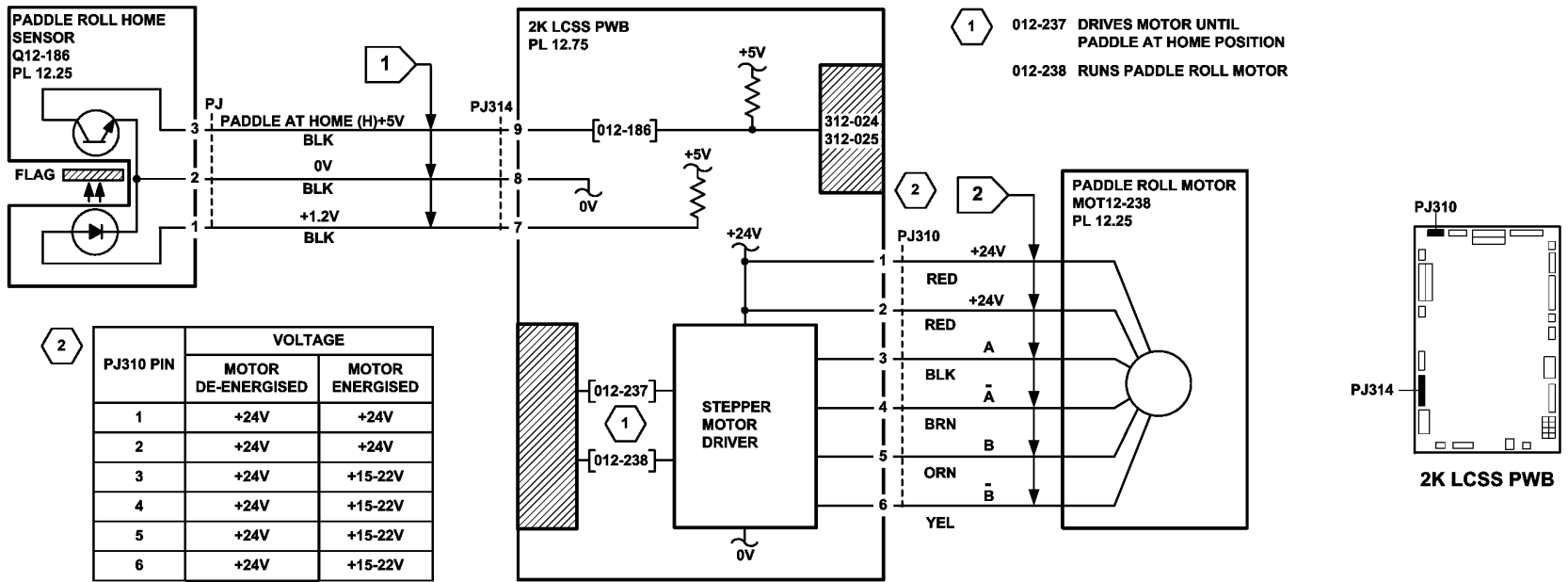


Figure 2 Circuit diagram

TX-1-0068-A

312-043-00-110, 312-046-00-110 Hole Punch Operation Failure RAP

312-043-00-110 The hole punch failed to leave the home position within the required time.

312-046-00-110 The hole punch failed to return to the home position within the required time.

Remote Service Actions

Ask the customer to check the items that follow:

- Check that the hole punch is present and correctly installed.
- Check that the punch has not jammed in the down position. This can occur with transparencies and labels. If the customer is not able to clear the punch, a site visit will be necessary.

NOTE: The home position of the punch unit is when the cut-out in the actuator is between the punch head home sensor jaws.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

Check the 2K LCSS PWB DIP switch settings. Refer to the [312F-110](#) 2K LCSS PWB DIP Switch Settings RAP.

Procedure

Go to [Flag 5](#). Check the link between [P/J307](#) pins 10 and 11 on the [2K LCSS PWB](#). The link is good.

Y N

Repair the wiring or connector as necessary. Refer to [REP 1.2](#).

Enter [dC330](#) code 012-195 punch head present sensor, Q12-195, [Figure 1](#). Actuate Q12-195. The display changes.

Y N

Go to [Flag 2](#). Check Q12-195.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J307, 2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Punch head present sensor, [PL 12.20 Item 1](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

A

Enter [dC330](#) code 012-194 punch head home sensor, Q12-194. Actuate Q12-194. The display changes.

Y N

Go to [Flag 1](#). Check Q12-194.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J307, 2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Punch head home sensor, [PL 12.20 Item 1](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Enter [dC330](#) code 012-244, punch head run. The punch cycles.

Y N

Go to [Flag 3](#). Check the hole punch motor, MOT12-243.

Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J311, 2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Punch head motor assembly, [PL 12.20 Item 2](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

NOTE: The chad bin collects the pieces of paper cut out by the hole punch. The chad bin level sensor will not operate if the tray is incorrectly installed. Ensure the chad bin is fully inserted and the lever engages in the slot.

Enter [dC330](#) code 012-193, chad bin level sensor, Q12-193, [Figure 2](#). Use a piece of paper to actuate Q12-193. The display changes.

Y N

Go to [Flag 4](#). Check Q12-193.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J307, 2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

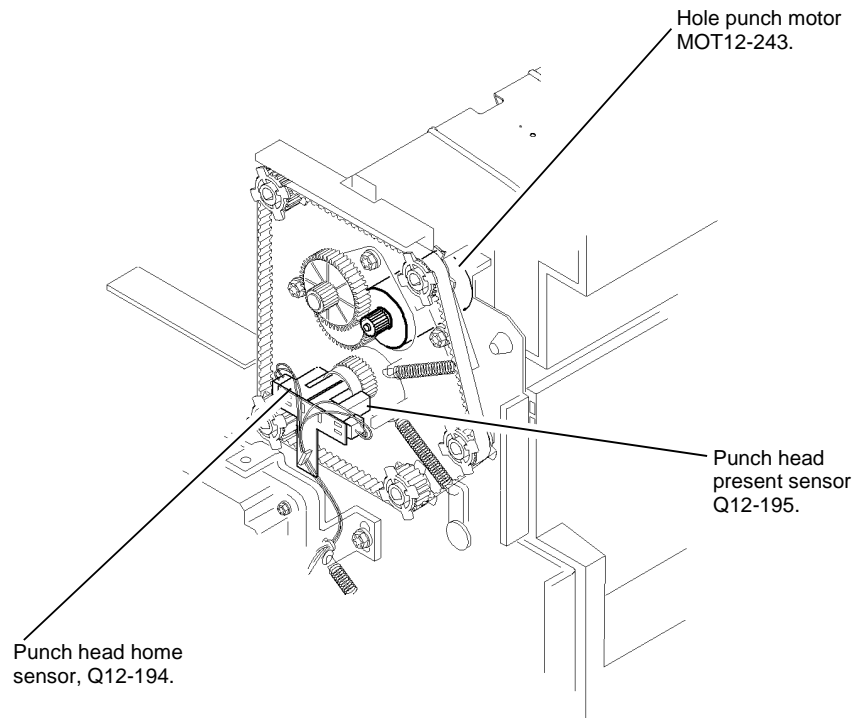
Install new components as necessary:

- Chad bin level sensor, [PL 12.20 Item 7](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

At a customer site with more than one type of Xerox device, it is possible that chad bins may have been inadvertently swapped. Refer to [Figure 3](#), ensure that the correct type of chad bin is installed.

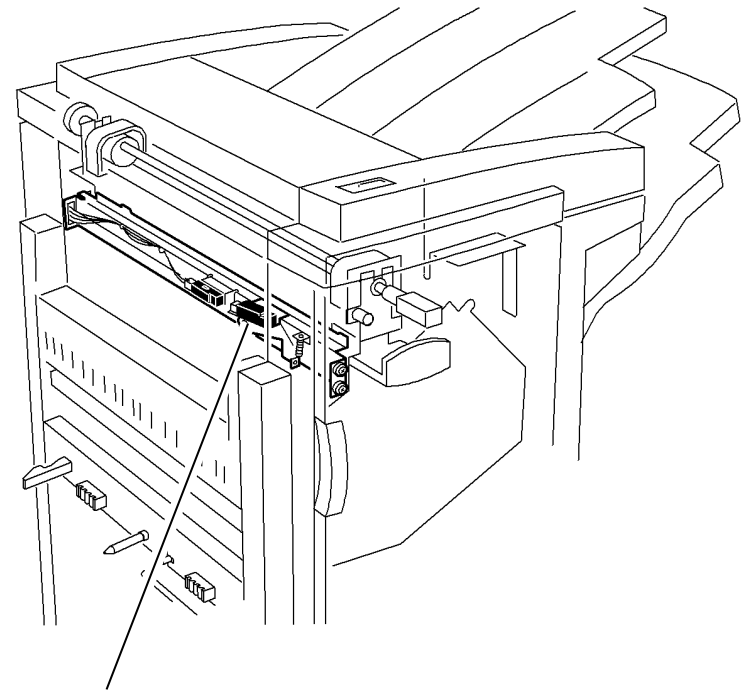
Perform [SCP 5](#) Final Actions.

A



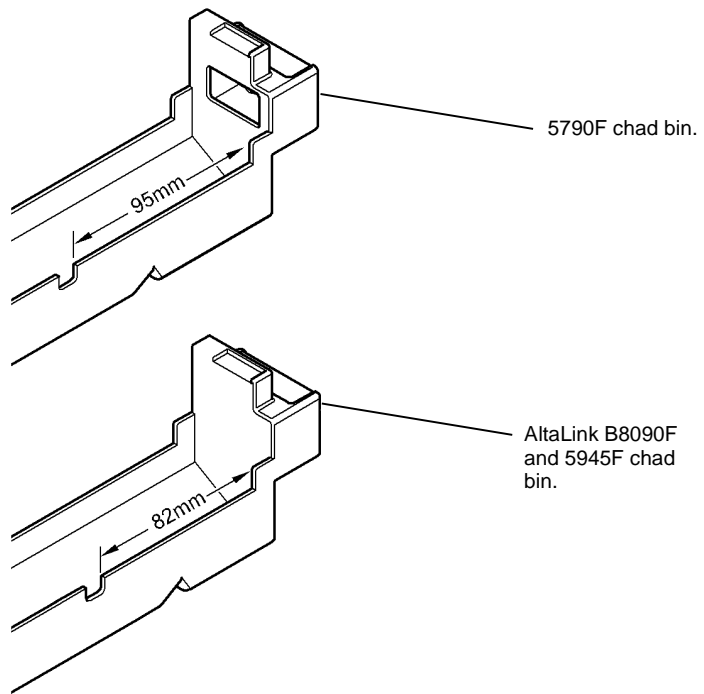
X-1-0835-A

Figure 1 Component location



X-1-0836-A

Figure 2 Component location



X-1-1423-A

Figure 3 Chad bin differences

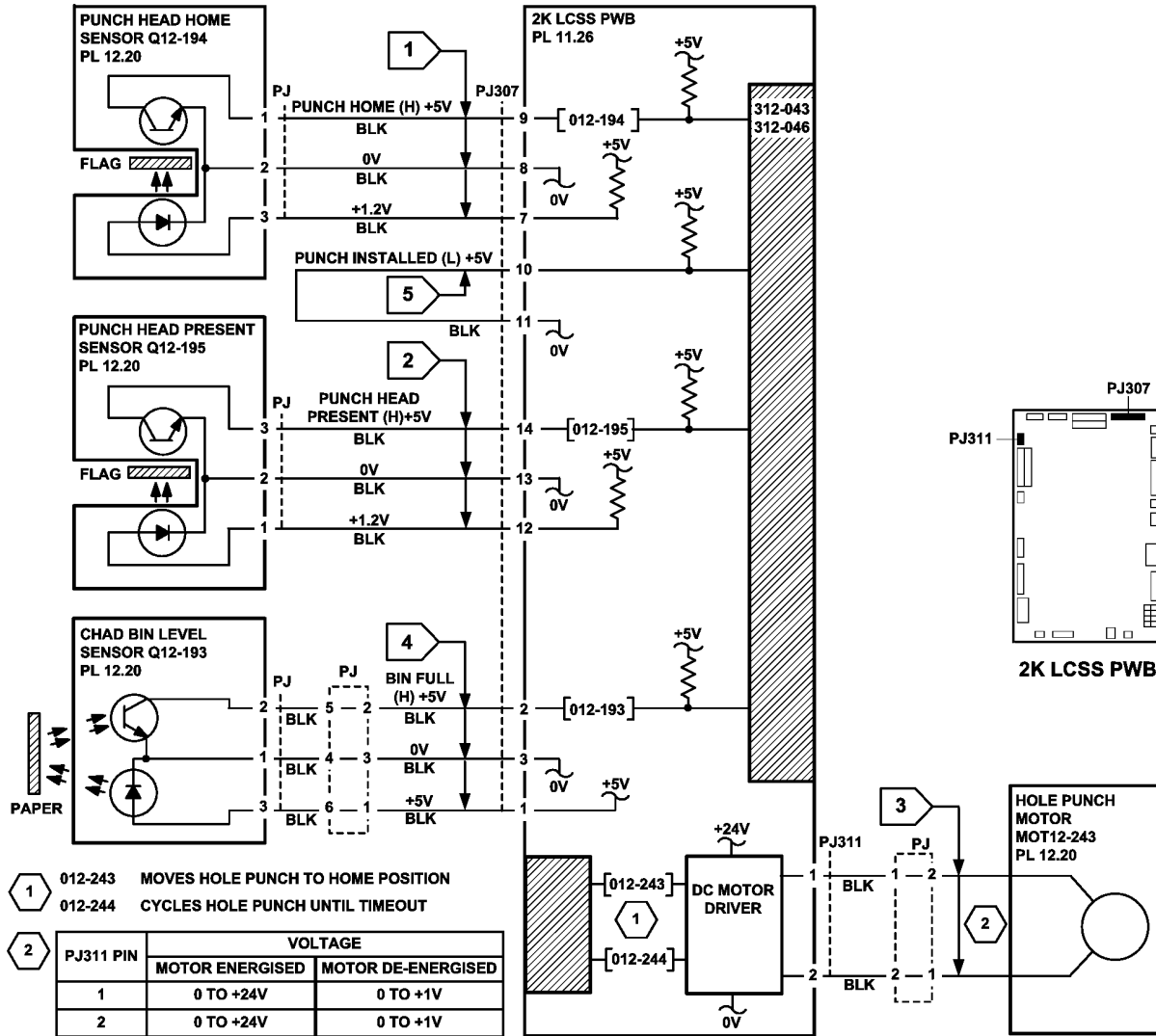


Figure 4 Circuit diagram

TX-1-0069-A

312-125-00-110, 312-126-00-110, 312-199-00-110 Paper Entry Jam RAP

312-125-00-110 The lead edge of the sheet was late to the finisher entry sensor.

312-126-00-110 The trail edge of the sheet was late from the finisher entry sensor.

312-199-00-110 The entry sensor detected paper at the start of a job or during a job without the finisher first receiving a paper at IOT exit sensor command.

Remote Service Actions

Ask the customer to check the items that follow:

- That the paper tray guides are set to the correct position for the size of paper in the tray.
- Horizontal transport assembly, [PL 10.15 Item 1](#), for obstructions.

If the fault code is 312-199-00, ask the customer to switch off then switch on the machine. If the fault continues a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.



CAUTION

Do not connect the output device power cord directly to the AC wall outlet. The output device cannot operate without the machine. The machine controls the distribution of electricity to the output device for correct power on and power off sequencing.

Check the items that follow:

- 2K LCSS PWB DIP switch settings. Refer to the [312F-110](#) 2K LCSS PWB DIP Switch Settings RAP.
- The jam clearance guide assembly, [PL 12.40 Item 8](#) for damage or wear that could cause paper to jam.
- [ADJ 12.2-110](#) Machine to 2K LCSS Alignment.
- Feeding performance from a paper tray loaded with a new ream of paper.

Procedure

Lower the paper entry guide assembly, [PL 12.40 Item 8](#), to access the entry sensor. Enter [dC330](#) code 012-077. Actuate the entry sensor, Q12-077, [Figure 1](#). The display changes.

Y N
Go to [Flag 1](#). Check Q12-077.

Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J304, 2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Entry sensor, [PL 12.70 Item 3](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Check the operation of the horizontal transport assembly, [PL 10.15 Item 1](#). Refer to [310-171-00](#) Trail Edge Late from Horizontal Transport Entry Sensor RAP.

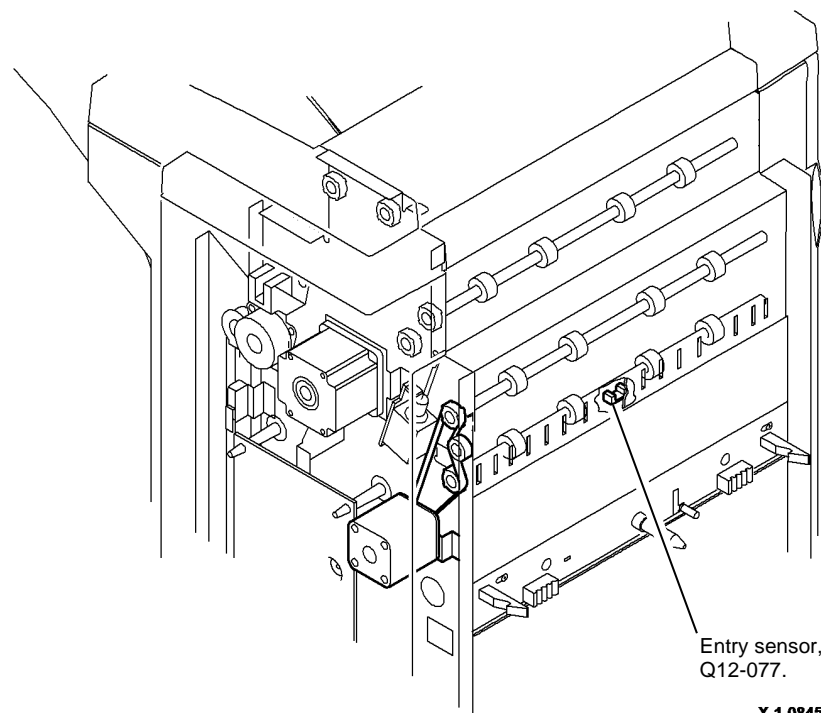
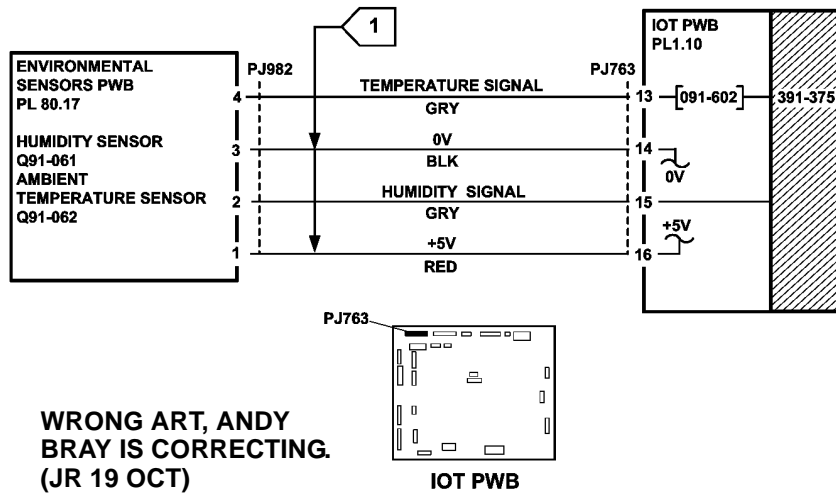


Figure 1 Component location

A



WRONG ART, ANDY BRAY IS CORRECTING. (JR 19 OCT)

Figure 2 Circuit diagram

312-127-00-110 Sheet Late to Hole Punch RAP

312-127-00-110 The lead edge of the paper failed to actuate the punch sensor from the entry sensor.

Remote Service Actions

Ask the customer to check the items that follow:

- Ensure the paper tray guides are set to the correct position for the size of paper in the tray.
- For a paper jam at the entrance to the 2K LCSS, check that there is no obstruction that would prevent a sheet from arriving in position for punching. Refer to the 312G-110 Copy Damage in the 2K LCSS RAP.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

Perform the checks that follow:

- The 2K LCSS PWB DIP switch settings. Refer to the 312F-110 2K LCSS PWB DIP Switch Settings RAP.
- The punch sensor 1 for chad debris, Figure 1.

Procedure

Enter dC330 code 012-078, punch sensor 1, Q12-078, Figure 1. Actuate Q12-078. The display changes.

Y N

Go to Flag 1. Check Q12-078.

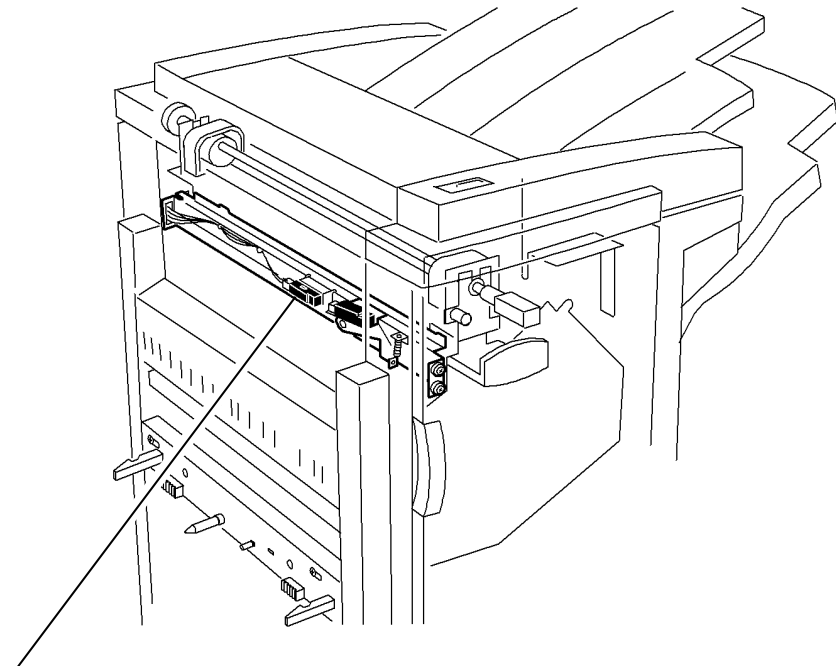
Refer to:

- GP 11, How to Check a Sensor.
- P/J307, 2K LCSS PWB.
- 312D-110 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Punch sensor 1, PL 12.20 Item 7.
- 2K LCSS PWB, PL 12.75 Item 1.

Perform SCP 5 Final Actions.



Punch sensor 1, Q12-078.

Figure 1 Component location

X-1-0837-A

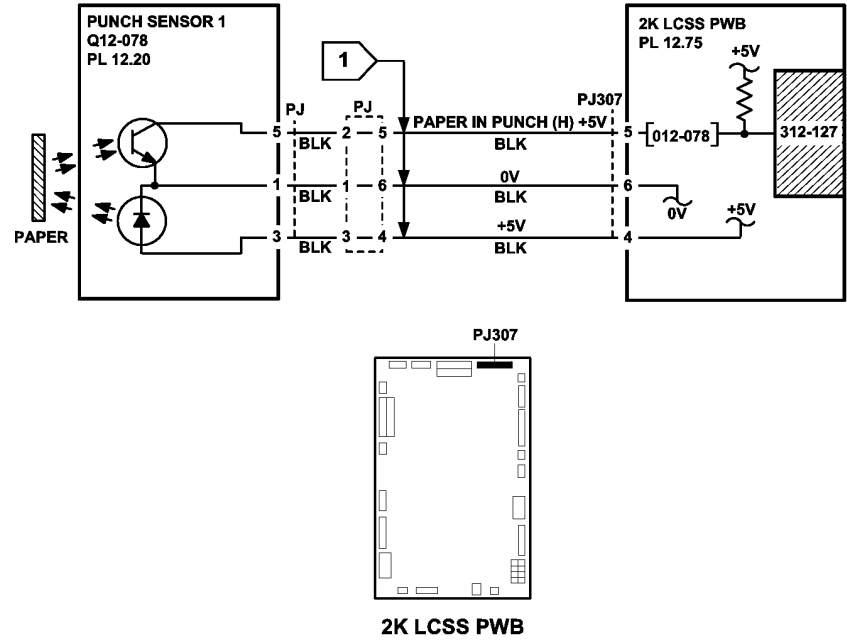


Figure 2 Circuit diagram

TX-1-0070-A

312-151-00-110, 312-152-00-110 Sheet Late to Bin 1 RAP

312-151-00-110 The compile exit sensor was not deactuated within a specified time.

312-152-00-110 The compile exit sensor was not actuated within a specified time.

Remote Service Actions

Ask the customer to check the items that follow:

- Ensure the paper tray guides are set to the correct position for the size of paper in all trays.
- A paper jam in the path to bin 1, to the compiler, and for poor stacking on bin 1.
- Ensure that the 2K LCSS is fully latched to the machine. Refer to [REP 12.13-110](#).
- Torn paper fragments from a previous jam clearance action.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

NOTE: Paper is diverted to bin 0 when the diverter gate solenoid is energized. Paper is fed to bin 1 when the diverter gate solenoid is de-energized.

Perform the checks that follow:

- 2K LCSS PWB DIP switch settings. Refer to the [312F-110](#) 2K LCSS PWB DIP Switch Settings RAP.
- The tensioner on the intermediate paper drive belt, [PL 12.60 Item 4](#). Check that the tensioner is free to move and that the tensioner pulley is free to rotate. If necessary re-lubricate the tensioner arm and tensioner pulley. Refer to [GP 18](#) Machine Lubrication.
- That the drive pulleys on both transport motor 1 and 2 are secure and do not slip on the motor shaft.
- All the transport drive belts are correctly fitted, are in a good condition and correctly tensioned. Refer to [ADJ 12.3-110](#).
- All the transport rolls and idler pulleys are free to rotate.
- The diverter gate and linkage for free movement.

Procedure

NOTE: All 2K LCSS interlocks must be made to supply +24V to the motors.

Enter [dC330](#) code 012-224 to run the transport motor 2, MOT12-224, [Figure 1](#). The motor runs.

Y N

Go to [Flag 3](#). Check MOT12-224.

A

A

Refer to:

- [GP 10](#), How to check a motor.
- [P/J309, 2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Transport motor 2, [PL 12.60 Item 5](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Enter [dC330](#) code 012-225 to energize the exit diverter solenoid, SOL12-225. The solenoid energizes.

Y N

Go to [Flag 4](#). Check SOL12-225.

Refer to:

- [GP 12](#), How to Check a Solenoid or Clutch.
- [P/J306, 2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Exit diverter solenoid, [PL 12.60 Item 12](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Enter [dC330](#) code 012-106, compiler exit sensor, Q12-106. Actuate Q12-106. The display changes.

Y N

Go to [Flag 1](#). Check Q12-106.

Refer to:

- [GP 11](#), How to Check a sensor.
- [P/J313, 2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Compiler exit sensor, [PL 12.65 Item 4](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Enter [dC330](#), code 012-223 to run the transport motor 1, MOT12-223. The motor runs.

Y N

Go to [Flag 2](#). Check MOT12-223.

Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J305, 2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Transport motor 1, [PL 12.40 Item 2](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

If the fault persists, perform the procedures that follow:

- [312-396-00-110, 312-397-00-110, 312-398-00-110](#) Rear Tamper Move Failure RAP
- [312G-110](#) Copy Damage in the 2K LCSS RAP

- 312H-110 Mis-Registration in Stapled Sets and Non-Stapled Sets RAP.

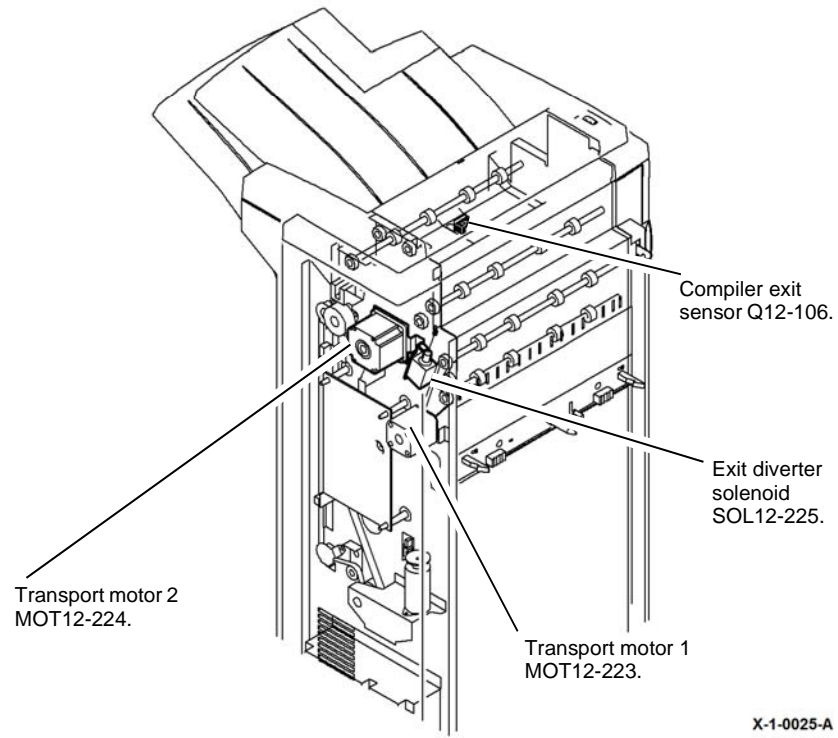


Figure 1 Component location

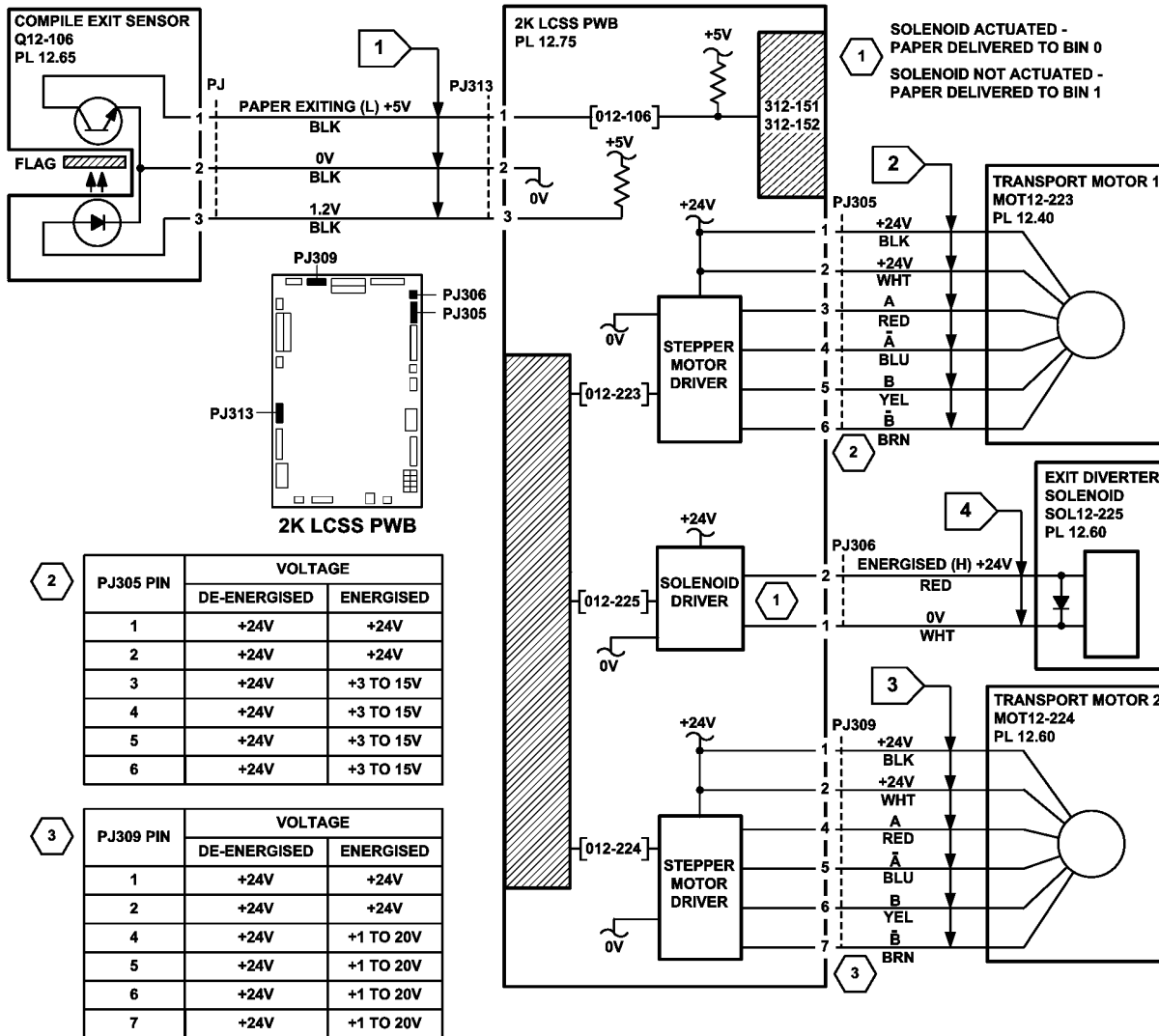


Figure 2 Circuit diagram

TX-1-0072-A

312-171-00-110, 312-172-00-110 Paper Exiting to Bin 0 RAP

312-171-00-110 The top exit sensor was not actuated within a specified time.

312-172-00-110 The top exit sensor is not deactuated within a specified time.

Remote Service Actions

Ask the customer to check the items that follow:

- Ensure the paper tray guides are set to the correct position for the size of paper in the tray
- A paper jam in the path to bin 0.
- Torn paper fragments from a previous jam clearance action.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

Perform the checks that follow:

- 2K LCSS PWB DIP switch settings. Refer to the [312F-110](#) 2K LCSS PWB DIP Switch Settings RAP.
- The tensioner on the intermediate paper drive belt, [PL 12.60 Item 4](#). Check that the tensioner is free to move and that the tensioner pulley is free to rotate. If necessary re-lubricate the tensioner arm and tensioner pulley. Refer to [GP 18](#) Machine Lubrication.

NOTE: The tensioner arm and the tensioner pulley require different lubricants, refer to [REP 12.3-110](#).

- The drive pulleys on both transport motor 1 and 2 are secure and do not slip on the motor shaft.
- All the transport drive belts are correctly fitted and are in a good condition.
- All the transport rolls and idler pulleys are free to rotate.
- The diverter gate and linkage for free movement.
- A paper jam in the path to the top tray. If the jams occur shortly after install. Check the gap between the entry guide cover, [PL 12.70 Item 5](#) and the paper guide [PL 12.60 Item 10](#). If the gap is less than 1mm, adjust or install a new entry guide cover. Refer to the replacement procedure in [REP 12.15-110](#).

NOTE: Paper is diverted to bin 0 when the diverter gate solenoid is energized. Paper is fed to bin 1 when the diverter gate solenoid is de-energized.

Procedure

NOTE: All 2K LCSS interlocks must be made to supply +24V to the motors.

Enter [dC330](#) code 012-224 to run transport motor 2, MOT12-224, [Figure 1](#). The motor runs.

Y N

Go to [Flag 3](#). Check MOT12-224.

Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J309](#), [2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Transport motor 2, [PL 12.60 Item 5](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Enter [dC330](#) code 012-225 to energize the exit diverter solenoid, SOL12-225. The solenoid energizes.

Y N

Go to [Flag 2](#). Check SOL12-225.

Refer to:

- [GP 12](#), How to Check a Solenoid.
- [P/J306](#), [2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Exit diverter solenoid, [PL 12.60 Item 12](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Enter [dC330](#) code 012-107, top tray exit sensor, Q12-107. Actuate Q12-107. The display changes.

Y N

Go to [Flag 1](#). Check Q12-107.

Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J313](#), [2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Top tray exit sensor, [PL 12.60 Item 11](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Enter [dC330](#) code 012-223 to run the transport motor 1, MOT12-223. The motor runs.

Y N

Go to [Flag 4](#). Check MOT12-223.

Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J305](#), [2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

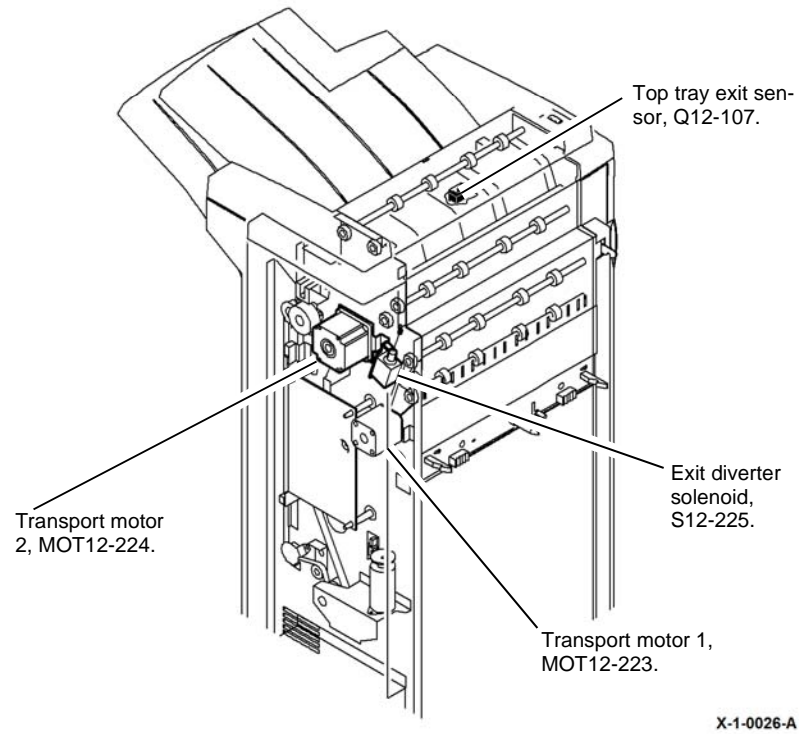
Install new components as necessary:

- Transport motor 1, [PL 12.40 Item 2](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

If the fault persists, perform the procedures that follow:

- [312-396-00-110](#), [312-397-00-110](#), [312-398-00-110](#) Rear Tamper Move Failure RAP

- 312G-110 Copy Damage in the 2K LCSS RAP
- 312H-110 Mis-Registration in Stapled Sets and Non-Stapled Sets RAP.



X-1-0026-A

Figure 1 Component location

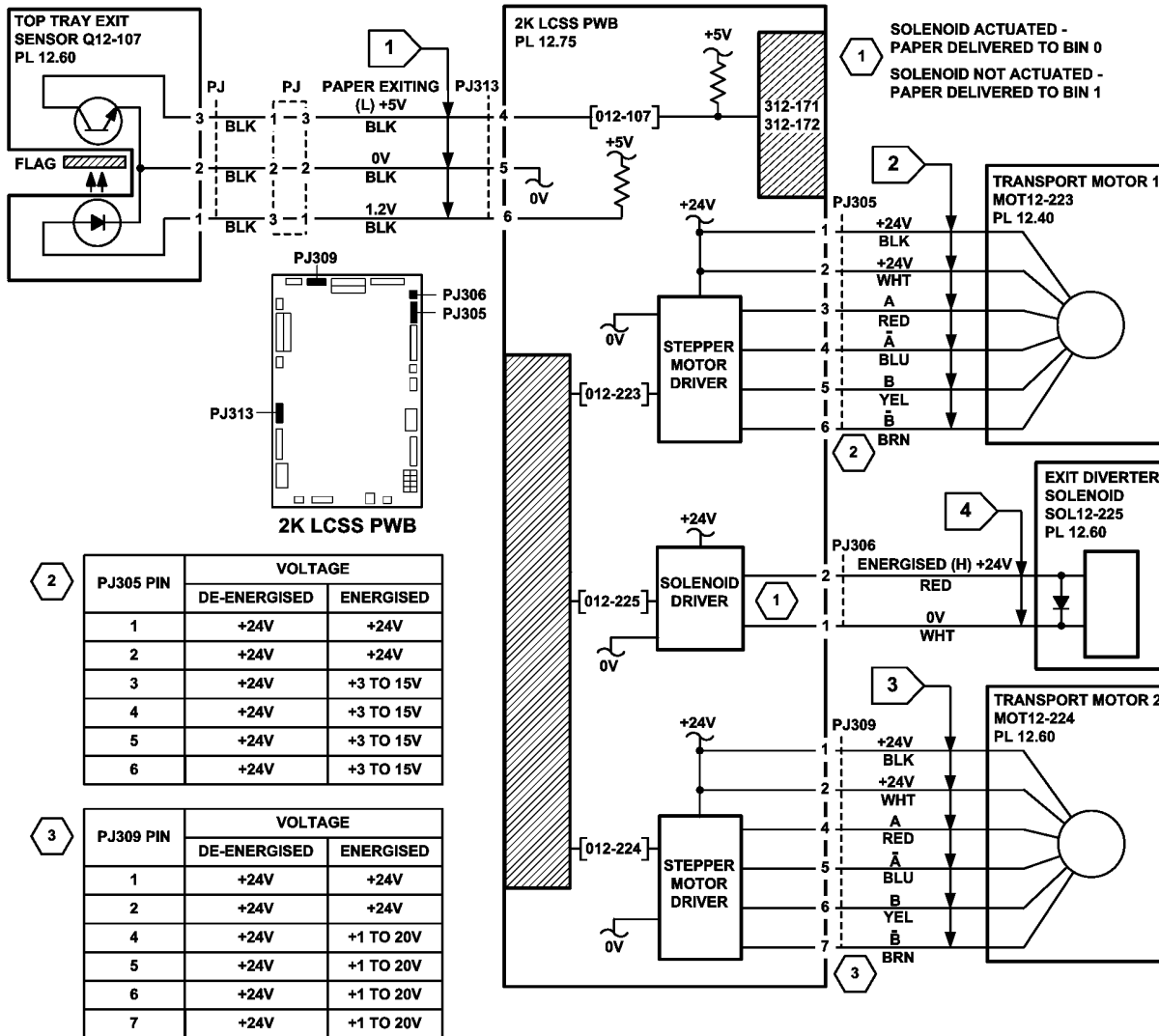


Figure 2 Circuit diagram

TX-1-0071-A

312-198-00-110 Finisher Stray Sheet Detected RAP

312-198-00-110 A stray sheet was detected in the finisher after jam clearance.

Remote Service Actions

Ask the customer to check the paper path in the 2K LCSS. Clear the paper path of any jams or paper debris.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Lower the paper entry guide assembly to access the entry sensor, Q12-077, [Figure 1](#). Enter [dC330](#), code 012-077. Actuate Q12-077. The display changes.

Y **N**
Go to [Flag 1](#). Check Q12-077.
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J304](#), [2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Repair or install new components as necessary:

- Entry sensor, [PL 12.70](#) [Item 3](#).
- 2K LCSS PWB, [PL 12.75](#) [Item 1](#).

Enter [dC330](#), code 012-078, punch sensor 1, Q12-078, [Figure 2](#). Actuate Q12-078. The display changes.

Y **N**
Go to [Flag 2](#). Check Q12-078.
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J307](#), [2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Repair or install new components as necessary:

- Punch sensor 1, [PL 12.330](#) [Item 7](#).
- 2K LCSS PWB, [PL 12.75](#) [Item 1](#).

Enter [dC330](#), code 012-107, top tray exit sensor, Q12-107, [Figure 3](#). Actuate Q12-107. The display changes.

Y **N**
Go to [Flag 3](#). Check Q12-107.
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J313](#), [2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Repair or install new components as necessary:

- Top tray exit sensor, [PL 12.60](#) [Item 11](#).
- 2K LCSS PWB, [PL 12.75](#) [Item 1](#).

Enter [dC330](#), code 012-106, compiler exit sensor, Q12-106, [Figure 4](#). Actuate Q12-106. The display changes.

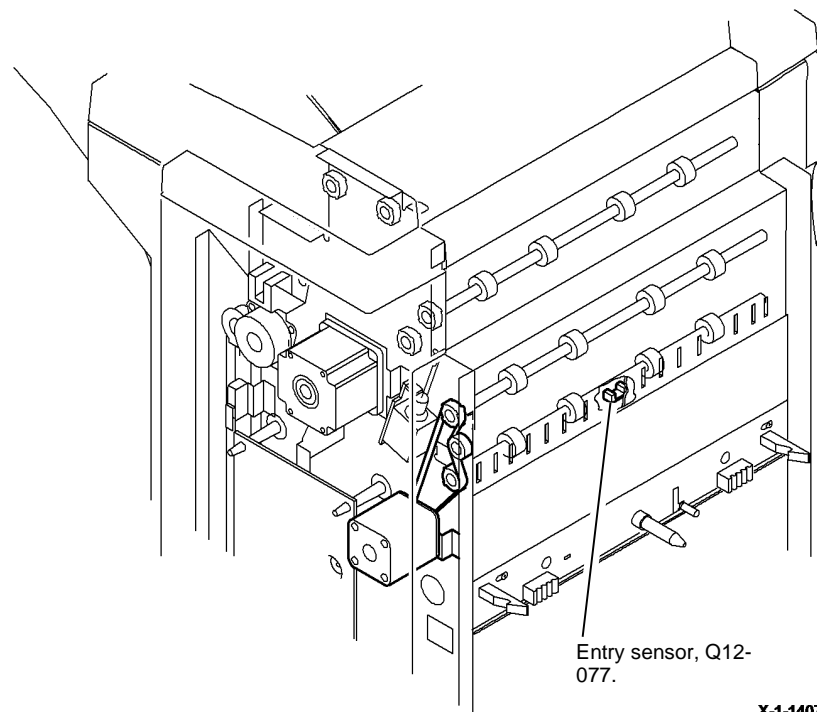
Y **N**
Go to [Flag 4](#). Check Q12-106.
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J313](#), [2K LCSS PWB](#).
- [312D-110](#) 2k LCSS Power Distribution RAP.

Repair or install new components as necessary:

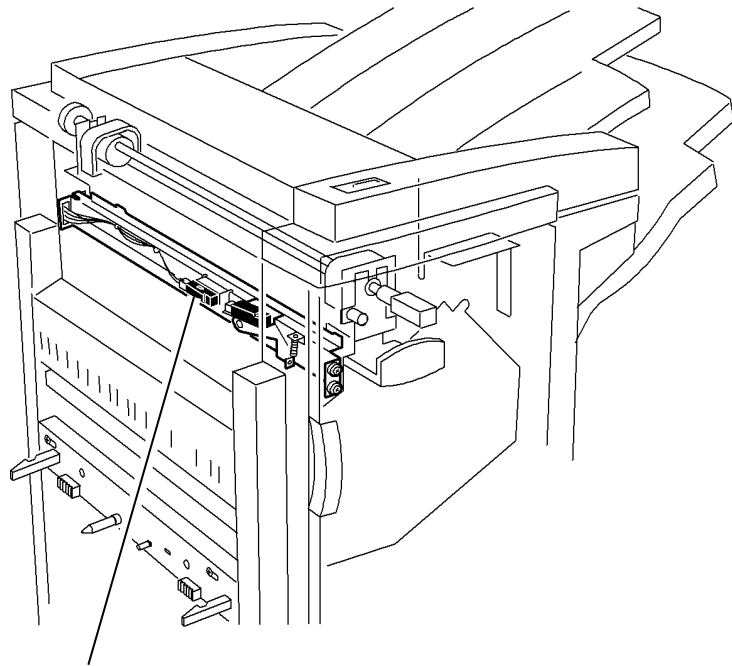
- Compiler exit sensor, [PL 12.65](#) [Item 4](#).
- 2K LCSS PWB, [PL 12.75](#) [Item 1](#).

Perform [SCP 5](#) Final Actions.



X-1-1407-A

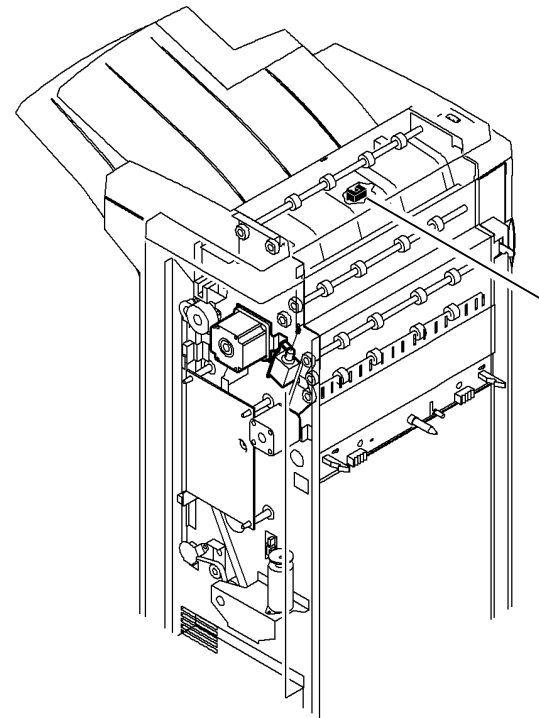
Figure 1 Component location



Punch sensor 1, Q12-078.

X-1-1408-A

Figure 2 Component location



Top tray exit sensor, Q12-107.

X-1-1409-A

Figure 3 Component location

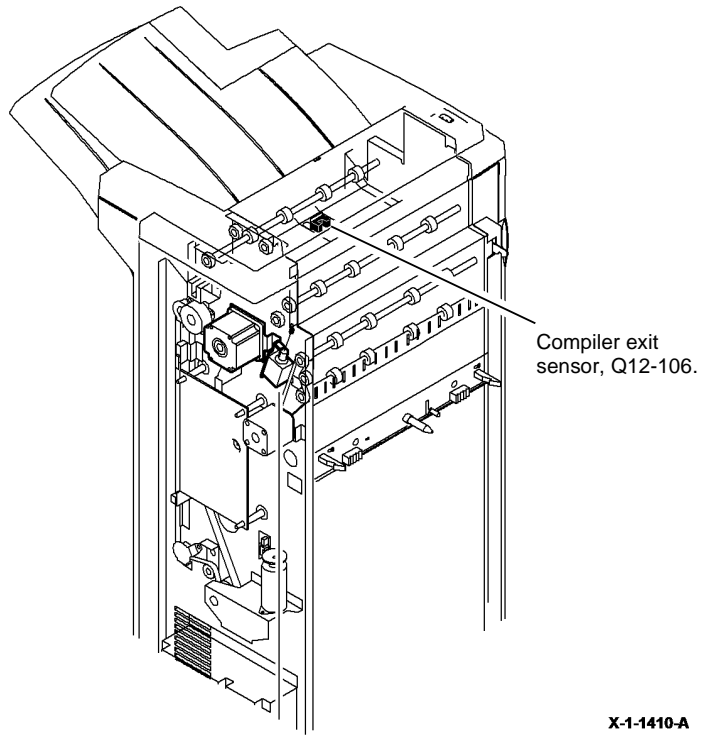


Figure 4 Component location

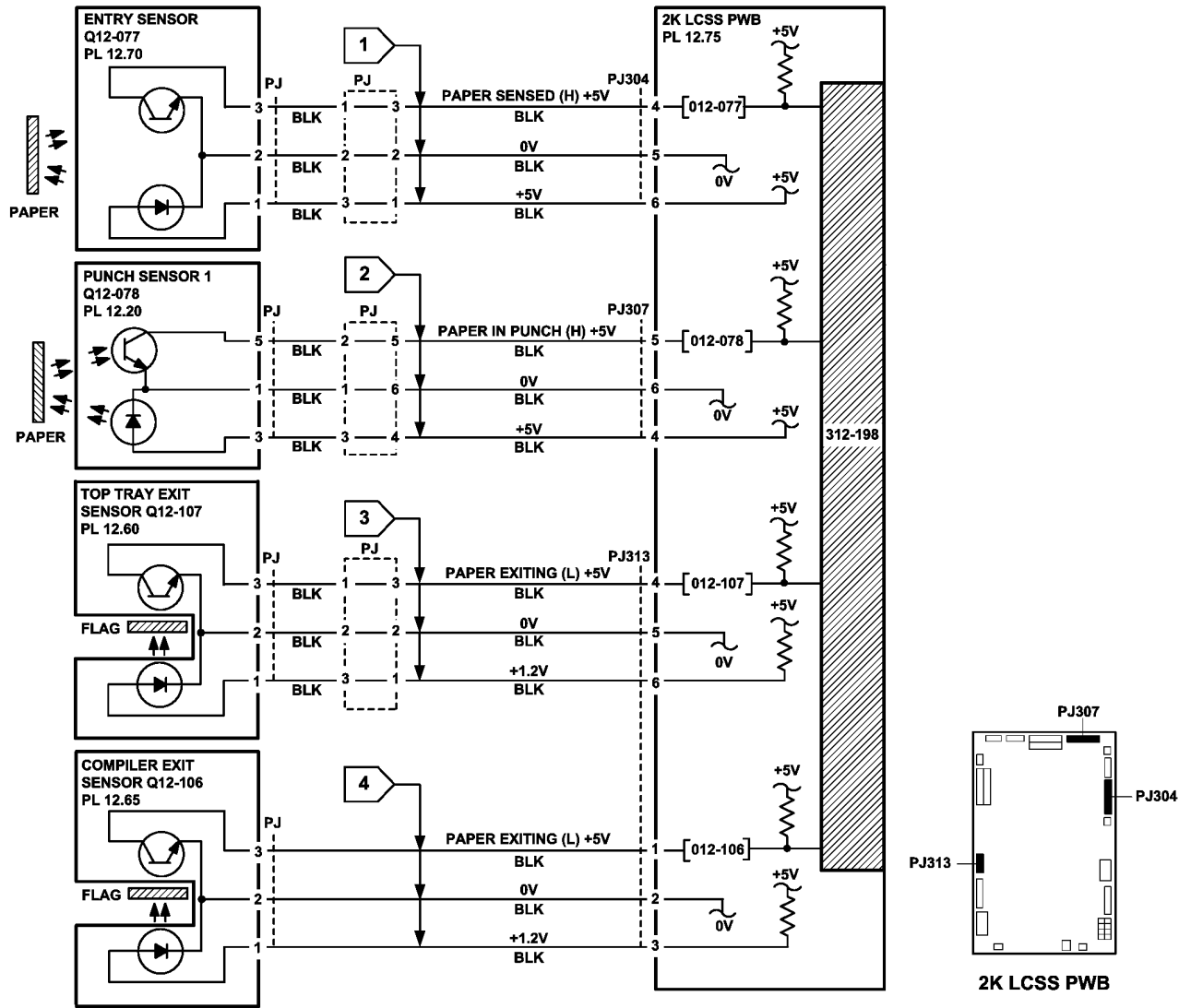


Figure 5 Circuit diagram

TX-1-0326-A

312-312-00-110, 312-313-00-110 Interlocks RAP

312-312-00-110 The top cover interlock was open during run mode.

312-313-00-110 The front door interlock was open during run mode.

Remote Service Actions

Ask the customer to perform the checks that follow:

- The 2K LCSS front door is closed.
- The 2K LCSS top cover is closed.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

Check the 2K LCSS PWB DIP switch settings. Refer to the 312F-110 2K LCSS PWB DIP Switch Settings RAP.

Procedure

Go to Flag 1. Check for +24V on P/J302 pin 1. If the voltage is not present, perform the 312D-110 2K LCSS Power Distribution RAP.

Go to the appropriate procedure:

- 312-312-00-110 Top Cover Interlock Checkout.
- 312-313-00-110 Front Door Interlock Checkout.

312-312-00-110 Top Cover Interlock Checkout

Procedure

Enter dC330 code 012-197, top cover interlock switch, S12-197, Figure 1. Actuate S12-197.

The display changes.

Y N

Go to Flag 2. Check S12-197.

Refer to:

- GP 13, How to Check a switch.
- P/J315, 2K LCSS PWB.

Install new components as necessary:

- Top cover interlock switch S12-197, PL 12.75 Item 6.
- 2K LCSS PWB, PL 12.75 Item 1.

Check the actuator on the inside of the exit cover, if necessary install a new exit cover, PL 12.10 Item 1.

312-313-00-110 Front Door Interlock Checkout

Procedure

Enter dC330 code 012-303, front door interlock switch, S12-303, Figure 1. Actuate S12-303.

The display changes.

Y N

Go to Flag 1. Check S12-303.

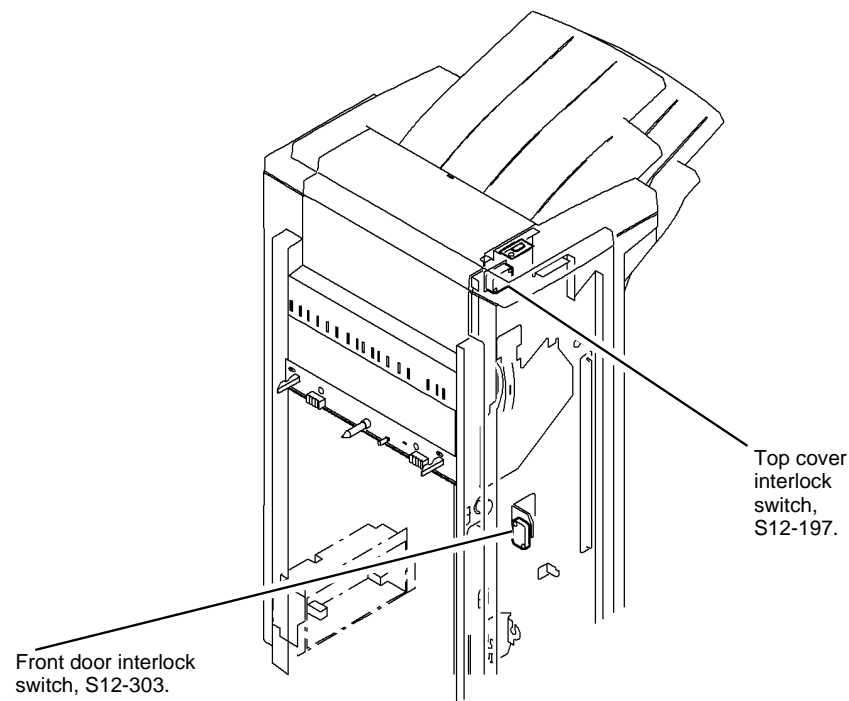
Refer to:

- GP 13, How to Check a switch.
- P/J302, 2K LCSS PWB.

Install new components as necessary:

- Front door interlock switch, PL 12.75 Item 5.
- 2K LCSS PWB, PL 12.75 Item 1.

Check the actuator on the inside of the 2K LCSS front door, if necessary install a new front door cover assembly, PL 12.10 Item 4.



X-1-0838-A

Figure 1 Component location

312-340-00-110, 312-341-00-110, 312-342-00-110 Ejector Movement Failure RAP

312-340-00-110 The ejector failed to return to the home position in the required time.

312-341-00-110 The ejector failed to move away from the home position in the required time.

312-342-00-110 The ejector failed to attain the compile/eject position in the required time.

NOTE: A cycle of operation for the ejector is to cycle from the home position to the out position and back to the home position.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

- Check the operation of the ejector mechanism. If the operation is noisy or sluggish, perform the 2K LCSS and LVF BM Ejector Shafts and Slide Bearings procedure in **ADJ 40.1** Machine Lubrication.
- Check the 2K LCSS PWB DIP switch settings. Refer to the **312F-110** 2K LCSS PWB DIP Switch Settings RAP.
- Un-dock the 2K LCSS, **REP 12.13-110**, Check for any obstructions that would prevent the ejector from moving.
- Check the finisher for binding and grinding noises, refer to **OF1** Unusual Noise RAP.

Procedure

NOTE: All 2K LCSS interlocks must be made to supply +24V to the motors.

Enter **dC330** code 012-185, ejector out sensor Q12-185, **Figure 1**. Actuate Q12-185. **The display changes.**

Y N

Go to **Flag 2**. Check Q12-185.

Refer to:

- **GP 11** How to Check a Sensor.
- **P/J304, 2K LCSS PWB**.
- **312D-110** 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Ejector out sensor, **PL 12.50** Item 3.
- 2K LCSS PWB, **PL 12.75** Item 1.

A

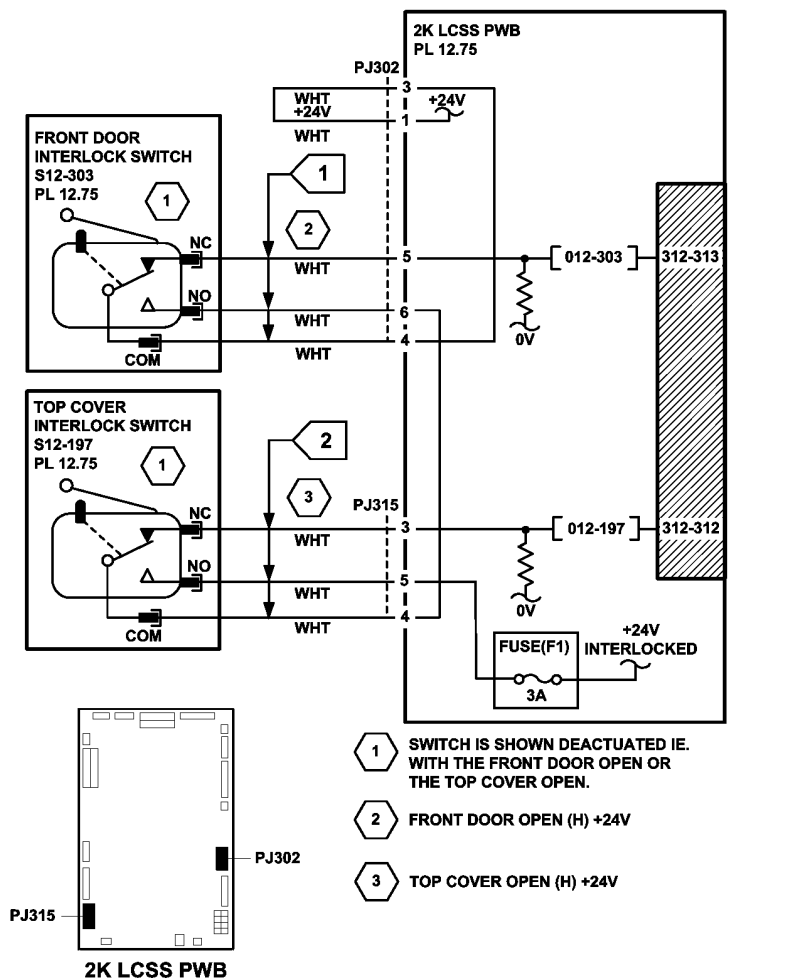


Figure 2 Circuit diagram

TX-1-0074-A

A
Enter **dC330** code 012-184, ejector home sensor Q12-184. Actuate Q12-184. **The display changes.**

Y N
Go to **Flag 1**. Check Q12-184.
Refer to:

- **GP 11** How to Check a Sensor.
- **P/J304, 2K LCSS PWB**.
- **312D-110** 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Ejector home sensor, **PL 12.50 Item 3**.
- 2K LCSS PWB, **PL 12.75 Item 1**.

Enter **dC330** code 012-236, ejector motor cycle to cycle the ejector motor, MOT12-234. **The ejector cycles between the out position and the home position.**

Y N
Check that the large tie-wrap around the motor of the ejector assembly has not cut through the motor wires and caused a short circuit to the case of the motor. **The wiring is good.**

Y N
Cut the tie-wrap, then insulate the wires.

Go to **Flag 3**. Check MOT12-234.

Refer to:

- **GP 10**, How to Check a Motor.
- **P/J303, 2K LCSS PWB**.
- **312D-110** 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Ejector assembly, **PL 12.50 Item 1**.
- 2K LCSS PWB, **PL 12.75 Item 1**.

The ejector cycles noisily, colliding with the end stops.

Y N
Check the stapler to ensure the staples are correctly formed. Mis-formed staples can cause the set to hang in the stapler causing ejector movement failures. **The staples are correctly formed.**

Y N
Clear the staple head of any mis-formed staples, then check the operation of the stapler. If necessary, install a new staple head unit, **PL 12.55 Item 5**.

If the ejector is still not moving, install a new ejector assembly, **PL 12.50 Item 1**.

Enter **dC330** code 012-096, ejector motor encoder sensor Q12-096. Slowly rotate the ejector motor encoder wheel. **The display changes.**

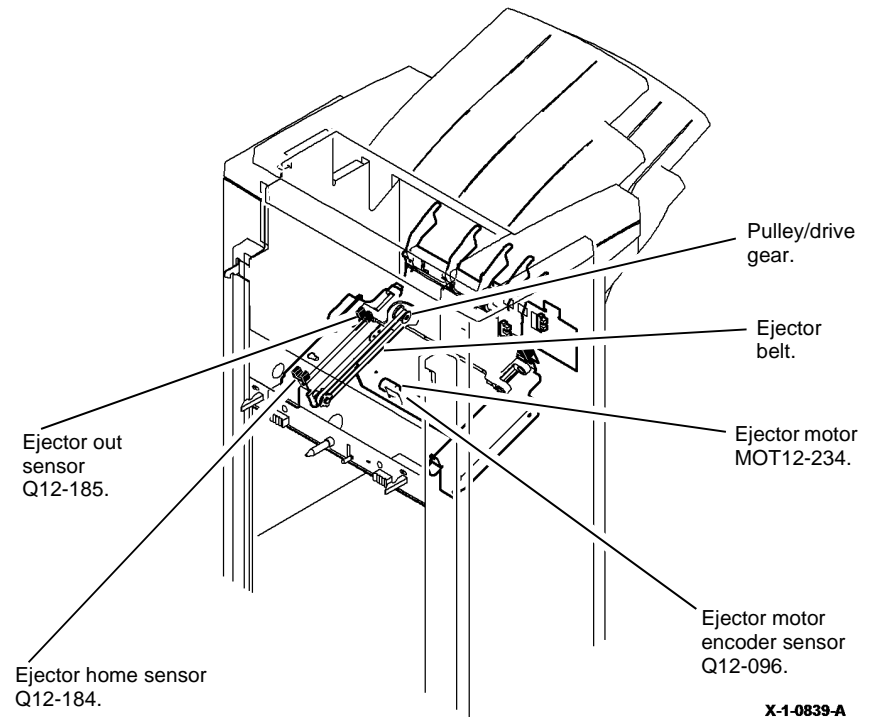
Y N
Go to **Flag 4**. Check Q12-096.
Refer to:

- **GP 11** How to Check a Sensor.
- **P/J304, 2K LCSS PWB**.
- **312D-110** 2K LCSS Power Distribution RAP.

B
Install new components as necessary:

- Ejector motor encoder sensor, **PL 12.50 Item 3**.
- 2K LCSS PWB, **PL 12.75 Item 1**.

If necessary install a new 2K LCSS PWB, **PL 12.75 Item 1**.



X-1-0839-A

Figure 1 Component location

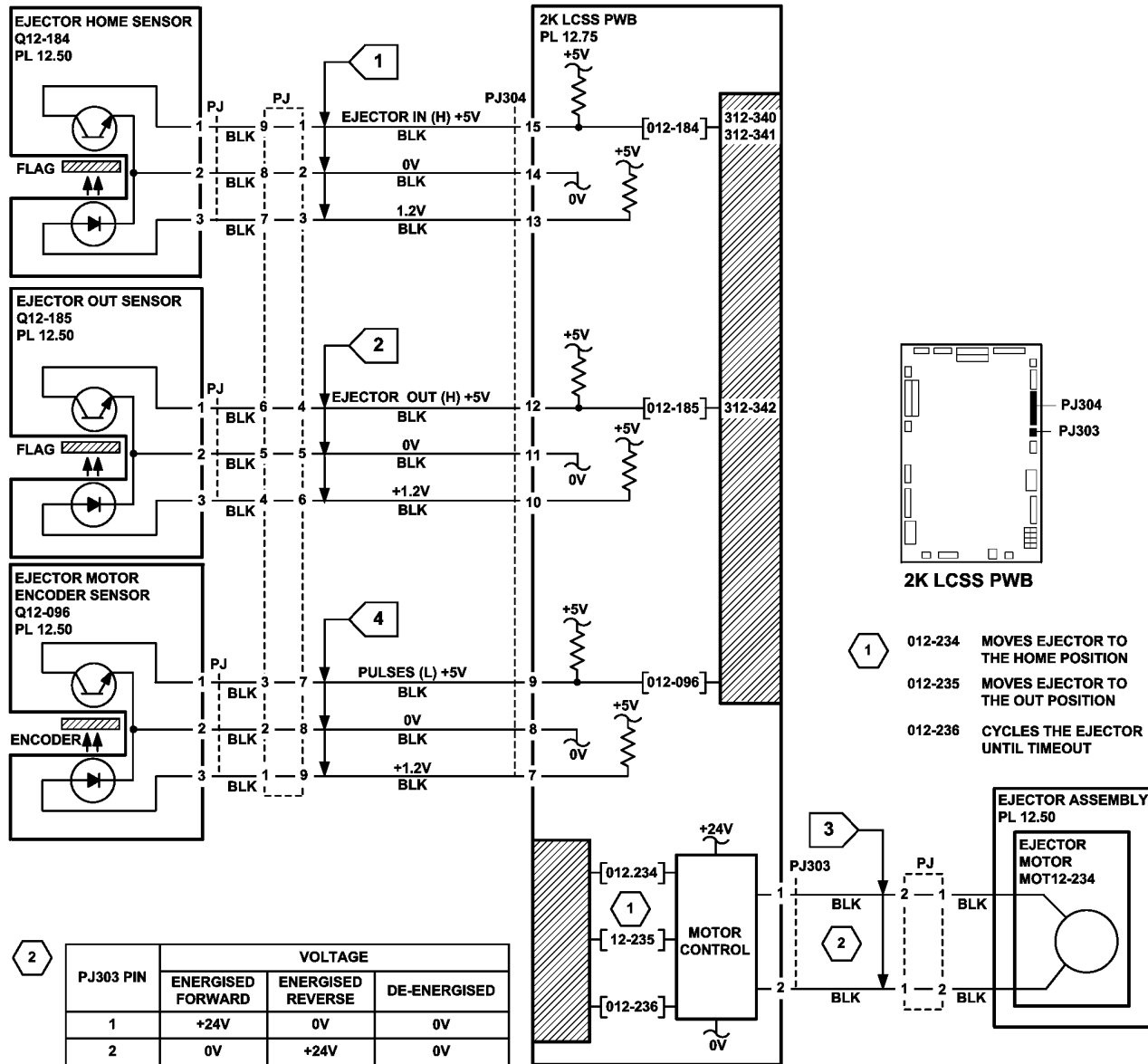


Figure 2 Circuit diagram

312-371-00-110, 312-372-00-110, 312-378-00-110 Staple Head Unit Movement Failure RAP

312-371-00-110 The staple head failed to leave home in the required time.

312-372-00-110 The staple head failed to return to home in the required time.

312-378-00-110 The staple head unit failed to index to the correct location within the required time.

NOTE: The home position is when the staple head unit is at the corner stapling position (fully to the front of the 2K LCSS and rotated through 45 degrees).

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

- Check the 2K LCSS PWB DIP switch settings. Refer to the [312F-110](#) 2K LCSS PWB DIP Switch Settings RAP.
- Un-dock the 2K LCSS from the machine, [REP 12.13-110](#). Move the ejector assembly fully to the right. Manually move the stapler unit along the full length of the track using the green thumb-wheel. Check the home sensor flag and the 2 dual position flags for damage, refer to NOTE. Check for damage or obstructions that would prevent the stapling unit from moving. If necessary, install a new staple head unit, [PL 12.55 Item 5](#) or a new stapler traverse assembly, [PL 12.55 Item 1](#).

NOTE: For dual position stapling, the SU1 front index sensor uses 2 flags.

- Dock the 2K LCSS to the machine.

Procedure

NOTE: All 2K LCSS interlocks must be made to supply +24V to the motors.

Enter [dC330](#) code 012-235 to move the ejector assembly to the out position. Enter code 012-250, SU1 motor cycle to run the SU1 motor, MOT12-249, [Figure 1](#). The stapling unit cycles back and forth along the track.

Y N

Go to [Flag 3](#). Check MOT12-249.

Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J308, 2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Stapler traverse assembly, [PL 12.55 Item 1](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Enter [dC330](#) code 012-135, staple home sensor Q12-135. Actuate Q12-135 by rotating the green thumbwheel to move the stapler unit to and from the home position. The display changes.

Y N

Go to [Flag 1](#). Check Q12-135.

Refer to:

- [GP 11](#). How to check a sensor.
- [P/J308, 2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Staple home sensor, [PL 12.55 Item 3](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Enter [dC330](#) code 012-168, stapler index sensor, Q12-168. Actuate Q12-168 by rotating the green thumbwheel to move the stapler unit to and from the flag position (approximately 115mm (4.5 inches) from the front of the track). The display changes.

Y N

Go to [Flag 2](#). Check Q12-168.

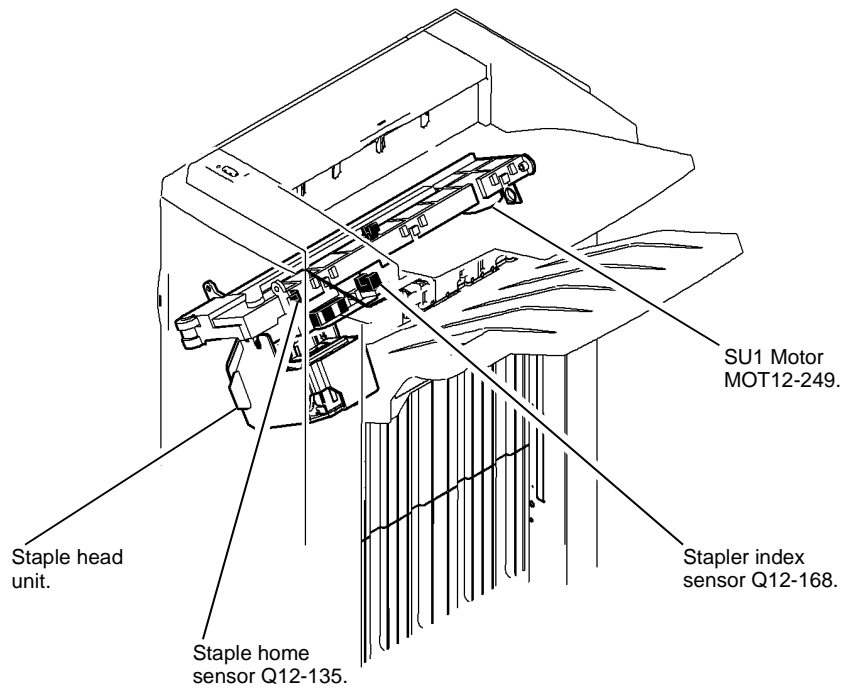
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J308, 2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Stapler index sensor, [PL 12.55 Item 3](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Perform [SCP 5](#) Final Actions.



X-1-0027-A

Figure 1 Component location

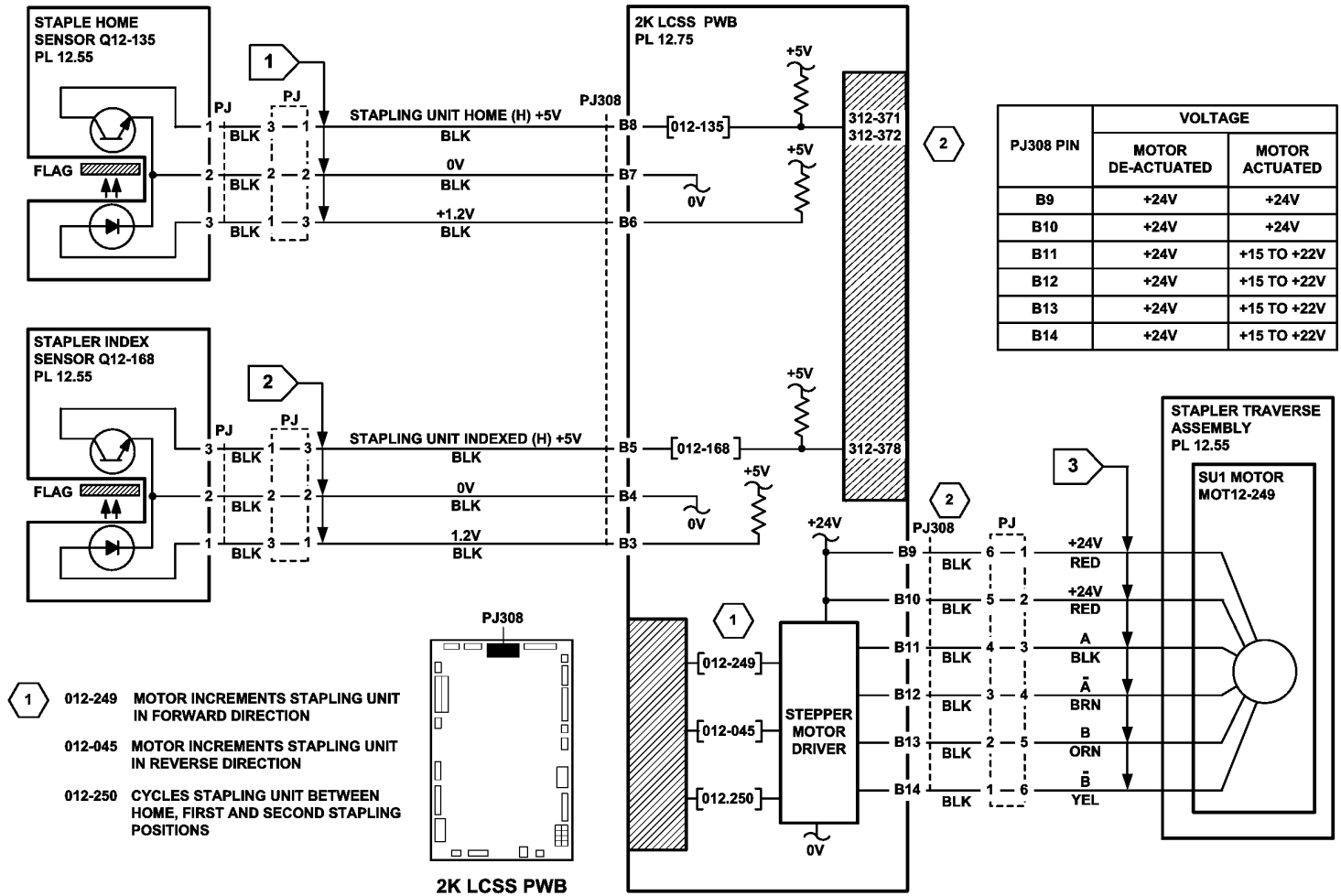


Figure 2 Circuit diagram

TX-1-0076-A

312-392-00-110, 312-393-00-110, 312-394-00-110 Front Tamper Move Failure RAP

312-392-00-110 The front tamper failed to move from the home position in the required time.

312-393-00-110 The front tamper failed to return to the home position in the required time.

312-394-00-110 The front tamper failed to return to the away home position in the required time.

Remote Service Actions

- Inform the customer that jams can be caused by removing prints from bin 1 before the machine has finished printing. If the tampers are touched while they are moving, they may stall and cause the machine to shut down. The resulting shut down can cause un-clearable jams in the finisher and the tray 3 and tray 4 to paper path interface.
- Inform the customer that jams can also be caused if the tray settings do not match the paper in the trays. Ensure the tray settings are correct.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

- Check for damage or obstructions that would prevent the tamper assembly from operating correctly. If necessary, install a new tamper assembly, [PL 12.45 Item 1](#).
- Check the condition and the tension of the front tamper drive belt. Tensioning is achieved by a spring on the motor, the motor should be free to move.
- If there is a large jam of paper above bin 1 that has obstructed the tampers, this has probably been caused by poorly stacked sets failing to actuate the bin 1 upper level sensor. Perform the checks that follow:
 - The paper for defects that could degrade the tamping operation e.g. curl, paper condition, buckling or paper type. Refer to the [IQ1 Image Quality Entry RAP](#).
 - The operation of the paddle roll, refer to the [312-024-00-110](#), [312-025-00-110 Paddle Roll Failure RAP](#).
 - The operation of the bin 1 upper level sensor, refer to the [312-462-00-110 Bin 1 Movement Failure RAP](#).
 - [312H-110 Mis-Registration in Stapled Sets and Non-Stapled Sets RAP](#).
 - The 2K LCSS PWB DIP switch settings. Refer to the [312F-110 2K LCSS PWB DIP Switch Settings RAP](#).

Procedure

NOTE: All 2K LCSS interlocks must be made to supply +24V to the motors.

Enter [dC330](#) codes 012-226, front tamper motor home and 012-228, front tamper motor move alternately. **The front tamper moves between the home and away positions.**

Y N

Go to [Flag 2](#). Check the front tamper motor, MOT12-226, [Figure 1](#). Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J312, 2K LCSS PWB](#).
- [312D-110 2K LCSS Power Distribution RAP](#).

Install new components as necessary:

- Tamper assembly, [PL 12.45 Item 1](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Enter [dC330](#) code 012-180, front tamper home sensor, Q12-180. Actuate Q12-180. **The display changes.**

Y N

Go to [Flag 1](#). Check Q12-180. Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J312, 2K LCSS PWB](#).
- [312D-110 2K LCSS Power Distribution RAP](#).

Install new components as necessary:

- Tamper assembly, [PL 12.45 Item 1](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

NOTE: The front tamper home sensor is bonded onto the tamper unit and is not replaceable. Therefore, failure of this sensor will require the replacement of the tamper assembly.

Enter [dC330](#) code 012-182, front tamper away sensor, Q12-182. Actuate Q12-182. **The display changes.**

Y N

Go to [Flag 3](#). Check Q12-182. Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J314, 2K LCSS PWB](#).
- [312D-110 2K LCSS Power Distribution RAP](#).

Install new components as necessary:

- Front tamper away sensor, [PL 12.45 Item 1](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Perform [SCP 5](#) Final Actions.

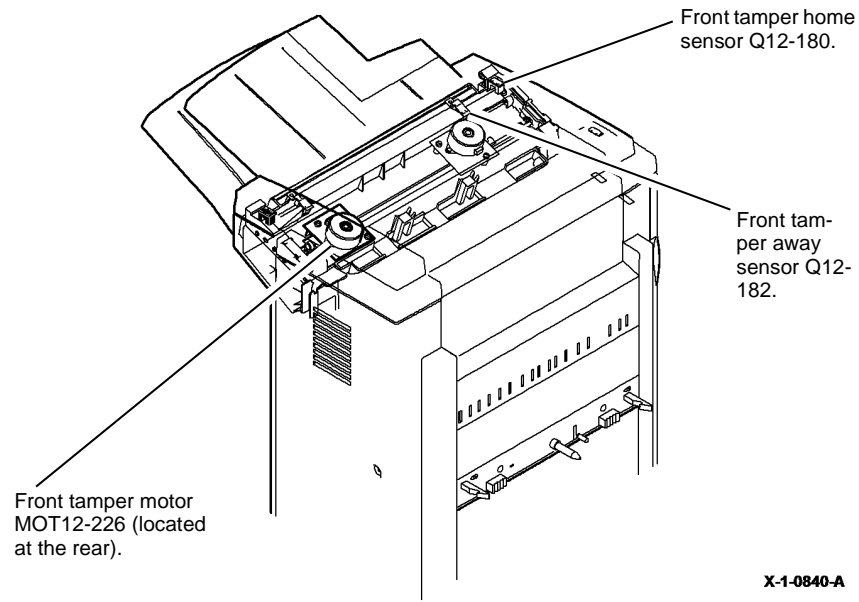


Figure 1 Component location

312-396-00-110, 312-397-00-110, 312-398-00-110 Rear Tamper Move Failure RAP

312-396-00-110 The rear tamper failed to move from the home position in the required time.

312-397-00-110 The rear tamper failed to return to the home position in the required time.

312-398-00-110 The rear tamper failed to move out of the away home position in the required time.

Remote Service Actions

- Inform the customer that jams can be caused by removing prints from bin 1 before the machine has finished printing. If the tampers are touched while they are moving, they may stall and cause the machine to shutdown. The resulting shutdown can cause un-clearable jams in the finisher and the tray 3 and tray 4 to paper path interface.
- Inform the customer that jams can also be caused if the tray settings do not match the paper in the trays. Ensure the tray settings are correct.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

- Check for damage or obstructions that would prevent the tamper assembly from operating correctly. If necessary, install a new tamper assembly, [PL 12.45 Item 1](#).
- Check the condition of the rear tamper drive belt and that it is correctly tensioned. Tensioning is achieved by a spring on the motor, the motor should be free to move.
- If there is a large jam of paper above bin 1 that has obstructed the tampers, this has probably been caused by poorly stacked sets failing to actuate the bin 1 upper level sensor. Perform the checks that follow:
 - The paper for defects that could degrade the tamping operation e.g. curl, paper condition, buckling or paper type. Refer to the [IQ1 Image Quality Entry RAP](#).
 - The operation of the paddle roll. Refer to the [312-024-00-110](#), [312-025-00-110 Paddle Roll Failure RAP](#).
 - The operation of the bin 1 upper level sensor. Refer to the [312-462-00-110 Bin 1 Movement Failure RAP](#).
 - [312H-110 Mis-Registration in Stapled Sets and Non-Stapled Sets RAP](#).
 - The 2K LCSS PWB DIP switch settings. Refer to the [312F-110 2K LCSS PWB DIP Switch Settings RAP](#).

Procedure

NOTE: All 2K LCSS interlocks must be made to supply +24V to the motors.

Enter [dC330](#) codes 012-227, rear tamper motor home and 012-229, rear tamper motor move alternately. **The rear tamper moves between the home and away positions.**

Y N

Go to [Flag 3](#). Check the rear tamper motor, MOT12-227, [Figure 1](#). Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J312, 2K LCSS PWB](#).
- [312D-110 2K LCSS Power Distribution RAP](#)

Install new components as necessary:

- Tamper assembly, [PL 12.45 Item 1](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Enter [dC330](#) code 012-181, rear tamper home sensor, Q12-181. Actuate Q12-181. **The display changes.**

Y N

Go to [Flag 1](#). Check Q12-181. Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J312, 2K LCSS PWB](#).
- [312D-110 2K LCSS Power Distribution RAP](#).

Install new components as necessary:

- Tamper assembly, [PL 12.45 Item 1](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

NOTE: The rear tamper home sensor is bonded onto the tamper unit and is not replaceable. Therefore, failure of this sensor will require the replacement of the tamper assembly.

Enter [dC330](#) code 012-183, rear tamper away sensor, Q12-183. Actuate Q12-183. **The display changes.**

Y N

Go to [Flag 2](#). Check Q12-183. Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J312, 2K LCSS PWB](#).
- [312D-110 2K LCSS Power Distribution RAP](#).

Install new components as necessary:

- Rear tamper away sensor, [PL 12.45 Item 3](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Perform [SCP 5](#) Final Actions.

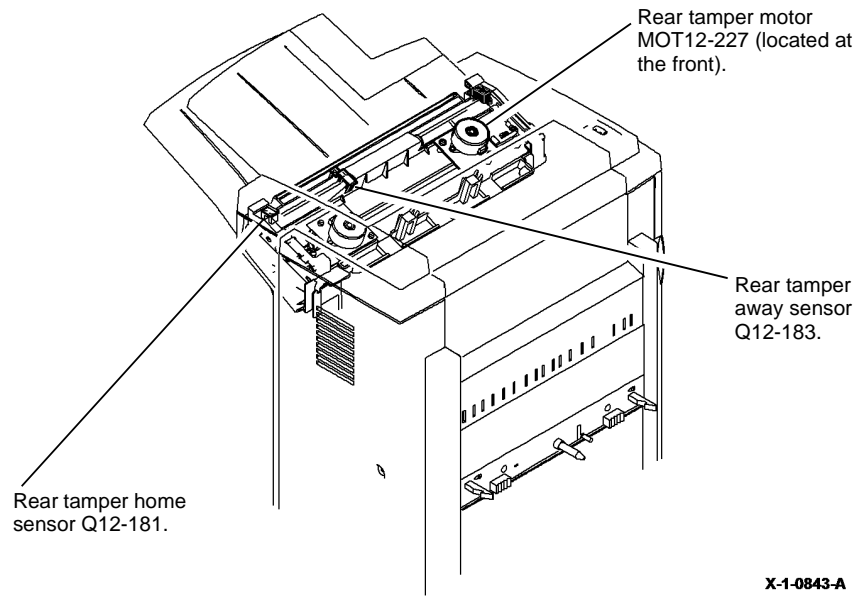


Figure 1 Component location

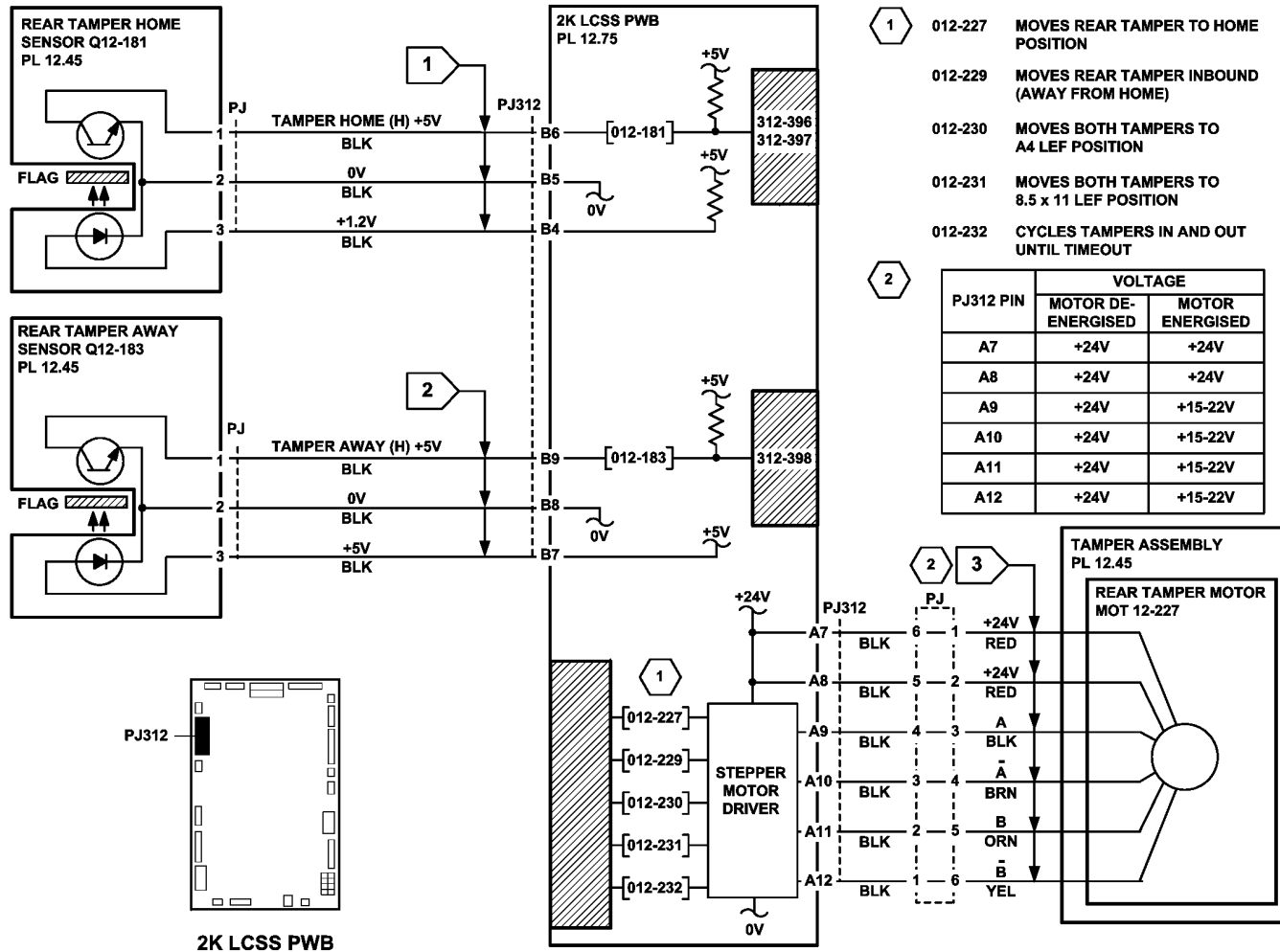


Figure 2 Circuit diagram

312-462-00-110 Bin 1 Movement Failure RAP

312-462-00-110 Bin 1 failed to leave the bin 1 upper level sensor during stacking or failed to initialize correctly.

NOTE: The home position of bin 1 is when the bin is just lower than the bin 1 upper level sensor. See the final actions at the end of the procedure.

Two sensors and 2 switches monitor the level of paper in bin 1 and the position of the tray:

- The bin 1 upper level sensor, detects the top of the paper stack in bin 1, or the empty bin 1, [PL 12.35 Item 3](#).
- The bin 1 90% full sensor, detects when the tray has descended to a position where the tray is 90% full, [PL 12.30 Item 5](#).
- Bin 1 upper limit switch, prevents over travel, [PL 12.30 Item 3](#).
- Bin 1 lower limit switch, prevents over travel, [PL 12.35 Item 1](#).

Remote Service Actions

Ask the customer to check for a physical obstruction that would prevent bin 1 from moving, such as an item of furniture.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

Perform the steps that follow:

- Check that bin 1 is level front to back. If necessary, perform [ADJ 12.1-110](#) 2K LCSS Bin 1 Level.
- Check the 2K LCSS PWB DIP switch settings. Refer to the 2K LCSS PWB DIP Switch Settings RAP.
- Refer to the [312H-110](#) Mis-Registration in Stapled Sets and Non-Stapled Sets RAP.
- If there is a large jam of paper above bin 1, this has probably been caused by poorly stacked sets failing to actuate the bin 1 upper level sensor.

Perform the relevant check:

- If paper is overflowing the tray when it is at the lower limit, check the tray 90% full sensor.
- If paper cannot be fed to bin 1 when it is at the highest position, check the bin 1 upper level sensor.
- Check the front and rear bin 1 drive belts. If necessary install new components, [PL 12.30 Item 1](#).

Procedure

NOTE: All 2K LCSS interlocks must be made to supply +24V to the motors.

Remove the 2K LCSS rear cover. Enter [dC330](#) code 012-163, bin 1 motor encoder sensor Q12-163, [PL 12.30 Item 11](#). Slowly rotate the encoder disk by hand. **The display changes.**

Y N

Go to [Flag 2](#). Check Q12-163.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J304, 2K LCSS PWB](#).
- [Figure 2](#), Component location.
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Bin 1 motor encoder sensor Q12-163, [PL 12.30 Item 5](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Enter [dC330](#) code 012-242. **Bin 1 cycles down and up.**

Y N

Go to [Flag 1](#). Check the bin 1 elevator motor, MOT12-241, [PL 12.30 Item 8](#).

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J318, 2K LCSS PWB](#).
- [Figure 2](#), Component location.
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Bin 1 elevator motor, [PL 12.30 Item 8](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Enter [dC330](#) code 012-188, actuate the bin 1 upper level sensor, Q12-188, [PL 12.35 Item 3](#).

The display changes.

Y N

Go to [Flag 3](#). Check Q12-188.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J314, 2K LCSS PWB](#).
- [Figure 1](#), Component location.
- [312D-110](#) 2K LCSS Power Distribution RAP.
- [REP 12.13-110](#) 2K LCSS Un-docking.

Install new components as necessary:

- Bin 1 upper level sensor, [PL 12.35 Item 3](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Enter [dC330](#) code 012-190, actuate the bin 1 upper limit switch, S12-190, [PL 12.30 Item 3](#).

The display changes.

Y N

Go to [Flag 4](#). Check S12-190.

A

A

Refer to:

- GP 13 How to Check a Switch.
- P/J315, 2K LCSS PWB.
- Figure 2, Component location.
- 312D-110 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Bin 1 upper limit switch, PL 12.30 Item 3.
- 2K LCSS PWB, PL 12.75 Item 1.

Enter dC330 code 012-191, actuate the bin 1 lower limit switch, S12-191, PL 12.35 Item 1.

The display changes.

Y N

Go to Flag 5. Check S12-191.

Refer to:

- GP 13 How to Check a Switch.
- P/J317, 2K LCSS PWB.
- Figure 2, Component location.
- 312D-110 2K LCSS Power Generation RAP.
- REP 12.13-110 2K LCSS Un-docking.

Install new components as necessary:

- Bin 1 lower limit switch, PL 12.35 Item 1.
- 2K LCSS PWB, PL 12.75 Item 1.

Enter dC330 code 012-187. Actuate the bin 1 90% full sensor, Q12-187, PL 12.30 Item 5. The

display changes.

Y N

Go to Flag 6. Check Q12-187.

Refer to:

- GP 11 How to Check a Sensor.
- P/J316, 2K LCSS PWB.
- Figure 2, Component location.
- 312D-110, 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Bin 1 90% full sensor, PL 12.30 Item 5.
- 2K LCSS PWB, PL 12.75 Item 1.

As final actions, check the sequence of operation that follows:

- Paper is delivered to the tray until the bin 1 upper level sensor, Q12-188 is actuated.
- The bin 1 elevator motor MOT12-241 lowers the tray until the bin 1 upper level sensor, Q12-188 is de-actuated.
- The Bin 1 elevator motor raises the tray until the top of the paper stack actuates the Bin 1 upper level sensor, then the Bin 1 elevator motor lowers the tray to continue the cycle.
- When the tray is emptied, the tray returns to the home position. The tray is elevated until the bin 1 upper level sensor, Q12-188 is made. The tray is then lowered until the bin 1 upper level sensor, Q12-188 is just cleared. In the home position the bin 1 upper limit switch, S12-190 is actuated.

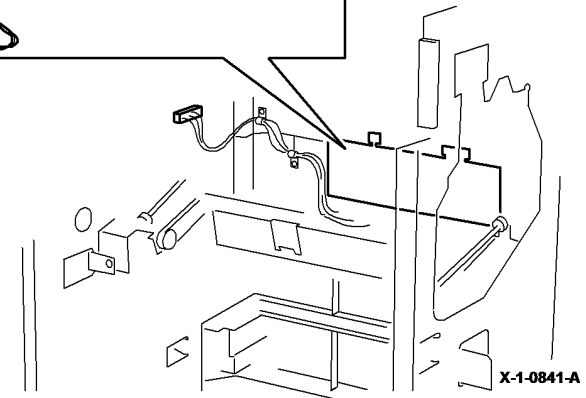
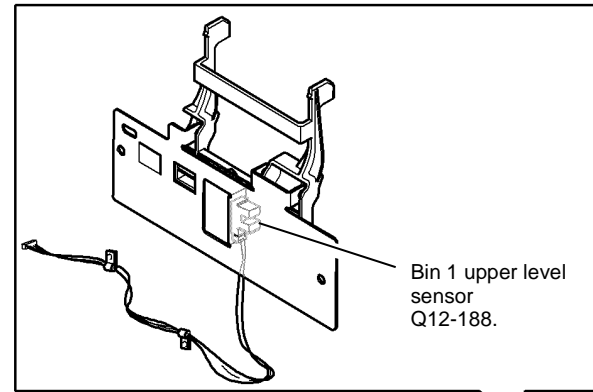
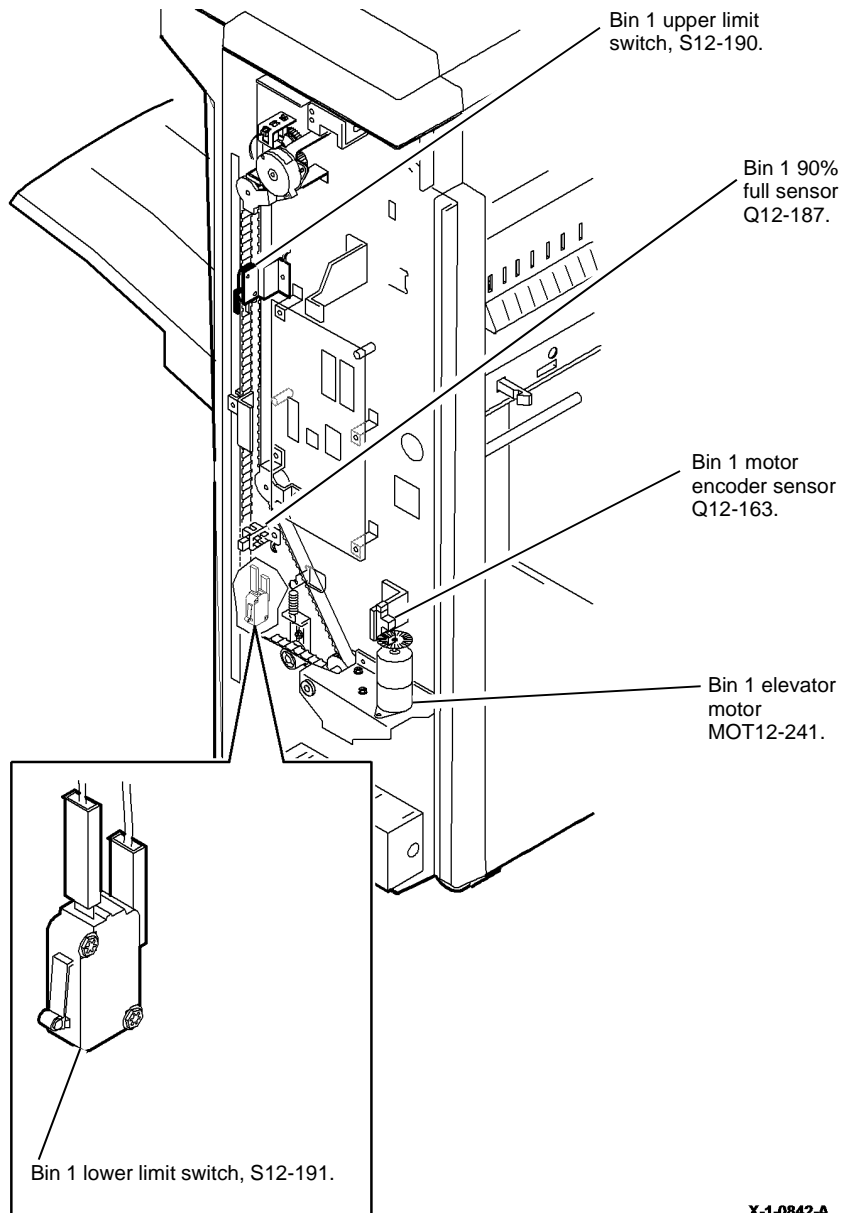
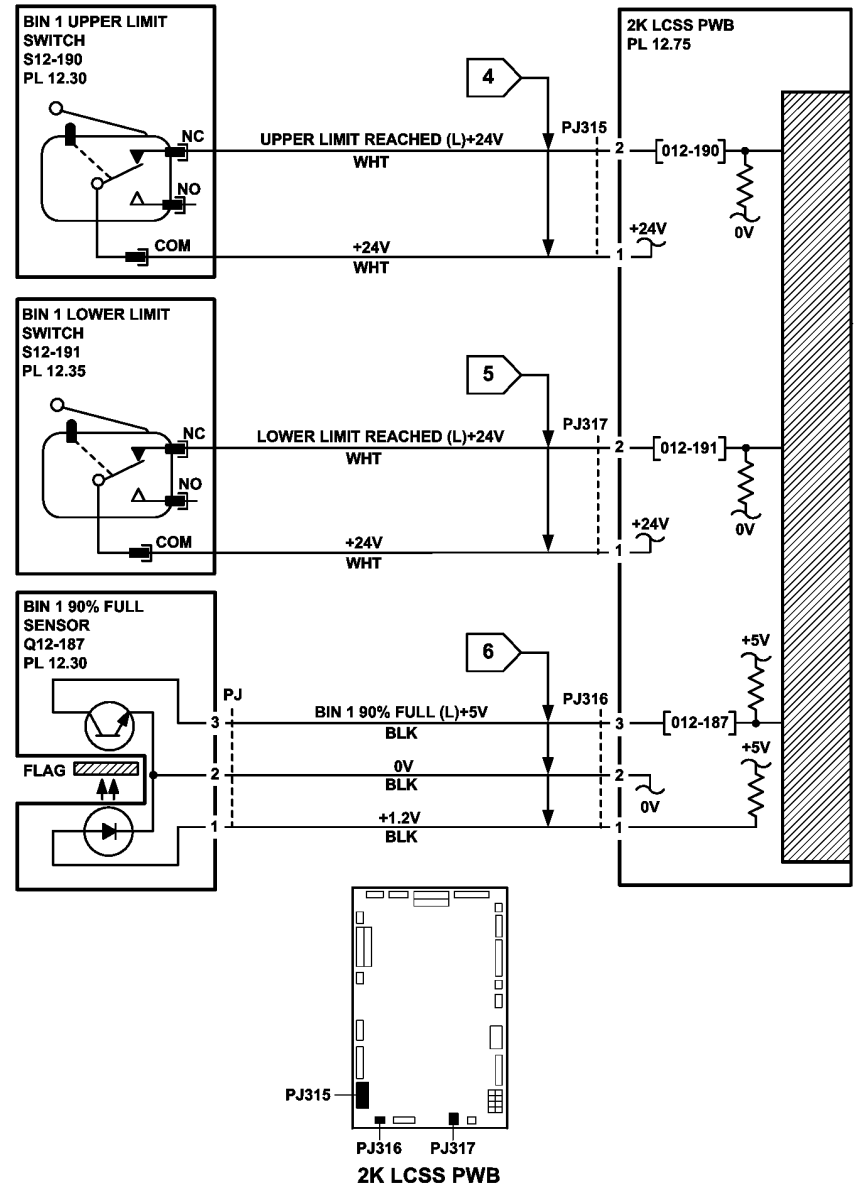


Figure 1 Component location



X-1-0842-A

Figure 2 Component location



TX-1-0079-A

Figure 3 Circuit diagram

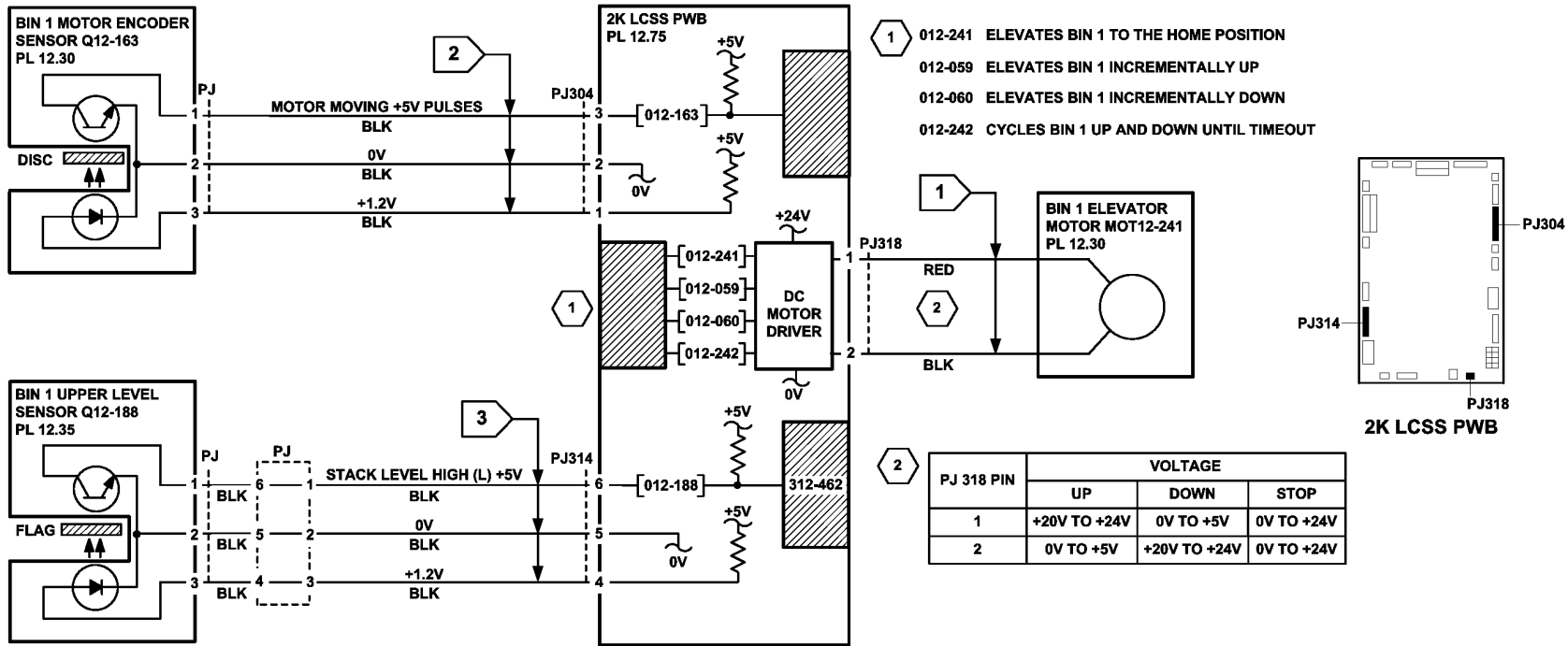


Figure 4 Circuit diagram

312-492-00-110 Finisher Communication Failure

312-492-00-110 CDI communications failure with the 2K LCSS.

Remote Service Actions

- Ask the customer to ensure the finisher power cord is connected to P/J652 on the LVPS [Figure 2](#).
- Ask the customer to switch off, then switch on the machine, [GP 14](#).

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

- Check the 2K LCSS PWB DIP switch settings. Refer to the [312F-110](#) 2K LCSS PWB DIP Switch Settings RAP.
- Perform [REP 12.13-110](#) 2K LCSS Un-docking. Check that the docking actuator, [PL 12.15 Item 7](#) is correctly installed.
- Check the fault history for 303-XXX fault codes. If the 303-XXX fault codes occur randomly, the cause may be due to electrical noise. Perform the [OF10](#) intermittent Failure RAP.

Procedure



CAUTION

Do not connect the output device power cord directly to the AC wall outlet. The output device cannot operate without the machine. The machine controls the distribution of electricity to the output device for correct power on and power off sequencing.

Remove [Fuse F1](#) from the 2K LCSS PWB. Check the fuse. **The fuse is good.**

- | | |
|---|--|
| Y | N |
| | |
| | Install a new 2K LCSS PWB, PL 12.75 Item 1 . |

Re-install [Fuse F1](#). Observe the software heartbeat LED (LED 1) on the 2K LCSS PWB, [Figure 1](#). **LED 1 is flashing at 1Hz (0.5 seconds on, 0.5 seconds off).**

- | | |
|---|--|
| Y | N |
| | |
| | If LED 1 is flashing at 0.25Hz (2 seconds on, 2 seconds off), this indicates that the finisher software is corrupt. Reload the finisher software, GP 4 . If necessary install a new 2K LCSS PWB, PL 12.75 Item 1 . |

Go to [Flag 1](#), [Flag 2](#) and [Flag 3](#). Check the wiring and connectors between [P/J772](#), [P/J996](#) and [P/J301](#). **The wiring and connectors are good.**

- | | |
|---|--|
| Y | N |
| | |
| | Repair the wiring or connectors, REP 1.2 . |

Perform the steps that follow:

- Go to the [312D-110](#) 2K LCSS Power Distribution RAP. Check the +5V and +24V supply from the power supply module to the 2K LCSS PWB. Ensure that the voltages are steady. Ensure that there is good ground continuity between the power supply module, [PL 12.75 Item 2](#) and the 2K LCSS frame. Install new components as necessary:
 - Power supply module, [PL 12.75 Item 2](#).
 - 2K LCSS PWB, [PL 12.75 Item 1](#).
- Reload the software using the forced AltBoot procedure, [GP 4](#).
- The [OF7](#) IOT PWB Diagnostics RAP.

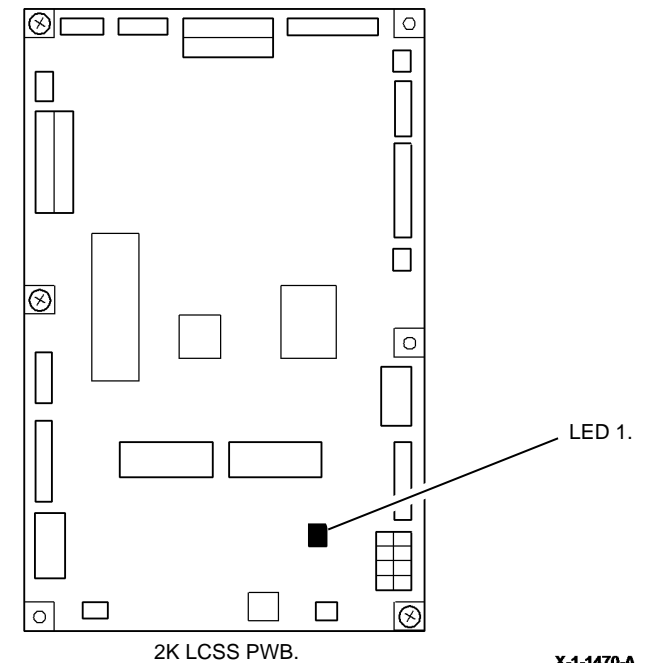


Figure 1 LCSS LED1 location

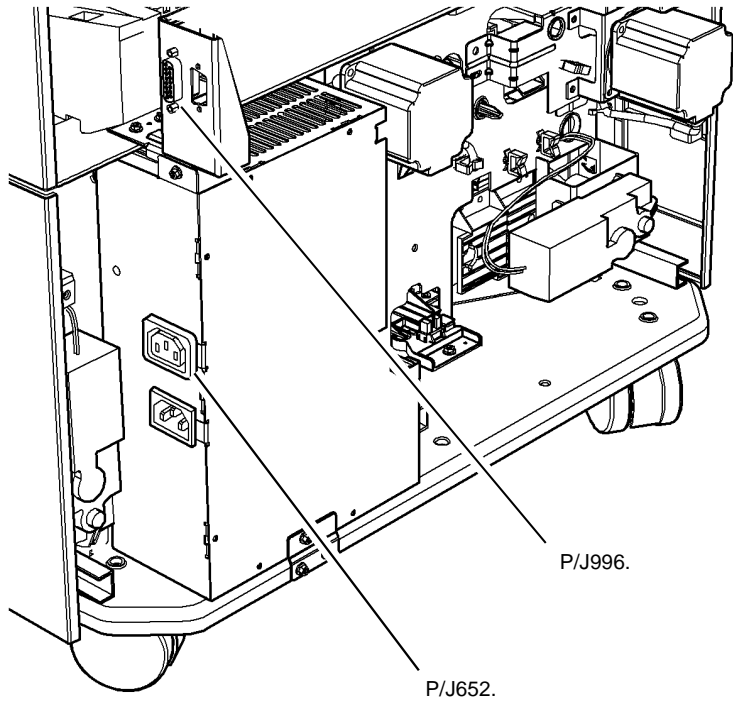


Figure 2 PJ966 and PJ652 locations

X-1-1468-A

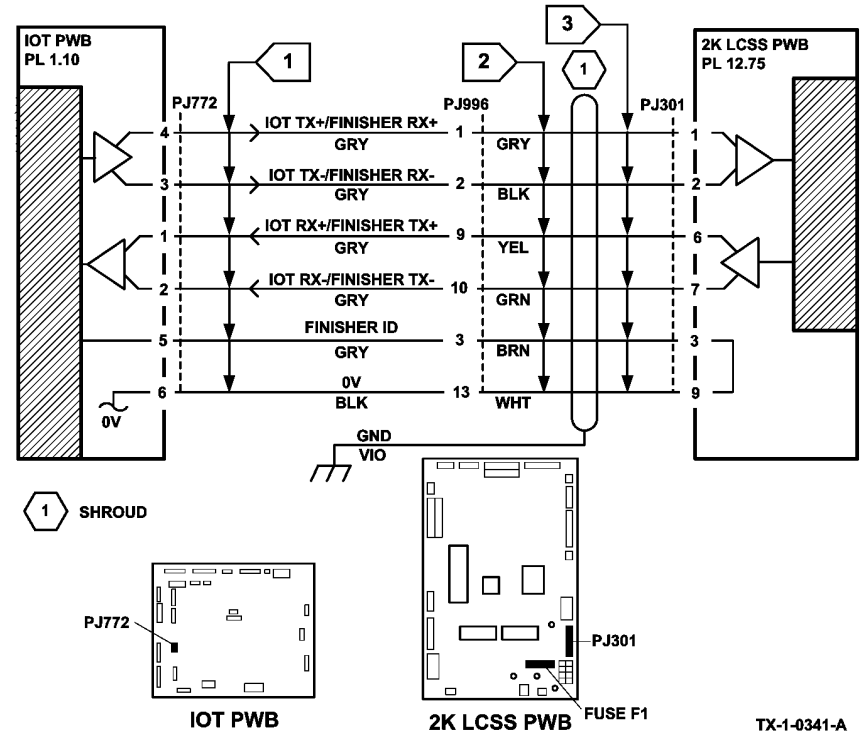


Figure 3 Circuit diagram

TX-1-0341-A

312-950-00-110 IME Violates Fin Prep Time RAP

312-950-00-110 The image marking engine delivers a sheet to finisher before the finisher preparation time has expired.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

If the customer has not already done so, switch off, then switch on the machine, [GP 14](#).

Procedure

The fault remains.

Y N
Perform [SCP 5](#) Final Actions.

Reload the software [GP 4](#). **The fault remains.**

Y N
Perform [SCP 5](#) Final Actions.

Install a new IOT PWB, [PL 1.10](#) Item 2.

312A-110 Chad Bin Present and Bin Full RAP

Use this RAP when there is a false indication of a missing or full chad bin.

Remote Service Actions

Ask the customer to check the items that follow:

- That the chad bin is fully inserted.
- That the sensor hole in the side of the chad bin is clear of obstructions.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check that the actuator for the chad bin level sensor engages in the slot of the chad bin.

Procedure

Enter [dC330](#) code 012-193, chad bin level sensor, Q12-193, [Figure 1](#). Use a strip of paper to actuate the sensor. **The display changes.**

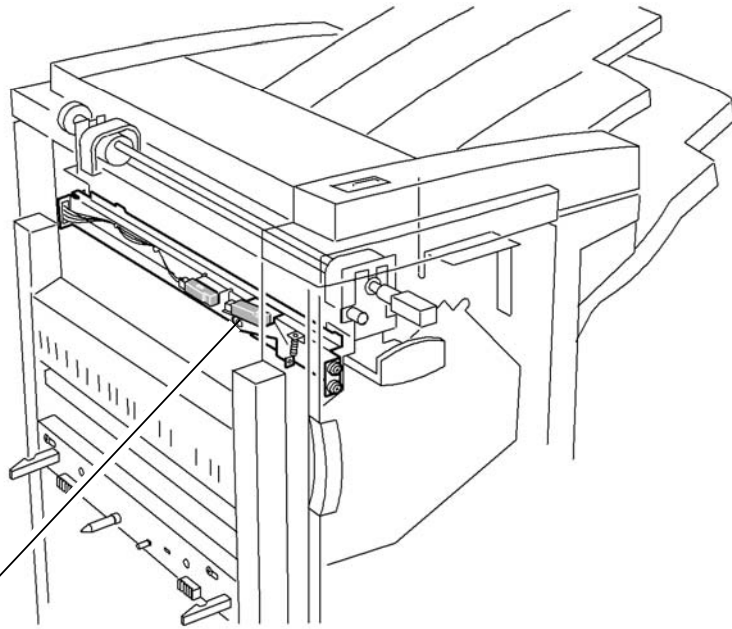
Y N
Go to [Flag 1](#). Check Q12-193.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J307, 2K LCSS PWB](#).
- [Figure 1](#), Component location.
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Chad bin level sensor, [PL 12.20](#) Item 7.
- 2K LCSS PWB, [PL 12.75](#) Item 1.

Perform [SCP 5](#) Final Actions.



Chad bin level sensor, Q12-193.

Figure 1 Component location

X-1-0903-A

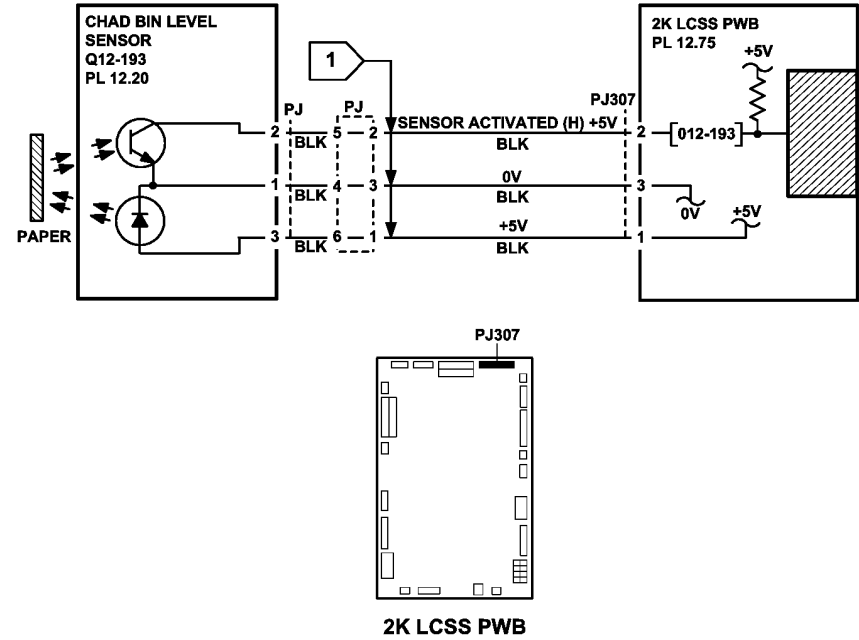


Figure 2 Circuit diagram

TX-1-0208-A

312B-110 Bin 1 Overload RAP

Use this RAP to resolve a fault with the bin 1 90% full sensor.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

Enter **dC330** code 012-187, bin 1 90% full sensor Q12-187, **PL 12.30** Item 5. Actuate the sensor. **The display changes.**

Y N

Go to **Flag 1**. Check Q12-187.
Refer to:

- **GP 11**, How to Check a sensor.
- **P/J316, 2K LCSS PWB**.
- **Figure 1**, Component location.
- **312D-110 2K LCSS Power Generation RAP**.

Install new components as necessary:

- Bin 1 90% full sensor, **PL 12.30** Item 5.
- 2K LCSS PWB, **PL 12.75** Item 1.

Perform **SCP 5** Final Actions.

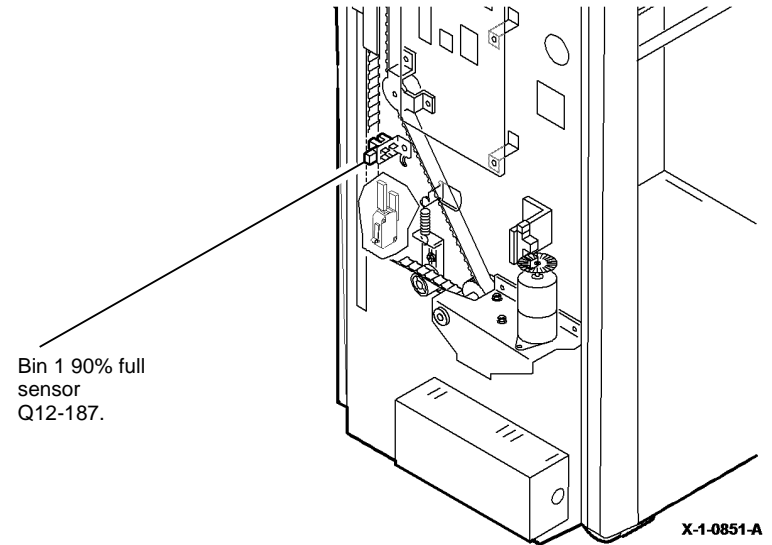
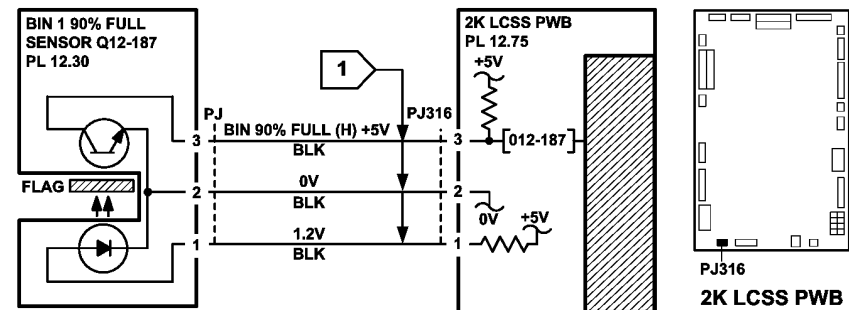


Figure 1 Component location



TX-1-0081-A

Figure 2 Circuit diagram

312C-110 2K LCSS Initialization Failure RAP

When an initialization command is received from the machine, the units are initialized in 2 stages:

- The units that follow are initialized sequentially:
 1. If the staple head is not at the home position, it is driven to the home position.
 2. If the stapling unit is not at the home position, it is driven to the home position.

NOTE: The staple cartridge must be fully pushed home.

 3. If the ejector is not at the home position, it is driven to the home position.
- The units that follow are then initialized simultaneously:
 1. If the front tamper is not at the home position, it is driven to the home position.
 2. If the rear tamper is not at the home position, it is driven to the home position.
 3. If the hole punch is not at the home position, it is driven to the home position.
 4. If the paddle is not at the home position, it is driven to the home position.
 5. If the stacker is not at the home position, it is driven to the home position.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.



CAUTION

Do not install a new 2K LCSS PWB until the cause of the damage to the old 2K LCSS PWB has been determined, go to [312G-110 2K LCSS PWB Damage RAP](#).

Check the fuse on the 2K LCSS PWB. If the fuse (F1) is good, continue at the procedure. If the fuse not good, perform the [312G-110 2K LCSS PWB Damage RAP](#). If necessary install a new 2K LCSS PWB, [PL 12.75 Item 1](#).

Remove the 2K LCSS rear cover, [REP 12.1-110](#). Check the 2K LCSS PWB DIP switch settings. Refer to the [312F-110 2K LCSS PWB DIP Switch Settings RAP](#).

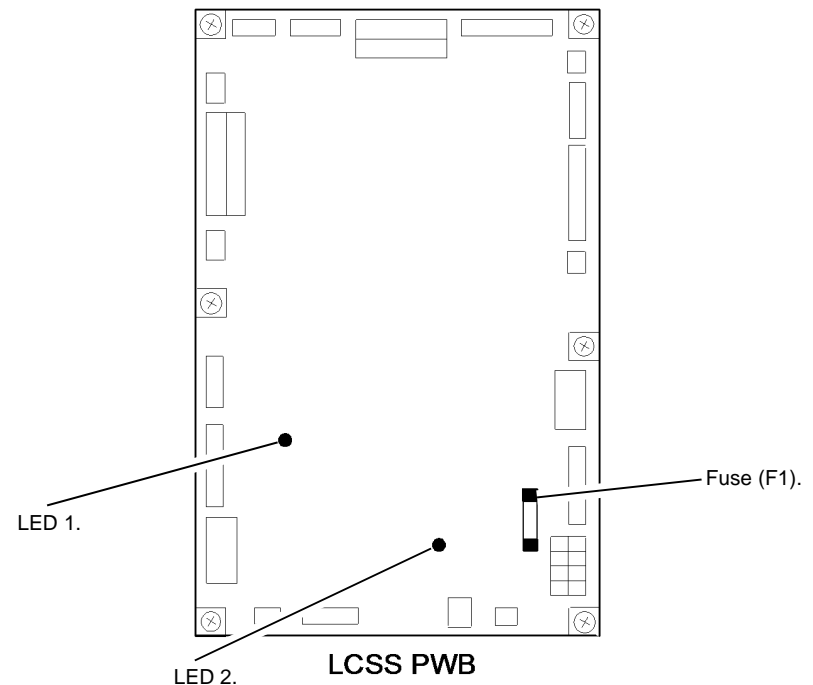
Remove the 2K LCSS top cover, front door cover assembly, [REP 12.1-110](#), so that the units can be viewed. Cheat the front door interlock switch and the top cover interlock switch. Check that LED 2 is illuminated. This shows that all interlocks are made. If the LED fails to illuminate, go to [312-312-00-110, 312-313-00-110 Interlocks RAP](#).

Procedure

[Figure 1](#). Check that the software heartbeat is present. LED 1 should flash twice per second when the 2K LCSS software is running. If necessary reload the 2K LCSS software, [GP 4](#).

If the initialization sequence fails to place any unit at the home position, refer to the appropriate RAPs:

- The front tamper is not at the home position, refer to [312-392-00-110, 312-393-00-110, 312-394-00-110 Front Tamper Move Failure RAP](#).
- The rear tamper is not at the home position, refer to [312-396-00-110, 312-397-00-110, 312-398-00-110 Rear Tamper Move Failure RAP](#).
- The paddle is not at the home position, refer to [312-024-00-110, 312-025-00-110 Paddle Roll Failure RAP](#).
- Bin 1 is not at the home position, refer to [312-462-00-110 Bin 1 Movement Failures RAP](#)
- The hole punch is not at the home position, refer to [312-043-00-110, 312-046-00-110 Hole Punch Operation Failure RAP](#).
- The staple head is not at the home position, refer to [312E-110 Staple Head Operation Failure RAP](#).
- The stapling unit is not at the home position, refer to [312-371-00-110, 312-372-00-110, 312-378-00-110 Staple Head Unit Movement Failure RAP](#).
- The ejector is not at the home position, refer to [312-340-00-110, 312-341-00-110, 312-342-00-110 Ejector Movement Failure RAP](#).



X-1-0028-A

Figure 1 LED location

312D-110 2K LCSS Power Distribution RAP

The 2K LCSS has an integral power supply providing +24V and +5V supplies to the 2K LCSS PWB. The AC power for the 2K LCSS power supply comes from the LVPS module of the machine.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care when measuring AC mains (line) voltage. Electricity can cause death or injury.



CAUTION

Do not connect the finisher power cord directly to the AC wall outlet. The finisher cannot operate without the machine. The machine controls the distribution of electricity to the finisher for correct power on and power off sequencing.

Close or cheat all the 2K LCSS interlocks. LED 1 on the 2K LCSS PWB is illuminated.

Y N

+24V is available at **FUSE (F1)** on the 2K LCSS PWB.

Y N

Go to [Flag 2](#). Check for +24V between the pins that follow on [P/J300](#):

- Pin 1 and pin 2.
- Pin 1 and pin 3.
- Pin 1 and pin 6.
- Pin 1 and pin 7.
- Pin 5 and pin 2.
- Pin 5 and pin 3.
- Pin 5 and pin 6.
- Pin 5 and pin 7.

+24V is available between all the checked pins.

Y N

Disconnect [P/J300](#). Check for +24V between the pins that follow on the end of the harness:

- Pin 1 and pin 2.
- Pin 1 and pin 3.
- Pin 1 and pin 6.
- Pin 1 and pin 7.
- Pin 5 and pin 2.
- Pin 5 and pin 3.
- Pin 5 and pin 6.
- Pin 5 and pin 7.

A B C

A B C

+24V is available between all the checked pins on the end of the harness.

Y N

Refer to [Figure 1](#). Loosen the 4 screws and lift the power supply module away from the 2K LCSS frame. Go to [Flag 1](#). **ACL is available at CN1 between pins 1 and 3.**

Y N

Go to the [301C](#) AC Power RAP and check the AC output voltages.

Check the wiring between CN2 and [P/J300](#). **The wiring is good.**

Y N

Repair the wiring.

Install a new power supply module, [PL 12.75](#) Item 2.



WARNING

Do not install a fuse of a different type or rating. Installing the wrong type or rating of fuse can cause overheating and a risk of fire.

Perform the steps that follow:

1. Switch off the machine, [GP 14](#).
2. Go to [Flag 3](#). Disconnect all the +24V harnesses to components.
3. Check each harness for short circuits and overheating, [GP 7](#).
4. Install new components as necessary.
5. Install a new **FUSE (F1)** on the 2K LCSS PWB, reconnect [P/J300](#) and switch on the machine, [GP 14](#).
6. Monitor the voltage at the left end of the fuse and re-connect the circuits one at a time. Energize the re-connected components using the [dC330](#) control codes shown on [Figure 2](#).
7. If the voltage drops below +22V, switch off the machine, [GP 14](#). Re-check the last re-connected component and harness for overheating or short circuits. Install new components as necessary.

Go to the [312-312-00-110](#), [312-313-00-110](#) Interlocks RAP.

Perform the [312G-110](#) 2K LCSS PWB Damage RAP. If necessary, install a new 2K LCSS PWB, [PL 12.75](#) Item 1.

Go to [Flag 2](#). +5V is available at [P/J300](#) between pins 5 and 7, and between pins 6 and 8.

Y N

Disconnect [P/J300](#). +5V is available at [P/J300](#) between pins 5 and 7, and between pins 6 and 8 on the end of the harness.

Y N

Loosen the 4 screws and lift the power supply module away from the 2K LCSS frame, [Figure 2](#). Go to [Flag 1](#). **ACL is available at CN1 between pins 1 and 3.**

Y N

Go to the [301C](#) AC Power RAP and check the AC output voltages.

Go to [Flag 2](#). Check the wiring between CN2 and [P/J300](#). **The wiring is good.**

D E

D E

Y N

Repair the wiring.

Install a new power supply module, [PL 12.75 Item 2](#).

Perform the steps that follow:

1. Switch off the machine, [GP 14](#).
2. Go to [Flag 4](#). Disconnect all the +5V harnesses to components.
3. Check each harness for short circuits and overheating, [GP 7](#).
4. Install new components as necessary.
5. Reconnect [P/J300](#) and switch on the machine, [GP 14](#).
6. Monitor the voltage at [P/J300](#) pin 8. Re-connect the circuits one at a time. Energize the re-connected components using the [dC330](#) control codes shown on [Figure 2](#).
7. If the voltage drops below +4.7V, switch off the machine, [GP 14](#). Re-check the last re-connected component and harness for overheating or short circuits. Install new components as necessary.

If necessary install a new 2K LCSS PWB, [PL 12.75 Item 1](#).

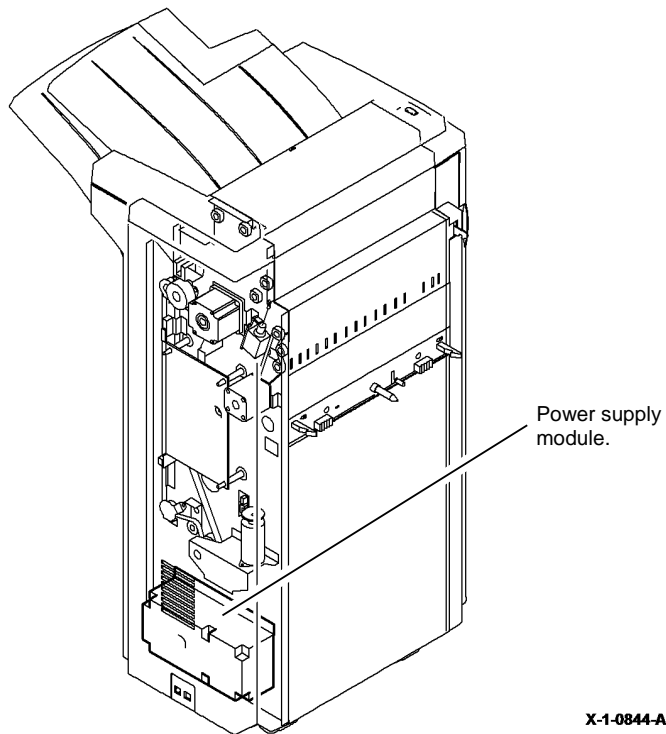
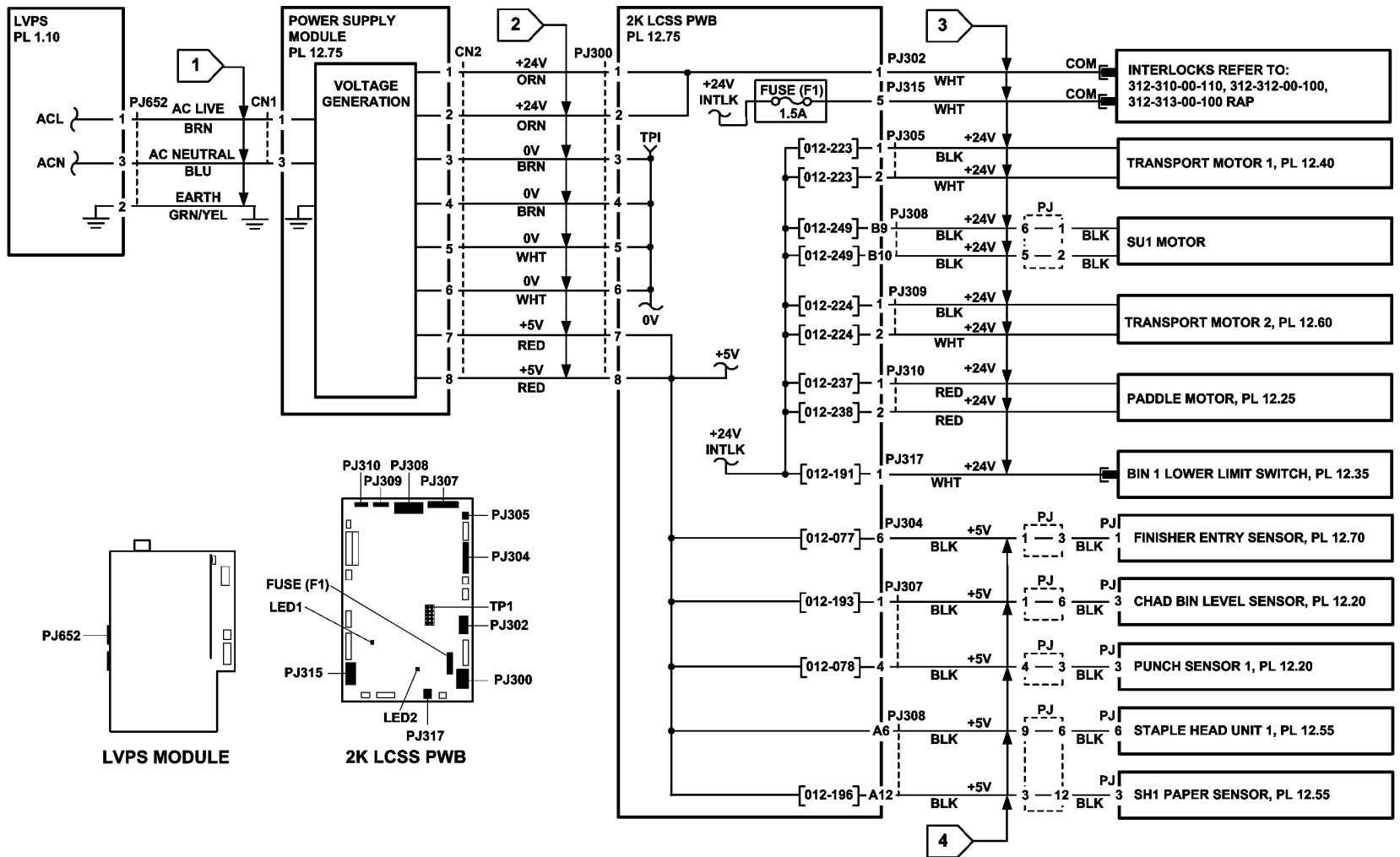


Figure 1 Component location



TX-1-0082-A

Figure 2 Circuit diagram

312E-110 Staple Head Operation Failure RAP

Use this RAP when the staple head fails to cycle or the stapler jaw is not at the home position.

NOTE: The home position is with the jaws of the staple head fully open.

Remote Service Actions

Ask the customer to Switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.



CAUTION

Do not run code 012-247 without 2 sheets of paper in the stapler jaws. Running this code without the paper in position can cause damage to the staple head.

Check the steps that follow:

- The 2K LCSS PWB DIP switch settings. Refer to the [312F-110](#) 2K LCSS PWB DIP Switch Settings RAP.
- The staple head unit is correctly installed, [PL 12.55 Item 5](#).

Procedure

NOTE: All 2K LCSS interlocks must be made to supply +24V to the motors.

Place 2 sheets of paper in the stapler jaws. Enter [dC330](#) code 012-247 to cycle the staple head once. Enter code 012-248 to reverse the staple head to the home position. **The staple head operates as expected.**

Y N
Go to [Flag 1](#) and [Flag 2](#). Check the wiring and connectors between the 2K LCSS PWB and the staple head. **The wiring is good.**

Y N
Repair the wiring, [REP 1.2](#) Wiring Harness Repairs.

Refer to:

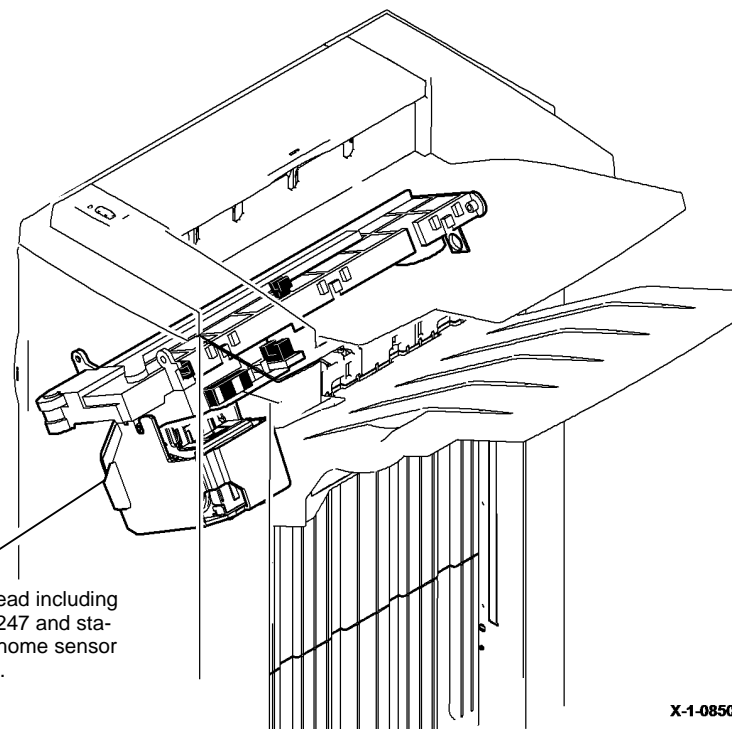
- [GP 13](#), How to Check a Switch.
- [P/J308](#), [2K LCSS PWB](#).
- [Figure 1](#), Component location.
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

- Staple head unit, [PL 12.55 Item 5](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

NOTE: Switch off, then switch on the machine, [GP 14](#), to enable operation of the staple head.

Perform [SCP 5](#) Final Actions.



Staple head including MOT12-247 and stapler jaw home sensor Q12-318.

Figure 1 Component location

X-1-0850-A

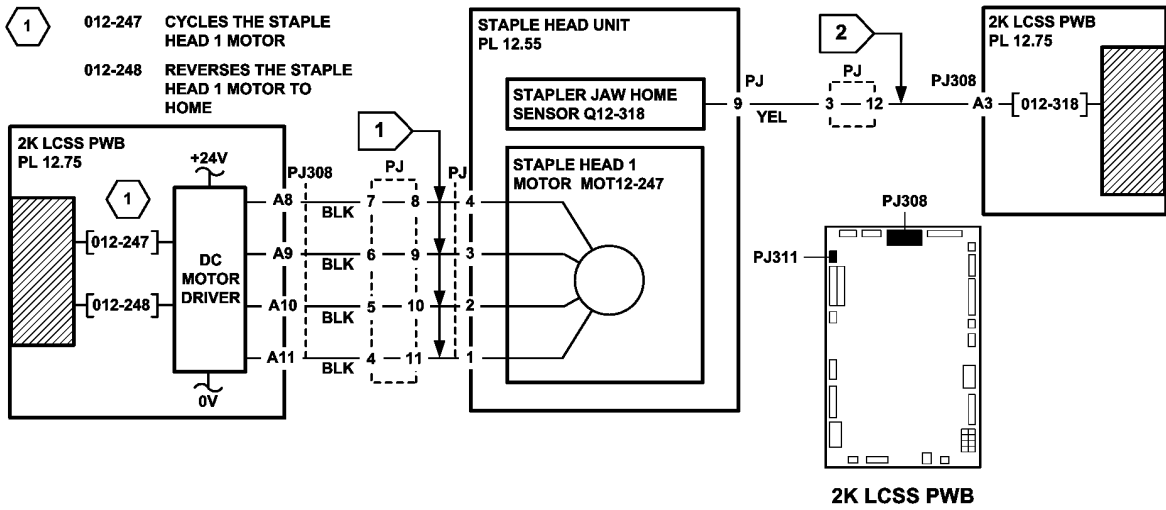


Figure 2 Circuit diagram

TX-1-0085-A

312F-110 2K LCSS PWB DIP Switch Settings RAP

To show the correct settings for the DIP switch on the 2K LCSS PWB.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

Problems that can result from incorrect DIP switch settings are:

- False jam clearance instructions for the 2K LCSS and/or the machine exit area.
- Communication errors between the 2K LCSS and machine.
- Erratic behavior of the 2K LCSS.

Check the DIP switch settings, [Figure 1](#). If necessary, switch off the machine, [GP 14](#). Correct the DIP switch setting, then switch on the machine, [GP 14](#).

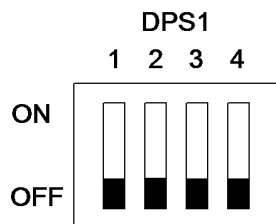


Figure 1 DIP switch settings

X-1-0029-A

312G-110 Copy Damage in the 2K LCSS RAP

Use this RAP to identify and correct the causes of copy damage in the 2K LCSS.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

Perform the checks that follow:

- Look for torn paper in the 2K LCSS paper path. Torn fragments can pass through the IOT and 2K LCSS paper path without causing a problem until they finally wedge themselves at some point. A likely place for a piece of paper to be wedged is at the hole punch assembly, where the top and bottom guides form the narrowest part of the paper path.
- Ensure that the exit diverter gate, [PL 12.60 Item 13](#), operates correctly and has full movement.
- Ensure that the hole punches park at the fully open position. If they protrude even slightly, a jam will occur in the narrow paper path of the hole punch.
- Ensure that the jam clearance guide, [PL 12.70 Item 6](#), closes and latches correctly. Check that the magnet at the rear is located and operates correctly. Check the spring clip at the front is positioned correctly, [Figure 1](#).
- Ensure that all idler rolls in the 2K LCSS paper path are free to rotate, particularly those on the jam clearance guide, where the paper turns through 90 degrees.
- Ensure that the paper path ribs of the paper entry guide assembly, [PL 12.40 Item 8](#), and the entry guide cover, [PL 12.70 Item 5](#), are free of scores and nicks. Check also for contamination and glue from label stock.

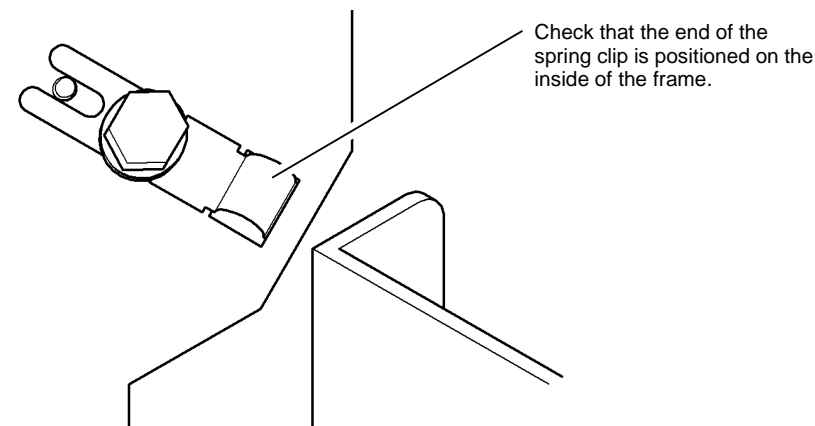


Figure 1 Position of the spring clip

312H-110 Mis-Registration in Stapled Sets and Non-Stapled Sets RAP

Use this RAP to identify and correct the causes of mis-registration in stapled sets, resulting in staples missing some sheets in the set, or poorly registered non-stapled sets.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

The most likely cause of mis-registration is paper condition and/or damage such as curl, wrinkle, creases, or dog ears.

Curl, wrinkle and creases are probably caused in the IOT. Perform the [IQ1 Image Quality Entry RAP](#).

For other copy/print damage and dog ears, perform the [312G-110 Copy Damage](#) in the 2K LCSS RAP.

Perform the steps that follow:

- Check that bin 1 is seated correctly and the bin 1 alignment clip is in position, [PL 12.10 Item 13](#).
- Turn over the paper stack in the tray in use.
- Use a new ream of paper in the tray in use.
- Paper type, especially recycled paper, can lead to registration problems. Change to a different brand or type of paper, if available.
- Ensure that the guides in the paper trays are correctly set and reported on the UI for the paper size loaded.
- Check that paper type is set correctly. If heavyweight paper is used but not set in the UI, the compiler capacity can be exceeded.
- Check for obstructions in the compiler.
- Ensure that the paddle shaft operates correctly and that the paddles are not damaged. The paddles should park completely inside the output cover, [PL 12.10 Item 7](#), with the shorter paddle in a vertical position. If all of the paddles are out of position, check the paddle roll home sensor, [PL 12.25 Item 11](#), the flag, [PL 12.25 Item 6](#) and the paddle roll motor assembly, [PL 12.25 Item 10](#). If only 1 paddle is mis-aligned with the others, it can be re-positioned by hand (they are not bonded to the shaft).
- Ensure that the tampers operate correctly, i.e. are not stalling or losing position during the job. Inspect the tampers for damage, if necessary, install new components, [PL 12.45](#).

- Inspect the bin 1 entry nips for roll damage. The idlers should be held against the rubber driving rolls and they should be free to rotate within their support springs. If necessary, install new components, [PL 12.65](#).
- Inspect the 4 spring loaded guides on the output cover, [PL 12.10 Item 7](#). Ensure that they are correctly located and are free to move up and down.

312J-110 2K LCSS Poor Stacking RAP

Use this RAP to find the cause of poor stacking in the 2K LCSS.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the checks that follow:

- Look for sets that are not dropping back fully in bin 1 and therefore not operating the bin 1 level sensor:
 - Large paper sizes should not be stacked on top of small paper sizes.
 - Ensure that the paper stack in each paper tray has been fanned.
 - Turn over the paper stack in each paper tray.
 - Ensure that all paper or other copy stock being used is within the size and weight specifications. Refer to GP 20 Paper and Media Size Specifications.
 - Use a new ream of paper, if available.
 - Ensure that the edge guides of all paper trays are adjusted correctly for the paper size and that the trays are fully closed.
 - Check that bin 1 is seated correctly and the bin 1 alignment clip is in position, PL 12.10 Item 13.
- Labels must not be fed to bin 1. Feed all labels to bin 0 only.
- It is recommended that transparencies are fed to bin 0 whenever possible.
- Check that bin 1 is level front to back. If necessary, perform ADJ 12.1-110 2K LCSS Bin 1 Level.
- Check that the bin 1 upper level sensor Q12-188 is working correctly. Refer to the Bin 1 Movement Failure RAP.
- Check the operation of the front and rear tampers. Refer to 312-392-00-110, 312-393-00-110, 312-394-00-110 Front Tamper Move Failure RAP and 312-396-00-110, 312-397-00-110, 312-398-00-110 Rear Tamper Move Failure RAP.
- Check that the output device is not near an air conditioning or ventilation output duct. Air flow across the output bins can cause poor stacking.

312K-110 Stapler Priming Failure RAP

Use this RAP when the staples in the stapling head are not primed.

Remote Service Actions

Ask the customer to Switch off, then switch on the machine, GP 14. If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

- Check the 2K LCSS PWB DIP switch settings. Refer to 312F-110 2K LCSS PWB DIP Switch Settings RAP.
- Perform the checks that follow:
 - The staple cartridge has staples in it and is correctly installed.
 - The leading staples in the staple head have been primed, Figure 3.
 - Check that the sheets of staples in the cartridge are feeding one at a time. If staple sheets overlap, they will jam in the cartridge. If necessary, install a new staple cartridge, PL 12.55 Item 7.

NOTE: The term “priming” refers to 2 staples at the front of the cartridge, that have been preformed automatically by the action of the stapler, refer to Figure 3.

NOTE: The SH1 low staples sensor, SH1 cartridge sensor, SH1 home sensor and the SH1 priming sensor are all integral to the staple head unit. These sensors can be checked using component control codes but they cannot be exchanged as components.

Procedure

Figure 1. Enter dC330 code 012-196, SH1 paper sensor Q12-196, actuate the sensor. **The display changes.**

Y N

Go to Flag 1. Check Q12-196.

Refer to:

- GP 11, How to Check a Sensor.
- P/J308, 2K LCSS PWB.
- 312D-110 2K LCSS Power Distribution RAP.

Install new components as necessary:

- SH1 paper sensor, PL 12.55 Item 4.
- 2K LCSS PWB, PL 12.75 Item 1.

A

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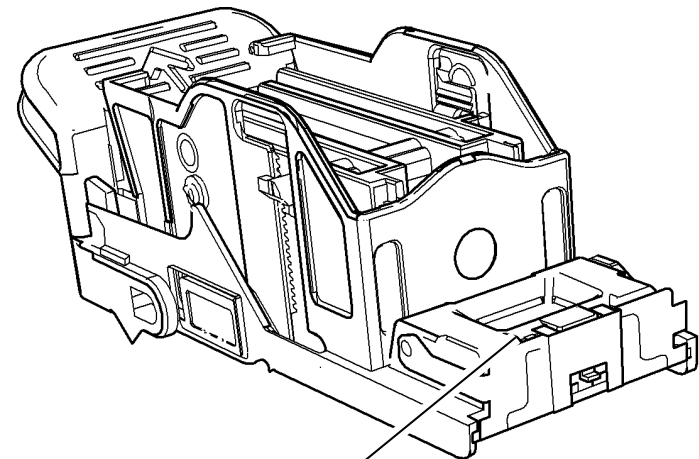
NOTE: If the SH1 priming sensor does not detect staples in the primed position, the staple head cycles a number of times to prime the staple head. This occurs when the 2K LCSS interlocks are made.

Follow the customer instruction label inside the 2K LCSS front door to remove the staple cartridge. Open the forming gate to slide out the bottom sheet of staples from the cartridge, to expose a new sheet of staples on the bottom of the stack. Ensure the forming plate is fully closed, **Figure 2**. Install the staple cartridge and close the door. The stapler will now cycle a few times to feed and prime the new sheet of staples. Open the door and remove the staple cartridge. Examine the sheet of staples that have been fed to the staple forming part of the stapler, by opening the forming plate, **Figure 3**. **The first 2 staples have been partially formed.**

Y N

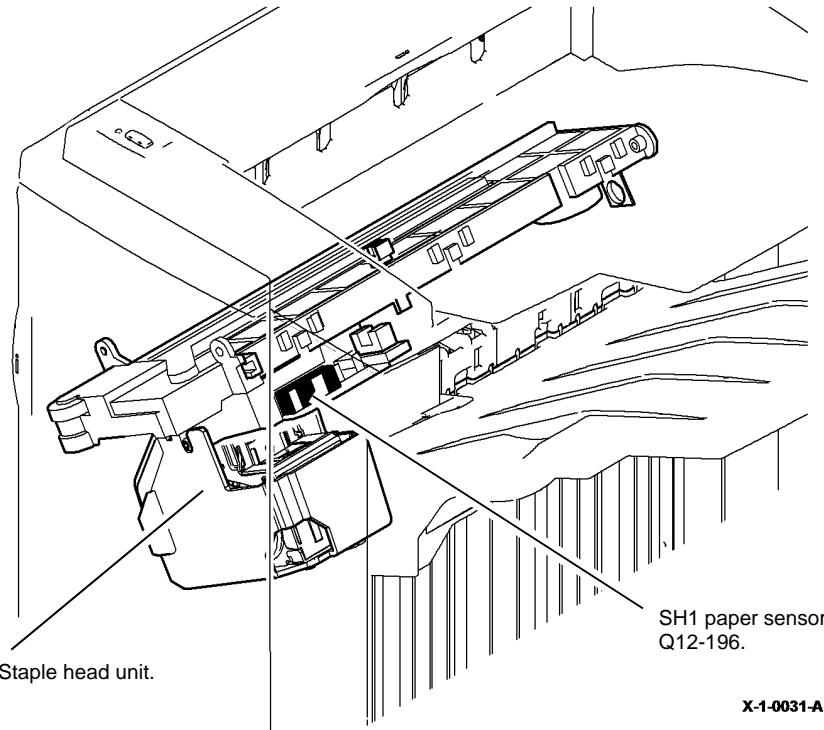
Install a new staple cartridge, **PL 12.55 Item 7** and repeat the check. If the first 2 staples are not partially formed install a new staple head unit, **PL 12.55 Item 5**. Perform **SCP 5 Final Actions**.

The staple priming is working correctly. Perform **SCP 5 Final Actions**.



Forming plate closed.

Figure 2 Staple cartridge closed

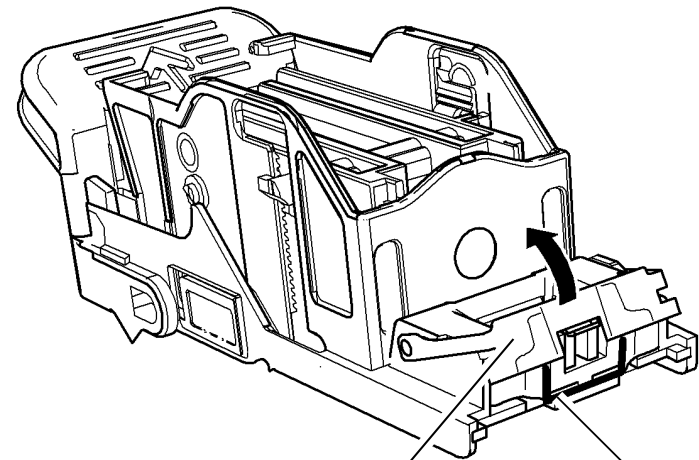


Staple head unit.

SH1 paper sensor
Q12-196.

X-1-0031-A

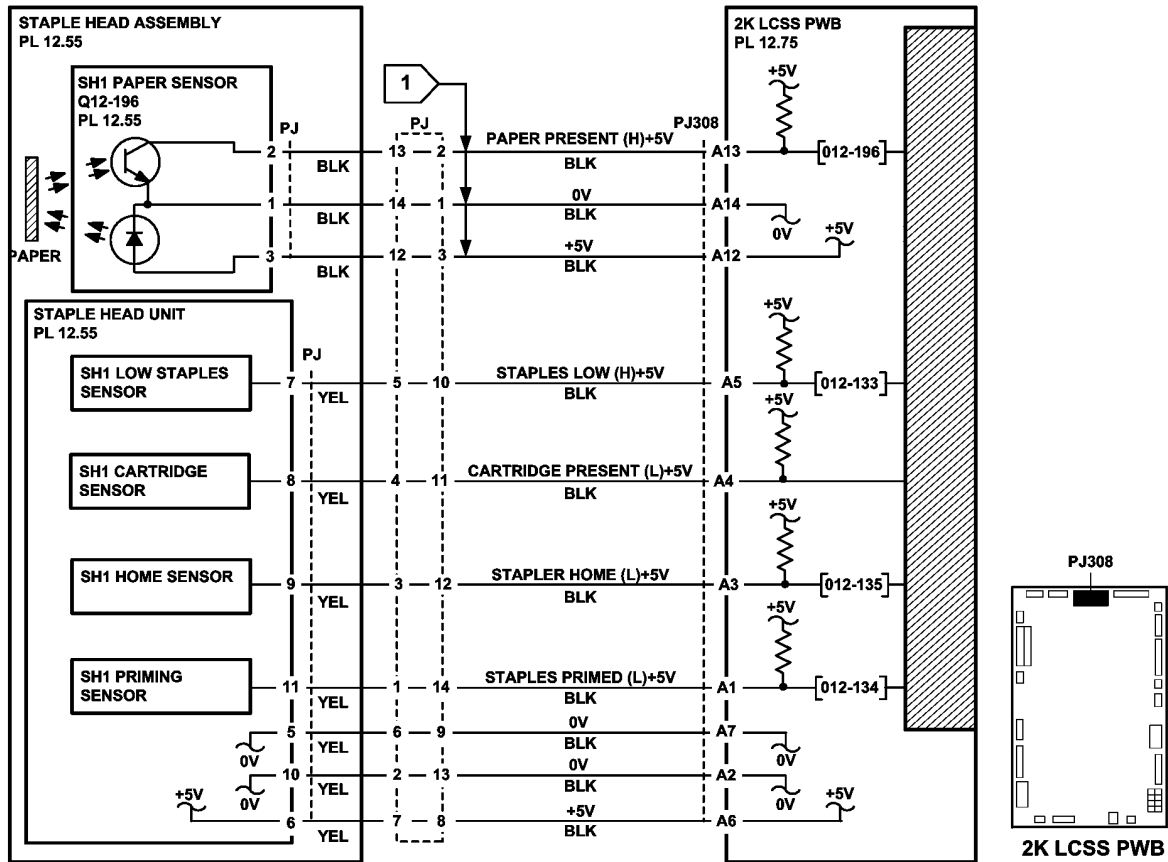
Figure 1 Component location



Primed staples.

Forming plate open.

Figure 3 Staple cartridge open



TX-1-0084-A

Figure 4 Circuit diagram

312-024-00-150, 312-025-00-150 Paddle Roll Failure RAP

312-024-00-150 The paddle was not at the home position.

312-025-00-150 The paddle failed to rotate.

NOTE: The paddle is in the home position when the sensor flag is located between the sensor jaws. If a jam occurs in the compiler, bin 1 will not be available.

Remote Service Actions

Ask the customer to check the items that follow:

- That there is no paper or other obstruction in the vicinity of the paddle.
- That the paper type is set correctly. If heavyweight paper is used but not set in the UI, the compiler capacity can be exceeded. Refer to [312G-150 Mis-Registration in Stapled Sets and Non-stapled Sets RAP](#).

If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the items that follow:

- The paddle roll position sensor bracket is holding the sensor in the correct position, i.e. the flag is in the middle of the sensor gap and the sensor does not touch any moving components.
- The position of the paddles. With the paddle roll in the home position, both sets of paddles must be within the output cover. If they are not, refer to [REP 12.12-150 Paddle Shaft Assembly and Paddle Motor Assembly](#). If any of the paddles are out of alignment to other paddles, install a new set of 4 paddles, [PL 31.12 Item 5](#).
- LVF PWB DIP switch settings. Refer to [312F-150 LVF PWB and LVF BM PWB DIP Switch Settings RAP](#).

Procedure

NOTE: All LVF BM interlocks must be made to supply +24V to the motors.

Enter [dC330](#), code 012-237, to run the paddle motor, MOT12-238, [PL 12.335 Item 10](#). The paddle rotates correctly.

Y N

Go to [Flag 2](#). Check the paddle roll motor, MOT12-238.

Refer to:

- [GP 10](#), How to Check a Motor.
- [Figure 1](#).
- [P/J310, LVF PWB](#).
- [312D-150 LVF BM Power Distribution RAP](#).

Repair or install new components as necessary:

- Paddle motor assembly, [PL 12.335 Item 10](#).
- LVF PWB, [PL 12.425 Item 8](#).

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Enter [dC330](#), code 012-186, paddle roll home sensor, Q12-186, [PL 12.335 Item 4](#). Add the code 012-238, paddle roll motor run, to actuate Q12-186. The display cycles high/low.

Y N

Go to [Flag 1](#). Check Q12-186.

Refer to:

- [GP 11](#), How to Check a Sensor.
- [Figure 1](#).
- [P/J314, LVF PWB](#).
- [312D-150 LVF BM Power Distribution RAP](#).

Repair or install new components as necessary:

- Paddle roll home sensor, [PL 12.335 Item 4](#).
- LVF PWB, [PL 12.425 Item 8](#).

Perform [SCP 5](#) Final Actions.

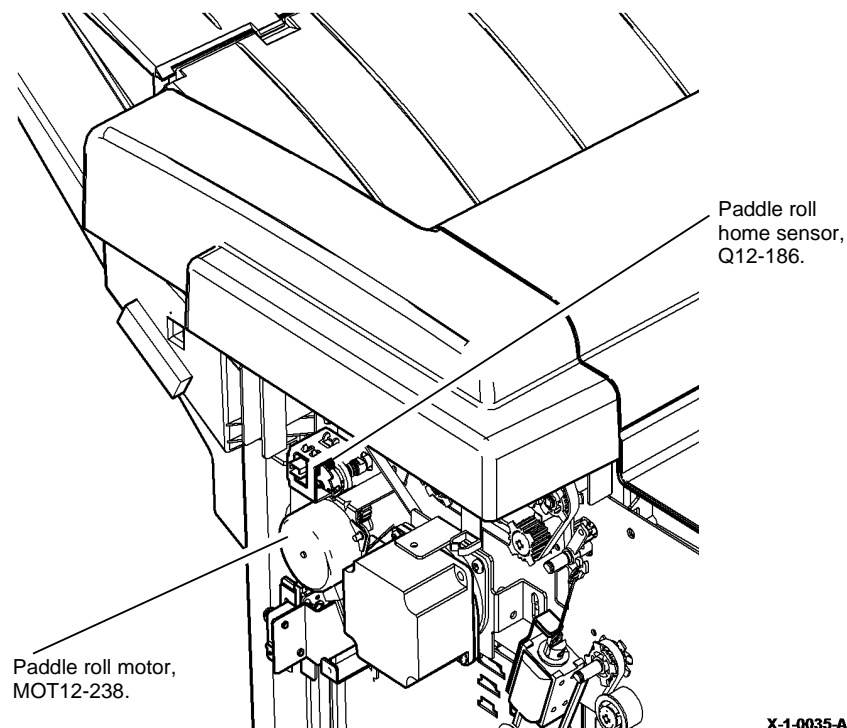


Figure 1 Component location

A

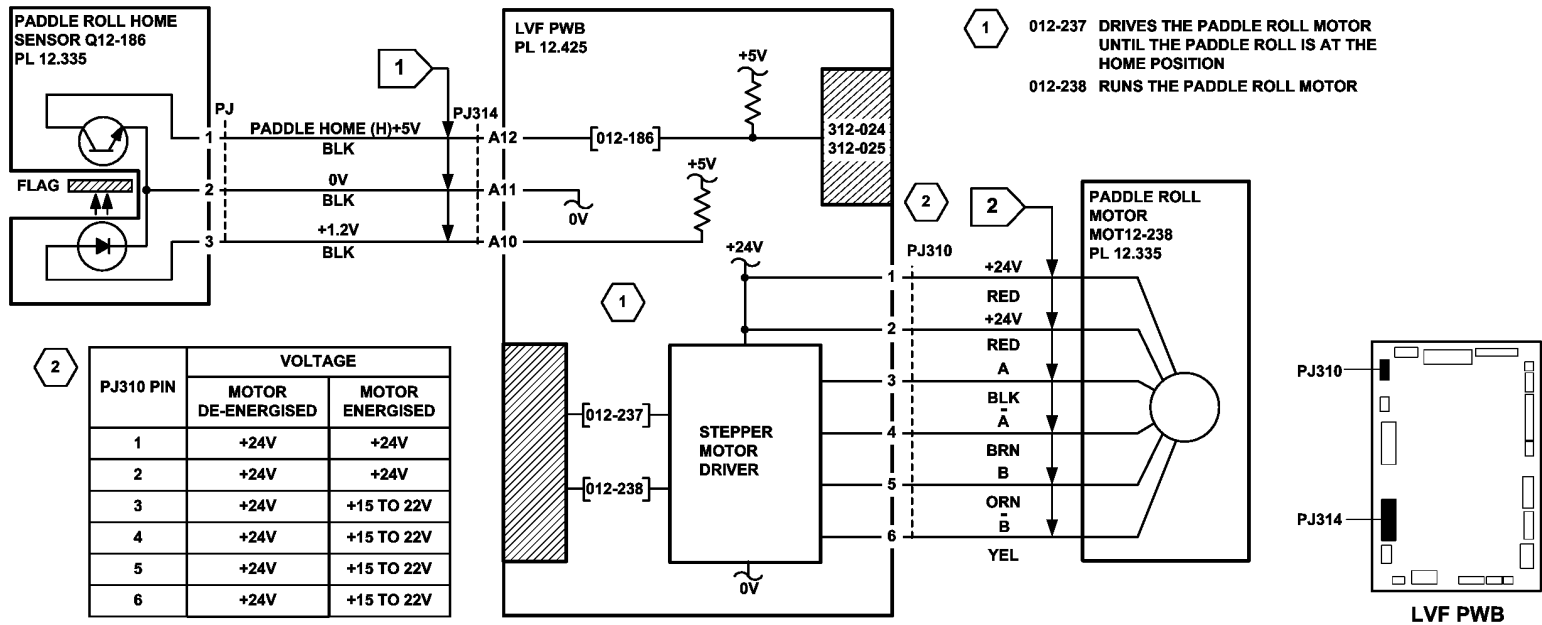


Figure 2 Circuit diagram

TX-1-0023-A

312-043-00-150, 312-046-00-150 Hole Punch Operation Failure RAP

312-043-00-150 The hole punch failed to perform a punch cycle.

312-046-00-150 The hole punch was not at the home position.

Remote Service Actions

Ask the customer to check the items that follow:

- Check that the hole punch is present and correctly installed.
- Check that the hole punch has not jammed in the down position. This can occur with transparencies and labels.

NOTE: The home position of the punch unit is when the cut-out in the actuator is between the punch head home sensor jaws.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the LVF PWB DIP switch settings. Refer to [312F-150 LVF PWB and LVF BM PWB DIP Switch Settings RAP](#).

Procedure

Go to [Flag 5](#). Check the link between [P/J307](#) pins 10 and 11, [LVF PWB](#). **The link is good.**

Y N
Repair the wiring or connector, [REP 1.2](#).

Enter [dC330](#), code 012-195, punch head present sensor, Q12-195, [Figure 1](#). Actuate Q12-195. **The display changes.**

Y N
Go to [Flag 2](#). Check Q12-195.
Refer to:

- [GP 11](#) How to Check a Sensor.
 - [P/J307, LVF PWB](#).
 - [312D-150 LVF BM Power Distribution RAP](#).
- Repair or install new components as necessary:
- Punch head home sensor, [PL 12.330 Item 1](#).
 - LVF PWB, [PL 12.425 Item 8](#).

Enter [dC330](#) code 012-194, punch head home sensor, Q12-194, [Figure 1](#). Actuate Q12-194. **The display changes.**

Y N
Go to [Flag 1](#). Check Q12-194.

Refer to:

- [GP 11](#) How to Check a Sensor.
 - [P/J307, LVF PWB](#).
 - [312D-150 LVF BM Power Distribution RAP](#).
- Repair or install new components as necessary:
- Punch head home sensor, [PL 12.330 Item 1](#).
 - LVF PWB, [PL 12.425 Item 8](#).

Enter [dC330](#) code 012-244, punch head run. **The punch cycles.**

Y N
Go to [Flag 3](#). Check the punch head motor assembly, MOT12-243.
Refer to:

- [Figure 2](#).
 - [GP 10](#), How to Check a Motor.
 - [P/J311, LVF PWB](#).
 - [312D-150 LVF BM Power Distribution RAP](#).
- Repair or install new components as necessary:
- Punch head motor assembly, [PL 12.330 Item 2](#).
 - LVF PWB, [PL 12.425 Item 8](#).

NOTE: The chad bin collects the pieces of paper cut out by the hole punch. The chad bin level sensor will not operate if the bin is incorrectly installed. Ensure the chad bin is fully inserted and the lever engages in the slot.

Enter [dC330](#), code 012-193, chad bin level sensor, Q12-193, [Figure 2](#). Use a strip of paper to actuate Q12-193. **The display changes.**

Y N
Go to [Flag 4](#). Check Q12-193.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J307, LVF PWB](#).
- [312D-150 LVF BM Power Distribution RAP](#).

Install new components as necessary.

- Chad bin level sensor, [PL 12.330 Item 7](#).
- LVF PWB, [PL 12.425 Item 8](#).

At a customer site with more than one type of Xerox device, it is possible that chad bins may have been inadvertently swapped. Refer to [Figure 3](#), ensure that the correct type of chad bin is installed.

Perform [SCP 5](#) Final Actions.

A

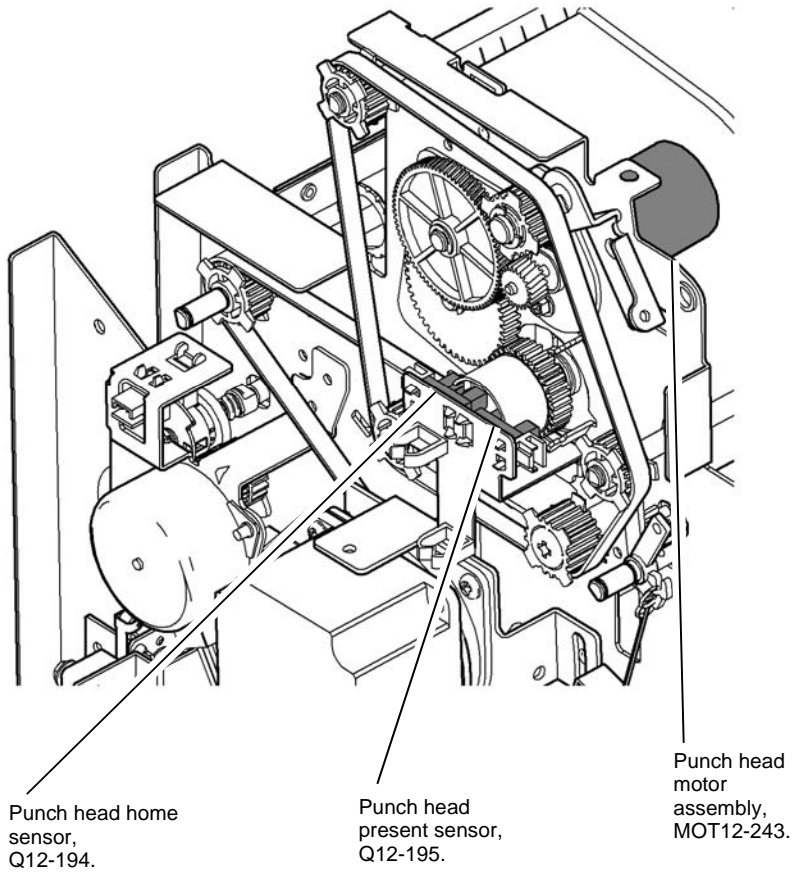


Figure 1 Component location

X-1-0038-A

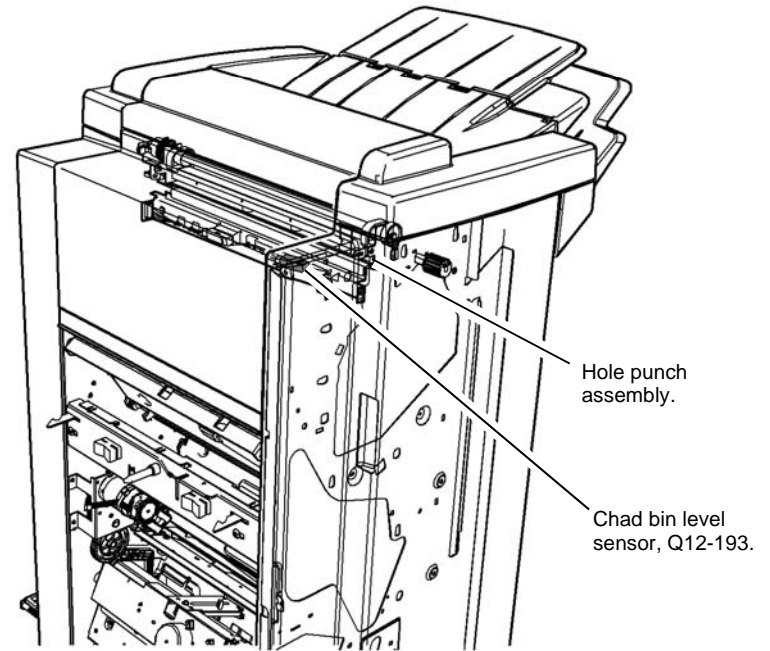
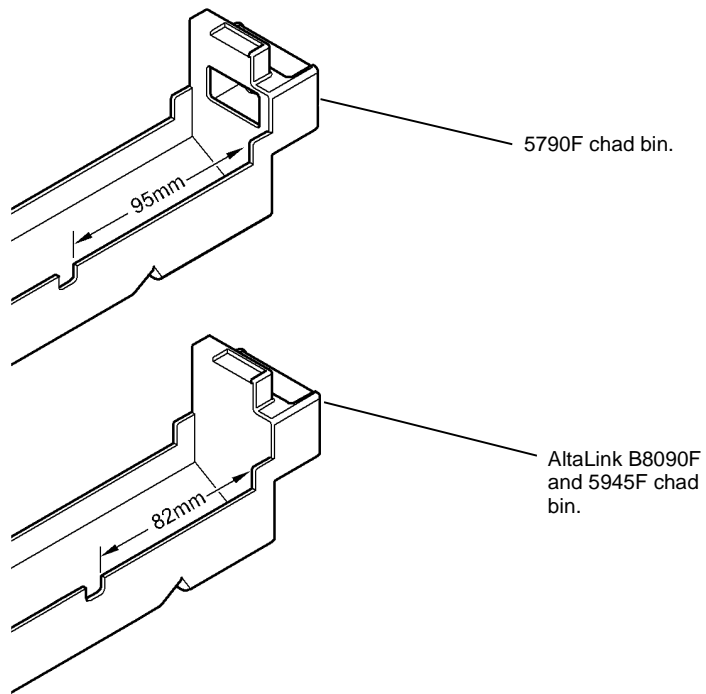


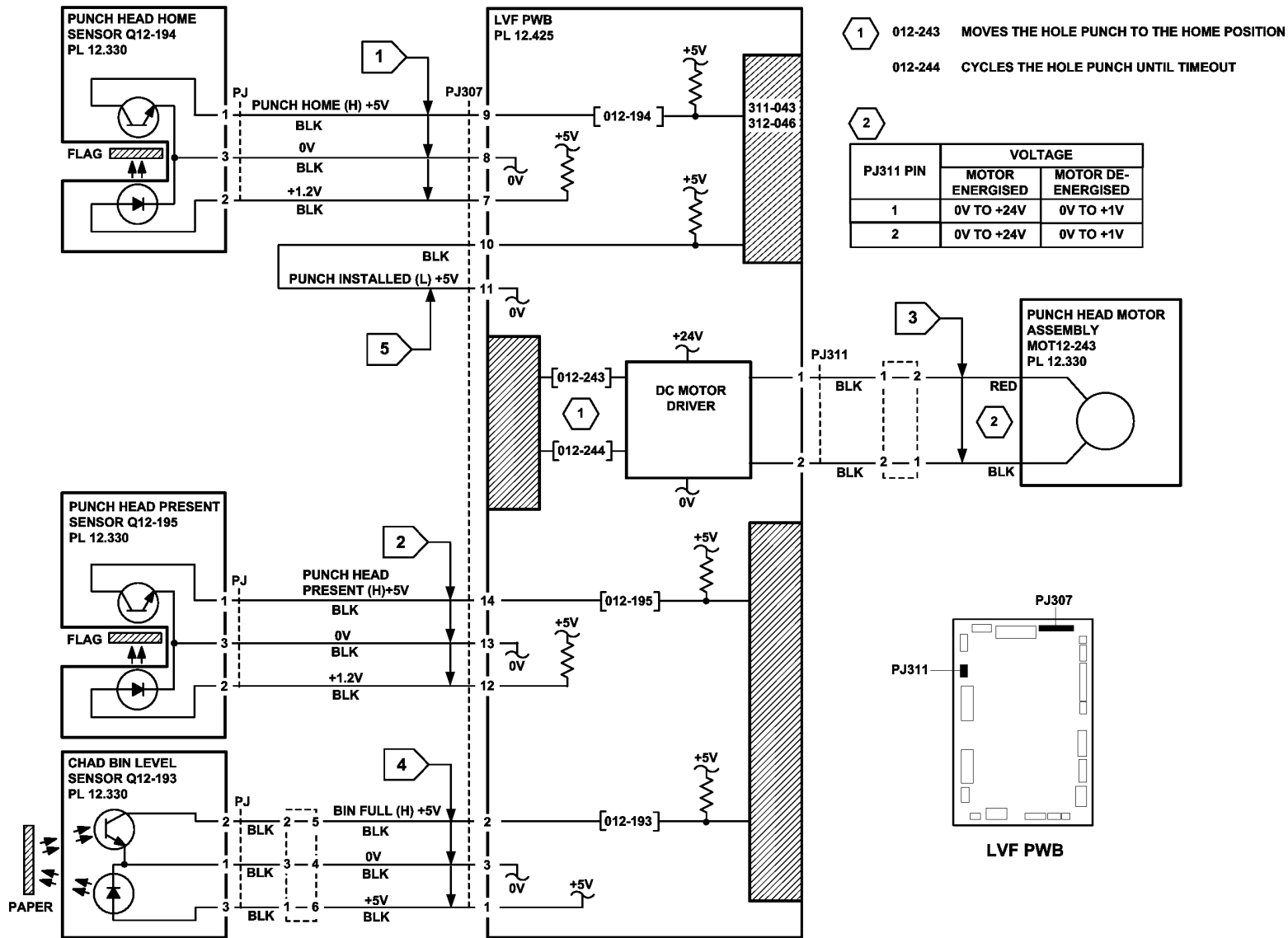
Figure 2 Component location

X-1-0039-A



X-1-1424-A

Figure 3 Chad bin differences



TX-1-0026-A

Figure 4 Circuit diagram

312-061-00-150 Crease Blade Move Failure RAP

312-061-00-150 The crease blade failed to clear the crease blade home sensor.

Remote Service Actions

Ask the customer to rotate the crease blade handle, [PL 12.405 Item 1](#), to ensure that the crease blade mechanism is free to move. If necessary, clear any paper jam in the area of the crease blade. If the fault continues, a site visit will be necessary.

Procedure



WARNING

Keep away from the crease blade mechanism when working in close proximity to the booklet maker while the machine is powered on. The crease blade mechanism activates quickly and with great force.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Check the parts that follow for damage:

- Crease blade assembly, [PL 12.405 Item 5](#).
- Crease blade drive gear, [PL 12.405 Item 7](#).
- Crease blade gearbox, [PL 12.405 Item 11](#).
- Crease blade cranks, [PL 12.405 Item 12](#).
- Crease blade front blade arm, [PL 12.405 Item 8](#).
- Crease blade rear blade arm, [PL 12.405 Item 9](#).
- Crease blade guides, [PL 12.405 Item 3](#).

The parts are good.

Y N
Install new components as necessary.

Enter [dC330](#) code 012-214, crease blade home sensor, Q12-214. Actuate Q12-214, [Figure 1](#), by rotating the crease blade knob so that the flag on the crease blade moves into and out of Q12-214. The display changes.

Y N
Go to [Flag 1](#). Check Q12-214.
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J104, LVF PWB](#).
- [312D-150 LVF BM Power Distribution RAP](#).

Install new components as necessary:

- LVF BM PWB, [PL 12.425 Item 1](#).
- Crease blade home sensor, [PL 12.405 Item 4](#).

A

Enter [dC330](#) code 012-215, crease blade motor encoder sensor, Q12-215. Actuate Q12-215, [Figure 1](#), by slowly rotating the crease blade knob. The display changes.

Y N
Go to [Flag 3](#). Check Q12-215.
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J104, LVF PWB](#).
- [312D-150 LVF BM Power Distribution RAP](#).

Install new components as necessary:

- LVF BM PWB, [PL 12.425 Item 1](#).
- Crease blade motor encoder sensor, [PL 12.405 Item 4](#).

Enter [dC330](#) code 012-252 to cycle the crease blade motor, MOT12-252, [Figure 1](#). The motor runs.

Y N
Go to [Flag 2](#). Check MOT12-252.
Refer to:

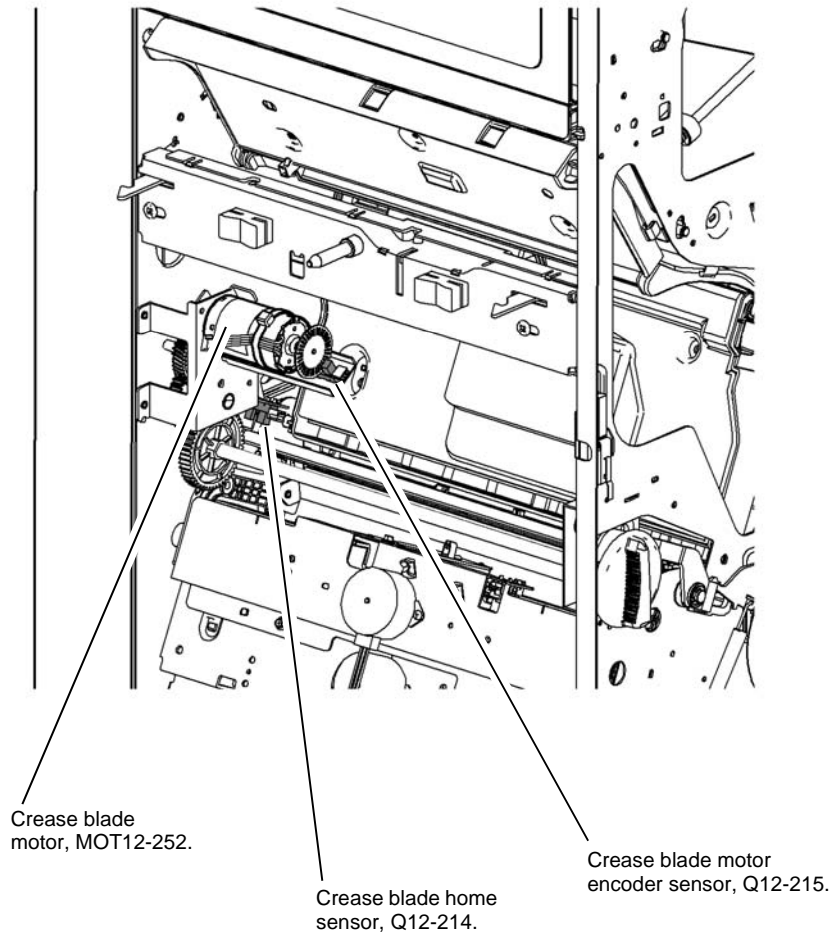
- [GP 10](#), How to Check a Motor.
- [P/J104, LVF BM PWB](#).
- [312D-150 LVF BM Power Distribution RAP](#).

Install new components as necessary:

- LVF BM PWB, [PL 12.425 Item 1](#).
- Crease blade motor, [PL 12.405 Item 2](#).

The fault may be intermittent. Check for damaged wiring or connectors. If necessary repair the wiring, [REP 1.2](#), or install new components.

A



X-1-0042-A

Figure 1 Component location

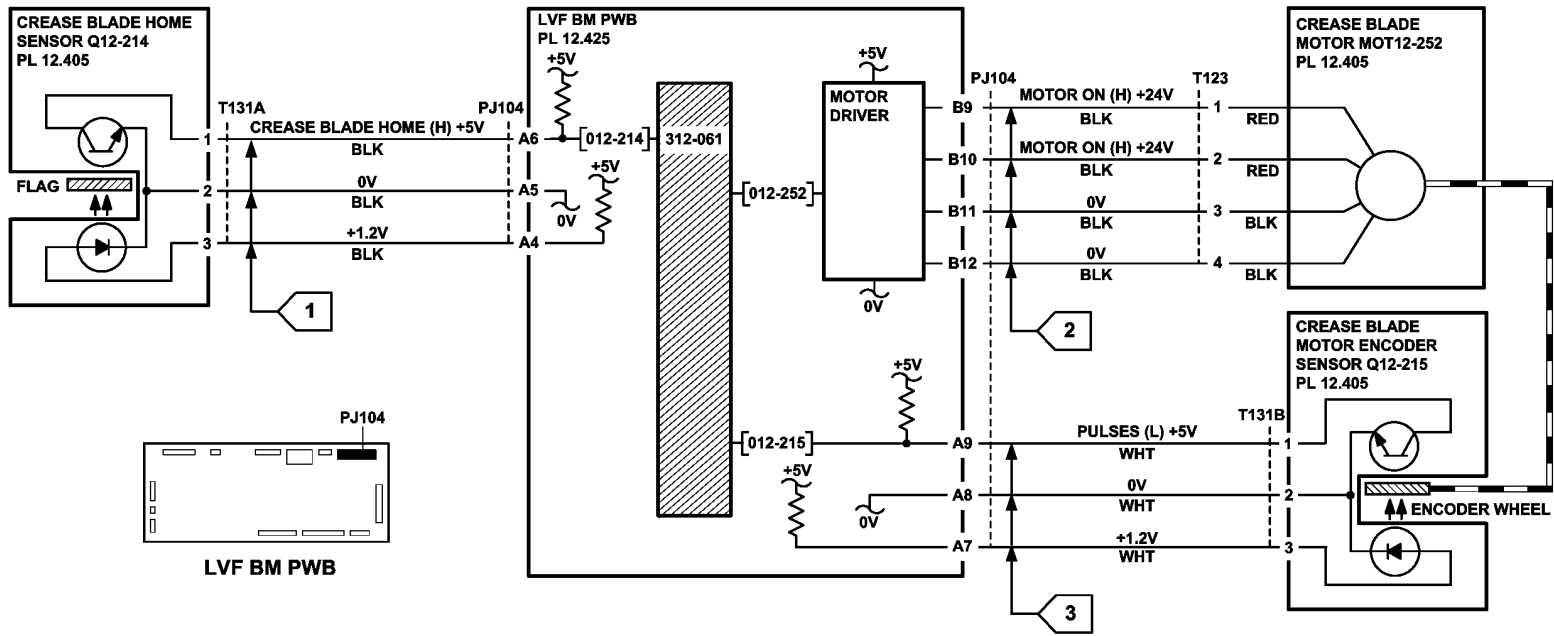


Figure 2 Circuit diagram

TX-1-0029-A

312-062-00-150 Crease Roll Failure RAP

312-062-00-150 The crease roll motor failed to run.

Remote Service Actions

Ask the customer to rotate the crease roll handle, [PL 12.410 Item 1](#), to ensure that the crease roll mechanism is free to move. If necessary clear any paper jam in the area of the crease rolls. If the fault continues, a site visit will be necessary.

Procedure



WARNING

Keep away from the crease blade mechanism when working in close proximity to the booklet maker while the machine is powered on. The crease blade mechanism activates quickly and with great force.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Check the parts that follow for damage:

- Upper crease roll, [PL 12.410 Item 2](#).
- Lower crease roll, [PL 12.410 Item 3](#).
- Crease roll gearbox assembly, [PL 12.415 Item 8](#).
- Crease roll gear 1, [PL 12.415 Item 1](#).
- Crease roll gear 2, [PL 12.415 Item 2](#).
- Crease roll gear 3, [PL 12.415 Item 3](#).
- Crease roll gear 4, [PL 12.415 Item 4](#).

The parts are good.

- Y N
Install new components as necessary.

Enter [dC330](#) code 012-216, crease roll motor encoder sensor, Q12-216. Actuate Q12-216, [Figure 1](#), by slowly rotating the crease roll handle. The display changes.

- Y N
Go to [Flag 1](#). Check Q12-216.
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J112](#), LVF BM PWB.
- [312D-150](#) LVF BM Power Distribution RAP.

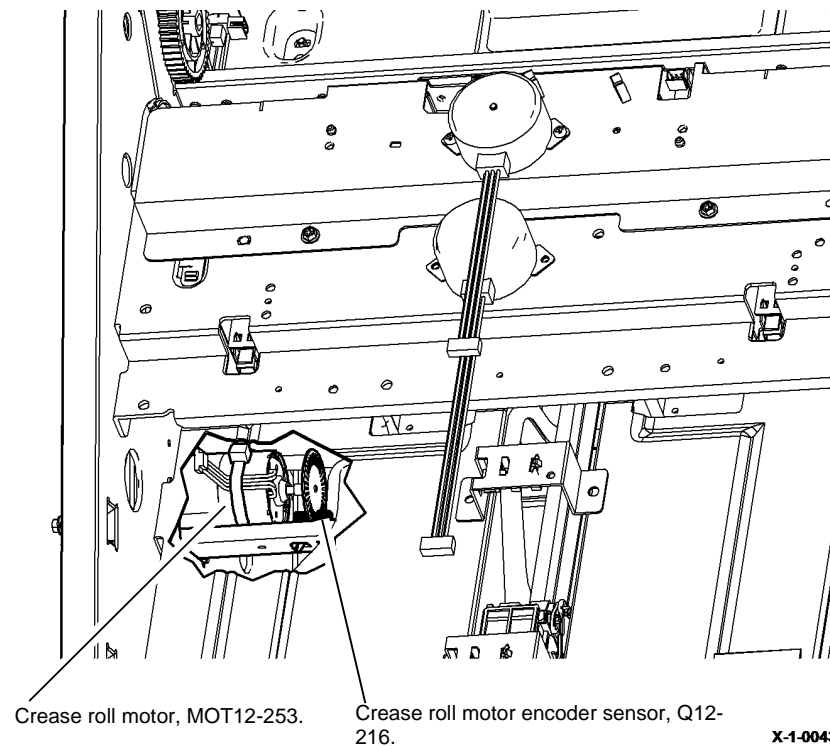
Install new components as necessary:

- LVF BM PWB, [PL 12.425 Item 1](#).
- Crease roll motor encoder sensor, [PL 12.415 Item 7](#).

Enter [dC330](#) code 012-253 to run the crease roll motor, MOT12-253, [Figure 1](#). The motor runs.

- Y N
Go to [Flag 2](#), MOT12-253.
Refer to:
- [GP 10](#), How to Check a Motor.
 - [P/J103](#), LVF BM PWB.
 - [312D-150](#) LVF BM Power Distribution RAP.
- Install new components as necessary:
- LVF BM PWB, [PL 12.425 Item 1](#).
 - Crease roll motor, [PL 12.415 Item 5](#).

The fault may be intermittent. Check for damaged wiring or connectors. If necessary repair the wiring, [REP 1.2](#), or install new components.



X-1-0043-A

Figure 1 Component location

312-063-00-150, 312-414-00-150, 312-488-00-150, 312-490-00-150 Booklet Stapler Movement Failure RAP

312-063-00-150 The booklet stapler unit failed to move away from the home position.

312-414-00-150 The booklet stapler head failed to move to the home position in the allowed time during initialisation or at a set boundary.

312-488-00-150 The booklet stapler unit failed to move to the home position in the allowed time.

312-490-00-150 The booklet stapler unit failed to move to the away position in the allowed time.

Remote Service Actions

Ask the customer to check for a paper jam, paper debris or damage in the stapler area that would hinder the movement of the BM staple head assembly. If the fault continues, a site visit will be necessary.

Procedure

WARNING

Keep away from the crease blade mechanism when working in close proximity to the booklet maker while the machine is powered on. The crease blade mechanism activates quickly and with great force.

WARNING

Switch off the electricity to the machine. Refer to **GP 14**. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Enter **dC330** code 012-438, BM staple unit home sensor, Q12-438. Actuate Q12-438, **Figure 1**. The display changes.

Y N

Go to **Flag 1**. Check Q12-438.
Refer to:

- **GP 11**, How to Check a Sensor.
- **P/J107**, LVF BM PWB.
- **312D-150** LVF BM Power Distribution RAP.

Install new components as necessary:

- LVF BM PWB, **PL 12.425** Item 1.
- Staple unit home sensor, **PL 12.395** Item 2.

Enter **dC330** code 012-439, BM staple unit away sensor, Q12-439, **Figure 1**. Actuate Q12-439. The display changes.

Y N

Go to **Flag 2**. Check Q12-439.

A

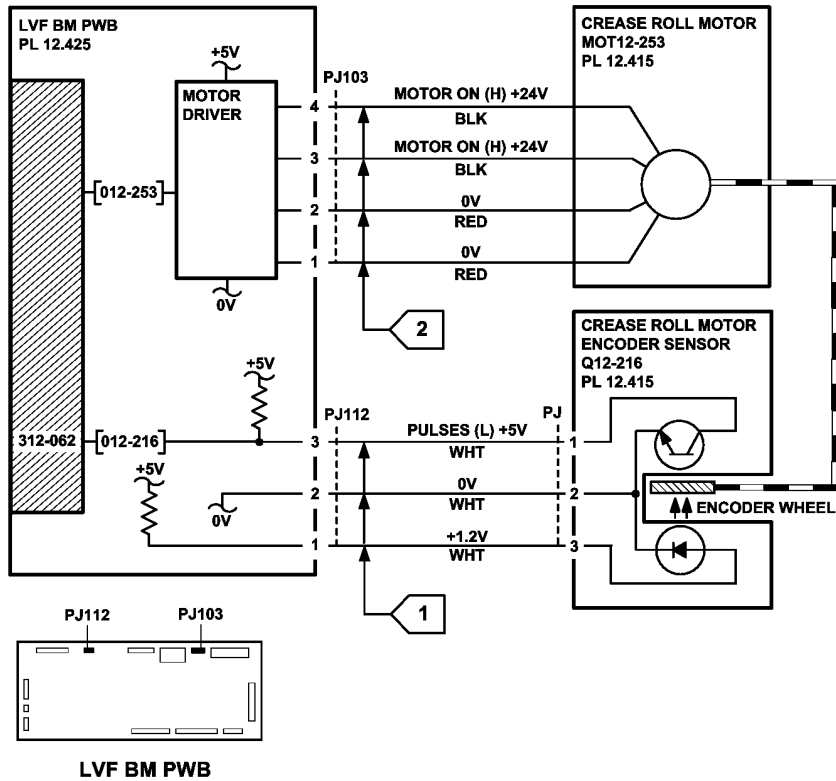


Figure 2 Circuit diagram

TX-1-0030-A

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Refer to:

- GP 11, How to Check a Sensor.
- P/J107, LVF BM PWB.
- 312D-150 LVF BM Power Distribution RAP.

Install new components as necessary:

- LVF BM PWB, PL 12.425 Item 1.
- Staple unit away sensor, PL 12.395 Item 2.

Enter dC330 code 012-437 to run the BM staple clinch motor, MOT12-437, Figure 2. The motor runs.

Y N

Go to Flag 5. Check MOT12-437.

Refer to:

- GP 10, How to Check a Motor.
- P/J107, LVF BM PWB.
- 312D-150 LVF BM Power Distribution RAP.

Install new components as necessary:

- LVF BM PWB, PL 12.425 Item 1.
- BM staple head assembly, PL 12.395 Item 5.
- BM stapler assembly, PL 12.395 Item 1.

Enter dC330 code 012-411 to monitor the BM stapler jaw home sensor, Q12-411, Figure 2. Add the code 012-437 to run the BM staple clinch motor, MOT12-437. The display changes.

Y N

Go to Flag 3. Check Q12-411.

Refer to:

- GP 11, How to Check a Sensor.
- P/J107, LVF BM PWB.
- 312D-150 LVF BM Power Distribution RAP.

Install new components as necessary:

- LVF BM PWB, PL 12.425 Item 1.
- BM staple head assembly, PL 12.395 Item 5.

Enter dC330 code 012-435, BM staple unit move to home, to move the staple unit to the home position, or enter code 012-436, BM staple unit move to away, to move the staple unit to the away position, Figure 1. The motor runs.

Y N

Go to Flag 4. Check the staple unit move motor, MOT12-435.

Refer to:

- GP 10, How to Check a Motor.
- P/J106, LVF BM PWB.
- 312D-150 LVF BM Power Distribution RAP.

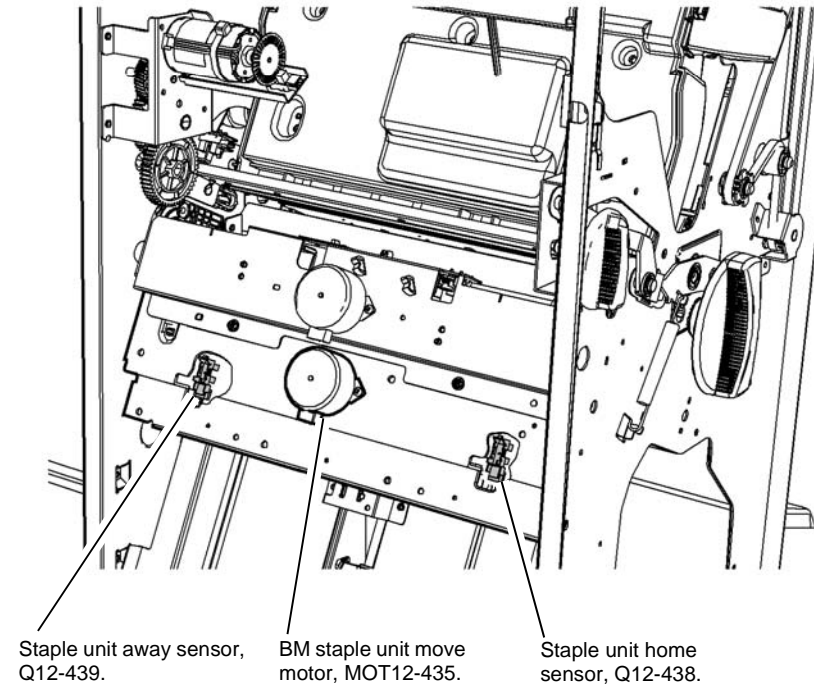
Install new components as necessary:

- LVF BM PWB, PL 12.425 Item 1.
- BM staple unit move motor, PL 12.395 Item 3.

B

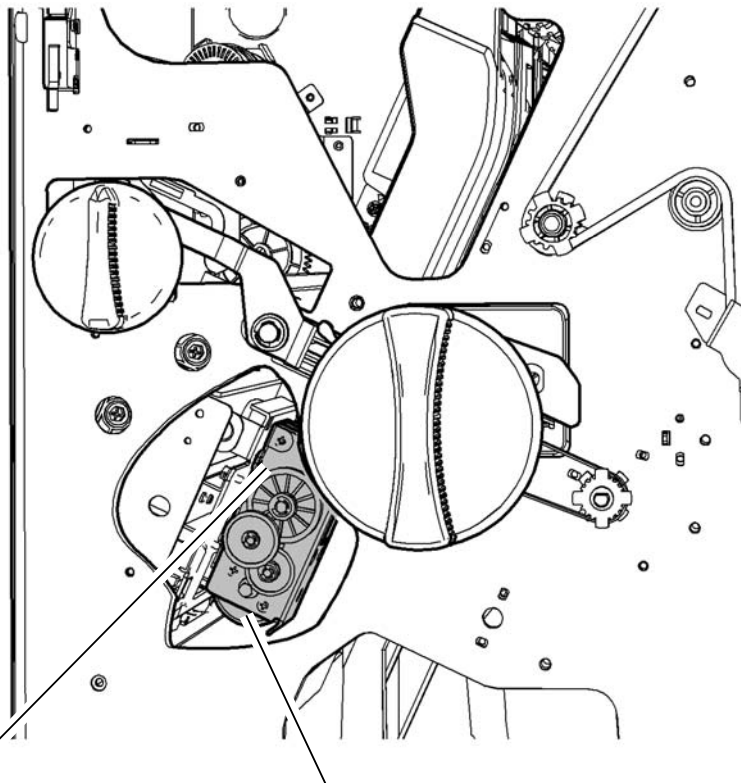
B

The fault may be intermittent. Check for damaged wiring or connectors. If necessary repair the wiring, REP 1.2, or install new components.



X-1-0059-A

Figure 1 Component location



BM stapler jaw home sensor, Q12-411
(part of the BM staple head assembly).

BM stapler clinch motor, MOT12-437
(part of the BM staple head assembly).

X-1-0060-A

Figure 2 Component location

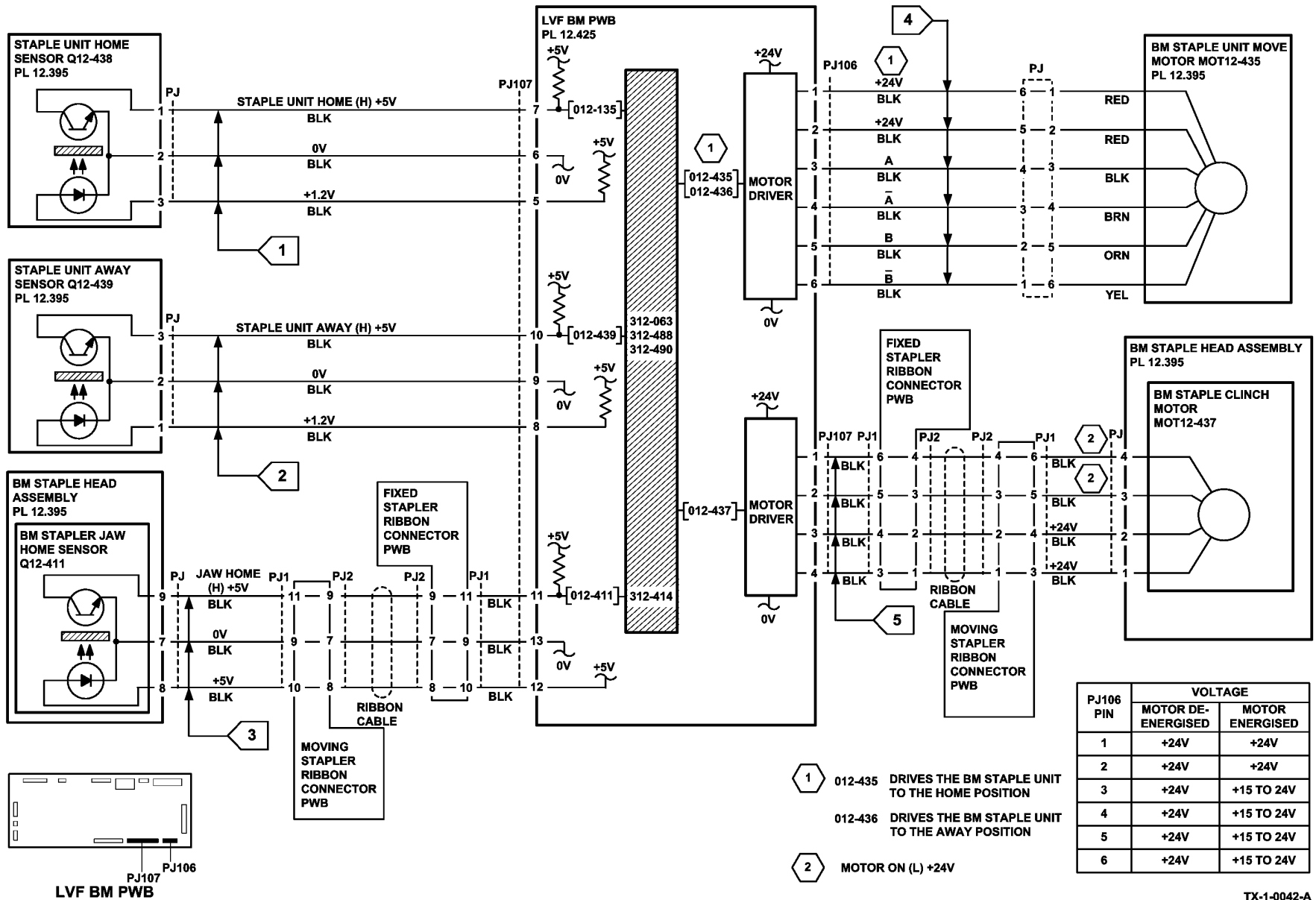


Figure 3 Circuit diagram

312-065-00-150, 312-383-00-150, 312-484-00-150, 312-486-00-150 Back Stop Failure RAP

312-065-00-150 The back stop motor failed to run.

312-383-00-150 The back stop was not at the home position.

312-484-00-150 The back stop failed to move to the mid home position in the allowed time.

312-486-00-150 The back stop failed to leave the mid home position in the allowed time.

Remote Service Actions

Ask the customer to check for any paper jams in the booklet compiler. If necessary clear any stray sheets or paper debris. If the fault continues, a site visit will be necessary.

Procedure



WARNING

Keep away from the crease blade mechanism when working in close proximity to the booklet maker while the machine is powered on. The crease blade mechanism activates quickly and with great force.



WARNING

Switch off the electricity to the machine. Refer to GP 14. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Check the parts that follow for damage:

- BM back stop drive belt. PL 12.400 Item 8.
- BM back stop drive pulley. PL 12.400 Item 7.
- BM back stop pulleys, PL 12.400 Item 5.
- BM back stop belt, PL 12.400 Item 4.
- BM back stop assembly, PL 12.400 Item 12. Check the wheels on the right side of the backstop assembly are present, are free to rotate and are not contaminated.

The parts are good.

Y N

Install new components as necessary.

Enter dC330 code 012-204, BM guide home sensor, Q12-204. Actuate Q12-204, Figure 1, by rotating the drive belt and pulley by hand so that the flag on the back stop moves into and out of Q12-204. The display changes.

Y N

Go to Flag 1. Check Q12-204.

Refer to:

- GP 11, How to Check a Sensor.
- P/J105, LVF BM PWB.
- 312D-150 LVF BM Power Distribution RAP.

A

Install new components as necessary:

- LVF BM PWB, PL 12.425 Item 1.
- BM guide home sensor, PL 12.400 Item 10.

Enter dC330 code 012-440, BM back stop mid home sensor, Q12-440. Actuate Q12-170, Figure 1, by rotating the drive belt and pulley by hand so that the flag on the back stop moves into and out of Q12-440. The display changes.

Y N

Go to Flag 2. Check Q12-440.

Refer to:

- GP 11, How to Check a Sensor.
- P/J105, LVF BM PWB.
- 312D-150 LVF BM Power Distribution RAP.

Install new components as necessary:

- LVF BM PWB, PL 12.425 Item 1.
- BM back stop mid home sensor, PL 12.400 Item 10.

Enter dC330 code 012-255 to run the BM back stop motor, MOT12-255, Figure 1. The motor runs.

Y N

Go to Flag 3. Check MOT12-255.

Refer to:

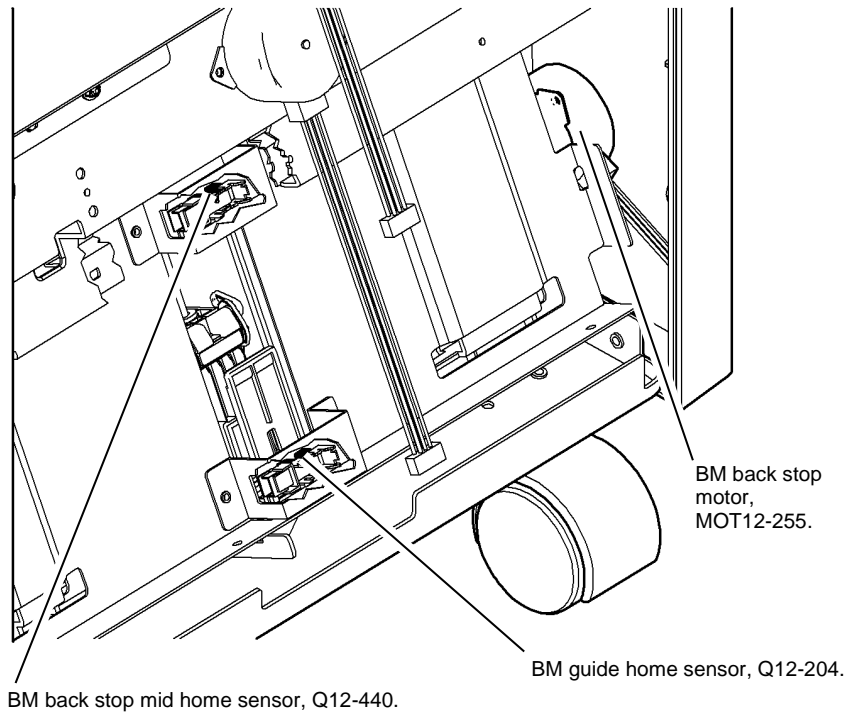
- GP 10, How to Check a Motor.
- P/J105, LVF BM PWB.
- 312D-150 LVF BM Power Distribution RAP.

Install new components as necessary:

- LVF BM PWB, PL 12.425 Item 1.
- BM back stop motor, PL 12.400 Item 9.

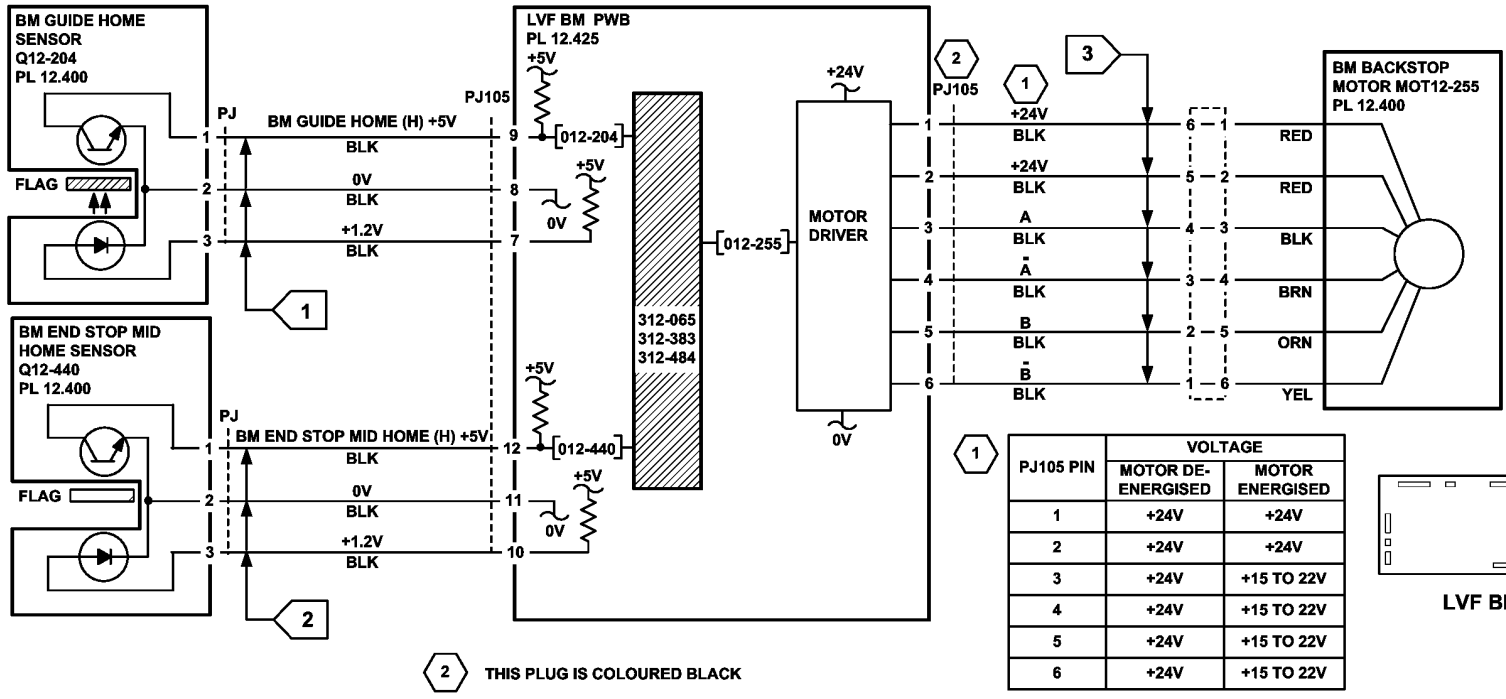
The fault may be intermittent. Check for damaged wiring or connectors. If necessary repair the wiring, REP 1.2, or install new components.

A

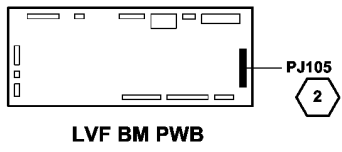


X-1-0044-A

Figure 1 Component location



PJ105 PIN	VOLTAGE	
	MOTOR DE-ENERGISED	MOTOR ENERGISED
1	+24V	+24V
2	+24V	+24V
3	+24V	+15 TO 22V
4	+24V	+15 TO 22V
5	+24V	+15 TO 22V
6	+24V	+15 TO 22V



2 THIS PLUG IS COLOURED BLACK

TX-1-0031-A

Figure 2 Circuit diagram

312-066-00-150, 312-384-00-150 Booklet Tamper 1 Move Failure RAP

312-066-00-150 The booklet tamper failed to clear the tamper home sensor.

312-384-00-150 The booklet tamper failed to move to the home position.

Initial Actions



WARNING

Keep away from the crease blade mechanism when working in close proximity to the booklet maker while the machine is powered on. The crease blade mechanism activates quickly and with great force.



WARNING

Switch off the electricity to the machine. Refer to **GP 14**. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Check that the booklet tamper mechanism is free to move. If necessary clear any paper jam in the area of the booklet tamper.

Procedure

Check the parts that follow for damage:

- Booklet tamper arms, **PL 12.380 Item 2**.
- Booklet tamper assembly, **PL 12.380 Item 1**.

The parts are good.

Y N
Install new components as necessary.

Enter **dC330** code 012-205, BM tamper 1 home sensor, Q12-205. Actuate Q12-205, **Figure 1**, by moving the tamper arms fully out then fully in. **The display changes.**

Y N
Go to **Flag 1**. Check Q12-205.

Refer to:

- **GP 11**, How to Check a Sensor.
- **P/J108**, LVF BM PWB.
- **312D-150** LVF BM Power Distribution RAP.

Install new components as necessary:

- LVF BM PWB, **PL 12.425 Item 1**.
- BM tamper 1 home sensor, **PL 12.380 Item 6**.

Enter **dC330** code 012-256 to run the BM booklet tamper 1 motor, MOT12-256, **Figure 1**. **The motor runs.**

Y N
Go to **Flag 2**. Check MOT12-256.

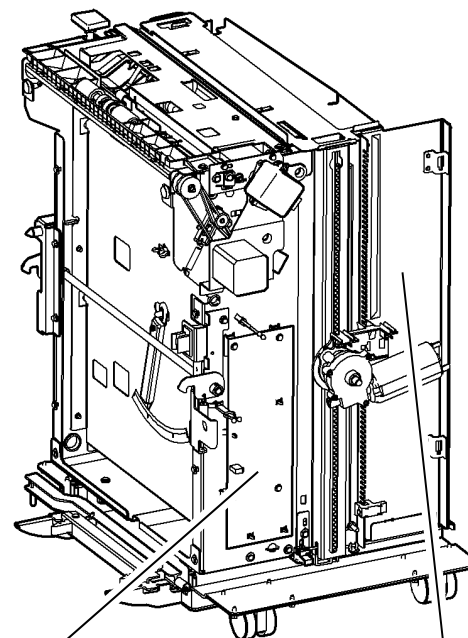
Refer to:

- **GP 10**, How to Check a Motor.
- **P/J108**, LVF BM PWB.
- **312D-150** LVF BM Power Distribution RAP.

Install new components as necessary:

- LVF BM PWB, **PL 12.425 Item 1**.
- BM booklet tamper 1 motor, **PL 12.380 Item 3**.

The fault may be intermittent. Check for damaged wiring or connectors. If necessary repair the wiring, **REP 1.2**, or install new components.



BM booklet tamper 1 motor,
MOT12-256.

BM tamper 1 home sensor,
Q12-205.

X-1-0145-A

Figure 1 Component location

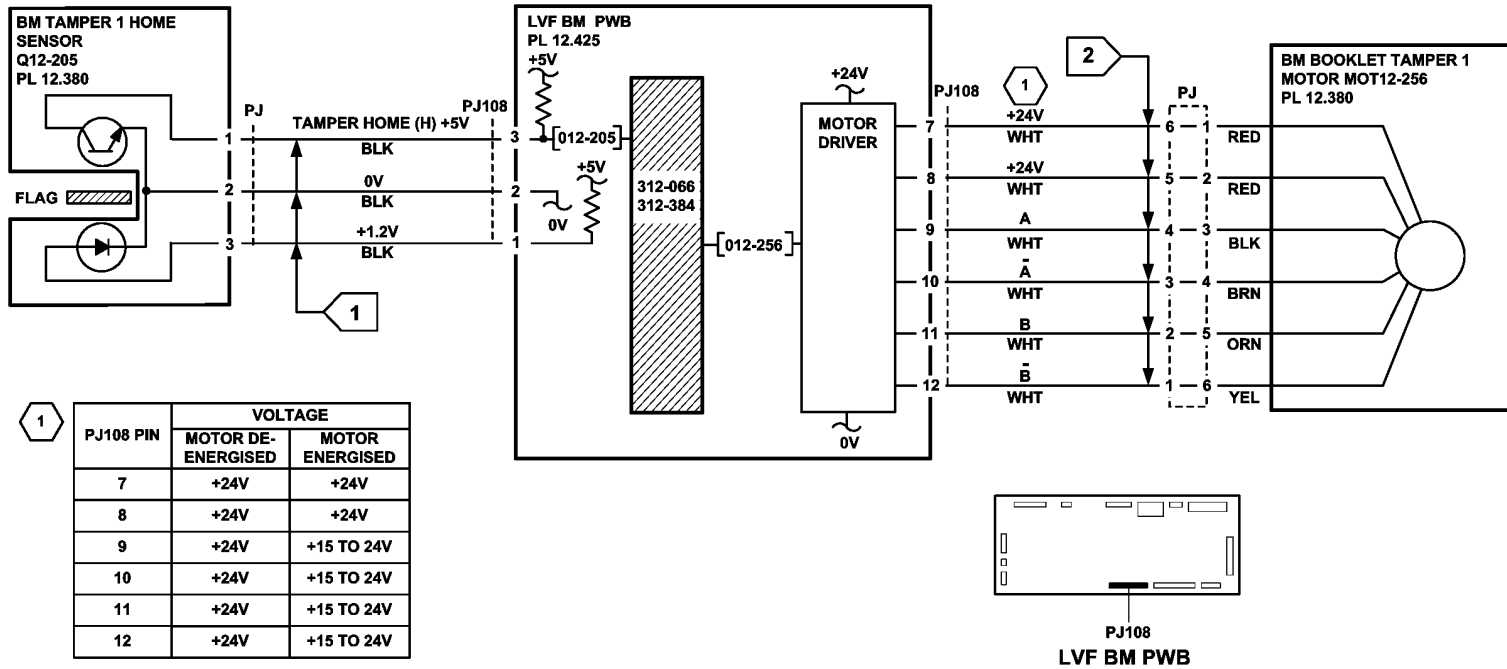


Figure 2 Circuit diagram

TX-1-0032-A

312-125-00-150, 312-126-00-150, 312-199-00-150 Paper Entry Jam RAP

312-125-00-150 The lead edge of the sheet was late to the finisher entry sensor.

312-126-00-110 The trail edge of the sheet was late from the finisher entry sensor.

312-199-00-110 The entry sensor detected paper at the start of a job or during a job without the finisher first receiving a paper at IOT exit sensor command.

Remote Service Actions

- If the fault code is 312-199-00, ask the customer to switch off then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.
- Ask the customer to check that the paper tray guides are set to the correct position for the size of paper in the tray.
- Ask the customer to check the finisher feeding performance from a paper tray loaded with a new ream of paper.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the [312H-150](#) Copy Damage in the LVF RAP.

Check the items that follow:

- LVF PWB DIP switch settings. Refer to [312F-150](#) LVF PWB and LVF BM PWB DIP Switch Settings RAP.
- The paper entry guide assembly, [PL 12.350](#) [Item 7](#), for damage or wear that could cause paper to jam.
- [ADJ 12.2-150](#) Machine to LVF BM Alignment.
- Horizontal transport assembly, [PL 10.15](#) [Item 1](#), for obstructions.

Procedure

Lower the paper entry guide assembly, [PL 12.350](#) [Item 7](#), to access the entry sensor, Q12-077, [Figure 1](#). Enter [dC330](#), code 012-077. Actuate Q12-077. **The display changes.**

Y N
Go to [Flag 1](#). Check Q12-077.

Refer to:

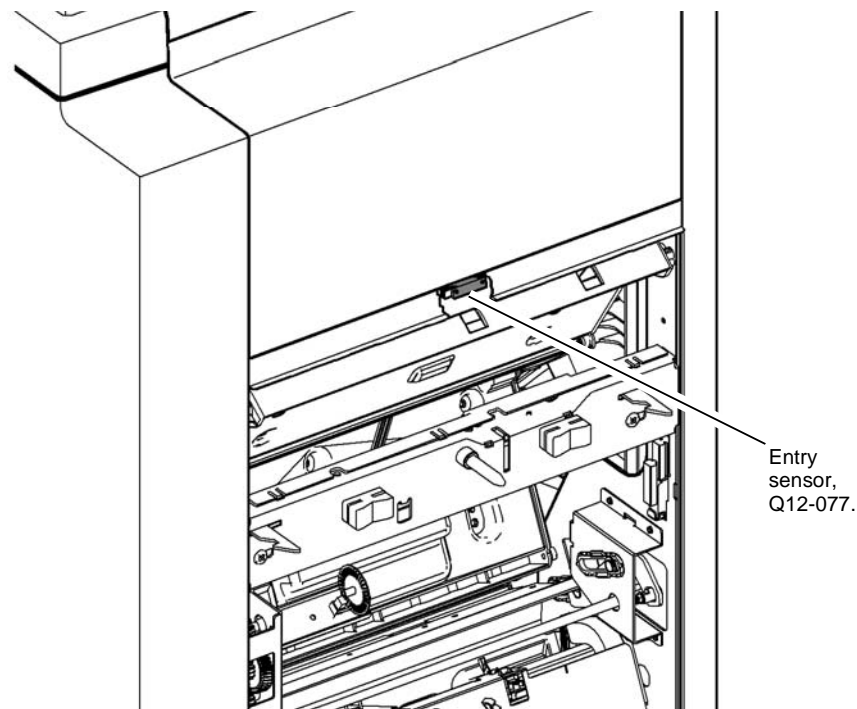
- [GP 11](#), How to Check a Sensor.
- [P/J304](#), [LVF PWB](#).
- [312D-150](#) LVF BM Power Distribution RAP.

Repair or install new components as necessary:

- Entry sensor, [PL 12.385](#) [Item 7](#).
- LVF PWB, [PL 12.425](#) [Item 8](#).

A

Check the operation of the horizontal transport assembly, [PL 10.15](#) [Item 1](#). Refer to [310-171-00](#) Trail Edge Late from Horizontal Transport Entry Sensor RAP.



X-1-0046-A

Figure 1 Component location

312-127-00-150 Sheet Late to Hole Punch RAP

312-127-00-150 A sheet was late to the punch sensor.

Remote Service Actions

Ask the customer to check that the paper tray guides are set to the correct position for the size of paper in the tray. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the items that follow:

- The LVF PWB DIP switch settings. Refer to [312F-150 LVF PWB and LVF BM PWB DIP Switch Settings RAP](#).
- For a paper jam at the entrance to the LVF BM. Check that there is no obstruction that would prevent a sheet from arriving in position for punching, refer to the [312H-150 Copy Damage in the LVF BM RAP](#).
- The punch sensor 1, Q12-078 for chad debris, [Figure 1](#).

Procedure

Enter [dC330](#), code 012-078, punch sensor 1, Q12-078, [Figure 1](#). Actuate Q12-078. The display changes.

Y N

Go to [Flag 1](#). Check Q12-078.

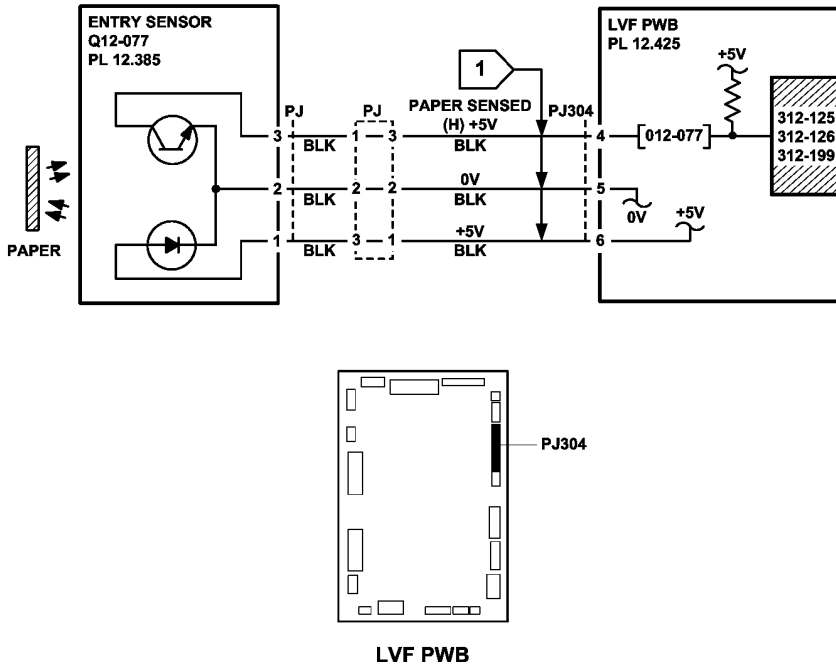
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J307, LVF PWB](#).
- [312D-150 LVF BM Power Distribution RAP](#).

Repair or install new components as necessary:

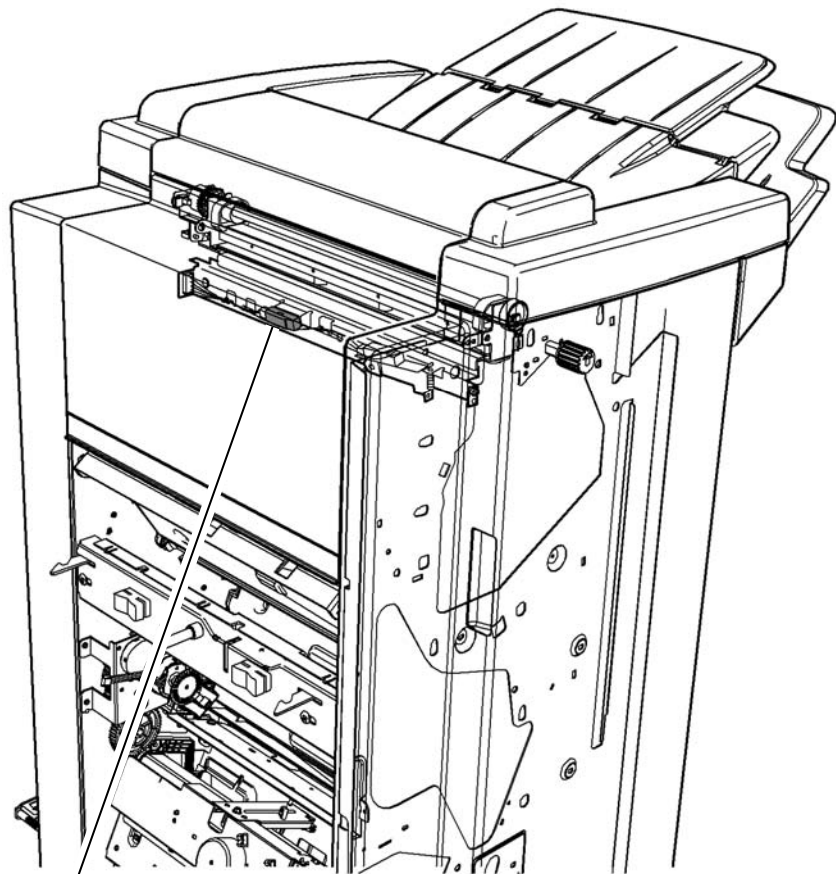
- Punch sensor 1, [PL 12.330 Item 7](#).
- LVF PWB, [PL 12.425 Item 8](#).

Perform [SCP 5](#) Final Actions.



TX-1-0033-A

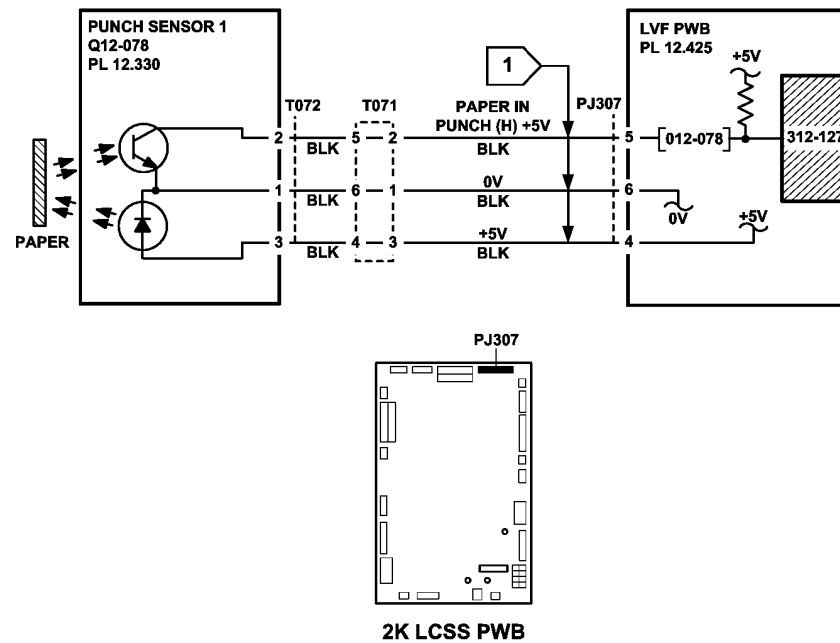
Figure 2 Circuit diagram



Punch sensor 1, Q12-078.

Figure 1 Component location

X-1-0047-A



TX-1-0034-A

Figure 2 Circuit diagram

312-151-00-150, 312-152-00-150 Sheet Late to Bin 1 RAP

312-151-00-150 The leading edge of the sheet was late to the compiler exit sensor.

312-152-00-150 The trailing edge of the sheet was late to the compiler exit sensor.

Remote Service Actions

Ask the customer to check that the paper tray guides are set to the correct position for the size of paper in all trays.

For trays 3 and 4, perform the steps that follow:

- Select the systems settings button from the tools screen.
- Select the tray management button and stock settings.
- From the list, select tray 3. Select the change stock size button.
- Select the paper size loaded in the tray. Select the save button.
- Repeat for tray 4.
- Save the stock setting and exit the tools mode.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: Paper is diverted to bin 0 when the exit diverter solenoid is energized. Paper is fed to bin 1 when the exit diverter solenoid is de-energized.

Check the items that follow:

- LVF PWB DIP switch settings. Refer to [312F-150](#) LVF PWB and LVF BM PWB DIP Switch Settings RAP.
- The tensioner on the intermediate paper drive belt. Check that the tensioner is free to move and that the tensioner pulley is free to rotate. If necessary re-lubricate the tensioner and tensioner pulley, [REP 12.3-150](#). Refer to [GP 18](#) Machine Lubrication.
- That the drive pulleys on both transport motor 1 and 2 are secure and do not slip on the motor shaft.
- All the transport drive belts are correctly fitted, are in a good condition and correctly tensioned. Refer to [ADJ 12.3-150](#).
- All the transport rolls and idler pulleys are free to rotate.
- The exit diverter gate and linkage for free movement.
- A paper jam in the path to bin 1, to the compiler, and for poor stacking on bin 1.
- Ensure that the LVF BM is fully latched to the machine, refer to [REP 12.13-150](#).
- That there are no torn paper fragments from a previous jam clearance action.

Refer to the [312H-150](#) Copy Damage in the LVF BM RAP and the [312G-150](#) Mis-Registration in Stapled Sets and Non-Stapled Sets RAP.

Procedure

NOTE: All LVF BM interlocks must be made to supply +24V to the motors.

Enter [dC330](#), code 012-224 to run the transport motor 2, [Figure 1](#). **The motor runs.**

Y N

Go to [Flag 3](#). Check MOT12-224.

Refer to:

- [GP 10](#), How to check a motor.
- [P/J309](#), LVF PWB.
- [312D-150](#) LVF BM Power Distribution RAP.

Repair or install new components as necessary:

- Transport motor 2, [PL 12.370](#) Item 5.
- LVF PWB, [PL 12.425](#) Item 8.

Enter [dC330](#), code 012-225, exit diverter solenoid, SOL12-225. Energize SOL12-255, [Figure 1](#). **The solenoid energizes.**

Y N

Go to [Flag 4](#). Check SOL12-225.

Refer to:

- [GP 12](#), How to Check a Solenoid or Clutch.
- [P/J306](#), LVF PWB.
- [312D-150](#) LVF BM Power Distribution RAP.

Repair or install new components as necessary:

- Exit diverter solenoid, [PL 12.370](#) Item 12.
- LVF PWB, [PL 12.425](#) Item 8.

Enter [dC330](#), code 012-106, compiler exit sensor, Q12-106, [Figure 1](#). Actuate Q12-106. **The display changes.**

Y N

Go to [Flag 1](#). Check Q12-106.

Refer to:

- [GP 11](#), How to Check a sensor.
- [P/J314](#), LVF PWB.
- [312D-150](#) LVF BM Power Distribution RAP.

Repair or install new components as necessary:

- Compiler exit sensor, [PL 12.375](#) Item 4.
- LVF PWB, [PL 12.425](#) Item 8.

Enter [dC330](#), code 012-223 to run the transport motor 1, MOT12-223, [Figure 1](#). **The motor runs.**

Y N

Go to [Flag 2](#). Check MOT12-223.

Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J305](#), LVF PWB.
- [312D-150](#) LVF BM Power Distribution RAP.

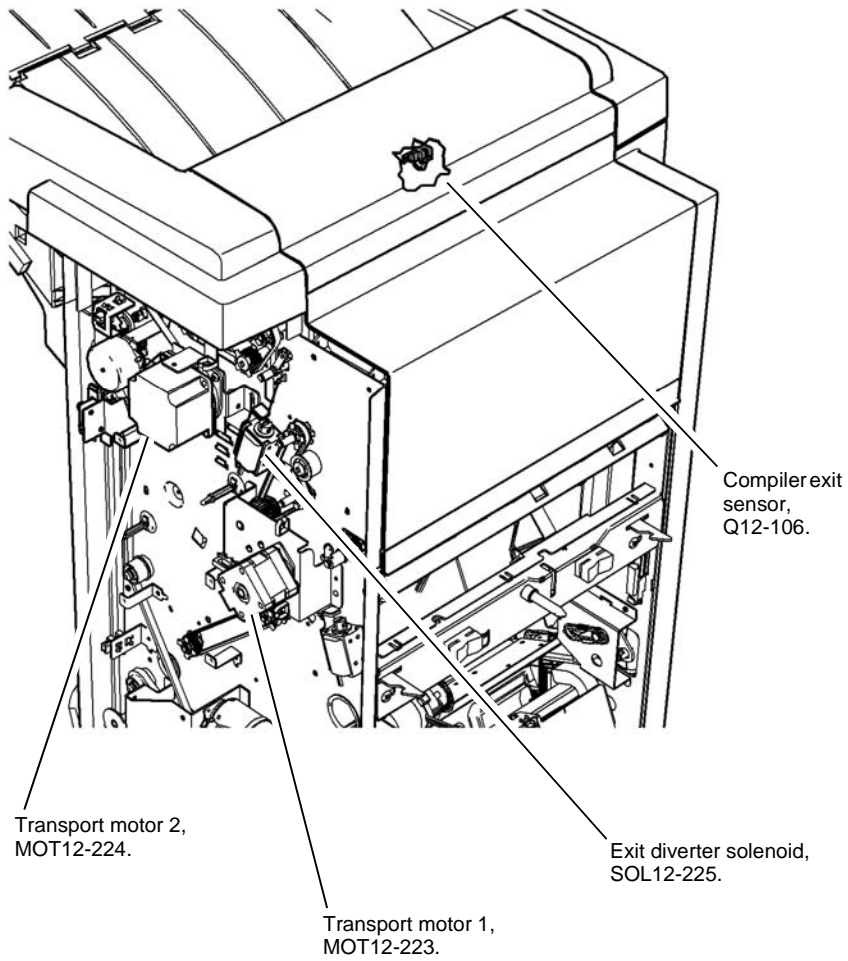
A

A

Repair or install new components as necessary:

- Transport motor 1, PL 12.350 Item 2.
- LVF PWB, PL 12.425 Item 8.

If the fault persists, perform 312-396-00-150, 312-397-00-150, 312-398-00-150 Rear Tamper Move Failure RAP.



X-1-0049-A

Figure 1 Component location

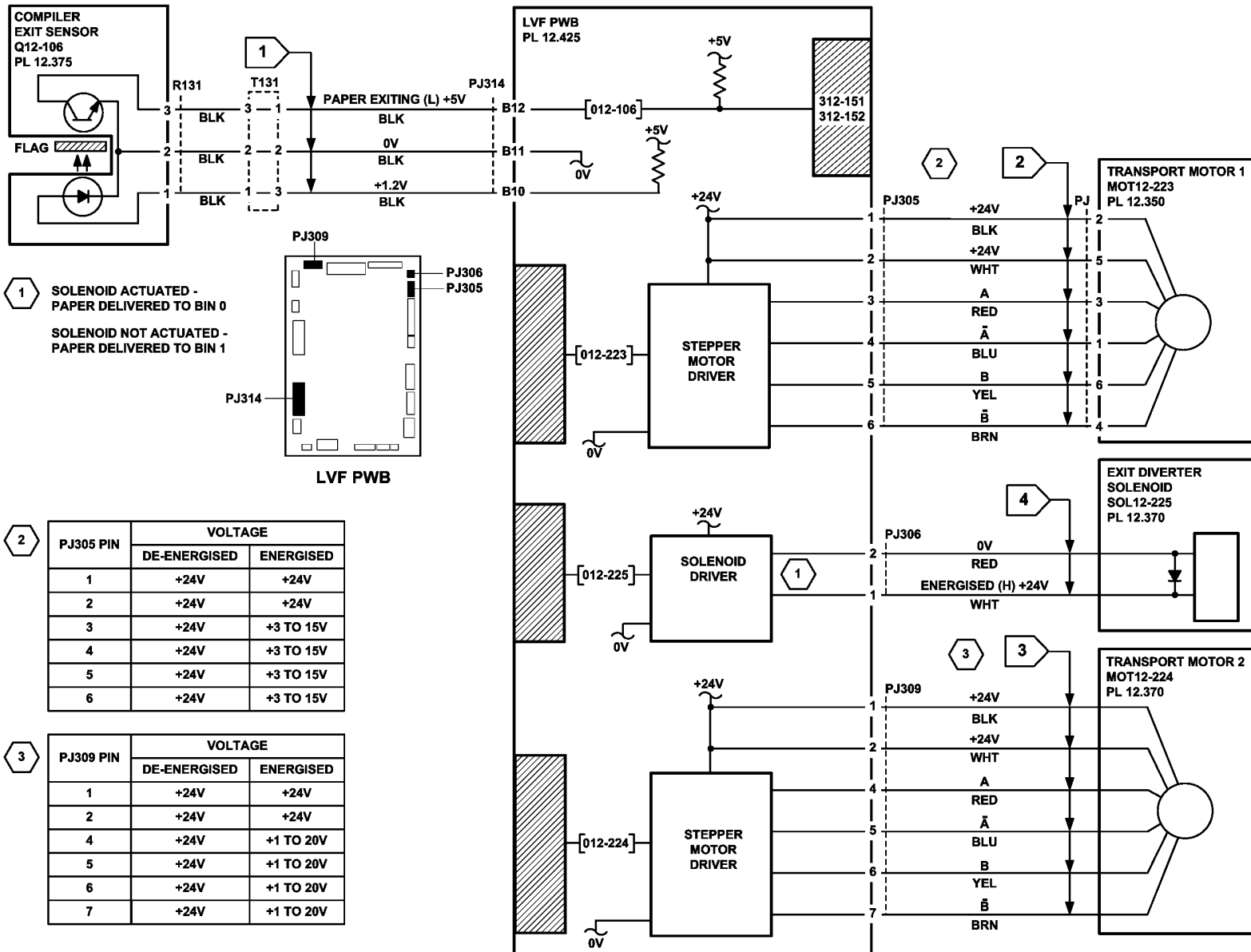


Figure 2 Circuit diagram

TX-1-0036-A

312-160-00-150, 312-162-00-150 Booklet Maker Entry Jam RAP

312-160-00-150 The lead edge of the sheet was late to the booklet maker entry sensor.

312-162-00-150 The trail edge of the sheet was late from the booklet maker entry sensor.

Remote Service Actions

Ask the customer to check the paper path to the booklet compiler. Clear the paper path of any jams or paper debris. Ensure the BM compiler guide assembly is correctly latched. If the fault continues, a site visit will be necessary.

Procedure



Keep away from the crease blade mechanism when working in close proximity to the booklet maker while the machine is powered on. The crease blade mechanism activates quickly and with great force.



Switch off the electricity to the machine. Refer to **GP 14**. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Check the parts that follow for damage:

- Booklet diverter gate, [PL 12.385 Item 2](#).
- Booklet compiler entrance guide, [PL 12.385 Item 1](#).
- BM compiler guide assembly, [PL 12.390 Item 1](#).

The parts are good,

Y N
Install new components as necessary.

Enter **dC330** code 012-089, BM entry sensor, Q12-089. Actuate Q12-089, [Figure 1](#). The display changes.

Y N
Go to [Flag 1](#). Check Q12-089.
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J104](#), [LVF BM PWB](#).
- [312D-150](#) LVF BM Power Distribution RAP.

Install new components as necessary:

- LVF BM PWB, [PL 12.425 Item 1](#).
- BM entry sensor, [PL 12.385 Item 6](#).

Enter **dC330** code 012-207, BM flapper home sensor, Q12-207. Actuate Q12-207, [Figure 2](#). The display changes.

Y N
Go to [Flag 4](#). Check Q12-207.
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J104](#), [LVF BM PWB](#).
- [312D-150](#) LVF BM Power Distribution RAP.

Install new components as necessary:

- LVF BM PWB, [PL 12.425 Item 1](#).
- BM flapper motor assembly, [PL 12.390 Item 17](#).

Enter **dC330** code 012-258 to energize the booklet diverter gate solenoid, SOL12-258, [Figure 3](#). The solenoid energizes.

Y N
Go to [Flag 3](#). SOL12-258.
Refer to:

- [GP 12](#), How to Check a Solenoid or Clutch
- [P/J303](#), [LVF BM PWB](#).
- [312D-150](#) LVF BM Power Distribution RAP.

Install new components as necessary:

- LVF BM PWB, [PL 12.425 Item 1](#).
- Booklet diverter gate solenoid, [PL 12.385 Item 10](#).

Enter **dC330** code 012-223 to run transport motor 1, MOT12-223, [Figure 3](#). The motor runs.

Y N
Go to [Flag 2](#). Check MOT12-223.
Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J305](#), [LVF BM PWB](#).
- [312D-150](#) LVF BM Power Distribution RAP.

Install new components as necessary:

- LVF BM PWB, [PL 12.425 Item 1](#).
- Transport motor 1, [PL 12.350 Item 2](#).

Enter **dC330** code 012-271 to run the BM flapper motor, MOT12-271, [Figure 2](#). The motor runs.

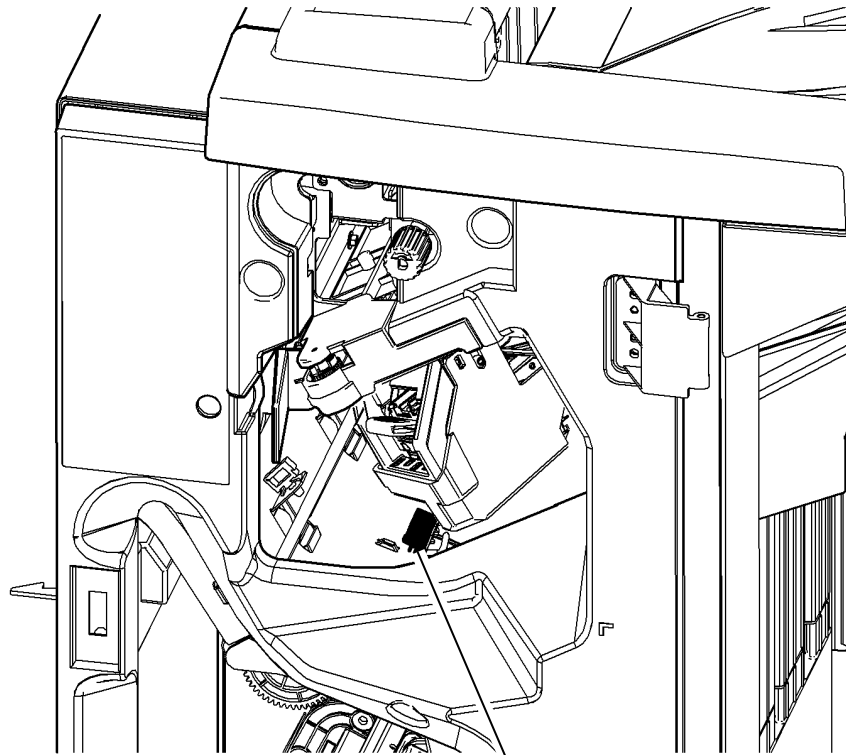
Y N
Go to [Flag 5](#). Check MOT12-271.
Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J104](#), [LVF BM PWB](#).
- [312D-150](#) LVF BM Power Distribution RAP.

Install new components as necessary:

- LVF BM PWB, [PL 12.425 Item 1](#).
- BM flapper motor assembly, [PL 12.390 Item 17](#).

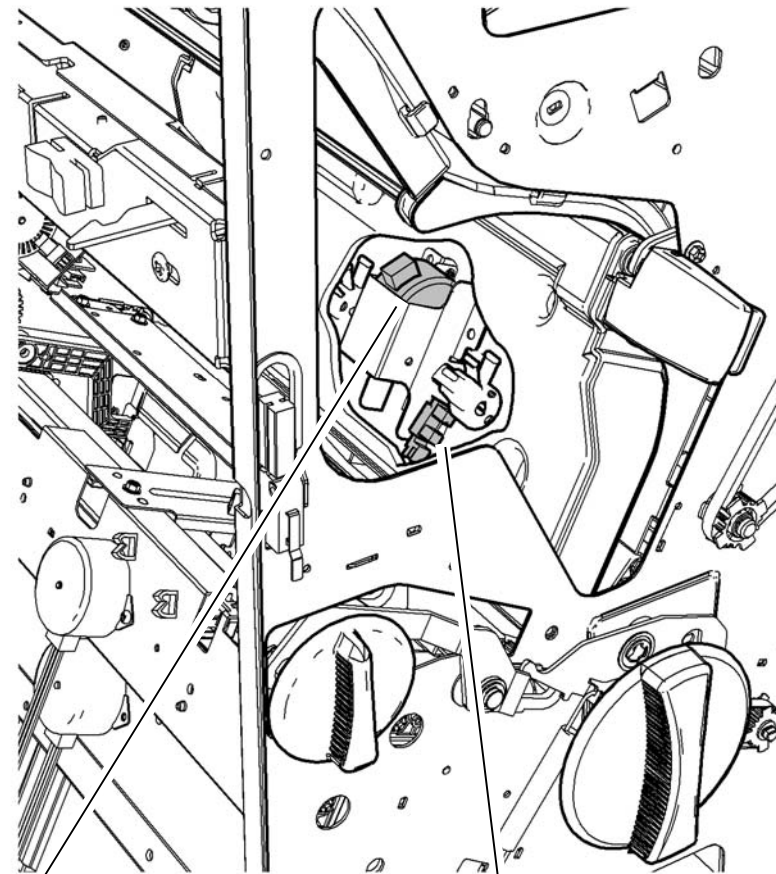
The fault may be intermittent. Check for damaged wiring or connectors. If necessary repair the wiring, [REP 1.2](#), or install new components.



BM entry sensor, Q12-089.

X-1-0051-A

Figure 1 Component location



BM flapper motor,
MOT12-271.

BM flapper home
sensor, Q12-207.

X-1-0052-A

Figure 2 Component location

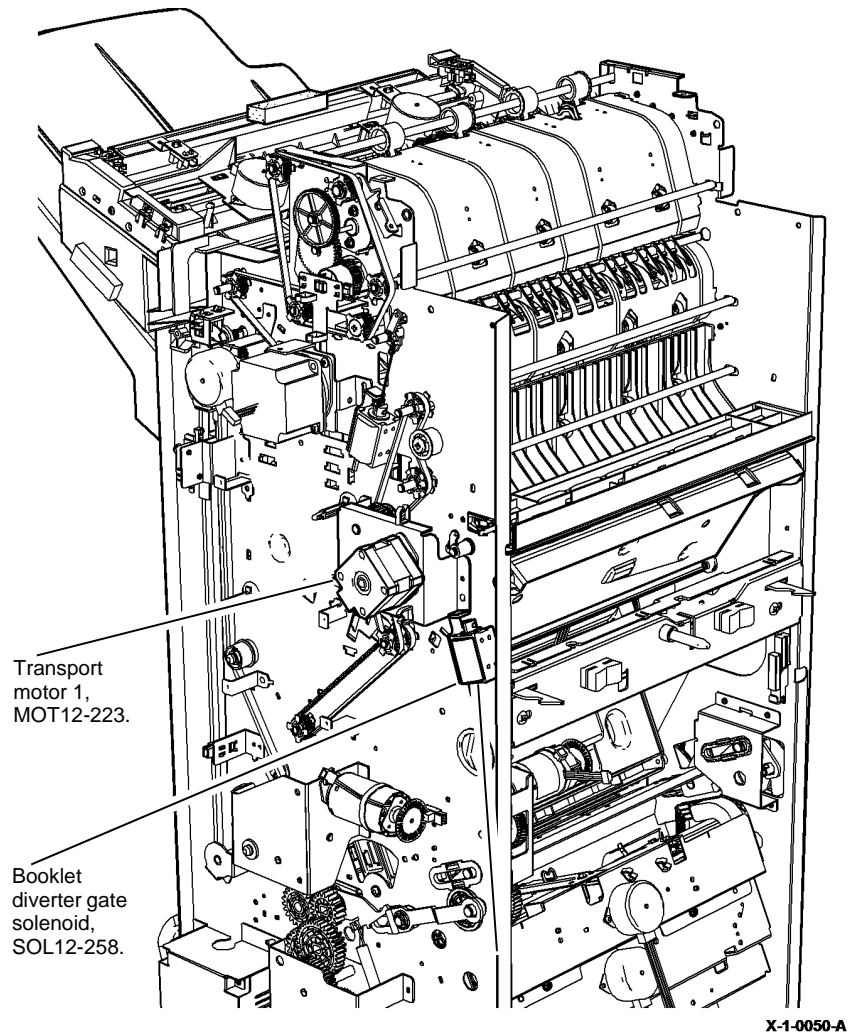


Figure 3 Component location

PJ305 PIN	PJ104 PIN	VOLTAGE	
		MOTOR DE-ENERGISED	MOTOR ENERGISED
1	B7	+24V	+24V
2	B6	+24V	+24V
3	B5	+24V	+15 TO 24V
4	B4	+24V	+15 TO 24V
5	B3	+24V	+15 TO 24V
6	B2	+24V	+15 TO 24V

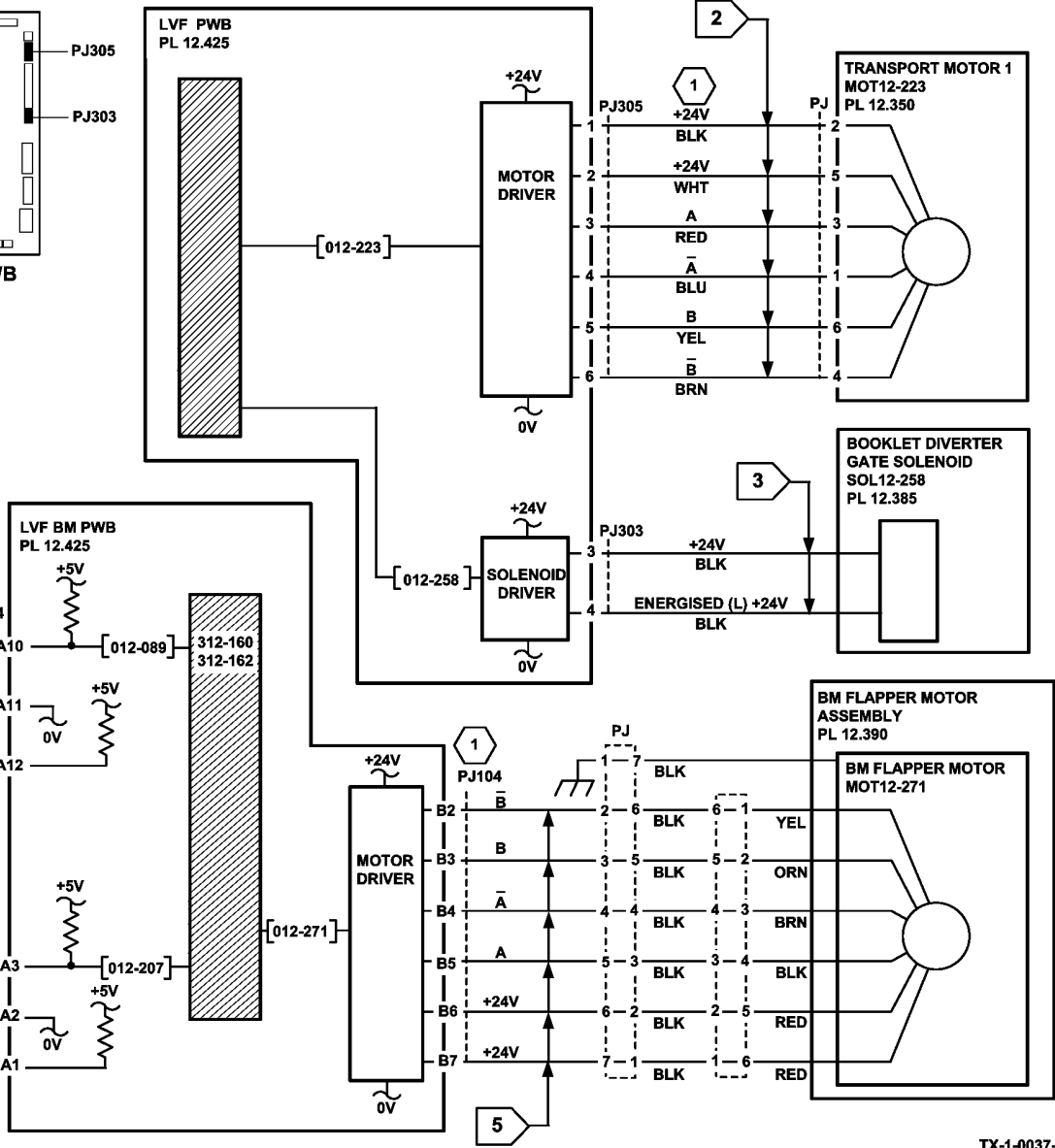
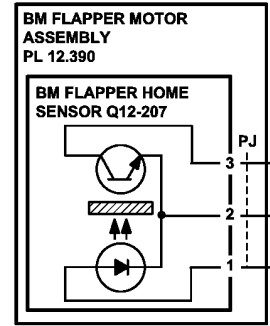
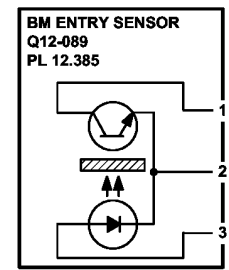
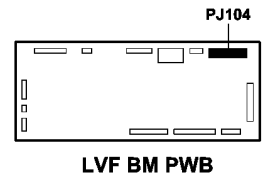
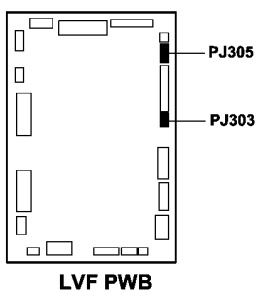


Figure 4 Circuit diagram

TX-1-0037-A

312-171-00-150, 312-172-00-150 Paper Exiting to Bin 0 RAP

312-171-00-150 The leading edge of the sheet was late to the top exit sensor.

312-172-100-150 The trailing edge of the sheet was late from the top exit sensor.

Remote Service Actions

Ask the customer to check the items that follow:

- That the paper tray guides are set to the correct position for the size of paper in the tray.
- That there are no torn paper fragments from a previous jam clearance action.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the items that follow:

- LVF PWB DIP switch settings. Refer to [312F-150](#) LVF PWB and LVF BM PWB DIP Switch Settings RAP.
- The tensioner on the intermediate paper drive belt. Check that the tensioner is free to move and that the tensioner pulley is free to rotate. If necessary lubricate the tensioner and tensioner pulley, [REP 12.3-150](#). Refer to [GP 18](#) Machine Lubrication.
- The drive pulleys on both transport motor 1 and 2 are secure and do not slip on the motor shaft.
- All the transport drive belts are correctly fitted and are in a good condition.
- All the transport rolls and idler pulleys are free to rotate.
- The exit diverter gate and linkage for free movement.

Refer to the [312H-150](#) Copy Damage in the LVF BM RAP and the [312G-150](#) Mis-Registration in Stapled Sets and Non-Stapled Sets RAP.

NOTE: Paper is diverted to bin 0 when the exit diverter solenoid is energized. Paper is fed to bin 1 when the exit diverter solenoid is de-energized.

Procedure

NOTE: All LVF BM interlocks must be made to supply +24V to the motors.

Enter [dC330](#), code 012-224 to run transport motor 2, MOT12-224, [Figure 1](#). **The motor runs.**

- Y** **N**
- Go to [Flag 3](#). Check MOT12-224.
Refer to:
- [GP 10](#), How to Check a Motor.
 - [P/J309](#), LVF PWB.
 - [312D-150](#) LVF BM Power Distribution RAP.
- Repair or install new components as necessary:
- Transport motor 2, [PL 12.370](#) Item 5.
 - LVF PWB, [PL 12.425](#) Item 8.

A

Enter [dC330](#), code 012-225 to energize the exit diverter solenoid, SOL12-225, [Figure 1](#). **The solenoid energizes.**

- Y** **N**
- Go to [Flag 2](#). Check SOL12-225.
Refer to:
- [GP 12](#), How to Check a Solenoid.
 - [P/J306](#), LVF PWB.
 - [312D-150](#) LVF BM Power Distribution RAP.
- Repair or install new components as necessary:
- Exit diverter solenoid, [PL 12.370](#) Item 12.
 - LVF PWB, [PL 12.425](#) Item 8.

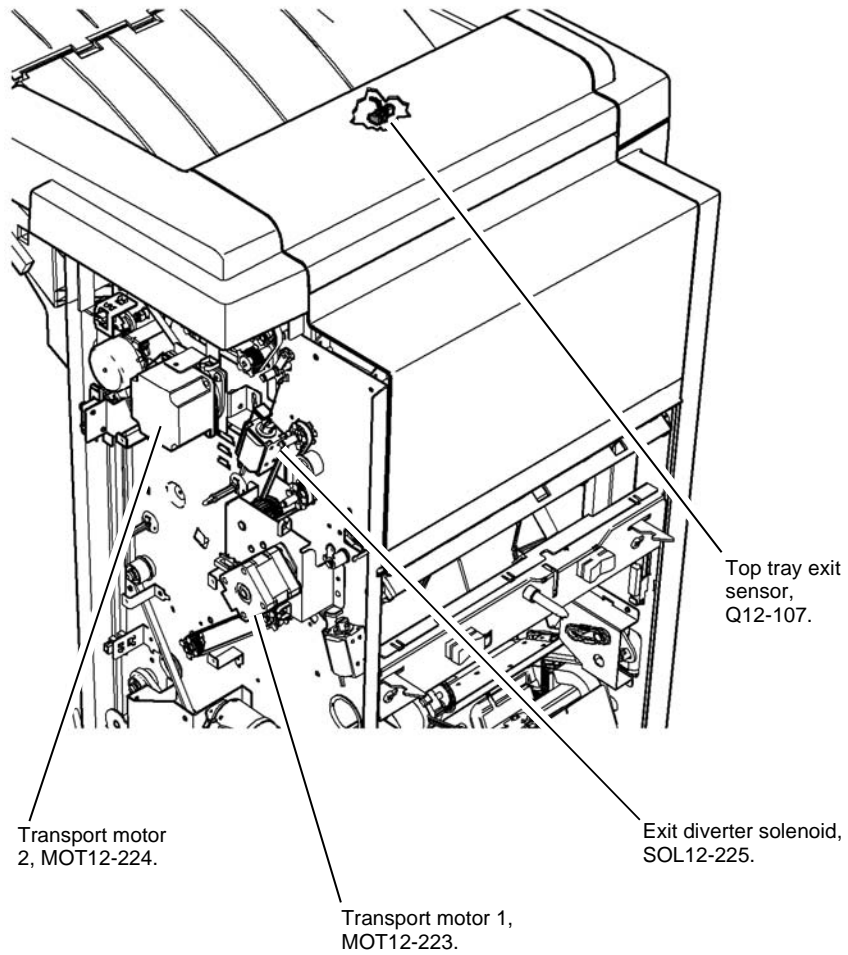
Enter [dC330](#), code 012-107, top tray exit sensor, Q12-107, [Figure 1](#). Actuate Q12-107. **The display changes.**

- Y** **N**
- Go to [Flag 1](#). Check Q12-107.
Refer to:
- [GP 11](#), How to Check a Sensor.
 - [P/J314](#), LVF PWB.
 - [312D-150](#) LVF BM Power Distribution RAP.
- Repair or install new components as necessary:
- Top tray exit sensor, [PL 12.370](#) Item 11.
 - LVF PWB, [PL 12.425](#) Item 8.

Enter [dC330](#), code 012-223 to run the transport motor 1, MOT12-223, [Figure 1](#). **The motor runs.**

- Y** **N**
- Go to [Flag 4](#). Check MOT12-223.
Refer to:
- [GP 10](#), How to Check a Motor.
 - [P/J305](#), LVF PWB.
 - [312D-150](#) LVF BM Power Distribution RAP.
- Repair or install new components as necessary:
- Transport motor 1, [PL 12.350](#) Item 2.
 - LVF PWB, [PL 12.425](#) Item 8.

Perform [SCP 5](#) Final Actions.



X-1-0048-A

Figure 1 Component location

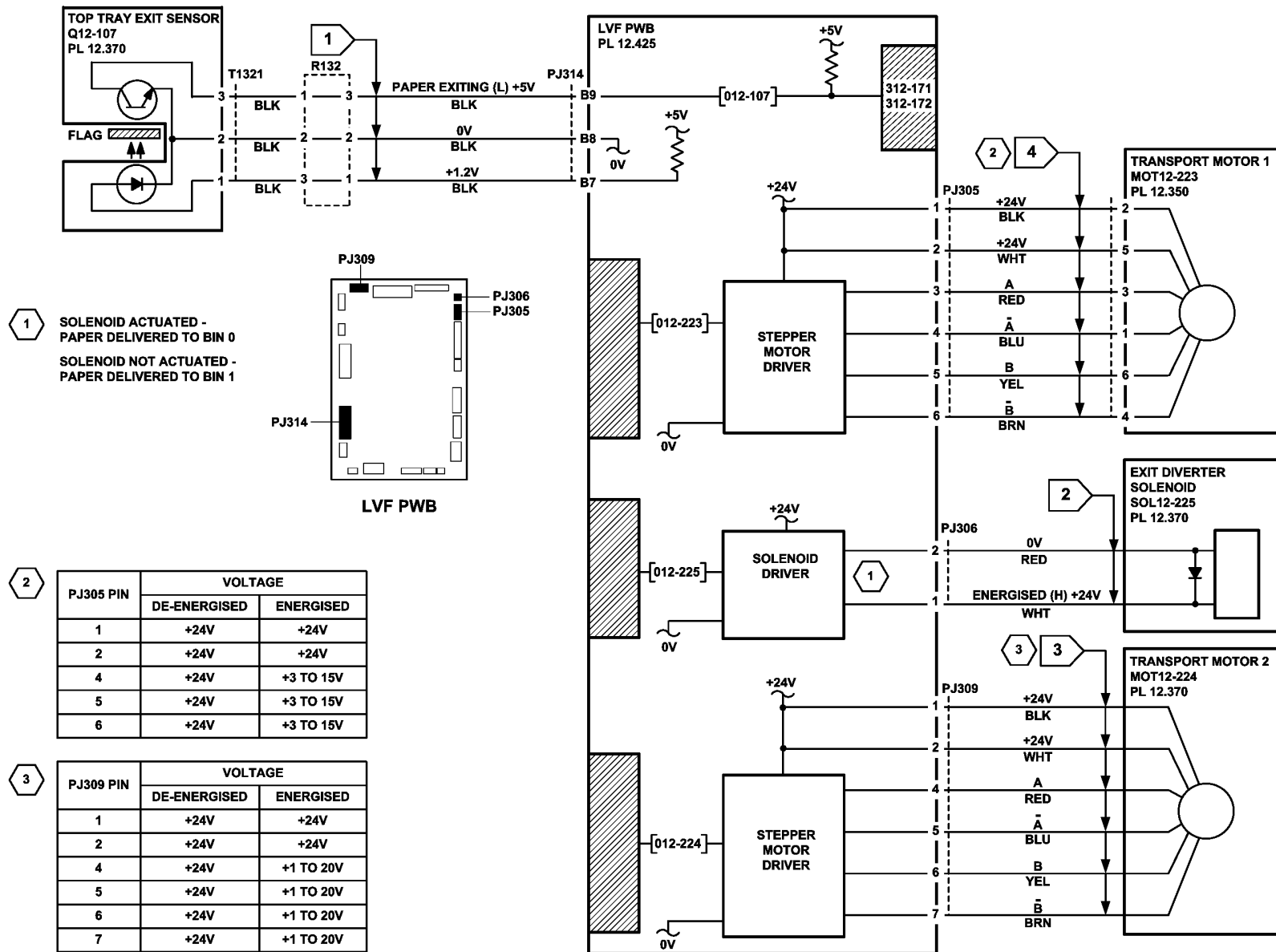


Figure 2 Circuit diagram

TX-1-0035-A

312-180-00-150, 312-182-00-150 Booklet Maker Exit Jam RAP

312-180-00-150 The lead edge was late arriving at the BM exit sensor.

312-182-00-150 The trail edge was late leaving the BM exit sensor.

Remote Service Actions

Ask the customer to turn the crease blade handle to ensure that the crease blade mechanism is free to move and if necessary, clear any paper jam in the exit area. If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter **dC330** code 012-215, BM crease blade motor encoder sensor, Q12-215. Actuate Q12-215, **Figure 2**, by rotating the crease blade roll. **The display changes.**

Y N

Go to **Flag 2**. Check Q12-215.

Refer to:

- **GP 11**, How to Check a Sensor.
- **P/J104**, **LVF BM PWB**.
- **312D-150** LVF BM Power Distribution RAP.

Install new components as necessary:

- BM crease blade motor encoder sensor, **PL 12.405** Item 4.
- LVF BM PWB, **PL 12.425** Item 1.

Release the crease roll nip pressure by moving the crease roll handle, **Figure 1**, fully counter clockwise. Enter **dC330** code 012-216, BM crease roll motor encoder sensor, Q12-216. Actuate Q12-216, **Figure 2**, by rotating the crease roll handle slowly by hand. **The display changes.**

Y N

Go to **Flag 1**. Check Q12-216.

Refer to:

- **GP 11**, How to Check a Sensor.
- **P/J112**, **LVF BM PWB**.
- **312D-150** LVF BM Power Distribution RAP.

Install new components as necessary:

- BM crease roll motor encoder sensor, **PL 12.415** Item 7.
- LVF BM PWB, **PL 12.425** Item 1.

Enter **dC330** code 012-213, BM exit sensor, Q12-213. Actuate Q12-213, **Figure 3**. **The display changes.**

Y N

Go to **Flag 3**. Check Q12-213.

Refer to:

- **GP 11**, How to Check a Sensor.
- **P/J110**, **LVF BM PWB**.
- **312D-150** LVF Power Distribution RAP.

Install new components as necessary:

- BM exit sensor, **PL 12.420** Item 8.
- LVF BM PWB, **PL 12.425** Item 1.

Enter **dC330** code 012-253, crease roll motor, MOT12-253, **Figure 2**. **The motor runs.**

Y N

Go to **Flag 4**. Check MOT12-253.

Refer to:

- **GP 10**, How to Check a Motor.
- **P/J103**, **LVF BM PWB**.
- **312D-150** LVF BM Power Distribution RAP.

Install new components as necessary:

- Crease roll motor and gearbox assembly, **PL 12.415** Item 10.
- LVF BM PWB, **PL 12.425** Item 1.

Enter **dC330** code 012-252, BM crease blade motor, MOT12-252, **Figure 1**. **The motor runs.**

Y N

Go to **Flag 5**. Check MOT12-252.

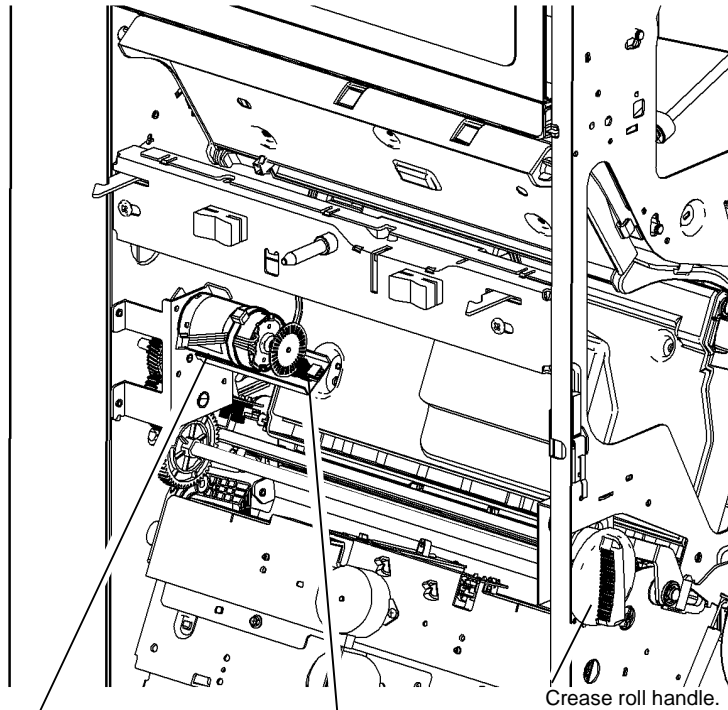
Refer to:

- **GP 10**, How to Check a Motor.
- **P/J104**, **LVF BM PWB**.
- **312D-150** LVF BM Power Distribution RAP.

Install new components as necessary:

- BM crease blade motor assembly, **PL 12.405** Item 13.
- LVF BM PWB, **PL 12.425** Item 1.

The fault may be intermittent. Check for damaged wiring or bad connectors. If necessary repair the wiring, **REP 1.2**, or install new components. If necessary install a new LVF BM PWB, **PL 12.425** Item 1.



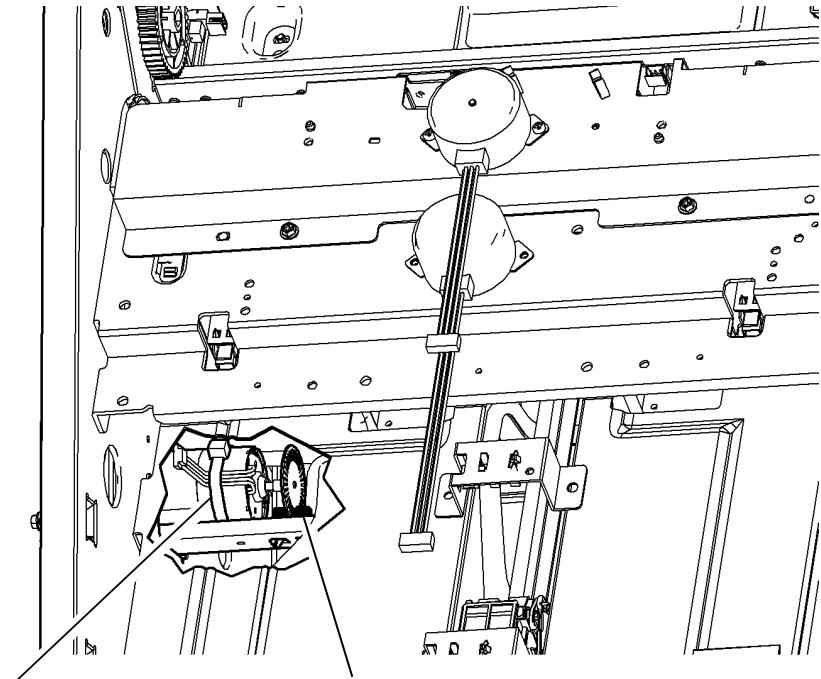
Crease blade motor,
MOT12-252.

Crease blade motor encoder sensor,
Q12-215.

Crease roll handle.

X-1-1046-A

Figure 1 Component location

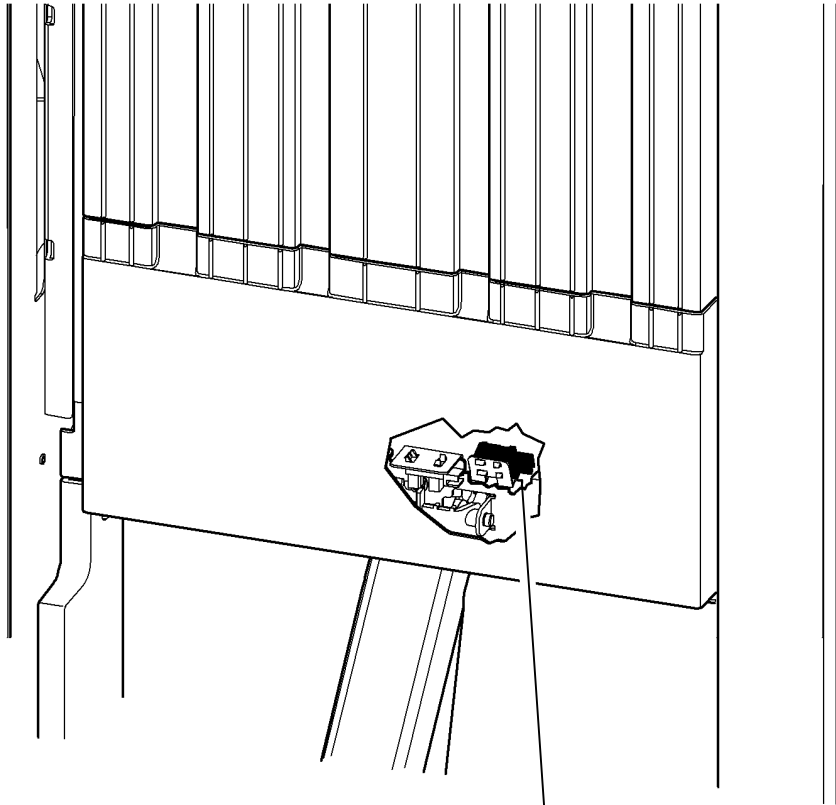


Crease roll motor, MOT12-253.

Crease roll motor encoder sensor, Q12-216.

X-1-1045-A

Figure 2 Component location



BM exit sensor, Q12-213.

X-1-1047-A

Figure 3 Component location

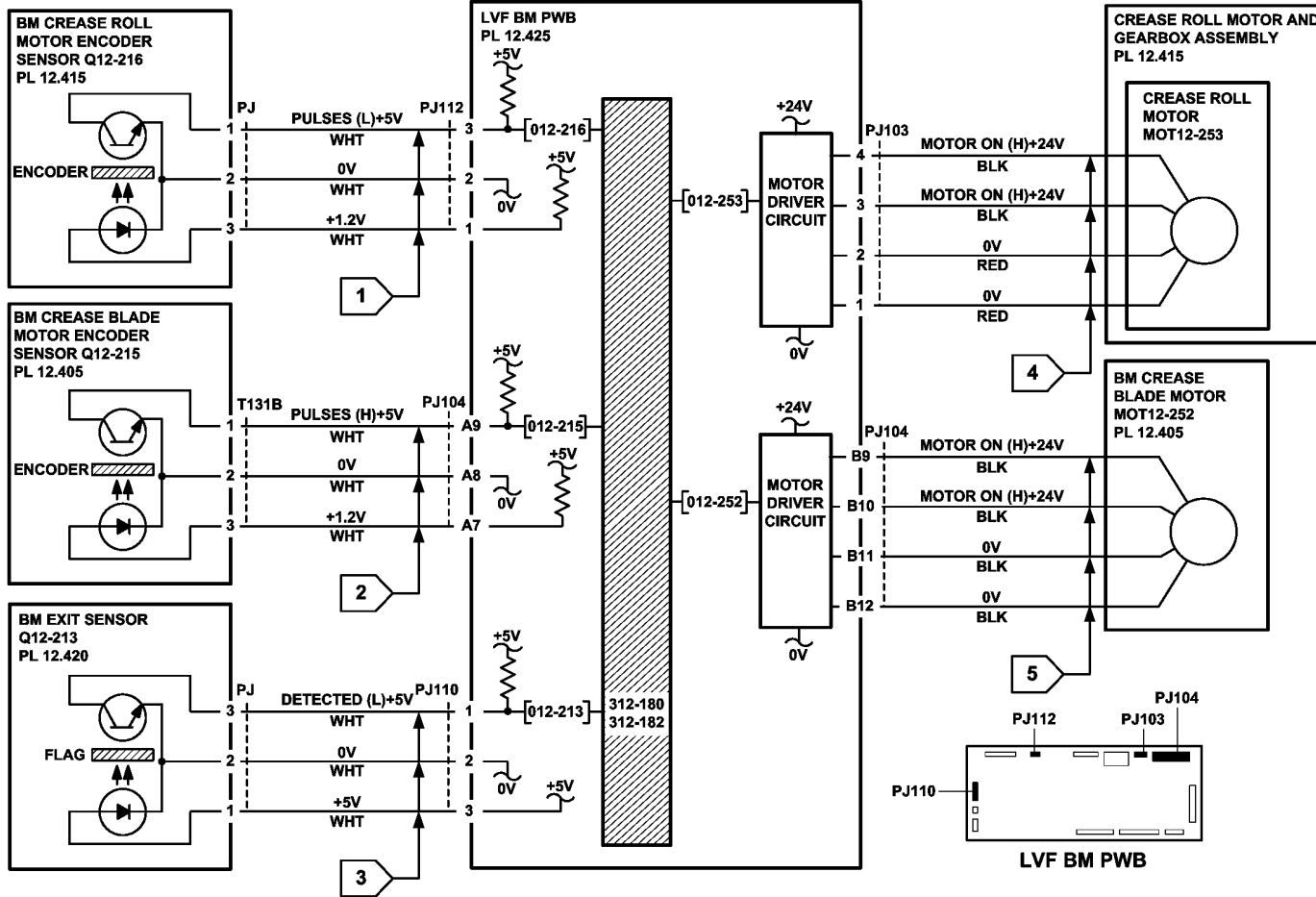


Figure 4 Circuit diagram

TX-1-0264-A

312-184-00-150, 312-494-00-150, 312-496-00-150 Booklet Maker Stray Sheet Detected RAP

312-184-00-150 A stray sheet is detected in the booklet maker after a jam clearance event.

312-494-00-150 A sheet was not detected at the BM staple paper detect sensor within the allowed time.

312-496-00-150 A sheet was not detected leaving the BM staple paper detect sensor within the allowed time.

Remote Service Actions

Ask the customer to check the paper path to the booklet compiler. Clear the paper path of any jams or paper debris. Ensure the compiler guide assembly is correctly latched. If the fault continues, a site visit will be necessary.

Procedure



Keep away from the crease blade mechanism when working in close proximity to the booklet maker while the machine is powered on. The crease blade mechanism activates quickly and with great force.



Switch off the electricity to the machine. Refer to GP 14. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Enter **dC330** code 012-089, BM entry sensor, Q12-089. Actuate Q12-089, **Figure 1**. The display changes.

Y N
Go to **Flag 1**. Check Q12-089.
Refer to:

- **GP 11**, How to Check a Sensor.
- **P/J104**, LVF BM PWB.
- **312D-150** LVF BM Power Distribution RAP.

Install new components as necessary:

- LVF BM PWB, **PL 12.425 Item 1**.
- BM entry sensor, **PL 12.385 Item 6**.

Enter **dC330** code 012-213, BM exit sensor, Q12-213. Actuate Q12-213, **Figure 2**. The display changes.

Y N
Go to **Flag 2**. Check Q12-213.
Refer to:

- **GP 11**, How to Check a Sensor.
- **P/J110**, LVF BM PWB.

- A**
- **312D-150** LVF BM Power Distribution RAP.
- Install new components as necessary:
- LVF BM PWB, **PL 12.425 Item 1**.
 - BM exit sensor, **PL 12.420 Item 8**.

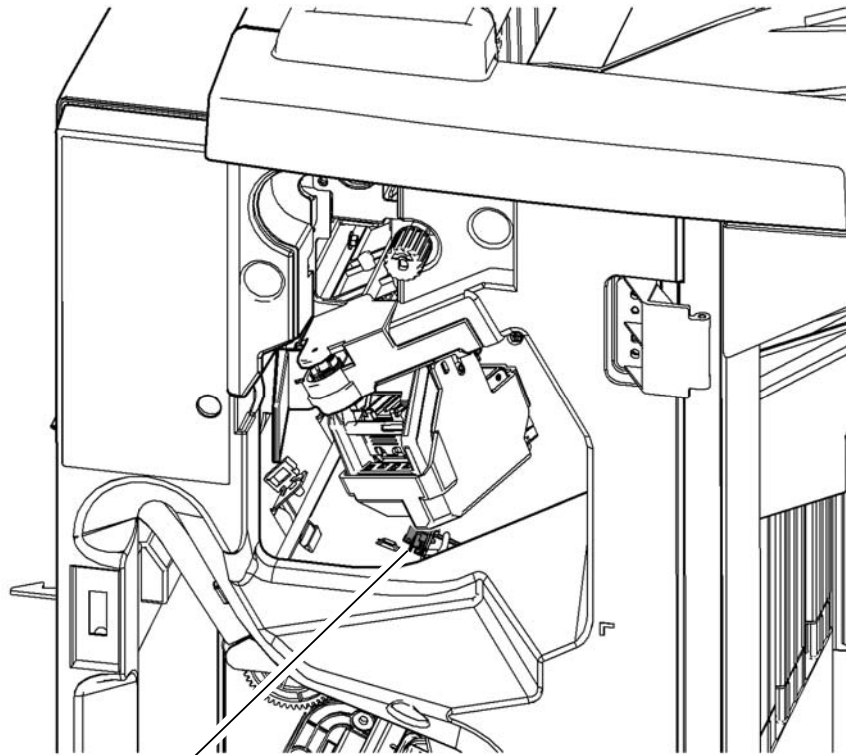
Enter **dC330** code 012-170, BM paper present sensor. Actuate Q12-170, **Figure 3**. The display changes.

Y N
Go to **Flag 3**. Check Q12-170.
Refer to:

- **GP 11**, How to Check a Sensor.
 - **P/J108**, LVF BM PWB.
 - **312D-150** LVF BM Power Distribution RAP.
- Install new components as necessary:
- LVF BM PWB, **PL 12.425 Item 1**.
 - BM paper present sensor, **PL 12.380 Item 5**.

The fault may be intermittent. Check for damaged wiring or connectors. If necessary repair the wiring, **REP 1.2**, or install new components.

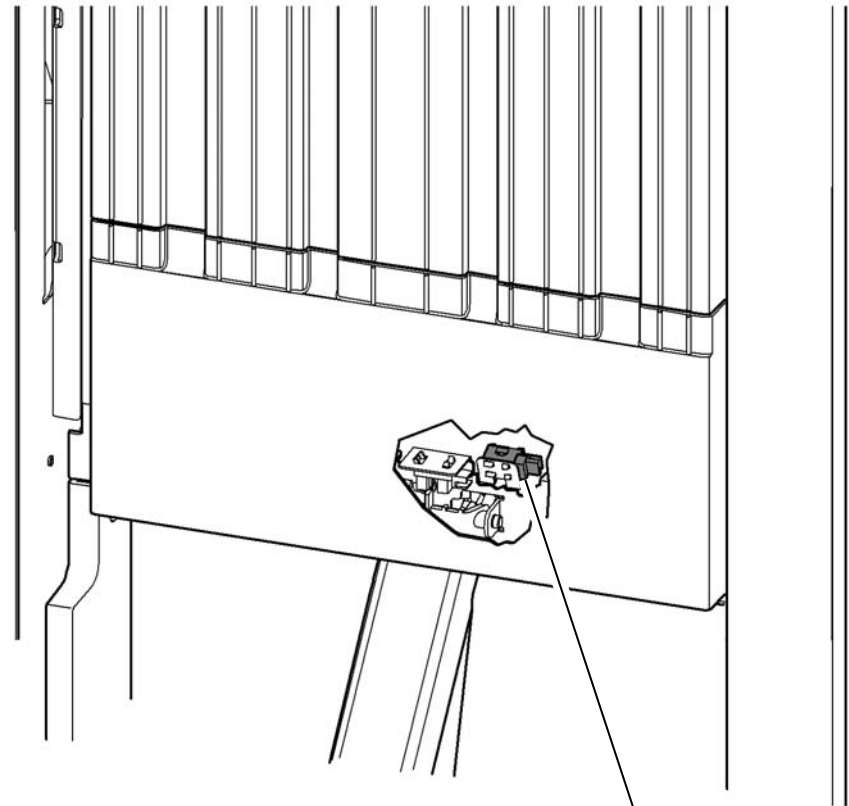
A



BM entry sensor,
Q12-089.

X-1-0055-A

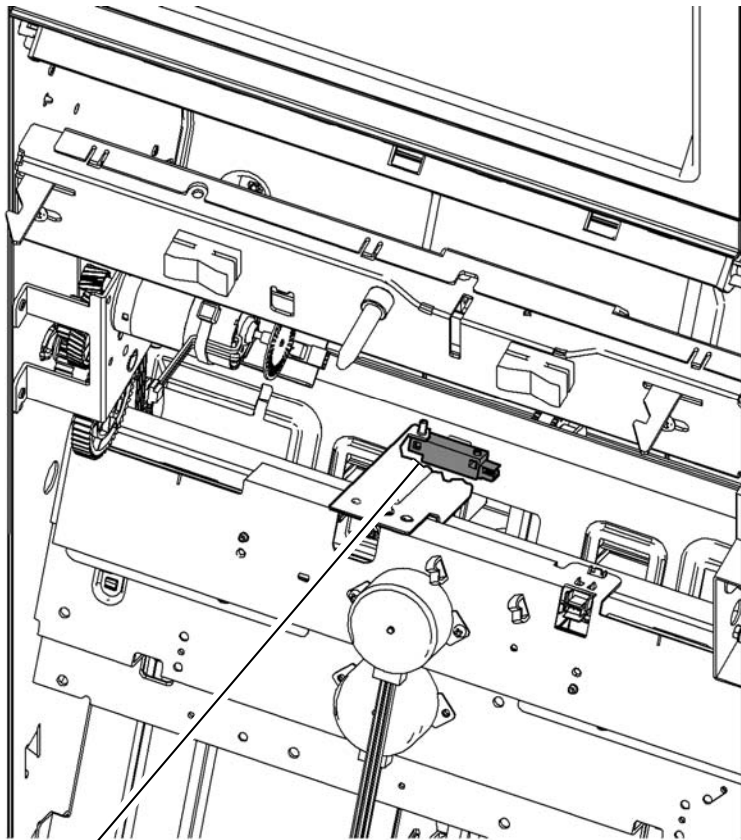
Figure 1 Component location



BM exit sensor,
Q12-213.

X-1-0054-A

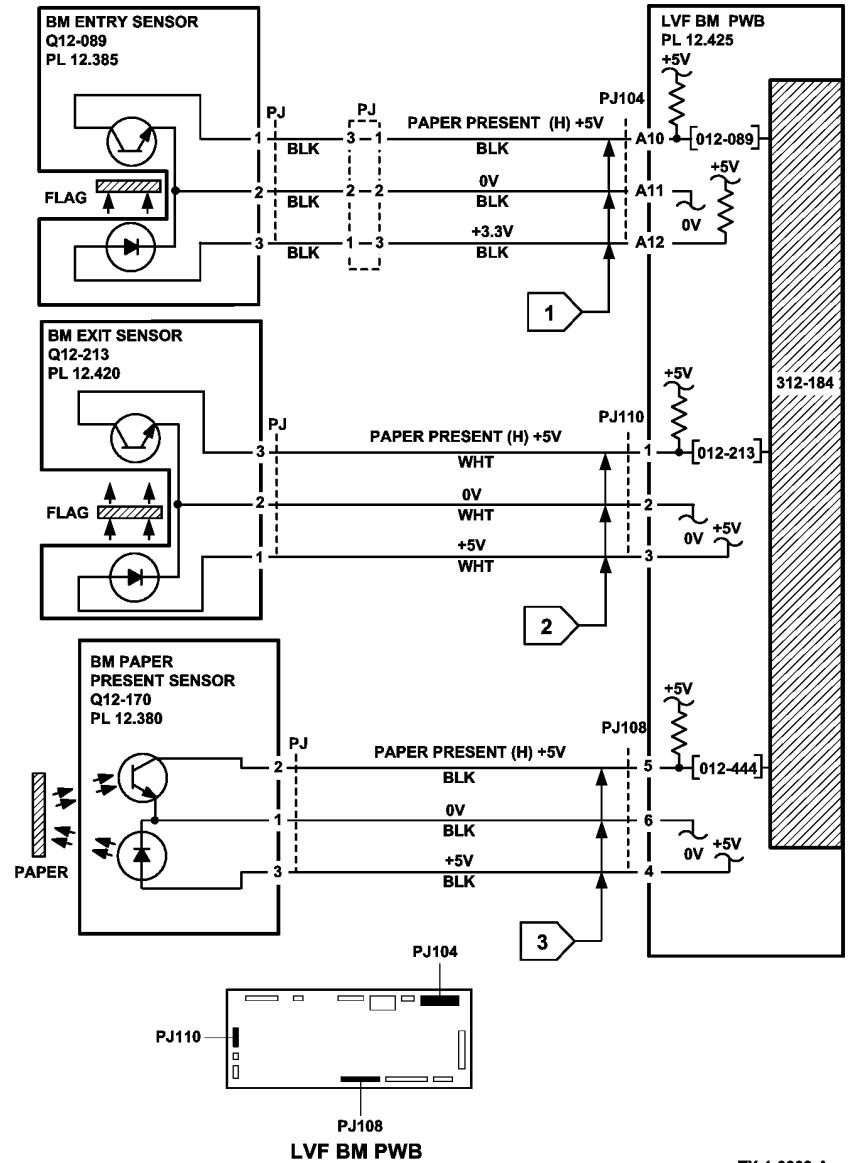
Figure 2 Component location



BM paper present sensor, Q12-170.

X-1-0053-A

Figure 3 Component location



TX-1-0038-A

Figure 4 Circuit diagram

312-198-00-150 Finisher Stray Sheet Detected RAP

312-198-00-150 A stray sheet was detected in the finisher after jam clearance.

Remote Service Actions

Ask the customer to check the paper path in the LVF. Clear the paper path of any jams or paper debris. If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Lower the paper entry guide assembly to access the entry sensor, Q12-077, [Figure 1](#). Enter [dC330](#), code 012-077. Actuate Q12-077. **The display changes.**

Y N
Go to [Flag 1](#). Check Q12-077.
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J304](#), [LVF PWB](#).
- [312D-150 LVF BM Power Distribution RAP](#).

Repair or install new components as necessary:

- Entry sensor, [PL 12.385 Item 7](#).
- [LVF PWB](#), [PL 12.425 Item 8](#).

Enter [dC330](#), code 012-078, punch sensor 1, Q12-078, [Figure 2](#). Actuate Q12-078. **The display changes.**

Y N
Go to [Flag 2](#). Check Q12-078.
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J307](#), [LVF PWB](#).
- [312D-150 LVF BM Power Distribution RAP](#).

Repair or install new components as necessary:

- Punch sensor 1, [PL 12.330 Item 7](#).
- [LVF PWB](#), [PL 12.425 Item 8](#).

Enter [dC330](#), code 012-107, top tray exit sensor, Q12-107, [Figure 3](#). Actuate Q12-107. **The display changes.**

Y N
Go to [Flag 3](#). Check Q12-107.
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J314](#), [LVF PWB](#).
- [312D-150 LVF BM Power Distribution RAP](#).

Repair or install new components as necessary:

- Top tray exit sensor, [PL 12.370 Item 11](#).
- [LVF PWB](#), [PL 12.425 Item 8](#).

Enter [dC330](#), code 012-106, compiler exit sensor, Q12-106, [Figure 4](#). Actuate Q12-106. **The display changes.**

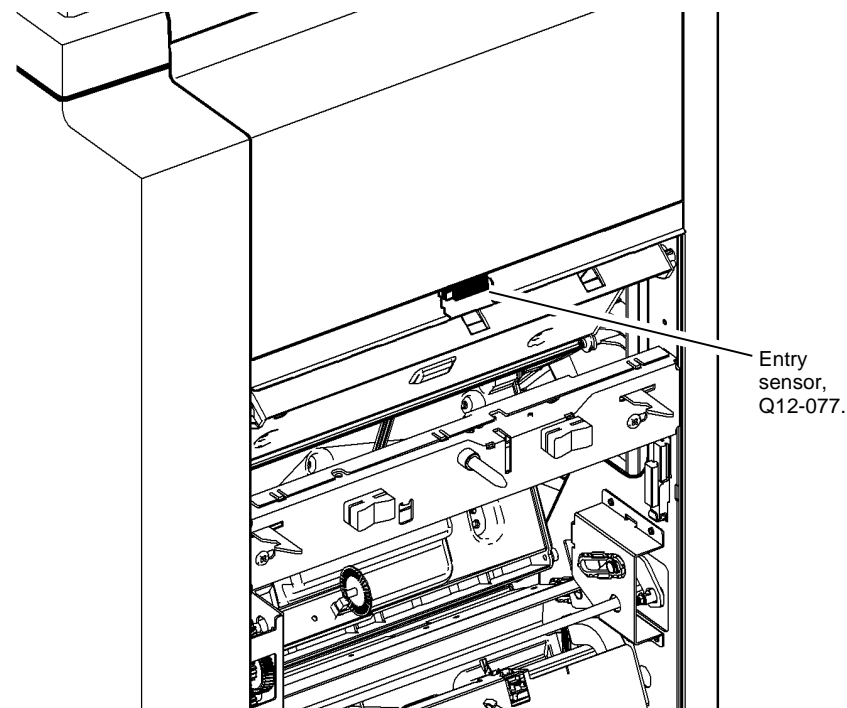
Y N
Go to [Flag 4](#). Check Q12-106.
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J314](#), [LVF PWB](#).
- [312D-150 LVF BM Power Distribution RAP](#).

Repair or install new components as necessary:

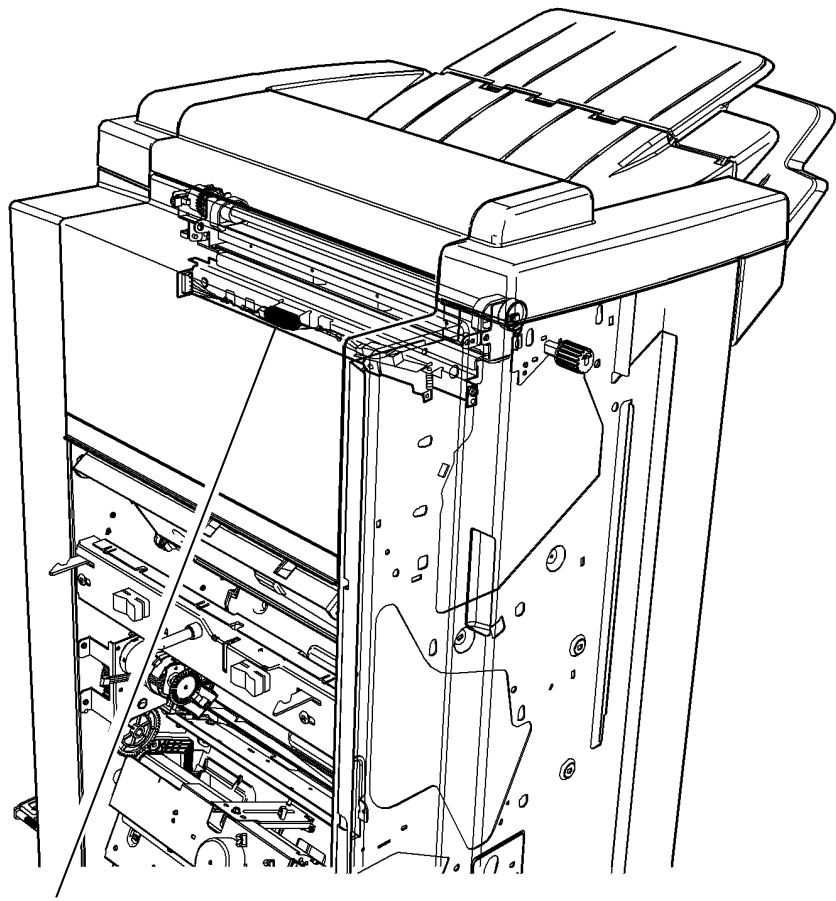
- Compiler exit sensor, [PL 12.375 Item 4](#).
- [LVF PWB](#), [PL 12.425 Item 8](#).

Perform [SCP 5](#) Final Actions.



X-1-1143-A

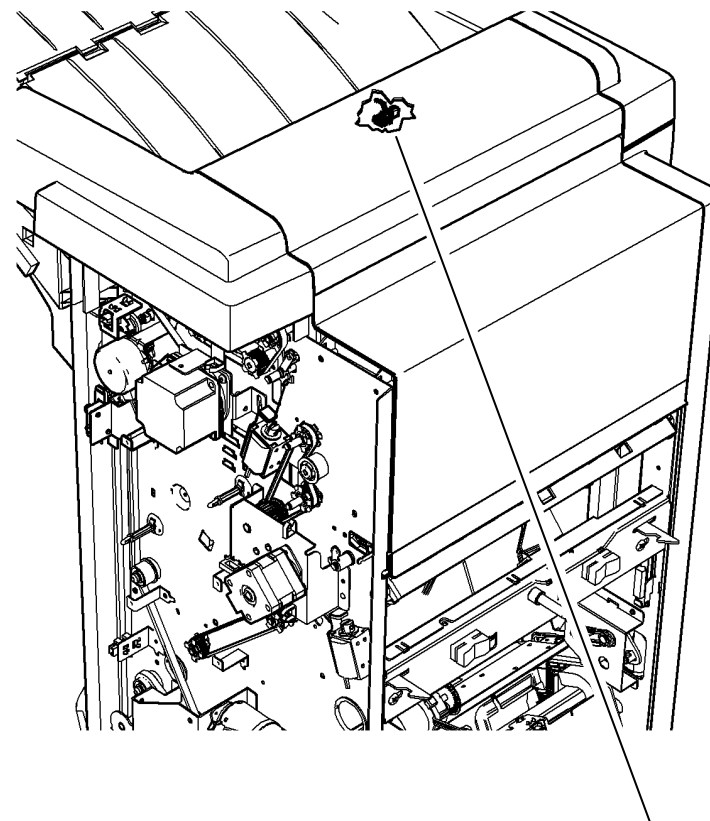
Figure 1 Component location



Punch sensor 1, Q12-078.

X-1-1144-A

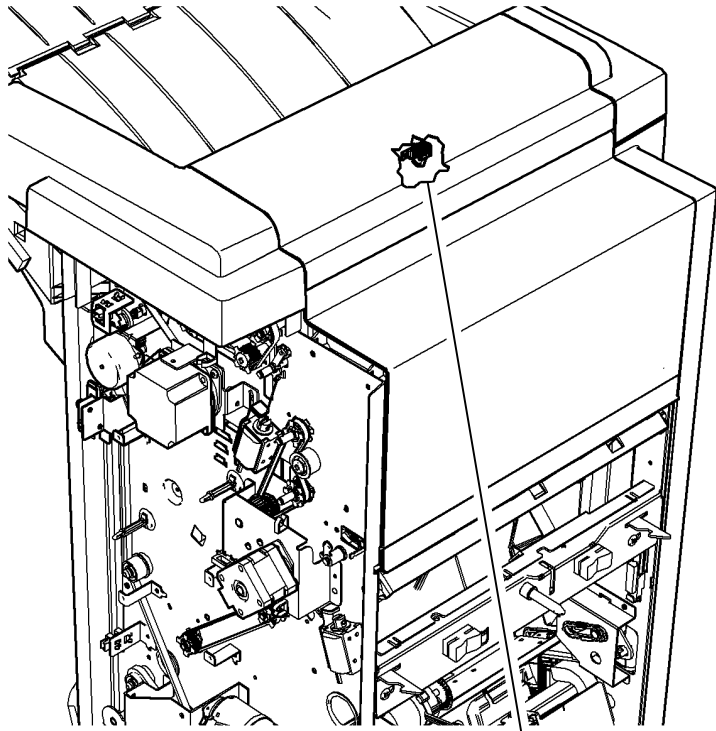
Figure 2 Component location



Top tray exit sensor, Q12-107.

X-1-1145-A

Figure 3 Component location



Compiler exit
sensor, Q12-106.

X-1-1146-A

Figure 4 Component location

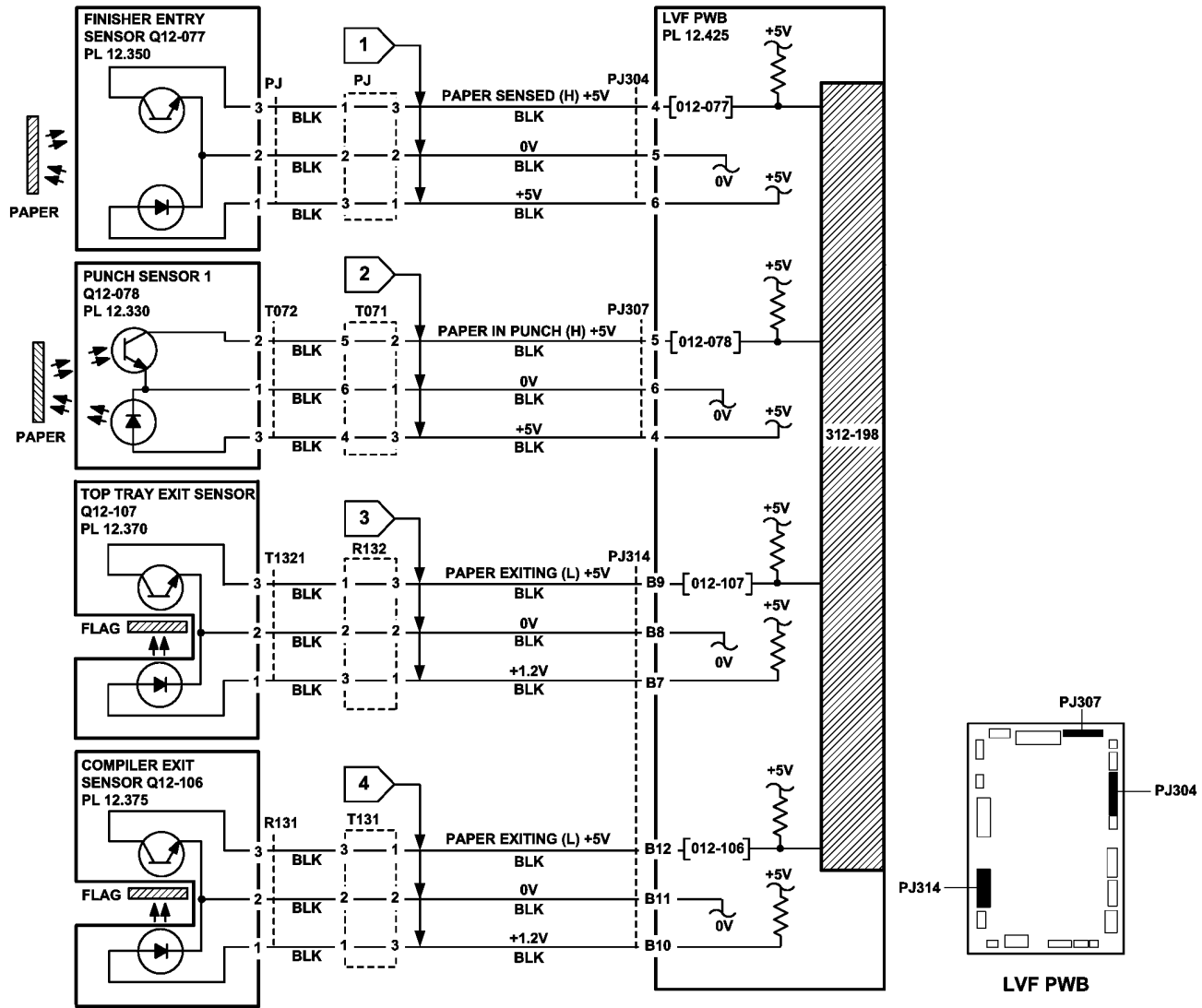


Figure 5 Circuit diagram

TX-1-0288-A

312-312-00-150, 312-313-00-150 Interlocks RAP

312-312-00-150 The LVF BM top cover interlock was open during run mode.

312-313-00-150 The LVF BM front door interlock was open during run mode.

Remote Service Actions

Ask the customer to check the items that follow:

- The LVF BM front door is closed.
- The LVF BM top cover is closed.

If the fault continues, a site visit will be necessary.

On Site Initial Actions

Check the LVF PWB DIP switch settings, refer to 312F-150 LVF PWB and LVF BM PWB DIP Switch Settings RAP.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the LVF BM. The LVF BM is unstable when un-docked from the machine. Do not show the customer how to un-dock the LVF BM.

Go to Flag 1. Check for +24V on P/J302 pin 1. If the voltage is not present, refer to 312D-110 LVF BM Power Distribution RAP.

Go to the appropriate RAP:

- 312-312-00-150 Top Cover Interlock RAP.
- 312-313-00-150 Front Door Interlock RAP.

312-312-00-150 Top Cover Interlock RAP

Check the top cover interlock switch, S12-197 as follows:

- Check the switch actuator.
- Enter dC330, code 012-197, top cover interlock switch, S12-197. Actuate S12-197. If the display does not change, refer to:
 - GP 13, How to Check a switch.
 - Figure 1.
 - P/J315, LVF PWB.
- Go to Flag 2. Check the wiring between P/J315 and S12-197.
- If necessary, install a new top cover interlock switch, PL 12.425 Item 6.

312-313-00-150 Front Door Interlock RAP

Check the front door interlock switch, S12-303 as follows:

- Check the switch actuator.
- Enter dC330, code 012-303, front door interlock switch, S12-303. Actuate S12-303. If the display does not change, refer to:
 - GP 13, How to Check a switch.
 - Figure 1.
 - P/J302, LVF PWB.
- Go to Flag 1. Check the wiring between P/J302 and S12-303.
- If necessary, install a new front door interlock switch, PL 12.425 Item 5.

Perform SCP 5 Final Actions.

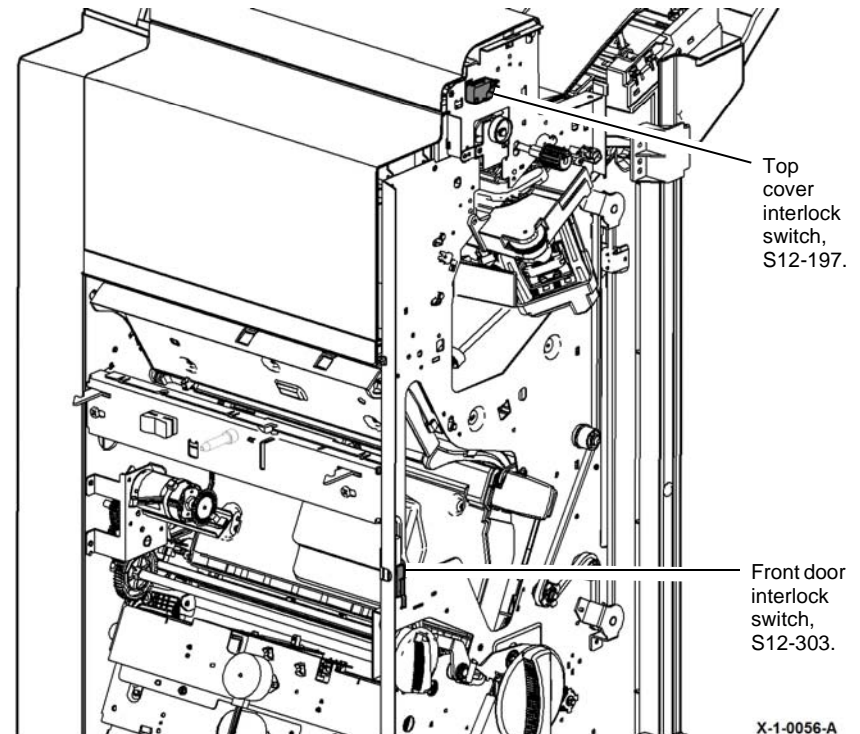


Figure 1 Component location

312-340-00-150, 312-342-00-150 Ejector Movement Failure RAP

312-340-00-150 The ejector was not at the home position.

312-342-00-150 The ejector failed to perform a cycle of operation.

NOTE: A cycle of operation for the ejector is to cycle from the home position to the out position and back to the home position.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the LVF BM. The LVF BM is unstable when un-docked from the machine. Do not show the customer how to un-dock the LVF BM.

- Check the operation of the ejector mechanism. If the operation is noisy or sluggish, perform the 2K LCSS and LVF BM Ejector Shafts and Slide Bearings procedure in **ADJ 40.1** Machine Lubrication.
- Check the LVF PWB DIP switch settings, refer to **312F-150** LVF PWB and LVF BM PWB DIP Switch Settings RAP.
- Check for any obstructions that would prevent the ejector from moving.
- Check the finisher for binding and grinding noises, refer to **OF1** Unusual Noise RAP.

Procedure

NOTE: All LVF BM interlocks must be made to supply +24V to the motors.

Enter **dC330**, code 012-185, ejector out sensor, Q12-185. Actuate Q12-185. The display changes.

Y N

Go to **Flag 2**. Check Q12-185.

Refer to:

- **GP 11** How to Check a Sensor.
 - **Figure 1**.
 - **P/J304, LVF PWB**.
 - **312D-150** LVF BM Power Distribution RAP.
- Repair or install new components as necessary:
- Ejector out sensor, **PL 12.360** Item 3.
 - LVF PWB, **PL 12.425** Item 8.

Enter **dC330**, code 012-184, ejector home sensor, Q12-184. Actuate Q12-184. The display changes.

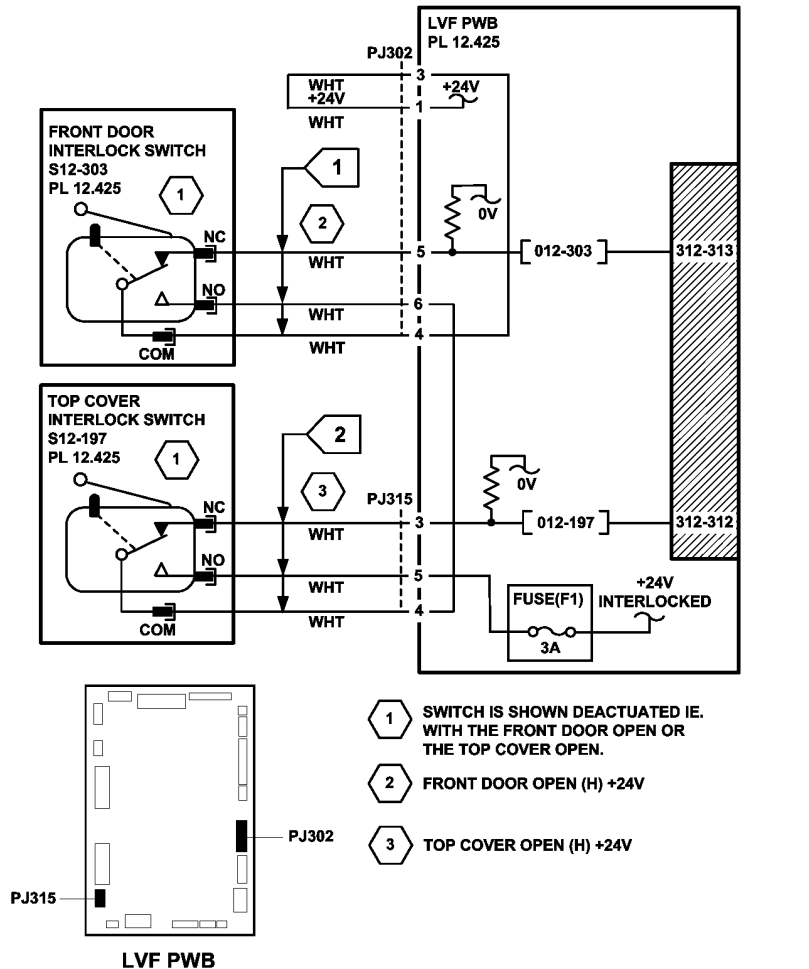


Figure 2 Circuit diagram

TX-1-0039-A

Y N

Go to **Flag 1**. Check Q12-184.

Refer to:

- GP 11 How to Check a Sensor.
- Figure 1.
- P/J304, LVF PWB.
- 312D-150 LVF BM Power Distribution RAP.

Repair or install new components as necessary:

- Ejector home sensor, PL 12.360 Item 3.
- LVF PWB, PL 12.425 Item 8.

Enter **dC330**, code 012-236, ejector motor cycle. Check the operation of the ejector motor, MOT12-234. **The motor runs.**

Y N

Go to **Flag 3**. Check MOT12-234.

Refer to:

- GP 10, How to Check a Motor.
- Figure 1.
- P/J303, LVF PWB.
- 312D-150 LVF BM Power Distribution RAP.

Repair or Install new components as necessary:

- Ejector assembly, PL 12.360 Item 1.
- LVF PWB, PL 12.425 Item 8.

Enter **dC330**, code 012-236, ejector motor cycle. Check the ejector cycles. Add the code 12-184, ejector sensor home, Q12-184. Then cycle the ejector. Add the code 12-185, ejector out sensor, Q12-185. Then cycle the ejector. **The ejector actuates the ejector home sensor and the ejector out sensor.**

Y N

Refer to **GP 7**, check the components that follow, install new components as necessary;

- Pulley drive gear, PL 12.360 Item 8.
- Ejector belt, PL 12.360 Item 5.

The ejector cycles noisily, colliding with the end stops.

Y N

Check the stapler to ensure the staples are correctly formed. Mis-formed staples can cause the set to hang in the stapler causing ejector movement failures. **The staples are correctly formed.**

Y N

Clear the staple head of any mis-formed staples. Then check the operation of the stapler. If necessary, install a new staple head unit, PL 12.365 Item 5.

If the ejector is still not moving, install a new ejector assembly, PL 12.360 Item 1. Perform **SCP 5** Final Actions.

Enter **dC330**, code 012-096, ejector motor encoder sensor, Q12-096. Actuate Q12-096. **The display changes.**

Y N

Go to **Flag 4**. Check Q12-096.

A

A

Refer to:

- GP 11 How to Check a Sensor.
- Figure 1.
- P/J304, LVF PWB.
- 312D-150 LVF BM Power Distribution RAP.

Repair or install new components as necessary:

- Ejector motor encoder sensor, Q12-096, PL 12.360 Item 3.
- LVF PWB, PL 12.425 Item 8.

Perform **SCP 5** Final Actions.

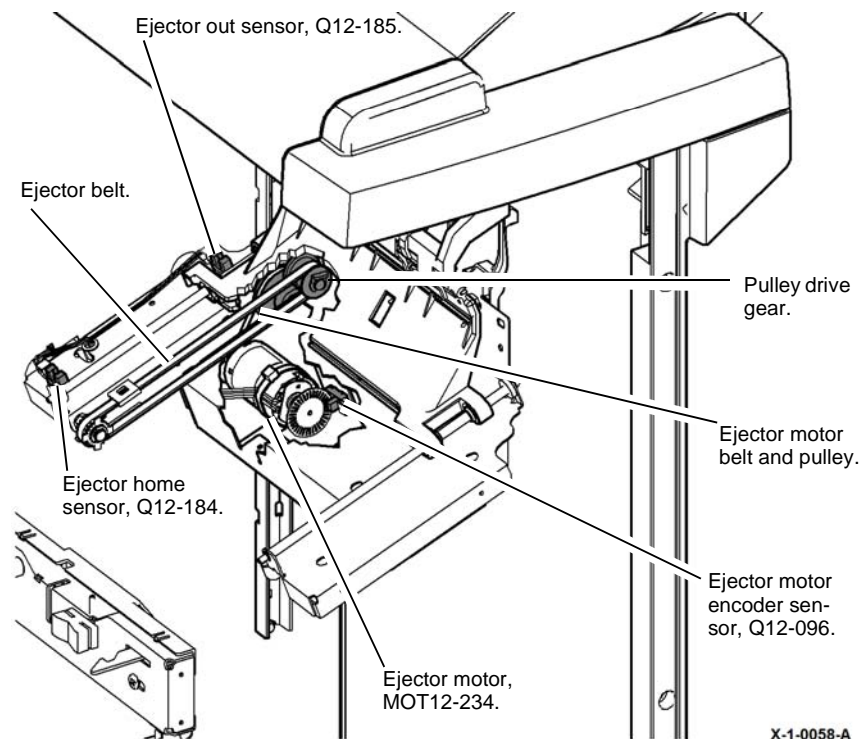
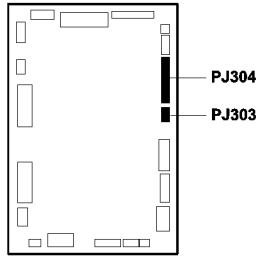


Figure 1 Component location

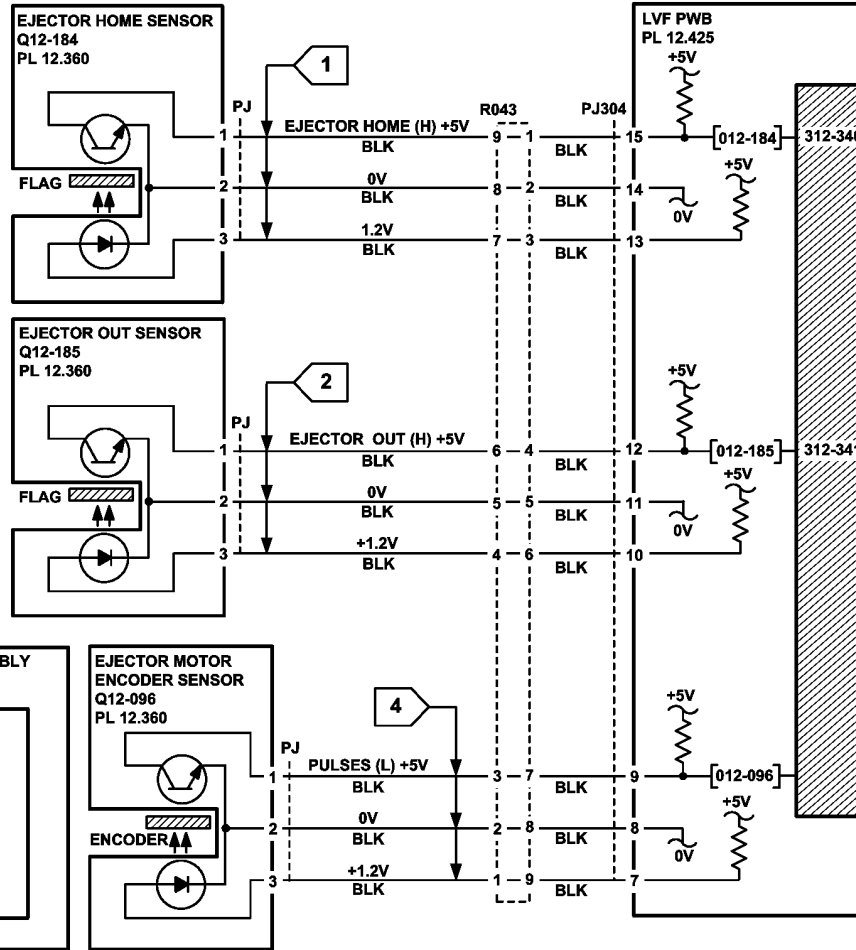
X-1-0058-A

- 1 012-234 MOVES EJECTOR TO THE HOME POSITION
- 012-235 MOVES EJECTOR TO THE OUT POSITION
- 012-236 CYCLES THE EJECTOR UNTIL TIMEOUT

PJ303 PIN	VOLTAGE		
	ENERGISED FORWARD	ENERGISED REVERSE	DE-ENERGISED
1	+24V	0V	0V
2	0V	+24V	0V



LVF PWB



TX-1-0041-A

Figure 2 Circuit diagram

312-352-00-150, 312-353-00-150 Booklet Stapler Assembly Failure RAP

312-352-00-150 The rear booklet staple cartridge assembly was not correctly primed within the required time.

312-353-00-150 The front booklet staple cartridge assembly was not correctly primed within the required time.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the LVF PWB DIP switch settings. Refer to [312F-150 LVF PWB](#) and LVF BM PWB DIP Switch Settings RAP.
- Check the items that follow:
 - The booklet staple cartridges, [Figure 1](#), have staples in them and are correctly installed.
 - The leading staples in the staple head have been primed, [Figure 2](#).
 - That the sheets of staples in the cartridge are feeding one at a time. If staple sheets overlap, they will jam in the cartridge. If necessary, install a new staple cartridge, [PL 12.395 Item 8](#).

NOTE: The term “priming” refers to 2 staples at the front of the cartridge, that have been performed automatically by the action of the BM staple head assembly, refer to [Figure 2](#).

NOTE: The low staples sensor, cartridge present sensor and the priming sensor for both the front and rear booklet staplers are all integral to the BM staple cartridge assembly. These sensors can be checked using component control codes but they cannot be exchanged as components.

NOTE: If the front or rear staple cartridge primed sensor does not see staples in the primed position, the staple head cycles a number of times to prime the staple head. This occurs when the LVF BM interlocks are made.

NOTE: Ensure that the staple forming plate is fully closed on both the front and rear staple cartridge assembly, [Figure 3](#).

Procedure

Enter [dC330](#), code 012-442, actuate the front staple cartridge primed sensor, Q12-442 by inserting a staple cartridge that has correctly primed staples, [Figure 2](#). Then remove that cartridge and insert a cartridge that does not have primed staples. **The display changes.**

Y N
| Go to [Flag 1](#). Check Q12-442.

A

Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J111, LVF PWB](#).
- [312D-150 LVF BM Power Distribution RAP](#).
- [REP 1.2 Wiring Harness](#).

Repair or install new components as necessary:

- LVF PWB, [PL 12.425 Item 8](#).
- BM staple cartridge assembly, [PL 12.395 Item 8](#).

Enter [dC330](#), code 012-443, actuate the rear staple cartridge primed sensor, Q12-443 by inserting a staple cartridge that has correctly primed staples, [Figure 2](#). Then remove that cartridge and insert a cartridge that does not have primed staples. **The display changes.**

Y N

Go to [Flag 2](#). Check Q12-443.

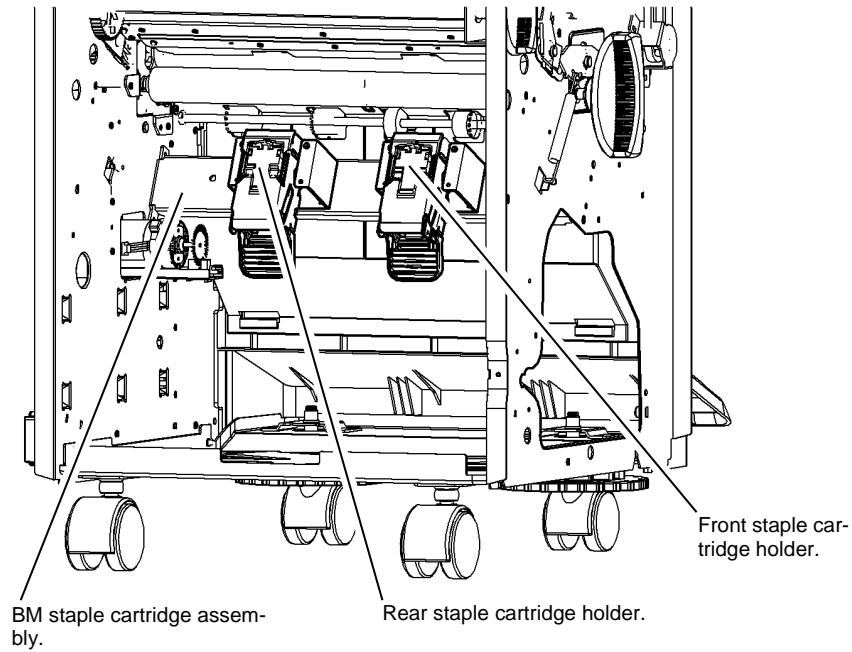
Refer to:

- [GP 11](#), How to Check a Sensor.
- [P/J111, LVF PWB](#).
- [312D-150 LVF BM Power Distribution RAP](#).
- [REP 1.2 Wiring Harness](#).

Repair or install new components as necessary:

- LVF PWB, [PL 12.425 Item 8](#).
- BM staple cartridge assembly, [PL 12.395 Item 8](#).

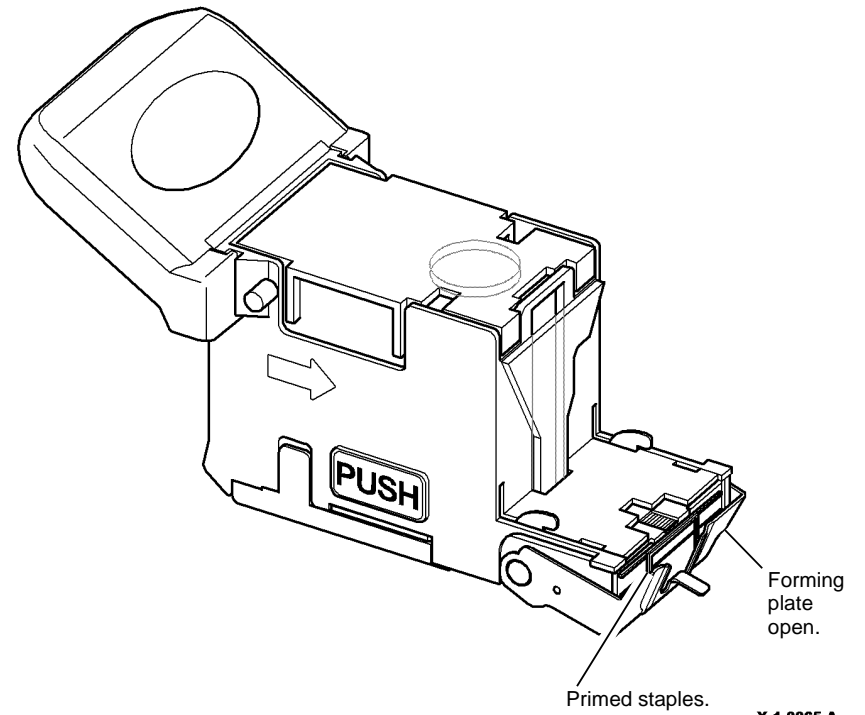
The fault may be intermittent. Check for damaged wiring or connectors. If necessary repair the wiring, [REP 1.2](#), or install new components.



NOTE: The back stop assembly, BM stapler assembly and booklet tamper assembly have been removed for clarity.

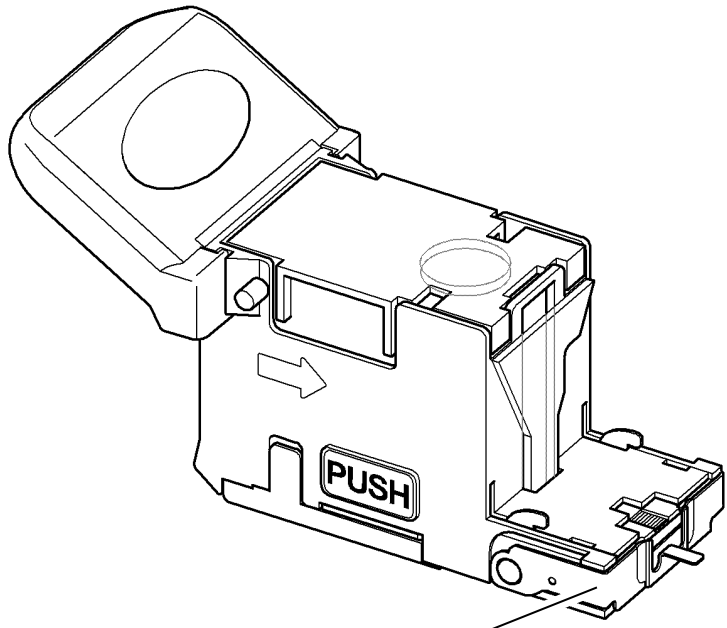
X-1-0064-A

Figure 1 Component location



X-1-0065-A

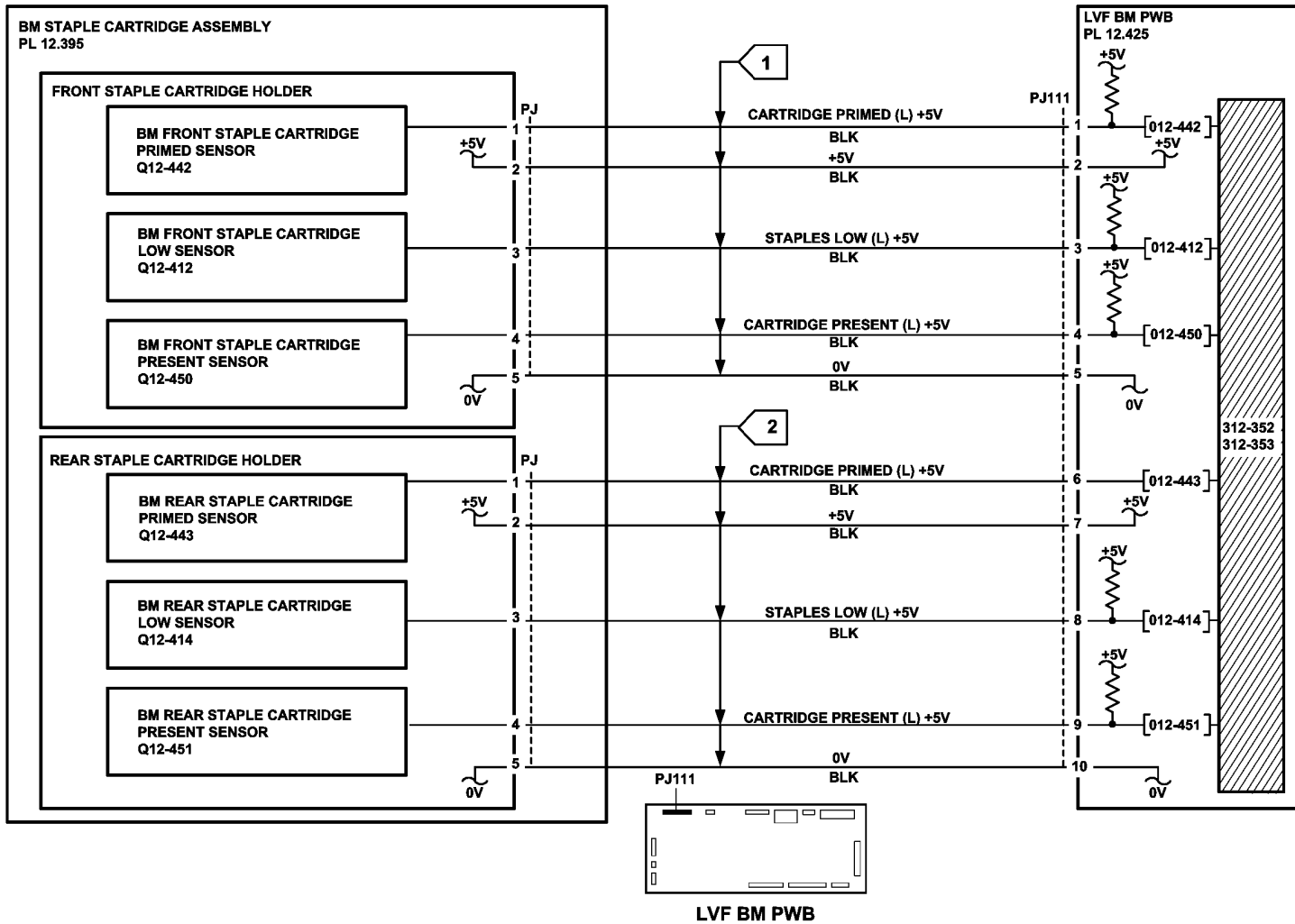
Figure 2 Staple cartridge open



Forming plate fully closed.

X-1-0066-A

Figure 3 Staple cartridge closed



TX-1-0044-A

Figure 4 Circuit diagram

312-371-00-150, 312-372-00-150, 312-378-00-150 Staple Head Unit Movement Failure RAP

312-371-00-150 The staple head unit fails to move.

312-372-00-150 The staple head unit was not at the home position.

312-378-00 The staple head unit was not indexed correctly.

NOTE: The home position is when the staple head unit is at the corner stapling position (fully to the front of the LVF BM and rotated through 45 degrees).

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care not to topple the LVF BM. The LVF BM is unstable when un-docked from the machine. Do not show the customer how to un-dock the LVF BM.

- Check the LVF PWB DIP switch settings. Refer to [312F-150](#) LVF PWB and LVF BM PWB DIP Switch Settings RAP.
- Un-dock the LVF BM from the machine, [REP 12.13-150](#). Move the ejector assembly fully to the right. Manually move the stapler unit along the full length of the track using the green thumb-wheel. Check the home sensor flag and the 2 dual position flags for damage, see NOTE. Check for damage or obstructions that would prevent the stapling unit from moving. If necessary, install a new staple head unit, [PL 12.365 Item 5](#) or a new stapler traverse assembly, [PL 12.365 Item 1](#).

NOTE: For dual position stapling, the stapler index sensor uses 2 flags.

- Dock the LVF BM to the machine.

Procedure

NOTE: All LVF BM interlocks must be made to supply +24V to the motors.

Enter [dC330](#), code 012-234, ejector motor home, MOT12-234, to move the ejector assembly fully to the right. Enter code 012-250, SU1 motor cycle. **The stapling unit cycles back and forth along the track.**

Y N

Go to [Flag 3](#). Check SU1 motor, MOT12-249.

Refer to:

- [GP 10](#), How to Check a Motor.
- [Figure 1](#).
- [P/J308](#), [LVF PWB](#).
- [312D-150](#). LVF BM Power Distribution RAP.

A

Repair or install new components as necessary:

- Stapler traverse assembly, [PL 12.365 Item 1](#).
- LVF PWB, [PL 12.425 Item 8](#).

Enter [dC330](#), code 012-135, staple home sensor, Q12-135. Actuate Q12-135, by moving the stapler unit to and from the home position using the green thumb-wheel. **The display changes.**

Y N

Go to [Flag 1](#). Check Q12-135.

Refer to:

- [GP 11](#). How to check a sensor.
- [Figure 1](#).
- [P/J308](#), [LVF PWB](#).
- [312D-150](#) LVF BM Power Distribution RAP.

Repair or install new components as necessary:

- Staple home sensor, [PL 12.365 Item 3](#).
- LVF PWB, [PL 12.425 Item 8](#).

Enter [dC330](#), code 012-234, ejector motor, MOT12-234, to move the ejector assembly fully to the right. Enter code 012-168, stapler index sensor, Q12-168. Actuate Q12-168, by moving the stapler unit to and from the flag position (approximately 115mm (4.5 inches) from the front of the track) using the green thumb-wheel. **The display changes.**

Y N

Go to [Flag 2](#). Check Q12-168.

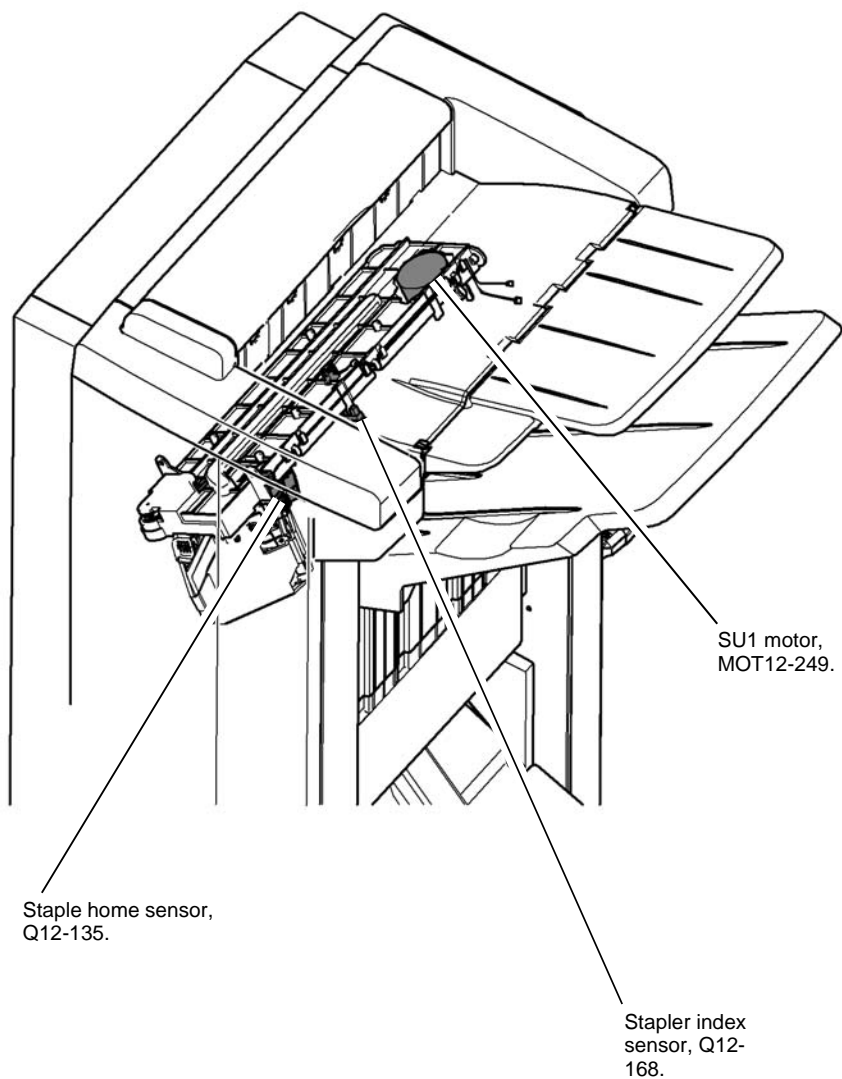
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J308](#), [LVF PWB](#).
- [312D-150](#) LVF BM Power Distribution RAP.

Repair or install new components as necessary:

- Stapler index sensor, [PL 12.365 Item 3](#).
- LVF PWB, [PL 12.425 Item 8](#).

Perform [SCP 5](#) Final Actions.



X-1-0041-A

Figure 1 Component location

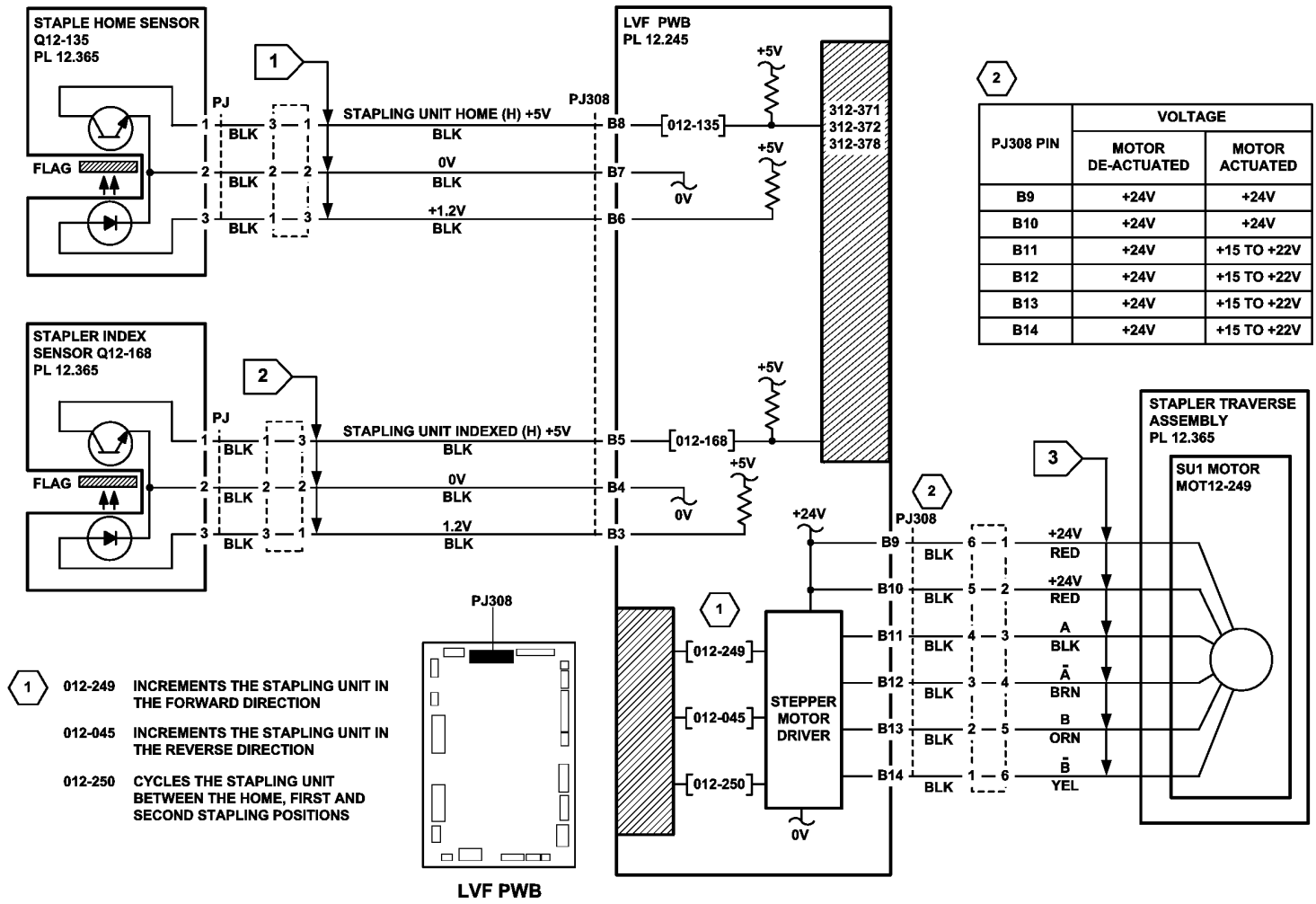


Figure 2 Circuit diagram

TX-1-0028-A

312-377-00-150 Stapling Failure RAP

312-377-00-150 Staples in the staple head unit were not primed.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, GP 14. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the LVF PWB DIP switch settings. Refer to 312F-150 LVF PWB and LVF BM PWB DIP Switch Settings RAP.
- Check the items that follow:
 - The staple cartridge has staples in it and is correctly installed.
 - The leading staples in the staple head have been primed, Figure 2.
 - That the sheets of staples in the cartridge are feeding one at a time. If staple sheets overlap, they will jam in the cartridge. If necessary, install a new staple cartridge, PL 12.365 Item 7.

NOTE: The term “priming” refers to 2 staples at the front of the cartridge, that have been performed automatically by the action of the stapler, refer to Figure 2.

NOTE: The SH1 low staples sensor, SH1 cartridge sensor, SH1 jaw home sensor and the SH1 priming sensor are all integral to the staple head unit. These sensors can be checked using component control codes, but they cannot be exchanged as components.

Procedure

Enter dC330, code 012-196, SH1 paper sensor, Q12-196. Actuate Q12-196. The display changes.

Y N
Go to Flag 1. Check Q12-196.
Refer to:

- Figure 1.
- GP 11, How to Check a Sensor.
- P/J308, LVF PWB.
- 312D-150 LVF BM Power Distribution RAP.

Repair or install new components as necessary:

- SH1 paper sensor, PL 12.365 Item 4.
- LVF PWB, PL 12.425 Item 8.

A

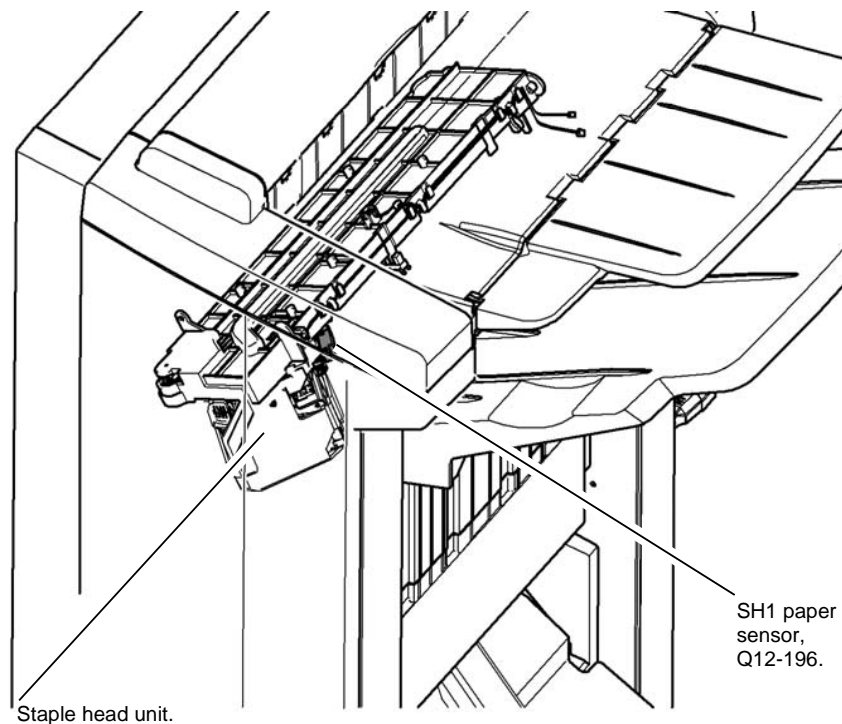
NOTE: If the SH1 priming sensor does not see staples in the primed position, the staple head cycles a number of times to prime the staple head. This occurs when the LVF BM interlocks are made.

Follow the customer instruction label inside the LVF BM front door to remove the staple cartridge. Slide out the top sheet of staples from the cartridge to expose a new sheet of staples on the top of the stack. Ensure the forming plate is fully closed, Figure 3. Install the staple cartridge and close the door. The stapler will now cycle a few times to feed and prime the new sheet of staples. Open the door and remove the staple cartridge. Examine the sheet of staples that have been fed to the staple forming part of the stapler by opening the forming plate, Figure 2. **The first 2 staples have been partially formed.**

Y N

Install a new staple cartridge, PL 12.365 Item 7 and repeat the check. If the first 2 staples are not partially formed, install a new staple head unit, PL 12.365 Item 5. Perform SCP 5 Final Actions.

Install a new staple head unit, PL 12.365 Item 5. Perform SCP 5 Final Actions.



SH1 paper sensor,
Q12-196.

Staple head unit.

X-1-0061-A

Figure 1 Component location

A

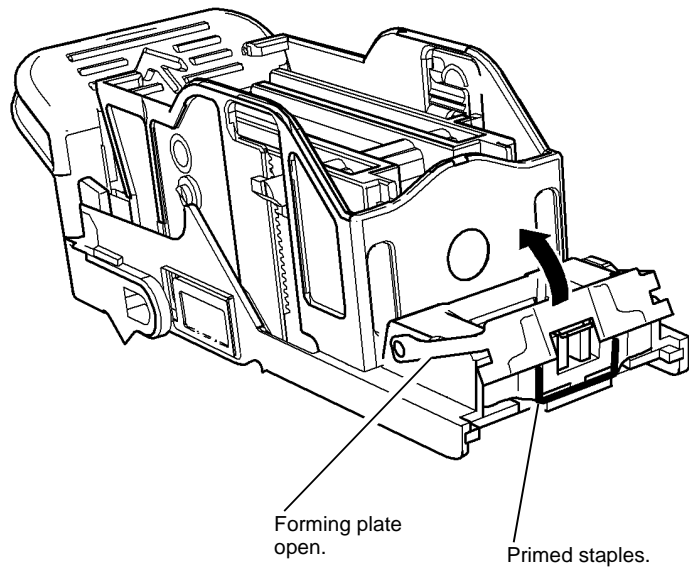


Figure 2 Staple cartridge open

X-1-0062-A

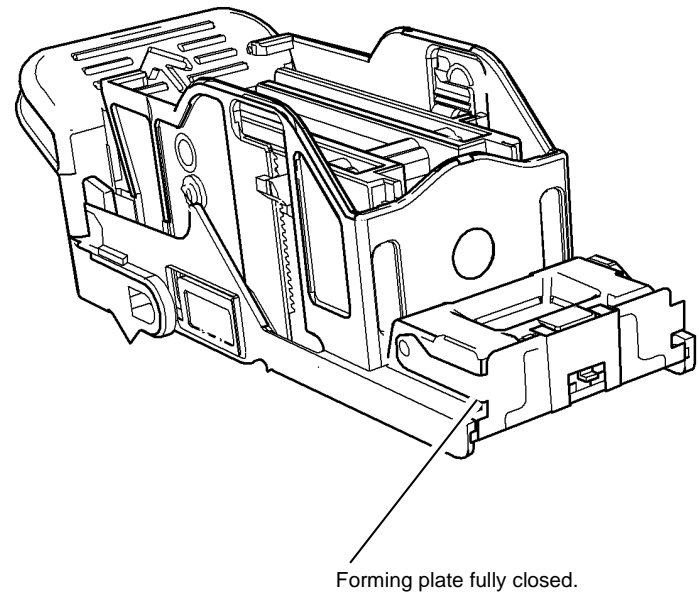


Figure 3 Staple cartridge closed

X-1-0063-A

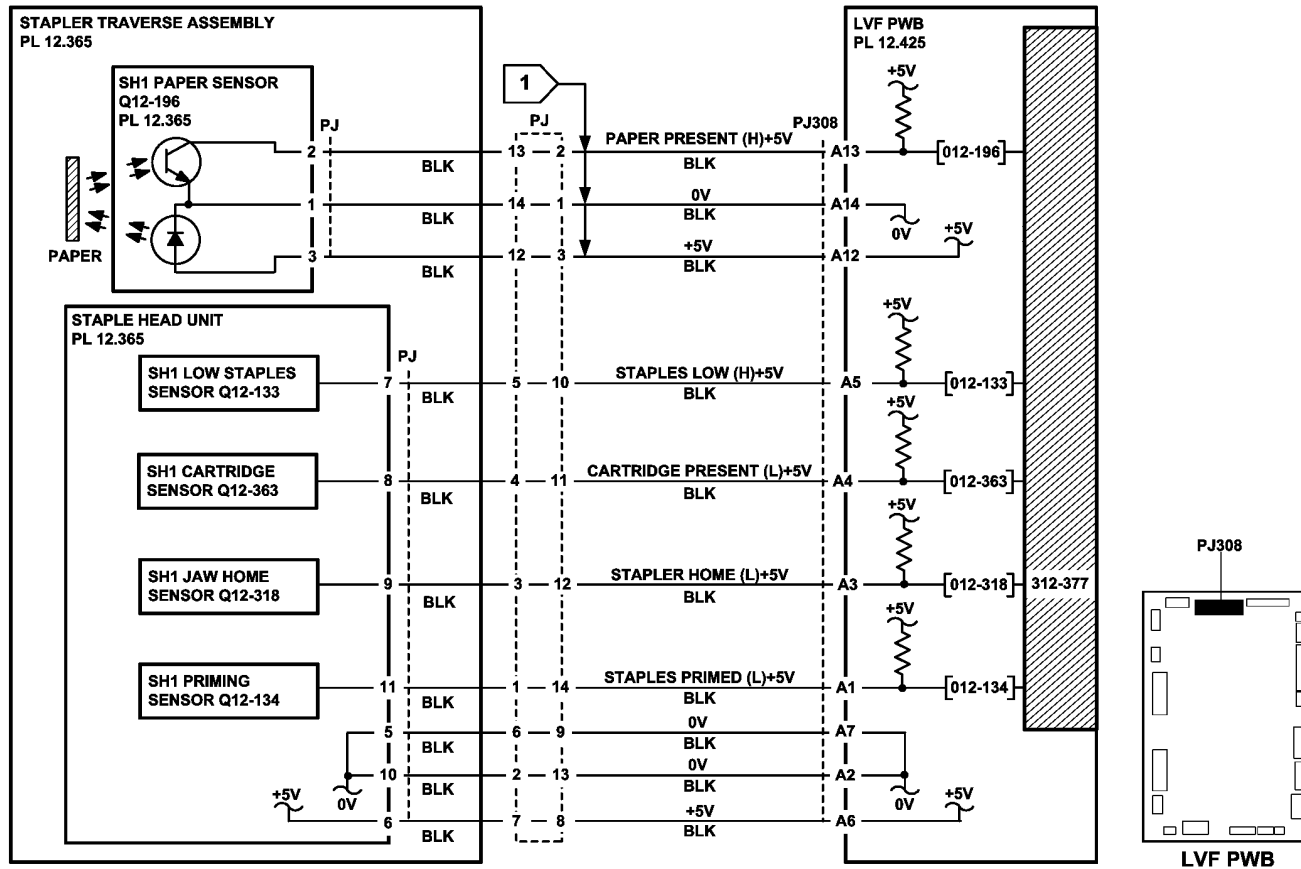


Figure 4 Circuit diagram

TX-1-0043-A

312-392-00-150, 312-393-00-150, 312-394-00-150 Front Tamper Move Failure RAP

312-392-00-150 The front tamper failed to move to the front position.

312-393-00-150 The front tamper failed to move to the rear position.

312-394-00-150 The front tamper was not at the rear home position.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- **Figure 1**. Check for damage or obstructions that would prevent the tamper assembly from operating correctly. If necessary, install a new tamper assembly, **PL 12.355 Item 1**.
- Jams can be caused by removing prints from bin 1 before the machine has finished printing. If the tampers are touched while they are moving, they may stall and cause the machine to shutdown. The resulting shutdown can cause un-clearable jams in the finisher and the tray 3 and tray 4 to paper path interface.
- Jams can also be caused if the tray settings do not match the paper in the trays. Ensure the tray settings are correct.
- Check the condition and the tension of the front tamper drive belt. Tensioning is achieved by a spring on the motor, the motor should be free to move.
- If there is a large jam of paper above bin 1 that has obstructed the tampers, this has probably been caused by poorly stacked sets failing to actuate the bin 1 upper level sensor. Perform the steps that follow:
 - Check the paper for defects that could degrade the tamping operation e.g. curl, paper condition, buckling or paper type. Refer to **IQ1 Image Quality Entry RAP**.
 - Check the operation of the paddle roll, refer to **312-024-00-150, 312-025-00-150 Paddle Roll Failure RAP**.
 - Check the operation of the bin 1 upper level sensor, refer to **312-462-00-150 Bin 1 Movement Failure RAP**.
 - Refer to the **312G-150 LVF BM Mis-Registration in Stapled Sets and Non-Stapled Sets RAP**.
 - Check the LVF PWB DIP switch settings, refer to **312F-150 LVF PWB and LVF BM PWB DIP Switch Settings RAP**.

Procedure

NOTE: All LVF BM interlocks must be made to supply +24V to the motors.

Enter **dC330**, codes 012-226, front tamper home and 012-228, front tamper move alternately, **Figure 1**. The front tamper moves between the home and inboard positions.

Y N

Go to **Flag 3**. Check the front tamper motor, MOT12-226.

A

Refer to:

- **GP 10** How to Check a Motor.
- **P/J312, LVF PWB**.
- **312D-150 LVF BM Power Distribution RAP**.

Repair or install new components as necessary:

- Tamper assembly, **PL 12.355 Item 1**.
- LVF PWB, **PL 12.425 Item 8**.

Enter **dC330** code 012-180, front tamper home sensor, Q12-180, **Figure 1**. Actuate Q12-180.

The display changes.

Y N

Go to **Flag 1**. Check Q12-180.

Refer to:

- **GP 11** How to Check a Sensor.
- **P/J312, LVF PWB**.
- **312D-150 LVF BM Power Distribution RAP**.

Repair or install new components as necessary:

- Front tamper home sensor, **PL 12.355 Item 3**.
- LVF PWB, **PL 12.425 Item 8**.

Enter **dC330** code 012-182, front tamper away sensor, Q12-182, **Figure 1**. Actuate Q12-182.

The display changes.

Y N

Go to **Flag 2**. Check Q12-182.

Refer to:

- **GP 11** How to check a Sensor.
- **P/J312, LVF PWB**.
- **312D-150 LVF BM Power Distribution RAP**.

Repair or install new components as necessary:

- Front tamper away sensor, **PL 12.355 Item 3**.
- LVF PWB, **PL 12.425 Item 8**.

Perform **SCP 5** Final Actions.

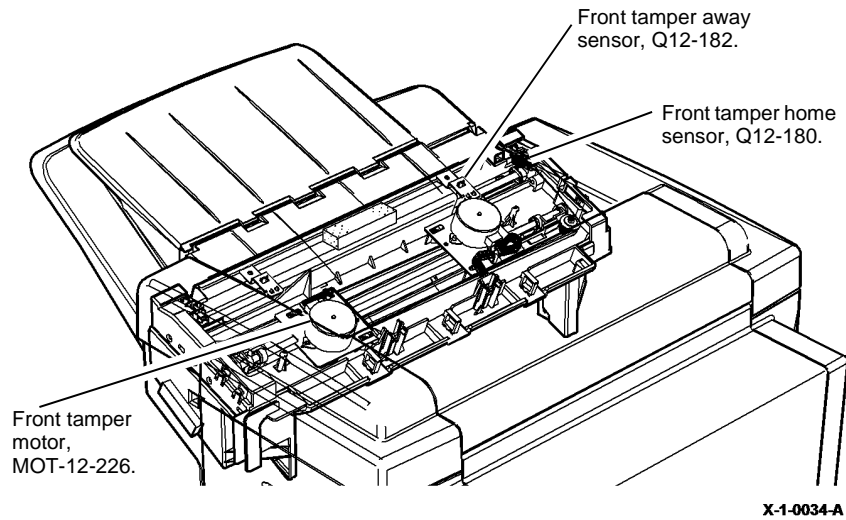


Figure 1 Component location

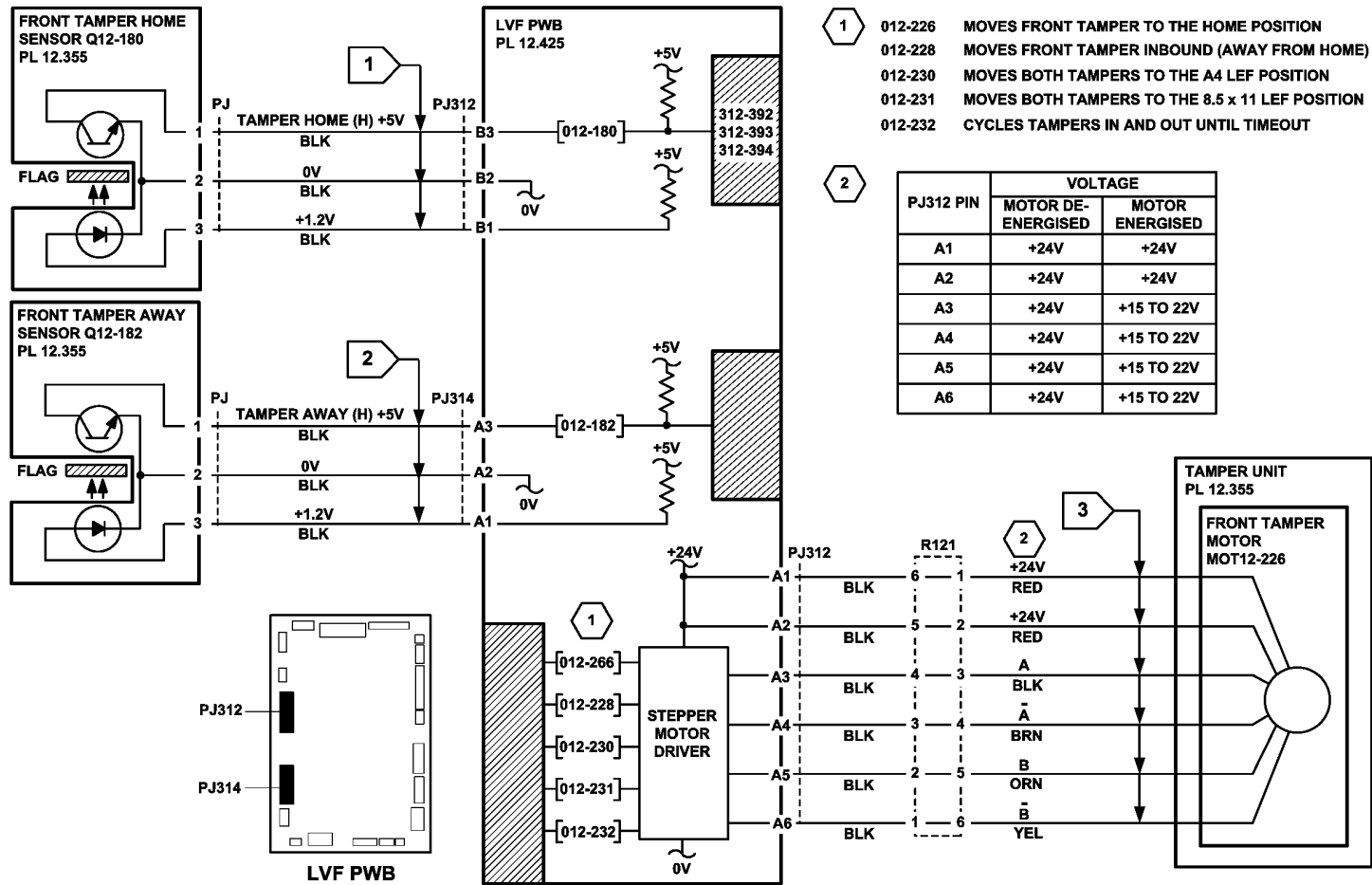


Figure 2 Circuit diagram

TX-1-0022-A

312-396-00-150, 312-397-00-150, 312-398-00-150 Rear Tamper Move Failure RAP

312-396-00-150 The rear tamper failed to move from the home position.

312-397-00-150 The rear tamper failed to return to the home position.

312-398-00-150 The rear tamper failed to move from the away from home position.

NOTE: The away home position is with the rear tamper approximately halfway along it's travel.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- **Figure 1.** Check for damage or obstructions that would prevent the tamper assembly from operating correctly. If necessary, install a new tamper assembly, [PL 12.355 Item 1](#).
- Jams can be caused by removing prints from bin 1 before the machine has finished printing. If the tampers are touched while they are moving, they may stall and cause the machine to shutdown. The resulting shutdown can cause un-clearable jams in the finisher and the tray 3 and tray 4 to paper path interface.
- Jams can also be caused if the tray settings do not match the paper in the trays. Ensure the tray settings are correct.
- Check the condition of the front tamper drive belt and that it is correctly tensioned. Tensioning is achieved by a spring on the motor, the motor should be free to move.
- If there is a large jam of paper above bin 1 that has obstructed the tampers, this has probably been caused by poorly stacked sets failing to actuate the bin 1 upper level sensor. Perform the steps that follow:
 - Check the paper for defects that could degrade the tamping operation e.g. curl, paper condition, buckling or paper type. Refer to [IQ1 Image Quality Entry RAP](#).
 - Check the operation of the paddle roll, refer to [312-024-00-150](#), [312-025-00-150 Paddle Roll Failure RAP](#).
 - Check the operation of the bin 1 upper level sensor, refer to [312-462-00-150 Bin 1 Movement Failure RAP](#).
 - Refer to the [312G-150 LVF BM Mis-Registration in Stapled Sets and Non-Stapled Sets RAP](#).
 - Check the LVF PWB DIP switch settings, refer to [312F-150 LVF PWB and LVF BM PWB DIP Switch Settings RAP](#).

Procedure

NOTE: All LVF BM interlocks must be made to supply +24V to the motors.

Enter [dC330](#), codes 12-227, rear tamper home and 12-229, rear tamper move alternately, [Figure 1](#). The rear tamper moves between the home and inboard positions.

Y N

| Go to [Flag 3](#). Check the rear tamper motor, MOT12-227.

A

A

Refer to:

- [GP 10](#), How to Check a Motor.
 - [P/J312, LVF PWB](#).
 - [312D-150 LVF BM Power Distribution RAP](#).
- Repair or install new components as necessary:
- Tamper assembly, [\[ensp_\]PL 12.355 Item 1](#).
 - LVF PWB, [PL 12.425 Item 8](#).

Enter [dC330](#) code 012-181, rear tamper home sensor, Q12-181, [Figure 1](#). Actuate Q12-181.

The display changes.

Y N

Go to [Flag 1](#). Check Q12-181.

Refer to:

- [GP 11](#), How to Check a Sensor.
 - [P/J312, LVF PWB](#).
 - [312D-150 LVF BM Power Distribution RAP](#).
- Repair or install new components as necessary:
- Rear tamper home sensor, [PL 12.355 Item 3](#).
 - LVF PWB, [PL 12.425 Item 8](#).

NOTE: The away position is used for short edge feed small paper. This saves unnecessary rear tamper travel.

Enter [dC330](#), code 012-183, rear tamper away sensor, [Figure 1](#), Q12-183. Actuate Q12-183.

The display changes.

Y N

Go to [Flag 2](#). Check Q12-183.

Refer to:

- [GP 11](#), How to Check a Sensor.
 - [P/J312, LVF PWB](#).
 - [312D-150 LVF BM Power Distribution RAP](#).
- Repair or install new components as necessary:
- Rear tamper away sensor, [PL 12.355 Item 3](#).
 - LVF PWB, [PL 12.425 Item 8](#).

Perform [SCP 5](#) Final Actions.

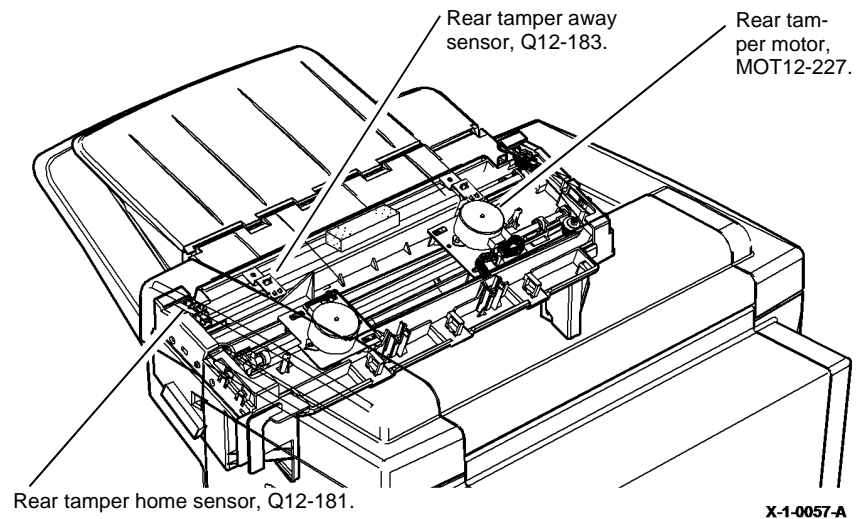
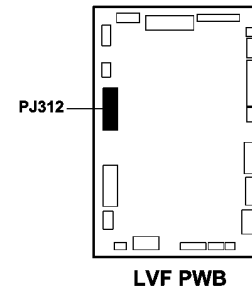
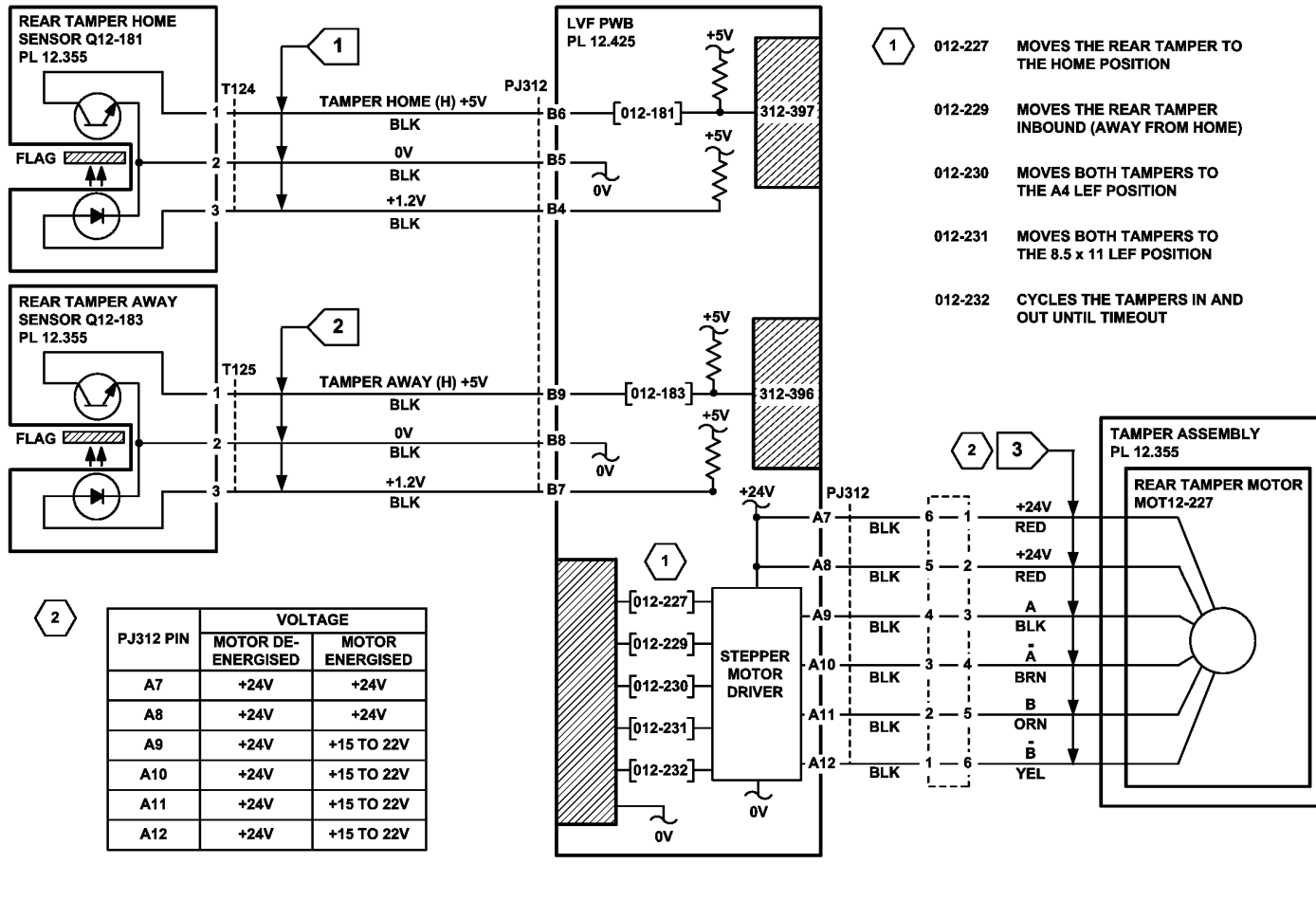


Figure 1 Component Location



TX-1-0040-A

Figure 2 Circuit diagram

312-418-00-150 Flapper Failure RAP

312-418-00-150 The booklet compiler flapper has failed.

Initial Actions



WARNING

Keep away from the crease blade mechanism when working in close proximity to the booklet maker while the machine is powered on. The crease blade mechanism activates quickly and with great force.



WARNING

Switch off the electricity to the machine. Refer to **GP 14**. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Check the booklet maker compiler guide assembly for damage, **PL 12.390 Item 1**. If necessary install new components.

Procedure

Enter **dC330** code 012-207, flapper home sensor, Q12-207, **Figure 1**. Q12-207. The display changes.

Y N

Go to **Flag 1**. Check Q12-207.

Refer to:

- **GP 11**, How to Check a Sensor.
- **P/J104, LVF BM PWB**.
- **312D-150 LVF BM Power Distribution RAP**.

Install new components as necessary:

- LVF BM PWB, **PL 12.425 Item 1**.
- BM flapper motor assembly, **PL 12.390 Item 17**.

Enter **dC330** code 012-271 to run the BM flapper motor, MOT12-271, **Figure 1**. The motor runs.

Y N

Go to **Flag 2**. Check MOT12-271.

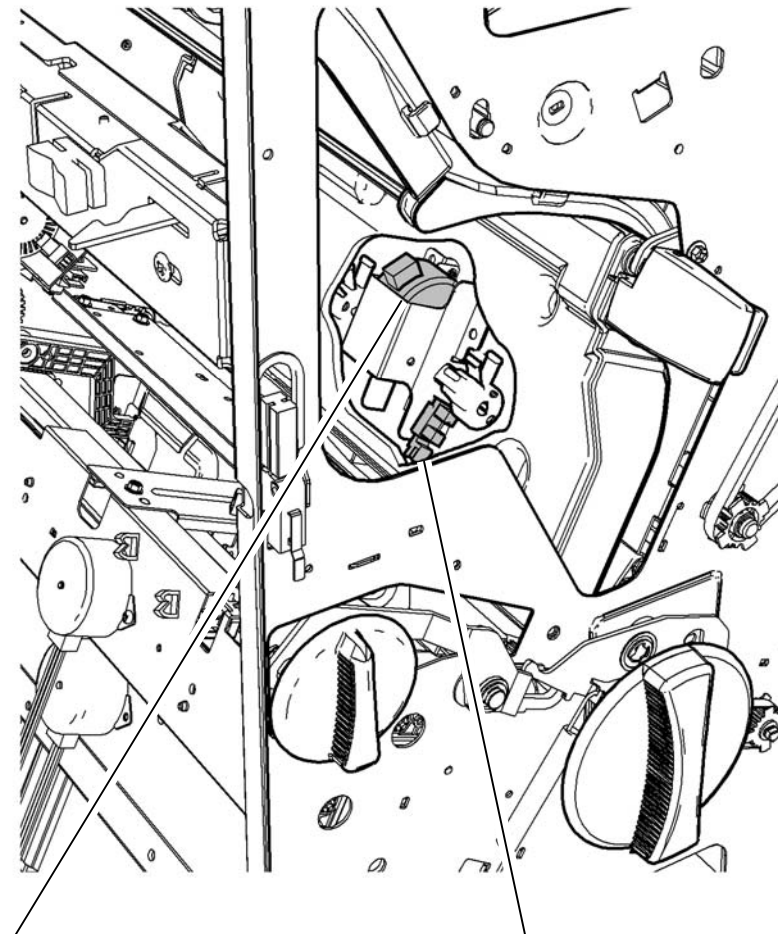
Refer to:

- **GP 10**, How to Check a Motor.
- **P/J104, LVF BM PWB**.
- **312D-150 LVF BM Power Distribution RAP**.

Install new components as necessary:

- LVF BM PWB, **PL 12.425 Item 1**.
- BM flapper motor assembly, **PL 12.390 Item 17**.

The fault may be intermittent. Check for damaged wiring or connectors. If necessary repair the wiring, **REP 1.2**, or install new components.



BM flapper motor,
MOT12-271.

Flapper home
sensor, Q12-207.

X-1-0067-A

Figure 1 Component location

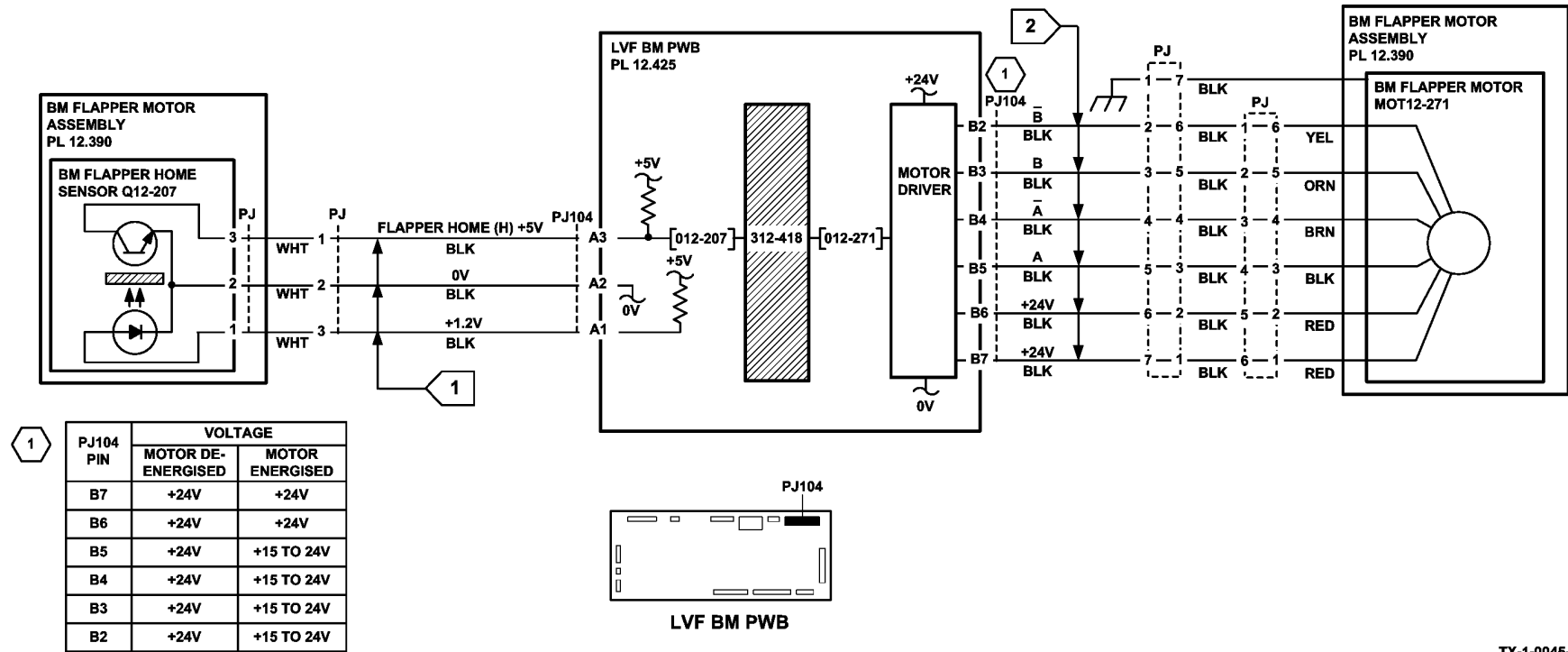


Figure 2 Circuit diagram

TX-1-0045-A

312-462-00-150 Bin 1 Movement Failure RAP

312-462-00-150 Bin 1 failed to move.

NOTE: The home position of bin 1 is when the bin is just lower than the bin 1 upper level sensor. See the final actions at the end of the procedure.

TWO sensors and 2 switches monitor the level of paper in bin 1 and the position of the tray:

- The bin 1 upper level sensor, detects the top of the paper stack in bin 1, or the empty bin 1, [Figure 1](#).
- The bin 1 90% full sensor detects when the tray has descended to a position where the tray is 90% full, [Figure 2](#).
- Bin 1 upper limit switch, S12-190, [Figure 2](#).
- Bin 1 lower limit switch, S12-191, [Figure 2](#).

Remote Service Actions

Ask the customer to check for a physical obstruction that would prevent bin 1 from moving, such as an item of furniture. If nothing is found, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- Check that bin 1 is level front to back, if necessary perform [ADJ 12.1-150](#) LVF BM Bin 1 Level.
- Check the LVF PWB DIP switch settings, refer to [312F-150](#) LVF PWB and LVF BM PWB DIP Switch Settings RAP.
- Refer to the [312G-150](#) Mis-Registration in Stapled Sets and Non-Stapled Sets RAP.
- If there is a large jam of paper above bin 1, this has probably been caused by poorly stacked sets failing to actuate the bin 1 upper level sensor.
- Check the front and rear bin 1 drive belts. If necessary install new components, [PL 12.340](#) [Item 1](#).

Perform the relevant check:

- If paper is overflowing the tray when it is at the lower limit, check the bin 1 90% full sensor, Q12-187.
- If paper cannot be fed to bin 1 when it is at the highest position, check the bin 1 upper level sensor, Q12-188.

Procedure

NOTE: All LVF BM interlocks must be made to supply +24V to the motors.

Remove the LVF BM rear cover. Enter [dC330](#) code 012-163, bin 1 motor encoder sensor, Q12-163, [Figure 2](#). Slowly rotate the encoder disk by hand. **The display changes.**

Y N
Go to [Flag 2](#). Check Q12-163.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J304](#), [LVF PWB](#).
- [312D-150](#) LVF BM Power Distribution RAP.

Repair or install new components as necessary:

- Bin 1 motor encoder sensor, [PL 12.340](#) [Item 5](#).
- LVF PWB, [PL 12.425](#) [Item 8](#).

Enter [dC330](#) code 012-242, bin 1 elevator motor cycle. **Bin 1 cycles down and up.**

Y N
Go to [Flag 1](#). Check bin 1 elevator motor MOT12-241.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J318](#), [LVF PWB](#).
- [312D-150](#) LVF BM Power Distribution RAP.

Repair or install new components as necessary:

- Bin 1 elevator motor, [PL 12.340](#) [Item 7](#).
- LVF PWB, [PL 12.425](#) [Item 8](#).

[Figure 1](#), enter [dC330](#), code 012-188, bin 1 upper level sensor, Q12-188, [Figure 1](#). Actuate Q12-188. **The display changes.**

Y N
Go to [Flag 3](#). Check Q12-188.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J314](#), [LVF PWB](#).
- [312D-150](#) LVF BM Power Distribution RAP.
- [REP 12.3-150](#) LVF BM Un-docking.

Repair or install new components as necessary:

- Bin 1 upper level sensor, [PL 12.345](#) [Item 3](#).
- LVF PWB, [PL 12.425](#) [Item 8](#).

[Figure 2](#). Enter [dC330](#) code 012-190, bin 1 upper limit switch, S12-190, [Figure 2](#). Actuate S12-190. **The display changes.**

Y N
Go to [Flag 4](#). Check S12-190.

Refer to:

- [GP 13](#) How to Check a Switch.
- [P/J315](#), [LVF PWB](#).
- [312D-150](#) LVF BM Power Distribution RAP.

Repair or install new components as necessary:

- Bin 1 upper limit switch, [PL 12.340](#) [Item 3](#).
- LVF PWB, [PL 12.425](#) [Item 8](#).

Enter [dC330](#) code 012-191, bin 1 lower limit switch, S12-191, [Figure 2](#). Actuate S12-190. **The display changes.**

Y N

Go to [Flag 5](#). Check S12-191.

Refer to:

- [GP 13](#) How to Check a Switch.
- [P/J314](#), [LVF PWB](#).
- [312D-150](#) LVF BM Power Distribution RAP.
- [REP 12.13-110](#) LVF BM Un-docking.

Repair or install new components as necessary:

- Bin 1 lower limit switch, [PL 12.345](#) Item 1.
- LVF PWB, [PL 12.425](#) Item 8.

Enter [dC330](#) code 012-187, bin 1 90% full sensor, Q12-187, [Figure 2](#). Actuate Q12-187. **The display changes.**

Y N

Go to [Flag 6](#). Check Q12-187.

Refer to:

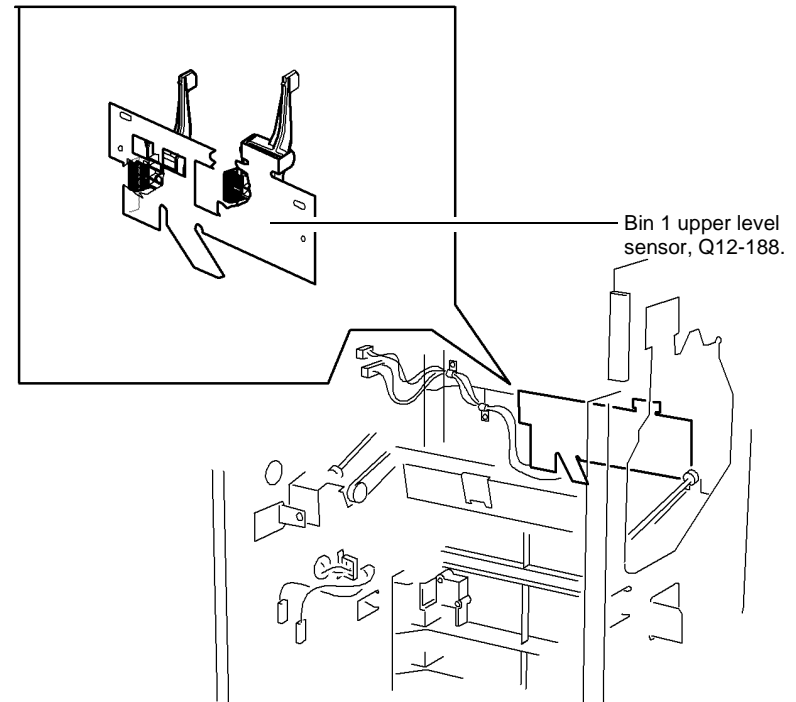
- [GP 11](#) How to Check a Sensor.
- [P/J316](#), [LVF PWB](#).
- [312D-150](#), LVF BM Power Distribution RAP.

Repair or install new components as necessary:

- Bin 1 90% full sensor, [PL 12.340](#) Item 5.
- LVF PWB, [PL 12.425](#) Item 8.

As final actions, check the sequence of operation:

1. Paper is delivered to the tray until the bin 1 upper level sensor, Q12-188 is actuated.
2. The bin 1 elevator motor, MOT12-241 lowers the tray until the bin 1 upper level sensor, Q12-188 is de-actuated.
3. The bin 1 elevator motor, MOT12-241 raises the tray until the paper stack height actuates the bin 1 upper level sensor, then MOT12-241 lowers the tray to continue the cycle.
4. When the tray is emptied, the tray returns to the home position. The tray is elevated until the bin 1 upper level sensor, Q12-188 is made. The tray is then lowered until Q12-188 is just cleared. In the home position the bin 1 upper limit switch, S12-190 is actuated.



X-1-0036-A

Figure 1 Component location

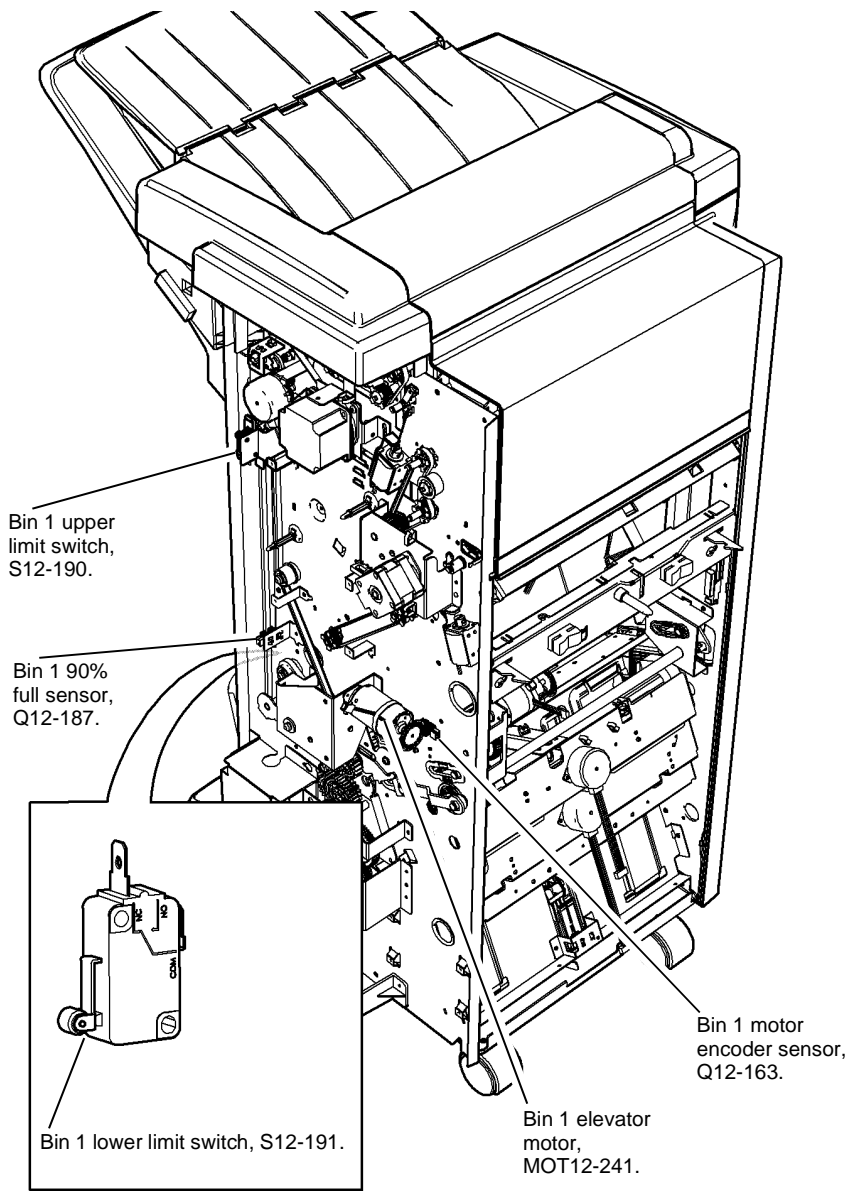


Figure 2 Component location

X-1-0037-A

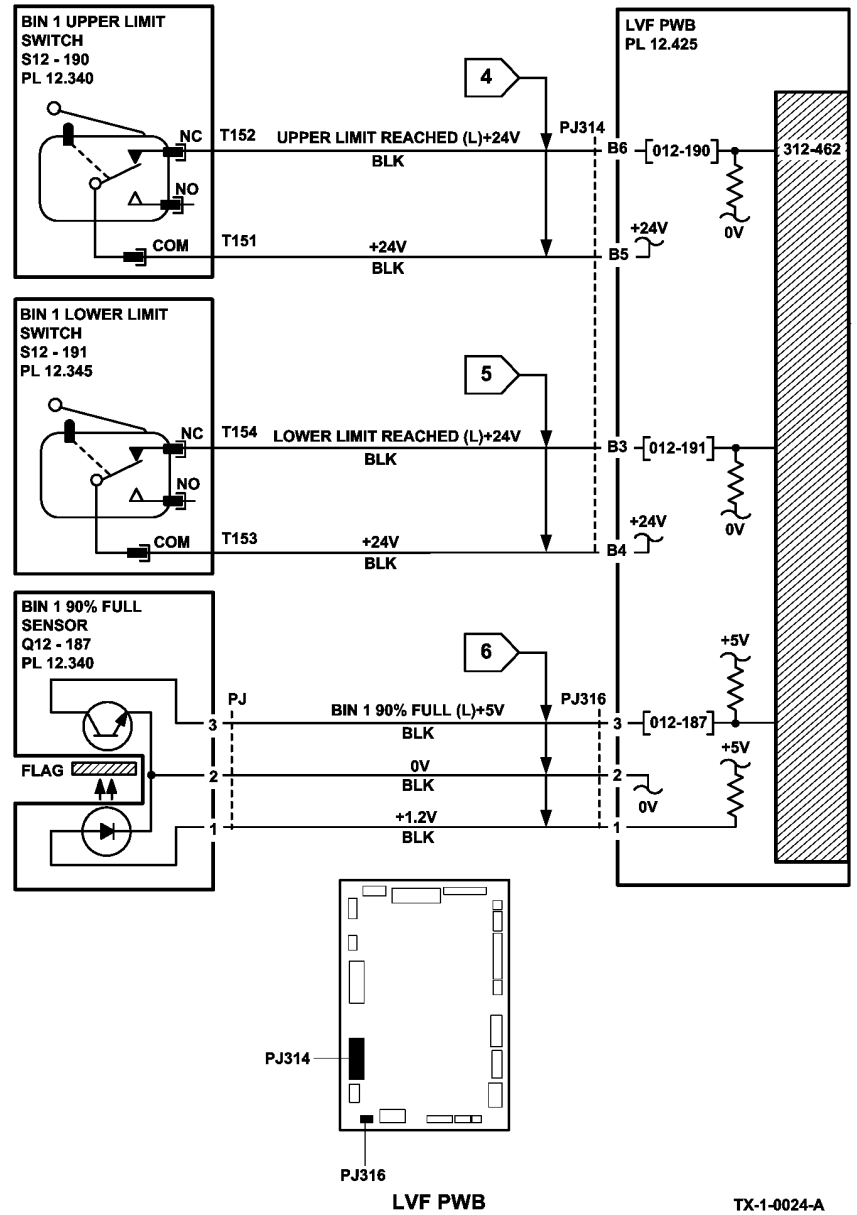


Figure 3 Circuit diagram

TX-1-0024-A

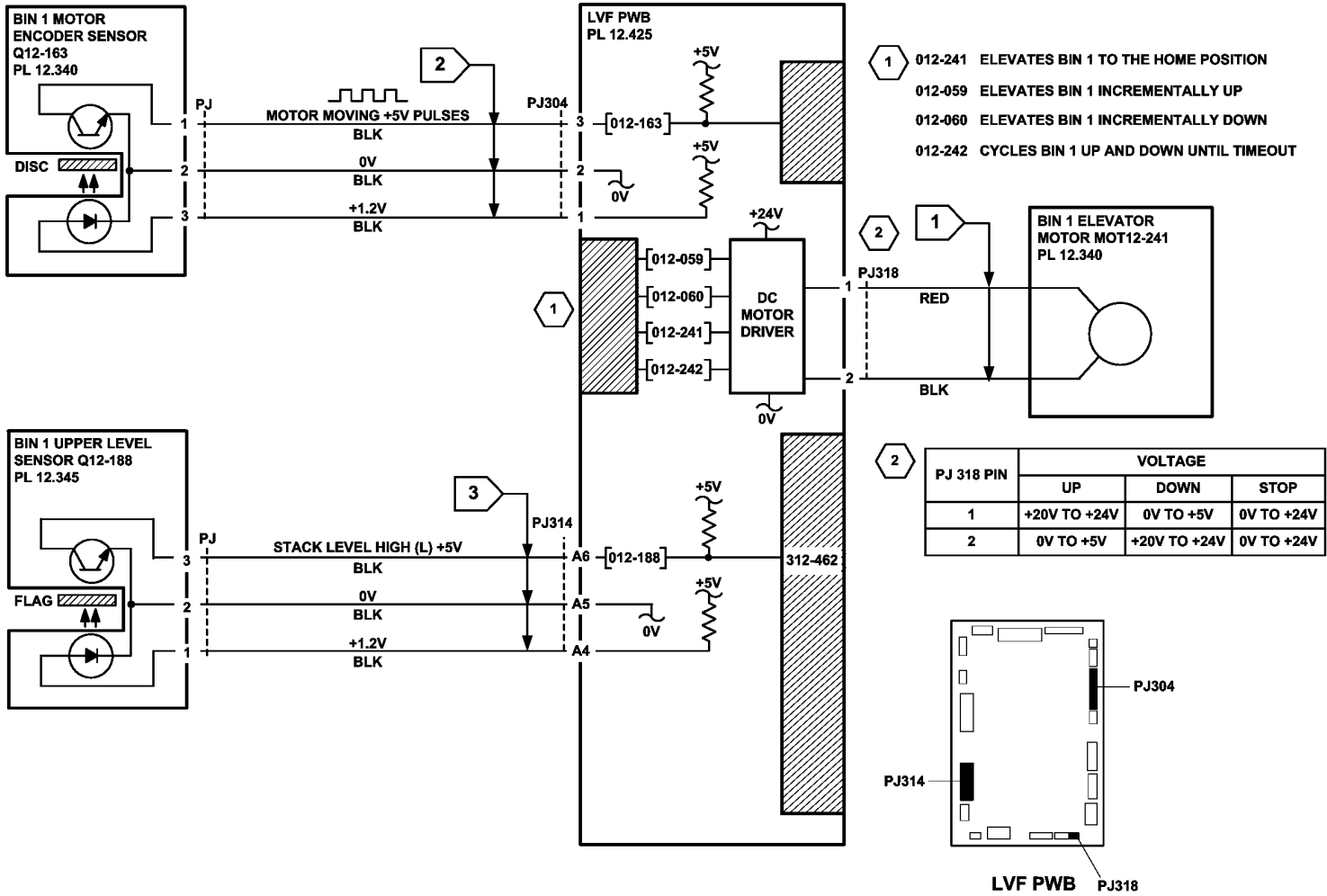


Figure 4 Circuit diagram

TX-1-0025-A

312-492-00-150 Finisher Communication Failure

312-492-00-110 CDI communications failure with the 2K LCSS.

Remote Service Actions

Ask the customer to check the items that follow:

- Ensure the finisher power cord is connected to PJ652 on the LVPS [Figure 2](#).
- Switch off, then switch on the machine, [GP 14](#).

If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the fault history for 303-XXX fault codes. If the 303-XXX fault codes occur randomly, the cause may be due to electrical noise. Perform the [OF10](#) intermittent Failure RAP.
- Check the LVF PWB and LVF BM PWB DIP switch settings. Refer to [312F-150](#) LVF PWB DIP Switch Settings RAP.
- Perform [REP 12.13-150](#) LVF BM Un-docking. Check that the docking actuator, [PL 12.325 Item 7](#) is correctly installed.

Procedure

Remove fuse F1 from the [LVF PWB](#). Check the fuse, [PL 12.425 Item 3](#). **The fuse is good.**

Y N
Install a new LVF PWB, [PL 12.425 Item 8](#).

Re-install fuse F1. Observe the software heartbeat LED (LED 1) on the LVF PWB, [Figure 2](#). **LED 1 is flashing at 1Hz (0.5 seconds on, 0.5 seconds off).**

Y N
If LED 1 is flashing at 0.25Hz (2 seconds on, 2 seconds off) this indicates that the finisher software is corrupt. Reload the finisher software, [GP 4](#). If necessary install a new LVF PWB, [PL 12.425 Item 8](#).

Observe the software heartbeat LED (LED 1) on the LVF BM PWB, [Figure 2](#). **LED 1 is flashing at 1Hz (0.5 seconds on, 0.5 seconds off).**

Y N
If LED 1 is flashing at 0.25Hz (2 seconds on, 2 seconds off) this indicates that the booklet maker software is corrupt. Reload the finisher software, [GP 4](#). If necessary install a new LVF BM PWB, [PL 12.425 Item 1](#).

Go to [Flag 4](#). Check the wiring and connectors between [P/J101](#) and [P/J401](#). **The wiring and connectors are good.**

Y N
Repair the wiring or connectors, [REP 1.2](#).

A

Go to [Flag 1](#), [Flag 2](#) and [Flag 3](#). Check the wiring and connectors between [P/J772](#), [P/J996](#) and [P/J301](#). **The wiring and connectors are good.**

Y N
Repair the wiring or connectors, [REP 1.2](#).

Perform the steps that follow:

- Go to the [312D-150](#) LVF Power Distribution RAP. Check the +5V and +24V supply from the power supply module to the LVF PWB. Ensure that the voltages are steady. Ensure that there is good ground continuity between the power supply module, [PL 12.425 Item 2](#) and the LVF BM frame. Install new components as necessary:
 - Power supply module, [PL 12.425 Item 2](#).
 - LVF PWB, [PL 12.425 Item 8](#).
- Reload the software using the forced AltBoot procedure, [GP 4](#).
- The [OF7](#) IOT PWB Diagnostics RAP.

A

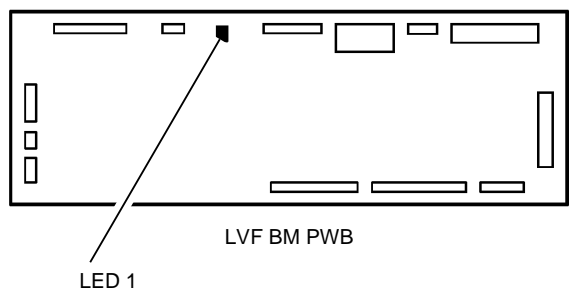
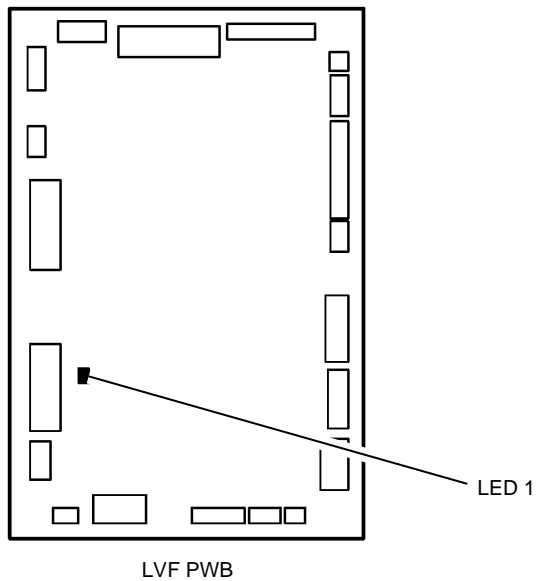


Figure 1 LED 1 locations

X-1-1471-A

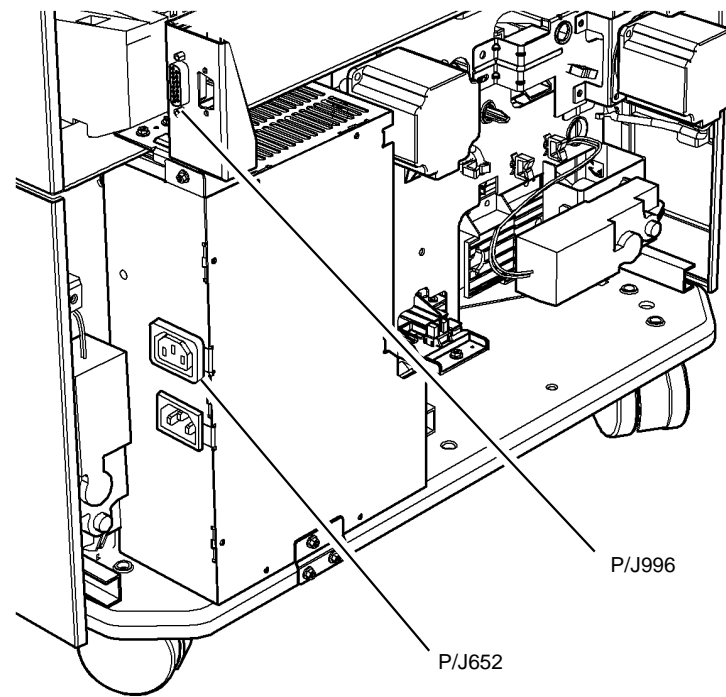


Figure 2 P/J652 and P/J996 locations

W-1-1469-A

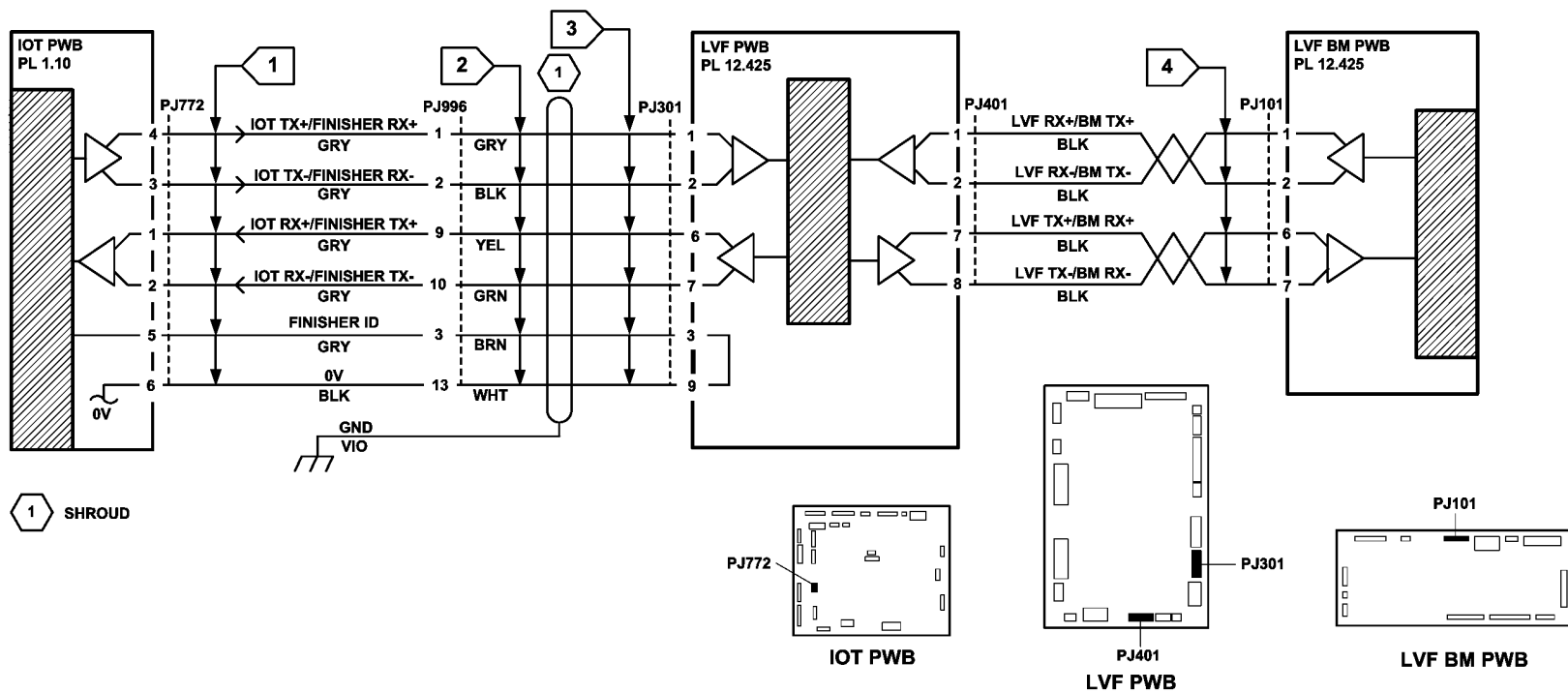


Figure 3 Circuit diagram

TX-1-0342-A

312A-150 Poor Stacking RAP

Use this RAP to find the cause of poor stacking in the LVF BM.

Remote Service Actions

Ask the customer to check for sets that are not dropping back fully in bin 1 and therefore not operating the bin 1 level sensors:

- Large paper sizes should not be stacked on top of small paper sizes.
- Ensure that the paper stack in each paper tray has been fanned.
- Turn over the paper stack in each paper tray.
- Ensure that all paper or other copy stock being used is within the size and weight specifications. Refer to [GP 20 Paper and Media Size Specifications](#).
- Use a new ream of paper, if available.
- Ensure that the edge guides of all paper trays are adjusted correctly for the paper size and that the trays are fully closed.
- Labels must not be fed to bin 1, but to bin 0 only.
- It is recommended that transparencies are fed to bin 0 whenever possible.

If the fault continues, a site visit will be necessary

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the items that follow;

- Check that bin 1 is seated correctly and the bin 1 alignment clip is in position, [PL 12.320 Item 12](#).
- Check that bin 1 is level front to back. If necessary perform [ADJ 12.1-150 LVF BM Bin 1 Level](#).
- Check that the bin 1 upper level sensor, Q12-188 is working correctly. Refer to the [312-462-00-150 LVF BM Bin 1 Movement Failure RAP](#).
- Check the operation of the front and rear tampers. Refer to the [312-392-00-150](#), [312-393-00-150](#), [312-394-00-150 LVF BM Front Tamper Move Failure RAP](#) and [312-396-00-150](#), [312-397-00-150](#), [312-398-00-150 LVF BM Rear Tamper Move Failure RAP](#).
- Check that the LVF BM is not near an air conditioning or ventilation output duct. Air flow across the output bins can cause poor stacking.
- Check the output copies/prints for curl. Refer to the [IQ5 Print Damage RAP](#).

312B-150 Bin 1 Overload RAP

Use this RAP to resolve a fault on the bin 1 90% full sensor.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter [dC330](#), code 012-187, bin 1 90% full sensor, Q12-187. Actuate Q12-187. The display changes.

Y N

Go to [Flag 1](#). Check Q12-187.

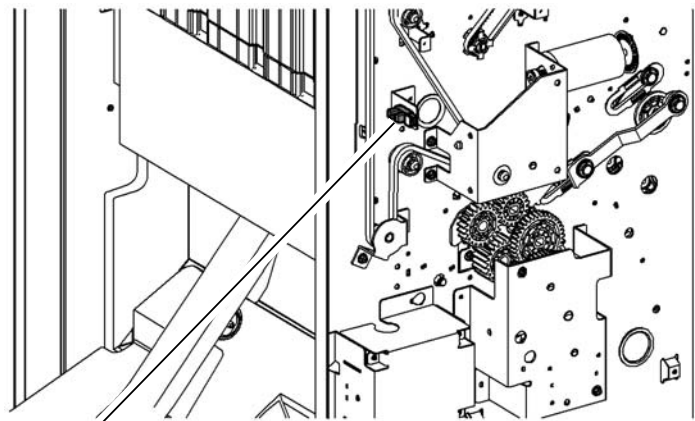
Refer to:

- [GP 11](#), How to Check a sensor.
- [Figure 1](#).
- [P/J316, LVF PWB](#).
- [312D-150 LVF BM Power Generation RAP](#).

Repair or install new components as necessary:

- Bin 1 90% full sensor, [PL 12.340 Item 5](#).
- LVF PWB, [PL 12.425 Item 8](#).

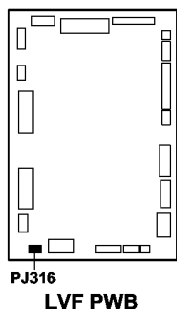
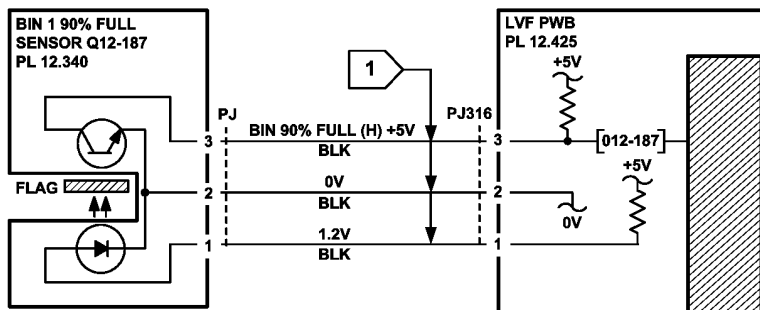
Perform [SCP 5 Final Actions](#).



Bin 1 90% full sensor, Q12-187.

X-1-0068-A

Figure 1 Component location



TX-1-0046-A

Figure 2 Circuit diagram

312C-150 LVF BM Initialization Failure RAP

When an initialization command is received from the machine, the units are initialized in 2 stages:

- The units that follow are initialized sequentially:
 - If the staple head is not at the home position, it is driven to the home position.
 - If the staple head unit is not at the home position, it is driven to the home position.
 - If the ejector is not at the home position, it is driven to the home position.
- The units that follow are then initialized simultaneously:
 - If the front tamper is not at the home position, it is driven to the home position.
 - If the rear tamper is not at the home position, it is driven to the home position.
 - If the hole punch is not at the home position, it is driven to the home position.
 - If the paddle wheel is not at the home position, it is driven to the home position.
 - If the stacker is not at the home position, it is driven to the home position.

NOTE: The staple cartridge must be fully pushed home.

- The booklet maker units that follow are then initialized sequentially:
 - If the BM back stop is not at the home position, it is driven to the home position.
 - If the BM tampers are not in the home position, they are driven to the home position.
 - If the BM stapler is not at the home position, it is driven to the home position.
 - If the BM crease blade is not at the home position, it is driven to the home position.
 - If the BM paddles are not in the home position, they are driven to the home position.
 - The BM staplers are cycled to ensure the staples are primed.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fuse on the LVF PWB. If the fuse is good, continue at the procedure. If the fuse not good, install a new LVF PWB, [PL 12.425 Item 8](#).

Check the LVF PWB DIP switch settings. Refer to [312F-150 LVF PWB and LVF BM PWB DIP Switch Settings RAP](#).

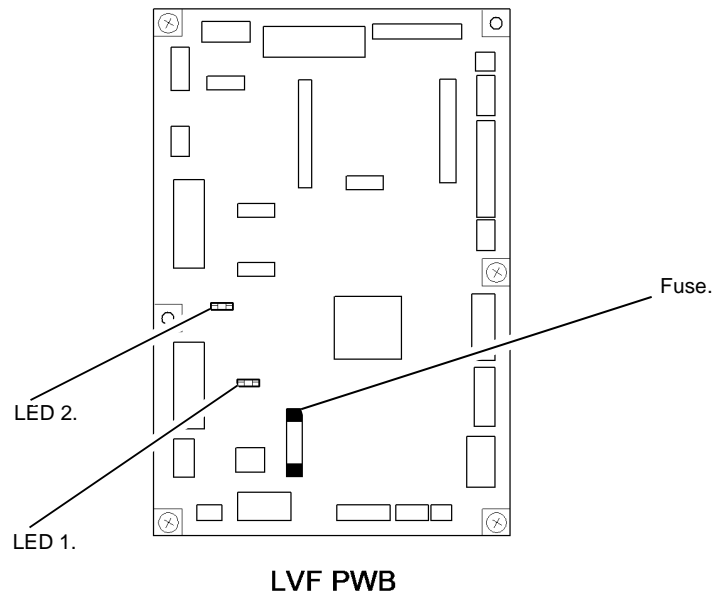
Remove the LVF BM covers, [REP 12.1-150](#), so that the units can be viewed. Cheat the front door interlock switch and the top cover interlock switch. Check that LED 2 is illuminated. This shows that all interlocks are made. If the LED fails to illuminate, go to [312-312-00-150, 312-313-00-150 Interlocks RAP](#).

Procedure

Refer to [Figure 1](#). Check that the software heartbeat is present on LED 1. The LED should flash twice per second if the LVF software is running. If necessary, reload the LVF software, refer to [GP 4 Machine Software](#).

If the initialization sequence fails to place any unit at the home position, refer to the appropriate RAPs:

- Front tamper not at home. Refer to [312-392-00-150](#), [312-393-00-150](#), [312-394-00-150](#) LVF BM Front Tamper Move Failure RAP.
- Rear tamper not at home. Refer to [312-396-00-150](#), [312-397-00-150](#), [312-398-00-150](#) LVF BM Rear Tamper Move Failure RAP.
- Paddle not at home. Refer to [312-024-00-150](#), [312-025-00-150](#) LVF BM Paddle Roll Failure RAP.
- Bin 1 not at home. Refer to [312-462-00-150](#) LVF BM Bin 1 Movement Failure RAP.
- Punch not at home. Refer to [312-043-00-150](#), [312-046-00-150](#) LVF BM Hole Punch Operation Failure RAP.
- Staple head not at home. Refer to [312E-150](#) LVF BM Staple Head Operation Failure RAP.
- Stapling unit not at home. Refer to [312-371-00-150](#), [312-372-00-150](#), [312-378-00-150](#) LVF BM Staple Head Unit Movement Failure RAP.
- Ejector not at home. Refer to [312-340-00-150](#), [312-342-00-150](#) LVF BM Ejector Movement Failure RAP.



X-1-0069-A

Figure 1 LED location

312D-150 LVF BM Power Distribution RAP

The LVF BM has an integral power supply providing +24V and +5V supplies to the LVF PWB and the LVF BM PWB. The AC power for the LVF BM power supply comes from the LVPS and base module of the machine.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Take care when measuring AC mains (line) voltage. Electricity can cause death or injury.



Do not connect the finisher power cord directly to the AC wall outlet. The finisher cannot operate without the machine. The machine controls the distribution of electricity to the finisher for correct power on and power off sequencing.

Close or cheat all the LVF BM interlocks. LED 2 on the LVF PWB, [Figure 1](#) is illuminated.

Y N
A B C

+24V is available at Fuse (F1) on the LVF PWB, [Figure 1](#).

Y N

Go to [Flag 2](#). Check for +24V between the pins that follow on [P/J300](#):

- Pin 1 and pin 2.
- Pin 1 and pin 3.
- Pin 1 and pin 6.
- Pin 1 and pin 7.
- Pin 5 and pin 2.
- Pin 5 and pin 3.
- Pin 5 and pin 6.
- Pin 5 and pin 7.

+24V is available between all the checked pins.

Y N

Disconnect [P/J300](#), check for +24V between the pins that follow on the end of the harness:

- Pin 1 and pin 2.
- Pin 1 and pin 3.
- Pin 1 and pin 6.
- Pin 1 and pin 7.
- Pin 5 and pin 2.
- Pin 5 and pin 3.
- Pin 5 and pin 6.
- Pin 5 and pin 7.

A B C

+24V is available between all the checked pins on the end of the harness.

Y N

Figure 2. Loosen the 4 screws and lift the power supply module away from the LVF BM frame. Go to Flag 1. **ACL is available at CN1 between pins 1 and 3.**

Y N

Go to the 301C AC Power RAP and check the AC output voltages.

Check the wiring and connectors between CN2 and P/J300. **The wiring is good.**

Y N

Repair the wiring, REP 1.2.

Install a new power supply module, PL 12.425 Item 2.

Check for a short or open circuit in the wiring or connectors between P/J300 on the LVF PWB and CN 2 on the power supply module. Refer to GP 7.

+24 V is available at PJ315 pin 5 on the LVF PWB.

Y N

Go to the 312-312-00-150, 312-313-00-150 Interlocks RAP.



WARNING

Do not install a fuse of a different type or rating. Installing the wrong type or rating of fuse can cause overheating and a risk of fire.

Perform the steps that follow:

- Switch off the machine, GP 14.
- Go to Flag 3, Flag 4, Flag 5 and Flag 6. Disconnect all the +24V harnesses to components.
- Check each harness for short circuits and overheating, GP 7.
- Repair or install new components as necessary.
- Install a new fuse F1, Figure 1 on the LVF PWB. Switch on the machine, GP 14.
- Monitor the voltage at the top end of the fuse and re-connect the circuits one at a time. Energize the re-connected components using the dC330 control codes shown on Figure 3.
- If the voltage drops below +22V, switch off the machine, GP 14. Re-check the component and harness for overheating or short circuits. Repair or install new components as necessary.

Install a new LVF PWB, PL 12.425 Item 8.

+5V is available at P/J300 between pins 4 and 6, also between pins 7 and 8.

Y N

Disconnect P/J300. **+5V is available at P/J300 between pins 4 and 6, also between pins 7 and 8 on the end of the harness.**

Y N

Check the wiring between CN2 and P/J300. **The wiring is good.**

D E

Y N

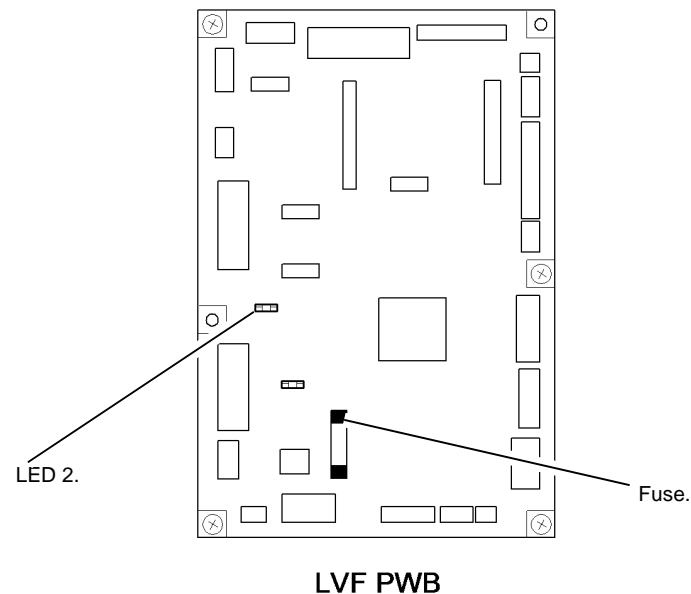
Repair the wiring, REP 1.2.

Install a new power supply module, PL 12.425 Item 2.

Perform the steps that follow

1. Switch off the machine, GP 14.
2. Go to Flag 3, Flag 4 and Flag 5. Disconnect all the +5V components.
3. Check each circuit for short circuits and overheating, GP 7.
4. Install new components as necessary.
5. Reconnect P/J300 and switch on the machine, GP 14.
6. Monitor the voltage at P/J300 pin 8, reconnect the circuits one at a time using the dC330 control codes shown on Figure 4.
7. If the voltage falls below +4.7V switch off the machine, GP 14. Re-check the last re-connected component and harness for overheating or short circuits. Install new components as necessary.

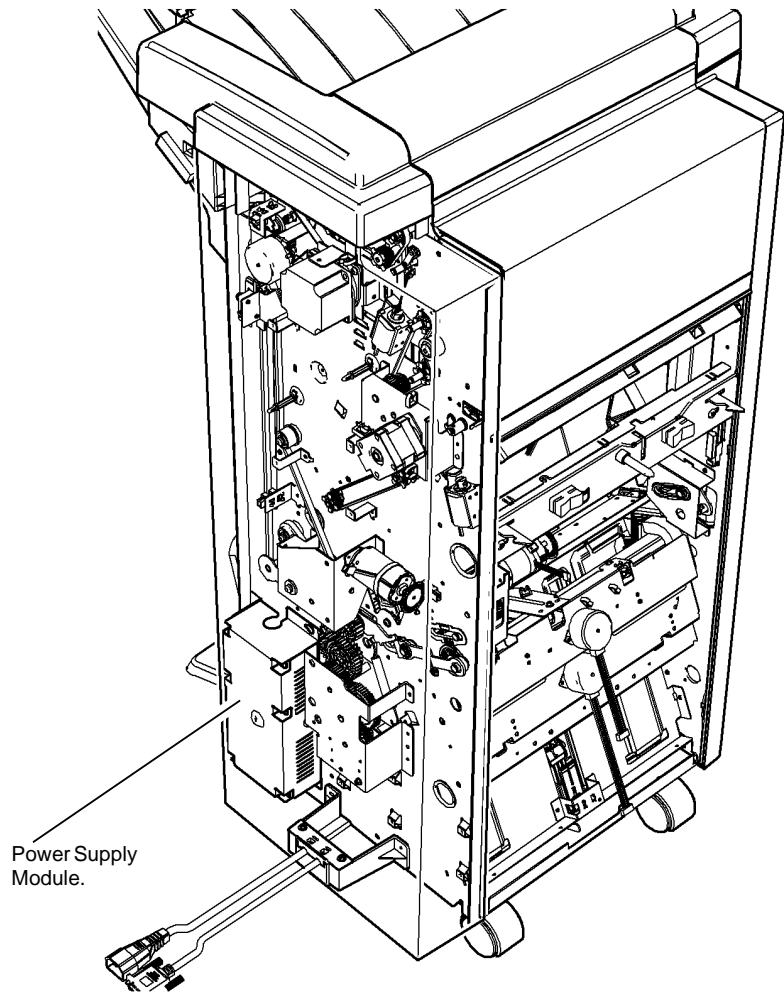
Perform SCP 5 Final Actions.



LVF PWB

X-1-0954-A

Figure 1 LED location



X-1-0070-A

Figure 2 Component location

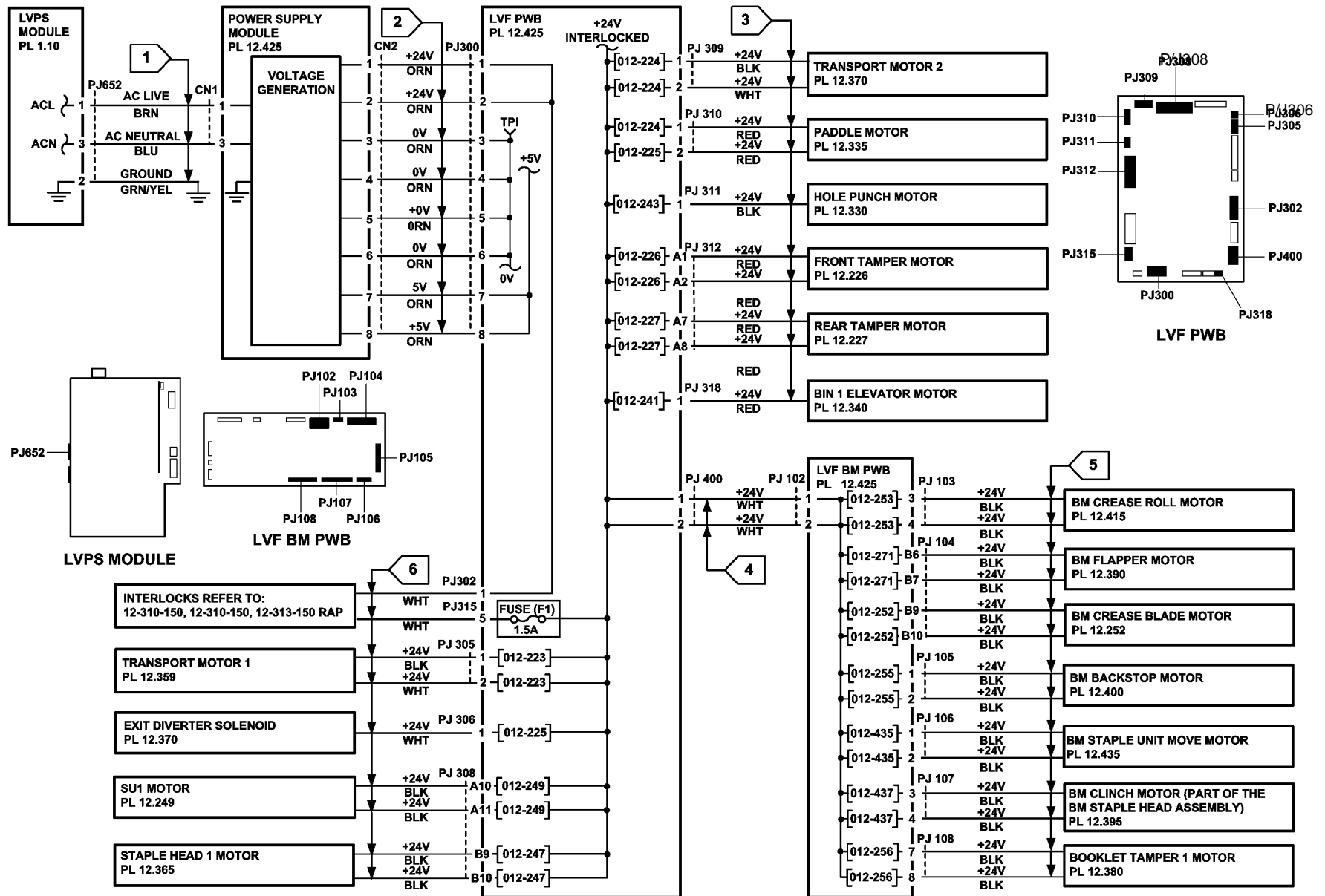
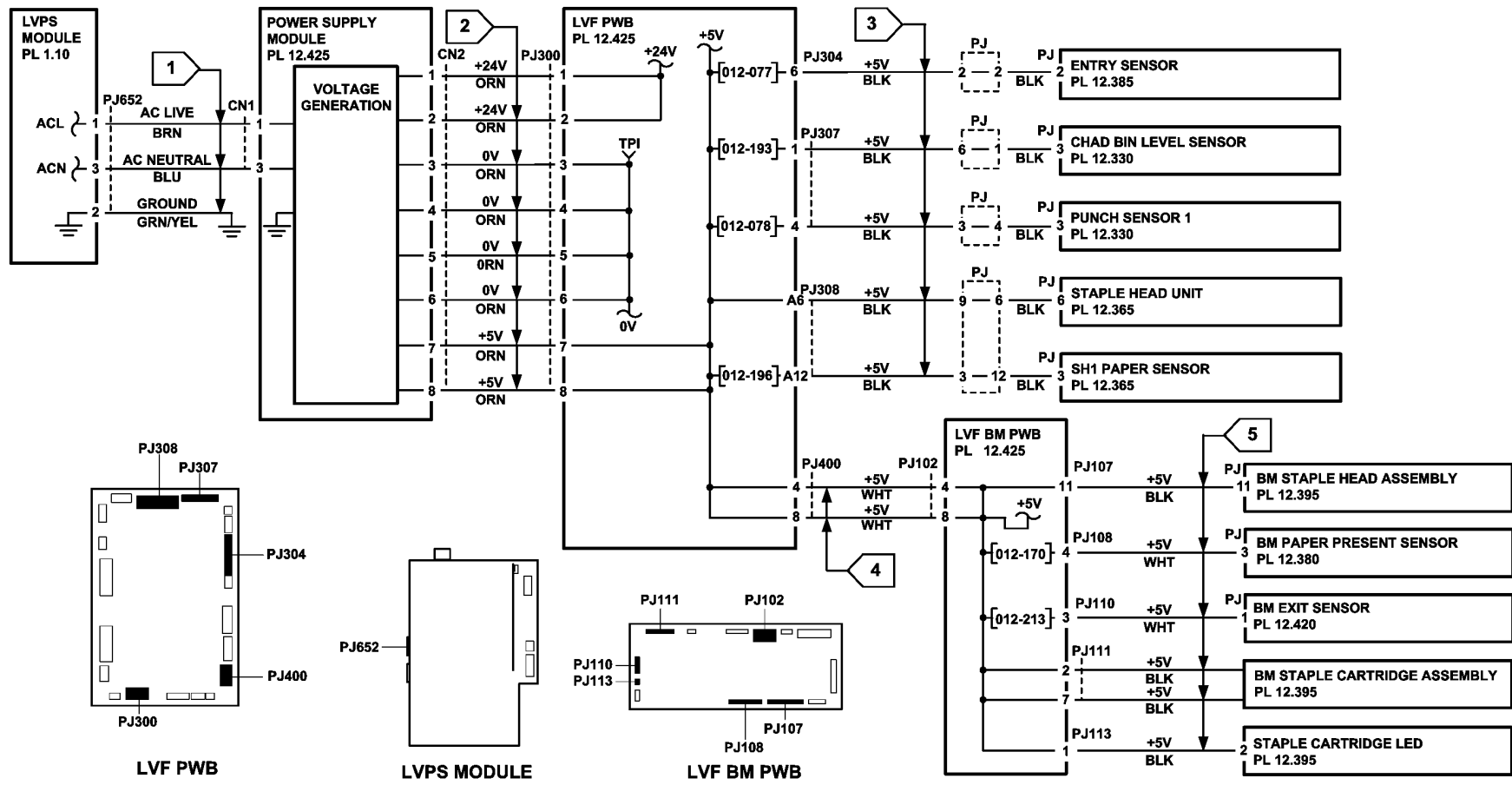


Figure 3 +24V circuit diagram



TX-1-0238-A

Figure 4 +5V circuit diagram

312E-150 Staple Head Operation Failure RAP

Use this RAP when the staple head failed to cycle, or the staple head was not at the home position.

NOTE: The home position is with the jaws of the staple head fully open.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, GP 14. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



CAUTION

Do not run code 012-247 without 2 sheets of paper in the stapler jaws. Running this code without the paper in position can cause damage to the machine.

Refer to Figure 1. Check the items that follow:

- The LVF PWB DIP switch settings. Refer to 312F-150 LVF PWB and LVF BM PWB DIP Switch Settings RAP.
- The staple head unit is correctly installed.

Procedure

NOTE: After repairing the fault using this RAP, switch off, then switch on the machine, GP 14, to enable operation of the staple head.

NOTE: All LVF BM interlocks must be made to supply +24V to the motors.

Place 2 sheets of paper in the stapler jaws. Enter dC330, code 012-247 to cycle the staple head once, and 12-248 to reverse the staple head to the home position. **The staple head operates as expected.**

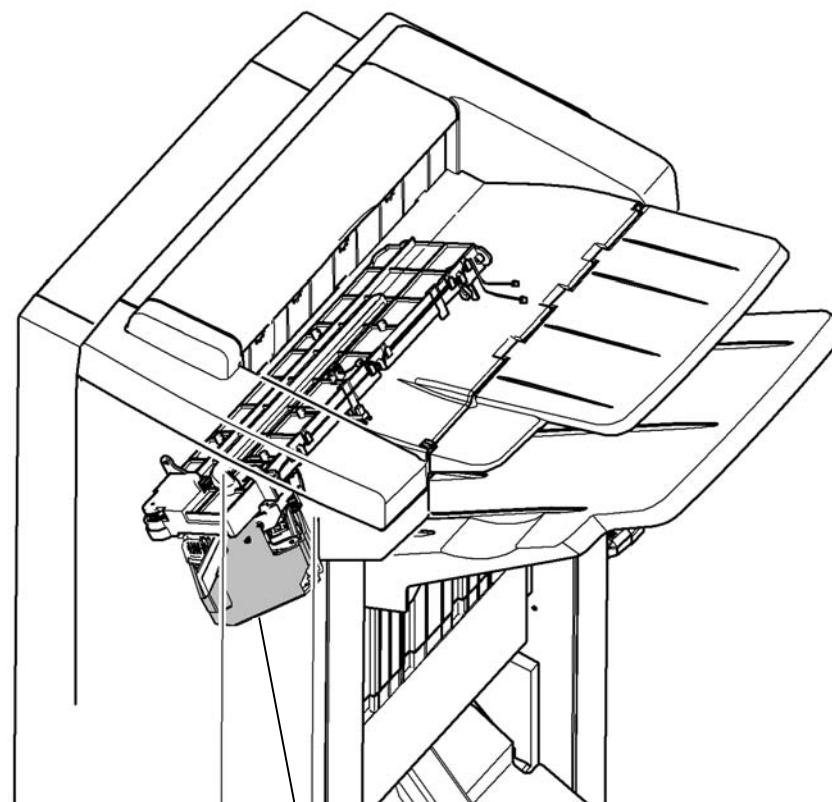
Y **N**
Go to Flag 1 and Flag 2. Check the wiring and connectors between the LVF PWB and the staple head. **The wiring is good.**

Y **N**
Repair the wiring, REP 1.2.

Install new components as necessary:

- Staple head unit, PL 12.365 Item 5.
- LVF PWB, PL 12.425 Item 8.

Perform SCP 5 Final Actions.



Staple head including MOT12-247 and stapler jaw home sensor, Q12-318.

X-1-0040-A

Figure 1 Component location

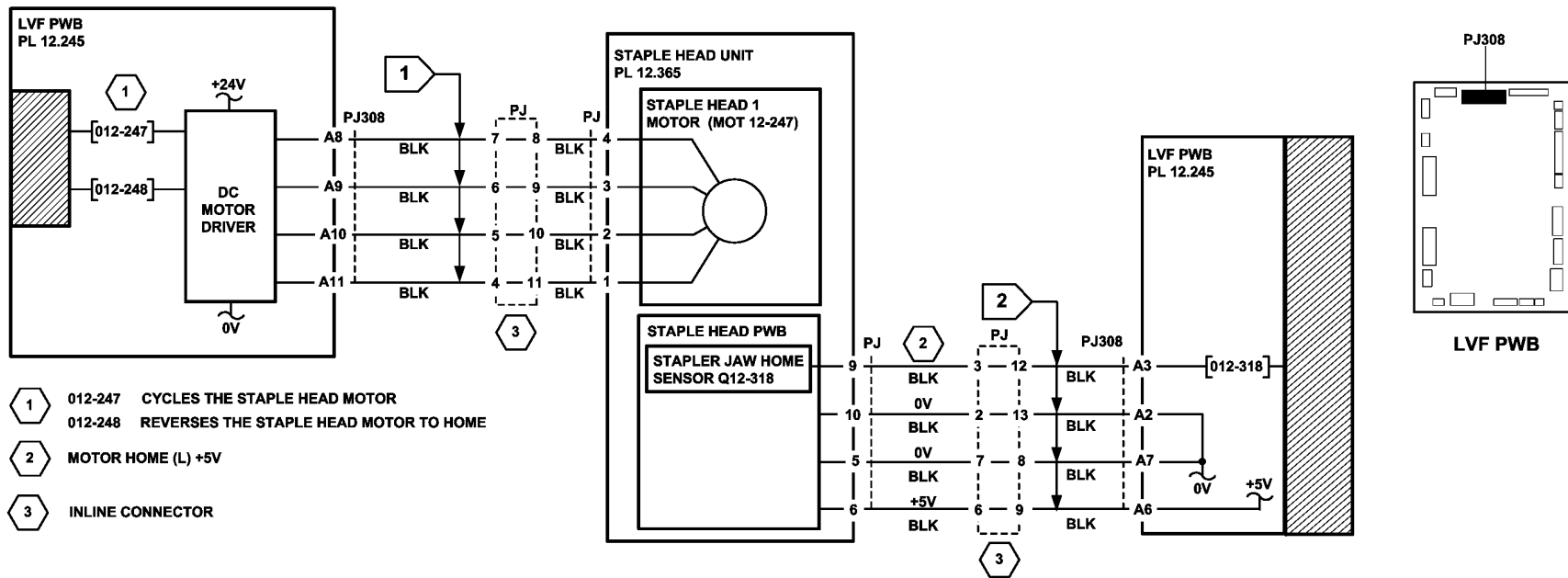


Figure 2 Circuit diagram

TX-1-0027-A

312F-150 LVF PWB and LVF BM PWB DIP Switch Settings RAP

To show the correct settings for the DIP switches on the LVF PWB and LVF BM PWB.

Procedure



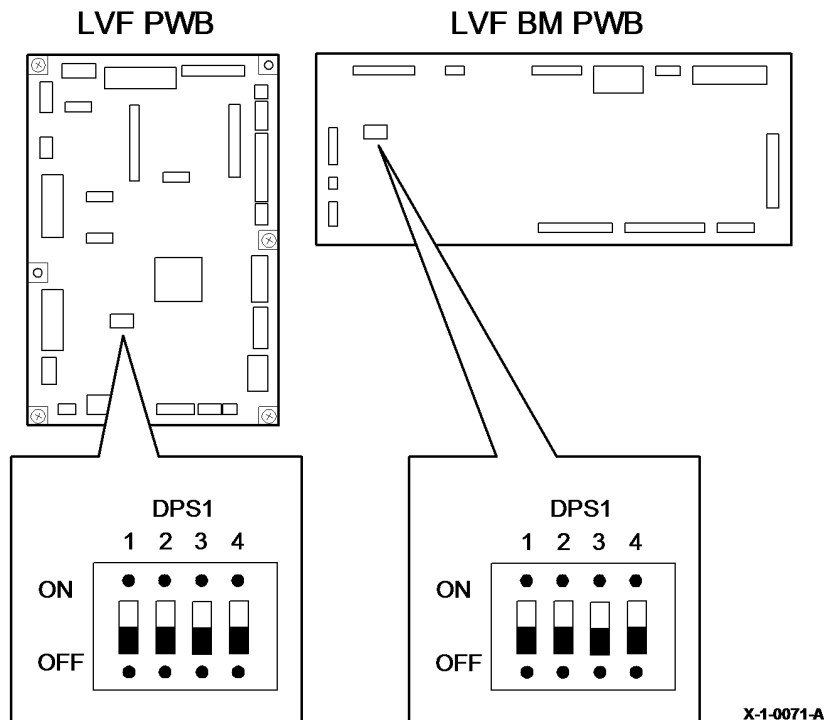
WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Problems that can result from incorrect DIP switch settings are:

- False jam clearance instructions for the LVF BM and/or the machine exit area.
- Communication errors between the LVF BM and machine.
- Erratic behavior of the LVF BM.

Check the DIP switch settings, [Figure 1](#). If necessary, switch off the machine, [GP 14](#). Correct the DIP switch settings, then switch on the machine, [GP 14](#).



X-1-0071-A

Figure 1 DIP switch settings

312G-150 Mis-Registration in Stapled Sets and Non-Stapled Sets RAP

Use this RAP to identify and correct the causes of mis-registration in stapled sets, resulting in staples missing some sheets in the set, or poorly registered non-stapled sets.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

The most likely cause of mis-registration is paper condition and/or damage such as curl, wrinkle, creases, dog ears, etc.

Curl, wrinkle and creases are probably caused in the IOT. Go to [IQ1 Image Quality Entry RAP](#).

For other copy/print damage and dog ears, go to the [312H-150 Copy Damage](#) in the LVF BM RAP.

Perform the steps that follow:

- Check that bin 1 is seated correctly and the bin 1 alignment clip is in position, [PL 12.320 Item 12](#).
- Turn over the paper stack in the tray in use.
- Use a new ream of paper in the tray in use.
- Paper type especially recycled paper can lead to registration problems. Change to a different brand or type of paper, if available.
- Ensure that the guides in the paper trays are correctly set and reported on the UI for the paper size loaded.
- Check that paper type is set correctly. If heavyweight paper is used but not set in the UI, the compiler capacity can be exceeded.
- Check for obstructions in the compiler.
- Ensure that the paddle roll operates correctly and that the paddles are not damaged. The paddles should park completely inside the top section of the compiler, with the shorter paddle in a vertical position. If all of the paddles are out of position, check the paddle roll home sensor, [PL 12.335 Item 4](#), the flag, [PL 12.335 Item 7](#) and the paddle motor assembly, [PL 12.335 Item 10](#). If only 1 paddle is mis-aligned with the others, it can be re-positioned by hand (they are not bonded to the shaft). If necessary install new paddles, [PL 12.335 Item 3](#).
- Ensure that the paddles are clean. If necessary, use formula A cleaning fluid, [PL 26.10 Item 2](#) to clean the paddles.
- Ensure that the tampers operate correctly, i.e. are not stalling or losing position during the job. Inspect the tampers for damage, if necessary install new components. [PL 12.355](#).
- Inspect the bin 1 entry nips for roll damage. The idlers should be held against the rubber driving rolls and they should be free to rotate within their support springs. If necessary, install new components, [PL 12.375](#).
- Inspect the 4 spring loaded guides on the output cover, [PL 12.335 Item 9](#). Ensure that they are correctly located and are free to move up and down.

312H-150 Copy Damage in the LVF BM RAP

Use this RAP to identify and correct the causes of copy damage in the LVF BM.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- Look for torn paper in the LVF BM paper path. Torn fragments can pass through the IOT and LVF BM paper path without causing a problem until they finally wedge themselves at some point. A likely place for a piece of paper to be wedged is at the hole punch assembly, where the top and bottom guides form the narrowest part of the paper path.
- Ensure that the exit diverter gate assembly, [PL 12.370 Item 13](#), operates correctly and has full movement.
- Ensure that the hole punches park at the fully open position. If they protrude even slightly, a jam will occur in the narrow paper path of the hole punch.
- Ensure that the paper entry guide assembly, [PL 12.350 Item 7](#), closes and latches correctly. Check that the magnet at the rear is located and operates correctly. Check the clip at the front is positioned correctly, [Figure 1](#).
- Ensure that all idler rolls in the LVF BM paper path are free to rotate, particularly those on the jam clearance guide, where the paper turns through 90 degrees.
- Ensure that the paper path ribs of the paper entry guide assembly, [PL 12.350 Item 7](#), and the entry guide cover assembly, [PL 12.320 Item 3](#), are free of “scores” and “nicks”. Check also for contamination and glue from label stock.

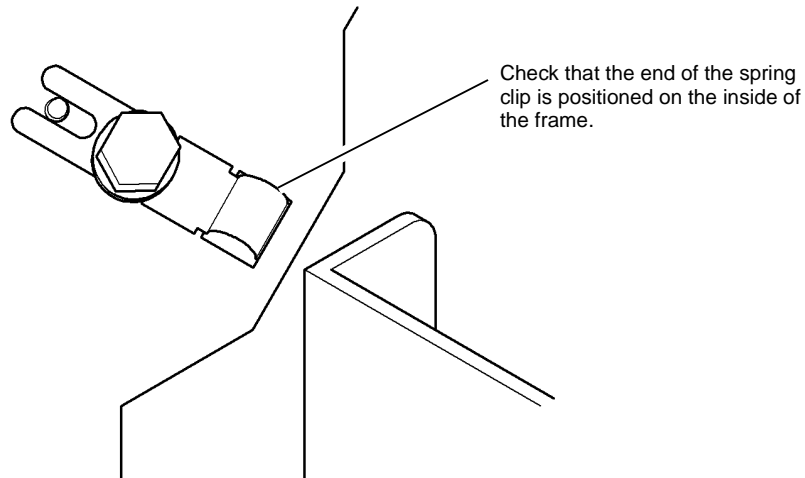


Figure 1 Position of the spring clip

312J-150 Booklet Quality RAP

Use this RAP to identify and correct the causes of poor booklet quality in the LVF BM.

The booklet quality problems that follow are covered in this RAP:

- The alignment of the top and bottom edges of the booklet are not within specification.
- The alignment of the open side edges of the booklet are not within specification.
- The booklet staples are badly formed.
- The booklet crease is off centre.
- The booklet crease is skewed greater than the specification.
- The booklet staple position is not within the specification.
- The booklet is not sufficiently creased.

Remote Service Actions

Ask the customer to check the items that follow:

- Check that the paper loaded in the paper trays matches the paper size displayed on the UI. Refer to [371-500-00 Tray 1 Open During Run RAP](#) and [372-500-00 Tray 2 Open During Run RAP](#).
- Ensure that the paper being fed to the BM conforms to the specification, [GP 20 Paper and Media Size Specification](#).
- Ensure that the booklets being produced do not exceed the maximum contents given in [Table 1](#).

Table 1 Booklet contents

Media	Media weight	Maximum number of sheets	Maximum number of booklet pages	Maximum number of un stapled sheets
Plain paper	60 to 80gsm (16 to 21lb bond)	15	60	5
Heavyweight	90gsm (24lb bond)	13	52	-
Heavyweight	120gsm (32lb bond)	10	40	-
Heavyweight	160gsm (43lb bond)	7	28	-
Heavyweight	216gsm (58lb bond)	2	8	-
Plain paper with heavy-weight cover	60 to 80gsm (16 to 21lb bond) with 160gsm (43lb bond) cover	14 including 1 cover	56	-

- Check the machine and LVF BM paper paths for any obstruction that could cause misalignment of the paper fed to the BM compiling area.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Produce three 4 sheet/16 page booklets using 80gsm (20lb) paper. Paper size and weight must conform to [GP 20](#) Paper and Media Size Specification.

Examine the booklets for defects. Go to the appropriate defect and perform the appropriate actions:

- [Top and Bottom Edge Alignment](#)
- [Open Side Edge Alignment](#)
- [Badly Formed Booklet Staples](#)
- [Booklet Crease Is Off Centre](#)
- [Skewed Booklet Crease](#)
- [Booklet Staple Position Is Not On the Crease](#)
- [The Booklet Is Not Sufficiently Creased](#)

Top and Bottom Edge Alignment

Open out the booklet at the centre page and press it onto a flat surface. Measure the mis-alignment of the top and bottom edges of the booklet, [Figure 1](#).

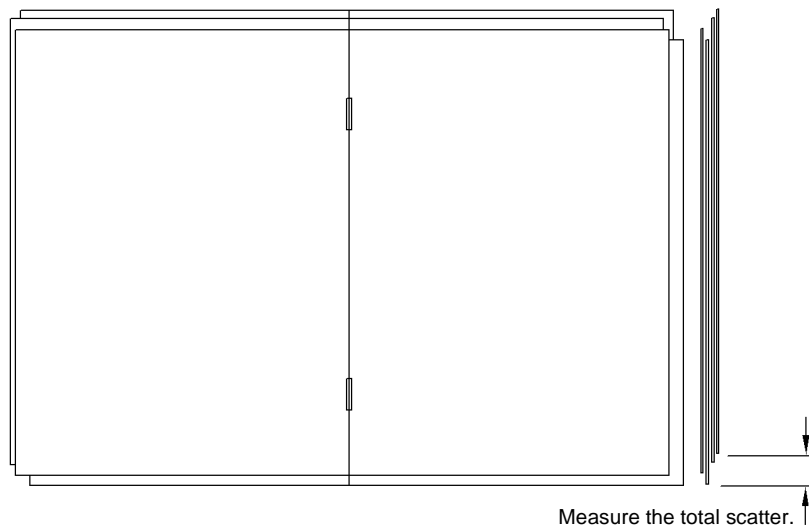


Figure 1 Top and bottom alignment

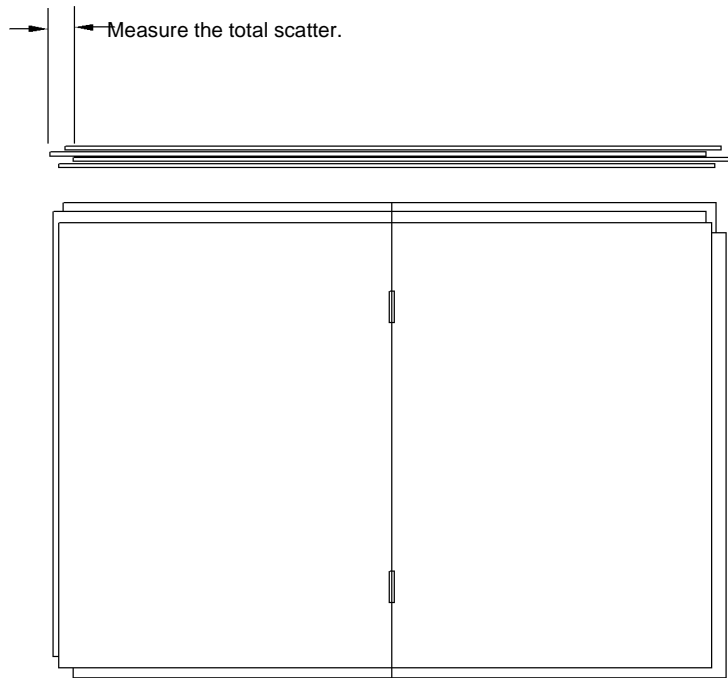
Table 2 Top and bottom edge alignment

	Paper size	4 sheet booklet	15 sheet booklet
95% of booklets	A4/8.5x11 inch	1.5mm	2.0mm
	8.5x14 inch	2.0mm	2.5mm
	A3	2.5mm	3.0mm
	11x17 inch	2.0mm	2.5mm
Worst 5% booklets	A4/8.5x11 inch	2.0mm	3.0mm
	8.5x14 inch	2.5mm	3.5mm
	A3	3.0mm	4.5mm
	11x17 inch	2.5mm	3.5mm

If the top and bottom edge alignment does not conform to the specification in [Table 2](#), check the operation of the BM tampers. Refer to [312-066-00-150](#), [312-384-00-150](#) Booklet Tamper 1 Move Failure RAP.

Open Side Edge Alignment

Open out the booklet at the centre page and press it onto a flat surface. Measure the mis-alignment of the open side edges of the booklet, [Figure 2](#).



X-1-1346-A

Figure 2 Open side edge alignment

Table 3 Open side edge alignment

	Paper size	4 sheet booklet	15 sheet booklet
95% of booklets	A4/8.5x11 inch	1.5mm	2.0mm
	8.5x14 inch	1.5mm	2.0mm
	A3	2.0mm	2.5mm
	11x17 inch	1.5mm	2.0mm
Worst 5% booklets	A4/8.5x11 inch	2.0mm	3.0mm
	8.5x14 inch	2.0mm	3.0mm
	A3	2.5mm	3.5mm
	11x17 inch	2.0mm	3.0mm

If the open side edge alignment does not conform to the specification in [Table 3](#), perform the RAPs that follow:

- [312-065-00-150](#), [312-383-00-150](#), [312-484-00-150](#), [312-486-00-150](#) Back Stop Failure RAP
- [312-418-00-150](#) Flapper Failure RAP.

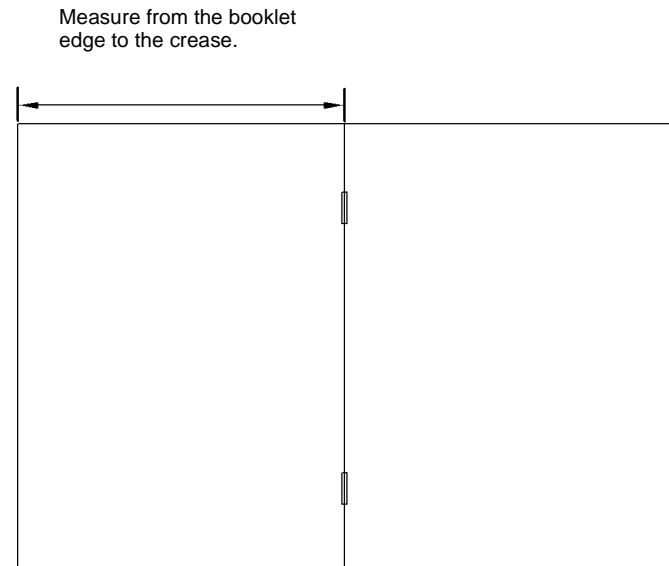
Badly Formed Booklet Staples

If the front booklet staples are not formed correctly, perform [ADJ 12.6-150](#) Booklet Stapler Anvil Position - Front.

If the rear booklet staples are not formed correctly, perform [ADJ 12.7-150](#) Booklet Stapler Anvil Position - Rear.

Booklet Crease Is Off Centre

Open out the booklet at the centre page and press it onto a flat surface. Measure the position of booklet crease, [Figure 3](#).



X-1-1346-A

Figure 3 Booklet skew

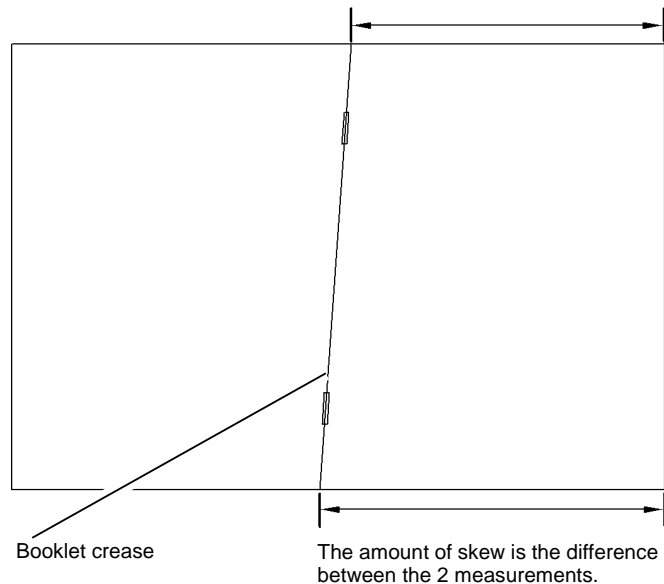
Table 4 Crease position and tolerance

Paper size	Edge to crease measurement
A4	148.5 +/- 1.5mm
A3	210 +/- 1.5mm
8.5x11 inch	139.5 +/- 1.5mm
8.5x13 inch	165.1 +/- 1.5mm
8.5x14 inch	178.0 +/- 1.5mm
11x17 inch	216.0 +/- 1.5mm

If the booklet crease position does not conform to the specification in [Table 4](#), perform [ADJ 12.4-150 Booklet Crease Position](#).

Skewed Booklet Crease

Open out the booklet at the centre page and press it onto a flat surface. Measure the mis-alignment of the open side edges of the booklet, [Figure 4](#).



X-1-1347-A

Figure 4 Booklet crease skew

Table 5 Booklet crease skew

	Paper size	4 sheet booklet	15 sheet booklet
95% of booklets	A4/8.5x11 inch	1.5mm	2.0mm
	8.5x14 inch	1.5mm	2.0mm
	A3	2.0mm	2.5mm
	11x17 inch	1.5mm	2.0mm
Worst 5% booklets	A4/8.5x11 inch	2.0mm	3.0mm
	8.5x14 inch	2.0mm	3.0mm
	A3	2.5mm	3.5mm
	11x17 inch	2.0mm	3.0mm

If the booklet crease skew does not conform to the specification in [Table 5](#), perform the procedures that follow:

- [312-065-00-150](#), [312-383-00-150](#), [312-484-00-150](#), [312-486-00-150](#) Back Stop Failure RAP.
- [312-418-00-150](#) Flapper Failure RAP.
- [ADJ 12.8-150](#) Booklet Skew.

Booklet Staple Position Is Not On the Crease

Open out the booklet at the centre page and press it down onto a flat surface. Measure the position of the booklet staple from the crease line, [Figure 5](#).

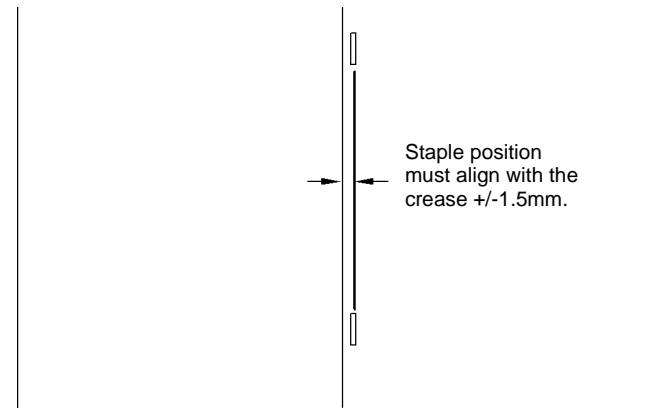


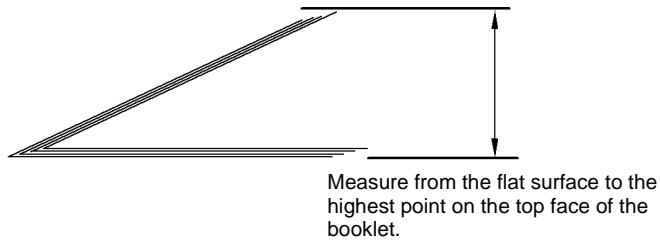
Figure 5 Booklet staple position

If the booklet staple position does not conform to the specification in [Figure 5](#), perform [ADJ 12.5-150 Booklet Staple Position](#).

The Booklet Is Not Sufficiently Creased

Place the folded booklet onto a flat surface. Measure the maximum open dimension of the booklets within 20 seconds of being formed, [Figure 6](#).

- Crease roll gear 2, [PL 12.415 Item 2](#).
- Crease roll gear 3, [PL 12.415 Item 3](#).
- Crease roll gear 4, [PL 12.415 Item 4](#).



X-1-1350-A

Figure 6 Booklet creasing

Table 6 Creasing tolerance

Number of sheets in booklet	Height of booklet at highest point
1-6 sheets of 80gsm (20lb)	25mm
7-10 sheets of 80gsm (20lb)	50mm
11-15 sheets of 80gsm (20lb)	100mm

If the maximum height of the booklets does not conform to the specification in [Table 6](#), check the parts that follow for damage:

- Crease blade assembly, [PL 12.405 Item 5](#).
- Crease blade drive gear, [PL 12.405 Item 7](#).
- Crease blade gearbox, [PL 12.405 Item 11](#).
- Crease blade cranks, [PL 12.405 Item 12](#).
- Crease blade front blade arm, [PL 12.405 Item 8](#).
- Crease blade rear blade arm, [PL 12.405 Item 9](#).
- Crease blade guides, [PL 12.405 Item 3](#).
- Upper crease roll, [PL 12.410 Item 2](#).
- Lower crease roll, [PL 12.410 Item 3](#).
- Crease roll gearbox assembly, [PL 12.415 Item 8](#).
- Crease roll gear 1, [PL 12.415 Item 1](#).

312-024-00-171, 312-025-00-171 HVF Paddle Roller Position RAP

312-024-00-171 The paddle roller has failed to return to the home position.

312-025-00-171 The paddle roller has failed to move from the home position.

Remote Service Actions

Ask the customer to check for any jam or obstruction that would prevent paddle movement. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check for damage or any obstruction that would prevent paddle movement. If necessary, install new components.

Procedure

Enter **dC330**, code 012-238 paddle roll motor run, to check the movement of the paddle. **The paddle turns.**

Y N

Go to **Flag 1**. Check the paddle roller motor, MOT12-238, **Figure 1**. Refer to:

- **GP 10** How to Check a Motor.
- **P/J202**. **HVF PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Paddle unit, **PL 12.115** Item 2.
- HVF PWB, **PL 12.140** Item 2.

Stack the code 012-186 paddle roll home sensor, Q12-186, **Figure 1**. **The display changes as the paddle rotates.**

Y N

Go to **Flag 2**. Check the paddle roller home sensor, Q12-186. Refer to:

- **GP 11** How to Check a Sensor.
- **P/J201**. **HVF PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Paddle unit, **PL 12.115** Item 2.
- HVF PWB, **PL 12.140** Item 2.

Perform **SCP 5** Final Actions.

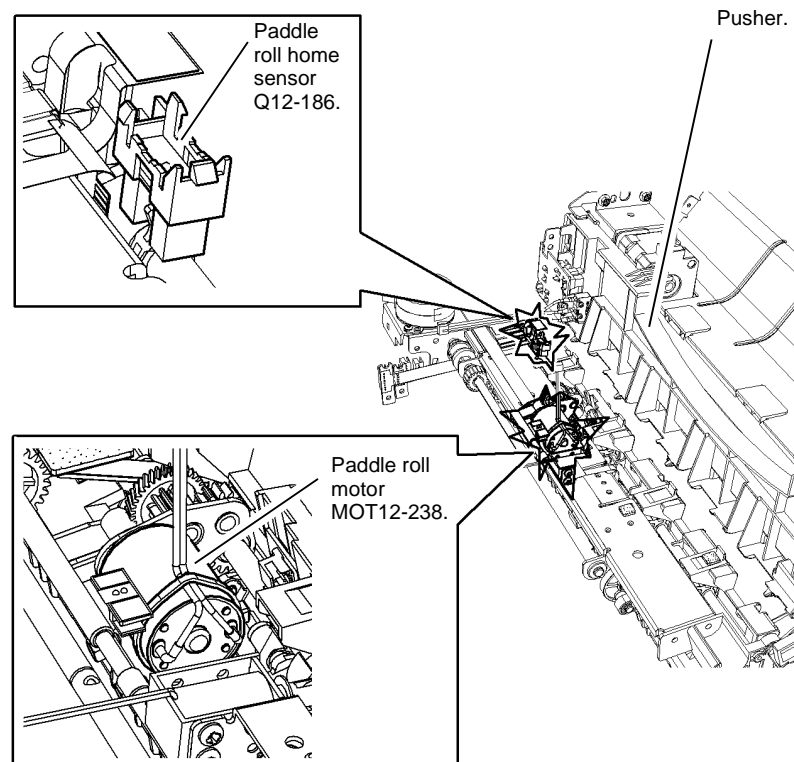


Figure 1 Components

X-1-0073-A

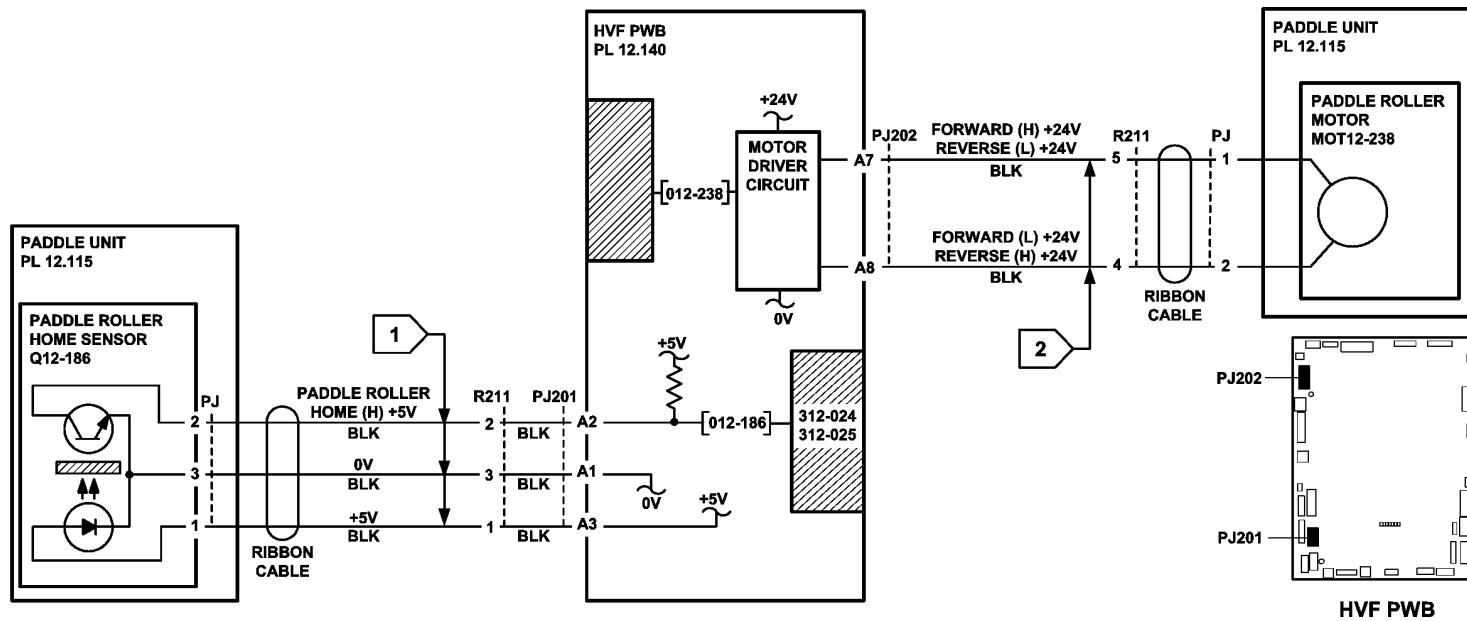


Figure 2 Circuit diagram

TX-1-0108-A

312-044-00-171 to 312-047-00-171 HVF Punch Head Position RAP

312-044-00-171 The punch head has failed to return to the home position within the required time.

312-045-00-171 The punch head has failed to move from the home position within the required time.

312-046-00-171 The punch unit has failed to return to the home position within the required time.

312-047-00-171 The punch unit has failed to move from the home position within the required time.

Remote Service Actions

Ask the customer to check the punch head area for any obstruction that could prevent the free movement of the head or the unit. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the punch head area for any obstruction or damage that could prevent the free movement of the head or the unit. If necessary, install new components.

Procedure

Enter **dC330**, code 012-246 for the punch head motor, MOT12-244 **Figure 1**. **The motor runs.**

Y N

Go to **Flag 2**. Check the punch head motor, MOT12-244. Refer to:

- **GP 10** How to Check a Motor.
- **P/J502. HVF PWB.**
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Hole punch module, **PL 12.125 Item 19.**
- HVF PWB, **PL 12.140 Item 2.**

Enter **dC330**, code 012-194 for the punch head home sensor and stack the code 012-246 for the punch head motor, **Figure 1**. Observe the condition of the sensor on the UI. **The display changes.**

Y N

Go to **Flag 1**. Check the punch head home sensor, Q12-194. Refer to:

- **GP 11** How to Check a Sensor.

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- **P/J501. HVF PWB.**
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Hole punch module, **PL 12.125 Item 19.**
- HVF PWB, **PL 12.140 Item 2.**

Enter **dC330**, code 012-045 for the punch unit motor, **Figure 1**, to travel in the forward direction, or enter the code 012-046 for the punch unit motor to travel in the reverse direction. **The motor runs.**

Y N

Go to **Flag 4**. Check MOT12-045. Refer to:

- **GP 10** How to Check a Motor.
- **P/J502. HVF PWB.**
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Hole punch module, **PL 12.125 Item 19.**
- HVF PWB, **PL 12.140 Item 2.**

Enter **dC330**, code 012-114 for the punch unit home sensor, **Figure 1**, and stack the code 012-045 or 012-046 to move the punch unit motor to the home position, then away from home. Observe the condition of the sensor on the UI. **The display changes.**

Y N

Go to **Flag 3**. Check the punch unit home sensor, Q11-114. Refer to:

- **GP 11** How to Check a Sensor.
- **P/J501. HVF PWB.**
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Hole punch module, **PL 12.125 Item 19.**
- HVF PWB, **PL 12.140 Item 2.**

Perform **SCP 5** Final Actions.

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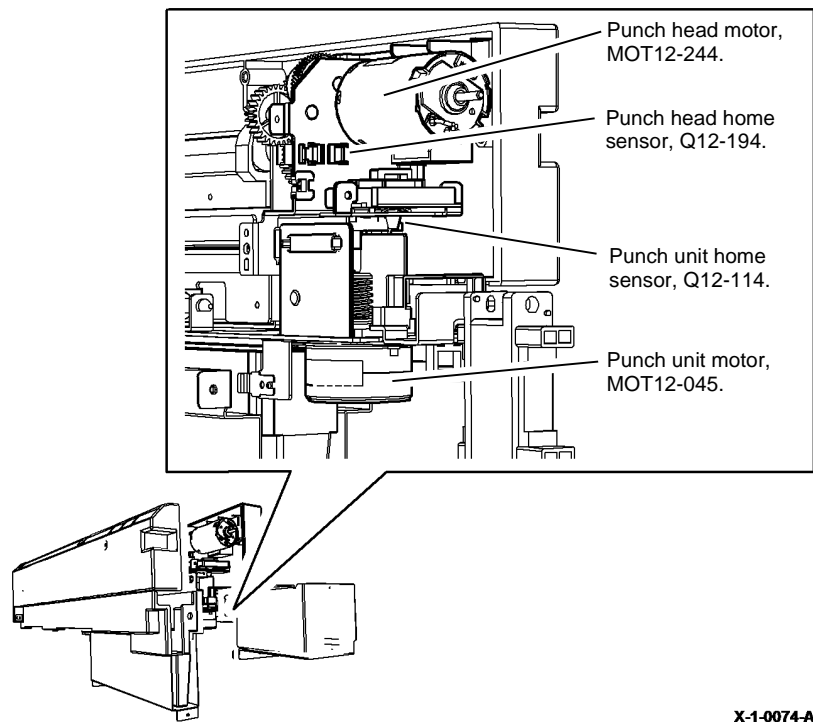


Figure 1 Component location

X-1-0074-A

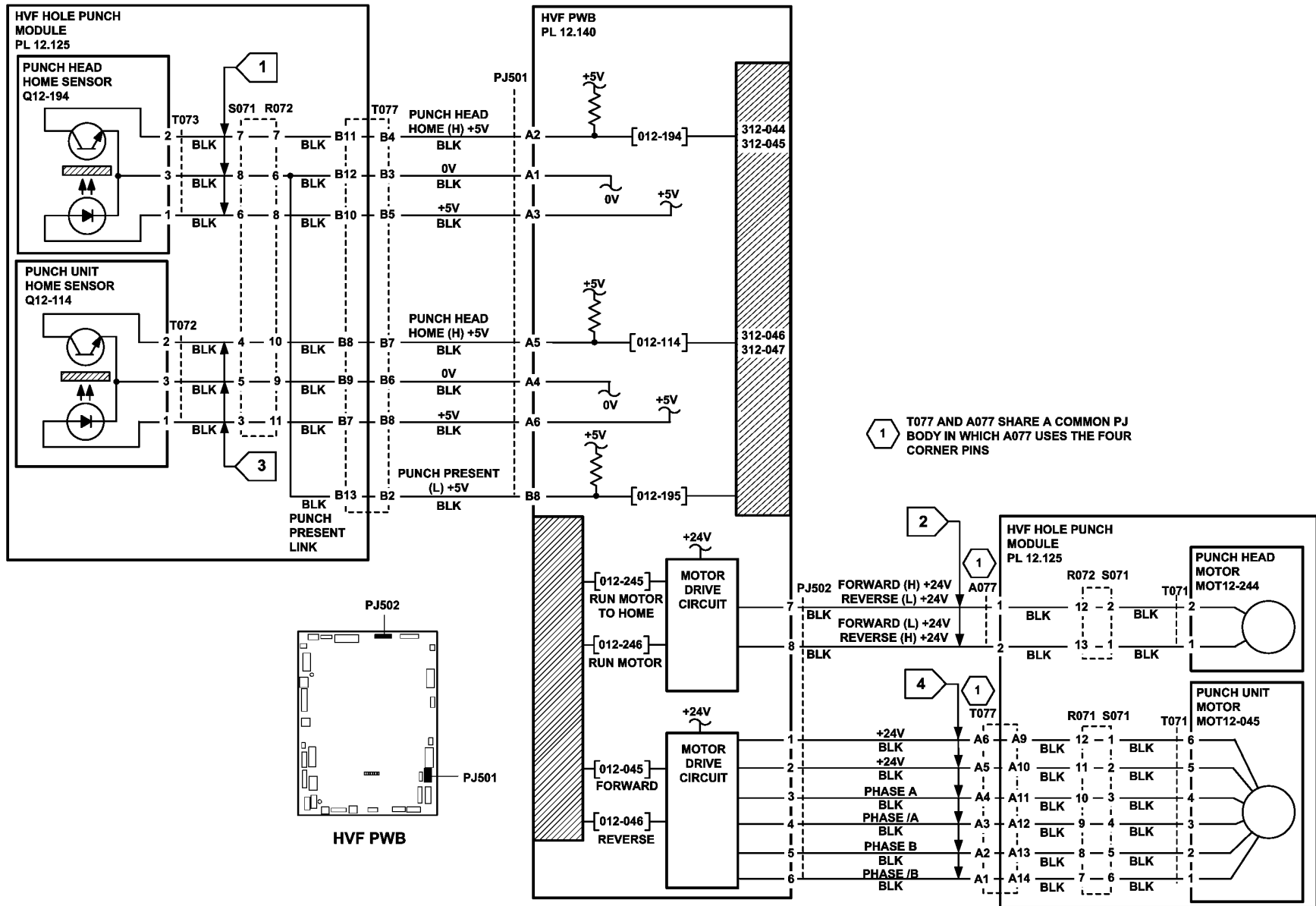


Figure 2 Circuit diagram

312-056-00-171, 312-057-00-171 HVF Inserter Bottom Plate RAP

312-056-00-171 The inserter bottom plate has failed to return to the home position.

312-057-00-171 The inserter bottom plate has failed to lift.

Remote Service Actions

Ask the customer to check that the bottom plate area is clear and that there are no obstructions. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check that the bottom plate area is clear and that there is no damage or obstructions. Install new components as necessary.

Procedure

Enter dC330, code 012-261 for the inserter motor MOT12-261, Figure 1. The motor runs.

Y N

Go to Flag 5 and Flag 6. Check the inserter motor, MOT12-261. Refer to:

- GP 10 How to Check a Motor.
- P/J4, P/J12. inserter PWB.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Inserter Motor, PL 12.315 Item 1.
- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

Enter dC330, code 012-085 for the inserter bottom plate sensor, Figure 1, then actuate the sensor. The display changes.

Y N

Go Flag 1 and Flag 2. Check the inserter bottom plate sensor, Q12-085. Refer to:

- GP 11 How to Check a Sensor.
- P/J3. inserter PWB.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Bottom tray assembly, PL 12.300 Item 19.
- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

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Enter dC330, code 012-315 for the inserter pickup sensor, Q12-315, Figure 1, then actuate the sensor. The display changes.

Y N

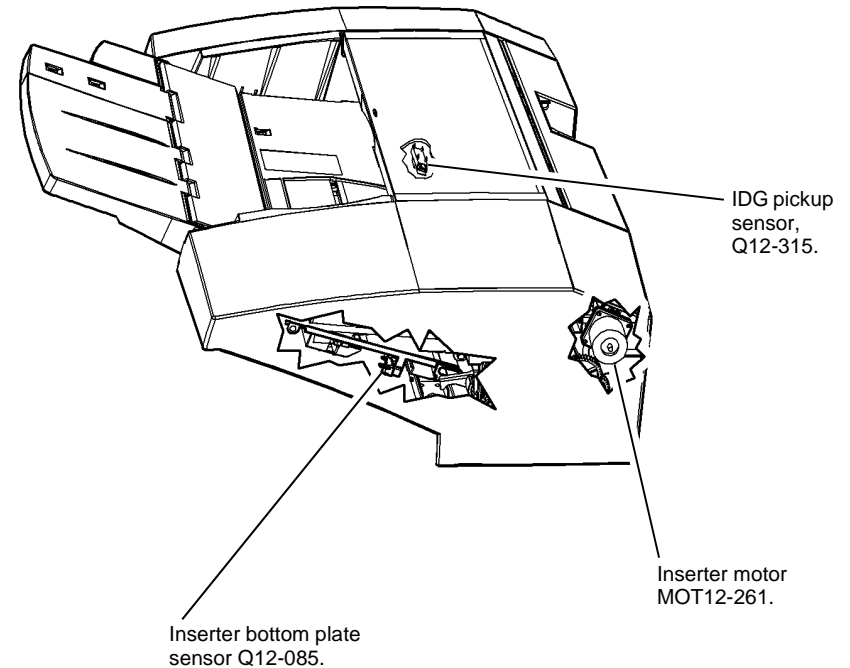
Go to Flag 3 and Flag 4. Check the inserter pickup sensor, Q12-315. Refer to:

- GP 11 How to Check a Sensor.
- P/J7. inserter PWB.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Top cover door assembly, PL 12.310 Item 20.
- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

Perform SCP 5 Final Actions.



X-1-0821-A

Figure 1 Component location

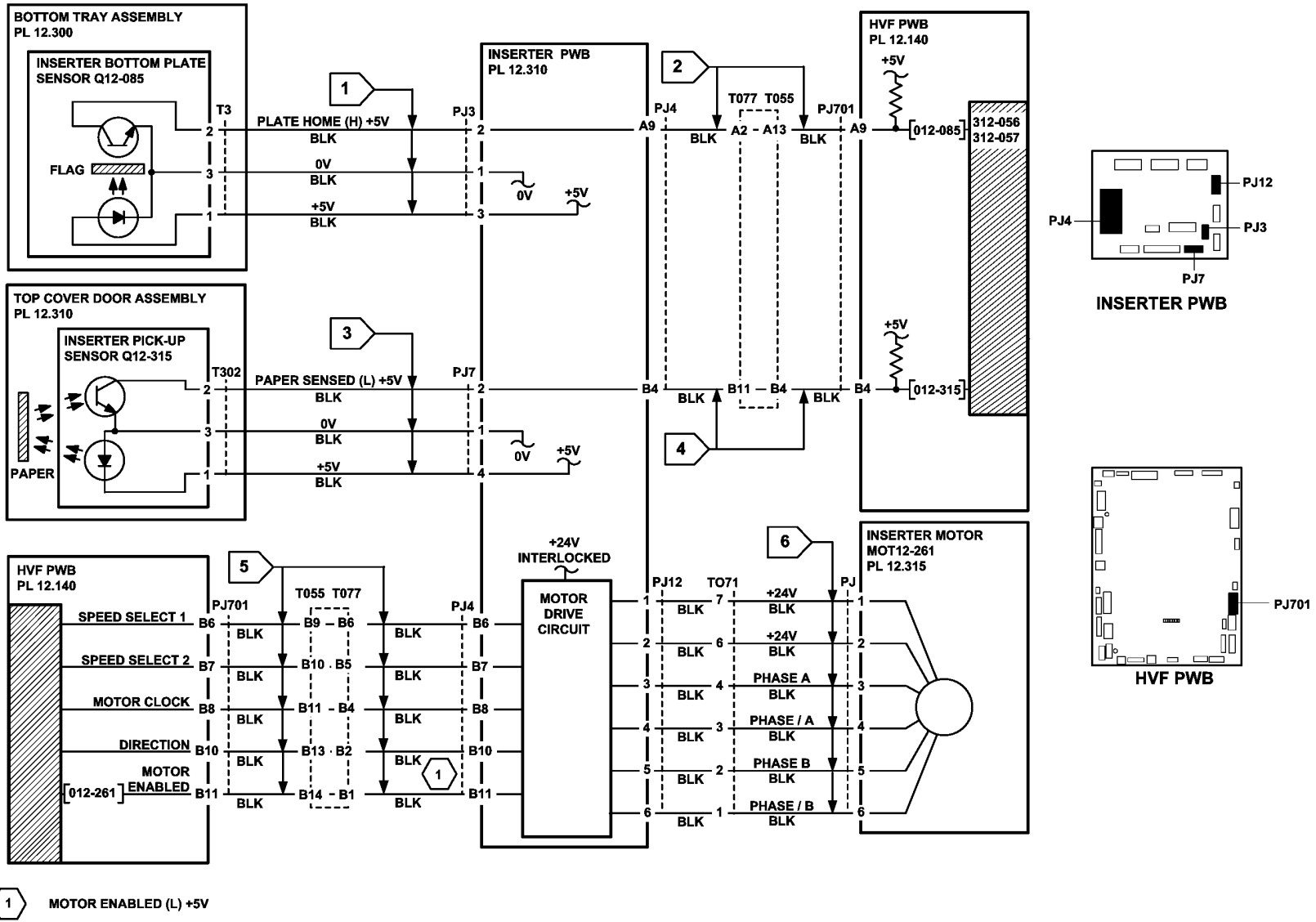


Figure 2 Circuit diagram

TX-1-0110-A

312-061-00-171, 312-416-00-171 HVF BM Crease Blade Fault RAP

312-061-00-171 The crease blade has failed to clear the crease blade home sensor.

312-416-00-171 The crease blade has failed to return to the home position.

Remote Service Actions

Ask the customer to turn the crease blade knob (6d), [Figure 1](#) to ensure that the crease blade mechanism is free to move. If necessary, clear any paper jam in the area of the blade. If the fault continues, a site visit will be necessary.

On Site Initial Actions

- Ensure that the crease blade assembly is level front to back and is installed correctly, refer to [REP 12.36-171](#).
- Check the following parts for damage:
 - Crease blade assembly, [PL 12.170 Item 13](#).
 - Drive gear, [PL 12.170 Item 6](#).
 - Connecting rods, [PL 12.170 Item 9](#).
 - Crank, [PL 12.170 Item 8](#).

Procedure



WARNING

Keep away from the crease blade mechanism when working in close proximity to the booklet maker while the machine is powered on. The crease blade mechanism activates quickly and with great force.



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter [dC330](#) code 012-214. Actuate the BM crease blade home sensor Q12-214, [Figure 1](#), by rotating the crease blade knob [Figure 1](#), so that the actuator moves into and out of the BM crease blade home sensor. **The display changes.**

Y N

Go to [Flag 1](#). Check Q12-214.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J552](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- [BM PWB](#), [PL 12.175 Item 10](#).
- [BM crease blade home sensor](#), [PL 12.170 Item 1](#).

A

Enter [dC330](#) code 012-215. Actuate the BM crease blade motor encoder sensor Q12-215, [Figure 1](#) by slowly rotating the crease blade knob [Figure 1](#). **The display changes.**

Y N

Go to [Flag 2](#). Check Q12-215.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J552](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- [BM PWB](#), [PL 12.175 Item 10](#).
- [BM crease blade motor encoder sensor](#), [PL 12.170 Item 1](#).

Enter [dC330](#), code 012-252 to run the BM crease blade motor, MOT12-252, [Figure 1](#). **The motor runs.**

Y N

Go to. Check MOT12-252.

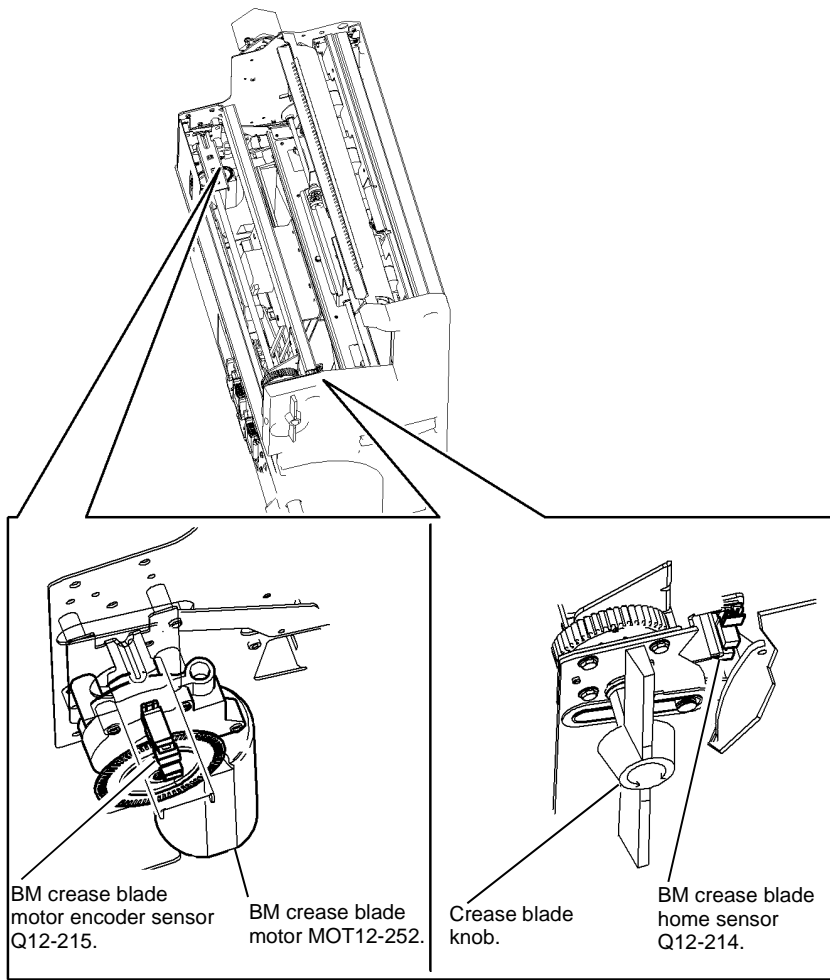
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J557](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- [BM crease blade motor assembly](#), [PL 12.170 Item 3](#).
- [BM PWB](#), [PL 12.175 Item 10](#).

The fault may be intermittent, check for damaged wiring or bad connectors, [REP 1.1](#). If necessary install new components.



X-1-0197-A

Figure 1 Component location

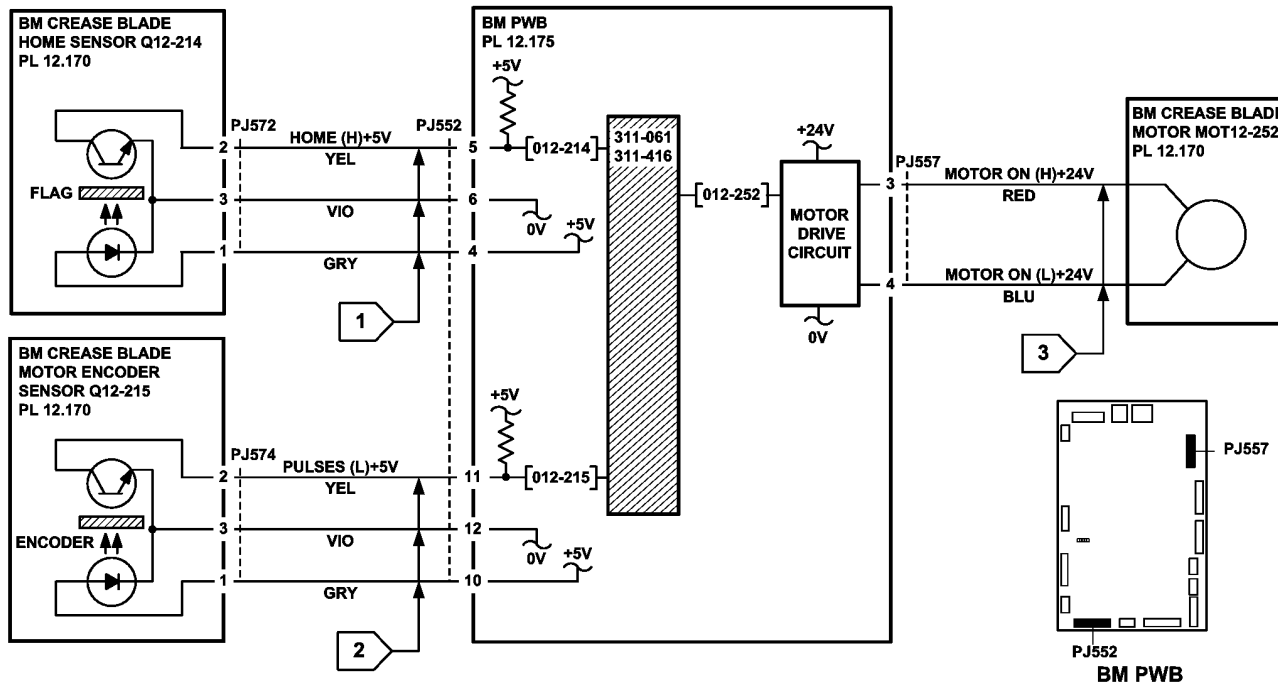


Figure 2 Circuit diagram

TX-1-0111-A

312-062-00-171 HVF BM Crease Roll Motor Failure RAP

312-062-00-171 The HVF BM crease roll motor has failed to run.

Remote Service Actions

Ask the customer to clear any paper jam in the area of the crease rolls. If the fault continues, a site visit will be necessary.

Procedure



WARNING

Keep away from the crease blade mechanism when working in close proximity to the booklet maker while the machine is powered on. The crease blade mechanism activates quickly and with great force.



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Release the crease roll nip pressure by moving the crease roll handle (6c), PL 12.150 Item 5, fully counter clockwise. Remove the BM right hand cover, PL 12.185 Item 15, to access the crease rolls. Enter dC330 code 012-216. Actuate the BM crease roll motor encoder sensor, Q12-216 by rotating the crease rolls slowly by hand. **The display changes.**

Y N
Go to Flag 1. Check the BM crease roll motor encoder sensor, Q12-216, Figure 1.

Refer to:

- GP 11 How to Check a Sensor.
- P/J552. BM PWB.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- BM PWB, PL 12.175 Item 10.
- BM crease roll motor encoder sensor, PL 12.175 Item 9.

Enter dC330, code 012-253 to run the BM crease roll motor, MOT12-253, Figure 1. **The motor runs.**

Y N
Go to Flag 2. Check the BM crease roll motor, MOT12-253.

Refer to:

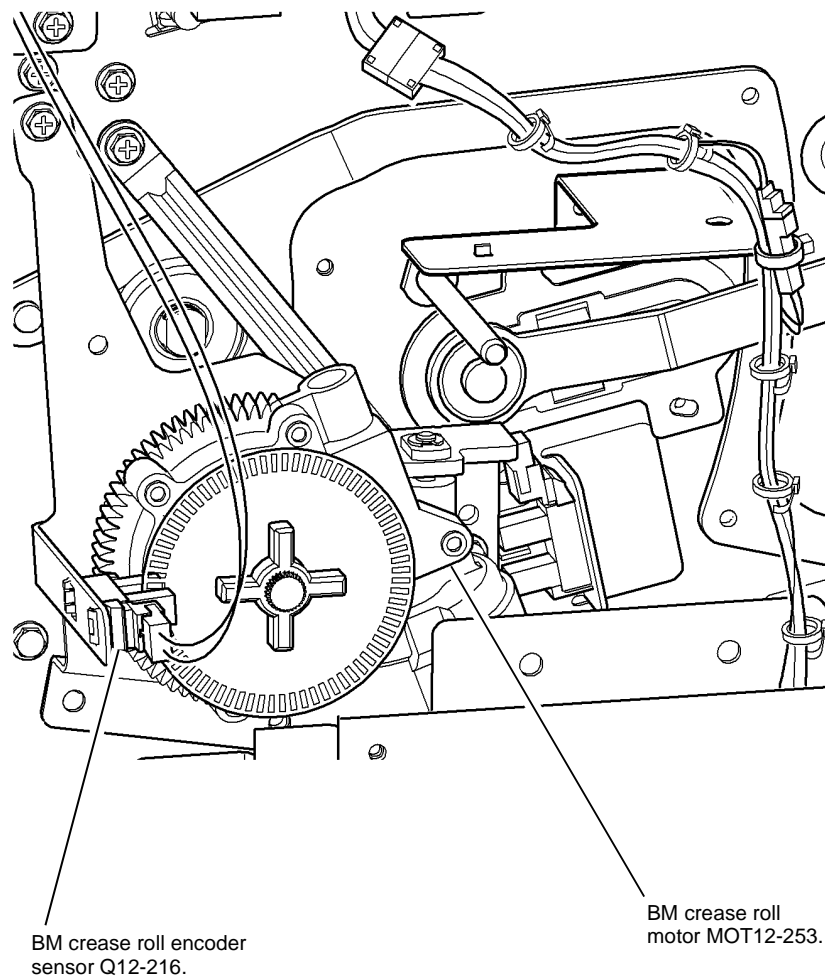
- GP 10 How to Check a Motor.
- P/J557. BM PWB.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- BM crease roll motor, PL 12.175 Item 12.
- BM PWB, PL 12.175 Item 10.

A
The fault may be intermittent, check for damaged wiring or bad connectors, REP 1.1. If necessary install new components:

- BM crease roll motor encoder sensor, PL 12.175 Item 9.
- BM crease roll motor, PL 12.175 Item 12.
- BM PWB, PL 12.175 Item 10.



X-1-0823-A

Figure 1 Component location

A

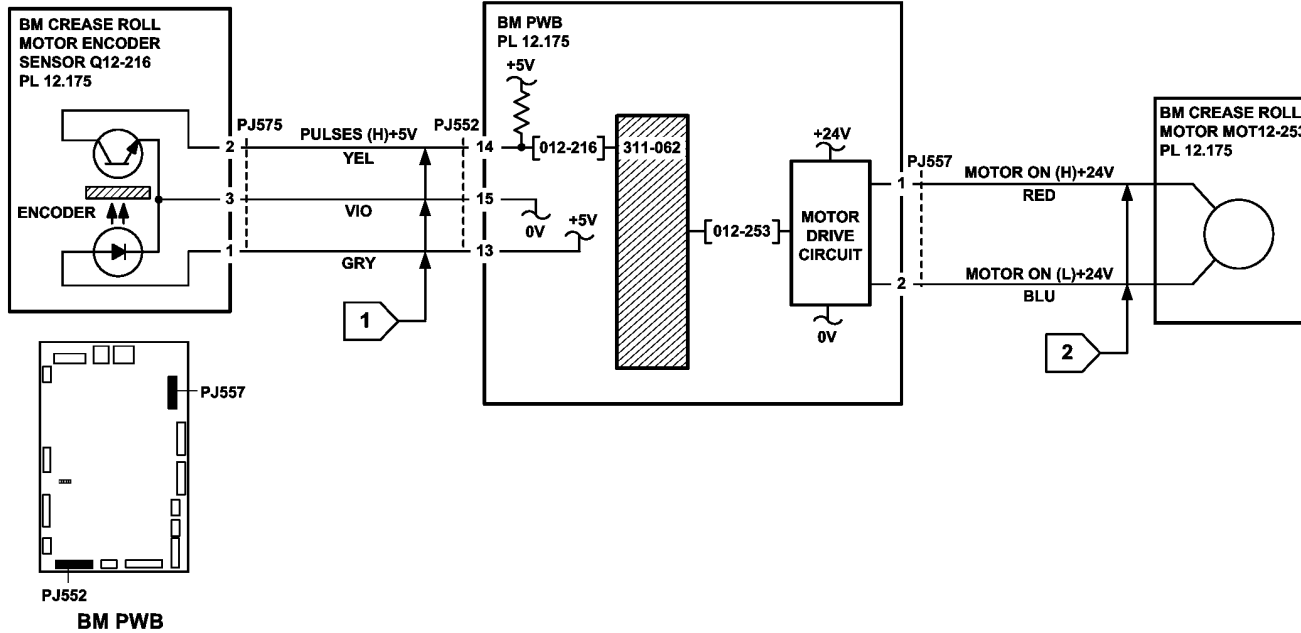


Figure 2 Circuit diagram

TX-1-0112-A

312-063-00-171, 312-411-00-171 HVF BM Staple Unit 1 Failure RAP

312-063-00-171 The HVF BM staple unit 1 has failed to leave the home position.

312-411-00-171 The HVF BM staple unit 1 has failed to return to the home position.

Remote Service Actions

Ask the customer to check the items that follow:

- Check for jammed staples in the stapler head.
- Ensure that the customer job does not exceed the capacity of the booklet maker. Refer to [312D-171 Booklet Quality RAP](#) for booklet maker quality specifications.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check that there is no damage or obstruction that would prevent the stapling unit from cycling.
- Check that the sheets of staples in the cartridge are feeding one at a time. If staple sheets overlap, they will jam in the cartridge. If necessary, install a new staple cartridge, [PL 12.185 Item 8](#).

Procedure

Enter [dC330](#), code 012-217 to check the BM staple head (SH) carrier closed sensor, Q12-217, [Figure 1](#). Open and close the staple head carrier. **The display changes.**

Y N
Go to [Flag 1](#). Check the BM SH carrier closed sensor, Q12-217.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J552. BM PWB](#).
- [312A-171 HVF Power Distribution RAP](#).
- [301A 0V Distribution RAP](#).

Install new components as necessary:

- BM Stapler head carrier closed sensor, [PL 12.185 Item 18](#).
- BM PWB, [PL 12.175 Item 10](#).

Remove the HVF front door, refer to [REP 12.1-171 HVF Covers](#). Pull out the BM module. Remove the staple head 1 cover, [PL 12.185 Item 14](#). Enter [dC330](#), code 012-218 to check the BM SH1 home switch. Manually rotate the staple head to actuate the BM SH1 home switch.

The display changes.

Y N
Go to [Flag 2](#). Check the BM SH 1 home switch, S12-218.

Refer to:

- [GP 13](#), How to Check a Switch.
- [P/J551. BM PWB](#).
- [312A-171 HVF Power Distribution RAP](#).
- [301A 0V Distribution RAP](#).

Install new components as necessary:

- BM staple head assembly, [PL 12.185 Item 7](#).
- BM PWB, [PL 12.175 Item 10](#).

Enter [dC330](#), code 012-254 to run the BM SH1 motor. **The staple head cycled.**

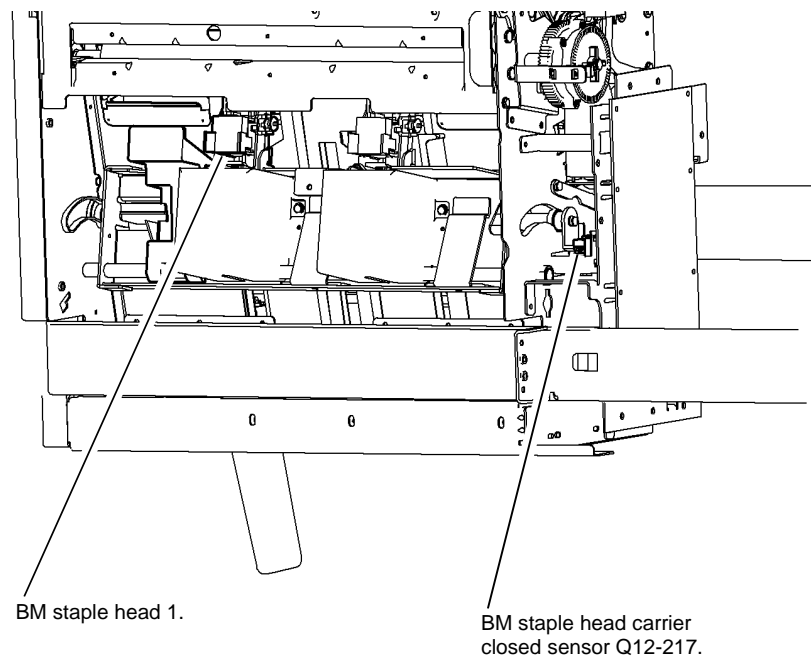
Y N
Go to [Flag 3](#). Check the wiring and connectors. **The wiring and connectors are good.**

Y N
Repair the wiring or connectors, [REP 1.1](#).

Install a new BM staple head assembly, [PL 12.185 Item 7](#).

The fault may be intermittent, check for damaged wiring or bad connectors, [REP 1.1](#). If necessary install new components:

- BM staple head 1, [PL 12.185 Item 7](#).
- BM PWB, [PL 12.175 Item 10](#).



X-1-0824-A

Figure 1 Component location

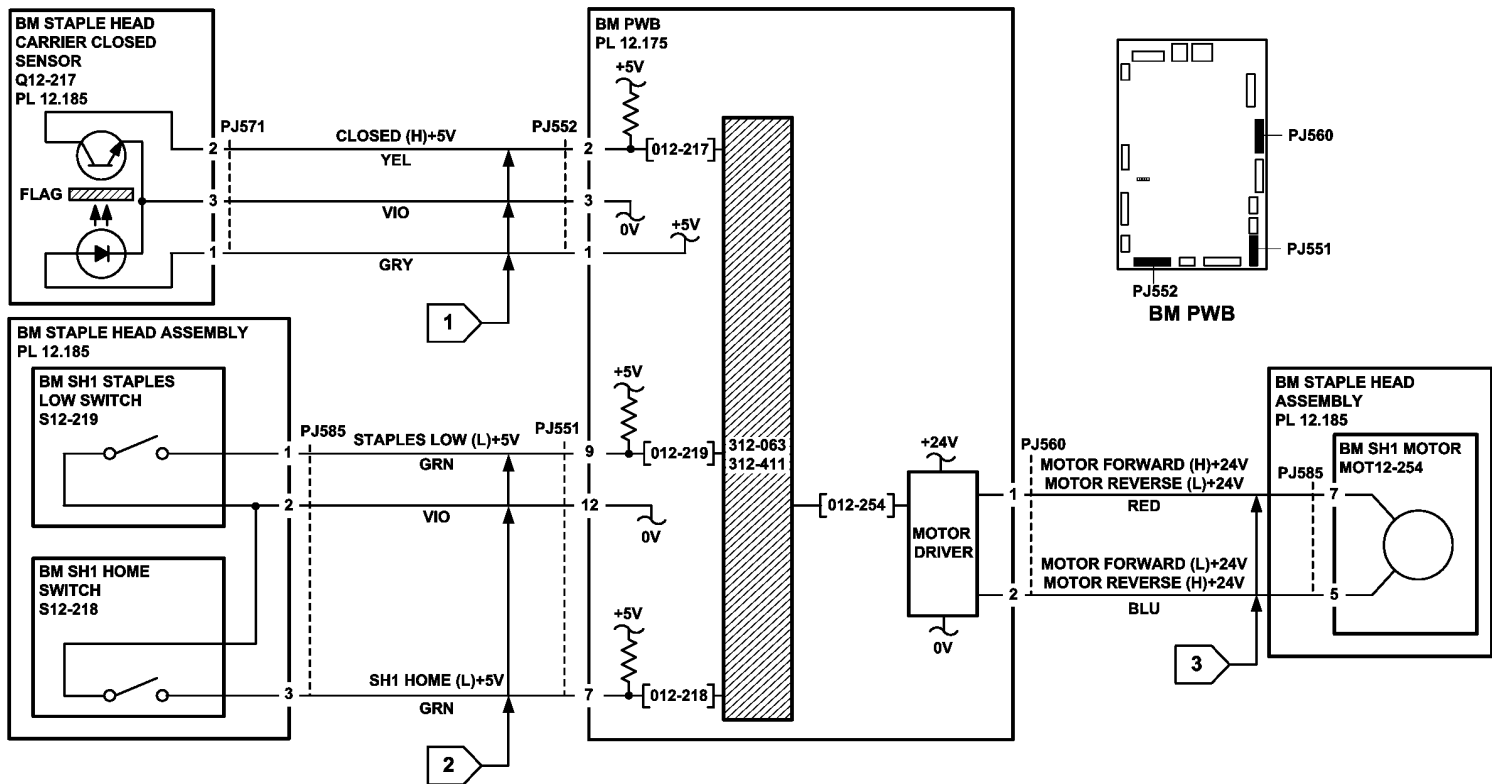


Figure 2 Circuit diagram

TX-1-0113-A

312-065-00-171, 312-383-00-171 HVF BM Backstop Motor Fault RAP

312-065-00-171 The HVF BM backstop motor fails to move.

312-383-00-171 The HVF BM backstop is not at the home position.

Remote Service Actions

Ask the customer to check for a jam or other obstruction that could prevent the backstop mechanism from moving. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the items that follow:

- Damaged BM back stop drive belt, [PL 12.160 Item 7](#).
- Damaged BM back stop belt, [PL 12.165 Item 15](#).
- Damaged pulley, [PL 12.160 Item 5](#).
- Damaged pulley on the BM back stop drive shaft, [PL 12.165 Item 14](#).
- Damaged pulley on the BM back stop idler shaft, [PL 12.160 Item 13](#).
- The BM back stop drive belt is tensioned correctly. Refer to [REP 12.20-171](#).
- The BM back stop belt is tensioned correctly. Refer to [REP 12.26-171](#).

Procedure

Enter [dC330](#) code 012-204. Actuate the BM guide home sensor, Q12-204, [Figure 1](#), by manually moving the backstop away from and back to the home position. **The display changes.**

Y N

Go to [Flag 1](#). Check Q12-204.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J556](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM guide home sensor, [PL 12.160 Item 18](#).
- BM PWB, [PL 12.175 Item 10](#).

Manually move the backstop away from the home position. Enter [dC330](#), code 012-255 to run the BM backstop motor, MOT12-255, [Figure 1](#). **The motor runs and returns the backstop to the home position.**

Y N

Go to [Flag 2](#) and [Flag 3](#). Check MOT12-255

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J554](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM backstop motor assembly, [PL 12.160 Item 19](#).
- BM PWB, [PL 12.175 Item 10](#).

Enter [dC330](#) code 012-259 to energize both of the BM stack hold solenoids, SOL12-259, [Figure 1](#). **Both solenoids energize.**

Y N

Go to [Flag 4](#). Check the BM stack hold solenoids, SOL12-259.

Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [P/J555](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

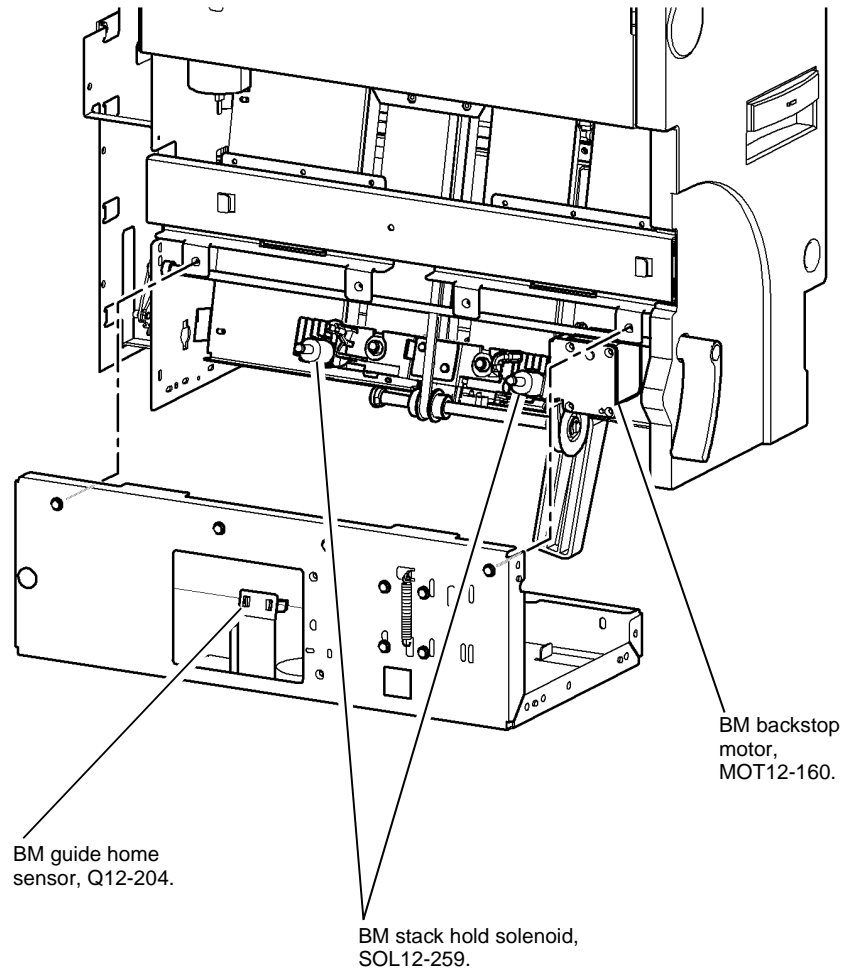
Install new components as necessary:

- BM PWB, [PL 12.175 Item 10](#).
- Back stop assembly, [PL 12.165 Item 18](#).

The fault may be intermittent, check for damaged wiring or bad connectors, [REP 1.1](#). If necessary install new components:

- BM guide home sensor, [PL 12.160 Item 18](#).
- BM backstop motor, [PL 12.160 Item 4](#).
- BM PWB, [PL 12.175 Item 10](#).

A



BM guide home sensor, Q12-204.

BM stack hold solenoid, SOL12-259.

BM backstop motor, MOT12-160.

X-1-0825-A

Figure 1 Component location

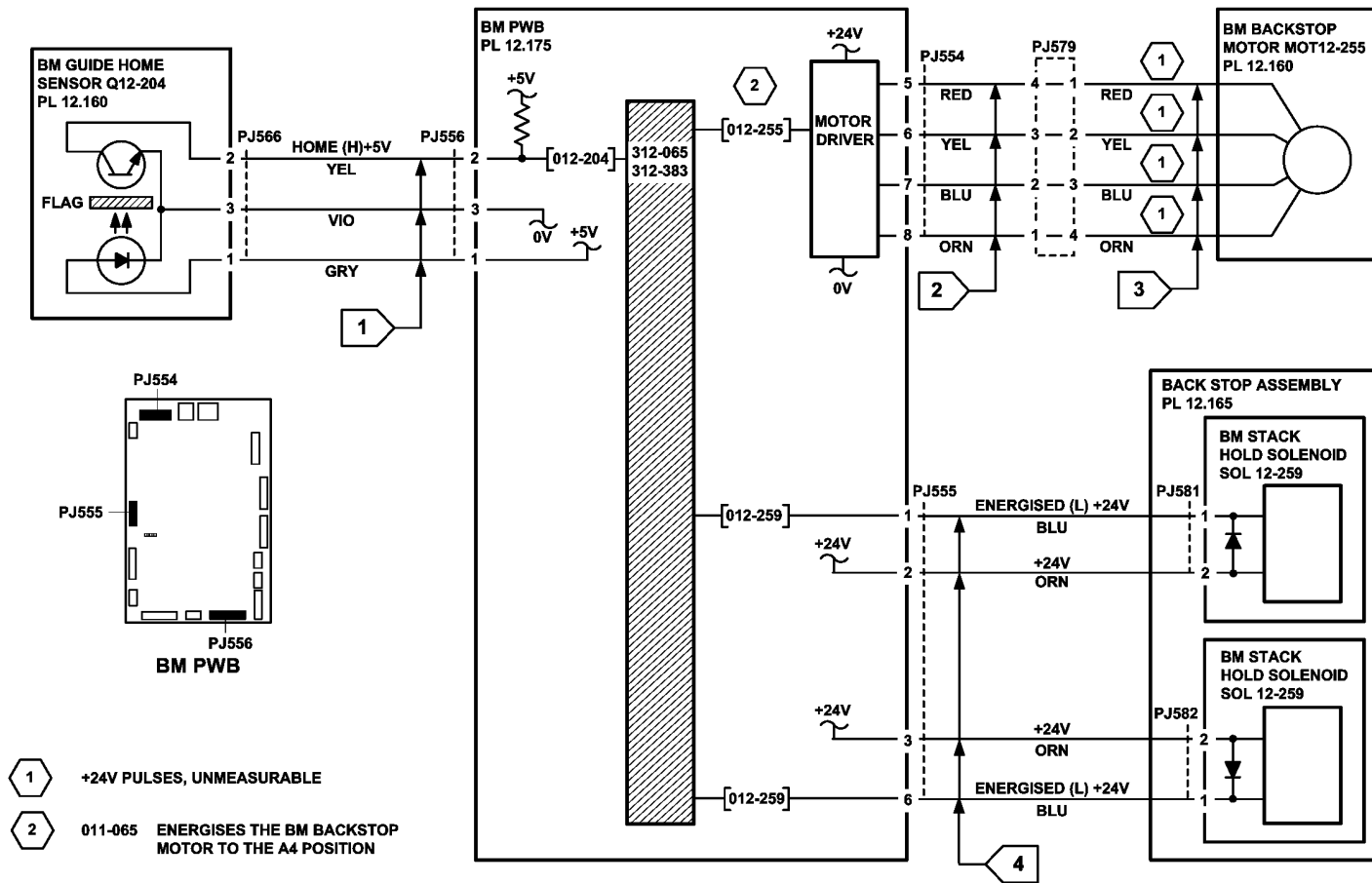


Figure 2 Circuit diagram

TX-1-0114-A

312-066-00-171, 312-384-00-171, 312-419-00-171, 312-420-00-171 HVF BM Tamper Fault RAP

312-066-00-171 The HVF BM tamper has failed to clear the home sensor.

312-384-00-171 The HVF BM tamper is not at the home sensor.

312-419-00-171 The HVF BM tamper home fault.

312-420-00-171 The HVF BM tamper move fault.

Remote Service Actions

Ask the customer to check for a jam or other obstruction that could prevent the tamper mechanism from moving. If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check for damaged tamper components, [PL 12.155](#).

Procedure

Enter [dC330](#) code 012-205. Actuate the BM tamper 1 home sensor, Q12-205, [Figure 1](#). **The display changes.**

Y N
Go to [Flag 1](#). Check Q12-205.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J556](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM PWB, [PL 12.175](#) [Item 10](#).
- BM tamper 1 home sensor, [PL 12.155](#) [Item 1](#).

Enter [dC330](#), code 012-256, to run the BM tamper 1 motor, MOT12-256, [Figure 1](#). **The motor runs.**

Y N
Go to [Flag 2](#) and [Flag 3](#). Check MOT12-256.
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J554](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM PWB, [PL 12.175](#) [Item 10](#).
- BM tamper 1 motor, [PL 12.155](#) [Item 3](#).

The fault may be intermittent, check for damaged wiring or bad connectors, [REP 1.1](#). If necessary install new components:

- BM tamper 1 home sensor, [PL 12.155](#) [Item 1](#).
- BM tamper 1 motor, [PL 12.155](#) [Item 3](#).
- BM PWB, [PL 12.175](#) [Item 10](#).

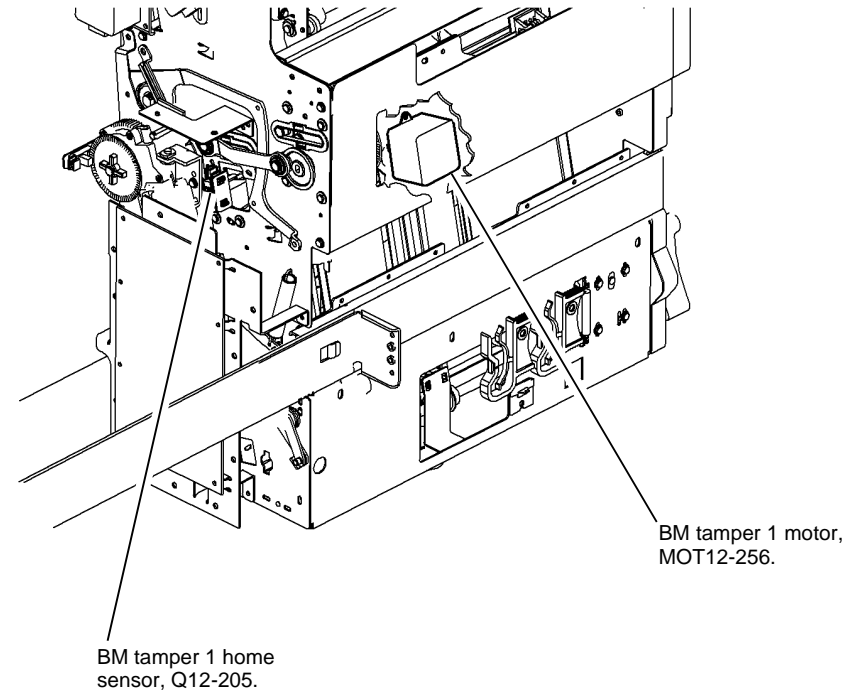


Figure 1 Component location

X-1-0826-A

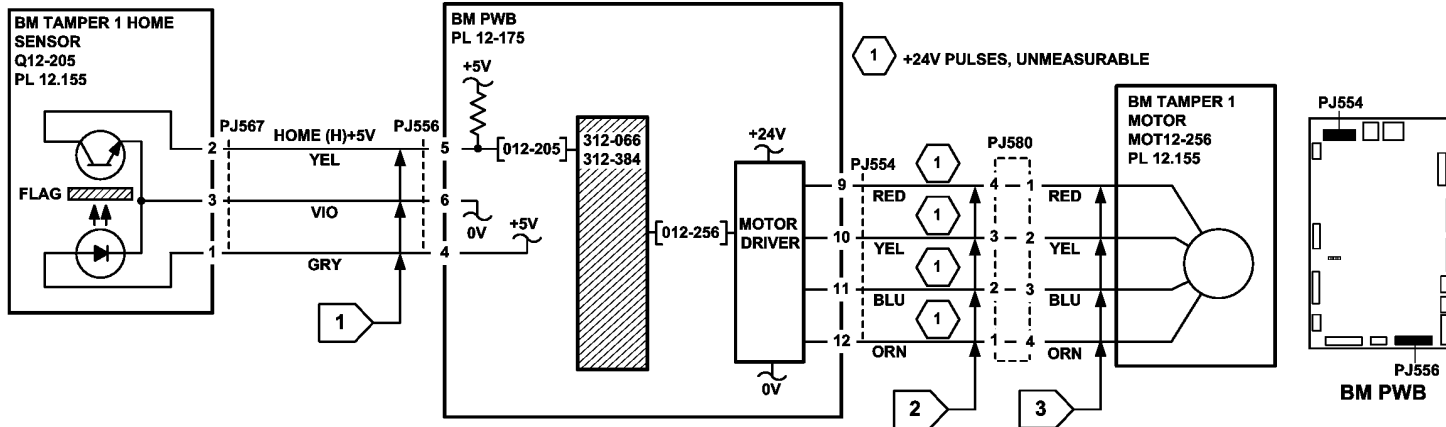


Figure 2 Circuit diagram

TX-1-0115-A

312-083-00-171, 312-440-00-171 to 312-444-00-171 HVF Paper Pusher Fault RAP

312-083-00-171 The paper pusher motor has stalled.

312-440-00-171 The paper pusher has failed to return to the home, (upper) position.

312-441-00-171 The paper pusher has failed to move from the home, (upper) position.

312-442-00-171 The paper pusher has failed to return to the away, (lower) position.

312-443-00-171 The paper pusher has failed to move from the away, (lower) position.

312-444-00-171 The stapler gate safety switch has failed.

Remote Service Actions

Ask the customer to check for a jam or other obstruction that could prevent the paper pusher from moving. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check for damaged paper pusher components.

Procedure

Enter [dC330](#), code 012-265 to run the paper pusher motor, MOT12-265, [Figure 1](#). The motor runs.

Y N

Go to [Flag 2](#). Check MOT12-265.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J202](#). HVF PWB.
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Paper pusher motor assembly, [PL 12.115 Item 13](#).
- HVF PWB, [PL 12.140 Item 2](#).

Go to [Flag 4](#). Check the stapler gate safety switch S12-319, [Figure 1](#).

Refer to:

- [GP 13](#) How to check a switch.
- [P/J304](#), HVF PWB.
- [312A-171](#) HVF Power Distribution RAP.

- [301A](#) 0V Distribution RAP.

The switch is good.

Y N

Install new components as necessary.

- Sensor assembly, [PL 12.115 Item 22](#).
- HVF PWB [PL 12.140 Item 2](#).

Enter [dC330](#), code 012-092. Manually actuate the paper pusher upper sensor, Q12-092, [Figure 1](#). The display changes.

Y N

Go to [Flag 1](#). Check Q12-092.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J201](#). HVF PWB.
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Paper pusher upper sensor, [PL 12.115 Item 16](#).
- HVF PWB [PL 12.140 Item 2](#).

Enter [dC330](#), code 012-094. Manually actuate the paper pusher lower sensor, Q12-094, [Figure 1](#). The display changes.

Y N

Go to [Flag 3](#). Check Q12-094.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J201](#). HVF PWB.
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Paper pusher lower sensor, [PL 12.115 Item 16](#).
- HVF PWB [PL 12.140 Item 2](#).

The fault may be intermittent, check for damaged wiring or bad connectors, [REP 1.1](#). If necessary install new components:

- Paper pusher upper sensor, [PL 12.115 Item 16](#).
- Paper pusher lower sensor, [PL 12.115 Item 16](#).
- Paper pusher motor assembly, [PL 12.115 Item 13](#).
- Sensor assembly, [PL 12.115 Item 22](#).
- HVF PWB, [PL 12.140 Item 2](#).

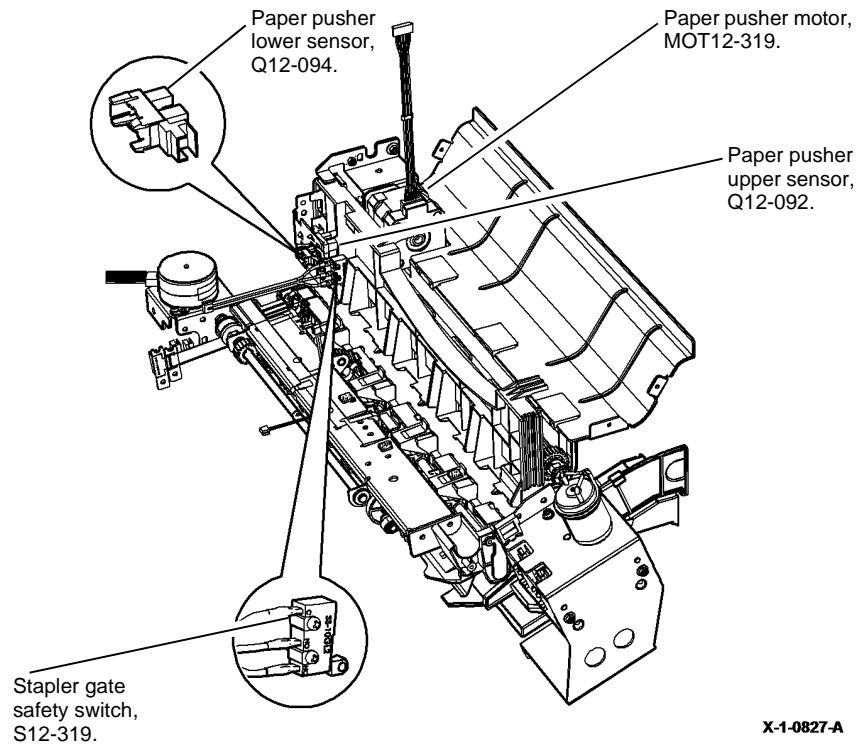


Figure 1 Component location

X-1-0827-A

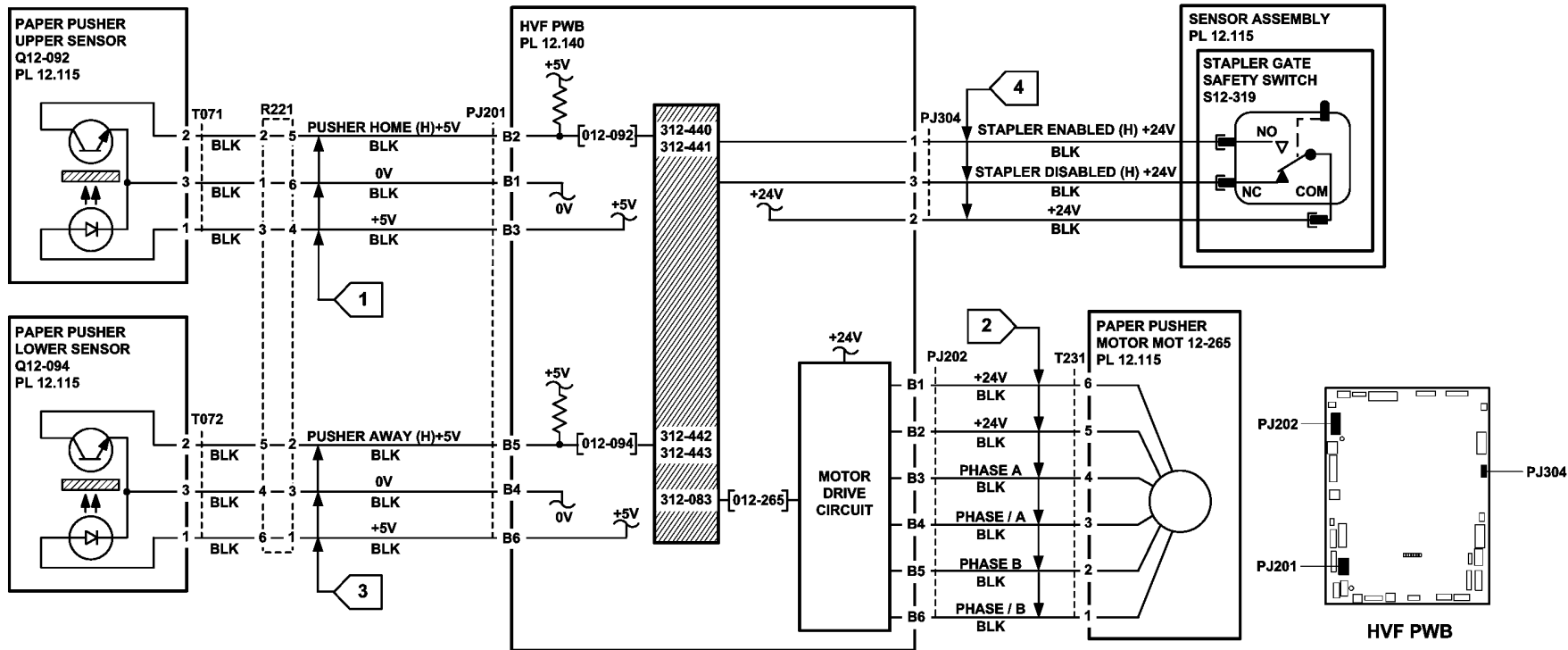


Figure 2 Circuit diagram

TX-1-0116-A

312-113-00-171, 312-114-00-171, 312-190-00-171, 312-192-00-171 HVF BM Entry RAP

312-113-00-171 The paper leading edge is late arriving at the HVF booklet exit sensor.

312-114-00-171 The paper trailing edge is late leaving the HVF booklet exit sensor.

312-125-00-171 The BM entry sensor is not turned on within a specified time.

312-190-00-171 The paper leading edge is late arriving at the BM entry sensor.

312-192-00-171 The paper trailing edge is late leaving the BM entry sensor.

Remote Service Actions

Ask the customer to check the items that follow:

- A jam or other obstruction in the bypass transport.
- A jam or other obstruction in the BM paper entry guide.

If the fault continues, a site visit will be necessary.

Procedure



WARNING

Switch off the electricity to the machine. Refer to GP 14. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Enter **dC330**, code 012-087. Manually actuate the HVF booklet exit sensor, Q12-087, **Figure 1**.

The display changes.

Y N

Go to **Flag 1**. Check Q12-087.

Refer to:

- **GP 11** How to Check a Sensor.
- **P/J101**. **HVF PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP

Install new components as necessary:

- HVF booklet exit sensor, **PL 12.135** **Item 3**.
- HVF PWB, **PL 12.140** **Item 2**.

Enter **dC330**, code 012-258. Energize the BM diverter solenoid SOL12-258, **Figure 1**. **The solenoid energizes.**

Y N

Go to **Flag 2**. Check SOL12-258.

Refer to:

- **GP 12** How to Check a Solenoid or Clutch.
- **P/J102**. **HVF PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

A

Install new components as necessary:

- BM diverter solenoid, **PL 12.120** **Item 4**.
- HVF PWB, **PL 12.140** **Item 2**.

Enter **dC330**, code 012-263 to run the bypass feed motor, MOT12-263, **Figure 1**. **The motor runs.**

Y N

Go to **Flag 3**. Check the bypass feed motor, MOT12-263.

Refer to:

- **GP 10** How to Check a Motor.
- **P/J103**. **HVF PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Bypass Feed motor, **PL 12.120** **Item 2**.
- HVF PWB, **PL 12.140** **Item 2**.

Check the drive belt on the motor. **The drive belt is good.**

Y N

Install a new drive belt, **PL 12.120** **Item 8**.

Enter **dC330**, code 012-089. Manually actuate the BM entry sensor, Q12-089, **Figure 2**. **The display changes.**

Y N

Go to **Flag 4**. Check Q12-089.

Refer to:

- **GP 11** How to Check a Sensor.
- **P/J551**. **BM PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- BM entry sensor, **PL 12.150** **Item 16**.
- BM PWB, **PL 12.175** **Item 10**.

Enter **dC330**, code 012-251 to run the BM compiler motor, MOT12-251, **Figure 2**. **The motor runs.**

Y N

Go to **Flag 5**. Check MOT12-251.

Refer to:

- **GP 10** How to Check a Motor.
- **P/J554**. **BM PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- BM compiler motor, **PL 12.175** **Item 1**.
- BM PWB, **PL 12.175** **Item 10**.

B

A

B

Lower the stapler bracket assembly, [Figure 2](#). Enter [dC330](#) code 012-170 BM paper present sensor, Q12-170. Actuate Q12-170. **The display changes.**

Y N

Go to [Flag 6](#). Check Q12-170.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J556](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM paper present sensor, [PL 12.185](#) [Item 5](#).
- BM PWB, [PL 12.175](#) [Item 10](#).

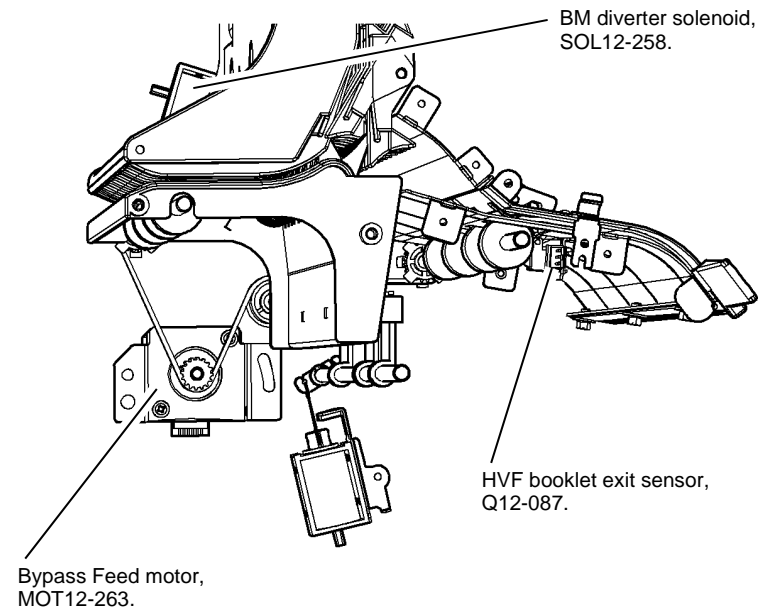
Check the drive belt on the motor. **The drive belt is good.**

Y N

Install a new drive belt, [PL 12.175](#) [Item 15](#).

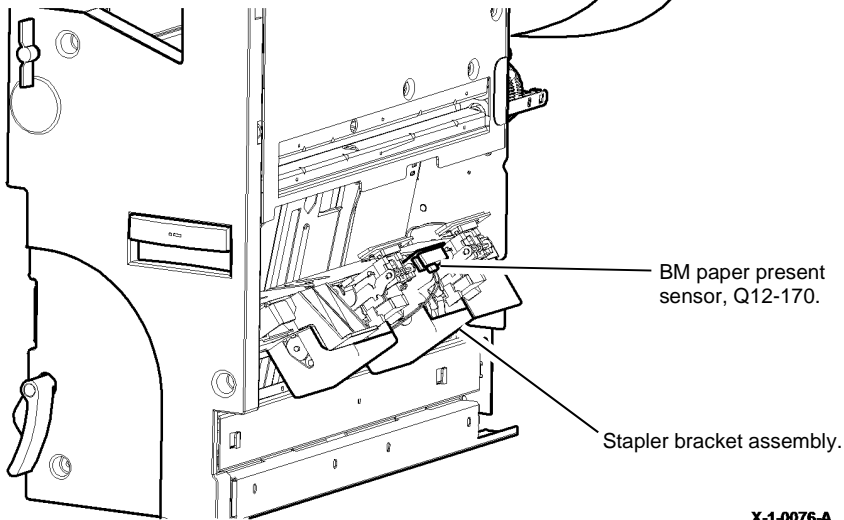
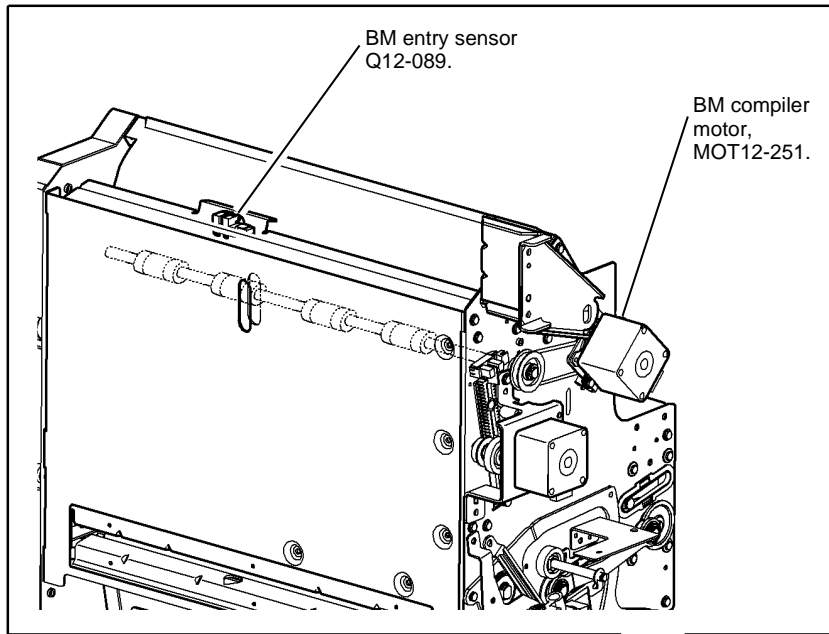
The fault may be intermittent, check for damaged wiring or bad connectors, [REP 1.1](#). If necessary install new components:

- HVF booklet exit sensor, [PL 12.135](#) [Item 3](#).
- BM diverter solenoid, [PL 12.120](#) [Item 4](#).
- BM diverter gate, [PL 12.125](#) [Item 9](#).
- BM compiler motor, [PL 12.175](#) [Item 1](#).
- Bypass Feed motor, [PL 12.120](#) [Item 2](#).
- HVF PWB, [PL 12.140](#) [Item 2](#).



X-1-0075-A

Figure 1 Component location



X-1-0076-A

Figure 2 Component location

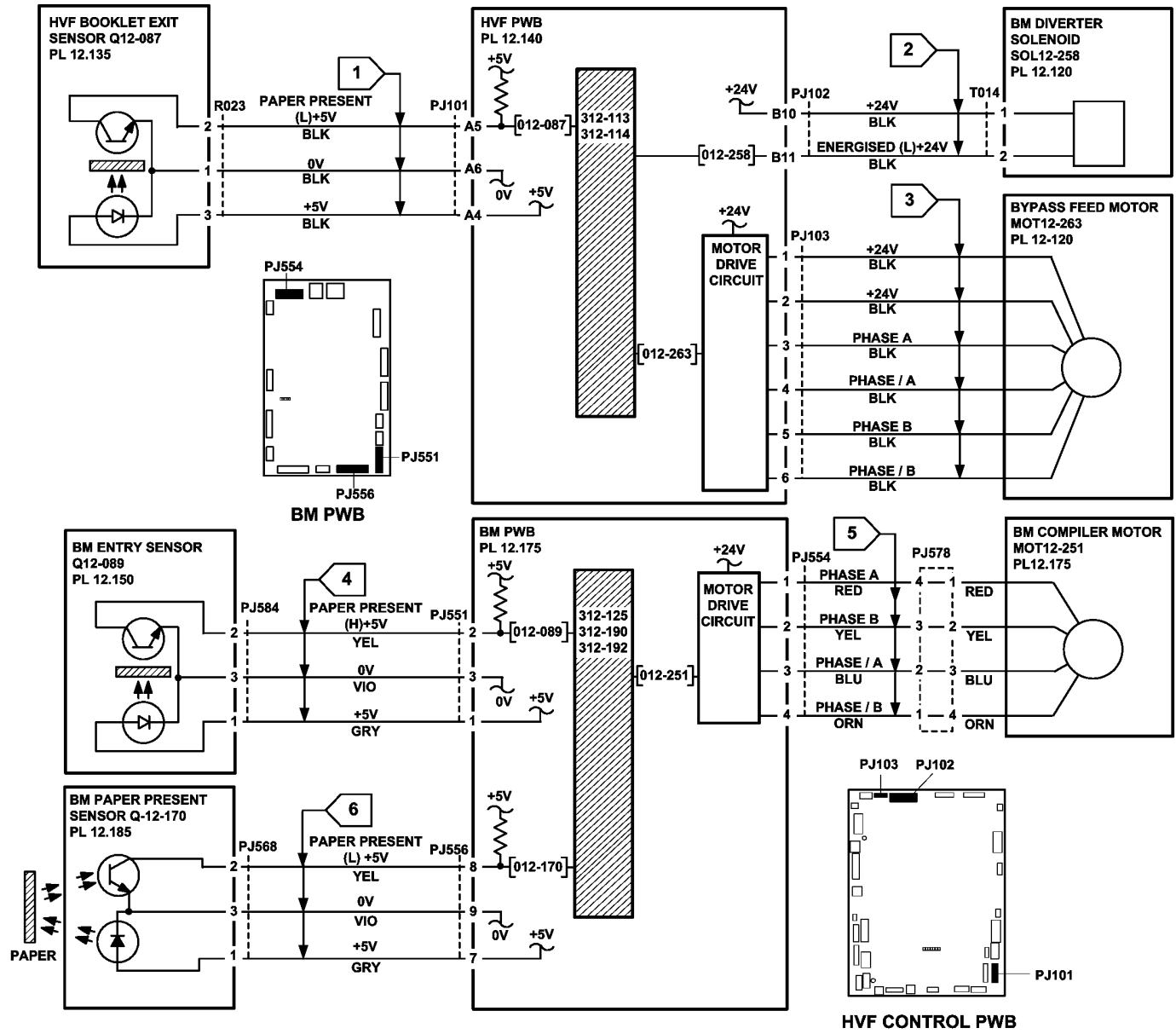


Figure 3 Circuit diagram

TX-1-0117-A

312-125-00-171, 312-126-00-171 HVF Entry Sensor RAP

312-125-00-171 The entry sensor is not turned on within a specified time.

312-126-00-171 The paper trailing edge is late leaving the entry sensor.

Remote Service Actions

Ask the customer to check for a jam or other obstruction in the entrance guide. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the entrance guide for damage.

Procedure

Enter [dC330](#), code 012-077. Manually actuate the entry sensor, Q12-077, [Figure 1](#). The display changes.

Y N

Go to [Flag 1](#). Check Q12-077.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J101](#). [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Entry sensor, [PL 12.135](#) Item 2.
- HVF PWB, [PL 12.140](#) Item 2.

Enter [dC330](#), code 012-263 to run the bypass feed motor, MOT12-263, [Figure 1](#). The motor runs.

Y N

Go to [Flag 2](#) Check MOT12-263

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J102](#). [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Bypass feed motor, [PL 12.120](#) Item 2.
- HVF PWB, [PL 12.140](#) Item 2.

Check the transport motor 1 drive belt. **The belt is good.**

Y N

Install a new transport motor 1 drive belt, [PL 12.120](#) Item 7.

The fault may be intermittent, check for damaged wiring or bad connectors, [REP 1.1](#). If necessary install new components:

- Entry sensor, [PL 12.135](#) Item 2.
- Bypass feed motor, [PL 12.120](#) Item 2.
- HVF PWB, [PL 12.140](#) Item 2.

If the fault remains, make sure that the paper correctly continues past the previous sensor in the paper path. Refer to the [310-171-00](#) TE Late from Horizontal Transport Entry Sensor RAP.

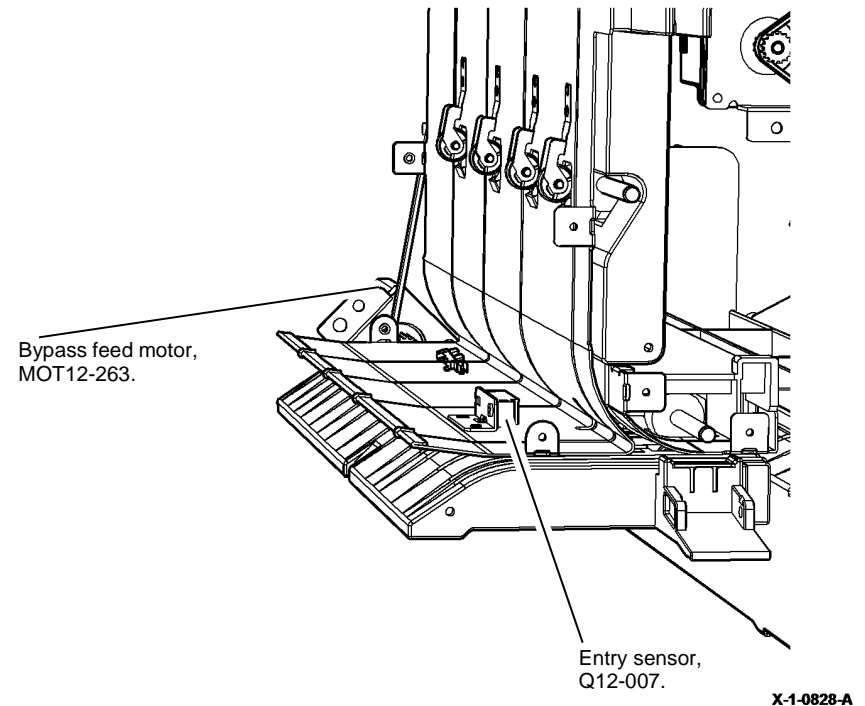


Figure 1 Component location

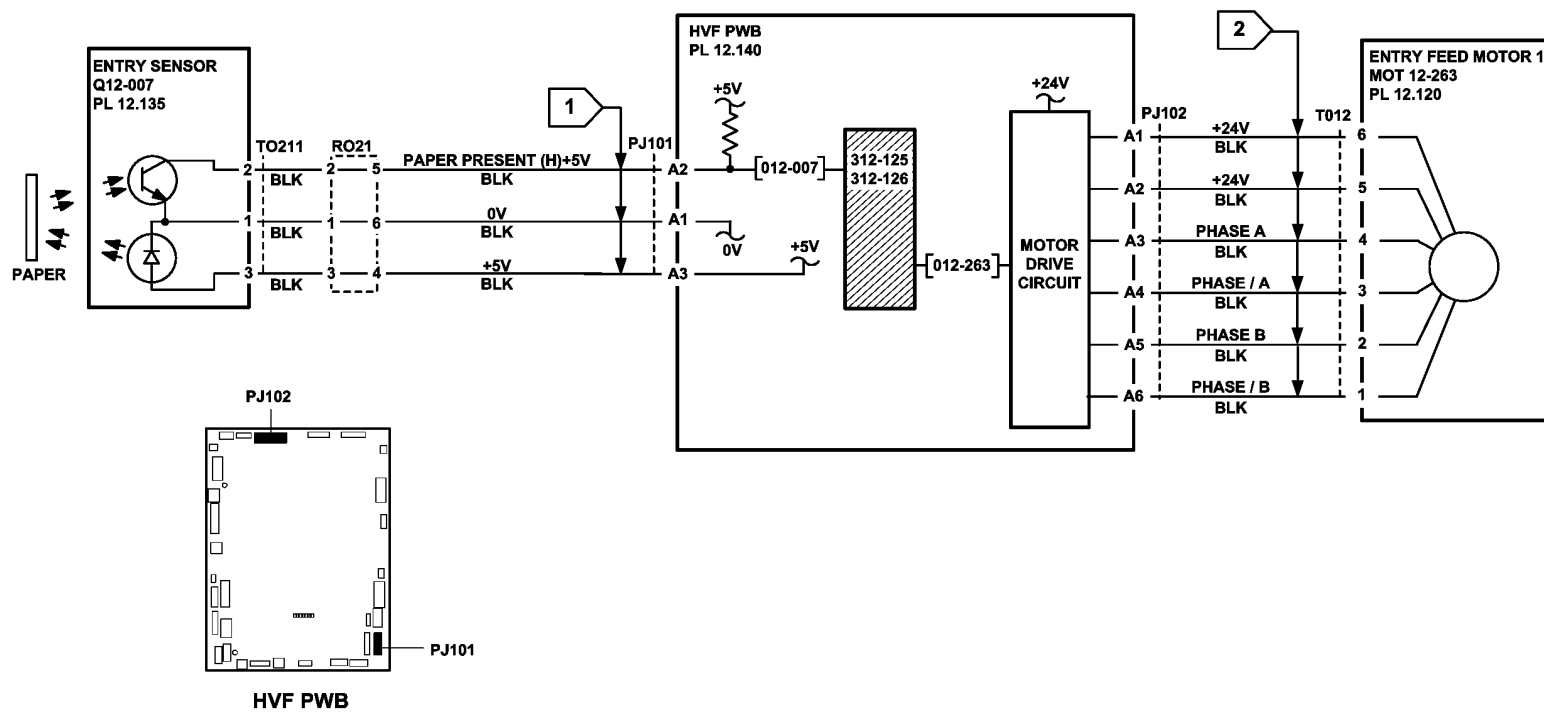


Figure 2 Circuit diagram

TX-1-0119-A

312-141-00-171, 312-142-00-171 HVF Buffer Path Sensor RAP

312-141-00-171 The paper trailing edge is late leaving the buffer path sensor.

312-142-00-171 The paper leading edge is late arriving at the buffer path sensor.

Remote Service Actions

Ask the customer to check for a jam or other obstruction in buffer path transport. If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the paper guide for damage.

Procedure

Enter **dC330**, code 012-321. Manually actuate the buffer path sensor, Q12-321, **Figure 1**. **The display changes.**

Y N

Go to **Flag 1**. Check Q12-321.

Refer to:

- **GP 11** How to Check a Sensor.
- **P/J101**. **HVF PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Buffer path sensor, **PL 12.135** Item 2.
- HVF PWB, **PL 12.140** Item 2.

Enter **dC330**, code 012-258. Energize the BM diverter solenoid SOL12-258, **Figure 2**. **The solenoid energizes.**

Y N

Go to **Flag 2**. Check SOL12-258.

Refer to:

- **GP 12** How to Check a Solenoid or Clutch.
- **P/J102**. **HVF PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- BM diverter solenoid, **PL 12.120** Item 4.
- HVF PWB, **PL 12.140** Item 2.

A

Enter **dC330**, code 012-262 to run the buffer motor, MOT12-262, **Figure 1**. **The motor runs.**

Y N

Go to **Flag 3**. Check MOT12-262.

Refer to:

- **GP 10** How to Check a Motor.
- **P/J102**. **HVF PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Buffer motor, **PL 12.120** Item 1.
- HVF PWB, **PL 12.140** Item 2.

Check the buffer feed motor belt, **PL 12.120** Item 9. **The drive belt is good.**

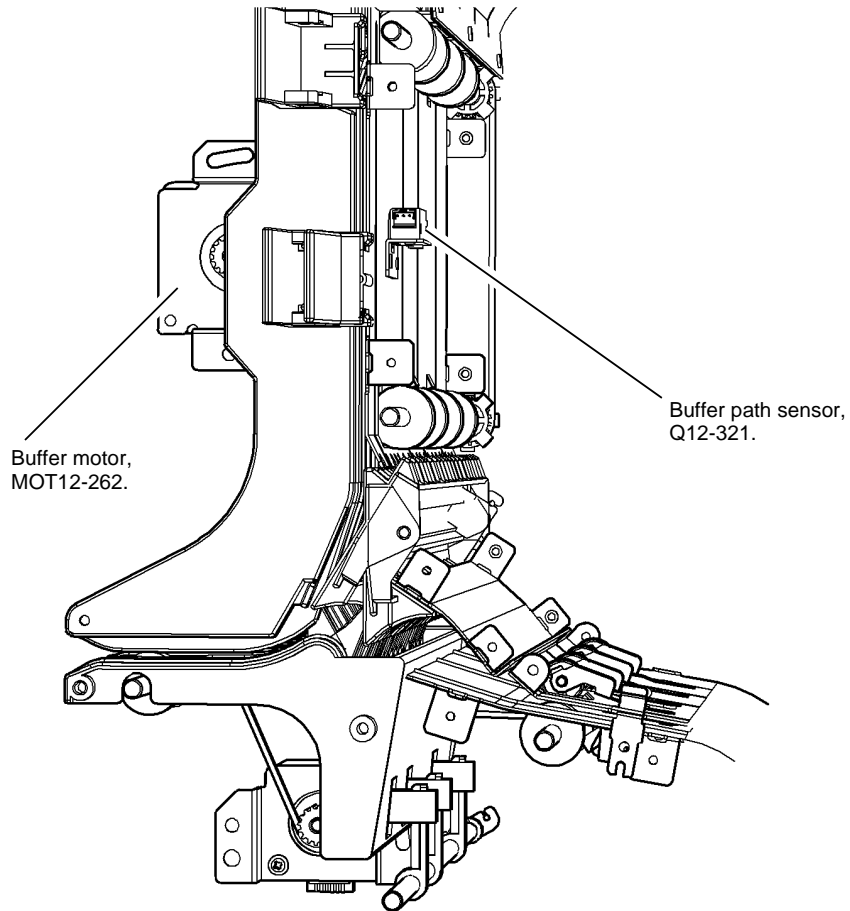
Y N

Install a new buffer feed motor belt, **PL 12.120** Item 9.

The fault may be intermittent, check for damaged wiring or bad connectors, **REP 1.1**. If necessary install new components:

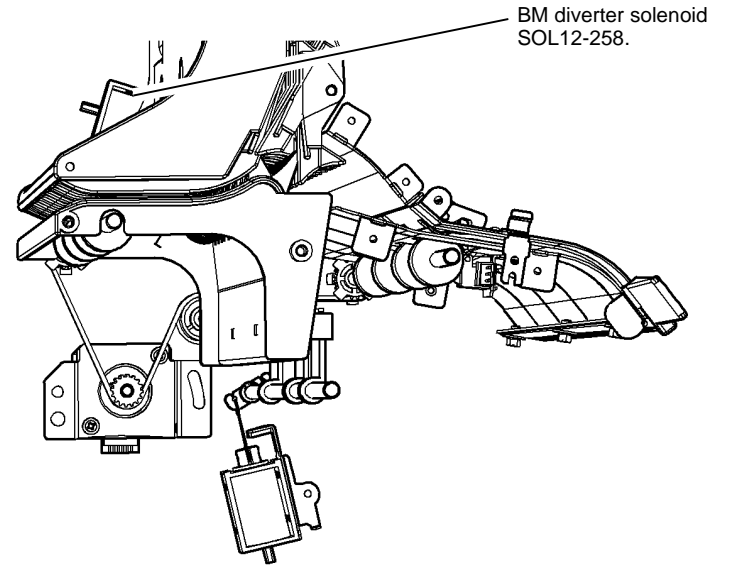
- Buffer path sensor, **PL 12.135** Item 2.
- Buffer motor, **PL 12.120** Item 1.
- HVF PWB, **PL 12.140** Item 2.

A



X-1-0829-A

Figure 1 Component location



X-1-0905-A

Figure 2 Component location

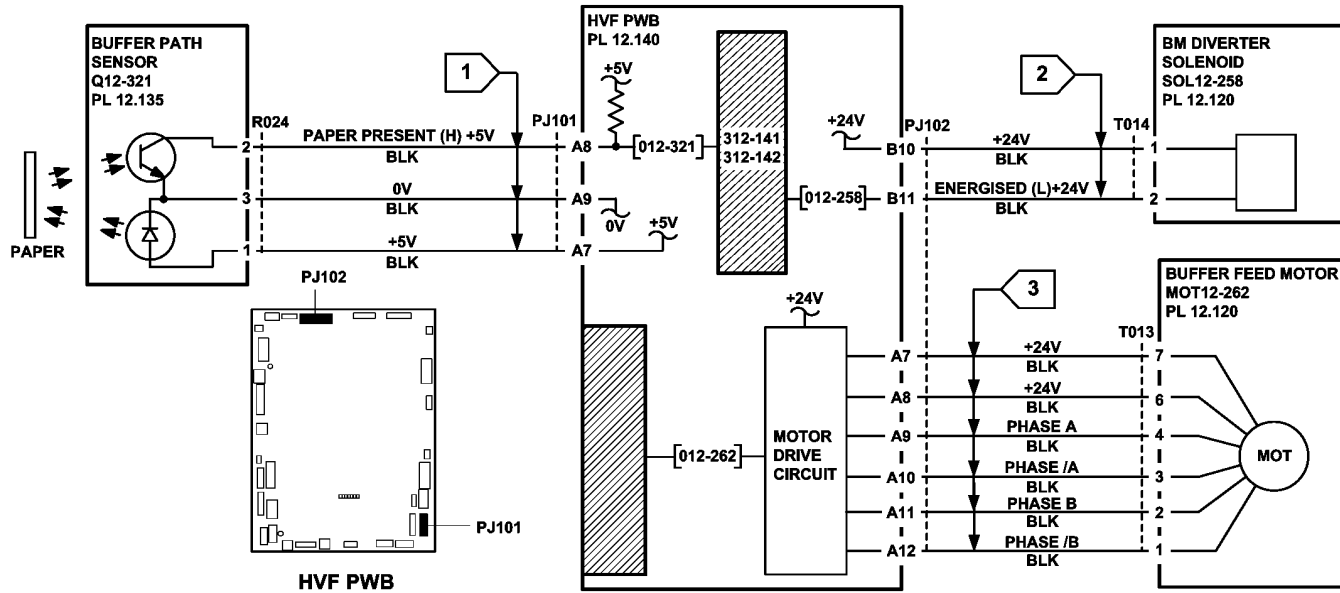


Figure 3 Circuit diagram

TX-1-0120-A

312-151-171, 312-152-171 HVF Compiler Exit Sensor RAP

312-151-00-171 The paper trailing edge is late leaving the compiler exit sensor.

312-152-00-171 The paper leading edge is late arriving at the compiler exit sensor.

Remote Service Actions

Check for a jam or other obstruction in the paper guides around the compiler exit sensor. If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the paper guides around the compiler exit sensor for damage.

Procedure

Enter **dC330**, code 012-106. Manually actuate the compiler exit sensor, Q12-106, **Figure 1**. **The display changes.**

Y N
Go to **Flag 1**. Check the sensor, Q12-106.
Refer to:

- **GP 11** How to Check a Sensor.
- **P/J101**. **HVF PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Compiler exit sensor, **PL 12.135** Item 2.
- HVF PWB, **PL 12.140** Item 2.

Enter **dC330**, code 012-225. Energize the exit diverter solenoid SOL12-225, **Figure 1**. **The solenoid energizes.**

Y N
Go to **Flag 2**. Check SOL12-225.
Refer to:

- **GP 12** How to Check a Solenoid or Clutch.
- **P/J102**. **HVF PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Exit diverter solenoid, **PL 12.120** Item 4.
- HVF PWB, **PL 12.140** Item 2.

Enter **dC330**, code 012-224 to run the transport motor 2, MOT12-224, **Figure 1**. **The motor runs.**

Y N
Go to **Flag 3**. Check the transport motor 2, MOT12-224.
Refer to:

- **GP 10** How to Check a Motor.
- **P/J102**. **HVF PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Transport motor 2, **PL 12.120** Item 1.
- HVF PWB, **PL 12.140** Item 2.

Check the transport motor 2 drive belt. **The drive belt is good.**

Y N
Install a new transport motor 2 drive belt, **PL 12.120** Item 10.

The fault may be intermittent, check for damaged wiring or bad connectors, **REP 1.1**. If necessary install new components:

- Compiler exit sensor, **PL 12.135** Item 2.
- Exit diverter solenoid, **PL 12.120** Item 4.
- Diverter gate, **PL 12.125** Item 7.
- HVF PWB, **PL 12.140** Item 2.

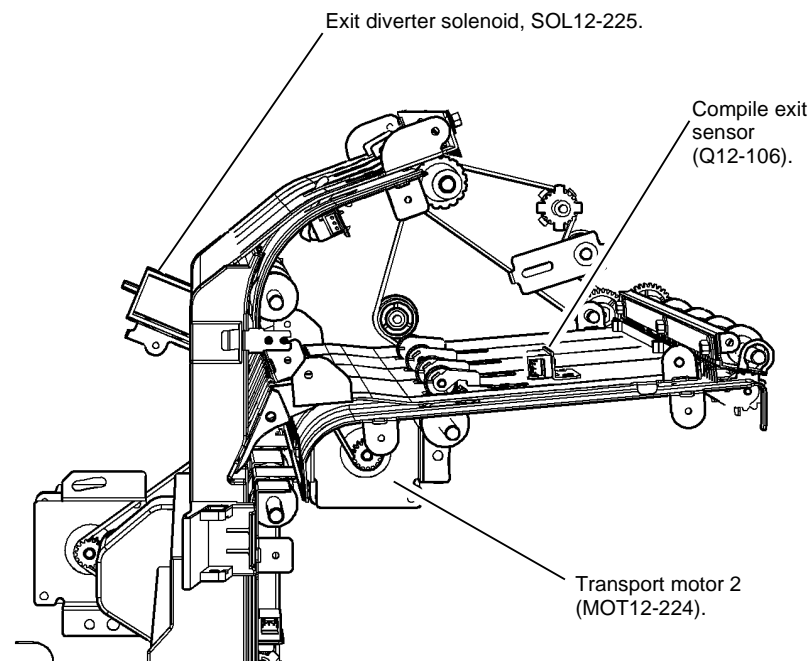


Figure 1 Component location

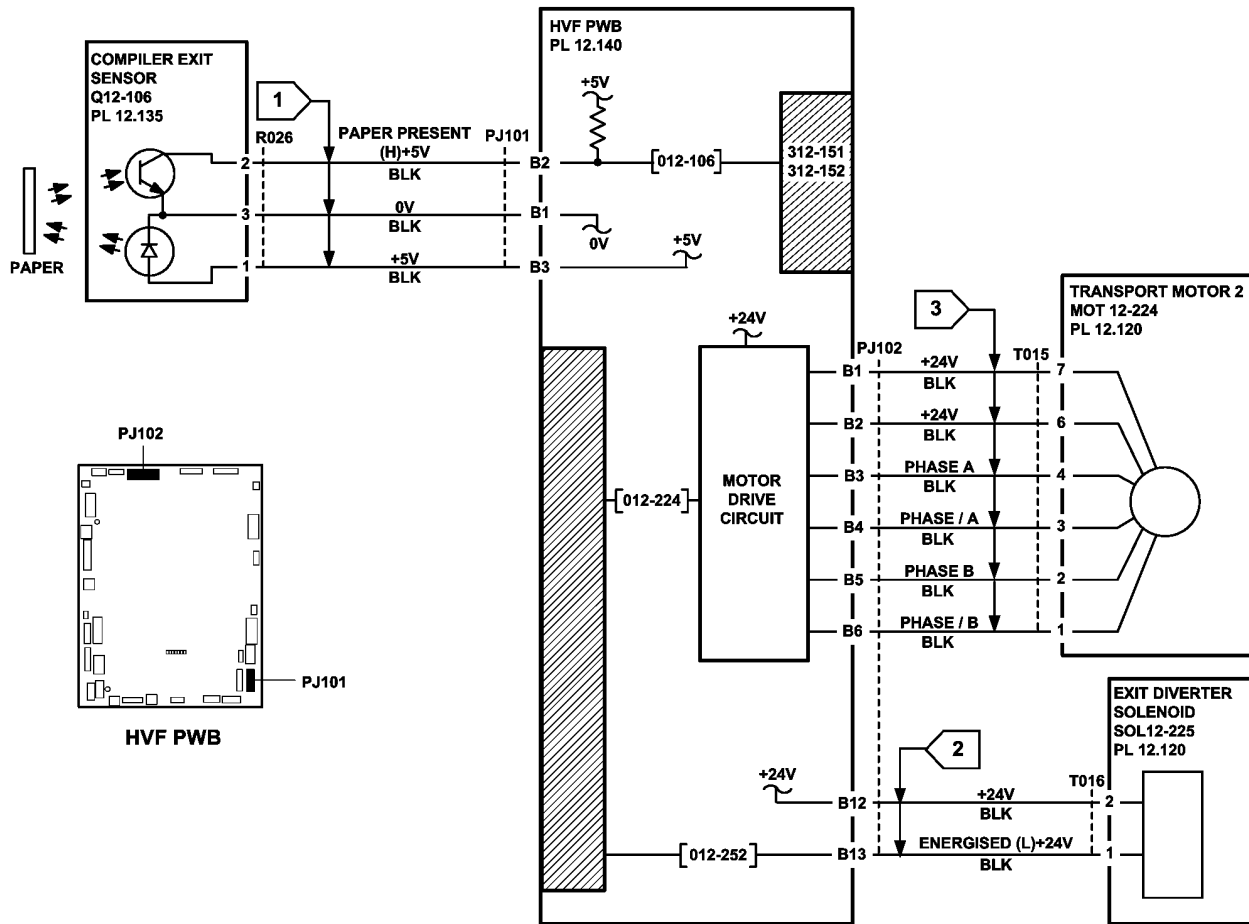


Figure 2 Circuit diagram

TX-1-0121-A

312-157-00-171, 312-158-00-171 HVF Buffer Position Sensor RAP

312-157-00-171 The paper leading edge is late arriving at the buffer position sensor.

312-158-00-171 The paper trailing edge is late leaving the buffer position sensor.

Remote Service Actions

Ask the customer to check for a jam or other obstruction around the buffer position sensor. If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the paper guides around the buffer position sensor for damage.

Procedure

Enter **dC330**, code 012-086. Manually actuate the buffer position sensor, Q12-086, **Figure 1**. **The display changes.**

Y N

Go to **Flag 1**. Check Q12-086.

Refer to:

- **GP 11** How to Check a Sensor.
- **P/J101**. **HVF PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Buffer position sensor, **PL 12.135** Item 2.
- HVF PWB, **PL 12.140** Item 2.

Enter **dC330**, code 012-223 to run the transport motor 1, MOT12-223, **Figure 1**. **The motor runs.**

Y N

Go to **Flag 2**. Check the wiring and repair as necessary, **REP 1.1**. Check MOT12-223.

Refer to:

- **GP 10** How to Check a Motor.
- **P/J102**. **HVF PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Transport motor 1, **PL 12.120** Item 2.
- HVF PWB, **PL 12.140** Item 2.

Check the transport motor 1 drive belt, **PL 12.120** Item 7. **The drive belt is good.**

Y N

Install a new transport motor 1 drive belt, **PL 12.120** Item 7.

Enter **dC330**, code 012-263 to run the bypass feed motor, MOT12-263, **Figure 2**. **The motor runs.**

Y N

Go to **Flag 3**. Check MOT12-263.

Refer to:

- **GP 10** How to Check a Motor.
- **P/J103**. **HVF PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Bypass feed motor, **PL 12.120** Item 2.
- HVF PWB, **PL 12.140** Item 2.

Check the bypass feed motor drive belt, **PL 12.120** Item 8. **The drive belt is good.**

Y N

Install a new bypass feed motor drive belt, **PL 12.120** Item 8.

The fault may be intermittent, check for damaged wiring or bad connectors, **REP 1.1**. If necessary install new components:

- Buffer position sensor, **PL 12.135** Item 2.
- Transport motor 1, **PL 12.120** Item 2.
- HVF PWB, **PL 12.140** Item 2.

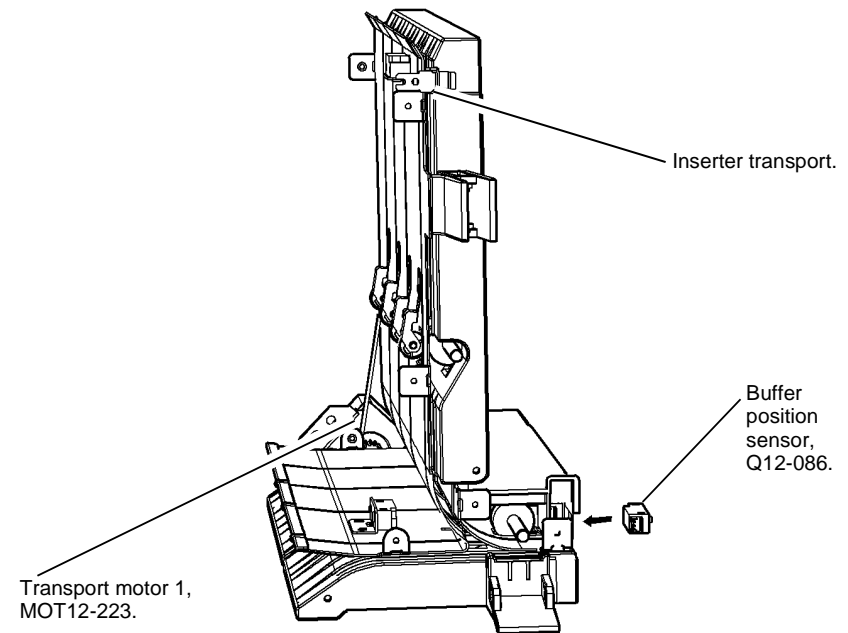
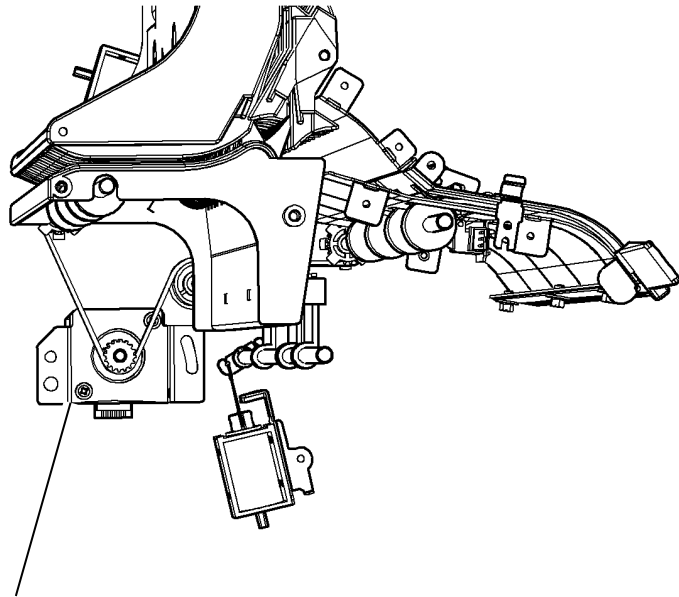


Figure 1 Component location



Bypass feed motor,
MOT12-263.

X-1-0906-A

Figure 2 Component location

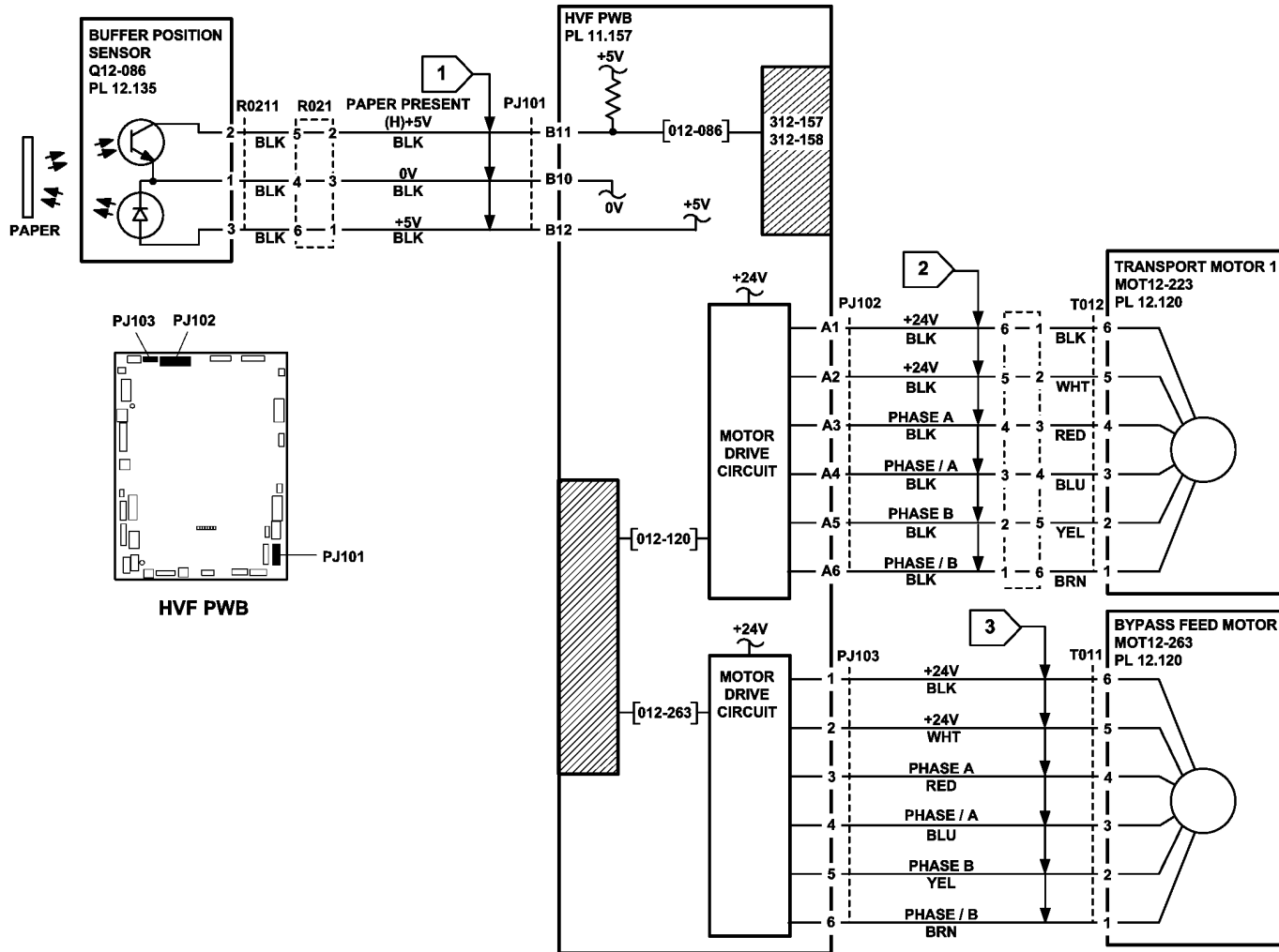


Figure 3 Circuit diagram

TX-1-0122-A

312-166-00-171 HVF BM Compiler Exit Jam RAP

312-166-00-171 The trail edge of the booklet is late leaving the BM paper present sensor.

Remote Service Actions

Ask the customer to check the items that follow:

- If found, remove any paper from the booklet maker.
- That there is no obstruction in the booklet compiling area or the paper path to the booklet compiling area.
- Check that the stapler bracket assembly, [PL 12.185 Item 10](#), is correctly latched.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the actions that follow:

- Check that there is no damage or obstruction in the booklet compiling area or the paper path to the booklet compiling area.
- Check the operation of the BM tampers, refer to the [312-066-00-171](#), [312-384-00-171](#), [312-419-00-171](#), [312-420-00-171](#) HVF BM Tamper Failure RAP. If the tampers are operating correctly, go to [ADJ 12.5-171](#) Booklet Tamping and check the tampers are correctly adjusted.

Procedure

Lower the stapler bracket assembly, [Figure 1](#). Enter [dC330](#) code 012-170 BM paper present sensor, Q12-170. Actuate Q12-170. **The display changes.**

Y N

Go to [Flag 1](#). Check Q12-170.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J556. BM PWB.](#)
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM paper present sensor, [PL 12.185 Item 5](#).
- BM PWB, [PL 12.175 Item 10](#).

Enter [dC330](#) code 012-251 BM compiler motor, MOT12-251, [Figure 1](#). **MOT12-251 runs.**

Y N

Go to [Flag 2](#). Check MOT12-251.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J554. BM PWB.](#)
- [312A-171](#) HVF Power Distribution RAP.

A

- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM compiler motor, [PL 12.175 Item 1](#).
- BM PWB, [PL 12.175 Item 10](#).

Unlatch the entrance baffle assembly, [PL 12.150 Item 22](#). Run again MOT12-251. **The BM entry roll rotates.**

Y N

Check the following components:

- BM compiler motor belt, [PL 12.175 Item 15](#).
- BM entry roll pulley, [PL 12.150 Item 14](#).
- BM entry roll, [PL 12.150 Item 15](#).

Install new components as necessary.

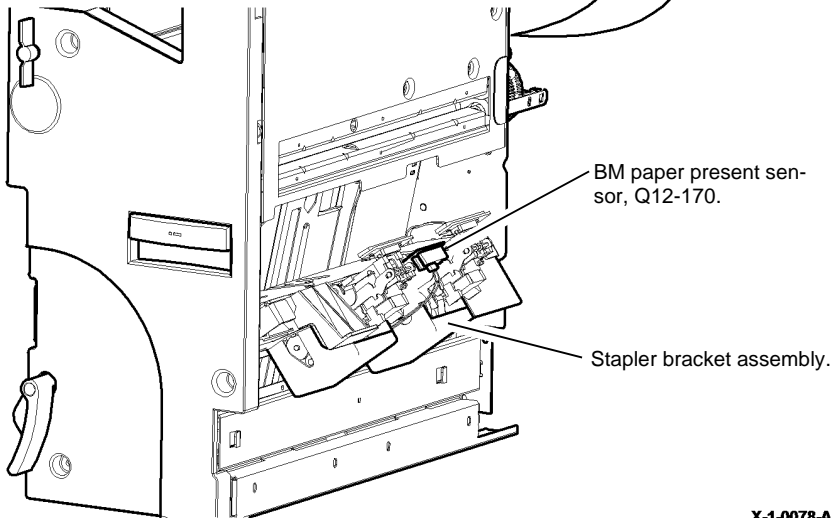
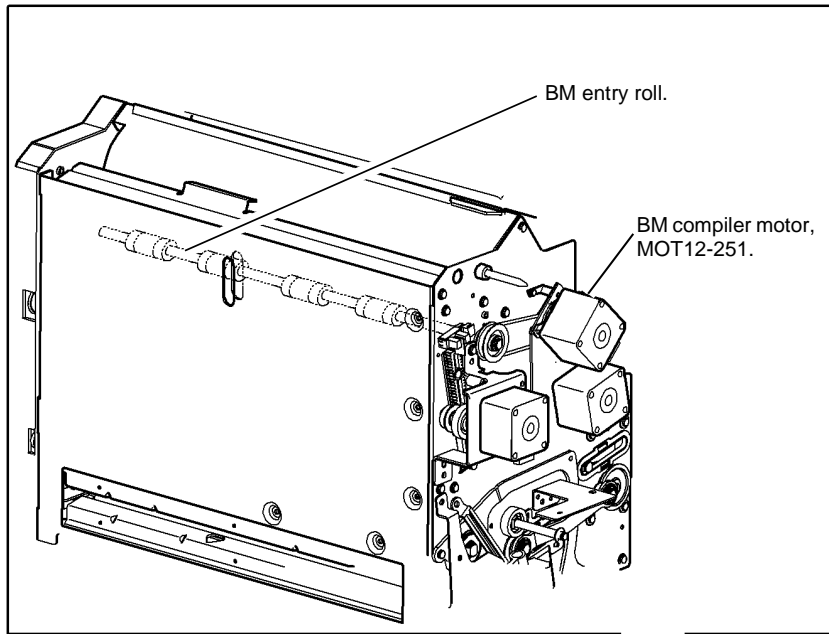
Make a 60 page booklet (15 sheets of paper). Check that the top sheet of paper has not been torn from the booklet. **The booklet is good.**

Y N

Check that the components in the lower crease roll gear and clutch assembly are correctly installed. Refer to the replacement procedure in [REP 12.52-171](#) BM Crease Rolls, Gears and Bearings.

Perform [SCP 5](#) Final Actions.

A



X-1-0078-A

Figure 1 Component location

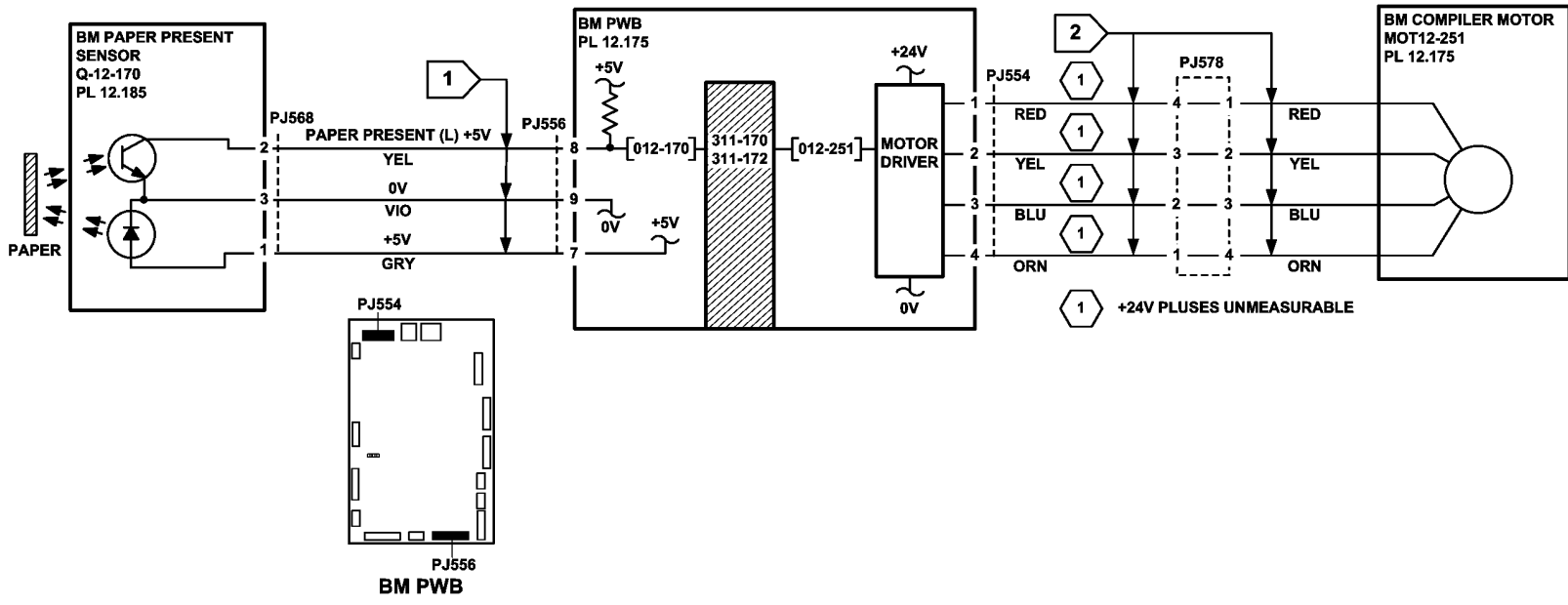


Figure 2 Circuit diagram

TX-1-0123-A

312-171-00-171, 312-172-00-171 HVF Top Tray Exit Sensor Fault RAP

312-171-00-171 The paper leading edge is late arriving at the top tray exit sensor.

312-172-00-171 The paper trailing edge is late leaving the top tray exit sensor.

Remote Service Actions

Ask the customer to check for a jam or other obstruction in the paper guide around the top tray exit sensor. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the paper guide for damage around the top tray exit sensor.

Procedure

Enter [dC330](#), code 012-107. Manually actuate the top tray exit sensor, Q12-107, [Figure 1](#). The display changes.

Y N

Go to [Flag 1](#). Check Q12-107.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J101](#). HVF PWB.
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Top tray exit sensor, [PL 12.135 Item 3](#).
- HVF PWB, [PL 12.140 Item 2](#).

Enter [dC330](#), code 012-225. Energize the exit diverter solenoid SOL12-225, [PL 12.120 Item 4](#). The solenoid energizes.

Y N

Go to [Flag 2](#). Check SOL12-225.

Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [P/J102](#). HVF PWB.
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Exit diverter solenoid, [PL 12.120 Item 4](#).
- HVF PWB, [PL 12.140 Item 2](#).

Enter [dC330](#), code 012-224 to run the transport motor 2, MOT12-224, [PL 12.120 Item 1](#). The motor runs.

Y N

Go to [Flag 3](#). Check MOT12-224

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J102](#). HVF PWB.
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Transport motor 2, [PL 12.120 Item 1](#).
- HVF PWB, [PL 12.140 Item 2](#).

Check the transport motor 2 drive belts (A) & (B).. The drive belts are good.

Y N

Install a new transport motor 2 drive belt (A) [PL 12.120 Item 10](#) and/or transport motor drive belt (B), [PL 12.120 Item 11](#).

The fault may be intermittent, check for damaged wiring or bad connectors, [REP 1.1](#). If necessary install new components:

- Top exit sensor, [PL 12.135 Item 3](#).
- Exit diverter solenoid, [PL 12.120 Item 4](#).
- Diverter exit gate, [PL 12.125 Item 7](#).
- Transport motor 2, [PL 12.120 Item 1](#).
- HVF PWB, [PL 12.140 Item 2](#).

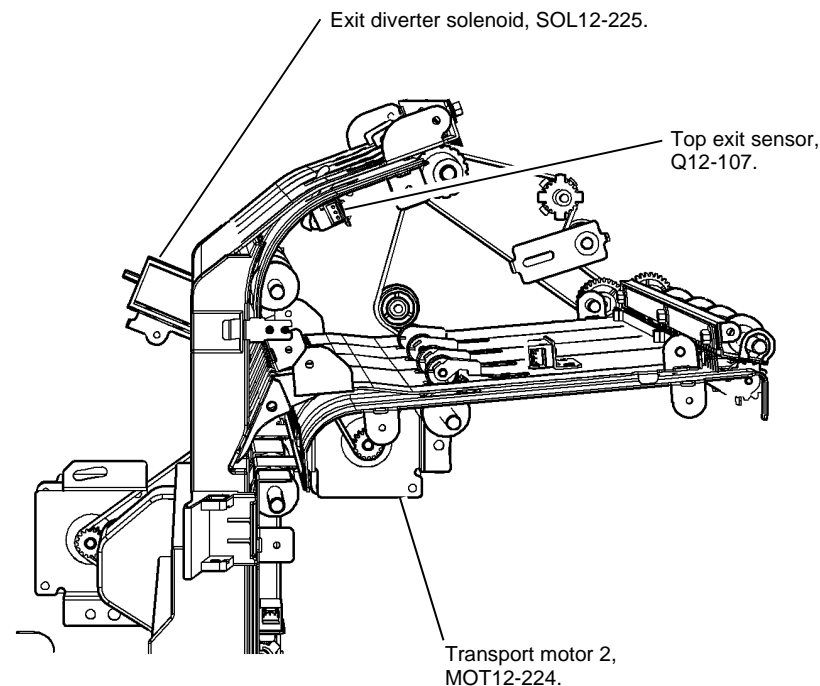


Figure 1 Component location

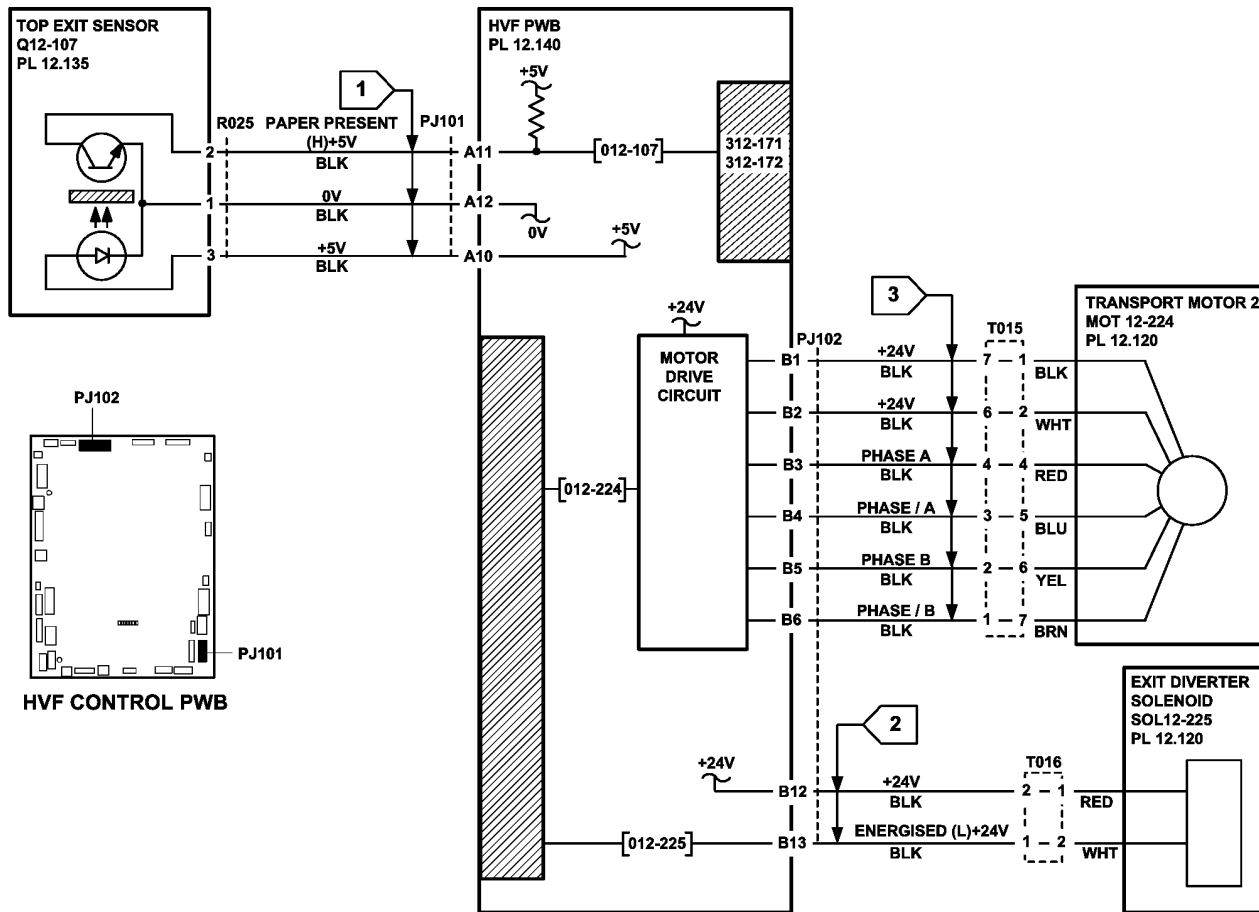


Figure 2 Circuit diagram

TX-1-0124-A

312-181-00-171, 312-182-00-171 HVF BM Exit Jam RAP

312-181-00-171 The lead edge is late arriving at the BM exit sensor.

312-182-00-171 The trail edge is late leaving the BM exit sensor.

Remote Service Actions

Ask the customer to check the items that follow:

- Turn the crease blade knob (6d) to ensure that the crease blade mechanism is free to move. If necessary, clear any paper jam in the exit area.
- For 12-182-00 faults. Remove and re-seat the BM staple cartridges. Check for misformed staples which may cause the booklets to snag and skew.

If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Keep away from the crease blade mechanism when working in close proximity to the booklet maker while the machine is powered on. The crease blade mechanism activates quickly and with great force.

Enter [dC330](#) code 012-215. Actuate the BM crease blade motor encoder sensor, Q12-215, [Figure 1](#) by rotating the crease blade knob (6d). **The display changes.**

Y N
Go to [Flag 1](#). Check Q12-215.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J552](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM PWB, [PL 12.175](#) [Item 10](#).
- BM crease blade motor encoder sensor, [PL 12.170](#) [Item 1](#).

Release the crease roll nip pressure by moving the crease roll handle fully counter clockwise. Remove the BM right hand cover, [PL 12.185](#) [Item 15](#) to access the crease rolls. Enter [dC330](#) code 012-216. Actuate the BM crease roll motor encoder sensor, [Figure 1](#), by rotating the crease rolls slowly by hand. **The display changes.**

Y N
Go to [Flag 2](#). Check Q12-216.
Refer to:

- [GP 11](#) How to Check a Sensor.

- A**
- [P/J552](#). [BM PWB](#).
 - [312A-171](#) HVF Power Distribution RAP.
 - [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM PWB, [PL 12.175](#) [Item 10](#).
- BM crease roll motor encoder sensor, [PL 12.175](#) [Item 9](#).

Enter [dC330](#) code 012-213. Actuate the BM exit sensor, Q12-213, [Figure 2](#). **The display changes.**

Y N
Go to [Flag 3](#). Check Q12-213.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J556](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM PWB, [PL 12.175](#) [Item 10](#).
- BM exit sensor, [PL 12.185](#) [Item 17](#).

Enter [dC330](#), code 012-253 to run the BM crease roll motor, MOT12-253, [Figure 1](#). **The motor runs.**

Y N
Go to [Flag 4](#). Check MOT12-253.
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J557](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM crease roll motor, [PL 12.175](#) [Item 12](#).
- BM PWB, [PL 12.175](#) [Item 10](#).

Enter [dC330](#), code 012-253 to run the BM crease roll motor, MOT12-253. **The motor drives the gears.**

Y N
Install new components as necessary:

- Crease roll drive train gears, [PL 12.180](#).

Enter [dC330](#), code 012-252 to run the BM crease blade motor, MOT12-252, [Figure 1](#). **The motor runs.**

Y N
Go to [Flag 5](#). Check MOT12-252.
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J557](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.

B

- 301A 0V Distribution RAP.
- Install new components as necessary:
- BM crease blade motor assembly, [PL 12.170 Item 3](#).
 - BM PWB, [PL 12.175 Item 10](#)

NOTE: The BM crease roll gate motor has two component control codes:
12-273 cycles the crease roll gate.
12-276 opens the crease roll gate.

Enter [dC330](#), code 012-273 to cycle the BM crease roll gate motor, MOT12-273, [Figure 1](#).

The motor runs.

Y N
Go to [Flag 6](#) and [Flag 7](#) Check MOT12-273.
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J555](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM crease roll gate motor, [PL 12.175 Item 8](#).
- BM PWB, [PL 12.175 Item 10](#).

The BM module has a tri-folder module installed.

Y N
The fault may be intermittent, check for damaged wiring or bad connectors, [REP 1.1](#). If necessary install a new BM PWB, [PL 12.175 Item 10](#).

Check the drive coupler, [PL 12.205 Item 17](#) is engaged with the BM crease roll motor encoder disc, [PL 12.175 Item 13](#). **The coupler and encoder are correctly engaged.**

Y N
Align the drive coupler, refer to [REP 12.68-171](#) Tri-folder Drive Install Kit.

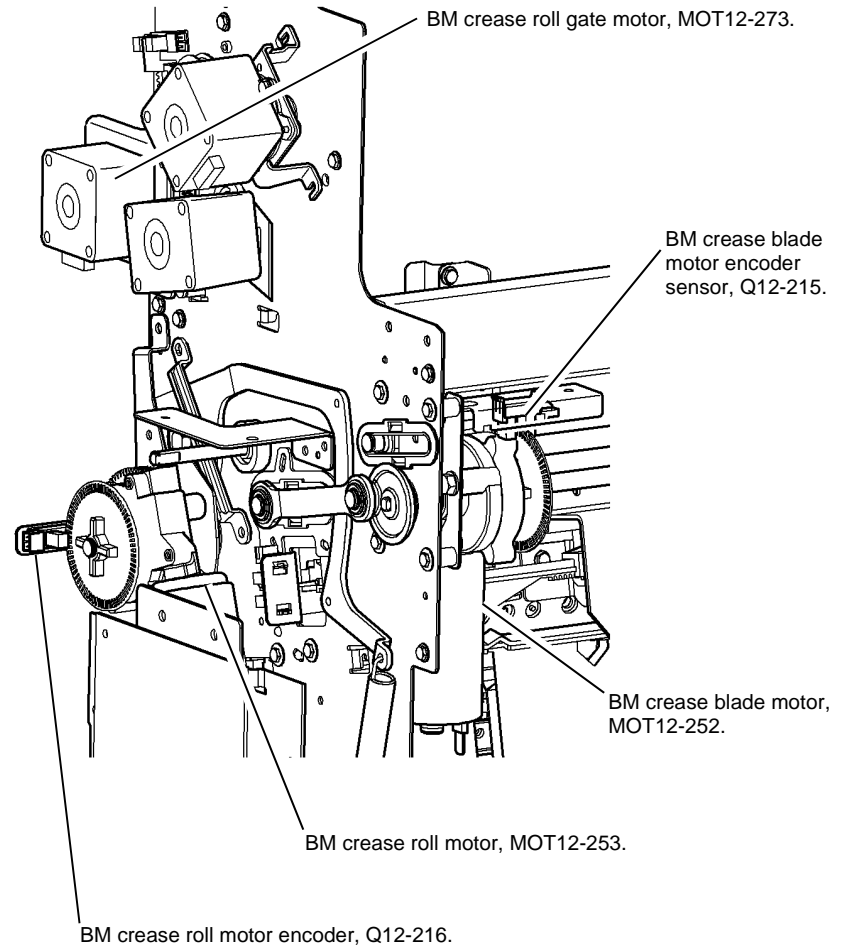
Check the drive assembly for wear, damage, contamination and misalignment, [PL 12.205 Item 12](#). **The condition of the drive assembly is good.**

Y N
Install a new drive assembly, [PL 12.205 Item 12](#).

Check the condition of the drive belt, [PL 12.205 Item 11](#). **The drive belt is good.**

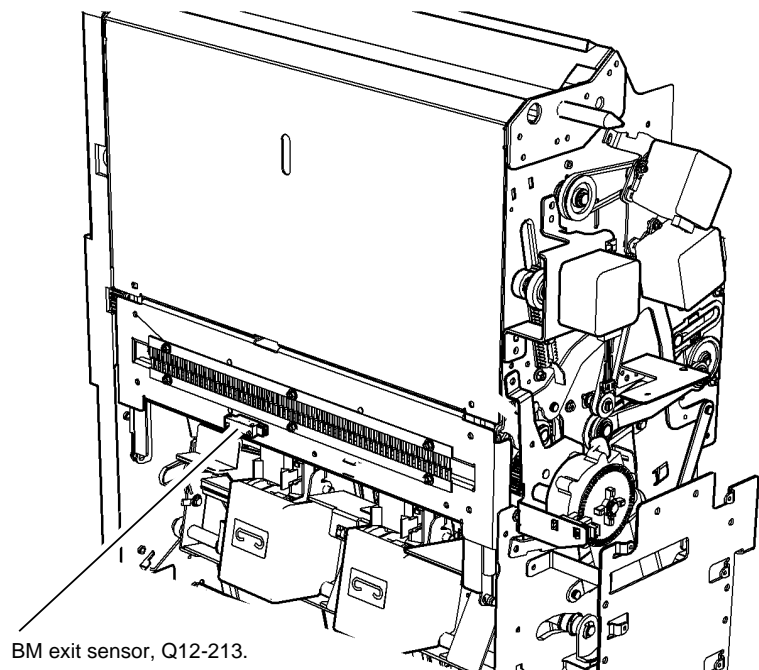
Y N
Install a new tri-folder install kit, [PL 12.205 Item 14](#).

The fault may be intermittent, check for damaged wiring or bad connectors, [REP 1.1](#). If necessary install a new BM PWB, [PL 12.175 Item 10](#).



X-1-0079-A

Figure 1 Component location



X-1-0080-A

Figure 2 Component location

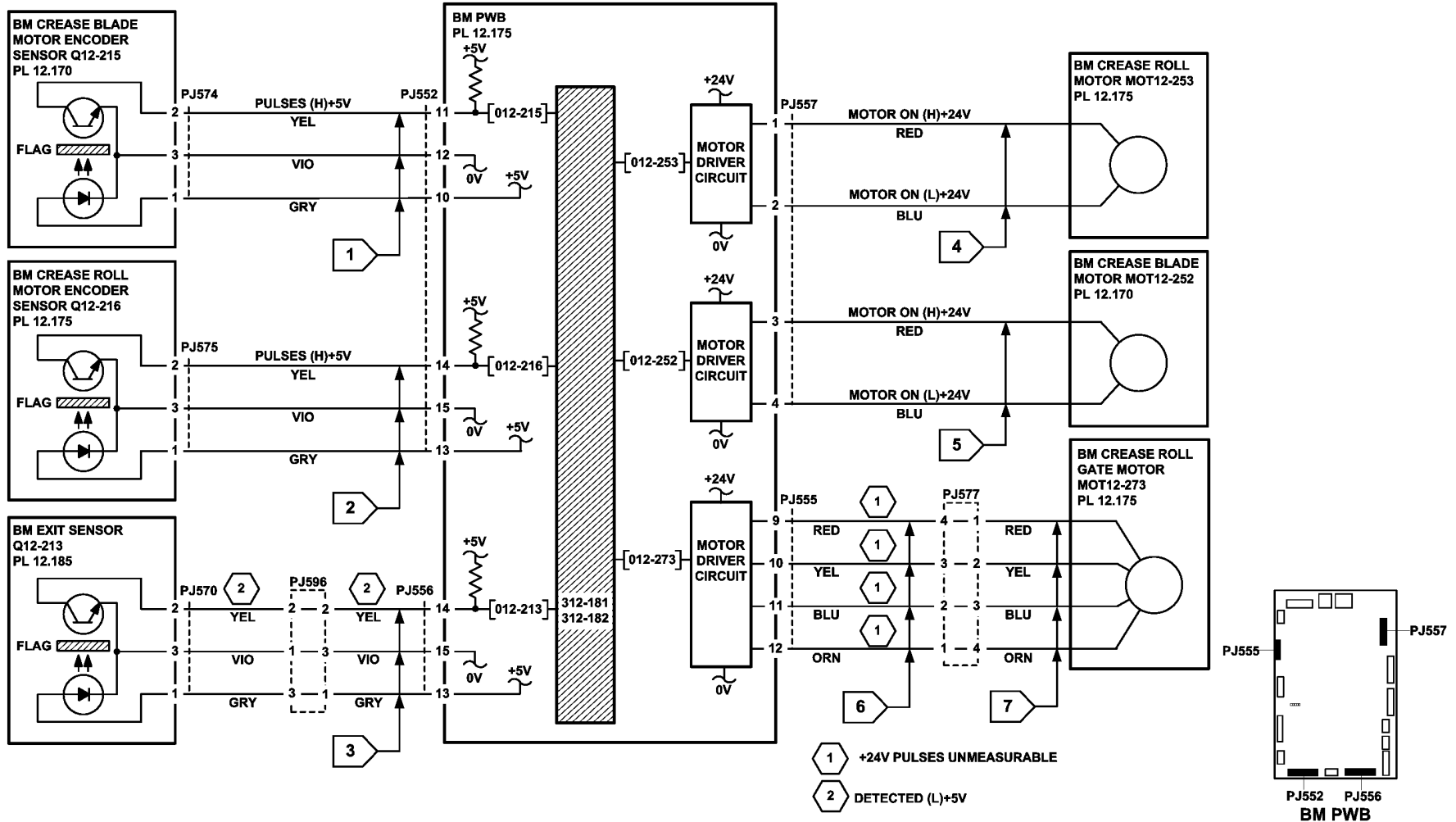


Figure 3 Circuit diagram

312-183-00-171, 312-184-00-171 HVF BM Paper Jam RAP

312-183-00-171 The BM PWB has detected an unexpected sheet in the booklet maker paper path.

312-184-00-171 The BM PWB has detected a stray sheet in the booklet maker paper path after jam clearance.

Remote Service Actions

Ask the customer to check for a jam or other obstruction in the booklet maker paper path. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the booklet maker paper path for damage.

Procedure

Enter **dC330** code 012-170. Manually actuate the BM paper present sensor, Q12-170, [Figure 1](#).

1. The display changes.

Y N

Go to [Flag 1](#). Check Q12-170.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J556](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM PWB, [PL 12.175](#) [Item 10](#).
- BM paper present sensor, [PL 12.185](#) [Item 5](#).

Enter **dC330** code 012-213. Manually actuate the BM exit sensor, [Figure 2](#). The display changes.

Y N

Go to [Flag 2](#). Check Q12-213.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J556](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM PWB, [PL 12.175](#) [Item 10](#).
- BM exit sensor, [PL 12.185](#) [Item 17](#).

A

Enter **dC330** code 012-089. Manually actuate the BM entry sensor, Q12-089, [Figure 1](#). The display changes.

Y N

Go to [Flag 3](#). Check Q12-089.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J551](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM PWB, [PL 12.175](#) [Item 10](#).
- BM entry sensor, [PL 12.150](#) [Item 16](#).

The HVF has a tri-folder.

Y N

The fault may be intermittent, check the wiring, [REP 1.1](#). If necessary install a new BM PWB, [PL 12.175](#) [Item 10](#).

Enter **dC330** code 012-164. Manually actuate the tri-folder entry sensor, Q12-164, [Figure 3](#).

The display changes.

Y N

Go to [Flag 4](#) and [Flag 5](#). Check Q12-164. Check the wiring between PJ602 pin 10 on the tri-folder control PWB and PJ563 pin 1 on the BM PWB.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J604](#), [P/J602](#), [P/J563](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Tri-folder entry sensor, [PL 12.215](#) [Item 11](#).
- Tri-folder control PWB, [PL 12.205](#) [Item 16](#).
- BM PWB, [PL 12.175](#) [Item 10](#).

The fault may be intermittent, check the wiring, [REP 1.1](#). If necessary install a new BM PWB, [PL 12.175](#) [Item 10](#).

A

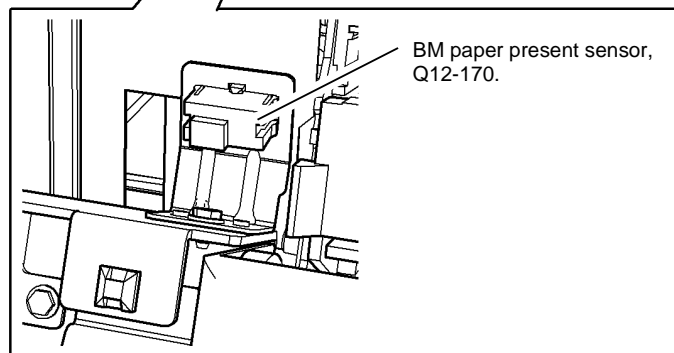
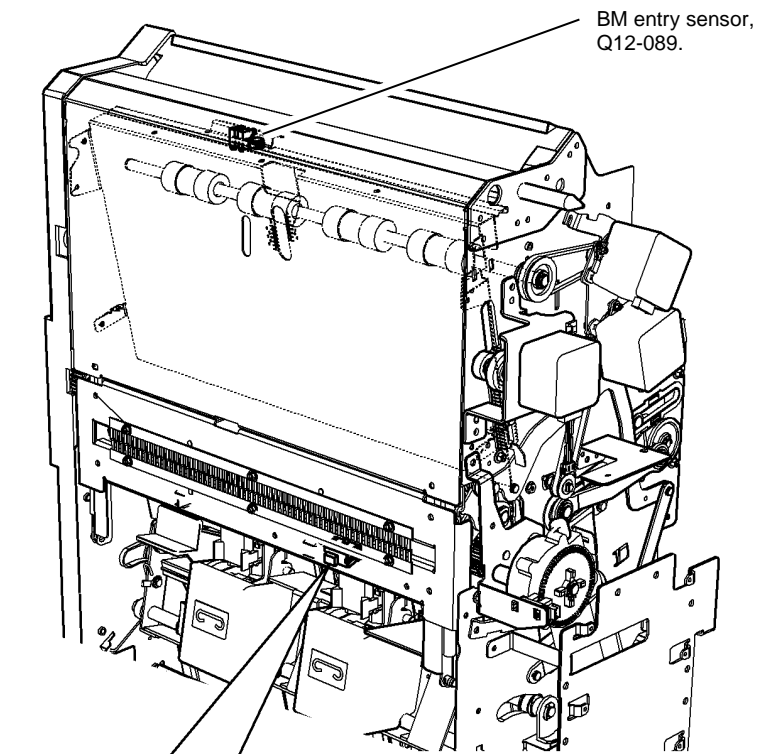
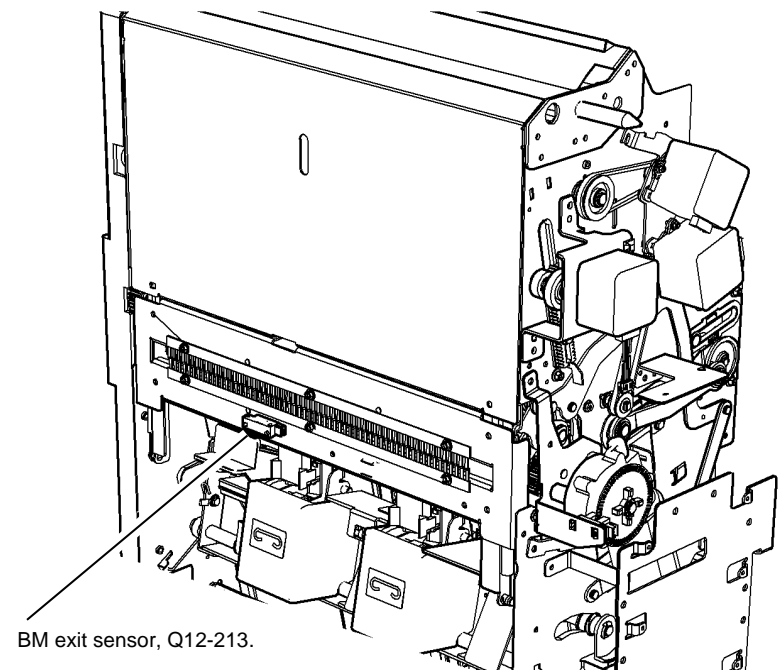


Figure 1 Component location

X-1-0081-A



X-1-0082-A

Figure 2 Component location

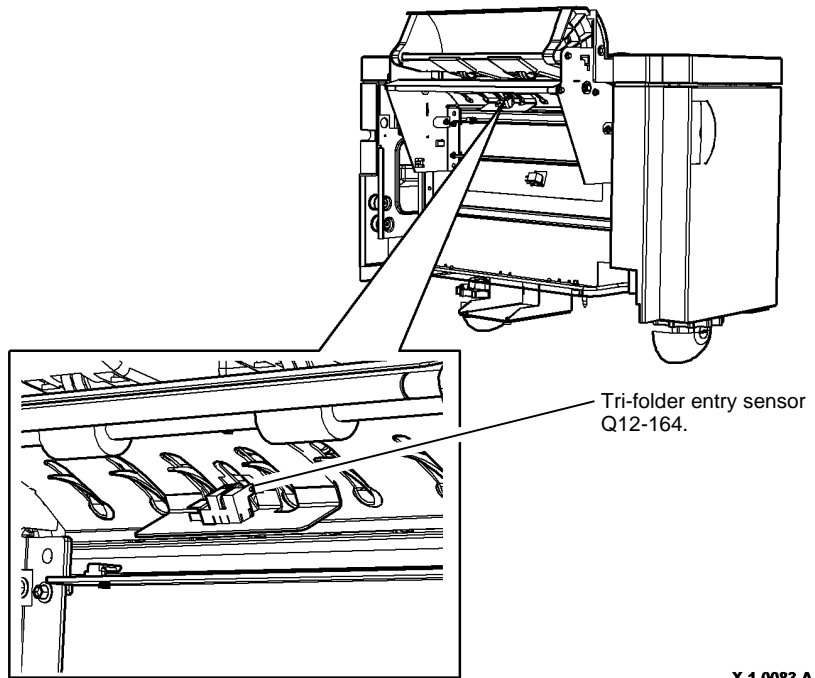


Figure 3 Component location

X-1-0083-A

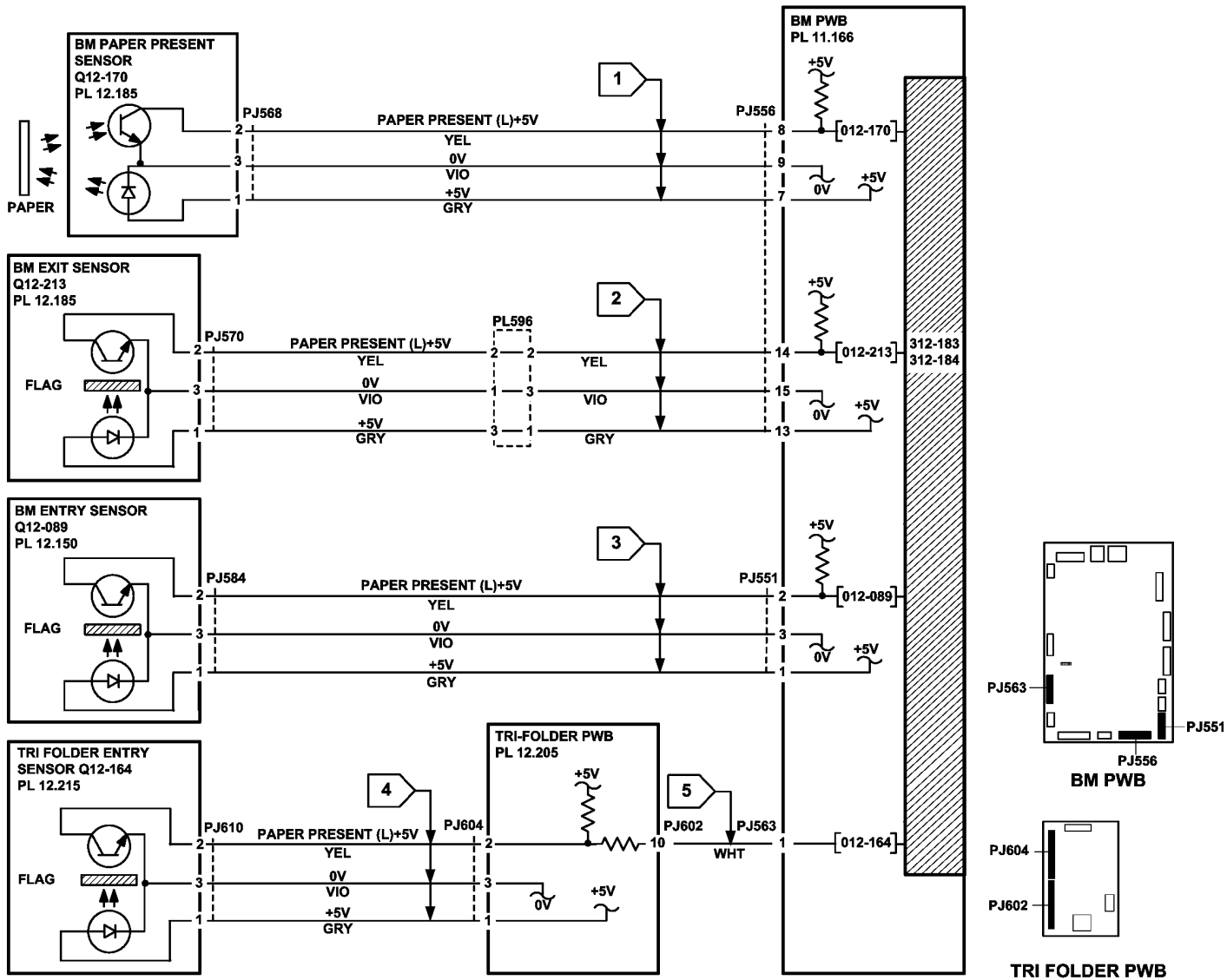


Figure 4 Circuit diagram

TX-1-0126-A

312-185-00-171 to 312-187-00-171 Tri-Folder Exit Sensor and Assist Sensor RAP

312-185-00-171 The lead edge is late arriving at the tri-folder exit sensor.

312-186-00-171 The trail edge is late leaving the tri-folder exit sensor.

312-187-00-171 The lead edge is late arriving at the tri-folder assist gate sensor.

Remote Service Actions

Ask the customer to check for a jam or other obstruction in the tri-folder paper path. If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the tri-folder for damage in the paper path.

Procedure

Enter **dC330** code 012-165. Manually actuate the assist gate sensor, Q12-165, **Figure 1**. **The display changes.**

- Y N**
- Go to **Flag 1** and **Flag 2**. Check Q12-165.
Refer to:
- **GP 11** How to Check a Sensor.
 - **P/J604**. **Tri-folder PWB**.
 - **312A-171** HVF Power Distribution RAP.
 - **301A** 0V Distribution RAP.
- Install new components as necessary:
- Assist gate sensor, **PL 12.215 Item 6**.
 - Tri-folder PWB, **PL 12.205 Item 16**.
 - BM PWB, **PL 12.175 Item 10**.

Enter **dC330** code 012-166. Manually actuate the tri folder exit sensor, Q12-166, **Figure 2**. **The display changes.**

- Y N**
- Go to **Flag 3** and **Flag 4**. Check Q12-166.
Refer to:
- **GP 11** How to Check a Sensor.
 - **P/J604**. **Tri-folder PWB**.
 - **312A-171** HVF Power Distribution RAP.
 - **301A** 0V Distribution RAP.

Install new components as necessary:

- Tri folder exit sensor, **PL 12.215 Item 12**.
- Tri-folder PWB, **PL 12.205 Item 16**.
- BM PWB, **PL 12.175 Item 10**.

Enter **dC330** code 012-267 to energize the tri folder diverter solenoid, SOL12-267, **Figure 1**. **The solenoid energizes.**

- Y N**
- Go to **Flag 5** and **Flag 6**. Check SOL12-267.
Refer to:
- **GP 12** How to Check a Solenoid or Clutch.
 - **P/J563**, **P/J602**, **P/J603**. **Tri-folder PWB**, **BM PWB**.
 - **312A-171** HVF Power Distribution RAP.
 - **301A** 0V Distribution RAP.

Install new components as necessary:

- Tri folder diverter solenoid, **PL 12.215 Item 16**.
- Tri-folder PWB, **PL 12.205 Item 16**.
- BM PWB, **PL 12.175 Item 10**.

Enter **dC330** code 012-268 to energize the assist gate solenoid, SOL12-268, **Figure 1**. **The solenoid energizes.**

- Y N**
- Go to **Flag 7** and **Flag 8**. Check SOL12-268.
Refer to:
- **GP 12** How to Check a Solenoid or Clutch.
 - **P/J563**, **P/J602**, **P/J603**. **Tri-folder PWB**, **BM PWB**.
 - **312A-171** HVF Power Distribution RAP.
 - **301A** 0V Distribution RAP.

Install new components as necessary:

- Assist gate solenoid, **PL 12.215 Item 8**.
- Tri-folder PWB, **PL 12.205 Item 16**.
- BM PWB, **PL 12.175 Item 10**.

Enter **dC330** code 012-269 to energize the drive clutch, CL12-269, **Figure 1**. **The clutch energizes.**

- Y N**
- Go to **Flag 9** and **Flag 10**. Check CL12-269.
Refer to:
- **GP 12** How to Check a Solenoid or Clutch.
 - **P/J563**, **P/J602**, **P/J603**. **Tri-folder PWB**, **BM PWB**.
 - **312A-171** HVF Power Distribution RAP.
 - **301A** 0V Distribution RAP.

Install new components as necessary:

- Drive clutch, **PL 12.205 Item 9**.
- Tri-folder PWB, **PL 12.205 Item 16**.
- BM PWB, **PL 12.175 Item 10**.

B

Enter **dC330**, code 012-273 to run the BM crease roll motor, MOT12-253, **Figure 3**. The motor runs.

Y N

Go to **Flag 11**. Check MOT12-253.

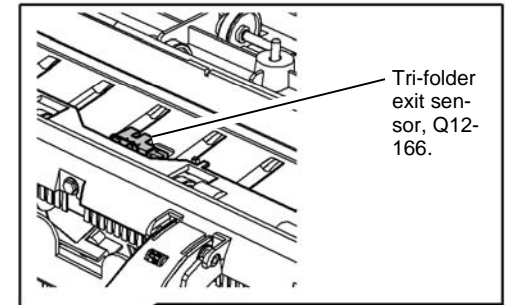
Refer to:

- **GP 10** How to Check a Motor.
- **P/J557, BM PWB**.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

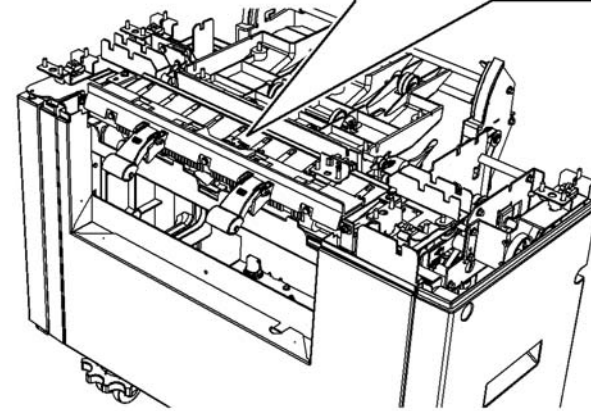
Install new components as necessary:

- BM crease roll motor, **PL 12.175 Item 12**.
- BM PWB, **PL 12.175 Item 10**.

Perform **SCP 5** Final Actions.

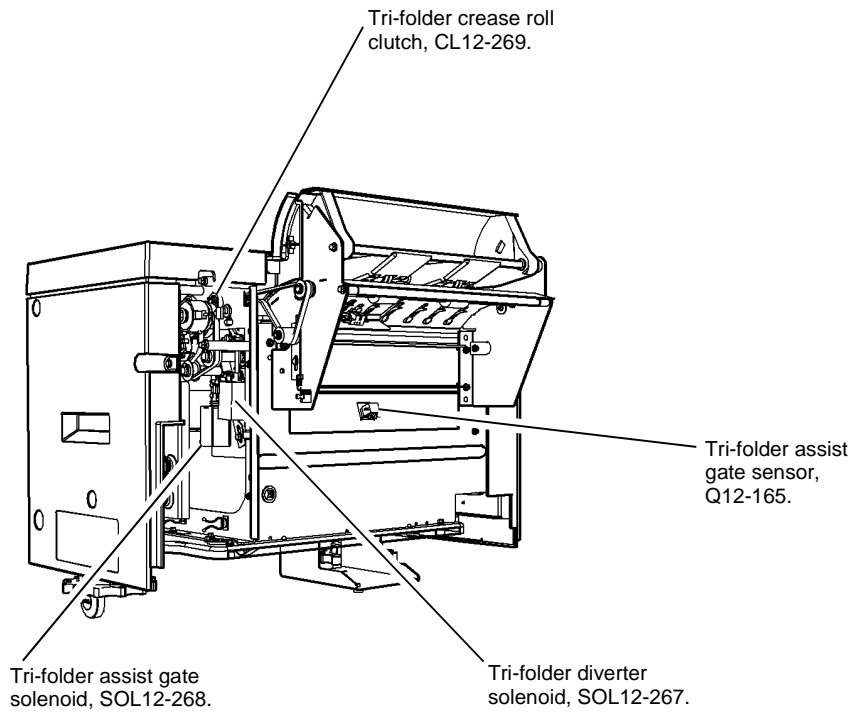


Tri-folder exit sensor, Q12-166.



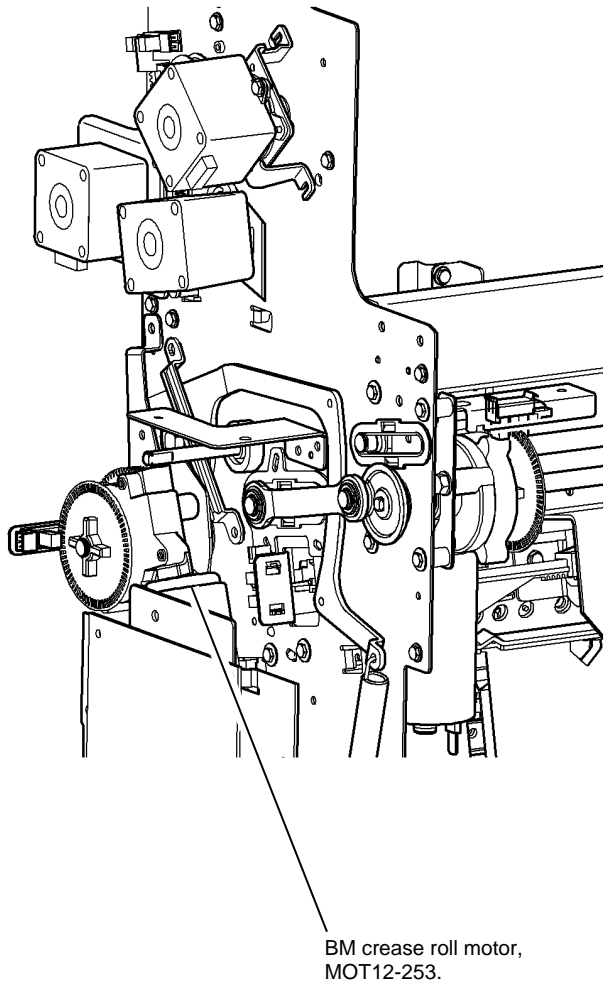
X-1-0085-A

Figure 2 Component location



X-1-0084-A

Figure 1 Component location



BM crease roll motor,
MOT12-253.

Figure 3 Component location

X-1-0086-A

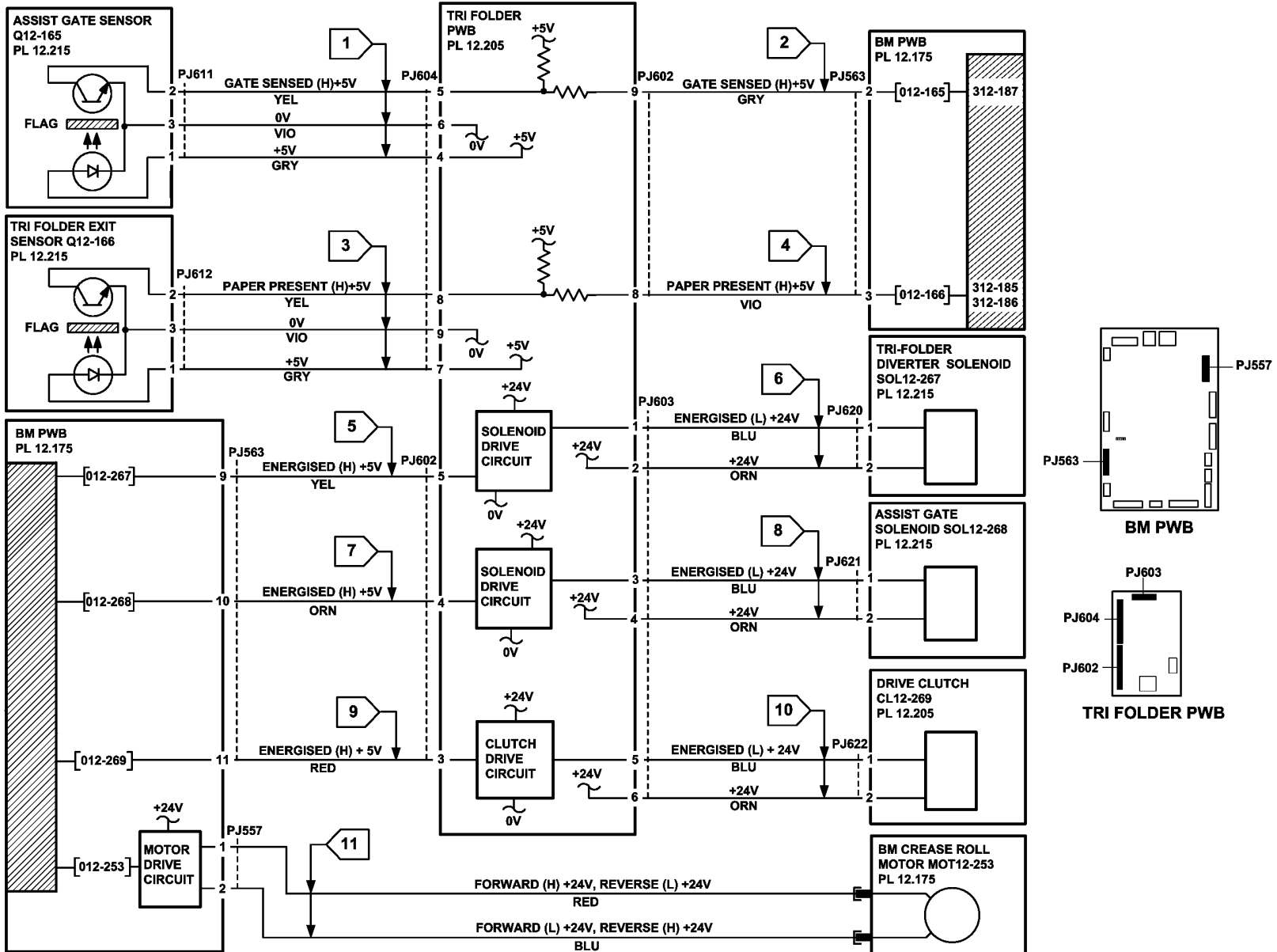


Figure 4 Circuit diagram

TX-1-0127-A

312-191-00-171, 312-193-00-171, 312-194-00-171, 312-196-00-171 Inserter Paper Jam RAP

312-191-00-171 The leading edge is late arriving at the inserter standby sensor.

312-193-00-171 The trailing edge is late leaving the inserter standby sensor.

312-194-00-171 The leading edge is late arriving at the inserter pickup sensor.

312-196-00-171 The trailing edge is late leaving the inserter pickup sensor.

Fault code 12-191-00 may also be generated where a fault in the inserter causes jamming in the IME.

Remote Service Actions

Ask the customer to check for a jam or other obstruction in the inserter. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the actions that follow:

- Check the inserter for damage.
- Check the condition of the inserter feed rolls. Use a cloth dampened with water to clean the rolls. If necessary, install a new inserter pickup assembly, [PL 12.310 Item 1](#).
- Go to [dC135 CRU/HFSI Status](#). Check the count of the inserter feed roller set. If the count is near end of life, install a new inserter pickup assembly, [PL 12.310 Item 1](#).

Procedure

Enter [dC330](#) code 012-315. Manually actuate the inserter pickup sensor, Q12-315, [Figure 1](#). The display changes.

Y N
Go to [Flag 11](#) and [Flag 12](#). Check Q12-315.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J7](#), [P/J4](#), [P/J701](#), [inserter PWB](#), [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Top cover door assembly, [PL 12.310 Item 20](#).
- Inserter PWB, [PL 12.310 Item 9](#).
- HVF PWB, [PL 12.140 Item 2](#).

A

Status Indicator RAPs

312-191-00-171, 312-193-00-171, 312-194-00-171, 312-

A

Enter [dC330](#) code 012-084. Manually actuate the inserter TE sensor, Q12-084, [Figure 1](#). The display changes.

Y N
Go to [Flag 1](#) and [Flag 2](#). Check Q12-084.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J6](#), [P/J4](#), [P/J701](#), [inserter PWB](#), [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Idle roller assembly, [PL 12.310 Item 19](#).
- Inserter PWB, [PL 12.310 Item 9](#).
- HVF PWB, [PL 12.140 Item 2](#).

Enter [dC330](#) code 012-083. Manually actuate the inserter LE sensor, Q12-083, [Figure 1](#). The display changes.

Y N
Go to [Flag 13](#) and [Flag 14](#). Check Q12-083.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J6](#), [P/J4](#), [P/J701](#), [inserter PWB](#), [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Idle roller assembly, [PL 12.310 Item 19](#).
- Inserter PWB, [PL 12.310 Item 9](#).
- HVF PWB, [PL 12.140 Item 2](#).

Enter [dC330](#) code 012-316. Manually actuate the inserter acceleration sensor Q12-316, [Figure 1](#). The display changes.

Y N
Go to [Flag 3](#) and [Flag 4](#). Check the sensor.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J11](#), [P/J4](#), [P/J701](#), [inserter PWB](#), [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Lower jam cover assembly, [PL 12.300 Item 21](#).
- Inserter PWB, [PL 12.310 Item 9](#).
- HVF PWB, [PL 12.140 Item 2](#).

Enter [dC330](#) code 012-320. Manually actuate the inserter standby sensor Q12-320. The voltage changes.

Y N
Go to [Flag 5](#). Check the sensor.

B

B

Refer to:

- GP 11 How to Check a Sensor.
- P/J7, P/J4, P/J701, inserter PWB, HVF PWB.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Inserter standby sensor, PL 12.135 Item 2.
- HVF PWB, PL 12.140 Item 2.

Enter dC330 code 012-260 to energize the inserter clutch CL12-260. **The clutch energizes.**

Y N

Go to Flag 6 and Flag 7. Check CL 12-260.

Refer to:

- GP 12 How to Check a Solenoid or Clutch.
- P/J12, P/J5, P/J703, inserter PWB, HVF PWB.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP

Install new components as necessary:

- Inserter clutch, PL 12.310 Item 3.
- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

Enter dC330, code 012-261 to run the inserter motor, MOT12-261. **The motor runs.**

Y N

Go to Flag 8 and Flag 9. Check MOT12-261.

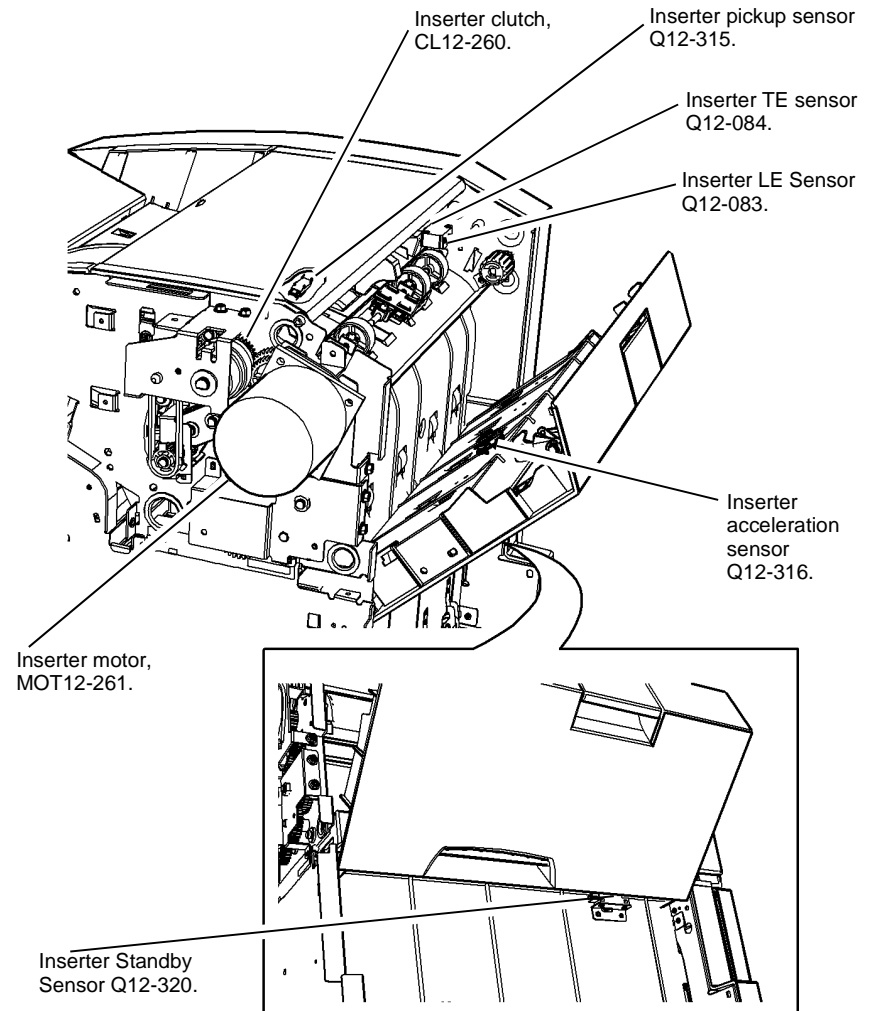
Refer to:

- GP 10 How to Check a Motor.
- P/J12, P/J4, P/J701. Inserter PWB, HVF PWB.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Inserter motor, PL 12.315 Item 1.
- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

Perform SCP 5 Final Actions.



X-1-0087-A

Figure 1 Component location

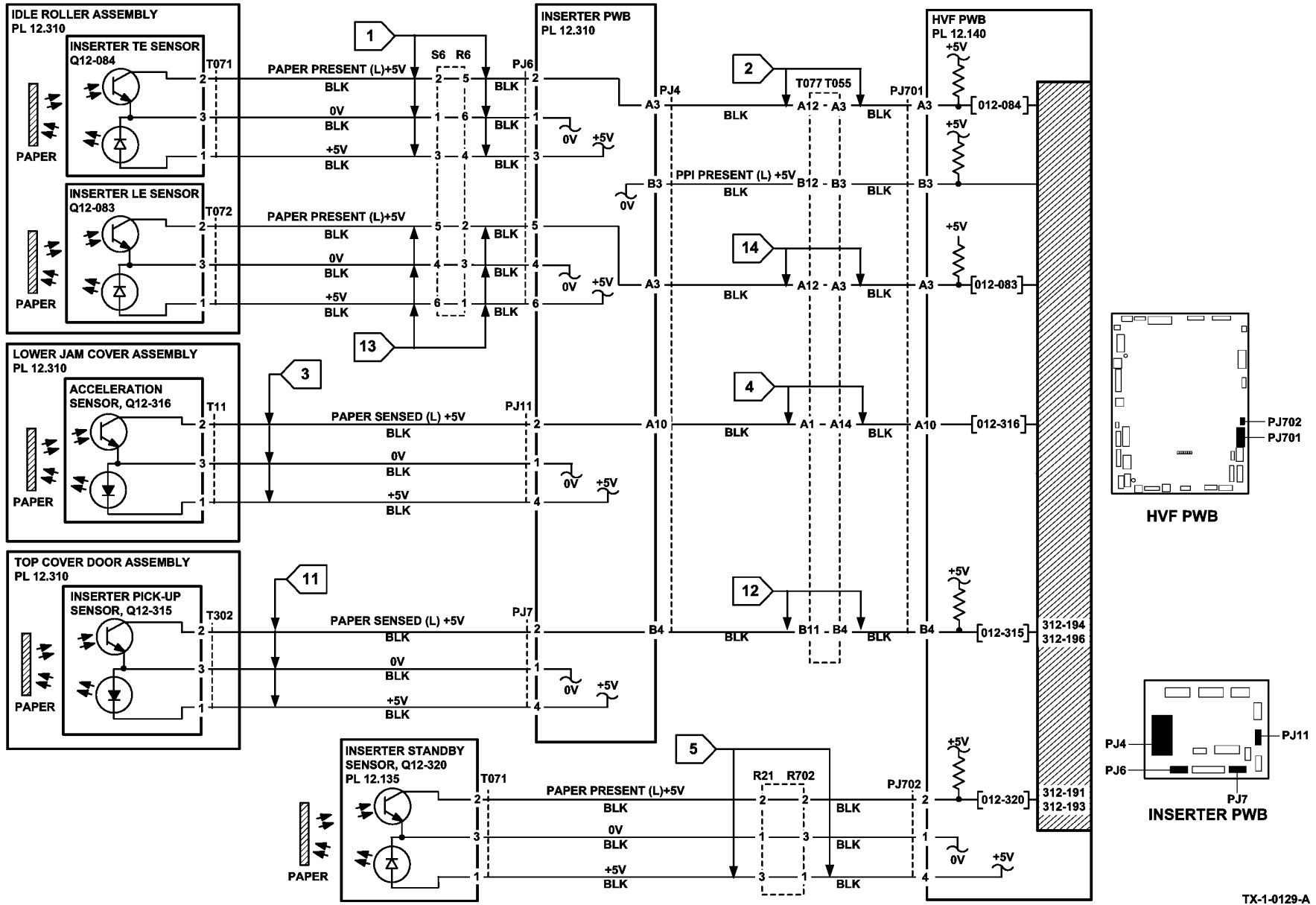


Figure 2 Circuit diagram

TX-1-0129-A

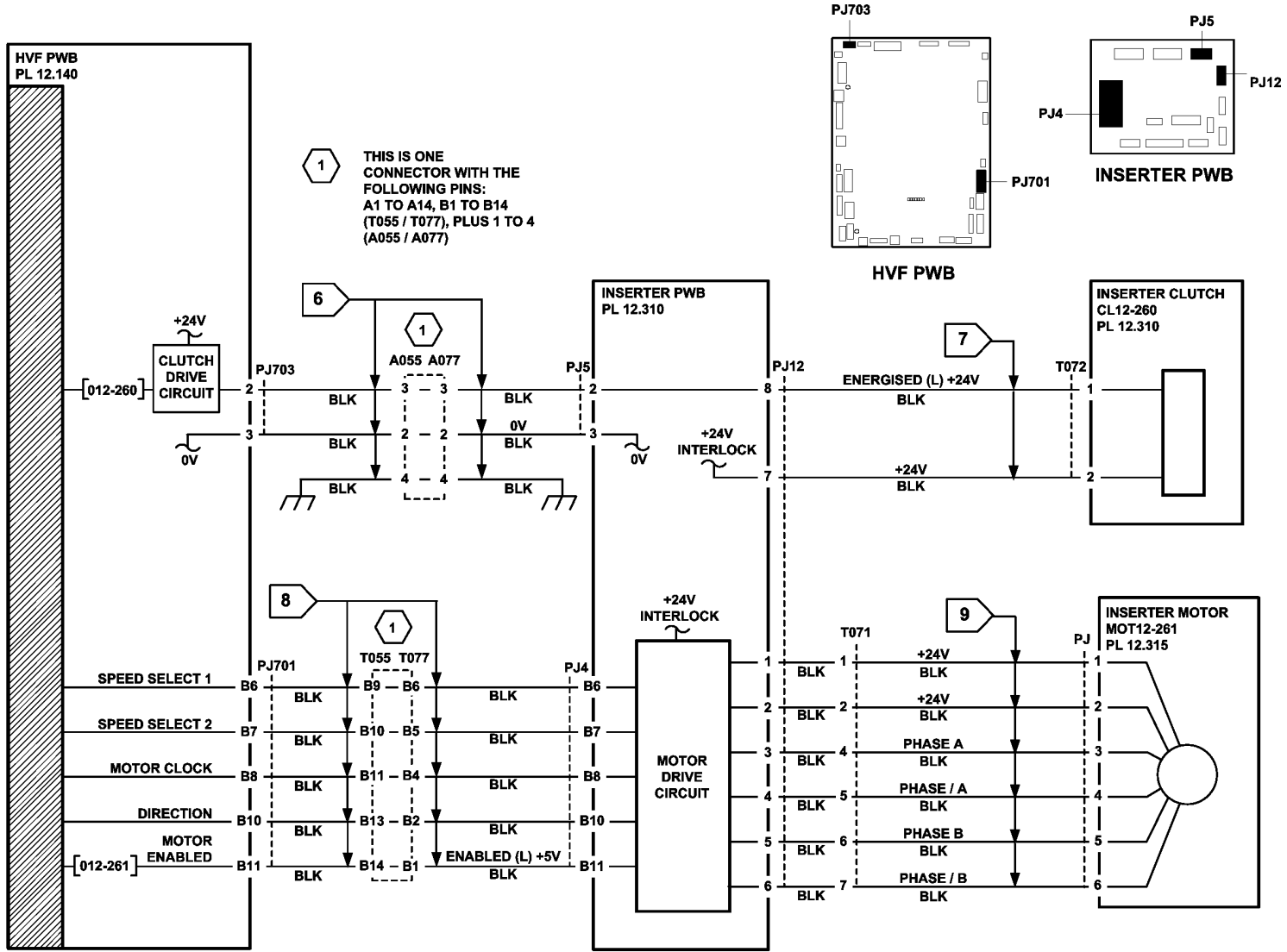


Figure 3 Circuit diagram

TX-1-0128-A

312-198-00-171, 312-199-00-171 HVF Paper Jam RAP

312-198-00-171 A stray sheet was detected in the finisher, after a jam clearance.

312-199-00-171 An unexpected sheet has been detected in the finisher.

Remote Service Actions

Ask the customer to check for a jam or other obstruction in the HVF paper path. If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the HVF paper path for damage.

Procedure

Enter **dC330**, code 012-077. Manually actuate the entry sensor, Q12-077, [Figure 1](#). **The display changes.**

- Y** **N**
- Go to [Flag 1](#). Check Q12-077.
Refer to:
- [GP 11](#) How to Check a Sensor.
 - [P/J101. HVF PWB.](#)
 - [312A-171](#) HVF Power Distribution RAP.
 - [301A](#) 0V Distribution RAP.
- Install new components as necessary:
- Entry sensor, [PL 12.135 Item 2](#).
 - HVF PWB, [PL 12.140 Item 2](#).

Enter **dC330**, code 012-086. Manually actuate the buffer position sensor, Q12-086, [Figure 1](#). **The display changes.**

- Y** **N**
- Go to [Flag 2](#). Check Q12-086.
Refer to:
- [GP 11](#) How to Check a Sensor.
 - [P/J101. HVF PWB.](#)
 - [312A-171](#) HVF Power Distribution RAP.
 - [301A](#) 0V Distribution RAP.
- Install new components as necessary:
- Buffer position sensor, [PL 12.135 Item 2](#).
 - HVF PWB, [PL 12.140 Item 2](#).

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Enter **dC330**, code 012-321. Manually actuate the buffer path sensor, Q12-321, [Figure 1](#).

The display changes.

- Y** **N**
- Go to [Flag 3](#). Check Q12-321.
Refer to:
- [GP 11](#) How to Check a Sensor.
 - [P/J101. HVF PWB.](#)
 - [312A-171](#) HVF Power Distribution RAP.
 - [301A](#) 0V Distribution RAP.
- Install new components as necessary:
- Buffer path sensor, [PL 12.135 Item 2](#).
 - HVF PWB, [PL 12.140 Item 2](#).

Enter **dC330**, code 012-106. Manually actuate the compiler exit sensor, Q12-106, [Figure 1](#).

The display changes.

- Y** **N**
- Go to [Flag 4](#). Check Q12-106.
Refer to:
- [GP 11](#) How to Check a Sensor.
 - [P/J101. HVF PWB.](#)
 - [312A-171](#) HVF Power Distribution RAP.
 - [301A](#) 0V Distribution RAP.
- Install new components as necessary:
- Compiler exit sensor, [PL 12.135 Item 2](#).
 - HVF PWB, [PL 12.140 Item 2](#).

Enter **dC330**, code 012-107. Manually actuate the top tray exit sensor, Q12-107, [Figure 1](#).

The display changes.

- Y** **N**
- Go to [Flag 5](#). Check Q12-107.
Refer to:
- [GP 11](#) How to Check a Sensor.
 - [P/J101. HVF PWB.](#)
 - [312A-171](#) HVF Power Distribution RAP.
 - [301A](#) 0V Distribution RAP.
- Install new components as necessary:
- Top tray exit sensor, [PL 12.135 Item 3](#).
 - HVF PWB, [PL 12.140 Item 2](#).

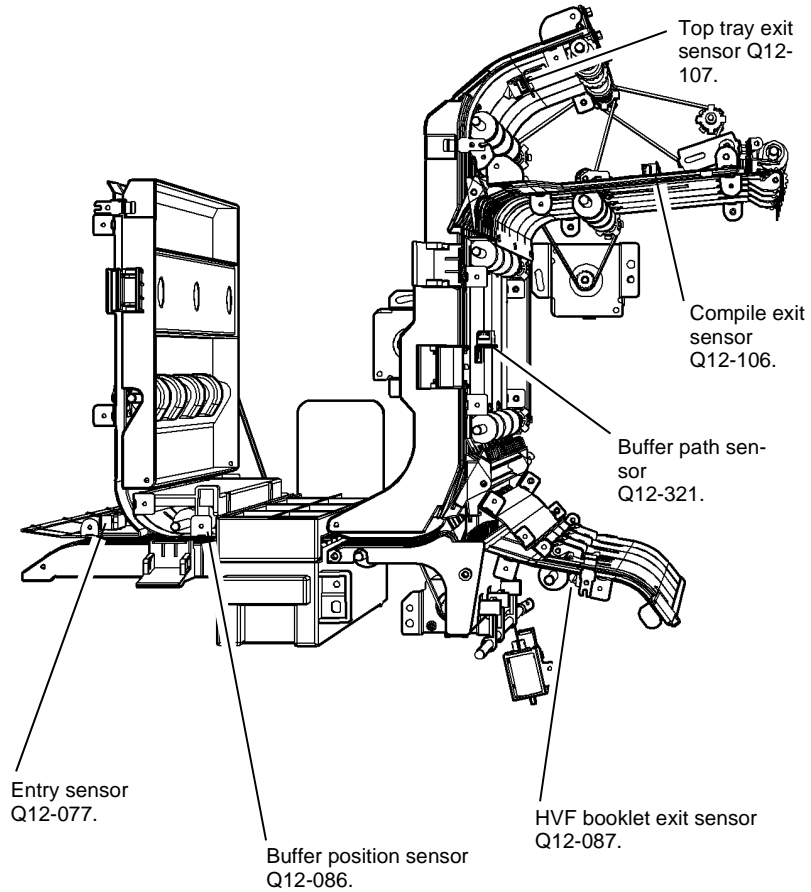
HVF BM machines only, enter **dC330**, code 012-087. Manually actuate the HVF booklet exit sensor, Q12-087, [Figure 1](#). **The display changes.**

- Y** **N**
- Go to [Flag 6](#). Check Q12-087.
Refer to:
- [GP 11](#) How to Check a Sensor.
 - [P/J101. HVF PWB.](#)
 - [312A-171](#) HVF Power Distribution RAP.

B

- 301A 0V Distribution RAP.
- Install new components as necessary:
- HVF booklet exit sensor, PL 12.135 Item 3.
 - HVF PWB PL 12.140 Item 2.

The fault may be intermittent, check for damaged wiring or bad connectors, REP 1.1. If necessary install new components.



X-1-0088-A

Figure 1 Component location

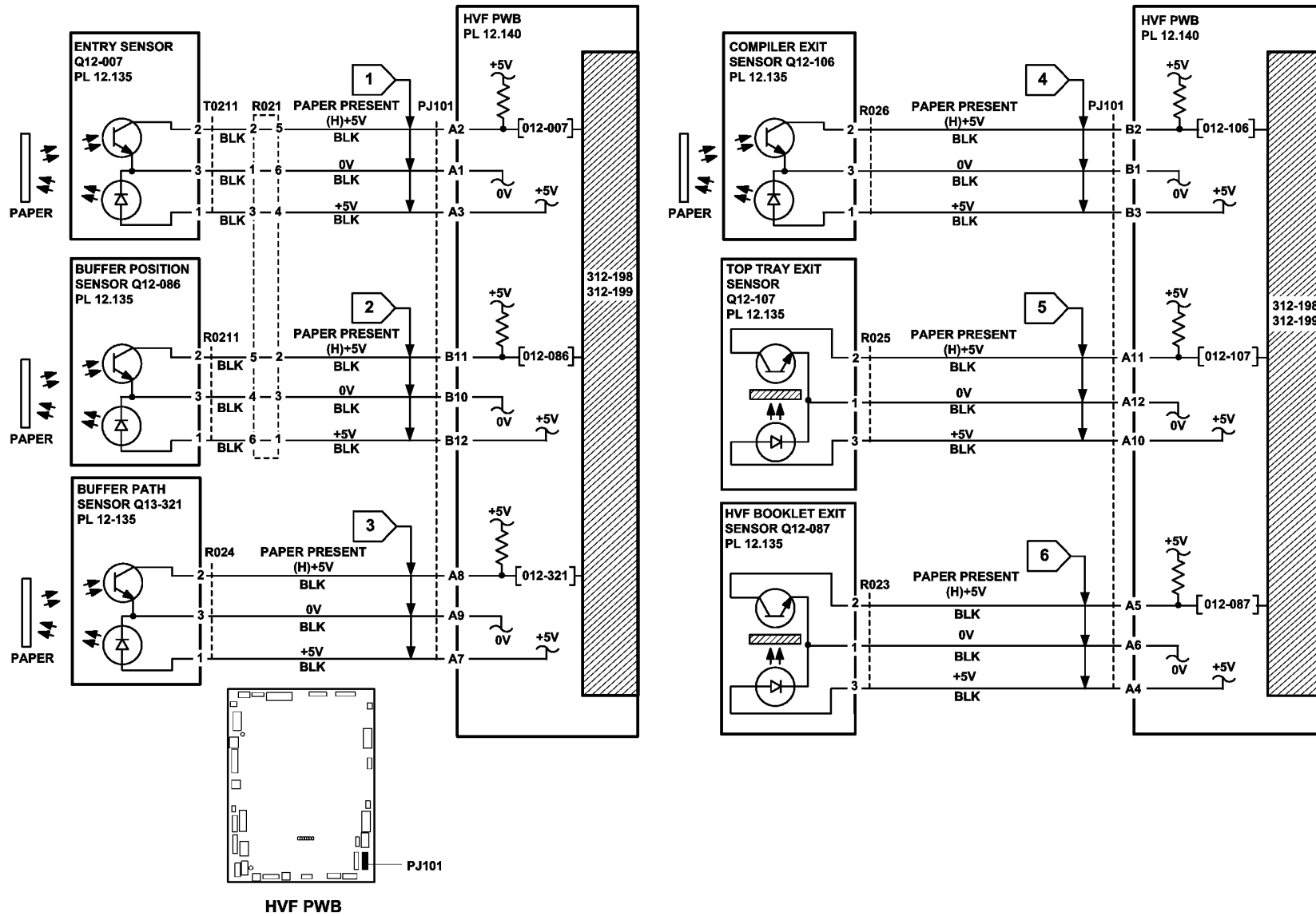


Figure 2 Circuit diagram

TX-1-0162-A

312-288-00-171, 312-289-00-171 HVF Nip Split RAP

312-288-00-171 The nip split has failed to operate.

312-289-00-171 The nip split has failed to return to the home position.

Remote Service Actions

Ask the customer to check for a jam or other obstruction in the nip split. If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the nip split for damage.

Procedure

Enter [dC330](#), code 012-264 to run the nip split motor, MOT12-264, [Figure 1](#). The nip-split mechanism can be heard.

Y N

Go to [Flag 3](#). Check MOT12-264.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J102](#), [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Nip split motor, [PL 12.125](#) Item 15.
- HVF PWB, [PL 12.140](#) Item 2.

Enter [dC330](#) code 012-088. Manually actuate the nip home sensor, Q12-088, [Figure 1](#). The display changes.

Y N

Go to [Flag 1](#). Check Q12-088.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J101](#), [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Nip home sensor, [PL 12.135](#) Item 1.
- HVF PWB, [PL 12.140](#) Item 2.

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Enter [dC330](#) code 012-091. Manually actuate the nip split sensor, Q12-091, [Figure 1](#). The display changes.

Y N

Go to [Flag 2](#). Check Q12-091.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J101](#), [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Nip split sensor, [PL 12.135](#) Item 1.
- HVF PWB, [PL 12.140](#) Item 2.

Perform [SCP 5](#) Final Actions.

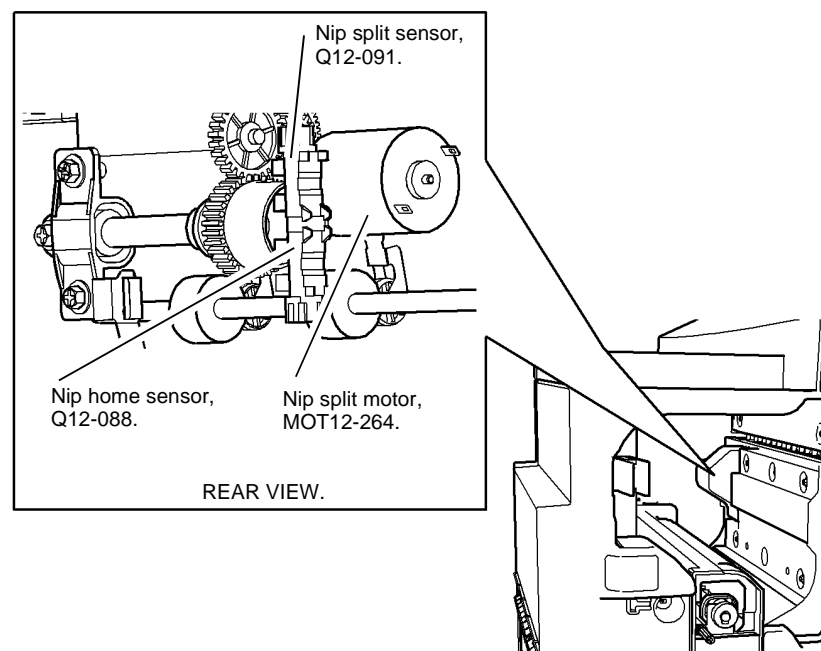


Figure 1 Component location

A

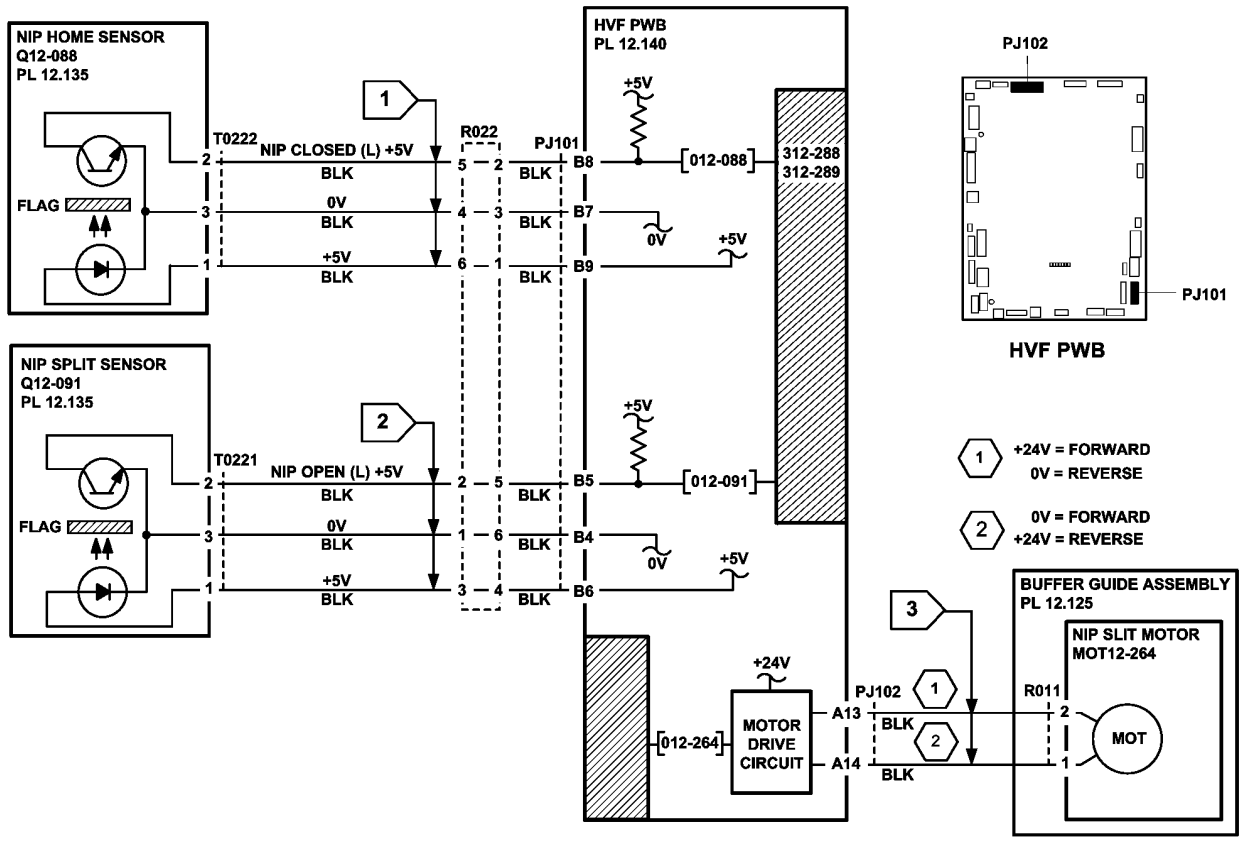


Figure 2 Circuit diagram

TX-1-0130-A

312-312-00-171, 312-313-00-171 HVF Interlocks RAP

312-312-00-171 The top cover interlock was detected open during a run.

312-313-00-171 The finisher front door interlock was detected open during a run.

Remote Service Actions

Ask the customer to check that the HVF front door and top cover are fully closed. If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Ensure all HVF interlocks are closed.
- Check the interlock actuators for damage.

Procedure

Go to the relevant procedure:

- 12-197-00-171 Top Cover Interlock.
- 12-303-00-171 Front Door Interlock.

12-197-00-171 Top Cover Interlock

Check the top cover interlock switch, S12-197, Figure 1.

- Check the switch actuator is not damaged.
- Enter dC330, code 012-197, actuate the switch and check the display.

Go to Flag 1. Check S11-302.

Refer to:

- GP 13 How to Check a Switch.
- P/J112, HVF PWB.
- Check the wiring, REP 1.1.
- If necessary, install a new top cover interlock switch, PL 12.115 Item 24.

12-303-00-171 Front Door Interlock

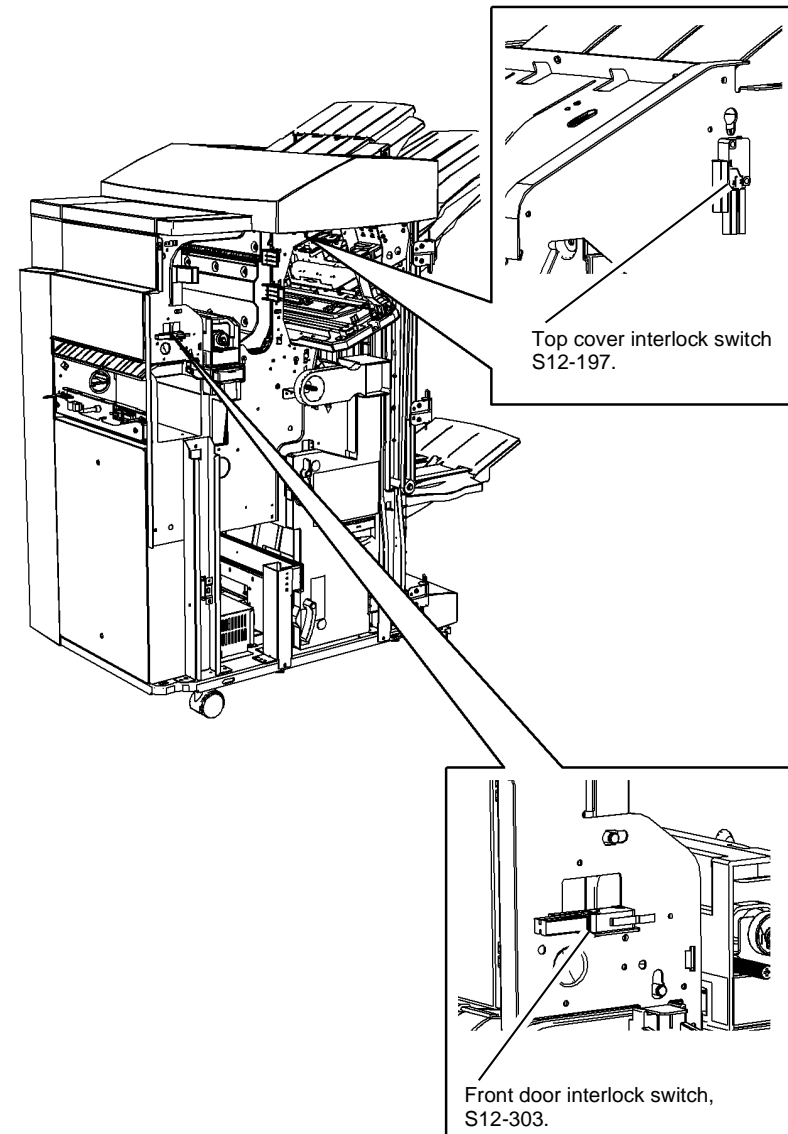
Check the front door interlock switch, S12-303, Figure 1.

- Check the switch actuator on the inside of the front door is not damaged.
- Enter dC330, code 012-303 actuate the switch and check the display.

Go to Flag 2. Check S11-303.

Refer to:

- GP 13 How to Check a Switch.
- P/J112, HVF PWB.
- Check the wiring, REP 1.1.
- If necessary, install a new front door interlock switch, PL 12.115 Item 28.



X-1-0090-A

Figure 1 Component location

312-316-00-171, 312-319-00-171 HVF Inserter Interlocks RAP

312-316-00-171 The inserter top cover interlock was detected open in the run mode.

312-319-00-171 The inserter left hand door was detected open in the run mode.

Remote Service Actions

Ask the customer to check that the inserter top cover and left hand door can be fully closed and that the interlocks are actuated, this will be indicated by the UI messages. Ask the customer to c remove any obstruction as necessary. If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Go to the relevant procedure:

- 12-316-00-171 Inserter Top Cover Interlock.
- 12-319-00-171 Inserter Jam Cover Interlock.

12-316-00-171 Inserter Top Cover Interlock

Check the inserter top cover interlock switch, S12-178, Figure 1.

- Check the switch actuator mounted on the machine is correctly installed and un-broken.
- Enter dC330, code 012-178, actuate the switch and check the display.

Go to Flag 1 and Flag 2. Check S12-178.

Refer to:

- GP 13 How to Check a Switch.
- P/J1, P/J4, P/J5, P/J701, P/J703. HVF PWB, inserter PWB.

- Check the wiring, REP 1.1.
- If necessary, install a new inserter top cover interlock switch, PL 12.305 Item 8.

12-319-00-171 Inserter Jam Cover Interlock

Check the inserter jam cover interlock switch, S12-179, Figure 1.

- Check the switch actuator is not damaged.
- Enter dC330, code 012-179 actuate the switch and check the display.

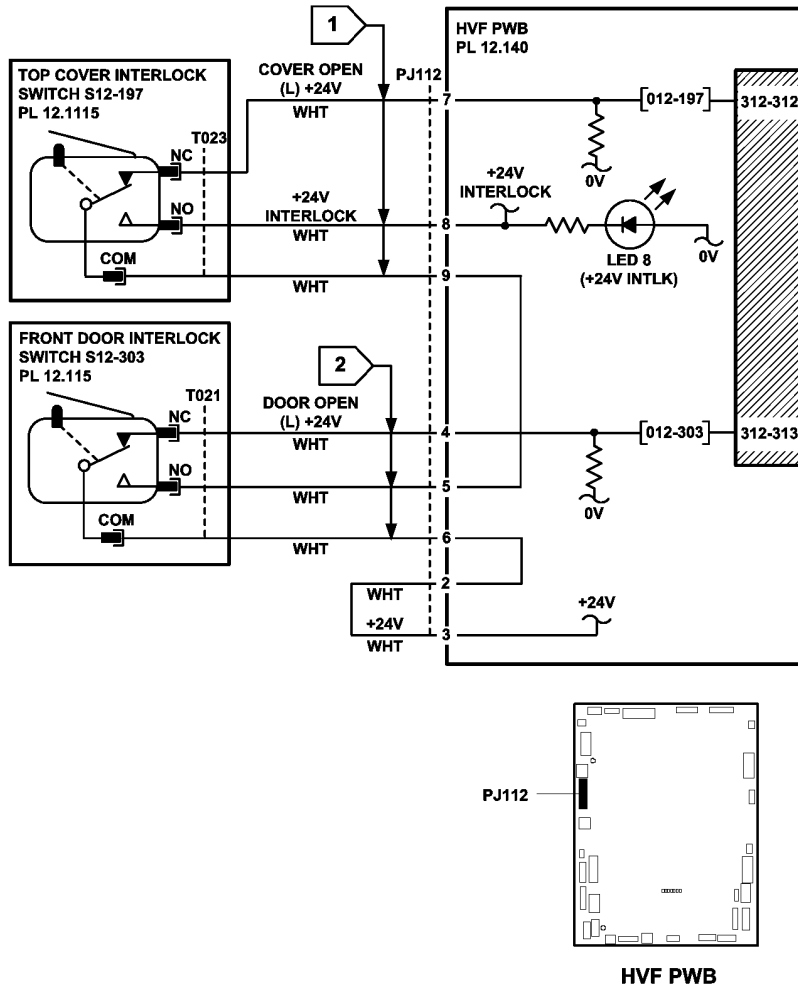
Go to Flag 3 and Flag 4. Check S11-431.

Refer to:

- GP 13 How to Check a Switch.
- P/J2, P/J4, P/J703. HVF PWB, inserter PWB.

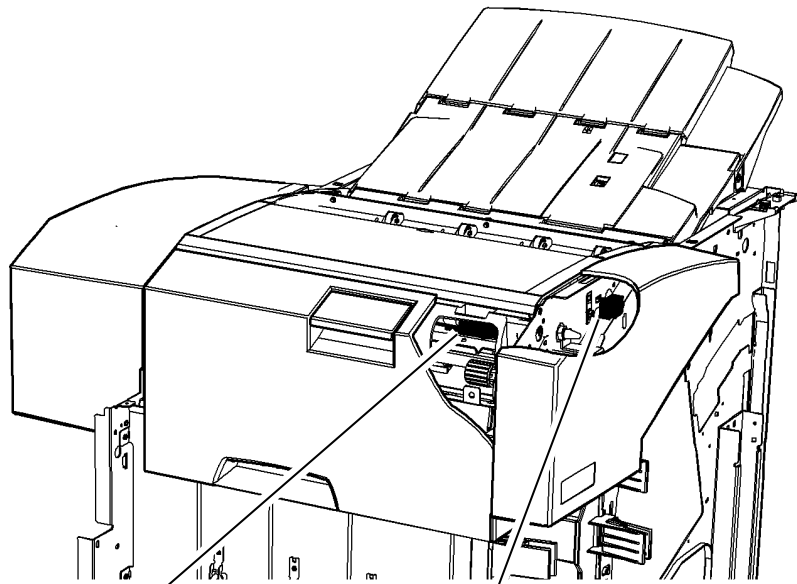
- Check the wiring, REP 1.1.

- If necessary, install a new inserter jam cover interlock switch, PL 12.300 Item 18.



TX-1-0131-A

Figure 2 Circuit diagram



Inserter jam cover interlock switch, S12-179.

Inserter top cover interlock switch, S12-178.

X-1-0091-A

Figure 1 Component location

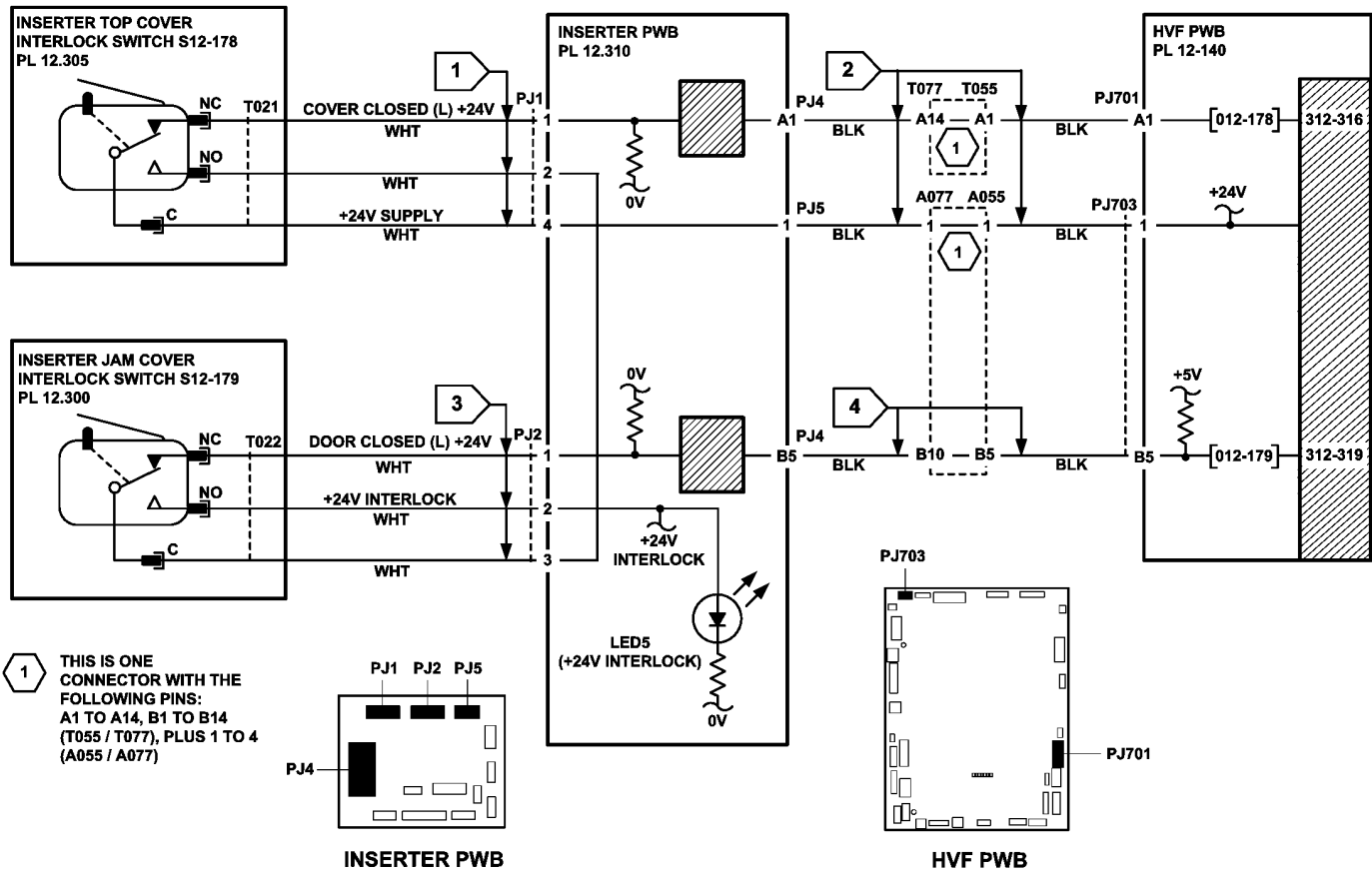


Figure 2 Circuit diagram

TX-1-0132-A

312-317-00-171, 312-318-00-171 HVF Tri-folder Interlocks RAP

312-317-00-171 The tri-folder top cover interlock was detected open during a run.

312-318-00-171 The tri-folder front door interlock was detected open during a run.

Remote Service Actions

Ask the customer to check that the tri-folder top cover and front door can be fully closed and that the interlocks are actuated, this will be indicated by the UI messages. Ask the customer to c remove any obstruction as necessary. If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Figure 2. The two yellow, +24V interlock LED's on the BM PWB will extinguish if a tri-folder interlock is open.

Check that the yellow, +24V interlock LED on the BM control PWB is lit. **The LED is lit.**

Y N

Go to **Flag 1, Flag 2, Flag 3, Flag 4** and **Flag 5**. Check the top cover interlock switch, S12-210 and the front door interlock switch, S12-209, **Figure 1**.

Refer to:

- **GP 13** How to Check a Switch.
- **P/J601, P/J553, P/J559, P/J605, P/J602, P/J563**. Tri-folder PWB, HVF PWB, BM PWB.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Top cover interlock switch, **PL 12.215** Item 3.
- Tri-folder front door interlock switch, **PL 12.215** Item 2.
- Tri-folder PWB, **PL 12.205** Item 16.
- BM PWB, **PL 12.175** Item 10.
- HVF PWB, **PL 12.140** Item 2.

Enter **dC330**, code 012-209 tri-folder front door interlock switch, S12-209, **Figure 1**. Open the tri-folder front door. **The display changes.**

Y N

Go to **Flag 1, Flag 2, Flag 3, Flag 4** and **Flag 5**. Check the tri-folder front door interlock, S12-209.

Refer to:

- **GP 13** How to Check a Switch.
- **P/J601, P/J553, P/J559, P/J605, P/J602, P/J563**. Tri-folder PWB, BM PWB, HVF PWB.
- **312A-171** HVF Power Distribution RAP.

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- **301A** 0V Distribution RAP.

Install new components as necessary:

- Tri-folder front door interlock switch, **PL 12.215** Item 2.
- Tri-folder PWB, **PL 12.205** Item 16.
- BM PWB, **PL 12.175** Item 10.

Enter **dC330**, code 012-210 top cover interlock switch, S12-210, **Figure 1**. Open the tri-folder front door. **The display changes.**

Y N

Go to **Flag 1, Flag 2, Flag 3, Flag 4** and **Flag 5**. Check the tri-folder front door interlock, S12-209.

Refer to:

- **GP 13** How to Check a Switch.
- **P/J601, P/J553, P/J559, P/J605, P/J602, P/J563**. Tri-folder PWB, BM PWB, HVF PWB.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Top cover interlock switch, **PL 12.215** Item 2.
- Tri-folder PWB, **PL 12.205** Item 16.
- BM PWB, **PL 12.175** Item 10.
- HVF PWB, **PL 12.140** Item 2.

Enter **dC330**, code 012-210 tri fold top cover interlock sensor, Q12-210, **Figure 1**. Open the tri-folder top cover. **The display changes.**

Y N

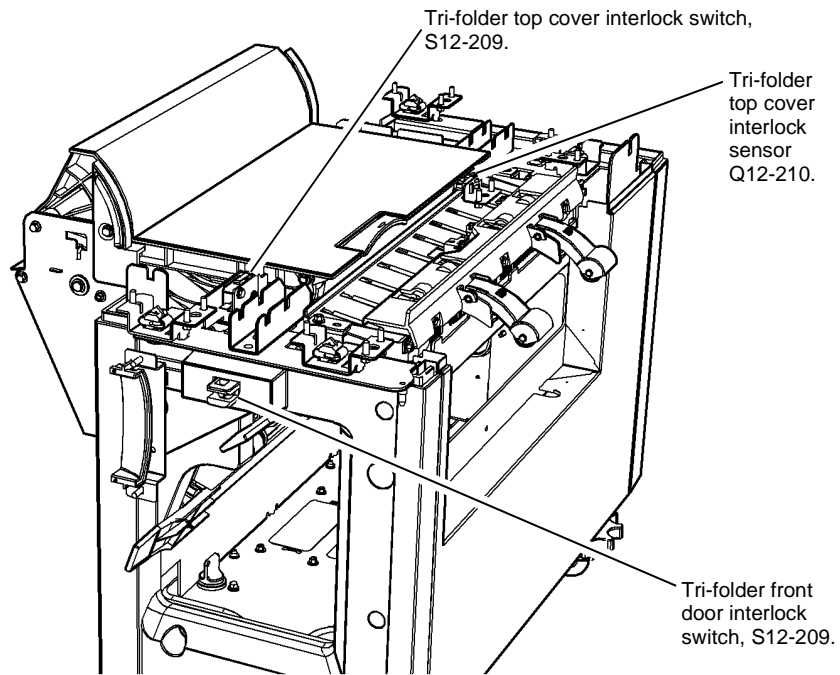
Go to **Flag 6** and **Flag 7**. Check the wiring and repair as necessary, **REP 1.1**. Check the tri-folder top cover interlock sensor, Q12-210. Refer to:

- **GP 11** How to Check a Sensor.
- **P/J605, P/J602, P/J563**. Tri-folder PWB, HVF PWB.
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Tri fold top cover interlock sensor, **PL 12.200** Item 10.
- Tri-folder PWB, **PL 12.205** Item 16.
- BM PWB, **PL 12.175** Item 10.

Perform **SCP 5** Final Actions.



X-1-0092-A

Figure 1 Component location

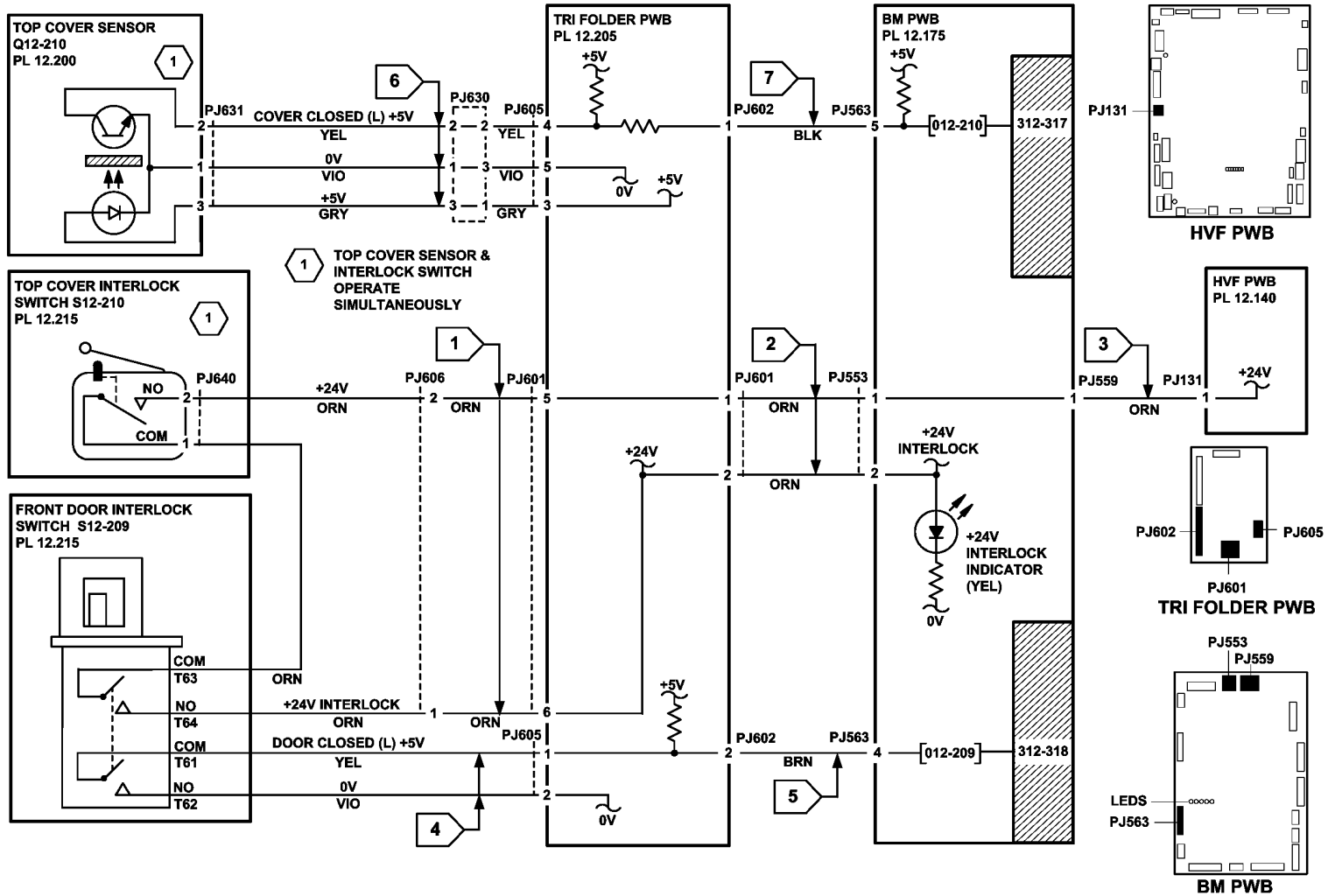


Figure 2 Circuit diagram

TX-1-0133-A

312-367-00-171, 312-368-00-171, 312-380-00-171 HVF Punch Unit Paper Edge Detect RAP

312-367-00-171 The punch unit failed to detect the edge of the A4 LE feed paper.

312-368-00-171 The punch unit failed to detect the edge of the 8.5"x 11" SE feed paper.

312-380-00-171 The punch unit failed to detect the edge of the 8.5"x11" LE feed paper.

Remote Service Actions

Ask the customer to check the items that follow:

- That the paper path through the punch is clear, [Figure 1](#).
- The punch module is fully seated at the rear or the machine.

If the fault continues, a site visit will be necessary.

On Site Initial Actions

Check that a centre registration punch unit is installed. A centre registration unit has 3 sensors on the unit, [Figure 1](#). If the wrong type of hole punch assembly has been installed 311-380-00 faults will occur. If necessary, install a new hole punch assembly, [PL 12.125 Item 19](#).

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: [Figure 1](#). Punch sensor 1, Q12-078 detects 8.5"x11" LE feed paper. Punch sensor 2, Q12-075 detects 8.5"x11" SE feed paper. Punch sensor 3, Q12-076 detects A4 LE feed paper.

Enter [dC330](#), code 012-078, punch sensor 1, Q12-078, [Figure 1](#). Actuate the sensor. **The display changes.**

Y N
Go to [Flag 1](#), check Q12-078.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J501](#). [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Hole punch module, [PL 12.125 Item 19](#).
- HVF PWB, [PL 12.140 Item 2](#).

Enter [dC330](#), code 012-075, punch sensor 2, Q12-075, [Figure 1](#). Actuate the sensor. **The display changes.**

Y N
Go to [Flag 2](#), check Q12-075.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J503](#). [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Hole punch module, [PL 12.125 Item 19](#).
- HVF PWB, [PL 12.140 Item 2](#).

Enter [dC330](#), code 012-076, punch sensor 3, Q12-076, [Figure 1](#). Actuate the sensor. **The display changes.**

Y N
Go to [Flag 3](#), check Q12-076.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J503](#). [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Hole punch module, [PL 12.125 Item 19](#).
- HVF PWB, [PL 12.140 Item 2](#).

Enter [dC330](#), code 012-223 transport motor 1, MOT12-223, [Figure 1](#). **The motor runs.**

Y N
Go to [Flag 4](#). Check MOT12-223.
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J102](#). [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Transport motor 1, [PL 12.120 Item 2](#).
- HVF PWB, [PL 12.140 Item 2](#).

Enter [dC330](#), code 012-245 punch unit motor, MOT12-245, [Figure 1](#). **The motor runs.**

Y N
Go to [Flag 5](#). Check the wiring and repair as necessary, [REP 1.1](#). Check MOT12-245.
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J502](#). [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Hole punch module, [PL 12.125 Item 19](#).
- HVF PWB, [PL 12.140 Item 2](#).

B
Perform SCP 5 Final Actions.

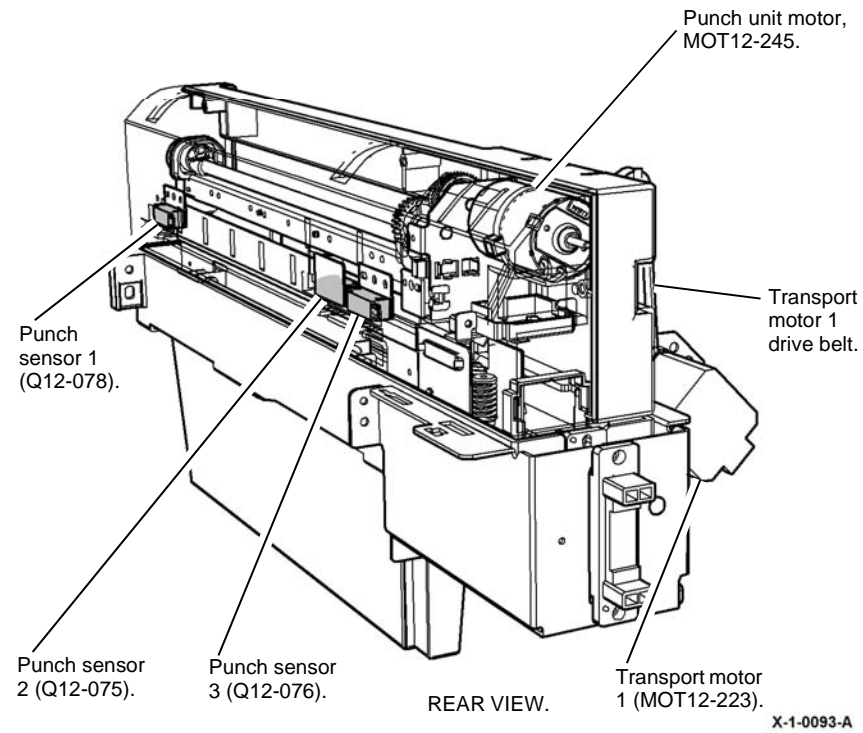


Figure 1 Component location

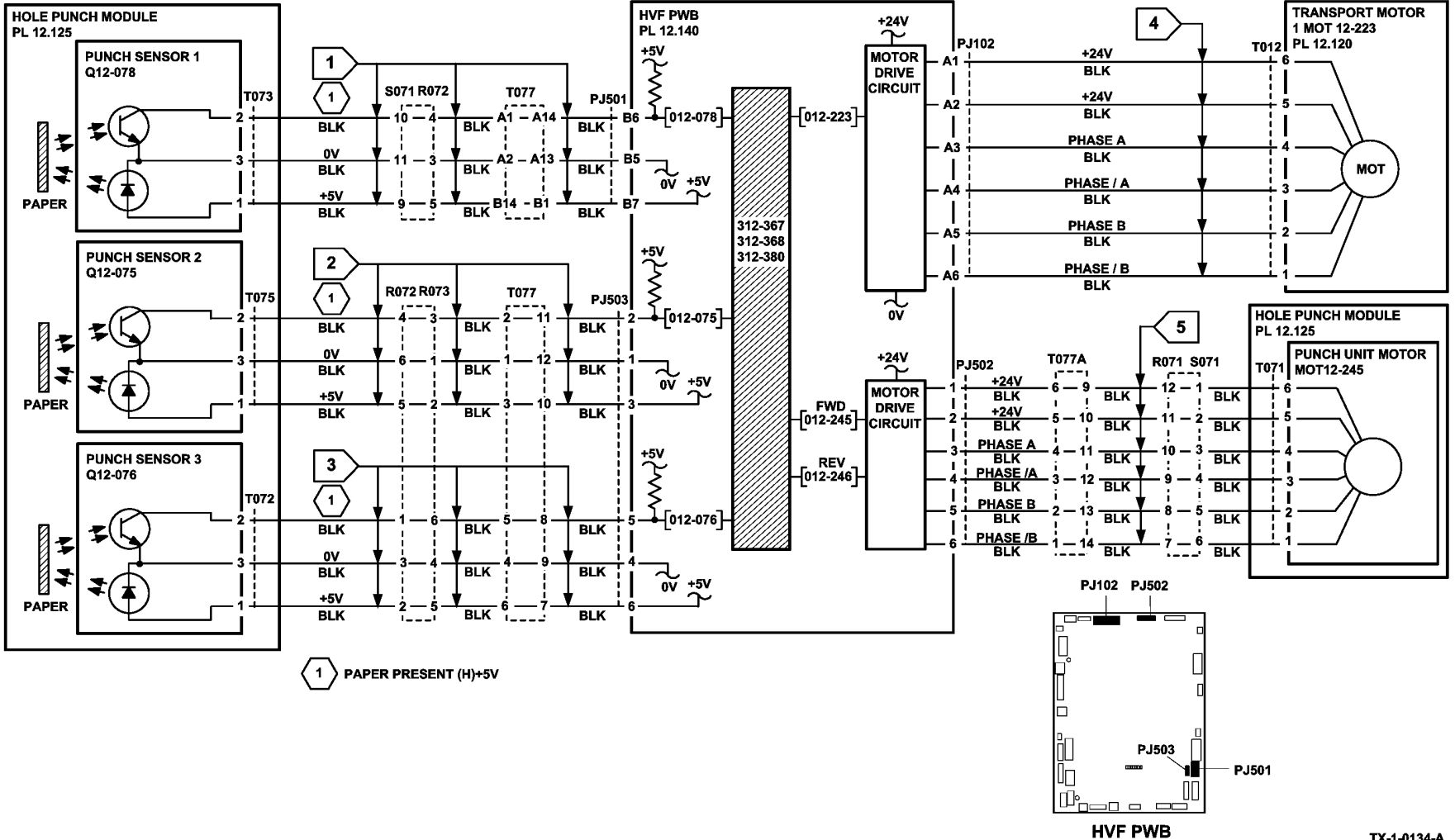


Figure 2 Circuit diagram

TX-1-0134-A

312-369-00-171 to 312-377-00-171 HVF Stapler Position and Priming RAP

312-369-00-171 The stapler does not return to the end home position.

312-370-00-171 The stapler does not move away from the end home position.

312-371-00-171 The stapler does not move from the home position within the required time.

312-372-00-171 The stapler does not return to the home position within the required time.

312-373-00-171 The stapler does not enter the mid home position.

312-374-00-171 The stapler does not leave the mid home position.

312-375-00-171 The stapler jaw does not enter the home position.

312-376-00-171 The stapler jaw does not leave the home position.

312-377-00-171 The stapler has not been correctly primed within the required time.

Remote Service Actions

Ask the customer to check the items that follow:

- That the staple cartridge has staples in it and is correctly installed in the staple head.
- That the sheets of staples in the cartridge are feeding one at a time. If staple sheets overlap, they will jam in the cartridge. If necessary, ask the customer to install a new cartridge.
- That the leading staples in the staple head have been primed.

If the fault continues, a site visit will be necessary.

On Site Initial Actions

If stapling has failed, perform the actions that follow:

- Check that the staple head unit is correctly installed.
- Check the fault history for 311-414-00 faults, if they exist switch off the machine, GP 14. Disconnect PJ131, PJ132 and PJ133 from the HVF PWB. Switch on the machine, GP 14. If the machine boots up without any faults and can run a stapled set into bin 1, then go to the 311-403-00-171, 311-413-00-171, 311-414-00-171 HVF BM Staple Head 2 and Stapler Module RAP to fix the fault, otherwise continue below.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Do not run code 012-247 without 2 sheets of paper in the stapler jaws. Running this code without the paper in position can cause damage to the machine.

NOTE: Sensors Q12-133, Q12-134, Q12-317 and Q12-318 are integral to the staple head unit and although they can be checked they are not spared separately.

Enter **dC330**, code 012-249, stapler unit 1 motor, MOT12-249, **Figure 2**, to send it to the inboard end of the stapler assembly. **The motor runs.**

Y N

Go to **Flag 5**. Check MOT12-249.

Refer to:

- **GP 10** How to Check a Motor.
- **P/J801. HVF PWB.**
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Stapler assembly, **PL 12.111 Item 2.**
- HVF PWB, **PL 12.140 Item 2.**

With the stapler unit still at the inboard end, enter **dC330**, code 012-135 stapler unit home sensor, Q12-135, **Figure 2**. Manually actuate the sensor. **The display changes.**

Y N

Go to **Flag 1**. Check Q12-135.

Refer to:

- **GP 11** How to Check a Sensor.
- **P/J301. HVF PWB.**
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Stapler unit home sensor, **PL 12.111 Item 3.**
- HVF PWB, **PL 12.140 Item 2.**

Enter **dC330**, code 012-045 to send the stapler unit to the outboard end of the machine. Enter code 012-176 stapler unit mid home sensor, Q12-176, **Figure 4**. Manually actuate the sensor.

The display changes.

Y N

Go to **Flag 4**. Check Q12-176.

Refer to:

- **P/J303. HVF PWB.**

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- GP 11 How to Check a Sensor.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Stapler unit mid home sensor, PL 12.111 Item 3.
- HVF PWB, PL 12.140 Item 2.

Place two sheets of paper in the stapler jaws. Raise the finisher top cover. Figure 1, fully lower the paper pusher, then lower the top cover. Enter dC330, code 012-247 staple head 1 motor, MOT12-247. **The motor runs.**

Y N

Enter dC330, code 012-319, stapler gate safety switch. Manually actuate the stapler gate safety switch. **The display changes.**

Y N

Go to Flag 6. Check S12-319.

Refer to:

- GP 13 How to Check a Switch.
- P/J304. HVF PWB.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Sensor assembly. PL 12.115 Item 22.
- HVF PWB, PL 12.140 Item 2.

Go to Flag 2. Check MOT12-247.

Refer to:

- GP 10 How to Check a Motor.
- P/J801. HVF PWB.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Stapler assembly, PL 12.111 Item 2.
- HVF PWB, PL 12.140 Item 2.

Remove the stapled paper and raise the paper pusher fully upwards. Go to Flag 3. +5V is available at T502 between pins 1 and 4, also between pin 1 and 7 on the staple head.

Y N

Check the wiring between T502 and PJ301. **The wiring is good.**

Y N

Repair the wiring, REP 1.1.

Install a new HVF PWB, PL 12.140 Item 2.

Enter dC330, code 012-134 actuate the stapler priming sensor, Q12-134, by removing and installing the staple cartridge. **The display changes.**

Y N

Go to Flag 3. Check for a change in signal level at PJ301 pin 9 when Q12-134 is being actuated. **The signal level changes.**

B

B

Y N

Check the wiring between PJ301 pin 9 and the stapler unit. **The wiring is good.**

Y N

Repair the wiring, REP 1.1.

Install a new stapler assembly, PL 12.111 Item 2.

Install a new HVF PWB, PL 12.140 Item 2.

Enter dC330, code 012-317 actuate the stapler cartridge sensor, Q12-317, by removing and installing the staple cartridge. **The display changes.**

Y N

Go to Flag 3. Check for a change in signal level at PJ301 pin 10 when Q12-317 is being actuated. **The signal level changes.**

Y N

Check the wiring between PJ301 pin 10 and the stapler unit. **The wiring is good.**

Y N

Repair the wiring, REP 1.1.

Install a new stapler assembly, PL 12.111 Item 2.

Install a new HVF PWB, PL 12.140 Item 2.

Place two sheets of paper in the stapler jaws. Enter dC330 code 012-318 to monitor the staple jaw home sensor Q12-318, stack the code 012-247 to cycle the staple head. **The display changes.**

Y N

Go to Flag 3, check for a change in signal level at PJ301 pin 12, while code 012-247 is running. **The signal level changes.**

Y N

Check the wiring between PJ301 pin 12 and the stapler unit. **The wiring is good.**

Y N

Repair the wiring, REP 1.1.

Install a new stapler assembly, PL 12.111 Item 2.

Install a new HVF PWB, PL 12.140 Item 2.

Enter dC330, code 012-133, actuate the low staples sensor, Q12-133, by removing and installing the staple cartridge. **The display changes.**

Y N

Go to Flag 3, check for a change in signal level at PJ301 pin 13 when Q12-133 is being actuated. **The signal level changes.**

Y N

Check the wiring between PJ301 pin 13 and the staple head unit. **The wiring is good.**

Y N

Repair the wiring REP 1.1.

Install a new stapler assembly, PL 12.111 Item 2.

Install a new HVF PWB, PL 12.140 Item 2.

C

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The fault may be intermittent, check for damaged wiring or bad connectors, [REP 1.1](#). If necessary install new components.

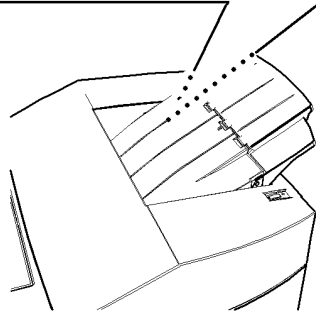
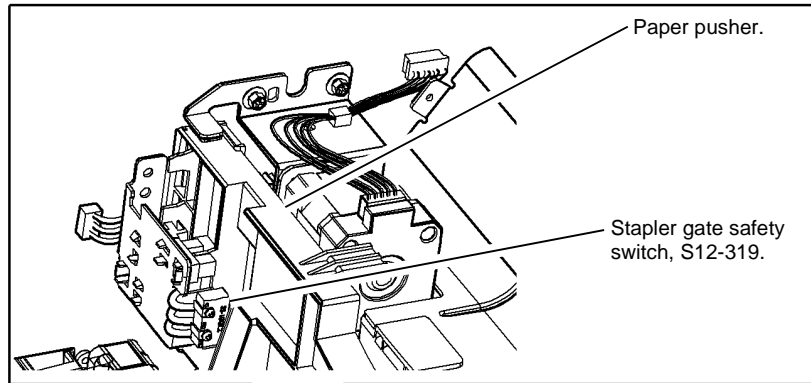


Figure 1 Component location

X-1-0094-A

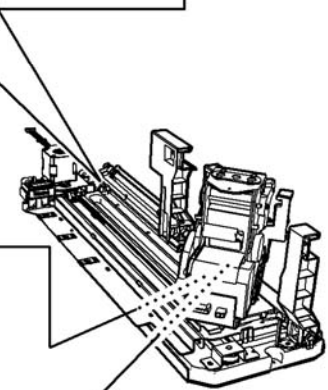
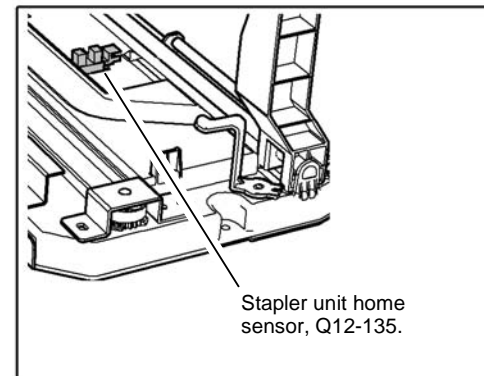
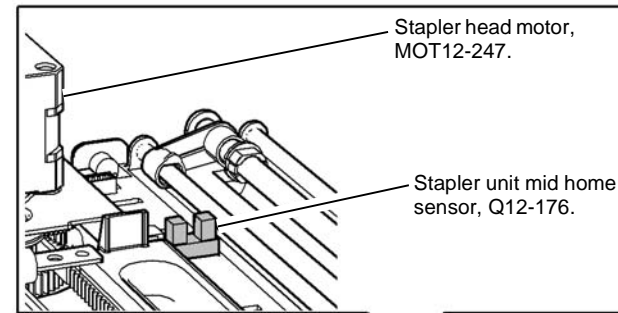


Figure 2 Component location

X-1-0095-A

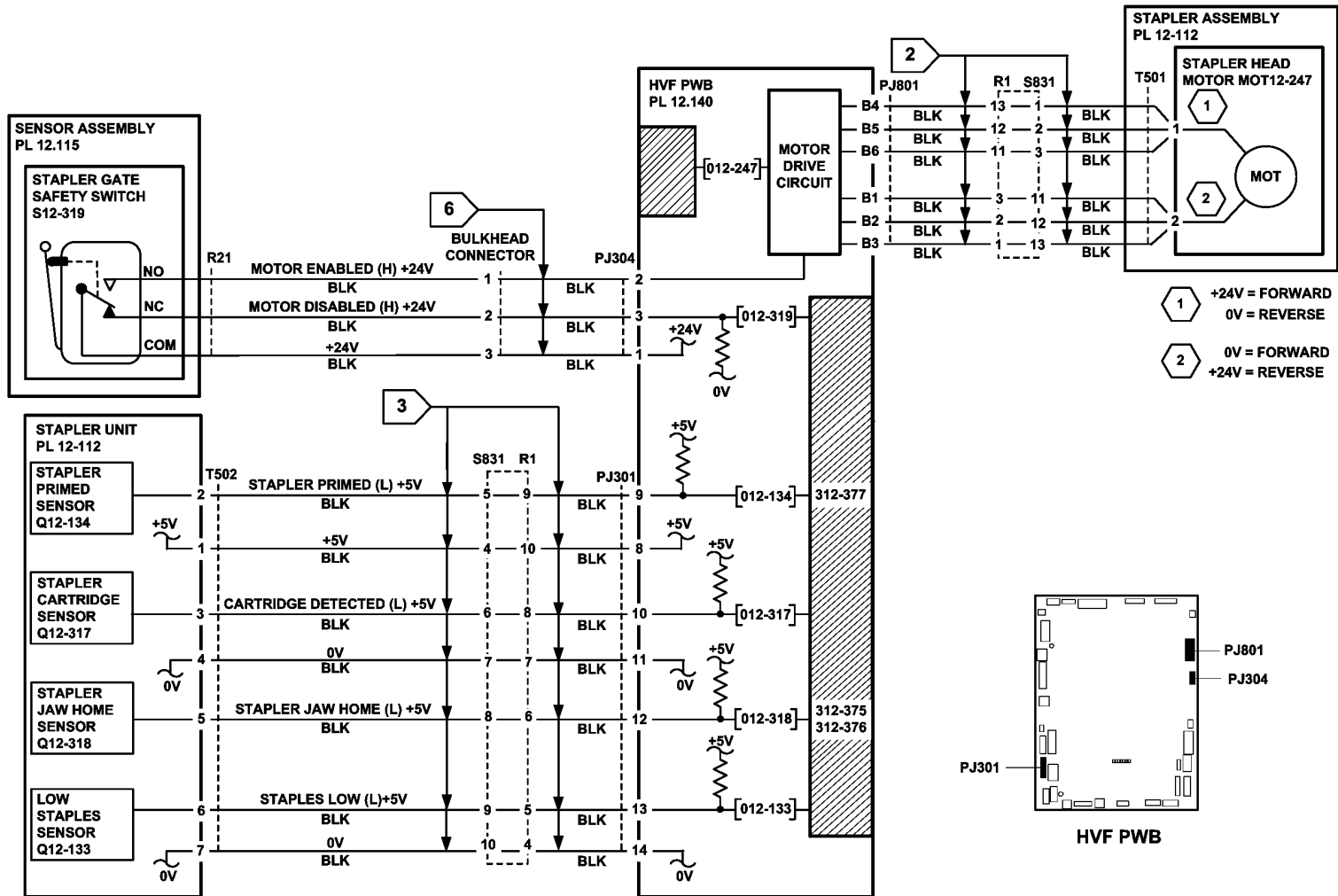


Figure 3 Circuit diagram

TX-1-0135-A

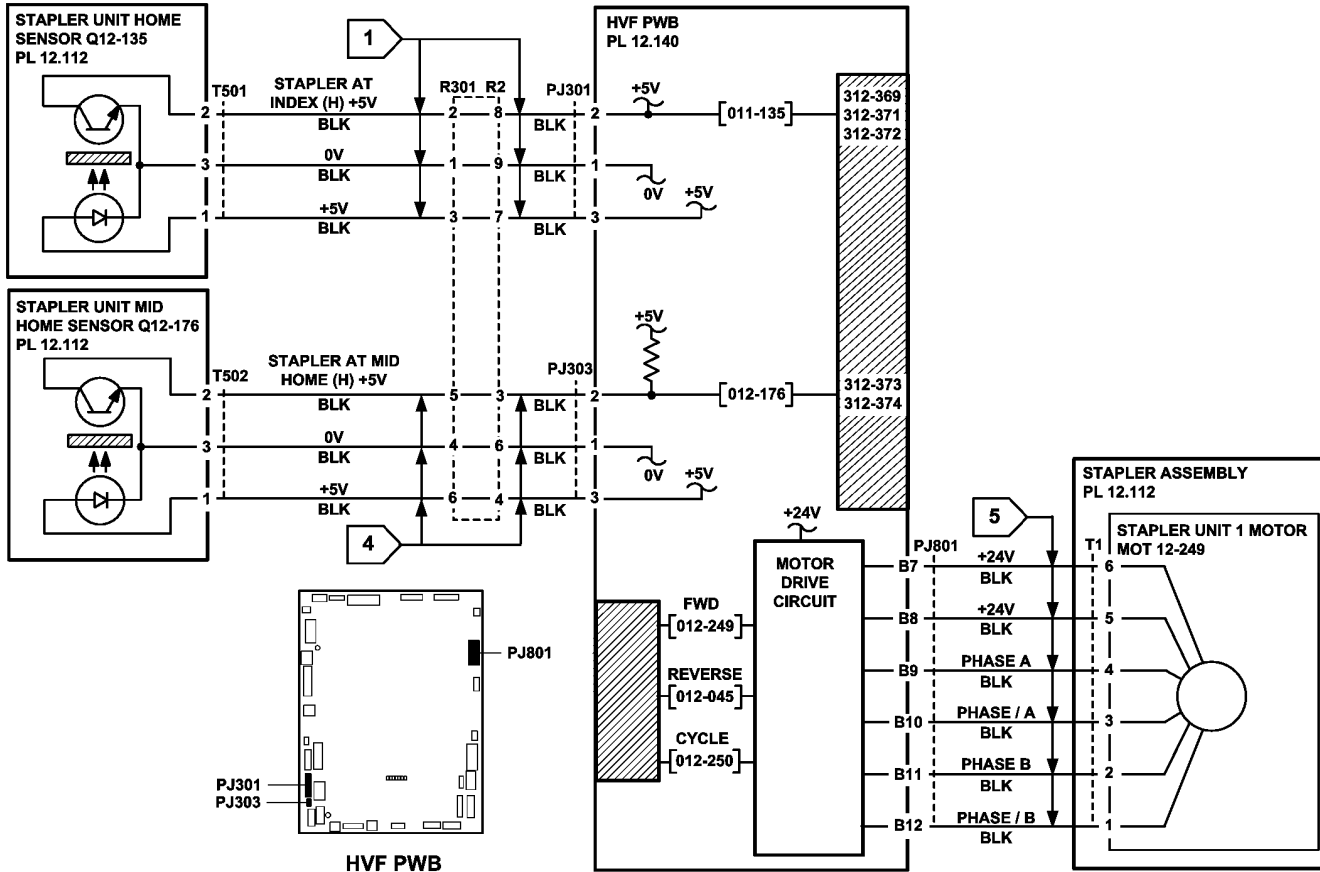


Figure 4 Circuit diagram

TX-1-0163-B

312-392-00-171 to 312-395-00-171 HVF Front Tamper Fault RAP

312-392-00-171 The front tamper did not move from the home position.

312-393-00-171 The front tamper did not return to the home position.

312-394-00-171 The front tamper did not enter the away position.

312-395-00-171 The front tamper did not move from the away position.

Remote Service Actions

Ask the customer to check the items that follow:

- A paper jam that would prevent the front tamper from operating correctly.
- Jams can be caused if the tray settings do not match the paper in the trays. Ask the customer to make sure the tray settings are correct.

If the fault continues, a site visit will be necessary.

On Site Initial Actions

Check for damage or obstructions that would prevent the front tamper from operating correctly.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter dC330, code 012-228 front tamper motor, MOT12-226, **Figure 1**, to move the tamper inboard, then enter 012-226 to move the tamper outboard. **The tamper moves.**

Y N

Go to **Flag 1**. Check the front tamper motor home, MOT12-226. Refer to:

- **GP 10** How to Check a Motor.
- **P/J902. HVF PWB.**
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Front tamper motor assembly, **PL 12.125 Item 6.**
- HVF PWB, **PL 12.140 Item 2.**

Stack the dC330 code 012-180, front tamper home sensor, Q12-180, **Figure 1**. Move the tamper using the control codes 012-226 (outboard) and 012-228 (inboard). **The display changes.**

Y N

Go to **Flag 2**. Check Q12-180. Refer to:

- **GP 11** How to Check a Sensor.
- **P/J901. HVF PWB.**
- **312A-171** HVF Power Distribution RAP.

- **301A** 0V Distribution RAP.
- Install new components as necessary:
- Tamper front home sensor, **PL 12.135 Item 1.**
 - HVF PWB, **PL 12.140 Item 2.**

Stack the dC330 code 012-182, tamper front away sensor, Q12-182, **Figure 1**. Move the tamper using the control codes 012-226 (outboard) and 012-228 (inboard). **The display changes.**

Y N

Go to **Flag 3**. Check Q12-182. Refer to:

- **GP 11** How to Check a Sensor.
- **P/J901. HVF PWB.**
- **312A-171** HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Tamper front away sensor, **PL 12.135 Item 1.**
- HVF PWB, **PL 12.140 Item 2.**

Perform **SCP 5** Final Actions.

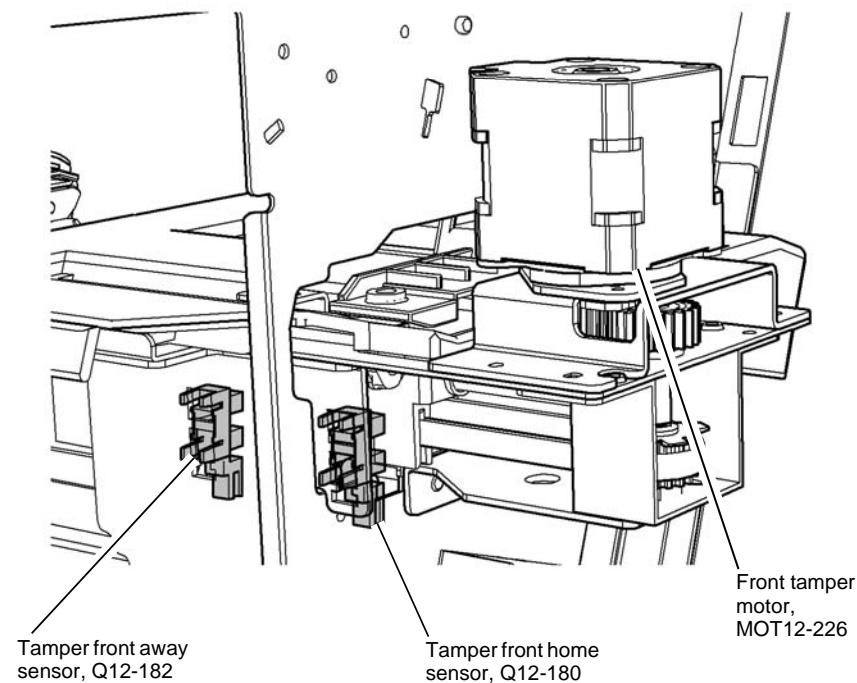


Figure 1 Component location

X-1-0096-A

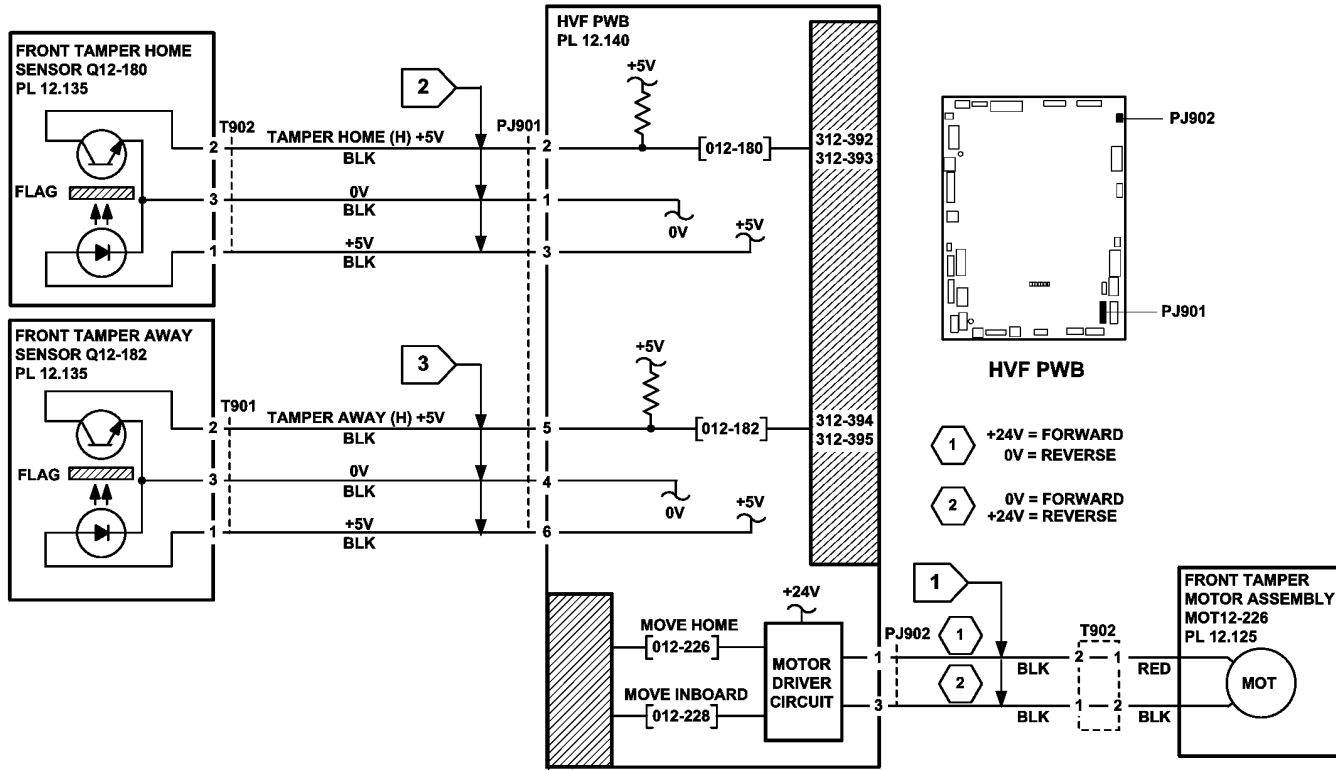


Figure 2 Circuit diagram

TX-1-0136-A

312-396-00-171 to 312-399-00-171 HVF Rear Tamper Fault RAP

312-396-00-171 The rear tamper tray did not move from the home position.

312-397-00-171 The rear tamper tray did not return to the home position.

312-398-00-171 The rear tamper tray did not move from the away position.

312-399-00-171 The rear tamper tray did not return to the away position.

Remote Service Actions

Ask the customer to check the items that follow:

- A paper jam that would prevent the rear tamper from operating correctly.
- Jams can be caused if the tray settings do not match the paper in the trays. Ask the customer to make sure the tray settings are correct.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check for damage or obstructions that would prevent the rear tamper from operating correctly.
- Check that the drive belt is securely in position, [Figure 1](#).

Procedure

Enter the [dC330](#) code 012-229, rear tamper motor, MOT12-227, [Figure 1](#), to move the rear tamper inboard, then enter 012-227 to move the rear tamper outboard. **The tamper moves.**

Y N

Go to [Flag 1](#). Check the rear tamper motor, MOT12-227. Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J801](#). [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Rear tamper assembly, [PL 12.110](#) [Item 24](#).
- HVF PWB, [PL 12.140](#) [Item 2](#).

Stack the [dC330](#) code 012-181, rear tamper home sensor, Q12-181, [Figure 1](#). Move the rear tamper using the codes 012-229 (inboard) and 012-227 (outboard). **The display changes.**

Y N

Go to [Flag 2](#). Check Q12-181. Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J401](#). [HVF PWB](#).

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- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Rear tamper home sensor, [PL 12.110](#) [Item 15](#).
- HVF PWB, [PL 12.140](#) [Item 2](#).

Enter the [dC330](#) code, 012-183, rear tamper away sensor, Q12-183, [Figure 1](#). Use a piece of paper inserted from the rear of the machine to actuate the sensor. **The display changes.**

Y N

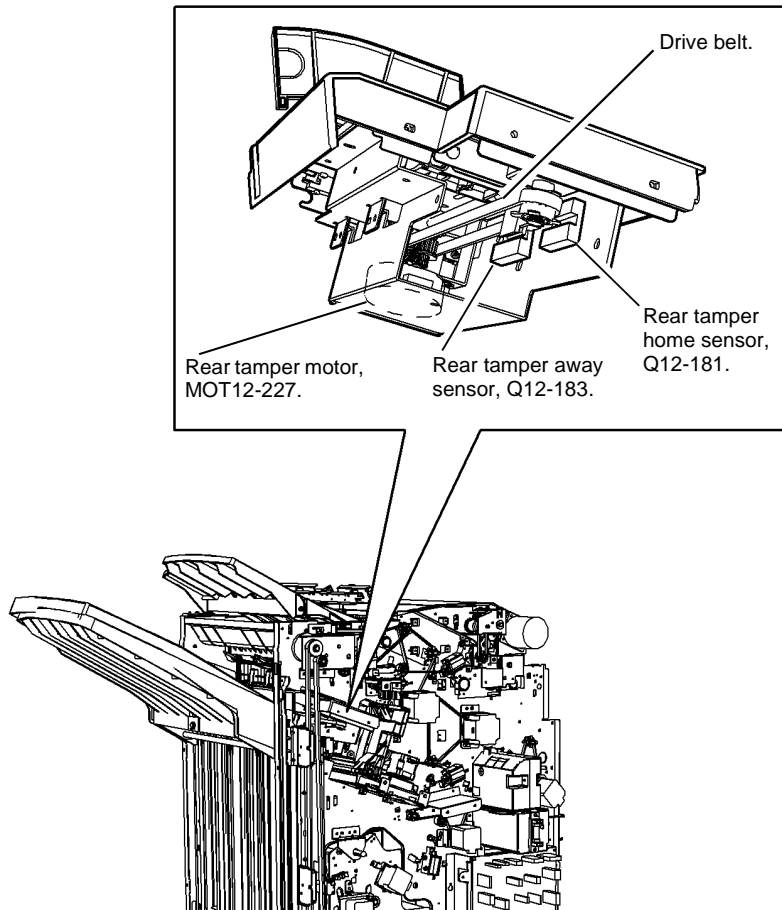
Go to [Flag 3](#). Check Q12-183. Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J401](#). [HVF PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Rear tamper away sensor, [PL 12.110](#) [Item 15](#).
- HVF PWB, [PL 12.140](#) [Item 2](#).

Perform [SCP 5](#) Final Actions.



X-1-0097-A

Figure 1 Component location

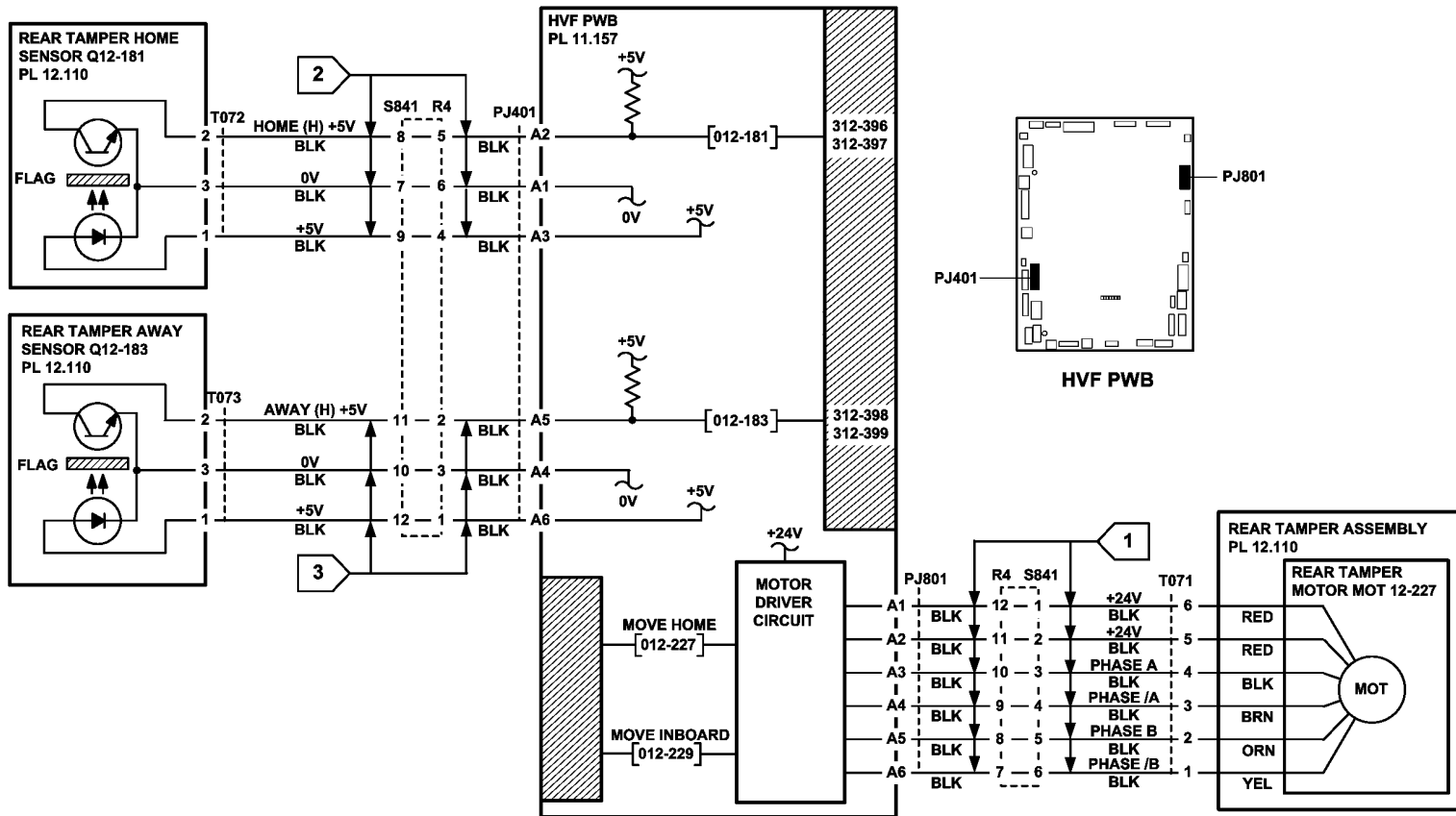


Figure 2 Circuit diagram

TX-1-0137-A

312-403-00-171, 312-413-00-171, 312-414-00-171 HVF BM Staple Head 2 and Stapler Module RAP

312-403-00-171 The booklet maker staple head 2 motor has failed to move.

312-413-00-171 The booklet maker staple head 2 is not detected in the home position.

312-414-00-171 The booklet maker stapler module is not detected in the home (staple head closed) position during hard / soft initialize, or at set boundary.

Remote Service Actions

Ask the customer to check the items that follow:

- That there is paper jam or obstruction that would prevent the stapling unit from cycling.
- That the sheets of staples in the cartridge are feeding one at a time. If staple sheets overlap, they will jam in the cartridge. If necessary, install a new staple cartridge, [PL 12.185 Item 8](#).
- That the customer job does not exceed the capacity of the booklet maker. Refer to [312D-171 Booklet Quality RAP](#) for booklet maker quality specifications.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check that there is no damage or obstruction that would prevent the stapling unit from cycling.

Procedure

Enter [dC330](#), code 012-217 BM staple head carrier closed sensor, Q12-217, [Figure 1](#). Open and close the staple head carrier. **The display changes.**

Y N
Go to [Flag 1](#). Check Q12-217.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J552](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM staple head carrier closed sensor, [PL 12.185 Item 18](#).
- BM PWB, [PL 12.175 Item 10](#).

Remove the HVF front door, refer to [REP 12.1-171 HVF Covers](#). Pull out the BM module. Remove the staple head 2 cover, [PL 12.185 Item 14](#). Enter [dC330](#), code 012-220 BM SH2 home switch, S12-220. Manually rotate the staple head gears to actuate the switch. **The display changes.**

Y N
Go to [Flag 2](#). Check the BM SH 2 home switch, S12-220.
Refer to:

- [GP 13](#), How to Check a Switch.

- [P/J551](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- BM staple head assembly, [PL 12.185 Item 7](#).
- BM PWB, [PL 12.175 Item 10](#).

Enter [dC330](#), code 012-275 to run the BM SH2 motor. **The staple head cycled.**

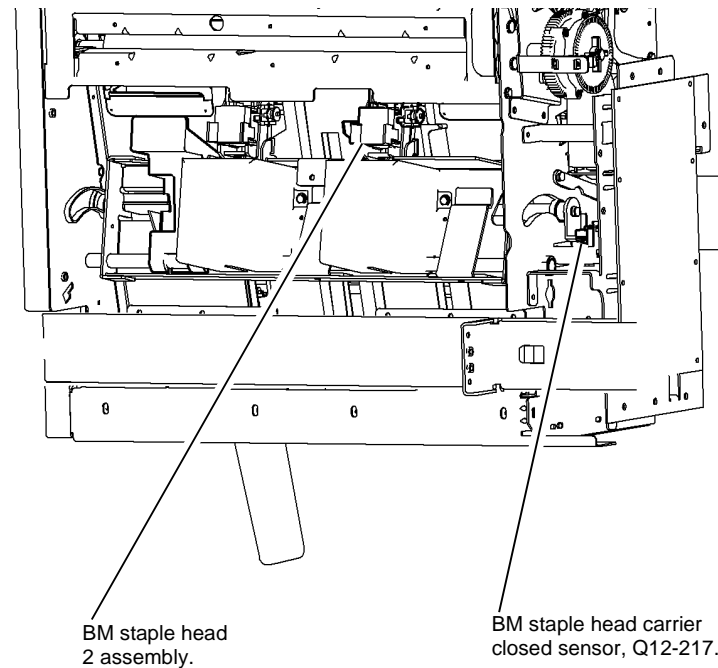
Y N
Go to [Flag 3](#). Check the wiring and connectors. **The wiring and connectors are good.**

Y N
Repair the wiring or connectors, [REP 1.1](#).

Install a new BM staple head 2, [PL 12.185 Item 7](#).

The fault may be intermittent, check for damaged wiring or bad connectors, [REP 1.1](#). If necessary install new components:

- BM staple head carrier closed sensor, [PL 12.185 Item 18](#).
- BM staple head assembly, [PL 12.185 Item 7](#).
- BM PWB, [PL 12.175 Item 10](#).



X-1-0098-A

Figure 1 Component location

A

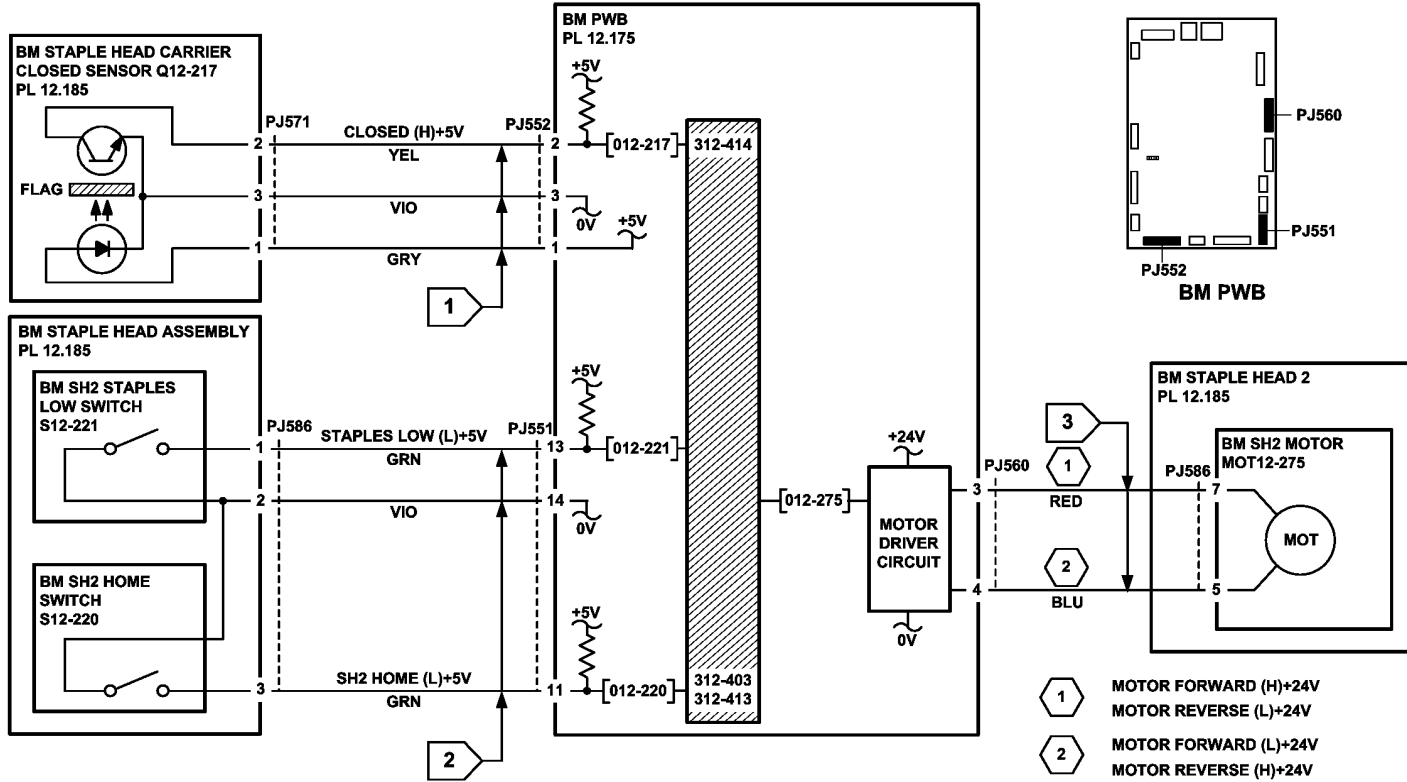


Figure 2 Circuit diagram

TX-1-0138-A

312-415-00-171 HVF BM Crease Roll Gate Home RAP

312-415-00-171 The crease roll gate is not at the home position.

Remote Service Actions

Ask the customer to check for a jam or other obstruction that can prevent the crease roll gate mechanism from moving. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the parts that follow for damage:

- Crease roll gate rack gears, [PL 12.180 Item 8](#).
- Crease roll gate racks, [PL 12.180 Item 14](#).

Procedure

Enter [dC330](#) code 012-222. Actuate the BM crease roll gate home sensor, Q12-222, [Figure 1](#).

The display changes.

Y N
Go to [Flag 1](#). Check Q12-222.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J552](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- [BM PWB](#), [PL 12.175 Item 2](#).
- [BM crease roll gate home sensor](#), [PL 12.175 Item 9](#).

NOTE: The BM crease roll gate motor has two component control codes:

- 12-273 cycles the crease roll gate.
- 12-276 opens the crease roll gate.

Enter [dC330](#), code 012-273 to cycle the BM crease roll gate motor, MOT12-273, [Figure 1](#).

The motor runs.

Y N
Go to [Flag 2](#) and [Flag 3](#). Check MOT12-273.
Refer to:

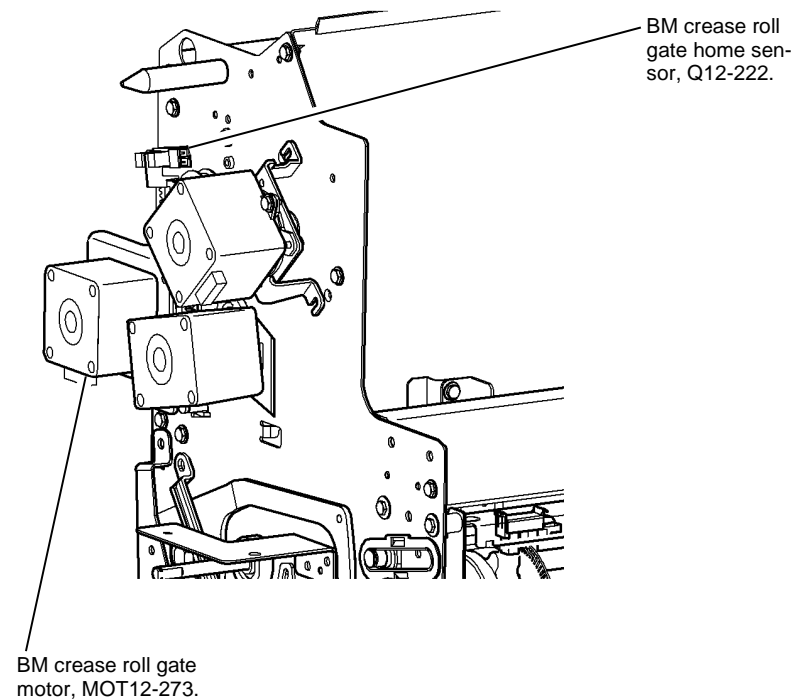
- [GP 10](#) How to Check a Motor.
- [P/J555](#). [BM PWB](#).
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- [BM PWB](#), [PL 12.175 Item 10](#).

- A
- [BM crease roll gate motor](#), [PL 12.175 Item 8](#).

The fault may be intermittent, check for damaged wiring or bad connectors, [REP 1.1](#). If necessary install a new [BM PWB](#), [PL 12.175 Item 10](#).



X-1-0099-A

Figure 1 Component location

A

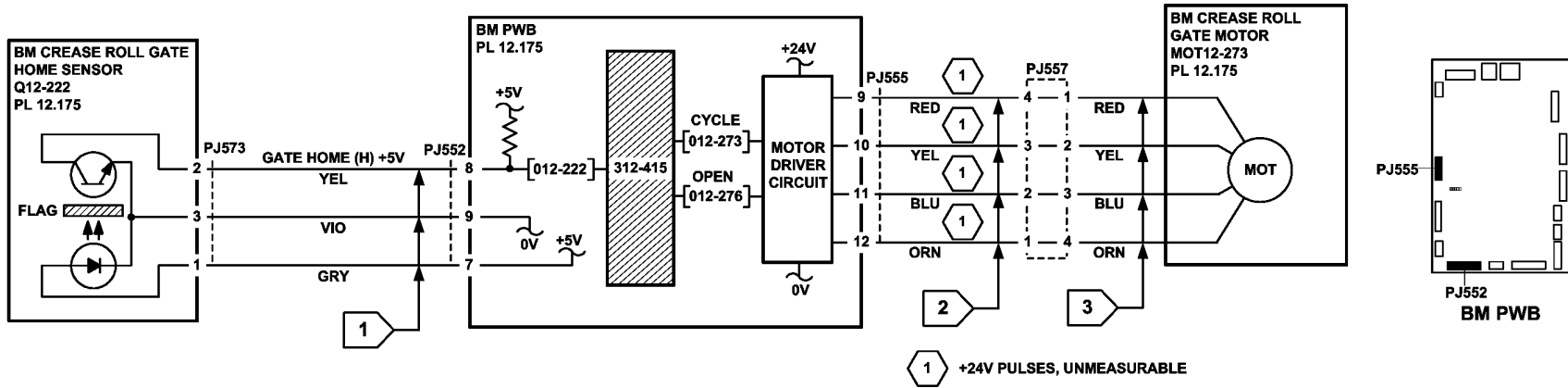


Figure 2 Circuit diagram

TX-1-0139-A

312-417-00-171, 312-418-00-171 HVF BM Flapper RAP

312-417-00-171 The booklet maker flapper did not return to the home position.

312-418-00-171 The booklet maker flapper did not move from the home position.

Remote Service Actions

Ask the customer to check for a paper jam or obstructions that would prevent the BM flapper from rotating. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check for damage or obstructions that would prevent the BM flapper from rotating.

Procedure

NOTE: All HVF BM interlocks must be made to supply +24V to the motors.

Enter dC330, code 012-271 to check the BM flapper motor, MOT12-271, Figure 1. The BM flapper rotates.

Y N
Go to Flag 2. Check MOT12-271.
Refer to:

- GP 10 How to Check a Motor.
- P/J560. BM PWB.
- 312A-171, HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- BM flapper motor, PL 12.175 Item 1.
- BM PWB, PL 12.175 Item 10.
- BM flapper, PL 12.150 Item 23.

Enter dC330, code 012-207. Actuate the flapper home sensor, Q12-207, Figure 1. The display changes.

Y N
Go to Flag 1. Check Q12-207.
Refer to:

- GP 11 How to Check a Sensor.
- P/J551. BM PWB.
- 312A-171, HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Flapper home sensor, PL 12.150 Item 12.

A
• BM PWB, PL 12.175 Item 10.
Perform SCP 5 Final Actions.

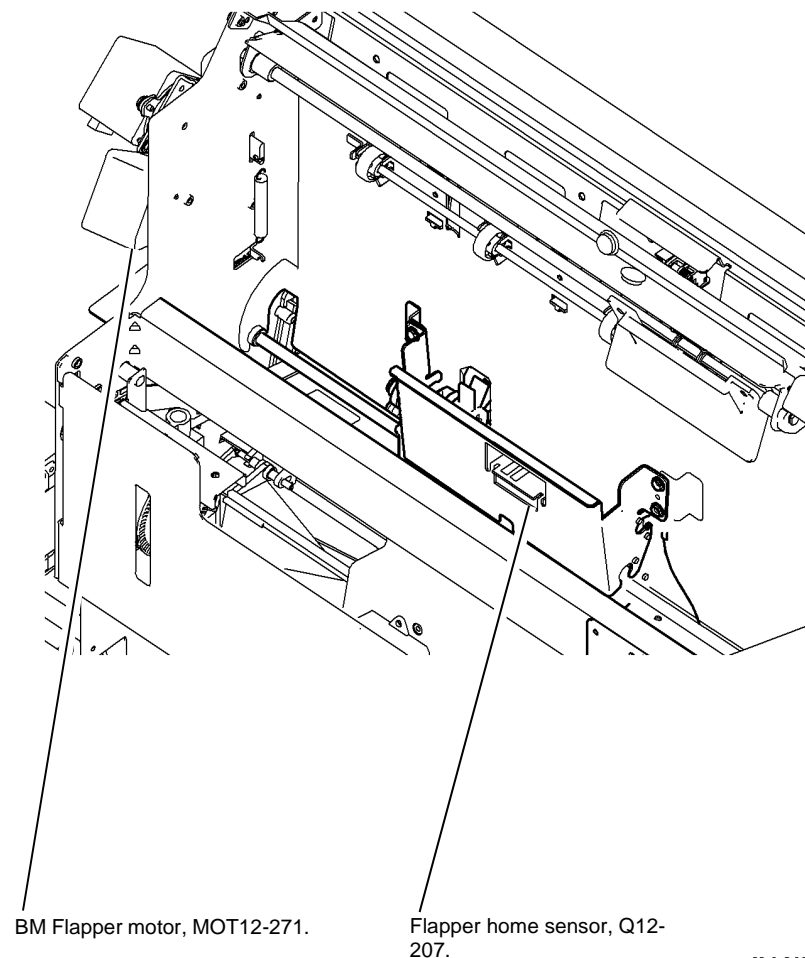


Figure 1 Component location

X-1-0100-A

A

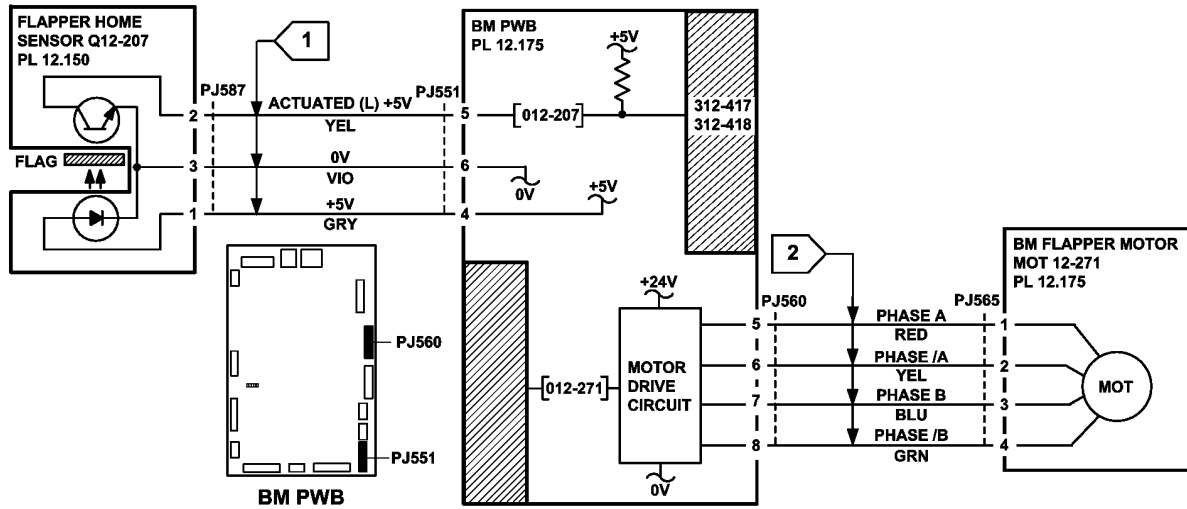


Figure 2 Circuit diagram

TX-1-0140-A

312-450-00-171, 312-456-00-171 to 312-459-00-171 HVF Ejector Module RAP

312-450-00-171 The ejector module motor has stalled

312-456-00-171 The ejector module did not return to the home position.

312-457-00-171 The ejector module did not move from the home position.

312-458-00-171 The ejector module did not return to the out position.

312-459-00-171 The ejector module did not move from the out position.

Remote Service Actions

Ask the customer to check for a paper jam or obstructions that would prevent the ejector module from operating correctly. If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check for damage or obstructions that would prevent the ejector module from operating correctly.
- Check the ribbon cable on the ejector for kinks and potential breaks in the conductors.
- Go to [312K-171 HVF Initialization Failure RAP](#) to determine when the fault occurs.
- Check the harness to the ejector unit and the connectors under the unit.

Procedure

Enter the **dC330** code 012-184, ejector home sensor, Q12-184, [Figure 1](#). Stack the **dC330** code 012-249 to move the stapler unit inboard. This action moves the stapler unit inboard, and also moves the ejector module to the out position. **The display changes.**

Y N

The ejector module moved to the out position.

Y N

Go to [Flag 2](#). Check the ejector motor, MOT12-234. Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J802. HVF PWB.](#)
- [312A-171](#), HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Ejector assembly, [PL 12.110 Item 2.](#)
- HVF PWB, [PL 12.140 Item 2.](#)

Go to [Flag 1](#). Check the ejector home sensor, Q12-184, [Figure 1](#). Refer to:

- [GP 11](#) How to Check a Sensor.

A

- [P/J401. HVF PWB.](#)
- [312A-171](#), HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Ejector assembly, [PL 12.110 Item 2.](#)
- HVF PWB, [PL 12.140 Item 2.](#)

Exit diagnostics mode, selecting the re-boot option. This returns the ejector module to the home position. Enter the **dC330** code, 12-185, ejector out sensor, Q12-185, [Figure 1](#). Stack the **dC330** code, 12-249 to move the stapler unit inboard. **The display changes.**

Y N

Go to flag 3. Check the ejector out sensor, Q12-185. Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J401. HVF PWB.](#)
- [312A-171](#), HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Ejector assembly, [PL 12.110 Item 2.](#)
- HVF PWB, [PL 12.140 Item 2.](#)

Exit the diagnostics mode, selecting the re-boot option. This returns the ejector module to the home position. Enter the **dC330** code 012-096, ejector motor encoder sensor, Q12-096, [Figure 1](#). Stack the **dC330** code, 12-249 to move the stapler unit inboard. **The display changes condition for a few seconds.**

Y N

Go to [Flag 4](#). Check Q12-096. Refer to:

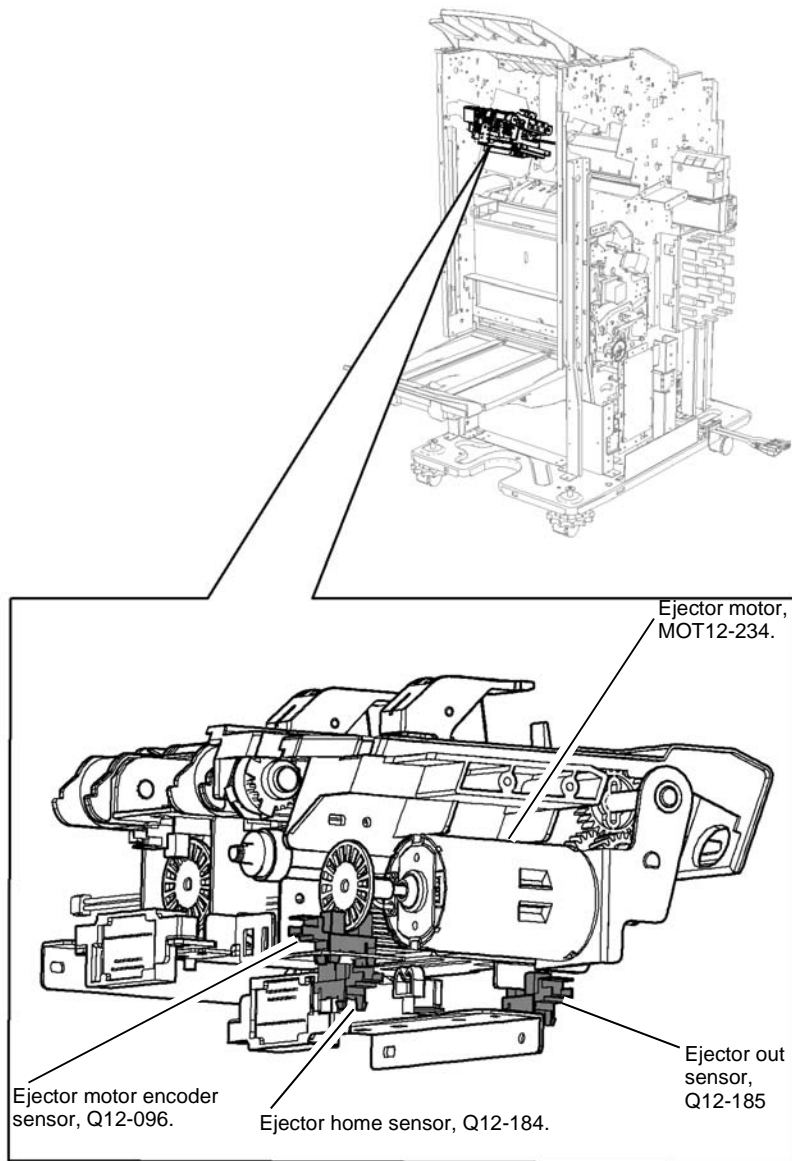
- [GP 11](#) How to Check a Sensor.
- [P/J401. HVF PWB.](#)
- [312A-171](#), HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Ejector assembly, [PL 12.110 Item 2.](#)
- HVF PWB, [PL 12.140 Item 2.](#)

Perform [SCP 5](#) Final Actions.

A



X-1-0101-A

Figure 1 Component location

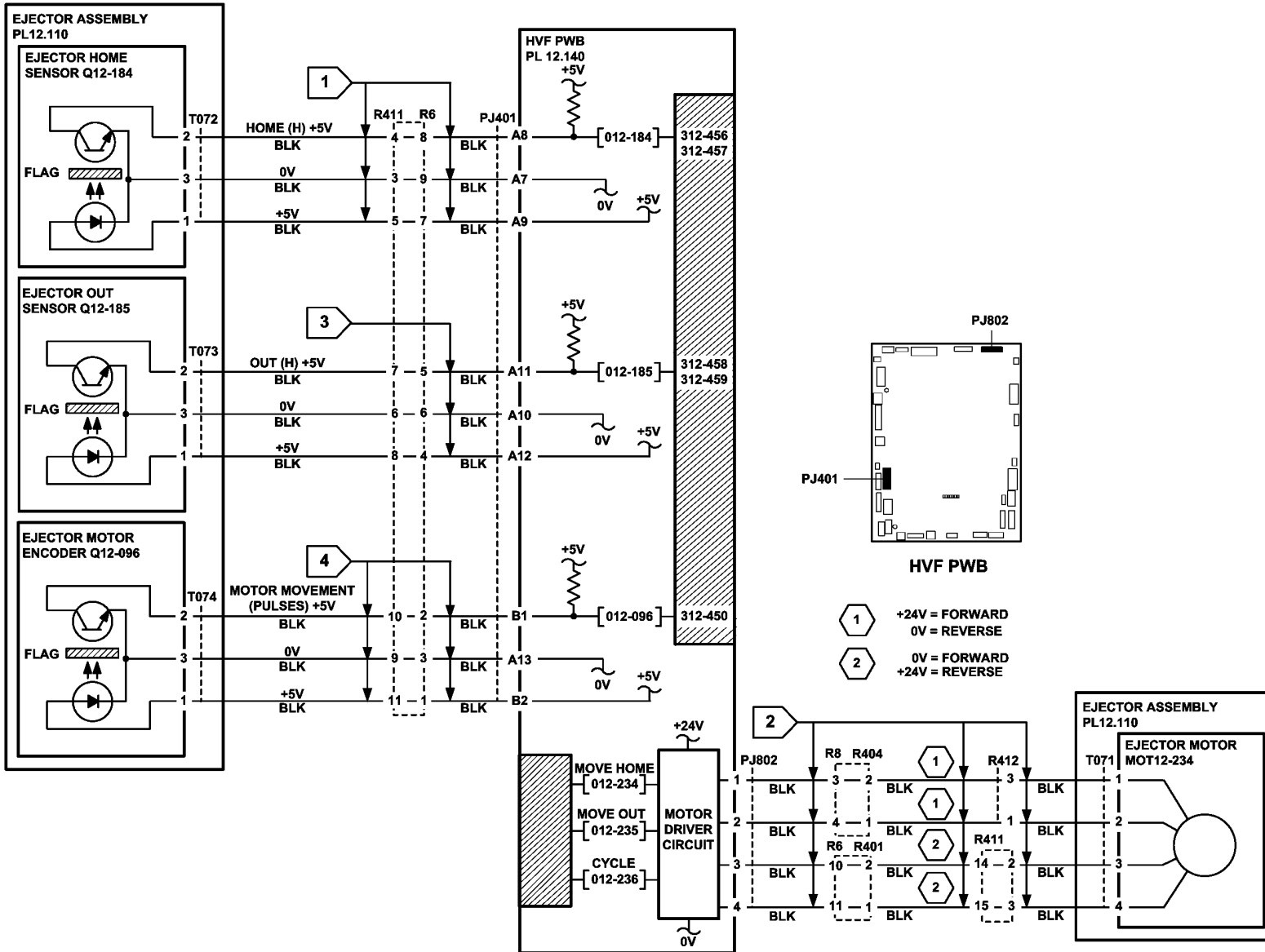


Figure 2 Circuit diagram

TX-1-0141-A

312-451-00-171 to 312-455-00-171 HVF Ejector Roll and Lower Paddle Fault RAP

312-451-00-171 The ejector roll motor has stalled.

312-452-00-171 The ejector roll did not return to the home position.

312-453-00-171 The ejector roll did not move from the home position.

312-454-00-171 The lower paddle has failed to return to the home position.

312-455-00-171 The lower paddle has failed to move from the home position.

Remote Service Actions

Ask the customer to check for any damage or obstructions that would prevent the ejector roll and lower paddle from operating correctly. If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter [dC330](#) code, 12-242 to lower the bin 1 stacker tray. Enter [dC330](#) code 012-249, staple unit 1 forward. This moves the ejector module to the out position. Enter [dC330](#) code 012-098, ejector plate home sensor, Q12-098, [Figure 1](#). Manually turn the ejector belts a few centimeters (inches). **The display changes.**

Y N
Go to [Flag 1](#). Check Q12-098. Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J401](#). HVF PWB.
- [312A-171](#), HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Ejector assembly, [PL 12.110 Item 2](#).
- HVF PWB, [PL 12.140 Item 2](#).

Enter the [dC330](#) code 012-097, ejector roll motor encoder sensor, Q12-097. Enter the code, 12-233 to rotate the ejector roll motor, MOT12-233, [Figure 1](#), one cycle of the ejector plates in the forward direction. **The display changes.**

Y N
The ejector roll motor turned.
Y N
Go to [Flag 2](#). Check MOT12-233. Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J802](#). HVF PWB.
- [312A-171](#) HVF Power Distribution RAP.

A B

A B

- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Ejector assembly, [PL 12.110 Item 2](#).
- HVF PWB, [PL 12.140 Item 2](#).

Go to [Flag 3](#). Check the ejector roll motor encoder sensor, Q12-097. Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J401](#). HVF PWB
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Ejector assembly, [PL 12.110 Item 2](#).
- HVF PWB, [PL 12.140 Item 2](#).

Enter [dC330](#) code 012-099, ejector lower paddle home switch. Rotate the lower paddle upwards and inwards for one full rotation, [Figure 3](#). **The voltage changes from a logic high to a low, and then back to high.**

Y N
Go to [Flag 4](#). Check the ejector lower paddle home switch, S12-099, [Figure 2](#). Refer to:

- [GP 13](#) How to Check a Switch
- [P/J401](#). HVF PWB.
- [312A-171](#), HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Ejector assembly, [PL 12.110 Item 2](#).
- HVF PWB, [PL 12.140 Item 2](#).

Enter [dC330](#) code 012-202, Ejector paper present sensor, Q12-202. Actuate the ejector paper present sensor by placing a sheet of paper on the ejector module. **The display changes.**

Y N
Go to [Flag 5](#). Check the ejector paper present sensor, Q12-202. Refer to:

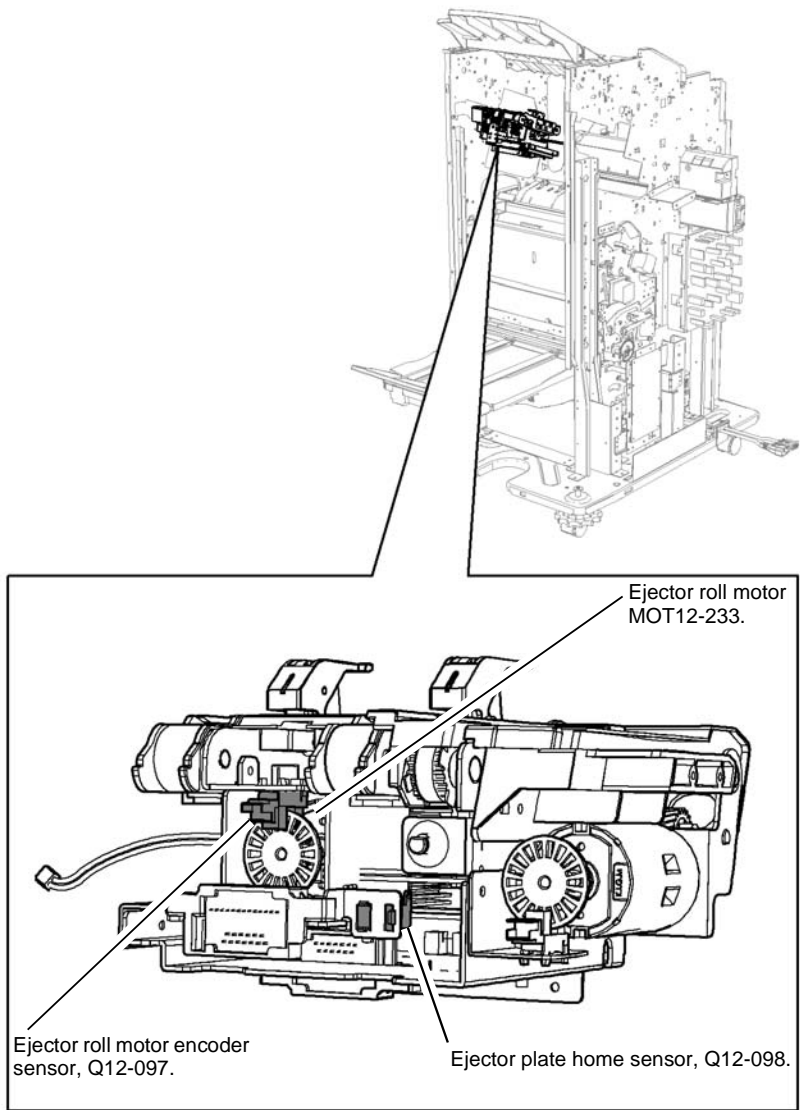
- [GP 11](#) How to Check a Sensor.
- [P/J401](#). HVF PWB.
- [312A-171](#), HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Ejector assembly, [PL 12.110 Item 2](#).
- HVF PWB, [PL 12.140 Item 2](#).

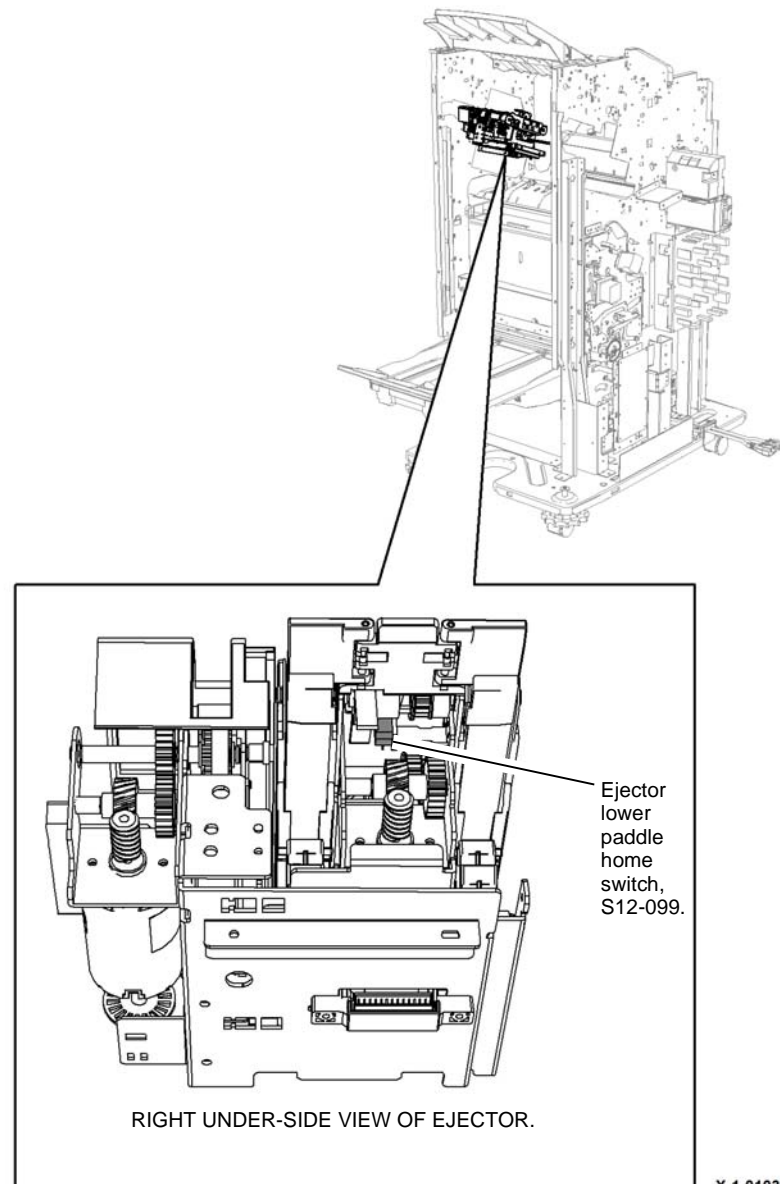
The fault may be intermittent. Check the wiring between the ejector assembly, [PL 12.110 Item 2](#) and the HVF PWB, [PL 12.140 Item 2](#). If the fault persists install new components as necessary.

- Ejector assembly, [PL 12.110 Item 2](#).
- HVF PWB, [PL 12.140 Item 2](#).



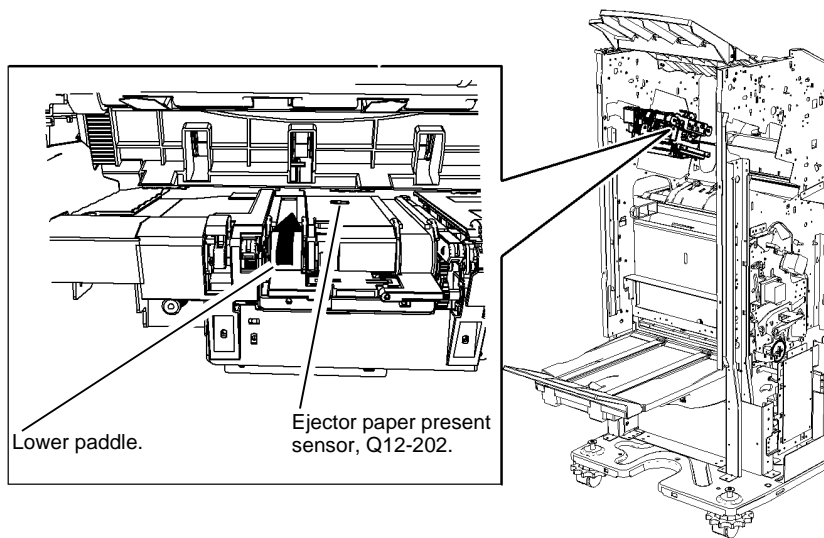
X-1-0102-A

Figure 1 Component location



X-1-0103-A

Figure 2 Component location



X-1-0104-A

Figure 3 Component location

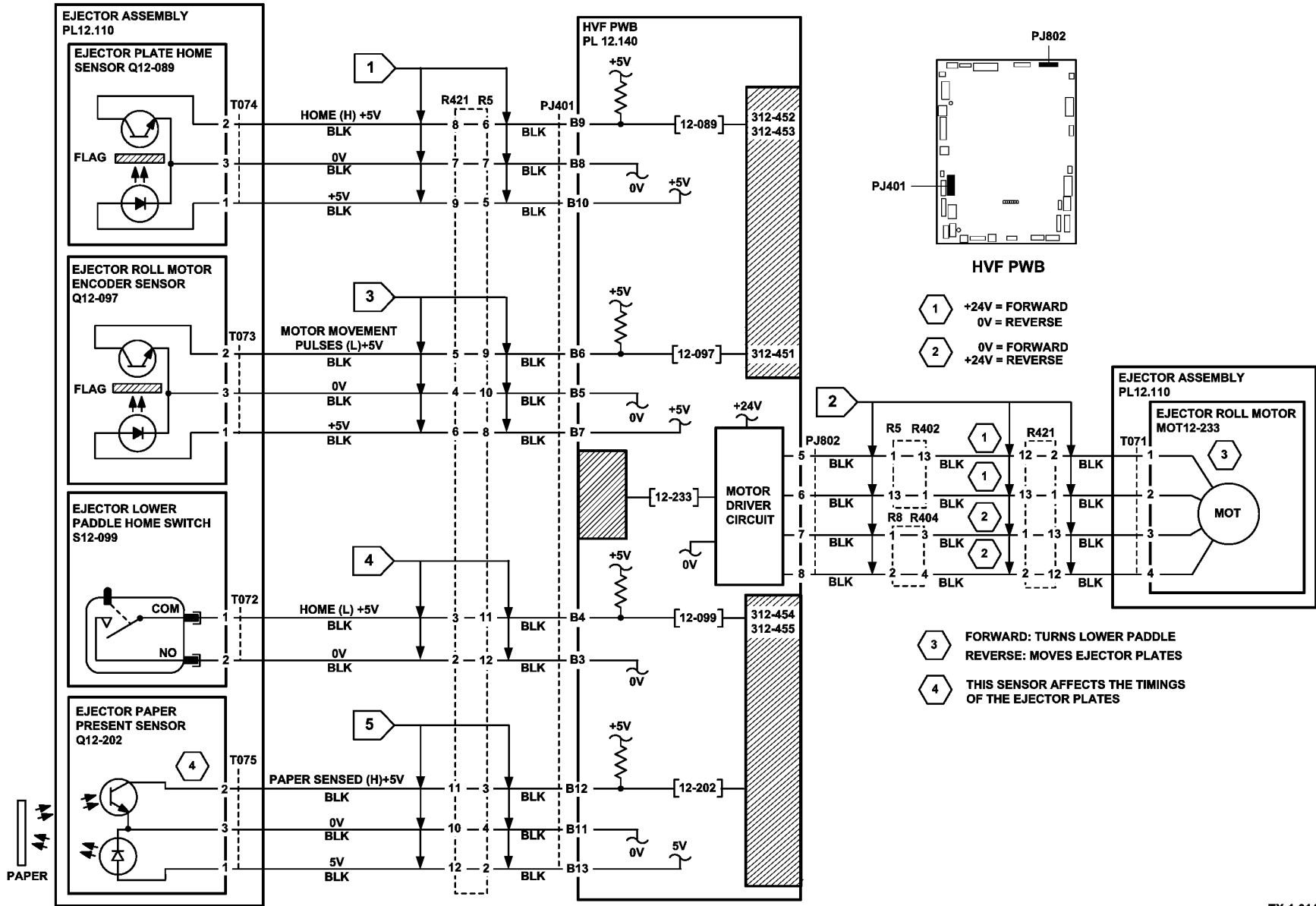


Figure 4 Circuit diagram

TX-1-0142-A

312-460-00-171 to 312-462-00-171 HVF Bin 1 Position RAP

312-460-00-171 Bin 1 motor has stalled.

312-461-00-171 Bin 1 did not actuate the bin 1 upper level sensor during stacking.

312-462-00-171 Bin 1 did not leave the bin 1 upper level sensor during stacking or the stacker failed to initialize correctly.

Remote Service Actions

- Ask the customer to check that bin 1 is not damaged and there are no obstructions that would prevent bin 1 from moving.
- Ask the customer to press the pause to unload button to lower bin 1. Press again the pause to unload button to raise bin 1.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check that bin 1 is not damaged and there are no obstructions that would prevent bin 1 from moving.

Procedure

NOTE: The bin 1 90% full sensor and the bin 1 lower limit switch are mounted on the same bracket. This bracket can be in either of two positions. It is in the upper position, only when a tri-folder module is installed.

NOTE: The bin 1 upper level sensor controls the height of the tray during normal use. The sensor is in two parts: the receiver at the rear of the tray and the transmitter at the front of the tray. Only the LED of the front sensor is used and only the light sensitive transistor of the rear sensor is used. Refer to Figure 4.

Place a 1cm (0.4 inch) stack of paper on the bin 1 tray. Switch off the machine, then switch on the machine. **The bin 1 tray moves during initialization.**

Y N

Ensure the tray is not at the upper limit, enter the dC330 code 012-190, bin 1 upper limit switch, S12-190, Figure 1. Manually actuate the switch. **The display changes.**

Y N

Go to Flag 5. Check S12-190. Refer to:

- GP 13 How to Check a Switch.
- P/J602. HVF PWB.
- 312A-171, HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Bin 1 upper limit switch, PL 12.105 Item 7.
- HVF PWB, PL 12.140 Item 2.

A B

A B

Ensure the tray is not at the lower limit, enter the dC330 code 012-191, bin 1 lower limit switch, S12-191, Figure 1. Manually actuate the switch. **The display changes.**

Y N

Go to Flag 6. Check S12-191. Refer to:

- GP 13 How to Check a Switch.
- P/J602. HVF PWB.
- 312A-171, HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Bin 1 lower limit switch, PL 12.105 Item 7.
- HVF PWB, PL 12.140 Item 2.

Go to Flag 1. Check the bin 1 elevator motor, MOT12-241, Figure 1. Refer to:

- GP 10 How to Check a Motor
- P/J202. HVF PWB.
- 312A-171, HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Bin 1 elevator motor, PL 12.105 Item 10.
- HVF PWB, PL 12.140 Item 2.

Enter the dC330 code, 12-163, bin 1 motor encoder sensor, Q12-063, Figure 1. Turn the encoder wheel. **The display changes.**

Y N

Go to Flag 2. Check Q12-163. Refer to:

- GP 11 How to Check a Sensor
- P/J601. HVF PWB.
- 312A-171, HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Bin 1 motor encoder sensor, PL 12.105 Item 3.
- HVF PWB, PL 12.140 Item 2.

Enter the dC330 code 012-188, bin 1 upper level sensor, Q12-188, Figure 1. Remove the paper from the tray. Actuate the sensor by breaking the light beam from the front transmitter to the rear receiver. **The display changes.**

Y N

Go to Flag 3 and Flag 4. Check the two parts of the bin 1 upper level sensor, Q12-188. Refer to:

- GP 11 How to Check a Sensor.
- P/J601, P/J901. HVF PWB.
- 312A-171, HVF Power Distribution RAP.

Install new components as necessary:

- Bin 1 upper level sensor (transmitter), PL 12.110 Item 20.
- Bin 1 upper level sensor (receiver), PL 12.110 Item 16.
- HVF PWB, PL 12.140 Item 2.

Enter the dC330 code 012-187, bin 1 90% full sensor, Q12-187, Figure 1. Actuate the sensor using a piece of paper. **The display changes.**

- Y N**
Go to **Flag 7**. Check the wiring and repair as necessary. Check Q12-187. Refer to:
- **GP 11** How to Check a Sensor.
 - **P/J601. HVF PWB.**
 - **312A-171**, HVF Power Distribution RAP.
 - **301A 0V** Distribution RAP.
- Install new components as necessary:
- Bin1 90% full sensor, **PL 12.105 Item 3.**
 - HVF PWB, **PL 12.140 Item 2.**

Enter **dC330**. Add code 012-172, pressing & support A sensor to the active list. Add code 012.323, pressing and support motor to the active list. Press start on the sensor then press start on the motor and observe the display for the pressing and support sensor. **The display changes.**

- Y N**
Go to **Flag 8**. Check the pressing and support sensor A, Q12-172. Refer to:
- **GP 11** How to Check a Sensor.
 - **P/J402. HVF PWB.**
 - **312A-171**, HVF Power Distribution RAP.
 - **301A 0V** Distribution RAP.
- Install new components as necessary:
- Pressing and support sensor A, **PL 12.110 Item 13.**
 - HVF PWB, **PL 12.140 Item 2.**

Enter **dC330**. Remove code 012-172, pressing & support A sensor. Add code 012-171, pressing & support B sensor to the active list. Press start on the sensor then press start on the motor and observe the display for the pressing and support sensor. **The display changes.**

- Y N**
Go to **Flag 8**. Check the pressing and support sensor B, Q12-171. Refer to:
- **GP 11** How to Check a Sensor.
 - **P/J402. HVF PWB.**
 - **312A-171**, HVF Power Distribution RAP.
 - **301A 0V** Distribution RAP.
- Install new components as necessary:
- Pressing and support sensor B, **PL 12.110 Item 17.**
 - HVF PWB, **PL 12.140 Item 2.**

Enter **dC330**. Remove code 012-171, pressing & support B sensor. Add code 012-173, pressing & support C sensor to the active list. Press start on the sensor then press start on the motor and observe the display for the pressing and support sensor. **The display changes.**

- Y N**
Go to **Flag 8**. Check the pressing and support sensor C, Q12-173. Refer to:
- **GP 11** How to Check a Sensor
 - **P/J402. HVF PWB.**
 - **312A-171**, HVF Power Distribution RAP.
 - **301A 0V** Distribution RAP.
- Install new components as necessary:
- Pressing and support sensor C, **PL 12.110 Item 17.**

- C**
- HVF PWB, **PL 12.140 Item 2.**
- Perform **SCP 5** Final Actions.

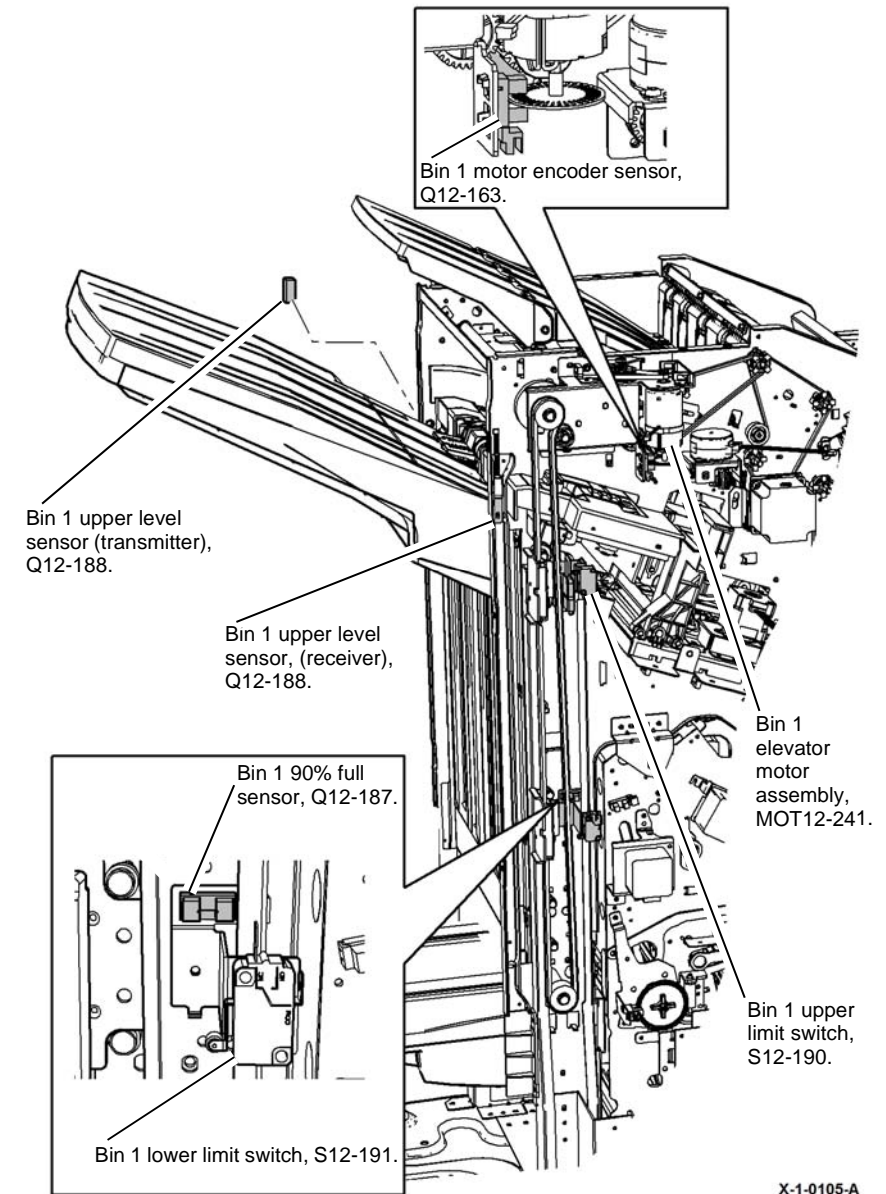
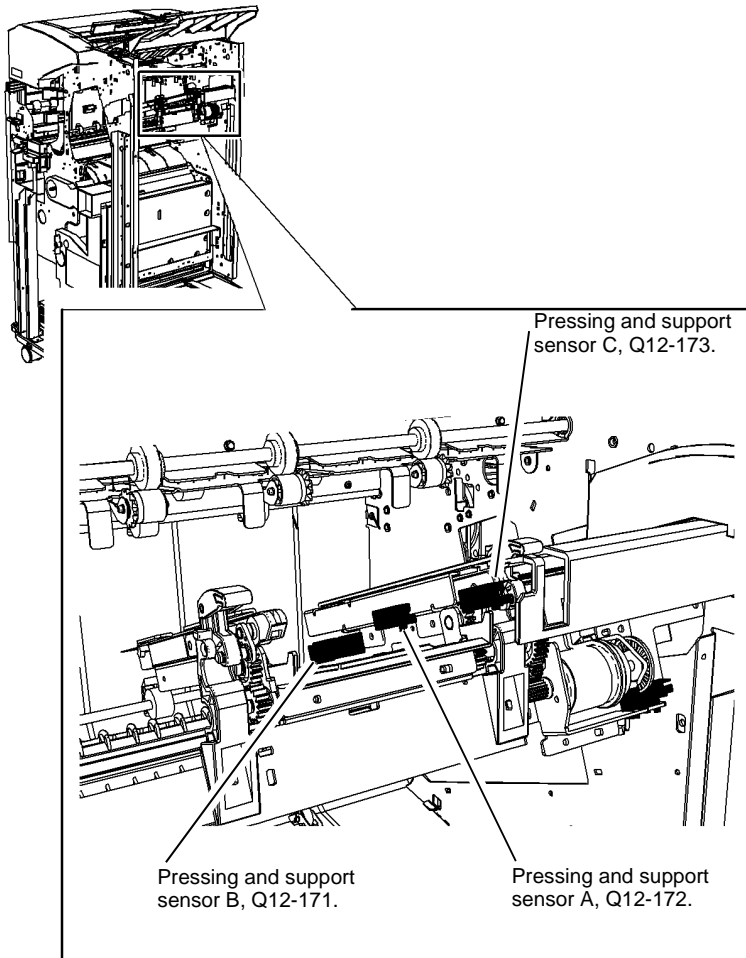


Figure 1 Component location

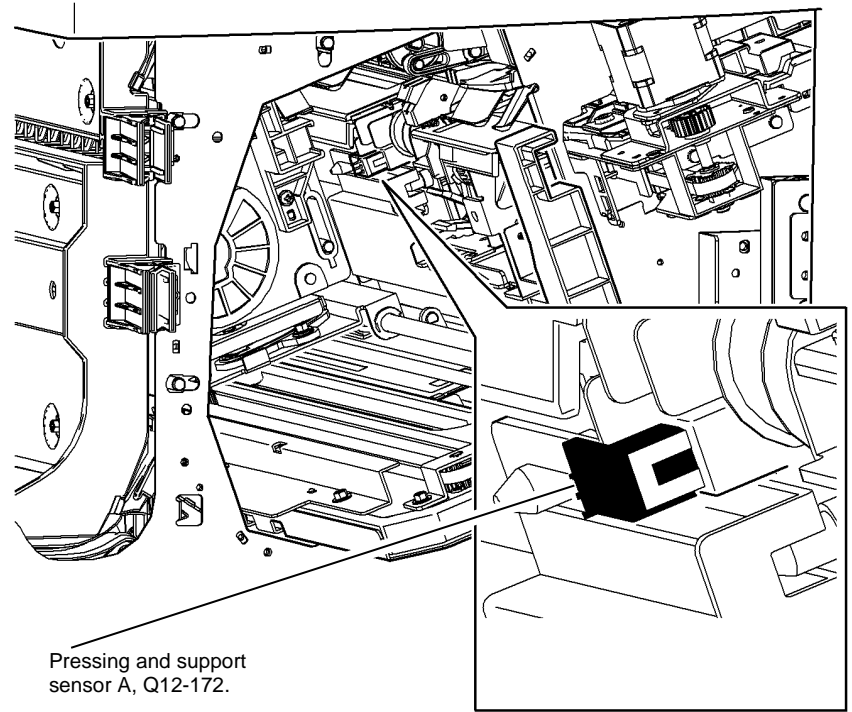
X-1-0105-A

C



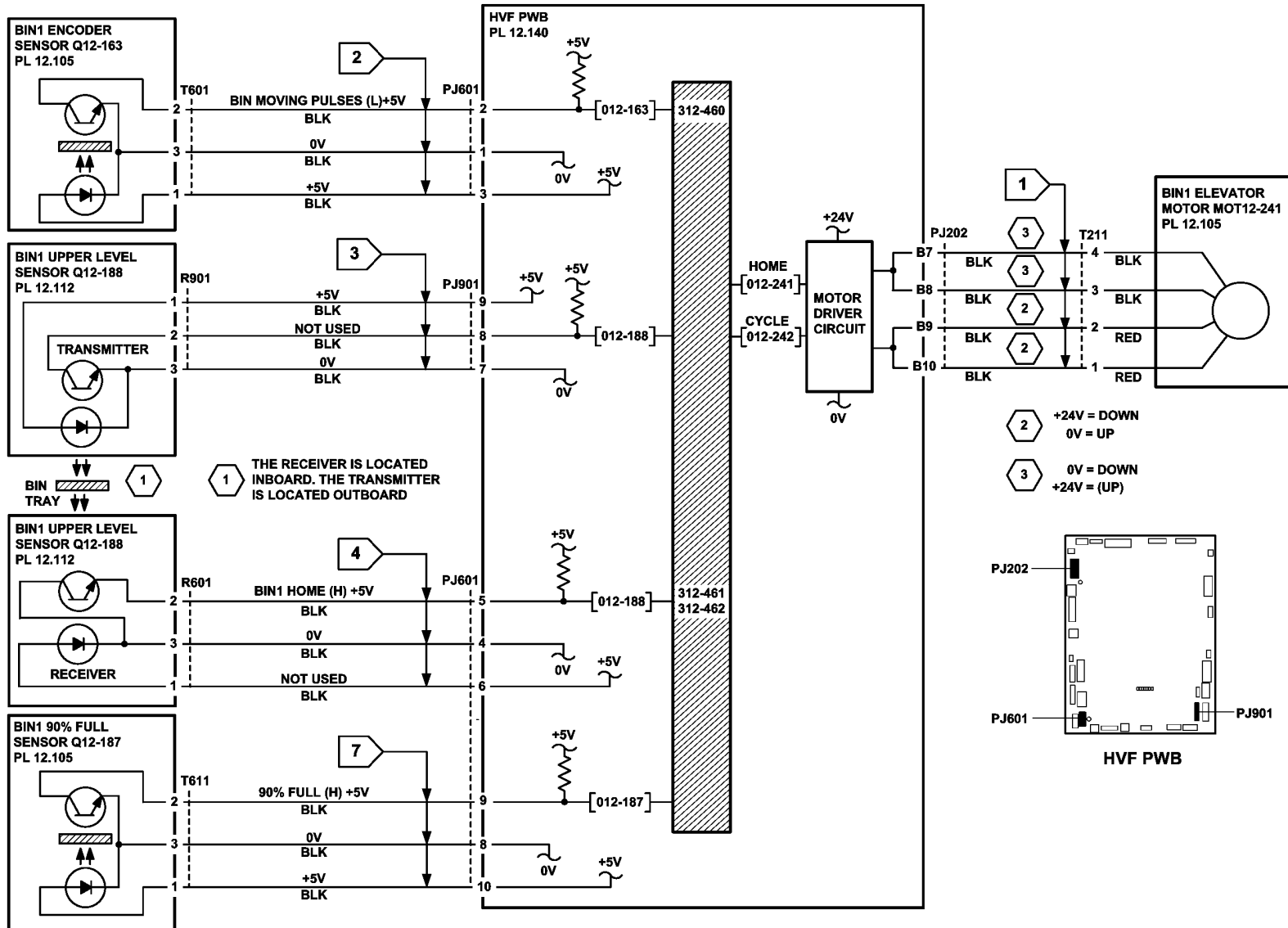
X-1-0895-A

Figure 2 Component location



X-1-0896-A

Figure 3 Component location



TX-1-0143-A

Figure 4 Circuit diagram

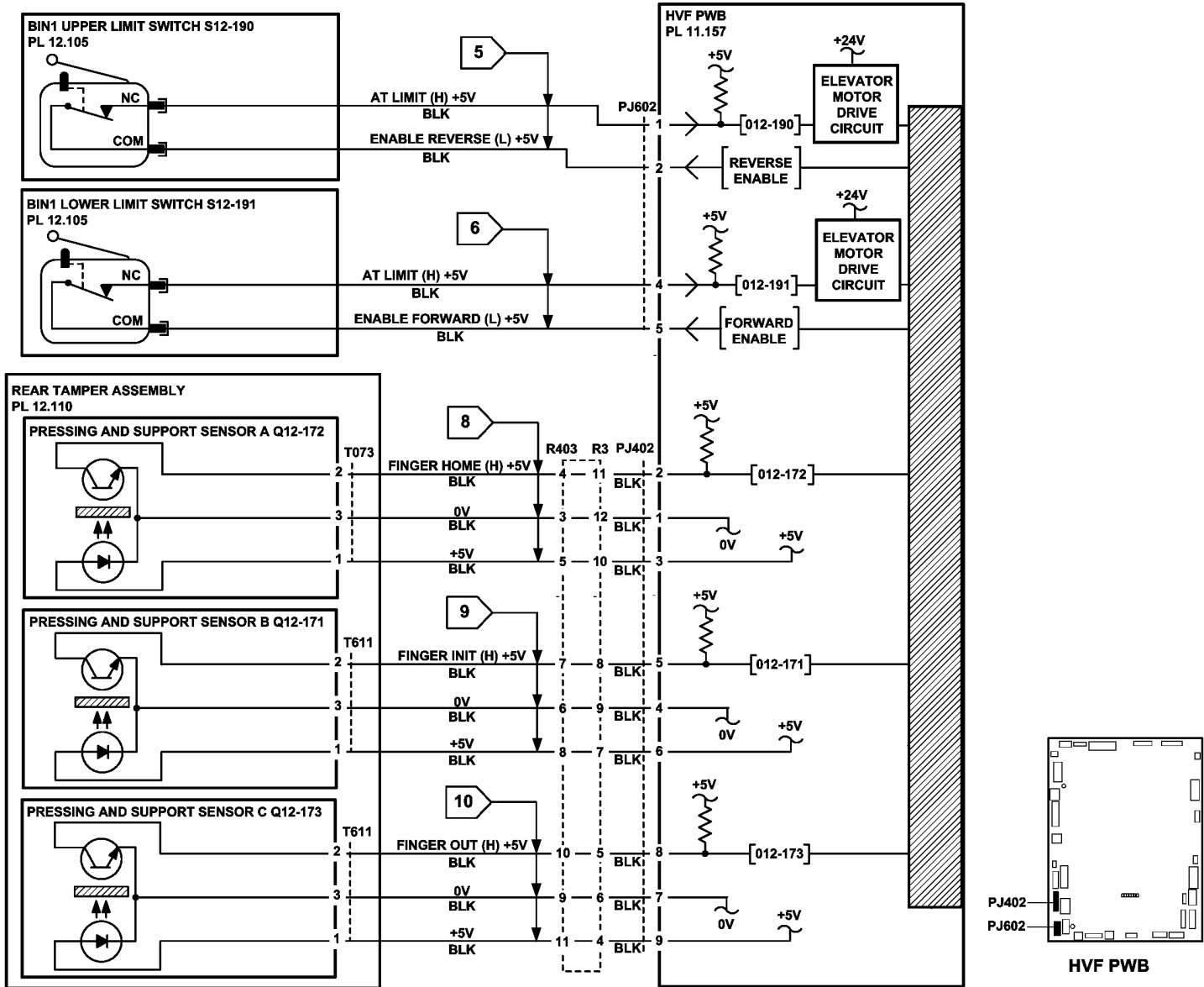


Figure 5 Circuit diagram

TX-1-0144-A

312-463-00-171, 312-464-00-171 HVF BM +24V Failure RAP

312-463-00-171 The BM PWB has failed to detect +24V at the input from the HVF.

312-464-00-171 The BM PWB has detected an internal +24V failure, such as over current, short circuit or under voltage.

Remote Service Actions

Ask the customer to check the items that follow:

- Ensure the HVF BM is correctly docked to the machine and all interlocks are closed.
- Check the interlock actuator for damage.

If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care when measuring AC mains (line) voltage. Electricity can cause death or injury.

Refer to **Figure 1**. Close or cheat all the HVF BM interlocks. The HVF BM performs a mechanical reset.

Y N
Go to **Flag 1**. ACL is available at **P/J652** on the LVPS module between pins 1 and 2.

Y N
Go to the **301C** AC Power RAP and check the AC output voltages.

Go to **Flag 2**. +24V is available at **P/J111** between pins 1 and 4, also between pins 3 and 6.

Y N
Figure 1. +24V is available at **T001** on the HVF power supply unit between pins 1 and 5, also between pins 3 and 6.

Y N
NOTE: If the in-line 10A fuse has blown, it indicates a defective HVF power supply unit.

Install a new HVF power supply unit, **PL 12.140** Item 1.

Check the connectors and harness between **T001** and **P/J111**. Repair the harness and connectors as necessary, **REP 1.1**.

Go to **Flag 4**. +24V is available at **P/J559** between pins 1 and 2, also between pins 1 and 3.

Y N
+24V is available at **P/J131** between pins 1 and 2, also between pins 1 and 3.

A B

Y N
Install a new HVF PWB, **PL 12.140** Item 2.

Check the connectors and harness between **P/J559** and **P/J131**. Repair the harness and connectors as necessary, **REP 1.1**.

If a inserter is installed, go to **Flag 3** and **Flag 2**. +24V is available between **P/J703** pin 1 and **P/J111** pin 1.

Y N
Go to **312-316-00-171, 312-319-00-171** Inserter Interlocks RAP.

If a tri-folder is installed, go to **Flag 5**. +24V is available at **P/J601** between pins 1 and pin 4.

Y N
+24V is available at **P/J553** between pins 1 and pin 4.

Y N
Install a new BM PWB, **PL 12.175** Item 10.

Check the connectors and harness between **P/J553** and **P/J601**. Repair the harness and connectors as necessary, **REP 1.1**.

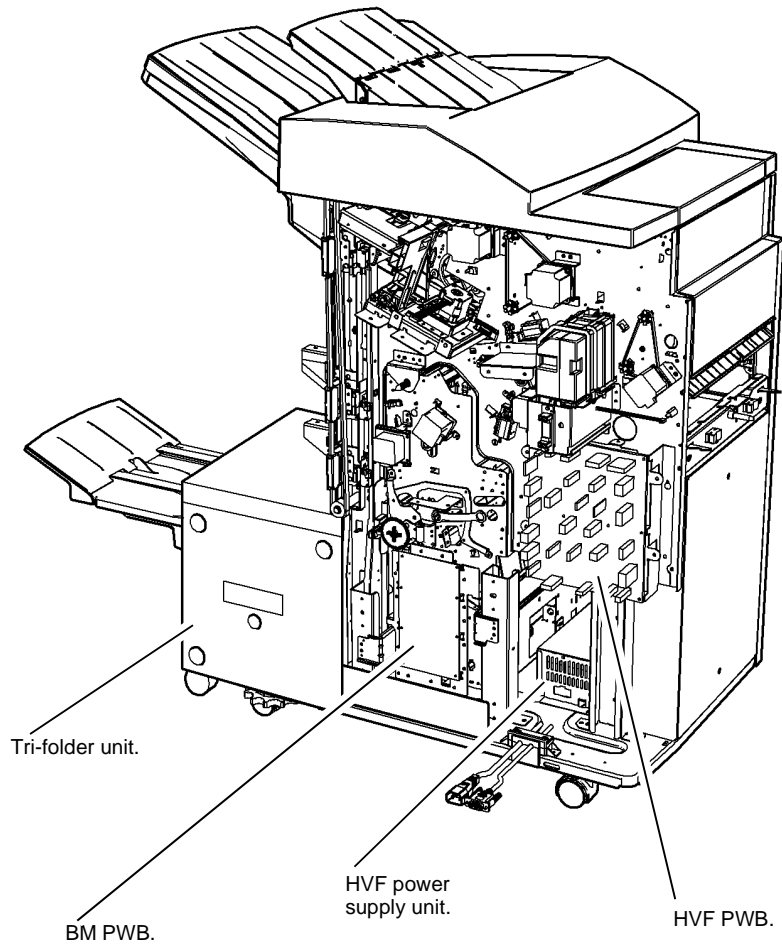
Go to **Flag 5** and **Flag 6**. +24V is available at **P/J601** between pins 4 and 6.

Y N
Go to the **312-317-00-171, 312-318-00-171** Tri-folder Interlocks RAP.

The +24V supply is good. Go to **SCP 5** Final actions.

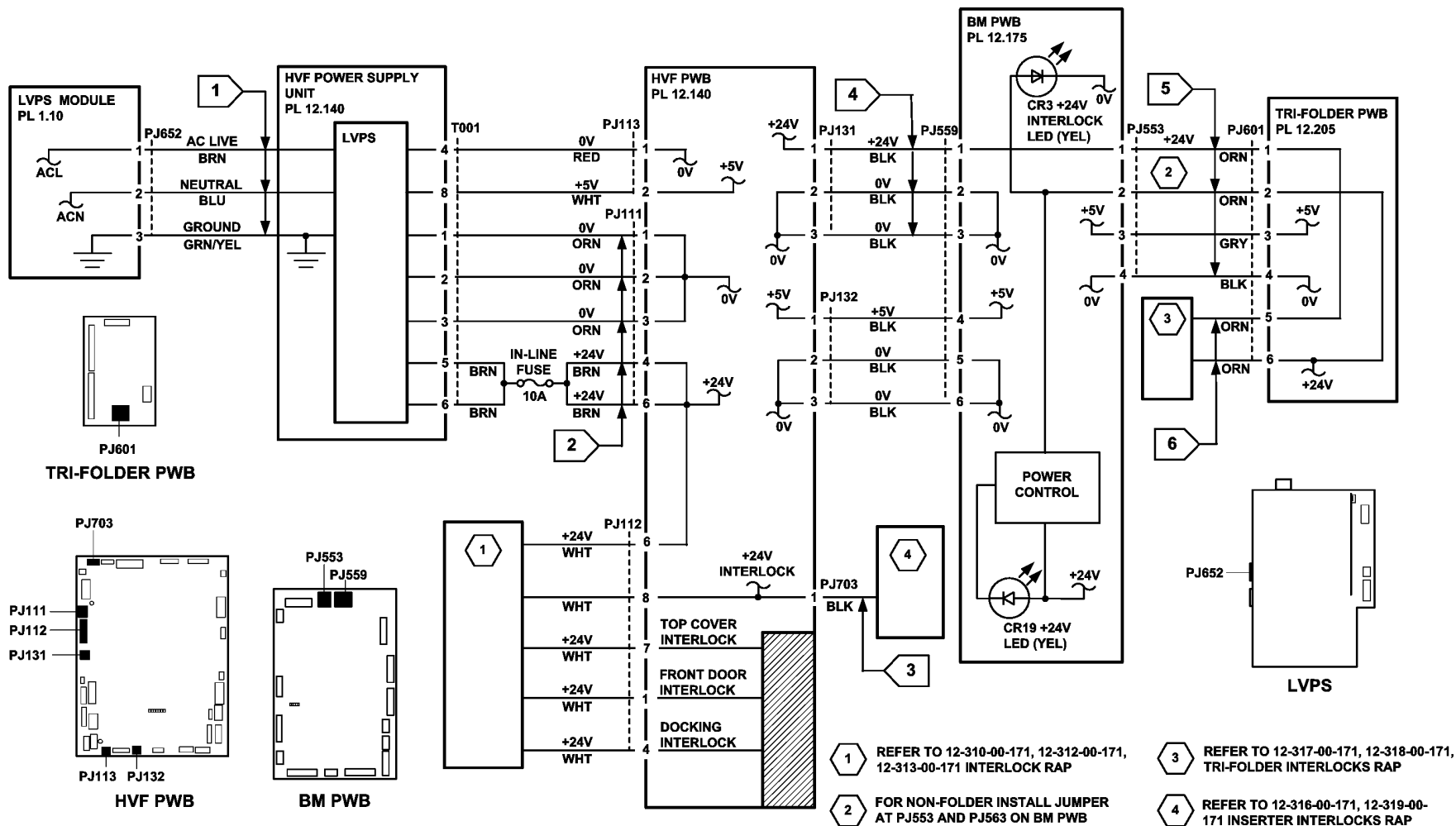
The +24V supply is good. Go to **SCP 5** Final actions.

A B



X-1-0106-A

Figure 1 Component location



TX-1-0145-A

Figure 2 Circuit diagram

312-465-00-171 to 312-468-00-171 HVF Paddle Unit Position RAP

312-465-00-171 The paddle unit has failed to return to the upper position.

312-466-00-171 The paddle unit has failed to move from the upper position.

312-467-00-171 The paddle unit has failed to return to the lower position.

312-468-00-171 The paddle unit has failed to move from the lower position.

Remote Service Actions

Ask the customer to check for a paper jam or obstructions that would prevent the paddle unit from operating correctly. If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check for damage or obstructions that would prevent the paddle unit from operating correctly.

Procedure

NOTE: All HVF BM interlocks must be made to supply +24V to the motors.

Enter **dC330**, code 012-239 to run the paddle unit motor, MOT12-239, **Figure 1**. **The motor runs.**

Y N

Go to **Flag 2**. Check the paddle unit motor, MOT12-239.

Refer to:

- **GP 10** How to Check a Motor.
- **P/J202**. **HVF PWB**.
- **312A-171**, HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Paddle unit motor, **PL 12.120** **Item 6**.
- HVF PWB, **PL 12.140** **Item 2**.

The paddle unit moves.

Y N

Check the drive gears on the paddle unit. Install a new paddle unit as necessary, **PL 12.115** **Item 2**.

Enter **dC330**, code 012-174 paddle unit upper sensor, Q12-174, **Figure 1**. Stack the code 012-240 to run the paddle unit motor. **The sensor status changes.**

Y N

Go to **Flag 1**. Check Q12-174.

Refer to:

- **GP 11** How to Check a Sensor.
- **P/J201**. **HVF PWB**.
- **312A-171**, HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Paddle unit, **PL 12.115** **Item 2**.
- HVF PWB, **PL 12.140** **Item 2**.

Enter **dC330**, code 012-175 paddle unit lower sensor, Q12-175, **Figure 1**. Select code 012-239 to run the paddle unit motor. **The sensor status changes.**

Y N

Go to **Flag 2**. Check Q12-175.

Refer to:

- **GP 11** How to Check a Sensor.
- **P/J201**. **HVF PWB**.
- **312A-171**, HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Paddle unit, **PL 12.115** **Item 2**.
- HVF PWB, **PL 12.140** **Item 2**.

Perform **SCP 5** Final Actions.

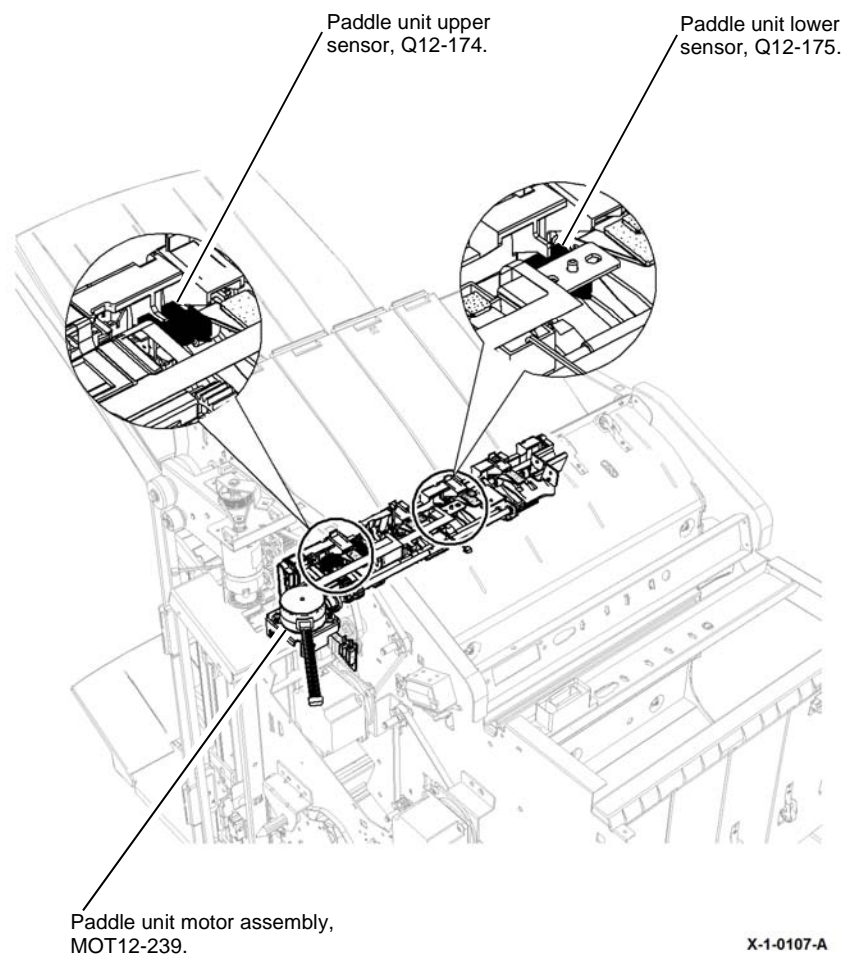


Figure 1 Component location

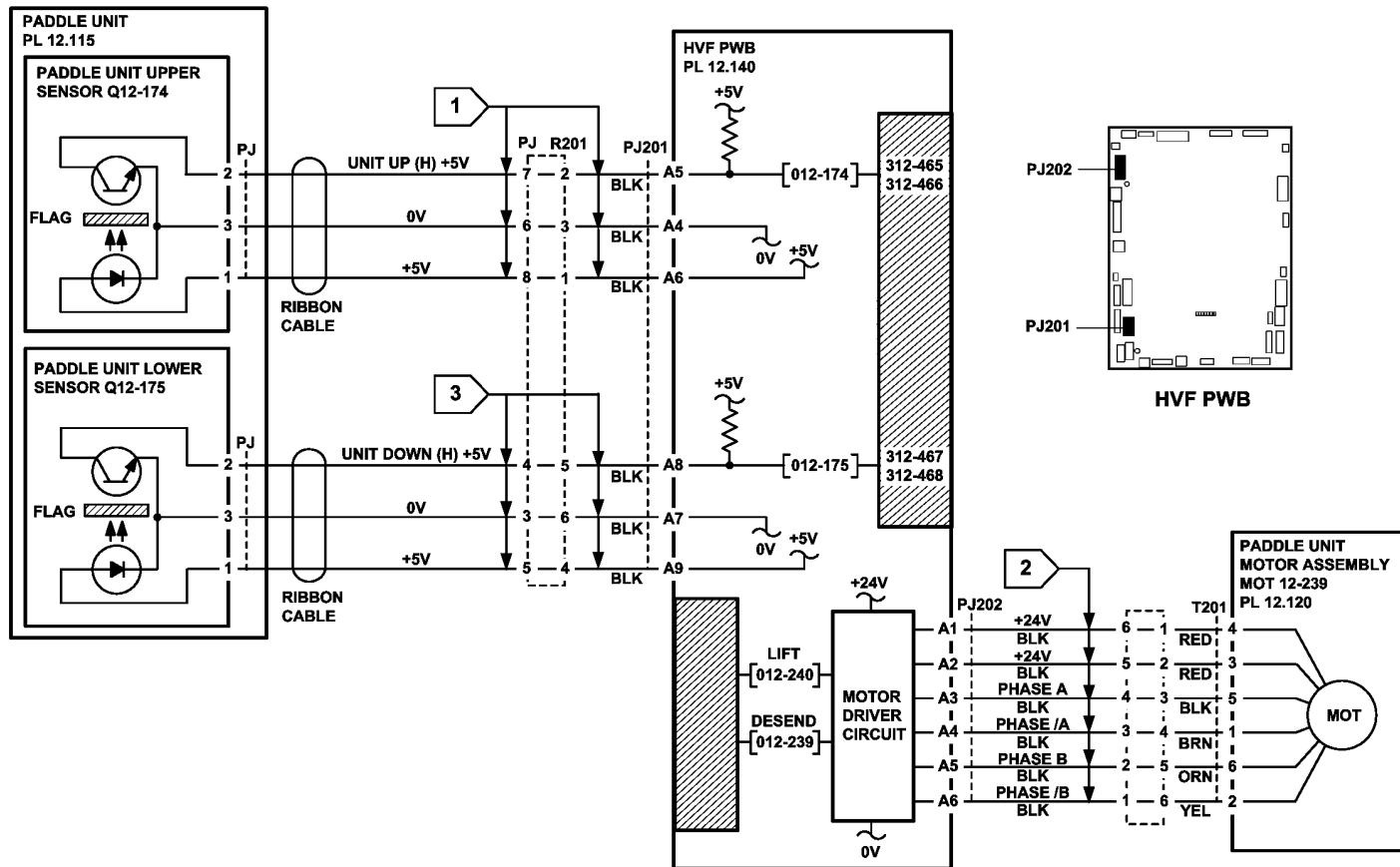


Figure 2 Circuit diagram

TX-1-0146-A

312-473-00-171 to 312-478-00-171 HVF Support Finger Position RAP

312-473-00-171 The pressing and support motor does not return to the initial position within the required time.

312-474-00-171 The pressing and support motor does not move out to the initial position within the required time.

312-475-00-171 The pressing and support motor does not return to the home position within the required time.

312-476-00-171 The pressing and support motor does not move out of the home position within the required time.

312-477-00-171 The pressing and support motor does not return to the out position within the required time.

312-478-00-171 The pressing and support motor does not move out of the out position within the required time.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: When manually extending the fingers to check the sensors, the pressing and support sensor A operates first, followed by the pressing and support sensor B. The pressing and support sensor C operates when the fingers are fully extended. All three sensors are spared as part of the rear tamper assembly.

Remove the HVF front door and front cover **REP 12.1-171**. Remove the upper right side cover **REP 12.5-171**. Cheat the front door interlock. Enter **dC330** code 012-249 SU1 Motor Forward, to move staple head to the rear of the HVF. Disconnect then reconnect the pressing and support A sensor, **Figure 1** and **Figure 2**.

Enter **dC330** code 012-172, pressing and support A sensor, Q12-172. Note the position of the support fingers at rest. Turn the gear wheel shown in **Figure 1**, downwards. The support fingers extend to the right as the gear is turned. Extend the support fingers approximately 6mm (0.25 inch). **The display changes.**

Y N

Go to **Flag 1**. Check Q12-172. Refer to:

- **GP 11** How to Check a Sensor.
- **P/J402**. **HVF PWB**.
- **312A-171**, HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Rear tamper assembly, **PL 12.110 Item 24**.
- HVF PWB, **PL 12.140 Item 2**.

A

A

Enter the **dC330** code 012-171 pressing and support B sensor, Q12-171, **Figure 1**. Turn the gear wheel to extend the support fingers approximately 25mm (1 inch). **The display changes.**

Y N

Go to **Flag 2**. Check Q12-171. Refer to:

- **GP 11** How to Check a Sensor.
- **P/J402**. **HVF PWB**.
- **312A-171**, HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Rear tamper assembly, **PL 12.110 Item 24**.
- HVF PWB, **PL 12.140 Item 2**.

Enter the **dC330** code 012-173, pressing and support C sensor, Q12-173, **Figure 1**. Turn the gear wheel to extend the support fingers approximately 105mm (4.1 inch). **The display changes.**

Y N

Go to **Flag 3**. Check Q12-173. Refer to:

- **GP 11** How to Check a Sensor.
- **P/J402**. **HVF PWB**.
- **312A-171**, HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Rear tamper assembly, **PL 12.110 Item 24**.
- HVF PWB, **PL 12.140 Item 2**.

Make several small sets of prints. Check that the support fingers extend between each set. **The support fingers extended.**

Y N

Remove the HVF top cover and rear cover, **REP 12.1-171**. Enter the **dC330** code 012-093, pressing and support encoder sensor, Q12-093. Manually turn the pressing and support motor encoder disc. **The display changes.**

Y N

Go to **Flag 4**. Check Q12-093. Refer to:

- **GP 11** How to Check a Sensor.
- **P/J402**. **HVF PWB**.
- **312A-171**, HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

Install new components as necessary:

- Motor encoder assembly, **PL 12.110 Item 15**.
- HVF PWB, **PL 12.140 Item 2**.

Go to **Flag 5**. Check the pressing and support motor, MOT12-323.

Refer to:

- **GP 10**, How to check a motor
- **P/J802**. **HVF PWB**.
- **312A-171**, HVF Power Distribution RAP.
- **301A** 0V Distribution RAP.

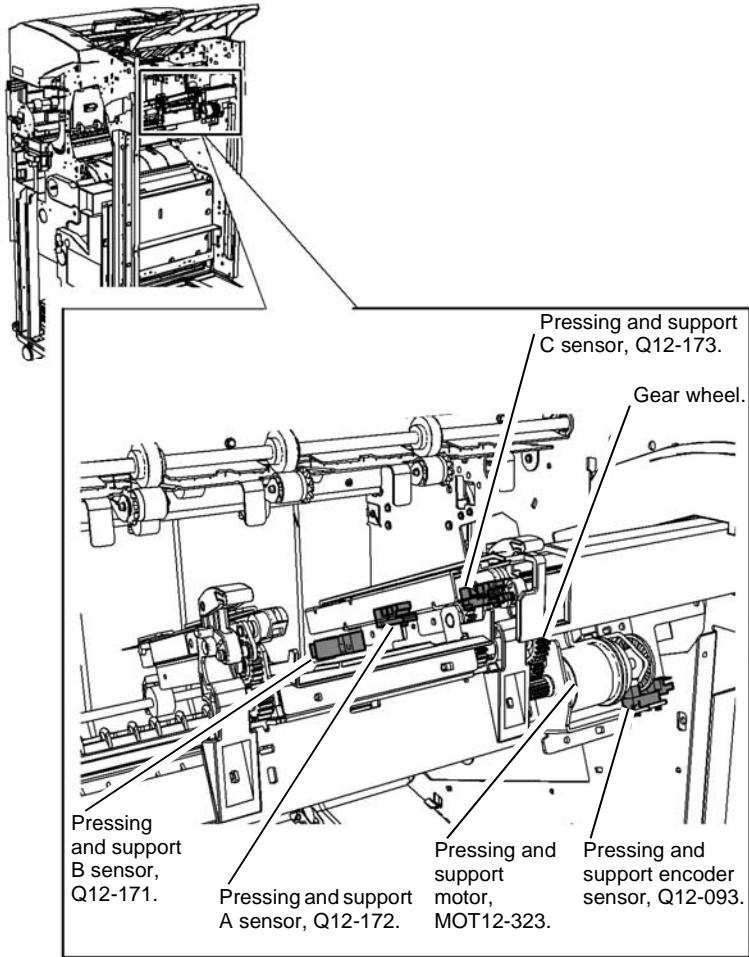
B

B

Install new components as necessary:

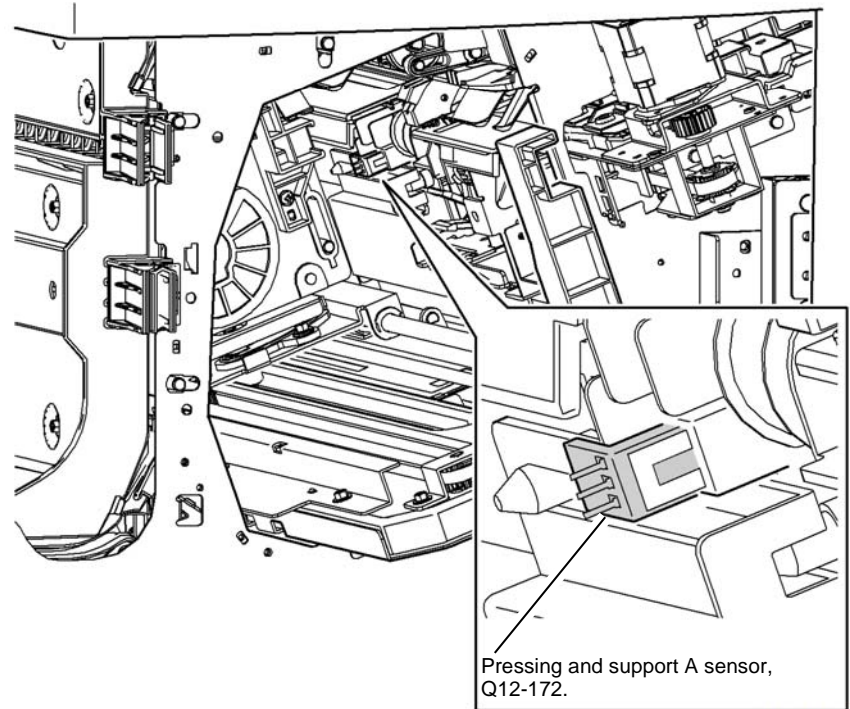
- Motor encoder assembly, PL 12.110 Item 18.
- HVF PWB, PL 12.140 Item 2.

Perform SCP 5 Final Actions.



X-1-0108-A

Figure 1 Component location



W-1-0109-A

Figure 2 Component location

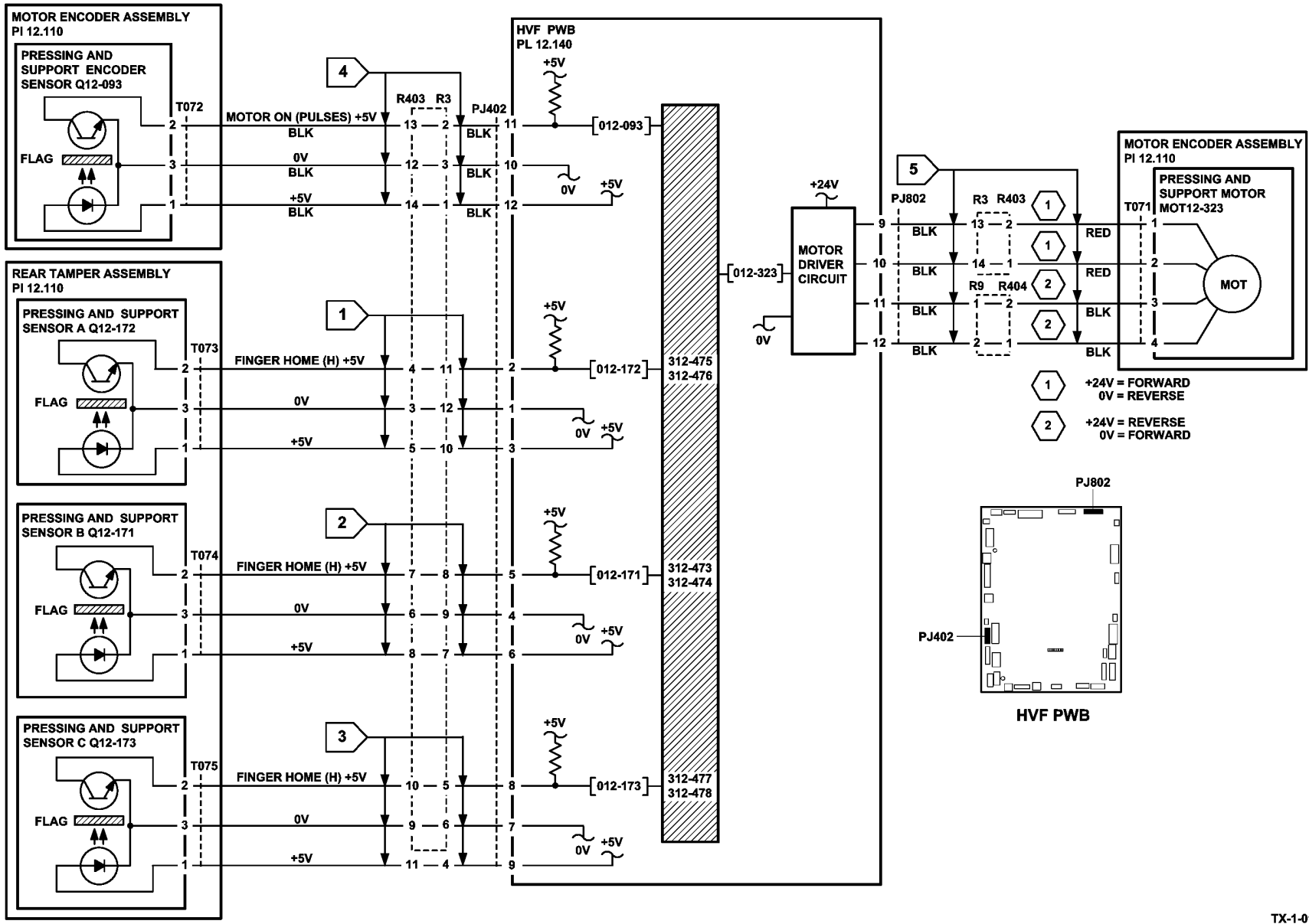


Figure 3 Circuit diagram

TX-1-0147-A

312-479-00-171 HVF Inserter Paper Length Fault RAP

312-479-00-171 A shorter than expected sheet has been fed from the inserter.

Remote Service Actions

Ask the customer to check that the inserter paper path is clear of paper debris any other obstructions. If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check that the inserter paper path is clear of obstructions and the sensors are clean.

Procedure

Figure 1 shows the component locations.

Enter the dC330 code 012-079, inserter paper length sensor 1, Q12-079, Figure 1. Actuate the sensor. **The display changes.**

Y N

Go to **Flag 1** and **Flag 2**. Check Q12-079. Refer to:

- GP 11 How to Check a Sensor.
- P/J9, P/J4, inserter PWB, P/J701 and HVF PWB.
- 312A-171, HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Inserter paper length sensor 1, PL 12.300 Item 12.
- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

Enter the dC330 code 012-080, inserter paper length 2 sensor, Q12-080, Figure 1. Actuate the sensor. **The display changes.**

Y N

Go to **Flag 3** and **Flag 4**. Check Q12-080. Refer to:

- GP 11 How to Check a Sensor.
- P/J9, P/J4, inserter PWB, P/J701 and HVF PWB.
- 312A-171, HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Inserter paper length sensor 2, PL 12.300 Item 12.
- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

Enter the dC330 code 012-090, inserter paper length sensor 3, Q12-090, Figure 1. Actuate the sensor. **The display changes.**

Y N

Go to **Flag 14** and **Flag 15**. Check Q12-090. Refer to:

- GP 11 How to Check a Sensor.
- P/J10, P/J4, inserter PWB, P/J701 and HVF PWB.
- 312A-171, HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Inserter paper length sensor 3, PL 12.300 Item 12.
- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

Enter the dC330 code 012-084, inserter TE sensor, Q12-084, Figure 1. Actuate the sensor. **The display changes.**

Y N

Go to **Flag 5** and **Flag 6**. Check Q12-084. Refer to:

- GP 11 How to Check a Sensor.
- P/J6, P/J4, inserter PWB, P/J701 and HVF PWB.
- 312A-171, HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Inserter TE sensor, PL 12.310 Item 11.
- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

Enter the dC330 code 012-083, inserter LE sensor, Q12-083, Figure 1. Actuate the sensor. **The display changes.**

Y N

Go to **Flag 7** and **Flag 8**. Check Q12-083. Refer to:

- GP 11 How to Check a Sensor.
- P/J6, P/J4, inserter PWB, P/J701 and HVF PWB.
- 312A-171, HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Inserter LE sensor, PL 12.310 Item 11.
- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

Enter the dC330 code 012-261, inserter motor, MOT12-261, Figure 1. **The motor runs.**

Y N

Go to **Flag 11** and **Flag 12**. Check MOT12-261. Refer to:

- GP 10 How to Check a Motor.
- P/J12, P/J4, inserter PWB, P/J701 and HVF PWB.
- 312A-171, HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Inserter motor, PL 12.315 Item 1.

A

A

- Inserter PWB, [PL 12.310 Item 9](#).
- HVF PWB, [PL 12.140 Item 2](#).

Stack the [dC330](#) code 012-260, inserter clutch, CL12-260, [Figure 1](#). The inserter clutch energizes.

Y N

Go to [Flag 10](#) and [Flag 13](#). Check CL12-260. Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [P/J13](#), [P/J5](#), [inserter PWB](#), [P/J703](#) and [HVF PWB](#).
- [312A-171](#), HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Inserter clutch, [PL 12.310 Item 3](#).
- Inserter PWB, [PL 12.310 Item 9](#).
- HVF PWB, [PL 12.140 Item 2](#).

Perform [SCP 5](#) Final Actions.

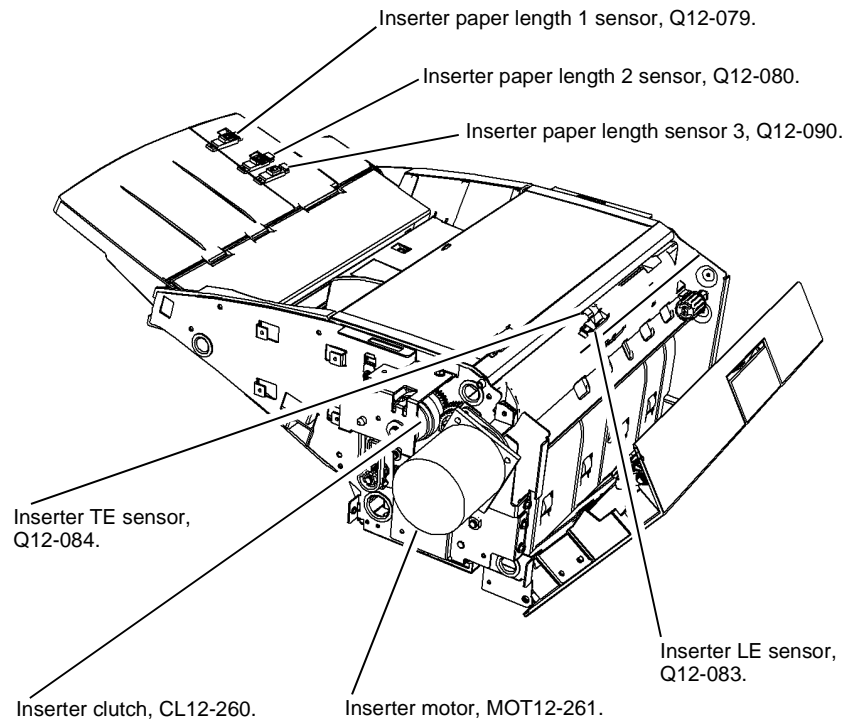


Figure 1 Component location

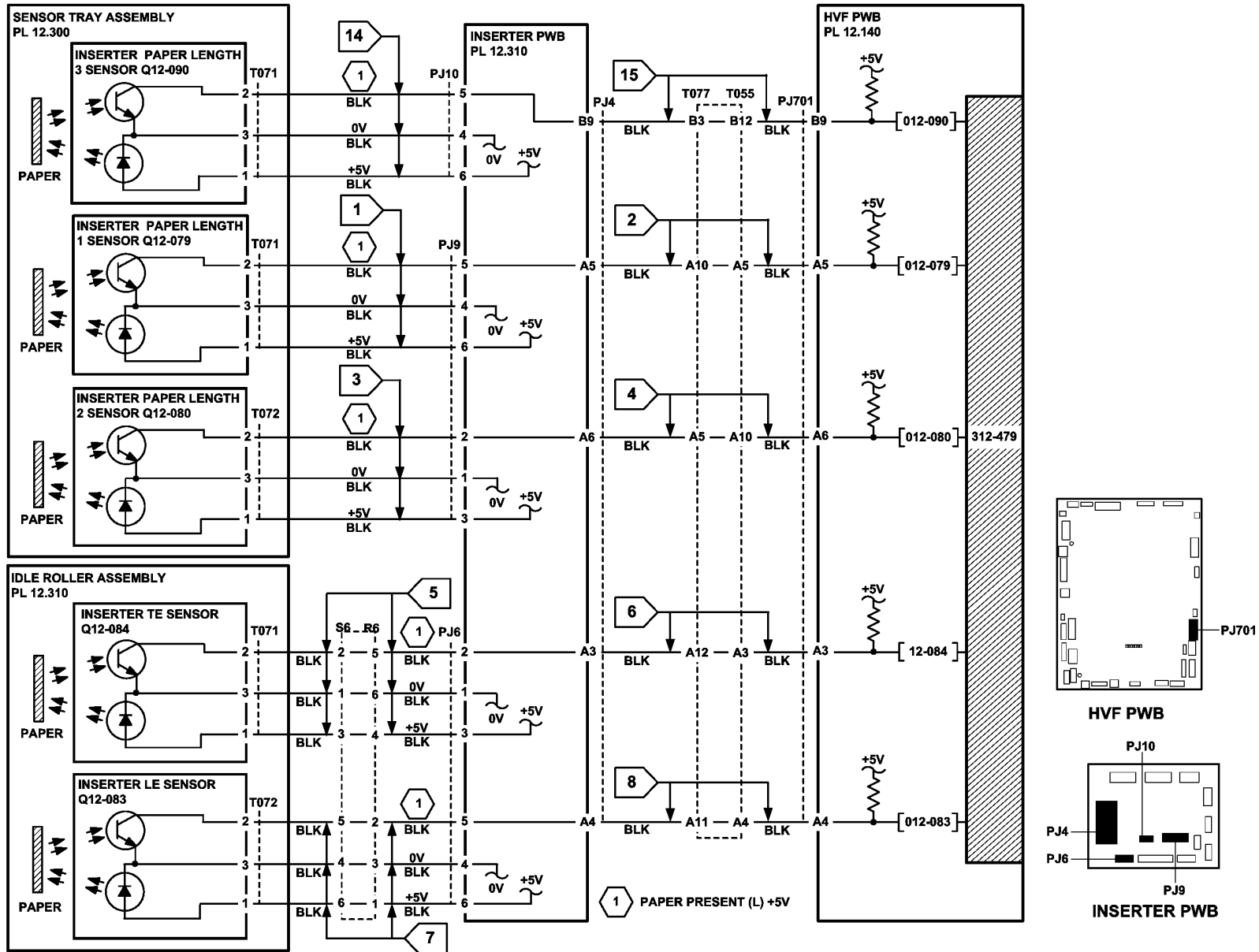


Figure 2 Circuit diagram

TX-1-0148-A

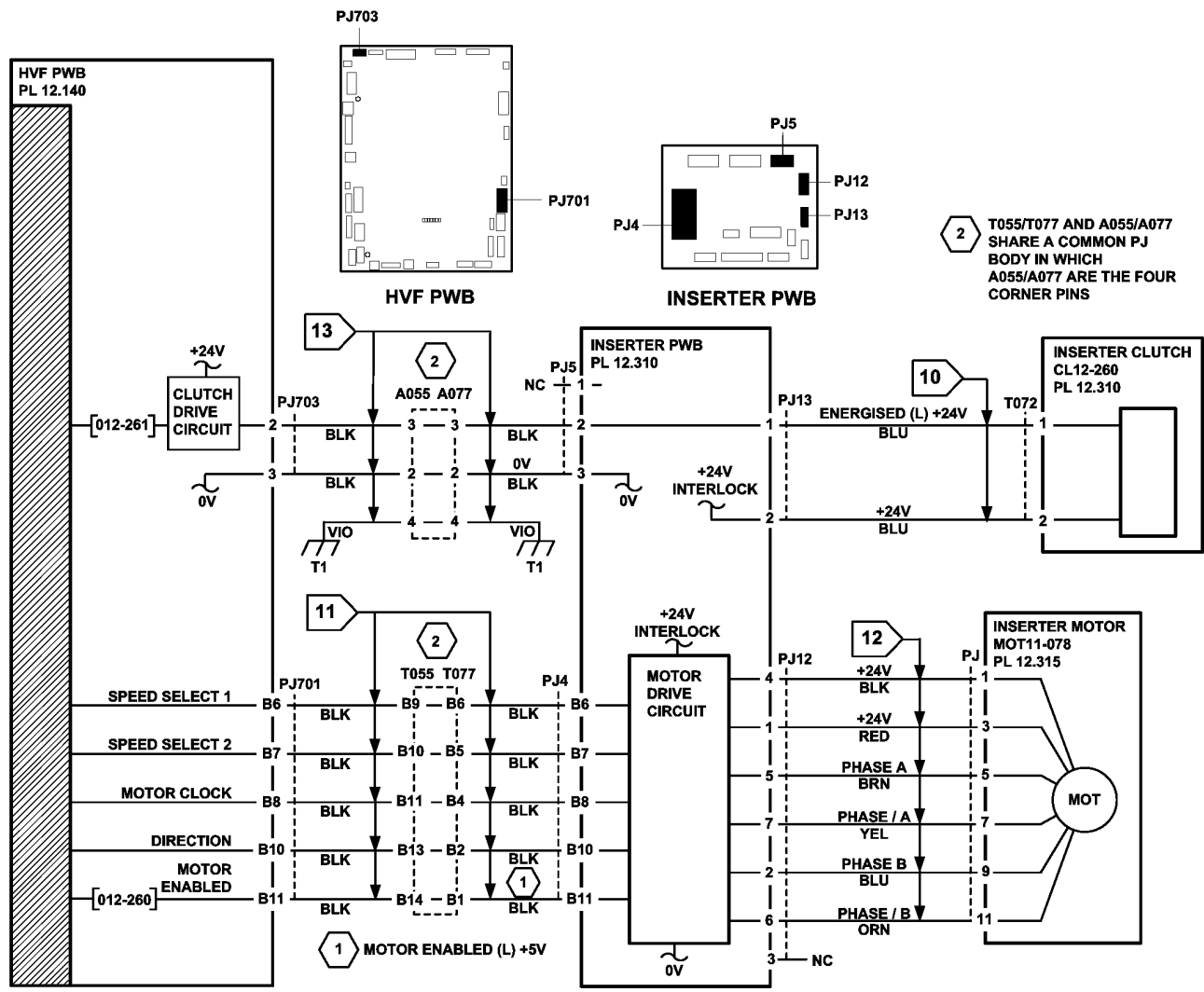


Figure 3 Circuit diagram

TX-1-0149-A

312-492-00-171 Controller To Finisher Communication Failure RAP

312-492-00-171 CDI Communications failure with the finisher.

Remote Service Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Ask the customer to check the items that follow:

- The finisher power cord is plugged into the LVPS module.
- That the communication harness from the finisher is plugged in to PJ966 at the rear left of the machine.
- Switch off the machine, then switch on the machine, GP 14.

If the fault continues, a site visit will be necessary.

Procedure

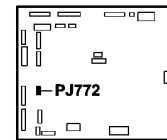
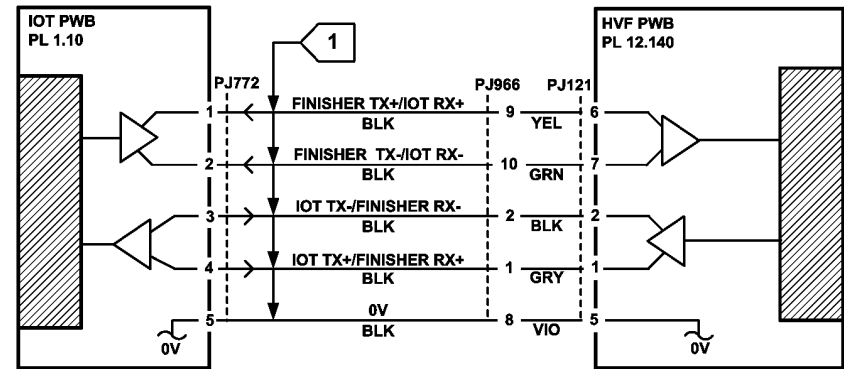
Go to Flag 1. Check the harness between P/J772 through PJ966 to P/J121.

Refer to:

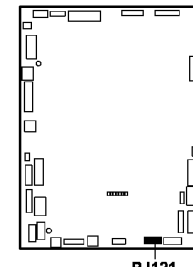
- REP 1.2 Wiring Harness Repairs.

Install new components as necessary:

- Power communications cable, PL 12.140 Item 7.
- HVF PWB, PL 12.140 Item 2.
- IOT PWB, PL 1.10 Item 2.



IOT PWB



HVF PWB

TX-1-0150-A

Figure 1 Circuit diagram

312-950-00-171 IME Violates Fin Prep Time RAP

312-950-00-171 The image marking engine delivers a sheet to finisher before the finisher preparation time has expired.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

If the customer has not already done so, switch off, then switch on the machine, [GP 14](#).

Procedure

The fault remains.

Y N
Perform [SCP 5](#) Final Actions.

Reload the software [GP 4](#). **The fault remains.**

Y N
Perform [SCP 5](#) Final Actions.

Install a new IOT PWB, [PL 1.10 Item 2](#).

312A-171 HVF Power Distribution RAP

The HVF has an integral power supply providing +24V and +5V supplies to the HVF PWB and HVF BM PWB. The AC power for the HVF power supply comes from the LVPS and base module of the machine. Refer to [Figure 3](#) for component location.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Take care when measuring AC mains (line) voltage. Electricity can cause death or injury.



Do not connect the HVF power cord directly to the AC wall outlet. The HVF cannot operate without the machine. The machine controls the distribution of electricity to the HVF/HVF BM for correct power on and power off sequencing.

- Ensure all HVF/HVF BM interlocks are closed.
- Check the interlock actuators for damage.
- Refer to [HVF PWB](#) and [BM PWB LEDs](#) to identify the status of the PWBs.

Procedure

[Figure 1](#) shows the component locations.

Close or cheat all the HVF BM interlocks. **The HVF BM performs a mechanical reset.**

Y N
Go to [Flag 2](#). **+5V is available at [P/J113](#) between pins 1 and 2.**

Y N
+5V is available at T001 on the HVF power supply unit between pins 4 and 8.

Y N
Go to [Flag 1](#). **ACL is available at [P/J652](#) on the LVPS module between pins 1 and 2.**

Y N
Go to the [301C](#) AC Power RAP and check the AC output voltages.

Install a new HVF power supply unit, [PL 12.140 Item 1](#).

Go to [Flag 2](#). Disconnect [P/J113](#). **+5V is available at the harness end of [P/J113](#) between pins 1 and 2.**

Y N
Check the connectors and harness between T001 and [P/J113](#). Repair the harness as necessary, [REP 1.1](#).

Install a new HVF PWB, [PL 12.140 Item 2](#).

A B

A B
 Go to **Flag 2**. **+24V is available at P/J111 between pins 1 and 4.**
Y N
+24V is available at T001 between pins 5 and 3.
Y N
 Install a new HVF power supply module, **PL 12.140 Item 1.**
 Check the in-line fuse, F1 (10A), and as necessary install a new fuse, **PL 12.140 Item 5.** Check the connectors and harness between T001 and **P/J111.** Repair the harness as necessary, **REP 1.1.**

Go to **Flag 2** and **Flag 3.** Close the front door and top cover and ensure the HVF is docked to the machine. **+24V is available between P/J111 pin 1 and P/J112 pin 8.**
Y N
 Go to the **312-312-00-171, 312-313-00-171** HVF Interlocks RAP.

Go to **Flag 4.** **+5V is available at P/J559 between pins 4 and 5.**
Y N
+5V is available at P/J132 between pins 1 and 2.
Y N
 Install a new HVF PWB, **PL 12.140 Item 2**
 Check the connectors and harness between **P/J132** and **P/J559.** Repair the harness as necessary.

Go to **Flag 4.** **+24V is available at P/J559 between pins 1 and 2.**
Y N
+24V is available at P/J131 between pins 1 and 2.
Y N
 Install a new HVF PWB, **PL 12.140 Item 2.**
 Check the connectors and harness between **P/J559** and **P/J131.** Repair the harness as necessary, **REP 1.1.**

If an inserter is installed, go to **Flag 7.** **+24V is available between P/J703 pin 1 and P/J111 pin 1.**
Y N
 Go to **312-316-00-171, 312-319-00-171** HVF Inserter Interlock RAP

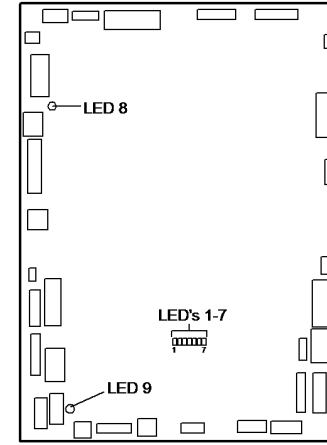
Go to **Flag 5.** **+5V is available at P/J601 between pins 3 and 4.**
Y N
+5V is available at P/J553 between pins 3 and 4.
Y N
 Install a new HVF PWB, **PL 12.140 Item 2.**
 Check the connectors and harness between **P/J553** and **P/J601.** Repair the harness as necessary, **REP 1.1.**

Go to **Flag 5.** **+24V is available at P/J601 between pins 1 and 4.**
Y N
+24V is available at P/J553 between pins 1 and 4.
Y N
 Install a new BM PWB, **PL 12.175 Item 10.**

A C D
 Check the connectors and harness between **P/J553** and **P/J601.** Repair the harness as necessary, **REP 1.1.**
 The +24V and +5V supplies are good. Go to **SCP 5** Final actions.
 Go to **Flag 5** and **Flag 6.** **+24V is available at P/J601 between pins 4 and 6.**
Y N
 Go to the **312-312-00-171, 312-313-00-171** HVF Interlocks RAP.
 The +24V and +5V supplies are good. Go to **SCP 5** Final actions.

HVF PWB and BM PWB LEDs

Figure 1 shows the LED's on the HVF PWB.



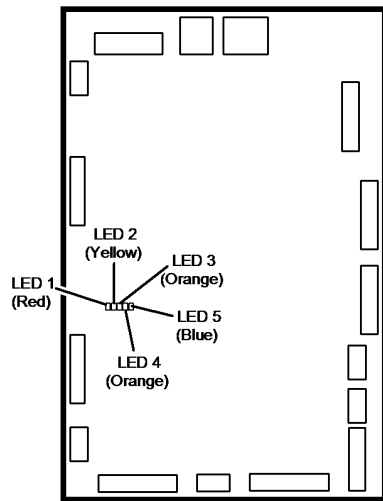
X-1-0111-A

Figure 1 LEDs on the HVF PWB

- The LEDs are:
- LED 1 - red. Not used.
 - LED 2 - red. Not used.
 - LED 3 - red, flashing. This indicates the functioning of the CPU. When flashing at 2Hz, (every 1/2 second), the software is running normally. When flashing at about 1/4Hz, (every 4 seconds), this indicates that the software is encountering a code problem and a possible software upgrade is needed. If this LED is OFF, the CPU does not function and a new HVF PWB is needed.
 - LED 4 - red. Not used.
 - LED 5 - red. Not used.
 - LED 6 - red. Not used.
 - LED 7 - red. Not used.

- LED 8 - red, steady. This indicates that the HVF top cover and front door interlocks are all closed and +24V is available at the HVF module.
- LED 9 - red, steady. This indicates that the +5V supply is present in the HVF module.

Figure 2 shows the LED's on the BM PWB.

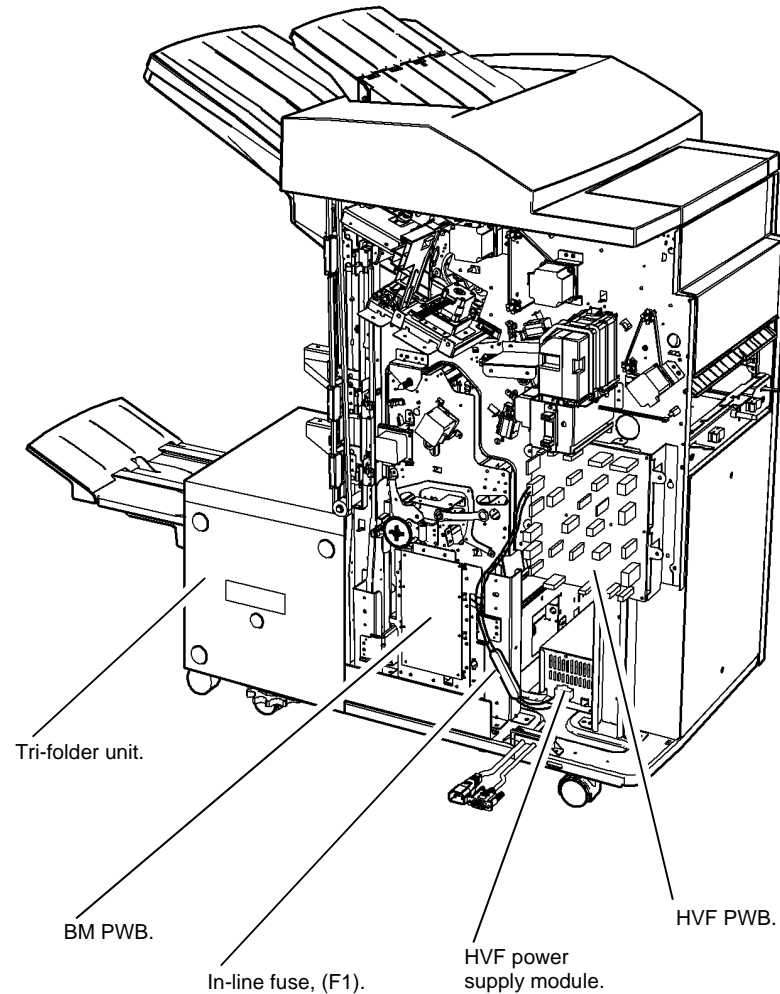


X-1-0112-A

Figure 2 LEDs on the BM PWB

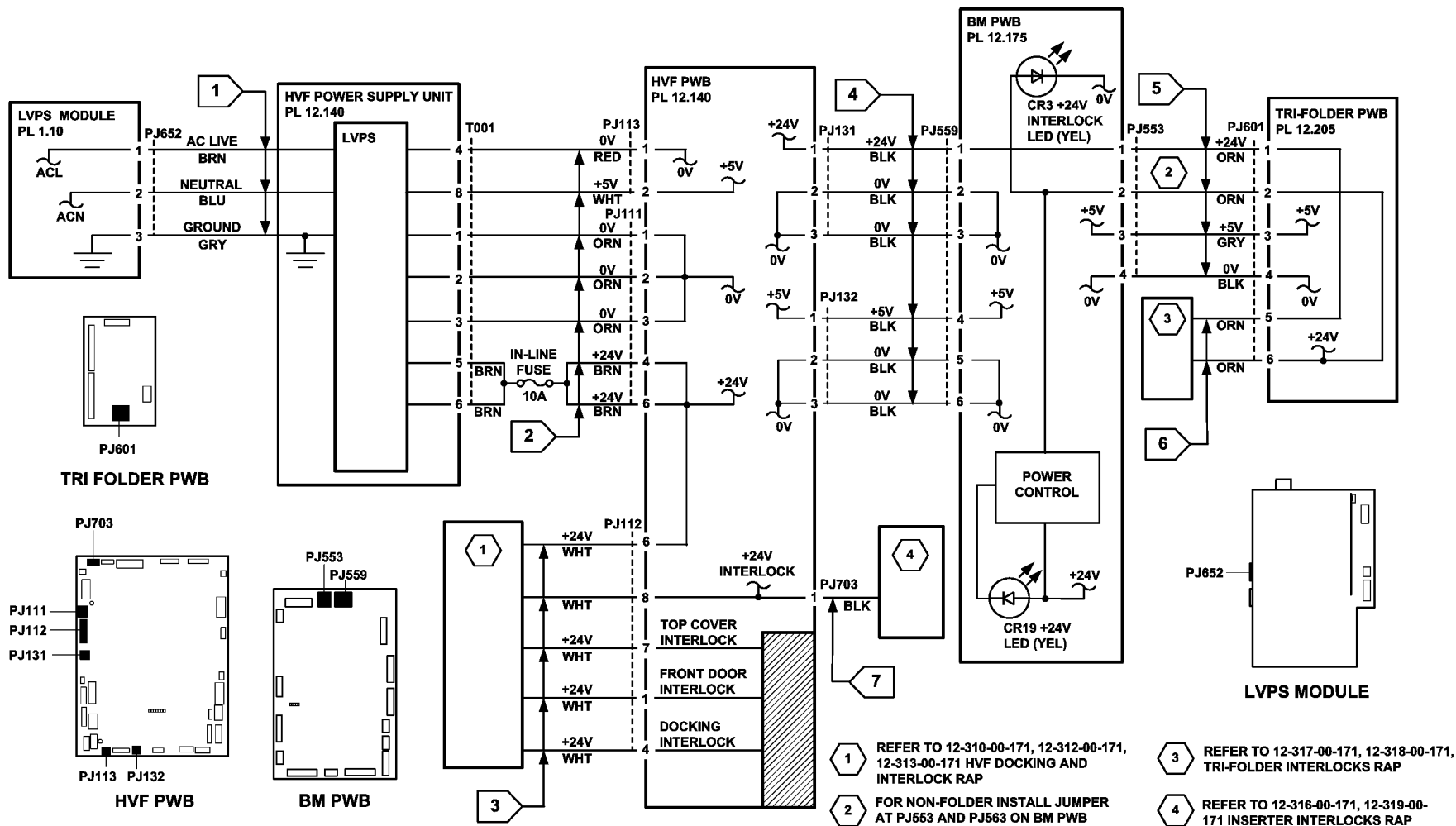
The LEDs are:

- LED 1 - red, steady. This indicates a fault or other abnormal status.
- LED 2 - yellow, flashing at about 1Hz. This indicates that the software is operating in normal mode. In other modes, e.g., software downloading, the flashing rate is higher.
- LED 3 - orange, steady. This indicates either:
 - that the tri-folder front door and top cover interlocks are closed, and +24V is available to the BM module or, if the tri-folder is not installed;
 - that the interlock cheater is present in PJ553 on the BM control PWB the logic cheater is present in PL563 on the BM control PWB.
- LED 4 - orange, steady. This indicates that the +24V supply is within voltage and current limits, and that the power limiting circuit has not been active for over a set time limit.
- LED 5 - blue, steady. This indicates that the +5V supply is present in the BM module.



X-1-0113-A

Figure 3 Component location



TX-1-0152-A

Figure 4 Circuit diagram

312B-171 HVF BM to Machine Communications Interface and BM Present RAP

A communication fault exists between the HVF BM and the machine.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Figure 1 shows the communications between the BM PWB and the HVF PWB. For communications between the HVF PWB and the machine go to the 312-492-00-171 Controller To Finisher Communication Failure RAP.

The pulses on the connections between PJ133 and PJ562 cannot be measured, but may be detected using a meter that can record maximum and minimum voltage levels, or by using an AC voltage range.

Use the UI to check if booklet maker features are available. **The machine indicates that the booklet maker is present**

Y N

Go to Flag 2, check that P/J133, pin 6 is held at 0V.

Refer to:

- REP 1.2 Wiring Harness Repairs.

If necessary, install new components:

- Booklet maker PWB, PL 12.175 Item 10.
- HVF PWB, PL 12.140 Item 2.

Go to Flag 1. Check the wiring and connectors between P/J133 and P/J562.

Refer to:

- REP 1.2 Wiring Harness Repairs.

If necessary, install new components:

- Booklet maker PWB, PL 12.175 Item 10.
- HVF PWB, PL 12.140 Item 2.

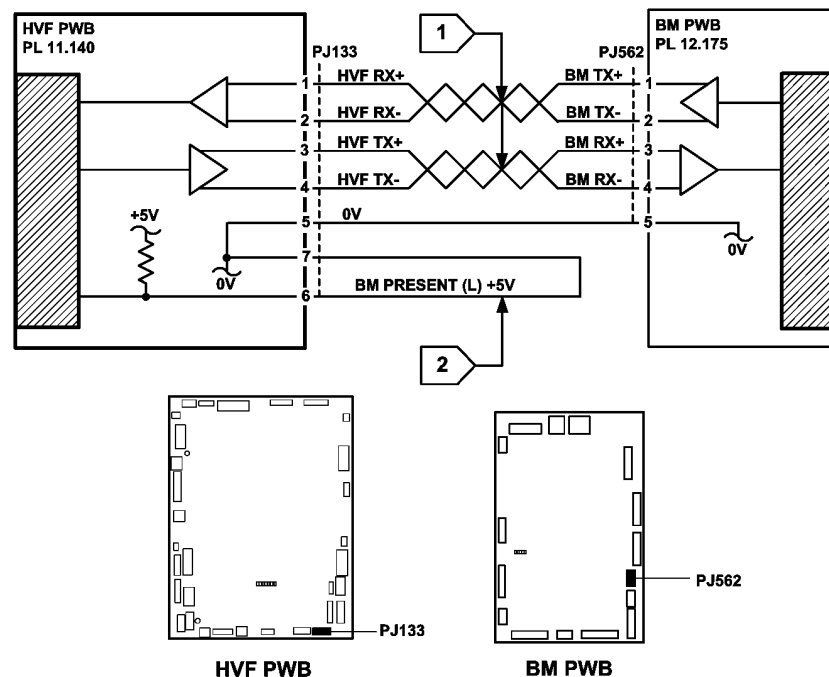


Figure 1 Circuit diagram

TX-1-0153-A

312C-171 HVF BM Bin 2 Failure RAP

Bin 2 fails to remove the finished booklets from the exit area of the booklet maker.

Remote Service Actions

Ask the customer to check the HVF BM bin 2 belts and HVF BM Bin 2 extension for any paper jam that could prevent the conveyor belt mechanism from moving. If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check for a jam or any other obstruction that could prevent the conveyor belt mechanism from moving.

Procedure

Enter **dC330** code 012-206. Actuate the HVF BM bin 2 90% full sensor, Q12-206, **Figure 1**. The display changes.

Y N
If a tri-folder is installed, go to **Flag 4**. Check the connection at PJ583 on the tri-folder. **The connection is good.**

Y N
Check the connectors and harness at the tri-folder. Repair the harness as necessary, **REP 1.1**.

Go to **Flag 1** and **Flag 4**. Check Q12-206.

Refer to:

- **GP 11** How to Check a Sensor.
- **P/J556. BM PWB.**
- **312A-171 HVF Power Distribution RAP.**
- **301A 0V Distribution RAP.**

Install new components as necessary:

- BM PWB, **PL 12.175 Item 10.**
- BM bin 2 90% full sensor **PL 12.190 Item 5.**

NOTE: **dC330** will only drive the BM conveyor drive motor for 10 seconds.

Enter **dC330**, code 012-274 to run the BM conveyor drive motor, MOT12-274. **The motor runs.**

Y N
If a tri-folder is installed, go to **Flag 5**. Check the connection at PJ583 on the tri-folder. **The connection is good.**

Y N
Check the connectors and harness at the tri-folder. Repair the harness as necessary, **REP 1.1**.

A B

A B

Go to **Flag 2**, **Flag 3** and **Flag 5**. Check MOT12-274.

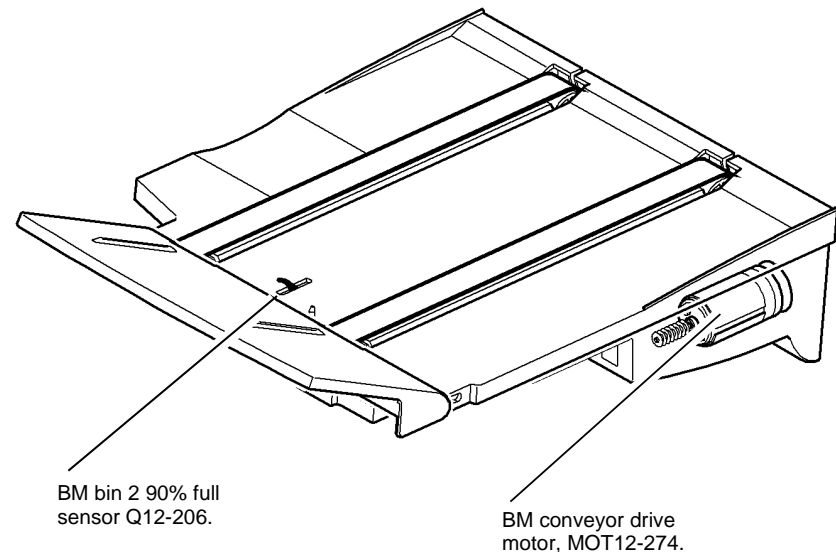
Refer to:

- **GP 10** How to Check a Motor.
- **P/J555. BM PWB.**
- **312A-171 HVF Power Distribution RAP.**
- **301A 0V Distribution RAP.**

Install new components as necessary:

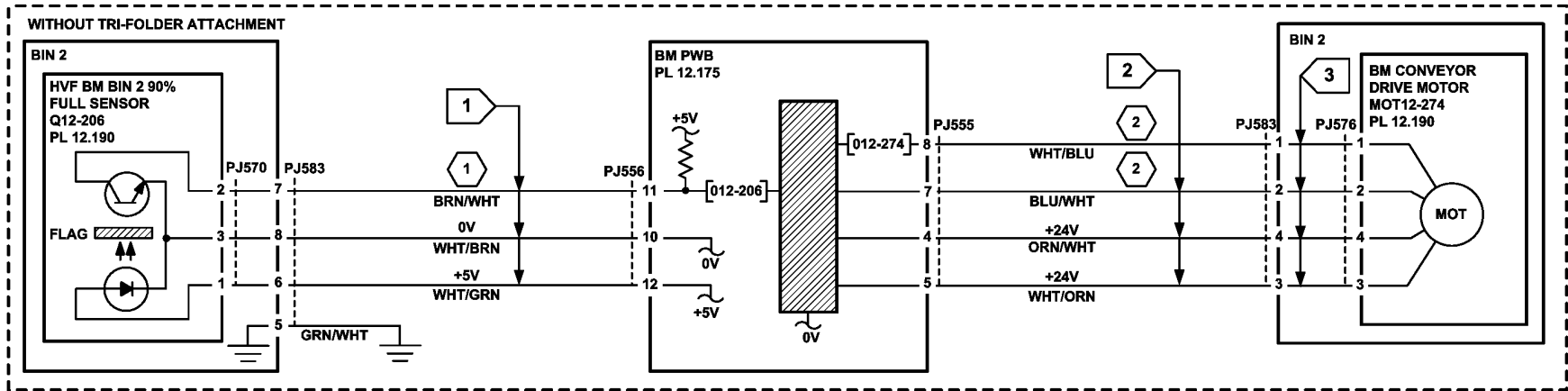
- BM conveyor drive motor, **PL 12.190 Item 4**
- BM PWB, **PL 12.175 Item 10**

The fault may be intermittent, check for damaged wiring or bad connectors, **REP 1.1**. If necessary install new conveyor belts, **PL 12.190 Item 1**.



X-1-1786-A

Figure 1 Component location



- 1 BIN 2 90% FULL (H)+5V
- 2 ENERGISED (L)+24V

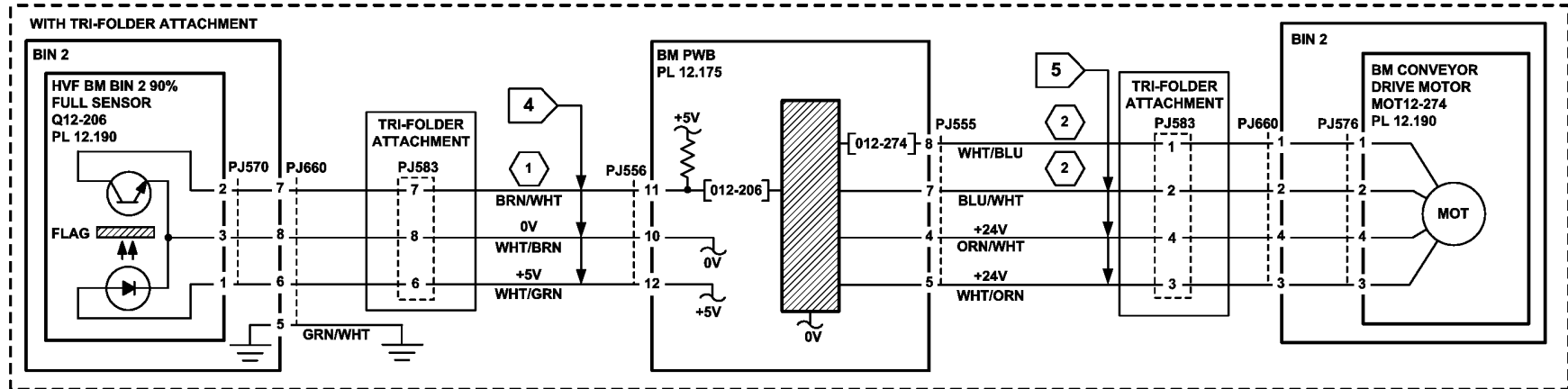
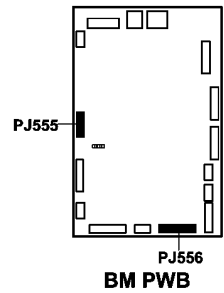


Figure 2 Circuit diagram

TX-1-0154-A

312D-171 Booklet Quality RAP

Use this RAP to identify and correct the causes of poor booklet quality in the HVF BM.

The following booklet quality problems are covered in this RAP:

- The alignment of the top and bottom edges of the booklet are not within specification.
- The alignment of the open side edges of the booklet are not within specification.
- The booklet staples are badly formed.
- The booklet compiling is not correct (page order is wrong).
- The booklet crease is skewed greater than the specification.
- The booklet crease is off-centre, greater than the specification.
- The booklet staple position is not within the specification.
- The booklet is not sufficiently creased.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check that the paper loaded in the paper trays matches the paper size displayed on the UI.
- Ensure that the paper being fed to the BM conforms to the specification, GP 20 Paper and Media Size Specification.
- Ensure that the booklets being produced do not exceed the maximum contents given in Table 1.

Table 1 Booklet contents

Media	Paper weight	Maximum number of sheets	Maximum number of booklet pages	Maximum number of unstapled sheets
Plain paper	60 to 80gsm (16 to 21lb bond)	15	60	5
Heavyweight	90gsm (24lb bond)	13	52	-
Heavyweight	120gsm (32lb bond)	10	40	-
Heavyweight	160gsm (43lb bond)	7	28	-
Heavyweight	216gsm (58lb bond)	5	20	-
Plain paper with heavy-weight cover	60 to 80gsm (16 to 21lb bond) with 160gsm (43lb bond) cover	14 including 1 cover	56	-

- Check the machine and HVF BM paper paths for any obstruction that could cause mis-alignment of the paper fed to the BM compiling area.

Procedure

Produce three 4 sheet / 16 page booklets, using 80gsm (20lb) paper. Paper size and weight must conform the specification in GP 20 Paper and Media Size Specification.

Examine the booklets for defects. Refer to the following:

- Top and Bottom Edge Alignment.
- Open Side Edge Alignment.
- Badly Formed Booklet Staples
- Booklet Compilation is Not Correct
- Skewed Booklet Crease.
- Booklet Crease is Off Centre.
- Booklet Staple Position is Not On The Fold.
- The Booklet is Not Sufficiently Creased.

Top and Bottom Edge Alignment

Figure 1, open out the booklet at the centre page and press it onto a flat surface. Measure the mis-alignment of the top and bottom edges of the booklet.

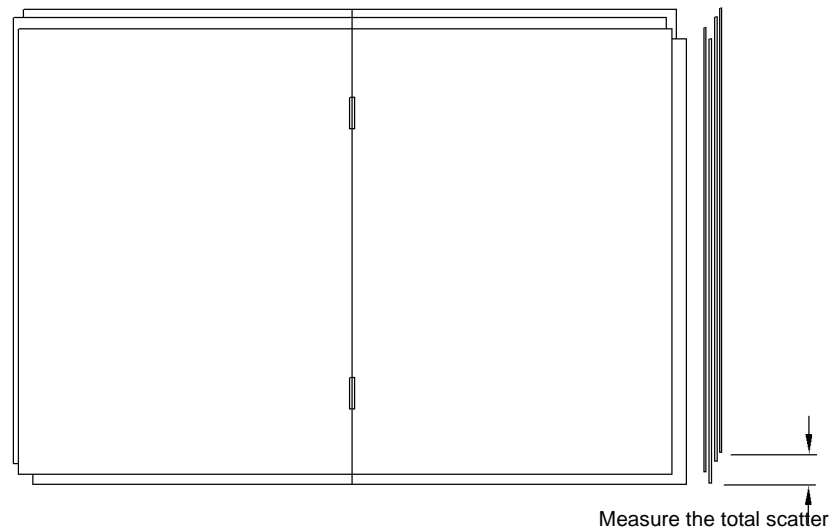


Figure 1 Top and bottom alignment

Table 2 Top and bottom edge alignment

Paper weight	95% of booklets	99.7% of booklets
80gsm (20lb)	1mm	2mm
All other BM approved weights in GP 20	2mm	3mm

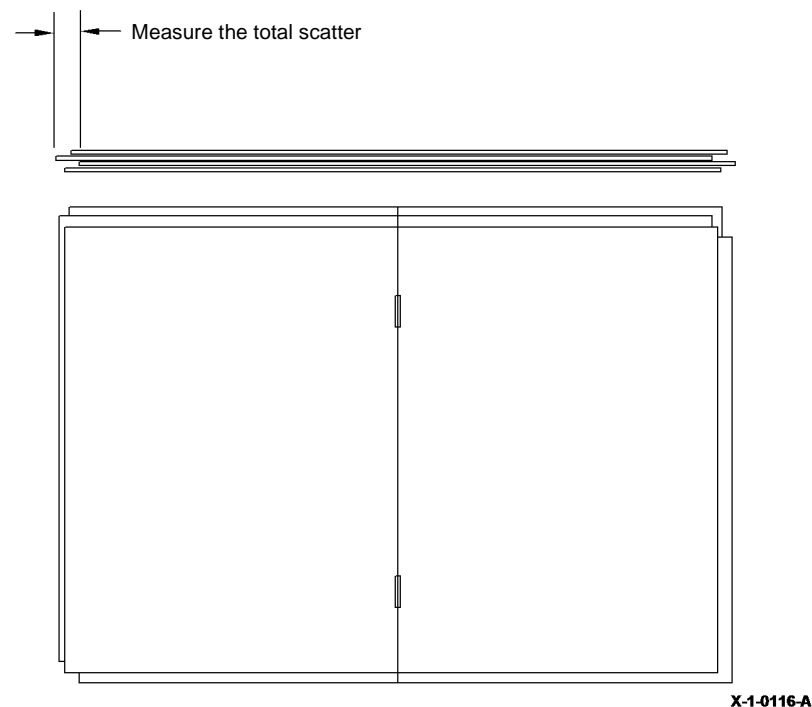
If the top and bottom edge alignment does not conform to the specification in [Table 2](#), check the operation of the BM tampers, refer to the [312-066-00-171](#), [312-384-00-171](#), [312-419-00-171](#), [312-420-00-171](#) HVF BM Tamber Fault RAP. If the tampers are operating correctly, go to [ADJ 12.5-171](#) Booklet Tamping and check the tampers are correctly adjusted.

If the booklet skew does not conform to the specification in [Table 4](#). Perform the following:

- Check the operation of the BM stack hold solenoids, refer to [312-065-00-171](#), [312-383-00-171](#) HVF BM Backstop Motor Fault RAP.
- If the stack hold solenoids are operating correctly, check for contamination or debris in the compiling area of the BM that could cause the mis-alignment.

Open Side Edge Alignment

[Figure 2](#), open out the booklet at the centre page and press it onto a flat surface. Measure the mis-alignment of the open side edges of the booklet.



X-1-0116-A

Figure 2 Open side edge alignment

Table 3 Open side edge alignment

Paper weight	95% of booklets	99.7% of booklets
80gsm (20lb)	1mm	2mm
All other BM approved weights in GP 20	2mm	3mm

If the open side edge alignment does not conform to the specification in [Table 3](#), check the operation of the BM stack hold solenoids, refer to the [312-065-00-171](#), [312-383-00-171](#) HVF Booklet Back Stop Failure RAP. If the stack hold solenoids are operating correctly, check carefully for any contamination or debris in the compiling area of the BM, that could cause the mis-alignment.

Badly Formed Booklet Staples

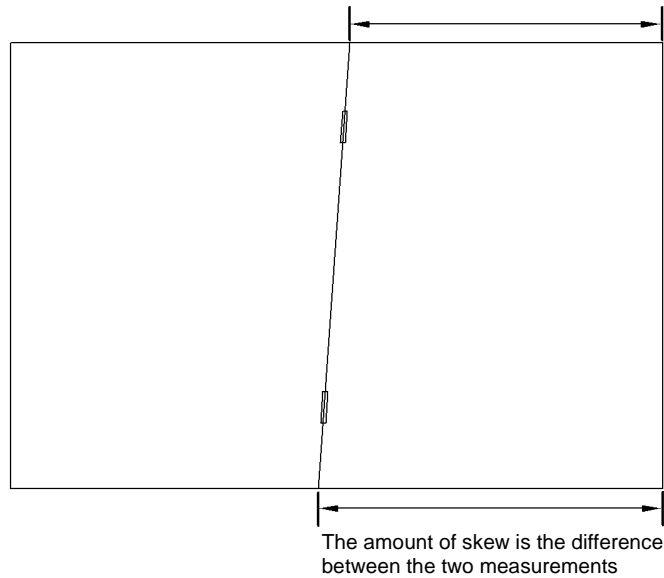
If the booklet staples are not formed correctly, perform [ADJ 12.3-171](#) Staple Anvil Alignment.

Booklet Compilation is Not Correct

If the page order of the booklets is not correct, perform [ADJ 12.6-171](#) Booklet Compiling Position.

Skewed Booklet Crease

Figure 3, open out the booklet at the centre page and press it onto a flat surface. Measure the amount of booklet skew.



X-1-0117-A

Figure 3 Booklet skew

Table 4 Skew tolerance

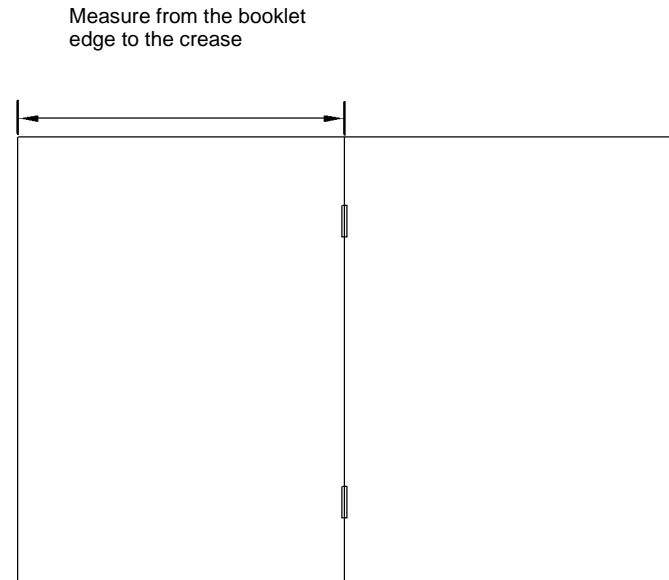
Paper weight	Paper size A4, 8.5x11in, 8.5x13in or 8.5x14in	Paper size A4, 8.5x11in, 8.5x13in or 8.5x14in	Paper size A3 or 11x17in	Paper size A3 or 11x17in
-	95% of booklets	99.7% of booklets	95% of booklets	99.7% of booklets
80gsm (20lb)	Less than 1.0mm	Less than 2.5mm	Less than 1.4mm	Less than 3.1mm
All other booklet maker approved weights in GP 20	Less than 1.5mm	Less than 3.0mm	Less than 2.1mm	Less than 3.6mm

If the booklet skew does not conform to the specification in Table 4, perform the following:

1. Check the operation of the BM stack hold solenoids, refer to the 312-065-00-171, 312-383-00-171 HVF Booklet Back Stop Failure RAP. If the stack hold solenoids are operating correctly, check for any contamination or debris in the compiling area of the BM, that could cause the mis-alignment.
2. ADJ 12.9-171 Booklet Maker Skew.
3. Check the BM back stop assembly for damage. If necessary, install a new BM back stop assembly, PL 12.165 Item 18.

Booklet Crease is Off Centre

Figure 4, open out the booklet at the centre page and press it onto a flat surface. Measure the position of the booklet crease.



X-1-0118-A

Figure 4 Booklet crease position

Table 5 Crease position and tolerance

Paper size	Edge to crease measurement
A4	148.5 +/- 1.5mm

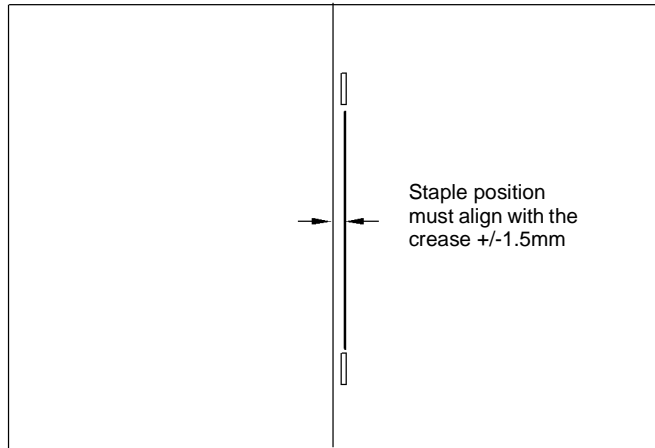
Table 5 Crease position and tolerance

Paper size	Edge to crease measurement
A3	210 +/- 1.5mm
8.5x11 inch	139.5 +/- 1.5mm
8.5x13 inch	165.1 +/- 1.5mm
8.5x14 inch	178.0 +/- 1.5mm
11x17 inch	216.0 +/- 1.5mm

If the booklet crease position does not conform to the specification in [Table 5](#), perform [ADJ 12.7-171](#) Booklet Crease Position.

Booklet Staple Position is Not On The Fold

[Figure 5](#), open out the booklet at the centre page and press it onto a flat surface. Measure the position of the booklet staple from the crease line.



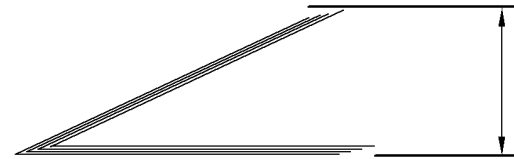
X-1-0119-A

Figure 5 Booklet staple position

If the booklet staple position does not conform to the specification in [Figure 5](#), perform [ADJ 12.8-171](#) Booklet Staple Position.

The Booklet is Not Sufficiently Creased

[Figure 6](#), Measure the open dimension of the booklets.



X-1-0120-A

Figure 6 Booklet creasing

Table 6 Creasing tolerance

Paper weight	Paper size A4, 8.5x11in, 8.5x13in or 8.5x14in	Paper size A4, 8.5x11in, 8.5x13in or 8.5x14in	Paper size A3 or 11x17in	Paper size A3 or 11x17in
-	95% of booklets	99.7% of booklets	95% of booklets	99.7% of booklets
80gsm (20lb)	Less than 30mm	Less than 35mm	Less than 22mm	Less than 25mm

If the open dimension of the booklets does not conform to the specification in [Table 6](#), install new crease nip springs, [PL 12.170](#) Item 12.

312E-171 Copy Damage in the HVF BM RAP

Use this RAP to identify and correct the causes of copy damage in the HVF BM.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the following:

- Check the alignment between the IME and the HVF BM, [ADJ 12.1-171](#).
- Look for paper fragments in the HVF BM paper path. Paper fragments can move through the machine and HVF BM paper path without causing a problem until they finally wedge themselves at some point. A likely place for a fragment of paper to be wedged is at the hole punch assembly, where the top and bottom guides form the narrowest part of the paper path.
- Ensure that the exit diverter solenoid SOL12-225, [PL 12.120 Item 4](#), energizes correctly and has full movement.
- Ensure that the hole punches park at the fully open position. If they protrude, even slightly, a jam will occur in the narrow paper path of the hole punch. Refer to the [312-044-00-171 to 312-047-00-171](#) Punch Head Position RAP.
- Check that all the idler rolls in the HVF BM paper path are free to rotate, particularly those on the jam clearance guides. Refer to [ADJ 40.1](#) Machine Lubrication.
- Make sure that the jam clearance guides 5a, 5b and 5c close and latch correctly.
- Check that the paper path ribs of the BM paper guide 6e, [PL 12.150 Item 7](#) and the upper exit guide [PL 12.125 Item 8](#) are free of scores and nicks. Check also for contamination and glue from label stock.
- Make sure that the compiler carriage tampers move to the correct paper size.
- Check that the paper size reported on the user interface corresponds to the actual paper size loaded in the trays, refer to the [370B](#) Tray 1 and 2 Wrong Size Paper RAP.
- Make sure that the BM tampers move to the correct paper size, refer to the [312-066-00-171, 312-384-00-171, 312-419-00-171, 312-420-00-171](#) HVF BM Tamper Fault RAP.
- Ensure that the BM paper guide, [PL 12.150 Item 7](#), closes and latches correctly.
- If heavy-weight paper is used, the paper can stop in the vertical transport and cause a fault. The fault is caused when the vertical transport motor is over loaded. Check the position of the jam clearance guides 5a, 5b and 5c. Check the vertical transport rolls and bearings for contamination. If necessary remove and clean the drive shaft and the bearings. If the problem continues install a new transport motor 1 (MOT12-223), [PL 12.120 Item 2](#).

312F-171 Mis-Registration in Stapled and Unstapled Sets RAP

Use this RAP to identify and correct the causes of mis-registration in stapled sets, resulting in staples missing some sheets in the set, or poorly registered non-stapled sets.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

A probable cause of mis-stapled or mis-compiled sheets is a defective paddle unit or ejector assembly.

- If output prints 2 to 100 in the compile area are not fully pulled back against the HVF backstops inspect the paddles of the paddle unit for physical signs of wear, [PL 12.115 Item 25](#).
- If output print 1 in the compile area is not fully pulled back against the HVF backstops inspect the ejector paddle assembly for physical signs of wear, [PL 12.110 Item 22](#).

A probable cause of mis-registration is the condition of the paper and/or damage such as, curl, wrinkle, creases, dog ears, etc.

- Curl, wrinkle and creases are probably caused in the IME, go to the [IQ1](#) Image Quality Entry RAP.
- For other copy/print damage and dog ears, go to the [312E-171](#) Copy Damage in the HVF BM RAP.

Check the following:

- Check the alignment between the IME and the HVF BM, [ADJ 12.1-171](#).
- Turn over the paper stack in the tray in use.
- Use a new ream of paper in the tray in use.
- Paper type, especially recycled paper, can lead to registration problems. Try changing to a different brand or type of paper.
- Ensure that the guides in the paper trays are correctly set and reported on the UI for the paper size loaded, refer to the [370B](#) Tray 1 and 2 Wrong Size Paper RAP.
- Check that paper type is set correctly. If heavyweight paper is used but not set in the UI, the compiler capacity can be exceeded.
- Check for obstructions in the compiler.
- Ensure the paddle roll mechanism in the eject housing is operating correctly, refer to the [312-024-00-171, 312-025-00-171](#) Paddle Roll Position RAP.
- Make sure that the compiler carriage tampers move to the correct paper size.
- Make sure that the BM tampers move to the correct paper size, refer to [312-066-00-171, 312-384-00-171, 312-419-00-171, 312-420-00-171](#) HVF BM Tamper Failure RAP.

312G-171 HVF BM Poor Stacking RAP

Use this RAP to find the cause of poor stacking in the HVF BM.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the following:

- Look for sets that are not dropping back fully in the bin 1 tray and therefore not being detected by the kicker fingers and sensors:
 - Large paper sizes should not be stacked on top of small paper sizes.
 - Ensure that the paper stack in each paper tray has been fanned.
 - Turn over the paper stack in each paper tray.
 - Ensure that all paper or other copy stock being used is within the size and weight specifications. Refer to [GP 20](#) Paper and Media Size Specifications.
 - Try using a fresh ream of paper.
 - Ensure that the edge guides of all paper trays are adjusted correctly for the paper size and that the trays are fully closed.
- Labels must not be fed to bin1, but to bin 0 only.
- It is recommended that transparencies are fed to bin 0 whenever possible.
- Check that the bin 1 upper limit switch, S12-190 and the bin 1 lower limit switch, S12-191 are working correctly. Refer to the [312-460-00-171 to 312-462-00-171](#) Bin 1 Position RAP.
- Make sure that the compiler carriage tampers move to the correct paper size.
- Check that the HVF BM is not positioned near an air conditioning or ventilation output duct. Air flow across the output bins can cause poor stacking.

312H-171 Pause to Unload (PTU) RAP

Use this RAP to diagnose pause to unload problems.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Go to [Flag 1](#). Enter dC330 code 012-208, pause to unload switch, [Figure 1](#). The display changes.

Y N

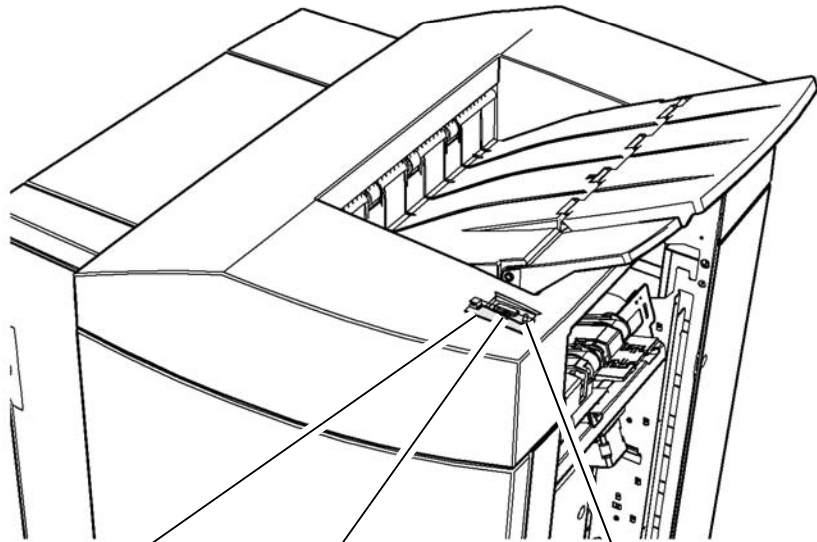
Go to [Flag 1](#). Check the pause to unload switch, S12-208. Refer to:

- [GP 13](#) How to Check a Switch
- [P/J901](#). HVF PWB.
- [REP 1.2](#) Wiring Harness Repairs.

If necessary install new parts:

- PTU PWB, [PL 12.140 Item 3](#).
- HVF PWB, [PL 12.140 Item 2](#).

Go to [SCP 5](#) Final actions.



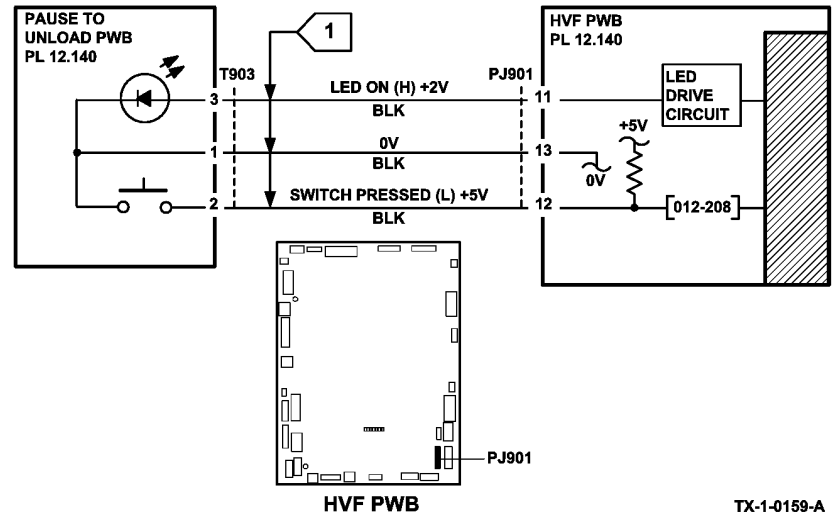
PTU PWB.

PTU switch, S12-208.

PTU LED.

X-1-0121-A

Figure 1 Component location



TX-1-0159-A

312J-171 Inserter Paper Sensing and +5V Supply RAP

Use this RAP to find the cause of inserter empty, inserter paper width and +5v supply problems.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

If a +5V supply problem is suspected, perform the following:

Go to the 312A-171 HVF Power Distribution RAP. Check the 0V and +5V supply from the HVF PWB to the inserter PWB. Repair the wiring as necessary, REP 1.1.

Install new components as necessary:

- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

To diagnose inserter paper sensing and paper width problems, perform the following:

Enter the dC330 code 012-082 inserter unit empty sensor, Q12-082, Figure 1. Actuate the sensor. **The display changes.**

Y N

Go to Flag 1 and Flag 2. Check Q12-082. Refer to:

- GP 11 How to Check a Sensor.
- P/J8 and P/J4, inserter PWB. P/J701 HVF PWB.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new component as necessary:

- Bottom tray assembly, PL 12.300 Item 19.
- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

Enter dC330 code 012-081, inserter paper width sensor 1, Q12-081, Figure 2. Actuate the sensor. **The display changes.**

Y N

Go to Flag 3 and Flag 4. Check Q12-081. Refer to:

- GP 11 How to Check a Sensor.
- P/J8 and P/J4, inserter PWB. P/J701 HVF PWB.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Bottom tray assembly, PL 12.300 Item 19.
- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

Enter dC330 code 012-169, inserter paper width sensor 2, Q12-169, Figure 2. Actuate the sensor. **The display changes.**

Y N

Go to Flag 5 and Flag 6 and check Q12-169. Refer to:

- GP 11 How to Check a Sensor.
- P/J8 and P/J4, inserter PWB. P/J701 HVF PWB.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Bottom tray assembly, PL 12.300 Item 19.
- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

Enter dC330 code 012-316, inserter acceleration sensor (Q12-316), Figure 1. Actuate the sensor. **The display changes.**

Y N

Go to Flag 7 and Flag 8, check Q12-316. Refer To:

- GP 11 How to check a Sensor.
- P/J11 and P/J4, inserter PWB. P/J701 HVF PWB.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

- Lower jam cover assembly, PL 12.300 Item 21.
- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

Enter dC330 code 012-315, inserter pickup sensor (Q12-315), Figure 1. Actuate the sensor. **The display changes.**

Y N

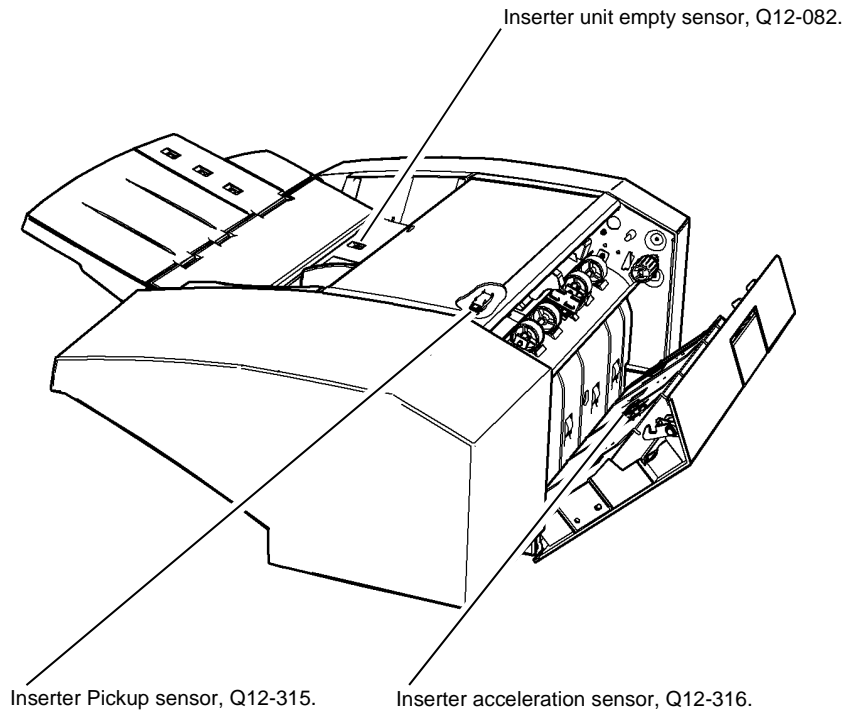
Go to Flag 9 and Flag 10, check Q12-315. Refer to:

- GP 11 How to check a Sensor.
- P/J7 and P/J4, inserter PWB. P/J701 HVF PWB.
- 312A-171 HVF Power Distribution RAP.
- 301A 0V Distribution RAP.

Install new components as necessary:

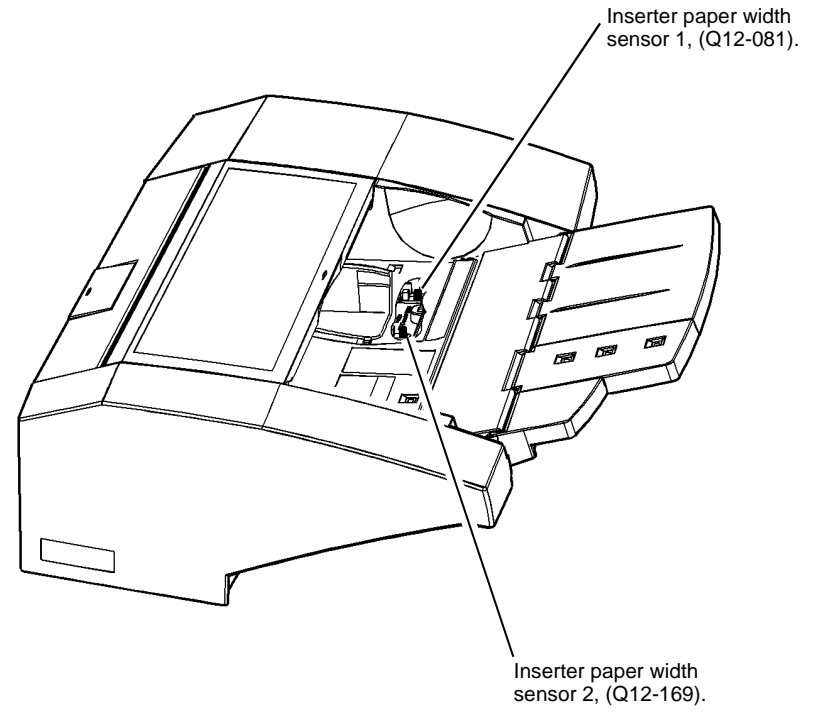
- Top cover door assembly, PL 12.310 Item 20.
- Inserter PWB, PL 12.310 Item 9.
- HVF PWB, PL 12.140 Item 2.

Perform SCP 5 final actions.



X-1-0122-A

Figure 1 Component location



X-1-0123-A

Figure 2 Component location

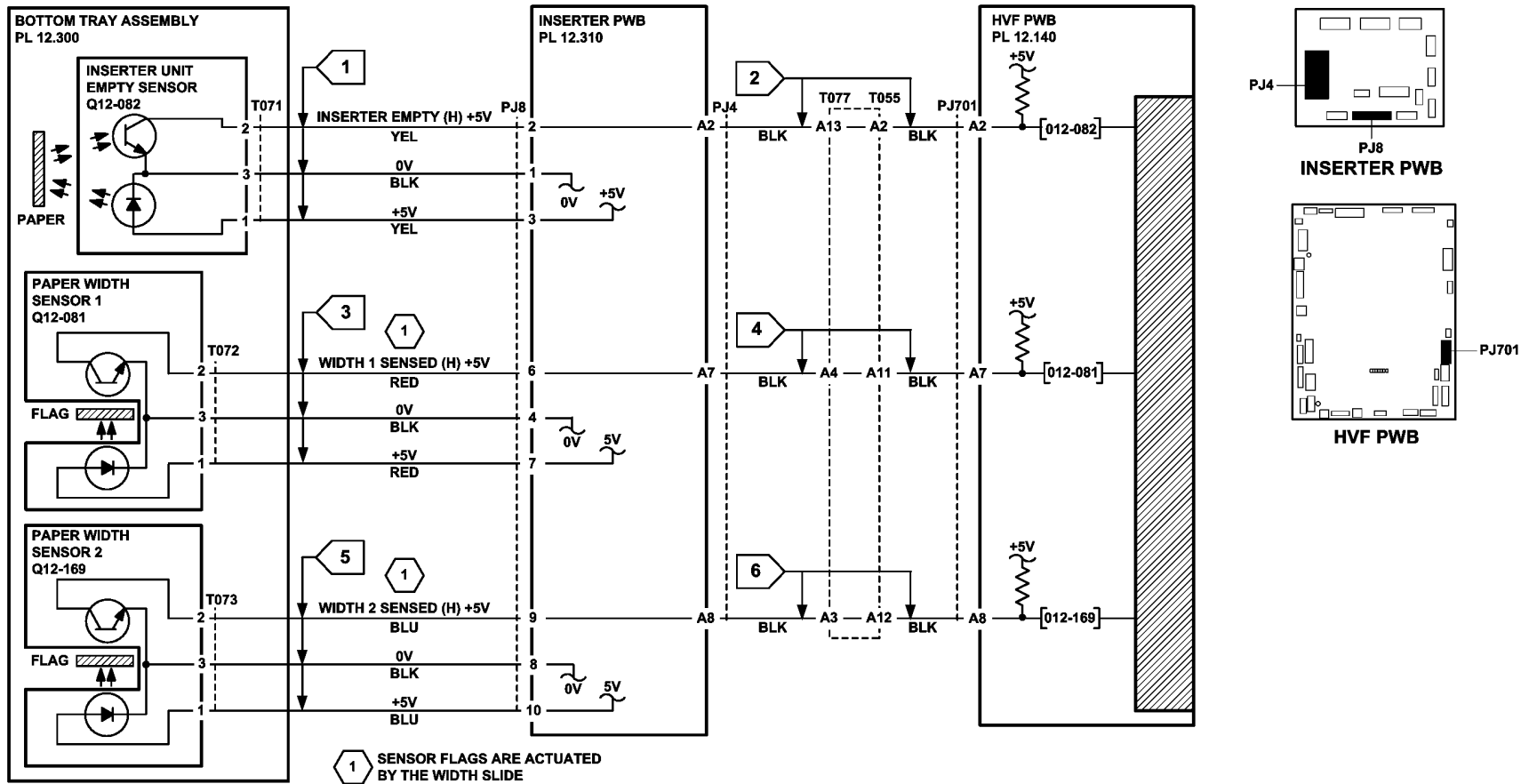


Figure 3 Circuit diagram

TX-1-0160-A

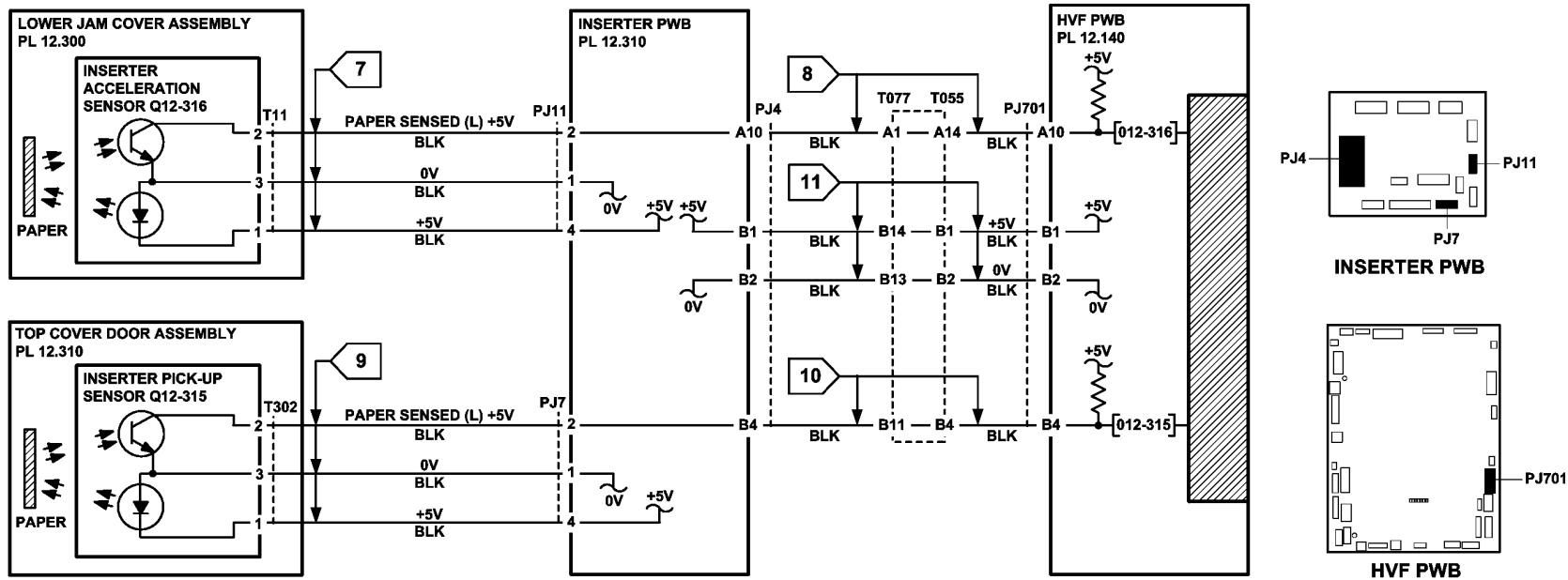


Figure 4 Circuit diagram

TX-1-0161-A

312K-171 HVF Initialization Failure RAP

When an initialization command is received from the machine, the HVF is initialized with the following actions:

1. The stacker tray moves down and then up.
2. The lower paddle rotates to home position.
3. The paddle unit moves up.
4. The paper pusher comes down
5. The ejector moves out.
6. The staple head moves to the rear.
7. The staple head moves back home, front.
8. The pusher moves up to home position
9. The ejector moves back into home position.
10. The pressing and support fingers come out and then move in.
11. The paddle unit moves down.
12. The paddles in the paddle unit rotate twice.
13. The HVF should now be ready to run if all these checks completed successfully.

NOTE: The HVF initialization procedure can be triggered by opening and closing the HVF front door, or by raising and lowering the top tray. When this is done the tray will not lower completely, but will adjust its position.

The booklet maker is initialized as follows:

1. The BM tampers are driven to their home position, unless already home.
2. The BM backstop is driven to the home position, unless already home.
3. The BM crease roll gate is driven to the home position, unless already home.
4. The BM crease blade is driven to the home position, unless already home.
5. The BM staple heads are driven to their home position, unless already home.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Open the HVF front door. Cheat the front door interlock switch. Fully pull out the BM module

Procedure

If the initialization sequence fails to place any unit at the home position, refer to the appropriate RAPs:

- Front tamper not at home, refer to [312-392-00-171](#) to [312-395-00-171](#) HVF Front tamper Tray RAP
- Rear tamper not at home, refer to [312-396-00-171](#) to [312-399-00-171](#) HVF Rear Tamper Tray RAP.
- Paddle not at home, refer to [312-024-00-171](#), [312-025-00-171](#) Paddle Roll Position RAP.
- Bin 1 not at home, refer to [312-460-00-171](#) to [312-462-00-171](#) HVF Bin 1 Position RAP.

- Punch not at home, refer to [312-044-00-171](#) to [312-047-00-171](#) Punch head Position RAP
- Staple head not at home, refer to [312-369-00-171](#) to [312-377-00-171](#) HVF stapler Position and Priming RAP.
- Ejector not at home, refer to [312-450-00-171](#), [312-456-00-171](#) to [312-459-00-171](#) HVF Ejector Module RAP.
- The buffer motor fails to start, refer to [312-141-00-171](#), [312-142-00-171](#) HVF Buffer Path RAP.
- Entry feed motor 1 fails to start, refer to [312-125-00-171](#), [312-126-00-171](#) HVF Entry Sensor RAP.
- Transport motor 2 fails to start, refer to [312-171-00-171](#), [312-172-00-171](#) HVF Top Exit Sensor RAP.
- The booklet maker diverter solenoid fails to energize, refer to [312-113-00-171](#), [312-114-00-171](#), [312-190-00-171](#), [312-192-00-171](#) HVF BM Entry RAP.
- The exit diverter solenoid fails to energize, refer to [312-171-00-171](#), [312-172-00-171](#) HVF Top Exit Sensor RAP.
- Either of the BM staple heads are not at the home position, refer to [312-063-00-171](#), [312-411-00-171](#) HVF BM Stapler Unit 1 Failure RAP or [312-403-00-171](#), [312-413-00-171](#), [312-414-00-171](#) HVF BM Stapler Head 2 and Stapler Module RAP.
- The BM tampers are not at the home position, refer to [312-066-00-171](#), [312-384-00-171](#), [312-419-00-171](#), [312-420-00-171](#) HVF BM Tamper Fault RAP.
- The BM backstop is not at the home position, refer to [312-065-00-171](#), [312-383-00-171](#) HVF BM Backstop Failure RAP.
- The BM crease roll gate is not at the home position, refer to [312-415-00-171](#) HVF BM Crease Roll Gate Home RAP.
- The BM crease blade is not at the home position, refer to [312-061-00-171](#), [312-416-00-171](#) HVF BM Creasing RAP.

312L-171 Tri-Folder Not Detected RAP

Use this RAP when the machine fails to detect the tri-folder module.

NOTE: The machine must be loaded with A4 or 8.5 x 11 inch SEF paper for the tri-folder to function. Also, booklet mode will only be available if A4, 11, 14 or 17 inch paper is loaded in the machine.

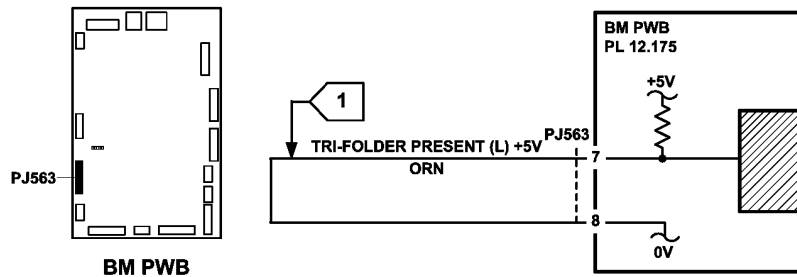
Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Go to [Flag 1](#). Check the wiring of the tri-folder present link, and repair as necessary. Check for 0V at [P/J563](#), pin 7. Refer to:

- [REP 1.2](#) Wiring Harness Repairs.
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.



TX-1-0151-A

Figure 1 Circuit diagram

312M-171 HVF Buffer Path Clamp Problems RAP

Use this RAP when having problems with the buffer path clamp on the HVF. Problems in this area result in paper jams at the exit and poor compiling.

Initial Actions

Check that the solenoid and the clamp can move freely without obstruction.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

[Figure 1](#) shows the location of the components.

Enter the [dC330](#) code 012-056, set clamp solenoid. **The solenoid actuates.**

Y N

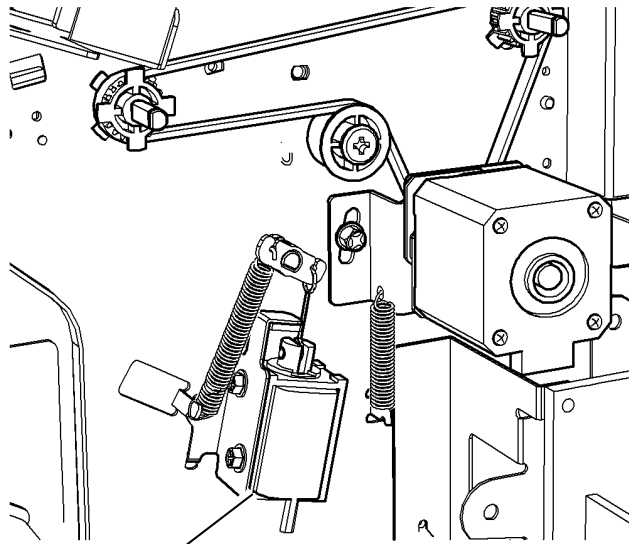
Go to [Flag 1](#). Check SOL12-056. Refer to:

- [REP 1.2](#) Wiring Harness Repairs.
- [GP 12](#) How to Check a Solenoid or Clutch.
- [312A-171](#) HVF Power Distribution RAP.
- [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Set clamp solenoid, [PL 12.120](#) Item 4.
- HVF PWB, [PL 12.140](#) Item 2.

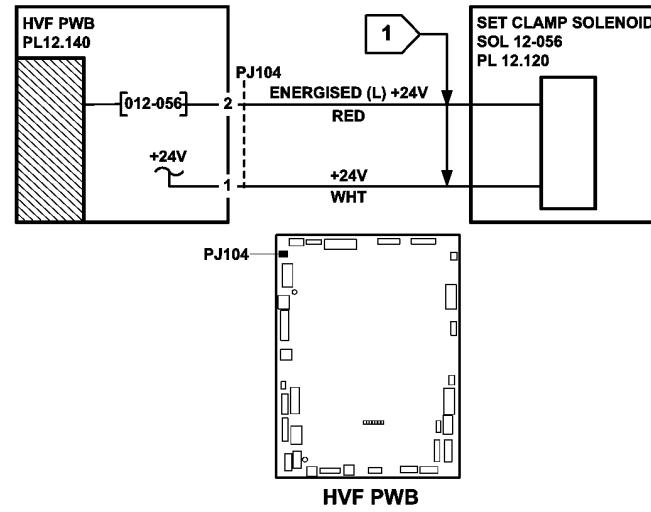
Perform [SCP 5](#) Final Actions.



Set clamp solenoid, SOL12-056. REAR VIEW.

Figure 1 Component location

X-1-0124-A



HVF PWB
Figure 2 Circuit diagram

TX-1-0155-A

312N-171 Chad Bin Present and Bin Full RAP

Use this RAP when there is a false indication of a missing or full chad bin.

Remote Service Actions

Ask the customer to check that the chad sensor hole in the side of the bin is clear of obstruction. Check that the bin is fully inserted and is empty. If the fault continues, a site visit will be necessary.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter dC330 code 012-118, chad bin present sensor, Q12-118, [Figure 1](#). Remove the chad bin and actuate the sensor manually. **The display changes.**

- Y N
- Go to [Flag 1](#). Check Q12-118. Refer to:
- [GP 11](#) How to Check a Sensor.
 - [P/J501](#). [HVF PWB](#).
 - [REP 1.2](#) Wiring Harness Repairs.
 - [312A-171](#) HVF Power Distribution RAP.
 - [301A](#) 0V Distribution RAP.

As necessary, install new components:

- Chad bin present sensor, [PL 12.125](#) [Item 18](#).
- HVF PWB, [PL 12.140](#) [Item 2](#).

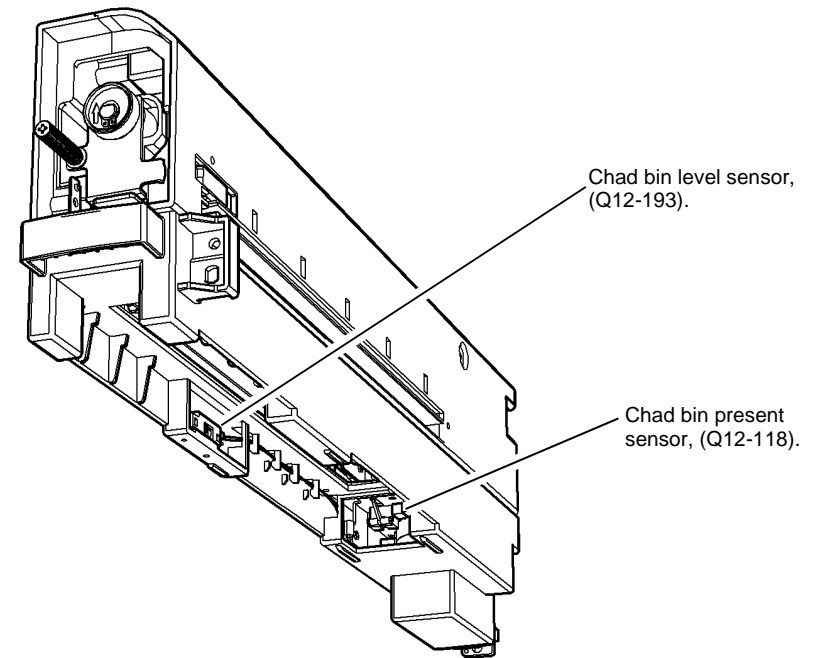
Enter the dC330 code, 12-193, chad bin level sensor, Q12-193, [Figure 1](#). Remove the chad bin and actuate the sensor with paper. **The display changes.**

- Y N
- Go to [Flag 2](#). Check Q12-193. Refer to:
- [GP 11](#) How to Check a Sensor.
 - [P/J501](#). [HVF PWB](#).
 - [REP 1.2](#) Wiring Harness Repairs.
 - [312A-171](#) HVF Power Distribution RAP.
 - [301A](#) 0V Distribution RAP.

Install new components as necessary:

- Chad bin level sensor, [PL 12.125](#) [Item 17](#).
- HVF PWB, [PL 12.140](#) [Item 2](#).

Perform [SCP 5](#) Final Actions.



UNDERSIDE VIEW

X-1-0125-A

Figure 1 Component location

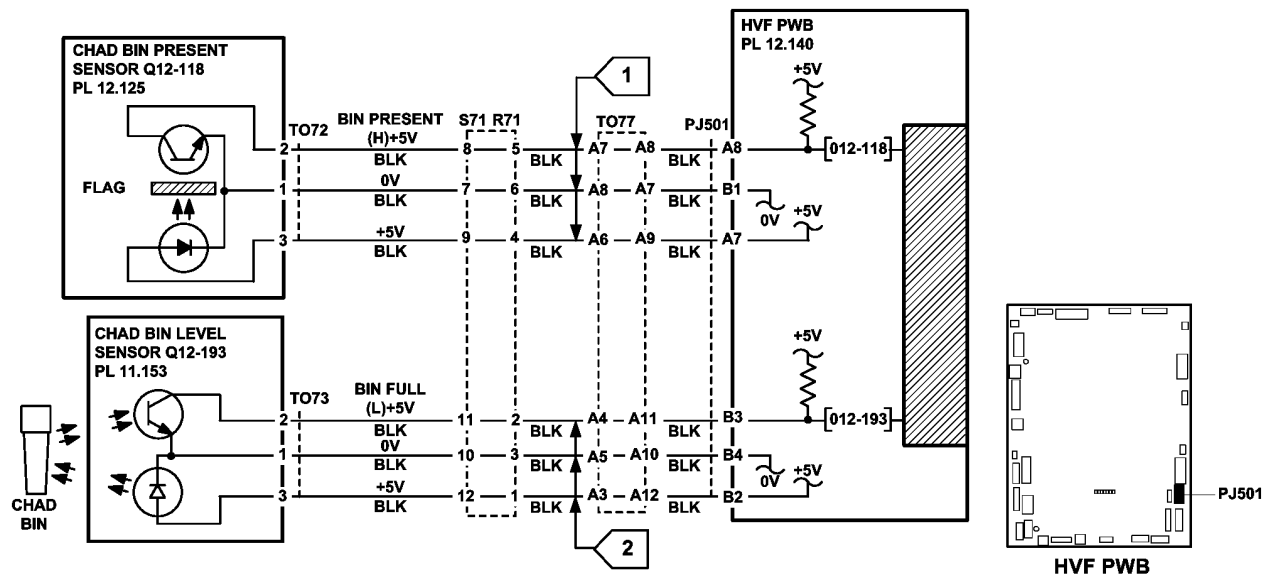


Figure 2 Circuit diagram

TX-1-0156-A

316-000-00 to 316-016-99 Network Faults 1 RAP

316-000-00 Format services non shutdown ESS faults.

316-000-01 ENS service non shutdown ESS faults.

316-000-09 Cannot create RPC connection with ENS.

316-000-14 Cannot create RPC connection with ENS.

316-000-19 Cannot create RPC connection with ENS.

316-000-26 Cannot create RPC connection with ENS.

316-001-09 Unable to do startup synchronization.

316-001-14 Unable to do startup synchronization.

316-001-19 Unable to do startup synchronization.

316-001-26 Unable to startup and synchronize with SC.

316-001-47 Unable to do startup synchronization.

316-001-90 Unable to do startup synchronization.

316-002-09 Unable to register as an RPC server.

316-002-14 Unable to register as an RPC server.

316-002-19 Unable to register as an RPC server.

316-002-26 Unable to register as an RPC server.

316-002-46 Unable to register as an RPC server.

316-003-09 Too many IPC handles.

316-003-14 Too many IPC handles.

316-003-19 Too many IPC handlers.

316-003-90 Utility insert handler failure.

316-004-14 RPC call failure to ESS registration service.

316-004-19 RPC connect failure to ESS registration service.

316-004-26 RPC connect failure to ESS registration service.

316-004-46 RPC connect failure to ESS registration service (to register with).

316-005-14 RPC call failure to ESS registration service.

316-005-19 RPC call failure to ESS registration service.

316-005-26 RPC call failure to ESS registration service.

316-005-46 RPC call failure to ESS registration service (to register with).

316-005-68 RPC call failure to ESS registration service (to register with).

316-005-90 RPC call failure to ESS registration failed.

316-005-92 RPC call failure to ESS registration service (to register with).

316-006-09 Cannot register for events.

316-006-19 Cannot register for events.

316-007-92 Invalid RPC data received.

316-009-09 Invalid IPC data received.

316-010-14 Unable to send IPC.

316-010-99 IPC open, create, signal queue failed.

316-013-14 Digital copier ENS synchronization error.

316-014-14 Digital copier ENS synchronization error.

316-015-14 SESS data store environmental variable not set.

316-015-19 SESS data store environmental variable not set.

316-016-14 Data store initialization failed.

316-016-19 Data store initialization failed.

316-016-99 Data Store init. failed.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the 316E Network Fault Checkout RAP.

316-017-19 to 316-153-19 Network Faults 2 RAP

316-017-19 Send event failure. Unable to send event to ESS ENS.

316-021-19 ESS PM registration connect error.

316-021-26 Service could not get host name.

316-021-46 Unable to get host name.

316-023-09 RPC call failure to ENS.

316-023-26 RPC call failure to ENS.

316-026-09 Memory allocation failure.

316-026-14 Memory allocation error.

316-026-46 Memory allocation failure.

316-026-90 Memory allocation error.

316-026-92 Memory allocation failure.

316-027-90 Unable to obtain well known queue ID.

316-028-09 Unable to complete RPC call.

316-028-90 Invalid range string.

316-030-19 Unable to obtain client RPC handle to EJS.

316-031-09 Invalid event notification received.

316-032-19 NVM connection failure.

316-039-00 Pthread create error.

316-040-92 Semaphore fault.

316-048-09 Unable to set binding.

316-048-14 Cannot set ESS client binding.

316-048-90 Cannot set ESS client binding.

316-048-99 Unable to set client binding.

316-150-09 Cannot send registration event.

316-150-14 Unable to obtain RPC transport.

316-150-19 Unable to sync peer (within ESS) infrastructure services.

316-150-26 Fault service failed to write log.

316-150-90 Invalid IPC request destination.

316-150-92 Consumer interface fault.

316-151-09 Invalid IPC command.

316-151-14 SNMP event registration failed.

316-151-19 Invalid IPC command.

316-151-26 Fault service failed to get a log handle.

316-151-90 Put environment variable failure.

316-152-09 Internal IPC failure.

316-152-14 Empty internal event received by ENS.

316-152-19 Unable to send request to SESS.

316-152-26 Fault service could not open fault log.

316-153-09 Unable to obtain IPC queue.

316-153-14 Can not initialize internal event list.

316-153-19 NVM save failure.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the 316E Network Fault Checkout RAP.

316-154-09 to 316-602-105 Network Faults 3 RAP

316-154-09 NC registration service configuration error.

316-154-14 Cannot create internal event.

316-154-19 NVM read failure.

316-155-19 NC failed to boot from alternate disk partition.

316-156-19 Service run loop failed.

316-160-09 NC registration service process death.

316-161-09 Cannot send registration event.

316-162-09 NC platform manager services process death.

316-163-09 NC DM agent services process death.

316-164-09 List access failure (create, add, find, delete).

316-429-00 Unable to write to data store.

316-431-00 Unable to get system time.

316-432-00 Unknown scheduler received.

316-433-00 RPC call failed.

316-434-00 Unable to change scheduler received.

316-501-00 Ethernet cable not connected.

316-502-00 USB WiFi adapter not installed.

316-503-00 Ethernet 802.1X connection failure.

316-504-00 WiFi connection failure. Cannot connect to the WiFi network.

316-505-00 WiFi connection lost.

316-506-00 Ethernet DHCP/BOOTP Error: DHCP/BOOTP failure.

316-507-00 Ethernet DHCP/BOOTP Error: DHCP/BOOTP failure.

316-508-00 Ethernet DHCP/BOOTP Error: DHCP/BOOTP failure.

316-509-00 Ethernet DHCP/BOOTP Error: DHCP/BOOTP failure.

316-510-00 Ethernet DHCP/BOOTP Error: DHCP/BOOTP failure.

316-511-00 Ethernet DHCP/BOOTP Error: DHCP/BOOTP failure.

316-512-00 Ethernet DHCP/BOOTP Error: DHCP/BOOTP server not found.

316-513-00 WiFi DHCP/BOOTP Error: DHCP/BOOTP server not found.

316-514-00 Ethernet DHCP/BOOTP Error: DHCP/BOOTP failed to obtain an address.

316-517-00 WiFi DHCP/BOOTP Error: DHCP/BOOTP failed to obtain an address.

316-518-00 Ethernet DHCP/BOOTP Error: DHCP/BOOTP failed to obtain an address.

316-519-00 WiFi DHCP/BOOTP Error: DHCP/BOOTP failed to obtain an address.

316-520-00 Ethernet DHCP/BOOTP Error: DHCP/BOOTP failed to obtain an address.

316-521-00 WiFi DHCP/BOOTP Error: DHCP/BOOTP failed to obtain an address.

316-522-00 Ethernet DHCP/BOOTP Error: DHCP/BOOTP server not found.

316-523-00 WiFi DHCP/BOOTP Error: DHCP/BOOTP server not found.

316-524-00 Ethernet: Duplicate IPv4 address detected.

316-525-00 WiFi Duplicate IPv4 address detected.

316-526-00 Ethernet: No IPv4 router configured.

316-527-00 WiFi: No IPv4 router configured.

316-528-00 Ethernet: No IPv6 router advertisement. No routable IPv6 address configured.

316-529-00 WiFi: No IPv6 router advertisement. No routable IPv6 address configured.

316-531-00 Ethernet: Duplicate IPv6 address detected.

316-533-00 WiFi: Duplicate IPv6 address detected.

316-535-00 Ethernet DHCPv6 Error: DHCPv6 failed to obtain an address.

316-536-00 WiFi DHCPv6 Error: DHCPv6 failed to obtain an address.

316-540-00 Ethernet DHCPv6 Error: DHCPv6 failed to obtain an address.

316-544-00 WiFi DHCPv6 Error: DHCPv6 failed to obtain an address.

316-546-00 Ethernet DHCPv6 Error: DHCPv6 failed to obtain an address. DHCPv6 NAK.

316-547-00 WiFi DHCPv6 Error: DHCPv6 failed to obtain an address. DHCPv6 NAK.

316-548-00 Ethernet DHCPv6 Error: DHCPv6 server not found.

316-550-00 WiFi DHCPv6 Error: DHCPv6 server not found.

316-551-00 Ethernet: Failed to verify the host name and/or domain name in DNS.

316-552-00 WiFi: Failed to verify the host name and/or domain name in DNS.

316-553-00 Ethernet: Verified host and/or domain name(s) do not match with the requested host/domain name(s).

316-554-00 WiFi: Verified host and/or domain name(s) do not match with the requested host/domain name(s).

316-600-07 Cannot create RPC connection to ENS.

316-600-35 Cannot create RPC connection to ENS.

316-600-46 Cannot create RPC connection to ENS.

316-600-66 Unable to create RPC connection to ENS.

316-600-67 Unable to create RPC connection to ENS.

316-601-26 Fault service failed IPC queue setup.

316-601-35 System control initialization failed.

316-601-46 Invalid UI information (RPC data) returned.

316-601-47 Diagnostics service failed IPC queue setup.

316-601-66 Unable to do startup synchronization.

316-601-67 Unable to do startup synchronization.

316-601-68 Unable to startup and synchronize with SC.

316-601-105 Unable to do startup synchronization.

316-602-07 RPC service registration failure.

316-602-09 Unable to unregistered as RPC service during shutdown.

316-602-11 RPC server register failed.

316-602-28 RPC server registration failed.

316-602-35 RPC server registration failed.

316-602-38 RPC server registration failed.

316-602-66 Unable to register as an RPC server.

316-602-67 Unable to register as an RPC server.

316-602-68 Unable to register as an RPC server.

316-602-105 Unable to register as an RPC server.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the **316E** Network Fault Checkout RAP.

316-603-11 to 316-608-105 Network Faults 4 RAP

316-603-11 Replace handler call failed.

316-603-28 Replace handler call failed.

316-603-46 Too many IPC handlers.

316-603-66 Too many IPC handlers.

316-603-67 Too many IPC handlers.

316-603-68 Replace handler call failed.

316-603-105 RPC call failure to network controller registration service.

316-604-14 Unable to unregister as RPC service during shutdown. Registration failed.

316-604-38 Could not register with registration service.

316-604-99 Could not register with registration service.

316-604-105 SESS data store environmental variable not set.

316-605-07 Unable to register with registration service.

316-605-14 RPC call failure to ESS registration service.

316-605-26 Fault service timed out registering with registration service.

316-605-35 RPC call failure to NC registration service.

316-605-47 RPC call failure to NC registration service (to register with).

316-605-66 RPC call failure to NC registration service.

316-605-67 RPC call failure to NC registration service.

316-605-105 Unable to unregister as RPC service during shutdown.

316-606-07 Cannot register for events.

316-606-35 Cannot register for events.

316-606-46 Cannot register for events.

316-606-99 Cannot register for events.

316-606-105 OS problem.

316-607-19 Invalid RPC data received.

316-607-46 Invalid RPC data received.

316-607-47 Invalid RPC disk diagnostic data received.

316-607-92 Invalid RPC data received.

316-607-105 Service run loop failed.

316-608-09 Unable to free IPC resources.

316-608-11 IPC unregister failed.

316-608-14 Unable to free IPC resources.

316-608-26 Fault service failed to unbind with SC.

316-608-28 IPC unregister fail.

316-608-35 Unable to free IPC resources.

316-608-38 Unable to unregister as IPC server.

316-608-46 Unable to free IPC resources.

316-608-66 Unable to free IPC resources.

316-608-67 Unable to free IPC resources.

16-608-68 Unable to Free IPC Resources.

316-608-105 Unable build UI SVC, obtain client failed.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the 316E Network Fault Checkout RAP.

316-609-07 to 316-612-68 Network Faults 5 RAP

316-609-07 Unknown message received from DM agent.

316-609-19 Invalid RPC data received.

316-609-26 Fault service encountered error trying to get IPC message.

316-609-46 Invalid IPC data received.

316-609-47 Invalid IPC data received. Get SC diagnostics handle failed.

316-609-92 Invalid IPC data received.

316-609-105 Too many IPC handlers.

316-610-00 IPC send failure to ESS AAA service for queue command authorization.

316-610-07 IPC send failure to DM agent.

316-610-09 Cannot send IPC message to ESS platform manage.

316-610-11 IPC communication failed.

316-610-19 Unable to send IPC message.

316-610-26 Unable to send IPC message.

316-610-28 IPC communication failed.

316-610-35 Unable to send IPC message.

316-610-46 Unable to send IPC message.

316-610-90 IPC send response error.

316-610-92 Failure to send queue status.

316-610-99 Unable to send IPC message.

316-611-07 Client removal failure.

316-611-09 Unable to remove RPC connection.

316-611-14 Unable to remove RPC connection.

316-611-19 Unable to remove RPC connection.

316-611-26 Unable to remove RPC connection.

316-611-38 Client removal failure.

316-611-46 Unable to remove RPC connection.

316-611-47 Unable to remove RPC connection.

316-611-66 Unable to remove RPC connection.

316-611-67 Unable to remove RPC connection.

316-611-99 Unable to remove RPC connection.

316-612-09 Unable to do shutdown synchronization.

316-612-14 Unable to do shutdown synchronization.

316-612-35 Unable to do shutdown synchronization.

316-612-46 Unable to do shutdown synchronization.

316-612-47 Downgrade not permitted.

316-612-68 Unable to do shutdown synchronization.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the **316E** Network Fault Checkout RAP.

316-613-09 to 316-620-90 Network Faults 6 RAP

316-613-09 DC registration synchronization error.

316-613-14 DC ENS synchronization error.

316-613-19 DC sys mgr sync error.

316-614-09 DC registration communications error.

316-614-14 Digital copier ENS registration error.

316-614-19 DC sys mgr communications error.

316-614-47 Invalid SW upgrade file.

316-615-35 SESS data store environmental variable not set.

316-615-46 SESS data store environmental variable not set.

316-615-47 Multiple SW upgrade files in directory.

316-615-66 SESS data store environmental variable not set.

316-615-67 SESS data store environmental variable not set.

316-615-90 Corrupt environment variable, configuration script error.

316-616-35 SESS faults 206 or 207. Data store not created. Corrupt environment.

316-616-38 Shared memory fault when initializing with the data store.

316-616-46 SESS faults 206 or 207, data store not created, corrupt environment variable.

316-616-47 IPC message failure.

316-616-67 Submission of e-mail or internet fax job failed.

316-617-19 Invalid event information or data. ENS failure, system RPC information corrupt.

316-617-47 TAR extraction failure.

316-618-47 DLM SPI extraction failure.

316-619-14 Registration service failed to respond in time.

316-619-19 Registration service failed to respond in time.

316-619-26 Could not register with registration service. Communication failure, software error.

316-619-46 Unable to unregister with network controller registration service. Registration Service was too slow to respond.

316-619-47 DMPR failure at web.

316-619-68 Unable to unregister with network controller registration service. Registration service was too slow to respond.

316-619-93 Unable to unregister with network controller registration service. Registration service was too slow to respond.

316-620-07 Registration service failed.

316-620-14 Registration service failed.

316-620-19 Registration service failed.

316-620-35 Registration service failed.

316-620-38 Registration service failed.

316-620-39 Registration service failed.

316-620-46 Registration service failed.

316-620-47 Upgrade request rejected.

316-620-90 Registration service failed.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the 316E Network Fault Checkout RAP.

316-620-92 to 316-625-90 Network Faults 7 RAP

316-620-92 Unable to unregister with network controller registration service due to registration service failure.

316-620-93 Unable to unregister with network controller registration service due to registration service failure.

316-620-99 Registration service failed.

316-621-00 Unable to get host name. Configuration error.

316-621-07 Unable to get host name. Configuration error.

316-621-11 Unable to get host name. Configuration error.

316-621-28 Unable to get host name. Configuration error.

316-621-35 Failed to get host name using GetHostName call.

316-621-38 Failed to get host name using GetHostName call.

316-621-47 Failed to get host name using GetHostName call.

316-621-66 Unable to get host name.

316-621-67 Unable to get host name.

316-621-93 Failed to get host name using GetHostName call.

316-621-99 Failed to get host name using GetHostName call.

316-622-07 Corrupt O/S RPC table.

316-622-09 Corrupt O/S table.

316-622-11 Corrupt O/S table.

316-622-14 Corrupt O/S table.

316-622-19 Corrupt O/S table.

316-622-26 Corrupt O/S table.

316-622-28 Corrupt O/S table.

316-622-35 Corrupt O/S table.

316-622-38 Corrupt O/S table.

316-622-46 Corrupt O/S table.

316-622-47 Software upgrade file failure.

316-622-66 Unable to unregister as RPC service during shutdown.

316-622-67 Unable to register as RPC service during shutdown.

316-622-68 Unable to register as RPC service during shutdown.

316-623-35 ENS Service failed to respond in time.

316-623-47 ENS service failed to respond in time.

316-624-46 RPC corrupted o/s failure.

316-625-35 Unknown message received. Software version mismatch.

316-625-46 Software version mismatch.

316-625-66 Invalid IPC message type.

316-625-67 Invalid IPC message type.

316-625-90 Known service sends message that does not make sense.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the [316E](#) Network Fault Checkout RAP.

316-626-00 to 316-635-99 Network Faults 8 RAP

316-626-00 Memory leak, software bug memory corrupt. Virtual memory exhausted. Process size exceeding system limits.

316-626-11 Memory leak, software bug memory corrupt. Virtual memory exhausted. Process size exceeding system limits.

316-626-38 Memory leak, software bug memory corrupt. Virtual memory exhausted. Process size exceeding system limits.

316-626-47 Memory leak, software bug memory corrupt. Virtual memory exhausted. Process size exceeding system limits.

316-626-66 Memory allocation failed.

316-626-67 Memory allocation failed.

316-628-07 Range environment variable not set. Set to invalid numeric string.

316-628-09 Unable to complete RPC call.

316-628-35 Range environment variable not set. Set to invalid numeric string.

316-628-46 Range environment variable not set. Set to invalid numeric string.

316-628-66 Range environment variable not set. Set to invalid numeric string.

316-628-67 Range environment variable not set. Set to invalid numeric string.

316-629-11 Fault service call to PSW callback failed.

316-629-26 Fault service call to PSW callback failed.

316-629-46 No acknowledgment for RPC message.

316-629-66 No acknowledgement for RPC message.

316-629-67 No acknowledgment for RPC message.

316-629-68 No acknowledgment for RPC message.

316-629-92 No acknowledgment for RPC message. RPC timeout calling program received void response due to corrupt RPC.

316-629-93 No acknowledgment for RPC message. RPC timeout calling program received void response due to corrupt RPC.

316-630-09 Corrupt O/S RPC table.

316-630-26 Corrupt system configuration.

316-630-35 Unable to get RPC client handle. Corrupt system configuration.

316-630-38 Null pointer returned when obtain client attempted.

316-630-46 Corrupt system configuration.

316-630-47 Corrupt system configuration.

316-630-66 Unable to get RPC client handle.

316-630-67 Unable to get RPC client handle.

316-630-68 Unable to get RPC client handle.

316-630-99 Corrupt system configuration.

316-631-19 Software error in the ENS service or in the service generating the fault.

316-631-46 Software error in the ENS or in the service generating the fault.

316-633-19 Invalid system configuration. NVM corrupted.

316-634-46 Unable to specify shutdown routine during initialization.

316-635-07 Cannot free XDR data.

316-635-35 Cannot free XDR data.

316-635-46 Unable to free XDR data.

316-635-99 Unable to convert serialized data to internal data structure.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the 316E Network Fault Checkout RAP.

316-636-35 to 316-647-26 Network Faults 9 RAP

316-636-35 Unable to convert serialized data to internal data structure. Unable to free XDR data.

316-636-99 Unable to convert serialized data to internal structure. Unable to free XDR data.

316-637-11 Failed to open system jobs file.

316-637-26 Failed to open system jobs file.

316-637-38 Disk write error.

316-637-47 Failed to open a file. Bad disk.

316-637-66 File I/O error.

316-637-67 File I/O error.

316-637-93 File I/O error.

316-637-95 File I/O error.

316-638-66 Unable to initialize with queue library.

316-638-67 Unable to initialize with queue library.

316-639-38 O/S failure memory.

316-639-46 O/S failure memory.

316-640-28 Calling program received void.

316-640-35 RPC send corrupt.

316-640-46 O/S failure.

316-641-00 Cannot log fault to network controller fault log. Either registration or network controller fault service is not available.

316-641-26 Unable to log a fault on the network controller.

316-641-46 Cannot log fault to network controller fault service.

316-642-46 Software error.

316-642-47 Software error.

316-643-19 Disk write error.

316-643-26 Failed to close system jobs file.

316-643-47 Failed to close a file.

316-644-11 Common logging utility failed to get log size.

316-644-26 Common logging utility failed to get log size.

316-644-47 Failed while trying to get data for next process to be verified.

316-644-66 File I/O error.

316-644-67 File I/O error.

316-645-11 Failed write to system jobs file.

316-645-26 Failed write to system jobs file.

316-645-46 Failed to write to a file.

316-645-47 Failed to write to a file.

316-645-66 File I/O error.

316-645-67 File I/O error.

316-646-26 Failed to delete system jobs file.

316-647-19 Lynx OS not responding.

316-647-26 Diagnostic failure, O/S failure.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the **316E** Network Fault Checkout RAP.

316-649-35 to 316-668-95 Network Faults 10 RAP

316-649-35 Software error.

316-650-35 Service making invalid attribute request.

316-650-99 Service making invalid attribute request.

316-651-19 IPC, OS, SESS or SC operation.

316-651-35 IPC and OS failure. SESS not responding.

316-651-99 IPC and OS failure. SESS not responding.

316-652-38 SPI enroll failed. Unable to enroll SPI callbacks.

316-652-98 SPI enroll failed. Unable to enroll SPI callbacks.

316-652-99 SPI enroll failed. Unable to enroll SPI callbacks.

316-653-38 When DM passes completed job logged an invalid job.

316-654-14 Log_Init/Log_Close Fault.

316-654-38 DM returned from SPI register function because of error.

316-654-99 DM returned from log function because of error.

316-655-38 DM returned to SPI register function because of error.

316-656-38 RPC processing fault.

316-658-07 Unable to get host name. Configuration error.

316-659-11 Parser utility open failure.

316-659-28 Parser utility open failure.

316-659-93 Parser utility open failure.

316-659-95 Parser utility open failure.

316-660-95 Cannot read local directory entries.

316-660-99 Service initialization failed.

316-661-95 Cannot create spool directory.

316-662-11 Parser utility template failed to parse.

316-662-28 Parser utility template failed to parse.

316-662-93 Parser utility template failed to parse.

316-662-95 Parser utility template failed to parse.

316-663-11 Parser utility template failed to parse.

316-663-28 Parser utility template failed to parse.

316-663-93 Parser utility template failed to parse.

316-663-95 Parser utility template failed to parse.

316-664-11 Parser utility parser closing failed.

316-664-28 Parser utility parser closing failed.

316-664-93 Parser utility parser closing failed.

316-664-95 Parser utility parser closing failed.

316-665-95 Unable to detach from child thread.

316-666-11 Parser utility invocation failed.

316-666-28 Parser utility invocation failed.

316-666-93 Parser utility invocation failed.

316-666-95 Parser utility invocation failed.

316-667-11 Parser utility set status failed.

316-667-28 Parser utility set status failed.

316-667-95 Parser utility set status failed.

316-668-47 Failed to write NVM.

316-668-93 Unable to determine local file statistics.

316-668-95 Unable to determine local file statistics.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the 316E Network Fault Checkout RAP.

316-669-28 to 316-730-66 Network Faults 11 RAP

316-669-28 Unable to write job template to network controller disk.

316-669-93 Unable to write job template to network controller disk.

316-669-95 Unable to write job template to network controller disk.

316-670-00 Unable to lock/unlock data store.

316-670-11 Unable to decode template file.

316-670-28 Unable to decode template file.

316-670-47 Failed to save NVM.

316-670-93 Unable to decode template file.

316-671-00 Sort jobs failed.

316-671-47 Failed to initialize NVM.

316-671-93 Unable to encode template file.

316-671-95 Unable to encode template file.

316-672-09 Software error. File system corruption.

316-672-95 Software error. File system corruption.

316-673-95 Software error. File system corruption.

316-674-00 RPC server not responding.

316-674-09 RPC server not responding.

316-675-00 Database server not responding.

316-700-00 In a list job request, an unknown attribute was requested.

316-700-35 Unknown attribute requested passes into a function.

316-701-00 LOA failure. Unable to communicate with XSA database.

316-701-68 Printing prohibited. Unable to communicate with postgres database.

316-701-99 LOA failure. Unable to communicate with XSA database.

316-701-110 Unable to communicate with XSA Database.

316-702-00 LOA failure. Unable to communicate with XSA database.

316-702-95 LOA failure. Unable to communicate with XSA database.

316-707-00 Unknown queue request received.

316-709-00 Unknown modify request received.

316-710-00 Service being communicated to is dead. System resource corrupted.

316-710-35 Service trying to communicate to is dead. System resources corrupted.

316-716-00 Data store not created. Corrupt environment variable.

316-728-00 Range environment variable set to invalid numeric string.

316-730-00 Unable to create client handle.

316-730-28 Unable to create client handle.

316-730-35 Unable to create client handle.

316-730-66 Unable to create client handle.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the 316E Network Fault Checkout RAP.

316-718-00 to 316-740-19 Hard Disk Faults RAP

16-718-00 Data store threshold exceeded.

16-720-00 Disk partition root threshold exceeded.

16-722-00 Disk partition /VAR threshold exceeded.

16-724-00 Disk partition /TMP threshold exceeded.

16-726-00 RPC connections exhausted.

16-740-19 NC hard disk IIO failure

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, reload the machine softwareGP 4.

316-742-19 Hard Disk ODIO Failure RAP

316-742-19 Hard disk ODIO failure.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Print a configuration report.
2. If the configuration report shows Image Overwrite as installed/disabled, perform the following:
 - a. Enter Customer Administration Tools, GP 24.
 - b. Select the **Tools** tab.
 - c. Select **Security Settings**.
 - d. Select **Image Overwrite Security**.
 - e. Enable the required feature.
3. Perform the 316E Network Fault Checkout RAP.

316-750-07 to 316-750-95 Network Faults 12 RAP

316-750-07 Message received from DM not processed correctly.

316-750-09 Service tried to register and service is already registered.

316-750-11 Template cache file is missing.

316-742-19 Hard disk ODIO failure.

316-750-14 Too many messages sent to SESS system control.

316-750-19 Invalid request data from calling service.

316-750-26 Invalid number of faults requested.

316-750-35 Data store failure.

316-750-38 Initialization of SPI and job tracking table failed in SVC initialize service.

316-750-46 Client requested an unknown object or invalid object type.

316-750-47 Bad parameter returned.

316-750-66 Failure to set service state.

316-750-67 Failure to set service state.

316-750-90 Unexpected service sends this message.

316-750-92 Unable to open bit map captured to disk. Bad or full disk.

316-750-93 IFS error when requesting memory.

316-750-95 Local spool area does not exist.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the [316E](#) Network Fault Checkout RAP.

316-751-00 to 316-753-95 Network Faults 13 RAP

316-751-00 Database error known by service registry or registry not available.

316-751-07 Message received from network controller AAA not processed correctly.

316-751-09 Registration receives unrequested ENS notification.

316-751-11 Initialization procedure fails.

316-751-14 SC not responding.

316-751-19 Invalid permission to change date.

316-751-26 Unrecognized code. Service raises code that the fault service doesn't know how to handle.

316-751-28 Templates attributes are invalid, or syntax error.

316-751-35 Invalid queue ID.

316-751-38 Unknown attribute returned for completed job list.

316-751-46 Client requested an unknown object or invalid object type.

316-751-47 Failed to replace the current directory with directory from alt. partition.

316-751-66 Unable to send event to network controller ENS.

316-751-67 Unable to send event to network controller ENS.

316-751-92 Cannot set job to complete.

316-751-93 Invalid template attribute.

316-751-112 Database Error or Service Registry not available.

316-752-00 File cabinet application registration error.

316-752-07 Data store error.

316-752-09 Configuration control problem.

316-752-14 SC not responding. SC IPC queue does not exist.

316-752-19 RPC failure.

316-752-26 Unrecognized SESS error code.

316-752-28 Template cache file is missing.

316-752-35 Invalid queue ID.

316-752-46 Invalid row of table object.

316-752-47 Invalid test pattern source.

316-752-66 Scan to fax services registration error.

316-752-67 Scan to fax services registration error.

316-752-92 Configuration problem.

316-752-93 Error accessing jobs in job list.

316-752-95 File transfer failure.

316-753-00 File cabinet application un-registration error.

316-753-09 Software bug.

316-753-14 Calling service used an invalid event number.

316-753-19 Invalid event information or data. ENS failure. System RPC information corrupt.

316-753-26 PSW failure. O/S failure. CCM failure.

316-753-28 Cannot communicate with UI for template list request.

316-753-35 Unable to change EJS status to offline.

316-753-46 Invalid table row.

316-753-47 Failed to close a directory during verification check. Corrupt disk.

316-753-66 Data store read failure.

316-753-67 Data store read failure.

316-753-90 Software error.

316-753-92 Configuration problem.

316-753-93 Error adding jobs in job list.

316-753-95 Requested transfer protocol not supported.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the **316E** Network Fault Checkout RAP.

316-754-09 to 316-756-93 Network Faults 14 RAP

316-754-09 Still registered services after timeout.

316-754-14 Receipt is not there. Failure on ENS side.

316-754-19 Shutdown request reason unknown.

316-754-26 Fault service encountered error reading fault log. File system corrupted.

316-754-28 Initialization procedure fails.

316-754-35 OS corrupt.

316-754-46 Attempted to write a read only object. Software configuration error.

316-754-47 Failed to replace a file that was missing with file from alt. partition.

316-754-66 OS problem.

316-754-67 OS problem.

316-754-68 Initialize procedure fails.

316-754-90 Software bug.

316-754-92 Data store failure.

316-754-93 Error deleting jobs from job list.

316-754-95 Unable to remove advisory lock on network server.

316-755-00 Service registry cannot initialize database.

316-755-09 Cannot register new service due to too many entries in SRV table.

316-755-14 Message buffer full. Full queue.

316-755-19 SESS system control broken or too many IPC messages.

316-755-26 Disk write error. Software error.

316-755-28 Cancel request failed.

316-755-35 OS corrupt. Software corrupt. Data store corrupt.

316-755-46 Mismatched data type during object write. Software configuration error or request mishandled configuration index data.

316-755-47 Failed to repair the permission of the current file being checked.

316-755-67 Cancel request failed.

316-755-90 Software limit reached.

316-755-92 Invalid IPC data received.

316-755-93 Unable to initialize with IFS.

316-755-99 Unable to abort job fault.

316-755-112 Unable to initialize the service registry table.

316-756-09 Service not registered.

316-756-14 Client provided wrong binding information. Client not required as RPC server.

316-756-26 Software error.

316-756-28 Range String Error.

316-756-35 OS corrupt. Software error. NVM error.

316-756-46 Poll select failed.

316-756-47 Executable missing or corrupt. Invalid test parameters.

316-756-66 Unable to read NVM value.

316-756-67 Unable to read NVM value.

316-756-92 Invalid IPC Data Received.

316-756-93 IPA operation failed.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the 316E Network Fault Checkout RAP.

316-757-09 to 316-760-99 Network Faults 15 RAP

316-757-09 System RPC corrupt.

316-757-14 Programming bug. Attempted to shorten timeout.

316-757-19 System manager died or communications link failed.

316-757-26 Software error. Bad disk.

316-757-28 Unknown Message Received.

316-757-35 OS corrupt. Software error. NVM corrupt.

316-757-46 O/S failure.

316-757-47 Failed while trying to replace the file with a file from alt. partition. Configuration error.

316-757-66 Unable to write NVM.

316-757-67 Unable to write NVM.

316-757-92 Invalid IPC Data Received.

316-757-93 Unable to set ICS document state.

316-758-09 Invalid service failure reported.

316-758-14 RPC communications error to client.

316-758-19 Unable to unregister registration service.

316-758-26 Fault service encountered error trying to access its own queue ID.

316-758-28 State Error.

316-758-35 Unable to change EJS state to offline.

316-758-46 Failed setting up monitor routine with registration service.

316-758-47 Error searching for job ID during print job submission. Print submission tool failed.

316-758-66 Service run loop failed.

316-758-67 Service loop failed.

316-758-93 Unable to obtain data store object handle.

316-759-09 Software error.

316-759-14 Request for wildcard from non-NC

316-759-19 Network controller failed cold reset 3 times in a row.

316-759-26 Service requesting information of fault service. Software error.

316-759-28 SC Init Fault.

316-759-46 Process no in correct state, O/S failure.

316-759-47 Failed to abort the requested process.

316-759-66 OA event register failed.

316-759-67 OA event register failed.

316-759-93 Unable to create.dat file.

316-760-09 Software error. Check fault log for more specific reasons.

316-760-14 Software error. Calling service not registered.

316-760-19 Any network controller startup.

316-760-26 Software failure.

316-760-28 Unable to Ack SC.

316-760-46 Software failure.

316-760-47 Found incorrect checksum partition 1 during software verify check. Bad disk and bad software.

316-760-67 Create list failed.

316-760-68 SRS returns to login service. Invalid fields, invalid data or missing data.

316-760-93 Job report failure from CCM.

316-760-99 RPC failure. CCM not responding.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the 316E Network Fault Checkout RAP.

316-761-09 to 316-765-93 Network Faults 16 RAP

316-761-09 Software error. Check fault log for more specific reasons.

316-761-14 Invalid RPC data.

316-761-19 Any network controller shut down.

316-761-26 Unable to become client of UI.

316-761-28 Unable to submit a job.

316-761-46 Hardware failure.

316-761-47 Failed to initialize. Files needed for software verify.

316-761-67 Failed to retrieve public list.

316-761-68 Login gets no response from SRS.

316-761-93 Image conversion to TIFF failed.

316-761-95 Unable to read template pool configuration information.

316-762-09 Netware process failed. Software error. Check fault log for more specific reasons.

316-762-14 Invalid internal table type.

316-762-19 DC platform mgr communication error.

316-762-26 Unable to become client of SCS diagnostic service.

316-762-46 Hardware failure.

316-762-47 Missing file found during software verify check. Disk access problem. Configuration problem.

316-762-67 Invalid index for recipient list.

316-762-68 Service registry bad data corrupted.

316-762-93 IFS Image done call failed.

316-762-95 Unable to read document repository configuration information.

316-763-09 Software error. Check fault log for more specific reasons.

316-763-14 Reached internal limit for events.

316-763-19 System manager died, its platform crashed or RPC comm corrupt.

316-763-26 No acknowledgment to RPC message. RPC timeout.

316-763-46 Hardware failure.

316-763-47 Invalid permission found during software verify check.

316-763-67 Failed to retrieve LDAP list.

316-763-93 Document image count not found.

316-763-95 Internal destination error.

316-764-09 Apple talk process failure. Software error. Check fault log for more specific reasons.

316-764-14 Internal logic error.

316-764-19 System call to signal failed.

316-764-26 Fault Service Encountered Error Trying to get IPC Message.

316-764-46 Hardware failure.

316-764-47 Found incorrect checksum during software verify check. Bad disk and bad software.

316-764-67 Create list failed.

316-765-09 Software error. Check fault log for more specific reasons.

316-765-19 Set status failed.

316-765-26 Fault Service Call to PSW Callback failed.

316-765-46 Software failure.

316-765-47 Novell daemon not running.

316-765-67 Failed to retrieve recipient list.

316-765-93 Unable to access data store.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the **316E** Network Fault Checkout RAP.

316-766-09 to 316-772-95 Network Faults 17 RAP

316-766-09 Adobe process failure. Check faults log for more specific reasons.

316-766-19 DM admin error.

316-766-26 Fault Service Call to UI Callback failed.

316-766-46 Software failure.

316-766-47 No servers responded.

316-766-67 Failed to bind to LDAP server.

316-766-93 TIFF handle has become null.

316-766-95 Cannot create image file name.

316-767-09 Software error. Check fault log for more specific reasons.

316-767-19 Request to cancel spooling job error. Job map library unable to cancel job.

316-767-26 Fault Service Call to RDT Callback failed.

316-767-46 Software failure.

316-767-47 Server name in configuration list is not up.

316-767-67 Error performing LDAP search.

316-767-93 Get document image count failed.

316-767-95 Cannot determine filing policy for transfer.

316-768-09 Software error. Check fault log for more specific reasons.

316-768-19 Job map library unable to hold or release jobs.

316-768-46 Software failure.

316-768-47 Network controller not attached to server.

316-768-67 Error performing public search.

316-768-93 Increment image count failed.

316-768-95 Cannot get network advisory lock file name.

316-769-09 Software error. Check fault log for more specific reasons.

316-769-19 Novell network failed to respond to request.

316-769-46 Software failure.

316-769-47 Network controller not attached to the print queue.

316-769-67 Failed to cancel search request.

316-769-93 IFS de-register call failed.

316-769-95 Cannot determine appropriate lock name and address.

316-770-09 Software error. Check fault log for more specific reasons.

316-770-19 SESS/DM job command not processed.

316-770-46 Software failure.

316-770-47 Network controller attached to both queue and server.

316-770-67 Required attribute missing.

316-771-09 Software error. Check fault log for more specific reasons.

316-771-19 UI/PSW/RDT/ RPC corrupt.

316-771-46 Software failure.

316-771-47 Failed to configure novell network.

316-772-09 Software error. Check fault log for more specific reasons.

316-772-19 Software error.

316-772-46 TCPIP address already being used.

316-772-47 Failed doing registration or RPC call.

316-772-95 Invalid transfer request.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the 316E Network Fault Checkout RAP.

316-770-09 to 316-779-95 Network Faults 18 RAP

316-773-09 Software error. Check fault log for more specific reasons.

316-773-19 Software error.

316-773-46 Failed requesting platform reset.

316-774-09 Check fault log for more specific reasons.

316-774-19 Client provided wrong binding info. Client not registered as RPC server. System RPC info is corrupt.

316-774-46 BOOTP status file error.

316-775-19 Data store not configured. Software error.

316-775-46 TCPIP missing configuration data.

316-775-95 Cannot create temporary file name.

316-776-09 Software error. Check fault log for more specific reasons.

316-776-19 Software error.

316-776-46 TCPIP invalid interface.

316-776-95 Cannot clean up after job completion.

316-777-09 Software error. Check fault log for more specific reasons.

316-777-19 Software error. Data store corrupt, missing configuration.

316-777-46 TCPIP invalid addressing.

316-777-95 Cannot log requested network server.

316-778-09 Software error. Check fault log for more specific reasons.

316-778-19 Software error.

316-778-46 TCPIP socket failure.

316-778-95 Cannot generate confirmation sheet.

316-779-00 System manager power saver complete callback failed. System manager failed or communications link failed.

316-779-09 Software error. Check fault log for more specific reasons.

316-779-19 System manager callback SM power save completed failed.

316-779-46 TCPIP interface attach.

316-779-47 SESS diagnostic failure.

316-779-95 Cannot create the template/job log name.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the **316E** Network Fault Checkout RAP.

316-780-00 to 316-789-47 Network Faults 19 RAP

316-780-00 Power save request timeout.

316-780-09 Software error. Check fault log for more specific reasons.

316-780-19 Power saver request timeout.

316-780-46 TCPIP enable interface.

316-780-47 SESS diagnostic failure.

316-780-95 Cannot determine the remote directory.

316-781-09 Software error. Check fault log for more specific reasons.

316-781-19 Customer software upgrade file is corrupted on transfer.

316-781-46 TCPIP NVRAM failure.

316-781-47 SESS diagnostic failure.

316-782-09 Network controller configuration synchronization process failure. Software error. check fault log for more specific reasons.

316-782-19 Software upgrade manifest file does not match software upgrade files.

316-782-46 TCPIP gateway failure.

316-782-47 SESS diagnostic failure.

316-783-09 Software error. IPC failure. SC not processing IPC.

316-783-19 Network controller does not enter upgrade mode. Network controller does not respond to upgrade prep command.

316-783-46 TCPIP host file failure.

316-783-47 SESS diagnostic failure.

316-784-09 Software error. Registration service out of date.

316-784-19 Software upgrade aborted, IOT failed to enter upgrade mode. IOT does not respond to upgrade prep command.

316-784-46 TCPIP resolve file failure.

316-784-47 SESS diagnostic failure.

316-785-09 Network controller agent process failure. Software error. Check fault log for more specific reasons.

316-785-19 UI does not respond to upgrade prep command.

316-785-46 TCPIP resolve file failure.

316-785-47 SESS diagnostic failure.

316-786-09 Software error. Check alt log for more specific reasons.

316-786-19 Network controller ntar of upgrade file fails.

316-786-46 TCPIP ELT file failure.

316-786-47 SESS diagnostic failure.

316-787-09 Software error. Check fault log more specific reasons.

316-787-19 Network controller times out. Cannot communicate with IOT.

316-787-46 TCPIP IPC failure.

316-787-47 SESS diagnostic failure.

316-788-09 Software error. Check fault log for more specific reasons.

316-788-19 Option load failure software.

316-788-46 Failed performing dynamic DNS update.

316-788-47 SESS diagnostic failure.

316-789-09 Software error. Check fault log for more specific reasons.

316-789-19 Option load failure software.

316-789-46 Failed performing autonet IP process.

316-789-47 SESS diagnostic failure.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the [316E](#) Network Fault Checkout RAP.

316-790-09 to 316-799-47 Network Faults 20 RAP

316-790-09 Software error. Check fault log for more specific reasons.

316-790-19 Option load failure software.

316-790-46 IPv6 address error.

316-790-47 SESS diagnostic failure.

316-791-09 Software error. Check fault log for more specific reasons.

316-791-19 Scan to file DLM is not defined.

316-791-46 DHCP V6 failure

316-791-47 SESS diagnostic failure.

316-792-09 Software error. Check fault log for more specific reasons.

316-792-19 LAN fax DLM is not defined.

316-792-47 SESS diagnostic failure.

316-793-09 Software error. Check fault log for more specific reasons.

316-793-19 Job based accounting DLM is not defined.

316-793-47 SESS diagnostic failure.

316-794-09 Cross platform synchronization error.

316-794-19 Install password mismatch.

316-794-47 SESS diagnostic failure.

316-795-09 Software error. Check fault log for more specific reasons.

316-795-19 Option load failure software.

316-795-47 SESS diagnostic failure.

316-796-09 Software error. Check fault log for more specific reasons.

316-796-19 Option load failure software.

316-796-47 SESS diagnostic failure.

316-797-09 Software error. Check fault log for more specific reasons.

316-797-19 Option load failure software.

316-797-47 SESS diagnostic failure.

316-798-09 Software error. Check fault log for more specific reasons.

316-798-19 Option already enabled.

316-798-47 SESS diagnostic failure.

316-799-09 Software error. Check fault log for more specific reasons.

316-799-19 Option already enabled.

316-799-47 SESS diagnostic failure.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the 316E Network Fault Checkout RAP.

316-800-09 to 316-809-47 Network Faults 21 RAP

316-800-09 List access failure (create, add, find, delete.)

316-800-19 Option not supported.

316-800-46 Unable to connect to device when setting up IP over Ethernet.

316-800-47 SESS diagnostic failure.

316-801-09 Invalid SESS event/IPC error.

316-801-19 Serial mismatch.

316-801-46 Unable to connect to device when setting up IP over token ring.

316-801-47 SESS diagnostic failure.

316-802-09 Web service edge client process death.

316-802-19 Counters do not match.

316-802-46 Error occurred when attempting to get the IP data from the DHCP server.

316-802-47 SESS diagnostic failure.

316-803-09 Web service edge client process death.

316-803-46 Unable to get the IP address from the RARP server.

316-803-47 SESS diagnostic failure.

316-804-09 Web service edge client process death.

316-804-47 SESS diagnostic failure.

316-805-09 Web service edge client process death.

316-805-19 Accounting install failed.

316-805-47 SESS diagnostic failure.

316-806-00 CPI death error.

316-806-09 CPI service unavailable.

316-806-19 Counters did not increment.

316-806-47 SESS diagnostic failure.

316-807-00 Job log service death error.

316-807-09 Job log service unavailable.

316-807-19 State change failed.

316-807-47 SESS diagnostic failure.

316-808-00 Job tracker death error.

316-808-09 Job tracker service unavailable.

316-808-47 SESS diagnostic failure.

316-809-00 Kerberos death error.

316-809-09 Kerberos service unavailable.

316-809-47 SESS diagnostic failure.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the 316E Network Fault Checkout RAP.

316-810-00 to 316-839-47 Network Faults 22 RAP

316-810-00 Scan to distribution death error.

316-810-09 Scan service available.

316-810-19 Failed to remove accounting.

316-810-47 SESS diagnostic failure.

316-811-00 SMB death error.

316-811-09 SMB service unavailable.

316-811-19 Failed to initiate operation.

316-811-47 SESS diagnostic failure.

316-812-00 TCP/IP death error.

316-812-09 TCPIP service unavailable.

316-812-19 Failed to change the enable upgrade flag.

316-812-47 SESS diagnostic failure.

316-813-00 WS scan temp death error.

316-813-09 Scan service unavailable

316-813-19 NC may be unavailable

316-813-47 SESS diagnostic failure.

316-814-00 Scan compressor death error.

316-814-09 Scan compressor service unavailable.

316-814-19 DEF is enabled on the NC

316-814-47 SESS diagnostic failure.

316-815-09 Service registry process death.

316-815-47 SESS diagnostic failure.

316-816-09 XEIP service not responding.

316-816-47 SESS diagnostic failure.

316-817-47 SESS diagnostic failure.

316-818-47 SESS diagnostic failure.

316-819-47 SESS diagnostic failure.

316-820-47 SESS diagnostics failure.

316-821-47 SESS diagnostics failure.

316-822-47 SESS diagnostics failure.

316-823-47 SESS diagnostics failure.

316-824-47 SESS diagnostics failure.

316-825-47 SESS diagnostics failure.

316-826-47 SESS diagnostics failure.

316-827-47 SESS diagnostics failure.

316-828-47 SESS diagnostics failure.

316-829-47 SESS diagnostics failure.

316-830-47 Unable to get the default router for the device.

316-831-47 Unable to get the subnet mask for the device.

316-832-47 Failure while getting local IP devices on the network.

316-833-47 Failure while performing ARP command.

316-834-47 Failed to get a default file server from the config. utility.

316-835-47 Failed to the novell frame type from the config. utility.

316-836-47 Failed SESS call to initialize netware.

316-837-47 Diagnostic name returned from SESS not found in list.

316-838-47 Failed to setup catching alarm signals for repair timeouts.

316-839-47 Failure to repair a file of file length 0. Corrupt disk.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the 316E Network Fault Checkout RAP.

316-840-47 to 316-879-47 Network Faults 23 RAP

316-840-47 Corrupt OS, software error.

316-841-47 Corrupt file system.

316-842-47 Machine out of configuration. Software error.

316-843-47 Corrupt OS machine in bad running state. Software error.

316-844-47 Corrupt OS machine in bad running state. Software error.

316-845-47 Corrupt OS machine in bad running state. Software error.

316-846-47 Corrupt OS machine in bad running state. Software error.

316-847-47 Corrupt OS machine in bad running state. Software error.

316-848-47 Error reading the fault file from fault service.

316-849-47 Error creating command array from stream editor.

316-850-47 Failed adding stream to stream editor array.

316-851-47 Failed on call to stream editor.

316-852-47 Unable to read a fault for the error report.

316-853-47 Failed getting the last reset time for the error report.

316-854-47 Failed calling fault service for the error report.

316-855-47 Failed sending event for diagnostic test.

316-856-47 Failed doing a unix c system call.

316-857-47 Abort request, unable to find process.

316-858-47 Failed to dump the fault logs.

316-859-47 Software verify test returned error.

316-860-47 No machines responded to an ICMP echo request.

316-861-47 Failed setting up monitor routine with registration service.

316-862-47 Command not valid to cancel.

316-863-47 Illegal buffer length.

316-864-47 Illegal local session number.

316-865-47 SESS NETBIOS test session closed.

316-866-47 SESS NETBIOS test command cancelled.

316-867-47 SESS NETBIOS test name de-registered. Name de-registered, session active.

316-868-47 SESS NETBIOS test local session table full. Local session table full.

316-869-47 SESS NETBIOS test no listen in remote computer.

316-870-47 SESS NETBIOS test illegal name number.

316-871-47 SESS NETBIOS test cannot find name or no answer.

316-872-47 SESS NETBIOS test name in use.

316-873-47 SESS NETBIOS test name deleted.

316-874-47 SESS NETBIOS test session abnormal end.

316-875-47 SESS NETBIOS test name conflict. Name conflict on network.

316-876-47 Software verify setup SIGTERM failed.

316-877-47 SESS PCI test unknown error.

316-878-47 SESS PCI test failed to open driver.

316-879-47 SESS PCI test failed flushing stream buffer.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the 316E Network Fault Checkout RAP.

316-880-47 to 316-929-19 Network Faults 24 RAP

316-880-47 SESS PCI test failed on put message call.

316-881-47 SESS PCI test invalid argument.

316-882-47 SESS PCI test failed on put message call.

316-883-47 SESS PCI test failed on ioctl call.

316-884-47 SESS PCI test control flag area too small.

316-885-47 SESS PCI test driver not initialized.

316-886-47 SESS PCI test info request failed.

316-887-47 SESS PCI test driver failed to register.

316-888-47 SESS PCI test driver failed to unregister.

316-889-47 Software verify get data failed.

316-890-47 Software verify get next proc failed.

316-891-00 Edge server auto registration failed

316-891-19 SMart eSolutions failed to register

316-891-47 Invalid RPC submit job Data Received.

316-892-00 Edge server communication failed

316-892-19 SMart eSolutions cannot contact Edge Host

316-892-47 Invalid RPC Data Received; Unknown diagnostic action.

316-893-47 Invalid RPC Data Received; Invalid job type.

316-894-47 Invalid RPC disk diagnostics Data Received.

316-895-47 SESS Apple test zip failure - network unreachable.

316-900-19 Failed to open SMC driver.

316-901-19 Failed to make ioctl call using SMC driver.

316-902-19 Address specified is invalid.

316-903-19 Result from ioctl does not match FD.

316-904-19 Invalid ioctl request.

316-905-19 Unknown ioctl failure.

316-906-19 Memory allocation failed for net upgrade.

316-907-19 Attempt to get pinned memory failed

316-908-19 Error opening file.

316-909-19 Error transfer data to CCM.

316-910-19 Failed untar file.

316-911-19 Error changing directory.

316-912-19 Install script did not execute.

316-913-19 Write failure to file.

316-914-19 Shared memory was corrupted.

316-915-19 Open failed.

316-916-19 CRC failed.

316-917-19 Failed to close on checksum.

316-918-19 CRC comparison failed.

316-919-19 Restart request failed.

316-920-19 ELT daemon start failed.

316-922-19 NVM store failed.

316-923-19 Failed saving persistent data.

316-924-19 Failed in restoring persistent data.

316-925-19 Failed saving web config data.

316-926-19 Failed to save data store values.

316-927-19 Failed to restore web config data.

316-928-19 Failed to install files.

316-929-19 Failed to restore data store values.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the **316E** Network Fault Checkout RAP.

316-930-19 to 316-971-19 Network Faults 25 RAP

316-930-19 Failed to remove jobs.

316-931-19 Failed to close on SMC driver.

316-932-19 NVM write failure.

316-933-19 Failed to remove file.

316-934-19 Job based accounting not enough DC memory.

316-935-19 Auto-upgrade failed. Cannot read/write attributes to machine.

316-936-19 Auto-upgrade failed. Cannot connect to remote server.

316-937-19 Auto-upgrade failed. Cannot access directory on remote server.

316-938-19 Auto-upgrade failed. Cannot access directory remote server.

316-939-19 Auto-upgrade failed. Multiple upgrade files found on remote server.

316-940-19 Auto-upgrade failed. Machine in diagnostics mode.

316-941-19 Auto-upgrade failed. Network controller cannot communicate with main controller.

316-942-19 Auto-upgrade failed upgrade is invalid. Incompatible with main controller.

316-943-19 Auto-upgrade failed. Upgrade file invalid. Installed software is more recent.

316-944-19 Auto-upgrade failed. Upgrade file is invalid. File corruption detected.

316-945-19 Auto-upgrade failed. Upgrade file is invalid. File not appropriate for current machine software.

316-946-19 Failed install scan to e-mail.

316-947-19 Failed to install internet fax.

316-948-19 Remove of scan to e-mail option failed.

316-949-19 Remove of internet fax option failed.

316-950-19 Scan to e-mail image processing hardware not available.

316-951-19 Internet fax image processing hardware not available.

316-952-19 Scan to e-mail memory size error.

316-953-19 Internet fax memory size error.

316-954-19 Set by internet fax service when it gets no response from service registry when trying to register.

316-955-19 Internet Fax application un-registration error.

316-956-19 E-mail application registration error.

316-957-19 E-mail application un-registration error.

316-958-19 Failed to install kerberos.

316-959-19 Failed to install SMB.

316-960-19 Failed to install SMTP.

316-961-19 Failed to remove kerberos.

316-962-19 Failed to remove SMB.

316-963-19 Failed to remove SMTP.

316-964-19 Failed to cancel operation.

316-965-19 Failed to send platform unavailable.

316-966-19 Failed to install job tracker.

316-967-19 Failed to remove job tracker.

316-968-19 Failed to install POP3.

316-969-19 Failed to remove POP3.

316-970-19 Over allocation of contiguous memory.

316-971-19 Auto-Upgrade not attempted due to machine being offline.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the [316E](#) Network Fault Checkout RAP.

316-975-19 to 316-989-35 Network Faults 26 RAP

316-975-19 Failed to install immediate image overwrite.

316-976-19 Failed to install immediate image overwrite.

316-977-00 Queue list jobs failure. Request to SESS's document manager failed for list jobs. Corrupt data sent to DM. Communication problem. DM failed.

316-977-19 Network controller PM failed to remove disk overwrite. Option load failure, software.

316-977-35 Queue list jobs failure. Request to SESS's document manager failed for list jobs. Corrupt data sent to DM. Communication problem. DM failed.

316-978-00 Unable to get copy jobs. Invalid data communication problem.

316-978-19 Network controller PM failed to remove job overwrite. Option load failure software.

316-978-35 Unable to get copy jobs. Invalid data communication problem.

316-979-00 Unknown attribute returned. Invalid data returned data store corrupt.

316-979-19 Network controller PM failed to remove embedded fax. Option load failure, software.

316-979-35 Unknown attribute returned. Invalid data returned. Data store corrupt.

316-980-00 DM request handle NULL. Null data received from DM.

316-980-19 Network controller PM failed to install G4. Option load failure, software.

316-980-35 DM request handle NULL. Null data received from DM.

316-981-00 Object handler corrupted. Null handle returned. Data store corrupt.

316-981-35 Unable to obtain job handle which is used to fetch data store attributes.

316-982-00 Unknown finishing value returned. Unable to map attribute or invalid data.

316-982-19 Failed to remove embedded fax.

316-982-35 Unknown finishing value returned. Unable to map attribute or invalid data.

316-983-00 Unknown offset value returned. Unable to map attribute or invalid data.

316-983-19 Failed to remove G4.

316-983-35 Unknown offset value returned. Unable to map attribute or invalid data.

316-984-00 Unknown job state reason value returned. Unable to map attribute or invalid data.

316-984-19 CPSR Memory Size Error.

316-984-35 Unknown job state reason value returned. Unable to map attribute or invalid data.

316-985-00 Unknown medium type value returned. Unable to map attribute or invalid data.

316-985-19 Network scanning application registration error.

316-985-35 Unknown medium type value returned. Unable to map attribute or invalid data.

316-986-00 Unknown collection value returned. Unable to map attribute or invalid data.

316-986-19 Network scanning application un-registration error.

316-986-35 Unknown collection value returned. Unable to map attribute or invalid data.

316-987-00 Unknown tray value returned. Unable to map attribute or invalid data.

316-987-19 Server fax application registration error.

316-987-35 Unknown tray value returned. Unable to map attribute or invalid data.

316-988-00 Unknown signature value returned. Unable to map attribute or invalid data.

316-988-19 Server fax application un-registration error.

316-988-35 Unknown signature value returned. Unable to map attribute or invalid data.

316-989-00 Unknown plex value returned. Unable to map attribute. Invalid information received 2.

316-989-19 Disk encryption operation failed.

316-989-35 Unknown plex value returned. Unable to map attribute. Invalid information received 3.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the **316E** Network Fault Checkout RAP.

316-990-00 to 316-999-35 Network Faults 27 RAP

316-990-00 Promote response from DM received with errors. Software error.

316-990-35 Promote response from DM received with errors. Software error.

316-991-00 Request to DM to promote job failed. Failure status returned on call to request library to promote job. Data store problem.

316-991-35 Request to DM to promote job failed. Failure status returned on call to request library to promote job. Data store problem.

316-992-00 Unable to build SESS job identifier for promote routing that converts the job ID returned. Null memory allocation error.

316-992-35 Unable to build SESS job identifier for promote routine that converts the job ID returned. Null memory allocation error.

316-993-00 Unable to get admin name from data store for promote. Request library call failed.

316-993-35 Unable to get admin name from data store for promote. Request library call failed.

316-994-00 Cancel response from DM received with errors. Software error.

316-994-35 Cancel response with errors. A job could not be cancelled.

316-995-00 Request to DM to cancel job failed.

316-995-35 Request to DM to cancel job failed.

316-996-00 Routine that converts the job ID returned. Null memory allocation error.

316-996-35 Routine that converts the job ID returned. Null memory allocation error.

316-997-00 Request library call failed.

316-997-35 Request library call failed.

316-998-00 Job not found in held table.

316-998-35 Job not set to released state. Job not found in held table.

316-999-00 Could not obtain job PIN for authorization.

316-999-35 Could not obtain job PIN for authorization.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. If a single occurrence, take no action.
2. For multiple occurrences, go to the **316E** Network Fault Checkout RAP.

316A Workflow Scanning Error Entry RAP

Use this RAP when the customer reports network failures. e.g. Cannot connect to the scan server when using the FTP or SMB protocols, or when a folder on the scan server cannot be opened.

NOTE: The fault message will be printed on the confirmation report. The report may take several minutes to print after scanning the document.

Initial Actions

Consult your manager before troubleshooting the customer's network, as the policy varies according to region.

Procedure

NOTE: If it is possible to log in to the web UI by entering the IP address of the machine, then the network controller on the single board controller PWB is good.

Perform the steps that follow:

1. Check that the machine's date and time are correctly set. Refer to [GP 31](#).
2. Print a configuration report.
3. Check with the customer that the printing of the confirmation report is enabled. If necessary, ask the customer to enable printing of the confirmation report.
4. Ensure that the machine is configured for scan to file. Check the back of the configuration report under the heading Workflow Scanning (Default Repository Protocol). If an IP address or name is not listed, ask the customer to configure the machine before continuing.
5. Perform the relevant procedure:
 - [316B](#) FTP or SMB Unable to Connect to Remote Server RAP.
 - [316C](#) Remote Directory Lock Failed RAP.

316B FTP or SMB Unable to Connect to Remote Server RAP

Either the machine cannot connect, find or log in to the scan server.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: The FTP/SMB protocol will be followed by a colon and port number, :21 is for FTP and :139 is for SMB.

Scan the document using the default template and 1 other template. **The fault is present on both templates.**

Y N

The template that failed is incorrectly configured. Ask the customer or System Administrator to verify the settings of the web template that failed, including the login password.

Ask the customer to open the machine's web UI. **The machine's web UI can be opened.**

Y N

Look at the front of the configuration report. Ensure that HTTP is enabled and set to port 80. **The settings are correct.**

Y N

Enable HTTP, [GP 32](#) and set the port to 80 on the UI. Restart this RAP from the beginning. If this path has been followed previously, escalate the fault to the System Administrator. If the customer does not have a System Administrator, they should contact the Customer Support Centre or request a Xerox analyst troubleshoot their network which will be subject to a charge.

Disconnect the network cable from the machine. Ensure the PWS network adaptor settings are set to Auto. Use a crossover cable, [PL 26.10 Item 6](#) to connect the PWS to the machine. **Either of the 2 LEDs on the SBC PWB or the PWS are lit, indicating a connection.**

Y N

Perform the steps that follow:

1. Change the network speed setting of the machine, [GP 35](#).
2. If either of the 2 LEDs on the SBC PWB or the PWS are not lit, repeat the steps in [GP 35](#).
3. If the LEDs light, use the new network speed setting. Inform the customer that the network speed has been changed. Then follow the Yes path from this step.
4. If the LEDs do not light, perform the [303D](#) SBC PWB Diagnostics RAP.

Ensure the firewall of the PWS is disabled, [GP 36](#). Ping the machine from the PWS, [GP 33](#).

NOTE: Re-enable the PWS firewall after completion of this procedure.

The machine responds to the ping request.

A

A

Y N
Perform an AltBoot, [GP 4](#).

The machine software is up to date.

Y N
Upgrade the software, [GP 4](#). **The fault persists.**

Y N
Perform [SCP 5](#) Final Actions.

Perform the [Customers Settings Check](#). **Changes were made to the customer's settings.**

Y N
Escalate the fault to the System Administrator. If the customer does not have a System Administrator, they should contact the Customer Support Centre or request a Xerox analyst troubleshoot their network which will be subject to a charge.

Retry the job. **The job was successful.**

Y N
Escalate the fault to the System Administrator. If the customer does not have a System Administrator, they should contact the Customer Support Centre or request a Xerox analyst troubleshoot their network which will be subject to a charge.

Perform [SCP 5](#) Final Actions.

Perform the [Customers Settings Check](#). **Changes were made to the customer's settings.**

Y N
Escalate the fault to the System Administrator. If the customer does not have a System Administrator, they should contact the Customer Support Centre or request a Xerox analyst troubleshoot their network which will be subject to a charge.

Retry the job. **The job was successful.**

Y N
Escalate the fault to the System Administrator. If the customer does not have a System Administrator, they should contact the Customer Support Centre or request a Xerox analyst troubleshoot their network which will be subject to a charge.

Perform [SCP 5](#) Final Actions.

Ask the customer to ping the scan server's IP address or name.

NOTE: The scan server is the computer that the job is being sent to. The scan server's IP address or name is displayed on the confirmation report.

The customer can ping the scan server.

Y N
Check the configuration report for default gateway IP address listed under TCP/IPv4 Settings. **A default gateway IP address is listed.**

B

B

Y N
Perform the [Customers Settings Check](#). **Changes were made to the customer's settings.**

Y N
Escalate the fault to the System Administrator. If the customer does not have a System Administrator, they should contact the Customer Support Centre or request a Xerox analyst troubleshoot their network which will be subject to a charge.

Retry the job. **The job was successful.**

Y N
Escalate the fault to the System Administrator. If the customer does not have a System Administrator, they should contact the Customer Support Centre or request a Xerox analyst troubleshoot their network which will be subject to a charge.

Perform [SCP 5](#) Final Actions.

The customer can ping the default gateway IP address.

Y N
Escalate the fault to the System Administrator. If the customer does not have a System Administrator, they should contact the Customer Support Centre or request a Xerox analyst troubleshoot their network which will be subject to a charge.

Perform the [Customers Settings Check](#). **Changes were made to the customer's settings.**

Y N
Escalate the fault to the System Administrator. If the customer does not have a System Administrator, they should contact the Customer Support Centre or request a Xerox analyst troubleshoot their network which will be subject to a charge.

Retry the job. **The job was successful.**

Y N
Escalate the fault to the System Administrator. If the customer does not have a System Administrator, they should contact the Customer Support Centre or request a Xerox analyst troubleshoot their network which will be subject to a charge.

Perform [SCP 5](#) Final Actions.

Perform the [Customers Settings Check](#). **Changes were made to the customer's settings.**

Y N
Escalate the fault to the System Administrator. If the customer does not have a System Administrator, they should contact the Customer Support Centre or request a Xerox analyst troubleshoot their network which will be subject to a charge.

Retry the job. **The job was successful.**

Y N
Escalate the fault to the System Administrator. If the customer does not have a System Administrator, they should contact the Customer Support Centre or request a Xerox analyst troubleshoot their network which will be subject to a charge.

Perform [SCP 5](#) Final Actions.

Customers Settings Check

NOTE: Both the configuration and confirmation reports are required to check the customer's settings. Corrections must be made through the machine's EWS page.

Check the items that follow with the customer. Ask the customer to correct any errors:

1. That the scan server is switched on and online.

NOTE: The scan server is the computer that the job is being sent to.

2. That the scan server's IP address or name is correct.
3. That the path and user name are correct.
4. **(SMB protocol only)** That the Share name is correct; referred too as the Volume on the configuration report.
5. Check with System Administrator that the correct password has been entered on the machine's EWS page.

NOTE: The password is not printed on the configuration or confirmation reports.

316C Remote Directory Lock Failed RAP

Use this RAP when the customer reports that the machine has logged in to the scan server, but cannot create a folder inside of the scan directory. The creation of the scan folder is necessary for the machine to successfully complete the can to file job.

NOTE: The scan server is the computer that the job is being sent to.

Procedure

The machine's login name that it is using to log in to the scan server, for this file repository, does not have sufficient rights. Ask the customer to verify the rights for this user at the scan server, or escalate the problem to their System Administrator. If the customer does not have a System Administrator, they should contact the Customer Support Centre or request a Xerox analyst troubleshoot their network which will be subject to a charge.

316D Wireless Connectivity RAP

Use this RAP when the customer reports wireless network failures when using the Xerox wireless network adapter kit.

NOTE: The customer must use the Xerox wireless network adapter kit, [PL 31.12 Item 10](#). Other wireless network adapters are not supported.

NOTE: Wireless connectivity instructions are contained in the *System Administrator Guide*.

Initial Actions

Consult your manager before troubleshooting the customer's network, as the policy varies according to region.

Procedure

Perform the steps that follow:

1. Check that the USB wireless network adapter, [PL 3.22 Item 20](#) is plugged into a USB port on the machine.
2. If the USB wireless network adapter is connected using the USB extension cable, [PL 3.22 Item 21](#), check that the extension cable is also plugged into a USB port on the machine.
3. Print a configuration report.
 - a. Check with the customer that printing of configuration reports is enabled. If necessary, ask the customer to enable printing of the configuration report.
4. Ensure that the USB ports are enabled.
 - a. Check the configuration report under the heading Connectivity Physical Connections.
 - b. If Software Tools is not listed next to USB Connection Mode, ask the customer to enable USB. Or enter Customer Administration Tools, [GP 24](#). Enable USB.
 - i. Refer to the USB Port Security Setting Check in [GP 4](#).
 - ii. Refer to [GP 28](#) USB Connection Mode.
5. Confirm the USB port is functional.
 - a. Check that the LED on the wireless network adapter flashes when the machine is in standby.
 - b. Connect the wireless network adapter to a different USB port if available.
 - c. Perform [dC361](#) NVM Save. If the NVM can be saved to a USB flash drive, the USB port is functional.

NOTE: It is not necessary to perform the NVM restore procedure.
- d. If the USB port checks fail, perform the [303D](#) SBC PWB Diagnostics RAP.
6. Ensure that the machine is configured for wireless printing.
 - a. Check the configuration report under the heading Connectivity Physical Connections.
 - b. If wireless is disabled, ask the customer to enable wireless printing. Or enter Customer Administration Tools, [GP 24](#). Enable wireless printing.
 - i. Select **Network Settings**.
 - ii. Select **Network Connectivity**.
 - iii. Select **Wireless**.

- iv. Select **OK**.
 - v. Select **Enable Wireless Network**.
 - c. Check the network name listed next to SSID on the configuration report.
 - d. If the network name (SSID) does not match the customer's wireless network, ask the customer to configure the wireless network setup before continuing.
 - e. Check the IP address under the heading Connectivity Protocols.
 - f. Ask the customer to confirm that the correct IP address is listed under TCP/IPv4 or TCP/IPv6.
 - g. If the wireless IP address is incorrect or is not present, ask the customer to configure the wireless network setup before continuing.
 - h. Check the wireless connection status on the configuration report. If it displays as Authenticating, ask the customer to check and configure the wireless network settings in Internet Services before continuing - in particular check the encryption, authentication and user name settings.
 7. Confirm that the customer's wireless network can be detected at the machine's location.
 - a. Ask the customer to confirm that the wireless network is switched on and can be received at the machine's location. Or use your PWS or a smartphone to detect the customer's wireless network.
 - b. To use a PWS to confirm the customer's wireless network can be detected, perform the relevant procedure below.

Windows 7

 - i. Click on the **Wireless Networking** icon in the notification area of the task bar. If necessary, click on the **Show hidden icons** button to show the wireless networking icon.
 - ii. Confirm that the customer's SSID is displayed in the list that pops up.

Windows XP

 - i. Right-click on the **Network Connection** icon in the notification area of the task bar.
 - ii. Click on **View Available Networks**.
 - iii. Confirm that the customer's SSID is displayed in the list that pops up.

NOTE: Do not attempt to connect the PWS or smartphone to the customer's wireless network.
8. If the wireless network signal strength is weak, ensure that the wireless network adapter is connected via the USB extension lead. If possible change the mounting position of the adapter to improve the reception. To view the signal strength, enter Customer Administration Tools, [GP 24](#).
 - a. Select **Network Settings**.
 - b. Select **Network Connectivity**.
 - c. Select **Wireless**.
 - d. The signal strength is displayed in the text frame.
 - e. Move the wireless network adapter and extension lead until the strongest signal strength is found.
9. If necessary, install a new wireless network adapter kit, [PL 31.12 Item 10](#).

316E Network Fault Checkout RAP

Initial Actions

Switch off, then switch on the machine, [GP 14](#).

Procedure

Refer to the Active Messages and Fault History to determine under what situation the fault is occurring. **The fault is related to a specific job, client or Page Description Language (PDL).**

Y N
Reload the software, [GP 4](#). **The fault persists.**

Y N
Perform [SCP 5](#) Final Actions.

Install new components as necessary:

- Hard disk drive, [PL 3.22 Item 2](#).
- HDD cable, [PL 3.22 Item 4](#).

If the fault persists, perform the [303D](#) SBC PWB Diagnostics RAP.

The fault occurs on one particular job from one particular client.

Y N
The fault occurs on all jobs sent from one client.

Y N
The fault occurs with one job from any client.

Y N
Install new components as necessary:

- Hard disk drive, [PL 3.22 Item 2](#).
- HDD cable, [PL 3.22 Item 4](#).

If the fault persists, perform the [303D](#) SBC PWB Diagnostics RAP.

Another WorkCentre 5945/5955 machine is available.

Y N
Escalate the service call.

The fault is repeatable on both machines.

Y N
Reload the software, [GP 4](#), on the faulty machine. If the fault persists, escalate the service call.

Inform field engineering that a Software Problem Action Report (SPAR) needs to be generated.

Have the System Administrator:

- check the network configuration on the client (compare to a working client).
- ensure that the client has the required resources.
- reload the print driver on the client.

If the fault persists, have the customer contact the customer support centre.

Have the customer reload the print driver on the affected workstation.

317-751-00 Ethernet or USB WIFI Connection Fault RAP

317-751-00 (Ethernet) The ethernet cable is not connected when the ethernet interface is active.

317-751-00 (WiFi) The USB WiFi adapter is not correctly connected.

Remote Service Actions

Ask the customer to check the items that follow:

- Ensure the ethernet cable or USB WiFi adapter is properly connected.
- Ensure the ethernet port is active.
- Ensure the ethernet cable is in good condition.

Ask the customer to switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

Procedure

Check the items that follow:

- Damaged or contaminated USB WiFi adapter or USB port.
- Damaged or contaminated ethernet cable or port.

If necessary clean or install new components:

- SBC PWB, [PL 3.22 Item 3](#).
- Wireless network adapter, [PL 3.22 Item 20](#).
- Extension cable, [PL 3.22 Item 21](#).

317-752-00 Ethernet or USB WIFI Fault RAP

317-752-00 (Ethernet) 802.1X connection failure, cannot connect to the ethernet network.

317-752-00 (WiFi) Generic WiFi connection failure, cannot connect to the WiFi network. (WiFi interface is active).

Procedure

For an ethernet fault, ensure 802.1X settings on the device match the 802.1X network authentication settings.

For a USB WiFi fault, check the local WiFi network for errors or try re-entering WiFi credentials on the device.

317-753-00 WIFI Fault RAP

317-753-00 WiFi connection lost. The WiFi connection was good, but is no longer connected.

Procedure

Check the local WiFi network for errors or reconfigure the device as needed.

317-754-00 to 317-761-00, 317-766-00 to 317-769-00 Ethernet or USB WIFI Address Fault RAP

317-754-00 a DHCP/BOOTP configuration error and no zero configuration IPv4 address.

317-755-00 DHCP/BOOTP lease failure (parsing error) and no zero configuration IPv4 address.

317-756-00 DHCP/BOOTP NAK and no zero configuration IPv4 address.

317-757-00 No response from DHCP/BOOTP server and no zero configuration IPv4 address.

317-758-00 DHCP/BOOTP configuration error and zero configuration IPv4 address configured.

317-759-00 DHCP/BOOTP lease failure (parsing error) and zero configuration IPv4 address configured.

317-760-00 DHCP/BOOTP NAK and zero configuration IPv4 address configured.

317-761-00 No response from DHCP/BOOTP server and zero configuration IPv4 address configured.

317-766-00 DHCPv6 configuration error.

317-767-00 DHCPv6 lease failure (parsing error).

317-768-00 WiFi DHCPv6 Error: DHCPv6 failed to obtain an address. DHCPv6 NAK.

317-769-00 DHCPv6 Error: DHCPv6 server not found. No routable IPv6 address configured.

Procedure

Check the addressing servers or disable the dynamic addressing.

317-762-00, 317-765-00 Ethernet or USB WIFI Duplicate Address Fault RAP

317-762-00 Duplicate IPv4 address detected.

317-765-00 Duplicate IPv6 address detected.

Procedure

Configure a unique address.

317-763-00, 317-764-00 Ethernet or USB WIFI Router Fault RAP

317-763-00 No IPv4 router configured.

317-764-00 No IPv6 router advertisement.

Procedure

Check network for router and/or reconfigure device.

317-770-00, 317-771-00 Ethernet or USB WIFI DNS Fault RAP

317-770-00 Failed to verify the host name and/or domain name in DNS (after 20 minutes).

317-771-00 Verified host and/or domain name(s) do not match with the requested host/domain name(s).

Procedure

Check network DNS servers and/or device DNS settings.

319-300-00 to 319-310-00 Hard Disk Drive Failure RAP

319-300-00 Unable to read or write data from the hard disk drive.

319-301-00 Unable to write data to the hard disk drive.

319-302-00 Bad data received from the hard disk drive (i.e. disk returned data other than a read or write operation in response to a read or write request from).

319-303-00 Unable to format the hard disk drive.

319-310-00 hard disk drive failed to return capacity information during power up.

Initial Actions

Switch off the machine, [GP 14](#). Ensure all connectors on the [SBC PWB](#) are securely connected.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Go to [Flag 1](#). Check that the HDD data cable between [P/J853](#) on the [SBC PWB](#) and [PJ211](#) on the hard disk drive, [PL 3.22 Item 2](#), is correctly connected and not damaged. **The HDD data cable is good.**

Y N
Correctly connect the cable. If necessary, install a new HDD cable, [PL 3.22 Item 4](#).

Go to [Flag 2](#). Check the wiring between [P/J852](#) on the [SBC PWB](#) and [PJ211](#) on the hard disk drive. **The wiring is good.**

Y N
Repair the harness, [REP 1.2](#) or install a new HDD cable, [PL 3.22 Item 4](#).

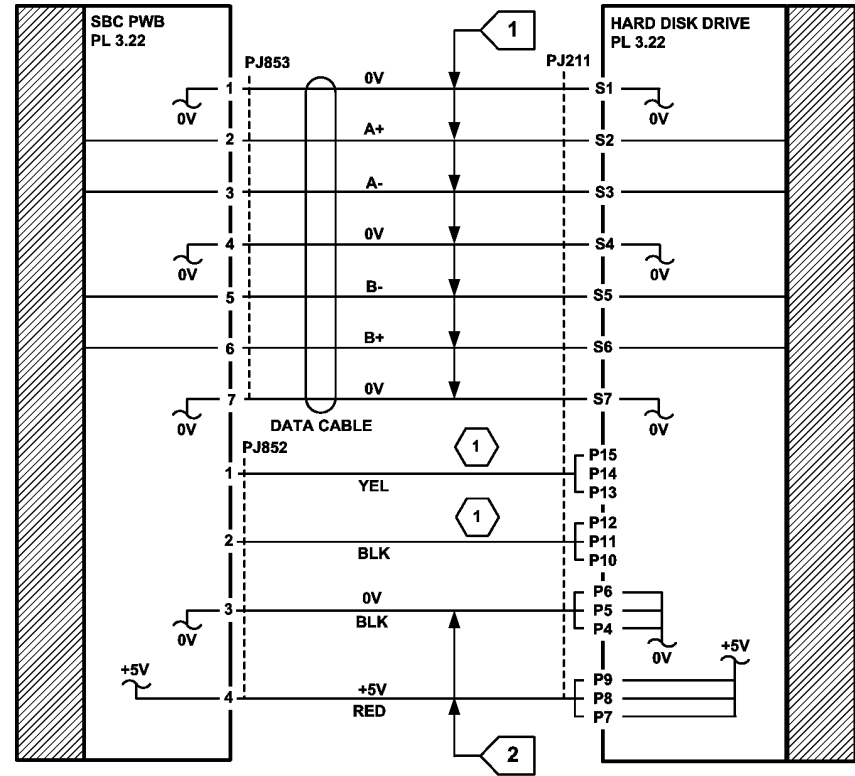
Go to [Flag 2](#). Check for +5V between pins 3 and 4 on [PJ211](#) at the hard disk drive. **+5V was measured.**

Y N
Check the voltages.
Refer to:

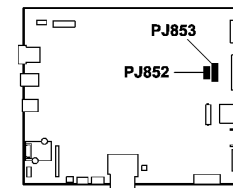
- [301E +5V and +5VSB Distribution RAP](#).
- [301B 0V Distribution RAP](#).

As necessary, perform the steps that follow:

- Reload the software using the forced AltBoot procedure, [GP 4](#).
- Install a new hard disk drive, [PL 3.22 Item 2](#).
- The [303D SBC PWB Diagnostics RAP](#).



1 THESE LINES ARE NOT USED BY THE HARD DISK DRIVE.



SBC PWB

TX-1-0118-A

Figure 1 Circuit diagram

319-401-00, 319-402-00 Stress Out of Memory RAP

319-401-00 Out of memory caused by a stress document.

319-402-00 Out of memory caused by a stress job.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

If this fault persists for more than 5 minutes, switch off, then switch on the machine, GP 14.

The fault has cleared.

Y N
| Reload the software, GP 4.

Go to SCP 5 Final Actions.

319-403-00 EPC Out of Memory RAP

319-403-00 Out of memory with greater than 1 job in EPC.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

No service action is required. Re-scan the job.

319-409-00 Job Integrity Failure RAP

319-409-00 Video determined that it could not guarantee the integrity of the job being processed.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, GP 14.
2. Re-run all the uncompleted jobs.

319-410-00 to 319-410-13 Image Structure Failure RAP

319-410-00 The system detected a mark output time-out.

319-410-01 The system detected a mark output time-out.

319-410-02 The system detected a compress image time-out.

319-410-03 The system detected a decompress image time-out.

319-410-04 The system detected a merge image time-out.

319-410-05 The system detected a rotate image time-out.

319-410-06 The system detected a network Input failure.

319-410-07 The system detected an embedded fax send/receive failure.

319-410-08 The system detected a scan input failure.

319-410-09 The system detected a byte counter error.

319-410-10 The system detected the image set up was too late.

319-410-11 The system detected a DMA master abort.

319-410-12 The system detected a Huffman error, (image encoding error).

319-410-13 The system detected an EOR error.

Initial Actions

Check that dC131 NVM locations 801-068, mag compensation side 1 and 801-069, mag compensation side 2 are set to default.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

If this fault persists for more than 5 minutes, switch off, then switch on the machine, GP 14. Re-run the job. **The fault has cleared.**

Y N
The message “All jobs deleted due to system image error” is displayed and fault code 319-410-08 is logged in fault history.

Y N
Reload the software, GP 4.

Check the SBC PWB to scanner PWB power/comms harness and connectors.

A

Refer to:

- [REP 1.2](#) Wiring Harness Repairs.
- [WD 3](#)
- SBC PWB, PJ854
- Scanner PWB, PJ411.

If necessary, install new components:

- SBC PWB/scanner PWB data cable, [PL 60.20](#) Item 22.
- Scanner PWB, [PL 60.20](#) Item 4.
- SBC PWB, [PL 3.22](#) Item 3.

Perform [SCP 5](#) Final Actions.

319-750-00 EPC Memory Change Detected RAP

319-750-00 The system detected that the EPC memory size configuration had changed during the power on sequence.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

No service action required. Re-run the job.

319-752-00 Image Rotation Detected RAP

319-752-00 The system detected that the image rotation configuration had changed during the Power On sequence.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, **GP 14**. Re-run the job.

319-754-00 Hard Disk Drive Change RAP

319-754-00 The system detected that the hard disk drive configuration (present vs. not present) has changed during the power on sequence.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, **GP 14**. Re-run the job. **The fault has cleared.**

Y N

Perform the **319-300-00 to 319-310-00** Hard Disk Drive Failure RAP.

Perform **SCP 5** Final Actions.

319-760-00 Test Patterns Missing From EPC RAP

319-760-00 Test patterns missing from EPC.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 14.

320-302-00, 320-303-00 Fax Reset Failure RAP

The Fax module automatically reset itself.

320-302-00 Unexpected reset fault due to fax module hardware or software error.

320-303-00 Unrecoverable fault due to fax module hardware or software error.

Initial Actions

Make a backup of the phone book and the customer settings. Refer to [dC361 NVM Save and Restore](#).

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 14](#). **The fault persists.**

Y N
| Perform [SCP 5](#) Final Actions.

Clear the fax module NVM. Go to [dC301 NVM Initialization](#). Select **Embedded Fax NVM Initialization**. Perform the routine, All Data. **The fault is cleared.**

Y N
| Reload the software, [GP 4](#). **The fault is cleared.**
Y N
| Perform the [320G Fax Module Checkout RAP](#).
| Perform [SCP 5](#) Final Actions.

Perform [SCP 5](#) Final Actions.

320-305-00 Fax System Low Memory Unrecoverable RAP

The fax module automatically reset itself.

320-305-00 Unrecoverable fax system low memory due to fax module hardware or software error

Initial Actions

Make a backup of the phone book and the customer settings. Refer to [dC361 NVM Save and Restore](#).

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 14](#). **The fault persists.**

Y N
| Perform [SCP 5](#) Final Actions.

Clear the images from the fax module. Go to [dC301 NVM Initialization](#). Select **Embedded Fax NVM Initialization**. Perform the routine, All Data. **The fault is cleared.**

Y N
| Reload the software, [GP 4](#).
| Perform [SCP 5](#) Final Actions.

320-320-00 Fax Fault Not Cleared by Reset RAP

320-320-00 Five instances of an unrecoverable fax fault occurred and were not cleared by a card reset.

Initial Actions

- Make a backup of the phone book and the customer settings. Refer to [dC361](#) NVM Save and Restore.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 14](#). **The fault persists.**

Y N
| Perform [SCP 5](#) Final Actions.

Clear the fax module NVM. Go to [dC301](#) NVM Initialization. Select **Embedded Fax NVM initialization**. Perform the routine, **All Data**. **The fault is cleared.**

Y N
| Reload the software, [GP 4](#).

Perform [SCP 5](#) Final Actions.

320-322-00 Non-Volatile Device Not Installed RAP

320-322-00 The non-volatile device was not detected on the fax module.

Initial Actions

Make a backup of the phone book and the customer settings. Refer to [dC361](#) NVM Save and Restore.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 14](#). **The fault persists.**

Y N
| Perform [SCP 5](#) Final Actions.

Clear the fax module NVM. Go to [dC301](#) NVM Initialization. Select **Embedded Fax NVM initialization**. Perform the routine, **All Data**. **The fault persists.**

Y N
| Perform [SCP 5](#) Final Actions.

Install a new fax PWB, [PL 20.05](#) Item 7.

320-323-00, 320-324-00 Fax System Memory Low RAP

320-323-00 The fax system memory was low, less than 6Mb.

320-324-00 There was not enough memory to use the fax service.

Initial Actions

Make a backup of the phone book and the customer settings. Refer to [dC361](#) NVM Save and Restore.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 14](#). **The fault persists.**

Y N
| Perform [SCP 5](#) Final Actions.

Clear the fax module NVM. Go to [dC301](#) NVM Initialization. Select **Embedded Fax NVM initialization**. Perform the routine, **All Data**. **The fault is cleared.**

Y N
| If necessary install a new fax PWB, [PL 20.05 Item 7](#).

Perform [SCP 5](#) Final Actions.

320-331-00, 320-338-00, 320-339-00, 320-341-00, 320-345-00 Fax Network Line 1 Fault RAP

320-331-00 No communication via the PSTN 1 port.

320-338-00 Fax Communication Error at power up or reboot.

320-339-00 Internal fax module fault.

320-341-00 Miscellaneous basic card problems.

320-345-00 Fax port 1 modem failure.

Initial Actions

Make a backup of the phone book and the customer settings. Refer to [dC361](#) NVM Save and Restore.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 14](#). **The fault persists.**

Y N
| Perform [SCP 5](#) Final Actions.

Check the connection between the fax module, [PL 20.05 Item 1](#) and the fax connector PWB, [PL 20.05 Item 4](#). **The connection is good.**

Y N
| Install new components as necessary:
• Fax connector PWB, [PL 20.05 Item 4](#).
• Fax PWB, [PL 20.05 Item 7](#).

Check that the customer fax line is operational. Plug a phone into the fax line. Check for a dial tone. If a phone is not available, then use a line test tool, [PL 26.10 Item 3](#). **The phone line connection is good.**

Y N
| The fax line has a fault. Inform the customer to have the fax line checked by the telephone company.

Install new components in the order that follows:

- Telephone cable, [PL 20.05 Item 3](#).
- Fax PWB, [PL 20.05 Item 7](#).
- Fax connector PWB, [PL 20.05 Item 4](#).

If the fault persists, perform the [303D](#) SBC PWB Diagnostics RAP.

320-327-00, 320-332-00, 320-340-00 Fax Network Line 2 Fault RAP

320-327-00 Registers cannot be accessed on the Extended card.

320-332-00 No communication via the PSTN 2 port.

320-340-00 Fax port 2 modem failure.

Initial Actions

Make a backup of the phone book and the customer settings. Refer to [dC361](#) NVM Save and Restore.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 14](#). **The fault persists.**

Y N
| Perform [SCP 5](#) Final Actions.

Check that the customer fax line is operational. Plug a phone into the fax line. Check for a dial tone. If a phone is not available, then use a line test tool, [PL 26.10 Item 3](#). **The fax line connection is good.**

Y N
| The fax line has a fault. Advise the customer to have the fax line checked by the telephone company.

Install new components in the order that follows:

- Telephone cable, [PL 20.05 Item 3](#).
- Fax PWB, [PL 20.05 Item 7](#).

320-342-00 Fax File Integrity Fault RAP

320-342-00 An error occurred when accessing the file on a non-volatile device.

Initial Actions

Make a backup of the phone book and the customer settings. Refer to [dC361](#) NVM Save and Restore.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 14](#). **The fault persists.**

Y N
| Perform [SCP 5](#) Final Actions.

Clear the fax module NVM. Go to [dC301](#) NVM Initialization. Select **Embedded Fax NVM initialisation**. Perform the routine, **All Data**. **The fault is cleared.**

Y N
| Reload the software, [GP 4](#).

Perform [SCP 5](#) Final Actions.

320-701-00 Fax Phone Book Download Failed RAP

320-701-00 The fax phone book download failed.

Initial Actions

Check the ground connection on the fax module. Refer to [301A](#) Ground Distribution RAP.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Reload the machine software, [GP 4](#).
2. Perform the [303D](#) SBC PWB Diagnostics RAP.

320-710-00, 320-711-00 Image Overwrite Error RAP

320-710 Immediate image overwrite error occurred on the fax module when overwriting the job.

320-711 On demand image overwrite error occurred on the fax module when overwriting the memory.

Initial Actions

Make a backup of the phone book and the customer settings. Refer to [dC361](#) NVM Save and Restore.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 14](#). **The fault persists.**

Y N
Perform [SCP 5](#) Final Actions.

Clear the fax module NVM. Go to [dC301](#) NVM Initialization. Select **Embedded Fax NVM initialization**. Perform the routine, **All Data**. **The fault is cleared.**

Y N
Perform an AltBoot, [GP 4](#). **The fault is cleared.**

Y N
Install a new fax PWB, [PL 20.05](#) Item 7. If the fault persists, perform the [303D](#) SBC PWB Diagnostics RAP.

Perform [SCP 5](#) Final Actions.

Perform [SCP 5](#) Final Actions.

320A Fax Entry RAP

Use this RAP to isolate components which contribute to a fax communications failure.

Initial Actions

- Check that the fax line cables are properly connected. Fax Line 1 from the telephone line outlet connects to the line 1 socket on the machine. Fax line 2 (if installed) from the telephone line outlet connects to the line 2 socket on the machine.
- Use a hand set to dial a remote number. Listen to the dial type, Dual Tone Multiple Frequency (DTMF or 'tone') or 'pulse'.
- Check the ground connection on the fax module. Refer to [301A Ground Distribution RAP](#).
- Check the Fault History. If the fault codes are [320-331-00](#), [320-338-00](#), [320-339-00](#), [320-341-00](#), [320-345-00](#) or [320-327-00](#), [320-332-00](#), [320-340-00](#), then perform the appropriate RAP.
- Enter Customer Administration Tools, [GP 24](#). Select **App Settings / Fax App / Print Fax Reports**. Print an activity report. Check for error codes.
- Select **App Settings / Fax App / Print Fax Reports**. Print an options report. Check for any active feature that would inhibit the sending or receiving of a fax, such as:
 - Line 1 setup is set to 'Send and Receive'.
Select **App Settings / Fax App / Line 1 Setup** to change if necessary.
 - Line 2 setup (if present) is set to 'Send and Receive'.
Select **App Settings / Fax App / Line 2 Setup** to change if necessary.
 - Fax country setting is correct.
Select **App Settings / Fax App / Fax Country Setting** to change it if necessary.
 - Answer mode is set to 'Auto'.
Enter [dC131](#) NVM Read/Write, NVM ID 200-019 FaxAnswerMode to change the setting. 0 = auto, 1 = manual.
 - Junk fax prevention (enabled/disabled).
Enter [dC131](#) NVM Read/Write, NVM ID 200-033 FaxMachJunkEnabled to change the setting. 0 = disabled, 1 = enabled.
 - Dial type setting is correct (tone/pulse).
Enter [dC131](#) NVM Read/Write, NVM ID 200-201 FaxLine1DialTypeDef to change the setting. 0 = tone, 1 = pulse.
Enter [dC131](#) NVM Read/Write, NVM ID 200-202 FaxLine2DialTypeDef to change the setting. 0 = tone, 1 = pulse.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

The fax is connected to an analogue network.

Y N
Perform the [320H Fax Problems on Digital Networks RAP](#).

A

A

The Fax icon is available.

Y N
perform the [320F Fax Icon Not Available RAP](#).

The machine will send a fax to all machines.

Y N
The machine will send a fax to some machines.

Y N
Perform the [320B Unable To Send A Fax RAP](#).

Perform the [320C Unable To Send A Fax To Some Machines RAP](#).

The machine will receive a fax from the remote machine.

Y N
Perform the [320D Unable To Receive A Fax RAP](#).

The fax prints out.

Y N
Perform the [320E Fax Will Not Print RAP](#).

The fault is cleared.

Y N
Perform the [320G Fax module Checkout RAP](#).

The fax is working correctly. Send a 3 page test fax to a known good fax machine. Enter Customer Administration Tools, [GP 24](#). Select **App Settings / Fax App / Print Fax Reports**. Print a protocol report. Check for errors.

NOTE: If applicable, ensure that any sending or receiving feature adjustments that were made during this procedure are reset to the customer's preferences.

320B Unable To Send A Fax RAP

Use this RAP to isolate components which contribute to a fax send failure.

Procedure

NOTE: Refer to the [320A Fax Entry RAP](#). Complete all of the Initial Actions.



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Verify with the customer that Public Switched Telephone Network/Private Automatic Branch Exchange (PSTN/PABX) line is operational. Connect a telephone handset into the line outlet. Listen for a dial tone. Use a known good telephone handset. **The dial tone is present.**

Y N

Use the line test tool, [PL 26.10 Item 3](#) to check the fax line. **The green 'normal' indicator light is on.**

Y N

Ask the customer to request a line check by the telephone company.

Use a telephone handset to dial a known good number. **The ring back is heard.**

Y N

Ask the customer to request a line check by the telephone company.

Enable audio line monitor. Refer to [How to Enable Audio Line Monitor](#).

Dial the fax number. Listen for dial tones or dialing and answer tones. **Fax tones are present.**

Y N

Enter [dC131](#) NVM Read/Write. Reset the values at the NVM ID locations that follow:

- 200-415 Line1CurrentDetect = 0.
- 200-416 Line2CurrentDetect = 0.

Fax tones are present.

Y N

Perform the [320G Fax Module Checkout](#).

Install new components as necessary:

- Fax PWB, [PL 20.05 Item 7](#).
- Telephone cable, [PL 20.05 Item 3](#).

The fax is working correctly. Send a 3 page test fax to a known good fax machine. Enter Customer Administration Tools, [GP 24](#). Select **Service Settings / Embedded Fax Settings / Print Fax Reports**. Print a protocol report. Check for errors.

The dial tone/dialling answer tones are present.

Y N

The exchange is receiving the digits too quickly or is not processing the digits correctly. Ask the customer if the exchange uses 'tone' or 'pulse' dialing.

Perform the steps that follow:

- Ensure that the machine is set for the correct dialing tone.

A B

- Enter [dC131](#) NVM Read/Write. Reset the values at the NVM ID locations that follow. Set to 0 = tone or 1 = pulse:
 - 200-201 FaxLine1DialTypeDef.
 - 200-202 FaxLine2DialTypeDef.
- Insert a pause (,) between the first and second digit of the dial string. In the Fax tab **Dialling Options** select **Dialling Characters / Pause / Add Character / Save**.

The fax only dials once and hangs up, or the busy tone has unusual timing, frequency or level. **The busy tones are recognized.**

Y N

Check the number for a voice or tone answer.

The fax is working correctly. Send a 3 page test fax to a known good fax machine. Enter Customer Administration Tools, [GP 24](#). Select **Service Settings / Embedded Fax Settings / Print Fax Reports**. Print a protocol report. Check for errors. Re-enter the details from the Fax options.

Check that the customer is dialing the correct number. **The number is correct.**

Y N

Ask the customer to dial the number using the appropriate access codes.

Enable audio line monitor. Refer to [How to Enable Audio Line Monitor](#).

Dial the fax number. Listen for a dial tone or dialing and answer tones. **Fax tones are present.**

Y N

Enter [dC131](#) NVM Read/Write. Reset the values at the NVM ID locations that follow:

- 200-415 Line1CurrentDetect = 0.
- 200-416 Line2CurrentDetect = 0.

Fax tones are present.

Y N

Perform the [320G Fax Module Checkout](#).

Install new components as necessary:

- Fax PWB, [PL 20.05 Item 7](#).
- Telephone cable, [PL 20.05 Item 3](#).

The fax is working correctly. Send a 3 page test fax to a known good fax machine. Enter Customer Administration Tools, [GP 24](#). Select **Service Settings / Embedded Fax Settings / Print Fax Reports**. Print a protocol report. Check for errors.

The dial tone/dialling answer tones are present.

Y N

The exchange is receiving the digits too quickly or is not processing the digits correctly. Ask the customer if the exchange is 'tone' or 'pulse' dialing.

Perform the steps that follow:

- Ensure that the machine is set for the correct dialing tone.
- Enter [dC131](#) NVM Read/Write. Reset the values at the NVM ID locations that follow. Set to 0 = tone or 1 = pulse.
 - 200-201 FaxLine1DialTypeDef.

A B

C

- 200-202 FaxLine2DialTypeDef.
- Insert a pause (,) between the first and second digit of the dial string. In the Fax tab **Dialling Options** select **Dialling Characters / Pause / Add Character / Save**.
- Enter dC131 NVM Read/Write. Set NVM ID 200-397 TimeBeforeDial to 13.

The fax only dials once and hangs up, or the busy tone has unusual timing, frequency or level.

The busy tones are recognized.

Y N

- Check the number for a voice or tone answer.
- Enter dC131 NVM Read/Write, Check that the values at the NVM ID locations that follow are set to the correct defaults to match the appropriate country setting.
 - 200-237 FaxBusy1MakeMin1.
 - 200-238 FaxBusy1MakeMax1.
 - 200-240 FaxBusy1BreakMin1.
 - 200-241 FaxBusy1BreakMax1.

The fax is working correctly. Send a 3 page test fax to a known good fax machine. Enter Customer Administration Tools, GP 24. Select **Service Settings / Embedded Fax Settings / Print Fax Reports**. Print a protocol report. Check for errors.

How to Enable Audio Line Monitor

1. Enter Customer Administration Tools, GP 24.
2. Select **Service Settings**.
3. Select **Embedded Fax Settings**.
4. Select **Transmission Defaults**.
5. Select **Audio Line Monitor**.
6. Select **Enable and High Volume**.

320C Unable To Send A Fax To Some Machines RAP

Use this RAP to isolate components which contribute to a failure to send a fax to some machines.

Procedure

NOTE: Refer to the 320A Fax Entry RAP. Complete all of the Initial Actions.



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Ensure the correct number is being dialled to make the connection. **The connection is made.**

Y N

The exchange is not processing the digits correctly. The machine needs a longer pause between digits:

- Insert a pause (,) between the first and second digit of the dial string. In the Fax tab **Dialling Options** select **Dialling Characters / Pause / Add Character / Save**.
- Enter dC131 NVM Read/Write. Change the setting at NVM ID 200-410 DTMF Tone-Time to 100.

Call the fax number from a known good telephone. Listen for the answer fax tones. **The fax tones are heard.**

Y N

The fax on the remote end is not picking up, or no fax is connected. Advise the customer to check the machine at the remote end.

Enter Customer Administration Tools, GP 24. Select **Service Settings / Embedded Fax Settings / Print Fax Reports**. Print a protocol report. The protocol report shows Receive Not Ready (RNR) is received from the remote fax repeatedly until timeout and Disconnect (DCN). Check for a communication failure after 'V34-PH2/V34-PH3' or 'DCS/TCF'. **The remote fax receives and prints the fax.**

Y N

There is a compatibility problem with the remote fax. Check the items that follow:

- Check the protocol report for communication errors.
- The fax line quality is too poor for V34 (Super G3) to function correctly. This is possibly caused by mains interference on the line.
- Disable V34. Enter dC131 NVM Read/Write. Reset the values at the NVM ID locations that follow:
 - 200-087 T30MaxSpeedL1Tx = 11 (14400).
 - 200-088 T30MaxSpeed2Tx = 11 (14400).
 If mains noise persists, install and use line 2 instead of line 1 (if available).
- When sending to a PC fax or fax server that has an ISDN card, there is a need to customize the CEQ values. Enter dC131 NVM Read/Write. Set the value at NVM ID 203-031 CEQTX to 0.

A

The protocol report shows Message Confirmation (MCF) is not sent by the remote fax (last page), only DCN. **The failure report is printed, but the remote fax prints multiple copies of the job or failed page.**

Y N

The fax is working correctly. Send a 3 page test fax to a known good fax machine. Print a protocol report. Check for errors.

The machine will resend up to 5 times before printing the failure report.

Enter Customer Administration Tools, [GP 24](#). Select **Service Settings / Embedded Fax Settings / Transmission Defaults / Automatic Resend**. Set the number of resends to 1 or 2.

320D Unable To Receive A Fax RAP

Use this RAP to isolate components which contribute to a fax receive failure.

Procedure

NOTE: Refer to the [320A Fax Entry RAP](#). Complete all of the Initial Actions.



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Verify with the customer that Public Switched Telephone Network/Private Automatic Branch Exchange (PSTN/PABX) line is operational. Use a known good telephone handset or use the line test tool, [PL 26.10 Item 3](#) to check the fax line. **The dial tone is present.**

Y N

Ask the customer to request a line check by the telephone company.
Ensure the fax service is enabled and supported on that line by a PBX administrator.

Call the handset from another telephone. **The phone rings.**

Y N

Ask the customer to request a line check by the telephone company.
Ensure the fax service is enabled and supported on that line by a PBX administrator.

Reconnect the fax. Call the fax number from another telephone. Listen for fax tones. **The machine answers and fax tones are heard.**

Y N

Enter Customer Administration Tools, [GP 24](#). Select **Service Settings / Embedded Fax Settings / Print Fax Reports**. Print an activity report. Check for receive calls on the activity report. The machine probably does not 'beep' to indicate an incoming call.

Check that the NVM ID locations that follow are set to the defaults:

- 200-203 FaxAutoAnswerDelay.
- 200-423 FaxRing1MakeMin1.
- 200-426 FaxRing1BreakMin1.

Call the fax number from another telephone. Listen for fax tones. **The machine answers and fax tones are heard.**

Y N

Perform the [320G Fax Module Checkout](#).
If necessary, install a new fax PWB, [PL 20.05 Item 7](#).

The fax is working correctly. Send a 3 page test fax to a known good fax machine. Print a protocol report. Check for errors.

Receive a 3 page test fax from the original fax machine. Enter Customer Administration Tools, [GP 24](#). Select **App Settings / Fax App / Print Fax Reports**. Print a protocol report. Check for errors. The protocol report may show a communication failure after 'Called Subscriber Identified/Digital Identification Signal' (CSI/DIS) or 'Digital Command Signal/Training Check' (DCS/TCF) or after 'V34-PH2/V34-PH3' or 'Eye Quality Monitor' (EQM) value greater than 5000. **The protocol report shows a communication failure.**

Y N

The problem may be intermittent. Inform the operator of the remote machine that they should report the problem to the telephone company.

Perform the steps that follow:

- Confirm the fax line is a standard PSTN/PBX analogue line.
- The fax line quality is too poor for Super G3 or G3 to function correctly. There is possibly mains interference on the line. The DSL line may not be properly filtered.
- Ask the customer to request a fax capable service from telephone company.
- If mains noise is apparent, install a new fax PWB, [PL 20.05 Item 7](#). Use line 1.
- Enter **dC131** NVM Read/Write. Set the values at the NVM ID locations that follow:
 - 200-085 T30MaxResL1Rx = 7.
 - 200-086 T30MaxResL2Rx = 7.

This sets the receive resolution capabilities for line 1 and line 2 to 400 x 400 max. This will shorten the DIS.

- The DIS field is too long to enable successful communication.
Enter **dC131** NVM Read/Write. Change NVM ID 200-141 USSTOCKSUPPORT... to 0 (disable).
- Disable V34 (Super G3). Enter **dC131** NVM Read/Write and reset the values at the NVM ID locations that follow:
 - 200-089 T30MaxSpeedL1Rx = 11 (14400).
 - 200-090 T30MaxSpeedL2Rx = 11 (14400).

If the fault persists, use a lower line receive (Rx) speed: 12 = 12000, 13 = 9600, 14 = 7200, 15 = 4800, 16 = 2400.

- Send a 3 page test fax from a known good fax machine.

320E Fax Will Not Print RAP

Use this RAP to solve fax printing problems.

Initial Actions

- Check the condition of the paper in all trays.
- Check that the paper trays are loaded with the appropriate paper sizes for printing the fax. Refer to [GP 20](#).

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- If the received fax has mixed size documents (for example, the first prints are 8.5 x 11 and then followed by 8.5 x 14 prints), check the **All Jobs** queue. The job will print 8.5 x 11 pages without printing 8.5 x 14 pages. Then the job will be deleted. Perform the steps that follow:
 - Enter Customer Administration Tools, [GP 24](#). Select **App Settings / Fax App / Incoming Fax Defaults**:
 - Select **Paper Settings**. Change to **Manual**.
 - Select **Paper Sizes, Normal Size**. Select the correct paper size to match the paper in the trays. This is usually A4 or 8.5 x 11 LEF and SEF. Select **OK**.
 - Change **Paper Settings** back to **Automatic**. Save, then exit.
- If the UI requests a paper size that is not loaded in the trays, perform the steps that follow:
 - Enter Customer Administration Tools, [GP 24](#). Select **App Settings / Fax App / Incoming Fax Defaults**:
 - Select **Advanced Paper Size**.
 - For Small, Long or Large paper sizes, select **None** if the corresponding paper is not loaded in the paper trays. Select **OK**.
 - Change **Paper Settings** back to **Automatic**. Save, then exit.

320F Fax Icon Not Available RAP

Use this RAP to isolate the problem when the Fax tab is not available, or is greyed out.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fax setup. Enter Customer Administration Tools, [GP 24](#). Perform the steps that follow:

- Select **App Settings / Fax App / Fax Setup**. Check that the fax install was completed:
 - If **Disabled** is selected, select **Enabled**.
 - If the **Run Setup** option is displayed, select it. Follow the prompts on the UI screen to complete the install of the fax.
- Select **App Settings / Display**. Check that the fax service is registered to display on the UI screen:
 - Scroll down the list of services to **Fax**.
 - Check that the fax service is selected (indicated by a 'tick' symbol).
 - If necessary, select **Fax**.

Exit Customer Administration Tools, [GP 24](#). Press the **Home** button on the UI. **The fax icon is displayed.**

Y N

Check that the fax module is installed correctly, [PL 20.05 Item 1](#).

Perform the steps that follow:

1. Switch off the machine, [GP 14](#).
2. Check the connection between the fax module and the fax connector PWB, [PL 20.05](#).
Check the fax connector PWB ribbon cable, [PL 3.22 Item 10](#) connection between the SBC PWB, [PL 3.22 Item 3](#) and the fax connector PWB, [PL 20.05 Item 2](#).
3. Switch on the machine, [GP 14](#).

The fax icon is displayed.

Y N

Perform an AltBoot, [GP 4](#).

NOTE: Software should only be loaded on a working machine. Loading or reloading software onto a machine (or fax module) that has a fault will not work.

Perform [SCP 5](#) Final Actions.

Perform [SCP 5](#) Final Actions.

320G Fax Module Checkout RAP

Use this RAP to check for problems with the fax module.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Switch off, then switch on the machine, [GP 14](#).
- Check that the fax module, [PL 20.05 Item 1](#) is located correctly.
- Check the ground connection on the fax module. Refer to the [301A](#) Ground Distribution RAP.
- For image quality defects, perform the [IQ9](#) Unacceptable Received Fax Image Quality RAP.

Procedure

Switch off the machine [GP 14](#). Disconnect the components that follow:

- The fax module from the fax connector PWB, [PL 20.05](#).
- The fax connector PWB ribbon cable from the SBC PWB, [PL 3.22](#).

Check that the connectors are clean and not damaged. If the connectors are damaged, install new components as necessary:

- Fax connector PWB, [PL 20.05 Item 4](#).
- Fax PWB, [PL 20.05 Item 7](#).
- Fax connector PWB ribbon cable, [PL 3.22 Item 10](#).
- Perform the [303D](#) SBC PWB Diagnostics RAP.

Reconnect the components that follow:

- The fax connector PWB ribbon cable to the SBC PWB.
- The fax module to the fax connector PWB.

Switch on the machine, [GP 14](#). **The fault is cleared.**

Y N

Return to the original fault code RAP and perform the remaining actions in the procedure.

Perform [SCP 5](#) Final Actions.

320H Fax Problems on Digital Networks RAP

Use this RAP to isolate fax problems when using digital networks.

The fax option was designed as an analogue Group 3 device. This will have the best performance when connected to a dedicated analogue phone Public Switched Telephone Network (PSTN) line or 'Plain Old Telephone System' (POTS).

- The fax option will function on the technologies that follow:
 - Asymmetric Digital Subscriber Line (ADSL).
 - Digital Subscriber Line (DSL).
 - Voice Over Internet Protocol (VOIP).
 - Fax Over Internet Protocol (FOIP), (T.38 protocol).
 - T1 Trunk/E1 Trunk (Europe).

NOTE: Due to the compression used on the technologies, the level of performance will be lower than on a PSTN or POTS.

- The fax option will not function on Integrated Services Digital Network (ISDN).

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Switch off, then switch on the machine, GP 14.
- Check with the customer or IT person on what network the fax service is being used and what is the quality of service.
- Check that an analogue adapter or a connection for analogue terminals is available.
- Ask the customer to check with the service provider that an analogue port for fax service has been provided and enabled.

Procedure

Perform the steps that follow:

- Request the latest SPAR release.
- Disable V34.

Enter dC131 NVM Read/Write and reset the values at the NVM ID locations that follow:

- 200-087 T30MaxSpeedL1Tx = 11 (14400).
 - 200-088 T30MaxSpeedL2Tx = 11 (14400).
 - 200-089 T30MaxSpeedL1Rx = 11 (14400).
 - 200-090 T30MaxSpeedL2Rx = 11 (14400).
- If problems are still not resolved after these actions, escalate the problem using the normal escalation process.

322-300-05 to 322-309-04 Other Network Faults 01 RAP

322-300-05 Image complete not received from video.

322-300-10 Failed to transfer image due to decoding error.

322-300-16 Machine determined that it needed to do a reset in order to avoid an impending real time clock overflow.

322-301-05 Scan resources not available.

322-309-04 Consecutive no accepts received from a module exceeded threshold value (currently 20). Five consecutive 322-309-04 will cause 322-319-04.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 14.

322-310-04 to 322-318-04 Other Network Faults 02 RAP

322-310-04 Pages received from extended job service out of sequence.

322-311-04 Sequencer failed to respond with proposal within the required time.

322-314-04 Module registration error.

322-315-04 One or more modules failed to respond with a completion message.

322-316-04 Job required paper tray that does not exist.

322-317-04 Job required finishing capability that does not exist.

322-318-04 Job required an IOT capability that does not exist.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, GP 14.
2. Delete the original job. Rerun the job.

322-319-04 IOT Integrity Problem While Printing a Job RAP

322-319-04 Integrity problem while printing a job. The IOT cycled down and up 10 times without printing a page within the same job causing the fault. The system automatically executes a reset.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Delete the original job. Rerun the job.

322-320-00 Failed to Install Scan to File RAP

322-320-00 System manager failed to install scan to file (workflow scanning).

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Reload the software, **GP 4**.
3. Install a new SBC PWB, **PL 3.22 Item 3**.

322-321-00 Failed to Remove Scan to File RAP

322-321-00 System manager failed to remove scan to file (workflow scanning).

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 14](#).
2. Reload the software, [GP 4](#).
3. Install a new SBC PWB, [PL 3.22 Item 3](#).

22-321-04 Proposal Response Timeout Error RAP

322-321-04 Proposal response timeout error - RS422 configuration mismatch.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 14](#).
2. Check the machine configuration.

322-322-00 Failed to Install LAN Fax RAP

322-322-00 System manager failed to install LAN (server) Fax.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Reload the software, **GP 4**.
3. Install a new SBC PWB, **PL 3.22 Item 3**.

322-323-00 Failed to Remove LAN Fax RAP

322-323-00 System manager failed to remove LAN (server) Fax.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Reload the software, **GP 4**.
3. Install a new SBC PWB, **PL 3.22 Item 3**.

322-324-00 Failed to Install Scan to E-mail RAP

322-324-00 System manager failed to install scan to e-mail.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Reload the software, **GP 4**.
3. Install a new SBC PWB, **PL 3.22 Item 3**.

322-325-00 Failed to Remove Scan to E-mail RAP

322-325-00 System manager failed to remove scan to e-mail.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Reload the software, **GP 4**.
3. Install a new SBC PWB, **PL 3.22 Item 3**.

322-326-00 Failed to Install Internet Fax RAP

322-326-00 System manager failed to install internet Fax.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Reload the software, **GP 4**.
3. Install a new SBC PWB, **PL 3.22 Item 3**.

322-327-00 Failed to Remove Internet Fax RAP

322-327-00 System manager failed to remove internet fax.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Reload the software, **GP 4**.
3. Install a new SBC PWB, **PL 3.22 Item 3**.

322-328-00 Incomplete System Information RAP

322-328-00 Incomplete system information. The accounting service data was corrupted.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, **GP 14**.

322-330-00 PagePack PIN Entry Locked RAP

322-330-00 An incorrect PagePack PIN was entered more than 3 times and entry is now locked for 24 hours. Only 1 retry is now possible every 24 hours.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Obtain a new PIN and retry. Refer to **GP 39** Service Plans and Consumables if required.

322-330-01 to 322-330-05 List Jobs Request Timed Out RAP

322-330-01 List jobs request timed out between UI and single board controller.

322-330-02 List jobs request timed out between single board controller and ESS print service.

322-330-03 List jobs request timed out between single board controller and scan to file service.

322-330-04 List jobs request timed out between single board controller and scan to fax service.

322-330-05 List jobs request timed out between queue utility and DC job service.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, **GP 14**.

322-330-06 ESS Scan to Distribution Service not Responding to List Jobs RPC Call RAP

322-330-06 ESS scan to distribution service failed to respond to list RPC call.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, **GP 14**.

322-332-00 Invalid Plan Conversion RAP

322-332-00 Plan conversion entry locked due to repeated incorrect entry attempts.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 14](#).
2. Obtain a new PIN. Refer to [GP 39](#) Service Plans and Consumables.
3. Go to [dC137](#). Enter the new PIN.

322-335-00 Failed to Install Job Based Accounting RAP

322-335-00 System manager failed to install job based (network) accounting.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 14](#).
2. Reload the software, [GP 4](#).
3. Install a new SBC PWB, [PL 3.22](#) Item 3.

322-336-00 Failed to Remove Job Based Accounting RAP

322-336-00 System manager failed to remove job based (network) accounting.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Reload the software, **GP 4**.
3. Install a new SBC PWB, **PL 3.22 Item 3**.

322-337-00 Failed to Install Disk Overwrite RAP

322-337-00 System manager failed to install disk overwrite (image overwrite security).

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Reload the software, **GP 4**.
3. Install a new SBC PWB, **PL 3.22 Item 3**.

322-338-00 Failed to Remove Disk Overwrite RAP

322-338-00 System manager failed to remove disk overwrite (image overwrite security).

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Reload the software, **GP 4**.
3. Install a new SBC PWB, **PL 3.22 Item 3**.

322-339-00 Failed to Install Job Overwrite RAP

322-339-00 System manager failed to install job overwrite.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Reload the software, **GP 4**.
3. Install a new SBC PWB, **PL 3.22 Item 3**.

322-340-00 Failed to Remove Job Overwrite RAP

322-340-00 System manager failed to remove job overwrite.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Reload the software, **GP 4**.
3. Install a new SBC PWB, **PL 3.22 Item 3**.

322-350-01, 322-350-02 Software Detects Non-Valid Xerox SOK RAP

322-350-01 Software detected non-valid Xerox SOK 1.

322-350-02 Software detected non-valid Xerox SOK 2 or 3.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the **303-405-00, 303-406-00** SIM Card Fault RAP.

322-351-01 to 322-351-03 SOK Write Failure RAP

322-351-01 SOK 1 write failure.

322-351-02 SOK 2 write failure.

322-351-03 SOK 3 write failure.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Go to the [303-405-00](#), [303-406-00](#) SIM Card Fault RAP.

322-352-00 to 322-353-01 Serial Number Fault RAP

322-352-00 Serial number was lost.

322-352-01 Password routine is required to write serial number to the SOK 1, IOT and CCM.

322-353-00 IOT serial number is null or zero.

322-353-01 IOT serial number did not match system serial number. May be a legitimate case where machine was reserialized in re-manufacturing.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Switch off, then switch on the machine, [GP 14](#).

Procedure

1. Enter the correct serial number. Refer to [dC132](#) Serial Number.

322-360-00 Service Plan Mismatch RAP

322-360-00 Three way sync of the service plan could not be resolved. The service plan information has been lost.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Set the service plan, **dC136**.

322-370-00 Cannot Communicate to the XSA Database RAP

322-370-00 A loss of data communications on the single board controller.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Perform an AltBoot, **GP 4**.

322-371-00, 322-372-00 Fax Application Registration Error RAP

322-371-00 Set by the fax service when it gets no response from the service registry when trying to register.

322-372-00 Set by the fax service when it gets no response from the service registry when trying to un-register.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 14](#).
2. Check the fax connections.
3. Reload the software, [GP 4](#).

322-407-00 Embedded Fax Install Failure RAP

322-407-00 The system manager failed to install the embedded fax option.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 14](#).
2. Perform the [320G](#) Fax Module Checkout.
3. Go to [dC301](#) NVM initialization. Select All Copier NVM and reset the NVM. Re-install the fax module, [PL 20.05](#) Item 1.
4. Reload the software, [GP 4](#).

322-417-00 Embedded Fax Remove Failure RAP

322-417-00 The system manager failed to remove the embedded fax option.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 14](#).
2. To remove the option perform the steps that follow:
 - a. Enter Customer Administration Tools, [GP 24](#).
 - b. Press the **Machine Status** button.
 - c. Select the **Tools** tab.
 - d. Select **Service Settings**.
 - e. Select **Embedded Fax Settings**.
 - f. Select **Fax Setup**.
 - g. Select **Disable**.
NOTE: An option must be disabled before it can be removed.
 - h. Select **Save**.
 - i. Select **Exit Tools**.
3. If the embedded fax remove failure still occurs, go to [dC301](#) NVM initialization and select **All Copier NVM** and reset the NVM.
4. If the fax module is to be removed from the machine. Switch off the machine, [GP 14](#). Remove the fax module, [PL 20.05 Item 1](#). Switch on the machine, [GP 14](#). A 'fax hardware not detected' window appears. Perform the steps that follow:
 - a. Select **Yes**.
 - b. Select **Restart**.

322-419-00 Embedded Fax Enable Failure RAP

322-419-00 The system manager failed to enable the embedded fax option.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 14](#).
2. Perform the [320G](#) Fax Module Checkout.
3. To enable the option, perform the steps that follow:
 - a. Enter Customer Administration Tools, [GP 24](#).
 - b. Press the **Machine Status** button.
 - c. Select the **Tools** tab.
 - d. Select **Service Settings**.
 - e. Select **Embedded Fax Settings**.
 - f. Select **Fax Setup**.
 - g. Select **Enable**.
 - h. Select **Save**.
 - i. Select **Exit Tools**.
4. Go to [dC301](#) NVM initialization. Select **All Copier NVM** and reset the NVM.
5. Reload the software, [GP 4](#).

322-421-00 Embedded Fax Disable Failure RAP

322-421-00 The system manager failed to disable the embedded fax option.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, GP 14.
2. To disable the option perform the steps that follow:
 - a. Enter Customer Administration Tools, GP 24.
 - b. Press the **Machine Status** button.
 - c. Select the **Tools** tab.
 - d. Select **Service Settings**.
 - e. Select **Embedded Fax Settings**.
 - f. Select **Fax Setup**.
 - g. Select **Disable**.
 - h. Select **Save**.
 - i. Select **Exit Tools**.
3. Go to dC301 NVM initialization. Select Copier NVM and reset the NVM.
4. Reload the software, GP 4.

322-701-04 Module Completion Message Received RAP

322-701-04 Module completion message received after IOT returned to standby.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 14.

322-720-00 Service Registry Bad Data/Corrupted RAP

322-720-00 Service registry had bad or corrupted data.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, **GP 14**.

322-721-00 No Response From The Service Registry RAP

322-721-00 AAA received no response from the service registry service.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, **GP 14**.

322-750-17, 322-754-17, 322-755-17 Configuration Mismatch RAP

322-750-17 The system detected that the accessory card configuration had changed during the power on sequence.

322-754-17 The system detected the UI configuration had changed during the power on sequence.

322-755-17 The system detects that the RDT configuration has changed during the power on sequence after the 2nd user confirmation of configuration mismatch.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, **GP 14**.

341-301-00 CRUMs Bus Communications Error RAP

341-301-00 The CRUMs bus communications have been disrupted by internal electronic noise.

Procedure

Perform the following:

1. [ADJ 90.1](#) Xerographics Cleaning.
2. Check the print cartridge ground, go to the [301A](#) Ground Distribution RAP.
3. Refer to the [391A](#) HVPS RAP.
4. Install a new components as necessary:
 - HVPS tray assembly, [PL 90.10 Item 1](#).
 - Bias transfer roll housing assembly, [PL 80.15 Item 15](#).
 - Registration transfer assembly, [PL 80.15 Item 1](#).

345-100-00 Soft Clock Communications Error RAP

345-100-00 A communications failure occurred between the main IOT processor and the sub processor generating the clock for the drives module.

NOTE: *With this fault active, the fuser motor and print cartridge motor may not be correctly controlled.*

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Switch off, then switch on the machine, [GP 14](#).
2. Reload the software, [GP 4](#).
3. If the fault continues, install a new IOT PWB, [PL 1.10 Item 2](#).

361-100-00 LED Print Head Data Integrity Failure RAP

361-100-00 Checksum read from LED print head did not match the checksum calculated on the SBC PWB.

Remote Service Actions

- Ask the customer to switch off, then switch on the machine, [GP 14](#).
- Log into the machine remotely, [GP 15](#). Perform [dC304](#) LED Print Head Validation. If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol



CAUTION

Certain components in this product are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

Go to [Flag 1](#). Disconnect, then check the ribbon cable and connectors, P/J511 on the [LED print head module](#) and P/J851 on the [SBC PWB](#). The ribbon cable and connectors are clean and undamaged.

Y N

Clean or repair the ribbon cable and connectors. Install new components as necessary:

- LED print head to SBC PWB ribbon cable, [PL 60.35 Item 17](#).
- LED print head module, [PL 60.35 Item 1](#).

Re-install the ribbon cable. Perform [dC304](#) LED Print Head Validation. The LED print head validation test failed.

Y N

Perform [SCP 5](#) Final Actions.

Install a new LED print head module, [PL 60.35 Item 1](#). Check the operation of the machine. The fault persists.

Y N

Perform [SCP 5](#) Final Actions.

Reload the software, [GP 4](#). If the fault persists, perform the [303D](#) SBC PWB Diagnostics RAP.

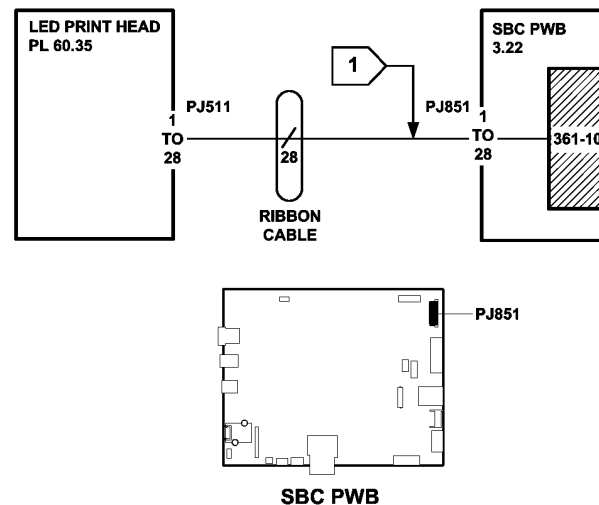


Figure 2 Circuit diagram

TX-1-0363-A

362-310-00, 362-492-00, 362-790-00 to 362-792-00, 366-492-00 to 366-792-00 Scanner to SBC Communications Failure RAP

362-310-00 A communication failure occurred between the scanner PWB and the SBC PWB.

362-492-00 IIT side 1 video failure.

362-790-00 IIT side 1 doorbell reject software problem.

362-791-00 IIT side 1 doorbell timeout software problem.

362-792-00 IIT side 1 doorbell failure software problem.

366-492-00 IIT side 2 video failure.

366-790-00 IIT side 2 doorbell reject software problem.

366-791-00 IIT side 2 doorbell timeout software problem.

366-792-00 IIT side 2 doorbell failure software problem.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol



CAUTION

Certain components in this product are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

Switch off, then switch on the machine, [GP 14](#).

Go to [Flag 1](#). Disconnect, then check the SBC PWB/scanner PWB data cable and connectors, [CN7](#) on the [Scanner PWB](#) and [P/J25](#) on the [SBC PWB](#). The data cable and connectors are clean and undamaged.

Y N

Clean or repair the ribbon cable or connectors. Install new components as necessary:

- SBC PWB/scanner PWB comms power harness, [PL 60.20 Item 5](#).
- Scanner PWB, [PL 60.20 Item 4](#).

If the fault persists, perform the [303D SBC PWB Diagnostics RAP](#).

Perform the steps that follow:

- Install a new SBC PWB/scanner PWB comms power harness, [PL 60.20 Item 5](#).
- Install a new scanner PWB, [PL 60.20 Item 4](#).
- The [303D SBC PWB Diagnostics RAP](#).

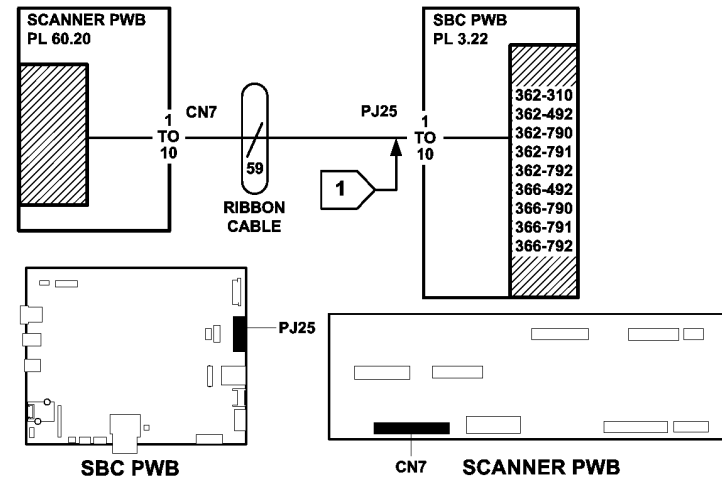


Figure 2 Circuit diagram

TX-1-0364-A

362-396-00, 362-397-00, 362-399-00, 366-396-00, 366-397-00 Scanner Data Connection Failure RAP

362-396-00 A connection failure occurred between the scanner PWB and the side 1 scanner.

362-397-00 A connection failure occurred between the scanner PWB and the side 1 scanner.

362-399-00 A cable failure occurred between the scanner PWB and the side 1 scanner.

366-396-00 A connection failure occurred between the scanner PWB and the side 2 scan assembly.

366-397-00 A connection failure occurred between the scanner PWB and the side 2 scan assembly.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol



CAUTION

Certain components in this product are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

Go to [Flag 1](#). Disconnect, then check the side 2 scan assembly data ribbon cable, [PL 5.10 Item 16](#) and connectors on the side 2 scan assembly, [PL 5.10 Item 12](#) and [CN8](#) on the [Scanner PWB](#), [PL 60.20 Item 4](#). The ribbon cable and connectors are clean and undamaged.

Y N

Clean or repair the ribbon cable or connectors. Install new components as necessary:

- Side 2 scan assembly data ribbon cable, [PL 5.10 Item 16](#).
- Scanner PWB, [PL 60.20 Item 4](#).
- Side 2 scan assembly, [PL 60.30 Item 1](#).

A

Re-install the ribbon cable. Check the operation of the machine. **The fault persists.**

Y N

Perform [SCP 5](#) Final Actions.

Go to [Flag 2](#). Disconnect, then check the scan carriage data ribbon cable, [PL 60.20 Item 11](#) and connectors on the scan carriage assembly, [PL 60.25 Item 1](#) and [CN6](#) on the [Scanner PWB](#), [PL 60.20 Item 4](#). The ribbon cable and connectors are clean and undamaged.

Y N

Clean or repair the ribbon cable or connectors. Install new components as necessary:

- Scan carriage data ribbon cable, [PL 60.20 Item 11](#).
- Scanner PWB, [PL 60.20 Item 4](#).
- Scan carriage assembly, [PL 60.20 Item 1](#).

Install new components as necessary:

- Side 2 scan assembly data ribbon cable, [PL 5.10 Item 16](#).
- Scanner PWB, [PL 60.20 Item 4](#).
- Side 2 scan assembly, [PL 60.30 Item 1](#).
- Scan carriage data ribbon cable, [PL 60.20 Item 11](#).
- Scan carriage assembly, [PL 60.20 Item 1](#).

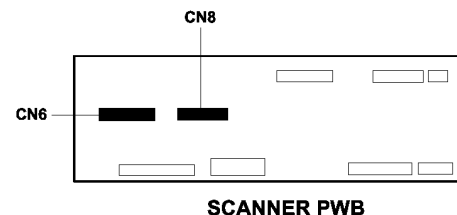
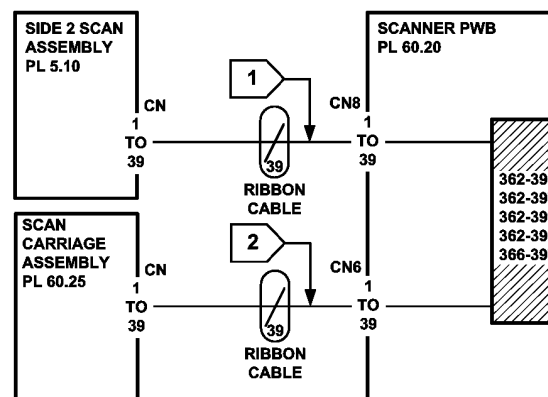


Figure 2 Circuit diagram

TX-1-0365-A

A

362-450-00 to 362-472-00, 362-781-00 Scanner Calibration Faults RAP

- 362-450-00** Dark range status bit was not clear prior to calibration.
- 362-451-00** Dark range status bit was not set after calibration.
- 362-452-00** Pixel offset status bit was not clear prior to calibration.
- 362-453-00** Pixel offset status bit was not set after calibration.
- 362-454-00** Gain range status bit was not clear prior to calibration.
- 362-455-00** Gain range status bit was not set after calibration.
- 362-456-00** Pixel gain status bit was not clear prior to calibration.
- 362-457-00** Pixel gain status bit was not set after calibration.
- 362-458-00** Highest intensity image pixel value exceeded maximum tolerance.
- 362-459-00** Pixel offset error (High) exceeded maximum adjustment allowed during dark calibration.
- 362-460-00** Pixel offset error (Low) exceeded maximum adjustment allowed during dark calibration.
- 362-461-00** Highest intensity image pixel value was lower than the minimum tolerance.
- 362-462-00** Pixel gain error (High) exceeded maximum adjustment allowed during white calibration.
- 362-463-00** Pixel gain error (Low) exceeded maximum adjustment allowed during white calibration.
- 362-464-00** The scanner was requested to perform another operation while busy.
- 362-466-00** Pixels were out of range during black calibration.
- 362-467-00** Pixels were out of range during white calibration.
- 362-468-00** Pixel clock error from the full width array.
- 362-469-00** Calibration ASIC communications error.
- 362-470-00** Unable to read the registers in the calibration ASIC.
- 362-471-00** Calibration ASIC write buffer was full.
- 362-472-00** Calibration ASIC communications time-out.
- 362-781-00** IIT Remote NVM out of range.

Status Indicator RAPs

362-450-00 to 362-472-00, 362-781-00

Remote Service Actions

Ask the customer to switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol



CAUTION

Certain components in this product are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration. **The fault persists.**

Y N
Perform [SCP 5](#) Final Actions.

Go to [Flag 1](#). Disconnect, then check the scan carriage data ribbon cable, [PL 60.20 Item 11](#) and connectors on the scan carriage assembly, [PL 60.20 Item 1](#) and [CN6](#) on the [Scanner PWB, Figure 2](#). **The ribbon cable and connectors are clean and undamaged.**

Y N
Clean or repair the scan carriage data ribbon cable or connectors. Install new components as necessary:

- Scan carriage data ribbon cable, [PL 60.20 Item 11](#).
- Scan carriage assembly, [PL 60.20 Item 1](#).
- Scanner PWB, [PL 60.20 Item 4](#).

Reconnect the scan carriage data ribbon cable. Go to [Flag 2](#). Disconnect, then check the SBC PWB/scanner PWB comms/power harness, [PL 60.20 Item 5](#) and connectors, [CN7](#) on the [Scanner PWB](#) and [P/J25](#) on the [SBC PWB](#). **The data cable and connectors are clean and undamaged.**

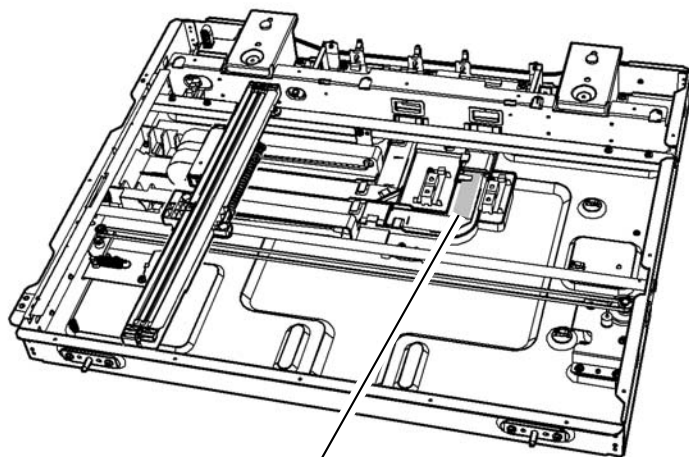
Y N
Clean or repair the ribbon cable or connectors. Install new components as necessary:

- SBC PWB/Scanner PWB comms/power harness, [PL 60.20 Item 5](#).
- Scanner PWB, [PL 60.20 Item 4](#).

If the fault persists, perform the [303D](#) SBC PWB Diagnostics RAP.

A

A
 Perform dC301 Scanner System NVM Initialization. Then perform ADJ 60.3 IIT Registration, Magnification and Calibration. If the fault persists, perform an AltBoot, GP 4.



Scan carriage data ribbon cable.

Figure 2 Component location

X-1-1915-A

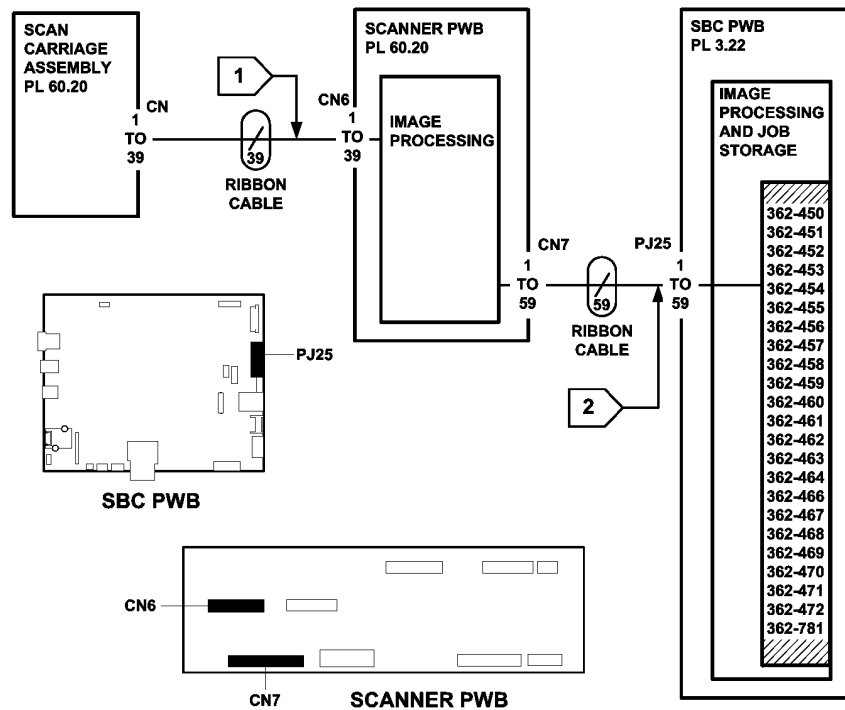


Figure 3 Circuit diagram

TX-1-0366-A

362-473-00 UART RX Wrap Error RAP

362-473-00 UART RX wrap error.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, GP 14. If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol



CAUTION

Certain components in this product are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

Go to Flag 1. Disconnect, then check the SBC PWB/scanner PWB data cable, PL 60.20 Item 5 and connectors CN7 on the Scanner PWB and P/J25 on the SBC PWB. The data cable and connectors are clean and undamaged.

Y N

Clean or repair the ribbon cable or connectors. Install new components as necessary:

- SBC PWB/Scanner PWB comms/power harness, PL 60.20 Item 5.
- Scanner PWB, PL 60.20 Item 4.

If the fault persists, perform the 303D SBC PWB Diagnostics RAP.

Perform the steps that follow:

- SBC PWB/Scanner PWB comms/power harness, PL 60.20 Item 5.
- Install a new scanner PWB, PL 60.20 Item 4.
- The 303D SBC PWB Diagnostics RAP.

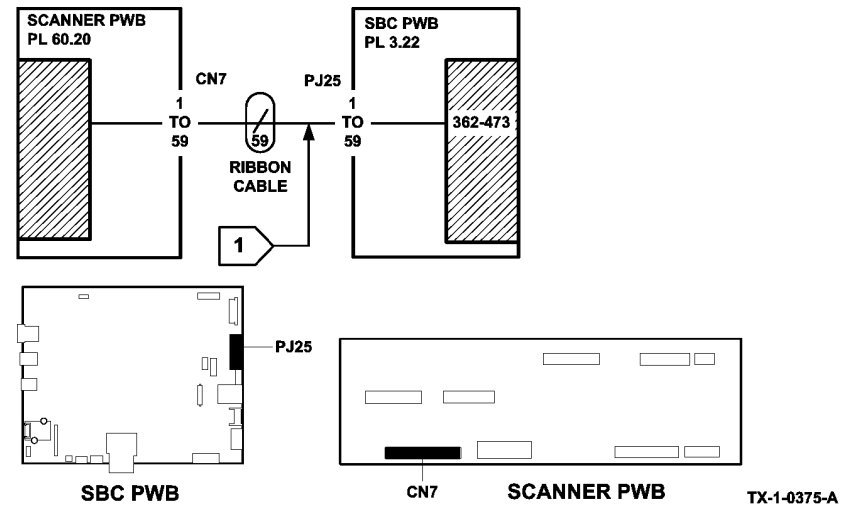


Figure 2 Circuit diagram

362-474-00, 362-475-00 Stepper Speed/Reset Error RAP

362-474-00 Stepper speed error.

362-475-00 Move before reset error.

Procedure

Perform the [362-473-00](#) UART RX Wrap Error RAP.

362-476-00 Scan Carriage Home Sensor RAP

362-476-00 Scan carriage home sensor was not cleared or actuated in time.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Visually check the scanner carriage alignment through the document glass. **Carriage alignment is good.**

Y N

Perform [REP 60.5](#) Scan Carriage Assembly.

Refer to [Figure 1](#). Enter [dC330](#) code 062-024, scan carriage move to document size position, then cancel the code. Enter [dC330](#) code 062-031, scan carriage move to home position, then cancel the code. **The scan carriage moves to the document size position then returns to the home position.**

Y N

Check the condition and adjustment of the scan drive belt, refer to [REP 60.10](#) Scan Carriage Drive Belt. **The scan carriage drive belt is good.**

Y N

Install a new scan carriage drive belt, [PL 60.20](#) Item 8.

Check the scan carriage motor, MOT62-031.

Refer to:

- [Flag 2](#). and [Figure 1](#).
- [GP 10](#), How to Check a Motor.
- [CN5](#), [Scanner PWB](#).
- [301H](#) +24V Distribution RAP.
- [301L](#) 0V Distribution RAP.

Install new components as necessary:

- Carriage motor assembly [PL 60.20](#) Item 2.
- Scanner PWB, [PL 60.20](#) Item 4.

Enter [dC330](#) code 062-100, carriage home sensor, Q62-100. Add code 062-023, carriage home sensor test. The carriage will move into and out of the home position. **The display changes.**

Y N

Go to [Flag 1](#). Check Q62-100.

Refer to:

- [GP 11](#), How to Check a Sensor.
- [CN9](#), [Scanner PWB](#).

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- 301C +3.3V Distribution RAP.
 - 301L 0V Distribution RAP.
- Install new components as necessary:
- Carriage home sensor, PL 60.20 Item 7.
 - Scanner PWB, PL 60.20 Item 4.

Perform SCP 5 Final Actions.

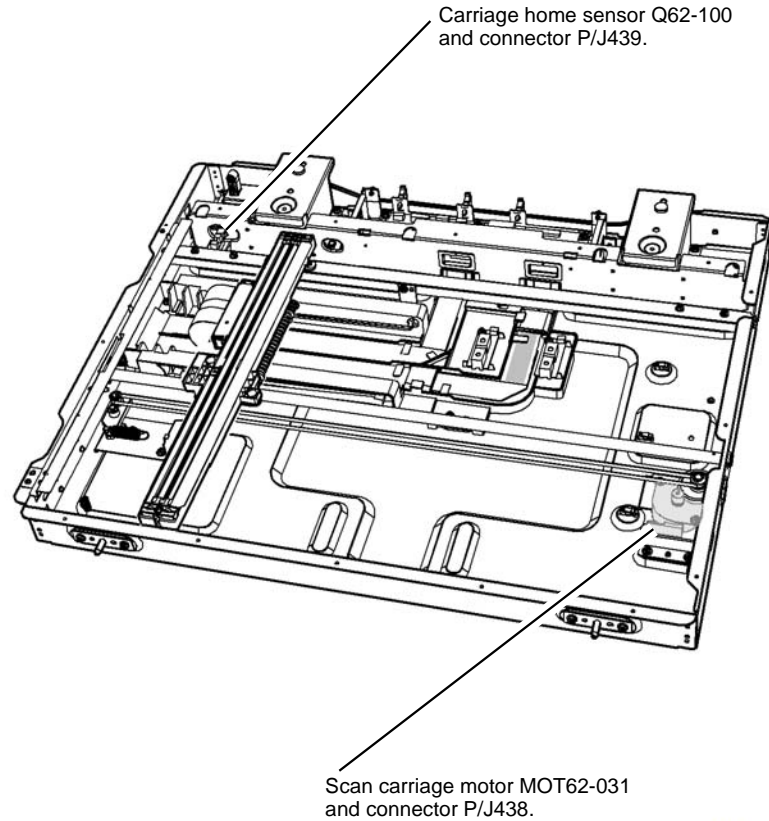
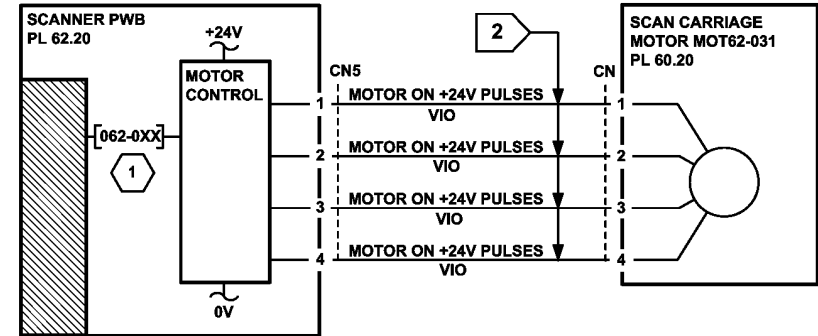
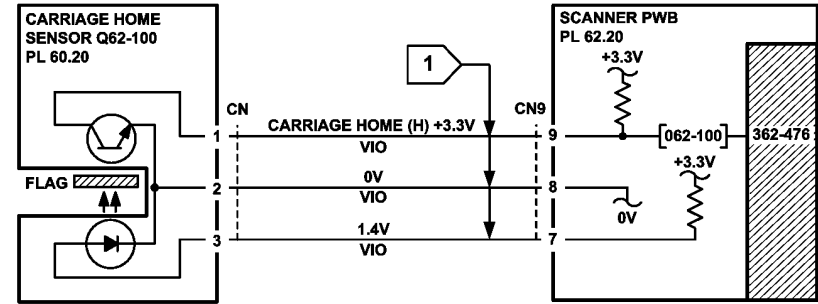
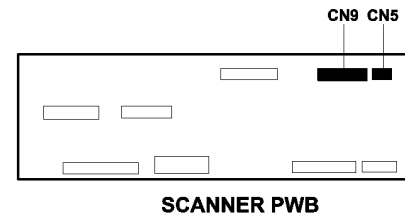


Figure 1 Component location

X-1-1917-A



- 062-024 MOVES THE CARRIAGE TO THE DOCUMENT SIZE POSITION
- 062-025 MOVES THE CARRIAGE TO THE CVT POSITION
- 062-026 MOVES THE CARRIAGE TO THE TEST A POSITION
- 062-027 MOVES THE CARRIAGE TO THE TEST B POSITION
- 062-028 MOVES THE CARRIAGE TO THE TEST C POSITION
- 062-030 MOVES THE CARRIAGE TO THE CALIBRATION STRIP POSITION
- 062-031 MOVES THE CARRIAGE TO THE HOME POSITION



SCANNER PWB

Figure 2 Circuit diagram

TX-1-0367-A

362-477-00 to 362-481-00, 362-782-00, 362-785-00, 362-786-00 Timing Errors RAP

362-477-00 Stepper busy error.

362-478-00 Real time error.

362-479-00 Page synchronization error.

362-480-00 Initialize time error.

362-481-00 SPDH client timeout.

362-782-00 IIT remote NVM read timeout.

362-785-00 Taurus 2 capability retry.

362-786-00 Taurus 2 capability timeout.

Procedure

Perform the [362-473-00](#) UART RX Wrap Error RAP.

362-484-00 Apps Code Not Present RAP

362-484-00 Apps code not present.

Procedure

Perform the [362-473-00](#) UART RX Wrap Error RAP.

362-485-00 +12V Supply Error RAP

362-485-00 +12V supply error.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, GP 14. If the fault continues, a site visit will be necessary.

Procedure

If the fault persists, perform the 301F +12V Distribution RAP. Check the +12V supply to the scanner PWB.

362-486-00 +24V Supply Error RAP

362-486-00 +24V supply error.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, GP 14. If the fault continues, a site visit will be necessary.

Procedure

If the fault persists, perform the 301G +24V Distribution RAP. Check the +24V supply to the scanner PWB.

362-487-00 System Phase Lock Loop Error RAP

362-487-00 System phase lock loop error.

Procedure

Perform the [362-473-00](#) UART RX Wrap Error RAP.

362-490-00, 362-491, 366-490-00, 366-491 Side 1 and Side 2 Data Steerer Error RAP

362-490-00 A side 1 scanner data steerer error was found during the transfer of data between the scanner PWB and the SBC PWB.

362-491-00 A side 1 scanner data steerer Tx error was found during the transfer of data between the scanner PWB and the SBC PWB.

366-490-00 A side 2 scanner data steerer error was found during the transfer of data between the scanner PWB and the SBC PWB.

366-491-00 A side 2 scanner data steerer error Tx was found during the transfer of data between the scanner PWB and the SBC PWB.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 14](#). Retry a print or copy job. **The fault persists.**

Y N

The faults returns after less than 1000 copies/prints have been made.

Y N

Perform [SCP 5](#) Final actions.

Install a new scanner PWB, [PL 60.20 Item 4](#).

Install a new scanner PWB, [PL 60.20 Item 4](#).

362-777-00, 362-778-00 Motor Communications Failure RAP

362-777-00 A motor communication failure occurred.

362-778-00 A motor client failure occurred.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Go to [Flag 1](#). Disconnect and check the harness and connectors, [CN11](#) on the [SPDH PWB](#) and [CN10](#) on the [Scanner PWB](#). The harness and connectors are good.

- Y N**
- Clean or repair the harness and connectors. Install new components as necessary:
- [SPDH PWB, PL 5.10 Item 5](#).
 - [Scanner PWB, PL 60.20 Item 4](#).

Switch off, then switch on the machine, [GP 14](#). The fault persists.

- Y N**
- Perform [SCP 5](#) Final actions.

Electrical noise due to poor connections in motor driver circuits can cause this failure. Check the connectors at the motor, in the harness and at the IOT PWB for the motors that follow:

- Registration motor, refer to the [381-152-00](#) Trail Edge Late from Registration Sensor RAP.
- Duplex motor, refer to the [381-161-00](#) Lead Edge Late to Registration Sensor Duplex Mode RAP.
- Inverter motor, refer to the [383-155-00, 383-156-00](#) Duplex Sensor RAP.
- Offset motor - centre tray configuration only, refer to the [310-702-00](#) Offset Motor Fault RAP.
- Horizontal transport motor - finisher configuration only, refer to the [310-171-00](#) Trail Edge Late from Horizontal Transport Entry Sensor RAP.
- Tray 3 feed motor, refer to the [381-136-00](#) Lead Edge Late to Tray 3 Feed Sensor RAP.
- Tray 4 feed motor, refer to the [381-146-00](#) Lead Edge Late to Tray 4 Feed Sensor RAP.
- Tray 3 elevate motor, refer to the [373-100-00, 373-217-00](#) Tray 3 Elevator Lift Failure RAP.
- Tray 4 elevate motor, refer to the [374-100-00, 374-217-00](#) Tray 4 Elevator Lift Failure RAP.
- HCF transport motor, refer to the [381-136-00](#) Lead Edge Late to Tray 3 Feed Sensor RAP.
- Tray 1 elevator/feed motor, refer to the [381-106-00](#) Lead Edge Late to TAR 1 Sensor from Tray 1 RAP.

- Tray 2 elevator/feed motor, refer to the [381-126-00](#) Lead Edge Late to TAR 2 Sensor from Tray 2 RAP.
- Fuser/exit motor, refer to the [310-153-00, 310-163-00](#) Lead Edge Late to Post Fuser Sensor RAP.
- Print cartridge motor, refer to the [392A](#) Print Cartridge Motor Failure RAP.
- Toner cartridge motor, refer to the [393-360-00 to 393-364-00](#) Toner Concentration Sensor Failure RAP.

Install new components as necessary:

- [SPDH PWB, PL 5.10 Item 5](#).
- [Scanner PWB, PL 60.20 Item 4](#).
- [SBC PWB, PL 3.22 Item 3](#).

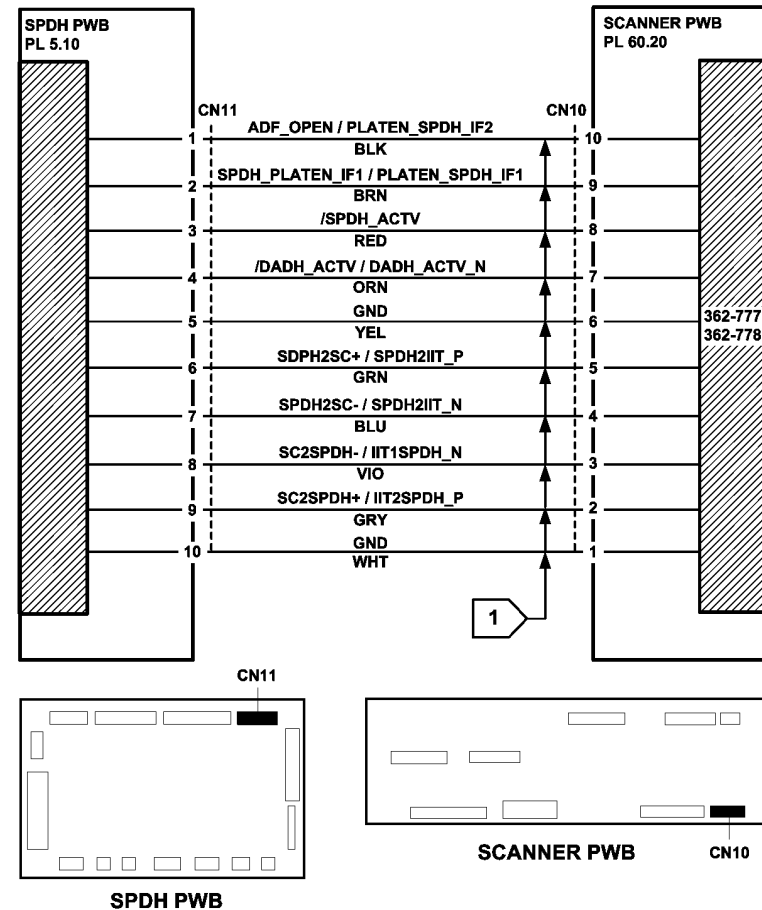


Figure 1 Circuit diagram

362-779-00, 362-780-00 Scanner Software Problem or Upgrade Error RAP

362-779-00 FPGA not loaded. FPGA had corrupted image or image was not loaded.

362-780-00 FPGA CRC error. FPGA had corrupted image or image was not loaded.

Procedure

Perform the [395-155-00](#) to [395-169-00](#) Scanner Software Upgrade Errors 1 RAP.

362-783-00, 366-783-00 SPDH Hotline Error RAP

362-783-00 SPDH side 1 hotline error.

366-783-00 SPDH side 2 hotline error.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [RAP GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol



CAUTION

Certain components in this product are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

Switch off, then switch on the machine, [GP 14](#). **The fault persists.**

Y N

Perform [SCP 5](#) Final Actions.

Reload the software, [GP 4](#). **The fault persists.**

Y N

Perform [SCP 5](#) Final Actions.

Go to [Flag 1](#). Disconnect, then check the harness and connectors, [CN11](#) on the [SPDH PWB](#) and [CN10](#) on the [Scanner PWB](#). **The harness and connectors are good.**

Y N

Repair the harness and connectors, [REP 1.2](#). Install new components as necessary:

- [SPDH PWB](#), [PL 5.10](#) Item 5.
- [Scanner PWB](#), [PL 60.20](#) Item 4.

Re-install the harness. Check the operation of the machine. **The fault persists.**

Y N

Perform [SCP 5](#) Final Actions.

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Go to [Flag 2](#). Disconnect then check the SBC PWB/scanner PWB comms/power harness and connectors, [CN7](#) on the [Scanner PWB](#) and [P/J25](#) on the [SBC PWB](#). **The harness and connectors are good.**

Y N

Repair the harness and connectors, [REP 1.2](#). If necessary, install a new scanner PWB, [PL 60.20 Item 4](#). If the fault persists, perform the [303D SBC PWB Diagnostics RAP](#).

Re-install the harness. Check the operation of the machine. **The fault persists.**

Y N

Perform [SCP 5 Final Actions](#).

Check document size sensor 1 and document size sensor 2. Refer to the [305A Document Size Sensors Failure RAP](#). **The fault persists.**

Y N

Perform [SCP 5 Final Actions](#).

Check the appropriate sensor:

- For 362-783-00 faults, check the reg sensor. Perform the [305-340-00](#), [305-341-00](#) SPDH Reg Sensor Failure RAP.
- For 366-783-00 faults, check the side 2 reg sensor. Perform the [305-342-00](#), [305-343-00](#) SPDH Side 2 Reg Sensor Failure RAP.

The fault persists.

Y N

Perform [SCP 5 Final Actions](#).

Perform the [303D SBC PWB Diagnostics RAP](#).

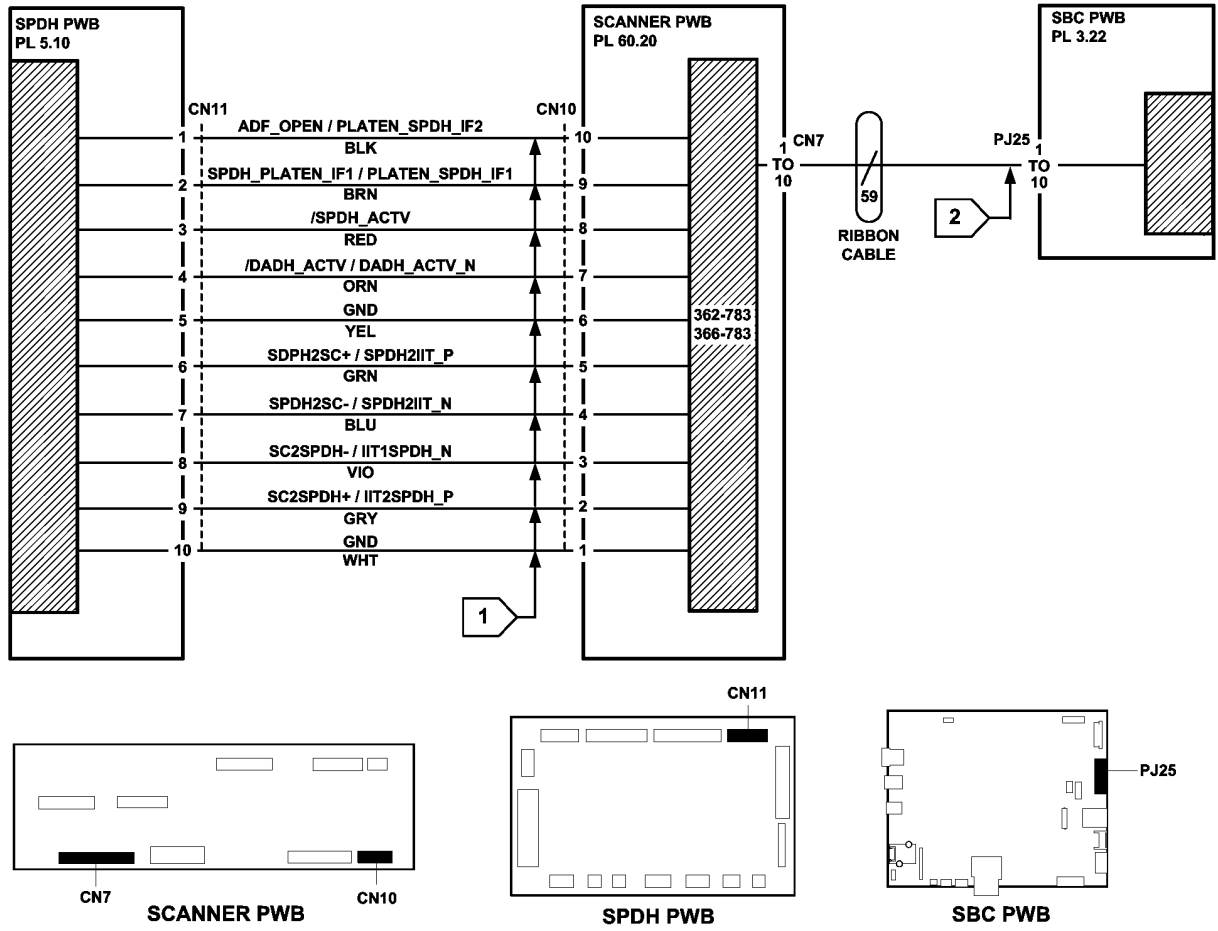


Figure 2 Circuit diagram

TX-1-0369-A

362-784-00 Platen Hotline Error RAP

362-784-00 Platen hotline error.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, GP 14. If the fault continues, a site visit will be necessary.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to RAP GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol



Certain components in this product are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

Switch off, then switch on the machine, GP 14. **The fault persists.**

Y N
Perform SCP 5 Final Actions.

Reload the software, GP 4. **The fault persists.**

Y N
Perform SCP 5 Final Actions.

Go to Flag 1. Disconnect, then check the SBC PWB/scanner PWB comms/power harness and connectors, CN7 on the Scanner PWB and PJ25 on the SBC PWB. **The harness and connectors are good.**

Y N
Repair the harness and connectors, REP 1.2. If necessary, install a new scanner PWB, PL 60.20 Item 4. If the fault persists, perform the 303D SBC PWB Diagnostics RAP.

Re-install the harness. Check the operation of the machine. **The fault persists.**

Y N
Perform SCP 5 Final Actions.

Check document size sensor 1 and document size sensor 2. Refer to the 362A Side 1 Scanning Document Size RAP. **The fault is fixed.**

Y N
Check the carriage home sensor. Refer to the 362-476-00 Scan Carriage Home Sensor RAP. **The fault is fixed.**
Y N
Install a new scanner PWB, PL 60.20 Item 4. If the fault persists, perform the 303D SBC PWB Diagnostics RAP.
Perform SCP 5 Final Actions.

Perform SCP 5 Final Actions.

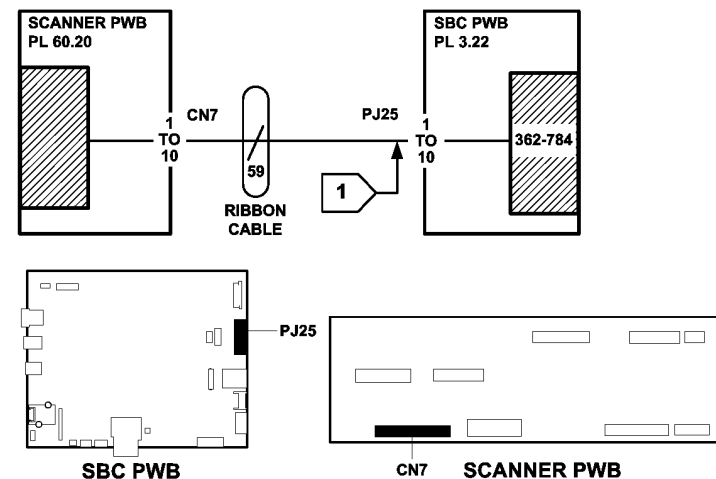


Figure 2 Circuit diagram

TX-1-0370-A

362A Side 1 Scanning Document Size RAP

The side 1 scanner encountered a document that was larger than expected.

The side 1 scanner encountered a document of unknown size.

The side 1 document size sensors incorrectly determined the size of the document.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check that the input module angle sensor actuator is not damaged. If necessary install a new input module angle sensor actuator, [PL 60.20 Item 12](#).

Enter [dC330](#) code 062-301, SPDH angle sensor Q62-301. Actuate Q62-301, [Figure 1](#). **The display changes.**

Y N

Go to [Flag 1](#). Check Q62-301.

Refer to:

- [GP 11](#), How to Check a Sensor.
- [CN9](#), [Scanner PWB](#).
- [301D](#) +3.3V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- SPDH angle sensor, [PL 60.20 Item 7](#).
- Scanner PWB, [PL 60.20 Item 4](#).

Enter [dC330](#) code 062-019, SPDH platen down sensor, Q62-019. Actuate Q62-019. **The display changes.**

Y N

Go to [Flag 2](#). Check Q62-019.

Refer to:

- [GP 11](#), How to Check a Sensor.
- [CN9](#), [Scanner PWB](#).
- [301D](#) +3.3V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- SPDH platen down sensor, [PL 60.20 Item 7](#).
- Scanner PWB, [PL 60.20 Item 4](#).

Raise the SPDH. Enter [dC330](#) code 062-251, document size sensor 1, Q62-251. Actuate Q62-251 by placing a piece of paper on the document glass above the sensor. **The display changes.**

Y N

Go to [Flag 3](#). Check Q62-251.

Refer to:

- [GP 11](#), How to Check a Sensor.
- [PL 60.20 Item 4](#), [Scanner PWB](#).
- [301E](#) +5V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Document size sensor 1, [PL 60.20 Item 3](#).
- Scanner PWB, [PL 60.20 Item 4](#).

Enter [dC330](#) code 062-253 document size sensor 2, Q62-253. Actuate Q62-253 by placing a piece of paper on the document glass above the sensor. **The display changes.**

Y N

Go to [Flag 4](#). Check Q62-253.

Refer to:

- [GP 11](#), How to Check a Sensor.
- [PL 60.20 Item 4](#), [Scanner PWB](#).
- [301E](#) +5V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Document size sensor 2, [PL 60.20 Item 3](#).
- Scanner PWB, [PL 60.20 Item 4](#).

Go to [Flag 5](#). Disconnect and check the SBC PWB/Scanner PWB comms/power harness, and the connectors [CN7](#) on the [Scanner PWB](#) and [P/J25](#) on the [SBC PWB](#). **The SBC PWB/Scanner PWB comms/power harness and connectors are clean and undamaged.**

Y N

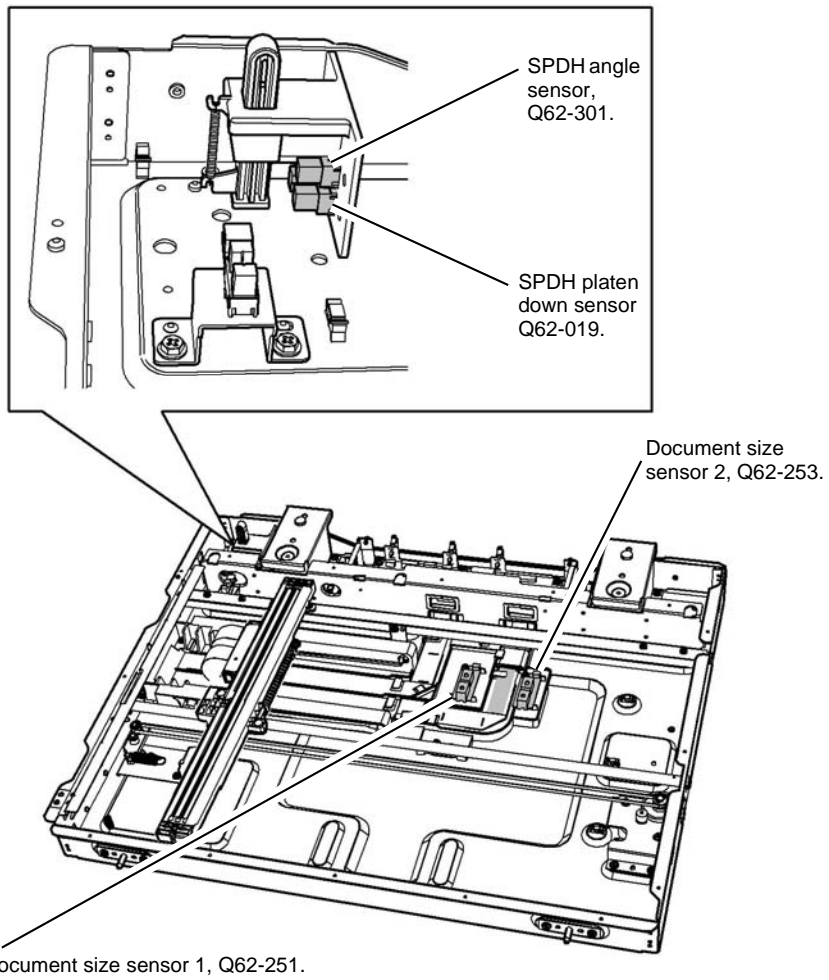
Clean or repair the SBC PWB/Scanner PWB comms/power harness or connectors, [REP 1.2](#). Install new components as necessary:

- SBC PWB/Scanner PWB comms/power harness, [PL 60.20 Item 5](#).
- Scanner PWB, [PL 60.20 Item 4](#).

If the fault persists, perform the [303D](#) SBC PWB Diagnostics RAP.

If the fault persists, perform an AltBoot, [GP 4](#).

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X-1-1918-A

Figure 1 Component location

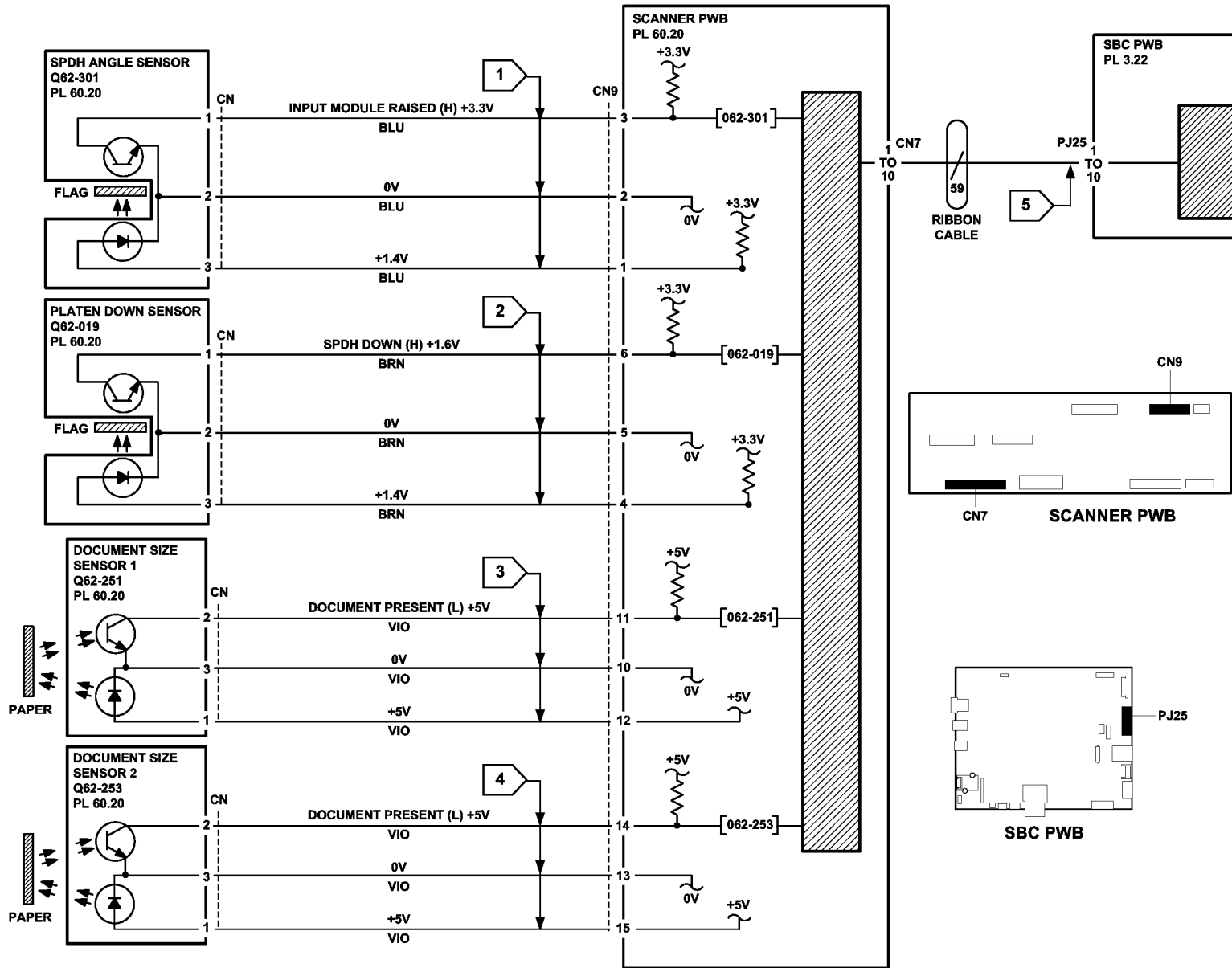


Figure 2 Circuit diagram

TX-1-0371-A

362B Side 1 LED Exposure Lamp Failure RAP

The side 1 LED exposure lamp failed to illuminate.

The side 1 LED exposure lamp failed to illuminate consistently throughout the scanning process.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Open the SPDH. Enter the dC330 code 062-002, platen exposure lamp, Figure 1. The LED lamp assembly in the scan carriage assembly illuminates.

Y N
Go to Flag 1. +5V is available at CN2 at pin 13.

Y N
Check the wiring. Refer to 301E +5V Distribution RAP. Repair the wiring as necessary.

Go to Flag 1. +12V is available at CN2 pin 1 and pin 2.

Y N
Check the wiring. Refer to 301G +12V Distribution RAP. Repair the wiring as necessary.

Go to Flag 1. 0V is available at CN2 pin 14.

Y N
Check the wiring. Refer to 301B 0V Distribution RAP. Repair the wiring as necessary.

Go to Flag 2. Check the wiring between CN4 on the Scanner PWB and the Scanner assembly. The wiring is good.

Y N
Repair the wiring as necessary or install a new scan carriage power ribbon cable, PL 60.20 Item 10.

Install new components as necessary.

- Scanner PWB, PL 60.20 Item 4.
- Scan carriage assembly, PL 60.25 Item 1.

Go to dC612. Make a print of internal test pattern 2 (ITP 3 25% halftone (106dpi 45deg)). Make a copy of the test pattern print from the document glass. The copy has uneven bands in the cross process direction.

Y N
Perform SCP 5 Final Actions.

Check that both ends of the scan carriage data ribbon cable are clean and securely connected. The scan carriage data ribbon cable is good.

Y N
Clean and reconnect or if necessary, install a new scan carriage data ribbon cable, PL 60.20 Item 11.

Go to IQ2 IOT Defect RAP.

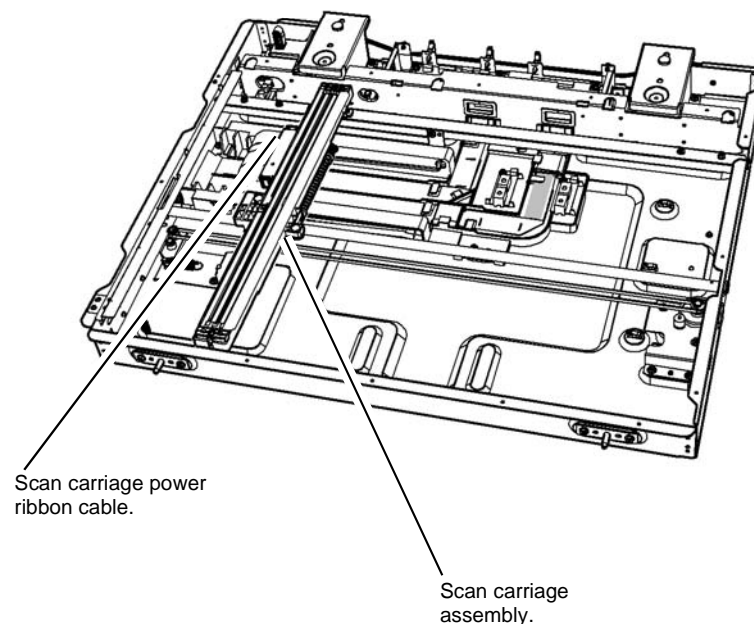


Figure 1 Component location

X-1-1919-A

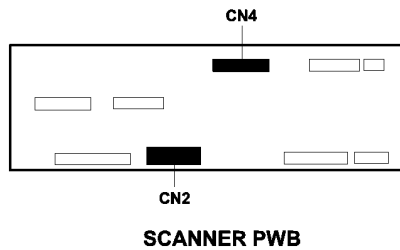
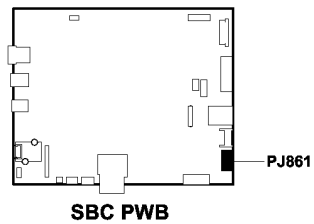
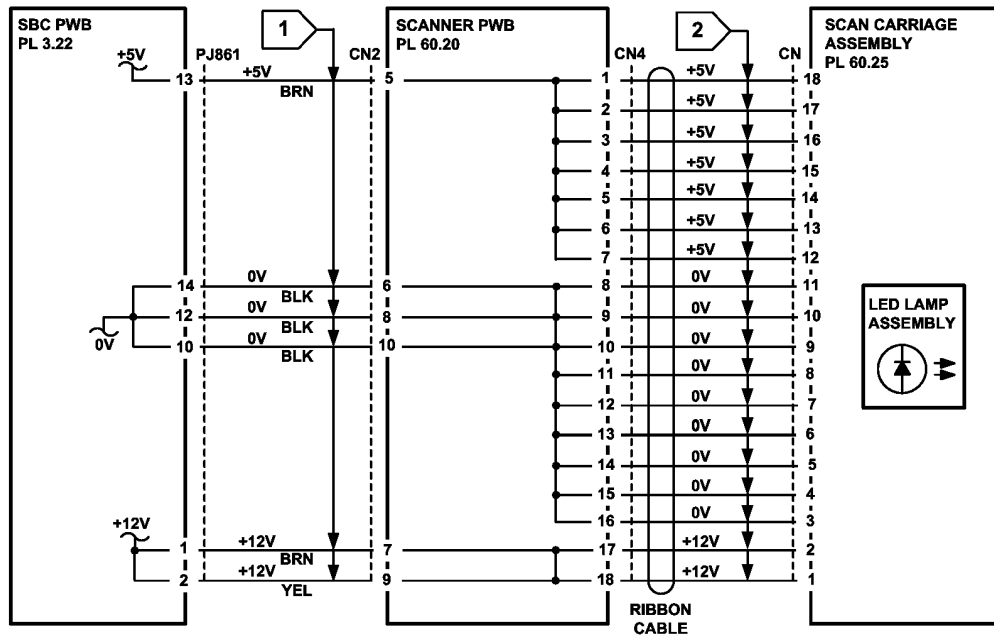


Figure 2 Circuit diagram

TX-1-0372-A

366-450-00 to 366-463-00, 366-466-00 to 366-468-00 SPDH Side 2 Scanner Calibration Faults RAP

366-450-00 Dark range status bit was not clear prior to calibration.

366-451-00 Dark range status bit was not set after calibration.

366-452-00 Pixel offset status bit was not clear prior to calibration.

366-453-00 Pixel offset status bit was not set after calibration.

366-454-00 Gain range status bit was not clear prior to calibration.

366-455-00 Gain range status bit was not set after calibration.

366-456-00 Pixel gain status bit was not clear prior to calibration.

366-457-00 Pixel gain status bit was not set after calibration.

366-458-00 Highest Intensity image pixel value exceeded maximum tolerance.

366-459-00 Pixel error exceeded maximum adjustment allowed during dark calibration.

366-460-00 Pixel error exceeded maximum adjustment allowed during dark calibration.

366-461-00 Highest Intensity image pixel value was lower than the minimum tolerance.

366-462-00 Pixel error exceeded maximum adjustment allowed during white calibration.

366-463-00 Pixel error exceeded maximum adjustment allowed during white calibration.

366-466-00 Pixels out range during black calibration.

366-467-00 Pixels out range during white calibration.

366-468-00 Pixel clock error from the full width array.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, GP 14. If the fault continues, a site visit will be necessary.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 14.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol



Certain components in this product are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

Perform ADJ 60.3 IIT Registration, Magnification and Calibration. **The fault persists.**

Y N
Perform SCP 5 Final Actions.

Go to **Flag 1**. Disconnect, then check the side 2 scan assembly data ribbon cable, PL 5.10 Item 16. and connector CN8 on the Scanner PWB. Check the connector on the side 2 scan assembly, PL 5.10 Item 12. **The side 2 scan assembly data ribbon cable and the connectors are clean and undamaged.**

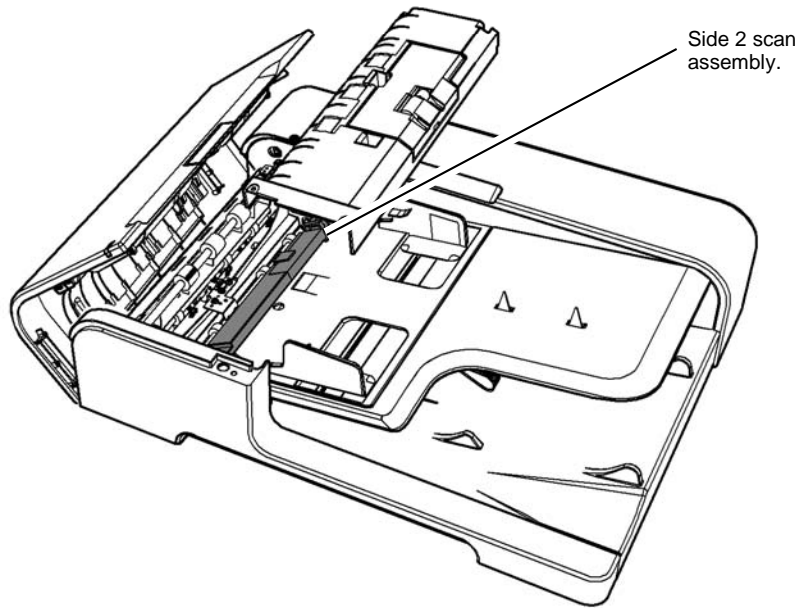
Y N
Clean or repair the side 2 scan assembly data ribbon cable or connectors. If necessary install new components:

- Side 2 scan assembly data ribbon cable, PL 5.10 Item 16.
- Side 2 scan assembly, PL 5.10 Item 12.
- Scanner PWB, PL 60.20 Item 4.

Reconnect the side 2 scan assembly data ribbon cable. Go to **Flag 2**. Disconnect then check the SBC PWB/Scanner PWB comms/power harness, PL 60.20 Item 5. Check the connectors CN7 on the Scanner PWB and P/J25 on the SBC PWB. **The SBC PWB/Scanner PWB comms/power harness and the P/J connectors are clean and undamaged.**

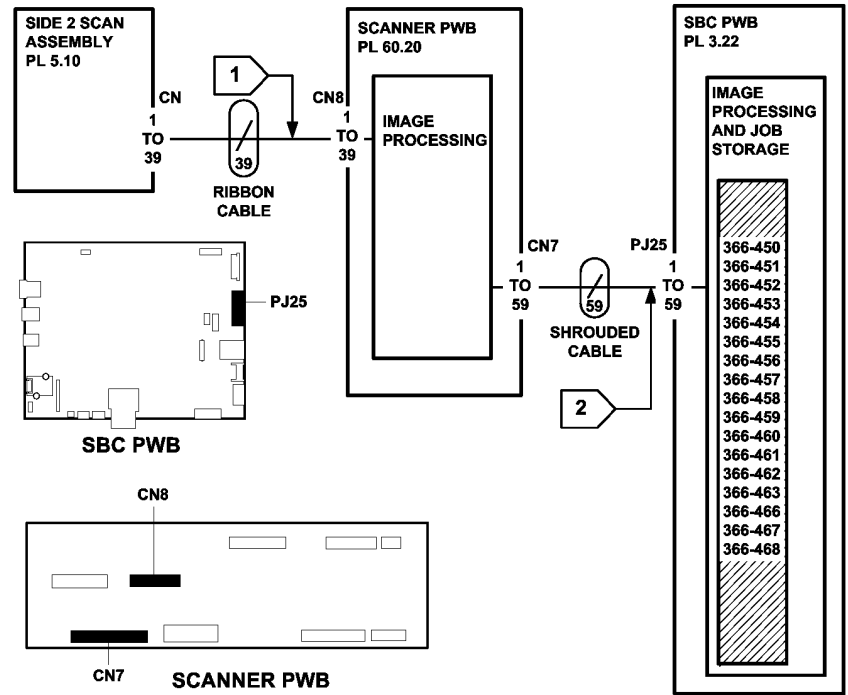
Y N
Clean or repair the SBC PWB/Scanner PWB comms/power harness or connectors. If necessary, install a new scanner PWB, PL 60.20 Item 4. If the fault persists, perform the 303D SBC PWB Diagnostics RAP.

Perform dC301 scanner system NVM initialization, then ADJ 60.3 IIT Registration, Magnification and Calibration. If the fault persists, perform an AltBoot, GP 4.



X-1-1920-A

Figure 2 Component location



TX-1-0373-A

Figure 3 Circuit diagram

366-779-00, 366-780-00 SPDH Software Upgrade Error RAP

366-779-00 FPGA not loaded (side 2). FPGA had a corrupted image or was not loaded.

366-780-00 FPGA CRC error (side 2). FPGA had a corrupted image or was not loaded.

Procedure

Perform the [395-228-00](#), [395-229-00](#) SPDH Software Upgrade Errors RAP.

366A Side 2 LED Exposure Lamp Failure RAP

The side 2 LED exposure lamp failed to illuminate.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: When the LED lamp in the side 2 scan assembly is energized from dC330, it is normal for the LED lamp to have a strobing flash.

Refer to Figure 1. Open the SPDH, then the jam clearance guide. Enter the dC330 code 066-002, DH exposure lamp. The LED lamp assembly in the side 2 scan assembly illuminates.

Y N

Go to Flag 1. +5V is available at P/J861 pin 13.

Y N

Check the wiring. Refer to 301E +5V Distribution RAP. Repair the wiring as necessary.

Go to Flag 1. +12V is available at P/J861 pin 1 and pin 2.

Y N

Check the wiring. Refer to 301G +12V Distribution RAP. Repair the wiring as necessary.

Go to Flag 1. 0V is available at P/J861 pin 14, 12 and 10.

Y N

Check the wiring. Refer to 301B 0V Distribution RAP. Repair the wiring as necessary.

Go to Flag 2. Check the wiring between CN3 and CN12. The wiring is good.

Y N

Repair the wiring as necessary.

Go to Flag 3. Check that both ends of the ribbon cable between CN21 and the side 2 scanner assembly, PL 60.25, are clean and securely connected. The ribbon cable is good.

Y N

Install a new Side 2 scan assembly power ribbon cable, PL 5.10 Item 6.

Install new components as necessary:

- Scanner PWB, PL 60.20 Item 4.
- SPDH PWB, PL 5.10 Item 5.
- Side 2 scanner assembly, PL 60.30 Item 1.

Go to dC612. Make a print of internal test pattern 2 (ITP 3 25% halftone (106dpi 45deg)). Make a copy of the test pattern print from the document glass. The copy has uneven bands in the cross process direction.

Y N

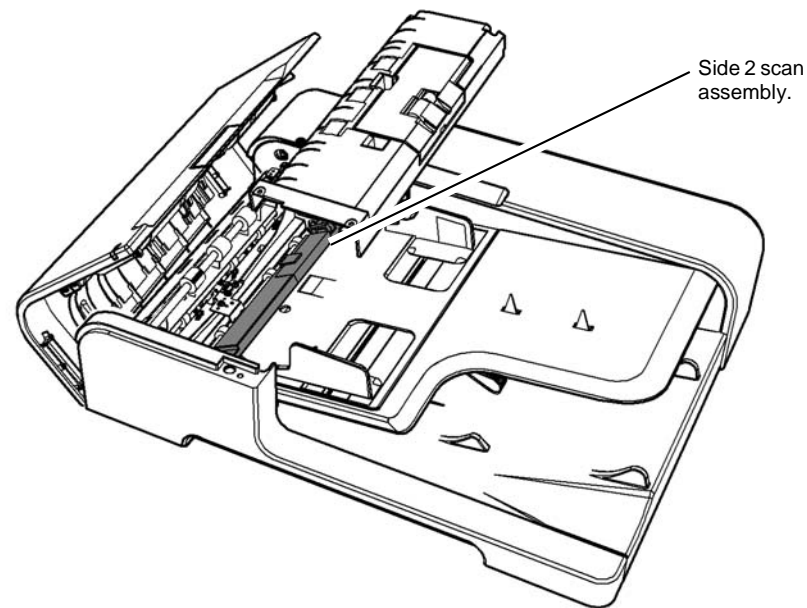
Perform SCP 5 Final Actions.

Check that both ends of the side 2 scan data ribbon cable, PL 5.10 Item 16, are clean and securely connected. The side 2 scan data ribbon cable is good.

Y N

Clean and reconnect or if necessary, install a new scan carriage data ribbon cable, PL 5.10 Item 16.

Go to IQ2 IOT Defect RAP.



X-1-1921-A

Figure 1 Component location

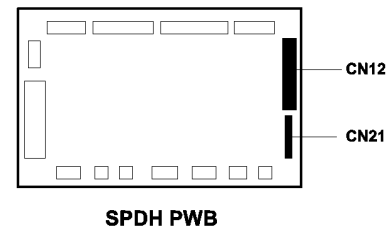
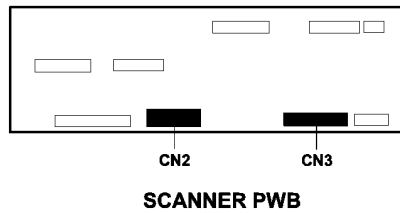
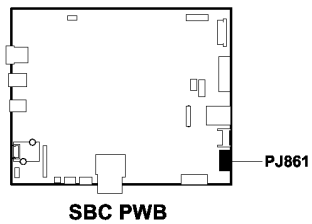
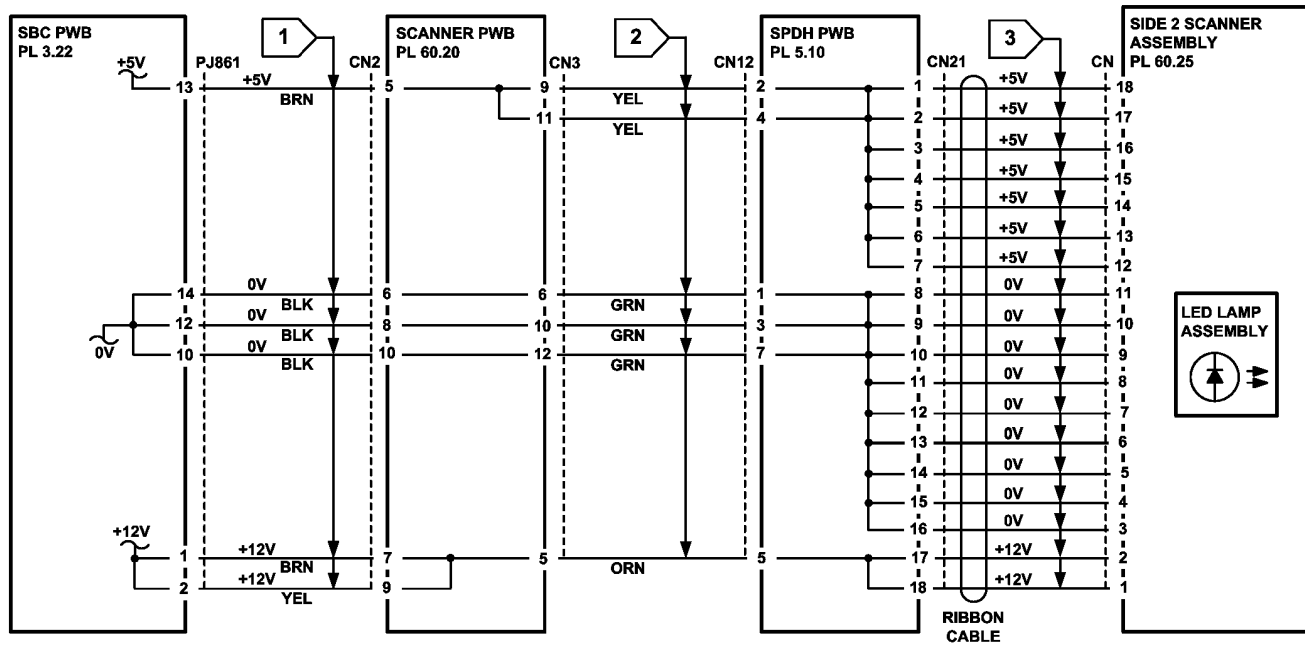


Figure 2 Circuit diagram

TX-1-0372-A

370A Tray Out of Service RAP

The IOT detected a fault in the tray and determines that the tray is out of service. The messages that follow will be displayed:

- Tray 1 out of service.
- Tray 2 out of service.
- Tray 3 out of service.
- Tray 4 out of service.

Remote Service Actions

Ask the customer to check the items that follow:

- Switch off, then switch on the machine, [GP 14](#).
- Check that the tray is pushed fully home.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- Check that the tray elevator cables and mechanisms are located correctly.
- Check for obstructions behind the tray.
- Check the feed heads.

Procedure

Perform the steps that follow:

1. If tray 1 or tray 2 is out of service, check the components that follow. Install new components as necessary:
 - Tray assembly, [PL 70.10 Item 15](#).
 - Tray 1 and 2 paper feed assembly, [PL 80.26 Item 1](#).
2. If tray 3 is out of service, perform the [373B Tray 3 Out of Paper RAP](#).
3. If tray 4 is out of service, perform the [374B Tray 4 Out of Paper RAP](#).

370B Tray 1 and Tray 2 Wrong Size Paper RAP

Use this RAP when the paper fed from the tray does not match the paper size indicated by the tray paper size switch.



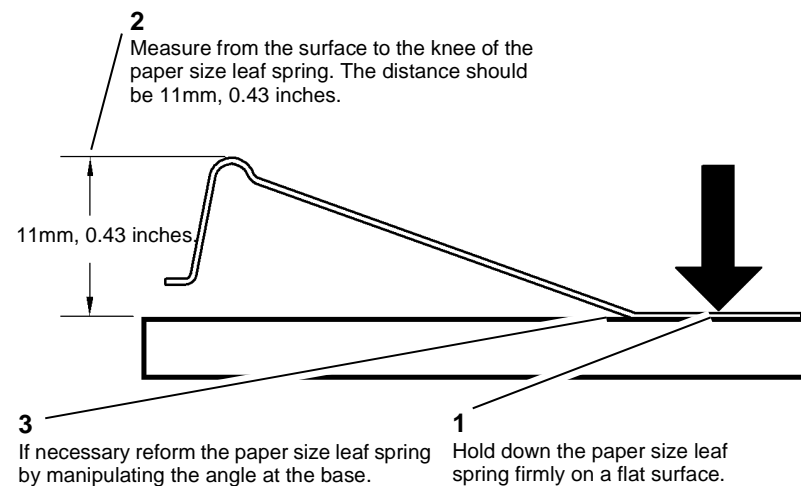
WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Procedure

Perform the steps that follow:

1. Remove paper tray 1 or tray 2, [REP 70.1](#).
2. Remove the paper size leaf springs, [PL 70.10 Item 23](#).
3. Check the contact measurement of the paper size leaf springs, [Figure 1](#).



X-1-1450-A

Figure 1 Contact measurement

4. Install the paper size leaf springs.
5. Install the paper tray.

If the fault persists, perform the appropriate RAP:

- [371-500-00 Tray 1 Open During Run RAP](#)
- [372-500-00 Tray 2 Open During Run RAP](#)

371-100-00, 371-217-00 Tray 1 Elevator Lift Failure RAP

371-100-00 Tray 1 stack height sensor failed to actuate within the correct time after the feed/elevator motor turned on.

371-217-00 Tray 1 failed to elevate during printing as sheets were fed from the tray.

Remote Service Actions

Ask the customer to ensure that tray 1 is pushed fully home. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- Check for obstructions behind the tray.
- Ensure that the tray is pushed fully home.
- Check the stack height mechanism actuator on the back of the tray, [Figure 1](#).
- Check the drive gears and coupling on the tray, [Figure 1](#).
- Check the elevator drive coupling on the feeder assembly.

Procedure

Enter [dC330](#) code 071-330, tray 1 stack height sensor, Q71-330. Pull out tray 1, then push tray 1 fully home. **The display changes.**

Y N

Go to [Flag 1](#). Check Q71-330.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J751](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new tray 1 stack height sensor, [PL 80.26 Item 8](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.



CAUTION

To prevent damage to the elevator and paper feed mechanism, the paper tray must be pulled out before [MOT07-010](#) is run in service mode.

Enter [dC330](#) code 071-010, tray 1 elevator motor, MOT71-010. Pull out tray 1. **The motor runs.**

Y N

Go to [Flag 2](#). Check MOT71-010.

Refer to:

- [GP 10](#) How to Check a Motor.

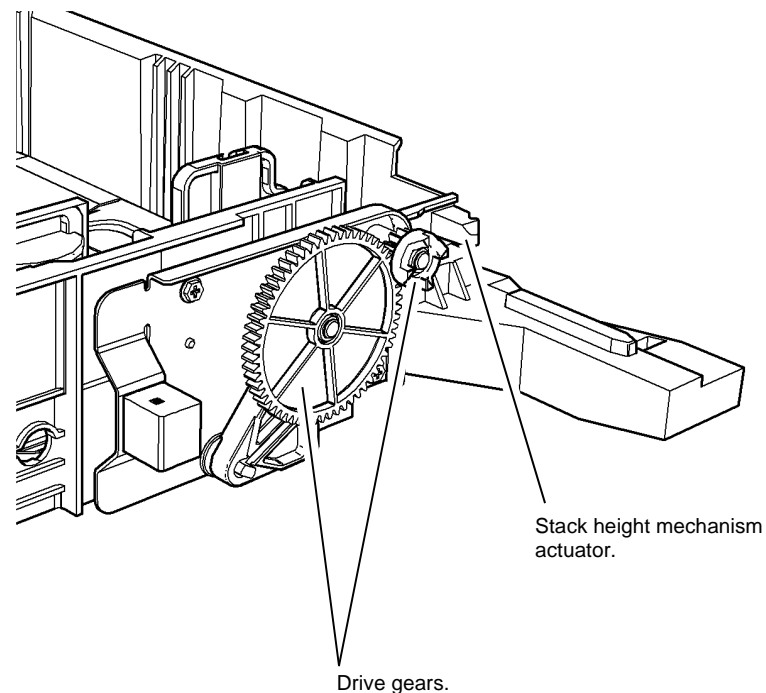
- [P/J752](#), [IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new tray 1 elevator motor, [PL 80.26 Item 6](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Check the components that follow:

- Elevator motor drive gears, [Figure 1](#).
- Tray 1 stack height mechanism on the feeder assembly.

If the fault persists, perform the [371A](#) Tray 1 and Tray 2 Empty RAP.



X-1-0964-A

Figure 1 Component location

371-500-00 Tray 1 Open During Run RAP

371-500-00 Tray 1 was opened during run when sheets were fed from the tray.

NOTE: Tray open is detected when none of the tray size switches are actuated. Also use this RAP when the paper fed from the tray does not match the paper size indicated by the tray paper guides.

NOTE: It is necessary to have at least one sheet of paper in the tray for the machine to recognize any changes made.

Remote Service Actions

Ask the customer to check the items that follow:

- Ensure that the tray is pushed fully home.
- Ensure that the tray paper guides are set up to the edges of the paper.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- Check for obstructions behind the tray.
- Check for contamination on the surface of the tray 1 paper size sensing PWB, PL 70.10 Item 18.
- Ensure that the guides are located in the slots in the base of the tray if a standard paper size is used.

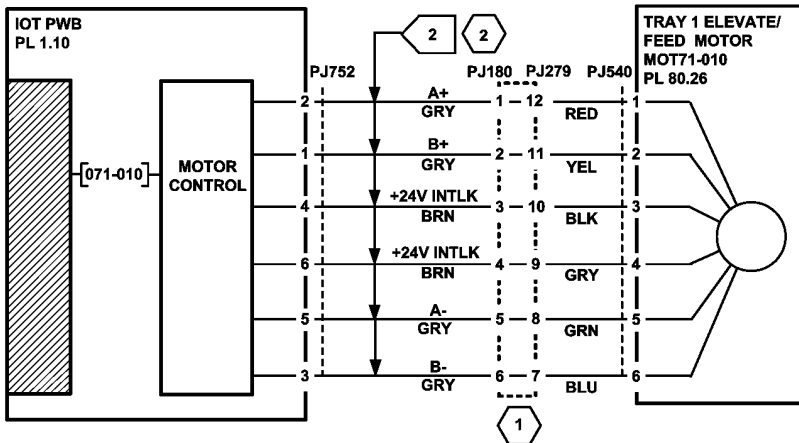
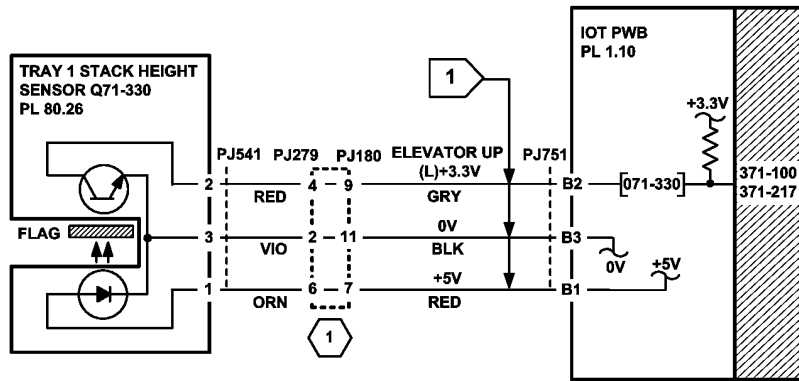
Procedure

Open, then fully close tray 1. The UI detects that the tray has closed and is set to the correct paper size.

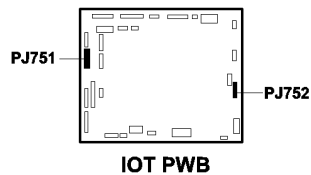
Y N
Remove tray 1 and tray 2, REP 70.1. Install tray 2 in the tray 1 position. Open, then fully close the tray. The UI detects that the tray has closed and is set to the correct paper size.

Y N
Go to Flag 1. Check the tray 1 paper size sensing PWB. Refer to:

- GP 13 How to Check a Switch.
- P/J751, IOT PWB.
- P/J537, tray 1 paper size sensing PWB.
- Table 1, tray 1 paper size sensing PWB switch logic.
- Figure 2, tray 1 paper size sensing PWB layout.
- 301D +3.3V Distribution RAP.
- 301B 0V Distribution RAP.



- 1 IN-LINE CONNECTOR
- 2 DATA LINES A AND B PULSE BETWEEN 0V AND +24V WHEN THE MOTOR IS RUNNING.



TX-1-0231-A

Figure 2 Circuit diagram

A B

If necessary, install a new tray 1 paper size sensing PWB, [PL 70.10 Item 18](#). If the fault persists, perform the [OF7 IOT PWB Diagnostics RAP](#).

Remove tray 2 from the tray 1 position. Inspect tray 1. Refer to [Figure 1](#). Perform the steps that follow:

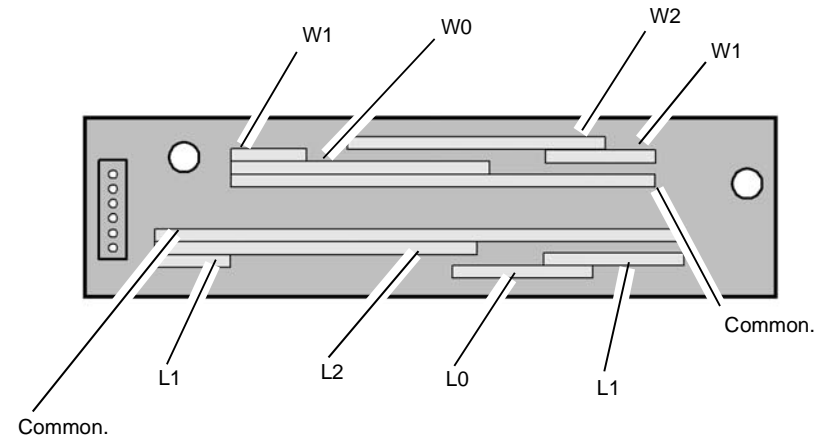
- Check that the paper size leaf springs are undamaged and mounted correctly, refer to [370B Tray 1 and Tray 2 Wrong Size Paper RAP](#).
- Check that the rack assembly and link arms are undamaged.

Install new components as necessary:

- Paper size leaf spring, [PL 70.10 Item 23](#).
- Tray assembly, [PL 70.10 Item 15](#).

The fault may be intermittent. Perform the steps that follow:

- Repeat the procedure with the tray paper guides set to each standard paper size in use.
- Go to [dC301 NVM Initialization](#). Perform the copier NVM initialization.
- Perform the [OF7 IOT PWB Diagnostics RAP](#).

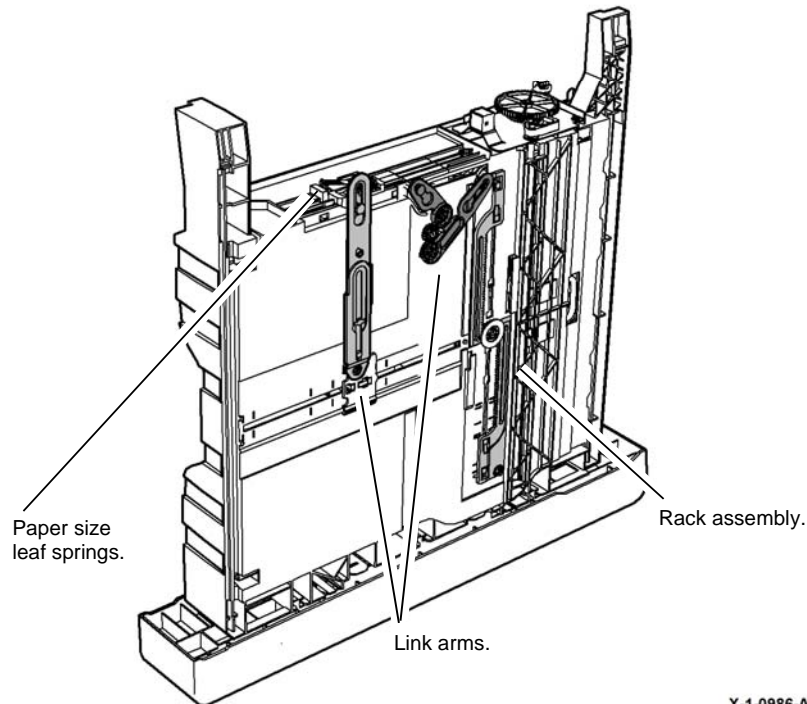


X-1-1076-A

Figure 2 Tray 1 paper size sensing PWB layout

Table 1 Tray 1 paper size table

Paper Size	L0	L1	L2	W0	W1	W2
Tray open	3.3V	3.3V	3.3V	3.3V	3.3V	3.3V
A3 SEF	3.3V	0V	0V	3.3V	0V	3.3V
A4 LEF	3.3V	0V	3.3V	3.3V	0V	3.3V
A4 SEF	0V	3.3V	3.3V	3.3V	3.3V	0V
A5 SEF	3.3V	0V	3.3V	0V	3.3V	0V
11x17 SEF	3.3V	0V	0V	3.3V	0V	0V
8.5x14 SEF	3.3V	3.3V	0V	3.3V	3.3V	0V
8.5x13 SEF	0V	3.3V	0V	3.3V	3.3V	0V
8.5x11 LEF	3.3V	0V	3.3V	3.3V	0V	0V
8.5x11 SEF	0V	0V	3.3V	3.3V	3.3V	0V
8.5x5.5 SEF	3.3V	0V	3.3V	0V	3.3V	0V



X-1-0986-A

Figure 1 Component location

371A Tray 1 and Tray 2 Empty RAP

Use this RAP when an incorrect tray 1 or tray 2 out of paper message is displayed.

NOTE: Tray 1 and tray 2 feed mechanisms are identical.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Pull out the relevant tray. Enter **dC330**, then the relevant code:

- Code 071-320 for the tray 1 empty sensor, Q71-320.
- Code 072-320 for the tray 2 empty sensor, Q72-320.

Manually actuate the tray empty sensor, **Figure 1**. The display changes.

Y N

For tray 1, go to **Flag 1**. Check Q71-320. For tray 2, go to **Flag 2**. Check Q72-320. Refer to:

- **GP 11** How to Check a Sensor.
- **P/J751, IOT PWB**.
- **301E** +5V and +5VSB Distribution RAP.
- **301B** 0V Distribution RAP.

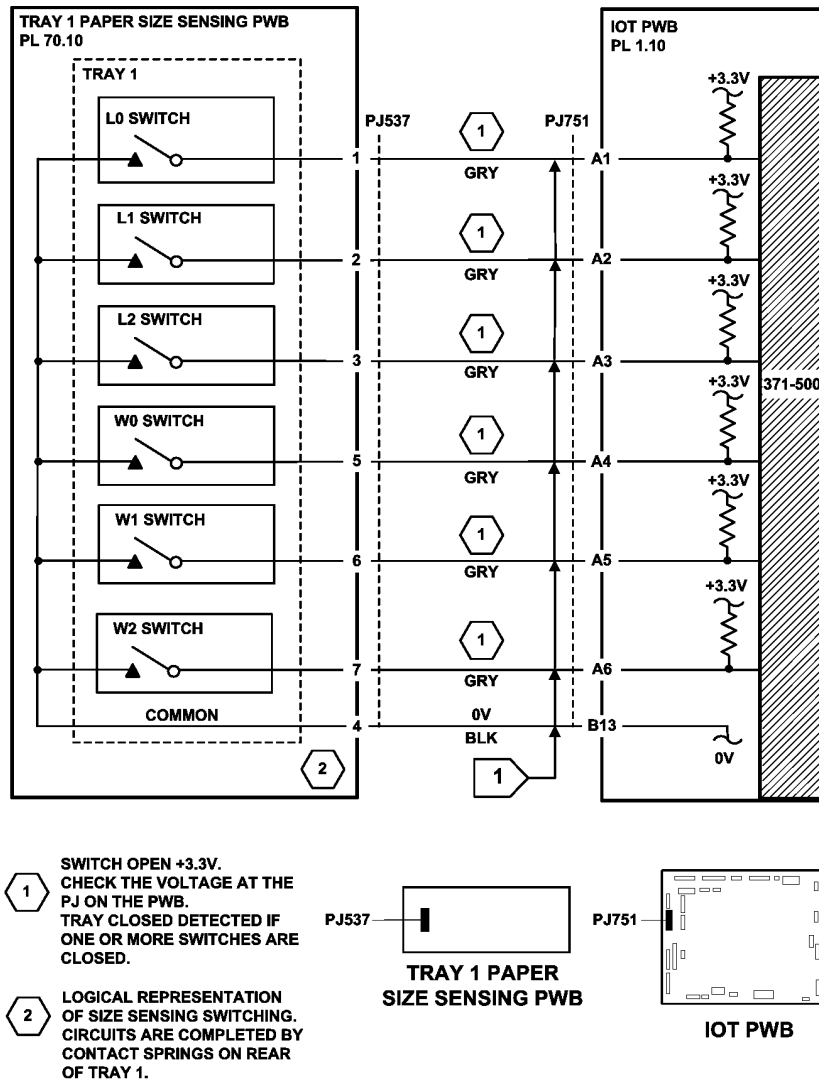
Install new components as necessary.

- Tray 1 empty sensor, **PL 80.26 Item 7**.
- Tray 2 empty sensor, **PL 80.26 Item 7**.

If the fault persists, perform the **OF7** IOT PWB Diagnostics RAP.

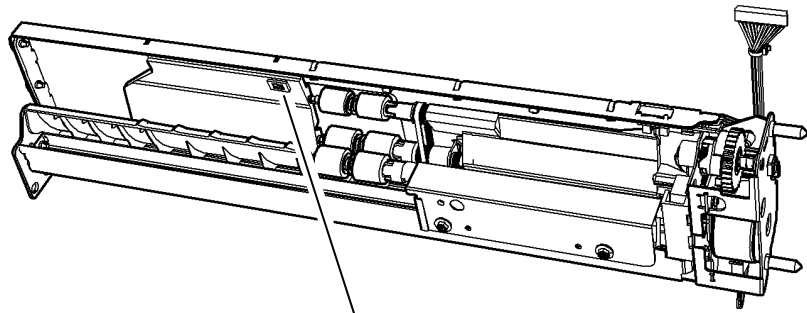
Perform the steps that follow:

- Check that the sensor is free of paper dust.
- Check the paper feed assembly, **PL 80.26 Item 1**.



TX-1-0269-A

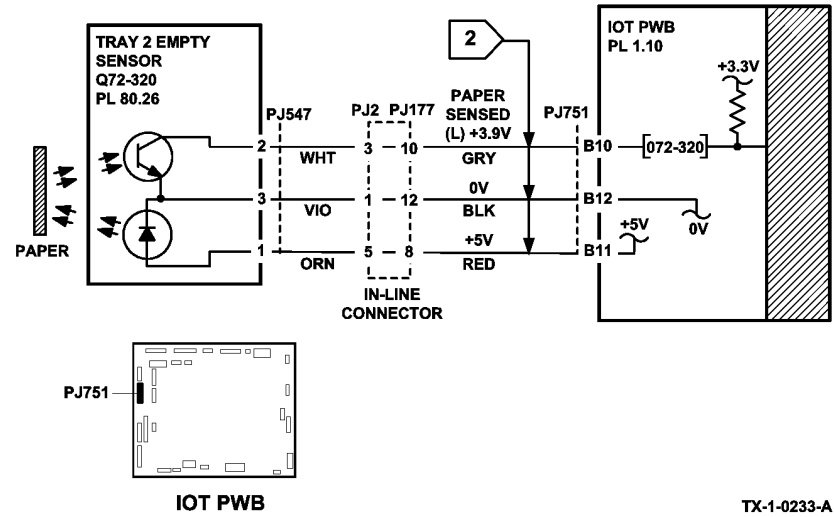
Figure 3 Circuit diagram



Tray 1 empty sensor, Q71-320.
Tray 2 empty sensor, Q72-320.

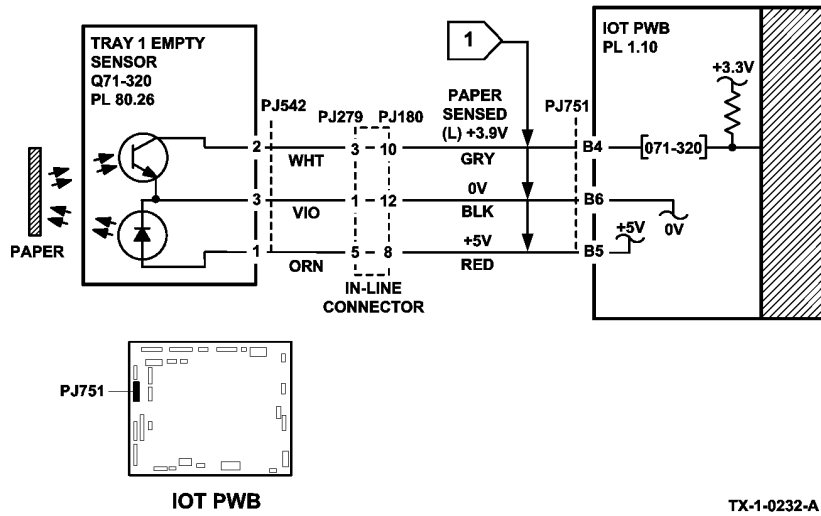
X-1-0966-A

Figure 1 Component location



TX-1-0233-A

Figure 3 Tray 2 circuit diagram



TX-1-0232-A

Figure 2 Tray 1 circuit diagram

372-100-00, 372-217-00 Tray 2 Elevator Lift Failure RAP

372-100-00 Tray 2 stack height sensor failed to actuate within the correct time after the feed/elevator motor turned on.

372-217-00 Tray 2 failed to elevate during printing as sheets were fed from the tray.

Remote Service Actions

Ask the customer to ensure that the tray is pushed fully home. GP 14. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- Check for obstructions behind the tray.
- Ensure that the tray is pushed fully home.
- Check the stack height mechanism actuator on the back of the tray, Figure 1.
- Check the drive gears and coupling on the tray, Figure 1.
- Check the elevator drive coupling on the feeder assembly.

Procedure

Enter dC330 code 072-330, tray 2 stack height sensor, Q72-330. Pull out tray 2, then push tray 2 fully home. **The display changes.**

Y N

Go to Flag 1. Check Q72-330.
Refer to:

- GP 11 How to Check a Sensor.
- P/J751, IOT PWB.
- 301E +5V and +5VSB Distribution RAP.
- 301B 0V Distribution RAP.

If necessary, install a new tray 2 stack height sensor, PL 80.26 Item 8. If the fault persists, perform the OF7 IOT PWB Diagnostics RAP.



CAUTION

To prevent damage to the elevator and paper feed mechanism, the paper tray must be pulled out before MOT72-010 is run in service mode.

Enter dC330 code 072-010, tray 2 elevate/feed motor, MOT72-010. Pull out tray 2. **The motor runs.**

Y N

Go to Flag 2. Check MOT72-010.
Refer to:

- GP 10 How to Check a Motor.

- P/J752, IOT PWB.
- 301G +24V Distribution RAP.
- 301B 0V Distribution RAP

If necessary, install a new tray 2 elevate/feed motor, PL 80.26 Item 6. If the fault persists, perform the OF7 IOT PWB Diagnostics RAP.

Perform the steps that follow:

- Check the elevate/feed motor drive gears, Figure 1.
- Check the tray 2 stack height mechanism on the feeder assembly.

If the fault persists, perform the 371A Tray 1 and Tray 2 Empty RAP.

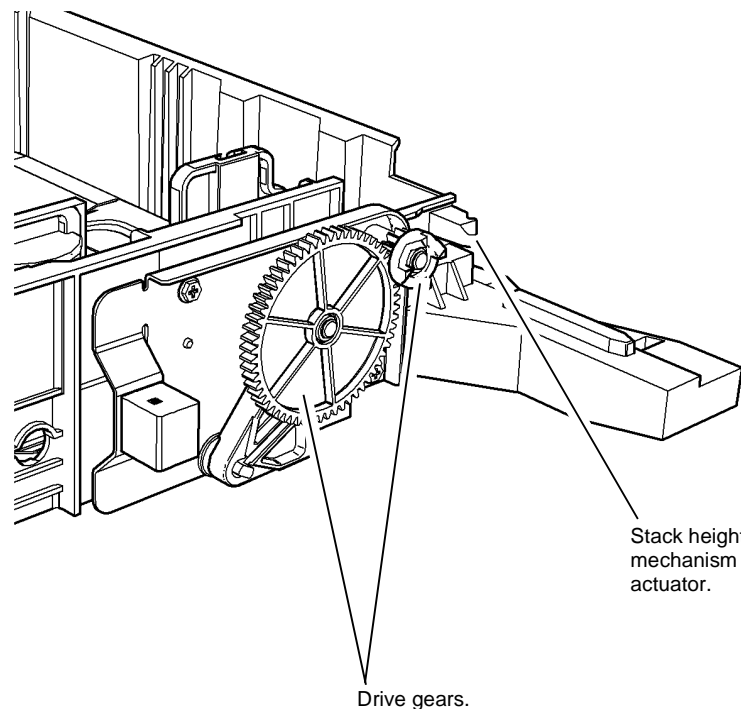


Figure 1 Component location

A

372-500-00 Tray 2 Open During Run RAP

372-500-00 Tray 2 was opened during run when sheets were fed from the tray.

NOTE: Tray open is detected when none of the tray size switches are activated. Also use this RAP when the paper fed from the tray does not match the paper size indicated by the tray paper guides.

NOTE: It is necessary to have at least one sheet of paper in the tray for the machine to recognize any changes made.

Remote Service Actions

Ask the customer to check the items that follow:

- Ensure that the tray is pushed fully home.
- If an envelope tray is installed as tray 2, ensure that it is configured on the UI:
 - Enter Customer Administrator Tools, [GP 24](#). Press the Machine Status button. Select Tools / Device Settings / Paper Management / Tray 2 Usage.
 - Ensure Tray 2 Usage is set to Envelope Tray.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- Check for obstructions behind the tray.
- Check for contamination on the surface of the tray 2 paper size sensing PWB, [PL 70.10](#) [Item 18](#).
- Ensure that the tray paper guides are set up to the edges of the paper.
- Ensure that the guides are located in the slots in the base of the tray if a standard paper size is used.

Procedure

Open, then fully close tray 2. **The UI detects that the tray has closed and is set to the correct paper size.**

Y N
Remove tray 1 and tray 2, [REP 70.1](#). Install tray 1 in the tray 2 position. Open, then fully close the tray. **The UI detects that the tray has closed and is set to the correct paper size.**

Y N
Go to [Flag 1](#). Check the tray 2 paper size sensing PWB. Refer to:

- [GP 13](#) How to Check a Switch.
- [P/J751, IOT PWB](#).
- [P/J544, Tray 2 paper size sensing PWB](#).
- [Table 1](#), tray 2 paper size sensing PWB switch logic.

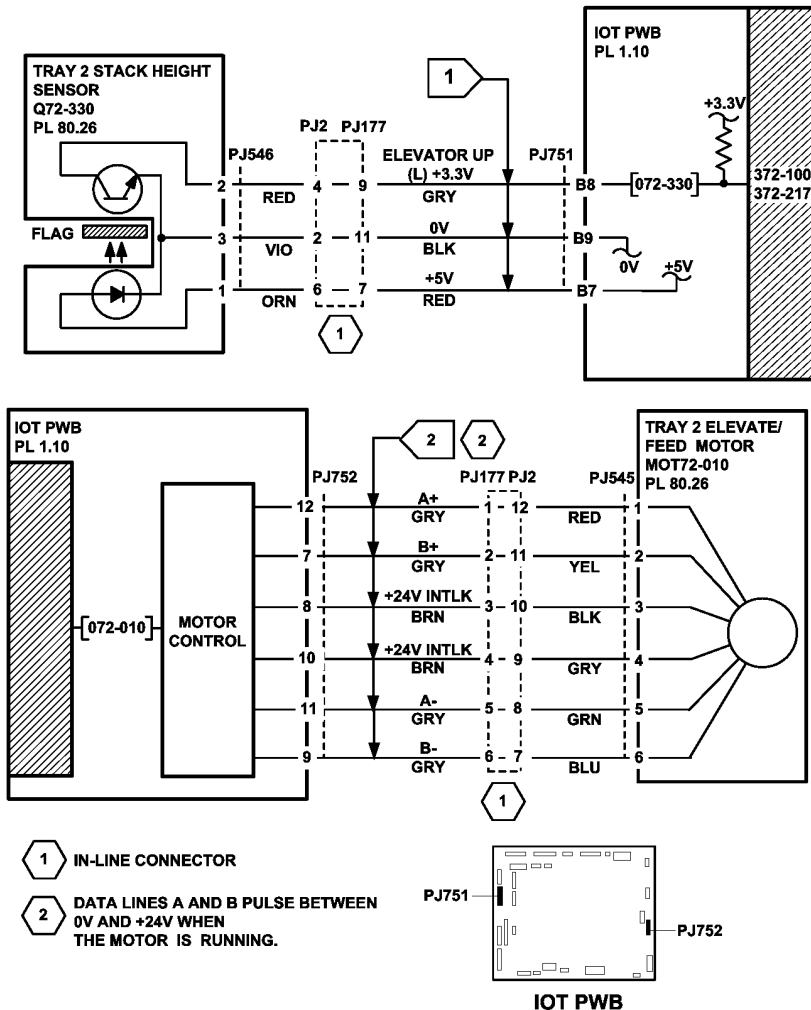


Figure 2 Circuit diagram

TX-1-0234-A

A B

- Figure 2, tray 2 paper size sensing PWB layout.
- 301D +3.3V Distribution RAP.
- 301B 0V Distribution RAP.

If necessary, install a new tray 2 paper size sensing PWB, PL 70.10 Item 18. If the fault persists, perform the OF7 IOT PWB Diagnostics RAP.

Remove tray 1 from the tray 2 position. Inspect tray 2. Refer to Figure 1.
Perform the steps that follow:

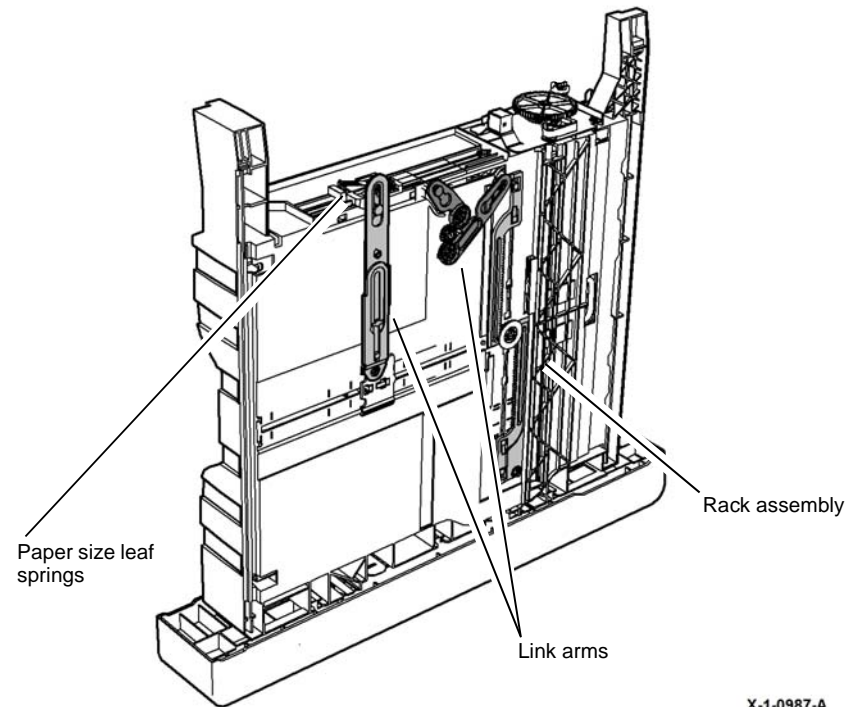
- Check that the paper size leaf springs are undamaged and mounted correctly, refer to 370B Tray 1 and Tray 2 Wrong Size Paper RAP.
- Check that the rack assembly and link arms are undamaged.

Install new components as necessary:

- Paper size leaf spring, PL 70.10 Item 23.
- Tray assembly, PL 70.10 Item 15.

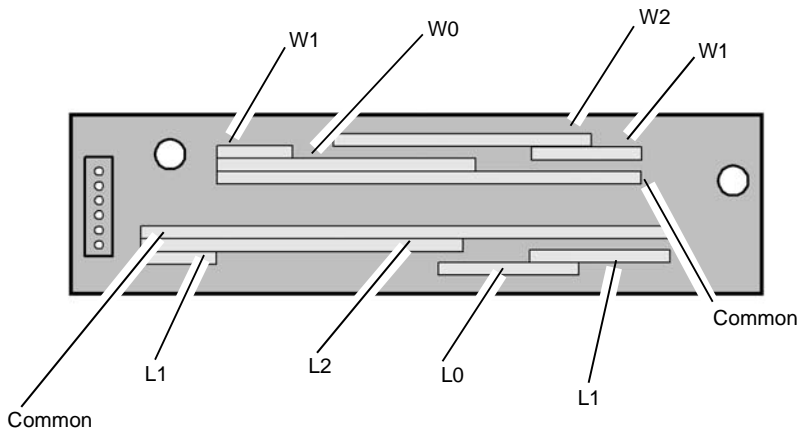
The fault may be intermittent. Perform the steps that follow:

- Repeat the procedure with the tray paper guides set to each standard size in use.
- Go to dC301 NVM Initialization. Perform the copier NVM initialization.
- Perform the OF7 IOT PWB Diagnostics RAP.



X-1-0987-A

Figure 1 Component location

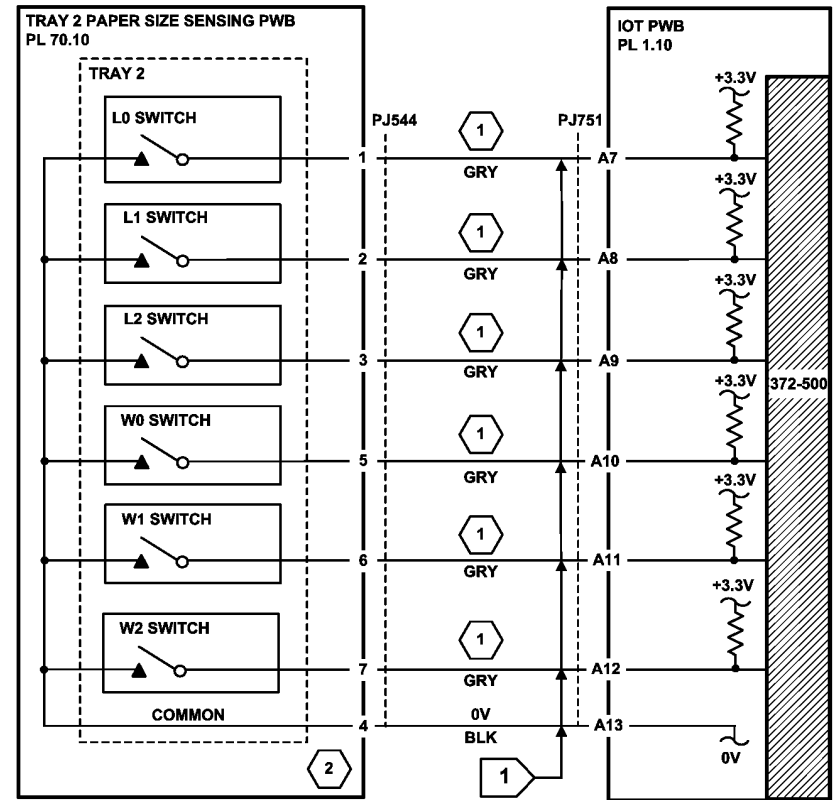


X-1-1077-A

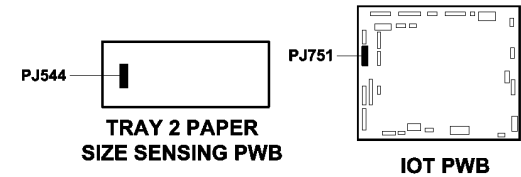
Figure 2 Tray 2 paper size sensing PWB layout

Table 1 Tray 2 paper size table

Paper Size	L0	L1	L2	W0	W1	W2
Tray open	3.3V	3.3V	3.3V	3.3V	3.3V	3.3V
A3 SEF	3.3V	0V	0V	3.3V	0V	3.3V
A4 LEF	3.3V	0V	3.3V	3.3V	0V	3.3V
A4 SEF	0V	3.3V	3.3V	3.3V	3.3V	0V
A5 SEF	3.3V	0V	3.3V	0V	3.3V	0V
11x17 SEF	3.3V	0V	0V	3.3V	0V	0V
8.5x14 SEF	3.3V	3.3V	0V	3.3V	3.3V	0V
8.5x13 SEF	0V	3.3V	0V	3.3V	3.3V	0V
8.5x11 LEF	3.3V	0V	3.3V	3.3V	0V	0V
8.5x11 SEF	0V	0V	3.3V	3.3V	3.3V	0V
8.5x5.5 SEF	3.3V	0V	3.3V	0V	3.3V	0V



- 1 SWITCH OPEN +3.3V. CHECK THE VOLTAGE AT THE PJ ON THE PWB. TRAY CLOSED DETECTED IF ONE OR MORE SWITCHES ARE CLOSED.
- 2 LOGICAL REPRESENTATION OF SIZE SENSING SWITCHING. CIRCUITS ARE COMPLETED BY CONTACT SPRINGS ON REAR OF TRAY 2.



TX-1-0270-A

Figure 3 Circuit diagram

373-100-00, 373-217-00 Tray 3 Elevator Lift Failure RAP

373-100-00 Tray 3 stack height sensor failed to actuate within the correct time after the elevator motor turned on.

373-217-00 Tray 3 failed to elevate during printing as sheets were fed from the tray.

NOTE: Rapid closure of tray 4 when tray 3 is being elevated may cause this fault.

Remote Service Actions

Ask the customer to ensure that the tray is pushed fully home. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- Check that the tray elevator cables and mechanisms are located correctly.
- Check for obstructions behind the tray.
- Ensure that the tray is pushed fully home.

Procedure

Enter **dC330** code 073-300, tray 3 home sensor, Q73-300. Pull out tray 3, then push tray 3 fully home. **The display changes.**

Y N

Go to **Flag 1**. Check Q73-300.

Refer to:

- **GP 11** How to Check a Sensor.
- **P/J755, IOT PWB**.
- **301E** +5V and +5VSB Distribution RAP.
- **301B** 0V Distribution RAP.

If necessary, install a new tray 3 home sensor, **PL 70.21 Item 4**. If the fault persists, perform the **OF7** IOT PWB Diagnostics RAP.

Enter **dC330** code 073-330, tray 3 stack height sensor, Q73-330, **Figure 1**. Pull out tray 3. Manually actuate Q73-330. **The display changes.**

Y N

Go to **Flag 2**. Check Q73-330.

Refer to:

- **GP 11** How to Check a Sensor.
- **P/J755, IOT PWB**.
- **301E** +5V and +5VSB Distribution RAP.
- **301B** 0V Distribution RAP.

If necessary, install a new tray 3 stack height sensor, **PL 80.32 Item 6**. If the fault persists, perform the **OF7** IOT PWB Diagnostics RAP.



CAUTION

To prevent damage to the elevator and paper feed mechanism, the paper tray must be pulled out before **MOT07-030** is run in service mode.

Re-connect **P/J756**. Enter **dC330** code 073-010, tray 3 elevator motor, MOT73-010. Pull out tray 3. **The motor runs.**

Y N

Go to **Flag 3**. Check MOT73-010.

Refer to:

- **GP 10** How to Check a Motor.
- **P/J756, IOT PWB**.
- **Figure 2**.
- **301G** +24V Distribution RAP.
- **301B** 0V Distribution RAP

Install new components as necessary:

- Tray 3 elevator motor, **PL 70.21 Item 1**.
- IOT PWB, **PL 1.10 Item 2**.

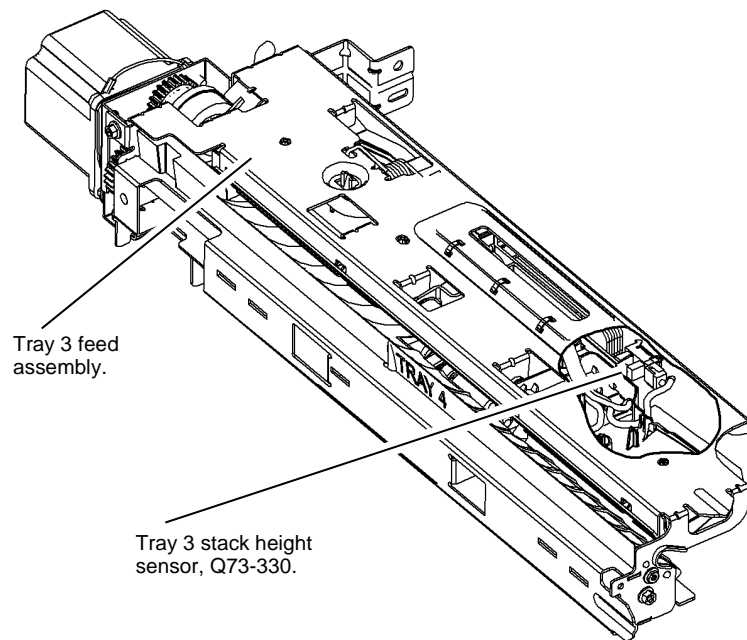
If the fault persists, perform the **OF7** IOT PWB Diagnostics RAP.

Check the components that follow:

- The elevator cables, **PL 70.18 Item 3**, **PL 70.18 Item 4** and **PL 70.18 Item 5**.
- The elevator drives gear coupling, **PL 70.18 Item 16**.

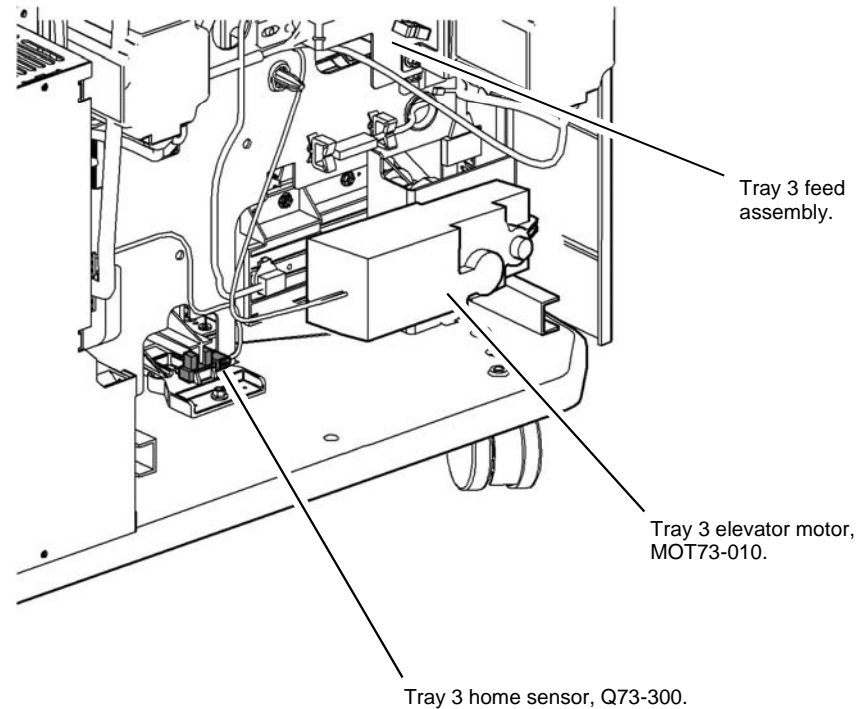
If the fault persists, perform the **373B** Tray 3 Out of Paper RAP.

A



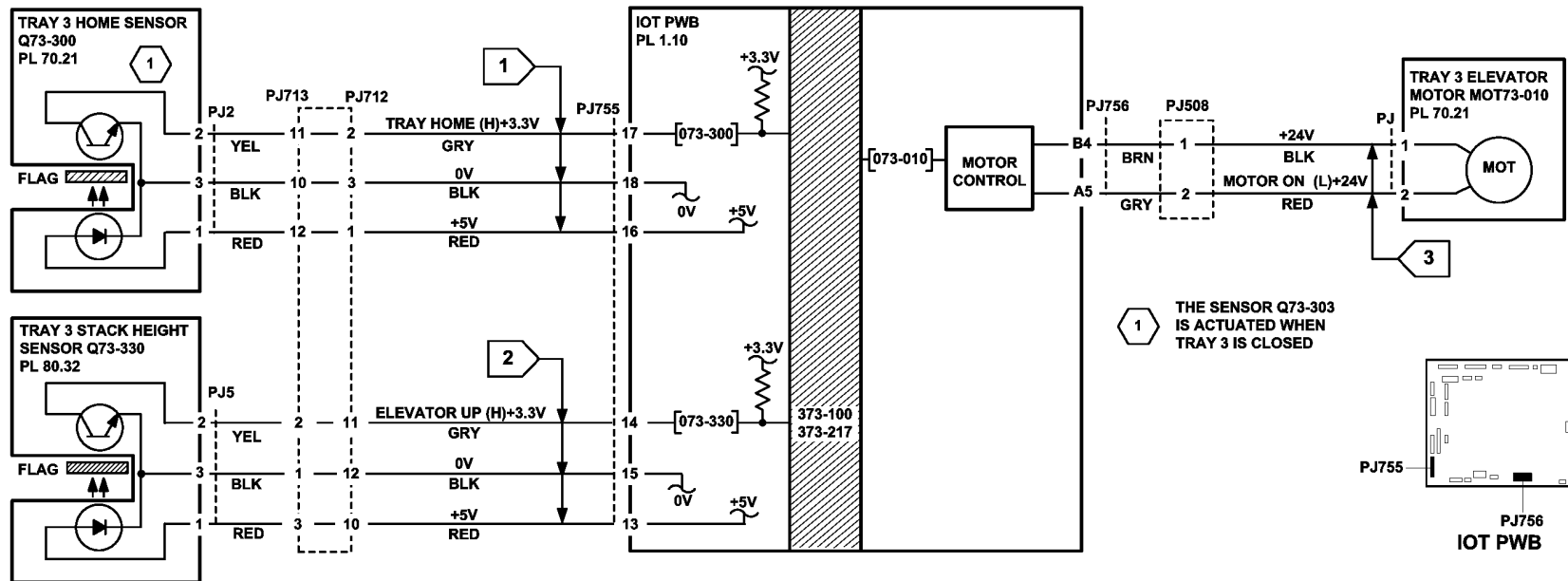
X-1-0967-A

Figure 1 Component location



X-1-0968-A

Figure 2 Component location



1 THE SENSOR Q73-303 IS ACTUATED WHEN TRAY 3 IS CLOSED

TX-1-0235-A

Figure 3 Circuit diagram

373-500-00 Tray 3 Open During Run RAP

373-500-00 Tray 3 was opened during run when sheets were fed from the tray.

Remote Service Actions

Ask the customer to ensure that the tray is pushed fully home. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- Check for obstructions behind the tray.
- Ensure that the tray is pushed fully home.
- Check the sensor flag, [Figure 1](#).
- Ensure that the tray is installed correctly. Refer to [REP 70.5](#) Tray 3 Removal.

Procedure

Enter [dC330](#) code 073-300, tray 3 home sensor, Q73-300. Open, then fully close tray 3. The display changes.

Y N

Go to [Flag 1](#). Check Q73-300.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J755](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new tray 3 home sensor, [PL 70.21](#) [Item 4](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

The fault may be intermittent. Perform the steps that follow:

- Check the sensor holder, [PL 70.21](#) [Item 3](#).
- Install a new tray 3 home sensor, [PL 70.21](#) [Item 4](#).
- [OF7](#) IOT PWB Diagnostics RAP.

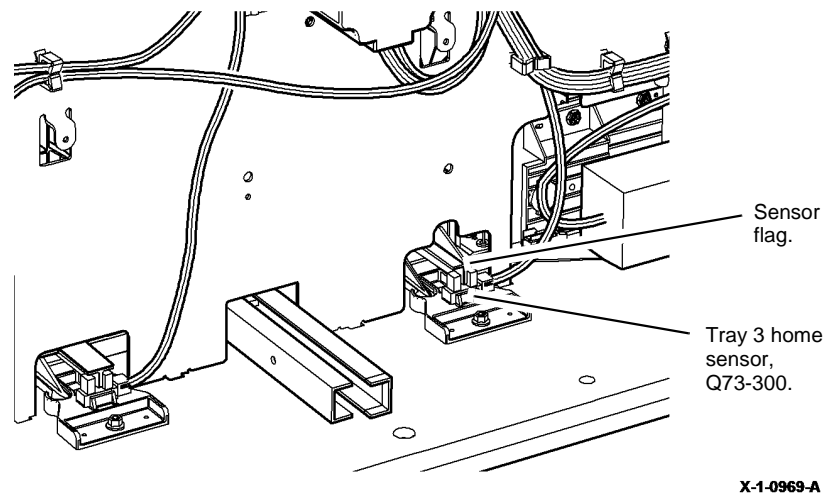


Figure 1 Component location

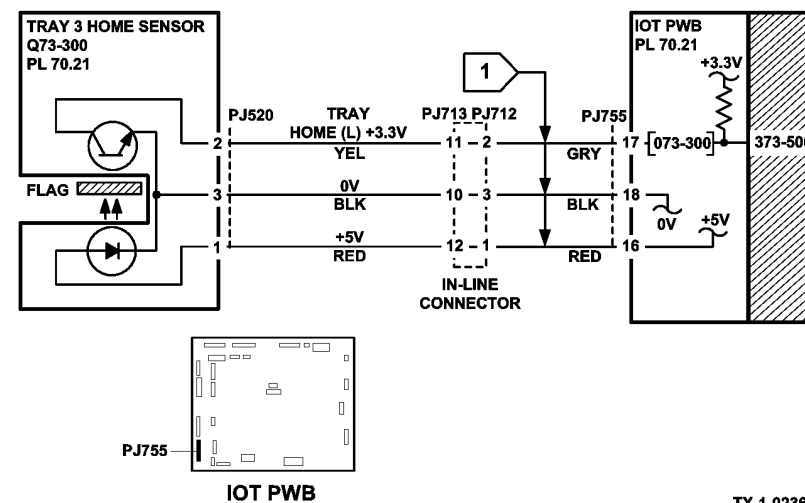


Figure 2 Circuit diagram

373A Tray 3 False Low Paper Level RAP

Use this RAP when the machine displays 'tray 3 is low on paper' when the tray is full. The 'tray is low on paper' message should appear when the tray is at 10% of its capacity.

The machine measures the time taken for the tray to elevate after being closed, to determine the amount of paper remaining in tray 3. This measurement only occurs if the tray has been open for a minimum of 30 seconds. If the tray is closed within 30 seconds the time-out of the last known paper level is used and no new timing is calculated.

NOTE: A low paper condition will be declared if the stack is below approximately 190 sheets.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Pull out tray 3 and allow it to move fully down. Close the tray. **The tray moves up.**

Y N

Perform the [373-100-00](#), [373-217-00](#) Tray 3 Elevator Lift Up Failure RAP.

Pull out tray 3. Load a ream of paper (500 sheets). Wait for 30 seconds before closing the tray.

The message 'Tray 3 is low on paper' has cleared.

Y N

Perform the [OF7](#) IOT PWB Diagnostics RAP.

The low paper sensor appears to be working correctly. If the customer is only adding small amounts of paper at a time, then the message 'Tray is low on paper' will be displayed. If the tray is filled with 190 sheets or more, the message is cancelled.

373B Tray 3 Out of Paper RAP

Use this RAP when an incorrect tray 3 out of paper message is displayed.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to [Figure 1](#). Enter dC330 code 073-320, tray 3 empty sensor, Q73-320. Use a piece of paper to actuate Q73-320. **The display changes.**

Y N

Go to [Flag 1](#). Check Q73-320.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J755](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

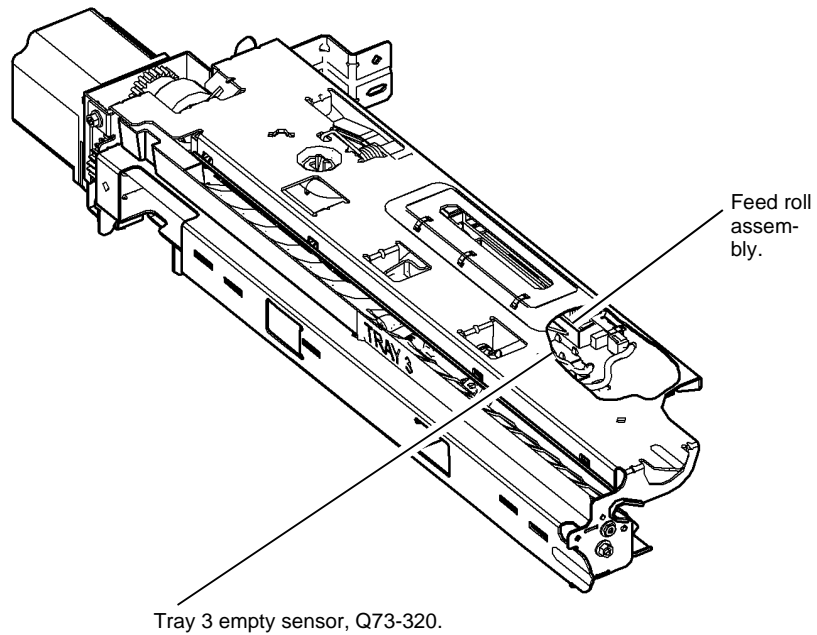
If necessary install a new tray 3 empty sensor, [PL 80.32 Item 3](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Remove the tray 3 front cover, refer to [REP 70.5](#) Tray 3 Removal. Close tray 3. **The feed roll assembly drops when tray 3 is closed.**

Y N

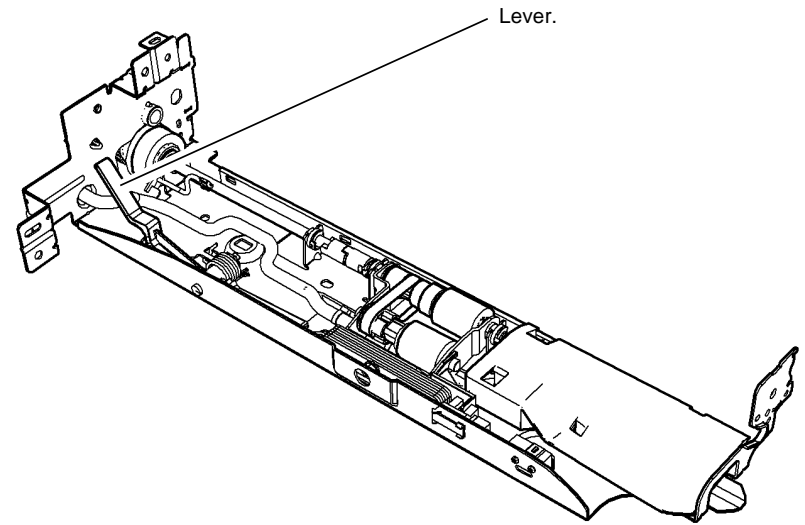
Remove the tray 3 paper feed assembly, [REP 80.20](#). Ensure the lever is undamaged and operates correctly, [Figure 2](#). If necessary, install a new tray 3 paper feed assembly, [PL 80.32 Item 1](#).

The fault may be intermittent. Check the wiring and connectors between the IOT PWB and Q73-320. If the fault persists, perform [OF7](#) IOT PWB Diagnostics RAP.



X-1-0971-A

Figure 1 Component location



X-1-1299-A

Figure 2 Component location

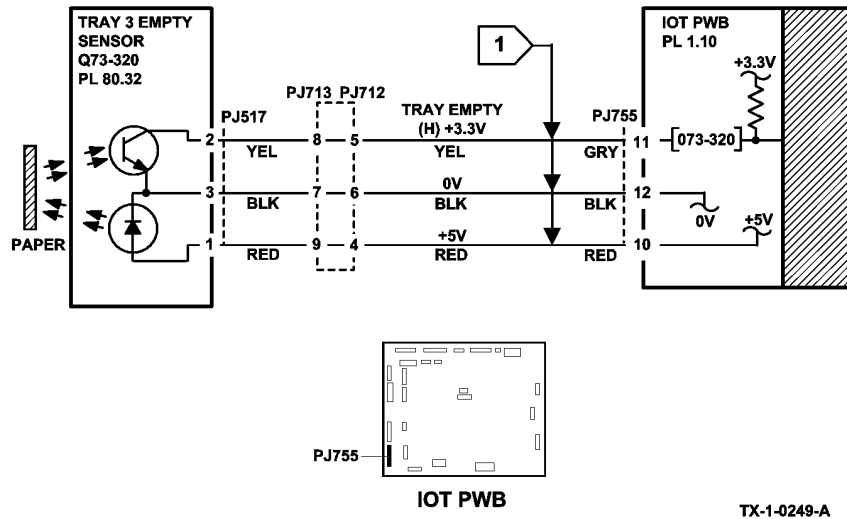


Figure 3 Circuit diagram

TX-1-0249-A

374-100-00, 374-217-00 Tray 4 Elevator Lift Failure RAP

347-100-00 The tray 4 tray 4 stack height sensor has not been made.

374-217-00 Tray 4 failed to raise during printing as media was consumed from the tray.

Remote Service Actions

Ask the customer to ensure that the tray is pushed fully home. If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: Rapid closure of tray 3 when tray 4 is being elevated may cause this fault.

Perform the steps that follow:

- Check the tray 4 feed motor, MOT81-040. Refer to the 381-146-00 Lead Edge Late to Tray 4 Feed Sensor RAP.
- Check that the tray elevator cables and mechanisms are located correctly.
- Ensure that the tray is pushed fully home.
- Check for obstructions behind the tray.

Procedure

Enter dC330 code 074-300, tray 4 home sensor, Q74-300, Figure 1. Pull out tray 4, then push tray 4 fully home. **The display changes.**

Y N

Go to Flag 1. Check Q74-300.

Refer to:

- GP 11 How to Check a Sensor.
- P/J786, IOT PWB.
- 301E +5V and +5VSB Distribution RAP.
- 301B 0V Distribution RAP.

Install a new tray 4 home sensor, PL 70.21 Item 4.

Enter dC330 code 074-330, tray 4 stack height sensor, Q74-330, Figure 2. Pull out tray 4. Manually actuate Q74-330. **The display changes.**

Y N

Go to Flag 2. Check Q74-330.

Refer to:

- GP 11 How to Check a Sensor.
- P/J786, IOT PWB.
- 301E +5V and +5VSB Distribution RAP.
- 301B 0V Distribution RAP.

Install a new tray 4 stack height sensor, PL 80.33 Item 7.

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CAUTION

To prevent damage to the elevator and paper feed mechanism, the appropriate paper tray must be pulled out before MOT74-010 or MOT73-010 is run in service mode.

Pull out tray 4. Enter dC330 code 074-010, tray 4 elevator motor, MOT74-010. **The motor runs.**

Y N
Pull out tray 3. Enter dC330 code 073-010, tray 3 elevator motor, MOT73-010. **The motor runs.**

Y N
Perform the 373-100-00, 373-217-00 Tray 3 Elevator Lift Failure RAP.

Perform the steps that follow:

- Remove the tray 4 elevator motor, [Figure 1](#).
- Remove the tray 3 elevator motor, [PL 70.21 Item 1](#).
- Install the tray 3 elevator motor in place of the tray 4 elevator motor, [Figure 1](#).

Enter dC330 code 074-010, MOT74-010. **The motor runs.**

Y N
Go to Flag 3. Check the wiring between the tray 4 elevator motor and the IOT PWB. Refer to:

- [P/J785](#), [IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

The wiring is good.

Y N
Repair the wiring, [REP 1.2](#).

+24V is present at P/J785 pin 4.

Y N
If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP

Install a new tray 4 elevator motor, [PL 70.21 Item 1](#).

Check the components that follow:

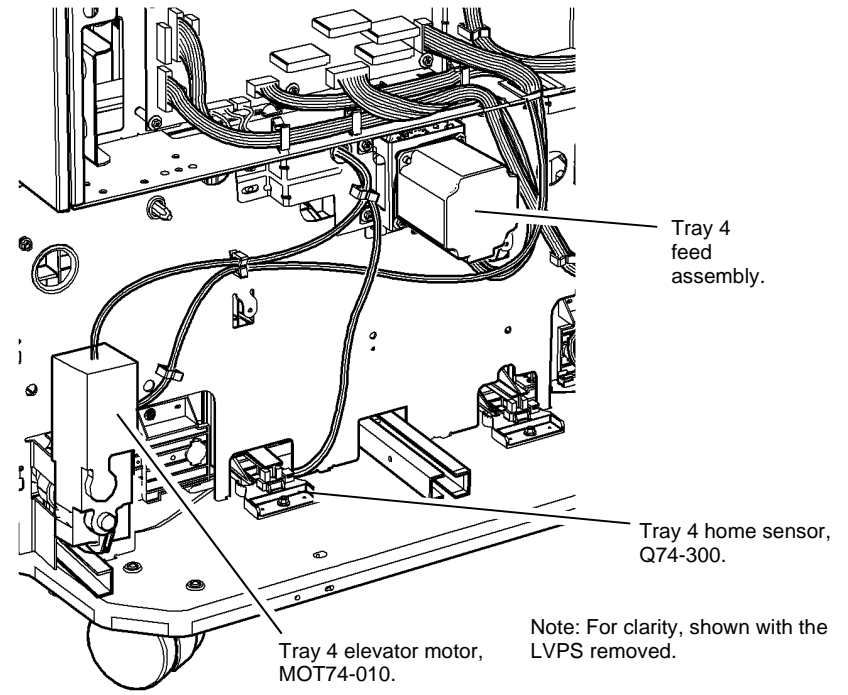
- The elevator cables, [PL 70.19 Item 3](#), [PL 70.19 Item 4](#) and [PL 70.19 Item 5](#).
- The elevator drives gear coupling, [PL 70.19 Item 16](#).

If the fault persists, perform the [374B](#) Tray 4 Out of Paper RAP.

Check the components that follow:

- The elevator cables, [PL 70.19 Item 3](#), [PL 70.19 Item 4](#) and [PL 70.19 Item 5](#).
- The elevator drives gear coupling, [PL 70.19 Item 16](#).

If the fault persists, perform the [374B](#) Tray 4 Out of Paper RAP.



X-1-1434-A

Figure 1 Component location

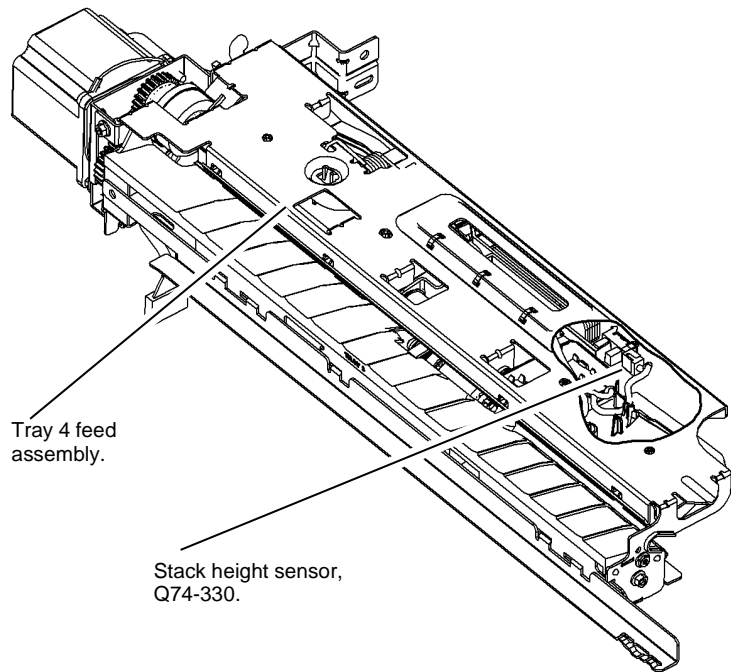
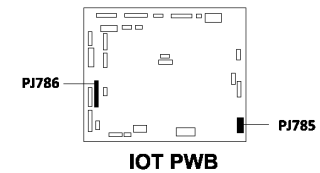
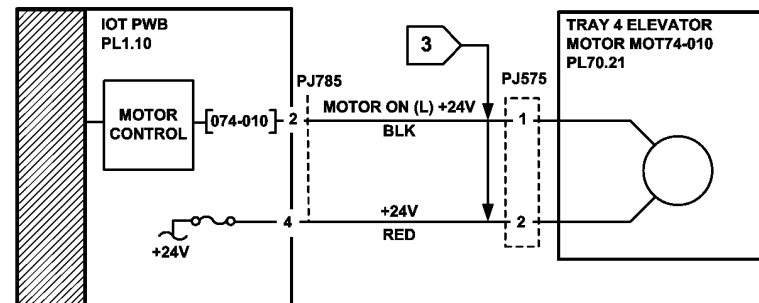
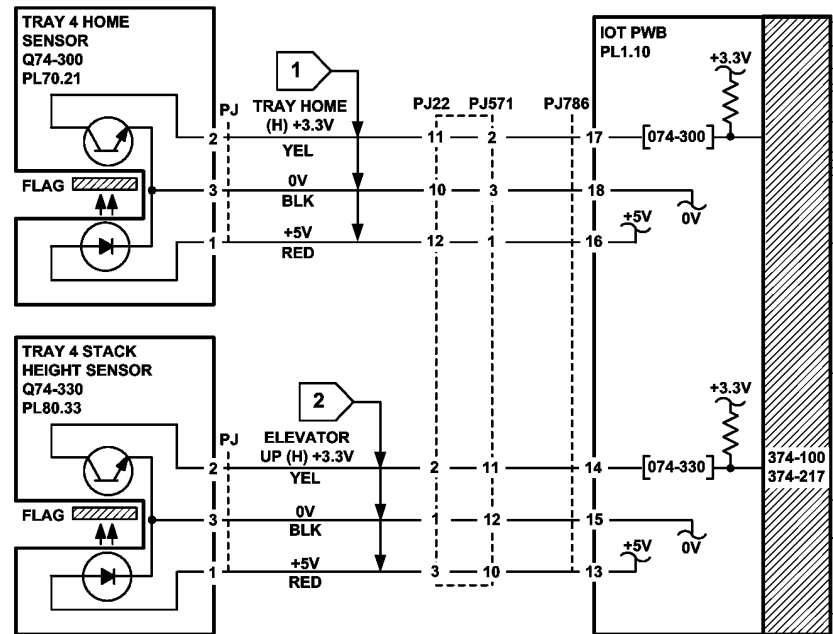


Figure 2 Component location

X-1-1435-A



TX-1-0336-A

Figure 3 Circuit diagram

374-500-00 Tray 4 Open During Run RAP

374-500-00 HCF indicates that Tray 4 is open while feeding from Tray 4.

Remote Service Actions

Ask the customer to ensure that the tray is pushed fully home. If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- Check for obstructions behind the tray.
- Ensure that the tray is pushed fully home.
- Check the sensor flag, [Figure 1](#).
- Ensure that the tray is installed correctly. Refer to [REP 70.13](#) Tray 4 Removal.

Procedure

Enter [dC330](#) code 074-300, tray 4 home sensor, Q74-300. Open, then fully close tray 4. **The display changes.**

Y N
Go to [Flag 1](#). Check Q74-300.

Refer to:

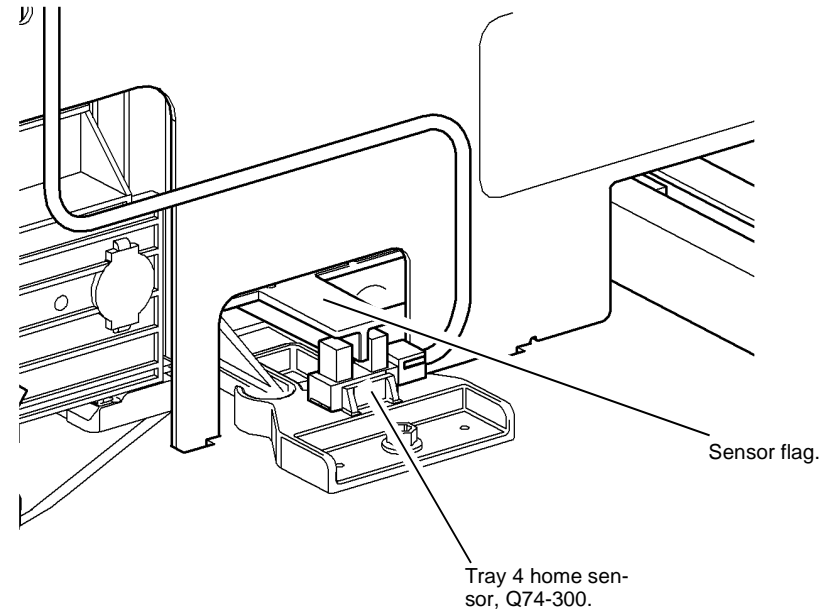
- [GP 11](#) How to Check a Sensor.
- [P/J786](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 4 home sensor, [PL 70.21](#) Item 4.

The fault may be intermittent. Perform the steps that follow:

- Check the sensor holder, [PL 70.21](#) Item 3.
- Install a new tray 4 home sensor, [PL 70.21](#) Item 4.
- [OF7](#) IOT PWB Diagnostics RAP.



X-1-1436-A

Figure 1 Component location

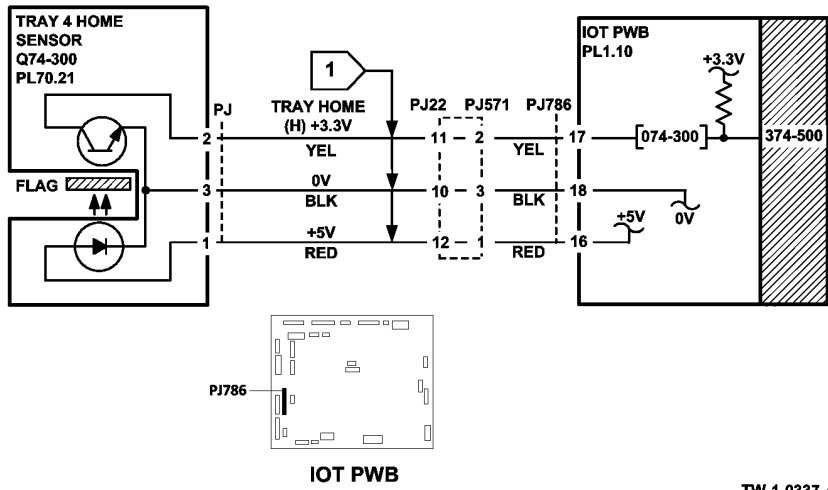


Figure 2 Circuit diagram

TW-1-0337-A

374A Tray 4 False Low Paper Level RAP

Use this RAP when the machine displays 'tray 4 is low on paper' when the tray is full. The 'tray is low on paper' message should appear when the tray is at 10% of its capacity.

The machine measures the time taken for the tray to elevate after being closed, to determine the amount of paper remaining in tray 4. This measurement only occurs if the tray has been open for a minimum of 30 seconds. If the tray is closed within 30 seconds the time-out of the last known paper level is used and no new timing is calculated.

NOTE: A low paper condition will be declared if the stack is below approximately 190 sheets.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Pull out tray 4 and allow it to move fully down. Close the tray. **The tray moves up.**

Y N

Perform the 374-100-00, 374-217-00 Tray 4 Elevator Lift Up Failure RAP.

Pull out tray 4. Load a ream of paper (500 sheets). Wait for 30 seconds before closing the tray.

The message 'Tray 4 is low on paper' has cleared.

Y N

Perform the OF7 IOT PWB Diagnostics RAP.

The low paper sensor appears to be working correctly. If the customer is only adding small amounts of paper at a time, then the message 'Tray is low on paper' will be displayed. If the tray is filled with 190 sheets or more, the message is cancelled.

374B Tray 4 Out of Paper RAP

Use this RAP when an incorrect tray 4 out of paper message is displayed.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to [Figure 1](#). Enter dC330 code 074-320, tray 4 empty sensor, Q74-320. Use a piece of paper to actuate Q74-320. **The display changes.**

Y N

Go to [Flag 1](#). Check Q74-320.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J786](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

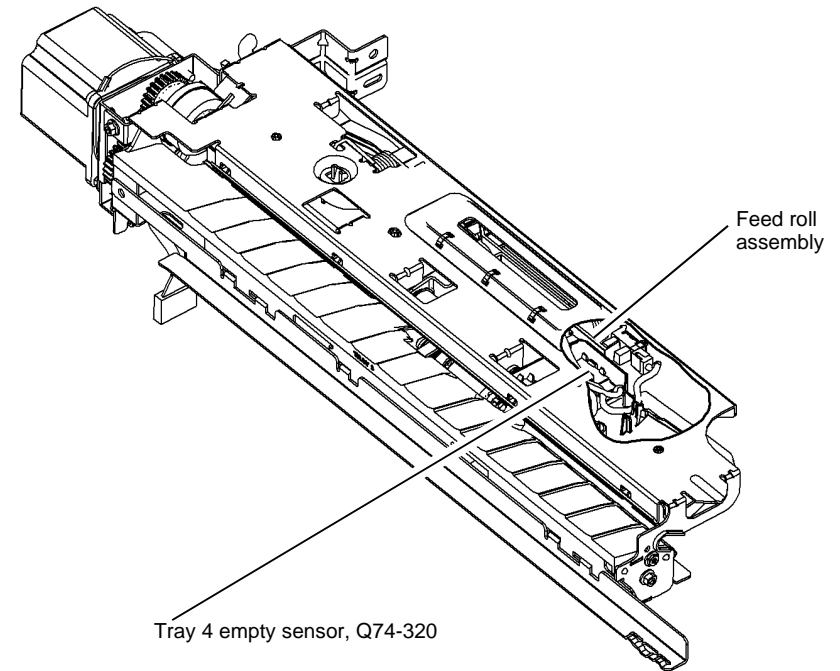
- Tray 4 empty sensor, [PL 80.33](#) Item 6.

Remove the tray 4 front cover, refer to [REP 70.13](#) Tray 4 Removal. Close tray 4. **The feed roll assembly drops when tray 4 is closed.**

Y N

Remove the tray 4 paper feed assembly, [REP 80.21](#). Ensure the lever is undamaged and operates correctly, [Figure 2](#). If necessary, install a new tray 4 paper feed assembly, [PL 80.33](#) Item 1.

The fault may be intermittent. Check the wiring and connectors between the HCF control PWB and the sensor. If the fault persists, perform [OF7](#) IOT PWB Diagnostics RAP.



X-1-0984-A

Figure 1 Component location

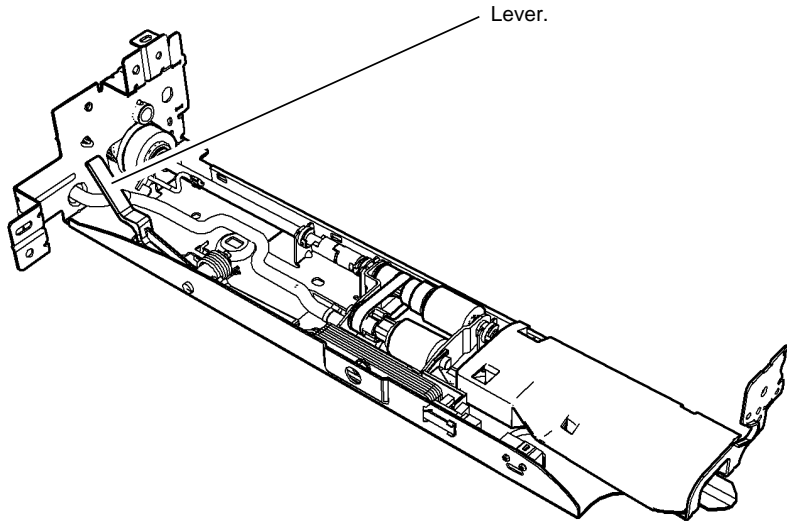


Figure 2 Component location

X-1-1300-A

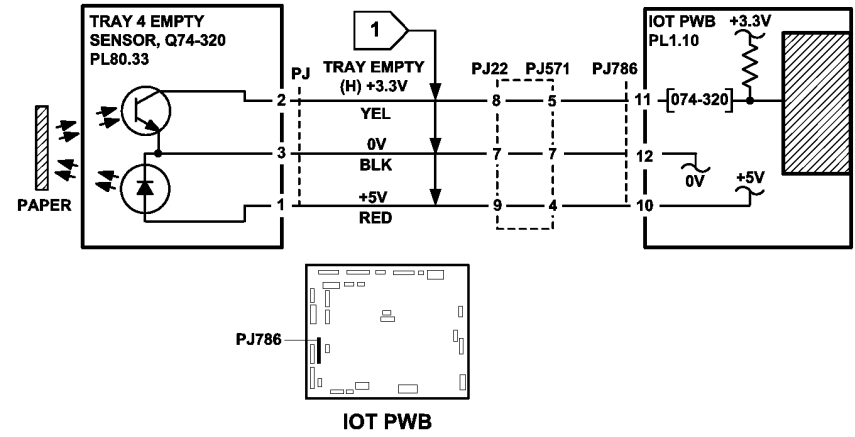


Figure 3 Circuit diagram

TX-1-0338-A

375-100-00 Bypass Tray Lift Failure RAP

375-100-00 The bypass tray elevate sensor failed to actuate within the correct time.

Remote Service Actions

Ask the customer to check for obstructions or debris in the bypass tray. If the fault continues, a site visit will be necessary.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter **dC330** code 075-040, bypass tray elevate sensor, Q75-040, **Figure 1**. Manually actuate the sensor. **The display changes.**

Y N

Go to **Flag 1**. Check Q75-040.

Refer to:

- **GP 11** How to Check a Sensor.
- **P/J750, IOT PWB**.
- **301E** +5V and +5VSB Distribution RAP.
- **301B** 0V Distribution RAP.

If necessary, install a new bypass tray elevate sensor, **PL 70.35 Item 20**. If the fault persists, perform the **OF7** IOT PWB Diagnostics RAP.

With the left door closed, enter **dC330** code 080-025, TAR/bypass tray motor, MOT80-006, **PL 80.25 Item 5**. **The motor runs in reverse.**

Y N

Go to **Flag 2**. Check MOT80-006.

Refer to:

- **GP 10**, How to Check a Motor.
- **P/J754, IOT PWB**.
- **301G** +24V Distribution RAP.
- **301B** 0V Distribution RAP.

If necessary, install a new TAR/bypass tray motor, **PL 80.25 Item 5**. If the fault persists, perform the **OF7** IOT PWB Diagnostics RAP.

Go to **Flag 3**. Check the bypass tray clutch, **Figure 1**.

Refer to:

- **GP 12** How to Check a Solenoid or Clutch.
- **P/J757, IOT PWB**.
- **301G** +24V Distribution RAP.
- **301B** 0V Distribution RAP.

The clutch is good.

Y N

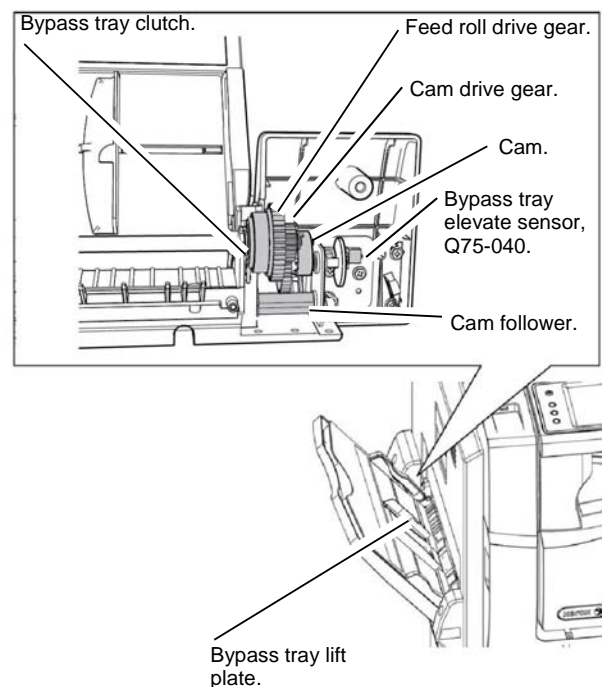
If necessary, install a new bypass tray clutch, **PL 70.35 Item 9**. If the fault persists, perform the **OF7** IOT PWB Diagnostics RAP.

Check the condition and operation of the components that follow. Refer to **GP 7** Miscellaneous Checks:

- Bypass tray drive assembly, **Figure 2**.
- Tension spring, **Figure 2**.
- Bypass tray drive belt, **PL 80.25 Item 10**.
- Drive pulley, **PL 80.25 Item 3**.
- Bypass tray lift plate shaft, cam, cam follower and cam drive gear, **Figure 1**.

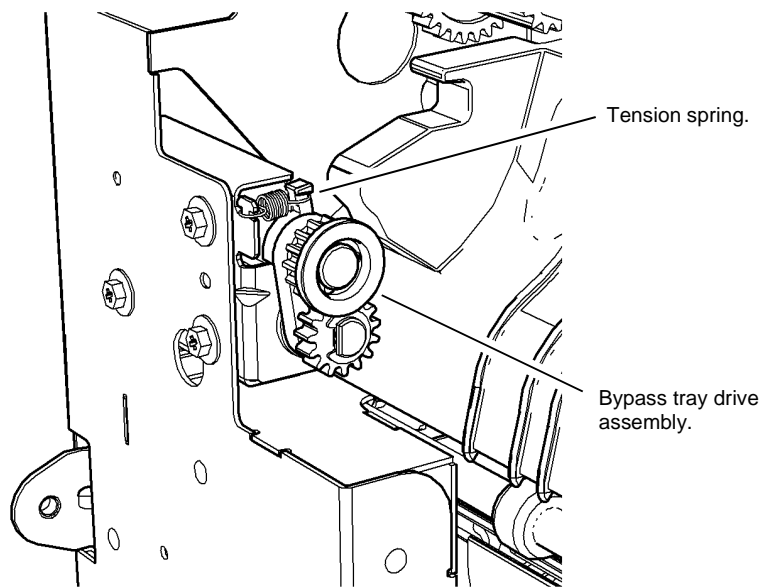
Install new components as necessary:

- Bypass tray assembly, **PL 70.35 Item 1**.
- Bypass tray drive belt, **PL 80.25 Item 10**.
- Drive pulley, **PL 80.25 Item 3**.



X-1-1249-A

Figure 1 Component location



X-1-1250-A

Figure 2 Component location

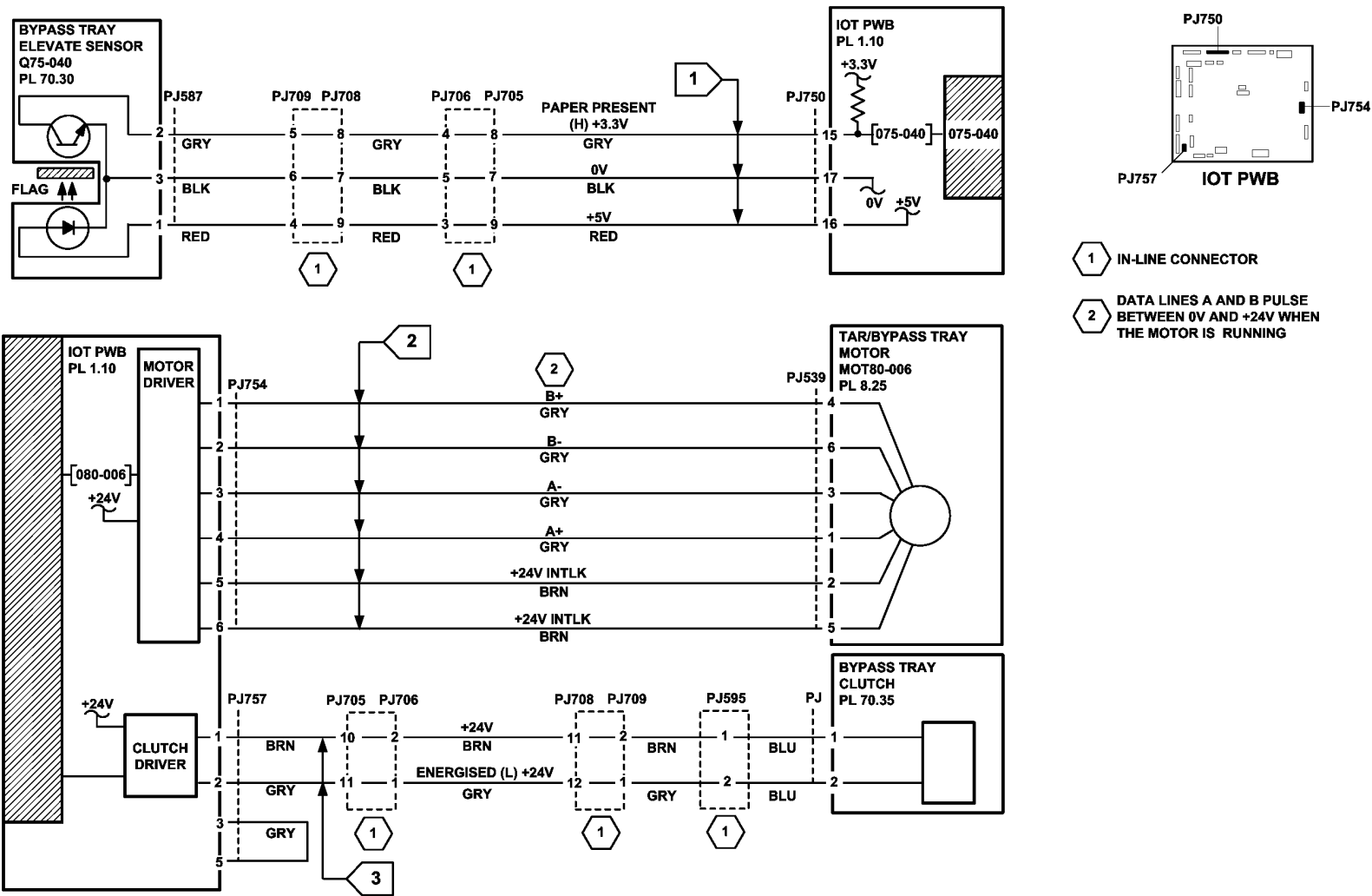


Figure 3 Circuit diagram

375A Bypass Tray RAP

Use this RAP to identify and correct problems when using the bypass tray.

Remote Service Actions

Ask the customer to check the items that follow:

- Check the condition of the media used in the bypass tray. Refer to [IQ1](#) and [GP 20](#).
- Ensure that the width guides are touching the edge of the paper, [Figure 1](#).

If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- If there is a paper width sensing problem, check that the bypass tray width sensor, Q75-601, is not damaged, [Figure 1](#).
- Clean the bypass tray with a microfiber wiper, [PL 26.10 Item 13](#) and antistatic fluid, [PL 26.10 Item 19](#).
- Check the fault history file. If 375-100-00 codes are present, perform the [375-100-00 Bypass Tray Lift Failure RAP](#).

Procedure

Enter [dC330](#) code 075-320, bypass tray empty sensor, Q75-320. Manually actuate the sensor. **The display changes.**

Y N

Go to [Flag 2](#). Check Q75-320.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J750, IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new bypass tray empty sensor, [PL 70.35 Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC140](#) code 075-601, bypass tray width sensor, Q75-601. Move the bypass tray width guides between wide and narrow settings.

NOTE: The width sensor is a potentiometer. The wiper of the potentiometer is attached to the bypass tray side guides. This gives a variable voltage to indicate the paper width setting.

The display changes.

Y N

Go to [Flag 1](#). Check Q75-601.
Refer to:

- [GP 11](#) How to Check a Sensor.

A

- [P/J750, IOT PWB](#).
- [301D](#) +3.3V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new bypass tray assembly, [PL 70.35 Item 1](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Perform the steps that follow:

- Ensure that the customer is not filling the tray above the max fill line.
- For feeding problems from the bypass tray, perform the [381-155-00](#) Lead Edge Late to Registration Sensor from Bypass Tray RAP.

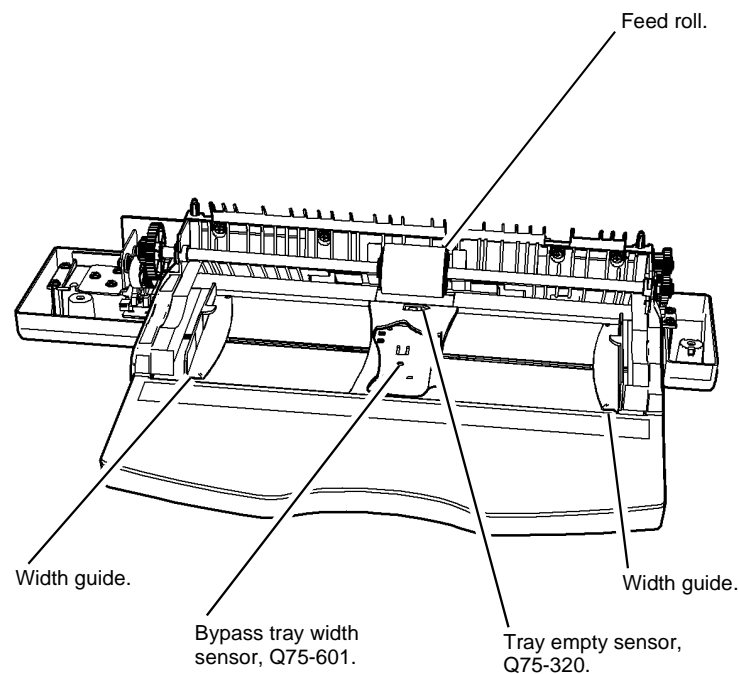


Figure 1 Component location

376-100-00 Tray 6 Elevator Lift Failure RAP

376-100-00 A signal was not detected by the encoder when the elevator motor was driving up.

Remote Service Actions

Ask the customer to check for obstructions behind the tray. If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Ensure the cable holder is not trapped behind the elevator motor bracket, [Figure 1](#). The cable holder is correctly positioned.

Y N

Reposition the cable holder so that it does not become trapped behind the elevator motor bracket.

Open the tray 6 front door. If necessary, remove paper from the stack until there is only about 12mm (0.5 inch) of paper left in the stack. Close the tray 6 door. **The tray moves up.**

Y N

Enter [dC330](#) code 076-300 tray 6 door switch, S76-300. Press Start. Manually toggle the tray 6 door switch. **The display changes.**

Y N

Go to [Flag 1](#). Check S76-300. Refer to:

- [GP 13](#) How to Check a Switch.
- [P/J507](#), [Tray 6 control PWB](#)
- [301E](#) +5V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 6 door switch, [PL 75.60](#) Item 6.
- Tray 6 control PWB, [PL 75.68](#) Item 8.

Enter [dC330](#) code 076-330 stack height sensor, Q76-330. Press Start. Manually activate the stack height sensor on the paper feed assembly. **The display changes.**

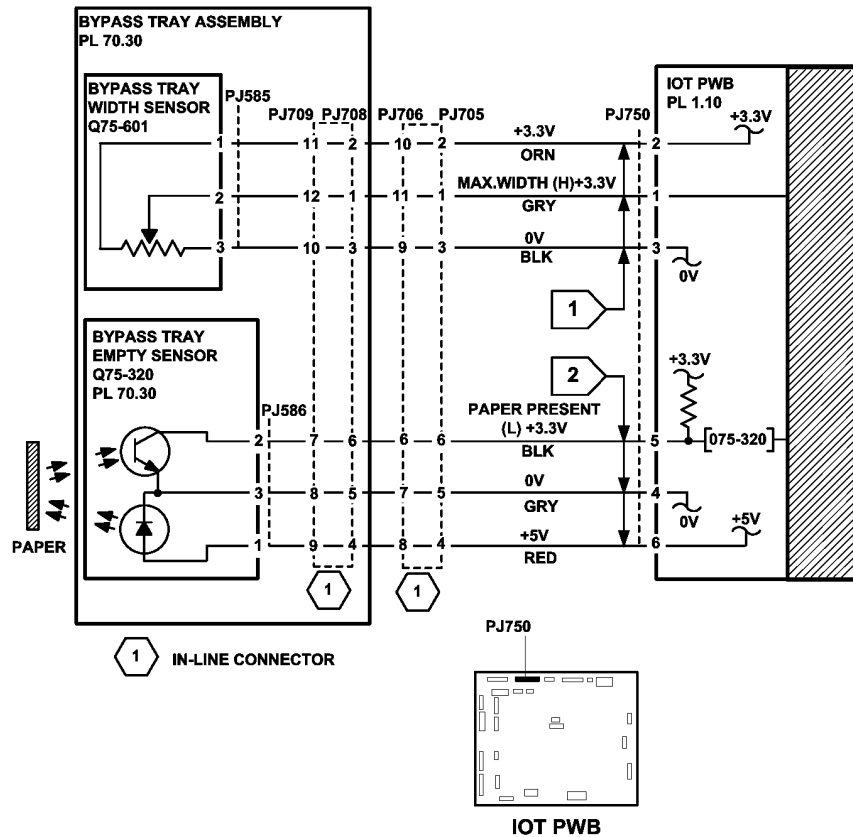
Y N

Go to [Flag 2](#). Check Q76-330. Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J505](#), [Tray 6 control PWB](#).
- [301E](#) +5V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Stack height sensor, [PL 80.41](#) Item 7.
- Tray 6 control PWB, [PL 75.68](#) Item 8.



TX-1-0248-A

Figure 2 Circuit diagram

A **B**
Check the voltage at PJ504 pin 4, [Flag 3](#). Manually actuate the upper limit switch, S76-412, [Figure 1](#). **The voltage changes.**

Y **N**
Go to [Flag 3](#). Check S76-412. Refer to:

- [GP 13](#) How to Check a Switch.
- [P/J504](#), [Tray 6 control PWB](#)
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Upper limit switch, [PL 75.68 Item 12](#).
- Tray 6 control PWB, [PL 75.68 Item 8](#).

Enter [dC330](#) code 076-340 elevator encoder sensor, Q76-340. Press Start. Manually lift the motor to activate the sensor. **The display changes.**

Y **N**
Go to [Flag 4](#). Check Q76-340. Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J506](#), [Tray 6 control PWB](#).
- [301E](#) +5V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Elevator encoder sensor, [PL 75.68 Item 5](#).
- Tray 6 control PWB, [PL 75.68 Item 8](#).

Enter [dC330](#) code 076-010 to energise the elevator motor, MOT76-010, to drive the tray up. Press Start. **The motor runs.**

Y **N**
Go to [Flag 5](#). Check MOT76-010. Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J504](#), [Tray 6 control PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Elevator motor, [PL 75.68 Item 4](#).
- Tray 6 control PWB, [PL 75.68 Item 8](#).

Enter [dC330](#) code 076-011 to energise the elevator motor to drive the tray down, MOT76-010. Press Start. **The motor runs.**

Y **N**
Go to [Flag 5](#). Check MOT76-010. Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J504](#), [Tray 6 control PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Elevator motor, [PL 75.68 Item 4](#).

A **C**
• [Tray 6 control PWB](#), [PL 75.68 Item 8](#).

The tray 6 elevator motor is operating correctly.

The tray moves up until the top of the paper stack is in the feed position without binding or excessive noise.

Y **N**
Remove the tray 6 covers, [PL 75.60](#). Check for the following:

- Parts of the lift assembly, [PL 75.68](#) and [PL 75.70](#) that are worn or broken.
- Paper or other debris that is impeding free movement of the lift mechanism.
- There is sufficient slack in the elevator harness to allow full travel of the lift assembly.
- The tray 6 paper tray guides are correctly set, refer to [ADJ 70.2](#) Tray 6 Paper Tray Guides Setting.

If necessary clean, repair or install new parts, [PL 75.64](#), [PL 75.68](#) and [PL 75.70](#).

Open the tray 6 front door. **The tray moves down until the tray assembly is in the lowest position without binding or excessive noise.**

Y **N**
Remove the tray 6 covers, [PL 75.60](#). Check for the following:

- Parts of the lift assembly, [PL 75.68](#) and [PL 75.70](#) that are worn or broken.
- Paper or other debris that is impeding free movement of the lift mechanism.
- There is sufficient slack in the elevator harness to allow full travel of the lift assembly.
- The tray 6 paper tray guide are correctly set, refer to [ADJ 70.2](#) Tray 6 Paper Tray Guide Setting.

If necessary clean, repair or install new parts, [PL 75.64](#), [PL 75.68](#) and [PL 75.70](#).

The tray 6 elevator is operating correctly. Perform [SCP 5](#) Final Actions.

A **C**

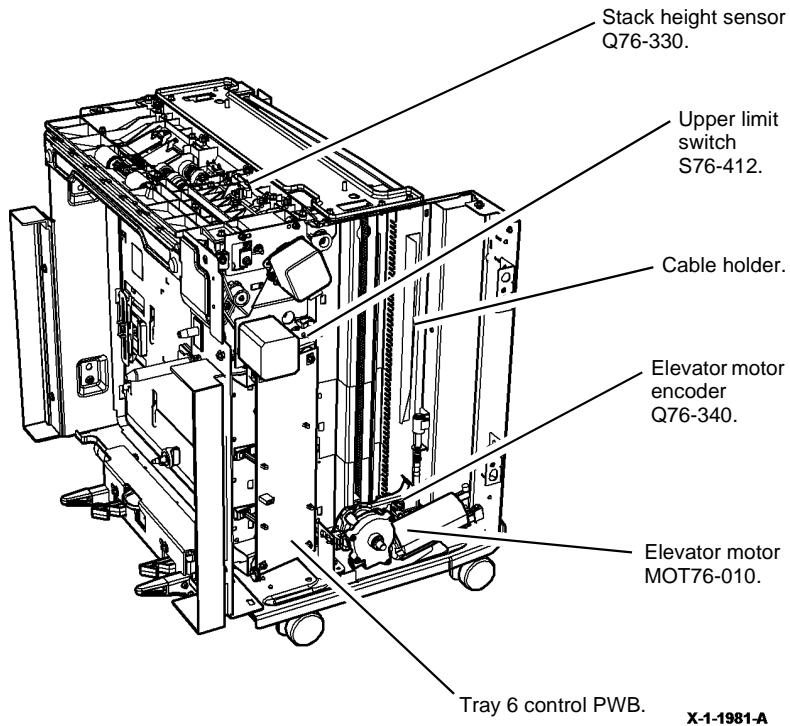


Figure 1 Component location

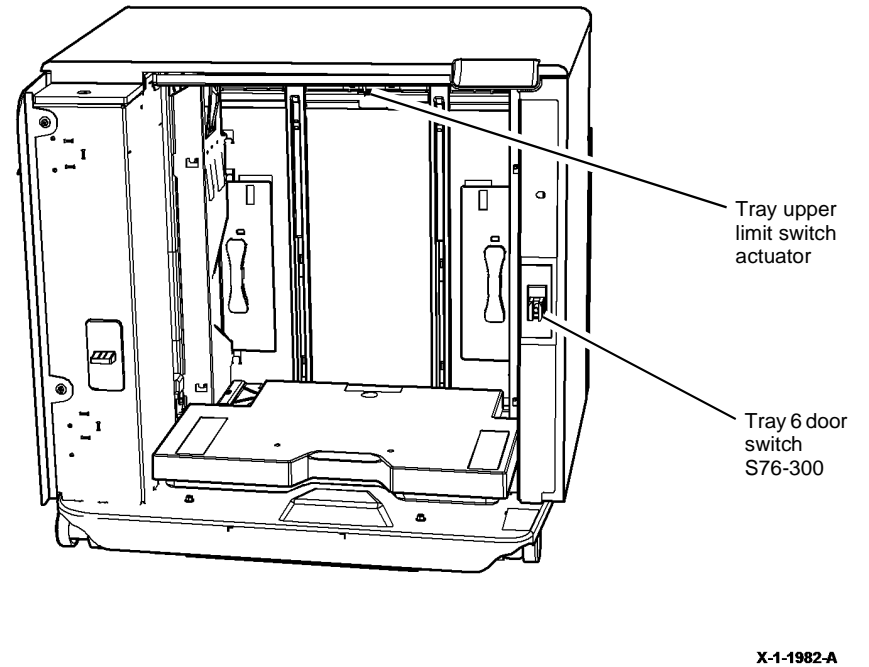


Figure 2 Component location

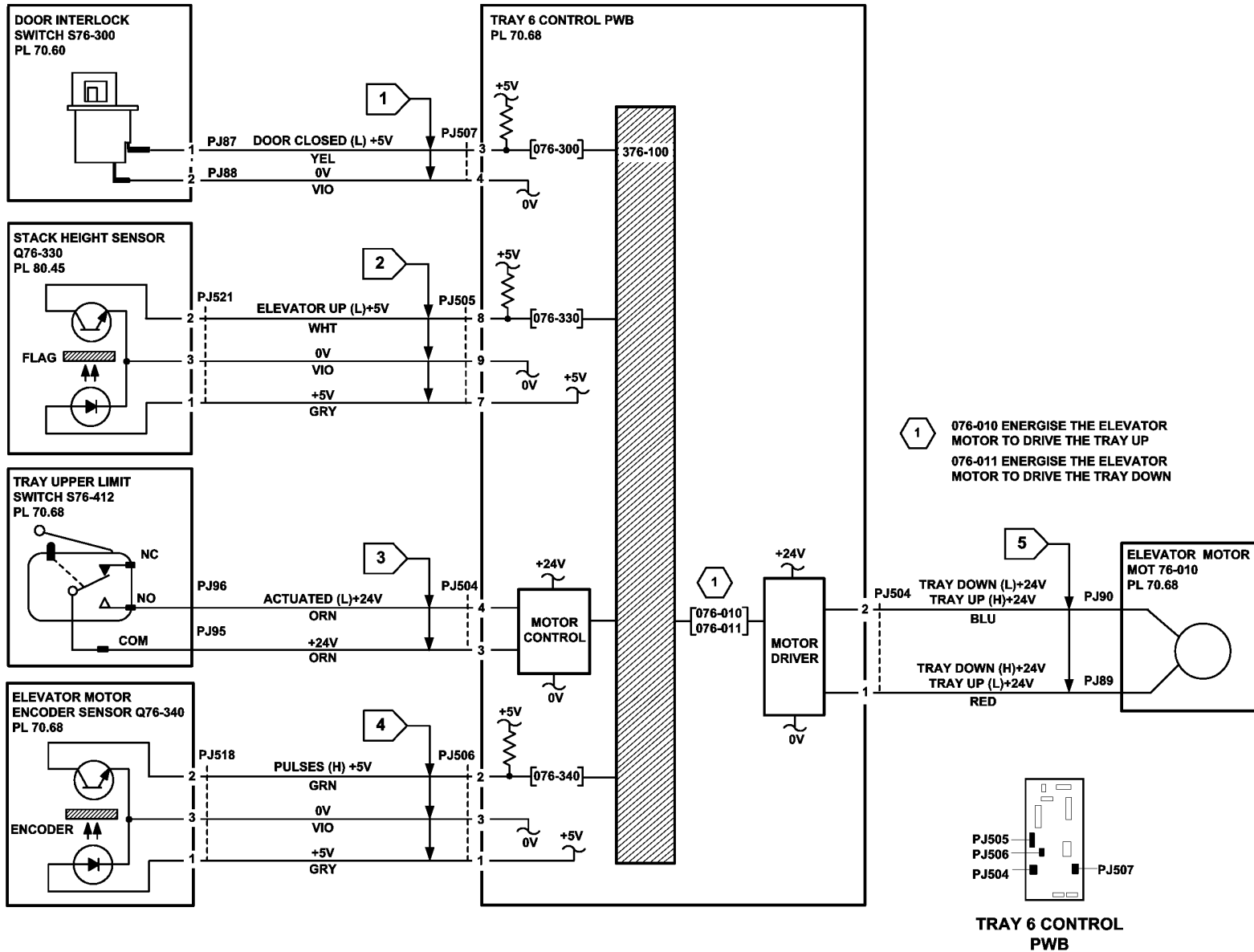


Figure 3 Circuit diagram

TX-1-0391-A

376-101-00 Tray 6 Elevator Lower Failure RAP

376-101-00 A signal was not detected by the encoder when the elevator motor was driving down.

Remote Service Actions

Ask the customer to check for obstructions behind the tray. If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Ensure the cable holder is not trapped behind the elevator motor bracket, [Figure 1](#). The cable holder is correctly positioned.

Y N

Reposition the cable holder so that it does not become trapped behind the elevator motor bracket.

Open, then close the tray 6 door. The tray moves down.

Y N

Enter [dC330](#) code 076-300 Tray 6 door switch, S76-300. Press Start. Manually toggle the tray 6 door switch. The display changes.

Y N

Go to [Flag 1](#). Check S76-300. Refer to:

- [GP 13](#) How to Check a Switch.
- [P/J507](#), [Tray 6 control PWB](#).
- [301E](#) +5V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 6 door switch, [PL 75.60](#) Item 6.
- Tray 6 control PWB, [PL 75.68](#) Item 8.

Enter [dC330](#) code 076-335 tray down sensor, Q76-335. Press Start. Manually activate the tray down sensor. The display changes

Y N

Go to [Flag 2](#). Check Q76-335. Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J505](#), [Tray 6 control PWB](#).
- [301E](#) +5V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray down sensor, [PL 75.68](#) Item 9.
- Tray 6 control PWB, [PL 75.68](#) Item 8.

A B

Check the voltage at PJ504 pin 6, [Flag 3](#). Manually actuate the tray down limit switch, S76-415, by pressing the plate under the paper tray, [Figure 2](#). The voltage changes.

Y N

Go to [Flag 3](#). Check S76-415. Refer to:

- [GP 13](#) How to Check a Switch.
- [P/J504](#), [Tray 6 control PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray down limit switch, [PL 75.70](#) Item 2.
- Tray 6 control PWB, [PL 75.68](#) Item 8.

Enter [dC330](#) code 076-340 elevator encoder sensor, Q76-340. Press Start. Manually lift the elevator motor to activate the sensor. The display changes

Y N

Go to [Flag 4](#). Check Q76-340. Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J505](#), [Tray 6 control PWB](#).
- [301E](#) +5V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Elevator encoder sensor, [PL 75.68](#) Item 5.
- Tray 6 control PWB, [PL 75.68](#) Item 8.

Enter [dC330](#) code 076-011 to lower the elevator motor, MOT76-010. Press Start. The motor runs

Y N

Go to [Flag](#). Check MOT76-010. Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J504](#), [Tray 6 control PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP

Install new components as necessary:

- Elevator motor, [PL 75.68](#) Item 4.
- Tray 6 control PWB, [PL 75.68](#) Item 8.

The elevator motor is operating correctly. Perform [ADJ 70.5](#) Tray 6 Stack Height Sensor and Retard Shield. Perform [SCP 5](#) Final Actions.

The elevator motor is operating correctly. Perform [ADJ 70.5](#) Tray 6 Stack Height Sensor and Retard Shield. Perform [SCP 5](#) Final Actions.

A B

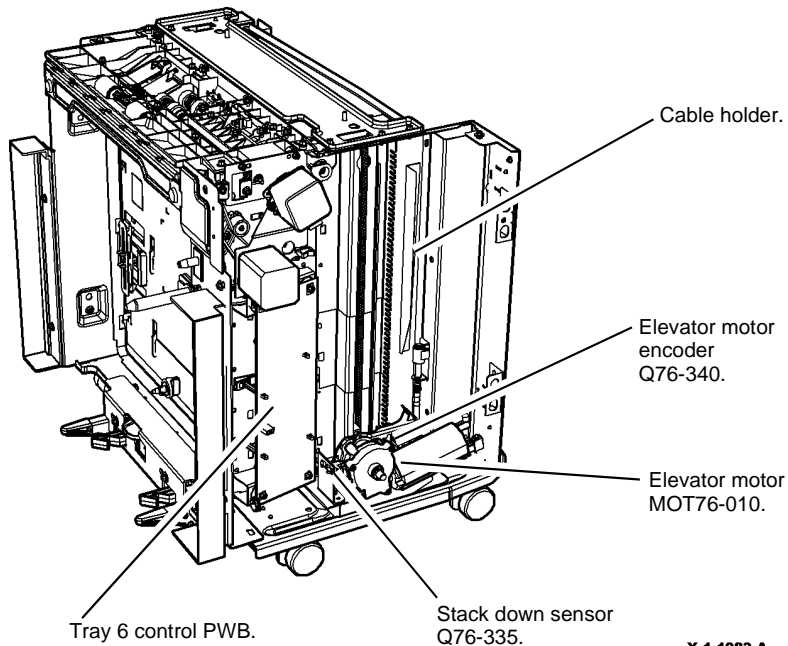


Figure 1 Component location

X-1-1983-A

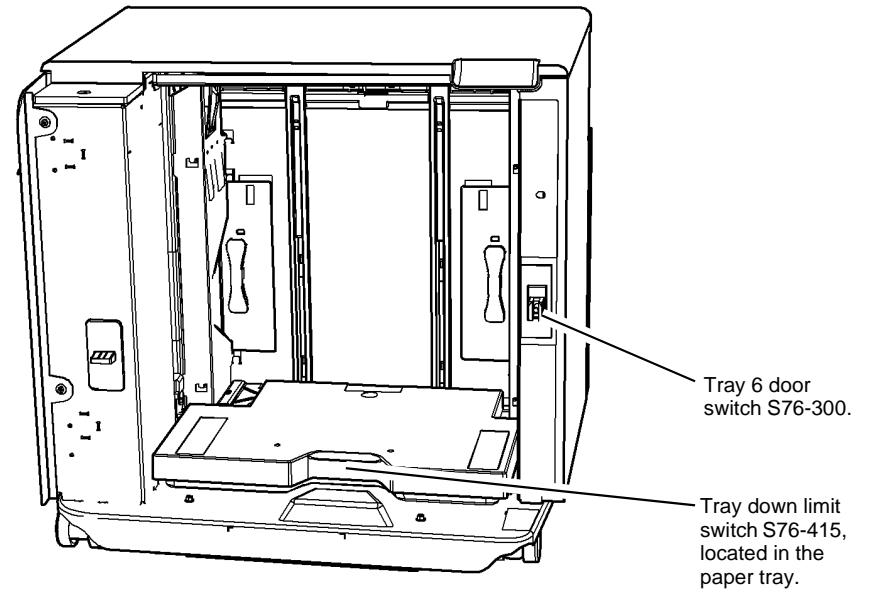


Figure 2 Component location

X-1-1984-A

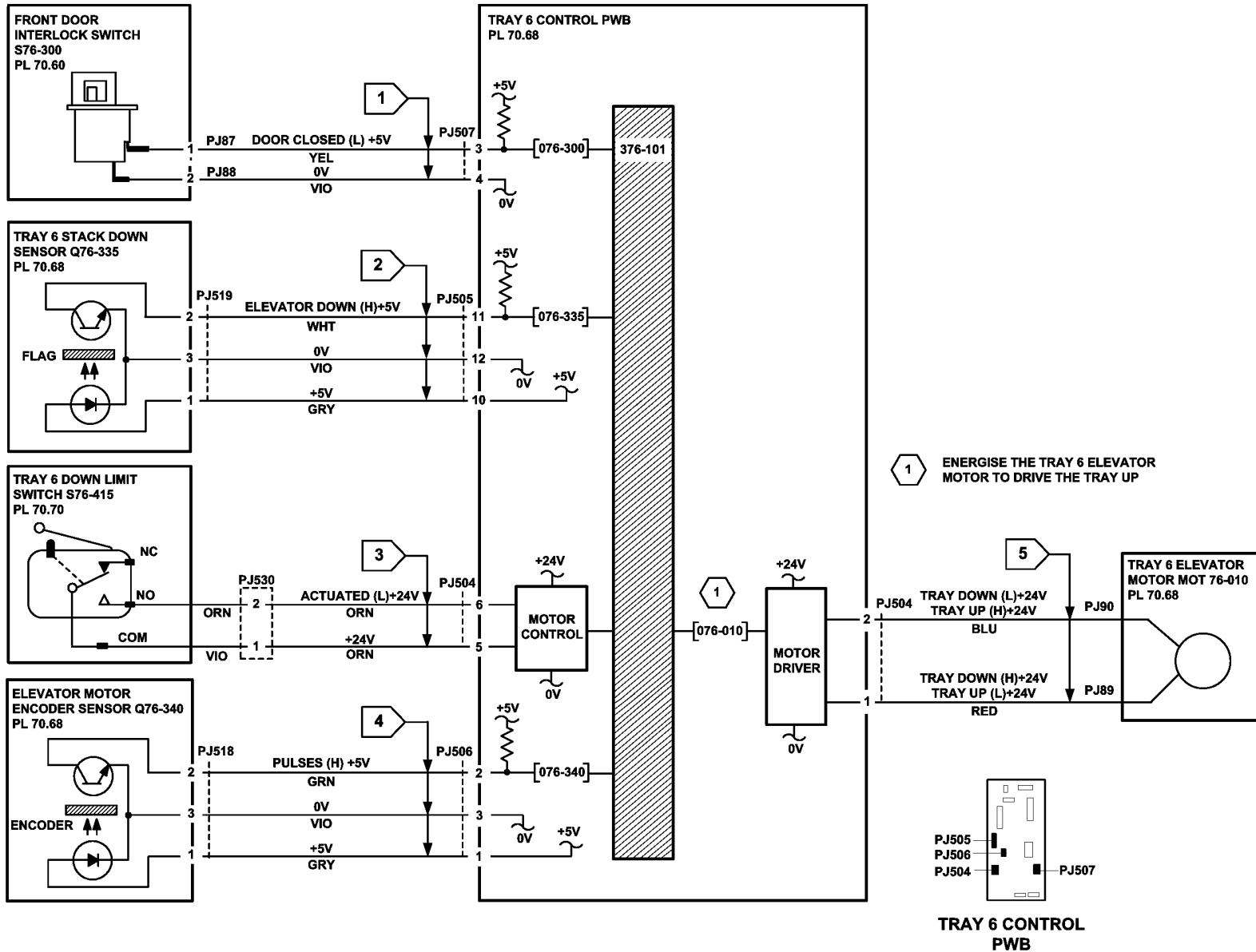


Figure 3 Circuit diagram

TX-1-0392-A

376-500-00 Tray 6 Door Open During Run RAP

376-500-00 The tray 6 door was open during run when the paper is fed from tray 6.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Ensure that the door is correctly aligned and closes correctly.
- Check the switch actuator, [Figure 1](#).

Procedure

Enter [dC330](#) code 076-300 tray 6 door switch, S76-300. Press Start. Open, then fully close the door. **The display changes.**

Y N

Go to [Flag 1](#). Check S76-300. Refer to:

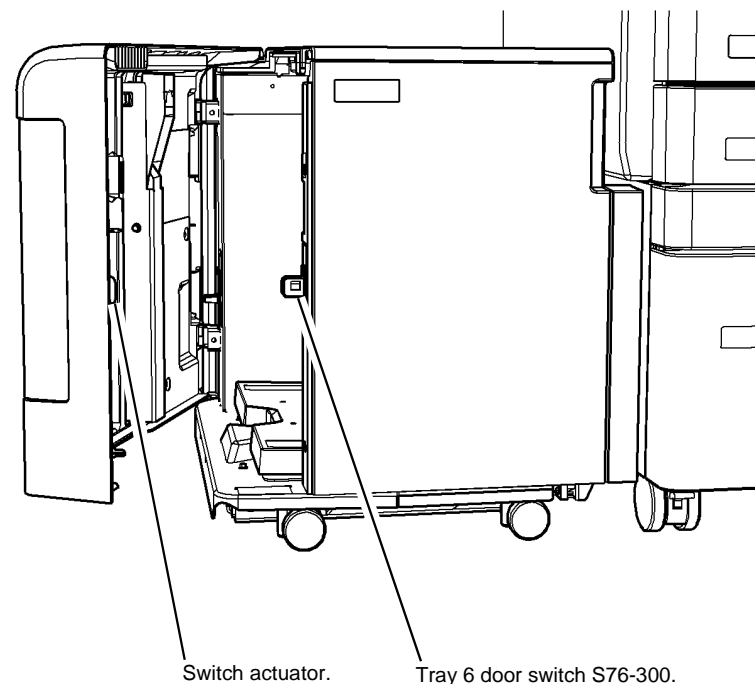
- [GP 13](#) How to Check a Switch.
- [P/J507](#), [Tray 6 control PWB](#).
- [301E](#) +5V Distribution RAP
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 6 door switch, [PL 75.60 Item 6](#).
- Tray 6 control PWB, [PL 75.68 Item 8](#).

If the fault remains, install new components as necessary:

- Tray 6 door switch, [PL 75.60 Item 6](#).
- Tray 6 control PWB, [PL 75.68 Item 8](#).



X-1-1-985-A

Figure 1 Component location

376-510-00 Tray 6 Undocked During Run RAP

376-510-00 Tray 6 was undocked during run when the paper is fed from tray 6.

Remote Service Actions

Ask the customer to check the items that follow:

- Ensure tray 6 is fully docked to the machine.
- Check for obstructions between tray 6 and the machine.

If the fault continues, a site visit will be necessary.

On Site Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Make sure that tray 6 is correctly aligned to the machine, [ADJ 70.3](#).

Procedure

Enter [dC330](#) code 076-310 tray 6 docking interlock switch, S76-310. Press Start. Undock, then dock tray 6, refer to [REP 70.24](#). **The display changes.**

Y N

Go to [Flag 1](#). Check S76-310. Refer to:

- [GP 13](#) How to Check a Switch.
- [P/J507](#), [Tray 6 control PWB](#).
- [Figure 1](#).
- [301E](#) +5V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 6 docking interlock switch, [PL 75.64](#) [Item 1](#).
- Tray 6 control PWB, [PL 75.68](#) [Item 8](#).

Perform the following:

- Check that the docking latch on tray 6 is latched onto the machine, [Figure 2](#).
- Check that the rail assembly is located correctly to the machine.

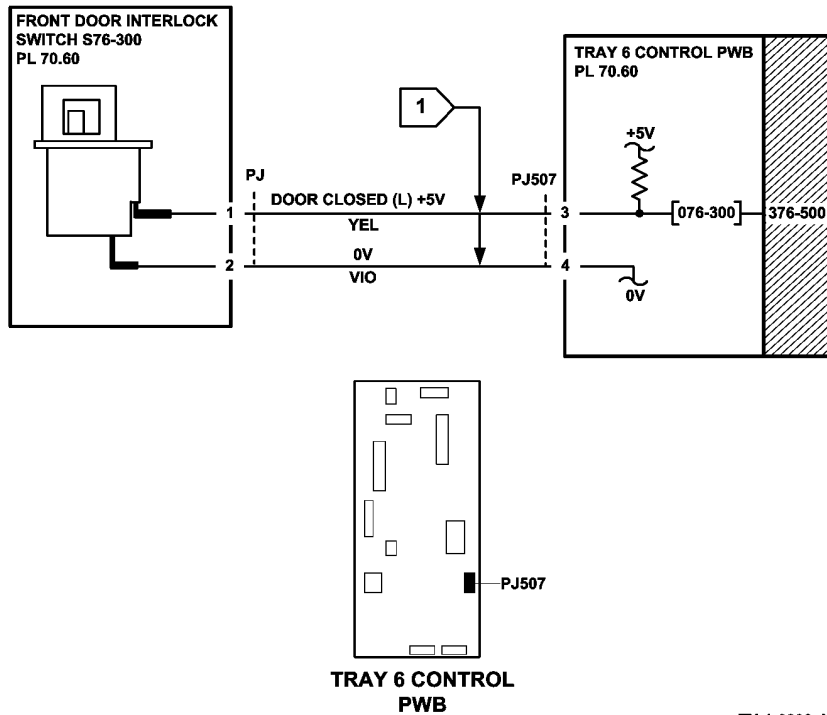


Figure 2 Circuit diagram

TX-1-0393-A

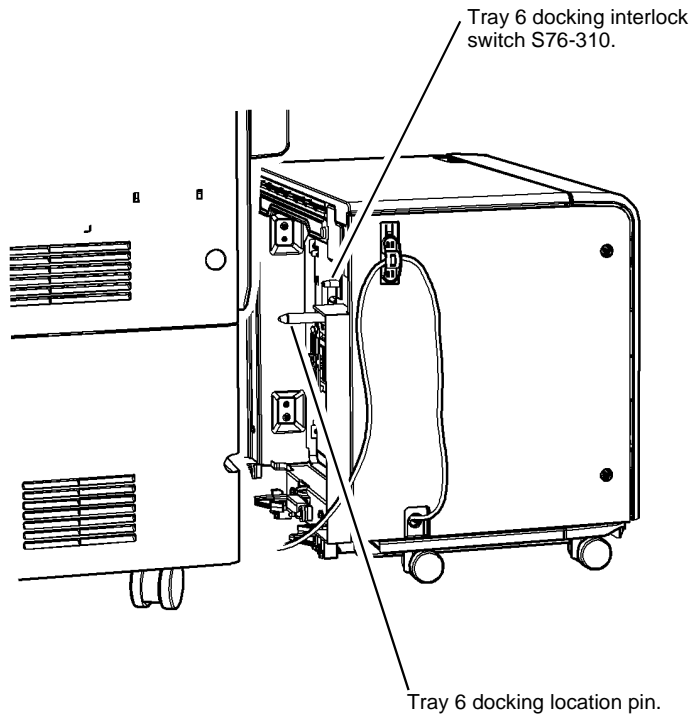
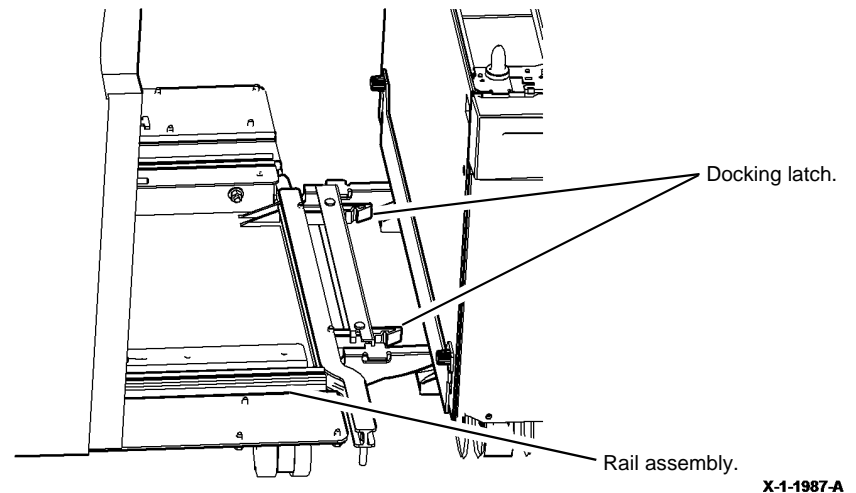


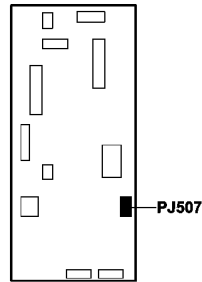
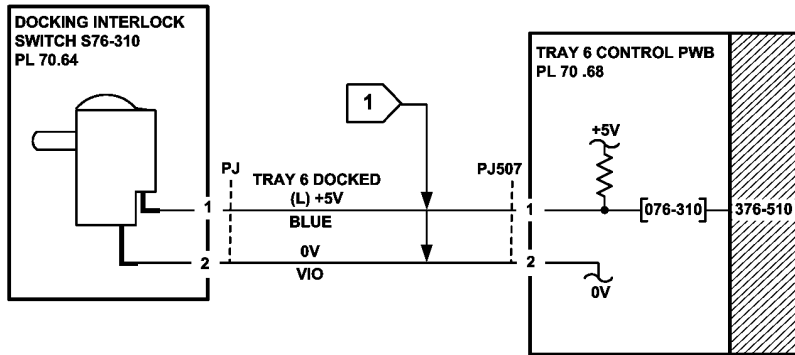
Figure 1 Component location

X-1-1986-A



X-1-1987-A

Figure 2 Component location



TRAY 6 CONTROL PWB

Figure 3 Circuit diagram

TX-1-0394-A

376A Tray 6 Empty RAP

Use this RAP to solve problems associated with the tray 6 empty sensor.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check that the hole in the tray, directly under the sensor is clear and empty, Figure 1.
- Check the sensor for contamination.

Procedure

Enter dC330 code 076-320 empty sensor, Q76-320. Press Start. Manually actuate the tray empty sensor. **The display changes.**

Y N

Go to Flag 1. Check Q76-320. Refer to:

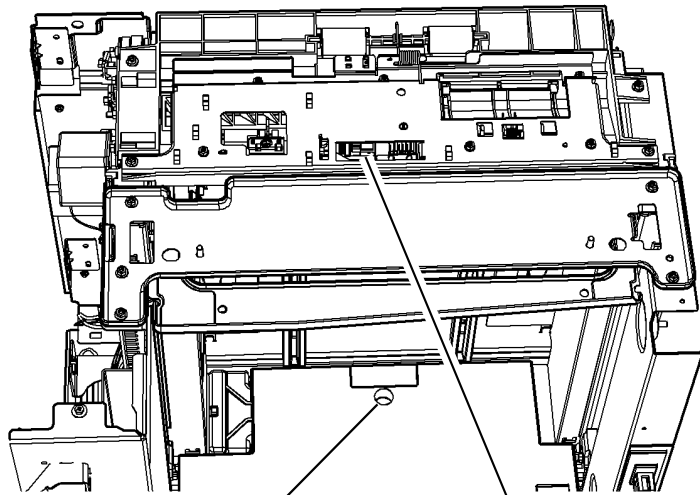
- GP 11 How to Check a Sensor.
- P/J505, Tray 6 control PWB.
- 301E +5V Distribution RAP.
- 301B 0V Distribution RAP.

Install new components as necessary:

- Empty sensor, PL 80.41 Item 6
- Tray 6 control PWB, PL 75.68 Item 8.

The fault may be intermittent. Perform the steps that follow:

- Check the wiring harness for damage, GP 7.
- Check that the empty sensor is located correctly.

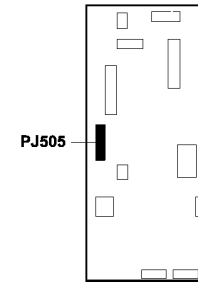
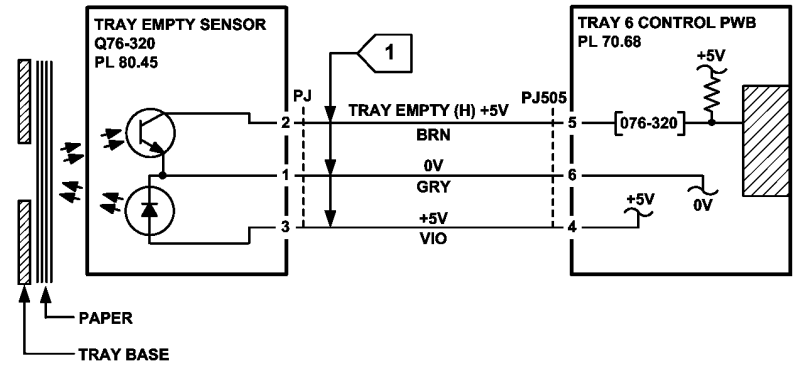


Empty sensor Q76-320.

Check the hole in the tray is clear.

Figure 1 Component location

X-1-1988-A



TRAY 6 CONTROL PWB

Figure 2 Circuit diagram

TX-1-0395-A

381-106-00 Lead Edge Late to TAR 1 Sensor from Tray 1 RAP

381-106-00 The lead edge of the paper failed to actuate the tray 1 TAR sensor within the correct time after feeding paper from tray 1.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 1. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check that the paper guides are set correctly.
- Ask the customer to observe the tray 1 feeder and check for obstructions.
- Ask the customer to turn or change the paper in the tray.

If the fault persists a site visit will be necessary.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check that the tray elevates to the feed position. Refer to [371-100-00](#), [371-217-00](#) Tray 1 Elevator Lift Failure RAP.
- Check that the left door assembly is latched correctly.
- Check the left door interlock switch. Refer to [301-305-00](#) Left Door Open RAP.
- Check for damage to the chamfered edge on the left side of the tray. If necessary install a new paper tray, [PL 70.10](#) Item 15.

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

NOTE: To help fault diagnosis, install the tray 1 paper feed assembly in the tray 2 paper feed assembly position. With tray 1 removed, the operation of the feed assembly can be observed. Refer to [REP 80.1](#).

Enter [dC330](#) code 081-001, tray 1 TAR sensor, Q81-001, [Figure 1](#). Open the left door. Manually actuate Q81-001. **The display changes.**

Y N

Go to [Flag 1](#). Check Q81-001.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J750](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new Tray 1 TAR sensor, [PL 80.10](#) Item 5, If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 080-006, TAR/bypass tray motor, MOT80-006. **The motor runs.**

Y N

Go to [Flag 2](#). Check MOT80-006.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J754](#), [IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new TAR/bypass tray motor, [PL 80.25](#) Item 5. If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Observe the transport rolls, [PL 80.25](#) Item 7. **The transport rolls rotate.**

Y N

Check the transport roll drive belt, drive pulley and pulley, [PL 80.25](#).

Install new components as necessary:

- Transport roll drive belt, [PL 80.25](#) Item 2.
- Pulley, [PL 80.25](#) Item 4.
- Transport roll bearing, [PL 80.25](#) Item 6.
- Transport roll, [PL 80.25](#) Item 7.

Check the nip roll assembly, [PL 80.10](#) Item 10, refer to [GP 7](#). Manually rotate the nip rolls.

The nip rolls rotate.

Y N

Install new components as necessary:

- Nip roll assembly, [PL 80.10](#) Item 10.
- Tension spring, [PL 80.10](#) Item 7.



CAUTION

To prevent damage to the feed mechanism, the paper tray must be pulled out before MOT71-010 is run in service mode.

Enter [dC330](#) code 081-010, tray 1 elevator/feed motor, MOT71-010. Pull out the tray. **The feed rolls rotate.**

Y N

Remove the feed assembly from the machine. Manually rotate the feed roll shaft. **The drive gears rotate.**

Y N

Check the drive gears for damage. If necessary, install new components, [PL 80.26](#).

Re-install the tray 1 feed assembly. Go to [Flag 3](#). Check MOT71-010.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J752](#), [IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a Tray 1 elevator/feed motor, [PL 80.26](#) Item 6. If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

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Observe the nudger roll, [PL 80.26 Item 5](#). **The nudger roll rotates.**

Y N

Check the nudger roll drive belt and drive coupling for damage. If necessary, install new components, [PL 80.26](#).

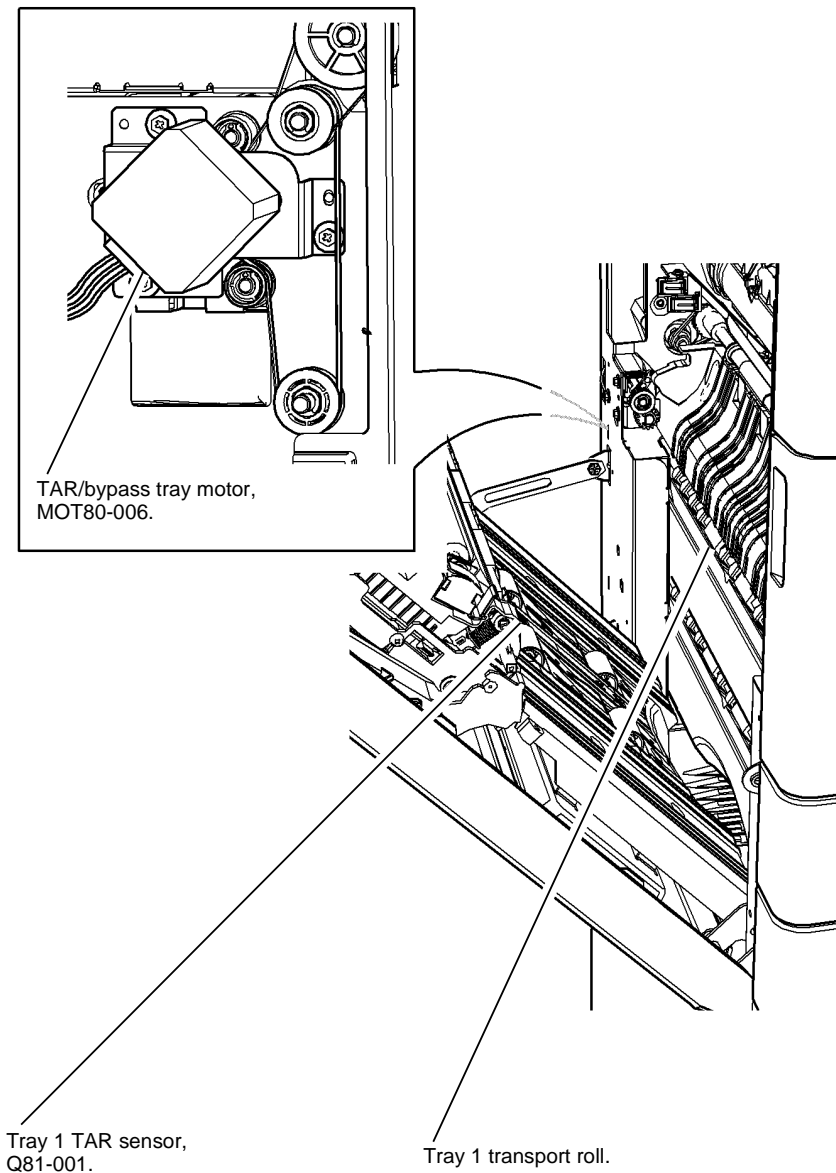
Remove the paper tray. Manually actuate the retard nip split mechanism. **The retard roll moves against the feed roll.**

Y N

Check the retard roll drive coupling and mechanism for damage. If necessary, install new components, [PL 80.26](#).

Perform the steps that follow:

- Clean the feed roll using a cloth dampened with water.
- Check the roll assembly, [PL 80.26 Item 3](#).
- Check the paper feed assembly, [PL 80.26 Item 1](#).



X-1-0155-A

Figure 1 Component location

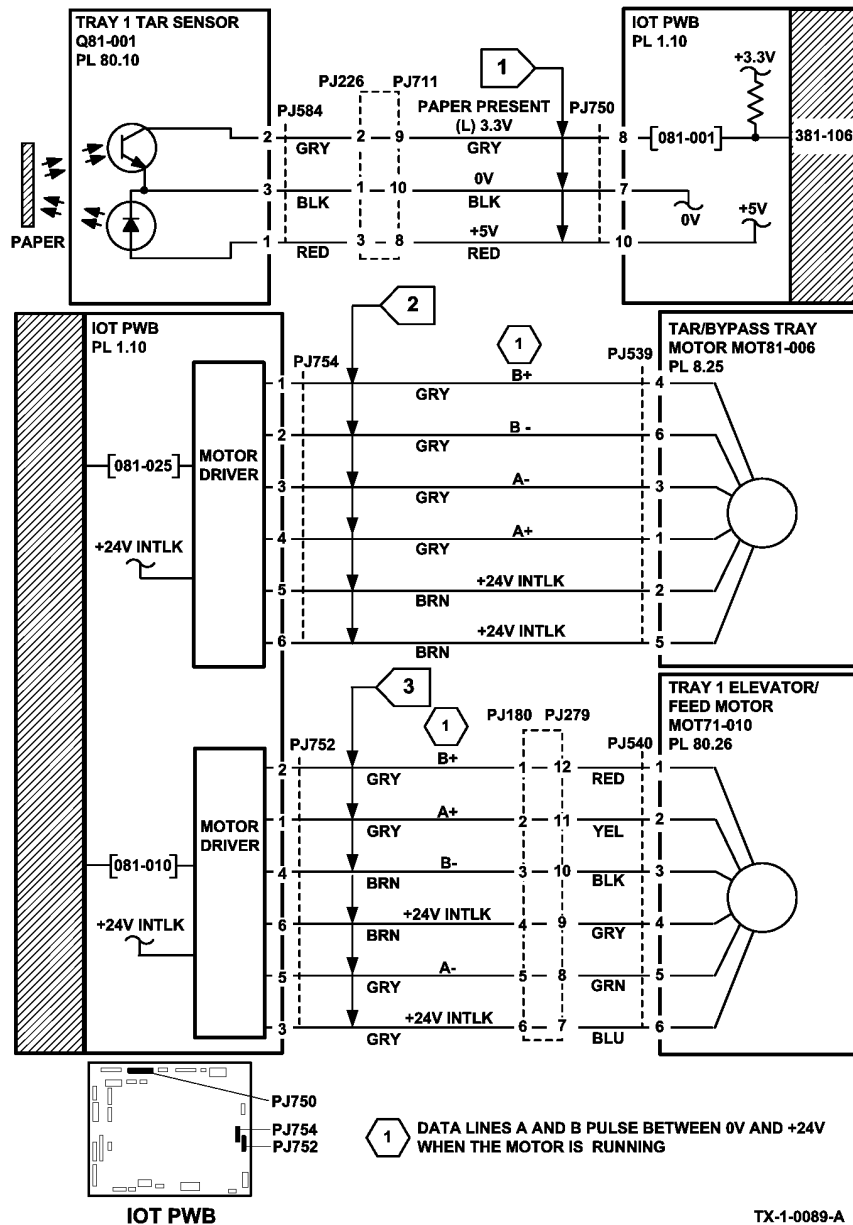


Figure 2 Circuit diagram

381-126-00 Lead Edge Late to TAR 2 Sensor from Tray 2 RAP

381-126-00 The lead edge of the paper failed to actuate the tray 2 TAR sensor within the correct time after feeding paper from tray 2.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 2. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check that the paper guides are set correctly.
- Ask the customer to observe the tray 2 feeder and check for obstructions.
- Ask the customer to turn or change the paper in the tray.

If the fault persists a site visit will be necessary.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check that the tray elevates to the feed position. Refer to [372-100-00](#), [372-217-00](#) Tray 2 Elevator Lift Failure RAP.
- Check that the left door is latched correctly.
- Check the left door interlock switch. Refer to [301-305-00](#) Left Door Open RAP.
- Check for damage to the chamfered edge on the left side of the tray. If necessary install a new paper tray, [PL 70.10](#).

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 082-001, tray 2 TAR sensor, Q82-001. [Figure 1](#). Open the left door. Manually actuate Q82-001. **The display changes.**

Y N
Re-install the tray 1 feed assembly. Go to [Flag 3](#). Check MOT71-010. Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J750](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new Tray 2 TAR sensor, [PL 80.10](#) Item 5. If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 080-006, TAR/bypass tray motor, MOT80-006. **The motor runs.**

Y N
Go to [Flag 2](#). Check MOT80-006. Refer to:

- [GP 10](#) How to Check a Motor.

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- [P/J754, IOT PWB.](#)
- [301G +24V Distribution RAP.](#)
- [301B 0V Distribution RAP.](#)

If necessary, install a new TAR/bypass tray motor, [PL 80.25 Item 5](#). If the fault persists, perform the [OF7 IOT PWB Diagnostics RAP](#).

Observe the transport rolls, [PL 80.25 Item 7](#). **The transport rolls rotate.**

Y N

Check the transport roll drive belt, drive pulley and pulley, [PL 80.25](#).

Install new components as necessary:

- Transport roll drive belt, [PL 80.25 Item 2](#).
- Pulley, [PL 80.25 Item 4](#).
- Transport roll bearing, [PL 80.25 Item 6](#).
- Transport roll, [PL 80.25 Item 7](#).

Check the nip roll assembly, [PL 80.10 Item 10](#), refer to [GP 7](#). Manually rotate the nip rolls.

The nip rolls rotate.

Y N

Install new components as necessary:

- Nip roll assembly, [PL 80.10 Item 10](#).
- Tension spring, [PL 80.10 Item 7](#).



CAUTION

To prevent damage to the feed mechanism, the paper tray must be pulled out before MOT72-010 is run in service mode.

Enter [dC330](#) code 081-020, tray 2 elevator/feed motor, MOT72-010. Pull out the tray. **The motor runs.**

Y N

Remove the feed assembly from the machine. Manually rotate the feed roll shaft. **The feed rolls rotate.**

Y N

Check the drive gears for damage. If necessary, install new components, [PL 80.26](#).

Install the tray 2 feed assembly. Go to [Flag 3](#). Check MOT72-010.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J752, IOT PWB.](#)
- [301E +5V and +5VSB Distribution RAP.](#)
- [301G +24V Distribution RAP.](#)
- [301B 0V Distribution RAP.](#)

If necessary, install a new tray 2 elevator/feed motor, [PL 80.26 Item 6](#). If the fault persists, perform the [OF7 IOT PWB Diagnostics RAP](#).

Observe the nudger roll, [PL 80.26 Item 5](#). **The nudger roll rotates.**

Y N

Check the nudger roll drive belt and drive coupling for damage. If necessary install new components, [PL 80.26](#).

B

B

Remove the paper tray. Manually activate the retard nip split mechanism. **The retard roll moves against the feed roll.**

Y N

Check the retard roll drive coupling and mechanism for damage. If necessary install new components, [PL 80.26](#).

Perform the steps that follow:

- Clean the feed roll using a cloth dampened with water.
- Check the feed roll assembly, [PL 80.26 Item 3](#).
- Check the paper feed assembly, [PL 80.26 Item 1](#).

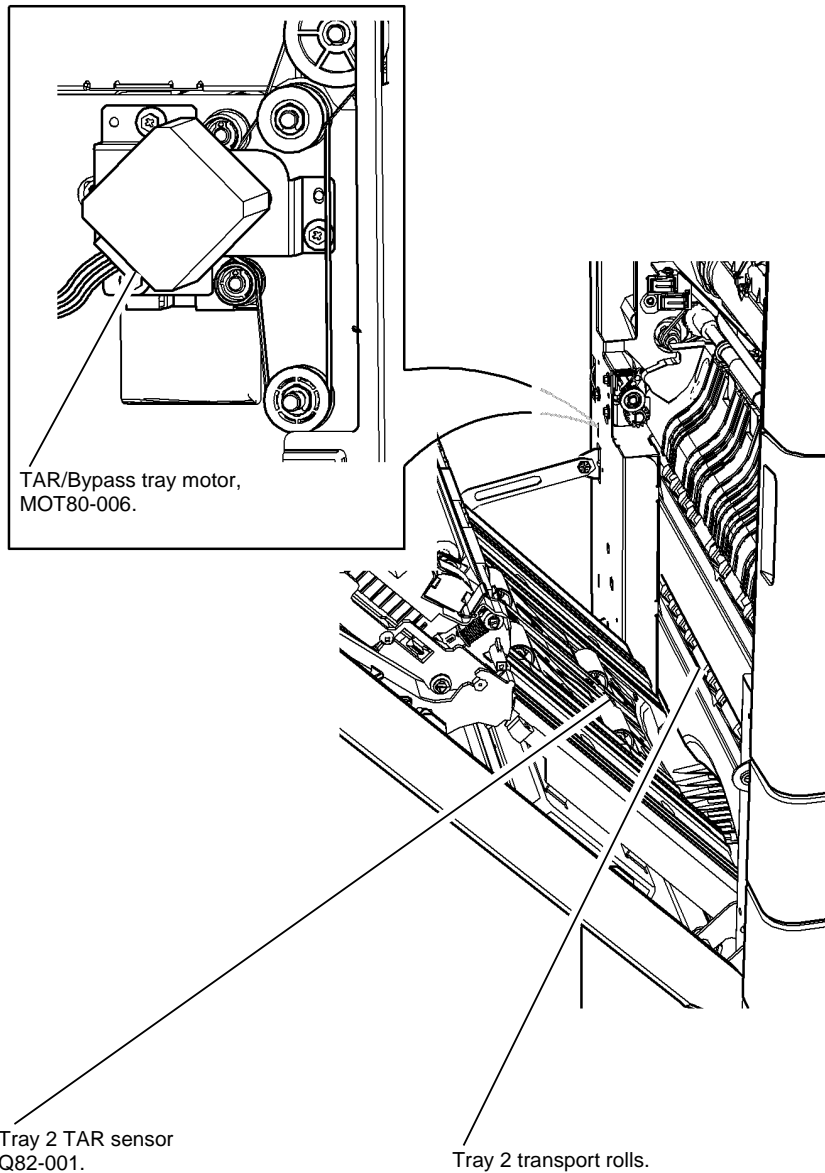


Figure 1 Component location

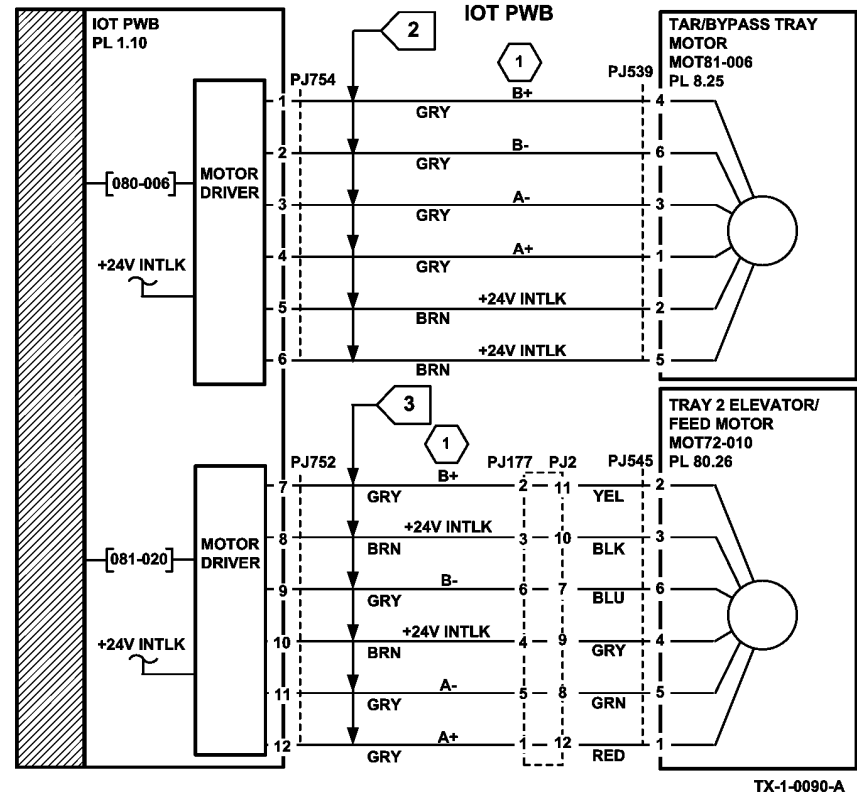
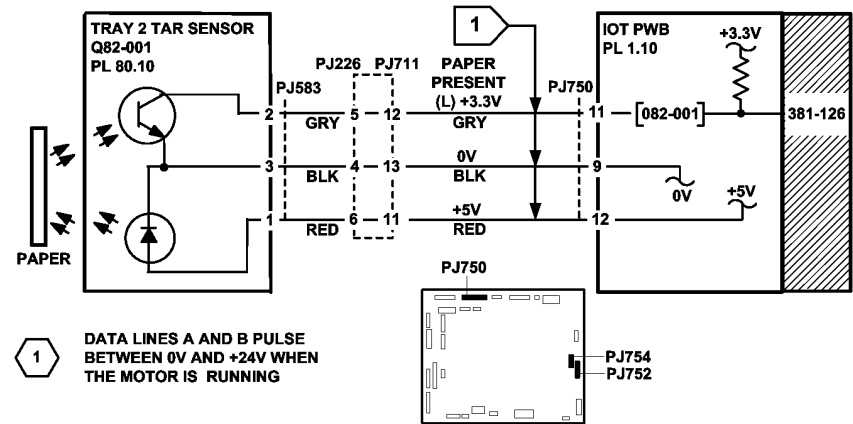


Figure 2 Circuit diagram

381-136-00 Lead Edge Late to Tray 3 Feed Sensor RAP

381-136-00 The lead edge of the paper failed to actuate the tray 3 feed sensor within the correct time after feeding paper from tray 3.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 3. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to ensure that tray 3 is pushed fully home.
- Ask the customer to check that the left door is latched correctly.

If the fault persists a site visit will be necessary.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- If the misfeed occurs between 15 and 20 paper feeds, perform the [373-100-00, 373-217-00](#) Tray 3 Elevator Lift Failure RAP.
- Reducing the retard roll nip pressure will make the retard action less aggressive and may lessen the occurrence of misfeeds. Perform [ADJ 80.3](#).

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 081-103, tray 3 feed sensor, Q81-103, [Figure 2](#). Manually actuate Q81-103. **The display changes.**

Y N
Go to [Flag 1](#). Check Q81-103.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J755, IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new tray 3 feed sensor, [PL 80.32 Item 3](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 081-045, HCF transport motor, MOT81-045, [Figure 1](#). **The motor runs.**

Y N
Go to [Flag 2](#). Check MOT81-045.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J756, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new HCF transport motor, [PL 80.36 Item 13](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Observe the HCF transport roll, [PL 80.33 Item 4](#). **The HCF transport roll rotates.**

Y N
Check the components that follow:

- HCF transport roll, [PL 80.33 Item 4](#).
- Gear, [PL 80.33 Item 2](#).
- Transport gear pulley, [PL 80.36 Item 12](#).

Install new components as necessary.



CAUTION

To prevent damage to the feed mechanism, the paper tray must be pulled out before MOT81-030 is run in service mode.

Enter [dC330](#) code 081-030, tray 3 feed motor, MOT81-030, [Figure 1](#). Pull out tray 3. **The motor runs.**

Y N
Go to [Flag 3](#). Check MOT81-030.
Refer to:

- [GP 10](#) How to Check a motor.
- [P/J755, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new Tray 3 feed motor, [PL 80.32 Item 8](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 081-030, tray 3 feed motor, MOT81-030. Add the code 081-033, tray 3 feed clutch, CL81-033, [Figure 2](#). Pull out tray 3. Observe the tray 3 feed and nudger rolls.

NOTE: The bypass tray clutch will also energize when component control code 081-033 is entered.

The rolls rotate.

Y N
Go to [Flag 4](#). Check CL81-033.
Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [P/J755, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new tray 3 feed clutch, [PL 80.32 Item 19](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Perform the steps that follow:

- Clean the feed roll, nudger roll and retard roll using a cloth dampened with water.
- Check the feed roll, retard roll and nudger roll for wear. If necessary install a new feed/nudger/retard roll spares kit, [PL 31.12 Item 15](#).

- Perform the adjustments that follow:
 - **ADJ 80.3** Tray 3 and Tray 4 Retard Roll Pressure. Ensure the spring seat set in the nominal (1mm) position.
 - **ADJ 80.1** Tray 3 and Tray 4 Nudger Roll Pressure.
- Ensure that **dC131** 500-143 is set to the nominal value of 1800.
- Check the tray 3 stack height sensor actuator on the feed assembly, **PL 80.32 Item 6**.
- Check the tray is level.
 1. Pull out tray 3 and remove all of the paper from the tray.
 2. Remove the tray 3 front cover.
 3. Manually elevate the tray to the top of its travel by rotating the elevator cable drum at the front of the tray.
 4. At the 3 locations where the metal paper tray protrudes through the plastic outer frame of tray 3, check that the top surface of the metal paper tray is the same distance from the inside top of the slots.
 5. If the tray is not level, install new elevator cables, **PL 70.18 Item 7**.
- Check the tray 3 paper tray guide for paper cut damage. If necessary install new components, **PL 70.18 Item 14**.

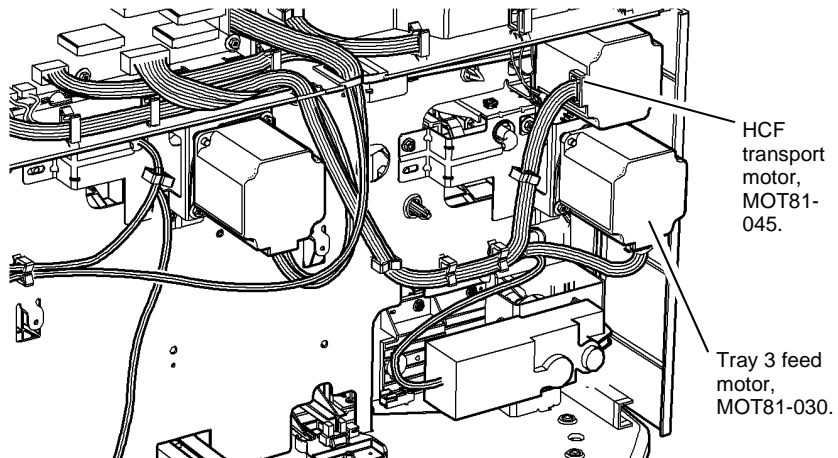


Figure 1 Component location

X-1-0159-A

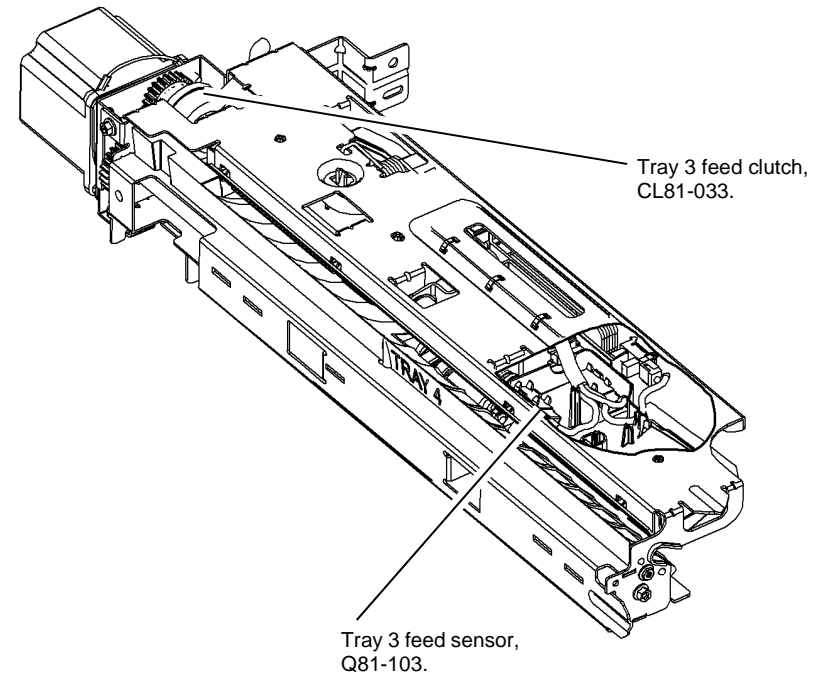


Figure 2 Component location

X-1-0160-A

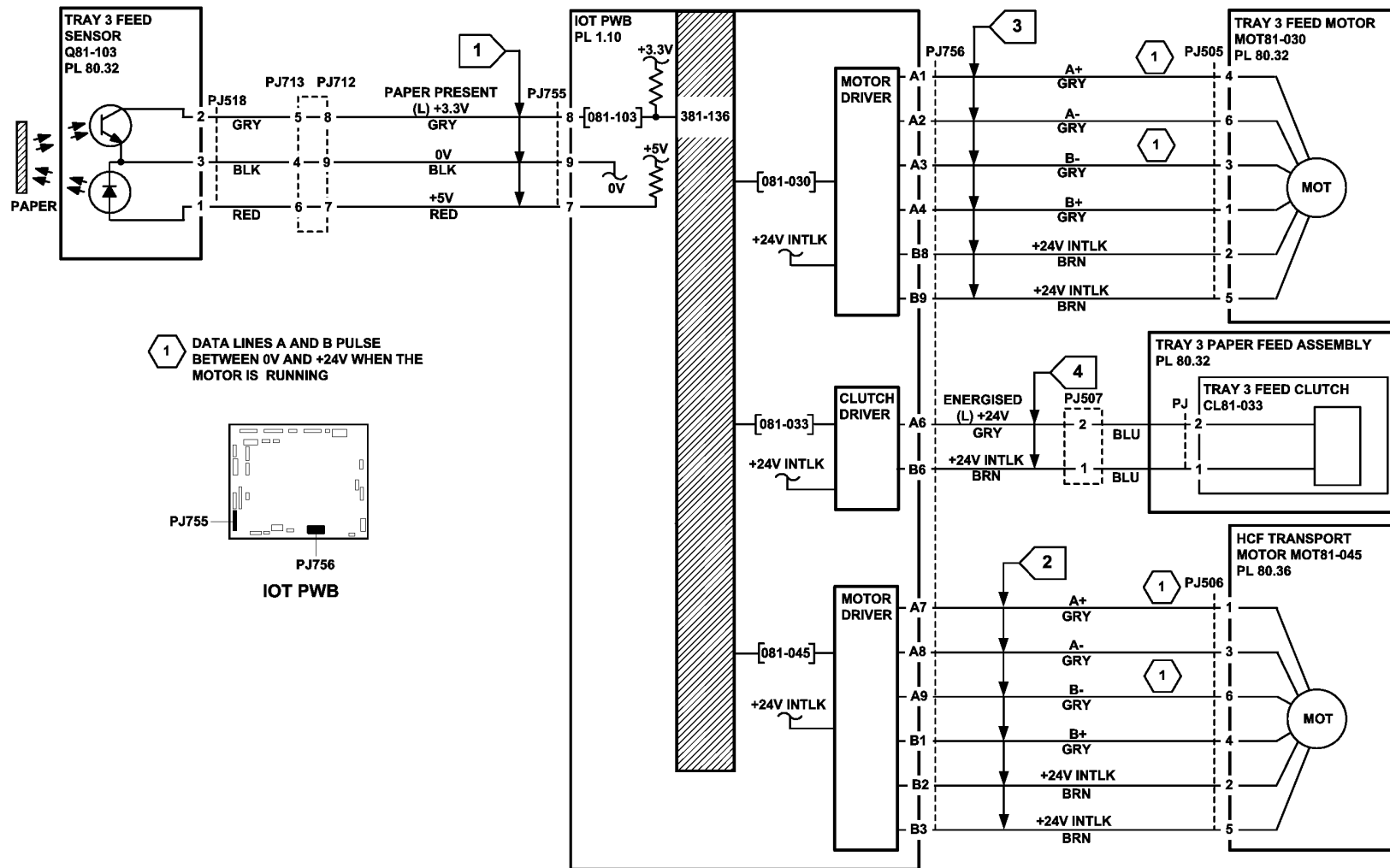


Figure 3 Circuit diagram

TX-1-0322-A

381-146-00 Lead Edge Late to Tray 4 Feed Sensor RAP

381-146-00 The lead edge of the paper failed to actuate the tray 4 feed sensor within the correct time after feeding paper from tray 4.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 4. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to ensure that tray 4 is pushed fully home.
- Ask the customer to check that the left door is latched correctly.

If the fault persists a site visit will be necessary.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- If the misfeed occurs between 15 and 20 paper feeds, perform the [374-100-00](#), [374-217-00](#) Tray 4 Elevator Lift Failure RAP.

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Locate the tray 4 feed sensor, [Figure 2](#). Enter [dC330](#) code 081-104, tray 4 feed sensor, Q81-104. Manually actuate Q81-104. **The display changes.**

Y N
Go to [Flag 1](#). Check Q81-104.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J786](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 4 feed sensor, [PL 80.33 Item 6](#).

Enter [dC330](#) code 081-104, tray 4 feed sensor, Q81-104. Manually actuate Q81-104.

The display changes.

Y N
Perform [OF7](#) IOT PWB Diagnostics RAP.



CAUTION

To prevent damage to the feed mechanism, the paper tray must be pulled out before [MOT81-040](#) is run in service mode.

Enter [dC330](#) code 081-040, tray 4 feed motor, [MOT81-040](#), [Figure 1](#). **The motor runs.**

Y N
Go to [Flag 3](#). Check [MOT81-040](#).

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J785](#), [IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 4 feed motor, [PL 80.33 Item 10](#).

Enter [dC330](#) code 081-040, tray 4 feed motor, [MOT81-040](#), [Figure 1](#). **The motor runs.**

Y N
Perform [OF7](#) IOT PWB Diagnostics RAP.

Locate the tray 4 feed clutch, [CL81-043](#), [Figure 2](#). Enter [dC330](#) code 081-040, tray 4 feed motor, [MOT81-040](#). Add the code 081-043, tray 4 feed clutch, [CL81-043](#). Pull out tray 4. Observe the tray 4 feed and nudger rolls. **The rolls rotate.**

Y N
Go to [Flag 2](#). Check [CL81-043](#).
Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [P/J785](#), [IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 4 feed clutch, [PL 80.33 Item 21](#).

The rolls rotate

Y N
Perform [OF7](#) IOT PWB Diagnostics RAP.

Go to [Final Actions](#).

Go to [Final Actions](#).

Locate the tray 4 feed clutch, [CL81-043](#), [Figure 2](#). Enter [dC330](#) code 081-040, tray 4 feed motor, [MOT81-040](#). Add the code 081-043, tray 4 feed clutch, [CL81-043](#). Pull out tray 4. Observe the tray 4 feed and nudger rolls. **The rolls rotate.**

Y N
Go to [Flag 2](#). Check [CL81-043](#).
Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [P/J785](#), [IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 4 feed clutch, [PL 80.33 Item 21](#).

The rolls rotate

Y N
Perform [OF7](#) IOT PWB Diagnostics RAP.

A B

A C D

A C D
Go to [Final Actions](#).
Go to [Final Actions](#).



To prevent damage to the feed mechanism, the paper tray must be pulled out before MOT81-040 is run in service mode.

Enter [dC330](#) code 081-040, tray 4 feed motor, MOT81-040, [Figure 1](#). **The motor runs.**

Y N
Go to [Flag 3](#). Check MOT81-040.
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J785, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 4 feed motor, [PL 80.33 Item 10](#).

Enter [dC330](#) code 081-040, tray 4 feed motor, MOT81-040, [Figure 1](#). **The motor runs.**

Y N
Perform [OF7](#) IOT PWB Diagnostics RAP.

Locate the tray 4 feed clutch, CL81-043, [Figure 2](#). Enter [dC330](#) code 081-040, tray 4 feed motor, MOT81-040. Add the code 081-043, tray 4 feed clutch, CL81-043. Pull out tray 4. Observe the tray 4 feed and nudger rolls. **The rolls rotate.**

Y N
Go to [Flag 2](#). Check CL81-043.
Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [P/J785, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 4 feed clutch, [PL 80.33 Item 21](#).

The rolls rotate

Y N
Perform [OF7](#) IOT PWB Diagnostics RAP.

Go to [Final Actions](#).

Go to [Final Actions](#).

Locate the tray 4 feed clutch, CL81-043, [Figure 2](#). Enter [dC330](#) code 081-040, tray 4 feed motor, MOT81-040. Add the code 081-043, tray 4 feed clutch, CL81-043. Pull out tray 4. Observe the tray 4 feed and nudger rolls. **The rolls rotate.**

Y N
Go to [Flag 2](#). Check CL81-043.

Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [P/J785, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 4 feed clutch, [PL 80.33 Item 21](#).

The rolls rotate

Y N
Perform [OF7](#) IOT PWB Diagnostics RAP.

Go to [Final Actions](#).

Go to [Final Actions](#).

Final Actions

Perform the steps that follow:

- Clean the feed roll, nudger roll and retard roll using a cloth dampened with water.
- Check the feed roll, nudger roll and retard roll for wear. If necessary install a new feed/nudger/retard roll spares kit, [PL 31.12 Item 15](#).
- Perform the adjustments that follow:
 - [ADJ 80.3](#) Tray 3 and Tray 4 Retard Roll Pressure. Ensure the spring seat set in the nominal (1mm) position.
 - [ADJ 80.1](#) Tray 3 and Tray 4 Nudger Roll Pressure.
- Ensure that [dC131](#) 500-143 is set to the nominal value of 1800.
- Check the tray 4 stack height sensor actuator on the feed assembly, [PL 80.33 Item 7](#).
- Check the tray is level:
 1. Pull out tray 4. Remove all the paper from the tray.
 2. Remove the tray 4 front cover.
 3. Manually elevate the tray to the top of its travel by rotating the elevator cable drum at the front of the tray.
 4. At the 3 locations where the metal paper tray protrudes through the outer plastic frame of tray 4, check that the top surface of the metal paper tray is the same distance from the inside top of the slots
 5. If the tray is not level, install new elevator cables, [PL 70.19 Item 7](#).
- Check the tray 4 paper tray guide for paper cut damage, [PL 70.19 Item 17](#).
- If the fault persists, refer to [GP 7](#). Check the components that follow:
 - The takeaway roll assembly, [PL 80.36 Item 2](#).
 - The idler roll assembly, [PL 80.36 Item 8](#).
 - HCF transport roll, [PL 80.33 Item 4](#).
 - The idler roll assembly, [PL 80.32 Item 2](#).

Install new components as necessary.

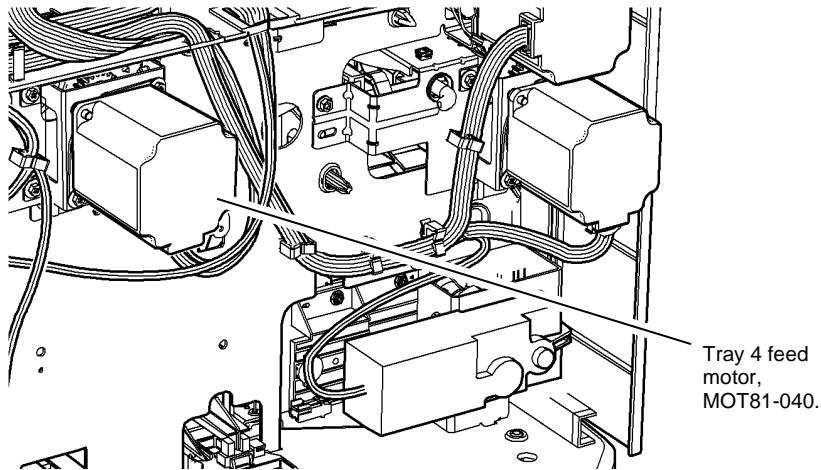


Figure 1 Component location

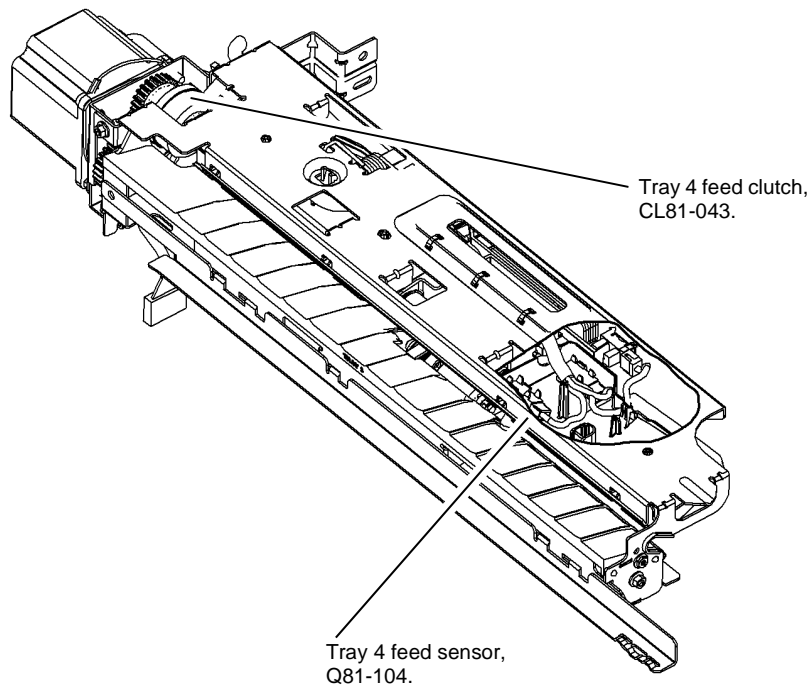


Figure 2 Component location

X-1-1438-A

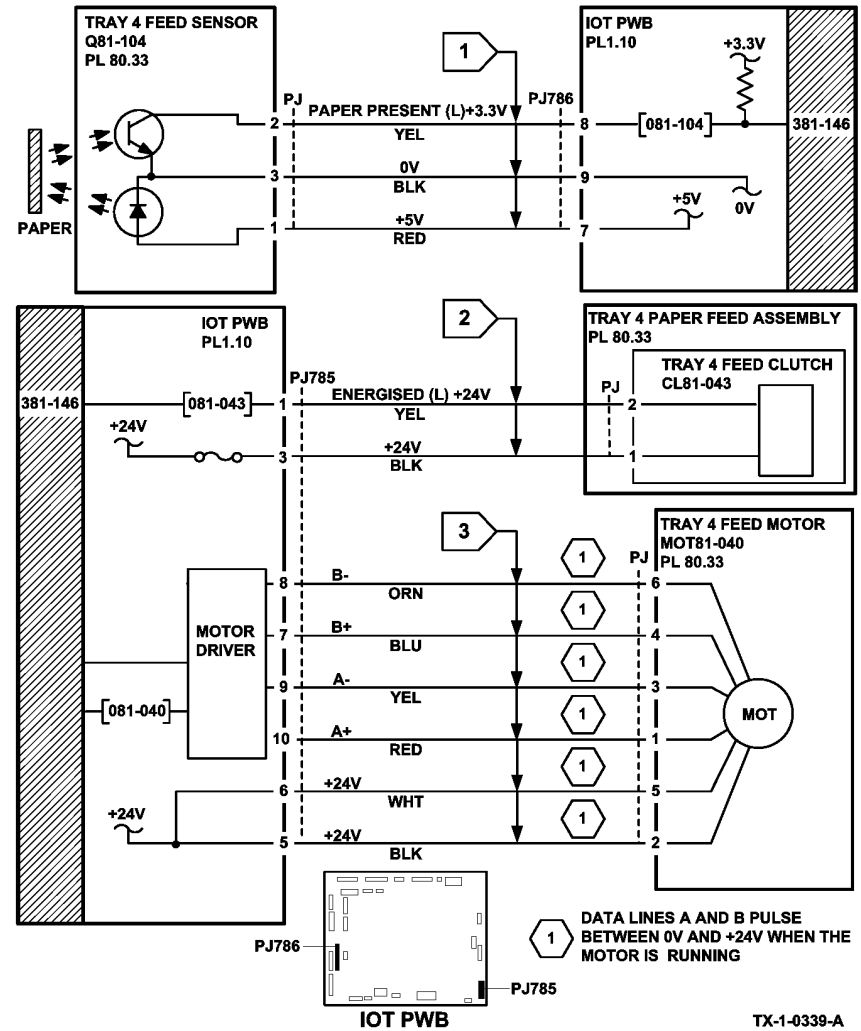


Figure 3 Circuit diagram

381-151-00 Lead Edge Late to Registration Sensor RAP

381-151-00 The lead edge of the paper was late to the registration sensor when feeding in simplex mode.

Remote Service Actions

- Ask the customer to check the condition of the paper in all trays. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check for obstructions in the paper path.
- Ask the customer to Check that the left door is latched correctly.

If the fault persists a site visit will be necessary.

Initial actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- If the fault occurs from the bypass tray, perform the [381-155-00](#) Lead Edge Late to Registration Sensor from the Bypass Tray RAP.
- If the fault occurs when feeding from tray 6, perform [ADJ 70.5](#) Tray 6 stack Height Sensor and Retard Shield.
- If 2 sheets of paper are jammed at the registration rolls. Perform the [OF8](#) Multifeed RAP.
- If multifeds occur from tray 3 or tray 4, increasing the retard roll nip pressure will make the retard action more aggressive and may lessen the occurrence of multifeds. Perform [ADJ 80.3](#).
- Clean the paper path sensors that follow:
 - Tray 1 TAR sensor, [PL 80.10](#) Item 5.
 - Tray 2 TAR sensor, [PL 80.10](#) Item 5.
 - Registration sensor, [PL 80.17](#) Item 7.
- Ensure that all connectors on the [IOT PWB](#) are correctly and securely seated.
- If the paper has excessive curl, refer to [IQ5](#).
- Check for skew. Refer to [IQ8](#).
- Check the condition of the pressure blade, [PL 80.17](#) Item 12. If the pressure blade is damaged or worn, install a new blade.

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 082-150, registration sensor, Q82-150, [Figure 1](#). Open the left door. Actuate Q82-150. **The display changes.**

- Y N
- Go to [Flag 1](#). Check Q82-150.
 - Refer to:
 - [GP 11](#) How to check a Sensor.
 - [P/J763](#), [IOT PWB](#).
 - [301E](#) +5V and +5VSB Distribution RAP.

- [301B](#) 0V Distribution RAP.

If necessary, install a new registration sensor, [PL 80.17](#) Item 7. If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

If the fault persists, perform the appropriate RAP:

- [381-190-00](#) Lead Edge Late to Registration Sensor from Tray 1.
- [381-191-00](#) Lead Edge Late to Registration Sensor from Tray 2.
- [381-192-00](#) Lead Edge Late to Registration Sensor from Tray 3.
- [381-193-00](#) Lead Edge Late to Registration Sensor from Tray 4.

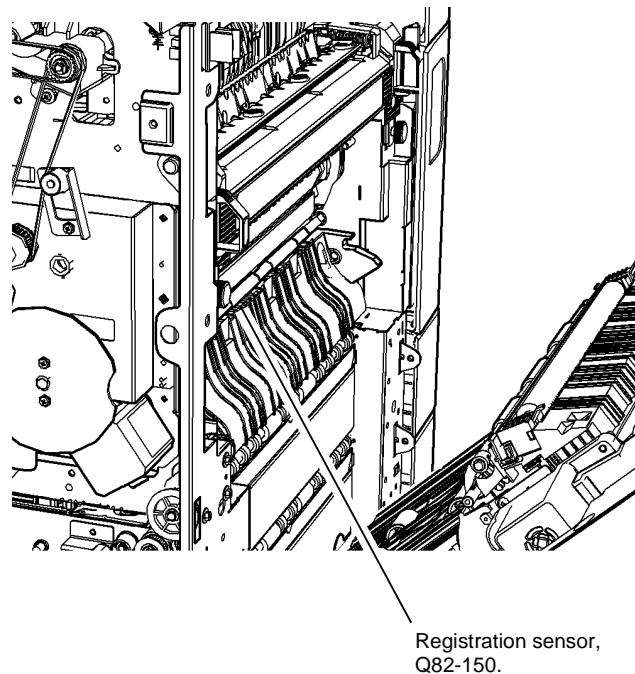


Figure 1 Component location

X-1-1212-A

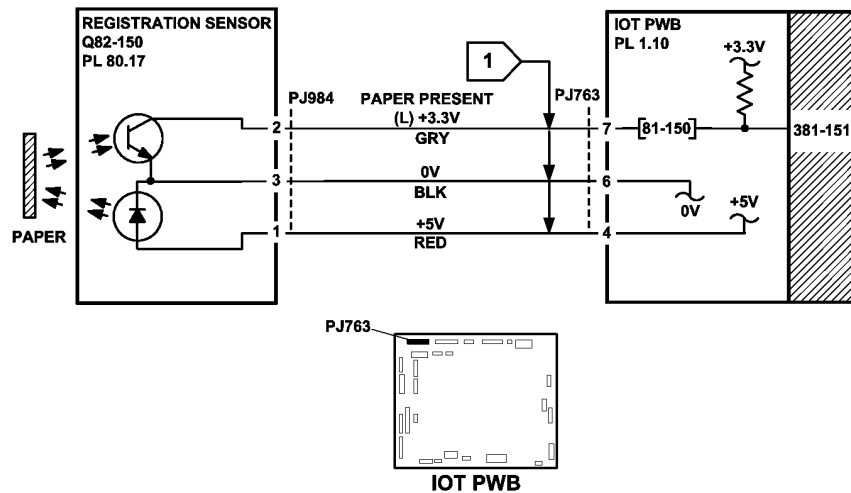


Figure 2 Circuit diagram

TX-1-0101-A

381-152-00 Trail Edge Late from Registration Sensor RAP

381-152-00 The trail edge of the paper was late from the registration sensor when feeding in simplex mode.

Remote Service Actions

- Ask the customer to check for obstructions in the paper path.
- Ask the customer to check the condition of the paper in all trays. Refer to **IQ1** and **GP 20**.
- Ask the customer to check that the left door is latched correctly.

If the fault continues a site visit will be necessary.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- If 2 sheets of paper are jammed at the registration rolls. Perform the **OF8** Multifeed RAP.
- If multifeds occur from tray 3 or tray 4, increasing the retard roll nip pressure will make the retard action more aggressive and may lessen the occurrence of multifeds. Perform **ADJ 80.3**.
- If the fault occurs from the bypass tray, perform the **381-155-00** Lead Edge Late to Registration Sensor from the Bypass Tray RAP.
- Clean the paper path sensors that follow:
 - Tray 1 TAR sensor, **PL 80.10** Item 5.
 - Tray 2 TAR sensor, **PL 80.10** Item 5.
 - Registration sensor, **PL 80.17** Item 7.
- Ensure that all connectors on the **IOT PWB** are correctly and securely seated.
- If the paper has excessive curl, refer to **IQ5**.
- Check for skew. Refer to **IQ8**.
- Check for paper in the fuser module.

Procedure

Open the left door. Enter **dC330** code 010-020, fuser drive motor, MOT10-020, **Figure 1**. Observe the fuser roll and the pressure roll through the top of the fuser. **The fuser rolls turn.**

Y N

Go to **Flag 1**. Check MOT10-020.

Refer to:

- **GP 10**, How to Check a Motor.
- **P/J761**, **IOT PWB**.
- **P/J656**, **LVPS**.
- **301E** +5V and +5VSB Distribution RAP.
- **301G** +24V Distribution RAP.
- **301B** 0V Distribution RAP.

If necessary, install a new main drive module, **PL 40.15** Item 1. If the fault persists, perform the **OF7** IOT PWB Diagnostics RAP and **301L** LVPS RAP.

A

A

Enter **dC330** code 093-045, print cartridge motor, MOT93-045, **Figure 1**. Observe the photoreceptor. **The photoreceptor turns.**

Y N

Go to **Flag 1**. Check MOT93-045.

Refer to:

- **GP 10**, How to check a Motor.
- **P/J756**, **IOT PWB**.
- **P/J656**, **LVPS**.
- **301E** +5V and +5VSB Distribution RAP.
- **301G** +24V Distribution RAP.
- **301B** 0V Distribution RAP.

Install new components as necessary:

- Main drive module, **PL 40.15 Item 1**.
- Print cartridge, **PL 90.17 Item 9**.

If the fault persists, perform the **OF7** IOT PWB Diagnostics RAP and **301L** LVPS RAP.

Enter **dC330** code 082-150, registration sensor, Q82-150, **Figure 2**. Actuate Q82-150. **The display changes.**

Y N

Go to **Flag 2**. Check Q82-150.

Refer to:

- **GP 11** How to check a Sensor.
- **P/J762**, **IOT PWB**.
- **301E** +5V and +5VSB Distribution RAP.
- **301B** 0V Distribution RAP.

If necessary, install a new registration sensor, **PL 80.17 Item 7**. If the fault persists, perform the **OF7** IOT PWB Diagnostics RAP.

Enter **dC330** code 080-040, registration motor, MOT80-040, **Figure 2**. **The motor runs.**

Y N

Go to **Flag 3**. Check MOT80-040.

Refer to:

- **GP 10**, How to Check a Motor.
- **P/J762**, **IOT PWB**.
- **301G** +24V Distribution RAP.
- **301B** 0V Distribution RAP.

If necessary, install a new registration motor, **PL 40.15 Item 6**. If the fault persists, perform the **OF7** IOT PWB Diagnostics RAP.

Observe the registration roll, **PL 80.17 Item 5**. **The registration roll turns.**

Y N

Check the registration drive gear, **PL 80.17 Item 3**. Install new components as necessary.

Refer to **GP 7** and **OF10** Intermittent Fault RAP. Check the components that follow:

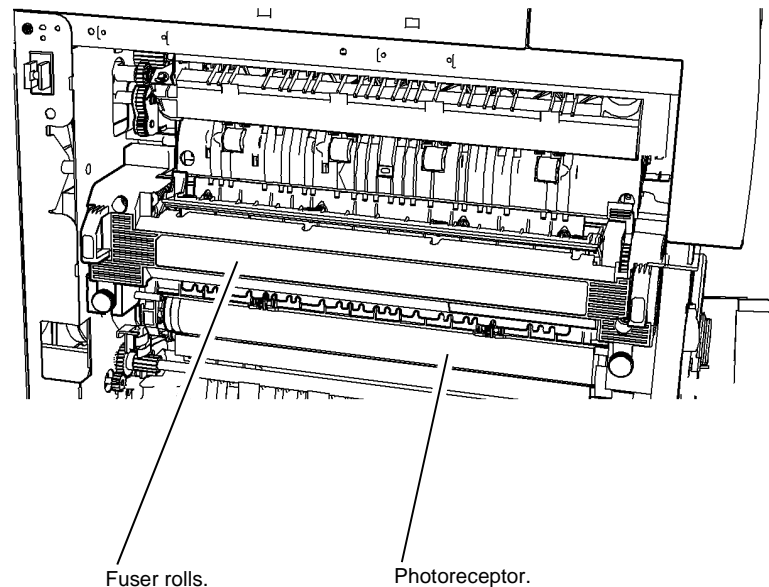
- Registration nip roll, **PL 80.15 Item 4**.
- Bias transfer roll, **PL 80.15 Item 3**.
- Registration roll, **PL 80.17 Item 6**.

- Track (DTS), **PL 90.10 Item 6**, from the detack saw to the HVPS.

Install new components as necessary.

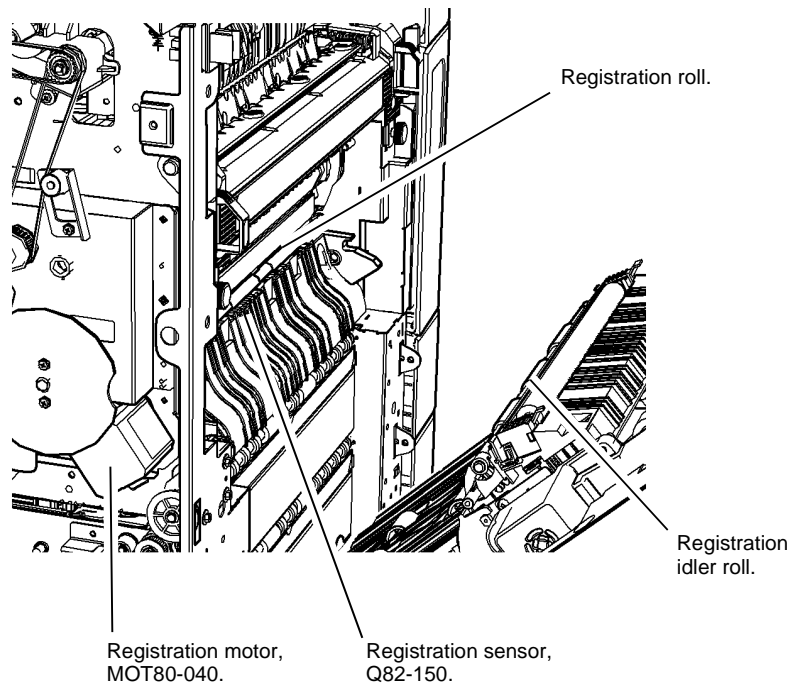
If the fault persists, perform the actions that follow:

- Check the print for image defects such as image shift or digital lines, if they are evident, refer to **301A** Ground Distribution RAP and check the print cartridge ground.
- **381A** Paper Feed Retries RAP.



X-1-0166-A

Figure 1 Component location



X-1-1213-A

Figure 2 Component location

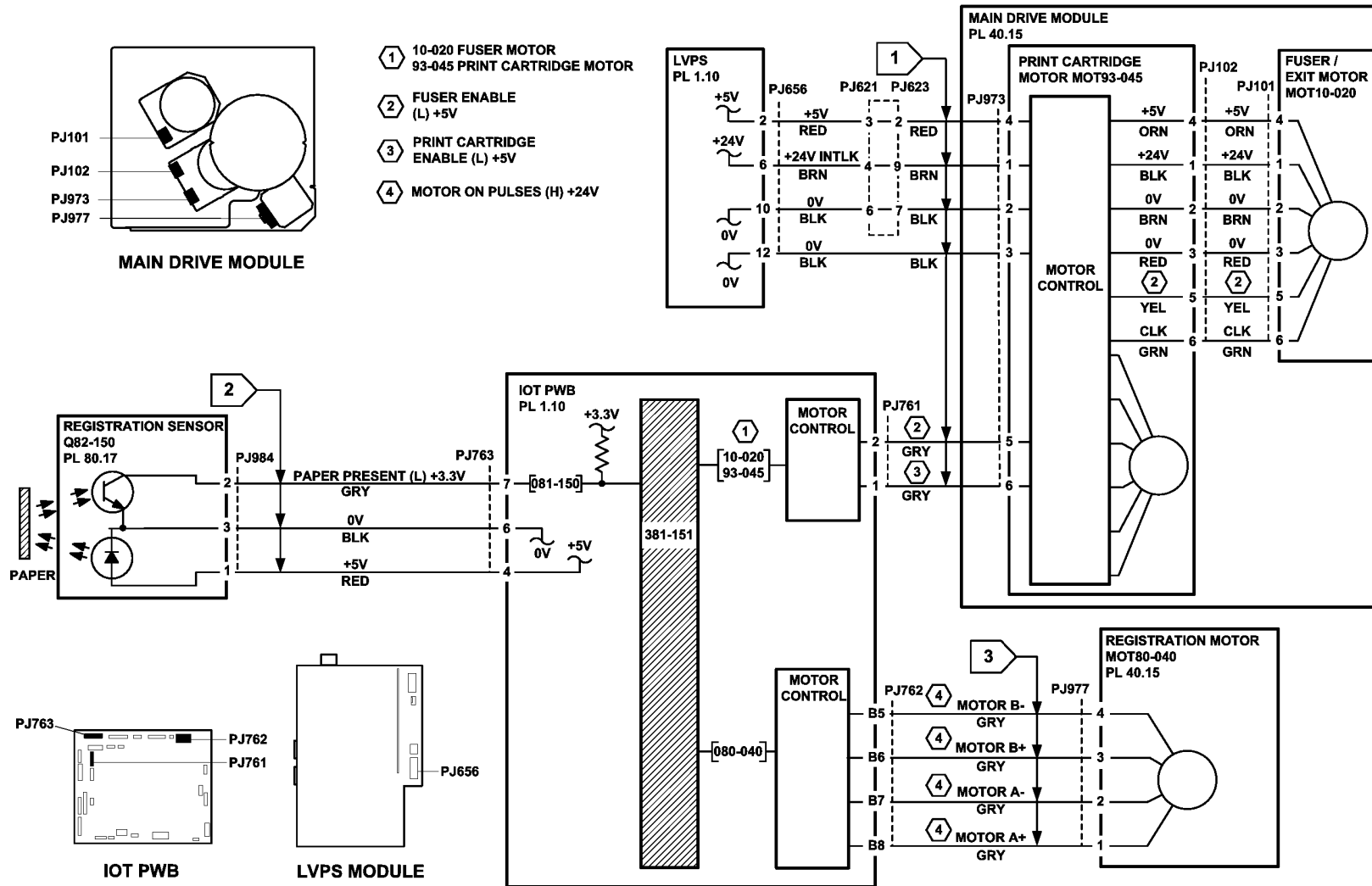


Figure 3 Circuit diagram

TX-1-0096-A

381-155-00 Lead Edge Late to Registration Sensor from the Bypass Tray RAP

381-155-00 The lead edge of the paper was late to the registration sensor when feeding from the bypass tray.

Remote Service Actions

- Ask the customer to check the condition of the paper in the bypass tray. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to ensure that the bypass tray is not overfilled.

If the fault continues a site visit will be necessary.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check for obstructions in the paper path.
- Clean the paper path sensors that follow:
 - Tray 1 TAR sensor, [PL 80.10 Item 5](#).
 - Tray 2 TAR sensor, [PL 80.10 Item 5](#).
 - Registration sensor, [PL 80.17 Item 7](#).
- Check that the bypass tray is installed correctly, [REP 70.2](#).
- Check the fault history file for the fault code 375-100-00. If necessary, perform the [375-100-00 Bypass Tray Lift Failure RAP](#).
- Check the condition of the pressure blade, [PL 80.17 Item 12](#). If the pressure blade is damaged or worn, install a new blade.

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Open the left door. Enter [dC330](#) code 082-150, registration sensor, Q82-150, [Figure 1](#). Actuate Q82-150. **The display changes.**

Y N
Go to [Flag 1](#). Check Q82-150.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J763, IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new registration sensor, [PL 80.17 Item 7](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

A

With the left door closed, enter [dC330](#) code 080-025, TAR/bypass tray motor, MOT80-006, in reverse, [Figure 1](#). **The motor runs in reverse and the bypass tray elevates up and down as the cam rotates.**

Y N
Go to [Flag 2](#). Check MOT80-006.
Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J754, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new TAR/bypass tray motor, [PL 80.25 Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 080-025, TAR/bypass tray motor, in reverse MOT80-006. Add the code 075-325, bypass feed clutch, See Note. Observe the feed roll assembly, [PL 70.35 Item 14](#).

NOTE: The bypass tray clutch will also energize when component control code 081-033 is entered.

The feed roll assembly rotates.

Y N
Go to [Flag 3](#). Check the bypass tray clutch, [PL 70.35 Item 9](#).
Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [P/J757, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

The clutch is good.

Y N
If necessary, install a new bypass tray clutch, [PL 70.35 Item 9](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Check the condition and operation of the components that follow. Refer to [GP 7](#) Miscellaneous Checks:

- Bypass tray drive assembly, [Figure 2](#).
- Tension spring, [Figure 2](#).
- Bypass tray drive belt, [PL 80.25 Item 10](#).
- Drive pulley, [PL 80.25 Item 3](#).

Install new components as necessary:

- Bypass tray assembly, [PL 70.35 Item 1](#).
- Bypass tray drive belt, [PL 80.25 Item 10](#).
- Drive pulley, [PL 80.25 Item 3](#).

Refer to [GP 7](#) Miscellaneous Checks. Perform the steps that follow:

- Check the bypass tray feed roll, [PL 70.35 Item 14](#), retard roll, [PL 70.35 Item 16](#) and retard pad, [PL 70.35 Item 6](#).
- If necessary clean the feed roll, retard roll and retard pad using a cloth dampened with water.

A

- If necessary install new components, [PL 70.35](#).

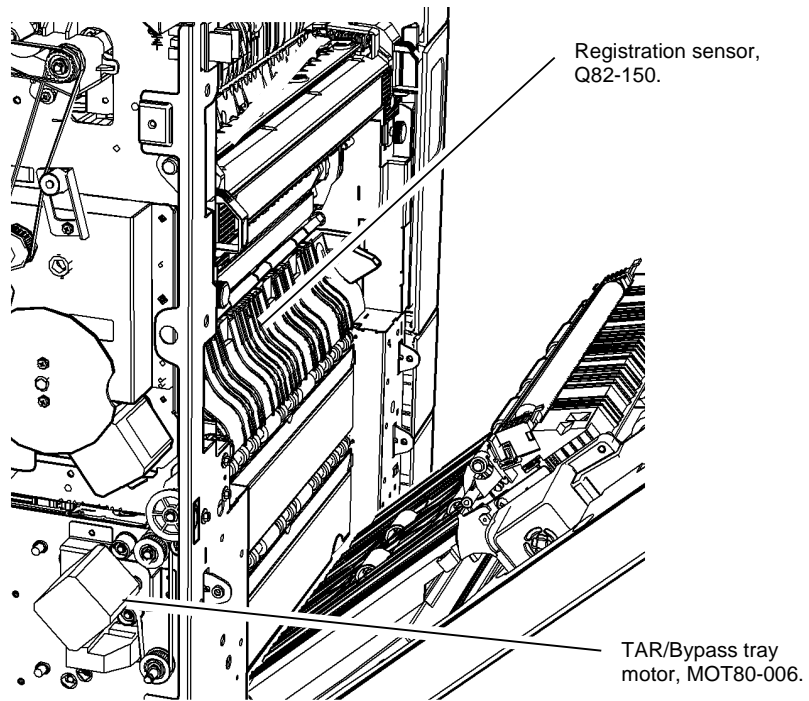


Figure 1 Component location

X-1-1215-A

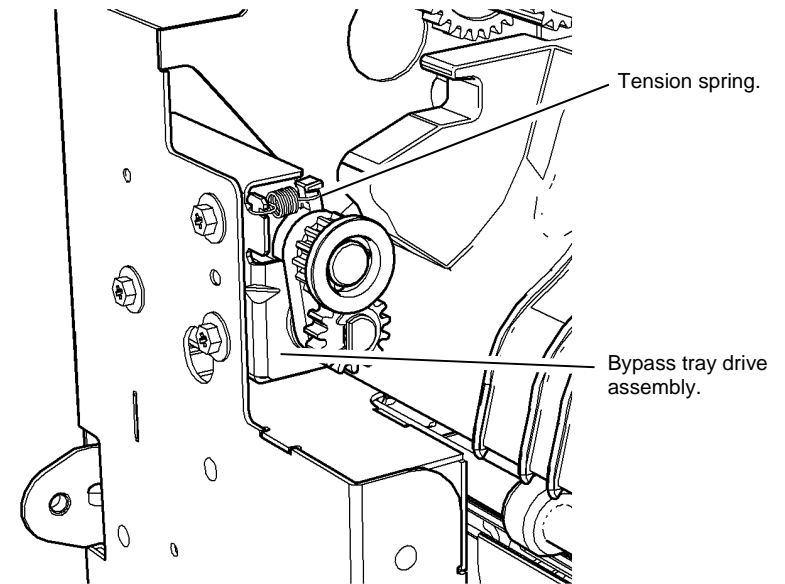
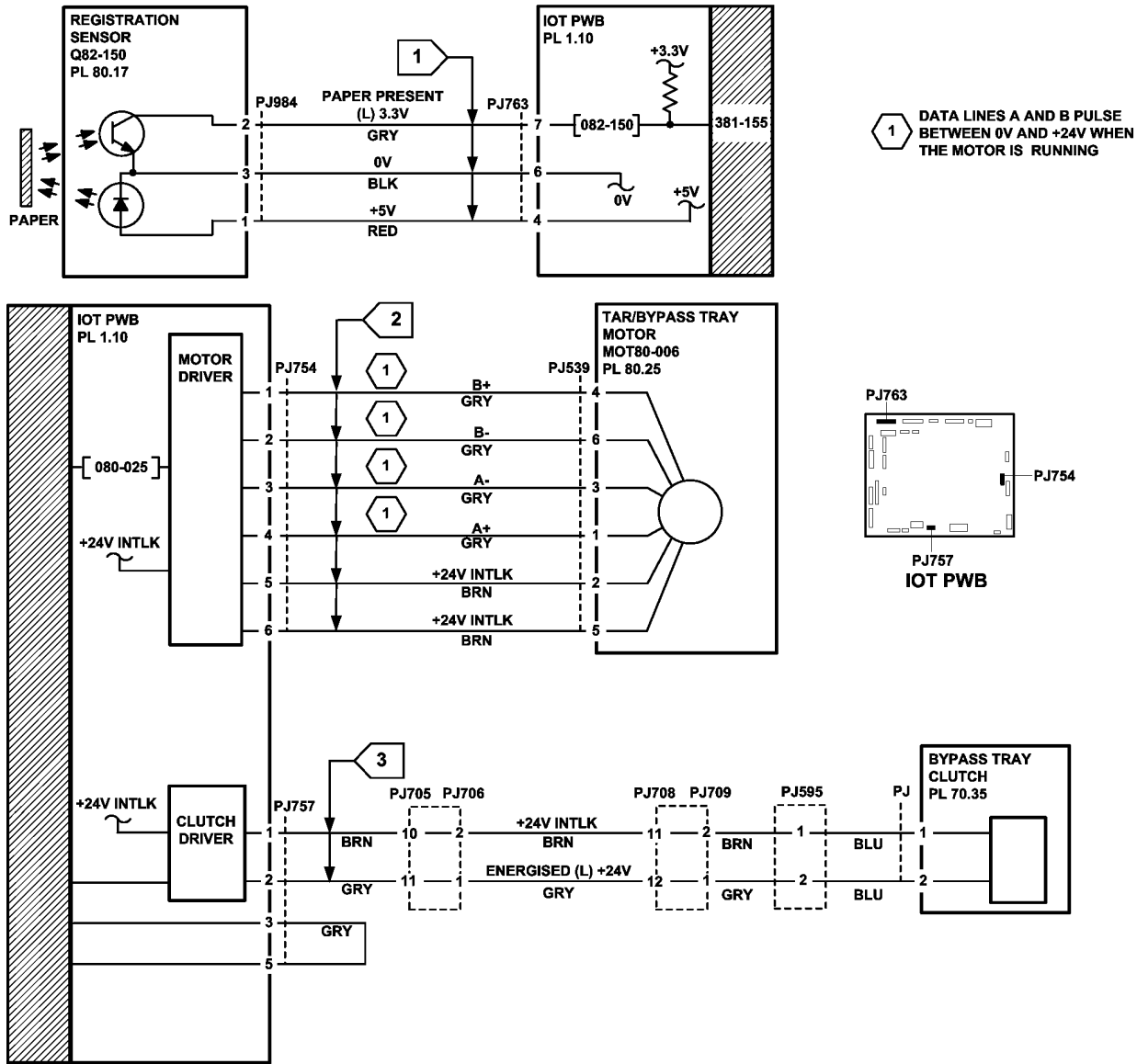


Figure 2 Component location

X-1-1214-A



TX-1-0299-A

Figure 3 Circuit diagram

381-159-00 Lead Edge Late to HCF Exit Sensor from Tray 3 RAP

381-159-00 The lead edge of the paper was late to the HCF exit sensor when feeding from tray 3.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 3. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check for obstructions in tray 3 paper path.
- Ask the customer to ensure that tray 3 is pushed fully home.

If the fault continues a site visit will be necessary.

Initial actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Clean the paper path sensors that follow:
 - Tray 1 TAR sensor, [PL 80.10 Item 5](#).
 - Tray 2 TAR sensor, [PL 80.10 Item 5](#).
 - Registration sensor, [PL 80.17 Item 7](#).
- Reducing the retard roll nip pressure will make the retard action less aggressive and may lessen the occurrence of misfeeds. Perform [ADJ 80.3](#).

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 081-108, HCF exit sensor, Q81-108, [Figure 1](#). Manually actuate Q81-108.

The display changes.

Y N

Go to [Flag 1](#). Check Q81-108.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J755, IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new HCF exit sensor, [PL 80.32 Item 3](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 081-045, HCF transport motor, MOT81-045, [Figure 1](#). **The motor runs.**

Y N

Go to [Flag 2](#). Check MOT81-045.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J756, IOT PWB](#).

- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new HCF transport motor, [PL 80.36 Item 13](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Observe the takeaway roll, [PL 80.36 Item 2](#) and HCF transport roll, [PL 80.33 Item 4](#). **The takeaway and HCF transport rolls rotates.**

Y N

Check the components that follow:

- Drive belt, [PL 80.36 Item 6](#).
 - Drive coupling, [PL 80.36 Item 7](#).
 - Takeaway roll assembly, [PL 80.36 Item 2](#).
 - Idler roll assembly, [PL 80.32 Item 2](#).
 - Transport gear pulley, [PL 80.36 Item 12](#).
 - HCF transport roll, [PL 80.33 Item 4](#).
- Install new components as necessary.

Perform the procedures that follow:

- [ADJ 80.3](#) Tray 3 and Tray 4 Retard Roll Pressure.
- [381-136-00](#) Lead Edge Late to Tray 3 Feed Sensor RAP.

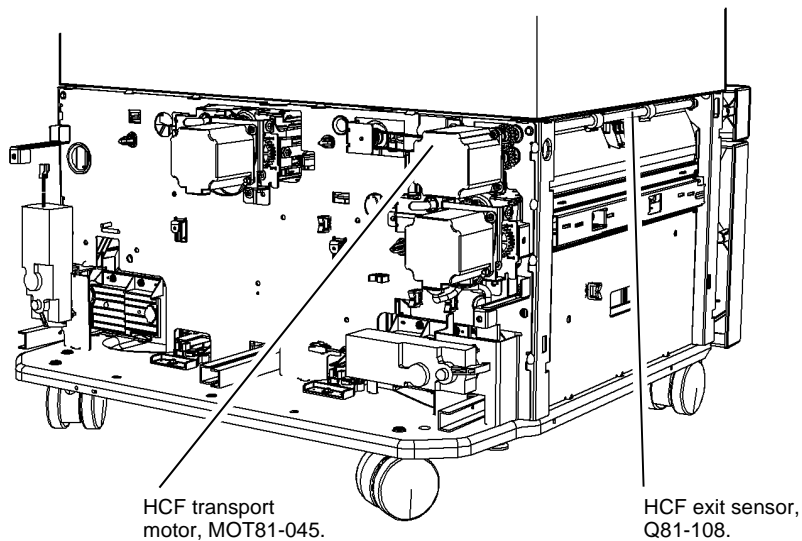
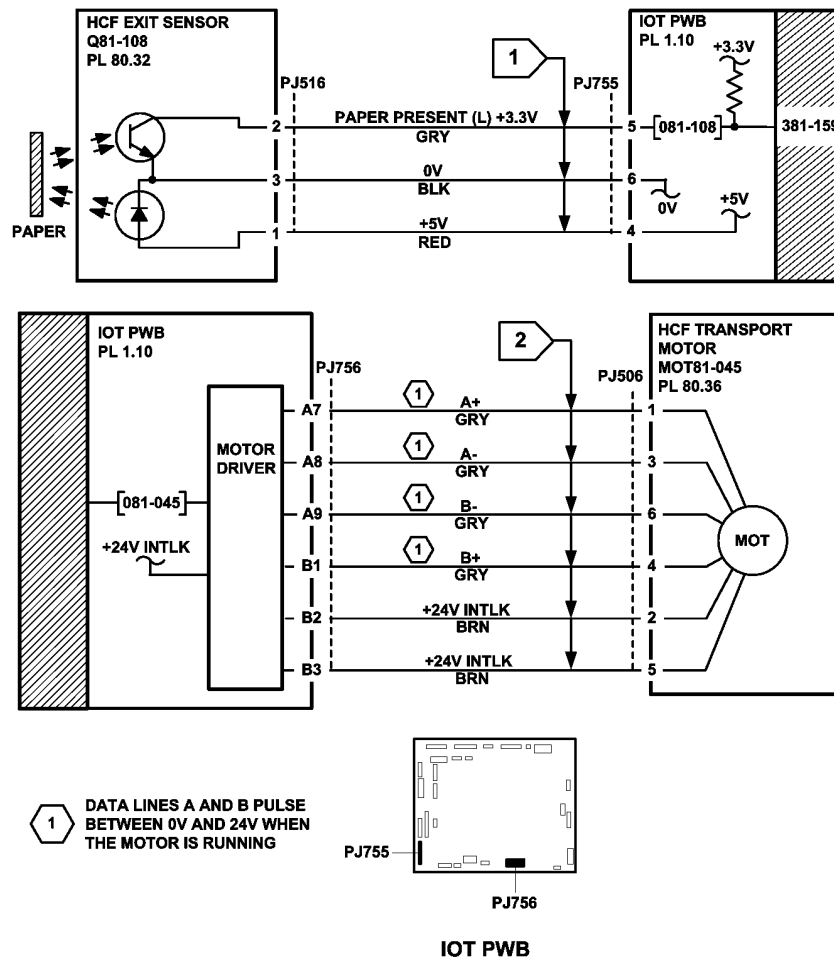


Figure 1 Component location

X-1-1253-A



381-161-00 Lead Edge Late to Registration Sensor Duplex Mode RAP

381-161-00 The lead edge was late to the registration sensor in duplex mode.

Remote Service Actions

- Ask the customer to check the condition of the paper in all trays. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check for paper in the inverter and duplex transport.
- Ask the customer to check for obstructions in the paper path.
- Ask the customer to check the left door assembly is fully closed.

If the fault continues a site visit will be necessary.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the condition of the pressure blade, [PL 80.17 Item 12](#). If the pressure blade is damaged or worn, install a new blade.

Procedure



WARNING

Take care during this procedure. Motors will become hot during normal operation.

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Open the left door. Enter [dC330](#) code 083-160, duplex sensor, Q83-160, [Figure 1](#). Open the inner duplex door. Manually actuate Q83-160. **The display changes.**

Y N
Go to [Flag 1](#). Check Q83-160.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J759, IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new duplex sensor, [PL 80.10 Item 8](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Remove the duplex motor cover [PL 80.22 Item 21](#). Locate the duplex motor, MOT83-060, [Figure 1](#). Enter [dC330](#) code 083-062, duplex motor fast speed. **The motor runs.**

Y N
Go to [Flag 2](#). Check MOT83-060.
Refer to:

- [GP 10](#) How to Check a Motor.

- A**
- [P/J762, IOT PWB](#).
 - [301G](#) +24V Distribution RAP.
 - [301B](#) 0V Distribution RAP.

If necessary, install a new duplex motor assembly, [PL 80.22 Item 8](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 083-060, duplex motor slow speed, MOT83-060. **The motor runs.**

Y N
Go to [Flag 2](#). Check MOT83-060.
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J762, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new duplex motor assembly, [PL 80.22 Item 8](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Observe the duplex rolls, [PL 80.22](#). **The upper, mid and lower duplex rolls rotate.**

Y N
Refer to [GP 7](#). Check the components that follow:

- Upper duplex roll, [PL 80.22 Item 14](#).
- Mid duplex rolls, [PL 80.22 Item 15](#).
- Lower duplex roll, [PL 80.22 Item 13](#).
- Drive belt (65T), [PL 80.22 Item 2](#).
- Drive belt (89T), [PL 80.22 Item 3](#).
- Drive belt (45T), [PL 80.22 Item 4](#).

Install new components as necessary.

Check the duplex roll idlers, [PL 80.10 Item 11](#), refer to [GP 7](#). Manually rotate the idler rolls. **The idler rolls rotate.**

Y N
Install new components as necessary:

- Duplex roll idler, [PL 80.10 Item 11](#).
- Idler spring, [PL 80.10 Item 12](#).

The fault persists

Y N
Perform [SCP 5](#) Final Actions.

Enter [dC330](#) code 082-150, registration sensor, Q82-150. Manually actuate Q82-150 with a strip of paper, [Figure 2](#). **The display changes.**

Y N
Go to [Flag 3](#). Check Q82-150.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J763, IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.

B

- 301B 0V Distribution RAP.

If necessary, install a new registration sensor, PL 80.17 Item 7. If the fault persists, perform the OF7 IOT PWB Diagnostics RAP.

Refer to GP 7 and OF10 Intermittent Fault RAP. Check the components that follow:

- Registration nip roll, PL 80.15 Item 4.
- Registration roll, PL 80.17 Item 5.
- Registration drive pulley, PL 80.17 Item 3.
- Registration drive belt, PL 80.17 Item 4.

Install new components as necessary.

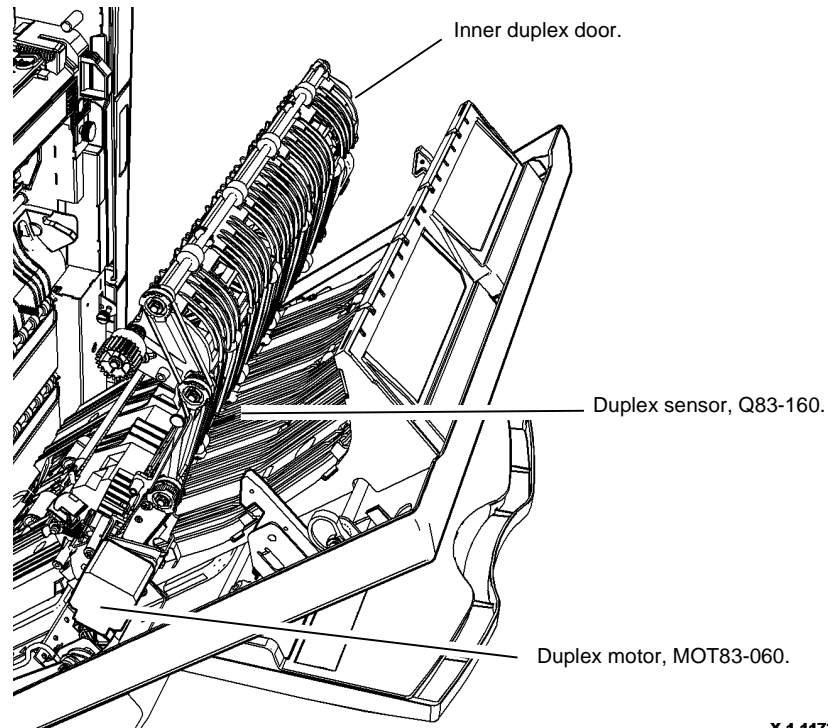


Figure 1 Component location

X-1-1173-A

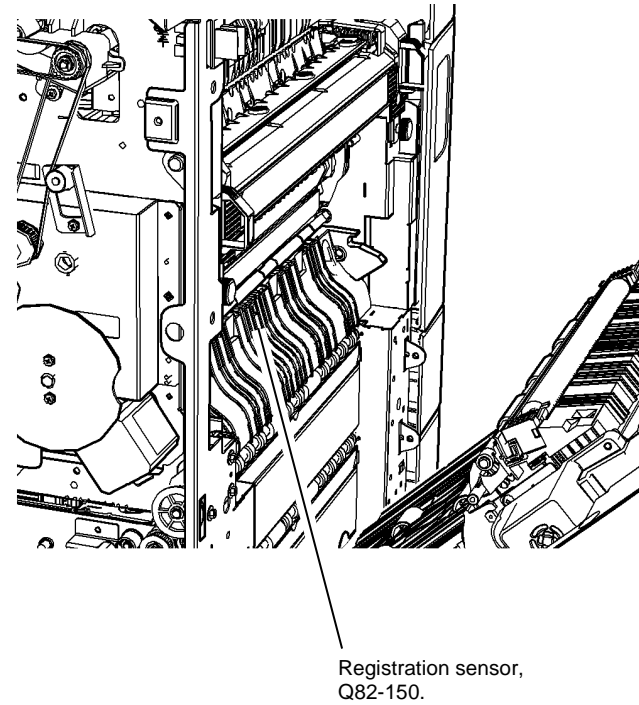


Figure 2 Component location

X-1-1217-A

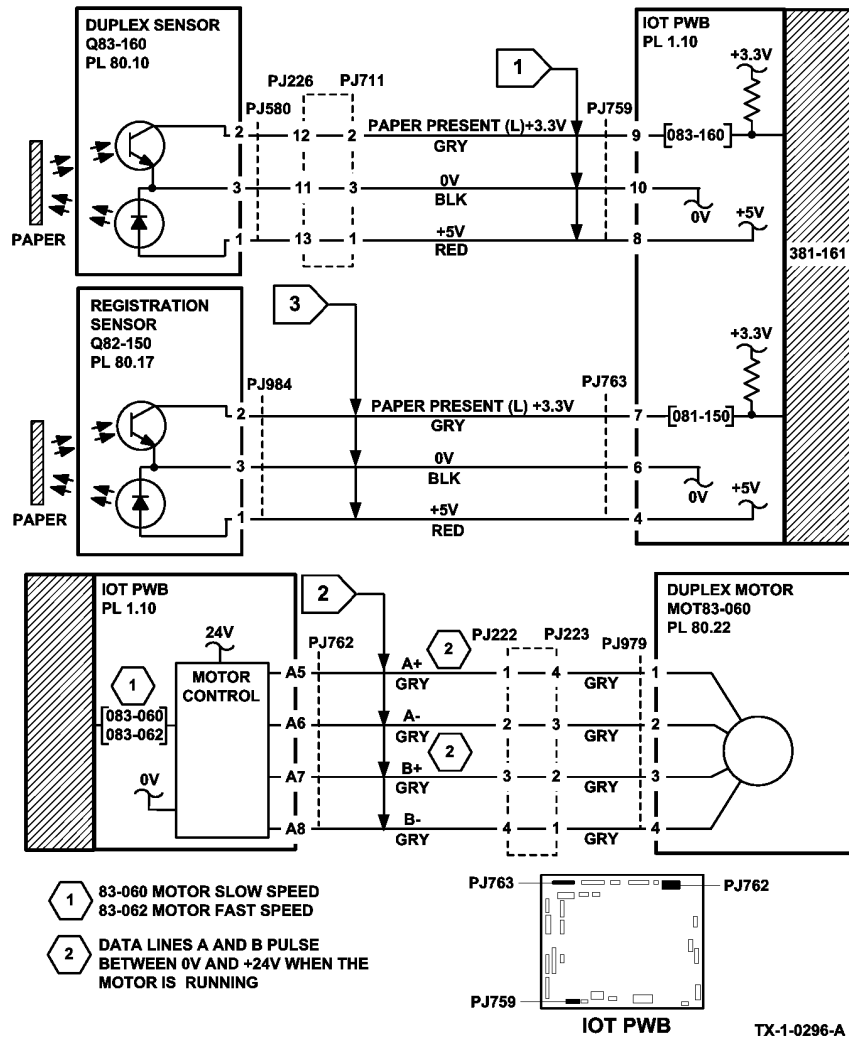


Figure 3 Circuit diagram

381-162-00 Trail Edge Late from Registration Sensor Duplex Mode RAP

381-162-00 The trail edge was late from the registration sensor in duplex mode.

Remote Service Actions

- Ask the customer to check the condition of the paper in all trays. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check for paper in the inverter and duplex transport.
- Ask the customer to check for obstructions in the paper path.
- Ask the customer to check the left door assembly is fully closed.

If the fault continues a site visit will be necessary.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Motors will become hot during normal operation.

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Open the left door. Enter [dC330](#) code 083-160, duplex sensor, Q83-160, [Figure 1](#). Open the inner duplex door. Manually actuate Q83-160. **The display changes.**

Y N

Go to [Flag 1](#). Check Q83-160.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J759](#), IOT PWB.
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new duplex sensor, [PL 80.10](#) [Item 8](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Remove the duplex motor cover, [PL 80.22](#) [Item 21](#). Locate the duplex motor, MOT83-060, [Figure 1](#). Enter [dC330](#) code 083-062, duplex motor fast speed. **The motor runs.**

Y N

Go to [Flag 2](#). Check MOT83-060.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J762](#), IOT PWB.
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

A

A

If necessary, install a new duplex motor assembly, [PL 80.22 Item 8](#). If the fault persists, perform the [OF7 IOT PWB Diagnostics RAP](#).

Enter [dC330](#) code 083-060, duplex motor slow speed, MOT83-060, [Figure 1](#). **The motor runs.**

Y N

Go to [Flag 2](#). Check MOT83-060.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J762](#), [IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new duplex motor assembly, [PL 80.22 Item 8](#). If the fault persists, perform the [OF7 IOT PWB Diagnostics RAP](#).

Observe how the motor belt, [PL 80.22 Item 4](#) tracks on the pulleys. **The belt tracks correctly in the centre of the pulleys.**

Y N

Carefully reform the motor bracket so that the belt tracks correctly.

Observe the duplex rolls, [PL 80.22](#). **The upper, mid and lower duplex rolls rotate.**

Y N

Refer to [GP 7](#). Check the components that follow:

- Upper duplex roll, [PL 80.22 Item 14](#).
- Mid duplex rolls, [PL 80.22 Item 15](#).
- Lower duplex roll, [PL 80.22 Item 13](#).
- Drive belt (65T), [PL 80.22 Item 2](#).
- Drive belt (89T), [PL 80.22 Item 3](#).
- Drive belt (45T), [PL 80.22 Item 4](#).

Install new components as necessary.

Check the duplex roll idlers, [PL 80.10 Item 11](#), refer to [GP 7](#). Manually rotate the idler rolls. **The idler rolls rotate.**

Y N

Install new components as necessary:

- Duplex roll idler, [PL 80.10 Item 11](#).
- Idler spring, [PL 80.10 Item 12](#).

Enter [dC330](#) code 093-045, print cartridge motor, MOT93-045. Observe the photoreceptor, [Figure 2](#). **The photoreceptor turns.**

Y N

Go to [Flag 5](#). Check MOT93-045.

Refer to:

- [GP 10](#), How to check a Motor.
- [P/J761](#), [IOT PWB](#).
- [P/J656](#), [LVPS](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301G](#) +24V Distribution RAP.

B

B

- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Main drive module, [PL 40.15 Item 1](#).
- Print cartridge, [PL 90.17 Item 9](#).

If the fault persists, perform the [OF7 IOT PWB Diagnostics RAP](#) and [301L](#) LVPS RAP.

Enter [dC330](#) code 082-150, registration sensor, Q82-150. Manually actuate Q82-150, [Figure 2](#). **The display changes.**

Y N

Go to [Flag 3](#). Check Q82-150.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J763](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary install a new registration sensor, [PL 80.17 Item 7](#).

If the fault persists, perform the [OF7 IOT PWB Diagnostics RAP](#).

Enter [dC330](#) code 080-040, registration motor, MOT80-040. Observe the registration roll, [Figure 2](#). **The registration roll turns.**

Y N

Go to [Flag 4](#). Check MOT80-040.

Refer to:

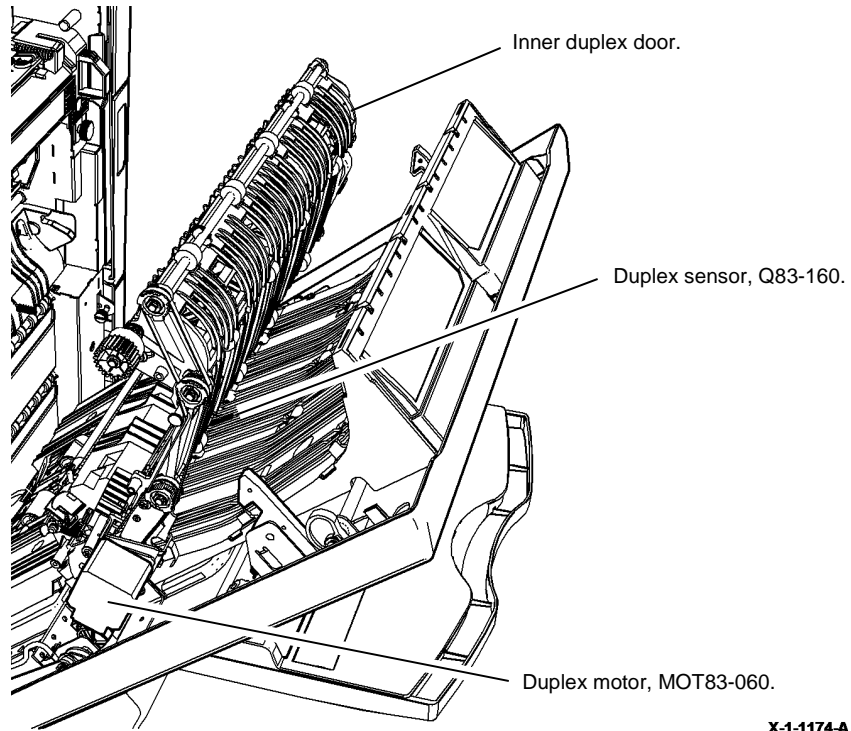
- [GP 10](#), How to Check a Motor.
- [P/J762](#), [IOT PWB](#).

If necessary, install a new registration motor, [PL 40.15 Item 6](#). If the fault persists, perform the [OF7 IOT PWB Diagnostics RAP](#).

Refer to [GP 7](#) and [OF10](#) Intermittent Fault RAP. Check the components that follow:

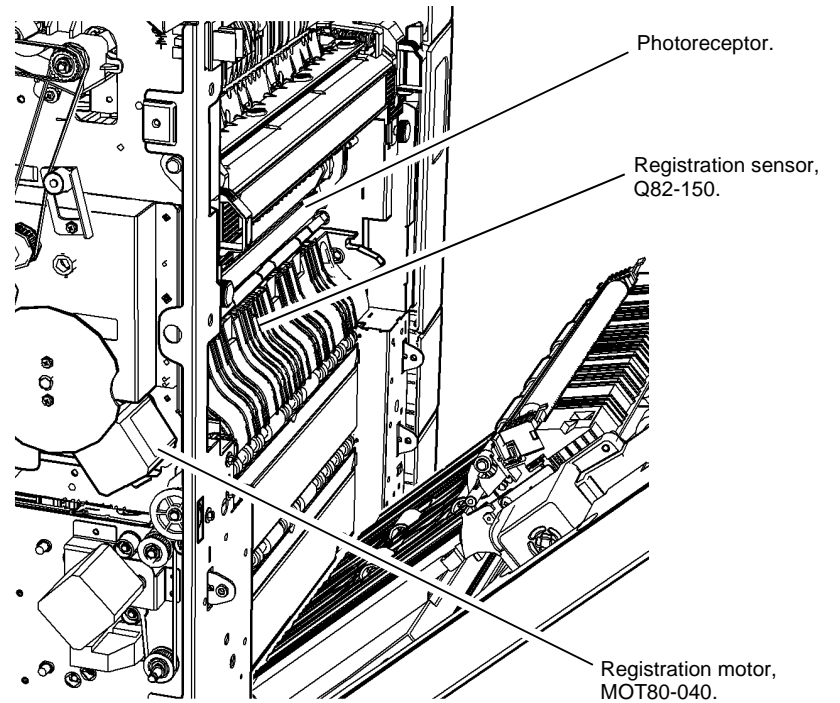
- Registration idler roll, [PL 80.15 Item 4](#).
- Bias transfer roll, [PL 80.15 Item 3](#).
- Registration roll, [PL 80.17 Item 6](#).
- Registration drive pulley, [PL 80.17 Item 3](#).
- Registration drive belt, [PL 80.17 Item 4](#).
- Track (DTS), [PL 90.10 Item 6](#), from the detack saw to the HVPS.

Install new components as necessary.



X-1-1174-A

Figure 1 Component location



X-1-1216-A

Figure 2 Component location

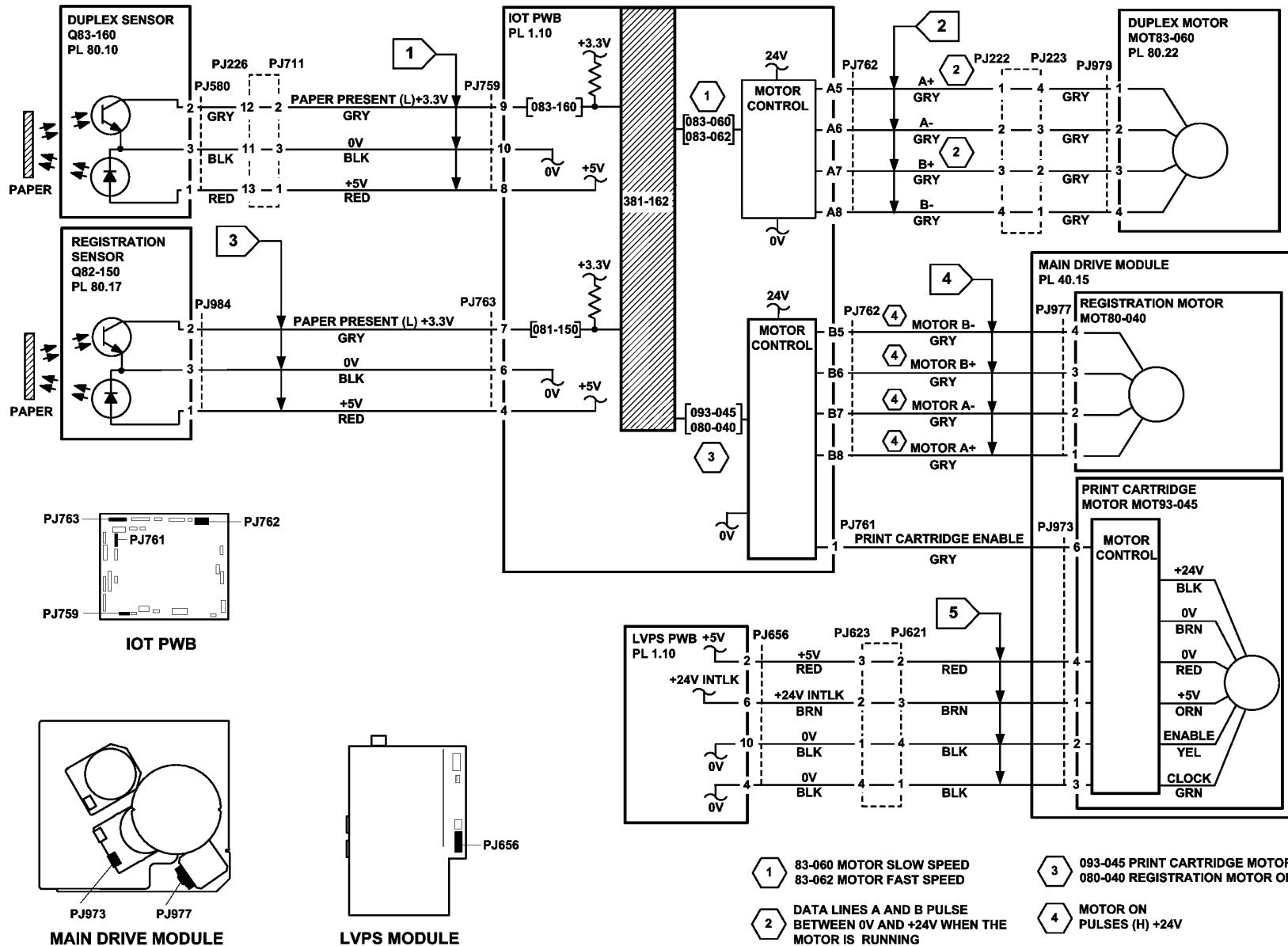


Figure 3 Circuit diagram

TX-1-0297-A

381-167-00 Lead Edge Late to Tray 4 Exit Sensor RAP

381-167-00 The lead edge of the paper was late to the tray 4 exit sensor.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 4. Refer to [IQ1](#) and [GP 20](#).
- If the fault continues a site visit will be necessary.

Initial actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- If a misfeed occurs between 15 and 20 paper feeds, perform the [374-100-00](#), [374-217-00](#) Tray 4 Elevator Lift Failure RAP.
- Check tray 4 closes correctly, [ADJ 80.5](#) Tray 4 Closing Alignment. If necessary perform the adjustment.
- Check the condition of the tray 4 exit sensor bracket.
- Reducing the retard roll nip pressure will make the retard action less aggressive and may lessen the occurrence of misfeeds. Perform [ADJ 80.3](#).

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 081-150, tray 4 exit sensor, Q81-150, [Figure 2](#). Manually actuate Q81-150.

The display changes.

Y N
Go to [Flag 1](#). Check Q81-150.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J786](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 4 exit sensor, [PL 80.33 Item 6](#).

Enter [dC330](#) code 081-150, tray 4 exit sensor, Q81-150. Manually actuate Q81-150. The display changes.

Y N
Perform [OF7](#) IOT PWB Diagnostics RAP.



CAUTION

To prevent damage to the feed mechanism, the paper tray must be pulled out before MOT81-040 is run in service mode.

Enter [dC330](#) code 081-040, tray 4 feed motor, MOT81-040, [Figure 1](#). The motor runs.

Y N
Go to [Flag 3](#). Check MOT81-040.
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J785](#), [IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 4 feed motor, [PL 80.33 Item 10](#).

Enter [dC330](#) code 081-040, tray 4 feed motor, MOT81-040, [Figure 1](#). The motor runs.

Y N
Perform [OF7](#) IOT PWB Diagnostics RAP.

Locate the tray 4 feed clutch, CL81-043, [Figure 1](#). Enter [dC330](#) code 081-040, tray 4 feed motor, MOT81-040. Add the code 081-043, tray 4 feed clutch, CL81-043. Pull out tray 4. Observe the tray 4 feed and nudger rolls. The rolls rotate.

Y N
Go to [Flag 2](#). Check CL81-043.
Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [P/J785](#), [IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 4 feed clutch, [PL 80.33 Item 21](#).

The rolls rotate.

Y N
Perform [OF7](#) IOT PWB Diagnostics RAP.

Go to [Final Actions](#).

Go to [Final Actions](#).

Locate the tray 4 feed clutch, CL81-043, [Figure 1](#). Enter [dC330](#) code 081-040, tray 4 feed motor, MOT81-040. Add the code 081-043, tray 4 feed clutch, CL81-043. Pull out tray 4. Observe the tray 4 feed and nudger rolls. The rolls rotate.

Y N
Go to [Flag 2](#). Check CL81-043.
Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [P/J785](#), [IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 4 feed clutch, [PL 80.33 Item 21](#).

The rolls rotate.

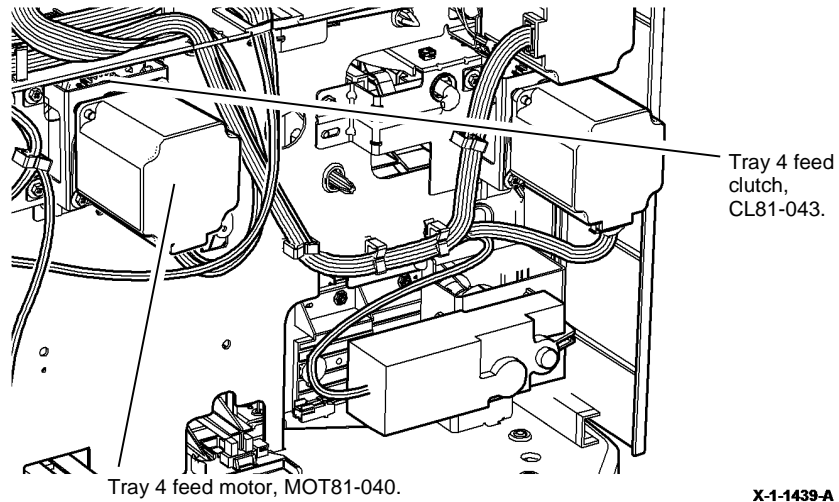


Figure 1 Component location

X-1-1439-A

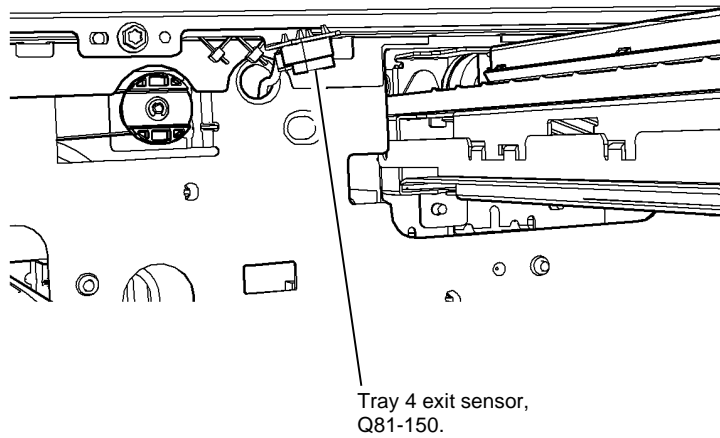


Figure 2 Component location

X-1-1440-A

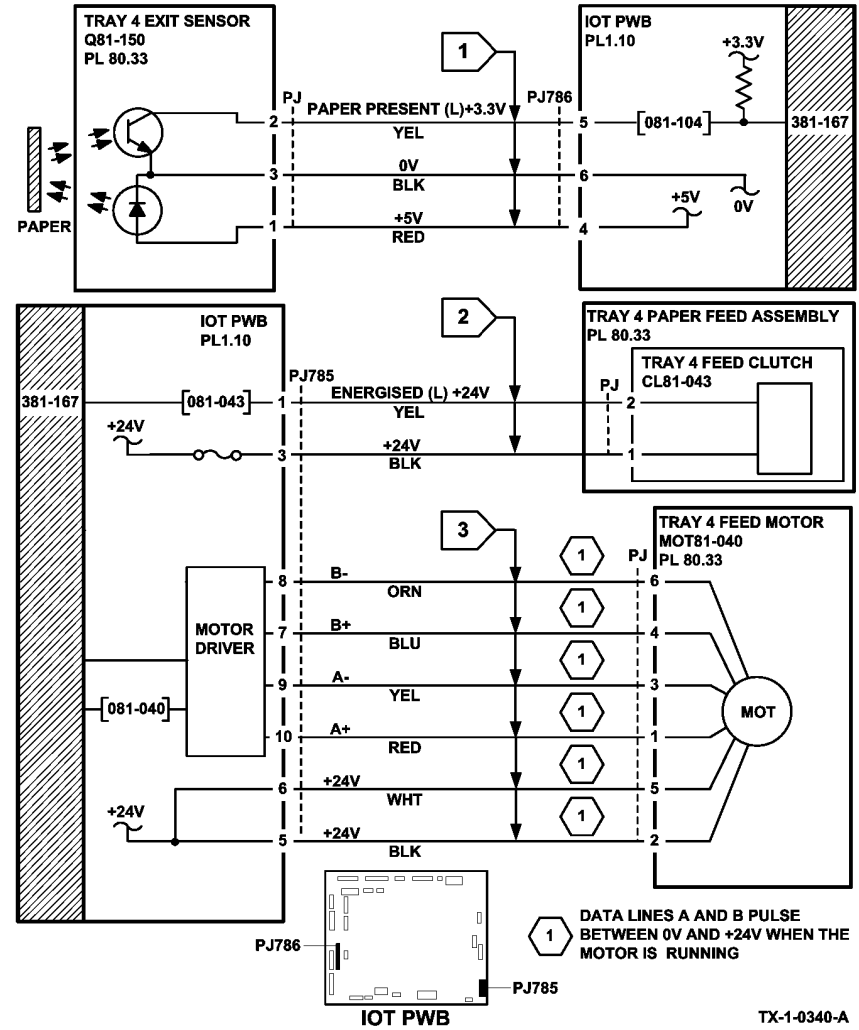


Figure 3 Circuit diagram

TX-1-0340-A

381-180-00 Lead Edge Late to TAR 1 Sensor from Tray 6 RAP

381-180-00 The lead edge of the paper was late to the tray 1 TAR sensor when feeding from tray 6.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 6. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check that the tray 6 is set to the correct paper size.
- Ask the customer to observe the tray 6 feeder and check for obstructions.
- Ask the customer to turn or change the paper in the tray.
- Ask the customer to check that the left door assembly is latched correctly.
- Log in remotely to the customer machine, check that NVM 500-590 is set to a value of 80 to 90.

If the fault continues a site visit will be necessary.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check that NVM 500-590 is set to a value of 80 to 90.
- Check that the tray elevates to the feed position. Refer to [376-100-00](#) Tray 6 Elevator Lift Failure RAP.
- Check the left door interlock switch. Refer to [301-305-00](#) Left Door Open RAP.

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 081-001, tray 1 TAR sensor, Q81-001, [Figure 2](#). Open the left door. Manually actuate Q81-001. **The display changes.**

Y N
Go to [Flag 1](#). Check Q81-001.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J750](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new Tray 1 TAR sensor, [PL 80.10](#) Item 5. If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Remove the rear cover, then manually rotate the tray 2 transport roll, [Figure 2](#), [PL 80.25](#) Item 7, whilst holding the pulley, [PL 80.25](#) Item 4. **The transport roll rotates in one direction only.**

Y N
Install new components as necessary:

- Pulley, [PL 80.25](#) Item 4.
- Tray 2 transport roll, [PL 80.25](#) Item 7.
- Tray 2 transport roll bearings, [PL 80.25](#) Item 6.

Enter [dC330](#) code 080-006, TAR/bypass tray motor, MOT80-006. **The motor runs.**

Y N
Go to [Flag 2](#). Check MOT80-006.
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J754](#), [IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new TAR/bypass tray motor, [PL 80.25](#) Item 5. If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Observe the transport rolls, [PL 80.25](#) Item 7. **The transport rolls rotate.**

Y N
Check the transport roll drive belt, drive pulley and pulley, [PL 80.25](#).
Install new components as necessary:

- Transport roll drive belt, [PL 80.25](#) Item 2.
- Pulley, [PL 80.25](#) Item 4.
- Transport roll bearing, [PL 80.25](#) Item 6.
- Transport roll, [PL 80.25](#) Item 7.

Apply pressure to the tray 1 transport roll, [Figure 1](#). **The transport roll stalls.**

Y N
Enter [dC330](#) code 076-018 tray 6 transport motor, MOT76-018. Press Start. **The motor runs.**

Y N
Go to [Flag 3](#). Check MOT81-065. Refer to:
• [GP 10](#) How to Check a Motor.
• [P/J503](#), [Tray 6 control PWB](#)
• [301G](#) +24V Distribution RAP.
• [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 6 transport motor, [PL 80.40](#) Item 2.
- Tray 6 control PWB, [PL 75.68](#) Item 8.

Run the motor for 30 seconds. **The motor runs at a constant speed, without slowing.**

Y N
Install a new tray 6 transport motor, [PL 80.40](#) Item 2.

The take away roller rotates.

Y N
Check the drive belt and the one way pulley clutch for damage, refer to [GP 7](#). Check the belt tensioner. Install new components as necessary:

A B

- Drive belt, [PL 80.40 Item 7.](#)
- One way pulley clutch, [PL 80.42 Item 4.](#)
- Take away roller, [PL 80.42 Item 5.](#)

Perform the steps that follow:

- [ADJ 70.5](#), Tray 6 Stack Height Sensor and Retard Shield.
- Clean the feed roll using a cloth dampened with water.
- Install a new feed roll retro fit kit, [PL 80.41/2.](#)

Install new components as necessary:

- Drive pulley, [PL 80.25 Item 3.](#)
- Tray 1 transport roll, [PL 80.25 Item 7.](#)
- Tray 1 transport roll bearings, [PL 80.25 Item 6.](#)

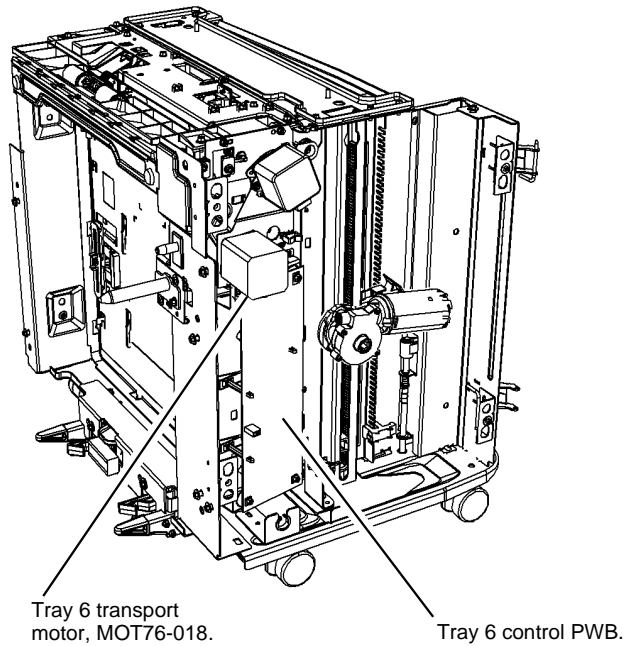


Figure 1 Component location

X-1-1995-A

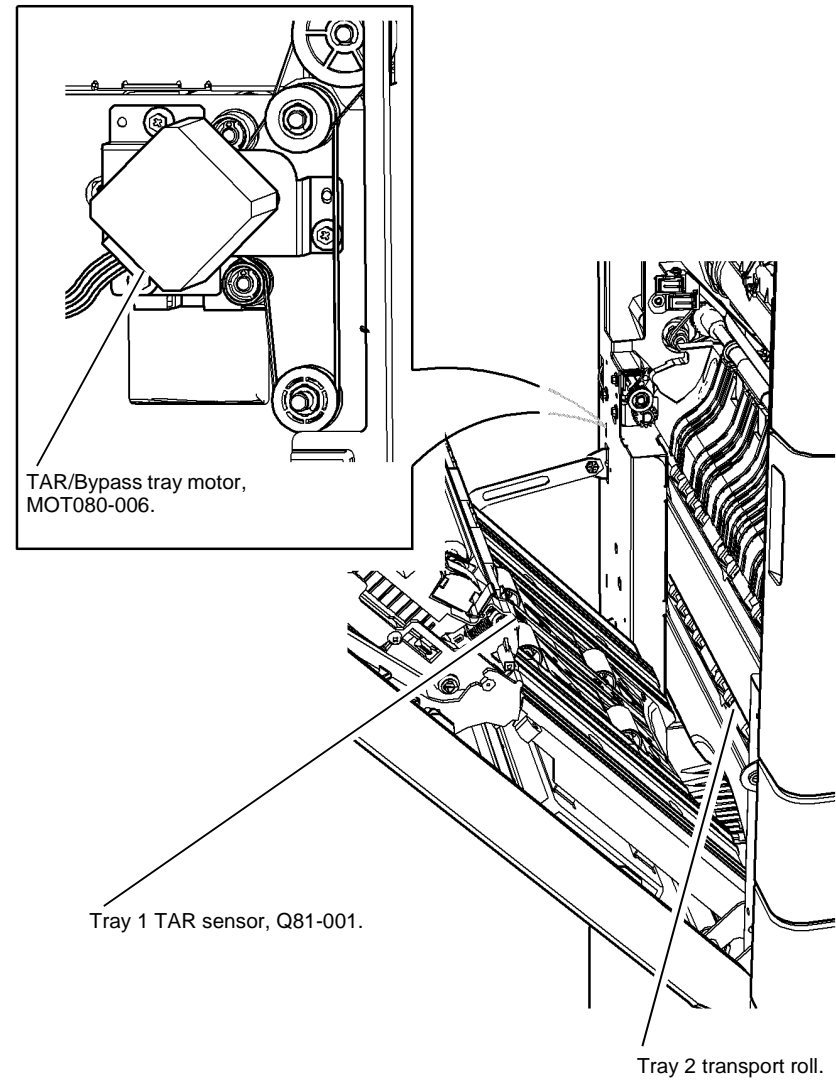


Figure 2 Component location

X-1-1994-A

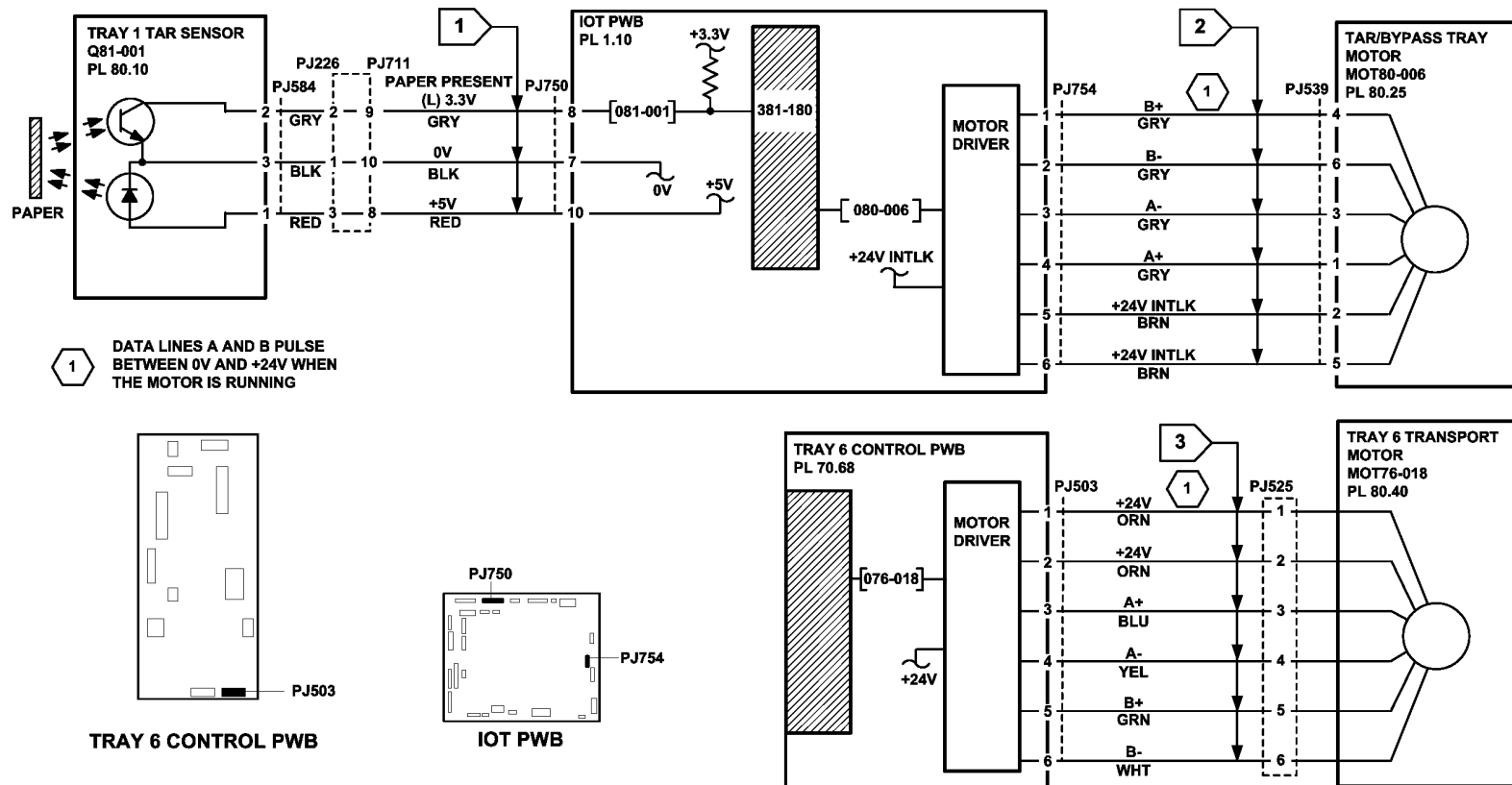


Figure 3 Circuit diagram

TX-1-0396-A

381-182-00 Lead Edge Late to Registration from Tray 6

381-182-00 The lead edge of the paper was late to the registration sensor when feeding from tray 6.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 6. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check that the tray 6 is set to the correct paper size.
- Ask the customer to observe the tray 6 feeder and check for obstructions.
- Ask the customer to turn or change the paper in the tray.

If the fault continues a site visit will be necessary.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check that the tray elevates to the feed position. Refer to [376-100-00](#) Tray 6 Elevator Lift Failure RAP.
- Check the left door interlock switch. Refer to [301-305-00](#) Left Door Open RAP.
- If 2 sheets of paper are jammed at the registration rolls, perform the [OF8](#) Multifeed RAP.
- Clean the paper path sensors that follow:
 - Tray 1 TAR sensor, [PL 80.10](#) Item 5.
 - Registration sensor, [PL 80.17](#) Item 7.
- Ensure that all connectors on the [IOT PWB](#) are correctly and securely seated.
- If the paper has excessive curl, refer to [IQ5](#).
- Check for skew. Refer to [IQ8](#).
- Clean the tray 6 paper feed assembly feed rolls.
- Clean the transport rolls between tray 6 and the registration area.
- Check the condition of the pressure blade, [PL 80.17](#) Item 12. If the pressure blade is damaged or worn, install a new blade.

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 082-150, registration sensor, Q82-150, [Figure 1](#). Open the left door assembly. Actuate Q82-150. **The display changes.**

- Y N**
- Go to [Flag 1](#). Check Q82-150.
Refer to:
- [GP 11](#) How to check a Sensor.
 - [P/J763](#), [IOT PWB](#).
 - [301E](#) +5V and +5VSB Distribution RAP.
 - [301B](#) 0V Distribution RAP.

A

If necessary, install a new registration sensor, [PL 80.17](#) Item 7. If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Remove the rear cover, then manually rotate the tray 1 transport roll, [Figure 1](#), [PL 80.25](#) Item 7, whilst holding the pulley, [PL 80.25](#) Item 4. **The transport roll rotates in one direction only.**

- Y N**
- Install new components as necessary:
- Pulley, [PL 80.25](#) Item 4.
 - Tray 1 transport roll, [PL 80.25](#) Item 7.
 - Tray 1 transport roll bearings, [PL 80.25](#) Item 6.

Enter [dC330](#) code 080-006, TAR/bypass tray motor, MOT80-006. **The motor runs.**

- Y N**
- Go to [Flag 2](#). Check MOT80-006.
Refer to:
- [GP 10](#) How to Check a Motor.
 - [P/J754](#), [IOT PWB](#).
 - [301G](#) +24V Distribution RAP.
 - [301B](#) 0V Distribution RAP.
- If necessary, install a new TAR/bypass tray motor, [PL 80.25](#) Item 5. If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Observe the transport rolls, [PL 80.25](#) Item 7. **The transport rolls rotate.**

- Y N**
- Check the transport roll drive belt, drive pulley and pulley, [PL 80.25](#).
Install new components as necessary:
- Transport roll drive belt, [PL 80.25](#) Item 2.
 - Pulley, [PL 80.25](#) Item 4.
 - Transport roll bearing, [PL 80.25](#) Item 6.
 - Transport roll, [PL 80.25](#) Item 7.

Apply pressure to the tray 1 transport roll, [Figure 1](#). **The transport roll stalls.**

- Y N**
- Enter [dC330](#) code 076-018 tray 6 transport motor, MOT76-018. Press Start. **The motor runs.**
- Y N**
- Go to [Flag 3](#). Check MOT81-065. Refer to:
- [GP 10](#) How to Check a Motor.
 - [P/J503](#), [Tray 6 control PWB](#)
 - [301G](#) +24V Distribution RAP.
 - [301B](#) 0V Distribution RAP.
- Install new components as necessary:
- Tray 6 transport motor, [PL 80.40](#) Item 2.
 - Tray 6 control PWB, [PL 75.68](#) Item 8.

Run the motor for 30 seconds. **The motor runs at a constant speed, without slowing.**

A

B

B

Y N

Install a new tray 6 transport motor, PL 80.40 Item 2.

The take away roller rotates.

Y N

Check the drive belt and the one way pulley clutch for damage, refer to GP 7. Check the belt tensioner. Install new components as necessary:

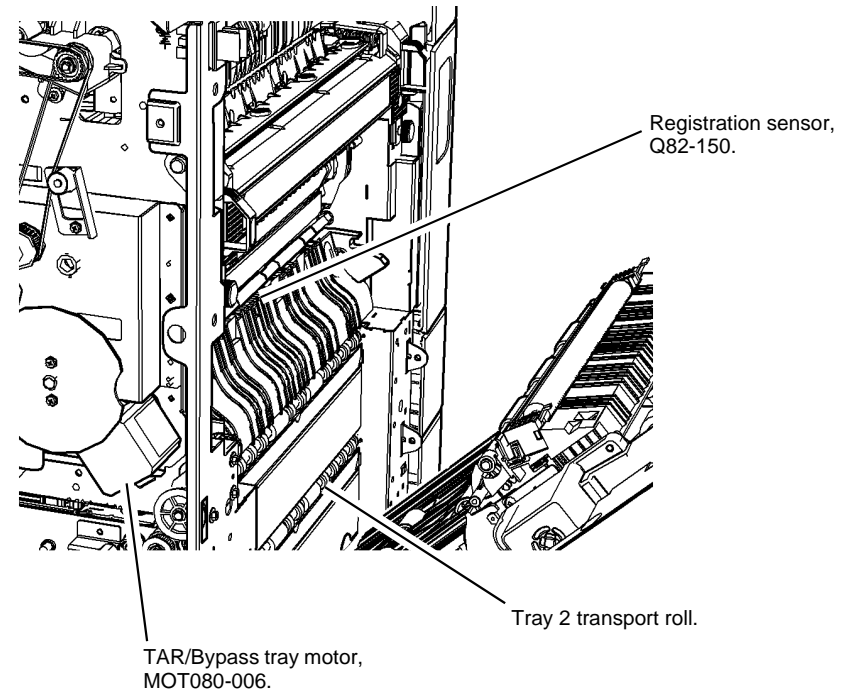
- Drive belt, PL 80.40 Item 7.
- One way pulley clutch, PL 80.42 Item 4.
- Take away roller, PL 80.42 Item 5.

Perform the steps that follow:

- ADJ 70.5, Tray 6 Stack Height Sensor and Retard Shield.
- Clean the feed roll using a cloth dampened with water.
- Install a new feed roll retro fit kit, PL 80.41/2.

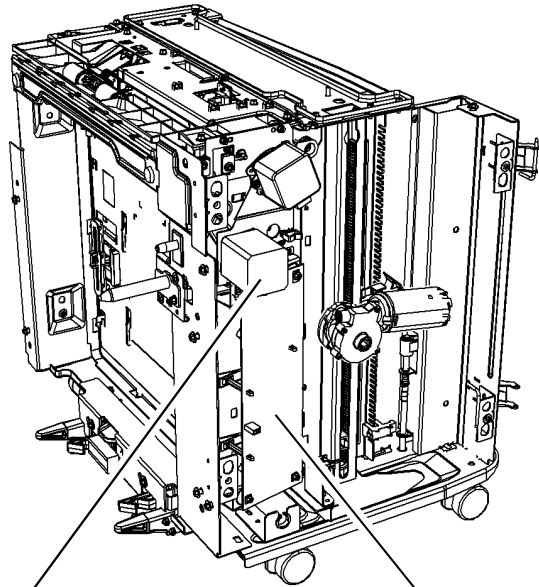
Install new components as necessary:

- Drive pulley, PL 80.25 Item 3.
- Tray 1 transport roll, PL 80.25 Item 7.
- Tray 1 transport roll bearings, PL 80.25 Item 6.



X-1-1996-A

Figure 1 Component location



Tray 6 transport
motor, MOT76-018.

Tray 6 control PWB.

X-1-1997-A

Figure 2 Component location

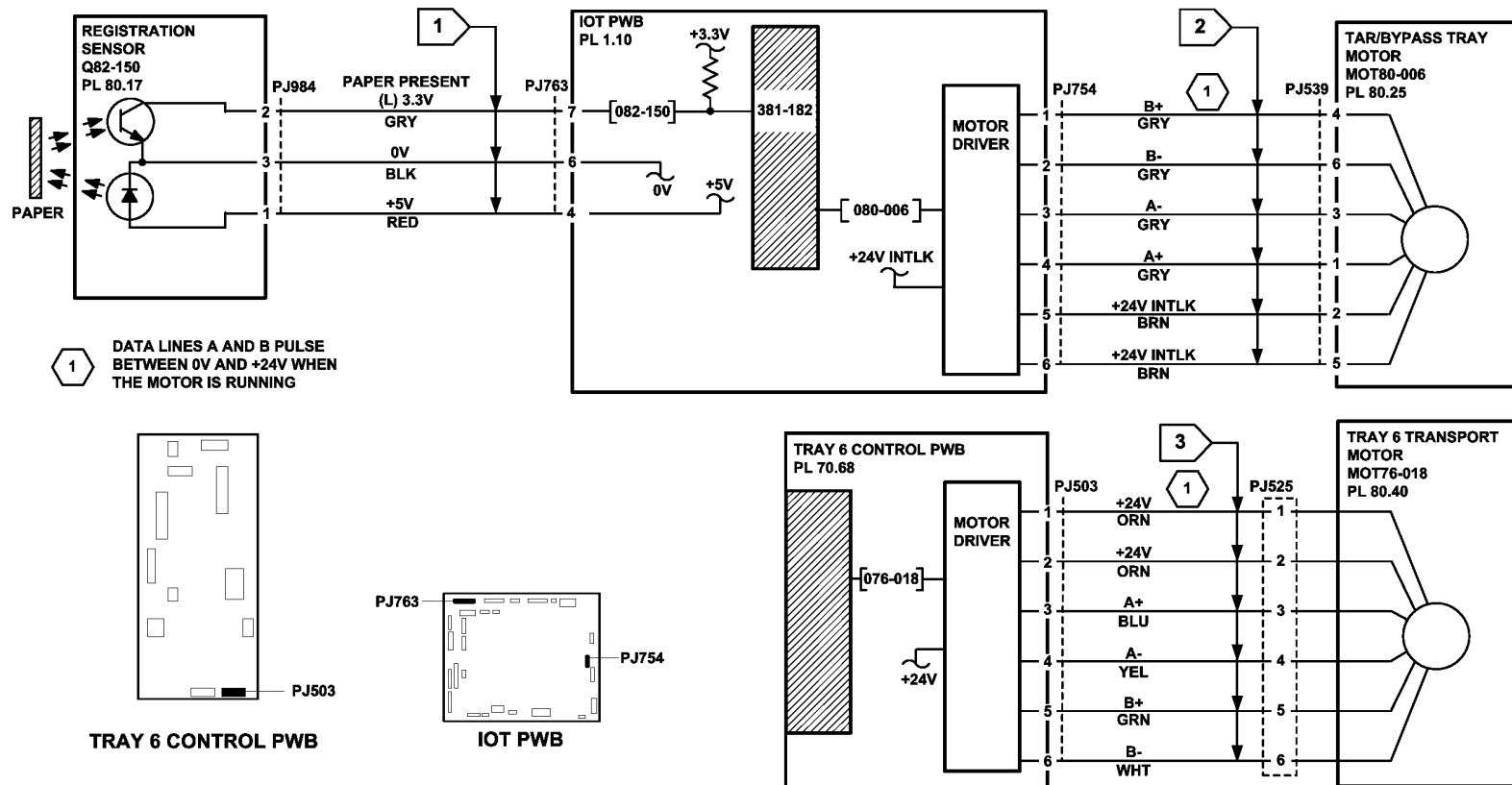


Figure 3 Circuit diagram

TX-1-0397-A

381-184-00 Lead Edge Late to Tray 6 Feed Sensor RAP

381-184-00 The lead edge of the paper is late to the tray 6 feed sensor.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 6. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check that the left door is correctly latched.
- Ask the customer to check that the tray 6 is set to the correct paper size.

If the fault continues, a site visit will be necessary.

Initial Actions

Check that tray 6 is set to the correct paper configuration. Enter [dC131](#) NVM, check value 604-001.



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Procedure

NOTE: The front door interlock must be cheated when checking +24V components.

Enter [dC330](#) code 076-105 tray 6 feed sensor, Q76-105, [Figure 1](#). Press Start. Manually actuate the sensor. **The display changes.**

- Y N**
- Go to [Flag 1](#). Check Q81-105. Refer to:
- [GP 11](#) How to Check a Sensor.
 - [P/J505](#), [Tray 6 control PWB](#)
 - [301E](#) +5V Distribution RAP.
 - [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 6 feed sensor, [PL 80.41](#) [Item 6](#).
- Tray 6 control PWB, [PL 75.68](#) [Item 8](#).

Enter [dC330](#) code 076-117 tray 6 feed motor, MOT76-117. Open the door. Press Start. **The motor runs.**

- Y N**
- Go to [Flag 2](#). Check MOT76-117. Refer to:
- [GP 10](#) How to Check a motor.
 - [P/J511](#), [Tray 6 control PWB](#).
 - [301G](#) +24V Distribution RAP.
 - [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 6 feed motor, [PL 80.40](#) [Item 3](#).
- Tray 6 control PWB, [PL 75.68](#) [Item 8](#).

A
The feed shaft rotates.

Y N
Check the drive gears between the motor and the feed shaft. Install new components as necessary:

- Gear (14T), [PL 80.40](#) [Item 5](#).
- Gear 30T bearing, [PL 80.40](#) [Item 18](#).
- Gear (29T), [PL 80.41](#) [Item 11](#).

The feed roller rotates

Y N
Check the one way coupling, feed roller and clutch. Install new components as necessary:

- One way coupling, [PL 80.41](#) [Item 4](#).
- Clutch, [PL 80.41](#) [Item 10](#).
- Feed roller, [PL 80.41](#) [Item 2](#).

The nudger roller rotates

Y N
Check the nudger roller and the nudger pulley. Check the roller belt between the feed roller and the nudger roller. Install new components as necessary:

- Nudger pulley, [PL 80.41](#) [Item 3](#).
- Roller belt, [PL 80.41](#) [Item 15](#).
- Nudger roll, [PL 80.41](#) [Item 8](#).

The retard roller rotates

Y N
Check the retard roller, retard clutch and clutch. Install new components as necessary:

- Retard clutch, [PL 80.42](#) [Item 3](#).
- Clutch, [PL 80.42](#) [Item 7](#).
- Retard roller, [PL 80.42](#) [Item 2](#).

Enter [dC330](#) code 076-018 tray 6 transport motor, MOT76-018. Press Start. **The motor runs.**

- Y N**
- Go to [Flag 3](#). Check MOT76-018. Refer to:
- [GP 10](#) How to Check a Motor.
 - [P/J503](#), [Tray 6 control PWB](#)
 - [301G](#) +24V Distribution RAP.
 - [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 6 transport motor, [PL 80.40](#) [Item 2](#).
- Tray 6 control PWB, [PL 75.68](#) [Item 8](#).

Run the motor for 30 seconds. **The motor runs at a constant speed, without slowing.**

Y N
Install a new tray 6 transport motor, [PL 80.40](#) [Item 2](#).

The take away roller rotates.

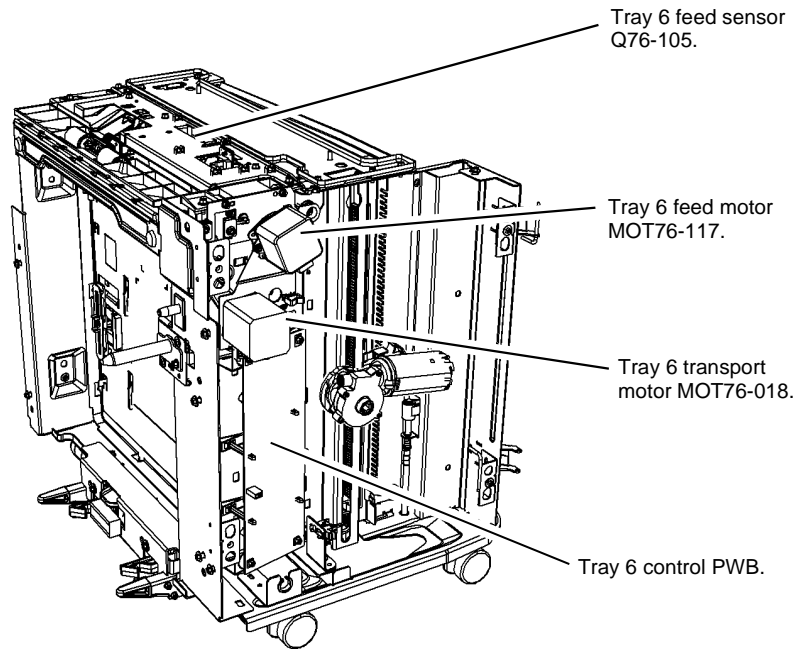
Y N

Check the drive belt and the one way pulley clutch for damage, refer to [GP 7](#). Check the belt tensioner. Install new components as necessary:

- Drive belt, [PL 80.40 Item 7](#).
- One way pulley clutch, [PL 80.42 Item 4](#).
- Take away roller, [PL 80.42 Item 5](#).

Perform the steps that follow:

- [ADJ 70.5](#), Tray 6 Stack Height Sensor and Retard Shield.
- Clean the feed roll using a cloth dampened with water.
- Install a new feed roll retro fit kit, [PL 80.41 Item 2](#).



X-1-1998-A

Figure 1 Component location

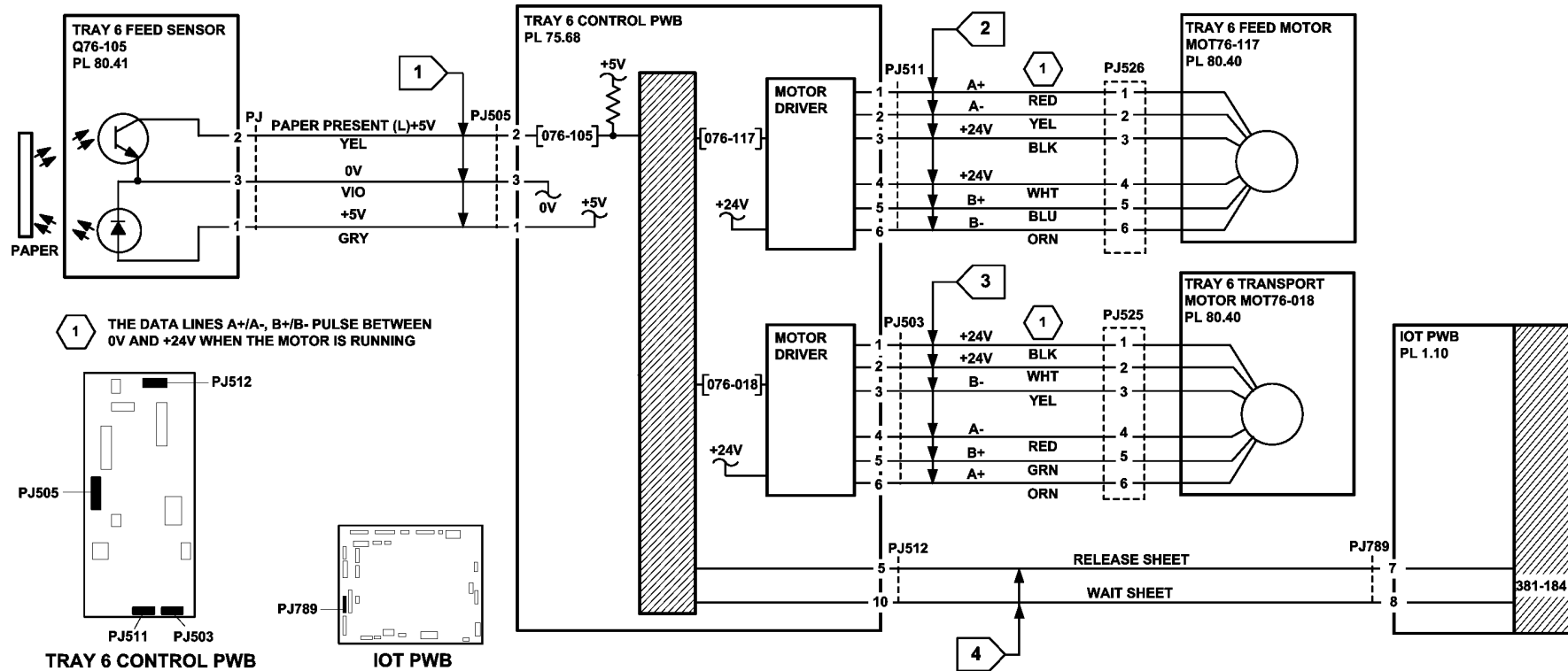


Figure 2 Circuit diagram

TX-1-0398-A

381-190-00 Lead Edge Late to Registration Sensor from Tray 1 RAP

381-190-00 The lead edge of the paper was late to the registration sensor when feeding from tray 1.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 1. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check that the left door is latched correctly.
- Ask the customer to check for obstructions in the paper path.

If the fault continues a site visit will be necessary.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- If 2 sheets of paper are jammed at the registration rolls, perform the [OF8](#) Multifeed RAP.
- Clean the paper path sensors that follow:
 - Tray 1 TAR sensor, [PL 80.10 Item 5](#).
 - Tray 2 TAR sensor, [PL 80.10 Item 5](#).
 - Registration sensor, [PL 80.17 Item 7](#).
- Ensure that all connectors on the [IOT PWB](#) are correctly and securely seated.
- If the paper has excessive curl, refer to [IQ5](#).
- Check for skew. Refer to [IQ8](#).
- Clean the tray 1 paper feed assembly feed rolls.
- Clean the transport rolls between tray 1 and the registration area.
- Check the condition of the pressure blade, [PL 80.17 Item 12](#). If the pressure blade is damaged or worn, install a new blade.

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 082-150, registration sensor, Q82-150, [Figure 1](#). Open the left door assembly. Actuate Q82-150. **The display changes.**

Y N
Go to [Flag 1](#). Check Q82-150.
Refer to:

- [GP 11](#) How to check a Sensor.
- [P/J763](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new registration sensor, [PL 80.17 Item 7](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

A
Remove the rear cover, then manually rotate the tray 1 transport roll, [Figure 1](#), [PL 80.25 Item 7](#), whilst holding the drive pulley, [PL 80.25 Item 3](#). **The transport roll rotates in one direction only.**

Y N
Install new components as necessary:

- Drive pulley, [PL 80.25 Item 3](#).
- Tray 1 transport roll, [PL 80.25 Item 7](#).
- Tray 1 transport roll bearings, [PL 80.25 Item 6](#).

Enter [dC330](#) code 080-006, TAR/bypass tray motor, MOT80-006, [Figure 1](#). **The motor runs.**

Y N
Go to [Flag 2](#). Check MOT80-006.
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J754](#), [IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new TAR/bypass tray motor, [PL 80.25 Item 5](#). If the fault persists, perform the [OF7](#) IOT Diagnostics RAP.

Observe the transport rolls, [PL 80.25 Item 7](#). **The transport rolls rotate.**

Y N
Check the transport roll drive belt, drive pulley and pulley, [PL 80.25](#).
Install new components as necessary:

- Transport roll drive belt, [PL 80.25 Item 2](#).
- Pulley, [PL 80.25 Item 4](#).
- Transport roll bearing, [PL 80.25 Item 6](#).
- Transport roll, [PL 80.25 Item 7](#).

Apply pressure to the tray 1 transport roll, [Figure 1](#). **The transport roll stalls.**

Y N
If the fault persists, perform the [381-106-00](#) Lead Edge Late to TAR 1 Sensor from Tray 1 RAP.

Install new components as necessary:

- Drive pulley, [PL 80.25 Item 3](#).
- Tray 1 transport roll, [PL 80.25 Item 7](#).
- Tray 1 transport roll bearings, [PL 80.25 Item 6](#).

A

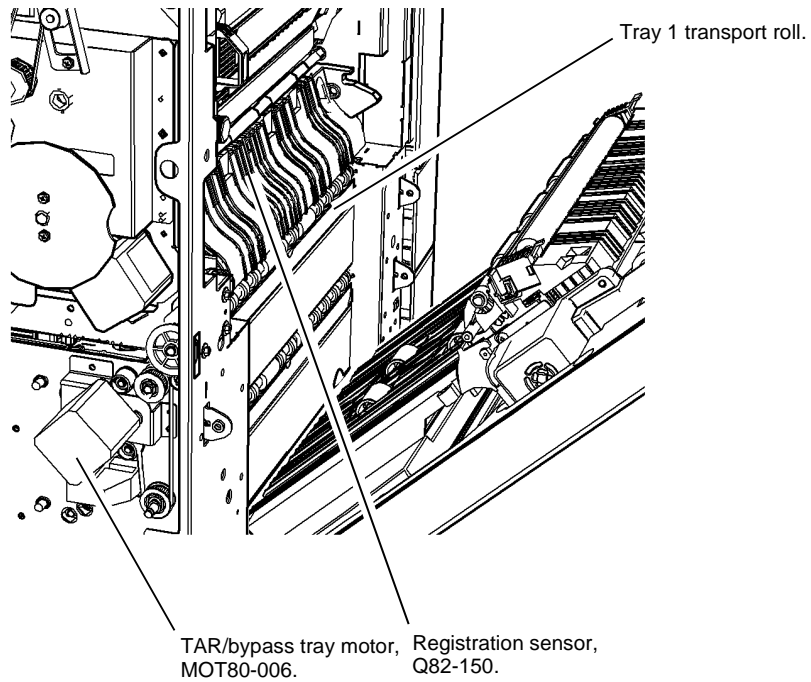


Figure 1 Component location

X-1-1256-A

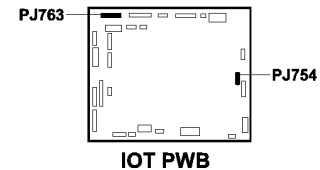
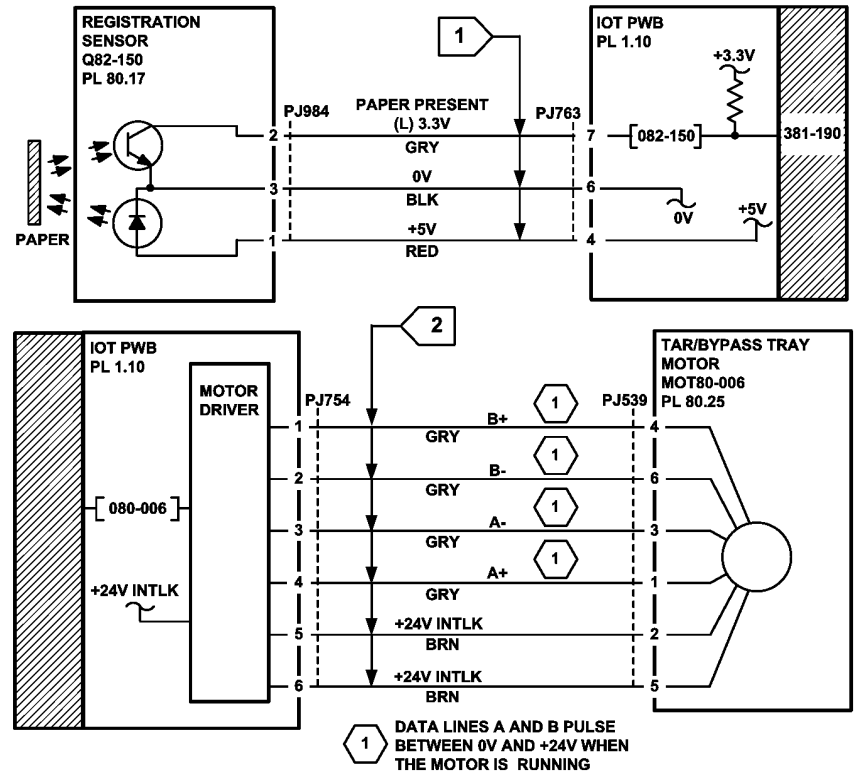


Figure 2 Circuit diagram

TX-1-0309-A

381-191-00 Lead Edge Late to Registration Sensor from Tray 2 RAP

381-191-00 The lead edge of the paper was late to the registration sensor when feeding from tray 2.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 2. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check for obstructions in the paper path.
- Ask the customer to check that the left door is latched correctly.

If the fault continues a site visit will be necessary.

Initial actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- If 2 sheets of paper are jammed at the registration rolls, perform the [OF8](#) Multifeed RAP.
- Clean the paper path sensors that follow:
 - Tray 1 TAR sensor, [PL 80.10 Item 5](#).
 - Tray 2 TAR sensor, [PL 80.10 Item 5](#).
 - Registration sensor, [PL 80.17 Item 7](#).
- Ensure that all connectors on the [IOT PWB](#) are correctly and securely seated.
- If the paper has excessive curl, refer to [IQ5](#).
- Check for skew. Refer to [IQ8](#).
- Clean the tray 2 paper feed assembly feed rolls.
- Clean the transport rolls between tray 2 and the registration area.
- Check the condition of the pressure blade, [PL 80.17 Item 12](#). If the pressure blade is damaged or worn, install a new blade.

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 082-150, registration sensor, Q82-150, [Figure 1](#). Open the left door assembly. Actuate Q82-150. **The display changes.**

Y N
Go to [Flag 1](#). Check Q82-150.

Refer to:

- [GP 11](#) How to check a Sensor.
- [P/J763, IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new registration sensor, [PL 80.17 Item 7](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

A

Remove the rear cover, then manually rotate the tray 2 transport roll, [Figure 1, PL 80.25 Item 7](#), whilst holding the pulley, [PL 80.25 Item 4](#). **The transport roll rotates in one direction only.**

Y N
Install new components as necessary:

- Pulley, [PL 80.25 Item 4](#).
- Tray 2 transport roll, [PL 80.25 Item 7](#).
- Tray 2 transport roll bearings, [PL 80.25 Item 6](#).

Manually rotate the tray 1 transport roll, [Figure 1, PL 80.25 Item 7](#), whilst holding the drive pulley, [PL 80.25 Item 3](#). **The transport roll rotates in one direction only.**

Y N
Install new components as necessary:

- Drive pulley, [PL 80.25 Item 3](#).
- Tray 1 transport roll, [PL 80.25 Item 7](#).
- Tray 1 transport roll bearings, [PL 80.25 Item 6](#).

Enter [dC330](#) code 080-006, TAR/bypass tray motor, MOT 80-006, [Figure 1](#). **The motor runs.**

Y N
Got to [Flag 2](#). Check MOT 80-006.

Refer to:

- [GP 10](#) How to check a motor.
- [P/J754, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution Rap.

If necessary, install a new TAT/bypass tray motor, [PL 80.25 Item 5](#).

Observe the transport rolls, [PL 80.25 Item 7](#). **The transport rolls rotate.**

Y N
Check the transport roll drive belt, drive pulley and pulley, [PL 80.25](#).

Install new components as necessary:

- Transport roll drive belt, [PL PL 80.25 Item 2](#).
- Pulley, [PL 80.25 Item 4](#).
- Transport roll bearings, [PL 80.25 Item 6](#).
- Transport roll, [PL 80.25 Item 7](#).

Apply pressure to the tray 2 transport roll, [Figure 1](#). **The transport roll stalls.**

Y N
Apply pressure to the tray 1 transport roll, [Figure 1](#). **The transport roll stalls.**

Y N
If the fault persists perform the [381-194-00](#) Lead Edge Late to TAR 1 Sensor from Tray 2 RAP.

Install new components as necessary:

- Drive pulley, [PL 80.25 Item 3](#).
- Tray 1 transport roll, [PL 80.25 Item 7](#).
- Tray 1 transport roll bearings, [PL 80.25 Item 6](#).

A

B

B

Install new components as necessary:

- Drive pulley, PL 80.25 Item 3.
- Tray 2 transport roll, PL 80.25 Item 7.
- Tray 2 transport roll bearings, PL 80.25 Item 6.

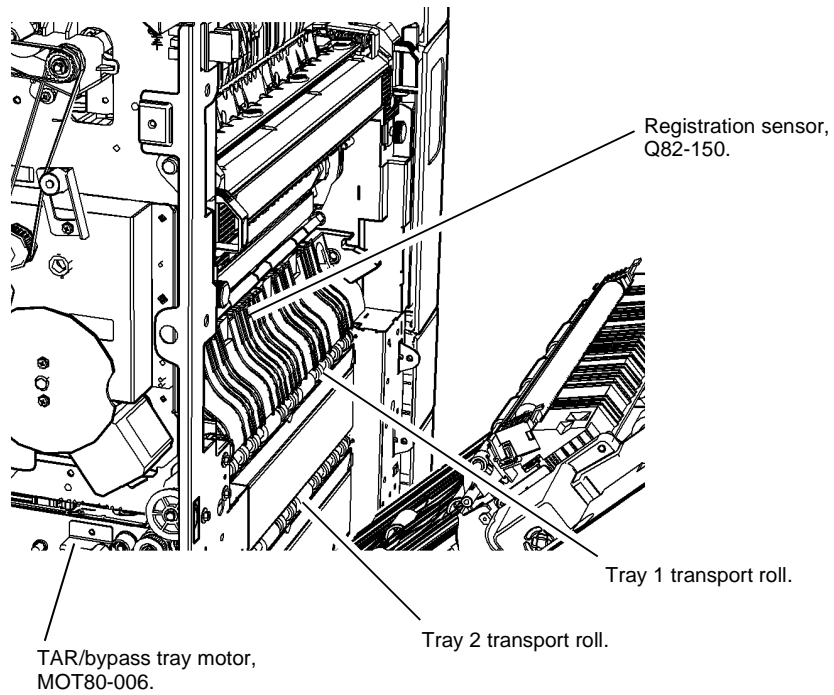


Figure 1 Component location

X-1-1257-A

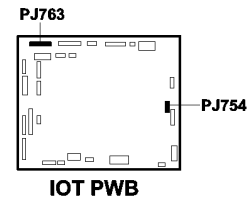
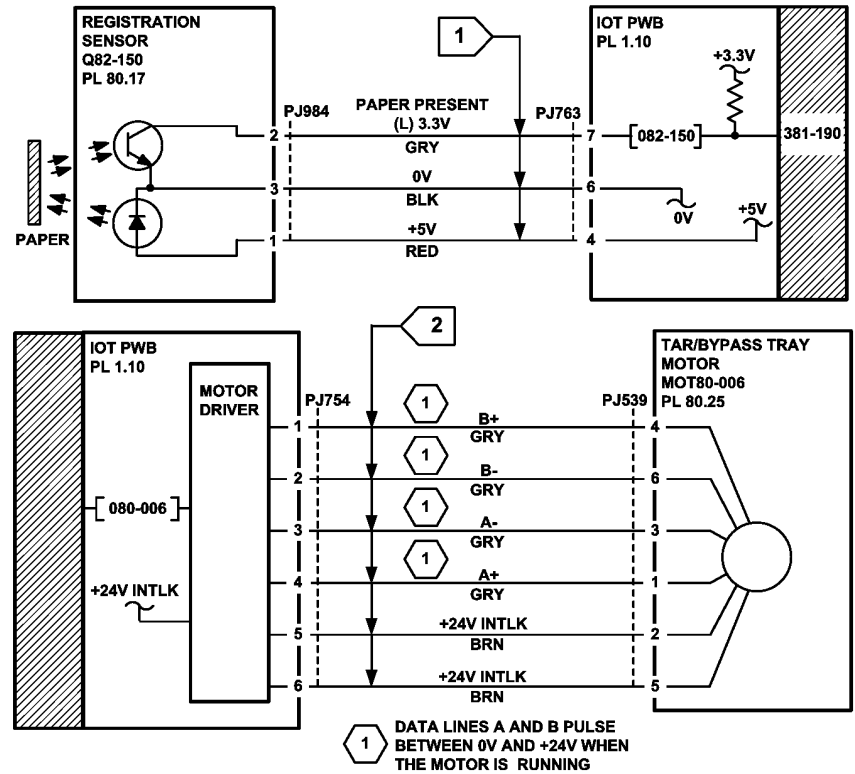


Figure 2 Circuit diagram

TX-1-0308-A

381-192-00 Lead Edge Late to Registration Sensor from Tray 3 RAP

381-192-00 The lead edge of the paper was late to the registration sensor when feeding from tray 3.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 3. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check for obstructions in the paper path.
- Ask the customer to check that the left door is latched correctly.

If the fault continues a site visit will be necessary.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- If 2 sheets of paper are jammed at the registration rolls, perform the [OF8](#) Multifeed RAP.
- Increasing the retard roll nip pressure will make the retard action more aggressive and may lessen the occurrence of multifeeds. Perform [ADJ 80.3](#).
- Clean the paper path sensors that follow:
 - Tray 1 TAR sensor, [PL 80.10 Item 5](#).
 - Tray 2 TAR sensor, [PL 80.10 Item 5](#).
 - Registration sensor, [PL 80.17 Item 7](#).
- Ensure that all connectors on the [IOT PWB](#) are correctly and securely seated.
- If the paper has excessive curl, refer to [IQ5](#).
- Check for skew. Refer to [IQ8](#).
- Clean the tray 3 paper feed assembly feed rolls.
- Clean the transport rolls between tray 3 and the registration area.
- Check the condition of the pressure blade, [PL 80.17 Item 12](#). If the pressure blade is damaged or worn, install a new blade.

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 082-150, registration sensor, Q82-150, [Figure 1](#). Open the left door. Actuate Q82-150. **The display changes.**

- Y N**
- Go to [Flag 1](#). Check Q82-150.
Refer to:
- [GP 11](#) How to check a Sensor.
 - [P/J763](#), [IOT PWB](#).
 - [301E](#) +5V and +5VSB Distribution RAP.
 - [301B](#) 0V Distribution RAP.

If necessary, install a new registration sensor, [PL 80.17 Item 7](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 081-001, tray 1 TAR sensor, Q81-001, [Figure 2](#). Manually actuate Q81-001. **The display changes.**

- Y N**
- Go to [Flag 2](#). Check Q81-001.
Refer to:
- [GP 11](#) How to Check a Sensor.
 - [P/J750](#), [IOT PWB](#).
 - [301E](#) +5V and +5VSB Distribution RAP.
 - [301B](#) 0V Distribution RAP.

If necessary, install a new Tray 1 TAR sensor, [PL 80.10 Item 5](#). If the fault persists, perform the [OF7](#) IOT diagnostics RAP.

Enter [dC330](#) code 082-001, tray 2 TAR sensor, Q82-001, [Figure 2](#). Manually actuate Q82-001. **The display changes.**

- Y N**
- Go to [Flag 3](#). Check Q82-001.
Refer to:
- [GP 11](#) How to Check a Sensor.
 - [P/J750](#), [IOT PWB](#).
 - [301E](#) +5V and +5VSB Distribution RAP.
 - [301B](#) 0V Distribution RAP.

If necessary, install a new Tray 2 TAR sensor, [PL 80.10 Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Remove the rear cover, then manually rotate the tray 2 transport roll, [Figure 1](#), [PL 80.25 Item 7](#), whilst holding the pulley, [PL 80.25 Item 4](#). **The transport roll rotates in one direction only.**

- Y N**
- Install new components as necessary:
- Pulley, [PL 80.25 Item 4](#).
 - Tray 2 transport roll, [PL 80.25 Item 7](#).
 - Tray 2 transport roll bearings, [PL 80.25 Item 6](#).

Manually rotate the tray 1 transport roll, [Figure 1](#), [PL 80.25 Item 7](#), whilst holding the drive pulley, [PL 80.25 Item 3](#). **The transport roll rotates in one direction only.**

- Y N**
- Install new components as necessary:
- Drive pulley, [PL 80.25 Item 3](#).
 - Tray 1 transport roll, [PL 80.25 Item 7](#).
 - Tray 1 transport roll bearings, [PL 80.25 Item 6](#).

Enter [dC330](#) code 080-006 TAR/Bypass tray motor MOT80-006. **The motor runs.**

- Y N**
- Go to [Flag 4](#). Check MOT80-006. Refer to:
- [GP 10](#) How to Check a Motor.

B

- P/J754, IOT PWB
- 301G +24V Distribution RAP.
- 301B 0V Distribution RAP.

If necessary, install a new TAR/bypass tray motor, PL 80.25 Item 5. If the fault persists, perform the OF7 IOT PWB Diagnostics RAP.

Observe the transport rolls, PL 80.25 Item 7. **The transport rolls rotate.**

Y N

Check the transport roll drive belt, drive pulley and pulley, PL 80.25. Install new components as necessary:

- Transport roll drive belt, PL 80.25 Item 2.
- Pulley, PL 80.25 Item 4.
- Transport roll bearing, PL 80.25 Item 6.
- Transport roll, PL 80.25 Item 7.
- Transport gear pulley, PL 80.36 Item 12.

Apply pressure to the tray 2 transport roll, Figure 1. **The transport roll stalls.**

Y N

Apply pressure to the tray 1 transport roll, Figure 1. **The transport roll stalls.**

Y N

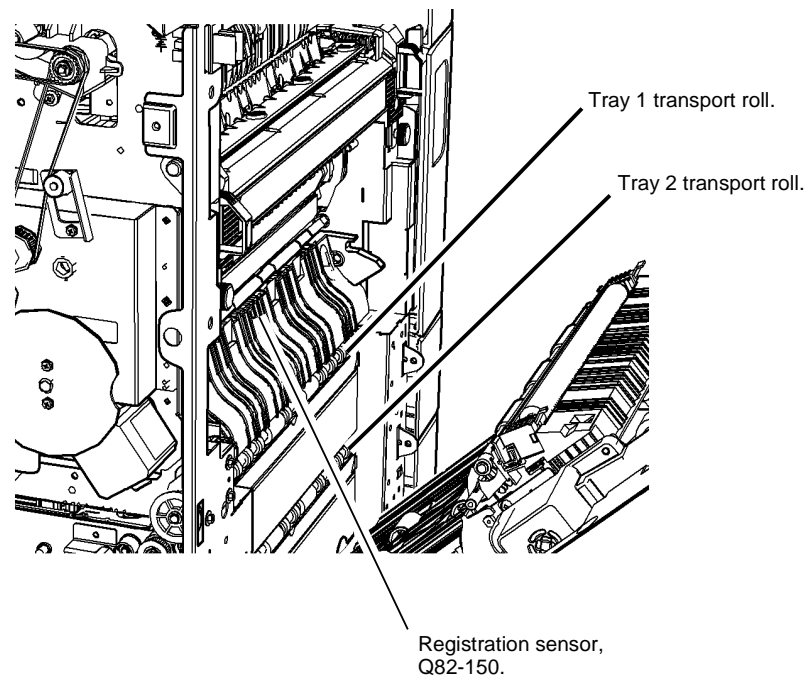
If the fault persists perform the 381-159-00 Late to HCF Exit Sensor from Tray 3 RAP.

Install new components as necessary:

- Drive pulley, PL 80.25 Item 3.
- Tray 1 transport roll, PL 80.25 Item 7.
- Tray 1 transport roll bearings, PL 80.25 Item 6.

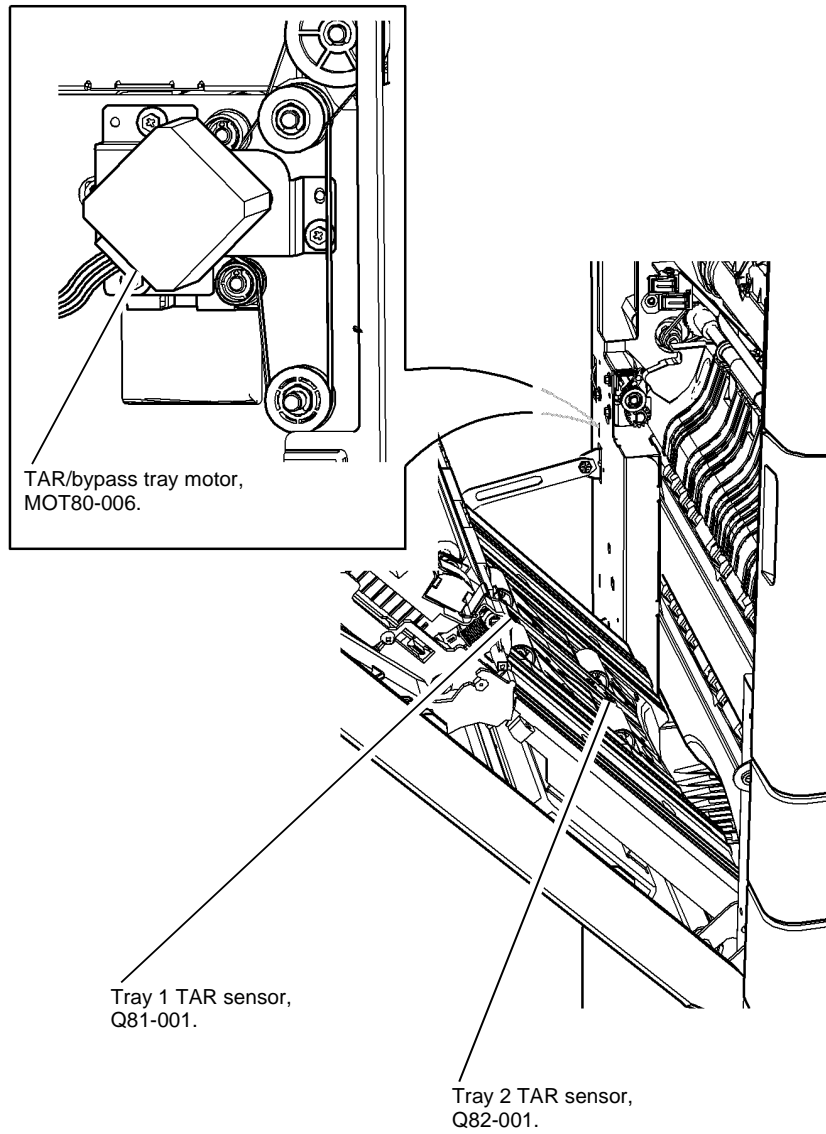
Install new components as necessary:

- Drive pulley, PL 80.25 Item 3.
- Tray 2 transport roll, PL 80.25 Item 7.
- Tray 2 transport roll bearings, PL 80.25 Item 6.



X-1-1259-A

Figure 1 Component location



X-1-1266-A

Figure 2 Component location

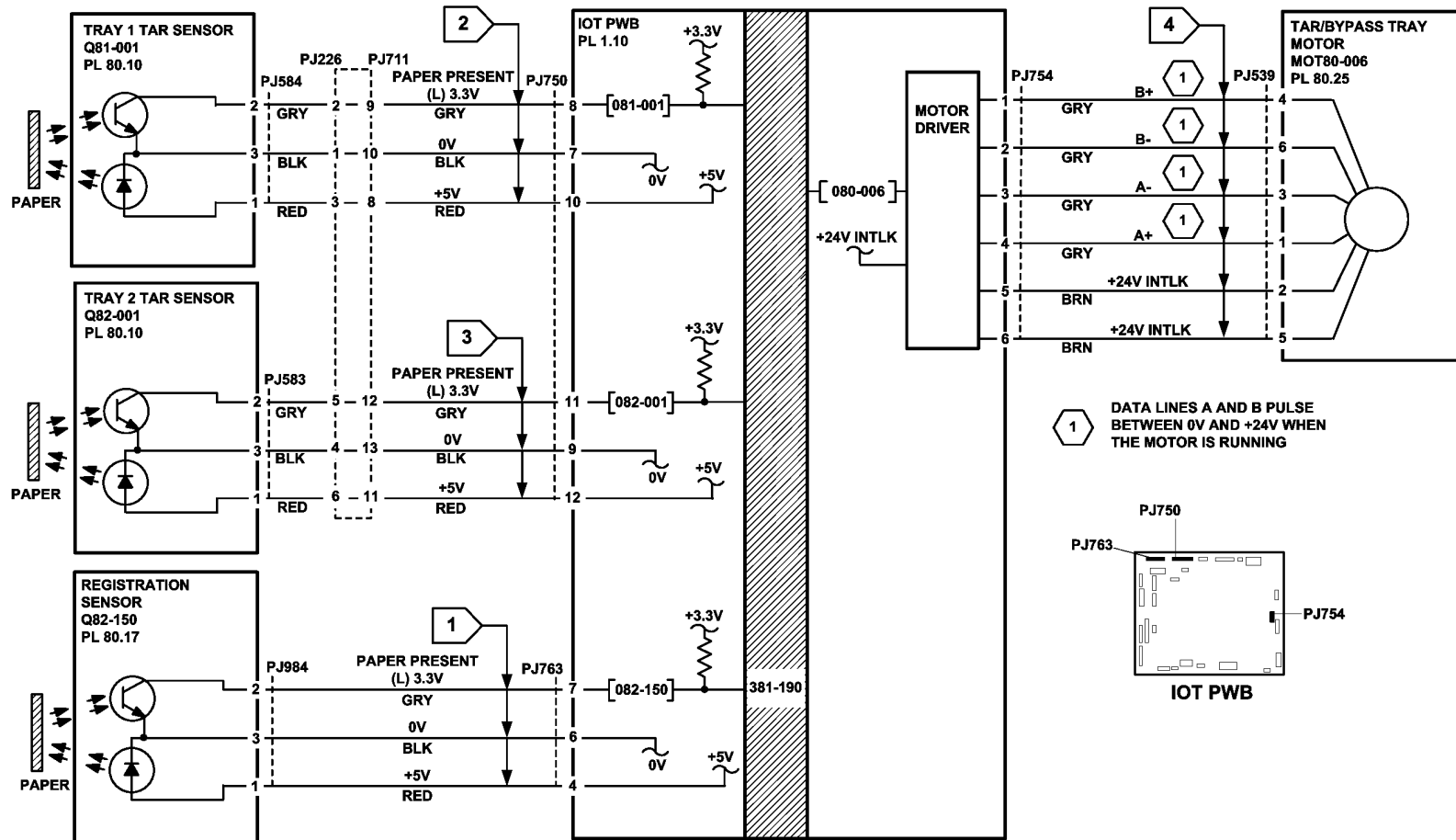


Figure 3 Circuit diagram

TW-1-0310-A

381-193-00 Lead Edge Late to Registration Sensor from Tray 4 RAP

381-193-00 The lead edge of the paper was late to the registration sensor when feeding from tray 4.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 4. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check for obstructions in the paper path.
- Ask the customer to check that the left door is latched correctly.

If the fault continues a site visit will be necessary.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- If 2 sheets of paper are jammed at the registration rolls, perform the [OF8](#) Multifeed RAP.
- Increasing the retard roll nip pressure will make the retard action more aggressive and may lessen the occurrence of multifeeds. Perform [ADJ 80.3](#).
- If fault occurs from the bypass tray, perform the [381-155-00](#) Late to Registration Sensor from Bypass Tray RAP.
- Clean the paper path sensors that follow:
 - Tray 1 TAR sensor, [PL 80.10 Item 5](#).
 - Tray 2 TAR sensor, [PL 80.10 Item 5](#).
 - Registration sensor, [PL 80.17 Item 7](#).
- Ensure that all connectors on the [IOT PWB](#) are correctly and securely seated.
- If the paper has excessive curl, refer to [IQ5](#).
- Check for skew. Refer to [IQ8](#).
- Clean the tray 4 paper feed assembly feed rolls.
- Clean the transport rolls between tray 4 and the registration area.
- Check the condition of the pressure blade, [PL 80.17 Item 12](#). If the pressure blade is damaged or worn, install a new blade.

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 082-150, registration sensor, Q82-150, [Figure 1](#). Open the left door. Actuate Q82-150. **The display changes.**

Y N
Go to [Flag 1](#). Check Q82-150.
Refer to:

- [GP 11](#) How to check a Sensor.
- [P/J763](#), [IOT PWB](#).

- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new registration sensor, [PL 80.17 Item 7](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 081-001, tray 1 TAR sensor, Q81-001, [Figure 2](#). Manually actuate Q81-001. **The display changes.**

Y N
Go to [Flag 2](#). Check Q81-001.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J750](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new Tray 1 TAR sensor, [PL 80.10 Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 082-001, tray 2 TAR sensor, Q82-001, [Figure 2](#). Manually actuate Q82-001. **The display changes.**

Y N
Go to [Flag 3](#). Check Q82-001.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J750](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new Tray 2 TAR sensor, [PL 80.10 Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Remove the rear cover, then manually rotate the tray 2 transport roll, [Figure 1](#), [PL 80.25 Item 7](#), whilst holding the pulley, [PL 80.25 Item 4](#). **The transport roll rotates in one direction only.**

Y N
Install new components as necessary:

- Pulley, [PL 80.25 Item 4](#).
- Tray 2 transport roll, [PL 80.25 Item 7](#).
- Tray 2 transport roll bearings, [PL 80.25 Item 6](#).

Manually rotate the tray 1 transport roll, [Figure 1](#), [PL 80.25 Item 7](#), whilst holding the drive pulley, [PL 80.25 Item 3](#). **The transport roll rotates in one direction only.**

Y N
Install new components as necessary:

- Drive pulley, [PL 80.25 Item 3](#).
- Tray 1 transport roll, [PL 80.25 Item 7](#).
- Tray 1 transport roll bearings, [PL 80.25 Item 6](#).

Enter [dC330](#) code 080-006 TAR/Bypass tray motor MOT80-006. **The motor runs.**

A

Y N

Go to **Flag 4**. Check MOT80-006.

Refer to:

- **GP 10** How to Check a Motor.
- **P/J754, IOT PWB**.
- **301G** +24V Distribution RAP.
- **301B** 0V Distribution RAP.

If necessary, install a new TAR/bypass tray motor, **PL 80.25 Item 5**. If the fault persists, perform the **OF7 IOT PWB Diagnostics RAP**.

Observe the transport rolls, **PL 80.25 Item 7**. **The transport rolls rotate.**

Y N

Check the transport roll drive belt, drive pulley and pulley, **PL 80.25**.

Install new components as necessary:

- Transport roll drive belt, **PL 80.25 Item 2**.
- Pulley, **PL 80.25 Item 4**.
- Transport roll bearing, **PL 80.25 Item 6**.
- Transport roll, **PL 80.25 Item 7**.
- Transport gear pulley, **PL 80.36 Item 12**.

Apply pressure to the tray 2 transport roll, **Figure 1**. **The transport roll stalls.**

Y N

Apply pressure to the tray 1 transport roll, **Figure 1**. **The transport roll stalls.**

Y N

If the fault persists, perform the **381-199-00 Late to HCF Exit Sensor from Tray 4 RAP**.

Install new components as necessary:

- Drive pulley, **PL 80.25 Item 3**.
- Tray 1 transport roll, **PL 80.25 Item 7**.
- Tray 1 transport roll bearings, **PL 80.25 Item 6**.

Install new components as necessary:

- Drive pulley, **PL 80.25 Item 3**.
- Tray 2 transport roll, **PL 80.25 Item 7**.
- Tray 2 transport roll bearings, **PL 80.25 Item 6**.

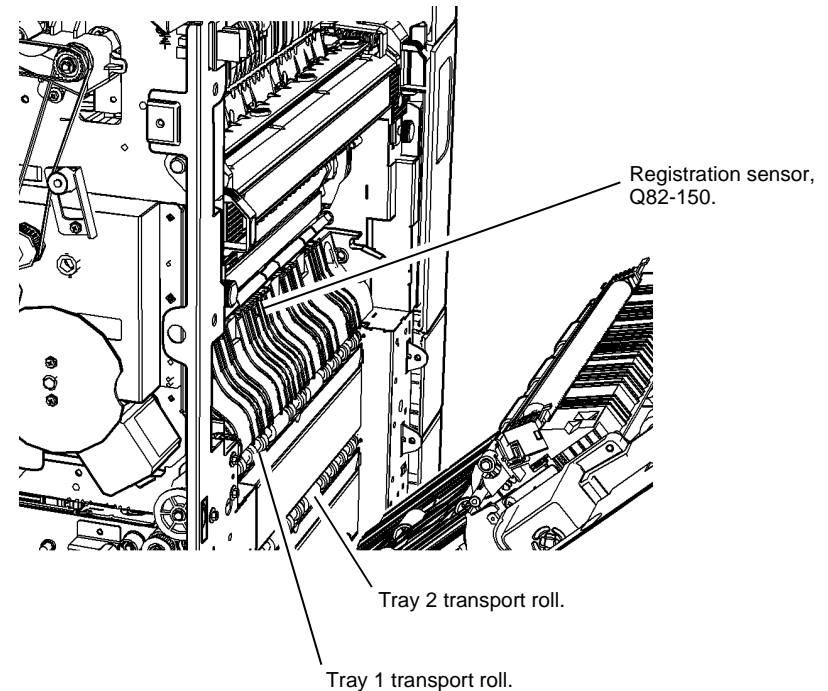
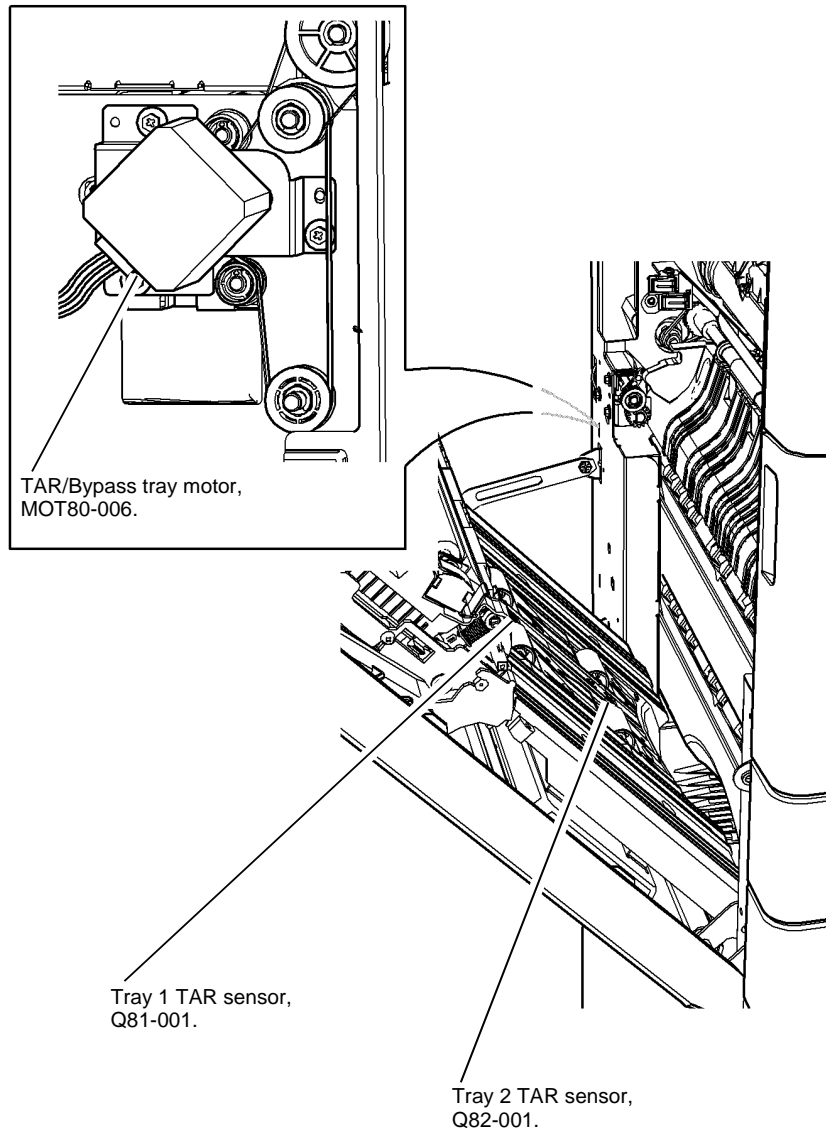


Figure 1 Component location

X-1-1267-A



X-1-1268-A

Figure 2 Component location

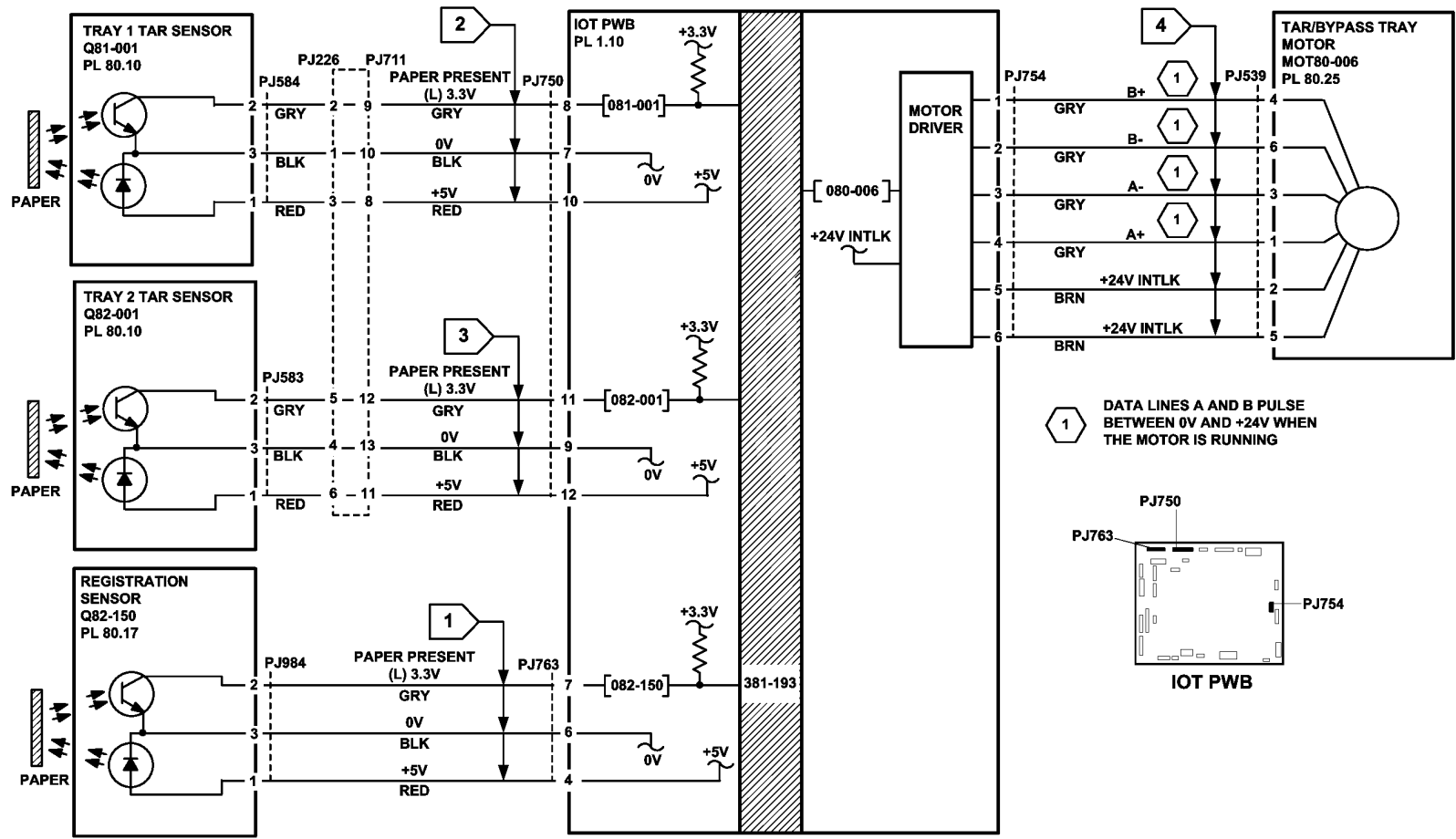


Figure 3 Circuit diagram

TW-1-0313-A

381-194-00 Lead Edge Late to TAR 1 Sensor from Tray 2 RAP

381-194-00 The lead edge of the paper failed to actuate the tray 1 TAR sensor within the correct time after feeding paper from tray 2.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 2. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check that the paper guides are set correctly.
- Ask the customer to observe the tray 2 feeder and check for obstructions.
- Ask the customer to turn or change the paper in the tray.
- Ask the customer to check that the left door assembly is latched correctly.

If the fault continues a site visit will be necessary.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check that the tray elevates to the feed position. Refer to [372-100-00](#), [372-217-00](#) Tray 2 Elevator Lift Failure RAP.
- Check the left door interlock switch. Refer to [301-305-00](#) Left Door Open RAP.
- Check for damage to the chamfered edge on the left side of the tray. If necessary install a new paper tray, [PL 70.10](#).

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 081-001, tray 1 TAR sensor, Q81-001, [Figure 1](#). Open the left door. Manually actuate Q81-001. **The display changes.**

Y N
Go to [Flag 1](#). Check Q81-001.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J750](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new Tray 1 TAR sensor, [PL 80.10](#) [Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 082-001, tray 2 TAR sensor, Q82-001, [Figure 1](#). Manually actuate Q82-001. **The display changes.**

Y N
Go to [Flag 2](#). Check Q82-001.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J750](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new Tray 2 TAR sensor, [PL 80.10](#) [Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Remove the rear cover, then manually rotate the tray 2 transport roll, [Figure 1](#), [PL 80.25](#) [Item 7](#), whilst holding the pulley, [PL 80.25](#) [Item 4](#). **The transport roll rotates in one direction only.**

Y N
Install new components as necessary:

- Pulley, [PL 80.25](#) [Item 4](#).
- Tray 2 transport roll, [PL 80.25](#) [Item 7](#).
- Tray 2 transport roll bearings, [PL 80.25](#) [Item 6](#).

Enter [dC330](#) code 080-006, TAR/bypass tray motor, MOT80-006. **The motor runs.**

Y N
Go to [Flag 3](#). Check MOT80-006.
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J754](#), [IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new TAR/bypass tray motor, [PL 80.25](#) [Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Observe the transport rolls, [PL 80.25](#) [Item 7](#). **The transport rolls rotate.**

Y N
Check the transport roll drive belt, drive pulley and pulley, [PL 80.25](#).
Install new components as necessary:

- Transport roll drive belt, [PL 80.25](#) [Item 2](#).
- Pulley, [PL 80.25](#) [Item 4](#).
- Transport roll bearing, [PL 80.25](#) [Item 6](#).
- Transport roll, [PL 80.25](#) [Item 7](#).

Apply pressure to the tray 2 transport roll, [Figure 1](#). **The transport roll stalls.**

Y N



To prevent damage to the feed mechanism, the paper tray must be pulled out before MOT71-010 is run in service mode.

Enter [dC330](#) code 081-020, tray 2 elevator/feed motor MOT072-010. Pull out the tray. **The feed rolls rotate.**

A

B

Y N

Remove the tray 2 feed assembly from the machine. Manually rotate the feed roll shaft. **The drive gears rotate.**

Y N

Check the drive gears for damage. If necessary install new components, [PL 80.26](#).

Install the tray 2 feed assembly. Go to [Flag 4](#). Check MOT072-010.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J752, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new Tray 2 elevator/feed motor, [PL 80.26 Item 6](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Observe the nudger roll, [PL 80.26 Item 5](#). **The nudger roll rotates.**

Y N

Check the nudger roll drive belt and drive coupling for damage. If necessary install new components, [PL 80.26](#).

Remove the paper tray. Manually activate the retard nip split mechanism. **The retard roll moves against the feed roll.**

Y N

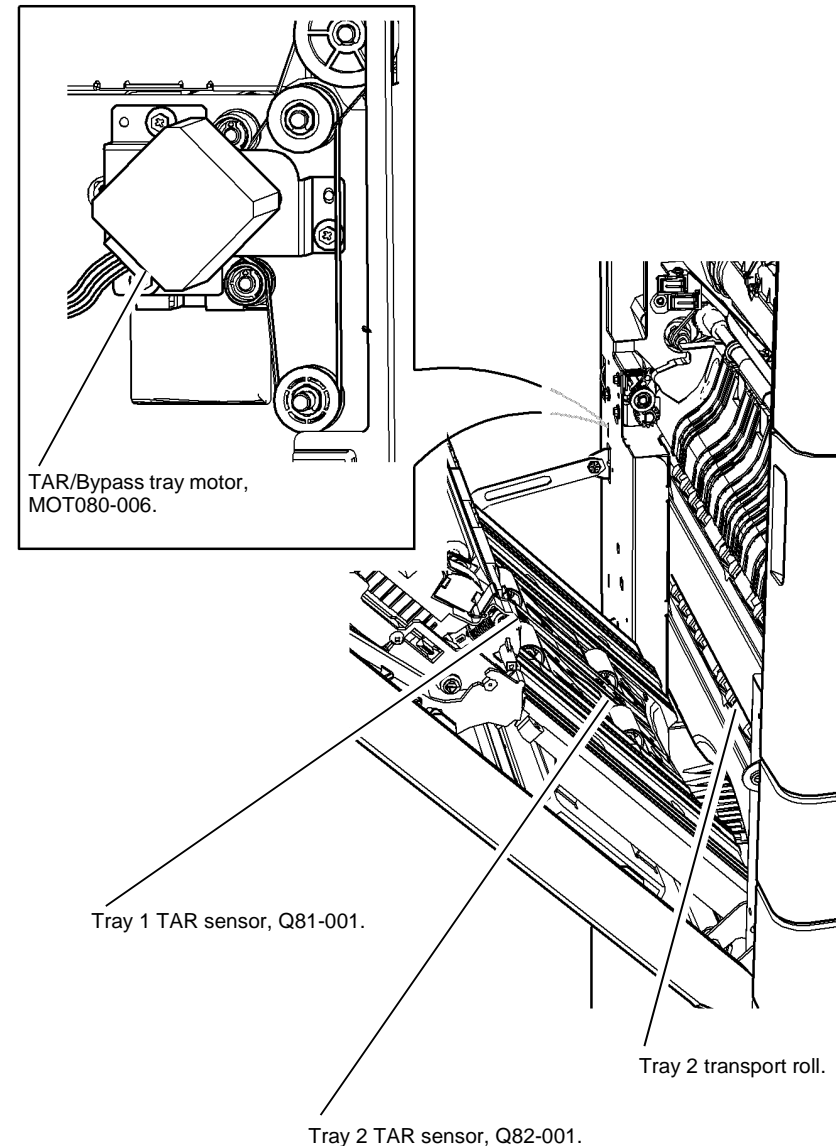
Check the retard roll drive coupling and mechanism for damage. If necessary install new components, [PL 80.26](#).

Perform the steps that follow:

- Clean the feed roll using a cloth dampened with water.
- Check the roll assembly, [PL 80.26 Item 3](#).
- Check the paper feed assembly, [PL 80.26 Item 1](#).

Install new components as necessary:

- Drive pulley, [PL 80.25 Item 3](#).
- Tray 2 transport roll, [PL 80.25 Item 7](#).
- Tray 2 transport roll bearings, [PL 80.25 Item 6](#).



X-1-1269-A

Figure 1 Component location

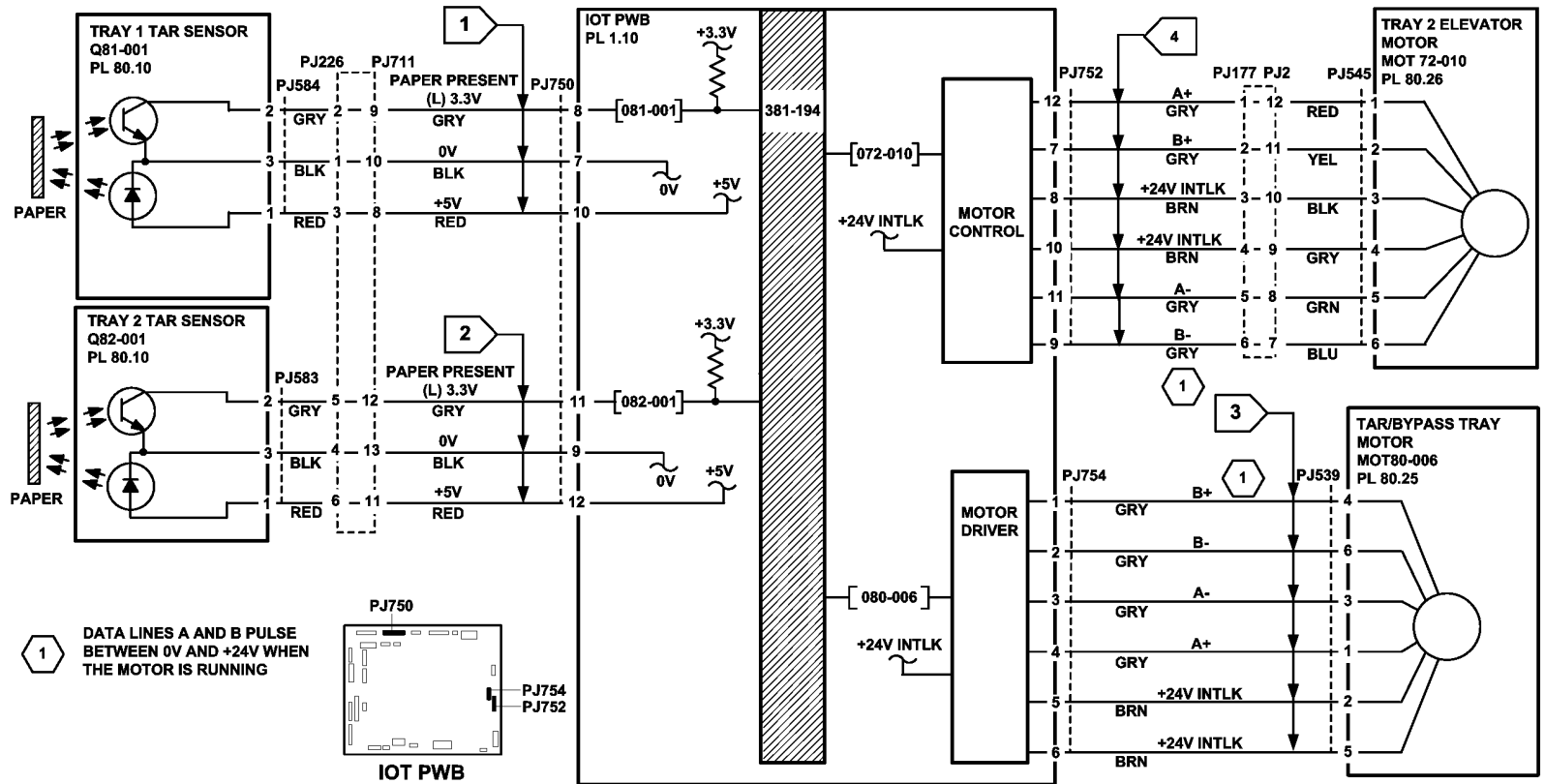


Figure 2 Circuit diagram

TX-1-0314-A

381-195-00 Lead Edge Late to TAR 1 Sensor from Tray 3 RAP

381-195-00 The lead edge of the paper failed to actuate the tray 1 TAR sensor within the correct time after feeding paper from tray 3.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 3. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check that the paper guides are set correctly.
- Ask the customer to turn or change the paper in the tray.
- Ask the customer to check that the left door assembly is latched correctly.
- Ask the customer to observe the Tray 3 feeder and check for obstructions.

If the fault continues a site visit will be necessary.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- If the misfeed occurs between 15 and 20 paper feeds, perform the [373-100-00, 373-217-00](#) Tray 3 Elevator Lift Failure RAP.
- Check the left door interlock switch. Refer to [301-305-00](#) Left Door Open RAP.
- Reducing the retard roll nip pressure will make the retard action less aggressive and may lessen the occurrence of misfeeds. Perform [ADJ 80.3](#).

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 081-001, tray 1 TAR sensor, Q81-001. [Figure 1](#). Open the left door. Manually actuate Q81-001. **The display changes.**

- Y N**
- Go to [Flag 1](#). Check Q81-001.
- Refer to:
- [GP 11](#) How to Check a Sensor.
 - [P/J750, IOT PWB](#).
 - [301E](#) +5V and +5VSB Distribution RAP.
 - [301B](#) 0V Distribution RAP.

If necessary, install a new Tray 1 TAR sensor, [PL 80.10](#) [Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 082-001, tray 2 TAR sensor, Q82-001, [Figure 1](#). Manually actuate Q82-001. **The display changes.**

- Y N**
- Go to [Flag 2](#). Check Q82-001.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J750, IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new Tray 2 TAR sensor, [PL 80.10](#) [Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Remove the rear cover, then manually rotate the tray 2 transport roll, [Figure 1](#), [PL 80.25](#) [Item 7](#), whilst holding the pulley, [PL 80.25](#) [Item 4](#). **The transport roll rotates in one direction only.**

- Y N**
- Install new components as necessary:
- Pulley, [PL 80.25](#) [Item 4](#).
 - Tray 2 transport roll, [PL 80.25](#) [Item 7](#).
 - Tray 2 transport roll bearings, [PL 80.25](#) [Item 6](#).

Enter [dC330](#) code 080-006 TAR/bypass tray motor MOT80-006, [Figure 1](#). **The motor runs.**

- Y N**
- Go to [Flag 3](#). Check MOT80-006.
- Refer to:
- [GP 10](#) How to Check a Motor.
 - [P/J754, IOT PWB](#).
 - [301G](#) +24V Distribution RAP.
 - [301B](#) 0V Distribution RAP.
- If necessary, install a new TAR/bypass tray motor, [PL 80.25](#) [Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

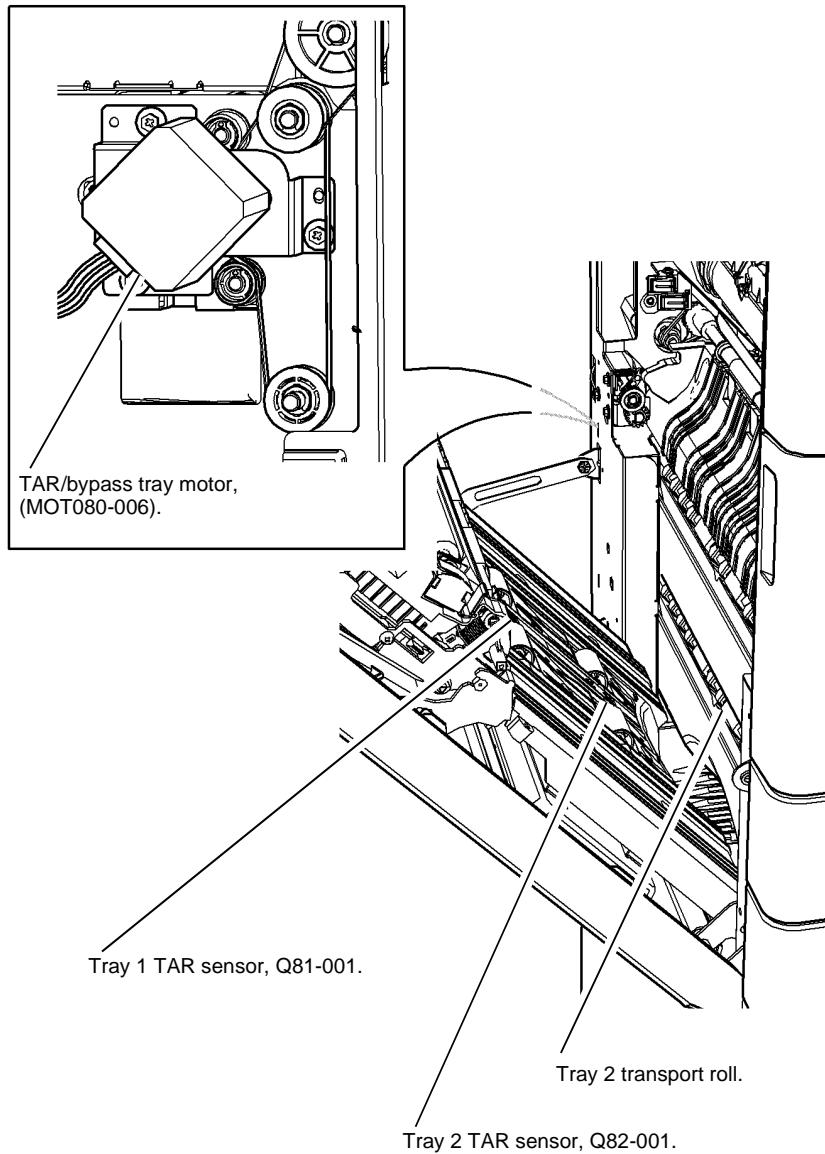
Observe the transport rolls, [PL 80.25](#) [Item 7](#). **The transport rolls rotate.**

- Y N**
- Check the transport roll drive belt, drive pulley and pulley, [PL 80.25](#).
- Install new components as necessary:
- Transport roll drive belt, [PL 80.25](#) [Item 2](#).
 - Pulley, [PL 80.25](#) [Item 4](#).
 - Transport roll bearing, [PL 80.25](#) [Item 6](#).
 - Transport roll, [PL 80.25](#) [Item 7](#).

Apply pressure to the tray 2 transport roll, [Figure 1](#). **The transport roll stalls.**

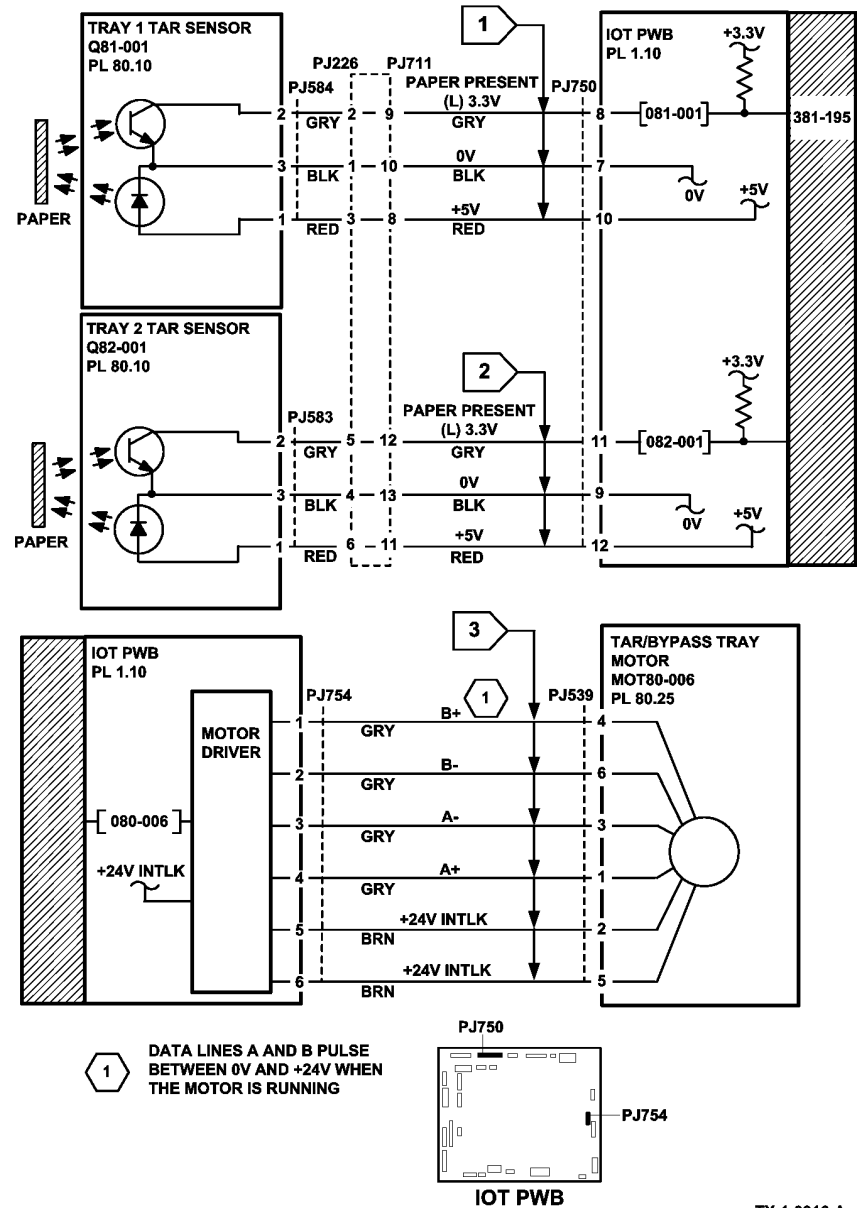
- Y N**
- If the fault persists perform the [381-159-00](#) Late to HCF Exit Sensor from Tray 3 RAP.

- Install new components as necessary:
- Drive pulley, [PL 80.25](#) [Item 3](#).
 - Tray 2 transport roll, [PL 80.25](#) [Item 7](#).
 - Tray 2 transport roll bearings, [PL 80.25](#) [Item 6](#).



X-1-1270-A

Figure 1 Component location



TX-1-0316-A

Figure 2 Circuit diagram

381-196-00 Lead Edge Late to TAR 1 Sensor from Tray 4 RAP

381-196-00 The lead edge of the paper failed to actuate the tray 1 TAR sensor within the correct time after feeding paper from tray 4.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 4. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check that the paper guides are set correctly.
- Ask the customer to turn or change the paper in the tray.
- Ask the customer to check that the left door assembly is latched correctly.
- Ask the customer to observe the tray 4 feeder and check for obstructions.

If the fault continues a site visit will be necessary.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- If the misfeed occurs between 15 and 20 paper feeds, perform the [374-100-00, 374-217-00](#) Tray 4 Elevator Lift Failure RAP.
- Check tray 4 closes correctly, [ADJ 80.5](#) Tray 4 Closing Alignment. If necessary perform the adjustment.
- Check the left door interlock switch. Refer to [301-305-00](#) Left Door Open RAP.

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 081-001, tray 1 TAR sensor, Q81-001. [Figure 1](#). Open the left door. Manually actuate Q81-001. **The display changes.**

Y N
Go to [Flag 1](#). Check Q81-001.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J750, IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new Tray 1 TAR sensor, [PL 80.10](#) [Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 082-001, tray 2 TAR sensor, Q82-001, [Figure 1](#). Manually actuate Q82-001. **The display changes.**

Y N
Go to [Flag 2](#). Check Q82-001.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J750, IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new Tray 2 TAR sensor, [PL 80.10](#) [Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Remove the rear cover, then manually rotate the tray 2 transport roll, [Figure 1](#), [PL 80.25](#) [Item 7](#), whilst holding the pulley, [PL 80.25](#) [Item 4](#). **The transport roll rotates in one direction only.**

Y N
Install new components as necessary:

- Pulley, [PL 80.25](#) [Item 4](#).
- Tray 2 transport roll, [PL 80.25](#) [Item 7](#).
- Tray 2 transport roll bearings, [PL 80.25](#) [Item 6](#).

Enter [dC330](#) code 080-006, TAR/bypass tray motor, MOT80-006, [Figure 1](#). **The motor runs.**

Y N
Go to [Flag 3](#). Check MOT80-006.
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J754, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new TAR/bypass tray motor, [PL 80.25](#) [Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Observe the transport rolls, [PL 80.25](#) [Item 7](#). **The transport rolls rotate.**

Y N
Check the transport roll drive belt, drive pulley and pulley, [PL 80.25](#).
Install new components as necessary:

- Transport roll drive belt, [PL 80.25](#) [Item 2](#).
- Pulley, [PL 80.25](#) [Item 4](#).
- Transport roll bearing, [PL 80.25](#) [Item 6](#).
- Transport roll, [PL 80.25](#) [Item 7](#).
- Transport gear pulley, [PL 80.36](#) [Item 12](#).

Apply pressure to the tray 2 transport roll, [Figure 1](#). **The transport roll stalls.**

Y N
If the fault persists, perform the [381-199-00](#) Late to HCF Exit Sensor from Tray 4 RAP.

Install new components as necessary:

- Drive pulley, [PL 80.25](#) [Item 3](#).
- Tray 2 transport roll, [PL 80.25](#) [Item 7](#).
- Tray 2 transport roll bearings, [PL 80.25](#) [Item 6](#).

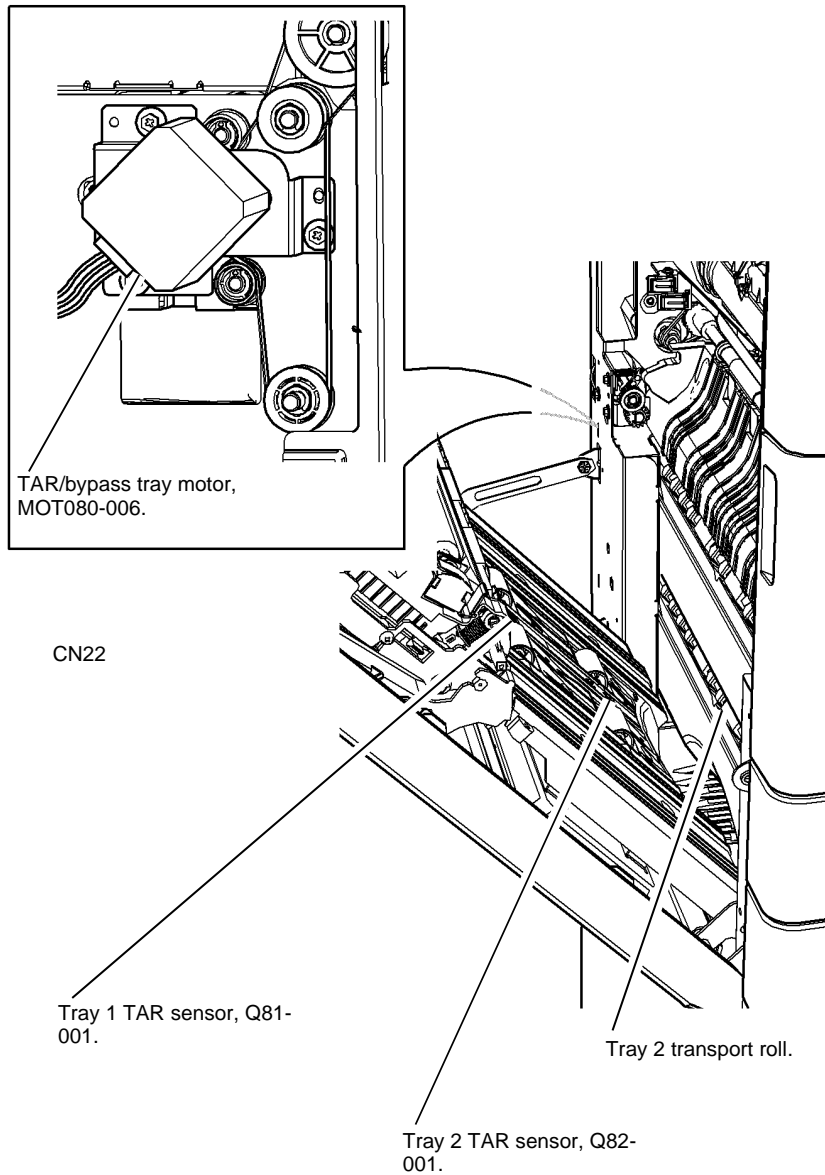


Figure 1 Component location

X-1-1271-A

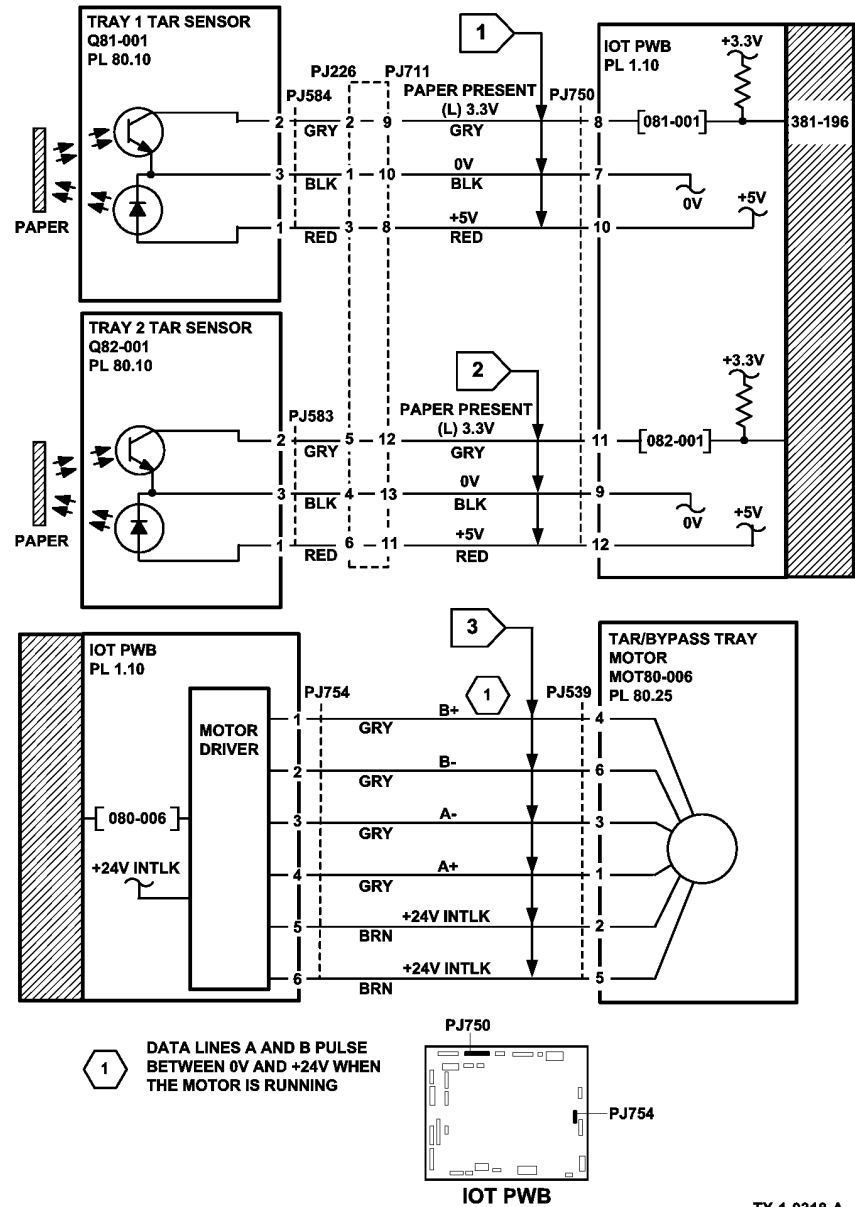


Figure 2 Circuit diagram

TX-1-0318-A

381-197-00 Lead Edge Late to TAR 2 Sensor from Tray 3 RAP

381-197-00 The lead edge of the paper failed to actuate the tray 2 TAR sensor within the correct time after feeding paper from tray 3.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 3. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check that the paper guides are set correctly.
- Ask the customer to observe the tray 3 feeder and check for obstructions.
- Ask the customer to turn or change the paper in the tray.
- Ask the customer to check that the left door assembly is latched correctly.

If the fault continues a site visit will be necessary.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- If the misfeed occurs between 15 and 20 paper feeds, perform the [373-100-00, 373-217-00](#) Tray 3 Elevator Lift Failure RAP.
- Check the left door interlock switch. Refer to [301-305-00](#) Left Door Open RAP.
- Reducing the retard roll nip pressure will make the retard action less aggressive and may lessen the occurrence of misfeeds. Perform [ADJ 80.3](#).

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 082-001, tray 2 TAR sensor, Q82-001, [Figure 1](#). Open the left door. Manually actuate Q82-001. **The display changes.**

Y N

Go to [Flag 1](#). Check Q82-001.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J750, IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new tray 2 TAR sensor, [PL 80.10 Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Remove the rear cover, then manually rotate the tray 2 transport roll, [Figure 1](#), [PL 80.25 Item 7](#), whilst holding the pulley, [PL 80.25 Item 4](#). **The transport roll rotates in one direction only.**

Y N

Install new components as necessary:

- Pulley, [PL 80.25 Item 4](#).
- Tray 2 transport roll, [PL 80.25 Item 7](#).
- Tray 2 transport roll bearings, [PL 80.25 Item 6](#).

Enter [dC330](#) code 080-006, TAR/bypass tray motor MOT80-006, [Figure 1](#). **The motor runs.**

Y N

Go to [Flag 2](#). Check MOT80-006.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J754, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new TAR/bypass tray motor, [PL 80.25 Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Observe the transport rolls, [PL 80.25 Item 7](#). **The transport rolls rotate.**

Y N

Check the transport roll drive belt, drive pulley and pulley, [PL 80.25](#).

Install new components as necessary:

- Transport roll drive belt, [PL 80.25 Item 2](#).
- Pulley, [PL 80.25 Item 4](#).
- Transport roll bearing, [PL 80.25 Item 6](#).
- Transport roll, [PL 80.25 Item 7](#).
- Transport gear pulley, [PL 80.36 Item 12](#).

Apply pressure to the tray 2 transport roll, [Figure 1](#). **The transport roll stalls.**

Y N

If the fault persists perform the [381-159-00](#) Late to HCF Exit Sensor from Tray 3 RAP.

Install new components as necessary:

- Drive pulley, [PL 80.25 Item 3](#).
- Tray 2 transport roll, [PL 80.25 Item 7](#).
- Tray 2 transport roll bearings, [PL 80.25 Item 6](#).

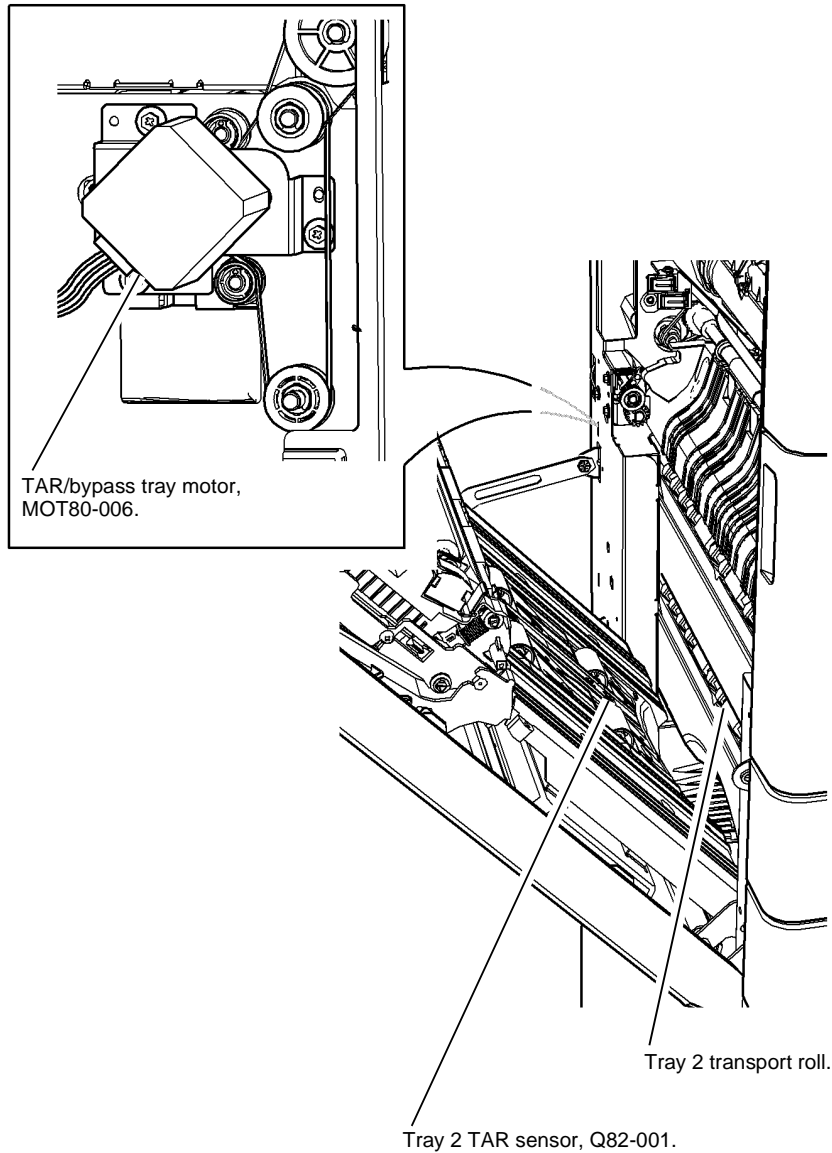


Figure 1 Component location

X-1-1272-A

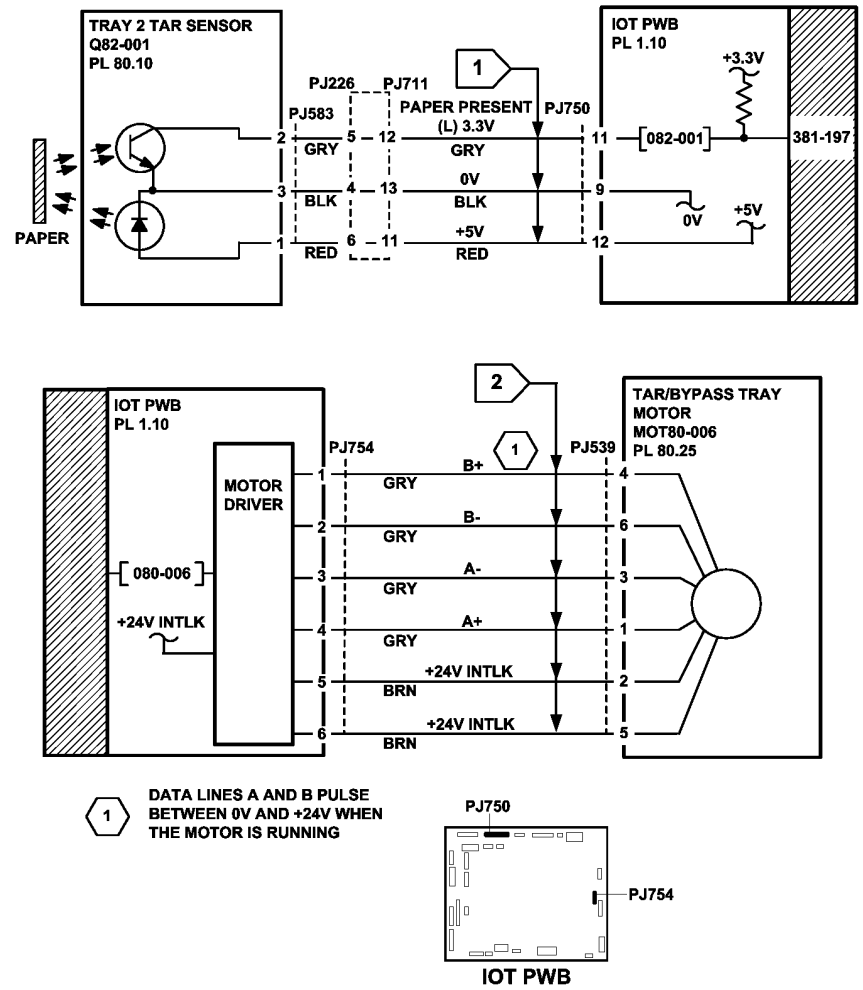


Figure 2 Circuit diagram

TX-1-0319-A

381-198-00 Lead Edge Late to TAR 2 Sensor from Tray 4 RAP

381-198-00 The lead edge of the paper failed to actuate the tray 2 TAR sensor within the correct time after feeding paper from tray 4.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 4. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check that the paper guides are set correctly.
- Ask the customer to check that the left door assembly is latched correctly.
- Ask the customer to observe the tray 4 feeder and check for obstructions.
- Ask the customer to turn or change the paper in the tray.

If the fault continues a site visit will be necessary.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- If the misfeed occurs between 15 and 20 paper feeds, perform the [374-100-00, 374-217-00](#) Tray 4 Elevator Lift Failure RAP.
- Check tray 4 closes correctly, [ADJ 80.5](#) Tray 4 Closing Alignment. If necessary perform the adjustment.
- Check the left door interlock switch. Refer to [301-305-00](#) Left Door Open RAP.

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 082-001, tray 2 TAR sensor, Q82-001, [Figure 1](#). Manually actuate Q82-001. **The display changes.**

Y N

Go to [Flag 1](#). Check Q82-001.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J750, IOT PWB](#)
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new tray 2 TAR sensor, [PL 80.10](#) Item 5. If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Remove the rear cover, then manually rotate the tray 2 transport roll, [Figure 1](#), [PL 80.25](#) Item 7, whilst holding the pulley, [PL 80.25](#) Item 4. **The transport roll rotates in one direction only.**

Y N

Install new components as necessary:

- Pulley, [PL 80.25](#) Item 4.
- Tray 2 transport roll, [PL 80.25](#) Item 7.
- Tray 2 transport roll bearings, [PL 80.25](#) Item 6.

Enter [dC330](#) code 080-006, TAR/bypass tray motor, MOT80-006, [Figure 1](#). **The motor runs.**

Y N

Go to [Flag 2](#). Check MOT80-006.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J754, IOT PWB](#)
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new TAR/bypass tray motor, [PL 80.25](#) Item 5. If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Observe the transport rolls, [PL 80.25](#) Item 7. **The transport rolls rotate.**

Y N

Check the transport roll drive belt, drive pulley and pulley, [PL 80.25](#).

Install new components as necessary:

- Transport roll drive belt, [PL 80.25](#) Item 2.
- Pulley, [PL 80.25](#) Item 4.
- Transport roll bearing, [PL 80.25](#) Item 6.
- Transport roll, [PL 80.25](#) Item 7.
- Transport gear pulley, [PL 80.36](#) Item 12.

Apply pressure to the tray 2 transport roll, [Figure 1](#). **The transport roll stalls.**

Y N

If the fault persists perform the [381-199-00](#) Late to HCF Exit Sensor from Tray 4 RAP.

Install new components as necessary:

- Drive pulley, [PL 80.25](#) Item 3.
- Tray 2 transport roll, [PL 80.25](#) Item 7.
- Tray 2 transport roll bearings, [PL 80.25](#) Item 6.

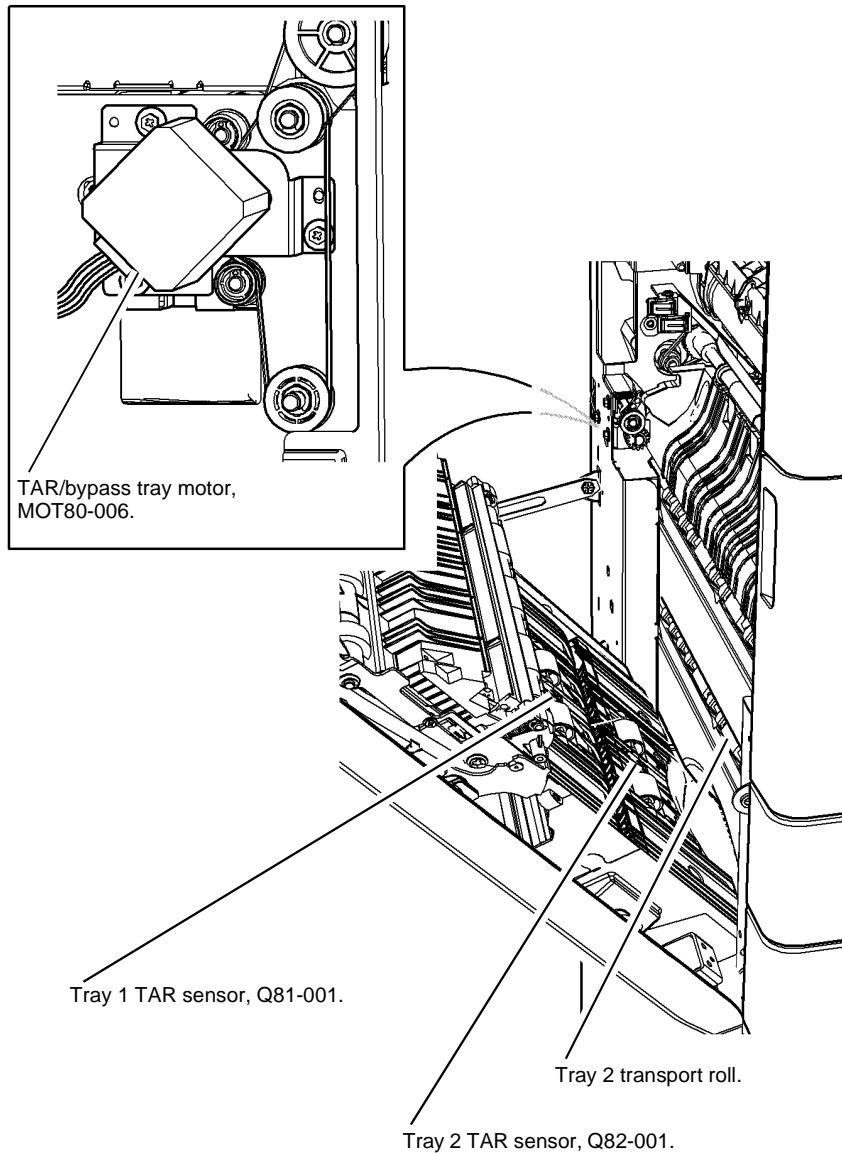


Figure 1 Component location

X-1-1273-A

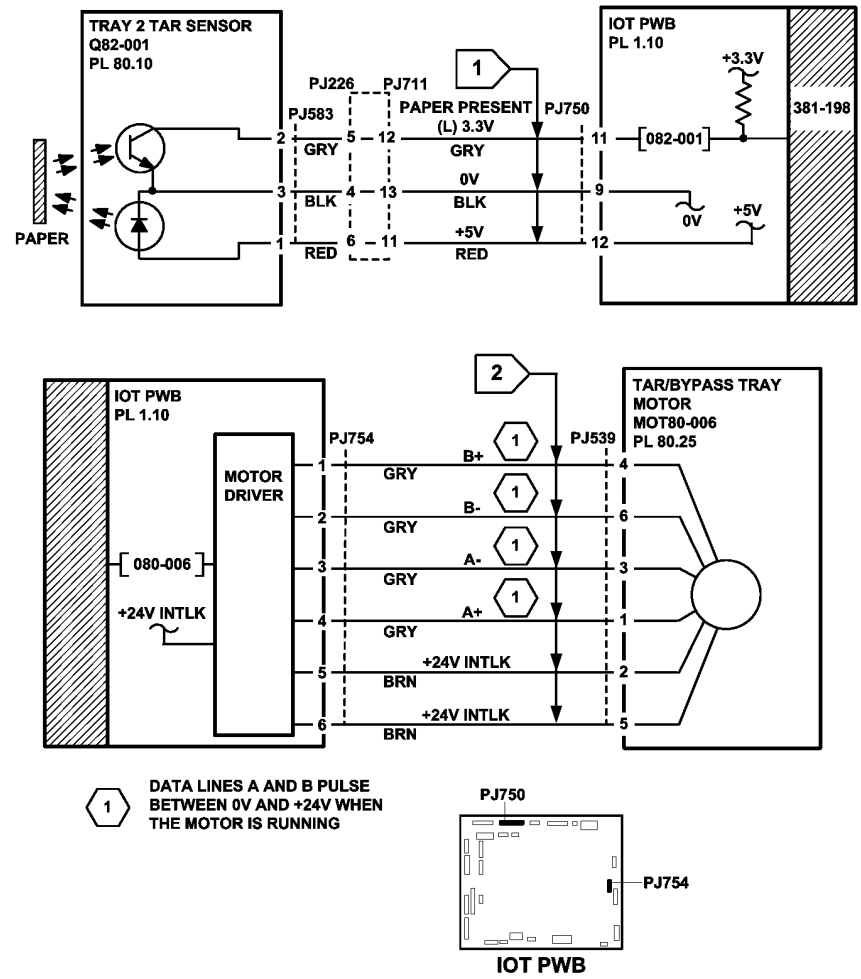


Figure 2 Circuit diagram

TX-1-0320-A

381-199-00 Lead Edge Late to HCF Exit Sensor from Tray 4 RAP

381-199-00 The lead edge of the paper was late to the HCF exit sensor when feeding from tray 4.

Remote Service Actions

- Ask the customer to check the condition of the paper in tray 4. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check for obstructions in the tray 4 paper path, [Figure 2](#).

If the fault continues a site visit will be necessary.

Initial actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check tray 4 closes correctly, [ADJ 80.5](#) Tray 4 Closing Alignment. If necessary perform the adjustment.

Procedure

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Enter [dC330](#) code 081-108, HCF exit sensor, Q81-108, [Figure 1](#). Manually actuate Q81-108.

The display changes.

Y N

Go to [Flag 1](#). Check Q81-108.
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J755](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new HCF exit sensor, [PL 80.32](#) [Item 3](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Remove the lower rear cover, [PL 70.26](#) [Item 1](#), then manually rotate the transport gear pulley, [Figure 1](#), [PL 80.36](#) [Item 12](#) and drive belt, [Figure 1](#), [PL 80.36](#) [Item 6](#) in both directions. **The manual rotation causes the HCF transport motor, [Figure 1](#) to rotate in one direction only.**

Y N

Install a new transport gear pulley, [PL 80.36](#) [Item 12](#).

Enter [dC330](#) code 081-045, HCF transport motor, MOT81-045, [Figure 1](#). **The motor runs.**

Y N

Go to [Flag 2](#). Check MOT81-045.
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J756](#), [IOT PWB](#).

- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

if necessary, install a new HCF transport motor, [PL 80.36](#) [Item 13](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Observe the takeaway roll, [PL 80.36](#) [Item 2](#) and HCF transport roll, [PL 80.33](#) [Item 4](#). **The takeaway and HCF transport rolls rotate.**

Y N

Check the components that follow:

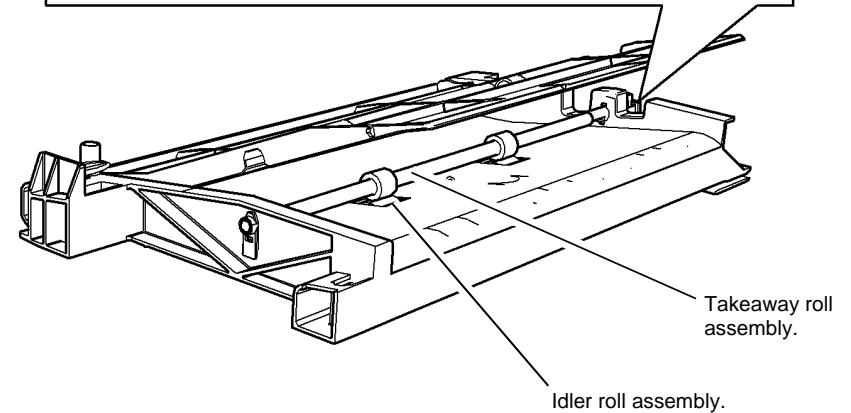
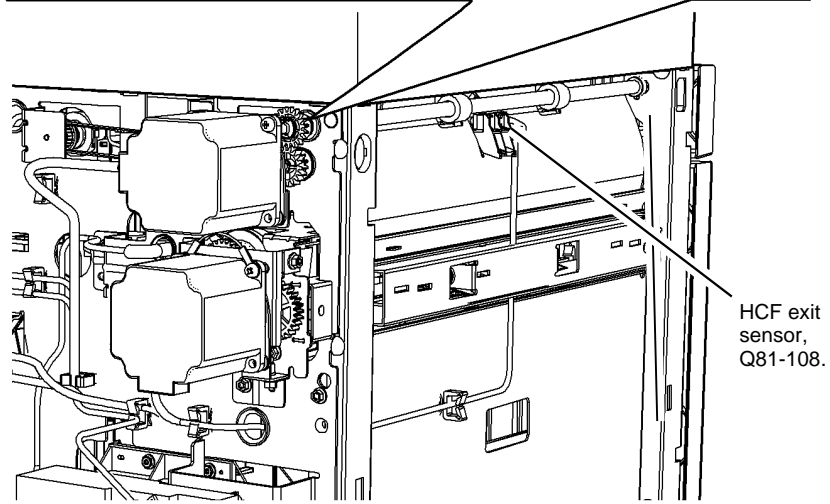
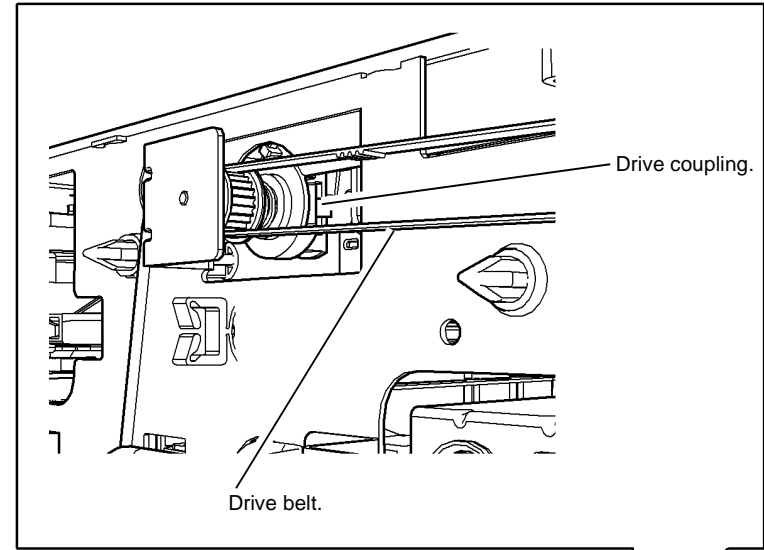
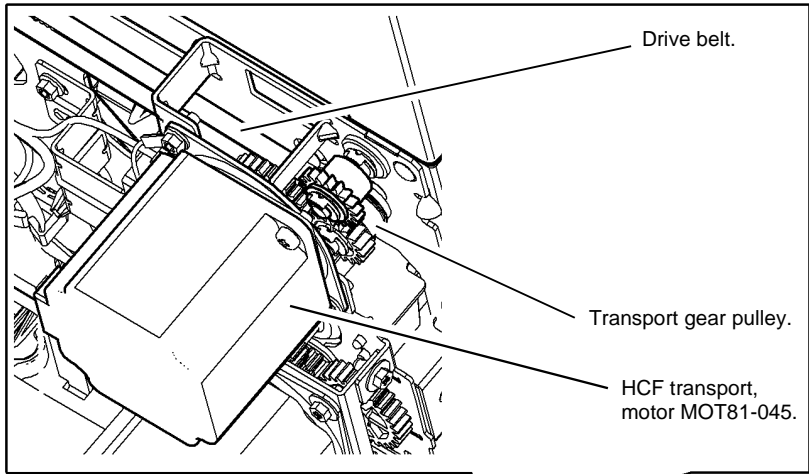
- Drive belt, [PL 80.36](#) [Item 6](#).
 - Drive coupling, [PL 80.36](#) [Item 7](#).
 - Takeaway roll assembly, [PL 80.36](#) [Item 2](#).
 - Idler roll assembly, [PL 80.36](#) [Item 8](#).
 - HCF transport roll, [PL 80.33](#) [Item 4](#).
- Install new components as necessary.

Apply pressure to the drive belt, [Figure 1](#). **The drive belt stalls.**

Y N

Perform the [381-167-00](#) Lead Edge Late to Tray 4 Exit Sensor RAP.

Install a new transport gear pulley, [PL 80.36](#) [Item 12](#).



X-1-1274-A

X-1-1275-A

Figure 1 Component location

Figure 2 Component location

381-200-00 Unexpected Sheet At Registration Sensor RAP

381-200-00 The IOT stray sheet detection mechanism detected an unexpected sheet of paper at the registration sensor.

Remote Service Actions

- Enter the machine status mode and check for the active messages. Refer to **OF4** Status Codes and Message RAP for the jam clearance procedure.
- Ask the customer to check for paper or paper fragments in the locality of the registration transfer assembly, **PL 80.15 Item 1**.
- Ask the customer to Check for paper or paper fragments in the locality of the registration transport assembly, **PL 80.17 Item 10**.
- Ask the customer to Check for paper in the machine paper path at all the sensor locations.

If the fault continues a site visit will be necessary.

Initial Actions

Clean the paper path sensors that follow:

- Tray 1 TAR sensor, **PL 80.10 Item 5**.
- Tray 2 TAR sensor, **PL 80.10 Item 5**.
- Registration sensor, **PL 80.17 Item 7**.



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Procedure

If the Initial Actions failed to fix the fault, switch off, then switch on the machine, **GP 14**. If a fault code is then displayed, go to the appropriate RAP.

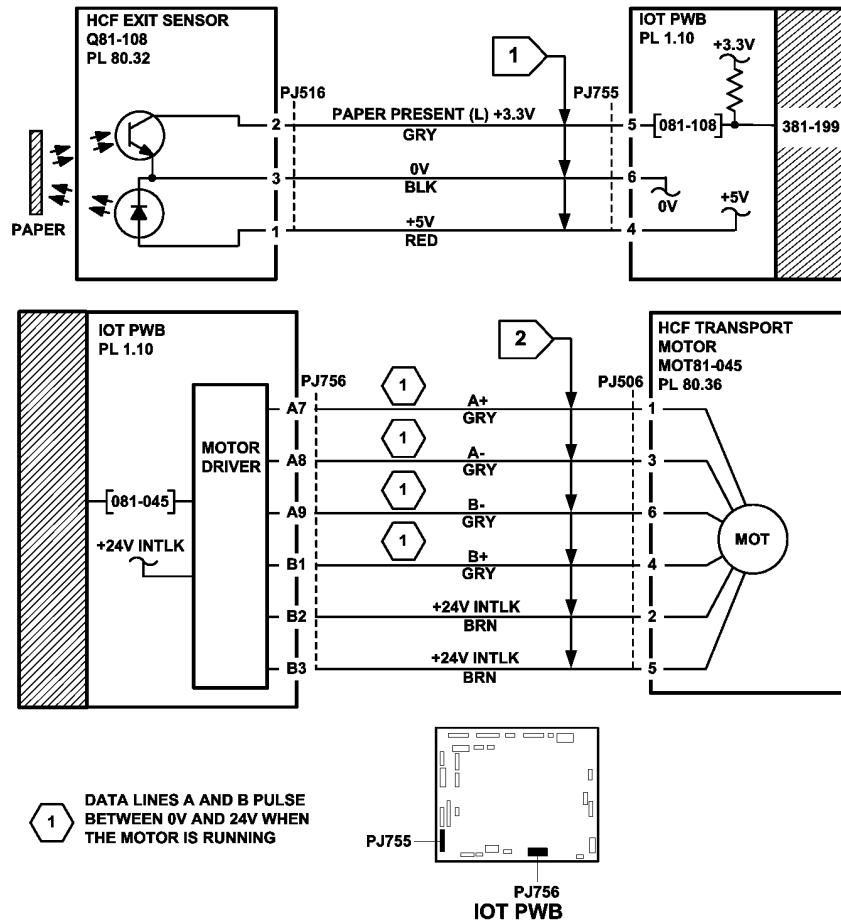


Figure 3 Circuit diagram

381-220-00 Motor Watchdog RAP

381-220-00 Paper path motor run timing fault.

Procedure

This fault code is documented for information only. No service actions are required to address this fault code.

381-221-00 SheetSMTransitionError RAP

381-221-00 Invalid paper path transition.

Procedure

There are no specific service actions to address this fault code. Look in the fault history for other paper path faults occurring at the same time as the 381-221-00 fault, then perform the appropriate RAP.

381-222-00 TAR Gear NVM Changed RAP

381-222-00 The IOT NVM valves are incorrectly set for the ratio of the TAR/Bypass tray motor drive gear.

Procedure

Ensure NVM locations 500-517, 500-518 and 500-519 are set to their default values, refer to [dC131](#).

381A Paper Feed Retries RAP

Use this RAP when the relevant fault code RAP failed to identify the cause of the jam, and the machine exhibits the symptoms that follow:

- Intermittent paper jams at different points in the paper path from registration to IOT exit.
- Paper jams at any point in the paper path from registration to IOT exit, but only from one specific paper tray.

Initial Actions

Before performing this RAP, any relevant fault code RAP must have been performed.

Procedure

Enter [dC131](#). Set the relevant NVM location to 0:

- 500- 102 Tray1_2FeedRetries, for tray 1 and 2.
- 500-146 HCFRetries, for tray 3 and 4.

Make copies from the relevant paper tray. Check for misfeeds from the tray (381-106-00, 381-126-00, 381-136-00, 381-146-00 fault codes). **Misfeeds occur.**

Y N

Enter [dC131](#). Reset the relevant NVM location to its default value. Make copies from the relevant paper tray. **Paper jams occur.**

Y N

Perform [SCP 5](#) Final Actions.

Perform the appropriate RAP for the fault code displayed.

Enter [dC131](#). Reset the relevant NVM location to its default value. Perform the appropriate RAP dependent on the tray used:

- [381-106-00](#) Lead Edge late to TAR 1 Sensor from Tray 1 RAP.
- [381-126-00](#) Lead Edge Late to TAR 2 Sensor from Tray 2 RAP.
- [381-136-00](#) Lead Edge Late to Tray 3 Feed Sensor RAP.
- [381-146-00](#) Lead Edge Late to Tray 4 Feed Sensor RAP.

383-155-00, 383-156-00 Duplex Sensor RAP

383-155-00 The lead edge was late to the duplex sensor.

383-156-00 The trail edge was late to the duplex sensor.

Remote Service Actions

- Ask the customer to check the condition of the paper in all trays. Refer to [IQ1](#) and [GP 20](#).
- Ask the customer to check for paper in the inverter and duplex transport.
- Ask the customer to check for obstructions in the paper path.
- Ask the customer to check for obstructions on the diverter output guide, [PL 10.10 Item 3](#).

If the fault continues a site visit will be necessary.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the diverter output guide is correctly installed, [PL 10.10 Item 3](#).
- Check the left door assembly is fully closed.

NOTE: Paper jams in the jam clearance paper guide area of the inverter assembly ([PL 10.11 Item 1](#)) can be due to paper skew or excessive paper curl. Refer to [IQ8 Skew RAP](#) and [IQ5 Print Damage RAP](#).

Procedure



WARNING

Take care during this procedure. Motors will become hot during normal operation.

NOTE: The front door and left door must be closed, or their respective interlock switches must be cheated when checking +24V components.

Open the left door. Enter [dC330](#) code 083-160, duplex sensor, Q83-160, [Figure 1](#). Open the inner duplex door. Manually actuate Q83-160. **The display changes.**

Y N

Go to [Flag 1](#). Check Q83-160.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J759, IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new duplex sensor, [PL 80.10 Item 8](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

A

A

Locate the inverter motor MOT10-030, drive roll and the exit roll, [PL 10.11](#). Enter [dC330](#) code 010-036 inverter motor high speed in reverse. **The motor runs and turns the inverter drive roll in reverse.**

Y N

Go to [Flag 3](#). Check MOT10-030.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J762, IOT PWB](#).

Install new components as necessary:

- Inverter motor, [PL 10.11 Item 9](#).
- Drive belt, [PL 10.11 Item 4](#).

If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 010-045, inverter gate solenoid, SOL10-045. Observe the solenoid and inverter gate, [Figure 2](#). **The solenoid energizes and the inverter gate is pulled down.**

Y N

Go to [Flag 7](#). Check SOL10-045.

Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [P/J762, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new inverter gate solenoid, [PL 10.13 Item 8](#).

If the fault persists, perform [OF7](#) IOT PWB Diagnostics RAP.

Remove the duplex motor cover, [PL 80.22 Item 21](#). Locate the duplex motor, MOT83-060, [Figure 1](#). Enter [dC330](#) code 083-062, duplex motor fast speed. **The motor runs.**

Y N

Go to [Flag 2](#). Check MOT83-060.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J762, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new duplex motor assembly, [PL 80.22 Item 8](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Enter [dC330](#) code 083-060, duplex motor slow speed, MOT83-060, [Figure 1](#). **The motor runs.**

Y N

Go to [Flag 2](#). Check MOT83-060.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J762, IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

B

B

If necessary, install a new duplex motor assembly, [PL 80.22 Item 8](#). If the fault persists, perform the [OF7 IOT PWB Diagnostics RAP](#).

Observe the duplex rolls, [PL 80.22](#). **The upper, mid and lower duplex rolls rotate.**

Y N

Refer to [GP 7](#). Check the components that follow:

- Upper duplex roll, [PL 80.22 Item 14](#).
- Mid duplex rolls, [PL 80.22 Item 15](#).
- Lower duplex roll, [PL 80.22 Item 13](#).
- Drive belt (65T), [PL 80.22 Item 2](#).
- Drive belt (89T), [PL 80.22 Item 3](#).
- Drive belt (45T), [PL 80.22 Item 4](#).

Install new components as necessary.

Check the duplex roll idlers, [PL 80.10 Item 11](#), refer to [GP 7](#). Manually rotate the idler rolls. **The idler rolls rotate.**

Y N

Install new components as necessary:

- Duplex roll idler, [PL 80.10 Item 11](#).
- Idler spring, [PL 80.10 Item 12](#).

Enter [dC330](#) code 093-045, print cartridge motor, MOT93-045. Observe the photoreceptor. **The photoreceptor turns.**

Y N

Go to [Flag 6](#). Check MOT93-045.

Refer to:

- [GP 10](#), How to check a Motor.
- [P/J761](#), [IOT PWB](#).
- [P/J656](#), [LVPS](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Main drive module, [PL 40.15 Item 1](#).
- Print cartridge, [PL 90.17 Item 9](#).

If the fault persists, perform the [OF7 IOT PWB Diagnostics RAP](#) and [301L](#) LVPS RAP.

Enter [dC330](#) code 082-150, registration sensor, Q82-150. Manually actuate Q82-150 with a strip of paper, [Figure 1](#). **The display changes.**

Y N

Go to [Flag 4](#). Check Q82-150. Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J763](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new registration sensor, [PL 80.17 Item 7](#). If the fault persists, perform the [OF7 IOT PWB Diagnostics RAP](#).

C

C

Enter [dC330](#) code 080-040, registration motor, MOT80-040. Observe the registration roll, [PL 80.17 Item 5](#). **The registration roll turns.**

Y N

Go to [Flag 5](#). Check MOT80-040.

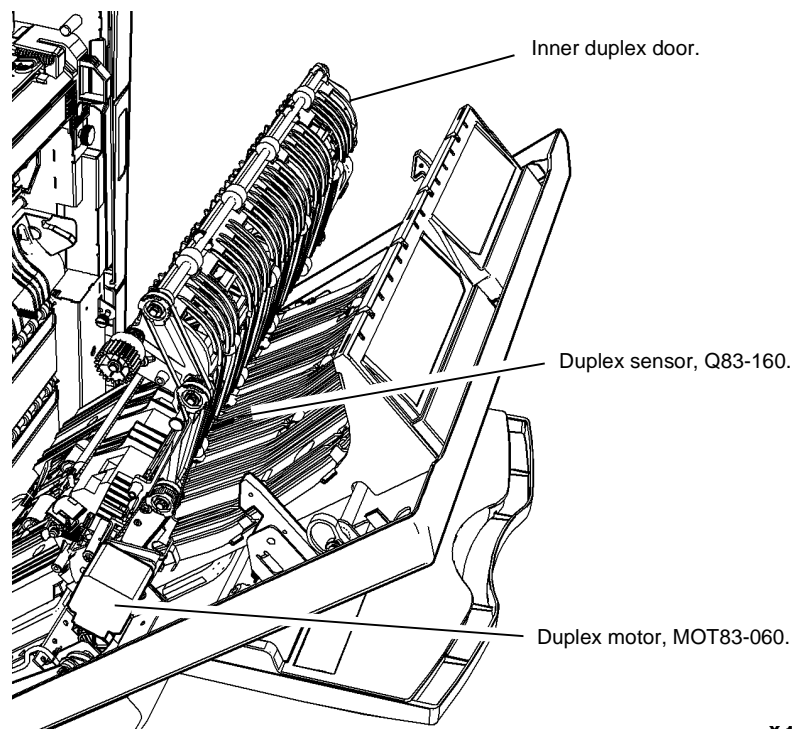
Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J762](#), [IOT PWB](#).

If necessary, install a new registration motor, [PL 40.15 Item 6](#). If the fault persists, perform the [OF7 IOT PWB Diagnostics RAP](#).

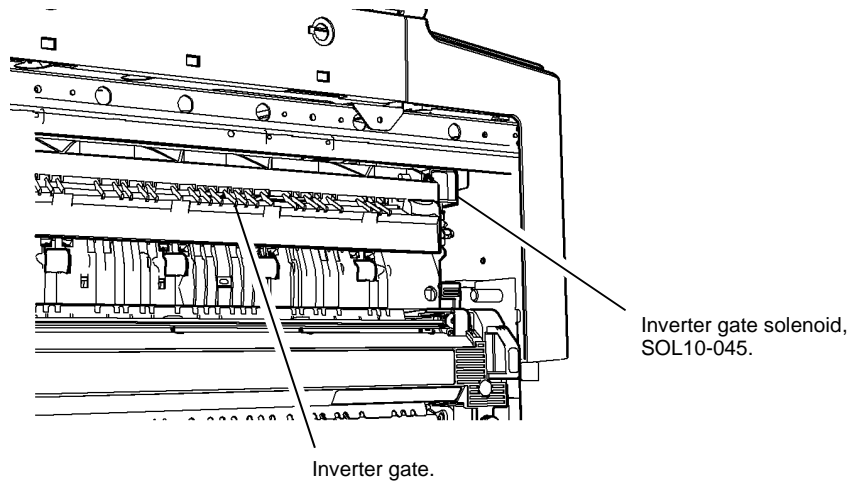
Refer to [GP 7](#) and [OF10](#) Intermittent Fault RAP. Check the components that follow:

- Registration idler roll, [PL 80.15 Item 4](#).
- Bias transfer roll, [PL 80.15 Item 3](#).
- Registration roll, [PL 80.17 Item 6](#).
- Registration drive pulley, [PL 80.17 Item 3](#).
- Registration drive belt, [PL 80.17 Item 4](#).
- Track (DTS), [PL 90.10 Item 6](#), from the detack saw to the HVPS.



X-1-0179-A

Figure 1 Component location



W-1-1427-A

Figure 2 Component location

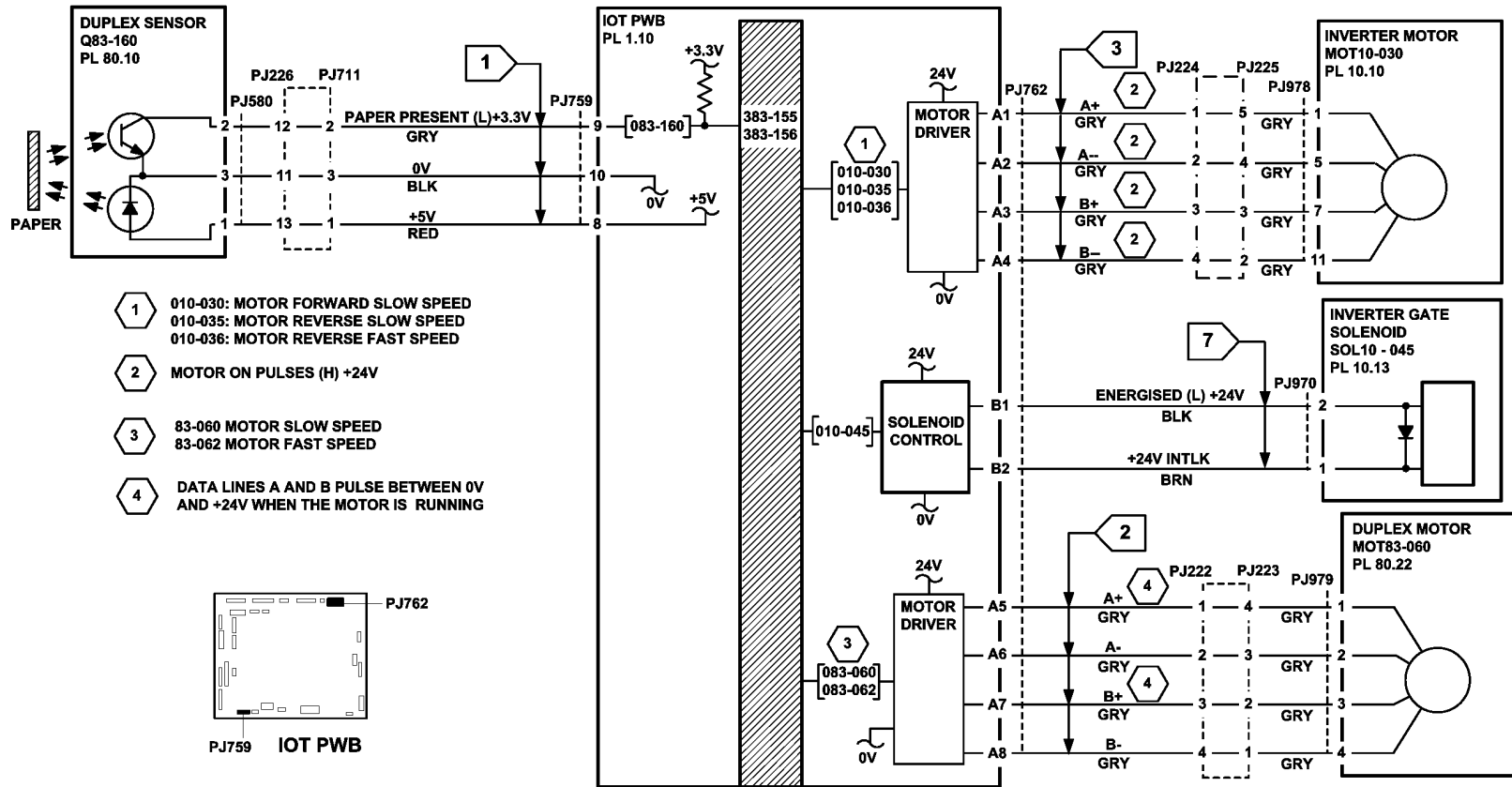
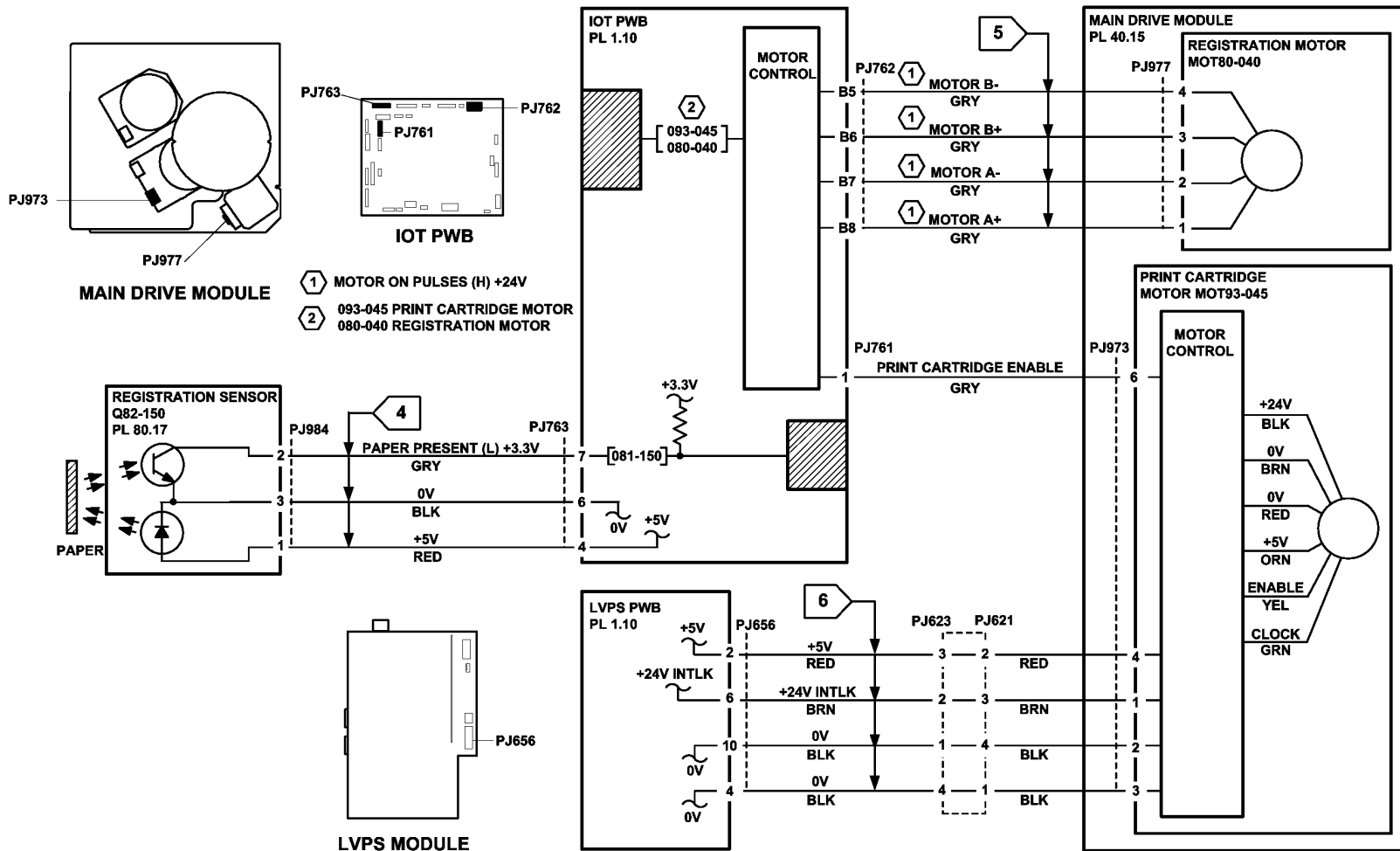


Figure 3 Circuit diagram

TX-1-0104-A



TX-1-0095-A

Figure 4 Circuit Diagram

383-157-00 Unexpected Sheet At The Duplex Sensor RAP

383-157-00 The IOT stray sheet detection mechanism detected an unexpected sheet of paper at the duplex sensor.

Remote Service Actions

- Enter the machine status mode and check for the active messages. Refer to [OF4 Status Codes and Message RAP](#) for the jam clearance procedure.
- Ask the customer to check for paper or paper fragments in the locality of the left door assembly, [PL 80.10 Item 1](#).
- Ask the customer to check for paper in the machine paper path at all the sensor locations.
- If the Remote Service Actions failed to fix the fault, ask the customer to switch off, then switch on the machine, [GP 14](#). If a fault code is then displayed, a site visit may be necessary to perform the appropriate RAP.

391A HVPS RAP

To assist in identifying any suspected problems with the HVPS and the high voltage distribution.

Procedure

NOTE: If directed here from any other procedure, always return to that procedure.



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

If fault code 341-302-00 is shown in fault history, remove the print cartridge, refer to the 301A Ground Distribution RAP figure 11 and check for pitting on the print cartridge drive shaft in the area shown. If pitting is found on the shaft, follow the cleaning instructions in the 301A Ground Distribution RAP. If necessary install a new print cartridge, PL 90.17 Item 9.

Go to **Flag 1. +24V is available at P/J769 between pins 13 and 14.**

Y N
Disconnect P/J769. **+24V is available at J769 on the IOT PWB.**
Y N
Perform the 301G +24V Distribution RAP and the 301B 0V Distribution RAP.
Go to **Flag 1.** Check the wiring and connectors P/J769 and P/J830 between the IOT PWB and the HVPS. **The wiring and connectors are good.**
Y N
Repair the wiring or install new components as necessary.
Install a new HVPS, PL 1.10 Item 3.

+24V is available at P/J830 between pins 12 and 13.

Y N
Go to **Flag 1.** Check the wiring and connectors P/J769 and P/J830 between the IOT PWB and the HVPS. **The wiring and connectors are good.**
Y N
Repair the wiring or install new components as necessary.
Install a new HVPS, PL 1.10 Item 3.

Ensure the machine is in standby mode. **+2.4V to +2.6V is available between pins 9 and 10 on P/J830.**

Y N
Install a new HVPS, PL 1.10 Item 3.

Check the high voltage circuits:

NOTE: For information regarding the cleaning of xerographic components, refer to ADJ 90.1 Xerographics Cleaning.

- BCR.

Refer to PL 90.10. Check the items that follow:

- Track (BCR) on the HVPS tray assembly for continuity, short circuits and damage. Ensure the contact area at each end is clean and undamaged.
- The BCR contact on the HVPS is clean and undamaged, Figure 3.
- The bias charge roll contact on the print cartridge is clean and undamaged, Figure 1.

If necessary repair the high voltage track or install new components:

- HVPS tray assembly, PL 90.10 Item 1.
- HVPS, PL 1.10 Item 3.
- Print cartridge, PL 90.17 Item 9.

- DEV.

Refer to PL 90.10. Check the items that follow:

- Track (DEV) on the HVPS tray assembly for continuity, short circuits and damage. Ensure the contact area at each end is clean and undamaged.
- The DB contact on the HVPS is clean and undamaged, Figure 3.
- The developer bias contact on the print cartridge is clean and undamaged, Figure 1.

If necessary repair the high voltage track or install new components:

- HVPS tray assembly, PL 90.10 Item 1.
- HVPS, PL 1.10 Item 3.
- Print cartridge, PL 90.17 Item 9.

- BTR.

Refer to PL 90.10. Check the items that follow:

- Track (BTR) on the HVPS tray assembly for continuity, short circuits and damage. Ensure the contact area at each end is clean and undamaged.
- The BTR contact on the HVPS is clean and undamaged, Figure 3.
- The bias transfer contact on the registration transfer housing is clean and undamaged, Figure 1.
- The condition of the bias transfer roll and bearings, Figure 2.

If necessary repair the high voltage track or install new components:

- HVPS tray assembly, PL 90.10 Item 1.
- HVPS, PL 1.10 Item 3.
- Registration transfer housing, PL 80.15 Item 2.
- Bias transfer roll, PL 80.15 Item 3.
- Bias transfer roll bearings, PL 80.15 Item 9.

- DTS.

Refer to PL 90.10. Check the items that follow:

- Track (DTS) on the HVPS tray assembly for continuity, short circuits and damage. Ensure the contact area at each end is clean and undamaged.
- The DTS contact on the HVPS is clean and undamaged, Figure 3.
- The detach saw contact on the registration transfer housing is clean and undamaged, Figure 2.

If necessary repair the high voltage track or install new components:

- HVPS tray assembly, PL 90.10 Item 1.
- HVPS, PL 1.10 Item 3.
- Registration transfer housing, PL 80.15 Item 2.

If no fault was found, the HVPS is working correctly, return to the procedure that directed you here.

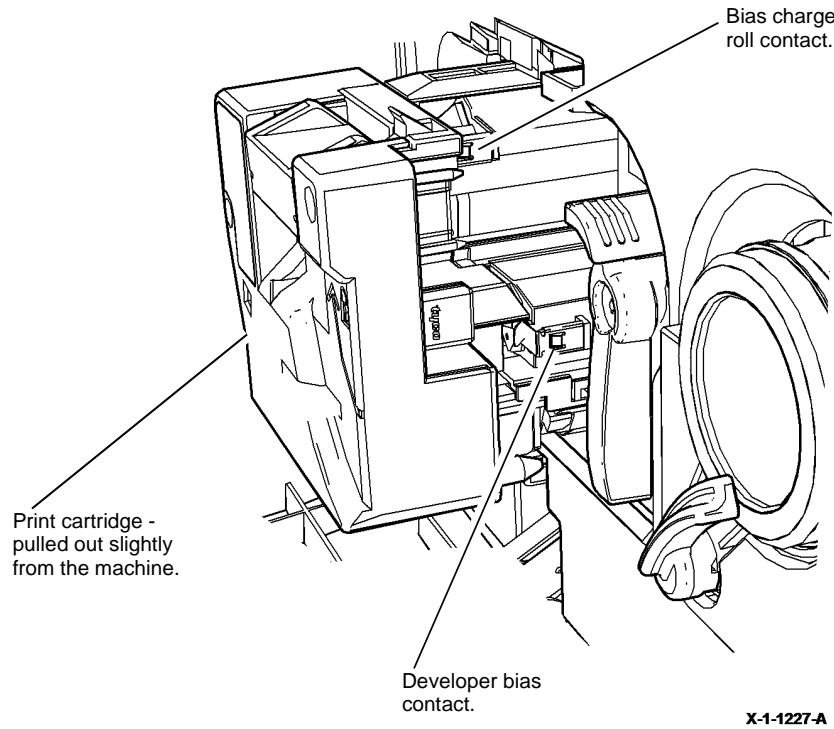


Figure 1 Component location

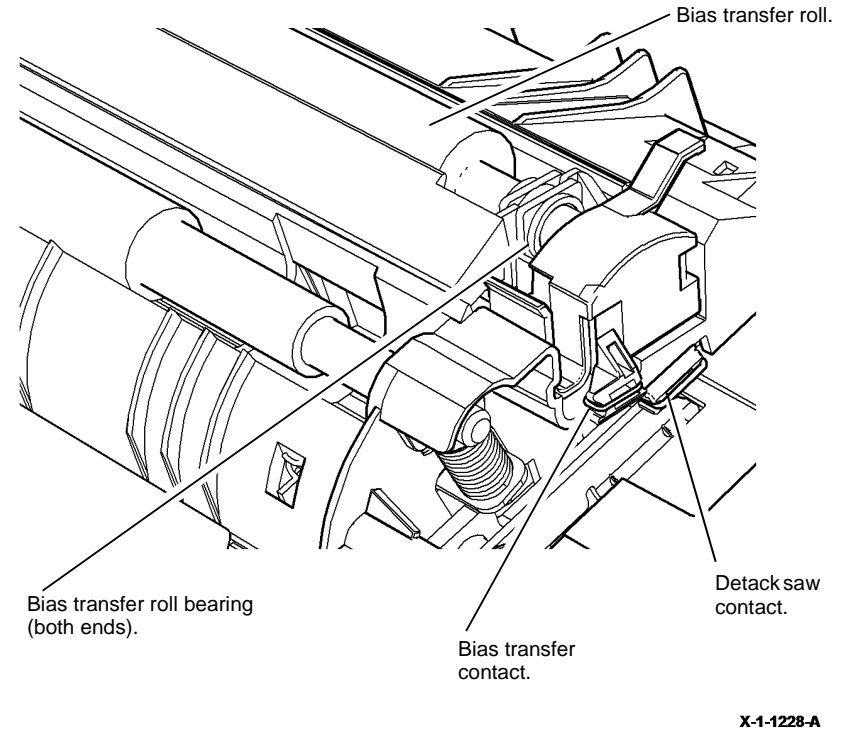
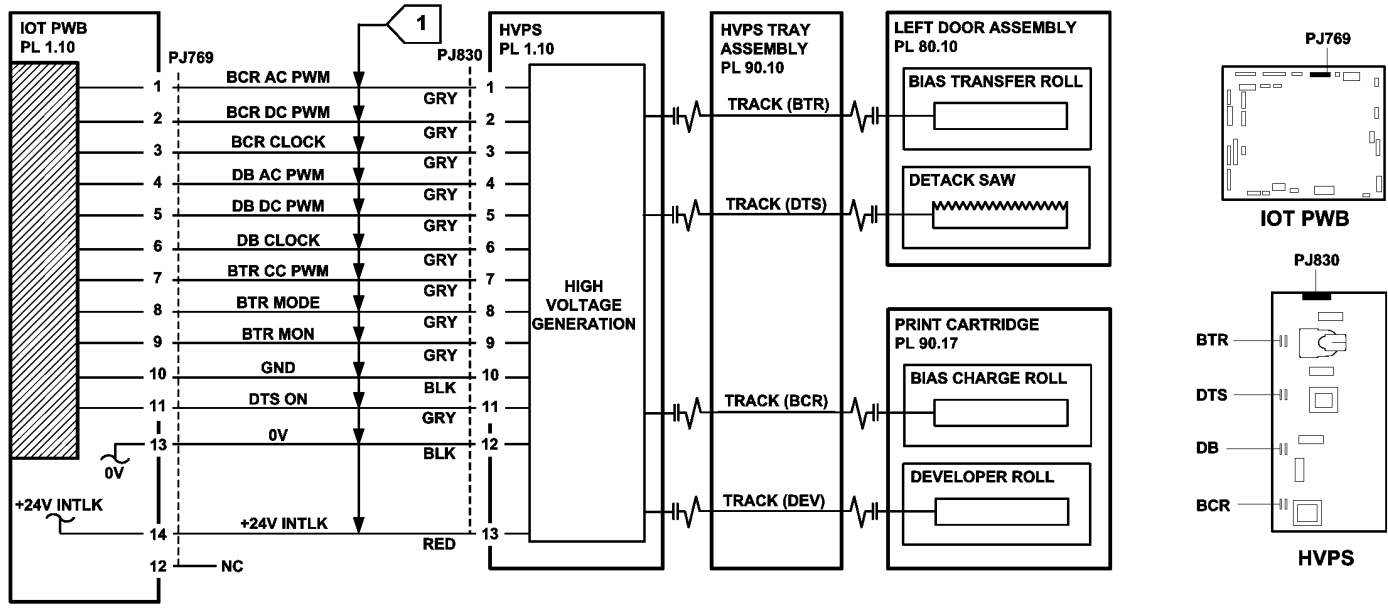


Figure 2 Component Location



TX-1-0300-A

Figure 3 Circuit diagram

391-365-00 Humidity Sensor Failure RAP

391-365-00 Average humidity reading was out of limits.

Also use this RAP if the humidity sensor is suspected of working incorrectly. A faulty relative humidity sensor can cause image quality problems.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

WARNING

Use eye protection when using air dusters. Failure to wear eye protection could result in serious personal injury. Do not use air dusters in the presence of customers. Customers could be struck by debris and not have the benefit of eye protection.

Open the left side door. Remove the print cartridge, [PL 90.17 Item 9](#), and the fuser module, [PL 10.8 Item 1](#). Enter [dC140](#) code 091-601, humidity sensor, Q91-601. Observe the displayed state of Q91-601. Use an air duster, [PL 26.11 Item 1](#), directed onto the environmental sensors PWB to change the state of Q91-601, [Figure 1](#).

NOTE: Only use the approved air duster, [PL 26.11 Item 1](#).

The displayed state changed.

Y N
Go to [Flag 1](#). Check for +5V at [P/J763](#) pin 16 on the [IOT PWB](#). +5V is present.
Y N
Go to:
• [301E](#) +5V and +5VSB Distribution RAP.
• [301B](#) 0V Distribution RAP.
Go to [Flag 1](#). Disconnect PJ982. Check for +5V at PJ982, pin 12. +5V is present.
Y N
Check the wiring between [P/J763](#) on the [IOT PWB](#) and PJ982. Repair the wiring as necessary, [REP 1.2](#).
Install a new environmental sensors PWB, [PL 90.15 Item 4](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

If possible, check the humidity of the external environment using a hygrometer. Compare with a reading from Q91-601. Refer to the NOTE above [Table 1](#). If a hygrometer is not available refer to [Table 1](#) for the approximate expected humidity value. Compare the expected values with Q91-601. If the value of Q91-601 is very different from the expected reading install a new environmental sensors PWB, [PL 90.15 Item 4](#).

If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

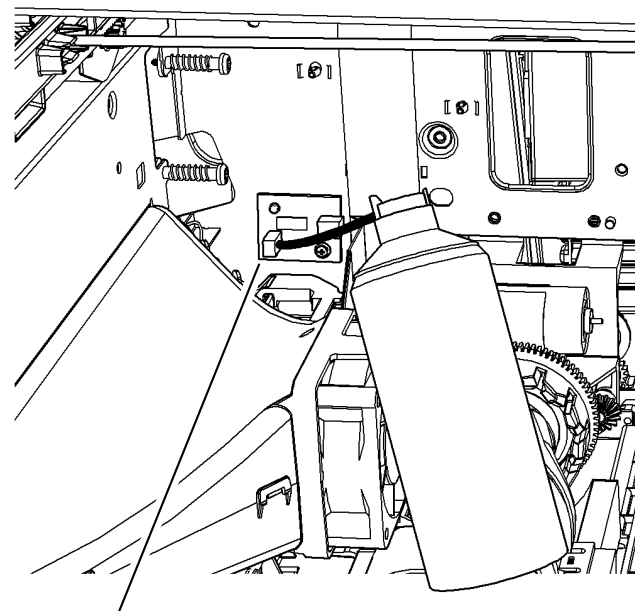
If the fault is intermittent, perform the steps that follow:

- Check the wiring, [GP 7](#). Repair as necessary, [REP 1.2](#).
- Ensure that the P/Js are correctly and securely connected.

NOTE: The actual value is not critical. If the reading from Q91-601 is approximately within the range indicated in column 4, [Table 1](#), the sensor is good.

Table 1 Relative humidity values

External Environment	Average Relative Humidity	Cold Machine Relative Humidity	Warm Machine Relative Humidity
Wet	80%	80%	40% to 50%
Ambient	50%	50%	15% to 30%
Dry	10%	10%	1% to 7%



Humidity sensor (Q91-601), part of the environmental sensors PWB.

X-1-1354-A

Figure 1 Component location

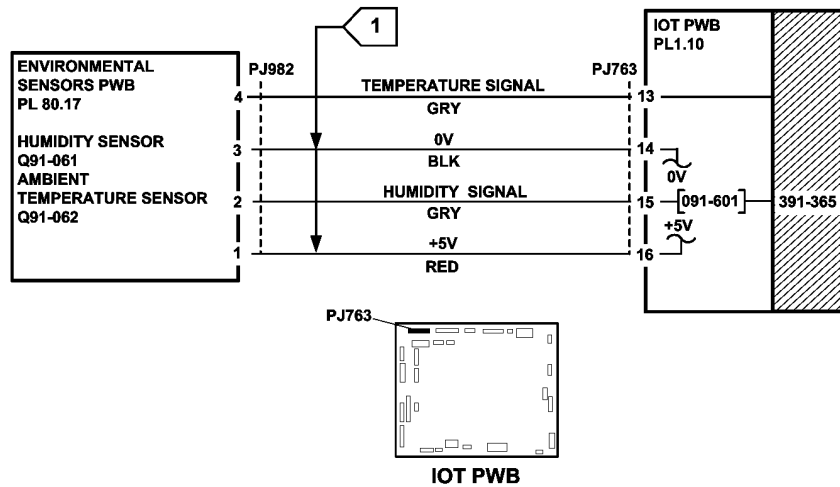


Figure 2 Circuit diagram

TX-1-0277-A

391-375-00 Ambient Temperature Sensor Failure RAP

391-375-00 The average ambient temperature was out of limits.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

WARNING

Use eye protection when using air dusters. Failure to wear eye protection could result in serious personal injury. Do not use air dusters in the presence of customers. Customers could be struck by debris and not have the benefit of eye protection.

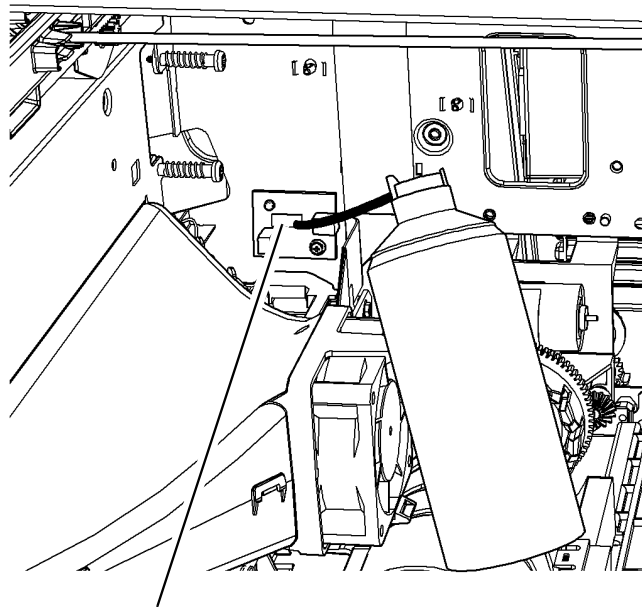
Open the left side door. Remove the print cartridge, [PL 90.17 Item 9](#), and the fuser module, [PL 10.8 Item 1](#). Enter [dC140](#) code 091-602, ambient temperature sensor, Q91-602. Observe the displayed state of Q91-602. Use an air duster, [PL 26.11 Item 1](#) directed onto the environmental sensors PWB to change the state of Q91-602, [Figure 1](#).

NOTE: Only use the approved air duster, [PL 26.11 Item 1](#).

The displayed state changed.

Y	N
	Go to Flag 1 . Check for +5V at P/J763 pin 16 on the IOT PWB . +5V is present.
Y	N
	Go to:
	<ul style="list-style-type: none"> 301E +5V Distribution RAP. 301B 0V Distribution RAP.
	Go to Flag 1 . Disconnect PJ982 . Check for +5V at PJ982 , pin 12. +5V is present.
Y	N
	Check the wiring between P/J763 on the IOT PWB and PJ982 . Repair the wiring as necessary, REP 1.2 .
	Install a new environmental sensors PWB, PL 90.15 Item 4 . If the fault persists, perform the OF7 IOT PWB Diagnostics RAP.

The ambient temperature sensor is working correctly. If the fault is intermittent, check the wiring, [GP 7](#). Repair as necessary, [REP 1.2](#).



Ambient temperature sensor (Q91-062),
part of the environmental sensors PWB.

Figure 1 Component location

X-1-1355-A

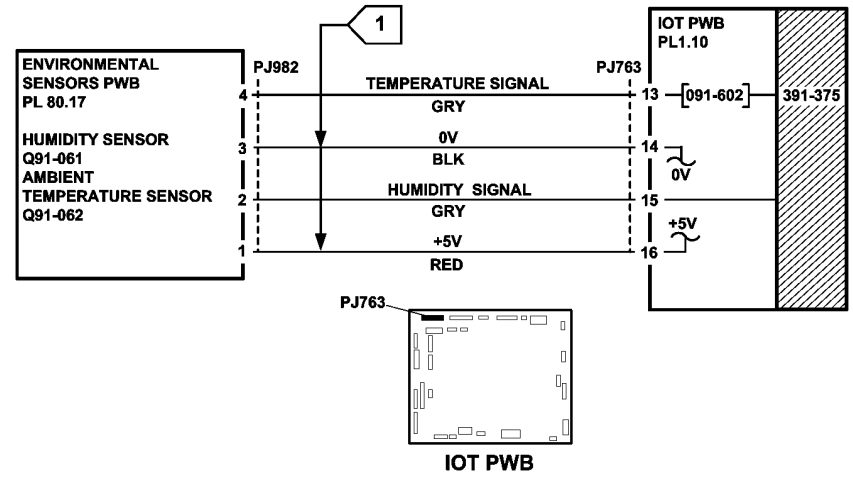


Figure 2 Circuit diagram

TX-1-0273-A

391-377-00 Print Cartridge Cooling Failure RAP

391-377-00 The averaged temperature sensor reading has exceeded the upper temperature threshold of the print cartridge.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the following:

1. Check the print cartridge cooling fan, refer to the **OF6** Air Systems RAP.
2. Check the left door fans 1 and 2, refer to the **OF6** Air Systems RAP.
3. Ensure **dC131** NVM location 616-002 is set to default.
4. Check the temperature sensor, go to the **391-375-00** Ambient Temperature Sensor Failure RAP.

392-399-00 Incompatible Print Cartridge RAP

392-399-00 The print cartridge CRUM failed the authorization check.

The authorization check is performed to ensure that the print cartridge installed in the system is compatible with the current machine configuration and the customer service plan.

Remote Service Actions

Ask the customer to Install a new print cartridge, **PL 90.17** Item 9. If the fault continues, a site visit will be necessary.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Install a new print cartridge, **PL 90.17** Item 9.

392-400-00 Print Cartridge CRUM Communication Error RAP

392-400-00 The print cartridge CRUM communications failed.

Remote Service Action

Ask the customer to check the items that follow:

- Ensure that the print cartridge, [PL 90.17 Item 9](#) is correctly installed.
- Ensure that the fuser module, [PL 10.8 Item 1](#) is correctly installed.
- Switch off, then switch on the machine, [GP 14](#).

If the fault continues, a site visit will be necessary.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Perform the [310-400-00](#) Fuser CRUM Communication Fault RAP.

392A Print Cartridge Motor Failure RAP

Use this RAP to determine a failure of the print cartridge motor.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to [Figure 1](#). Enter [dC330](#), code 093-045 print cartridge motor, MOT93-045. The motor runs.

Y N

Go to [Flag 1](#). Check MOT93-045.

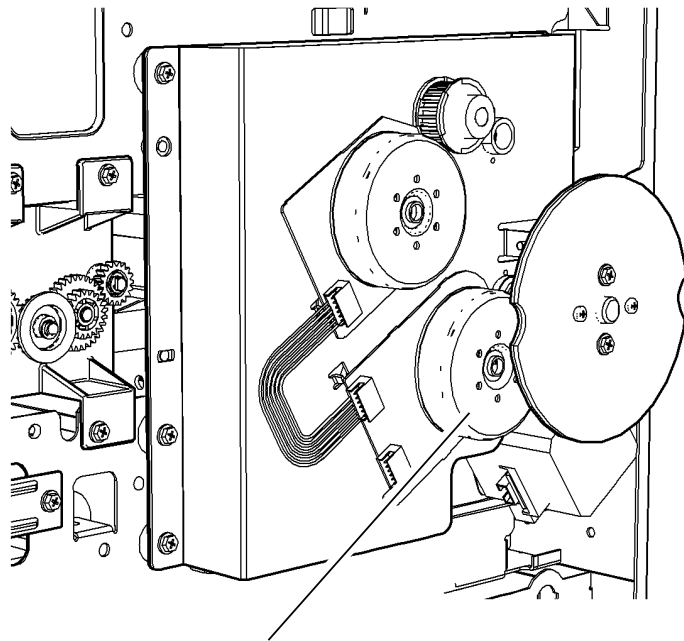
Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J761](#), IOT PWB.
- [P/J656](#), LVPS.
- [301E](#) +5V Distribution RAP.
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new main drive module, [PL 40.15 Item 1](#).

If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP and the [301L](#) LVPS RAP.

The fault may be intermittent. Check all the wiring and connections between the LVPS module, IOT PWB and the main drive module for damage and loose connections.



Print cartridge
motor, MOT93-045

X-1-1164-A

Figure 1 Component location

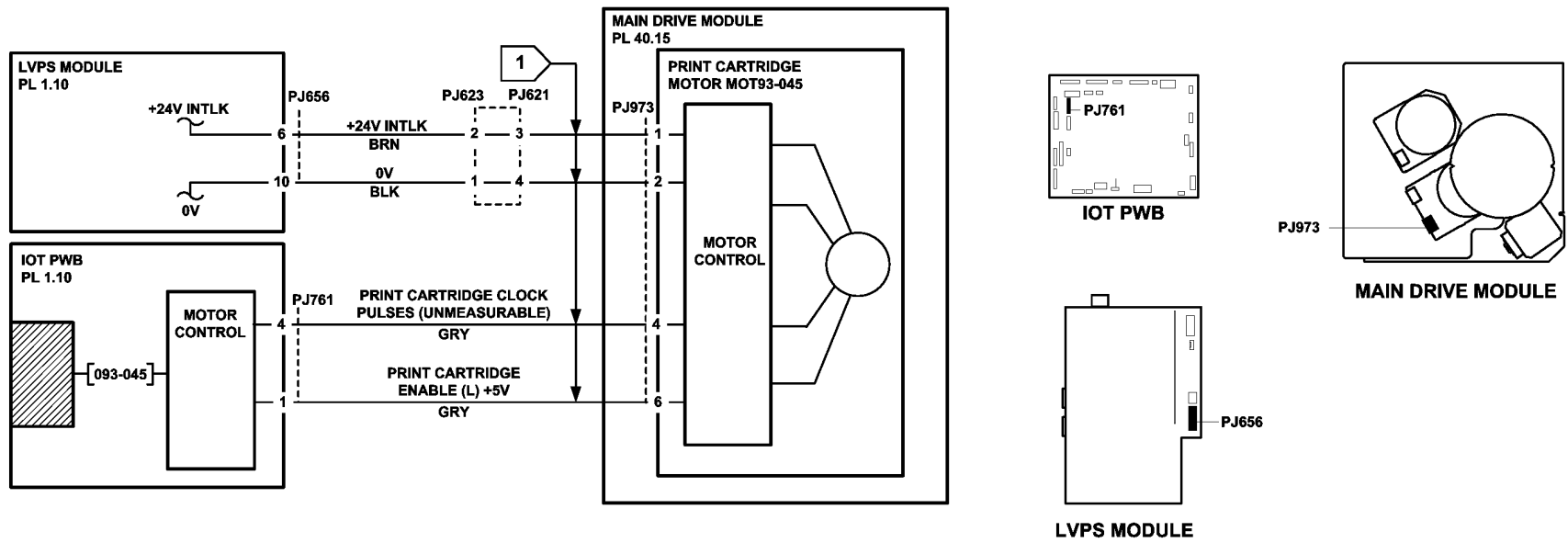


Figure 2 Circuit diagram

TX-1-0295-A

393-360-00 to 393-364-00 Toner Concentration Sensor Failure RAP

393-360-00 The toner concentration sensor registered a reading outside the expected range.

393-361-00 The toner concentration sensor was reading high. This indicates that the toner concentration (TC) was low.

393-362-00 The toner concentration sensor was reading low. This indicates that the toner concentration (TC) was high.

393-364-00 The toner concentration sensor registered a reading outside the range.

Remote Service Actions

1. Ask the customer to ensure that the toner cartridge is not empty. If the toner cartridge is empty, ask the customer to install a new toner cartridge, [PL 90.17 Item 2](#).
2. Enter remote diagnostics. Enter [dC131](#) location 501-359 SystemLockoutFault. Set the value to 0.
3. Ask the customer to switch off, then switch on the machine, [GP 14](#).

If the fault persists a site visit will be necessary.

Initial actions

1. **393-361 Only.** Remove the toner cartridge, [PL 90.17 Item 2](#). Check that the foam seal on the rear of the toner cartridge is undamaged and in one piece. If the foam seal is damaged, install a new toner cartridge and toner dispense module, [PL 90.17 Item 1](#).
2. Switch off, then switch on the machine, [GP 14](#).

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: At completion of this procedure, perform the [NVM Check](#).

NOTE: The front door and left door interlock switches must be cheated when checking +24V components.

NOTE: If the machine fails to run while performing a check in this procedure, enter [dC131](#) location 501-359 SystemLockoutFault. Set the value to 0.

Enter [dC330](#) 093-045, to run the print cartridge motor, MOT93-045. Go to [Flag 1](#). Check the voltage at [P/J766](#) pin 1. **The voltage is outside the range of +1V to +2V.**

Y N

The fault may be intermittent. Perform the steps that follow:

- Check the wiring between PJ510 and PJ766 on the [IOT PWB](#). Refer to [GP 7](#).
- Check the 0V distribution. Refer to the [301B](#) 0V Distribution RAP.
- Ensure the print cartridge is correctly installed.
- If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

A

The voltage at [P/J766](#) pin 1 is less than +1V.

Y N

The voltage is greater than +2V. Perform the [TC Increase Adjustment](#). The **increase was successful.**

Y N

Go to [Flag 2](#). **+5V is present at [P/J766](#), pin 2.**

Y N

Go to:

- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

Go to [Flag 3](#). **0V is available at [P/J766](#), pin 3.**

Y N

Go to the [301B](#) 0V Distribution RAP.

Enter [dC330](#), code 093-045, print cartridge motor. Add the code 093-040, toner cartridge motor.

NOTE: The routine 93-040 times out after 5 seconds.

The toner cartridge rotates.

Y N

Remove the toner cartridge, [PL 90.17 Item 2](#). Enter [dC330](#), code 093-040, toner cartridge motor, MOT93-040. **The motor runs.**

Y N

Go to [Flag 4](#). Check MOT93-040.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J767](#), [IOT PWB](#).
- [301G](#) +24V Generation and Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new toner dispense module, [PL 90.17 Item 1](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Check the toner dispense drive gears, [Figure 1](#). If necessary, install a new toner dispense module, [PL 90.17 Item 1](#).

Remove the print cartridge, [PL 90.17 Item 9](#), then place in a black bag. Remove the fuser, [PL 10.10 Item 1](#). Put a sheet of paper beneath the toner dispense tube, [Figure 2](#). Enter [dC330](#), code 093-040, toner cartridge motor, MOT93-040. Manually open the shutter on the toner dispense tube. **Toner is dispensed.**

Y N

Ensure the shutter on the toner dispense tube opens and closes correctly. If necessary, install a new toner dispense module, [PL 90.17 Item 1](#).

Ensure the shutter on the print cartridge, [Figure 3](#), opens and closes correctly. If necessary, install a new print cartridge, [PL 90.17 Item 9](#).

The fault may be intermittent. Perform the steps that follow:

- Check the wiring between PJ510 and PJ766 on the [IOT PWB](#). Refer to [GP 7](#).
- Check the 0V distribution. Refer to the [301B](#) 0V Distribution RAP.

A

B

B

- Ensure the print cartridge is correctly installed.
- If the fault persists, perform the **OF7** IOT PWB Diagnostics RAP.

Go to **Flag 2. +5V is present at PJ766, pin 2.**

Y N

Go to:

- **301E** +5V and +5VSB Distribution RAP.
- **301B** 0V Distribution RAP.

Go to **Flag 3. 0V is available at PJ766, pin 3.**

Y N

Go to the **301B** 0V Distribution RAP.

Perform the **TC Reduction Adjustment**. **The reduction was successful.**

Y N

Install a new print cartridge, **PL 90.17 Item 9**.

The fault may be intermittent. Perform the steps that follow:

- Check the wiring between PJ510 and PL766 on the **IOT PWB**. Refer to **GP 7**.
- Check the 0V distribution. Refer to the **301B** 0V Distribution RAP.
- Ensure the print cartridge is correctly installed.
- If the fault persists, perform the **OF7** IOT PWB Diagnostics RAP.

TC Reduction Adjustment

Perform the steps that follow:

1. Enter **dC131** location 501-230 TCHighCdEnable. Set the value 0.
2. Disconnect **P/J512**. Refer to **Figure 1**.
3. Open the SPDH. Make 10 copies.
4. Go to **Flag 1**. Monitor the voltage output.
5. Make sets of 10 copies until the monitored voltage is greater than 0.9V. If the voltage does not change, perform the **Sensor and Circuit Check**.
6. Check the image quality.
7. Reconnect **P/J512**.
8. Re-enter **dC131** location 501-230 TCHighCdEnable. Set the value 1.

TC Increase Adjustment

Perform the steps that follow:

1. Enter **dC330** code 093-045, print cartridge motor. Add the code 093-040, toner cartridge motor.
2. Go to **Flag 1**. Monitor the voltage output.
3. Run the routine until the monitored voltage is between 2.2V and 2.8V. If the voltage does not change, perform the **Sensor and Circuit Check**.
4. Check the image quality. Refer to **IQS 1** Solid Area Density and Tone Reproduction.

NVM Check

Enter **dC131**, ensure the NVM locations that follow are set as listed:

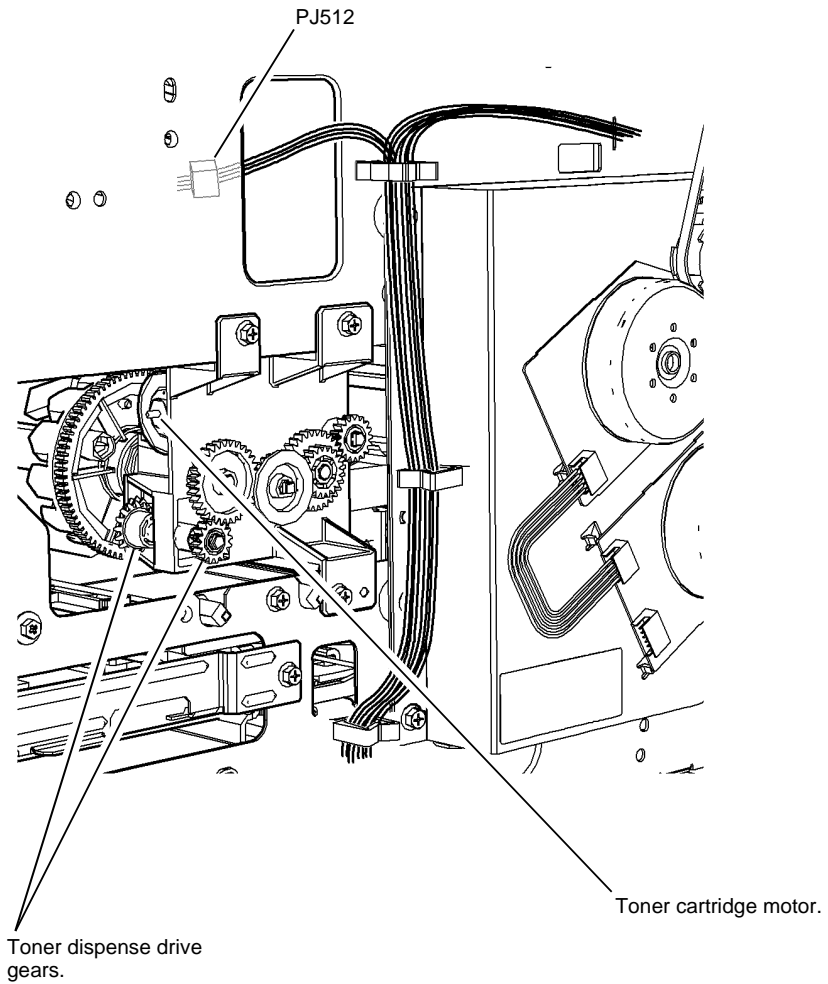
- 501-223 TcFailCyDnEn, set to 1.
- 501-229 TCLowCdEnable, set to 1.

- 501-230 TCHighCdEnable, set to 1.
- 501-359 SystemLockoutFault, set to 0.

Sensor and Circuit Check

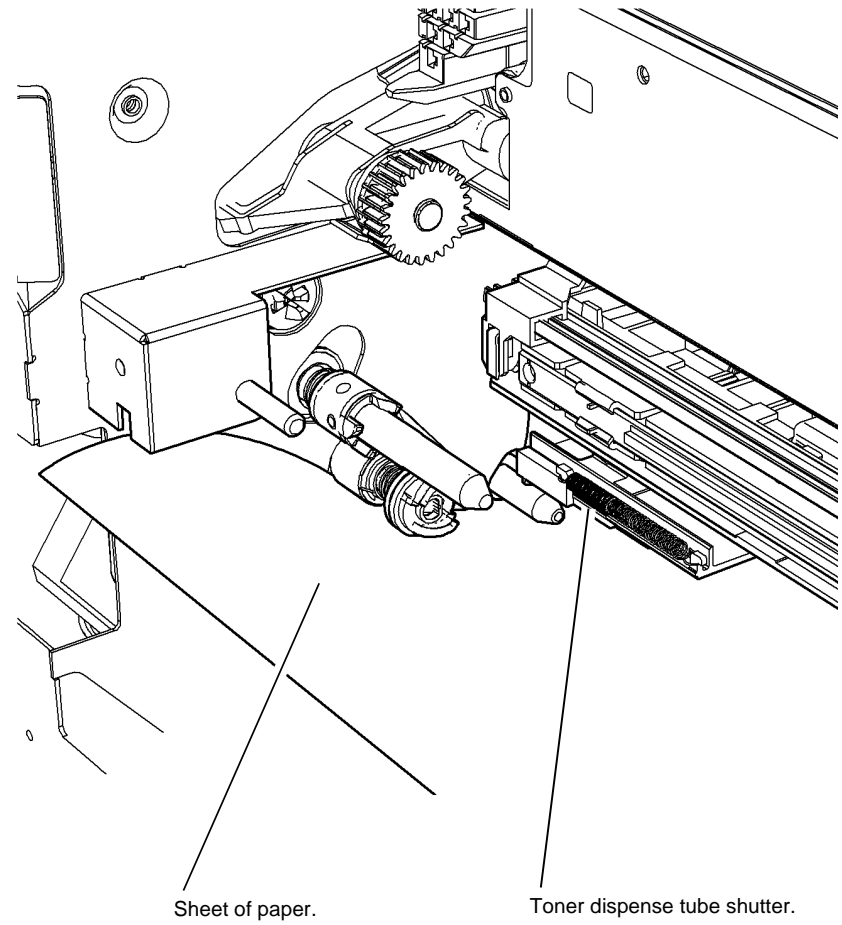
Perform the steps that follow:

1. Go to **Flag 1**, **Flag 2** and **Flag 3**, check the wiring between the toner concentration sensor PJ510, through PJ187 and PJ188 to **P/J766** on the IOT PWB, refer to **GP 7**. If necessary, repair the wiring, refer to **REP 1.2**
2. If the wiring is good install a new print cartridge, **PL 90.17 Item 9**. If the fault persists, Perform the **OF7** IOT PWB Diagnostics RAP.



X-1-1098-A

Figure 1 Toner dispense module



X-1-1099-A

Figure 2 Toner dispense tube

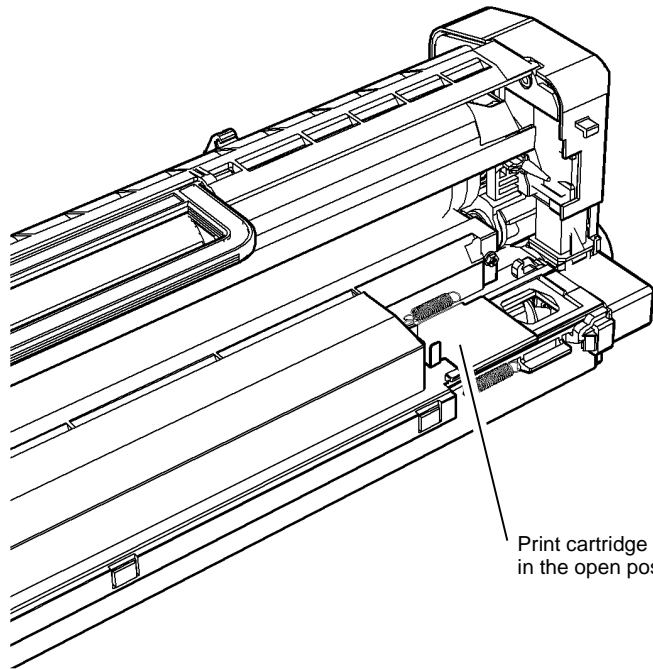
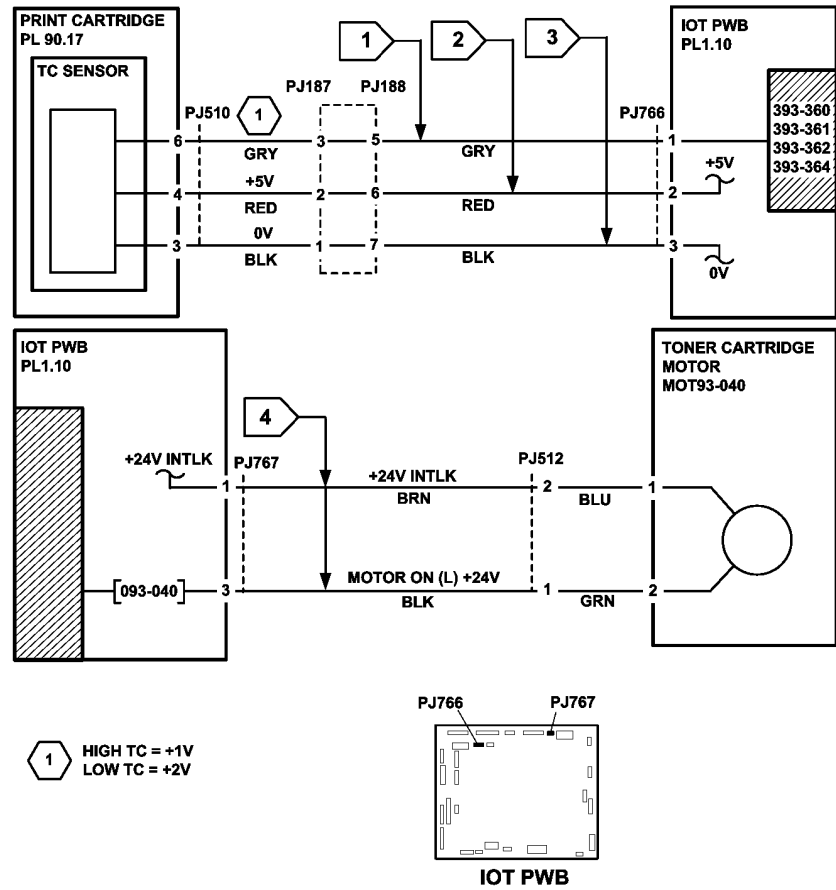


Figure 3 Print cartridge shutter

X-1-1100-A



TX-1-0279-A

Figure 4 Circuit diagram

393-365-00 High AC Recovery RAP

393-365-00 The machine remained in high AC mode, dispensing toner, for more than 90 seconds.

Remote Service Actions

Ask the customer to switch off, then switch on the machine, [GP 14](#). If the fault continues, a site visit will be necessary.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Reload the software, [GP 4](#).
2. If the fault persists, perform the [393-360-00 to 393-364-00 Toner Concentration Sensor Failure RAP](#).

393-390-00 Toner Cartridge Empty RAP

393-390-00 Based on the toner concentration sensor reading, the toner cartridge is empty.

Remote Service Actions

Ask the customer to ensure that the toner cartridge is not empty. If the toner cartridge is empty, install a new toner cartridge, [PL 90.17 Item 2](#). If the fault continues, a site visit will be necessary.

On Site Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- When fault code 393-390-00 is called the toner cartridge CRUM will have received the end of life command, this renders the toner cartridge null so that it can no longer be used. Even if the current toner cartridge is not empty, ensure that a new toner cartridge is available before performing this procedure.
- A possible cause of this fault is arcing. Ensure the grounding of the xerographic components is good. Refer to [301A Ground Distribution RAP](#). Install a new toner cartridge, [PL 90.17 Item 2](#).

Procedure

NOTE: The front door and left door interlock switches must be cheated when checking +24V components.

Cheat the front door interlock. Enter [dC330](#) code 093-040, toner cartridge motor, MOT93-040.

The toner cartridge rotates.

Y N
Remove the toner cartridge, [PL 90.17 Item 2](#). Enter [dC330](#), code 093-040, toner cartridge motor, MOT93-040. **The motor runs.**

Y N
Go to [Flag 1](#). Check MOT93-040.
Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J767, IOT PWB](#).
- [301G +24V](#) Generation and Distribution RAP.
- [301B 0V](#) Distribution RAP.

If necessary, install a new toner dispense module, [PL 90.17 Item 1](#). If the fault persists, perform the [OF7 IOT PWB Diagnostics RAP](#). Install a new toner cartridge, [PL 90.17 Item 2](#).

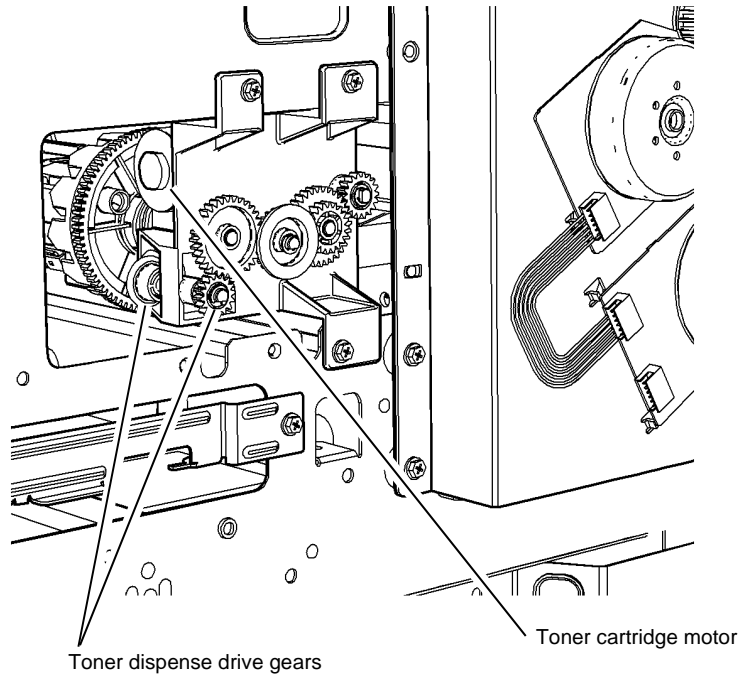
Check the toner dispense drive gears, [Figure 1](#). If necessary, install a new toner dispense module, [PL 90.17 Item 1](#). Install a new toner cartridge, [PL 90.17 Item 2](#).

A

A
Remove the print cartridge, PL 90.17 Item 9, then place in a black bag. Remove the fuser, PL 10.8 Item 1. Put a sheet of paper beneath the toner dispense tube, Figure 2. Enter dC330, code 093-040, toner cartridge motor, MOT93-040. Manually open the shutter on the toner dispense tube. **Toner is dispensed.**

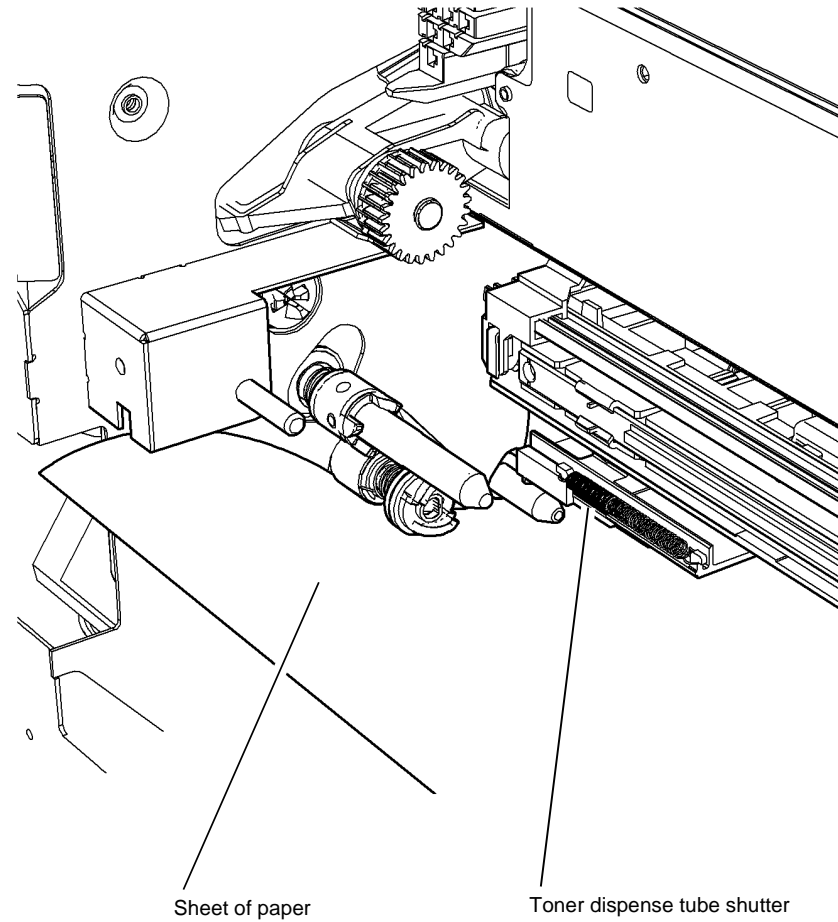
Y N
Ensure the shutter on the toner dispense tube opens and closes correctly. If necessary, install a new toner dispense module, PL 90.17 Item 1. Install a new toner cartridge, PL 90.17 Item 2.

Ensure the shutter on the print cartridge, Figure 3, opens and closes correctly. If necessary, install a new print cartridge, PL 90.17 Item 9. Install a new toner cartridge, PL 90.17 Item 2.



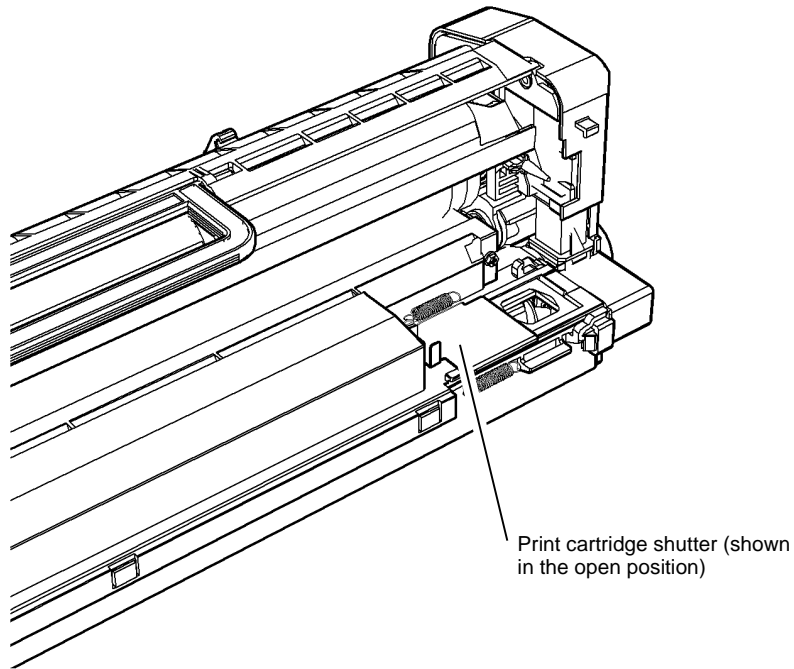
X-1-1101-A

Figure 1 Toner dispense module



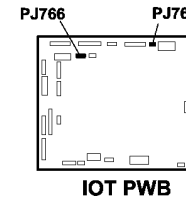
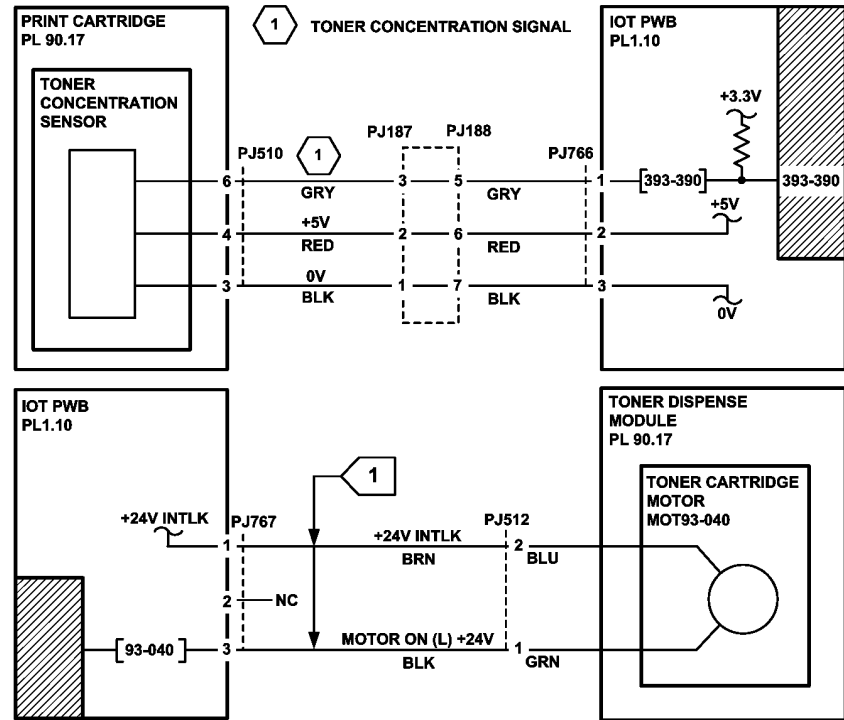
X-1-1102-A

Figure 2 Toner dispense tube



X-1-1103-A

Figure 3 Print cartridge shutter



TX-1-0276-A

Figure 4 Circuit diagram

393-399-00 Incompatible Toner Cartridge RAP

393-399-00 The toner cartridge CRUM failed the authorization check.

The authorization check is performed to ensure that the toner cartridge installed in the system is compatible with the current machine configuration and the customer service plan.

NOTE: Refer also to:

- [GP 9 Machine SIM Card Matrix](#)
- [GP 39 Service Plans and Consumables](#)

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



CAUTION

The first time the toner cartridge is replaced, installing a sold toner cartridge into a metered service plan machine will convert the machine to a sold service plan. But this may not be noticed until the sold toner cartridge has failed and is renewed with a metered toner cartridge.

Perform the steps that follow:

1. Check that the toner cartridge matches the customer service plan. Refer to [How to Check the Service Plan](#) in [GP 39 Service Plans and Consumables](#).
2. If necessary, install a new toner cartridge, [PL 90.17 Item 2](#) that matches the machine configuration and the customer service plan. Refer to [GP 39 Service Plans and Consumables](#).

393-401-00 Toner Cartridge Missing RAP

393-401-00 The toner cartridge PWB failed to detect the RF CRUM within 2 revolutions of the toner bottle.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Remove the toner cartridge, [PL 90.17 Item 2](#). The CRUM is attached to the toner cartridge.

Y N

Install a new toner cartridge, [PL 90.17 Item 2](#) that is compatible with the current machine configuration and the customer service plan.

Enter [dC330](#), code 093-045, print cartridge motor. Add the code 093-040, toner cartridge motor.

NOTE: The routine 93-040 times out after 5 seconds.

The toner cartridge rotates.

Y N

Remove the toner cartridge, [PL 90.17 Item 2](#). Enter [dC330](#), code 093-040, toner cartridge motor, MOT93-040. The motor runs.

Y N

Go to [Flag 3](#). Check MOT93-040.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J766](#), IOT PWB.
- [301G](#) +24V Generation and Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new toner dispense module, [PL 90.17 Item 1](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

Check the toner dispense drive gears. If necessary, install a new toner dispense module, [PL 90.17 Item 1](#).

Go to [Flag 1](#). Check for +5V at [P/J782](#) pins 1 and 6 on the IOT PWB. +5V is present.

Y N

Go to:

- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

Remove the relevant component:

- Horizontal transport assembly, [REP 10.6](#).
- Centre output tray, [REP 28.1](#).

Remove the toner cartridge PWB cover, [PL 90.17 Item 11](#). Go to [Flag 2](#). Check the wiring between the toner cartridge PWB and [P/J782](#) on the IOT PWB. The wiring is good.

Y N

Repair the wiring, GP 7 or install a new toner cartridge PWB, PL 90.17 Item 12.

Install a new toner cartridge, PL 90.17 Item 2 that is compatible with the current machine configuration and the customer service plan. If the fault persists, perform the procedures that follow:

- OF7 IOT PWB Diagnostics RAP.
- 391A HVPS RAP.

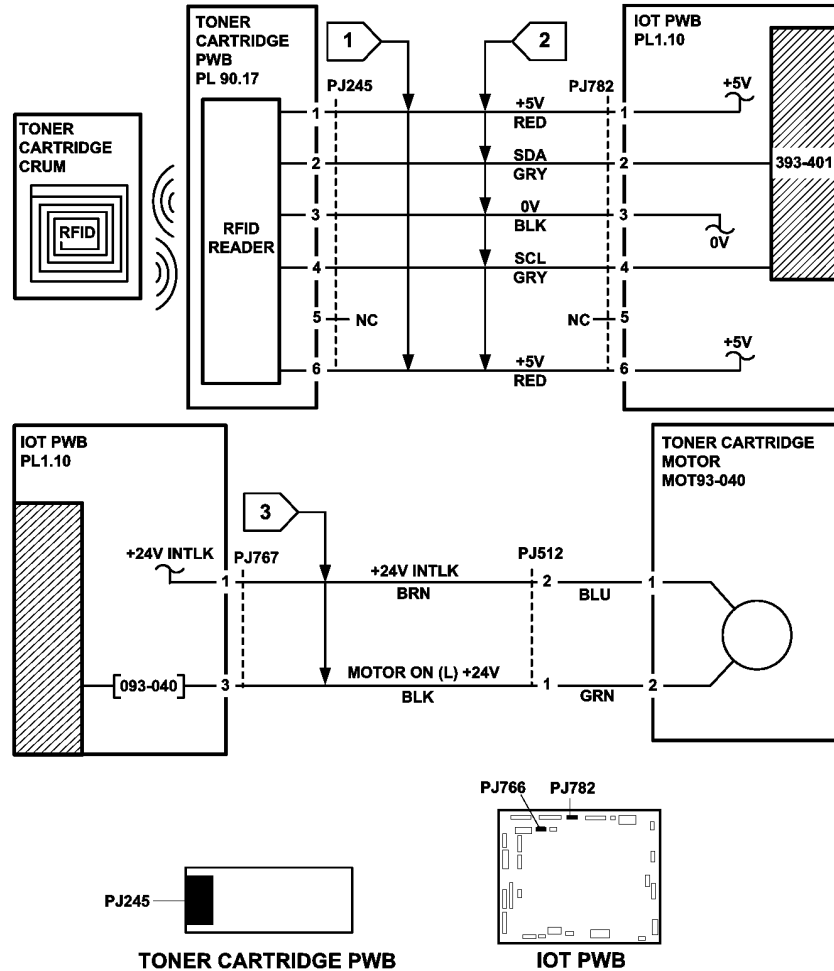
393-974-00, 393-987-00 Unknown Toner Cartridge RAP

393-974-00 Null string read on new toner cartridge.

393-978-00 Non-Xerox string read on new toner cartridge.

Procedure

The fault is code shown for information only. No service action is necessary.



TX-1-0317-A

Figure 1 Circuit diagram

395-000-00 to 395-009-00 SBC Software Upgrade Errors 1 RAP

395-000-00 Failed to upgrade the DC (SBC) boot code.

395-001-00 Failed to upgrade the DC (SBC) software upgrade code.

395-002-00 Failed to upgrade the DC (SBC) application

395-008-00 Failed to upgrade the DC (SBC) operating system.

395-009-00 Failed to upgrade the DC (SBC) CIPS.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Reload the software using the forced AltBoot procedure, [GP 4](#).
2. If the fault persists, install a new SBC PWB, [PL 3.22 Item 3](#). Reload the software, [GP 4](#).

395-011-00 UI Software Upgrade Errors RAP

395-011-00 Failed to upgrade the UI application.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Refer to [WD 4](#). Check the wiring between PJ864 on the [SBC PWB](#) and PJ130 on the [UI control PWB](#). Repair as necessary, [REP 1.2](#). If necessary, install a new SBC PWB to UI control PWB power/comms harness, [PL 2.10 Item 3](#).
2. Reload the software using the forced AltBoot procedure, [GP 4](#).
3. If the fault persists, install a new UI control PWB, [PL 2.10 Item 6](#). Reload the software, [GP 4](#).

395-038-00 Fax Software Upgrade Errors RAP

395-038-00 Software upgrade synchronization error.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Remove, then re-install the fax module, [PL 20.05 Item 1](#).
2. Refer to [WD 4](#). Check the ribbon cable between PJ860 on the [SBC PWB](#) and PJ1 on the [Fax connector PWB](#). If necessary, install a new SBC PWB to fax connector PWB ribbon cable, [PL 3.22 Item 14](#).
3. Reload the software using the forced AltBoot procedure, [GP 4](#).
4. If the fault persists, install a new fax PWB, [PL 20.05 Item 7](#). Reload the software, [GP 4](#).

395-040-00 to 395-042-00 IOT Software Upgrade Errors RAP

395-040-00 Failed to upgrade the IOT bootstrap code.

395-041-00 Failed to upgrade the IOT bootloader code.

395-042-00 Failed to upgrade the IOT application.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Refer to [WD 10](#). Check the wiring between PJ866 on the [SBC PWB](#) and PJ768 on the [IOT PWB](#). Repair as necessary, [REP 1.2](#).
2. Reload the software using the forced AltBoot procedure, [GP 4](#).
3. If the fault persists, install a new IOT PWB, [PL 1.10 Item 2](#). Reload the software, [GP 4](#).

395-060-00 2K LCSS Software Upgrade Error RAP

395-060-00 Failed to upgrade the 2K LCSS application.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Refer to [WD 10](#). Check the wiring between PJ866 on the [SBC PWB](#) and PJ768 on the [IOT PWB](#). Repair as necessary, [REP 1.2](#).
2. Refer to [WD 10](#) and [WD 19](#). Check the wiring between PJ772 on the [IOT PWB](#) and PJ301 on the [2K LCSS PWB](#). Repair as necessary, [REP 1.2](#).
3. Make sure the 2K LCSS PWB DIP switches are set correctly. Refer to the [312F-110 2K LCSS DIP Switch Settings RAP](#).
4. Reload the software using the forced AltBoot procedure, [GP 4](#).
5. If the fault persists, install a new 2K LCSS, [PL 12.75 Item 1](#). Reload the software, [GP 4](#).

395-140-00 SBC Software Upgrade Errors 2 RAP

395-140-00 Failed to upgrade the DC (SBC) NC application.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Go to the [395-000-00 to 395-009-00 SBC Software Upgrade Errors 1 RAP](#).

395-155-00 to 395-169-00 Scanner Software Upgrade Errors 1 RAP

395-155-00 Failed to upgrade the IIT CCD module.

395-161-00 Failed to upgrade the IIT Taurus 2 bootcode.

395-162-00 Failed to upgrade the IIT Taurus 2 application.

395-163-00 Failed to upgrade the IIT Taurus 1 FPGA.

395-164-00 Failed to upgrade the IIT Taurus 2 FPGA.

395-169-00 Failed to upgrade the IIT Taurus 1 bootcode.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Refer to [WD 3](#). Check the wiring between PJ860 on the [SBC PWB](#) and PJ410 on the [Scanner PWB](#). Repair as necessary, [REP 1.2](#). If necessary, install a new SBC PWB to scanner PWB power/comms harness, [PL 60.20 Item 5](#).
2. Reload the software using the forced AltBoot procedure, [GP 4](#).
3. If the fault persists, install a new scanner PWB, [PL 60.20 Item 4](#). Reload the software, [GP 4](#).

395-214-00 to 395-217-00 SBC Software Upgrade Errors 3 RAP

395-214-00 Failed to upgrade the DC (SBC) ACD.

395-216-00 Failed to upgrade the DC (SBC) glue application.

395-217-00 Failed to upgrade the DC (SBC) PWS proxy.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Go to the [395-000-00 to 395-009-00](#) SBC Software Upgrade Errors 1 RAP.

395-222-00 LVF Software Upgrade Error RAP

395-222-00 Failed to upgrade the LVF application.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Refer to [WD 10](#). Check the wiring between PJ866 on the [SBC PWB](#) and PJ768 on the [IOT PWB](#). Repair as necessary, [REP 1.2](#).
2. Refer to [WD 10](#) and [WD 23](#). Check the wiring between PJ772 on the [IOT PWB](#) and PJ301 on the [LVF PWB](#). Repair as necessary, [REP 1.2](#).
3. Make sure the LVF PWB DIP switches are set correctly. Refer to the [312F-150 LVF PWB](#) and LVF BM DIP Switch Settings RAP.
4. Reload the software using the forced AltBoot procedure, [GP 4](#).
5. If the fault persists, install a new LVF PWB, [PL 12.425 Item 8](#). Reload the software, [GP 4](#).

395-224-00 LVF BM Software Upgrade Errors RAP

395-224-00 Failed to upgrade the LVF BM application.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Refer to [WD 10](#). Check the wiring between PJ866 on the [SBC PWB](#) and PJ768 on the [IOT PWB](#). Repair as necessary, [REP 1.2](#).
2. Refer to [WD 10](#) and [WD 23](#). Check the wiring between PJ772 on the [IOT PWB](#) and PJ301 on the [LVF PWB](#). Repair as necessary, [REP 1.2](#).
3. Refer to [WD 26](#). Check the wiring between PJ401 on the [LVF PWB](#) and PJ101 on the [LVF BM PWB](#). Repair as necessary, [REP 1.2](#).
4. Make sure the LVF BM PWB DIP switches are set correctly. Refer to the [312F-150 LVF PWB](#) and LVF BM DIP Switch Settings RAP.
5. Reload the software using the forced AltBoot procedure, [GP 4](#).
6. If the fault persists, install a new LVF BM PWB, [PL 12.425 Item 1](#). Reload the software, [GP 4](#).

395-227-00 Scanner Software Upgrade Errors 2 RAP

395-227-00 Failed to upgrade the IIT PMC application.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Go to the [395-155-00 to 395-169-00](#) Scanner Software Upgrade Errors 1 RAP.

395-228-00, 395-229-00 SPDH Software Upgrade Errors RAP

395-228-00 Failed to upgrade the SPDH application.

395-229-00 Failed to upgrade the SPDH bootcode.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Refer to [WD 3](#). Check the wiring between PJ860 on the [SBC PWB](#) and PJ410 on the [Scanner PWB](#). Repair as necessary, [REP 1.2](#). If necessary, install a new SBC PWB to scanner PWB power/comms harness, [PL 60.20 Item 5](#).
2. Refer to [WD 13](#). Check the wiring between PJ417 on the [Scanner PWB](#) and PJ460 on the [SPDH PWB](#). Repair as necessary, [REP 1.2](#).
3. Reload the software using the forced AltBoot procedure, [GP 4](#).
4. If the fault persists, install a new SPDH PWB, [PL 5.10 Item 5](#). Reload the software, [GP 4](#).

395-255-00 SBC Software Upgrade Errors 4 RAP

395-255-00 Failed to upgrade the DC (SBC) SCD.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Go to the [395-000-00 to 395-009-00 SBC Software Upgrade Errors 1 RAP](#).

395-300-00 Software Upgrade Product Error RAP

395-300-00 Software upgrade detected an incompatible DLM file.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

The software upgrade DLM file is not compatible with the machine. Source the correct DLM file.

395-301-00, 395-302-00 Software Upgrade Hardware Error RAP

395-301-00 Software upgrade detected incompatible hardware.

395-302-00 Software upgrade detected incompatible firmware.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

The machine has attempted to upgrade incompatible hardware or firmware. Check all recently installed components. Install the correct components.

395-303-00 Software DLM Downgrade Error RAP

395-303-00 Software DLM file downgrade error. An attempt was made to load a lower level of software.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Reload the software using the forced AltBoot procedure, **GP 4**.

395-304-00 Software DLM Sidegrade Error RAP

395-304-00 Software DLM file sidegrade error. An attempt was made to load the same level of software.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Reload the software using the forced AltBoot procedure, [GP 4](#).

395-305-00 Software Upgrade Synchronization Error RAP

395-305-00 Software upgrade synchronization error.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

When an upgrade fails, the SCD module version that failed to upgrade is printed on the software upgrade report. Refer to the report and [Table 1](#). Perform the relevant procedure.

Table 1 Software module numbers

Module	SCD Module Versions	Procedure
SBC PWB	0, 1, 2, 8, 9, 11, 140, 214, 216, 217, 226	395-000-00 to 395-009-00 SBC Software Upgrade Errors 1 RAP
UI PWB	19	395-011-00 UI Software Upgrade Errors RAP
SPDH PWB	228, 229	395-228-00, 395-229-00 SPDH Software Upgrade Errors RAP
Fax	38	395-038-00 Fax Software Upgrade Errors RAP
IOT PWB	40, 41, 42	395-040-00 to 395-042-00 IOT Software Upgrade Errors RAP
2K LCSS PWB	60	395-060-00 2K LCSS Software Upgrade Errors RAP
Scanner PWB	155, 163, 164, 169, 227	395-155-00 to 395-169-00 Scanner Software Upgrade Errors 1 RAP
LVF PWB	222	395-222-00 LVF Software Upgrade Errors RAP
LVF BM PWB	224	395-224-00 LVF BM Software Upgrade Errors RAP

OF1 Unusual Noise RAP

Use this RAP to isolate unusual noises in the machine.

NOTE: Due to the intermittent nature of unusual noises, this RAP can only give guidance on how to isolate noises. This RAP will not find all possible causes. When machines become old and worn, unusual noises may arise that are not covered in this RAP.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Ask the customer if there are any specific machine functions that are noisy.
2. Ask the customer to demonstrate the function of the machine that generates the unusual noise.
3. Check the fault logs.
4. Switch off the machine, GP 14. Wait for 2 minutes. Switch on the machine. Allow the machine to perform a normal initialization and warm-up.
5. Run the machine in all modes. Also use service mode to run individual components. Go to the relevant subsection:
 - Main Drives and Paper Transport.
 - SPDH.
 - Tray 1 and 2 Assembly.
 - Tray 3.
 - Tray 4.
 - Tray 6 Assembly.
 - Xerographics.
 - Fuser Module.
 - Centre Output Tray Offset Mechanism.
 - Horizontal Transport.
 - 2K LCSS.
 - LVF BM.
 - HVF and HVF BM.
 - Scanner.

Main Drives and Paper Transport

- Enter dC330 code 010-020, fuser/exit motor, part of the main drive unit, PL 40.15 Item 5. The components that follow will run:
 - Exit roll, PL 10.11 Item 21.
 - Post fuser roll, PL 80.22 Item 12.
 - Fuser module, PL 10.8 Item 1. Remove the fuser module to eliminate the noise caused by the fuser. If the source of the noise is the fuser, perform the Fuser Module checkout.
- If the machine is fitted with a centre output tray, enter dC330 code 010-500, offset motor, to run the offset motor, PL 10.11 Item 14. The offset shuttle, PL 10.11 Item 22 will move.

- Enter dC330 code 010-030, inverter motor, to run the inverter motor, PL 10.11 Item 9. The drive roll, PL 10.11 Item 12 will rotate.
- Enter dC330 code 010-045, inverter gate solenoid. The solenoid energizes and moves the inverter gate, part of the inverter assembly, PL 10.10 Item 1.
- Enter dC330 code 010-040, horizontal transport motor, to run the horizontal transport motor, PL 10.16 Item 1. The transport rolls, PL 10.16 Item 4 will rotate.
- Enter dC330 code 080-040, registration motor, to run the registration motor, PL 40.15 Item 6. The registration roll, PL 80.17 Item 5 will rotate.
- Enter dC330 code 080-015, left door fans, to run the left door fan 1 and left door fan 2, PL 80.10 Item 9.
- Enter dC330 code 080-025, TAR/bypass tray motor (bypass), to run the TAR/bypass tray motor in reverse. The bypass tray feed roll and retard roll, PL 70.35 will rotate.
- Enter dC330 code 080-006, TAR/bypass tray motor (TAR Rolls) Process Speed, to run the TAR/bypass tray motor forward at process speed. The tray 1 and 2 transport rolls, PL 80.25 Item 7 will rotate.
- Enter dC330 code 083-060, duplex motor, to run the duplex motor, PL 80.22 Item 8. The components that follow will rotate:
 - Upper duplex roll, PL 80.22 Item 14.
 - Mid duplex rolls, PL 80.22 Item 15.
 - Lower duplex roll, PL 80.22 Item 13.

Possible causes and potential solutions are:

• Symptom: squeaks.

Possible causes:

- Contamination of the drive shafts and the bearings.
- Bearings in cooling fans.
- Incorrectly adjusted or worn drive belts.
- Incorrectly aligned or damaged parts.

Potential solutions:

- Clean the components.
- Remove, clean and lubricate the drive shafts and bearings. Refer to ADJ 40.1 Machine Lubrication.
- Adjust the components if necessary.
- Check for parts that are damaged or out of position.
- Install new components as necessary.

SPDH

Run the components that follow:

- Enter dC330 code 005-020, DH feed motor. Add the code 005-025, DH feed clutch, to rotate the feed roll and nudger roll, PL 5.20 and the retard roll, PL 5.25 Item 3.
- Enter dC330 code 005-020, DH feed motor. Add the code 005-425, DH takeaway clutch, to rotate the takeaway roll assembly, PL 5.17 Item 1.
- Enter dC330 code 005-030, DH read motor, to run the exit, mid scan and pre scan roll assemblies, PL 5.17.
- Enter dC330 code 005-390, DH tray elevator motor, to run the input tray lift mechanism, PL 5.30.

Possible causes and potential solutions are:

- **Symptom: squeaks.**

Possible causes:

- Contamination of the drive shafts and bearings.
- Incorrectly adjusted or worn drive belts.
- Incorrectly aligned or damaged parts.

Potential solutions:

- Remove, clean and lubricate the drive shafts and bearings. Refer to [ADJ 40.1 Machine Lubrication](#).
- Check for parts that are damaged or out of position.
- Adjust the components if necessary.
- Install new components as necessary.

Tray 1 and 2 Assembly

Remove tray 1 and tray 2. Run the components that follow:

- Enter [dC330](#) code 081-010, tray 1 feed motor, to run the tray 1 elevate/feed motor, [PL 80.26 Item 6](#).
- Enter [dC330](#) code 081-020, tray 2 feed motor, to run the tray 2 elevate/feed motor, [PL 80.26 Item 6](#).
- Open the left door.
Enter [dC330](#) code 080-006, TAR/bypass tray motor (TAR rolls), to run the tray 1 and tray 2 transport rolls, [PL 80.25 Item 7](#).

Possible causes and potential solutions are:

- **Symptom: squeaks.**

Possible causes:

- Contamination of the drive shafts and bearings.
- Incorrectly adjusted or worn drive belts.
- Incorrectly aligned or damaged parts.

Potential solutions:

- Remove, clean and lubricate the drive shafts and bearings. Refer to [ADJ 40.1 Machine Lubrication](#).
- Check for parts that are damaged or out of position.
- Adjust the components if necessary.
- Install new components as necessary.

Tray 3

Run the components that follow:

- Enter [dC330](#) code 081-045, HCF transport motor, to run the HCF transport roll, [PL 80.33 Item 4](#).
- Pull out tray 3. Let the tray drop. Push the tray back in. Enter [dC330](#) code 073-010, tray 3 elevator motor, to elevate tray 3, [PL 70.21 Item 1](#).
- Pull out tray 3. Enter [dC330](#) code 081-030, tray 3 feed motor. Add the code 081-033, tray 3 feed clutch, to rotate the tray 3 feed rolls, [PL 80.32](#).

NOTE: The bypass tray clutch will also energize when component control code 081-033 is entered.

Possible causes and potential solutions are:

- **Symptom: knocking noise, no drive or a knocking noise from the HCF transport motor.**

Possible causes:

- The HCF transport motor or drives.
- Worn or stretched tray 3 elevator cables.

Potential solutions:

- Adjust or install new components as necessary, [PL 70.18](#) and [PL 80.32](#).
- Check that the paper trays are correctly positioned and that the tray moves freely inside the tray assembly.

Tray 4

Run the components that follow:

- Enter [dC330](#) code 081-045, HCF transport motor, to run the HCF transport roll and tray 4 transport drives, [PL 80.36](#) and [PL 80.33 Item 4](#).
- Pull out tray 4. Let the tray drop. Push the tray back in. Enter [dC330](#) code 074-010, tray 4 elevator motor to elevate tray 4, [PL 70.21 Item 1](#).
- Pull out tray 4. Enter [dC330](#) code 081-040, tray 4 feed motor. Add the code 081-043, tray 4 feed clutch, to rotate the tray 4 feed rolls, [PL 80.33](#).

Possible causes and potential solutions are:

- **Symptom: knocking noise, no drive or a knocking noise from the HCF transport motor.**

Possible causes:

- The HCF transport motor or drives, [PL 80.36](#).
- Worn or stretched tray 4 elevator cables.

Potential solutions:

- Check the HCF transport drives, [PL 80.36](#).
- Adjust or install new components as necessary, [PL 70.19](#) and [PL 80.33](#).
- Check that the paper trays are correctly positioned and that the tray moves freely inside the tray assembly.

Tray 6 Assembly

Run the components as follows:

- Open the tray 6 door to lower the tray.
- Close the door or actuate the interlock.
- Enter [dC330](#) code 076-010 to drive the tray up.
- Enter [dC330](#) code 076-011 to drive the tray down.
- Enter [dC330](#) code 081-065 to operate the tray 6 transport motor, [PL 80.40 Item 2](#).
- Enter [dC330](#) code 081-060 to operate the tray 6 feed motor, [PL 80.40 Item 3](#)

Check the associated belts, rollers, bearings, sensors and encoders for possible noise sources.

Xerographics

Run the components that follow:

- Enter [dC330](#) code 093-040, toner cartridge motor, to run the toner cartridge motor, part of the toner dispense module, [PL 90.17 Item 1](#).

- Enter [dC330](#) code 093-045, print cartridge motor to run the print cartridge motor, part of the main drive unit, [PL 40.15 Item 5](#).

Possible causes and potential solutions are:

- **Symptom: knocking or clicking noise.**
Possible causes are:
 - Print cartridge drive gears not correctly engaged.
 Potential solutions:
 - Remove, then re-install the print cartridge.

Fuser Module

Run components that follow:

- Enter [dC330](#) code 010-020, fuser/exit Motor to run the fuser, part of the main drive unit, [PL 40.15 Item 5](#).

Possible causes and potential solutions are:

- **Symptom: knocking or clicking noise.**
Possible causes are:
 - Fuser drive gear not correctly engaged.
 Potential solutions:
 - Remove, then re-install the fuser module.

Centre Output Tray Offset Mechanism

Remove the centre output tray, [REP 28.1](#). Enter [dC330](#) code 010-500, offset motor forward or code 010-501, offset motor reverse, MOT10-500, [Figure 2](#).

- **Symptom: noisy operation of the offset mechanism.**
Possible cause:
 - Incorrect mesh between the offset motor pinion, [PL 10.11 Item 14](#) and the shuttle rack teeth, [PL 10.11 Item 22](#).
 Potential solution:
 - Loosen the two screws securing the offset motor bracket, [PL 10.11 Item 15](#) to the exit guide housing, [PL 10.11 Item 2](#). Move the motor bracket up as far as possible, then re-tighten the screws.

Horizontal Transport

Run the components that follow:

- Enter [dC330](#) code 010-040, horizontal transport motor, to run the horizontal transport rolls, [PL 10.16 Item 4](#).

Possible causes and potential solutions are:

- **Symptom: squeaks.**
Possible causes are:
 - Contamination of the drive shafts and bearings.
 - Incorrectly adjusted or worn drive belts.
 - Incorrectly aligned or damaged parts.
 - Idler roll snap features rubbing against the idler roller snap features (4 idler rolls)
 Potential solutions:
 - Remove, clean and lubricate the drive shafts and bearings. Refer to [ADJ 40.1](#) Machine Lubrication.

- Check for parts that are damaged or out of position.
- Adjust the components if necessary.
- Install new components as necessary.
- Lubricate the idler rolls, [ADJ 40.1](#).

2K LCSS

Run the components that follow:

- Enter [dC330](#) code 012-223, transport motor 1, to rotate the feed rolls, [PL 12.40](#).
- Enter [dC330](#) code 012-224, transport motor 2, to rotate the entry rolls, [PL 12.60](#).
- Enter [dC330](#) code 012-239, paddle roll motor run, rotates the paddle wheel shaft assembly, [PL 12.25 Item 4](#).
- Enter [dC330](#) code 012-232, tamp mot cycle, cycles the front and rear tampers, [PL 12.45](#).
- Enter [dC330](#) code 012-236, ejector mot cycle, cycles the ejector assembly, [PL 12.50 Item 1](#).
- Enter [dC330](#) code 012-242, bin 1 elevator motor cycle, to move bin 1 up and down, [PL 12.10 Item 10](#).

NOTE: *The bin will move down and then move up to the home position.*

- Enter [dC330](#) code 012-244, punch head run, rotates the punch head, [PL 12.20 Item 2](#).
- Enter [dC330](#) code 012-250, SU1 motor cycle, cycles the stapler from the front to the rear, [PL 12.55 Item 5](#).

Possible causes and potential solutions are:

- **Symptom: 2 knocks for each stapled set.**
Potential solutions:
 - Perform the [312-340-00-110](#), [312-341-00-110](#), [312-342-00-110](#) Ejector Movement Failure RAP.
- **Symptom: noise from the right hand side of the machine.**
Possible causes are:
 - The 2K LCSS is not aligned correctly.
 Potential solutions:
 - Check the machine to 2K LCSS alignment, [ADJ 12.2-110](#).
 - Adjust the components if appropriate.
 - Install new components as necessary.
- **Symptom: clicking Noise from the 2K LCSS.**
Possible causes are:
 - The staple head continually operating for approximately 15 seconds. This occurs every time the 2K LCSS top cover or front door is opened then closed, because the stapler is attempting to prime the staple head, by indexing the staple stick forward and pre-forming 2 staples.
 Potential solutions:
 - Check the staple cartridge for jammed staples and remove any that are found.
 - Ensure the staple cartridge is fully seated.
 - Ensure that the correct staple cartridge is installed.
 - Perform the [312K-110](#) Stapling Prime Failure RAP.
- **Symptom: loud grinding/binding noise from the 2K LCSS.**

Possible causes are:

- The ejector shafts are dry, gummy or dirty, [PL 12.50 Item 10](#).
- The ejector bearings are dry, gummy or dirty, [PL 12.50 Item 11](#) and [PL 12.50 Item 12](#).

Potential solutions:

- Clean and lubricate the drive shafts and bearings. Refer to [ADJ 40.1](#) Machine Lubrication.

LVF BM

Run the components that follow:

- Enter [dC330](#) code 012-223, transport motor 1, to run the feed rolls, [PL 12.385](#).
- Enter [dC330](#) code 012-224, transport motor 2, to run the entry rolls, [PL 12.370](#).
- Enter [dC330](#) code 012-239, paddle wheel motor run, rotates the paddle shaft, [PL 12.335 Item 2](#).
- Enter [dC330](#) code 012-232, tamp mot cycle, cycles the front and rear tampers, [PL 12.335 Item 1](#).
- Enter [dC330](#) code 012-236, eject mot cycle, cycles the ejector assembly, [PL 12.360 Item 1](#).
- Enter [dC330](#) code 012-242, bin 1 elevator motor cycle, to move bin 1 up and down, [PL 12.320 Item 10](#).

NOTE: *The bin will move down and then move up to the home position.*

- Enter [dC330](#) code 012-244, punch head run, rotates the punch head, [PL 12.330 Item 2](#).
- Enter [dC330](#) code 012-250, SU1 motor cycle, cycles the stapler from the front to the rear, [PL 12.365 Item 5](#).
- Enter [dC330](#) code 012-256, BM tamper motor 1, to move the booklet maker tamper arms, [PL 12.380 Item 2](#).
- Enter [dC330](#) code 012-271, BM flapper motor, to run the BM compiler flappers, [PL 12.390 Item 10](#).
- Enter [dC330](#) code 012-435, BM stapler unit move motor, to move the BM staple head assembly, [PL 12.395 Item 5](#).
- Enter [dC330](#) code 012-255, BM back stop motor, to run move the BM back stop, [PL 12.400 Item 9](#) between the A4 receive, staple and crease positions.
- Enter [dC330](#) code 012-252, BM crease blade motor, to cycle the crease blade, [PL 12.405 Item 5](#).
- Enter [dC330](#) code 012-253, BM crease roll motor, to run the crease rolls, [PL 12.410](#).

Possible causes and potential solutions are:

- **Symptom: 2 knocks for each stapled set.**

Potential solutions:

- Perform the [312-340-00-150](#), [312-342-00-150](#) Ejector Movement Failure RAP.

- **Noise from the right hand side of the machine.**

Possible causes are:

- The LVF BM is not aligned correctly.

Potential solutions:

- Check the machine to LVF BM alignment, [ADJ 12.2-150](#).
- Adjust the components if appropriate.

- Install new components as necessary.

- **Symptom: clicking Noise from the LVF BM.**

Possible causes are:

- The staple head continually operating for approximately 15 seconds. This occurs every time the LVF BM top cover or front door is opened then closed, because the stapler is attempting to prime the staple head, by indexing the staple stick forward and pre-forming 2 staples.

Potential solutions:

- Check the staple cartridge for jammed staples. Remove any that are found.
- Ensure the staple cartridge is fully seated.
- Ensure that the correct staple cartridge is installed.
- Perform the [312-377-00-150](#) LVF BM Stapling Failure RAP.

- **Symptom: loud grinding/binding noise from the LVF BM.**

Possible causes are:

- The ejector shafts are dry, gummy or dirty, [PL 12.360 Item 11](#).
- The ejector bearings are dry, gummy or dirty, [PL 12.360 Item 12](#) and [PL 12.360 Item 13](#).

Potential solutions:

- Clean and lubricate the drive shafts and bearings. Refer to [ADJ 40.1](#) Machine Lubrication.

HVF and HVF BM

Run the following components:



CAUTION

Make sure that the first tamper in the compiler carriage is returned to the home position before the second tamper is checked in service mode.

- Enter [dC330](#) code 012-223 Transport Motor 1, to run the input transport roll, [PL 12.150 Item 2](#).
- Enter [dC330](#) code 012-224 Transport Motor 2, to run the exit drive shafts to feed paper to the top tray or to the stacker tray, [PL 12.150 Item 1](#).
- Enter [dC330](#) code 012-226 Tamp. Mot. Front Home, to move the front tamper to the home position [PL 12.110 Item 26](#)
- Enter [dC330](#) code 012-227 Tamp. Mot. Rear Home, to move the rear tamper to the home position, [PL 12.110 Item 23](#).
- Enter [dC330](#) code 012-228 Tamp. Mot. Front Move, to move the front tamper to the centre of the compiler, [PL 12.110 Item 26](#).
- Enter [dC330](#) code 012-229 Tamp. Mot. Rear Move, to move the rear tamper to the centre of the compiler tray, [PL 12.110 Item 23](#).
- Enter [dC330](#) code 012-238 Paddle Roll Motor Run, to lift the paddle unit and rotate the paddle rolls, [PL 12.115 Item 2](#)
- Enter [dC330](#) code 012-027 Paddle Unit Mot. Home, to lift the paddle unit to the up position, [PL 12.115 Item 2](#).
- Enter [dC330](#) code 012-030 Bin 1 Elevator Motor Home, to move Bin 1 up to the home position, [PL 12.115 Item 16](#).

- Enter **dC330** code 012-031 Bin 1 Elevator Motor Up, to move Bin 1 down, [PL 12.115 Item 16](#).

NOTE: The tray moves up for 15 seconds and then stops.

- Enter **dC330** code 012-032 Bin 1 Elevator Motor Down, to move Bin 1 down, [PL 12.115 Item 16](#).

NOTE: The tray moves down for 15 seconds and then stops.

- Enter **dC330** code 012-053 SU1 Motor Forward, to move the stapler unit to the rear, [PL 12.111 Item 1](#).
- Enter **dC330** code 012-054 SU1 Motor Reverse, to move the stapler unit to the rear, [PL 12.111 Item 1](#).
- Enter **dC330** code 012-060 BM Compiler Motor, runs the compiler BM entry roll, [PL 12.150 Item 15](#).
- Enter **dC330** code 012-061 BM Blade motor, to move the crease blade assembly, [PL 12.170 Item 13](#) and the crease roll gate, [PL 12.180 Item 19](#).
- Enter **dC330** code 012-062 BM Crease Motor, to rotate the four crease rolls, [PL 12.180](#).
- Enter **dC330** code 012-065 BM Back Stop Motor, to move the back stop assembly, [PL 12.165 Item 18](#).
- Enter **dC330** code 012-066 BM Tamper 1 Motor, to move the tamper rack and fingers, [PL 12.155](#).
- Enter **dC330** code 012-402 BM conveyor drive motor, to run the output tray conveyor belts, [PL 12.190 Item 1](#).
- Enter **dC330** code 012-390 BM flapper Motor, to run the BM flapper, [PL 12.150 Item 30](#).
- Enter **dC330** code 012-401 BM Crease roll, to move the crease roll gate up and down, [PL 12.180 Item 19](#).
- Enter **dC330** code 012-078 Inserter unit motor, to run inserter main drives, [PL 12.315](#)
- Enter **dC330** code 012-062 BM crease roll motor, to run the tri-folder drives, [PL 12.215](#).

Possible causes and potential solutions are:

- **Noise from the right side of the machine.**

Possible causes are:

- The HVF/HVF BM is not aligned correctly.
- Bin 1 not aligned correctly on the main drive belts, [PL 12.105](#).

Solution:

- Check the machine to HVF or HVF BM alignment, [ADJ 12.1-171](#).
- Check that the Bin 1 is level, refer to [REP 12.38-171](#) HVF Bin 1 Main Drive Belts.
- Adjust the components if appropriate.
- Install new parts as necessary.

- **Knocking.**

Possible causes are:

- Mis-adjusted or worn drive belts.
- The support fingers on the ejector hit bin1 each time they are moved out.

Solution:

- Adjust the belt tension as required.
- Pre-load bin 1 with 30 sheets of paper this acts a a damper and will stop the noise.

- Install new parts as necessary.

- **Squeak.**

Possible causes are:

- Check that the paper guides are closed and located correctly.

Solution:

- Install new parts as necessary.

- **Clicking Noise from the HVF/HVF BM.**

Possible causes are:

- The noise is caused by the transport motor 2, **dC330** code 012-001, continually operating for approximately 15 seconds. This occurs every time the top tray, [PL 12.120 Item 1](#). or the front door, [PL 12.100 Item 3](#), is opened then closed.

Solution:

- Ensure the staple cartridge is fully seated and that the correct cartridge is installed.

NOTE: When a new staple cartridge is installed the stapler makes a repeating noise. This is normal it is the stapler performing a priming cycle.

- Perform [312-369-00-171](#) to [312-377-00-171](#) HVF Stapler Position and Priming RAP.

Scanner

Possible causes and potential solutions are:

- **Symptom: loud clicking noise.**

Possible causes are:

- The scanner transit lock is engaged.

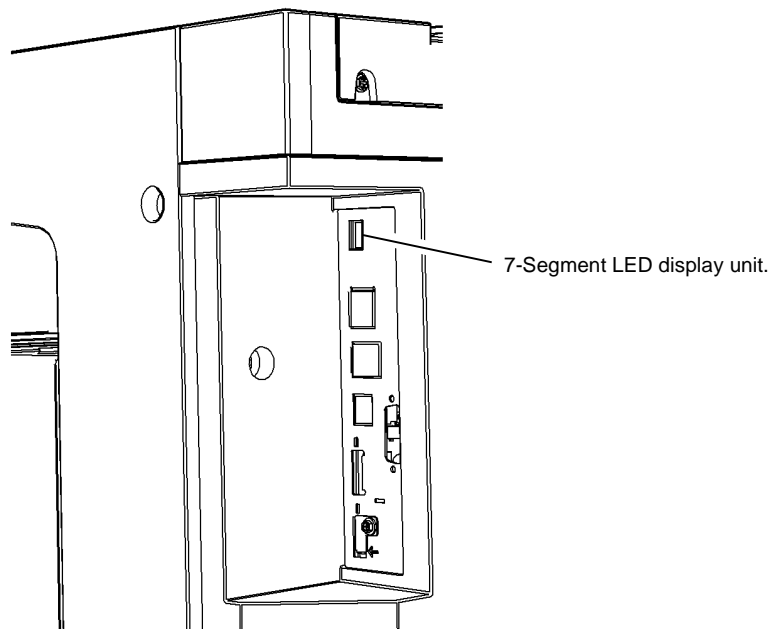
Potential solutions.

- Release the transit lock.

OF2 POST Error RAP

Use this RAP when the UI has stalled and shows the splash-logo screen, or the system appears to have power but the UI is blank.

- Power On Self Test (POST) occurs each time the machine is powered on. POST verifies the functionality of key subsystems.
- POST begins when power is switched on before higher level machine functions (such as the user interface) are operational.
- POST is performed by the IOT PWB and the SBC PWB.
- The fault is communicated via a 7-Segment LED display unit on the rear of the machine attached to the SBC PWB, [Figure 1](#). This is to help diagnose common faults which prevent the machine from powering up correctly to the point where faults are displayed and service mode can be entered. The LED display should show just a pulsing decimal point when the machine boots correctly. The main codes are displayed for short periods of time during power up depending, on how long each test takes. If any code is left displayed during power up and the machine appears not to have powered on correctly, then this should indicate the problem component. Refer to [Table 1](#).
- The flashing decimal point of the 7-segment display represents the SBC PWB heartbeat.



Rear right of machine.

X-1-1051-A

Figure 1 SBC LED display unit

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

To check for the system power up error:

1. Switch off, then switch on the machine, [GP 14](#).
2. If the system has powered up correctly, there will be a pulsing decimal point on the 7-segment display, [Figure 1](#).
3. If the system power up sequence has failed, check the code on the LED display. Refer to [Table 1](#) for the actions required for each code.
4. If the fault persists, go to the [OF3 Dead Machine RAP](#).

Table 1 7-Segment LED display

Fault Code	POST Code Name	Decimal Point Status	Code Description	Service Action
Blank.	Machine in ready mode.	Flashing.	None, no fault detected.	No action, no fault detected.
0	Initialise the video.	Off.	Initialize Video (IGD processor h/w) and stopped on failure.	Install a new SBC PWB, PL 3.22 Item 3 .
1	System memory initialization check.	Off.	Initialized DDR3 memory, stopped on failure.	Install a new SBC PWB, PL 3.22 Item 3 .
2	FPGA check.	Off.	Initialized FPGA, stopped on failure.	Install a new SBC PWB, PL 3.22 Item 3 .
3	BIOS flash memory initialization check.	Off.	Testing BIOS private NVM area in BIOS flash chip.	Install a new SBC PWB, PL 3.22 Item 3 .
4	Initialize real time clock.	Off.	Initialized real time clock, stopped on failure.	Install a new CMOS battery, PL 3.22 Item 19 .
5	SD boot.	Off.	Booted from SD card, stopped on failure.	Install a new SD card PL 3.22 Item 6 . See NOTE 2 . Then perform an Altboot GP 4 .
6	HD boot.	Off.	Booted from hard drive, stopped on failure.	Install a new hard disk, PL 3.22 Item 2 .
7	NVRAM corruption in EFI DXE drivers area.	Off.	NVRAM corruption detected.	Install a new SBC PWB, PL 3.22 Item 3 .
8	7 segment display test.	Off.	BIOS starts. No stop on segment failure.	Install a new SBC PWB, PL 3.22 Item 3 .
9	Boot to OS.	Off.	Boot to OS.	See NOTE 3 .

Table 1 7-Segment LED display

Fault Code	POST Code Name	Decimal Point Status	Code Description	Service Action
A	UI platform availability.	Flashing.	UI platform not available.	See NOTE 1. Reload the software, GP 4 .
b	IIT comms.	Flashing.	IIT comms not established.	See NOTE 1. Reload the software, GP 4 . If the fault persists, perform the 362-310-00 Scanner to SBC Communications Failure RAP.
C	NC platform availability.	Flashing.	NC platform not available.	See NOTE 1. See NOTE 4. Reload the software, GP 4 .
d	DC platform availability.	Flashing.	DC platform not available.	See NOTE 1. Reload the software, GP 4 .
E	IOT comms.	Flashing.	IOT comms not established.	See NOTE 1. Reload the software, GP 4 . If the fault persists, perform the 303-316-00 CCM Cannot Communicate with IOT RAP.
F	Fax comms.	Flashing.	Fax comms not established. Only if Fax installed.	See NOTE 1. Reload the software, GP 4 . If the fault persists, perform the 303-401-00 , 303-403-00 Fax Not Detected RAP.
H	Machine attempting wake-up from deep sleep.	Flashing or off.	OS resuming drivers.	None, for diagnostic information only.
J	System entropy health check.	Off.	Checks the processor DRNG hardware.	Install a new SBC PWB, PL 3.22 Item 3 .
L	Machine attempting sleep entry.	Flashing or off.	OS suspending drivers, entering sleep.	None, for diagnostic information only.
r	Machine in deep sleep state.	Off.	Resting in deep sleep.	None, for diagnostic information only.
t	Machine in semi-conscious state.	Flashing.	Running in semi-conscious mode.	None, for diagnostic information only.
u	Kernel starting user space.	Flashing.	Kernel starting user space.	Perform the 319-300-00 to 319-310-00 Hard Disk Drive Failure RAP.

NOTE:

1. After application start the 7-segment display cycles around displaying codes A, b,C, d, E and F. suppressing the codes of platforms that are fully synchronised with the system. Any code left displayed after power on indicates this event has not been detected in software and is a probable s/w issue.
2. Install a new SD card, [PL 3.22 Item 6](#). If the fault persists, install a new SBC PWB, [PL 3.22 Item 3](#). The software level on the SD and SBC PWB card **MUST** be the same as the software level on the hard disk drive. If necessary, use a good working machine to reload software on the SD card and SBC PWB by use of AltBoot, [GP 4](#), before they are installed in the faulted machine.
3. A defective HVPS can short out +24V interlocked or +24V supplies. This causes the UI to go dark or blank and also displays a 9 in the seven segment display. Perform the [391A](#) HVPS RAP.
4. This fault may be caused by a faulty hard disk drive. If necessary, install a new hard disk drive, [PL 3.22 Item 2](#).

OF3 Dead Machine RAP

use this RAP if the machine fails to reach an operational state when switched on.

Initial Actions

- Check the 7-segment LED display on the side of the single board controller module. If a code is displayed, perform the [OF2 POST Error RAP](#).
- Check that the power cord is connected to the machine.
- Remove the power cord from the customer's power outlet. Wait 2 minutes. Reconnect the plug into the outlet. Switch on the machine, [GP 14](#). If the fault persists, follow the procedure.
- If the problem occurs while entering or exiting sleep mode, perform the [301K Sleep Mode RAP](#).
- If the machine continually switches off approximately 10 seconds after power on, perform the [301J Power On and LVPS Control Signal RAP](#).

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Only use the correct plug to connect a power lead to a power outlet.



CAUTION

Incorrect voltage may damage the machine. The machine must only be connected to the power outlet of the correct voltage.

Observe the pulsing decimal point of the seven segment display on the SBC PWB. This represents the SBC microprocessor heartbeat and should flash at approximately 0.5Hz to show that the microprocessor is running correctly. **The decimal point is flashing correctly.**

Y | **N**
Perform the [301C AC Power RAP](#).

Perform the [301J Power On and LVPS Control Signal RAP](#). **The fault persists.**

Y | **N**
Perform [SCP 5 Final Actions](#).

Check that the events that follow occur in sequence following a reset or switch on:

- The UI touch screen illuminates.
- The output module resets.
- The SPDH resets.
- The exposure lamp switches on.

The sequence completed correctly.

Y | **N**

Perform the relevant action:

- If the UI touch screen illuminates, then the machine powers off, perform the [301H Short Circuit RAP](#).
- If the UI is illuminated but there is no image displayed, perform the [302A UI Touch Screen Failure RAP](#).
- If the UI is not illuminated, perform the [302A UI Touch Screen Failure RAP](#).
- If the UI touch screen is illuminated, but the printer fails to reach an operational state, perform the [319-300-00 to 319-310-00 Hard Disk Drive Failure RAP](#).
- If the output module failed to reset, perform the [303-360-00, 303-455-00, 303-800-00 IOT to Finisher Error RAP](#).
- If the SPDH failed to reset, perform the [305-253-00 SPDH Communications Error RAP](#).
- If the exposure lamp is off, perform the Scanner to [362-310-00 SBC Communications Failure RAP](#).

If the UI displays the message "not ready to copy" or the machine continues to reboot without reaching an operational state, perform the [OF5 Boot Up Failure RAP](#).

OF4 Status Codes and Messages RAP

Use this RAP for faults and messages without fault codes.

The status code numbers are in the series XX-XXX-XX. The first and second digits identify the relevant functional chain link number. The status code numbers are in the series XX-5XX-XX. However a shortage of 500 series numbers means that occasionally other numbers must be used. For example; XX-6XX-X and XX-9XX.-X Refer to [GP 2](#) Fault Codes and History Files.

Status codes are used to call up UI status messages. The UI status messages are displayed in the Active Messages Log. The UI status messages can be displayed on the UI by selecting Device / Notifications / Faults & Alerts then selecting as appropriate:

- Faults & Alerts - displays the active messages
- Fault History - Displays a list of faults with date, time and image count

NOTE: The status codes are only displayed on the Web UI.

The tables in this procedure bring together the status codes, the relevant RAP or procedure references, and some of the UI messages.

Procedure

Enter the Fault Codes and History Files, [GP 2](#). Identify and clear any active faults. Perform the RAPs that follow to identify a status code or message:

- [OF4a](#) Status Codes in Numerical Order.
- [OF4b](#) Status Messages in Alphabetical Order.

OF4a Status Codes in Numerical Order

Status Message Tables

- [Table 1](#) 01-5XX-XX Status codes.
- [Table 2](#) 02-5XX-XX Status codes.
- [Table 3](#) 03-XXX-XX Status codes.
- [Table 4](#) 04-5XX-XX Status codes.
- [Table 5](#) 05-5XX-XX Status codes.
- [Table 6](#) 09-5XX-XX Status codes.
- [Table 7](#) 10-XXX-XX Status codes.
- [Table 8](#) 12-XXX-XX Status codes.
- [Table 9](#) 14-5XX-XX Status codes.
- [Table 10](#) 16-5XX-XX Status codes.
- [Table 11](#) 17-5XX-XX Status codes.
- [Table 12](#) 19-5XX-XX Status codes.
- [Table 13](#) 20-5XX-XX Status codes.
- [Table 14](#) 22-5XX-XX Status codes.
- [Table 15](#) 41-5XX-XX Status codes.
- [Table 16](#) 6X-XXX-XX Status codes.
- [Table 17](#) 7X-XXX-XX Status codes.
- [Table 18](#) 81-XXX-XX Status codes.
- [Table 19](#) 9X-XXX-XX Status codes.

Table 1 01-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
01-510-00	The Front Door is open.	The front door is open.	Copying and printing services are disabled. Perform the 301-300-00 RAP.
01-514-00	The Left Side Door is open.	The bypass tray and left door assembly is open.	Copying and printing services are disabled. Perform the 301-305-00 RAP.
01-515-00	The Left Side Door is open.	The bypass tray and left door assembly is open for more than 30 seconds.	Copying and printing services are disabled. Perform the 301-305-00 RAP.
01-540-01	Check the settings for tray 1.	Paper removed or added to tray 1.	Confirm the tray 1 settings.
01-540-02	Check the settings for tray 2.	Paper removed or added to tray 2.	Confirm the tray 2 settings.
01-540-05	Check the settings for tray 5.	Paper removed or added to the bypass tray.	Confirm the bypass tray settings.
01-540-06	Check the settings for tray 6.	Paper removed or added to tray 6.	Confirm the tray 6 settings.

Table 1 01-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
01-540-07	Check the settings for tray 7	Paper removed or added to tray 7.	Confirm the tray 7 settings.
01-545-01	Tray 1 guides are not set properly.	Dedicated tray 1 closed with media size different to the programmed size.	Load the correct media size or change the tray preset size. Perform the 371-500-00 RAP.
01-545-02	Tray 2 guides are not set properly.	Dedicated tray 2 closed with media size different to the programmed size.	Load the correct media size or change the tray preset size. Perform the 372-500-00 RAP.
51-550-00	-	NC status code - system is in power save mode.	Printing will start when a job is received or a user initiates a job at the machine.
01-551-00	-	NC status code - system is in sleep mode.	Printing will start when a job is received or a user initiates a job at the machine.
01-561-00	Local UI authentication in progress.	Local UI authentication in progress	Wait until authentication has completed.

Table 2 02-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
02-501-00	XUI Xclient determines that the USB com link between network controller and the UI has failed. Machine status only.	XUI Xclient determines that the USB com link between network controller and the UI has failed. Machine status only.	Switch the machine off then on, GP 14 . If the fault persists, perform the 302-320-00, 321-00, 380-00, 381-00, 302B UI Communications RAP.
02-502-00	XUI Xserver on the UI determines that the USB com link between it and the copier controller has failed.	XUI Xserver on the UI determines that the USB com link between it and the copier controller has failed.	Switch the machine off then on, GP 14 . If the fault persists, perform the 302-320-00, 321-00, 380-00, 381-00, 302B UI Communications RAP.

Table 2 02-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
02-517-00	Obtain a Supplies Plan Activation Code from your Xerox equipment supplier.	The CCS is counting down grace prints until a valid authorisation PIN is entered at the UI.	User intervention is required to enter a valid activation code. All services are available until all courtesy prints are used.
02-518-00	Obtain a Supplies Plan Activation Code from your Xerox equipment supplier.	The grace prints period has expired.	User intervention is required to enter a valid activation code. Print services are disabled.
02-520-00	The machine is not available	Software error has occurred.	Switch the machine off then on, GP 14 .
02-521-00	Set by the XUI when the XEIP browser does not respond or is known not to work.	XEIP browser is dead	Switch the machine off then on, GP 14 .
02-590-00	Machine power on failed. Power Off then On and Notify System Administrator.	Configurable services are not stable at power on.	Switch the machine off then on, GP 14 . If the fault persists, perform the 302-390-00 RAP.

Table 3 03-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
03-504-00	The machine is offline.	NC status code.	Switch the machine off then on, GP 14 .
03-504-01	The machine is offline.	NC status code.	Switch the machine off then on, GP 14 .
03-505-00	System error. Power Off then On and Notify System Administrator.	The machine is not available.	Perform the 303-325-00 RAP and 303-355-00 RAP.

Table 3 03-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
03-518-00	Network Controller not available. Power Off then On and Notify System Administrator.	The network controller is not available.	Perform the 303-331-00, 303-332-00 RAP.
03-520-00	-	CCM to UI communication not established in 30 sec.	Perform the 303-346-00, 303-347-00 RAP.
03-521-00	-	CCM to UI communication are lost.	Perform the 303-346-00, 303-347-00 RAP.
03-535-00	-	The machine is in non intrusive diagnostic mode.	No user intervention required, please wait.
03-536-00	-	The machine has entered intrusive diagnostic mode.	No user intervention required, please wait.
03-546-00	Incompatible Fax software detected (upgrade required).	Incompatible fax software detected at power on.	The embedded fax software version is incompatible with the system. A software upgrade should be performed, GP 4. Refer to the 303-417-00 RAP.
03-547-00	A Fax Service error has occurred. Power Off then On.	Basic fax not detected or confirmed.	Switch the machine off then on, GP 14. If the fault persists, perform the 303-401-00, 303-403-00 RAP.
03-548-00	Fax line 2 is unavailable. Notify your System Administrator.	Extended fax not detected or confirmed.	Check the fax line connection. If the fault persists, perform the 303-401-00, 303-403-00 RAP.
03-549-00	Fax memory error. Power Off then On and Notify System Administrator.	Fax POST failure status.	Switch the machine off, then on GP 14. If the fault persists, perform the 303-401-00, 303-403-00 RAP.
03-550-00	A Fax service error has occurred. Power Off then On.	Fax card is unavailable.	Switch the machine off then on, GP 14. If the fault persists, perform the 303-401-00, 303-403-00 RAP.
03-551-00	A Fax service error has occurred. Power Off then On.	The fax service is unavailable.	Switch the machine off then on, GP 14. If the fault persists, perform the 303-401-00, 303-403-00 RAP.

Table 3 03-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
03-555-00	Please wait... Maintenance in progress. Scan, Copy and Print services not available.	The machine has entered intrusive customer tools mode.	Go to dC301. Perform a copier NVM initialization and NVM data select all.
03-556-00	Please wait. The scanner is initializing.	Power on while the IIT is being initialized.	No user intervention is required, please wait.
03-557-00	Please wait... The scanner is attempting to recover.	Scanner recovery in progress. No user intervention is required; please wait. Copy and scan services will be delayed temporarily; Print and other machine services are unaffected.	None.
03-558-00	Please complete all steps required by the external accounting device to access this service.	Generic FDI: unable to complete the current job.	Complete all steps required by the external accounting device to continue the job.
03-558-01	Please insert card into the external accounting device to access this service.	Walk up card entry FDI: access card required.	Complete all steps required by the external accounting device to continue the job.
03-558-02	Please enter access code into external accounting device to access this service.	Walk up code entry FDI: access code required.	Complete all steps required by the external accounting device to continue the job.
03-558-03	Please insert money into the external accounting device to access this service.	Walk up coin entry FDI: coin entry required.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job.

Table 3 03-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
03-558-04	Please insert Key Counter into the external accounting device to access this service.	Walk up key entry FDI: key counter required.	Complete all steps required by the external accounting device to continue the job.
03-559-00	Provide payment or the current job may be deleted.	Generic FDI: unable to complete the current job due to insufficient funds.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job.
03-559-01	Provide payment.	Walk up FDI: unable to complete the current job due to insufficient funds.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job.
03-559-02	Enter your access code or the current job may be deleted.	Walk up code entry FD: access code not entered.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job.
03-559-03	Provide payment.	Walk up coin entry FDI: not defined - FDI inactivity timer disabled.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job. To cancel this job, press the hard-panel Job Status button, select the job and then the Delete button.
03-559-04	Provide payment or the current job may be deleted.	Walk up key entry FDI: not defined.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job.
03-559-05	Provide payment or the current job may be deleted.	Walk up FDI. Unable to complete the current job - FDI inactivity timer enabled.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job, select the Close button, then the Job Status button located on the control panel and then your job. If no action is taken, the job will be deleted.
03-559-06	Provide payment or the current job may be deleted.	Walk up coin entry FDI: not defined - FDI inactivity timer disabled.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job. To immediately delete this job, select the Close button, then the Job Status button located on the control panel and then your job. If no action is taken, the job will be deleted.

Table 3 03-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
03-561-00	Please wait... the system is attempting to recover.	The system is recovering.	Wait until the system recovers.
03-562-00	Some jobs may have been deleted.	Jobs may have been deleted due to a system error.	No service action.
03-563-00	The Network Controller is initializing. Copy and Print jobs may be delayed.	Network service are being established.	Please wait, the network controller is initializing. No user intervention is required. Printing is currently unavailable. If the fault persists, perform the 303-331-00 , 303-332-00 RAP
03-564-00	Image Rotation is not available. Power off then on and notify System Administrator.	Image rotation is not available.	Switch the machine off then on, GP 14 .
03-565-00	System Error. Power Off then On and Notify System Administrator.	System fault.	Switch the machine off then on, GP 14 .
03-578-00	System error. Power Off them On and Notify System Administrator.	Paper tray error.	Switch the machine off then on, GP 14 .
03-581-00	System Error. Power Off them On and Notify System Administrator.	Paper tray error.	Switch the machine off then on, GP 14 .
03-593-00	Tray 7 out of service (mechanical failure).	Mechanical failure for Tray 7	Switch the machine off then on, GP 14 . If the fault persists, perform the 312-191-00-171 , 312-193-00-171 , 312-194-00-171 , 312-196-00-171 Inserter Paper Jam RAP
03-597-00	The Document Feeder is not available. The Document Glass is still available.	The document feeder is not available. Use the document glass.	Switch the machine off then on, GP 14 .

Table 3 03-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
03-598-00	System Error. Power Off then On and Notify System Administrator.	Unable to set ready mode. Printing and copying services are not available.	Switch the machine off then on, GP 14 . If the fault persists, perform the 303-788-00 RAP.
03-600-00	Ready to Install.	Displayed at install when the machine is in the correct state to allow machine speed to be set from a blank SIM.	No service action.
03-601-00	Machine configuration locked.	Displayed when the machine speed is invalid.	Switch the machine off then on, GP 14 . If the fault persists, perform the 303-405-00 , 303-406-00 RAP.

Table 4 04-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
04-565-00	System Error. Power Off then On and Notify System Administrator.	DC Platform interface failure. One or more DC platform interfaces has timed out.	System fault. Switch the machine off then on, GP 14 . If the fault persists, perform the 303-315-00 RAP
04-568-00	The Output Tray is full. Empty the Output Tray.	The centre output tray is full.	Empty the centre output tray.
04-569-00	The Output tray is almost full.	The centre output detects that it is 90% full.	The centre output tray is almost full. The tray may be emptied now or when it is full. Printing and other machine services are unaffected.

Table 5 05-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
05-326-00	Misfeed in the Document Feeder.	Document in the SPDH at power on or exit from power save.	Remove all documents from the SPDH. If the fault persists, perform the 305-330-00 , 305-331-00 RAP.

Table 5 05-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
05-330-00	Misfeed in the Document Feeder.	Jam in document feeder, feed sensor covered.	Perform the 305-330-00 , 305-331-00 RAP.
05-335-00	Misfeed in the Document Feeder.	Jam in document feeder, takeaway sensor covered.	Perform the 305-335-00 , 305-336-00 RAP.
05-340-00	Misfeed in the Document Feeder.	Jam in document feeder, reg sensor covered.	Perform the 305-340-00 , 305-341-00 RAP
05-343-00	Misfeed in the Document Feeder.	Jam in document feeder, side 2 reg sensor covered.	Perform the 305-342-00 , 305-343-00 RAP
05-344-00	Misfeed in the Document Feeder.	Jam in document feeder, calibration home sensor covered.	Perform the 305-959-00 RAP
05-361-00	Misfeed in the Document Feeder.	Jam in document feeder, feed sensor and takeaway sensor covered.	Open the top cover, remove any documents. As necessary, perform the 305-330-00 , 305-331-00 and 305-335-00 , 305-336-00 RAPs.
05-362-00	Misfeed in the Document Feeder.	Jam in document feeder, feed, takeaway, reg or side 2 reg sensor covered.	Open the top cover, remove any documents. As necessary, perform the 305-330-00 , 305-331-00 RAP, 305-335-00 , 305-336-00 , 305-340-00 , 305-341-00 RAP or 305-342-00 , 305-343-00 RAP.
05-363-00	Misfeed in the Document Feeder.	Jam in document feeder, reg sensor and side 2 reg sensor covered.	Remove any documents. As necessary, perform the 305-340-00 , 305-341-00 and 305-342-00 , 305-343-00 RAP.
05-501-00	Scan and copy services not available. Print service is available.	Document feeder is raised.	Close the document feeder.
05-502-00	The Document Feeder Top Cover is open.	The document feeder top cover is open.	Close the document feeder top cover. If the fault persists, perform the 305-305-00 RAP.
05-535-00	-	Document feeder tray loaded.	No user intervention required.
05-560-00	Remove the document. It is too short to be fed by Document Feeder.	The document is too short.	Remove the short document. Inform the customer that the document is too short to be fed by the SPDH.

Table 5 05-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
05-570-00	Misfeed in the Document Feeder.	Reload originals to start job recovery following a jam in the document feeder.	Remove any documents. Re-order and reload originals. As necessary, perform the 305-335-00 , 305-336-00 , 305-340-00 , 305-341-00 or 305-342-00 , 305-343-00 RAP.
05-571-00	Document not fully inserted in document feeder.	Document not fully inserted	Remove any sheets from the document feeder to allow the device to initialise.

Table 6 09-XXX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
09-510-00	New K Unit detected	Detection of new K toner cartridge	None.
09-521-00	Replace Print Cartridge (R2).	IOT detects a print cartridge failure.	Install a new print cartridge, PL 90.17 Item 9 .
09-568-00	Toner Cartridge (R1) is nearly empty. Make sure you have a replacement.	Reorder toner cartridge (R1) but do not replace until prompted.	Order a new toner cartridge, PL 26.11 Item 3 .
09-582-00	Turn the power to the machine OFF, then ON again.	A software error has occurred	Switch off, then switch on the machine, GP 14 . If the fault persists, check for active fault codes and perform the associated RAP. If there is no fault code, reload the machine software, GP 4 .
09-588-00	Replace Toner Cartridge (R1).	Replace toner cartridge (R1).	Install new toner cartridge. If the fault persists perform 393-390-00 RAP.
09-594-00	Reorder Fuser Module but do not replace until prompted.	Reorder fuser module but do not replace yet.	Order a fuser module, PL 10.8 Item 1 , but do not replace until prompted.
09-596-00	Toner control system failure.	Toner control system fault.	Switch off, then switch on the machine, GP 14 . If the fault persists, perform the 393-360-00 to 393-364-00 RAP.
09-597-00	Toner control system failure.	Toner control out of limits (high or low).	Perform the 393-360-00 to 393-364-00 RAP.

Table 6 09-XXX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
09-598-00	The Print Cartridge module low supply warning (reorder) threshold has been reached and the administrator has acknowledged this condition.	Low supply warning.	None.
09-599-00	Toner Cartridge (R1) is missing or not inserted correctly.	Toner cartridge RF CRUM not detected within 2 cartridge rotations.	Install a toner cartridge. If the fault persists, perform the 393-401-00 RAP.
09-676-00	When the Toner Cartridge (R1) is nearly empty message has been cleared.	Reorder toner cartridge (R1) but do not replace until prompted.	Order a toner cartridge, PL 90.17 Item 2 .
09-677-00	Incompatible Print Cartridge. Contact your System Administrator.	The print cartridge in the machine is metered. The machine is sold. This is an incompatible combination that results in revenue loss.	Install a correct print cartridge. If the fault persists, perform the 392-399-00 RAP.
09-678-00	Toner Cartridge (R1) is incompatible and needs replacing.	The toner cartridge in the machine is incompatible with the machine (market region, service plan or type).	Install a correct toner cartridge. If the fault persists, perform the 393-399-00 RAP.
09-681-00	-	The toner is near end of life and toner replacement has not been confirmed.	Confirm installation of a new toner cartridge.
09-685-00	Reorder Bias Transfer Roller (R4) but do not replace until prompted.	Reorder bias transfer roller but do not replace yet.	Order a new bias transfer roller, PL 80.15 Item 3 , but do not replace until prompted.

Table 6 09-XXX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
09-686-00	-	The bias transfer roller low supply warning (reorder) threshold has been reached and the system administrator has acknowledged this condition.	Confirm that the system administrator has ordered a new bias transfer roller, PL 80.15 Item 3 .

Table 7 10-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
10-010-00	Please wait... Print Quality Maintenance in progress.	IOT switched into high area coverage recovery mode. No marking, sheets stopped below reg sensor and IOT dead cycling until TC recovers.	Clear any paper jam. Perform the 393-360-00 to 393-364-00 RAP.
10-200-00	Jam in Horizontal Transport.	Jam in the horizontal transport. Includes sheets covering sensors or late to sensors.	Clear the jam. If the fault persists, perform the 310-170-00 or 310-171-00 RAP.
10-200-01	Jam in Horizontal Transport.	Jam in the horizontal transport. Includes sheets covering sensors or late to sensors.	Clear the jam. If the fault persists, perform the 310-170-00 or 310-171-00 RAP.
10-200-02	Jam in Horizontal Transport.	Jam in the horizontal transport. Includes sheets covering sensors or late to sensors.	Clear the jam. If the fault persists, perform the 310-170-00 or 310-171-00 RAP.
10-201-00	LE late to fin entry sensor clearance.	Sheet late to finisher entry sensor. Jam in horizontal transport. Includes sheets covering sensors or late to sensors.	Clear the jam. If the fault persists, perform the 310-171-00 RAP.
10-201-01	LE late to fin entry sensor clearance.	Sheet late to finisher entry sensor. Jam in horizontal transport. Includes sheets covering sensors or late to sensors.	Clear the jam. If the fault persists, perform the 310-171-00 RAP.

Table 7 10-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
10-201-03	LE late to fin entry sensor clearance.	Sheet late to finisher entry sensor. Jam in horizontal transport. Includes sheets covering sensors or late to sensors.	Clear the jam. If the fault persists, perform the 310-171-00 RAP.
10-505-00	Please wait... Fuser is warming up.	Fuser is not at run temperature.	Perform the 310-330-00 , 310-340-00 RAP.
10-506-00	Fuser temperature control failure.	Fuser is above maximum fuser operating temperature - shutdown requested.	Printing may be delayed. No user intervention required.
10-523-00	Replace Fuser Module (R3).	The fuser needs to be replaced.	Install a new fuser, PL 10.8 Item 1 .
10-523-01	Replace Fuser Module (R3).	The fuser needs to be replaced.	Install a new fuser, PL 10.8 Item 1 .
10-523-02	Replace Fuser Module (R3).	The fuser needs to be replaced.	Install a new fuser, PL 10.8 Item 1 .
10-524-00	Reorder Fuser Module (R3) but do not replace until prompted.	The fuser low supply warning, threshold has been reached.	Order a fuser module, PL 10.8 Item 1 , but do not replace until prompted.
10-537-00	Incompatible Fuser Module. Contact your System Administrator.	Fuser module is not compatible with the device.	Check the market region of the machine, dC134 . Install the correct fuser, PL 10.8 Item 1 .
10-537-01	Incompatible Fuser Module. Contact your System Administrator.	Fuser module is not compatible with the device.	Check the market region of the machine, dC134 . Install the correct fuser, PL 10.8 Item 1 .
10-537-02	Fuser module is incompatible with the device. Fuser should be kept and repackaged.	The Fuser module is incompatible with the device (Market region, voltage, service plan type, etc)	Check the market region of the machine, dC134 . Install the correct fuser, PL 10.8 Item 1 .
10-537-01	Fuser module is incompatible with the device. Fuser should be kept and repackaged.	The Fuser module is incompatible with the device (Market region, voltage, service plan type, etc)	Check the market region of the machine, dC134 . Install the correct fuser, PL 10.8 Item 1 .

Table 7 10-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
10-537-02	Fuser module is incompatible with the device. Fuser should be kept and repackaged.	The Fuser module is incompatible with the device (Market region, voltage, service plan type, etc)	Check the market region of the machine, dC134 . Install the correct fuser, PL 10.8 Item 1 .
10-547-00	Fuser is missing or communications problems with fuser CRUM.	Fuser is missing or CRUM communications problems.	Ensure the fuser module is correctly installed. If necessary, switch the machine off, GP 14 . Re-install the fuser then switch the machine on. If necessary, install a new fuser, PL 10.8 Item 1 .
10-547-01	Fuser is missing or communications problems with fuser CRUM.	Fuser is missing or CRUM communications problems.	Ensure the fuser module is correctly installed. If necessary, switch the machine off, GP 14 . Re-install the fuser then switch the machine on. If necessary, install a new fuser, PL 10.8 Item 1 .
10-547-02	Fuser is missing or communications problems with fuser CRUM.	Fuser is missing or CRUM communications problems.	Ensure the fuser module is correctly installed. If necessary, switch the machine off, GP 14 . Re-install the fuser then switch the machine on. If necessary, install a new fuser, PL 10.8 Item 1 .
10-548-00	Fuser is missing or communications problems with fuser CRUM.	Fuser is missing or CRUM communications problems.	Ensure the fuser module is correctly installed. If necessary, switch the machine off, GP 14 . Re-install the fuser then switch the machine on. If necessary, install a new fuser, PL 10.8 Item 1 .
10-548-01	Fuser is missing or communications problems with fuser CRUM.	Fuser is missing or CRUM communications problems.	Ensure the fuser module is correctly installed. If necessary, switch the machine off, GP 14 . Re-install the fuser then switch the machine on. If necessary, install a new fuser, PL 10.8 Item 1 .
10-548-02	Fuser is missing or communications problems with fuser CRUM.	Fuser is missing or CRUM communications problems.	Ensure the fuser module is correctly installed. If necessary, switch the machine off, GP 14 . Re-install the fuser then switch the machine on. If necessary, install a new fuser, PL 10.8 Item 1 .
10-550-00	Printer failed to warm up.	Fuser warm up failure.	Perform the 310-330-00 , 310-340-00 Fuser Warm Up Failure RAP.
10-573-00	Please wait... Printer is warming up.	Warming up.	No service action.

Table 7 10-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
10-702-00	Centre Tray Off-setting is not available. Power Off then On and Notify System Administrator.	Offset motor offset fail.	Switch the machine off then on, GP 14 .

Table 8 12-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
12-411-00	The current job exceeds the tray capacity, you will be prompted to empty the tray.	Copy job will exceed the output destination's capacity.	Empty the tray.
12-564-00	The finisher front door is open.	The 2K LCSS front door is open.	Close the finisher front door. If the fault persists perform the 312-312-00-110 , 312-313-00-110 RAP.
12-564-01	The finisher front door is open.	The HVF BM front door is open.	Close the finisher front door. If the fault persists perform the 312-312-00-171 , 312-313-00-171 HVF Interlocks RAP.
12-564-03	The finisher front door is open.	The LVF BM front door is open.	Close the finisher front door. If the fault persists perform the 312-312-00-150 , 312-313-00-150 RAP.
12-579-00	Hole punching not available. Power Off then On and Notify System Administrator.	Hole punching is not available.	Check that the hole punch unit is correctly installed. Switch the machine off then on, GP 14 . If the fault persists, perform the 312-043-00-150 , 312-046-00-150 RAP for the LVF, 312-043-00-110 , 312-046-00-110 for the 2K LCSS.
12-601-01	HVF finisher top tray open.	The HVF top cover is open.	Close the HVF top tray, PL 12.100 Item 9 .
12-602-00	Close finisher top cover.	The 2K LCSS top cover is open.	Close the finisher top cover. If the fault persists, perform the 312-312-00-110 , 312-313-00-110 RAP.
12-602-03	Close finisher top cover.	The LVF BM top cover is open.	Close the finisher top cover. If the fault persists, perform the 312-312-00-150 , 312-313-00-150 RAP.

Table 8 12-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
12-606-00	The post process inserter top cover is open.	The tray 7 top cover is open.	Close the inserter top cover door, PL 12.300 Item 8 . If the fault persists perform the 312-316-00-171 , 312-319-00-171 Inserter Interlocks RAP.
12-607-00	The tri-folder unit top cover is open.	Tri-folder top cover open (HVF with tri-folder)	Close the tri-folder top cover, PL 12.200 Item 6 . If the fault persists perform the 312-317-00-171 , 312-318-00-171 HVF Tri-folder Interlocks RAP.
12-608-00	The tri-folder unit front door is open.	Tri-folder front door open (HVF with tri-folder)	Close the tri-folder front door, PL 12.200 Item 2 . If the fault persists perform the 312-317-00-171 , 312-318-00-171 HVF Tri-folder Interlocks RAP.
12-609-00	The finisher inserter left side door is open.	The inserter lower jam cover is open.	Close the inserter lower jam cover, PL 12.300 Item 7 . If the fault persists, perform the 312-316-00-171 , 312-319-00-171 Inserter Interlocks RAP.
12-610-00	Paper jam near the entry to the finisher unit.	Paper is detected over the 2K LCSS entry sensor.	Clear the paper jam. If the fault persists, perform the 312-125-00-110 , 312-126-00-110 , 312-199-00-110 RAP.
12-610-01	Paper jam near the entry to the finisher unit.	Sheet detected over the HV entry sensor.	Clear the paper jam. If the fault persists, perform the 312-125-00-171 , 312-126-00-171 HVF Entry Sensor RAP.
12-610-03	Paper jam near the entry to the finisher unit.	Paper is detected over the LVF BM entry sensor.	Clear the paper jam. If the fault persists, perform the 312-125-00-150 , 312-126-00-150 , 312-199-00-150 RAP.
12-611-00	Paper Jam in the Finisher.	Paper jam near the entry to the finisher unit.	Clear the paper jam.
12-612-00	Paper Jam in the Finisher.	Paper is detected over the hole punch position sensor at power-up, interlock status change or after shutdown. (2K LCSS).	Clear the paper jam.

Table 8 12-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
12-612-03	Paper Jam in the Finisher.	Paper is detected over the hole punch position sensor at power-up, interlock status change or after shutdown. (LVF BM).	Clear the paper jam.
12-618-00	Paper Jam in the Finisher.	Paper is detected over the top tray exit sensor at power-up, interlock status change or after shutdown (2K LCSS).	Clear the paper jam.
12-618-01	Paper jam near the top exit.	Sheet detected over top tray exit sensor	Clear the paper jam.
12-618-03	Paper Jam in the Finisher.	Paper is detected over the top tray exit sensor at power-up, interlock status change or after shutdown. (LVF BM).	Clear the paper jam.
12-620-00	Paper Jam in the Finisher.	Paper is detected over the 2K LCSS compiler exit sensor at power-up, interlock status change or after shutdown.	Clear the paper jam. If the fault persists, perform the 312-151-00-110 , 312-152-00-110 RAP.
12-620-01	Paper jam near the output to the HVF stacker tray.	Sheet over HVF 2nd top exit sensor.	Clear the paper jam. If the fault persists, perform the 312-166-00-171 HVF BM Compiler Exit Jam RAP RAP.
12-620-03	Paper Jam in the Finisher.	Paper is detected over the LVF BM compiler exit sensor at power-up, interlock status change or after shutdown.	Clear the paper jam. If the fault persists, perform the 312-151-00-150 , 312-152-00-150 RAP.
12-624-00	Paper jam near the inserter.	Page over HVF inserter pickup sensor.	Clear the paper jam. If the fault persists, perform the 312-191-00-171 , 312-193-00-171 , 312-194-00-171 , 312-196-00-171 Inserter Paper Jam RAP.
12-625-00	Paper jam near the inserter.	Page over HVF inserter tab standby sensor.	Clear the paper jam.
12-626-00	Paper jam in the finisher paper path.	Page over HVF buffer position sensor.	Clear the paper jam. If the fault persists, perform the 312-157-00-171 , 312-158-00-171 HVF Buffer Position Sensor RAP RAP.

Table 8 12-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
12-627-01	Paper jam in the finisher paper path.	Page over exit HVF into BM sensor (located in area 6a), cleared via area 6a and 6e.	Clear the paper jam. If the fault persists, perform the 312-160-00-150 , 312-162-00-150 Booklet Maker Entry Jam RAP.
12-627-02	Paper jam in the finisher paper path.	Page over exit HVF into BM sensor (located in area 6a), cleared via area 6a.	Clear the paper jam. If the fault persists, perform the 312-160-00-150 , 312-162-00-150 Booklet Maker Entry Jam RAP.
12-628-00	Paper jam near the output to the stacker tray.	Page over the compiler exit sensor.	Clear the paper jam. If the fault persists, perform the 312-198-00-171 , 312-199-00-171 HVF Paper Jam RAP.
12-629-00	Paper jam near entry to the tri-fold unit.	Page over tri-folder entry sensor.	Clear the paper jam.
12-630-01	Paper jam near the entry to the booklet maker.	Sheet over BM entry sensor (located in area 6e) cleared via area 6e.	Clear the paper jam. If the fault persists, perform the 312-113-00-171 , 312-114-00-171 , 312-190-00-171 , 312-192-00-171 HVF BM Entry RAP.
12-630-02	Paper jam near the entry to the booklet maker.	Sheet over BM entry sensor (located in area 6e) cleared via area 6e.	Clear the paper jam. If the fault persists, perform the 312-113-00-171 , 312-114-00-171 , 312-190-00-171 , 312-192-00-171 HVF BM Entry RAP.
12-630-03	Paper Jam in the Finisher.	Sheet over the booklet maker entry sensor (LVF BM).	Clear the area. If the fault persists, perform the 312-160-00-150 , 312-162-00-150 RAP.
12-636-01	Paper jam in the booklet maker.	Sheet over BM exit sensor.	Clear the area. If the fault persists, perform the 312-181-00-171 , 312-182-00-171 HVF BM Exit Jam RAP.
12-636-02	Paper jam in the booklet maker.	Sheet over BM exit sensor.	Clear the area. If the fault persists, perform the 312-181-00-171 , 312-182-00-171 HVF BM Exit Jam RAP.
12-636-03	Paper jam in the booklet maker.	Sheet over the booklet maker exit sensor (LVF BM).	Clear the jam from the output bin. If the fault persists, perform the 312-180-00-150 , 312-182-00-150 RAP.
12-640-00	Hole punch not detected (Missing). Please insert the hole punch.	The finisher punch unit is missing or incorrectly installed.	Ensure that the punch unit is correctly installed.

Table 8 12-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
12-641-00	Chad bin is missing.	Chad bin has been removed from HVF finisher.	Ensure the HVF chad bin is correctly installed. If the fault persists, perform the 312N-171 Chad Bin Present and Bin Full RAP.
12-642-00	Booklet Maker Staple Cartridges (R8) are nearly empty. Make sure you have replacements.	Booklet maker staple cartridges (R8) are nearly empty.	The booklet maker staple cartridge supplies are low. Order a staple cartridge, PL 12.365 Item 7 for the LVF BM.
12-643-00	Replace Booklet Maker Staple Cartridges (R8).	The booklet maker staple cartridge is empty.	The booklet maker staple cartridge is empty. Follow the instructions at the printer to load a new staple cartridge, PL 12.365 Item 7 or the LVF BM. Printing can continue, but stapled booklet making is unavailable.
12-644-02	Booklet maker staple cartridge is empty.	Booklet maker stapler empty and HVF finisher front door open.	Install 2 new staple cartridges, PL 12.185 Item 8 .
12-644-03	Booklet Maker staple cartridge is empty.	Booklet Maker Stapler Empty AND LVF Finisher front door open.	Install a new booklet maker staple cartridge, PL 12.365 Item 7 .
12-649-00	The Hole Punch Waste Container is full.	The 2K LCSS hole punch chad bin is full and needs emptying.	Hole punch waste container is full, jobs requesting hole punching will be held. Empty the chad bin.
12-649-01	Empty the Hole Punch Waste Container.	The HVF hole punch chad bin is full and needs emptying.	Hole punch waste container is full, jobs requesting hole punching will be held. Empty the chad bin.
12-653-00	Stapling fault. Power Off then On and Notify System Administrator.	2K LCSS stapling disabled, out of service.	Switch the machine off then on, GP 14 . Open Finisher Front Door and Check for Obstructions.
12-665-00	Finisher Main Tray is out of service. Power Off then On and Notify System Administrator.	2k LCSS bin 1 out of service status.	Switch the machine off then on, GP 14 . Open Finisher Front Door and Check for Obstructions.
12-692-00	Finisher Top Tray is full. Empty Top Tray.	The 2K LCSS finisher top tray is full.	Empty the top tray.

Table 8 12-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
12-692-01	Centre tray bin is full	The centre output tray is full.	Empty the centre output tray.
12-714-01	Compiler staple cartridge is empty.	2K LCSS main staple cartridge is empty.	Install a new staple cartridge, PL 12.55 Item 7 .
12-714-02	Compiler staple cartridge is empty.	HVF compiler stapler empty and HVF finisher front door open.	Install a new staple cartridge, PL 12.111 Item 6 .
12-714-03	Compiler staple cartridge is empty.	LVF BM main staple cartridge is empty.	Install a new staple cartridge, PL 12.365 Item 7 .
12-715-00	Replace Staple Cartridge (R7).	The finisher's main staple cartridge is empty.	Install new staple cartridge, PL 12.55 Item 7 for the 2K LCSS, PL 12.365 Item 7 for the LVF BM, PL 12.111 Item 6 .
12-716-00	Staple Cartridge (R7) is nearly empty. Make sure you have a replacement.	Finisher staples are low.	The finisher's main staple cartridge supplies are low. Re-order staple cartridge. Printing can continue. PL 12.55 Item 7 for the 2K LCSS, PL 12.365 Item 7 for the LVF BM, PL 12.111 Item 6 for the HVF.
12-717-01	Paper jam in booklet compiler.	Page over HVF BM compiler paper present sensor (located near staple heads). Cleared via area 6e.	Clear the paper jam. If the fault persists, perform the 312-183-00-171 , 312-184-00-171 HVF BM Paper Jam RAP.
12-717-02	Paper jam in booklet compiler.	Page over HVF BM compiler paper present sensor (located near staple heads). Cleared via area 6a and 6e.	Clear the paper jam. If the fault persists, perform the 312-183-00-171 , 312-184-00-171 HVF BM Paper Jam RAP.
12-717-03	Paper jam in booklet compiler.	Sheet over the LVF BM compiler paper present sensor.	Clear the LVF BM paper present sensor area 6e. If the fault persists, perform the 312-184-00-150 , 312-494-00-150 , 312-496-00-150 RAP.
12-718-00	Paper jam in Tri-Fold unit.	Page over HVF BM tri-folder assist sensor.	Clear the paper jam. If the fault persists, perform the 312-185-00-171 to 312-187-00-171 Tri-Folder Exit Sensor and Assist Sensor RAP.
12-719-00	Paper jam in Tri-Fold unit.	Page over tri-folder exit sensor.	Clear the paper jam. If the fault persists, perform the 312-185-00-171 to 312-187-00-171 Tri-Folder Exit Sensor and Assist Sensor RAP.

Table 8 12-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
12-720-00	Failure of any booklet making / tri-folding functions.	Booklet making unavailable.	Switch the machine off then on, GP 14 . Open Finisher Front Door and Check for Obstructions. If the fault persists, perform the 312-352-00-150 , 312-353-00-150 RAP for LVF BM, or 312-061-00-171 , 312-416-00-171 HVF BM Crease Blade Fault RAP.
12-721-00	Stapler module position sensor indicates stapler module is not closed in initialisation.	Stapler not in position	Switch the machine off then on, GP 14 . Open Finisher Front Door and Check for Obstructions. If the fault persists, perform the 312-369-00-171 to 312-377-00-171 HVF Stapler Position and Priming RAP.
12-726-00	Booklet Stapler not available. Power Off then On and Notify System Administrator.	Failure of the booklet maker stapling functions.	Switch the machine off then on, GP 14 . Open Finisher Front Door and Check for Obstructions. If the fault persists, perform the 312-352-00-150 , 312-353-00-150 RAP for LVF BM, or 312-403-00-171 , 312-413-00-171 , 312-414-00-171 HVF BM Staple Head 2 and Stapler Module RAP
12-727-00	The Booklet Maker Tray in the Finisher is nearly full.	The booklet maker output tray is nearly full.	The booklet maker tray is near full. User intervention will be required soon to empty the tray to allow continued booklet making. Print and copy services can continue; other machine services are unaffected.
12-728-00	The Booklet Maker Tray in the Finisher is full. Empty the Tray.	Booklet maker output tray full.	Empty the tray.
12-729-00	Finisher Top Tray is nearly full.	The finisher top output bin is nearly full.	The top output bin is nearly full. This output bin may need to be unloaded soon. Printing can continue.
12-729-01	Centre tray bin is nearly full	The centre output tray is nearly full.	The output tray is near full. No immediate user intervention is required. Print and copy services can continue; other machine services are unaffected.
12-730-00	Finisher Main Tray is full.	The stacker tray is full (LVF BM and 2K LCSS).	The middle output bin is full. This output bin needs to be unloaded. Printing to this output bin is disabled.

Table 8 12-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
12-730-01	Middle output bin (stacker tray) is full.	Stacker tray full.	The finisher main tray is full. User intervention is required to empty the tray. Print and copy services can continue to other output trays; other machine services are unaffected
12-731-00	Post process inserter tray (denoted tray 7) is empty	Tray 7 (inserter) is empty.	Tray 7 (inserter) is empty. User intervention is required to add paper to tray 7. Print and copy services can continue without inserts; other machine services are unaffected.
12-732-00	Paper jam in inserter tray.	Page detected near PPI pickup sensor.	Clear the paper jam. If the fault persists, perform the 312-191-00-171 , 312-193-00-171 , 312-194-00-171 , 312-196-00-171 Inserter Paper Jam RAP.
12-734-00	Finisher Main Tray is nearly full.	Stacker tray bin is nearly full.	No action necessary.
12-740-00	Finisher offline for unloading.	Tray ready for unloading.	Finisher output tray has lowered to allow unloading. User intervention is required to unload the tray. Print and copy services are not available during unloading; other machine services are unaffected.
12-741-00	Finisher is just about to go back on line.	Pause to unload time-out warning.	Finisher output tray is lowering to allow unloading. User intervention is required to unload the tray. Print and copy services are not available during unloading; other machine services are unaffected.
12-742-00	Finisher has gone back on line.	Pause to unload timer expiry.	No action necessary.
12-747-00	Jam in tri-folder.	Page detected near tri-folder exit sensor.	Clear the paper jam. If the fault persists, perform the 312-185-00-171 to 312-187-00-171 Tri-Folder Exit Sensor and Assist Sensor RAP.
12-752-00	Paper jam in finisher in buffer path.	Page over buffer path sensor.	Clear the paper jam. If the fault persists, perform the 312-141-00-171 , 312-142-00-171 HVF Buffer Path Sensor RAP.
12-762-00	Finisher Communications Error. Check Cabling. Power Off then On.	Communication failure between SBC and finisher.	Switch the machine off then on, GP 14 . Check the finisher communication harness. If the fault persists, perform the 303-360-00 , 303-455-00 , 303-800-00 RAP.

Table 8 12-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
12-765-00	Incompatible or unknown Finisher detected. Check Finisher compatibility.	The SBC interface indicates that the finisher is incompatible/unknown.	Switch the machine off then on, GP 14 . Check the finisher communication harness.
12-901-00	Unable to staple. Check for obstructions in the output trays.	The finisher is in degraded mode, unable to staple.	Switch the machine off then on, GP 14 . If the fault persists, perform 312E-110 RAP for the 2K LCSS, 312E-150 RAP for the LVF BM. 312-063-00-171 , 312-411-00-171 RAP for the HVF.
12-902-00	Finisher Main Tray out of service. Check for obstructions in the Main Tray.	Stacker tray fault.	Switch the machine off then on, GP 14 . Check for obstructions in the tray.
12-908-00	Hole Punching is unavailable. Check for obstructions in the hole puncher.	The finisher hole punch head motor has failed.	Clear the paper jam. Switch the machine off then on, GP 14 . If the fault persists, perform 312-043-00-110 , 312-046-00-110 RAP for the 2K LCSS, 312-043-00-150 , 312-046-00-150 RAP for the LVF BM.
12-909-00	All output trays are unavailable.	Raised based upon the reported capabilities from the finisher.	Finisher output tray error. User intervention is required to check for obstructions and power off/on the machine; service is required if problem persists. Print and copy services are disabled; other machine services are unaffected.

Table 9 14-5XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
14-517-00	Scanner Fault.	Scanner fault.	Switch the machine off then on GP 14 . Check the current fault codes list for faults in the scanner and perform the appropriate RAP.

Table 10 16-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
16-501-00	Network Services with Job Based Accounting not available. Notify your System Administrator.	Job based accounting not enough DC memory. Some network controller services are not available.	Not enough CCM memory to run the network accounting feature. Perform the 316E Network Fault Checkout RAP.
16-502-00	The Network Controller connection is about to be reset.	Status active when ever the network controller detects that a platform reset is about to occur	Cleared when the network controller reset is initiated.
16-503-00	System Error. Power Off then On and Notify System Administrator.	Incomplete system information.	Switch the machine off then on, GP 14. If the fault persists perform the 303-315-00 DC Platform Internal Interface Fault RAP.
16-504-00	Some Network Services involving DDNS are not available. Notify your System Administrator.	DDNS error. Some network controller services are not available.	The DDNS address resolution process has failed. Switch the machine off then on, GP 14. If the fault persists check the DDNS server's network connections.
16-505-00	Network Services involving Scan to E-mail are not available. Notify System Administrator.	Insufficient memory for e-mail.	Switch the machine off then on, GP 14. If the fault persists check the network connections.
16-506-00	Your Administrator is reconfiguring the system. Services will not be available.	Your Administrator is reconfiguring the system.	The System Administrator is saving the machine configuration to a remote station.
16-507-00	Some Network Services involving SLP are not available. Notify your System Administrator.	SLP process stopped. Some network controller services are not available.	Switch the machine off then on, GP 14.

Table 10 16-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
16-508-00	Autonet functions are not available. Notify your System Administrator.	Autonet is not available.	Switch the machine off then on, GP 14. Printing can continue if other network protocols are used
16-509-00	Some Network Services involving Internet Fax are not available. Notify System Administrator.	Insufficient memory for internet fax.	Switch the machine off then on, GP 14. Printing can continue if other network protocols are used
16-510-00	Network Services involving Scan to E-mail are not available. Notify System Administrator.	Scan to e-mail process failed.	Switch the machine off then on, GP 14. If the fault persists check network connections
16-511-00	Network Services related to Internet Fax are not available. Notify System Administrator.	Internet fax process failed.	Switch the machine off then on, GP 14. If the fault persists check network connections
16-512-00	USB Process Death. Some Network Controller services are not available.	USB process death. Some network controller services are not available.	USB printing error. User intervention is required to power off/on the machine. Print service through USB is disabled; Print service can continue with other protocols; other machine services are unaffected. If the fault persists, perform the 316D Wireless Connectivity RAP.
16-513-00	Some Network Services involving SSDP are not available. Notify your System Administrator.	Simple service discovery protocol (SSDP) failed.	Switch the machine off then on, GP 14.
16-514-00	Network Services involving Scan to E-mail are not available. Notify System Administrator.	Post office protocol (POP3) (for inbound Internet fax messages) process failed.	Switch the machine off then on, GP 14.

Table 10 16-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
16-517-00	Network Services involving Scan to E-mail are not available. Notify System Administrator.	SMTP process failed.	Switch the machine off then on, GP 14.
16-518-00	Network Services using WS Edge Client are not available. Notify your System Administrator.	Web services edge client interface does not work.	Switch the machine off then on, GP 14. If the fault persists check network connections.
16-519-00	Network Services using WS Edge Client are not available. Notify your System Administrator.	Web services client controller does not work.	Switch the machine off then on, GP 14. If the fault persists check network connections.
16-520-00	Network Services using WS Edge Client are not available. Notify your System Administrator.	Web services server controller interface does not work.	Switch the machine off then on, GP 14. If the fault persists check network connections.
16-521-00	The Network Controller connection is about to be reset.	The network controller's CPI service process has stopped.	Machine services are temporarily disabled. The network controller connection is about to be reset. No user intervention is required.
16-522-00	The Network Controller connection is about to be reset.	The network controller's job log service process has stopped.	Some network services are not available. The network controller connection is about to be reset. No user intervention is required.
16-523-00	The Network Controller connection is about to be reset.	The network controller's job tracker service process has stopped.	Some network services are not available. The network controller connection is about to be reset. No user intervention is required.
16-524-00	The Network Controller connection is about to be reset.	The network controller's Kerberos service process has stopped.	Some network services are not available. The network controller connection is about to be reset. No user intervention is required.

Table 10 16-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
16-525-00	The Network Controller connection is about to be reset.	The network controller's scan to distribution service process has stopped.	Some network services are not available. The network controller connection is about to be reset. No user intervention is required.
16-526-00	The Network Controller connection is about to be reset.	The network controller's SMB service process has stopped.	Some network service are not available. The network controller connection is about to be reset. No user intervention is required.
16-527-00	The Network Controller connection is about to be reset.	The network controller's TCP/IP service process has stopped.	Some network service are not available. The network controller connection is about to be reset. No user intervention is required.
16-528-00	The Network Controller connection is about to be reset.	The network controller's WS scan temp service process has stopped.	Some network service are not available. The network controller connection is about to be reset. No user intervention is required.
16-529-00	Network Services with Scan Compressor are not available. Notify your System Administrator.	The network controller's Scan compressor service process has stopped.	Some network service are not available. The network controller connection is about to be reset. No user intervention is required.
16-533-00	Service Limit exceeded. New services will not be available until some services are removed.	Controller software service limit exceeded.	Remove some existing services to enable new services to be added. Machine services are available but may be degraded.
16-535-00	Immediate Job Overwrite Failed. Perform an On Demand Overwrite immediately.	Immediate job overwrite failed.	Immediate job overwrite failed. Administrator intervention is required to perform an ODIO immediately.
16-536-00	Network Controller error. Some Network Services not available. Notify System Administrator.	The XSA service is unavailable. Network controller error.	Switch the machine off then on, GP 14.

Table 10 16-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
16-540-00	Ensure the USB Wireless Network Interface is properly connected.	USB wireless network not connected.	Perform the 316D RAP.
16-544-00	Ensure network cables are properly connected.	An ethernet cable is unplugged.	Ensure cables are properly connected.
16-550-00	Machine entering SW upgrade mode. ALL jobs will be cancelled.	Machine entering software upgrade mode - all jobs will be canceled.	The machine entered a software upgrade mode (all jobs will be deleted). No user intervention is required. Machine services are unavailable until the software upgrade process has completed.
16-551-00	Accounting out of memory. Notify your System Administrator.	Network controller - accounting log is full or a hard disk full state exists.	Accounting Administrator needs to retrieve accounting data log from the system.
16-553-00	Additional memory is required to support Scan to File. Notify your System Administrator.	Network controller - not enough physical memory is configured on the platform to support scan to file.	Switch the machine off then on, GP 14. Hardware must be added or replaced.
16-554-00	Workflow Scanning hardware must be added or replaced. Notify your System Administrator.	Network controller - hardware must be added or replaced.	Hardware must be added or replaced.
16-555-00	Insufficient memory for Fax job. Notify your System Administrator.	Network controller - not enough physical memory is configured on the platform to support LAN fax.	Additional memory required to support fax. The fax service is not available. Switch the machine off then on, GP 14.
16-556-00	-	There is an authentication problem between the 802.1x device and the 802.1x server.	User intervention is required to check the settings on the 802.1x device to ensure they match the 802.1x server, then switch the machine off then on, GP 14.

Table 10 16-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
16-557-00	Network Services using DC Platform recovery not available. Notify System Administrator.	Network controller DC platform recovery failed.	Switch the machine off then on, GP 14.
16-558-00	Network Services using DC Platform recovery not available. Notify System Administrator.	Network controller DC communications failed.	Switch the machine off then on, GP 14.
16-559-00	Network Services using BOOTP Initialization not available. Notify System Administrator.	Network controller BOOTP initialization failure.	Check the BOOTP server and its network connection. Switch the machine off then on, GP 14.
16-560-00	Some Network Services are not available due to a process error. Notify System Administrator.	Some processes on the network controller have failed.	Switch the machine off then on, GP 14.
16-561-00	Scan to File not available. Power Off then On and Notify System Administrator.	Network controller - scan to file processes have failed.	Switch the machine off then on, GP 14.
16-562-00	Some Network Services involving LPD are not available. Notify your System Administrator.	Network controller - the line printer daemon (LPD) process has failed.	Switch the machine off then on, GP 14. Printing can continue if other submission methods are used.
16-563-00	Some Network Services involving Novell are not available. Notify your System Administrator.	Network controller - the Novell network connectivity process has failed.	Switch the machine off then on, GP 14. Printing can continue if other submission methods are used.

Table 10 16-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
16-564-00	Some Network Services involving NetBios are not available. Notify System Administrator.	Network controller - the NetBIOS connectivity process has failed.	Switch the machine off then on, GP 14. Printing can continue if other submission methods are used.
16-565-00	Network Services involving AppleTalk are not available. Notify your System Administrator.	Apple Talk printing error. Printing can continue using other submission methods.	Switch the machine off then on, GP 14. Printing can continue if other submission methods are used.
16-567-00	Network Services involving PostScript are not available. Notify your System Administrator.	Network controller - a PostScript interpreter error has occurred, causing the process to fail.	Switch the machine off then on, GP 14. Printing can continue if other submission methods are used.
16-568-00	Some Network Services involving PCL are not available. Notify your System Administrator.	Network controller - a PCL interpreter error has occurred, causing the process to fail.	Switch the machine off then on, GP 14, to enable PCL printing. Printing can continue if other job format methods are used.
16-569-00	Network Services involving a Parallel Port are not available. Notify System Administrator.	Network controller - parallel ports are not available.	Switch the machine off then on, GP 14. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-570-00	Some Network Services involving HTTP are not available. Notify your System Administrator.	Network controller - an HTTP interpreter error has occurred, causing the process to fail.	Switch the machine off then on, GP 14. Printing can continue if other submission methods are used. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-571-00	Network Printing disabled. Notify your System Administrator.	Network controller - print service has failed.	Switch the machine off then on, GP 14. Printing cannot continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-572-00	Network Printing disabled. Notify your System Administrator.	Network controller - print service has failed.	Switch the machine off then on, GP 14. Printing cannot continue. If the fault persists, perform the 316E Network Fault Checkout RAP.

Table 10 16-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
16-573-00	Network Printing disabled. Notify your System Administrator.	Network controller - ESS print service has failed.	Switch the machine off then on, GP 14. Printing cannot continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-574-00	Job queue error. Power Off then On and Notify System Administrator.	ESS queue utility has failed. Only a partial list is available for display at this time.	Switch the machine off then on, GP 14. Printing cannot continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-575-00	The Network Controller connection is about to be reset.	The network controller ESS registration service process has stopped.	Automatic network controller reset. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-576-00	The Network Controller connection is about to be reset.	The network controller ESS event notification service process has stopped.	Automatic network controller reset. Switch the machine off then on, GP 14. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-577-00	The Network Controller connection is about to be reset.	The network controller ESS platform manager service process has stopped.	Automatic network controller reset. Machine is unavailable. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-578-00	Incomplete system information. Power Off then On and Notify System Administrator.	The network controller ESS fault log service process has stopped.	Switch the machine off then on, GP 14. Printing and scanning can continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-579-00	Job Status not available. Power Off then On and Notify System Administrator.	The network controller ESS completed job log service has stopped.	Switch the machine off then on, GP 14. Printing and scanning can continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-580-00	Incomplete system information. Power Off then On and Notify System Administrator.	The network controller ESS configuration utility process has stopped.	Switch the machine off then on, GP 14. Printing and scanning can continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-581-00	Some Network Diagnostic Services are not available. Notify your System Administrator.	The network controller ESS diagnostic service process has stopped.	Switch the machine off then on, GP 14. Printing and scanning can continue. If the fault persists, perform the 316E Network Fault Checkout RAP.

Table 10 16-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
16-582-00	Some Network Authentication Services are not available. Notify your System Administrator.	The network controller ESS authentication SPI process has stopped.	Switch the machine off then on, GP 14 . Print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-583-00	Incomplete system information. Power Off then On and Notify System Administrator.	The network controller ESS counters utility process has stopped.	Switch the machine off then on, GP 14 . Printing and scanning can continue.
16-584-00	The Network Controller connection is about to be reset.	The network controller document manager agent process has stopped.	Automatic network controller reset. Machine is unavailable.
16-585-00	Incomplete system information. Power Off then On and Notify System Administrator.	The network controller ESS configuration synchronization process has stopped.	Switch the machine off then on, GP 14 . Print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-586-00	Incomplete system information. Power Off then On and Notify System Administrator.	The network controller agent process has stopped.	Switch the machine off then on, GP 14 . Print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-589-00	Network Services involving a Serial Port are not available. Notify System Administrator.	The network controller serial port connectivity has failed.	Switch the machine off then on, GP 14 . Print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-590-00	Network Connectivity Configuration Server not available. Notify your System Administrator.	The network controller CCS process has failed.	Switch the machine off then on, GP 14 . Print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-591-00	Some Network Services involving Ethernet are not available. Notify System Administrator.	Network controller Ethernet process has failed.	Check ethernet connection. Switch the machine off, then switch the machine on GP 14 . Local printing can continue. If the fault persists, perform the 316E Network Fault Checkout RAP.

Table 10 16-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
16-593-00	Some Network Services involving DHCP are not available. Notify your System Administrator.	Network controller - DHCP address resolution has failed.	Check DHCP server network connection. Switch the machine off then on GP 14 . Copying and printing with local connections can continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-594-00	Some Network Services involving RARP are not available. Notify your System Administrator.	Network controller - RARP address resolution has failed.	Check RARP server network connection. Switch the machine off then on GP 14 . Printing can continue with other submission methods. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-595-00	LAN Fax Service error. Power Off then On and Notify System Administrator.	The network controller LAN fax service has failed.	Switch the machine off then on, GP 14 . Print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-596-00	Some Network Accounting Services are not available. Notify your System Administrator.	Some network controller services are not available.	Network accounting error. User intervention is required to switch the machine off then on, GP 14 . Print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-597-00	Some Network Services involving TIFF are not available. Notify your System Administrator.	The network controller TIFF interpreter has failed.	Switch the machine off then on, GP 14 . Printing can continue with other job formats. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-598-00	Some Network Services involving TCP/IP are not available. Notify your System Administrator.	IP interface not configured.	Another IP address needs to be used. Switch the machine off then on, GP 14 . Copy and fax services (if installed) can continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
16-599-00	Network Services with Port 9100 Process are not available. Notify System Administrator.	Raw TCP/IP printing (port 9100) process has failed.	Switch the machine off then on, GP 14 . Printing can continue with other submission methods. If the fault persists, perform the 316E Network Fault Checkout RAP.

Table 10 16-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
16-600-00	System Error. Power Off then On and Notify System Administrator.	Disk partition threshold has been exceeded. Performance may be degraded.	Switch the machine off then on, GP 14. Refer to the 316-718-00 to 316-740-19 Hard Disk Faults RAP.

Table 11 17-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
17-510-00	Duplicate IPv6 address detected. Reconfigure with a unique address.	Duplicate IPv6 address detected.	Reconfigure with a unique address. Switch the machine off then on, GP 14. Copy and fax services (if installed) can continue.
17-512-00	DHCPv6 services are not available. Notify your System Administrator.	DHCPv6 failure status.	Switch the machine off then on, GP 14. Printing can continue with other submission methods.
17-513-00	Duplicate IPv4 address detected. Reconfigure with a unique address.	Duplicate IPv4 address detected.	Reconfigure with a unique address. Switch the machine off then on, GP 14.
17-514-00	Unable to communicate to the attached accounting device.	External accounting device communication failure.	Administrator intervention required to check the connection to the external accounting device.
17-520-00	Ethernet cable unplugged.	Ethernet cable not connected and ethernet is the active connectivity interface.	Ensure network cable is properly connected.
17-520-01	WiFi adapter unplugged.	USB Wireless adapter not installed/detected and WiFi is the active connectivity interface.	Ensure USB wireless adapter is properly installed.
17-521-00	Ethernet 802.1X connection failure	Ethernet 802.1X connection failure. Cannot connect to the ethernet network.	Ensure 802.1X settings on the device match the 802.1X network authentication settings.

Table 11 17-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
17-521-01	WiFi connection failure.	WiFi connection failure. Cannot connect to the WiFi network.	The machine cannot connect to the WiFi network. User intervention required to re-enter WiFi credentials, if the problem persists, contact the local system administrator. All machine services that require network connectivity are disabled.
17-522-01	Connecting to WiFi network.	Connecting to a WiFi network.	The machine is attempting to connect to a WiFi network. Please wait, no user intervention required. All machine services that require network connectivity may be available soon.
17-523-01	WiFi Connection Lost.	WiFi connection lost. (machine had a WiFi connection, but no longer does.)	Check the WiFi network and settings, if the problem persists, contact the local system administrator. All machine services that require network connectivity are disabled
17-524-02	DHCP/BOOTP failure and no zero configuration IPv4 address.	DHCP/BOOTP Error: DHCP/BOOTP failed to obtain an address and zero configuration (auto IP) disabled. No IPv4 address configured.	User intervention required to configure IPv4, if the problem persists, contact the local system administrator. All machine services that require IPv4 connectivity are disabled.
17-525-02	No response from DHCP/BOOTP server and no zero configuration IPv4 address.	DHCP/BOOTP Error: DHCP/BOOTP server not found and zero configuration (auto IP) disabled. No IPv4 address configured.	User intervention required to configure IPv4, if the problem persists, contact the local system administrator. All machine services that require IPv4 connectivity are disabled
17-526-02	DHCP/BOOTP failure and zero configuration IPv4 address configured.	DHCP/BOOTP Error: DHCP/BOOTP failed to obtain an address and zero configuration (auto IP) successful. Device has a non-routable IPv4 address configured.	User intervention required to configure an IPv4 address, if the problem persists, contact the local system administrator. All machine services that require routable IPv4 connectivity are disabled.
17-527-02	No response from DHCP/BOOTP server and zero configuration IPv4 address configured.	DHCP/BOOTP Error: DHCP/BOOTP server not found and zero configuration (auto IP) successful. Device has a non-routable IPv4 address configured.	User intervention required to configure an IPv4 address, if the problem persists, contact the local system administrator. All machine services that require routable IPv4 connectivity are disabled

Table 11 17-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
17-528-02	Duplicate IPv4 address.	Duplicate IPv4 address detected.	User intervention required to configure a unique IPv4 address. Connectivity issues may be experienced when utilizing machine features using this duplicate address.
17-529-02	No IPv4 Router.	No IPv4 router/gateway configured.	User intervention required to configure an IPv4 router address, if the problem persists, contact the local system administrator. Machine services that require routable IPv4 connectivity are disabled.
17-530-02	No IPv6 Router Advertisement.	No routable IPv6 address configured.	User intervention required to check the IPv6 configuration, if the problem persists, contact the local system administrator. All machine services that require routable IPv6 connectivity are disabled.
17-531-02	Duplicate IPv6 address	Duplicate IPv6 address detected.	User intervention required to configure a unique IPv6 address. Connectivity issues may be experienced when utilizing machine features using this duplicate address
17-532-02	DHCPv6 failure.	DHCPv6 Error: DHCPv6 failed to obtain an address. No DHCPv6 assigned IPv6 address configured.	User intervention required to obtain a DHCPv6 address, if the problem persists, contact the local system administrator. All machine services that require IPv6 connectivity may be disabled.
17-533-02	No response from DHCPv6 server.	DHCPv6 Error: DHCPv6 server not found. No DHCPv6 assigned IPv6 address configured.	User intervention required to obtain a DHCPv6 address, if the problem persists, contact the local system administrator. All machine services that require IPv6 connectivity may be disabled
17-534-02	Failed to Verify Host/Domain name(s).	Failed to Verify the Host Name and/or Domain name in DNS (after 5 minutes) [after the verification process completed]	The machine failed to verify the host name or domain names in DNS. Check the DNS settings, if the problem persists, contact the local system administrator. Machine services that require fully qualified domain names may be disabled.
17-535-02	Requested and verified host/domain name(s) mismatch.	The verified host and/or domain name(s) do not match with the requested host/domain name(s).	Check the DNS settings, if the problem persists, contact the local system administrator. Machine services that require fully qualified domain names may be disabled.

Table 11 17-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
17-551-00	Server Fax Service cannot Register. Power Off then On and Notify System Administrator.	Server fax service cannot register.	Switch the machine off then on, GP 14 . Server fax is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
17-552-00	Set by file cabinet service when it gets no response from service registry when trying to register.	Reprint saved jobs service cannot register.	User intervention is required to power off/on the machine; service is required if the problem persists. Reprinting of saved jobs is disabled; Print and other machine services are unaffected.
17-553-00	Internet Fax Service cannot Register. Power Off then On and Notify System Administrator.	Internet fax service cannot register.	Switch the machine off then on, GP 14 . Internet fax is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
17-554-00	E-mail Service cannot Register. Power Off then On and Notify System Administrator.	Scan to e-mail service cannot register.	Switch the machine off then on, GP 14 . Scan to e-mail is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
17-556-00	The Server Fax Service cannot Un-Register. Notify your System Administrator.	Server fax service cannot un-register	Switch the machine off then on, GP 14 . Server fax is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
17-557-00	The Internet Fax Service cannot Un-Register. Notify your System Administrator.	Internet fax service cannot un-register.	Switch the machine off then on, GP 14 . Internet fax is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
17-558-00	The E-mail Service cannot Un-Register. Notify your System Administrator.	E-mail service cannot un-register.	Switch the machine off then on, GP 14 . Scan to e-mail is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.

Table 11 17-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
17-559-00	Workflow Scanning Service cannot Register. Power Off then On and Notify System Administrator.	Network scanning service cannot register.	Switch the machine off then on, GP 14 . Scan service is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
17-560-00	The Workflow Scanning Service cannot Un-Register. Notify your System Administrator.	Network scanning service cannot un-register.	Switch the machine off then on, GP 14 . Scan service is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
17-561-00	The Reprint Saved Jobs Service cannot Un-Register. Notify your System Administrator.	Reprint saved jobs service cannot un-register.	Switch the machine off then on, GP 14 . Re-printing of saved jobs is disabled. If the fault persists, perform the 316E Network Fault Checkout RAP.
17-562-00	No communications with Xerox SMart eSolutions server. Contact System Administrator.	Registration with edge server fails.	User intervention is required to review SMart eSolutions settings. Machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
17-563-00	No communications with Xerox SMart eSolutions server. Contact System Administrator.	Communication with Edge server fails.	User intervention is required to review SMart eSolutions settings. Machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
17-565-00	Extensible Services are not responding. Power machine Off then On.	XEIP service not responding.	Switch the machine off then on, GP 14 . Machine services are unaffected.
17-566-00	Lock down Security Remediation Failed	At least one of the Lockdown security settings is not compliant.	User intervention is required to contact the local system administrator. Device services are unaffected.
17-570-00	Communication with NNTP server failed	Communication with NNTP server failed.	User intervention is required to verify network time protocol server settings, operability and machine time. Machine services are unaffected.

Table 11 17-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
17-580-00	Please wait... Disk Encryption operation in progress.	Disk encryption is in progress.	No service action required, please wait for encryption to finish.
17-590-00	Image Overwrite is in progress... the machine is Offline.	Image overwrite is in progress.	No service action required, please wait for the overwrite to finish.
17-591-00	On Demand Overwrite Failed. Perform an On Demand Overwrite immediately.	HDD or fax ODIO failed.	ODIO error. Administrator intervention is required to perform an ODIO immediately. Printing can continue; other machine services are unaffected.

Table 12 19-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
19-502-00	Please wait... Freeing memory.	Out of memory resources. The machine has run out of image processing memory for the current job.	No user intervention required, please wait, printing will resume after memory is freed. Other machine services are unaffected. If the fault persists, perform the 319-401-00, 319-402-00 RAP.
19-505-00	Some jobs may have been deleted.	Compressor DVMA timeout. Current job has been deleted.	Confirm that UI message has been seen. Re-scan the job. If the fault persists, perform the 319-403-00 RAP.
19-506-00	Immediate Job Overwrite Failed. Perform an On Demand Overwrite immediately.	Immediate job overwrite failed.	Administrator intervention is required to perform an ODIO immediately. Printing can continue. Other machine services are unaffected.
19-507-00	On Demand Overwrite Failed. Perform an On Demand Overwrite immediately.	HDD or fax ODIO failed.	ODIO error. Administrator intervention is required to perform an ODIO immediately. Printing can continue; other machine services are unaffected.

Table 12 19-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
19-510-00	Please wait... The system is attempting to recover.	System is attempting to recover. Image disk error.	No service action required. Printing and other machine services are unaffected.
19-511-00	Image Disk is offline. Job(s) may take longer than normal. Notify System Administrator.	Image disk unavailable. Performance is degraded. Service is required.	Switch the machine off then on, GP 14 . The system is unable to read from the image disk. Jobs may take longer than normal. If the fault persists, perform the 319-300-00 to 319-310-00 RAP.
19-512-00	Image Disk offline. Power Off then On and Notify System Administrator.	The image disk cannot read or write and must be serviced. Power off/power on will temporarily alleviate the problem.	Switch the machine off then on, GP 14 . The system is unable to read from the image disk. Printing has stopped. If the fault persists, perform the 319-300-00 to 319-310-00 RAP.
19-513-00	Please wait... The Image Disk is full.	The image disk is full.	Print jobs may be delayed. No service action required. The system is attempting to recover. Printing and other machine services are available.
19-514-00	All incomplete jobs have been deleted.	Video job integrity fault detected.	Video job integrity error; one or more jobs were deleted. No user intervention is required; the system has recovered. Printing and other machine services can continue. If the fault persists, perform the 319-409-00 RAP.
19-550-00	Configuration mismatch.	The single board controller cannot access the EPC memory or the image disk.	Switch the machine off then on, GP 14 . Install a new memory module, PL 3.22 Item 11 . Install a new hard disk drive, PL 3.22 Item 2 . Install a new single board control PWB, PL 3.22 Item 3 .

Table 13 20-5XX-XX Status codes

Status Codes	UI Message	Reason for Message	Reference/Action
20-544-00	Please wait... The Fax Service is initializing.	The fax service is initializing.	The fax service is re-starting. No user intervention is required. Printing and other machine services are available.

Table 13 20-5XX-XX Status codes

Status Codes	UI Message	Reason for Message	Reference/Action
20-545-00	Fax job could not be sent at this time, please try again.	A fax job could not be sent.	Fax job could not be sent, re-try. Printing and other machine services are available.
20-546-00	Fax memory is low. Contact your System Administrator.	Not enough memory to use fax service.	Switch the machine off then on, GP 14 . Fax and LAN fax are disabled. Printing and other machine services are unaffected. If the fault persists, perform the 320-323-00 , 320-324-00 RAP.
20-547-00	Fax memory is low. Contact your System Administrator.	Fax memory is low.	User intervention is required to delete unnecessary mailbox files or fax jobs stored for polling. Fax and LAN fax services are disabled. Printing and other machine services are unaffected. If the fault persists, perform the 320-323-00 , 320-324-00 RAP.
20-550-00	Fax line 2 is unavailable. Notify your System Administrator.	Extended fax card failure detected.	Switch the machine off then on, GP 14 . Fax service can continue from line 1. Printing and other machine services are available.
20-556-00	Fax system error. Power Off then On and Notify System Administrator.	Fax service error. Reset fax service.	Fax and LAN fax are disabled. Switch the machine off then on, GP 14 . Printing and other machine services are unaffected. If the fault persists, perform the 320-331-00 , 320-338-00 , 320-339-00 , 320-341-00 , 320-345-00 RAP.
20-558-00	Fax system error. Power Off then On and Notify System Administrator.	Fax memory error.	Fax and LAN fax are disabled. Switch the machine off then on, GP 14 . Printing and other machine services are unaffected. If the fault persists, perform the 320-322-00 RAP.
20-559-00	Fax system error. Power Off then On and Notify System Administrator.	Fax service error.	Fax and LAN fax are disabled. Switch the machine off then on, GP 14 . Printing and other machine services are unaffected. If the fault persists, perform the 320-320-00 RAP.

Table 13 20-5XX-XX Status codes

Status Codes	UI Message	Reason for Message	Reference/Action
20-562-00	Fax line 1 is unavailable. Check line connection Or notify your System Administrator.	No communication on fax line 1.	User intervention is required to check the external phone line connection. Fax and LAN fax are disabled. Printing and other machine services are unaffected. If the fault persists, perform the 320-331-00, 320-338-00, 320-339-00, 320-341-00, 320-345-00 RAP.
20-563-00	Fax line 2 is unavailable. Check line connection Or notify your System Administrator.	No communication on fax line 2.	User intervention is required to check the external phone line connection. Fax and LAN fax are disabled. Printing and other machine services are unaffected. If the fault persists, perform the 320-327-00, 320-332-00, 320-340-00 RAP.
20-565-00	Fax job limit has been reached. Power Off then On and Notify System Administrator.	All jobs IDs allocated cannot create any more.	Switch the machine off then on, GP 14. Fax and LAN fax are disabled.
20-570-00	Fax system error. Power Off then On and Notify System Administrator.	Fax service error.	Switch the machine off then on, GP 14. Fax and LAN fax are disabled. Printing and other machine services are unaffected.
20-571-00	Fax system error. Power Off then On and Notify System Administrator.	Fax service error.	Fax line 1 is unavailable. Switch the machine off then on, GP 14. Fax and LAN fax are disabled. Printing and other machine services are unaffected. If the fault persists, perform the 320-331-00, 320-338-00, 320-339-00, 320-341-00, 320-345-00 RAP.
20-572-00	Fax line 2 is unavailable. Call for assistance.	Fax service error. Fax line 2 is unavailable.	Switch the machine off then on, GP 14. Fax and LAN fax are degraded. Printing and other machine services are unaffected. If the fault persists, perform the 320-327-00, 320-332-00, 320-340-00 RAP.
20-580-00	Fax Service is unavailable. Turn machine off, then on.	NVM values supplied by the fax are invalid. Fax NVM data error.	No service action required. Fax and LAN fax are disabled. Printing and other machine services are unaffected.

Table 13 20-5XX-XX Status codes

Status Codes	UI Message	Reason for Message	Reference/Action
20-595-00	Fax line 1 is unavailable. Call for assistance.	Fax service error. Fax line 1 is unavailable.	Fax line 1 is unavailable. Switch the machine off then on, GP 14. Fax and LAN fax are disabled. Printing and other machine services are unaffected. If the fault persists, perform the 320-331-00, 320-338-00, 320-339-00, 320-341-00, 320-345-00 RAP.

Table 14 22-5XX-XX Status codes

Status Codes	UI Message	Reason for Message	Reference/Action
22-501-04	Please wait... The system is attempting to recover.	System is in recovery.	Marking service control software error. No user intervention is required, please wait; the system is attempting to recover. All machine services are disabled.
22-502-04	Select the Current Messages button in the Machine Status for more information.	An active message has been produced.	Go to the Status screen and select the Faults tab. Select the Active Messages button and perform the action appropriate to the message.
22-503-04	All incomplete jobs have been deleted.	System error. Jobs have been lost and must be resubmitted.	No user intervention is required. Machine is temporarily unavailable.
22-503-05	The number of originals was less than the number originally scanned.	Job recovery error. The number of originals reloaded does not match the number originally scanned.	Perform the 305-940-00, 305-941-00 RAP.
22-504-04	No tray is configured with the required paper size.	No paper tray is configured to run the stock size required for this job.	Print and copy services are disabled, other machine services are unaffected Job must be deleted. Paper tray must be configured to match the job. If the fault persists, perform the 322-310-04 to 322-318-04 RAP.
22-504-05	Invalid original size detected. It will be treated as the next largest standard size.	Invalid mixed size original pair detected.	Ensure the originals are not creased or folded If the fault persists, perform the 305A RAP.

Table 14 22-5XX-XX Status codes

Status Codes	UI Message	Reason for Message	Reference/Action
22-504-16	Auto configuration is disabled.	Non customer mode. Auto configuration is disabled. Wait for machine to exit diagnostics mode. The machine is unavailable.	Enter customer mode. Enter dC131 Read/Write and check that NVM ID 616-014 = 4.
22-505-00	Remove documents from the Document Feeder Input Tray or close the Document Feeder.	Documents sensed in the SPDH tray during IIT standby and document feeder input tray. To use the document feeder to scan your documents, lower the document feeder.	To scan from the document glass, remove documents in the document feeder input tray. To use the document feeder to scan your documents, lower the document feeder.
22-505-17	Machine is in a non-customer mode.	Machine is in a non-customer mode.	Enter customer mode. Enter dC131 Read/Write and check that NVM ID 616-014 = 4.
22-506-17	Auto configuration is disabled.	Machine is in a non-customer mode.	Enter customer mode. Enter dC131 Read/Write and check that NVM ID 616-014 = 4.
22-507-05	The document size was different than expected. The job has been deleted.	Document is larger than expected.	Try one of the following: Select mixed size originals and reload into the document feeder or ensure the originals are not creased or folded and retry from the document glass. If the fault persists, perform the 305A .
22-508-04	Scanning will be delayed.	Scan startup delayed whilst awaiting resources.	No user intervention is required. Job will begin when system is ready. If the fault persists, perform the 322-330-06 RAP.
22-511-04	Paper required for the current job is not available.	Media required for current marking job is not loaded.	Load the correct paper to complete the held job or cancel the held job. Other machine services are unaffected.
22-512-04	Auto Paper Select is not available.	All trays direct select only.	System Administrator intervention is required to enable at least 1 tray for auto select. Printing and copying can continue without auto select, other machine services are unaffected.
22-513-04	One or more queued jobs need resources.	One or more queued jobs in the system are being held due to lack of resources.	Add paper to the tray being used to clear queued job. Jobs will be held until resources become available. Other machine services are unaffected.

Table 14 22-5XX-XX Status codes

Status Codes	UI Message	Reason for Message	Reference/Action
22-515-04	One or more queued jobs need resources.	One or more queued jobs in the system is being held.	Add paper to the tray being used to clear queued job.
22-557-00	Configuration Parameter error.	Serial number sync failure, power on failed.	Switch the machine off then on, GP 14 . Go to dC132 , check the serial number is correct. Enter dC131 NVM ID 616-003, check the machine configuration. Perform the 303-405-00, 303-406-00 RAP.
22-555-00	Option Install Error.	Option Install Error.	System administrator intervention is required to complete option installation. The machine is unavailable.
22-556-00	Option removal error.	Option removal error.	System Administrator intervention is required to complete option removal. The machine is unavailable.
22-557-00	Serial number sync failure.	Serial number sync failure.	User intervention is required to power off/on the machine. The machine is unavailable. If the problem persists, refer to dC132 Serial Number.
22-559-00	Inserted SIM is incompatible. Replace with a compatible SIM.	SIM card serial number does not match machine serial number.	Perform the 303-405-00, 303-406-00 RAP.
22-560-00	SIM card data cannot be processed.	SIM card data cannot be processed.	User intervention is required to re-install the SIM. The machine is unavailable. If the problem persists, refer to GP 9 Machine SIM Card Matrix and GP 44 How to Procure a New SIM Card.
22-562-00	Network controller error. Notify your system administrator.	Network controller error.	Xerox standard accounting (XSA) is unavailable. User intervention is required to power off/on the machine to enable XSA. All machine services are disabled.
22-563-00	System Error. Power Off then On and Notify System Administrator.	Incomplete system information.	Switch the machine off then on, GP 14 .
22-564-00	Acct service data is corrupt.	Incomplete System Information.	System error. User intervention is required to power off/on the machine; service is required if the problem persists. All machine services are disabled.

Table 14 22-5XX-XX Status codes

Status Codes	UI Message	Reason for Message	Reference/Action
22-566-00	The Fax Service cannot Register. Notify your System Administrator.	Fax service cannot register.	Switch the machine off then on, GP 14 . Fax and LAN Fax are disabled. Other machine services are unaffected. If the fault persists, perform the 322-371-00, 322-372-00 RAP.
22-567-00	The Fax Service cannot Un-Register. Notify your System Administrator.	Fax service cannot un-register.	Switch the machine off then on, GP 14 . All machine services are disabled. If the fault persists, perform the 322-371-00, 322-372-00 RAP.
22-568-00	-	Status requiring POPO detected and auto-reset count less than 2.	The system will try to power off then on twice before asking for assistance.
22-572-00	SIM Insertion Required. Notify System Administrator.	Speed not set on IOT. Either the machine has not yet received a SIM, or the settings have been corrupted.	Switch the machine off then on, GP 14 . If the fault persists, perform the 303-405-00, 303-406-00 RAP.
22-580-00	Register for your Supplies Plan.	Service plan registration alert.	Perform the 322-360-00 RAP.
22-581-00	Enter an Activation Code for print services to become available.	Service plan is undetermined.	Perform the 322-360-00 RAP.
22-582-00	Obtain a Supplies Plan Activation Code from your Xerox equipment supplier.	Service plan registration warning.	Enter the registration code.
22-583-00	Contact System Administrator to enter activation code.	Service plan registration expiration warning.	Enter the registration code.
22-584-00	Obtain a Supplies Plan Activation Code from your Xerox equipment supplier.	Service plan registration expired.	Enter the registration code.
22-585-00	The device is not available.	Recovery mechanism has restored a lost parameter.	Switch the machine off, then on, GP 14 .

Table 15 4X-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
41-501-00	System Error. Power Off then On and Notify System Administrator.	The CRUMs bus communications have been disrupted by internal electronic noise.	Switch the machine off, then on, GP 14 . If the fault persists, perform the 341-301-00 RAP.
45-100-00	Soft clock comms failure	Communications Error between main IOT processor and sub processor generating the drives module clocks (fuser and print cartridge)	Switch the machine off then on, GP 14 . If the fault persists, perform the 345-100-00 Soft Clock Communications Error RAP.

Table 16 6X-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
61-100-00	Print Head data transfer failure.	CIPS checksum of LED PH data does not match checksum read from the PH itself.	Switch the machine off, then on, GP 14 . If the fault persists, perform the 361-100-00 RAP.

Table 17 7X-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
71-301-00	Check paper and close the tray.	Dedicated tray 1 is open.	Close the tray. If the fault persists, perform the 371-500-00 RAP.
71-302-00	Check paper and close the tray.	Adjustable tray 1 is open.	Close the tray. If the fault persists, perform the 371-500-00 RAP.
71-313-00	Tray 1 is not available. Notify your System Administrator.	Mechanical failure for tray 1.	Switch the machine off, then on, GP 14 .
71-530-00	Tray1 is empty. Add paper.	Tray 1 out of media.	Add paper to tray 1. If the fault persists, perform the 371A RAP.
71-535-00	Tray 1 media low.	Tray 1 media low.	Tray 1 is nearly empty. User intervention is required to add paper to the tray. Device services are unaffected.

Table 17 7X-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
71-536-00	Tray 1 lifting.	Tray 1 lifting.	No service action required. Print and copy services can continue from other trays if the correct media is available. If the fault persists, perform the 371-100-00 , 371-217-00 RAP.
72-301-00	Check paper and close the tray.	Dedicated tray 2 is open.	Close the tray. If the fault persists, perform 372-500-00 RAP.
72-302-00	Check paper and close the tray.	Adjustable tray 2 is open.	Close the tray. If the fault persists, perform 372-500-00 RAP.
72-313-00	Tray 2 is not available. Notify your System Administrator.	Mechanical failure for tray 2.	Switch the machine off, then on, GP 14 .
72-530-00	Tray 2 is empty. Add paper.	Tray 2 out of media.	Add paper to Tray 2. If the fault persists, perform the 371A RAP.
72-535-00	Tray 2 media low.	Tray 2 media low.	Tray 2 is nearly empty. User intervention is required to add paper to the tray. Device services are unaffected.
72-536-00	Tray 2 lifting.	Tray 2 lifting.	No service action required. Print and copy services can continue from other trays if the correct media is available. If the fault persists, 372-100-00 , 372-217-00 RAP.
73-301-00	Check paper and close the tray.	Dedicated tray 3 is open.	Close the tray. If the fault persists, perform the 373-500-00 RAP.
73-313-00	Tray 3 is not available. Notify your System Administrator.	Mechanical failure for tray 3.	Switch the machine off, then on, GP 14 .
73-530-00	Tray 3 is empty. Add paper.	Tray 3 out of media.	Add paper to tray 3. If the fault persists, perform the 373B RAP.
73-535-00	Tray 3 media low.	Tray 3 media low.	Tray 3 is nearly empty. User intervention is required to add paper to the tray. Device services are unaffected.
73-536-00	Tray 3 lifting.	Tray 3 lifting.	Print and copy services can continue from other trays if the correct media is available. If the fault persists, perform the 373-100-00 , 373-217-00 RAP.

Table 17 7X-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
74-301-00	Tray 4 is open.	Dedicated tray 4 is open.	User intervention is required to close the tray. Print and Copy services can continue if the correct paper is available in other trays.
74-313-00	Tray 4 is not available. Notify your System Administrator.	Mechanical failure for tray 4.	Switch the machine off, then on, GP 14 .
74-530-00	Tray 4 is empty. Add paper	Tray 4 out of media.	Add paper to tray 4. If the fault persists, perform the 374B RAP.
74-535-00	Tray 4 media low.	Tray 4 media low.	Tray 4 is nearly empty. User intervention is required to add paper to the tray. Device services are unaffected.
74-536-00	Tray 4 lifting.	Tray 4 lifting.	Print and copy services can continue from other trays if the correct media is available. If the fault persists, perform the 374-100-00 , 374-217-00 RAP.
75-150-00	T5 needs to be reset by emptying and reloading media.	A paper jam has occurred after feeding from the bypass tray.	Tray 5 (bypass) is not available. User intervention is required to remove all media and reload tray 5. Print and copy services can continue if the correct paper is available in other trays. If the problem persists, perform the 375A Bypass Tray RAP.
75-150-01	T5 needs to be reset by emptying and reloading media.	A paper jam has occurred after feeding from the bypass tray.	Tray 5 (bypass) is not available. User intervention is required to remove all media and reload tray 5. Print and copy services can continue if the correct paper is available in other trays. If the problem persists, perform the 375A Bypass Tray RAP.
75-150-02	T5 needs to be reset by emptying and reloading media.	A paper jam has occurred after feeding from the bypass tray.	Tray 5 (bypass) is not available. User intervention is required to remove all media and reload tray 5. Print and copy services can continue if the correct paper is available in other trays. If the problem persists, perform the 375A Bypass Tray RAP.
75-313-00	Tray 5 is not available. Notify your System Administrator.	Mechanical failure of the bypass tray.	Switch the machine off, then on, GP 14 . If the fault persists, perform the 375A RAP.

Table 17 7X-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
75-530-00	Tray 5 is empty. Add paper.	The bypass tray is out of media.	Add paper to the bypass tray. If the fault persists, perform the 375A RAP .
75-535-00	Tray 5 media low.	Tray 5 media low.	User intervention is required to add paper to tray 5. Print and copy services can continue if the correct paper is available in other trays.
76-106-00	Misfeed in tray 6: A4 PFP dedicated.	Misfeed in tray 6: A4 PFP dedicated.	User intervention is required to clear the paper jam in tray 6. Print and Copy services are disabled.
76-106-01	Misfeed in tray 6: A3 PFP kit.	Misfeed in tray 6: A3 PFP kit.	User intervention is required to clear the paper jam in tray 6. Print and Copy services are disabled.
76-110-00	Jam in tray 6 docking area.	Jam in tray 6 docking area.	User intervention is required to clear the paper jam in tray 6. Print and Copy services are disabled.
76-110-01	Jam in tray 6 docking area.	Jam in tray 6 docking area.	User intervention is required to clear the paper jam in tray 6. Print and Copy services are disabled.
76-300-00	PFP (tray 6) dedicated paper tray is open.	Dedicated tray 6 (PFP) tray loading door is opened/elevate switch is flipped down.	User intervention is required to close the door. Print service can continue if the correct paper is available in other paper trays.
76-300-01	PFP (tray 6) dedicated paper tray is open.	Dedicated tray 6 (PFP) tray loading door is opened/elevate switch is flipped down.	User intervention is required to close the door. Print service can continue if the correct paper is available in other paper trays.
76-301-00	PFP (tray 6) dedicated paper tray is open.	Dedicated tray 6 (PFP) tray loading door is opened/elevate switch is flipped down.	User intervention is required to close the door. Print service can continue if the correct paper is available in other paper trays.
76-301-01	PFP (tray 6) dedicated paper tray is open.	Dedicated tray 6 (PFP) tray loading door is opened/elevate switch is flipped down.	User intervention is required to close the door. Print service can continue if the correct paper is available in other paper trays.
76-302-00	PFP (tray 6) adjustable is open.	Adjustable tray 6 (PFP) tray loading door is opened/elevate switch is flipped down.	User intervention is required to close the door. Print service can continue if the correct paper is available in other paper trays.
76-302-01	PFP (tray 6) adjustable is open.	Adjustable tray 6 (PFP) tray loading door is opened/elevate switch is flipped down.	User intervention is required to close the door. Print service can continue if the correct paper is available in other paper trays.

Table 17 7X-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
76-305-00	Tray 6 (A4PFP) is undocked.	Tray 6 (A4PFP) is undocked.	User intervention is required to dock tray 6. Print and copy services can continue if the correct paper is available in other trays. If the problem persists, perform the 376-510-00 Tray 6 Undocked During Run RAP .
76-305-01	Tray 6 (A4PFP) is undocked.	Tray 6 (A4PFP) is undocked.	User intervention is required to dock tray 6. Print and copy services can continue if the correct paper is available in other trays. If the problem persists, perform the 376-510-00 Tray 6 Undocked During Run RAP .
76-530-00	Tray 6 out of media.	Tray 6 out of media.	User intervention is required to add paper to tray 6. Print and Copy services can continue if the correct paper is available in other trays.
76-535-00	Tray 6 media low.	Tray 6 media low.	User intervention is required to add paper to the tray. Device services are unaffected.
76-536-00	Tray 6 lifting.	Tray 6 lifting.	User intervention is not required. Print and copy services will continue when the tray is in position.
76-537-00	Tray 6 lowering.	Tray 6 lowering.	User intervention is not required. Print and copy services can continue with other trays.

Table 18 8X-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
81-155-00	Sheet over or late to sensor inside left hand door.	Jam in the left door when sheets are fed from tray 5. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.
81-155-01	Sheet over or late to sensor inside left hand door.	Jam in the left door when sheets are fed from tray 5. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.

Table 18 8X-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
81-155-02	Sheet over or late to sensor inside left hand door.	Jam in the left door when sheets are fed from tray 5. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.
81-155-03	Sheet over or late to sensor inside left hand door.	Jam in the left door when sheets are fed from tray 5. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.
81-200-00	Sheet over or late to sensor inside left hand door.	Jam in left door when sheets fed from trays 1-4. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.
81-200-01	Paper jam behind the left side door.	Jam in left door when sheets fed from trays 1-4. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.
81-200-02	Paper jam behind the left side door.	Jam in left door when sheets fed from trays 1-4. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.
81-200-03	Paper Jam behind the left side door.	Jam in left door when sheets fed from trays 1-4. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.
81-201-00	Misfeed in tray 1.	Misfeed in tray 1.	Clear the paper jam in tray 1.
81-201-01	Misfeed in tray 1.	Misfeed in tray 1.	Clear the paper jam in tray 1.
81-202-00	Misfeed in tray 2.	Misfeed in tray 2.	Clear the paper jam in tray 2.
81-202-01	Misfeed in tray 2.	Misfeed in tray 2.	Clear the paper jam in tray 2.
81-203-00	Misfeed in tray 3.	Misfeed in tray 3.	Clear the paper jam in tray 3.
81-203-01	Misfeed in tray 3.	Misfeed in Tray 3.	Clear the paper jam in tray 3.
81-203-02	Misfeed in tray 3.	Misfeed in tray 3.	Clear the paper jam in tray 3.
81-204-00	Misfeed in tray 4.	Misfeed in tray 4.	Clear the paper jam in tray 4.
81-204-01	Misfeed in tray 4.	Misfeed in tray 4.	Clear the paper jam in tray 4.
81-204-02	Misfeed in tray 4.	Misfeed in tray 4.	Clear the paper jam in tray 4.
81-220-00	Please wait... Adjustments are in progress.	Post jam clearance initialization.	No service action required, please wait. If the fault persists, switch the machine off, then on, GP 14 .

Table 19 Chain 9X-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
81-222-00	Please wait... Adjustments are in progress.	TAR Gears don't match NVM settings.	No service action required.
91-366-00	IOT Humidity Sensor Averaged reading out of limits.	IOT humidity sensor averaged reading out of limits.	Perform the 391-375-00 RAP.
91-376-00	IOT Temperature Sensor averaged reading out of limits.	IOT temperature sensor averaged reading out of limits.	Perform the 391-365-00 RAP.
91-378-00	Please wait...Print Engine cooling in progress.	Print cartridge cooling event. IOT temperature is above print cartridge temperature upper threshold.	Perform the 391-377-00 Print Cartridge Cooling Failure RAP.
91-380-00	Ready to Scan. Copying and printing not available.	TC control error and print cartridge life less than X prints defined in IOT NVM.	User intervention is required to remove the print cartridge and check the blue sealing strip has been removed. All machine services are disabled.
91-380-01	Ready to Scan. Copying and printing not available.	TC control error and print cartridge life less than X prints defined in IOT NVM.	User intervention is required to remove the print cartridge and check the blue sealing strip has been removed. All machine services are disabled.
91-400-00	Please wait... Print Engine cooling in progress.	Print cartridge cooling fan is on.	No service action required.
95-100-00	Software Upgrade Failure.	An Attempt to upgrade the system using software upgrade did not complete successfully.	The machine is unavailable. User intervention is required to upgrade software. Print and copy services are disabled.

OF4b Status Messages in Alphabetical Order

Status Message Tables

The status message tables contain all the messages to which a status code can be attributed.

- [Table 1](#) Status Messages A to F.
- [Table 2](#) Status Messages G to N.
- [Table 3](#) Status Messages O to R.
- [Table 4](#) Status Messages S to Y.

Table 1 Status messages A to F

UI Message	Status Code	Reason for Message	Reference/Action
A Fax Service error has occurred. Power Off then On.	03-547-00	Basic fax not detected or confirmed.	Switch the machine off then on, GP 14 . If the fault persists, perform the 303-401-00 , 303-403-00 RAP.
A Fax service error has occurred. Power Off then On.	03-550-00	Fax card is unavailable.	Switch the machine off then on, GP 14 . If the fault persists, perform the 303-401-00 , 303-403-00 RAP.
A Fax service error has occurred. Power Off then On.	03-551-00	The fax service is unavailable.	Switch the machine off then on, GP 14 . If the fault persists, perform the 303-401-00 , 303-403-00 RAP.
Accounting out of memory. Notify your System Administrator.	16-551-00	Network controller - accounting log is full or a hard disk full state exists.	Accounting Administrator needs to retrieve accounting data log from the system.
Acct service data is corrupt.	22-564-00	Incomplete System Information.	System error. User intervention is required to power off/on the machine; service is required if the problem persists. All machine services are disabled.
Additional memory is required to support Scan to File. Notify your System Administrator.	16-553-00	Network controller - not enough physical memory is configured on the platform to support scan to file.	Switch the machine off then on, GP 14 . Hardware must be added or replaced.
All incomplete jobs have been deleted.	19-514-00	Video job integrity fault detected.	Video job integrity error; one or more jobs were deleted. No user intervention is required; the system has recovered. Printing and other machine services can continue. If the fault persists, perform the 319-409-00 RAP.

Table 1 Status messages A to F

UI Message	Status Code	Reason for Message	Reference/Action
All incomplete jobs have been deleted.	22-503-04	System error. Jobs have been lost and must be resubmitted.	No user intervention is required. Machine is temporarily unavailable.
All output trays are unavailable.	12-909-00	Raised based upon the reported capabilities from the finisher.	Finisher output tray error. User intervention is required to check for obstructions and power off/on the machine; service is required if problem persists. Print and copy services are disabled; other machine services are unaffected.
Auto configuration is disabled.	22-504-16	Non customer mode. Auto configuration is disabled. Wait for machine to exit diagnostics mode. The machine is unavailable.	Enter customer mode. Enter dC131 Read/Write and check that NVM ID 616-014 = 4.
Auto configuration is disabled.	22-506-17	Machine is in a non-customer mode.	Enter customer mode. Enter dC131 Read/Write and check that NVM ID 616-014 = 4.
Auto Paper Select is not available.	22-512-04	All trays direct select only.	System Administrator intervention is required to enable at least 1 tray for auto select. Printing and copying can continue without auto select, other machine services are unaffected.
Autonet functions are not available. Notify your System Administrator.	16-508-00	Autonet is not available.	Switch the machine off then on, GP 14 . Printing can continue if other network protocols are used
Booklet maker staple cartridge is empty.	12-644-02	Booklet maker stapler empty and HVF finisher front door open.	Install 2 new staple cartridges, PL 12.185 Item 8 .
Booklet Maker staple cartridge is empty.	12-644-03	Booklet Maker Stapler Empty AND LVF Finisher front door open.	Install a new booklet maker staple cartridge, PL 12.365 Item 7 .
Booklet Maker Staple Cartridges (R8) are nearly empty. Make sure you have replacements.	12-642-00	Booklet maker staple cartridges (R8) are nearly empty.	The booklet maker staple cartridge supplies are low. Order a staple cartridge, PL 12.365 Item 7 for the LVF BM.

Table 1 Status messages A to F

UI Message	Status Code	Reason for Message	Reference/Action
Booklet Stapler not available. Power Off then On and Notify System Administrator.	12-726-00	Failure of the booklet maker stapling functions.	Switch the machine off then on, GP 14 . Open Finisher Front Door and Check for Obstructions. If the fault persists, perform the 312-352-00-150 , 312-353-00-150 RAP for LVF BM, or 312-403-00-171 , 312-413-00-171 , 312-414-00-171 HVF BM Staple Head 2 and Stapler Module RAP
Centre tray bin is full	12-692-01	The centre output tray is full.	Empty the centre output tray.
Centre tray bin is nearly full	12-729-01	The centre output tray is nearly full.	The output tray is near full. No immediate user intervention is required. Print and copy services can continue; other machine services are unaffected.
Centre Tray Off-setting is not available. Power Off then On and Notify System Administrator.	10-702-00	Offset motor offset fail.	Switch the machine off then on, GP 14 .
Chad bin is missing.	12-641-00	Chad bin has been removed from HVF finisher.	Ensure the HVF chad bin is correctly installed. If the fault persists, perform the 312N-171 Chad Bin Present and Bin Full RAP.
Check paper and close the tray.	71-301-00	Dedicated tray 1 is open.	Close the tray. If the fault persists, perform the 371-500-00 RAP.
Check paper and close the tray.	71-302-00	Adjustable tray 1 is open.	Close the tray. If the fault persists, perform the 371-500-00 RAP.
Check paper and close the tray.	72-301-00	Dedicated tray 2 is open.	Close the tray. If the fault persists, perform 372-500-00 RAP.
Check paper and close the tray.	72-302-00	Adjustable tray 2 is open.	Close the tray. If the fault persists, perform 372-500-00 RAP.
Check paper and close the tray.	73-301-00	Dedicated tray 3 is open.	Close the tray. If the fault persists, perform the 373-500-00 RAP.
Check the settings for tray 1.	01-540-01	Paper removed or added to tray 1.	Confirm the tray 1 settings.
Check the settings for tray 2.	01-540-02	Paper removed or added to tray 2.	Confirm the tray 2 settings.
Check the settings for tray 5.	01-540-05	Paper removed or added to the bypass tray.	Confirm the bypass tray settings.
Check the settings for tray 6.	01-540-06	Paper removed or added to tray 6.	Confirm the tray 6 settings.

Table 1 Status messages A to F

UI Message	Status Code	Reason for Message	Reference/Action
Check the settings for tray 7	01-540-07	Paper removed or added to tray 7.	Confirm the tray 7 settings.
Close finisher top cover.	12-602-00	The 2K LCSS top cover is open.	Close the finisher top cover. If the fault persists, perform the 312-312-00-110 , 312-313-00-110 RAP.
Close finisher top cover.	12-602-03	The LVF BM top cover is open.	Close the finisher top cover. If the fault persists, perform the 312-312-00-150 , 312-313-00-150 RAP.
Communication with NNTP server failed	17-570-00	Communication with NNTP server failed.	User intervention is required to verify network time protocol server settings, operability and machine time. Machine services are unaffected.
Compiler staple cartridge is empty.	12-714-01	2K LCSS main staple cartridge is empty.	Install a new staple cartridge, PL 12.55 Item 7 .
Compiler staple cartridge is empty.	12-714-02	HVF compiler stapler empty and HVF finisher front door open.	Install a new staple cartridge, PL 12.111 Item 6 .
Compiler staple cartridge is empty.	12-714-03	LVF BM main staple cartridge is empty.	Install a new staple cartridge, PL 12.365 Item 7 .
Configuration mismatch.	19-550-00	The single board controller cannot access the EPC memory or the image disk.	Switch the machine off then on, GP 14 . Install a new memory module, PL 3.22 Item 11 . Install a new hard disk drive, PL 3.22 Item 2 . Install a new single board control PWB, PL 3.22 Item 3 .
Configuration Parameter error.	22-557-00	Serial number sync failure, power on failed.	Switch the machine off then on, GP 14 . Go to dC132 , check the serial number is correct. Enter dC131 NVM ID 616-003, check the machine configuration. Perform the 303-405-00 , 303-406-00 RAP.
Connecting to WiFi network.	17-522-01	Connecting to a WiFi network.	The machine is attempting to connect to a WiFi network. Please wait, no user intervention required. All machine services that require network connectivity may be available soon.
Contact System Administrator to enter activation code.	22-583-00	Service plan registration expiration warning.	Enter the registration code.

Table 1 Status messages A to F

UI Message	Status Code	Reason for Message	Reference/Action
DHCP/BOOTP failure and no zero configuration IPv4 address.	17-524-02	DHCP/BOOTP Error: DHCP/BOOTP failed to obtain an address and zero configuration (auto IP) disabled. No IPv4 address configured.	User intervention required to configure IPv4, if the problem persists, contact the local system administrator. All machine services that require IPv4 connectivity are disabled.
DHCP/BOOTP failure and zero configuration IPv4 address configured.	17-526-02	DHCP/BOOTP Error: DHCP/BOOTP failed to obtain an address and zero configuration (auto IP) successful. Device has a non-routable IPv4 address configured.	User intervention required to configure an IPv4 address, if the problem persists, contact the local system administrator. All machine services that require routable IPv4 connectivity are disabled.
DHCPv6 failure.	17-532-02	DHCPv6 Error: DHCPv6 failed to obtain an address. No DHCPv6 assigned IPv6 address configured.	User intervention required to obtain a DHCPv6 address, if the problem persists, contact the local system administrator. All machine services that require IPv6 connectivity may be disabled.
DHCPv6 services are not available. Notify your System Administrator.	17-512-00	DHCPv6 failure status.	Switch the machine off then on, GP 14 . Printing can continue with other submission methods.
Document not fully inserted in document feeder.	05-571-00	Document not fully inserted	Remove any sheets from the document feeder to allow the device to initialise.
Duplicate IPv4 address detected. Reconfigure with a unique address.	17-513-00	Duplicate IPv4 address detected.	Reconfigure with a unique address. Switch the machine off then on, GP 14 .
Duplicate IPv4 address.	17-528-02	Duplicate IPv4 address detected.	User intervention required to configure a unique IPv4 address. Connectivity issues may be experienced when utilizing machine features using this duplicate address.
Duplicate IPv6 address	17-531-02	Duplicate IPv6 address detected.	User intervention required to configure a unique IPv6 address. Connectivity issues may be experienced when utilizing machine features using this duplicate address

Table 1 Status messages A to F

UI Message	Status Code	Reason for Message	Reference/Action
Duplicate IPv6 address detected. Reconfigure with a unique address.	17-510-00	Duplicate IPv6 address detected.	Reconfigure with a unique address. Switch the machine off then on, GP 14 . Copy and fax services (if installed) can continue.
E-mail Service cannot Register. Power Off then On and Notify System Administrator.	17-554-00	Scan to e-mail service cannot register.	Switch the machine off then on, GP 14 . Scan to e-mail is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Check-out RAP.
Empty the Hole Punch Waste Container.	12-649-01	The HVF hole punch chad bin is full and needs emptying.	Hole punch waste container is full, jobs requesting hole punching will be held. Empty the chad bin.
Ensure network cables are properly connected.	16-544-00	An ethernet cable is unplugged.	Ensure cables are properly connected.
Ensure the USB Wireless Network Interface is properly connected.	16-540-00	USB wireless network not connected.	Perform the 316D RAP.
Enter an Activation Code for print services to become available.	22-581-00	Service plan is undetermined.	Perform the 322-360-00 RAP.
Enter your access code or the current job may be deleted.	03-559-02	Walk up code entry FD: access code not entered.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job.
Ethernet 802.1X connection failure	17-521-00	Ethernet 802.1X connection failure. Cannot connect to the ethernet network.	Ensure 802.1X settings on the device match the 802.1X network authentication settings.
Ethernet cable unplugged.	17-520-00	Ethernet cable not connected and ethernet is the active connectivity interface.	Ensure network cable is properly connected.
Extensible Services are not responding. Power machine Off then On.	17-565-00	XEIP service not responding.	Switch the machine off then on, GP 14 . Machine services are unaffected.

Table 1 Status messages A to F

UI Message	Status Code	Reason for Message	Reference/Action
Failed to Verify Host/Domain name(s).	17-534-02	Failed to Verify the Host Name and/or Domain name in DNS (after 5 minutes) [after the verification process completed]	The machine failed to verify the host name or domain names in DNS. Check the DNS settings, if the problem persists, contact the local system administrator. Machine services that require fully qualified domain names may be disabled.
Failure of any booklet making / tri-folding functions.	12-720-00	Booklet making unavailable.	Switch the machine off then on, GP 14 . Open Finisher Front Door and Check for Obstructions. If the fault persists, perform the 312-352-00-150 , 312-353-00-150 RAP for LVF BM, or 312-061-00-171 , 312-416-00-171 HVF BM Crease Blade Fault RAP.
Fax job could not be sent at this time, please try again.	20-545-00	A fax job could not be sent.	Fax job could not be sent, re-try. Printing and other machine services are available.
Fax job limit has been reached. Power Off then On and Notify System Administrator.	20-565-00	All jobs IDs allocated cannot create any more.	Switch the machine off then on, GP 14 . Fax and LAN fax are disabled.
Fax line 1 is unavailable. Call for assistance.	20-595-00	Fax service error. Fax line 1 is unavailable.	Fax line 1 is unavailable. Switch the machine off then on, GP 14 . Fax and LAN fax are disabled. Printing and other machine services are unaffected. If the fault persists, perform the 320-331-00 , 320-338-00 , 320-339-00 , 320-341-00 , 320-345-00 RAP.
Fax line 1 is unavailable. Check line connection Or notify your System Administrator.	20-562-00	No communication on fax line 1.	User intervention is required to check the external phone line connection. Fax and LAN fax are disabled. Printing and other machine services are unaffected. If the fault persists, perform the 320-331-00 , 320-338-00 , 320-339-00 , 320-341-00 , 320-345-00 RAP.

Table 1 Status messages A to F

UI Message	Status Code	Reason for Message	Reference/Action
Fax line 2 is unavailable. Call for assistance.	20-572-00	Fax service error. Fax line 2 is unavailable.	Switch the machine off then on, GP 14 . Fax and LAN fax are degraded. Printing and other machine services are unaffected. If the fault persists, perform the 320-327-00 , 320-332-00 , 320-340-00 RAP.
Fax line 2 is unavailable. Check line connection Or notify your System Administrator.	20-563-00	No communication on fax line 2.	User intervention is required to check the external phone line connection. Fax and LAN fax are disabled. Printing and other machine services are unaffected. If the fault persists, perform the 320-327-00 , 320-332-00 , 320-340-00 RAP.
Fax line 2 is unavailable. Notify your System Administrator.	03-548-00	Extended fax not detected or confirmed.	Check the fax line connection. If the fault persists, perform the 303-401-00 , 303-403-00 RAP.
Fax line 2 is unavailable. Notify your System Administrator.	20-550-00	Extended fax card failure detected.	Switch the machine off then on, GP 14 . Fax service can continue from line 1. Printing and other machine services are available.
Fax memory error. Power Off then On and Notify System Administrator.	03-549-00	Fax POST failure status.	Switch the machine off, then on GP 14 . If the fault persists, perform the 303-401-00 , 303-403-00 RAP.
Fax memory is low. Contact your System Administrator.	20-546-00	Not enough memory to use fax service.	Switch the machine off then on, GP 14 . Fax and LAN fax are disabled. Printing and other machine services are unaffected. If the fault persists, perform the 320-323-00 , 320-324-00 RAP.
Fax memory is low. Contact your System Administrator.	20-547-00	Fax memory is low.	User intervention is required to delete unnecessary mailbox files or fax jobs stored for polling. Fax and LAN fax services are disabled. Printing and other machine services are unaffected. If the fault persists, perform the 320-323-00 , 320-324-00 RAP.
Fax Service is unavailable. Turn machine off, then on.	20-580-00	NVM values supplied by the fax are invalid. Fax NVM data error.	No service action required. Fax and LAN fax are disabled. Printing and other machine services are unaffected.

Table 1 Status messages A to F

UI Message	Status Code	Reason for Message	Reference/Action
Fax system error. Power Off then On and Notify System Administrator.	20-556-00	Fax service error. Reset fax service.	Fax and LAN fax are disabled. Switch the machine off then on, GP 14 . Printing and other machine services are unaffected. If the fault persists, perform the 320-331-00, 320-338-00, 320-339-00, 320-341-00, 320-345-00 RAP.
Fax system error. Power Off then On and Notify System Administrator.	20-558-00	Fax memory error.	Fax and LAN fax are disabled. Switch the machine off then on, GP 14 . Printing and other machine services are unaffected. If the fault persists, perform the 320-322-00 RAP.
Fax system error. Power Off then On and Notify System Administrator.	20-559-00	Fax service error.	Fax and LAN fax are disabled. Switch the machine off then on, GP 14 . Printing and other machine services are unaffected. If the fault persists, perform the 320-320-00 RAP.
Fax system error. Power Off then On and Notify System Administrator.	20-570-00	Fax service error.	Switch the machine off then on, GP 14 . Fax and LAN fax are disabled. Printing and other machine services are unaffected.
Fax system error. Power Off then On and Notify System Administrator.	20-571-00	Fax service error.	Fax line 1 is unavailable. Switch the machine off then on, GP 14 . Fax and LAN fax are disabled. Printing and other machine services are unaffected. If the fault persists, perform the 320-331-00, 320-338-00, 320-339-00, 320-341-00, 320-345-00 RAP.
Finisher Communications Error. Check Cabling. Power Off then On.	12-762-00	Communication failure between SBC and finisher.	Switch the machine off then on, GP 14 . Check the finisher communication harness. If the fault persists, perform the 303-360-00, 303-455-00, 303-800-00 RAP.
Finisher has gone back on line.	12-742-00	Pause to unload timer expiry.	No action necessary.
Finisher is just about to go back on line.	12-741-00	Pause to unload time-out warning.	Finisher output tray is lowering to allow unloading. User intervention is required to unload the tray. Print and copy services are not available during unloading; other machine services are unaffected.

Table 1 Status messages A to F

UI Message	Status Code	Reason for Message	Reference/Action
Finisher Main Tray is full.	12-730-00	The stacker tray is full (LVF BM and 2K LCSS).	The middle output bin is full. This output bin needs to be unloaded. Printing to this output bin is disabled.
Finisher Main Tray is nearly full.	12-734-00	Stacker tray bin is nearly full.	No action necessary.
Finisher Main Tray is out of service. Power Off then On and Notify System Administrator.	12-665-00	2k LCSS bin 1 out of service status.	Switch the machine off then on, GP 14 . Open Finisher Front Door and Check for Obstructions.
Finisher Main Tray out of service. Check for obstructions in the Main Tray.	12-902-00	Stacker tray fault.	Switch the machine off then on, GP 14 . Check for obstructions in the tray.
Finisher offline for unloading.	12-740-00	Tray ready for unloading.	Finisher output tray has lowered to allow unloading. User intervention is required to unload the tray. Print and copy services are not available during unloading; other machine services are unaffected.
Finisher Top Tray is full. Empty Top Tray.	12-692-00	The 2K LCSS finisher top tray is full.	Empty the top tray.
Finisher Top Tray is nearly full.	12-729-00	The finisher top output bin is nearly full.	The top output bin is nearly full. This output bin may need to be unloaded soon. Printing can continue.
Fuser is missing or communications problems with fuser CRUM.	10-547-00	Fuser is missing or CRUM communications problems.	Ensure the fuser module is correctly installed. If necessary, switch the machine off, GP 14 . Re-install the fuser then switch the machine on. If necessary, install a new fuser, PL 10.8 Item 1 .
Fuser is missing or communications problems with fuser CRUM.	10-547-01	Fuser is missing or CRUM communications problems.	Ensure the fuser module is correctly installed. If necessary, switch the machine off, GP 14 . Re-install the fuser then switch the machine on. If necessary, install a new fuser, PL 10.8 Item 1 .

Table 1 Status messages A to F

UI Message	Status Code	Reason for Message	Reference/Action
Fuser is missing or communications problems with fuser CRUM.	10-547-02	Fuser is missing or CRUM communications problems.	Ensure the fuser module is correctly installed. If necessary, switch the machine off, GP 14 . Re-install the fuser then switch the machine on. If necessary, install a new fuser, PL 10.8 Item 1 .
Fuser is missing or communications problems with fuser CRUM.	10-548-00	Fuser is missing or CRUM communications problems.	Ensure the fuser module is correctly installed. If necessary, switch the machine off, GP 14 . Re-install the fuser then switch the machine on. If necessary, install a new fuser, PL 10.8 Item 1 .
Fuser is missing or communications problems with fuser CRUM.	10-548-01	Fuser is missing or CRUM communications problems.	Ensure the fuser module is correctly installed. If necessary, switch the machine off, GP 14 . Re-install the fuser then switch the machine on. If necessary, install a new fuser, PL 10.8 Item 1 .
Fuser is missing or communications problems with fuser CRUM.	10-548-02	Fuser is missing or CRUM communications problems.	Ensure the fuser module is correctly installed. If necessary, switch the machine off, GP 14 . Re-install the fuser then switch the machine on. If necessary, install a new fuser, PL 10.8 Item 1 .
Fuser module is incompatible with the device. Fuser should be kept and repackaged.	10-537-02	The Fuser module is incompatible with the device (Market region, voltage, service plan type, etc)	Check the market region of the machine, dC134 . Install the correct fuser, PL 10.8 Item 1 .
Fuser module is incompatible with the device. Fuser should be kept and repackaged.	10-537-01	The Fuser module is incompatible with the device (Market region, voltage, service plan type, etc)	Check the market region of the machine, dC134 . Install the correct fuser, PL 10.8 Item 1 .
Fuser module is incompatible with the device. Fuser should be kept and repackaged.	10-537-02	The Fuser module is incompatible with the device (Market region, voltage, service plan type, etc)	Check the market region of the machine, dC134 . Install the correct fuser, PL 10.8 Item 1 .
Fuser temperature control failure.	10-506-00	Fuser is above maximum fuser operating temperature - shutdown requested.	Printing may be delayed. No user intervention required.

Table 2 Status messages G to N

UI Message	Status Code	Reason for Message	Reference/Action
Hole punch not detected (Missing). Please insert the hole punch.	12-640-00	The finisher punch unit is missing or incorrectly installed.	Ensure that the punch unit is correctly installed.
Hole Punching is unavailable. Check for obstructions in the hole puncher.	12-908-00	The finisher hole punch head motor has failed.	Clear the paper jam. Switch the machine off then on, GP 14 . If the fault persists, perform 312-043-00-110 , 312-046-00-110 RAP for the 2K LCSS, 312-043-00-150 , 312-046-00-150 RAP for the LVF BM.
Hole punching not available. Power Off then On and Notify System Administrator.	12-579-00	Hole punching is not available.	Check that the hole punch unit is correctly installed. Switch the machine off then on, GP 14 . If the fault persists, perform the 312-043-00-150 , 312-046-00-150 RAP for the LVF, 312-043-00-110 , 312-046-00-110 for the 2K LCSS.
HVF finisher top tray open.	12-601-01	The HVF top cover is open.	Close the HVF top tray, PL 12.100 Item 9 .
Image Disk is offline. Job(s) may take longer than normal. Notify System Administrator.	19-511-00	Image disk unavailable. Performance is degraded. Service is required.	Switch the machine off then on, GP 14 . The system is unable to read from the image disk. Jobs may take longer than normal. If the fault persists, perform the 319-300-00 to 319-310-00 RAP.
Image Disk offline. Power Off then On and Notify System Administrator.	19-512-00	The image disk cannot read or write and must be serviced. Power off/ power on will temporarily alleviate the problem.	Switch the machine off then on, GP 14 . The system is unable to read from the image disk. Printing has stopped. If the fault persists, perform the 319-300-00 to 319-310-00 RAP.
Image Overwrite is in progress... the machine is Offline.	17-590-00	Image overwrite is in progress.	No service action required, please wait for the overwrite to finish.
Image Rotation is not available. Power off then on and notify System Administrator.	03-564-00	Image rotation is not available.	Switch the machine off then on, GP 14 .

Table 2 Status messages G to N

UI Message	Status Code	Reason for Message	Reference/Action
Immediate Job Overwrite Failed. Perform an On Demand Overwrite immediately.	16-535-00	Immediate job overwrite failed.	Immediate job overwrite failed. Administrator intervention is required to perform an ODIO immediately.
Immediate Job Overwrite Failed. Perform an On Demand Overwrite immediately.	19-506-00	Immediate job overwrite failed.	Administrator intervention is required to perform an ODIO immediately. Printing can continue. Other machine services are unaffected.
Incompatible Fax software detected (upgrade required).	03-546-00	Incompatible fax software detected at power on.	The embedded fax software version is incompatible with the system. A software upgrade should be performed, GP 4. Refer to the 303-417-00 RAP.
Incompatible Fuser Module. Contact your System Administrator.	10-537-00	Fuser module is not compatible with the device.	Check the market region of the machine, dC134. Install the correct fuser, PL 10.8 Item 1.
Incompatible Fuser Module. Contact your System Administrator.	10-537-01	Fuser module is not compatible with the device.	Check the market region of the machine, dC134. Install the correct fuser, PL 10.8 Item 1.
Incompatible or unknown Finisher detected. Check Finisher compatibility.	12-765-00	The SBC interface indicates that the finisher is incompatible/unknown.	Switch the machine off then on, GP 14. Check the finisher communication harness.
Incompatible Print Cartridge. Contact your System Administrator.	09-677-00	The print cartridge in the machine is metered. The machine is sold. This is an incompatible combination that results in revenue loss.	Install a correct print cartridge. If the fault persists, perform the 392-399-00 RAP.
Incomplete system information. Power Off then On and Notify System Administrator.	16-578-00	The network controller ESS fault log service process has stopped.	Switch the machine off then on, GP 14. Printing and scanning can continue. If the fault persists, perform the 316E Network Fault Checkout RAP.

Table 2 Status messages G to N

UI Message	Status Code	Reason for Message	Reference/Action
Incomplete system information. Power Off then On and Notify System Administrator.	16-580-00	The network controller ESS configuration utility process has stopped.	Switch the machine off then on, GP 14. Printing and scanning can continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
Incomplete system information. Power Off then On and Notify System Administrator.	16-583-00	The network controller ESS counters utility process has stopped.	Switch the machine off then on, GP 14. Printing and scanning can continue.
Incomplete system information. Power Off then On and Notify System Administrator.	16-585-00	The network controller ESS configuration synchronization process has stopped.	Switch the machine off then on, GP 14. Print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
Incomplete system information. Power Off then On and Notify System Administrator.	16-586-00	The network controller agent process has stopped.	Switch the machine off then on, GP 14. Print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
Inserted SIM is incompatible. Replace with a compatible SIM.	22-559-00	SIM card serial number does not match machine serial number.	Perform the 303-405-00, 303-406-00 RAP.
Insufficient memory for Fax job. Notify your System Administrator.	16-555-00	Network controller - not enough physical memory is configured on the platform to support LAN fax.	Additional memory required to support fax. The fax service is not available. Switch the machine off then on, GP 14.
Internet Fax Service cannot Register. Power Off then On and Notify System Administrator.	17-553-00	Internet fax service cannot register.	Switch the machine off then on, GP 14. Internet fax is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
Invalid original size detected. It will be treated as the next largest standard size.	22-504-05	Invalid mixed size original pair detected.	Ensure the originals are not creased or folded If the fault persists, perform the 305A RAP.

Table 2 Status messages G to N

UI Message	Status Code	Reason for Message	Reference/Action
IOT Humidity Sensor Averaged reading out of limits.	91-366-00	IOT humidity sensor averaged reading out of limits.	Perform the 391-375-00 RAP.
IOT Temperature Sensor averaged reading out of limits.	91-376-00	IOT temperature sensor averaged reading out of limits.	Perform the 391-365-00 RAP.
Jam in Horizontal Transport.	10-200-00	Jam in the horizontal transport. Includes sheets covering sensors or late to sensors.	Clear the jam. If the fault persists, perform the 310-170-00 or 310-171-00 RAP.
Jam in Horizontal Transport.	10-200-01	Jam in the horizontal transport. Includes sheets covering sensors or late to sensors.	Clear the jam. If the fault persists, perform the 310-170-00 or 310-171-00 RAP.
Jam in Horizontal Transport.	10-200-02	Jam in the horizontal transport. Includes sheets covering sensors or late to sensors.	Clear the jam. If the fault persists, perform the 310-170-00 or 310-171-00 RAP.
Jam in tray 6 docking area.	76-110-00	Jam in tray 6 docking area.	User intervention is required to clear the paper jam in tray 6. Print and Copy services are disabled.
Jam in tray 6 docking area.	76-110-01	Jam in tray 6 docking area.	User intervention is required to clear the paper jam in tray 6. Print and Copy services are disabled.
Jam in tri-folder.	12-747-00	Page detected near tri-folder exit sensor.	Clear the paper jam. If the fault persists, perform the 312-185-00-171 to 312-187-00-171 Tri-Folder Exit Sensor and Assist Sensor RAP.
Job queue error. Power Off then On and Notify System Administrator.	16-574-00	ESS queue utility has failed. Only a partial list is available for display at this time.	Switch the machine off then on, GP 14 . Printing cannot continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
Job Status not available. Power Off then On and Notify System Administrator.	16-579-00	The network controller ESS completed job log service has stopped.	Switch the machine off then on, GP 14 . Printing and scanning can continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
LAN Fax Service error. Power Off then On and Notify System Administrator.	16-595-00	The network controller LAN fax service has failed.	Switch the machine off then on, GP 14 . Print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.

Table 2 Status messages G to N

UI Message	Status Code	Reason for Message	Reference/Action
LE late to fin entry sensor clearance.	10-201-00	Sheet late to finisher entry sensor. Jam in horizontal transport. Includes sheets covering sensors or late to sensors.	Clear the jam. If the fault persists, perform the 310-171-00 RAP.
LE late to fin entry sensor clearance.	10-201-01	Sheet late to finisher entry sensor. Jam in horizontal transport. Includes sheets covering sensors or late to sensors.	Clear the jam. If the fault persists, perform the 310-171-00 RAP.
LE late to fin entry sensor clearance.	10-201-03	Sheet late to finisher entry sensor. Jam in horizontal transport. Includes sheets covering sensors or late to sensors.	Clear the jam. If the fault persists, perform the 310-171-00 RAP.
Local UI authentication in progress.	01-561-00	Local UI authentication in progress	Wait until authentication has completed.
Lockdown Security Remediation Failed	17-566-00	At least one of the Lockdown security settings is not compliant.	User intervention is required to contact the local system administrator. Device services are unaffected.
Machine configuration locked.	03-601-00	Displayed when the machine speed is invalid.	Switch the machine off then on, GP 14 . If the fault persists, perform the 303-405-00 , 303-406-00 RAP.
Machine entering SW upgrade mode. ALL jobs will be cancelled.	16-550-00	Machine entering software upgrade mode - all jobs will be canceled.	The machine entered a software upgrade mode (all jobs will be deleted). No user intervention is required. Machine services are unavailable until the software upgrade process has completed.
Machine is in a non-customer mode.	22-505-17	Machine is in a non-customer mode.	Enter customer mode. Enter dC131 Read/Write and check that NVM ID 616-014 = 4.
Machine power on failed. Power Off then On and Notify System Administrator.	02-590-00	Configurable services are not stable at power on.	Switch the machine off then on, GP 14 . If the fault persists, perform the 302-390-00 RAP.
Middle output bin (stacker tray) is full.	12-730-01	Stacker tray full.	The finisher main tray is full. User intervention is required to empty the tray. Print and copy services can continue to other output trays; other machine services are unaffected

Table 2 Status messages G to N

UI Message	Status Code	Reason for Message	Reference/Action
Misfeed in the Document Feeder.	05-326-00	Document in the SPDH at power on or exit from power save.	Remove all documents from the SPDH. If the fault persists, perform the 305-330-00, 305-331-00 RAP.
Misfeed in the Document Feeder.	05-330-00	Jam in document feeder, feed sensor covered.	Perform the 305-330-00, 305-331-00 RAP.
Misfeed in the Document Feeder.	05-335-00	Jam in document feeder, takeaway sensor covered.	Perform the 305-335-00, 305-336-00 RAP.
Misfeed in the Document Feeder.	05-340-00	Jam in document feeder, reg sensor covered.	Perform the 305-340-00, 305-341-00 RAP
Misfeed in the Document Feeder.	05-343-00	Jam in document feeder, side 2 reg sensor covered.	Perform the 305-342-00, 305-343-00 RAP
Misfeed in the Document Feeder.	05-344-00	Jam in document feeder, calibration home sensor covered.	Perform the 305-959-00 RAP
Misfeed in the Document Feeder.	05-361-00	Jam in document feeder, feed sensor and takeaway sensor covered.	Open the top cover, remove any documents. As necessary, perform the 305-330-00, 305-331-00 and 305-335-00, 305-336-00 RAPs.
Misfeed in the Document Feeder.	05-362-00	Jam in document feeder, feed, takeaway, reg or side 2 reg sensor covered.	Open the top cover, remove any documents. As necessary, perform the 305-330-00, 305-331-00 RAP, 305-335-00, 305-336-00, 305-340-00, 305-341-00 RAP or 305-342-00, 305-343-00 RAP.
Misfeed in the Document Feeder.	05-363-00	Jam in document feeder, reg sensor and side 2 reg sensor covered.	Remove any documents. As necessary, perform the 305-340-00, 305-341-00 and 305-342-00, 305-343-00 RAP.
Misfeed in the Document Feeder.	05-570-00	Reload originals to start job recovery following a jam in the document feeder.	Remove any documents. Re-order and reload originals. As necessary, perform the 305-335-00, 305-336-00, 305-340-00, 305-341-00 or 305-342-00, 305-343-00 RAP.
Misfeed in tray 1.	81-201-00	Misfeed in tray 1.	Clear the paper jam in tray 1.
Misfeed in tray 1.	81-201-01	Misfeed in tray 1.	Clear the paper jam in tray 1.
Misfeed in tray 2.	81-202-00	Misfeed in tray 2.	Clear the paper jam in tray 2.
Misfeed in tray 2.	81-202-01	Misfeed in tray 2.	Clear the paper jam in tray 2.
Misfeed in tray 3.	81-203-00	Misfeed in tray 3.	Clear the paper jam in tray 3.
Misfeed in tray 3.	81-203-01	Misfeed in Tray 3.	Clear the paper jam in tray 3.

Table 2 Status messages G to N

UI Message	Status Code	Reason for Message	Reference/Action
Misfeed in tray 3.	81-203-02	Misfeed in tray 3.	Clear the paper jam in tray 3.
Misfeed in tray 4.	81-204-00	Misfeed in tray 4.	Clear the paper jam in tray 4.
Misfeed in tray 4.	81-204-01	Misfeed in tray 4.	Clear the paper jam in tray 4.
Misfeed in tray 4.	81-204-02	Misfeed in tray 4.	Clear the paper jam in tray 4.
Misfeed in tray 6: A3 PFP kit.	76-106-01	Misfeed in tray 6: A3 PFP kit.	User intervention is required to clear the paper jam in tray 6. Print and Copy services are disabled.
Misfeed in tray 6: A4 PFP dedicated.	76-106-00	Misfeed in tray 6: A4 PFP dedicated.	User intervention is required to clear the paper jam in tray 6. Print and Copy services are disabled.
Network Connectivity Configuration Server not available. Notify your System Administrator.	16-590-00	The network controller CCS process has failed.	Switch the machine off then on, GP 14. Print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
Network controller error. Notify your system administrator.	22-562-00	Network controller error.	Xerox standard accounting (XSA) is unavailable. User intervention is required to power off/on the machine to enable XSA. All machine services are disabled.
Network Controller error. Some Network Services not available. Notify System Administrator.	16-536-00	The XSA service is unavailable. Network controller error.	Switch the machine off then on, GP 14.
Network Controller not available. Power Off then On and Notify System Administrator.	03-518-00	The network controller is not available.	Perform the 303-331-00, 303-332-00 RAP.
Network Printing disabled. Notify your System Administrator.	16-571-00	Network controller - print service has failed.	Switch the machine off then on, GP 14. Printing cannot continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
Network Printing disabled. Notify your System Administrator.	16-572-00	Network controller - print service has failed.	Switch the machine off then on, GP 14. Printing cannot continue. If the fault persists, perform the 316E Network Fault Checkout RAP.

Table 2 Status messages G to N

UI Message	Status Code	Reason for Message	Reference/Action
Network Printing disabled. Notify your System Administrator.	16-573-00	Network controller - ESS print service has failed.	Switch the machine off then on, GP 14. Printing cannot continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
Network Services involving a Parallel Port are not available. Notify System Administrator.	16-569-00	Network controller - parallel ports are not available.	Switch the machine off then on, GP 14. If the fault persists, perform the 316E Network Fault Checkout RAP.
Network Services involving a Serial Port are not available. Notify System Administrator.	16-589-00	The network controller serial port connectivity has failed.	Switch the machine off then on, GP 14. Print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
Network Services involving AppleTalk are not available. Notify your System Administrator.	16-565-00	Apple Talk printing error. Printing can continue using other submission methods.	Switch the machine off then on, GP 14. Printing can continue if other submission methods are used.
Network Services involving PostScript are not available. Notify your System Administrator.	16-567-00	Network controller - a PostScript interpreter error has occur, causing the process to fail.	Switch the machine off then on, GP 14. Printing can continue if other submission methods are used.
Network Services involving Scan to E-mail are not available. Notify System Administrator.	16-505-00	Insufficient memory for e-mail.	Switch the machine off then on, GP 14. If the fault persists check the network connections.
Network Services involving Scan to E-mail are not available. Notify System Administrator.	16-510-00	Scan to e-mail process failed.	Switch the machine off then on, GP 14. If the fault persists check network connections

Table 2 Status messages G to N

UI Message	Status Code	Reason for Message	Reference/Action
Network Services involving Scan to E-mail are not available. Notify System Administrator.	16-514-00	Post office protocol (POP3) (for inbound Internet fax messages) process failed.	Switch the machine off then on, GP 14.
Network Services involving Scan to E-mail are not available. Notify System Administrator.	16-517-00	SMTP process failed.	Switch the machine off then on, GP 14.
Network Services related to Internet Fax are not available. Notify System Administrator.	16-511-00	Internet fax process failed.	Switch the machine off then on, GP 14. If the fault persists check network connections
Network Services using BOOTP Initialization not available. Notify System Administrator.	16-559-00	Network controller BOOTP initialization failure.	Check the BOOTP server and its network connection. Switch the machine off then on, GP 14.
Network Services using DC Platform recovery not available. Notify System Administrator.	16-557-00	Network controller DC platform recovery failed.	Switch the machine off then on, GP 14.
Network Services using DC Platform recovery not available. Notify System Administrator.	16-558-00	Network controller DC communications failed.	Switch the machine off then on, GP 14.
Network Services using WS Edge Client are not available. Notify your System Administrator.	16-518-00	Web services edge client interface does not work.	Switch the machine off then on, GP 14. If the fault persists check network connections.

Table 2 Status messages G to N

UI Message	Status Code	Reason for Message	Reference/Action
Network Services using WS Edge Client are not available. Notify your System Administrator.	16-519-00	Web services client controller does not work.	Switch the machine off then on, GP 14 . If the fault persists check network connections.
Network Services using WS Edge Client are not available. Notify your System Administrator.	16-520-00	Web services server controller interface does not work.	Switch the machine off then on, GP 14 . If the fault persists check network connections.
Network Services with Job Based Accounting not available. Notify your System Administrator.	16-501-00	Job based accounting not enough DC memory. Some network controller services are not available.	Not enough CCM memory to run the network accounting feature. Perform the 316E Network Fault Checkout RAP.
Network Services with Port 9100 Process are not available. Notify System Administrator.	16-599-00	Raw TCP/IP printing (port 9100) process has failed.	Switch the machine off then on, GP 14 . Printing can continue with other submission methods. If the fault persists, perform the 316E Network Fault Checkout RAP.
Network Services with Scan Compressor are not available. Notify your System Administrator.	16-529-00	The network controller's Scan compressor service process has stopped.	Some network service are not available. The network controller connection is about to be reset. No user intervention is required.
New K Unit detected	09-510-00	Detection of new K toner cartridge	None.
No communications with Xerox SMart eSolutions server. Contact System Administrator.	17-562-00	Registration with edge server fails.	User intervention is required to review SMart eSolutions settings. Machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.

Table 2 Status messages G to N

UI Message	Status Code	Reason for Message	Reference/Action
No communications with Xerox SMart eSolutions server. Contact System Administrator.	17-563-00	Communication with Edge server fails.	User intervention is required to review SMart eSolutions settings. Machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
No IPv4 Router.	17-529-02	No IPv4 router/gateway configured.	User intervention required to configure an IPv4 router address, if the problem persists, contact the local system administrator. Machine services that require routable IPv4 connectivity are disabled.
No IPv6 Router Advertisement.	17-530-02	No routable IPv6 address configured.	User intervention required to check the IPv6 configuration, if the problem persists, contact the local system administrator. All machine services that require routable IPv6 connectivity are disabled.
No response from DHCP/BOOTP server and no zero configuration IPv4 address.	17-525-02	DHCP/BOOTP Error: DHCP/BOOTP server not found and zero configuration (auto IP) disabled. No IPv4 address configured.	User intervention required to configure IPv4, if the problem persists, contact the local system administrator. All machine services that require IPv4 connectivity are disabled
No response from DHCP/BOOTP server and zero configuration IPv4 address configured.	17-527-02	DHCP/BOOTP Error: DHCP/BOOTP server not found and zero configuration (auto IP) successful. Device has a non-routable IPv4 address configured.	User intervention required to configure an IPv4 address, if the problem persists, contact the local system administrator. All machine services that require routable IPv4 connectivity are disabled
No response from DHCPv6 server.	17-533-02	DHCPv6 Error: DHCPv6 server not found. No DHCPv6 assigned IPv6 address configured.	User intervention required to obtain a DHCPv6 address, if the problem persists, contact the local system administrator. All machine services that require IPv6 connectivity may be disabled
No tray is configured with the required paper size.	22-504-04	No paper tray is configured to run the stock size required for this job.	Print and copy services are disabled, other machine services are unaffected Job must be deleted. Paper tray must be configured to match the job. If the fault persists, perform the 322-310-04 to 322-318-04 RAP.

Table 3 Status messages O to R

UI Message	Status Code	Reason for Message	Reference/Action
Obtain a Supplies Plan Activation Code from your Xerox equipment supplier.	02-517-00	The CCS is counting down grace prints until a valid authorisation PIN is entered at the UI.	User intervention is required to enter a valid activation code. All services are available until all courtesy prints are used.
Obtain a Supplies Plan Activation Code from your Xerox equipment supplier.	02-518-00	The grace prints period has expired.	User intervention is required to enter a valid activation code. Print services are disabled.
Obtain a Supplies Plan Activation Code from your Xerox equipment supplier.	22-582-00	Service plan registration warning.	Enter the registration code.
Obtain a Supplies Plan Activation Code from your Xerox equipment supplier.	22-584-00	Service plan registration expired.	Enter the registration code.
On Demand Overwrite Failed. Perform an On Demand Overwrite immediately.	17-591-00	HDD or fax ODIO failed.	ODIO error. Administrator intervention is required to perform an ODIO immediately. Printing can continue; other machine services are unaffected.
On Demand Overwrite Failed. Perform an On Demand Overwrite immediately.	19-507-00	HDD or fax ODIO failed.	ODIO error. Administrator intervention is required to perform an ODIO immediately. Printing can continue; other machine services are unaffected.
One or more queued jobs need resources.	22-513-04	One or more queued jobs in the system are being held due to lack of resources.	Add paper to the tray being used to clear queued job. Jobs will be held until resources become available. Other machine services are unaffected.
One or more queued jobs need resources.	22-515-04	One or more queued jobs in the system is being held.	Add paper to the tray being used to clear queued job.

Table 3 Status messages O to R

UI Message	Status Code	Reason for Message	Reference/Action
Option Install Error.	22-555-00	Option Install Error.	System administrator intervention is required to complete option installation. The machine is unavailable.
Option removal error.	22-556-00	Option removal error.	System Administrator intervention is required to complete option removal. The machine is unavailable.
Paper jam behind the left side door.	81-200-01	Jam in left door when sheets fed from trays 1-4. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.
Paper jam behind the left side door.	81-200-02	Jam in left door when sheets fed from trays 1-4. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.
Paper Jam behind the left side door.	81-200-03	Jam in left door when sheets fed from trays 1-4. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.
Paper jam in booklet compiler.	12-717-01	Page over HVF BM compiler paper present sensor (located near staple heads). Cleared via area 6e.	Clear the paper jam. If the fault persists, perform the 312-183-00-171 , 312-184-00-171 HVF BM Paper Jam RAP.
Paper jam in booklet compiler.	12-717-02	Page over HVF BM compiler paper present sensor (located near staple heads). Cleared via area 6a and 6e.	Clear the paper jam. If the fault persists, perform the 312-183-00-171 , 312-184-00-171 HVF BM Paper Jam RAP.
Paper jam in booklet compiler.	12-717-03	Sheet over the LVF BM compiler paper present sensor.	Clear the LVF BM paper present sensor area 6e. If the fault persists, perform the 312-184-00-150 , 312-494-00-150 , 312-496-00-150 RAP.
Paper jam in finisher in buffer path.	12-752-00	Page over buffer path sensor.	Clear the paper jam. If the fault persists, perform the 312-141-00-171 , 312-142-00-171 HVF Buffer Path Sensor RAP.
Paper jam in inserter tray.	12-732-00	Page detected near PPI pickup sensor.	Clear the paper jam. If the fault persists, perform the 312-191-00-171 , 312-193-00-171 , 312-194-00-171 , 312-196-00-171 Inserter Paper Jam RAP.

Table 3 Status messages O to R

UI Message	Status Code	Reason for Message	Reference/Action
Paper jam in the booklet maker.	12-636-01	Sheet over BM exit sensor.	Clear the area. If the fault persists, perform the 312-181-00-171 , 312-182-00-171 HVF BM Exit Jam RAP.
Paper jam in the booklet maker.	12-636-02	Sheet over BM exit sensor.	Clear the area. If the fault persists, perform the 312-181-00-171 , 312-182-00-171 HVF BM Exit Jam RAP.
Paper jam in the booklet maker.	12-636-03	Sheet over the booklet maker exit sensor (LVF BM).	Clear the jam from the output bin. If the fault persists, perform the 312-180-00-150 , 312-182-00-150 RAP.
Paper jam in the finisher paper path.	12-626-00	Page over HVF buffer position sensor.	Clear the paper jam. If the fault persists, perform the 312-157-00-171 , 312-158-00-171 HVF Buffer Position Sensor RAP RAP.
Paper jam in the finisher paper path.	12-627-01	Page over exit HVF into BM sensor (located in area 6a), cleared via area 6a and 6e.	Clear the paper jam. If the fault persists, perform the 312-160-00-150 , 312-162-00-150 Booklet Maker Entry Jam RAP.
Paper jam in the finisher paper path.	12-627-02	Page over exit HVF into BM sensor (located in area 6a), cleared via area 6a.	Clear the paper jam. If the fault persists, perform the 312-160-00-150 , 312-162-00-150 Booklet Maker Entry Jam RAP.
Paper Jam in the Finisher.	12-611-00	Paper jam near the entry to the finisher unit.	Clear the paper jam.
Paper Jam in the Finisher.	12-612-00	Paper is detected over the hole punch position sensor at power-up, interlock status change or after shutdown. (2K LCSS).	Clear the paper jam.
Paper Jam in the Finisher.	12-612-03	Paper is detected over the hole punch position sensor at power-up, interlock status change or after shutdown. (LVF BM).	Clear the paper jam.
Paper Jam in the Finisher.	12-618-00	Paper is detected over the top tray exit sensor at power-up, interlock status change or after shutdown (2K LCSS).	Clear the paper jam.
Paper Jam in the Finisher.	12-618-03	Paper is detected over the top tray exit sensor at power-up, interlock status change or after shutdown. (LVF BM).	Clear the paper jam.

Table 3 Status messages O to R

UI Message	Status Code	Reason for Message	Reference/Action
Paper Jam in the Finisher.	12-620-00	Paper is detected over the 2k LCSS compiler exit sensor at power-up, interlock status change or after shutdown.	Clear the paper jam. If the fault persists, perform the 312-151-00-110 , 312-152-00-110 RAP.
Paper Jam in the Finisher.	12-620-03	Paper is detected over the LVF BM compiler exit sensor at power-up, interlock status change or after shutdown.	Clear the paper jam. If the fault persists, perform the 312-151-00-150 , 312-152-00-150 RAP.
Paper Jam in the Finisher.	12-630-03	Sheet over the booklet maker entry sensor (LVF BM).	Clear the area. If the fault persists, perform the 312-160-00-150 , 312-162-00-150 RAP.
Paper jam in Tri-Fold unit.	12-718-00	Page over HVF BM tri-folder assist sensor.	Clear the paper jam. If the fault persists, perform the 312-185-00-171 to 312-187-00-171 Tri-Folder Exit Sensor and Assist Sensor RAP.
Paper jam in Tri-Fold unit.	12-719-00	Page over tri-folder exit sensor.	Clear the paper jam. If the fault persists, perform the 312-185-00-171 to 312-187-00-171 Tri-Folder Exit Sensor and Assist Sensor RAP.
Paper jam near entry to the tri-fold unit.	12-629-00	Page over tri-folder entry sensor.	Clear the paper jam.
Paper jam near the entry to the booklet maker.	12-630-01	Sheet over BM entry sensor (located in area 6e) cleared via area 6e.	Clear the paper jam. If the fault persists, perform the 312-113-00-171 , 312-114-00-171 , 312-190-00-171 , 312-192-00-171 HVF BM Entry RAP.
Paper jam near the entry to the booklet maker.	12-630-02	Sheet over BM entry sensor (located in area 6e) cleared via area 6e.	Clear the paper jam. If the fault persists, perform the 312-113-00-171 , 312-114-00-171 , 312-190-00-171 , 312-192-00-171 HVF BM Entry RAP.
Paper jam near the entry to the finisher unit.	12-610-00	Paper is detected over the 2K LCSS entry sensor.	Clear the paper jam. If the fault persists, perform the 312-125-00-110 , 312-126-00-110 , 312-199-00-110 RAP.
Paper jam near the entry to the finisher unit.	12-610-01	Sheet detected over the HV entry sensor.	Clear the paper jam. If the fault persists, perform the 312-125-00-171 , 312-126-00-171 HVF Entry Sensor RAP.

Table 3 Status messages O to R

UI Message	Status Code	Reason for Message	Reference/Action
Paper jam near the entry to the finisher unit.	12-610-03	Paper is detected over the LVF BM entry sensor.	Clear the paper jam. If the fault persists, perform the 312-125-00-150 , 312-126-00-150 , 312-199-00-150 RAP.
Paper jam near the inserter.	12-624-00	Page over HVF inserter pickup sensor.	Clear the paper jam. If the fault persists, perform the 312-191-00-171 , 312-193-00-171 , 312-194-00-171 , 312-196-00-171 Inserter Paper Jam RAP.
Paper jam near the inserter.	12-625-00	Page over HVF inserter tab standby sensor.	Clear the paper jam.
Paper jam near the output to the HVF stacker tray.	12-620-01	Sheet over HVF 2nd top exit sensor.	Clear the paper jam. If the fault persists, perform the 312-166-00-171 HVF BM Compiler Exit Jam RAP.
Paper jam near the output to the stacker tray.	12-628-00	Page over the compiler exit sensor.	Clear the paper jam. If the fault persists, perform the 312-198-00-171 , 312-199-00-171 HVF Paper Jam RAP.
Paper jam near the top exit.	12-618-01	Sheet detected over top tray exit sensor	Clear the paper jam.
Paper required for the current job is not available.	22-511-04	Media required for current marking job is not loaded.	Load the correct paper to complete the held job or cancel the held job. Other machine services are unaffected.
PFP (tray 6) adjustable is open.	76-302-00	Adjustable tray 6 (PFP) tray loading door is opened/elevate switch is flipped down.	User intervention is required to close the door. Print service can continue if the correct paper is available in other paper trays.
PFP (tray 6) adjustable is open.	76-302-01	Adjustable tray 6 (PFP) tray loading door is opened/elevate switch is flipped down.	User intervention is required to close the door. Print service can continue if the correct paper is available in other paper trays.
PFP (tray 6) dedicated paper tray is open.	76-300-00	Dedicated tray 6 (PFP) tray loading door is opened/elevate switch is flipped down.	User intervention is required to close the door. Print service can continue if the correct paper is available in other paper trays.
PFP (tray 6) dedicated paper tray is open.	76-300-01	Dedicated tray 6 (PFP) tray loading door is opened/elevate switch is flipped down.	User intervention is required to close the door. Print service can continue if the correct paper is available in other paper trays.
PFP (tray 6) dedicated paper tray is open.	76-301-00	Dedicated tray 6 (PFP) tray loading door is opened/elevate switch is flipped down.	User intervention is required to close the door. Print service can continue if the correct paper is available in other paper trays.

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UI Message	Status Code	Reason for Message	Reference/Action
PFP (tray 6) dedicated paper tray is open.	76-301-01	Dedicated tray 6 (PFP) tray loading door is opened/elevate switch is flipped down.	User intervention is required to close the door. Print service can continue if the correct paper is available in other paper trays.
Please complete all steps required by the external accounting device to access this service.	03-558-00	Generic FDI: unable to complete the current job.	Complete all steps required by the external accounting device to continue the job.
Please enter access code into external accounting device to access this service.	03-558-02	Walk up code entry FDI: access code required.	Complete all steps required by the external accounting device to continue the job.
Please insert card into the external accounting device to access this service.	03-558-01	Walk up card entry FDI: access card required.	Complete all steps required by the external accounting device to continue the job.
Please insert Key Counter into the external accounting device to access this service.	03-558-04	Walk up key entry FDI: key counter required.	Complete all steps required by the external accounting device to continue the job.
Please insert money into the external accounting device to access this service.	03-558-03	Walk up coin entry FDI: coin entry required.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job.
Please wait. The scanner is initializing.	03-556-00	Power on while the IIT is being initialized.	No user intervention is required, please wait.
Please wait... Adjustments are in progress.	81-220-00	Post jam clearance initialization.	No service action required, please wait. If the fault persists, switch the machine off, then on, GP 14 .
Please wait... Adjustments are in progress.	81-222-00	TAR Gears don't match NVM settings.	No service action required.

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UI Message	Status Code	Reason for Message	Reference/Action
Please wait... Disk Encryption operation in progress.	17-580-00	Disk encryption is in progress.	No service action required, please wait for encryption to finish.
Please wait... Freeing memory.	19-502-00	Out of memory resources. The machine has run out of image processing memory for the current job.	No user intervention required, please wait, printing will resume after memory is freed. Other machine services are unaffected. If the fault persists, perform the 319-401-00 , 319-402-00 RAP.
Please wait... Fuser is warming up.	10-505-00	Fuser is not at run temperature.	Perform the 310-330-00 , 310-340-00 RAP.
Please wait... Maintenance in progress. Scan, Copy and Print services not available.	03-555-00	The machine has entered intrusive customer tools mode.	Go to dC301 . Perform a copier NVM initialization and NVM data select all.
Please wait... Print Engine cooling in progress.	91-400-00	Print cartridge cooling fan is on.	No service action required.
Please wait... Print Quality Maintenance in progress.	10-010-00	IOT switched into high area coverage recovery mode. No marking, sheets stopped below reg sensor and IOT dead cycling until TC recovers.	Clear any paper jam. Perform the 393-360-00 to 393-364-00 RAP.
Please wait... Printer is warming up.	10-573-00	Warming up.	No service action.
Please wait... The Fax Service is initializing.	20-544-00	The fax service is initializing.	The fax service is re-starting. No user intervention is required. Printing and other machine services are available.
Please wait... The Image Disk is full.	19-513-00	The image disk is full.	Print jobs may be delayed. No service action required. The system is attempting to recover. Printing and other machine services are available.

Table 3 Status messages O to R

UI Message	Status Code	Reason for Message	Reference/Action
Please wait... The scanner is attempting to recover.	03-557-00	Scanner recovery in progress. No user intervention is required; please wait. Copy and scan services will be delayed temporarily; Print and other machine services are unaffected.	None.
Please wait... the system is attempting to recover.	03-561-00	The system is recovering.	Wait until the system recovers.
Please wait... The system is attempting to recover.	19-510-00	System is attempting to recover. Image disk error.	No service action required. Printing and other machine services are unaffected.
Please wait... The system is attempting to recover.	22-501-04	System is in recovery.	Marking service control software error. No user intervention is required, please wait; the system is attempting to recover. All machine services are disabled.
Please wait... Print Engine cooling in progress.	91-378-00	Print cartridge cooling event. IOT temperature is above print cartridge temperature upper threshold.	Perform the 391-377-00 Print Cartridge Cooling Failure RAP.
Post process inserter tray (denoted as tray 7) is empty	12-731-00	Tray 7 (inserter) is empty.	Tray 7 (inserter) is empty. User intervention is required to add paper to tray 7. Print and copy services can continue without inserts; other machine services are unaffected.
Print Head data transfer failure.	61-100-00	CIPS checksum of LED PH data does not match checksum read from the PH itself.	Switch the machine off, then on, GP 14 . If the fault persists, perform the 361-100-00 RAP.
Printer failed to warm up.	10-550-00	Fuser warm up failure.	Perform the 310-330-00 , 310-340-00 Fuser Warm Up Failure RAP.
Provide payment or the current job may be deleted.	03-559-00	Generic FDI: unable to complete the current job due to insufficient funds.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job.
Provide payment or the current job may be deleted.	03-559-04	Walk up key entry FDI: not defined.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job.

Table 3 Status messages O to R

UI Message	Status Code	Reason for Message	Reference/Action
Provide payment or the current job may be deleted.	03-559-05	Walk up FDI. Unable to complete the current job - FDI inactivity timer enabled.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job, select the Close button, then the Job Status button located on the control panel and then your job. If no action is taken, the job will be deleted.
Provide payment or the current job may be deleted.	03-559-06	Walk up coin entry FDI: not defined - FDI inactivity timer disabled.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job. To immediately delete this job, select the Close button, then the Job Status button located on the control panel and then your job. If no action is taken, the job will be deleted.
Provide payment.	03-559-01	Walk up FDI: unable to complete the current job due to insufficient funds.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job.
Provide payment.	03-559-03	Walk up coin entry FDI: not defined - FDI inactivity timer disabled.	The job cannot be completed due to insufficient funds. Complete all steps required by the external accounting device to continue the job. To cancel this job, press the hard-panel Job Status button, select the job and then the Delete button.
Ready to Install.	03-600-00	Displayed at install when the machine is in the correct state to allow machine speed to be set from a blank SIM.	No service action.
Ready to Scan. Copying and printing not available.	91-380-00	TC control error and print cartridge life less than X prints defined in IOT NVM.	User intervention is required to remove the print cartridge and check the blue sealing strip has been removed. All machine services are disabled.
Ready to Scan. Copying and printing not available.	91-380-01	TC control error and print cartridge life less than X prints defined in IOT NVM.	User intervention is required to remove the print cartridge and check the blue sealing strip has been removed. All machine services are disabled.
Register for your Supplies Plan.	22-580-00	Service plan registration alert.	Perform the 322-360-00 RAP.

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UI Message	Status Code	Reason for Message	Reference/Action
Remove documents from the Document Feeder Input Tray or close the Document Feeder.	22-505-00	Documents sensed in the SPDH tray during IIT standby and document handler cover is open.	To scan from the document glass, remove documents in the document feeder input tray. To use the document feeder to scan your documents, lower the document feeder.
Remove the document. It is too short to be fed by Document Feeder.	05-560-00	The document is too short.	Remove the short document. Inform the customer that the document is too short to be fed by the SPDH.
Reorder Bias Transfer Roller (R4) but do not replace until prompted.	09-685-00	Reorder bias transfer roller but do not replace yet.	Order a new bias transfer roller, PL 80.15 Item 3 , but do not replace until prompted.
Reorder Fuser Module (R3) but do not replace until prompted.	10-524-00	The fuser low supply warning, threshold has been reached.	Order a fuser module, PL 10.8 Item 1 , but do not replace until prompted.
Reorder Fuser Module but do not replace until prompted.	09-594-00	Reorder fuser module but do not replace yet.	Order a fuser module, PL 10.8 Item 1 , but do not replace until prompted.
Replace Booklet Maker Staple Cartridges (R8).	12-643-00	The booklet maker staple cartridge is empty.	The booklet maker staple cartridge is empty. Follow the instructions at the printer to load a new staple cartridge, PL 12.365 Item 7 or the LVF BM. Printing can continue, but stapled booklet making is unavailable.
Replace Fuser Module (R3).	10-523-00	The fuser needs to be replaced.	Install a new fuser, PL 10.8 Item 1 .
Replace Fuser Module (R3).	10-523-01	The fuser needs to be replaced.	Install a new fuser, PL 10.8 Item 1 .
Replace Fuser Module (R3).	10-523-02	The fuser needs to be replaced.	Install a new fuser, PL 10.8 Item 1 .
Replace Print Cartridge (R2).	09-521-00	IOT detects a print cartridge failure.	Install a new print cartridge, PL 90.17 Item 9 .
Replace Staple Cartridge (R7).	12-715-00	The finisher's main staple cartridge is empty.	Install new staple cartridge, PL 12.55 Item 7 for the 2K LCSS, PL 12.365 Item 7 for the LVF BM, PL 12.111 Item 6 .

Table 3 Status messages O to R

UI Message	Status Code	Reason for Message	Reference/Action
Replace Toner Cartridge (R1).	09-588-00	Replace toner cartridge (R1).	Install new toner cartridge. If the fault persists perform 393-390-00 RAP.
Requested and verified host/domain name(s) mismatch.	17-535-02	The verified host and/or domain name(s) do not match with the requested host/domain name(s).	Check the DNS settings, if the problem persists, contact the local system administrator. Machine services that require fully qualified domain names may be disabled.

Table 4 Status messages S to Y

UI Message	Status Code	Reason for Message	Reference/Action
Scan and copy services not available. Print service is available.	05-501-00	Document feeder is raised.	Close the document feeder.
Scan to File not available. Power Off then On and Notify System Administrator.	16-561-00	Network controller - scan to file processes have failed.	Switch the machine off then on, GP 14 .
Scanner Fault.	14-517-00	Scanner fault.	Switch the machine off then on GP 14 . Check the current fault codes list for faults in the scanner and perform the appropriate RAP.
Scanning will be delayed.	22-508-04	Scan startup delayed whilst awaiting resources.	No user intervention is required. Job will begin when system is ready. If the fault persists, perform the 322-330-06 RAP.
Select the Current Messages button in the Machine Status for more information.	22-502-04	An active message has been produced.	Go to the Status screen and select the Faults tab. Select the Active Messages button and perform the action appropriate to the message.
Serial number sync failure.	22-557-00	Serial number sync failure.	User intervention is required to power off/on the machine. The machine is unavailable. If the problem persists, refer to dC132 Serial Number.

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UI Message	Status Code	Reason for Message	Reference/Action
Server Fax Service cannot Register. Power Off then On and Notify System Administrator.	17-551-00	Server fax service cannot register.	Switch the machine off then on, GP 14 . Server fax is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
Service Limit exceeded. New services will not be available until some services are removed.	16-533-00	Controller software service limit exceeded.	Remove some existing services to enable new services to be added. Machine services are available but may be degraded.
Set by file cabinet service when it gets no response from service registry when trying to register.	17-552-00	Reprint saved jobs service cannot register.	User intervention is required to power off/on the machine; service is required if the problem persists. Reprinting of saved jobs is disabled; Print and other machine services are unaffected.
Set by the XUI when the XEIP browser does not respond or is known not to work.	02-521-00	XEIP browser is dead	Switch the machine off then on, GP 14 .
Sheet over or late to sensor inside left hand door.	81-155-00	Jam in the left door when sheets are fed from tray 5. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.
Sheet over or late to sensor inside left hand door.	81-155-01	Jam in the left door when sheets are fed from tray 5. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.
Sheet over or late to sensor inside left hand door.	81-155-02	Jam in the left door when sheets are fed from tray 5. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.
Sheet over or late to sensor inside left hand door.	81-155-03	Jam in the left door when sheets are fed from tray 5. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.

Table 4 Status messages S to Y

UI Message	Status Code	Reason for Message	Reference/Action
Sheet over or late to sensor inside left hand door.	81-200-00	Jam in left door when sheets fed from trays 1-4. Includes sheets covering sensors or late to sensors.	Clear the jam in the left door.
SIM card data cannot be processed.	22-560-00	SIM card data cannot be processed.	User intervention is required to re-install the SIM. The machine is unavailable. If the problem persists, refer to GP 9 Machine SIM Card Matrix and GP 44 How to Procure a New SIM Card.
SIM Insertion Required. Notify System Administrator.	22-572-00	Speed not set on IOT. Either the machine has not yet received a SIM, or the settings have been corrupted.	Switch the machine off then on, GP 14 . If the fault persists, perform the 303-405-00 , 303-406-00 RAP.
Soft clock comms failure	45-100-00	Communications Error between main IOT processor and sub processor generating the drives module clocks (fuser and print cartridge)	Switch the machine off then on, GP 14 . If the fault persists, perform the 345-100-00 Soft Clock Communications Error RAP.
Software Upgrade Failure.	95-100-00	An Attempt to upgrade the system using software upgrade did not complete successfully.	The machine is unavailable. User intervention is required to upgrade software. Print and copy services are disabled.
Some jobs may have been deleted.	03-562-00	Jobs may have been deleted due to a system error.	No service action.
Some jobs may have been deleted.	19-505-00	Compressor DVMA timeout. Current job has been deleted.	Confirm that UI message has been seen. Re-scan the job. If the fault persists, perform the 319-403-00 RAP.
Some Network Accounting Services are not available. Notify your System Administrator.	16-596-00	Some network controller services are not available.	Network accounting error. User intervention is required to switch the machine off then on, GP 14 . Print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.

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UI Message	Status Code	Reason for Message	Reference/Action
Some Network Authentication Services are not available. Notify your System Administrator.	16-582-00	The network controller ESS authentication SPI process has stopped.	Switch the machine off then on, GP 14 . Print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
Some Network Diagnostic Services are not available. Notify your System Administrator.	16-581-00	The network controller ESS diagnostic service process has stopped.	Switch the machine off then on, GP 14 . Printing and scanning can continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
Some Network Services are not available due to a process error. Notify System Administrator.	16-560-00	Some processes on the network controller have failed.	Switch the machine off then on, GP 14 .
Some Network Services involving DDNS are not available. Notify your System Administrator.	16-504-00	DDNS error. Some network controller services are not available.	The DDNS address resolution process has failed. Switch the machine off then on, GP 14 . If the fault persists check the DDNS server's network connections.
Some Network Services involving DHCP are not available. Notify your System Administrator.	16-593-00	Network controller - DHCP address resolution has failed.	Check DHCP server network connection. Switch the machine off then on GP 14 . Copying and printing with local connections can continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
Some Network Services involving Ethernet are not available. Notify System Administrator.	16-591-00	Network controller Ethernet process has failed.	Check ethernet connection. Switch the machine off, then switch the machine on GP 14 . Local printing can continue. If the fault persists, perform the 316E Network Fault Checkout RAP.
Some Network Services involving HTTP are not available. Notify your System Administrator.	16-570-00	Network controller - an HTTP interpreter error has occurred, causing the process to fail.	Switch the machine off then on, GP 14 . Printing can continue if other submission methods are used. If the fault persists, perform the 316E Network Fault Checkout RAP.

Table 4 Status messages S to Y

UI Message	Status Code	Reason for Message	Reference/Action
Some Network Services involving Internet Fax are not available. Notify System Administrator.	16-509-00	Insufficient memory for internet fax.	Switch the machine off then on, GP 14 . Printing can continue if other network protocols are used
Some Network Services involving LPD are not available. Notify your System Administrator.	16-562-00	Network controller - the line printer daemon (LPD) process has failed.	Switch the machine off then on, GP 14 . Printing can continue if other submission methods are used.
Some Network Services involving NetBios are not available. Notify System Administrator.	16-564-00	Network controller - the NetBIOS connectivity process has failed.	Switch the machine off then on, GP 14 . Printing can continue if other submission methods are used.
Some Network Services involving Novell are not available. Notify your System Administrator.	16-563-00	Network controller - the Novell netware connectivity process has failed.	Switch the machine off then on, GP 14 . Printing can continue if other submission methods are used.
Some Network Services involving PCL are not available. Notify your System Administrator.	16-568-00	Network controller - a PCL interpreter error has occurred, causing the process to fail.	Switch the machine off then on, GP 14 , to enable PCL printing. Printing can continue if other job format methods are used.
Some Network Services involving RARP are not available. Notify your System Administrator.	16-594-00	Network controller - RARP address resolution has failed.	Check RARP server network connection. Switch the machine off then on GP 14 . Printing can continue with other submission methods. If the fault persists, perform the 316E Network Fault Checkout RAP .
Some Network Services involving SLP are not available. Notify your System Administrator.	16-507-00	SLP process stopped. Some network controller services are not available.	Switch the machine off then on, GP 14 .

Table 4 Status messages S to Y

UI Message	Status Code	Reason for Message	Reference/Action
Some Network Services involving SSDP are not available. Notify your System Administrator.	16-513-00	Simple service discovery protocol (SSDP) failed.	Switch the machine off then on, GP 14 .
Some Network Services involving TCP/IP are not available. Notify your System Administrator.	16-598-00	IP interface not configured.	Another IP address needs to be used. Switch the machine off then on, GP 14 . Copy and fax services (if installed) can continue. If the fault persists, perform the 316E Network Fault Checkout RAP .
Some Network Services involving TIFF are not available. Notify your System Administrator.	16-597-00	The network controller TIFF interpreter has failed.	Switch the machine off then on, GP 14 . Printing can continue with other job formats. If the fault persists, perform the 316E Network Fault Checkout RAP .
Staple Cartridge (R7) is nearly empty. Make sure you have a replacement.	12-716-00	Finisher staples are low.	The finisher's main staple cartridge supplies are low. Re-order staple cartridge. Printing can continue. PL 12.55 Item 7 for the 2K LCSS, PL 12.365 Item 7 for the LVF BM, PL 12.111 Item 6 for the HVF.
Stapler module position sensor indicates stapler module is not closed in initialization.	12-721-00	Stapler not in position	Switch the machine off then on, GP 14 . Open Finisher Front Door and Check for Obstructions. If the fault persists, perform the 312-369-00-171 to 312-377-00-171 HVF Stapler Position and Priming RAP .
Stapling fault. Power Off then On and Notify System Administrator.	12-653-00	2K LCSS stapling disabled, out of service.	Switch the machine off then on, GP 14 . Open Finisher Front Door and Check for Obstructions.
System error. Power Off them On and Notify System Administrator.	03-578-00	Paper tray error.	Switch the machine off then on, GP 14 .
System Error. Power Off them On and Notify System Administrator.	03-581-00	Paper tray error.	Switch the machine off then on, GP 14 .

Table 4 Status messages S to Y

UI Message	Status Code	Reason for Message	Reference/Action
System error. Power Off then On and Notify System Administrator.	03-505-00	The machine is not available.	Perform the 303-325-00 RAP and 303-355-00 RAP.
System Error. Power Off then On and Notify System Administrator.	03-565-00	System fault.	Switch the machine off then on, GP 14 .
System Error. Power Off then On and Notify System Administrator.	03-598-00	Unable to set ready mode. Printing and copying services are not available.	Switch the machine off then on, GP 14 . If the fault persists, perform the 303-788-00 RAP.
System Error. Power Off then On and Notify System Administrator.	04-565-00	DC Platform interface failure. One or more DC platform interfaces has timed out.	System fault. Switch the machine off then on, GP 14 . If the fault persists, perform the 303-315-00 RAP
System Error. Power Off then On and Notify System Administrator.	16-503-00	Incomplete system information.	Switch the machine off then on, GP 14 . If the fault persists perform the 303-315-00 DC Platform Internal Interface Fault RAP.
System Error. Power Off then On and Notify System Administrator.	16-600-00	Disk partition threshold has been exceeded. Performance may be degraded.	Switch the machine off then on, GP 14 . Refer to the 316-718-00 to 316-740-19 Hard Disk Faults RAP.
System Error. Power Off then On and Notify System Administrator.	22-563-00	Incomplete system information.	Switch the machine off then on, GP 14 .
System Error. Power Off then On and Notify System Administrator.	41-501-00	The CRUMs bus communications have been disrupted by internal electronic noise.	Switch the machine off, then on, GP 14 . If the fault persists, perform the 341-301-00 RAP.

Table 4 Status messages S to Y

UI Message	Status Code	Reason for Message	Reference/Action
T5 needs to be reset by emptying and reloading media.	75-150-00	A paper jam has occurred after feeding from the bypass tray.	Tray 5 (bypass) is not available. User intervention is required to remove all media and reload tray 5. Print and copy services can continue if the correct paper is available in other trays. If the problem persists, perform the 375A Bypass Tray RAP.
T5 needs to be reset by emptying and reloading media.	75-150-01	A paper jam has occurred after feeding from the bypass tray.	Tray 5 (bypass) is not available. User intervention is required to remove all media and reload tray 5. Print and copy services can continue if the correct paper is available in other trays. If the problem persists, perform the 375A Bypass Tray RAP.
T5 needs to be reset by emptying and reloading media.	75-150-02	A paper jam has occurred after feeding from the bypass tray.	Tray 5 (bypass) is not available. User intervention is required to remove all media and reload tray 5. Print and copy services can continue if the correct paper is available in other trays. If the problem persists, perform the 375A Bypass Tray RAP.
The Booklet Maker Tray in the Finisher is full. Empty the Tray.	12-728-00	Booklet maker output tray full.	Empty the tray.
The Booklet Maker Tray in the Finisher is nearly full.	12-727-00	The booklet maker output tray is nearly full.	The booklet maker tray is near full. User intervention will be required soon to empty the tray to allow continued booklet making. Print and copy services can continue; other machine services are unaffected.
The current job exceeds the tray capacity, you will be prompted to empty the tray.	12-411-00	Copy job will exceed the output destination's capacity.	Empty the tray.
The device is not available.	22-585-00	Recovery mechanism has restored a lost parameter.	Switch the machine off, then on, GP 14 .
The Document Feeder is not available. The Document Glass is still available.	03-597-00	The document feeder is not available. Use the document glass.	Switch the machine off then on, GP 14 .

Table 4 Status messages S to Y

UI Message	Status Code	Reason for Message	Reference/Action
The Document Feeder Top Cover is open.	05-502-00	The document feeder top cover is open.	Close the document feeder top cover. If the fault persists, perform the 305-305-00 RAP.
The document size was different than expected. The job has been deleted.	22-507-05	Document is larger than expected.	Try one of the following: Select mixed size originals and reload into the document feeder or ensure the originals are not creased or folded and retry from the document glass. If the fault persists, perform the 305A RAP.
The E-mail Service cannot Un-Register. Notify your System Administrator.	17-558-00	E-mail service cannot un-register.	Switch the machine off then on, GP 14 . Scan to e-mail is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
The Fax Service cannot Register. Notify your System Administrator.	22-566-00	Fax service cannot register.	Switch the machine off then on, GP 14 . Fax and LAN Fax are disabled. Other machine services are unaffected. If the fault persists, perform the 322-371-00, 322-372-00 RAP.
The Fax Service cannot Un-Register. Notify your System Administrator.	22-567-00	Fax service cannot un-register.	Switch the machine off then on, GP 14 . All machine services are disabled. If the fault persists, perform the 322-371-00, 322-372-00 RAP.
The finisher front door is open.	12-564-00	The 2K LCSS front door is open.	Close the finisher front door. If the fault persists perform the 312-312-00-110, 312-313-00-110 RAP.
The finisher front door is open.	12-564-01	The HVF BM front door is open.	Close the finisher front door. If the fault persists perform the 312-312-00-171, 312-313-00-171 HVF Interlocks RAP.
The finisher front door is open.	12-564-03	The LVF BM front door is open.	Close the finisher front door. If the fault persists perform the 312-312-00-150, 312-313-00-150 RAP.
The finisher inserter left side door is open.	12-609-00	The inserter lower jam cover is open.	Close the inserter lower jam cover, PL 12.300 Item 7 . If the fault persists, perform the 312-316-00-171, 312-319-00-171 Inserter Interlocks RAP.
The Front Door is open.	01-510-00	The front door is open.	Copying and printing services are disabled. Perform the 301-300-00 RAP.

Table 4 Status messages S to Y

UI Message	Status Code	Reason for Message	Reference/Action
The Hole Punch Waste Container is full. Empty the Hole Punch Waste Container.	12-649-00	The 2K LCSS hole punch chad bin is full and needs emptying.	Hole punch waste container is full, jobs requesting hole punching will be held. Empty the chad bin.
The Internet Fax Service cannot Un-Register. Notify your System Administrator.	17-557-00	Internet fax service cannot un-register.	Switch the machine off then on, GP 14 . Internet fax is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
The Left Side Door is open.	01-514-00	The bypass tray and left door assembly is open.	Copying and printing services are disabled. Perform the 301-305-00 RAP.
The Left Side Door is open.	01-515-00	The bypass tray and left door assembly is open for more than 30 seconds.	Copying and printing services are disabled. Perform the 301-305-00 RAP.
The machine is not available	02-520-00	Software error has occurred.	Switch the machine off then on, GP 14 .
The machine is offline.	03-504-00	NC status code.	Switch the machine off then on, GP 14 .
The machine is offline.	03-504-01	NC status code.	Switch the machine off then on, GP 14 .
The Network Controller connection is about to be reset.	16-502-00	Status active when ever the network controller detects that a platform reset is about to occur	Cleared when the network controller reset is initiated.
The Network Controller connection is about to be reset.	16-521-00	The network controller's CPI service process has stopped.	Machine services are temporarily disabled. The network controller connection is about to be reset. No user intervention is required.
The Network Controller connection is about to be reset.	16-522-00	The network controller's job log service process has stopped.	Some network services are not available. The network controller connection is about to be reset. No user intervention is required.
The Network Controller connection is about to be reset.	16-523-00	The network controller's job tracker service process has stopped.	Some network services are not available. The network controller connection is about to be reset. No user intervention is required.

Table 4 Status messages S to Y

UI Message	Status Code	Reason for Message	Reference/Action
The Network Controller connection is about to be reset.	16-524-00	The network controller's Kerberos service process has stopped.	Some network services are not available. The network controller connection is about to be reset. No user intervention is required.
The Network Controller connection is about to be reset.	16-525-00	The network controller's scan to distribution service process has stopped	Some network services are not available. The network controller connection is about to be reset. No user intervention is required.
The Network Controller connection is about to be reset.	16-526-00	The network controller's SMB service process has stopped.	Some network service are not available. The network controller connection is about to be reset. No user intervention is required.
The Network Controller connection is about to be reset.	16-527-00	The network controller's TCP/IP service process has stopped.	Some network service are not available. The network controller connection is about to be reset. No user intervention is required.
The Network Controller connection is about to be reset.	16-528-00	The network controller's WS scan temp service process has stopped.	Some network service are not available. The network controller connection is about to be reset. No user intervention is required.
The Network Controller connection is about to be reset.	16-575-00	The network controller ESS registration service process has stopped.	Automatic network controller reset. If the fault persists, perform the 316E Network Fault Checkout RAP.
The Network Controller connection is about to be reset.	16-576-00	The network controller ESS event notification service process has stopped.	Automatic network controller reset. Switch the machine off then on, GP 14 . If the fault persists, perform the 316E Network Fault Checkout RAP.
The Network Controller connection is about to be reset.	16-577-00	The network controller ESS platform manager service process has stopped.	Automatic network controller reset. Machine is unavailable. If the fault persists, perform the 316E Network Fault Checkout RAP.
The Network Controller connection is about to be reset.	16-584-00	The network controller document manager agent process has stopped.	Automatic network controller reset. Machine is unavailable.
The Network Controller is initializing. Copy and Print jobs may be delayed.	03-563-00	Network service are being established.	Please wait, the network controller is initializing. No user intervention is required. Printing is currently unavailable. If the fault persists, perform the 303-331-00, 303-332-00 RAP

Table 4 Status messages S to Y

UI Message	Status Code	Reason for Message	Reference/Action
The number of originals was less than the number originally scanned.	22-503-05	Job recovery error. The number of originals reloaded does not match the number originally scanned.	Perform the 305-940-00, 305-941-00 RAP.
The Output tray is almost full.	04-569-00	The centre output detects that it is 90% full.	The centre output tray is almost full. The tray may be emptied now or when it is full. Printing and other machine services are unaffected.
The Output Tray is full. Empty the Output Tray.	04-568-00	The centre output tray is full.	Empty the centre output tray.
The post process inserter top cover is open.	12-606-00	The tray 7 top cover is open.	Close the inserter top cover door, PL 12.300 Item 8 . If the fault persists perform the 312-316-00-171, 312-319-00-171 Inserter Interlocks RAP.
The Print Cartridge module low supply warning (reorder) threshold has been reached and the administrator has acknowledged this condition.	09-598-00	Low supply warning.	None.
The Reprint Saved Jobs Service cannot Un-Register. Notify your System Administrator.	17-561-00	Reprint saved jobs service cannot un-register.	Switch the machine off then on, GP 14 . Re-printing of saved jobs is disabled. If the fault persists, perform the 316E Network Fault Checkout RAP.
The Server Fax Service cannot Un-Register. Notify your System Administrator.	17-556-00	Server fax service cannot un-register	Switch the machine off then on, GP 14 . Server fax is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Checkout RAP.
The tri-folder unit front door is open.	12-608-00	Tri-folder front door open (HVF with tri-folder)	Close the tri-folder front door, PL 12.200 Item 2 . If the fault persists perform the 312-317-00-171, 312-318-00-171 HVF Tri-folder Interlocks RAP.

Table 4 Status messages S to Y

UI Message	Status Code	Reason for Message	Reference/Action
The tri-folder unit top cover is open.	12-607-00	Tri-folder top cover open (HVF with tri-folder)	Close the tri-folder top cover, PL 12.200 Item 6 . If the fault persists perform the 312-317-00-171 , 312-318-00-171 HVF Tri-folder Interlocks RAP.
The Workflow Scanning Service cannot Un-Register. Notify your System Administrator.	17-560-00	Network scanning service cannot un-register.	Switch the machine off then on, GP 14 . Scan service is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Check-out RAP.
Toner Cartridge (R1) is incompatible and needs replacing.	09-678-00	The toner cartridge in the machine is incompatible with the machine (market region, service plan or type).	Install a correct toner cartridge. If the fault persists, perform the 393-399-00 RAP.
Toner Cartridge (R1) is missing or not inserted correctly.	09-599-00	Toner cartridge RF CRUM not detected within 2 cartridge rotations.	Install a toner cartridge. If the fault persists, perform the 393-401-00 RAP.
Toner Cartridge (R1) is nearly empty. Make sure you have a replacement.	09-568-00	Reorder toner cartridge (R1) but do not replace until prompted.	Order a new toner cartridge, PL 26.11 Item 3 .
Toner control system failure.	09-596-00	Toner control system fault.	Switch off, then switch on the machine, GP 14 . If the fault persists, perform the 393-360-00 to 393-364-00 RAP.
Toner control system failure.	09-597-00	Toner control out of limits (high or low).	Perform the 393-360-00 to 393-364-00 RAP.
Tray 1 guides are not set properly.	01-545-01	Dedicated tray 1 closed with media size different to the programmed size.	Load the correct media size or change the tray preset size. Perform the 371-500-00 RAP.
Tray 1 is not available. Notify your System Administrator.	71-313-00	Mechanical failure for tray 1.	Switch the machine off, then on, GP 14 .
Tray 1 lifting.	71-536-00	Tray 1 lifting.	No service action required. Print and copy services can continue from other trays if the correct media is available. If the fault persists, perform the 371-100-00 , 371-217-00 RAP.

Table 4 Status messages S to Y

UI Message	Status Code	Reason for Message	Reference/Action
Tray 1 media low.	71-535-00	Tray 1 media low.	Tray 1 is nearly empty. User intervention is required to add paper to the tray. Device services are unaffected.
Tray 2 guides are not set properly.	01-545-02	Dedicated tray 2 closed with media size different to the programmed size.	Load the correct media size or change the tray preset size. Perform the 372-500-00 RAP.
Tray 2 is empty. Add paper.	72-530-00	Tray 2 out of media.	Add paper to Tray 2. If the fault persists, perform the 371A RAP.
Tray 2 is not available. Notify your System Administrator.	72-313-00	Mechanical failure for tray 2.	Switch the machine off, then on, GP 14 .
Tray 2 lifting.	72-536-00	Tray 2 lifting.	No service action required. Print and copy services can continue from other trays if the correct media is available. If the fault persists, 372-100-00 , 372-217-00 RAP.
Tray 2 media low.	72-535-00	Tray 2 media low.	Tray 2 is nearly empty. User intervention is required to add paper to the tray. Device services are unaffected.
Tray 3 is empty. Add paper.	73-530-00	Tray 3 out of media.	Add paper to tray 3. If the fault persists, perform the 373B RAP.
Tray 3 is not available. Notify your System Administrator.	73-313-00	Mechanical failure for tray 3.	Switch the machine off, then on, GP 14 .
Tray 3 lifting.	73-536-00	Tray 3 lifting.	Print and copy services can continue from other trays if the correct media is available. If the fault persists, perform the 373-100-00 , 373-217-00 RAP.
Tray 3 media low.	73-535-00	Tray 3 media low.	Tray 3 is nearly empty. User intervention is required to add paper to the tray. Device services are unaffected.
Tray 4 is empty. Add paper	74-530-00	Tray 4 out of media.	Add paper to tray 4. If the fault persists, perform the 374B RAP.
Tray 4 is not available. Notify your System Administrator.	74-313-00	Mechanical failure for tray 4.	Switch the machine off, then on, GP 14 .

Table 4 Status messages S to Y

UI Message	Status Code	Reason for Message	Reference/Action
Tray 4 is open.	74-301-00	Dedicated tray 4 is open.	User intervention is required to close the tray. Print and Copy services can continue if the correct paper is available in other trays.
Tray 4 lifting.	74-536-00	Tray 4 lifting.	Print and copy services can continue from other trays if the correct media is available. If the fault persists, perform the 374-100-00 , 374-217-00 RAP.
Tray 4 media low.	74-535-00	Tray 4 media low.	Tray 4 is nearly empty. User intervention is required to add paper to the tray. Device services are unaffected.
Tray 5 is empty. Add paper.	75-530-00	The bypass tray is out of media.	Add paper to the bypass tray. If the fault persists, perform the 375A RAP.
Tray 5 is not available. Notify your System Administrator.	75-313-00	Mechanical failure of the bypass tray.	Switch the machine off, then on, GP 14 . If the fault persists, perform the 375A RAP.
Tray 5 media low.	75-535-00	Tray 5 media low.	User intervention is required to add paper to tray 5. Print and copy services can continue if the correct paper is available in other trays.
Tray 6 (A4PFP) is undocked.	76-305-00	Tray 6 (A4PFP) is undocked.	User intervention is required to dock tray 6. Print and copy services can continue if the correct paper is available in other trays. If the problem persists, perform the 376-510-00 Tray 6 Undocked During Run RAP.
Tray 6 (A4PFP) is undocked.	76-305-01	Tray 6 (A4PFP) is undocked.	User intervention is required to dock tray 6. Print and copy services can continue if the correct paper is available in other trays. If the problem persists, perform the 376-510-00 Tray 6 Undocked During Run RAP.
Tray 6 lifting.	76-536-00	Tray 6 lifting.	User intervention is not required. Print and copy services will continue when the tray is in position.
Tray 6 lowering.	76-537-00	Tray 6 lowering.	User intervention is not required. Print and copy services can continue with other trays.
Tray 6 media low.	76-535-00	Tray 6 media low.	User intervention is required to add paper to the tray. Device services are unaffected.

Table 4 Status messages S to Y

UI Message	Status Code	Reason for Message	Reference/Action
Tray 6 out of media.	76-530-00	Tray 6 out of media.	User intervention is required to add paper to tray 6. Print and Copy services can continue if the correct paper is available in other trays.
Tray 7 out of service (mechanical failure).	03-593-00	Mechanical failure for Tray 7	Switch the machine off then on, GP 14 . If the fault persists, perform the 312-191-00-171 , 312-193-00-171 , 312-194-00-171 , 312-196-00-171 Inserter Paper Jam RAP
Tray1 is empty. Add paper.	71-530-00	Tray 1 out of media.	Add paper to tray 1. If the fault persists, perform the 371A RAP.
Turn the power to the machine OFF, then ON again.	09-582-00	A software error has occurred	Switch off, then switch on the machine, GP 14 . If the fault persists, check for active fault codes and perform the associated RAP. If there is no fault code, reload the machine software, GP 4 .
Unable to communicate to the attached accounting device.	17-514-00	External accounting device communication failure.	Administrator intervention required to check the connection to the external accounting device.
Unable to staple. Check for obstructions in the output trays.	12-901-00	The finisher is in degraded mode, unable to staple.	Switch the machine off then on, GP 14 . If the fault persists, perform 312E-110 RAP for the 2K LCSS, 312E-150 RAP for the LVF BM. 312-063-00-171 , 312-411-00-171 RAP for the HVF.
USB Process Death. Some Network Controller services are not available.	16-512-00	USB process death. Some network controller services are not available.	USB printing error. User intervention is required to power off/on the machine. Print service through USB is disabled; Print service can continue with other protocols; other machine services are unaffected. If the fault persists, perform the 316D Wireless Connectivity RAP.
When the Toner Cartridge (R1) is nearly empty message has been cleared.	09-676-00	Reorder toner cartridge (R1) but do not replace until prompted.	Order a toner cartridge, PL 90.17 Item 2 .
WiFi adapter unplugged.	17-520-01	USB Wireless adapter not installed/detected and WiFi is the active connectivity interface.	Ensure USB wireless adapter is properly installed.

Table 4 Status messages S to Y

UI Message	Status Code	Reason for Message	Reference/Action
WiFi connection failure.	17-521-01	WiFi connection failure. Cannot connect to the WiFi network.	The machine cannot connect to the WiFi network. User intervention required to re-enter WiFi credentials, if the problem persists, contact the local system administrator. All machine services that require network connectivity are disabled.
WiFi Connection Lost.	17-523-01	WiFi connection lost. (machine had a WiFi connection, but no longer does.)	Check the WiFi network and settings, if the problem persists, contact the local system administrator. All machine services that require network connectivity are disabled
Workflow Scanning hardware must be added or replaced. Notify your System Administrator.	16-554-00	Network controller - hardware must be added or replaced.	Hardware must be added or replaced.
Workflow Scanning Service cannot Register. Power Off then On and Notify System Administrator.	17-559-00	Network scanning service cannot register.	Switch the machine off then on, GP 14 . Scan service is disabled, print and other machine services are unaffected. If the fault persists, perform the 316E Network Fault Check-out RAP .
XUI Xclient determines that the USB com link between network controller and the UI has failed. Machine status only.	02-501-00	XUI Xclient determines that the USB com link between network controller and the UI has failed. Machine status only.	Switch the machine off then on, GP 14 . If the fault persists, perform the 302-320-00, 321-00, 380-00, 381-00, 302B UI Communications RAP .
XUI X server on the UI determines that the USB com. link between it and the copier controller has failed.	02-502-00	XUI X server on the UI determines that the USB com. link between it and the copier controller has failed.	Switch the machine off then on, GP 14 . If the fault persists, perform the 302-320-00, 321-00, 380-00, 381-00, 302B UI Communications RAP .
Your Administrator is reconfiguring the system. Services will not be available.	16-506-00	Your Administrator is reconfiguring the system.	The System Administrator is saving the machine configuration to a remote station.

OF5 Boot Up Failure RAP

Use this RAP if the machine;

- Does not come to a “Ready to scan your job” state.
- Locks up with a “Please Wait” or “Machine Self Test In Progress” message.
- Has a black/white, dark/blank or green UI touch screen and the power saver LED on the user interface is flashing.
- Has failed to load software.

Initial Actions

- Check the 7-segment LED display on the rear of the SBC module. If a code is displayed, perform the [OF2 POST Error RAP](#).
- If the problem occurs while entering or exiting sleep mode, perform the [301K Sleep Mode RAP](#).
- Perform the [OF7 IOT PWB Diagnostics RAP](#).
- Perform the [319-300-00 to 319-310-00 Hard Disk Failure RAP](#).
- If a boot up failure has occurred after the installation of new components, ensure those new components are compatible with the machine.
- Check that the power cord is connected to the machine.
- Switch off the machine, [GP 14](#). Remove the SIM card, [PL 3.22 Item 5](#). Switch on the machine, [GP 14](#). If the fault is cleared, install a new SIM card that is compatible with the speed of machine and PagePack requirement. Refer to [GP 9](#).
- Switch off the machine [GP 14](#). Remove the power cord from the customer power outlet. Wait 2 minutes. Reconnect the plug into the outlet. Switch on the machine, [GP 14](#). If the fault persists, perform the procedure.
- Remove, then re-install the SD card, [PL 3.22 Item 6](#).
- Disconnect, then reconnect all the PJs on the SBC PWB, [PL 3.22 Item 3](#).
- Check all the PJs are correctly connected on the UI control PWB, [PL 2.10 Item 6](#).
- Check the UI harness connection to the SBC PWB, [WD 4, PL 3.22 Item 15](#).

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Only use the correct plug to connect a power lead to a power outlet.



CAUTION

Incorrect voltage may damage the machine. The machine must only be connected to the power outlet of the correct voltage.

Observe the pulsing decimal point of the seven segment display on the SBC PWB. This represents the SBC microprocessor heartbeat and should flash at approximately 0.5Hz to show that the microprocessor is running correctly. **The decimal point is flashing correctly.**

Y N

Perform the steps that follow:

- Check the +5VSB supply to the SBC PWB. Refer to the [301E](#) +5V and +5VSB Distribution RAP.
- Check the 0V supply to the SBC PWB. Refer to the [301B](#) 0V Distribution RAP.

If the voltages are good, perform the [301J](#) Power On and LVPS Control Signal RAP.

Switch off the machine, [GP 14](#).

1. Disconnect the SBC PWB to scanner PWB power/comms harness, [PL 3.22 Item 13](#) from the SBC PWB, [WD 3](#).
2. If a LCSS or LVF BM is installed, disconnect the communication cable from PJ966, and the finisher power cord from PJ652 on the LVPS.
3. Install a finisher bypass connector, [PL 26.10 Item 7](#).
4. If a fax is installed, remove the fax module, [PL 20.05 Item 1](#).
5. Switch on the machine, [GP 14](#).

The machine boots up.

Y N

Perform the steps that follow:

- Perform the [302A](#) Touch Screen Failure RAP.
- Check the +5V supply to the SBC PWB. Refer to the [301E](#) +5V and +5VSB Distribution RAP.
- Check the 0V supply to the SBC PWB. Refer to the [301B](#) 0V Distribution RAP.
- Check the +24V supply to the SBC PWB. Refer to the [301G](#) +24V Distribution RAP.

The decimal point on the seven segment display flashes to represent the processor heartbeat of the SBC PWB. **The decimal point of the seven segment display is either on or off (not flashing).**

Y N

If the UI touch screen is still black/white, dark/blank or green and the power saver LED is flashing, perform an AltBoot, [GP 4](#).

A B

Install a new SBC PWB, [PL 3.22 Item 3](#).

Switch off the machine, [GP 14](#). Connect the SBC PWB to scanner PWB power/comms harness. Switch on the machine, [GP 14](#). **The machine boots up.**

Y N

Install a new Scanner PWB, [PL 60.20 Item 4](#).

Switch off the machine, [GP 14](#). Connect the output device communication cable and power cord. Switch on the machine, [GP 14](#). **The machine boots up.**

Y N

Install new components as necessary:

- 2K LCSS PWB, [PL 12.75 Item 1](#).
- LVF PWB, [PL 12.425 Item 8](#).

Switch off the machine, [GP 14](#). Re-install the original Fax module. Switch on the machine, [GP 14](#). **The machine boots up.**

Y N

Install new components as necessary:

- Fax PWB, [PL 20.05 Item 7](#).
- SBC PWB, [PL 3.22 Item 3](#).

If necessary, reload the software, [GP 4](#).

A B

OF6 Air Systems RAP

Use this RAP to diagnose faulty machine fans. Faulty fans can cause smells or overheating.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Identify the suspect fan. Check that the fan is working correctly:

- LVPS Cooling Fan.
- Print Cartridge Cooling Fan
- Fuser Cooling Fans .

LVPS Cooling Fan

This fan draws in air from the rear of the machine and blows it into the LVPS. The fan is hard wired into the low voltage power supply. Refer to [PL 1.10 Item 5](#) and [WD 1](#).

Print Cartridge Cooling Fan

This fan draws directs air via a duct onto the print cartridge. To check the operation of the fan, enter [dC330](#), code 93-001 print cartridge fan. Refer to [PL 90.15 Item 2](#) and [WD 7](#).

Differences between AltaLink ® B8045/55 and AltaLink ® B8065/75/90

- The AltaLink ® B8045/55 draws air from the cavity below the horizontal transport or centre output tray.
- The AltaLink ® B8065/75/90 draws air from outside the rear of the machine via a duct below the horizontal transport or centre output tray. The duct draws air through the rear cover beneath the fuser cooling duct.

Refer to [Print Cartridge Cooling](#) in the Principles of Operation for further details.

Fuser Cooling Fans

The AltaLink ® B8045/55 and AltaLink ® B8065/75/90 have different arrangements for fuser cooling. The fans provide cooling for the fuser unit and remove warm air from the xerographic subsystem.

- The AltaLink ® B8045/55 draws air away from the fuser through 2 fans in the left door.
- The AltaLink ® B8065/75/90 draws air away from the fuser into a duct at the top of the left door. Warm air inside the duct is drawn down a duct inside the rear cover through a fan and out via a filter.

If one or both fans run continuously, inspect the fan harnesses for shorts to the left door frame or inside the rear cover. To check the operation of the fans, enter [dC330](#), code 80-015 left door fans. Refer to [PL 80.11 Item 9](#) and [WD 7](#). Both the AltaLink ® B8045/55 and AltaLink ® B8065/75/90 use [dC330](#) to control the fans.

Refer to [Fuser Cooling](#) in the Principles of Operation for further details.

OF7 IOT PWB Diagnostics RAP

Purpose

To assist in identifying any suspected problems with the IOT PWB. If directed here from another procedure, always return to that procedure.

Perform the IOT PWB corruption check before a new IOT PWB is installed. If the fault persists after completing this check, install a new IOT PWB.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the checks that follow:

- IOT NVM Corruption Check.
- IOT PWB Voltage Check.
- IOT PWB Communications Check.

Ensure the machine is in standby or run mode (power button is not illuminated).

IOT NVM Corruption Check

Corruption of the IOT NVM can cause paper jams, fuser temperature or xerographic control faults. Perform these steps before a new IOT PWB is installed.

Perform the steps that follow:

1. Enter [dC131](#) location 501-292, Photoreceptor and Developer Unit Age (number of cycles). Note the age value. Check when the print cartridge was installed, to ensure that the age value is correct.
2. Go to [dC301](#) NVM initialization.
3. Select Domain = Copier.
4. Select, Sub Domain = **Copy Controller**.
5. Select, NVM Data = **All**.
6. Select Initialize.
7. Switch off, then switch on the machine, [GP 14](#). Check if the fault persists.
 - If the fault does not occur, go to step 8.
 - If the fault persists, install a new IOT PWB, [PL 1.10 Item 2](#).
8. Perform [dC604](#) Registration Setup Procedure.
9. Enter [dC131](#) location 501-349, TC Sensor Reading. Record the value on the NVM sheet stored in the wallet on the rear cover.
10. Enter [dC131](#) location 501-292, Photoreceptor and Developer Unit Age (number of cycles). Check that the value for the developer age is correct. Reset the value if required.
11. Perform [SCP 5](#) Final Actions.

IOT PWB Voltage Check

1. On the IOT PWB, check that the LEDs that follow are on, [Figure 1](#):

- **CR13** - Indicates the presence of +5V.
 - **CR16** - Indicates the presence of +24V interlocked.
 - **CR51** - Indicates the presence of +3.3V (generated on the IOT PWB).
2. If no LEDs are on, or only **CR13** is on, perform the **301H** Short Circuits and Overloads RAP.

IOT PWB Communications Check

1. Switch off, then switch on the machine, **GP 14**. With the front door and left door closed, the LEDs that follow should be observed on the IOT PWB, **Figure 1**:
 - **CR13** - on indicates the presence of +5V.
 - **CR16** - on indicates the presence of +24V interlocked.
 - **CR50** - flashing at about 2 Hz is the software heartbeat.
 - **CR51** - on indicates the presence of +3.3V (generated on the IOT PWB).
2. If any of the above conditions still fail, then install a new IOT PWB, **PL 1.10 Item 2**.

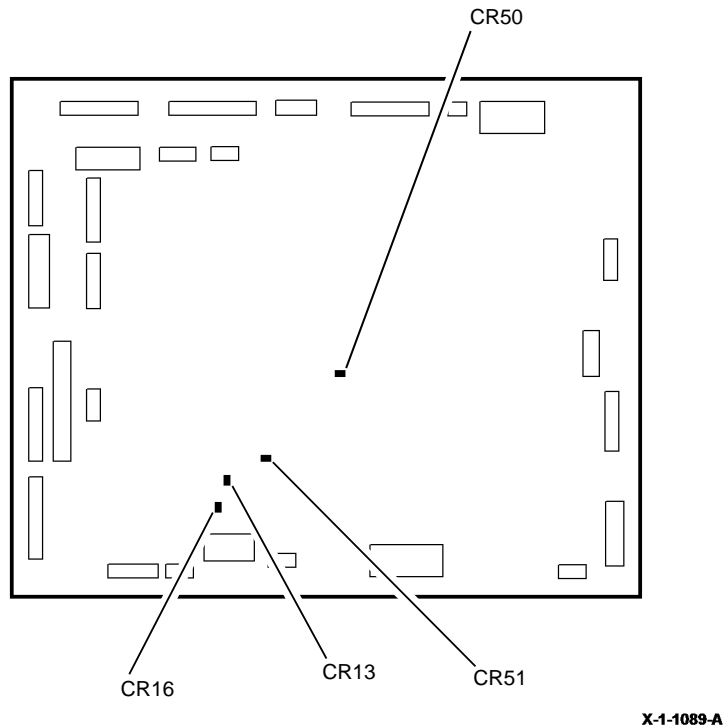


Figure 1 IOT PWB LED locations

OF8 Multi-feed RAP

To solve multi-sheet feeds or extra blank sheet output problems.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- For multi-feeds from the bypass tray, perform the **381-155-00** Late to Reg Sensor from Bypass Tray RAP.
- If multifeds occur from tray 3 or tray 4, decreasing the retard roll nip pressure will lessen the occurrence of multifeds. Perform **ADJ 80.3**.
- Check the condition of the paper. Do not use incorrectly cut paper, damp paper, paper with rough edges, badly drilled paper, paper with wrapper wax or glue contamination. Refer to **IQ1** Image Quality Entry RAP.
- Check the paper specification, **GP 20**.

Procedure

When checking for multi-feeds always use a new ream of paper. If a new ream cannot be used, then perform the steps that follow:

- Fan the paper.
- Turn the paper round or turn the paper over.
- Remove 4 or 5 sheets from the top of the stack.
- When loading multiple reams of paper into tray 3 or tray 4, remove the top and bottom sheet from each ream. This will prevent ream interface multi-feeds.

For tray 1 and tray 2, check the checks that follow:

- The paper tray side guides are set to the correct paper size.
- The paper tray drops when the tray is pulled out and the tray elevates when pushed in.
 - Check the paper feed assembly, **REP 80.1**.
 - Check the paper feed rolls, **REP 80.18**.
 - Install new components as necessary, **PL 80.26**.
- The paper trays for worn, broken or missing components.
 - Install new components as necessary, **PL 70.10**.

For tray 3 and tray 4, perform the steps that follow:

- Check the tray moves down when the tray is pulled out, and moves up when the tray is closed.
 - Check tray 3 paper feed assembly, **REP 80.20**.
 - Check tray 4 paper feed assembly, **REP 80.21**.
 - Install new components as necessary, **PL 80.32**, **PL 80.33**.
- Check the paper trays for worn, broken or missing components.
 - Install new components as necessary, **PL 70.18** and **PL 70.19**.
- Perform **ADJ 80.3** Tray 3 and Tray 4 Retard Roll Pressure.

For the bypass tray, perform the steps that follow:

- Ensure that the customer is not filling the tray above the max fill line.
- Clean the feed roll and retard pad with a damp cloth with water.
- Install a new feed roll and retard pad assembly, [PL 70.35](#).

OF9 False Fuser End Of Life RAP

Use this RAP if the fuser module has prematurely reached its end of life, 250,000 prints.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter [dC131](#) locations 658-131, 658-132 and 658-133. Check the fuser module image count. If the image count is unexpectedly high, 260,000 or greater, then the CRUM data is corrupted.

Procedure

Perform the checks that follow:

1. The wiring harness at PJ766. Repair the wiring as necessary, [REP 1.2](#). Refer to [WD 9](#).
2. For damage to the fuser CRUM connector, [PL 10.8 Item 3](#).
3. For damage to the CRUM plug on the fuser module, [PL 10.8 Item 1](#).

If the fault persists, go to the [OF10](#) Intermittent Failure RAP. Perform the Electrostatic Discharge Checkout.

OF10 Intermittent Failure RAP

Use this RAP to locate failures when no specific cause can be found, i.e. if the machine resets to 'Ready to scan your job' or 'Please wait' during a print / copy run, or a fault code occurs which cannot easily be repeated.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

Perform the steps that follow to gather additional information about the fault:

- Ask the customer if there are any specific functions that cause the fault to occur; e.g. using the input or output module, or making reduced images.
- Select the **Machine Status** button on the UI. Select the **Active Messages** tab on the touch screen. Check the active messages and the fault history. If a fault code is raised when the failure occurs, perform the appropriate RAP.
- Make copies and observe where the paper stops and which components are switched on or off when the failure occurs.
- Check if there is a repetitive pattern to the failure.

Procedure

Go to the relevant checkout:

- [Customer Power Supply Checkout.](#)
- [External Electrical Equipment Checkout.](#)
- [Common Causes Checkout.](#)
- [Connectors and Wiring Checkout.](#)
- [Power Supply Checkout.](#)
- [SD Card Checkout.](#)
- [Electric Motors Checkout.](#)
- [Solenoids and Clutches Checkout.](#)
- [Switches and Sensors Checkout.](#)
- [High Voltage Arcing Checkout.](#)
- [Registration Transfer Assembly Checkout.](#)
- [Print Cartridge Checkout.](#)
- [Electrostatic Discharge Checkout.](#)
- [Paper Trays Checkout.](#)
- [Output Device Checkout.](#)

Customer Power Supply Checkout



WARNING

Take care when measuring AC mains (line) voltage. Electricity can cause death or injury.



CAUTION

If you suspect that the customer power supply is incorrect, do not try to correct the customer power supply. Do not reconnect the printer. Inform the customer and your manager.

- Measure the customer power supply voltage at the power outlet and check that the customer power supply is within specification. Refer to [GP 22](#) Electrical Power Requirements.
- Check that the customer power supply does not drop below the specification when the copier is making copies. Use a digital meter and select 'Peak Hold'. Refer to [GP 22](#) Electrical Power Requirements.

External Electrical Equipment Checkout



WARNING

Take care when measuring AC mains (line) voltage. Electricity can cause death or injury.



CAUTION

If you suspect that the customer power supply is incorrect, do not try to correct the customer power supply. Do not reconnect the machine. Inform the customer and your manager.

Perform the steps that follow:

- Ask the customer if there is any electrical equipment, which uses a large amount of current, that is connected to the same supply circuit as the machine.
- With the customer's assistance, check if the failure occurs when electrical equipment near to the machine is switched on or off.
- If possible, connect the machine to a different supply circuit from the equipment that is causing the problem.

Common Causes Checkout

Make the checks that follow of common causes of intermittent failures:

- Intermittent connections in the fuser connector assembly. Refer to [310-320-00](#) Fuser Control Failure RAP.
- The left door interlock switch, [PL 1.12 Item 1](#), is fully actuated by the left door interlock. If the fault is eliminated when an interlock cheater is installed, check that the interlock actuator bracket is not damaged. Install new components as necessary.
- The front door interlock switch, [PL 1.12 Item 1](#), is fully actuated by the front door interlock. If the fault is eliminated when an interlock cheater is installed, check that the interlock actuator bracket is not damaged. Install new components as necessary.

Connectors and Wiring Checkout

Refer to [REP 1.2](#) for details of wiring harness repair.

Perform the checks that follow:

- For visible signs of damage to the wiring and the ribbon cables.
- For pinched wires near moving parts.
- The SPDH module harness for broken wiring. Ensure that the ground terminals are secure.
- For the continuity of harnesses by checking for wire breaks inside insulation. Gently pull the relevant connector and wire while measuring continuity.
- That all the PWB and in-line connections are good. Refer to [PJ Locations](#).
- The continuity of the ground connections. Refer to the [301A Ground Distribution RAP](#).
- That all the input and output module static eliminators are connected correctly and in good condition; refer to the relevant input or output module RAP.

Power Supply Checkout

Check the power cord for continuity. Refer to the [301C AC Power RAP](#).

SD Card Checkout

Check that all EPROMs are installed correctly. Refer to [REP 3.4 SD Card](#).

Electric Motors Checkout

Refer to [GP 10 How to Check a Motor](#) and perform the steps that follow:

- Disconnect each motor in turn to locate the motor that is causing the fault. When the faulty motor has been located, install a new motor.
- If the fault persists, locate the PWB that drives the motor and install a new PWB.

Solenoids and Clutches Checkout

Refer to [GP 12 How to Check a Solenoid or Clutch](#) and perform the steps that follow:

- Check that the components are installed correctly.
- Check that there is no mechanical binding, slipping or interference.
- Enter the relevant output codes. Check that the energizing of the components is reliable. Check if the fault is caused when the components de-energize.
- If it is suspected that a clutch or solenoid is faulty, install a new component as necessary.
- If the fault persists, locate the PWB that drives the component and install a new PWB.

Switches and Sensors Checkout

Refer to [GP 11 How to Check a Sensor](#), [GP 38 How to Check an Adaptive Sensor](#) and [GP 13 How to Check a Switch](#). Perform the steps that follow:

- Check that the components are clean and installed correctly. Ensure that the wiring to the components is connected correctly.
- Enter the relevant input codes. Check that the sensing of the components is reliable. Check if the fault is caused when the components are actuated.
- If it is suspected that a switch or sensor is faulty, install a new component as necessary.
- If the fault persists, locate the PWB that controls the component and install a new PWB.

High Voltage Arcing Checkout

Use this Checkout when there are intermittent 34X-XXX failures and the suspect cause is high voltage arcing.

Refer to the [391A HVPS RAP](#) and complete all of the actions to check the HVPS.

Registration Transfer Assembly Checkout

Perform the steps that follow:

- Check that the registration transfer assembly ground connections are good. Refer to [301A Ground Distribution RAP](#).
- Inspect the bias transfer roll for correct installation. If any damage or wear is identified, install a new bias transfer roll, [PL 80.15 Item 3](#).
- Check the xerographic voltage distribution tracks, [PL 90.10 Item 5](#), [PL 90.10 Item 6](#) and [PL 90.10 Item 7](#). Check for damage, signs of arcing, contamination or short circuit to ground. Refer to the [391A HVPS RAP](#).

Print Cartridge Checkout

Perform the steps that follow:

- Check the surface of the photoreceptor for damage. Ensure that the print cartridge is installed correctly.
- Check the print cartridge ground. Refer to [301A Ground Distribution RAP](#).
- Check the track (BCR), [PL 90.10 Item 5](#) and the track (DEV), [PL 90.10 Item 4](#). Check for damage, signs of arcing, contamination or short circuit to ground. Check the terminals on the print cartridge for signs of arcing. Refer to the [391A HVPS RAP](#).
- Inspect the print cartridge for damage and or incorrect assembly that may cause arcing.
- If no fault is found, install a new print cartridge, [PL 90.17 Item 9](#).

Electrostatic Discharge Checkout

Perform the steps that follow:

- If the fault only occurs when feeding from a specific paper tray, perform the [Paper Trays Checkout](#).
- Check that all components and connectors are seated correctly on the [SBC PWB](#).

Paper Trays Checkout

Perform the steps that follow:

- Check that the tray 1 and 2 paper size sensing PWB outputs match the size of paper in the trays. Refer to RAPs [371-500-00 Tray 1 Open During Run RAP](#) and [372-500-00 Tray 2 Open During Run RAP](#). Check that the control panel indicators display the correct size of paper.
- Perform the [Electrostatic Discharge Checkout](#).
- Refer to the appropriate RAPs to check the operations of sensors, feed components and associated harnessing:
 - [381-106-00 Lead Edge Late to TAR 1 Sensor from Tray 1 RAP](#).
 - [381-126-00 Lead Edge Late to TAR 2 Sensor from Tray 2 RAP](#).
 - [381-136-00 Lead Edge Late to Tray 3 Feed Sensor RAP](#).
 - [381-146-00 Lead Edge Late to Tray 4 Feed Sensor RAP](#).
 - [381-155-00 Lead Edge Late to Registration Sensor from Bypass Tray RAP](#).
 - [381-182-00 Lead Edge Late to Registration from Tray 6](#).

Output Device Checkout

To run the machine without the output device connected, use a finisher bypass connector, [PL 26.10 Item 7](#). If the problem is cleared, then go to the appropriate output device.

- 2K LCSS. Check the items that follow:
 - Ground connection on the power cord, [PL 12.75 Item 8](#).

- Static eliminator on bin 0 entry, [PL 12.60 Item 7](#).
- Static eliminator on the tamper assembly, [PL 12.45 Item 5](#).
- Static eliminator on the bin 1 entry, [PL 12.65 Item 7](#).
- Check that all of the connectors on the [2K LCSS PWB](#) are pushed fully home. Ensure that all of the ground wires are connected to the frame.
- Check all the harnesses for damage and short circuit to ground.
- LVF BM. Check the items that follow:
 - Ground connection on the power cord, [PL 12.425 Item 4](#).
 - Static eliminator on bin 0 entry, [PL 12.370 Item 7](#).
 - Static eliminator on the tamper assembly, [PL 12.355 Item 5](#).
 - Static eliminator on the bin 1 entry, [PL 12.375 Item 7](#).
 - Static eliminator on the exit upper guide, [PL 12.420 Item 9](#).
 - Check that all of the connectors on the [LVF PWB](#) and [LVF BM PWB](#) are pushed fully home. Ensure that all of the ground wires are connected to the frame.
 - Check all the harnesses for damage and short circuit to ground.
- HVF BM. Check the items that follow:
 - Ground connection to the power supply unit, [PL 12.140 Item 4](#).
 - Static eliminator on BM entry, [PL 12.150 Item 26](#).
 - Static eliminator on BM exit, [PL 12.185 Item 16](#).
 - Static eliminator on the tri-folder right hand frame, [PL 12.215 Item 13](#).
 - Ground wire on the BM compiler motor, [PL 12.175 Item 1](#).
 - Ground wire on the BM back stop motor, [PL 12.400 Item 9](#).
 - Ground wires to HVF transport motors, [PL 12.120](#).
 - Ground wires to HVF buffer and bypass feed motors, [PL 12.120](#).
 - Ground wire to front of HVF paddle unit [PL 12.115 Item 2](#).
 - Ground wire to HVF paper pusher motor, [PL 12.115 Item 13](#).
 - Ground wire to HVF stapler unit, [PL 12.111 Item 1](#).
 - Check that all of the connectors on the HVF PWB, and BM PWB are pushed fully home. Ensure that all of the ground wires are connected to the frame.
 - Where the Tri Folder and the Inserter options are installed check that the PWB connectors are pushed fully home. Ensure that all of the ground wires are connected to the frame:
 - Ground wire on the inserter PWB, [PL 12.310 Item 9](#).
 - Inserter docking PJ and connector.
 - Check all the harnesses for damage and short circuit to ground.

OF11 Toner Contamination RAP

Use this RAP if there is excessive toner contamination in the machine or on the customer's floor.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the checks that follow:

- The toner cartridge, [PL 90.17 Item 2](#), is undamaged, and that the toner cartridge seal is undamaged.
- The print cartridge, [PL 90.17 Item 9](#), is undamaged.
- The dispense module, [PL 90.17 Item 1](#), is undamaged.
- The toner dispense auger tube engages correctly with the print cartridge, [Figure 1](#).
- The xerographic voltage tracks on the HVPS tray assembly, [PL 90.10 Item 1](#). Refer to the [391A HVPS RAP](#).
- The fault history file for any recent 391-XXX or 393-XXX fault codes. The contamination may be caused by a xerographic control fault. Perform the appropriate RAP.

OF12 False Print Cartridge End of Life RAP

Use this RAP if the print cartridge has prematurely reached its end of life, 220,000 prints.

Initial Actions



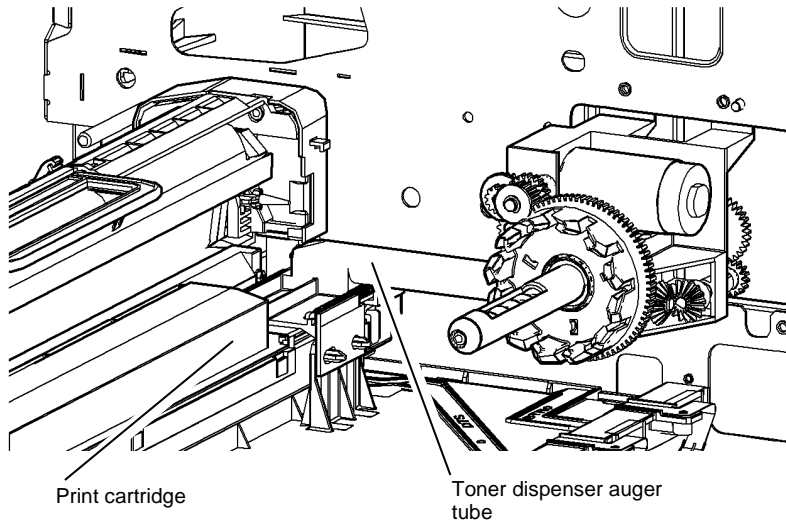
Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter [dC131](#) locations 658-128, 658-129 and 658-130. Check the print cartridge image counts. If the total image counts are unexpectedly high, 220,000 or greater, then the CRUM data is corrupted.

Procedure

Perform the checks that follow:

1. The wiring harness at PJ513. Repair the wiring as necessary, [REP 1.2](#). Refer to [WD 9](#).
2. For damage to the print cartridge CRUM connector, [PL 60.35 Item 18](#). If necessary, install a new LED print head module, [PL 60.35 Item 1](#).
3. Check that the print cartridge fan is working, refer to the [OF6 Air Systems RAP](#).
4. For damage to the CRUM plug on the print cartridge, [PL 90.17 Item 9](#). If necessary, install a new print cartridge, [PL 90.17 Item 9](#).
5. If the fault persists, go to the [OF10 Intermittent Failure RAP](#) and perform the Print Cartridge Checkout.



X-1-1230-A

Figure 1 Component location

OF13 Convenience Stapler RAP

To identify problems with the convenience stapler.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care when measuring AC mains (line) voltage. Electricity can cause death or injury.



CAUTION

Incorrect voltage may damage the convenience stapler. The convenience stapler must not be connected to the power outlet if the voltage is incorrect.

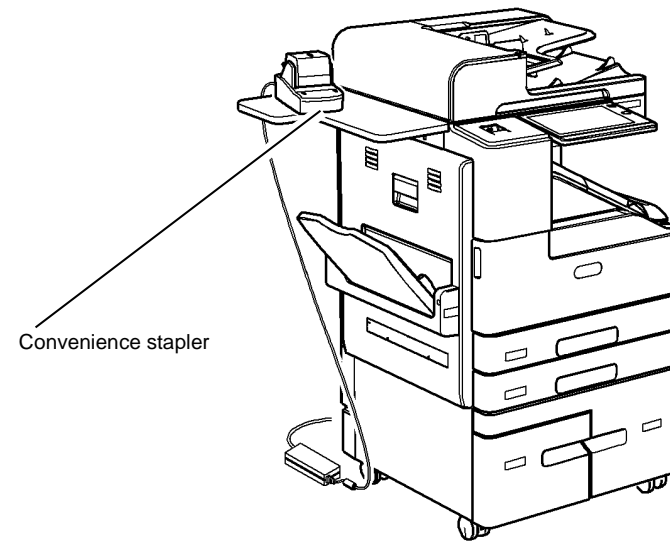
NOTE: There are no serviceable components in the convenience stapler.

Check that the power lead is correctly connected to the convenience stapler, [Figure 1](#). Check the AC mains (line) voltage at the customer power outlet. **The voltage measured is within the power requirements, [GP 22](#).**

Y N

If the voltages are incorrect or the wiring of the main supply is found to be defective, inform your technical manager and the customer. Do not attempt to repair or adjust the customer supply.

Install a new convenience stapler, [PL 25.10 Item 1](#).



Convenience stapler

X-1-1078-A

Figure 1 Component location

OF14 Xerox Extensible Interface Platform RAP

Use this RAP when experiencing faults with the Xerox Extensible Interface Platform (XEIP).

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

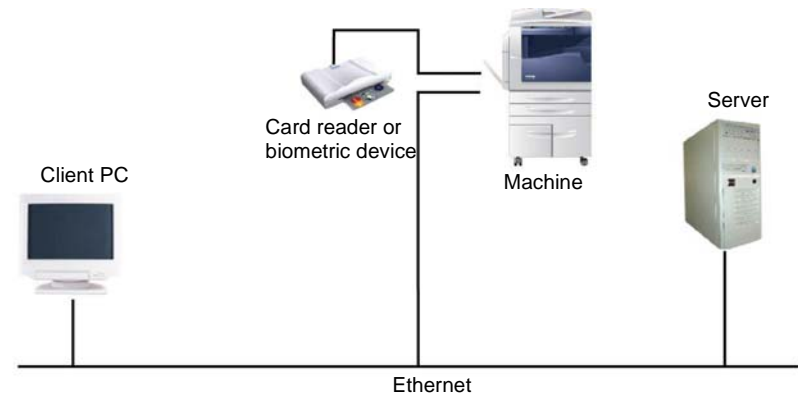
1. As necessary, perform the steps that follow:
 - Perform an AltBoot, GP 4. Ask the customer to resubmit the XEIP enablement file and restore XEIP settings.
 - Install a new UI control PWB, PL 2.10 Item 6.
 - Perform the 303D SBC PWB Diagnostics RAP.
2. Request the customer to check their network and software.

OF15 Xerox Secure Access RAP

Overview

Xerox Secure Access uses an external device, such as a card reader or biometric device, to authorize access to the machine. The reader passes the information to the machine, which handles the authentication process, including which UI screens are displayed, accepting UI responses that define their content and order. The machine can gather user identities and passwords directly from an external server. All communication is via the machine's connection to the ethernet. Refer to Figure 1.

Xerox Secure Access is controlled via the web UI. The active status is displayed in tools within Access Control. If communications cannot be established with the Xerox Secure Access Server, the service may be temporarily disabled by selecting the now enabled Off button within the Xerox Secure Access tools window. Once communication is re-established the stored Xerox Secure Access settings are restored.



X-1-1079-A

Figure 1 Network Diagram

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Before working on the Xerox Secure Access, test the machine in service mode, GP 1 to ensure no faults are displayed and that the machine is functioning properly. If it is not, repair any problems before proceeding with diagnosing the Secure Access Accessory. Service mode can be entered to test copier functionality when Secure Access is installed.

Perform the steps that follow:

- Check the connection between the card reader and the machine.
- Check that the card reader LED's are on or blinking. If the LEDs on the card reader are not operating, go to [Card Reader Failure](#).
- If customers have problems of install/setting up, or any other problems related to their Secure Access Administrator, they should refer to the Installation/Administration Guide or contact Xerox Technical Support.

Card Reader Failure

The primary failure modes of the card reader are power problems or failed hardware components. The symptom of these failures can be detected by observing the LED on the card reader. Refer to [Table 1](#). Go to the relevant procedure:

- [The Green LED on the Card Reader is On.](#)
- [The Green LED on the Card Reader Flashes Rapidly.](#)
- [The Red LED on the Card Reader is On.](#)
- [The Red LED on Card Reader Flashes Slowly.](#)
- [The Red LED on Card Reader Flashes Rapidly.](#)
- [The Card Reader LEDs are not On or Blinking.](#)

Table 1 LED identification

When the LED on the Card Reader is:	Meaning
Red	The authentication device is in idle mode; there is no active session.
Green	The authentication device is in ready mode; a session is active.
Slow flashing red	The authentication device has no connection to the server.
Slow flashing green	The authentication device is communicating to the server.
Fast flashing red	Invalid card / password; access denied.

The Green LED on the Card Reader is On

- This indicates an active Secure Access Session and the Card Read correctly corresponds to a valid Secure Access Account.
- If the UI on the machine is locked, check with the customer for a second PIN for additional security. This PIN will need to be entered via the soft buttons on the UI.
- Ensure that the card corresponds to a valid Secure Access Account.

The Green LED on the Card Reader Flashes Rapidly

- This indicates a valid card swipe and the system is in process of authentication on the server.
- If the UI on the machine is locked, check with the customer for a second PIN for additional security. This PIN will need to be entered via the soft buttons on the UI.
- If the UI on the machine is locked and no secondary PIN is required. Check that the Xerox Secure Access is installed correctly, and ask the customer to check the configuration at the server.

The Red LED on the Card Reader is On

- This indicates the card reader is in an idle state. If the red LED remains on, and the UI remains locked after a card is swiped, re-orientate the card and re-swipe.

- Use a known good card in the reader. If the known good card works on the problem card reader, ask the customer to ensure the problem card corresponds to a valid Secure Access Account.
- Use the card in a known good card reader. If the card is working on a known good card reader, install a new card reader.

The Red LED on Card Reader Flashes Slowly

- This indicates the reader is connected to the controller but the controller is not connected to the server. Ensure the connectors of the LAN connections are working properly. If the connections are working, this indicates the network may not work properly. Ask the customer to check with the Network Administrator.

The Red LED on Card Reader Flashes Rapidly

- This indicates a valid card but does not correspond to a valid Secure Access Account at the server. Test with a known valid user's card.
- If all cards react the same way, this indicates the server configuration may not be correct. Ask the customer to check the server configuration.
- If some cards react this way, this indicates the cards are not valid. Ask the customer to perform the checks that follow on the problem cards:
 - A properly formed certificate can be found on the card.
 - A personal identifier entered by the System Administrator can be validated against the card.
 - The card is not damaged or worn.

The Card Reader LEDs are not On or Blinking

- Check that the Secure Access feature is correctly installed.
- If there is still no LED on the card reader, install a new card reader.

NOTE: *if there is another working card reader available, the readers can be swapped to confirm failure.*

- If the card reader is not functioning, the web UI has a setting that will enable UI keypad access. If the users know their card access number, they can use the machine by manually entering their number. The process is as follows:
 1. Go to the machine's web UI. select **Properties / Security**. Check the box that says "Allow local user interface initiation".
 2. Enable the keypad and test with valid credentials. This will validate the rest of the secure access function.
 3. Leave the system in this mode until the new card reader can be installed.

OF16 USB Keyboard RAP

Use this RAP if an optional external keyboard fails to communicate with the machine.

Overview

The optional USB keyboard feature enables the customer to connect a standard USB keyboard to the machine. This allows textual input to, and navigation between fields on the UI screen.

NOTE: This feature requires SMP1 or higher software.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

The machine software version is SMP1 or higher.

Y N
| Load new machine software, GP 4.

The USB keyboard is plugged into a USB port on the machine.

Y N
| Connect the USB keyboard to a USB port on the machine.

Print a configuration report. Check the configuration report under the heading Connectivity Physical Connections. **Software Tools is listed next to USB Connection Mode.**

Y N
| Ask the customer to enable USB. Or enter Customer Administration Tools, GP 24. Enable USB:
• Refer to the USB Port Security Setting Check in GP 4.
• Refer to GP 28 USB Connection Mode.

Check that the USB port is functional by connecting a USB flash drive to the USB port, then perform a dC131 NVM save. **The NVM save was successfully saved to the USB flash drive.**

Y N
| **NOTE:** It is not necessary to perform the NVM restore procedure.
Perform the 303D SBC PWB Diagnostics RAP.

Connect the USB keyboard to the PWS or ask the customer to connect the USB keyboard to a computer. **The USB Keyboard functions correctly.**

Y N
| Ask the customer to install a different USB keyboard.

Perform SCP 5 Final Actions.

Image Quality RAPs

IQ1 Image Quality Entry RAP	3-3
IQ2 IOT IQ Defects RAP	3-17
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IQ4 Fuser Module RAP	3-33
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Image Quality Specifications

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IQ1 Image Quality Entry RAP

Use this RAP to determine the source of an image quality problem.

Initial Actions

Refer to [Figure 1](#) for print/copy definitions.

Perform the steps that follow:

- Discuss the IQ problem with the customer to fully understand the defect and the modes in which it occurs. Produce the customer job that displays the customer's IQ defect.

NOTE: If the customer is using Toner Save mode, explain that this will lighten the image to save toner. Standard mode (toner save disabled) should be used for image quality problem solving.

NOTE: When border erase is switched off, an image defect within 5mm of the sheet edge is acceptable. Border erase only affects the printed image from the IOT, so scanned images saved to USB stick will have edge to edge images.

NOTE: Long runs of duplex or running LVF BM jobs may result in lighter prints. If this occurs adjust the darkness using the **Darken Image** tool on the UI. From the UI select **Device** then **Tools**. Scroll down to **Darken Image**. Check the position of the **Darken Image** tool and reset to zero before proceeding.

- Enter Customer Administrator Tools, [GP 24](#). Press the Machine Status button. Select Device / Tools / App Settings / Copy. Disable the Toner Saver mode if it is not already disabled. At the end of the IQ procedure, set the Toner Saver mode back to the original setting.
- Check the condition of the paper. Do not use incorrectly cut paper, damp paper, paper with rough edges, badly drilled paper, paper with wrapper wax or glue. Paper and media should be stored flat, enclosed in wrappers, in a cool dry environment.
- Check that the paper is within specifications, [GP 20](#).
- Check that paper tray guides are set to the correct paper size.
- Check that the document guides on the SPDH are set correctly.
- Check the original documents for defects. If the documents are damaged passing through the SPDH, perform the [305C](#) Damaged Documents RAP.
- Go to [dC122](#) Fault History. Check for any fault codes associated with the print cartridge, fuser module, LED print head or the paper path from the registration roll, [PL 80.17 Item 5](#) to the fuser module, [PL 10.8 Item 1](#). These may contribute to image quality faults. If found, fix these faults before continuing with this RAP.
- Clean the paper path sensors that follow:
 - Tray 1 TAR sensor, [PL 80.10 Item 5](#).
 - Tray 2 TAR sensor, [PL 80.10 Item 5](#).
 - Registration sensor, [PL 80.17 Item 7](#).

NOTE: The Scan to USB option must be made available by the System Administrator. If Authentication or Accounting has been enabled on the device, you may have to enter login details to access the Scan To features.

Procedure

Enter [dC612](#) Print Test Patterns. Select test pattern 21 (ITP 11 Error Diffused IOT TRC+MQ). Select simplex. Select quantity 3. Select Start Test. **The printed image of the second print is good, with reference to [IQS 1](#) Solid Area Density and Tone Reproduction.**

Y N

Perform the actions that follow:

- Check the condition of the paper. Do not use incorrectly cut paper, damp paper, paper with rough edges, badly drilled paper, paper with wrapper wax or glue. Paper and media should be stored flat, enclosed in wrappers, in a cool dry environment.
- Check that the paper is within specifications. Refer to [GP 20](#).
- Check that paper tray guides are set to the correct paper size.
- Check the original documents for defects. If the documents are damaged passing through the SPDH, perform [305C](#) Damaged Documents RAP.
- Ensure that the image adjustment mode selections are those used by the customer.
- Perform [ADJ 60.4](#) LED print head Cleaning.

Produce the customer job that displays the customer's IQ defect. **The image quality fault persists.**

Y N

Perform [SCP 5](#) Final actions.

Select a suitable internal test pattern to diagnose the IQ problem. If necessary, refer to [IQ1 Internal Test Patterns](#) for:

- A description of image quality defects together with the optimum internal test pattern to be used to diagnose the IQ defect, [Table 1](#).
- A chart of the internal test pattern descriptions together with their intended use, [Table 2](#).
- Example images of all internal test patterns, Figures 2 to 20.

Enter [dC612](#) Print Test Patterns. Select the required internal test pattern. Select simplex. Select Start Test. **The printed image of the internal test pattern is good.**

Y N

Perform the [IQ2](#) IOT IQ Defects RAP.

Check the back of the prints for toner contamination. **The back of the prints are clean.**

Y N

Perform the [IQ2](#) IOT IQ Defects RAP.

Select a suitable duplex internal test pattern. Select duplex. Select Start Test. **The printed images of the internal test pattern are good.**

Y N

Perform the [IQ2](#) IOT IQ Defects RAP.

Check the prints for damage. **The prints are good.**

Y N

Perform the [IQ5](#) Print Damage RAP.

A B

A | **B**
 If a fax module is installed, send a test fax to the machine. **The fax image quality is good.**
Y | **N**
 Compare the fax print with an internal test pattern print. **The fax print and the internal test pattern print display the same defect.**
Y | **N**
 Perform the **IQ9** Unacceptable Received Fax Image Quality RAP.
 Perform the **IQ2** IOT IQ Defects RAP.

No specific image quality defect has been identified. If necessary, modify the print quality to meet the customer requirements. Refer to the **IQ11** Print Quality Improvement RAP.

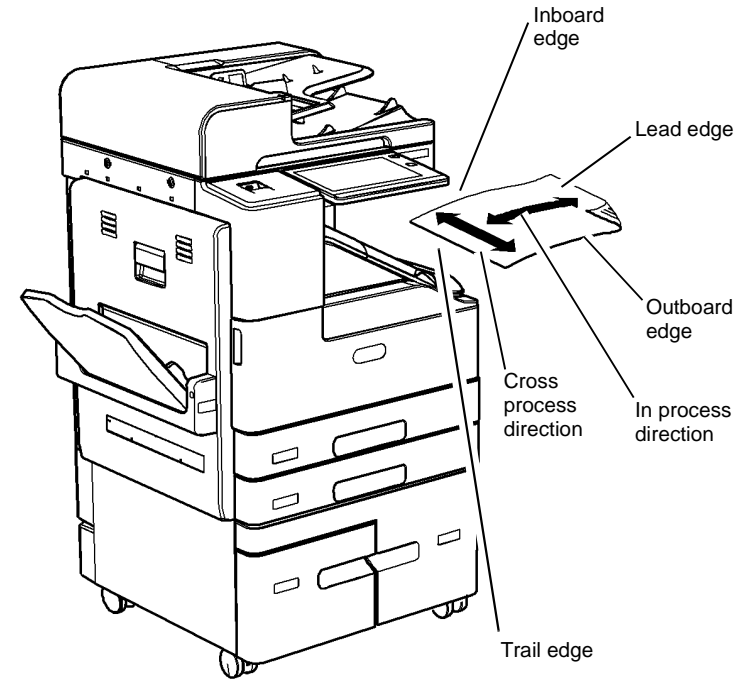
Make a simplex scan to USB file of test pattern 82E2010 (A4) or 82E2020 (8.5 x11inch) from the document glass. Ensure that the test pattern is correctly registered against the document guides and is not disturbed when the SPDH is lowered. Scan 3 times. View the resultant file on a computer screen. **The file image of the second image is good.**

Y | **N**
 Perform the **IQ7** Document Glass and Scanner IQ Defects RAP.

Place the test pattern 82E2010 (A4) or 82E2020 (8.5 x11inch) face down in the SPDH input tray. Check the document guides on the SPDH are set to just touch the test pattern. Make a duplex scan to USB file. Scan 3 times. View the resultant file on a computer screen. **The file image for side 2 of the second image is good.**

Y | **N**
 Perform the **IQ12** Side 2 Scanner IQ Defects RAP.

No specific image quality defect has been identified. If necessary, modify the print quality to meet the customer requirements. Refer to the **IQ11** Print Quality Improvement RAP.



X-1-1229-A

Figure 1 Print/copy definitions

IQ1 Internal Test Patterns

Table 1 defines the image defect, gives a description of the defect and identifies the optimum test pattern to be used, together with a link to an example image of the test pattern.

Table 2 describes the test patterns and the purpose for which they should be used to identify image quality defects.

To access internal test patterns, refer to dC612 Print Test Pattern. Use the test patterns listed in Table 1 for image quality analysis. The other test patterns are designed for the use of initial machine calibration by the manufacturer.

Table 1 Image quality defects

Image Quality Defect	Description of Defect	Optimum Internal Test Pattern	Example Test Pattern Image
Background	Uniform darkening across all the non print areas.	1	Figure 2

Table 1 Image quality defects

Image Quality Defect	Description of Defect	Optimum Internal Test Pattern	Example Test Pattern Image
Bands in the process direction	Grey to dark bands in the light or non-image areas of the print in the process direction.	2 3	Figure 3 Figure 4
Bands in the cross process direction	Grey to dark bands in the light or non-image areas of the print in the cross process direction. See also narrow bands in the cross process direction.	2 3	Figure 3 Figure 4
Black bands in the cross process direction	Black bands in the light or non-image areas of the print in the cross process direction.	2 3	Figure 3 Figure 4
Black image	A print that is black or grey all over, but has no visible image of the original document.	1	Figure 2
Black lines in the process direction	Black lines in the light or non-image areas of the print in the process direction.	2 3	Figure 3 Figure 4
Blank image	No visible image.	3	Figure 4
Blurred image	Part or whole of the image has the appearance of being out of focus. Refer to IQS 4 Resolution.	9 11, 12, 13, 14 (side 1) - 11, 12, 13, 14 (side 2) 22	Figure 10 Figure 12 - Figure 13 - Figure 21
Dark grey copies or prints are too dark	Dark grey tones are reproduced too dark.	15	Figure 14
Dark prints	Very dark background with a visible image.	1 11, 12, 13, 14 (side 1) - 11, 12, 13, 14 (side 2)	Figure 2 Figure 12 - Figure 13
Deletions	Areas of the image missing from the print. Deletions may be in the form of white spots, marks, lines, or whole areas of toner missing from the print.	2 3 4 9	Figure 3 Figure 4 Figure 5 Figure 10
Developer beads on print	Developer beads in the light or non-image areas of the print.	1 2	Figure 2 Figure 3
Displaced and fragmented image	Distorted images, part images and missing images. Images that are on the page but in the wrong place.	3 9 11, 12, 13, 14 (side 1) - 11, 12, 13, 14 (side 2)	Figure 4 Figure 10 Figure 12 - Figure 13

Table 1 Image quality defects

Image Quality Defect	Description of Defect	Optimum Internal Test Pattern	Example Test Pattern Image
Fuzzy or grainy lead edge	Fuzzy or grainy lead edge on full page half tones. Fuzzy or grainy trailing edge on full page half tones edge/trail edge	2	Figure 3
Light copies or prints	The image is visible on the print, but with insufficient solid area density.	5 8 21	Figure 6 Figure 9 Figure 20
Light grey copies or prints are too light	Light grey tones are reproduced too light.	15 21	Figure 14 Figure 20
Marks and spots	Dark marks or spots in the non-image areas of the print.	1 2	Figure 2 Figure 3
Misregistration	The image on the paper is Misregistered. Refer to IQS 7 Registration.	9	Figure 10
Narrow Bands in the cross process direction	Bands across the process direction visible in halftone areas.	4	Figure 5
Offsetting	A previous image that was not removed from the fuser roll during transfer. The image is repeated at regular intervals.	7	Figure 8
Part images and missing images	Incomplete or missing images.	3 9 11, 12, 13, 14 (side 1) - 11, 12, 13, 14 (side 2) 22	Figure 4 Figure 10 Figure 12 - Figure 13 - Figure 21
Print damage	Creases, curl, cuts, folds, wrinkles, or embossed marks are visible on the print.	3	Figure 4
Repeat image defects	Repeated image defects that are not obviously offsetting or residual.	7 11, 12, 13, 14 (side 1) - 11, 12, 13, 14 (side 2)	Figure 8 Figure 12 - Figure 13
Residual image	A previous image that was not removed from the photoreceptor during the cleaning cycle.	7 11, 12, 13, 14 (side 1) - 11, 12, 13, 14 (side 2)	Figure 8 Figure 12 - Figure 13

Table 1 Image quality defects

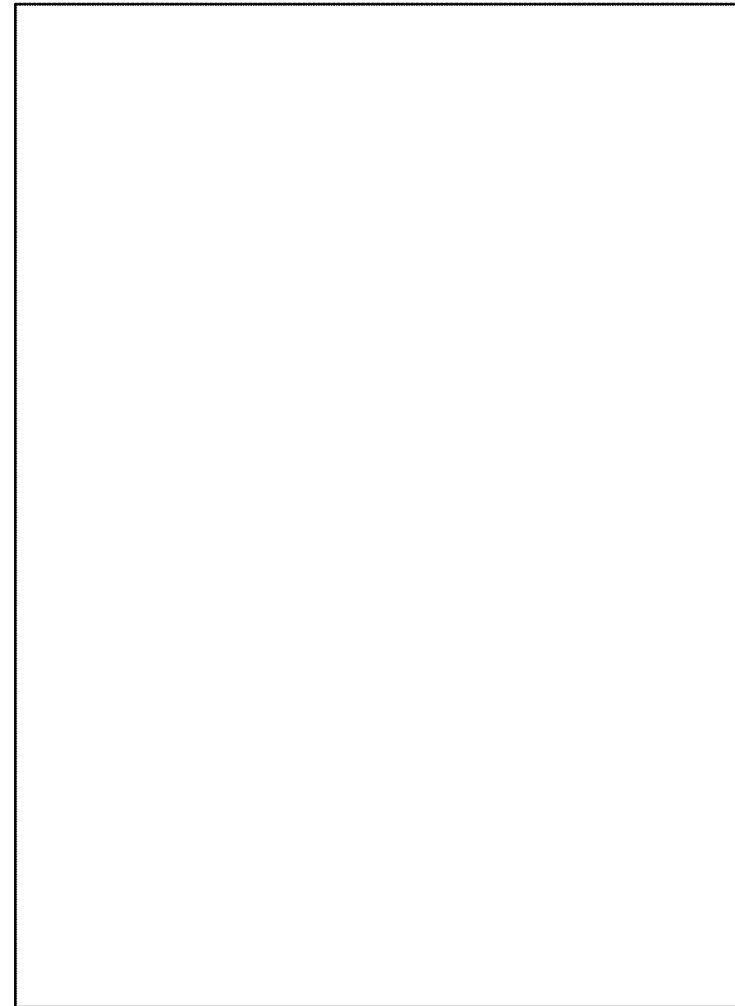
Image Quality Defect	Description of Defect	Optimum Internal Test Pattern	Example Test Pattern Image
Scrambled image	An image on the page that is broken, mixed-up or confused.	3 9 11, 12, 13, 14 (side 1) 11, 12, 13, 14 (side 2)	Figure 4 Figure 10 Figure 12 - Figure 13
Rotated image	The image on the printed document has turned 90 degrees to the image printed on the original document.	11, 12, 13, 14 (side 1) 11, 12, 13, 14 (side 2)	Figure 12 - Figure 13
Skew	A difference in angular alignment between image on the print and the original document.	9	Figure 10
Skips	Loss or stretching of the image, and compression of the image, in bands across the process direction.	9	Figure 10
Smears	Loss or stretching of the image, and compression of the image, in bands across the process direction.	9	Figure 10
Smudges	Dark marks extending from image areas of the page.	3	Figure 4
Streaks in the process direction	Lines on the print, in the process direction of the non-image area.	2 3	Figure 3 Figure 4
Stretched and distorted images	The image on the paper is stretched or distorted.	9	Figure 10
Toner contamination on the back of prints	Random black spots or marks.	2	Figure 3
Uneven density or non uniform image	Variation in image density across the print.	3 22	Figure 4 Figure 21
Unfused prints	The toner image on the finished print is not fused to the print medium.	7	Figure 8
White lines in the process direction	White lines in the dark or image areas of the print in the process direction.	2 3	Figure 3 Figure 4
White spots	White spots are areas visible on a half tone or solid area where the toner has failed to be deposited.	2 3 4 9	Figure 3 Figure 4 Figure 5 Figure 10

Table 2 Internal test patterns

Internal Test Pattern Number	Name	Intended Use	Sample Illustration
1	ITP 1 0% coverage	Use for background defects spots and scratches.	Figure 2
2	ITP 3 25% halftone (106dpi 45deg)	Use for light density uniformity, deletions, lines, bands and streaks.	Figure 3
3	ITP 5 50% halftone (106dpi 45deg)	Use for uniformity, fuser defects, lines, bands, streaks and smears.	Figure 4
4	ITP 8 Perpendicular lines (2on/2off)	Use for motion quality. ROS, developer, registration transport, fuser and intermediate gear trains.	Figure 5
5	ITP 11 Original IOT TRC+MQ	Use to check solid area density and tone reproduction.	Figure 6
6	ITP 12 Perpendicular bands (1 inch on/1 inch off)	Use for solid area reproducibility, checking fusing, stripper finger marks, solid area, offsetting and cleaning.	Figure 7
7	ITP 14 Black band (off, 4.75inch on/1.75inch on)	Use for fuser offsetting and cleaning failure. Stress test for stripping from the fuser.	Figure 8
8	ITP 15 Step-wedge (106dpi 45deg)	The 50% wedge is used for checking IOT darkness.	Figure 9
9	ITP 16 Quadrille lines (4 on/60 off)	Use to check for deletions, skew and skips.	Figure 10
10	ITP 17 Registration print	Use to check registration and skew.	Figure 11
11	ITP 19 Field test print (letter)	Use to check registration, skew, resolution, uniformity, streaks and bands.	Figure 12 and Figure 13 (2 pages)
12	ITP 19 Field test pattern (A4)	Use to check registration, skew, resolution, uniformity, streaks and bands.	Figure 12 and Figure 13 (2 pages)
13	ITP 19 Field test pattern (A3)	Use to check registration, skew, resolution, uniformity, streaks and bands.	Figure 12 and Figure 13 (2 pages)
14	ITP 19 Field test pattern (11x17)	Use to check registration, skew, resolution, uniformity, streaks and bands.	Figure 12 and Figure 13 (2 pages)
15	IQAF TP 3 Gen. Eng. Test	For service engineer's general use.	Figure 14
16	IQAF TP 16 Large Squares	For service engineer's general use.	Figure 15

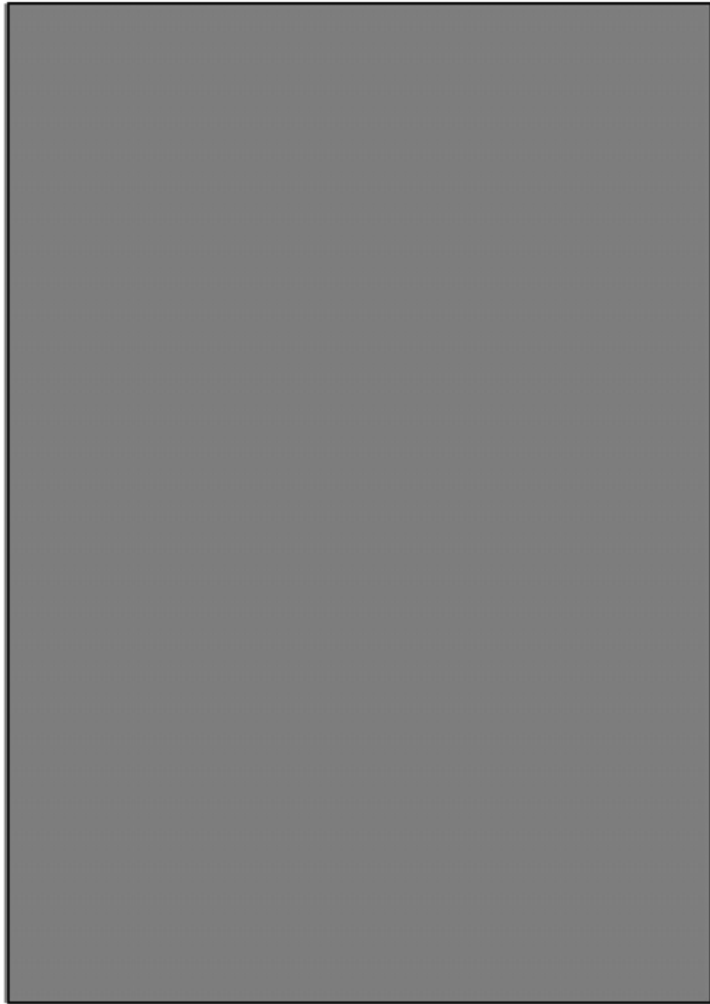
Table 2 Internal test patterns

Internal Test Pattern Number	Name	Intended Use	Sample Illustration
17	IQAF TP 21 Piano Keys (11x17)	For service engineer's general use.	Figure 16
18	IQAF TP 36	For service engineer's general use.	Figure 17
19	IQAF Smear (11x17inch)	For service engineer's general use.	Figure 18
20	100% coverage	For service engineer's general use.	Figure 19
21	ITP 11 Error Diffused IOT TRC+MQ	Use to check solid area density, tone reproduction and resolution.	Figure 20
22	LPH_Focus_5_10ED_Rev2	Use to check xerographic set up and LED print head focus.	Figure 21



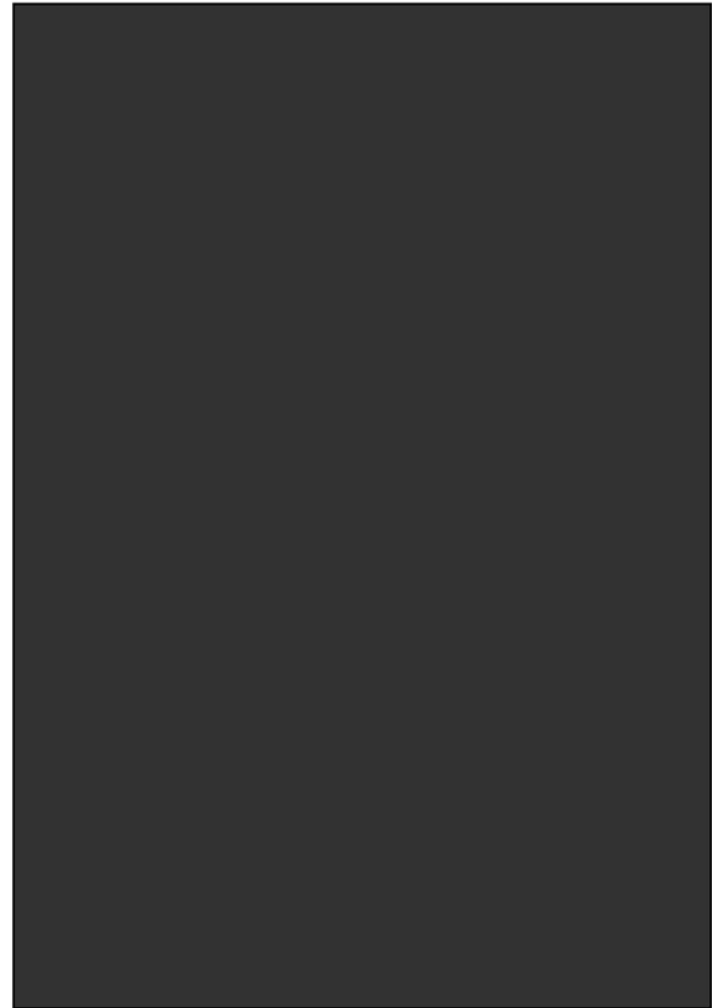
X-1-1175-A

Figure 2 Internal test pattern 1



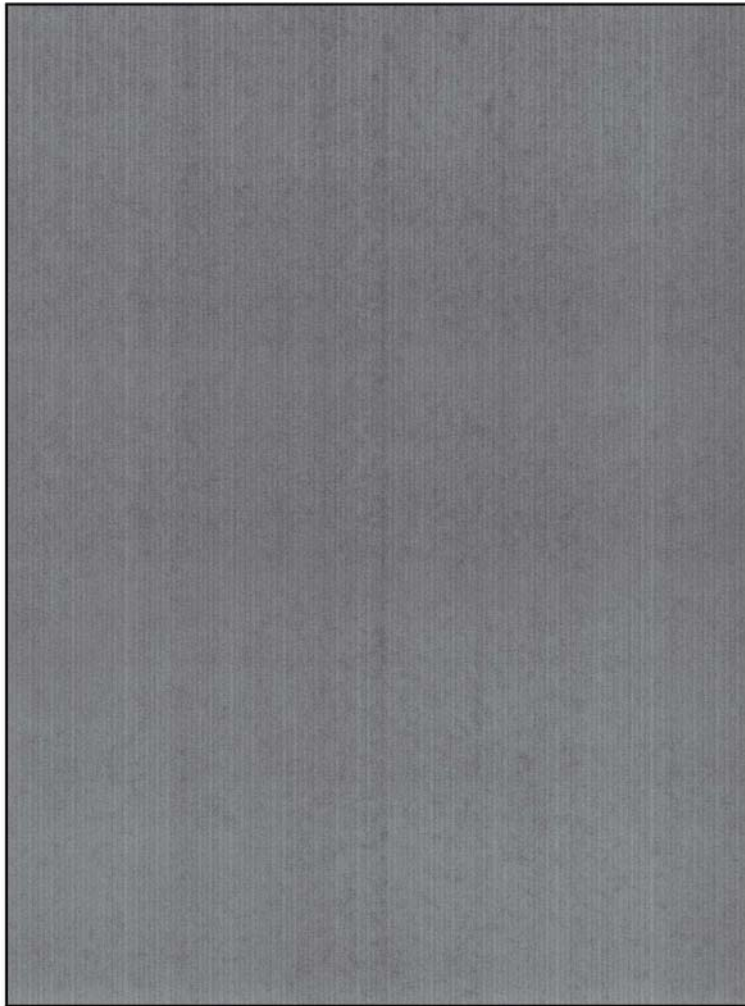
X-1-1176-A

Figure 3 Internal test pattern 2



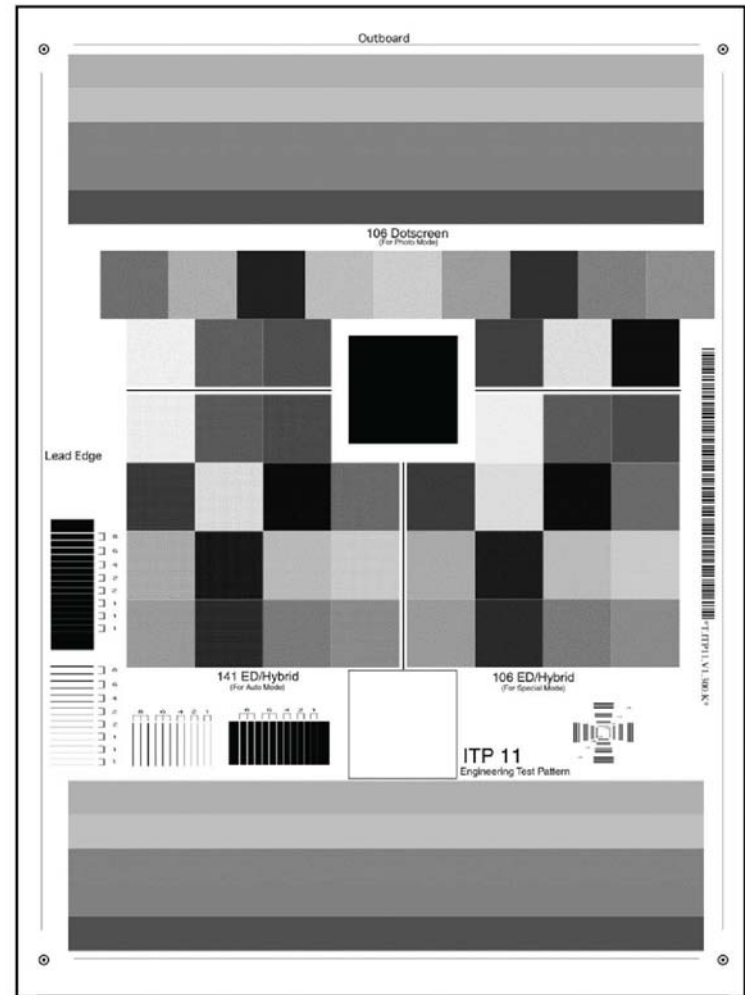
X-1-1177-A

Figure 4 Internal test pattern 3



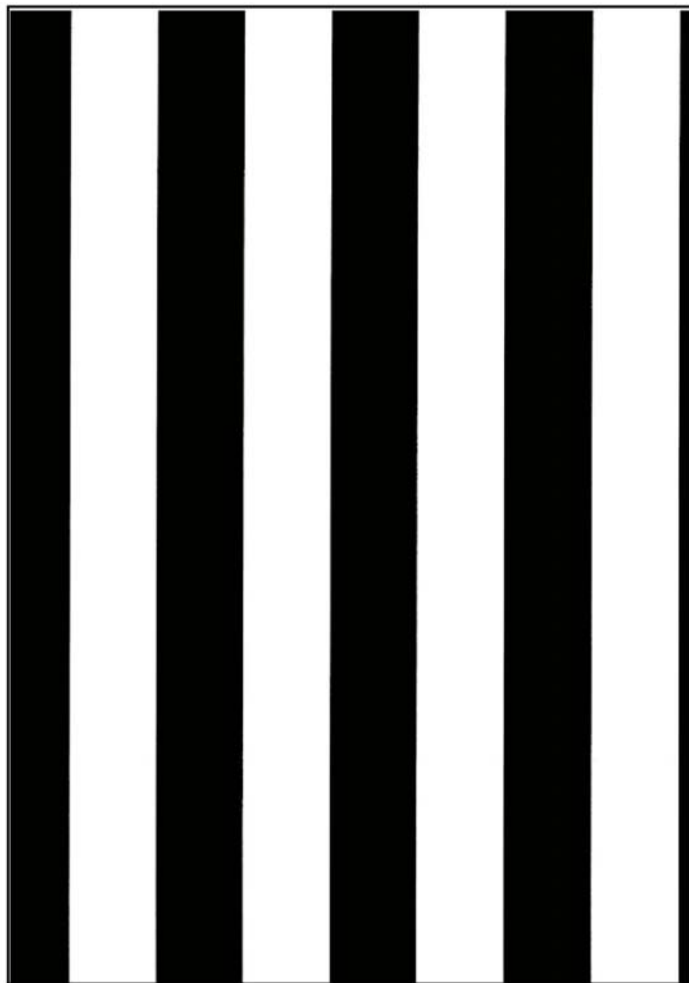
X-1-1178-A

Figure 5 Internal test pattern 4



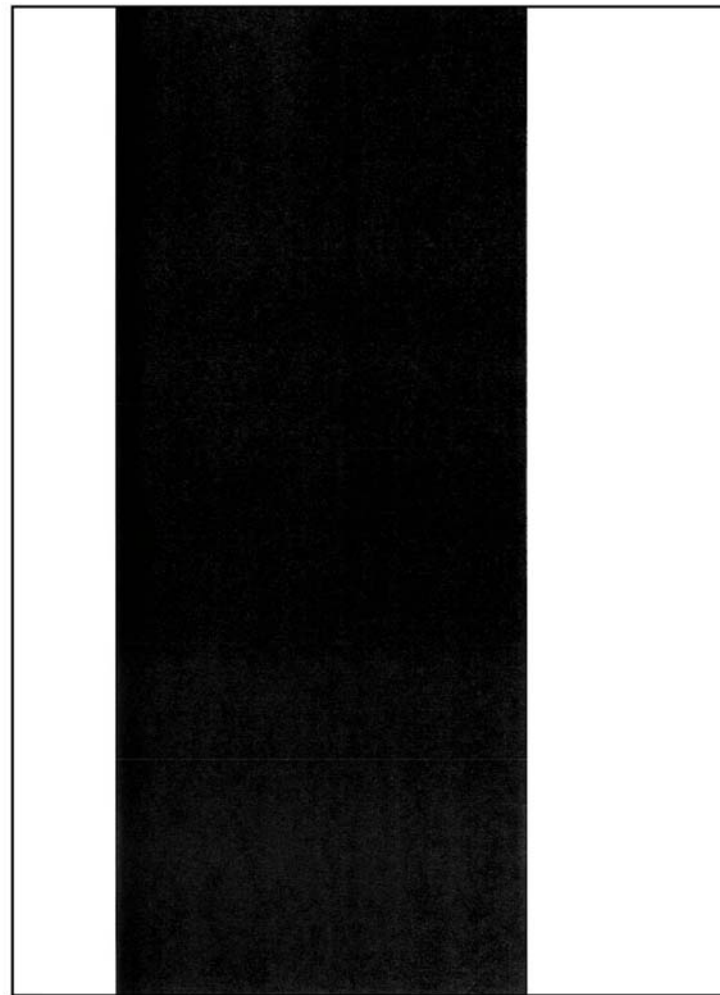
X-1-1179-A

Figure 6 Internal test pattern 5



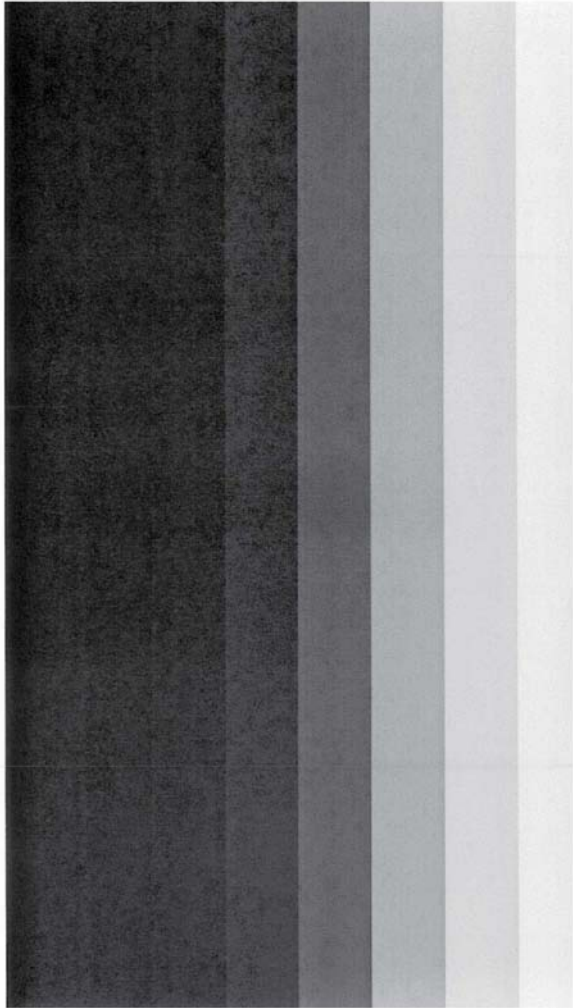
X-1-1180-A

Figure 7 Internal test pattern 6



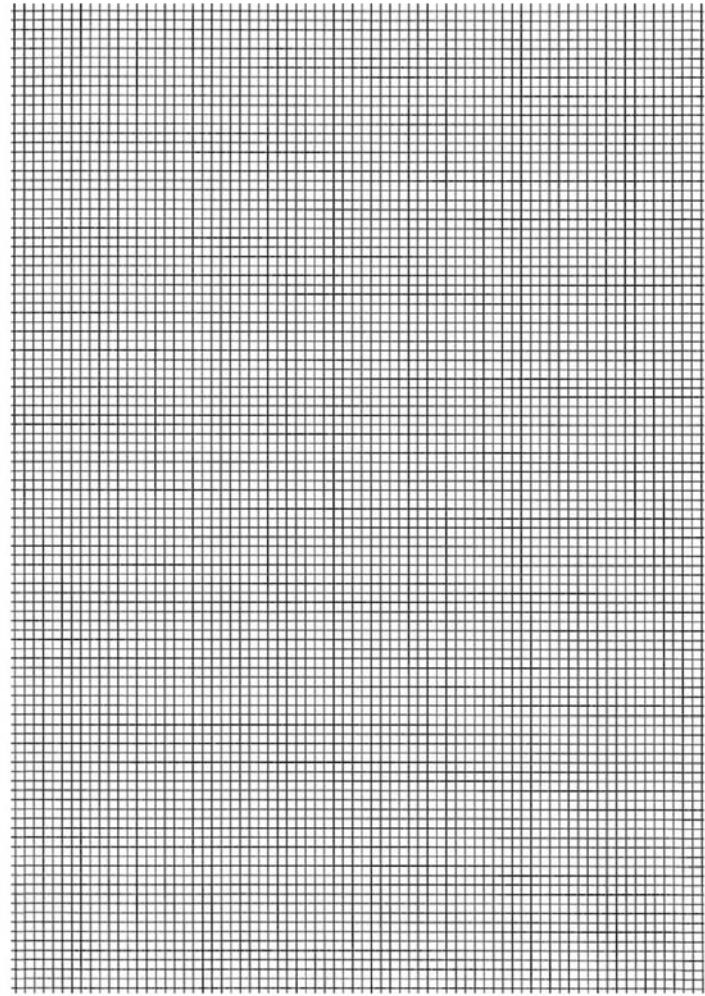
X-1-1181-A

Figure 8 Internal test pattern 7



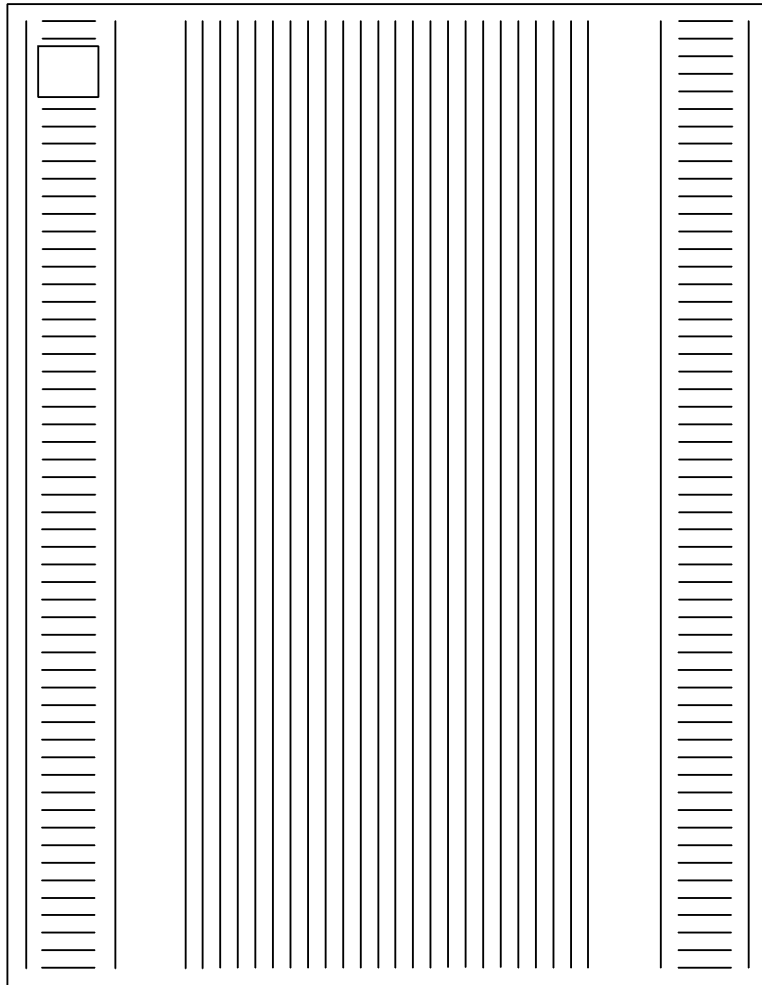
X-1-1182-A

Figure 9 Internal test pattern 8



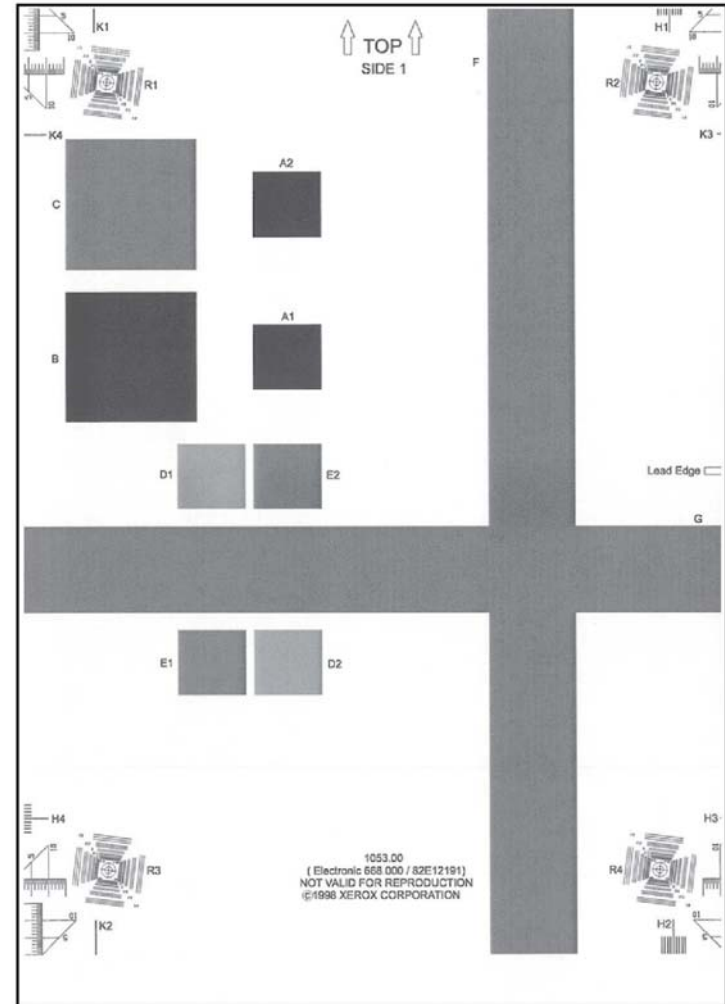
X-1-1183-A

Figure 10 Internal test pattern 9



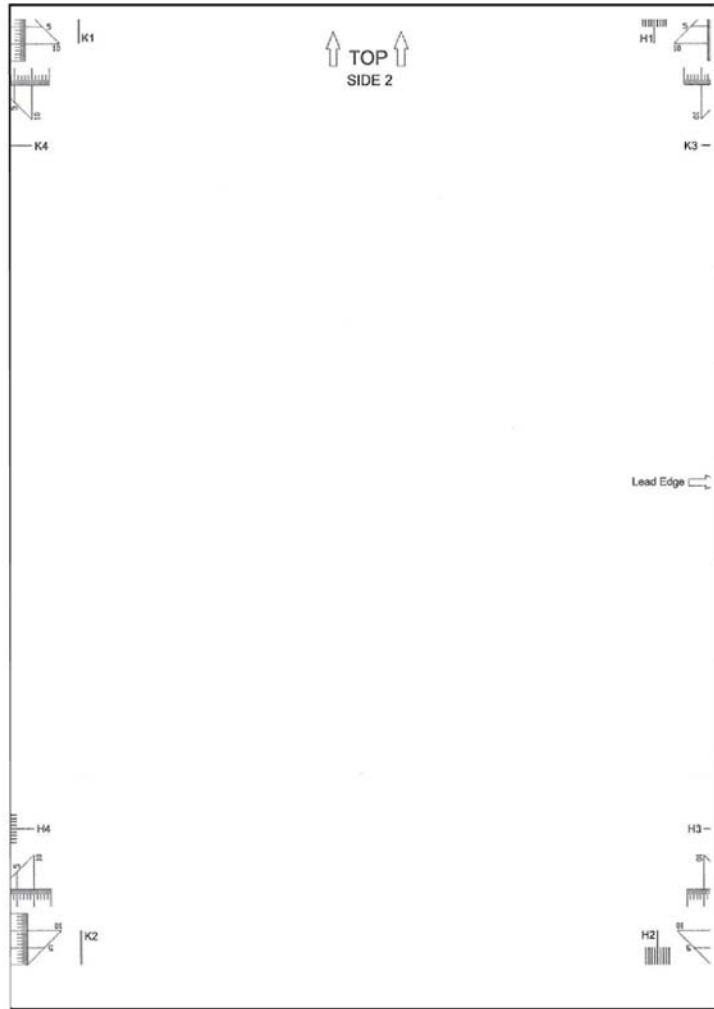
X-1-1184-A

Figure 11 Internal test pattern 10



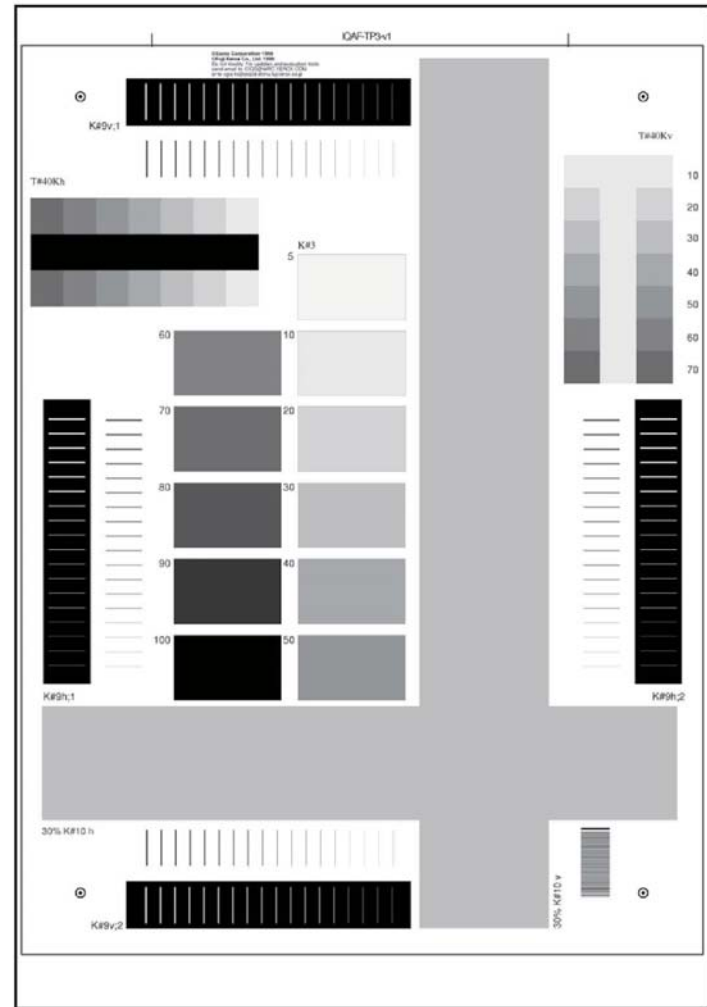
X-1-1185-A

Figure 12 ITP 11, 12 13 and 14 (side 1)



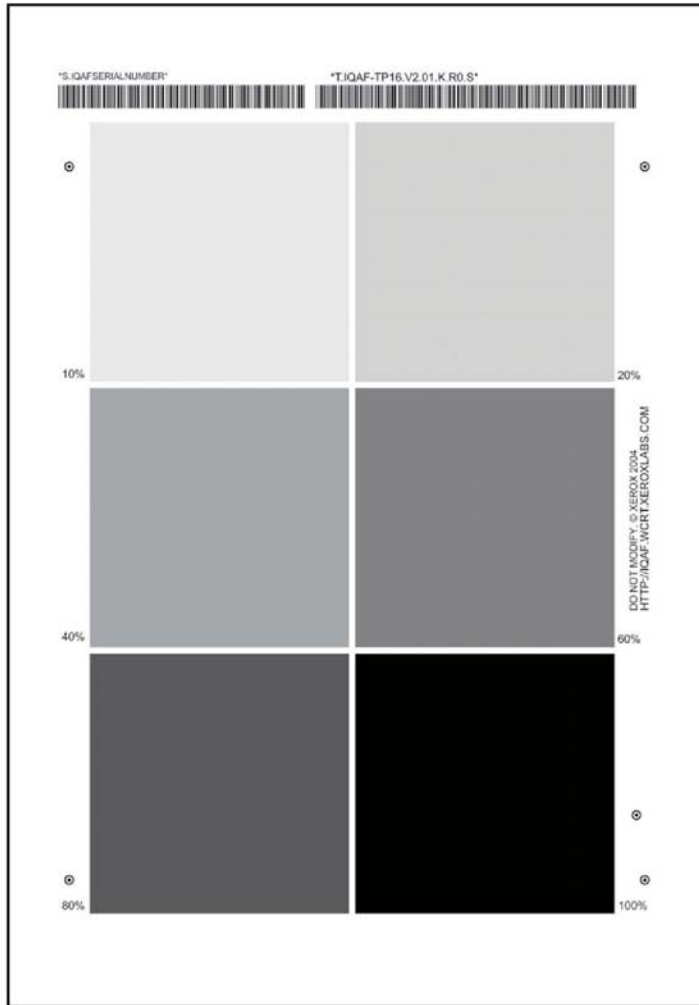
X-1-1186-A

Figure 13 ITP 11, 12 13 and 14 (side 2)



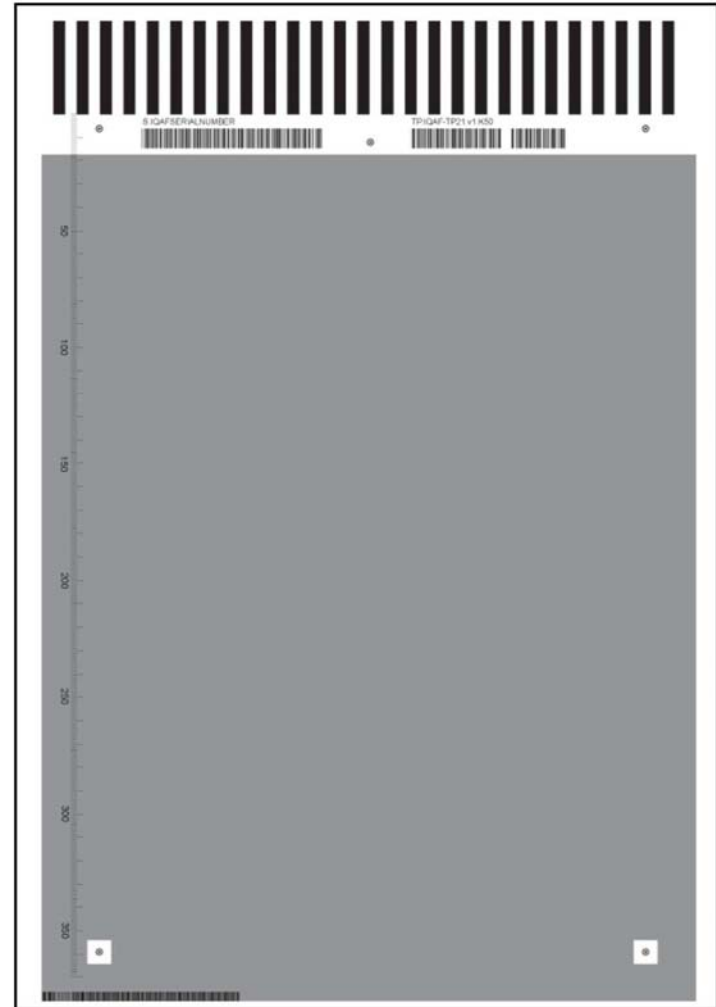
X-1-1187-A

Figure 14 Internal test pattern 15



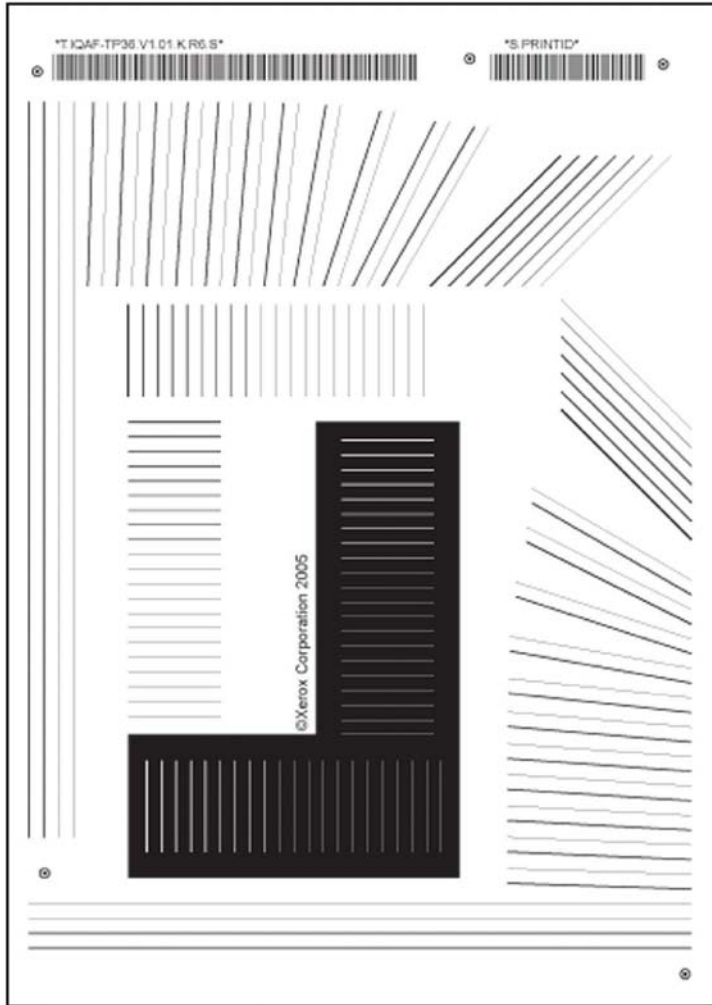
X-1-1188-A

Figure 15 Internal test pattern 16



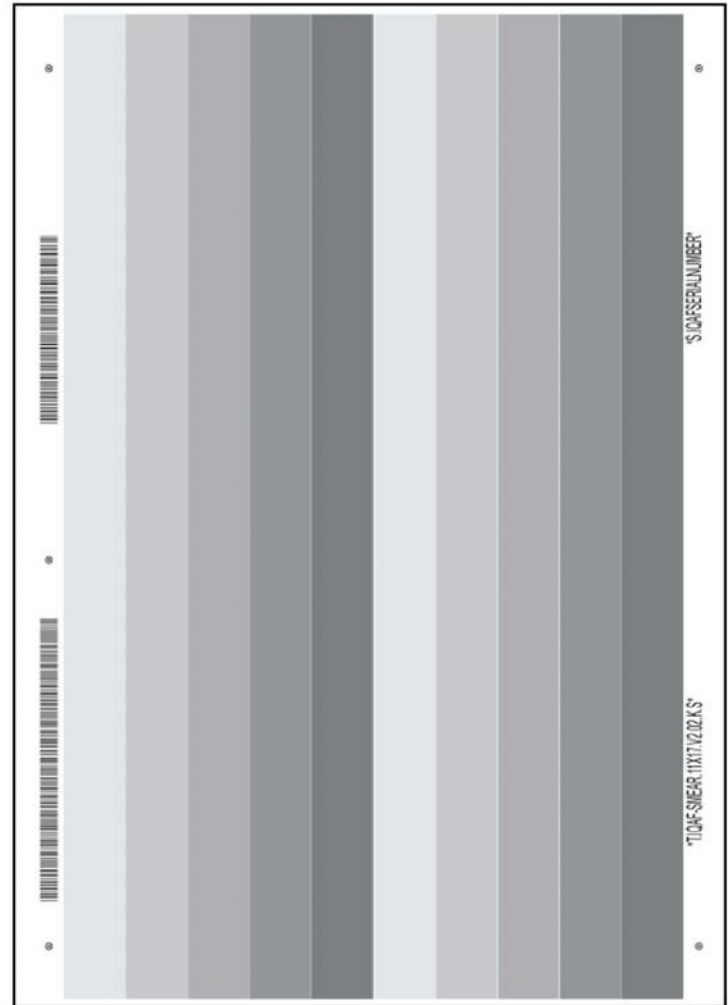
X-1-1189-A

Figure 16 Internal test pattern 17



X-1-1190-A

Figure 17 Internal test pattern 18



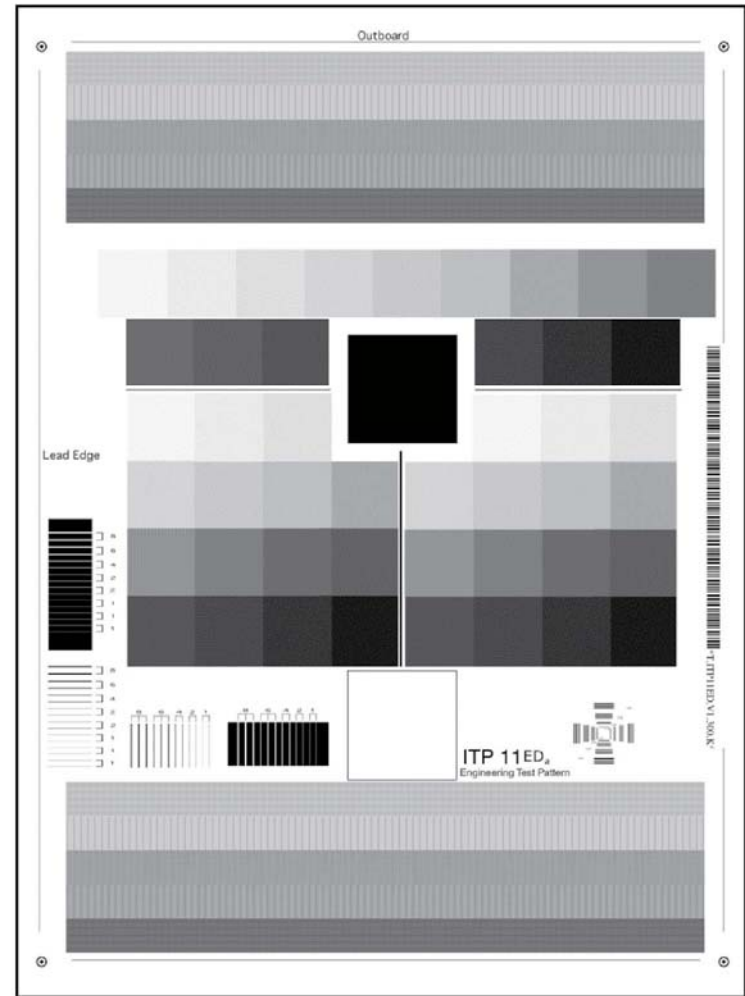
X-1-1191-A

Figure 18 Internal test pattern 19



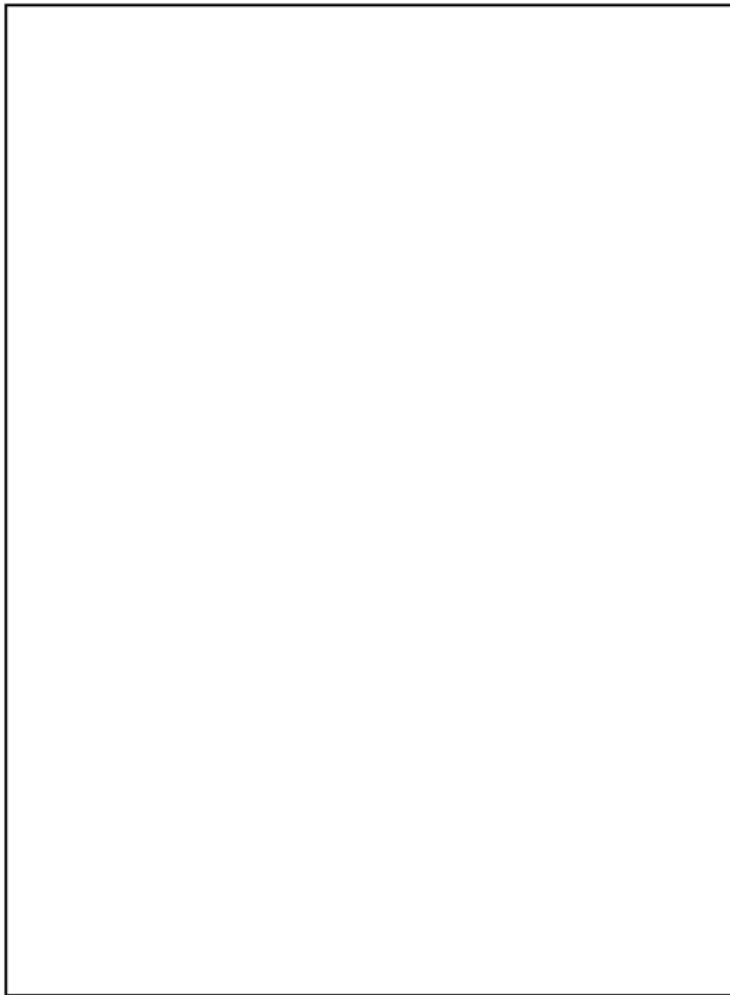
X-1-1192-A

Figure 19 Internal test pattern 20



X-1-1231-A

Figure 20 Internal test pattern 21



X-1-1461-A

Figure 21 Internal test pattern 22

IQ2 IOT IQ Defects RAP

Use this RAP to resolve image quality defects produced in the IOT.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

When border erase is switched off, an image defect within 5mm of the edge of the sheet is acceptable.

Ensure IQ1 Image Quality Entry RAP is performed before starting this RAP.

Check the fault log for the fault codes that follow: 93-360, 93-361, 93-362, 93-364, 93-390. If any of the codes are displayed, perform the 393-390-00 Toner Cartridge Empty RAP or the 393-360-00 to 393-364-00 Toner Concentration Sensor Failure RAP.

Procedure

Go to the appropriate image quality defect and perform the appropriate action.

- Background.
- Bands in the Process Direction.
- Bands in the Cross Process Direction.
- Black Bands in the Cross Process Direction.
- Black Image.
- Black Lines in the Process Direction.
- Blank Image.
- Blurred Image.
- Dark Grey Copies or Prints are Too Dark.
- Deletions.
- Developer Beads on the Print or Copy.
- Displaced, Fragmented or Scrambled Image.
- Fuzzy or Grainy Lead Edge or Trail Edge .
- Light Copies or Prints.
- Misregistration.
- Mottled Copies or Prints.
- Narrow Bands in the Cross Process Direction.
- Part images and missing images.
- Print Damage.
- Repeated Image Defects.
- Skew.
- Skips.
- Smears.
- Smudges.

- [Streaks in the Process Direction.](#)
- [Toner Contamination on the Back of Prints.](#)
- [Uneven Density or Non Uniform Image.](#)
- [Unfused Prints.](#)
- [White Lines in the Process Direction.](#)
- [White Spots.](#)

Background

Description

Uniform darkening across all the non print areas.

Procedure

Refer to [IQS 2](#) Background. Perform the [IQ3](#) Xerographic RAP.

Bands in the Process Direction

Description

Grey to dark bands in the light or non-image areas or white bands in the grey areas of the print in the process direction.

Procedure

White bands on a grey or dark dusting. Check for developer leakage. Go to the [IQ3](#) Xerographic RAP and perform the [Print Cartridge Checkout](#).

Bands that are formed by a difference in density of one band to the next. Typically there are 1 or more image defects in the form of process direction bands that are 8mm (0.3 inch) wide, or multiples thereof. Go to the [IQ3](#) Xerographic RAP and perform the [LED Print Head Checkout](#).

Bands in the Cross Process Direction

Description

Grey to dark bands in the light or non-image areas of the print in the cross process direction. See also [Narrow Bands in the Cross Process Direction](#).

Procedure

Bands that are formed by a difference in density of one band to the next. Go to the [IQ3](#) Xerographic RAP and perform the [LED Print Head Checkout](#) and the [Print Cartridge Checkout](#).

If the band resembles [Figure 4](#), the bands may have been caused by the LED print head being energized while the photoreceptor was stationary. Perform the procedures that follow:

- [392A](#) Print Cartridge Motor Failure RAP.
- [361-100-00](#) LED Print Head Data Integrity Failure RAP.

If the band resembles [Figure 7](#) or [Figure 13](#), the bands may have been caused by an intermittent loss of bias charge roll voltage. Perform the [391A](#) HVPS RAP.

Black Bands in the Cross Process Direction

Description

Black bands in the light or non-image areas of the print in the cross process direction.

Procedure

Perform the [391A](#) HVPS RAP. Go to the [IQ3](#) Xerographic RAP and perform the [Print Cartridge Checkout](#).

Black Image

Description

A print that is black or grey all over, but has no visible image of the original document.

Procedure

If both the print and the copy are completely black, go to the [391A](#) HVPS RAP and check the charge circuit to the print cartridge.

Black Lines in the Process Direction

Description

Black lines in the light or non-image areas of the print in the process direction.

Procedure

Perform the steps that follow:

- If there are dark lines that are continuous from edge to edge of the image, install a new print cartridge, [PL 90.17 Item 9](#).
- Check the LED print head module:
 - Check the camming mechanism is working correctly.
 - Check that there is no debris that would position the LED print head too close to the photoreceptor.
 - Clean the LED print head, [ADJ 60.4](#).
 - If necessary install a new LED print head module, [PL 60.35 Item 1](#).
- If the fault persists, perform the [IQ3](#) Xerographic RAP.

Blank Image

Description

No visible image.

Procedure

Perform the steps that follow:

- If the blank images are additional output, perform the [OF8](#) Multifeed RAP.
- Check the print cartridge drives:
 1. Open the left door and cheat the left door interlock switch.
 2. Enter [dC330](#) code 093-045, print cartridge motor.
 3. [Figure 2](#), Observe the surface of the photoreceptor in the print cartridge.
 4. Select Stop.
 5. If the photoreceptor failed to turn, check the components that follow:
 - Photoreceptor dog gear, [PL 40.15 Item 10](#).
 - Dowel pin, [PL 40.15 Item 4](#).
 - Spring, [PL 40.15 Item 9](#).
 - Print cartridge, [PL 90.17 Item 9](#).
 - Main drive module. Refer to the [392A](#) Print Cartridge Motor Failure RAP.

- If necessary, install new components.
- 6. If the photoreceptor turned, continue below.
- Check the print cartridge development:
 1. Open the left door and cheat the left door interlock switch.
 2. Enter **dC330** code 091-078, Developer Bias DC.
 3. **Figure 2**, observe the surface of the photoreceptor in the print cartridge, rotate the flywheel, **PL 40.15 Item 2** in the normal direction. A solid area of toner should appear on the surface of the photoreceptor.
 4. Select Stop.
 5. If the solid area of toner failed to appear, perform the **391A HVPS RAP** and check the developer bias supply to the print cartridge.
 6. If the solid area of toner did appear, go to the **IQ3 Xerographic RAP** and perform the **LED Print Head Checkout**.

Blurred Image

Description

Part or whole of the image has the appearance of being out of focus.

Procedure

Refer to **IQS 4 Resolution** and **Figure 10**. Perform the steps that follow:

1. Use a new ream of paper.
2. Go to **IQ3** and perform the LED Print Head Checkout.
3. Perform the **391A HVPS RAP** and check the bias transfer supply to the bias transfer roll.

Dark Grey Copies or Prints are Too Dark

Description

Dark grey tones of the image are reproduced too dark.

Procedure

Perform the **IQ11 Print Quality Improvement RAP**.

Deletions

Description

Areas of the image are missing from the print. Deletions may be in the form of white spots, marks, lines, or whole areas of toner missing from the print.

Procedure

Perform the steps that follow:

- Check that the paper tray settings match the paper type and size in the trays.
- If the deletions are on side 2 of a duplex print or copy, perform the **IQ5 Print Damage RAP**. Also refer to the **White Lines in the Process Direction** defect.
- If the deletions are small spots, this can be caused by developer beads on the image. Refer to **Developer Beads on the Print or Copy**.
- Check the photoreceptor for fingerprints or other marks. If necessary install a new print cartridge, **PL 90.17 Item 9**.

- If the deletions are small and align with the stripper fingers in the print cartridge, clean the stripper fingers. If necessary install a new print cartridge, **PL 90.17 Item 9**. Refer to **Table 1** to locate the position of stripper finger marks on various paper sizes.

Table 1 Location of stripper finger marks

Paper size and orientation	Paper edge measured from	Outboard stripper finger marks	Centre stripper finger marks	Inboard stripper finger marks
A4 LEF	Outboard	57.5	161.5	245.5
A4 SEF		14.0	118.0	202.0
LTR LEF		48.5	152.5	236.5
LTR SEF		17.0	121.0	205.0
A3		57.5	161.5	245.5
11x17		48.5	152.5	236.5
A4 LEF	Inboard	239.5	135.5	51.5
A4 SEF		196.0	92.0	8.0
LTR LEF		230.5	126.5	42.5
LTR SEF		199.0	95.0	11.0
A3		239.5	135.5	51.5
11x17		230.5	126.5	42.5

NOTE: All the above measurements are in millimetres (+/- 4mm) and are taken from either the inboard or outboard edge of the paper.

- If the deletions are small and align with the stripper fingers in the fuser module, clean the stripper fingers. If necessary install a new fuser module, **PL 10.8 Item 1**.
- If the deletions resemble those shown in **Figure 11**, go to **IQS 6 Copy / Print Defects** and perform the Paper Wrinkle corrective actions.
- Perform the **IQ3 Xerographic RAP**.

Developer Beads on the Print or Copy

Description

Developer beads in the light or non-image areas of the print.

Procedure

Clean the components that follow:

- The print cartridge, **PL 90.17 Item 9**.
- The registration transport housing and registration roll, **PL 80.17**.
- The registration transfer assembly. **PL 80.15 Item 1**.
- The duplex transport assembly, **PL 80.22 Item 1**.

If developer bead contamination continues, install a new print cartridge, **PL 90.17 Item 9**.

Displaced, Fragmented or Scrambled Image

Description

Distorted, broken, mixed-up, incomplete or missing images. Images that are on the page but in the wrong place.

Procedure

Check the items that follow:

- If the scrambled image resembles [Figure 3](#), check for grounding problems at the LED print head.
- Check for high voltage arcing. Refer to the [391A HVPS RAP](#).
- Check the connections on the LED print head module to SBC PWB ribbon cable, PJ851 on the SBC PWB, [PL 3.22 Item 3](#) and PJ511 on the LED print head assembly, [PL 60.35 Item 15](#). Refer to [WD 2](#).
- Go to [OF10](#) Intermittent Failure RAP and perform the [Electrostatic Discharge Checkout](#).
- Go to the [IQ3](#) Xerographic RAP and perform the [LED Print Head Checkout](#).

Fuzzy or Grainy Lead Edge or Trail Edge

Description

The leading edge or the trailing edge of a full page half tone image is fuzzy or grainy.

Procedure

Refer to [dC131](#). Check that the following NVM values are set as follows. Refer to [Table 2](#).

Table 2 NVM Values

Chain	NVM Name	dC131 Display Name	45ppm 55ppm	65ppm 75ppm 90ppm
501-167	BTRFwdBiasRun	BTRFwdBiasRun_P1	210	155
501-168	BTRRevBiasRun	BTRRevBiasRun_P1	10	10

Light Copies or Prints

Description

The image is visible on the print, but with insufficient solid area density, or light grey tones are reproduced too light.

Procedure

Perform the procedures that follow:

- If the IQ defect resembles [Figure 8](#), suspect the developer bias AC supply. Perform the [391A HVPS RAP](#).
- If the IQ defect resembles [Figure 9](#), suspect the developer bias DC supply. Perform the [391A HVPS RAP](#).
- [IQ11](#) Print Quality Improvement RAP.

Misregistration

Description

The image on the paper is displaced relative to the lead or top edge.

Procedure

Refer to [IQS 7](#) Registration. Perform the procedures that follow:

1. [dC604](#) Registration Setup.
2. [ADJ 80.2](#) Simplex and Duplex Buckle Timing.

Mottled Copies or Prints

Description

The image is visible on the print, but with inconsistent solid area density. Black areas are grey and/or spotted.

Procedure

Perform the procedures that follow:

- If the IQ defect resembles [Figure 8](#), suspect the bias transfer roll supply, perform the [391A HVPS RAP](#).
- [IQ11](#) Print Quality Improvement RAP.

Narrow Bands in the Cross Process Direction

Description

Bands across the process direction visible in halftone areas. See also [Bands in the Cross Process Direction](#).

Procedure

Perform the procedures that follow:

- [IQ6](#) Narrow Bands RAP.
- Go to the [IQ3](#) Xerographic RAP and perform the [LED Print Head Checkout](#). Go to the [IQ3](#) Xerographic RAP and perform the [Print Cartridge Checkout](#).

If the band resembles part of [Figure 13](#), the bands may have been caused by an intermittent loss of bias charge roll voltage. Perform the [391A HVPS RAP](#).

Part images and missing images

Description

Incomplete or missing images.

Procedure

Perform the steps that follow:

- [Figure 1](#), check that the bias transfer roll, [PL 80.15 Item 3](#), is correctly seated, latched and in good condition.
- [Figure 1](#), check that the registration transfer housing, [PL 80.15 Item 2](#), is correctly seated and latched.
- Check that the left door assembly, [PL 80.10 Item 1](#), latches correctly to the IOT frame.
- Remove the print cartridge. Check that it seats correctly on the machine frame and that there is no debris that could compromise the correct seating. Re-install the print cartridge.
- Go to [IQ3](#) and perform the LED Print Head Checkout.
- If the fault persists, perform the [IQ3](#) Xerographic RAP.

Print Damage

Description

Creases, curl, cuts, folds, wrinkles, or embossed marks are visible on the print.

Procedure

Perform the [IQ5](#) Print Damage RAP.

Repeated Image Defects

Description

Offsetting. A toner image that adheres to the fuser roll or pressure roll and transfers to another area of the print. The repeat interval for a fuser roll defect or a pressure roll defect is 94.3mm (3.71 inches). Refer to [Figure 6](#).

Procedure

Check the fuser module. Perform the [IQ4 Fuser Module RAP](#).

Description

Residual Image. A previous image that was not removed from the photoreceptor during the cleaning cycle. The repeat interval for a photoreceptor defect is 125.6mm (5 inches).

Procedure

If the repeated residual image on A3 (11X17 inches) paper is 125.6mm (5 inches), perform the [IQ3 Xerographic RAP](#).

Description

Other. Repeated image defects that are not obviously offsetting or residual.

Procedure

Perform the steps that follow:

- If the distance between repeated defects in the process direction is 125.6mm (5 inches), install a new print cartridge, [PL 90.17 Item 9](#).
- If the distance between repeated defects in the process direction is 94.3mm (3.71 inches), perform the [IQ4 Fuser Module RAP](#).
- If the distance between repeated defects in the cross process direction is 84mm (3.3 inches) and 105mm (4.13 inches) that align with the print cartridge stripper fingers, go to the [IQ3 Xerographic RAP](#). Perform the [Print Cartridge Checkout](#).
- If the distance between repeated defects in the cross process direction is 44mm, 70mm, 60mm and 78mm (1.73, 2.75, 2.36 and 3.07 inches) that align with the fuser module stripper fingers, perform the [IQ4 Fuser Module RAP](#).
- If the distance between repeated defects in the process direction is 56.5mm (2.22 inches), perform the steps that follow:
 1. [Figure 1](#), check the bias transfer roll surface for damage or contamination. If necessary install a new bias transfer roll, [PL 80.15 Item 3](#).
 2. If the bias transfer roll is good, install a new print cartridge, [PL 90.17 Item 9](#).
- If there are other defects that are repeated in sequential images, install a new print cartridge, [PL 90.17 Item 9](#).

Skew

Description

A difference in angular alignment between the image on the print and the original document.

Procedure

Refer to [IQS 5 Skew](#) and the [IQ8 IOT Skew RAP](#).

Skips

Description

Loss or stretching of the image, and compression of the image, in bands across the process direction.

Procedure

Skips are associated with a variation in the relative write speed of the LED print head image and the rotation speed of the photoreceptor. Check the components that follow for wear:

- Main drive module, [PL 40.15 Item 1](#).
- Flywheel clamp, [PL 40.15 Item 3](#).
- Photoreceptor dog gear, [PL 40.15 Item 10](#) and spring, [PL 40.15 Item 9](#).

Smears

Description

Loss or stretching of the image, and compression of the image, in bands across the process direction.

Procedure

Smears are associated with a variation in the rotation speed of the photoreceptor or speed of the paper. Check the components that follow:

- Main drive module, [PL 40.15 Item 1](#).
- The fuser drive gear on the main drive module, [PL 40.15 Item 1](#).
- Registration drive pulley, [PL 80.17 Item 3](#).

Smudges

Description

Dark marks extending from image areas of the page.

Procedure

Smudges are caused by the unfused image being disturbed. Check the items that follow:

- The paper path between the print cartridge and the fuser for any stray pieces of paper.
- The fuser entrance guide for contamination. Refer to [Figure 5](#).
- If the IQ defect resembles [Figure 12](#), install a new print cartridge, [PL 90.17 Item 9](#).

Streaks in the Process Direction

Description

Lines on the print, in the process direction of the non-image area.

Procedure

The result of disturbance either before or after image transfer. Perform the steps that follow:

- Check the fuser entry area and remove any debris.
- Install a new print cartridge, [PL 90.17 Item 9](#).

Toner Contamination on the Back of Prints

Description

Random black spots or marks on the back of simplex prints, or on both sides of duplex prints.

Procedure

Refer to [Figure 1](#). Perform the steps that follow:

1. Clean the registration nip roll, [PL 80.15 Item 4](#).
2. Clean the registration transfer housing and mylar, [PL 80.15 Item 2](#).
3. Perform [dC604 Registration Setup Procedure](#).
4. If the contamination persists, perform the steps that follow as necessary:
 - Check that the [dC131](#) NVM values that follow are set to their default values:
 - 501-164 BTRReverseBiasCycleIn.
 - 501-168 BTRReverseBiasRun.
 - Run 50 blank sheets through the machine.
 - Install a new bias transfer roll, [PL 80.15 Item 3](#).
5. If the fault persists, install a new print cartridge, [PL 90.17 Item 9](#), then run 50 blank sheets through the machine.

Uneven Density or Non Uniform Image

Description

Variation in image density across the print.

Procedure

Perform the steps that follow:

- [Figure 1](#), check that the bias transfer roll, [PL 80.15 Item 3](#), is correctly seated and latched.
- [Figure 1](#), check that the registration transfer housing, [PL 80.15 Item 2](#), is correctly seated and latched.
- Check that the left door assembly, [PL 80.10 Item 1](#), latches correctly to the IOT frame.
- Remove the print cartridge. Check that it seats correctly on the machine frame and that there is no debris that could compromise the correct seating. Re-install the print cartridge.
- Go to [IQ3](#) and perform the LED Print Head Checkout.
- If the fault persists, perform the [IQ3](#) Xerographic RAP.

Unfused Prints

Description

The toner image on the finished print is not fused to the print medium.

Procedure

Refer to [IQS 3](#) Fusing and [IQ4](#) Fuser Module RAP.

White Lines in the Process Direction

Description

White lines in the dark or image areas of the print in the process direction.

Procedure

Perform the steps that follow:

- White lines or deletions that are continuous from edge to edge of the image. Check the items that follow:

- Contamination of, or damage to, the stripper fingers, the bias charge roll or trim bar (parts of the print cartridge). Install a new print cartridge, [PL 90.17 Item 9](#). Refer to [Table 3](#) to locate the position of stripper finger marks on various paper sizes.

Table 3 Location of stripper finger marks

Paper size and orientation	Paper edge measured from	Outboard stripper finger marks	Centre stripper finger marks	Inboard stripper finger marks
A4 LEF	Outboard	57.5	161.5	245.5
A4 SEF		14.0	118.0	202.0
LTR LEF		48.5	152.5	236.5
LTR SEF		17.0	121.0	205.0
A3		57.5	161.5	245.5
11x17		48.5	152.5	236.5
A4 LEF	Inboard	239.5	135.5	51.5
A4 SEF		196.0	92.0	8.0
LTR LEF		230.5	126.5	42.5
LTR SEF		199.0	95.0	11.0
A3		239.5	135.5	51.5
11x17		230.5	126.5	42.5

NOTE: All the above measurements are in millimetres (+/- 4mm) and are taken from either the inboard or outboard edge of the paper.

- Contamination of the fuser roll. Perform the [IQ4](#) Fuser Module RAP.
- Damage to the fuser roll. Install a new fuser module [PL 10.8 Item 1](#).
- Spots or marks on the LED print head. Go to the [IQ3](#) Xerographic RAP and perform the [LED Print Head Checkout](#).
- If the fault persists, perform the [IQ3](#) Xerographic RAP.

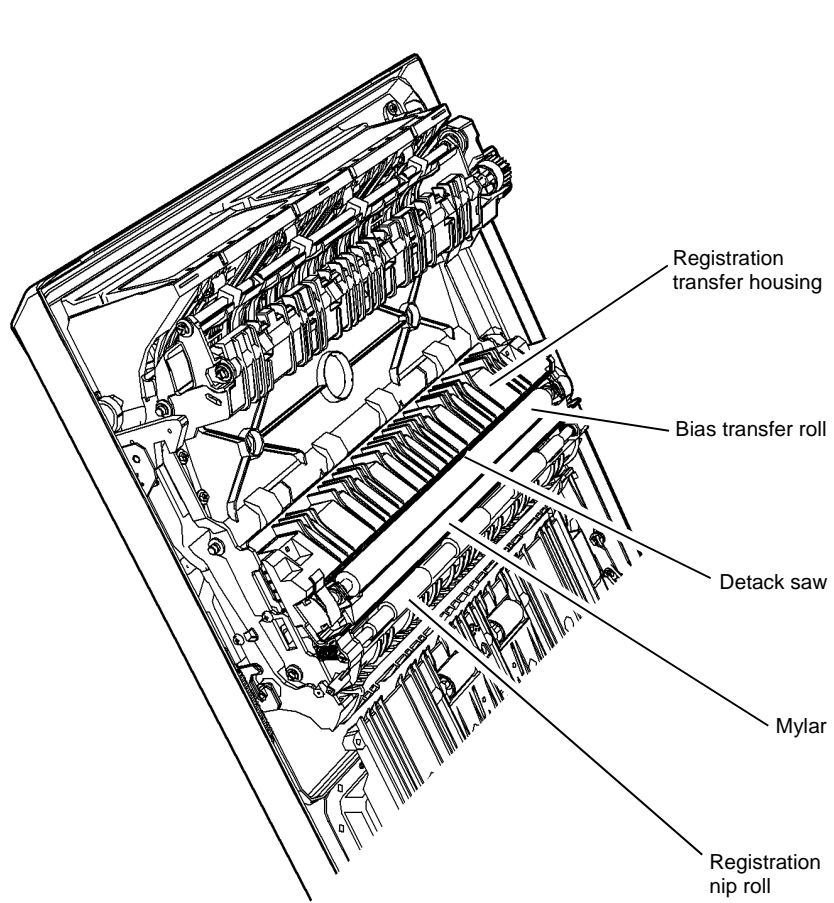
White Spots

Description

White spots are areas visible on a half tone or solid area where the toner has failed to be deposited.

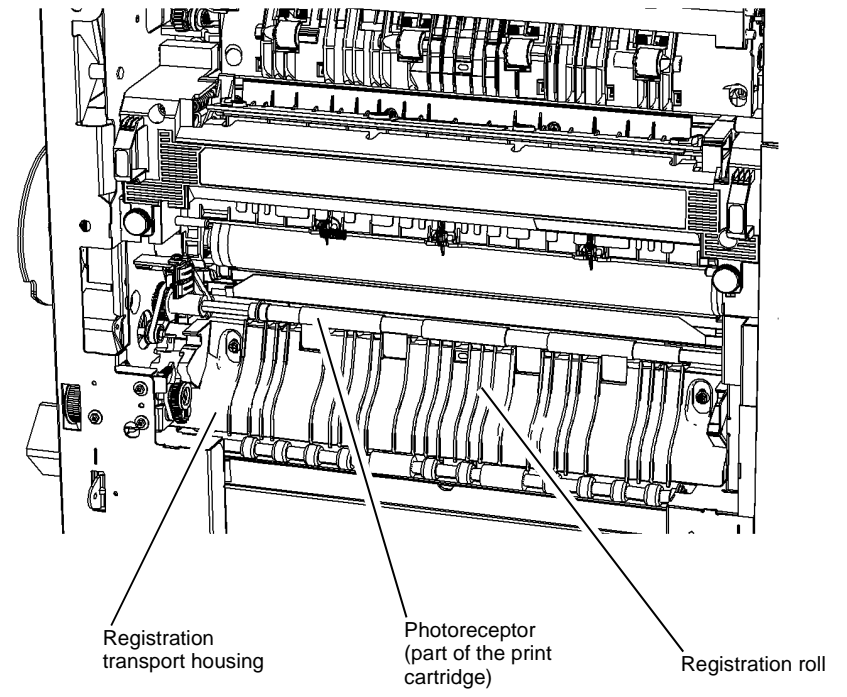
Procedure

Perform the [Deletions](#) procedure.



X-1-1151-A

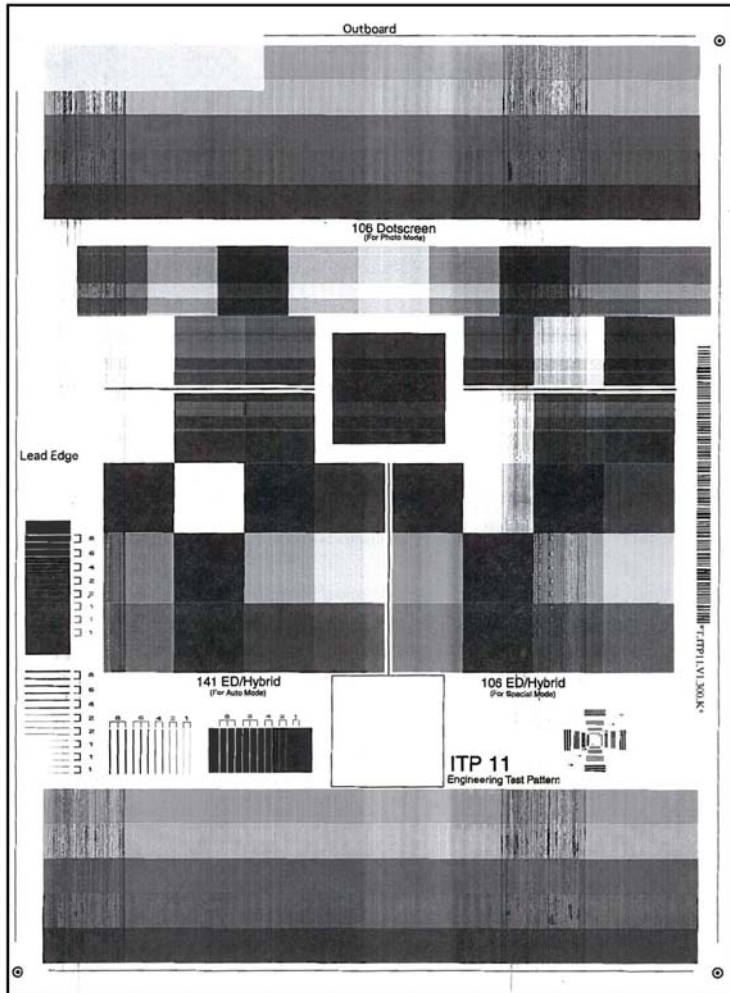
Figure 1 Component location



X-1-1152-A

Figure 2 Component location

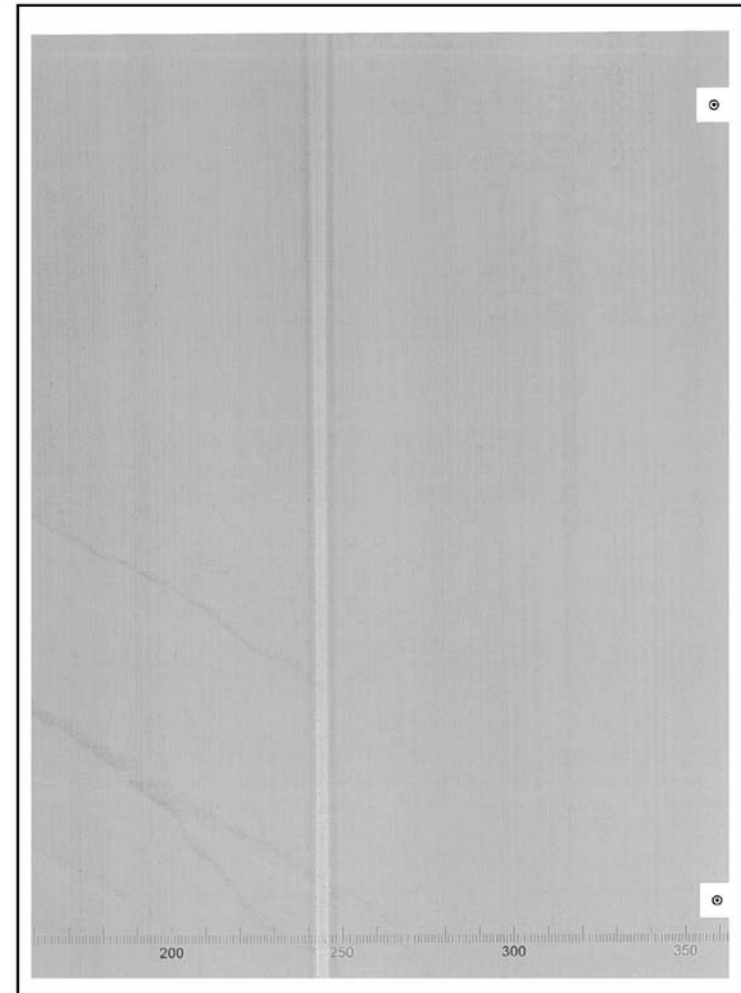
Image Quality Defect Samples



X-1-1276-A

Figure 3 IQ defect sample

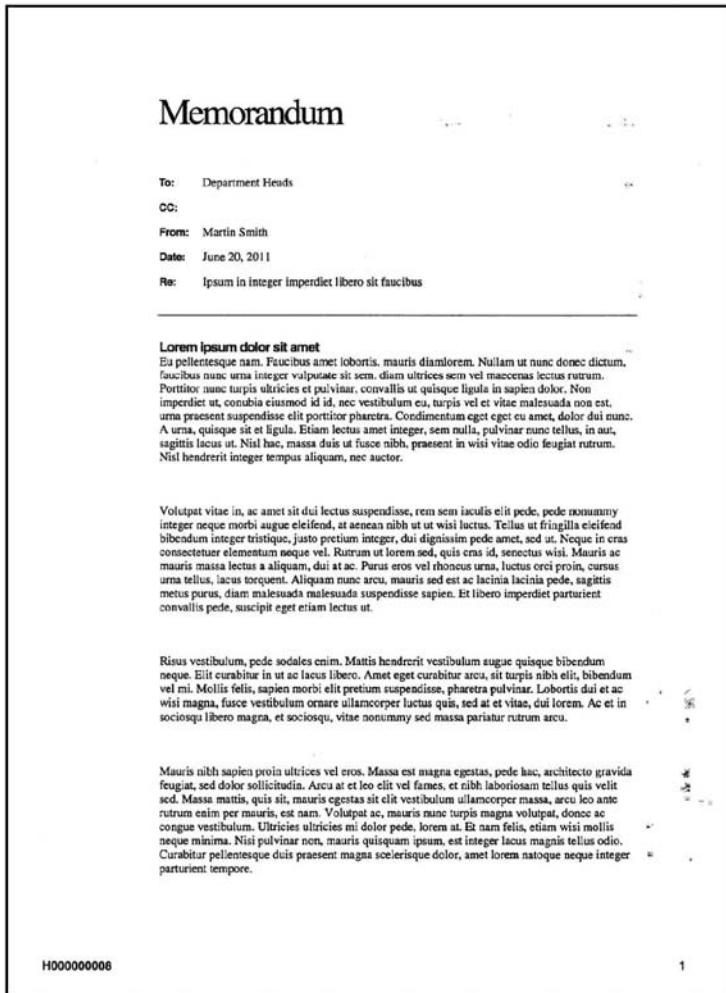
The defect shown in Figure 3 is a result of electrostatic discharge (ESD) affecting the LED print head, caused by a loss of grounding.



X-1-1277-A

Figure 4 IQ defect sample

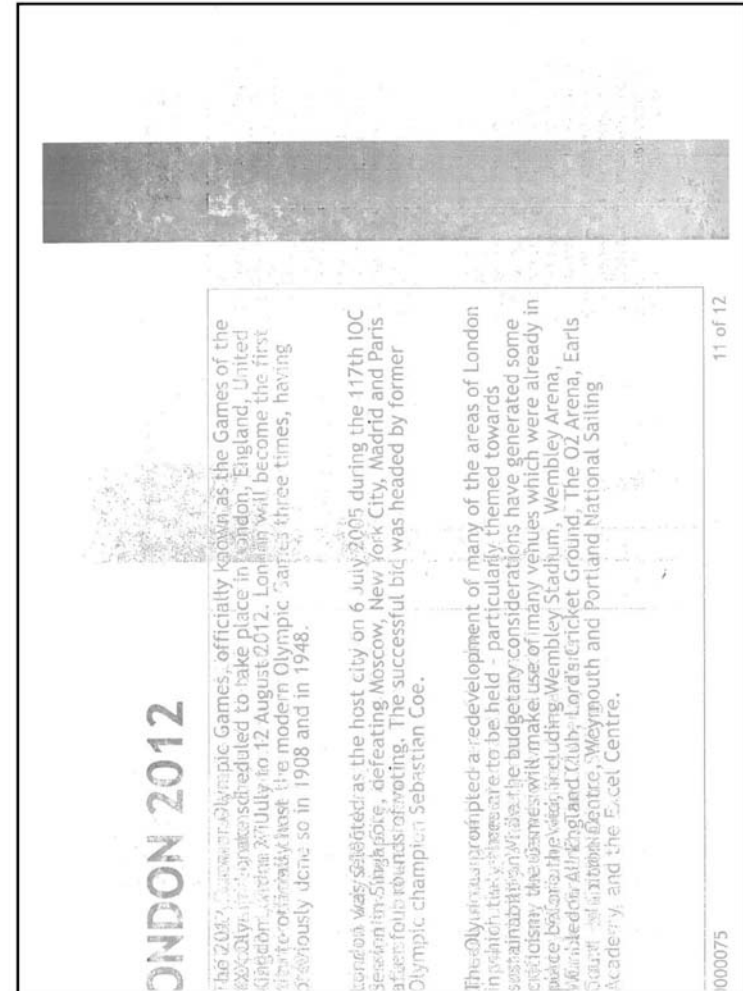
The defect shown in Figure 4 is the result of a light shocked photoreceptor caused by the LED print head being energized while the photoreceptor is stationary.



X-1-1278-A

Figure 5 IQ defect sample

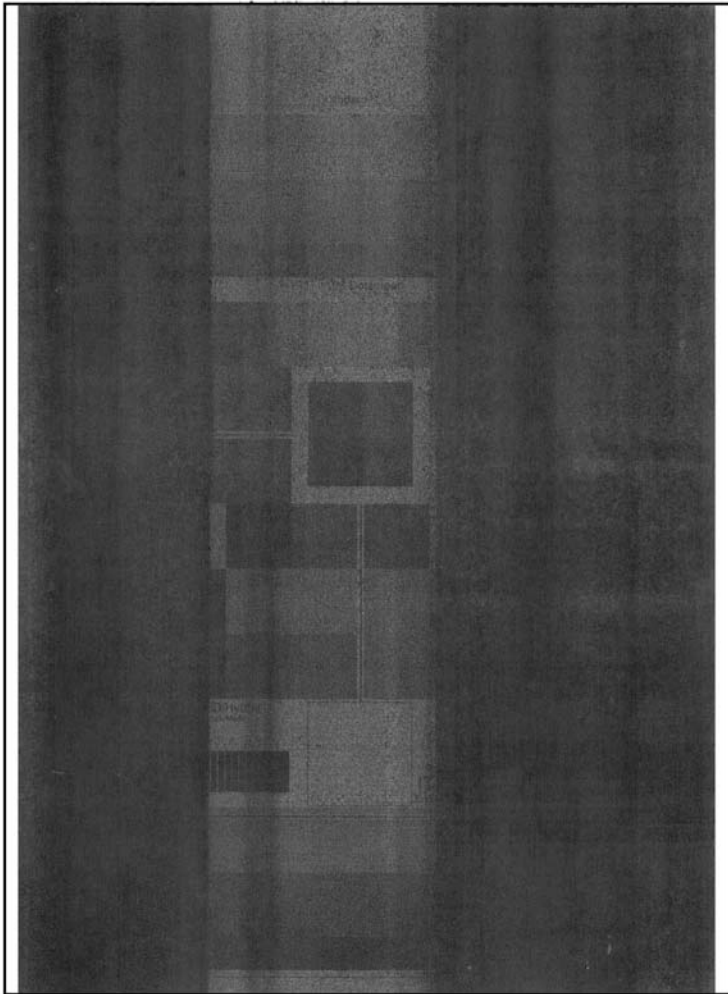
The defect shown in Figure 5 is the result of contamination on the fuser guide. This can be seen as image disturbance and contamination deposits towards the trail edge from the image areas of the page.



X-1-1279-A

Figure 6 IQ defect sample

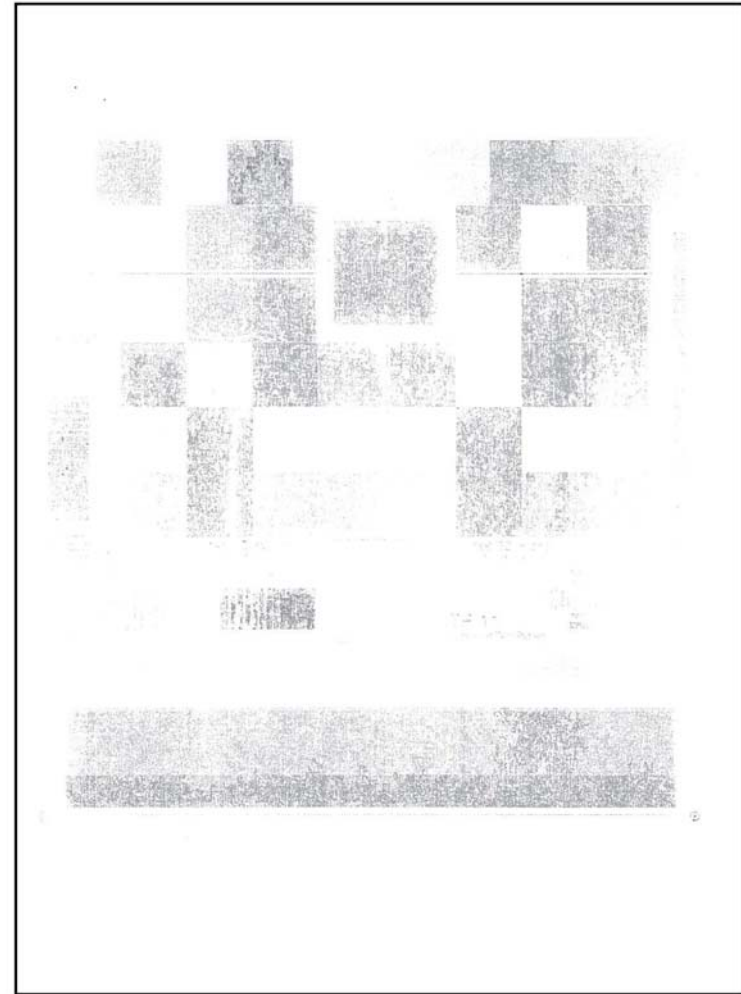
The defect shown in Figure 6 is a toner image that adheres to the fuser roll or pressure roll and transfers to another area of the print. The repeat interval for a fuser roll defect or a pressure roll defect is 94.3mm (3.71 inches).



X-1-1280-A

Figure 7 IQ defect sample

The defect shown in [Figure 7](#) is a result of an intermittent loss of bias charge roll voltage.

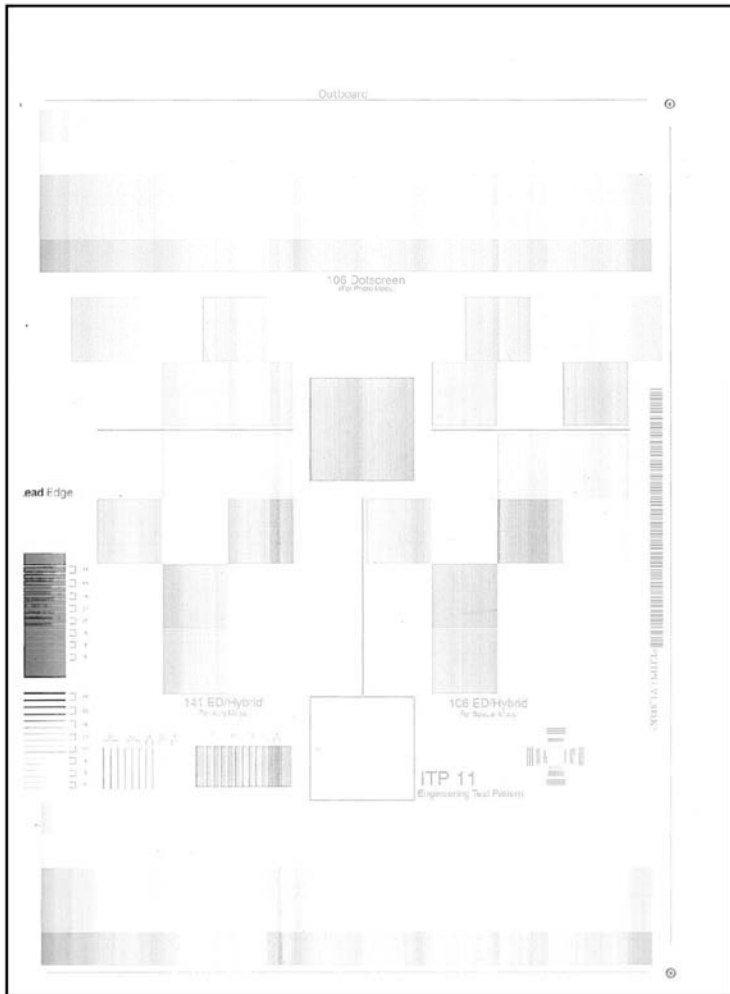


X-1-1281-A

Figure 8 IQ defect sample

The defect shown in [Figure 8](#) could be caused by one of the causes that follow:

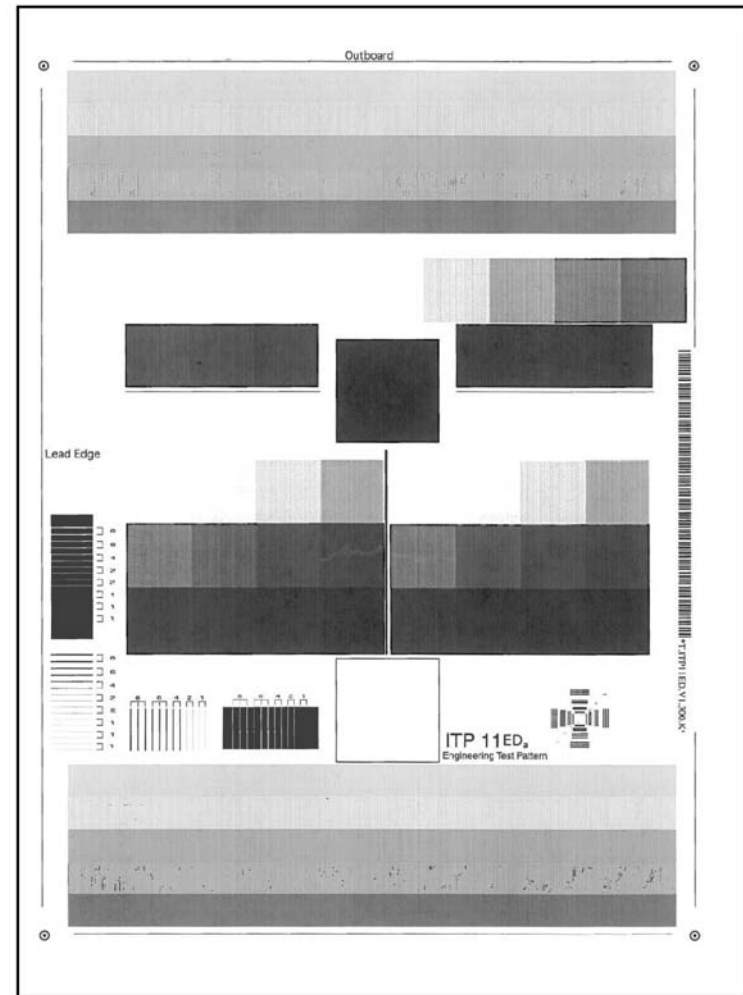
- Loss of the developer bias AC voltage.
- Loss of the BTR voltage due to a damaged BTR track, [PL 90.10 Item 7](#).
- A failed HVPS.



X-1-1282-A

Figure 9 IQ defect sample

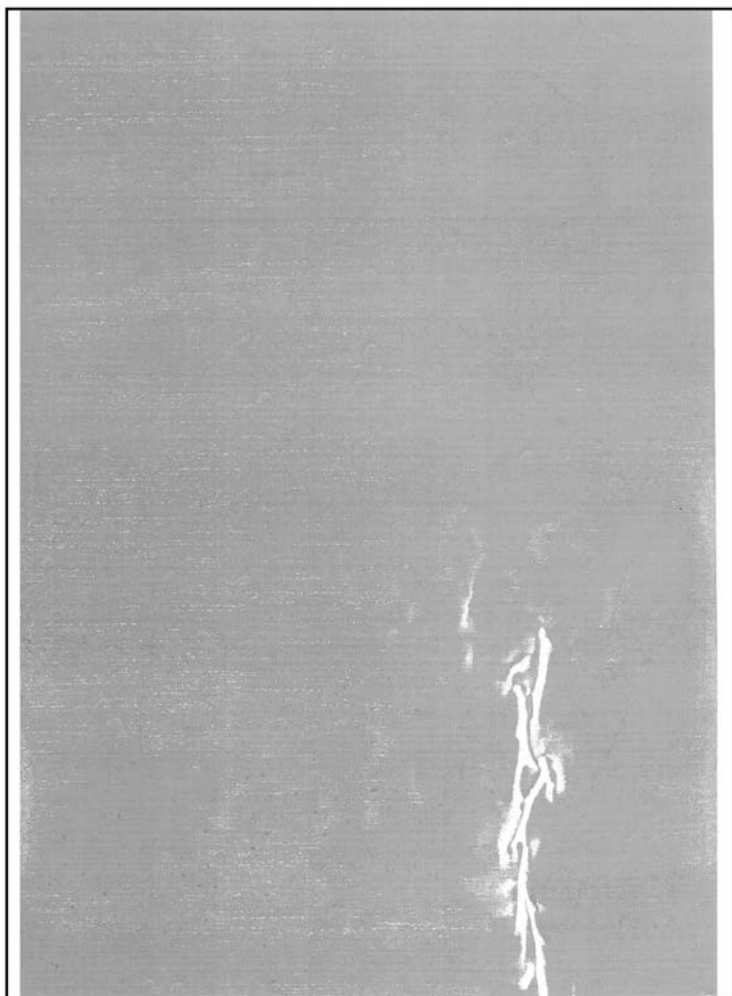
The defect shown in [Figure 9](#) is a result of the loss of the developer bias DC voltage.



X-1-1283-A

Figure 10 IQ defect sample

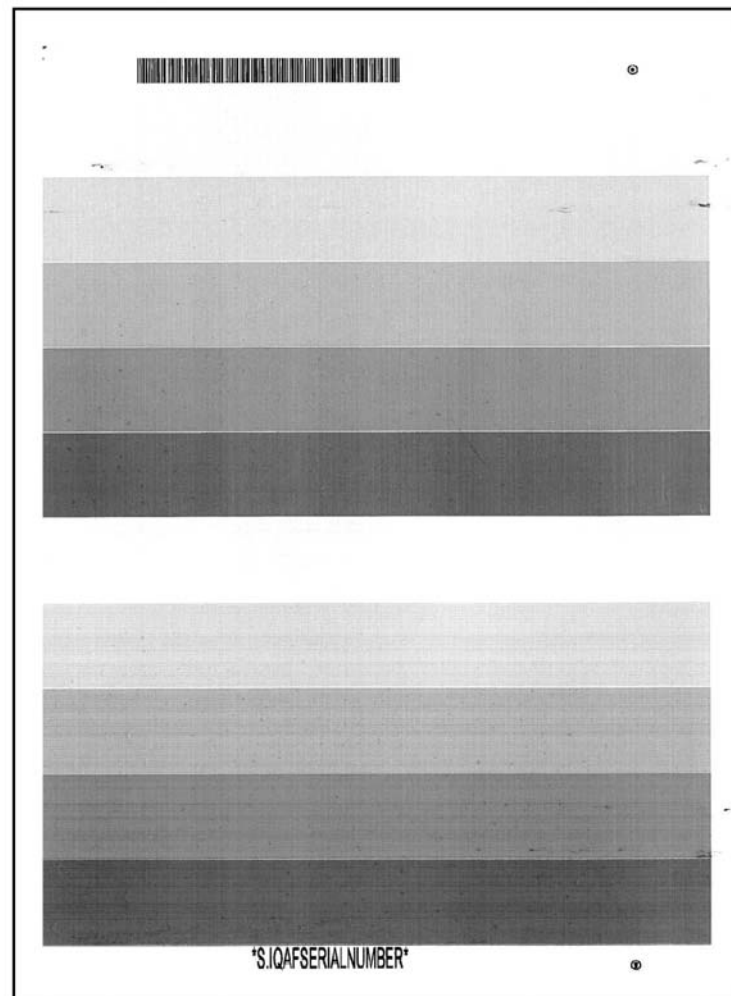
The defect shown in [Figure 10](#) is the result of the distance between the LED print head and the photoreceptor being wrong, giving poor focus.



X-1-1284-A

Figure 11 IQ defect sample

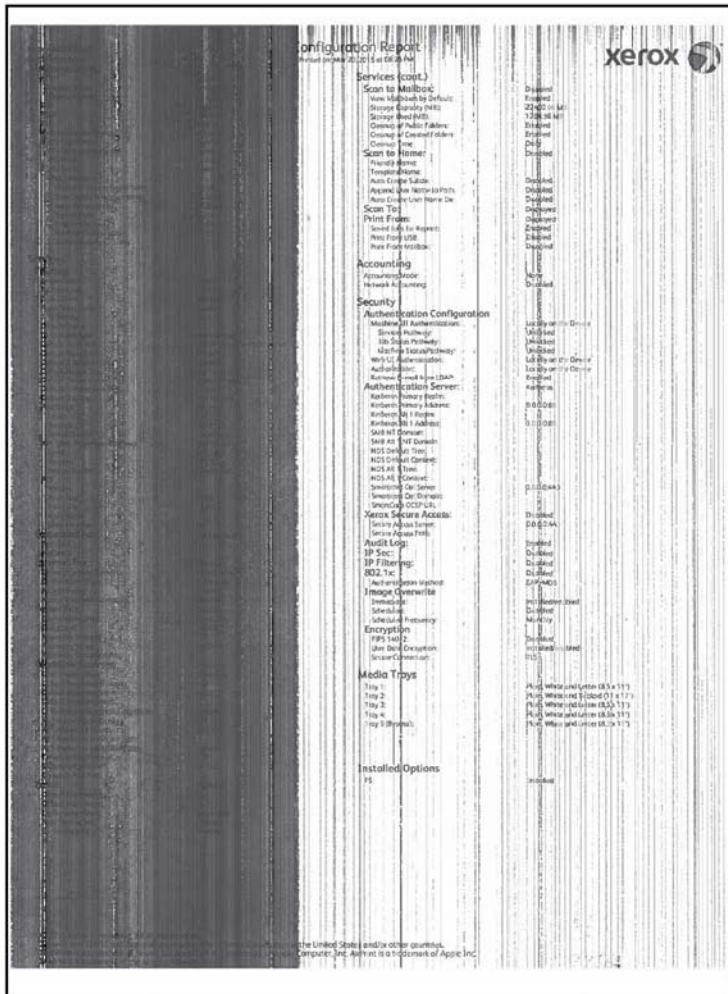
The defect shown in [Figure 11](#) is the result of wrinkled paper before transfer, resulting in image loss.



X-1-1285-A

Figure 12 IQ defect sample

The defect shown in [Figure 12](#) is the result of contamination from the print cartridge. This can be seen as random contamination deposits over the entire area of the page.



X-1-1784-A

Figure 13 IQ defect sample

The defect shown in Figure 13 is a result of an intermittent loss of bias charge roll voltage.

IQ3 Xerographic RAP

Use this RAP to determine the cause of the image quality problem.

Ensure IQ1 Image Quality Entry RAP is performed before starting this RAP.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the checks that follow. If necessary, install new components:

- AltaLink® B8045/55, refer to Figure 1, check that the left door fan 1 and fan 2 are working. If the fans are working, air will be blown out of the air vents of the left door. If necessary, refer to the OF6 Air Systems RAP.
- AltaLink® B8065/75/90, refer to Figure 4, check that the rear exit fan is working. If the fan is working, air will be blown out of the air vent of the rear cover. If necessary, refer to the OF6 Air Systems RAP.
- Figure 1, check that the print cartridge cooling fan runs. This fan draws air from the cavity below the horizontal transport or centre output tray, then directs the air flow via a duct onto the print cartridge. To check the operation of the fan, enter dC330, code 93-001 print cartridge fan. If necessary, refer to the OF6 Air Systems RAP.
- Figure 3, check that the humidity sensor is working. Perform the 391-365-00 Humidity Sensor Failure RAP.
- Perform ADJ 90.1 Xerographic Cleaning.
- Check the developer bias track, PL 90.10 Item 4. Refer to the 391A HVPS RAP.
- Check that the high voltage connections to the HVPS are secure, PL 90.10. If necessary, refer to the 391A HVPS RAP.
- Check for loose ground connections. Perform the 301A Ground Distribution RAP.

Make prints. If the image quality defect is still present, perform the procedure.

Procedure

The components that follow can cause image quality defects. Perform the checks:

- Paper Path Checkout.
- Print Cartridge Checkout.
- Fuser Module Checkout.
- LED Print Head Checkout.

Paper Path Checkout

- Figure 2, check the registration transport housing, PL 80.17 Item 1 for wear, damage and contamination. If necessary, clean the housing or install a new part.
- Figure 1, check the registration transfer housing, PL 80.15 Item 2 for wear, damage and contamination. If necessary, clean the housing or install a new part.
- Figure 1, check the bias transfer roll surface for damage or contamination, if necessary, install a new bias transfer roll, PL 80.15 Item 3.

Print Cartridge Checkout

- Three marks/dots/spots on the edge or the body of the prints/copies, that align with the three print cartridge stripper fingers, [Figure 2](#), together with some or all of the symptoms that follow, indicates that there is no voltage or a low voltage supplied to the detack saw due to the detack transformer in the HVPS failing. Refer to [Table 1](#) to locate the position of stripper finger marks on various paper sizes.

Table 1 Location of stripper finger marks

Paper size and orientation	Paper edge measured from	Outboard stripper finger marks	Centre stripper finger marks	Inboard stripper finger marks
A4 LEF	Outboard	57.5	161.5	245.5
A4 SEF		14.0	118.0	202.0
LTR LEF		48.5	152.5	236.5
LTR SEF		17.0	121.0	205.0
A3		57.5	161.5	245.5
11x17		48.5	152.5	236.5
A4 LEF	Inboard	239.5	135.5	51.5
A4 SEF		196.0	92.0	8.0
LTR LEF		230.5	126.5	42.5
LTR SEF		199.0	95.0	11.0
A3		239.5	135.5	51.5
11x17		230.5	126.5	42.5

NOTE: All the above measurements are in millimetres (+/- 4mm) and are taken from either the inboard or outboard edge of the paper.

Additional symptoms:

- Toner contamination of the print cartridge stripper fingers.
- Broken or missing print cartridge stripper fingers caused by frequent jam clearances.
- Paper wrinkles.
- Inverter jams.
- Dog eared copies/prints.

Perform the steps that follow:

1. Ensure the track (DTAK), [PL 90.10 Item 6](#) makes good contact with the HVPS.
2. Ensure the track (DTAK), [PL 90.10 Item 6](#) touches the detack saw contact when the left door is closed, by connecting one meter lead to the back of the detack saw contact wire and the other meter lead to the track (DTAK). Route the meter leads through the rear frame below the registration motor [PL 40.15 Item 6](#). Set the meter on continuity with the buzzer on. Very carefully close the left door. Re-adjust the lay of the meter leads as necessary so that the door can fully close. If the buzzer sounds, the contact is good.
3. Ensure the track (DTAK), [PL 90.10 Item 6](#) has continuity from end to end.
4. Check that the print cartridge has a good ground, perform [301A Ground Distributon RAP](#).
5. If checks 1 and 3 are good, install a new HVPS, [PL 1.10 Item 3](#).

- Check the surface of the photoreceptor in the print cartridge for toner contamination. If the photoreceptor is not clean, cheat the left door interlock switch. Enter [dC330](#) code 093-045, print cartridge motor. Allow the motor to run for a few seconds. If the photoreceptor surface is still not clean, install a new print cartridge, [PL 90.17 Item 9](#).
- Check that the surface of the photoreceptor is not chipped, scored or scratched. If the photoreceptor is damaged, install a new print cartridge, [PL 90.17 Item 9](#).
- [Figure 2](#), check the print cartridge stripper fingers for wear, damage and contamination. If necessary install a new print cartridge, [PL 90.17 Item 9](#).

Fuser Module Checkout

- Check the fuser rolls and stripper fingers for toner and developer contamination. If contamination is present, perform the [IQ4 Fuser Module RAP](#).

LED Print Head Checkout

- If toner contamination is evident on the LED print head, perform [ADJ 60.4 LED Print Head Cleaning Procedure](#).
- If there are 1 or more image defects in the form of process direction bands that are 8mm (0.3 inch) wide, or multiples thereof, install a new LED print head module, [PL 60.35 Item 1](#).
- Perform the following
 1. Go to [dC612 Print Test Pattern](#), make a print of internal test pattern 22.
 2. Refer to [IQS 1 Solid Area Density and Tone Reproduction](#), check that the 100% patch of the internal test pattern 22 print meets the IQS 1 specification. If necessary, perform the [Print Cartridge Checkout](#).
 3. Check both “Fine Lines In Focus” areas of the internal test pattern 22 print. The fine print and the fine lines should both be visible. If either or both are soft and fluffy or missing, it suggests that the LED print head is out of focus. Check the LED print head camming mechanism is working correctly. Check that there is no debris that would prevent the LED print head from moving to the imaging position close to the photoreceptor. Check that the harness and the ground wire to the LED print head are correctly routed and are not restricting the movement of the head.
 4. Check the 5% patch of the internal test pattern 22 print. The patch should be clearly visible across the whole width. If either end is lighter than the other, the light end is out of focus, BUT only if checks 2 and 3 are good. Check the LPH pins are fully seated. Check when the LPH is cammed on and off there is no binding and that the head goes home on the pins.
- Perform [dC304 LED Print Head Validation](#).
- Check the wiring and connectors between the LED print head and SBC PWB. Refer to the [361-100-00 LED Print Head Data Integrity Failure RAP](#).

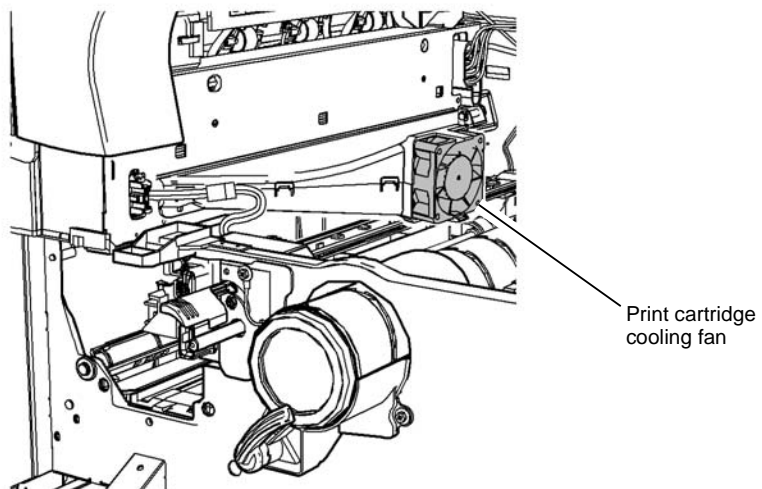
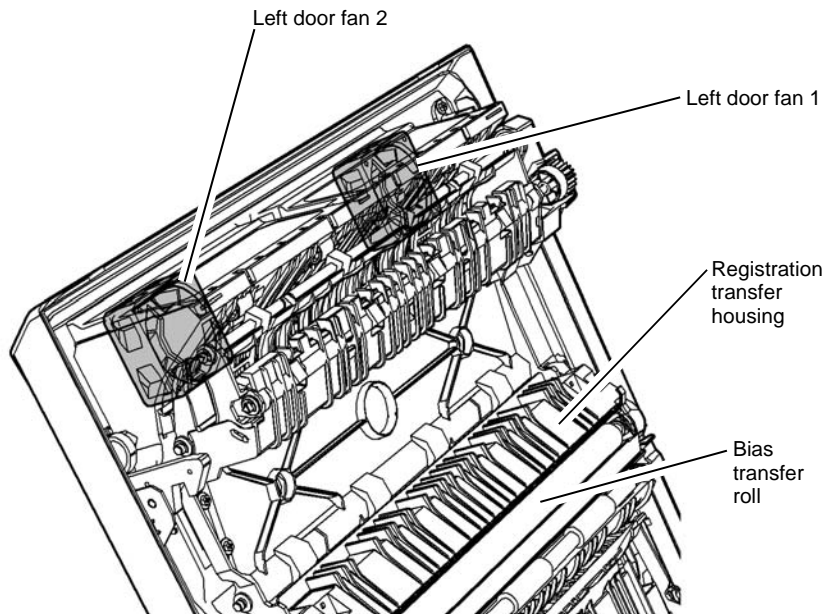


Figure 1 Component location

X-1-1156-A

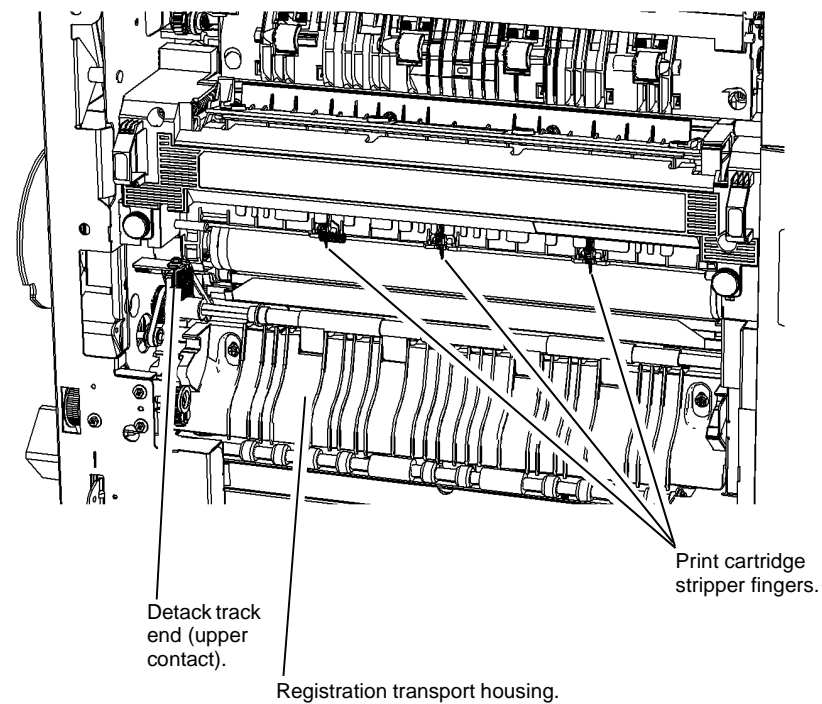
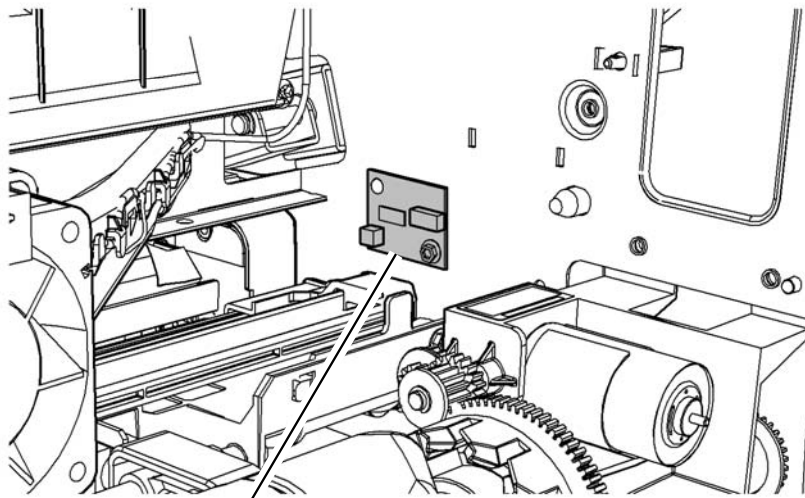


Figure 2 Component location

X-1-1157-A

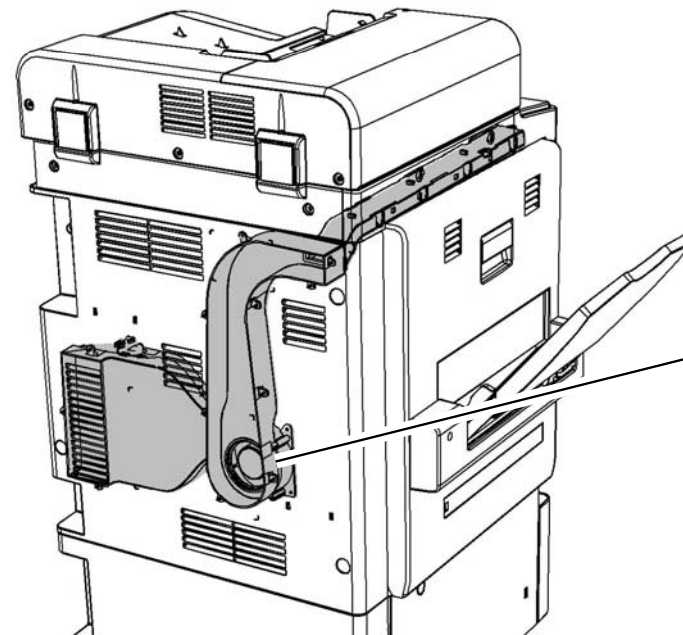


Humidity sensor (part of the environmental sensors PWB).

The inner machine cover and either the centre output tray or horizontal transport have been removed in this view.

X-1-2026-A

Figure 3 Component location



Rear exit fan.

X-1-2027-A

Figure 4 Component location

IQ4 Fuser Module RAP

Use this RAP for fuser module related problems.

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- Enter [dC131](#). Check the NVM values for 502-292, NVMFsrStandby Temp and 502-293, NvmFsrRun Temp. If the NVM values are increased, fusing performance is improved, but contamination or curl can occur. If the NVM values are decreased, fusing performance is reduced.
- Poor fusing can be caused by alternative quality paper and heavily embossed envelopes. Refer to [GP 20](#) Paper and Media Specifications. If the customer is using alternative quality paper, select the card stock setting on the UI. Adjusting 741-052 only changes the fuser temperature when card stock is selected. Some 200gsm papers do not fuse correctly.
 - Check that the customer is using tray 1 and tray 2 for alternative quality paper or heavyweight paper up to 200gsm. For heavyweight paper between 200gsm and 216gsm the bypass tray must be used.
 - Refer to [IQS 3](#) Fusing.
- Check the components that follow for wear and contamination:
 - Fuser stripper fingers. If possible remove any contamination. If the stripper fingers are damaged or worn, install a new fuser module, [PL 10.8 Item 1](#).
 - Check that the fuser rolls are clean:
 1. If the fuser rolls are not clean, go to [dC612](#) Print Test Patterns. Select test pattern 1. Select simplex. Select quantity 20. Select Start Test. This action should clean the fuser rolls of residual toner.
 2. If the fuser rolls are still not clean, use a lint free cloth dampened with formula A cleaning fluid, [PL 26.10 Item 2](#), to remove the contamination.
 3. If the fuser rolls' cleanliness is still not satisfactory, install a new fuser module, [PL 10.8 Item 1](#).
 - Check the condition of the fuser rolls. If the fuser rolls are damaged or worn, install a new fuser module, [PL 10.8 Item 1](#).

NOTE: Do not install a new fuser module due to the appearance of wrinkles on the pressure roll. This is normal for the pressure roll, caused by the conductive sleeve that stretches as the silicon rubber base of the roll expands.

IQ5 Print Damage RAP

Use this RAP when the prints have nicks, tears, creases, folds, curled edges or wrinkles.

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter [dC612](#). Select the relevant internal test pattern:

- Number 13 (ITP 19 Field test pattern (A3)).
- Number 14 (ITP 19 Field test pattern (11x17)).

Make prints to identify where the prints are damaged.

Check for curled paper in the paper trays:

- Ensure the paper is in specification. Refer to [GP 20](#).

Check the paper path, [Figure 2](#), for the problems that follow:

- Obstructions.
- Damaged guides and rolls, [GP 7](#). Pay particular attention to the areas that align with the damage on the prints. For example, fuser stripper fingers.
- Protruding objects on the edges of the paper path.
- If the machine has a centre output tray, ensure that the diverter output guide, [PL 10.10 Item 3](#) is fitted correctly.
- If the paper feed is introducing skew to the paper, perform the [IQ8](#) IOT Skew RAP.
- If the paper does not correctly strip from the print cartridge, ensure that all the tracks on the HVPS tray assembly make good contact on the HVPS and the xerographic components. Refer to [PL 90.10](#).
- Check that the fuser roll stripper fingers are clean. If possible remove any contamination. If the stripper fingers are missing, damaged or worn, install a new fuser, [PL 10.8 Item 1](#).
- Check that the print cartridge stripper fingers and star wheels are clean. If possible remove any contamination. If the stripper fingers and star wheels are missing, damaged or worn, install a new print cartridge, [PL 90.17 Item 9](#).
- If the prints are creased, wrinkled or corrugated after passing through the fuser module, install a new fuser module, [PL 10.8 Item 1](#).
- If the paper is curled after passing through the fuser module, go to [Curl Measurement](#).
- Check the inverter assembly for damage or wear, [GP 7](#).
- Check the duplex and registration transport assemblies for damage or wear.
 - If the paper displays wrinkles due to excessive buckle in the duplex or registration transport, perform [ADJ 80.2](#) Simplex and Duplex Buckle Timing.
- If the output device suffers from poor stacking, perform the steps that follow as necessary:
 - Check that the output device is not positioned near an air conditioning or ventilation output duct. Air flow across the output bins can cause poor stacking.

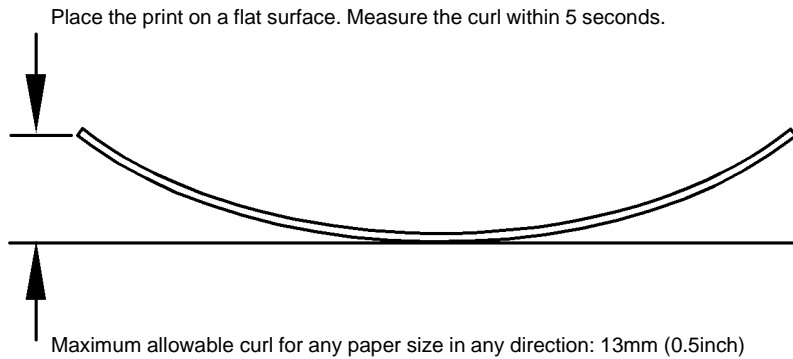
- 312J-110 2K LCSS Poor Stacking RAP.
- 312A-150 LVF BM Poor Stacking RAP.
- Remove the output device, then connect a finisher bypass connector, [PL 26.10 Item 7](#).
 - Check the paper path through the inverter assembly, [PL 10.10 Item 1](#).
 - Check the paper path through the horizontal transport, [PL 10.15 Item 1](#).

If the paper path and the duplex path are good, check that the paper and other media used, is of the correct weight and size, [GP 20](#).

Curl Measurement

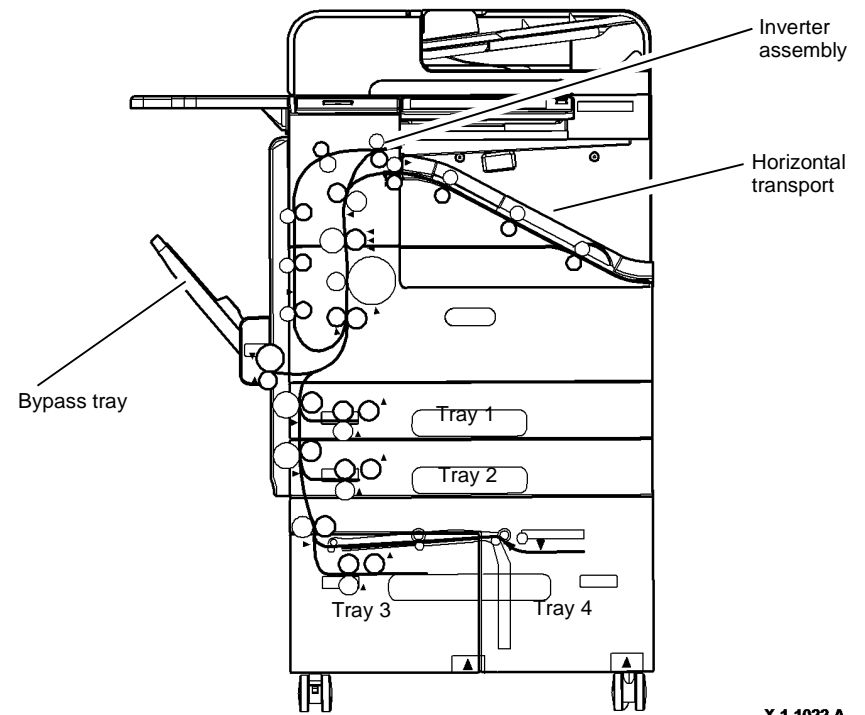
Make 5 simplex prints. Refer to [Figure 1](#). If the curl on the prints exceeds 13mm (0.5 inch), perform the steps that follow:

- Check the paper storage and wrapping.
- Turn over the paper stack in the paper tray.
- Use paper from a new ream.
- If the fault persists, perform the [IQ4 Fuser Module RAP](#).



X-1-1021-A

Figure 1 Curl height measurement



X-1-1022-A

Figure 2 Paper path

IQ6 Narrow Bands RAP

Use this RAP to determine the cause of narrow bands.

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: The Scan to USB option must be made available by the System Administrator. If Authentication or Accounting has been enabled on the device you may have to enter login details to access the Scan To features.

Make a duplex scan of test pattern 82E2010 to USB file. View the resultant file on a computer screen. **There are dark edges, coloured edges or bands on the scanned image.**

Y N

Bands that are irregular in the cross process direction can be caused by:

- High voltage arcing. Perform the [391A](#) HVPS RAP.
- Worn gears or components in the areas that follow. Examine the gears, the shafts and the bearings, [GP 7](#), install new components as necessary:
 - Main drive module, [PL 40.15 Item 1](#).
 - Flywheel clamp, [PL 40.15 Item 3](#).
 - Developer dog gear, [PL 40.15 Item 8](#) and spring, [PL 40.15 Item 7](#).
 - Photoreceptor dog gear, [PL 40.15 Item 10](#) and spring, [PL 40.15 Item 9](#).
 - Registration drive pulley, [PL 80.17 Item 3](#).

Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

IQ7 Document Glass and Scanner IQ Defects RAP

Use this RAP to identify image quality problems caused by the document glass and the scanner.

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Procedure

Go to the appropriate image quality defect and perform the appropriate action.

- [Background](#).
- [Bands](#).
- [Black Image](#).
- [Blurred image](#).
- [Deletions](#).
- [Displaced and Fragmented Image](#).
- [Lines](#).
- [Magnification](#).
- [Marks and spots](#).
- [Misregistration](#).
- [Part Images and Missing Images](#).
- [Rotated image](#).
- [Scanner Module Skew](#).
- [Side 1 SPDH Skew](#).

Background

Description

Uniform darkening across all the non image areas on the scanned file.

Procedure

NOTE: The Scan to USB option must be made available by the System Administrator. If Authentication or Accounting has been enabled on the device you may have to enter login details to access the Scan To features.

Make a simplex and duplex scan to USB file from the document glass. View the resultant file on a computer screen. If the images have a background problem, perform the steps that follow:

- Check the SPDH height. Refer to [ADJ 5.2](#) SPDH Height.
- [ADJ 60.3](#) IIT Registration, Magnification and Calibration.
- Copying thick documents can leave the SPDH raised above the document glass. Raise and lower the SPDH 5 times to settle the counterbalances.

Bands

Description

Light or dark bands on the scanned file in the process direction. These are best detected on a scan of a grey image such as ITP 2.

Procedure

Perform the [Scan Carriage Assembly Checkout](#).

Black Image

Description

Side 1 images are completely black.

Procedure

Perform the [362-450-00 to 362-472-00](#), [362-781-00](#) Scanner Calibration Faults RAP.

Blurred image

Description

A part or the whole of the image has the appearance of being out of focus.

Procedure

Refer to [IQS 4](#) Resolution. Perform the steps that follow:

1. Check that the document is flat on the document glass.
2. Copying thick documents can leave the SPDH raised above the document glass.
Raise and lower the SPDH 5 times to settle the counterbalances.

Deletions

Description

Areas of the image missing from the scanned file. Deletions may be in the form of lines or whole areas of toner missing from the print.

Procedure

Perform the [Scan Carriage Assembly Checkout](#) and the [Document Glass Checkout](#). If necessary install a new scan carriage assembly, [PL 60.25 Item 1](#).

Displaced and Fragmented Image

Description

Displaced images, part images or scrambled images.

Procedure

Perform the [Scan Carriage Assembly Checkout](#). If necessary install a new scan carriage assembly, [PL 60.25 Item 1](#).

Lines

Description

Light or dark lines in the process direction. These are best detected on a scan of a grey image such as ITP 2.

Procedure

Perform the [Scan Carriage Assembly Checkout](#) and the [Document Glass Checkout](#). If necessary install a new scan carriage assembly, [PL 60.25 Item 1](#).

Magnification

Description

At 100% magnification the scanned image differs from the size of the image on the original document. Refer to [IQS 8](#) Magnification.

Procedure

Compare side 2 images produced from the SPDH with side 1 images produced from the document glass or CVT glass. If this comparison shows the scan carriage magnification to be outside of the [IQS 8](#) specification, install a new scan carriage assembly, [PL 60.25 Item 1](#).

Marks and spots

Description

Dark marks or spots in the non-image areas of the print.

Procedure

Refer to the [IQS 6](#) Copy / Print Defects. Perform the steps that follow:

- Check the original documents for marks and spots.
- Check the document glass for marks and spots, if necessary clean the document glass. Refer to [ADJ 60.1](#).
- Perform the [IQ3](#) Xerographic RAP.

Misregistration

Description

The image in the scanned file is displaced relative to the lead or top edge. Refer to [IQS 7](#) Registration.

Procedure

NOTE: The Scan to USB option must be made available by the System Administrator. If Authentication or Accounting has been enabled on the device you may have to enter login details to access the Scan To features.

Make a simplex scan of test pattern 82E2010/82E2020 to USB file. View the resultant file on a computer screen. If the scanned file shows misregistration, perform the [Scan Carriage Assembly Checkout](#) and the [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

Part Images and Missing Images

Description

Incomplete or missing images.

Procedure

Perform the [362A](#) Side 1 Scanning Document Size RAP.

Rotated image

Description

The image on the scanned file is rotated 90 degrees to the image on the original document.

Procedure

Perform the [362A](#) Scanning Document Size RAP.

Scanner Module Skew

Description

A difference in angular alignment between the scanned image and the original document.

Procedure

Refer to [IQS 5](#) Skew. Check the scanned file produced in [IQ1](#) for skew.

If the scanned file has skew, there is a skew problem originating in the scanner. Perform the steps that follow:

- Check the scan carriage is not damaged and moves freely.
- Check the scan drive belt is in a good condition and is routed correctly, refer to [REP 60.10](#).

If necessary, install a new scanner module, [PL 60.15 Item 1](#).

Side 1 SPDH Skew

Description

A difference in angular alignment between the scanned image and the original document when the SPDH is used to transport the originals across the CVT glass.

Procedure

Refer to [IQS 5](#) Skew. Check the scanned file produced in [IQ1](#) for skew.

If the scanned file has skew, perform the steps that follow:

- Check that the SPDH is seated correctly. If necessary, perform the [ADJ 5.2](#) SPDH Height.
- Go to [ADJ 5.3](#) and perform the Side 1 Skew Adjustment.

Document Glass Checkout

Perform the steps that follow:

- Clean the top surface of the document glass and CVT glass. Refer to [ADJ 60.1](#) Scanner Cleaning Procedure.
- Check that the white AGC strip on the CVT glass is on the rear underside of the glass.
- Check the condition of the SPDH document pad. If necessary clean the pad or install a new pad, [PL 5.10 Item 3](#).

Scan Carriage Assembly Checkout

Perform the steps that follow:

- If the copy of the internal test pattern (made from the [IQ1](#) Image Quality Entry RAP) is fragmented and displaced, check the components that follow:
 - The scan carriage data ribbon cable, [PL 60.20 Item 11](#) from the scan carriage, to CN6 on the [Scanner PWB](#). Refer to [WD16](#)

- The scan carriage power ribbon cable, [PL 60.20 Item 10](#) from the scan carriage, to CN4 on the [Scanner PWB](#). Refer to [WD 16](#).
- The SBC PWB to scanner PWB data cable, [PL 60.20 Item 18](#) from the [scanner PWB](#), CN7 to the [SBC PWB](#), PJ25. Refer to [WD 3](#) Ensure the data cable is located and secured in the correct location, refer to [REP 60.2](#).
- The SBC PWB to scanner PWB comms/power harness, [PL 60.20 Item 5](#) from the [scanner PWB](#), CN2 to the [SBC PWB](#), PJ861. Refer to [WD 3](#).
- Raise the SPDH. Enter [dC330](#) code 062-002, platen exposure lamp. If the scan carriage exposure lamp does not illuminate, perform the [362B](#) Side 1 Exposure Lamp Failure RAP.
- Check the scan carriage for contamination. Refer to [ADJ 60.1](#) Scanner Cleaning Procedure.
- Check all of the scanner module ground connections listed in the [301A](#) Ground Distribution RAP. If necessary clean any contamination to ensure a good ground contact.

IQ8 IOT Skew RAP

Use this RAP to determine the source of skew.

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the misregistration procedure in the [IQ2](#) IQ Defects RAP.

Procedure

Enter [dC612](#). Select the relevant internal test pattern:

- Number 11 (ITP 19 Field test pattern (letter)).
- Number 12 (ITP 19 Field test pattern (A4)).
- Number 13 (ITP 19 Field test pattern (A3)).
- Number 14 (ITP 19 Field test pattern (11x17)).

Make 5 simplex prints. Check the prints for skew. Refer to [IQS 5](#) Skew. **The prints are skewed.**

Y N
Make 5 duplex prints of the same internal test pattern. Check the prints for skew, refer to [IQS 5](#) Skew. **Side 2 of the prints are skewed.**
Y N
No IOT skew is present. Re-define the image quality defect. Refer to [IQ1](#) Image Quality Entry RAP.

The skew occurs in the duplex paper path.

- Refer to [ADJ 80.2](#) Simplex and Duplex Buckle Timing. Check the duplex buckle.
- Check the nip and drive rolls in the inverter assembly for wear, damage and contamination, [PL 10.10](#), [PL 10.11](#) and [Figure 1](#).
- Check the inverter guide ribs, [Figure 1](#) for wear, damage and contamination.
- Check the drive and idler rolls in the duplex transport assembly for wear, damage and contamination, [PL 80.22](#) and [Figure 2](#).
- Check the inner and outer duplex ribs, [Figure 2](#) for wear, damage and contamination.

Clean or install new components as necessary.

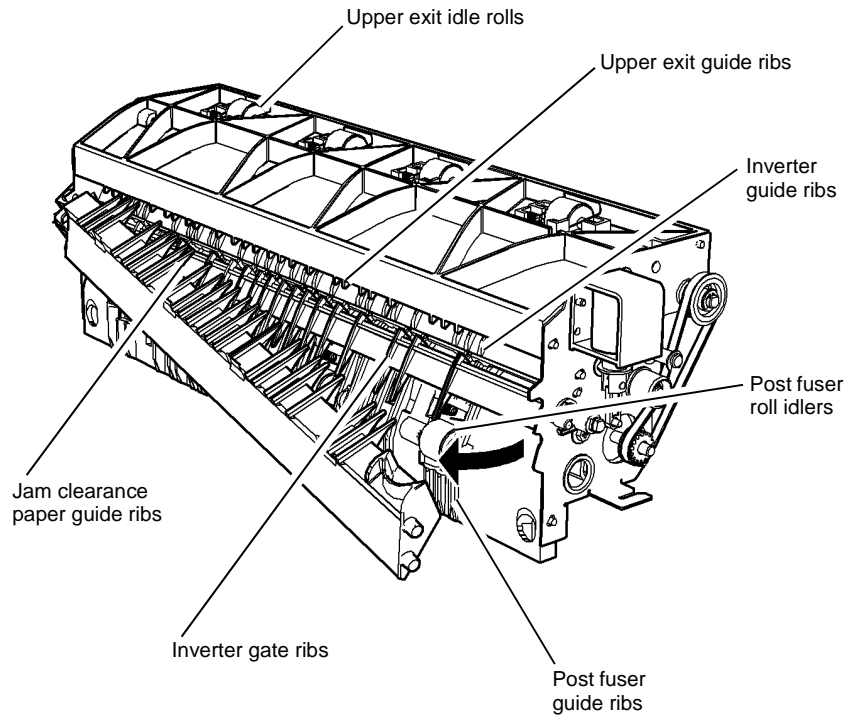
Using the prints made from [dC612](#), check the prints for distortion by measuring between the lines produced. **The lines are parallel to each other.**

Y N
Install a new LED print head module, [PL 60.35](#) Item 1.

Make 5 prints from each tray and the bypass tray to identify the source of skew:

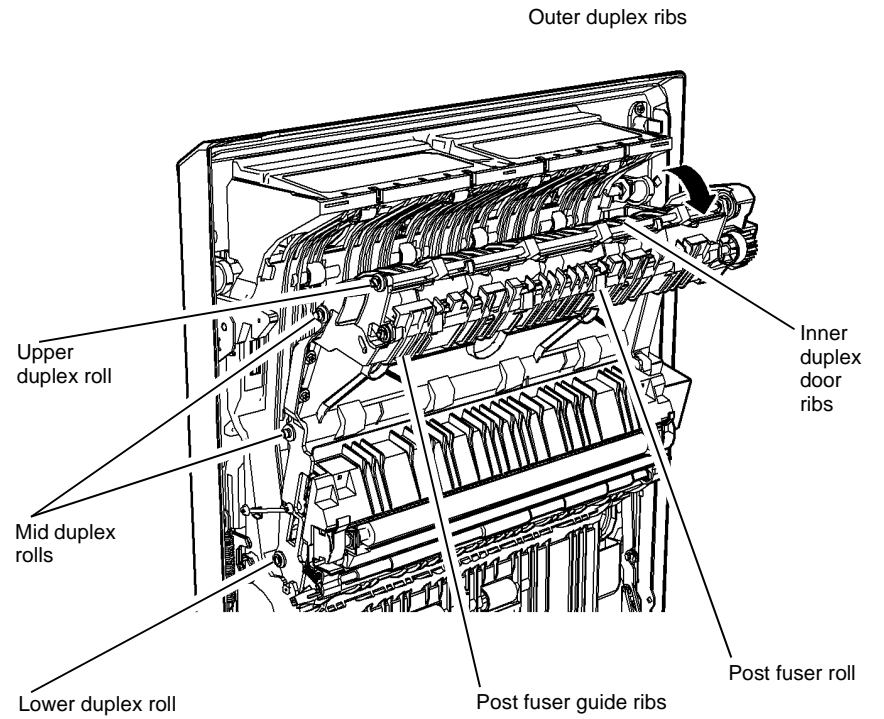
- Refer to [ADJ 80.2](#) Simplex and Duplex Buckle Timing. Check the simplex buckle.

- Check the feed rolls and guides for contamination. Clean the components as necessary.
- Check the feed rolls and transport rolls for wear. Install new components as necessary.
- If there is skew from tray 3 or tray 4, check the parts that follow:
 - The tray 3 and tray 4 paper guides for wear, damage or incorrect assembly. If necessary install new paper guides, [PL 80.32](#) Item 11 (tray 3) or [PL 80.33](#) Item 9 (tray 4).
 - The tray 3 and 4 skew brackets for wear. If necessary install new skew brackets, [PL 70.18](#) Item 10 (tray 3) or [PL 70.19](#) Item 10 (tray 4).
 - The idler roll assembly (metal shaft), [PL 80.36](#) Item 8 (tray 4) or [PL 80.32](#) Item 2 (tray 3). Install new components as necessary.
- Check that there is no variation in the size or weight of the sheets of paper in each tray.
- Check that the paper weight and type is within the specification. Refer to [GP 20](#) Paper and Media Size Specifications.
- Check that the paper size guides are set correctly.
- Perform the [OF8](#) Multifeed RAP.
- Check that the bypass tray width guides are set correctly and that media sizes are within the specification, refer to [GP 20](#).
- Check the bypass tray baffle, [PL 70.35](#) Item 15 for contamination, wear or damage
- Check the registration transport housing ribs for wear, damage and contamination, [Figure 3](#). If necessary clean the housing or install a new registration transport housing, [PL 80.17](#) Item 1.
- Check the paper path for obstructions. Refer to the [IQ5](#) Print Damage RAP.



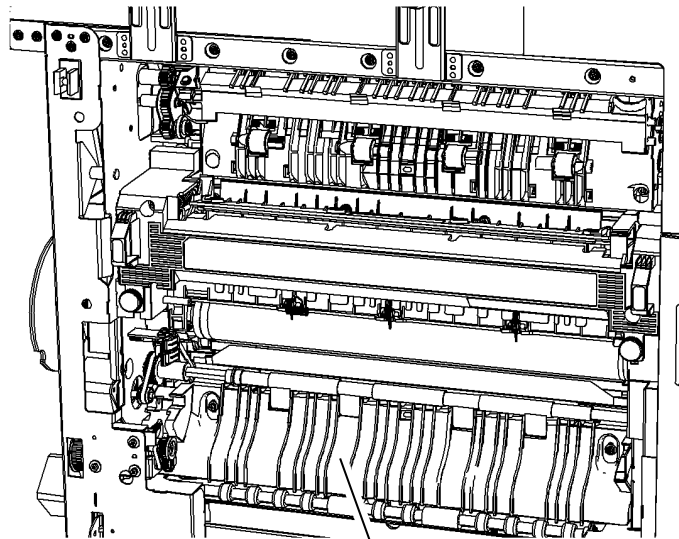
X-1-1161-A

Figure 1 Inverter ribs and rolls



X-1-1162-A

Figure 2 Duplex paper guides



Registration transport housing

Figure 3 Registration transport

X-1-1163-A

IQ9 Unacceptable Received Fax Image Quality RAP

Use this RAP to identify the causes of poor reception.

Ensure **IQ1** Image Quality Entry RAP is performed before starting this RAP.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the fax country setting, NVM location 200-043, is correct. Refer to the FAX NVM PDF in the edoc library.

Procedure

The condition of the original transmission document is good.

Y N
Generate a new document from the original.

If possible, establish voice contact using the same telecommunication link as used to receive the document. **The line is free of interference sounds and the normal voice can be heard clearly.**

Y N
Perform the **320G** Fax Module Checkout RAP.

Receive the document at a slower receive speed. Set the NVM location 200-089 Line 1 = 11 and location 200-090 Line 2 = 11. Refer to the Fax NVM PDF in the edoc library. **The image quality is acceptable.**

Y N
The telecommunication links and harnesses are connected properly.

Y N
Correct the connections.

Check the condition of the telecommunication links and harnesses. **The telecommunication links and harnesses are good.**

Y N
Install a new telephone cable, **PL 20.05 Item 3**.

Verify the operation of the machine and the communication link by transmitting between machines over a known good link. **All received documents have an acceptable image quality.**

Y N
Install a new fax PWB, **PL 20.05 Item 7**.

Perform the **320G** Fax Module Checkout RAP.

Inform the remote user of the required changes to the settings.

IQ10 Copy Quality Improvement RAP

Use this RAP if the customer is not satisfied with the copy quality.

Ensure [IQ11](#) Print Quality Improvement RAP is performed before starting this RAP.

The copy quality can be altered by changing the copy defaults. This will optimize the copy quality to the unique requirements of the customer.

NOTE: These adjustments will have no effect on the image quality of the printed output.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Make a copy of the customer document that shows the defect and keep as a reference.
- Ensure that the customer copy quality requirements are understood.

NOTE: If the customer is using Toner Save mode, explain that this will lighten the image to save toner. Standard mode (Toner Save disabled) should be used for image quality problem solving.

Enter Customer Administrator Tools, [GP 24](#). Press the Machine Status button. Select Tools / Service Settings / Copy Service. Disable the Toner Saver mode if it is not already disabled.

Procedure

1. Clean the document glass and CVT glass. Refer to [ADJ 60.1](#) Scanner Cleaning Procedure.
2. Ensure the white patch on the CVT glass is present at the rear of the glass and is facing downwards.
3. Set Image Quality / Image Enhancement / Background Suppression to Off.
4. Make 3 document glass copies of test pattern 82E2010 (A4), or 82E2020 (8.5 x 11 inches).
5. Evaluate the second copy. Refer to [IQS 1](#) Solid Area Density and Tone Reproduction.
6. If the copy of the test pattern is out of specification, perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration. Make test copies. If the problem is now fixed, perform [SCP 5](#) Final actions. If the fault persists, continue with this procedure.
7. If the copy quality meets the specification, but does not meet the customer's requirement, make copies of the test pattern, 82E2010/82E2020 or the customer's document, with different image quality settings until the image quality has been improved. Use different combinations of the image quality options that are available. Refer to the [Image Quality Options](#).

NOTE: If the Text or the Halftone Photo option is selected then the Sharpness and Contrast sliders are greyed out. The Text option is the same as High Contrast 2. The Halftone Photo is the same as Low Contrast 1.

8. Enter Customer Administrator Tools, [GP 24](#). In the Tools pathway, select Service Settings / Copy Settings / Feature Defaults / Set Copy Defaults / Image Quality.
9. Save the image quality options to be used as the default setting.
10. Select End Defaults and Exit Tools.
11. Run different jobs to confirm that the changes made have not caused other image quality problems.
12. Record the new values in the machine log book.
13. Perform an NVM save. Refer to [dC361](#).

Image Quality Options

Original type

- Content Type.
 - Photo and text.
 - Photo.
 - Text.
 - Map.
 - Newspaper/Magazine.
- How Original was Produced.
 - Printed Original.
 - Photocopied Original.
 - Photograph.
 - Ink Jet Original.
 - Solid Ink Original.

Image Options

- Lighten/Darken - a choice of 7 steps from lightest to darkest, using a slider to select.
- Sharpness - a choice of 5 steps from softest to sharpest, using a slider to select.

Image Enhancement

- Background Suppression.
 - Off.
 - Auto Suppression.
- Contrast:
 - Manual Contrast - a choice of 5 levels from lowest to highest, using a slider to select.
 - Auto Contrast.

IQ11 Print Quality Improvement RAP

Use this RAP when the machine is making light or dark prints.

Perform **IQ1** Image Quality Entry RAP before starting this RAP.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Check the fault log. Troubleshoot any current 310-XXX-XX, 36X-XXX-XX or 39X-XXX-XX faults.
2. Check that there is toner in the toner cartridge.
3. Check that the machine is level.
4. Check if the customer is using toner save mode. Machines are configured in the factory to use toner save mode. Explain to the customer that using standard mode will darken the print but will use more toner whereas toner save mode will result in lighter images but use less toner. If the image quality issue is that the image is not dark enough set toner save mode to off and ask the customer if that is satisfactory.
5. If the image is still not dark enough check the image density using the **Darken Image** tool. Tell the customer that using the **Darken Image** tool will affect both print and copy modes. If the slider is set to Nominal move the slider to Maximum. If the image defect is sufficiently darkened use the slider to satisfy the customer's requirements. Explain to the customer that increasing the darkness of the image will increase toner usage.
6. Perform the **LED Print Head Checkout**. If necessary adjust the image density using the **Darken Image** tool.
7. Check the bias transfer roll (BTR)
 - Inspect the bias transfer roll, **PL 80.15 Item 3**. The surface of the roll should not be excessively contaminated with toner, paper dust or debris. If necessary use a vacuum cleaner to clean the roll.
 - Clean the BTR contacts, refer to **ADJ 90.1**.
 - Check the life of the bias transfer roll. The surface of the roll should be a uniform color and texture. Excessive discoloration or damage could indicate an out of life roll. The BTR should have a life of 500,000 prints. Check the machine log to establish if the BTR is beyond its expected life. Install a new bias transfer roll, **PL 80.15 Item 3** if replacement is indicated.
8. Remove and inspect the print cartridge:
 - If the drum is discoloured or hazy, install a new print cartridge, **PL 90.17 Item 9**.
 - If the print cartridge is contaminated with toner, go to the **IQ3** Xerographic RAP and perform the **Print Cartridge Checkout**.
 - Ensure that the print cartridge is undamaged.

NOTE: If the customer is using the print driver's Toner Save mode, explain that this will lighten the image to save toner. Toner Save disabled should be used for image quality problem solving.

NOTE: Long runs of duplex or running LVF BM jobs may result in lighter prints. If this occurs adjust the darkness using the **Darken Image** tool on the UI. Check the position of the slider and reset to nominal before proceeding.

Procedure

Select **dC612** Print Test Patterns. Make 3 prints of internal test pattern 21 (ITP 11 Error Diffused IOT TRC+MQ). Mark these "START". Check the solid area density and tone reproduction. Refer to **IQS 1** Solid Area Density and Tone Reproduction. **The print quality meets the specification or the customer's requirements.**

Y N

Remove the print cartridge. Mark a pencil line on the white plastic surface of the developer roll coupling. Re-install the print cartridge. Enter **dC330** code 093-045, print cartridge motor. Allow the motor to run for approximately 5 seconds, then cancel the code. Remove the print cartridge. **The developer roll coupling has rotated.**

Y N

Check the drives to the developer. Repair or install new components as necessary:

- Developer dog gear, **PL 40.15 Item 8**.
- Spring, **PL 40.15 Item 7**.
- Main drive module, **PL 40.15 Item 1**.
- Print cartridge, **PL 90.17 Item 9**.

The image is sufficiently dark.

Y N

Use the **Darken Image** tool to darken the prints. **The darkness of the print now meets the IQ specification and the customer requirements.**

Y N

Go to **dC131** Change the NVM values for 501-383, 501-384, 501-385, 501-386. Increase each of these values by +15. Use the **Darken Image** tool to adjust the darkness of the prints. **The darkness of the print now meets the IQ specification and the customer requirements.**

Y N

Go to **dC131** Change the NVM values for 501-383, 501-384, 501-385, 501-386. Increase each of these values by +15. Use the **Darken Image** tool to adjust the darkness of the prints. **The darkness of the print now meets the IQ specification and the customer requirements.**

Y N

Go to **dC131** Change the NVM values for 501-383, 501-384, 501-385, 501-386. Increase each of these values by +15. Use the **Darken Image** tool to adjust the darkness of the prints. Perform **Final Actions** within this procedure.

Perform **Final Actions** within this procedure.

Perform **Final Actions** within this procedure.

Perform **Final Actions** within this procedure.

A B

A

B

Check that the toner dispense is working. Refer to [wiring diagram 9](#) Monitor the voltage on the grey wire on pin 1 of PJ766 on the IOT PWB while printing 20 copies of test pattern 82E2010/82E2020. This is the output of the toner concentration sensor. The voltage should be between +1.5V and +2.8V. **The voltage is correct.**

Y N

Perform the [393-390-00](#) Toner Cartridge Empty RAP. If the toner dispense is good, perform the [393-360-00 to 393-364-00](#) Toner Concentration Sensor Failure RAP.

Perform the [IQ3](#) Xerographic RAP. **The image quality defect remains.**

Y N

Perform [Final Actions](#) within this procedure.

Perform the [393-360-00 to 393-364-00](#) Toner Concentration Sensor Failure RAP. **The image quality defect remains.**

Y N

Perform [Final Actions](#) within this procedure.

Perform the steps that follow:

1. Use the [Darken Image](#) tool to reset the density adjustment to Nominal.
2. Enter [dC131](#) NVM location 501-300, LPH_Exposure_Fixed:
 - Increase the value by increments of 100 to darken the image.
 - Decrease the value by increments of 100 to lighten the image.
3. Select [dC612](#) Print Test Patterns. Make 3 prints of internal test pattern 21 (ITP 11 Error Diffused IOT TRC+MQ). Check the solid area density and tone reproduction. Refer to [IQS 1](#) Solid Area Density and Tone Reproduction.

The print quality meets the IQ specification and the customer requirements.

Y N

Install a new print cartridge, [PL 90.17 Item 9](#). Then perform [Final Actions](#) within this procedure.

Perform [Final Actions](#) within this procedure.

Perform [Final Actions](#) within this procedure.

LED Print Head Checkout

1. Check the [Darken Image](#) tool. Set the value to Nominal.
2. Perform [ADJ 60.4](#) LED Print Head Cleaning Procedure. Toner contamination on the LED Print Head may not be visible.
3. Check the LED print head brightness. Perform [dC304](#) LED Print Head Validation.
4. Check the LED print head camming mechanism is working correctly. Check that there is no debris such as a dropped screw, that would prevent the LED print head from moving to the imaging position close to the photoreceptor.
5. If there are 1 or more image defects in the form of bands that are 8mm (0.3 inch) wide, or multiples thereof, install a new LED print head module, [PL 60.35 Item 1](#).

Darken Image

1. Log in as Admin [GP 24](#).
2. From the UI select Device then Tools.
3. On the Device Settings tab select General, then scroll down to select Darken Image.
4. If the slider is set to nominal move the slider to maximum. If the image defect is sufficiently darkened use the slider to satisfy the customer's requirements by selecting a position between nominal and maximum.

NOTE: The Darken Image slider adjusts the LPH exposure power. This is the same as adjusting the value for NVM 501.300. Adjusting the slider will affect both print and copy modes.

Final Actions

Perform the following:

1. Run [dC604](#) Registration Setup Routine.
2. Check the copy quality. Perform the following:
 - a. Enter Customer Administrator Tools, [GP 24](#). Press the Machine Status button. Select Tools / Service Settings / Copy Service. Disable the Toner Saver mode if it is not already disabled.
 - b. Make copies of test pattern 82E2010/82E2020 from the document glass.
 - c. If the copies do not meet the specification, [IQS 1](#) Solid Area Density and Tone Reproduction, perform [IQ10](#) Copy Quality Improvement RAP.
 - d. Re-enable the Toner Saver mode if the customer requires it.

NOTE: If the customer is using Toner Save mode, explain that this will lighten the image to save toner. Standard mode (Toner Save disabled) should be used for image quality problem solving.

3. Select [dC612](#) Print Test Patterns. Print internal test patterns:
 - Number 5 (ITP 11 original IOT TRC+MQ).
 - Number 8 (ITP 15 Step-wedge (106dpi 45deg).
 Mark these "FINISH" and write the new NVM values on these prints. Save these documents in the machine logbook for future reference:
4. Record any image quality options selected onto the customer copy, and save in the machine logbook for future reference.
5. Perform an NVM Save, [dC361](#).
6. Perform [SCP 5](#) Final Actions.

IQ12 Side 2 Scanner IQ Defects RAP

Use this RAP to identify image quality problems caused by the SPDH.

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Procedure

Go to the appropriate image quality defect and perform the appropriate actions.

- [Background](#).
- [Bands](#).
- [Black Image](#).
- [Deletions](#).
- [Displaced and Fragmented Image](#).
- [Lines](#).
- [Magnification](#).
- [Misregistration](#).
- [Part Images and Missing Images](#).
- [Skew](#).
- [Stretched and Distorted Images](#).
- [Side 2 Scan Assembly Checkout](#).
- [SPDH Checkout](#).

Background

Description

Uniform darkening across all the non image areas on the scanned file.

Procedure

NOTE: The Scan to USB option must be made available by the System Administrator. If Authentication or Accounting has been enabled on the device you may have to enter login details to access the Scan To features.

Make a duplex scan to USB file from the SPDH. View the resultant file on a computer screen. If the side 2 images have a background problem, perform the steps that follow:

- Check the SPDH height. Refer to [ADJ 5.1](#) SPDH Height.
- Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.
- Copying thick documents can leave the SPDH raised above the document glass. Raise and lower the SPDH 5 times to settle the counterbalances.

Bands

Description

Light or dark bands on the scanned file in the process direction. These are best detected on a scan of a grey image such as ITP 2.

Procedure

Perform the [Side 2 Scan Assembly Checkout](#) and the [SPDH Checkout](#).

Black Image

Description

Side 2 images are completely black.

Procedure

Perform the [366-450-00 to 366-463-00](#), [366-466-00 to 366-468-00](#) SPDH Side 2 Scanner Calibration Faults RAP.

Deletions

Description

Areas of the image are missing from the scanned file. Deletions may be in the form of lines or whole areas of toner missing from the image.

Procedure

Perform the [Side 2 Scan Assembly Checkout](#). If necessary install a new side 2 scan assembly, [PL 60.30 Item 1](#).

Displaced and Fragmented Image

Description

Displaced images, part images or scrambled images.

Procedure

Perform the [Side 2 Scan Assembly Checkout](#). If necessary install a new side 2 scan assembly, [PL 60.30 Item 1](#).

Lines

Description

Light or dark lines in the process direction. These are best detected on a scan of a grey image such as ITP 2.

Procedure

Perform the [Side 2 Scan Assembly Checkout](#). If necessary install a new side 2 scan assembly, [PL 60.30 Item 1](#).

Magnification

Description

At 100% magnification the scanned image differs from the size of the image on the original document. Refer to [IQS 8](#) Magnification.

Procedure

Compare side 2 images produced from the SPDH with side 1 images produced from the document glass or CVT glass. If this comparison shows the SPDH magnification to be outside of the [IQS 8](#) specification, install a new SPDH, [PL 5.10 Item 9](#).

Misregistration

Description

The image in the scanned file is displaced relative to the lead or top edge. Refer to [IQS 7](#) Registration.

Procedure

NOTE: The Scan to USB option must be made available by the System Administrator. If Authentication or Accounting has been enabled on the device you may have to enter login details to access the Scan To features.

Make a duplex scan of test pattern 82E2010/82E2020 to USB file. View the resultant file on a computer screen. If the scanned image shows misregistration, perform the [SPDH Checkout](#) and the [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

Part Images and Missing Images

Description

Incomplete or missing images.

Procedure

Go to the [305A](#) Document Size Sensors Failure RAP.

Skew

Description

A difference in angular alignment between the scanned image and the original document.

Procedure

Refer to [IQS 5](#) Skew. Perform the [SPDH Checkout](#). Check that the SPDH document width guides, [Figure 1](#), are correctly adjusted. If necessary, perform [ADJ 5.2](#) SPDH Skew.

Stretched and Distorted Images

Description

The scanned file image is stretched or distorted.

Procedure

NOTE: The Scan to USB option must be made available by the System Administrator. If Authentication or Accounting has been enabled on the device you may have to enter login details to access the Scan To features.

Make a duplex scan of test pattern 82E2010/82E2020 to USB file from the SPDH. View the resultant file on a computer screen. If the images are stretched or smudged, lower the height of the SPDH by half a turn of the setting screws. Refer to [ADJ 5.1](#) SPDH Height. Make new files from the SPDH after each adjustment. If the fault persists, re-adjust the height of the SPDH as necessary.

Side 2 Scan Assembly Checkout

Perform the steps that follow:

- If the copy of the internal test pattern (made from the IQ1 RAP) is fragmented and displaced, check the components that follow:
 - The data ribbon cable from the side 2 scan assembly, to the [Scanner PWB](#), CN8. Refer to [WD 16](#).
 - The power ribbon cable from the side 2 scan assembly, to the [SPDH PWB](#), CN21. Refer to [WD 13](#).
- Raise the SPDH. Enter [dC330](#) code 066-002, SPDH exposure lamp. If the SPDH exposure lamp does not illuminate, perform the [366A](#) Side 2 LED Exposure Lamp Failure RAP.
- Perform [ADJ 60.2](#) Side 2 Scan Assembly Cleaning Procedure.

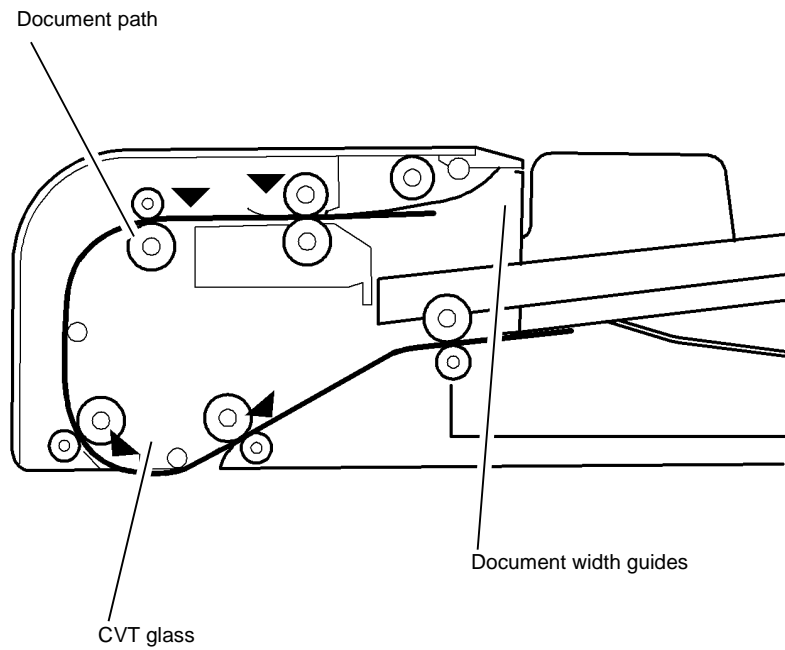
SPDH Checkout

Perform the steps that follow:

- Clean the underside of the SPDH around the area of the side 2 scan assembly, [PL 5.10 Item 12](#). Refer to [ADJ 5.3](#) SPDH Cleaning Procedure.
- Clean the top surface of the CVT glass, [Figure 1](#). Refer to [ADJ 60.1](#) Scanner Cleaning Procedure.
- [ADJ 60.2](#) Side 2 Scan Assembly Cleaning Procedure.
- [ADJ 60.3](#) IIT Registration, Magnification and Calibration.
- Check that the SPDH is seated correctly. If necessary, perform the [ADJ 5.1](#) SPDH Height.

NOTE: The Scan to USB option must be made available by the System Administrator. If Authentication or Accounting has been enabled on the device you may have to enter login details to access the Scan To features.

- Make scan to USB files of test pattern 82E2010/82E2020 from the SPDH and the document glass. View the resultant files on a computer screen. If the images from the SPDH are lighter or darker than those from the document glass, go to [dC131](#) NVM Read/Write location 801-020, CvtWhiteRefMono. If the value is increased, images made from the SPDH will be darker. If the value is decreased, images made from the SPDH will be lighter.
- Make a scan to USB file of test pattern 82E2010/82E2020 from the SPDH. View the resultant file on a computer screen. If the images are stretched or smudged, lower the height of the SPDH by half a turn of the setting screws. Refer to [ADJ 5.1](#) SPDH Height. Make new files from the SPDH after each adjustment. If the fault persists, re-adjust the height of the SPDH as necessary.



X-1-1160-A

Figure 1 SPDH document path

IQS 1 Solid Area Density and Tone Reproduction

Documents

Test patterns: 82E2000 (A3 and 11X17), 82E2010 (A4), 82E2020 (8.5X11), and the solid area density scale, 82E8230 (SIR 542.00) for reference.

Specification

NOTE: Always set up the print quality to specification before measuring or adjusting copy quality.

NOTE: Always measure print and copy quality in Standard mode (Toner Save disabled).

Print

Compare a print of the internal test pattern 21 (ITP 11 Error Diffused IOT TRC+MQ), [Figure 1](#), with the solid area density scale, 82E8230 (SIR 542.00).

- The density of the 100% solid area must be as dark or darker than the 1.2 reference, and no darker than the 1.5 reference.
- The density of the 90% and 95% solid areas may be as dark as the 100% solid area.
- The density of the 85% solid area should be just lighter than the 100% solid area.
- The 10% solid area should be visible compared to white paper.
- The 5% solid area may be invisible.
- Each density area from 10% to 85% must be distinguishable from its neighbours.

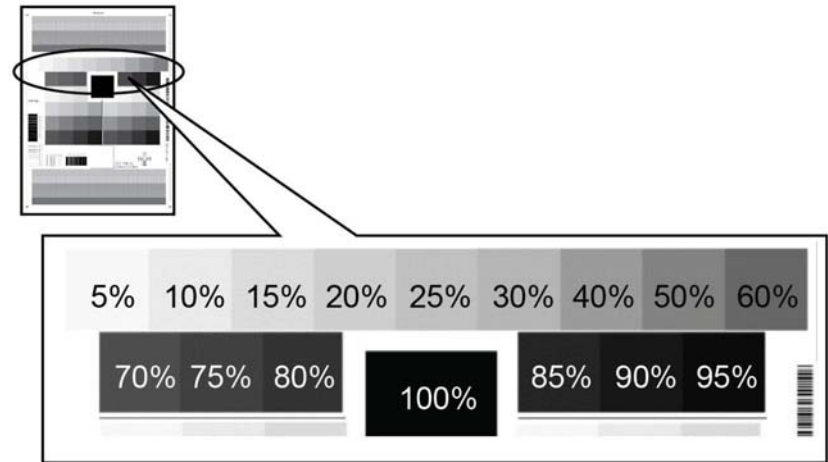
Copy

Compare copies of the test pattern, [Figure 2](#), made from the document glass, with a print of internal test pattern 21 (ITP 11 Error Diffused IOT TRC+MQ) that is within the print specification:

- The density of the 2.1, 2.3, and 2.5 squares should be as dark as the 70%, 75% or 80% solid area, [Figure 1](#), but less than the 85% solid area of ITP 21.
- The 3.0, 3.3 and 3.4 text areas should all be visible.
- The 4.1 line pair should be visible with ABS (automatic background suppression) turned on.
- The 4.2 line pair should be visible with ABS turned off.
- The 4.3 line pair may be slightly visible with ABS turned off.
- The 2.0, 2.2 and 2.4 squares should be lighter than the 2.1, 2.3 and 2.5 squares.

Corrective Action

- If the print solid area density specification is not met, perform the [IQ3](#) Xerographic RAP.
- If the lighter end of the ITP 21 density patches do not reproduce correctly, perform the [IQ11](#) Print Quality Improvement RAP.
- If the print quality meets the specification, but the copy quality does not, perform [IQ10](#) Copy Quality Improvement RAP.



X-1-1232-A

Figure 1 Internal test pattern 21

IQS 2 Background

Documents

Test patterns: 82E2000 (A3 and 11X17) 82E2010 (A4) 82E2020 (8.5X11) and visual scale, 82P448 for reference.

Specification

Copy

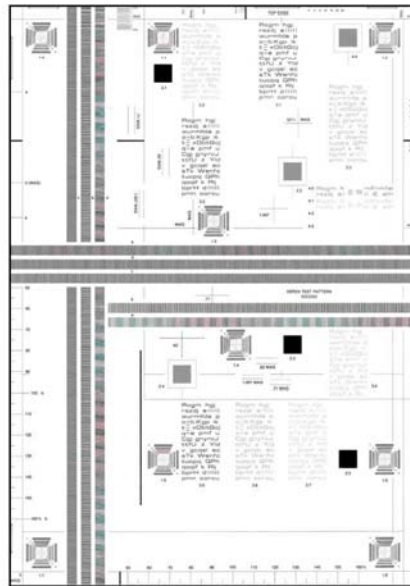
Compare the copies of the test pattern, [Figure 1](#), made from the document glass, with the visual scale, 82P448. The background of the copies must be lighter than the reference area B.

Print

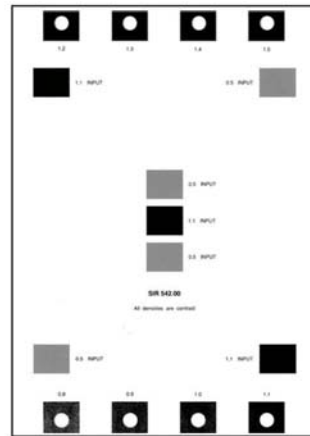
Compare a print of the internal test pattern 1 (ITP 1 0% coverage), [Figure 2](#), with the visual scale, 82P448. The background of the print must be lighter than the reference area B.

Corrective Action

If the background specification is not met, perform the [IQ3](#) Xerographic RAP.



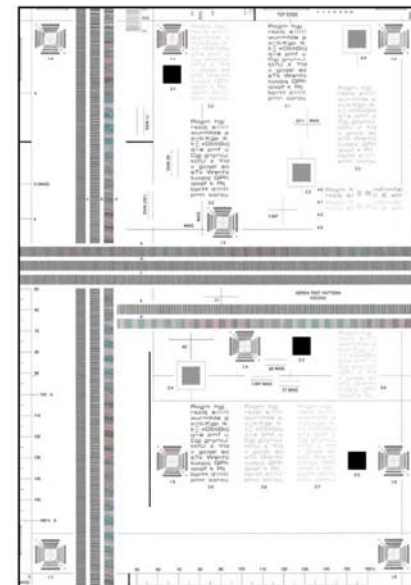
82E2000



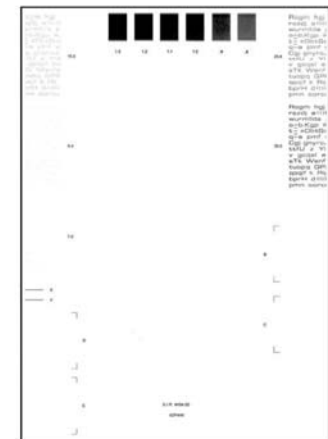
SIR 542.00

X-1-1235-A

Figure 2 Test patterns



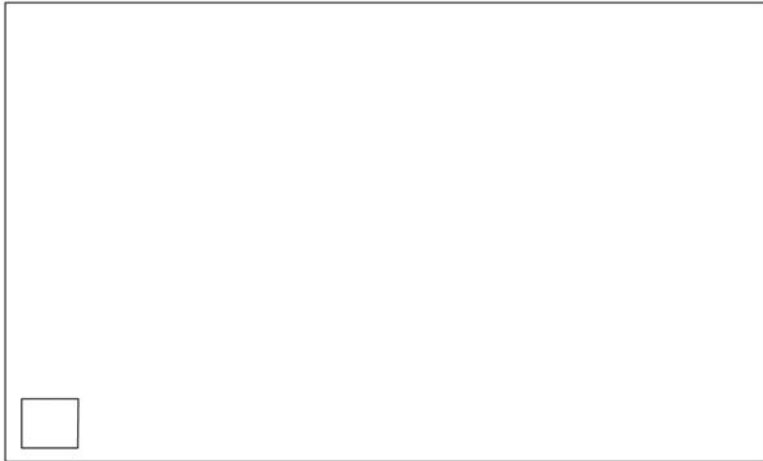
82E2000



SIR 494.00
82P448

X-1-1236-A

Figure 1 Test pattern



X-1-1237-A

Figure 2 Internal test pattern 1

IQS 3 Fusing

Documents

Test Patterns: 82E2000 (A3 and 11X17) 82E2010 (A4) 82E2020 (8.5X11).

Procedure

Make 5 copies of the test pattern, [Figure 1](#). Check the fusing by folding one of the copies through the centre of a solid area. Use a finger to apply medium pressure along the fold to crease the paper. Unfold the copy. Use a finger to lightly rub the area of the fold and adjacent areas.

Specification

Any break should measure less than 1mm (1/32 inch) across the line of a fold. Any area rubbed with a cloth should not smudge or the image lift off the surface of the paper. When checking the fusing on heavyweight paper (200gsm), rub the image with a finger. Images fused on the smooth side of the paper have a greater resistance to rubbing than images fused on the rough side of the paper. Do not attempt to fold heavyweight paper, as this breaks the fibres.

Corrective Action

If the fusing specification is not met, perform the [IQ4 Fuser Module RAP](#).

IQS 4 Resolution

Documents

Test patterns: 82E2000 (A3 and 11X17) 82E2010 (A4) 82E2020 (8.5X11).

Specification

Copy

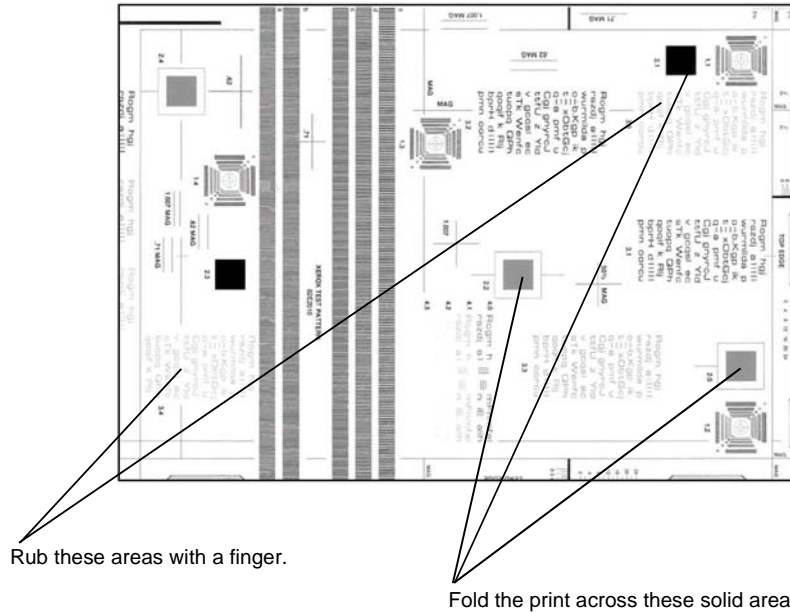
Make 3 copies of a test pattern from the document glass. Examine the targets of the second copy to determine the overall resolution of the copy. The lines identified by the letter H, [Figure 1](#), should be clearly reproduced at 100%

Print

Make 3 prints of internal test pattern 5 (ITP 11 Original IOT TRC+MQ). Examine the lines of the second print. All lines should be resolved.

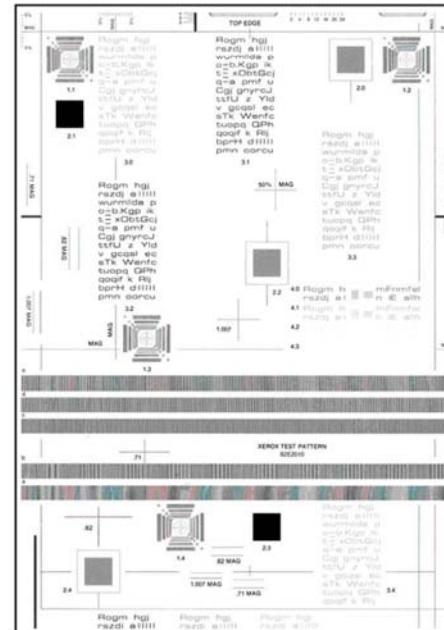
Corrective Action

If the resolution specification is not met, go to [IQ3](#) Xerographic RAP and perform the [LED Print Head Checkout](#).



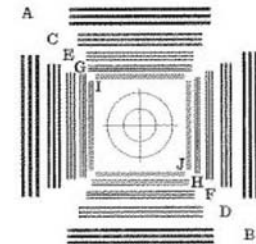
X-1-1238-A

Figure 1 Test pattern



X-1-1239-A

Figure 1 Test pattern



IQS 5 Skew

Documents

Test patterns: 82E2000 (A3 and 11x17), 82E2010 (A4), 82E2020 (8.5x11). Use for checking copy skew with border erase turned off or scan skew.

Procedure

Go to the relevant procedure:

- [Print Skew](#)
- [Copy Skew](#)
- [Scan Skew](#)

Print Skew

Specification

Refer to [Table 1](#).

Table 1 Print skew measurement

Source of Paper	Maximum Allowable Skew
Trays 1,2,3 and 4 simplex	1mm
Trays 1,2,3 and 4 duplex	1.6mm
Bypass tray	2.2mm

Skew Measurement

To check for skew, perform the following:

1. Enter [dC612](#). Make a simplex print of the relevant internal test pattern:
 - Number 11 (ITP 19 Field test pattern (letter).
 - Number 12 (ITP 19 Field test pattern (A4).
 - Number 13 (ITP 19 Field test pattern (A3).
 - Number 14 (ITP 19 Field test pattern (11x17).

NOTE: Two, single sided pages will be printed.

2. Refer to [Figure 1](#). Determine the amount of skew by using the corner scales. Measure the distance to the lead edge of the paper at the inboard and outboard edges.
3. Make a duplex print of the same internal test pattern.
4. Refer to [Figure 2](#). Determine the amount of skew by using the corner scales. Measure the distance to the lead edge of the paper at the inboard and outboard edges.
5. If skew is not within specification on either side, perform [ADJ 80.2](#) Simplex and Duplex Buckle Timing.

Copy Skew

Specification

Refer to [Table 2](#).

Table 2 Copy skew measurement

Type of Copy	Maximum Allowable Skew from Trays 1, 2, 3 and 4	Maximum Allowable Skew from Bypass Tray
Platen simplex	1.4mm	1.9mm
Platen duplex	1.7mm	2.3mm
SPDH simplex	2.5mm	3.1mm
SPDH duplex	3.1mm	3.7mm

Skew Measurement

To check for skew, perform the following:

1. Make a simplex copy of test pattern 82E2000 (A3 and 11x17), 82E2010 (A4) or 82E2020 (8.5x11).
2. Make a duplex copy of the same test pattern.

NOTE: When making the duplex copy, place the test pattern so that the side of the test pattern with the datum line is copied onto side 2.

3. Refer to [Figure 3](#). Determine the amount of skew by either:
 - measuring the distance between the datum line and the lead edge of the paper at the inboard and outboard edges.
 - using the grid A and grid B areas of the test pattern to directly measure the skew difference.

NOTE: Grid A and grid B are small areas of parallel lines 1mm apart.

4. If skew is not within specification, perform [ADJ 80.2](#) Simplex and Duplex Buckle Timing.

Scan Skew

Specification

Refer to [Table 3](#).

Table 3 Scan skew measurement

Type of Scan	Maximum Allowable Skew from Trays 1, 2, 3 and 4
Platen simplex	1.4mm
Platen duplex	1.7mm
Document handler simplex CVT	2.5mm
Document handler duplex SPDH	3.1mm

Skew Measurement

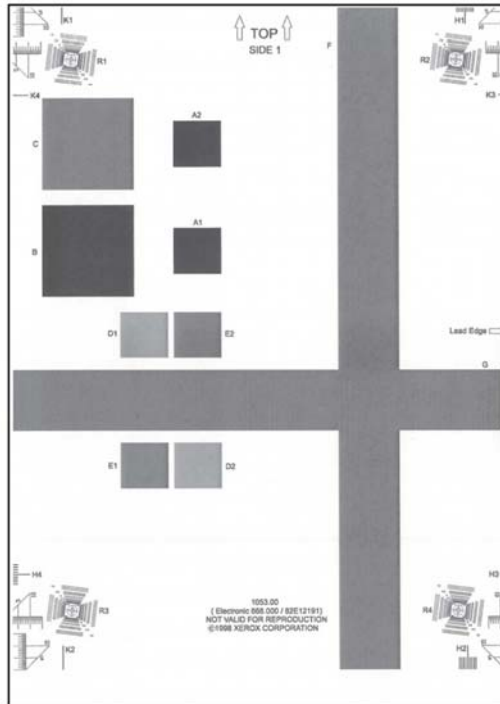
To check for skew, perform the following:

1. Produce a Scan to USB file of test pattern 82E2000 (A3 and 11x17), 82E2010 (A4) or 82E2020 (8.5x11), then view the file on a computer screen.
2. Refer to [Figure 3](#). Determine the amount of skew by either:

- measuring the distance between the datum line and the lead edge of the paper at the inboard and outboard edges.
- using the grid A and grid B areas of the test pattern to directly measure the skew difference.

NOTE: Grid A and grid B are small areas of parallel lines 1mm apart.

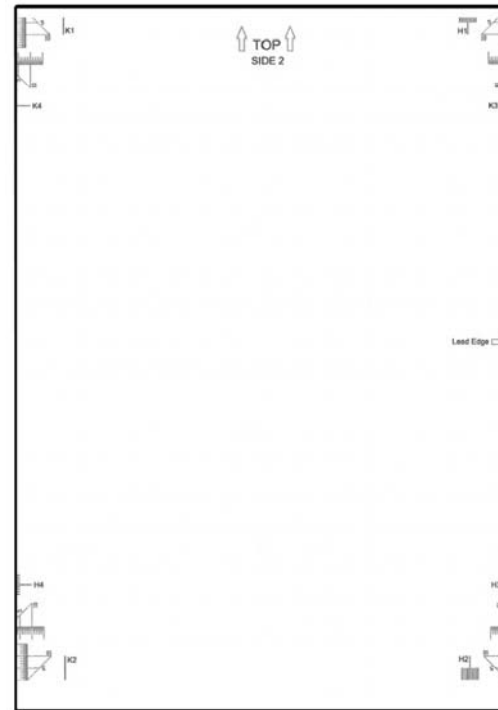
3. If skew is not within specification, perform the relevant procedure:
 - For skew produced in the SPDH, perform [ADJ 5.3 SPDH Skew Adjustment](#).
 - For skew produced from the document glass, perform the [IQ7 Document Glass and Scanner IQ Defects RAP](#).
 - For skew produced in the bypass tray, perform [ADJ 80.4 Bypass Tray Nip Pressure](#).



Lead edge corner scales.

X-1-1414-A

Figure 1 Print skew measurement (simplex)



Lead edge corner scales.

X-1-1415-A

Figure 2 Print skew measurement (duplex)

IQS 6 Copy / Print Defects

The machine should produce copies/prints free of defects. Any defects not explicitly covered by this specification should be considered as a fault.

Show Through

No show through of the underside of the document handler should be visible when using Xerox 80gsm (20lb) or heavier paper as an input document. The check is made with the document handler closed and in normal copy/print mode. Some show through may occur using 60gsm (15lb) paper as documents.

Corrective action

If show through of the underside of the document handler is visible, ensure that the document pad is clean. Refer to [ADJ 5.3 SPDH Cleaning Procedure](#). If necessary, install a new document pad, [PL 5.10 Item 3](#).

Dark Spots

Dark spots are toner deposits in the background area of a copy/print. The specification is for the total image area. To assess for dark spots use the [dC612](#) internal test print1.

- Spots of 0.4mm (0.016 inch) and larger - none allowed.
- Spots 0.3mm to 0.4mm (0.012 to 0.015 inch) - no more than 1 spot per A4 (8.5 x 11 inch) page.
- Spots 0.2mm to 0.3mm (0.008 to 0.012 inch) - no more than 6 spots per A4 (8.5 x 11 inch) page.
- Spots 0.15mm to 0.2mm (0.006 to 0.008 inch) - no more than 10 spots per A4 (8.5 x 11 inch) page.

Corrective Action

Go to the [IQ7](#) Document Glass and Scanner IQ defects RAP and perform the [Marks and spots](#) procedure.

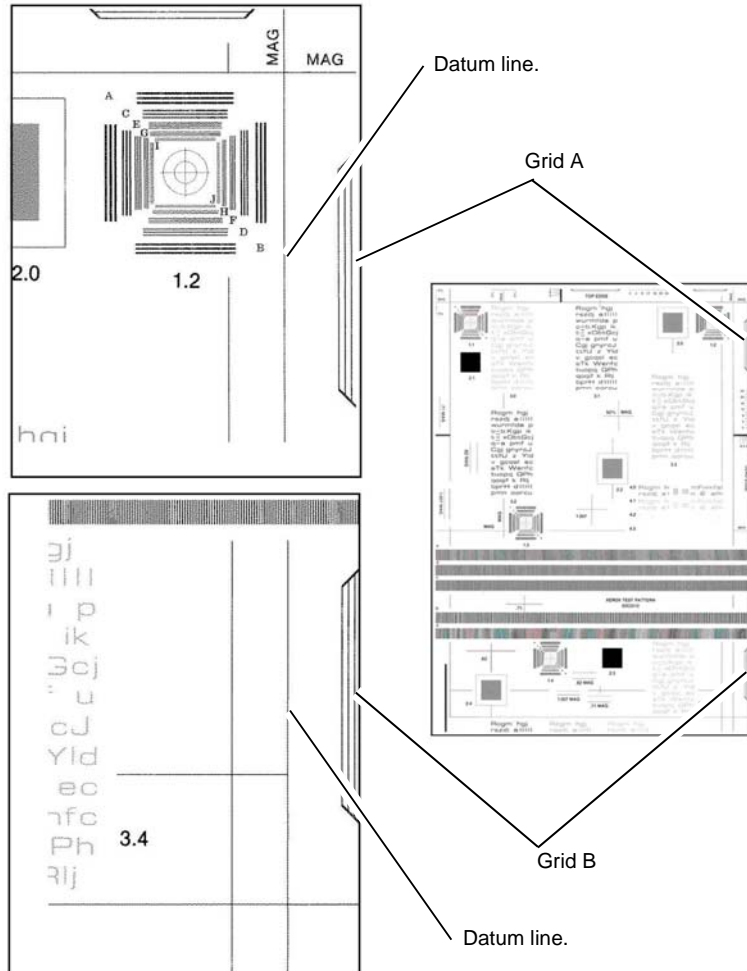
White Spots

White spots are areas visible on a half tone or solid area where the toner has failed to be deposited. The specification is for the total image area. To assess for white spots use the [dC612](#) internal test pattern 2 (ITP 3 25% halftone (106dpi 45deg).

- Spots of 1mm (0.04 inch) and larger - none allowed.
- Spots 0.5mm to 1mm (0.02 to 0.04 inch) - no more than 1 spot per A4 (8.5 x 11 inch) page.
- Spots 0.25mm to 0.5mm (0.01 to 0.02 inch) - no more than 4 spots per A4 (8.5 x 11 inch) page.
- Spots 0.125mm to 0.25mm (0.005 to 0.01 inch) - no more than 20 spots per A4 (8.5 x 11 inch) page.

Corrective Action

Go to the [IQ2](#) IOT IQ Defect RAP and perform the [Deletions](#) procedure.



X-1-1240-A

Figure 3 Copy and scan skew measurement

Paper Wrinkle

Paper wrinkles which result in the loss of information are unacceptable at any level. In any mode, copies/prints containing wrinkles or creases of 84mm (3.3 inch) or less in length which do not result in the loss of information may occur less frequently than 1 in 10 consecutive copies/prints in that mode. This is applicable to all base line papers; to simplex prints, provided the paper is stored inside the printer and that the printer is operated within the environmental specification.

Corrective Action

Perform the checks that follow:

- That the paper stock conforms to the specification. Refer to [GP 20](#) Paper and Media Size Specifications. Inform the customer if the paper is outside of the specifications.
- The customer's paper storage conditions. Paper must be stored in unopened packs in cool dry conditions. Inform the customer if the storage conditions are not good.
- The environmental conditions. Refer to [GP 23](#) Environmental Data. Inform the customer if the environmental conditions are outside of the specifications.
- For damaged rollers in the paper path.
 - Wrinkles occurring before image transfer can be flattened by the fuser, resulting in a wrinkled image even though the paper is flat. This type of wrinkle shows up well on a print of [dC612](#) internal test pattern 3 (ITP 5 50% halftone (106dpi 45deg)).
 - Wrinkles occurring after transfer tend to be creased into the paper and can be caused in the fuser.

Hole Punch Performance

The hole punch unit makes a set of holes near the trail edge of single copies or prints. The dimension between the holes are set by the hole punch. The position of the holes from the trail edge is controlled by the software that uses timing information from the punch sensor. The specification for the hole positions in the top to bottom direction is +/-2 mm, with A4 / 80gsm (8.5x11 inch 75gsm) simplex, from a single tray in a nominal environment. For all other paper sizes, weights, trays and environments, the specification is +/-3 mm.

IQS 7 Registration

Documents

Test patterns: 82E2010 (A4), 82E2020 (8.5 X 11).

Print Registration Specifications

Refer to [Table 1](#).

Table 1 Registration measurement

Parameter	Tolerance
Lead edge registration error on a simplex sheet	+/- 1.6 mm (0.063 inch)
Lead edge registration error on a duplex sheet	+/- 2 mm (0.079 inch)
Top edge registration error on a simplex sheet	+/- 2.1 mm (0.082 inch)
Top edge registration error on a duplex sheet	+/- 2.1 mm (0.082 inch)

Registration measurement

Enter [dC612](#). Select the relevant internal test pattern:

- Number 11 (ITP 19 Field test pattern (letter)).
- Number 12 (ITP 19 Field test pattern (A4)).
- Number 13 (ITP 19 Field test pattern (A3)).
- Number 14 (ITP 19 Field test pattern (11x17)).

Use the measurement scales at each end of the top edge to measure the displacement of the top of the image from the paper top edge.

Use the measurement scales at each end of the lead edge to measure the displacement of the side of the image from the paper lead edge.

NOTE: If a there is a difference between any pair of measurements, refer to [IQS 5 Skew](#).

Corrective Action

Perform the [dC604](#) Registration Setup.

Copy Registration Specifications

Refer to [Table 2](#).

Table 2 Registration measurement

Parameter	Tolerance
Lead edge registration error on a simplex sheet	+/- 1.6 mm (0.063 inch)
Lead edge registration error on a duplex sheet	+/- 2 mm (0.079 inch)
Top edge registration error on a simplex sheet	+/- 2.1 mm (0.082 inch)
Top edge registration error on a duplex sheet	+/- 2.1 mm (0.082 inch)

Registration measurement

Make a copy of test pattern 82E2010 (A4) or 82E2020 (8.5 X 11).

Use the grids A and B on the copy, **Figure 1**, to measure the displacement of the lead edge compared to the test pattern. Use the grid C, **Figure 1**, to measure the top edge displacement. The displacement measured at A and B should be equal.

NOTE: Grid A and grid B of test patterns 82E2000, 82E2010, 82E2020 are small areas of parallel lines 1mm apart. These can be used to directly measure the registration displacement.

NOTE: If a there is a difference between measurements at A and B, refer to **IQS 5 Skew**.

Corrective Action

Perform the **dC604** Registration Setup.

Scan Registration Specifications

Refer to **Table 3**.

Table 3 Registration measurement

Parameter	Tolerance
Left edge registration error - platen	+/- 1.6 mm (0.063 inch)
Top edge registration error - platen	+/- 2.1 mm (0.082 inch)
Left edge registration error - CVT (side 1)	+/- 2.3 mm (0.091 inch)
Top edge registration error - CVT (side 1)	+/- 3.0 mm (0.118 inch)
Left edge registration error - SPDH (side 2)	+/- 2.3 mm (0.091 inch)
Top edge registration error - SPDH (side 2)	+/- 3.0 mm (0.118 inch)

Registration measurement

Make a scan to USB of test pattern 82E2010 (A4) or 82E2020 (8.5 X 11).

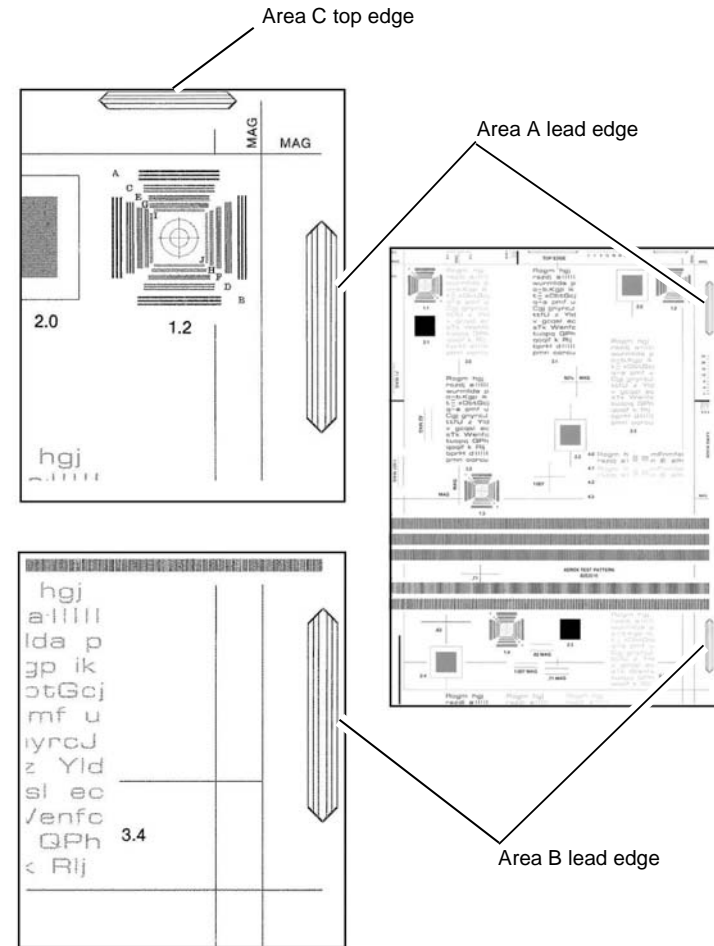
Use the grids A and B on the soft copy viewed on a computer screen, **Figure 1**, to measure the displacement of the left edge compared to the test pattern. Use the grid C, **Figure 1**, to measure the top edge displacement. The displacement measured at A and B should be equal.

NOTE: Grid A and grid B of test patterns 82E2000, 82E2010, 82E2020 are small areas of parallel lines 1mm apart. These can be used to directly measure the registration displacement.

NOTE: If a there is a difference between measurements at A and B, refer to **IQS 5 Skew**.

Corrective Action

Perform the **dC604** Registration Setup.



X-1-1241-A

Figure 1 Registration measurement

IQS 8 Magnification

NOTE: There are no cross process direction adjustments.

Documents

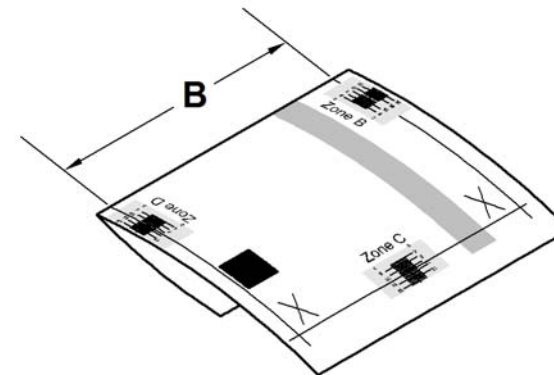
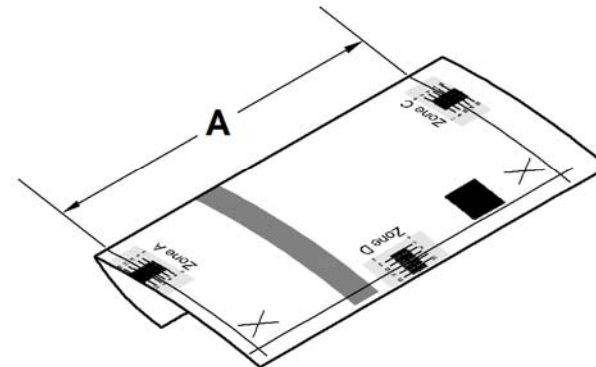
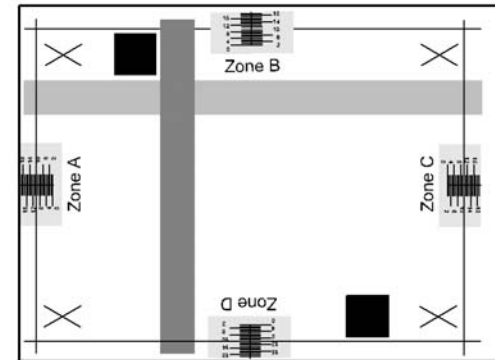
Use the internal test pattern generated in dC604 Registration Setup.

Specifications

Refer to [Table 1](#).

Table 1 Magnification

Parameter	Nominal	Minimum	Maximum	Dimension A	Dimension B
In process direction from the platen. A4 80gsm (letter 20lb) papers.	100%	99.3%	100.7%	260 +/- 0.78mm (10.24 +/- 0.03 inch)	190 +/- 0.57mm (7.48 +/- 0.02 inch)
Cross process direction from the platen. A4 80gsm (letter 20lb) papers.	100%	99.3%	100.7%	260 +/- 0.78mm (10.24 +/- 0.03 inch)	190 +/- 0.57mm (7.48 +/- 0.02 inch)
From CVT or SPDH. A4 80gsm (letter 20lb) papers. A4 80gsm (letter 20lb) papers.	100%	99.5%	101%	258.7 to 262.6mm (10.19 to 10.34 inch)	189.05 to 191.9mm (7.44 to 7.56 inch)
In process and cross process direction print. A4 80gsm (letter 20lb) papers.	100%	99.6%	100.4%	260 +/- 1.04mm (10.24 +/- 0.04 inch)	190 +/- 0.76mm (7.48 +/- 0.03 inch)
In process and cross process direction print. For all other papers.	100%	99.5%	100.5%	260 +/- 1.3mm (10.24 +/- 0.05 inch)	190 +/- 0.95mm (7.48 +/- 0.04 inch)



Magnification measurement

Make copies of the registration test pattern from the document glass and through the SPDH. Fold the printed images across Zone A to Zone C and from Zone B to Zone D. Lay the folded printed images over the unfolded test pattern. Compare the dimensions, [Figure 1](#).

Corrective action

Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

X-1-1242-A

Figure 1 Magnification check

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REP 1.1 LVPS Module Removal

Parts List on [PL 1.10](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



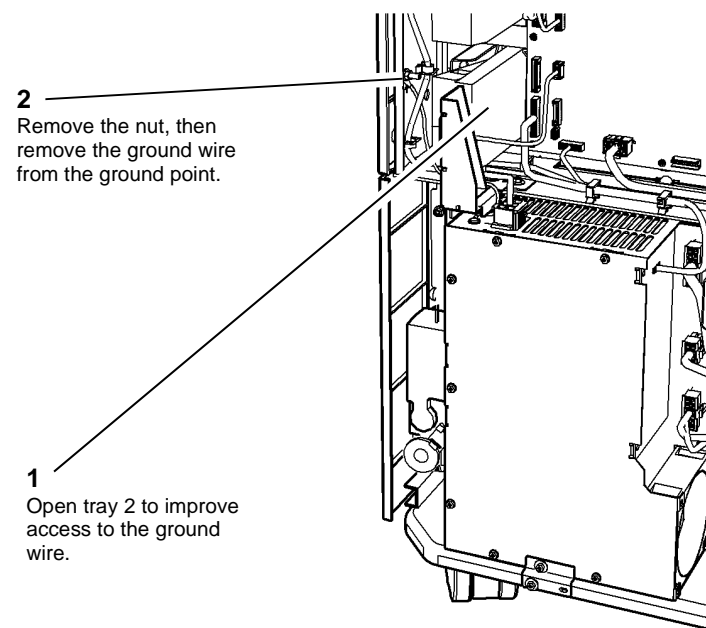
Figure 1 ESD Symbol



CAUTION

Observe ESD procedures during this procedure.

1. Switch off the machine, [GP 14](#). Disconnect the power cord.
2. Disconnect the power cord to the output device if fitted.
3. Remove the rear cover, [REP 28.2](#).
4. Remove the lower rear cover, [PL 70.26 Item 1](#).
5. Disconnect the ground wire from the main frame ground point, [Figure 2](#).



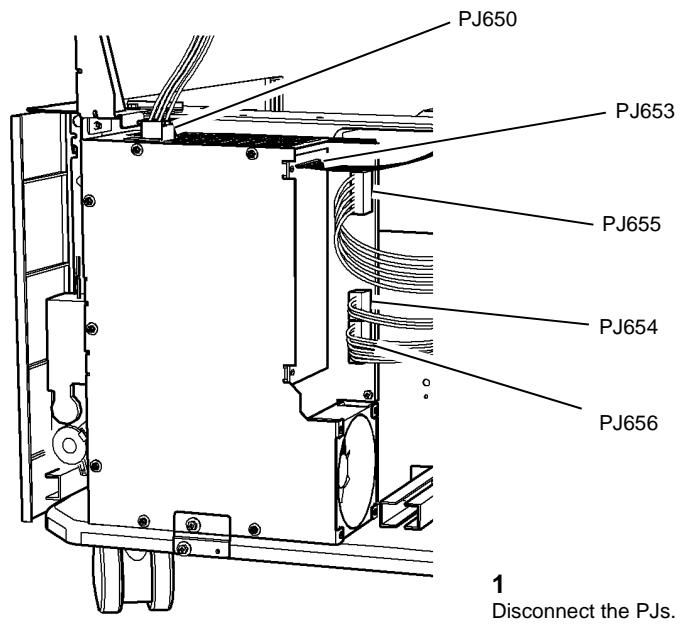
2
Remove the nut, then remove the ground wire from the ground point.

1
Open tray 2 to improve access to the ground wire.

X-1-1040-A

Figure 2 Main frame ground point

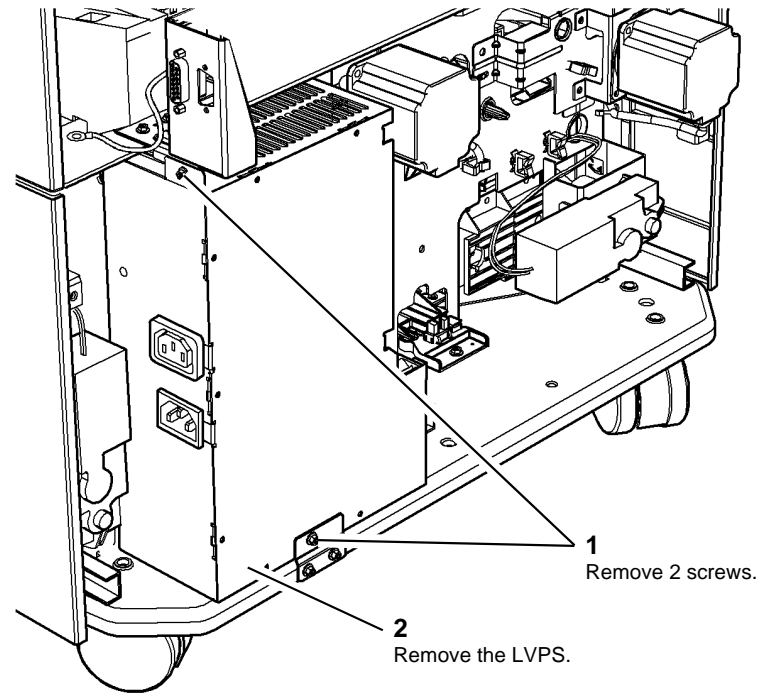
6. Disconnect the wiring to the LVPS, [Figure 3](#).



X-1-1041-A

Figure 3 Wiring disconnection

7. Remove the LVPS module, [Figure 4](#).



X-1-1042-A

Figure 4 LVPS module removal

Replacement

1. The replacement is the reverse of the removal procedure.
2. Ensure that the nut on the main frame ground point is tightened to secure the ground terminal. Refer to [Figure 2](#).
3. Using a digital multimeter set to a resistance range, verify that there is continuity between the ground pin on PJ651 and the frame ground point of less than 10 ohms, [Figure 5](#).

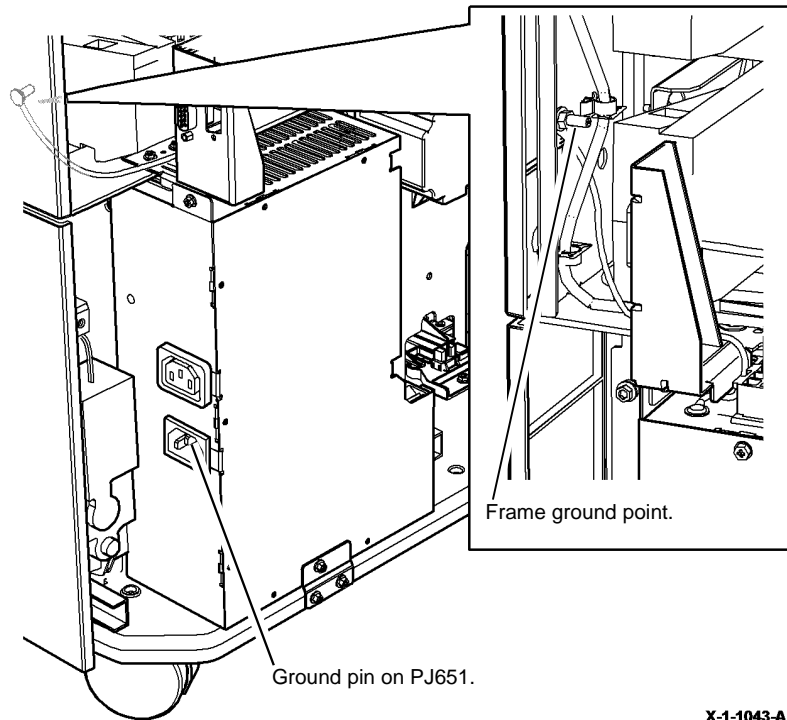


Figure 5 Ground check

REP 1.2 Wiring Harness

Purpose



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Do not attempt any repairs to the power cord or safety ground harness / conductor.

NOTE: Safety ground connections use green/yellow wires (green insulation with a yellow stripe or band). The scanner module safety ground is a flat braid covered with a black sleeve.

The steps that follow identify the relevant procedures for repairing the machine connectors.

1. The harness assemblies that follow are spared, install new components:
 - Extension cable, [PL 3.22 Item 21](#).
 - LED print head module to SBC PWB ribbon cable, part of the LED print head module, [PL 60.35 Item 1](#).
 - Main power cord, [PL 1.15 Item 1](#).
 - Scan carriage power ribbon cable, [PL 60.20 Item 10](#).
 - Scan carriage data ribbon cable [PL 60.20 Item 11](#).
 - Side 2 scan assembly data ribbon cable, [PL 5.10 Item 16](#).
 - Side 2 scan assembly power ribbon cable, [PL 5.10 Item 6](#).
2. The connectors that follow can be repaired by removing the faulty terminals then installing new terminals:
 - Molex SL connectors, [REP 1.3](#).
 - Male Hirose DF1B connectors, [REP 1.4](#).
 - AMP EI connectors, [REP 1.5](#).
 - Hirose DF11 connectors, [REP 1.6](#).
 - AMP CT connectors, [REP 1.7](#).
 - Molex mini-fit junior connectors, [REP 1.11](#).

REP 1.3 Molex SL Connectors

Removal



Switch off the electricity to the machine, GP 14. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: Molex connectors have small black housings in single or double rows, formed with miniature square section pins and sockets.

1. If the damaged connector is in the centre of a double row housing beneath the latching clip, the latching prong will not be accessible to release the connector from the housing. Therefore it will be necessary to disassemble the housing as shown in Figure 1.

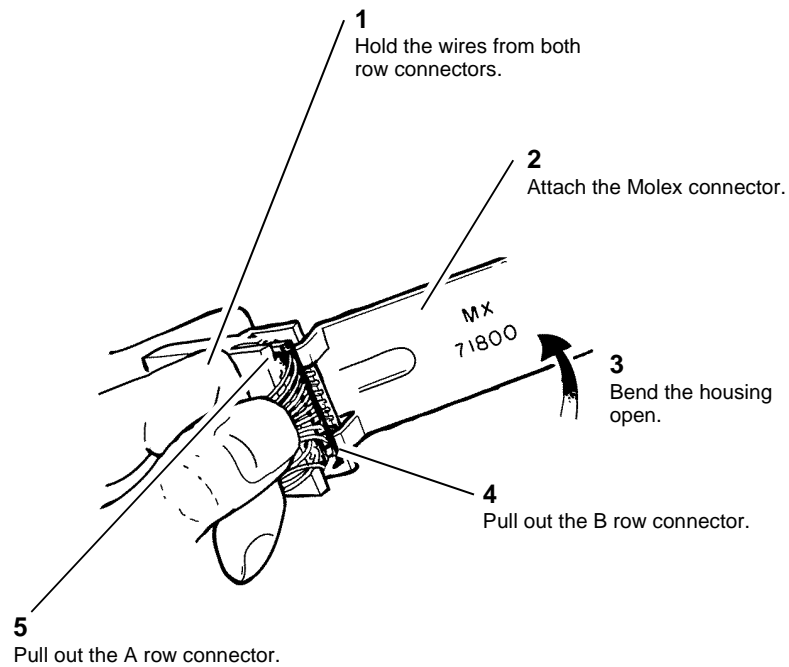
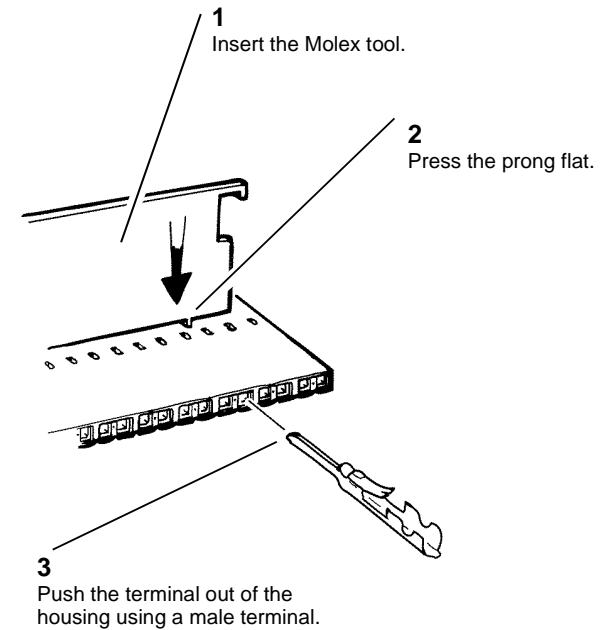


Figure 1 Disassembling the connector

X-1-1381-A

2. Remove the terminal from the connector housing using the Molex extractor tool, Figure 2.



X-1-1382-A

Figure 2 Removing the terminal

3. Cut off the damaged terminal, then strip 3mm of insulation from the end of the wire.

Replacement

1. Select the correct replacement terminal, and identify the appropriate crimp positions for the terminal.
2. Insert a male or female terminal into the appropriate position of the crimp tool, then close the tool just enough to hold the terminal, [Figure 3](#).

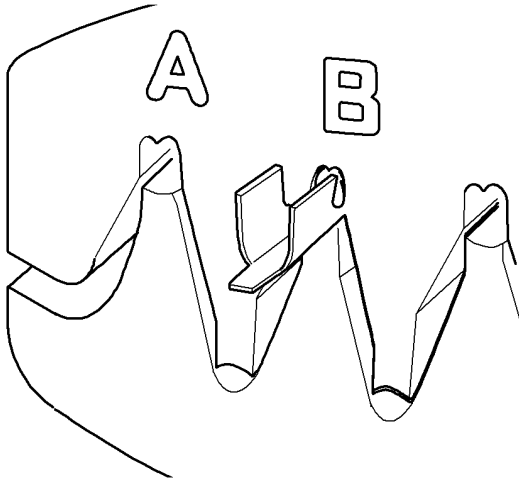


Figure 3 Crimping the terminal

X-1-1383-A

3. Insert the wire fully into the terminal so that the stripped portion of the wire is within the inner grip of the terminal. Close the crimp tool fully to make the crimp.

4. Insert the crimped terminal into the appropriate position of the crimp tool and close the crimp tool, to fasten the insulation of the wire in the outer grip of the terminal, [Figure 4](#).

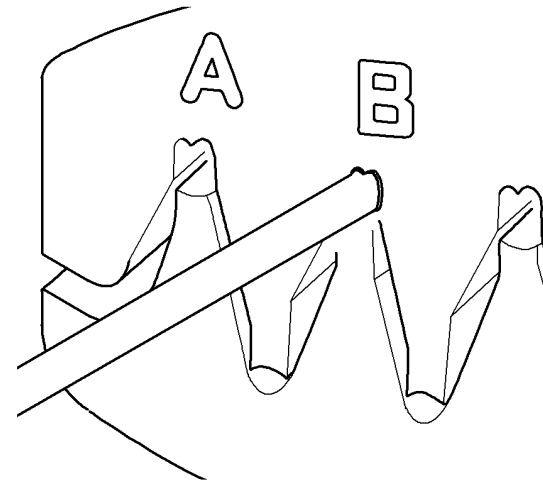


Figure 4 Crimping the insulation grip

X-1-1384-A

5. Check that the crimp is correctly made, [Figure 5](#).

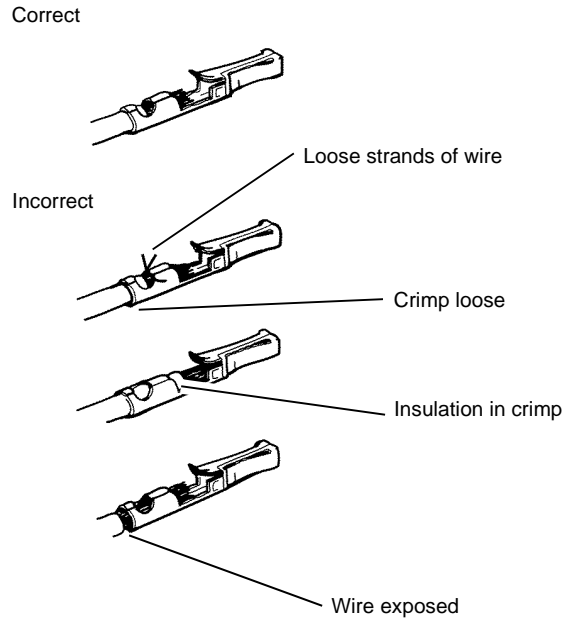


Figure 5 Inspecting the finished crimp

X-1-1385-A

6. Insert the replacement terminal into the connector housing.
7. If the repair was carried out on a double row connector that was disassembled, push both connectors into the housing taking care that the "A" connector is fitted on the fastener side.

REP 1.4 Male Hirose DF1B Connectors Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the damaged terminal from the housing, [Figure 1](#).

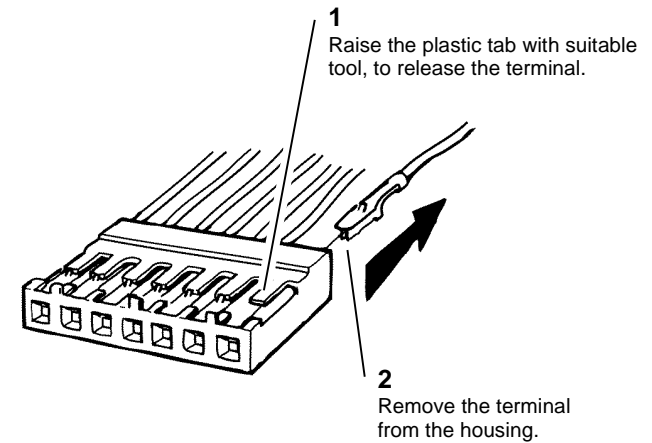


Figure 1 Remove the terminal

X-1-1386-A

2. Cut off the damaged terminal, then strip 3mm of insulation from the end of the wire.

Replacement

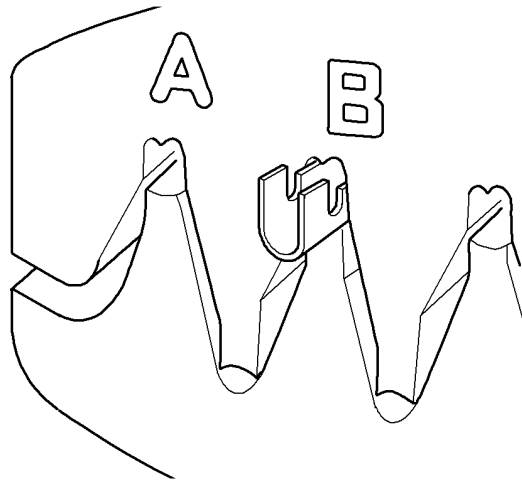


There are different terminals for large gauge and small gauge wire. Ensure that the correct replacement terminal is used.

1. Select the correct replacement terminal and identify the appropriate crimp positions for the terminal.

NOTE: These connectors can be repaired using either crimp terminals or pre-crimped terminals with flying lead and butt connector, as required.

2. Insert the terminal into the appropriate position of the crimp tool and close the tool just enough to hold the terminal, [Figure 2](#).

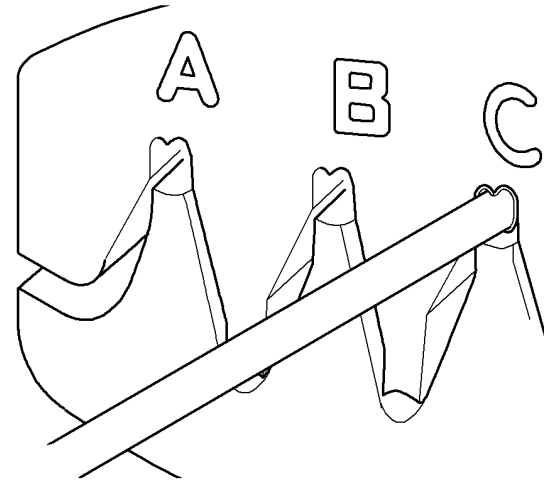


X-1-1387-A

Figure 2 Crimping the terminal

3. Insert the wire fully into the terminal so that the stripped portion of the wire is within the longer grip of the terminal and the insulation of the wire is within the cable grip of the terminal. Close the crimp tool fully to make the crimp; check that the wire is firmly crimped in the terminal.

4. Insert the crimped terminal into the appropriate position of the crimp tool, then close the crimp tool to firmly fasten the insulation of the wire in the cable grip of the terminal, [Figure 3](#).

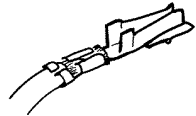


X-1-1388-A

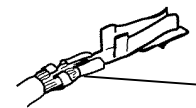
Figure 3 Crimping the insulation grip

5. Check that the crimp is correctly made, [Figure 4](#).

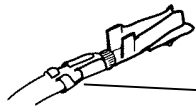
Correct



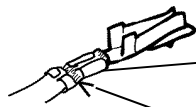
Incorrect



Wire exposed



Insulation in crimp



Crimp loose



Loose strands of wire

Figure 4 Inspecting the finished crimp

6. Insert the replacement terminal into the connector housing.

X-1-1389-A

REP 1.5 AMP EI Connectors

Removal

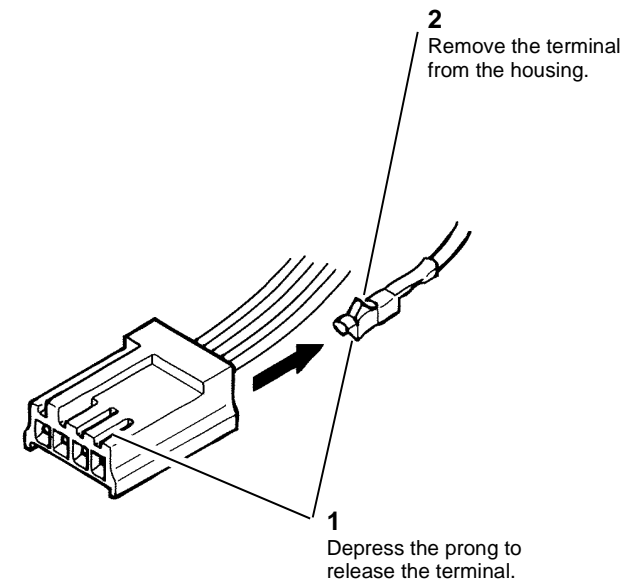


WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: The male housings contain socket terminals, and the female housings contain pin terminals.

1. Use the extractor tool, to release the terminal from the housing. Refer to [Figure 1](#) to identify the male housing and terminal type. Refer to [Figure 2](#) to identify the female housing and the terminal type.



X-1-1390-A

Figure 1 Terminal removal; male housing

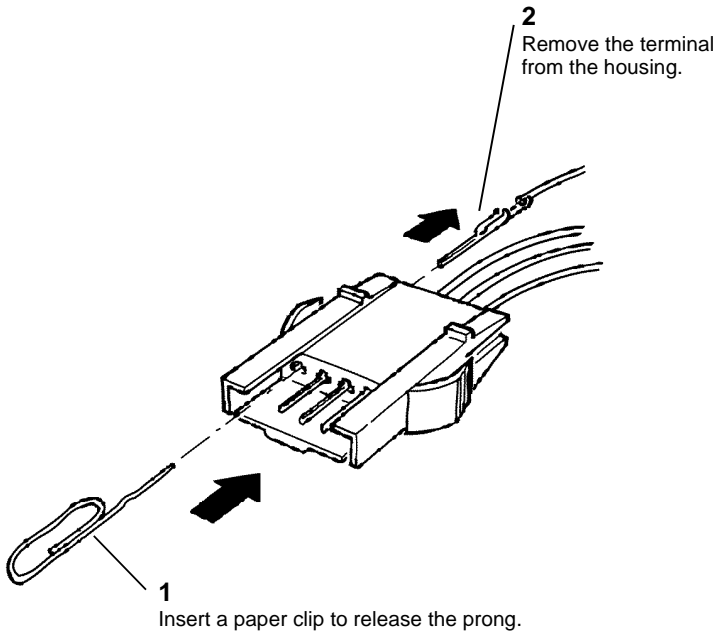


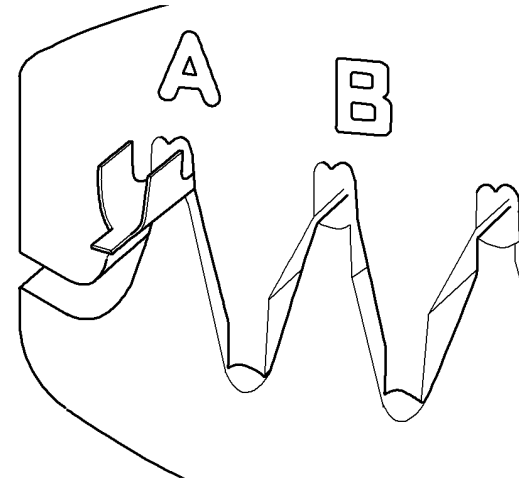
Figure 2 Terminal removal; female housing

X-1-1391-A

2. Cut off the damaged terminal, then strip 3mm of insulation from the end of the wire.

Replacement

1. Select the correct replacement terminal and identify the appropriate crimp positions for the terminal.
2. Insert the terminal into the appropriate position of the crimp tool and close the tool enough to hold the terminal, [Figure 3](#).



X-1-1392-A

Figure 3 Crimping the terminal

3. Insert the wire completely into the terminal, so that the stripped portion of the wire is in the longer grip of the terminal. The insulation of the wire is within the cable grip of the terminal. Close the crimp tool completely to make the crimp. Check that the wire is crimped firmly in the terminal.

4. Insert the crimped terminal into the appropriate position of the crimp tool and close the crimp tool to firmly fasten the insulation of the wire in the cable grip of the terminal, [Figure 4](#).

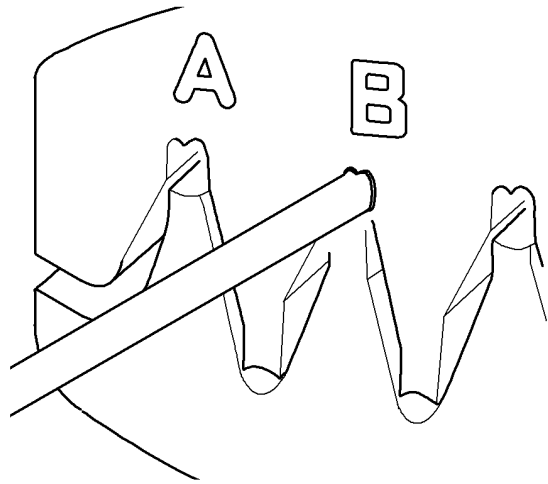
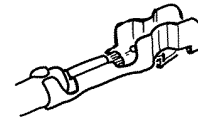


Figure 4 Crimping the insulated grip

X-1-1393-A

5. Check that the crimp is correctly made, [Figure 5](#).

Correct



Incorrect

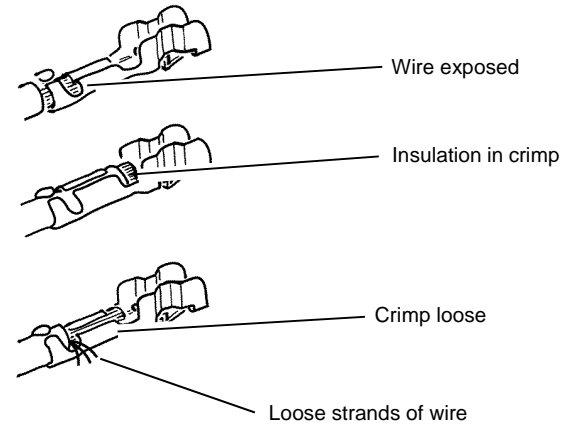


Figure 5 Inspect the finished crimp

X-1-1394-A

6. Insert the replacement terminal into the connector housing.

REP 1.6 Hirose DF11 Connectors

Removal

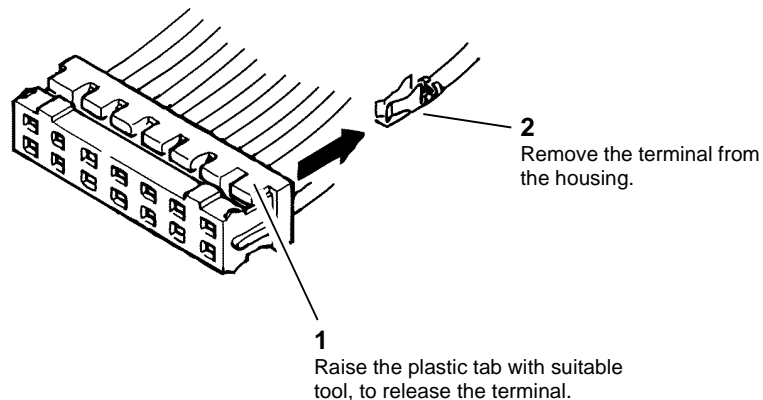


WARNING

Switch off the electricity to the machine, **GP 14**. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: The male housing contains female terminals that cannot be crimped in the field; if a terminal is damaged, install a new terminal with flying lead.

1. Remove the damaged terminal from the connector housing, **Figure 1**.



X-1-1395-A

Figure 1 Terminal removed

2. Cut the damaged terminal off the wire.

Replacement

1. Insert the replacement terminal with flying lead into the connector housing.
2. Use a butt connector to connect the flying lead to the original wire.

REP 1.7 AMP CT Connectors

Removal



WARNING

Switch off the electricity to the machine, **GP 14**. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

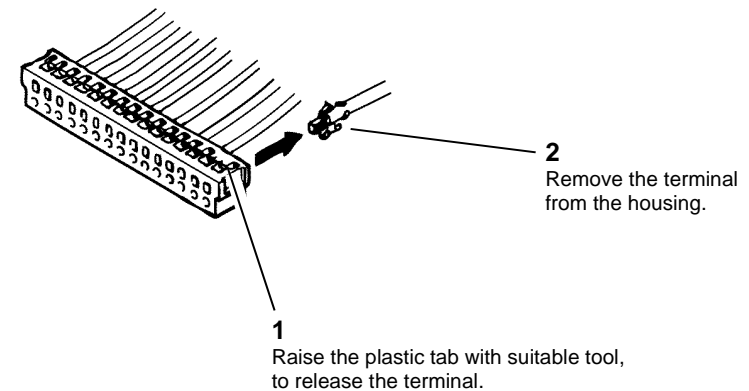


CAUTION

Amp CT connectors use in-line adaptors to connect housings together. Ensure that the correct adaptor is used for each in-line connection. Do not attempt to disassemble or repair the in-line adaptors.

NOTE: There are two types of CT connector: insulation displacement connector (IDC) or crimp terminal. Repairing crimp terminal CT connectors is performed by installing individual replacement terminals with flying leads, connected to the existing wiring with connector splicing blocks (removal steps 2 and 3). Repairing IDC connectors is performed by installing a complete replacement housing with wires already fitted, connected to the existing wiring with connector splicing blocks (removal steps 4 and 5). The replacement procedure is only applicable to crimp terminal connectors.

1. Identify the terminal type. Go to step 2 for a housing containing crimp terminals, or go to step 4 for a housing containing insulation displacement (IDC) terminals.
2. Remove the damaged crimp terminal from the connector housing, **Figure 1**.



X-1-1396-A

Figure 1 Terminal removal

3. Cut the damaged crimp terminal off of the wire.

4. IDC housings are repaired by installing a complete replacement housing with wires already fitted. These are connected with connector splicing blocks to the existing wiring. Select the correct replacement connector.
5. Cut one wire from the faulty connector and then reconnect the wire to the appropriate flying lead on the replacement connector. Repeat this process for each wire in turn, until the faulty connector has been fully disconnected and the replacement connector installed in its place.

Replacement

1. Insert the replacement crimp terminal with flying lead into the connector housing.
2. Use a connector splicing block to connect the flying lead to the original wire.

REP 1.8 Front Door Interlock Removal

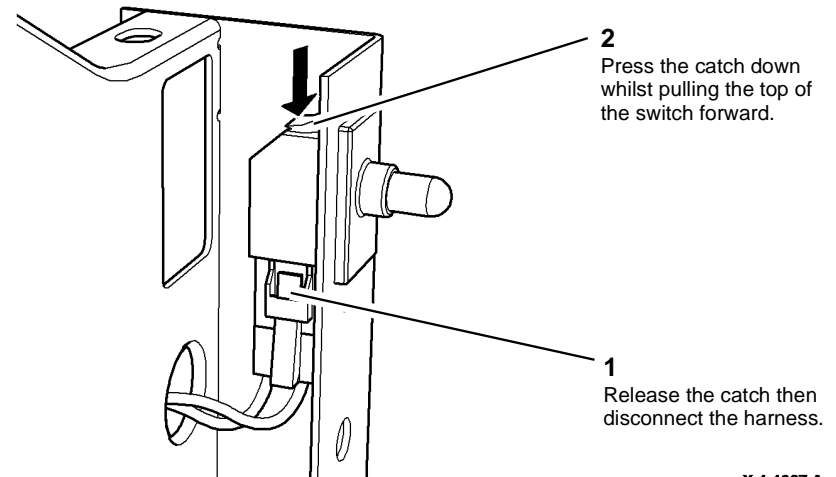
Parts List on [PL 1.12](#)

Removal



Switch off the electricity to the machine, GP 14. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the latch, [PL 60.35 Item 2](#) (1 screw).
2. Remove the inner front cover, [PL 28.10 Item 10](#) (3 screws).
3. Release the front door interlock switch, [Figure 1](#).



X-1-1067-A

Figure 1 Switch release

- Remove the front door interlock switch, [Figure 2](#).

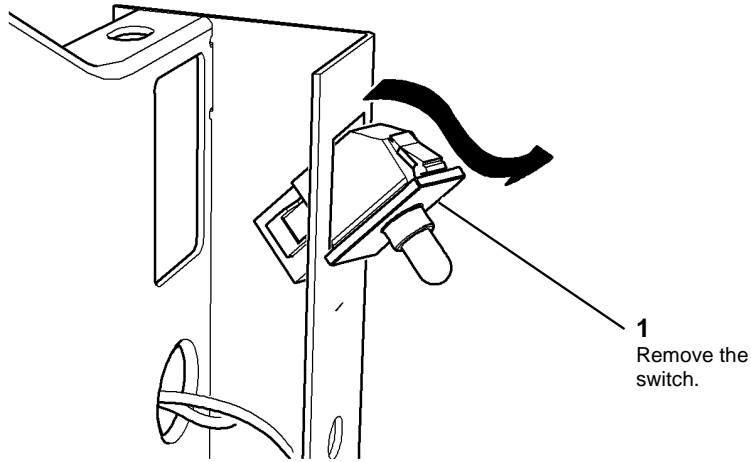


Figure 2 Switch removal

Replacement

The replacement is the reverse of the removal procedure.

REP 1.9 Left Door Interlock Removal

Parts List on [PL 1.12](#)

Removal

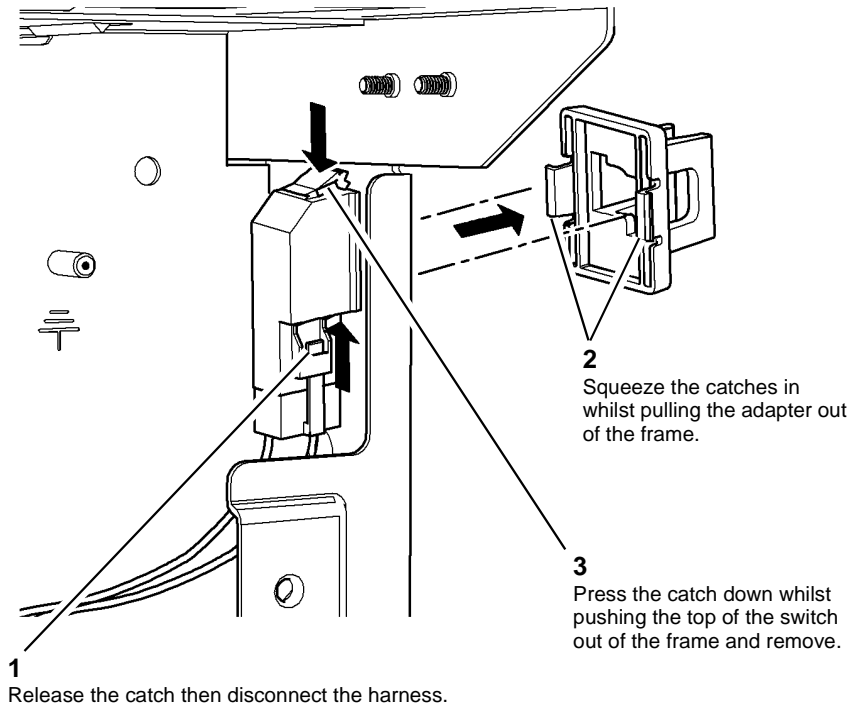


Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

- Remove the rear cover, [REP 28.2](#).
- Open the left door.
- Remove the left door interlock switch, [Figure 1](#).

NOTE: It may be necessary to cut some tie-wraps on the switch harness to provide enough slack to remove the switch.

X-1-1068-A



X-1-1248-A

Figure 1 Switch removal

Replacement

- The replacement is the reverse of the removal procedure.
- Install new tie-wraps to replace any removed during this procedure.

REP 1.10 HVPS Removal

Parts List on [PL 1.10](#)

Removal

NOTE: A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



Figure 1 ESD Symbol



CAUTION

Observe ESD procedures during this procedure.

1. Switch off the machine, [GP 14](#). Disconnect the main power cord.
2. Disconnect the power cord and communication harness to the output device, if installed.
3. Remove the rear cover, [REP 28.2](#).

4. Remove the HVPS, [Figure 2](#).

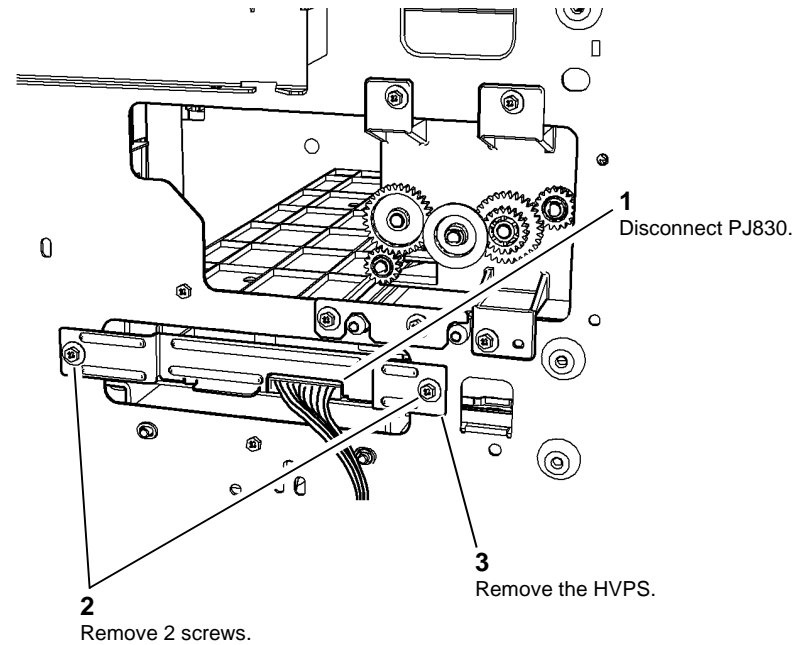
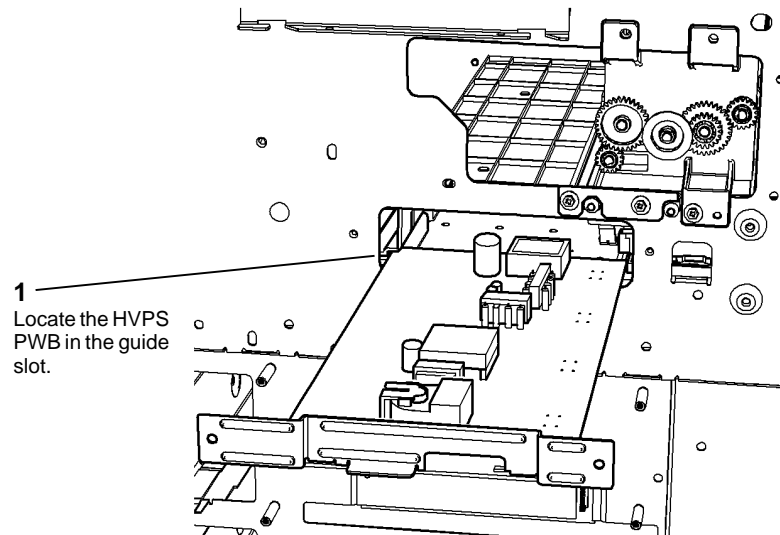


Figure 2 HVPS removal

X-1-1254-A

Replacement

1. The replacement is the reverse of the removal procedure.
2. Align the left side of the HVPS PWB into the guide slot then push the HVPS into the machine, [Figure 3](#).



- 2
Slide in the HVPS.

Figure 3 HVPS replacement

X-1-1255-A

REP 1.11 Molex Mini-Fit Junior Connectors

Removal

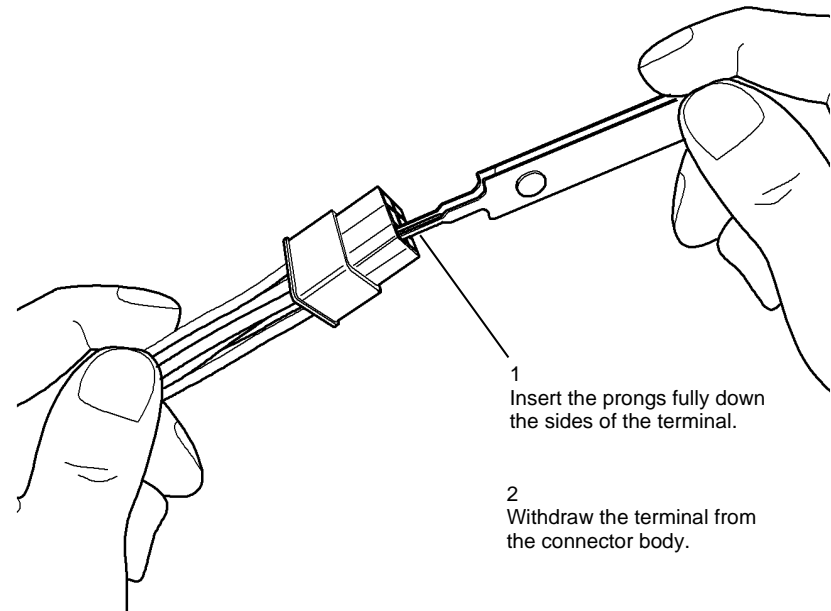

WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the terminal from the housing, using the Molex, Mini-Fit extractor tool, [Figure 1](#).



X-1-1397-A

Figure 1 Removing the terminal

2. Cut off the damaged terminal, then strip 4mm of insulation from the end of the wire.

Replacement

1. Select the correct terminal type.

2. Insert the terminal into the appropriate position of the crimp tool and close the tool just enough to hold the terminal, [Figure 2](#).

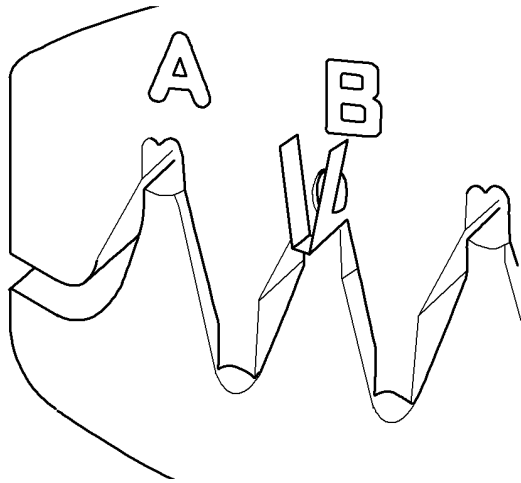


Figure 2 Crimping the terminal

X-1-1398-A

3. Insert the wire fully into the terminal so that the stripped portion is within the inner grip of the terminal. Close the crimp tool of the terminal. Close the crimp tool fully to make the crimp.
4. Insert the crimped terminal into the appropriate position of the crimp tool and close the crimp tool to fasten the wire insulation in the outer grip of the terminal, [Figure 3](#).

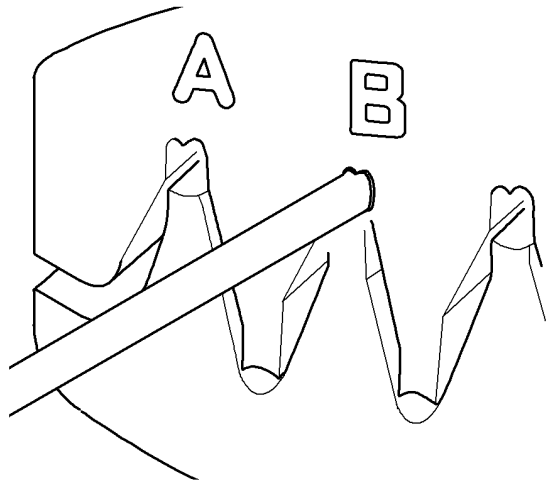
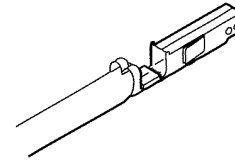


Figure 3 Crimping the insulation grip

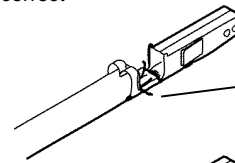
X-1-1399-A

5. Check that the crimp is correctly made, [Figure 4](#).

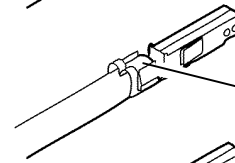
Correct



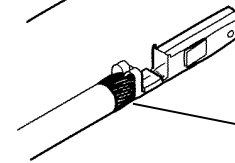
Incorrect



Loose strands of wire



Insulation in crimp



Wire exposed

X-1-1400-A

Figure 4 Inspecting the finished crimp

6. Insert the replacement terminal into the connector housing.

REP 2.1 UI Module

Parts List on [PL 2.10 Item 1](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol



Ensure that E.S.D. procedures are observed during the removal and installation of the UI module.

1. Remove the scanner front cover, refer to [REP 28.1](#).
2. Disconnect the ribbon cable from the UI interface PWB, [PL 2.10 Item 15](#).
3. Remove 5 screws to remove the UI module clamp and hinge assembly complete with the UI module and the ribbon cable.

Replacement

Reinstallation is the reverse of the removal procedure.

REP 2.2 UI interface PWB

Parts List on [PL 2.10 Item 15](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol



Ensure that E.S.D. procedures are observed during the removal and installation of the UI module.

1. Refer to [REP 2.1](#) to gain access to the UI interface PWB, [PL 2.10 Item 15](#).
2. Disconnect 3 connectors, remove 3 screws and remove the UI interface PWB.

Replacement

Reinstallation is the reverse of the removal procedure.

REP 3.1 IOT PWB

Parts List on [PL 1.10](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol



CAUTION

Ensure that E.S.D. procedures are observed during the removal and installation of the IOT PWB.



CAUTION

Take care if a new IOT PWB, scanner PWB or hard disk is to be installed. Ensure that any combination of these components are replaced one at a time and that the machine is switched off then on ([GP 14](#)) between each installation of a PWB or the hard disk. Failure to do so will cause corruption of the machine's NVM configuration data and render the machine inoperable. Refer to [GP 27 Machine Configuration Control and Recovery](#).

1. Remove the rear cover, [REP 28.2](#).
2. Disconnect the PJs from the [IOT PWB](#).
3. Remove the IOT PWB (8 screws).

Replacement

Perform the steps that follow:

NOTE: If the original IOT PWB has been re-installed, do not perform steps 2, 3 and 4.

1. Replacement is the reverse of the removal procedure.

NOTE: PJs 758, 778, 788 and 780 are not connected.

2. If necessary, reload the software, [GP 4](#). The machine will automatically upgrade or downgrade the software when the machine is switched on.

NOTE: After the software reload has been completed, the machine resets and gives a message 'Restoring Configuration Settings'. Do not switch off the machine or intervene during this NVM transformation process.

3. Ensure that the machine serial number in [dC132](#) is correct. If necessary, enter the correct serial number.
4. If necessary, perform an NVM restore, [dC361](#).

REP 3.2 Hard Disk Drive

Parts List on [PL 3.22](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.



Figure 1 ESD Symbol



Ensure that E.S.D. procedures are observed during the removal and installation of the hard disk drive.



Take care if a new IOT PWB, scanner PWB or hard disk is to be installed. Ensure that any combination of these components are replaced one at a time and that the machine is switched off then on ([GP 14](#)) between each installation of a PWB or the hard disk. Failure to do so will cause corruption of the machine's NVM configuration data and render the machine inoperable. Refer to [GP 27 Machine Configuration Control and Recovery](#).

1. Remove the rear cover, [REP 28.2](#).
2. Remove the SBC cover, [PL 3.22 Item 9](#).
3. Disconnect the HDD cable, [PL 3.22 Item 4](#) from the hard disk.
4. Remove the hard disk drive, [PL 3.22 Item 2](#).

Replacement

1. Replacement is the reverse of the removal procedure.
2. Perform an AltBoot, [GP 4](#).
3. Ensure that the machine serial number in [dC132](#) is correct. If necessary, enter the correct serial number.
4. Check the usage counters on the UI, Machine Status / Billing Information.
5. If the counters have reset, refer to [GP 41 Reporting Usage Counter Resets](#).

REP 3.3 Single Board Controller PWB

Parts List on [PL 3.22](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.



Figure 1 ESD Symbol



Ensure that E.S.D. procedures are observed during the removal and installation of the SBC PWB.

1. Remove the rear cover, [REP 28.2](#).
2. Remove the SBC cover, [PL 3.22 Item 9](#).
3. If installed, remove the fax module, [PL 20.05 Item 1](#).

4. Remove the fax module support, [Figure 2](#).

NOTE: If a foreign device interface is installed, carefully pull the FDI ribbon cable away from the fax module support before removing the fax module support.

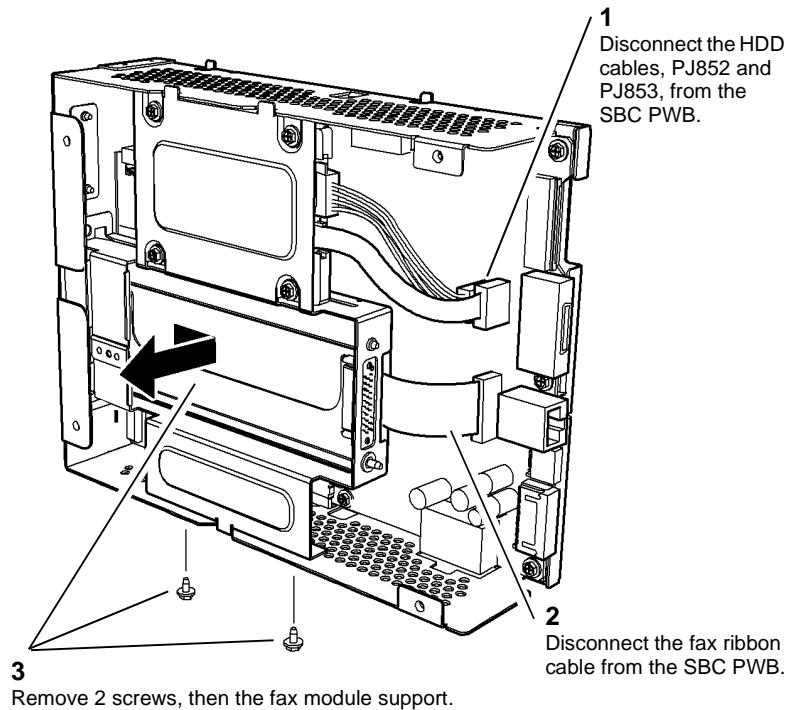


Figure 2 Fax module support removal

5. Remove the components that follow from the SBC PWB:

- SD card, [PL 3.22 Item 6](#).
- SIM card, [PL 3.22 Item 5](#).
- If installed, the foreign interface PWB. Refer to [REP 3.5](#).

NOTE: The FDI ribbon cable should be disconnected from the FDI PWB before the FDI PWB is removed.

- If installed, the wireless network adaptor, [PL 3.22 Item 20](#).

!
CAUTION

Disconnect PJ851 and PJ880 by carefully releasing the clamps. The cable clamps are very fragile and only need to be moved slightly to release the ribbon cables.

6. Disconnect the PJs from the [SBC PWB](#).
7. Remove the single board controller PWB, [PL 3.22 Item 3](#) (8 screws).

Replacement

1. Replacement is the reverse of the removal procedure.
2. Perform an AltBoot, [GP 4](#).
3. Ensure that the machine serial number in [dC132](#) is correct. If necessary, enter the correct serial number.

REP 3.4 SD Card Parts List on [PL 3.22](#) Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol

1. Remove the rear cover, [REP 28.2](#).
2. Remove the SD card, [PL 3.22 Item 6](#) from the SBC PWB.

Replacement

1. Replacement is the reverse of the removal procedure.
2. Reload the software using the AltBoot procedure, [GP 4](#).
3. Ensure that the machine serial number in [dC132](#) is correct. If necessary, enter the correct serial number.
4. Check the usage counters on the UI, Machine Status / Billing Information.
5. If the counters have reset, refer to [GP 41](#) Reporting Usage Counter Resets.

REP 3.5 Foreign Device Interface PWB and Ribbon Cable Parts List on [PL 3.22](#) Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



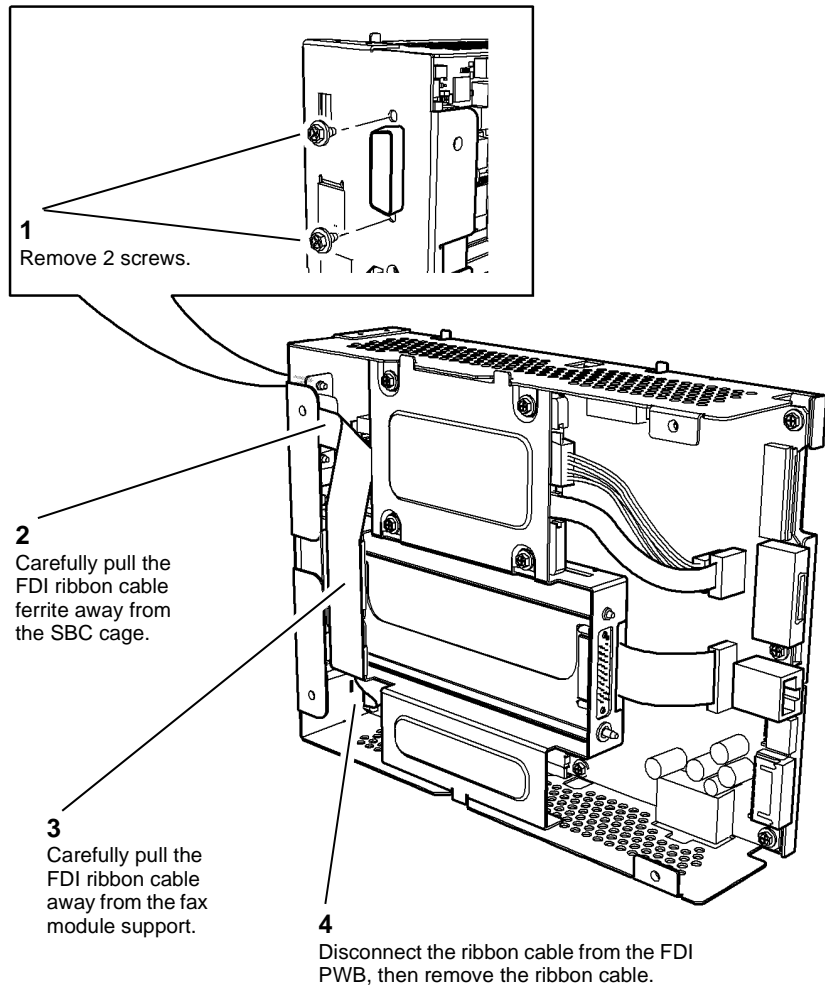
Figure 1 ESD Symbol



Ensure that E.S.D. procedures are observed during the removal and installation of the foreign device interface PWB.

1. Remove the rear cover, [REP 28.2](#).
2. Remove the SBC cover, [PL 3.22 Item 9](#).

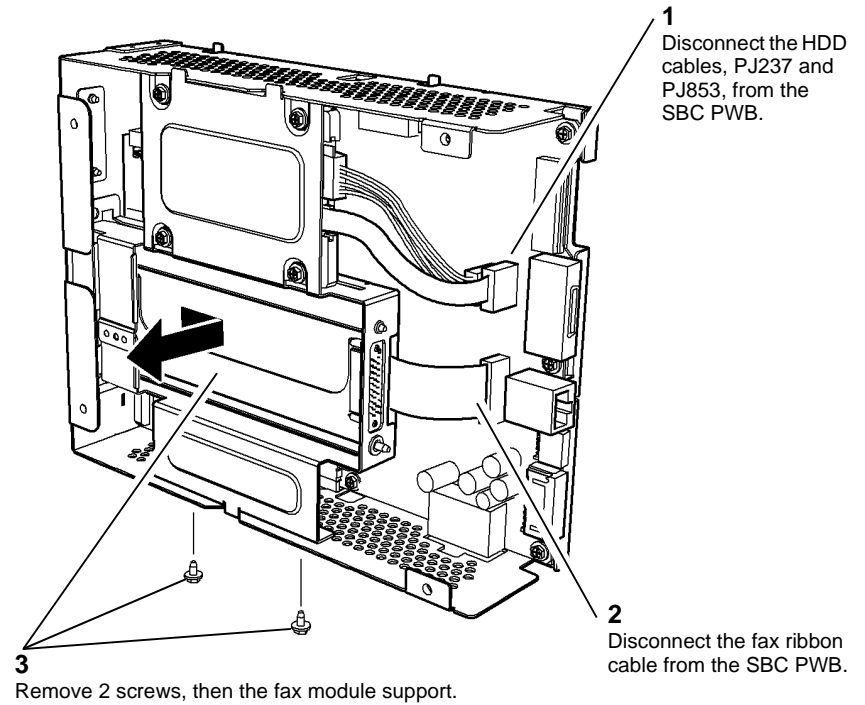
3. Remove the FDI ribbon cable from the SBC cage, [Figure 2](#).



X-1-1225-A

Figure 2 FDI ribbon cable

4. Remove the fax module support, [Figure 3](#).



X-1-1226-A

Figure 3 Fax module support removal

5. Remove the FDI PWB, [PL 3.22 Item 18](#).

Replacement

1. Replacement is the reverse of the removal procedure.
2. Reload the software, [GP 4](#).
3. Ensure that the machine serial number in [dC132](#) is correct. If necessary, enter the correct serial number.

REP 3.6 Single Board Controller Module

Parts List on [PL 3.22](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



Figure 1 ESD Symbol



CAUTION

Ensure that E.S.D. procedures are observed during the removal and installation of the SBC module.

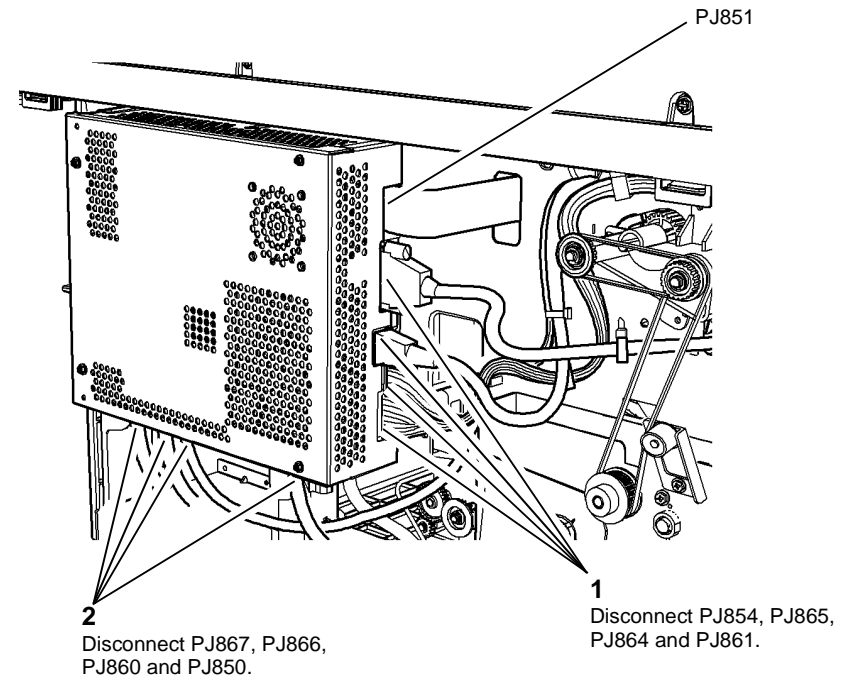
1. Remove the rear cover, [REP 28.2](#).
2. Remove the SIM card, [PL 3.22 Item 5](#) from the SBC PWB.



CAUTION

Do not disconnect the ribbon cable, PJ851, at this time.

3. Prepare to remove the SBC module, [Figure 2](#).



X-1-1291-A

Figure 2 Preparation

4. Remove the SBC cover, [PL 3.22 Item 9](#).



CAUTION

Disconnect PJ851 by carefully releasing the clamp. The cable clamp is very fragile and only needs to be moved slightly to release the ribbon cable.

5. Disconnect PJ851, [Figure 3](#).

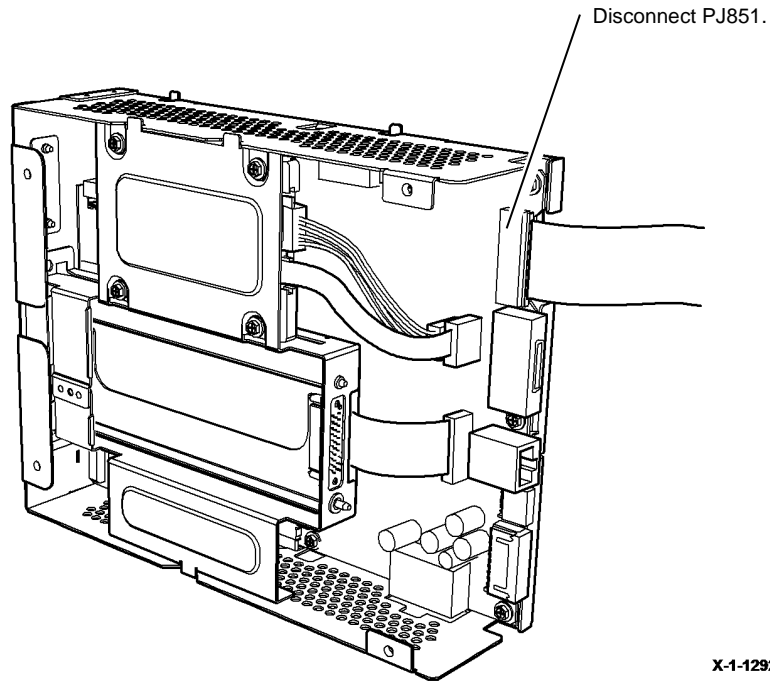


Figure 3 Disconnect PJ851

X-1-1292-A

6. Remove the SBC PWB module, [Figure 4](#).

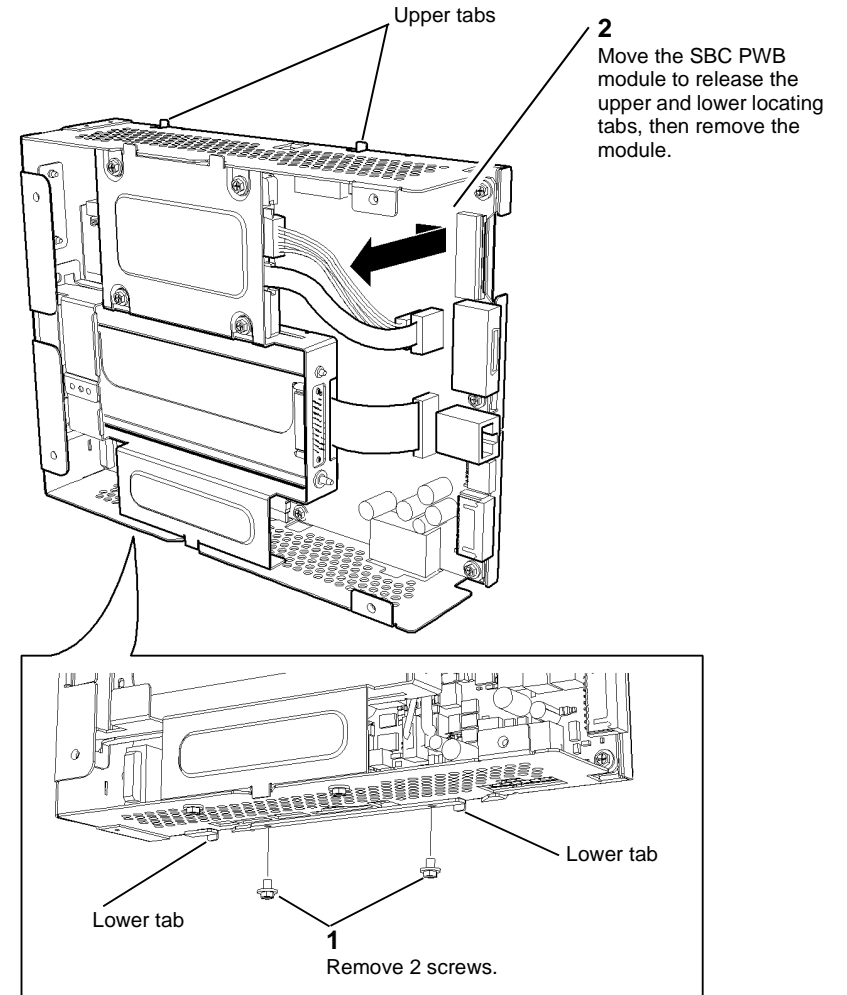
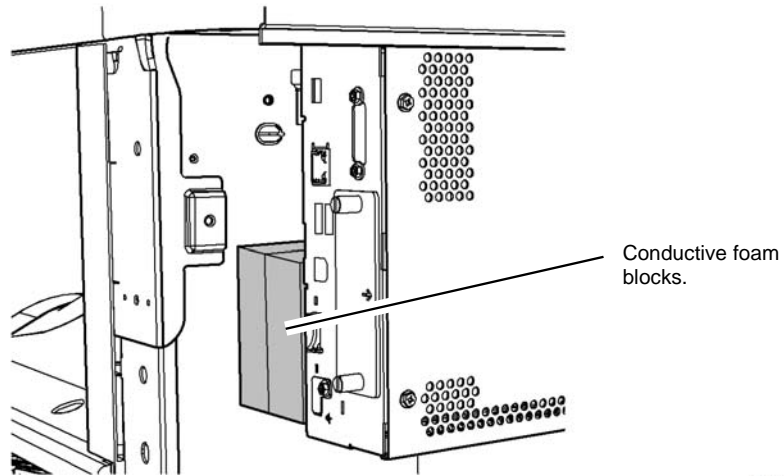


Figure 4 Removal

X-1-1293-A

Replacement

1. On 50Hz machines only, when installing the SBC PWB module, ensure that the conductive foam blocks are correctly located between the machine frame and the SBC PWB module, [Figure 5](#).



X-1-2028-A

Figure 5 Conductive foam blocks

2. Replacement is the reverse of the removal procedure.
3. Perform an AltBoot, [GP 4](#).
4. Ensure that the machine serial number in [dC132](#) is correct. If necessary, enter the correct serial number.
5. Re-install the SIM card.

REP 5.1 Top Cover Assembly

Parts List on [PL 5.20](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the SPDH top cover assembly, [PL 5.20 Item 15](#).
2. Remove 5 screws then remove the SPDH rear cover, [PL 5.10 Item 1](#).
3. Prepare to remove the top cover assembly, [Figure 1](#).

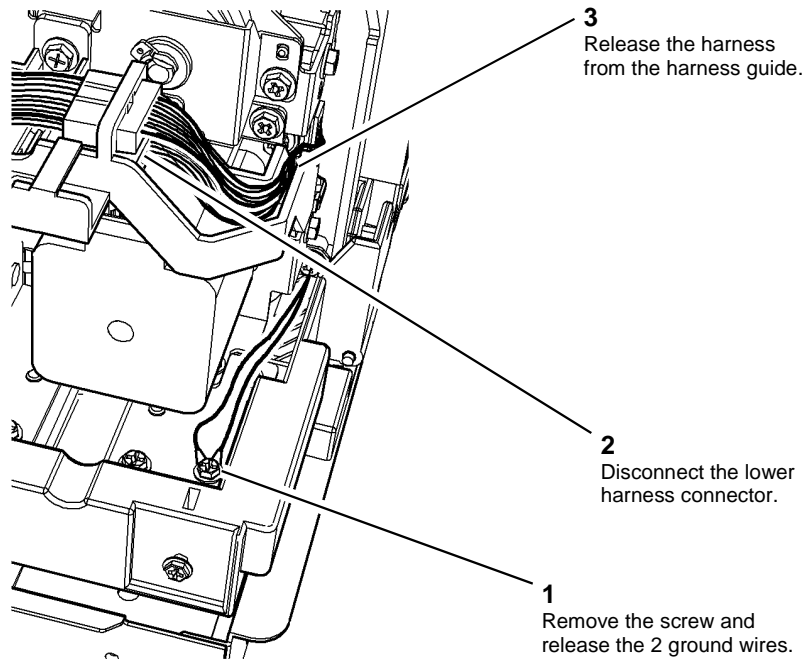


Figure 1 Preparation

X-1-1787-A

4. Release the front hinge, [Figure 2](#).

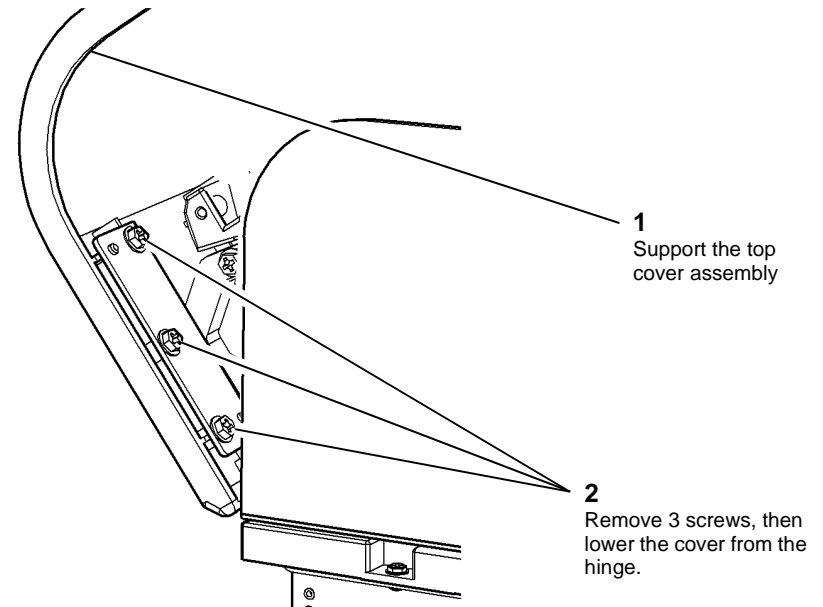
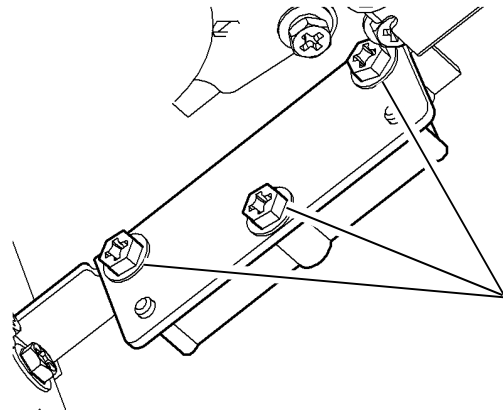


Figure 2 Front hinge removal

X-1-1788-A

- Remove the top cover assembly, [Figure 3](#).



- Remove 3 screws from the rear hinge, then lower the cover from the hinge.

X-1-1789-A

Figure 3 Top cover removal

Replacement

CAUTION

Be careful when self tapping screws are installed into plastic components, refer to [GP 6](#).

CAUTION

When installing the rear cover, ensure that the cover is lowered vertically into place so that the feed assembly drive belt, [PL 5.19 Item 13](#) is not pushed off the pulley by the protrusion on the rear cover.

- The replacement is the reverse of the removal procedure.
- Perform [ADJ 5.2 SPDH Skew](#).

REP 5.2 Feed Roll, Nudger Roll and Feed Assembly

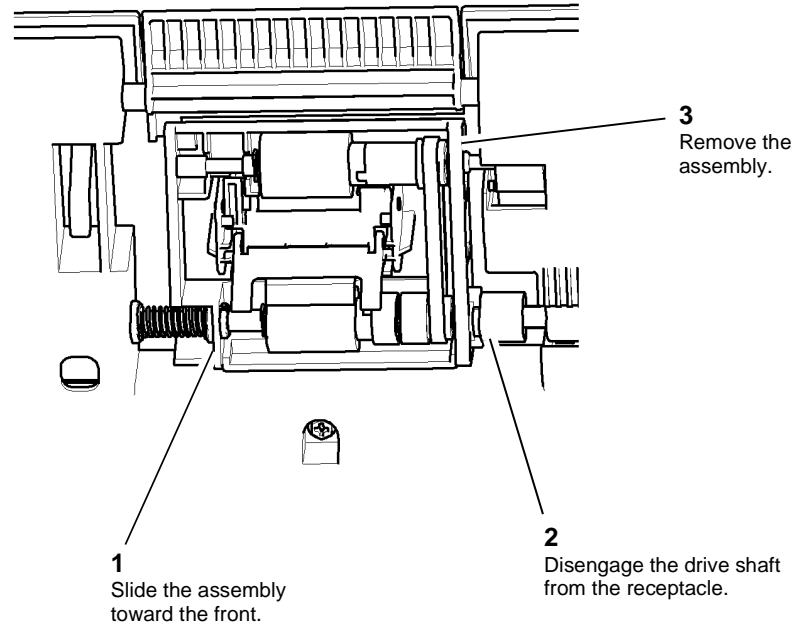
Parts List on [PL 5.20](#)

Removal

WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

- Open the SPDH top cover assembly, [PL 5.20 Item 14](#).
- Remove the feed and nudger rolls assembly, [Figure 1](#).



- Slide the assembly toward the front.

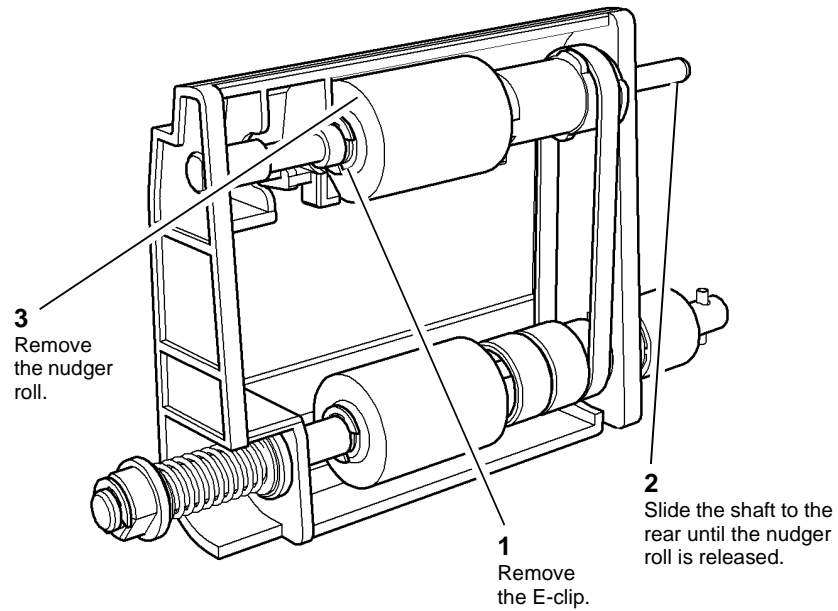
- Disengage the drive shaft from the receptacle.

- Remove the assembly.

X-1-1790-A

Figure 1 Feed and Nudger assembly removal

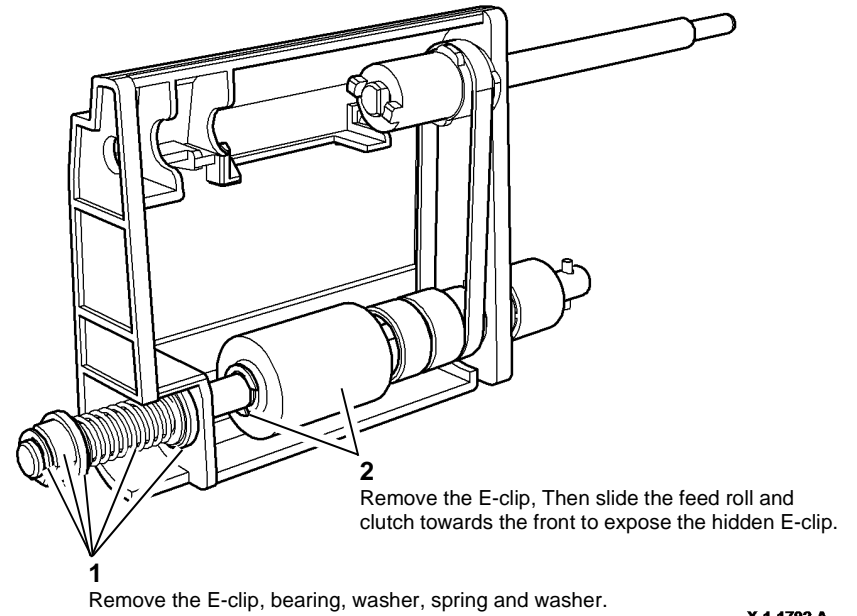
3. Remove the nudger roll, [Figure 2](#).



X-11791-A

Figure 2 Nudger roll removal

4. Prepare to remove the feed roll, [Figure 3](#).



X-1-1792-A

Figure 3 Preparation

- Remove the feed roll, [Figure 4](#).

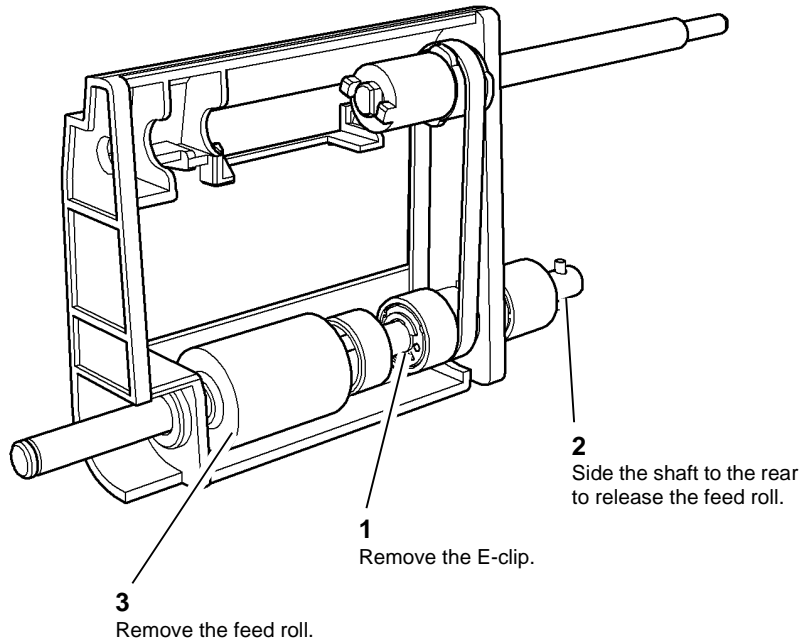


Figure 4 Feed roll removal

X-1-1793-A

- Remove the top cover assembly, [REP 5.1](#).

- Remove the feed assembly, [Figure 5](#).

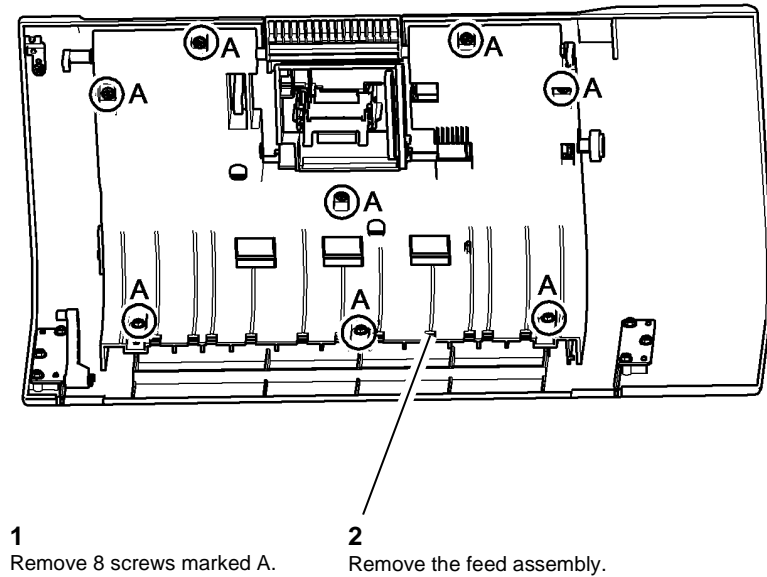


Figure 5 Feed assembly removal

X-1-1794-A

Replacement



Be careful when self tapping screws are installed into plastic components, refer to [GP 6](#).
The replacement is the reverse of the removal procedure.

- If either the feed or nudger roll are defective, it is imperative that new feed roll, nudger roll and retard rolls are all installed as a complete new set, Refer to [REP 5.3 Retard Roll and Separation Assembly](#).
- If new feed, nudger and retard rolls are installed, reset the document feeder feed roller count. Refer to [dC135 CRU/HFSI Status](#).



Ensure the harness to the feed assembly is routed around the harness guide to clear the hinge at the rear of the top cover assembly. If the harness is not routed correctly the harness can cause the top cover to jam.

- Perform [ADJ 60.3 IIT Registration, Magnification and Calibration](#).

REP 5.3 Retard Roll and Separation Assembly

Parts List on [PL 5.25](#)

Removal


WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

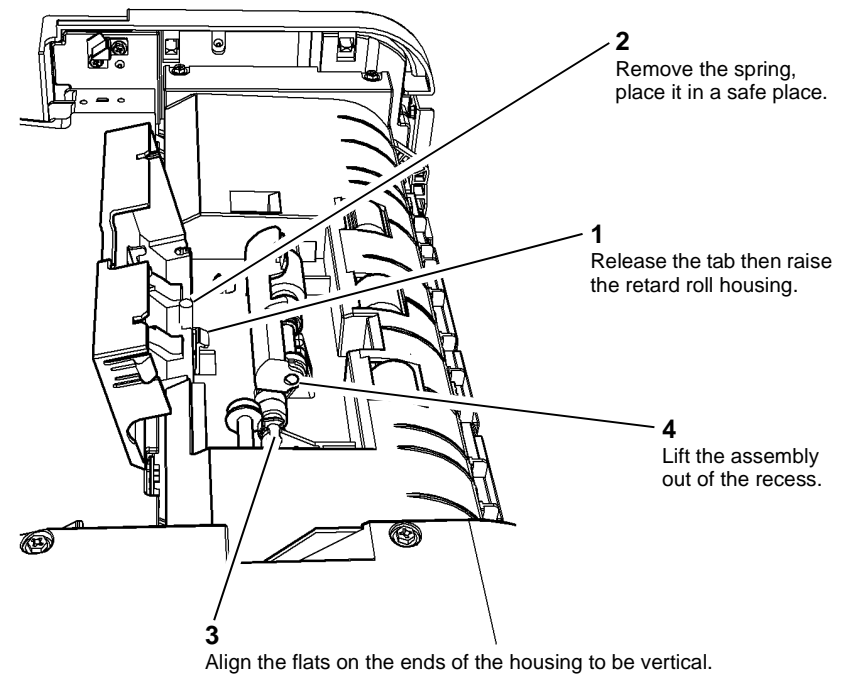
Take care during this procedure. Sharp edges may be present that can cause injury.

1. Open the SPDH top cover assembly, [PL 5.20 Item 14](#).

NOTE: If only the separation assembly is being removed, go to step 5.

2. Pull open the retard roll cover, [PL 5.25 Item 2](#).
3. Remove the retard roll assembly, [Figure 1](#).

NOTE: The retard roll can be removed without previously removing the retard roll assembly.



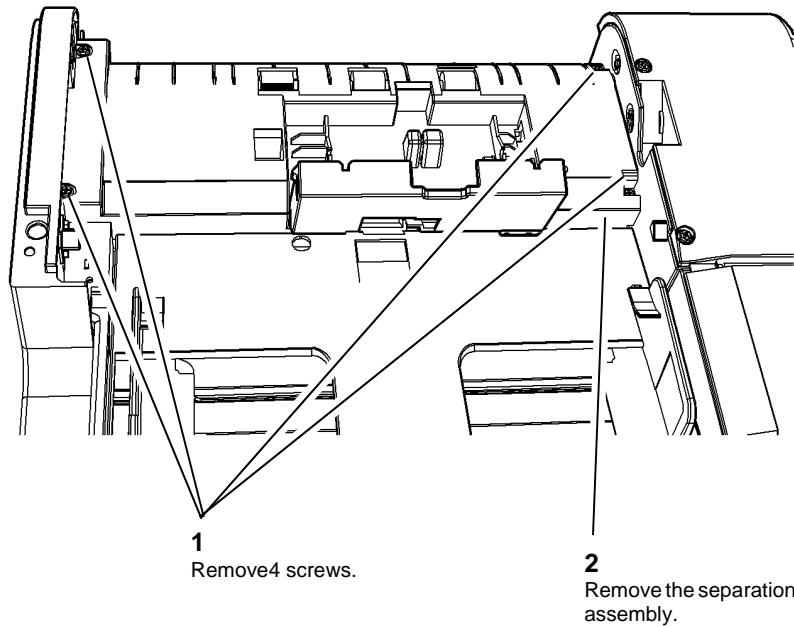
X-1-1795-A

Figure 1 Retard roll assembly removal

4. Remove the retard roll by removing the KL-clip from the end of the shaft, then remove the retard roll.

5. Remove the separation assembly, [Figure 2](#).

NOTE: The separation assembly can be removed without previously removing the retard roll assembly.



X-1-1796-A

Figure 2 Separation assembly removal

Replacement



Be careful when self tapping screws are installed into plastic components, refer to [GP 6](#).

The replacement is the reverse of the removal procedure.

1. If either the feed or nudger roll are defective, it is imperative that new feed roll, nudger roll and retard rolls are all installed as a complete new set.
2. If new feed, nudger and retard rolls are installed, reset the document feeder feed roller count. Refer to [dC135 CRU/HFSI Status](#).

REP 5.4 Input Tray Upper Assembly, Input Tray Lower Assembly and Lift Home Position Sensor

Parts List on [PL 5.30](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

NOTE: The complete input tray assembly can be removed without disassembly, refer to [REP 5.21](#).

1. Remove 5 screws then remove the SPDH rear cover, [PL 5.10 Item 1](#).
2. Remove 4 screws then remove the SPDH front cover, [PL 5.10 Item 17](#).

3. Prepare to remove the input tray upper assembly, [Figure 1](#).

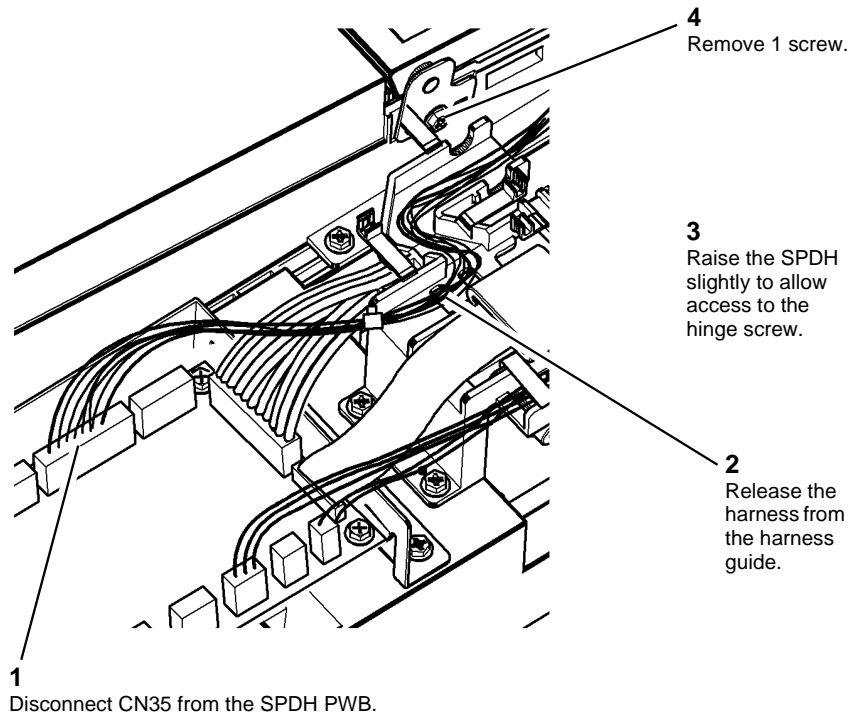


Figure 1 Preparation

X-1-1797-A

4. Remove the input tray upper assembly, [Figure 2](#).

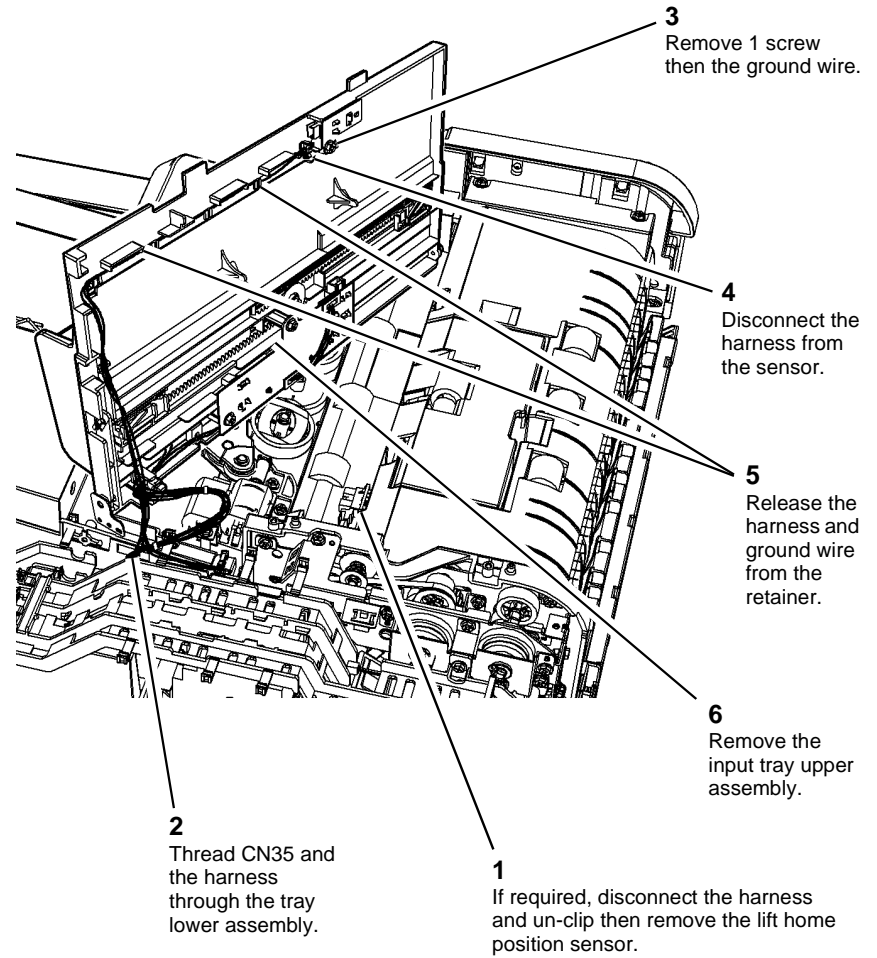
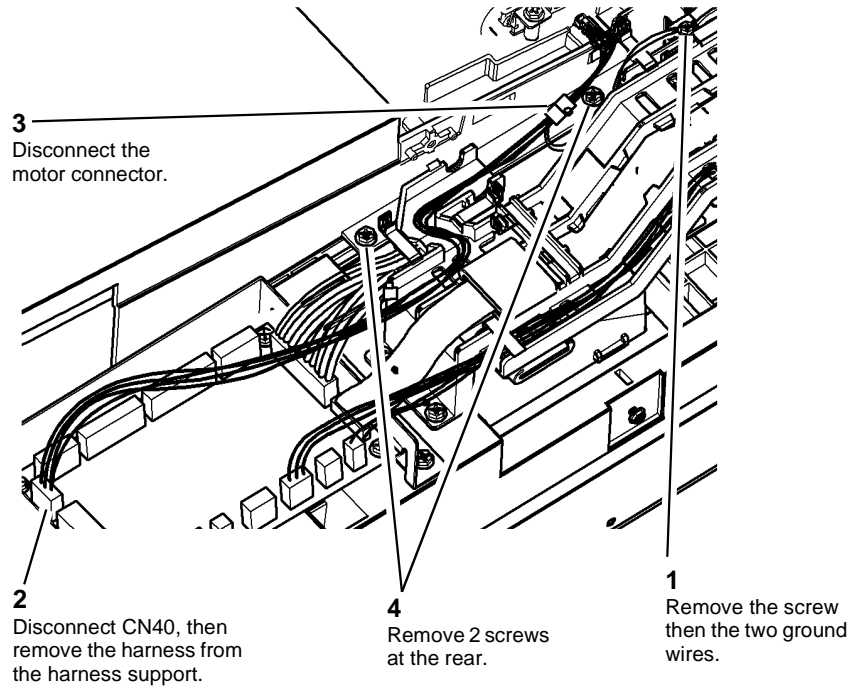


Figure 2 Upper assembly removal

X-1-1798-A

5. Prepare to remove the input tray lower assembly, [Figure 3](#).

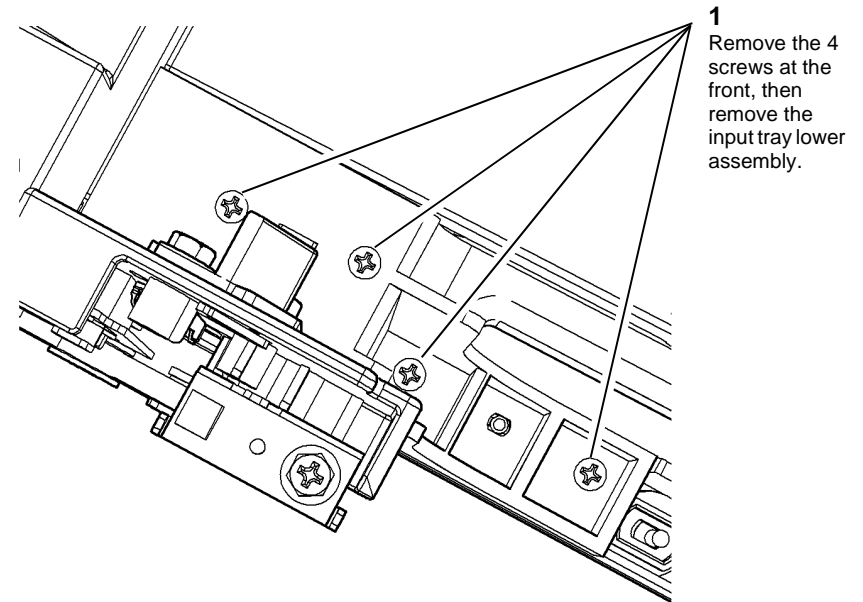


X-1-1799-A

Figure 3 Preparation

6. Remove 4 screws then remove the SPDH front cover, [PL 5.10 Item 17](#).

7. Remove the input tray lower assembly, [Figure 4](#).



X-1-1800-A

Figure 4 Input tray lower removal

Replacement

!
CAUTION

Be careful when self tapping screws are installed into plastic components, refer to [GP 6](#).

!
CAUTION

When installing the rear cover, ensure that the cover is lowered vertically into place so that the feed assembly drive belt, [PL 5.19 Item 13](#) is not pushed off the pulley by the protrusion on the rear cover.

1. The replacement is the reverse of the removal procedure.
2. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

REP 5.5 Takeaway Roll Assembly

Parts List on [PL 5.17](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

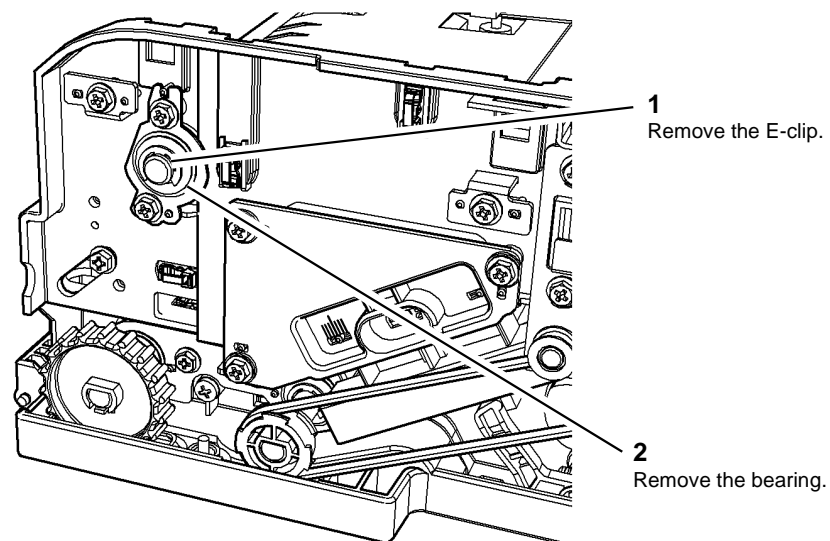


CAUTION

The working area is restrictive, take care not to drop any components. Extensive repair procedures may be required to retrieve fallen parts from within the SPDH.

1. Remove the separation assembly, [REP 5.3](#).
2. Remove 5 screws then remove the SPDH rear cover, [PL 5.10 Item 1](#).
3. Remove 4 screws then remove the SPDH front cover, [PL 5.10 Item 17](#).

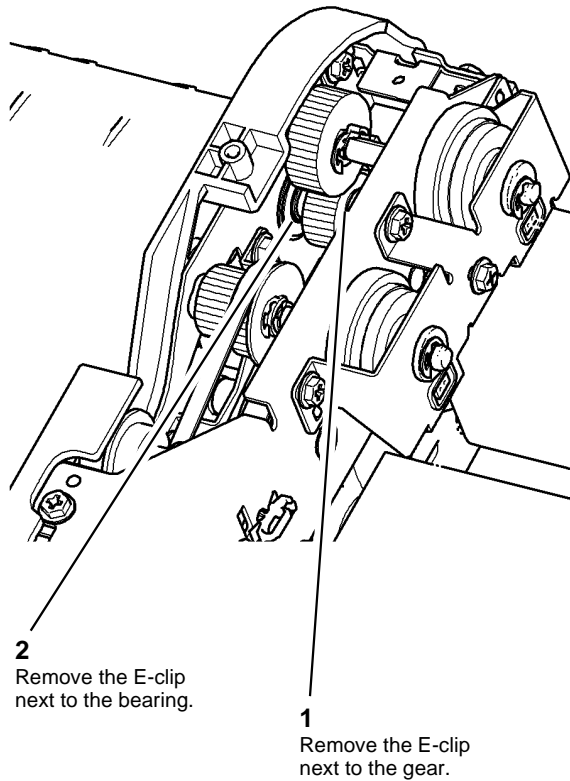
4. Remove the front bearing, [Figure 1](#).



X-1-1862-A

Figure 1 Front bearing removal

5. Remove the takeaway roll assembly, [Figure 2](#).



3
Slide the takeaway roll assembly forward to enable the gear and bearing to be removed.

4
Slide the takeaway roll assembly towards the front of the machine to clear the rear frame.

5
Remove the takeaway roll assembly.

1
Remove the E-clip next to the gear.

2
Remove the E-clip next to the bearing.

X-1-1863-A

Figure 2 Takeaway roll removal

Replacement

!
CAUTION

When installing the rear cover, ensure that the cover is lowered vertically into place so that the feed assembly drive belt, [PL 5.19 Item 13](#) is not pushed off the pulley by the protrusion on the rear cover.

The replacement is the reverse of the removal procedure.

REP 5.6 Lower Pre Scan Roller Assembly

Parts List on [PL 5.17](#)

Removal

!
WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

!
WARNING

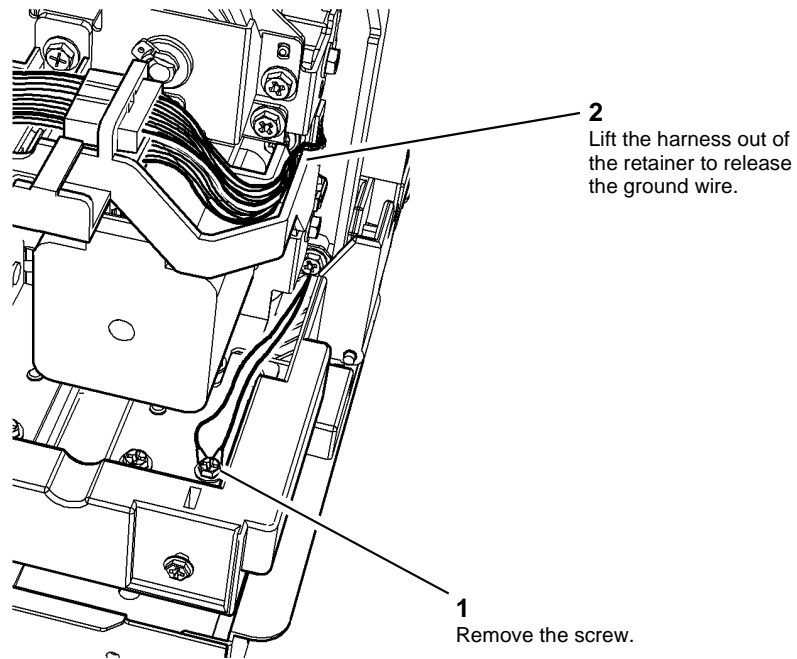
Take care during this procedure. Sharp edges may be present that can cause injury.

!
CAUTION

Handle the lower pre scan assembly with care. The lower pre scan assembly is loosely assembled and contains 2 springs under compression. The assembly can spring apart on removal.

1. Open the SPDH top cover assembly, [PL 5.20 Item 14](#).
2. Remove 5 screws then remove the SPDH rear cover, [PL 5.10 Item 1](#).

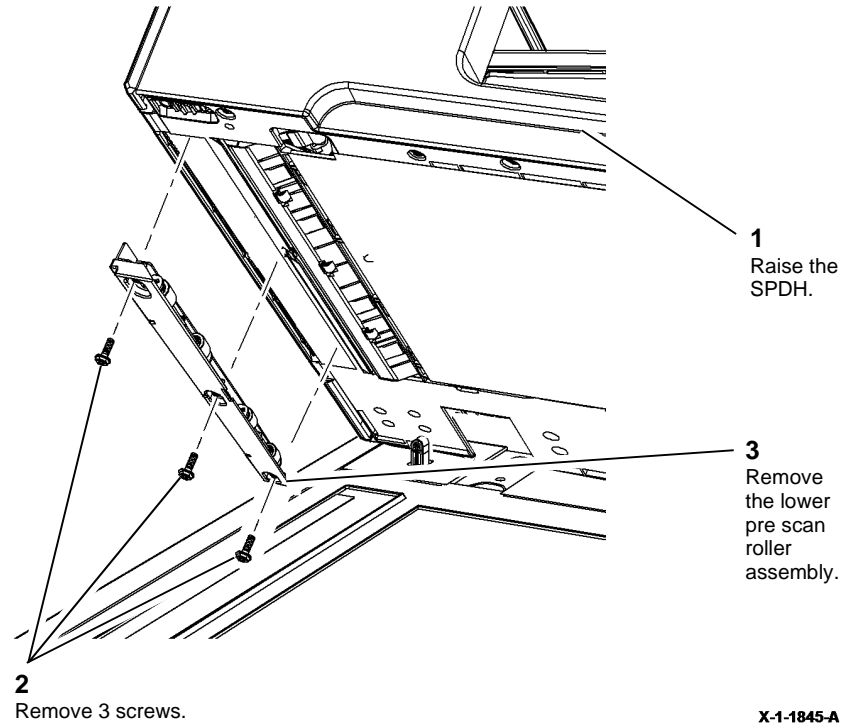
3. Disconnect the ground wire, **Figure 1**.



X-1-1844-A

Figure 1 Ground wire disconnection

4. Remove the lower pre scan roller assembly, **Figure 2**.



X-1-1845-A

Figure 2 Lower pre scan roller assembly

Replacement



CAUTION

When installing the rear cover, ensure that the cover is lowered vertically into place so that the feed assembly drive belt, PL 5.19 Item 13 is not pushed off the pulley by the protrusion on the rear cover.

The replacement is the reverse of the removal procedure.

REP 5.7 Exit Roll Assembly

Parts List on [PL 5.17](#)

Removal


WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Open the SPDH top cover assembly, [PL 5.20 Item 14](#).
2. Remove 5 screws then remove the SPDH rear cover, [PL 5.10 Item 1](#).
3. Remove 4 screws then remove the SPDH front cover, [PL 5.10 Item 17](#).
4. Remove the complete input tray assembly, [REP 5.23](#).
5. Remove the front components, [Figure 1](#).

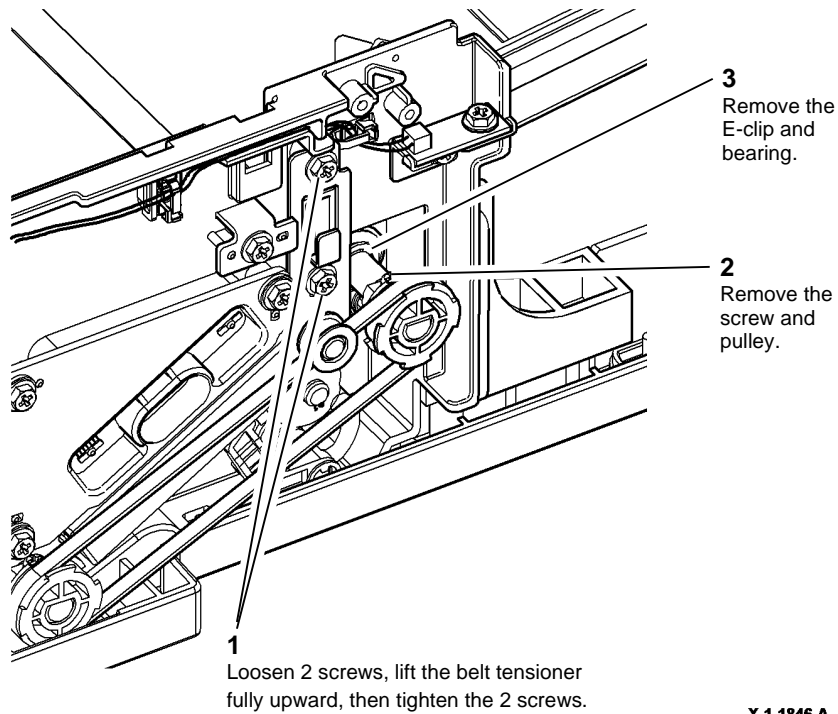


Figure 1 Front components removal

X-1-1846-A

6. Remove the SPDH top cover open switch, [Figure 2](#).

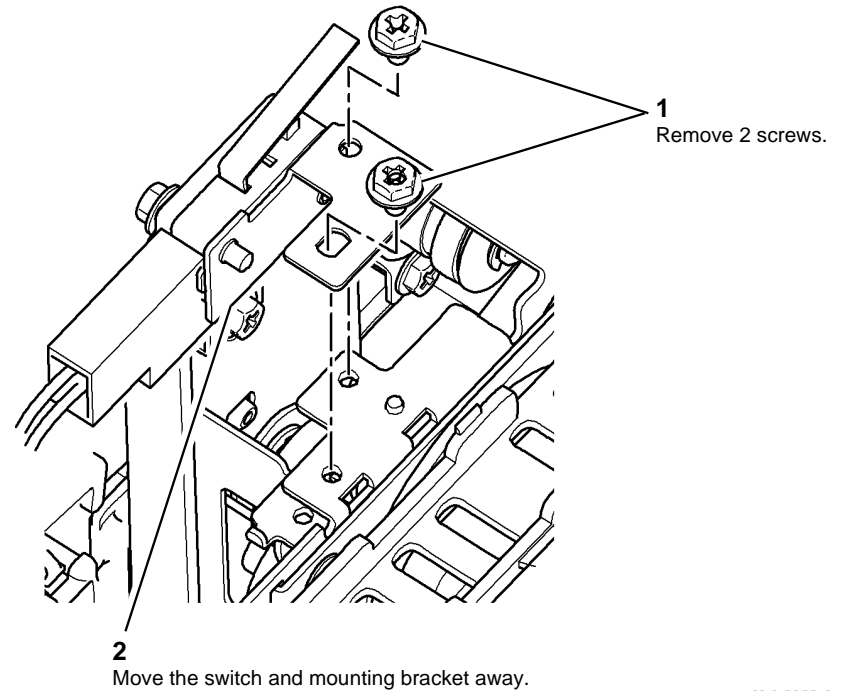


Figure 2 Switch removal

X-1-2023-A

7. Remove the rear components, [Figure 3](#).

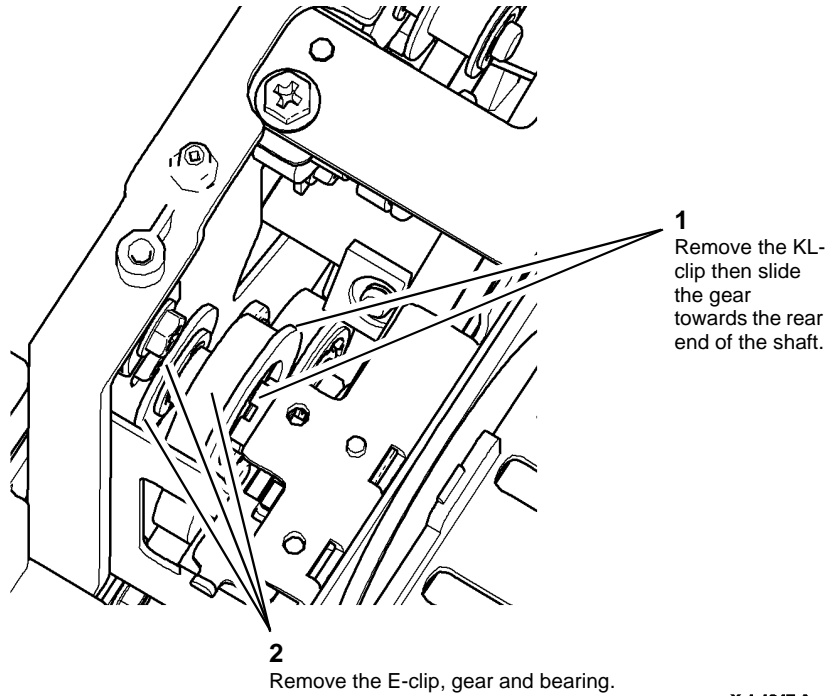


Figure 3 Rear components removal

8. Remove the exit roll assembly, [Figure 4](#).

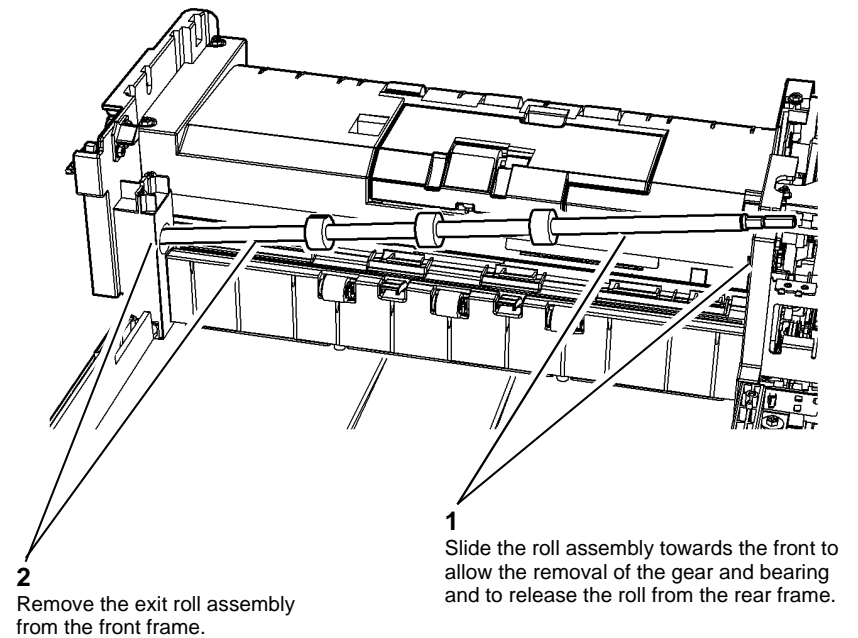


Figure 4 Exit roll assembly removal

Replacement



CAUTION

When installing the rear cover, ensure that the cover is lowered vertically into place so that the feed assembly drive belt, PL 5.19 Item 13 is not pushed off the pulley by the protrusion on the rear cover.

1. The replacement is the reverse of the removal procedure.
2. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

REP 5.8 Stack Height Sensor, Takeaway Sensor and Feed Sensor

Parts List on [PL 5.20](#)

Removal

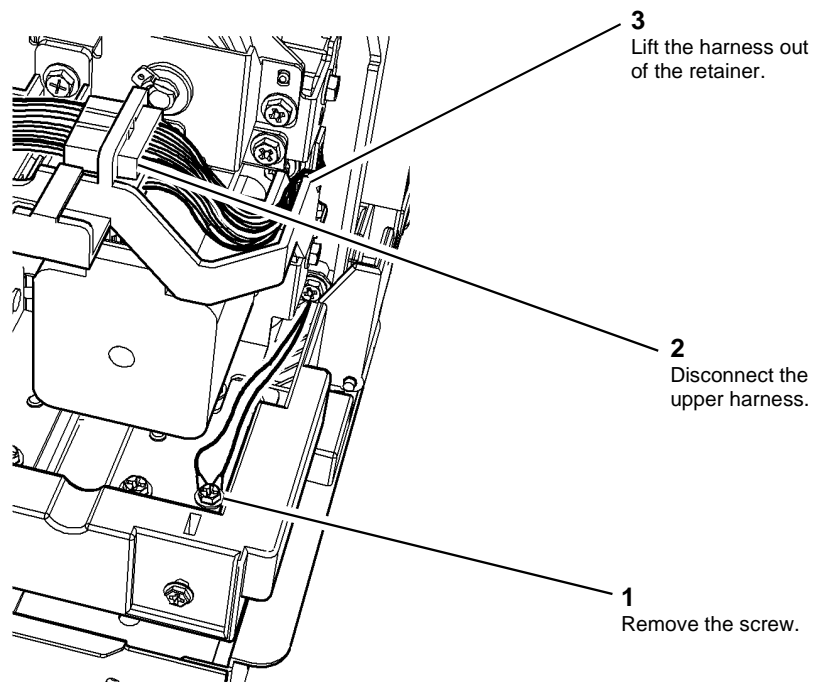

WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

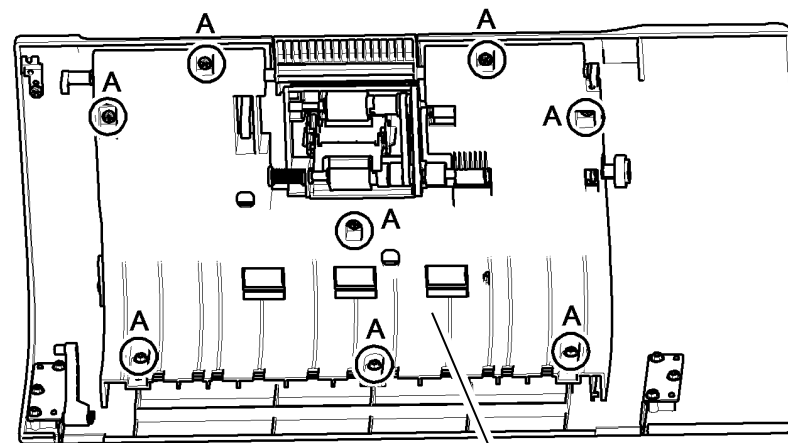
1. Open the SPDH top cover assembly, [PL 5.20 Item 14](#).
2. Disconnect the harnesses, [Figure 1](#).



X-1-1849-A

Figure 1 Ground wire disconnection

3. Remove the feed assembly frame, [Figure 2](#).



1. Remove 8 screws marked A.

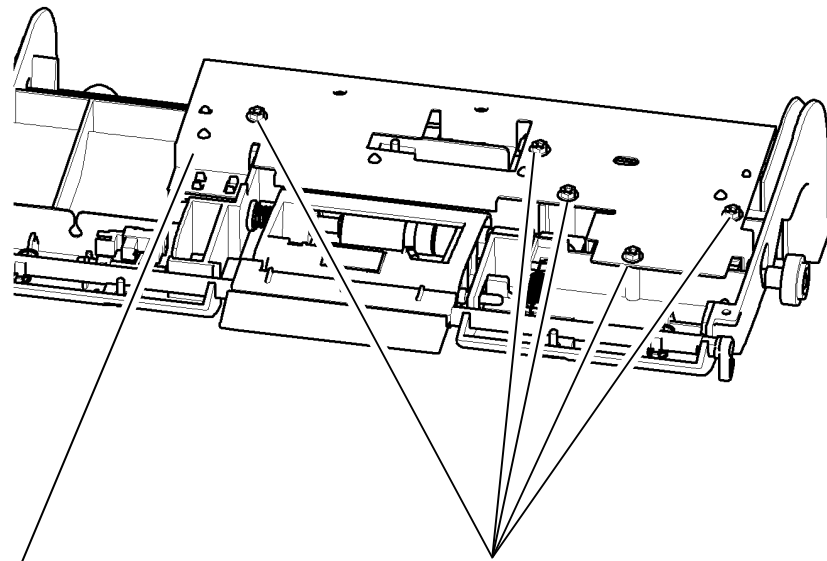
2. Remove the feed assembly.

X-1-1850-A

Figure 2 Frame removal

NOTE: If only the stack height sensor is being removed, go to step 5 otherwise continue at step 4.

4. Prepare to remove the sensors, [Figure 3](#).



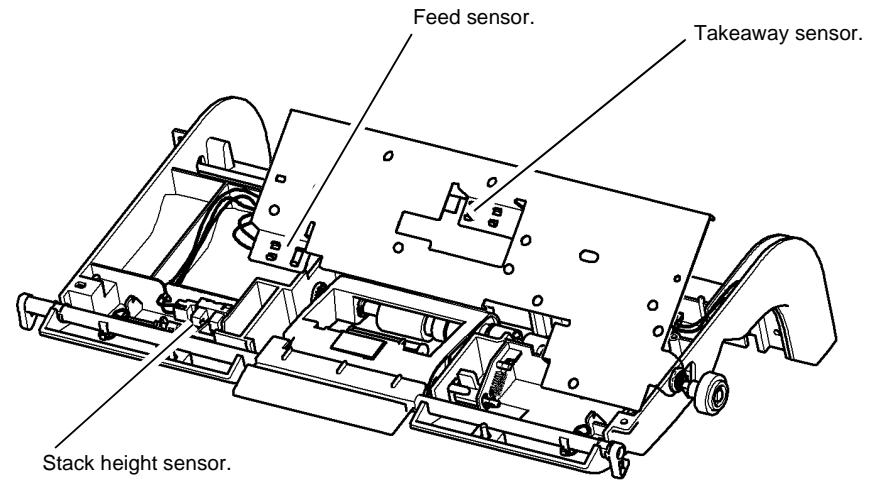
2
Raise the mounting plate to give access to the sensors and connectors.

1
Remove 5 screws.

X-1-1851-A

Figure 3 Preparation

5. Remove the appropriate sensor, [Figure 4](#).



1
Disconnect the sensor harness, remove 1 screw or release the sensor legs, then remove the appropriate sensor.

X-1-1852-A

Figure 4 Sensor removal

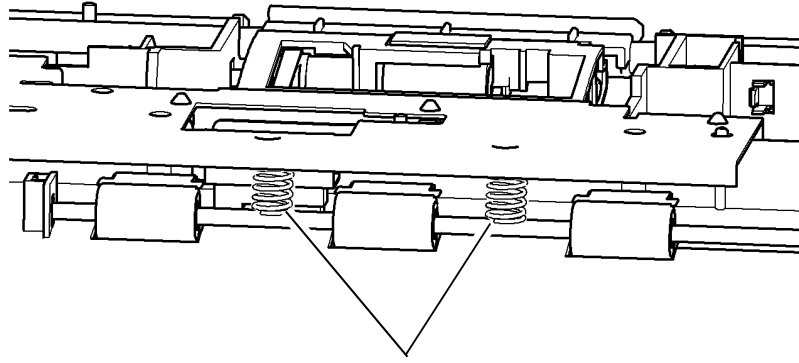
Replacement



CAUTION

Be careful when self tapping screws are installed into plastic components, refer to GP 6.

1. The replacement is the reverse of the removal procedure.
2. Ensure the nip roll springs are correctly located, Figure 5.



- 2** Insert and tighten the five screws, refer to Figure 3 and the CAUTION.
- 1** Position the springs between the mounting plate and the nip shaft.

X-1-1853-A

Figure 5 Mounting plate installation

3. Ensure the feed assembly frame is located correctly within the top cover before tightening the 8 screws.

REP 5.9 Length Sensors

Parts List on PL 5.30

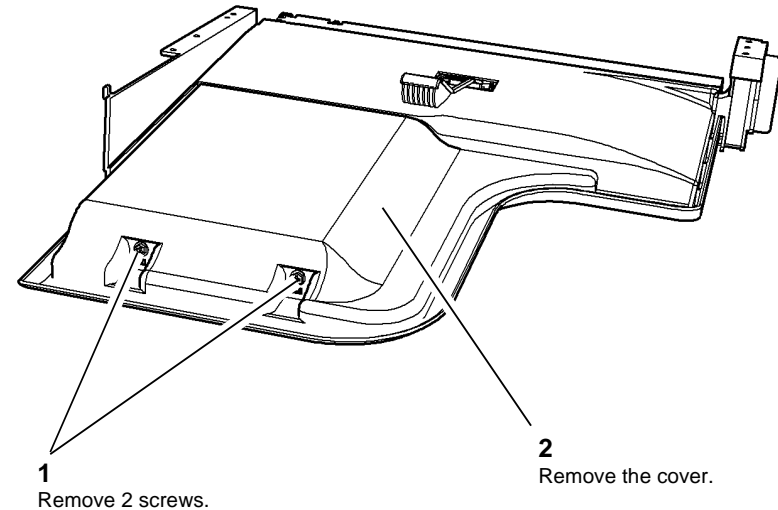
Removal



WARNING

Switch off the electricity to the machine, GP 14. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the complete input tray assembly, REP 5.23.
2. Turn the input tray assembly upside down.
3. Remove the length sensors cover, Figure 1.



- 1** Remove 2 screws.

- 2** Remove the cover.

X-1-1801-A

Figure 1 Cover removal

- Remove the appropriate length sensor, [Figure 2](#).

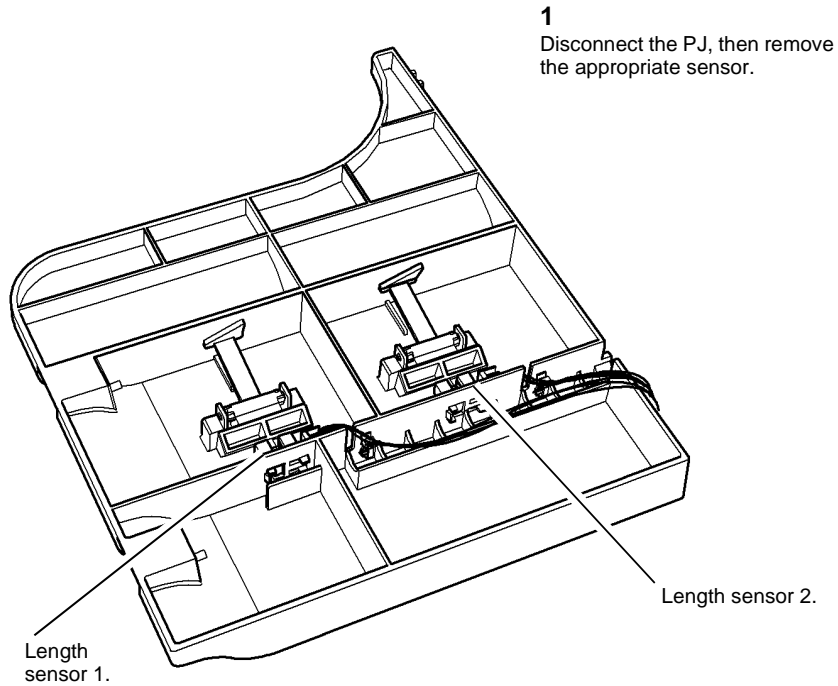


Figure 2 Length sensors removal

X-1-1802-A

Replacement



CAUTION

Be careful when self tapping screws are installed into plastic components, refer to [GP 6](#).

The replacement is the reverse of the removal procedure.

REP 5.10 Reg Sensor and Side 2 Reg Sensor

Parts List on [PL 5.18](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

- Remove the separation assembly, [REP 5.3](#).
- Prepare to remove the reg sensors, [Figure 1](#).

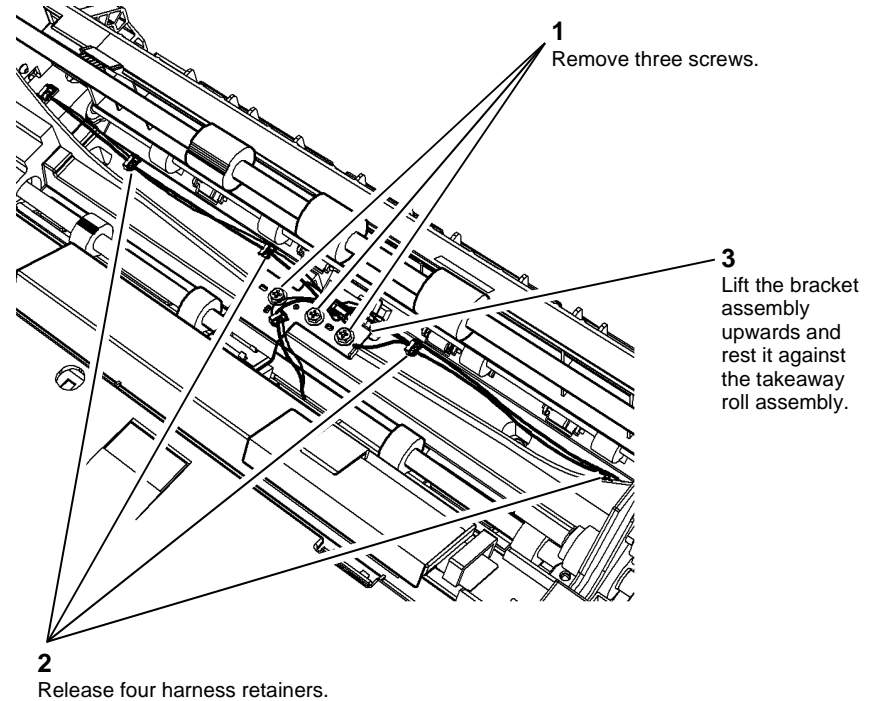
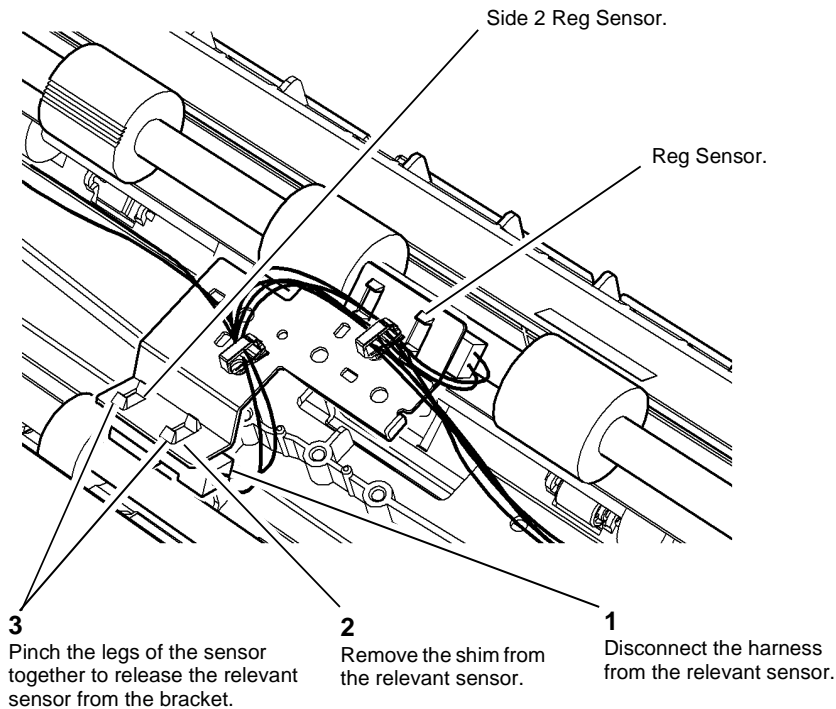


Figure 1 Preparation

X-1-1854-A

- Remove the appropriate reg sensor, [Figure 2](#).



X-1-1855-A

Figure 2 Sensor assembly removal

Replacement

The replacement is the reverse of the removal procedure.

REP 5.11 Calibration Home Position Sensor

Parts List on [PL 5.18](#)

Removal

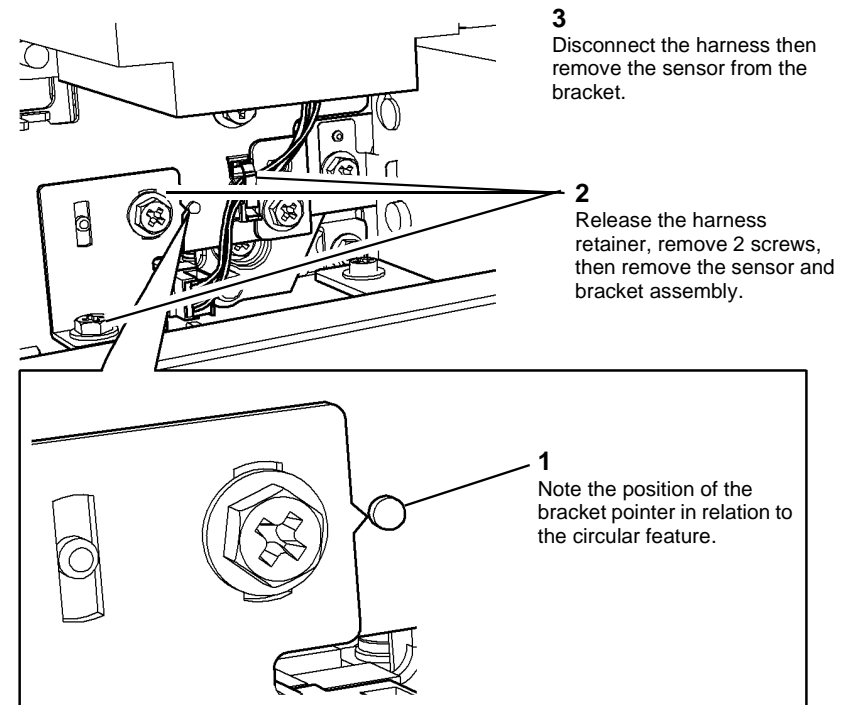


Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

- If necessary rotate the exit jam clearance knob, [PL 5.17 Item 5](#), so that the flag is not within the gap of the sensor.
- Remove the calibration home position sensor, [Figure 1](#).



X-1-1856-A

Figure 1 Sensor removal

Replacement

1. The replacement is the reverse of the removal procedure.
2. When installing the sensor and bracket assembly, ensure that the pointer on the bracket is accurately aligned with the circular feature as noted in [Figure 1](#) step 1.

REP 5.12 Feed Motor and Belt

Parts List on [PL 5.18](#) and [PL 5.19](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove 5 screws then the SPDH rear cover, [PL 5.10](#) Item 1.

- Remove the feed motor, [Figure 1](#).

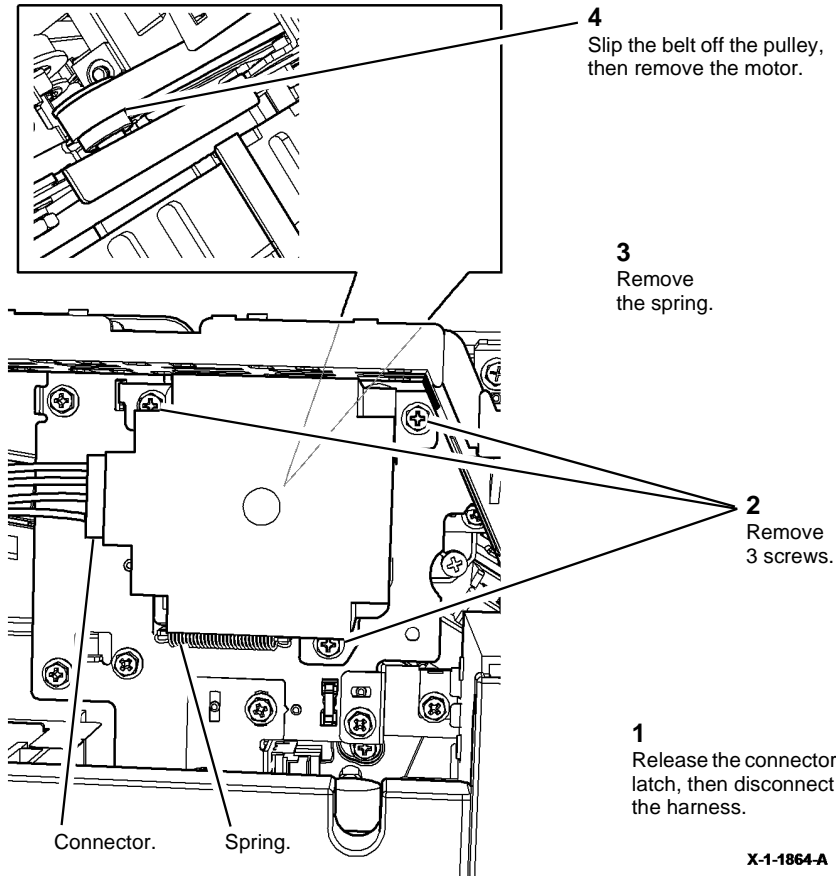


Figure 1 Feed motor removal

Replacement

- Position the motor in the loop of the drive belt.
- Insert, but do not tighten the 3 screws.
- Attach the spring to correctly tension the drive belt, then tighten the 3 screws.
- The remainder of the replacement is the reverse of the removal procedure.

REP 5.13 Read Motor

Parts List on [PL 5.18](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

- Open the SPDH top cover assembly, [PL 5.20 Item 14](#).
- Remove 5 screws then the SPDH rear cover, [PL 5.10 Item 1](#).
- Remove the read motor, [Figure 1](#).

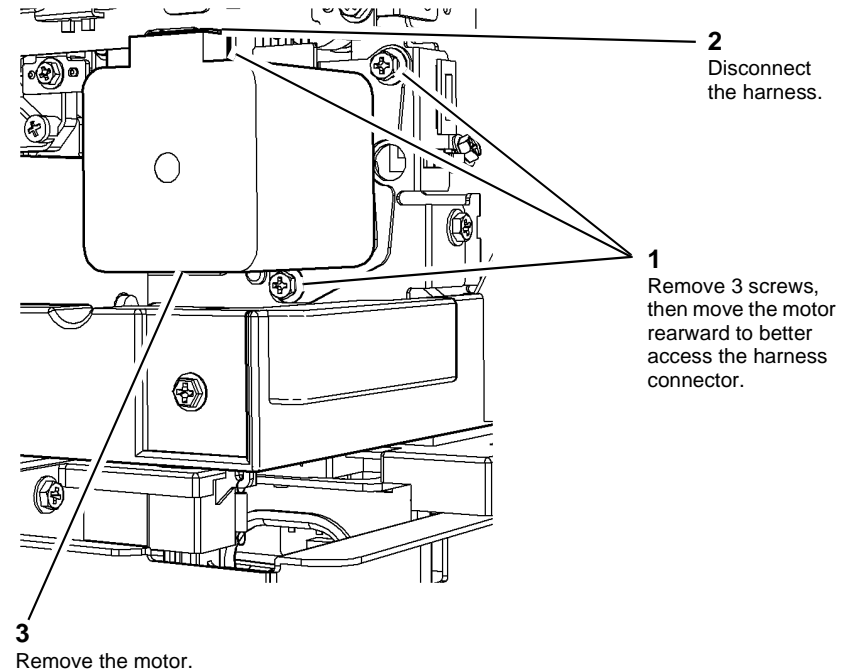


Figure 1 Read motor removal

Replacement



CAUTION

When installing the rear cover, ensure that the cover is lowered vertically into place so that the feed assembly drive belt, PL 5.19 Item 13 is not pushed off the pulley by the protrusion on the rear cover.

The replacement is the reverse of the removal procedure.

REP 5.14 Feed Clutch and Takeaway Clutch

Parts List on [PL 5.18](#)

Removal



WARNING

Switch off the electricity to the machine, GP 14. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the SPDH top cover assembly, [PL 5.20 Item 14](#).
2. Remove 5 screws then the SPDH rear cover, [PL 5.10 Item 1](#).

3. Prepare to remove the feed clutch and/or the takeaway clutch, **Figure 1**.

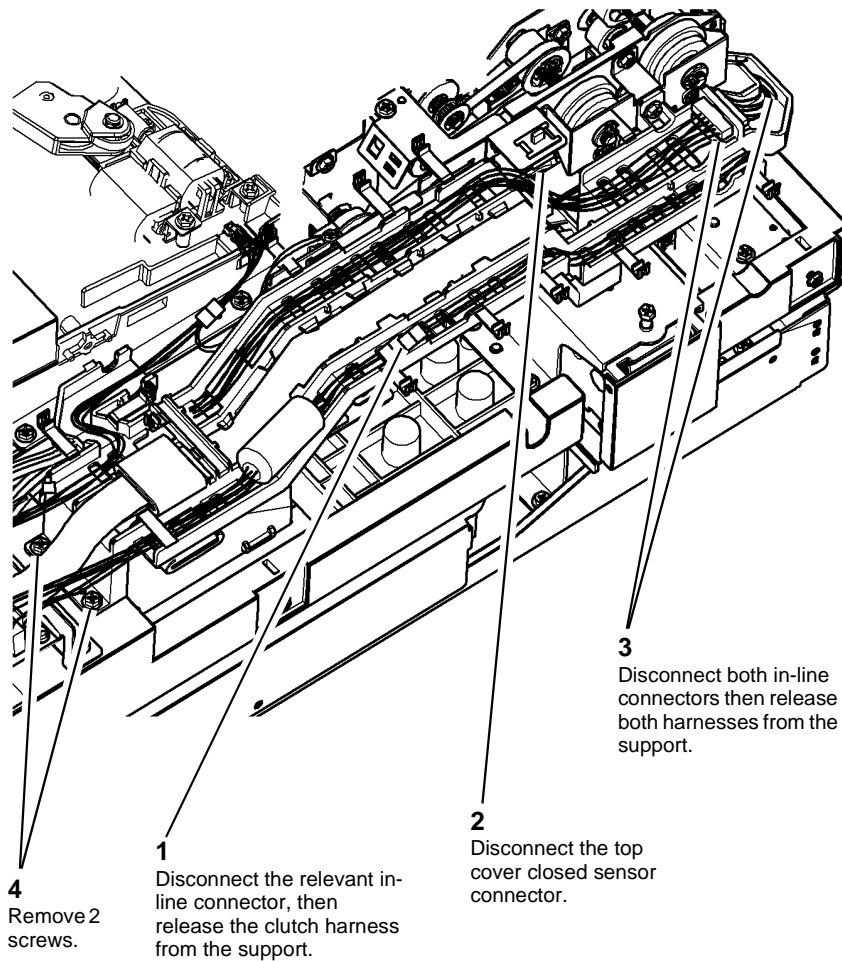


Figure 1 Preparation

X-1-1866-A

4. Remove the feed clutch and/or the takeaway clutch, **Figure 2**.

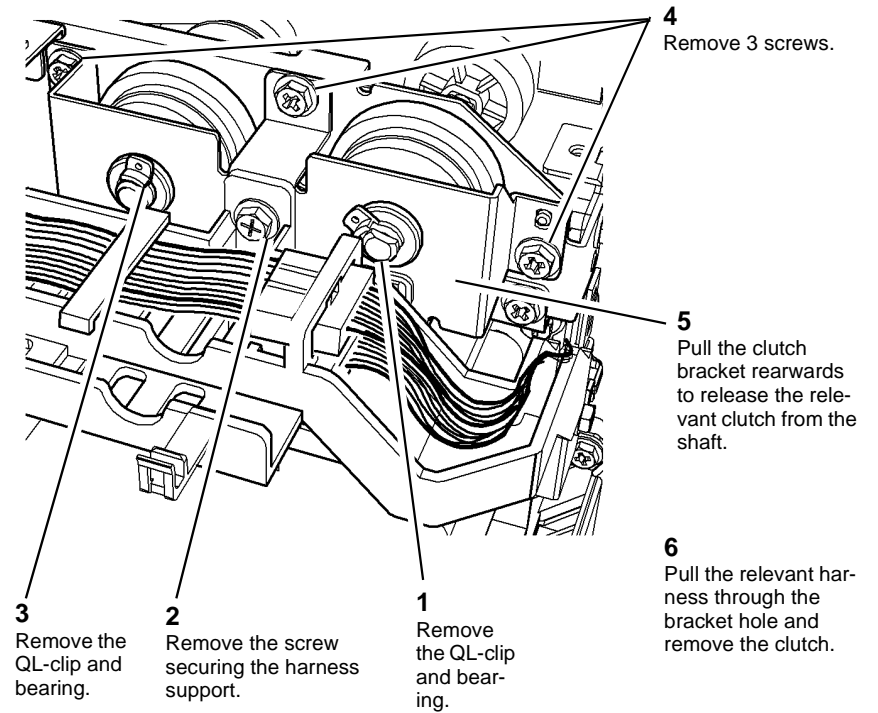


Figure 2 Clutch removal

X-1-1867-A

Replacement



CAUTION

When installing the rear cover, ensure that the cover is lowered vertically into place so that the feed assembly drive belt, PL 5.19 Item 13 is not pushed off the pulley by the protrusion on the rear cover.

1. The replacement is the reverse of the removal procedure.
2. Ensure the feed clutch engages correctly with the bracket, Figure 3.

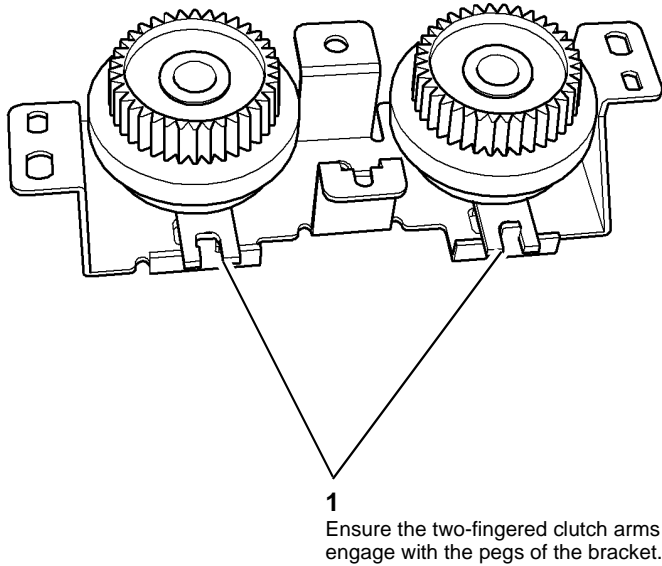


Figure 3 Clutch locator

X-1-1868-A

REP 5.15 Input Tray Sensors

Parts List on PL 5.30

Removal



WARNING

Switch off the electricity to the machine, GP 14. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the input tray upper assembly, refer to REP 5.4.

NOTE: If only the doc present sensor is being removed, it is not necessary to remove the input tray sensors or wiring. Hold the input tray in a vertical position to give access to the doc present sensor, then continue at Figure 3.

2. Remove the sensor mounting plate, Figure 1.

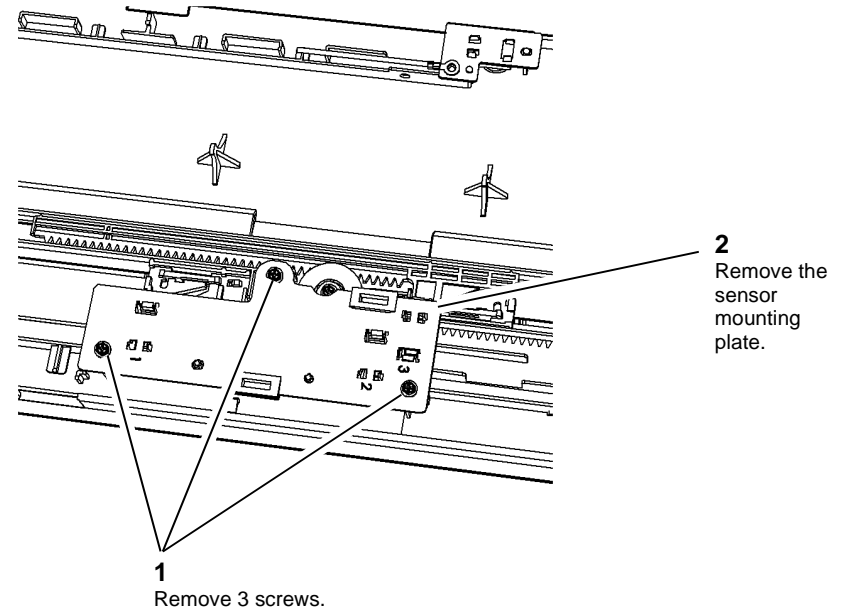


Figure 1 Mounting plate removal

X-1-1803-A

3. Remove the document width sensors, [Figure 2](#).

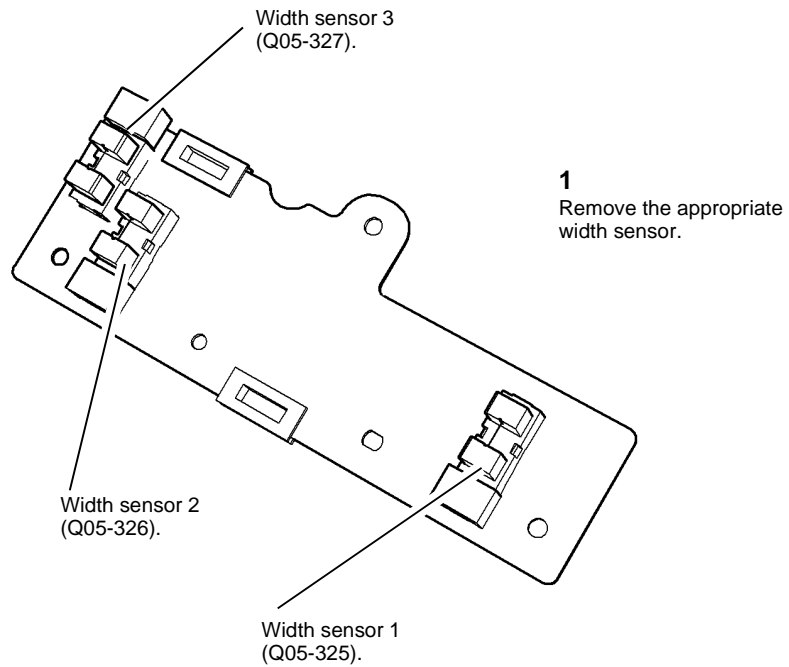


Figure 2 Width sensors removal

X-1-1804-A

4. Remove the document present sensor, [Figure 3](#).

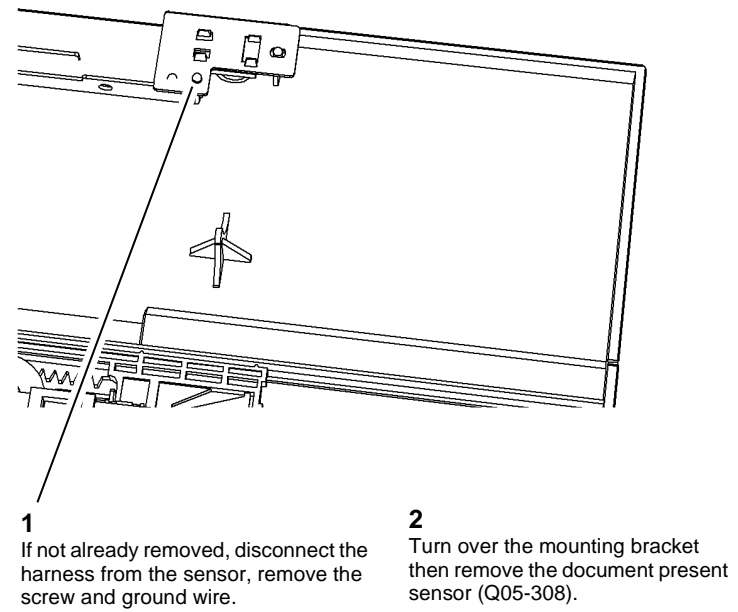


Figure 3 Sensor removal

X-1-1805-A

Replacement



CAUTION

Be careful when self tapping screws are installed into plastic components, refer to [GP 6](#).

1. The replacement is the reverse of the removal procedure.

REP 5.16 Mid Scan Roll Assembly

Parts List on [PL 5.17](#)

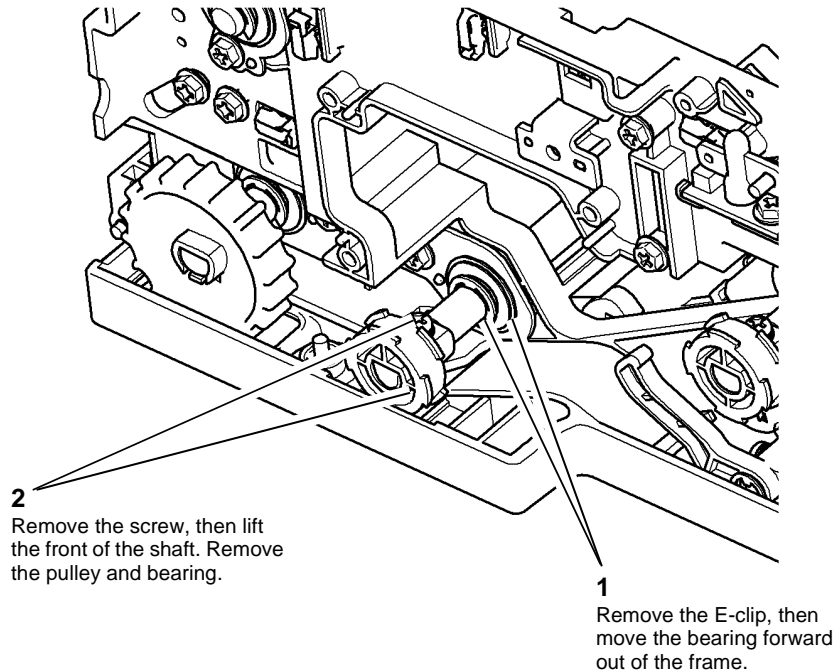
Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

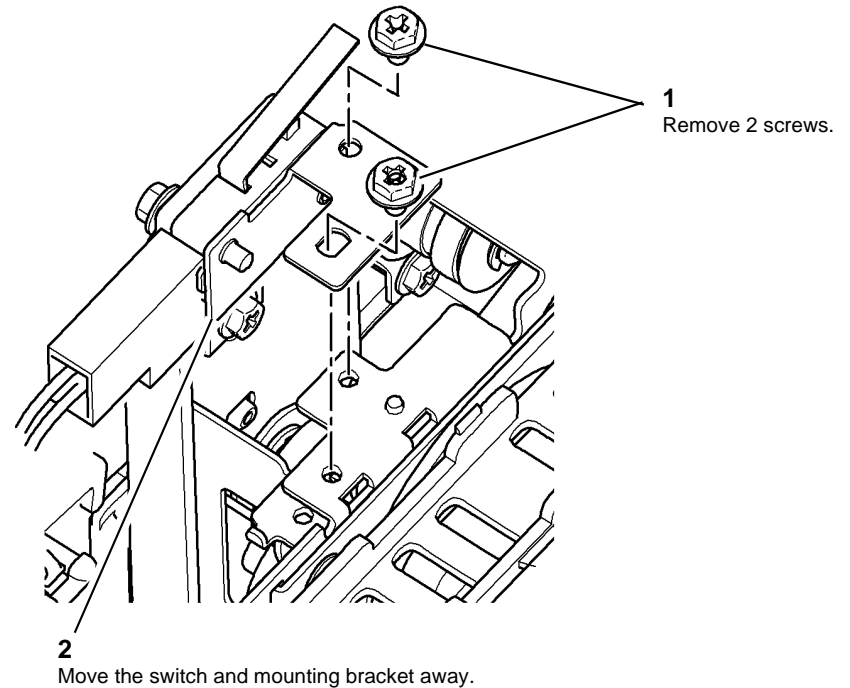
1. Remove the side 2 scan assembly, [REP 60.6](#).
2. Remove 5 screws then remove the SPDH rear cover, [PL 5.10 Item 1](#).
3. Prepare to remove the mid scan roll assembly, [Figure 1](#).



X-1-1873-A

Figure 1 Preparation

4. Remove the SPDH top cover open switch, [Figure 2](#).



X-1-2024-A

Figure 2 Switch removal

5. Refer to [REP 5.10](#) to release the registration sensor bracket for access. Do not disconnect the sensors.

6. Remove the mid scan roll assembly, [Figure 3](#).

NOTE: At step 2 [Figure 3](#), pull the E-clip from the shaft using a spring removing tool and a magnetic retriever tool.

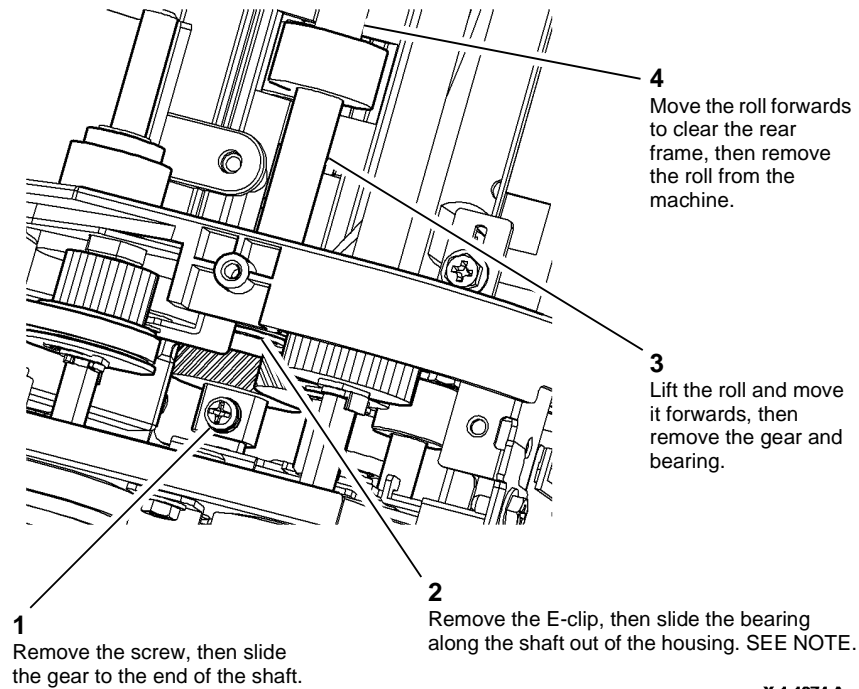


Figure 3 Mid scan roll removal

X-1-1874-A

Replacement



CAUTION

When installing the rear cover, ensure that the cover is lowered vertically into place so that the feed assembly drive belt, [PL 5.19 Item 13](#) is not pushed off the pulley by the protrusion on the rear cover.

1. The replacement is the reverse of the removal procedure.

NOTE: When installing the E-clip next to the rear bearing, perform the steps that follow:

- a. Push the shaft as far to rear as possible.
 - b. Push the bearing as far as possible into the housing.
 - c. Leave the gear at the rear of the shaft.
 - d. Grip the E-clip with long nose pliers and lower it into position through the frame.
 - e. While still holding the E-clip in position with the long nose pliers, force it into the groove using a large flat blade screwdriver.
2. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

REP 5.17 Pre Scan Roll Assembly

Parts List on [PL 5.17](#)

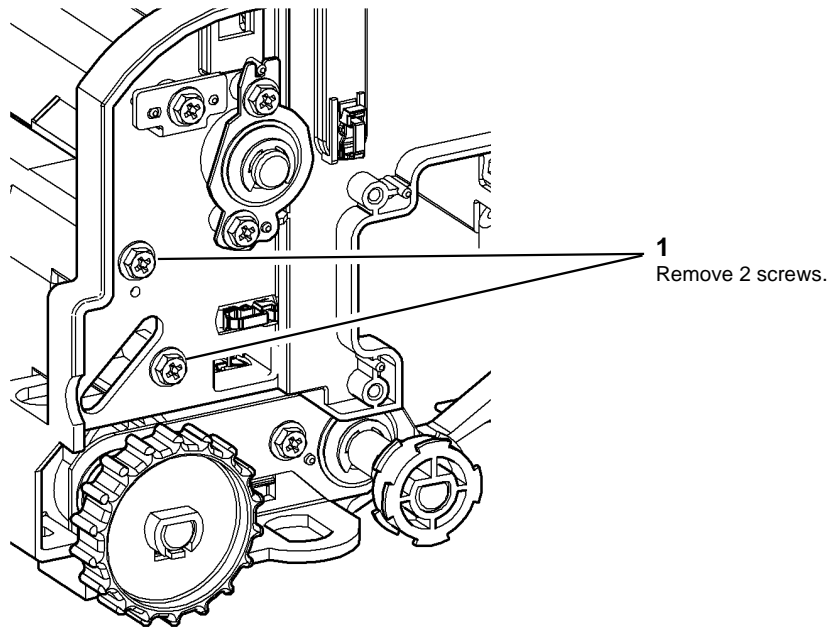
Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

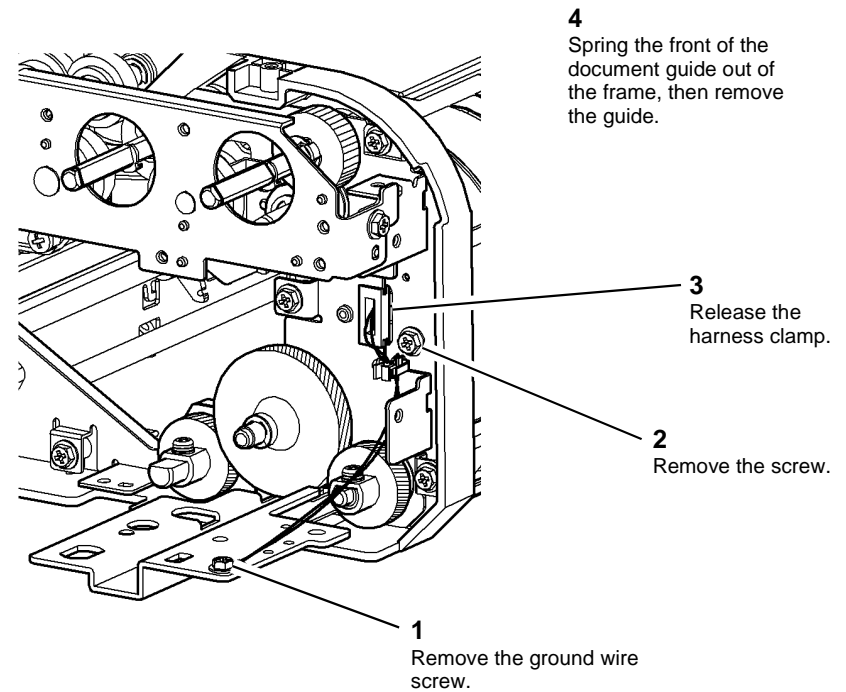
1. Perform [REP 5.22](#) up to and including step 4.
2. [Figure 1](#), release the document guide front fixings.



X-1-1891-A

Figure 1 Document guide front fixings

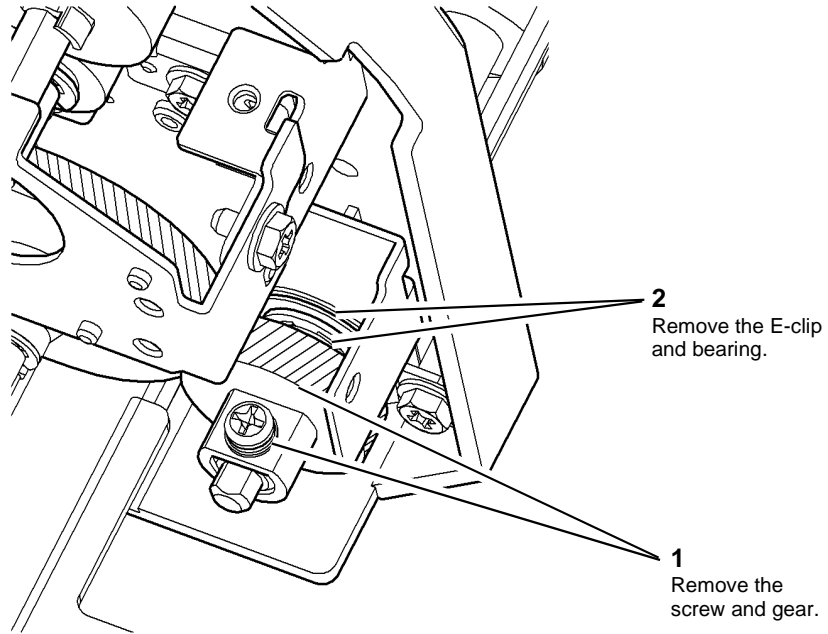
3. [Figure 2](#), remove the document guide.



X-1-1892-A

Figure 2 Document guide removal

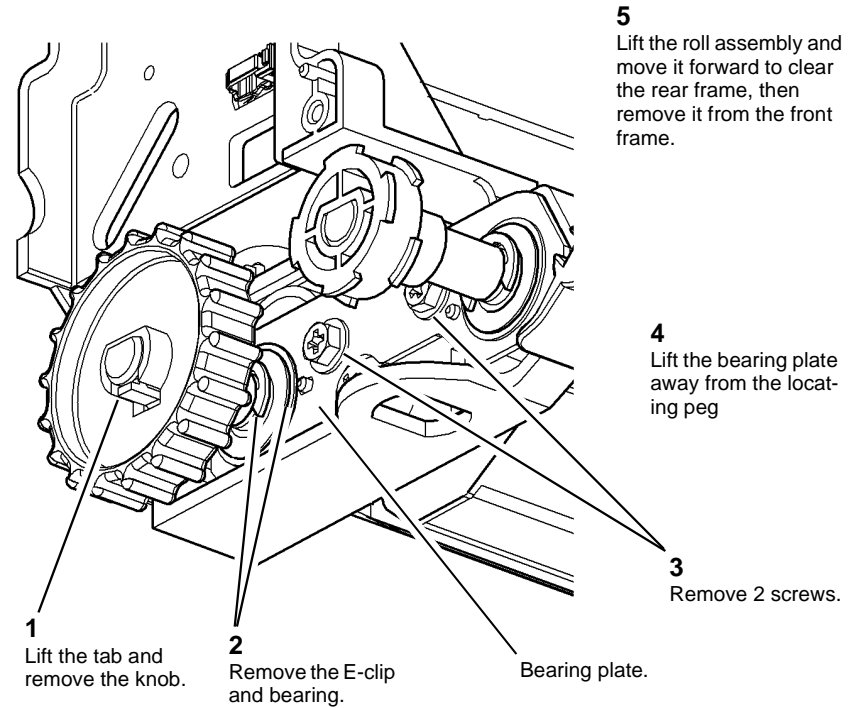
4. **Figure 3**, remove the rear bearing.



X-1-1893-A

Figure 3 Rear bearing removal

5. **Figure 4**, remove the pre scan roll assembly.



X-1-1894-A

Figure 4 Roll assembly removal

Replacement

1. The replacement is the reverse of the removal procedure.
2. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

REP 5.18 SPDH Removal

Parts List on PL 5.10

Removal

NOTE: A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.


WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Do not remove the SPDH while the SPDH is lowered. In the lowered position the counterbalance springs are compressed and can cause injury when released.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the scanner rear cover and faraday shield, [REP 60.1](#).
2. Fully open the SPDH.

3. Disconnect the data, communication and power cables, [Figure 1](#).

NOTE: If improved access to the PWB connectors is required, refer to [REP 60.4](#), and perform the steps that follow:

- a. Disconnect the SBC data harness.
- b. Release the clips securing the SBC data and power harnesses.
- c. Remove the 2 screws securing the scanner PWB chassis.
- d. Move the scanner PWB and chassis rearwards for improved access to the PWB connectors.

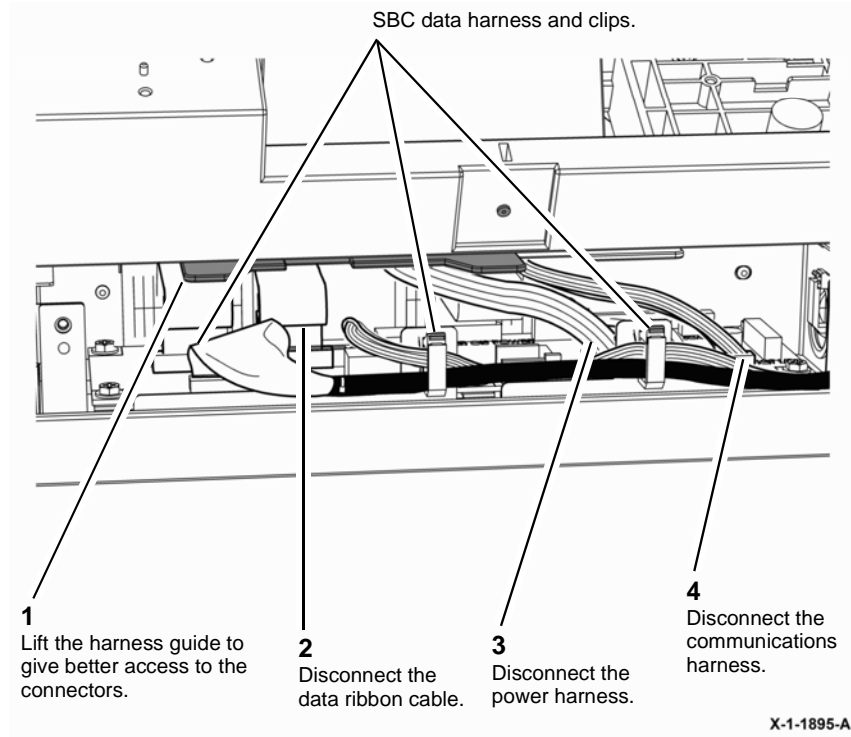


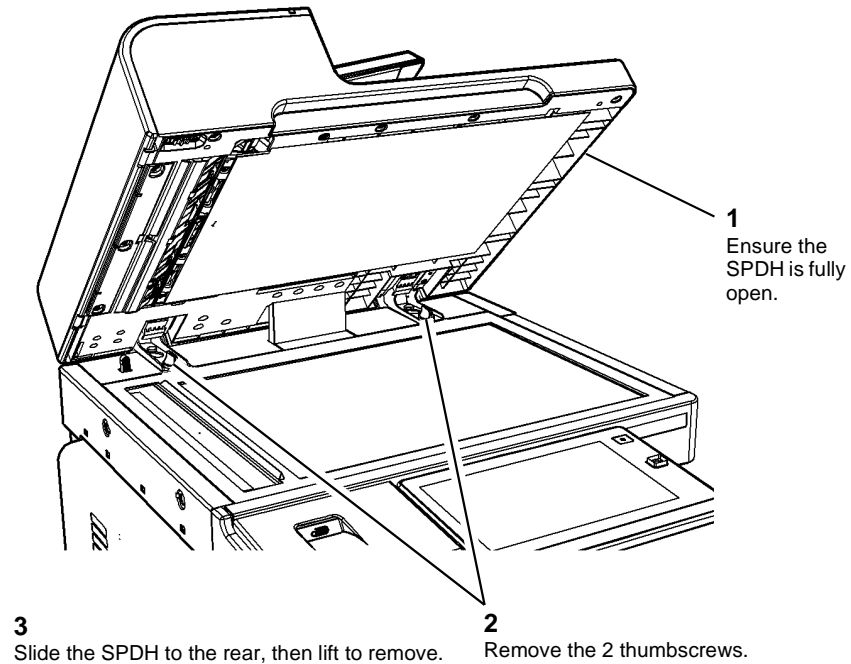
Figure 1 SPDH to Scanner Connections


WARNING

Use safe handling procedures when removing the module, [GP 16](#). The module is heavy.

NOTE: The SPDH weight is 11.1Kg (24.4lb) TBD.

- Stand at the rear of the machine, remove the SPDH, [Figure 2](#).



X-1-1896-A

Figure 2 SPDH removal

Replacement

- The replacement is the reverse of the removal procedure.
- Ensure the thumb screws are secure and fully tightened.
- If a new SPDH is installed, perform the steps that follow:
 - Select [dC131](#) location 606-482. Reset the copy count to zero.
 - Reset the document feeder feed roller count. Refer to [dC135](#) CRU/HFSI Status.
 - [ADJ 5.1](#) SPDH Height.
 - [ADJ 5.2](#) SPDH Skew.
- Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

REP 5.19 SPDH FFC Harness Assembly

Parts List on [PL 5.10](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

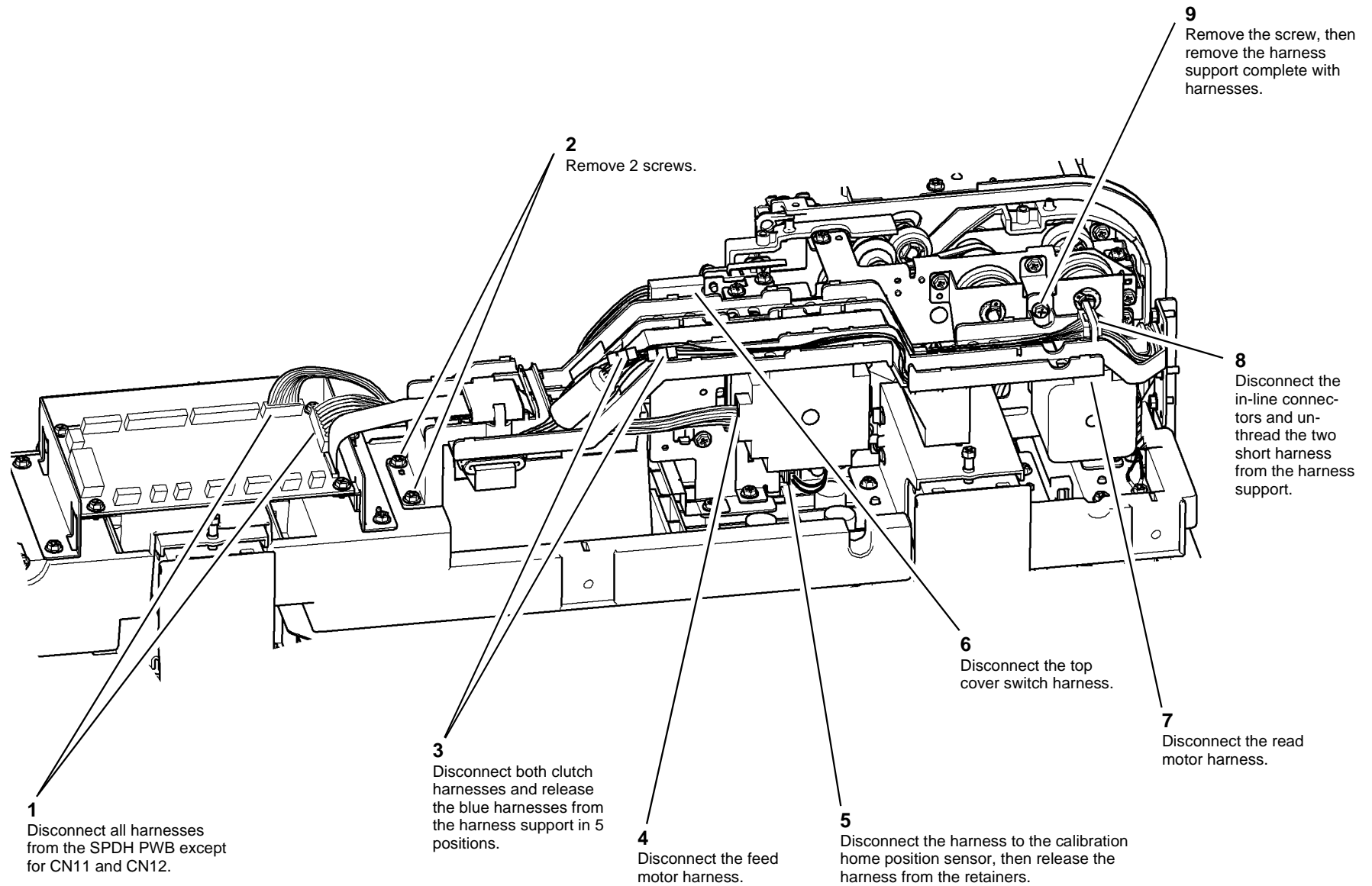
Do not remove the SPDH while the SPDH is lowered. In the lowered position the counterbalance springs are compressed and can cause injury when released.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the scanner rear cover and faraday shield, [REP 60.1](#).
2. Refer to [REP 5.18](#), figure 1, Disconnect the data ribbon cable only from the scanner PWB, by following the procedure up to steps 1 and 2.
3. Disconnect the ribbon cables from the side 2 scanner, refer to [REP 60.6](#). Perform the procedure up to step 5, but do not remove the rear fixing screw (step 4 in figure 1 of the procedure).
4. Remove the harness assembly, [Figure 1](#).



X-1-2025-A

Figure 1 Harness assembly removal

Replacement



CAUTION

When installing the rear cover, ensure that the cover is lowered vertically into place so that the feed assembly drive belt, PL 5.19 Item 13 is not pushed off the pulley by the protrusion on the rear cover.

The replacement is the reverse of the removal procedure.

REP 5.20 SPDH Read Assembly

Parts List on [PL 5.19](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



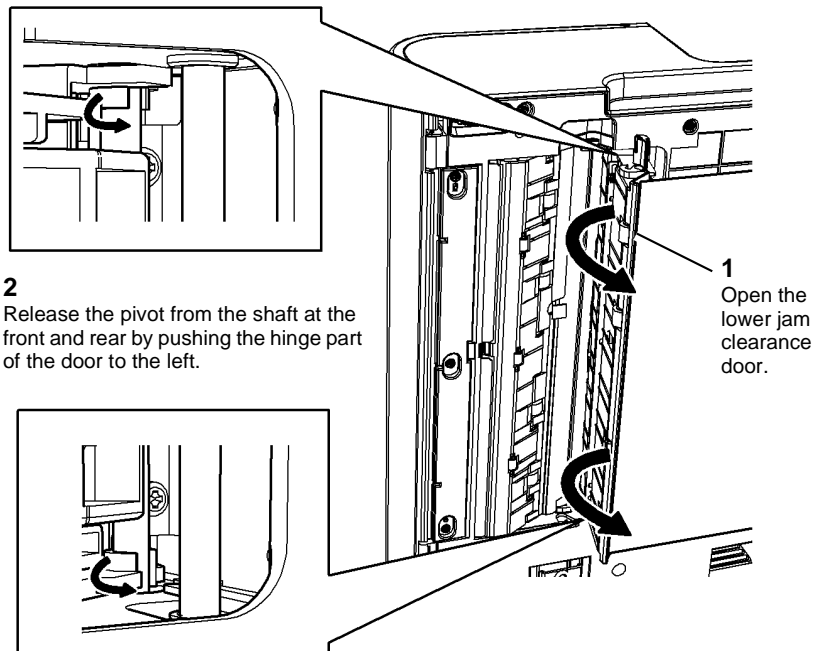
WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

CAUTION

During steps 2 and 3, support the weight of the lower jam clearance door to prevent damage to the document pad and document pad fixings.

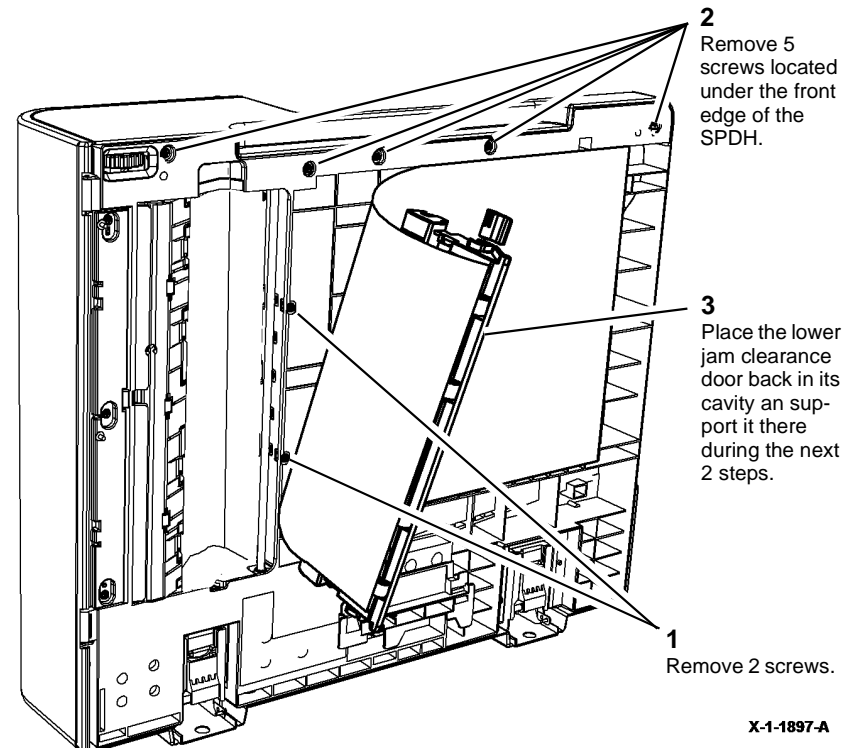
1. Release the lower jam clearance door, [Figure 1](#).



X-1-1990-A

Figure 1 Jam clearance flap release

2. Remove the lower fixings, [Figure 2](#).

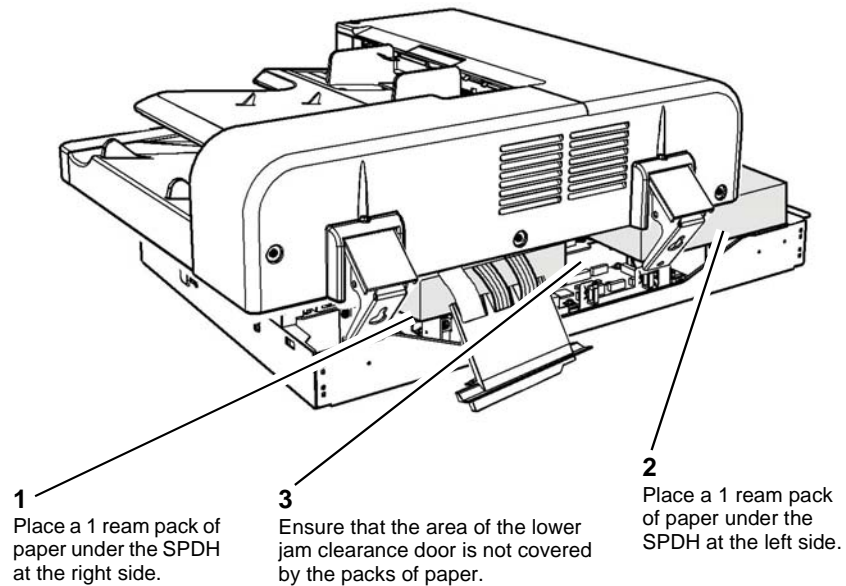


X-1-1897-A

Figure 2 Lower fixings removal

3. Remove the SPDH, [REP 5.17](#).

- Support the removed SPDH on top of the machine, [Figure 3](#).



X-1-1898-A

Figure 3 Supporting the SPDH

- Remove the complete input tray assembly, [REP 5.21](#).
- Remove the side 2 scan assembly, [REP 60.6](#).
- Remove the top cover assembly, [REP 5.1](#).

8. Remove the harness support, [Figure 4](#).

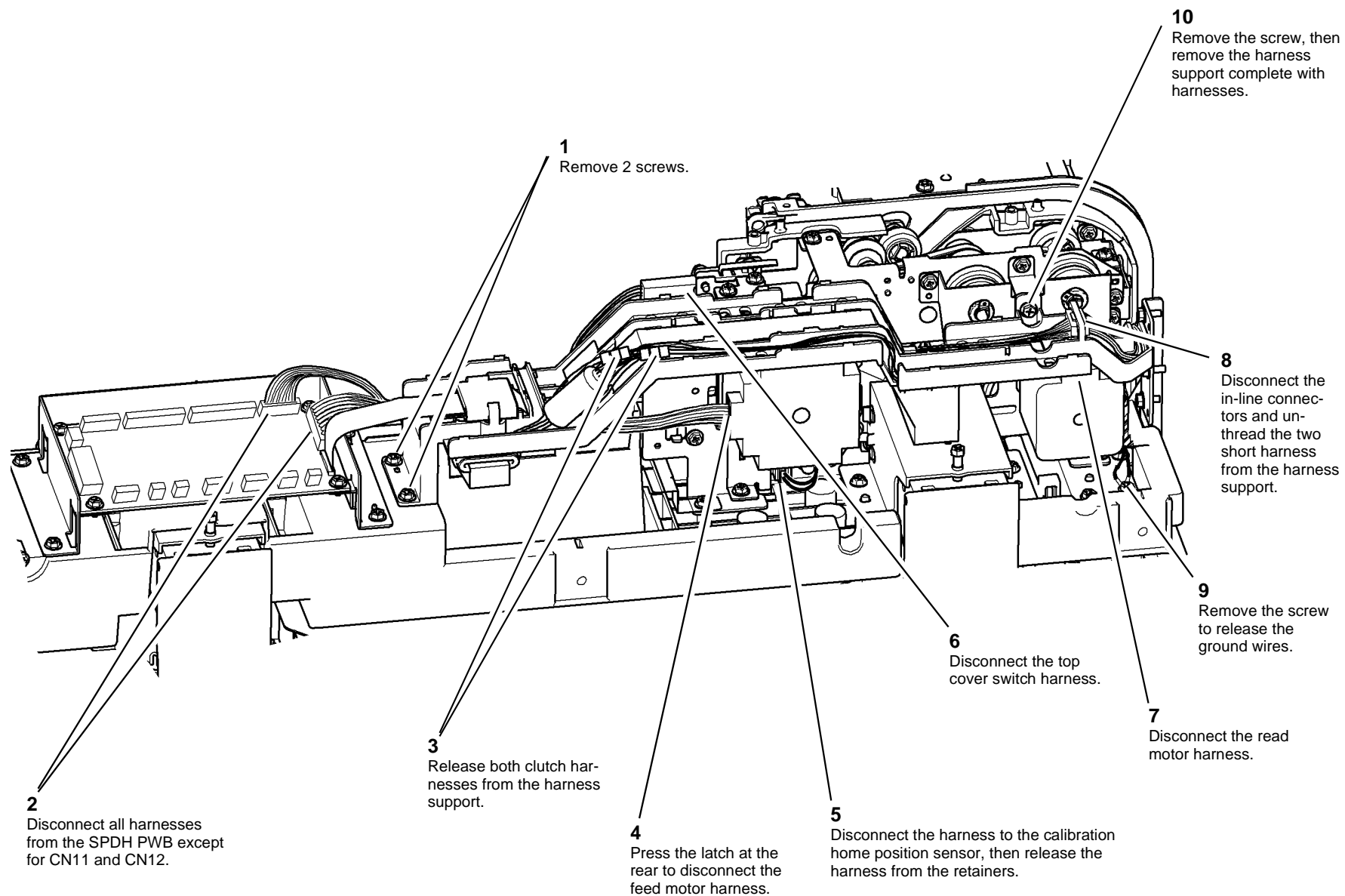
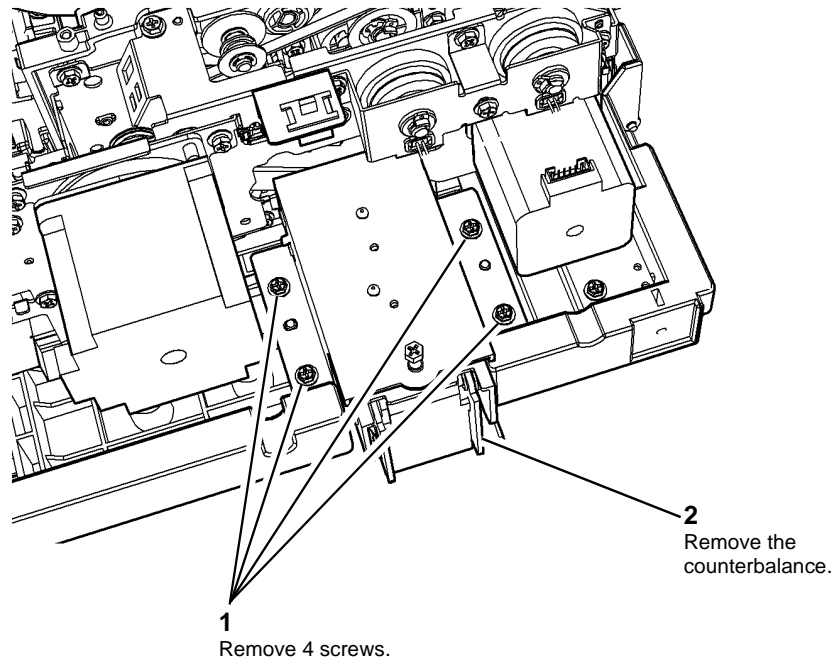


Figure 4 Harness support removal

X-1-2025-A

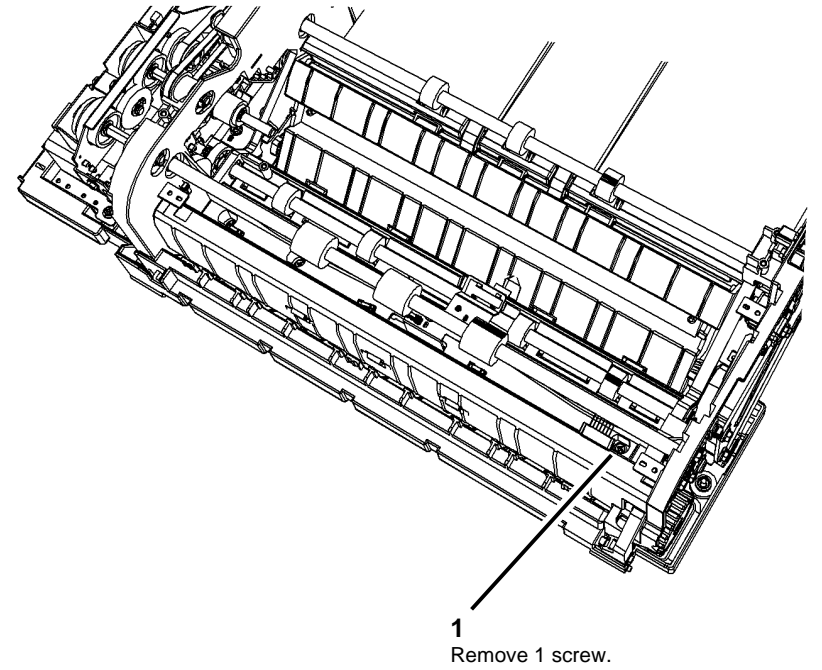
9. Remove the left counterbalance, [Figure 5](#).

10. Release the inner fixings, [Figure 6](#).



X-1-1900-A

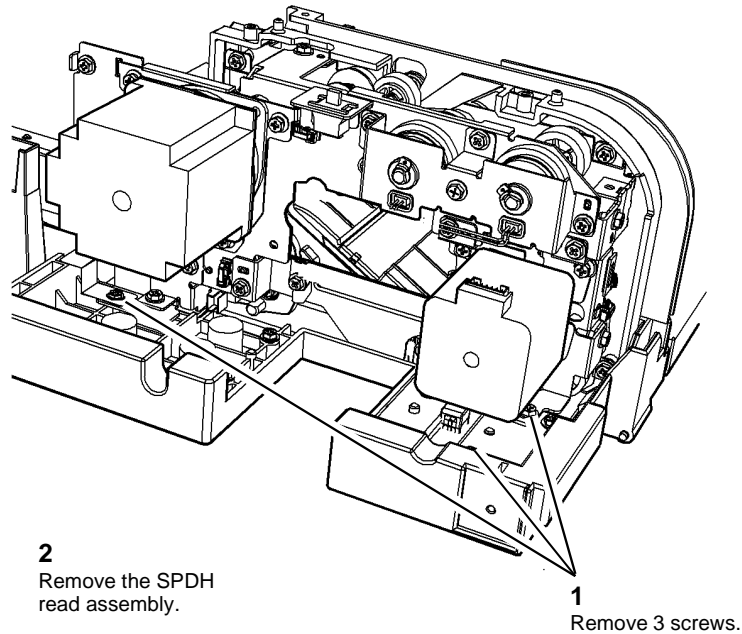
Figure 5 Left counterbalance removal



X-1-1-901-A

Figure 6 Inner fixings release.

11. Remove the SPDH read assembly, [Figure 7](#).



2
Remove the SPDH
read assembly.

1
Remove 3 screws.

X-1-1902-A

Figure 7 SPDH read assembly removal

Replacement



CAUTION

Be careful when self tapping screws are installed into plastic components, refer to [GP 6](#).

1. The replacement is the reverse of the removal procedure.
2. Perform the Side 1 SPDH Skew procedure in the [IQ7](#) Document Glass and Scanner IQ Defects RAP.
3. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

REP 5.21 Tray Elevator Motor Assembly

Parts List on [PL 5.18](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Do not remove the SPDH while the SPDH is lowered. In the lowered position the counterbalance springs are compressed and can cause injury when released.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Perform steps 1 and 2 of [REP 5.4](#) to release the input tray upper assembly.

- Remove the tray elevator motor assembly, [Figure 1](#).

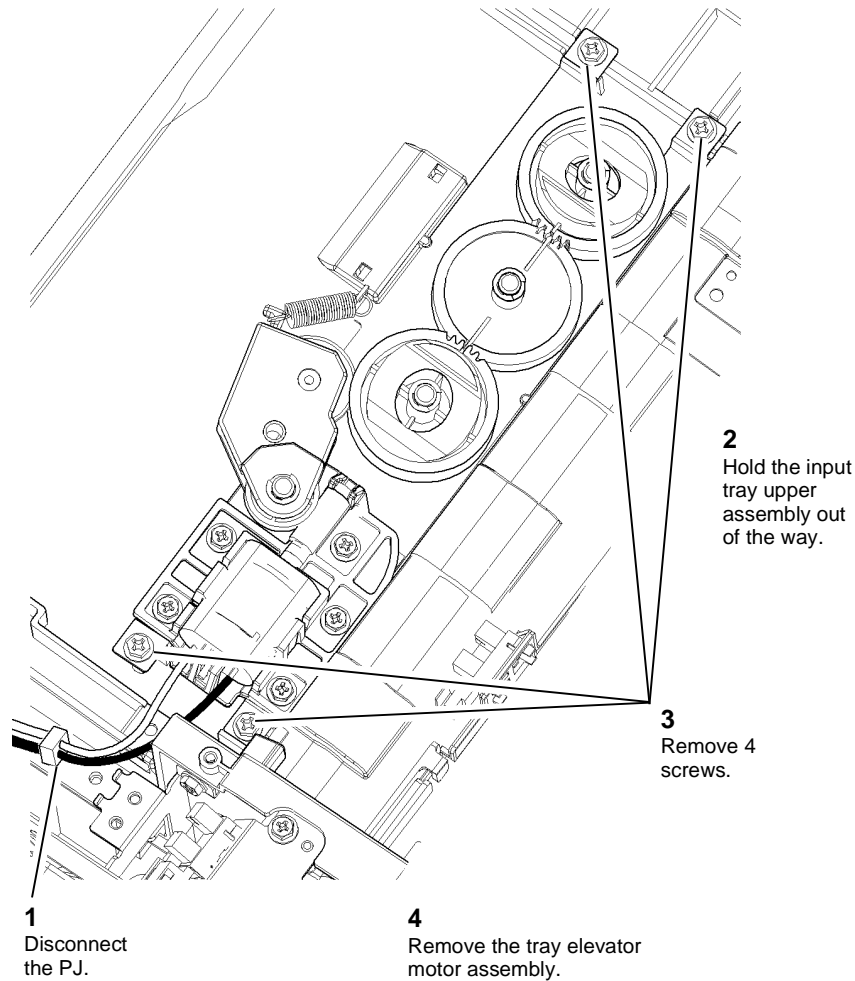


Figure 1 Motor assembly removal

X-1-1875-A

Replacement

The replacement is the reverse of the removal procedure.

REP 5.22 SPDH Drives

Parts List on [PL 5.19](#)

Removal

WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

WARNING

Take care during this procedure. Sharp edges may be present that can cause injury. This procedure deals with all of the components within the SPDH drive kit, [PL 5.19 Item 23](#).

- Remove the read assembly, [REP 5.20](#).
- Remove the feed clutch and read clutch, [REP 5.14](#).
- Prepare to remove the read motor support bracket and read motor, [Figure 2](#).

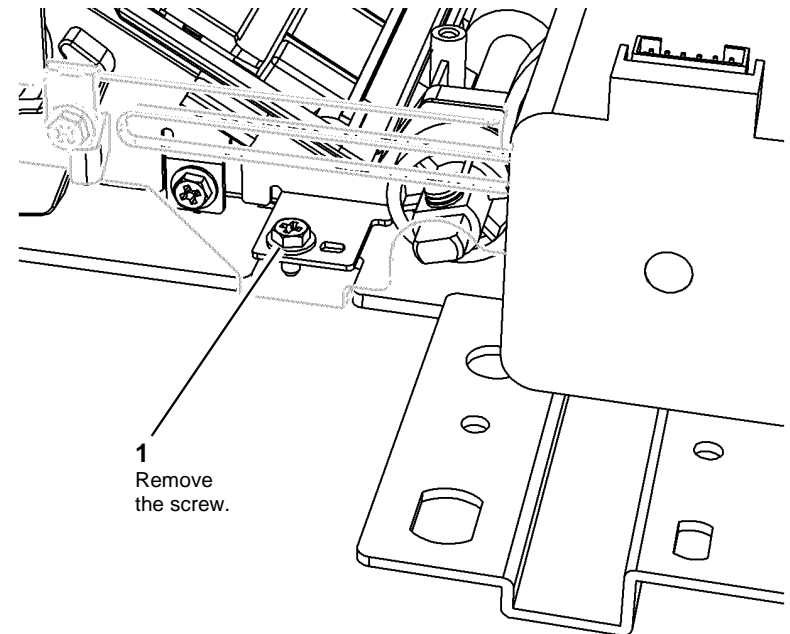


Figure 1 Preparation

X-1-1903-A

- Remove the read motor support bracket and read motor, [Figure 3](#).

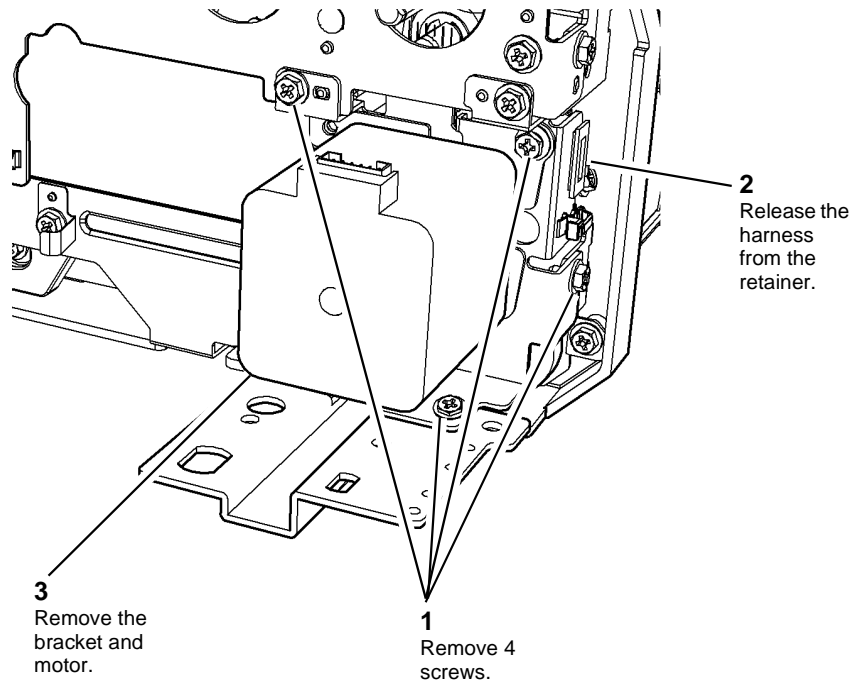


Figure 2 Read motor and bracket

X-1-1904-A



When removing the feed motor and bracket, take care not to damage the calibration home position sensor.

- Remove the feed motor and support bracket, [Figure 3](#).

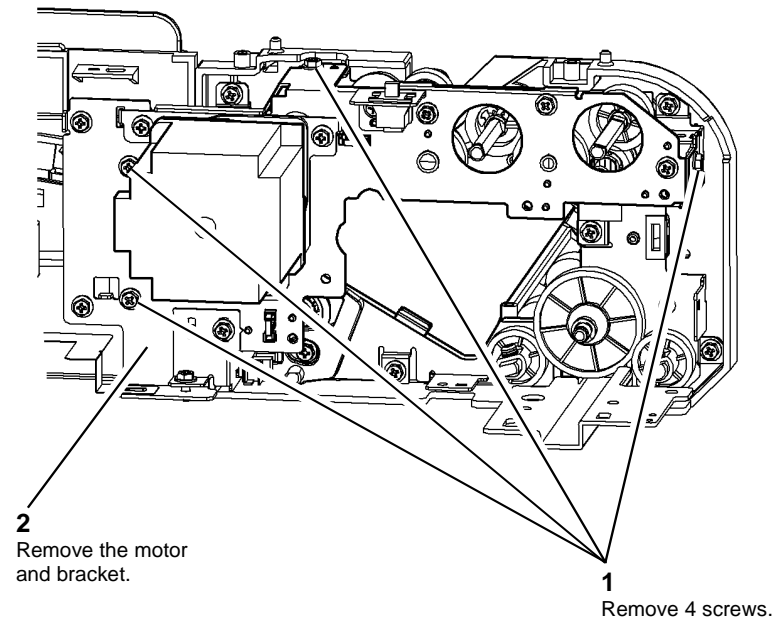


Figure 3 Feed motor and bracket

X-1-1905-A

Replacement

- The replacement is the reverse of the removal procedure.
- Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

REP 5.23 Complete Input Tray Assembly

Parts List on [PL 5.30 Item 1](#).

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

NOTE: The input tray components can be removed separately, refer to [REP 5.4](#).

1. Remove 5 screws then remove the SPDH rear cover, [PL 5.10 Item 1](#).
2. Remove 4 screws then remove the SPDH front cover, [PL 5.10 Item 17](#).
3. Prepare to remove the input tray assembly, [Figure 1](#).

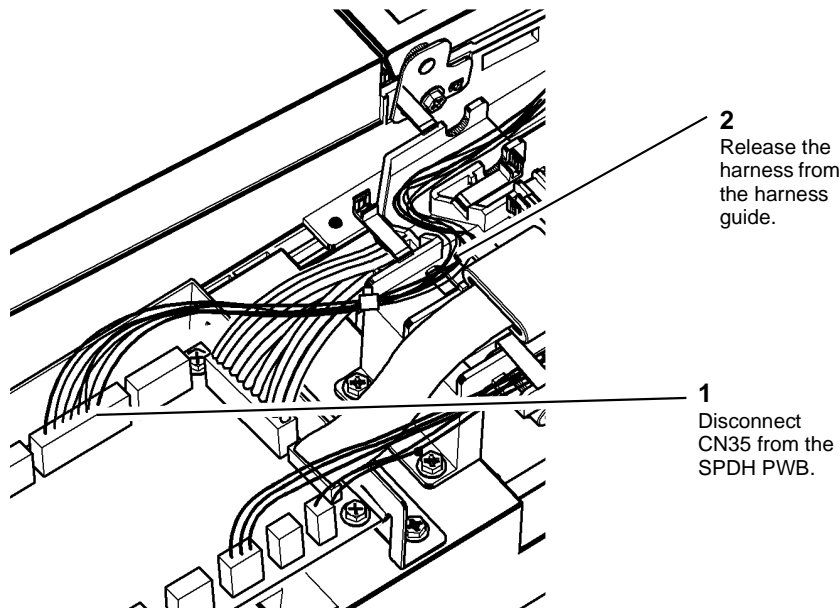


Figure 1 Preparation

X-1-1906-A

4. Prepare to remove the input tray assembly, [Figure 2](#).

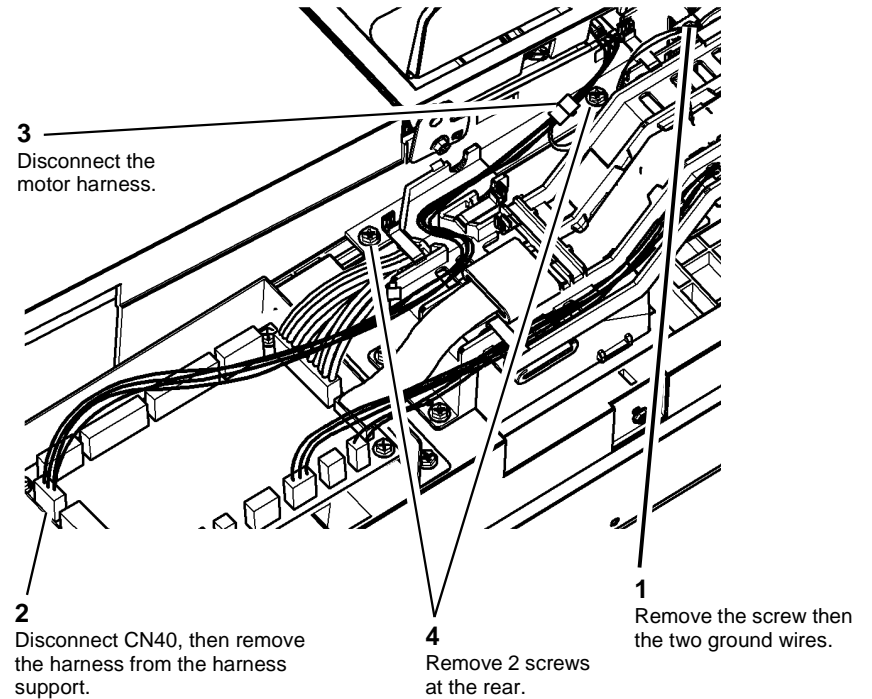
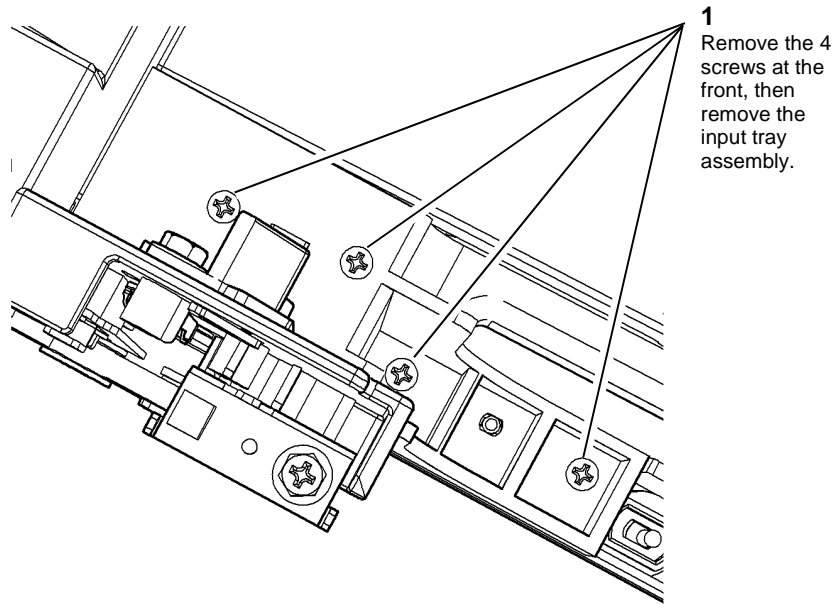


Figure 2 Preparation

X-1-1907-A

5. Remove the input tray assembly, [Figure 3](#).



X-1-1908-A

Figure 3 Input tray removal

Replacement



Be careful when self tapping screws are installed into plastic components, refer to [GP 6](#).



When installing the rear cover, ensure that the cover is lowered vertically into place so that the feed assembly drive belt, [PL 5.19 Item 13](#) is not pushed off the pulley by the protrusion on the rear cover.

1. The replacement is the reverse of the removal procedure.
2. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

REP 10.1 Inverter Assembly

Parts List on [PL 10.10](#), [PL 10.11](#), [PL 10.13](#)

Removal

NOTE: Removal and replacement videos of this procedure are available on the EDOC. The videos are accessible from the Library menu on the Service Interface.



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

Perform the appropriate procedure dependent on the machine configuration:

- [Horizontal Transport Inverter Assembly](#).
- [Centre Output Tray Inverter Assembly](#).

Horizontal Transport Inverter Assembly

1. Open the front door.
2. Open the left door.
3. Remove the print cartridge, [PL 90.17 Item 9](#), then place in a black bag.
4. Remove the horizontal transport, [REP 10.6](#).
5. Disconnect the harnesses to the inverter, [Figure 1](#).

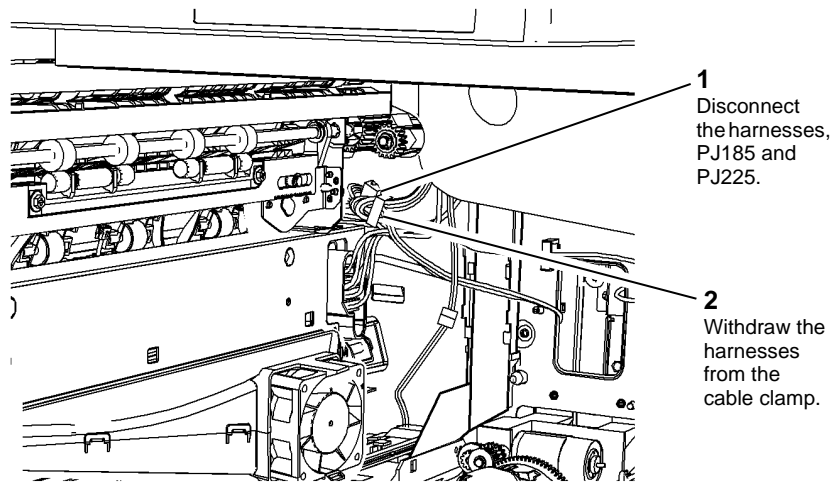


Figure 1 Harness disconnection

X-1-1149-A

6. Prepare to remove the inverter assembly, [Figure 2](#).

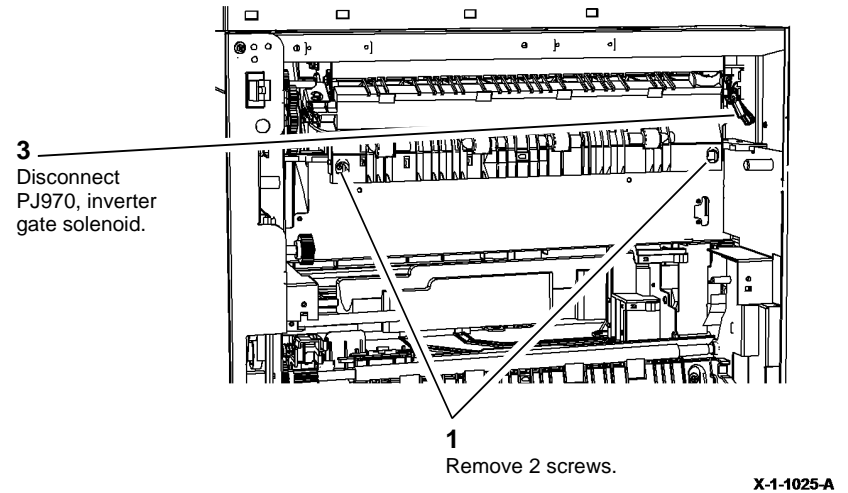


Figure 2 Inverter removal preparation

X-1-1025-A

7. Remove the exit drive assembly, [REP 10.2](#).
8. Remove the inverter locator, [Figure 3](#).

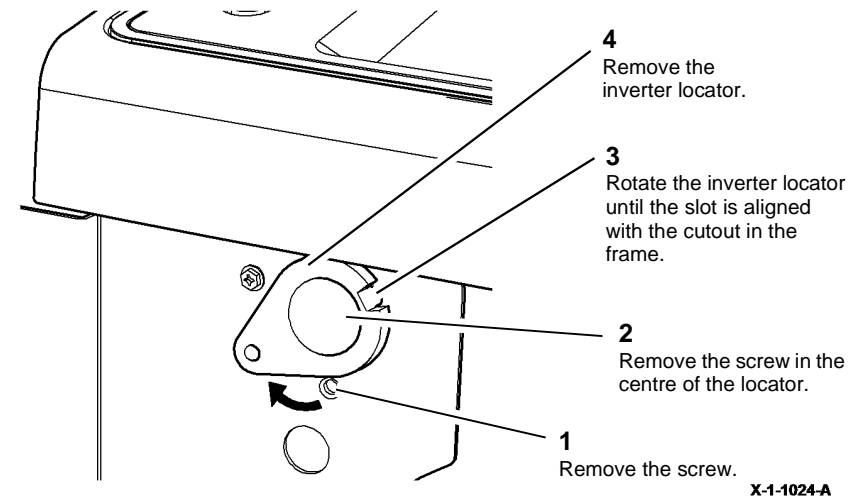


Figure 3 Inverter locator removal

X-1-1024-A

- Remove the inverter assembly, [Figure 4](#).

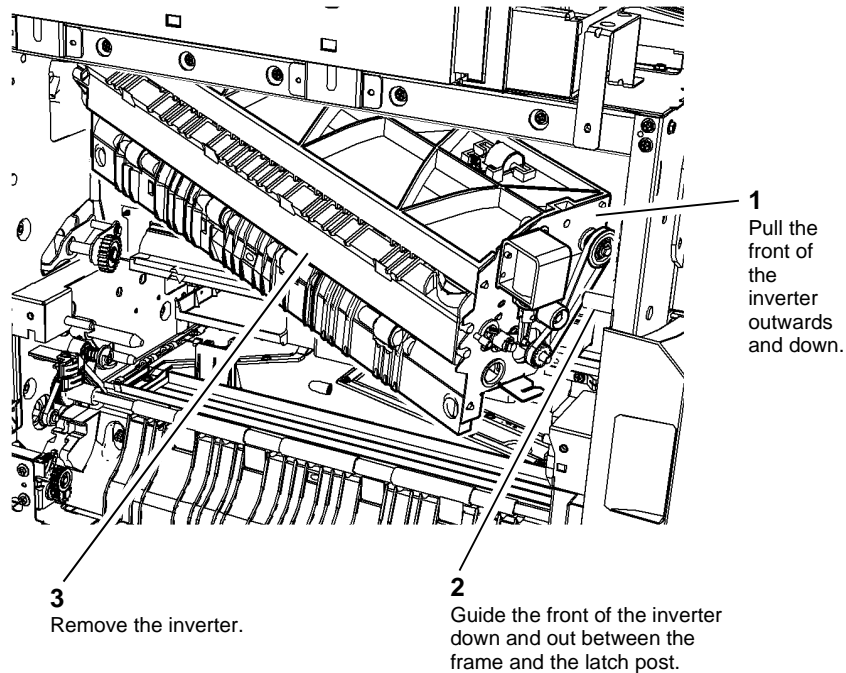


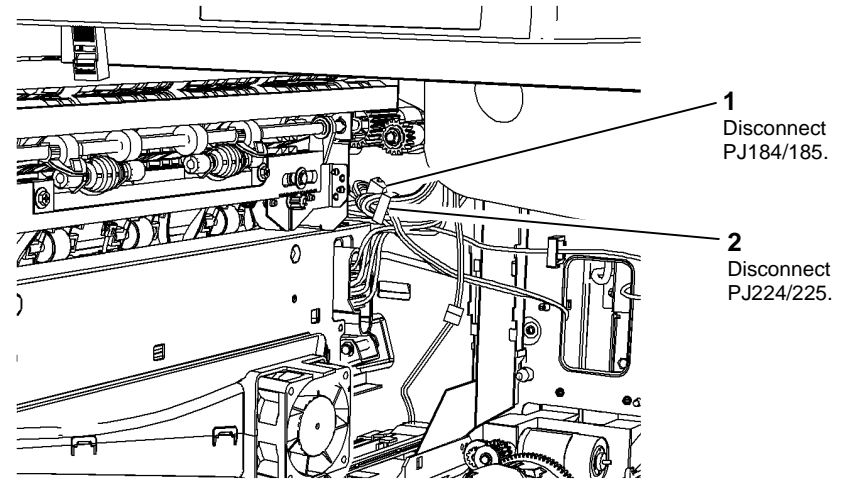
Figure 4 Inverter removal

Centre Output Tray Inverter Assembly

- Open the front door.
- Open the left door.
- Remove the print cartridge, [PL 90.17 Item 9](#), then place in a black bag.
- Remove the diverter output guide, [PL 10.10 Item 3](#).
- Remove the centre output tray, [REP 28.1](#).

X-1-1026-A

- Disconnect the harnesses to the inverter, [Figure 1](#).



X-1-1027-A

Figure 5 Harness disconnection

- Remove the centre exit cover, [REP 28.1](#).
- Prepare to remove the inverter assembly. Refer to [Figure 2](#).
- Remove the exit drive assembly, [REP 10.2](#).
- Remove the inverter locator. Refer to [Figure 3](#).
- Remove the inverter assembly. Refer to [Figure 4](#).

Replacement



Screws must be replaced in the exact reverse of the removal order shown to ensure the optimum alignment of the inverter assembly.

- The replacement is the reverse of the removal procedure.
- Ensure that the inverter harnesses are not trapped between the inverter and the machine frame.
- Ensure that the inverter harness connectors, PJ185 and PJ225 do not interfere with the drive gears. Refer to [Figure 5](#).
- Ensure that the bail arm assembly, [PL 10.11 Item 25](#), is not trapped between the inverter and the centre output tray, (centre output tray only).

REP 10.2 Exit Drive Assembly

Parts List on [PL 10.14](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

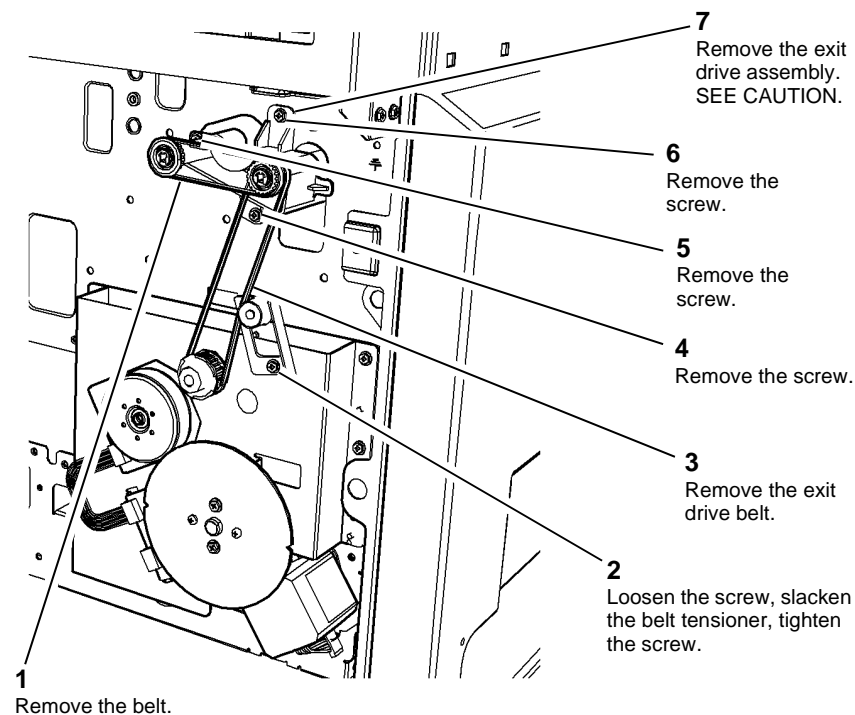
1. Remove the rear cover, [REP 28.2](#).



CAUTION

Take care to not damage the wiring harness that passes over the top of the exit drive assembly, inside the rear frame.

2. Remove the exit drive assembly, [Figure 1](#).



X-1-1028-A

Figure 1 Exit drive assembly removal

Replacement



CAUTION

Screws must be replaced in the exact reverse of the removal order shown to ensure the optimum alignment of the exit drive assembly.

1. Check that the gears are adequately greased, if necessary perform the Exit Drive Assembly procedure of [ADJ 40.1](#).
2. The replacement is the reverse of the removal procedure. SEE CAUTIONS.

REP 10.3 Inverter Motor

Parts List on [PL 10.11](#)

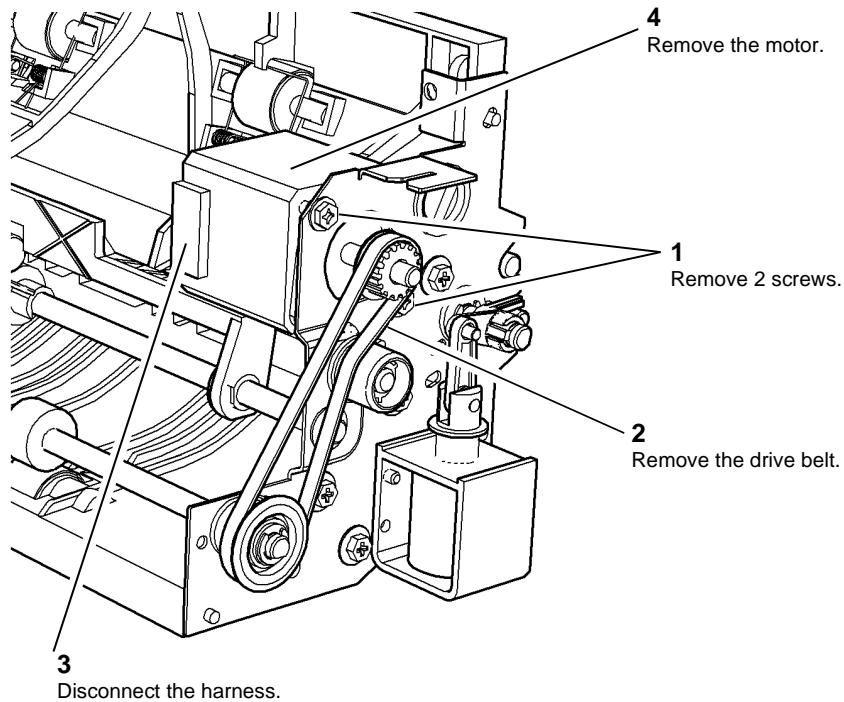
Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the inverter assembly, [REP 10.1](#).
2. Remove the inverter motor, [Figure 1](#).



X-1-1030-A

Figure 1 Inverter motor removal

Replacement

The replacement is the reverse of the removal procedure.

REP 10.4 Offset Motor

Parts List on [PL 10.11](#)

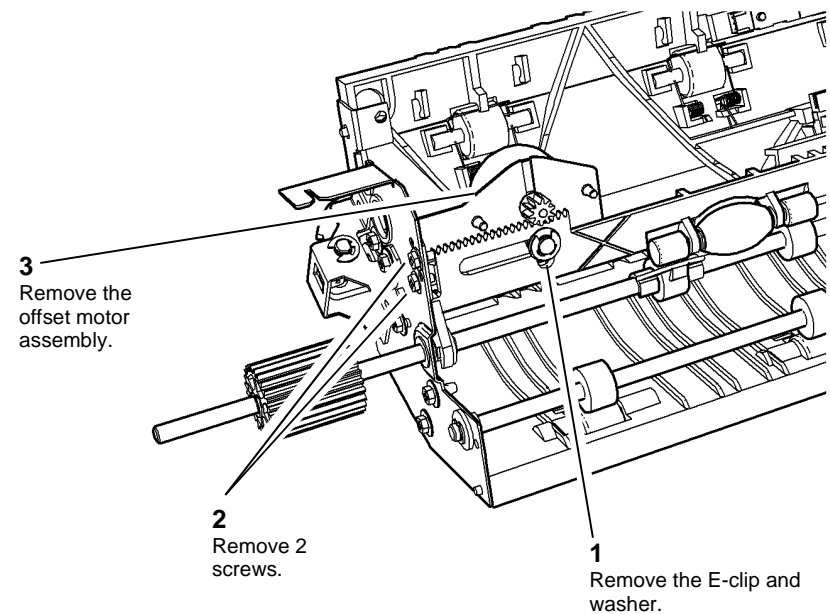
Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the inverter assembly, [REP 10.1](#).
2. Remove the offset motor assembly, [Figure 1](#).



X-1-1031-A

Figure 1 Offset motor removal

Replacement

The replacement is the reverse of the removal procedure.

REP 10.5 Exit Roll and Offset Shuttle

Parts List on [PL 10.11](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the inverter assembly, [REP 10.1](#).
2. Remove the exit roll and offset shuttle assembly, [Figure 1](#).

2

Remove 3 E-clips (centre tray) or 4 E-clips (horizontal transport) marked A, and the exit drive gear.

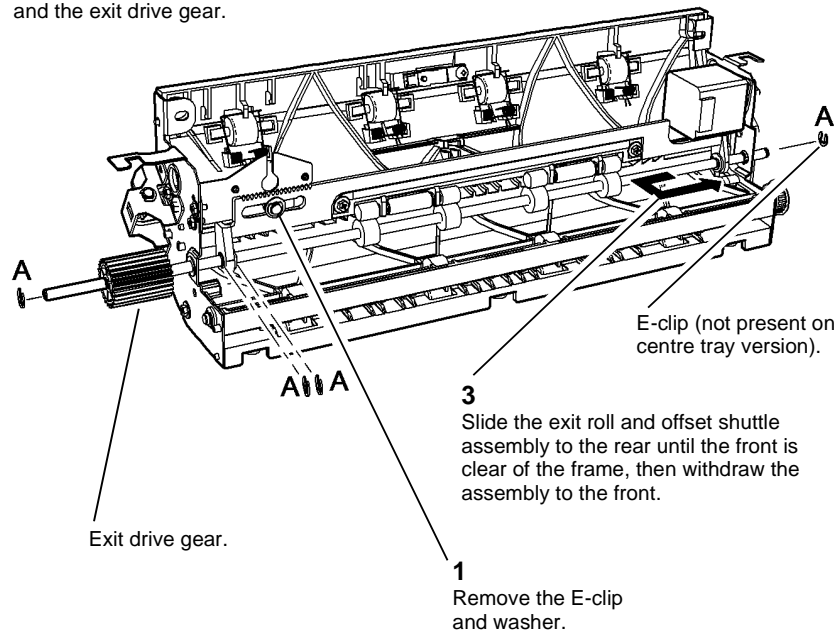


Figure 1 Shaft and shuttle removal

Replacement

Reinstallation is the reverse of the removal procedure.

REP 10.6 Horizontal Transport Assembly

Parts List on [PL 10.15](#)

Removal

NOTE: Removal and replacement videos of this procedure are available on the EDOC. The videos are accessible from the Library menu on the Service Interface.



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Un-dock the finisher. Refer to:
 - [REP 12.13-110](#) LCSS Un-Docking.
 - [REP 12.13-150](#) LVF BM Un-Docking.
 - [REP 12.13-171](#) HVF/HVF BM Un-Docking.

- Remove the horizontal transport assembly, [Figure 1](#).

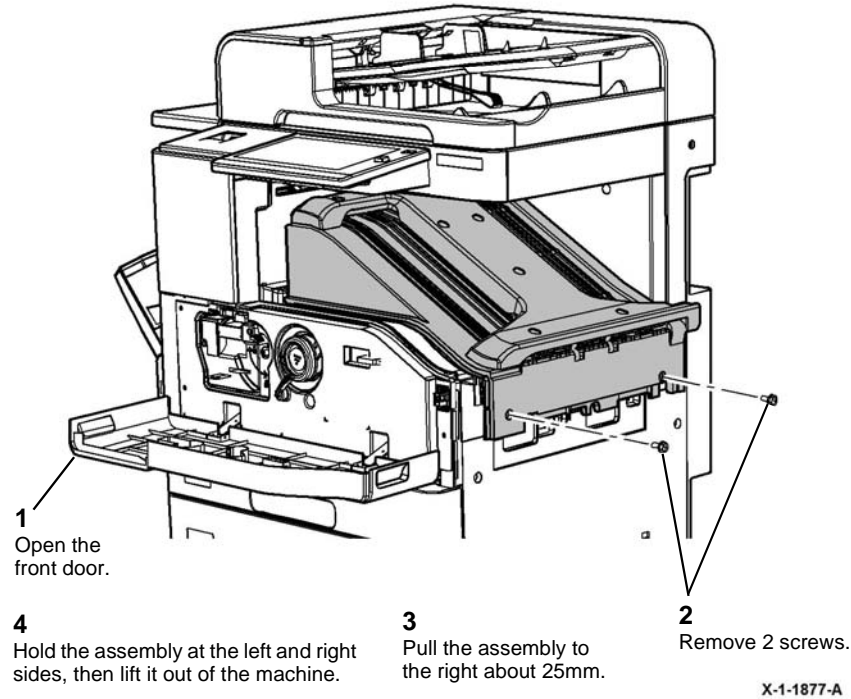


Figure 1 Removal

Replacement

Reinstallation is the reverse of the removal procedure.

REP 10.7 Horizontal Transport Motor and Drive Belts

Parts List on [PL 10.16](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

- Remove the horizontal transport assembly, [REP 10.6](#).
- Remove the horizontal transport motor or horizontal transport drive belt, as necessary, [Figure 1](#).

NOTE: If removing only the drive belt, perform steps 2 and 3 only in [Figure 1](#).

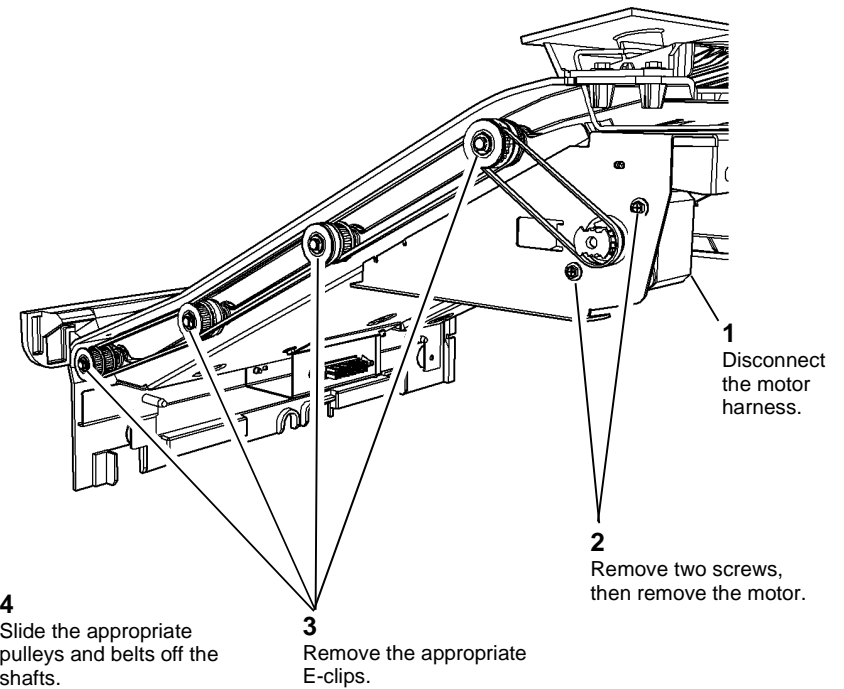


Figure 1 Motor or belt removal

Replacement

- The replacement is the reverse of the removal procedure.

REP 10.8 Jam Clearance Paper Guide & Hinge Assembly

Parts List on [PL 10.13](#)

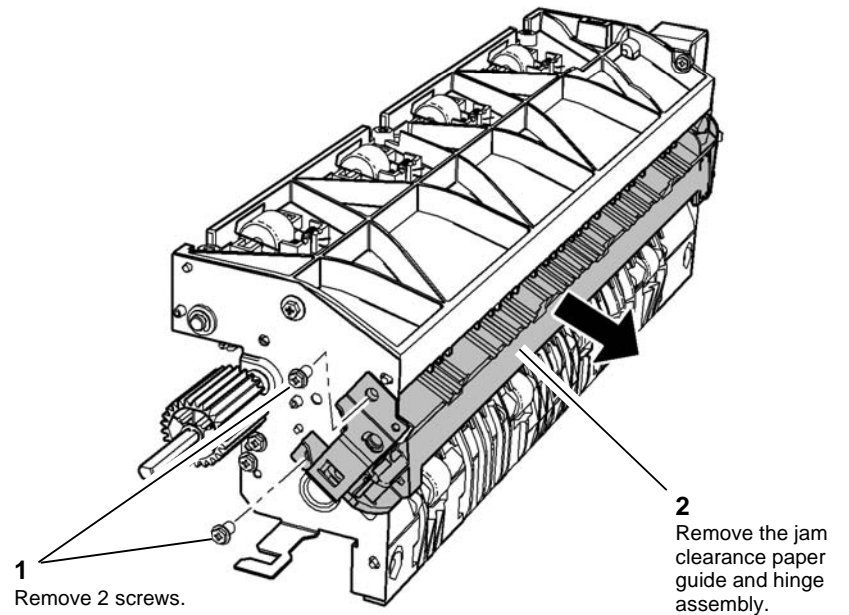
Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the Inverter Assembly, [REP 10.1](#).
2. Remove the jam clearance paper guide & hinge assembly, [Figure 1](#).



X-1-1452-A

Figure 1 Assembly removal

Replacement

1. The replacement is the reverse of the removal procedure.

REP 10.9 Centre Output Tray

Parts List on [PL 10.17](#)

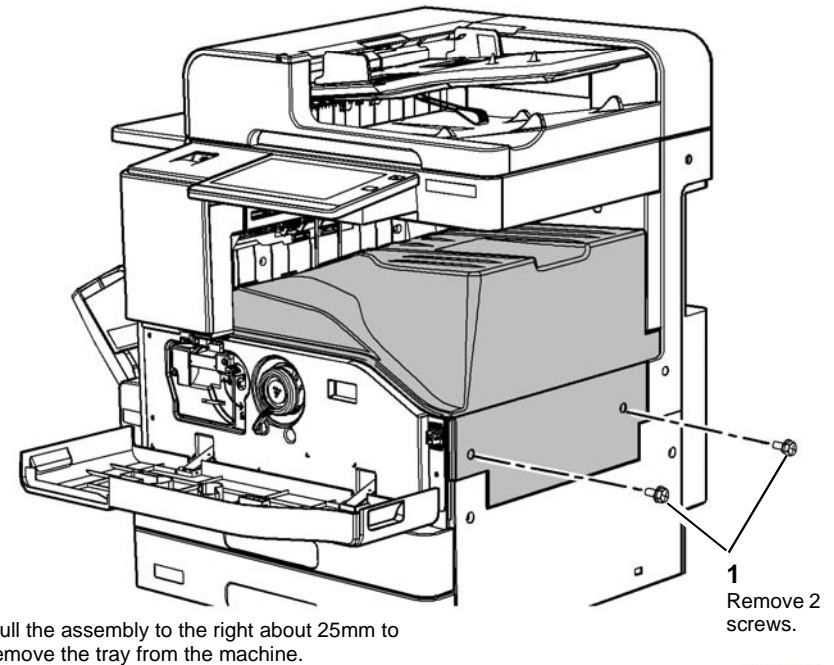
Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the front door.
2. Remove the centre output tray, [Figure 1](#).



X-1-2012-A

Figure 1 Removal

Replacement

1. Replacement is the reverse of the removal procedure.

REP 12.1-110 2K LCSS Covers

Parts List on [PL 12.10](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



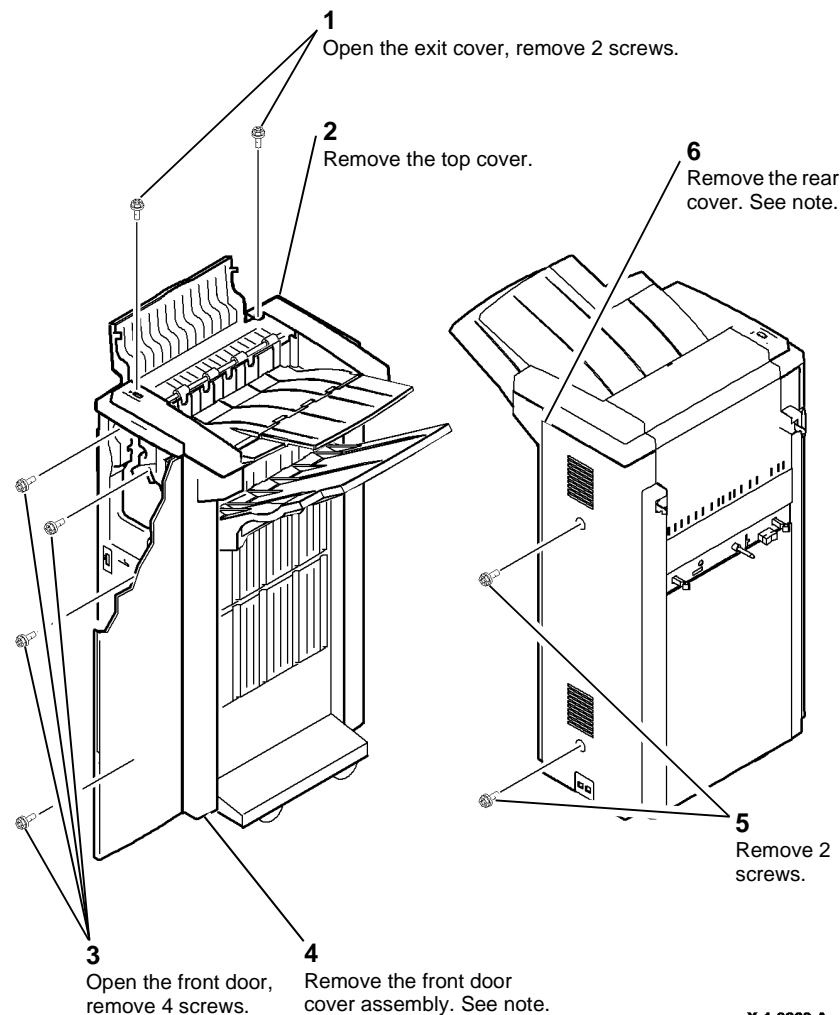
WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

NOTE: Removing the top cover first will allow easy removal of the front door cover assembly and rear cover.

NOTE: Later versions of the 2K LCSS rear cover and front door cover assembly may be additionally retained by protrusions that locate in holes in the frame edges. These protrusions are best released by pulling on the bottom section of the covers.

Remove the covers, [Figure 1](#).



X-1-0263-A

Figure 1 Covers removal

Replacement

The replacement is the reverse of the removal procedure.

REP 12.2-110 Input Drive Belt and Transport Motor 1

Parts List on [PL 12.40](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the 2K LCSS top cover and rear cover, [REP 12.1-110](#).
2. Remove transport motor 1 and the input drive belt, [Figure 1](#).

Replacement

1. Place the input drive belt around the pulleys.
2. Install the motor screws, but do not tighten.
3. Install the spring
4. Rotate the shaft by hand to ensure the belt runs smoothly over the pulleys and allows the spring to tension the belt, [ADJ 12.3-110](#).
5. Tighten the motor screws and re-connect the harness.
6. Install the 2K LCSS top cover and rear cover, [REP 12.1-110](#).

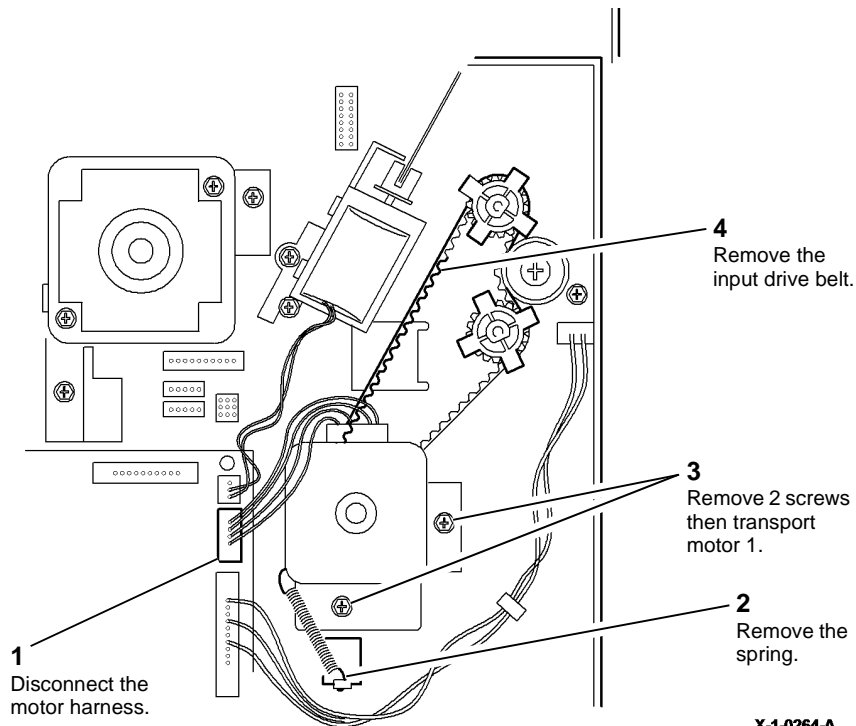


Figure 1 Component removal

REP 12.3-110 Intermediate Paper Drive Belt

Parts List on [PL 12.60](#)

Removal

NOTE: A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.



WARNING

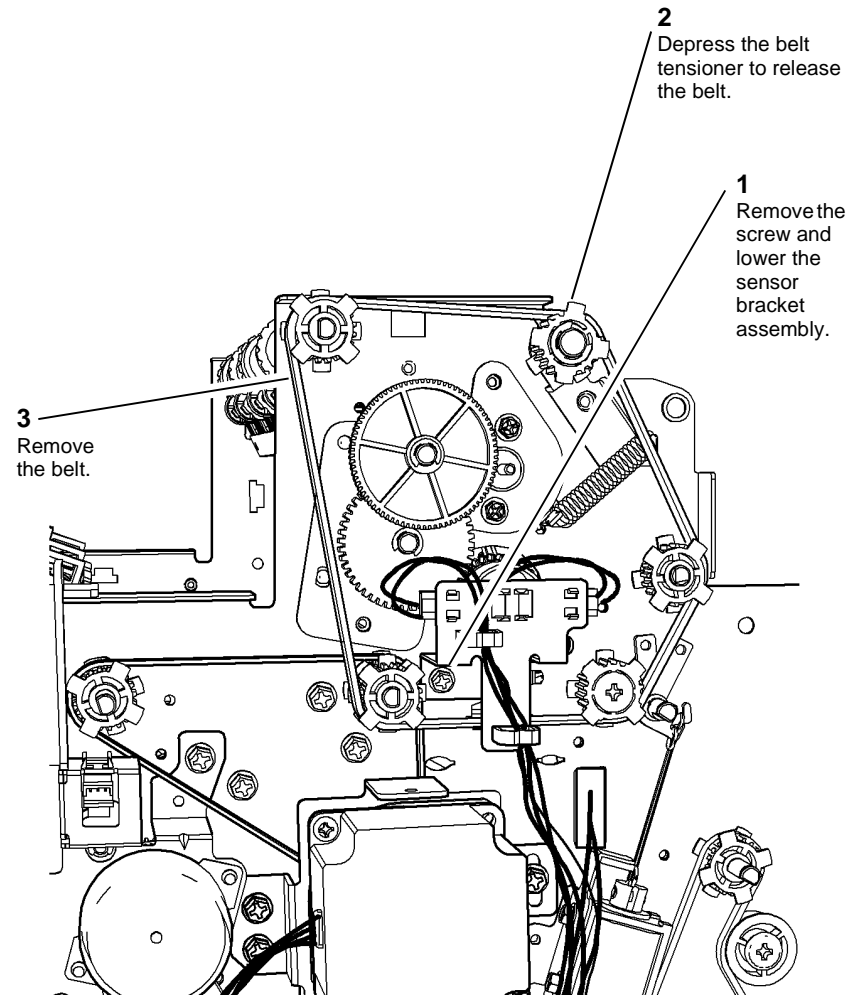
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the 2K LCSS top cover and rear cover, [REP 12.1-110](#).
2. Remove the intermediate paper drive belt, [Figure 1](#).



X-1-0265-A

Figure 1 Belt removal

Replacement

1. If necessary, lubricate the belt tensioner, refer to [ADJ 40.1](#).
2. Install the belt over the pulleys, ensuring that the belt is on all 5 pulleys.

NOTE: Two of the pulleys are free to slide along the shaft. Ensure that the belt is correctly located on these pulleys.

3. The remainder of the reinstallation procedure is the reverse of the removal procedure.

REP 12.4-110 Paper Output Drive Belt and Transport Motor

2

Parts List on [PL 12.60](#)

Removal


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the 2K LCSS top cover and rear cover, [REP 12.1-110](#).
2. Remove the intermediate paper drive belt, [REP 12.3-110](#).
3. Remove the paper output drive belt and transport motor 2, [Figure 1](#).

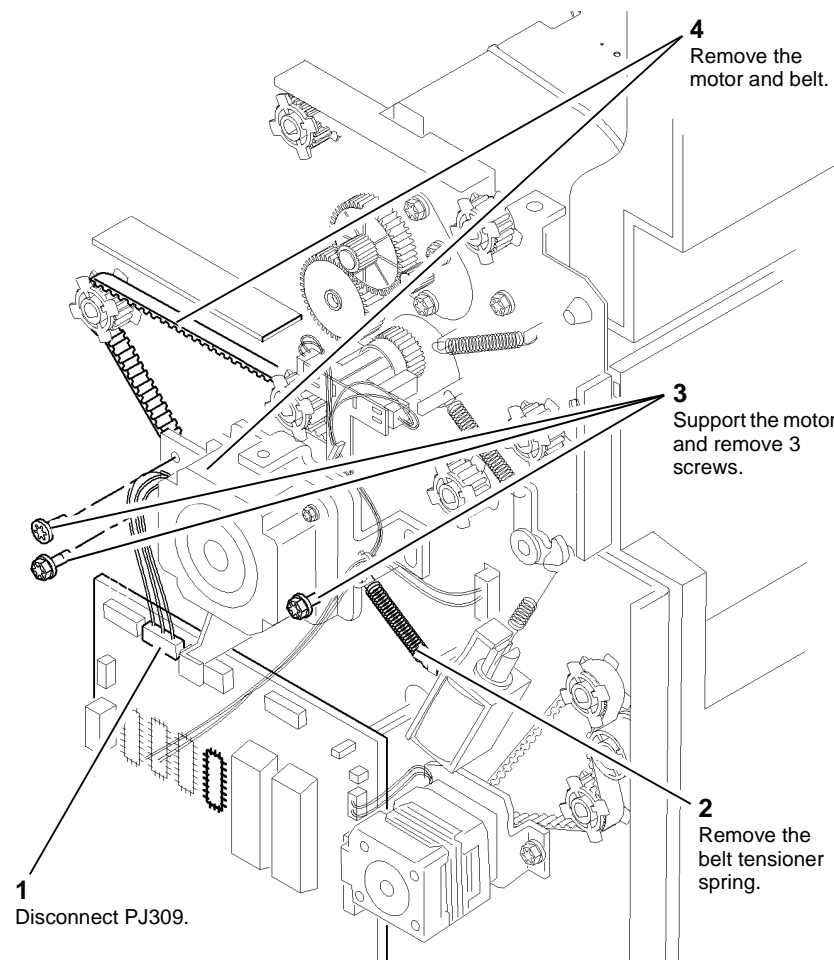


Figure 1 Component removal

Replacement

1. Install the paper output drive belt over the pulleys.
2. Install the transport motor 2 pivot shoulder screw and fully tighten.
3. Install the 2 motor mounting bracket securing screws, but do not tighten them.
4. Install the belt tensioner spring.
5. Rotate the belt by hand to allow the spring to tension the belt, [ADJ 12.3-110](#). Tighten the screws.
6. Install the intermediate drive belt, [REP 12.3-110](#).
7. Install the 2K LCSS top cover and rear cover, [REP 12.1-110](#).

REP 12.5-110 Bin 1 Drive Belts

Parts List on [PL 12.30](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the 2K LCSS covers, [REP 12.1-110](#).



CAUTION

Keep all of the rear components as a set. The set of components on the rear are different from the front components.



CAUTION

Ensure that ESD procedures are observed during step 6 of [Figure 1](#).

2. Remove the bin 1 drive belt (rear) [Figure 1](#).

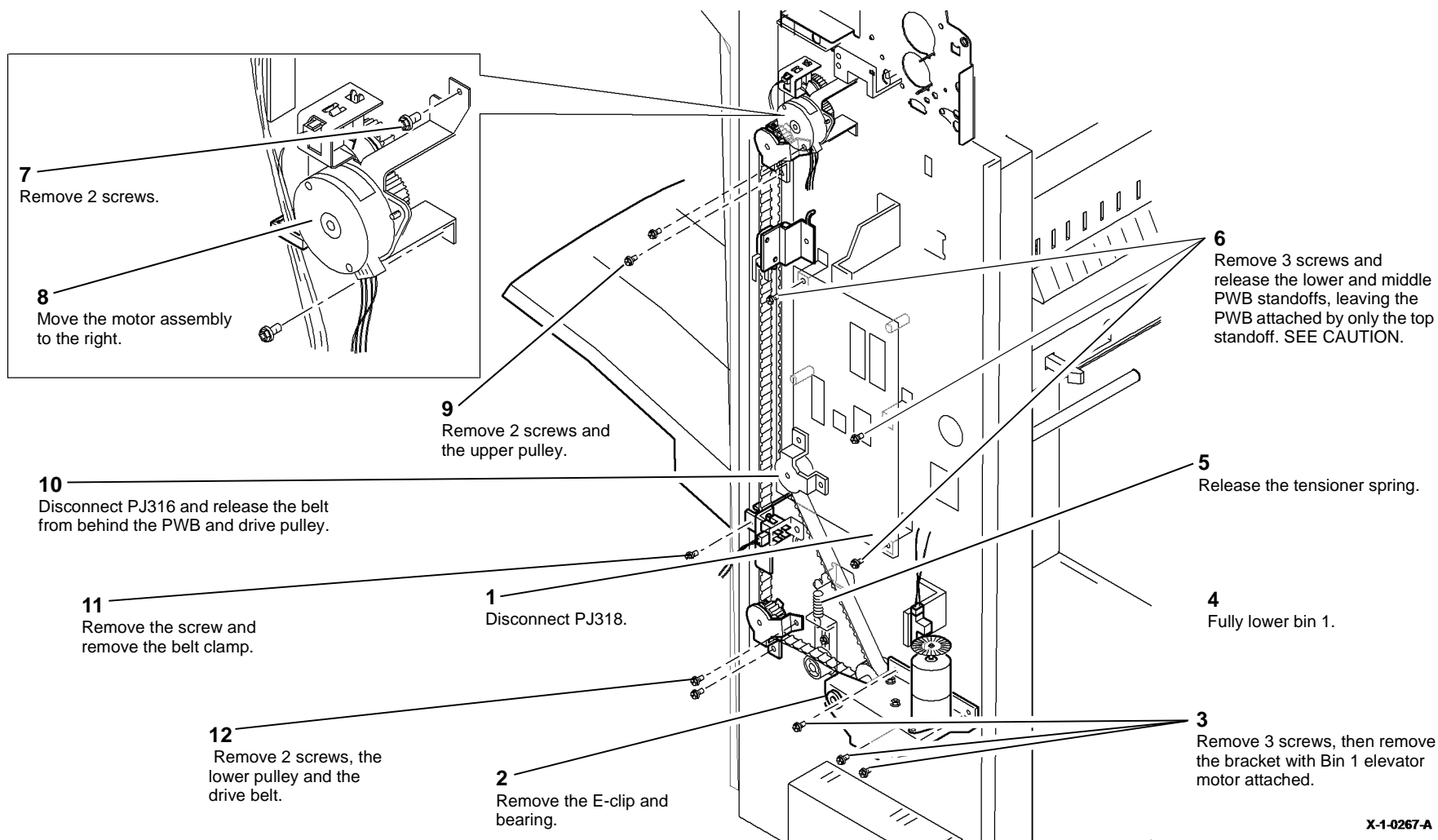


Figure 1 Rear belt removal

X-1-0267-A

!
CAUTION

Keep all of the front components as a set. The set of components on the front are different from the rear components.

3. Remove the bin 1 drive belt (front) [Figure 2](#).

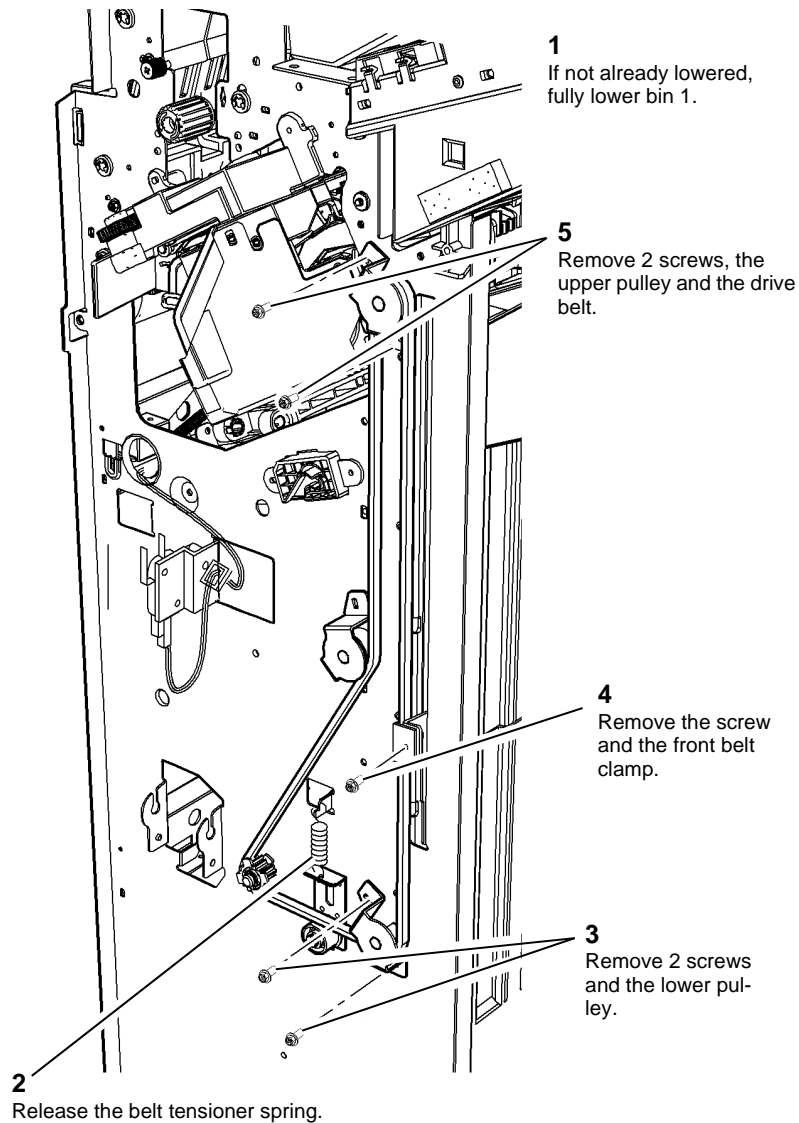


Figure 2 Front belt removal

Replacement

NOTE: Ensure the correct set of components are used for the front and the rear of the 2K LCSS.

1. Check that bores of the pulleys and idlers are adequately greased, if necessary perform the 2K LCSS Bin 1 Drive Belt Pulleys and Idler procedure of [ADJ 40.1](#).
2. Check that belt tensioners are adequately greased, if necessary perform the 2K LCSS Drive Belt Tensioners procedure of [ADJ 40.1](#).
3. The replacement is the reverse of the removal procedure.

NOTE: The bin 1 level can critically affect the overall stack registration. Refer to [ADJ 12.1-110](#) if adjustment is necessary.

4. Install the 2K LCSS covers, [REP 12.1-110](#).

REP 12.6-110 Tamper Assembly

Parts List on [PL 12.45](#)

Removal

NOTE: A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the 2K LCSS covers, [REP 12.1-110](#).
2. Prepare to remove the tamper assembly, [Figure 1](#).

4

Release the harness from the groove.

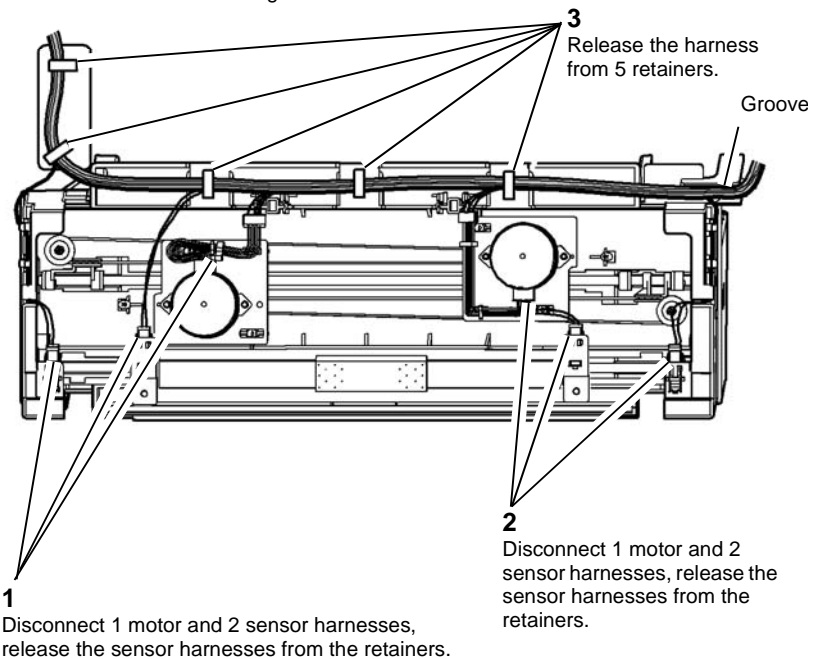


Figure 1 Preparation

X-1-0269-A

3. Remove the tamper assembly, [Figure 2](#).

NOTE: For clarity, bin 1, [PL 12.10 Item 10](#) has been omitted from [Figure 2](#).

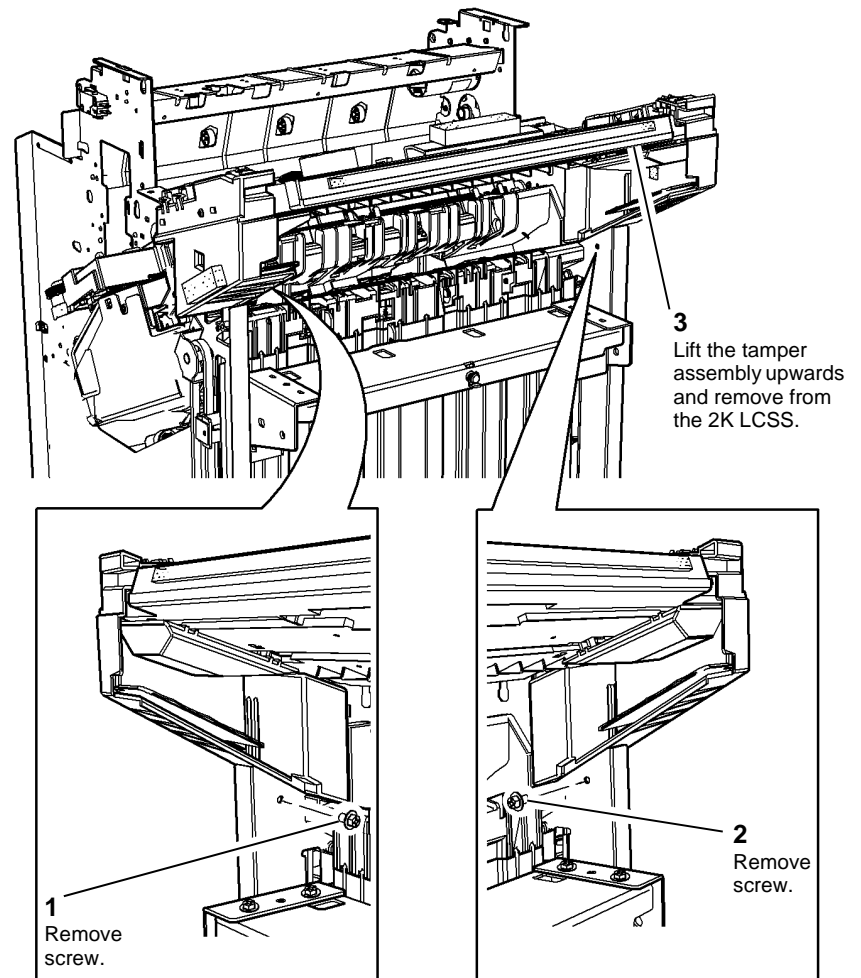


Figure 2 Tamper assembly removal

X-1-0270-A

Replacement

NOTE: Ensure that the tamper assembly locates correctly in the 2K LCSS frame.

NOTE: Ensure that the sensors are correctly located in the tamper assembly. They are easily mis-located when being re-connected to the harnesses.

NOTE: Ensure that all connectors in the harness over the tamper assembly are securely connected.

The replacement is the reverse of the removal procedure.

REP 12.7-110 Hole Punch Unit, Motor and Sensors

Parts List on [PL 12.20](#)

Removal

NOTE: A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the 2K LCSS covers, [REP 12.1-110](#).
2. Remove and empty the chad bin, [PL 12.20 Item 4](#).
3. Remove the hole punch unit, motor assembly and sensors, [Figure 1](#).

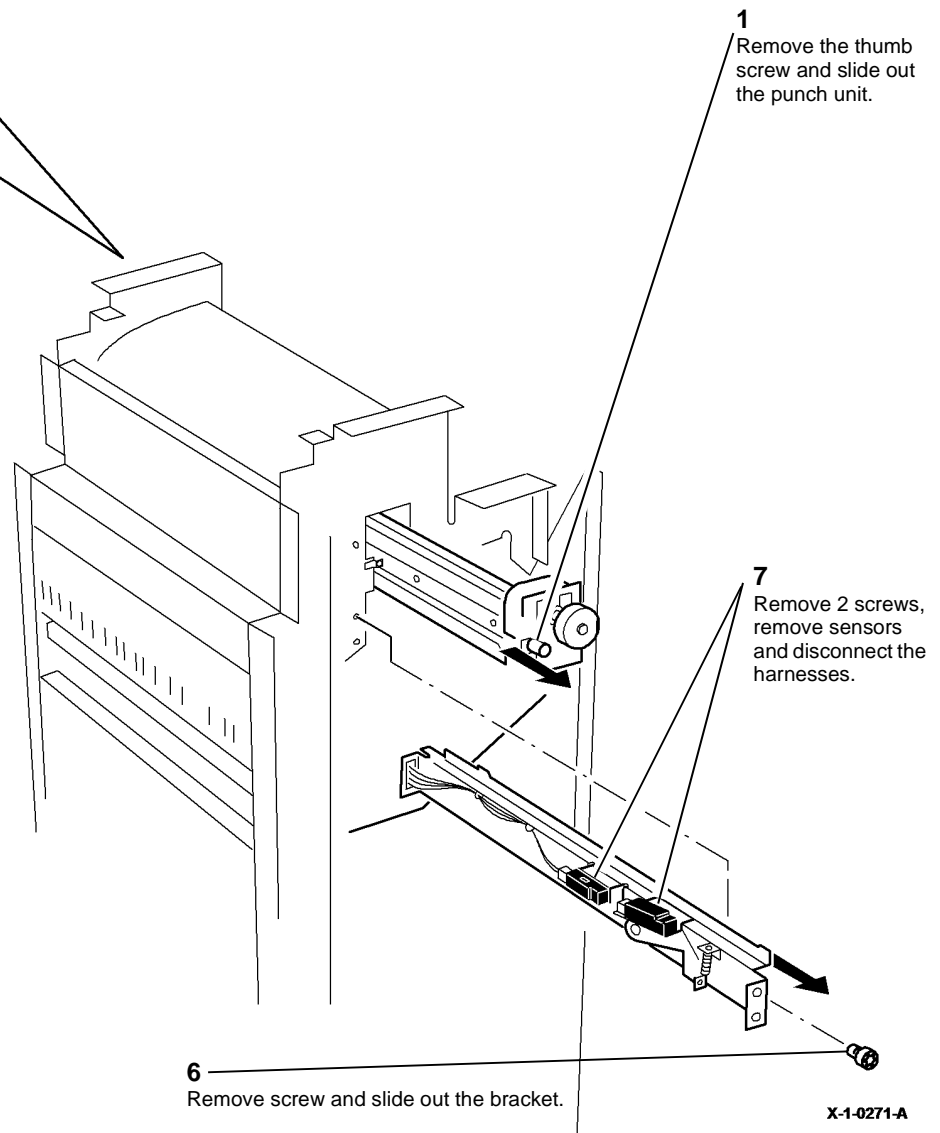
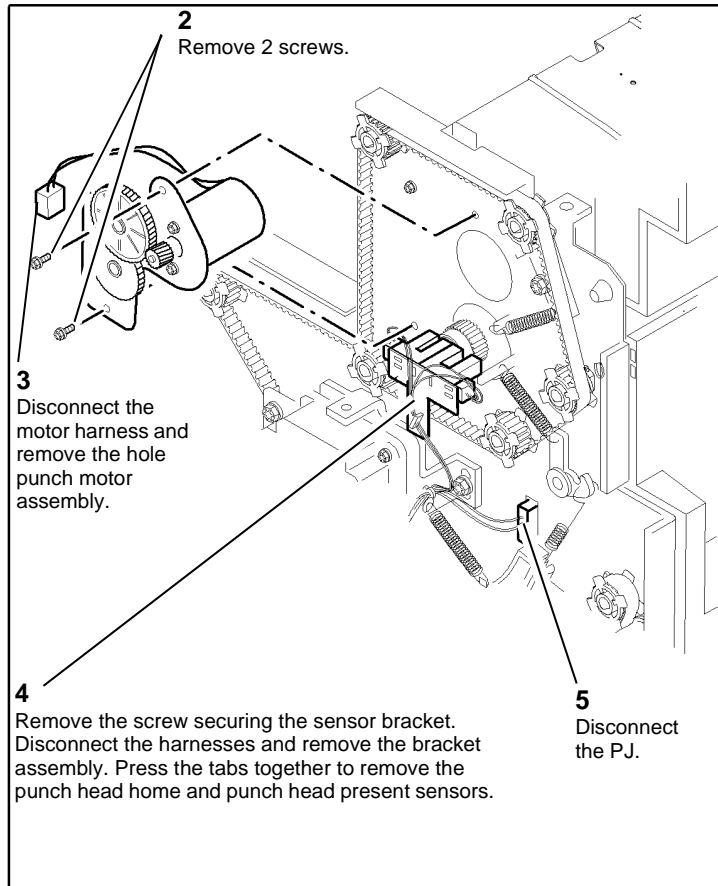


Figure 1 Component removal

Replacement

NOTE: When installing the hole punch motor assembly, ensure that the belt tensioner arm does not get trapped behind the motor assembly plate.

1. The replacement is the reverse of the removal procedure.

REP 12.8-110 Stapler Traverse Assembly

Parts List on [PL 12.55](#)

Removal

NOTE: A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

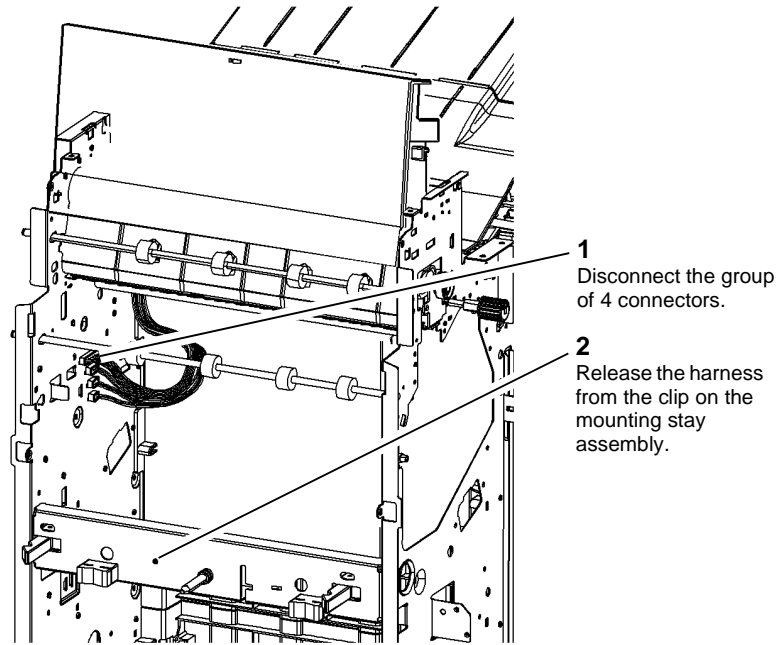


WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when un-docked from the machine. Do not show the customer how to un-dock the 2K LCSS.

1. Un-dock the 2K LCSS, [REP 12.13-110](#).
2. Remove the 2K LCSS covers, [REP 12.1-110](#).
3. Remove the entry guide cover, [REP 12.15-110](#).
4. Manually move the ejector, [PL 12.50 Item 1](#) fully to the right.

5. Disconnect the harness, [Figure 1](#).



X-1-0272-A

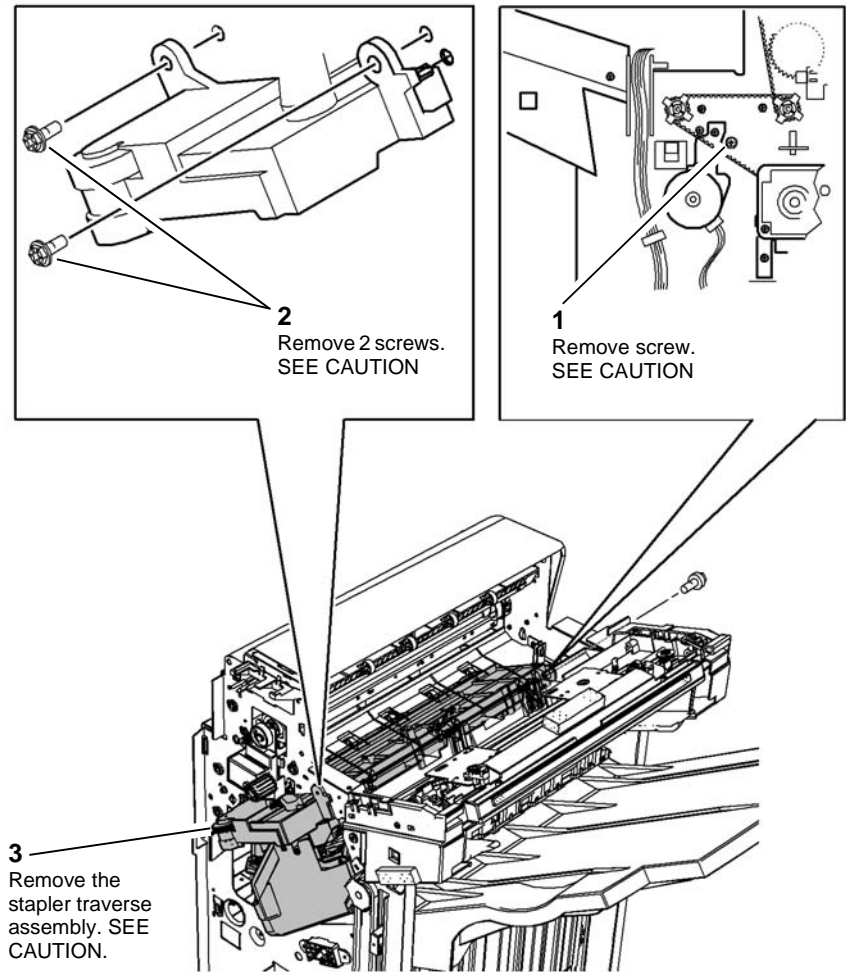
Figure 1 Harness disconnection



CAUTION

When removing and replacing the stapler traverse assembly, support the weight of the assembly underneath the stapler and take care not to damage the wiring.

6. Remove the stapler traverse assembly, [Figure 2](#).



X-1-0273-A

Figure 2 Traverse assembly removal

Replacement

NOTE: Ensure the stapling traverse assembly is engaged on the front and rear locating dowels.

NOTE: Ensure that the harness clamp on the mounting stay assembly is located between the two cable ties on the stapler harness.

The replacement is the reverse of the removal procedure.

REP 12.9-110 Staple Head Unit

Parts List on [PL 12.55](#)

Removal



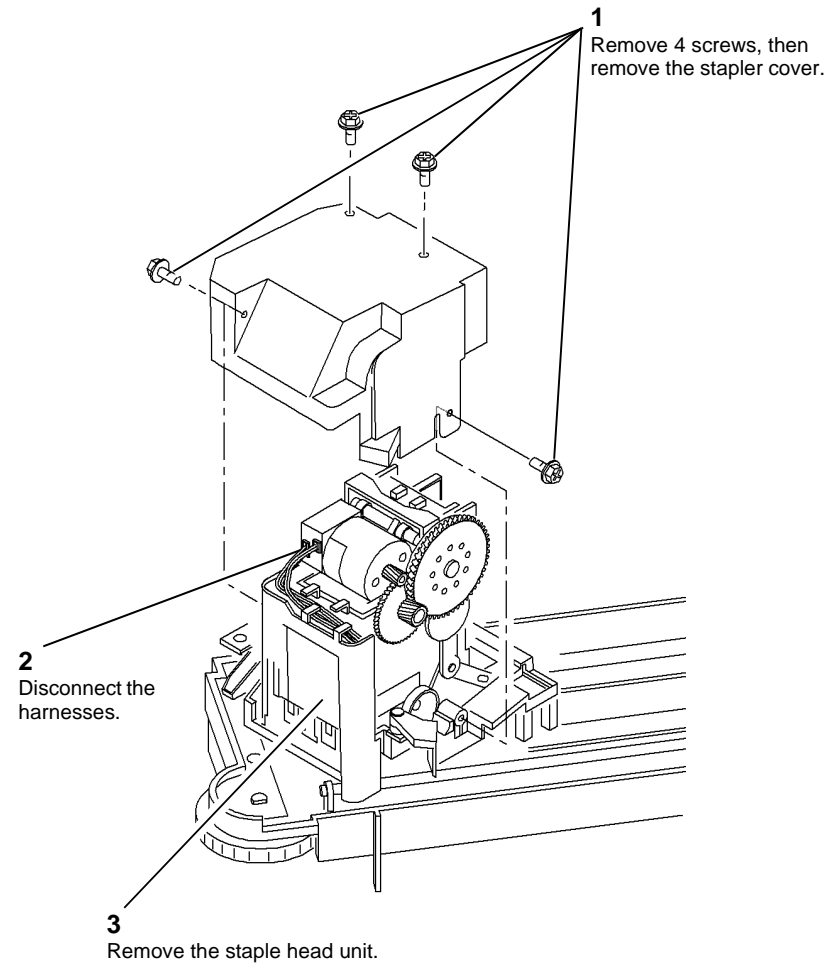
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the stapler traverse assembly, [REP 12.8-110](#).
2. Place the stapler traverse unit upside-down.

3. Remove the staple head unit from the stapler traverse assembly [Figure 1](#).



X-1-0274-A

Figure 1 Staple head unit removal

Replacement

The replacement is the reverse of the removal procedure.

REP 12.10-110 Ejector Assembly and Sensors

Parts List on PL 12.50

Removal

NOTE: A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.



WARNING

Switch off the electricity to the machine. Refer to GP 14. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

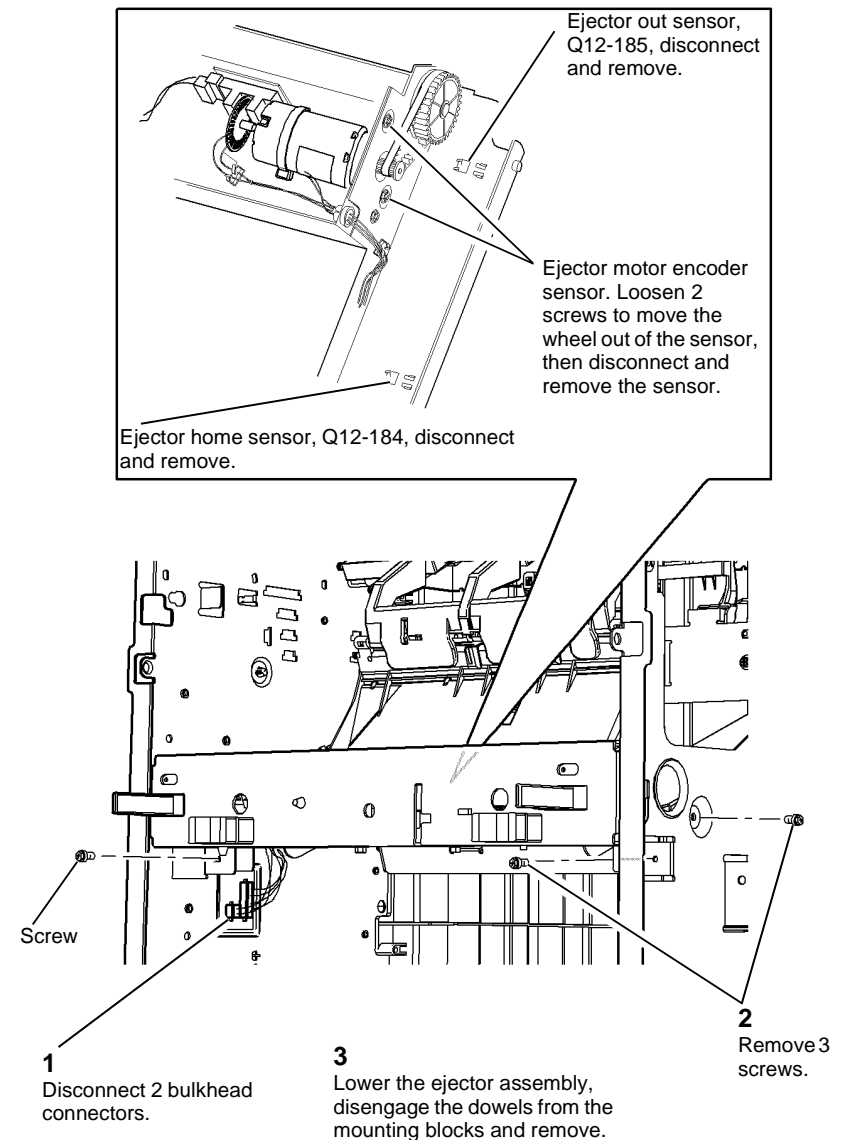


WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when un-docked from the machine. Do not show the customer how to un-dock the 2K LCSS.

NOTE: The home position of the stapling unit is when the staple head unit is at the corner stapling position (fully to the front of the 2K LCSS and rotated through 45 degrees).

1. Disconnect the 2 harnesses between the 2K LCSS and the machine.
2. Un-dock the 2K LCSS, REP 12.13-110 and move it away from the machine.
3. Remove the top cover and front door cover assembly, REP 12.1-110.
4. Ensure the stapling unit is at the home position.
5. If necessary, manually move the ejector to the home (left) position.
6. Figure 1, remove the ejector assembly.



X-1-0275-A

Figure 1 Ejector assembly removal

7. Figure 1, remove the appropriate sensor by releasing the sensor tabs and disconnecting the harness.

Replacement



CAUTION

When installing the ejector assembly onto the 2K LCSS, ensure that the ejector fingers do not damage the wiring to the staple head unit.

The replacement is the reverse of the removal procedure.

REP 12.11-110 Bin 1 Upper Level Sensor

Parts List on [PL 12.35](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the ejector assembly, [REP 12.10-110](#).

2. Remove the bin 1 upper level sensor, [Figure 1](#).

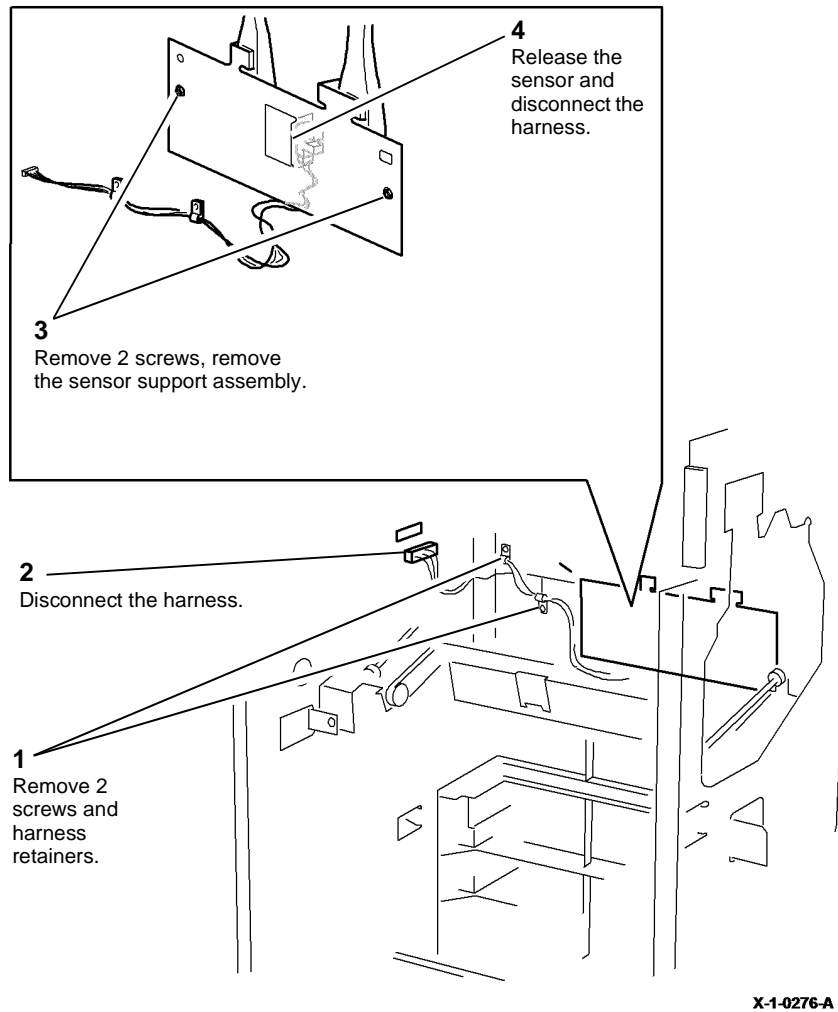


Figure 1 Removal

Replacement

The replacement is the reverse of the removal procedure.

REP 12.12-110 Paddle Shaft Assembly

Parts List on [PL 12.25](#).

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the tamper assembly, [REP 12.6-110](#).
2. Remove bin 1, [PL 12.10 Item 10](#).

3. Remove the paddle motor assembly, **Figure 1**.

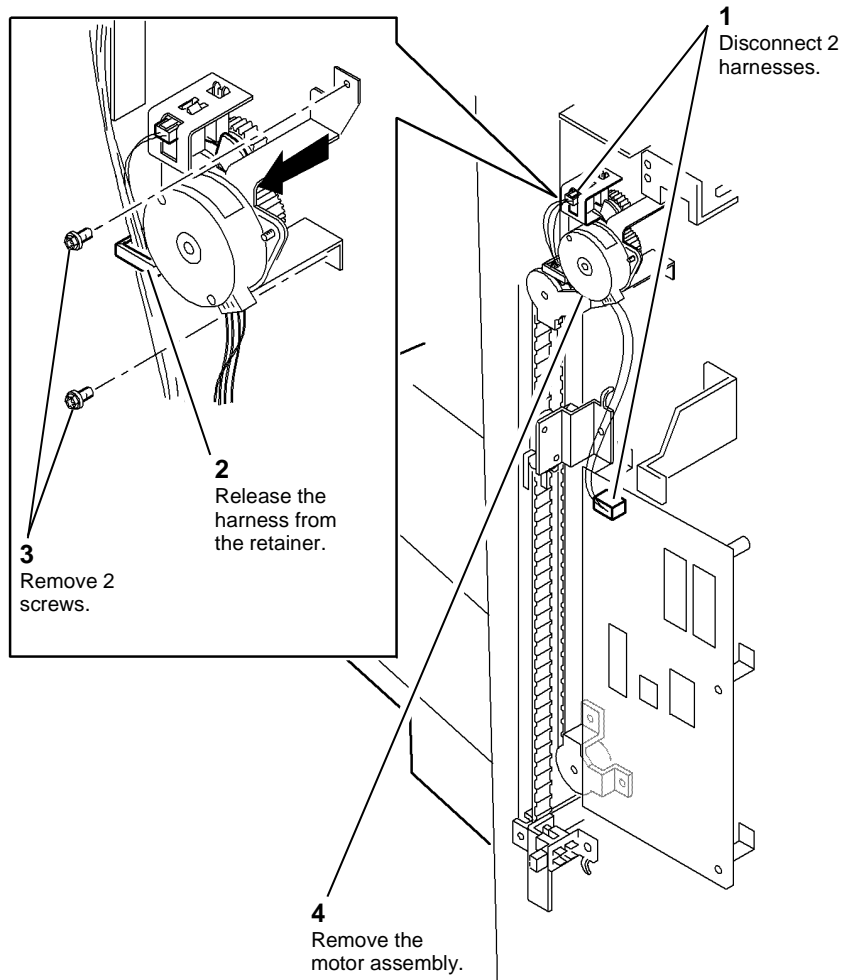


Figure 1 Paddle motor removal

X-1-0277-A

4. Prepare to remove the rear components, **Figure 2**.

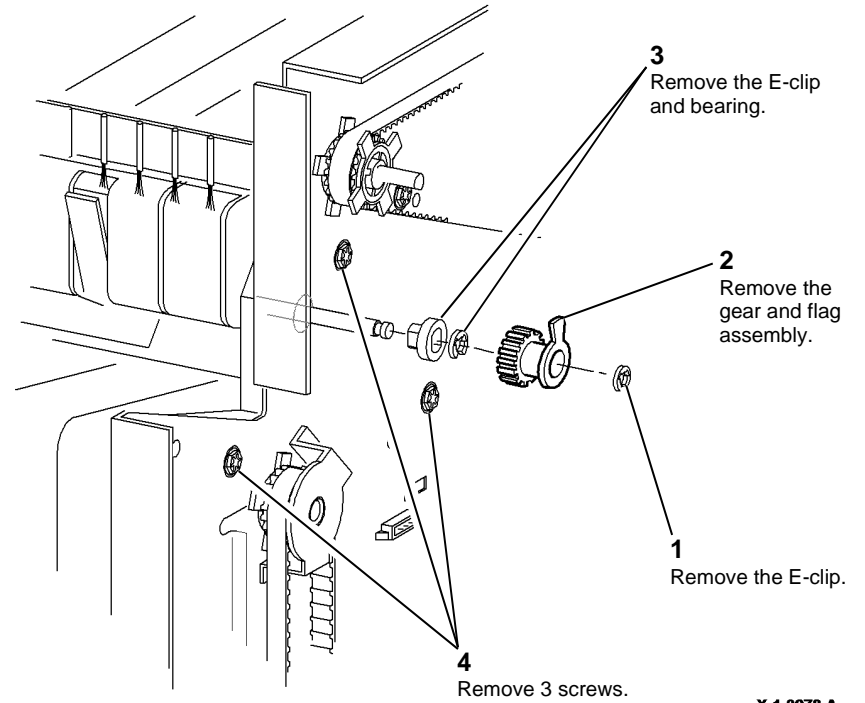


Figure 2 Rear preparation

X-1-0278-A

5. Prepare to remove the front components, [Figure 3](#).

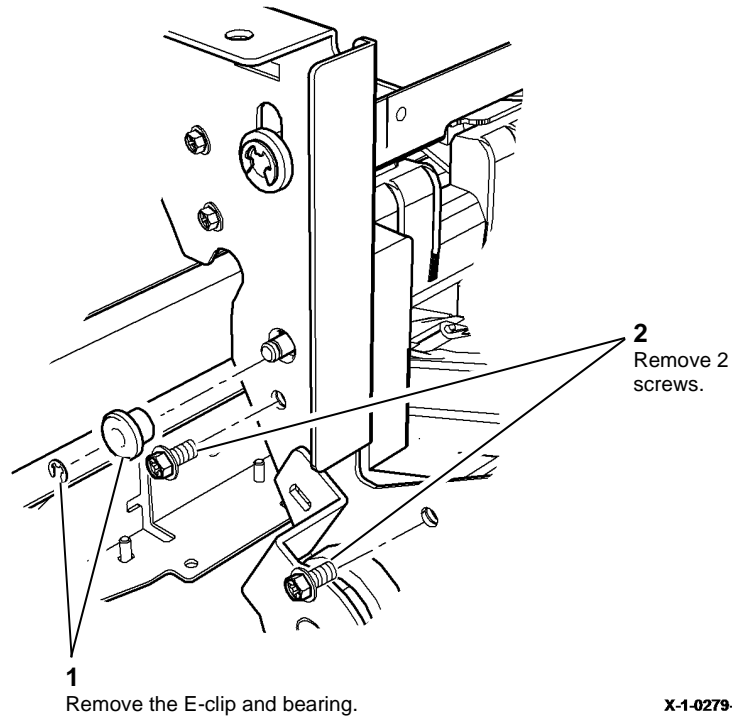


Figure 3 Front preparation

6. Ensure that the compiler ejector is in the home position (fully to the left).

7. Remove the paddle shaft assembly, [Figure 4](#).

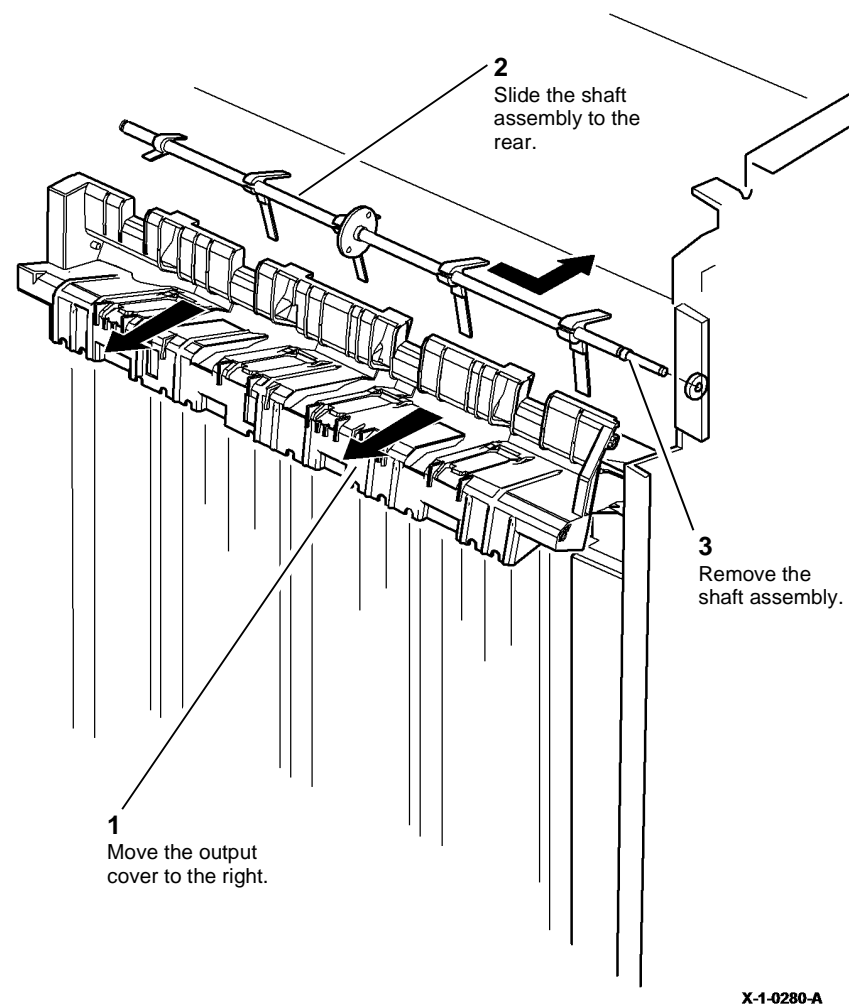
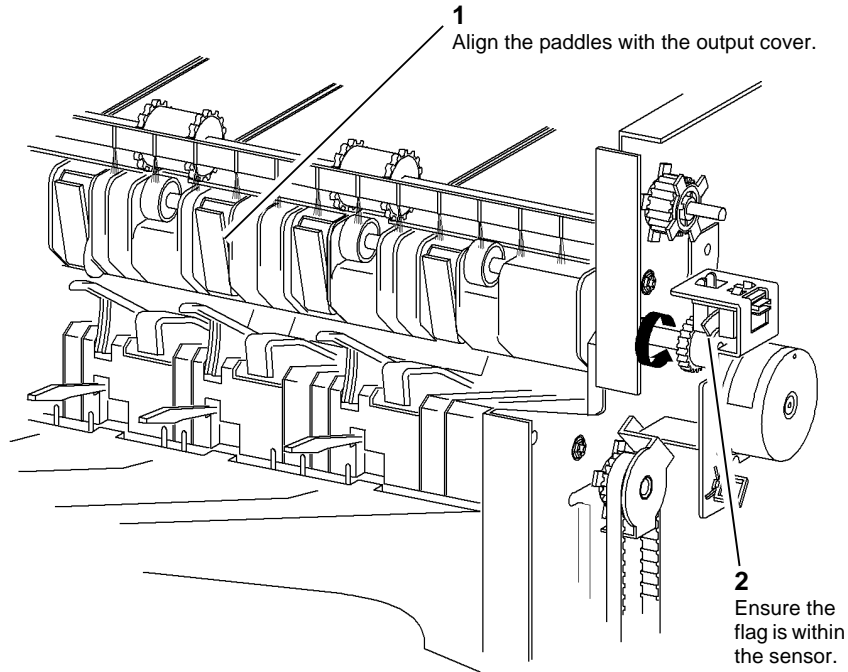


Figure 4 Paddle shaft removal

Replacement

1. Install the paddle shaft assembly, front bearing and E-clip. Refer to [Figure 3](#).
2. Install the output cover. Refer to [Figure 4](#).
3. Install the rear bearing and E-clip. Refer to [Figure 2](#).
4. Install the gear and flag assembly, with the E-clip.
5. Install the paddle motor assembly. Refer to [Figure 1](#).
6. Ensure the paddles and flag are correctly aligned, [Figure 5](#).



X-1-0281-A

Figure 5 Paddle alignment

7. Test the operation of the paddle roll. Enter `dC330`, output code 012-238. When the code is cancelled, the paddles must stop with both rubber blades inside of the output cover. If necessary, check that the paddles are assembled on the shaft correctly.
8. Reverse the remainder of the removal procedures to complete the procedure.

REP 12.13-110 2K LCSS Un-Docking

Parts List on [PL 12.15](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.



Take care not to topple the 2K LCSS. The 2K LCSS is unstable when un-docked from the machine. Do not show the customer how to un-dock the 2K LCSS.

1. If necessary, disconnect the harnesses between the 2K LCSS and the machine.
2. Open the 2K LCSS front door.

3. Release the 2K LCSS docking latch assembly, [Figure 1](#).

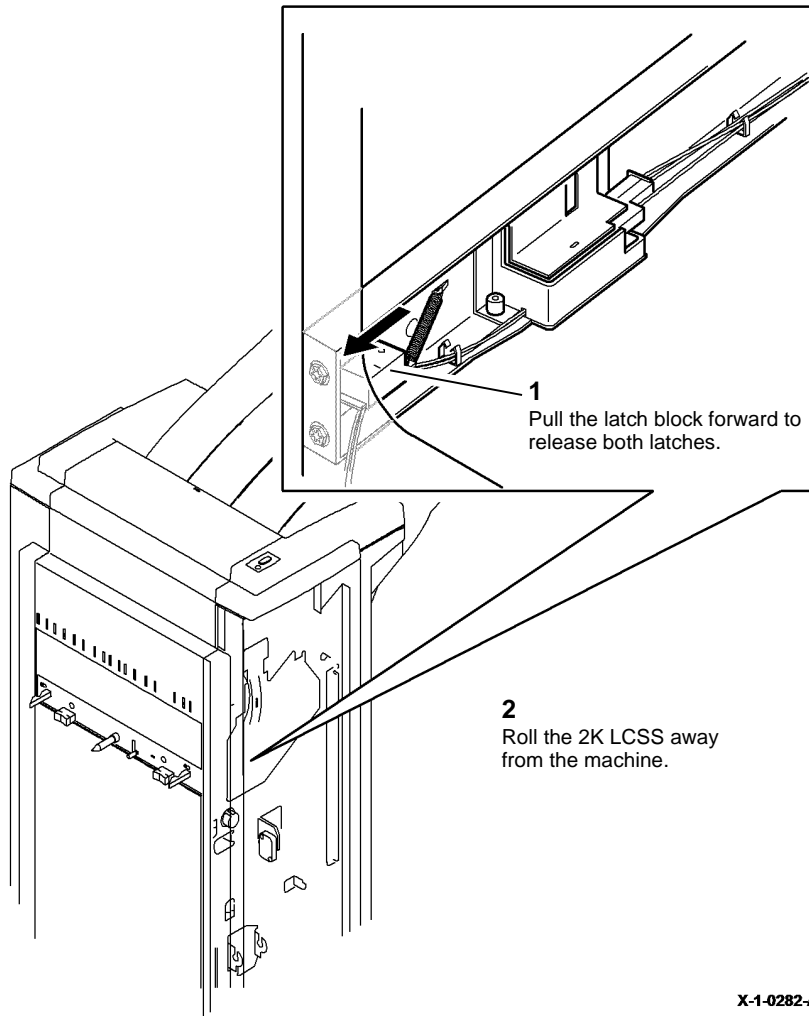


Figure 1 Docking latch assembly

Replacement

Align the 2K LCSS latches to the machine apertures, then push the 2 units firmly together until they latch.

REP 12.14-110 2K LCSS PWB

Parts List on [PL 12.75](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



CAUTION

Ensure that ESD procedures are observed during the removal and installation of the 2K LCSS PWB.

1. Remove the 2K LCSS rear cover, [REP 12.1-110](#).
2. Disconnect all harness connectors from the 2K LCSS PWB.
3. Remove the 3 screws and release the 3 standoffs securing the 2K LCSS PWB.

Replacement

NOTE: Before replacing the 2K LCSS rear cover, perform [312F-110 2K LCSS PWB DIP Switch Settings RAP](#).

The replacement is the reverse of the removal procedure.

REP 12.15-110 Entry Guide Cover

Parts List on [PL 12.70](#)

Removal


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.


WARNING

Take care not to topple the 2K LCSS. The 2K LCSS is unstable when un-docked from the machine. Do not show the customer how to un-dock the 2K LCSS.

1. Un-dock the 2K LCSS, [REP 12.13-110](#) and move it away from the machine.
2. Remove the 2K LCSS covers, [REP 12.1-110](#).
3. Remove the entry guide cover, [Figure 1](#).

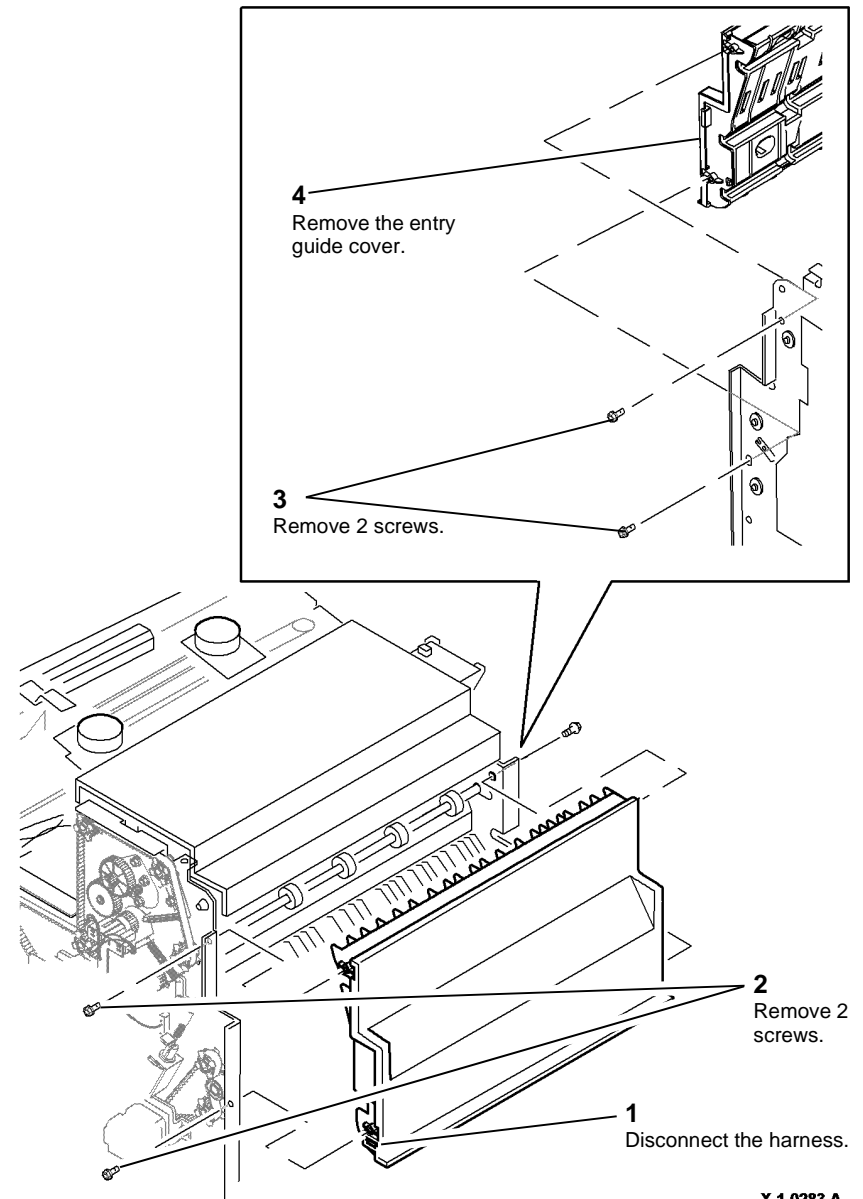
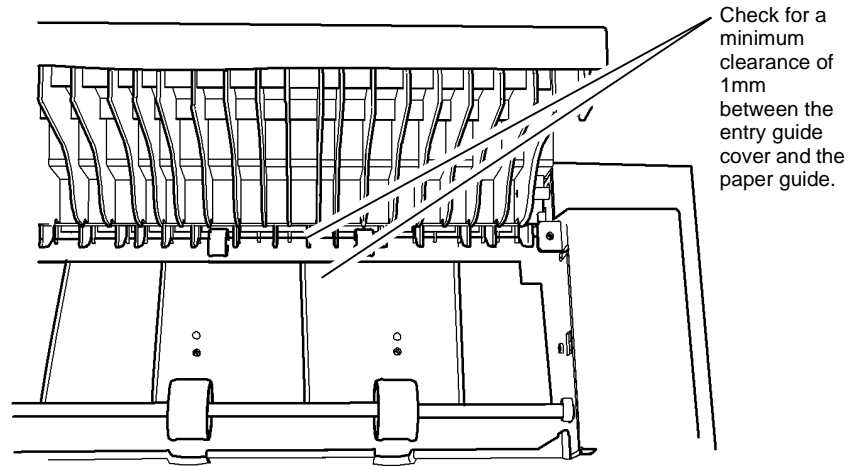


Figure 1 Entry guide cover removal

Replacement

1. Bias the entry guide cover away from the paper guide when you tighten the screws.
2. The clearance between the entry guide cover and the paper guide must be a minimum of 1 mm. Refer to [Figure 2](#).

NOTE: If the clearance is less than 1 mm, then install a new entry guide cover.



X-1-0284-A

Figure 2 Entry guide cover clearance

3. Connect the entry sensor and dock the 2K LCSS to the machine.
4. Run copies through the 2K LCSS, if possible use heavyweight paper or labels. Check for marks on the print and for damage to the paper. If there are no marks or damage then install the covers.

REP 12.16-110 Docking Latch Assembly

Parts List on [PL 12.15](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.



Take care not to topple the 2K LCSS. The 2K LCSS is unstable when un-docked from the machine. Do not show the customer how to un-dock the 2K LCSS.

1. Un-dock the 2K LCSS, [REP 12.13-110](#) and move it away from the machine.
2. Remove the 2K LCSS covers, [REP 12.1-110](#).

3. Prepare to remove the docking latch assembly, [Figure 1](#).

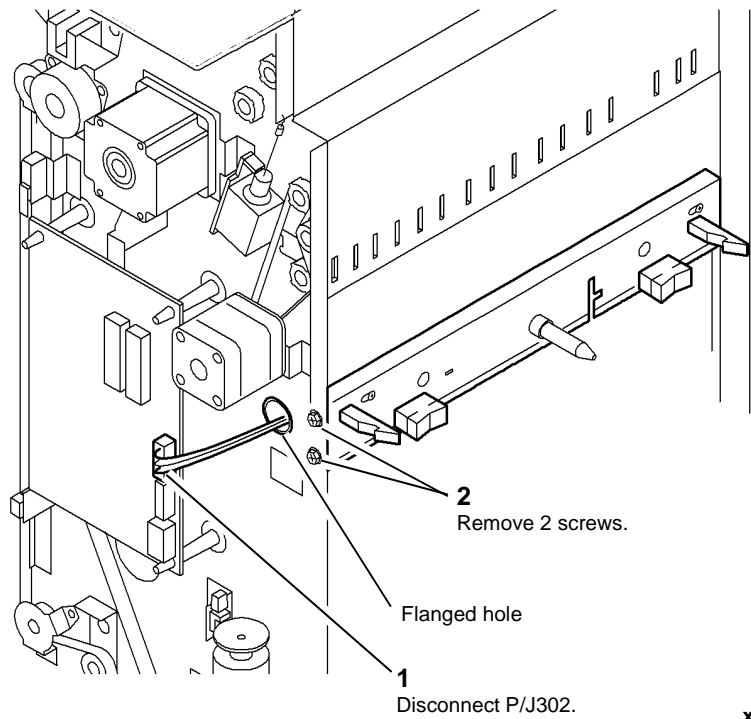


Figure 1 Preparation

4. Remove the docking latch assembly, [Figure 2](#).

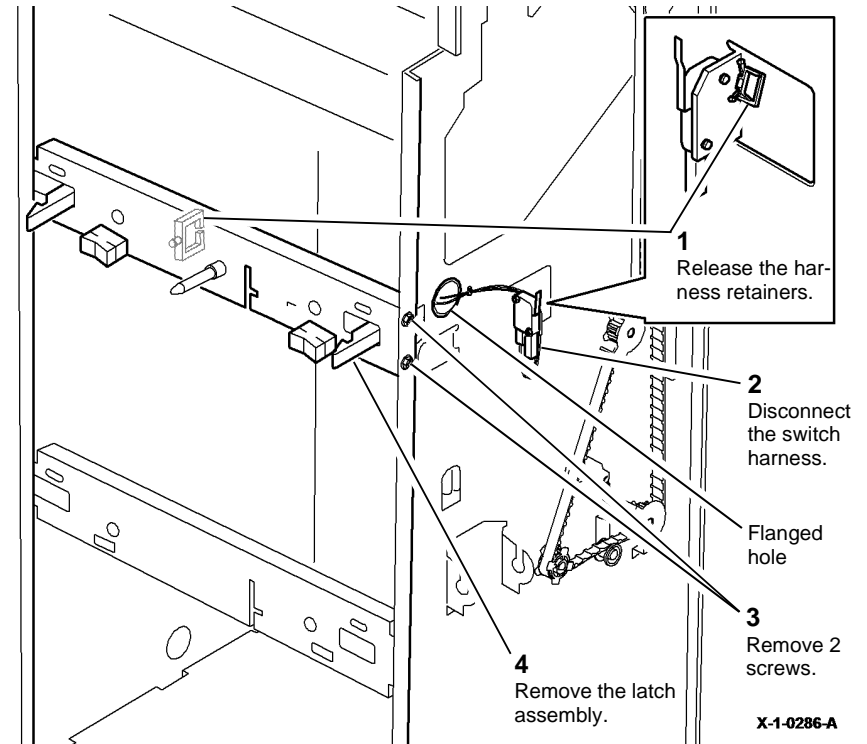


Figure 2 Latch assembly removal.

Replacement

The replacement is the reverse of the removal procedure.

CAUTION

Ensure that the front and rear harness are routed through the flanged holes. Refer to [Figure 1](#) and [Figure 2](#).

REP 12.17-110 Ejector Belt

Parts List on [PL 12.50 Item 5](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

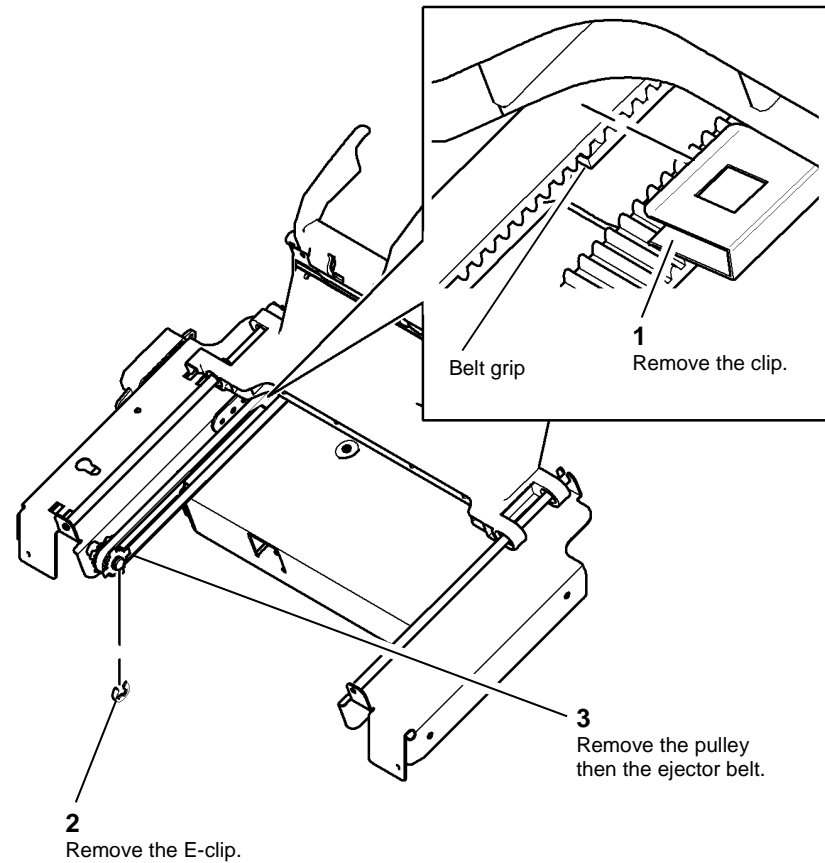


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the ejector assembly, refer to [REP 12.10-110](#).

2. Remove the ejector belt, [Figure 1](#).



X-1-0287-A

Figure 1 Ejector belt removal

Replacement

The replacement is the reverse of the removal procedure. Ensure that the ejector belt is correctly engaged with the belt grip on the ejector assembly before the clip is re-installed. Refer to [Figure 1](#).

REP 12.18-110 Paddles

Parts List on [PL 12.25](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: This procedure shows the replacement of the paddles with the paddle shaft assembly installed. If necessary, remove the paddle shaft assembly before replacing the paddles. Refer to [REP 12.12-110](#).

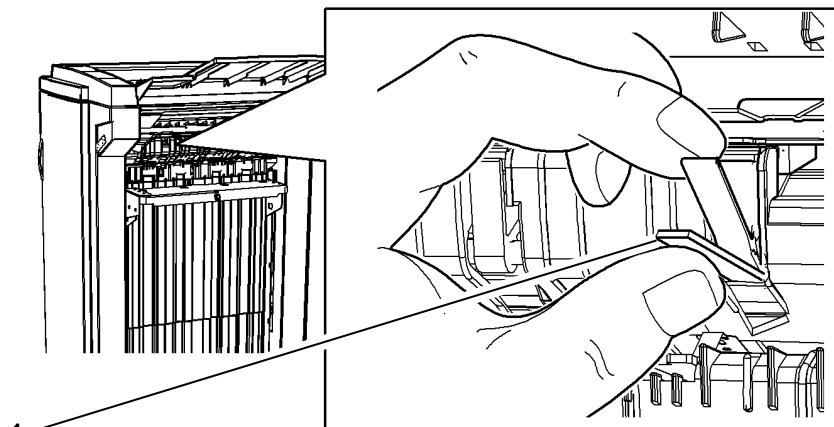
1. Remove bin 1, [PL 12.10 Item 10](#).
2. Remove the top cover and the rear cover, [REP 12.1-110](#).
3. Rotate the paddle shaft assembly by rotating the gear on the rear of the paddle shaft assembly until the 2 rubber blades are visible, and the shorter blade is horizontal.



CAUTION

To ensure that the correct home position of the paddle shaft assembly is maintained, remove the old paddles and install the new paddles one at a time.

4. Remove the paddles, [Figure 1](#).



1 Squeeze the rubber blades together and pull the paddle from the shaft

X-1-0288-A

Figure 1 Paddle removal

Replacement

1. Hold the paddle by the 2 rubber blades, ensuring that the longer rubber blade is uppermost, align the pin inside the paddle with the hole in the shaft and clip the paddle onto the shaft.

REP 12.19-110 Lower Right Paper Guide

Parts List on [PL 12.65](#)

Removal



WARNING

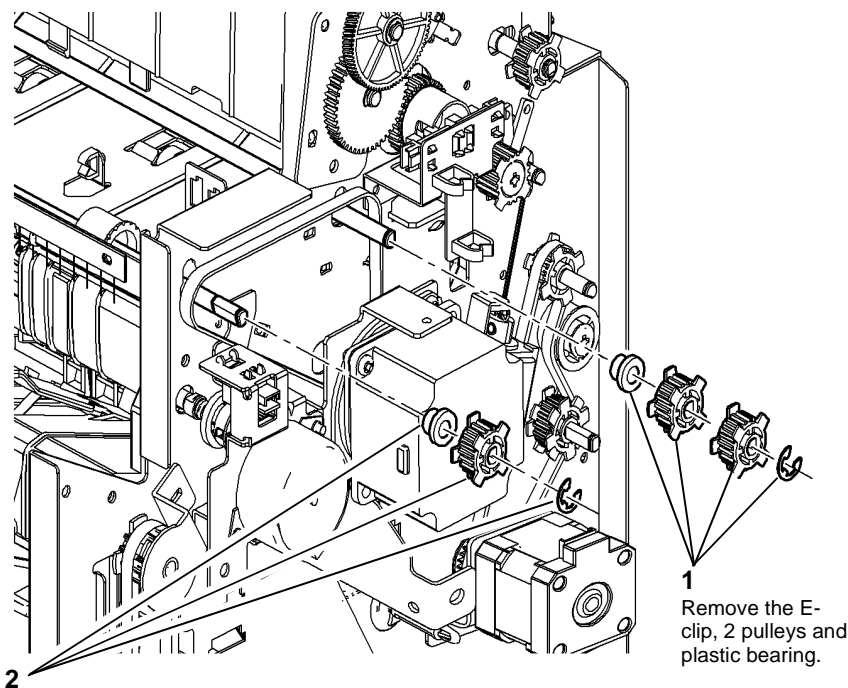
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the 2K LCSS covers, [REP 12.1-110](#).
2. Remove the tamper assembly, [REP 12.6-110](#).
3. Remove the paper output drive belt, [REP 12.4-110](#).
4. Loosen the fixing screws on transport motor 2, [PL 12.60 Item 5](#).
5. Prepare to remove the drive shafts [Figure 1](#).



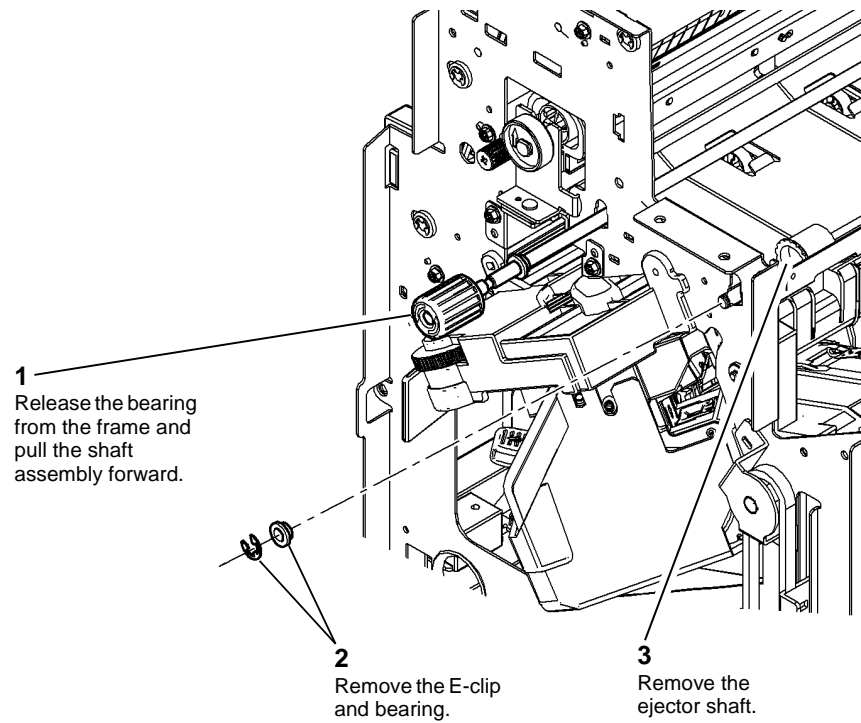
2 Remove the E-clip, pulley and plastic bearing.

1 Remove the E-clip, 2 pulleys and plastic bearing.

X-1-0885-A

Figure 1 Preparation

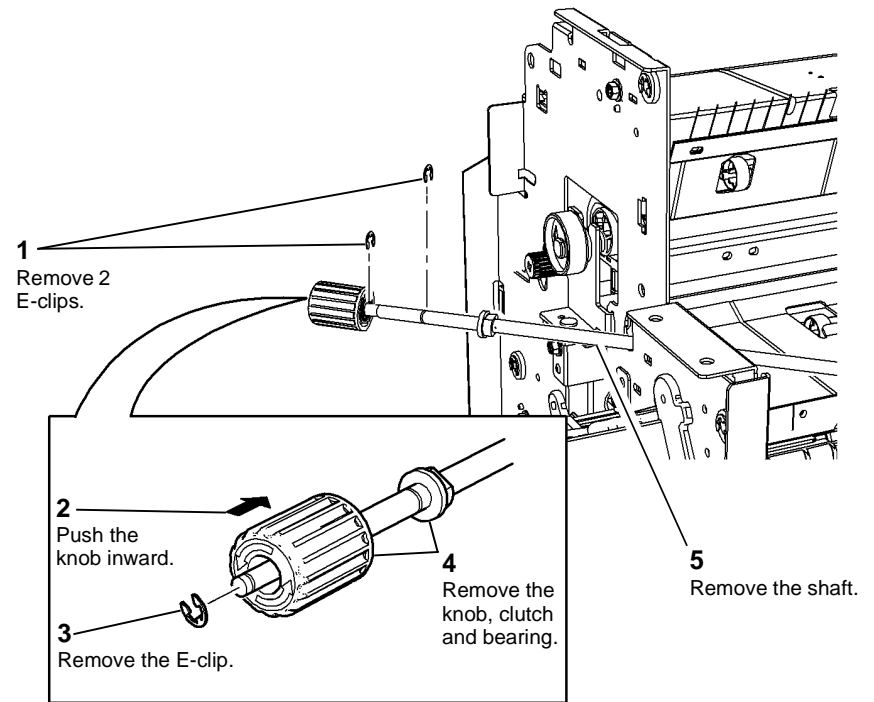
6. Remove the ejector drive shaft, [Figure 2](#).



X-1-0886-A

Figure 2 Ejector shaft removal

7. Remove the drive shaft, [Figure 3](#).



X-1-1288-A

Figure 3 Drive shaft removal

8. Prepare to remove the upper right paper guide, [Figure 4](#).

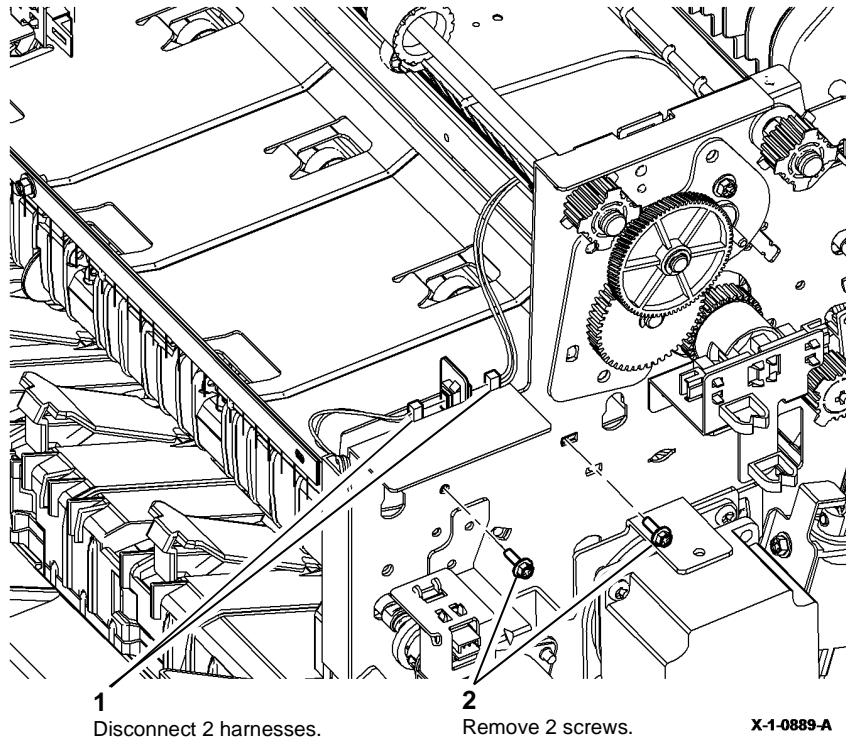


Figure 4 Preparation

9. Remove the upper right paper guide, [Figure 5](#).

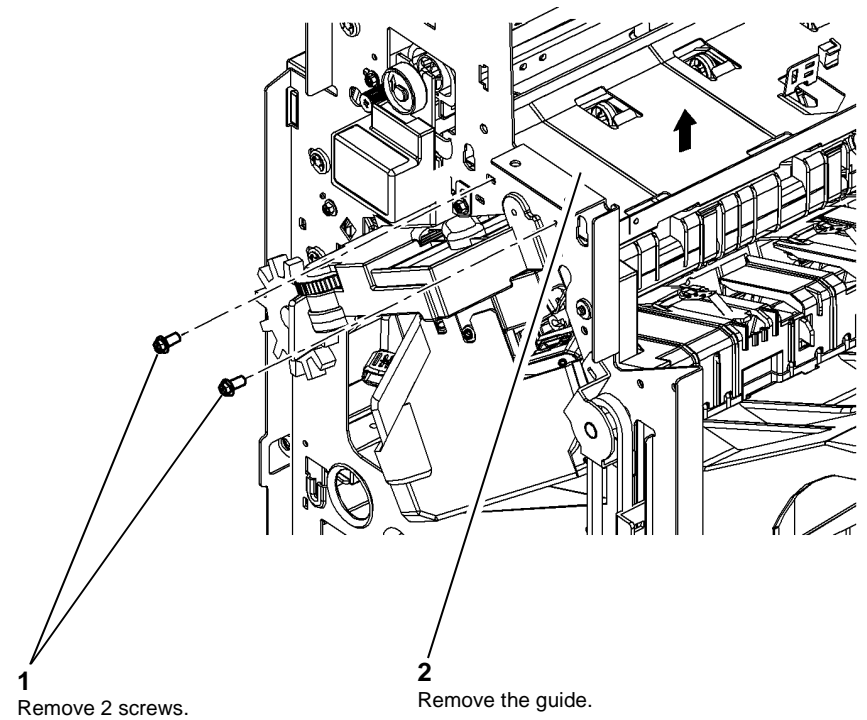


Figure 5 Upper right guide removal

10. Prepare to remove the lower right paper guide, [Figure 6](#).

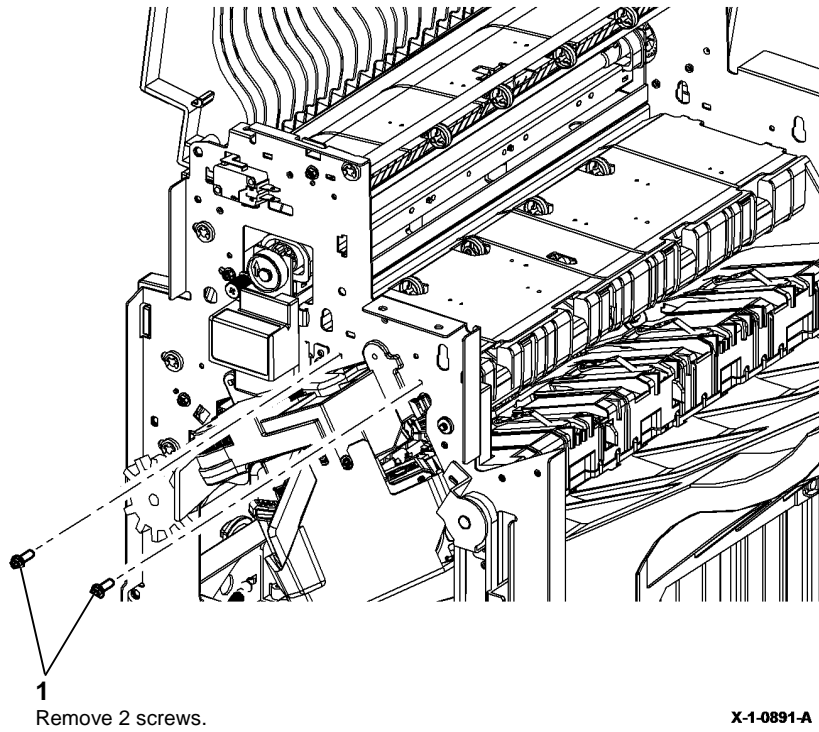


Figure 6 Preparation

11. Remove the lower right paper guide, [Figure 7](#).

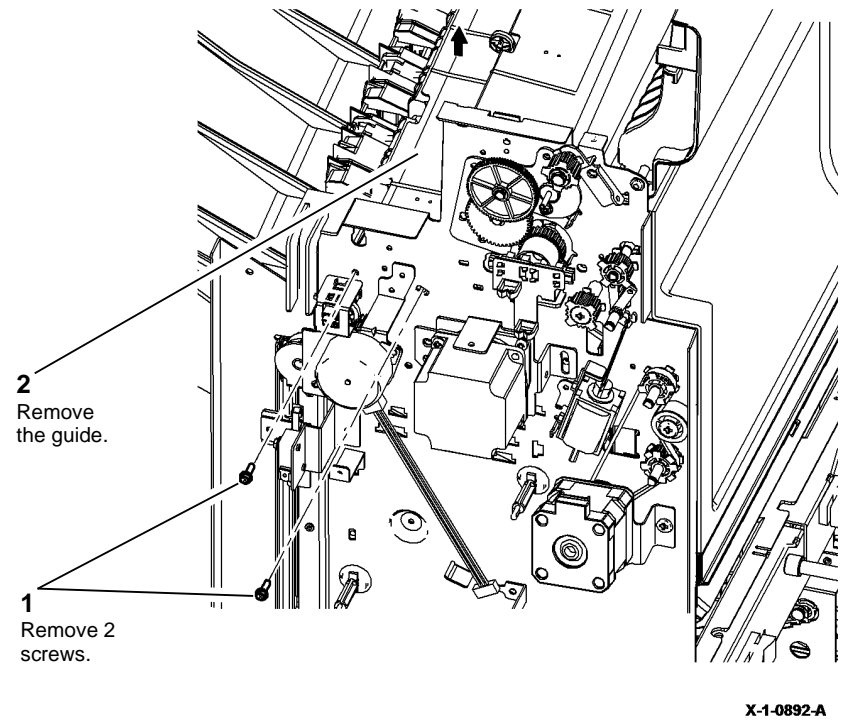
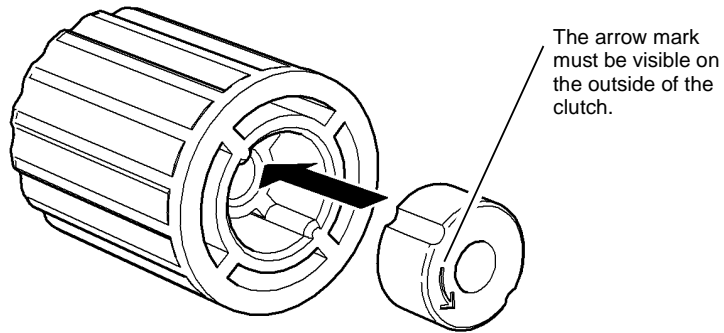


Figure 7 Lower right guide removal

Replacement

1. The replacement is the reverse of the removal procedure.
2. Ensure that the one-way-clutch inside the knob is installed correctly, [Figure 8](#).



-1-1289-A

Figure 8 Clutch orientation

REP 12.20-110 Paper Guide and Top Exit Sensor

Parts List on [PL 12.60](#)

Removal

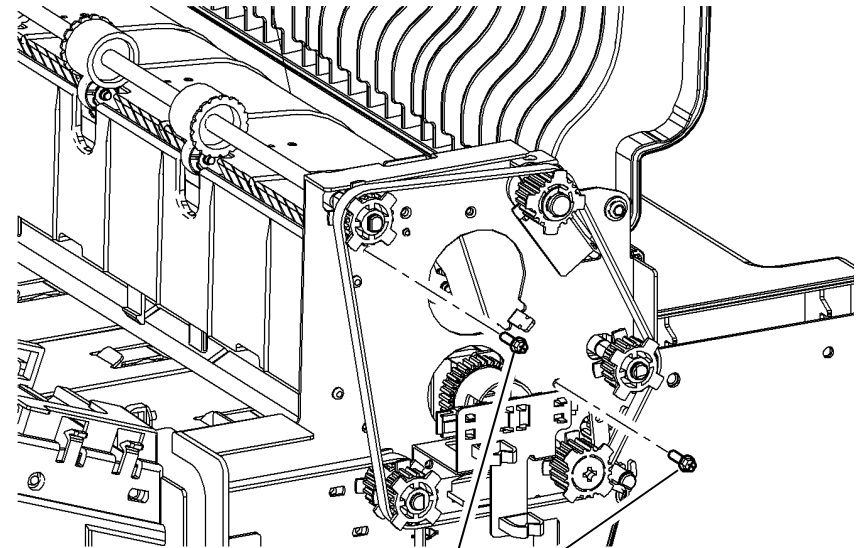


Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the 2K LCSS covers, [REP 12.1-110](#).
2. Remove the hole punch motor assembly, [REP 12.7-110](#).
3. Prepare to remove the paper guide, [Figure 1](#).



1
Remove 2 screws.

X-1-0887-A

Figure 1 Preparation

4. Remove the paper guide and top tray exit sensor, Q12-107, [Figure 2](#).

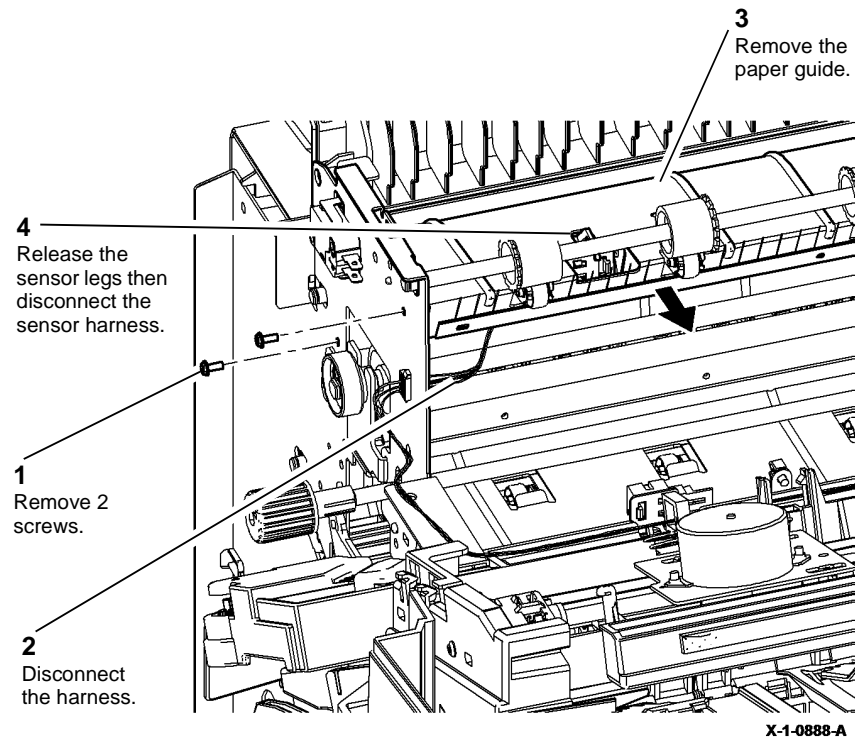


Figure 2 Guide and sensor removal

Replacement

The replacement is the reverse of the removal procedure.

REP 12.1-150 LVF BM Covers

Parts List on [PL 12.320](#), [PL 12.395](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

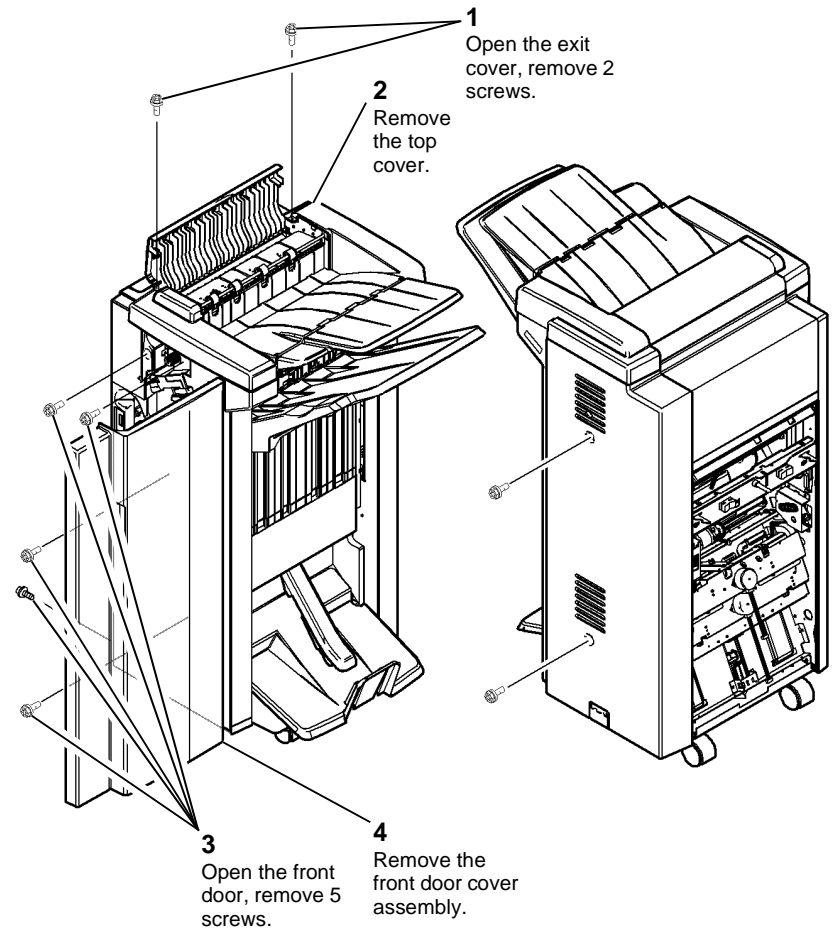


Take care during this procedure. Sharp edges may be present that can cause injury.

NOTE: Removing the top cover first will allow easy removal of the front door cover assembly and rear cover.

NOTE: The front and rear covers are additionally retained by protrusions that locate in holes in the frame edges. These protrusions are best released by pulling on the bottom section of the covers.

1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the covers, [Figure 1](#) and [Figure 2](#).



X-1-0289-A

Figure 1 Covers removal 1 of 2

REP 12.2-150 Input Drive Belt, Compiler Entrance Drive Belt 1 and Transport Motor 1 and Gearbox Assembly

Parts List on [PL 12.350](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the LVF BM rear cover, [REP 12.1-150](#).

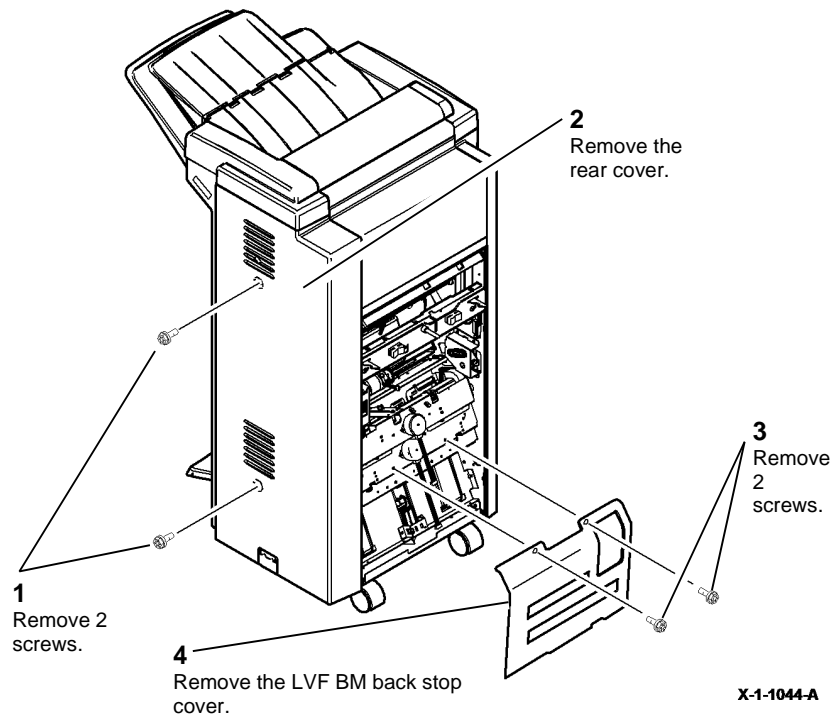
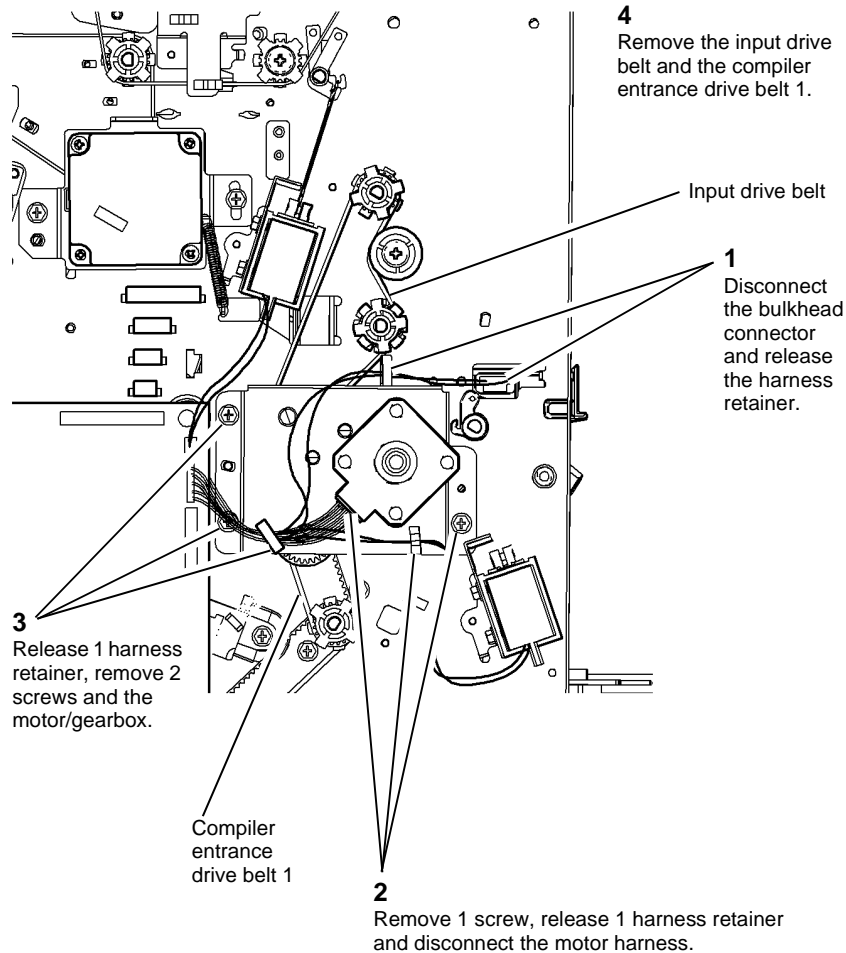


Figure 2 Covers removal 2 of 2

Replacement

The replacement is the reverse of the removal procedure.

2. Remove the motor and drive belt, [Figure 1](#).



X-1-0290-A

Figure 1 Motor and drive belt removal

3. If necessary, remove 2 screws to remove the motor from the gearbox.

Replacement

Replacement is the reverse of the removal procedure.

REP 12.3-150 Intermediate Paper Drive Belt

Parts List on [PL 12.370](#)

Removal

NOTE: A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the LVF BM rear cover and top cover, [REP 12.1-150](#).

2. Remove the intermediate paper drive belt, [Figure 1](#).

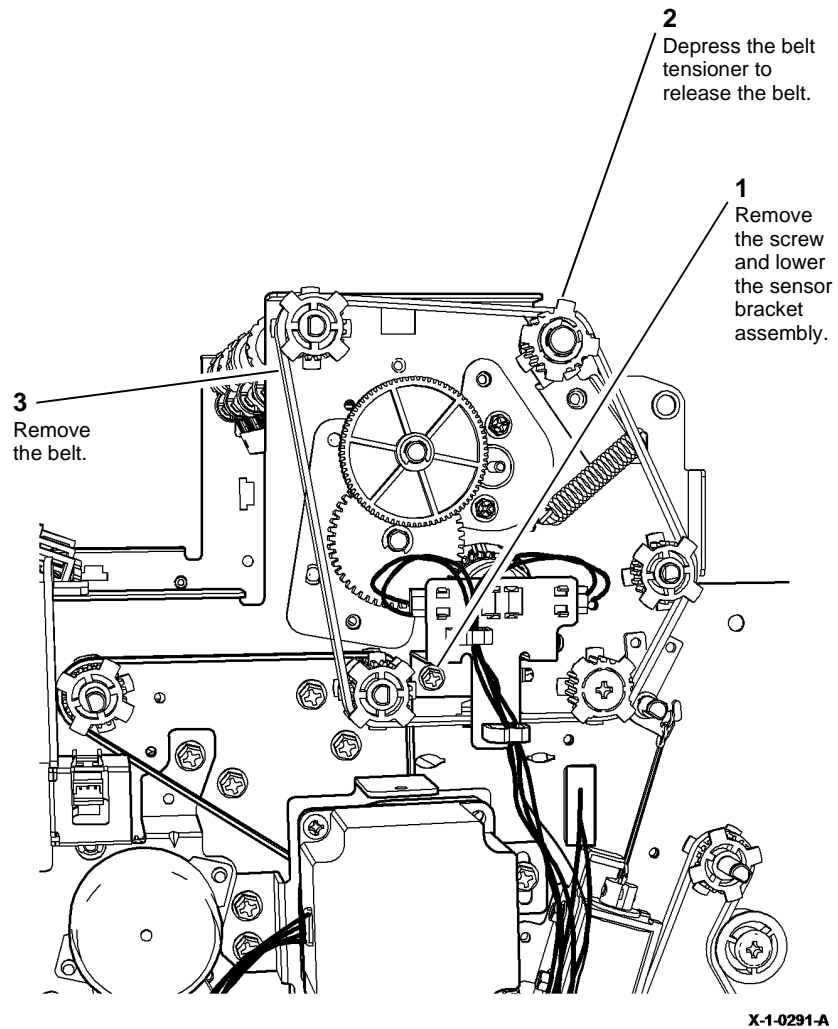


Figure 1 Belt removal

Replacement

1. If necessary, lubricate the belt tensioner, refer to [ADJ 40.1](#).
2. Install the belt over the pulleys, ensuring that the belt is on all 5 pulleys.

NOTE: Two of the pulleys are free to slide along the shaft. Ensure that the belt is correctly located on these pulleys.

3. Reverse the removal procedure to install the remainder of the components.

REP 12.4-150 Paper Output Drive Belt and Transport Motor

2

Parts List on [PL 12.370](#)

Removal


WARNING

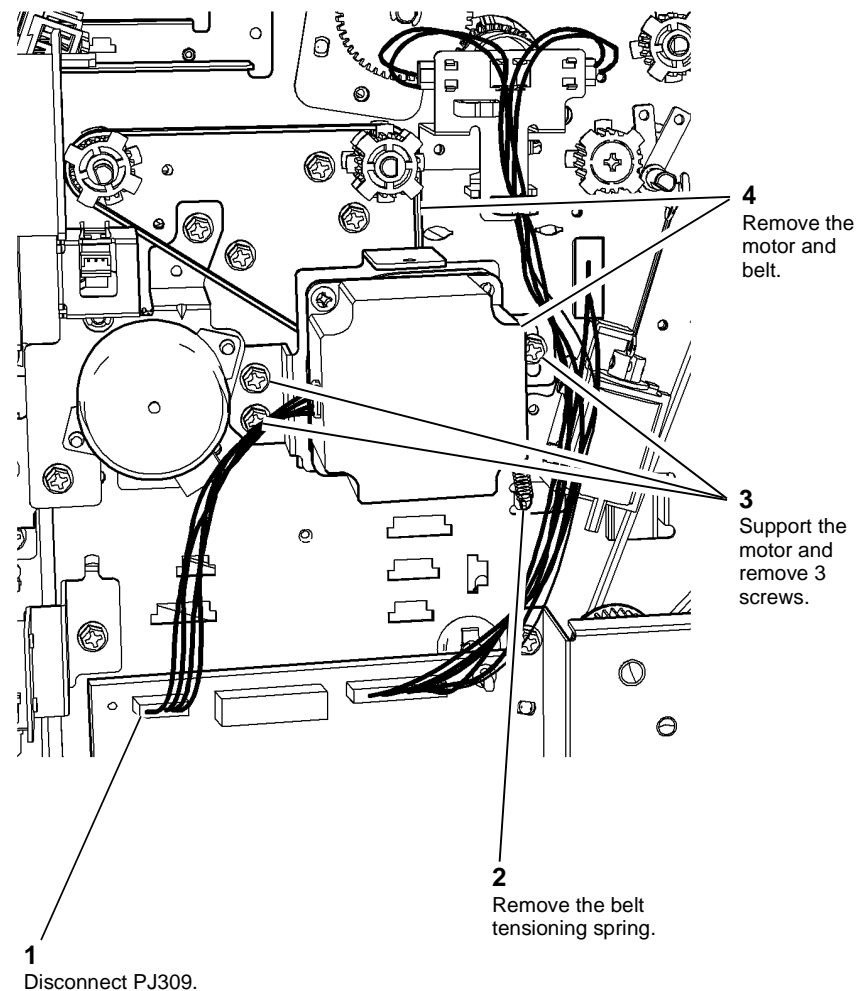
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the LVF BM rear cover, [REP 12.1-150](#).
2. Remove the intermediate drive belt, [REP 12.3-150](#).

3. Remove the output drive belt and motor, [Figure 1](#).



X-1-0292-A

Figure 1 Removing the drive belt

Replacement

1. Install the belt over the pulleys.
2. Install the motor pivot shouldered screw and fully tighten.
3. Install the 2 motor mounting bracket securing screws but do not tighten them.
4. Install the belt tensioner spring.
5. Rotate the belt by hand to allow the spring to tension the belt, [ADJ 12.3-110](#). Tighten the screws.
6. Install the intermediate drive belt, [REP 12.3-150](#).
7. Install the LVF BM rear cover, [REP 12.1-150](#).

REP 12.5-150 Bin 1 Drive Belts and Stacker Tray Drive and Motor Assembly

Parts List on [PL 12.340](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



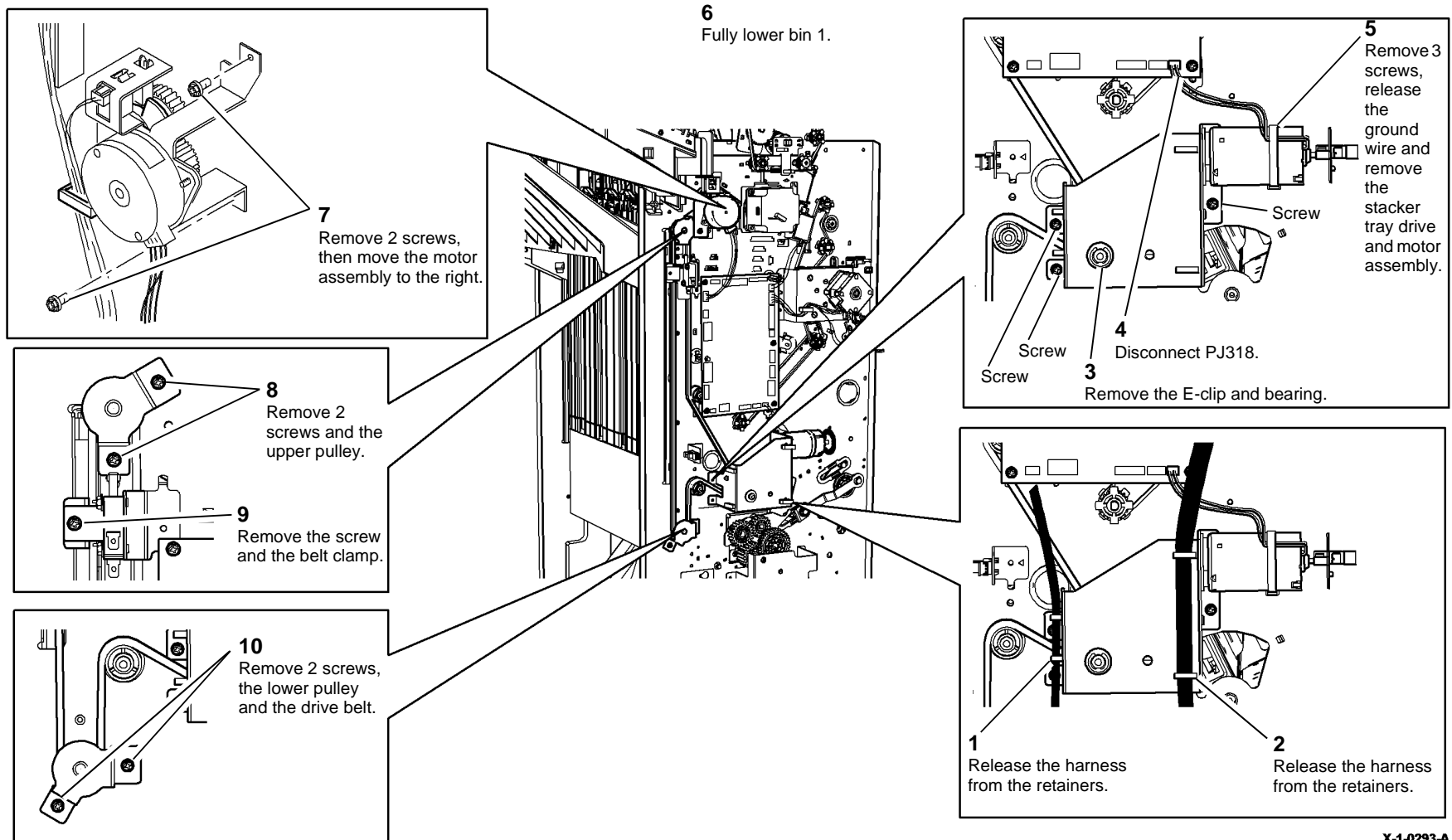
WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the LVF BM front door cover assembly and rear cover, [REP 12.1-150](#).

2. Remove the bin 1 drive belt (rear), **Figure 1**.

NOTE: Keep all of the components removed as a set. The set of rear frame components are different from the front frame set.



X-1-0293-A

Figure 1 Bin 1 drive belt (rear)

3. Remove the bin 1 drive belt (front) [Figure 2](#).

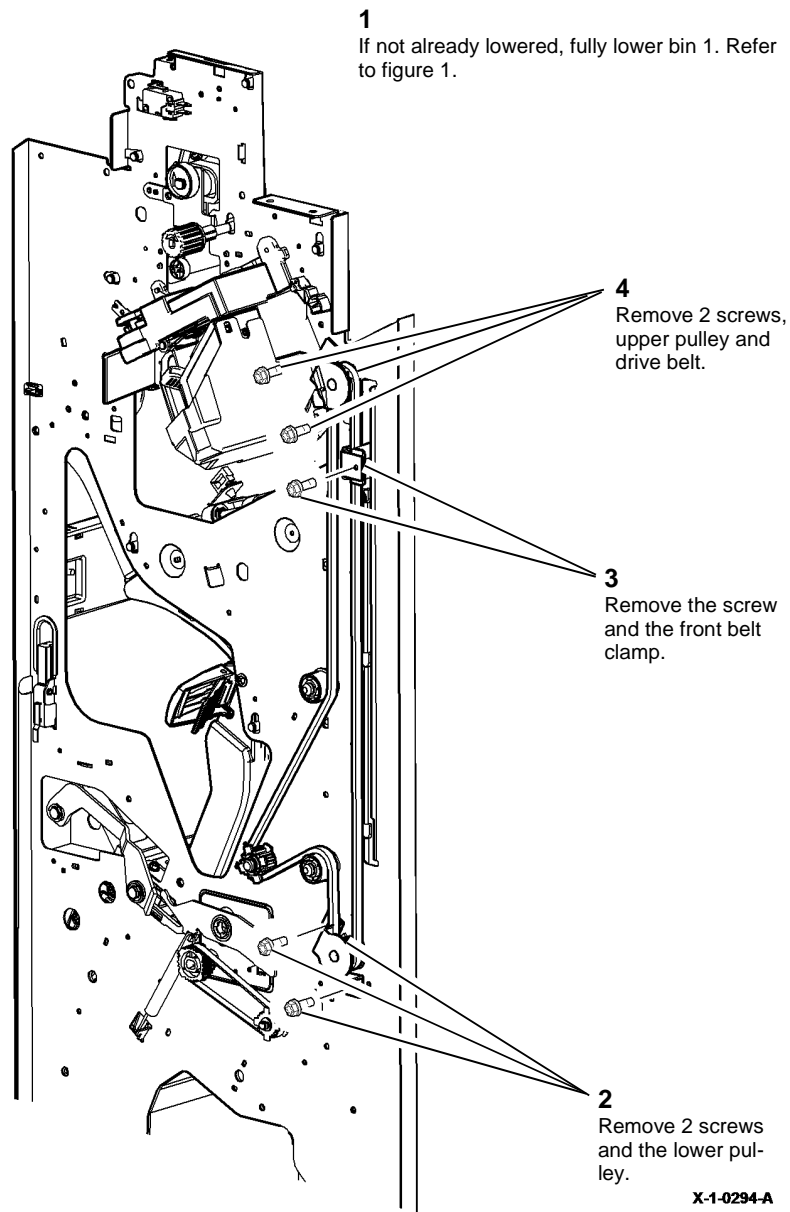


Figure 2 Bin 1 drive belt (front)

Replacement

NOTE: Ensure that the correct set of components are used for each side of the LVF BM.

1. Check that bores of the pulleys and idlers are adequately greased, if necessary perform the LVF BM Bin 1 Drive Belt Pulleys and Idlers procedure of [ADJ 40.1](#).
2. The replacement is the reverse of the removal procedure.

NOTE: The bin 1 level can critically affect the overall stack registration. Refer to [ADJ 12.1-110](#) if adjustment is necessary.

3. Install the LVF BM front door cover assembly and rear cover. [REP 12.1-150](#).

REP 12.6-150 Tamper Assembly and Sensors

Parts List on [PL 12.355](#)

Removal

NOTE: A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.



WARNING

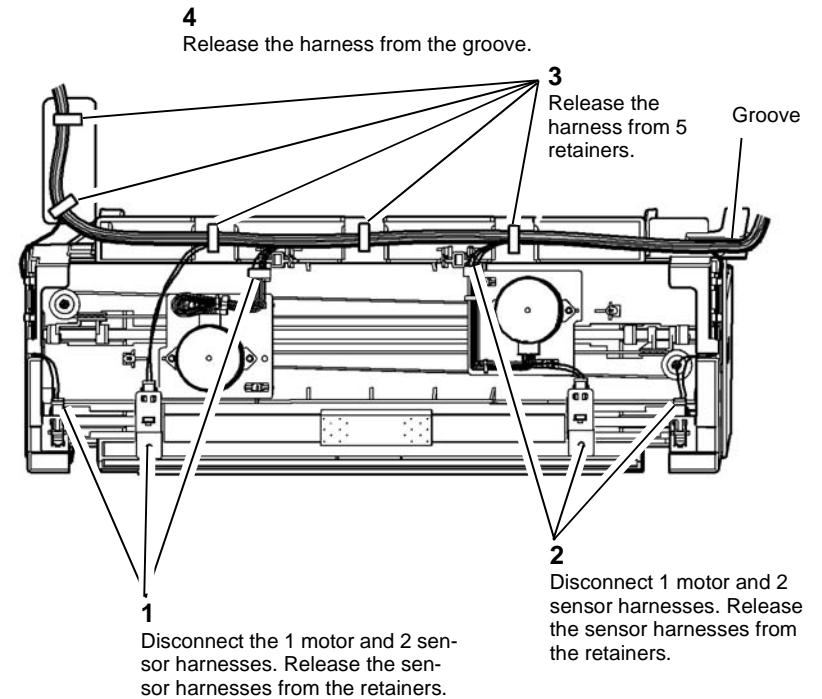
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

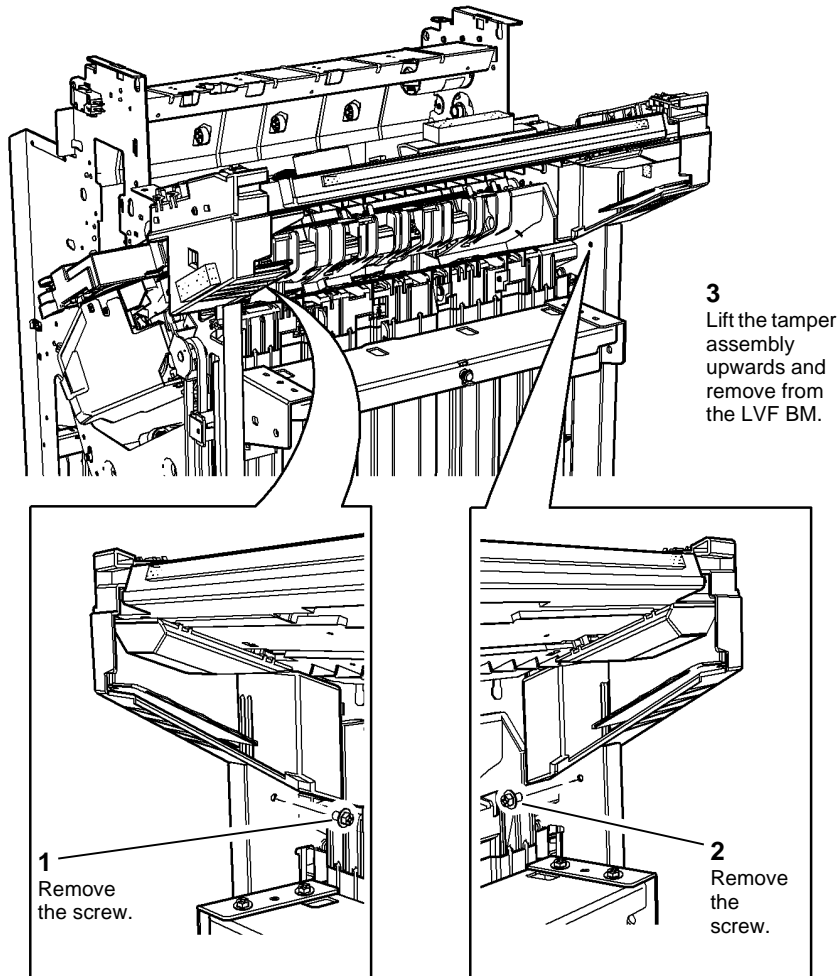
1. Remove the LVF BM covers [REP 12.1-150](#).
2. Remove bin 1 (1 K-L clip).
3. Prepare to remove the tamper assembly [Figure 1](#).



X-1-0295-A

Figure 1 Preparation

4. Remove the tamper assembly, [Figure 2](#).



X-1-0296-A

Figure 2 Removing the tamper assembly

5. To remove the front tamper home sensor, Q12-180, disconnect the harness and release the sensor legs.
6. To remove the rear tamper home sensor, Q12-181, disconnect the harness and release the sensor legs.
7. To remove the rear tamper away sensor, Q12-183, disconnect the harness and release the sensor legs.

Replacement

1. Refer to [GP 6](#) before re-fitting the screws.
2. The replacement is the reverse of the removal procedure.

NOTE: Ensure that:

- The slots in the tamper assembly locate correctly in the LVF BM frame.
- The sensors are correctly located in the tamper assembly, they are easily mis-located when being re-connected to the harnesses.
- All connectors in the harness over the tamper assembly are securely connected.

REP 12.7-150 Hole Punch Unit, Motor and Sensors

Parts List on [PL 12.330](#)

Removal

NOTE: A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the LVF BM covers, [REP 12.1-150](#).
2. Remove and empty the chad bin, [PL 12.330 Item 4](#).

3. Remove the hole punch unit, motor assembly and sensors, [Figure 1](#).

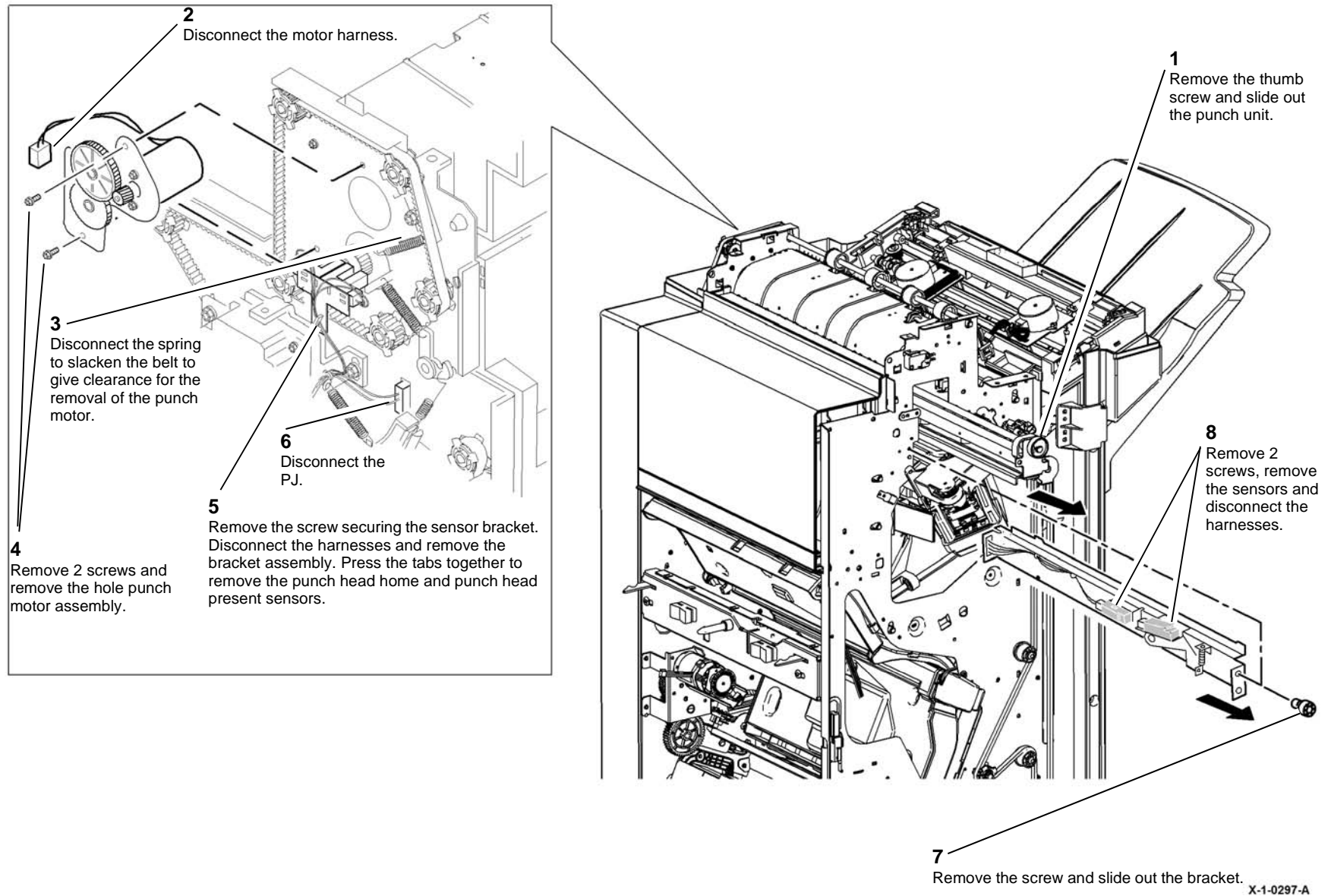


Figure 1 Removal

Replacement

1. The replacement is the reverse of the removal procedure.

NOTE: Refer to [IQS 6 Copy/Print Defects for hole punch performance specifications](#).

REP 12.8-150 Stapler Traverse Assembly and Sensors

Parts List on [PL 12.365](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

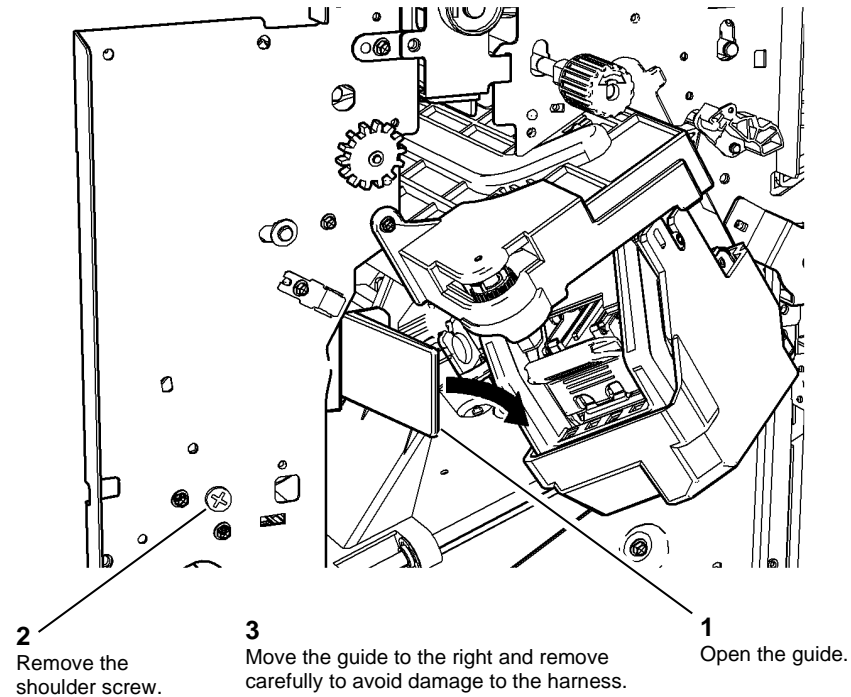


WARNING

Take care not to topple the LVF BM. The LVF BM is unstable when un-docked from the machine. Do not show the customer how to un-dock the LVF BM.

1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the rear cover and front door cover assembly, [REP 12.1-150](#).
3. Remove the entry guide cover assembly, [REP 12.15-150](#).

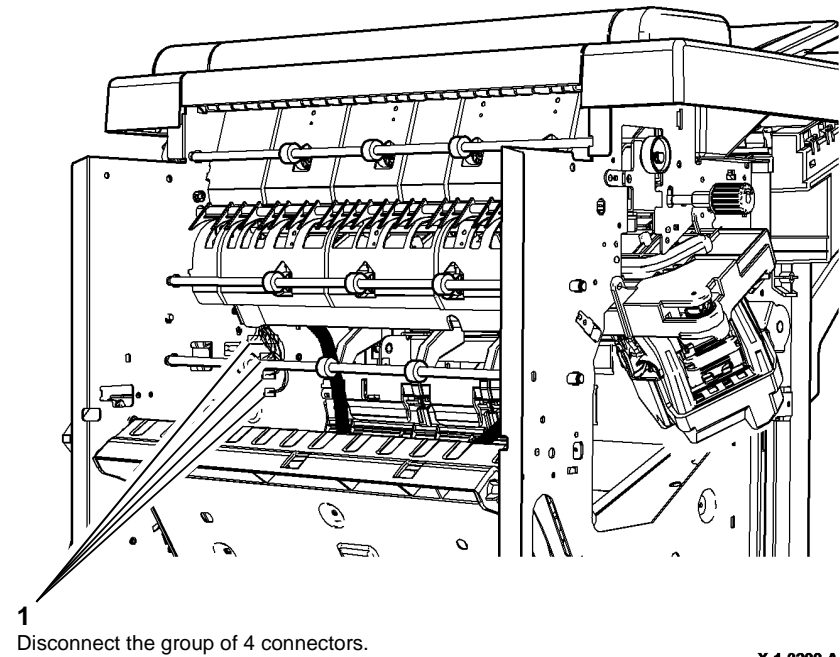
4. Remove the paper entry guide assembly, [Figure 1](#).



X-1-0298-A

Figure 1 Paper entry guide removal

6. Disconnect the harness, [Figure 2](#).



X-1-0299-A

Figure 2 Harness disconnection

5. If necessary, manually move the ejector, [PL 12.360 Item 1](#) fully to the right.

7. Release the stapler harness, [Figure 3](#).

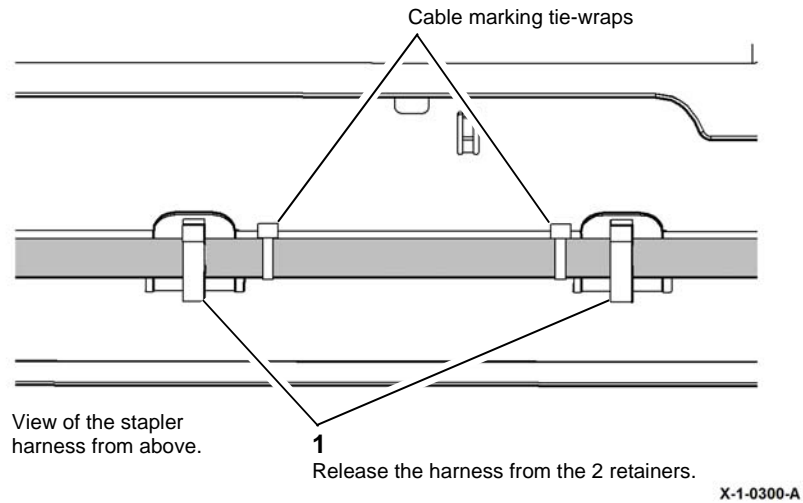


Figure 3 Harness release



CAUTION

When removing and replacing the stapler traverse assembly, support the weight of the assembly underneath the stapler and take care not to damage wiring.

8. Remove the stapler traverse assembly, [Figure 4](#).

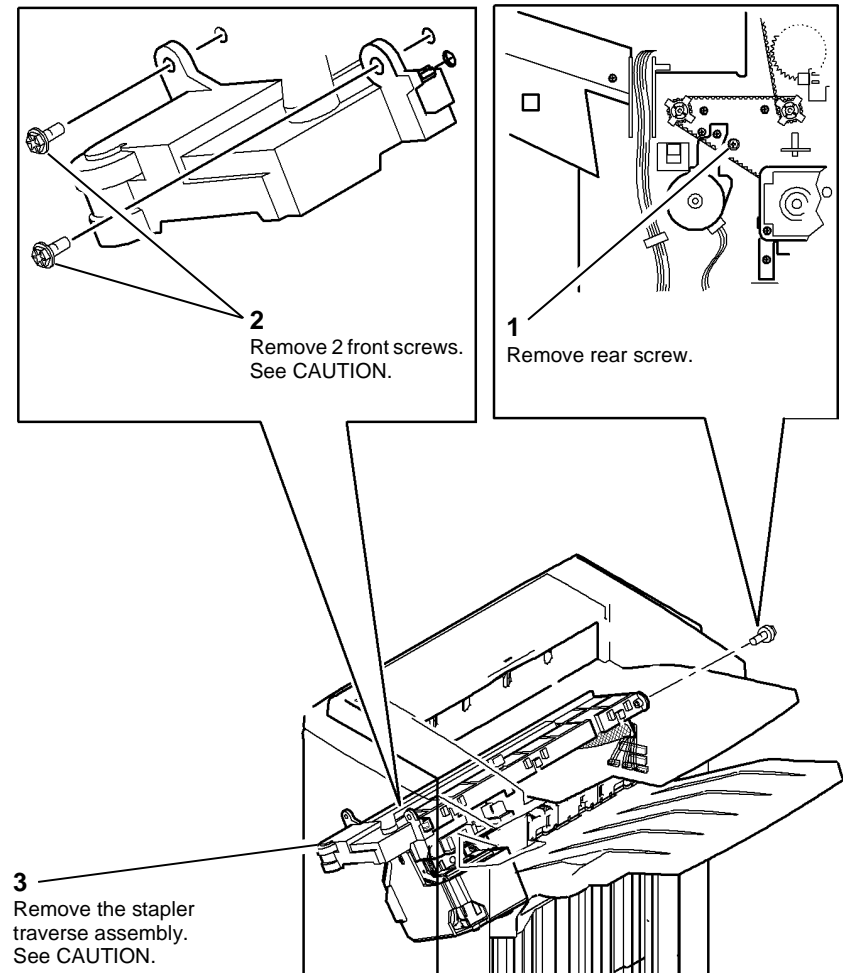


Figure 4 Traverse assembly removal

9. To remove the staple home sensor, Q12-135, disconnect the harness and release the sensor legs.
10. To remove the stapler index sensor, Q12-168, disconnect the harness and release the sensor legs.
11. To remove the SH1 paper sensor, Q12-196, disconnect the harness and release the sensor grips.

Replacement

1. Refer to [GP 6](#) before re-fitting screws into plastic components.
2. When installing the stapler harness, ensure that the cable marking tie-wraps are positioned between the 2 harness retainers, [Figure 3](#).
3. Ensure that the stapling traverse assembly is engaged on the front and rear locating dowels.
4. Ensure that the stapler harness does not interfere with the paper entry guide assembly, [Figure 1](#).
5. Reverse the removal procedure to replace the stapling unit.

REP 12.9-150 Staple Head Unit

Parts List on [PL 12.365](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

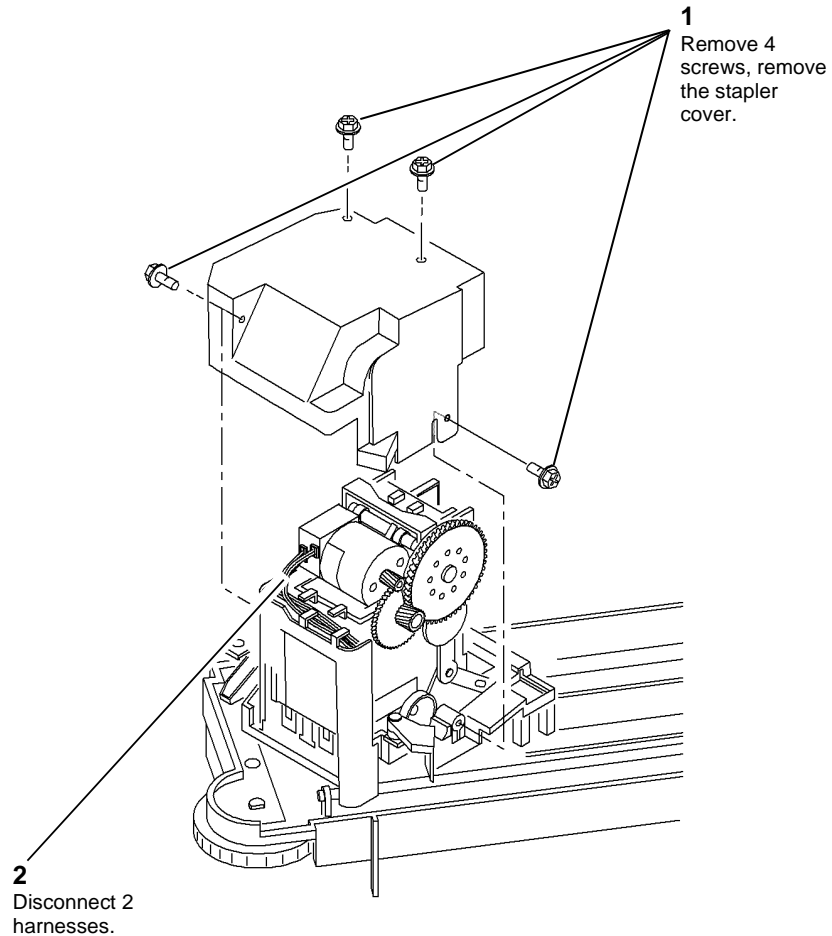


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the stapler traverse assembly, [REP 12.8-150](#).
2. Place the stapler traverse unit upside-down.

3. Remove the staple head unit from the stapling unit, [Figure 1](#).



X-1-0302-A

Figure 1 Staple head unit removal

Replacement

1. Refer to [GP 6](#) before re-fitting screws into plastic components.
2. The replacement is the reverse of the removal procedure.

REP 12.10-150 Ejector Assembly, Support Finger and Sensors

Parts List on [PL 12.360](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.



Take care not to topple the LVF BM. The LVF BM is unstable when un-docked from the machine. Do not show the customer how to un-dock the LVF BM.



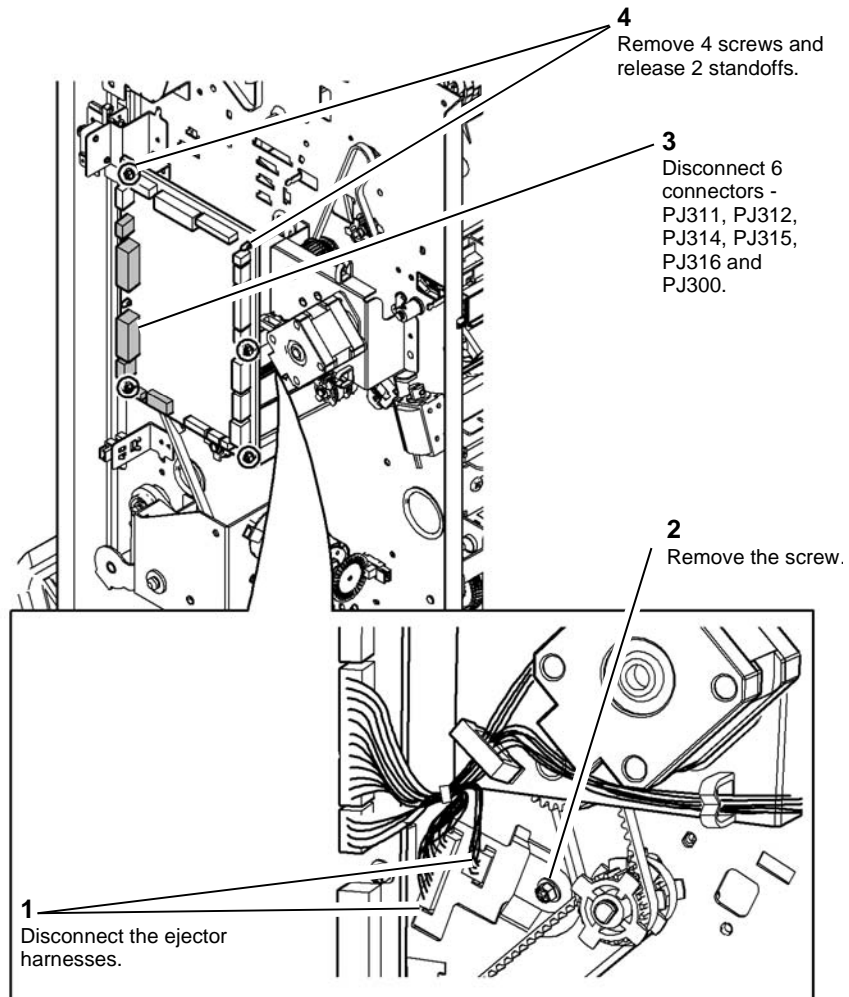
Figure 1 ESD Symbol



Certain components in this product are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

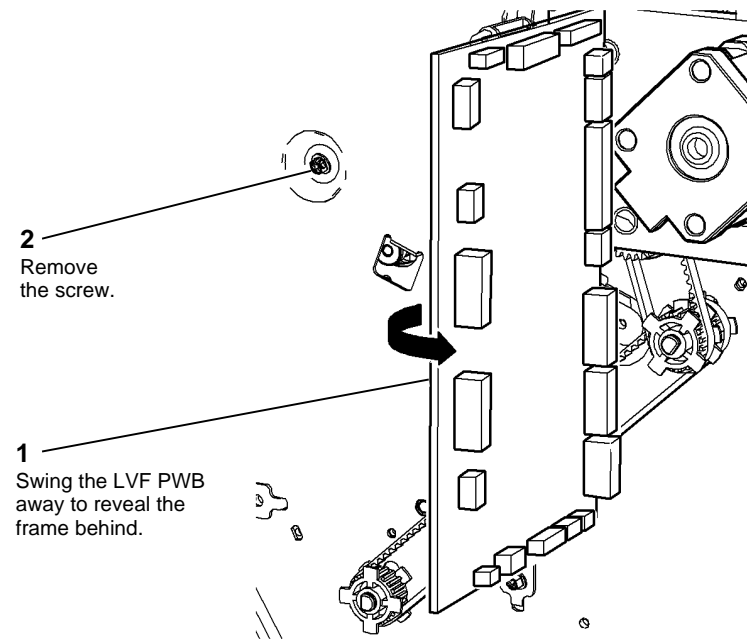
1. Remove the stapler traverse assembly, [REP 12.8-150](#).
2. Remove and empty the chad bin, [PL 12.330 Item 4](#).
3. If necessary, manually move the ejector to the left position.

4. Prepare to remove the ejector assembly, [Figure 2](#) and [Figure 3](#).



X-1-0303-A

Figure 2 Preparation 1



X-1-0304-A

Figure 3 Preparation 2

5. Remove the front fixings, [Figure 4](#).

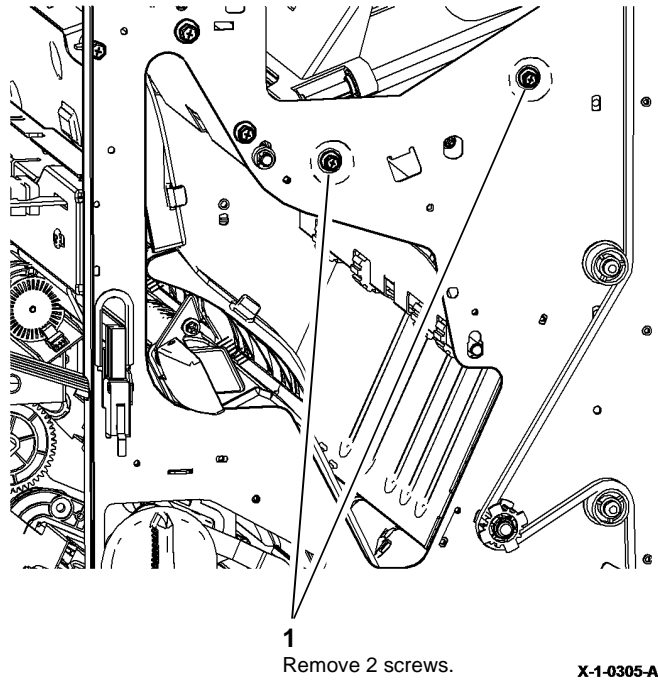


Figure 4 Front fixings removal

6. Remove the ejector assembly, [Figure 5](#).

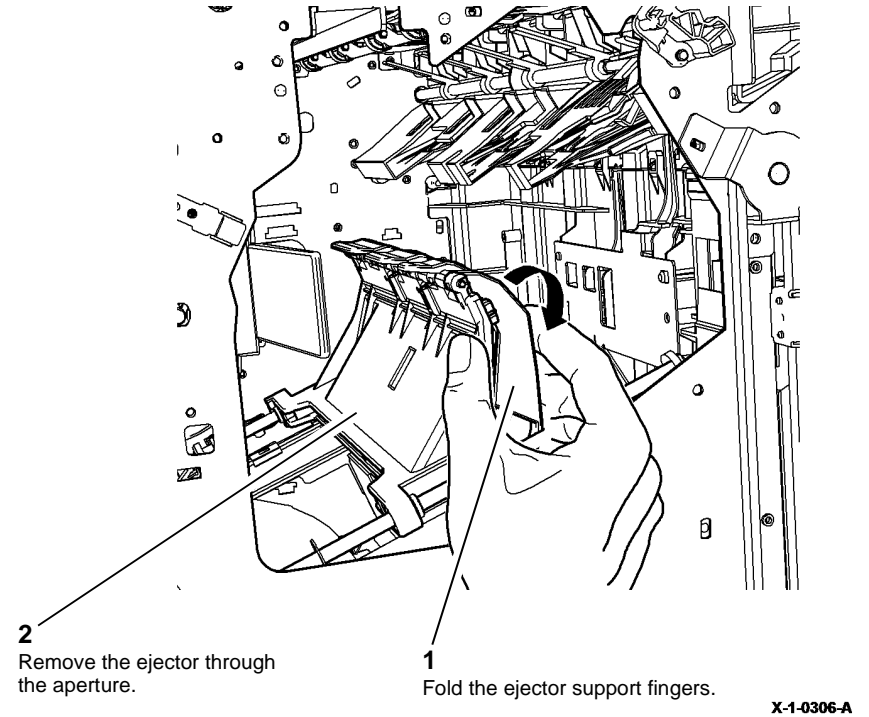


Figure 5 Ejector assembly removal

7. If required, remove the appropriate sensor, [Figure 6](#).

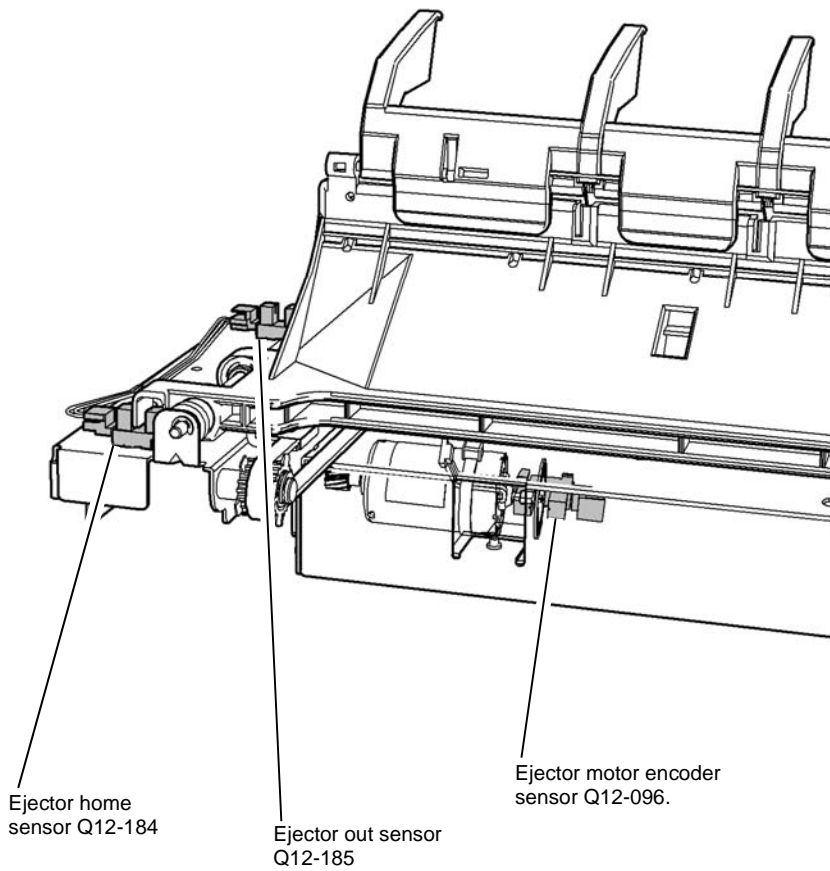


Figure 6 Sensor removal

X-1-0307-A

8. If required, prepare to remove the support finger, [Figure 7](#).

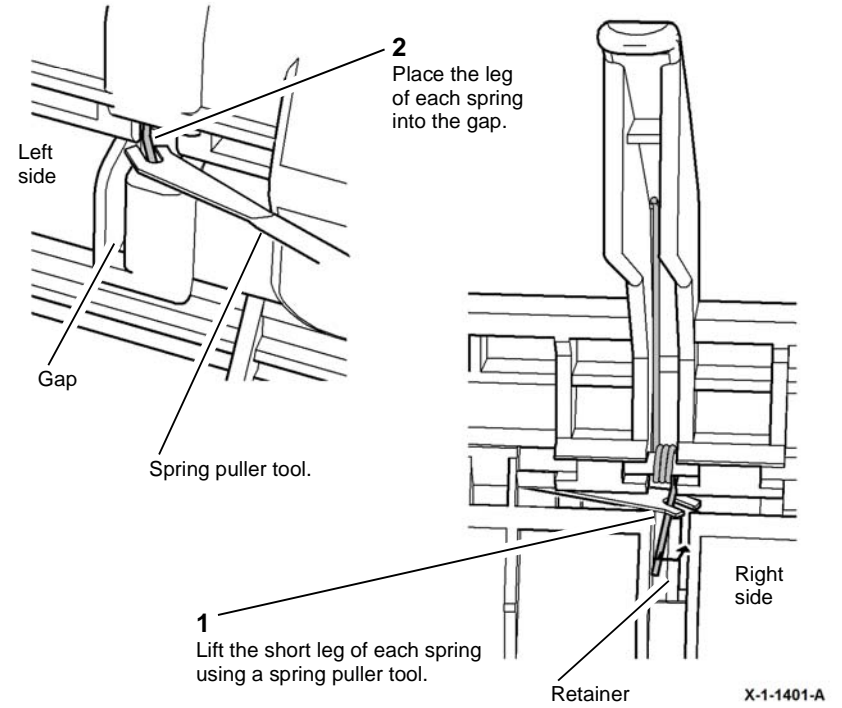


Figure 7 Preparation

X-1-1401-A

9. Remove the support finger, [Figure 8](#).

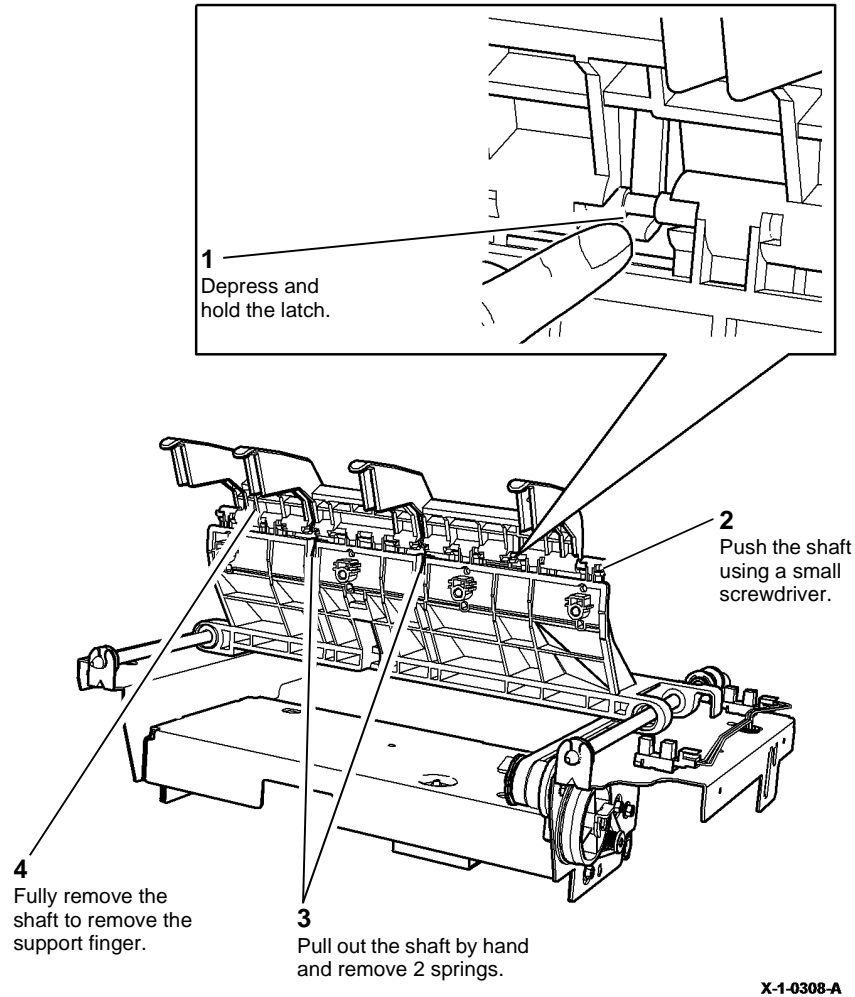


Figure 8 Support finger removal

Replacement

The replacement is the reverse of the removal procedure.

NOTE: After replacing the support finger, springs and shaft, ensure that the spring legs are lifted back behind the retainers, refer to [Figure 7](#).

REP 12.11-150 Bin 1 Upper Level Sensor

Parts List on [PL 12.345](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the ejector assembly. Refer to [REP 12.10-150](#).

2. Remove the bin 1 upper level sensor [Figure 1](#).

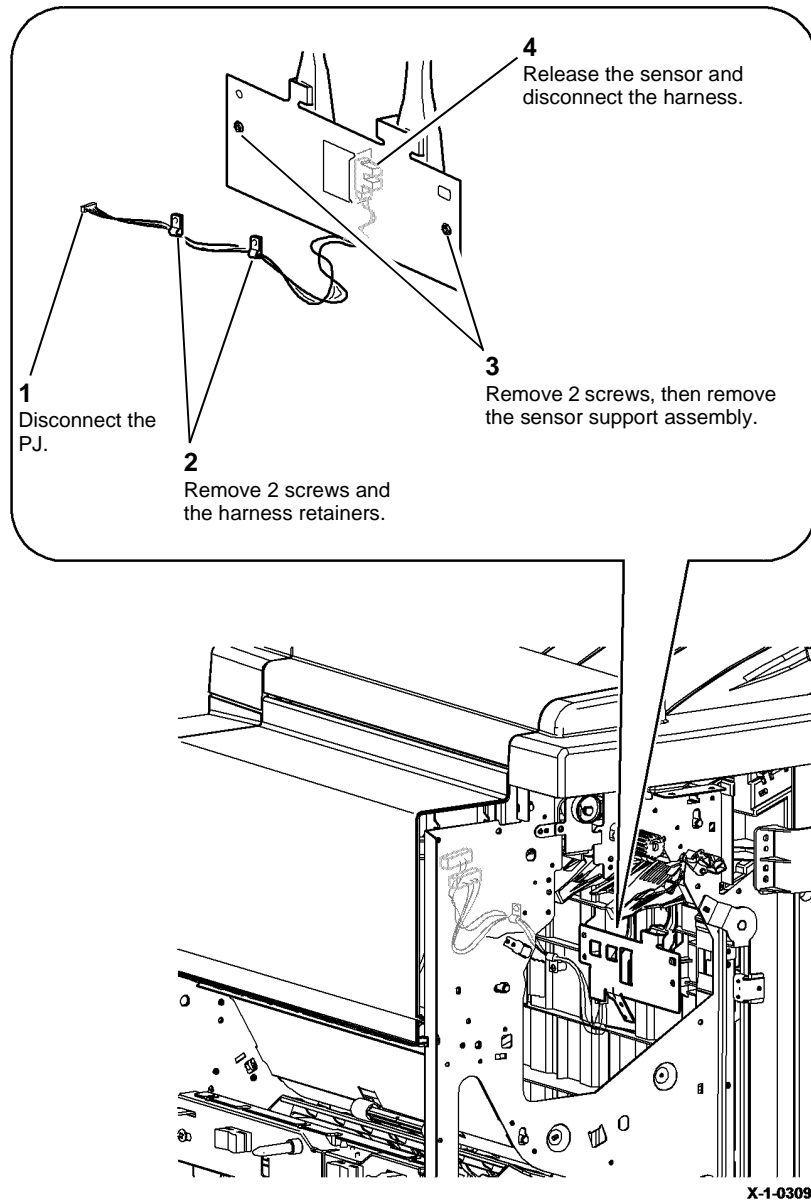


Figure 1 Bin 1 level sensors removal

Replacement

1. Refer to [GP 6](#) before refitting the screws.
2. The replacement is the reverse of the removal procedure.

REP 12.12-150 Paddle Shaft Assembly and Paddle Motor Assembly

Parts List on [PL 12.335](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

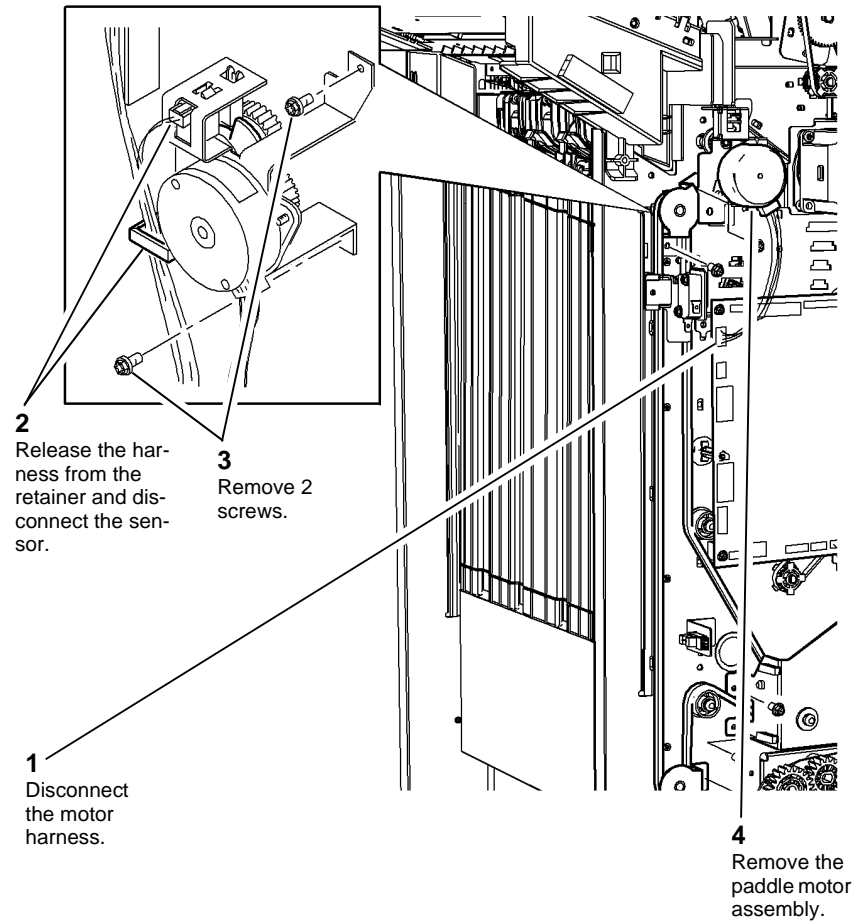


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the tamper assembly, [REP 12.6-150](#).
2. Remove bin 1, [PL 12.320 Item 10](#).

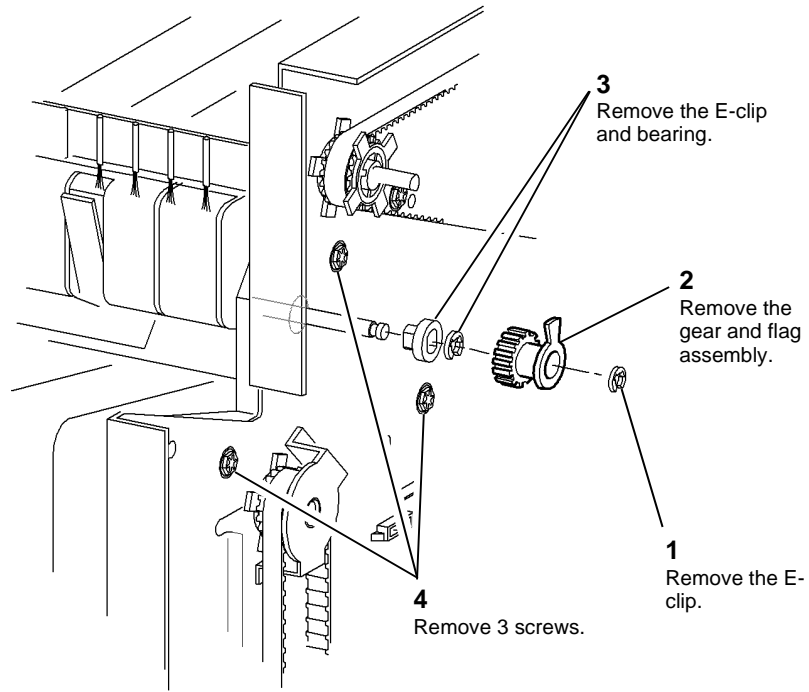
3. Remove the paddle motor assembly, [Figure 1](#).



X-1-0310-A

Figure 1 Paddle motor assembly

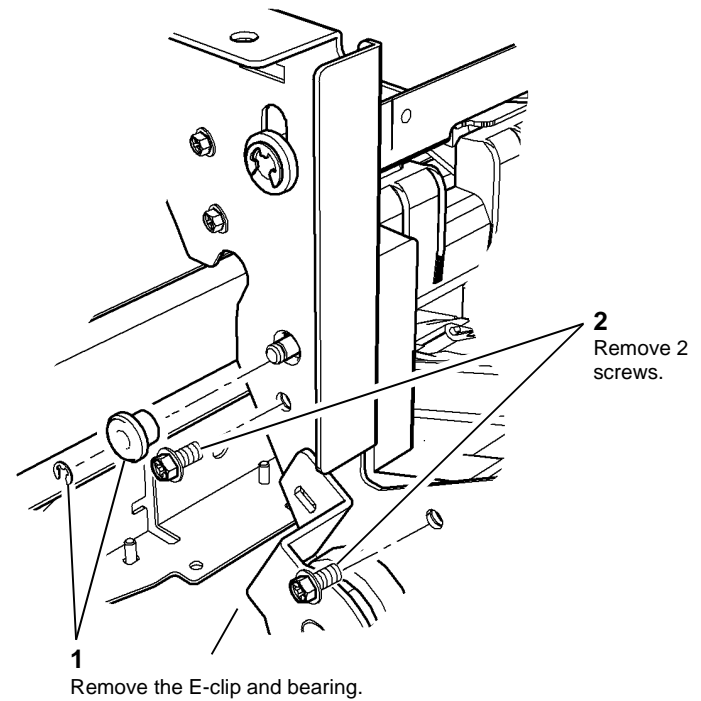
4. Prepare to remove the rear components, [Figure 2](#).



X-1-0311-A

Figure 2 Rear preparation

5. Prepare to remove the front components, [Figure 3](#).



X-1-0312-A

Figure 3 Front preparation

- Remove the paddle shaft assembly, [Figure 4](#).

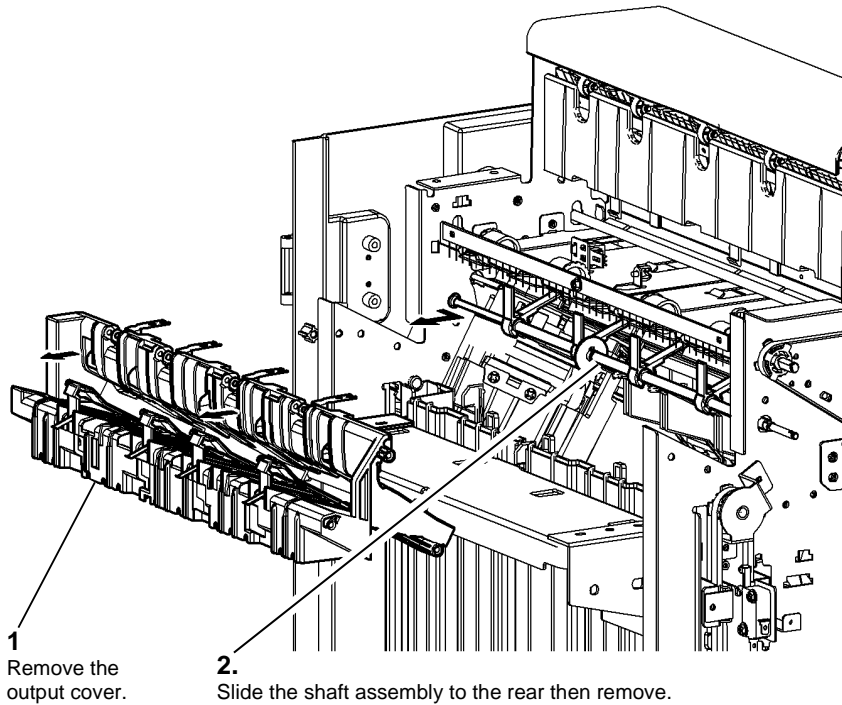


Figure 4 Paddle shaft removal

X-1-0313-A

Replacement

- Refer to [GP 6](#) before refitting the screws.
- Install the paddle shaft. Install the front E-clip.
- Install the output cover, [Figure 4](#).
- Install the rear bearing and E-clip.
- Install the gear and flag assembly with the E-clip. Ensure that it locates onto the "D" flat, [Figure 2](#).
- Install the motor assembly, [Figure 1](#).
- Install the tamper assembly and bin 1.

- Ensure that the paddles and flag are correctly aligned [Figure 5](#).

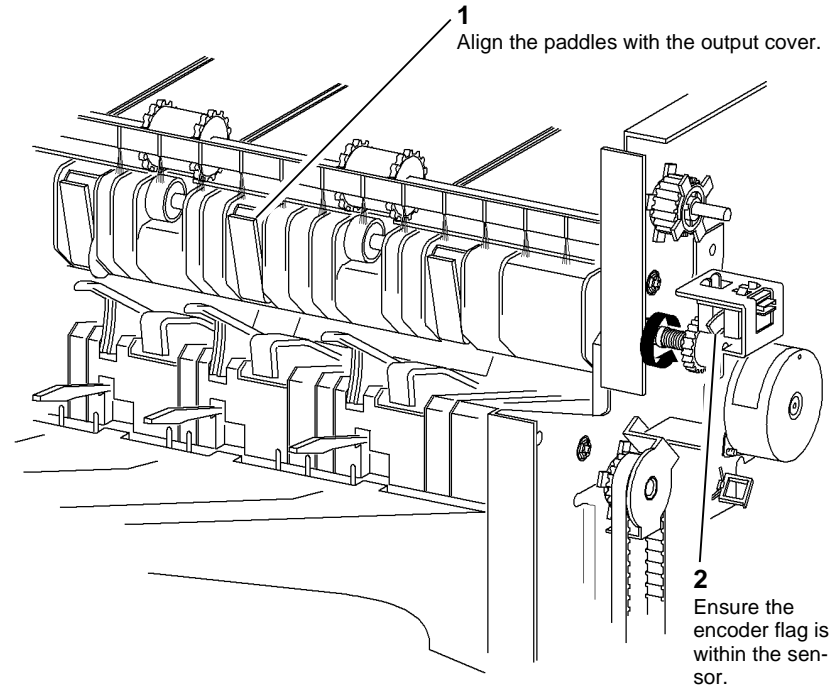


Figure 5 Paddle alignment

X-1-0314-A

- Test the operation of the paddle roll, enter `dC330`, output code 012-238. When the code is cancelled the paddles must stop with both rubber blades inside of the output cover. If necessary, check that the gear and flag assembly are correctly located on the "D" flat.

REP 12.13-150 LVF BM Un-Docking

Parts List on [PL 12.325](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



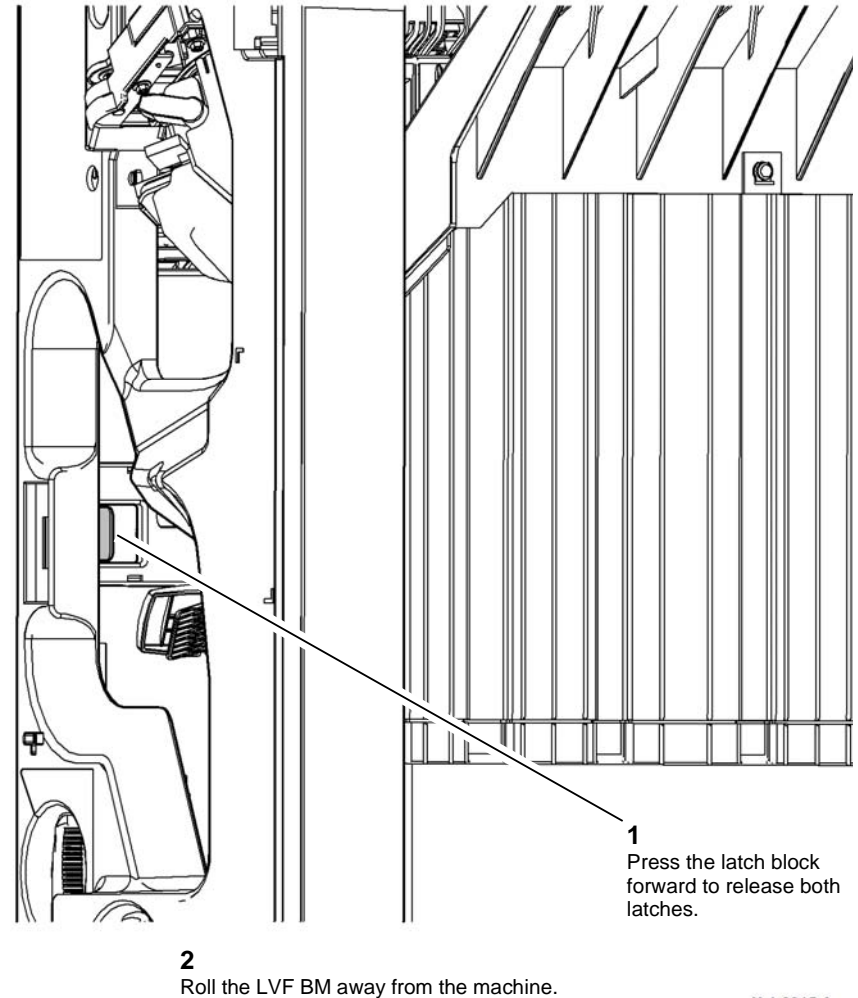
Take care during this procedure. Sharp edges may be present that can cause injury.



Take care not to topple the LVF BM. The LVF BM is unstable when un-docked from the machine. Do not show the customer how to un-dock the LVF BM.

1. If necessary, disconnect the harnesses between the LVF BM and the machine.
2. Open the LVF BM front door.

3. Release the LVF BM link bracket assembly, [Figure 1](#).



X-1-0315-A

Figure 1 LVF BM link bracket assembly

Replacement

Align the LVF BM latches to the machine apertures then push the 2 units firmly together until they latch.

REP 12.14-150 LVF PWB

Parts List on [PL 12.425](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.



Figure 1 ESD Symbol



Certain components in this product are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

1. Remove the LVF BM rear cover, [REP 12.1-150](#).
2. Disconnect all harness connectors from the LVF PWB.
3. Remove the 4 screws and release the 2 standoffs securing the LVF PWB.

Replacement

1. The replacement is the reverse of the removal procedure.
2. If a new LVF PWB is being installed, read the NVM values from the LVF BM NVM label. Enter [dC131](#) and enter the values from the label into locations 712-100, 712-101, 712-102 and 712-103.
3. If a new LVF PWB is being installed, perform the [312F-150](#) LVF PWB and LVF BM PWB DIP Switch Settings RAP.

REP 12.15-150 Entry Guide Cover Assembly

Parts List on [PL 12.320](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.



Take care not to topple the LVF BM. The LVF BM is unstable when un-docked from the machine. Do not show the customer how to un-dock the LVF BM.

1. Remove the LVF BM front door cover assembly and rear cover, [REP 12.1-150](#).
2. Un-dock the LVF BM, [REP 12.13-150](#).
3. Remove the upper entrance guide, [REP 12.31-150](#).

4. Remove the entry guide cover, [Figure 1](#).

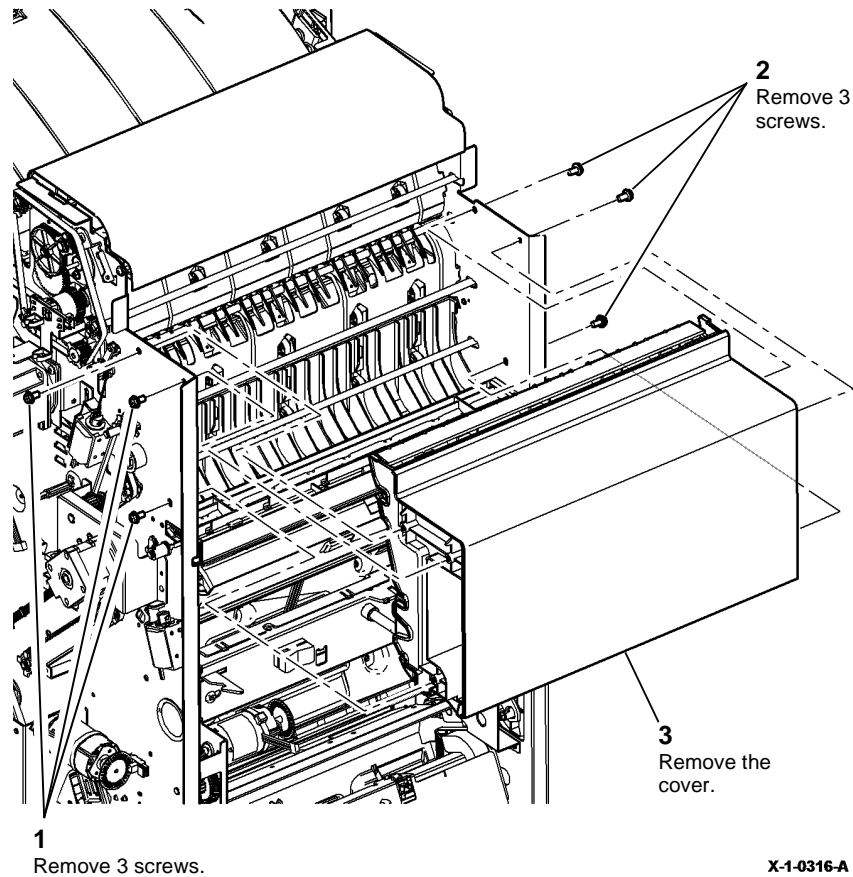


Figure 1 Entry guide cover removal

Replacement

1. Refer to [GP 6](#) before refitting the screws.
2. The replacement is the reverse of the removal procedure.

REP 12.16-150 Docking Latch Assembly

Parts List on [PL 12.325](#)

Removal


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

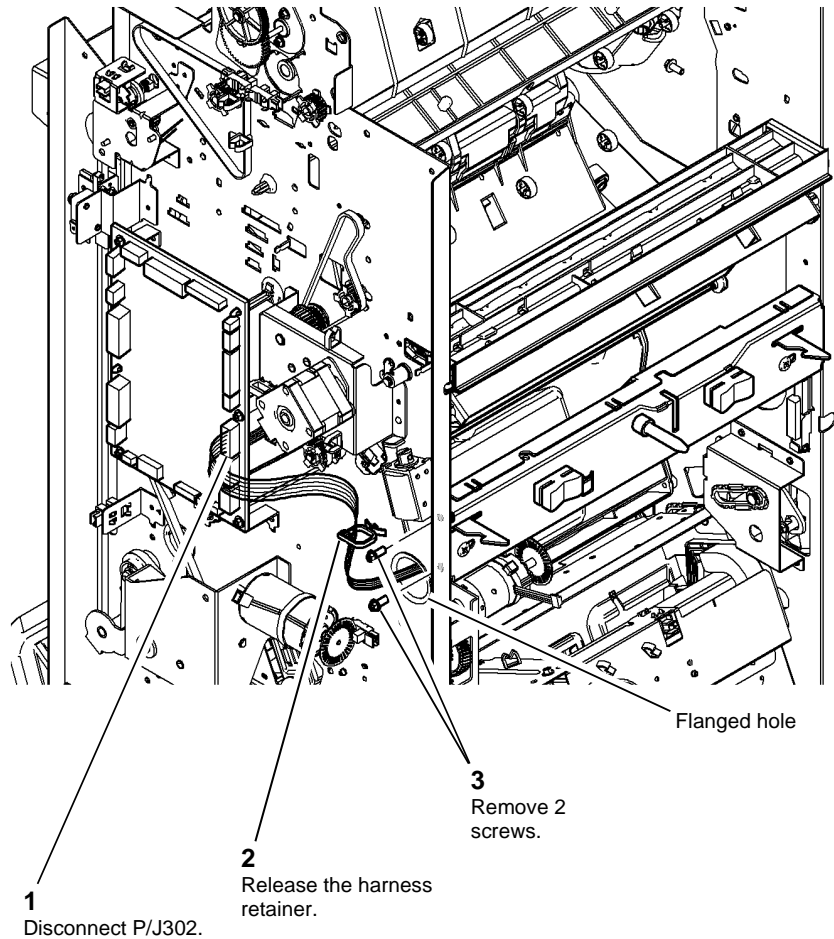
Take care during this procedure. Sharp edges may be present that can cause injury.


WARNING

Take care not to topple the LVF BM. The LVF BM is unstable when un-docked from the machine. Do not show the customer how to un-dock the LVF BM.

1. Remove the LVF BM front door cover assembly and rear cover, [REP 12.1-150](#).
2. Un-dock the LVF BM, [REP 12.13-150](#).

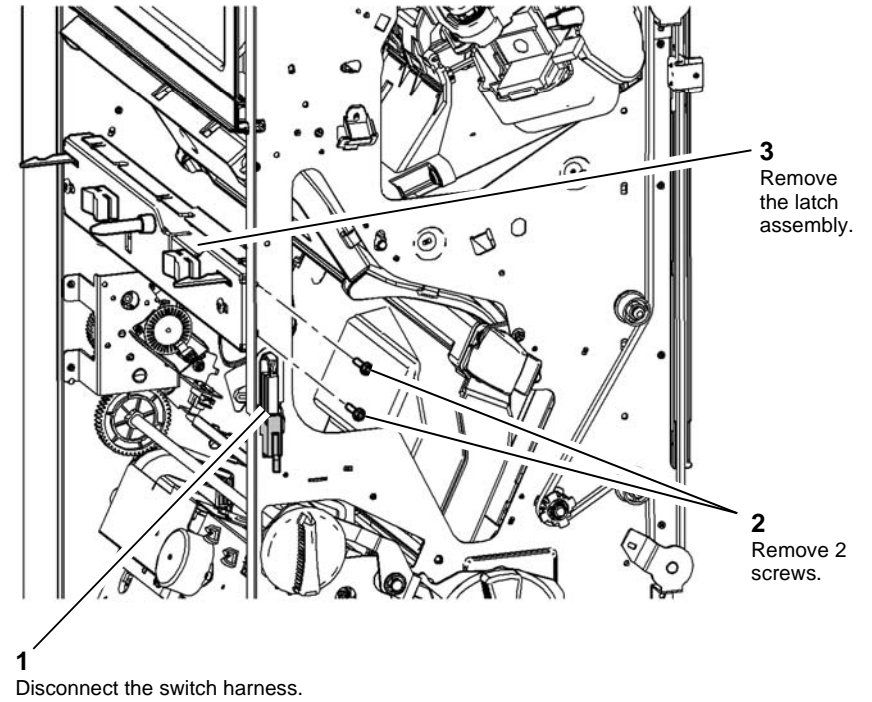
3. Prepare to remove the docking latch assembly, **Figure 1**.



X-1-0317-A

Figure 1 Prepare to remove the latch

4. Remove the docking latch assembly, **Figure 2**.

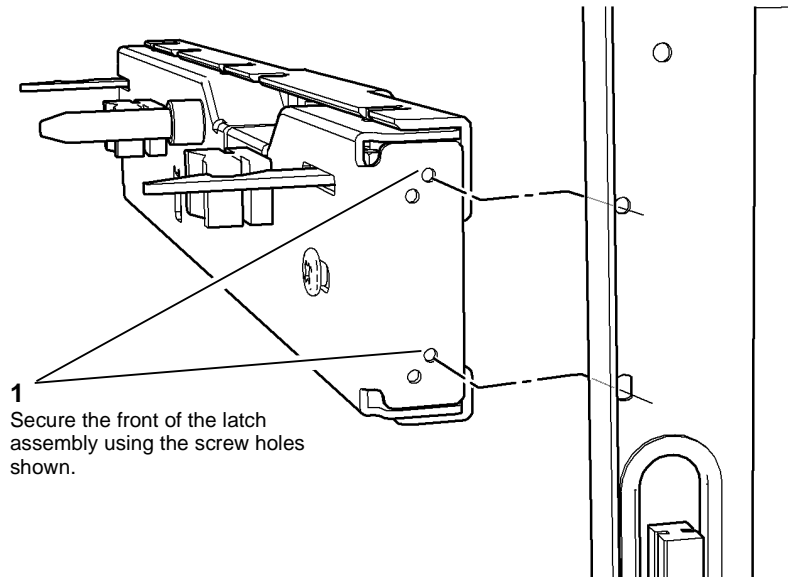


X-1-0318-A

Figure 2 Latch assembly removal

Replacement

1. The replacement is the reverse of the removal procedure.
2. Ensure the 2 screws at the front locate in the correct holes, [Figure 3](#).



1
Secure the front of the latch assembly using the screw holes shown.

X-1-1322-A

Figure 3 Latch assembly front screw holes



CAUTION

Ensure that the front and rear harness are routed through the flanged holes. Refer to [Figure 1](#) and [Figure 2](#).

REP 12.17-150 Ejector Belt

Parts List on [PL 12.360](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the ejector assembly. Refer to [REP 12.10-150](#).

- Remove the ejector belt, [Figure 1](#).

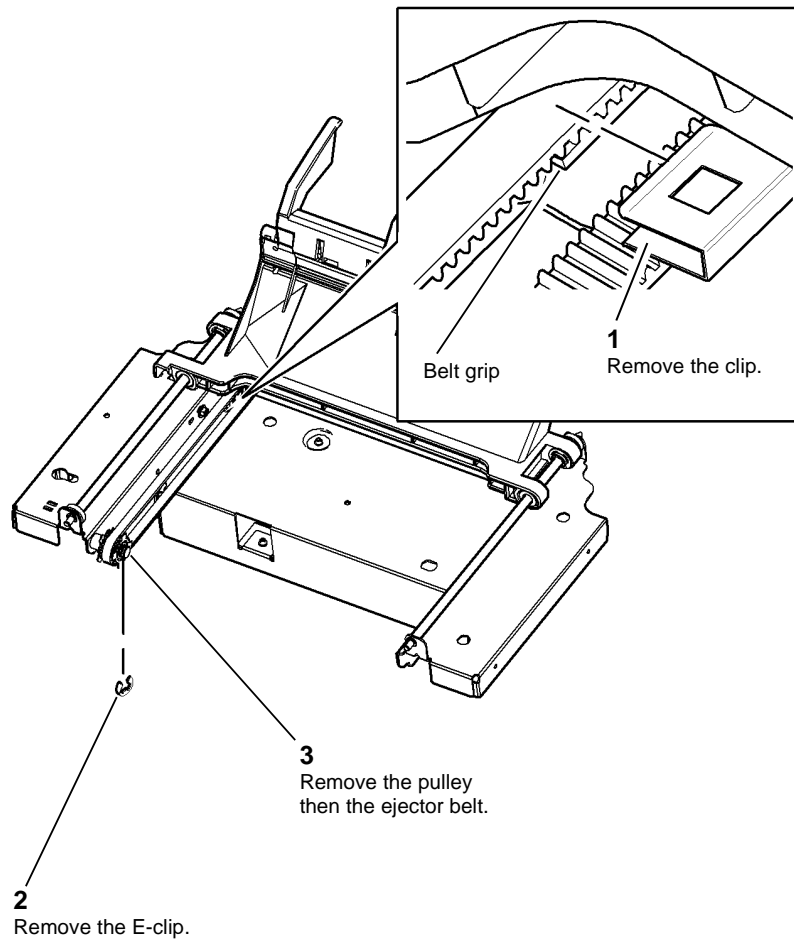


Figure 1 Remove the ejector belt

X-1-0319-A

Replacement

- The replacement is the reverse of the removal procedure.
- Ensure that the ejector belt is correctly engaged with the belt grip on the ejector assembly before the clip is re-installed. Refer to [Figure 1](#).

REP 12.18-150 BM Back Stop Motor

Parts List on [PL 12.400](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

- Un-dock the LVF BM, [REP 12.13-150](#).
- Remove the LVF BM front door cover assembly, [REP 12.1-150](#).
- Remove the back stop motor, [Figure 1](#).

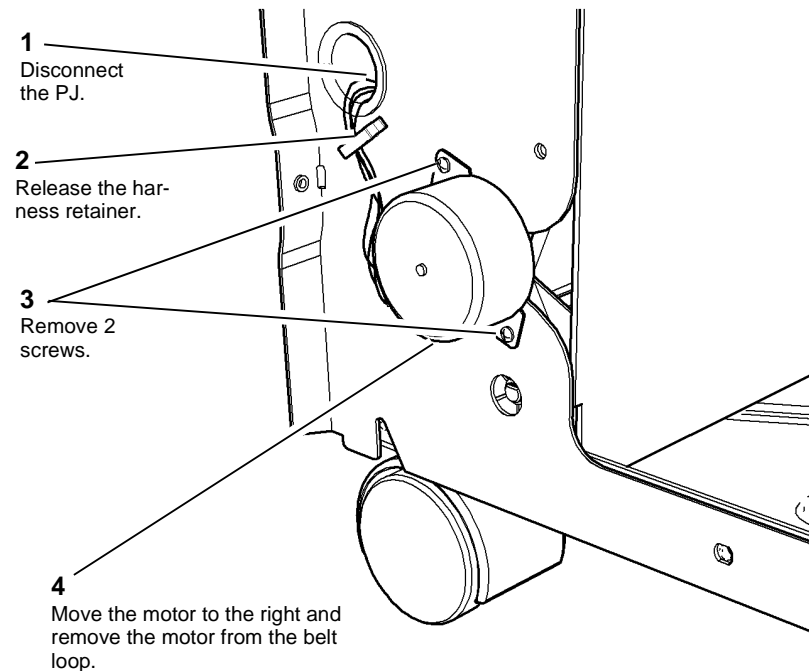
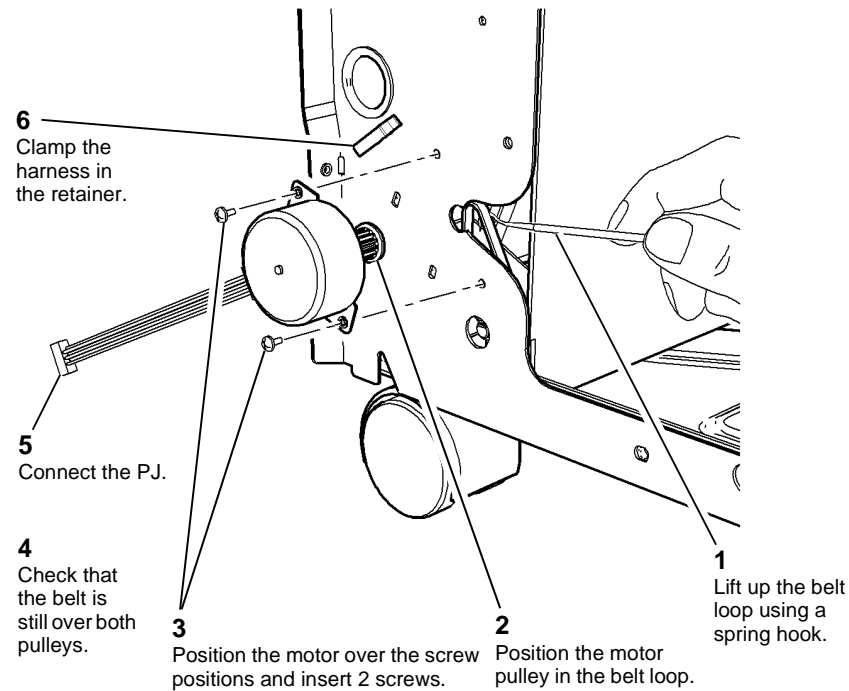


Figure 1 Back stop motor removal

X-1-0320-A

Replacement

1. Install the back stop motor, [Figure 2](#).



X-1-0321-A

Figure 2 Back stop motor installation

2. Reverse the removal procedure to install the remainder of the removed components.

REP 12.19-150 Back Stop Assembly, Left Guide Assembly and Static Eliminators

Parts List on [PL 12.400](#)

Removal


WARNING

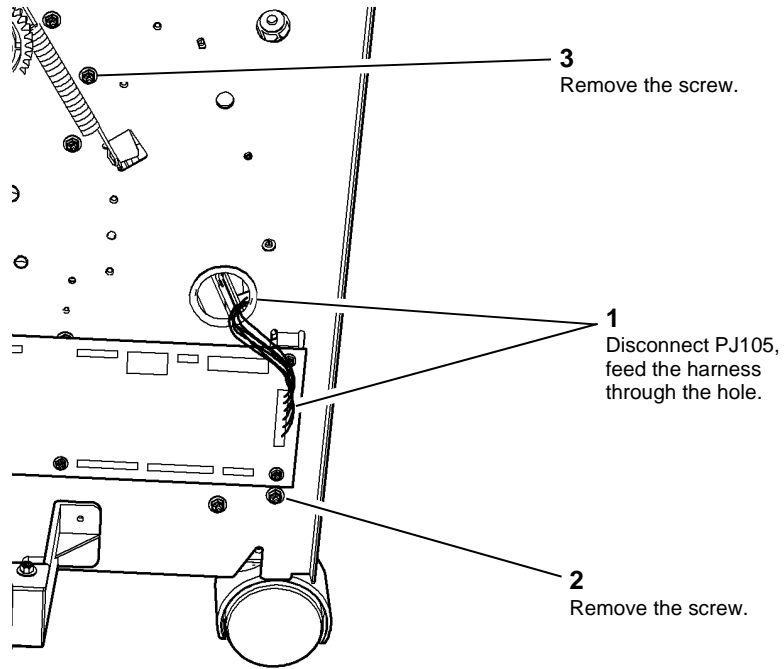
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM front door cover assembly and rear cover, [REP 12.1-150](#).
3. Remove the BM stapler assembly and booklet tamper assembly, [REP 12.38-150](#).
4. Remove the crease roll motor and gearbox assembly, [REP 12.25-150](#).
5. Remove the back stop motor, [REP 12.18-150](#).

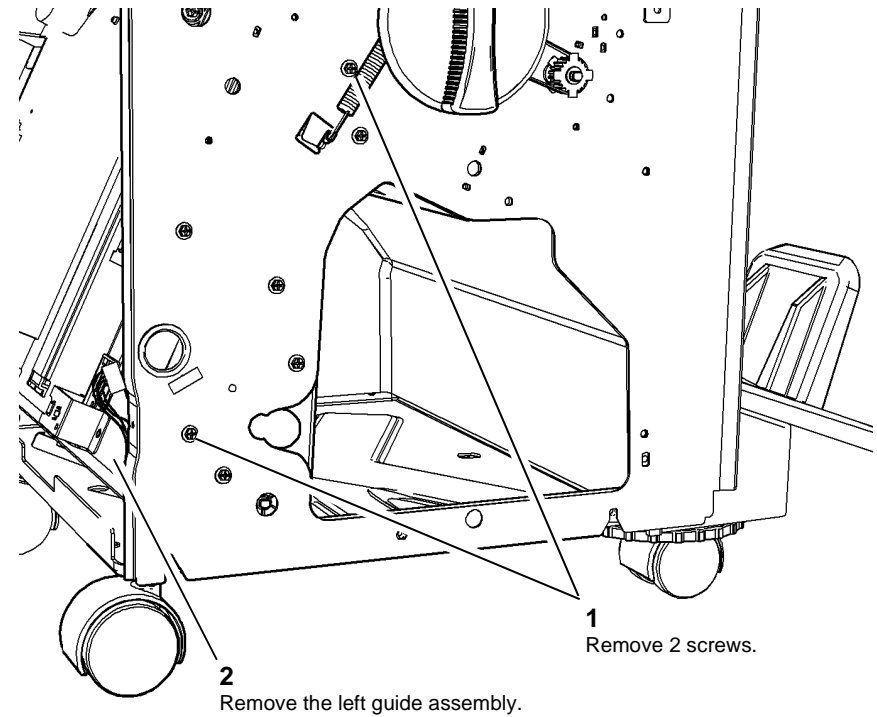
6. Prepare to remove the left guide assembly, [Figure 1](#).



X-1-0322-A

Figure 1 Preparation

7. Remove the left guide assembly, [Figure 2](#).



X-1-0323-A

Figure 2 Left guide assembly removal

8. If only repairing the left guide assembly or static eliminators, go to Replacement steps 5 and 6.

9. Prepare to remove the right guide assembly, [Figure 3](#).

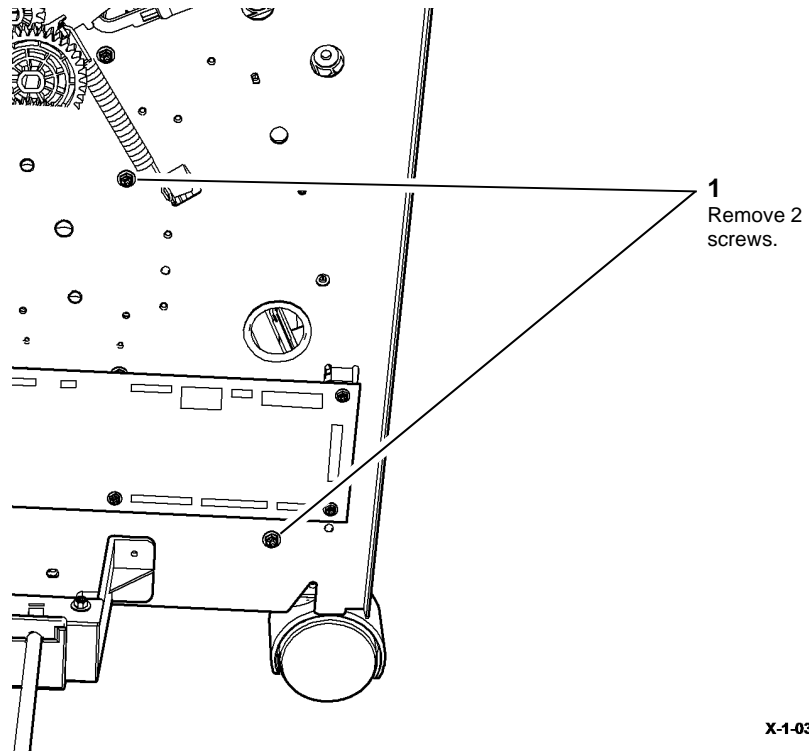


Figure 3 Preparation

X-1-0324-A

10. Remove the right guide assembly, [Figure 4](#).

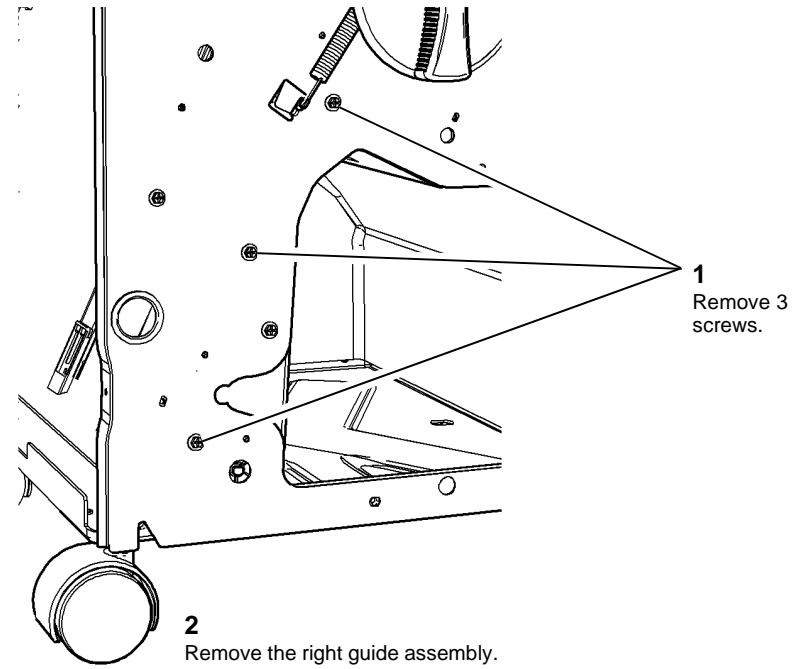
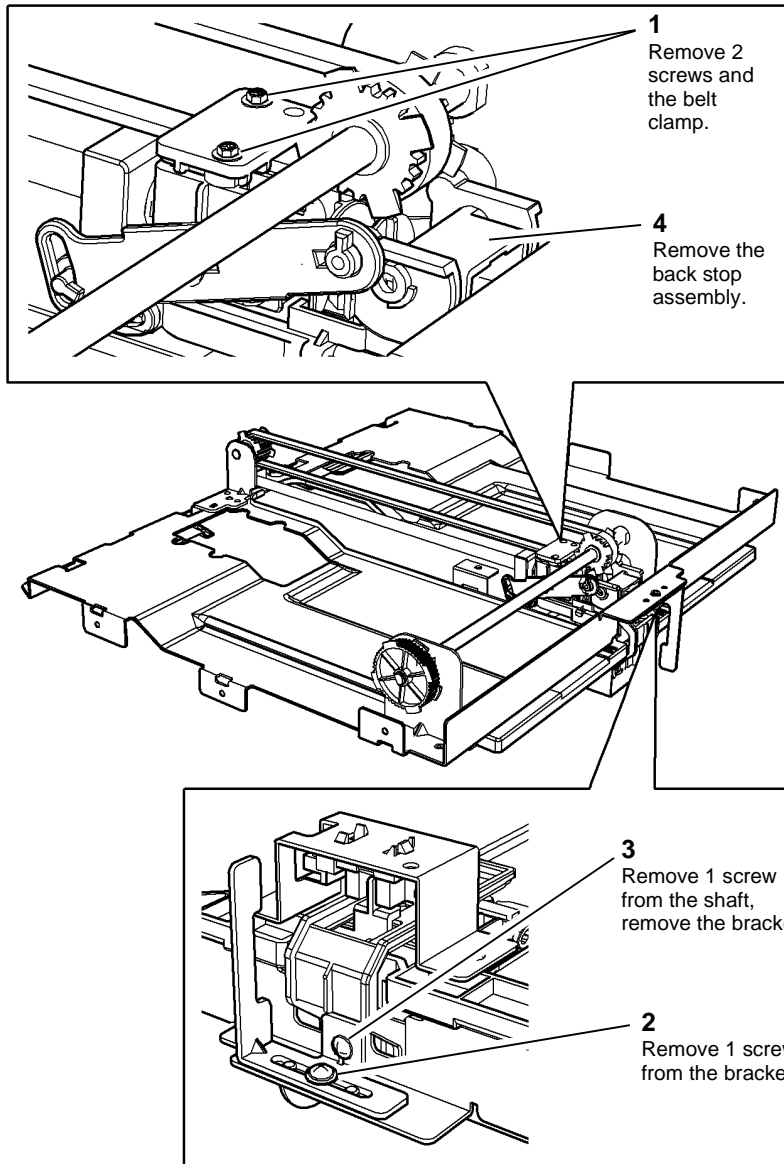


Figure 4 Right guide assembly removal

X-1-0325-A

11. Remove the back stop assembly, [Figure 5](#).

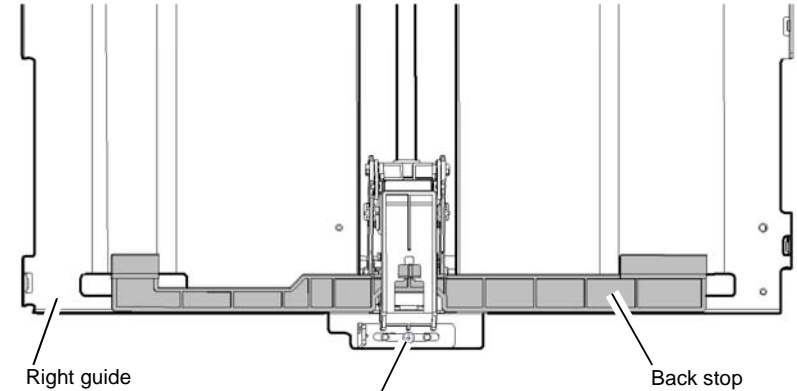


X-1-0326-A

Figure 5 Back stop assembly removal

Replacement

1. Refer to [GP 6](#) before refitting the screws.
2. Install the back stop assembly by reversing the steps in [Figure 5](#). Ensure that the back stop is correctly located, [Figure 6](#). Ensure that the belt clamp is correctly located, [Figure 7](#).



- 1** Move the back stop to align the bottom edge with the bottom edge of the right guide.
- 2** Align the back stop so that the inboard and outboard lower edges are in-line with the bottom edge of the right guide.
- 3** Tighten the screw.

X-1-0327-A

Figure 6 Bracket location

REP 12.20-150 BM Guide Home Sensor and BM Back Stop Mid Home Sensor

Parts List on [PL 12.400](#)

Removal

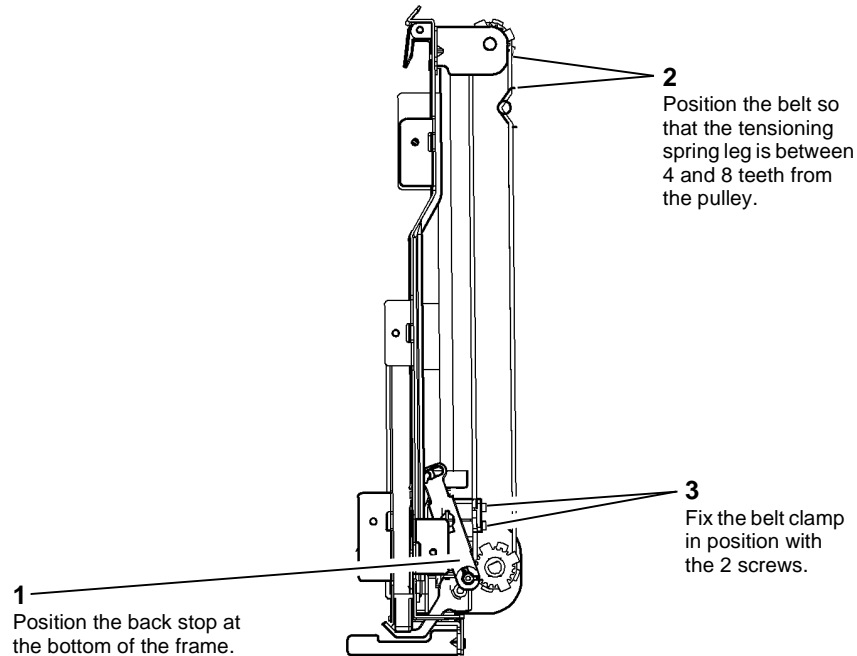


Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

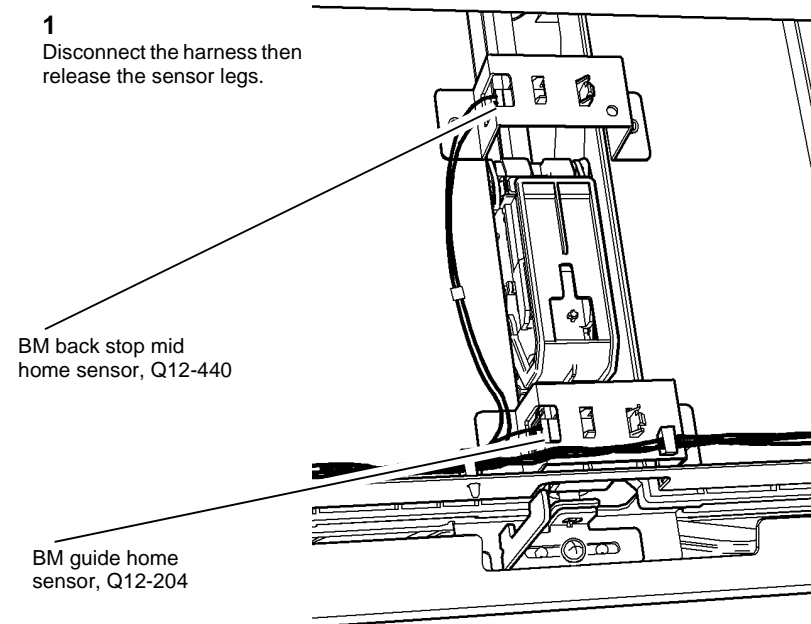
1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM back stop cover, [REP 12.1-150](#).
3. Remove the sensors, [Figure 1](#).



X-1-0328-A

Figure 7 Belt clamp location

3. Manually move the back stop to both extremes of travel. Ensure that the tensioner spring does not touch either pulley. If necessary re-position the belt clamp.
4. Reverse the removal procedure to install the remainder of the removed components.
5. If a new sub plate, [PL 12.400 Item 16](#) with static eliminator, [PL 12.400 Item 17](#) attached is being installed, un-clip the old sub plate, clip on the new sub plate.
6. If new static eliminators, [PL 12.400 Item 15](#) are being installed, peel off the old static eliminators, then peel the backing paper from the new static eliminators and apply to the left guide assembly, press firmly in place.
7. Perform [ADJ 12.8-150 Booklet Skew](#).
8. Perform [ADJ 12.4-150 Booklet Crease Position](#).



X-1-0329-A

Figure 1 Sensors removal

Replacement

The replacement is the reverse of the removal procedure.

REP 12.21-150 Crease Blade Gearbox Assembly, Motor and Sensors

Parts List on PL 12.405

Removal

Use this procedure to remove the components that follow:

- Crease blade motor, MOT12-252.
- Crease blade gearbox assembly.
- Crease blade home sensor, Q12-214.
- Crease blade motor encoder sensor, Q12-215.



WARNING

Switch off the electricity to the machine. Refer to GP 14. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

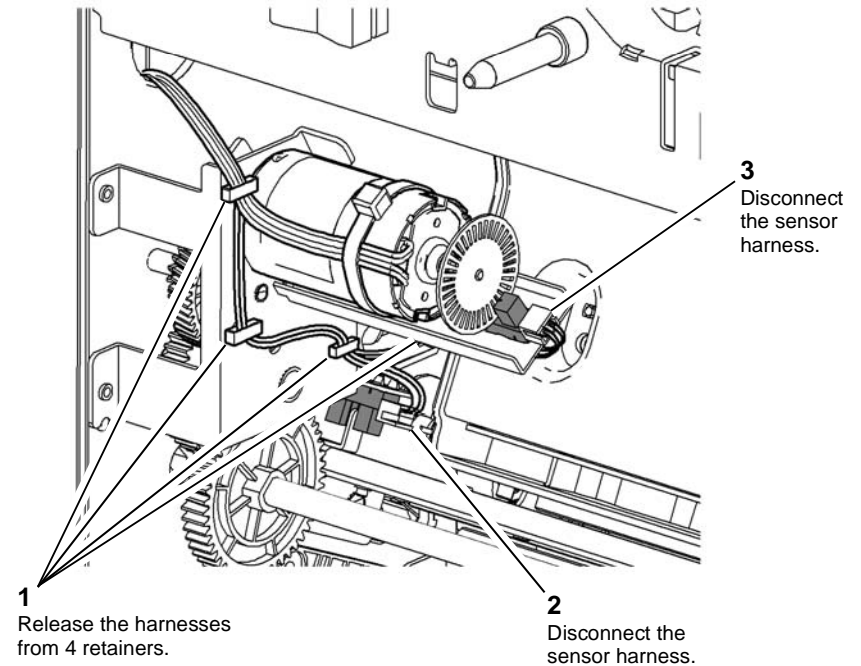


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the LVF BM rear cover, REP 12.1-150.
2. Un-dock the LVF BM, REP 12.13-150.

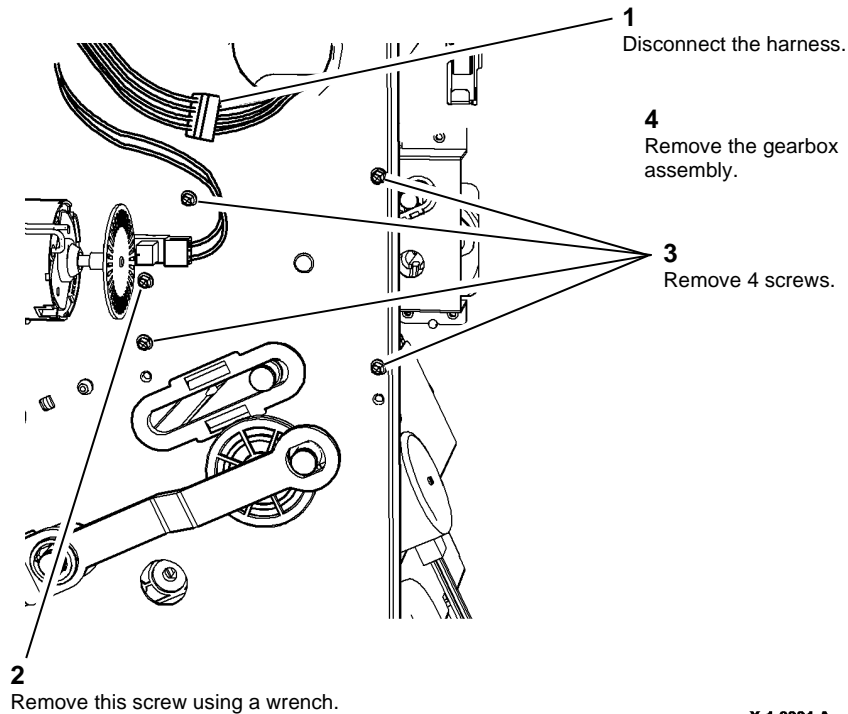
3. Prepare to remove the crease blade motor and gearbox, Figure 1.



X-1-0330-A

Figure 1 Preparation

- Remove the crease blade gearbox assembly, [Figure 2](#).



X-1-0331-A

Figure 2 Gearbox assembly removal

- Remove the crease blade motor, MOT12-252 by removing the 2 mounting screws.
- Remove the crease blade home sensor, Q12-214 by releasing the sensor legs.
- Remove the crease blade motor encoder sensor, Q12-215 by releasing the sensor legs.

Replacement

The replacement is the reverse of the removal procedure.

REP 12.22-150 Crease Blade Assembly and Guides

Parts List on [PL 12.405](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

- Un-dock the LVF BM, [REP 12.13-150](#).
- Remove the LVF BM front door cover assembly and rear cover, [REP 12.1-150](#).
- Remove the crease blade gearbox assembly, [REP 12.21-150](#).
- Remove the crease blade cranks, bearings, drive gear and handle, [REP 12.23-150](#).

5. Prepare to remove the crease blade assembly, **Figure 1**.

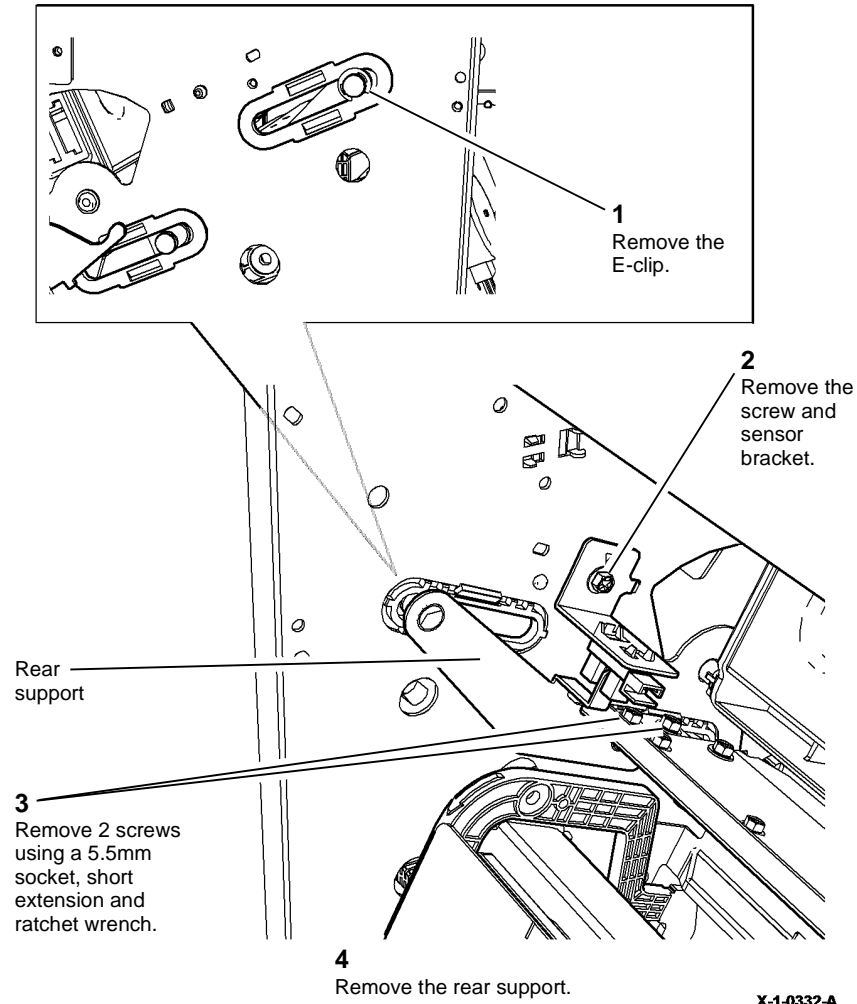


Figure 1 Preparation

6. Remove the crease blade assembly, **Figure 2**.

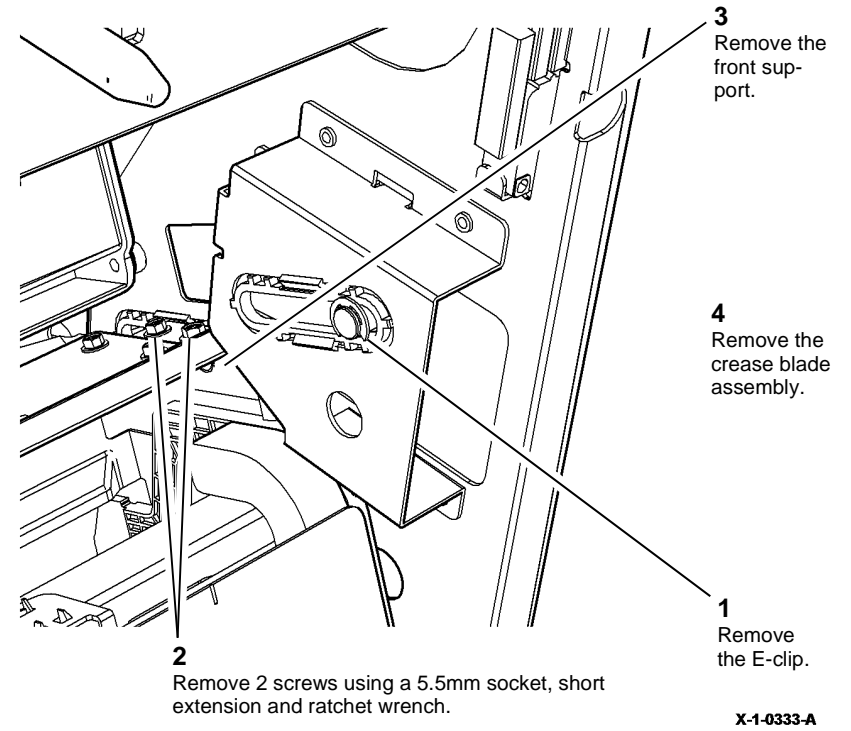
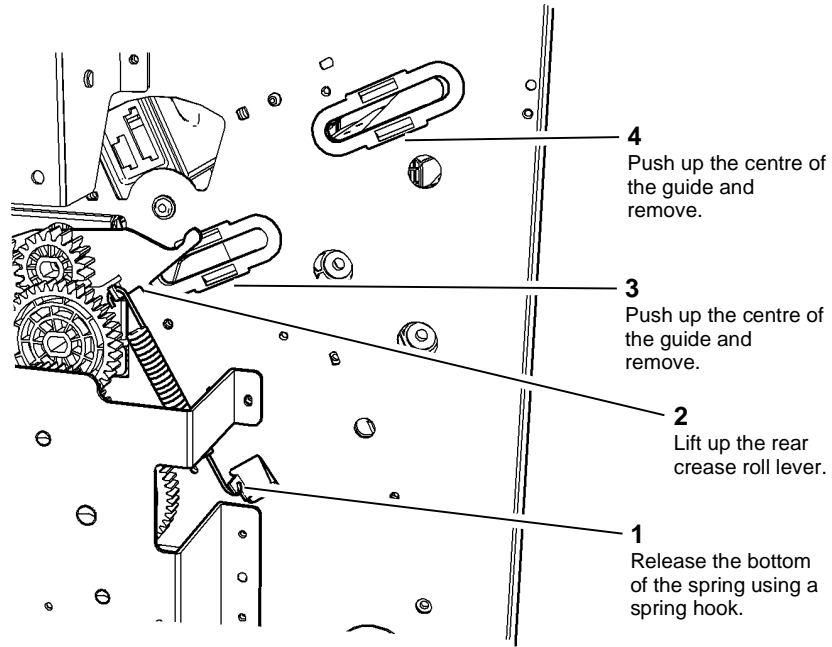


Figure 2 Crease blade assembly removal

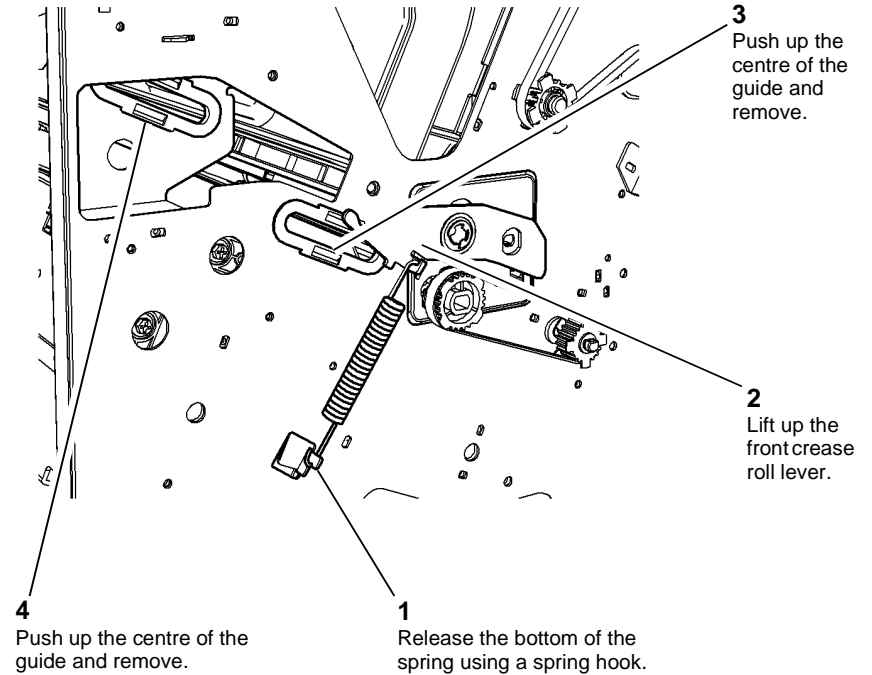
7. Remove the rear crease blade guides, [Figure 3](#).



X-1-0334-A

Figure 3 Rear guides removal

8. Remove the front crease blade guides, [Figure 4](#).



X-1-0335-A

Figure 4 Front guides removal

Replacement

1. The replacement is the reverse of the removal procedure.
2. Perform [ADJ 12.4-150 Booklet Crease Position](#).

REP 12.23-150 Crease Blade Cranks, Bearings, Gear and Handle

Parts List on [PL 12.405](#)

Removal



WARNING

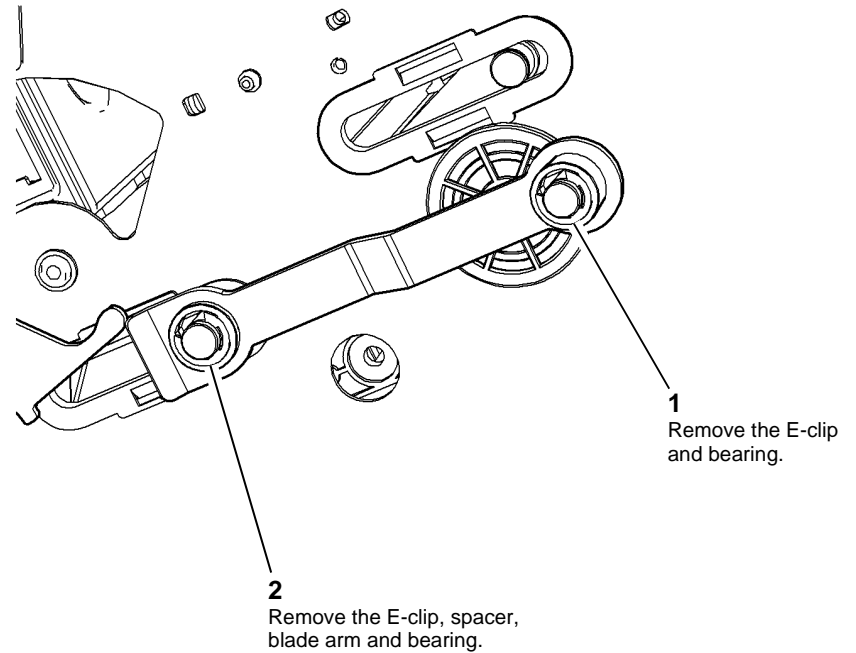
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM front door cover assembly and rear cover, [REP 12.1-150](#).
3. Remove the crease blade gearbox assembly, [REP 12.21-150](#).
4. Remove the rear blade arm, [Figure 1](#).



X-1-0336-A

Figure 1 Rear blade arm removal

5. Remove the front blade arm, [Figure 2](#).

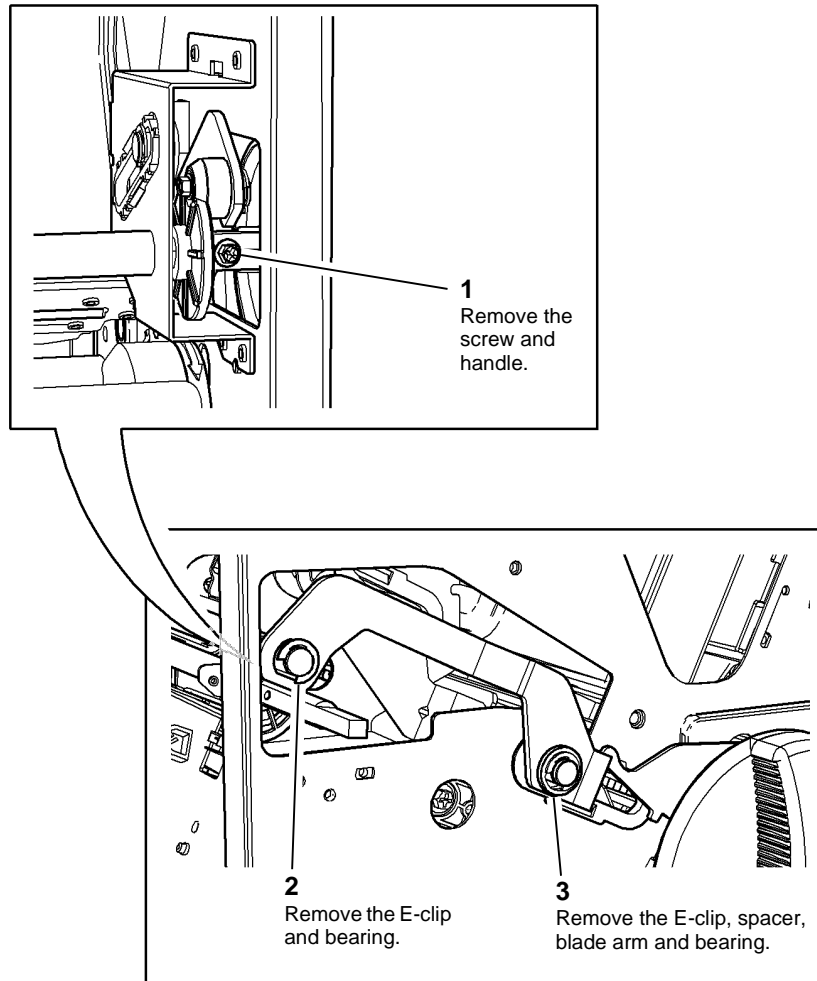


Figure 2 Front blade arm removal

X-1-0337-A

6. Remove the crease blade shaft assembly, [Figure 3](#).

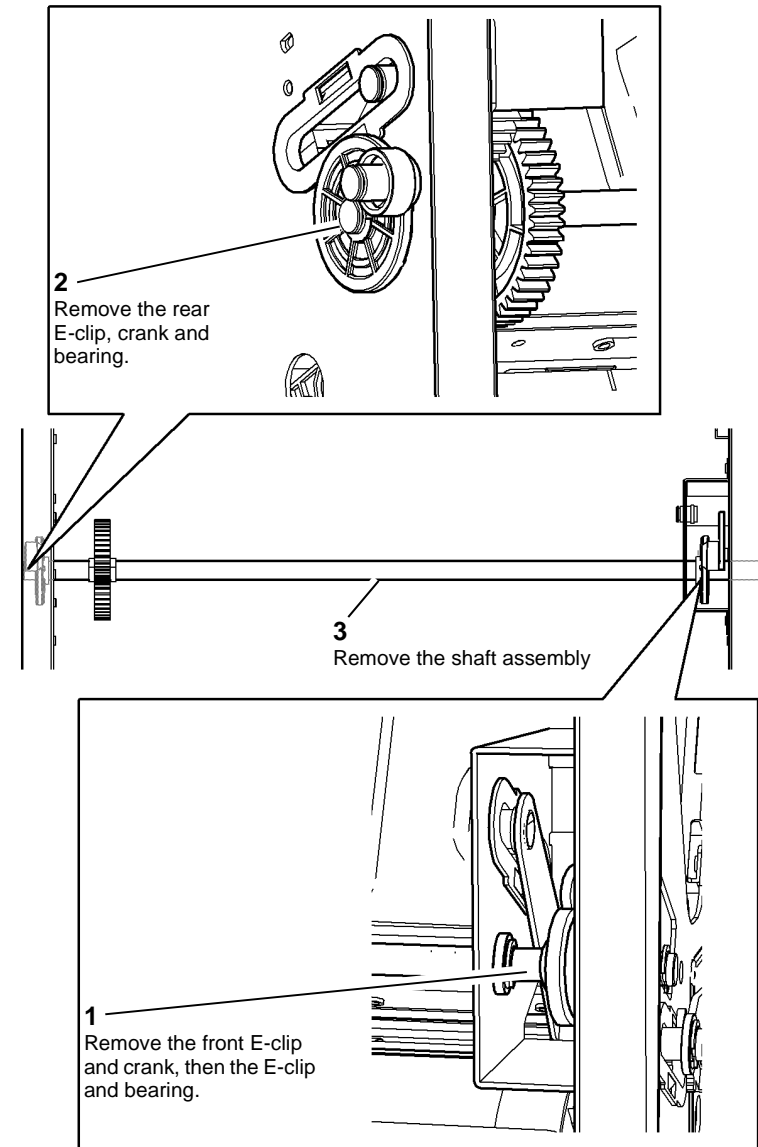


Figure 3 Crease blade shaft removal

X-1-0338-A

7. Remove the crease blade drive gear, [Figure 4](#).

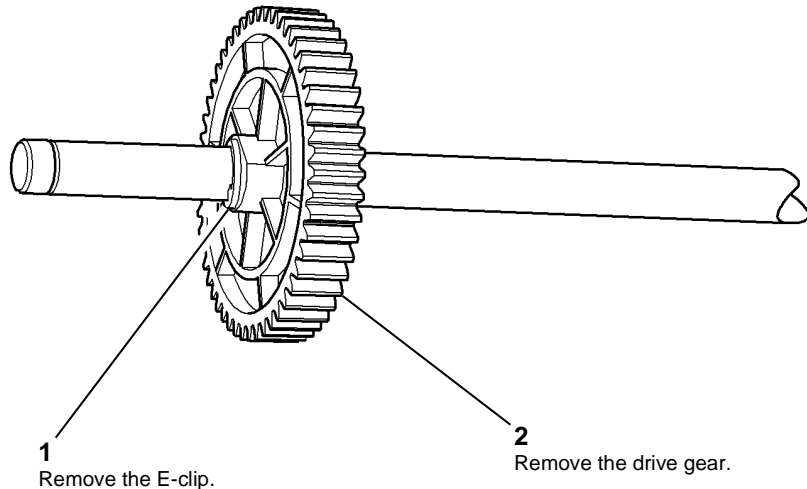


Figure 4 Drive gear removal

X-1-0339-A

Replacement

The replacement is the reverse of the removal procedure.

REP 12.24-150 Crease Rolls and Associated Components

Parts List on [PL 12.410](#)

Removal

NOTE: Removal and replacement videos of this procedure are available on the EDOC. The videos are accessible from the Library menu on the Service Interface.

Use this procedure to repair the components that follow:

- Crease roll handle pulley.
- Crease roll handle.
- Exit roll belt.
- Upper crease roll.
- Lower crease roll.
- Crease roll spring.
- Crease roll bearing.
- Front crease roll lever.
- Rear crease roll lever.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the crease roll motor and gearbox assembly, [REP 12.25-150](#).
2. Remove the crease roll gears 1 to 4, [REP 12.26-150](#).
3. Un-dock the LVF BM, [REP 12.13-150](#).
4. Remove the LVF BM front door cover assembly, [REP 12.1-150](#).

5. Remove the rear crease roll lever, [Figure 1](#).

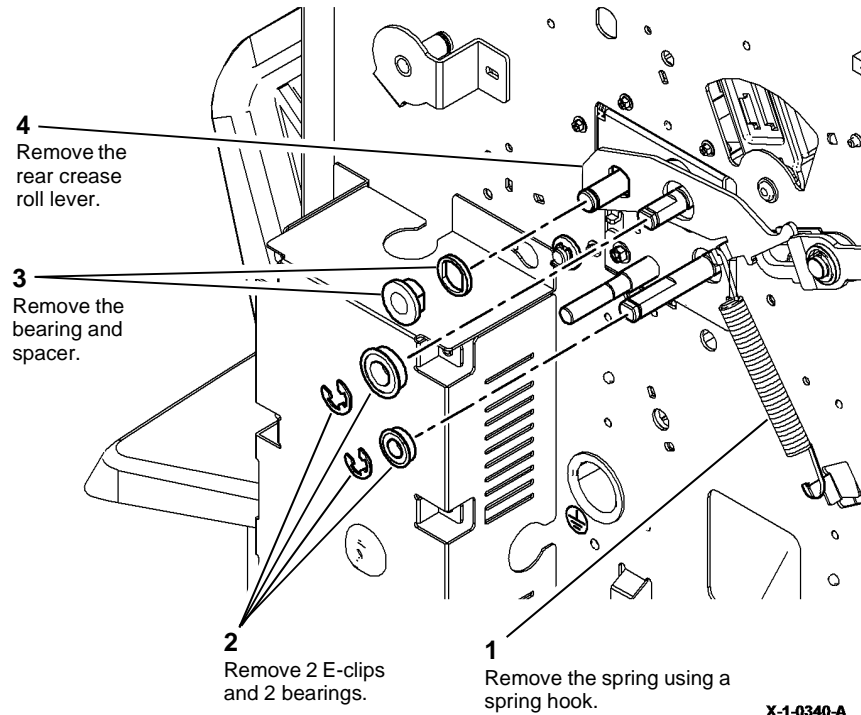


Figure 1 Rear lever removal

6. Remove the exit roll belt components, [Figure 2](#).

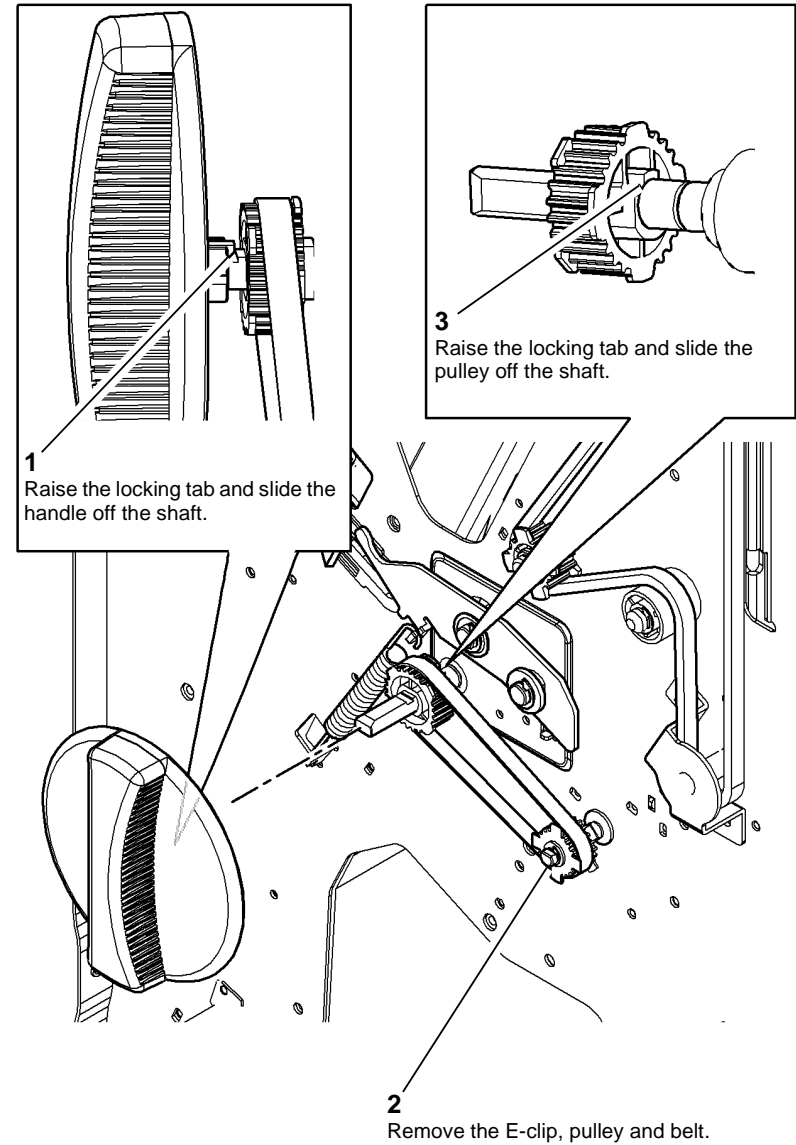


Figure 2 Exit roll belt removal

7. Remove the front crease roll lever, [Figure 3](#).

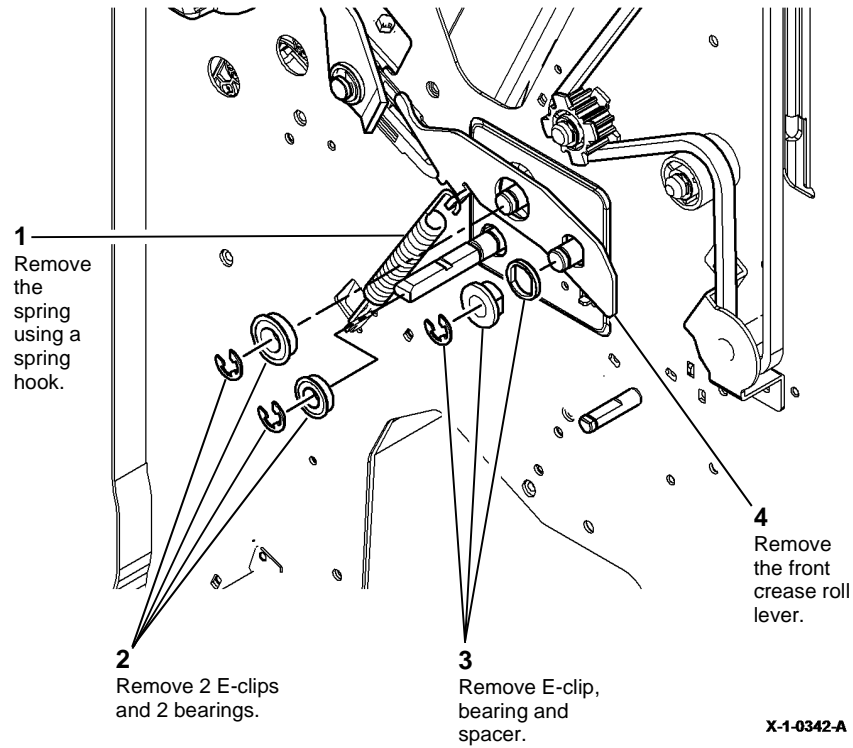


Figure 3 Front lever removal

- 8. Remove the bin 2 support, [REP 12.44-150](#).
- 9. Remove the lower right cover, [REP 12.45-150](#).
- 10. Remove the bail arm support bracket and bail arm. Refer to [REP 12.29-150](#).
- 11. Remove the exit upper guide assembly, [REP 12.28-150](#).

12. Remove the exit lower guide, [Figure 4](#).

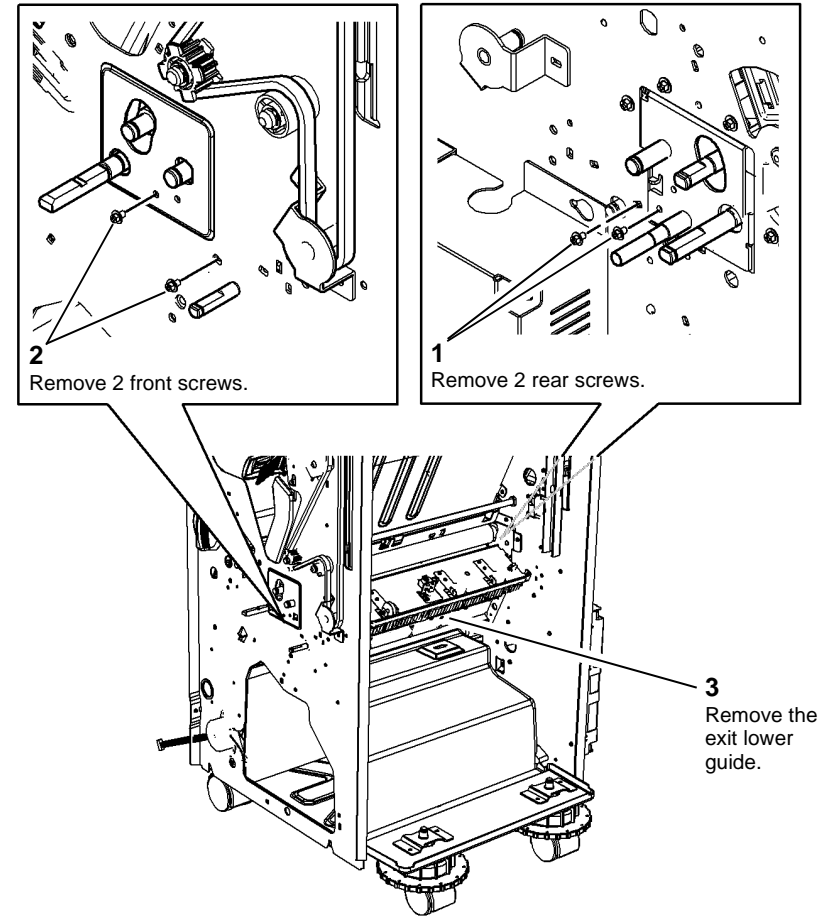


Figure 4 Exit lower guide removal

13. Remove the stacker tray drive and motor assembly. Refer to [REP 12.5-150](#).

14. Prepare to release the booklet compiler tray, [Figure 5](#).

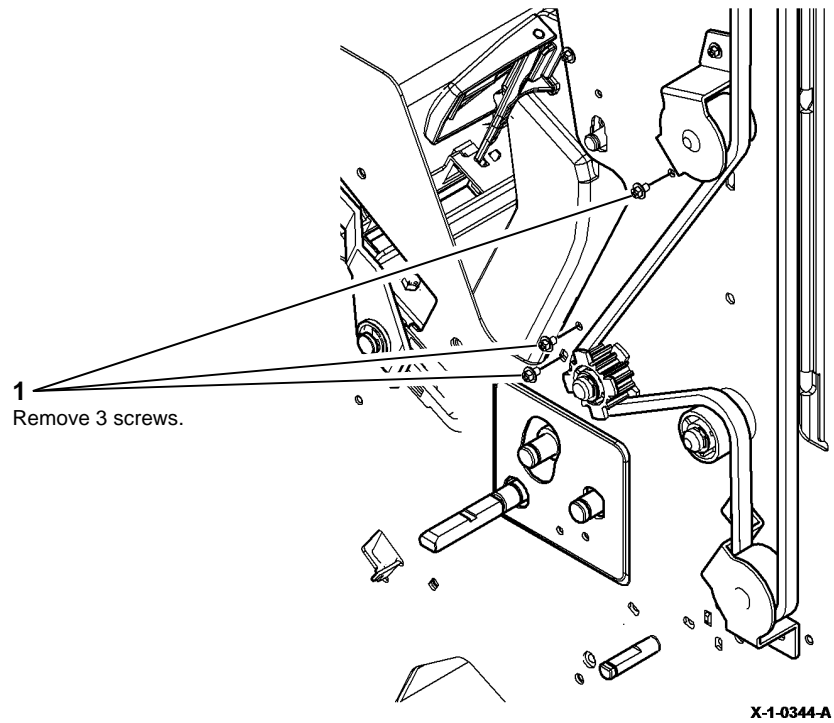


Figure 5 Preparation

15. Release the booklet compiler tray, [Figure 6](#).

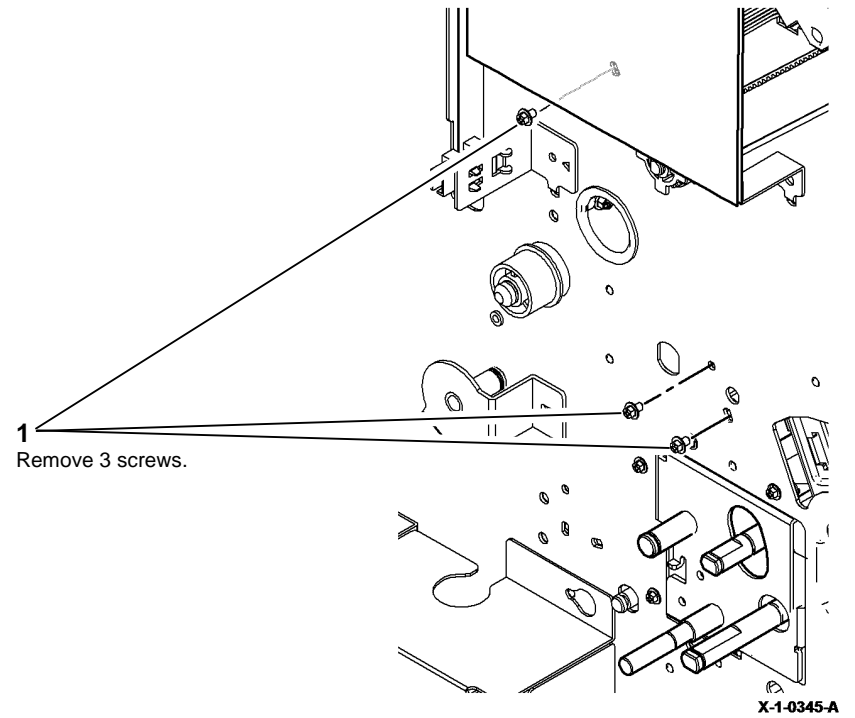


Figure 6 Tray release

16. Release the rear of the BM exit roll assembly, [Figure 7](#).

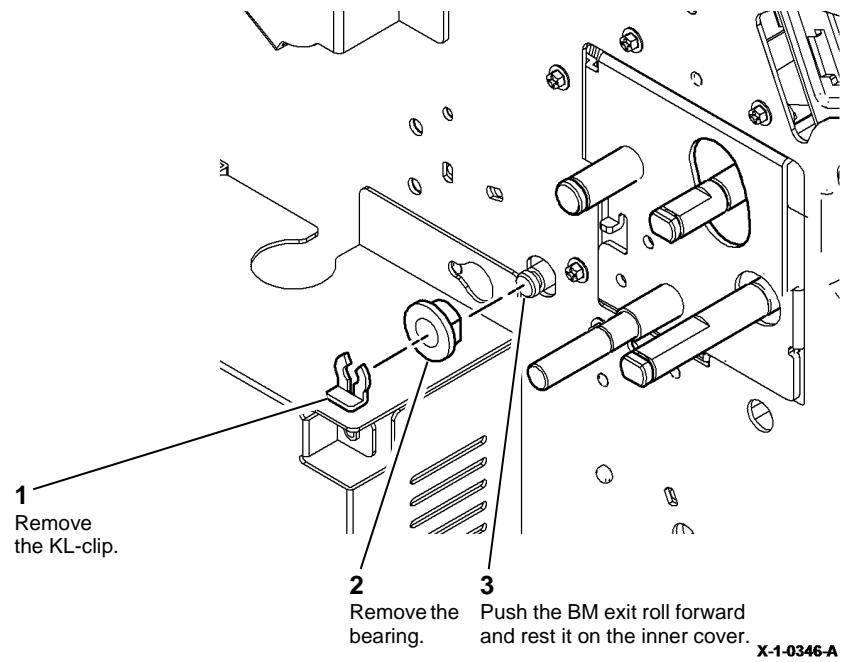


Figure 7 BM exit roll release

17. Remove the upper and lower crease roll, [Figure 8](#).

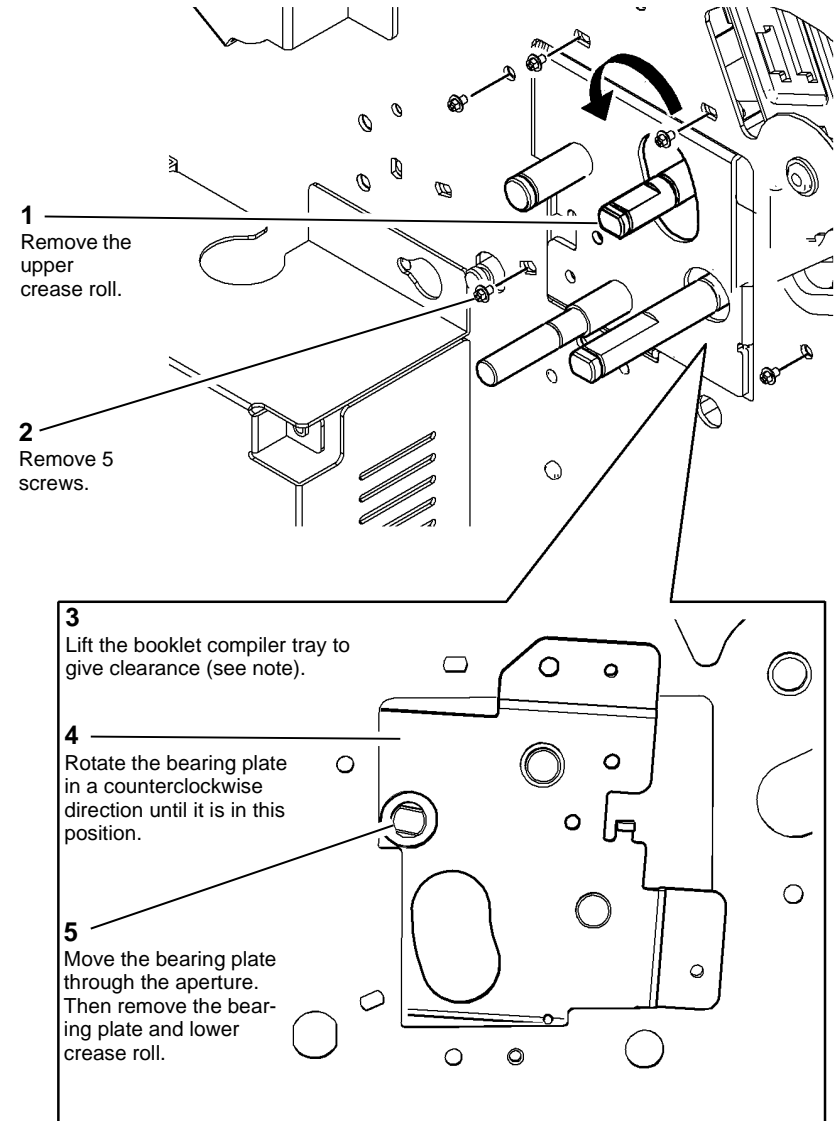


Figure 8 Crease rolls removal

NOTE: The lifted booklet compiler tray can be temporarily supported by loosely holding it in place with a screw. Lift the tray as high as it can be raised. Align the lower screw hole with a suitable hole in the finisher frame.

Replacement

1. The replacement is the reverse of the removal procedure.
2. When replacing the exit roll belt components, ensure the one-way clutch on the pulley is on the inside. Refer to [Figure 2](#).

REP 12.25-150 Crease Roll Motor and Gearbox Assembly

Parts List on [PL 12.415](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the LVF BM top and rear covers, [REP 12.1-150](#).
2. Remove the crease roll gearbox assembly, [Figure 1](#).

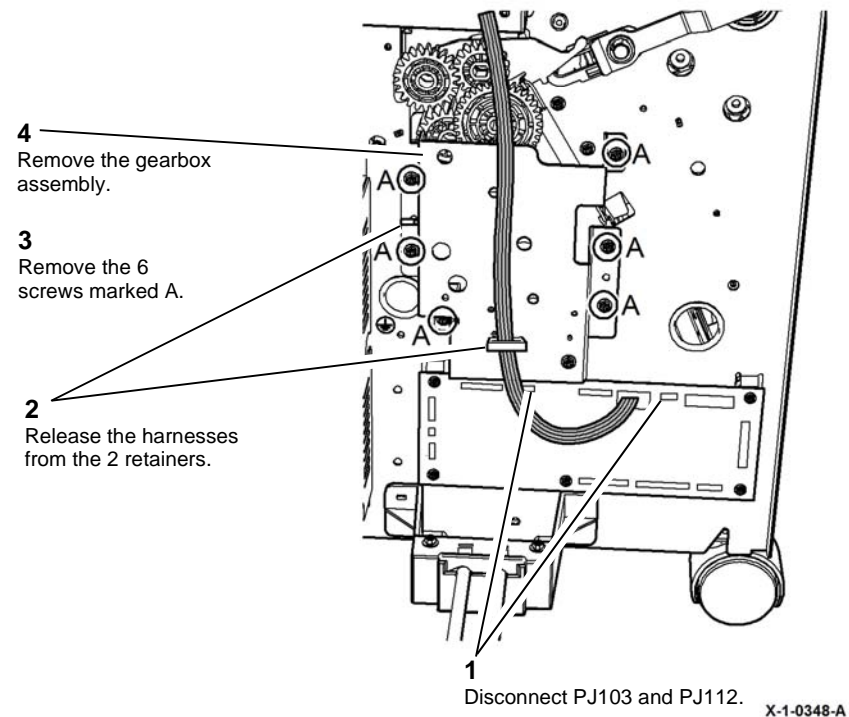


Figure 1 Gearbox removal

- Remove the crease roll motor and sensor, [Figure 2](#).

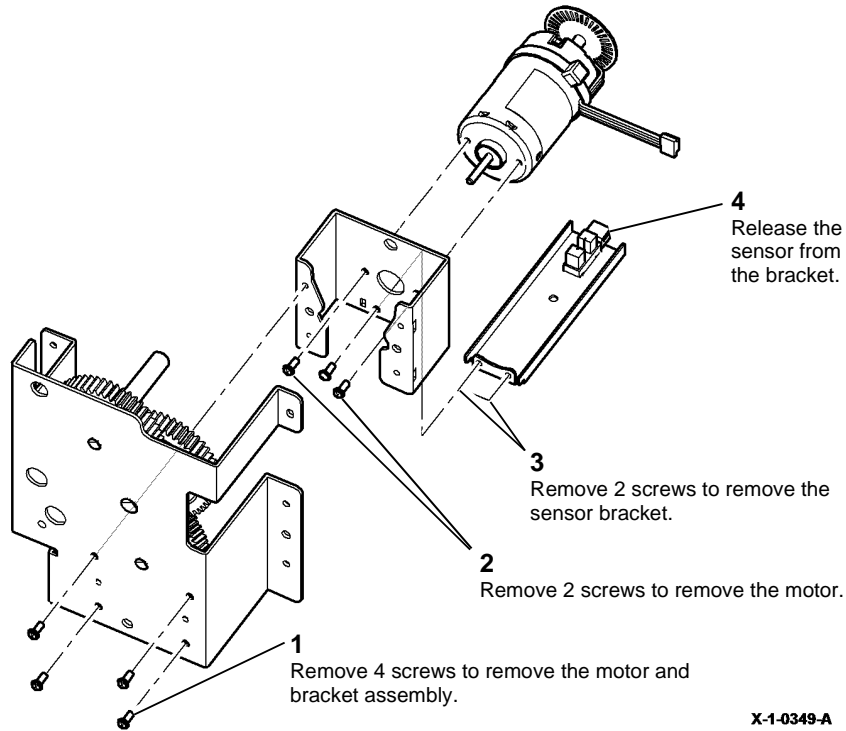


Figure 2 Crease roll motor removal

X-1-0349-A

Replacement

The replacement is the reverse of the removal procedure.

REP 12.26-150 Crease Roll Gear Kit

Parts List on [PL 12.415](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

- Remove the crease roll motor and gearbox, [REP 12.25-150](#).
- Remove the crease roll gears, [Figure 1](#).

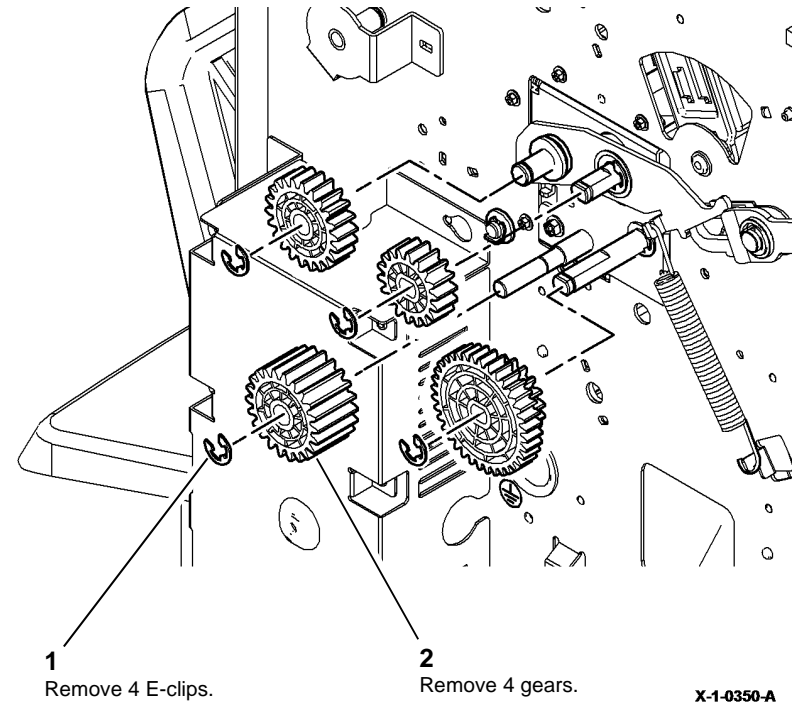


Figure 1 Gears removal

X-1-0350-A

Replacement

- Ensure the gears are located in their correct positions. Refer to [Figure 1](#).
- Reverse the removal procedure to replace the remainder of the components.

REP 12.27-150 BM Exit Roll, Belt, Pulley, Bush and Paddle

Parts List on [PL 12.410](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



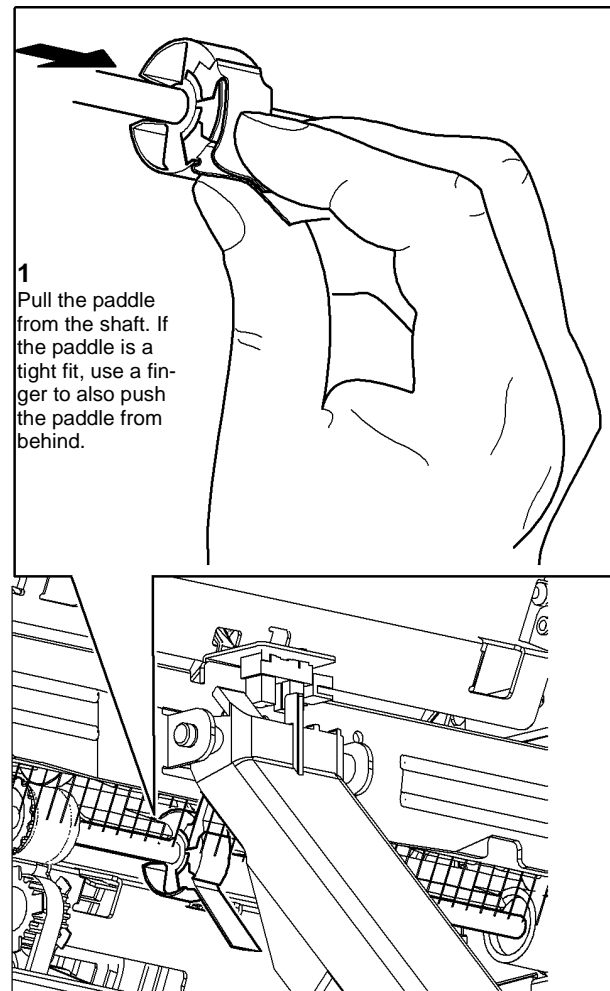
WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the bin 2 support, [REP 12.44-150](#).
2. Remove the lower right cover, [REP 12.45-150](#).

NOTE: If only the paddle is being repaired, do not perform removal steps 4 and 5.

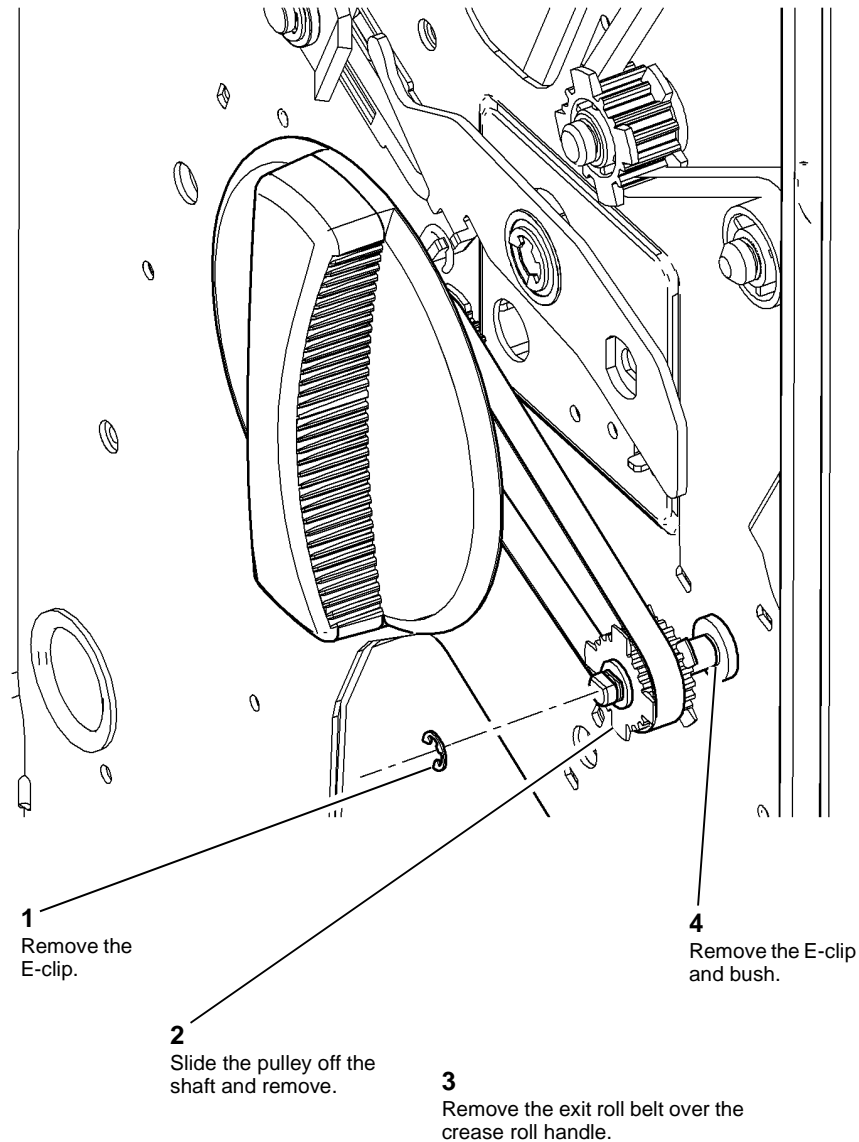
3. Remove the exit roll paddle, [Figure 1](#).



X-1-0351-A

Figure 1 Exit roll paddle removal

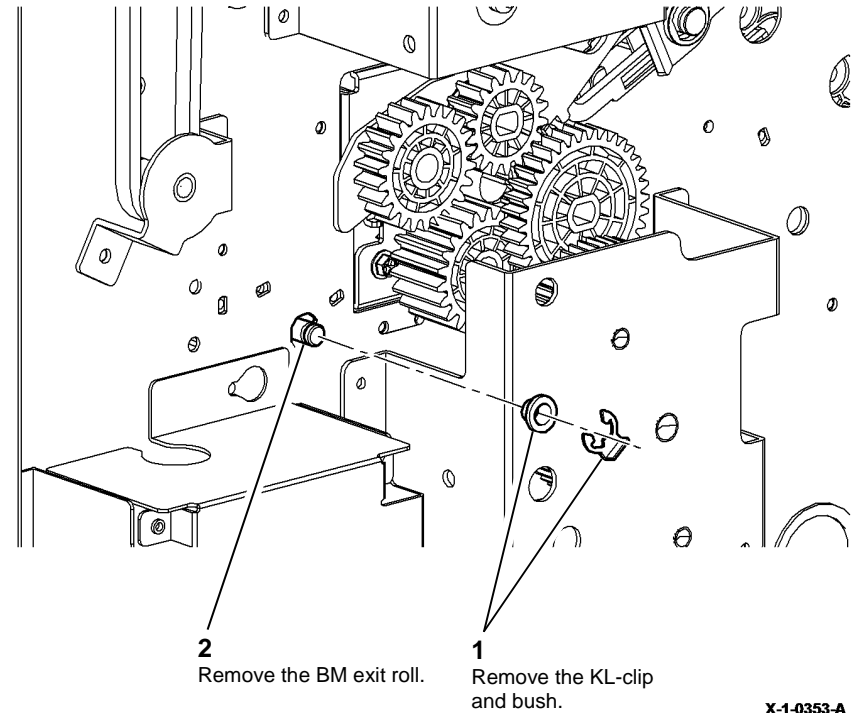
4. Remove the belt pulley and bush, [Figure 2](#).



X-1-0352-A

Figure 2 Belt pulley and bush removal

5. Remove the BM exit roll, [Figure 3](#).



X-1-0353-A

Figure 3 BM exit roll removal

Replacement

The replacement is the reverse of the removal procedure.

NOTE: When replacing the paddle ensure that it is correctly orientated, refer to [Figure 1](#).

REP 12.28-150 BM Exit Upper Guide Assembly and Exit Sensor

Parts List on [PL 12.420](#)

Removal



WARNING

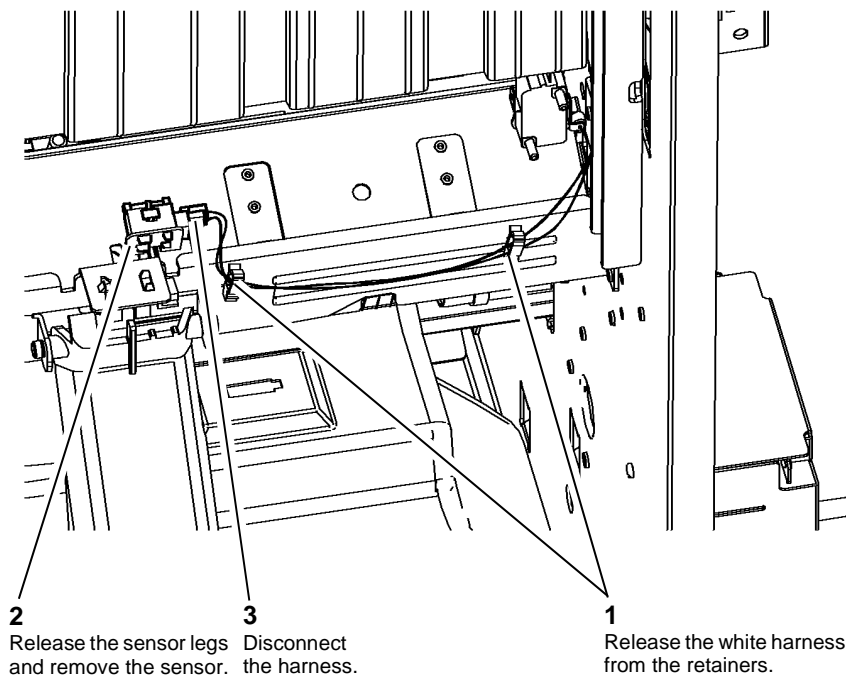
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

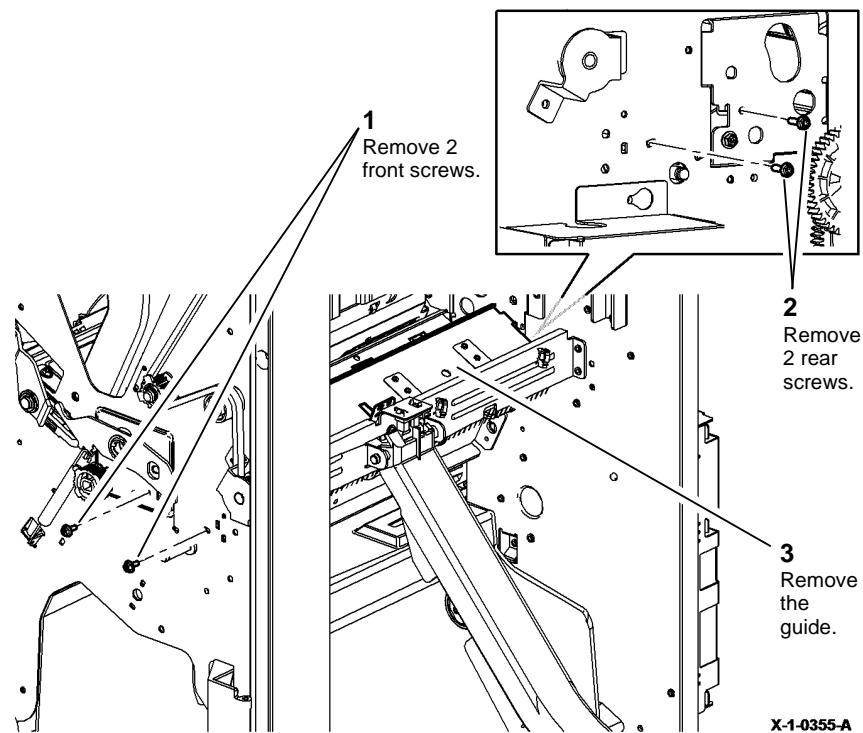
1. Remove the lower right cover, [REP 12.45-150](#).
2. Remove the BM exit sensor, [Figure 1](#).



X-1-0354-A

Figure 1 BM exit sensor removal

3. Remove the BM exit upper guide assembly, [Figure 2](#).



X-1-0355-A

Figure 2 Upper guide removal

Replacement

The replacement is the reverse of the removal procedure.

NOTE: Ensure that the white harness is connected to the BM exit sensor and the black harness is connected to the bin 2 90% full sensor.

REP 12.29-150 BM Bail Arm Assembly, Spring, Roller and Bin 2 90% Full Sensor

Parts List on [PL 12.420](#)

Removal



WARNING

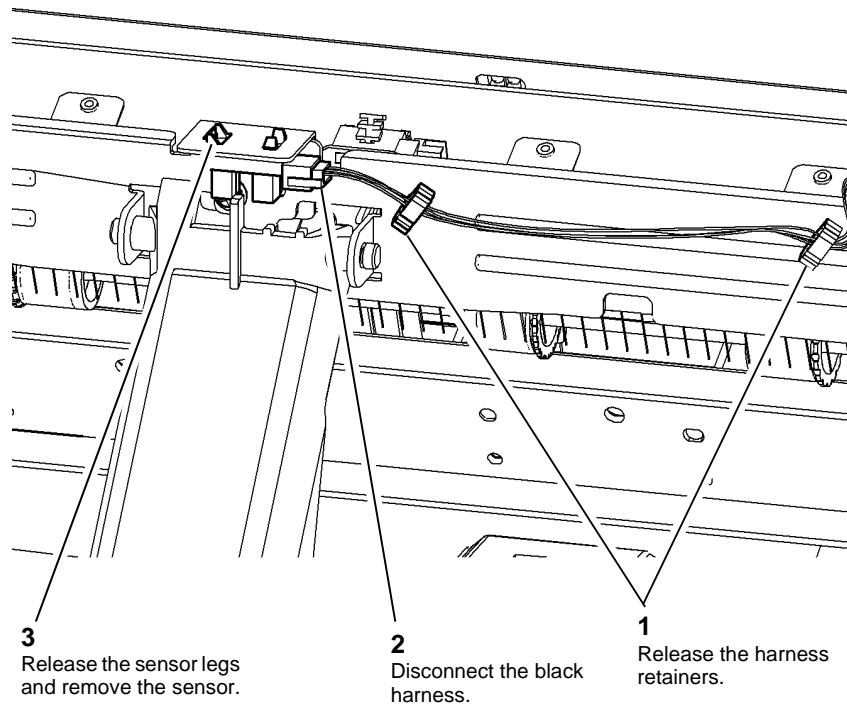
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

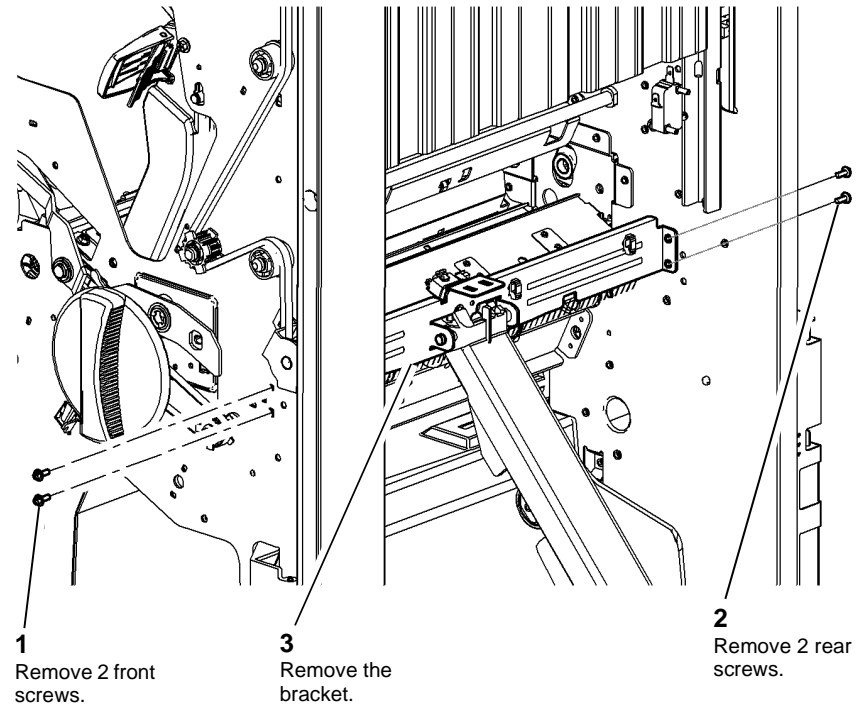
1. Remove the lower right cover, [REP 12.45-150](#).
2. Remove the bin 2 90% full sensor, [Figure 1](#).



X-1-0356-A

Figure 1 Sensor removal

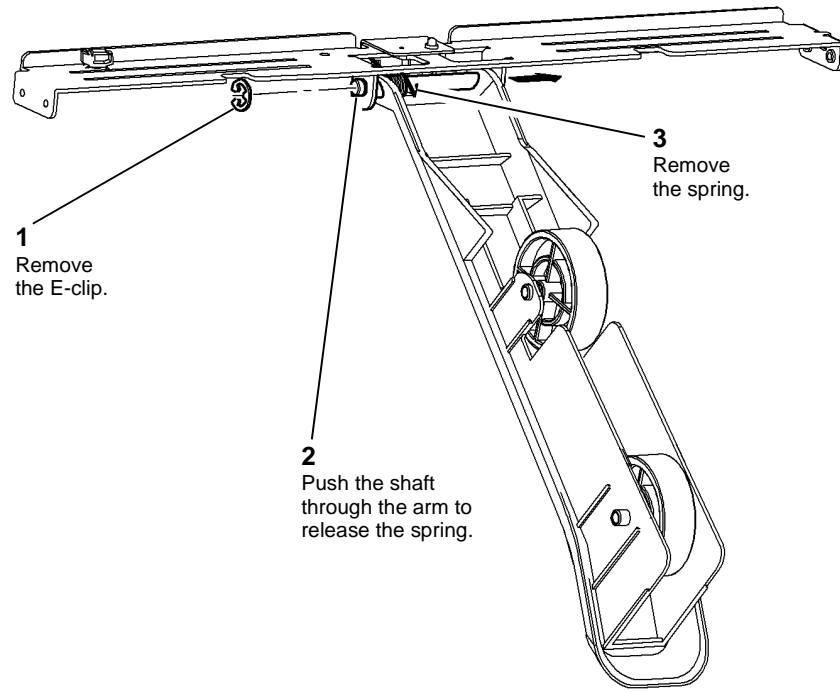
3. Remove the bail arm support bracket and bail arm, [Figure 2](#).



X-1-0357-A

Figure 2 Support bracket removal

4. Remove the bail arm spring, [Figure 3](#).

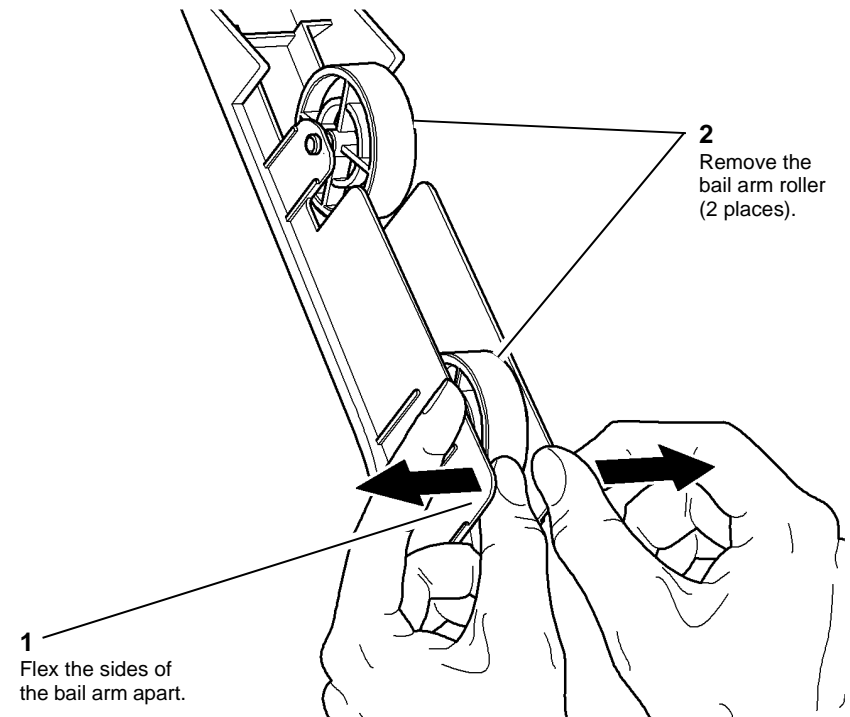


X-1-0358-A

Figure 3 Bail arm spring removal

NOTE: The bail arm rollers can be removed with the bail arm installed on the LVF BM.

5. Remove the bail arm roller, [Figure 4](#).



X-1-0359-A

Figure 4 Bail arm roller removal

Replacement

The replacement is the reverse of the removal procedure.

NOTE: Ensure the white harness is connected to the BM exit sensor and the black harness is connected to the bin 2 90% full sensor.

REP 12.30-150 BM Compiler Guide Assembly, Flapper and Flapper Motor

Parts List on [PL 12.390](#)

Removal



WARNING

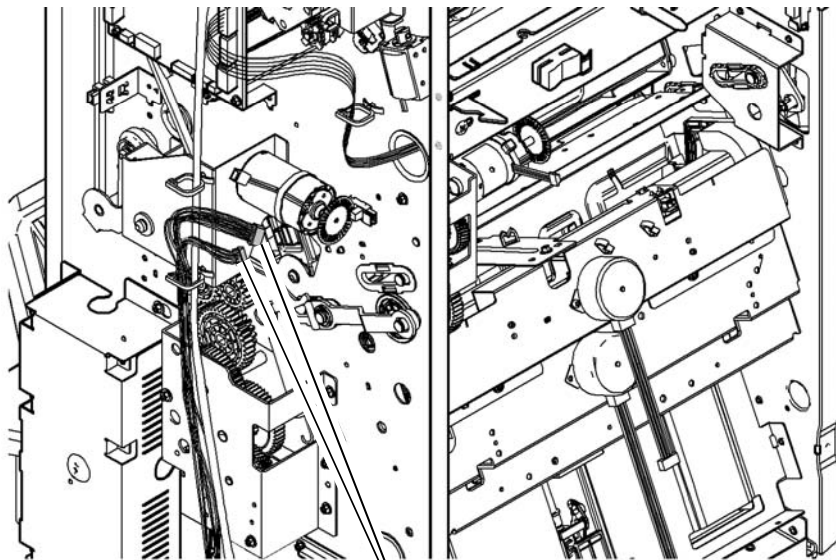
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM front door cover assembly, rear cover and LVF BM back stop cover, [REP 12.1-150](#).
3. Disconnect the harnesses, [Figure 1](#).

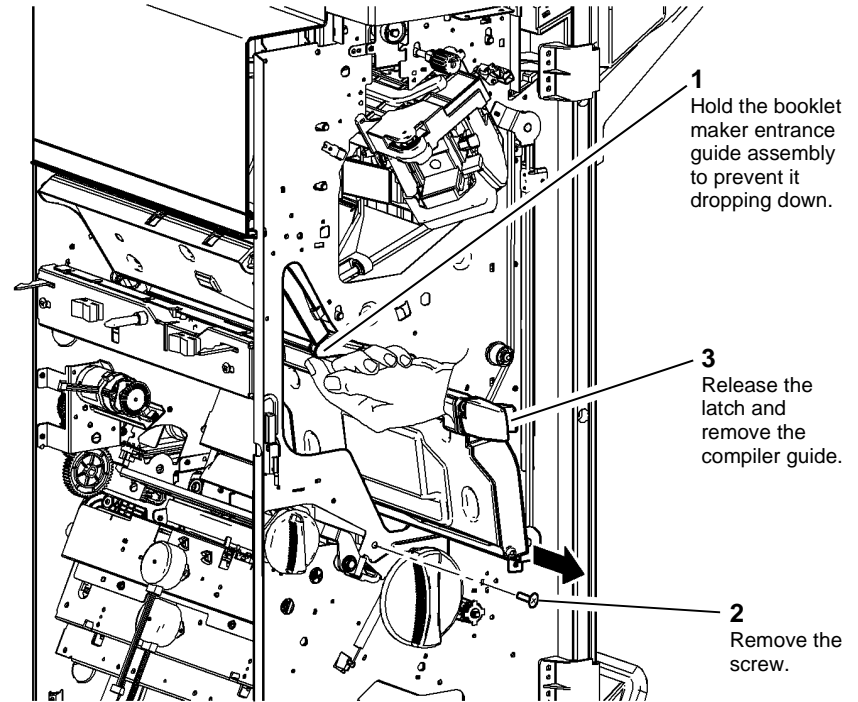


1
Disconnect 2 harnesses.

X-1-0360-A

Figure 1 Disconnecting harnesses

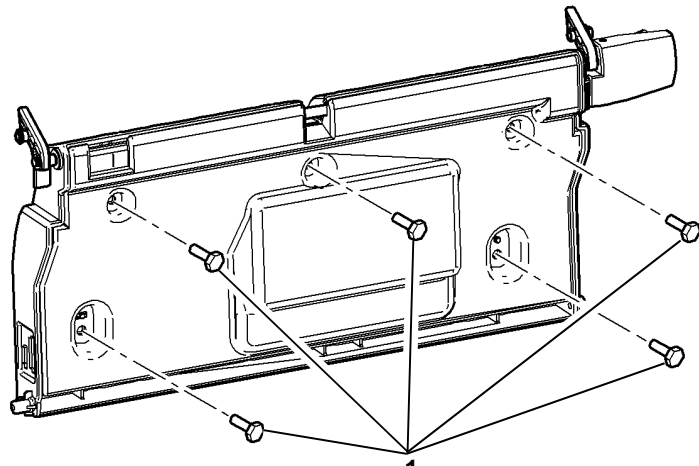
4. Remove the BM compiler guide assembly, [Figure 2](#).



X-1-0361-A

Figure 2 Compiler guide removal

5. Remove the BM compiler guide assembly cover, [Figure 3](#).

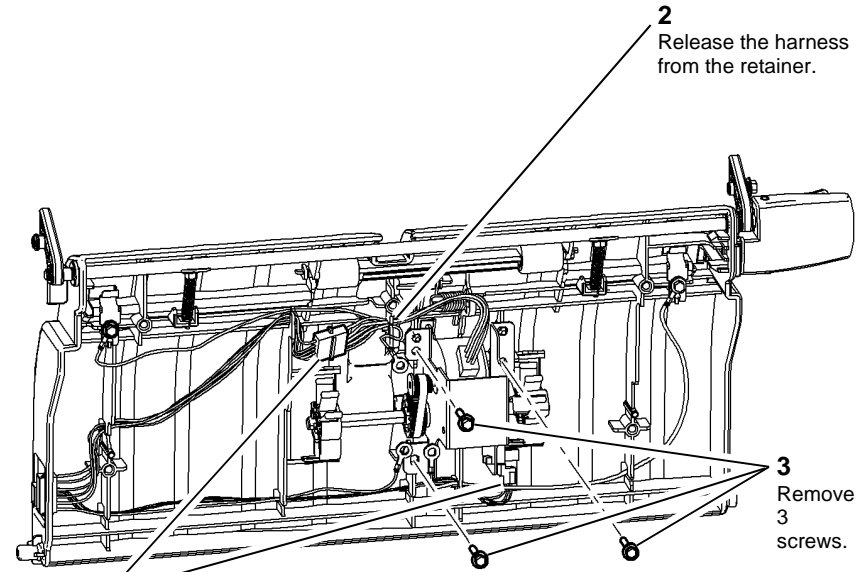


1 Remove 5 screws.
Figure 3 Cover removal

2 Remove the cover.

X-1-0362-A

6. Remove the BM flapper motor assembly, [Figure 4](#).



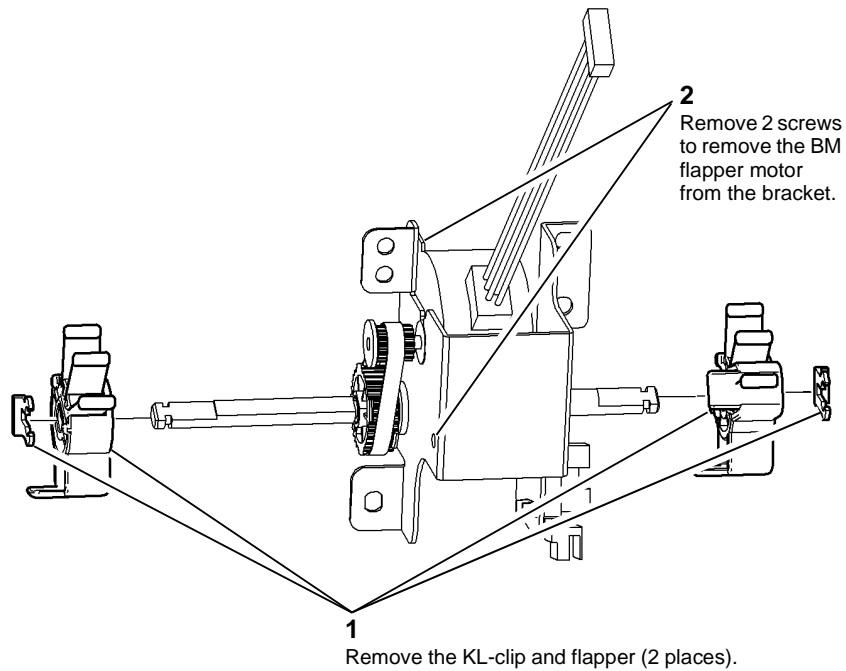
1 Disconnect 2 harnesses.

4 Remove the motor assembly.

X-1-0363-A

Figure 4 Motor assembly removal

- Remove the BM compiler flappers, [Figure 5](#).



X-1-0364-A

Figure 5 BM compiler flapper removal

Replacement

- Refer to [GP 6](#) before refitting the screws.
- The replacement is the reverse of the removal procedure.

NOTE: Ensure that the flappers are orientated correctly. Refer to [Figure 5](#).

REP 12.31-150 BM Upper Entrance Guide and Finisher Entry Sensor

Parts List on [PL 12.385](#)

Removal

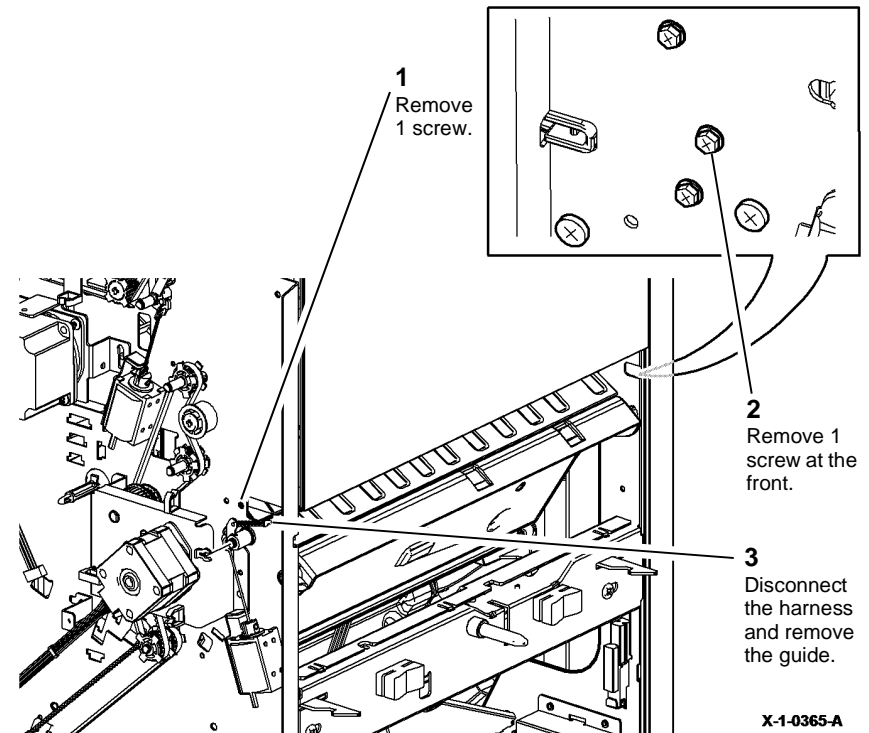
WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

- Un-dock the LVF BM, [REP 12.13-150](#).
- Remove the LVF BM front door cover assembly and rear cover, [REP 12.1-150](#).
- Remove the upper entrance guide, [Figure 1](#).



X-1-0365-A

Figure 1 Upper entrance guide removal

4. Remove the finisher entry sensor, Q12-077 by disconnecting the harness then releasing the holding arms.

Replacement

1. Refer to [GP 6](#) before refitting the screws.
2. The replacement is the reverse of the removal procedure.

REP 12.32-150 BM Lower Guide, BM Entry Sensor and BM Entrance Guide Assembly

Parts List on [PL 12.385](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM front door cover assembly and rear cover, [REP 12.1-150](#).
3. Remove the BM entrance guide assembly, [Figure 1](#).

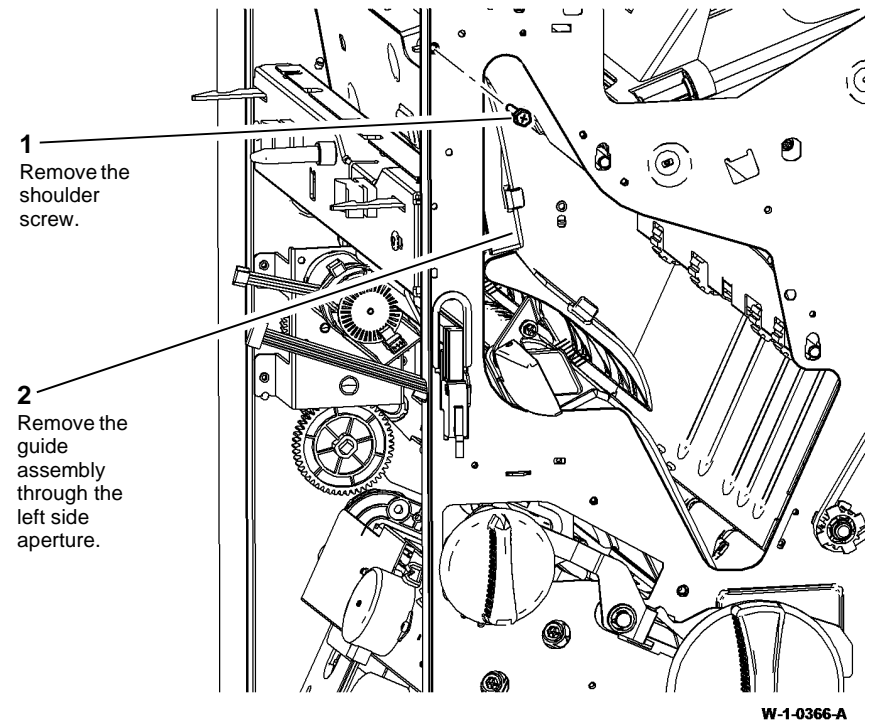


Figure 1 Entrance guide removal

4. Remove the BM compiler guide assembly, [REP 12.30-150](#).
5. Prepare to remove the BM lower guide, [Figure 2](#).

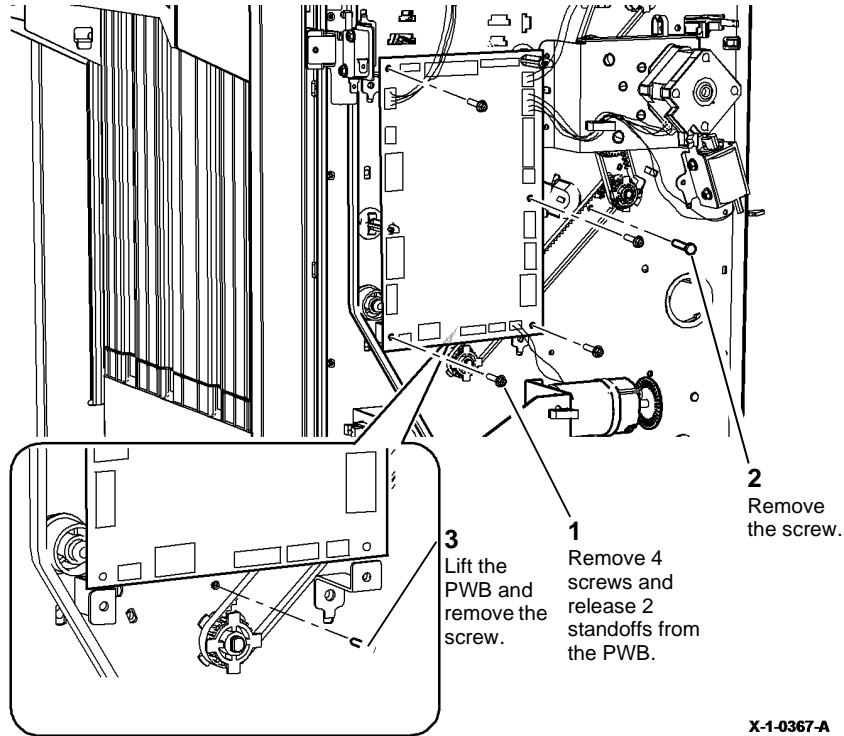


Figure 2 Preparation

6. Remove the BM lower guide, [Figure 3](#).

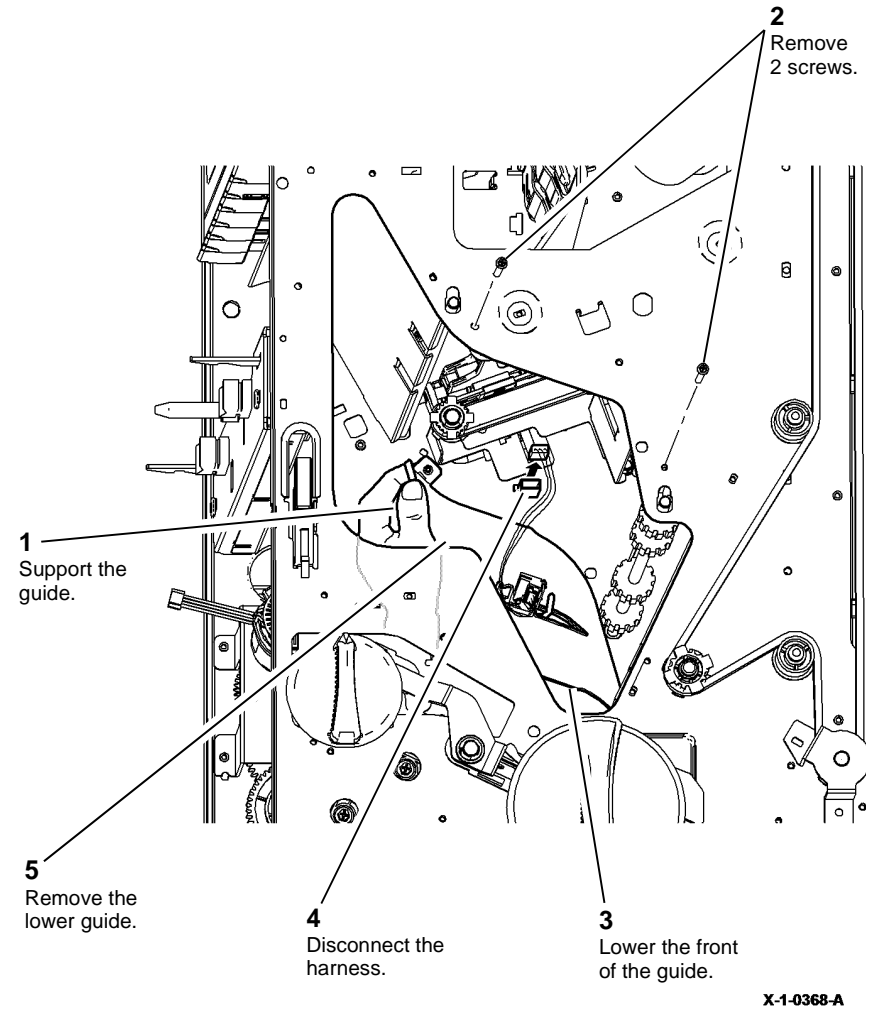


Figure 3 BM lower guide removal

7. Remove the BM entry sensor, Q12-089 by disconnecting the harness and then releasing the sensor legs from the guide.

Replacement

1. Refer to [GP 6](#) before refitting the screws.
2. The replacement is the reverse of the removal procedure.

REP 12.33-150 Booklet Diverter Gate

Parts List on [PL 12.385](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM front door cover assembly and rear cover, [REP 12.1-150](#).
3. Remove the upper entrance guide, [REP 12.31-150](#).
4. Remove the booklet diverter gate, [Figure 1](#).

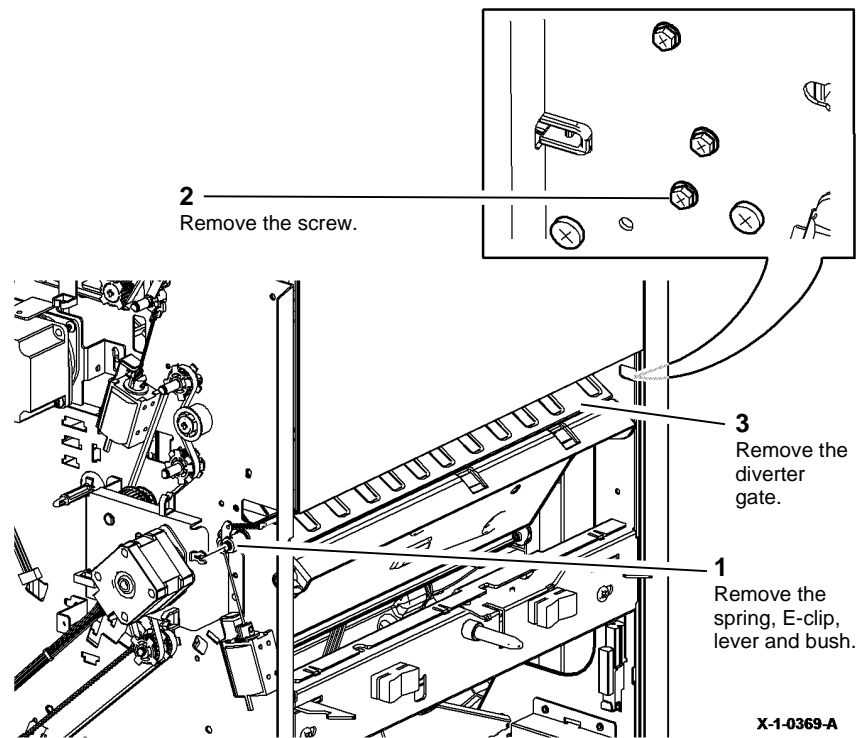


Figure 1 Diverter gate removal

Replacement

The replacement is the reverse of the removal procedure.

REP 12.34-150 BM 1st Feed Roll Assembly, Compiler Entrance Drive Belt 1 and 2

Parts List on [PL 12.385](#), [PL 12.350](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

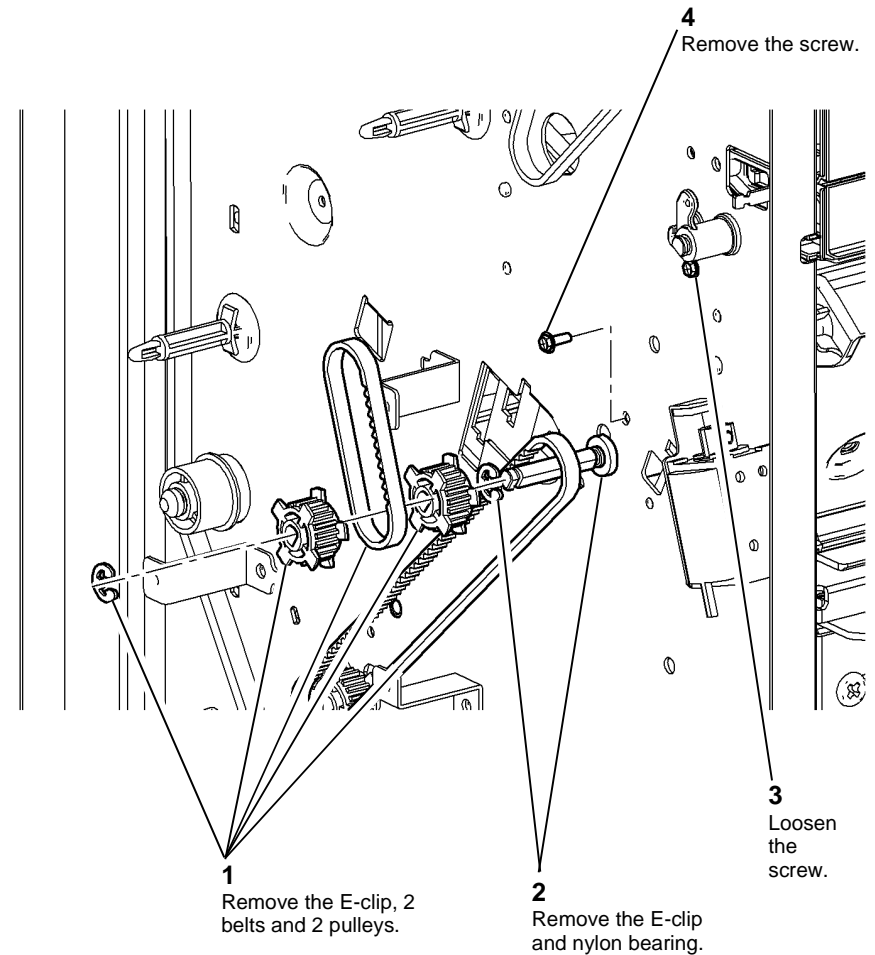


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM front door cover assembly and rear cover, [REP 12.1-150](#).
3. Remove the transport motor 1 and gearbox assembly, [REP 12.2-150](#).

4. Remove the rear components, [Figure 1](#).



X-1-0370-A

Figure 1 Rear components removal

5. Open the BM entrance guide assembly, [PL 12.385 Item 3](#).

6. Remove the BM 1st feed roll assembly, [Figure 2](#).

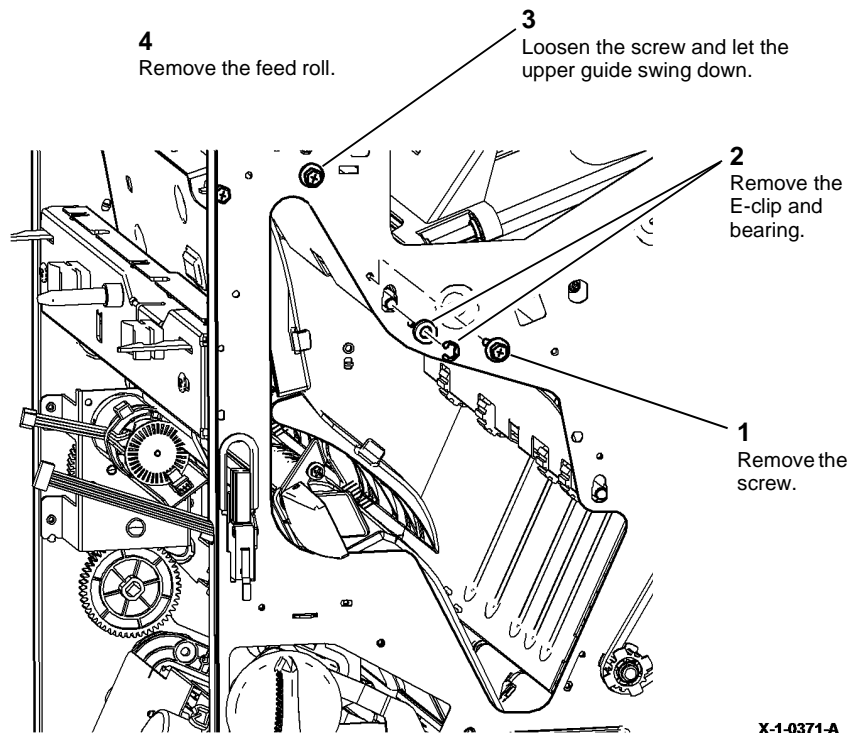


Figure 2 1st feed roll removal

X-1-0371-A

Replacement

The replacement is the reverse of the removal procedure.

REP 12.35-150 BM 2nd Feed Roll Assembly

Parts List on [PL 12.385](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM front door cover assembly and rear cover, [REP 12.1-150](#).

- Remove the rear components, [Figure 1](#).

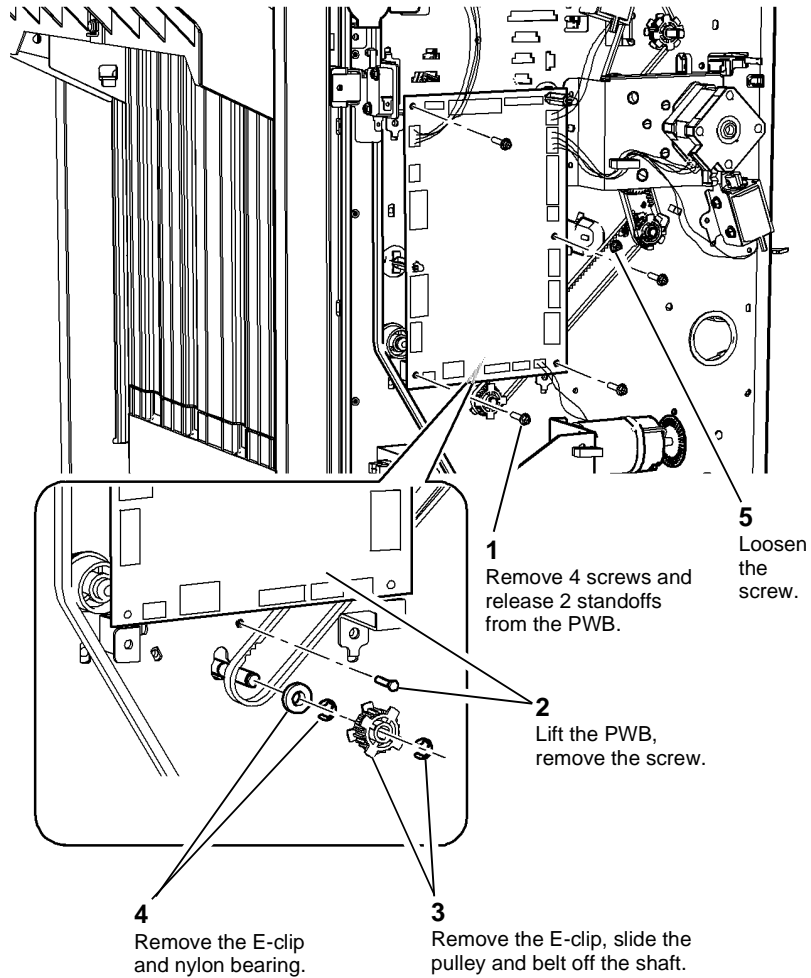


Figure 1 Rear components removal

X-1-0372-A

- Open the BM entrance guide assembly, [PL 12.385 Item 3](#).

- Remove the BM 2nd feed roll assembly, [Figure 2](#).

NOTE: Take care when lowering the guide in [Figure 2](#), so that the harness to the BM entry sensor does not become disconnected.

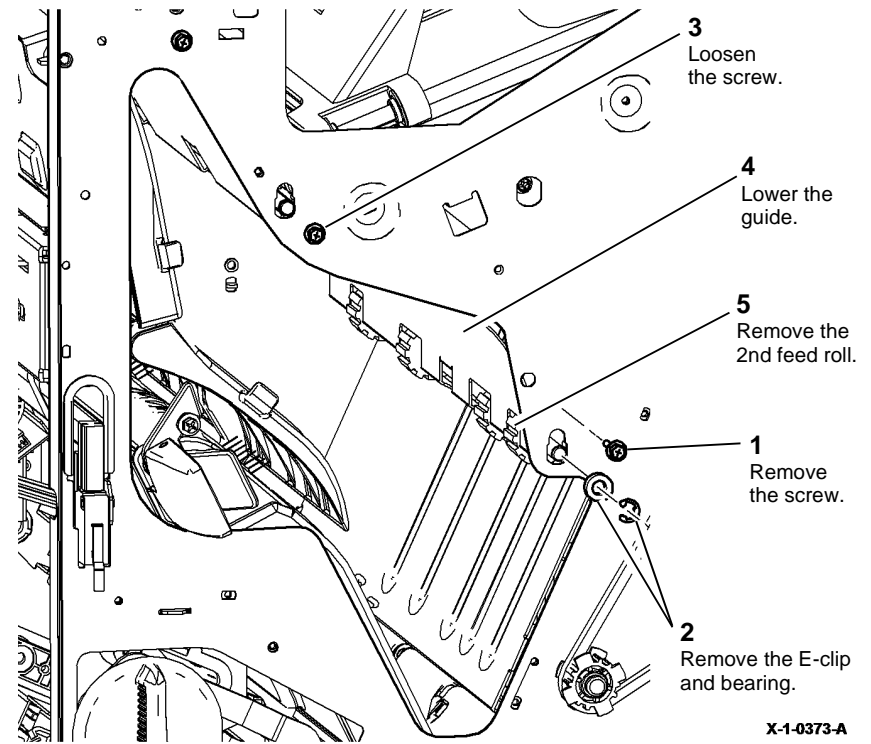


Figure 2 2nd feed roll removal

X-1-0373-A

Replacement

The replacement is the reverse of the removal procedure.

REP 12.36-150 LVF BM PWB

Parts List on [PL 12.425](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



Figure 1 ESD Symbol



CAUTION

Certain components in this product are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

1. Remove the LVF BM rear cover, [REP 12.1-150](#).
2. Disconnect all harness connectors from the LVF BM PWB.
3. Remove the 6 screws securing the LVF PWB.

Replacement

NOTE: Before replacing the LVF BM rear cover, perform [312F-150](#) LVF PWB and LVF BM PWB DIP Switch Settings RAP.

The replacement is the reverse of the removal procedure.

REP 12.37-150 BM Staple Cartridge Assembly

Parts List on [PL 12.395](#)

Removal



WARNING

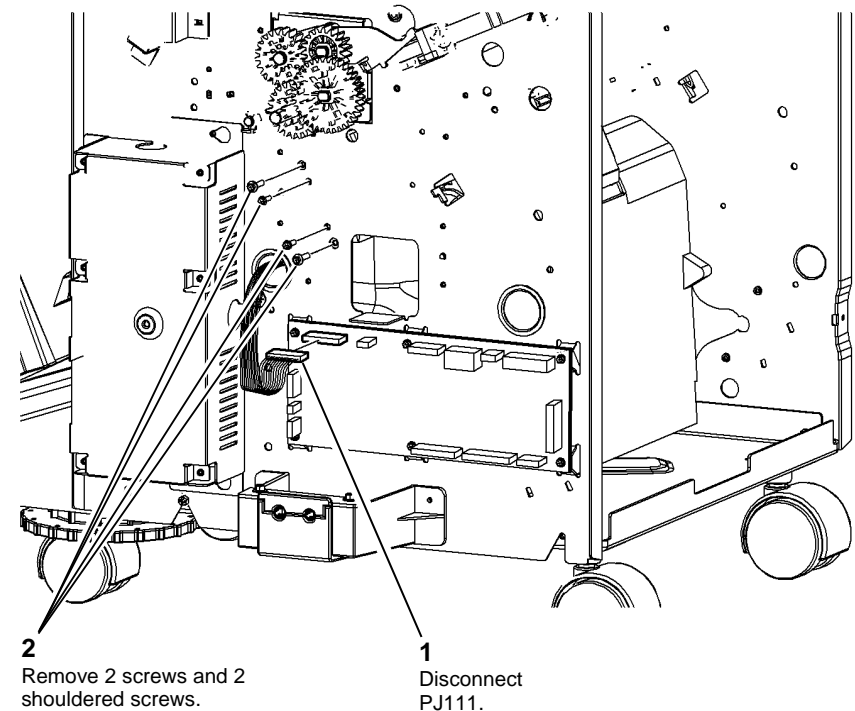
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

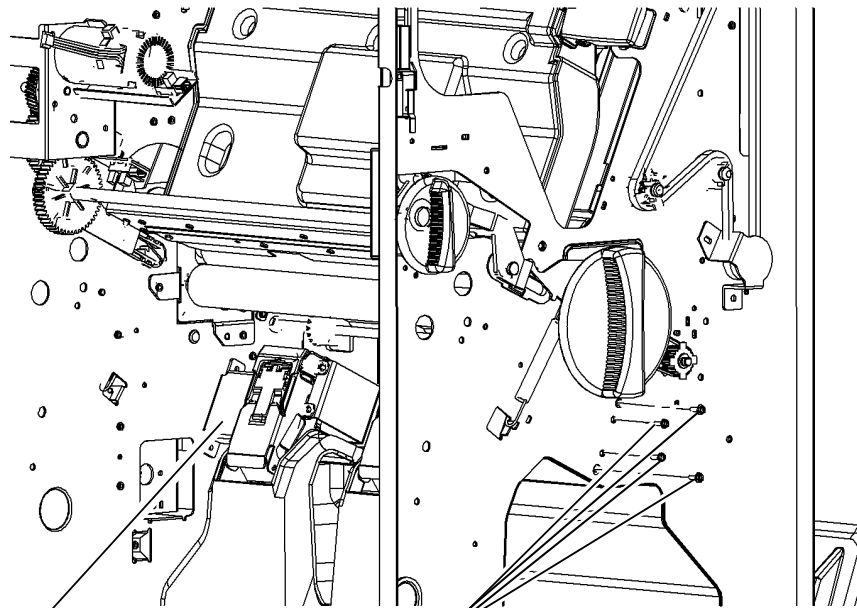
1. Remove the right guide assembly. Refer to [REP 12.19-150](#).
2. Prepare to remove the BM staple cartridge assembly, [Figure 1](#).



X-1-0374-A

Figure 1 Preparation

3. Remove the BM staple cartridge assembly, [Figure 2](#).



2
Remove the staple cartridge assembly.

1
Remove 2 screws and 2 shouldered screws.

X-1-0375-A

Figure 2 BM staple cartridge removal

Replacement

1. Insert and tighten the 4 shouldered screws, [Figure 1](#) and [Figure 2](#).
2. The remainder of the replacement is the reverse of the removal procedure.

REP 12.38-150 BM Stapler Assembly and Booklet Tamper Assembly

Parts List on [PL 12.395](#) and [PL 12.380](#)

Removal

NOTE: A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM front door cover assembly, rear cover and LVF BM back stop cover, [REP 12.1-150](#).

3. Prepare to remove the BM stapler assembly and booklet tamper assembly, [Figure 1](#).

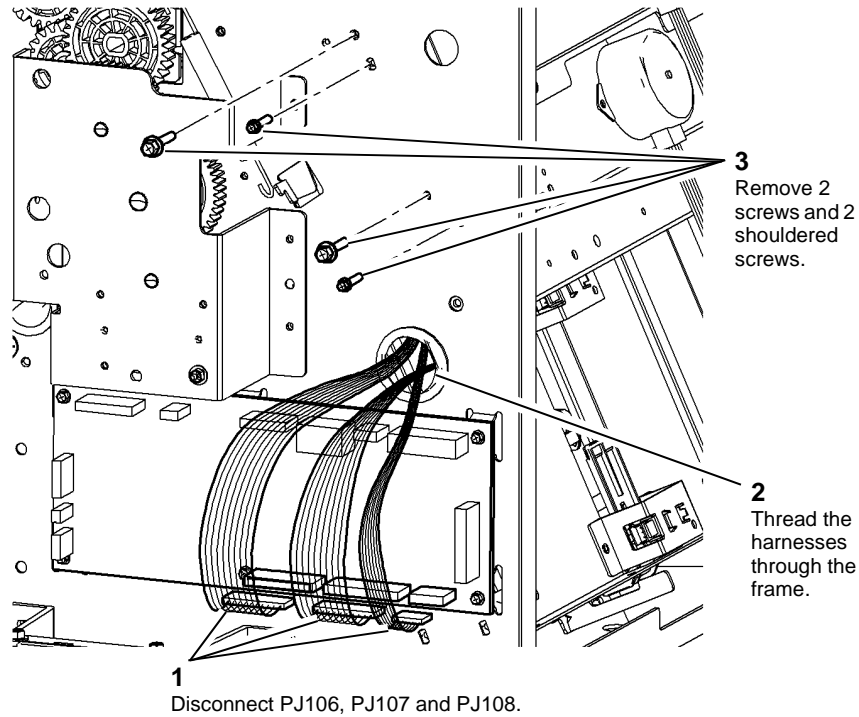


Figure 1 Preparation

4. Remove the BM stapler assembly and booklet tamper assembly, [Figure 2](#).

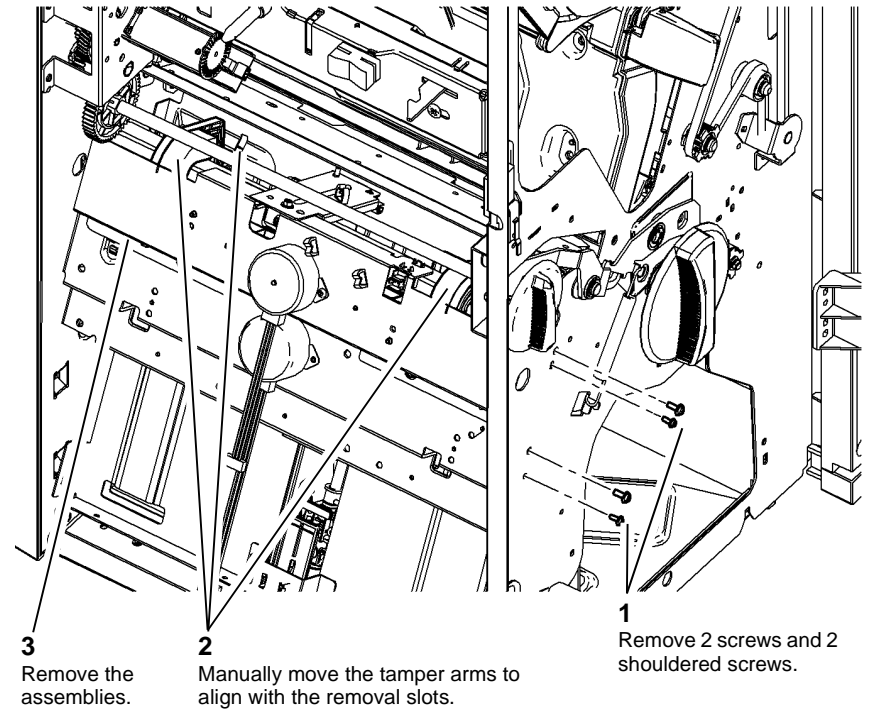


Figure 2 Assemblies removal

- Separate the BM stapler assembly from the booklet tamper assembly, [Figure 3](#).

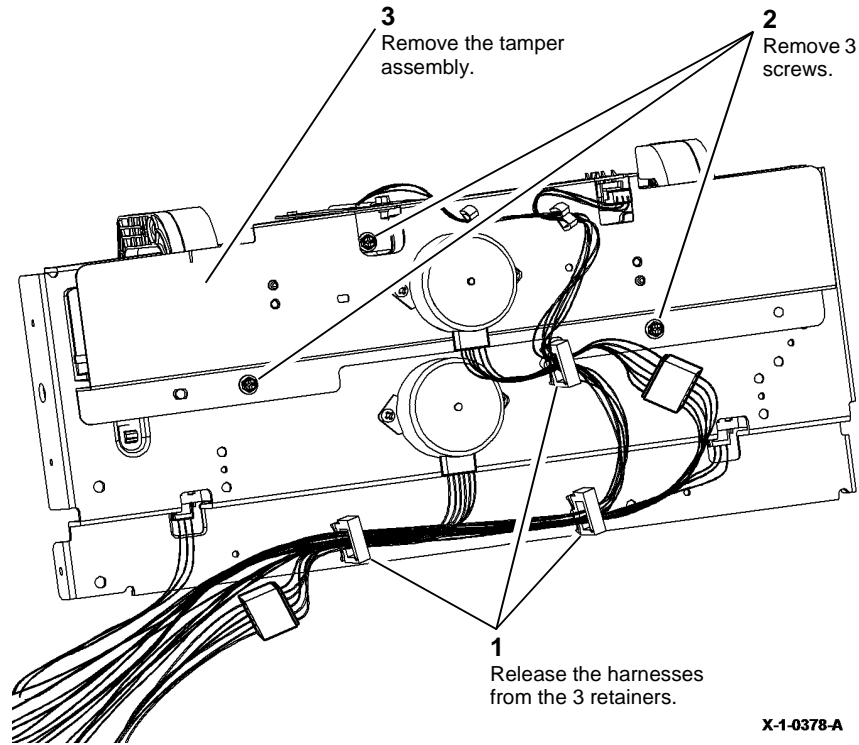


Figure 3 Stapler assembly removal

Replacement

- The replacement is the reverse of the removal procedure.
- When installing the BM stapler assembly and booklet tamper assembly, first insert and tighten the 4 shouldered screws, [Figure 1](#) and [Figure 2](#), then continue with the remainder of the installation.
- Perform [ADJ 12.5-150](#) Booklet Staple Position.

REP 12.39-150 BM Staple Cartridge LED

Parts List on [PL 12.395](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

- Remove the bin 2 support, [REP 12.44-150](#).
- Remove the BM staple cartridge LED, [Figure 1](#).

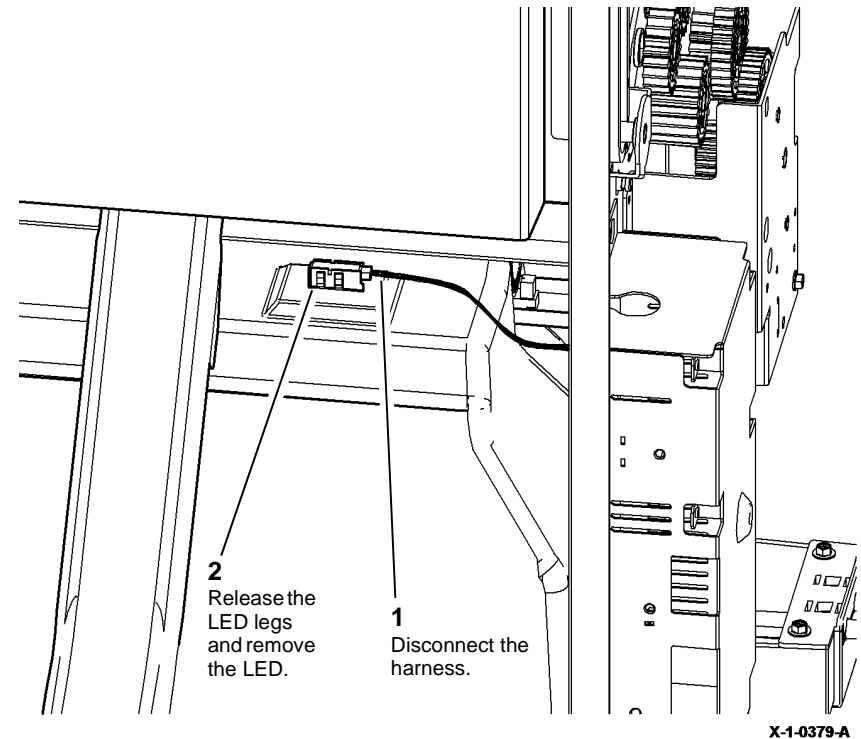


Figure 1 Staple cartridge LED removal

Replacement

The replacement is the reverse of the removal procedure.

REP 12.40-150 BM Tamper 1 Home Sensor

Parts List on [PL 12.380](#)

Removal



WARNING

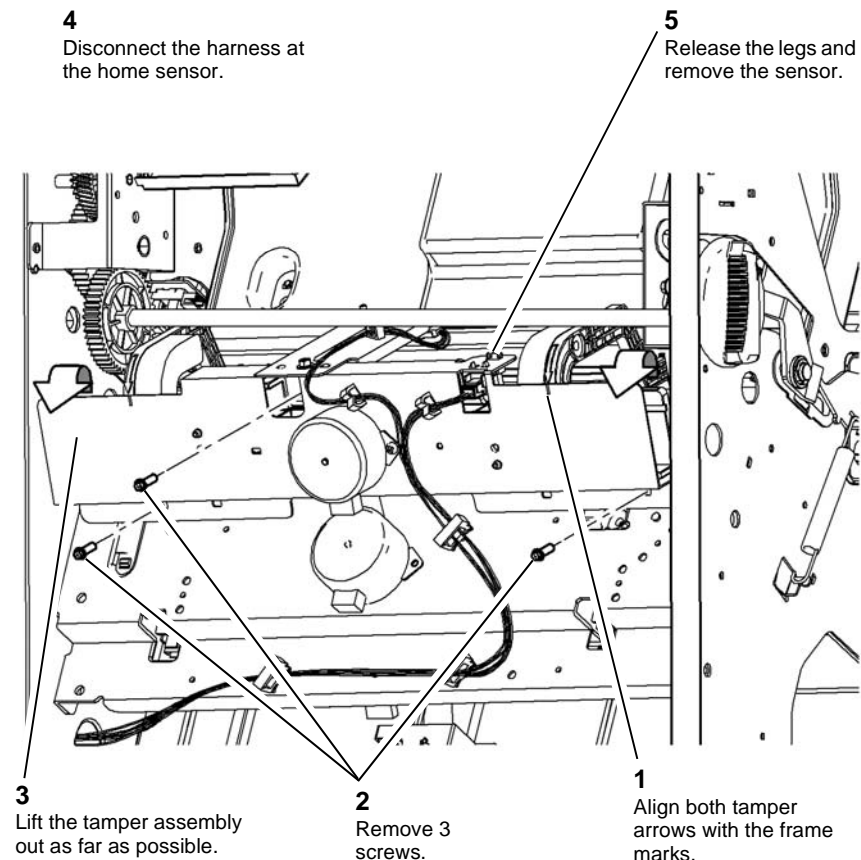
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM LVF BM back stop cover, [REP 12.1-150](#).
3. Remove the BM tamper 1 home sensor, [Figure 1](#).



X-1-0380-A

Figure 1 Home sensor removal

Replacement

The replacement is the reverse of the removal procedure.

REP 12.41-150 Booklet Tamper Motor

Parts List on [PL 12.380](#)

Removal



WARNING

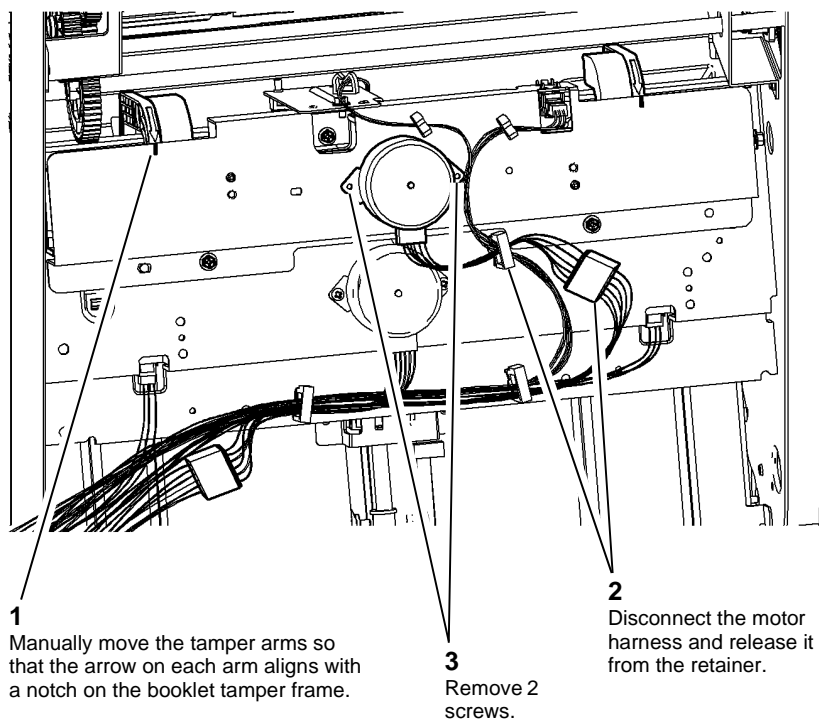
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM LVF BM back stop cover, [REP 12.1-150](#).
3. Prepare to remove the booklet tamper motor, [Figure 1](#).



1 Manually move the tamper arms so that the arrow on each arm aligns with a notch on the booklet tamper frame.

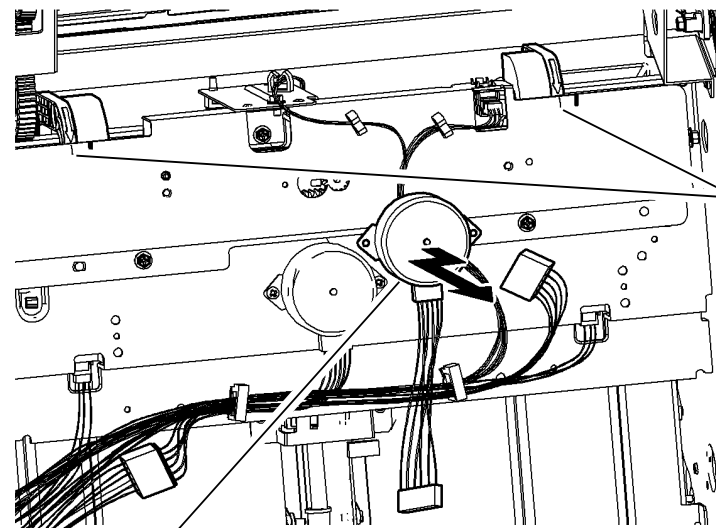
3 Remove 2 screws.

2 Disconnect the motor harness and release it from the retainer.

X-1-0381-A

Figure 1 Preparation

4. Remove the booklet tamper motor, [Figure 2](#).



1 Pull the motor out by approximately 1mm (0.04 inch), slide the motor approximately 12mm (0.5 inch) to the rear, pull the motor out to remove.

2 Without moving the tamper arms, place a pencil mark on the booklet tamper frame in line with each tamper arm arrow.

X-1-0382-A

Figure 2 Tamper motor removal

Replacement

1. Prepare to install the booklet tamper motor, [Figure 3](#).

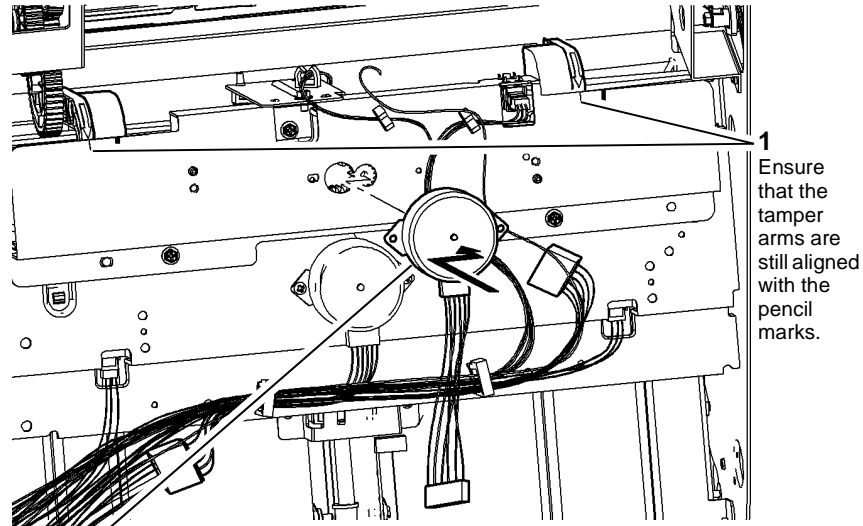


Figure 3 Preparation

X-1-0383-A

2. Install the booklet tamper motor, [Figure 4](#).

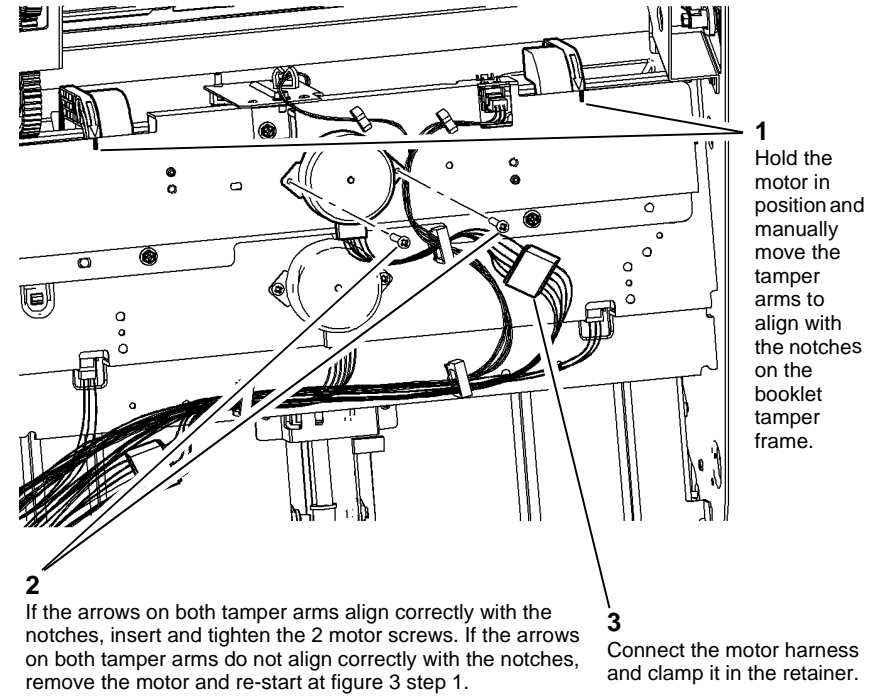


Figure 4 Tamper motor installation

X-1-0384-A

3. Install the LVF BM LVF BM back stop cover.
4. Dock the LVF BM, [REP 12.13-150](#).

REP 12.42-150 Booklet Tamper Arms

Parts List on [PL 12.380](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM front door cover assembly and rear cover, [REP 12.1-150](#).
3. Remove the front booklet tamper arm, [Figure 1](#).

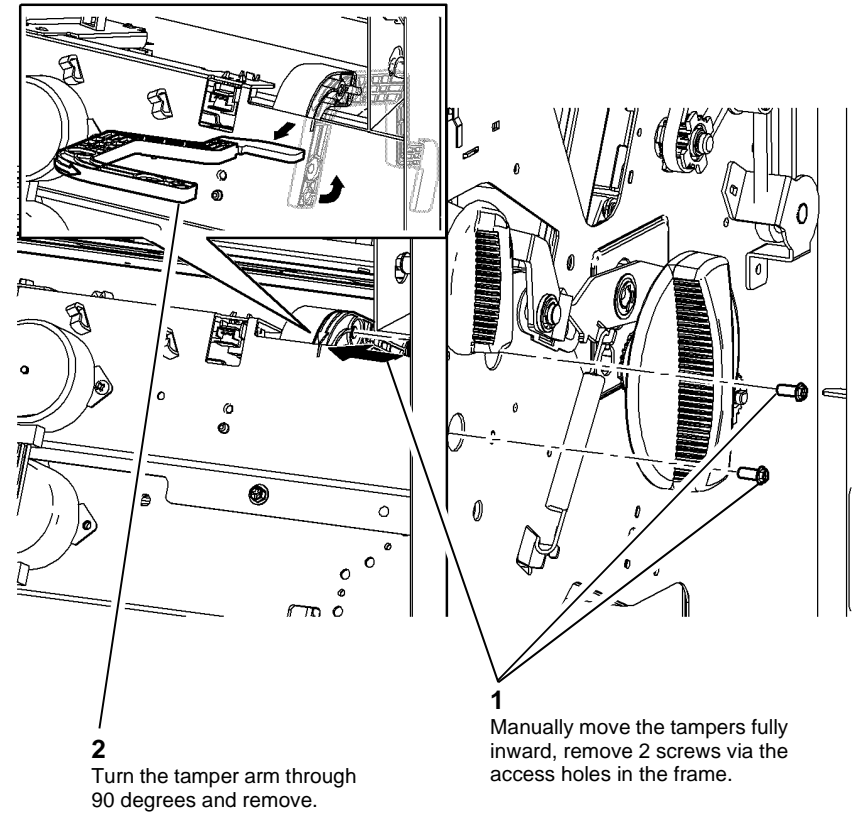
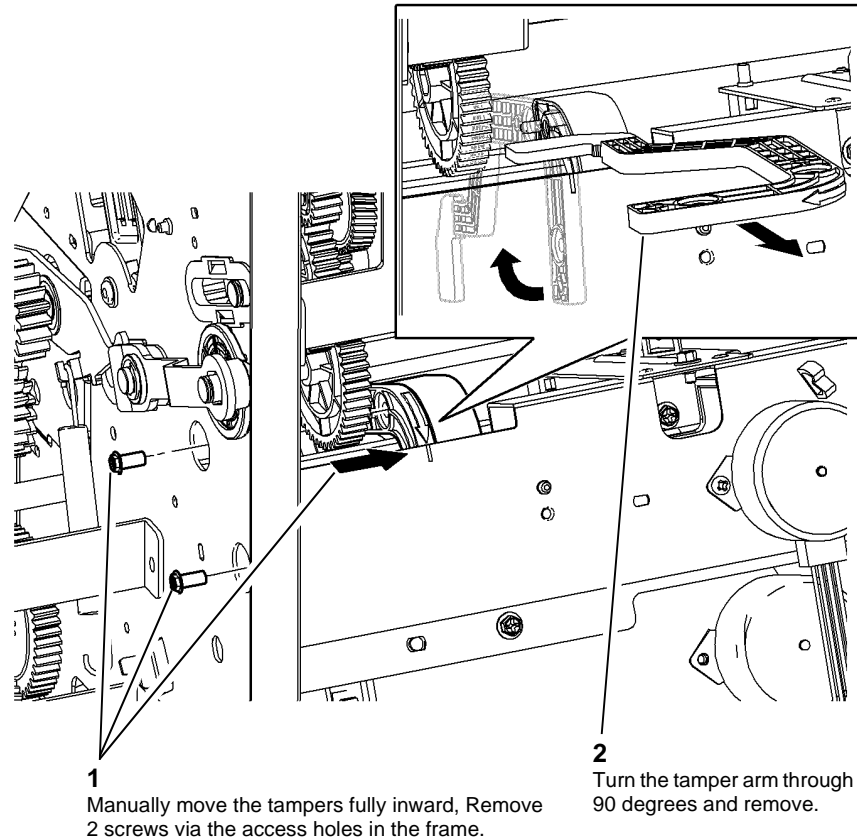


Figure 1 Front tamper arm removal

X-1-0385-A

- Remove the rear booklet tamper arm, [Figure 2](#).



- Manually move the tampers fully inward, Remove 2 screws via the access holes in the frame.
- Turn the tamper arm through 90 degrees and remove.

X-1-0386-A

Figure 2 Rear tamper arm removal

Replacement

- Refer to [GP 6](#) before refitting the screws.
- The replacement is the reverse of the removal procedure.

REP 12.43-150 BM Paper Present Sensor

Parts List on [PL 12.380](#)

Removal

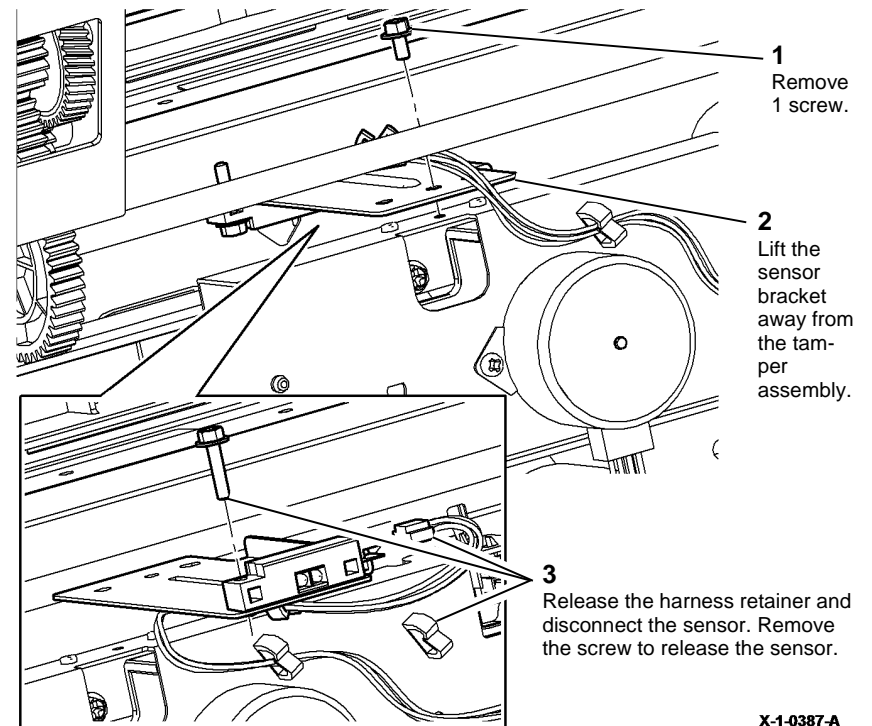


Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

- Un-dock the LVF BM, [REP 12.13-150](#).
- Remove the sensor bracket, [Figure 1](#).



- Remove 1 screw.
- Lift the sensor bracket away from the tamper assembly.
- Release the harness retainer and disconnect the sensor. Remove the screw to release the sensor.

X-1-0387-A

Figure 1 Sensor bracket removal

Replacement

The replacement is the reverse of the removal procedure.

REP 12.44-150 Bin 2 Support

Parts List on [PL 12.410](#)

Removal



WARNING

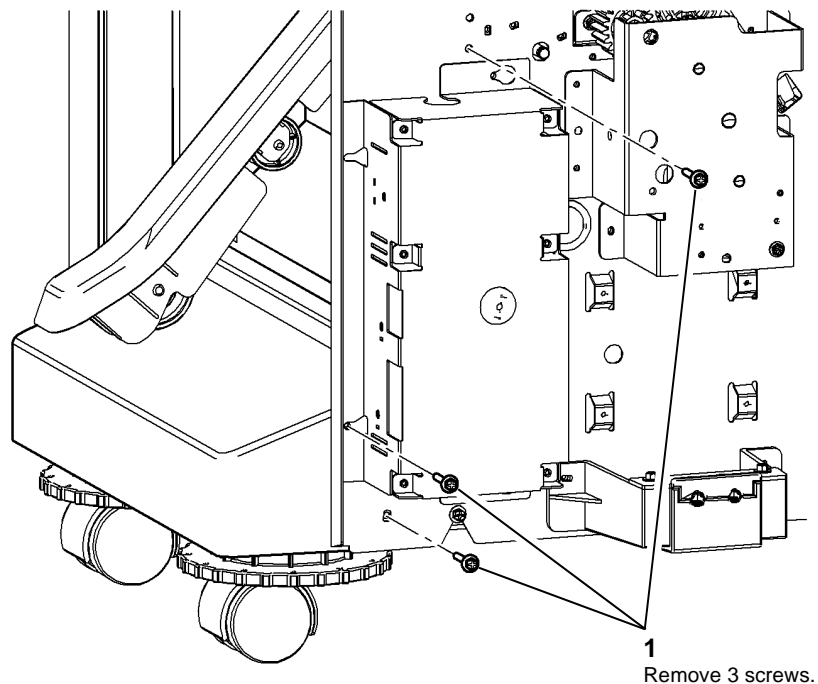
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM front door cover assembly and rear cover, [REP 12.1-150](#).
3. Remove bin 2, [PL 12.320 Item 18](#).
4. Prepare to remove the bin 2 support, [Figure 1](#).

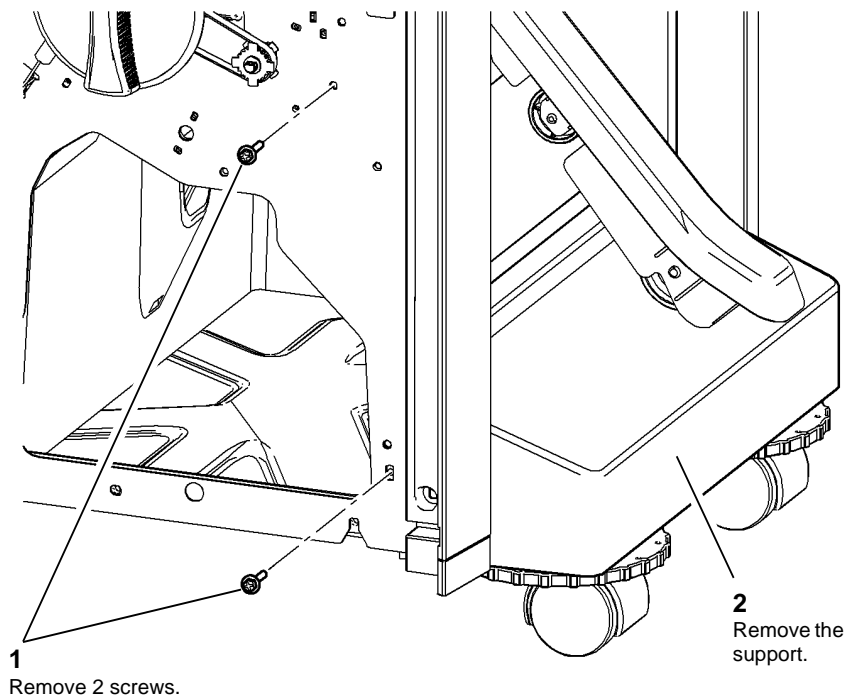


1
Remove 3 screws.

X-1-0388-A

Figure 1 Preparation

5. Remove the bin 2 support, [Figure 2](#).



1
Remove 2 screws.

2
Remove the support.

X-1-0389-A

Figure 2 Bin 2 support removal

Replacement

1. Refer to [GP 6](#) before refitting the screws.
2. The replacement is the reverse of the removal procedure.

REP 12.45-150 Lower Right Cover and Bin 1 Lower Limit Switch

Parts List on [PL 12.320](#) and [PL 12.345](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the bin 2 support, [REP 12.44-150](#).
2. Prepare to remove the lower right cover, [Figure 1](#).

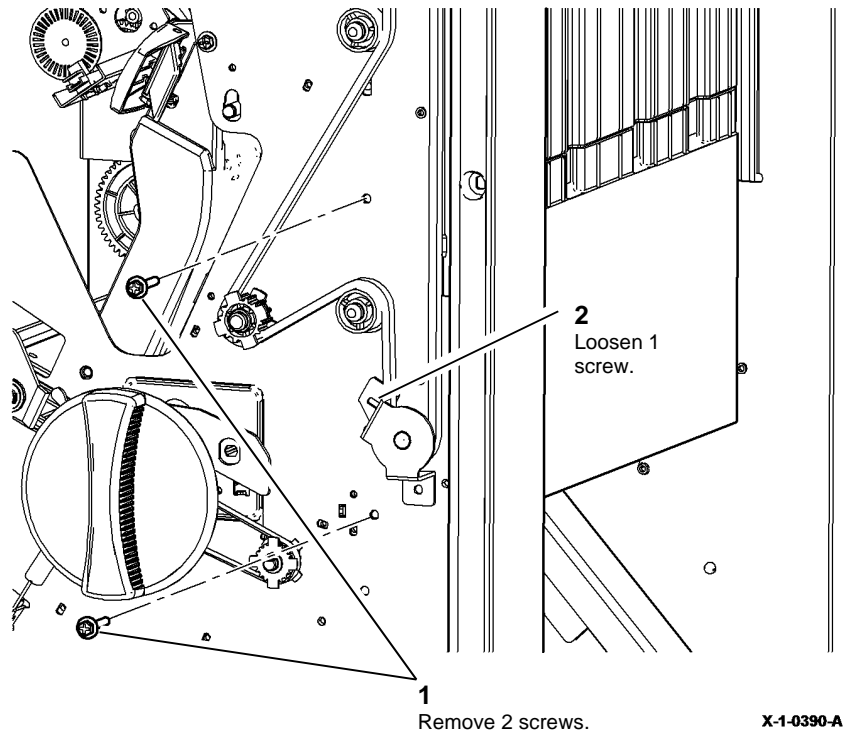
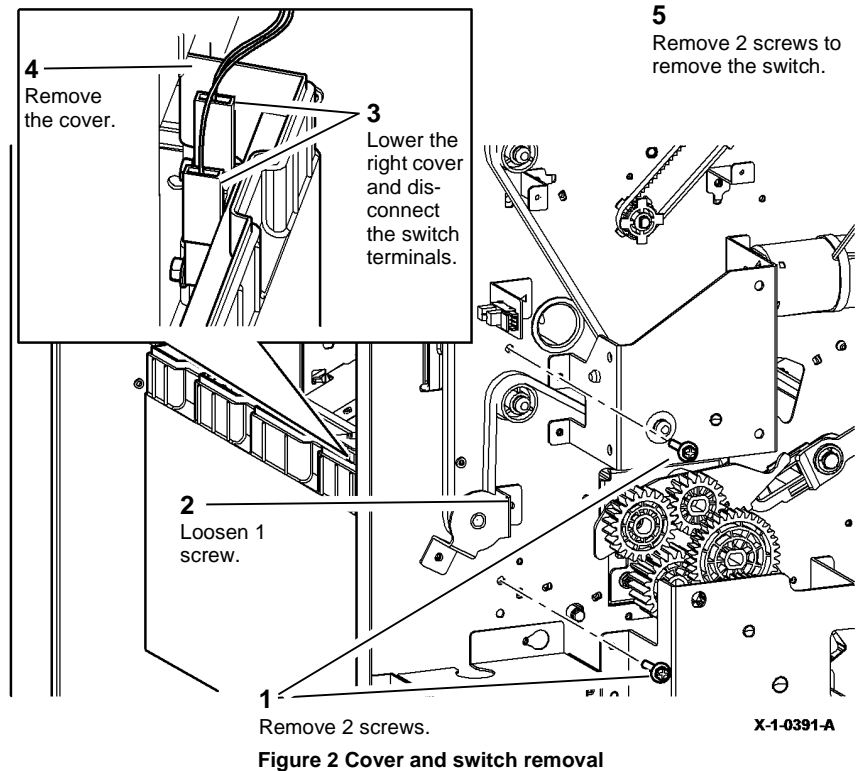


Figure 1 Preparation

3. Remove the lower right cover and bin 1 lower limit switch, [Figure 2](#).



Replacement

1. Refer to [GP 6](#) before refitting the screws.
2. The replacement is the reverse of the removal procedure.

REP 12.46-150 Paper Guide and Top Tray Exit Sensor

Parts List on [PL 12.370](#)

Removal



WARNING

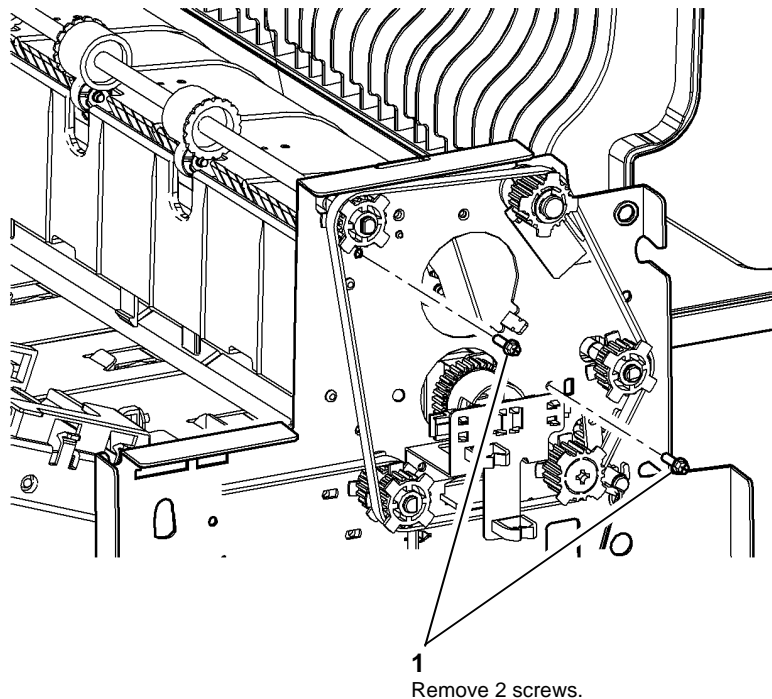
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

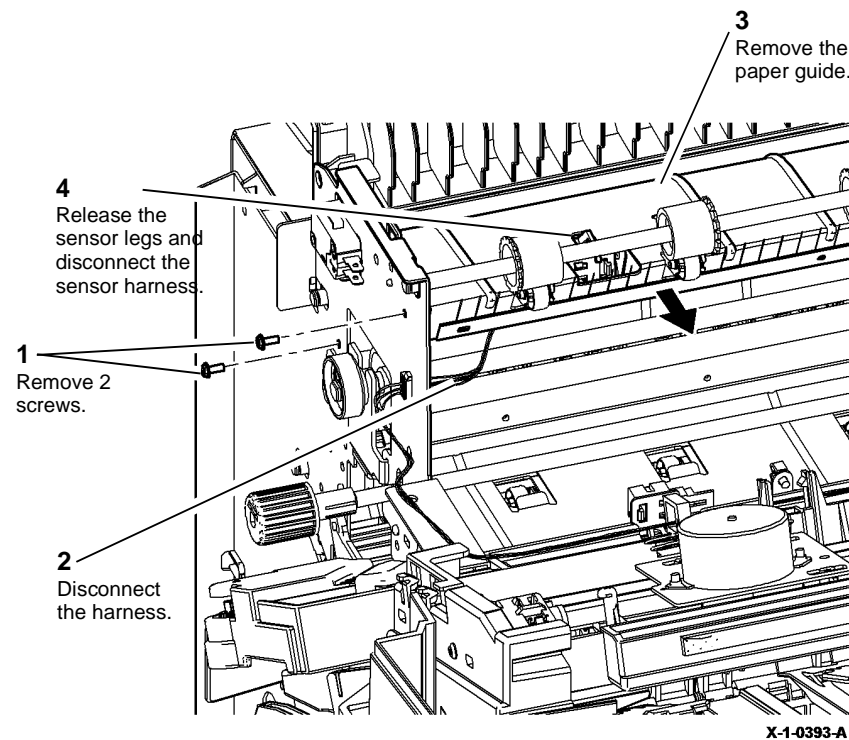
1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM front door cover assembly, rear cover and top cover, [REP 12.1-150](#).
3. Remove the hole punch motor assembly, [REP 12.7-150](#).
4. Prepare to remove the paper guide [Figure 1](#).



X-1-0392-A

Figure 1 Preparation

5. Remove the paper guide and top tray exit sensor, Q12-107, [Figure 2](#).



X-1-0393-A

Figure 2 Guide and sensor removal

Replacement

The replacement is the reverse of the removal procedure.

REP 12.47-150 Lower Right Paper Guide

Parts List on [PL 12.375](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVFBM top cover, rear cover and front door cover assembly, [REP 12.1-150](#).
3. Remove the tamper assembly, [REP 12.6-150](#).
4. Remove the paper output drive belt, [REP 12.4-150](#).
5. Prepare to remove the drive shafts [Figure 1](#).

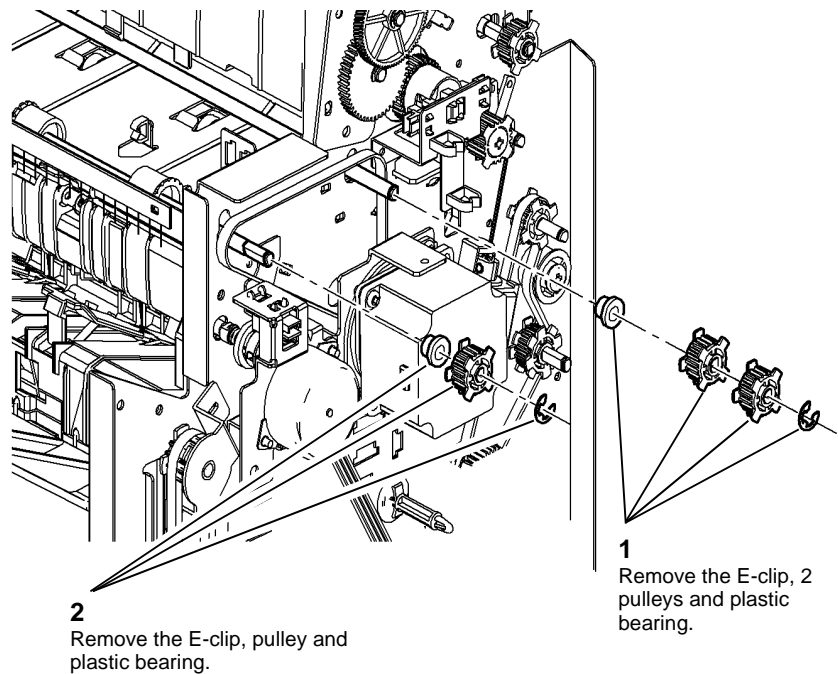


Figure 1 Preparation

X-1-0394-A

6. Remove the ejector drive shaft, [Figure 2](#).

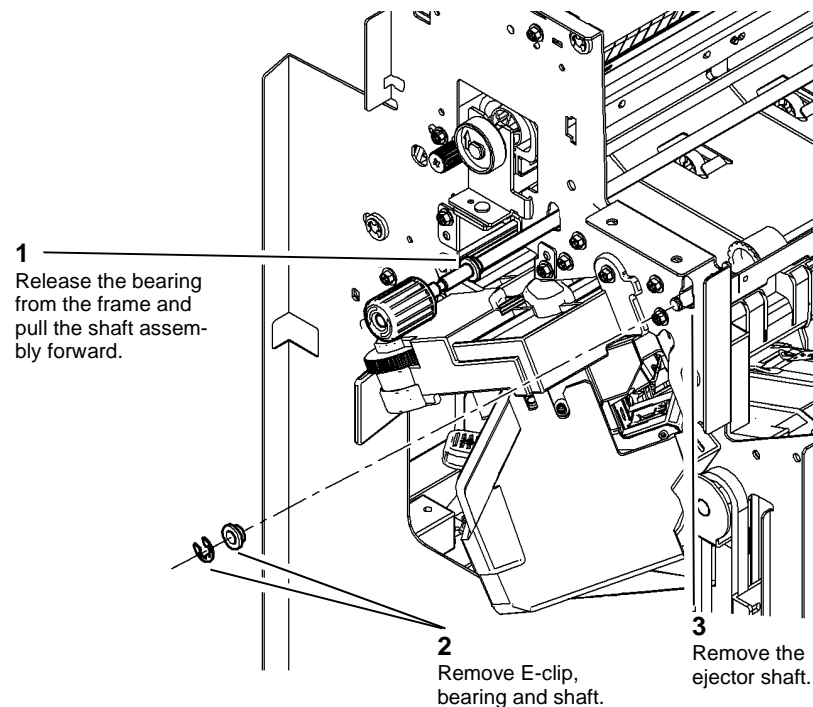
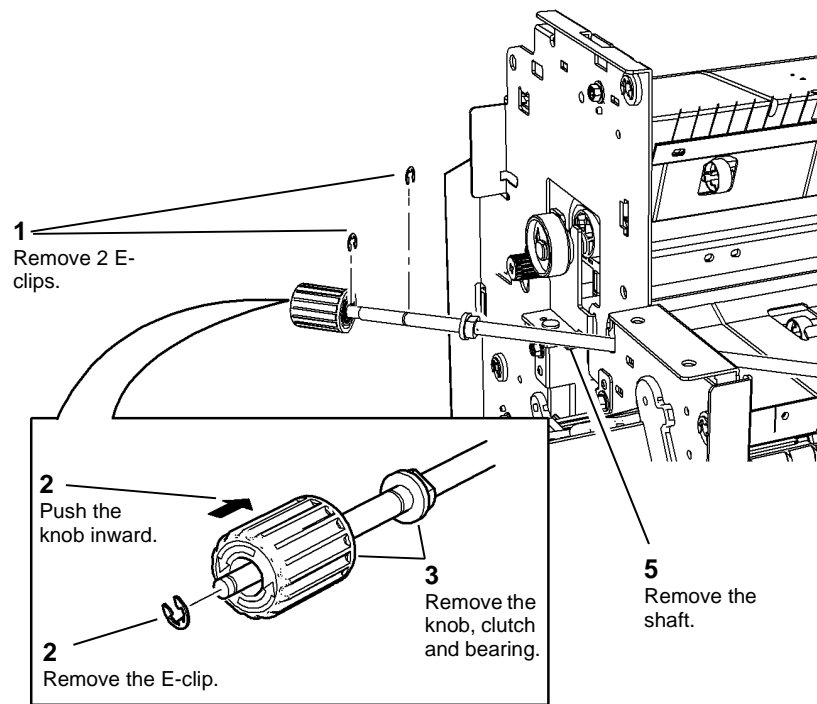


Figure 2 Ejector shaft removal

X-1-0395-A

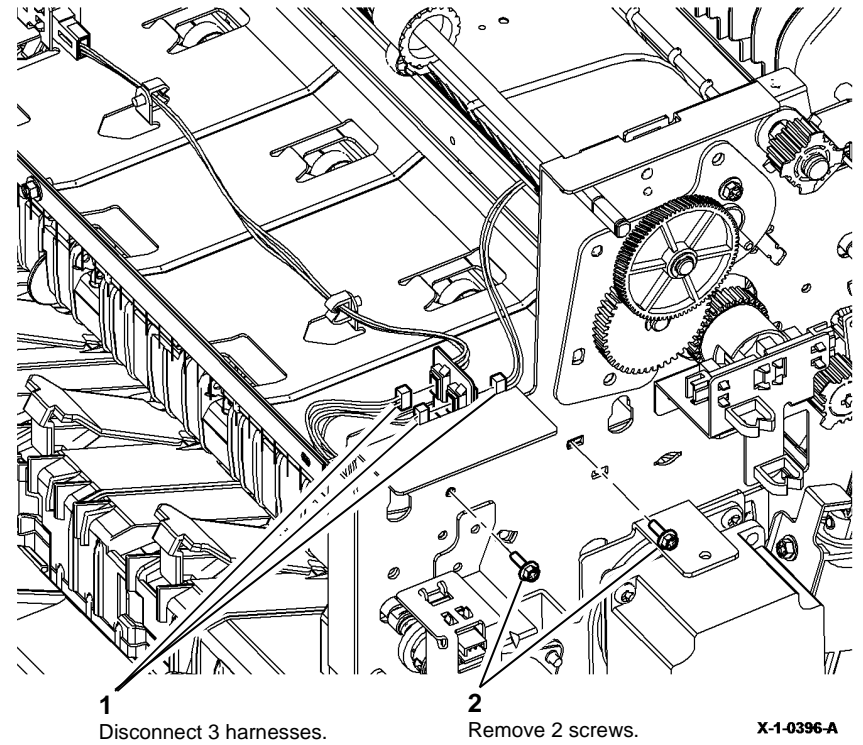
7. Remove the drive shaft, [Figure 3](#).



X-1-1286-A

Figure 3 Drive shaft removal

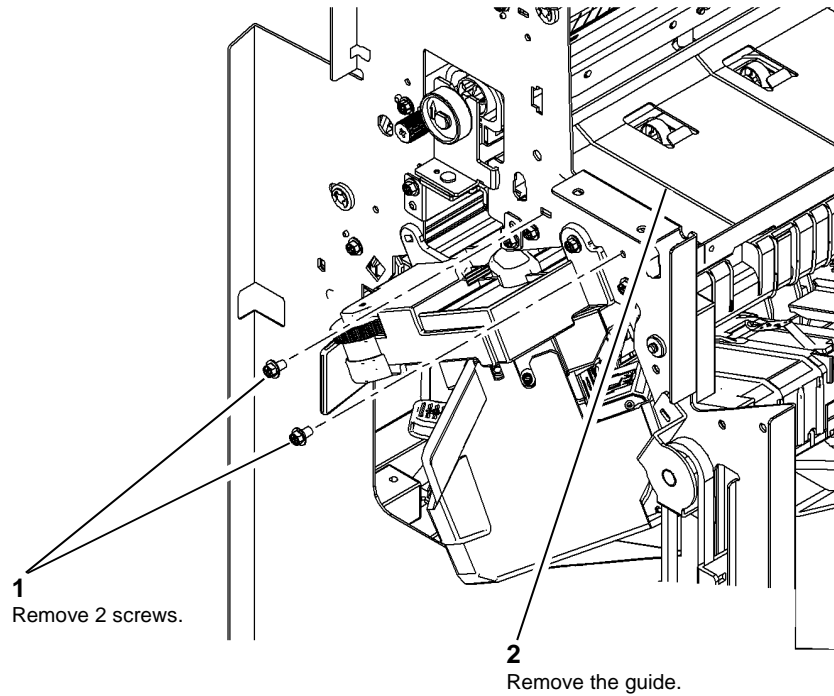
8. Prepare to remove the upper right paper guide, [Figure 4](#).



X-1-0396-A

Figure 4 Preparation

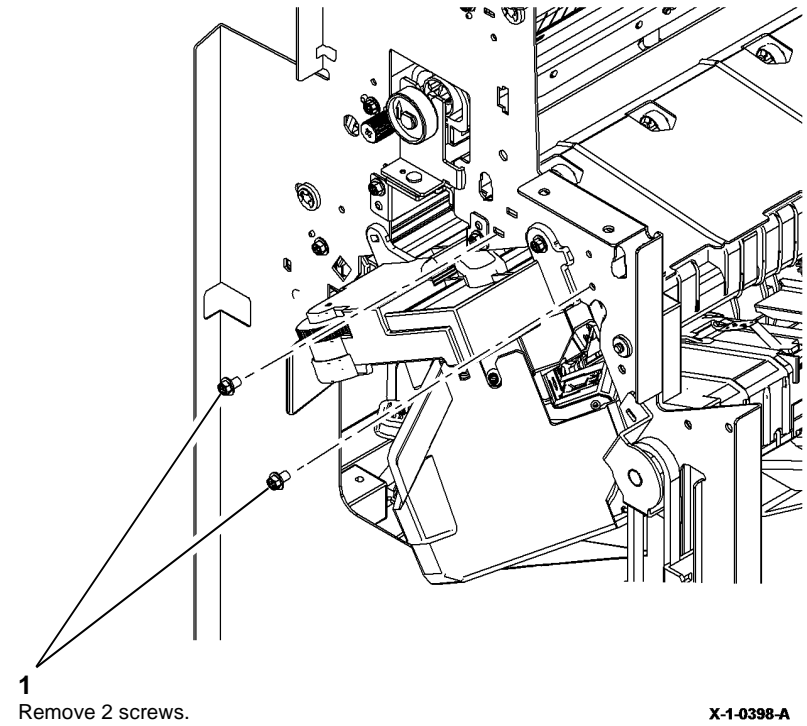
9. Remove the upper right paper guide, [Figure 5](#).



X-1-0397-A

Figure 5 Upper right guide removal

10. Prepare to remove the lower right paper guide, [Figure 6](#).



X-1-0398-A

Figure 6 Preparation

11. Remove the lower right paper guide, [Figure 7](#).

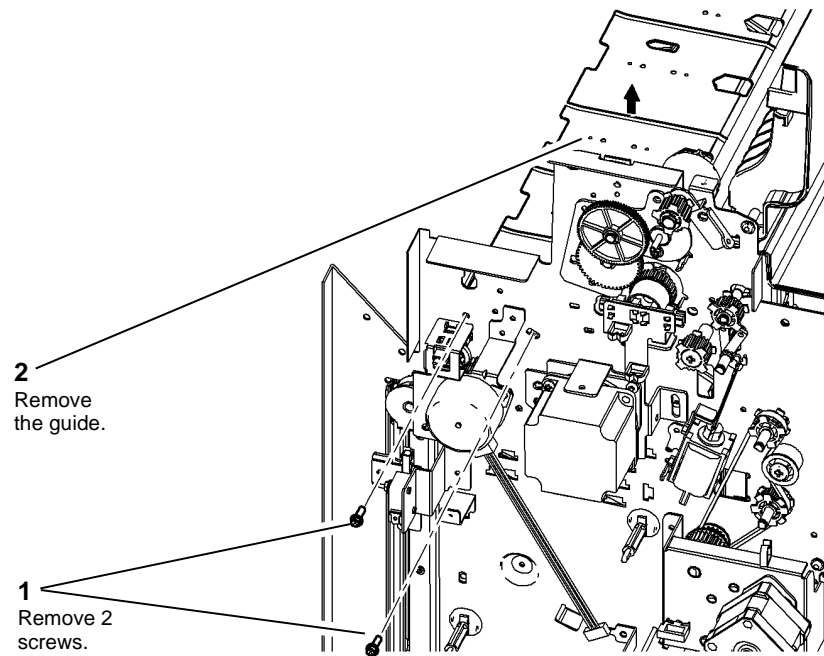


Figure 7 Lower right guide removal

X-1-0399-A

Replacement

1. The replacement is the reverse of the removal procedure.
2. When replacing the jam clearance knob, ensure the one-way clutch is installed in the correct orientation, [Figure 8](#).

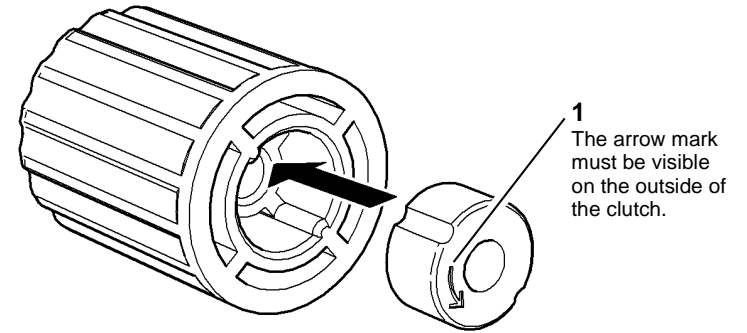


Figure 8 Clutch orientation

X-1-1287-A

REP 12.48-150 BM Staple Head and Sensors

Parts List on [PL 12.395](#)

Removal

NOTE: A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.



WARNING

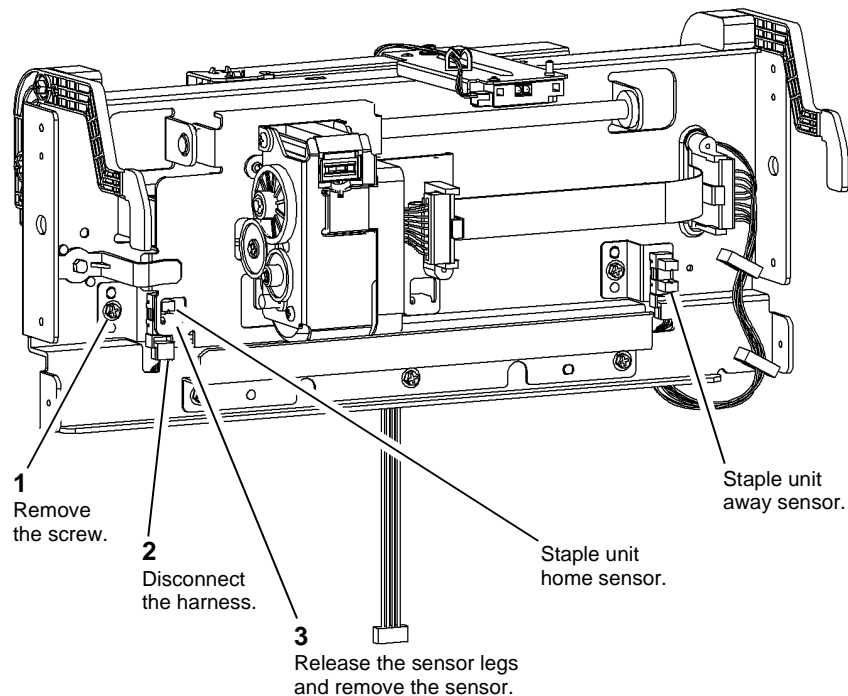
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

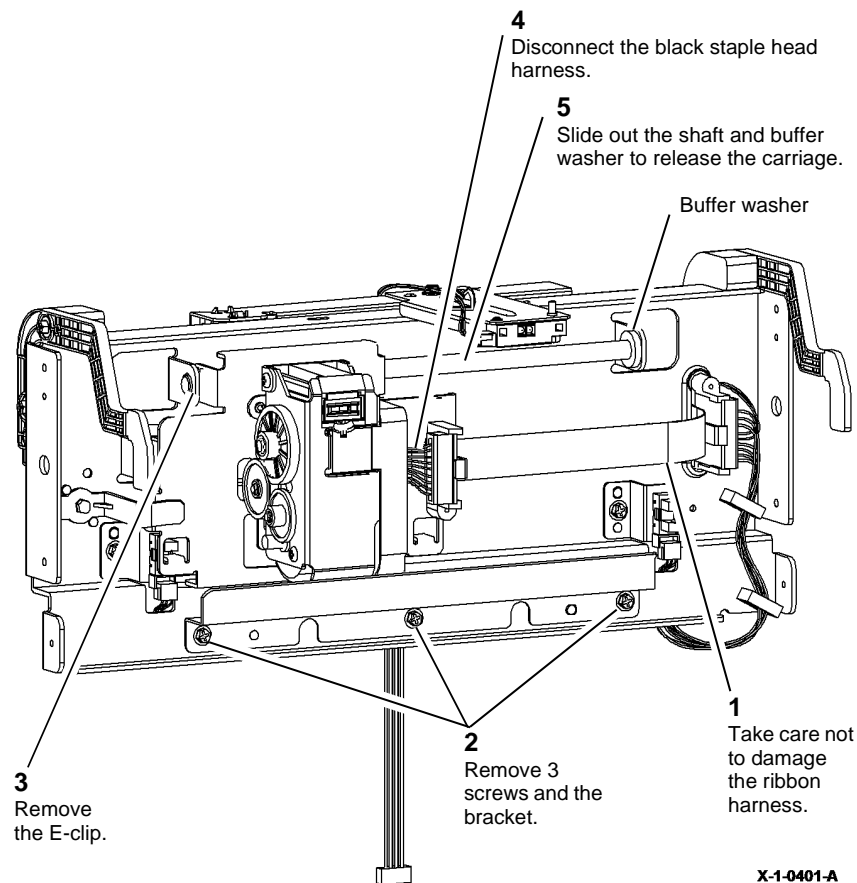
1. Remove the BM stapler assembly and booklet tamper assembly, [REP 12.38-150](#).
2. If required, remove the BM staple unit home sensor, Q12-438 or staple unit away sensor, Q12-439, [Figure 1](#).



X-1-0400-A

Figure 1 Sensor removal

3. Prepare to remove the stapler carriage assembly, [Figure 2](#).



X-1-0401-A

Figure 2 Preparation

4. Remove the stapler carriage assembly, [Figure 3](#).

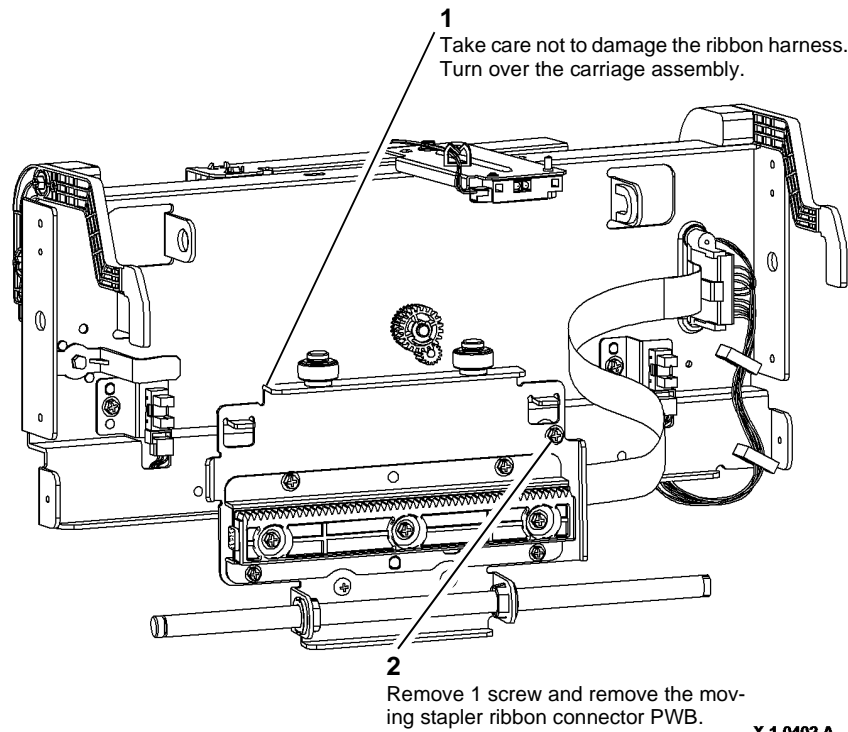


Figure 3 Carriage removal

5. Remove the rack bracket, [Figure 4](#).

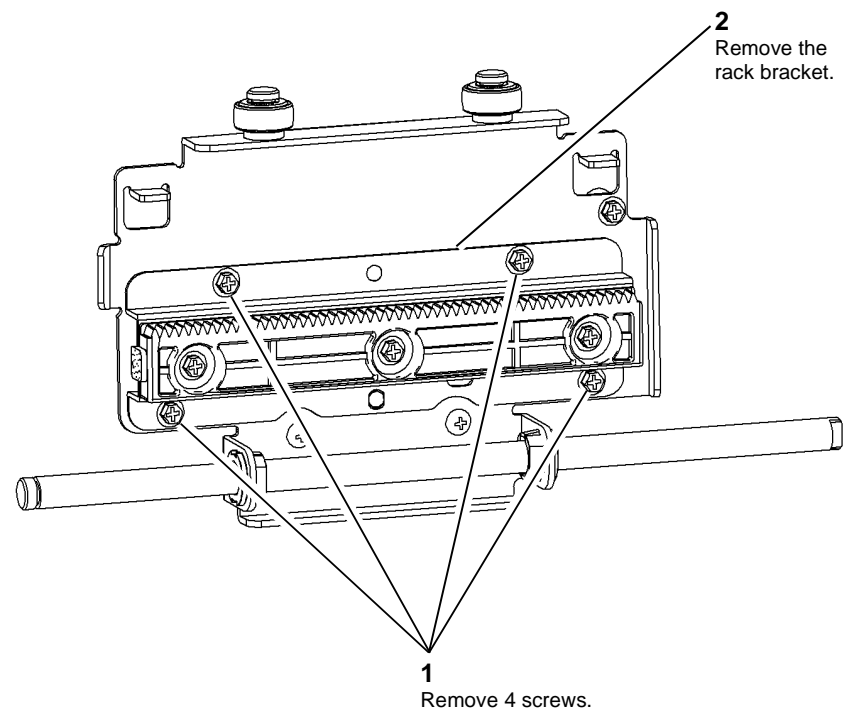
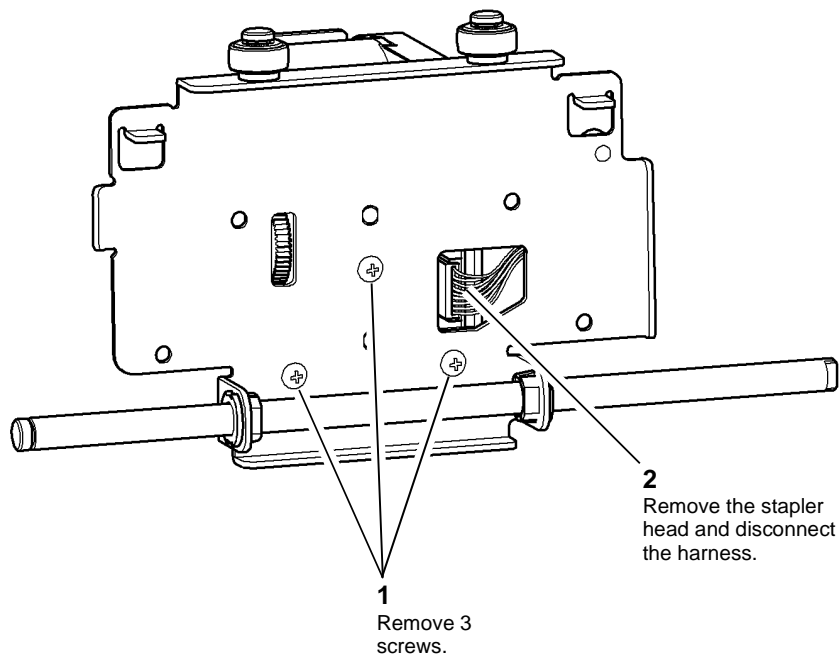


Figure 4 Rack bracket removal

6. Remove the BM stapler head assembly, [Figure 5](#).



X-1-0404-A

Figure 5 Head assembly removal

Replacement

1. Refer to [GP 6](#) before refitting the screws.
2. Ensure that the buffer washer is installed in the correct position, refer to [Figure 2](#).
3. The replacement is the reverse of the removal procedure.
4. Perform the adjustments that follow:
 - [ADJ 12.6-150](#) Booklet Stapler Anvil Position - Front
 - [ADJ 12.7-150](#) Booklet Stapler Anvil Position - Rear.

REP 12.1-171 HVF Covers

Parts List on [PL 12.100](#)

Removal


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

NOTE: All major HVF covers are dealt with in this procedure, only remove the covers listed for the procedure that you are performing.

Remove the HVF covers as follows:

1. Remove the front door, [Figure 1](#). If required, remove 5 screws to separate the door support from the front door.

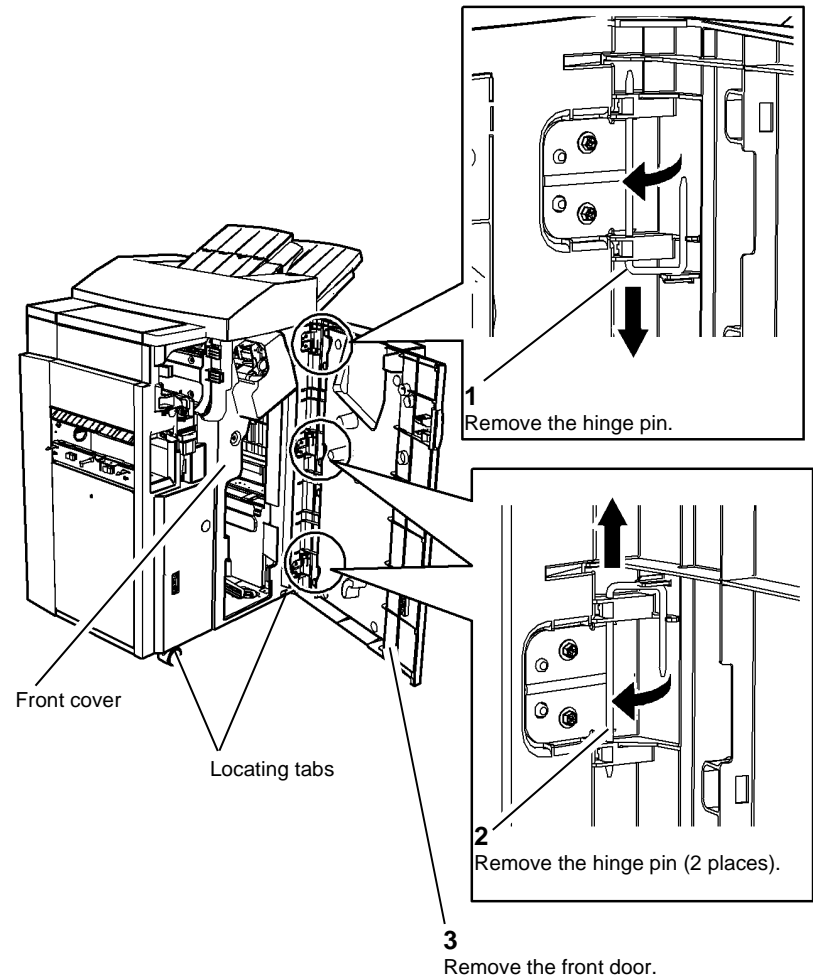


Figure 1 Front door removal

2. Remove the top cover, [Figure 2](#).

NOTE: In step 1 remove the Inserter unit if fitted (See [REP 12.82-171](#)), or remove the Inserter removable cover, [PL 12.100 Item 8](#).

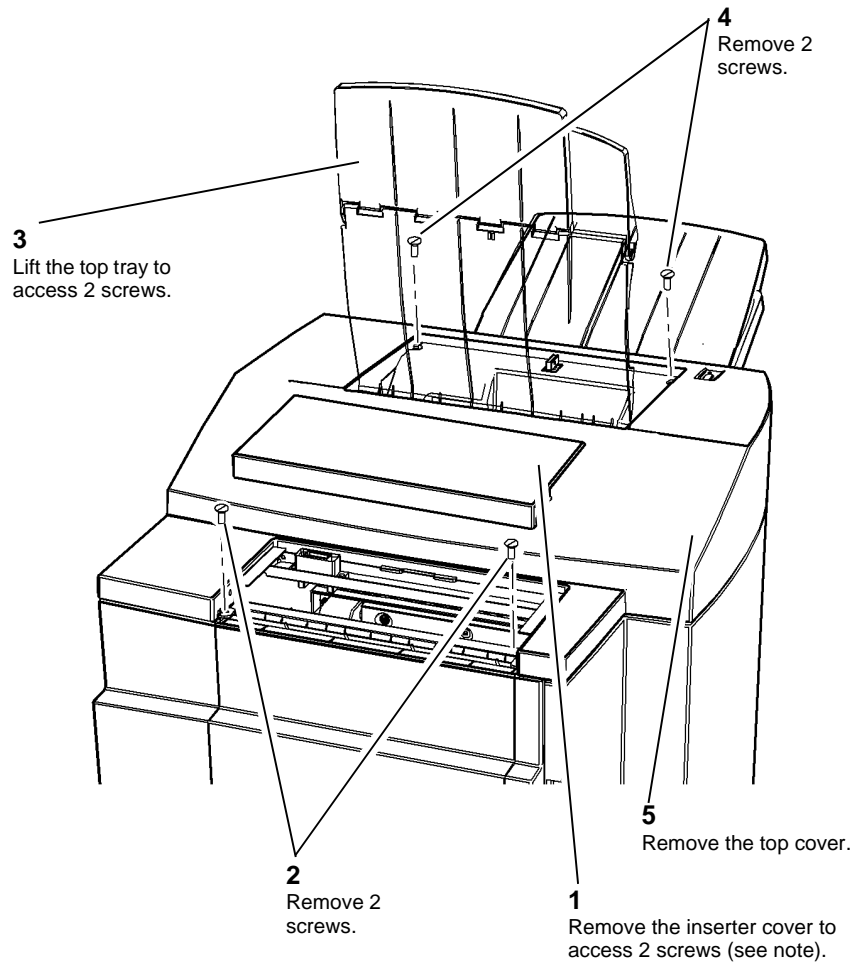


Figure 2 Top cover removal

X-1-0406-A

3. Remove the front cover, [Figure 3](#).

NOTE: The top cover must be removed before removing the front cover.

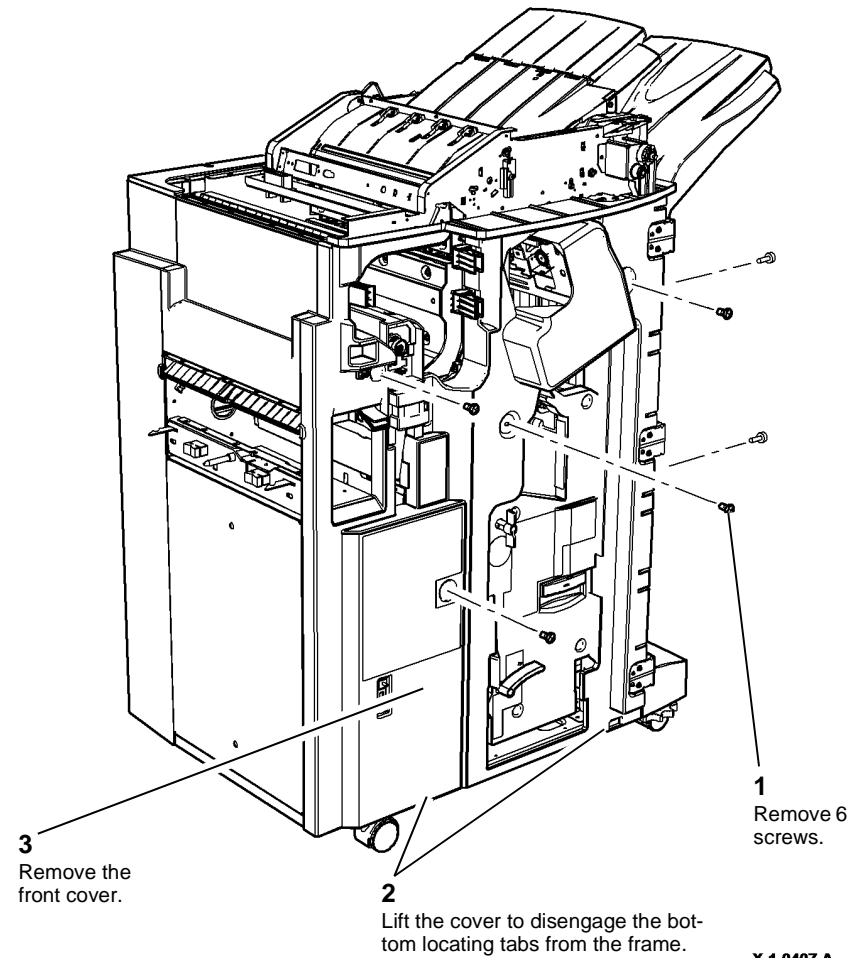


Figure 3 Front cover removal

X-1-0407-A

- Remove the rear cover, [Figure 4](#).

NOTE: The top cover must be removed before removing the rear cover.

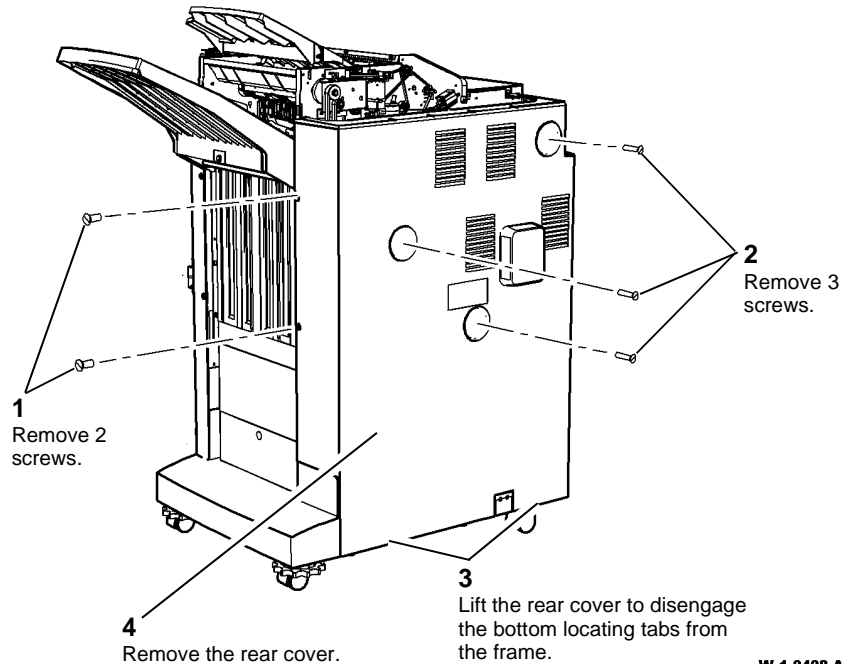


Figure 4 Rear cover removal

- Remove the vent cover and foot cover, [Figure 5](#). To provide enough room to remove the vent cover, un-dock the HVF, [REP 12.13-171](#).

NOTE: The top front cover and rear cover must be removed before removing the vent cover and foot cover.

NOTE: The foot cover is not installed if the tri-folder option is installed.

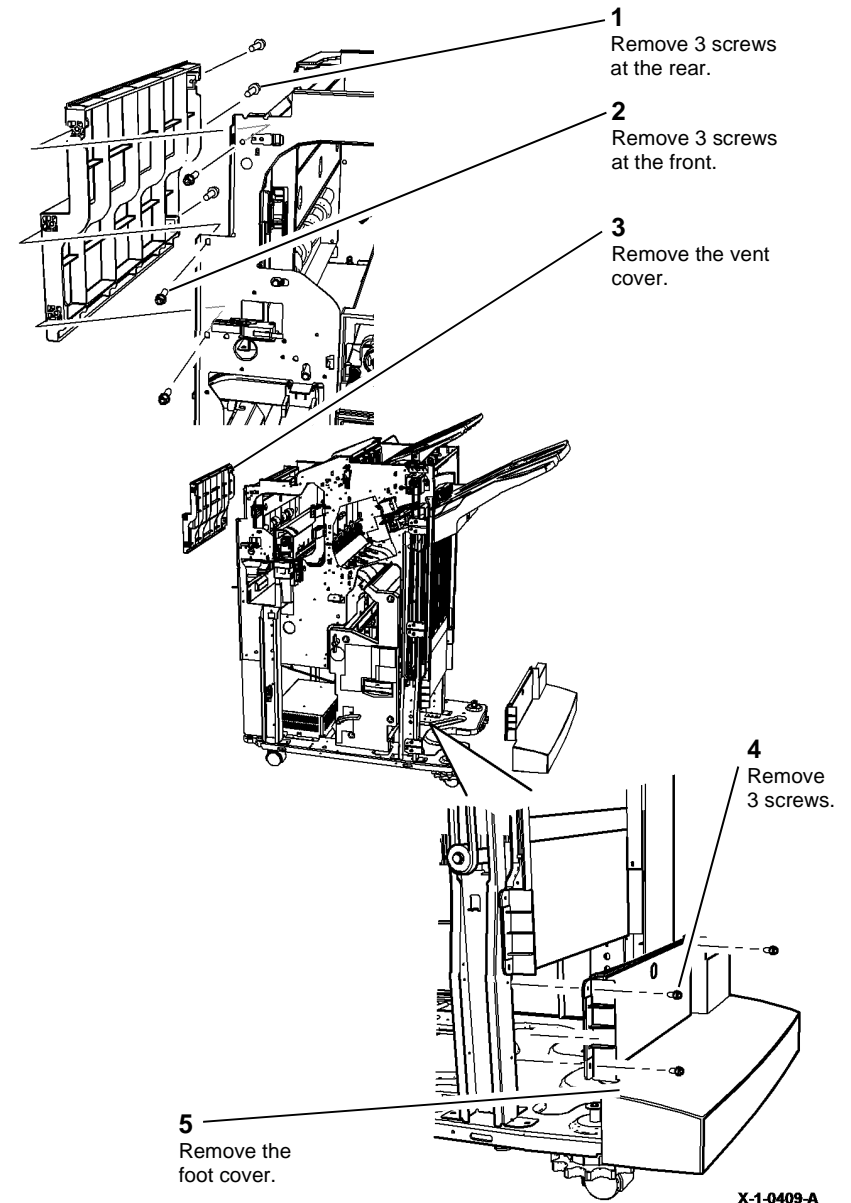


Figure 5 Vent and foot covers removal

Replacement

The replacement procedure is the reverse of the removal procedure.

Depending on the installed options and the covers removed, refit covers in the following sequence:

1. Vent cover, [PL 12.100 Item 6](#).
2. Foot cover (if no tri-folder installed), [PL 12.100 Item 7](#).
3. Rear cover, [PL 12.100 Item 5](#).
4. Front cover, [PL 12.100 Item 2](#).
5. Top cover, [PL 12.100 Item 1](#).
6. Inserter cover (if no inserter installed). [PL 12.100 Item 8](#).
7. Front door, [PL 12.100 Item 3](#).

REP 12.2-171 HVF Stapler Assembly

Parts List on [PL 12.111](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

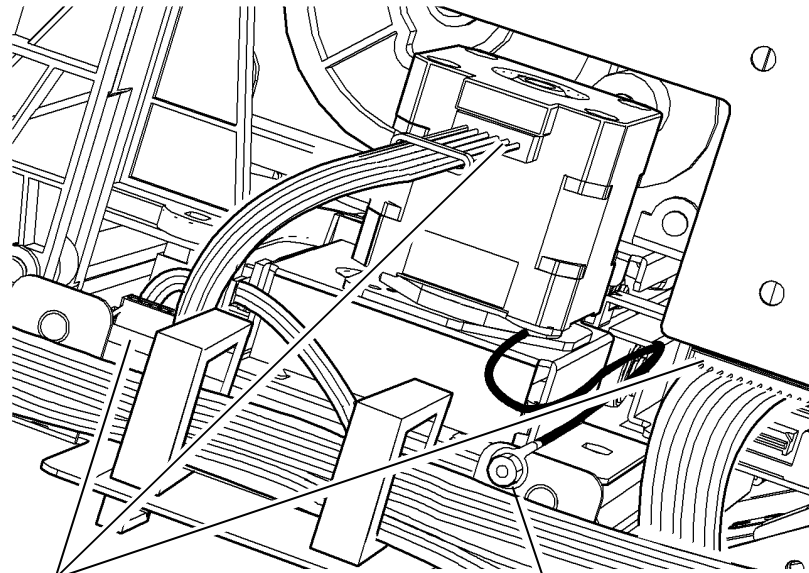


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Switch off the machine, [GP 14](#). Disconnect the power cord.
2. Slide the HVF away from the machine.
3. Remove the HVF front door, [REP 12.1-171](#).
4. Remove the HVF top cover, [REP 12.1-171](#).
5. Remove the HVF front cover, [REP 12.1-171](#).
6. Remove the rear cover, [REP 12.1-171](#).

7. **Figure 1.** At the rear of the HVF, prepare to remove the stapler assembly.



1
Disconnect three PJs.

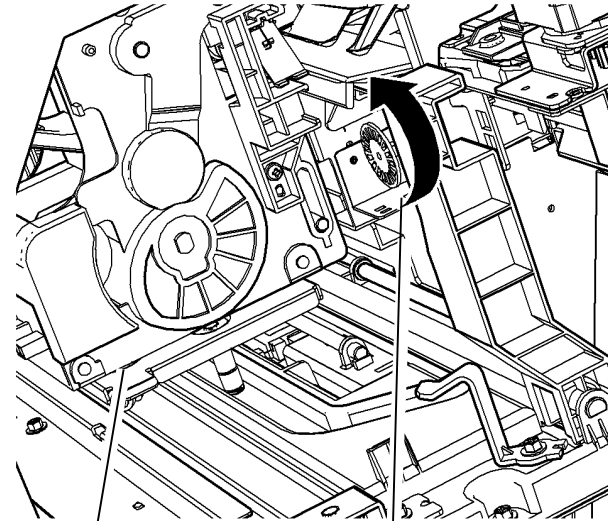
2
Remove the ground
wire screw.

REAR VIEW

X-1-0410-A

Figure 1 Preparation

8. **Figure 2.** Move the ejector unit to the out position.



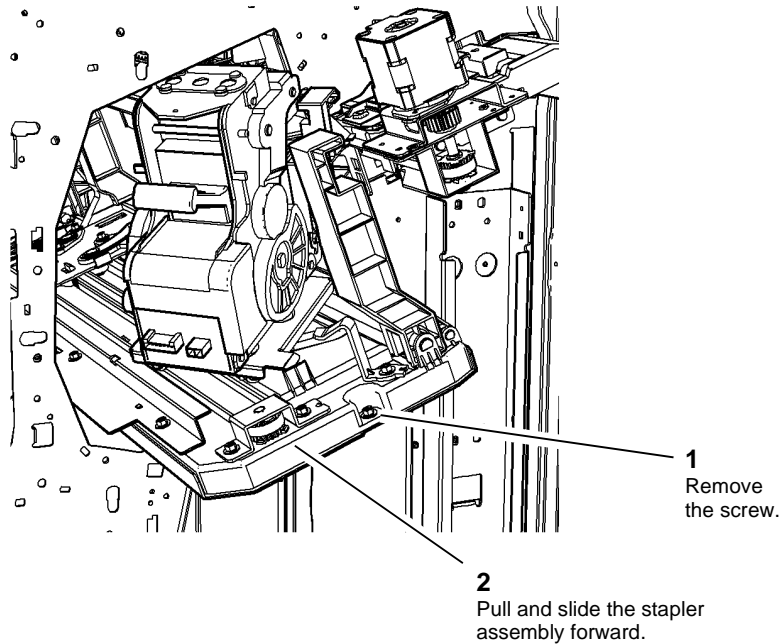
1
Move the stapler to
gain access.

2
Turn the encoder wheel to move
the ejector unit to the out position

X-1-0411-A

Figure 2 Ejector move

9. [Figure 3](#). Remove the stapler assembly.



X-1-0412-A

Figure 3 Stapler removal

Replacement

NOTE: The ejector unit returns to the home position when the HVF is initialized.

1. Slide the stapler assembly into the tray, taking care not to trap the ground wire at the rear.
2. The remainder of the replacement procedure is the reverse of the removal procedure.

REP 12.3-171 HVF Top Tray

Parts List on [PL 12.100](#).

Removal

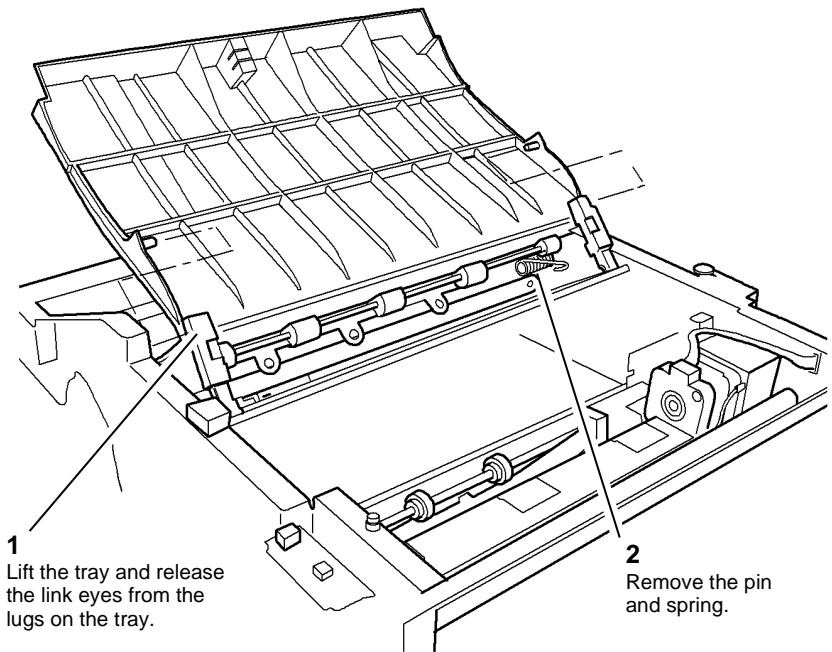


Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. If fitted, un-dock the Inserter, [REP 12.82-171](#).
2. Remove the top and rear covers [REP 12.1-171](#).
3. Prepare to remove the top tray, [Figure 1](#).



X-1-0413-A

Figure 1 Preparation

4. Remove the top tray, [Figure 2](#).

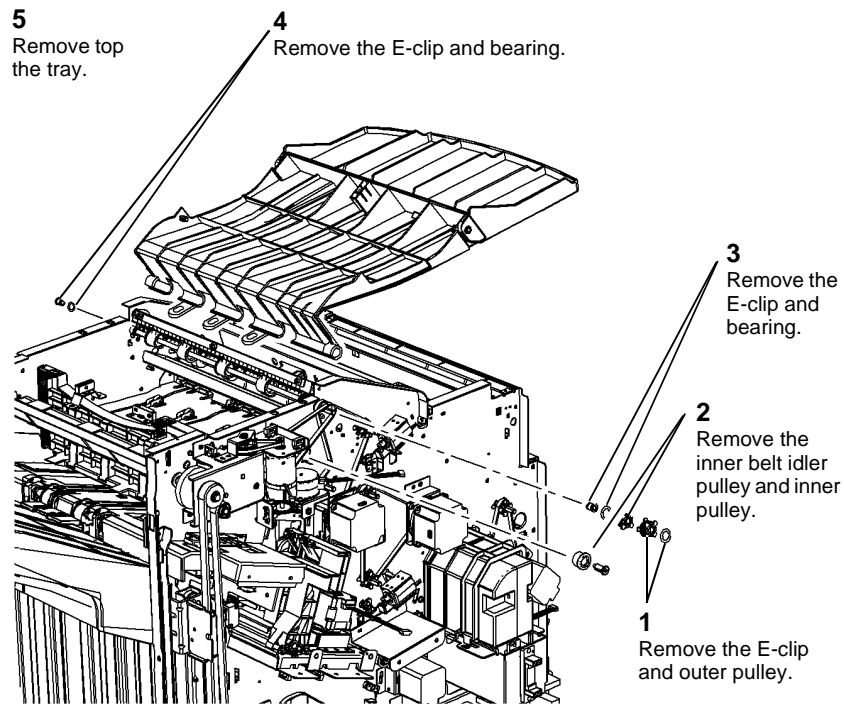


Figure 2 Top tray removal

Replacement

The replacement procedure is the reverse of the removal procedure.

REP 12.4-171 HVF Bin 1 Removal

Parts List on [PL 12.105](#).

Removal



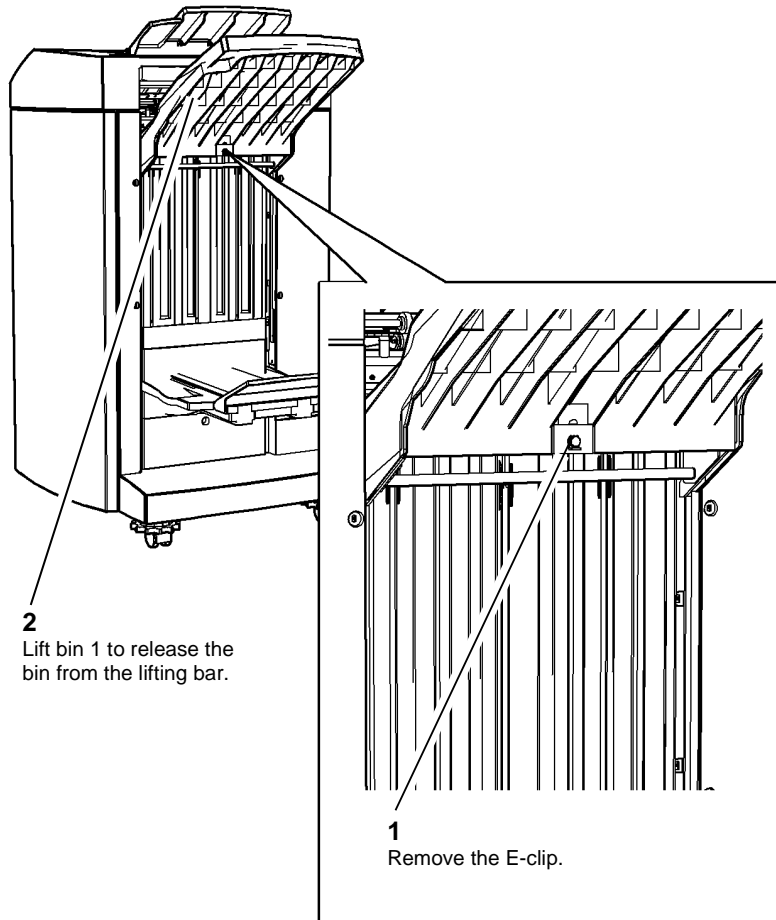
Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

X-1-0414-A

1. Remove Bin 1. [Figure 1](#).



X-1-0415-A

Figure 1 Bin 1 removal

Replacement

The replacement procedure is the reverse of the removal procedure.

REP 12.5-171 HVF Upper Right Side Cover

Parts List on [PL 12.105](#).

Removal


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. With the machine powered on, use [dC330](#) code 12-242 to lower Bin 1 to the position shown in [Figure 1](#).
2. Remove Bin 1, [REP 12.4-171](#).

3. Remove the lower right side cover and upper right side cover, [Figure 1](#).

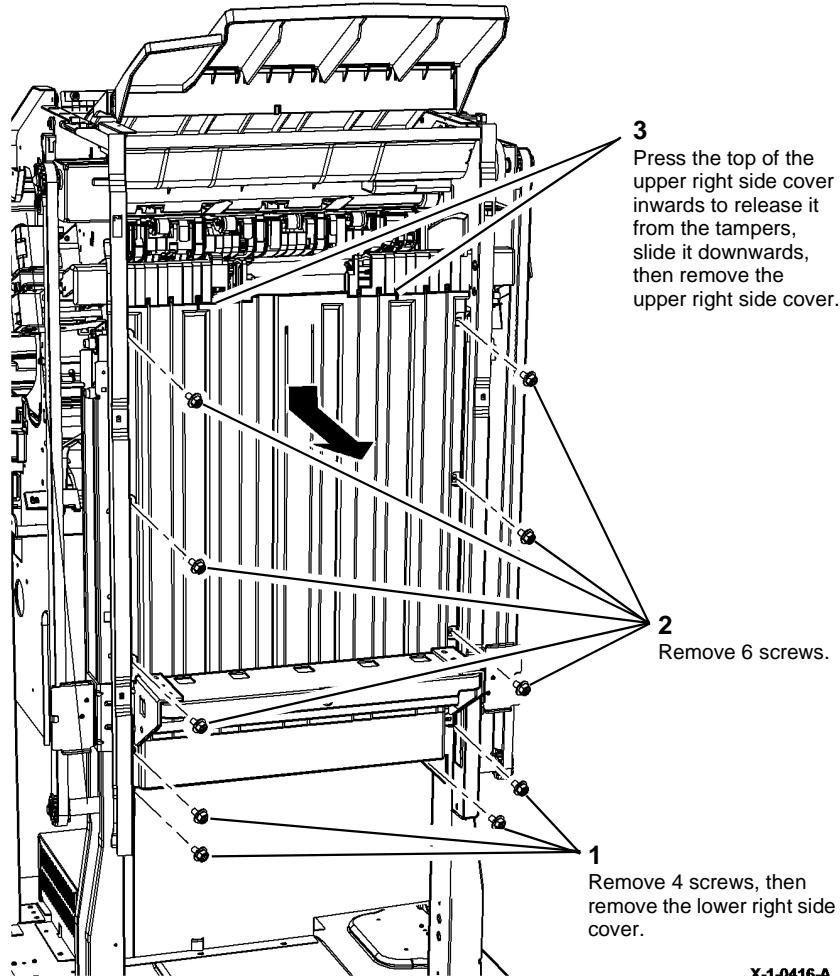


Figure 1 Covers removal

X-1-0416-A

REP 12.6-171 HVF Ejector Assembly

Parts List on [PL 12.110](#).

Removal



Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the upper right side cover [REP 12.5-171](#).
2. Remove the rear cover [REP 12.1-171](#).
3. Remove the front and rear pressing plate finger, [REP 12.7-171](#).
4. Disconnect the harnesses, [Figure 1](#).

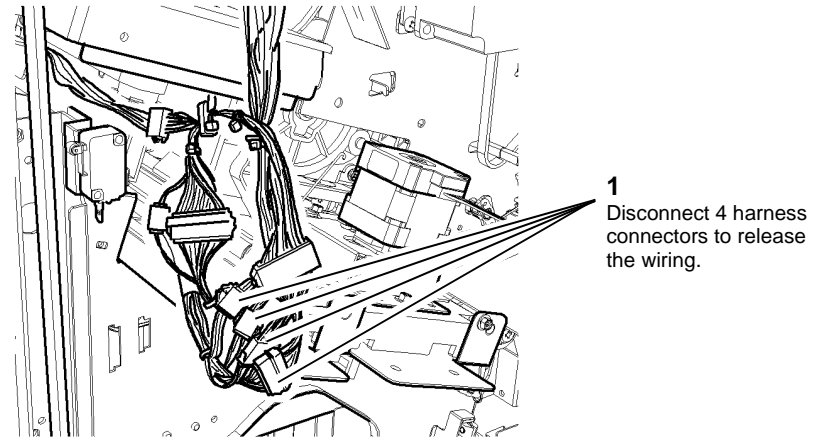


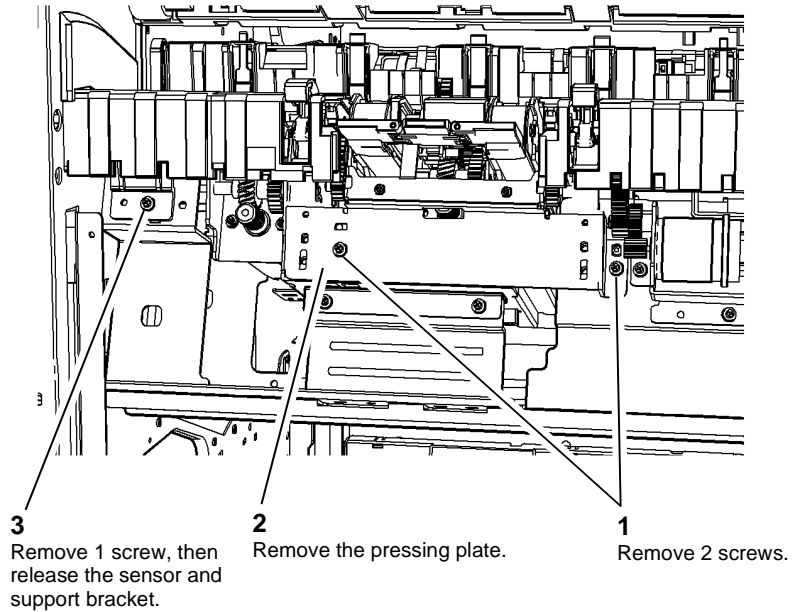
Figure 1 Harness disconnection

X-1-0417-A

Replacement

The replacement procedure is the reverse of the removal procedure.

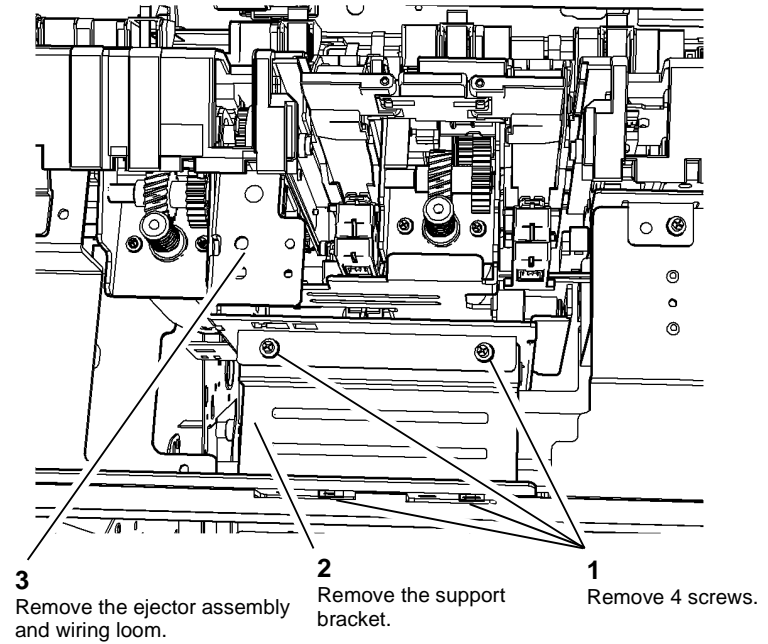
5. Remove the pressing plate and sensor support bracket. [Figure 2.](#)



X-1-0418-A

Figure 2 Pressing plate removal

6. Remove the support bracket and ejector assembly, [Figure 3.](#)

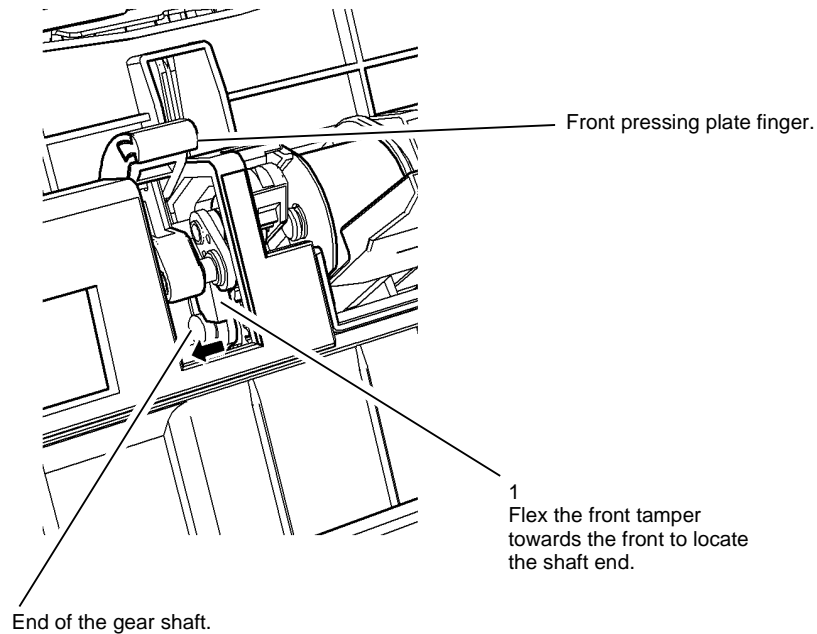


X-1-0419-A

Figure 3 Ejector assembly removal

Replacement

1. When reinstalling the eject assembly ensure that the tag on the ejector locates into the slot in the frame.
2. Ensure the front and rear support fingers are fully pushed home. See [REP 12.8-171](#).
3. When refitting the pressing plate, the shaft of the front support finger drive gear must fit in the hole of the front tamper see [Figure 4](#). Install the front pressing plate finger.



X-1-0420-A

Figure 4 Pressing plate install

4. The remainder of the replacement procedure is the reverse of the removal procedure.
5. Rotate the encoder wheel on pressing and support motor, [PL 12.110 Item 9](#) to extend the support fingers enough to check that they align correctly. If necessary, perform the replacement procedure in [REP 12.8-171](#) to align the fingers.

REP 12.7-171 HVF Pressing Plate Fingers

Parts List on [PL 12.110](#).

Removal

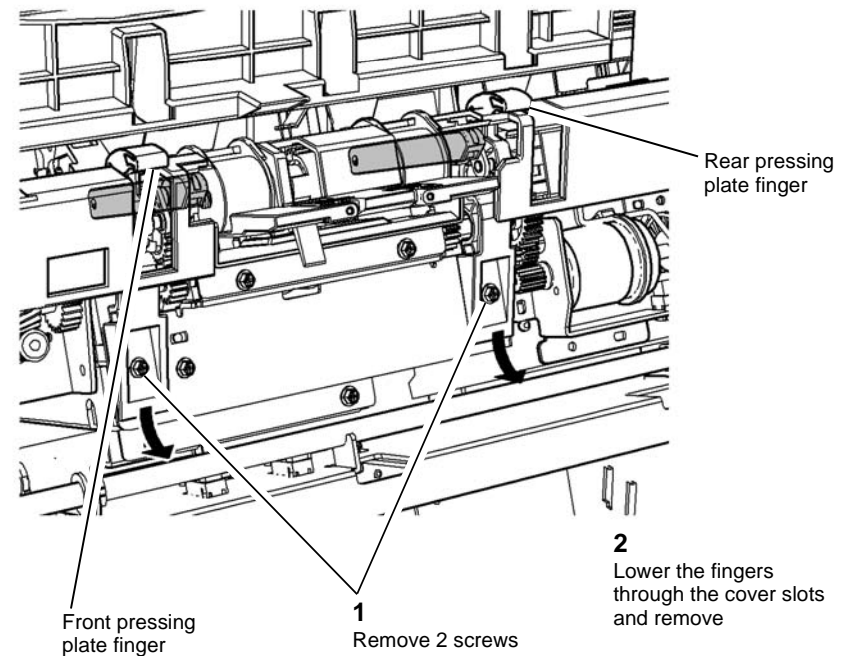


Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the upper right side cover [REP 12.5-171](#).
2. Remove the pressing plate fingers, [Figure 1](#).



X-1-0421-A

Figure 1 Pressing Plate Fingers

Replacement

Reverse the removal procedures to replace the front and rear pressing plate fingers.

REP 12.8-171 HVF Front and Rear Support Fingers

Parts List on [PL 12.110](#).

Removal



Take care during this procedure. Sharp edges may be present that can cause injury.



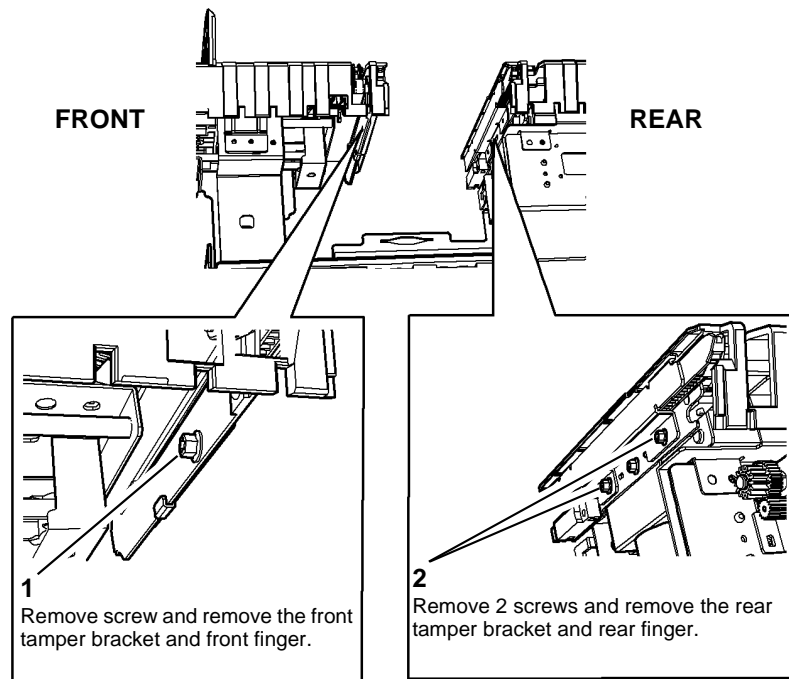
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the upper right side cover [REP 12.5-171](#).
2. Remove the HVF ejector assembly [REP 12.6-171](#).
3. Remove the ejector front and rear support finger assemblies, [Figure 1](#).

Replacement

Reverse the removal procedure to replace the front and rear support fingers, but take note of the points that follow:

1. When installing the front and rear support fingers, ensure that the pegs on the inner end of the fingers are fully inserted into the guide slots on the inboard ends of the front and rear tampers.
2. After tightening the fixing screws of the front and rear tamper brackets, ensure that the front and rear support fingers can slide freely in and out, before installing the pressing plate. Set the front and rear support fingers so that they are fully inserted in the tamper brackets.
3. When installing the pressing plate, the front of the pressing plate shaft must fit through the hole in the front tamper.
4. Rotate the encoder wheel, [Figure 2](#) to extend the support fingers enough to check that they align correctly, [Figure 2](#). If necessary, perform the steps in [Figure 2](#) to align the fingers.



X-1-0422-A

Figure 1 Support fingers removal

REP 12.9-171 HVF Paddles

Parts List on [PL 12.115](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

NOTE: This procedure shows the replacement of the paddles with the paddle unit installed. If necessary, remove the paddle unit before replacing the paddles. Refer to [REP 12.49-171](#).

1. Rotate the paddle shaft by hand until the two rubber blades are visible.



CAUTION

To ensure that the correct home position of the paddle shaft is maintained, install the new paddle wheels one at a time.



CAUTION

Ensure all defective paddles are replaced with a paddle of the same type. The two outer paddles are a different type to the three inner paddles.

2. Remove the HVF paddles, [Figure 1](#).

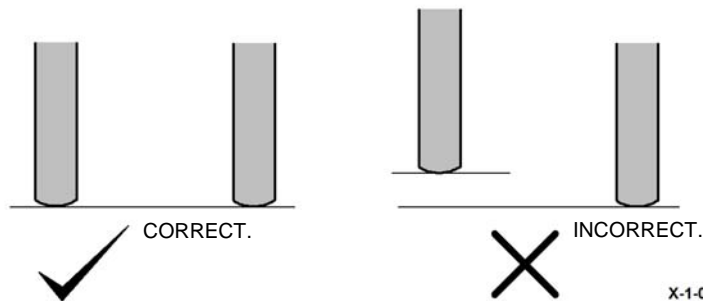
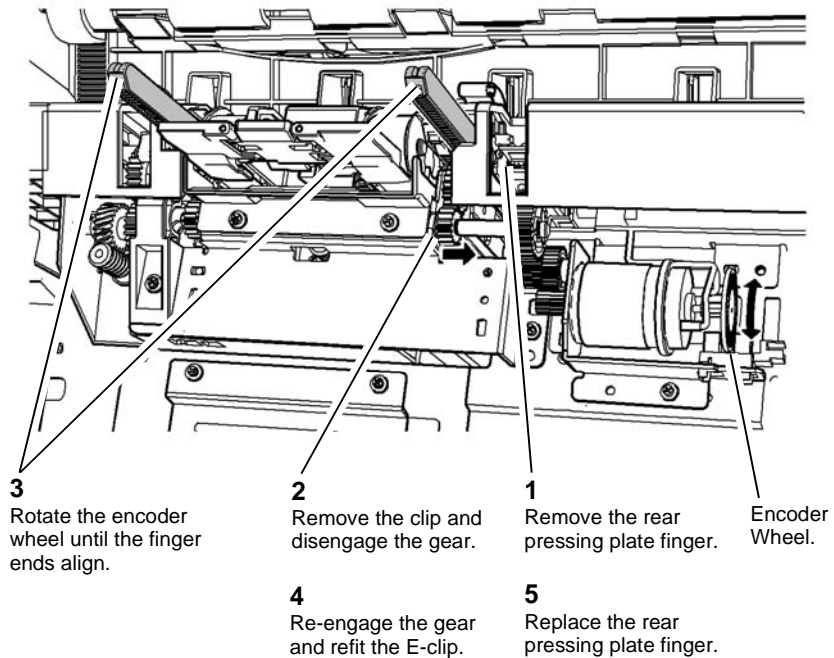


Figure 2 Support Finger End Alignment

REP 12.10-171 HVF Stacker Idler Rolls

Parts List on [PL 12.115](#).

Removal

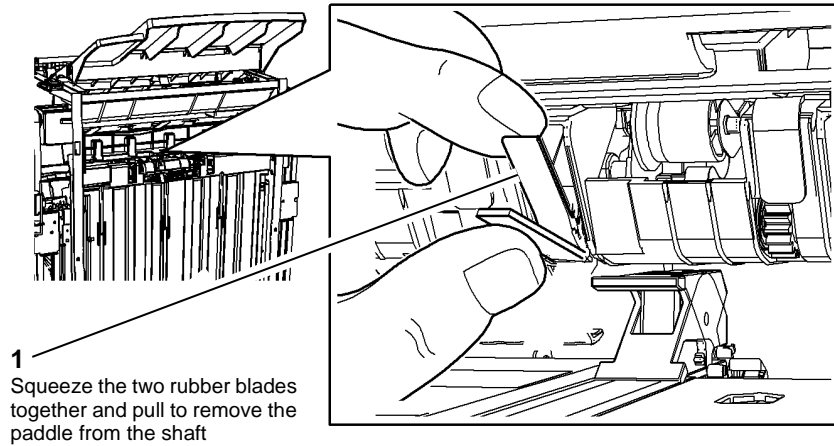


Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Lift the top tray
2. [Figure 1](#). Remove the four stacker idler rolls.

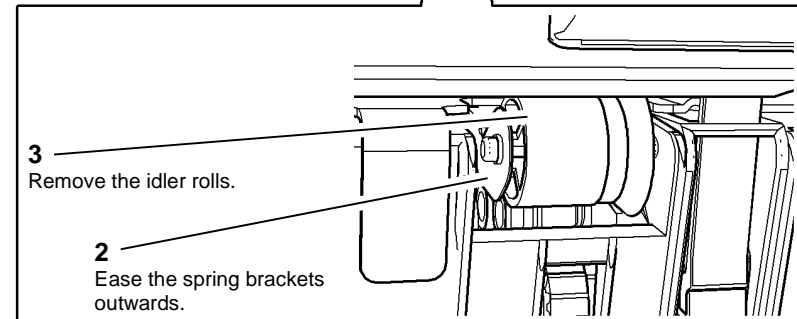
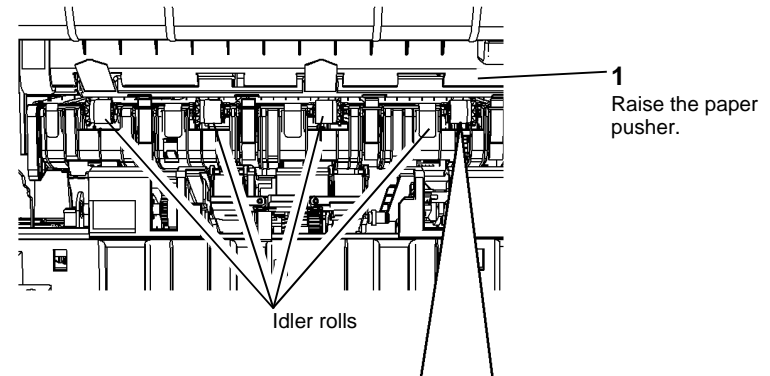


X-1-0593-A

Figure 1 Paddle removal

Replacement

1. Hold the paddle by the two rubber blades and clip onto the shaft.



X-1-0424-A

Figure 1 Paper pusher and idler rolls.

Replacement

1. [Figure 2](#). Ensure the sprung brackets are parallel and re-install the idler rolls in the sprung brackets.

NOTE: To ease the installation of the idler roll, push the spring bracket downwards from the top. This will provide clearance from the drive roll above.



Figure 2 Correct spring bracket position.

X-1-0425-A

2. Check that the rolls are held securely.

REP 12.11-171 HVF Front Tamper Motor Assembly and Front Tamper Assembly

Parts List on [PL 12.125](#).

Removal

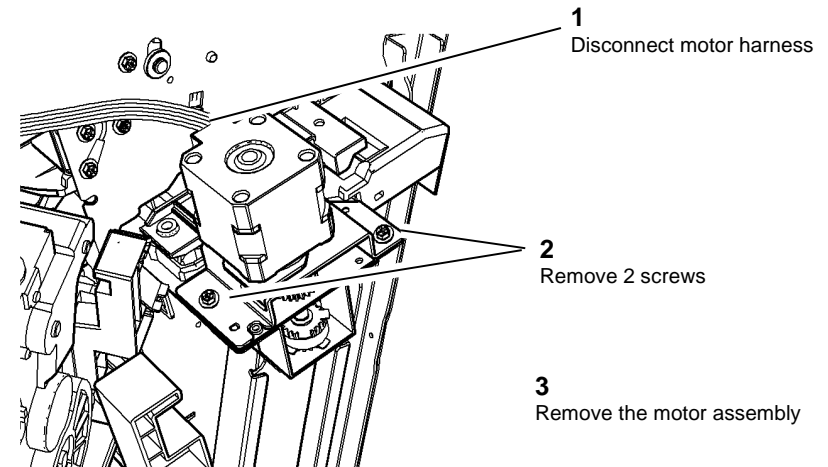

WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the front door and front cover [REP 12.1-171](#).
2. Remove the HVF ejector assembly, [REP 12.6-171](#).
3. Remove the tamper motor assembly, [Figure 1](#).

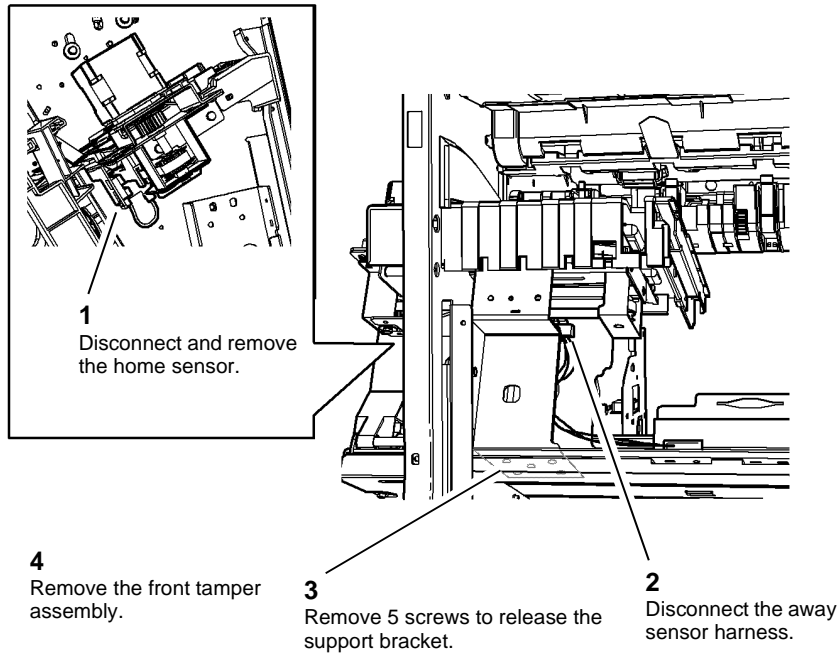


X-1-0426-A

Figure 1 Tamper motor removal

4. Remove the front tamper assembly, [Figure 2](#).

NOTE: The front tamper home sensor is removed to prevent the sensor from being damaged when the front tamper assembly is removed.



X-1-0427-A

Figure 2 Front tamper assembly

Replacement

Reverse the removal procedures to reinstall the front tamper assembly and the front tamper motor assembly.

REP 12.12-171 HVF Bin 1 Elevator Motor Assembly

Parts List on [PL 12.105](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

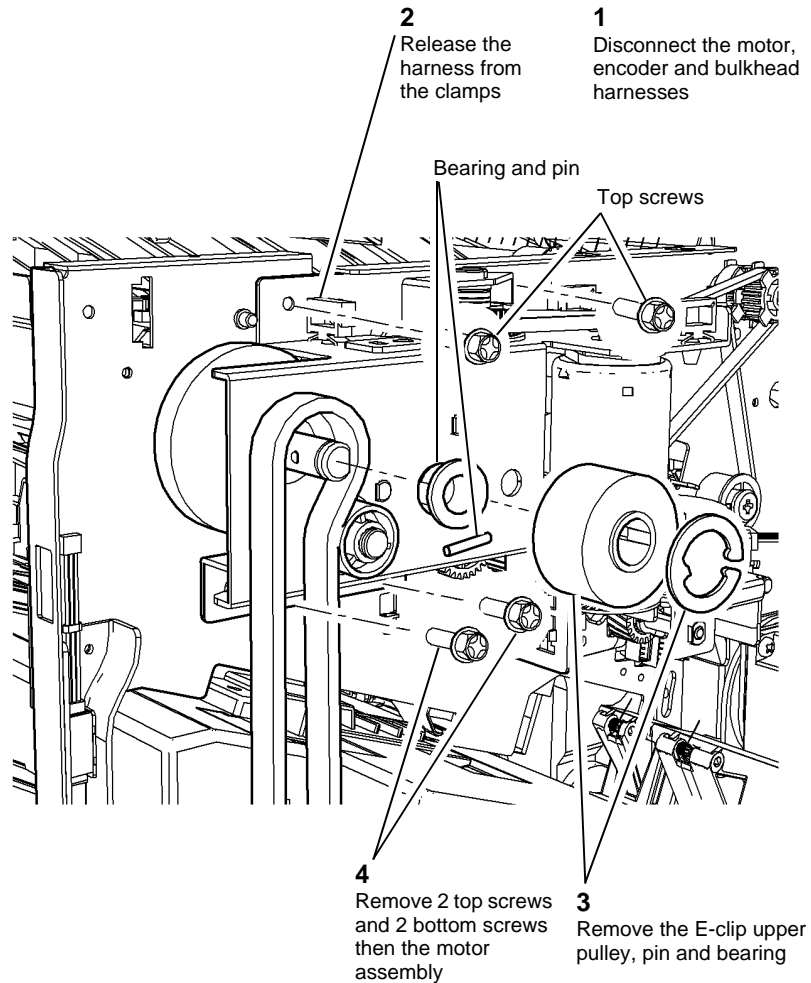


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the front and rear covers [REP 12.1-171](#).
2. Remove the rear bin 1 main drive belt lower pulley to relieve the belt tension.
3. Remove the bin 1 elevator motor assembly [Figure 1](#).

NOTE: The pulley pin may fall when the pulley is removed.



X-1-0428-A

Figure 1 Motor assembly removal

Replacement

Reverse the removal procedures to reinstall the bin 1 motor elevator motor assembly.

NOTE: Check that the 'flats' on the shaft bearing align with the cut-outs in the bracket.

Check that the Bin 1 lift bar is level before refitting the stacker belt lower pulley.

REP 12.13-171 HVF/HVF BM Un-docking

Removal

!
WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

!
WARNING

Switch off the electricity to the machine. Refer to **GP 14**. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

!
CAUTION

Do not show the customer how to un-dock the HVF/HVF BM.

1. Open the front door.
2. **Figure 1**, un-dock the HVF/HVF BM.

REP 12.14-171 HVF Upper Exit Guide (5c)

Parts List on [PL 12.125](#).

Removal



Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the HVF front door, [REP 12.1-171](#).
2. Remove the HVF top cover, [REP 12.1-171](#).
3. Remove the HVF front cover, [REP 12.1-171](#).
4. Remove the HVF rear cover, [REP 12.1-171](#).
5. [Figure 1](#). Remove the outboard pivot screw.

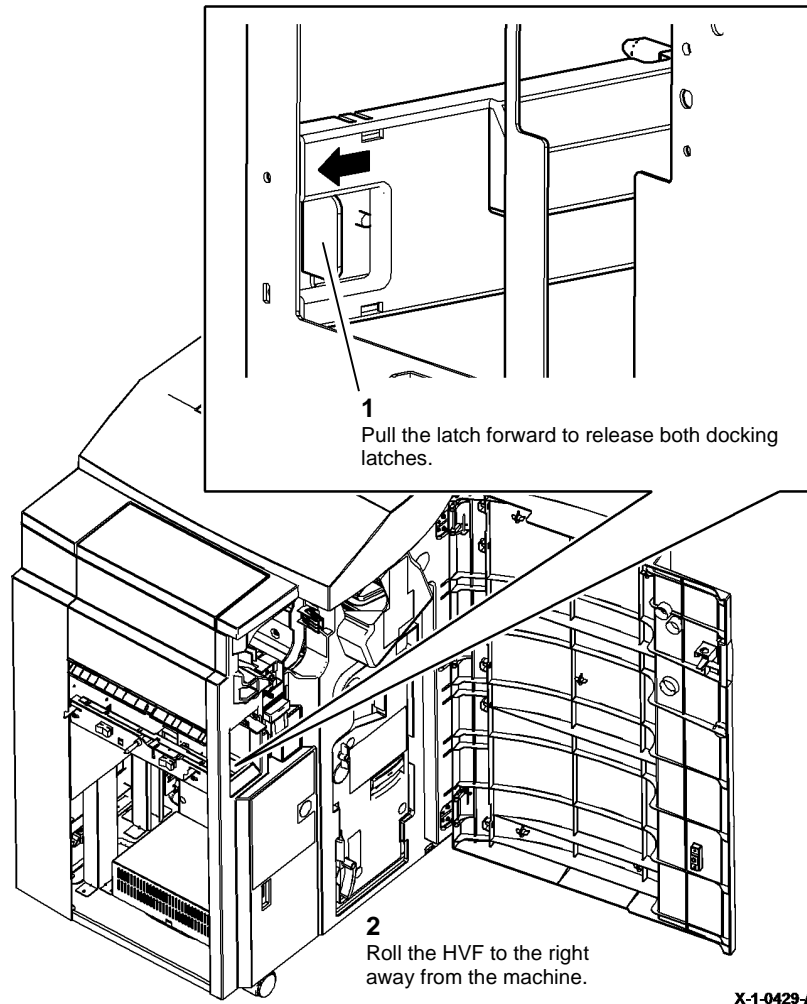


Figure 1 Docking latch release

NOTE: Where fitted, the tri-folder may remain docked to, and moved with, the HVF.

3. Disconnect the harnesses between the machine and the HVF/HVF BM if necessary.

Replacement

Reverse the removal procedure to dock the HVF/HVF BM.

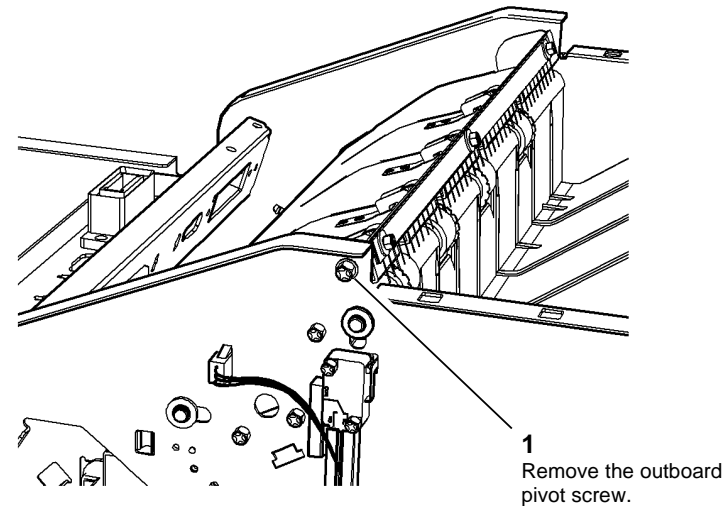
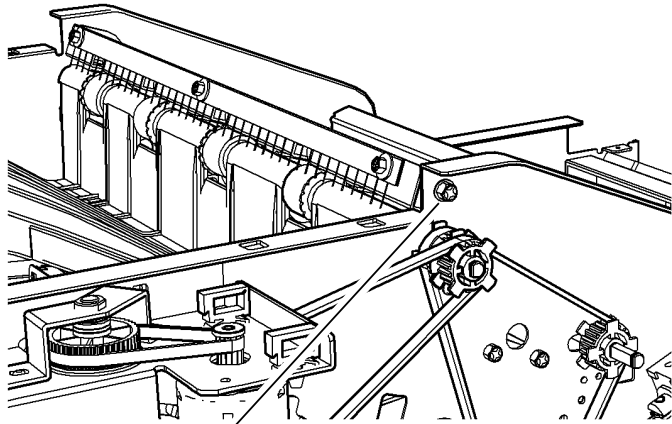


Figure 1 Outboard pivot screw.

6. **Figure 2.** Remove the inboard pivot screw.



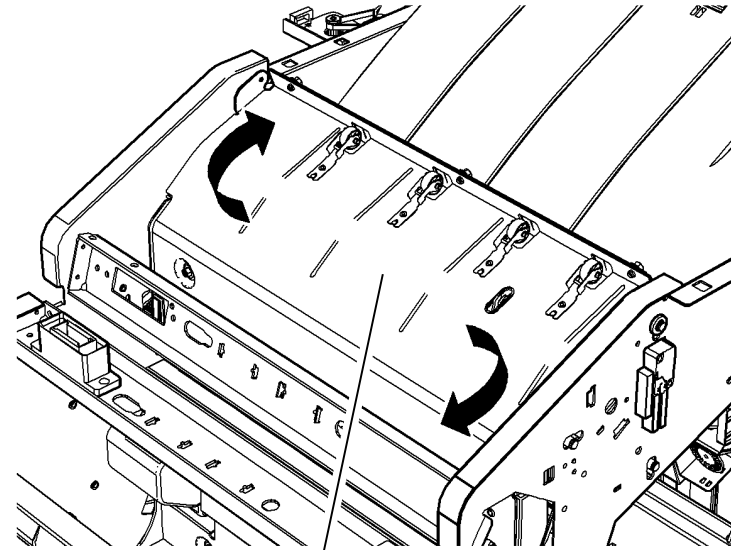
1
Remove the inboard
pivot screw.

REAR VIEW

Figure 2 Inboard pivot screw.

X-1-0431-A

7. **Figure 3.** Remove the upper exit guide.



1
Twist the upper exit guide
and lift upwards.

Figure 3 Upper exit guide removal.

X-1-0432-A

Replacement

The replacement procedure is the reverse of the removal procedure.

REP 12.15-171 HVF Rear Tamper Assembly

Parts List on [PL 12.110](#).

Removal



WARNING

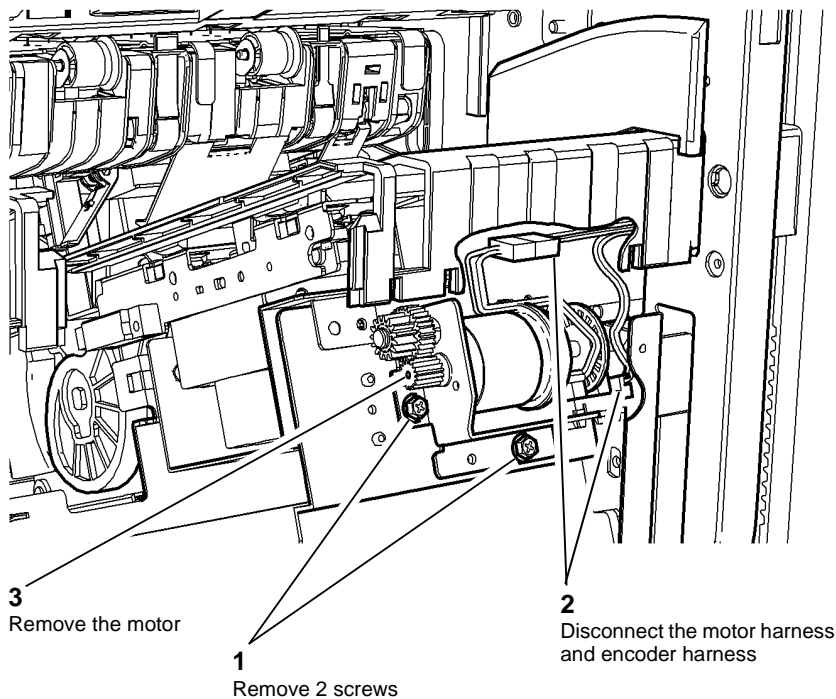
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the rear cover [REP 12.1-171](#).
2. Remove the upper right side cover [REP 12.5-171](#).
3. Remove the ejector assembly [REP 12.6-171](#).
4. Remove the front tamper assembly, [REP 12.11-171](#).
5. Remove the pressing and support motor, [Figure 1](#).



3
Remove the motor

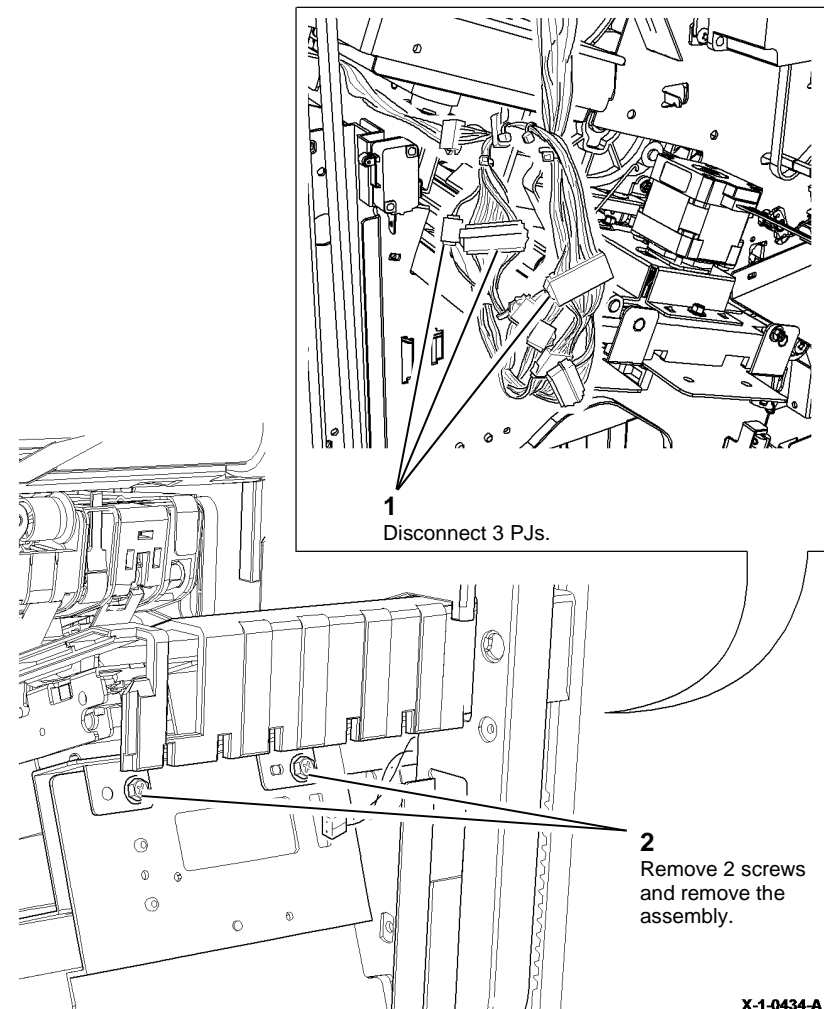
1
Remove 2 screws

2
Disconnect the motor harness
and encoder harness

X-1-0433-A

Figure 1 Motor removal

6. Remove the rear tamper assembly, [Figure 2](#).



1
Disconnect 3 PJs.

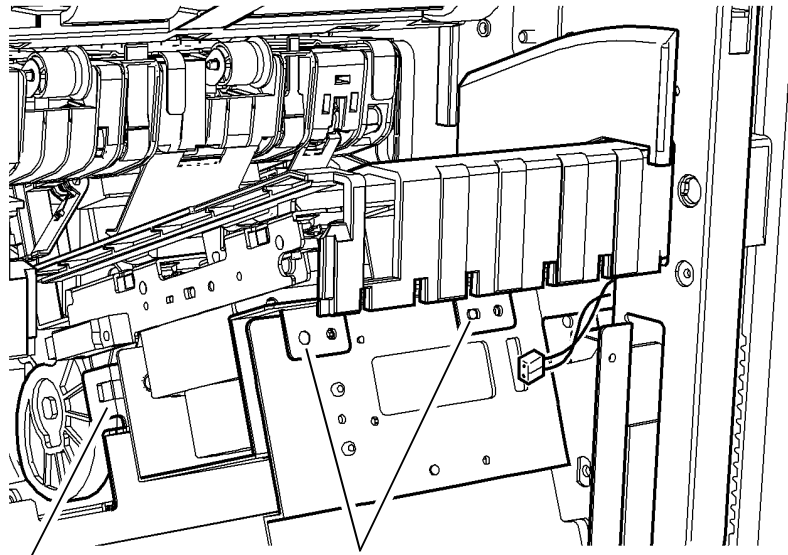
2
Remove 2 screws
and remove the
assembly.

X-1-0434-A

Figure 2 Rear tamper removal

Replacement

1. Reverse the removal procedures to reinstall the rear tamper assembly.
2. Ensure that the rear tamper assembly is located correctly, [Figure 3](#).



1
Ensure that the rear support pins are located correctly on the frame bracket.

2
Ensure that the fixing brackets are located on the tabs at the front.

X-1-0435-A

Figure 3 Rear tamper location

REP 12.16-171 BM Flapper

Parts List on [PL 12.150](#).

Removal

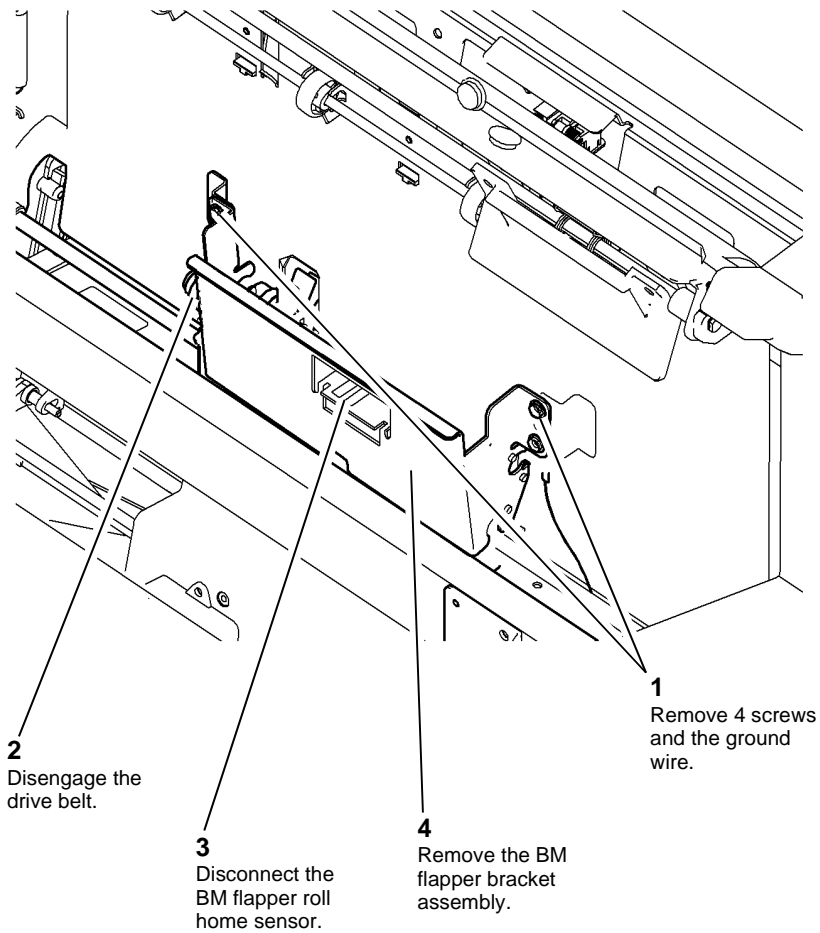

WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.


WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the HVF BM front door and fully pull out the BM module.
2. [Figure 1](#), remove the BM flapper bracket assembly.



2 Disengage the drive belt.

3 Disconnect the BM flapper roll home sensor.

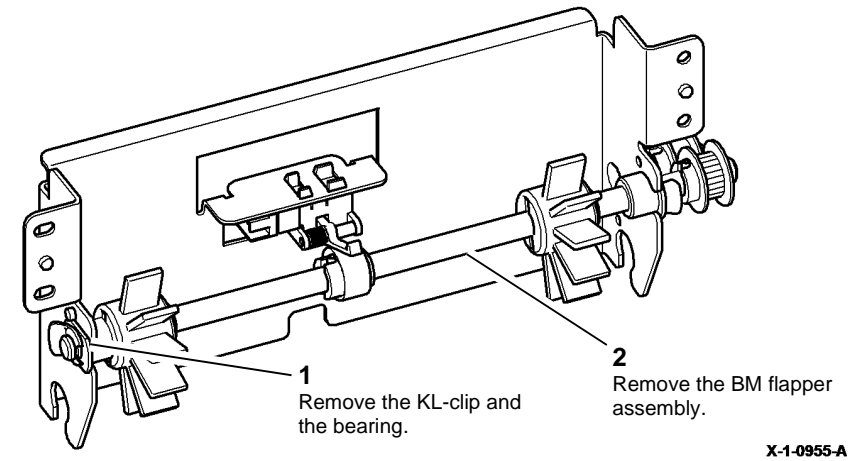
4 Remove the BM flapper bracket assembly.

1 Remove 4 screws and the ground wire.

X-1-0436-A

Figure 1 BM flapper bracket removal

3. Figure 2, remove the BM flapper assembly.



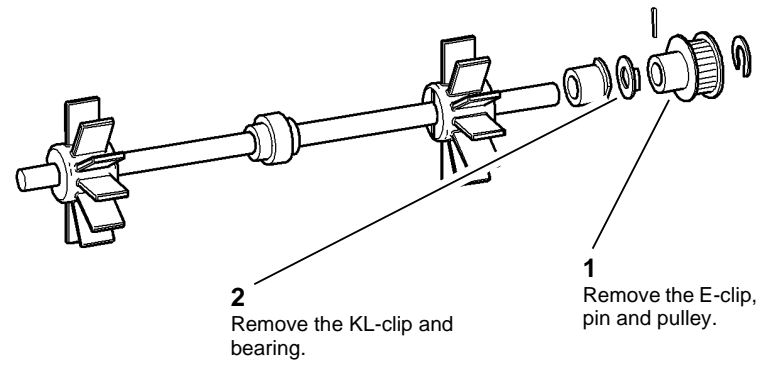
1 Remove the KL-clip and the bearing.

2 Remove the BM flapper assembly.

X-1-0955-A

Figure 2 BM flapper assembly removal

4. Figure 3, remove the BM flapper.



2 Remove the KL-clip and bearing.

1 Remove the E-clip, pin and pulley.

X-1-0956-A

Figure 3 BM flapper removal

Replacement

The replacement is the reverse of the removal procedure.

REP 12.17-171 BM PWB

Parts List on [PL 12.175](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol

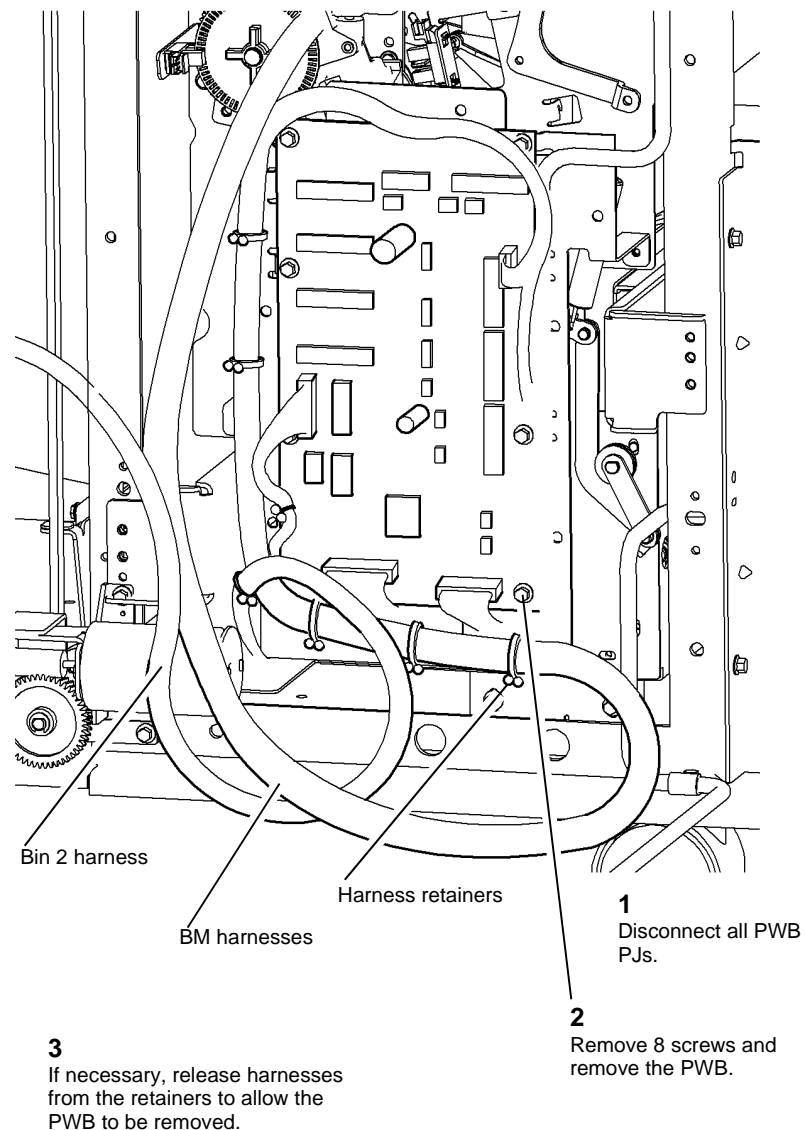


CAUTION

Ensure that ESD procedures are observed during the removal and installation of the BM PWB.

1. Remove the top cover, then the rear cover, [REP 12.1-171](#).

2. [Figure 2](#), remove the BM PWB.



X-1-0439-A

Figure 2 BM PWB removal

Replacement



CAUTION

Figure 2, ensure the BM harness and bin 2 harness are correctly positioned in the retainers to prevent damaged when the BM is moved to the extremities of its travel.

1. Reverse the removal procedures to replace the BM PWB.
2. The booklet maker PWB is supplied with a label with the customized NVM values for the new BM PWB. Enter the values into the machine dC131 NVM Read/Write at Finisher/DFA Location 12.

Check and perform the adjustments that follow:

- ADJ 12.5-171 Booklet Tamping
- ADJ 12.6-171 Booklet Compiling Position.
- ADJ 12.7-171 Booklet Crease Position
- ADJ 12.8-171 Booklet Staple Position

REP 12.18-171 BM Crease Blade Motor Assembly

Parts List on [PL 12.170](#).

Purpose

This procedure is used to repair the following components:

- BM crease blade motor encoder sensor, [PL 12.170 Item 1](#).
- BM crease blade motor assembly, [PL 12.170 Item 3](#).
- Motor encoder, [PL 12.170 Item 4](#).
- Bearing, [PL 12.120 Item 7](#).
- Crank, [PL 12.170 Item 8](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

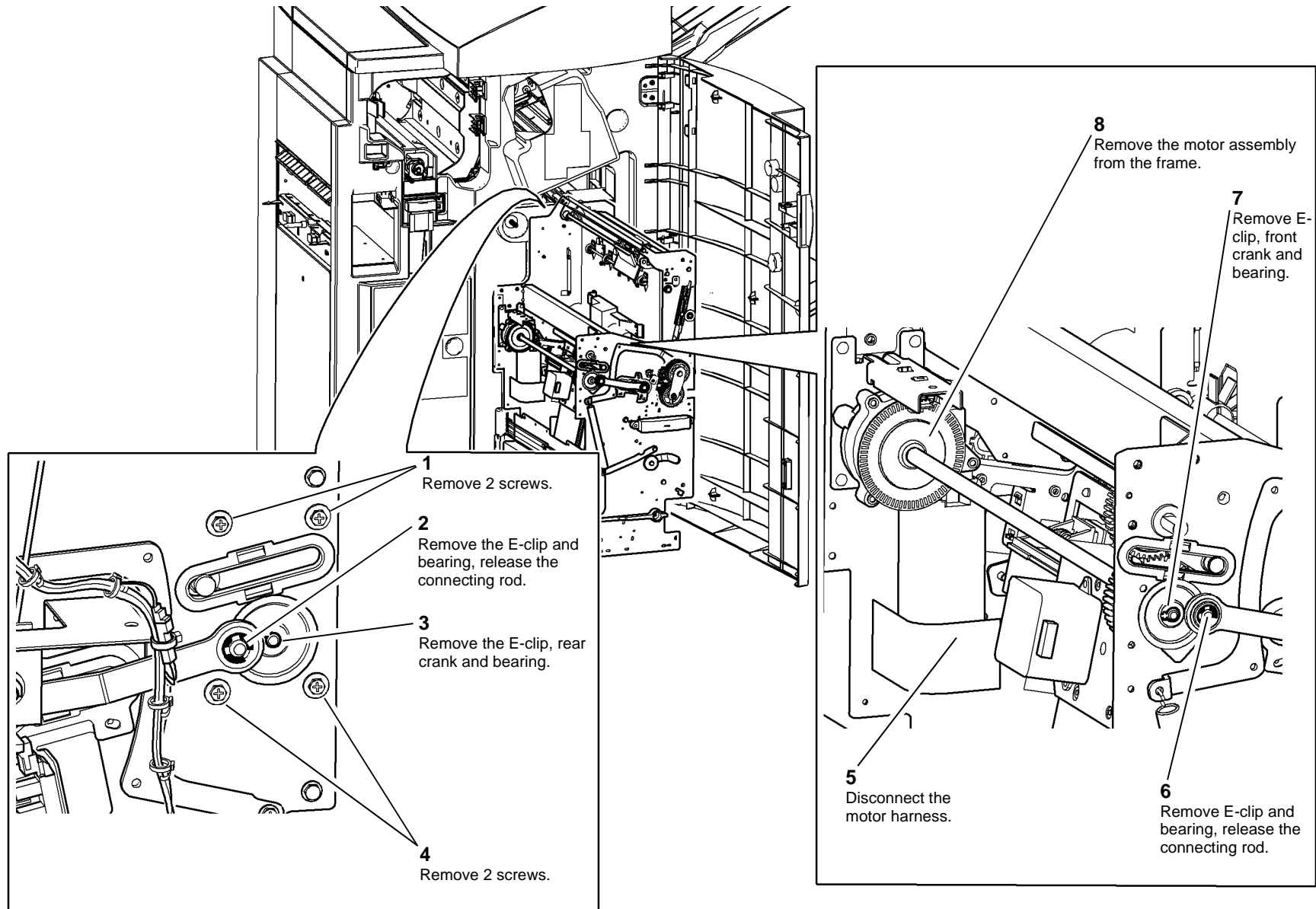


WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the HVF BM front door and fully pull out the BM module.
2. Remove the crease blade knob (6d), [PL 12.150 Item 4](#).
3. Remove the crease roll handle (6c), [PL 12.150 Item 5](#).
4. Remove the BM front cover, [PL 12.150 Item 3](#).
5. Remove the left frame plate, [PL 12.155 Item 2](#).
6. Remove the motor cover, [PL 12.170 Item 11](#). It is easier to remove the screw using an open ended spanner, this means the removal of the BM PWB is not necessary.

7. Figure 1, remove the BM crease blade motor assembly.



X-1-0440-A

Figure 1 Removing the motor assembly

8. [Figure 2](#), remove the BM crease blade motor.

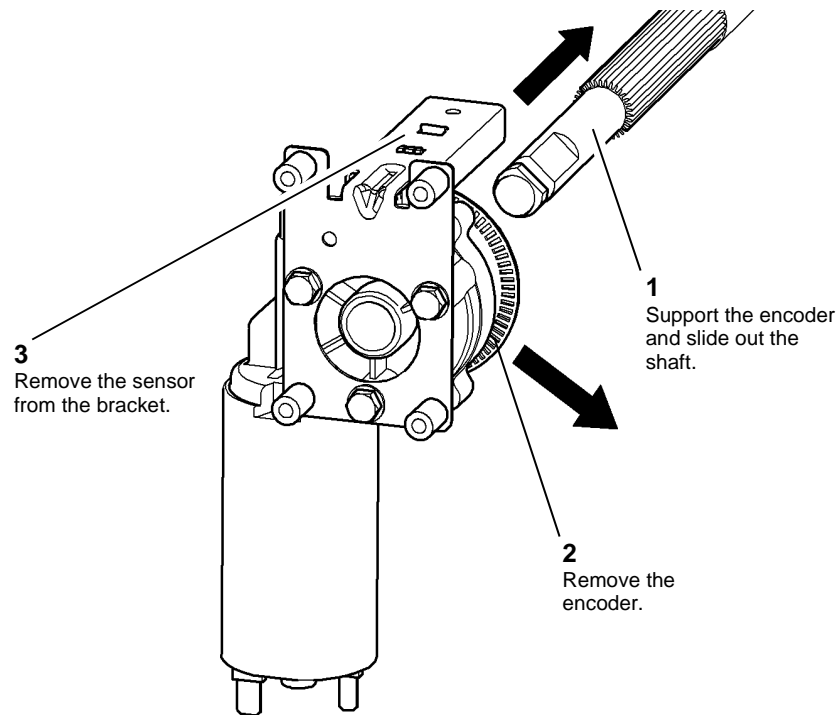


Figure 2 Removing the motor

X-1-0441-A

Replacement

Reverse the removal procedure to replace the BM crease blade motor assembly.

NOTE: Ensure that the mark on the crease blade knob aligns with the arrow on the front infill cover when the crease blade is fully withdrawn.

3. Remove the crease roll motor assembly, [Figure 1](#).

REP 12.19-171 BM Crease Roll Motor

Parts List on [PL 12.175](#).

Removal



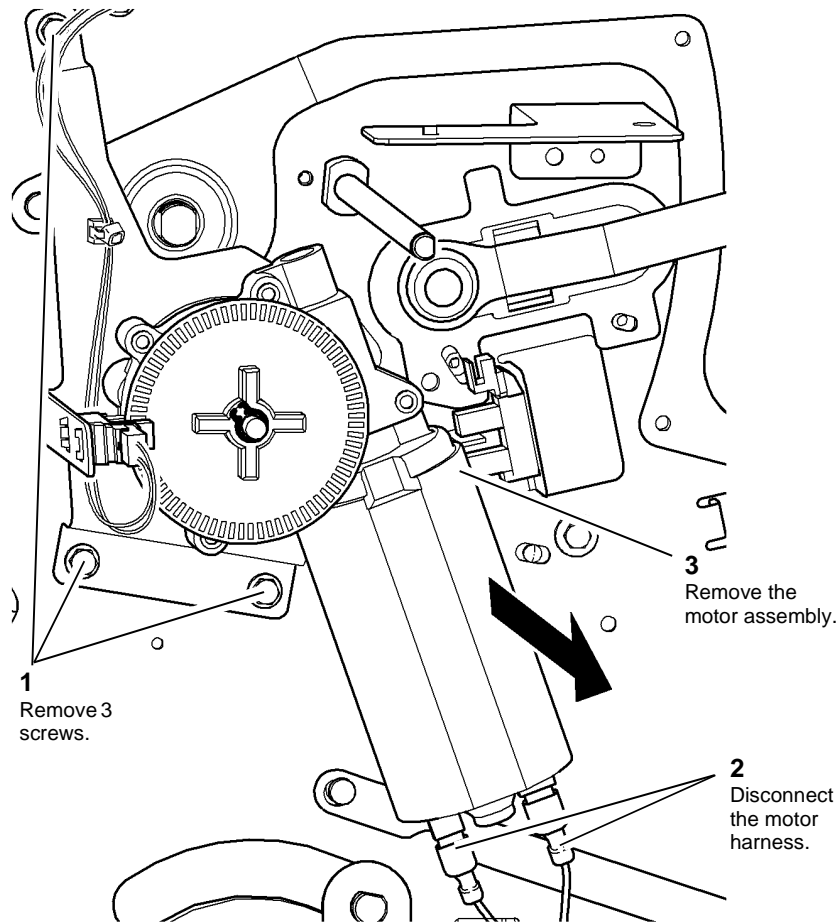
Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the top cover, then the rear cover, [REP 12.1-171](#).
2. Remove 4 screws securing the BM PWB mounting plate to the frame, allow the PWB and mounting plate to hang down, giving access to the BM crease roll motor.

NOTE: As necessary, cut any tie wraps securing the crease roll motor harness.



1 Remove 3 screws.

2 Disconnect the motor harness.

3 Remove the motor assembly.

X-1-0442-A

Figure 1 Motor assembly removal

Replacement

1. Reverse the removal procedure to replace the BM crease roll motor.
2. Before installing the motor check the bearing, [Figure 2](#).

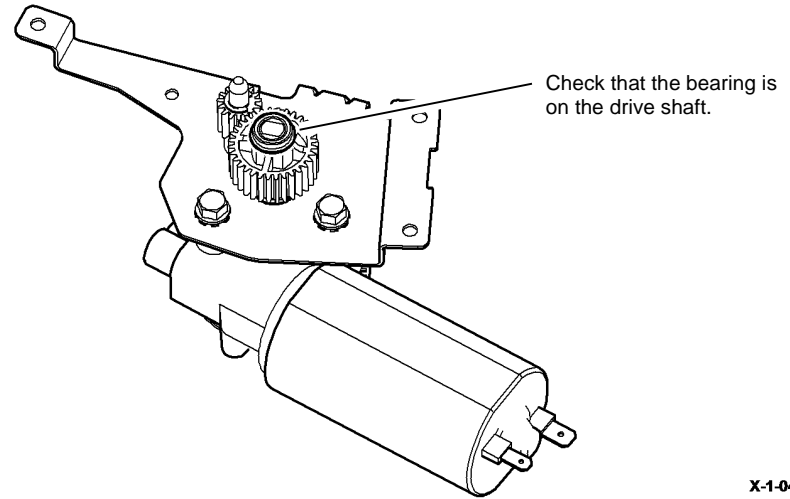


Figure 2 Location of bearing

X-1-0443-A

REP 12.20-171 BM Backstop Motor Assembly

Parts List on [PL 12.160](#).

Purpose

This procedure is used to repair the following components:

- Ground wire, [PL 12.160 Item 1](#).
- Motor damper, [PL 12.160 Item 3](#).
- BM backstop motor, [PL 12.160 Item 4](#).
- BM backstop drive belt, [PL 12.160 Item 7](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the HVF BM front door and fully pull out the BM module.
2. [Figure 1](#), remove the BM backstop motor.

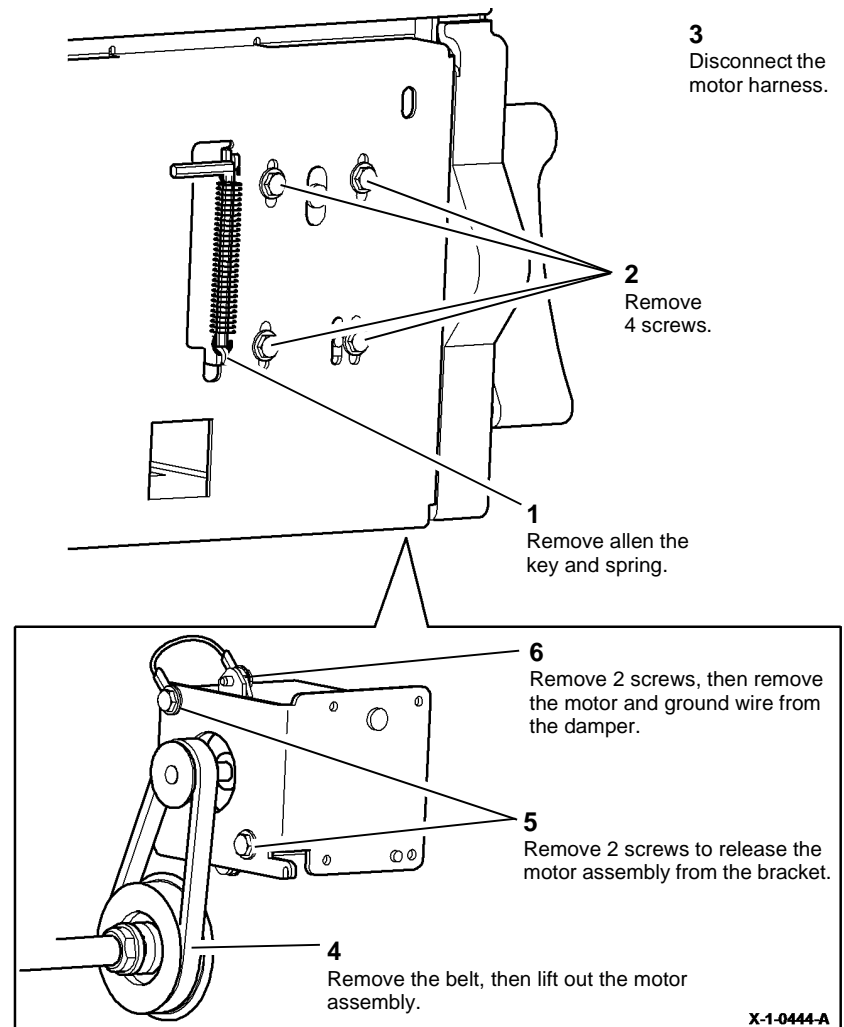


Figure 1 Motor removal

Replacement

Reverse the removal procedure to replace the BM backstop motor.

NOTE: Allow the spring to tension the drive belt while the screws are still loose, then tighten the 4 screws.

REP 12.21-171 BM Backstop Assembly

Parts List on [PL 12.165](#).

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the booklet maker, [REP 12.61-171](#).
2. Rotate the crease roll handle (6c), fully counter clockwise.
3. Remove the crease roll handle (6c), [PL 12.150 Item 5](#).
4. Remove the crease blade knob (6d), [PL 12.150 Item 4](#).
5. Remove the BM front cover, [PL 12.150 Item 3](#).



The BM harnesses and the backstop assembly harnesses are connected with a catch. Ensure the catch is released when disconnecting the solenoid harnesses.

6. Remove the two harness clamps, [Figure 1](#).

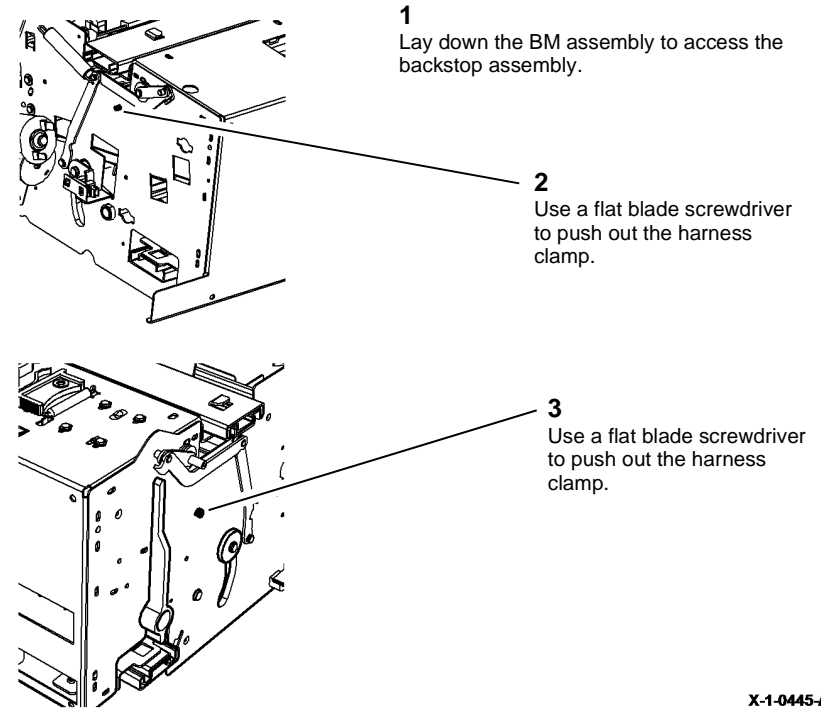


Figure 1 Harness clamps removal

- Remove the belt clamp, [Figure 2](#).

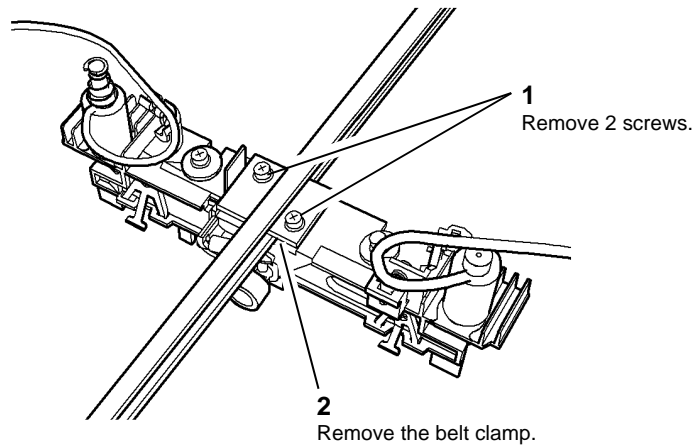


Figure 2 Belt clamp removal

X-1-0446-A

- Remove the shaft from the BM backstop assembly, [Figure 4](#).

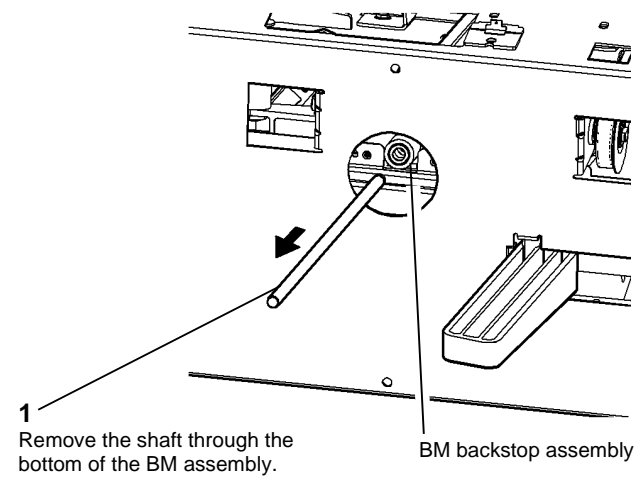


Figure 4 Remove the shaft

X-1-0448-A

- Use the allen key, [PL 12.160 Item 9](#) to remove the 2 screws and remove shaft support, [PL 12.165 Item 10](#).
- Prepare to remove the shaft from the frame, [Figure 3](#).

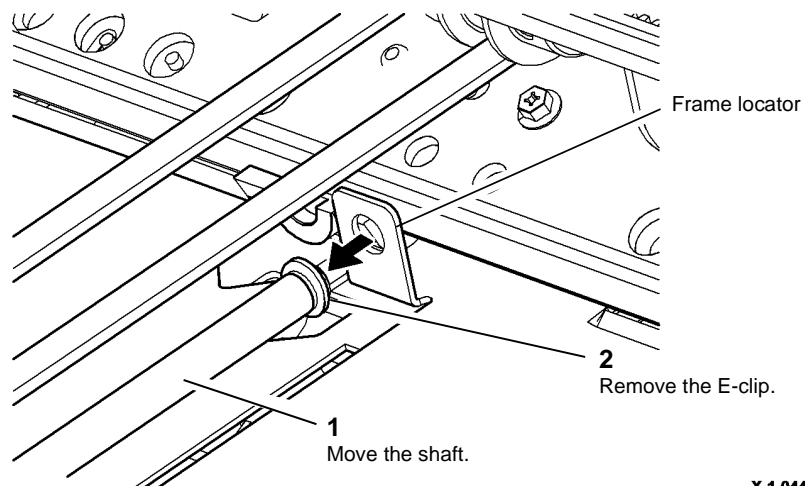


Figure 3 Preparation

X-1-0447-A

- Remove the BM backstop assembly, [Figure 5](#).

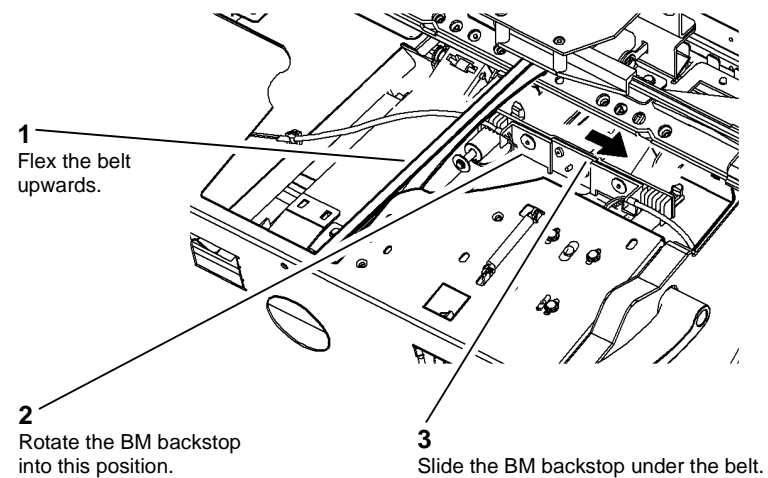


Figure 5 Backstop assembly removal

X-1-0449-A

- Move the backstop assembly to the bottom of the BM assembly.

Replacement

1. Reverse the removal procedure to replace the backstop assembly.
2. When installing the shaft ensure that the anti-play shoe has not moved out of position, [Figure 6](#).

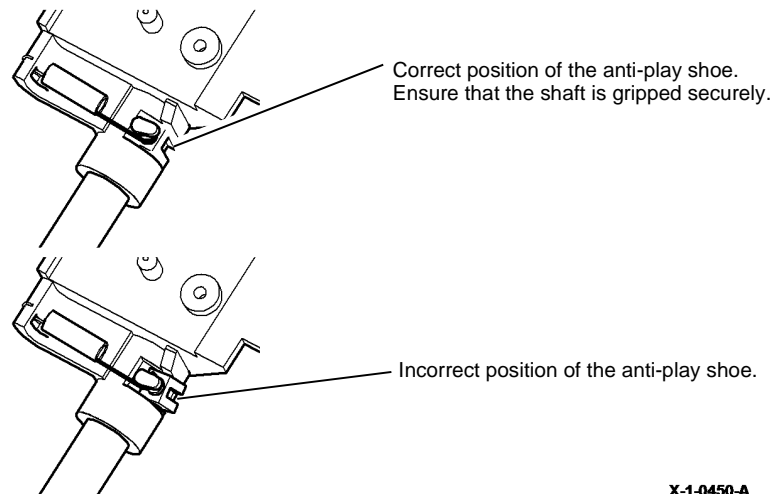


Figure 6 Anti-play shoe location

3. Ensure that all of the cable ties are installed and that the harnesses are in the correct position.
4. Check that all of the PJ connections on the BM PWB are connected.
5. Return the allen key to the storage position inside the drive belt tensioner spring, [PL 12.160 Item 9](#).
6. Go to [ADJ 12.9-171](#) and complete the adjustments.

REP 12.22-171 BM Entry Roll

Parts List on [PL 12.150](#).

Purpose

This procedure is used to repair the following components:

- BM entry roll pulley, [PL 12.150 Item 14](#).
- BM entry roll, [PL 12.150 Item 15](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the HVF BM front door and fully pull out the BM module.
2. Remove the crease blade knob (6d), [PL 12.150 Item 4](#).
3. Remove the crease roll handle (6c), [PL 12.150 Item 5](#).
4. Remove the BM front cover, [PL 12.150 Item 3](#).

5. Figure 1, remove the BM Entry Roll.

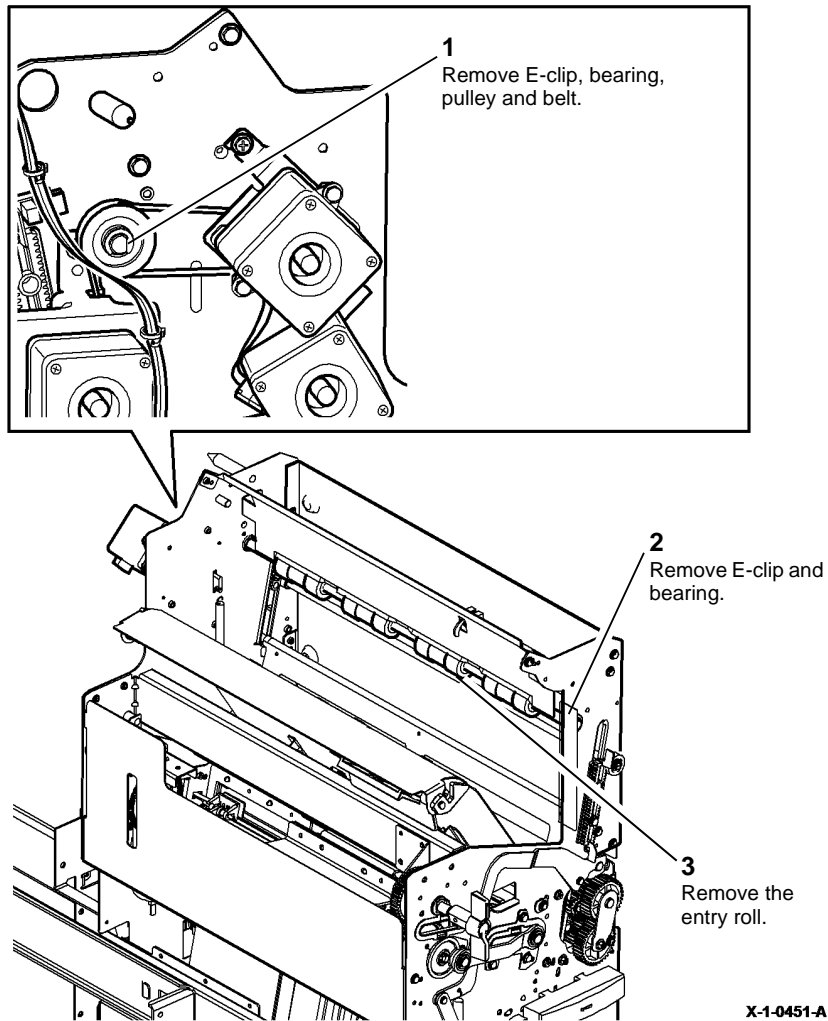


Figure 1 BM entry roll removal

Replacement

Reverse the removal procedure to replace the BM entry roll.

NOTE: Tension the drive belt, [ADJ 12.10-171](#)

REP 12.23-171 BM Entry Sensor

Parts List on [PL 12.150](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the HVF BM front door and fully pull out the BM module.
2. Remove the crease blade knob (6d), [PL 12.150 Item 4](#).
3. Remove the crease roll handle (6c), [PL 12.150 Item 5](#).
4. Remove the BM front cover, [PL 12.150 Item 3](#).

5. Figure 1, remove the BM entry sensor.

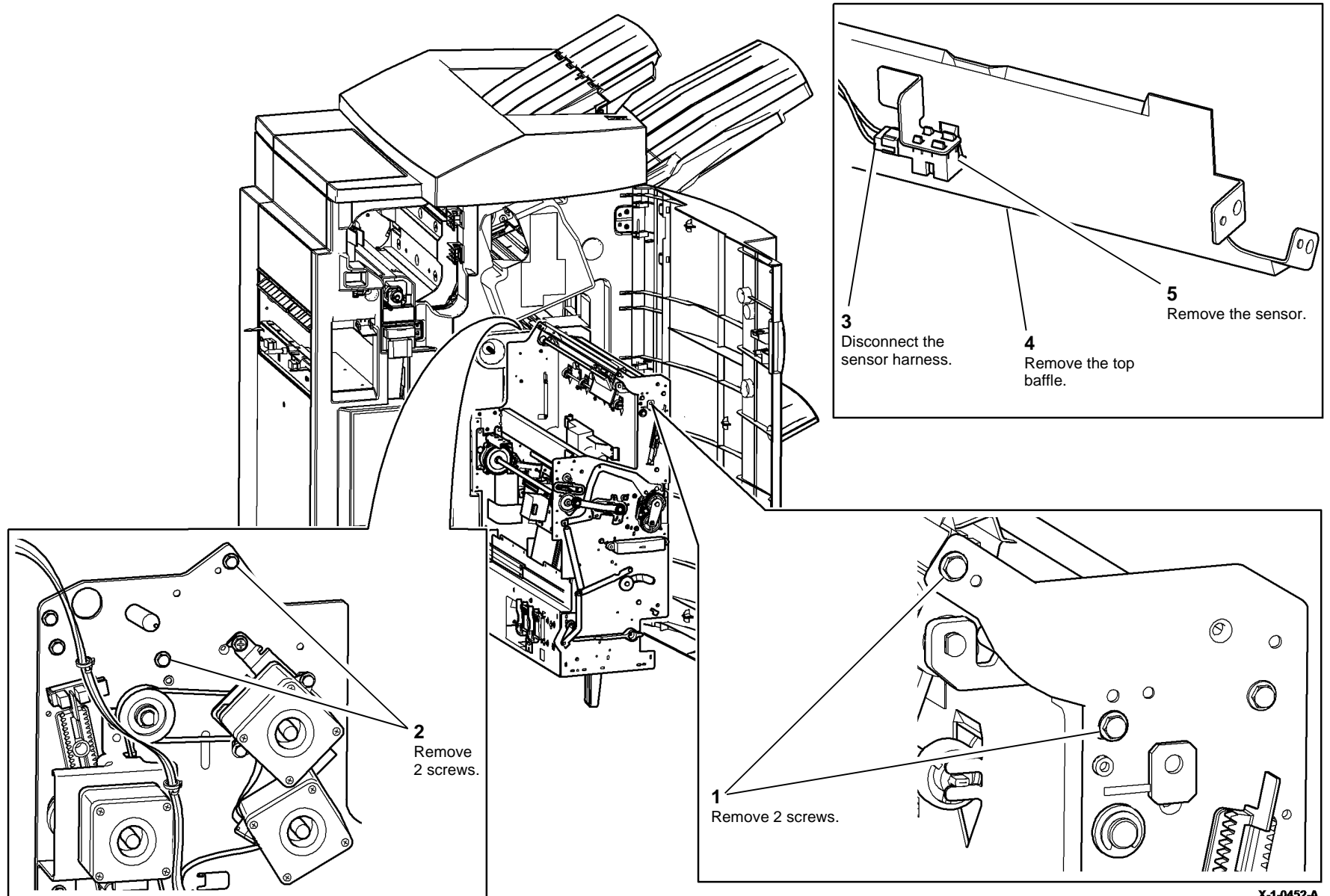


Figure 1 Sensor removal

X-1-0452-A

Replacement

Reverse the removal procedure to replace the BM entry sensor.

REP 12.24-171 BM Crease Roll Gate Motor

Parts List on [PL 12.175](#).

Removal



WARNING

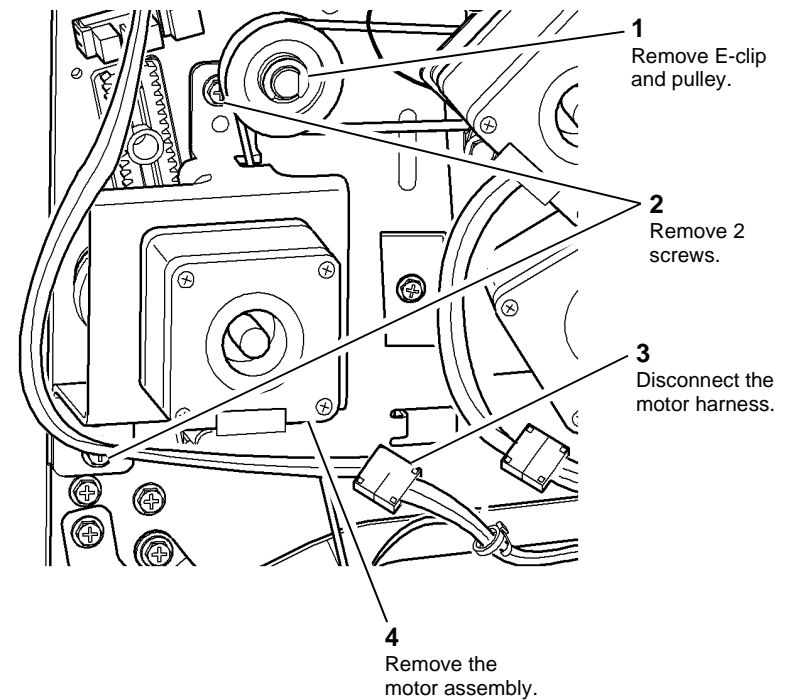
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the rear cover, [REP 12.1-171](#).
2. [Figure 1](#), remove the motor assembly



X-1-0453-A

Figure 1 Motor assembly removal

3. Remove 3 nuts to release the motor from the bracket.
- Reverse the removal procedure to replace the BM crease roll gate motor.

Replacement

REP 12.25-171 BM Compiler Motor and BM Flapper Motor

Parts List on [PL 12.175](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the rear cover, [REP 12.1-171](#).
2. [Figure 1](#), remove the motor assembly.

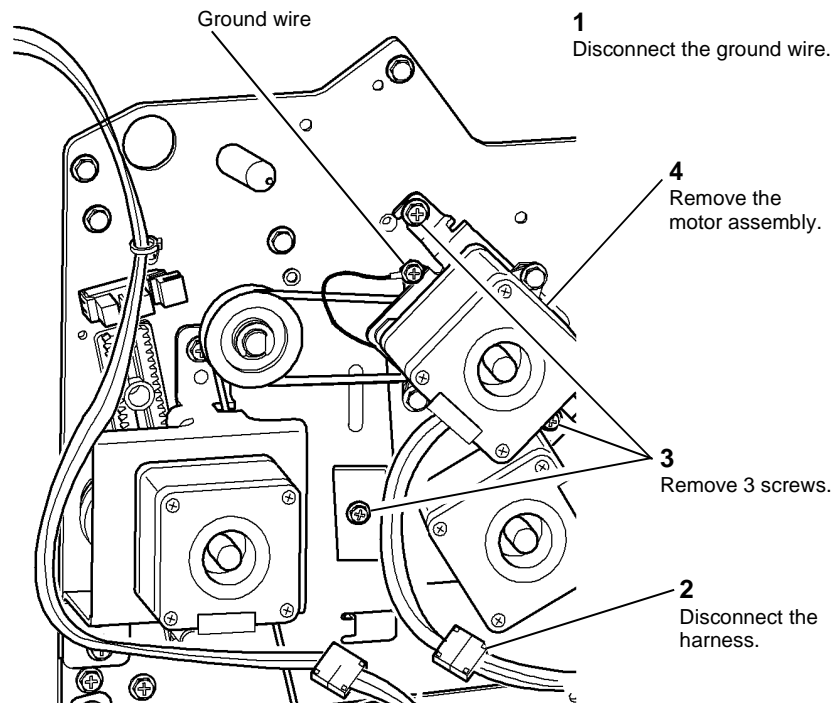


Figure 1 Motor assembly removal

3. Remove 2 screws to remove the relevant motor from the bracket.
4. Remove 2 screws to remove the motor from the damper.

Replacement

Reverse the removal procedure to replace the BM compiler motor or BM flapper motor.

REP 12.26-171 BM Back Stop Drive Assembly

Parts List on [PL 12.165](#).

Purpose

This procedure is used to repair the following components:

- BM backstop link springs, [PL 12.160 Item 15](#).
- BM backstop link, [PL 12.160 Item 16](#).
- BM backstop drive shaft, [PL 12.165 Item 14](#).
- BM backstop belt, [PL 12.160 Item 7](#).
- BM back stop bearing, [PL 12.160 Item 11](#).
- BM back stop idler bracket, [PL 12.160 Item 12](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the HVF BM front door and fully pull out the BM module.
2. Remove the crease blade knob (6d), [PL 12.150 Item 4](#).
3. Remove the crease roll handle (6c), [PL 12.150 Item 5](#).
4. Remove the BM front cover, [PL 12.150 Item 3](#).
5. Remove the LH frame plate, [PL 12.155 Item 2](#).
6. Remove the BM tamper assembly, [REP 12.30-171](#).
7. Remove the backstop motor assembly, [REP 12.20-171](#).
8. Remove the backstop assembly, [REP 12.21-171](#).
9. Remove the crease blade assembly, [REP 12.36-171](#).

10. **Figure 1**, remove the BM backstop drive shaft and bearings.

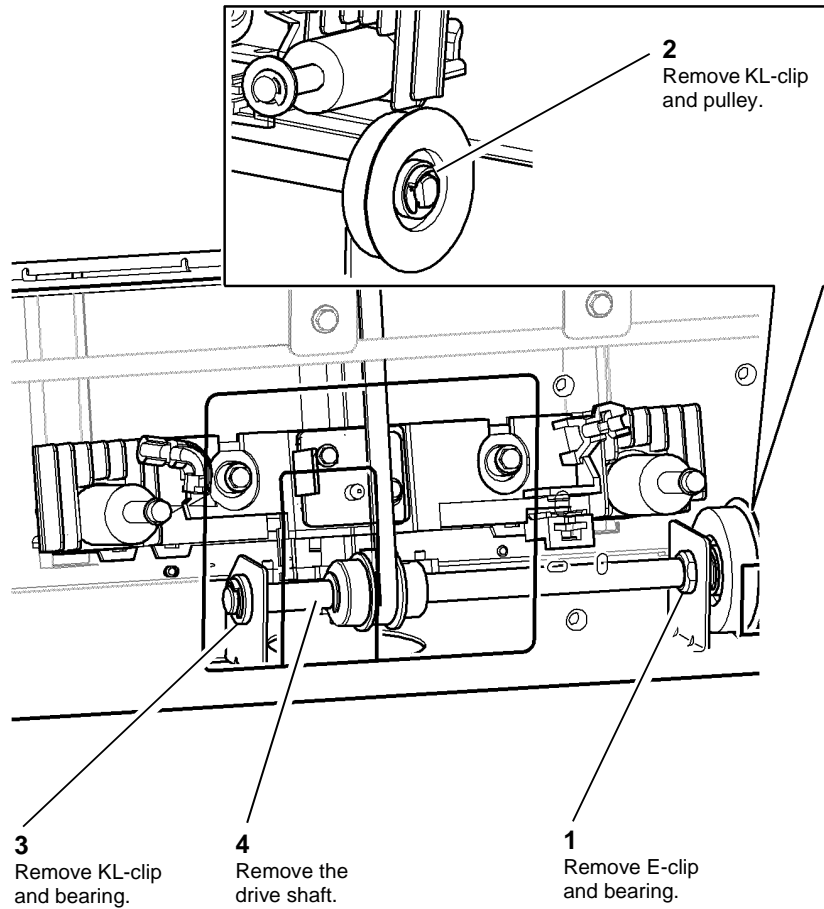


Figure 1 Drive shaft removal

X-1-0455-A

11. **Figure 2**, remove the backstop link.

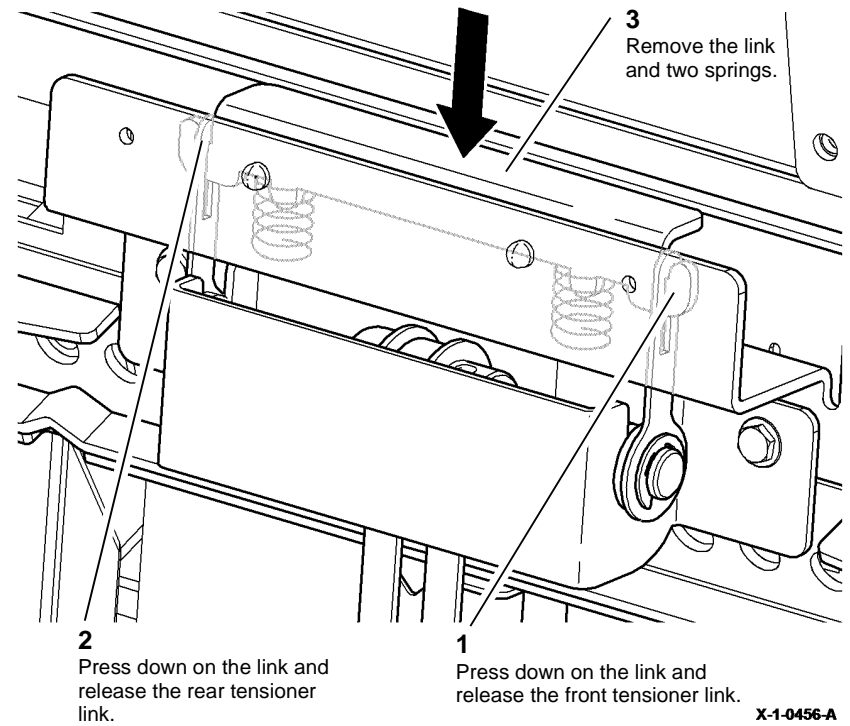
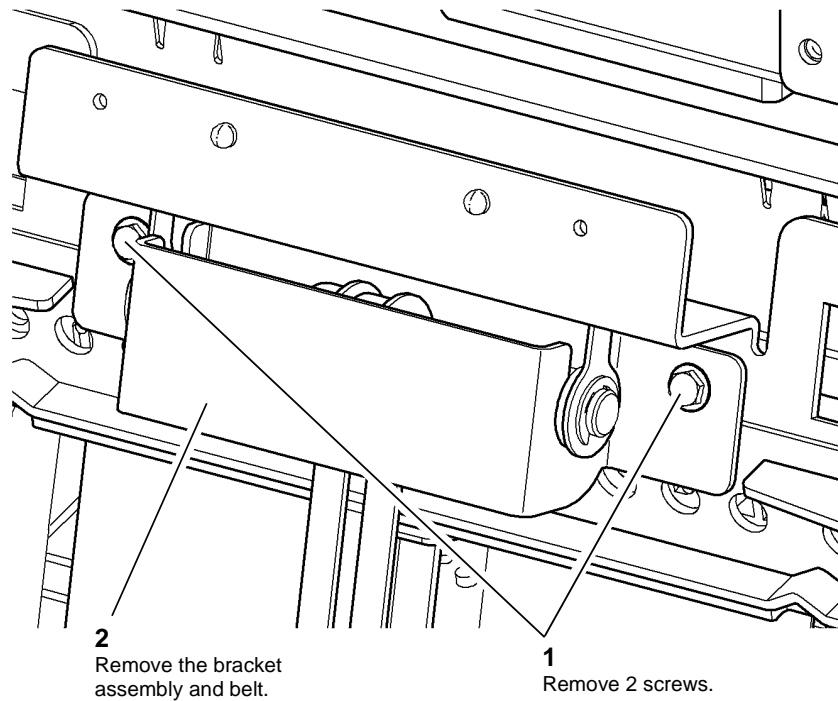


Figure 2 Backstop link removal

X-1-0456-A

12. Figure 3, remove the BM backstop idler bracket assembly.



X-1-0457-A

Figure 3 Bracket assembly removal

13. Figure 4, remove the BM backstop belt.

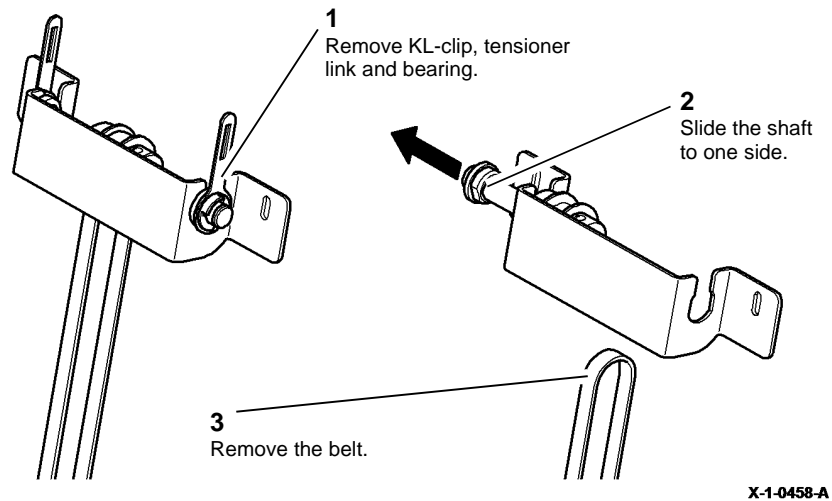


Figure 4 Backstop belt removal

Replacement

Reverse the removal procedure to replace the removed components. Allow the BM backstop belt to be tensioned correctly before the bracket assembly securing screws are tightened. Refer to Figure 3.

REP 12.27-171 BM Staple Heads

Parts List on PL 12.185.

Removal

WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

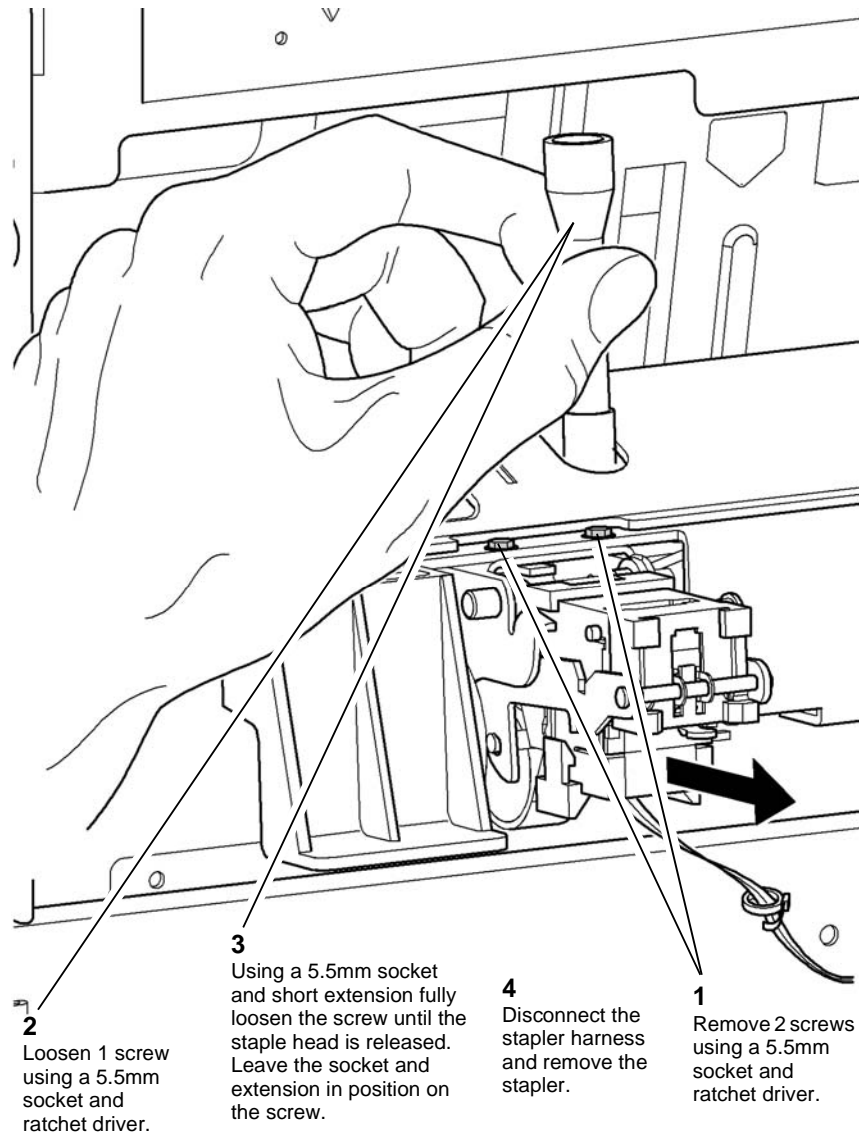
WARNING

Switch off the electricity to the machine GP 14. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Fully pull out the BM module.
2. Remove the relevant staple head cover, PL 12.185 Item 14.
3. Pull the stapler bracket handle, PL 12.185 Item 9. Open the staplers fully.

NOTE: If a 5.5mm socket and short extension is not available or access to the staple head securing screws is difficult, remove the BM stapler bracket assembly, REP 12.28-171, then remove the relevant staple head.

4. **Figure 1**, remove the relevant staple head.



X-1-0459-A

Figure 1 Staple head removal

Replacement

1. Reverse the removal procedure to replace the BM staple heads.
2. Perform **ADJ 12.3-171**, Stapler Anvil Alignment.

REP 12.28-171 BM Stapler Bracket Assembly

Parts List on [PL 12.185](#).

Purpose

This procedure is used to repair the following parts:

- Front follower, [PL 12.185 Item 1](#).
- Actuator, [PL 12.185 Item 2](#).
- Rear follower, [PL 12.185 Item 3](#).
- Spring, [PL 12.185 Item 4](#).
- BM paper present sensor Q12-190, [PL 12.185 Item 5](#).
- Latch slide, [PL 12.185 Item 6](#).
- Stapler bracket handle, [PL 12.185 Item 9](#).
- Stapler bracket assembly, [PL 12.185 Item 10](#).
- Torsion spring, [PL 12.185 Item 11](#).
- Bearing, [PL 12.185 Item 12](#).
- Spring, [PL 12.185 Item 13](#).
- BM stapler head carrier closed sensor Q12-421, [PL 12.185 Item 18](#).
- Lower shaft, [PL 12.185 Item 19](#).
- Upper shaft, [PL 12.185 Item 20](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

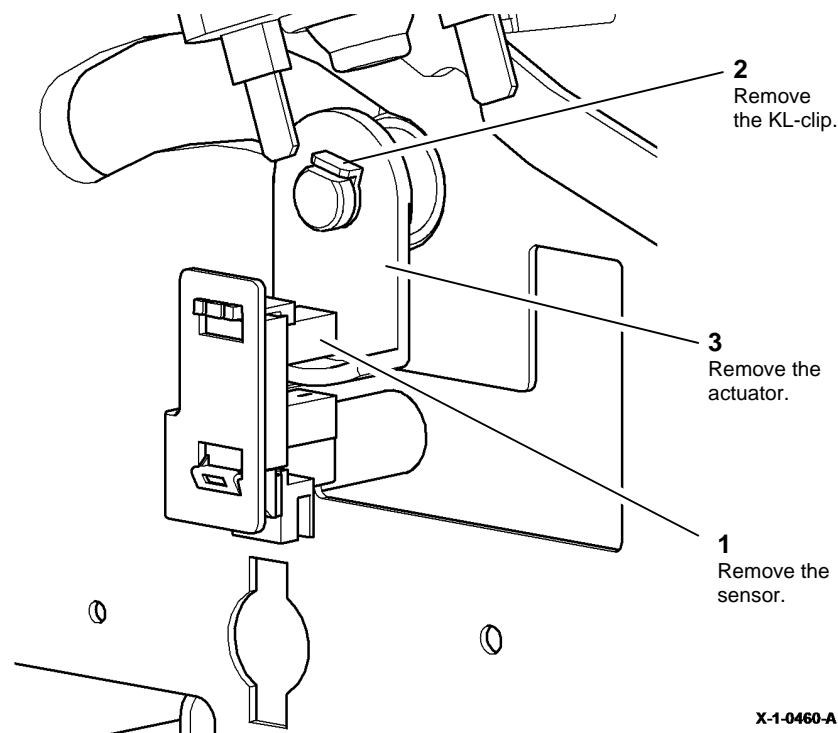


WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the top cover, then the rear cover, [REP 12.1-171](#).
2. Remove 4 screws securing the BM PWB mounting plate to the frame, allow the PWB and mounting plate to hang down, giving access to the BM staple head carrier closed sensor.

3. [Figure 1](#), remove the BM staple head carrier closed sensor actuator.



X-1-0460-A

Figure 1 Actuator removal

4. Temporarily attach the PWB mounting plate using only the top two screws.
5. Open the HVF BM front door and fully pull out the BM module.
6. Remove the crease blade knob (6d), [PL 12.150 Item 4](#).
7. Remove the crease roll handle (6c), [PL 12.150 Item 5](#).
8. Remove the BM front cover, [PL 12.150 Item 3](#).
9. Remove both staple head covers, [PL 12.185 Item 14](#).

10. **Figure 2**, lower the stapler bracket.

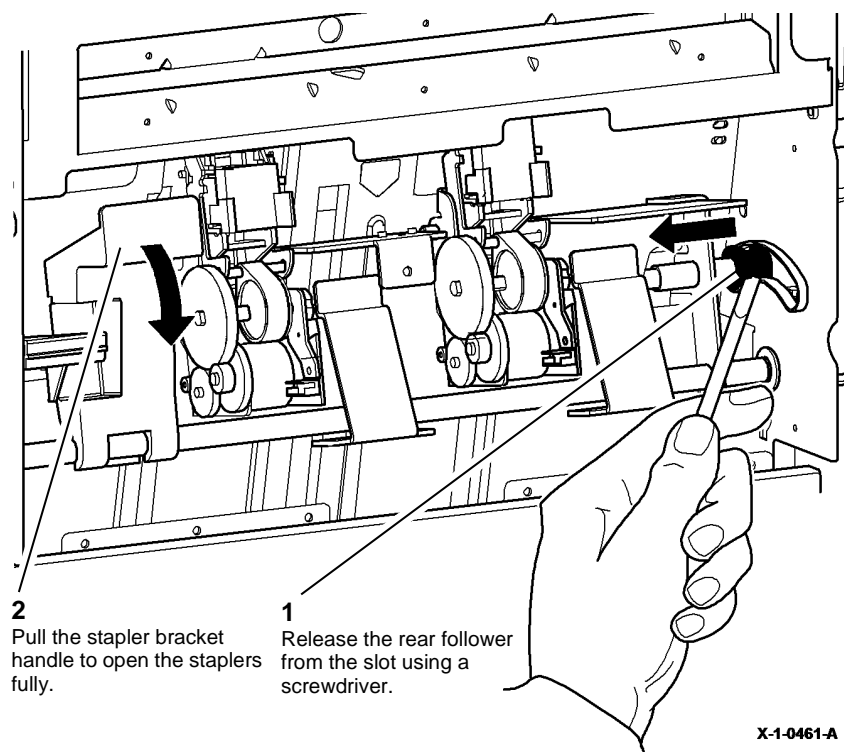
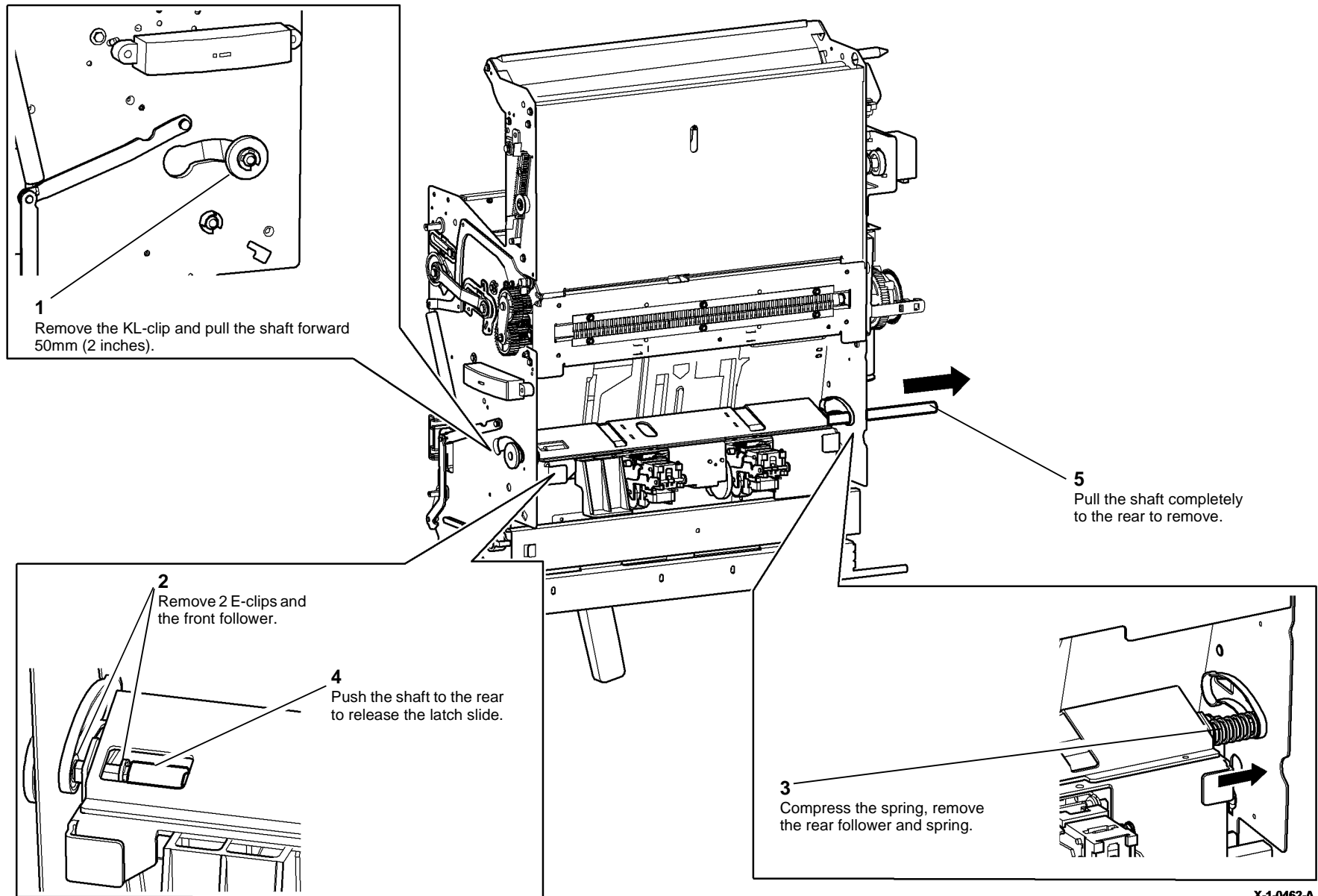


Figure 2 Stapler bracket lowering

11. Figure 3, remove the latch shaft.



X-1-0462-A

Figure 3 Latch shaft removal

12. Figure 4, prepare to remove the BM stapler bracket assembly.

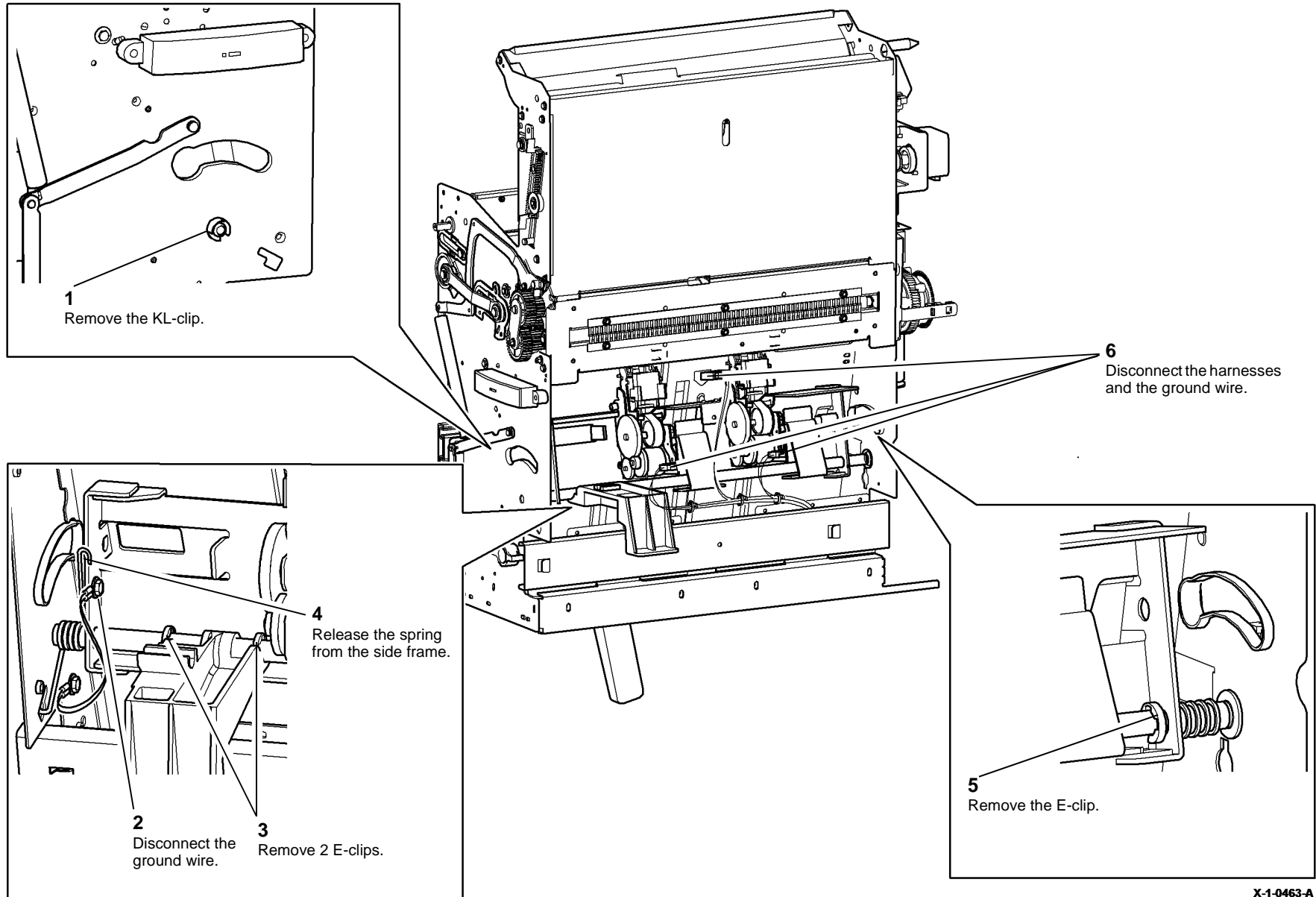


Figure 4 Preparation

13. Figure 5, remove the BM stapler bracket assembly.

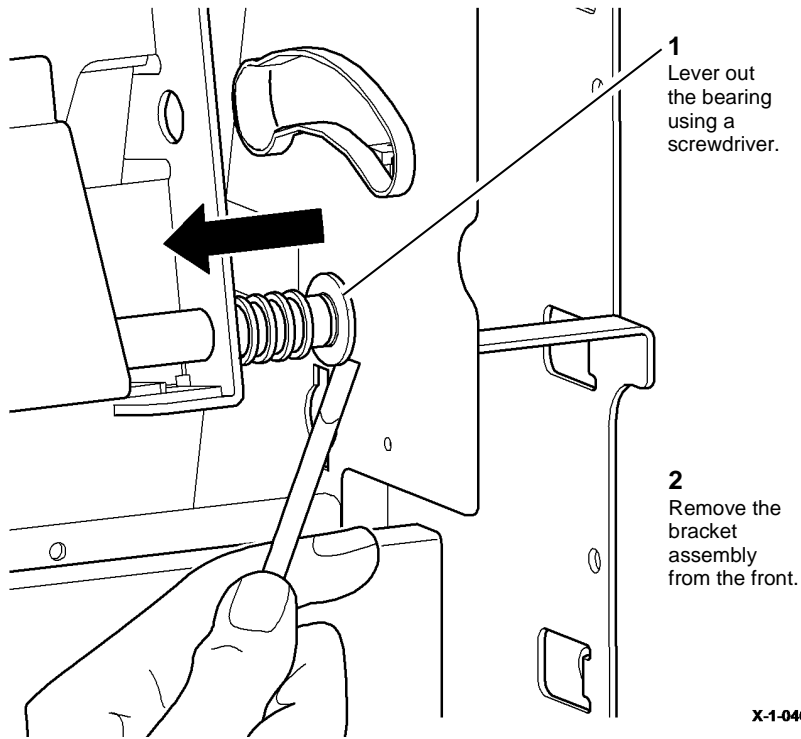


Figure 5 Assembly removal

Replacement

Reverse the removal procedure to replace the BM stapler bracket assembly and components.

REP 12.29-171 BM Conveyor Belts

Parts List on PL 12.190.

Removal



Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine GP 14. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: The removal procedure illustrates how to remove the rear conveyor belt. The procedure for the front conveyor belt is similar.

1. Remove bin 2 by disconnecting the harness, removing the thumb screw then lifting the bin upwards to release.
2. Remove the BM bin 2 extension by aligning the pivot pins with the cutouts and snapping the extension out of engagement.
3. Turn over bin 2 and remove the base pan, 3 screws.
4. Remove the BM bin 2 connector from the base pan, 1 screw.

5. **Figure 1**, remove the idler roller.

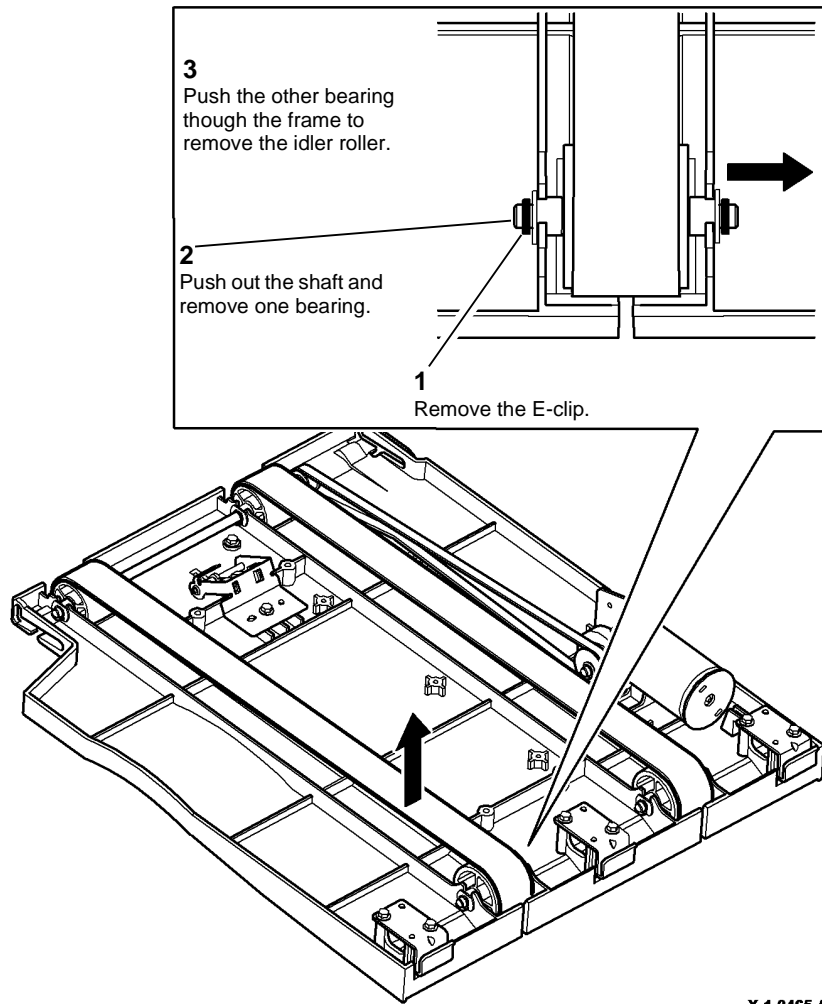


Figure 1 Idler roller removal

X-1-0465-A

6. **Figure 2**, remove the BM conveyor belt.

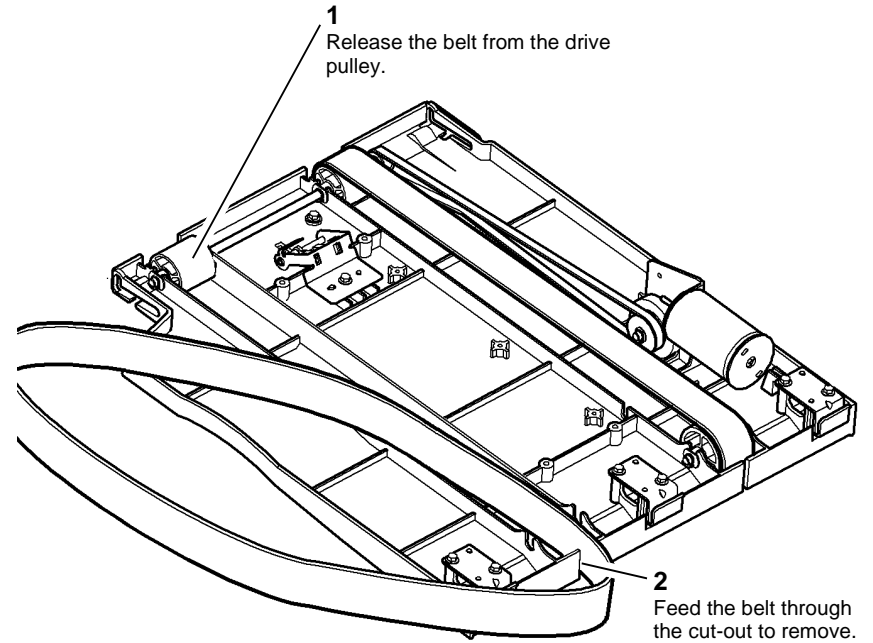


Figure 2 Belt removal

X-1-0466-A

Replacement

Reverse the removal procedure to replace the BM conveyor belts.

REP 12.30-171 BM Tamper Assembly and Tamper 1 Motor

Parts List on [PL 12.155](#).

Purpose

This procedure is used to repair the following components:

- BM tamper 1 motor, [PL 12.155 Item 3](#).
- BM rear tamper arm, [PL 12.155 Item 5](#).
- BM front tamper arm, [PL 12.155 Item 6](#).
- BM rear tamper rack, [PL 12.155 Item 7](#).
- BM front tamper rack, [PL 12.155 Item 8](#).
- BM rear tamper assembly, [PL 12.155 Item 9](#).
- BM front tamper assembly, [PL 12.155 Item 10](#).
- BM tamper gear, [PL 12.155 Item 11](#).
- BM tamper bracket, [PL 12.155 Item 12](#).
- BM tamper rack guide, [PL 12.155 Item 13](#).
- BM tamper guide plate, [PL 12.155 Item 15](#).
- BM rear tamper finger, [PL 12.155 Item 16](#).
- BM front tamper finger, [PL 12.155 Item 17](#).

Removal



WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

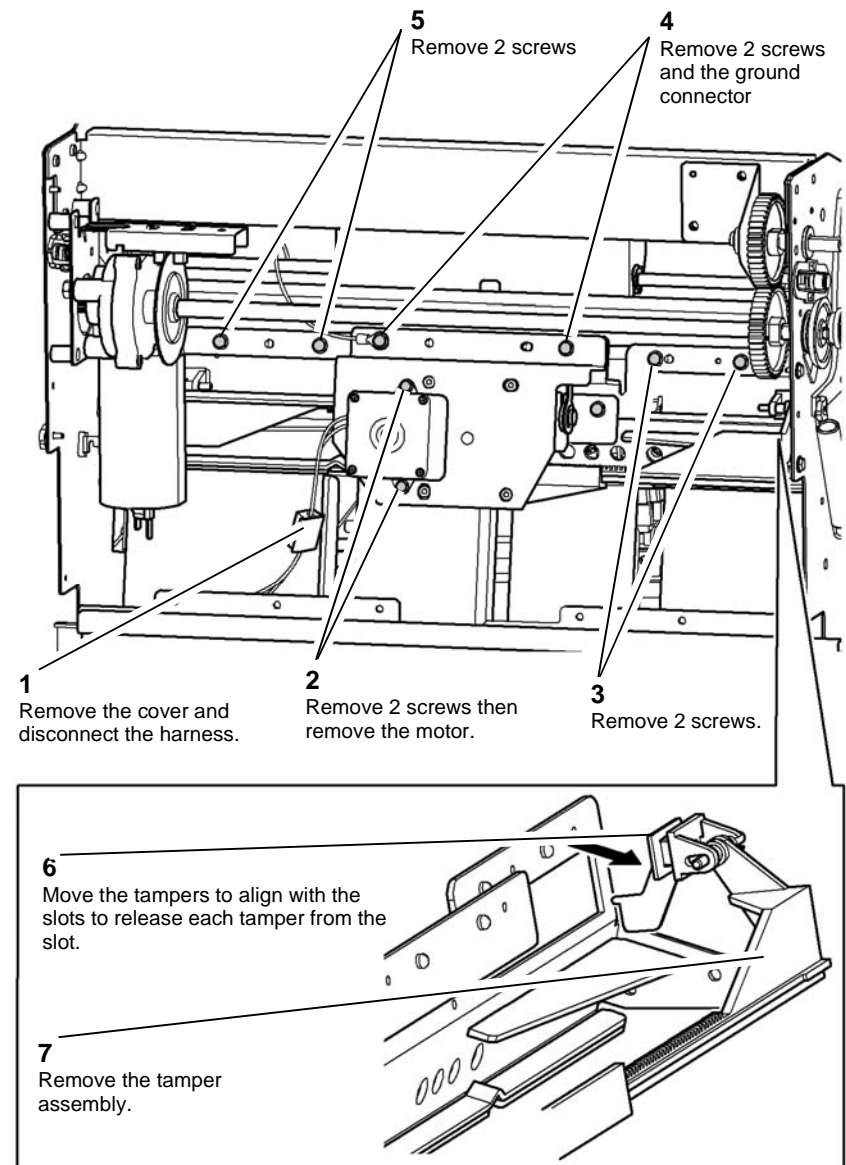


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Open the HVF BM front door and fully pull out the BM module.
2. Remove the crease blade knob (6d), [PL 12.150 Item 4](#).
3. Remove the crease roll handle (6c), [PL 12.150 Item 5](#).
4. Remove the BM front cover, [PL 12.150 Item 3](#).
5. Remove the left frame plate, [PL 12.160 Item 17](#).

6. [Figure 1](#), remove the tamper assembly.



X-1-0467-A

Figure 1 Tamper assembly removal

7. **Figure 2**, remove the front and rear tamper assemblies. Also remove the tamper gear and tamper motor.

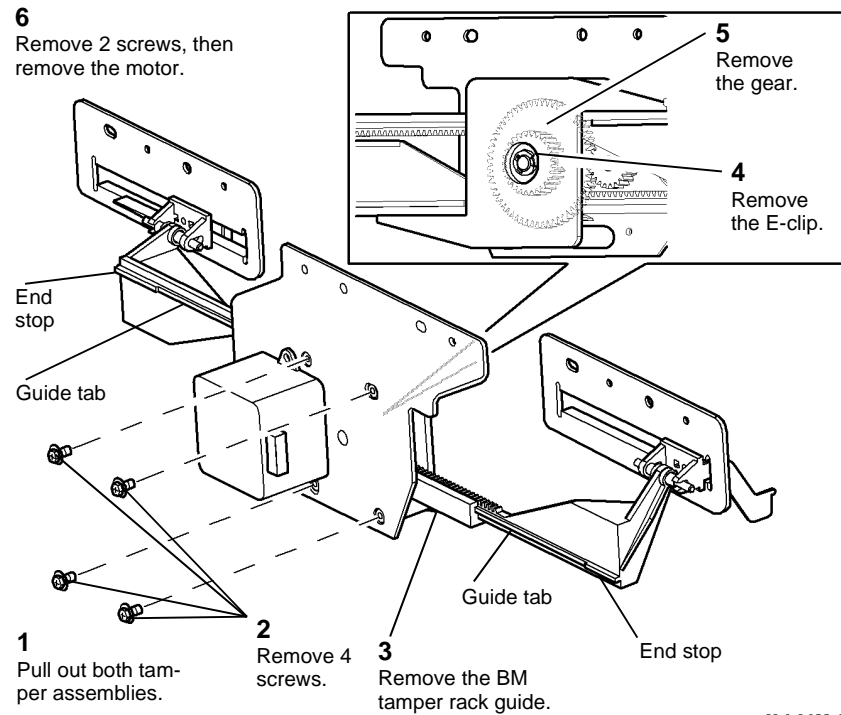


Figure 2 Dismantling the assembly

8. **Figure 3**, remove the tamper guide plate from each of the tamper assemblies.

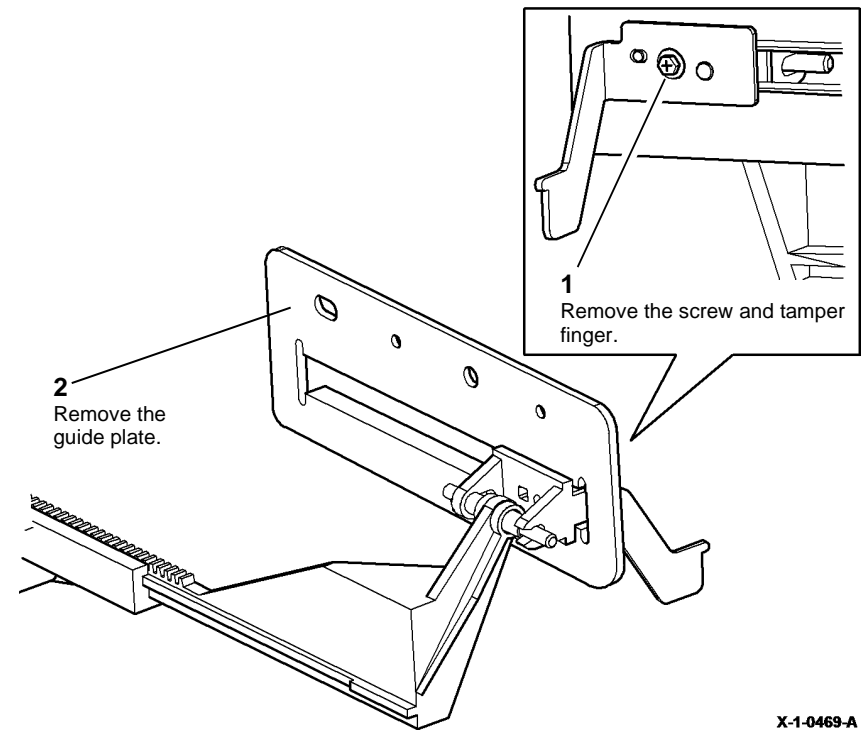


Figure 3 Guide plate removal

Replacement

1. If the tamper racks were removed from the BM tamper rack guide, perform the following:
 - a. Align the guide tabs on both tamper racks with the slots in the BM tamper rack guide. Refer to **Figure 2**.
 - b. Start both tamper racks into the BM tamper rack guide at the same time. Both tamper racks must engage with the BM tamper gear simultaneously. To check that the front and rear tampers are correctly aligned, perform the following:
 - Fully push in the tampers.
 - The distance between the end stop on each tamper and the ends of the BM tamper rack guide should be equal. Refer to **Figure 2**.
 - If the distances are different by more than 1mm (0.040 inches). Perform step b again.
2. Reverse the removal procedure to replace the BM tamper assembly and tamper 1 motor.
3. Perform **ADJ 12.5-171** Booklet Tamping.

REP 12.31-171 HVF Buffer Guide Assembly

Parts List on [PL 12.125](#).

Removal



WARNING

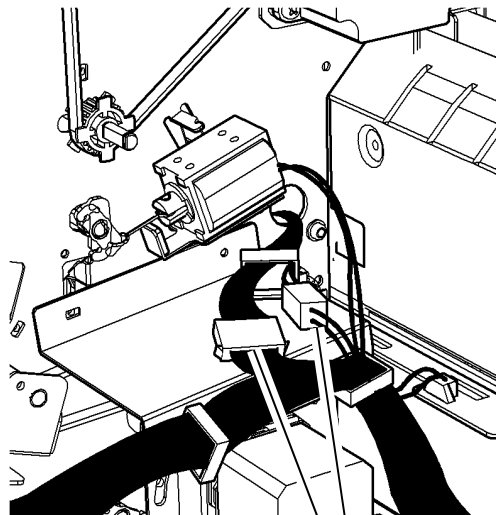
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the HVF front door, [REP 12.1-171](#).
2. Remove the HVF top cover, [REP 12.1-171](#).
3. Remove the HVF front cover, [REP 12.1-171](#).
4. Remove the HVF rear cover, [REP 12.1-171](#).
5. [Figure 1](#). Prepare to remove the guide assembly.



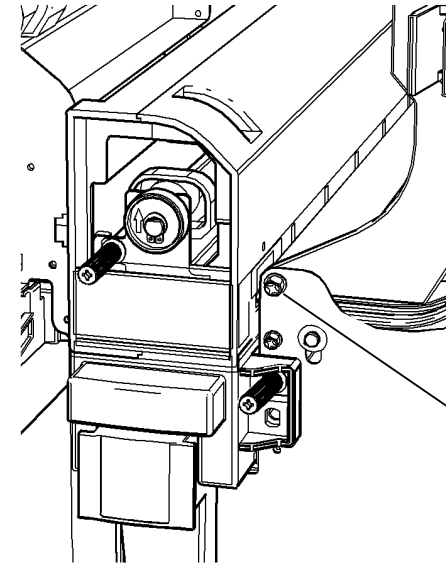
REAR VIEW

- 1 Disconnect two PJs.

X-1-0470-A

Figure 1 Preparation

6. [Figure 2](#). Remove the buffer guide assembly.



- 3 Withdraw the guide through the front opening.

- 2 Pass the PJs through the cut-out in the rear frame

- 1 Remove the pivot screw

X-1-0471-A

Figure 2 Buffer guide removal.

Replacement

Position the spigot at the guide rear in the hole in the rear frame. The rest of the replacement procedure is the reverse of the removal procedure.

REP 12.32-171 HVF Input Jam Clearance Guide

Parts List on [PL 12.125](#).

Removal



WARNING

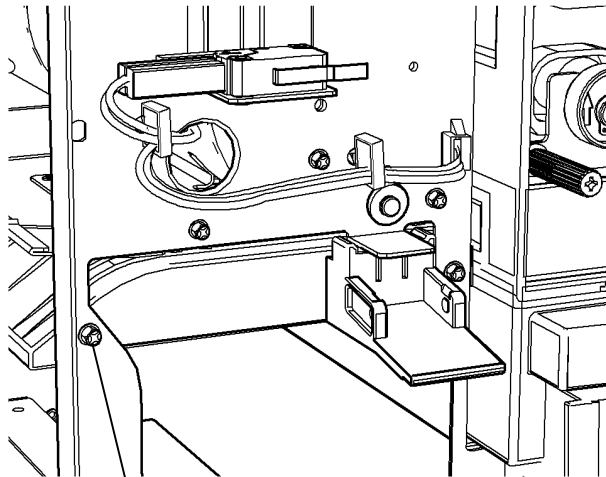
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the HVF front door, [REP 12.1-171](#).
2. Remove the HVF top cover, [REP 12.1-171](#).
3. Remove the HVF front cover, [REP 12.1-171](#).
4. [Figure 1](#). Remove the input jam clearance guide.



1
Remove the
pivot screw

2
Remove the guide through
the front opening

X-1-0472-A

Figure 1 Guide removal

Replacement

Position the spigot at the guide rear in the hole in the rear frame. The rest of the replacement procedure is the reverse of the removal procedure.

REP 12.33-171 HVF Buffer Pocket Jam Clearance Guide Assembly

Parts List on [PL 12.125](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the HVF front door, [REP 12.1-171](#).
2. Remove the HVF top cover, [REP 12.1-171](#).
3. Remove the HVF front cover, [REP 12.1-171](#).
4. Remove the HVF rear cover, [REP 12.1-171](#).
5. Remove the buffer pocket roll, [REP 12.42-171](#).
6. [Figure 1](#). Prepare to remove the guide.

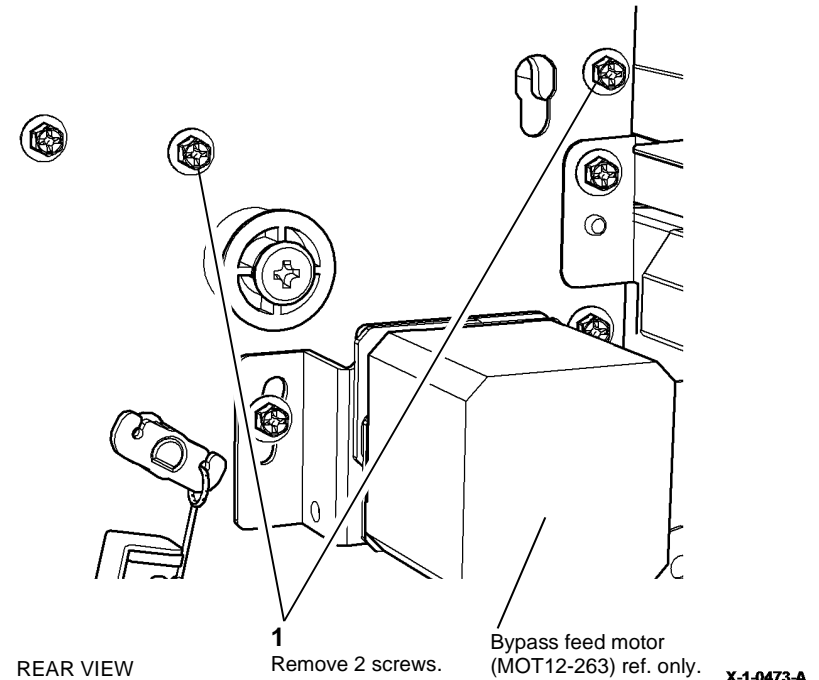


Figure 1 Preparation

7. **Figure 2.** At the front of the HVF, remove the guide.

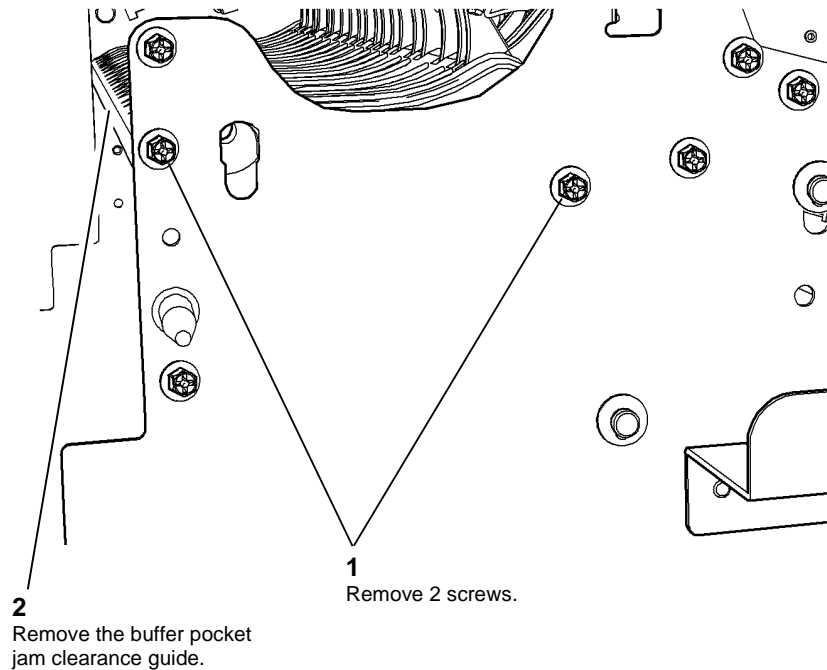


Figure 2 Guide removal

X-1-0474-A

Replacement

The replacement procedure is the reverse of the removal procedure.

REP 12.34-171 Inserter Jam Clearance Guide Assembly

Parts List on **PL 12.125.**

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine **GP 14.** Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the HVF front door, **REP 12.1-171**
2. Remove the HVF top cover, **REP 12.1-171.**
3. Remove the HVF front cover, **REP 12.1-171.**
4. **Figure 1.** Remove the Inserter jam clearance guide.

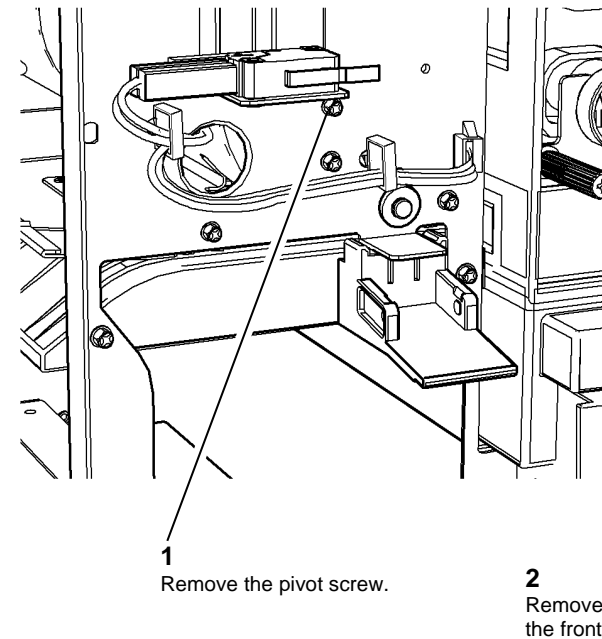


Figure 1 Guide removal.

Replacement

1. The replacement procedure is the reverse of the removal procedure.

REP 12.35-171 HVF Diverter Exit Gate

Parts List on [PL 12.125](#).

Removal

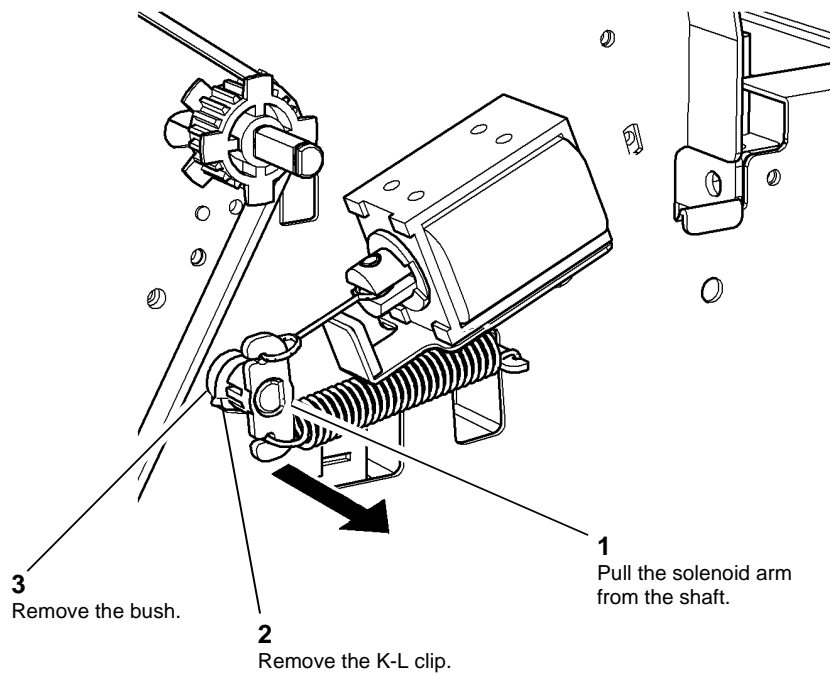
WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the HVF front door, [REP 12.1-171](#).
2. Remove the HVF top cover, [REP 12.1-171](#).
3. Remove the HVF front cover, [REP 12.1-171](#).
4. Remove the HVF rear cover, [REP 12.1-171](#).
5. [Figure 1](#). Prepare to remove the exit gate.

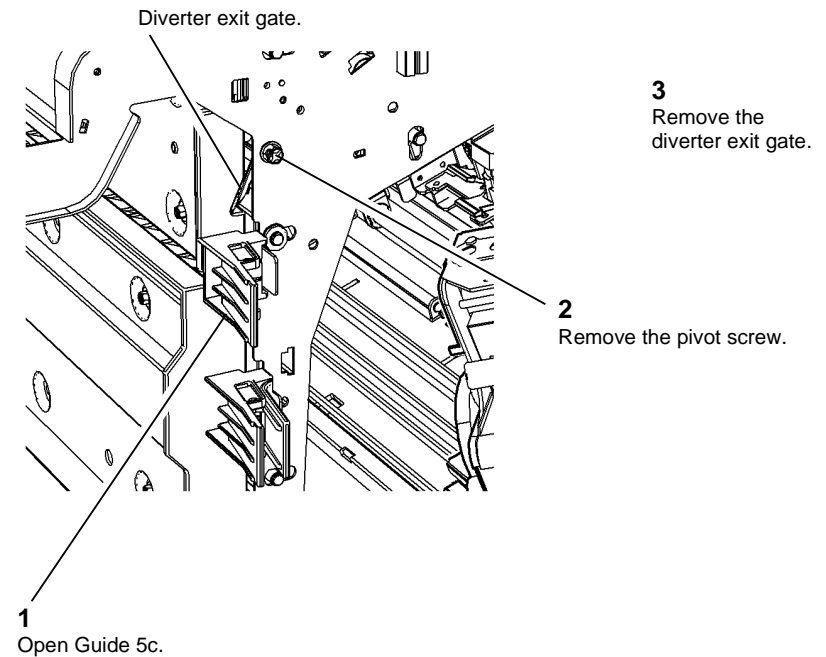


REAR VIEW

X-1-0476-A

Figure 1 Removal preparation

6. [Figure 2](#). Remove the diverter exit gate.



X-1-0477-A

Figure 2 Diverter removal

Replacement

CAUTION

After replacement, check the K-L clip is in the correct groove, and the bush cannot be pulled from the frame.

The replacement procedure is the reverse of the removal procedure.

REP 12.36-171 BM Crease Blade Assembly

Parts List on [PL 12.170](#).

Purpose

This procedure is used to repair the following components:

- Connecting rod, [PL 12.170 Item 9](#).
- Crease blade assembly, [PL 12.170 Item 13](#).
- Crease blade support guide, [PL 12.170 Item 14](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

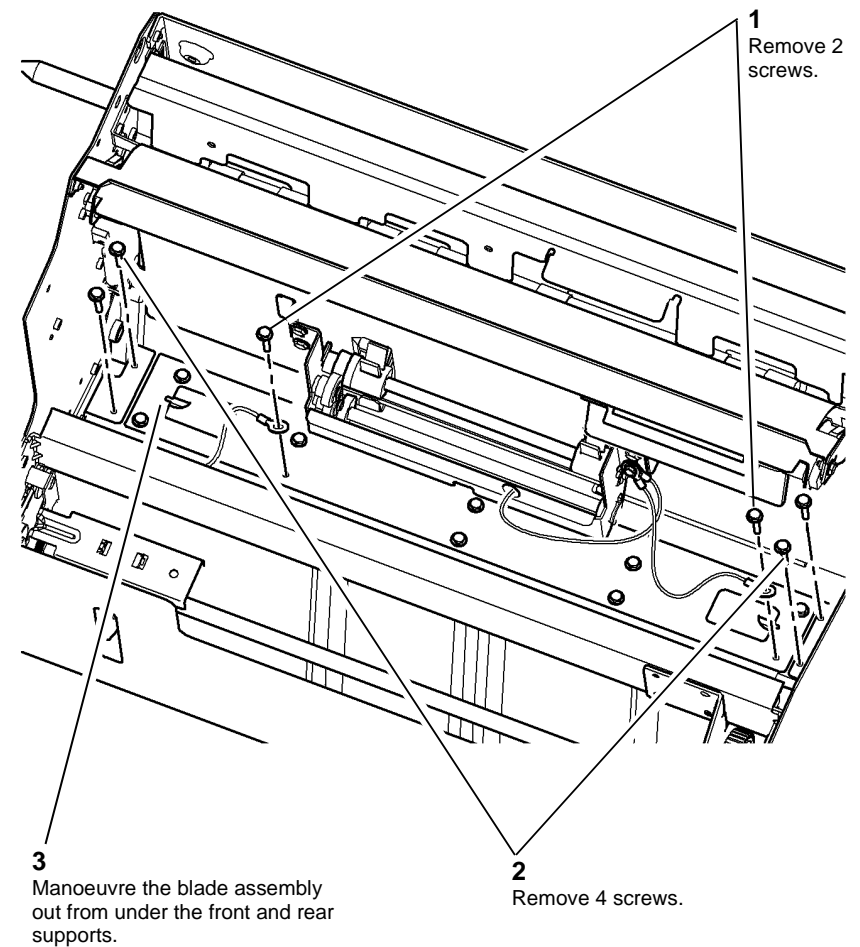


WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the HVF BM front door and fully pull out the BM module.
2. Remove the crease blade knob (6d), [PL 12.150 Item 4](#).
3. Remove the crease roll handle (6c), [PL 12.150 Item 5](#).
4. Remove the BM front cover, [PL 12.150 Item 3](#).

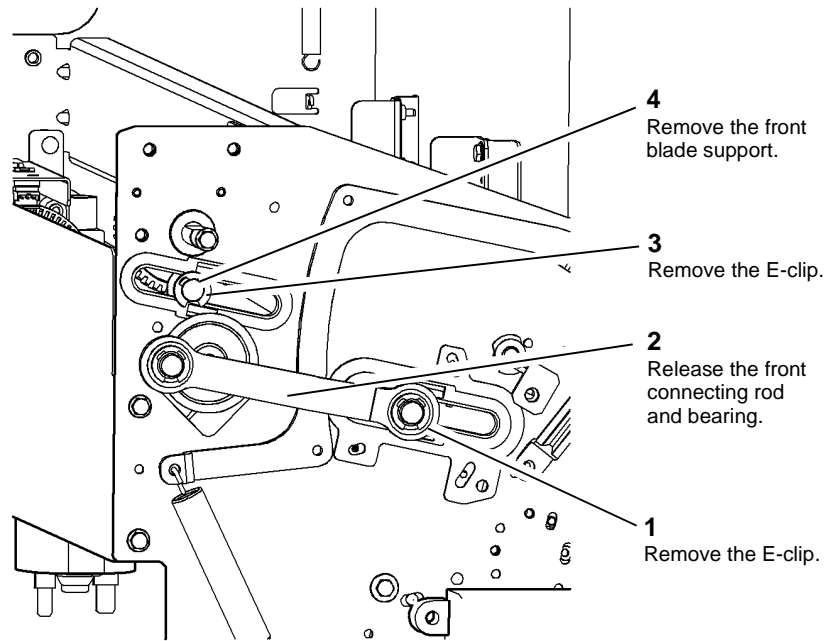
5. [Figure 1](#), remove the crease blade assembly.



X-1-0478-A

Figure 1 Crease blade assembly removal

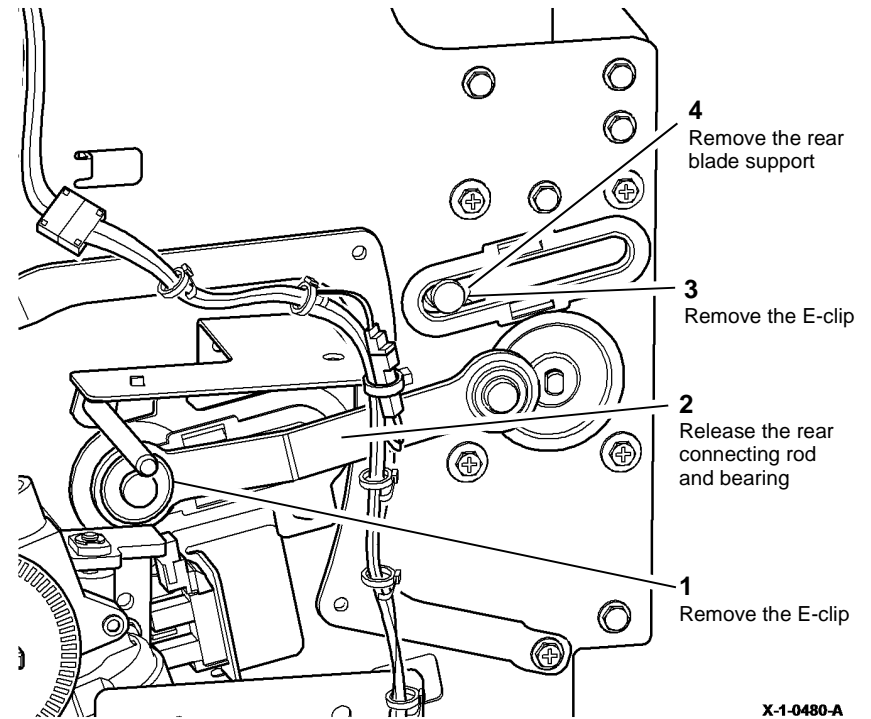
6. Figure 2, remove the front blade support.



X-1-0479-A

Figure 2 Front support removal

7. Figure 3, remove the rear blade support.



X-1-0480-A

Figure 3 Rear support removal

CAUTION

Do not loosen the three red screws that surround the lower support guides

8. **Figure 4**, remove the support guides (4 places).

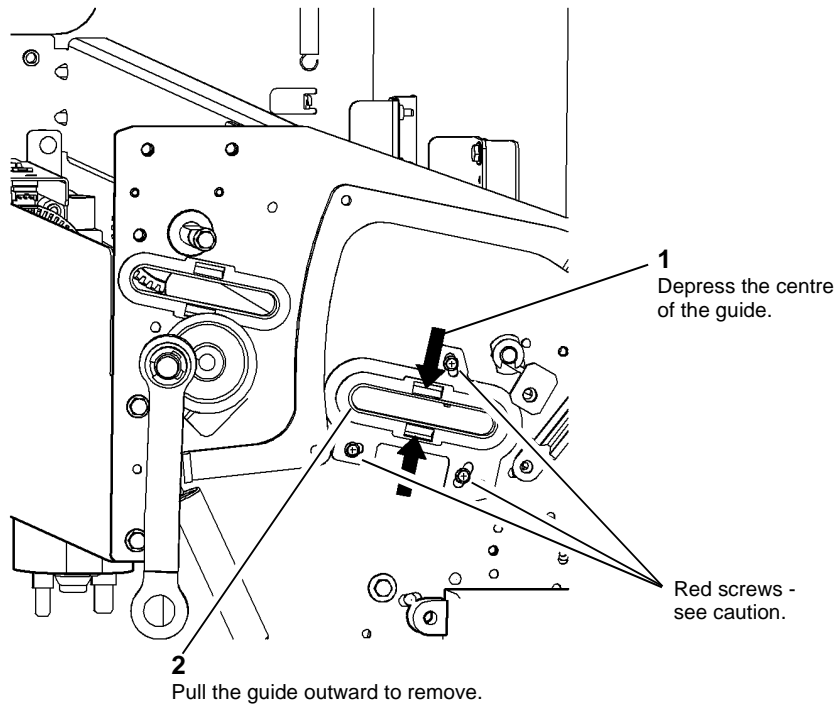


Figure 4 Support guide removal

X-1-0481-A

Replacement

Reverse the removal procedure to replace the crease blade assembly.

REP 12.37-171 HVF Stacker Main Drive Gear Shaft Bearings

Parts List on **PL 12.115**.

Removal

WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

WARNING

Switch off the electricity to the machine. Refer to **GP 14**. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the front and rear covers **REP 12.1-171**.
2. Remove the stacker motor and gear assembly **REP 12.12-171**.
3. Remove the rear bearing, **Figure 1**.

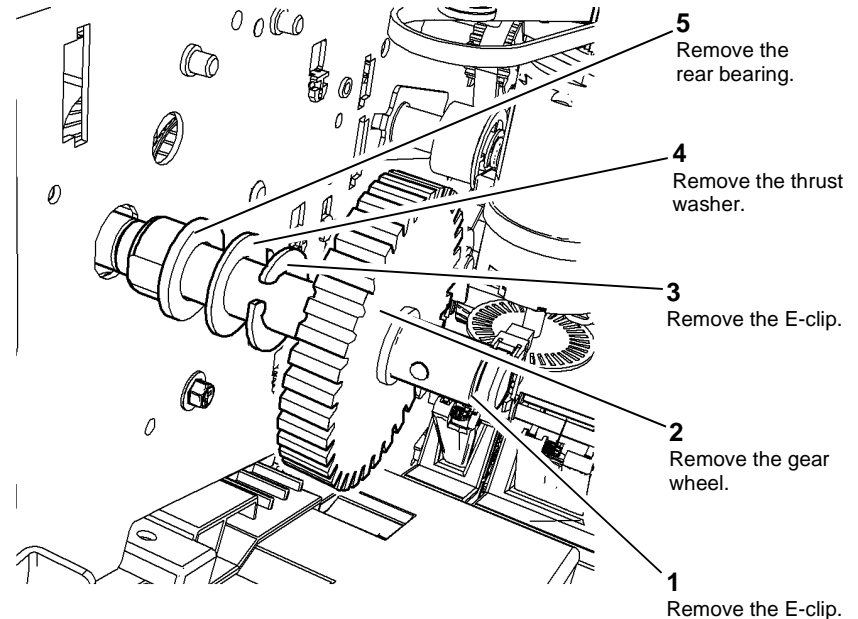


Figure 1 Rear bearing removal

X-1-0482-A

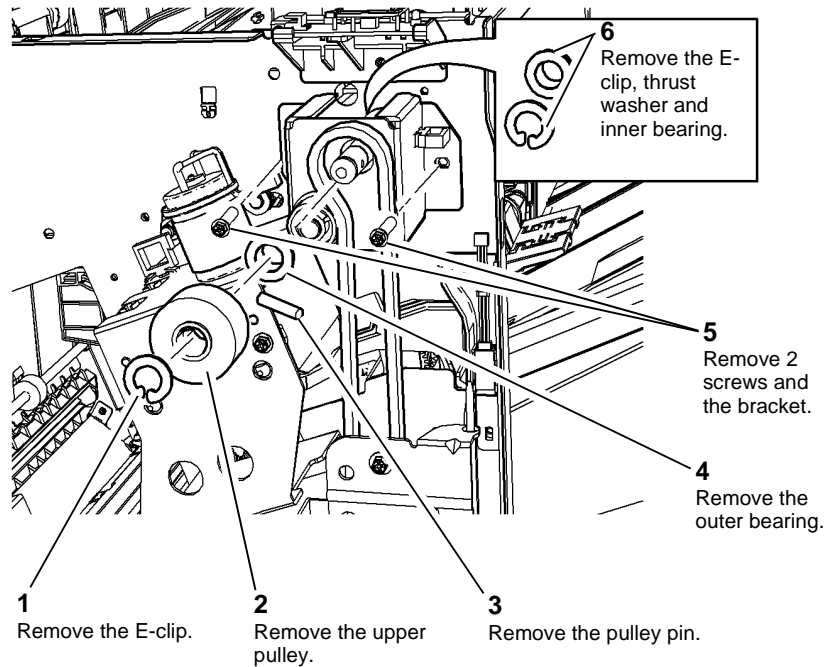
REP 12.38-171 HVF Bin 1 Main Drive Belts

Parts List on [PL 12.105](#).

Removal

NOTE: The upper pulley pin may fall when the pulley is removed.

4. Remove the front bearings, [Figure 2](#).



X-1-0483-A

Figure 2 Stacker Shaft Front Bearing

Replacement

Reverse the removal procedures to reinstall the stacker driving shaft front and rear bearings.

NOTE: Make sure that the 'flats' on the bearing align with the cut-outs in the bracket or frame.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



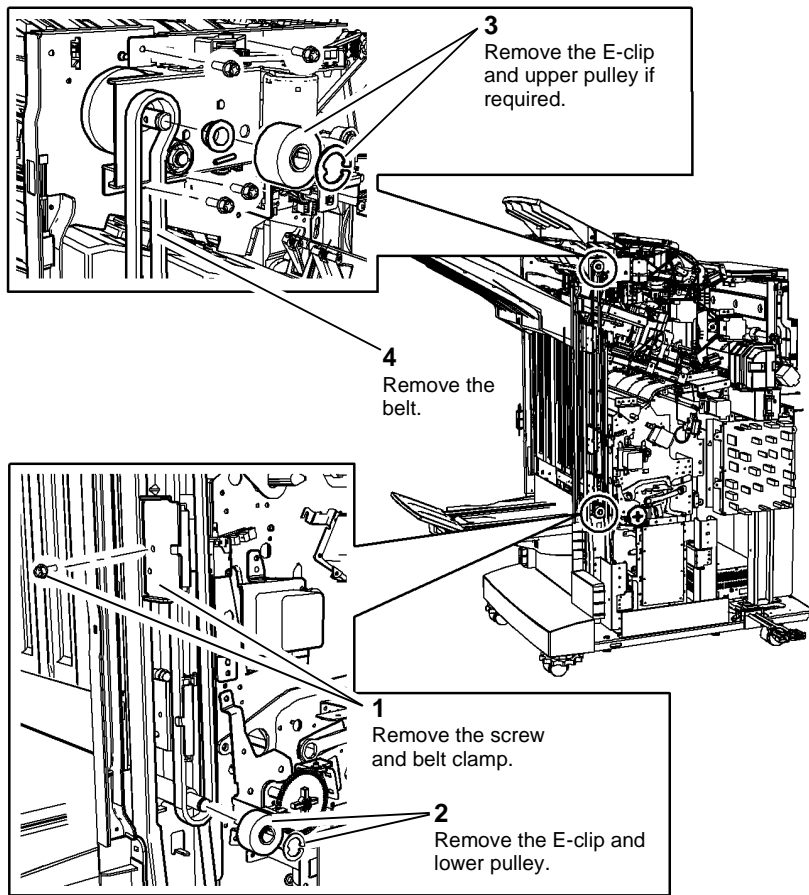
WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: The removal and replacement procedure for the front and rear bin 1 main drive belts is the same. Support the bin 1 lift bar if removing the front and rear belts at the same time

1. Remove the front or rear cover to access the front or rear drive belt [REP 12.1-171](#).
2. Remove the stacker bin 1 tray [REP 12.4-171](#).

- Remove the bin 1 main drive belts, [Figure 1](#).



X-1-0484-A

Figure 1 Bin 1 main drive belts

Replacement

NOTE: Check that the bin 1 lift bar is level before fitting the belt clamp.

Reverse the removal procedures to reinstall the front and rear bin 1 main drive belts.

REP 12.39-171 HVF BM Diverter Gate

Parts List on [PL 12.125](#).

Removal

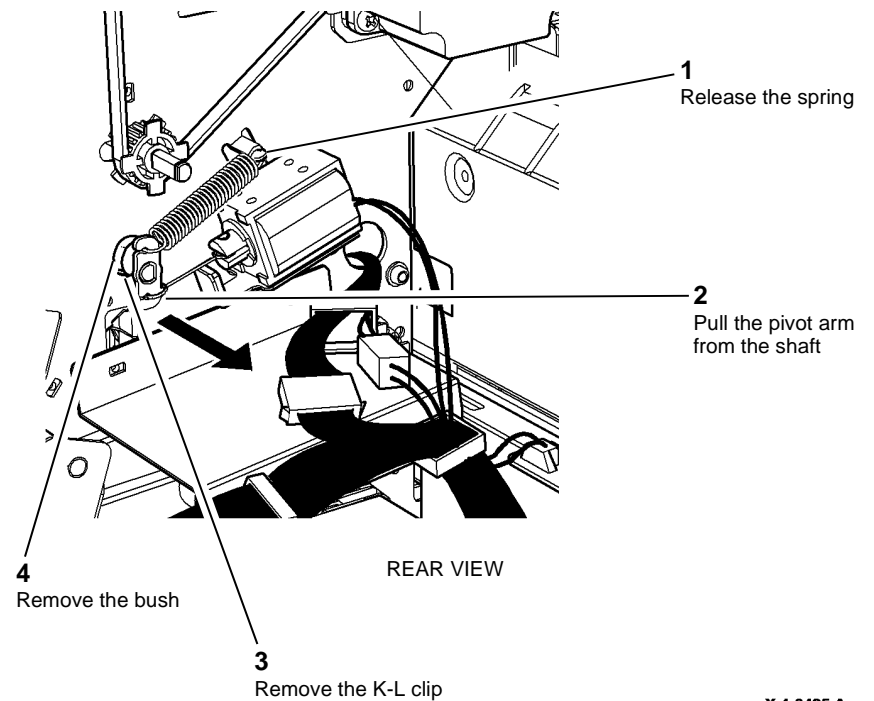


Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

- Remove the HVF front door, [REP 12.1-171](#).
- Remove the HVF top cover, [REP 12.1-171](#).
- Remove the HVF front cover, [REP 12.1-171](#).
- Remove the HVF rear cover, [REP 12.1-171](#).
- [Figure 1](#). prepare to remove the BM diverter gate.



X-1-0485-A

Figure 1 Removal preparation

6. **Figure 2.** Remove the BM diverter gate.

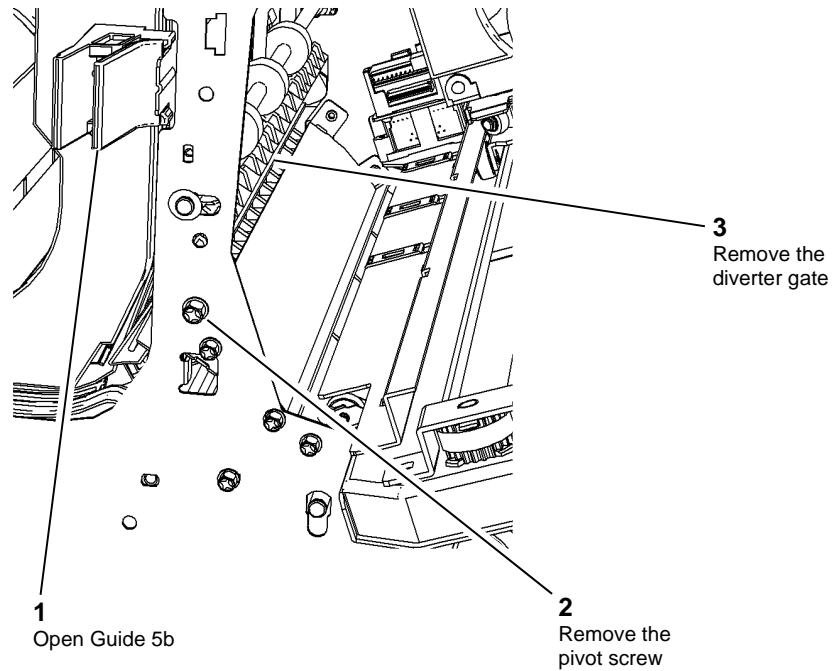


Figure 2 Diverter removal.

Replacement

The replacement procedure is the reverse of the removal procedure.

REP 12.40-171 HVF Input Roll

Parts List on **PL 12.130.**

Removal



Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine **GP 14.** Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the HVF front door, **REP 12.1-171.**
2. Remove the HVF top cover, **REP 12.1-171.**
3. Remove the HVF front cover, **REP 12.1-171.**
4. Remove the HVF rear cover, **REP 12.1-171.**
5. **Figure 1.** Remove the black plastic cover.

X-1-0486-A

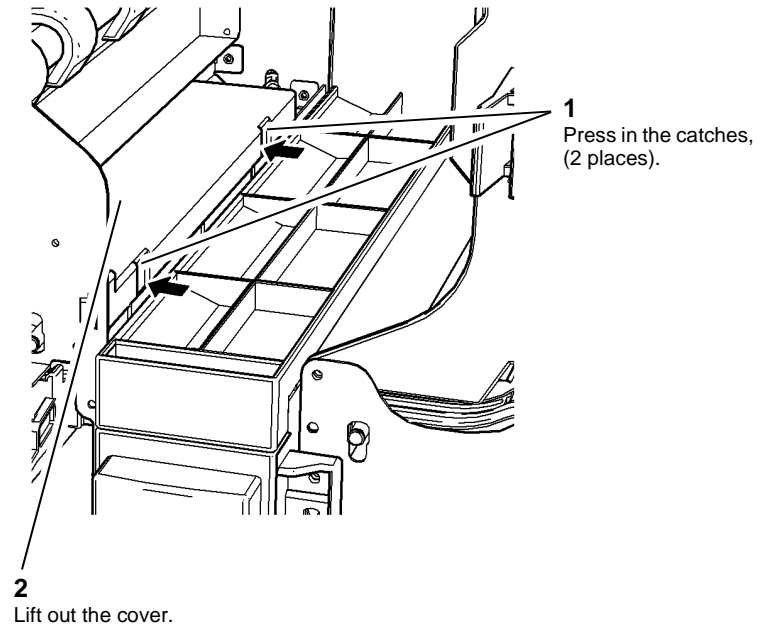


Figure 1 Cover removal.

X-1-0487-A

6. **Figure 2.** Prepare to remove the input roll.

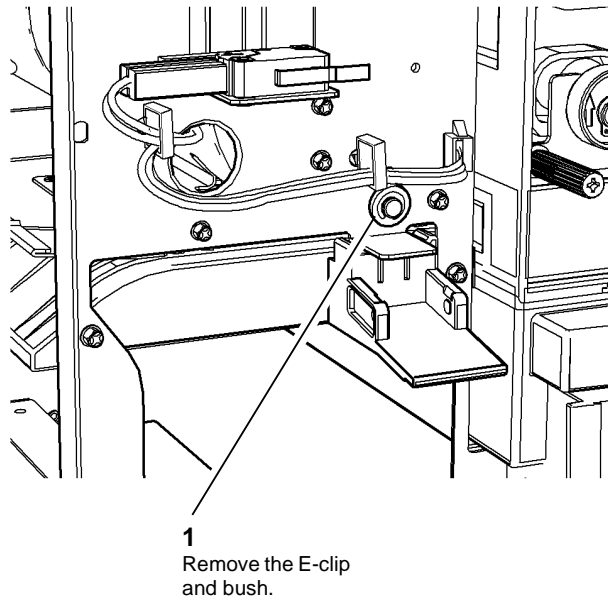


Figure 2 Preparation

7. **Figure 3.** At the rear of the HVF, remove the input roll.

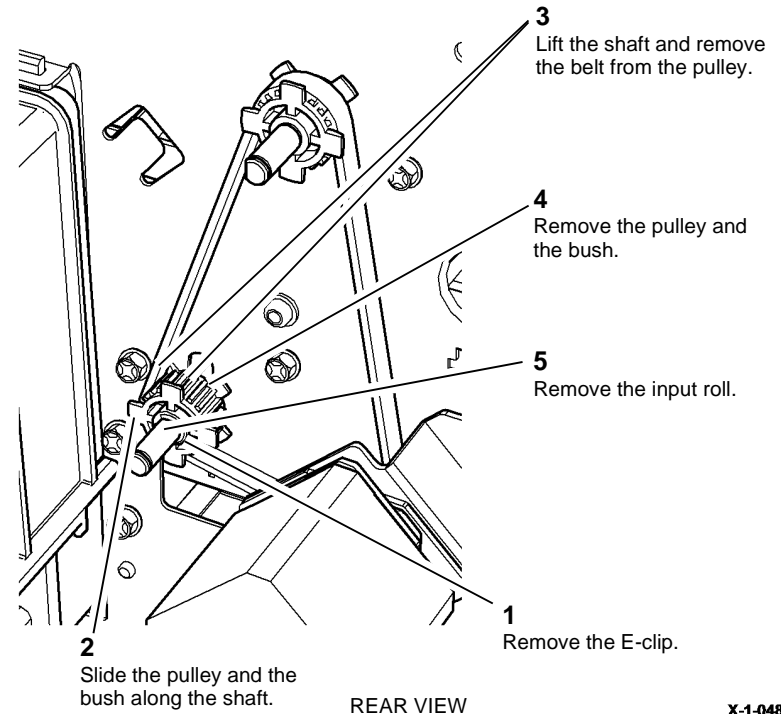


Figure 3 Input roll removal.

Replacement

The replacement procedure is the reverse of the removal procedure.

REP 12.41-171 HVF Inserter Guide Roll

Parts List on [PL 12.130](#).

Removal



WARNING

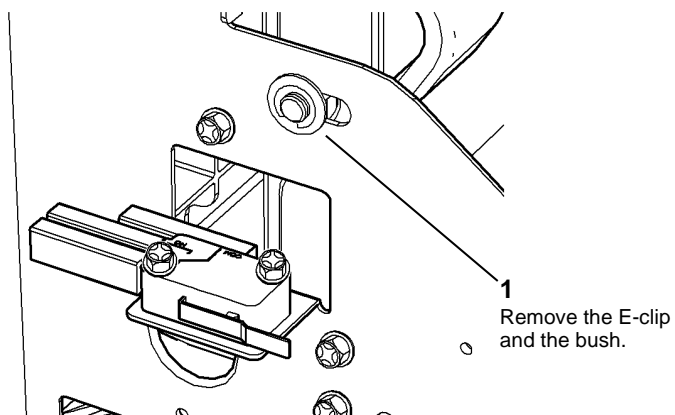
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

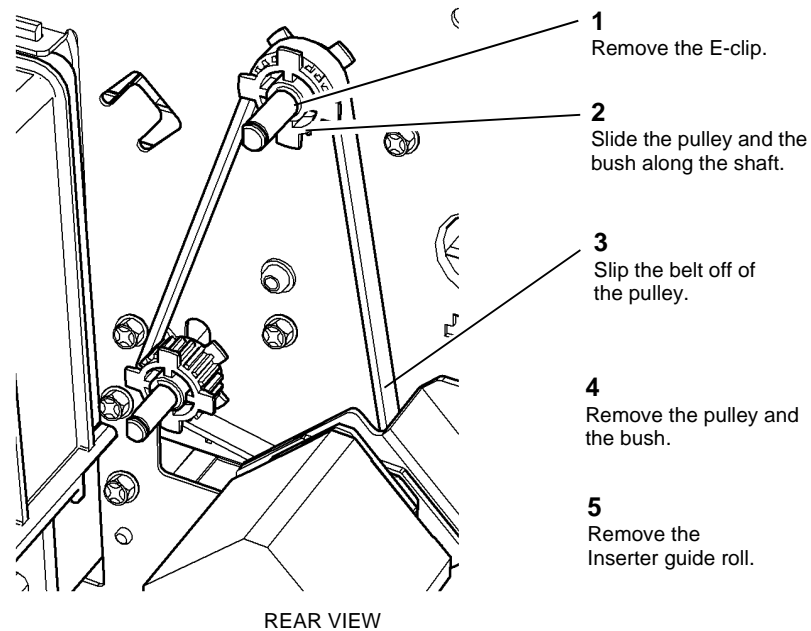
1. Remove the HVF front door, [REP 12.1-171](#).
2. Remove the HVF top cover, [REP 12.1-171](#).
3. Remove the HVF front cover, [REP 12.1-171](#).
4. Remove the HVF rear cover, [REP 12.1-171](#).
5. Open guide 8a.
6. [Figure 1](#). At the front of the HVF, remove the E-clip and the bush.



X-1-0490-A

Figure 1 E-clip and bush removal.

7. [Figure 2](#). At the rear of the HVF, remove the Inserter guide roll.



X-1-0491-A

Figure 2 Inserter guide roll removal

Replacement

The replacement procedure is the reverse of the removal procedure.

REP 12.42-171 HVF Buffer Pocket Roll

Parts List on [PL 12.130](#).

Removal

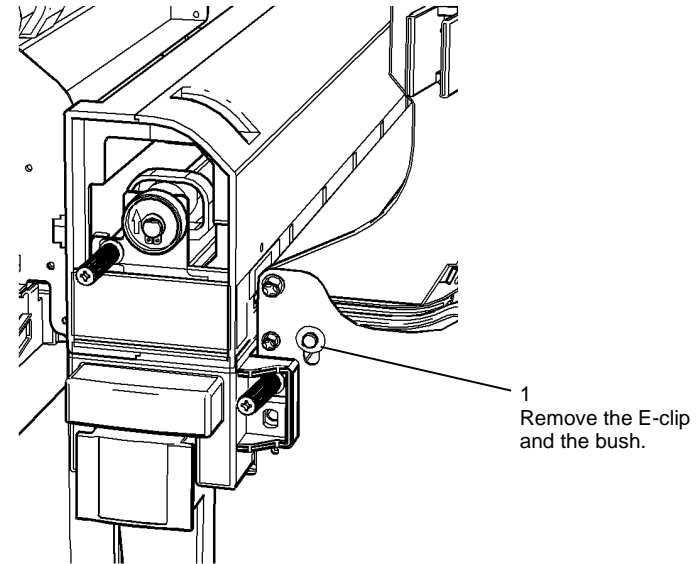


Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

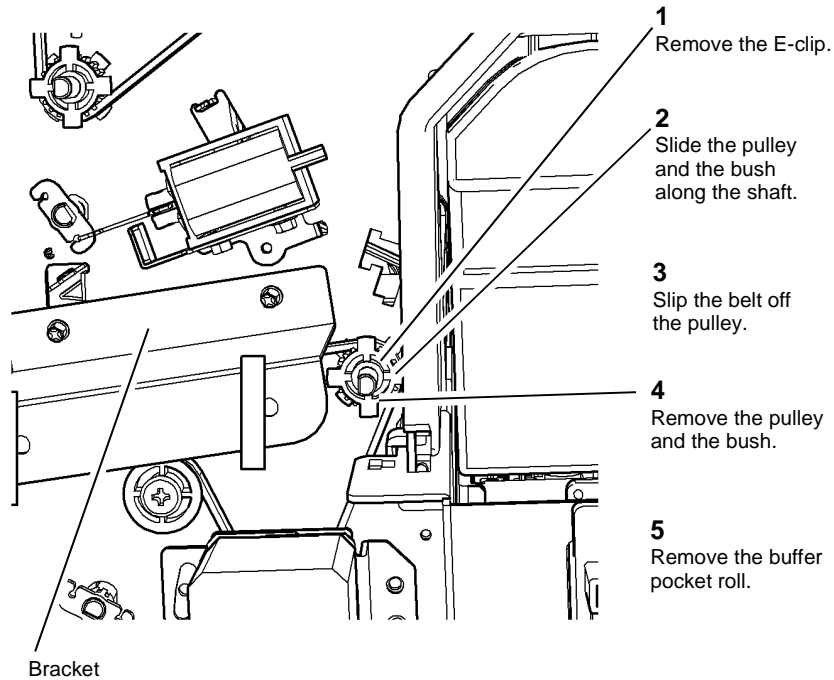
1. Remove the HVF front door, [REP 12.1-171](#).
2. Remove the HVF top cover, [REP 12.1-171](#).
3. Remove the HVF front cover, [REP 12.1-171](#).
4. Remove the HVF rear cover, [REP 12.1-171](#).
5. Remove the punch unit, or the punch unit guide, as appropriate.
6. [Figure 1](#). At the front of the HVF, remove the E-clip and bush.



X-1-0492-A

Figure 1 E-clip and bush removal.

- At the rear of the HVF, remove the buffer pocket roll. The bracket can be moved if necessary, to improve access, (two screws), [Figure 2](#).



REAR VIEW

Figure 2 Buffer pocket roll removal.

X-1-0493-A

Replacement

The replacement procedure is the reverse of the removal procedure.

REP 12.43-171 HVF Booklet Entrance Roll

Parts List on [PL 12.130](#).

Removal

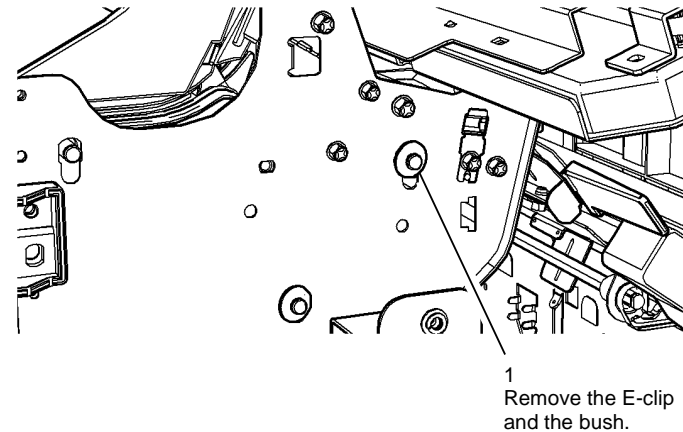


Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

- Remove the HVF front door, [REP 12.1-171](#).
- Remove the HVF top cover, [REP 12.1-171](#).
- Remove the HVF front cover, [REP 12.1-171](#).
- Remove the HVF rear cover, [REP 12.1-171](#).
- [Figure 1](#). Remove the E-clip and bush at the outboard end of the roll.



1 Remove the E-clip and the bush.

X-1-0494-A

Figure 1 E-clip and bush removal.

6. **Figure 2.** At the rear of the HVF, remove the booklet entrance roll.

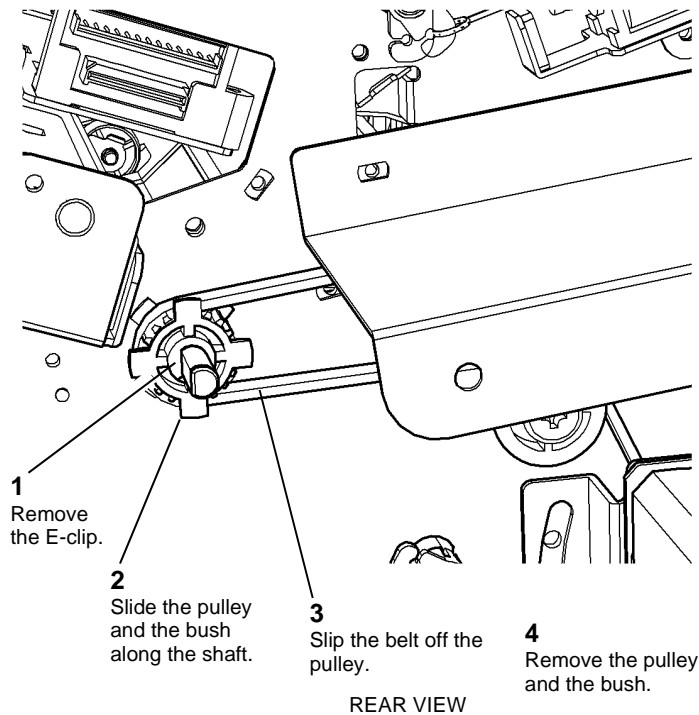


Figure 2 Booklet entrance roll removal.

Replacement

The replacement procedure is the reverse of the removal procedure.

REP 12.44-171 HVF Buffer Lower Roll

Parts List on **PL 12.130.**

Removal



Take care during this procedure. Sharp edges may be present that can cause injury.

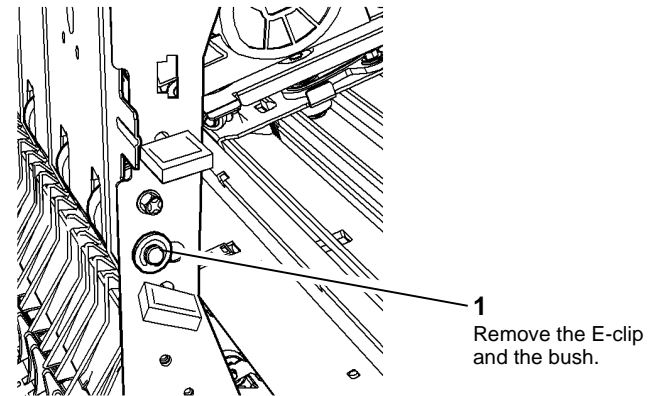


Switch off the electricity to the machine **GP 14.** Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the HVF front door, **REP 12.1-171.**
2. Remove the HVF top cover, **REP 12.1-171.**
3. Remove the HVF front cover, **REP 12.1-171.**
4. Remove the HVF rear cover, **REP 12.1-171.**
5. Open jam clearance guide 5b.
6. **Figure 1.** Remove the E-clip and the bush from the outboard end of the roll.

- 5 Remove the booklet entrance roll.

X-1-0495-A



X-1-0496-A

Figure 1 E-clip and bush removal.

7. **Figure 2.** At the rear of the HVF, remove the buffer lower roll.

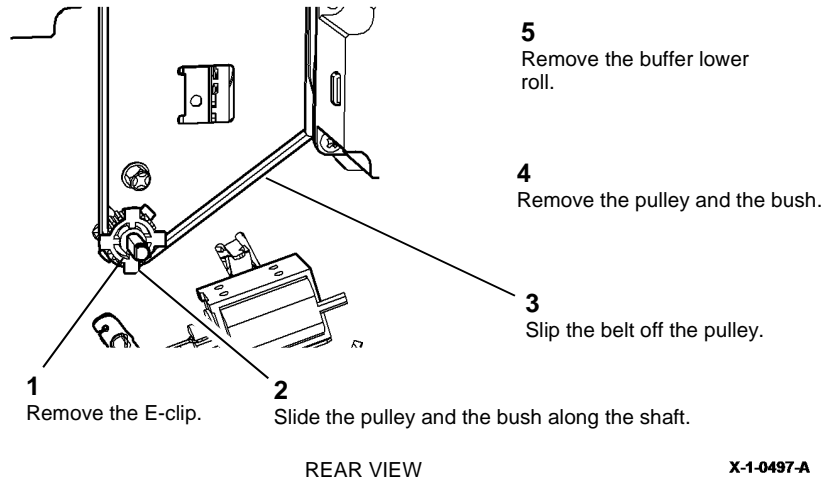


Figure 2 Buffer lower roll removal.

Replacement

The replacement procedure is the reverse of the removal procedure.

REP 12.45-171 HVF Buffer Upper Roll

Parts List on **PL 12.130.**

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine **GP 14.** Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the HVF front door, **REP 12.1-171.**
2. Remove the HVF top cover, **REP 12.1-171.**
3. Remove the HVF front cover, **REP 12.1-171.**
4. Remove the HVF rear cover, **REP 12.1-171.**
5. **Figure 1.** Prepare to remove the buffer upper roll.

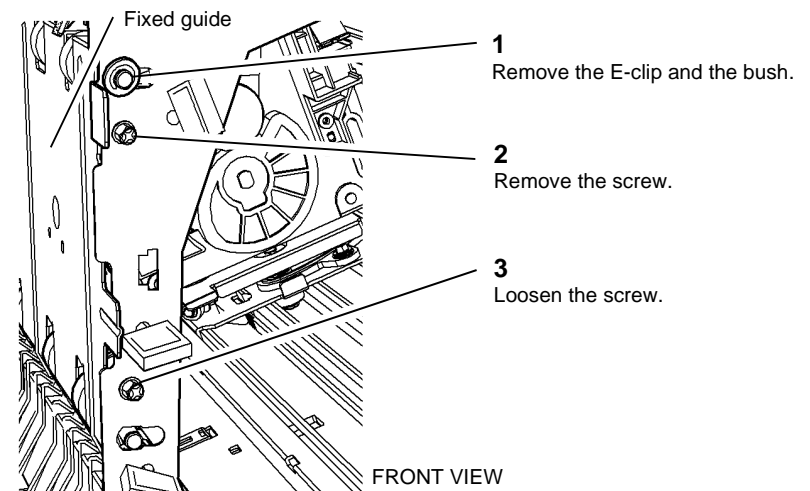


Figure 1 Preparation

6. [Figure 2](#). Remove the buffer upper roll.

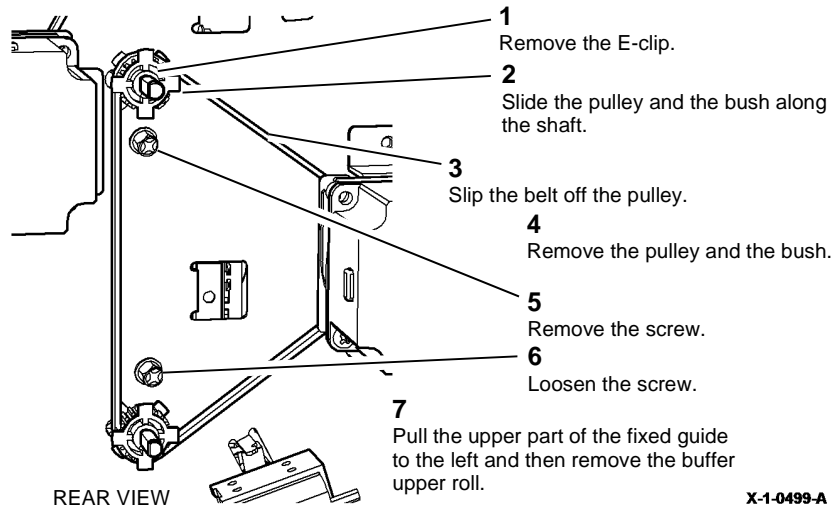


Figure 2 Buffer upper roll removal.

Replacement

The replacement procedure is the reverse of the removal procedure.

REP 12.46-171 HVF Stacker Exit Feed Roll

Parts List on [PL 12.130](#).

Removal

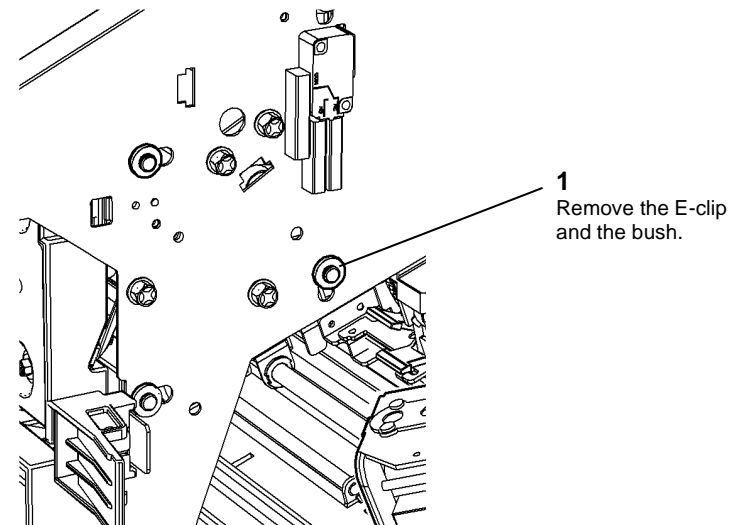


Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

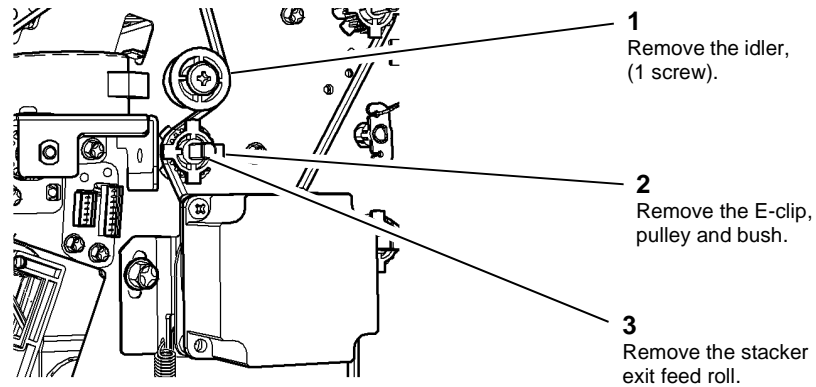
1. Remove the HVF front door, [REP 12.1-171](#).
2. Remove the HVF top cover, [REP 12.1-171](#).
3. Remove the HVF front cover, [REP 12.1-171](#).
4. Remove the HVF rear cover, [REP 12.1-171](#).
5. [Figure 1](#). Remove the E-clip and bush



X-1-0500-A

Figure 1 E-clip and bush removal.

6. **Figure 2.** Remove the stacker exit feed roll.



REAR VIEW

X-1-0501-A

Figure 2 Stacker exit feed roll removal.

Replacement

The replacement procedure is the reverse of the removal procedure.

REP 12.47-171 HVF Top Exit Roll

Parts List on **PL 12.130.**

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine **GP 14.** Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. If fitted, un-dock the Inserter, **REP 12.82-171.**
2. Remove the HVF front door, **REP 12.1-171.**
3. Remove the HVF top cover, **REP 12.1-171.**
4. Remove the HVF front cover, **REP 12.1-171.**
5. Remove the HVF rear cover, **REP 12.1-171.**

6. **Figure 1.** Raise the top tray and lower the plate beneath it.

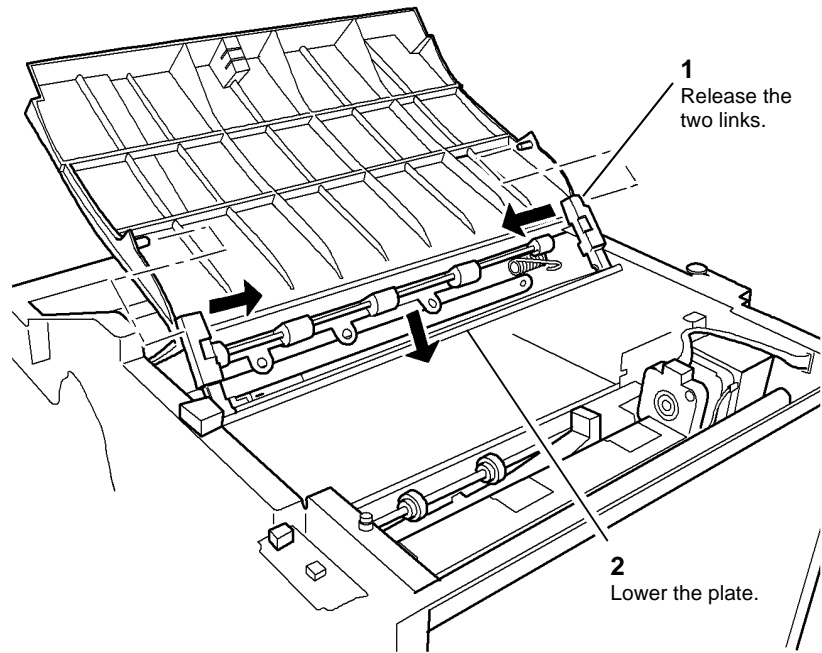


Figure 1 Lowering the plate.

X-1-0502-A

7. **Figure 2.** Remove the front components.

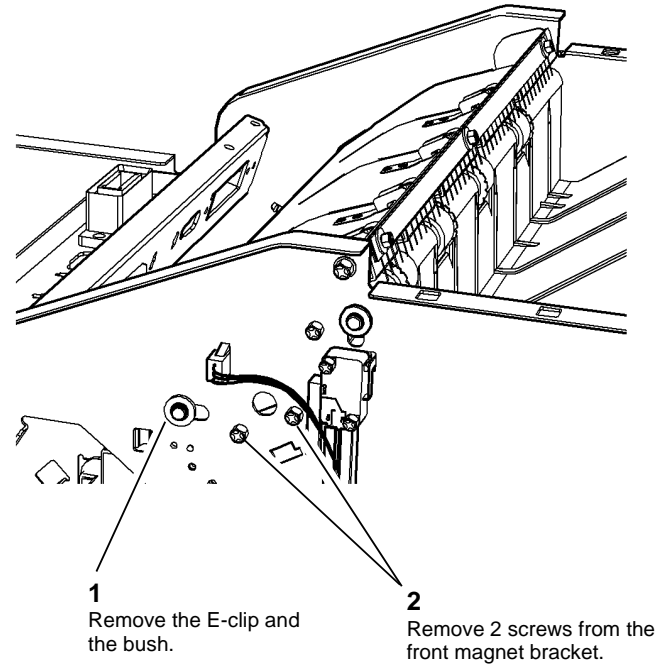


Figure 2 Front component removal

X-1-0503-A

8. **Figure 3.** Remove the rear components.

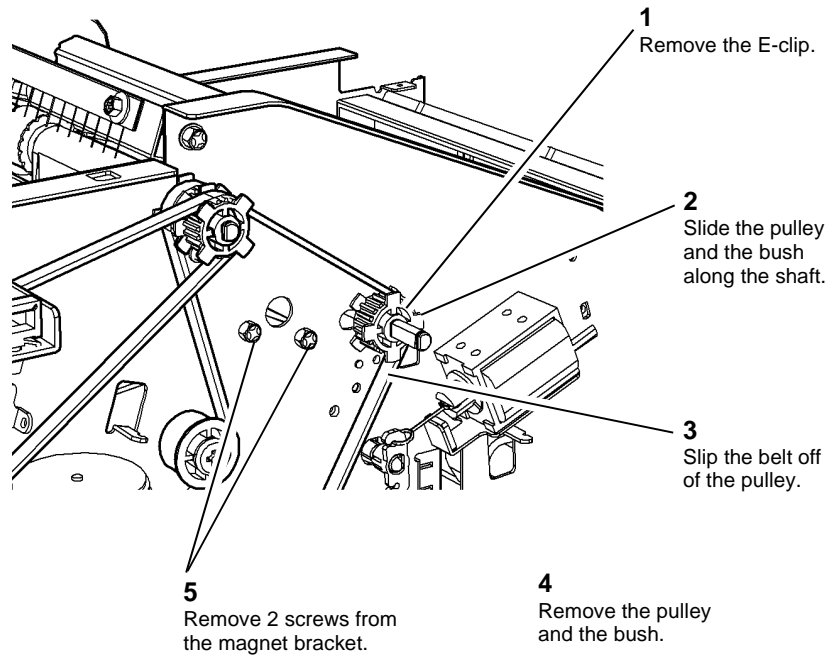


Figure 3 Rear component removal.

9. **Figure 4.** Remove the top exit roll.

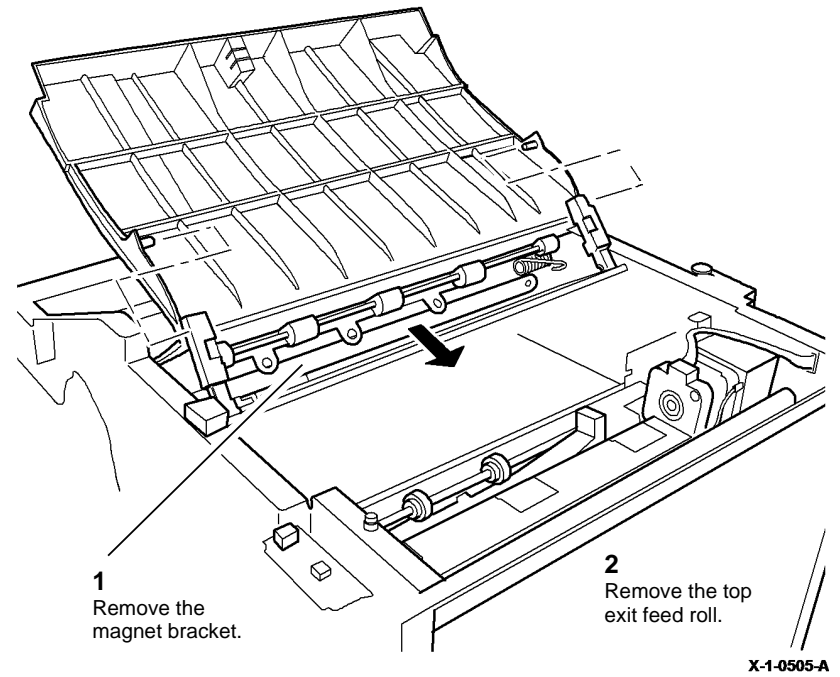


Figure 4 Top exit roll removal.

Replacement

The replacement procedure is the reverse of the removal procedure.

REP 12.48-171 HVF Paddle Unit Motor Assembly

Parts List on [PL 12.120](#)

Removal



WARNING

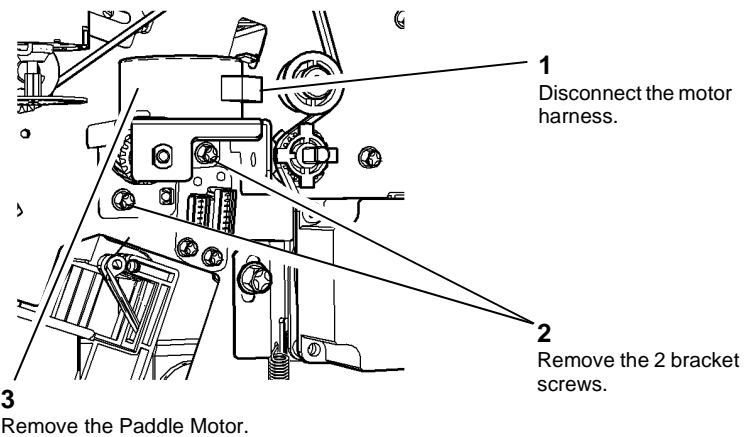
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the rear cover [REP 12.1-171](#).
2. Remove the paddle motor assembly, [Figure 1](#).



X-1-0506-A

Figure 1 Paddle motor assembly

Replacement

Reverse the removal procedures to replace the compiler paddle motor assembly.

REP 12.49-171 Paddle Unit

Parts List on [PL 12.115](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the front, rear and top covers [REP 12.1-171](#).
2. Remove the HVF stapler assembly, [REP 12.2-171](#).
3. Remove the paddle unit motor assembly, [REP 12.48-171](#).

NOTE: The motor coupler should detach with the motor assembly. If the coupler fails to detach, remove the coupler from the paddle unit.

4. Figure 1, remove the paddle unit.

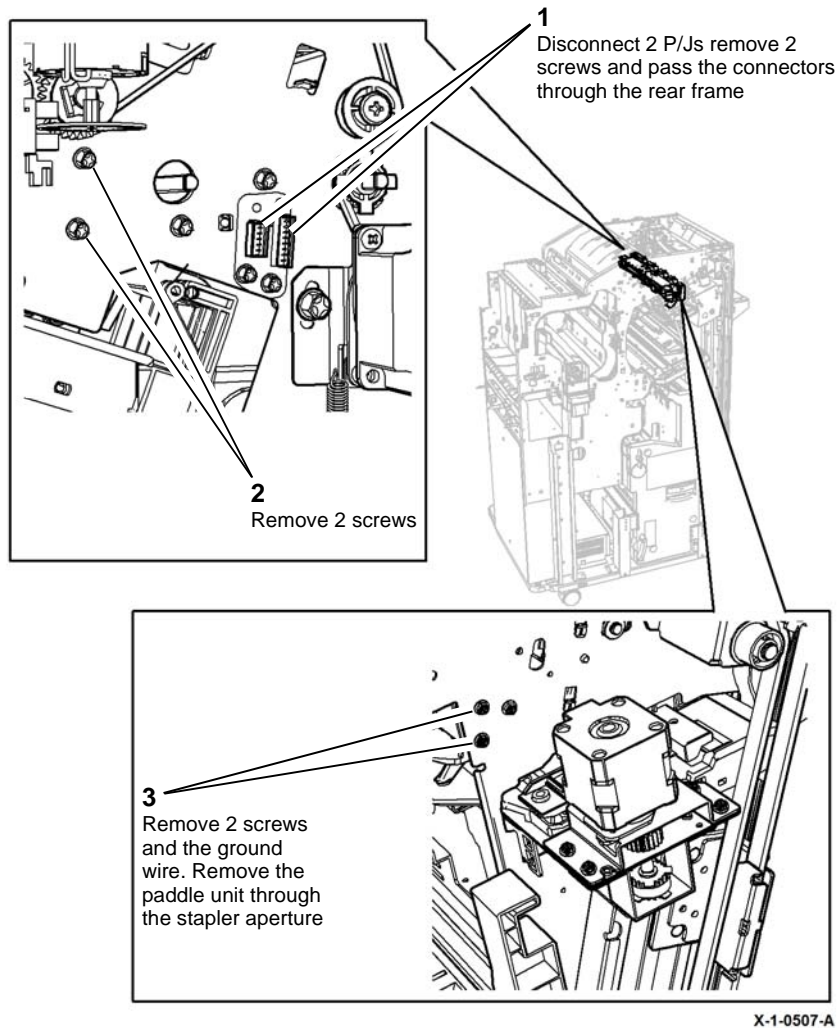


Figure 1 Paddle unit attachment

Replacement



CAUTION

Do not damage or strain the paddle module ribbon cables or connectors

Reverse the removal procedures to replace the paddle unit.

REP 12.50-171 BM Exit Sensor

Parts List on [PL 12.185](#).

Removal



WARNING

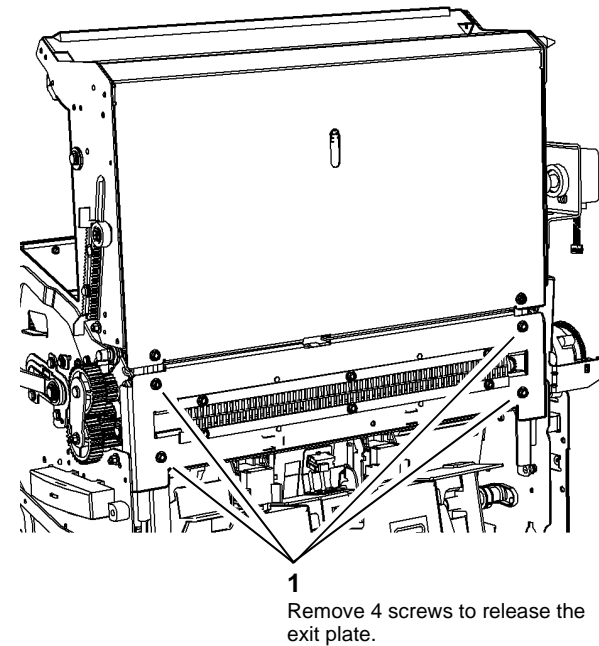
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

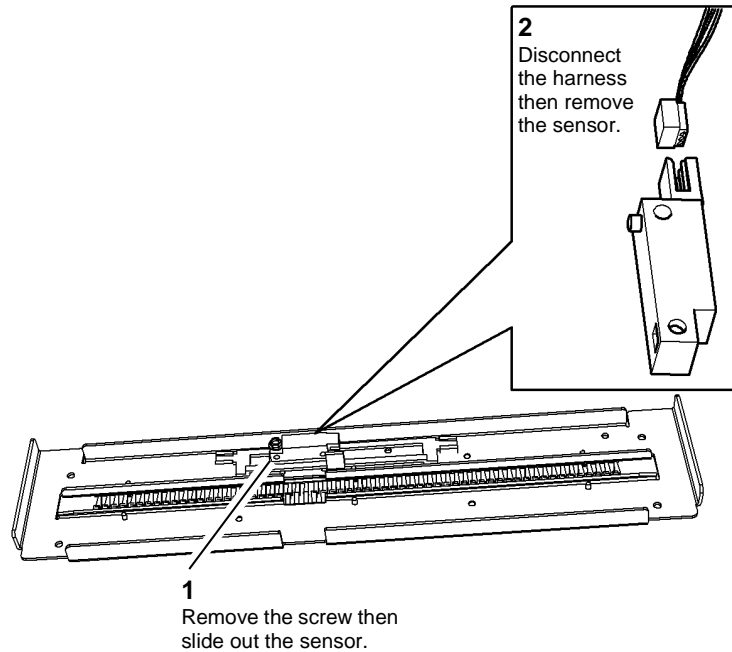
1. Remove the BM right hand cover, [REP 12.56-171](#).
2. Remove the exit plate, [Figure 1](#).



X-1-0508-A

Figure 1 Remove the exit plate

3. Figure 2, remove the BM exit sensor.



X-1-0509-A

Figure 2 Sensor removal

Replacement

Reverse the removal procedure to replace the BM exit sensor.

REP 12.51-171 HVF Paper Pusher Motor Assembly

Parts List on [PL 12.115](#).

Removal

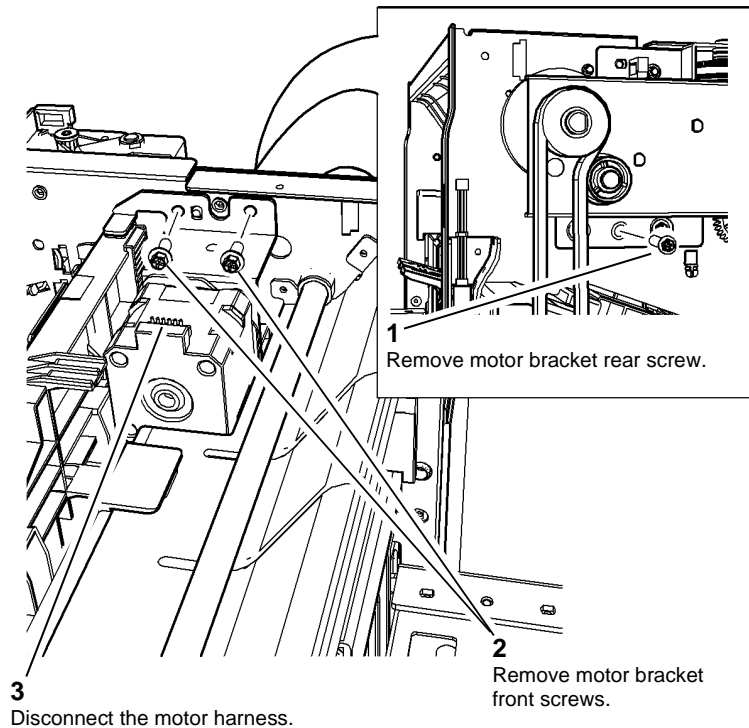
WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the top and rear covers [REP 12.1-171](#).
2. Remove the paper pusher motor assembly, [Figure 1](#).



X-1-0510-A

Figure 1 Motor removal

Replacement

Reverse the removal procedures to reinstall the paper pusher motor assembly.

REP 12.52-171 BM Crease Rolls

Parts List on [PL 12.180](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

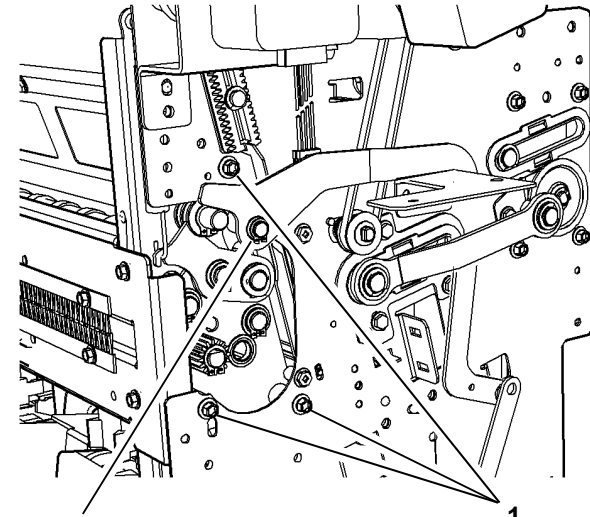


WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the HVF BM front door and fully pull out the BM module.
2. Release the crease roll nip pressure by fully rotating the crease roll handle (6c) counter-clockwise.
3. Remove the crease blade knob (6d), [PL 12.150 Item 4](#).
4. Remove the crease roll handle (6c), [PL 12.150 Item 5](#).
5. Remove the BM front cover, [PL 12.150 Item 3](#).
6. Remove the BM right hand cover, [REP 12.56-171](#).
7. Remove the BM crease roll motor, [REP 12.19-171](#), but do not disconnect the motor harness or remove the motor from the mounting plate.
8. Remove the exit plate, [PL 12.185 Item 22](#) (4 screws).

9. [Figure 1](#), Release the crease roll assembly at the rear.



2
Remove E-clip and release the arm.

1
Remove 3 screws.

NOTE: Flat washer between the bearing and arm

X-1-0511-A

Figure 1 Rear fasteners release

10. **Figure 2**, Release the crease roll assembly at the front.

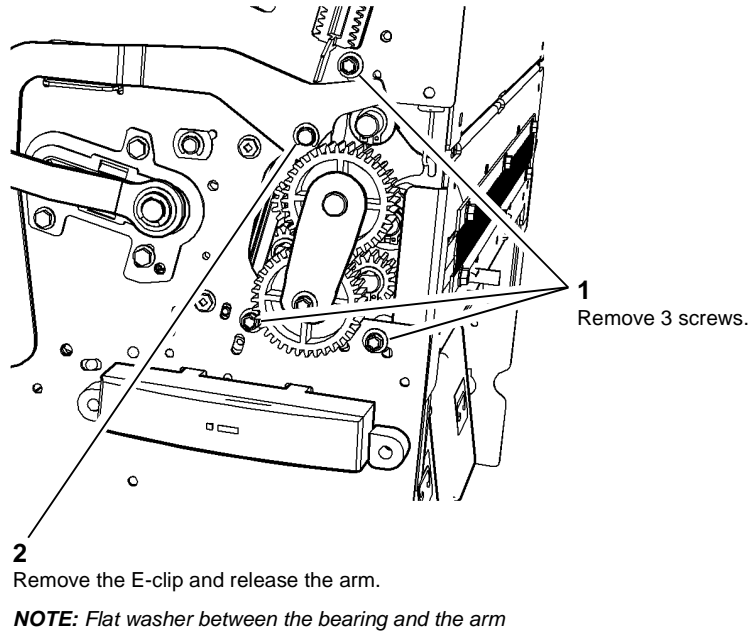


Figure 2 Front fasteners release

X-1-0512-A

11. **Figure 3**, remove the crease roll assembly.

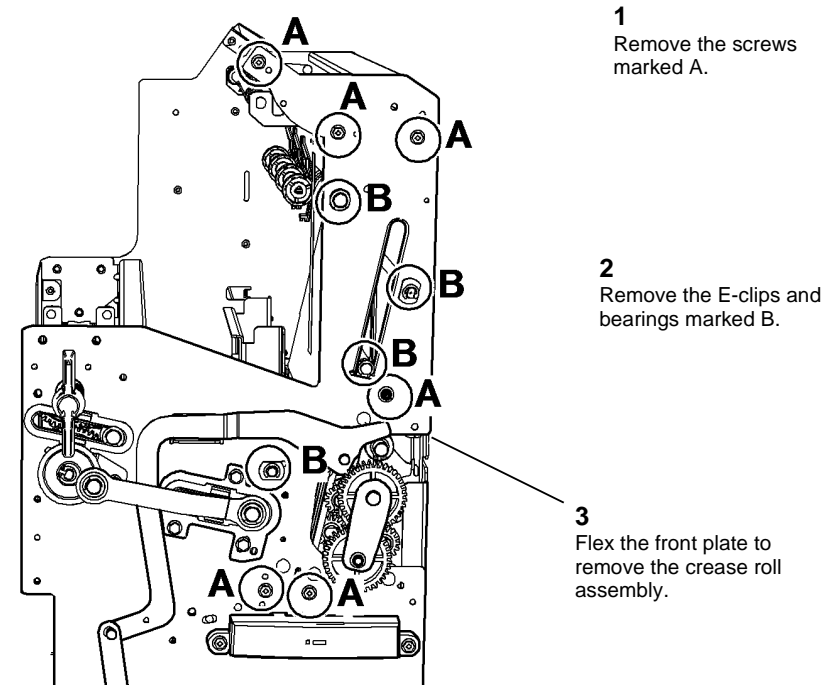


Figure 3 Release the front plate

-1-0513-A

12. Figure 4, remove the crease rolls.

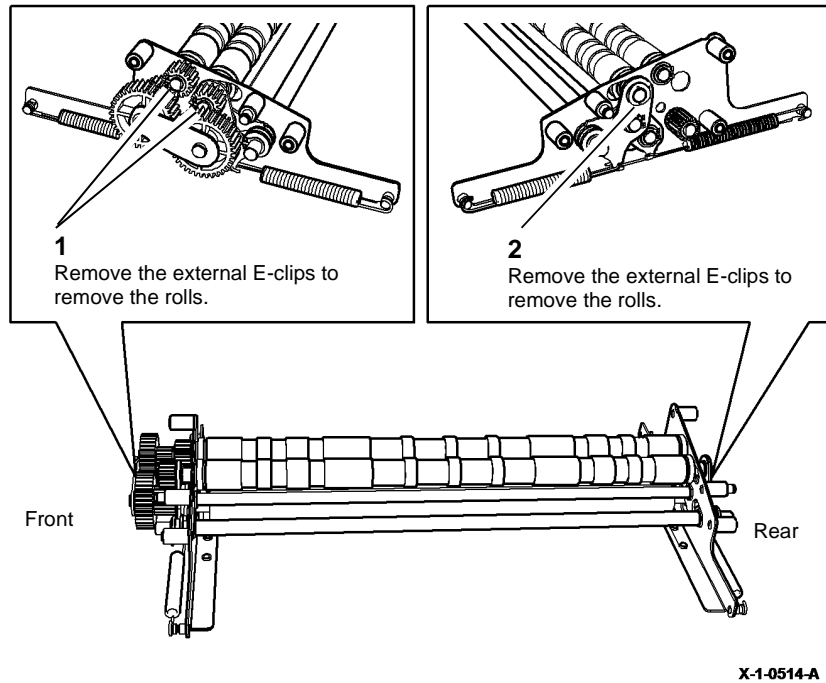


Figure 4 Remove the crease rolls

Replacement

Reverse the removal procedures to reinstall the crease roll assembly.

REP 12.53-171 HVF Paper Pusher

Parts List on [PL 12.115](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the front, rear and top covers [REP 12.1-171](#).
2. Remove the front and rear bin 1 main drive belts, [REP 12.38-171](#).
3. Remove the bin 1 elevator motor assembly, [REP 12.12-171](#).
4. Prepare to remove the paper pusher, [Figure 1](#).

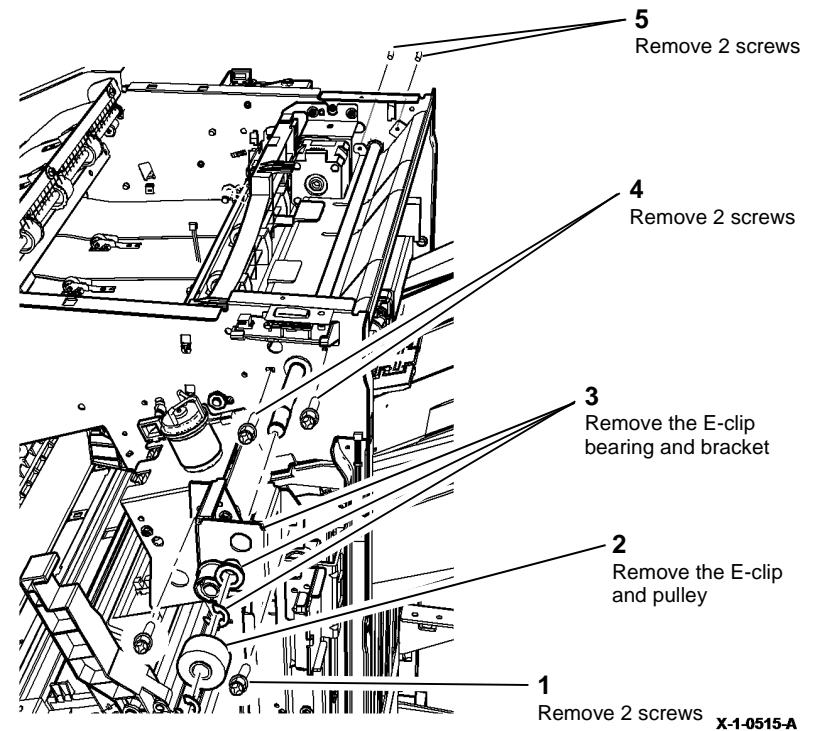


Figure 1 Preparation

5. Remove the paper pusher motor assembly, [REP 12.51-171](#).
6. Remove the pusher sensor assembly, [REP 12.54-171](#).
7. Remove the paper pusher, [Figure 2](#).

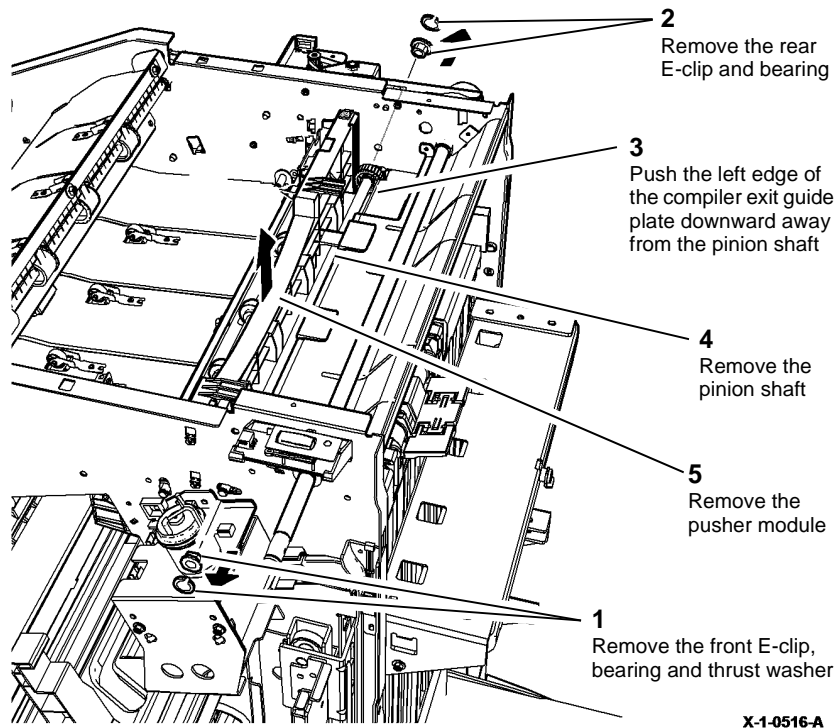


Figure 2 Paper pusher removal

X-1-0516-A

NOTE: The mylar strips and dampers are attached to the pusher module.

Replacement

Reverse the removal procedures to reinstall the compiler paper pusher.

REP 12.54-171 HVF Paper Pusher Sensor Assembly

Parts List on [PL 12.115](#).

Removal



Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the top cover [REP 12.1-171](#).
2. Remove the sensor assembly, [Figure 1](#).

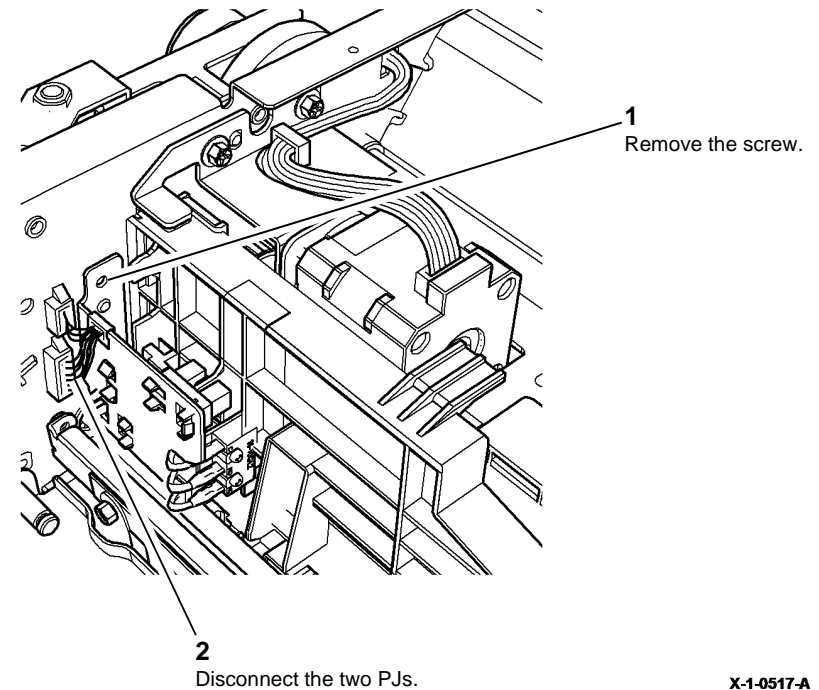


Figure 1 Pusher Sensor Assembly

X-1-0517-A

Replacement

Reverse the removal procedures to replace the Pusher sensor assembly.

REP 12.55-171 HVF Power Supply Unit

Parts List on [PL 12.140](#).

Removal



WARNING

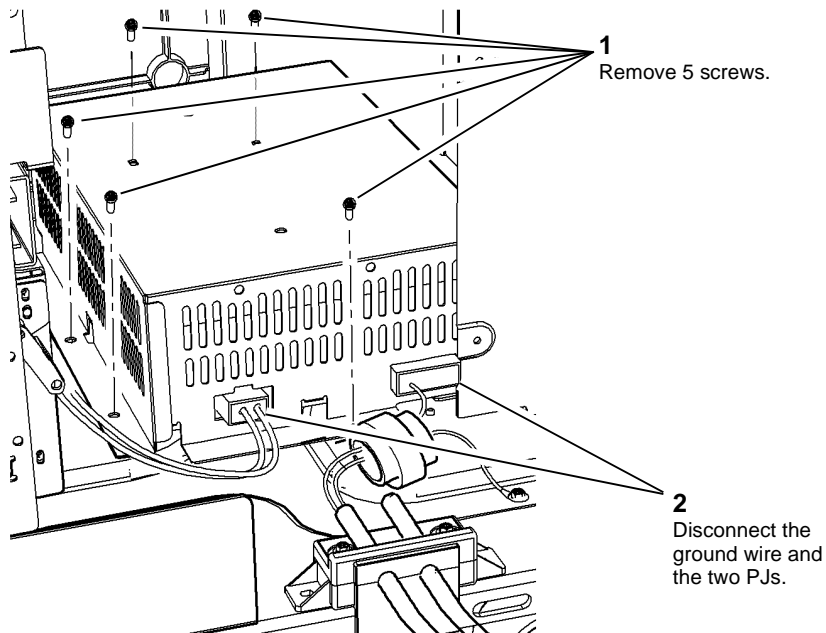
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the front and rear covers [REP 12.1-171](#).
2. Remove the power supply unit, [Figure 1](#).



X-1-0518-A

Figure 1 Power supply unit removal

Replacement

Reverse the removal procedures to replace the HVF power supply unit.

REP 12.56-171 BM Right Cover

Parts List on [PL 12.185](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the top cover, then the rear cover, [REP 12.1-171](#).
2. Open the BM front door and fully pull out the BM module.
3. Remove the crease blade knob (6d), [PL 12.150 Item 4](#).
4. Remove the crease roll handle (6c), [PL 12.150 Item 5](#).
5. Remove the BM front cover, [PL 12.150 Item 3](#).

6. **Figure 1**, remove the BM right cover.

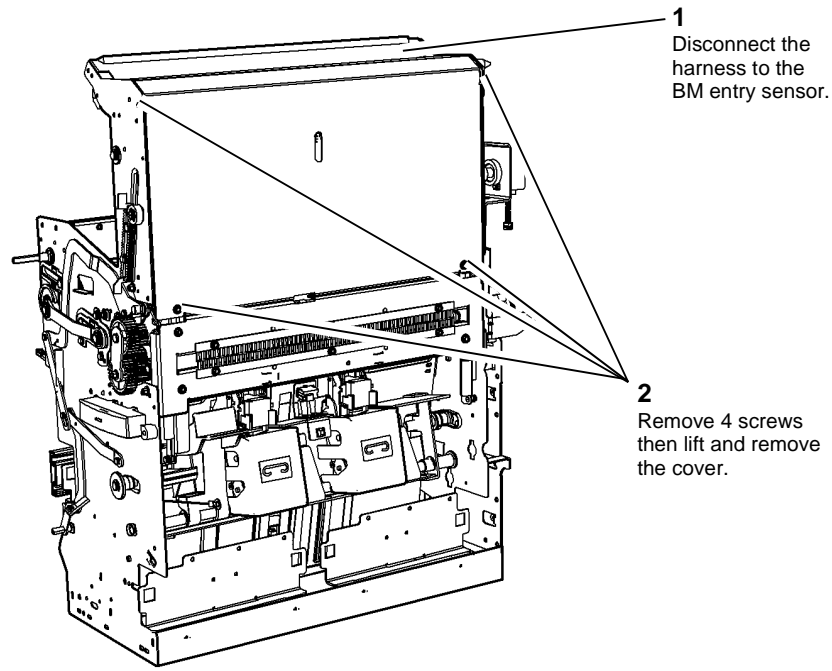


Figure 1 Right cover removal

X-1-0519-A

Replacement

Reverse the removal procedure to replace the BM right cover.

REP 12.57-171 HVF PWB

Parts List on **PL 12.140**.

Removal



Take care during this procedure. Sharp edges may be present that can cause injury.



Figure 1 ESD Symbol



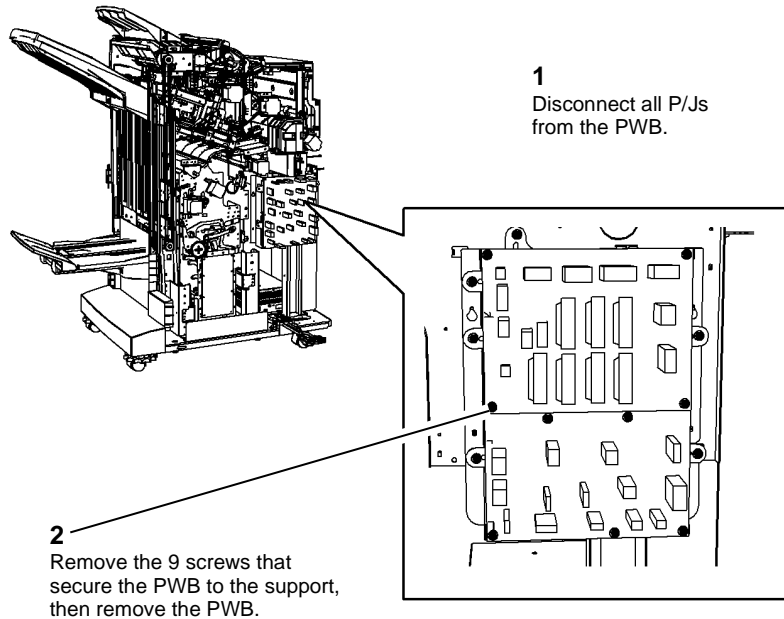
Ensure that ESD procedures are observed during the removal and installation of the HVF main PWB.



Switch off the electricity to the machine. Refer to **GP 14**. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the rear cover **REP 12.1-171**.

- Remove the HVF PWB, [Figure 2](#).



- Disconnect all P/J's from the PWB.

- Remove the 9 screws that secure the PWB to the support, then remove the PWB.

X-1-0520-A

Figure 2 HVF PWB removal

Replacement

Reverse the removal procedures to replace the HVF PWB.

REP 12.58-171 HVF Ejector Paddle Assembly

Parts List on [PL 12.110](#)

Removal

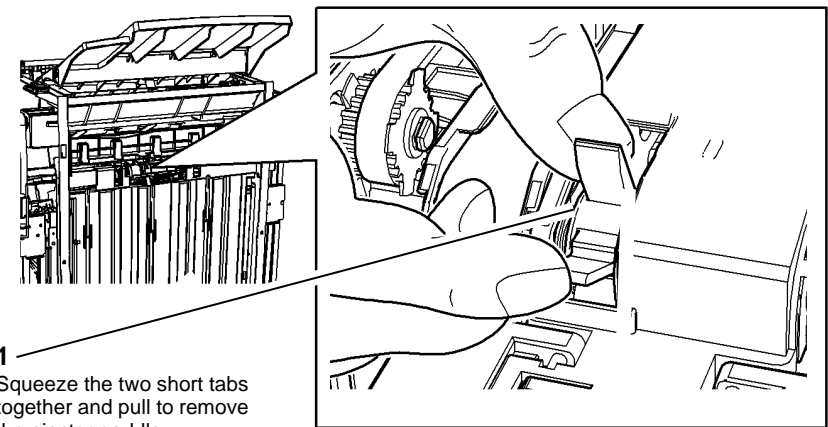

WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

- Rotate the ejector paddle assembly until the two short tabs are visible.
- Remove the ejector paddle assembly, [Figure 1](#).



- Squeeze the two short tabs together and pull to remove the ejector paddle.

X-1-0591-A

Figure 1 Ejector paddle removal

Replacement

1. Rotate the paddle shaft to ensure that the locating tab is uppermost, [Figure 2](#).
2. Ensure that the longest paddle is positioned towards the stacker tray.
3. Hold the paddle assembly by the two short tabs and clip onto the shaft.

NOTE: Ensure that the paddle assembly is correctly oriented to fit onto the plastic locating tab.

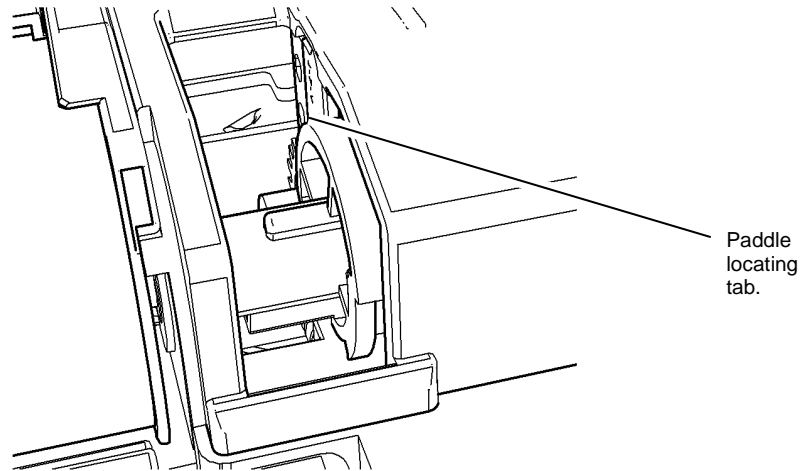


Figure 2 Paddle locating tab

X-1-0592-A

REP 12.59-171 BM Crease Roll Gate

Parts List on [PL 12.180](#).

Purpose

This procedure is used to repair the following components:

- Crease roll gate rack gear, [PL 12.180 Item 8](#).
- Crease roll gate rack drive gear, [PL 12.180 Item 13](#).
- Crease roll gate rack, [PL 12.180 Item 14](#).
- Crease roll gate front guide, [PL 12.180 Item 15](#).
- Crease roll gate rear guide, [PL 12.180 Item 16](#).
- Crease roll gate, [PL 12.180 Item 19](#).

Removal



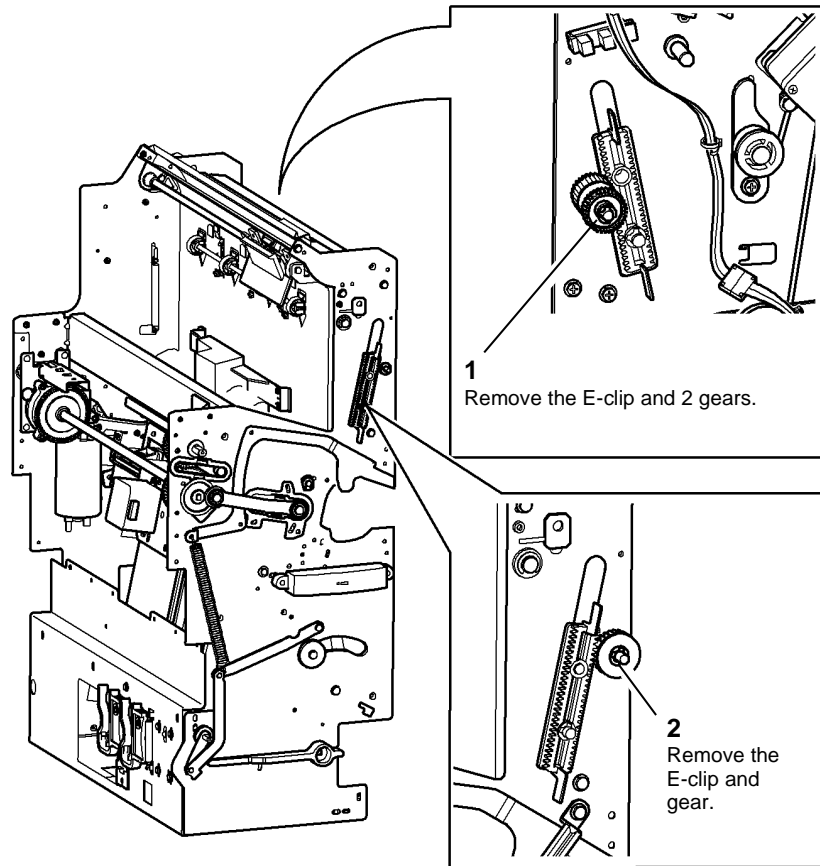
Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the HVF BM front door and fully pull out the BM.
2. Remove the crease blade knob (6d), [PL 12.150 Item 4](#).
3. Remove the crease roll handle (6c), [PL 12.150 Item 5](#).
4. Remove the BM front cover, [PL 12.150 Item 3](#).
5. Remove the BM right hand cover, [REP 12.56-171](#).
6. Remove the crease roll assembly, [REP 12.52-171](#).
7. Remove the crease roll gate motor, [REP 12.24-171](#).

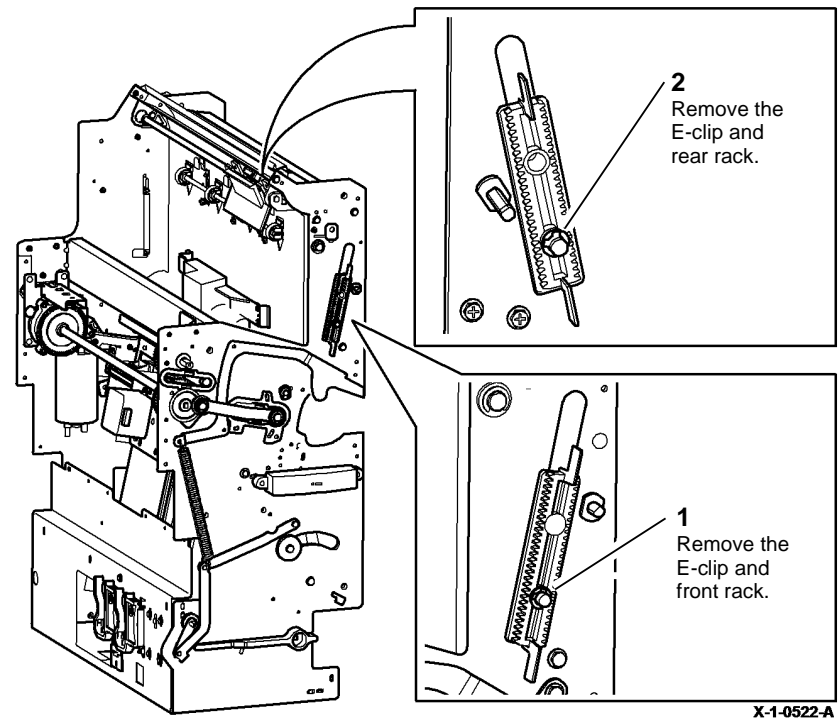
8. Figure 1, remove the gate rack gears.



X-1-0521-A

Figure 1 Removing gears

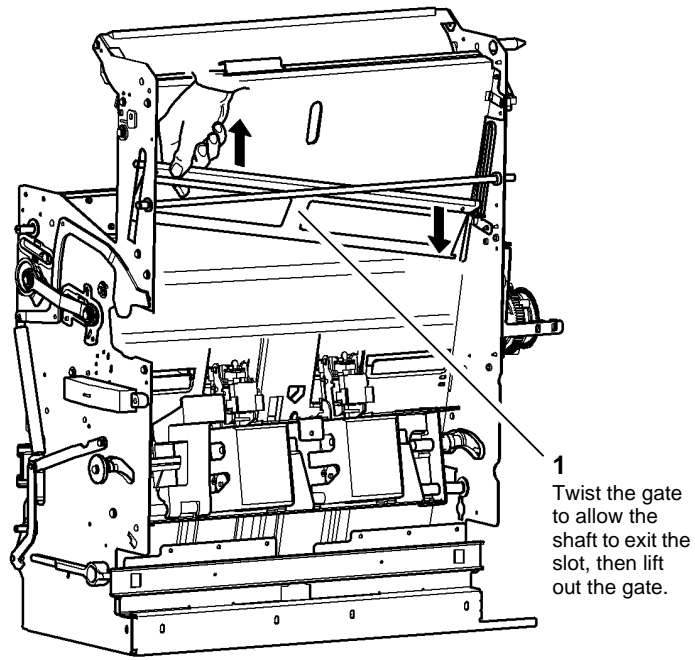
9. Figure 2, Remove the front and rear crease roll gate racks.



X-1-0522-A

Figure 2 Removing the racks

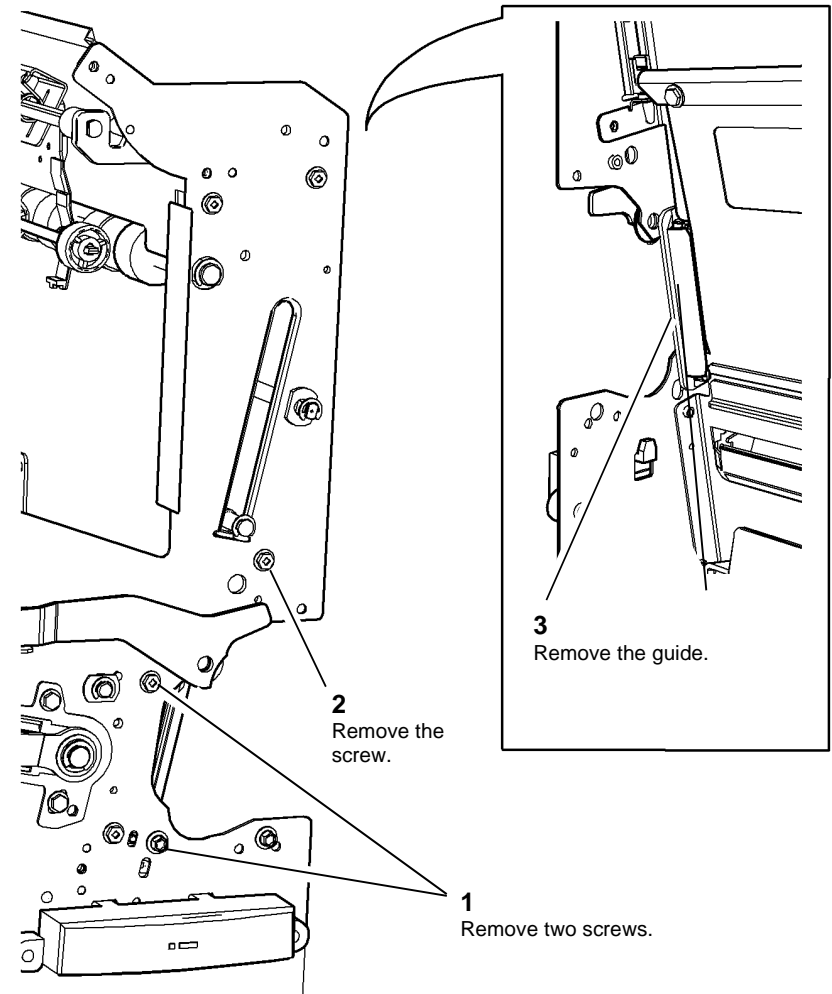
10. Figure 3, remove the crease roll gate.



X-1-0523-A

Figure 3 Gate removal

11. Figure 4, remove the grease roll gate front guide.



X-1-0524-A

Figure 4 Front guide removal

12. Figure 5, remove the grease roll gate rear guide.

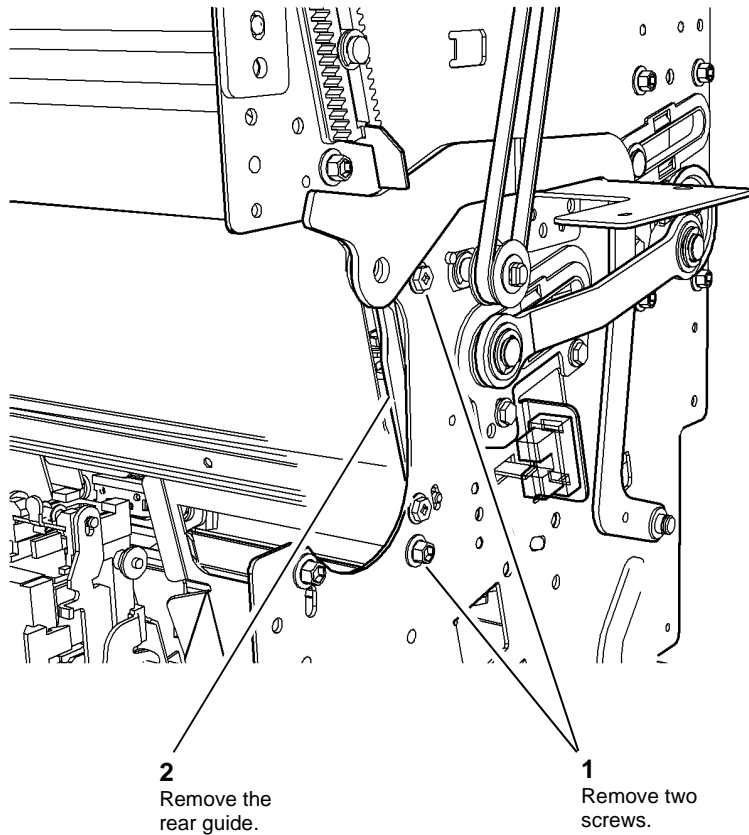


Figure 5 Rear guide removal

13. Loosen 3 screws to remove the crease roll gate shaft from the crease roll gate.

Replacement

Reverse the removal procedure to replace the crease roll gate assembly.



CAUTION

Ensure that the crease roll gate shaft is positioned centrally within the crease roll gate.

REP 12.60-171 BM Paper Guide

Parts List on [PL 12.150](#).

Purpose

This procedure is used to repair the following components:

- Paper guide, [PL 12.150 Item 7](#).
- Nip spring, [PL 12.150 Item 9](#).
- Nip roll, [PL 12.150 Item 10](#).
- Nip shaft, [PL 12.150 Item 11](#).

NOTE: If only new nip components are being installed, the BM paper guide assembly does not need to be removed.

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

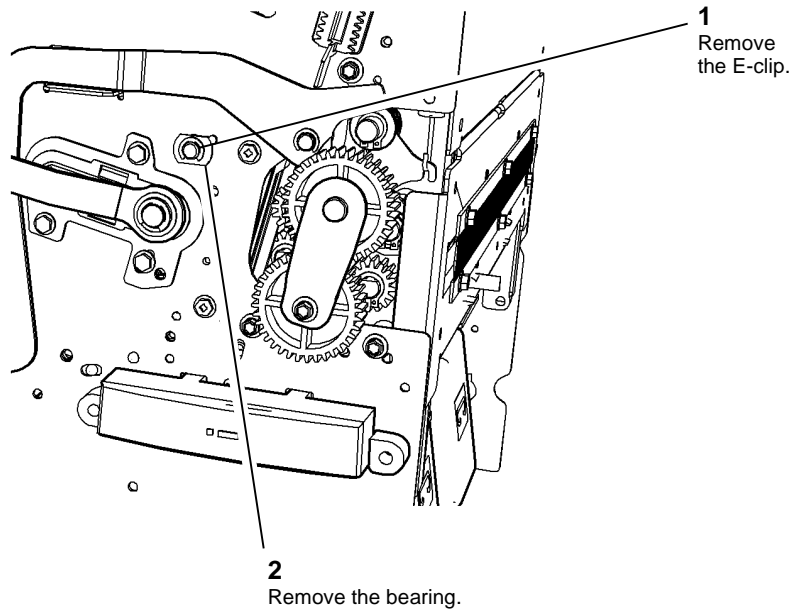


WARNING

Switch off the electricity to the machine [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the BM front door and fully pull out the BM.
2. Rotate the crease roll handle (6c) fully counterclockwise.
3. Remove the crease blade knob (6d), [PL 12.150 Item 4](#).
4. Remove the crease roll handle (6c), [PL 12.150 Item 5](#).
5. Remove the BM front cover, [PL 12.150 Item 3](#).

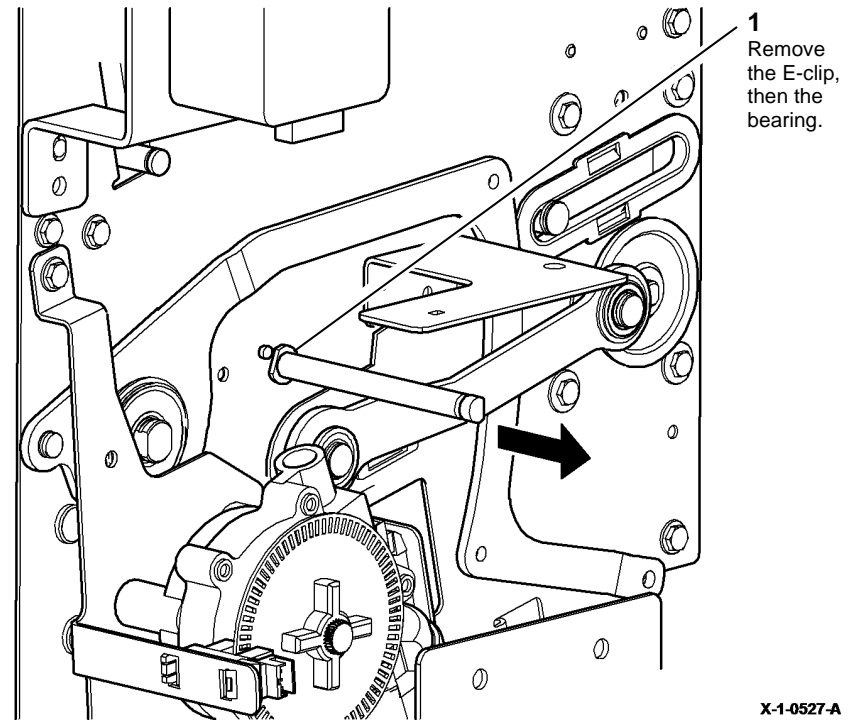
6. Figure 1, remove the front bearing.



X-1-0526-A

Figure 1 Front bearing removal

7. Figure 2, remove the rear bearing.



X-1-0527-A

Figure 2 Rear bearing removal

8. **Figure 3**, remove the BM paper guide assembly.

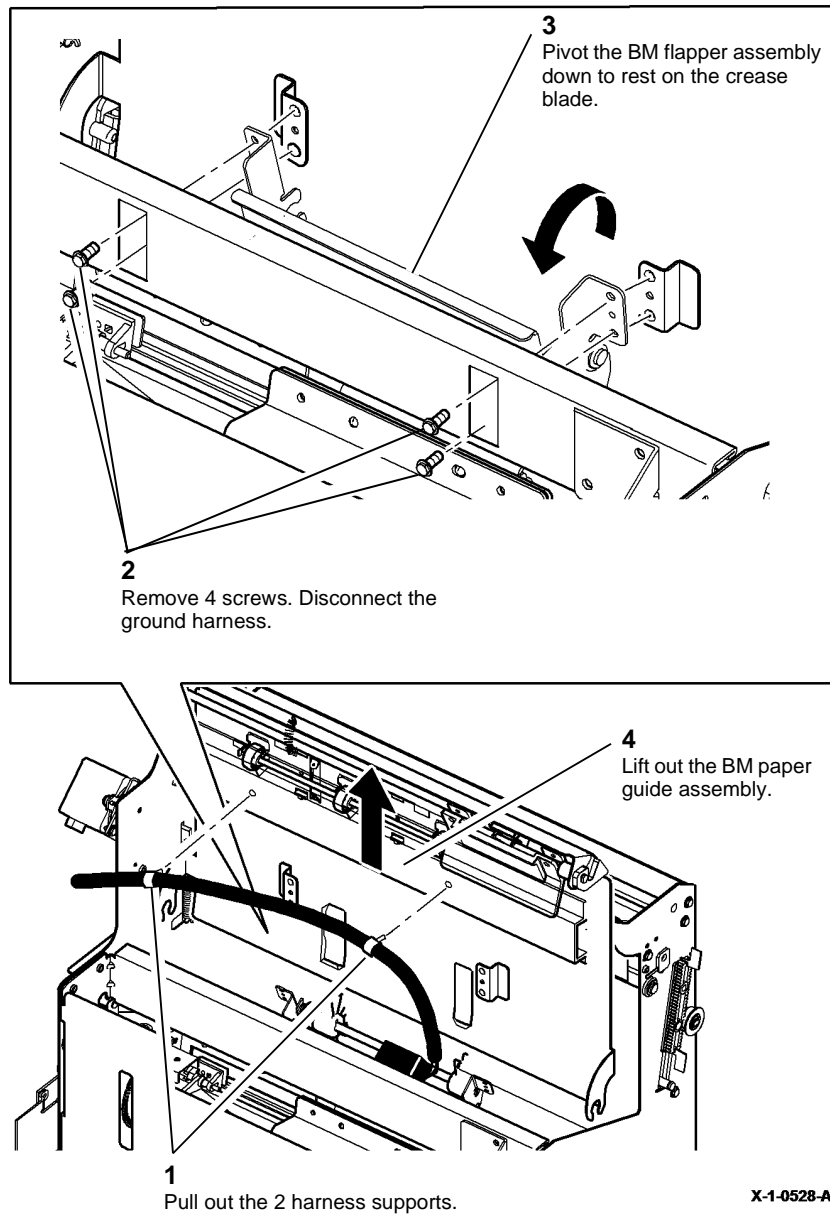


Figure 3 Paper guide assembly removal

9. **Figure 4**, remove the components from the BM paper guide assembly.

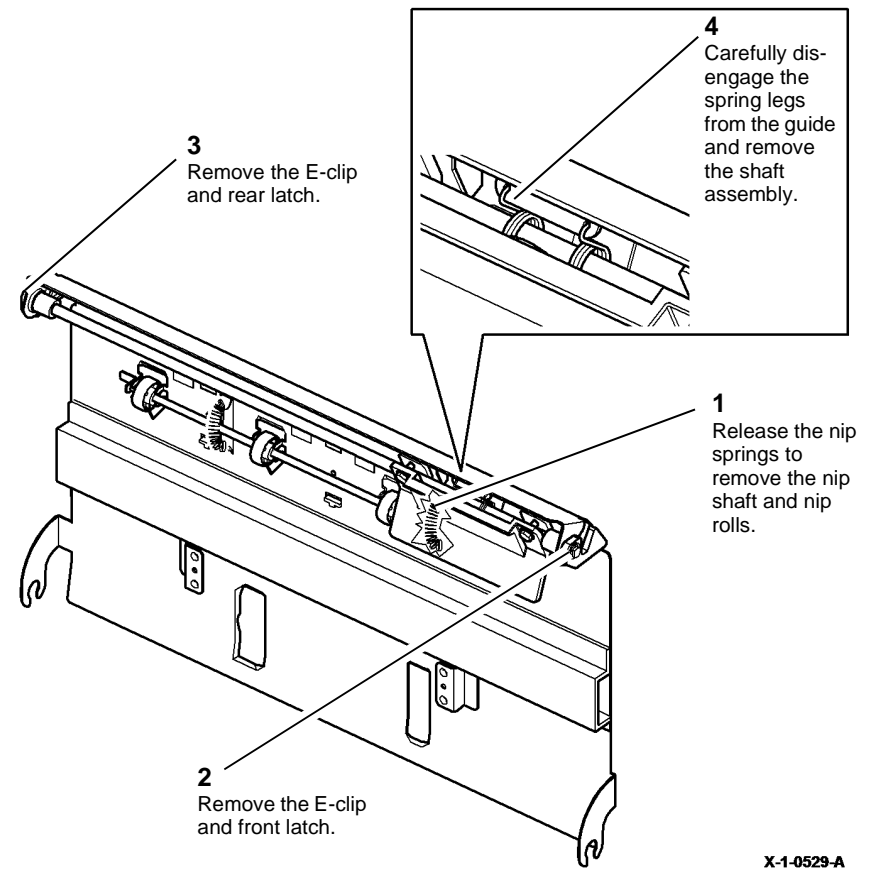


Figure 4 Paper guide dismantling

Replacement

Reverse the removal procedure to replace the BM paper guide.

REP 12.61-171 BM Module

Parts List on [PL 12.145](#).

Removal



WARNING

Mandatory safety warning. This procedure must be performed by 2 people. The module is heavy.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

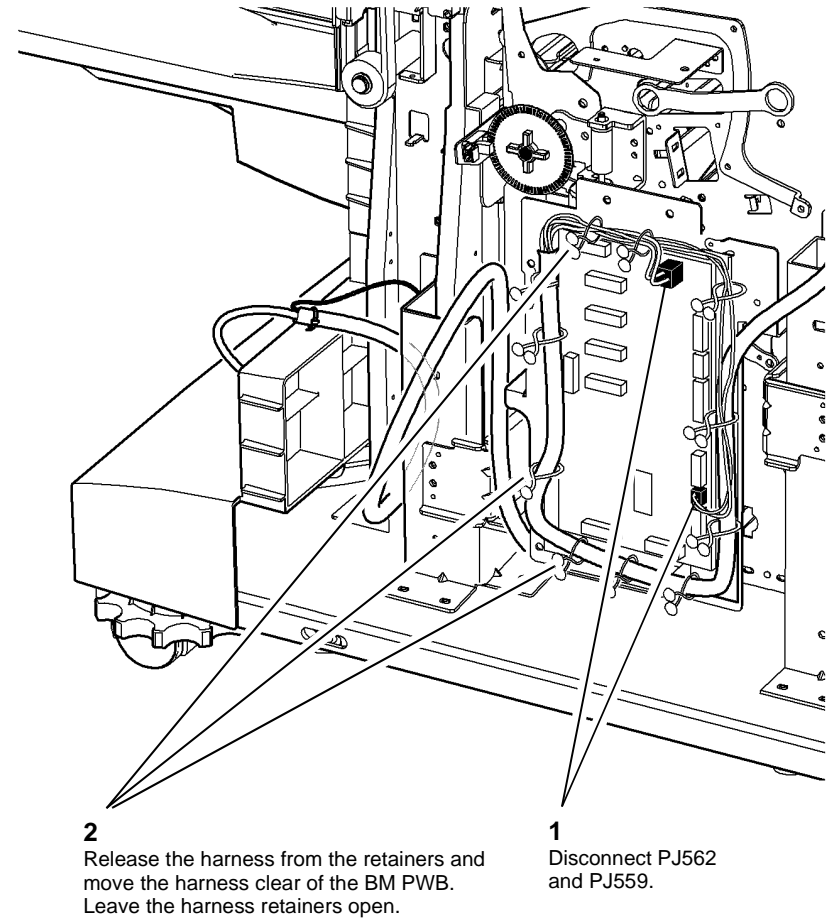


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the top cover, then the rear cover, [REP 12.1-171](#).

2. [Figure 1](#), disconnect PJ562 and PJ559 from the BM PWB.



2
Release the harness from the retainers and move the harness clear of the BM PWB. Leave the harness retainers open.

1
Disconnect PJ562 and PJ559.

X-1-0530-A

Figure 1 Disconnect the PJs

3. **Figure 2**, disconnect the harness from bin 2.

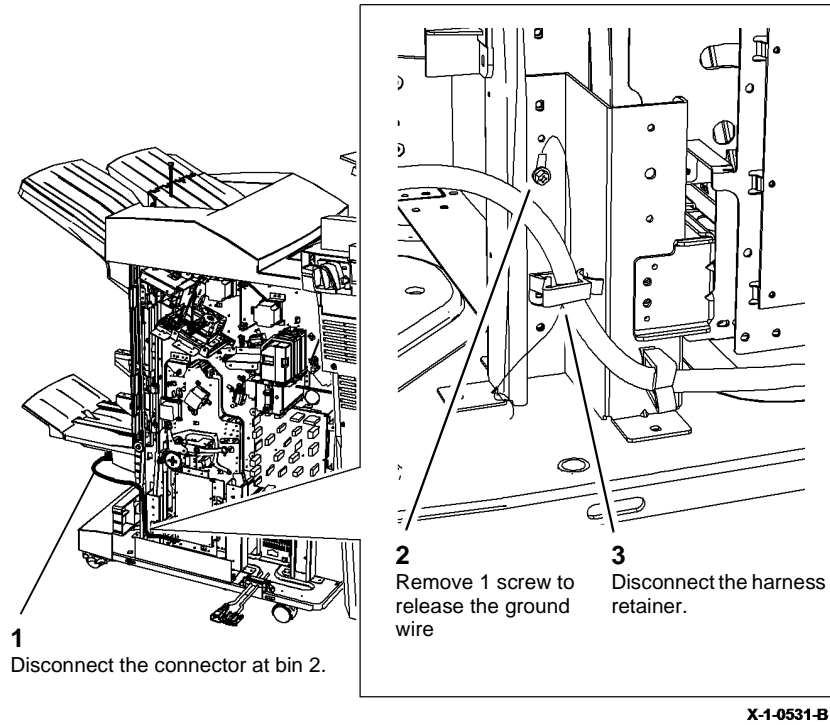


Figure 2 Disconnect the harness

4. Secure the harness to the BM PWB harness retainers, **Figure 1**. Use as many of the harness retainers as necessary to temporarily secure the bin 2 harness to the BM PWB so that the harness will not snag when the BM module is removed.

5. **Figure 3**, prepare to remove the BM module.

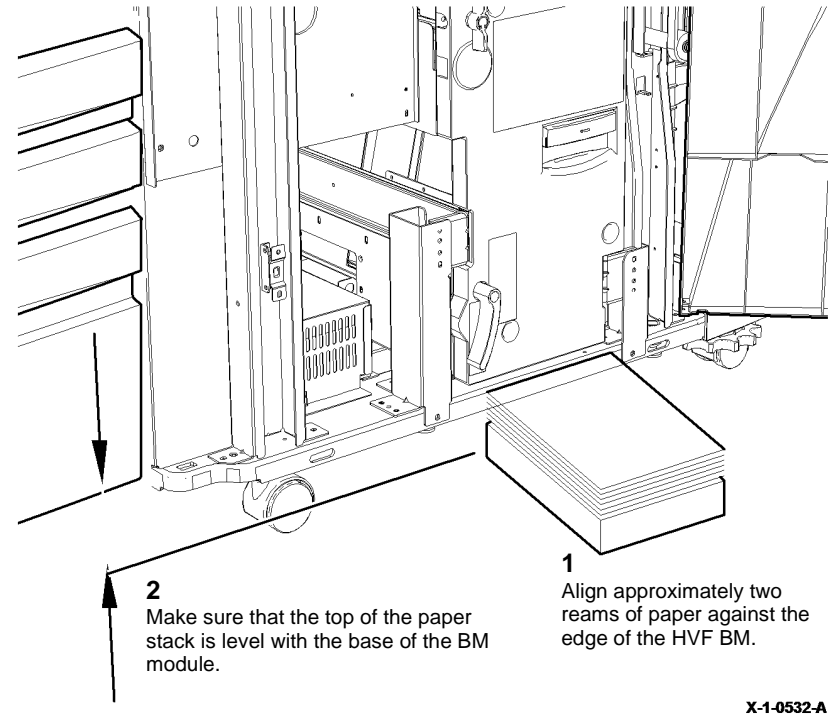
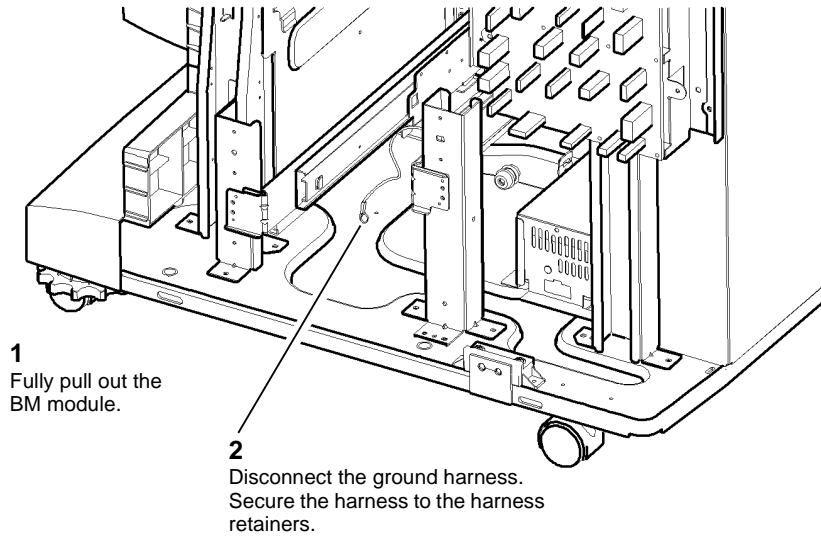


Figure 3 Preparation

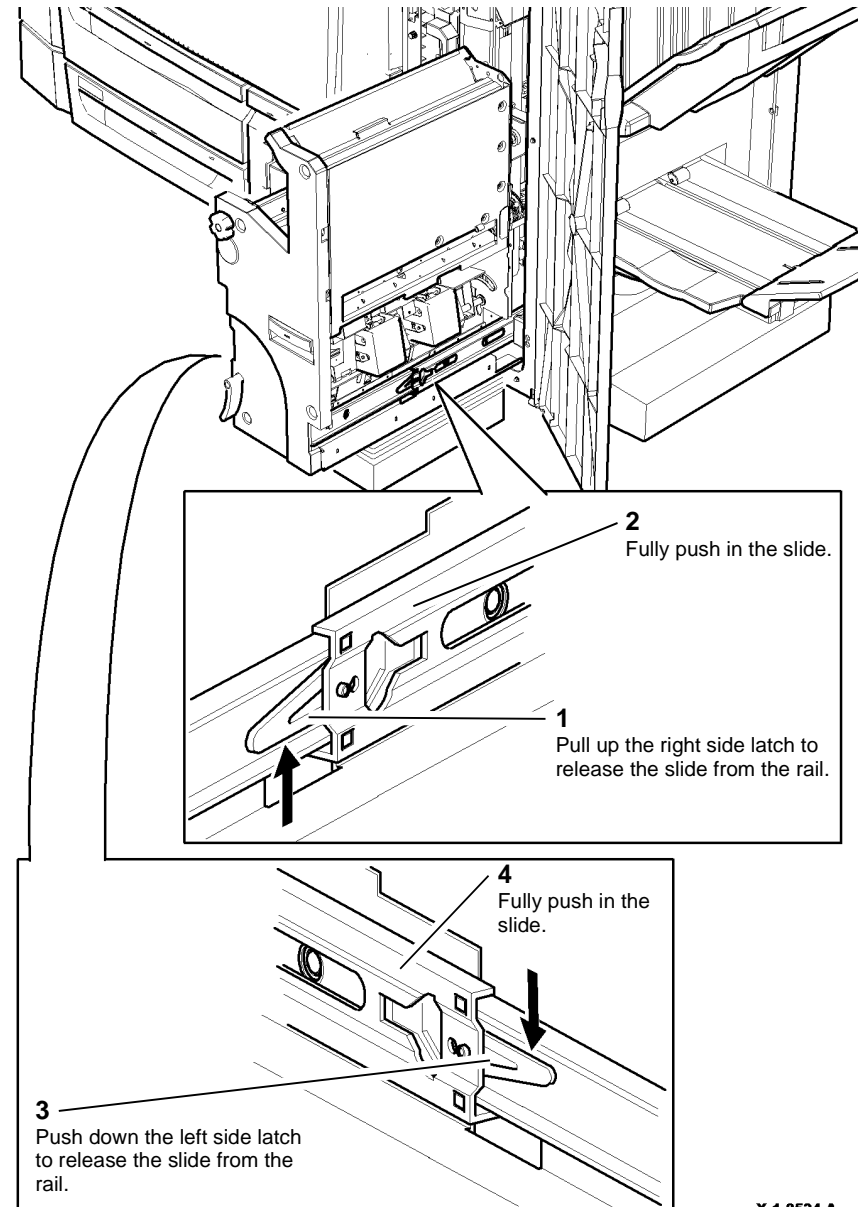
6. **Figure 4**, prepare to remove the BM module.



X-1-0533-A

Figure 4 Preparation

7. **Figure 5**, Release the latches.



X-1-0534-A

Figure 5 Releasing the latches


WARNING

Use safe handling procedures when removing the module. Refer to **GP 16**. The module is heavy.


WARNING

Mandatory safety warning. This procedure must be performed by 2 people. The module is heavy.

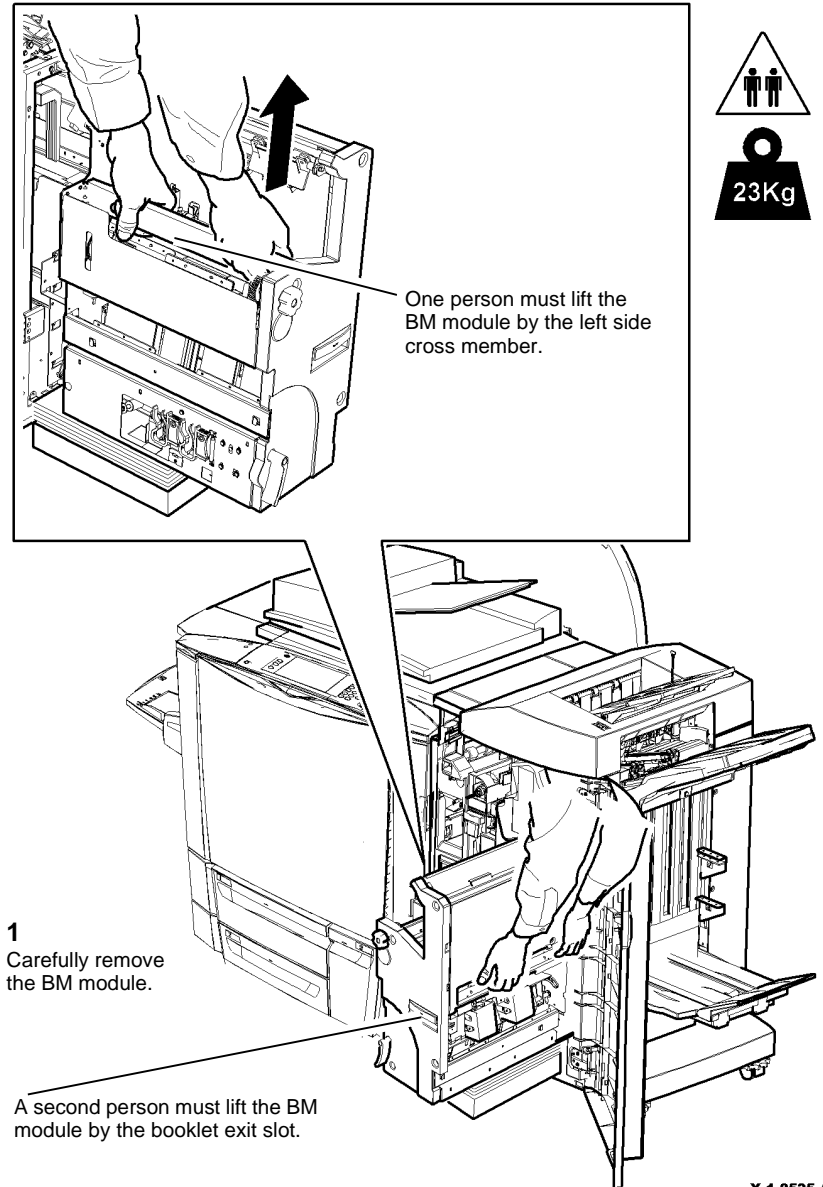

CAUTION

Do not damage the BM front cover when the BM module is removed.

NOTE: The BM module weight is 23 Kg (50.6 lb.).

NOTE: The BM catch will spring to the rear when the BM module is removed. Refer to **Figure 7**.

8. **Figure 6**, remove the BM module.



X-1-0535-A

Figure 6 Remove the BM module

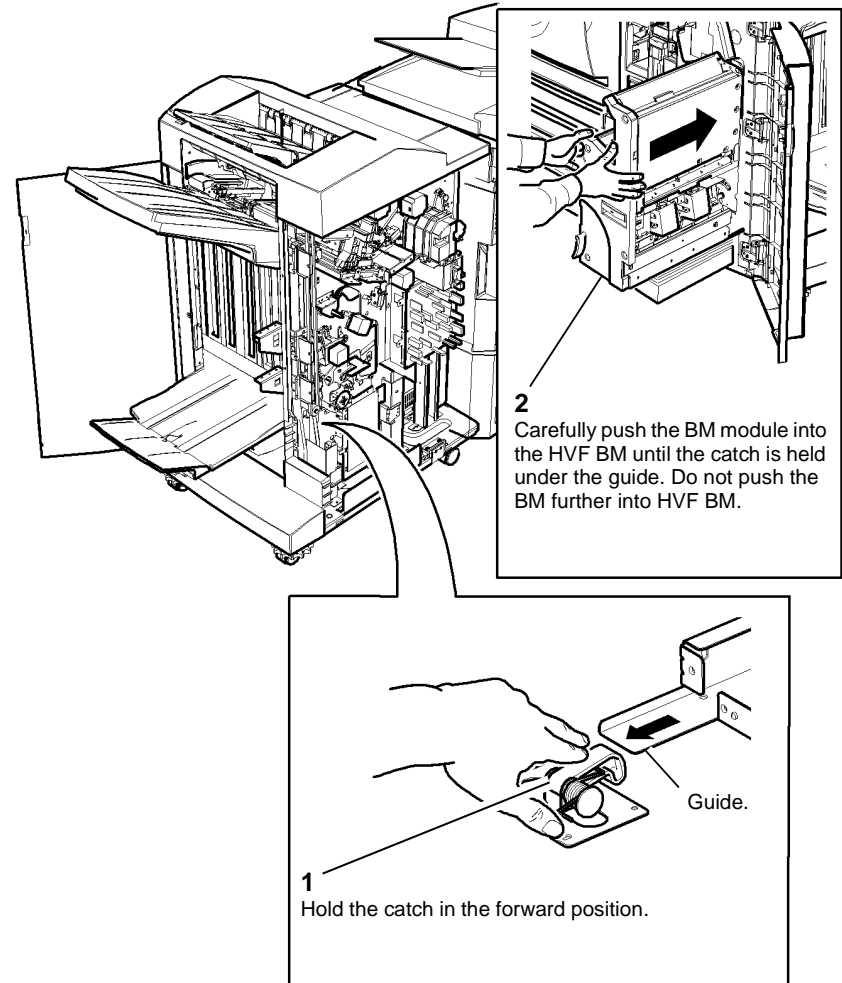
Replacement



CAUTION

Do not damage the harnesses when the BM module is installed. Ensure that the rails are correctly aligned with the slides.

1. Put the BM module on the paper stack in front of the HVF BM.
2. Ensure the bin 2 harness and the ground harnesses are secured to the BM PWB harness retainers, [Figure 1](#). Use as many of the harness retainers as necessary to temporarily secure the bin 2 harness to the BM PWB so that the harness will not snag when the BM module is installed.
3. If a new BM is to be installed, perform the following:
 - a. Unlatch the slides from the new BM module. Refer to [Figure 5](#).
 - b. Install the new BM module onto the existing rails in the HVF BM.
4. [Figure 7](#), prepare to install the BM module.



X-1-0536-A

Figure 7 Position of the catch

5. Reverse the removal procedure to replace the BM module.



CAUTION

Ensure the BM harness and bin 2 harness are correctly positioned in the harness retainers so that harnesses are not damaged when the BM is moved to the extremities of its travel.

6. Perform the [312D-171](#) Booklet Quality RAP.

REP 12.62-171 BM Slide Assembly

Parts List on [PL 12.145](#).

Removal



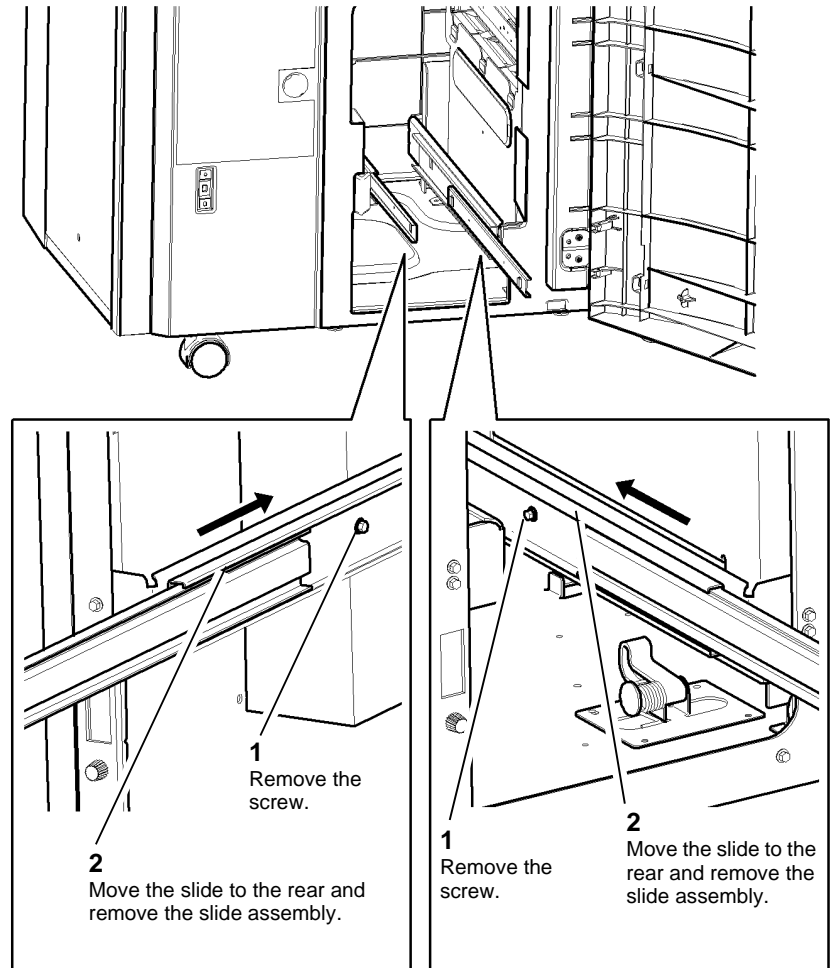
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the BM module, [REP 12.61-171](#).
2. Remove the BM front cover, [PL 12.150](#) Item 3.

3. [Figure 1](#), Remove the slide assemblies from the HVF BM frame.



X-1-0537-A

Figure 1 Slide assembly removal

4. **Figure 2.** Remove the bracket and the slide rail from the right side of the BM module.

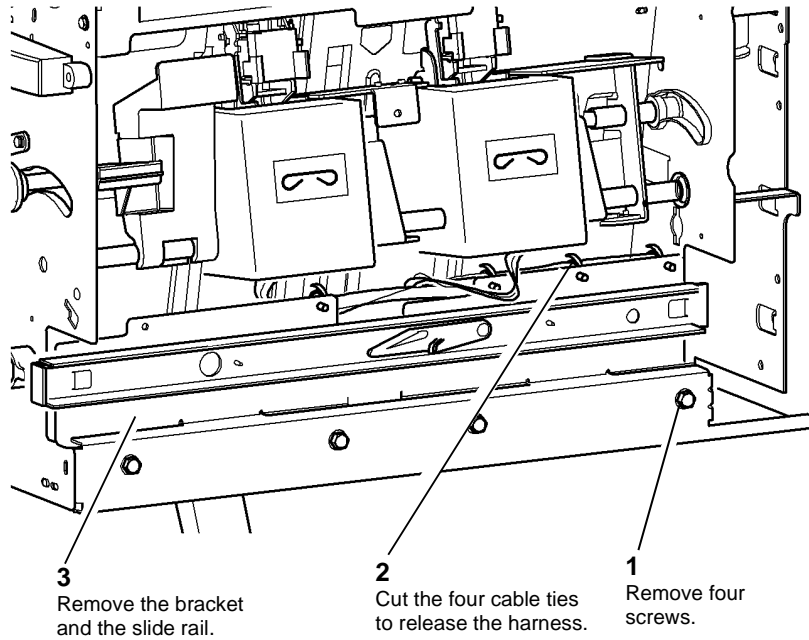


Figure 2 Bracket and rail removal

X-1-0538-A

5. **Figure 3.** Remove the two brackets from the slide rail.

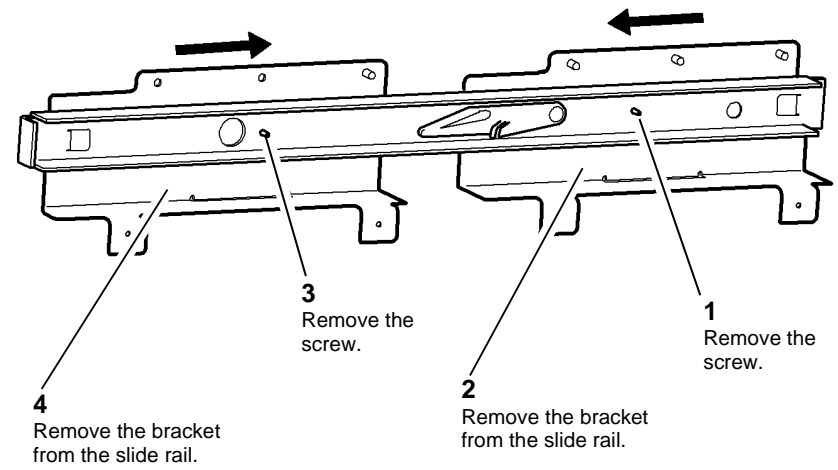


Figure 3 Bracket removal

X-1-0539-A

6. **Figure 4**, Remove the bracket and the slide rail from the left side of the BM module.

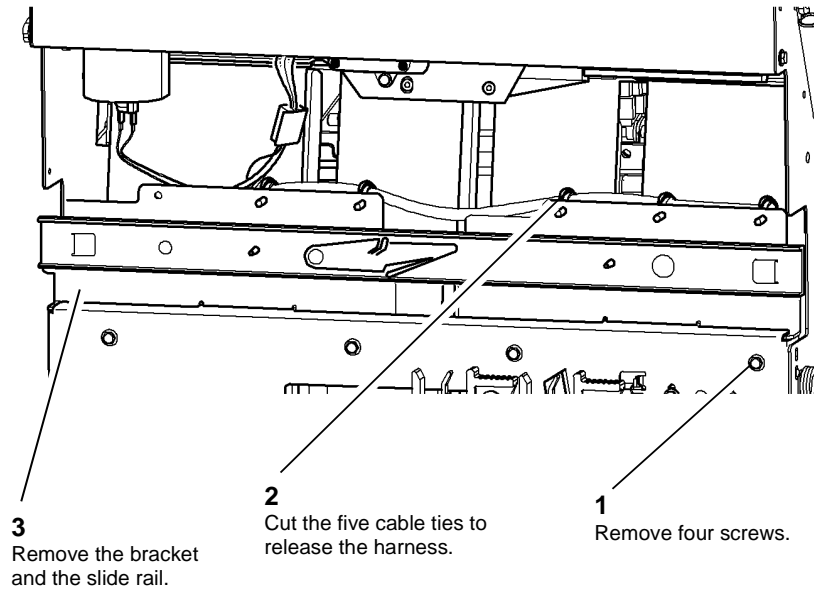
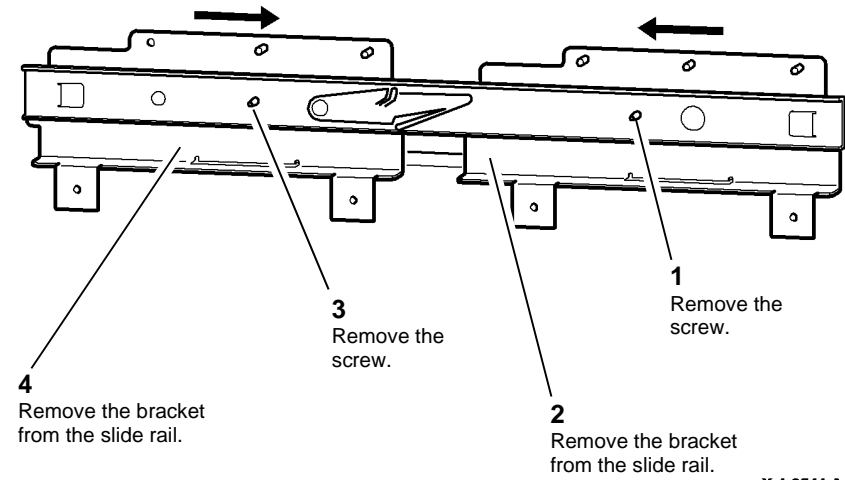


Figure 4 Bracket and rail removal

X-1-0540-A

7. **Figure 5**, Remove the two brackets from the slide rail



X-1-0541-A

Figure 5 Bracket removal

Replacement

1. Reverse the removal procedure to replace the slide assembly.
2. Ensure that all of the cable ties are installed and the harness are in the correct position.
3. Check that all of the PJ connections are connected.

REP 12.63-171 HVF Transport Motor 1

Parts List on [PL 12.120](#).

Removal



WARNING

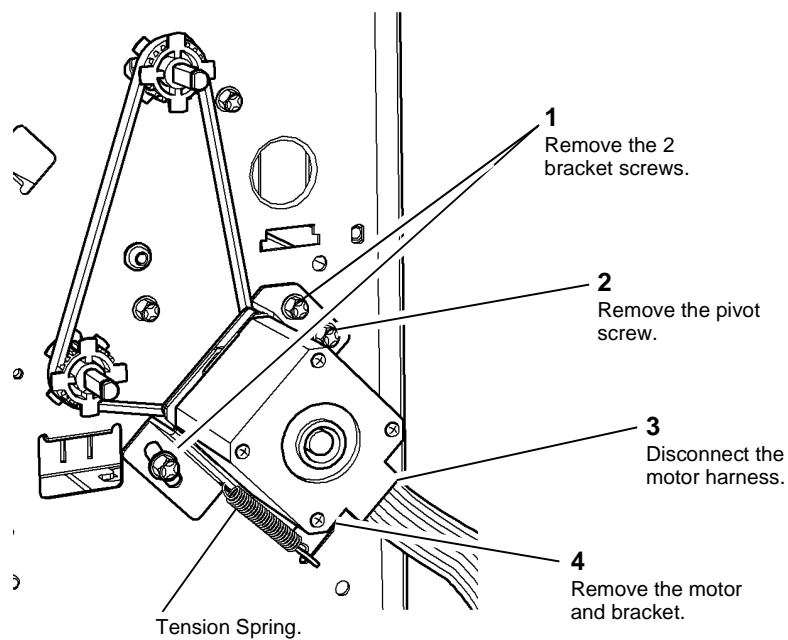
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the rear cover [REP 12.1-171](#).
2. Remove the transport motor 1 and bracket assembly, [Figure 1](#).



X-1-0542-A

Figure 1 Motor and bracket removal

3. Remove 2 screws and the ground wire to remove the motor and damper from the bracket.

Replacement

1. Reverse the removal procedures to replace the transport motor 1.
2. Set the belt tension [ADJ 12.10-171](#).

REP 12.64-171 HVF Bypass Feed Motor

Parts List on [PL 12.120](#).

Removal



WARNING

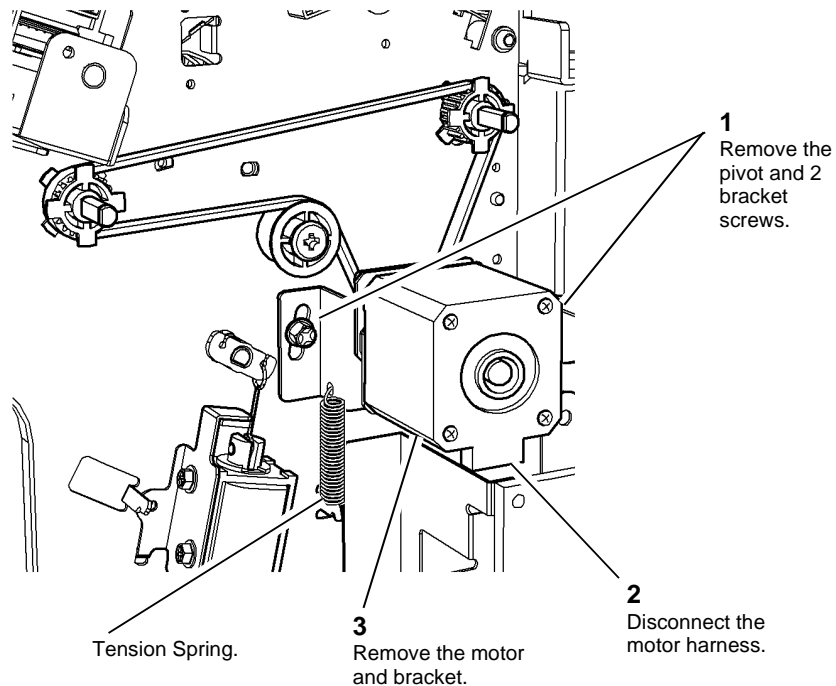
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the rear cover [REP 12.1-171](#).
2. Remove the bypass feed motor and bracket assembly, [Figure 1](#).



X-1-0543-A

Figure 1 Motor and bracket removal

3. Remove 2 screws and the ground wire to remove the motor and damper from the bracket.

REP 12.65-171 HVF Buffer Feed Motor

Parts List on [PL 12.120](#).

Removal



WARNING

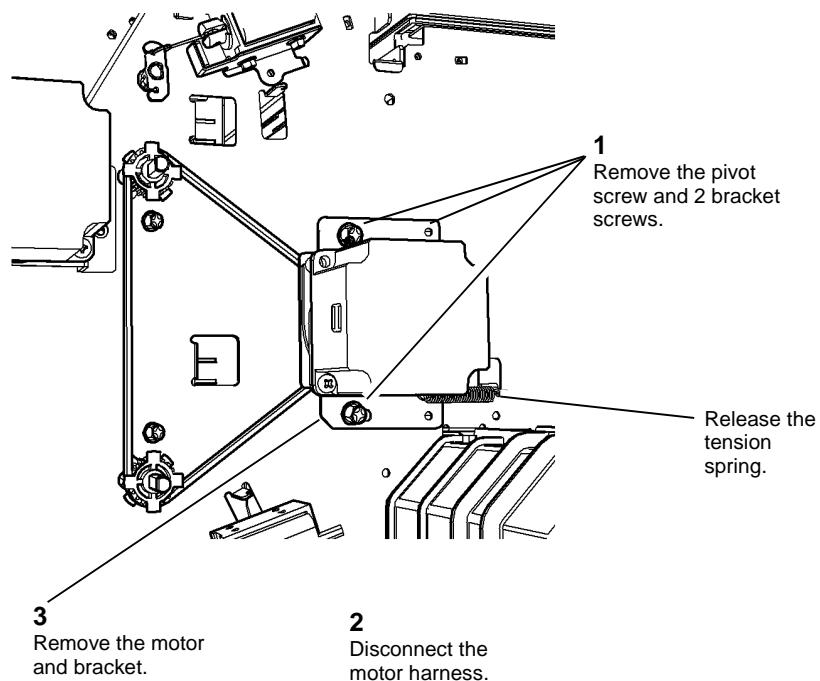
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the rear cover [REP 12.1-171](#).
2. Remove the buffer feed motor and bracket assembly, [Figure 1](#).



X-1-0544-A

Figure 1 Motor and bracket removal

3. Remove 2 screws and the ground wire to remove the motor and damper from the bracket.

Replacement

1. Reverse the removal procedures to replace the buffer feed motor.
2. Fit the pivot screw and set the belt tension, [ADJ 12.10-171](#).

REP 12.66-171 HVF Transport Motor 2

Parts List on [PL 12.120](#).

Removal



WARNING

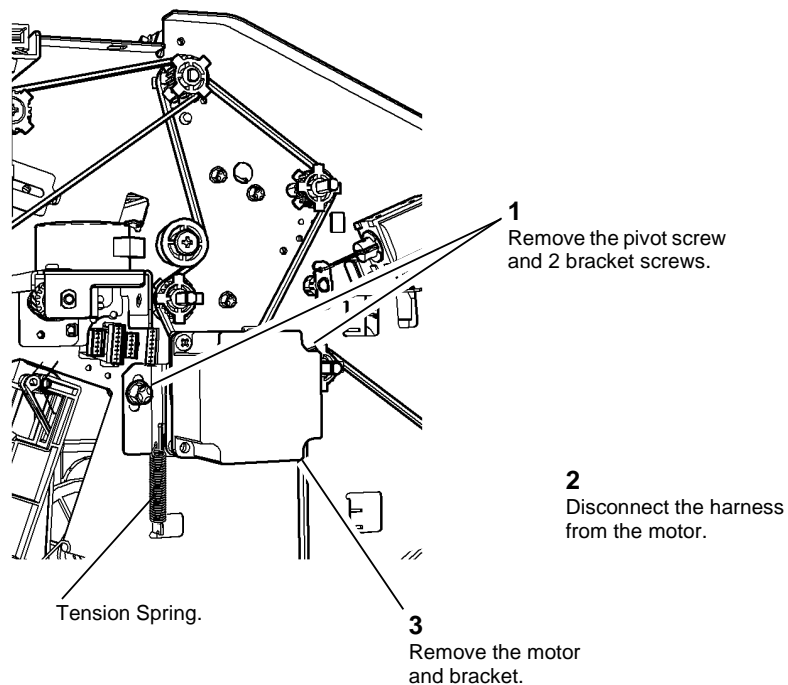
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the rear cover [REP 12.1-171](#).
2. Remove the transport motor 2 and bracket assembly, [Figure 1](#).



X-10545-A

Figure 1 Motor and bracket removal

3. Remove 2 screws and the ground wire to remove the motor and damper from the bracket.

REP 12.67-171 Tri-folder Covers

Parts List on [PL 12.200](#).

Removal



WARNING

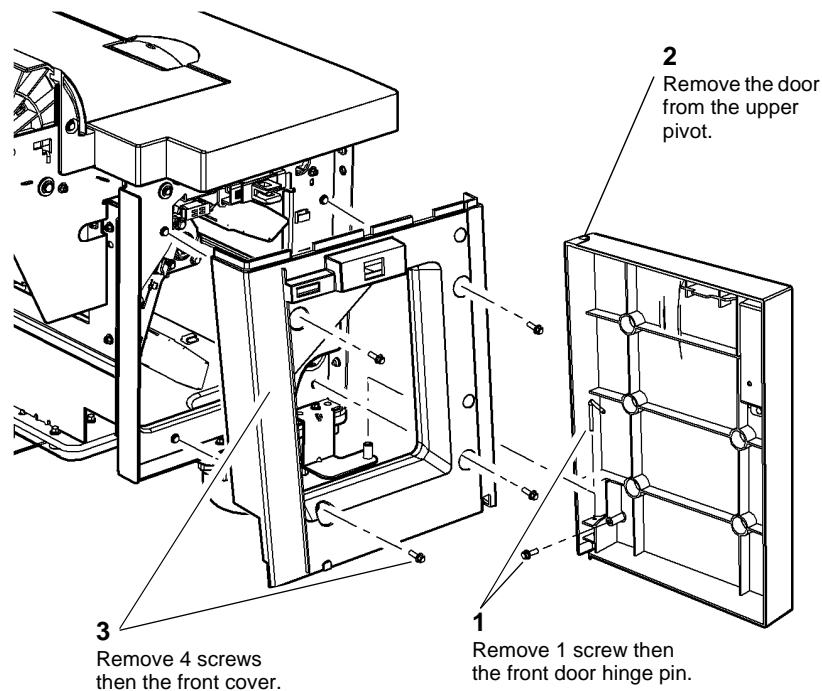
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the front door and the front cover as required, [Figure 1](#).

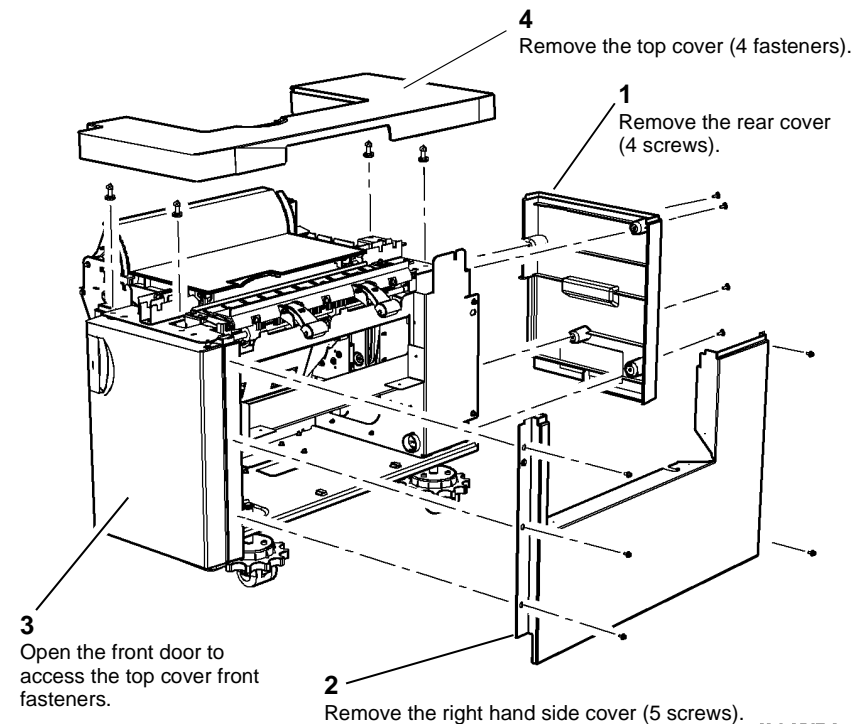


X-1-0546-A

Figure 1 Door and cover removal

2. Remove the rear cover, the top cover and the right side cover as required, [Figure 2](#).

NOTE: Open the top cover and remove the rear cover to access to the top cover rear fasteners and the top cover interlock sensor connector.



X-1-0547-A

Figure 2 Covers removal

Replacement

Reverse the removal procedures to reinstall the Tri-Folder covers.

REP 12.68-171 Tri-folder Drive Assembly

Parts List on [PL 12.205](#).

Removal



WARNING

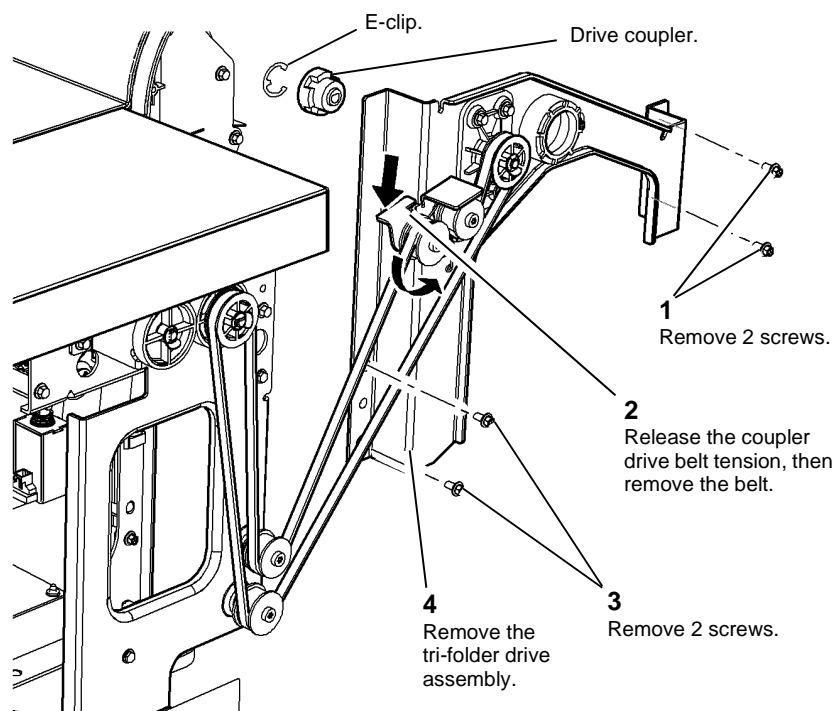
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the HVF rear cover, [REP 12.1-171](#).
2. Remove the tri-folder rear cover [REP 12.67-171](#).
3. Remove the tri-folder drive assembly, [Figure 1](#).



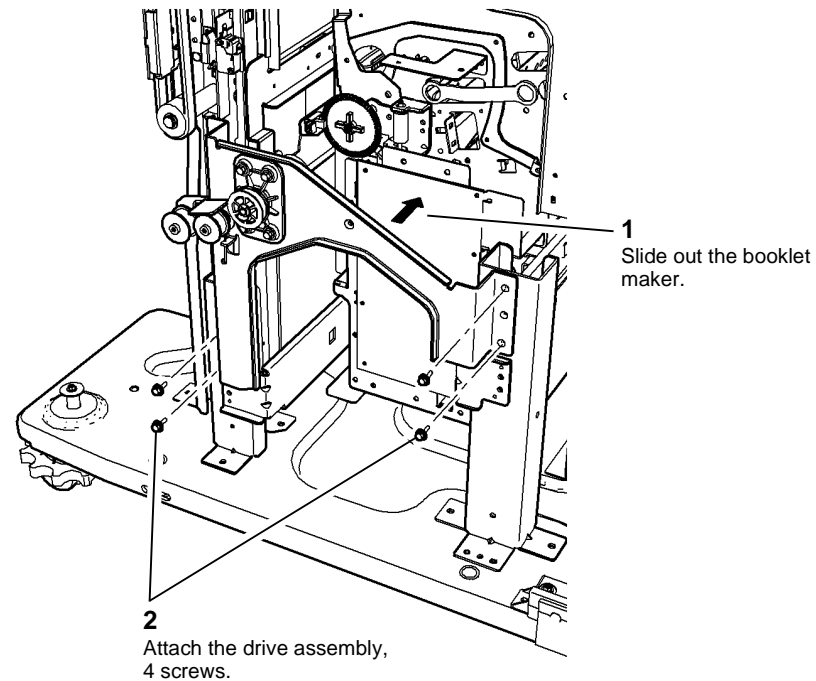
X-1-0548-A

Figure 1 Drive assembly removal

4. If necessary, remove the E-clip then remove the drive coupler, refer to [Figure 1](#).

Replacement

1. Detach the coupler alignment tool from the drive unit, refer to [Figure 1](#).
2. Install the drive assembly, [Figure 2](#).



X-1-0549-A

Figure 2 Drive assembly install

3. Centralize the coupler alignment tool onto the crease roll motor encoder disc, [PL 12.175 Item 13](#) and [Figure 3](#).
5. Loosen the drive unit retaining screws, [Figure 4](#).

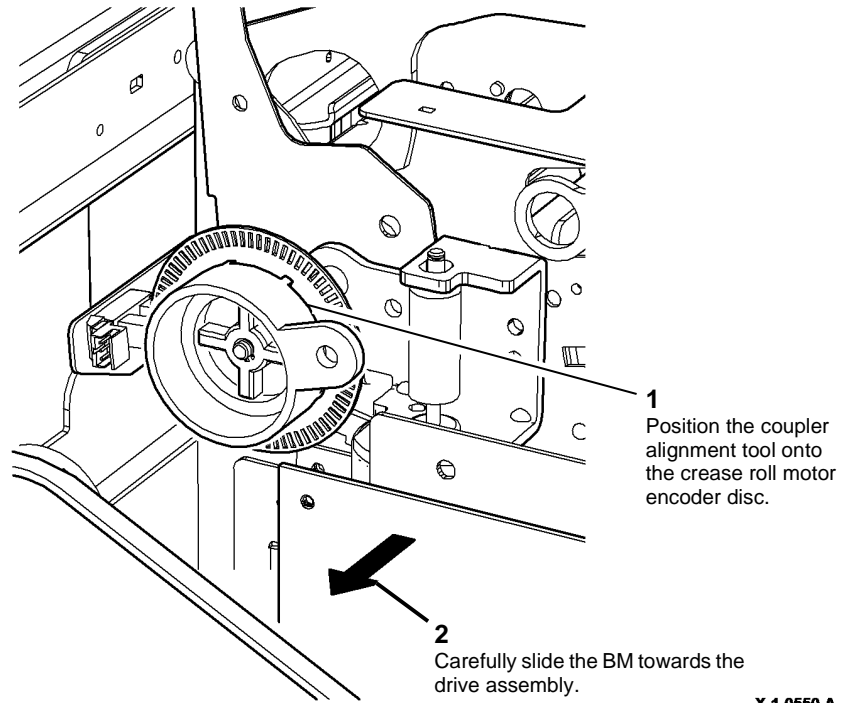


Figure 3 Alignment tool positioning

4. Prepare to centralize the drive coupler, refer to [Figure 1](#), with the HVF BM crease roll motor encoder disc, [Figure 3](#).

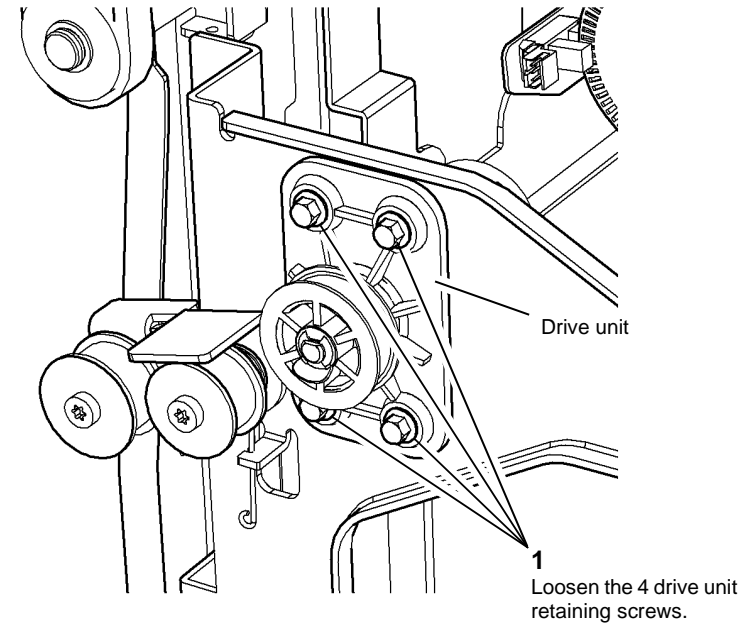


Figure 4 Drive unit preparation

X-1-0551-A

6. Centralize the coupler alignment tool with the drive unit coupler, [Figure 5](#).

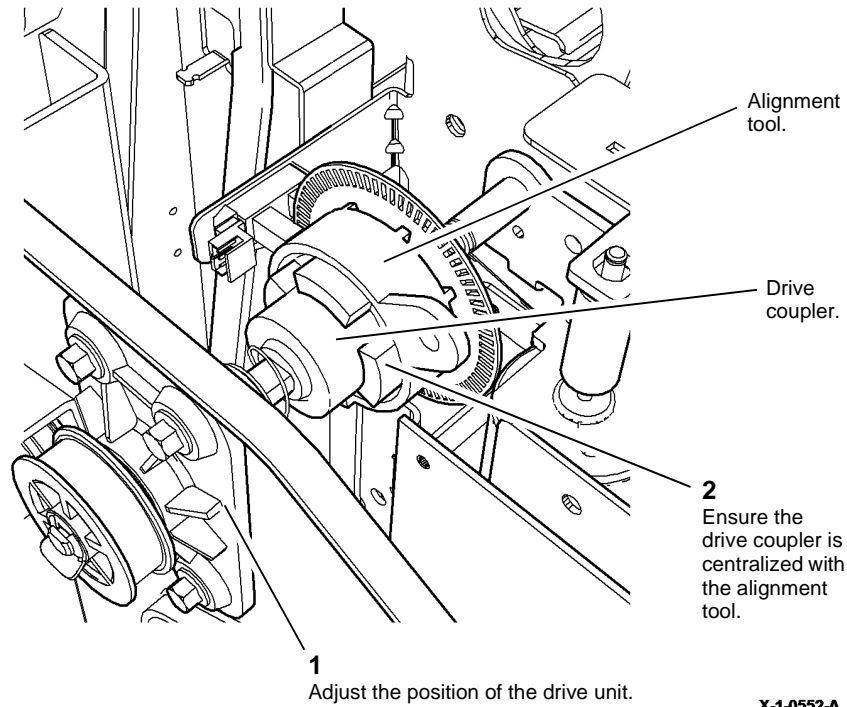


Figure 5 Drive coupler positioning

7. Secure the drive unit in the centralized position, [Figure 6](#).

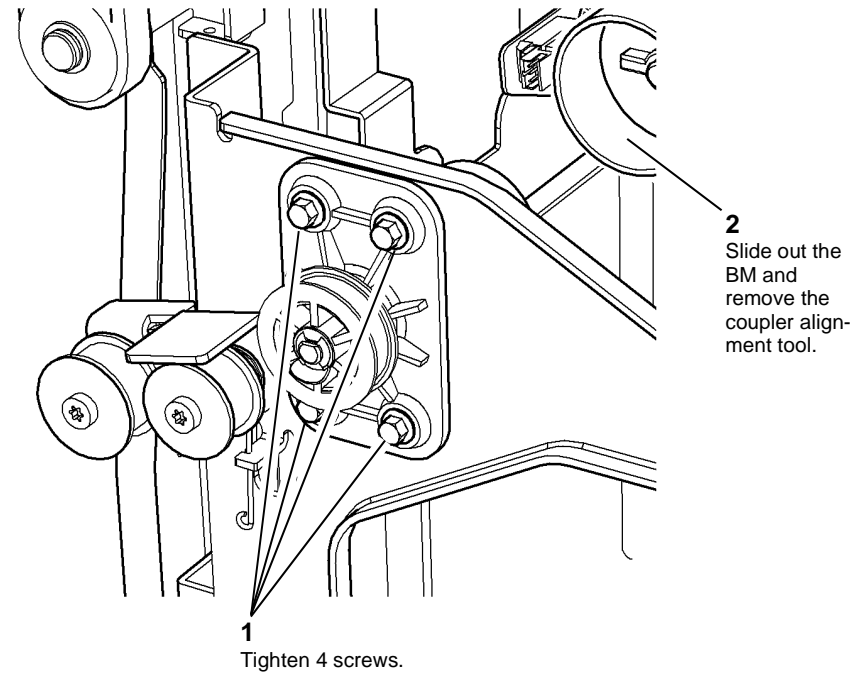


Figure 6 Secure the drive unit

8. Attach the alignment tool onto the drive assembly for future use.
9. Carefully slide back the BM and engage the drive unit coupler.
10. Check that the harnesses do not obstruct the BM crease roll motor encoder disc.

REP 12.69-171 Tri-folder Drive Coupling Assembly

Parts List on [PL 12.205](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the Tri-folder rear cover, [REP 12.67-171](#). Access is improved by removing the top cover.
2. Remove the drive coupling assembly bracket, [Figure 1](#).

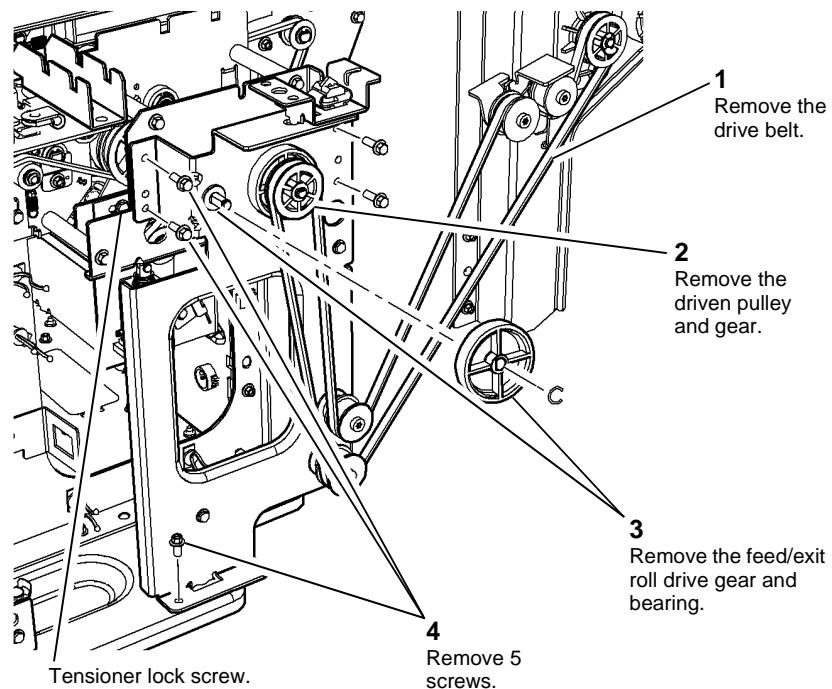


Figure 1 Bracket removal

3. Slacken the tensioner lock screw and move the crease roll tensioner pulley to the left, then tighten the lock screw, [Figure 1](#).

4. Remove the clutch and bearing from the idler assembly bracket, [Figure 2](#).

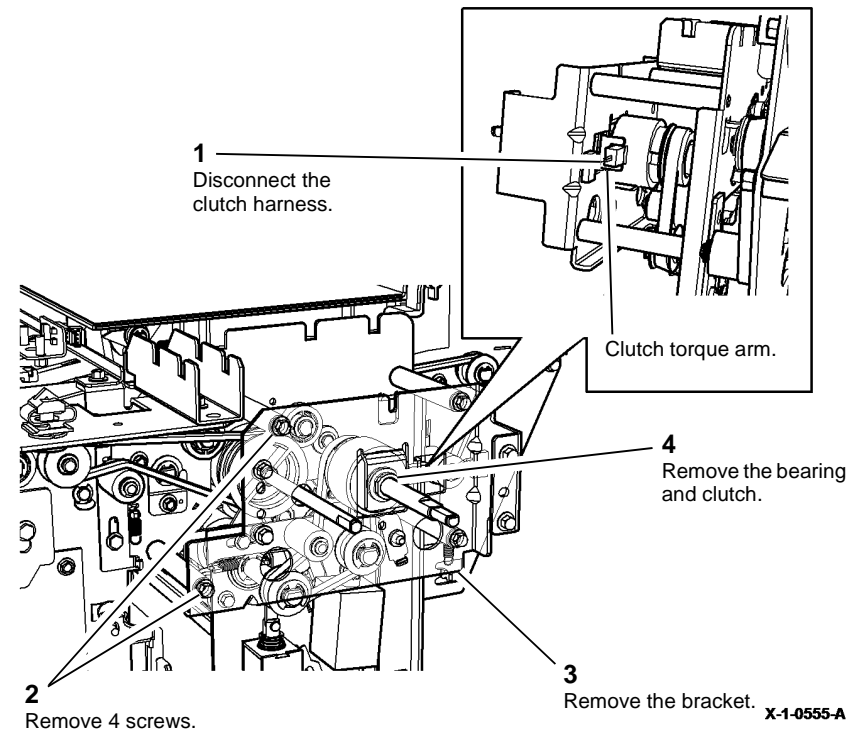


Figure 2 Clutch and bearing removal

Replacement

1. Reverse the removal procedures to reinstall the crease roll clutch and drive coupling assembly.
2. Replace the idler assembly with the smooth side of the crease roll drive belt towards the idler, then fit the drive belt over the clutch pulley, [Figure 2](#).
3. Position the clutch torque arm in the slot in the idler bracket, See [Figure 2](#) insert.
4. Perform [ADJ 12.10-171](#) Motor Drive Belt Tensioning.

REP 12.70-171 Tri-Folder Feed Roller and Drive Belt

Parts List on [PL 12.205](#).

Removal



WARNING

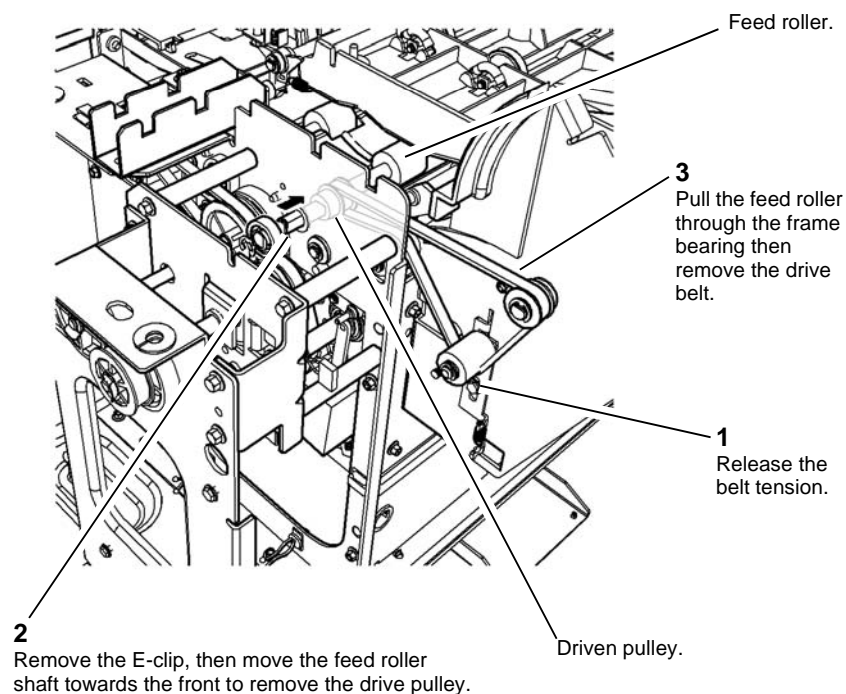
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Un-dock the tri-folder from the HVF and move the unit to the right to access the left side of the frame, [REP 12.99-171](#).
2. Remove the drive belt, [Figure 1](#).



X-1-0556-A

Figure 1 Feed roller and drive belt

3. If required, remove the feed roller shaft front E-clip and bearing and remove the feed roller assembly from the tri-folder.

Replacement

1. Reverse the removal procedures to replace the feed roller and drive belt.
2. Before docking the tri-folder unit to the HVF, perform [ADJ 12.10-171](#), Motor Drive Belt Tensioning.

REP 12.71-171 Tri-Folder Assist Gate Solenoid

Parts List on [PL 12.215](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the tri-folder front door, or remove the bin 2 assembly, then remove the tri-folder rear cover, [REP 12.67-171](#).
2. Remove the assist gate solenoid, [Figure 1](#).

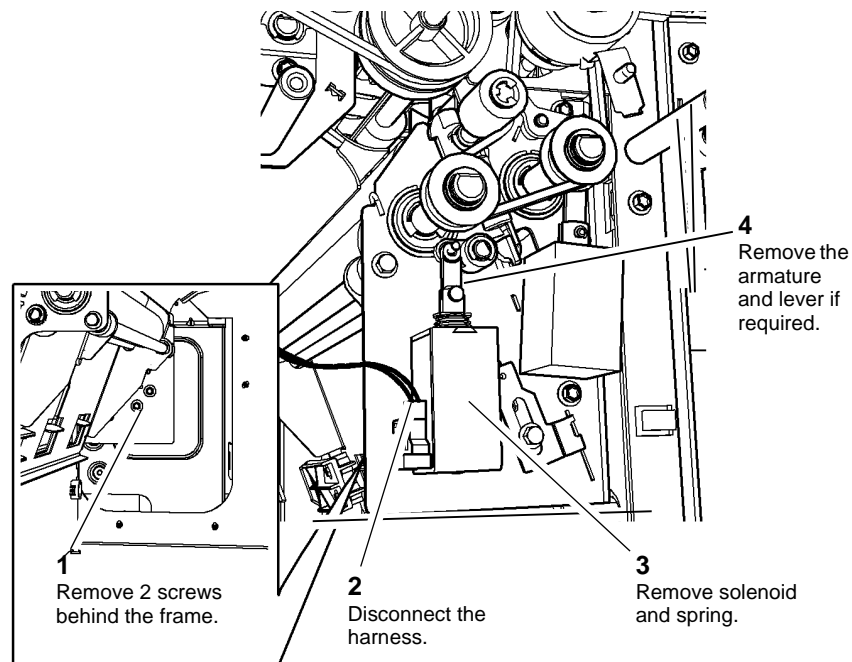


Figure 1 Solenoid removal

Replacement

1. Reverse the removal procedures to replace the assist gate solenoid.
2. Refit the armature and lever before replacing the spring and solenoid coil. If necessary, get assistance to hold the armature coil in position when replacing the screws.

REP 12.72-171 Tri-Folder Crease Roll Springs

Parts List on [PL 12.215](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the tri-folder front door, front cover and rear cover [REP 12.67-171](#).
2. Remove the front or rear spring, [Figure 1](#).

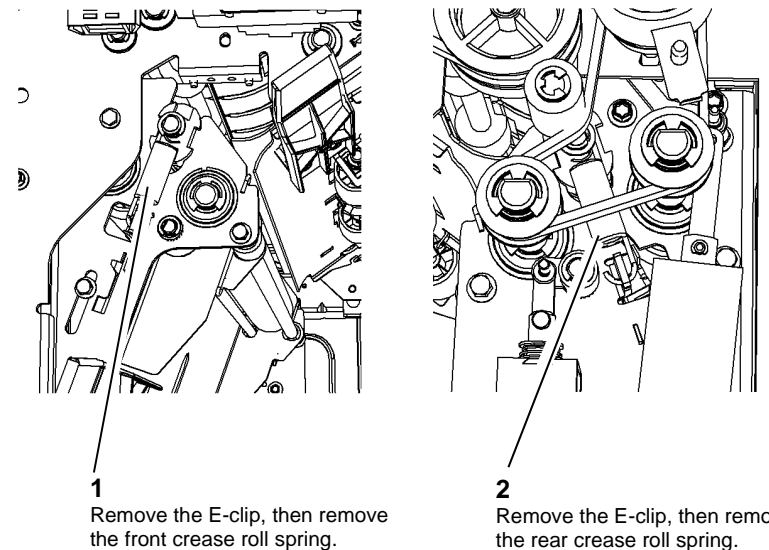


Figure 1 Crease roll springs removal

Replacement

Reverse the removal procedures to replace the front or rear crease roll spring.

X-1-0558-A

REP 12.73-171 Tri-folder Top Door Cover and Idler Assemblies

Parts List on [PL 12.210](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

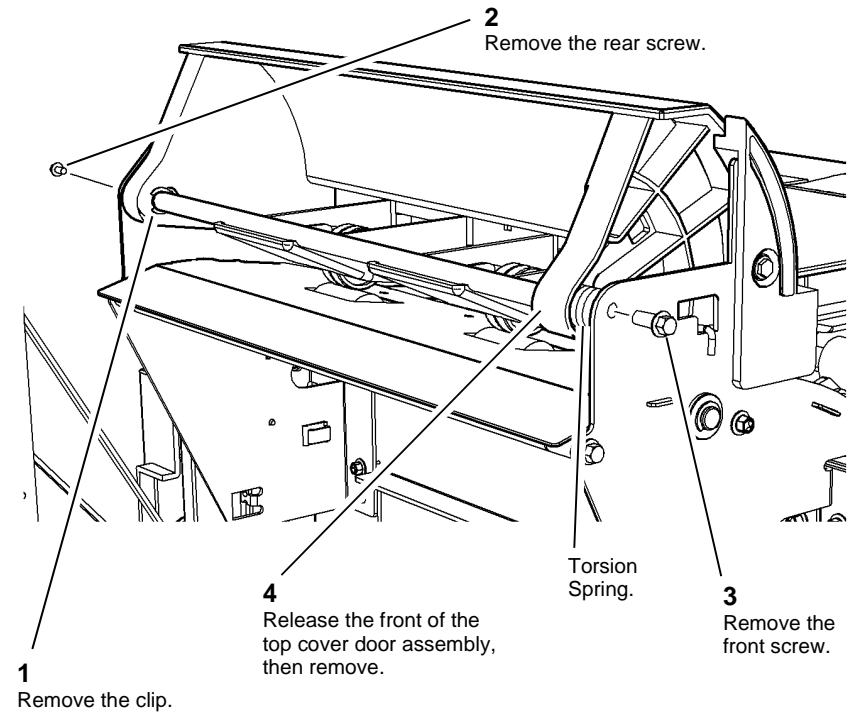
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Un-dock the tri-folder from the HVF and move it to the right to gain access to the left side of the tri-folder frame, [REP 12.99-171](#).

NOTE: The wiring harnesses to the HVF do not need to be disconnected.

2. Remove the top cover door assembly, [Figure 1](#).

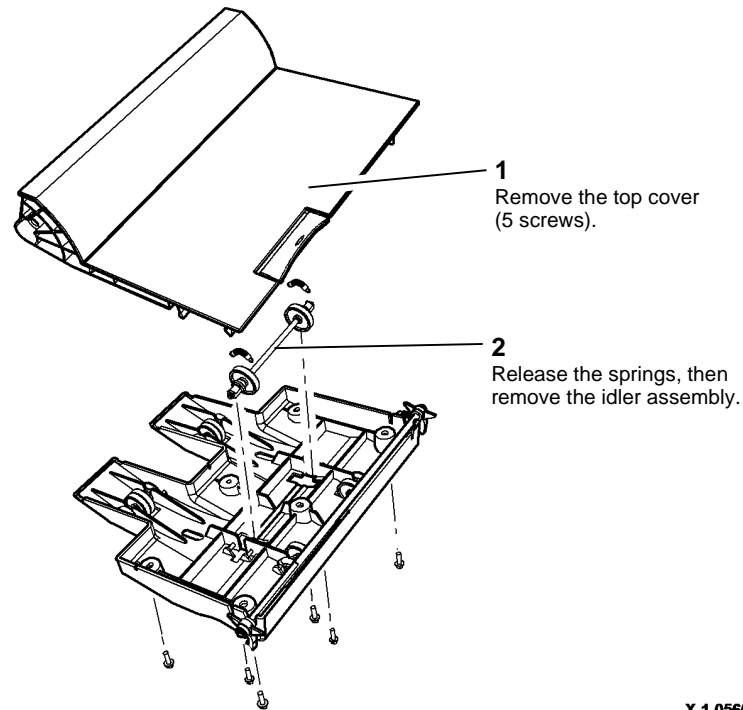
NOTE: Control the movement of the torsion spring.



X-1-0559-A

Figure 1 Top cover removal

3. Remove the idler assemblies, [Figure 2](#).



X-1-0560-A

Figure 2 Idler assembly removal

Replacement

1. Reverse the removal procedures to reinstall the idler assemblies and top cover door assembly.
2. Make sure that the correct self-tapping screws are used to replace the cover base; do not overtighten the screws.
3. Replace, but do not tighten, the rear pivot shaft screw. Position the cover and torsion spring then fit the front of the pivot shaft in the frame. Replace and tighten both front and rear pivot shaft screws.
4. Check that the cable harnesses are not obstructed or touching moving parts when the tri-folder is docked to the HVF.

REP 12.74-171 Tri-folder Roller Assembly and Diverter Solenoid

Parts List on [PL 12.215](#).

Removal


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Un-dock the tri-folder assembly from the HVF, [REP 12.99-171](#). Position and support the tri-folder so that it is safely accessible from the front, rear and left side.
2. Release the crease roll drive belt tension, [REP 12.69-171](#). Disconnect the harness from the diverter solenoid, [PL 12.215 Item 16](#) and assist gate solenoid, [PL 12.215 Item 8](#).

- Remove the roller assembly [Figure 1](#).

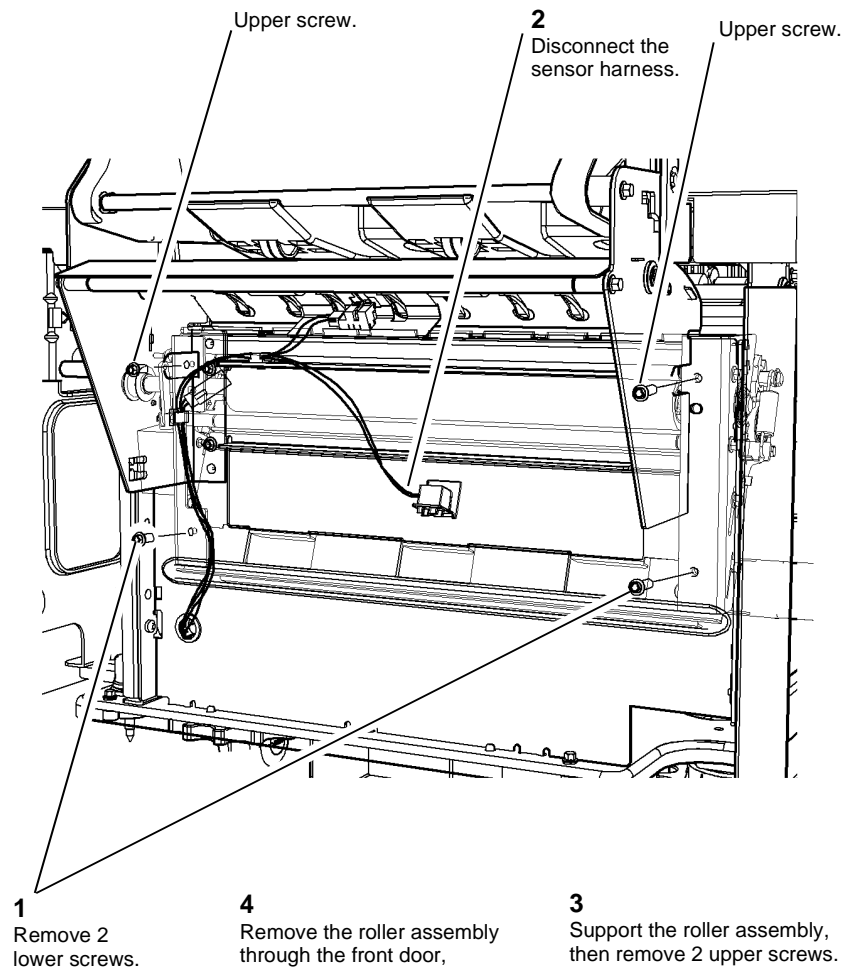


Figure 1 Roller assembly removal

X-1-0561-A

- Remove the diverter gate solenoid and crease roll pulleys as required, [Figure 2](#).

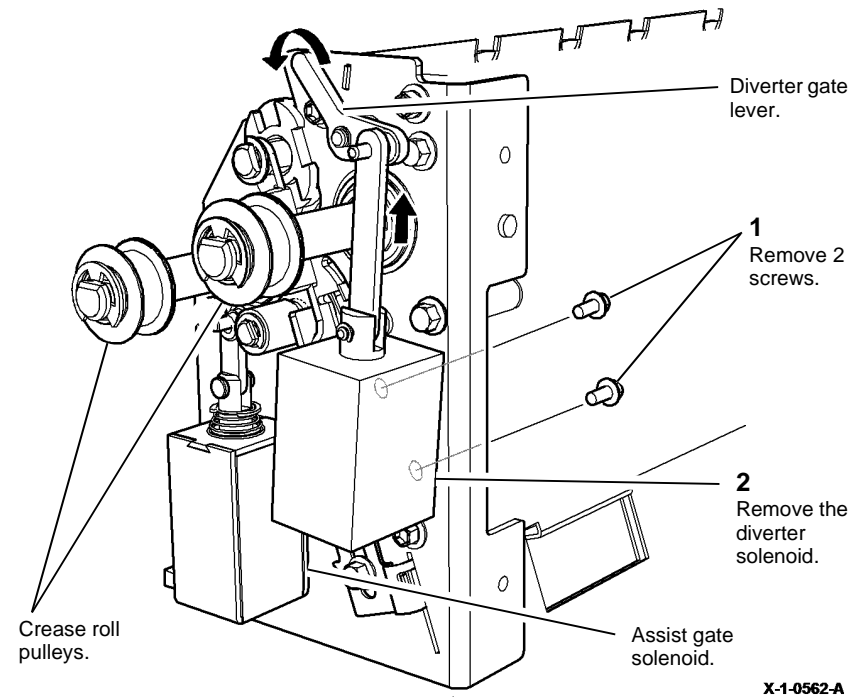


Figure 2 Solenoid removal

X-1-0562-A

Replacement

- Reverse the removal procedures to reinstall the pulleys, diverter gate solenoid and tri-folder roller assembly.
- Before replacing the roller assembly set the diverter gate lever to the forward (solenoid armature extended) position to engage with the right side of the diverter shaft lever, [Figure 2](#).
- Check that the diverter gate operates correctly before tensioning the crease roll drive belt.

REP 12.75-171 Bin 1 Limit Switches

Parts List on [PL 12.105](#).

Removal

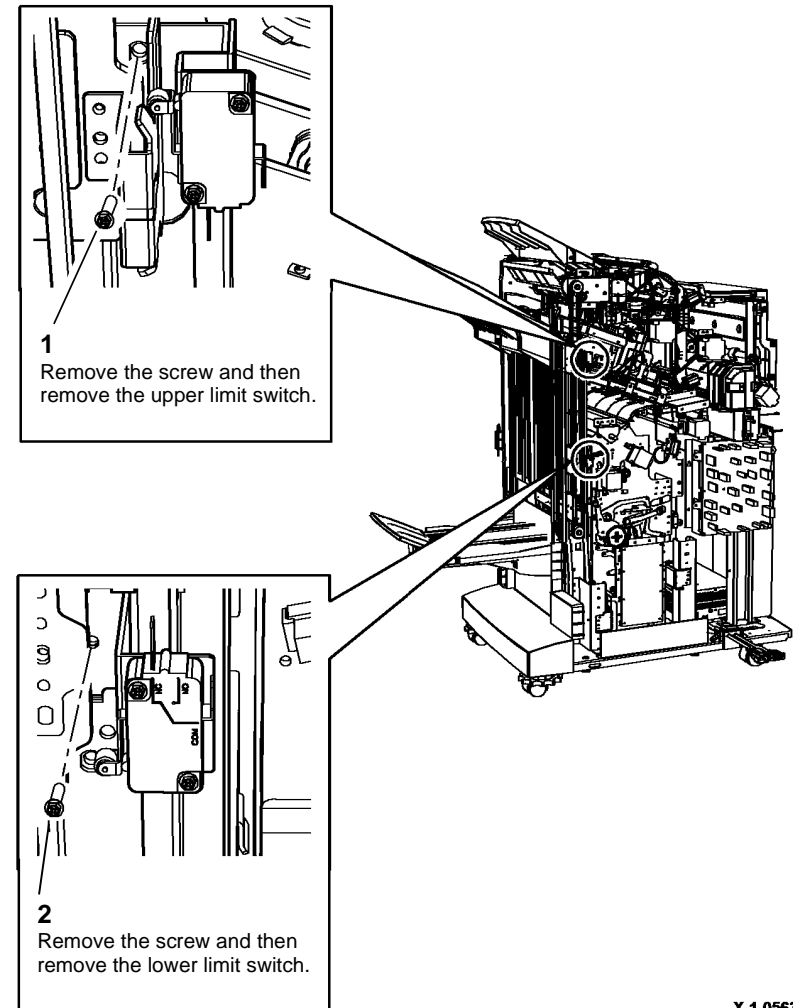


Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the HVF rear cover, [REP 12.1-171](#).
2. Disconnect the PJs and remove the upper or lower limit switch and bracket as required, [Figure 1](#).



X-1-0563-A

Figure 1 Switches removal

Replacement

Reverse the removal procedures to replace the Bin 1 upper and lower limit switches.

REP 12.76-171 Bin 1 Upper Level Sensor

Parts List on [PL 12.110](#).

Removal


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the HVF front and rear covers, [REP 12.1-171](#).
2. Remove the receiver or transmitter as necessary, [Figure 1](#).

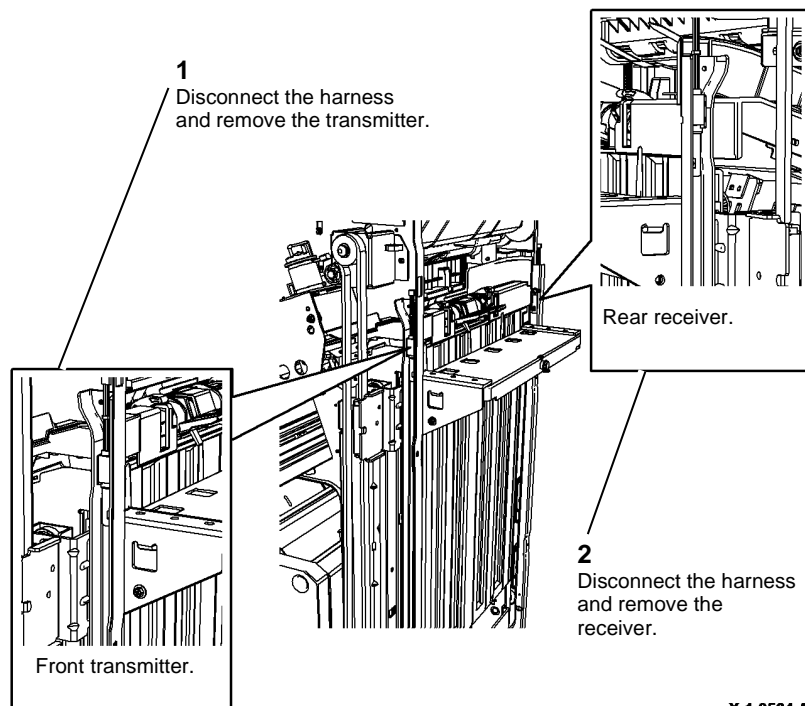


Figure 1 Sensor removal

Replacement

Reverse the removal procedures to replace the transmitter or receiver of the bin 1 upper level sensor.

REP 12.77-171 Tri-folder Door Interlock Switches and Sensor

Parts List on [PL 12.200](#), [PL 12.215](#)

Removal


WARNING

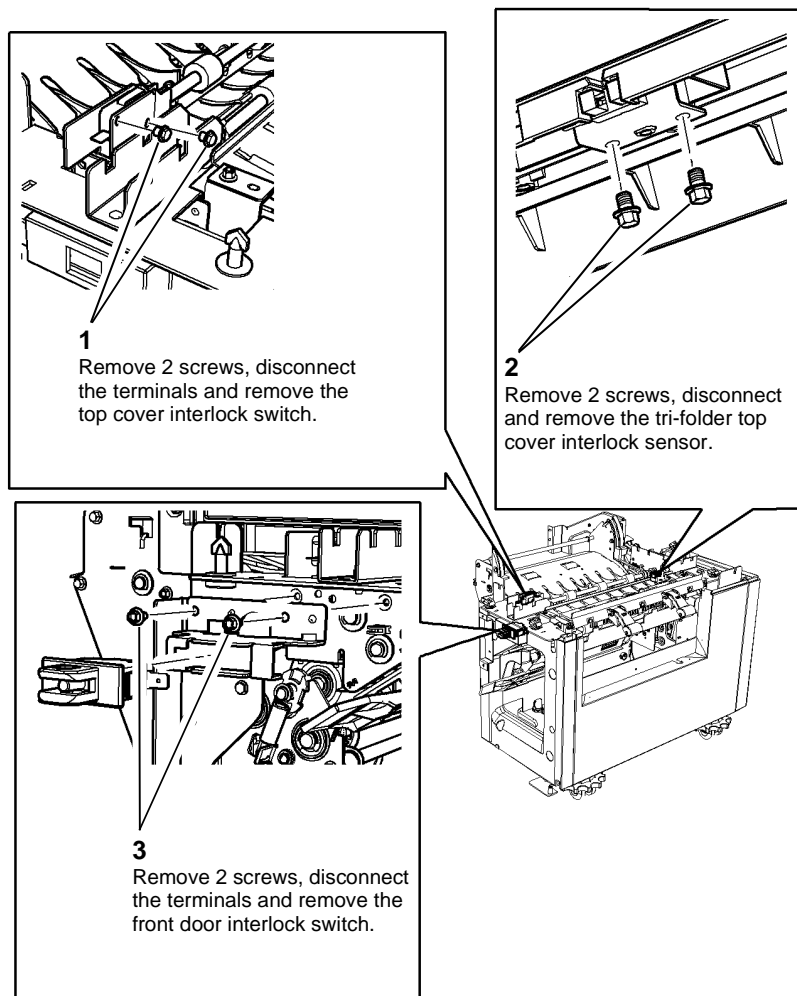
Take care during this procedure. Sharp edges may be present that can cause injury.


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the tri-folder front and top covers, [REP 12.67-171](#).

2. Remove the front door interlock switch, top cover interlock switch and the tri-folder top cover interlock sensor, as required, [Figure 1](#).



X-1-0565-A

Figure 1 Switches and sensor removal

Replacement

Reverse the removal procedures to replace the front door interlock switch, top cover interlock switch and the tri-folder top cover interlock sensor.

REP 12.78-171 Tri-folder Entry and Assist Gate Sensors

Parts List on [PL 12.215](#).

Removal


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Un-dock the tri-folder unit from the HVF, [REP 12.73-171](#).

- Remove the tri-folder entry sensor and assist gate sensor, [Figure 1](#).

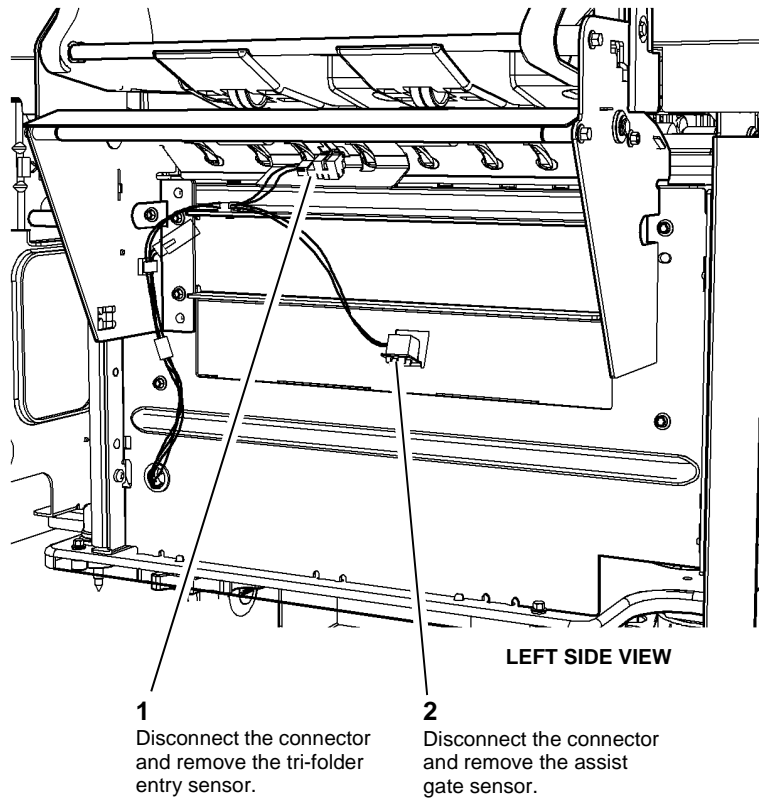


Figure 1 Sensors removal

Replacement

Reverse the removal procedures to replace the entry and assist gate sensors.

REP 12.79-171 Tri-folder Exit Sensor

Parts List on [PL 12.215](#).

Removal

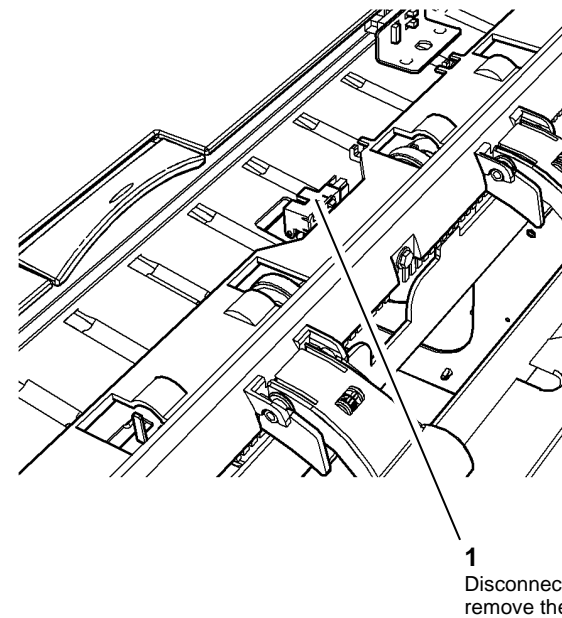


Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

- Remove the tri-folder top cover, [REP 12.67-171](#).
- Remove the exit sensor, [Figure 1](#).



- Disconnect the harness and remove the exit sensor.

X-1-0567-A

Figure 1 Exit sensor removal

Replacement

Reverse the removal procedures to replace the exit sensor.

REP 12.80-171 Tri-folder PWB

Parts List on [PL 12.205](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Figure 1 ESD Symbol



CAUTION

Ensure that ESD procedures are observed during the removal and installation of the tri-folder PWB.

1. Remove tri-folder rear cover, [REP 12.67-171](#).
2. Remove the tri-folder PWB, [Figure 2](#).

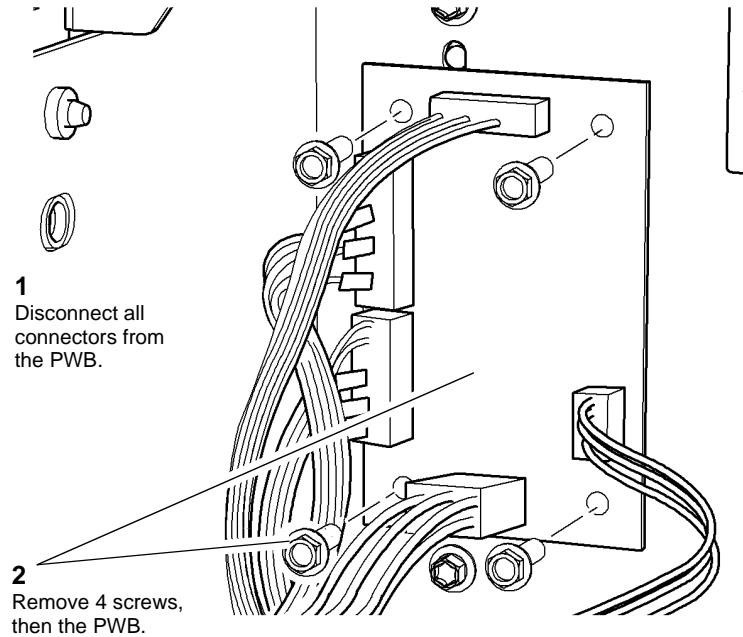


Figure 2 Tri-folder Control PWB

X-1-0568-A

Replacement

Reverse the removal procedures to replace the tri-folder control PWB.

REP 12.81-171 BM PWB to Tri-folder and Bin 2 Tray Harnesses

Parts List on [PL 12.205](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

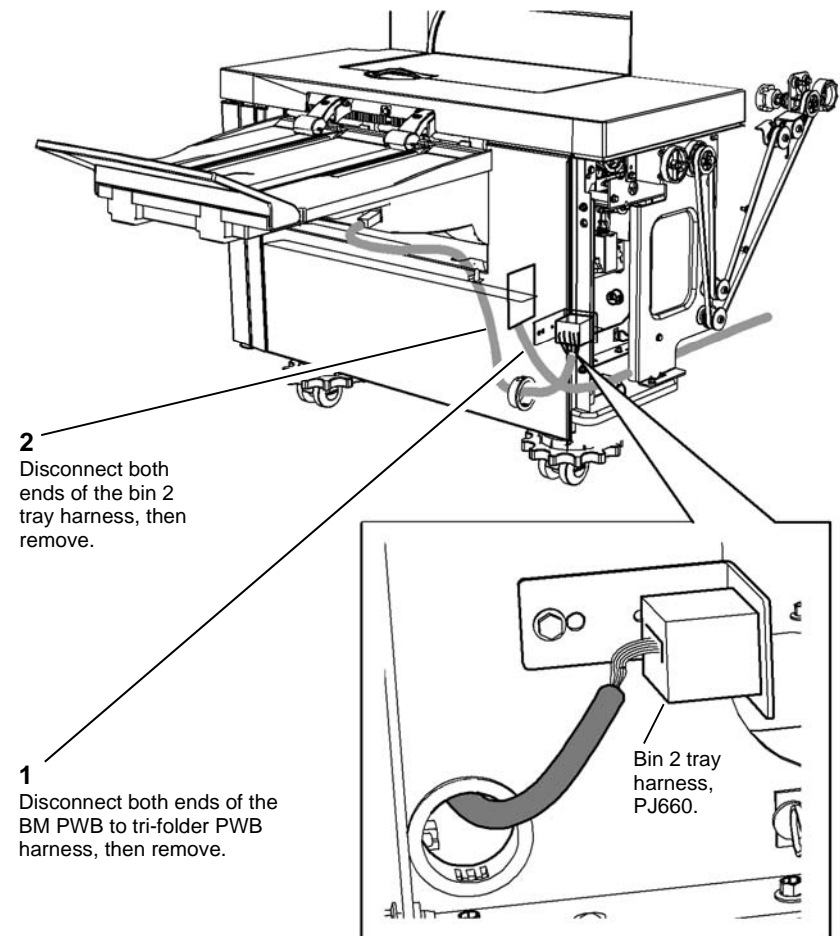


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the tri-folder rear cover, [REP 12.67-171](#). If removing the BM PWB to tri-folder PWB harness, remove the HVF rear cover, [REP 12.1-171](#).

2. Disconnect the PJs then remove the booklet maker PWB to tri-folder PWB harness, [Figure 1](#).
3. Remove the bin 2 tray harness, [Figure 1](#).



X-1-0569-A

Figure 1 Harnesses removal

Replacement

Reverse the removal procedures to replace the BM PWB to tri-folder PWB and bin 2 tray harnesses.

REP 12.82-171 Inserter Un-docking

Parts List on [PL 12.300](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



CAUTION

Place the Inserter on a suitable surface. Do not damage the Inserter locating pins.



CAUTION

Do not show the customer how to un-dock or dock the Inserter.

1. Open the HVF front door.
2. Un-dock the inserter, [Figure 1](#).

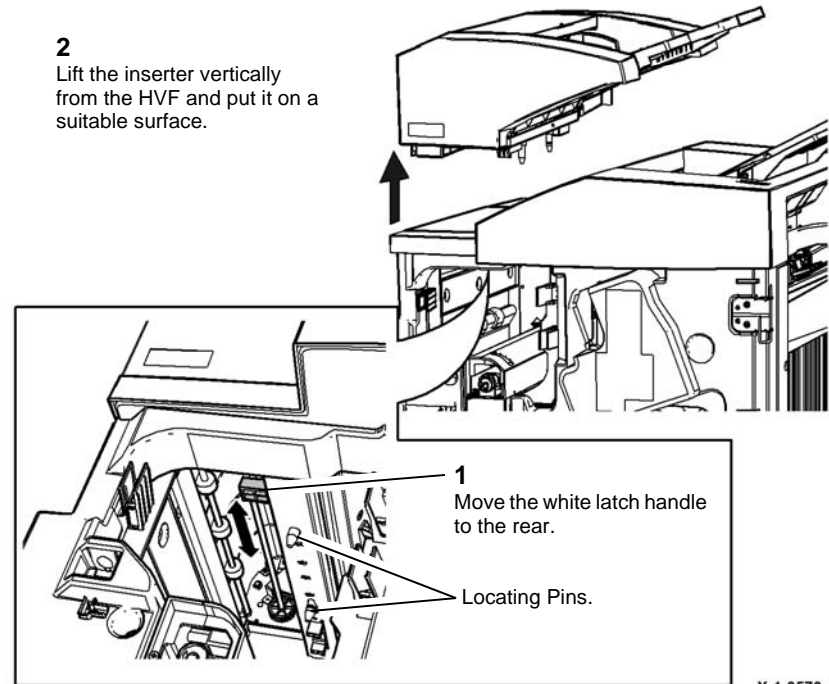


Figure 1 Inserter un-docking

X-1-0570-A

Replacement

1. Reverse the un-docking procedure to dock the Inserter unit to the HVF.
2. Lock the Inserter onto the HVF by sliding the latch handle towards the front, [Figure 1](#).

REP 12.83-171 Inserter Front and Rear Covers

Parts List on [PL 12.300](#).

Removal



WARNING

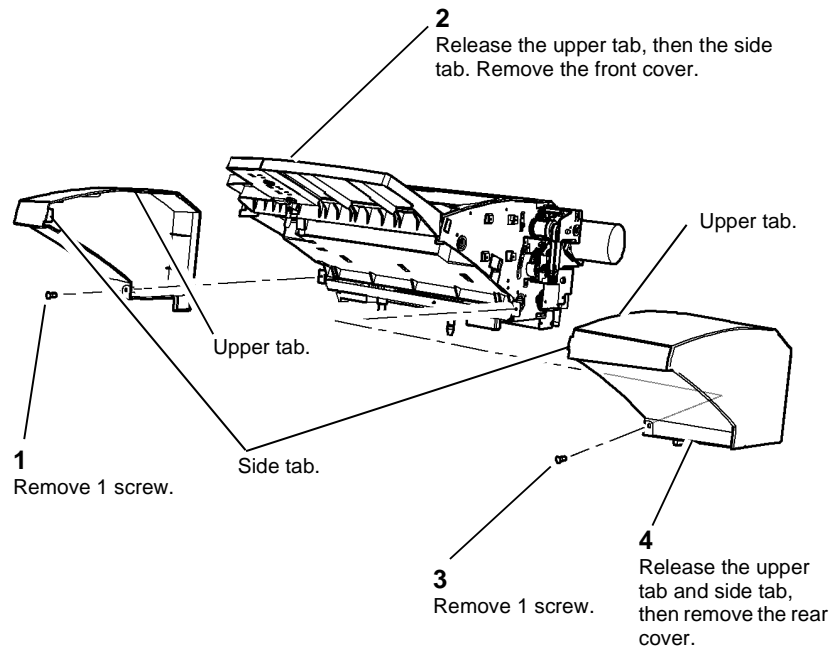
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Un-dock the Inserter and put it on a suitable surface, [REP 12.82-171](#).
2. Remove the front and rear covers, [Figure 1](#).



X-1-0571-A

Figure 1 Covers removal

Replacement

Reverse the removal procedures to replace the Inserter front and rear covers.

REP 12.84-171 Inserter Motor

Parts List on [PL 12.315](#).

Removal



WARNING

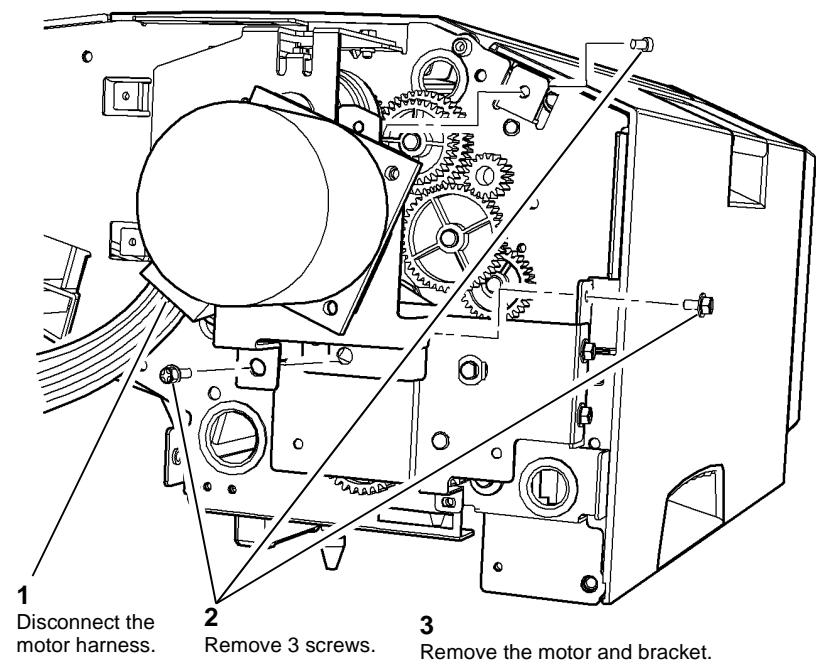
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the Inserter rear cover, and open the top left door, [REP 12.83-171](#).
2. Remove the inserter motor and bracket, [Figure 1](#).



X-1-0572-A

Figure 1 Motor removal

Replacement

1. Reverse the removal procedures to replace the Inserter motor.
2. Make sure that the correct screws are used to replace the inserter motor.

REP 12.85-171 Inserter PWB

Parts List on [PL 12.310](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



Figure 1 ESD Symbol



CAUTION

Ensure that ESD procedures are observed during the removal and installation of the inserter PWB.

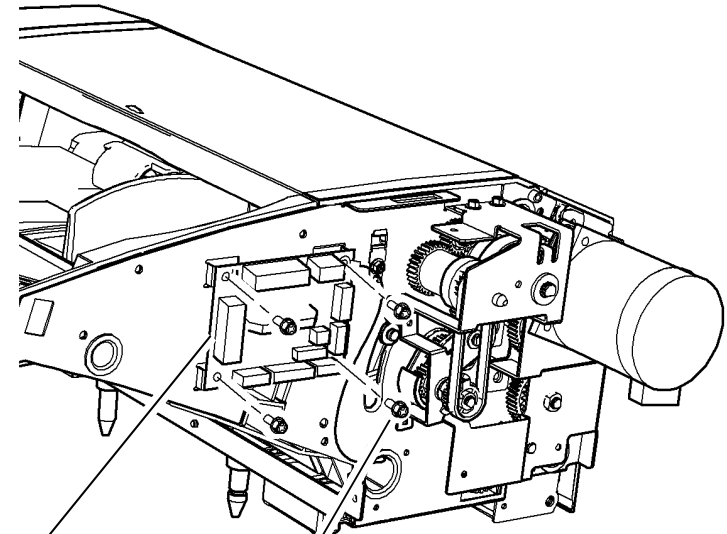


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the inserter rear cover. [REP 12.83-171](#).

2. Remove the inserter PWB, [Figure 2](#).



3
Remove the
inserter PWB.

2
Remove 4 screws
and the ground wire.

1
Disconnect all the
PJs from the PWB.

X-1-0573-A

Figure 2 Inserter PWB removal

Replacement

1. Reverse the removal procedures to replace the inserter PWB.
2. Ensure that the ground wire is secured by one of the fixing screws.

REP 12.86-171 Inserter Clutch

Parts List on [PL 12.310](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the Inserter rear cover. [REP 12.83-171](#).
2. Remove the inserter clutch, [Figure 1](#).

NOTE: The reverse roll drive idler and the drive belt are not attached to the clutch bracket or the Inserter frame.

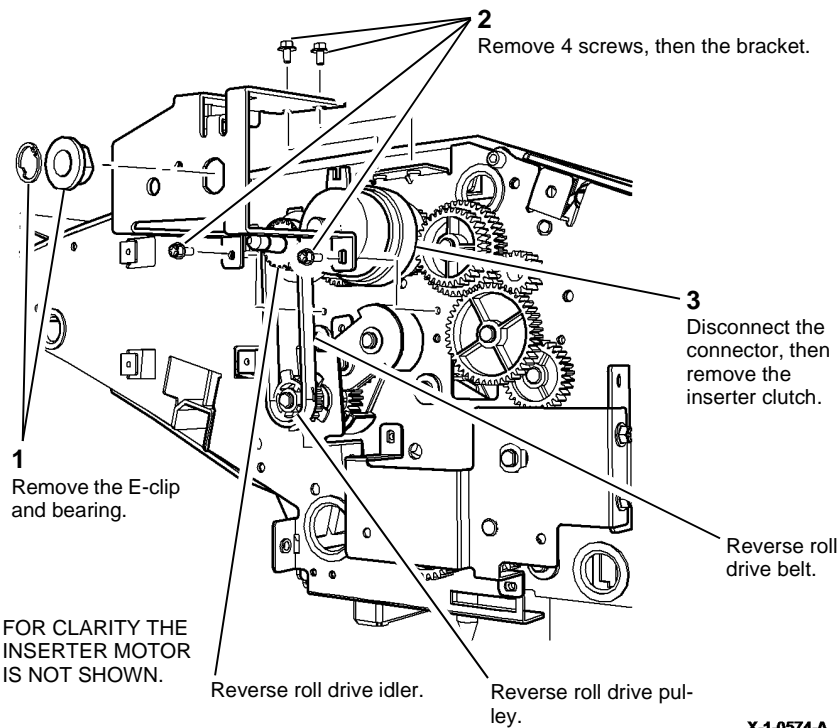


Figure 1 Inserter clutch removal

Replacement

1. Reverse the removal procedures to replace the Inserter clutch.
2. When replacing the bracket, check that the clutch torque arm locates in the locating tab.
3. Put the reverse roll drive belt over the drive idler and check that the reverse roll idler gear shaft locates properly into the frame.
4. When the bracket is secured, temporarily remove the E-clip and the reverse roll drive pulley to replace the drive belt over the reverse roll drive pulley.

REP 12.87-171 Inserter Top Cover Interlock Switch

Parts List on [PL 12.305](#).

Removal



WARNING

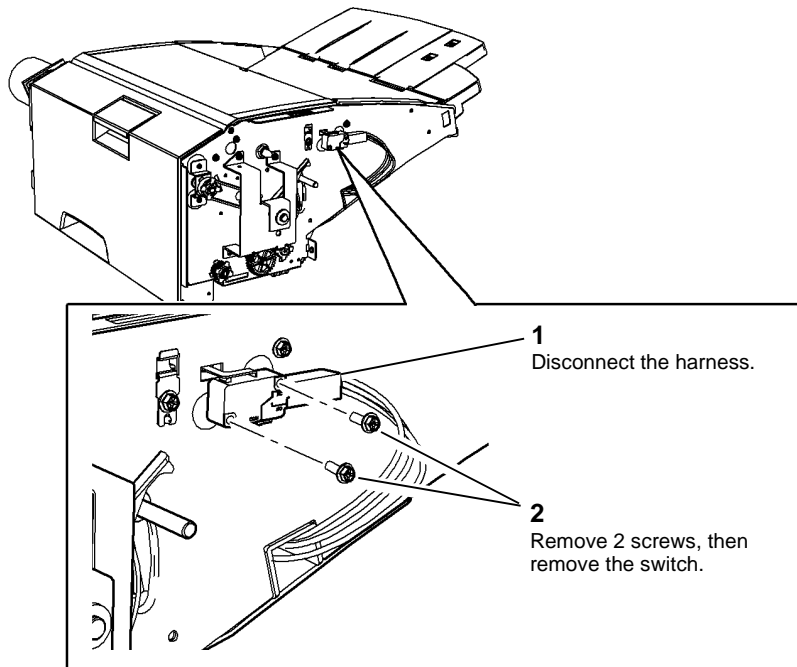
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the Inserter front cover, [REP 12.83-171](#).
2. Remove the top cover interlock switch, [Figure 1](#).



X-1-0575-A

Figure 1 Switch removal

Replacement

Reverse the removal procedures to replace the Inserter top cover interlock switch.

REP 12.88-171 Inserter Jam Cover Interlock Switch

Parts List on [PL 12.300](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

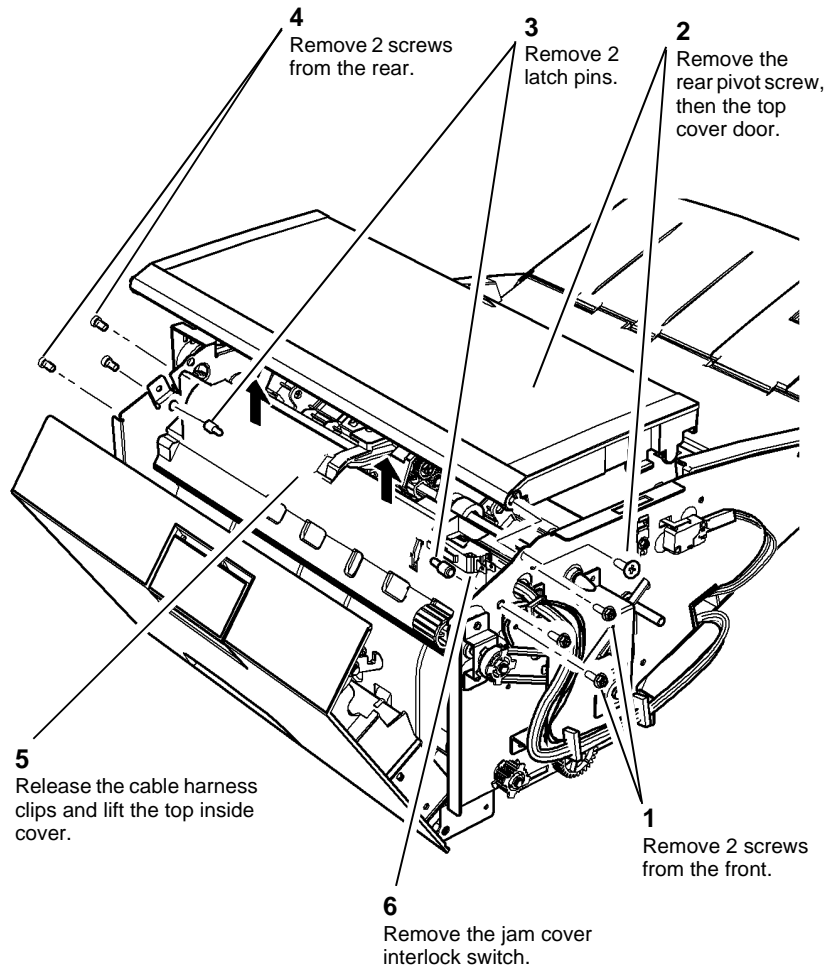


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the Inserter front and rear covers, [REP 12.83-171](#).
2. Remove the inserter motor, [REP 12.84-171](#).

- Remove the top cover door and the interlock switch, [Figure 1](#).



X-1-0576-A

Figure 1 Interlock switch removal

Replacement

- Reverse the removal procedures to replace the jam cover interlock switch.
- When reinstalling the top inside cover and the top cover door make sure that the correct screws are used and that the screws are not overtightened.

REP 12.89-171 Inserter Main Tray and Paper Length Sensors

Parts List on [PL 12.300](#).

Removal

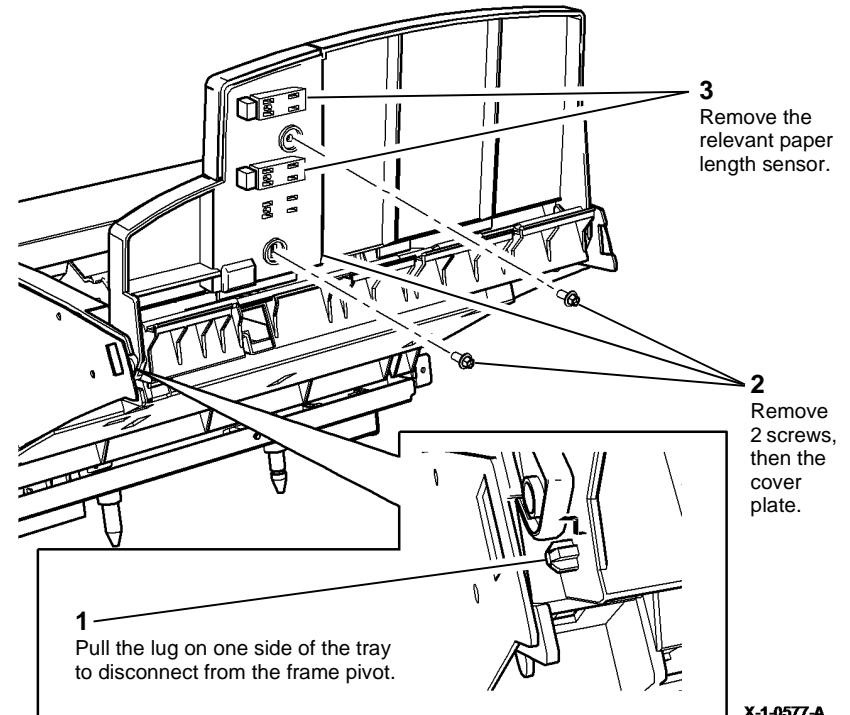


Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

- Remove the relevant sensor, [Figure 1](#)



X-1-0577-A

Figure 1 Sensor removal

Replacement

Reverse the removal procedures to replace the Inserter main tray and paper length sensors.

REP 12.90-171 Inserter Bottom Tray Bracket and Paper Sensors

Parts List on [PL 12.300](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Un-dock the Inserter, [REP 12.82-171](#).

2. Remove the bottom tray bracket, [Figure 1](#).

NOTE: Observe the position of the two springs when lifting the bottom tray.

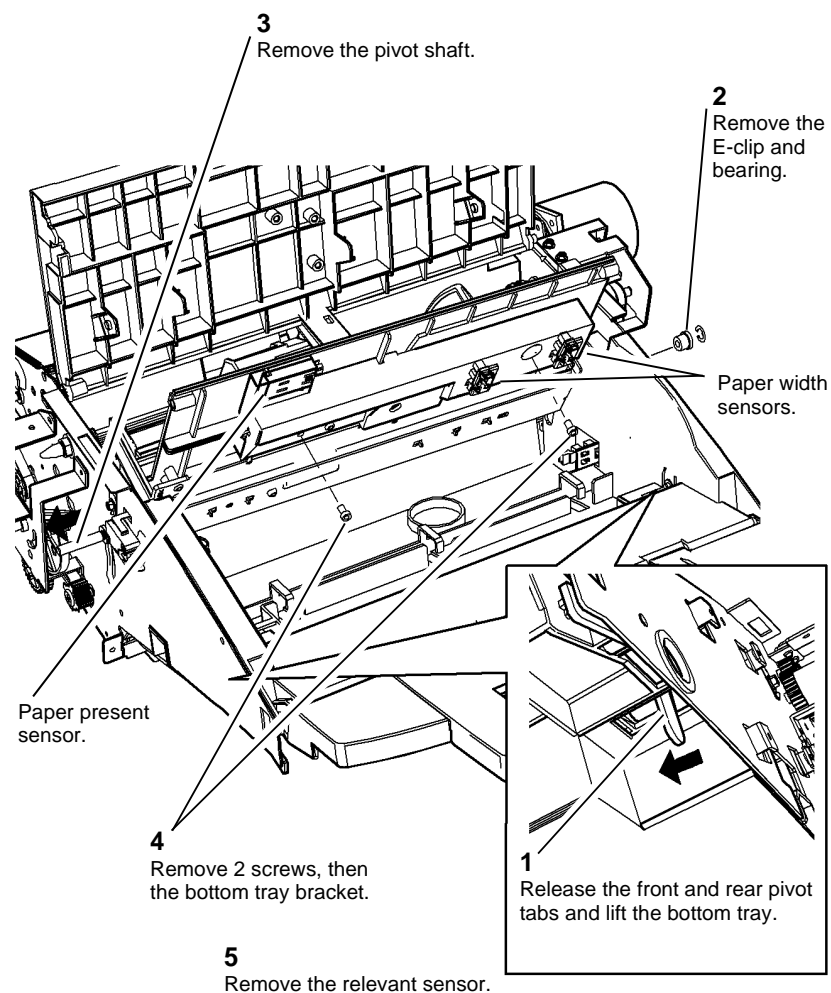


Figure 1 Tray and sensors removal

Replacement

1. Reverse the removal procedure to replace the bottom tray and paper sensors.
2. Check that the loading levers are at the same angle and that the tray pivot shaft passes below the front and rear loading levers. Check that the bottom tray is supported horizontally in the frame.
3. Make sure that the bottom tray springs are correctly aligned before engaging the front and rear pivot tabs.

REP 12.91-171 Inserter Top Cover and Inserter Pickup Sensor

Parts List on [PL 12.310](#).

Removal

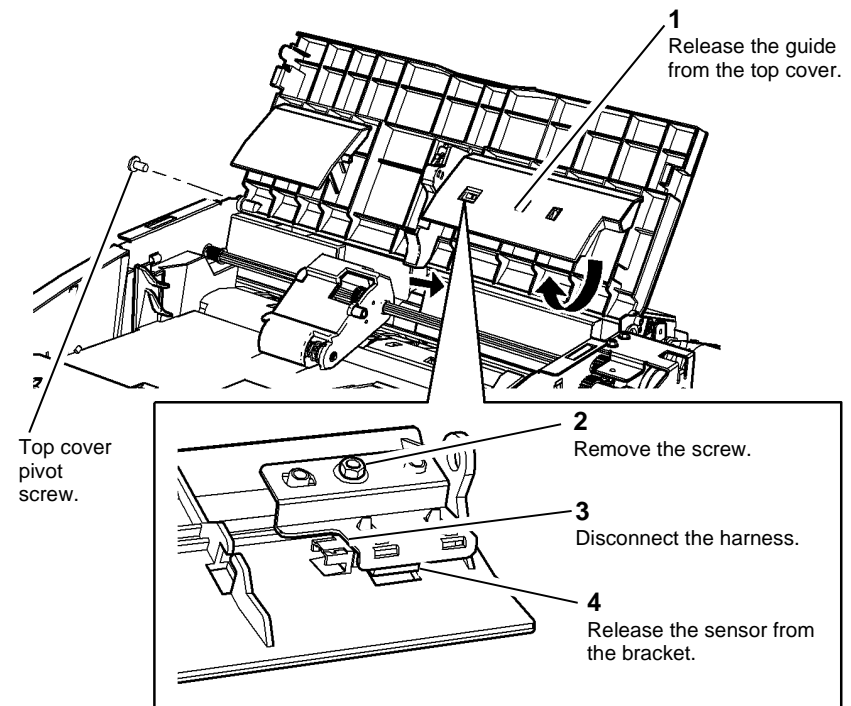


Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the Inserter front cover, [REP 12.83-171](#).
2. To release the top cover, remove the pivot screw, [Figure 1](#).
3. Remove the inserter pickup sensor, [Figure 1](#).



X-1-0579-A

Figure 1 Pickup sensor removal

Replacement

Reverse the removal procedure to replace the inserter pickup sensor and top cover.

REP 12.92-171 Inserter Lower Jam Cover and Inserter Acceleration Sensor

Parts List on [PL 12.300](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

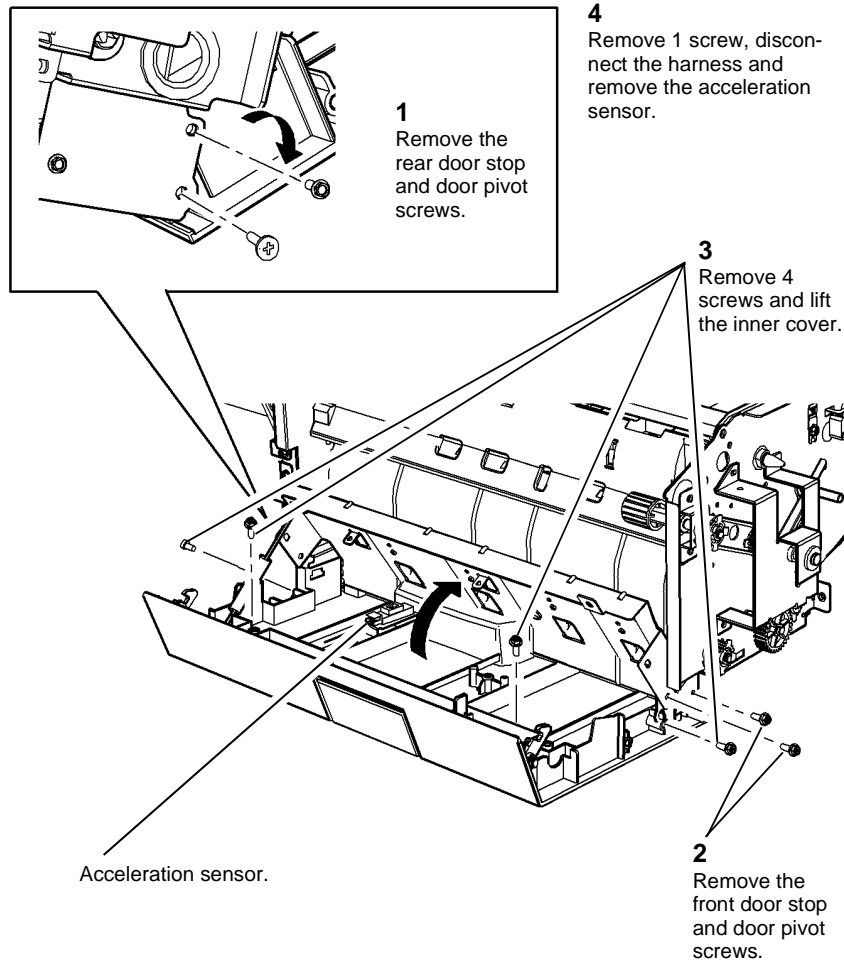


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the inserter front and rear covers, [REP 12.83-171](#).

2. Remove the acceleration sensor. [Figure 1](#).



X-1-0580-A

Figure 1 Cover and sensor removal

Replacement

Reverse the removal procedure to replace the Inserter lower jam cover and the acceleration sensor.

REP 12.93-171 Inserter LE and TE Sensors

Parts List on [PL 12.310](#).

Removal


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the Inserter front and rear covers, [REP 12.83-171](#).
2. Remove the inserter motor, [REP 12.84-171](#).
3. Remove the pickup roll assembly, [REP 12.95-171](#).
4. Remove the top cover, [REP 12.91-171](#).
5. Remove the top inside cover, [REP 12.88-171](#).

- Remove the LE sensor or TE sensor, [Figure 1](#).

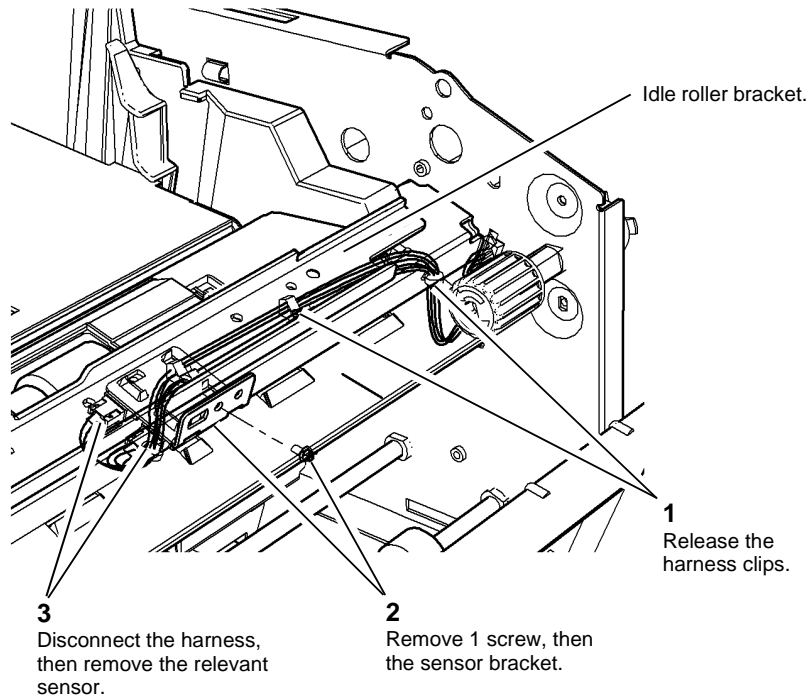


Figure 1 Sensors removal

X-1-0581-A

Replacement

Reverse the removal procedure to replace the LE and TE sensors.

REP 12.94-171 Inserter Bottom Plate Sensor

Parts List on [PL 12.300](#).

Removal



Take care during this procedure. Sharp edges may be present that can cause injury.



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

- Un-dock the Inserter, [REP 12.82-171](#), and release the front and rear pivot tabs then lift the bottom tray. Control the movement of the bottom tray springs.
- Remove the sensor from the bracket, [Figure 1](#).

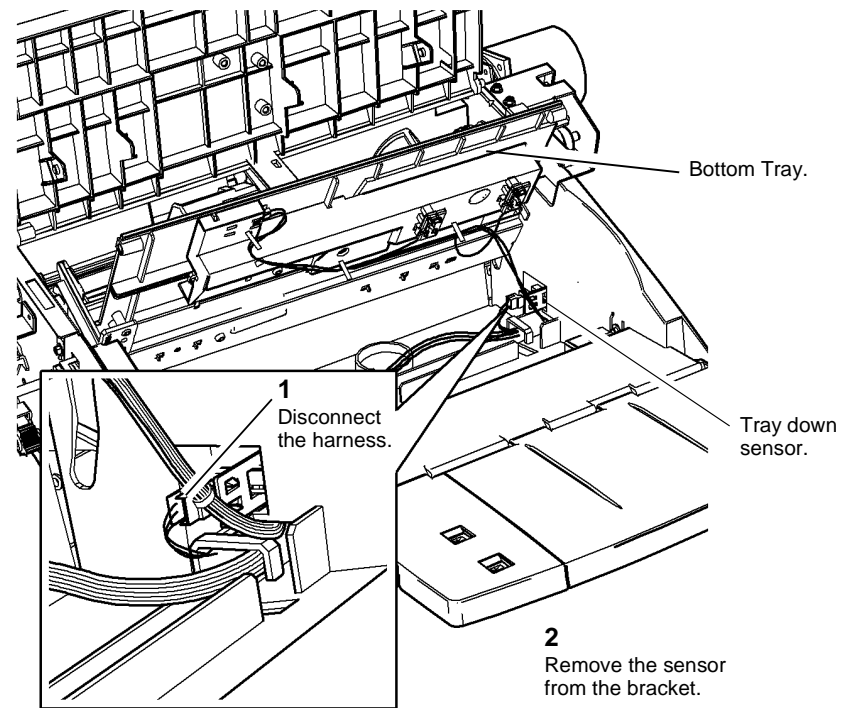


Figure 1 Sensor removal

X-1-0582-A

Replacement

Reverse the removal procedure to replace the Inserter bottom plate sensor.

REP 12.95-171 Inserter Pickup Assembly and Reverse Feed Roller

Parts List on [PL 12.310](#)

Removal



WARNING

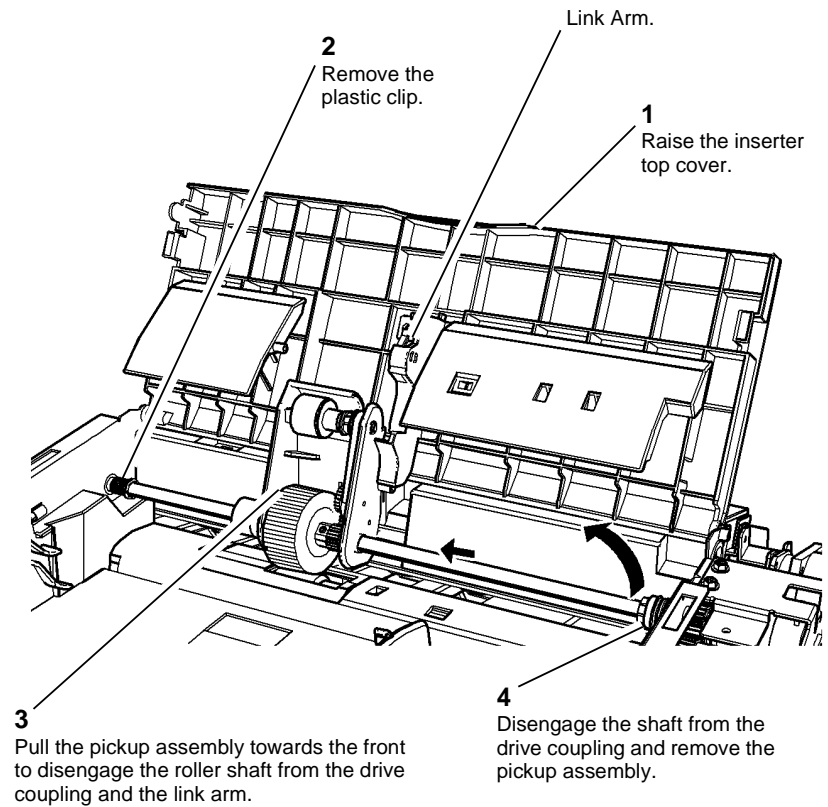
Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

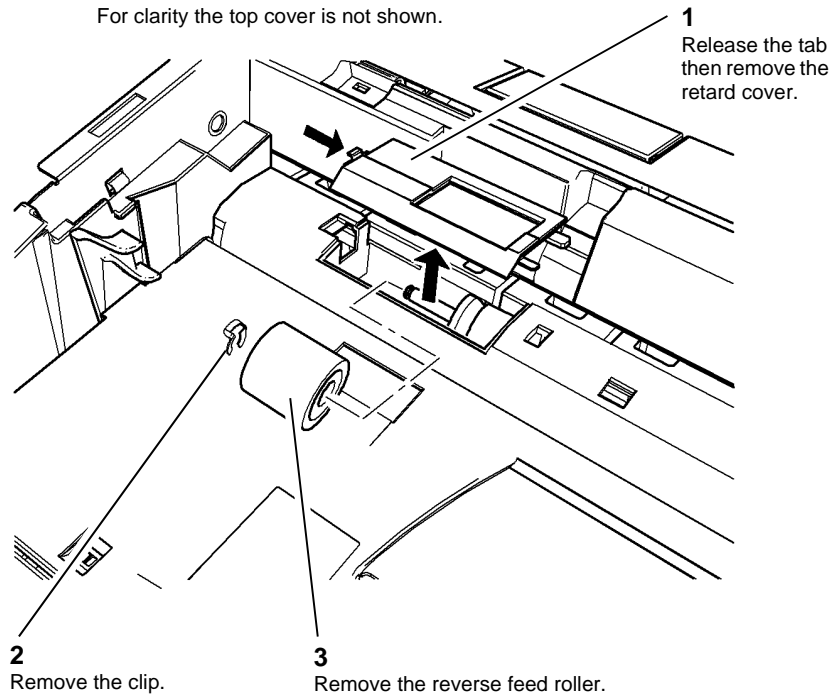
1. Remove the pickup assembly from the inserter, [Figure 1](#).



X-1-0583-A

Figure 1 Pickup assembly removal

2. Remove the reverse roller and coupling from the reverse roller shaft, [Figure 2](#).



X-1-0584-A

Figure 2 Reverse roller removal

Replacement

1. Reverse the removal procedure to replace the reverse and the pickup roller assemblies.
2. After replacing the pickup roller assembly close the Inserter top cover fully to engage the link arm with the pickup roller.
3. If a new inserter pickup assembly is installed, reset the inserter feed count to zero. Refer to [dC135 CRU / HFSI Status](#).

REP 12.96-171 HVF Fixed and Adjustable Casters

Parts List on [PL 12.100](#).

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

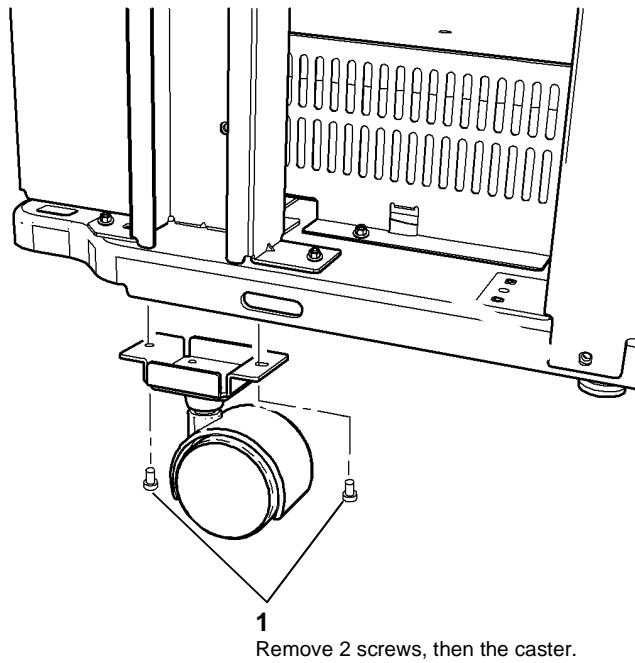


CAUTION

Do not remove more than one caster at a time unless the HVF frame is properly supported and stable.

1. Un-dock the tri-folder from the HVF, [REP 12.82-171](#).
2. Un-dock the HVF from the copier and remove the HVF front and rear covers, [REP 12.1-171](#).
3. Get help to lift and support the HVF frame securely at a position close to where the caster is to be removed, [GP 16](#). Support the frame approximately 4 inches (approximately 2 reams of paper) above the floor so that the caster is not supporting the unit.

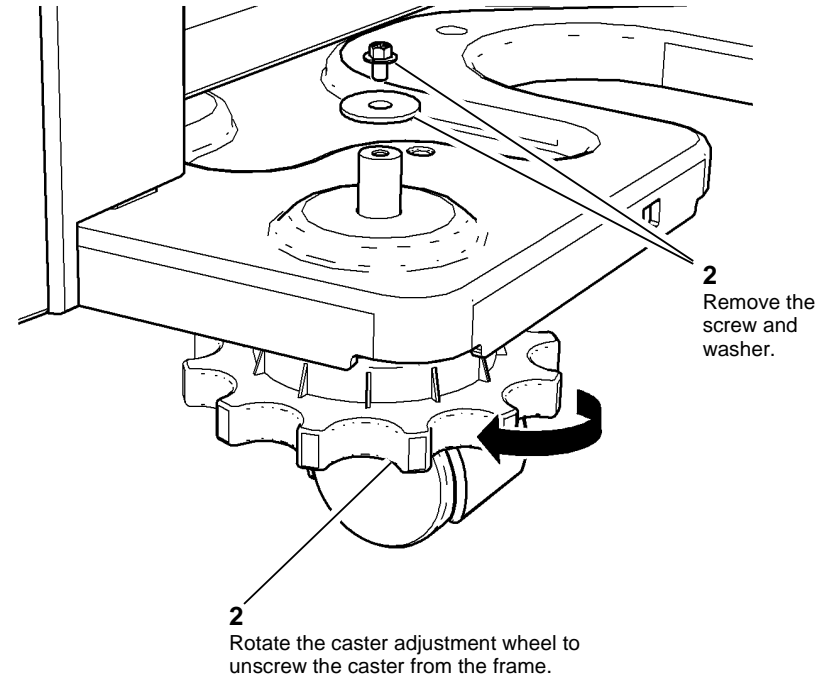
4. Remove the fixed caster, [Figure 1](#).



X-1-0585-A

Figure 1 Fixed caster removal

5. Support the HVF frame. Remove the adjustable caster, [Figure 2](#).



X-1-0586-A

Figure 2 Adjustable caster removal

Replacement

Reverse the removal procedure to replace the HVF fixed and adjustable casters.

Removal



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the Inserter front and rear covers., [REP 12.83-171](#).
2. Remove the inserter motor, [REP 12.84-171](#).
3. Remove the inserter clutch, [REP 12.86-171](#).
4. Remove the top cover assembly, [REP 12.91-171](#).
5. Remove the inside top cover and top left door interlock switch, [REP 12.88-171](#).

6. Prepare to remove the idle roller assembly, [Figure 1](#).

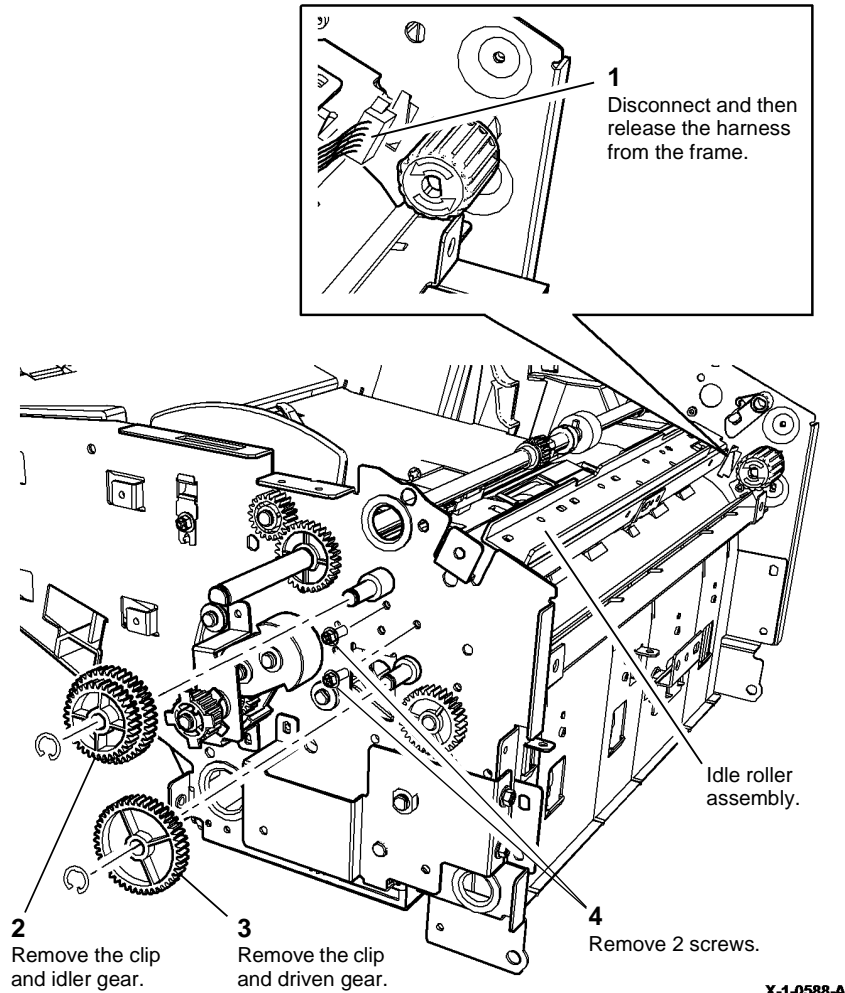


Figure 1 Preparation

7. Remove the idle roller assembly, [Figure 2](#).

NOTE: Check that the loading gear remains engaged with the loading shaft gear.

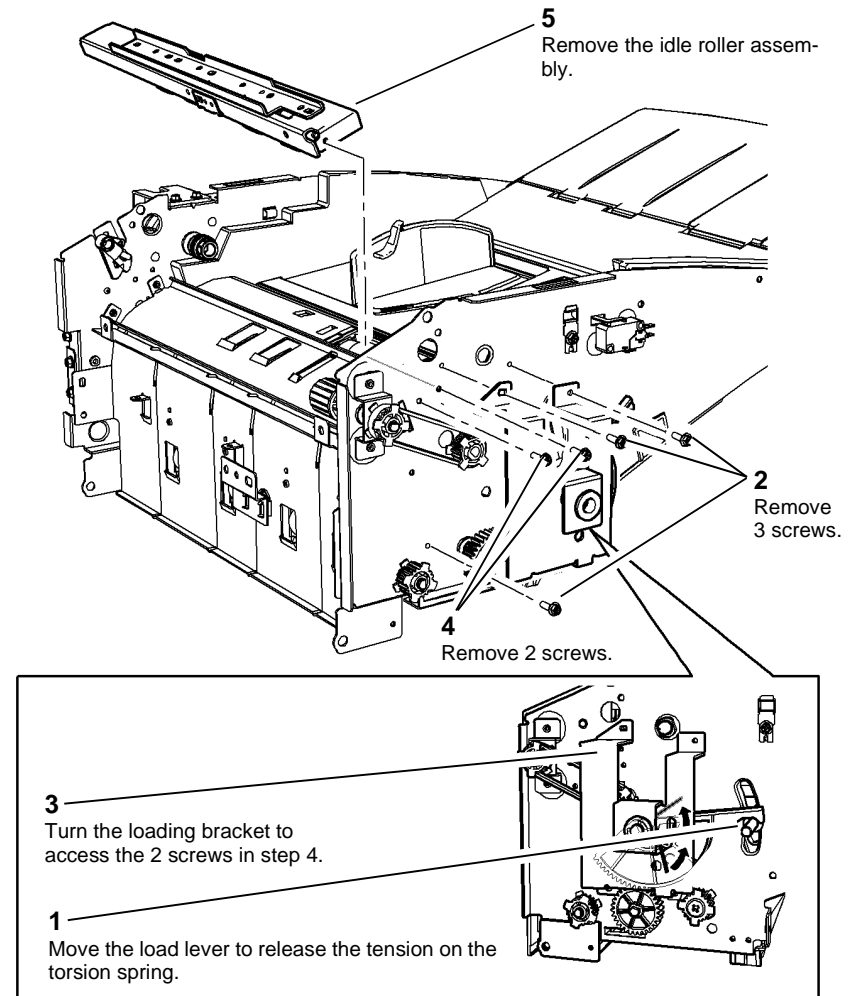


Figure 2 Idle roller assembly removal

Replacement

Reverse the removal procedure to replace the Idle roller assembly.

Replace the loading bracket screws and check that the front loading lever is at the same angle as the rear loading lever then tension the torsion spring. The loading tray will not operate correctly if it is not supported horizontally in the Inserter frame.

REP 12.99-171 Tri-folder Removal

Parts List on [PL 12.200](#), [PL 12.205](#)

Removal



Take care during this procedure. Sharp edges may be present that can cause injury.



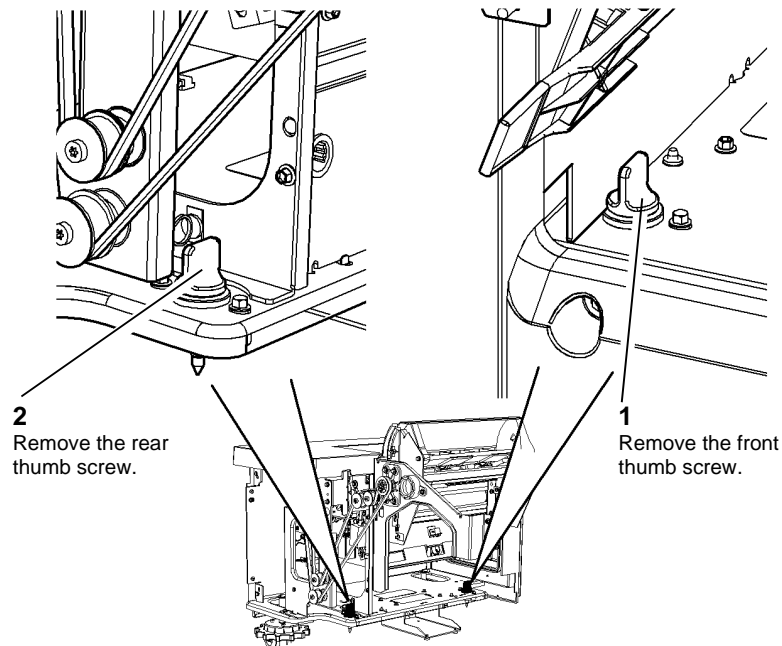
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the HVF rear cover, [REP 12.1-171](#).
2. Remove the tri-folder rear cover, [REP 12.67-171](#).
3. Remove the coupler drive belt, [REP 12.68-171](#).
4. Open the tri-folder front door. Remove the thumb screws, [Figure 1](#).

5. Disconnect the BM PWB to tri-folder PWB and bin 2 tray harnesses from the tri-folder module, [REP 12.81-171](#).
6. Disconnect the harness from PJ 553 & PJ 563 on the BM PWB, [PL 12.175 Item 10](#).
7. Un-dock the tri-folder from the HVF.

Replacement

Reverse the removal procedures to replace the tri-folder module.



X-1-0590-A

Figure 1 Thumb screw removal

REP 12.100-171 Docking Latch Assembly

Parts List on PL 12-100

Removal



WARNING

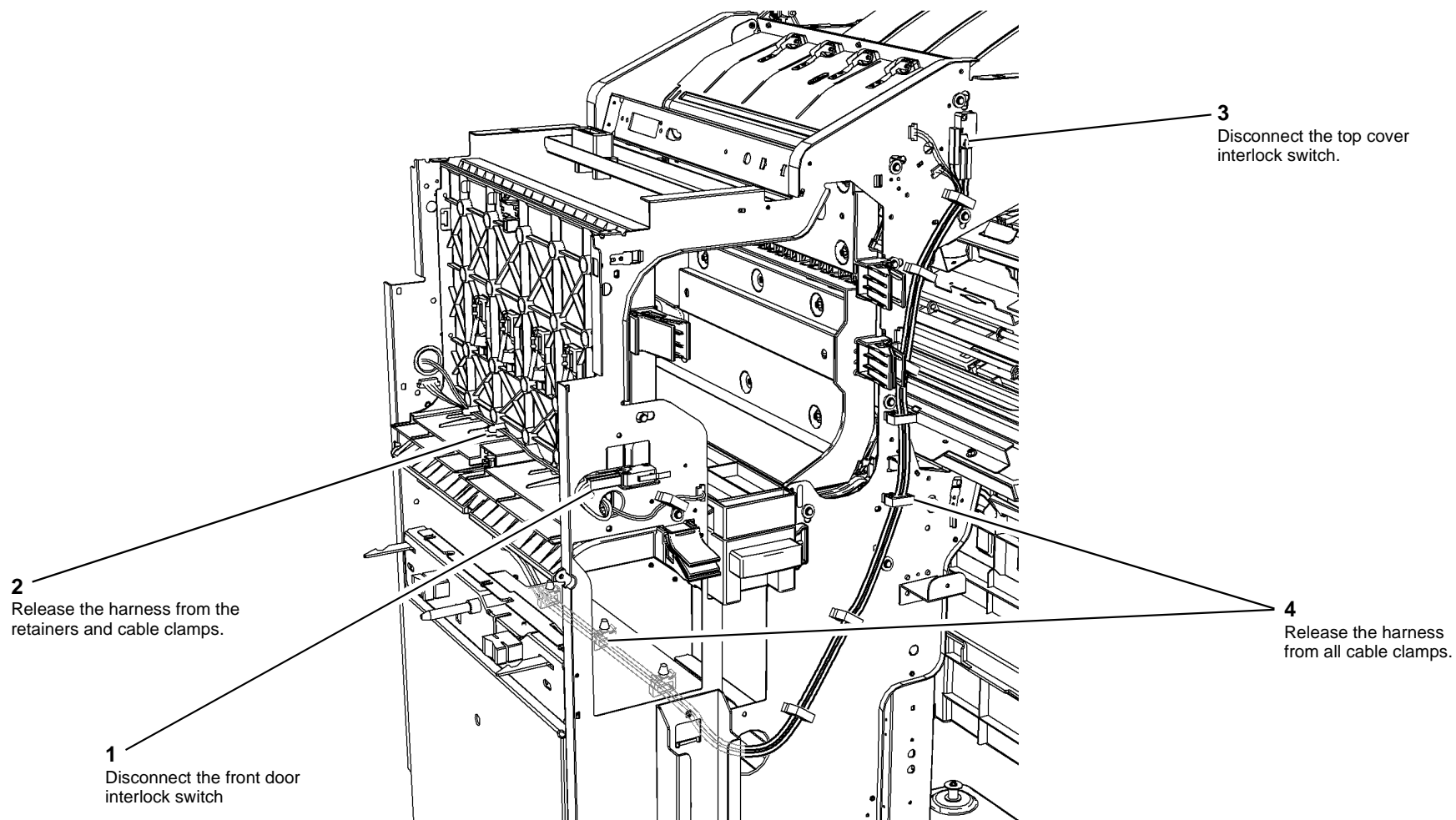
Switch off the electricity to the machine **GP 14**. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Un-dock the HVF or HVF BM, **REP 12.13-171**.
2. Refer to **REP 12.1-171**. Remove the following covers:
 - Top cover, **PL 12.100 Item 1**.
 - Rear cover, **PL 12.100 Item 5**.
 - Front cover, **PL 12.100 Item 2**.
 - Vent cover, **PL 12.100 Item 6**.
3. Disconnect the front interlock switches, **Figure 1**.



X-1-2030-A

Figure 1 Front interlock switches

4. Prepare to remove the docking latch assembly, [Figure 2](#).

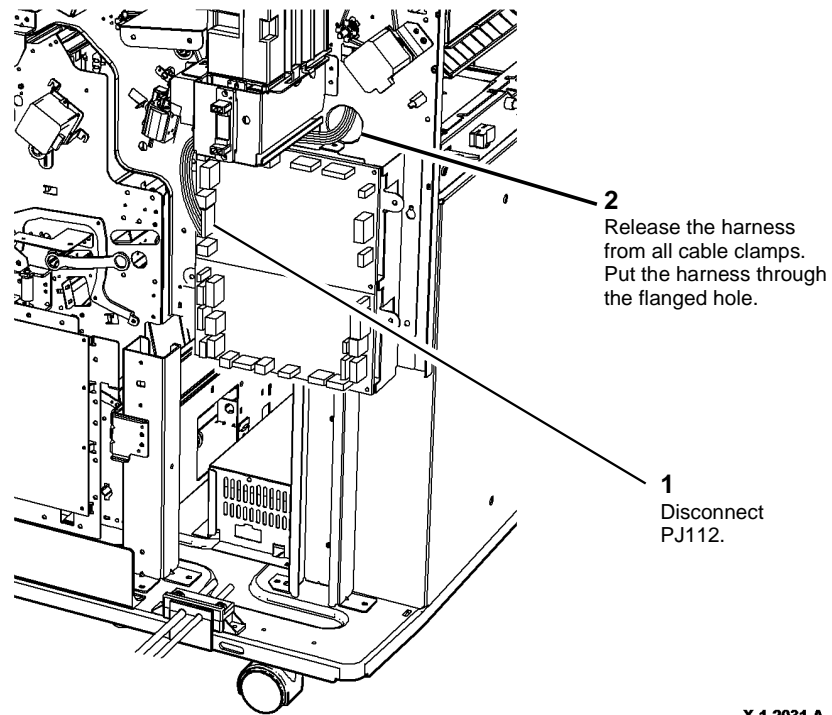


Figure 2 Preparation

X-1-2031-A

5. Remove the docking latch assembly, [Figure 3](#).

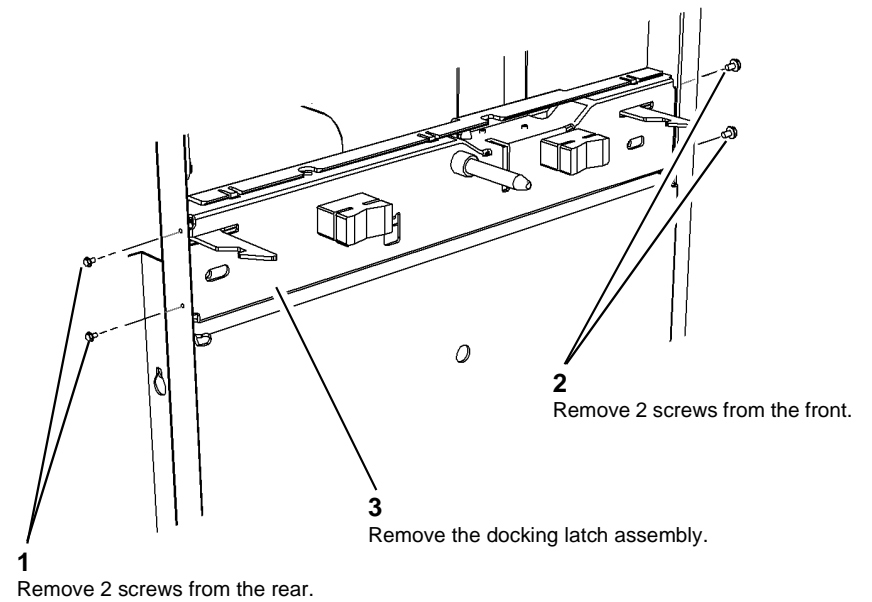
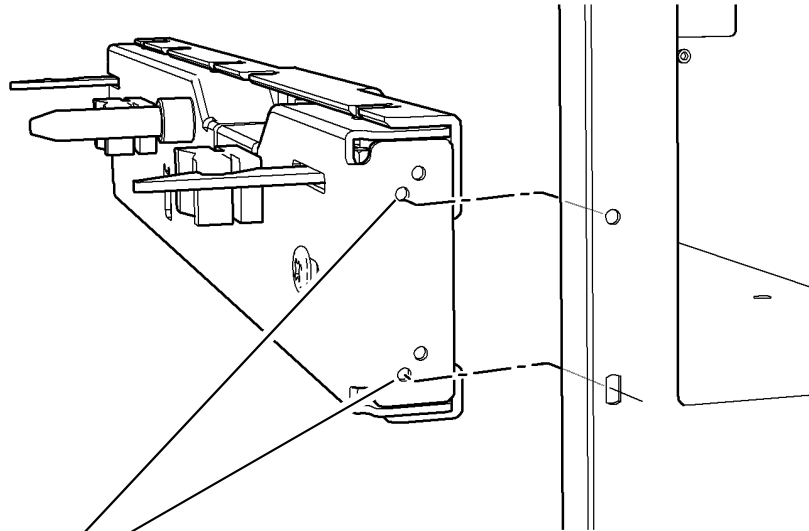


Figure 3 Removal

X-1-2032-A

Replacement

1. The replacement is the reverse of the removal procedure.
2. Ensure the 2 screws at the front locate in the correct holes, [Figure 4](#).



1
Secure the front of the latch assembly using the screw holes shown.

X-1-2033-A

Figure 4 Latch assembly front screw holes



CAUTION

Ensure that the front and rear harnesses are routed through the flanged holes. Refer to [Figure 1](#) and [Figure 2](#).

REP 20.1 Fax PWB

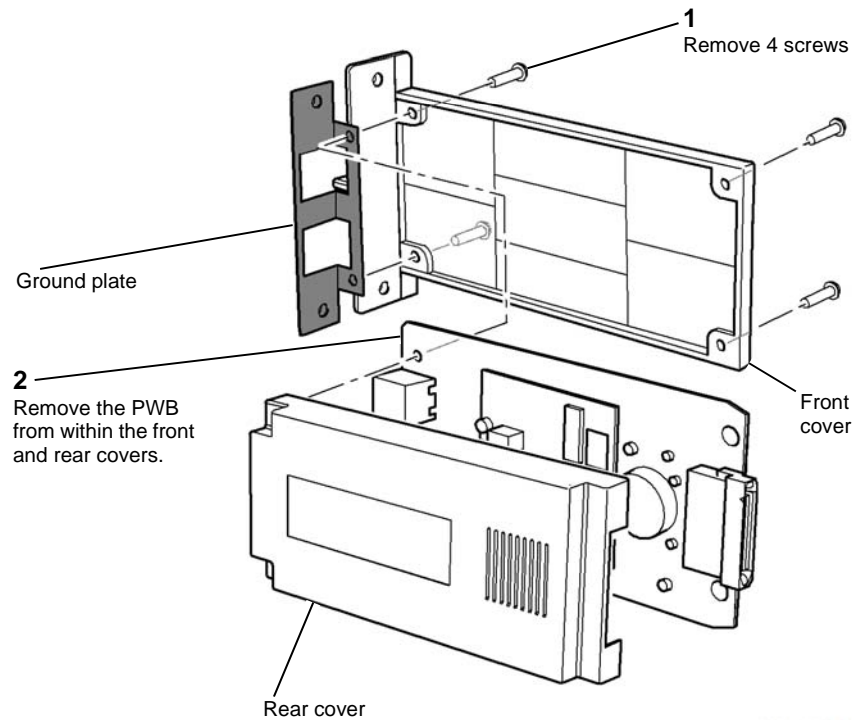
Parts List on [PL 20.05](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Switch off the machine, [GP 14](#).
2. Disconnect the telephone cable(s), [PL 20.05 Item 3](#).
3. Remove the fax module (2 thumb screws).
4. [Figure 1](#), remove the fax PWB.



X-1-1290-A

Figure 1 Fax PWB removal

Replacement



Ensure that the ground plate is located between the Fax PWB and the front cover. The ground plate provides a ground path for lightning strikes. Electricity can cause death or injury.

Replacement is the reverse of the removal procedure.

REP 28.1 Covers

Parts List on [PL 10.15](#), [PL 28.10](#) and [PL 80.10](#).

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Scanner Front Cover

1. Rotate the UI forward to access the left column upper cover fixing screw, [PL 2.10 Item 9](#).
2. Remove the left column upper cover, [PL 2.10 Item 9](#). Allow the cover to hang on the harness.
3. Remove 4 screws to remove the UI lower cover, [PL 2.10 Item 3](#).

NOTE: It may be necessary to partially remove the horizontal transport or the centre output tray to gain access to the screws. Refer to [REP 10.6](#) for the horizontal transport or [REP 10.9](#) for the centre output tray.



CAUTION

Take care not to drop the left screw through the hole in the chassis beneath the left column upper cover.

4. Remove 2 screws to remove the scanner front cover, [PL 2.10 Item 4](#).

Left Frame Cover

1. Open the front door.
2. Open the left door.
3. Raise the SPDH.

4. Remove the left frame cover, [PL 2.10 Item 9](#), [Figure 1](#).

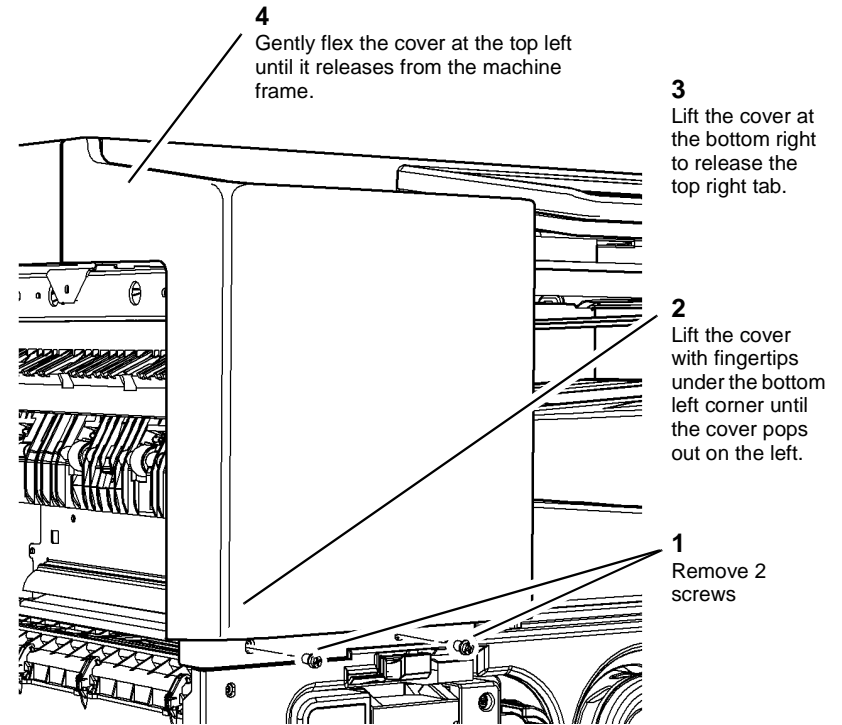


Figure 1 Left frame cover removal

Replacement

1. Replacement is the reverse of the removal procedure.

REP 28.2 Rear Cover

Parts List on [PL 28.10](#)

Removal



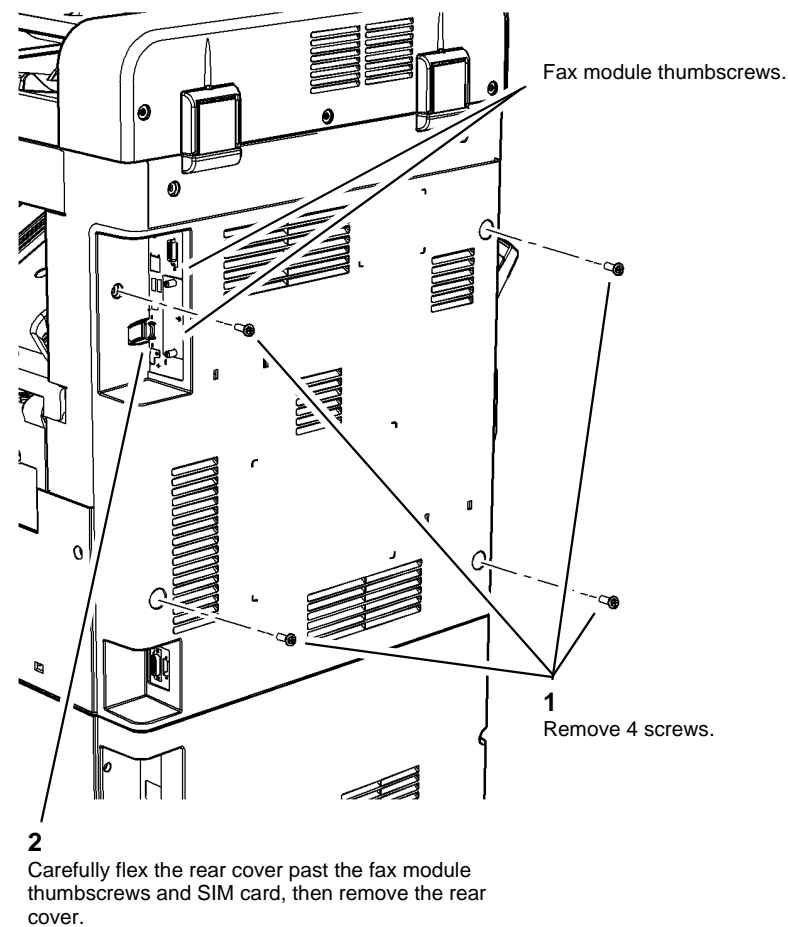
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Disconnect the components that follow, as necessary:
 - Network cable.
 - Wireless network adaptor, [PL 3.22 Item 20](#).
 - Telephone cable.
 - FDI harness.
 - Finisher communication harness.



Take care not to pull the wire. The wire to the rear fan duct can break easily. Refer to [Figure 2](#) before removing the screws.

2. Remove 4 screws from the rear cover, [Figure 1](#).



X-1-1316-A

Figure 1 Removal

!
CAUTION

Take care not to pull the wire tight. The wire to the fan is easily broken.

3. Pull the cover away, [Figure 2](#).

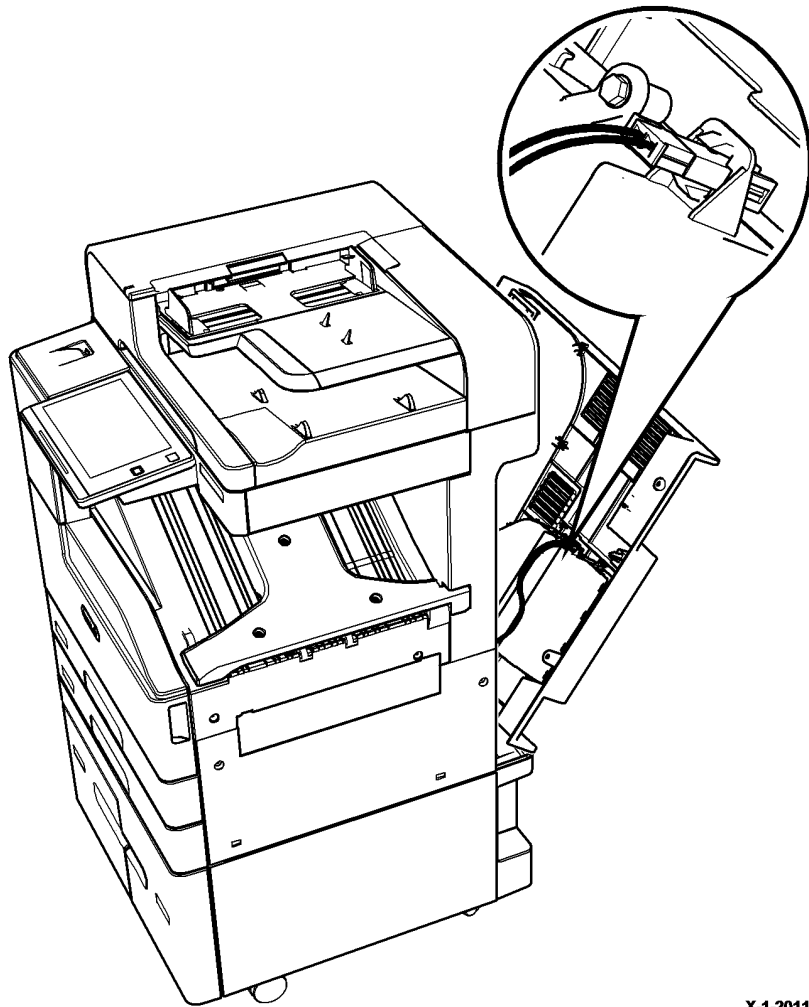


Figure 2 Removal

X-1-2011-A

Replacement

1. Re-install the rear cover, [Figure 3](#).

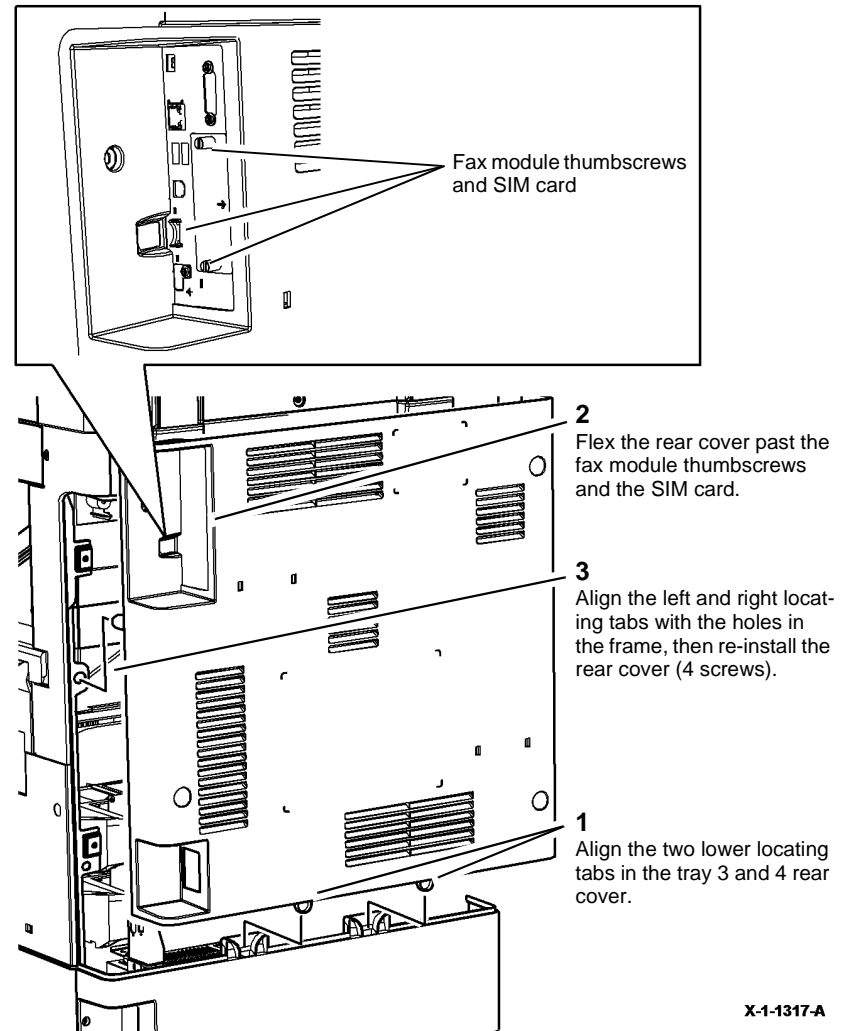


Figure 3 Replacement

X-1-1317-A

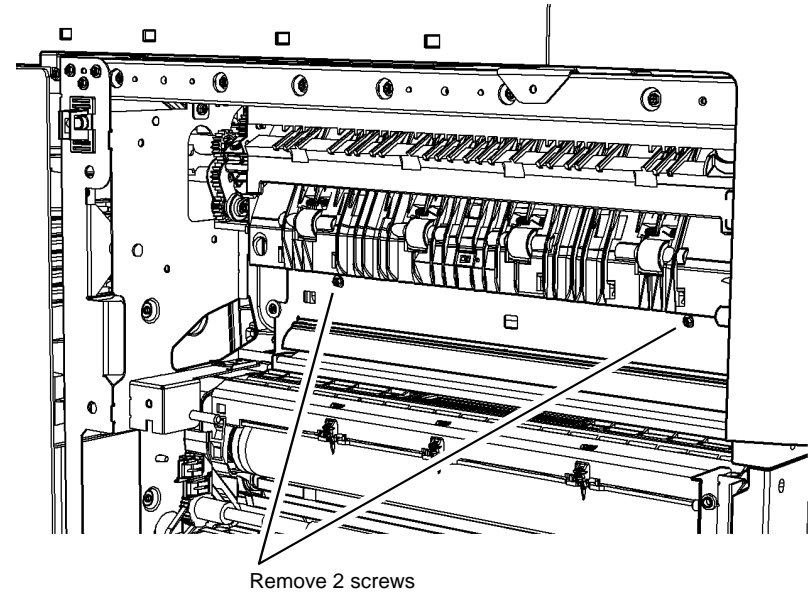
2. Re-connect the cables as necessary:
 - Network cable.
 - Wireless network adaptor, [PL 3.22 Item 20](#).
 - Telephone cable.
 - FDI harness.
 - Finisher communication harness.

REP 28.3 Inner Machine Cover

Parts List on [PL 28.10 Item 12](#).

Removal

1. Remove the horizontal transport assembly, [REP 10.6](#) or the centre output tray, [REP 10.9](#).
2. Remove the fuser.
3. Remove 2 screws behind the fuser, [Figure 1](#).



X-1-2013-A

Figure 1 Remove 2 screws

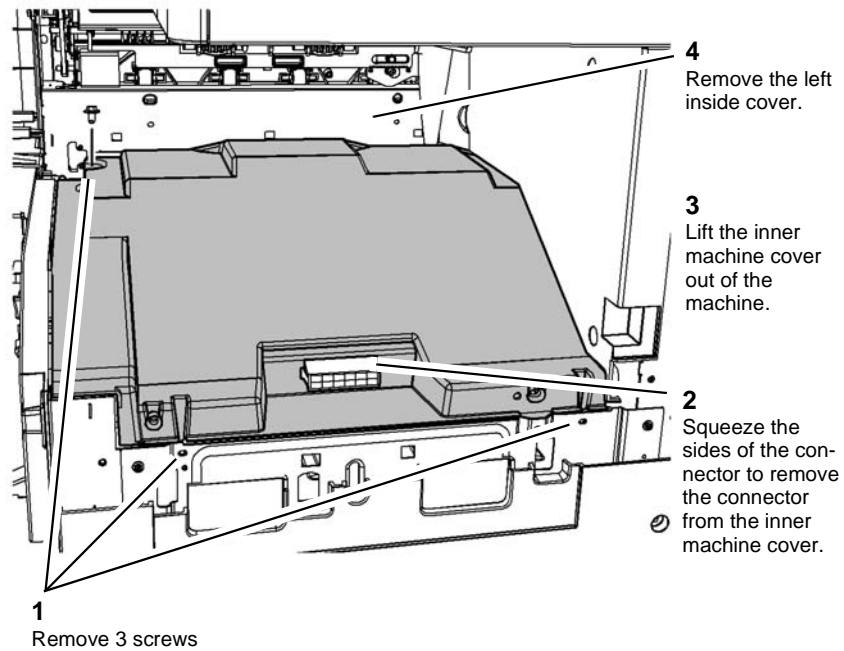
4. Remove the left frame cover, [REP 28.1](#).
5. Remove the latch, [PL 60.35 Item 2](#) (1 screw).

6. Remove the inner front cover, PL 28.10 Item 10, (4 screws).

!
CAUTION

Take care not to strain the wires of the connector when removing the inner machine cover.

7. Remove the inner machine cover and the left inside cover, PL 28.10 Item 14, Figure 2.



X-1-2014-A

Figure 2 Inner machine cover removal

Replacement

Reinstallation is the reverse of the removal procedure.

REP 40.1 Main Drive Module

Parts List on [PL 40.15](#)

Removal

NOTE: Removal and replacement videos of this procedure are available on the EDOC. The videos are accessible from the Library menu on the Service Interface.

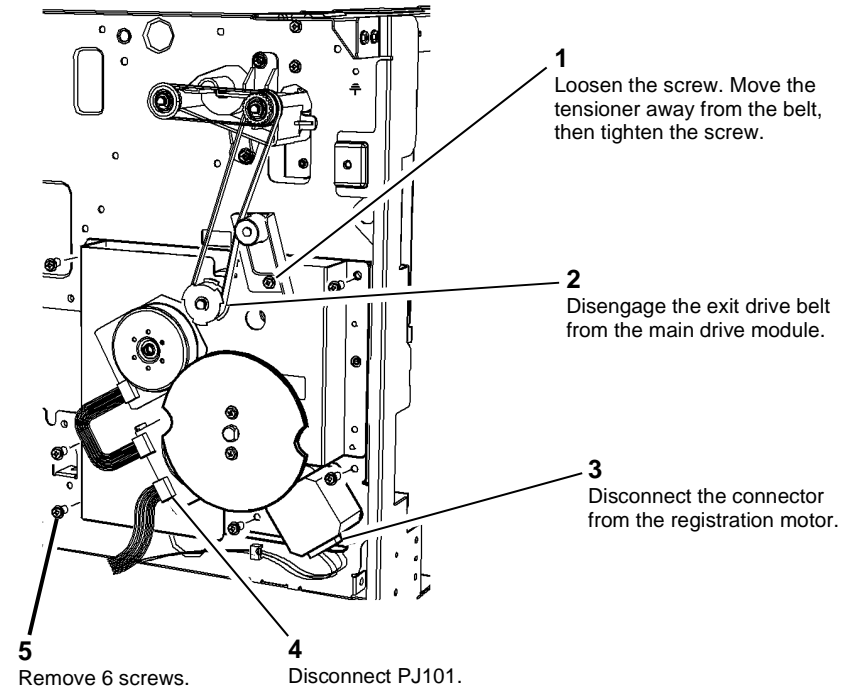

WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the fuser, [PL 10.8 Item 1](#).
2. Remove the print cartridge, [PL 90.17 Item 9](#), then place in a black bag.
3. Remove the rear cover, [REP 28.2](#).
4. Prepare to remove the main drive module, [Figure 1](#).



X-1-1017-A

Figure 1 Preparation

!
CAUTION

Take care not to damage harnesses when removing the main drive module.

5. Remove the main drive module. Refer to **Figure 2**.

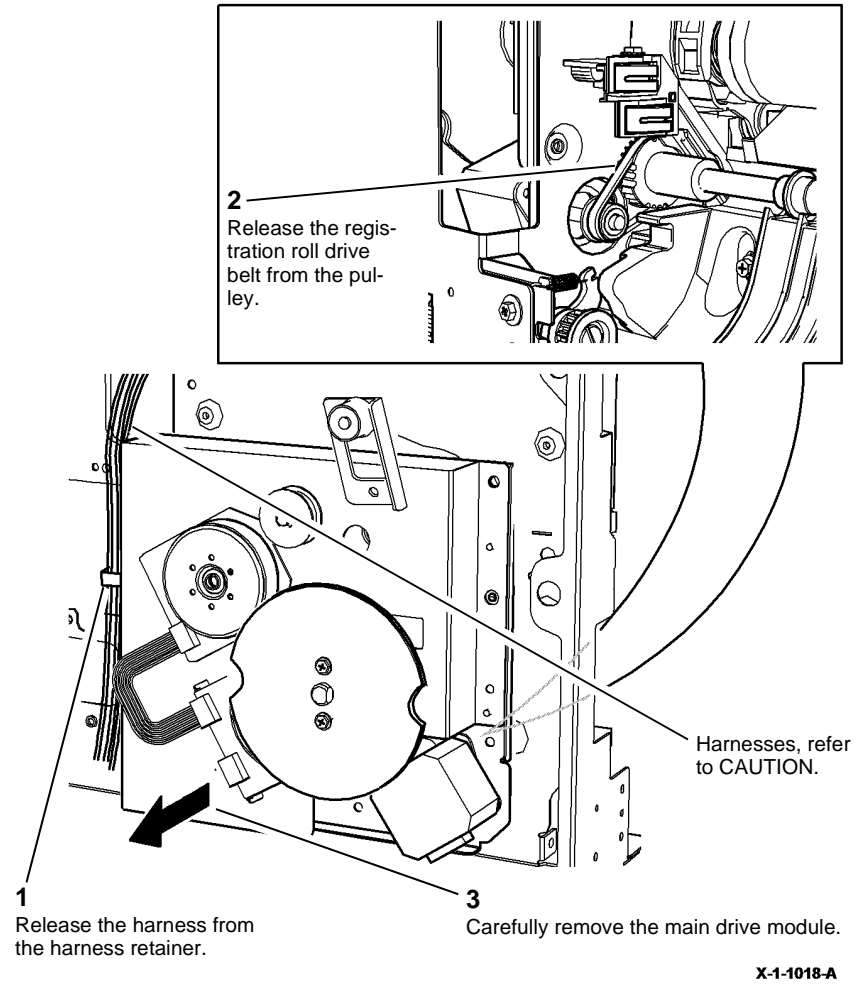


Figure 2 Removal

Replacement

!
CAUTION

Do not trap the harnesses when the main drives module is installed.

Perform the steps that follow:

1. Check that the gears are adequately greased, if necessary perform the Main Drive Module procedure of **ADJ 40.1**.
2. Install the main drive module, **Figure 3**.

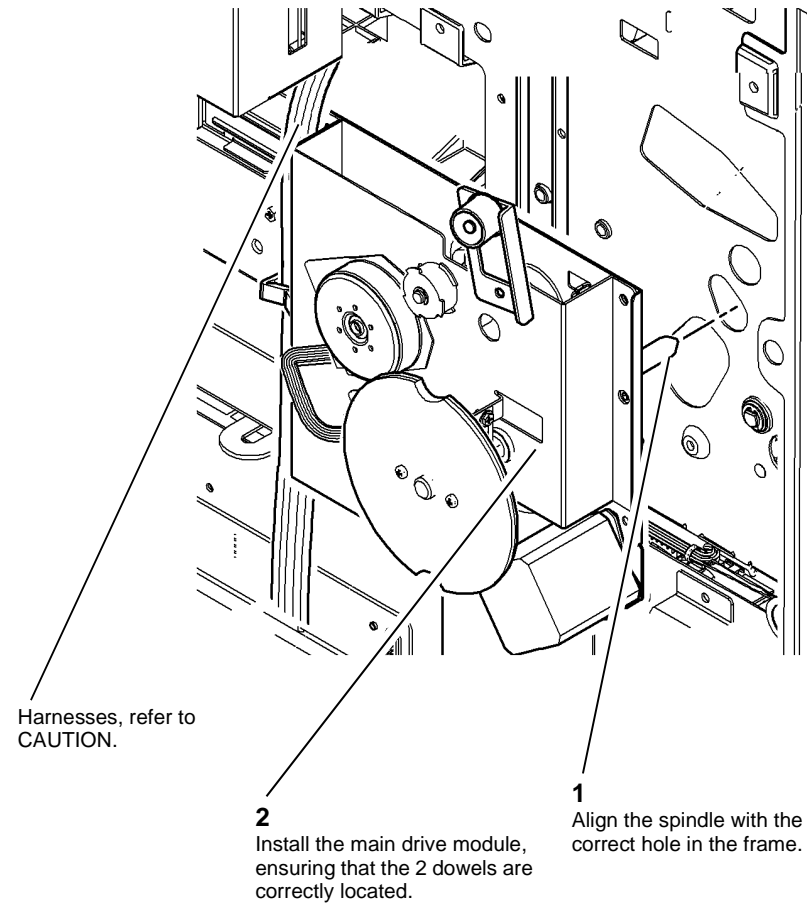
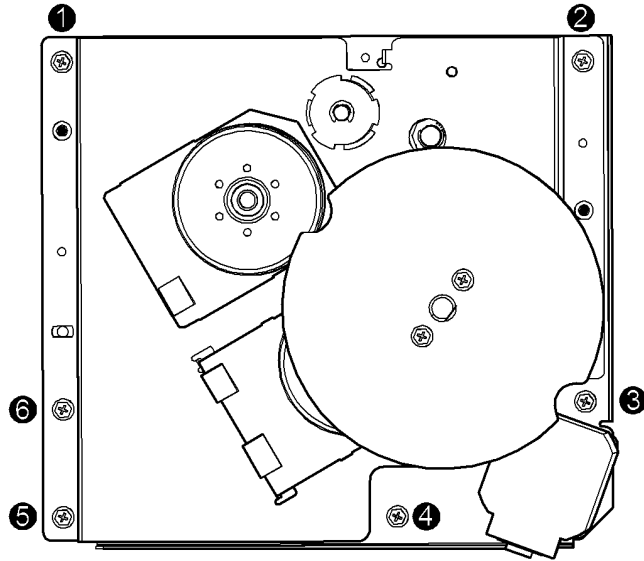


Figure 3 Replacement

!
CAUTION

To ensure optimum image quality, ensure that the securing screws are tightened in the order given in Figure 4.

3. Figure 4, secure the drives module to the machine frame.



1
Loosely insert 6 screws.

2
Tighten the 6 securing screws in the order shown. See Caution.

X-1-1451-A

Figure 4 Screw tightening sequence

4. The remainder of the replacement is the reverse of the removal procedure.
5. Re-fit the registration roll drive belt to the pulley.
6. Check the photoreceptor drive shaft on the main drive module and the print cartridge PL 90.17 Item 9 for ground continuity and electrical resistance, perform the 301A Ground Distribution RAP - Print Cartridge Ground.

REP 40.2 Registration Motor

Parts List on PL 40.15

Removal

!
WARNING

Switch off the electricity to the machine, GP 14. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

!
WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the main drive module, REP 40.1.
2. Remove 2 screws, then the registration motor, PL 40.15 Item 6.

Replacement

Replacement is the reverse of the removal procedure.

REP 60.1 Scanner Rear Cover and Faraday Shield

Parts List on [PL 60.15](#), [PL 60.20](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Raise the SPDH, [PL 5.10 Item 9](#).
2. Remove the scanner rear cover, [Figure 1](#).

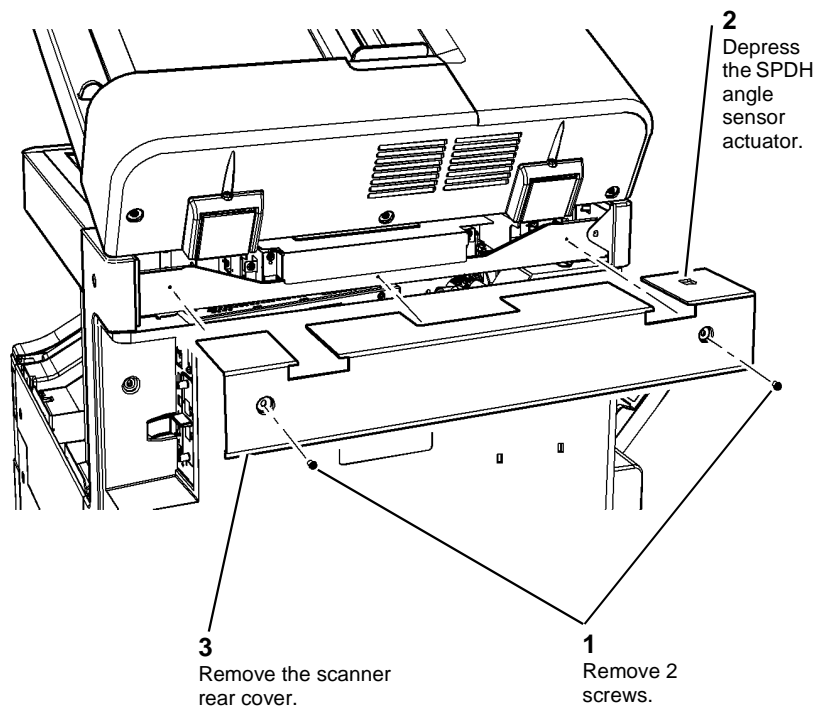


Figure 1 Scanner rear cover

X-1-1909-B

3. Remove the Faraday shield, [Figure 2](#).

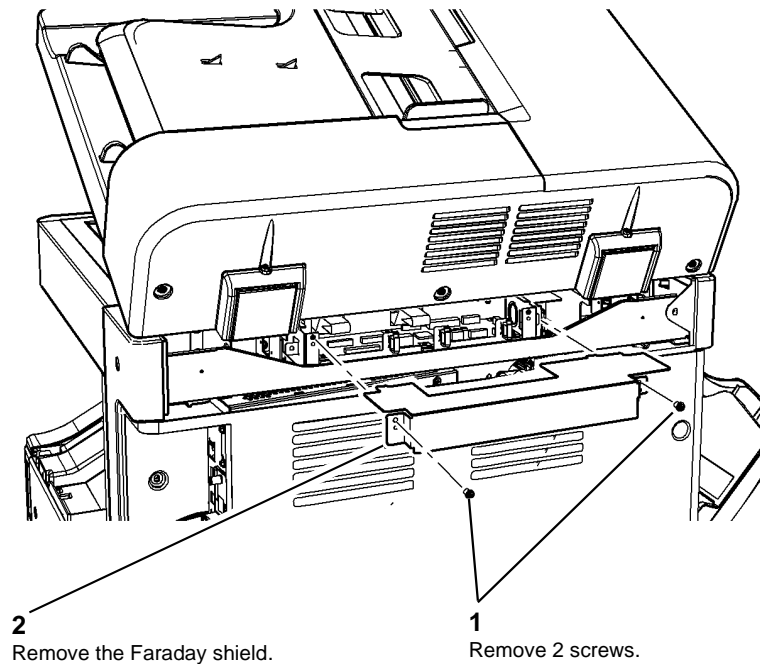


Figure 2 Faraday shield removal

X-1-1910-A

Replacement

The replacement is the reverse of the removal procedure.

REP 60.2 Scanner Module

Parts List on [PL 60.15](#)

Removal


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

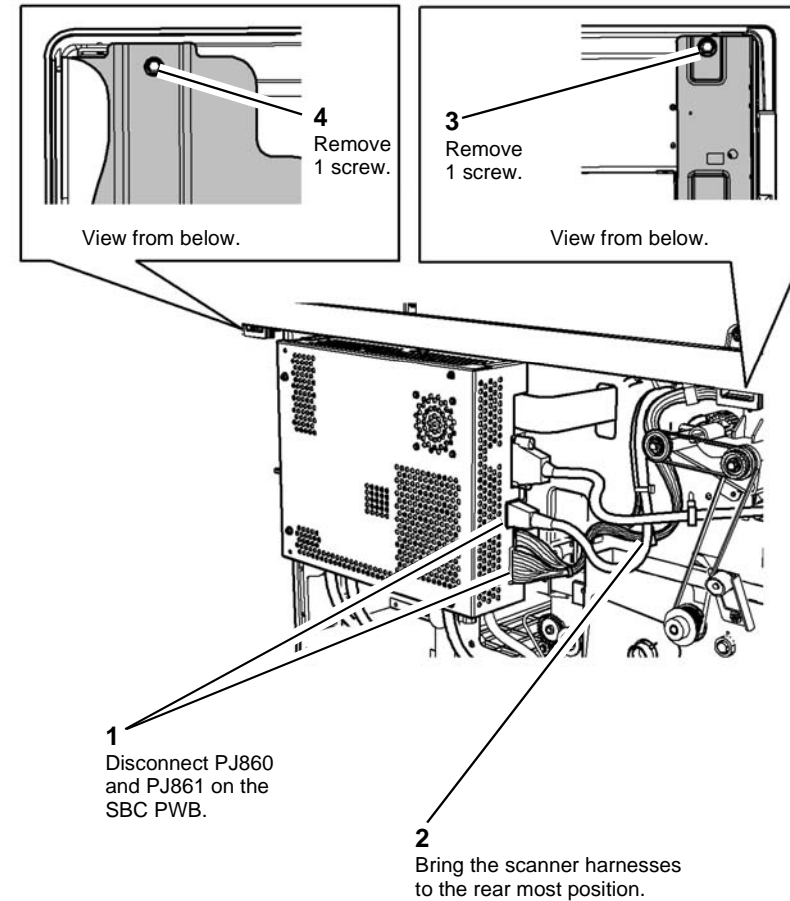

WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.


WARNING

Use safe handling procedures, [GP 16](#) when removing the module. The module is heavy.

1. If a finisher is installed, un-dock the finisher. Refer to:
 - [REP 12.13-110](#) LCSS Un-Docking.
 - [REP 12.13-150](#) LVF BM Un-Docking.
 - [REP 12.13-171](#) HVF/HVFBM Un-Docking
2. Position the machine to allow for the minimum safety work space [GP 21](#).
3. Ensure both of the front castors are locked, [PL 70.26](#) Item 3.
4. Remove the SPDH, [REP 5.18](#).
5. Remove the rear cover, [REP 28.2](#).
6. Remove the scanner rear cover, [PL 60.15](#) Item 4.
7. Remove the upper right cover, [PL 28.10](#) Item 3.
8. Remove the scanner right cover, [PL 60.15](#) Item 6.
9. Remove the scanner left cover, [PL 60.15](#) Item 7.
10. If installed, remove the centre output tray, [REP 10.9](#).
11. Prepare to remove the scanner module, [Figure 1](#).



X-1-1033-A

Figure 1 Scanner removal preparation

CAUTION

Take care not to damage the scanner harnesses when removing the scanner.

12. Remove the scanner module fixing screw, [Figure 2](#).

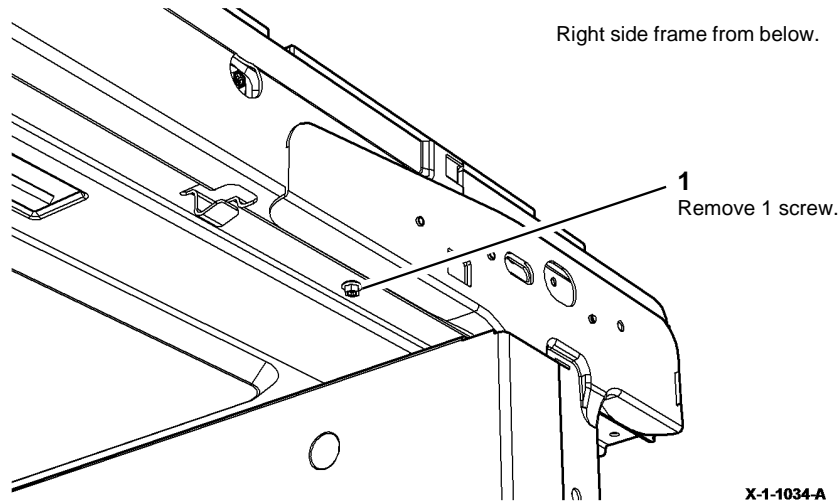
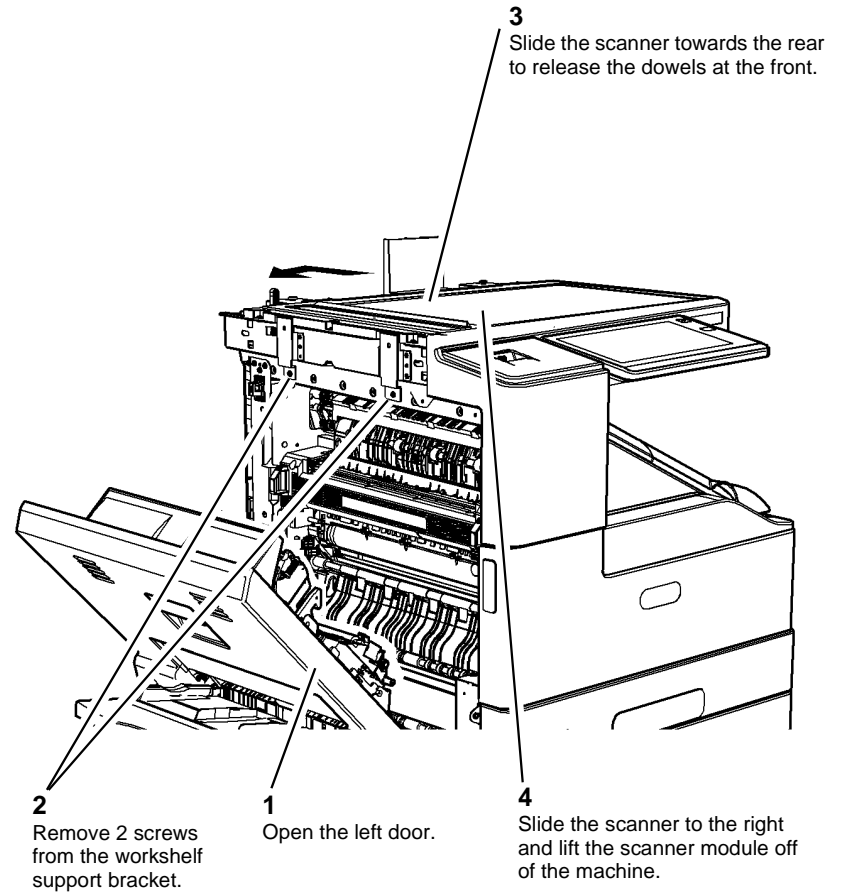


Figure 2 Scanner fixing removal

13. Remove the scanner, [Figure 3](#).



X-1-1036-A

Figure 3 Scanner removal

Replacement

1. If a new scanner module is being installed remove the workshelf support bracket, [Figure 3](#) from the old scanner module, then attach it to the new scanner module.
2. The replacement procedure is the reverse of the removal procedure.
3. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.
4. Ensure that the machine serial number in [dC132](#) is correct. If necessary, enter the correct serial number.

REP 60.3 Top Cover Assembly

Parts List on [PL 60.15](#)

Removal



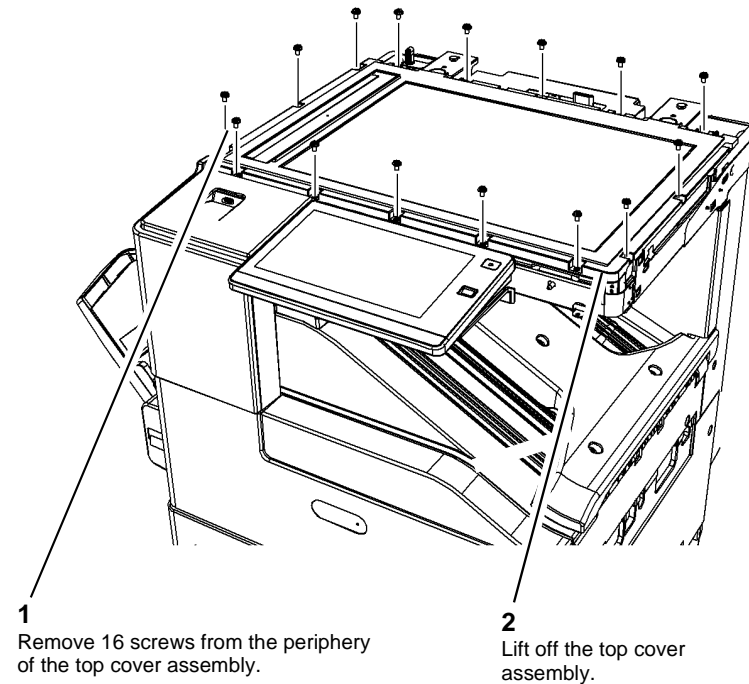
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the SPDH, [REP 5.18](#).
2. Remove the rear cover, [REP 28.2](#).
3. Remove the upper right cover, [PL 28.10 Item 3](#).
4. Remove the scanner right cover, [PL 60.15 Item 6](#).
5. Remove the scanner left cover, [PL 60.15 Item 7](#).
6. Remove the centre output tray, [REP 10.9](#) or the horizontal transport assembly, [REP 10.6](#).
7. Remove the scanner front cover, [REP 28.1](#).

8. Remove the top cover assembly, [Figure 1](#).



X-1-1911-A

Figure 1 Top cover assembly

Replacement

1. Perform [ADJ 60.1](#) scanner cleaning procedure.
2. The replacement is the reverse of the removal procedure.
3. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

REP 60.4 Scanner PWB

Parts List on [PL 60.20](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



CAUTION

Take care if a new IOT PWB, scanner PWB or hard disk is to be installed. Ensure that any combination of these components are replaced one at a time and that the machine is switched off then on ([GP 14](#)) between each installation of a PWB or the hard disk. Failure to do so will cause corruption of the machine's NVM configuration data and render the machine inoperable. Refer to [GP 27 Machine Configuration Control and Recovery](#).



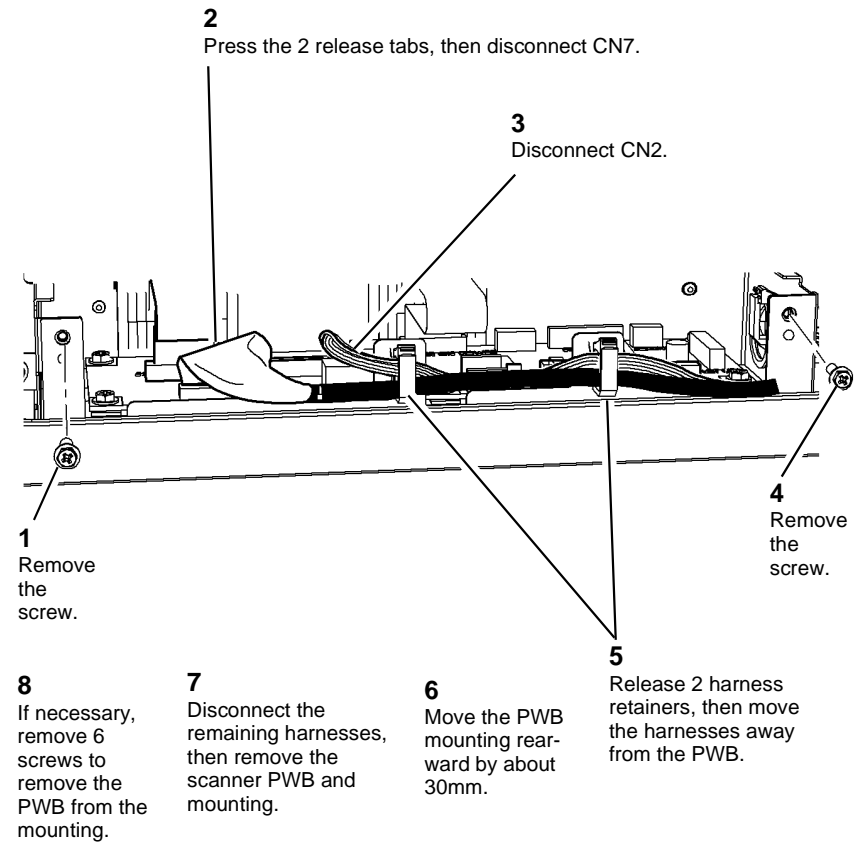
CAUTION

Ensure that E.S.D. procedures are observed during the removal and installation of the scanner PWB.

1. Remove the SPDH. [REP 5.19](#).

NOTE: It is possible to remove the scanner PWB without first removing the SPDH, but access to the scanner PWB connectors is more restricted.

2. Remove the scanner PWB, [Figure 1](#).



X-1-1912-A

Figure 1 Scanner PWB

Replacement

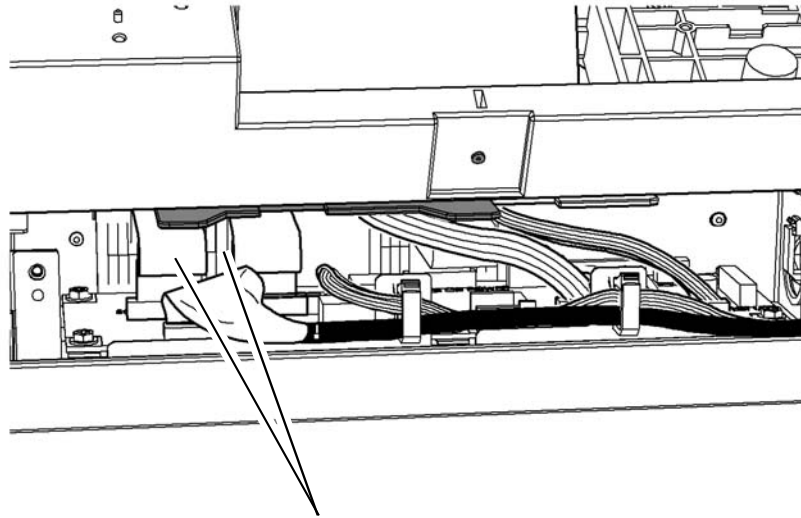
1. The replacement is the reverse of the removal procedure.



CAUTION

Ensure that all slack in both ribbon cables is pulled from the optics cavity and folded over the scanner PWB.

2. Before installing the scanner rear cover, dress the position of the ribbon cables, [Figure 2](#).



1. Ensure that all slack in both ribbon cables is pulled from the optics cavity and folded over the scanner PWB.

X-1-1913-A

Figure 2 Ribbon cables caution

3. If a new scanner PWB has been installed, perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.
4. Ensure that the machine serial number in [dC132](#) is correct. If necessary, enter the correct serial number.

REP 60.5 Scan Carriage Assembly

Parts List on [PL 60.20](#)

Removal



WARNING

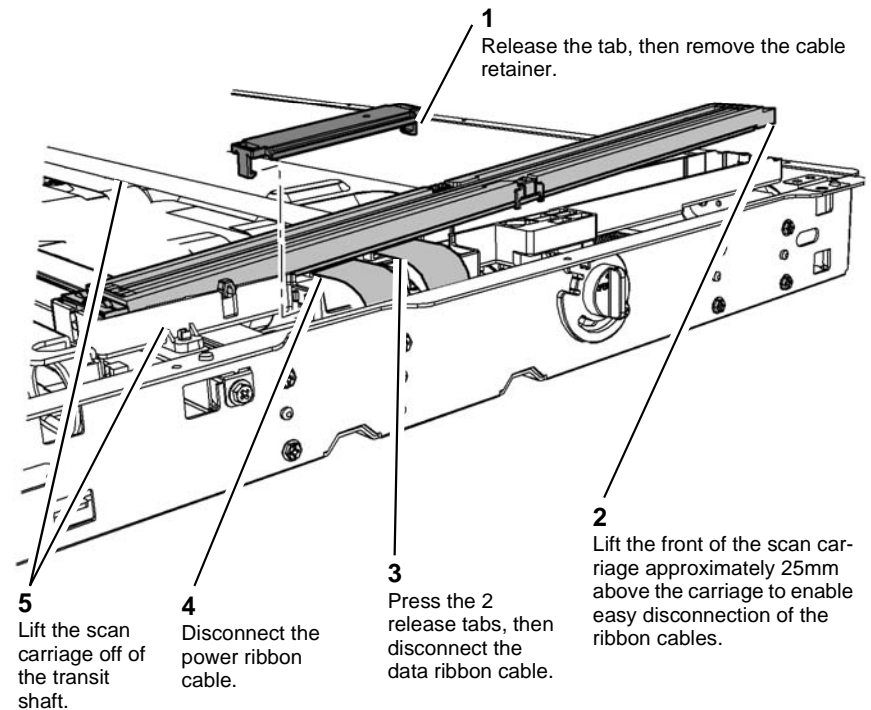
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the top cover assembly, [REP 60.3](#).
2. Remove the scan carriage drive belt, [REP 60.10](#).
3. Remove the scan carriage, [Figure 1](#).



X-1-1914-A

Figure 1 Scan carriage removal

Replacement

1. The replacement is the reverse of the removal procedure.
2. Perform [ADJ 60.1](#) Scanner Cleaning Procedure before installing the top cover assembly.
3. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

REP 60.6 Side 2 Scan Assembly

Parts List on [PL 60.30](#)

Removal



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Open the SPDH top cover assembly, [PL 5.20](#) Item 15.
2. Remove 5 screws then remove the SPDH rear cover, [PL 5.10](#) Item 1.
3. Raise the SPDH assembly.
4. Remove the SPDH front cover (4 screws), [PL 5.10](#) Item 17.
5. Remove the separation assembly, [REP 5.3](#).
6. Remove the complete input tray assembly, [REP 5.23](#).



CAUTION

Do not pull directly on the data ribbon to disconnect it from the side 2 scanner. The ribbon cable shield is flexible and can be lifted to allow access to the release tabs on the data ribbon cable connector.

7. Disconnect the harnesses and rear fixing, [Figure 1](#).

NOTE: The data ribbon cable has a silver coloured coating.

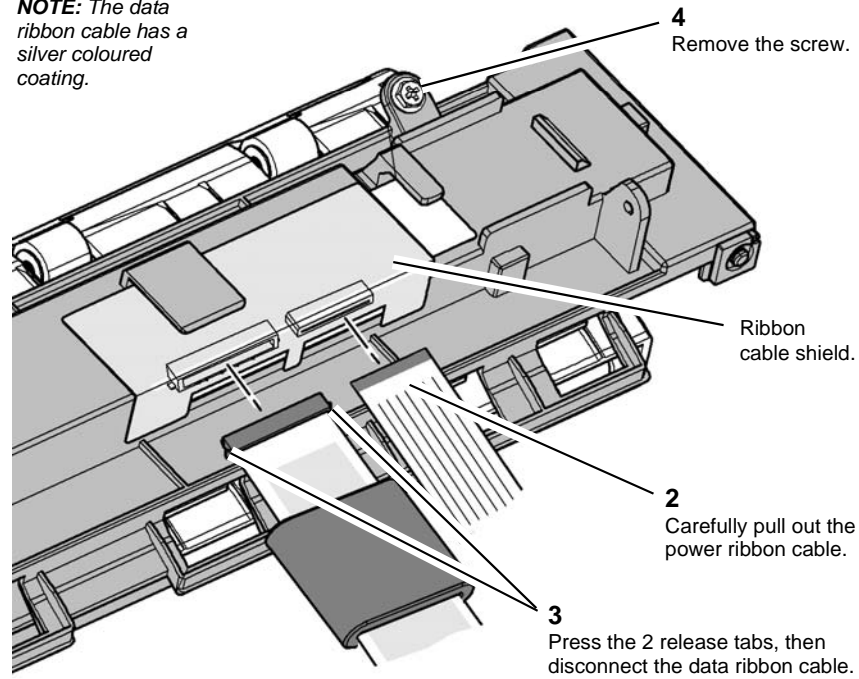


Figure 1 Preparation 1

8. Note the position of the peg in the alignment scale, [Figure 2](#).

9. Prepare to remove the side 2 scan assembly, [Figure 2](#).

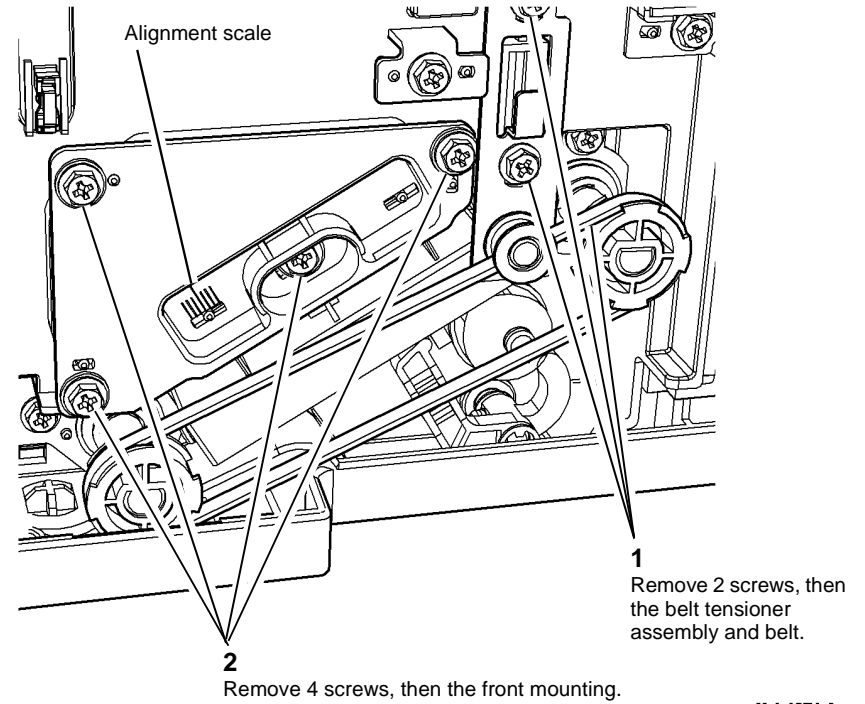


Figure 2 Preparation 2

10. Remove the side 2 scan assembly, [Figure 3](#).

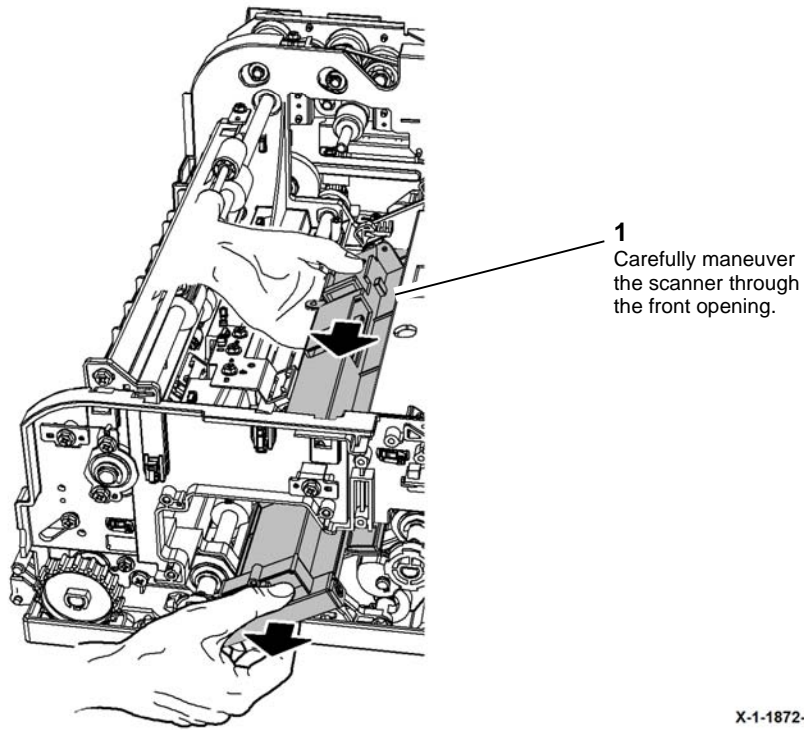


Figure 3 Side 2 scan assembly

Replacement

1. Perform [ADJ 60.2](#) Side 2 Scan Assembly Cleaning Procedure.



CAUTION

Take great care not to damage the ends of the ribbon cables when reconnecting them to the side 2 scanner.

2. The replacement is the reverse of the removal procedure.
3. When installing the front mounting, ensure that the peg is located in the same location as that noted in step 6.
4. Perform [ADJ 5.2](#) SPDH Skew.
5. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

REP 60.7 Scanner FFC Harness Assembly

Parts List on [PL 60.20](#)

Removal

NOTE: The scan carriage power ribbon cable and data ribbon cable are spared as part of the scanner ribbon cable carrier assembly, together with the document size sensors.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the top cover assembly, [REP 60.3](#).
2. Disconnect the ribbon cables from the scanner PWB, refer to [REP 60.4](#).
3. Disconnect the ribbon cables from the scan carriage assembly, refer to [REP 60.5](#).

NOTE: It is not necessary to detach the scan carriage drive belt from the scan carriage.

!
CAUTION

When removing the ribbon cable carrier assembly, take care to not damage the ribbon cables.

4. Remove the ribbon cable carrier assembly, **Figure 1**.

4
Manually move the scan carriage to the right, to allow removal of the carrier assembly.

3
Remove 4 screws.

2
Release the harness from the retainers.

1
Disconnect both sensor harnesses,

Scan carriage.

5
Lift the carrier assembly off the alignment dowel, then remove it from the scanner. **SEE CAUTION.**

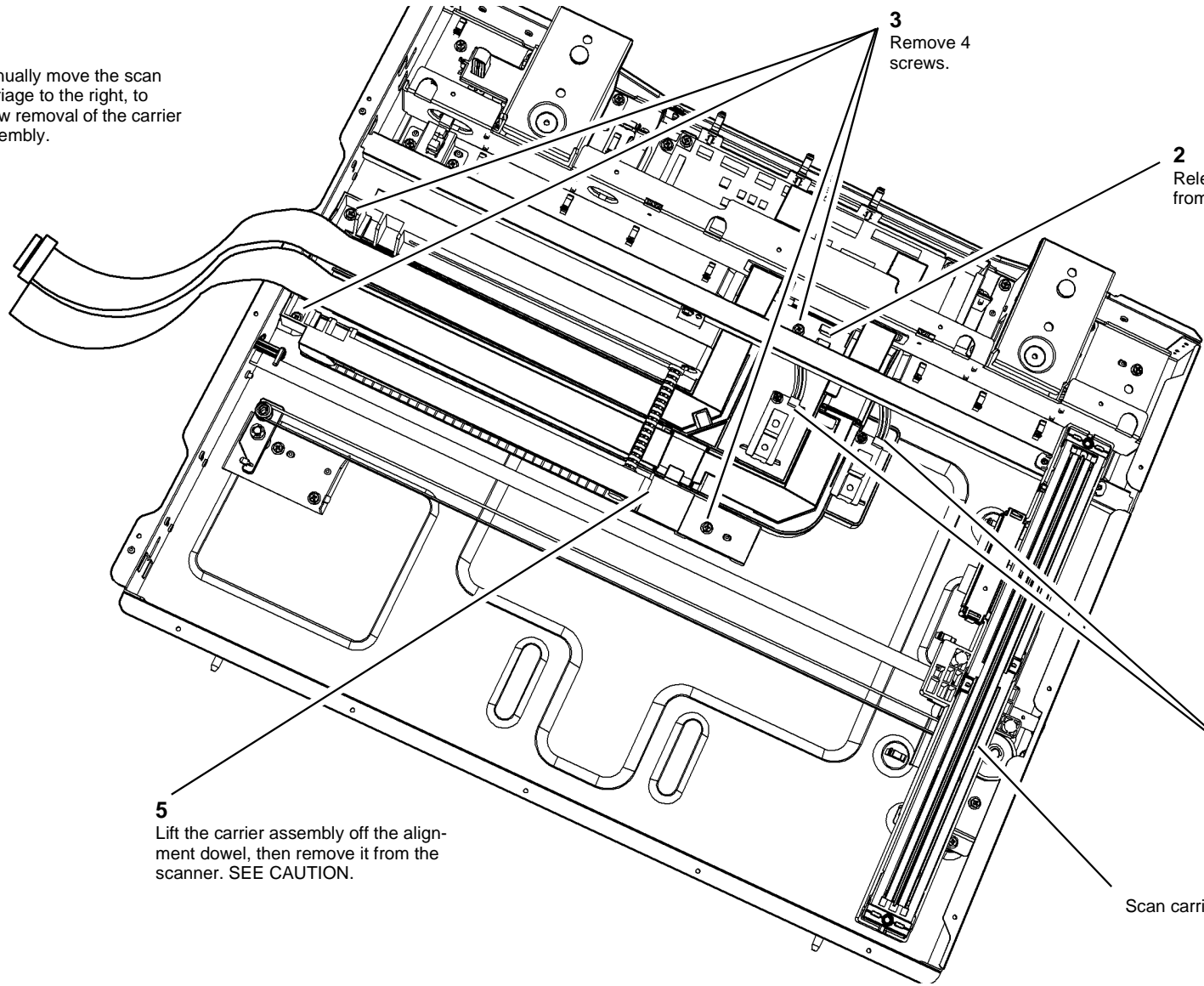


Figure 1 Carrier removal

X.1.1422.A

Replacement

1. Replacement is the reverse of the removal procedure.
2. Perform [ADJ 60.1](#) Scanner Cleaning Procedure before installing the top cover assembly.
3. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

REP 60.8 Actuator Support Assembly, DH Angle Sensor and DH Platen Down Sensor

Parts List on [PL 60.20](#)

Removal

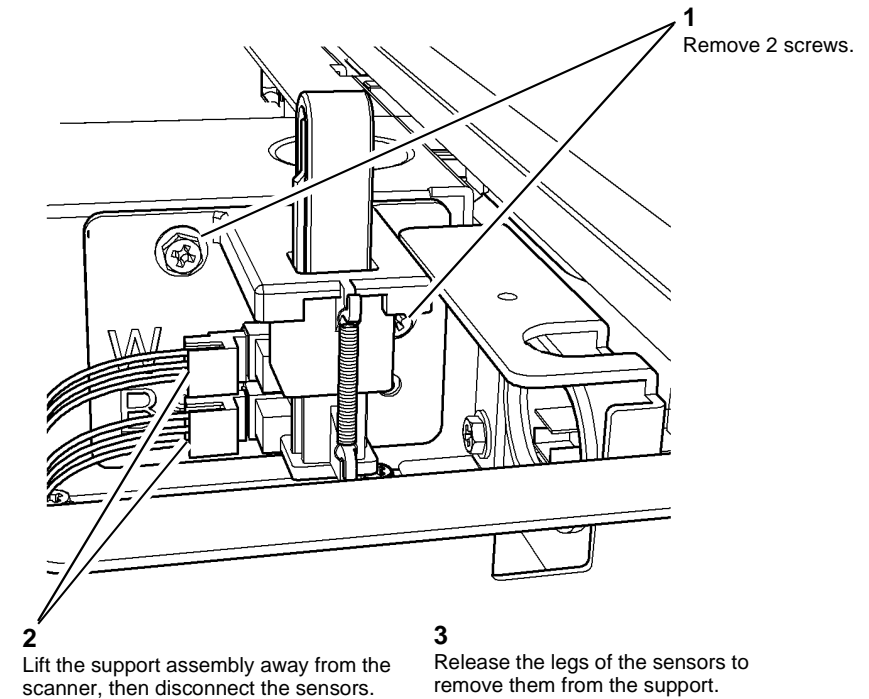

WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the scanner top cover, [REP 60.3](#).
2. Remove the scanner left cover, [PL 60.15](#) Item 7.
3. Remove the actuator support assembly, [Figure 1](#).



X-1-1924-A

Figure 1 Actuator support assembly

Replacement

NOTE: The black connector is for the DH angle sensor.

The replacement is the reverse of the removal procedure.

REP 60.9 Scan Carriage Motor Assembly

Parts List on [PL 60.20](#)

Removal

NOTE: A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.



WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the top cover assembly, [REP 60.3](#).

2. Remove the scan carriage drive belt from the motor drive gear, [Figure 1](#).

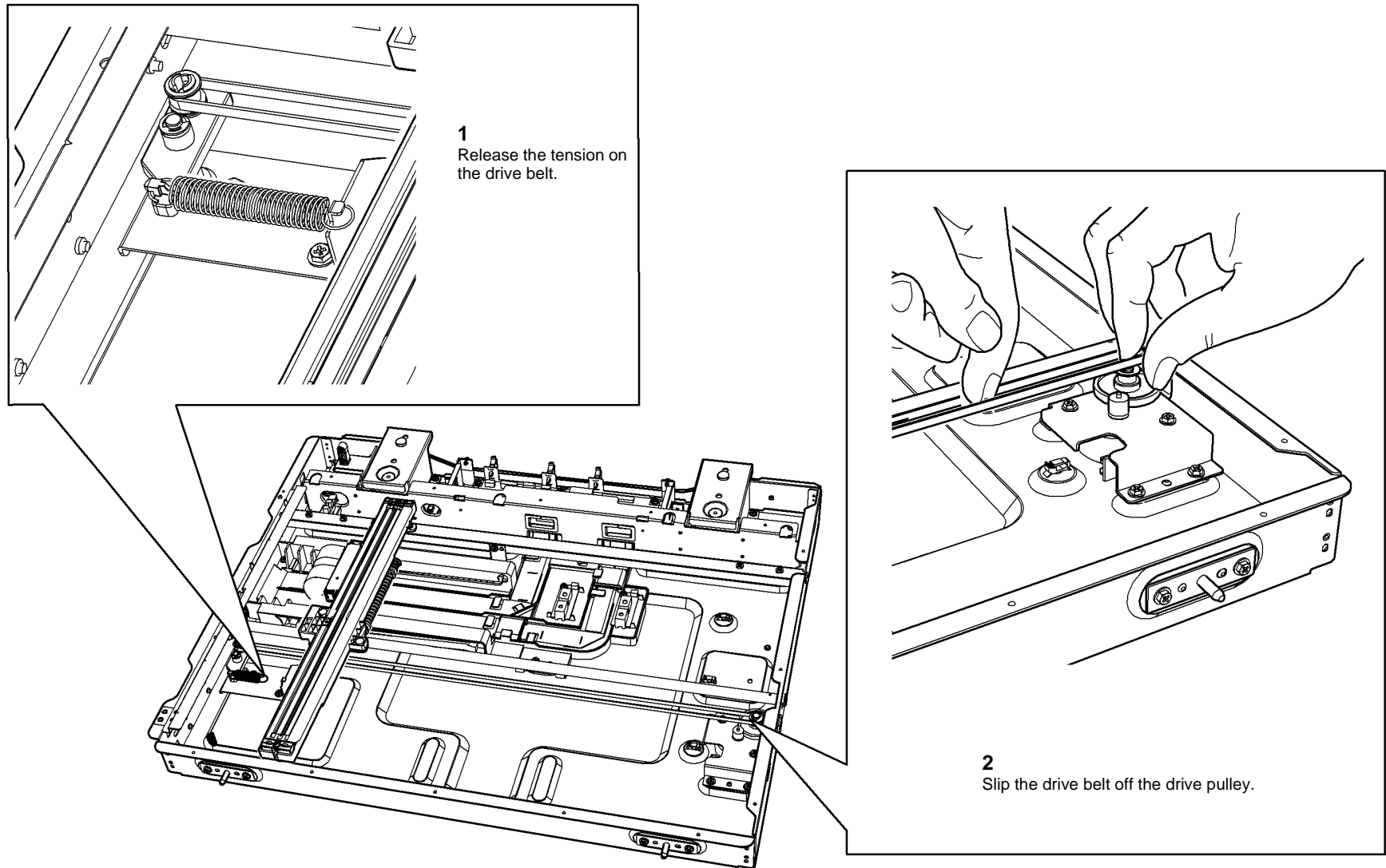
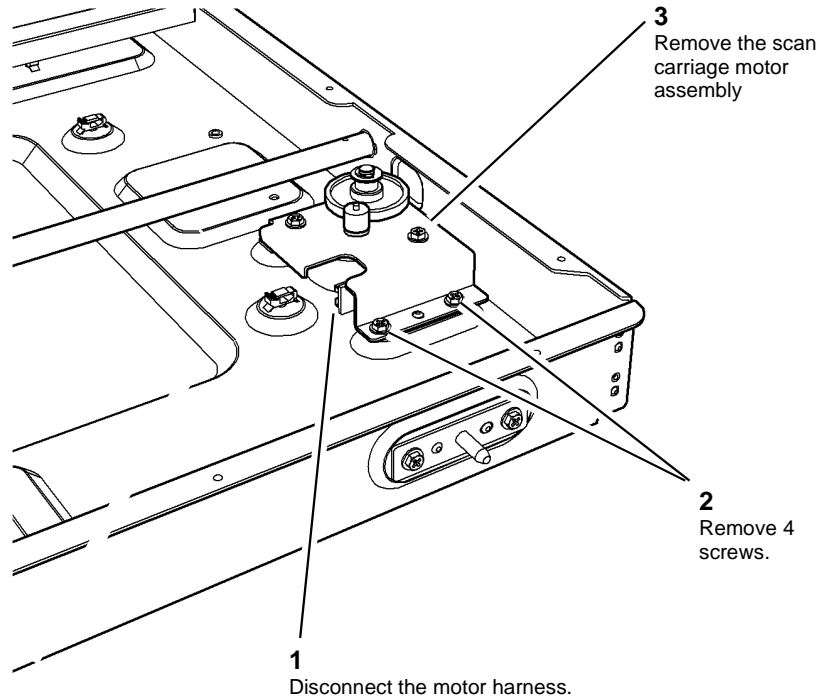


Figure 1 Drive belt release

X-1-1925-A

- Remove the scan carriage motor assembly, [Figure 2](#).



X-1-1929-A

Figure 2 Motor and bracket removal

Replacement

- The replacement is the reverse of the removal procedure.
- Perform [ADJ 60.1](#) Scanner Cleaning Procedure before installing the top cover assembly.
- Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

REP 60.10 Scan Carriage Drive Belt

Parts List on [PL 60.20](#)

Removal

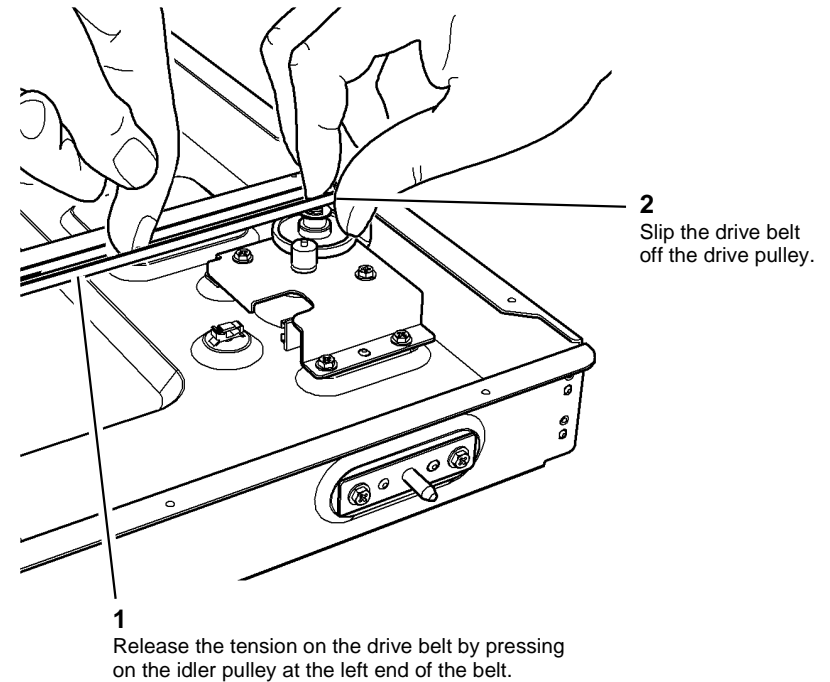


Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

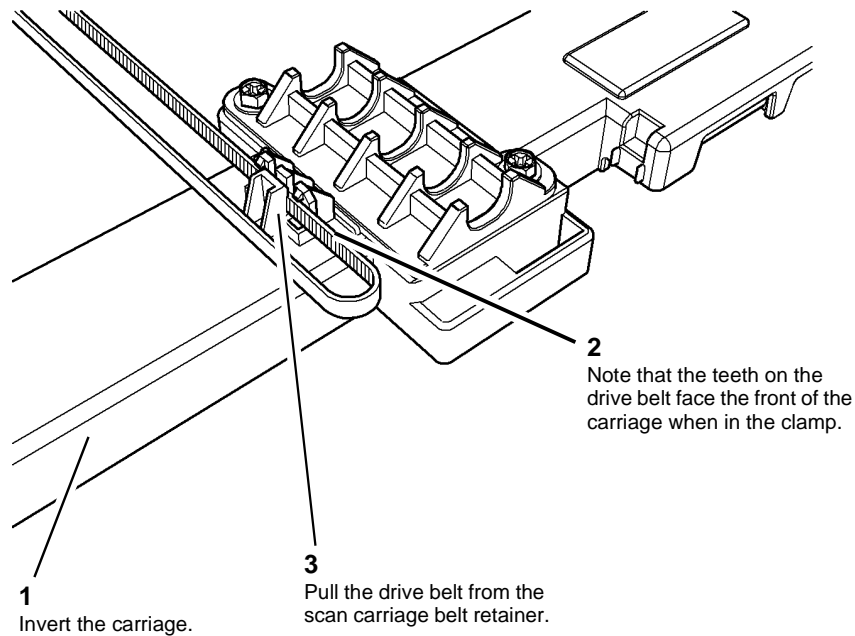
- Remove the top cover assembly, [REP 60.3](#).
- Release the scan carriage drive belt from the scan carriage motor assembly, [Figure 1](#).



X-1-1926-A

Figure 1 Drive belt release

- Detach the scan carriage drive belt, [Figure 2](#).



X-1-1927-A

Figure 2 Drive belt retainer

Replacement

- The replacement is the reverse of the removal procedure.
- Ensure the scan carriage drive belt is installed correctly in the scan carriage belt retainer, [Figure 2](#).
- Ensure the scan carriage drive belt is installed correctly on the idler pulley and the drive pulley.
- Perform [ADJ 60.1](#) Scanner Cleaning Procedure before installing the top cover assembly.
- Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

REP 60.11 Document Size Sensor 1 and Document Size Sensor 2

Parts List on [PL 60.20](#)

Removal


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

- Remove the top cover assembly, [REP 60.3](#).

- Remove document size sensor 1 (Q62-251) or document size sensor 2 (Q62-253), [Figure 1](#).

NOTE: The removal procedure of document size sensor 1 and document size sensor 2 is identical.

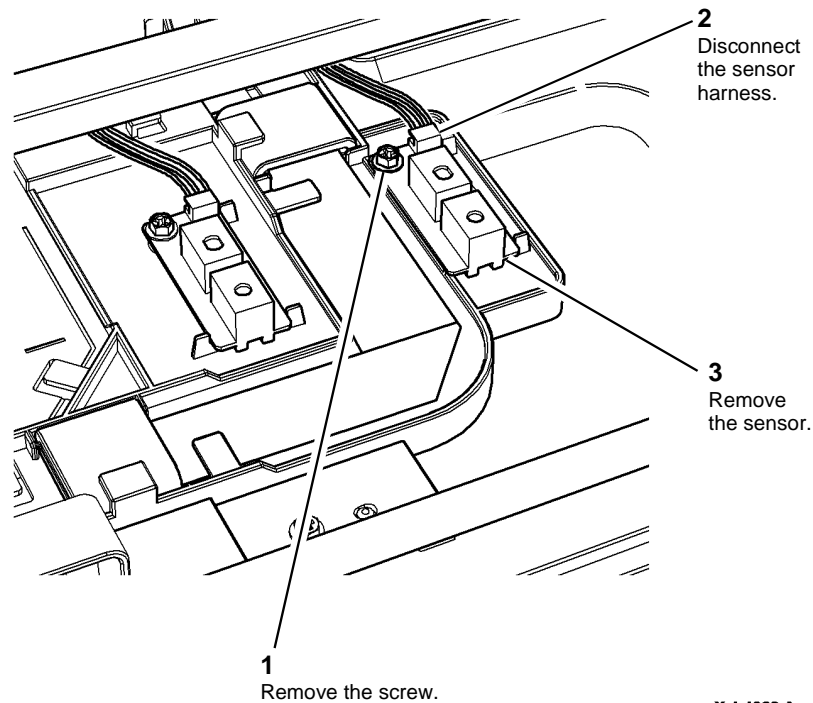


Figure 1 Document size sensor removal

Replacement

- The replacement is the reverse of the removal procedure.
- Perform [ADJ 60.1](#) Scanner Cleaning Procedure before installing the top cover assembly.
- Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

REP 60.12 LED Print Head Module

Parts List on [PL 60.35](#)

Removal

NOTE: Removal and replacement videos of this procedure are available on the EDOC. The videos are accessible from the Library menu on the Service Interface.



CAUTION

Certain components in this product are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

WARNING

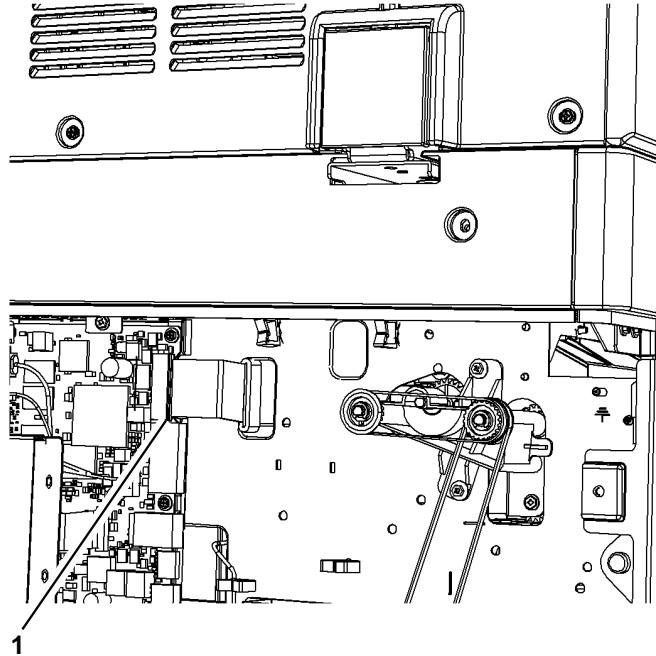
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

- Remove the rear cover, [REP 28.2](#).
- Remove the SBC cover, [PL 3.22](#) Item 9.

3. Disconnect the LED print head module ribbon cable, [Figure 1](#).



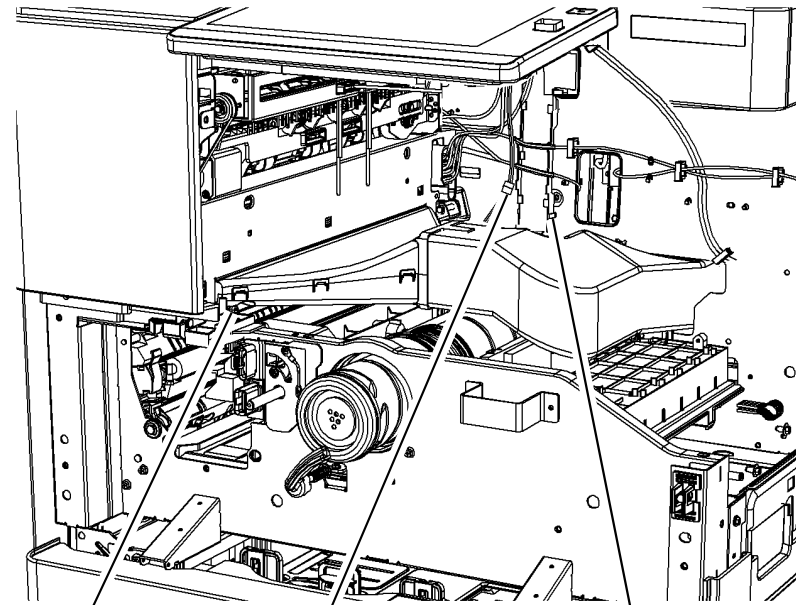
1 Disconnect the LPH ribbon cable from PJ851 on the SBC PWB.

Figure 1 Ribbon cable

4. Remove the print cartridge, [PL 90.17 Item 9](#), then place it in a lightproof bag.
5. Remove the relevant component:
 - Horizontal transport assembly, [REP 10.6](#).
 - Centre output tray, [REP 28.1](#).
6. Remove the inner machine cover, [REP 28.3](#).
7. Remove the back plate (4 screws), [PL 28.10 Item 13](#).
8. Remove the latch, [PL 60.35 Item 2](#).
9. Remove the inner front cover, [PL 28.10 Item 10](#).

X-1-1881-A

10. Prepare to remove the LED print head module, [Figure 2](#).



1 Disconnect the in-line connector of the CRUM connectors assembly (front).

2 Disconnect the in-line connector of the CRUM connectors assembly (rear).

3 Release the ribbon cable support from the frame.

X-1-1882-A

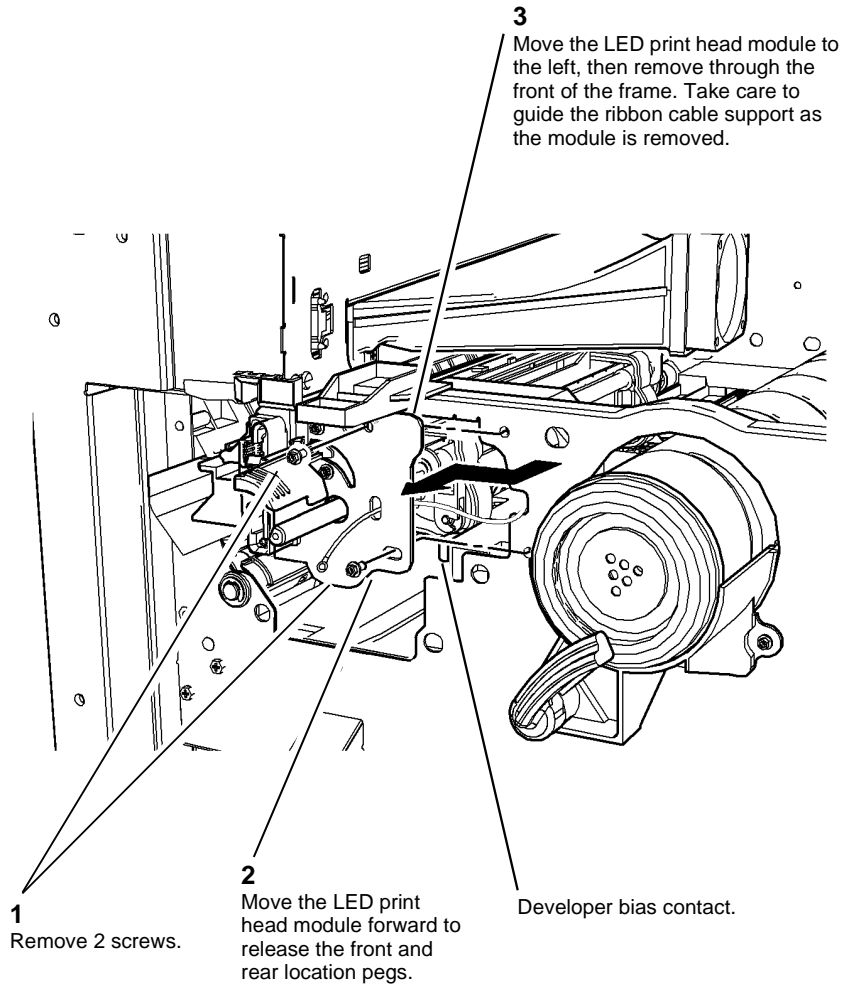
Figure 2 Preparation

!
CAUTION

Take care not to damage the developer bias contact when removing the LED print head module. Also, avoid touching the LED lamp when handling the LED print head module.

11. Remove the LED print head module, **Figure 3**.

13. Remove the ferrite from the ribbon cable.
14. Un-fold the uppermost corner fold in the ribbon cable.
15. Slide the ribbon cable out of the support.



X-1-1883-A

Figure 3 LPH removal

12. Push the SBC PWB end of the ribbon cable through the slot in the ribbon cable support to release the ferrite.

Replacement

1. The replacement is the reverse of the removal procedure.
2. Before installing the new LED print head module, ensure that the LED print head cleaner is fully home and the LED lamp is cammed into the housing.
3. Ensure the front and rear location pegs on the LPH are aligned with the holes in the frame, [Figure 4](#).

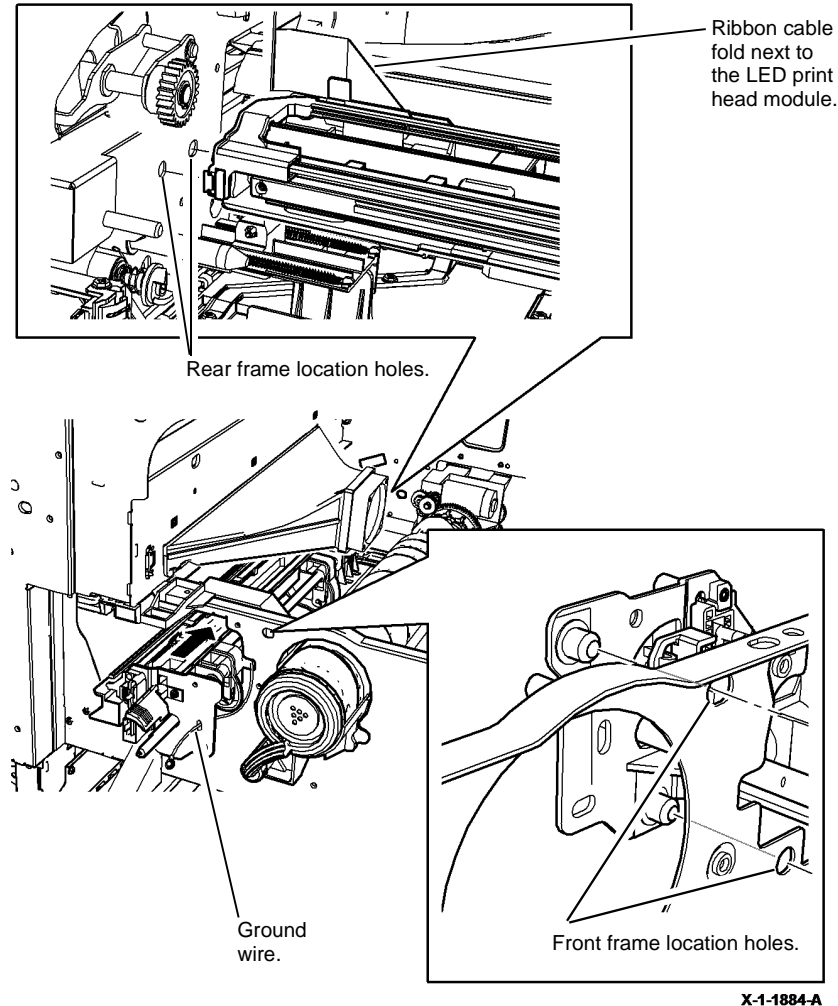


Figure 4 Replacement

4. Ensure that any slack in the ground wire is positioned behind the machine frame, not in front, [Figure 4](#).

5. Ensure that the ribbon cable fold next to the LED print head module is formed as shown in [Figure 4](#).
6. Ensure the ribbon cable is correctly connected to PJ851 on the SBC PWB. The printed blue band should face away from the PWB.
7. Perform [ADJ 60.4 LED Print Head Cleaning Procedure](#).
8. Check the LED print head module for ground continuity and electrical resistance, perform the [301A Ground Distribution RAP - LED Print Head Module Ground](#).

REP 60.13 Side 2 Reg Sensor

Parts List on

Removal

Go to [REP 5.10](#) SPDH Reg Sensor and Side 2 Reg Sensor.

REP 70.1 Tray 1 and Tray 2 Removal

Parts List on [PL 70.10](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



CAUTION

Do not stack the trays one on top of the other tray. The top tray can damage the bottom tray, which can cause misfeeds or paper jams.

1. Remove tray 1 or tray 2, [Figure 1](#).

NOTE: The removal procedure for tray 1 and tray 2 is the same.

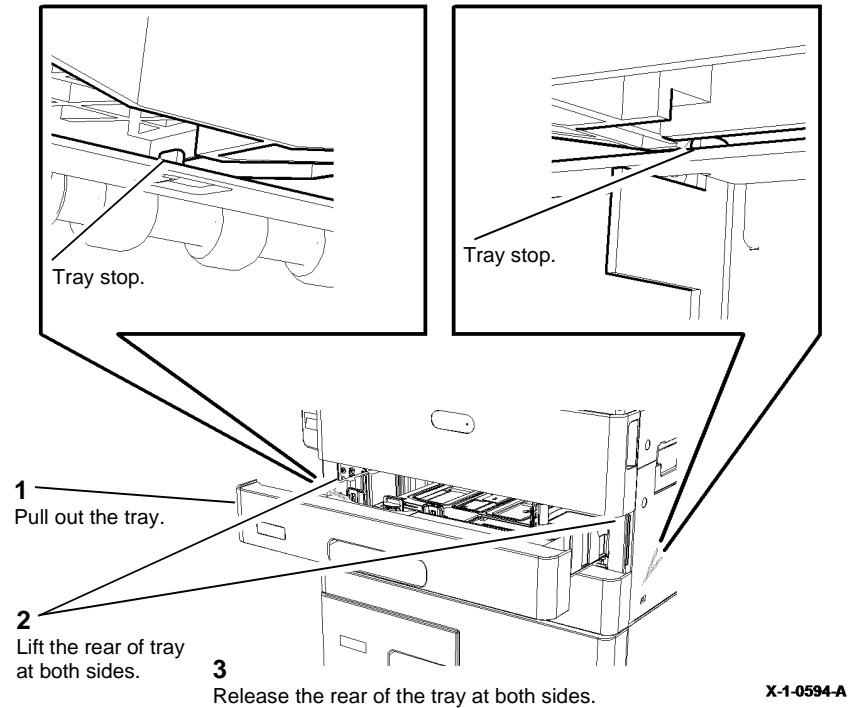


Figure 1 Tray 1 and tray 2 removal

Replacement

1. The replacement is the reverse of the removal procedure. Lift the rear of the tray over the tray stops and push the tray in. Refer to [Figure 1](#).
2. If the trays do not slide easily, go to [ADJ 40.1](#) and perform the Tray 1 and 2 Slide Pads procedure.

REP 70.2 Bypass Tray Assembly

Parts List on [PL 70.35](#)

Removal

NOTE: Removal and replacement videos of this procedure are available on the EDOC. The videos are accessible from the Library menu on the Service Interface.


WARNING

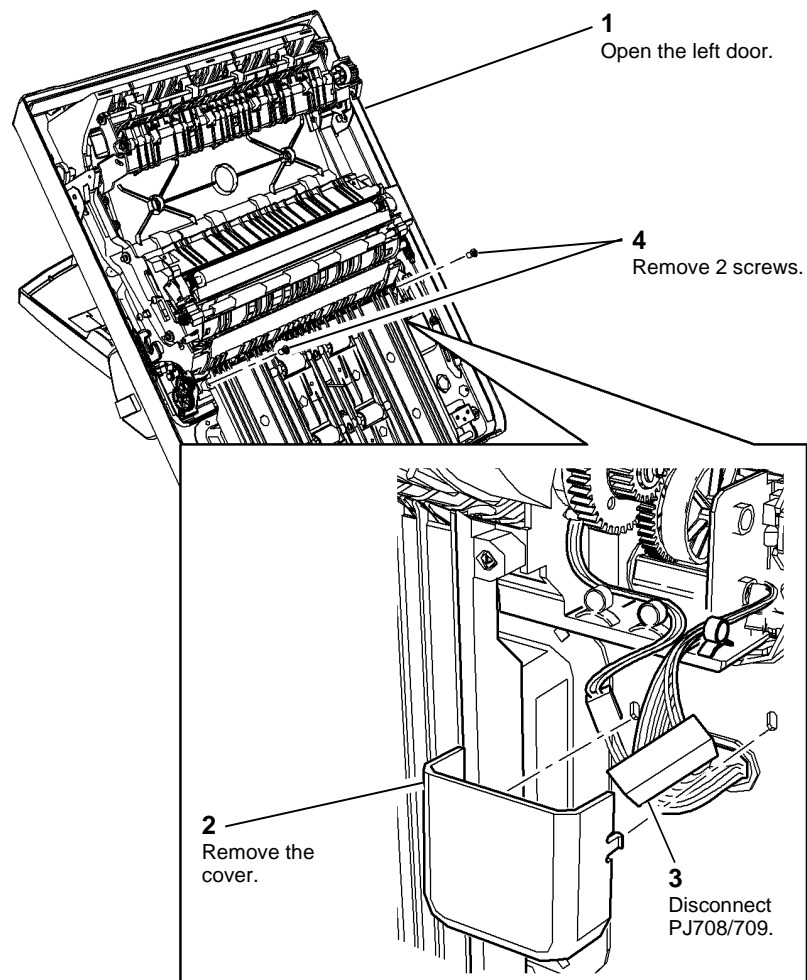
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the print cartridge, [PL 90.17 Item 9](#), then place in a black bag.

2. Prepare to remove the bypass tray assembly, [Figure 1](#).



X-1-1330-A

Figure 1 Preparation

3. Remove the bypass tray assembly, [Figure 2](#).

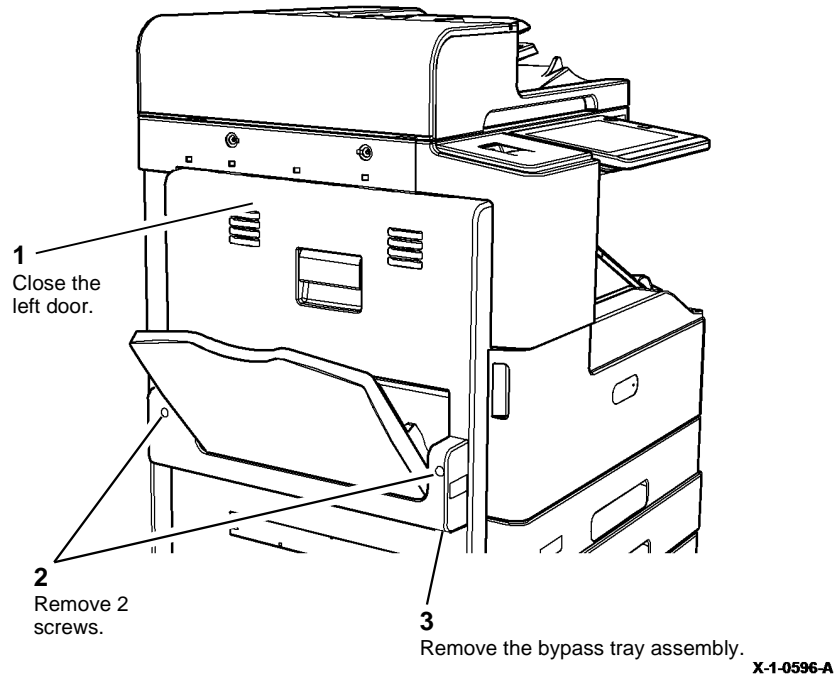


Figure 2 Bypass tray removal

Replacement

1. The replacement is the reverse of the removal procedure.
2. Perform the [dC604](#) Registration Setup.

REP 70.3 Tray 1 and Tray 2 Paper Guides

Parts List on [PL 70.10](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

NOTE: The removal procedure is the same for tray 1 and for tray 2.

1. Remove the paper from the tray.
2. Remove the tray, [REP 70.1](#).
3. Remove the paper lift plate, [Figure 1](#).

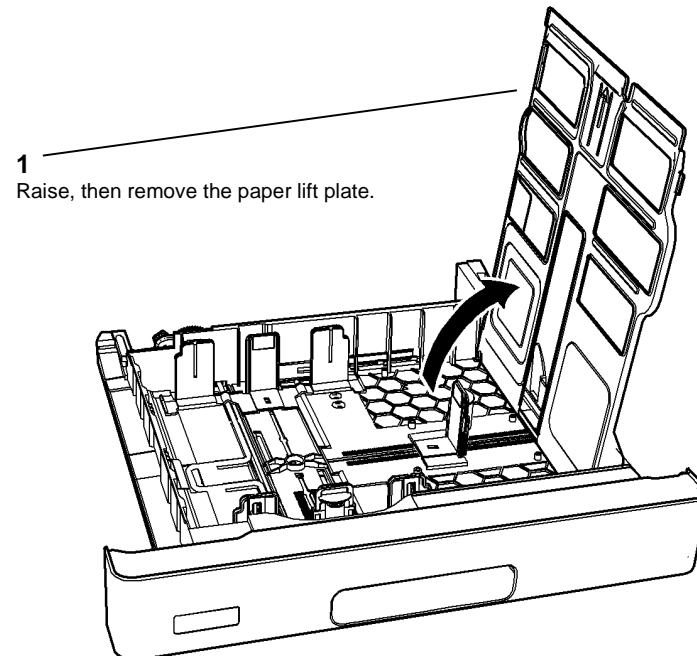
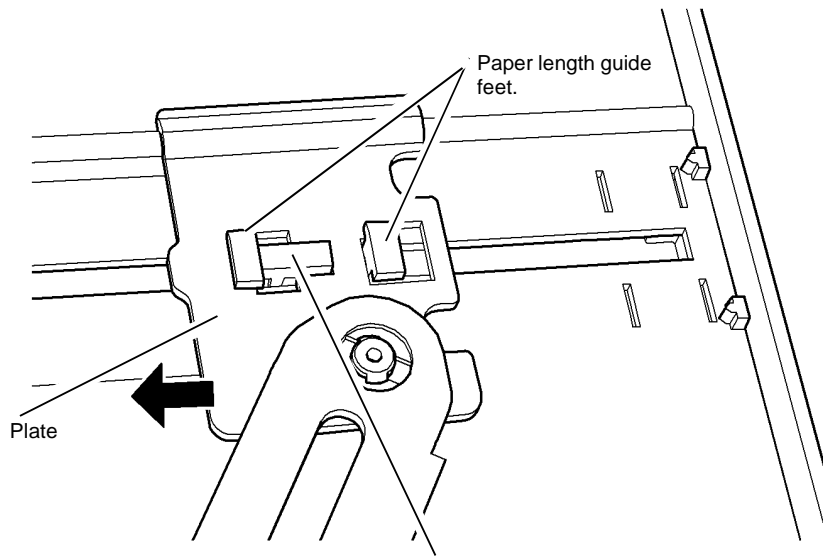


Figure 1 Paper lift plate removal

4. Prepare to remove the paper length guide, [Figure 2](#).

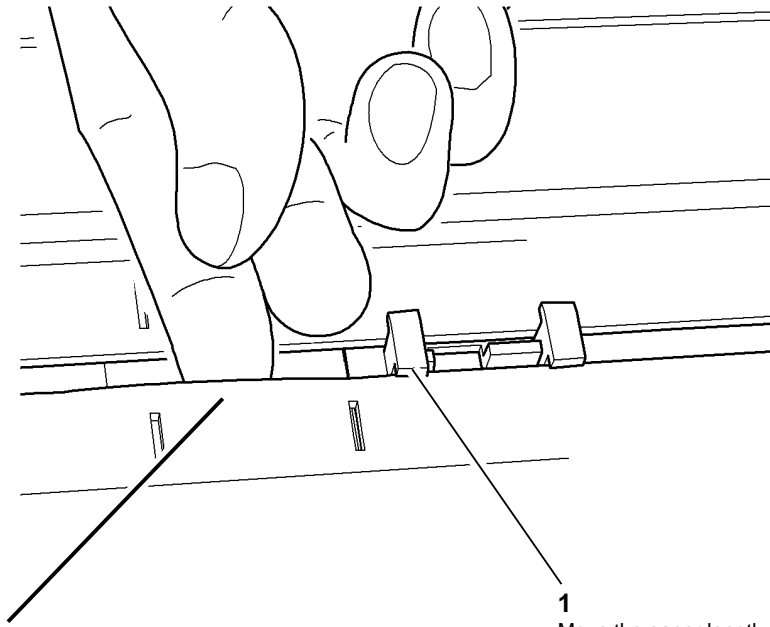


- 1** Remove the tab using a small flat blade screwdriver under the centre of the tab.
- 2** Move the plate to the left to release the plate from the length guide.

X-1-1135-A

Figure 2 Preparation

5. Remove the paper length guide, [Figure 3](#).

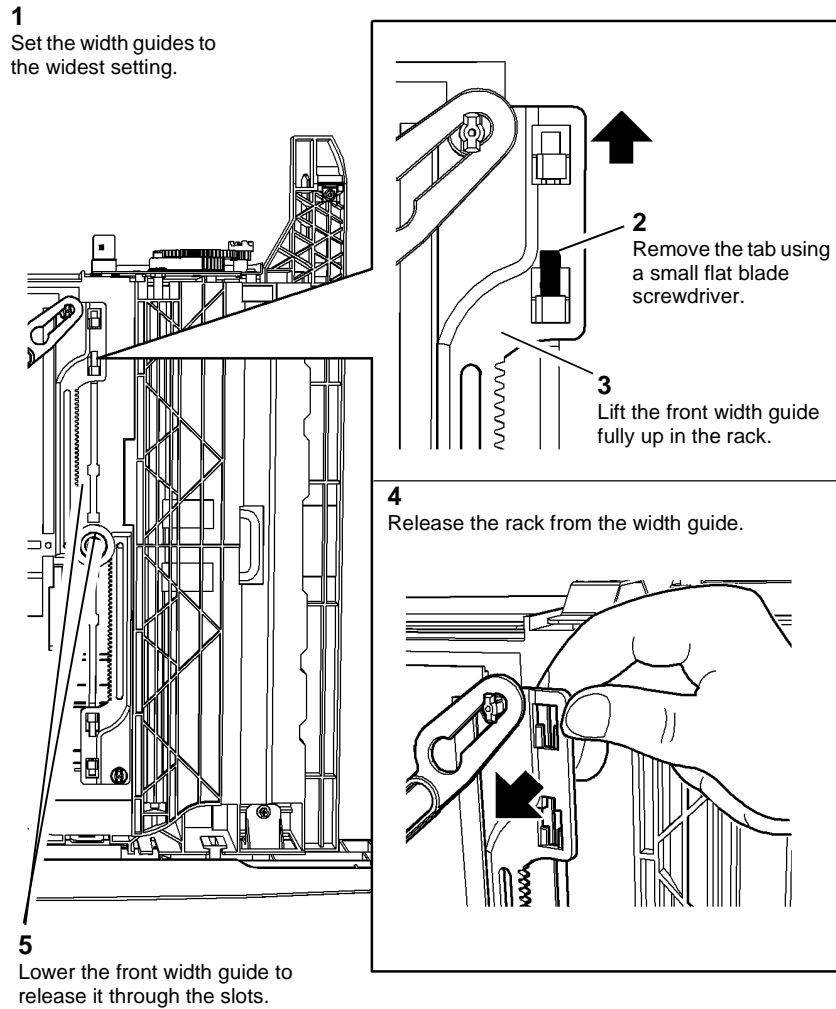


- 2** Lift one side of the track to prise the paper length guide out of the track.

X-1-1136-A

Figure 3 Paper length guide removal

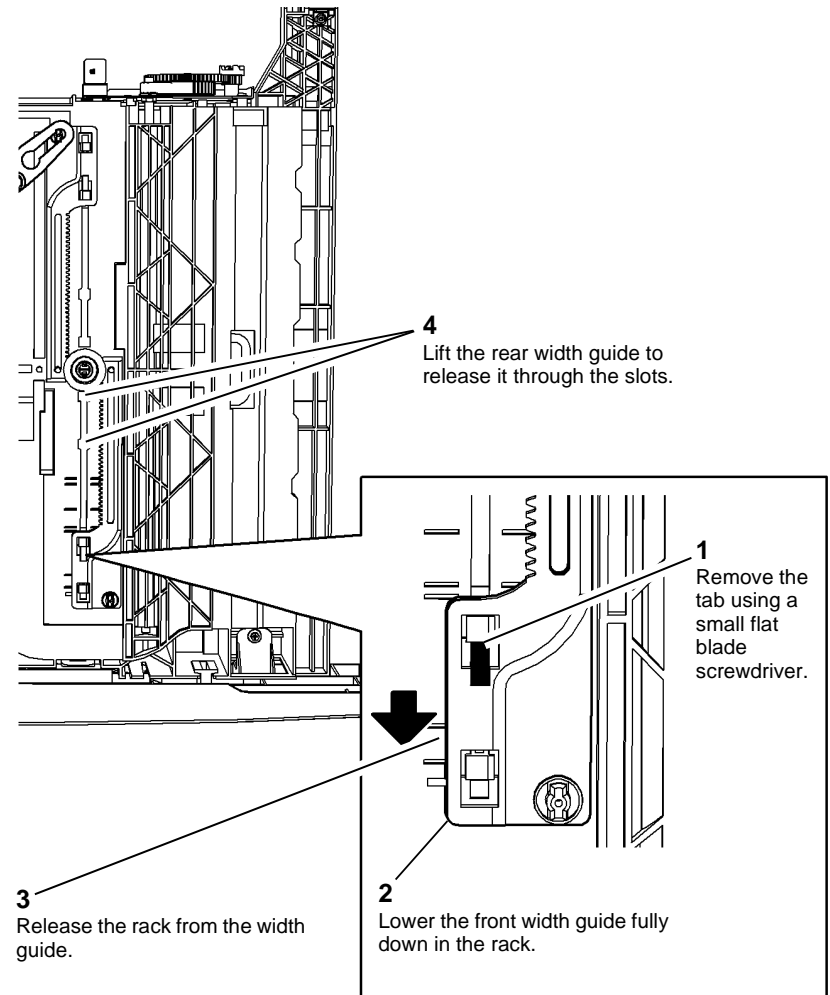
6. Remove the front paper width guide, [Figure 4](#).



X-1-1137-A

Figure 4 Front width guide removal

7. Remove the rear paper width guide, [Figure 5](#).



X-1-1138-A

Figure 5 Rear width guide removal

Replacement

1. The replacement is the reverse of the removal procedure.

REP 70.4 Tray 1 and Tray 2 Paper Size Sensing PWBs

Parts List on [PL 70.10](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove tray 1 and tray 2, [REP 70.1](#).
2. Remove the relevant paper tray size sensing PWB, [Figure 1](#).

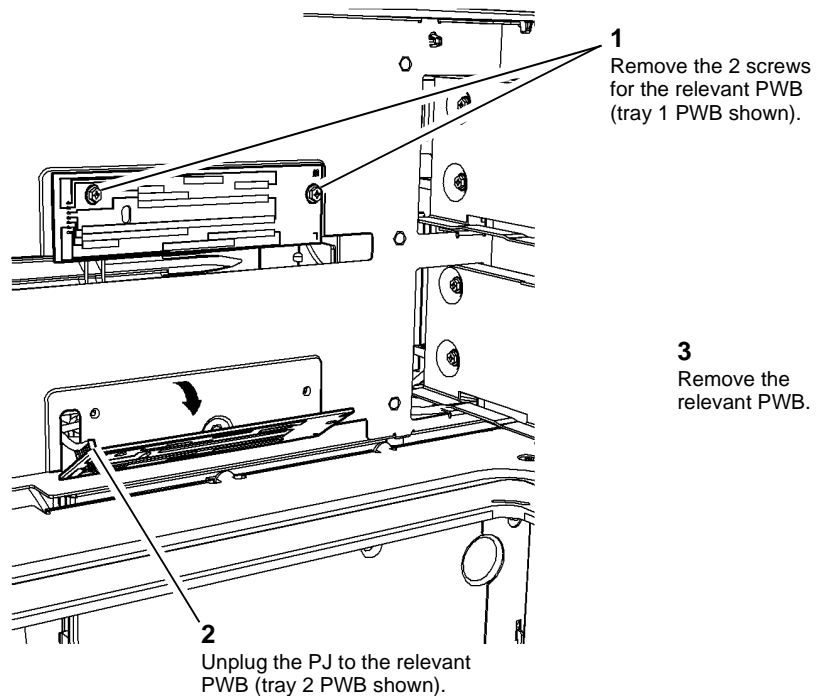


Figure 1 PWB removal

Replacement

The replacement is the reverse of the removal procedure.

REP 70.5 Tray 3 Removal

Parts List on [PL 70.18](#)

Removal

NOTE: Removal and replacement videos of this procedure are available on the EDOC. The videos are accessible from the Library menu on the Service Interface.



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the paper from tray 3.
2. Remove the tray 3 and tray 4 front covers, [Figure 1](#).

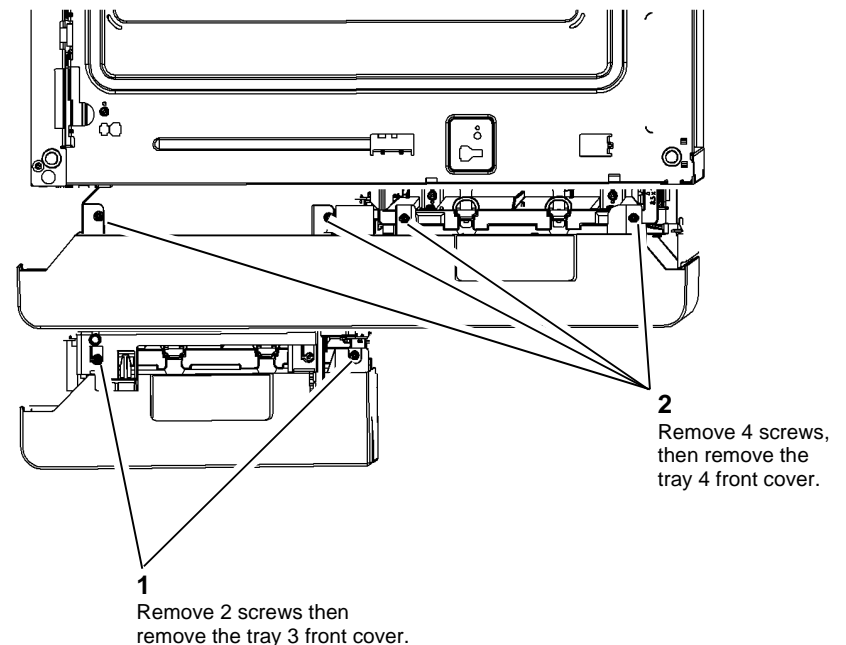
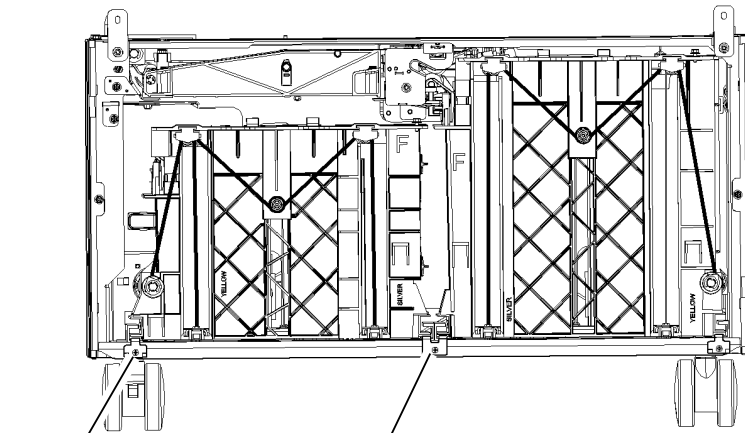


Figure 1 Tray front covers removal

3. Remove the stops, [Figure 2](#).



2 Remove the screw and the left stop (tray 3).

1 Remove the screw and the centre stop.

Figure 2 Tray 3 rail stops

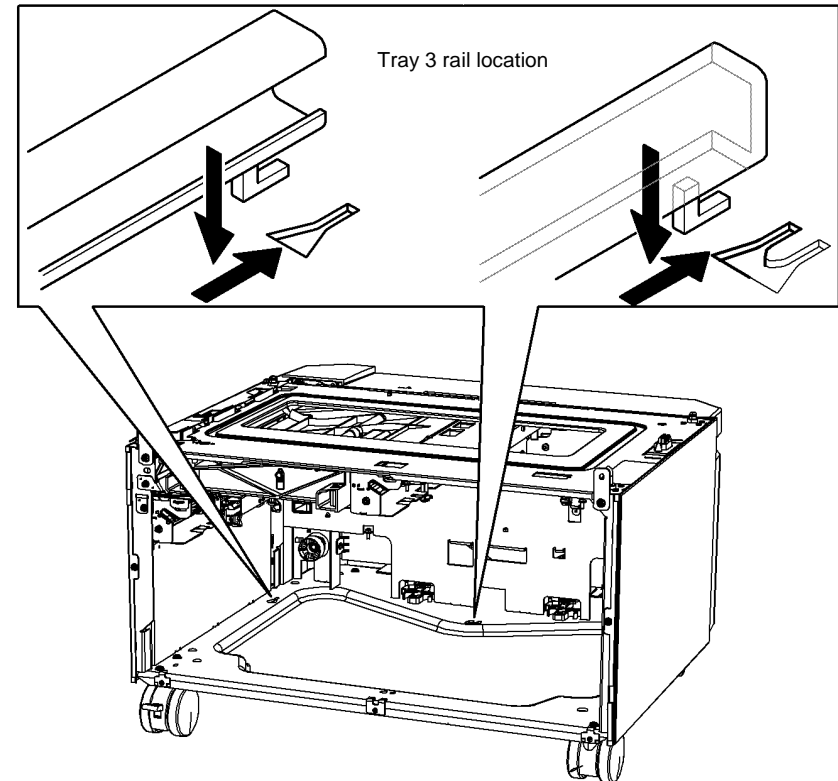
X-1-0629-A

4. Lift and pull to remove the tray complete with the guide rails.

Replacement

1. The replacement is the reverse of the removal procedure. Refer to [GP 6](#) when refitting the screws to secure tray 3 and tray 4 front covers.

NOTE: When installing tray 3 ensure that the tray rails are located correctly in the base of the machine, [Figure 3](#).



W-1-0630-A

Figure 3 Location of the tray rails

REP 70.6 Tray 3 Elevator Motor

Parts List on [PL 70.21](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Pull out tray 3.
2. Remove the lower rear cover, [PL 70.26 Item 1](#).
3. Remove the tray 3 elevator motor, [Figure 1](#).

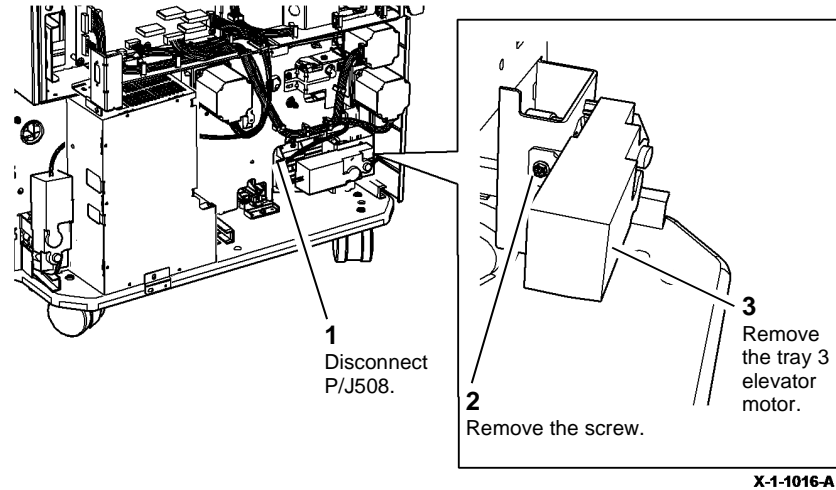


Figure 1 Elevator motor removal

Replacement

The replacement is the reverse of the removal procedure.

REP 70.7 Bypass Tray Width Sensor Removal

Parts List on [PL 70.35](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the bypass tray, [REP 70.2](#).

2. Remove the lower tray, [Figure 1](#).

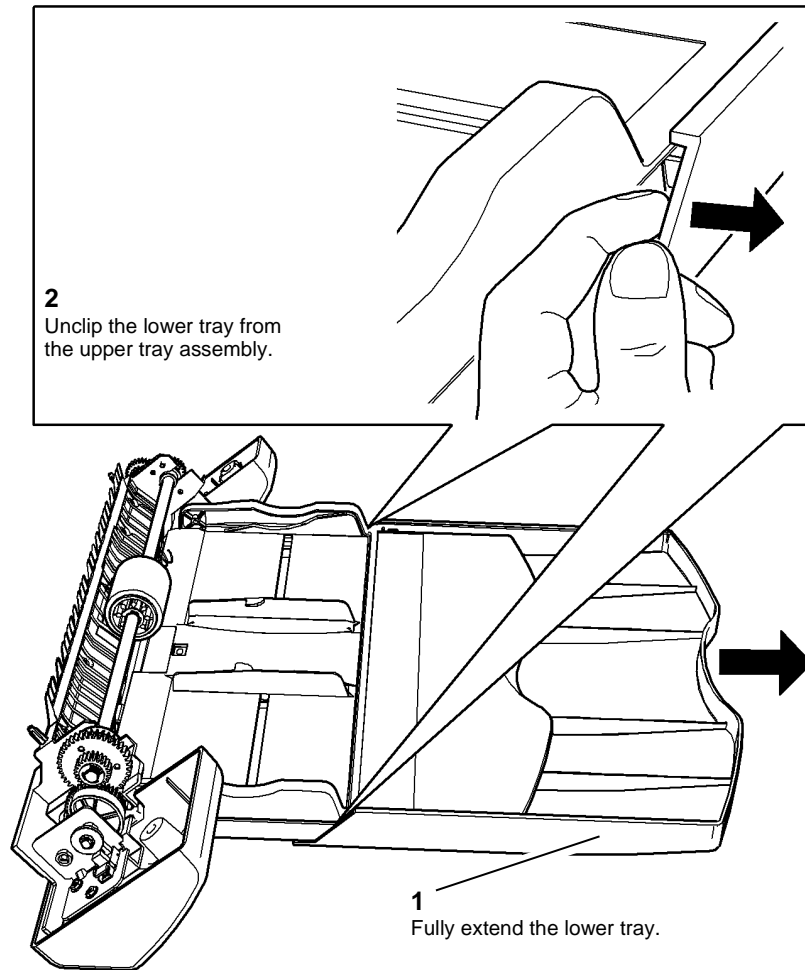


Figure 1 Lower tray removal

X-1-1119-A

3. Remove the width sensor cover, [Figure 2](#).

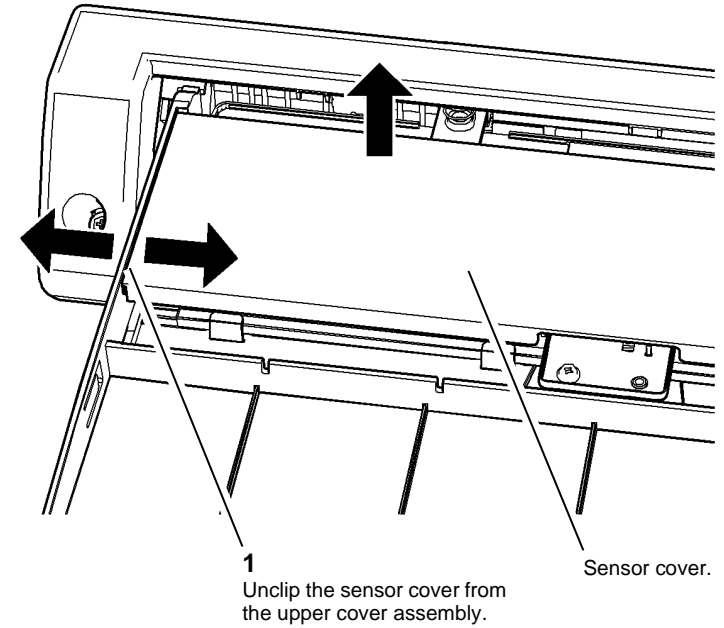


Figure 2 Width sensor cover removal

X-1-1120-A

4. Remove the width sensor, [Figure 3](#).

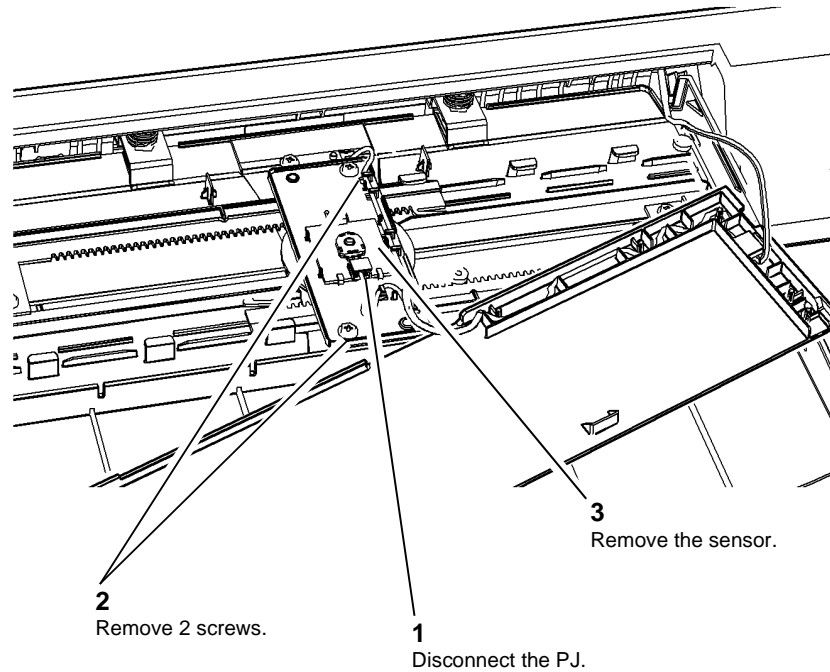
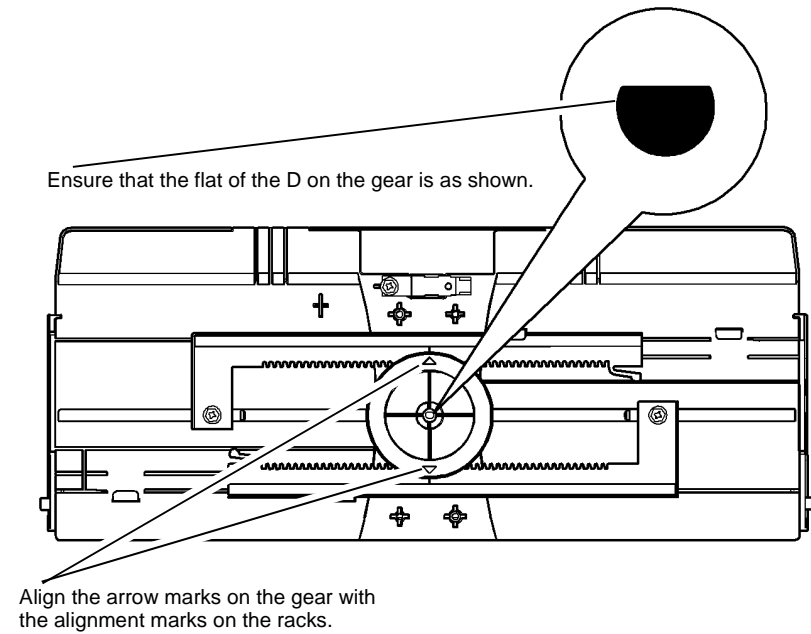


Figure 3 Width sensor removal

X-1-1121-A

Replacement

1. The replacement is the reverse of the removal procedure. Refer to [GP 6](#) when refitting the screws securing the sensor.
2. Ensure the potentiometer and gear are correctly aligned with the racks on the size guides, [Figure 4](#).



Ensure that the flat of the D on the gear is as shown.

Align the arrow marks on the gear with the alignment marks on the racks.

X-1-1122-A

Figure 4 Correct alignment

REP 70.8 Tray 3 and Tray 4 Elevator Cables

Parts List on [PL 70.18](#), [PL 70.19](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.



CAUTION

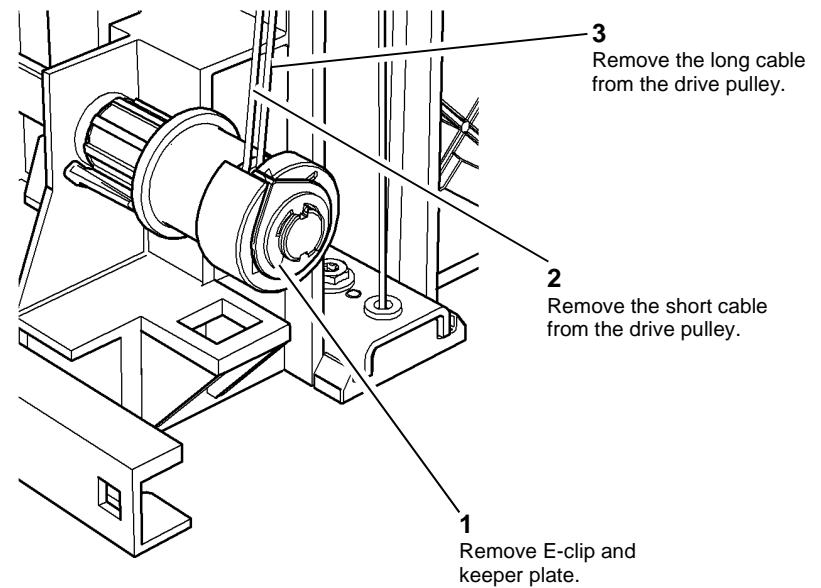
Do not replace the individual elevator cables. The rear cable and 2 front cables must be replaced as a set of 3, as supplied in the tray 3 or tray 4 elevator cable kit.

NOTE: The elevator drives at the front and at the rear are similar for both trays.

1. Remove the required paper tray:
 - Tray 3, [REP 70.5](#).
 - Tray 4, [REP 70.13](#).

2. Release the cables from the appropriate front drive pulley, [Figure 1](#).

This illustration shows tray 3 front.



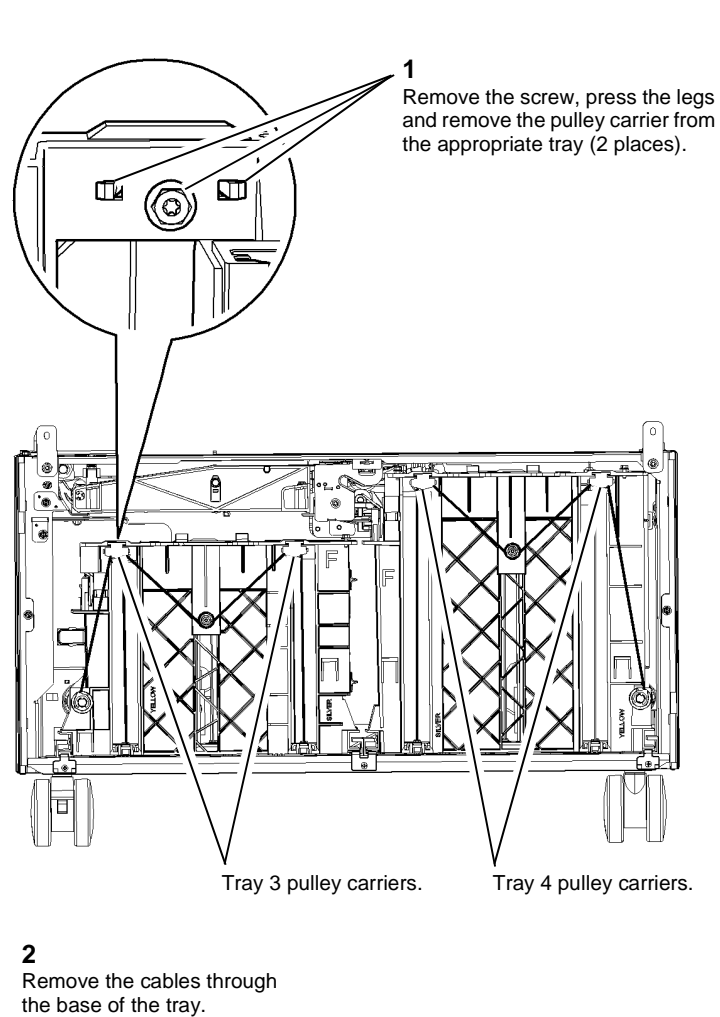
X-1-0632-A

Figure 1 Front cables release

3. Release the appropriate front paper tray guide, refer to [ADJ 70.1](#).

- Remove the appropriate front elevator cables, [Figure 2](#).

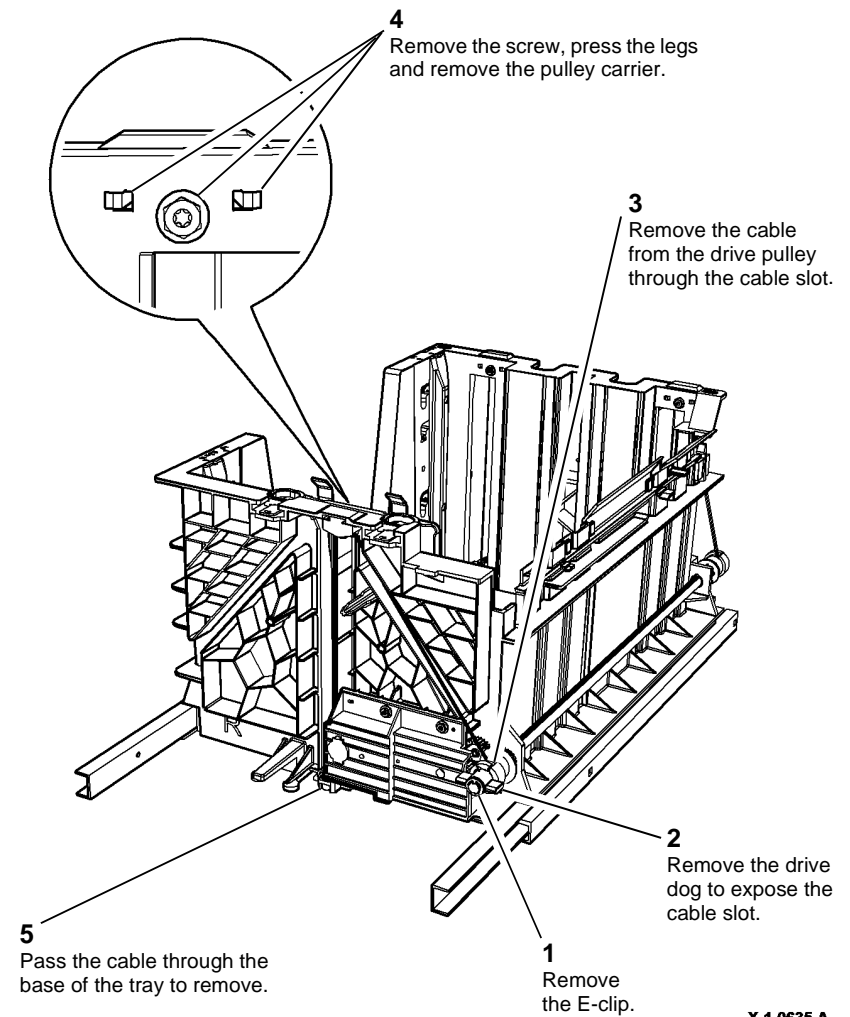
NOTE: The short cable is located over the outer pulley and the long cable is located over the inner pulley.



X-1-0633-A

Figure 2 Front cables removal

- Remove the appropriate rear elevator cable:
 - Tray 3, [Figure 3](#).
 - Tray 4, [Figure 4](#).



X-1-0635-A

Figure 3 Tray 3 rear cable removal

- Release the appropriate rear paper tray guide, refer to [ADJ 70.1](#).

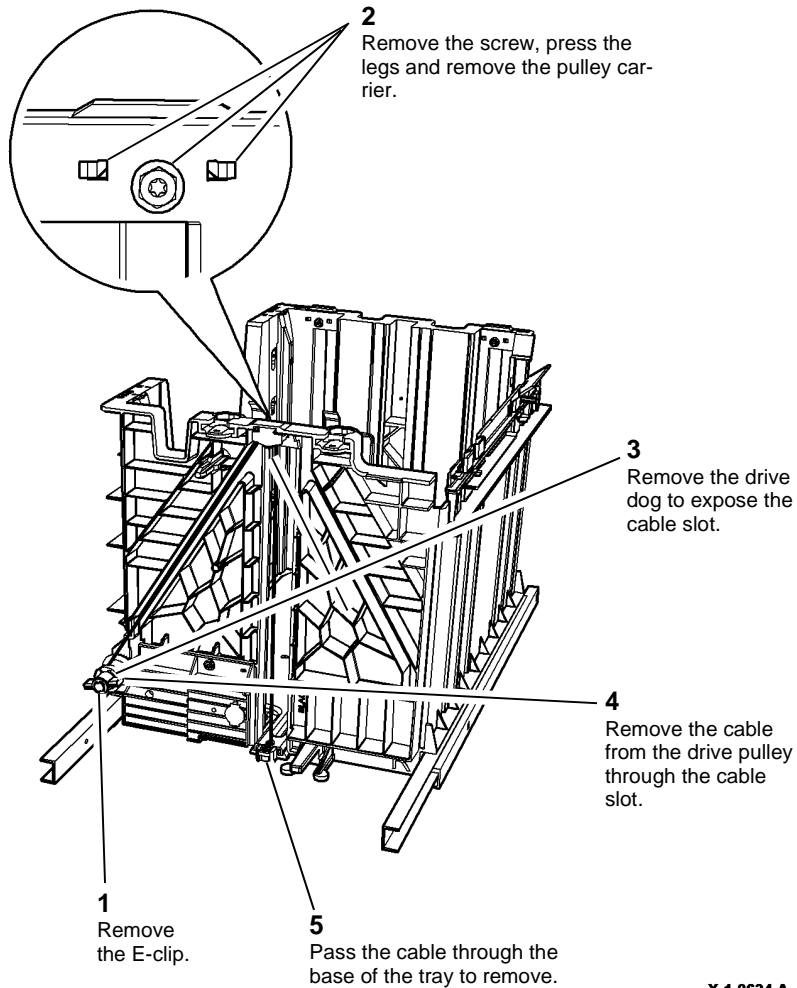
Replacement



CAUTION

Do not replace the individual elevator cables. The rear cable and 2 front cables must be replaced as a set of 3, as supplied in the tray 3 or tray 4 elevator cable kit.

1. The replacement is the reverse of the removal procedure.
2. For the tray 3 front cables:
 - a. Thread the long cable over the inner groove on the pulley.
 - b. Thread the short cable over the outer groove on the pulley.
3. For the tray 3 rear cable, thread the medium length cable over the outer groove on the pulley.
4. For the tray 4 front cables:
 - a. Thread the short cable over the inner groove on the pulley.
 - b. Thread the long cable over the outer groove on the pulley.
5. For the tray 4 rear cable, thread the medium length cable over the inner groove on the pulley.



X-1-0634-A

Figure 4 Tray 4 rear cable removal

REP 70.9 Tray 3 and Tray 4 Stack Height Sensor

Parts List on [PL 80.32](#), [PL 80.33](#)

Removal

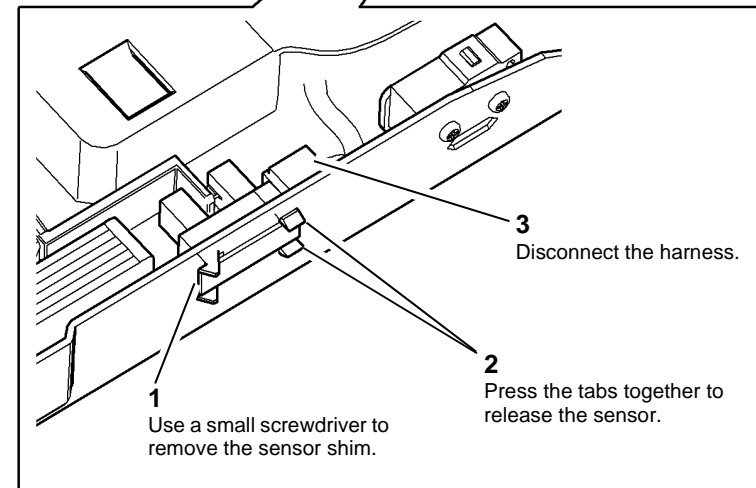
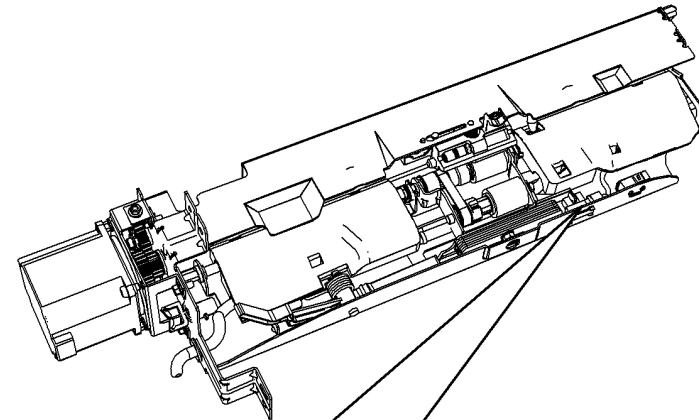


Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the required paper feed assembly:
 - Tray 3 paper feed assembly, [REP 80.20](#).
 - Tray 4 paper feed assembly, [REP 80.21](#).
2. Remove the stack height sensor, [Figure 1](#).



X-1-0636-A

Figure 1 Stack height sensor removal

Replacement

The replacement is the reverse of the removal procedure. Install a new sensor shim to lock the sensor in place.

REP 70.10 Tray 3 and Tray 4 Home Sensor

Parts List on [PL 70.21](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

NOTE: The removal procedure is the same for tray 3 and tray 4.

1. Pull out tray 3 or tray 4 by approximately 50mm (2 inches).
2. Remove the lower rear cover, [PL 70.26 Item 1](#).
3. If removing the tray 4 home sensor, remove the LVPS, [REP 1.1](#).
4. Remove the tray home sensor and holder, [Figure 1](#).

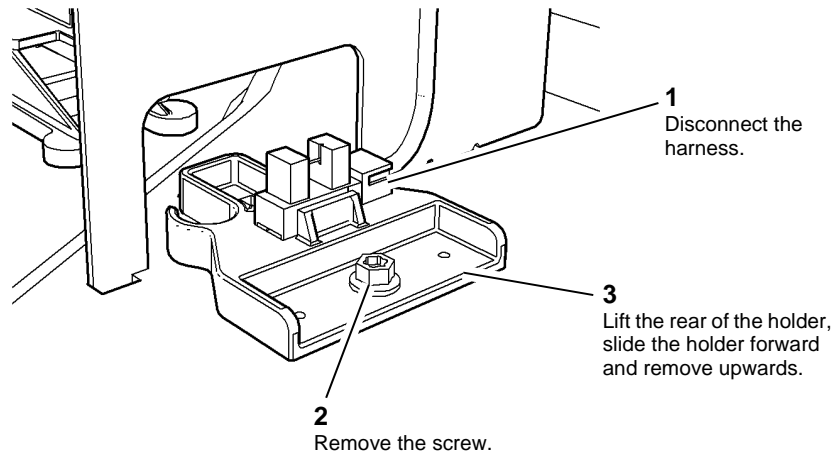


Figure 1 Tray home switch and holder

X-1-0637-A

5. Remove the tray home sensor, [Figure 2](#).

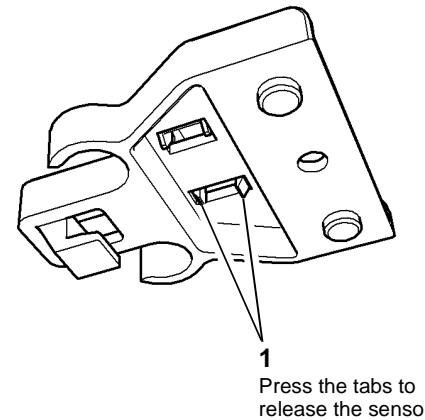


Figure 2 Sensor removal

X-1-0638-A

Replacement

Replacement is the reverse of the removal procedure. Correctly locate the sensor holder, [Figure 3](#).

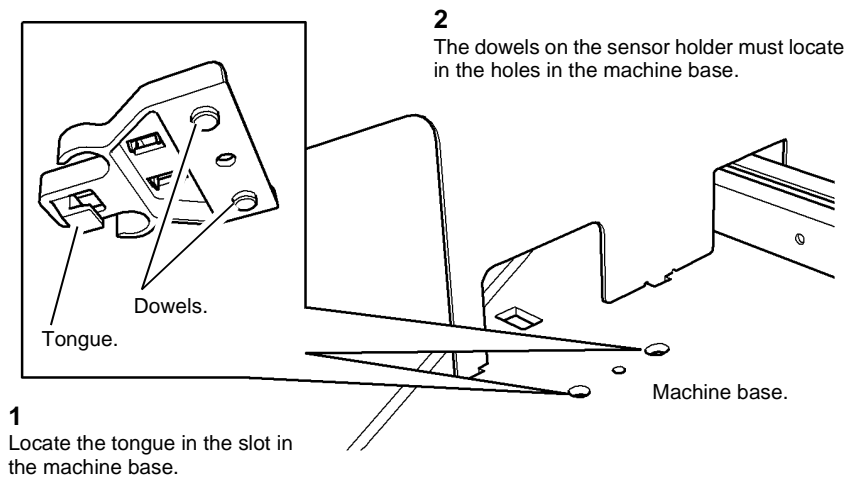


Figure 3 Holder location

X-1-0639-A

REP 70.11 Tray 3 and Tray 4 Elevate Damper Assembly

Parts List on [PL 70.18](#), [PL 70.19](#)

Removal



WARNING

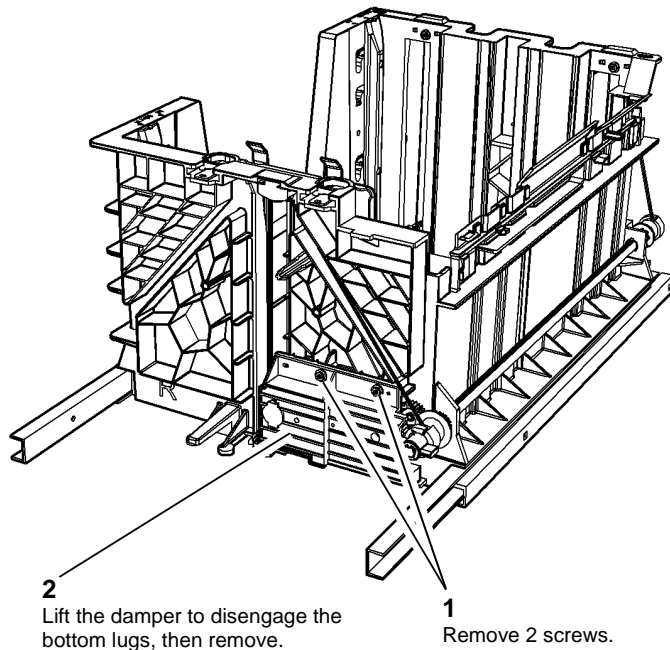
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the required paper tray:
 - Tray 3, [REP 70.5](#).
 - Tray 4, [REP 70.13](#).
2. Remove the damper from tray 3, [Figure 1](#).



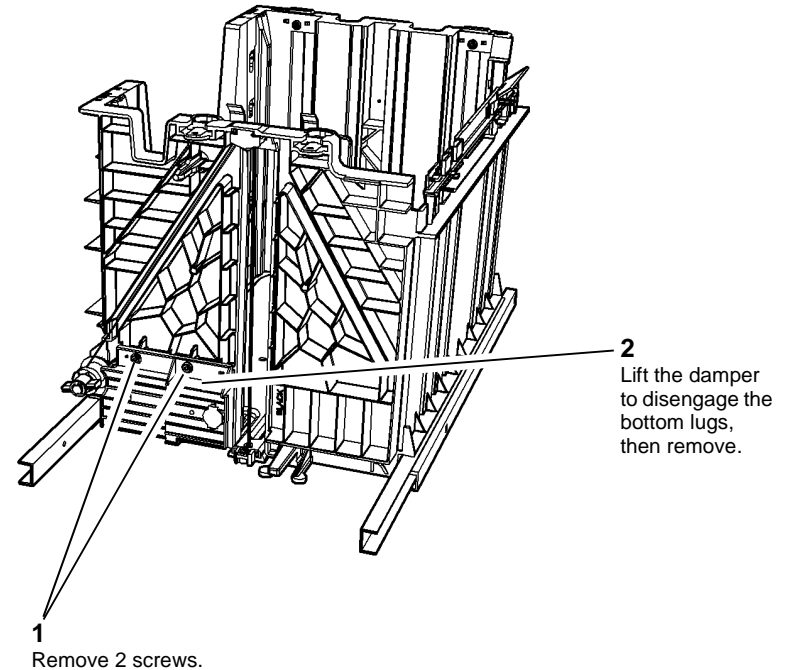
2 Lift the damper to disengage the bottom lugs, then remove.

1 Remove 2 screws.

X-1-0642-A

Figure 1 Tray 3 damper removal

3. Remove the damper from tray 4, [Figure 2](#).



1 Remove 2 screws.

2 Lift the damper to disengage the bottom lugs, then remove.

X-1-0641-A

Figure 2 Tray 4 damper removal

Replacement

1. The replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting the screws.

REP 70.12 Tray 1 and Tray 2 Lift Gear Assembly

Parts List on [PL 70.10](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



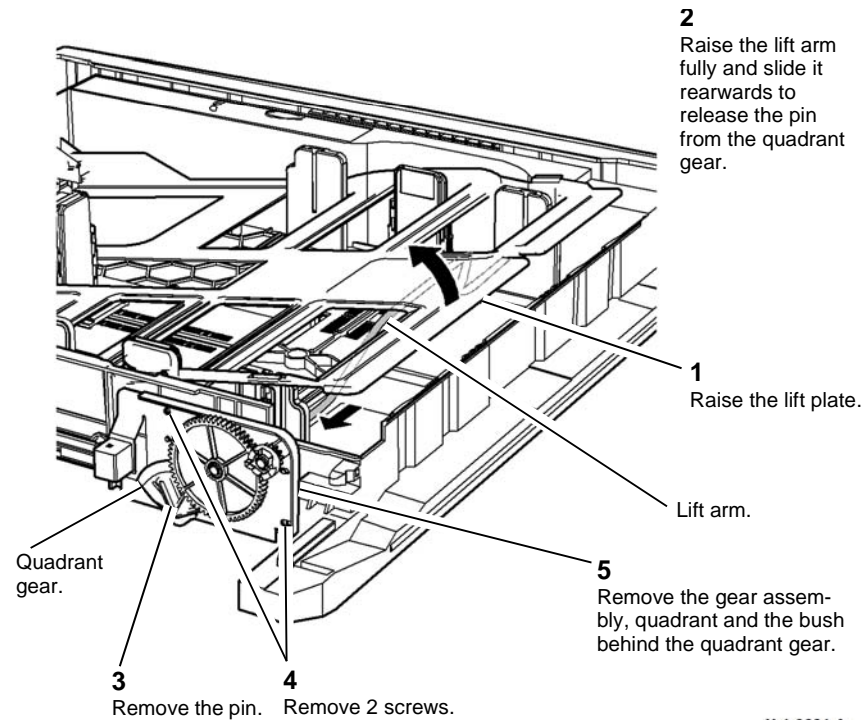
WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the tray, [REP 70.1](#).

NOTE: Make a note of the position of the 2 screws on the gear assembly, for replacement purposes.

2. Remove the lift gear assembly, [Figure 1](#).



X-1-0621-A

Figure 1 Lift gear removal

Replacement

1. Engage the lift gear assembly with the spigots on the rear of the tray. The remainder of the replacement procedure is the reverse of the removal procedure.

NOTE: The existing gears are snap fitted to the shafts and can be removed to allow the new gears to be pushed on.

REP 70.13 Tray 4 Removal

Parts List on [PL 70.19](#), [PL 70.26](#)

Removal

NOTE: Removal and replacement videos of this procedure are available on the EDOC. The videos are accessible from the Library menu on the Service Interface.

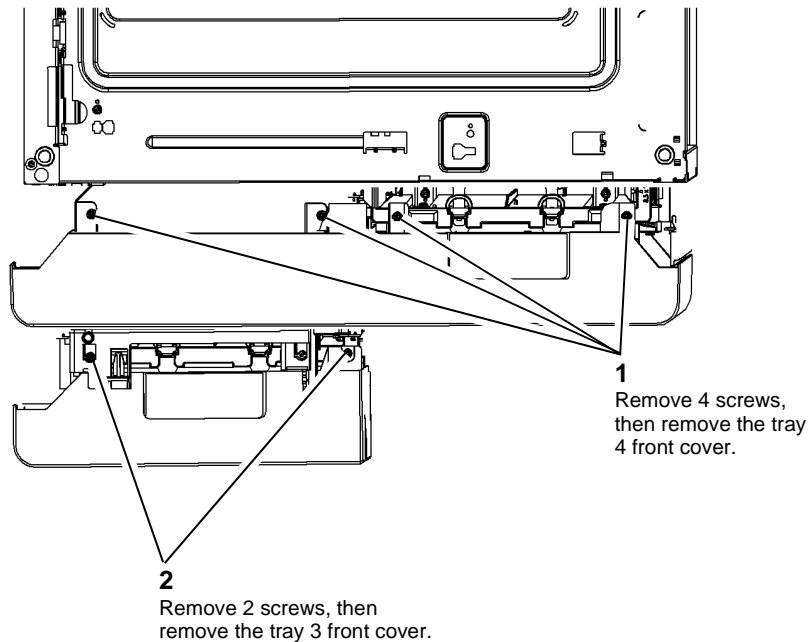


Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

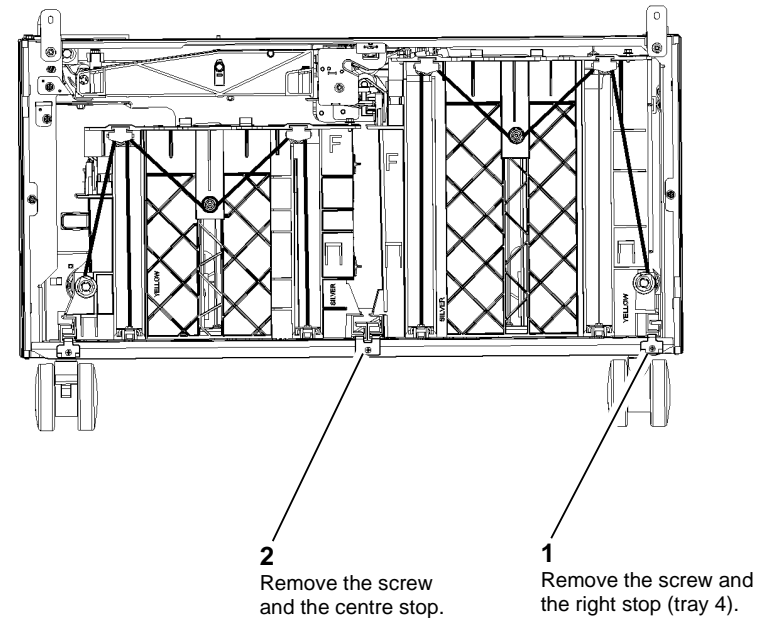
1. Remove the paper from the tray.
2. Remove the tray 3 and tray 4 front covers, [Figure 1](#).



X-1-1014-A

Figure 1 Front covers removal

3. Remove the stops, [Figure 2](#).



X-1-1015-A

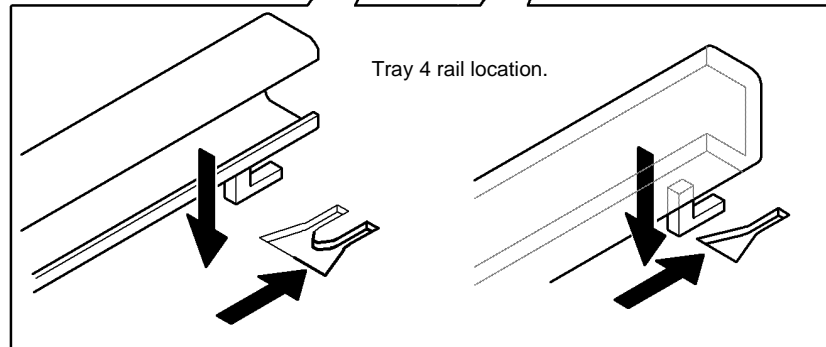
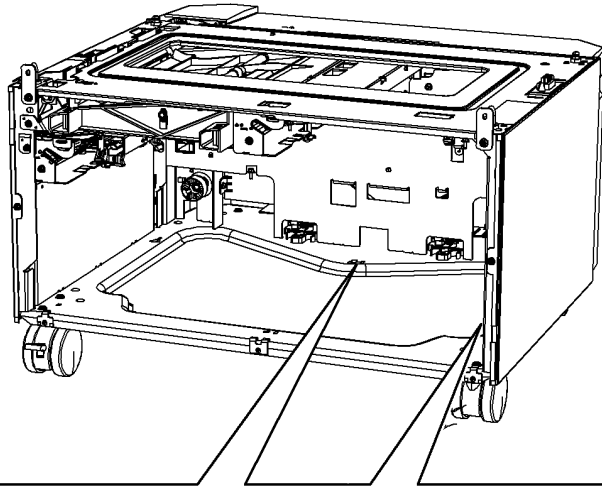
Figure 2 Tray 4 rail stops

4. Lift and pull to remove the tray complete with the guide rails.

Replacement

1. The replacement is the reverse of the removal procedure. Refer to [GP 6](#) when refitting the screws to secure the tray 4 front cover.

NOTE: When installing tray 4 ensure that the tray rails are located correctly in the base of the machine, [Figure 3](#).



X-1-1013-A

Figure 3 Location of the tray rails

REP 70.14 Tray 4 Elevator Motor

Parts List on [PL 70.21](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Pull out tray 4.
2. Remove the lower rear cover, [PL 70.26 Item 1](#).
3. Remove the LVPS, [REP 1.1](#).

- Remove the tray 4 elevator motor, [Figure 1](#).

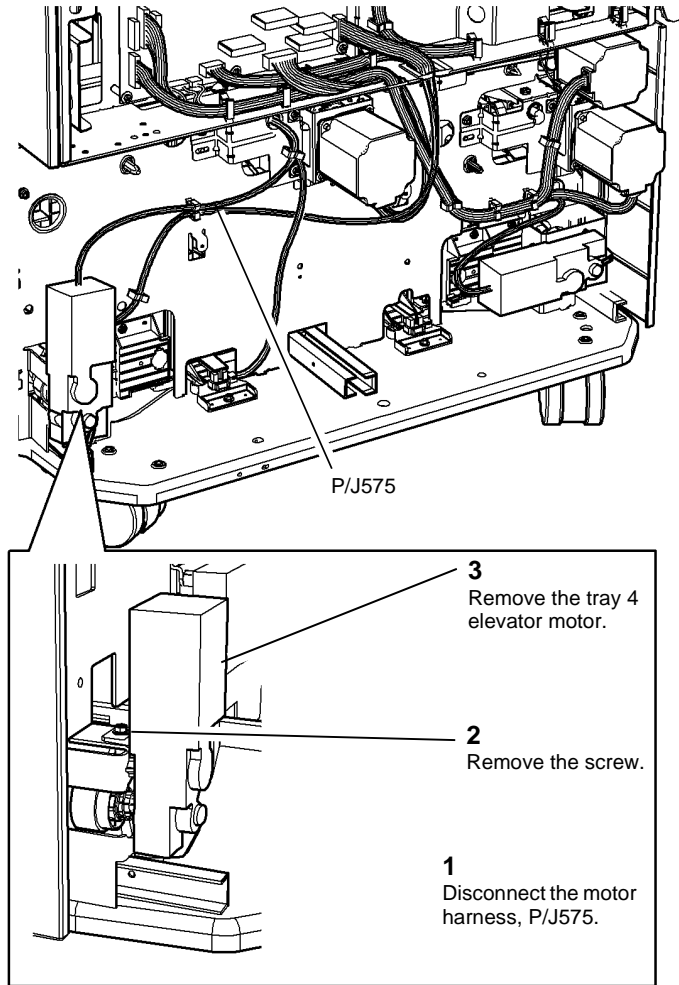


Figure 1 Elevator motor removal

Replacement

The replacement is the reverse of the removal procedure.

REP 70.15 Tray 3 Empty Sensor

Parts List on [PL 80.32](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

- Remove the tray 3 paper feed assembly, [REP 80.20](#).
- Release the sensor mounting, [Figure 1](#).

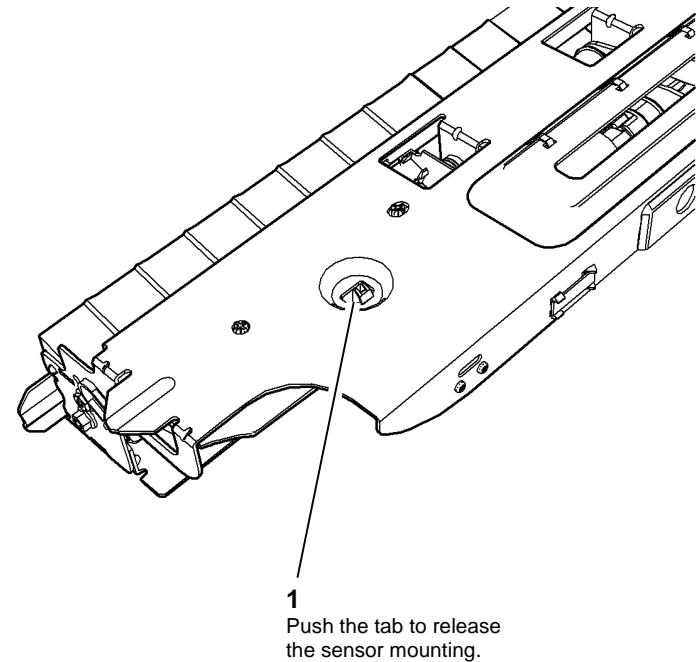


Figure 1 Sensor mounting release

X-1-1431-A

X-1-0737-A

3. Remove the tray 3 empty sensor, [Figure 2](#).

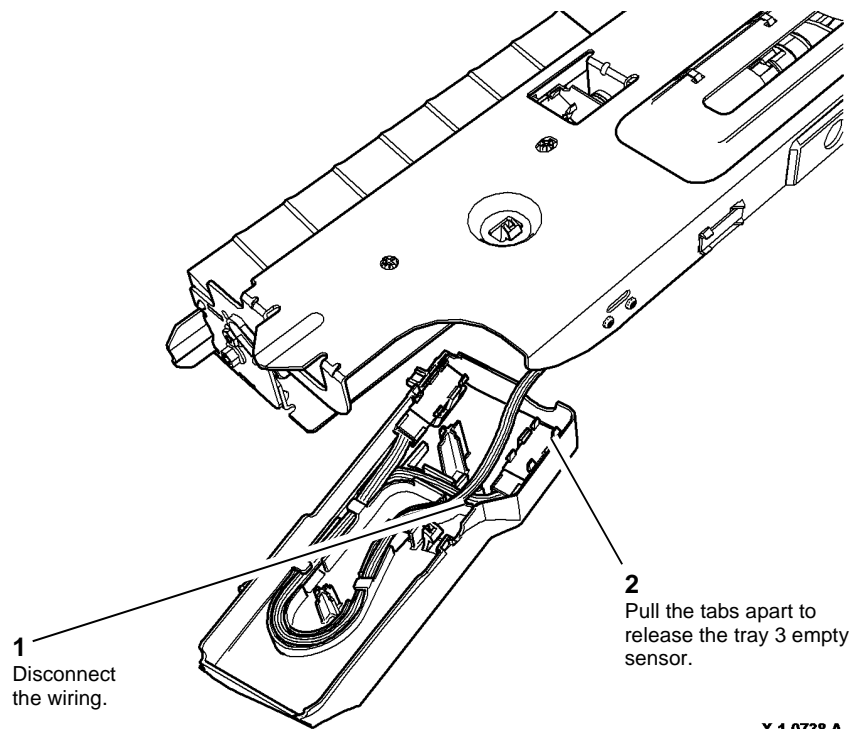


Figure 2 Sensor removal

X-1-0738-A

Replacement

Replacement is the reverse of the removal procedure.

REP 70.16 Tray 4 Empty Sensor

Parts List on [PL 80.33](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the tray 4 paper feed assembly, [REP 80.21](#).
2. Release the sensor mounting, [Figure 1](#).

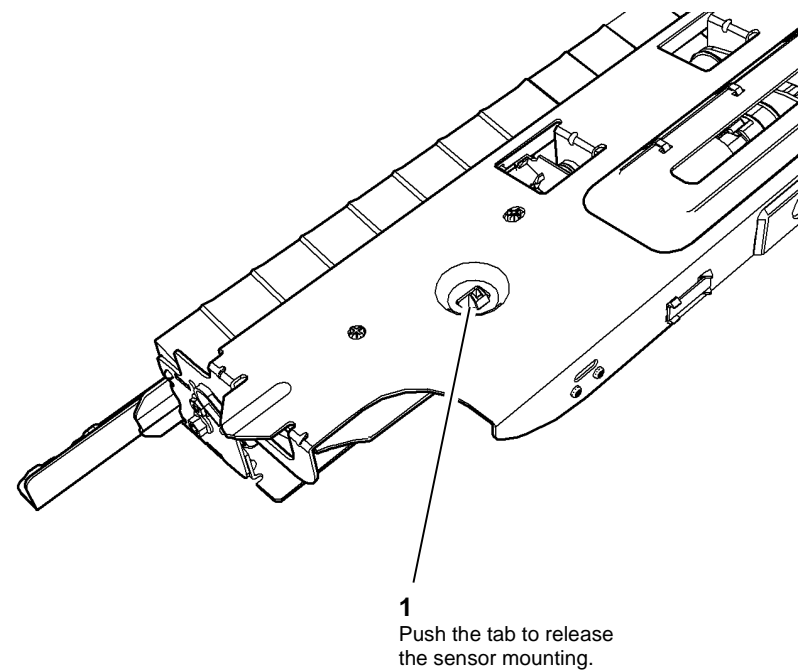


Figure 1 Sensor mounting release

X-1-0732-A

3. Remove the tray 4 empty sensor, [Figure 2](#).

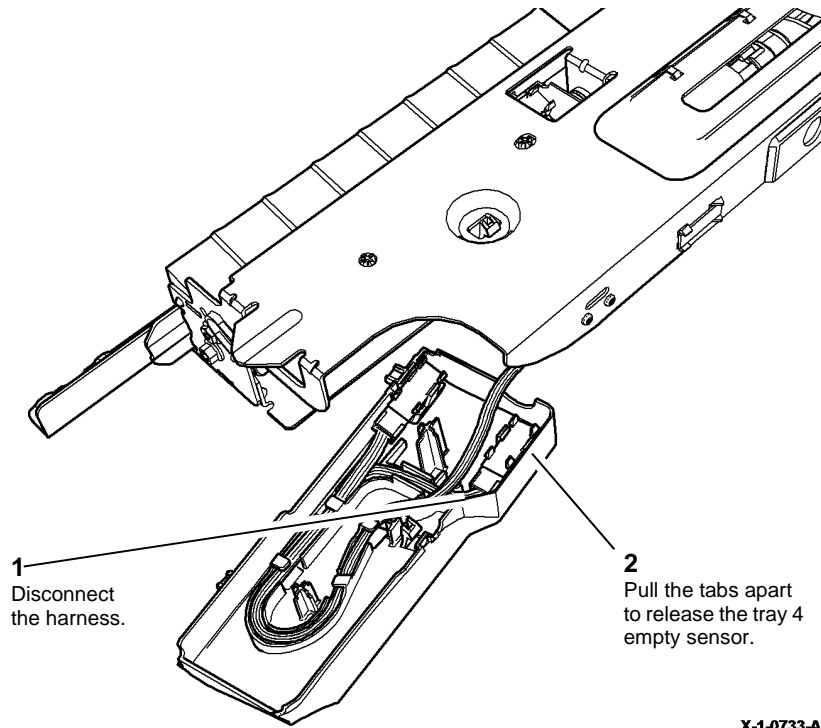


Figure 2 Sensor removal

X-1-0733-A

Replacement

Replacement is the reverse of the removal procedure.

REP 70.17 Bypass Tray Harness and Bypass Elevate Tray Assembly

Parts List on [PL 70.35](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

NOTE: If repairing only the bypass tray harness, skip step 4. If repairing only the bypass elevate tray assembly, skip step 3.

1. Remove the bypass tray assembly, [REP 70.2](#).



Take care not to damage the wiring harness between the tray assembly and the feeder frame.

2. Remove the feedhead cover, **Figure 1**.

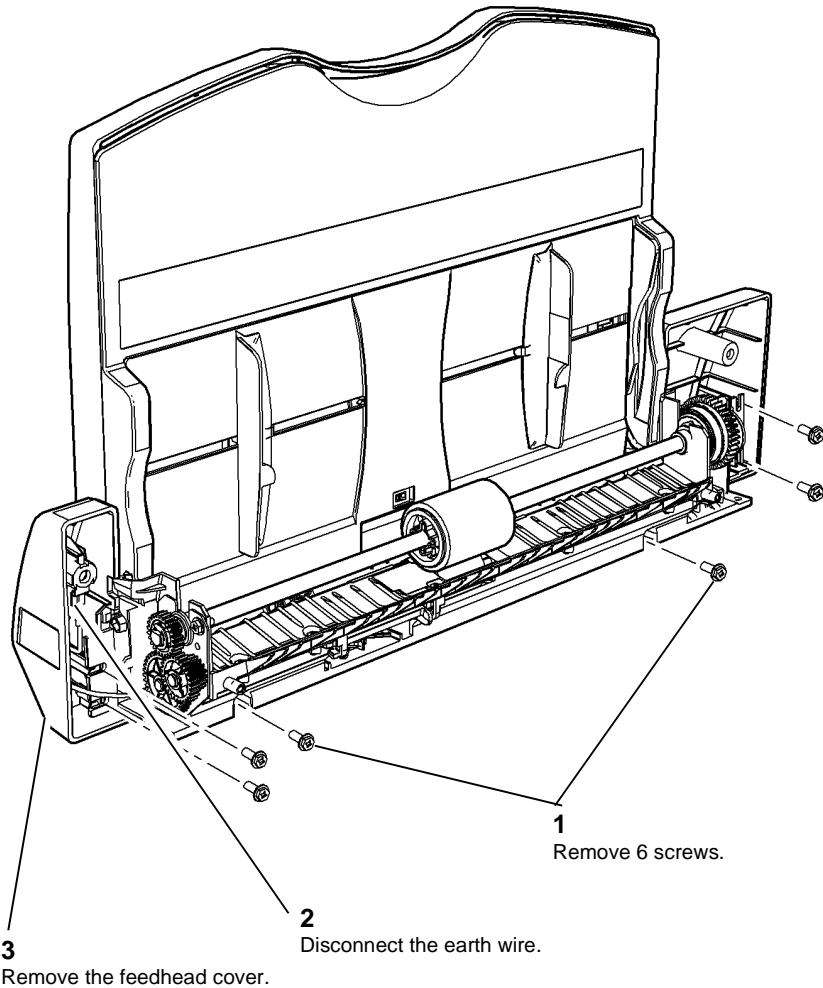


Figure 1 Cover removal

X-1-1417-A

3. Release the bypass tray harness, **Figure 2**.

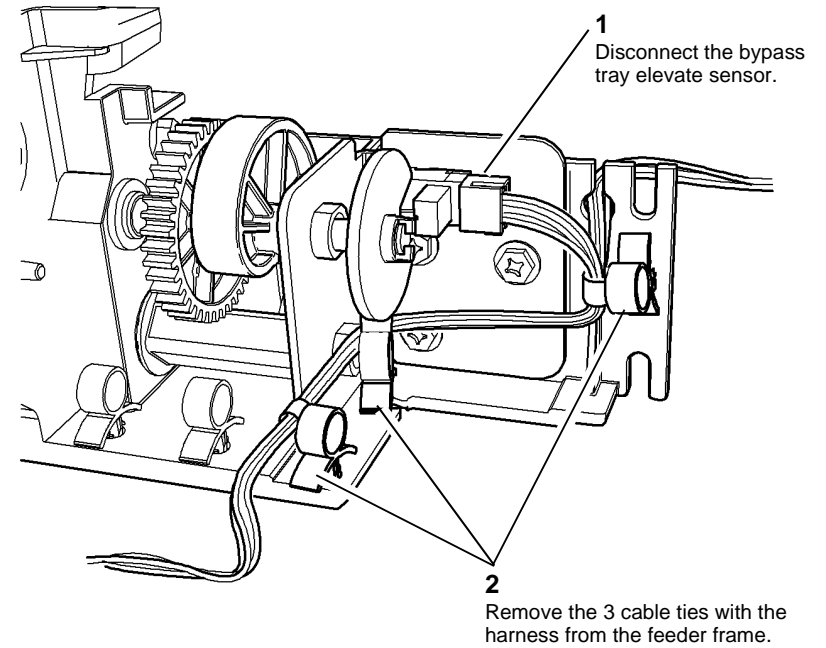


Figure 2 Sensor and cable ties

X-1-1420-A

4. Release the tray assembly, [Figure 3](#).

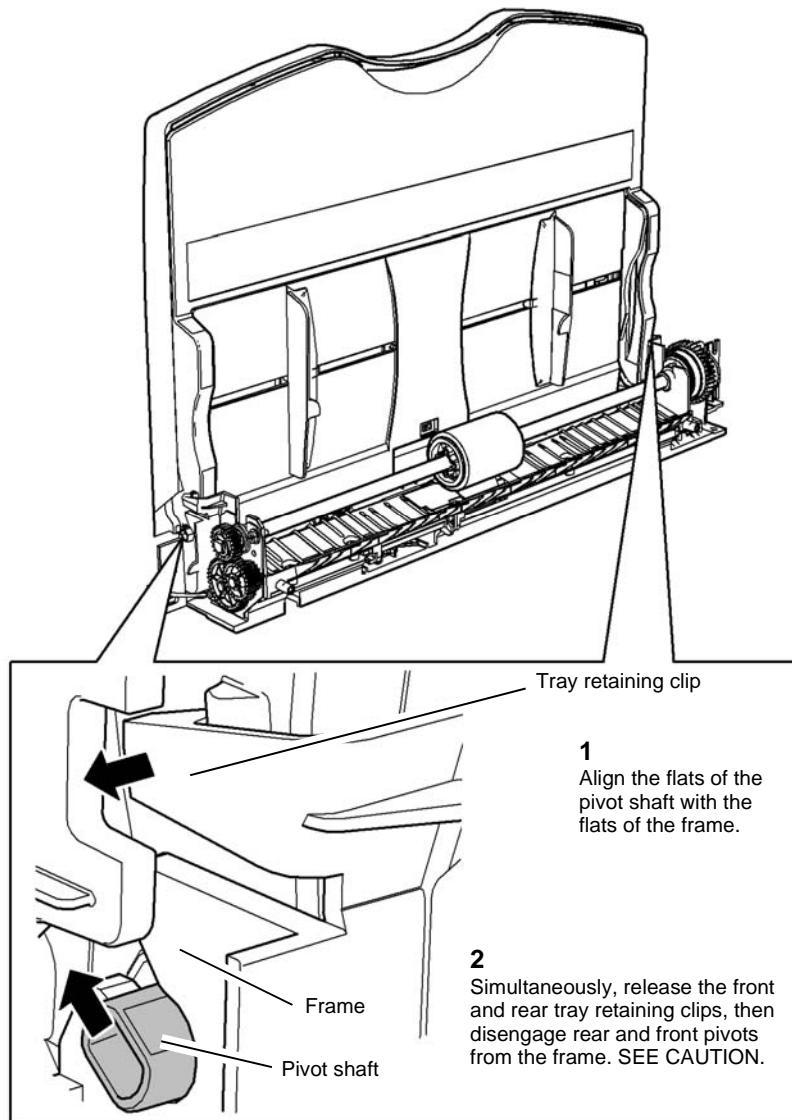


Figure 3 Tray assembly release

X-1-1428-A

5. Remove the lower tray, [Figure 4](#).

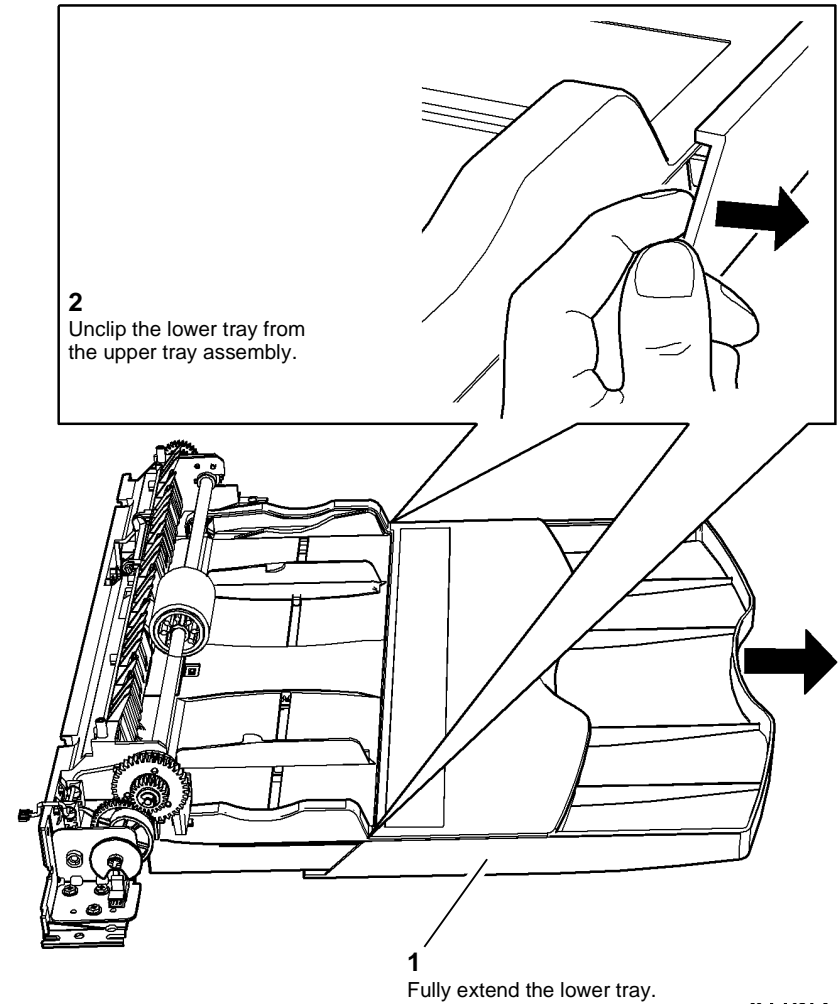


Figure 4 Lower tray removal

X-1-1421-A

6. Release the sensor cover, [Figure 5](#).

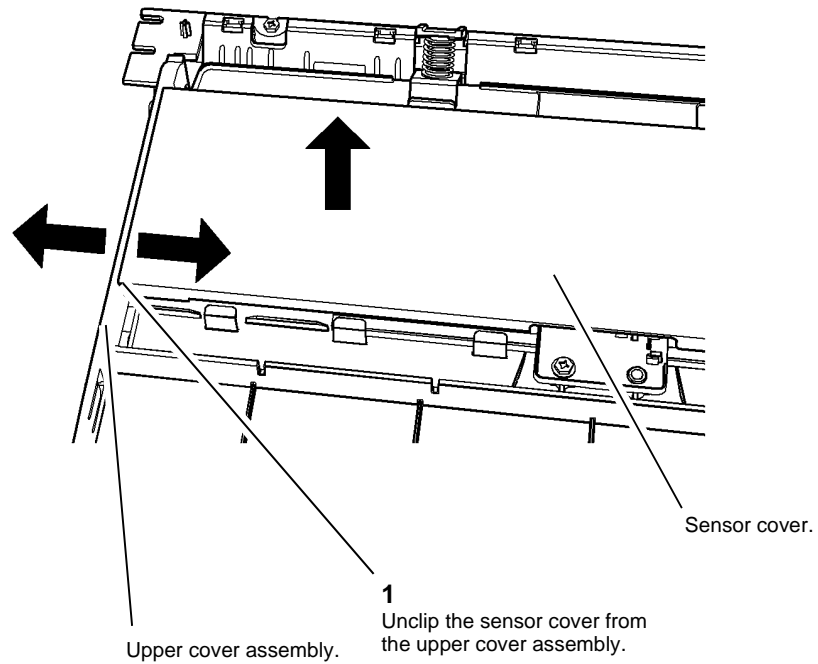


Figure 5 Unclip the sensor cover

X-1-1422-A

7. Disconnect the sensors and release the bypass tray harness, [Figure 6](#).

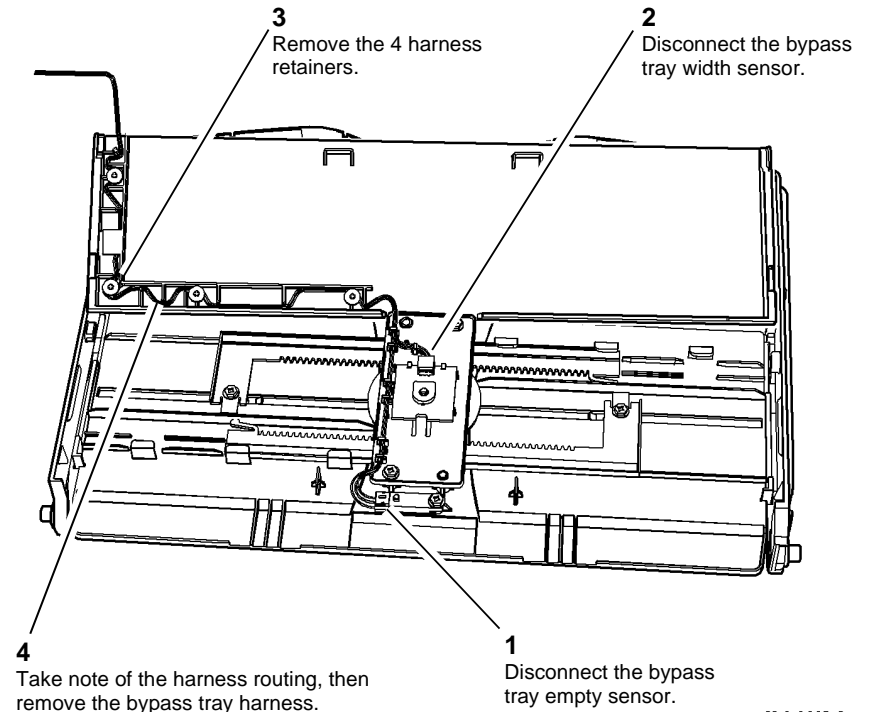


Figure 6 Harness routing

X-1-1419-A

Replacement

Replacement is the reverse of the removal procedure.

- Ensure the bypass tray harness does not get crushed when the feedhead cover is positioned on the location peg, [Figure 7](#).

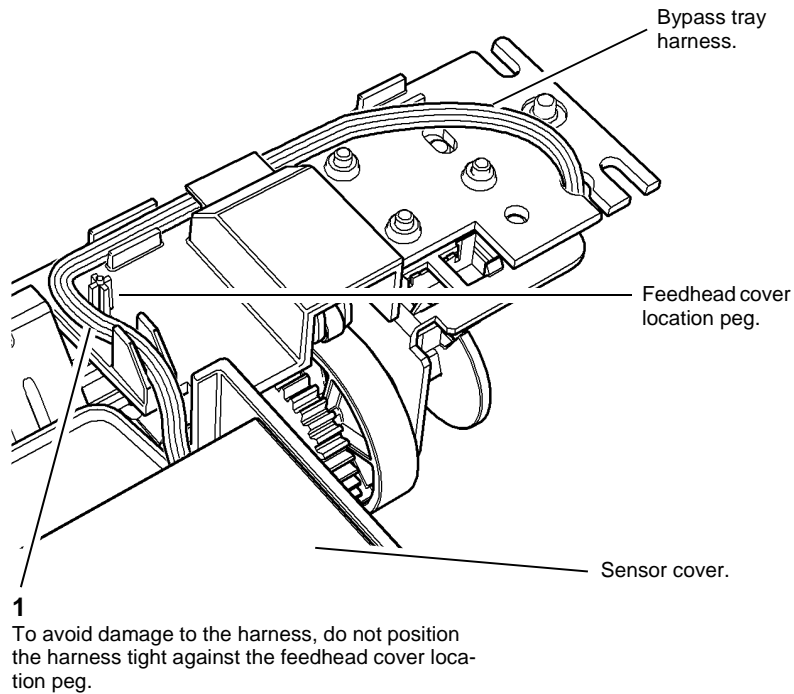


Figure 7 Harness routing on the feeder frame

X-1-1418-A

REP 70.18 Tray 6 Empty Sensor

Parts List on [PL 80.41 Item 6](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present and can cause injury.

1. Remove the top cover, [REP 70.25](#).
2. Prepare to remove the tray 6 empty sensor, [Figure 1](#).

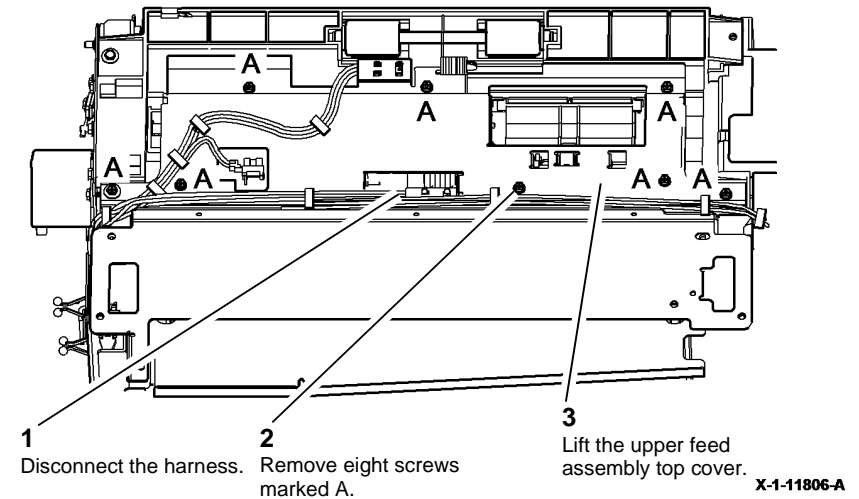


Figure 1 Preparation

X-1-11806-A

- Remove tray 6 empty sensor, [Figure 2](#).

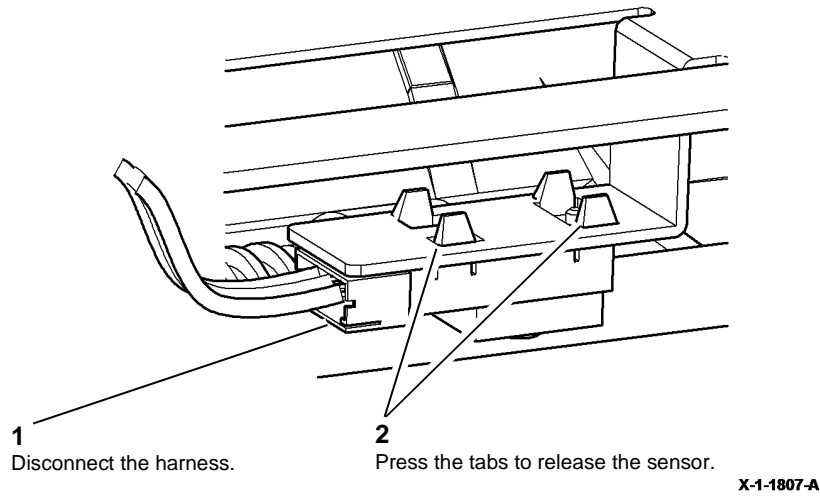


Figure 2 Remove tray 6 empty sensor

Replacement

- The replacement is the reverse of the removal procedure.
- Make sure that the torsion nudger spring on the paper feed assembly is in the correct position, [Figure 3](#).

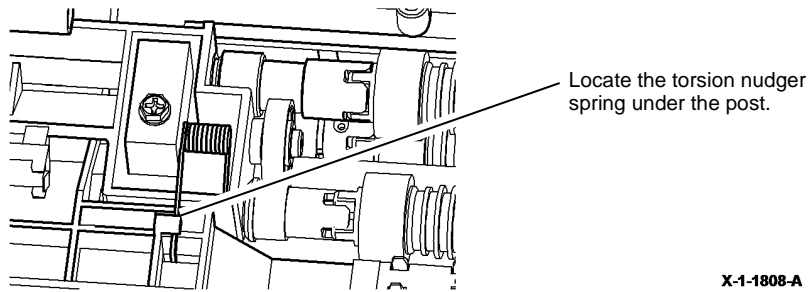


Figure 3 Spring location

- Make sure that the housing spring is positioned on top of the takeaway idler roller shaft when the upper feed assembly top cover is installed, [Figure 4](#).

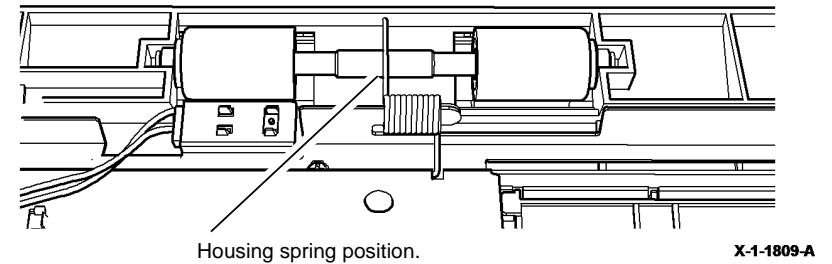


Figure 4 Spring position

- Check that the correct screw is used to attach the upper feed assembly top cover.
- Make sure that the torsion chute spring is positioned on top of the chute upper insert, [Figure 5](#).

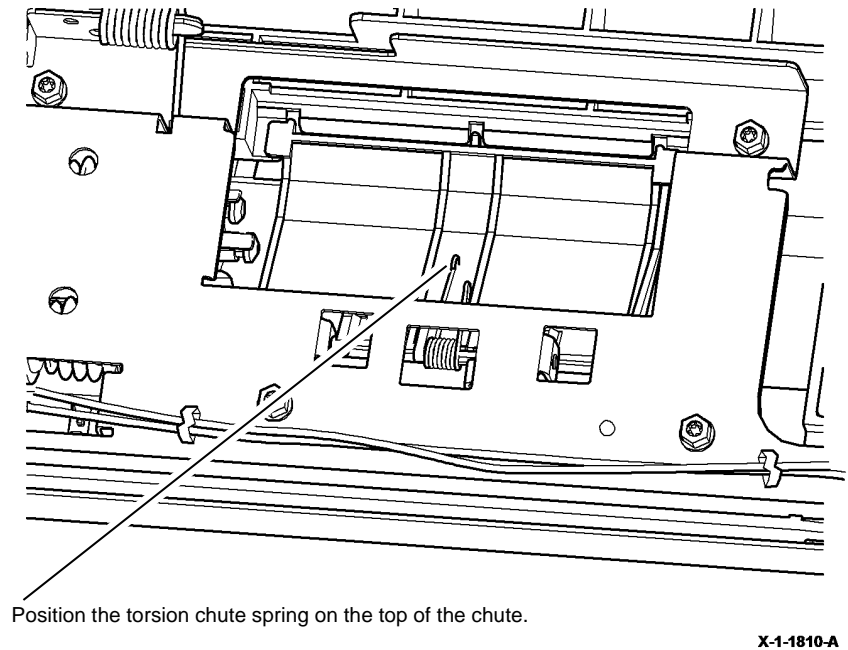


Figure 5 Spring position

- Check that the harness routing is correct, [Figure 1](#).

REP 70.19 Tray 6 Stack Height Sensor

Parts List on [PL 80.41 Item 7](#)

Removal



WARNING

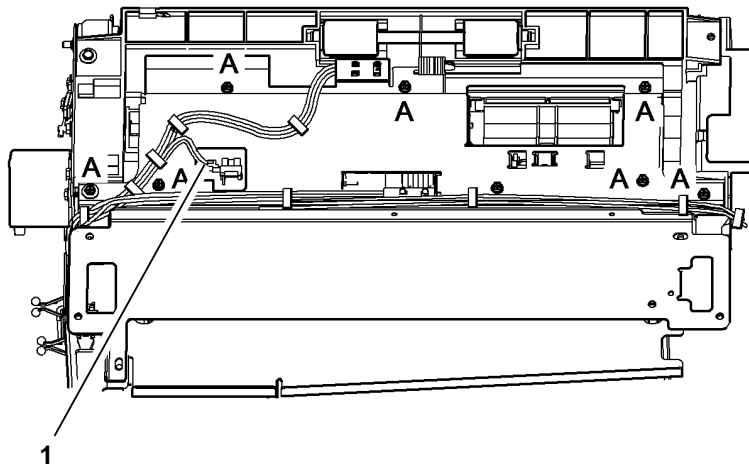
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present can cause injury.

1. Remove the top cover, [REP 70.25](#).
2. Prepare to remove the tray 6 stack height sensor, [Figure 1](#).

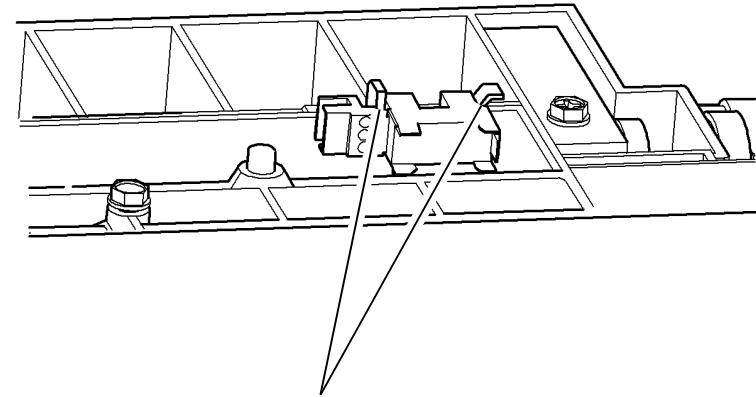


- 1
Disconnect the harness.

X-1-1811-A

Figure 1 Preparation

3. Remove tray 6 stack height sensor, [Figure 2](#).



Press the tabs to release the sensor.

X-1-0812-A

Figure 2 Remove the sensor

Replacement

1. The replacement is the reverse of the removal procedure.
2. Check that the harness routing is correct, [Figure 1](#).

REP 70.20 Tray 6 Down Sensor

Parts List on [PL 75.68](#)

Removal

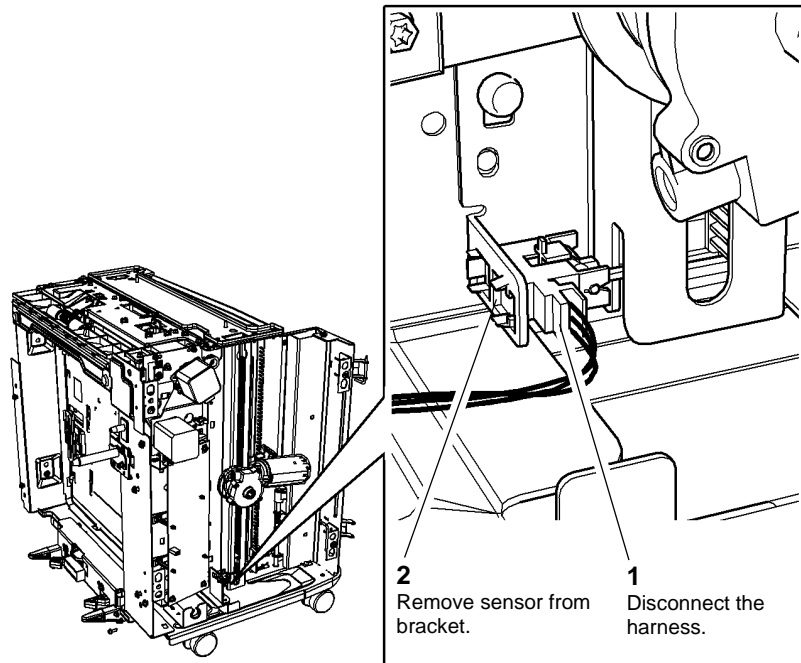


Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present can cause injury.

1. Remove the rear cover, [REP 70.25](#).
2. Remove the tray 6 down sensor, [Figure 1](#).



X-1-1813-A

Figure 1 Remove the sensor

Replacement

The replacement is the reverse of the removal procedure.

REP 70.21 Tray 6 Elevator Motor Assembly

Parts List on [PL 75.68](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present can cause injury.

1. Remove the paper from the tray.
2. Remove the rear cover, [REP 70.25](#).
3. Remove the tray 6 elevator motor assembly, [Figure 1](#).

NOTE: The tray 6 paper tray must be supported before the elevator motor assembly is removed.

4. If required remove the encoder sensor from the plastic bracket, [Figure 2](#).

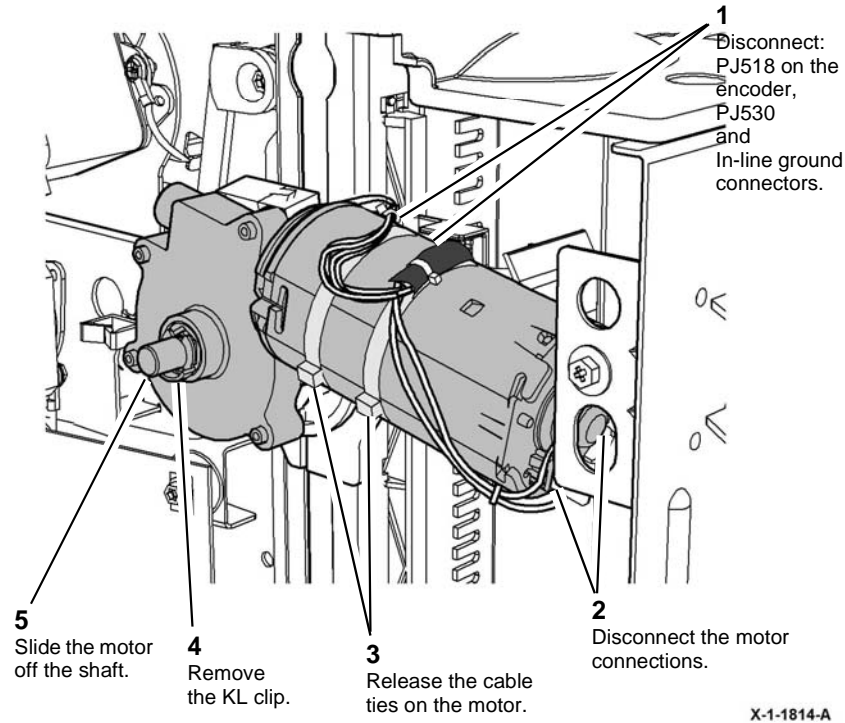


Figure 1 Remove the elevator motor assembly

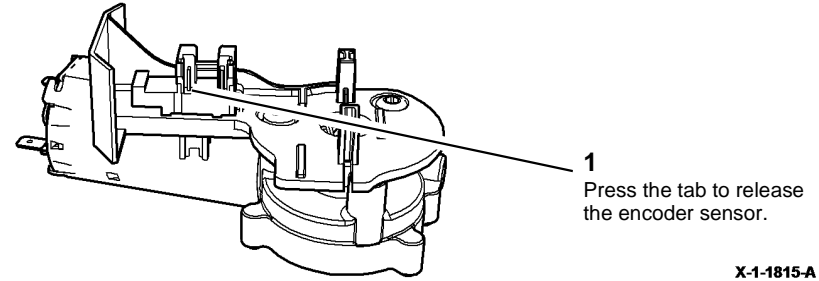


Figure 2 Remove the encoder sensor

Replacement

1. To help with the installing of a new elevator motor, support the paper tray on two reams of paper.
2. Make sure that the encoder sensor is position on the elevator motor assembly, [Figure 2](#).
3. The replacement is the reverse of the removal procedure.
4. Check that the harness is routed in the channel on the plastic bracket, [Figure 3](#).

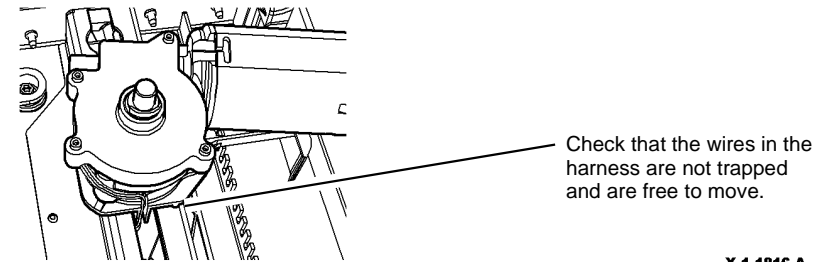


Figure 3 Harness position

5. Ensure that there are no twists in the harness when installing the elevator motor.
6. When the motor is installed, remove the paper supporting the paper tray.

- Exercise the elevator motor with one sheet of paper in the tray. Observe that the harness tracks properly between the mylar guide and the rear channel. [Figure 4](#).

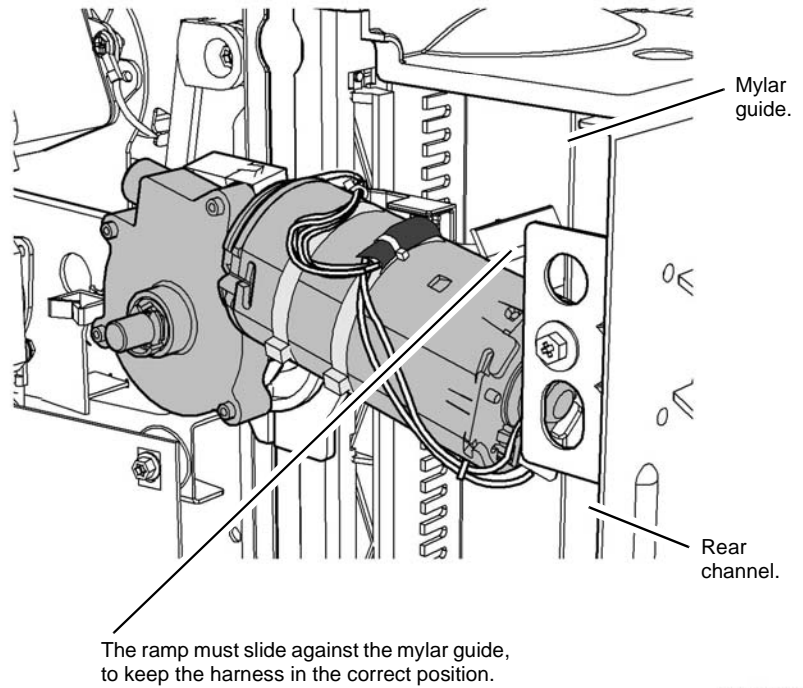


Figure 4 Location of the harness

- Check the registration, perform [dC604](#) Registration / preheat Calibration if necessary.

REP 70.22 Tray 6 Upper Limit Switch

Parts List on [PL 75.68](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present can cause injury.

- Remove the rear cover, [REP 70.25](#).
- Remove the top cover, [REP 70.25](#).
- Prepare to remove the tray 6 upper limit switch, [Figure 1](#).

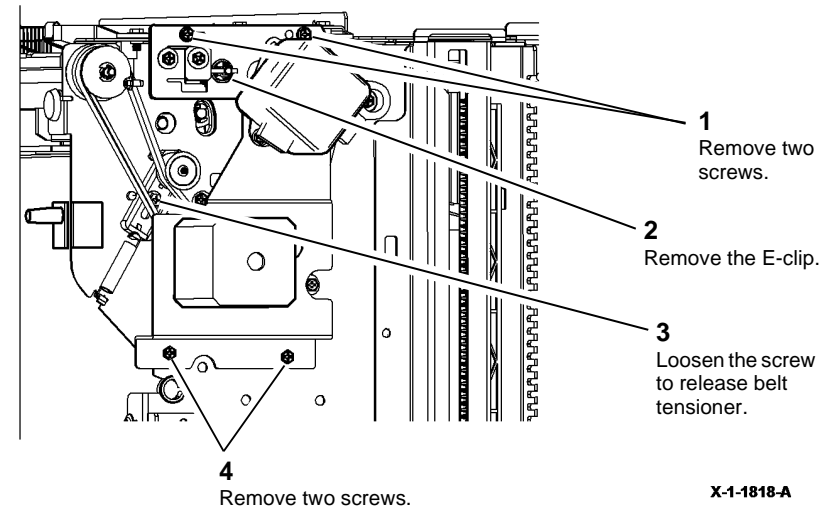


Figure 1 Preparation

- Remove the tray 6 upper limit switch and the actuator if required, [Figure 2](#).

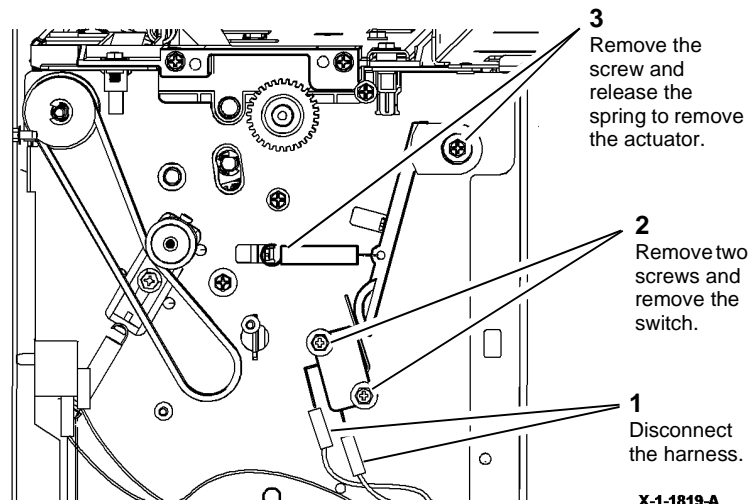


Figure 2 Remove tray upper limit switch

Replacement

- The replacement is the reverse of the removal procedure.

REP 70.23 Tray 6 Down Limit Switch

Parts List on [PL 75.70](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present can cause injury.

- The tray must be positioned high enough to access the screws shown in [Figure 1](#). If the tray is too low, open the door, remove all but about 1 ream (50mm) of paper, then close the door. When the tray has finished raising, switch off the machine and disconnect the power cord, [GP 14](#).
- Release the paper tray to gain access to the tray 6 down limit switch, [Figure 1](#).

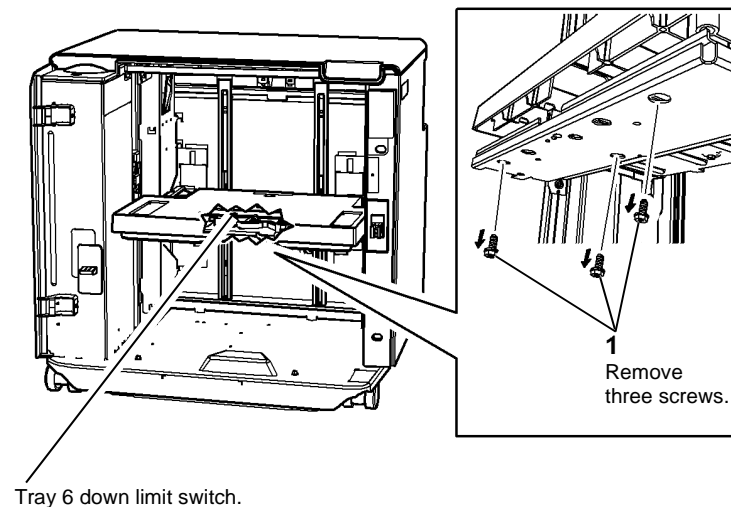


Figure 1 Release the paper tray

- Lift the tray to access the tray 6 down limit switch and the actuator if required, [Figure 2](#).

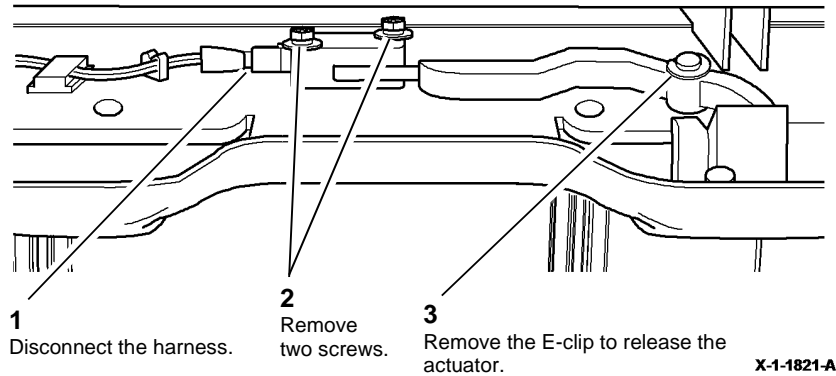


Figure 2 Remove tray 6 down limit switch

Replacement

- The replacement is the reverse of the removal procedure.
- Check that the wires are not trapped when refitting the tray.

REP 70.24 Un-docking and Docking Tray 6

Parts List on [PL 75.62](#)

Removal


WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

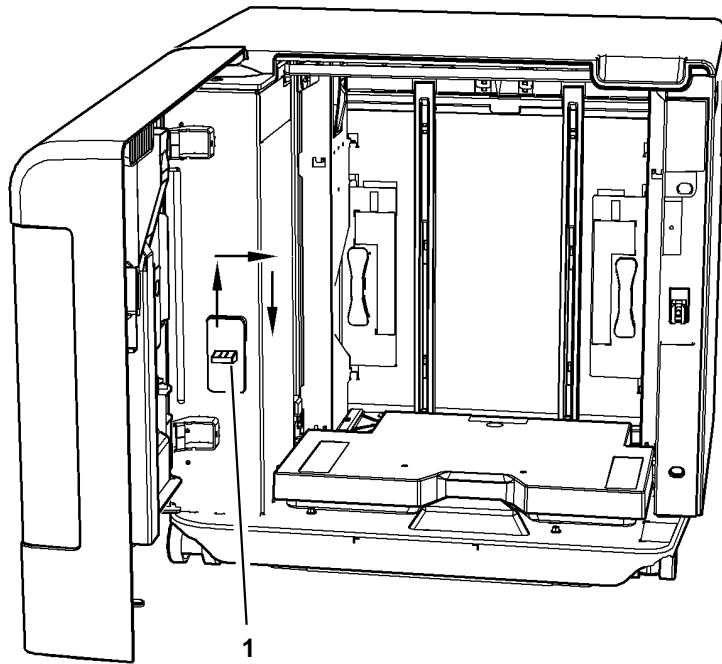
Take care during this procedure. Sharp edges may be present can cause injury.


WARNING

Take care not to topple Tray 6. Tray 6 is unstable when undocked from the machine. Do not show the customer how to undock Tray 6.

- Remove the paper from the tray.

- Engage the transit lock and pull the tray 6 module away from the machine until the lock engages, [Figure 1](#).

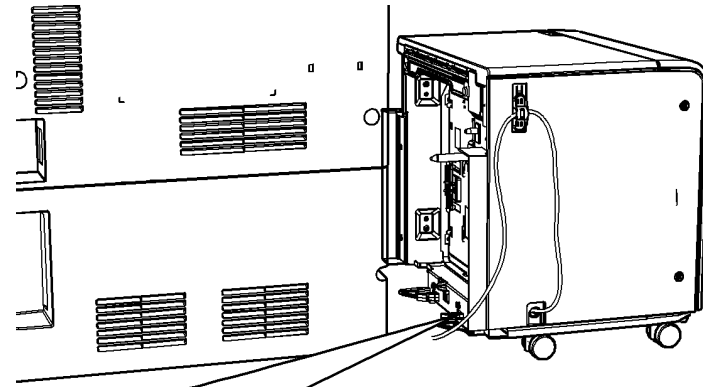


1
To engage - lift the lever and move it to the right.

X-1-1822-A

Figure 1 Engage transit lock

- At the rear of the machine release the latch and pull the tray 6 module away from the machine, [Figure 2](#).



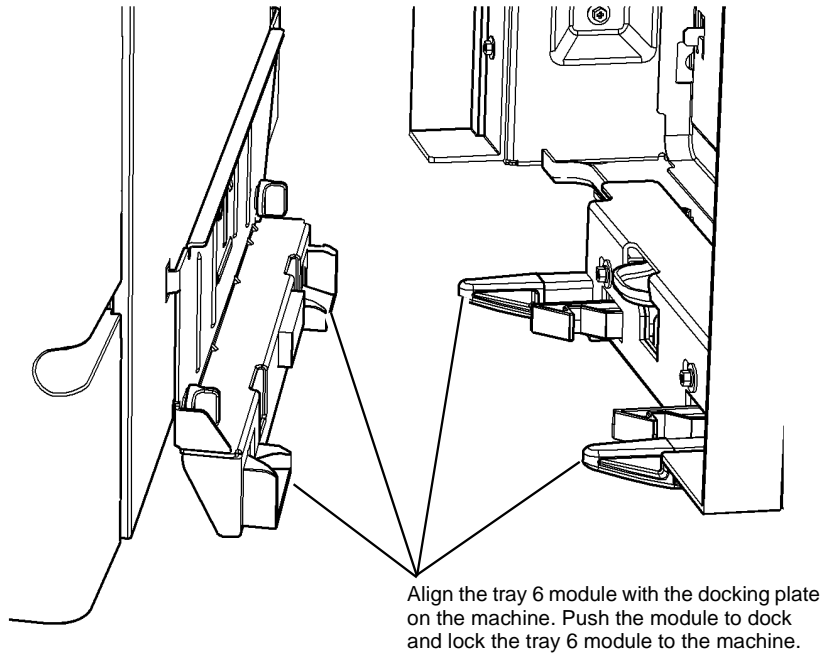
1
Press the lever to release the latch.

X-1-1823-A

Figure 2 Un-dock the tray 6 module

Replacement

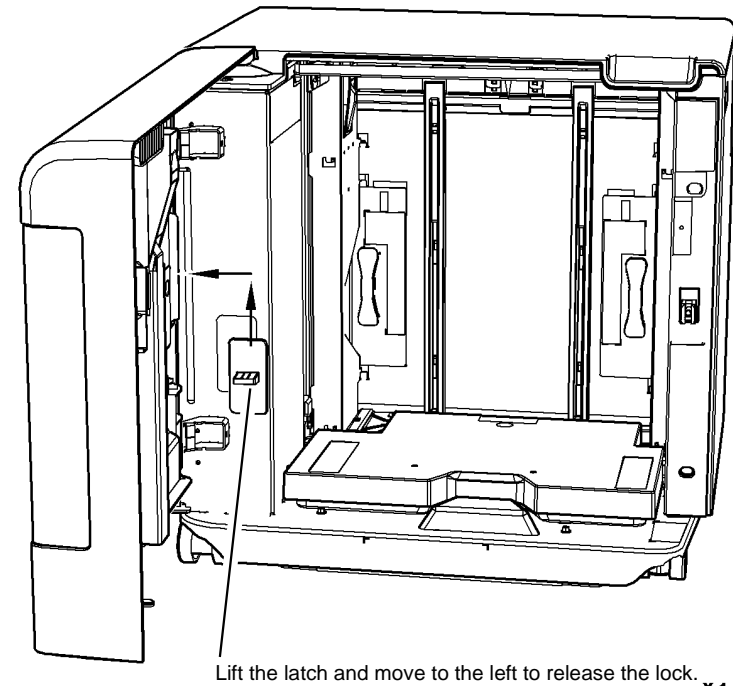
1. The replacement is the reverse of the removal procedure.
2. Position the tray 6 module and align the docking guides with the machine, [Figure 3](#).



X-1-1824-A

Figure 3 Docking the Tray 6 module

3. Release the transit lock and push the tray 6 module into the docked position against the machine, [Figure 4](#).



X-1-1825-A

Figure 4 Release transit lock

4. Go to [ADJ 70.3 Machine to Tray 6 Alignment](#) and complete the adjustment.

REP 70.25 Tray 6 Covers

Parts List on [PL 75.60](#)

Removal

!
WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

!
WARNING

Take care during this procedure. Sharp edges may be present can cause injury.

1. Remove the top cover, [Figure 1](#).

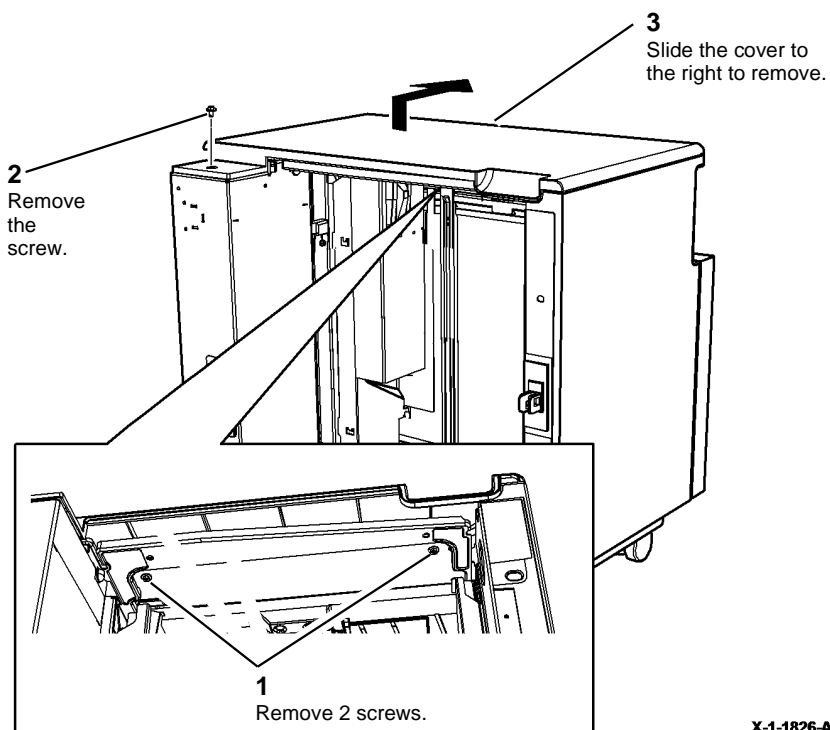


Figure 1 Top cover

2. Remove the front or rear cover, [Figure 2](#).

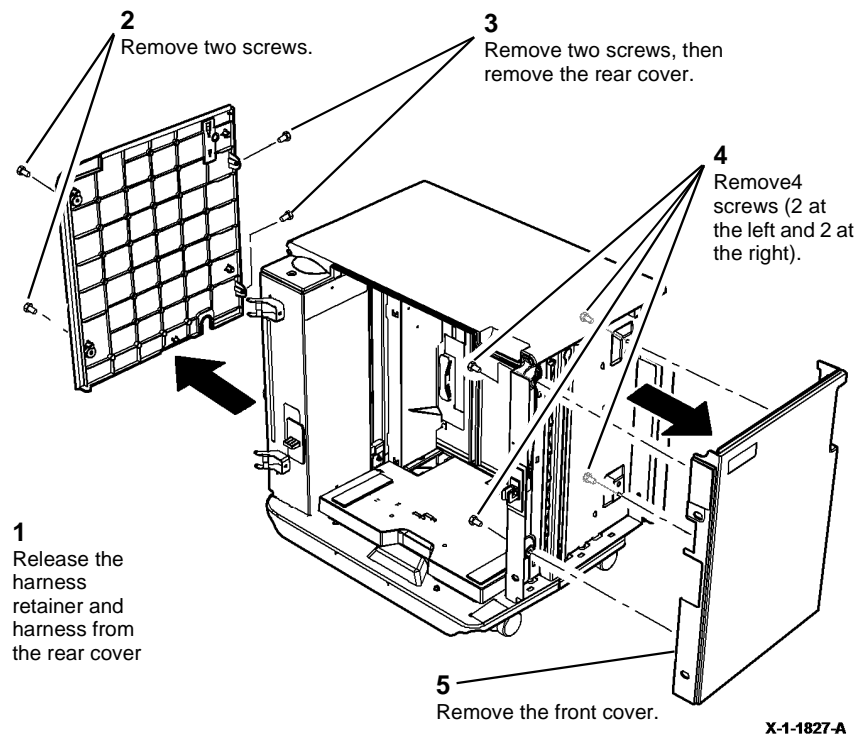


Figure 2 Front and rear cover

Replacement

1. The replacement is the reverse of the removal procedure.
2. Check that the top cover is located correctly, [Figure 1](#).

REP 70.26 Tray 6 Docking Latch

Parts List on [PL 75.62](#)

Removal



WARNING

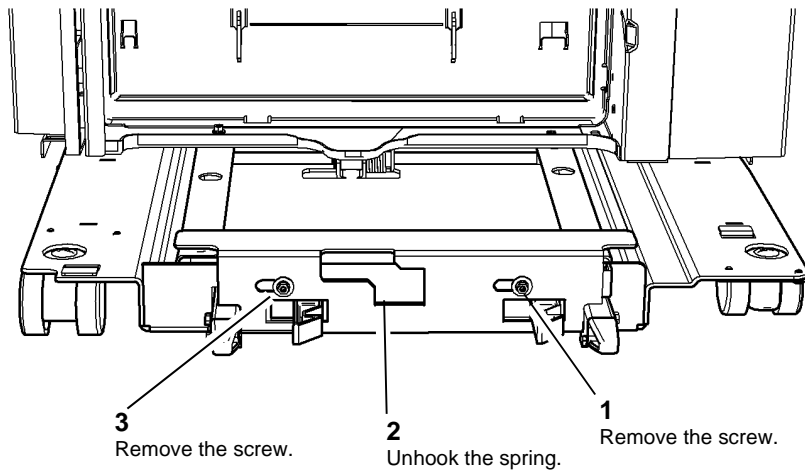
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present can cause injury.

1. Remove the paper and un-dock the tray 6 module, [REP 70.24](#).
2. Prepare to remove the latch assembly, [Figure 1](#).



3 Remove the screw.

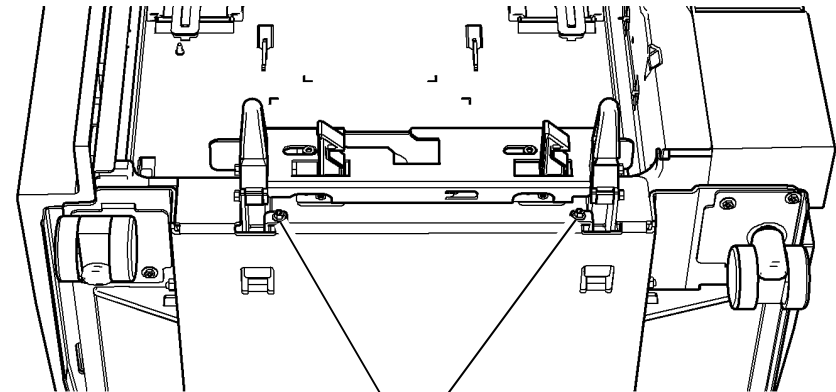
2 Unhook the spring.

1 Remove the screw.

X-1-1828-A

Figure 1 Preparation

3. Turn tray 6 onto its end to access the fixing screws on the docking latch main bracket. If tray 6 has a 11x17 / A3 or 8.5 x 11 / 14 kit then turn the tray 6 on it's side. [Figure 2](#).

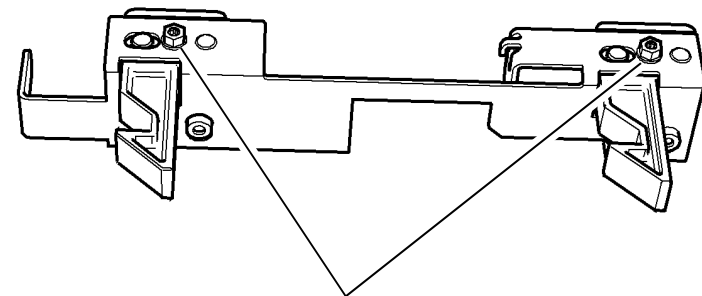


Remove 2 screws.

X-1-1829-A

Figure 2 Remove the latch assembly

4. Note the orientation of the latches and then remove the docking latches, [Figure 3](#).



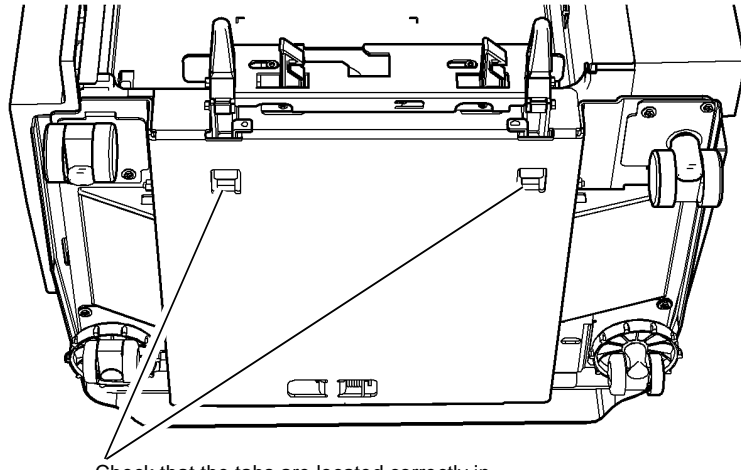
Remove the fixing screw, then remove the docking latch.

X-1-1830-A

Figure 3 Remove docking latch

Replacement

1. The replacement is the reverse of the removal procedure.
2. Check that the tabs are located correctly on the base plate when refitting the latch assembly, [Figure 4](#).



Check that the tabs are located correctly in the base.

X-1-1831-A

Figure 4 Location of the tabs

3. Check that the docking latch spring is located correctly.

REP 70.27 Tray 6 Elevator Rack Assembly

Parts List on [PL 75.68](#)

Removal

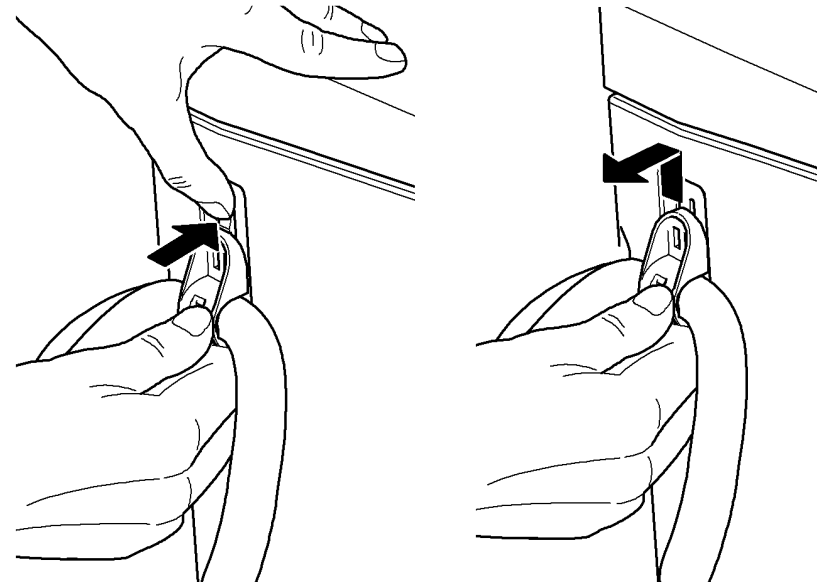

WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present can cause injury.

1. Release the cable clamp from the rear cover, [Figure 1](#).



1
Press the locking clip towards the module.

2
Slide the cable clamp off the module, in an upwards direction.

X-1-1832-A

Figure 1 Cable clamp

2. Remove any paper from tray 6, then un-dock the module, [REP 70.24](#).
3. Remove the two front door hinge pins, [PL 75.60 Item 3](#), then remove the front door assembly, [PL 75.60 Item 1](#).

4. Remove the top, front and rear covers, [REP 70.25](#).
5. Remove the elevator motor assembly, [REP 70.21](#).
6. Remove the frame top brace, [PL 75.68 Item 3](#).
7. Remove the crash bar, [PL 75.68 Item 2](#).
8. Remove the upper feeder assembly, [REP 80.42](#).
9. Prepare to remove the tray assembly, [Figure 2](#) and [Figure 3](#).

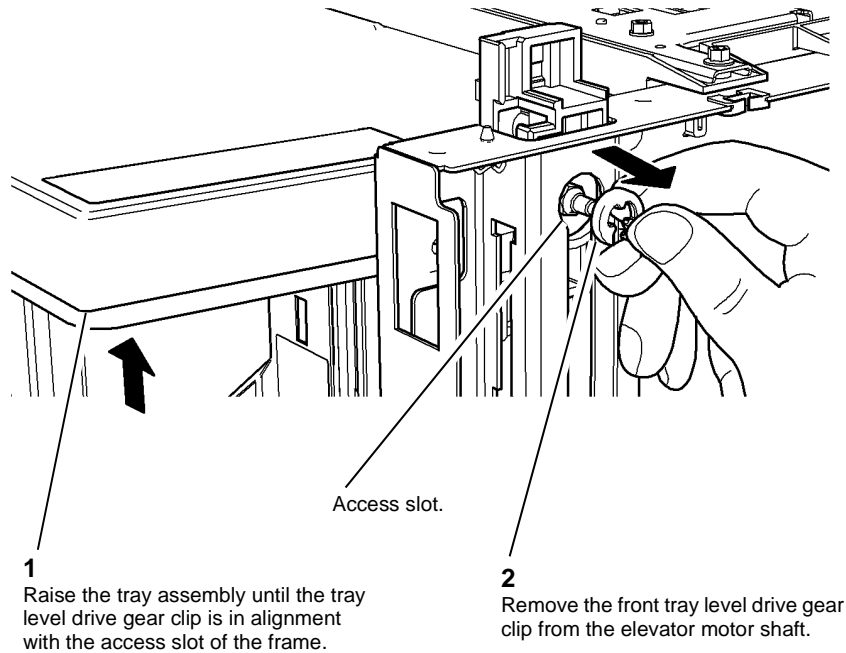


Figure 2 Tray assembly front view

X-1-1833-A

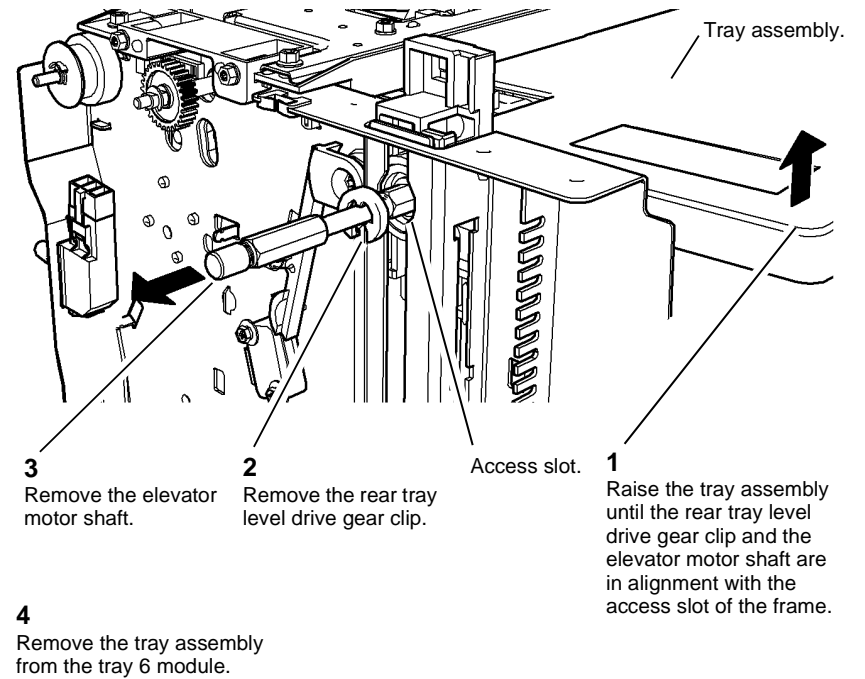


Figure 3 Tray assembly rear view

X-1-1834-A

10. Remove the front and rear drive gears, [PL 75.68 Item 28](#).
11. Remove the front elevator rack, [PL 75.68 Item 14](#). Slide the rack upwards within the frame then lift the rack away from the tray 6 module.

NOTE: Only the front elevator rack has a clearance cut-out to accommodate the tray 6 door switch, [Figure 4](#).

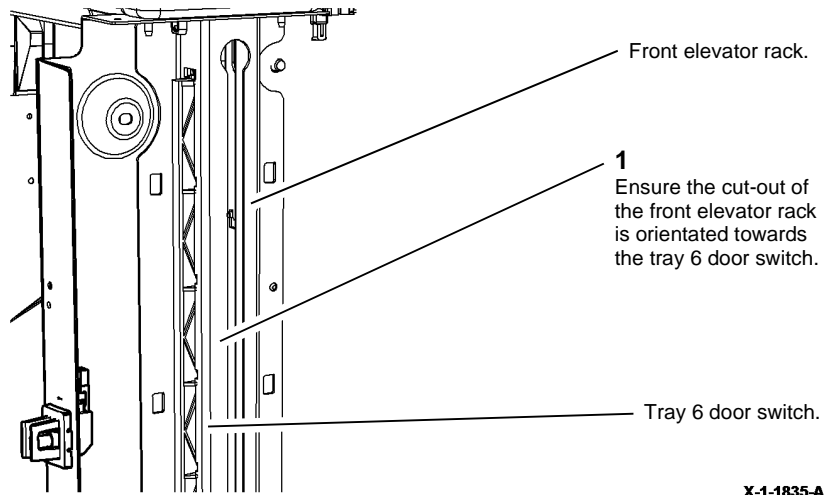


Figure 4 Front elevator rack

12. Remove the rear elevator rack, [PL 75.68 Item 13](#). Slide the rear elevator rack upwards within the frame, then lift the rack away from the tray 6 module.

Replacement

1. Install the elevator motor shaft into the tray assembly.
2. Place the tray assembly in the top of the module and insert the front and rear drive gears.
3. Ensure that the tray assembly is in horizontal alignment with the lower feeder assembly, [Figure 5](#). If necessary raise the tray assembly until the drive gears are just above the racks, align the tray again and then lower onto the racks.

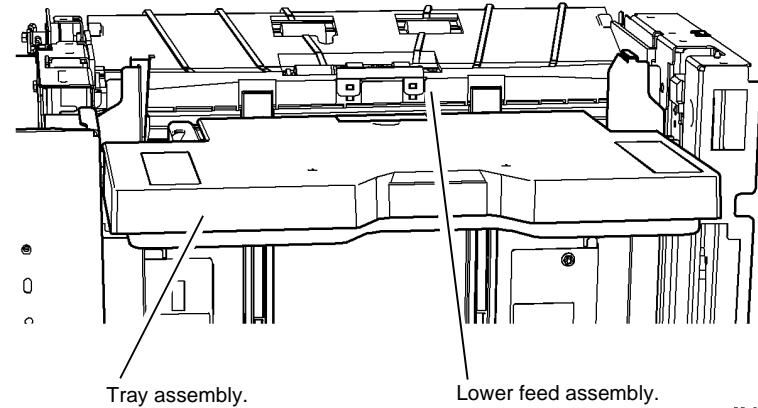


Figure 5 Tray alignment

4. Insert the front and rear the rear tray level drive gear clip, [Figure 2](#), [Figure 3](#).
5. The remainder of replacement is the reverse of the removal procedure.

REP 70.28 Tray 6 Elevator Tray Guides

Parts List on [PL 75.70](#)

Removal

! WARNING

Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

! WARNING

Take care during this procedure. Sharp edges may be present can cause injury.

1. Remove the tray assembly from the tray 6 module, by performing [REP 70.27](#) steps 1 to 11.
2. Remove the front and rear drive gears, [PL 75.68](#) Item 28.
3. Remove the elevator motor shaft, [PL 75.68](#) Item 7.
4. Remove the infill plate assembly, [Figure 1](#).

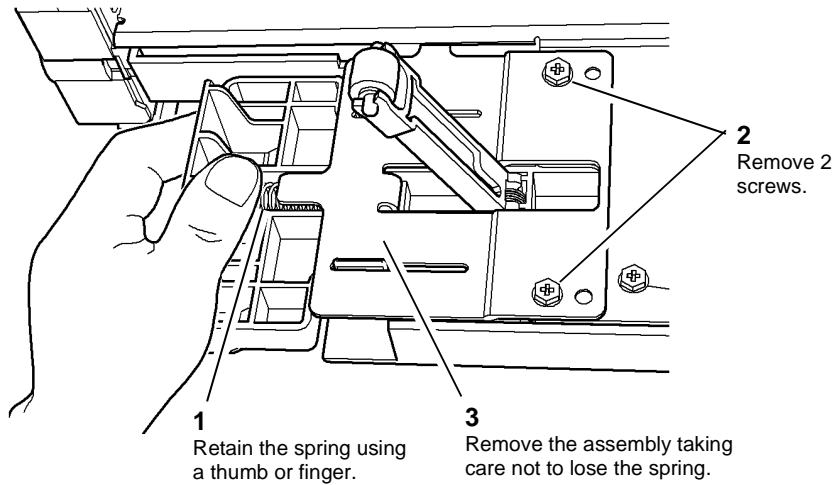


Figure 1 Infill plate assembly removal

5. Separate the lift plate from the tray lift top cover, [Figure 2](#).

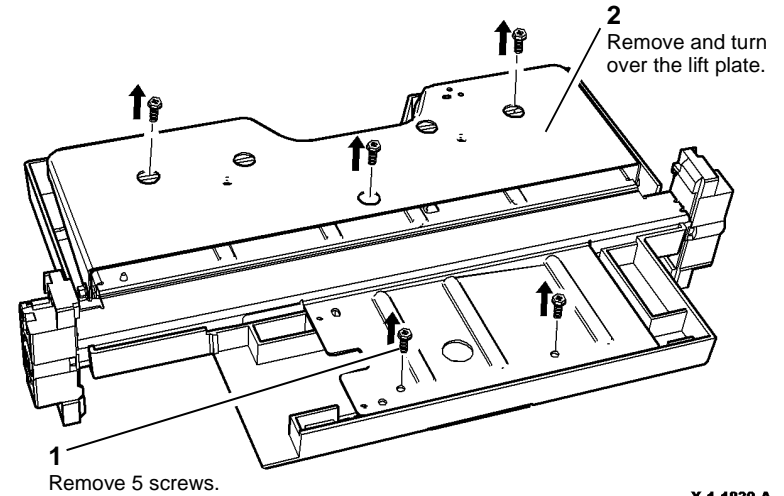


Figure 2 Tray separation

6. Remove the tray 6 elevator harness, [Figure 3](#).

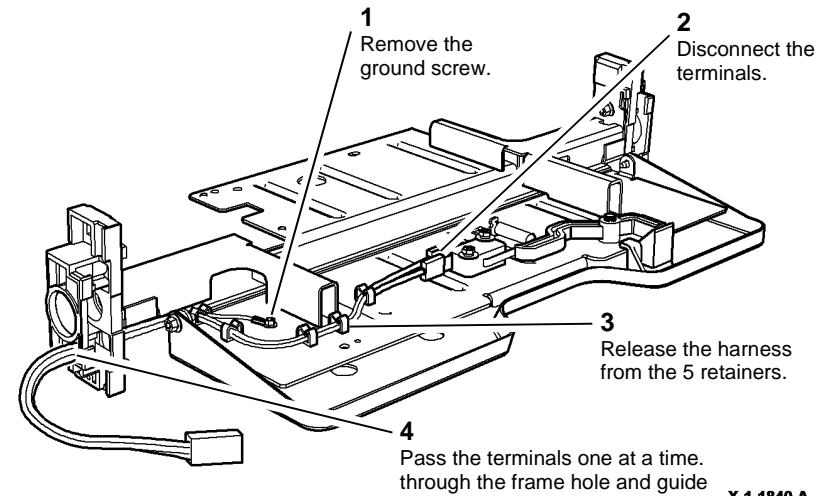


Figure 3 Harness removal

- Remove the elevator tray guides, [Figure 4](#).

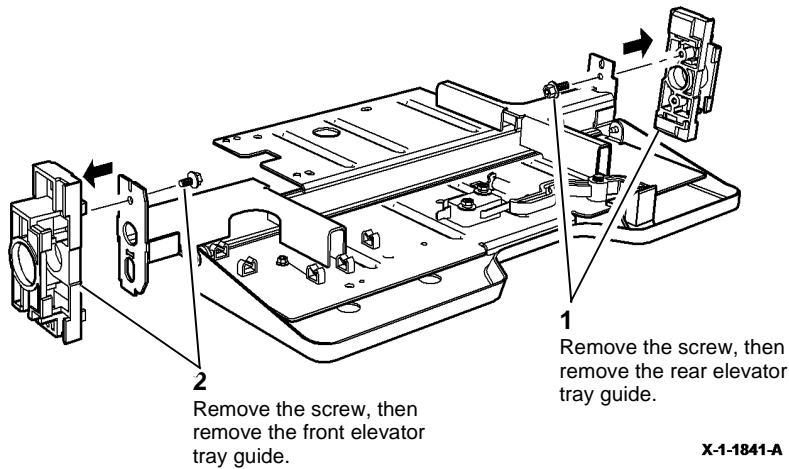


Figure 4 Elevator tray guides removal

Replacement

- Re-assemble the elevator tray by reversing the removal steps 3 to 5.
- Install the rear guide assembly, [Figure 5](#) and [Figure 6](#).

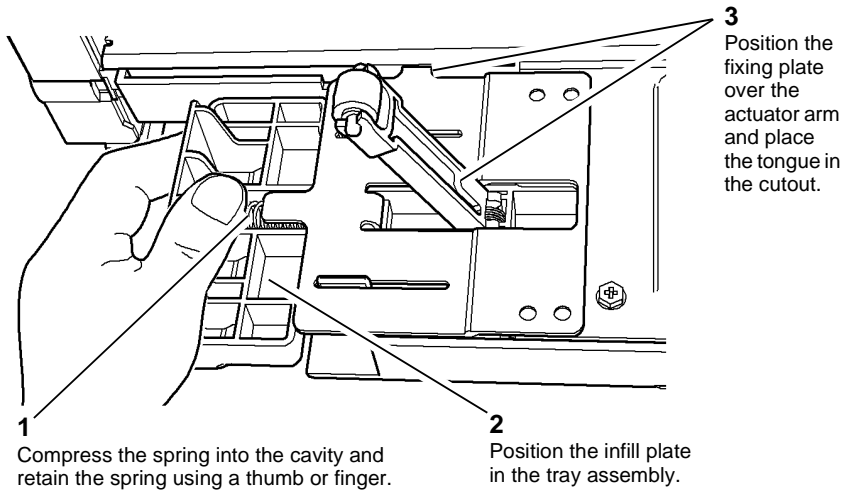


Figure 5 Rear guide assembly install

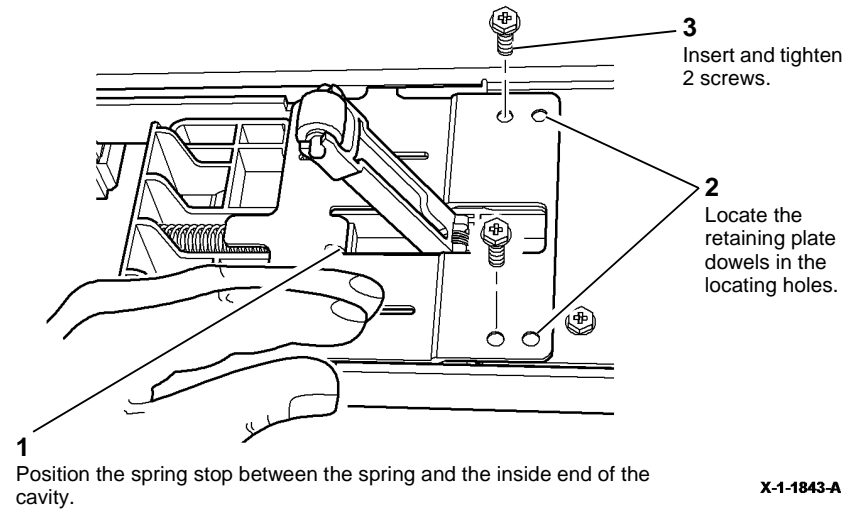


Figure 6 Rear guide assembly install

- The remainder of the installation is the reverse of the removal procedure, refer to [REP 70.27](#) and perform the replacement procedure.

REP 80.1 Tray 1 and Tray 2 Paper Feed Assembly

Parts List on [PL 80.26](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove tray 1 or tray 2 as required, [REP 70.1](#).
2. Remove the tray 1 or tray 2 feed assembly, [Figure 1](#).

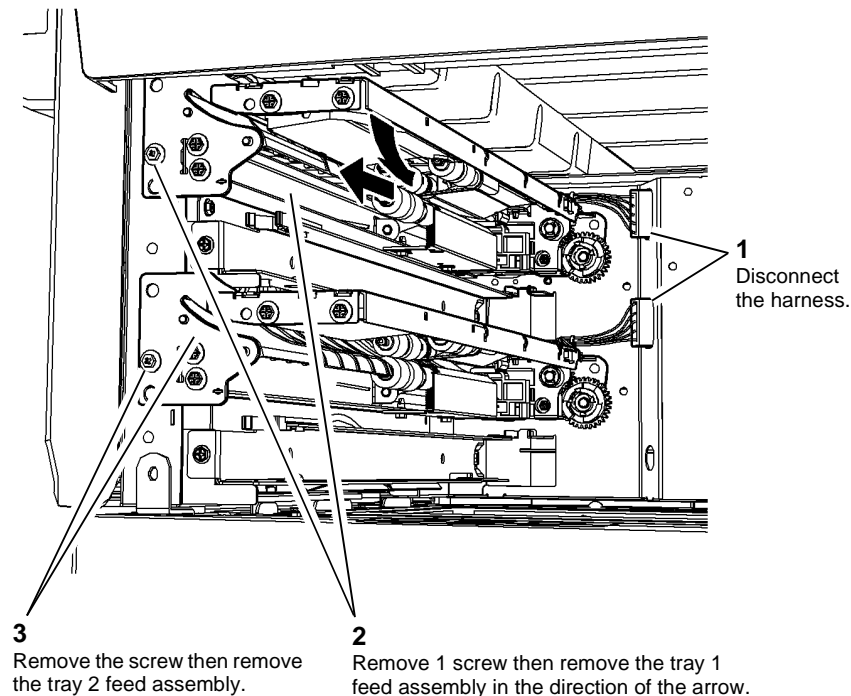


Figure 1 Paper feed assembly removal

Replacement

1. Examine the stack height mechanism actuator, If it does not slide easily, perform the Stack Height Mechanism Actuator procedure of [ADJ 40.1](#).
2. Replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting the screws.
3. If new feed rolls are installed, reset the tray 1 or tray 2 feed roll HFSI count. Refer to [dC135](#) CRU/HFSI Status.

REP 80.2 Tray 1 and Tray 2 TAR Sensors and Lower Left Door Paper Guide

Parts List on [PL 80.10](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the left door into the service position, [GP 37](#).
2. Prepare to remove the lower left door paper guide, [Figure 1](#).

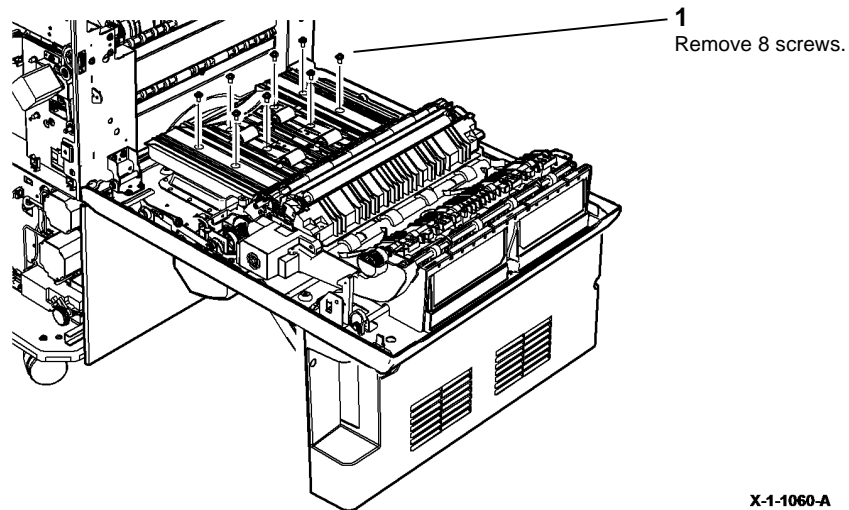


Figure 1 Preparation

X-1-1060-A

3. Release the TAR 1 and TAR 2 sensor harness cable ties (2 places) [Figure 2](#).

1
Avoid strain on the TAR 1 and TAR 2 sensor harness. Bias the lower left door paper guide just enough to access the anchor pins on the 2 cable ties.

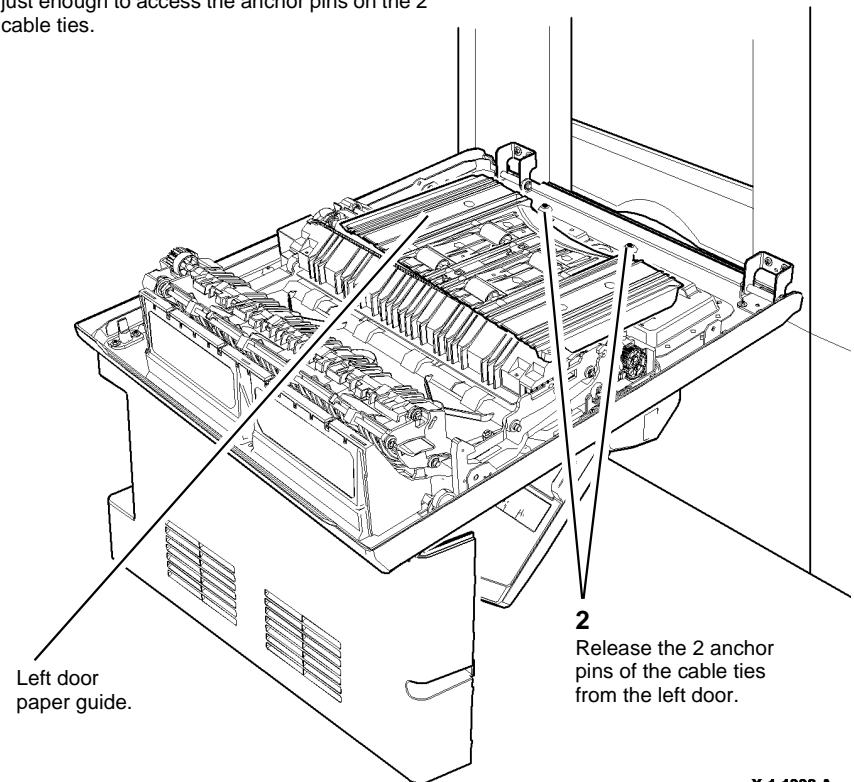
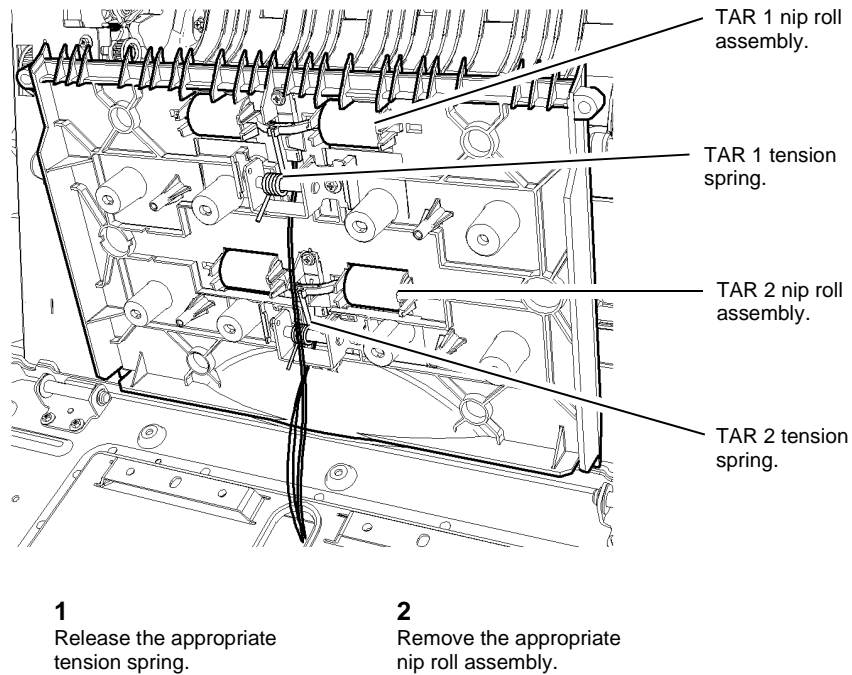


Figure 2 TAR 1 and TAR 2 sensor harness fixings

X-1-1338-A

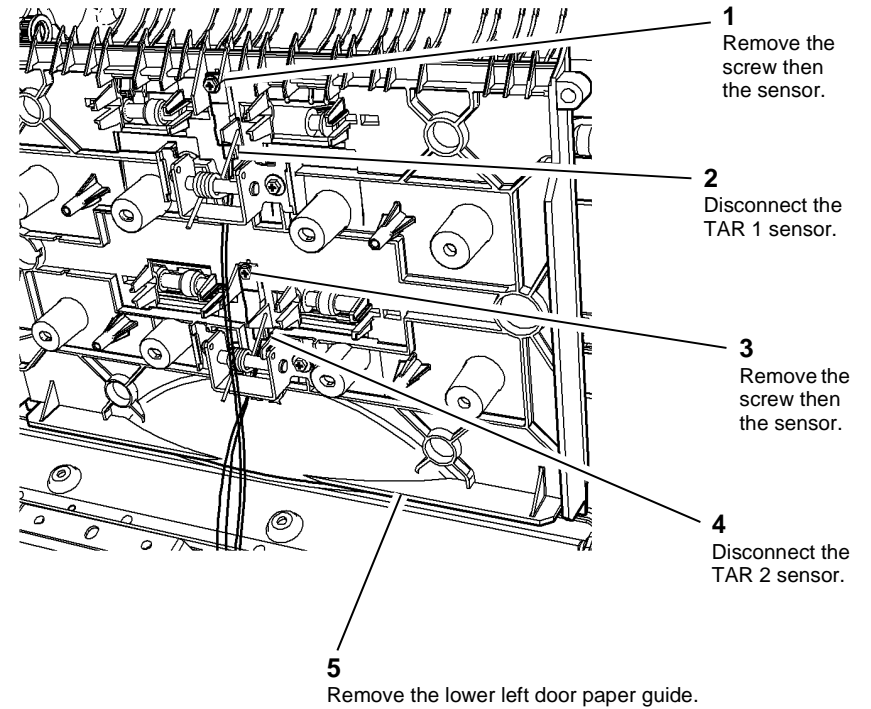
4. Prepare to disconnect the TAR 1 or TAR 2 sensors, [Figure 3](#).



X-1-1339-A

Figure 3 Lower left door nip rolls

5. Remove the lower left door paper guide, [Figure 4](#).



X-1-1061-A

Figure 4 Sensor and guide removal

Replacement

1. Replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting the screws.

REP 80.3 Registration Nip Roll and Registration Transfer Assembly

Parts List on [PL 80.15](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Open the left door, [PL 80.10 Item 1](#).
2. Remove the print cartridge, [PL 90.17 Item 9](#), then place in a black bag.
3. Remove the registration transfer assembly, [Figure 1](#).

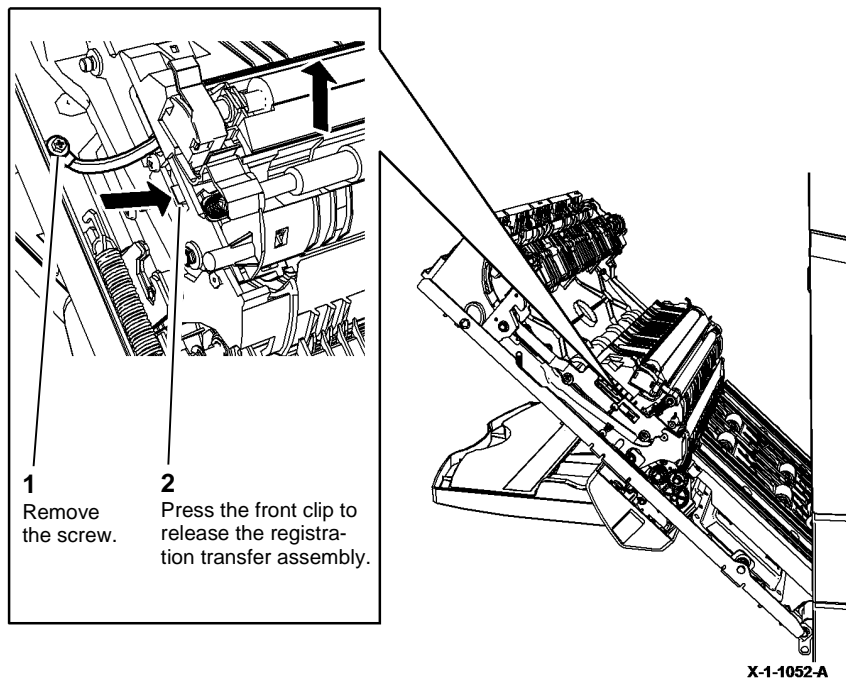


Figure 1 Registration transfer assembly removal

4. Prepare to remove the registration nip roll, [Figure 2](#).

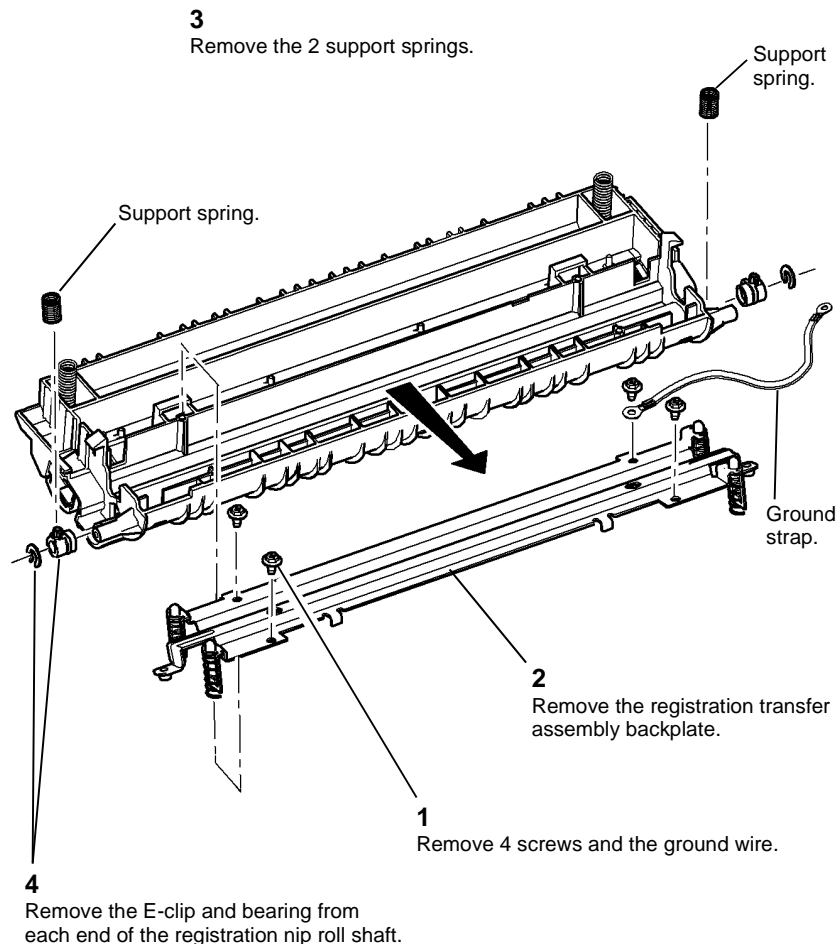
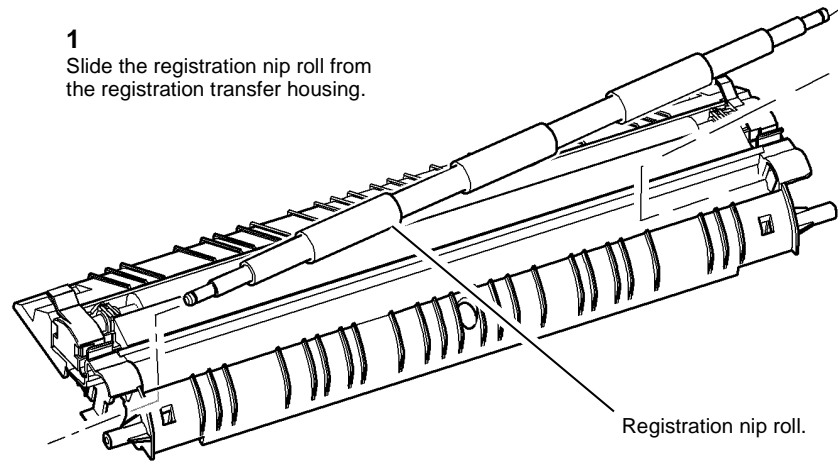


Figure 2 Registration backplate assembly

5. Remove the registration nip roll, [Figure 3](#).



X-1-1054-A

Figure 3 Registration nip roll removal

Replacement

1. Replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting the screws.
2. Ensure the ground strap is installed, [Figure 2](#).
3. Perform the [dC604](#) Registration Setup procedure.
4. Check the registration transfer assembly for ground continuity and electrical resistance, perform the [301A](#) Ground Distribution RAP - [Registration Transfer Ground](#).

REP 80.4 Registration Transport Assembly, Registration Roll and Registration Sensor

Parts List on [PL 80.17](#), [PL 80.25](#)

Removal

NOTE: Removal and replacement videos of this procedure are available on the EDOC. The videos are accessible from the Library menu on the Service Interface.


WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Open the left door, [PL 80.10](#) Item 1.
2. Cam-off the LED print head into the retracted position.
3. Remove the print cartridge, [PL 90.17](#) Item 9. Place the print cartridge in a lightproof bag.
4. Remove the latch, [PL 60.35](#) Item 2.
5. Remove the inner front cover, [PL 28.10](#) Item 10.
6. Remove the main drive module, [REP 40.1](#).

7. Remove the registration roll, [Figure 1](#).

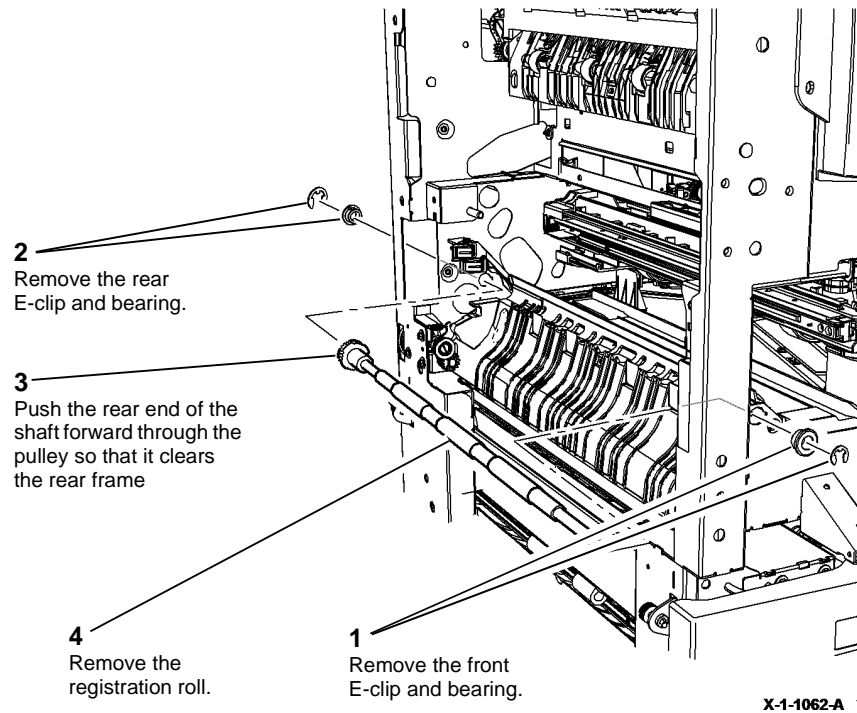


Figure 1 Registration roll removal

X-1-1062-A

8. Remove the bypass tray drive assembly, [Figure 2](#).

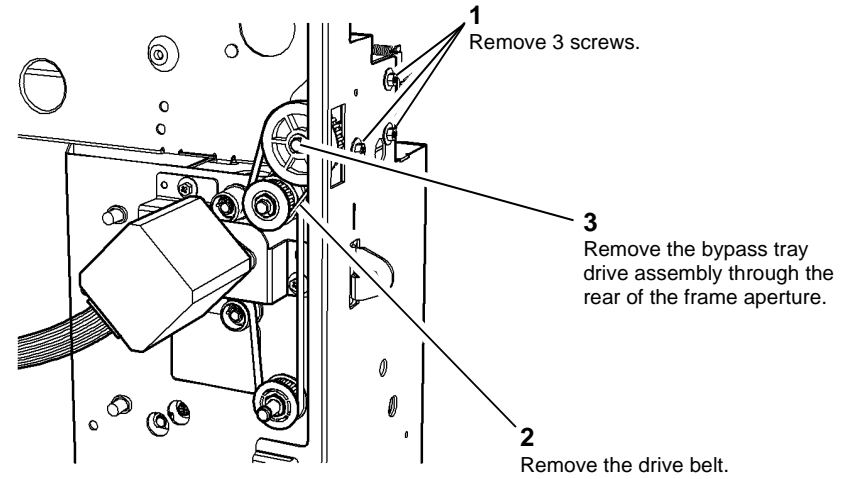


Figure 2 Bypass tray drive assembly removal

X-1-1063-A

9. Prepare to remove the registration transport housing, [Figure 3](#).

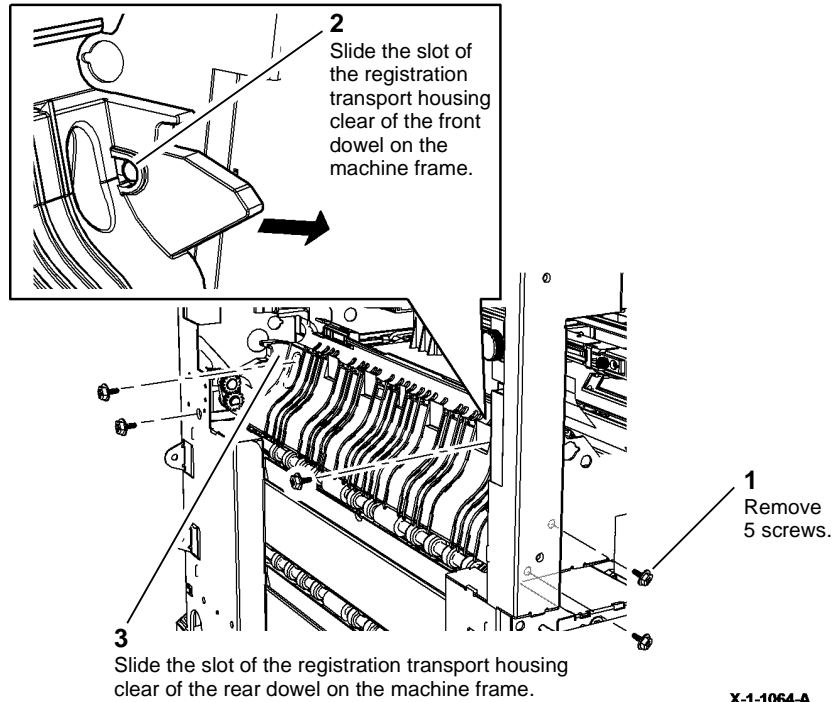


Figure 3 Preparation

10. Remove the registration transport housing, [Figure 4](#).

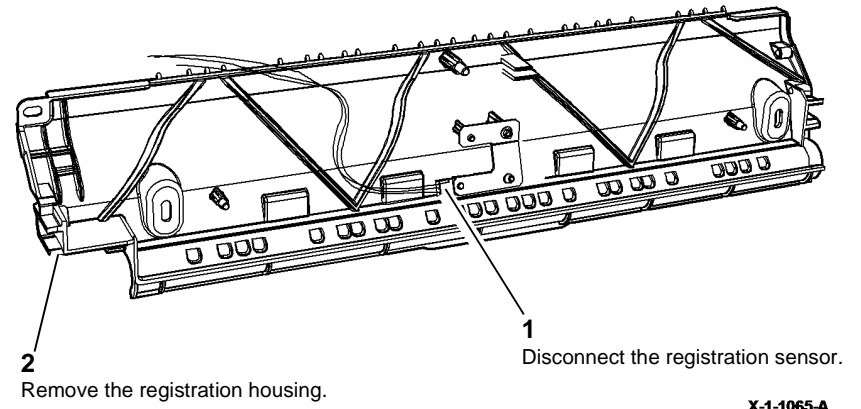


Figure 4 Housing removal

11. Remove the registration sensor.

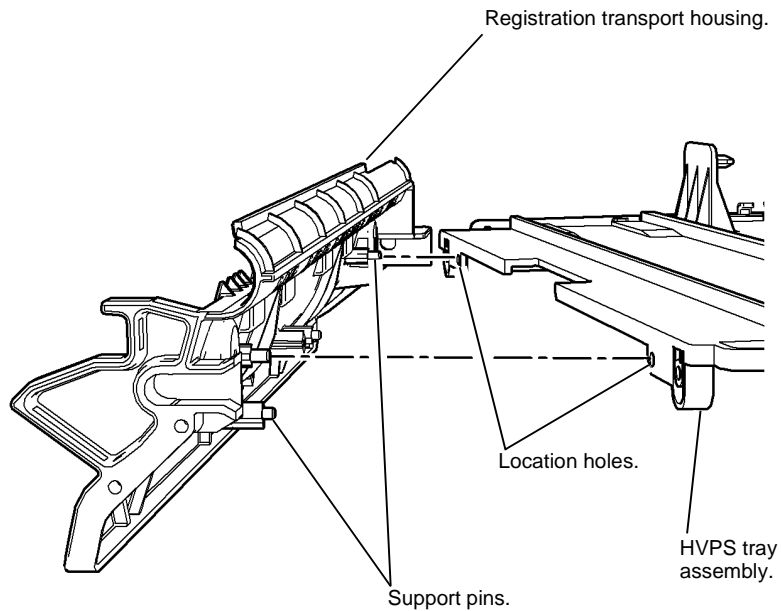
Replacement



CAUTION

If the registration transport housing is not located correctly rotation of the registration roll will be impaired.

1. Replacement is the reverse of the removal procedure. Refer to GP 6 before refitting the screws
2. Ensure the 2 support pins on the registration transport housing engage into the 2 location holes of the HVPS tray assembly, Figure 5.



X-1-1294-A

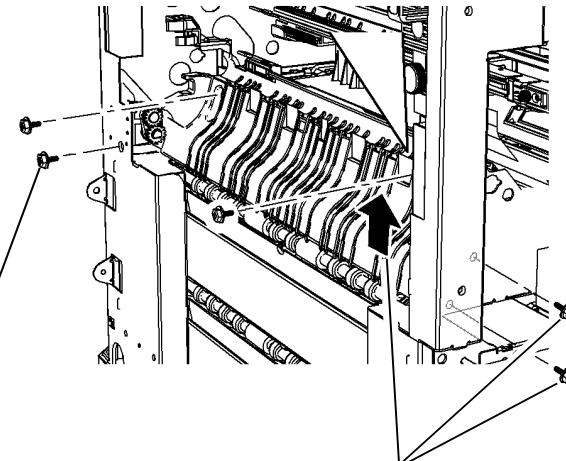
Figure 5 Housing replacement



CAUTION

Ensure the front of the registration transport housing is biased fully up before tightening the screws.

3. Secure the registration transport housing, Figure 6.



1
Loosely install the 5 screws.

3
Tighten the remaining 3 screws.

2
Fully bias up the front of the registration transport housing, then tighten the front 2 screws.

X-1-1416-A

Figure 6 Housing biasing

4. Check the registration roll rotates freely.
5. Perform the dC604 Registration Setup procedure.

REP 80.5 Duplex Transport Assembly

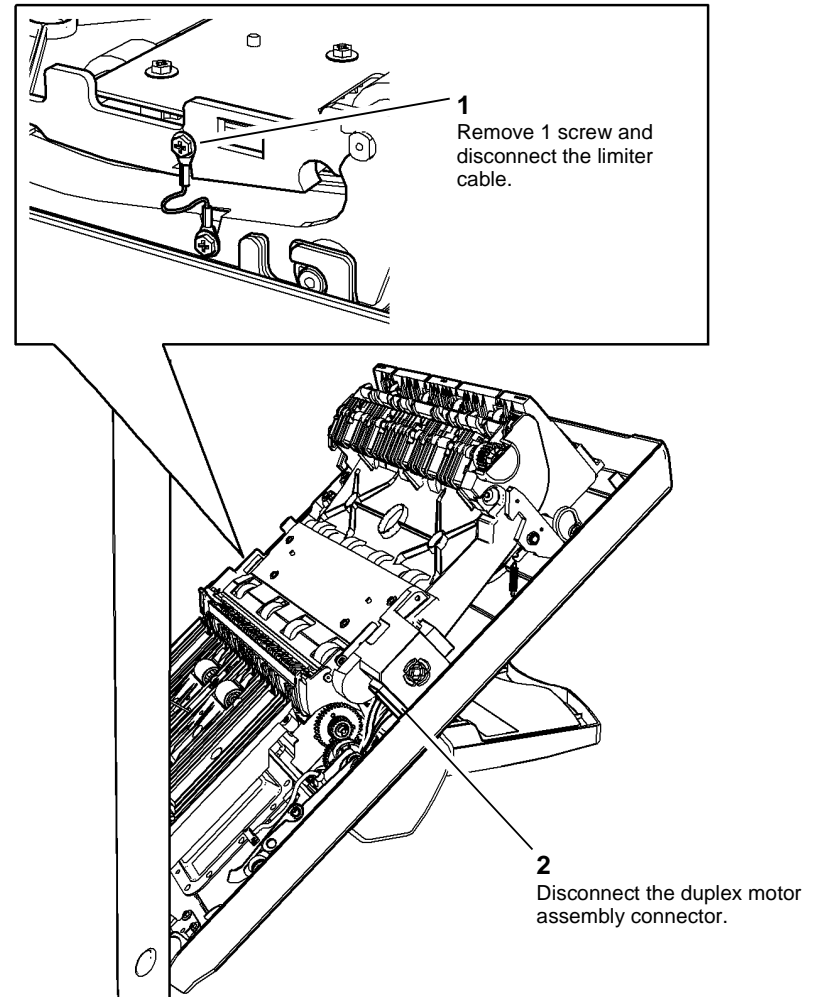
Parts List on [PL 80.22](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the left door, [PL 80.10 Item 1](#).
2. Remove the print cartridge, [PL 90.17 Item 9](#), then place in a black bag.
3. Remove the registration transfer assembly, [REP 80.3](#).
4. Prepare to remove the duplex transport assembly, [Figure 1](#).

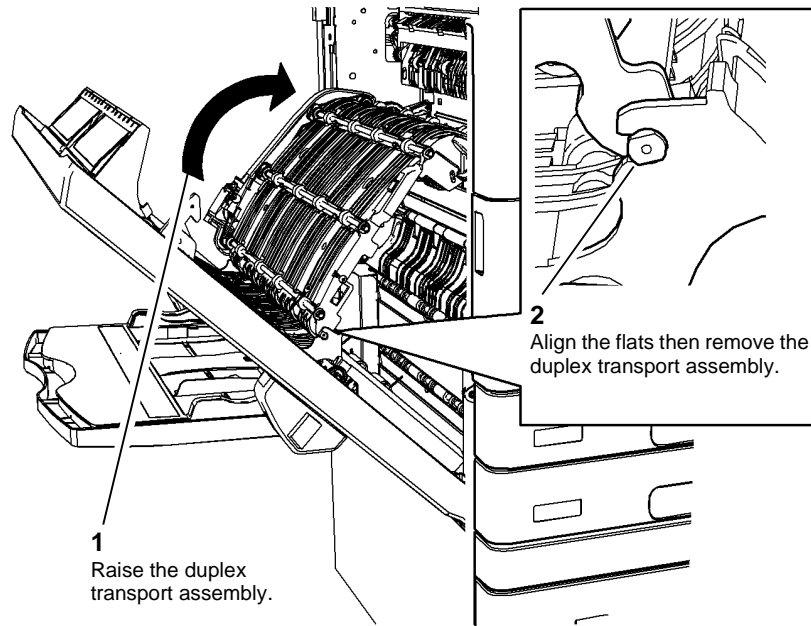


X-1-1055-A

Figure 1 Preparation

5. Remove the fuser module, [PL 10.8 Item 1](#).

6. Remove the duplex transport assembly, [Figure 2](#).



X-1-1056-B

Figure 2 Removal

Replacement

Replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting the screws.

REP 80.6 Bypass Tray Drive Belt

Parts List on [PL 80.25](#)

Removal


WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.


WARNING

Take care during this procedure. Motors will become hot during normal operation.

1. Open the left door, [PL 80.10 Item 1](#).
2. Remove the print cartridge, [PL 90.17 Item 9](#), then place in a black bag.
3. Remove the rear cover, [REP 28.2](#).

4. Remove the bypass tray drive belt, [Figure 1](#).

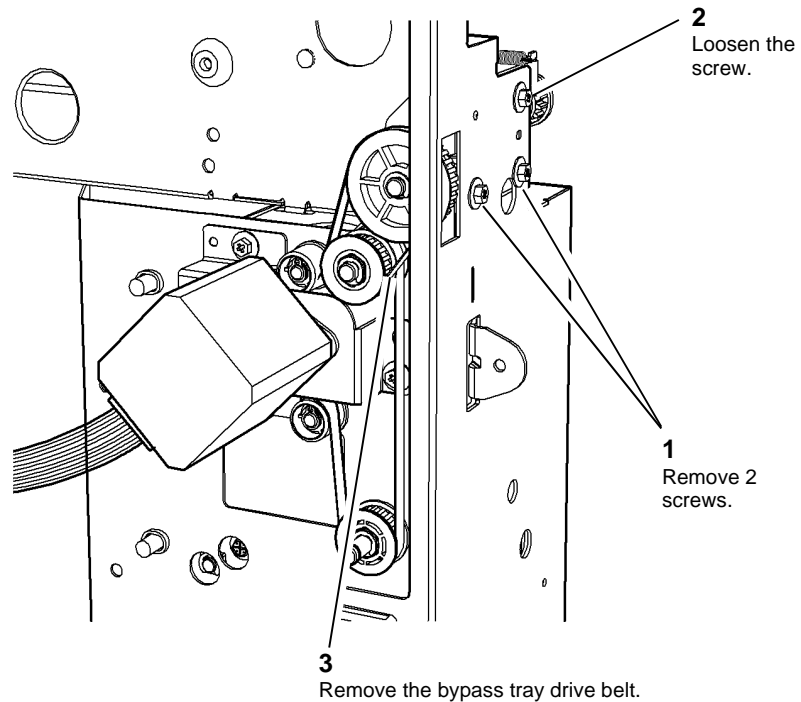


Figure 1 Drive Belt Removal

Replacement

1. The replacement is the reverse of the removal procedure.
2. Perform the [dC604](#) Registration Setup procedure.

REP 80.7 Left Door Assembly

Parts List on [PL 80.10](#)

Removal

NOTE: Removal and replacement videos of this procedure are available on the EDOC. The videos are accessible from the Library menu on the Service Interface.


WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.


CAUTION

Do not lower the left door assembly further than the authorized service position, [GP 37](#). Lowering of the left door assembly beyond the service position will cause the left door cover to collide with the IOT to HCF inboard fixing bolt.

1. If the existing left door assembly is to be replaced with a new left door assembly remove the bypass tray assembly, [REP 70.2](#).
2. Remove the rear cover, [REP 28.2](#).
3. Open the left door. Remove the print cartridge, [PL 90.17 Item 9](#). Place the print cartridge in a lightproof bag.

X-1-1050-A

4. Disconnect the harnesses between the IOT and the left door assembly, [Figure 1](#).

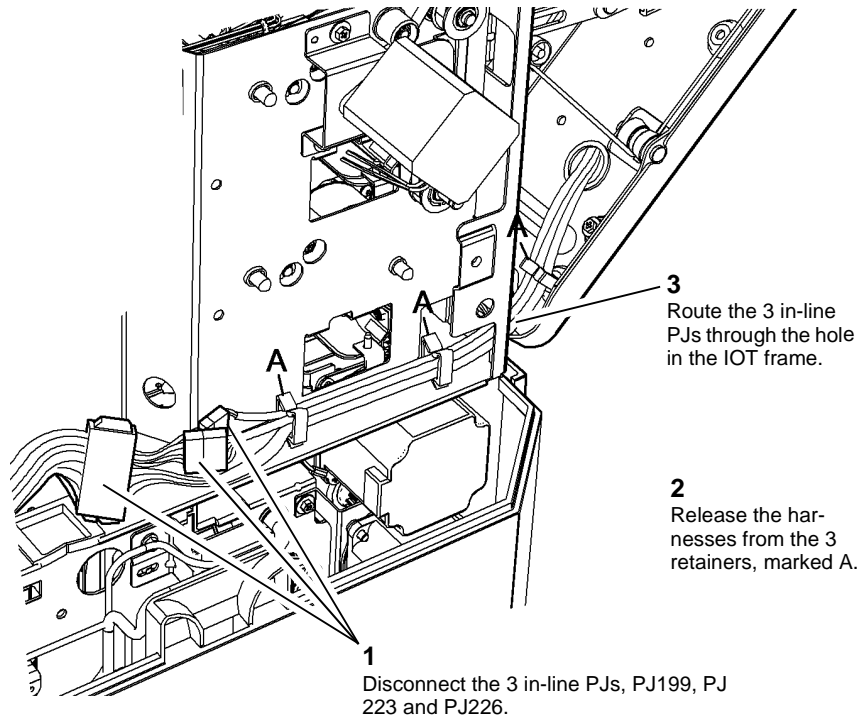


Figure 1 Left door harness connections

NOTE: Partial opening of tray 2 will allow greater clearance for the routing of the harnesses.

5. Position the left door assembly into the service position, [GP 37](#).

6. Remove the left door assembly, [Figure 2](#).

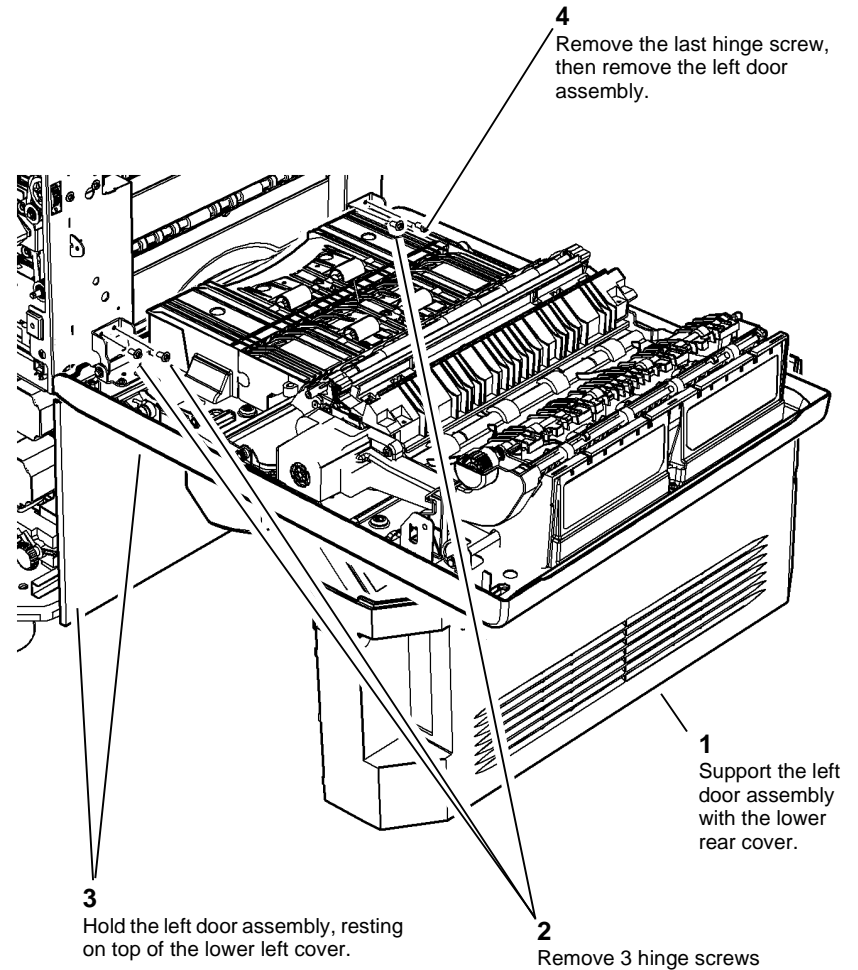


Figure 2 Left door removal

Replacement



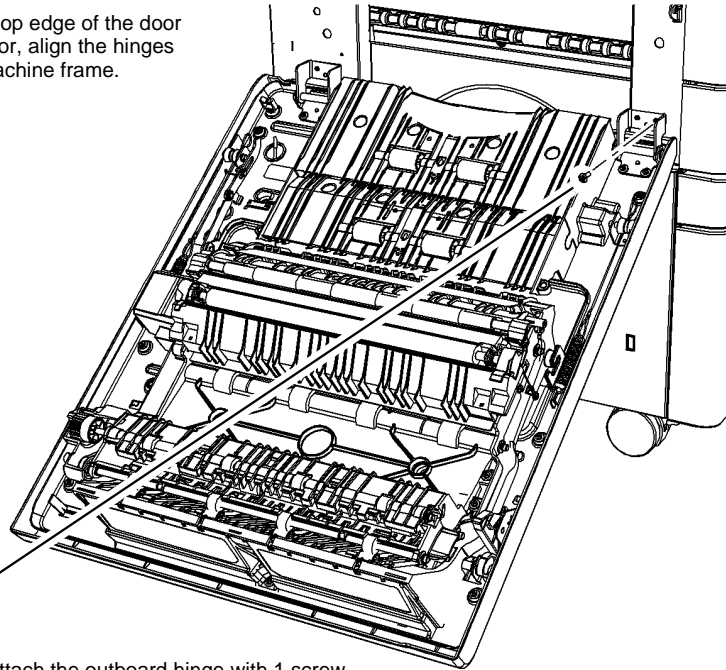
CAUTION

Ensure the left door assembly is supported and finally fixed into place when in the service position (horizontal), GP 37. Incorrect positioning of the left door assembly when installing the 4 fixing screws may cause the left door cover to collide with the IOT to HCF inboard fixing bolt, when the door is closed.

1. Prepare to install the left door assembly, Figure 3.

1

With the top edge of the door on the floor, align the hinges on the machine frame.



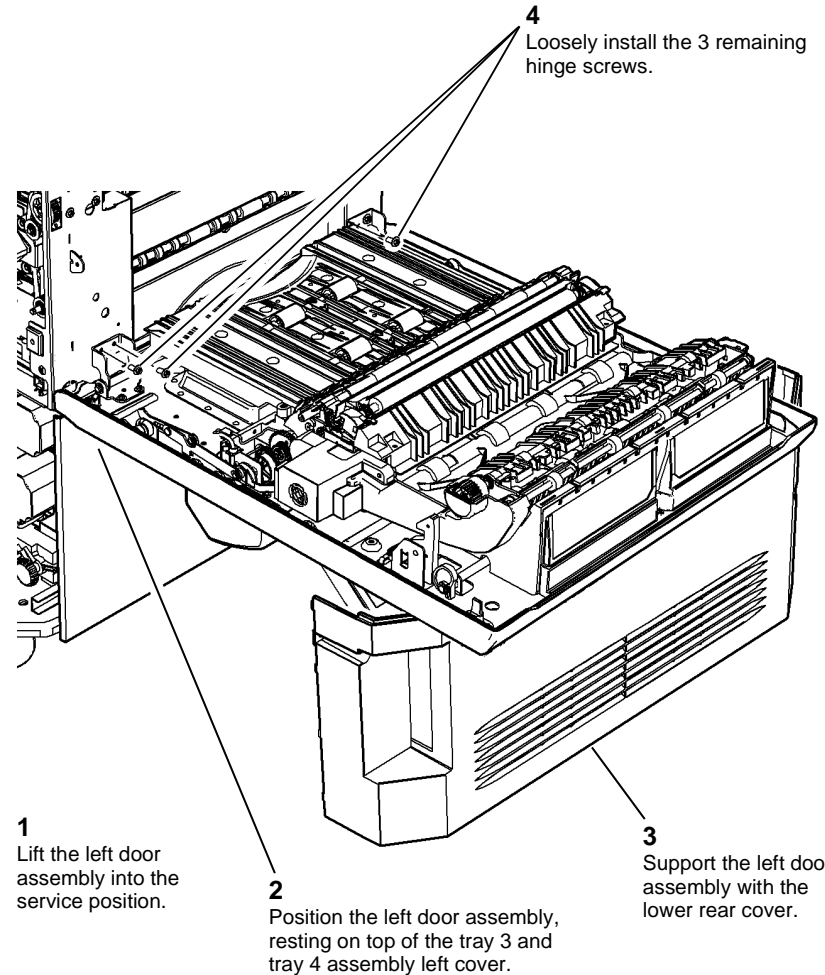
2

Loosely attach the outboard hinge with 1 screw.

X-1-1334-B

Figure 3 Temporary alignment

2. Install the left door assembly, Figure 4.



1

Lift the left door assembly into the service position.

2

Position the left door assembly, resting on top of the tray 3 and tray 4 assembly left cover.

3

Support the left door assembly with the lower rear cover.

X-1-1373-A

Figure 4 Left door assembly Installation

3. Ensure that the location holes of the left door assembly hinges locate correctly with small dowel pins on the IOT frame, Figure 5. Fully tighten the 4 hinge screws, refer to Figure 3 and Figure 4.

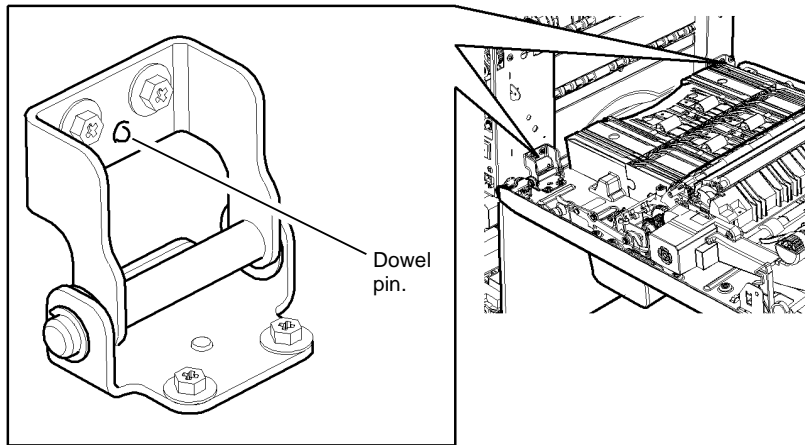


Figure 5 Hinge location

X-1-1374-B

4. The remainder of the replacement is the reverse of the removal procedure.
5. Check the left door assembly for ground continuity and electrical resistance, perform the 301A Ground Distribution RAP - Duplex Transport Ground.
6. Perform the dC604 Registration Setup procedure.
7. If a new left door assembly is installed return the old left door assembly with the front and rear damper spring tensioner tools attached.

REP 80.8 TAR/Bypass Tray Motor and Transport Drive Belt Kit

Parts List on [PL 80.25](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the bypass tray drive belt, [REP 80.6](#).
2. Remove the TAR/Bypass tray motor, [Figure 1](#).

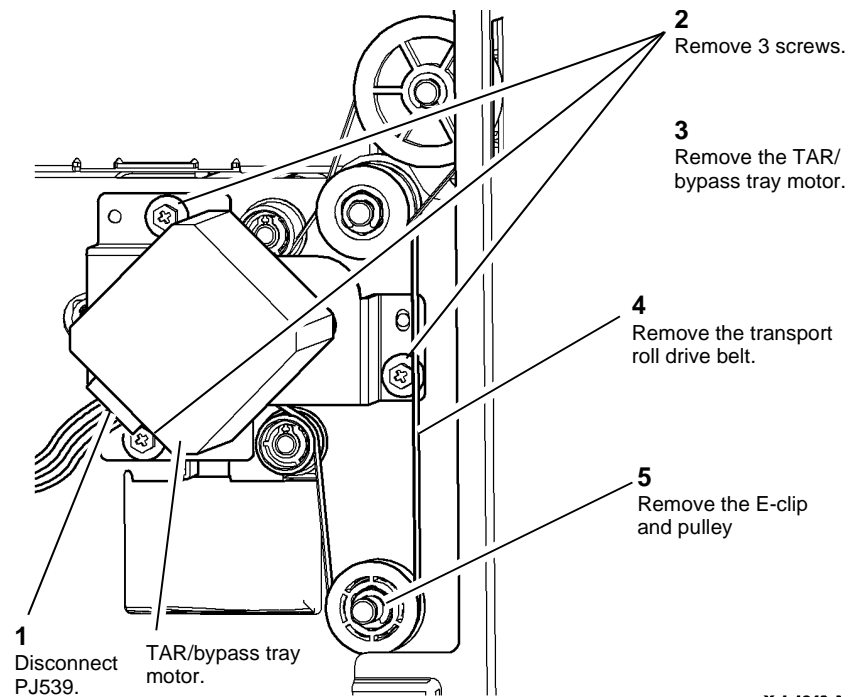


Figure 1 TAR/Bypass tray motor

X-1-1049-A

Replacement

1. The replacement is the reverse of the removal procedure.
2. Perform the [dC604](#) Registration Setup procedure.

REP 80.9 Duplex Sensor and Duplex Outer Guide Assembly

Parts List on [PL 80.10](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the left door, [PL 80.10 Item 1](#).
2. Remove the print cartridge, [PL 90.17 Item 9](#), then place in a black bag.
3. Remove the left door fan cover, [PL 80.10 Item 4](#).
4. Remove the duplex transport assembly, [REP 80.5](#).
5. Prepare to remove the duplex outer guide assembly, [Figure 1](#).

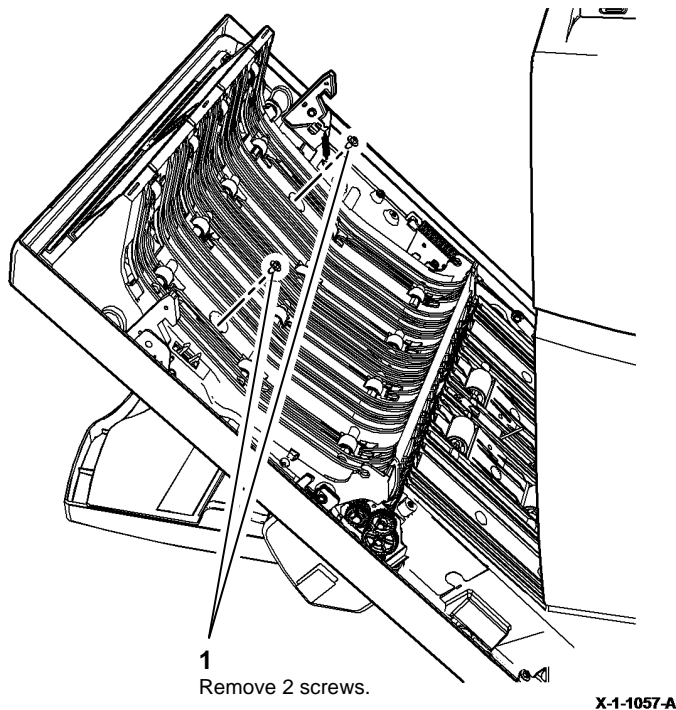


Figure 1 Preparation

6. Remove the duplex outer guide assembly, [Figure 2](#).

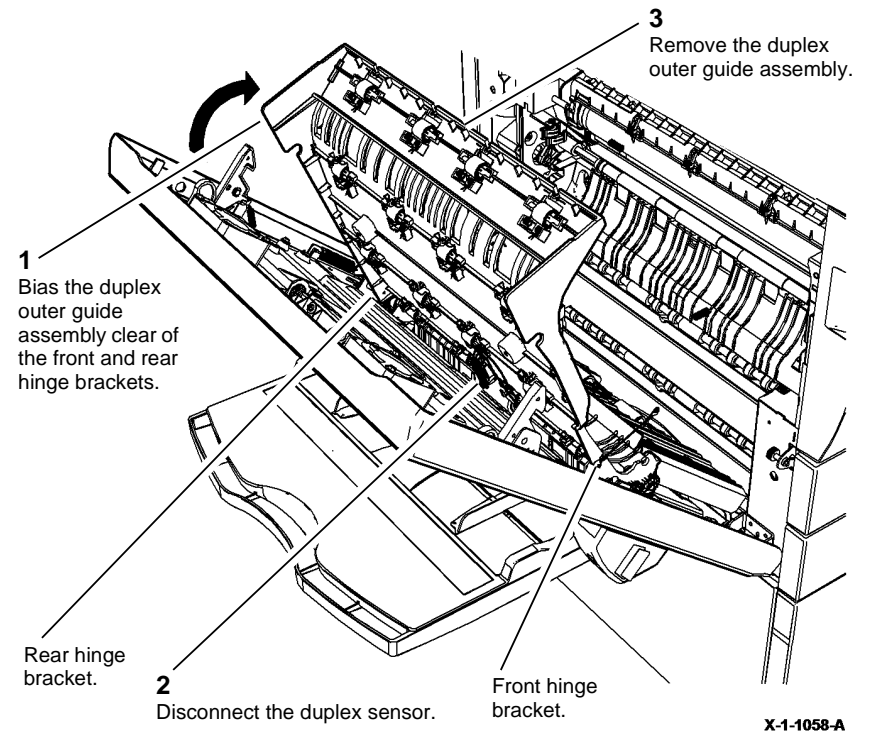


Figure 2 Removal

7. Remove the duplex sensor from the duplex outer guide assembly.

Replacement

Replacement is the reverse of the removal procedure.

REP 80.10 Tray 1 and Tray 2 Transport Rolls and Bearings

Parts List on [PL 80.25](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

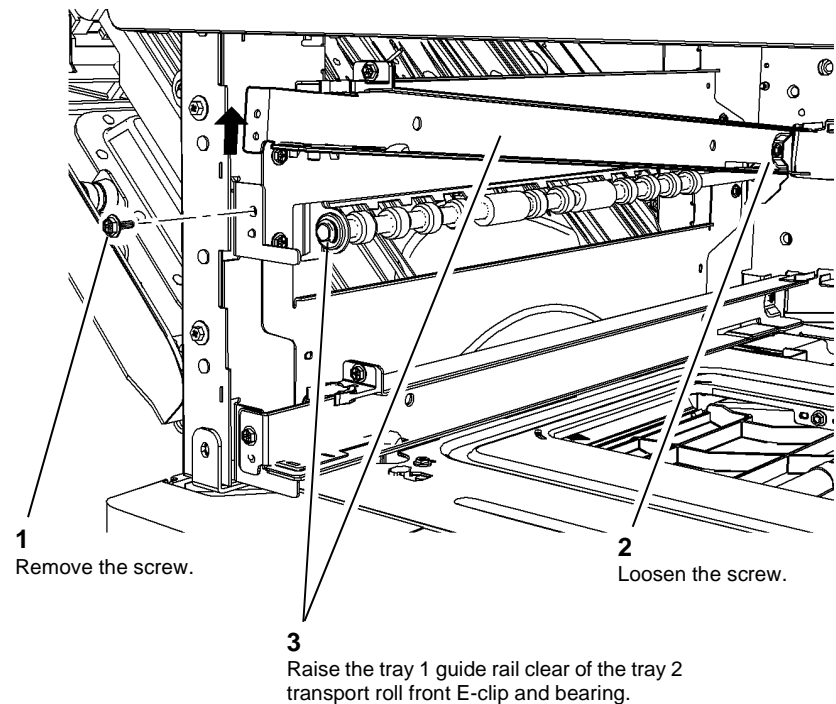
Take care during this procedure. Sharp edges may be present that can cause injury.

NOTE: The removal procedure is the same for the tray 1 and tray 2 transport rolls.

1. Open the left door, [PL 80.10 Item 1](#).
2. Remove the print cartridge, [PL 90.17 Item 9](#), then place in a black bag.
3. Remove tray 1 and tray 2, [PL 70.10](#).
4. Remove tray 1 and 2 paper feed assembly, [REP 80.1](#).
5. Remove the transport roll drive belt, [REP 80.8](#).

NOTE: The drive pulley, [PL 80.25 Item 3](#) and pulley, [PL 80.25 Item 4](#) both have a built-in one-way clutch. The transport roll rotates when the pulleys are turned in a counter-clockwise direction. Before removal of the pulleys, mark the pulleys to indicate their correctly installed position.

6. Raise the tray 1 guide rail to increase access to the tray 2 transport roll front E-clip and bearing, [Figure 1](#).



3. Raise the tray 1 guide rail clear of the tray 2 transport roll front E-clip and bearing.

X-1-1331-A

Figure 1 Front E-clip access

7. Remove the transport roll and transport roll bearings, [Figure 2](#).

6

Remove the front bearing. Then withdraw the shaft towards the front of the machine.

5

Move the transport roll towards the rear of the machine to release it from the front bearing.

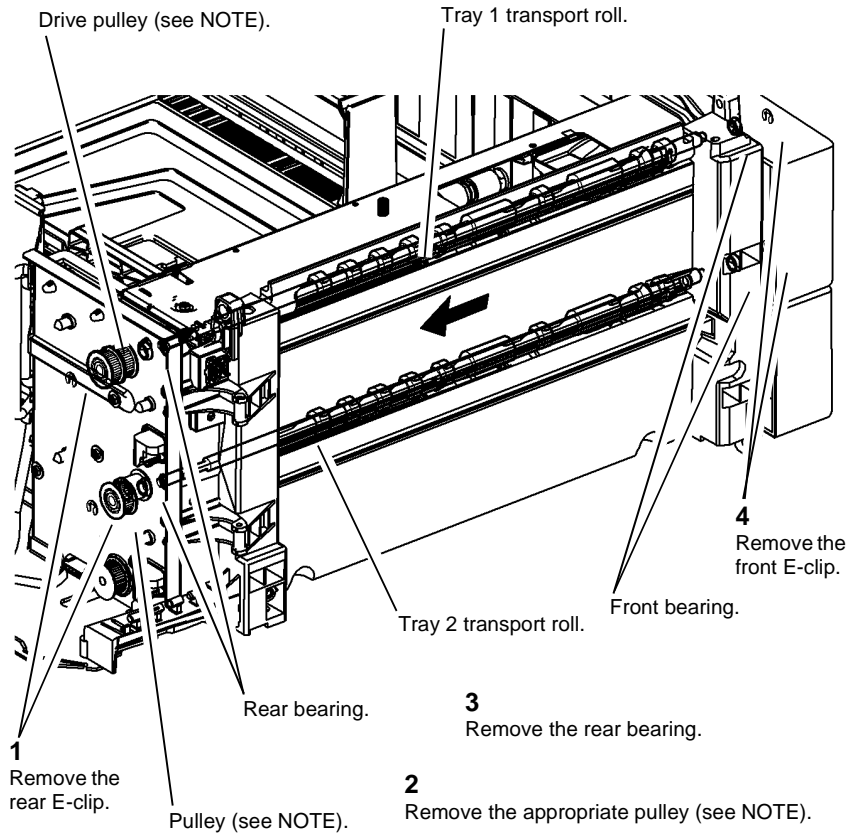


Figure 2 Transport roll removal

X-1-0663-A

Replacement

1. Replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting screws.
2. Ensure that the transport roll bearings are located correctly.
3. Perform the [dC604](#) Registration Setup procedure.
4. Check the tray 1 and tray 2 transport rolls for ground continuity and electrical resistance, perform the [301A](#) Ground Distribution RAP - [Paper Transport Rolls Ground](#).

REP 80.11 Left Door Latch Assembly

Parts List on [PL 80.11](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: The the following procedure illustrates the removal of the rear latch assembly. The removal procedure for the front latch assembly is the same.

1. Open the left door, [PL 80.10](#) Item 1.
2. Remove the print cartridge, [PL 90.17](#) Item 9, then place in a black bag.
3. Raise the duplex transport assembly, [PL 80.22](#) Item 1.
4. Remove the rear latch assembly, [Figure 1](#).

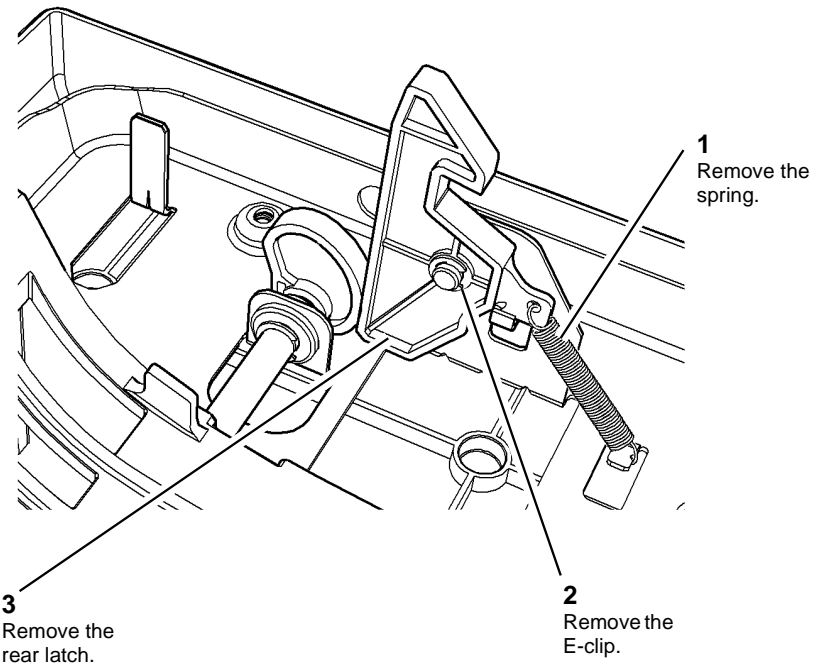


Figure 1 Removal

5. Repeat the steps shown in [Figure 1](#) in order to remove the front latch assembly.

Replacement

1. Replacement is the reverse of the removal procedure.

REP 80.12 Duplex Motor Assembly

Parts List on [PL 80.22](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the left door, [PL 80.10 Item 1](#).
2. Remove the print cartridge, [PL 90.17 Item 9](#), then place in a black bag.
3. Remove 2 screws, then remove the duplex drives cover, [PL 80.22 Item 21](#).
4. Prepare to remove the duplex motor assembly, [Figure 1](#).

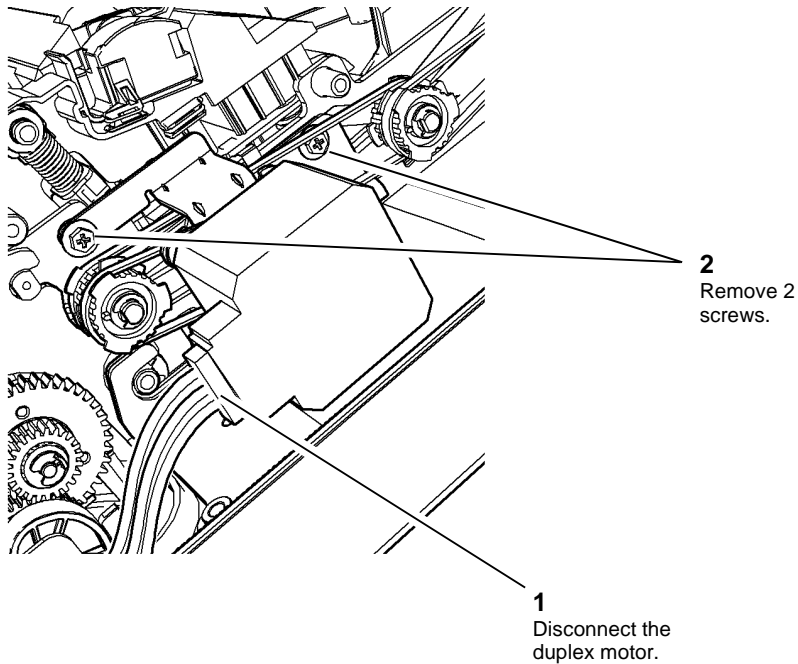


Figure 1 Preparation

X-1-1332-A

5. Remove the duplex motor assembly, [Figure 2](#).

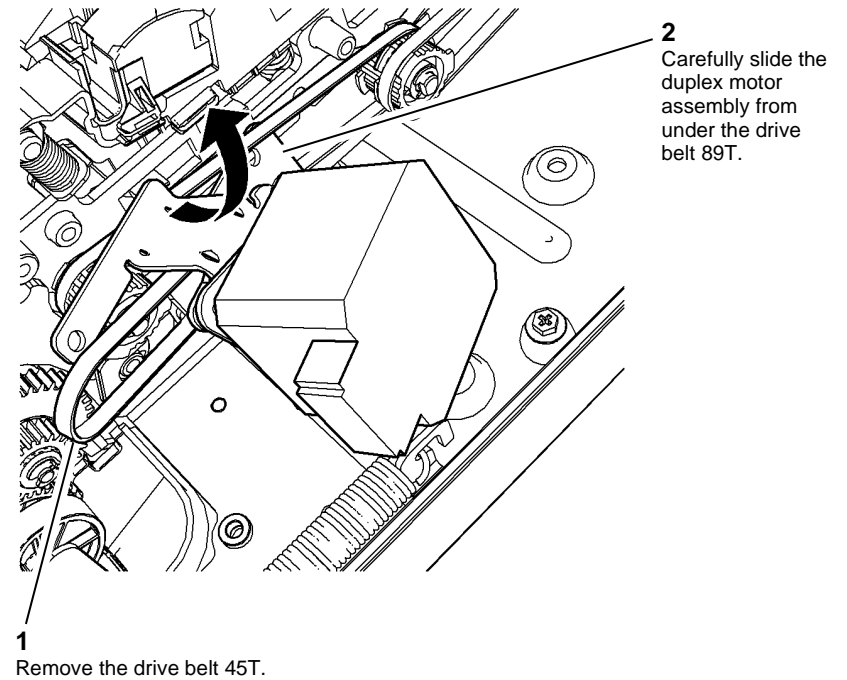


Figure 2 Remove the assembly

X-1-1333-A

Replacement

1. Replacement is the reverse of the removal procedure. Refer to [GP 6](#) before the screws are installed.

REP 80.13 Left Door Cover

Parts List on [PL 80.10](#)

Removal


WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the bypass tray assembly, [REP 70.2](#).
2. Remove the left door cover, [Figure 1](#).

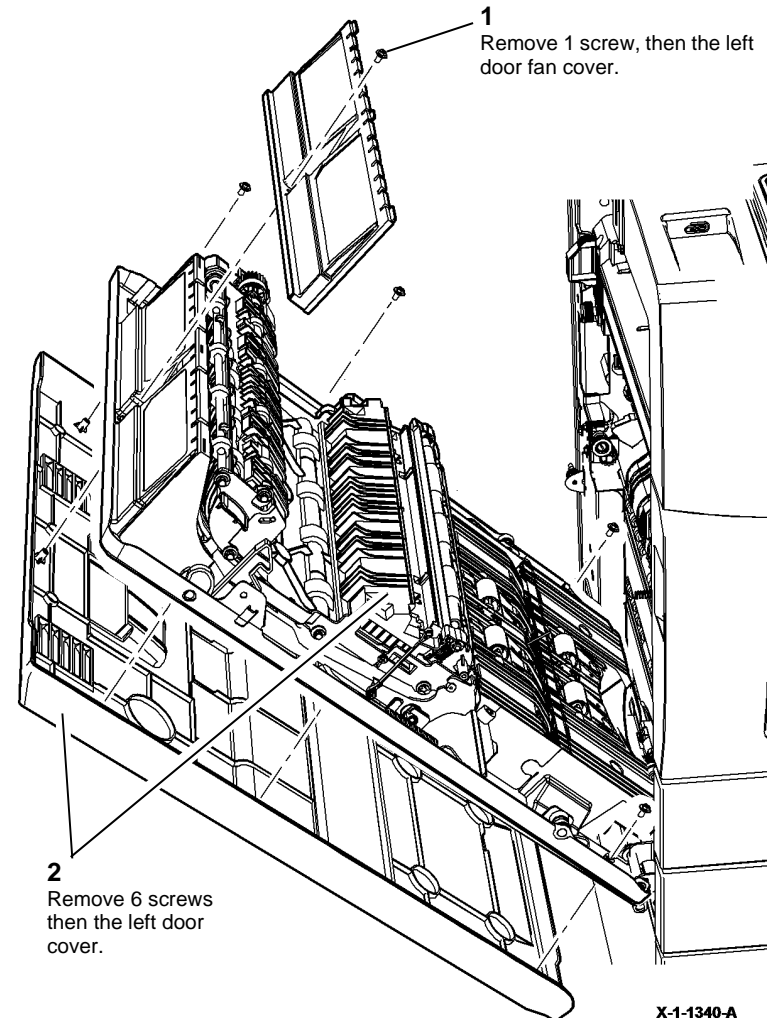


Figure 1 Cover removal

Replacement

1. Reposition the left door cover onto the door frame.
2. Ensure the latch handle, [PL 80.11 Item 12](#) and IOT PWB to Bypass tray intermediate harness [PL 70.35 Item 30](#) are not trapped under the left door cover.

NOTE: Refer to [GP 6](#) before the screws are installed.

3. With the left door and cover in the closed position, temporarily hold the left door cover in place with the 2 external bypass tray assembly fixing screws.
4. Open the left door.
5. Install the six screws, refer to [Figure 1](#).
6. Install the left door fan cover, refer to [Figure 1](#).
7. Remove the 2 external temporary fixing screws, then install the bypass tray assembly, [REP 70.2](#).

REP 80.14 Tray 4 Feed Sensor

Parts List on [PL 80.33](#)

Removal

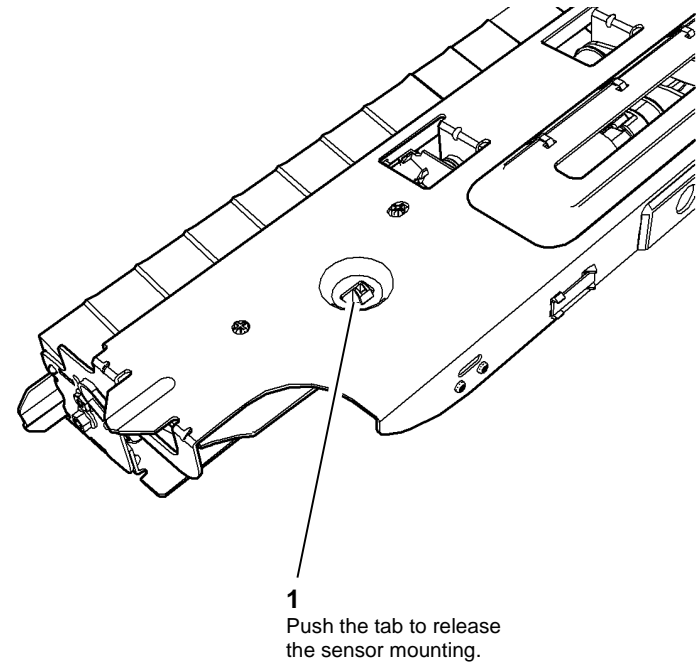


Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the tray 4 paper feed assembly, [REP 80.21](#).
2. Release the sensor mounting, [Figure 1](#).



X-1-0739-A

Figure 1 Sensor mounting release

3. Remove the tray 4 feed sensor, [Figure 2](#).

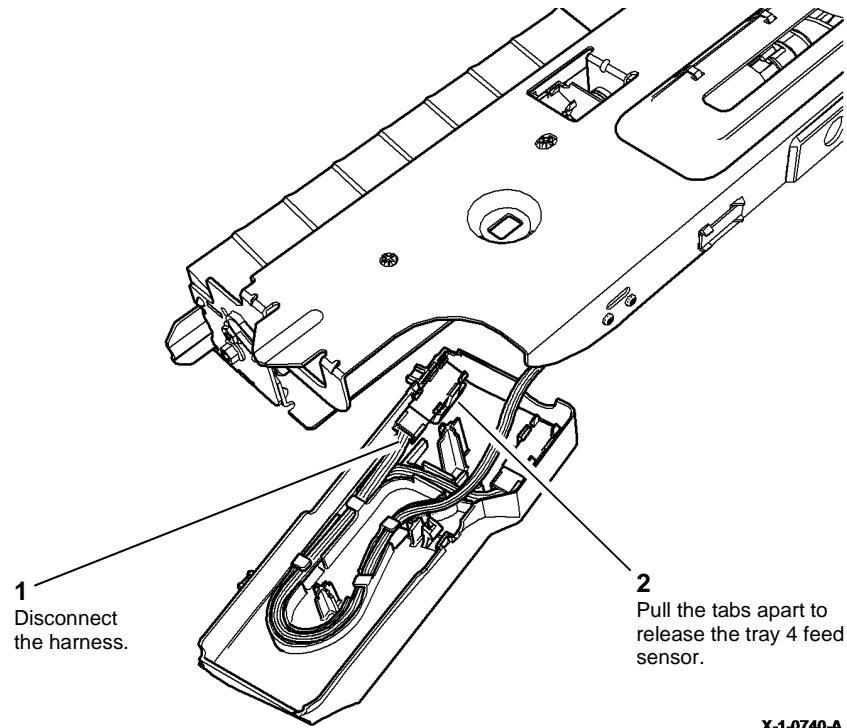


Figure 2 Sensor removal

X-1-0740-A

Replacement

Replacement is the reverse of the removal procedure.

REP 80.15 Bypass Tray Feed Roll Assembly

Parts List on [PL 70.35](#)

Removal

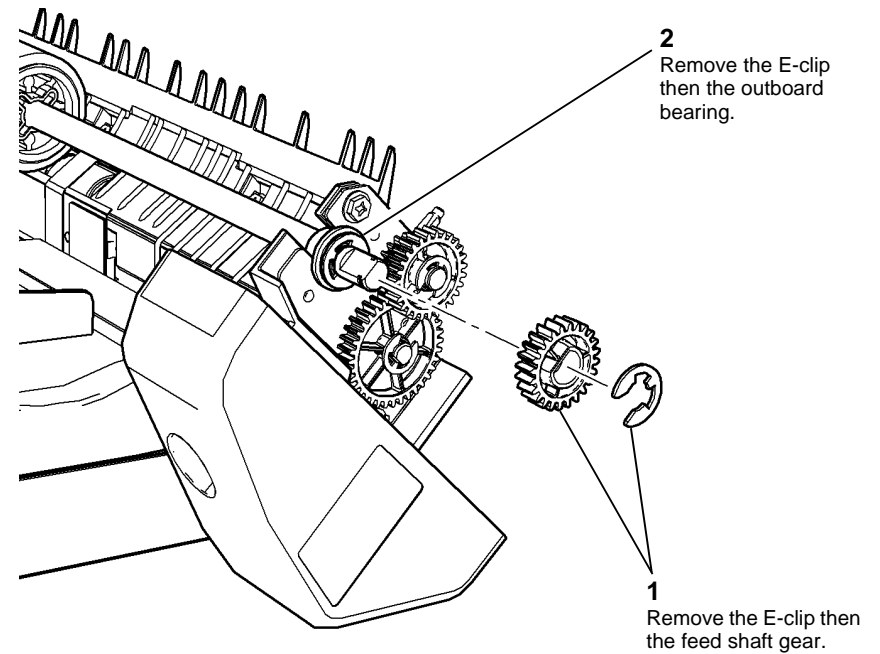


Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the bypass tray assembly, [REP 70.2](#).
2. Prepare to remove the feed roll assembly, [Figure 1](#).



X-1-1260-A

Figure 1 Feed roll front fixings

3. Remove the feed clutch and feed roll assembly, [Figure 2](#).

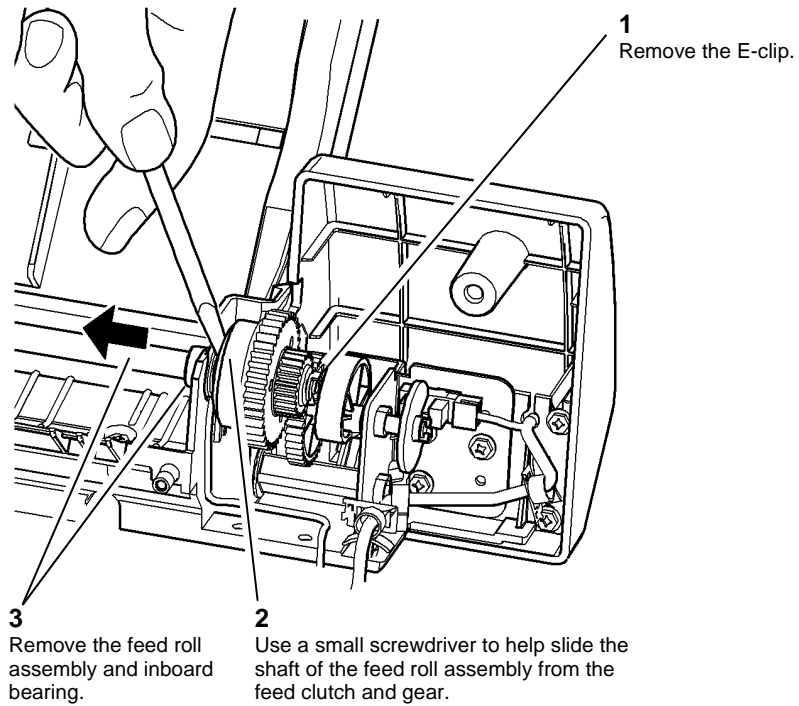
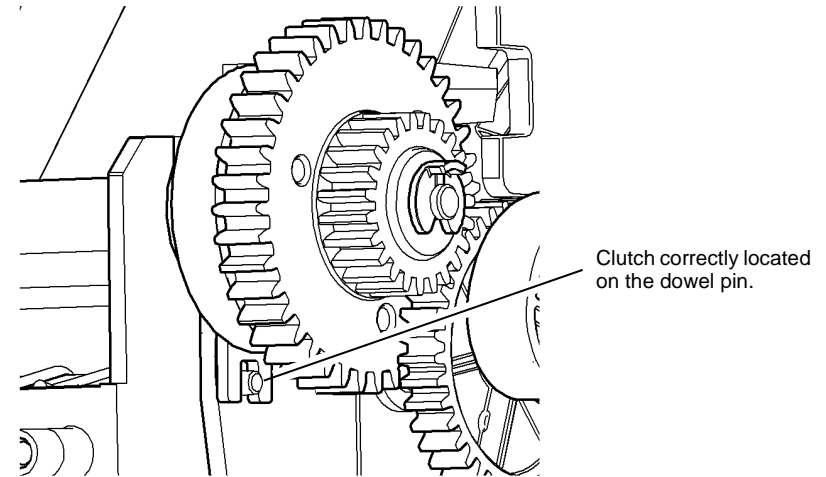


Figure 2 Feed roll and clutch assemblies

X-1-1351-A

Replacement

1. Replacement is the reverse of the removal procedure.
2. Ensure the clutch locates with the dowel pin on the feeder frame, [Figure 3](#).



X-1-1352-A

Figure 3 Dowel pin

3. If a new feed roll is installed, reset the tray 5 feed roll HFSI count. Refer to [dC135 CRU/HFSI Status](#).
4. Check the feed roll for ground continuity and electrical resistance, perform the [301A Ground Distribution RAP - Bypass Tray Ground](#).

REP 80.16 Bypass Tray Retard Roll Assembly

Parts List on [PL 70.35](#)

Removal


WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

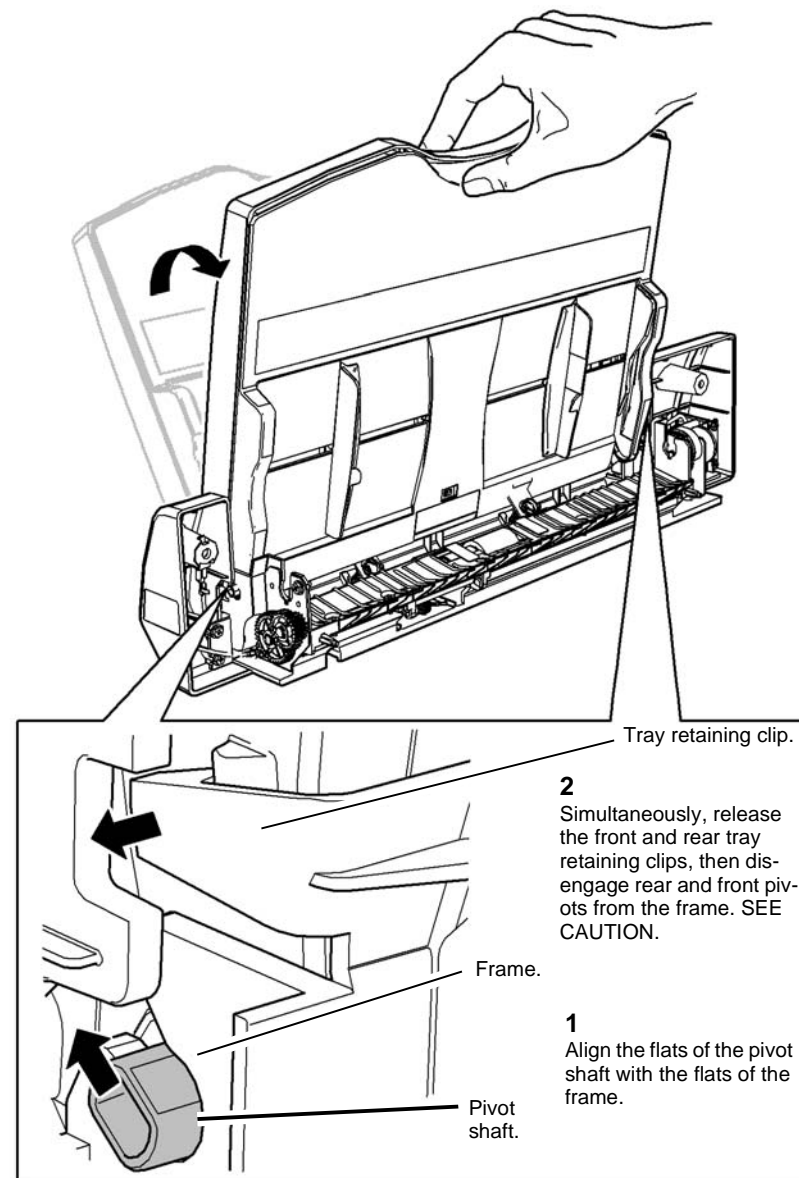
Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the bypass tray feed roll assembly, [REP 80.15](#).


CAUTION

Take care not to damage the wiring harness between the tray assembly and the feeder frame.

2. Release the tray assembly, [Figure 1](#).



X-1-1262-B

Figure 1 Bypass tray release

3. Remove the front gears, [Figure 2](#).

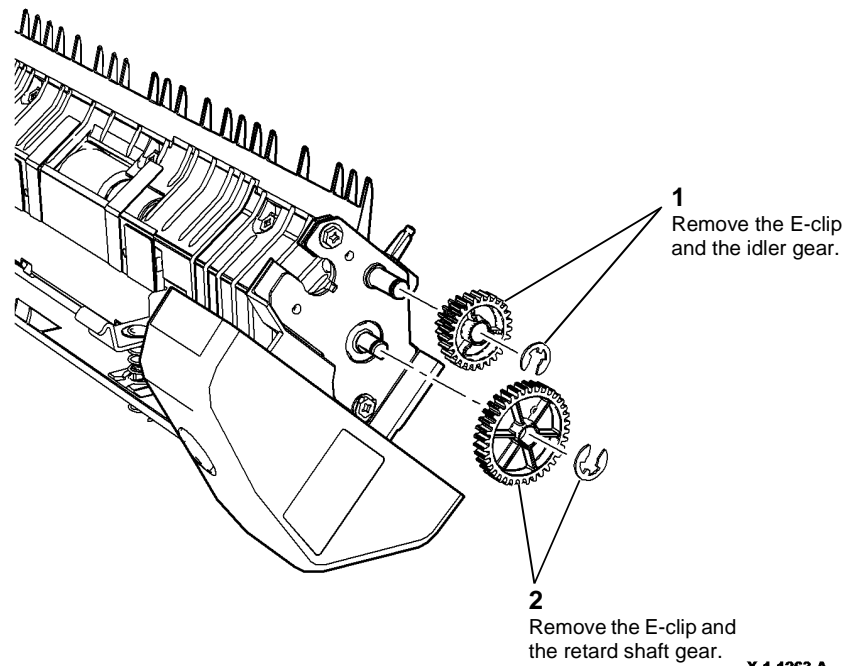


Figure 2 Gears removal

4. Release the baffle, [Figure 3](#).

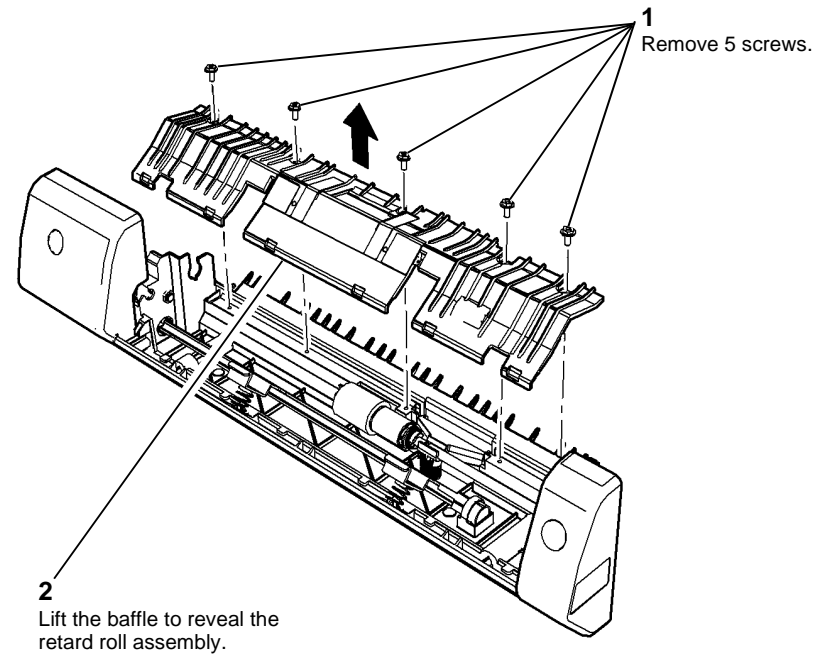


Figure 3 Baffle release

5. Remove the retard roll assembly, [Figure 4](#).

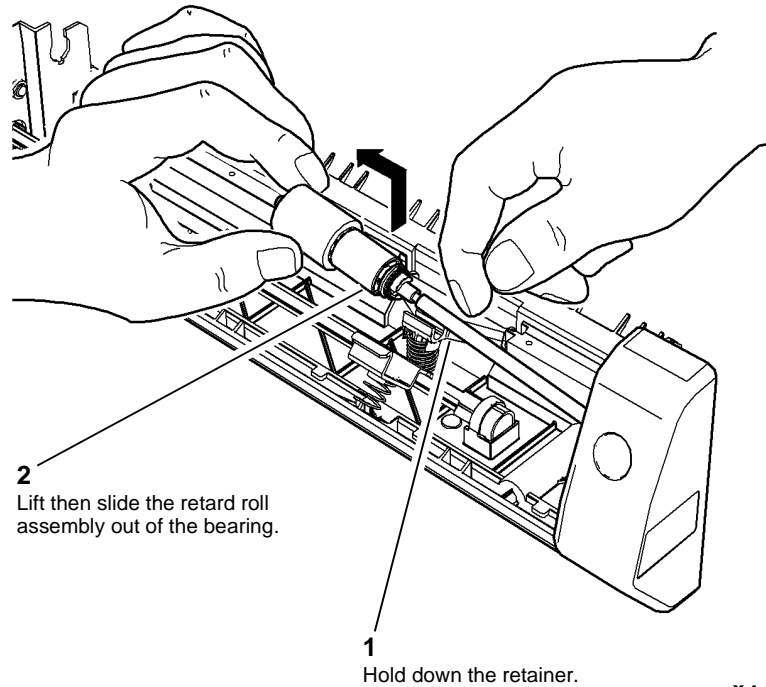


Figure 4 Retard roll removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. If a new retard roll assembly is installed, reset the tray 5 feed roll HFSI count. Refer to [dC135 CRU/HFSI Status](#).

REP 80.17 Tray 3 and Tray 4 Feed Assembly Feed Rolls

Parts List on [PL 80.32](#), [PL 80.33](#)

Removal


WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

NOTE: This procedure illustrates a tray 4 feed assembly. The procedure for the tray 3 feed assembly is identical.

NOTE: Removal and replacement videos of this procedure are available on the EDOC. The videos are accessible from the Library menu on the Service Interface.

1. Remove the relevant paper feed assembly:
 - Tray 3 paper feed assembly, [REP 80.20](#).
 - Tray 4 paper feed assembly, [REP 80.21](#).
2. Turn the paper feed assembly upside down and place on a flat work surface.

3. Remove the feed motor with the bracket, [Figure 1](#).

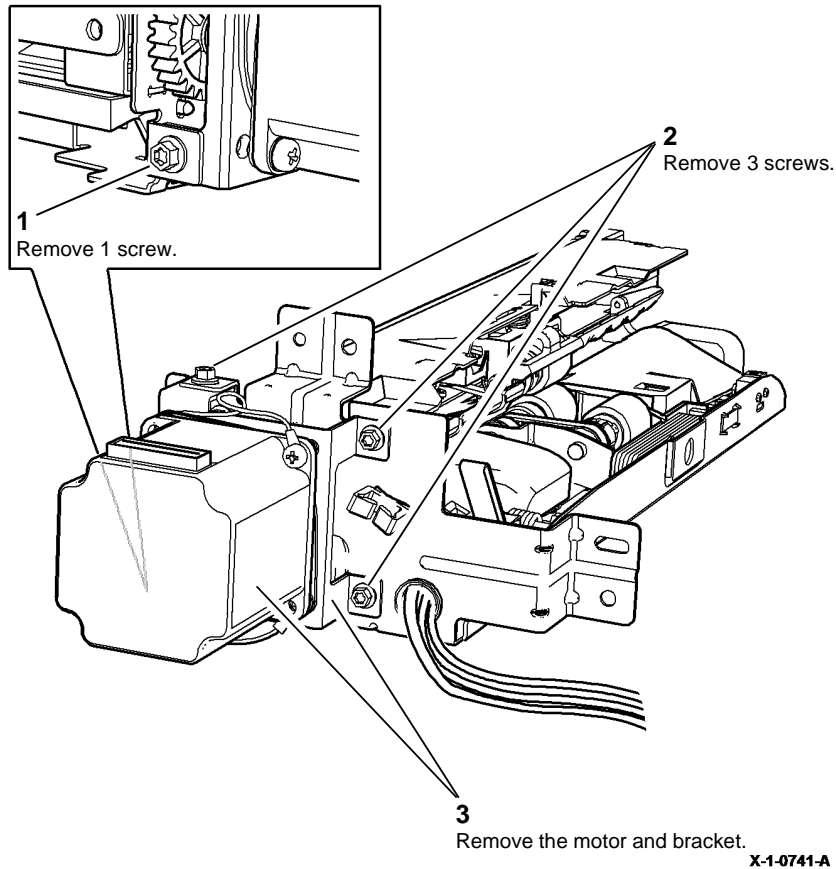


Figure 1 Motor and bracket removal

4. Release the rear fixings, [Figure 2](#).

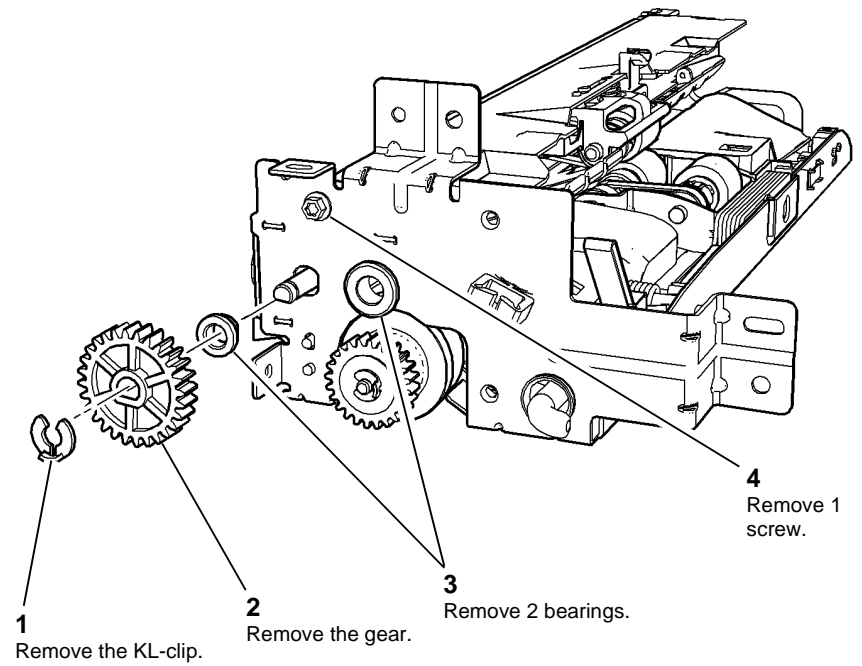
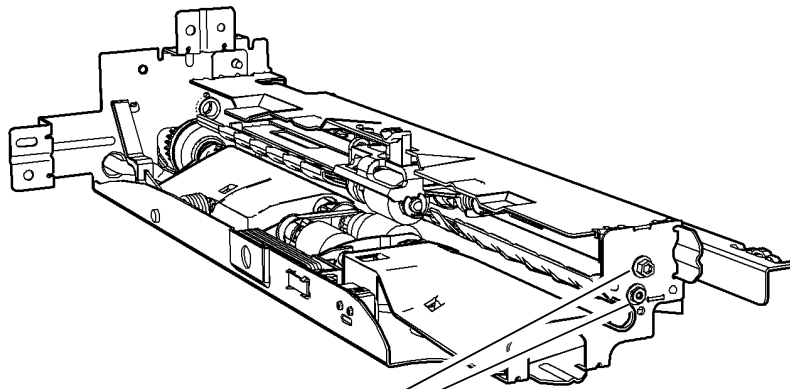


Figure 2 Rear fixings

5. Release the front fixings, [Figure 3](#).

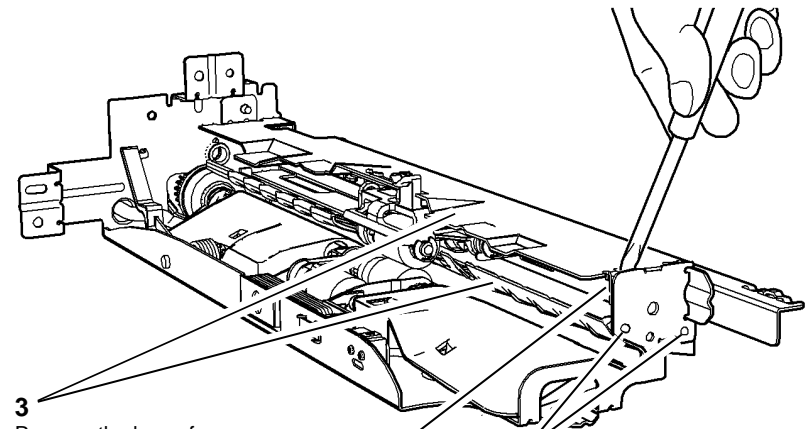


1
Remove 2 screws.

Figure 3 Front fixings

X-1-0743-A

6. Separate the upper and lower frames, [Figure 4](#).



3
Remove the lower frame
and paper guide.

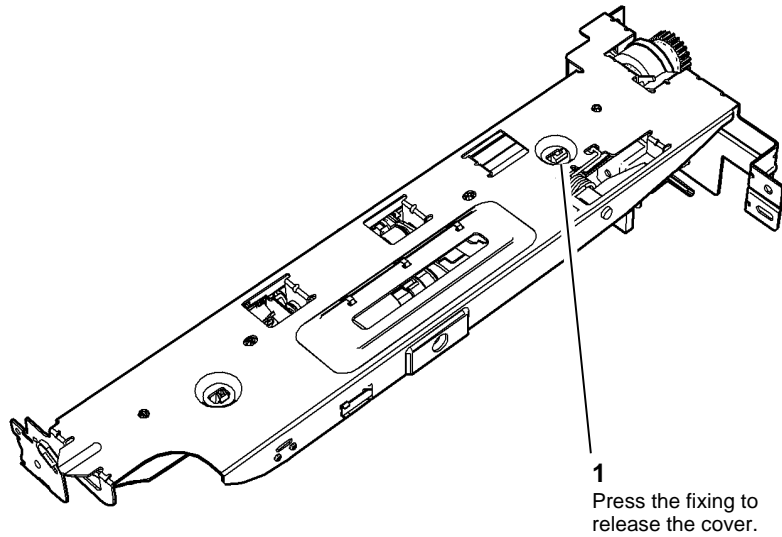
2
Ensure the plastic pins of the paper
guide are disengaged from the
holes in the lower frame.

1
Use a small flat bladed screwdriver
to separate the upper and lower frames.

Figure 4 Frame separation

X-1-0744-A

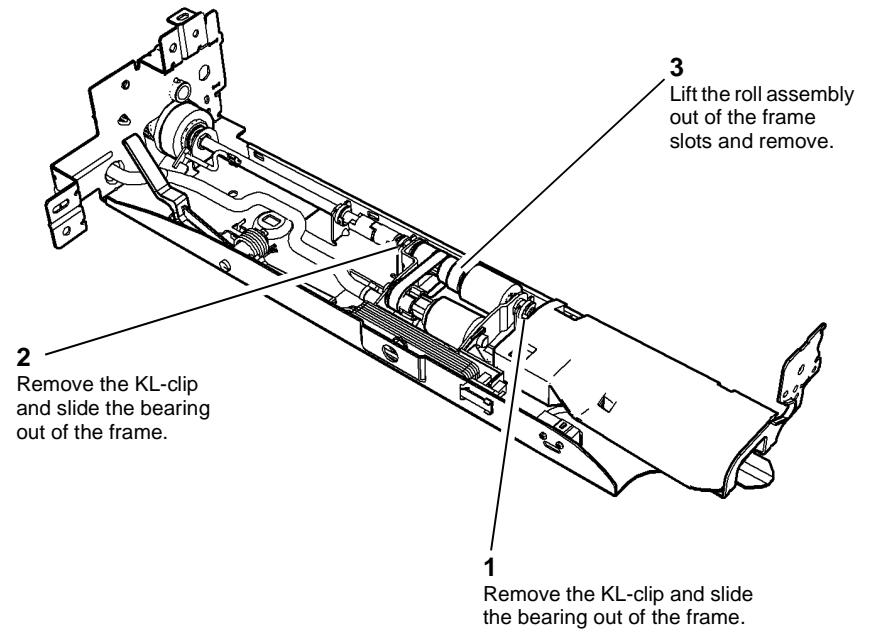
7. Remove the plastic cover, [Figure 5](#).



X-1-0745-A

Figure 5 Cover removal

8. Remove the nudger roll and feed roll assembly, [Figure 6](#).



X-1-0746-A

Figure 6 Nudger and feed roll removal

9. Remove the retard roller, [Figure 7](#).

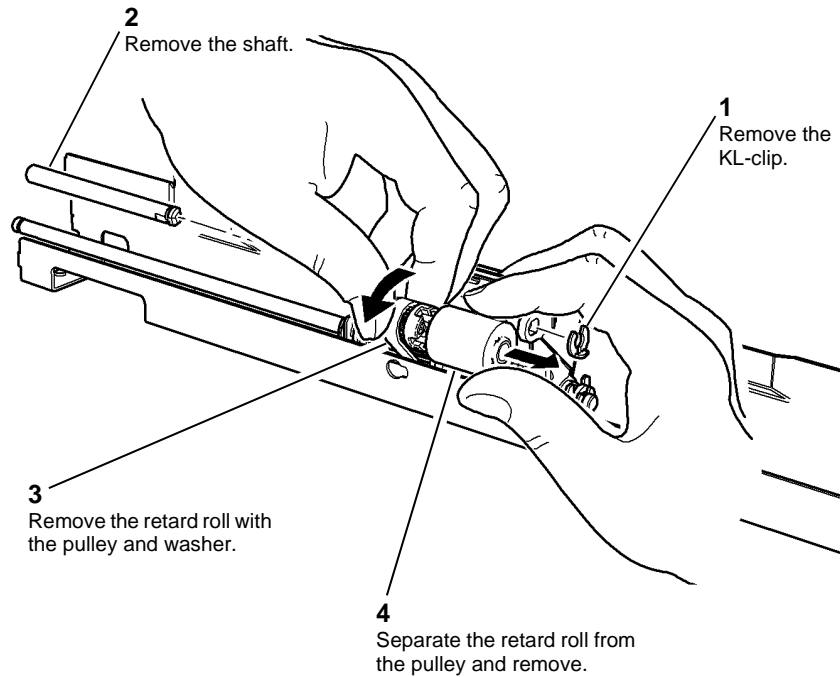
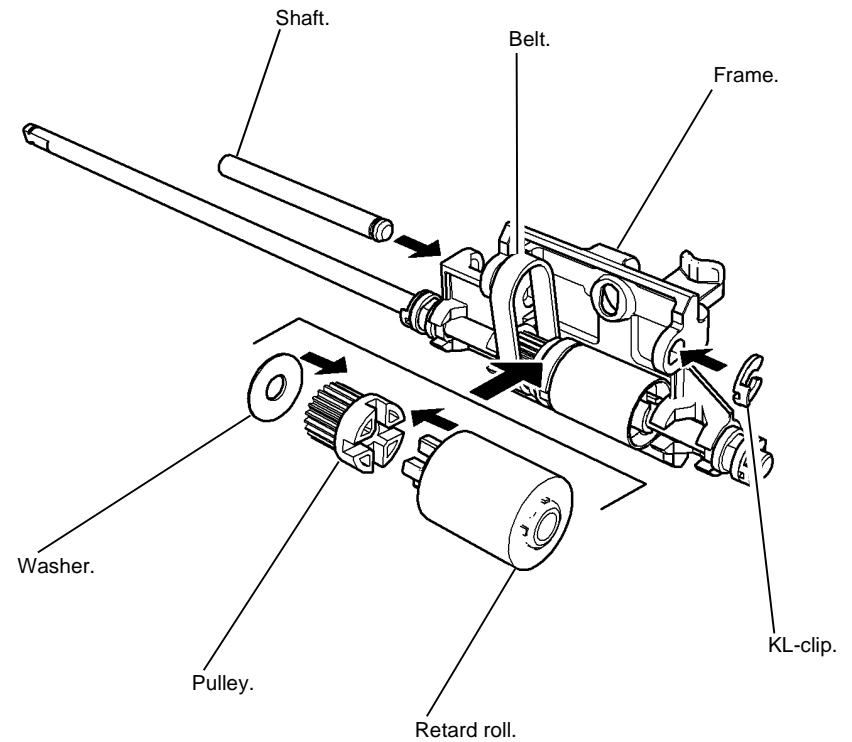


Figure 7 Retard roll removal

X-1-0747-A

Replacement

1. Install the retard roll by reversing the steps in [Figure 7](#).
2. If necessary refer to [Figure 8](#) for the correct assembly of the retard roll components.



X-1-0748-A

Figure 8 Exploded view of the retard assembly

3. Check that the number of weights on the new nudger roll and feed roll assembly is the same as on the old assembly. If necessary, correct the number of weights. Refer to [ADJ 80.3](#).

4. Install the nudger roll and feed roll assembly, [Figure 9](#).

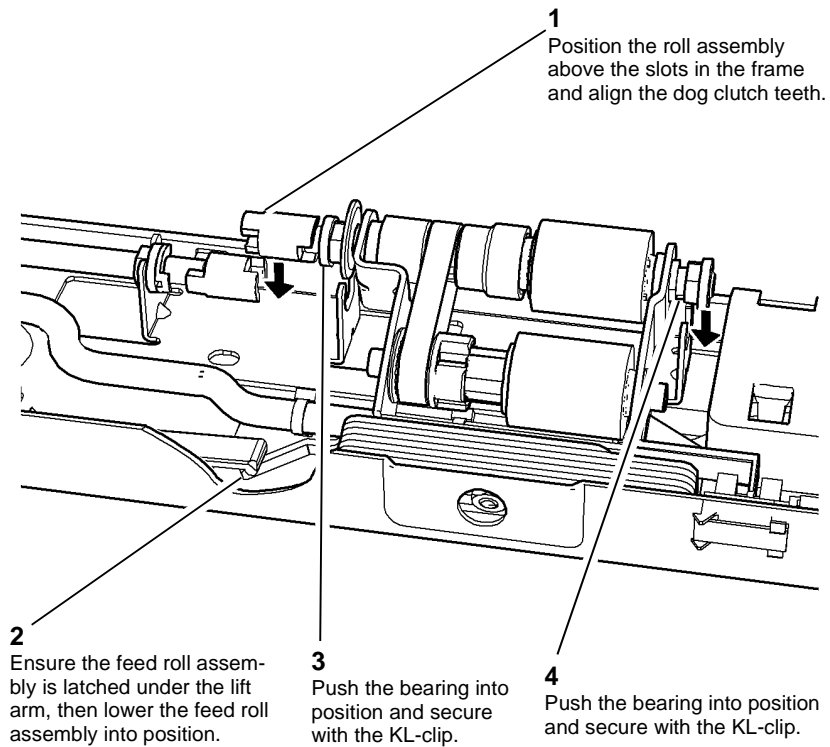
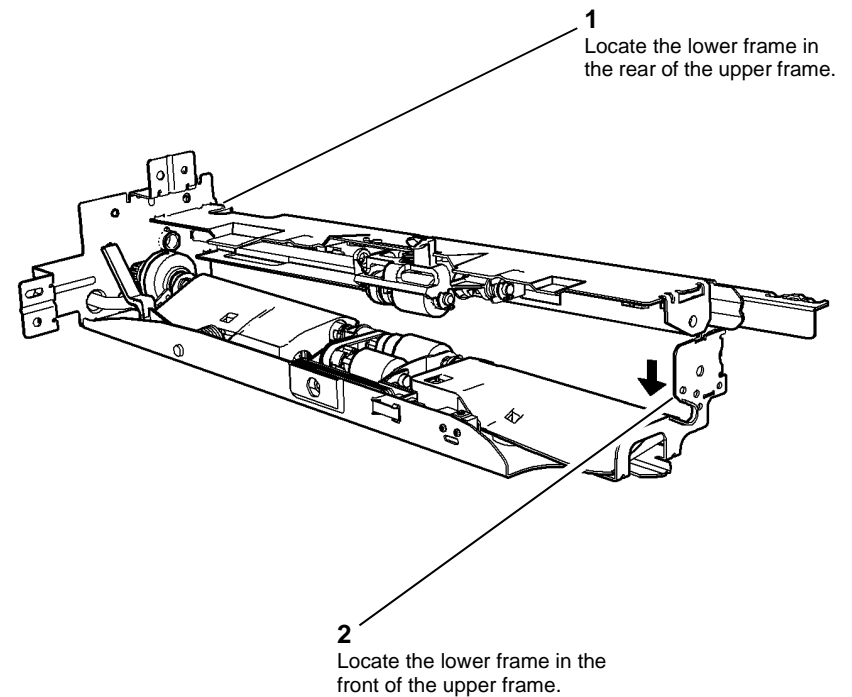


Figure 9 Nudger and feed roll install

X-1-0749-A

5. Fasten the plastic cover into position ensuring that the wiring is not trapped, refer to [Figure 5](#).

6. Assemble the upper and lower frames, [Figure 10](#).



X-1-0750-A

Figure 10 Frame assembly

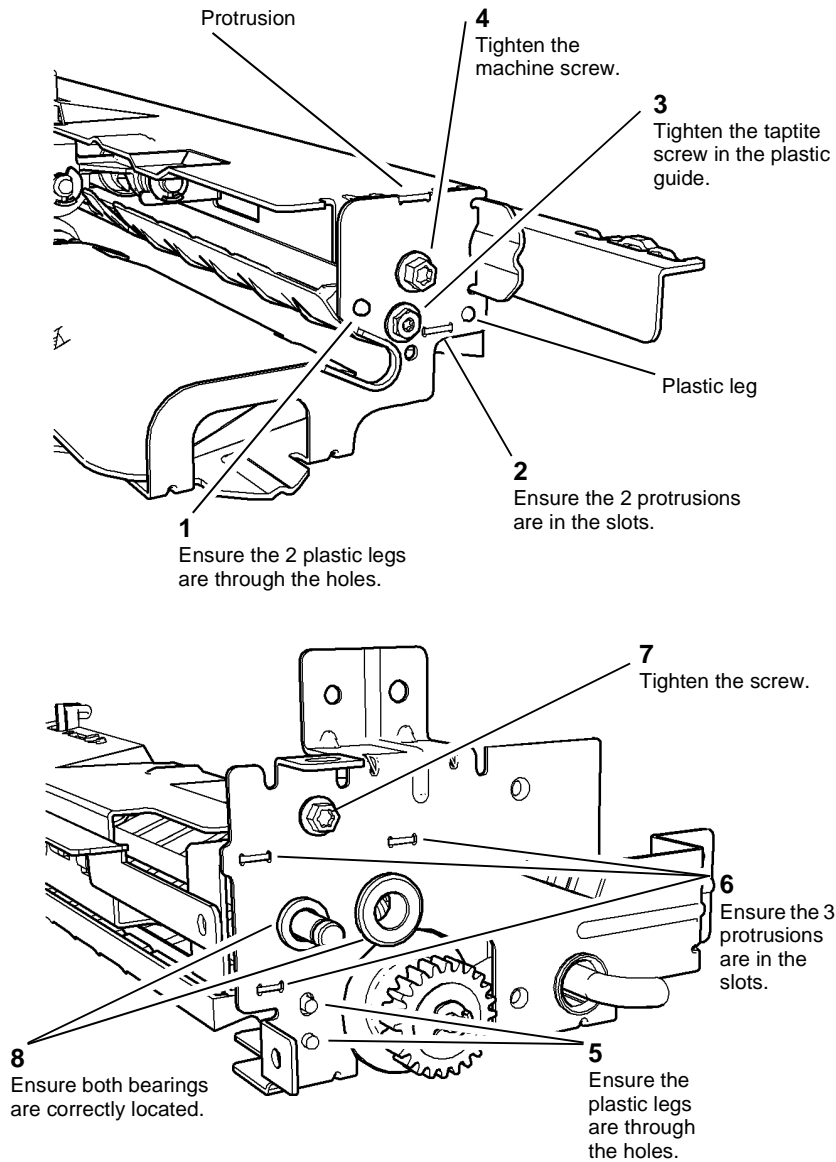
7. Assemble the paper guide to the lower frame.
Refer to:
- [REP 80.28](#) Tray 3 paper guide.
 - or
 - [REP 80.29](#) Tray 4 paper guide.

8. Align and secure the upper and lower frames, [Figure 11](#).

9. Install the remainder of the removed components, [Figure 2](#) and [Figure 1](#).

10. Install the feeder assembly into the machine. Check the feeding performance of the HCF.

11. Reset the HFSI count. Refer to [dC135 CRU/HFSI Status](#)



X-1-0751-A

Figure 11 Final assembly

REP 80.18 Tray 1 and Tray 2 Feed Rolls

Parts List on [PL 80.26](#)

Removal


WARNING

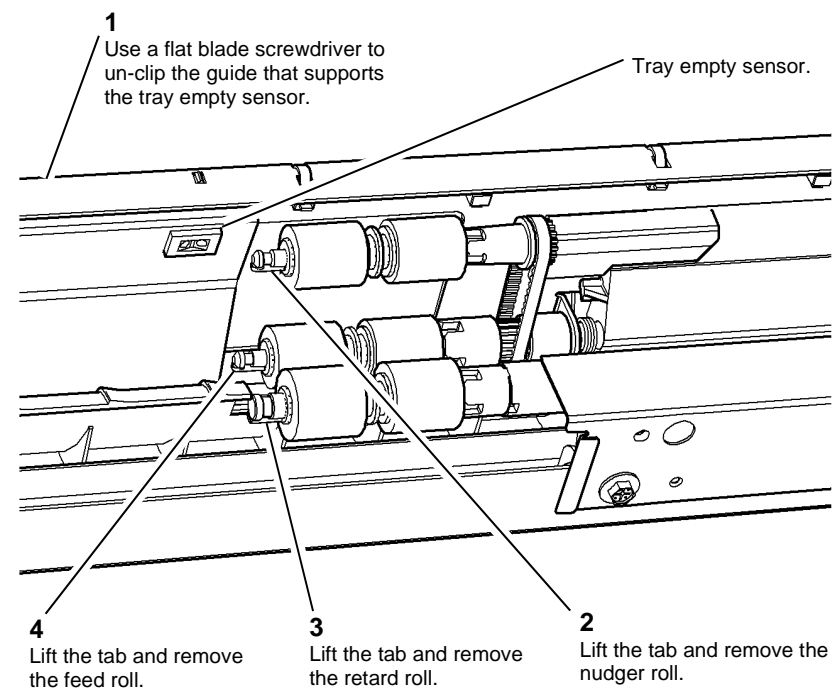
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove tray 1 or tray 2 as required, [REP 70.1](#).
2. Remove tray 1 or tray 2 paper feed assembly as required, [REP 80.1](#).
3. Remove tray 1 or tray 2 feed rolls, [Figure 1](#).

NOTE: The removal procedure is the same for the tray 1 and tray 2 feed, nudger and retard rolls. The feed and nudger rolls are the same diameter, but the retard roll has a larger diameter.



X-1-0705-A

Figure 1 Feed rolls removal

Replacement

1. The replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting the screws.
2. Ensure that the tabs on the feed, nudger and retard rolls are located in their drive shafts.
3. Check that the tray empty sensor is located in the guide, and that the guide is located correctly and secure on the feeder frame.
4. Check the registration. Refer to [dC604](#) Registration Setup Procedure.
5. If a new feed, nudger and retard roll are installed, reset the tray 1 or tray 2 feed roll HFSI count. Refer to [dC135](#) CRU/HFSI Status.

REP 80.19 Tray 1 and Tray 2 Retard Roll Friction Clutch

Parts List on [PL 80.26](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the retard roll, [REP 80.18](#).
2. Remove the clutch coupling, [PL 80.26 Item 13](#).
3. Remove the friction clutch, [PL 80.26 Item 2](#).

Replacement

The replacement is the reverse of the removal procedure.

REP 80.20 Tray 3 Paper Feed Assembly

Parts List on [PL 80.32](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

NOTE: Removal and replacement videos of this procedure are available on the EDOC. The videos are accessible from the Library menu on the Service Interface.

1. Pull out tray 3.
2. Remove the lower rear cover, [PL 70.26 Item 1](#).

3. Remove the tray 3 paper feed assembly, [Figure 1](#).

6

Carefully slide out the tray 3 paper feed assembly, ensuring that harnesses are not damaged.

5

Ensure the harnesses of the tray 3 paper feed assembly are released from their cable ties.

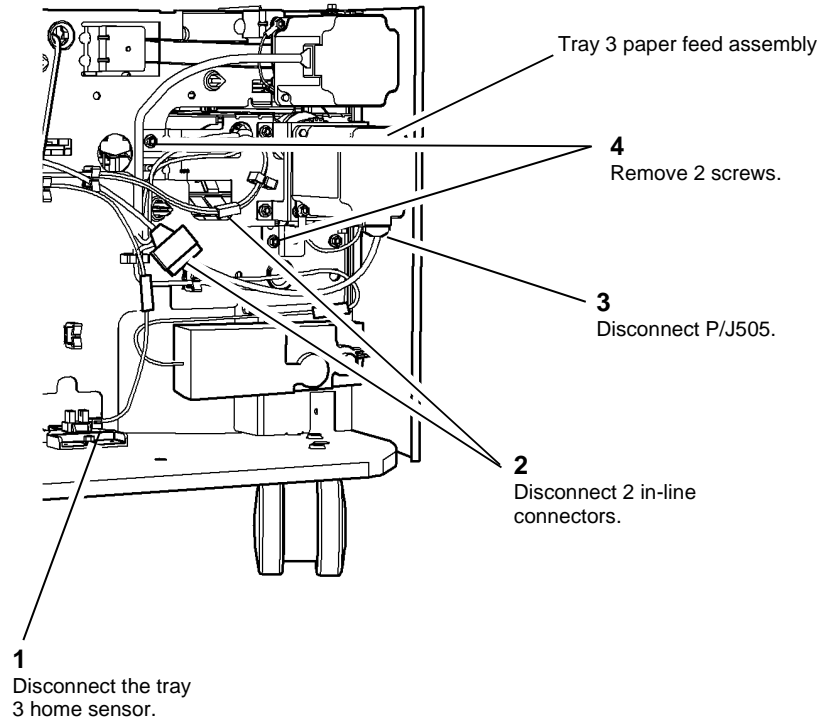


Figure 1 Feed assembly removal

X-1-0716-A

Replacement

NOTE: New paper feeder assemblies come ready configured for use in tray 4. When a new tray 3 paper feeder is required, follow the steps below.

1. If a new tray 3 paper feed assembly is being installed, perform steps 2 to 9. If the old tray 3 paper feed assembly is being re-installed, perform steps 5 to 9.
2. Remove the support bracket, [Figure 2](#).

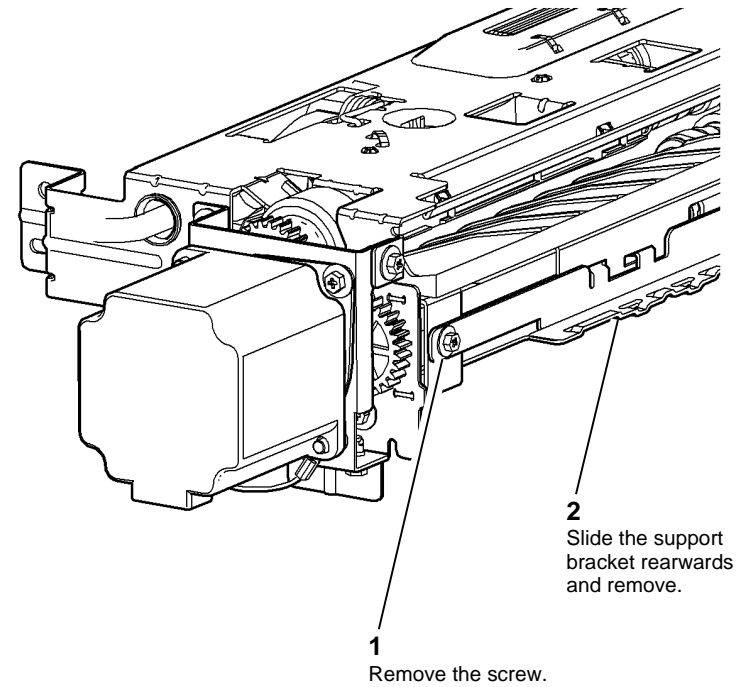


Figure 2 Support bracket removal

X-1-0717-A

3. Remove the tray 4 paper guide, [REP 80.29](#).
4. Install the tray 3 paper guide, [REP 80.28](#).

5. Install the paper feed assembly, [Figure 3](#).

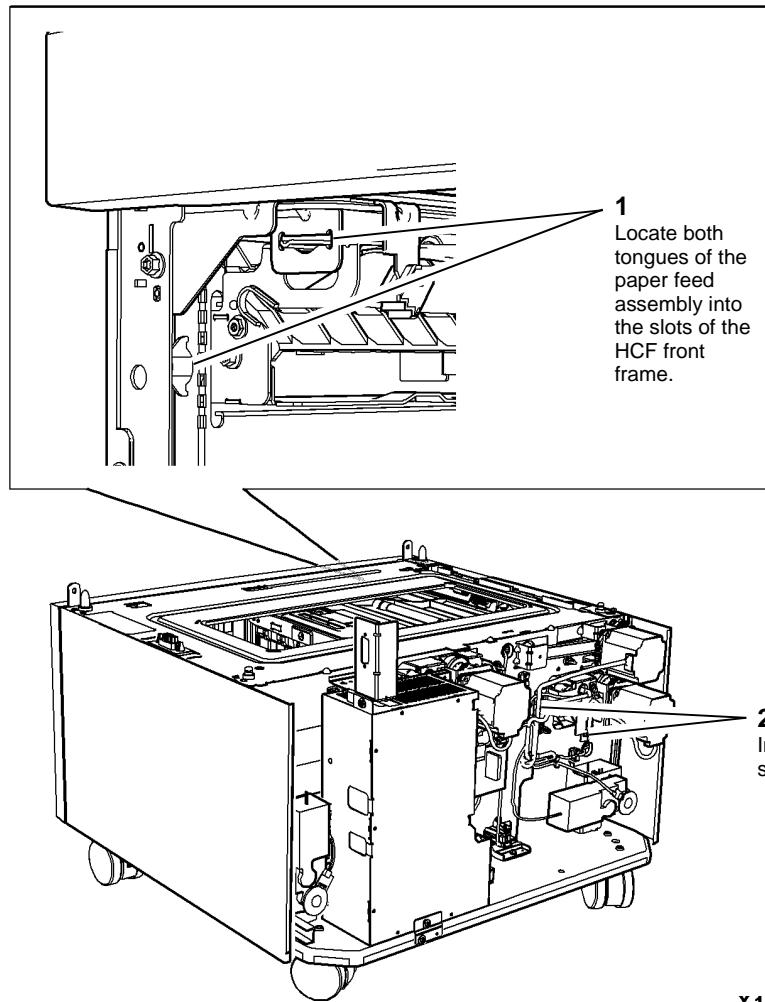


Figure 3 Feed assembly installation

6. Push tray 3 in slowly and check that the tray does not foul the paper feed assembly.
7. Connect the 5 PJs, refer to [Figure 1](#).
8. The remainder of the replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting the screws.
9. If a new paper feed assembly has been installed, reset the tray 3 feed roll HFSI count. Refer to [dC135](#) CRU/HFSI Status.

REP 80.21 Tray 4 Paper Feed Assembly

Parts List on [PL 80.33](#)

Removal

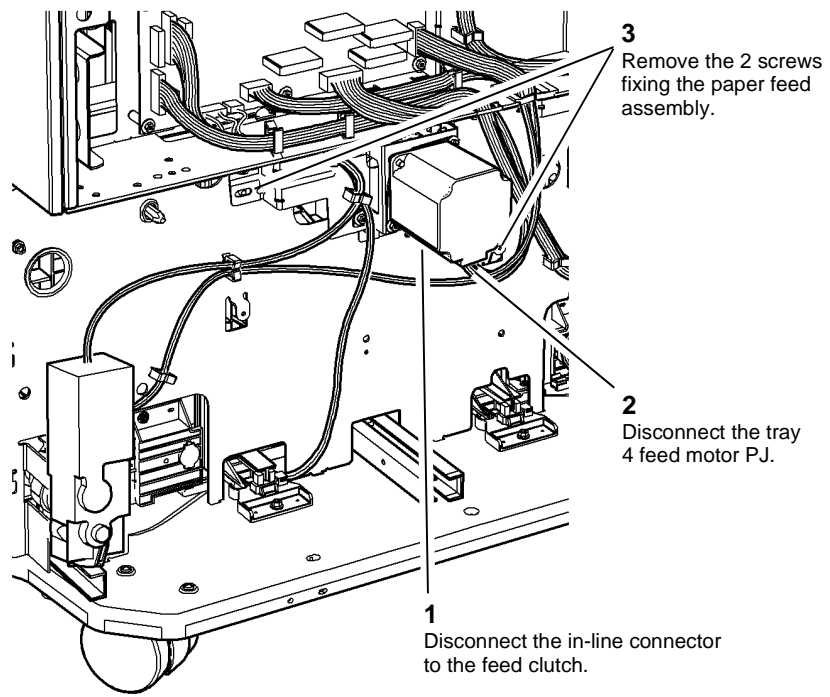


Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the LVPS module, [REP 1.1](#).
2. Pull out tray 4.
3. Remove the tray 4 paper feed assembly, [Figure 1](#).



4
Ensure the harnesses of the tray 4 paper feed assembly are released from their cable ties.

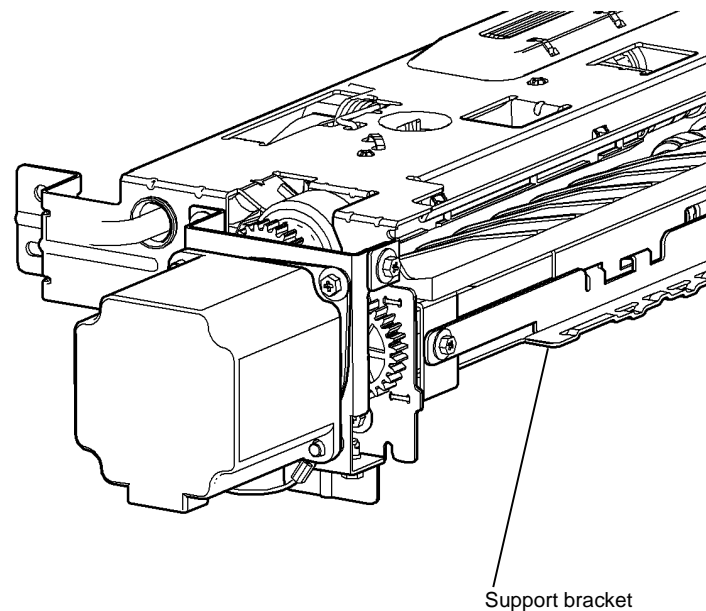
5
Carefully remove the paper feed assembly, from the rear of the machine.

X-1-1445-A

Figure 1 Feed assembly removal

Replacement

1. Ensure the support bracket is present on the tray 4 paper feed assembly, [Figure 2](#).



X-1-0714-A

Figure 2 Support bracket

2. Install the paper feed assembly, [Figure 3](#).

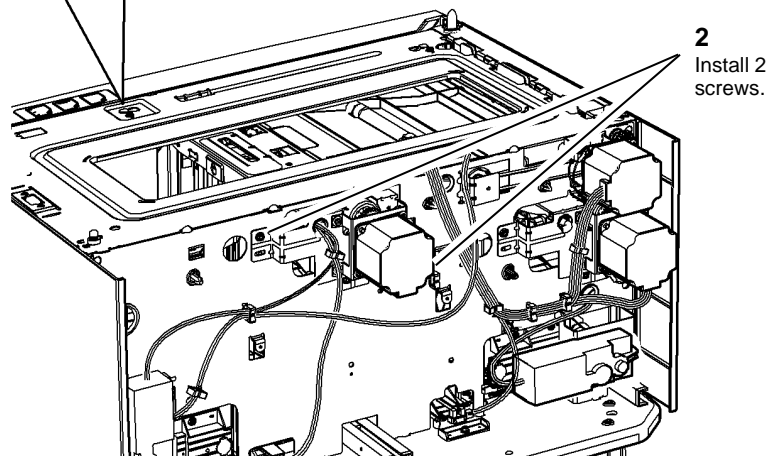
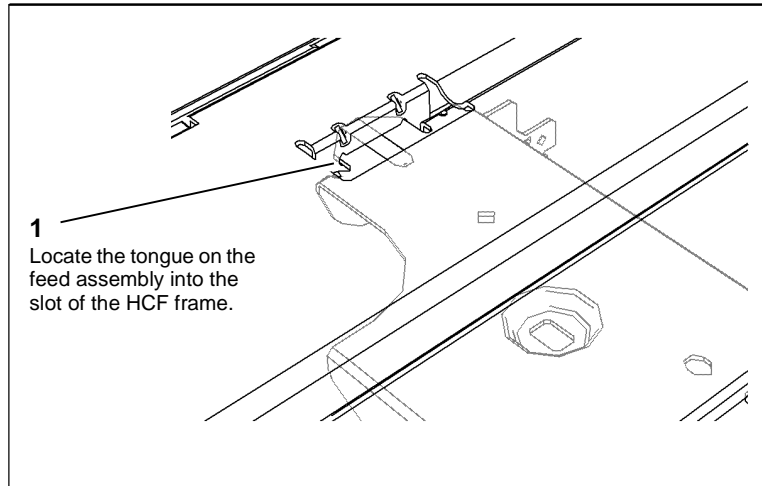


Figure 3 Feed assembly installation

3. Ensure that the tray slide, at the rear right of the tray 4 transport assembly, straddles the support bracket when the paper feed assembly is replaced.
4. Push tray 4 in slowly and check that the tray does not foul the paper feed assembly.
5. Connect the PJs, refer to [Figure 1](#).
6. The remainder of the replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting the screws.
7. If a new paper feed assembly has been installed, reset the tray 4 feed roll HFSI count. Refer to [dC135 CRU/HFSI Status](#).

REP 80.22 HCF Transport Motor

Parts List on [PL 80.36](#)

Removal


WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.


WARNING

Take care during this procedure. Motors will become hot during normal operation.

1. Remove lower rear cover, [PL 70.26 Item 1](#).
2. Remove the HCF transport motor, [Figure 1](#).

REP 80.23 Tray 4 Transport Gear Pulley

Parts List on [PL 80.36](#)

Removal



WARNING

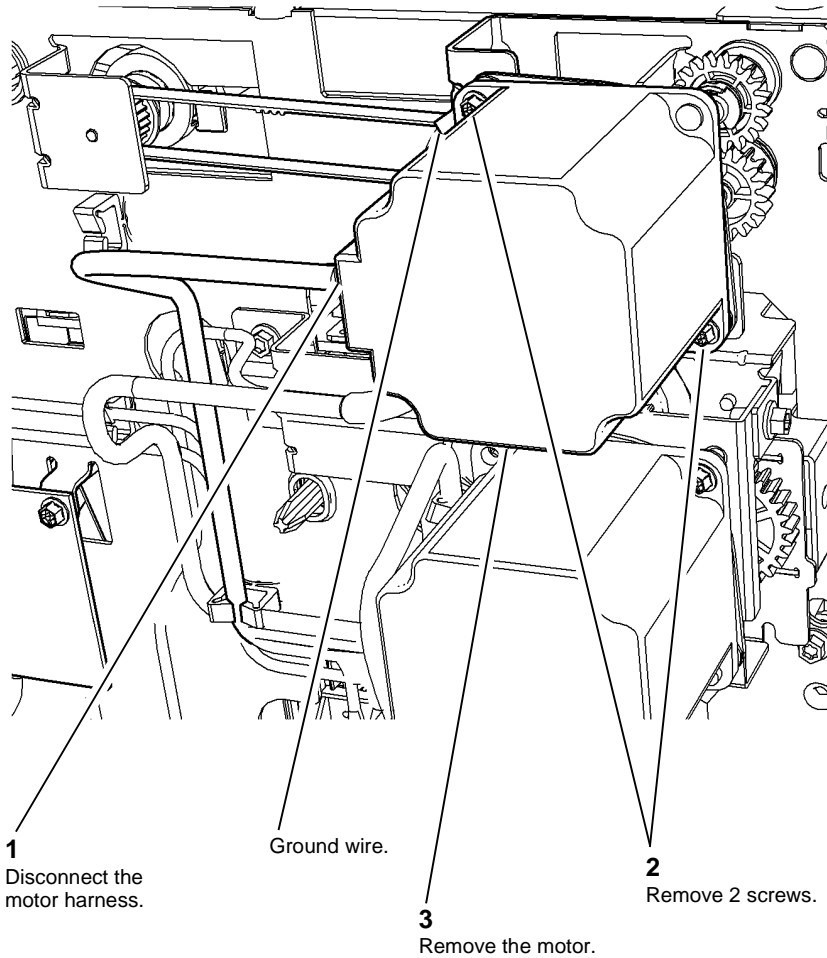
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the lower rear cover, [PL 70.26 Item 1](#).
2. Remove the HCF transport motor, [REP 80.22](#).
3. Remove the transport gear pulley, [Figure 1](#).



1
Disconnect the
motor harness.

Ground wire.

3
Remove the motor.

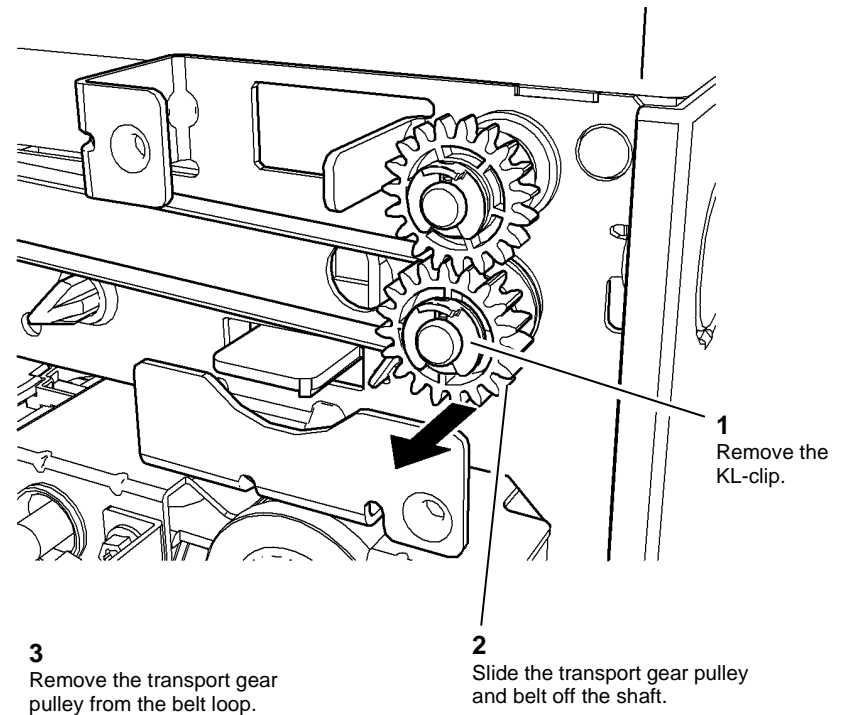
2
Remove 2 screws.

X-1-0719-A

Figure 1 Transport motor removal

Replacement

1. Replacement is the reverse of the removal procedure. Ensure that the ground wire is installed between the motor and the frame, [Figure 1](#).



1
Remove the
KL-clip.

3
Remove the transport gear
pulley from the belt loop.

2
Slide the transport gear pulley
and belt off the shaft.

X-1-0720-A

Figure 1 Transport gear removal

Replacement

1. Install the transport gear pulley, [Figure 2](#).

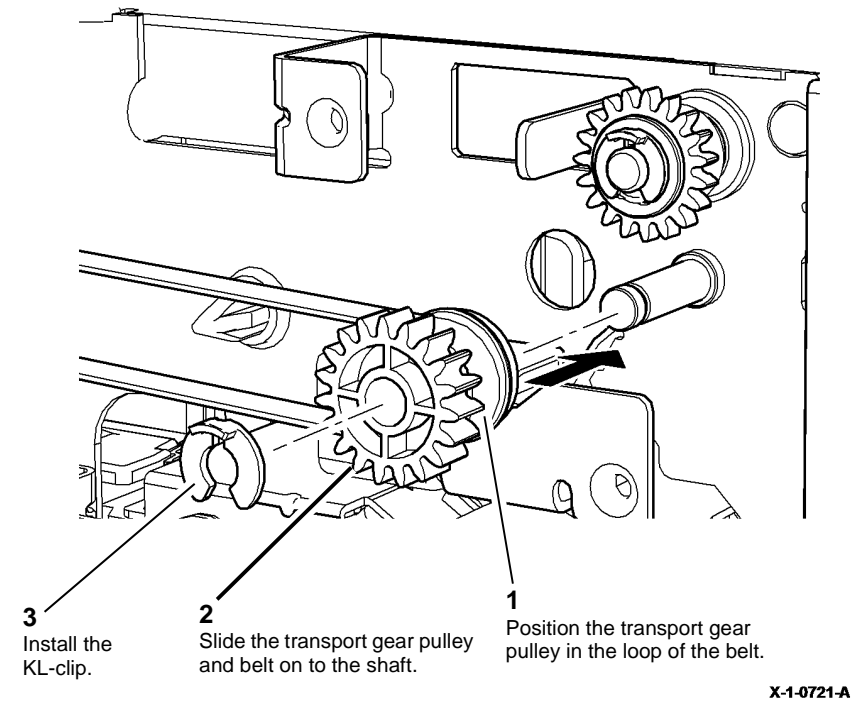


Figure 2 Drive belt installation

2. The remainder of the replacement is the reverse of the removal procedure.

REP 80.24 Tray 4 Transport Assembly

Parts List on [PL 80.36](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the tray 4 transport assembly, [Figure 1](#).

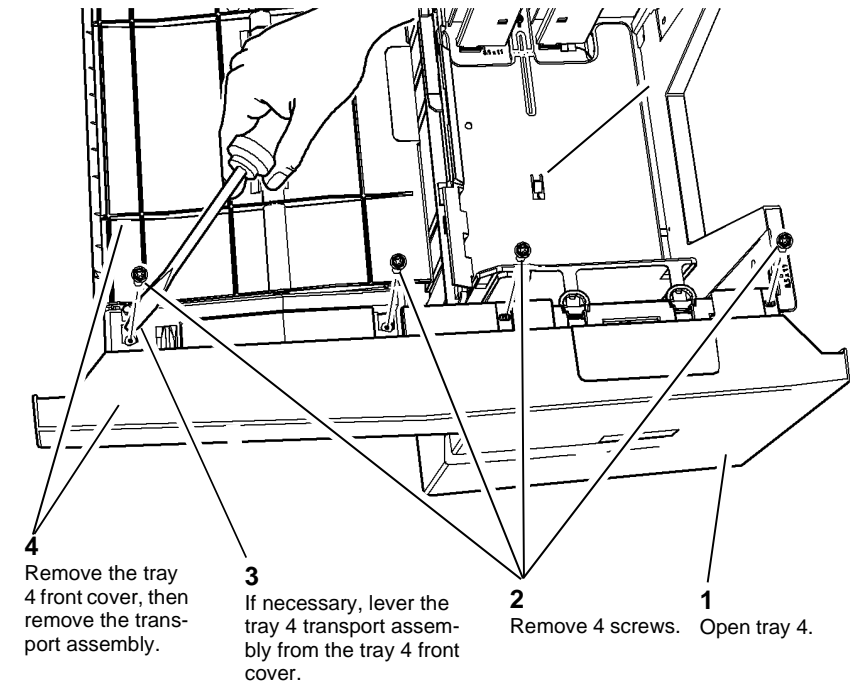


Figure 1 Transport assembly removal

Replacement

1. Ensure that the tray slide at the rear right of the tray straddles the support bracket when the tray is replaced.
2. The remainder of the replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting the screws.

REP 80.25 Tray 4 Exit Sensor

Parts List on [PL 80.33](#)

Removal



WARNING

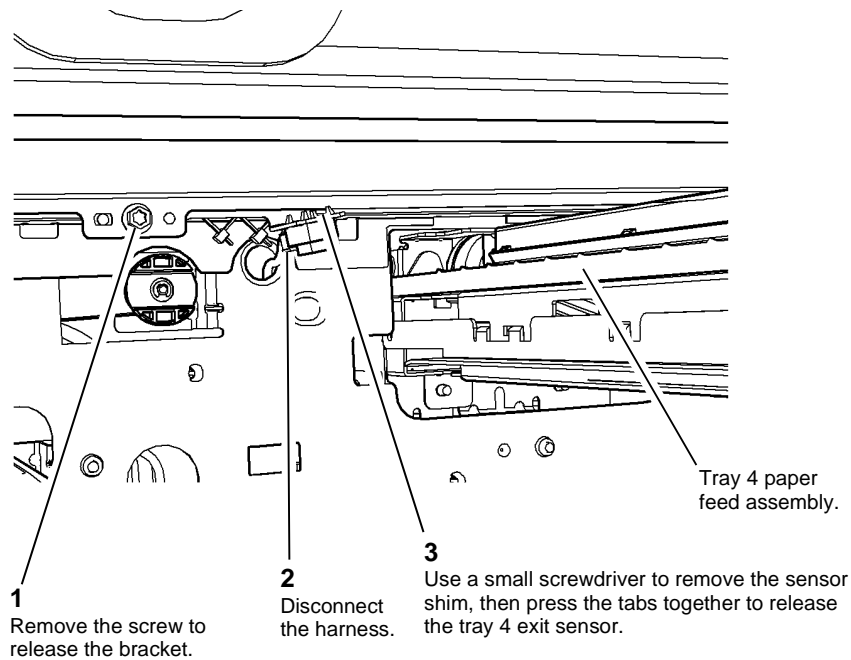
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the tray 3 assembly, [REP 70.5](#).
2. Remove the tray 4 assembly, [REP 70.13](#).
3. Remove the tray 4 exit sensor, [Figure 1](#).



X-1-0723-A

Figure 1 Tray 4 exit sensor removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. Install a new sensor shim to lock the sensor in place.

REP 80.26 Tray 4 Takeaway Roll Assembly

Parts List on [PL 80.36](#)

Removal



WARNING

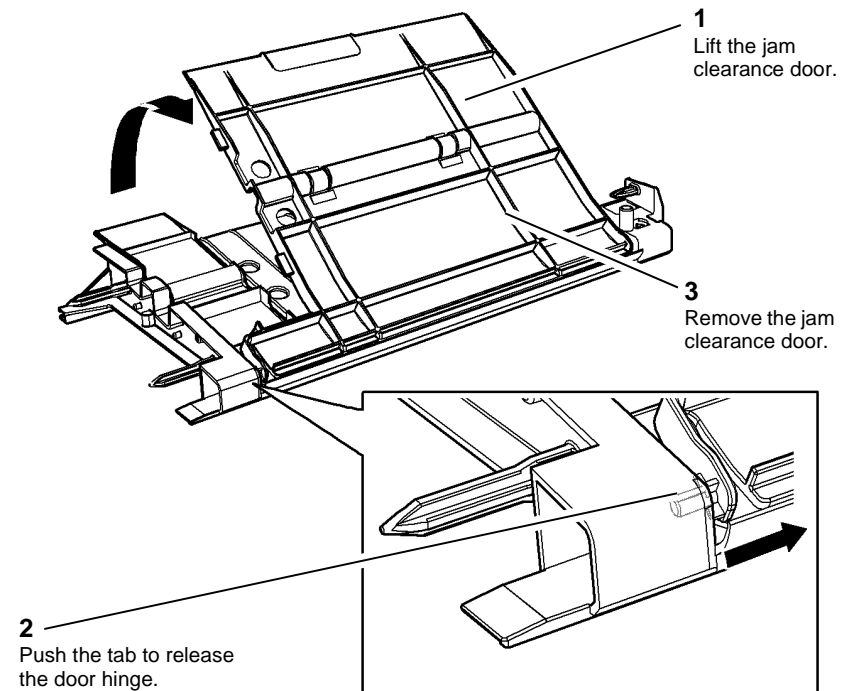
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the tray 4 transport assembly, [REP 80.24](#).
2. Remove the jam clearance door, [Figure 1](#).



X-1-0724-A

Figure 1 Jam clearance door removal

3. Remove the top fixed guide, [Figure 3](#).

4. Remove the takeaway roll assembly, [Figure 3](#).

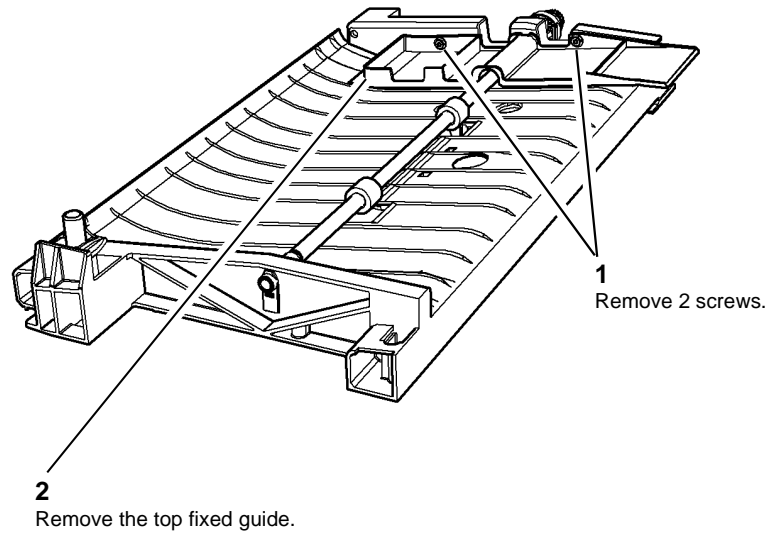


Figure 2 Top fixed guide removal

X-1-2017-A

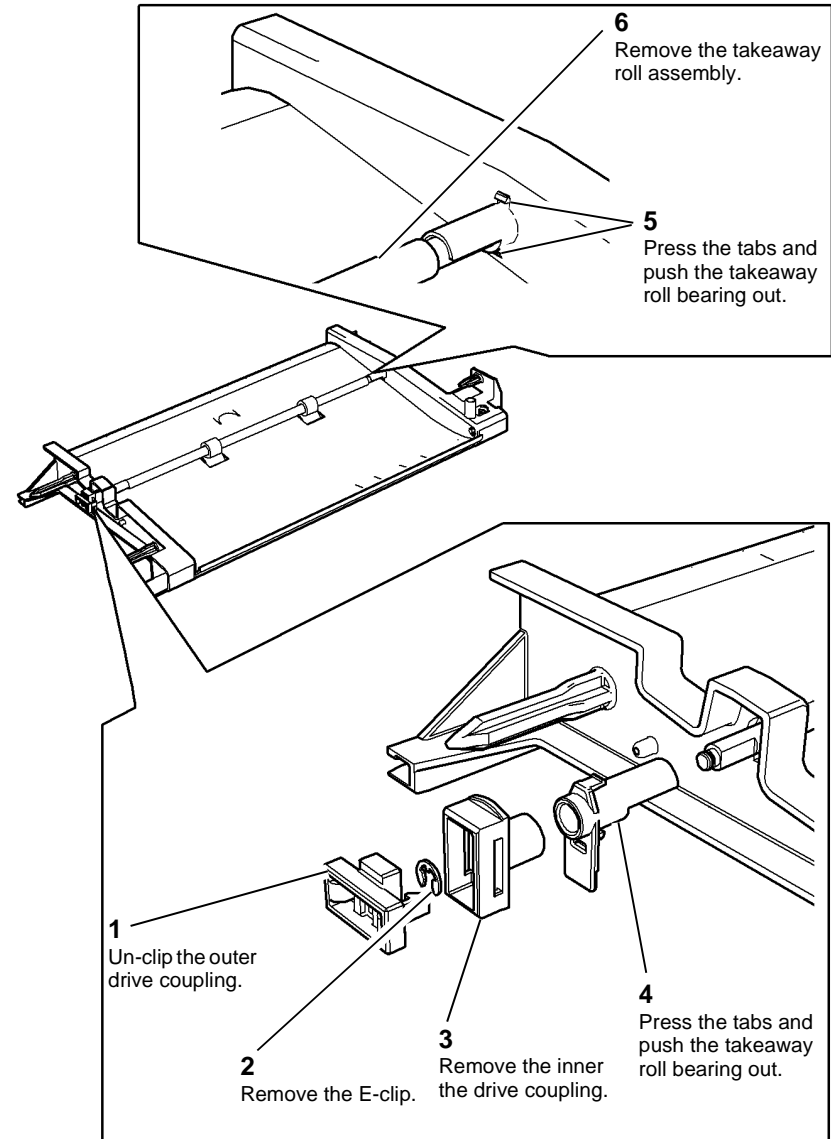


Figure 3 Takeaway roll removal

X-1-0725-A

5. If necessary, remove the tray 4 transport brace, [Figure 4](#), and the idler roll assembly, [Figure 5](#).

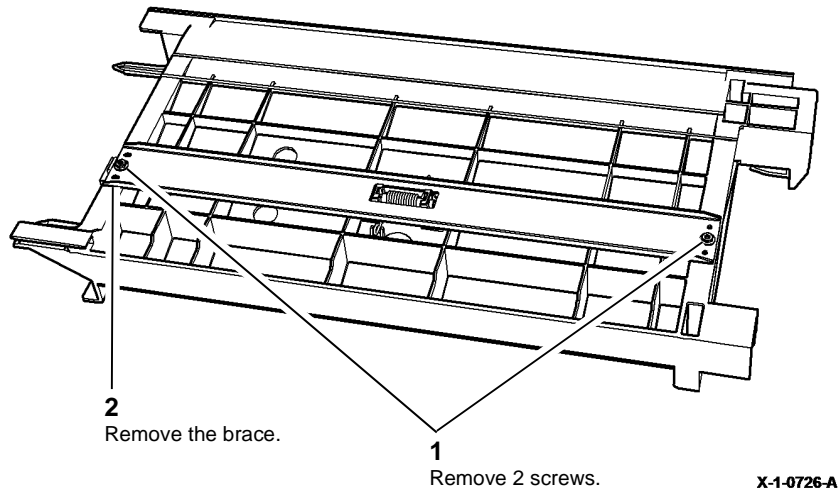


Figure 4 Brace removal

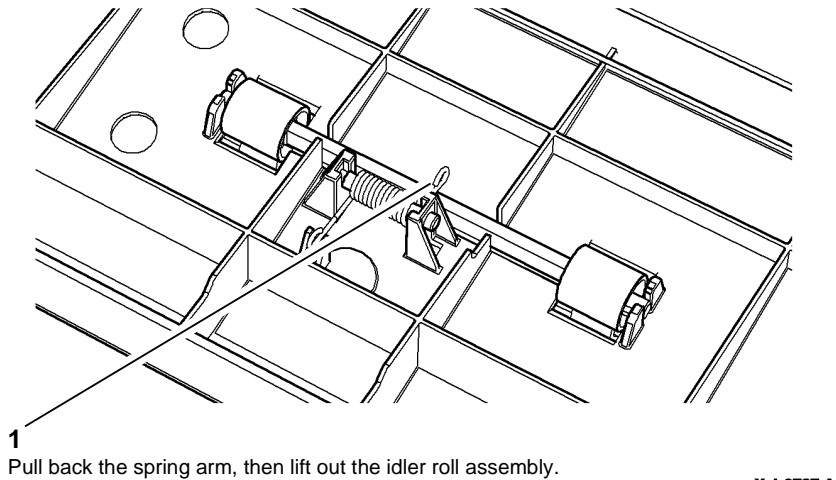


Figure 5 Idler rolls removal

Replacement

Replacement is the reverse of the removal procedure.

REP 80.27 HCF Transport Roll and Idler Roll

Parts List on [PL 80.32](#) and [PL 80.33](#).

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the lower left cover, [PL 70.26 Item 7](#).
2. Remove the tray 3 assembly, [REP 70.5](#).
3. Remove the tray 4 transport assembly, [REP 80.24](#).
4. Remove the idler roll assembly, [Figure 1](#).

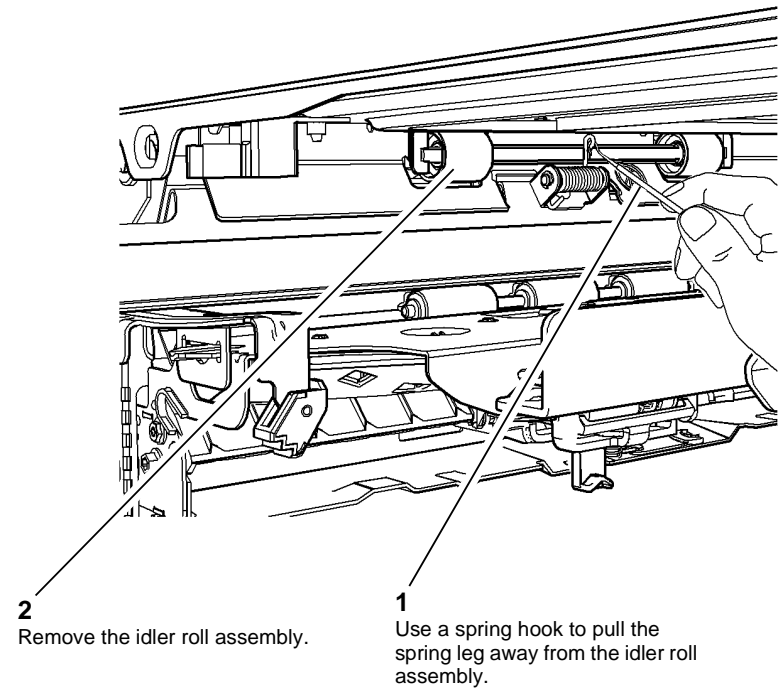


Figure 1 Idler shaft removal

5. Remove the HCF transport motor, [REP 80.22](#).
6. Prepare to remove the HCF transport roll, [Figure 2](#).

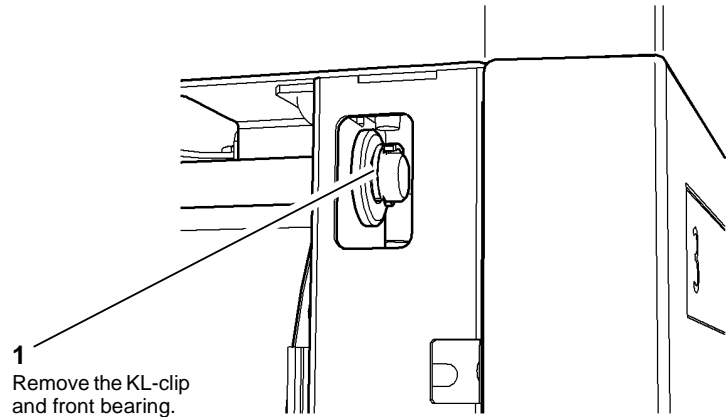


Figure 2 Preparation

X-1-0729-A

7. Remove the HCF transport roll, [Figure 3](#).

6. Slide the HCF transport roll to the front and remove.

5. Slide the HCF transport roll to the rear to release the roll from the front of the frame.

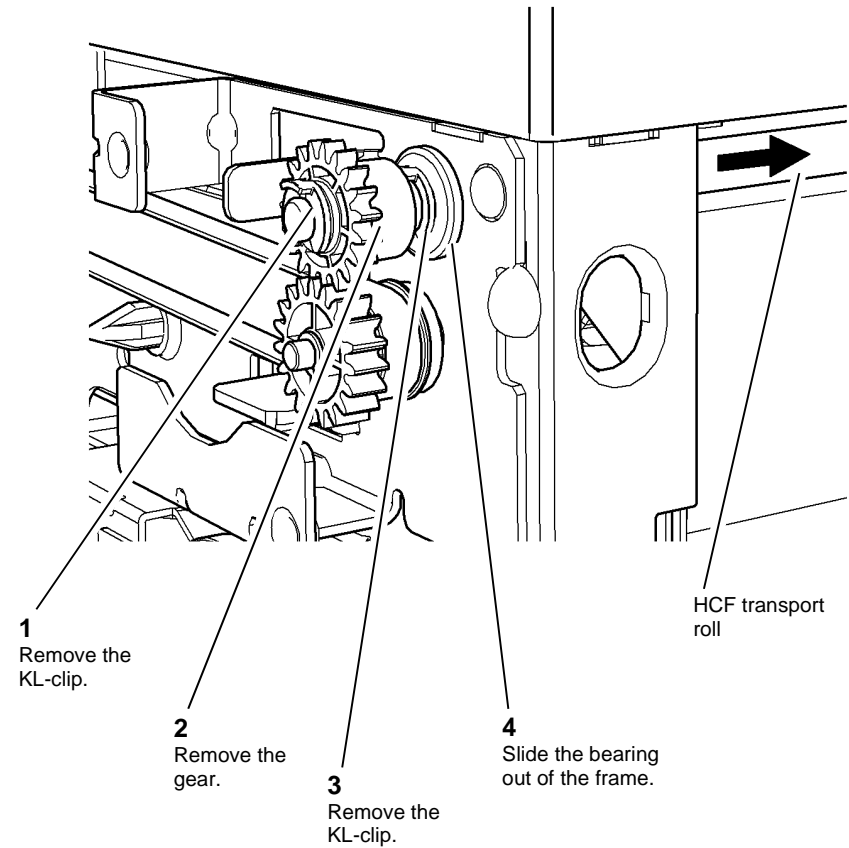


Figure 3 Transport roll removal

Replacement

CAUTION

When installing the gear on the shaft, take care not to damage the one-way clutch in the centre of the gear. Before tightening the motor screws, adjust the position of the motor so that there is a very small amount of backlash between the gears.

1. The replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting the screws.

REP 80.28 Tray 3 Paper Guide

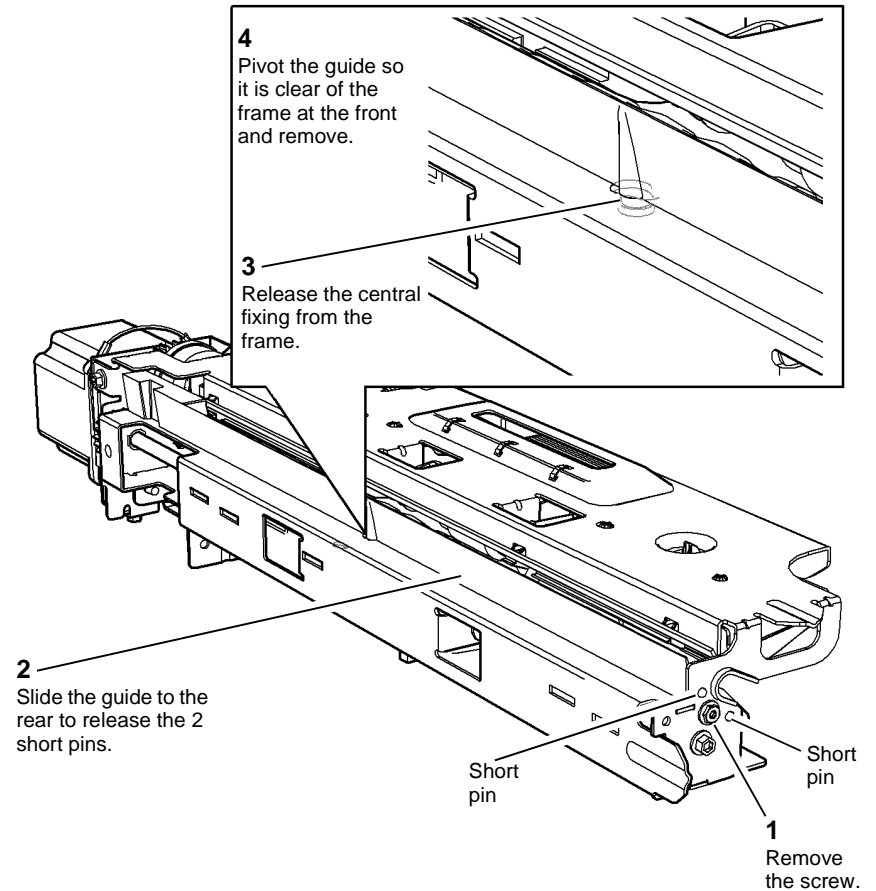
Parts List on [PL 80.32](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the tray 3 paper feed assembly, [REP 80.20](#).
2. Remove the tray 3 paper guide, [Figure 1](#).



X-1-0754-A

Figure 1 Paper guide removal

Replacement

1. Install the tray 3 paper guide, [Figure 2](#).

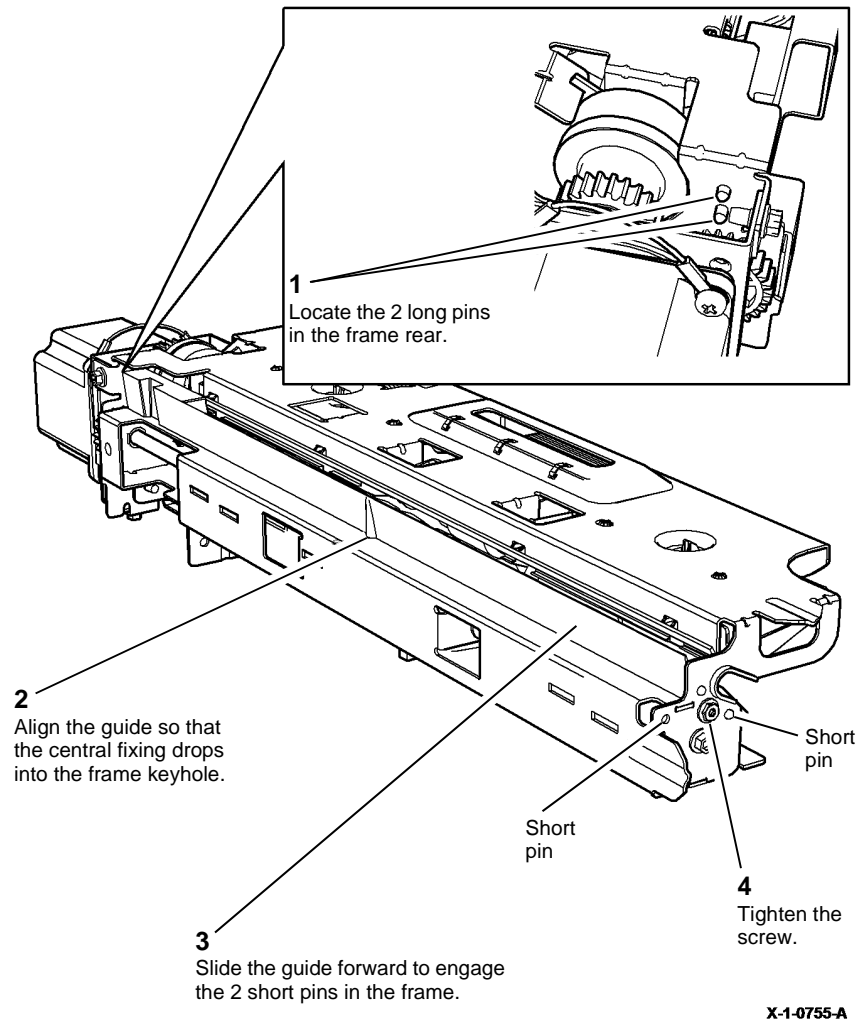


Figure 2 Paper guide replacement

2. The remainder of the replacement is the reverse of the removal procedure.

REP 80.29 Tray 4 Paper Guide

Parts List on [PL 80.33](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the tray 4 paper feed assembly, [REP 80.21](#).
2. Remove the tray 4 paper guide, [Figure 1](#).

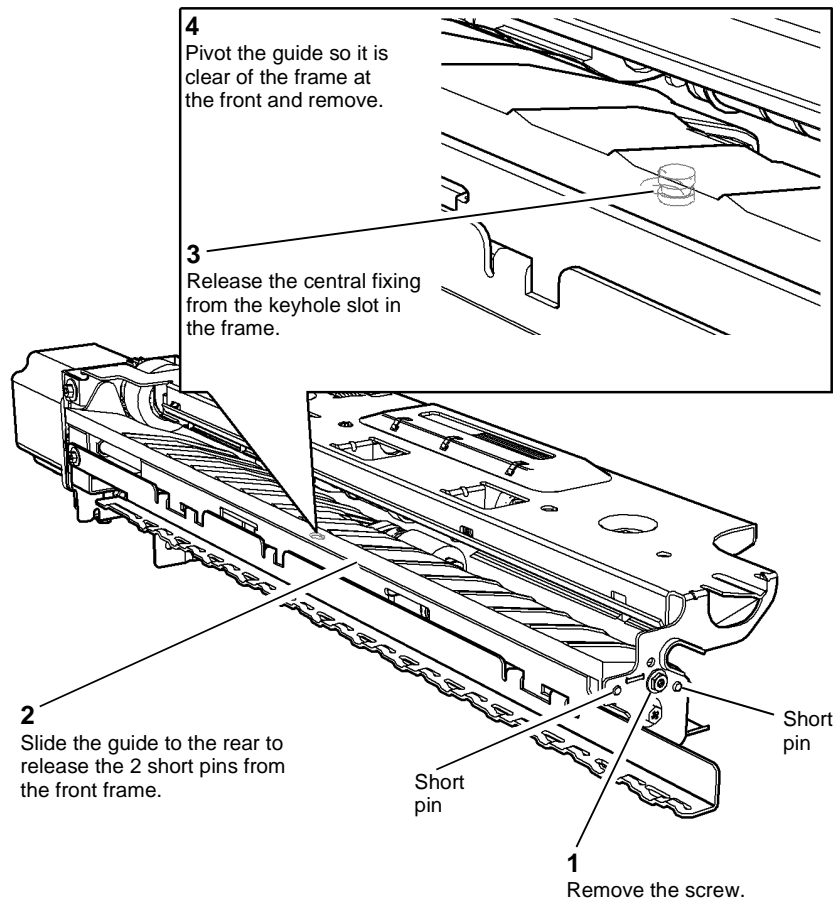


Figure 1 Paper guide removal

X-1-0752-A

Replacement

1. Install the tray 4 paper guide, [Figure 2](#).

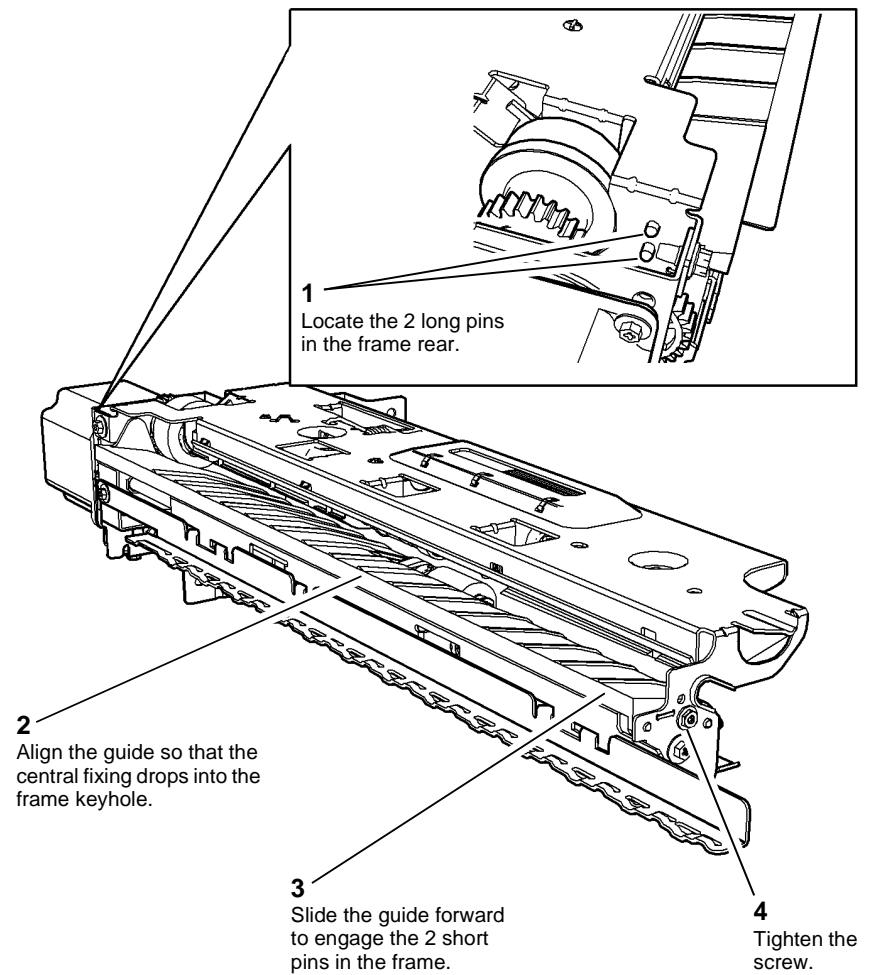


Figure 2 Paper guide replacement

X-1-0753-A

2. The remainder of the replacement is the reverse of the removal procedure.

REP 80.30 Tray 3 Feed Sensor

Parts List on [PL 80.32](#)

Removal

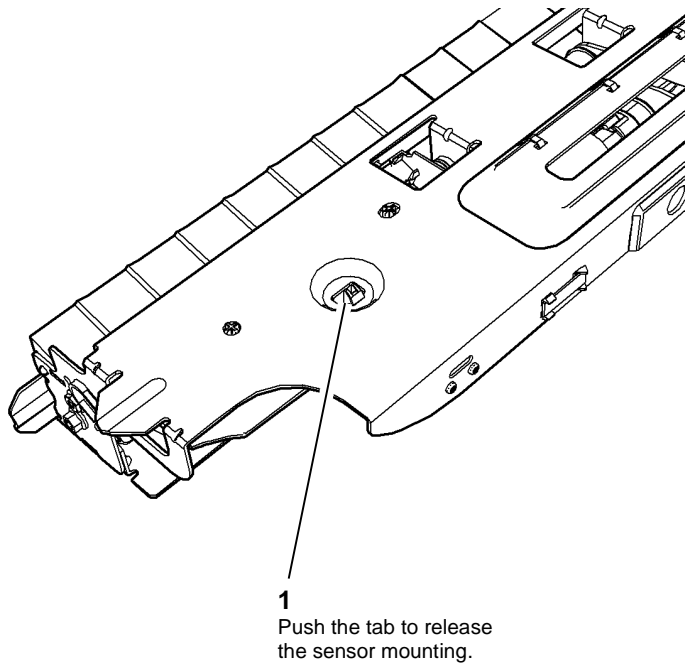


Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

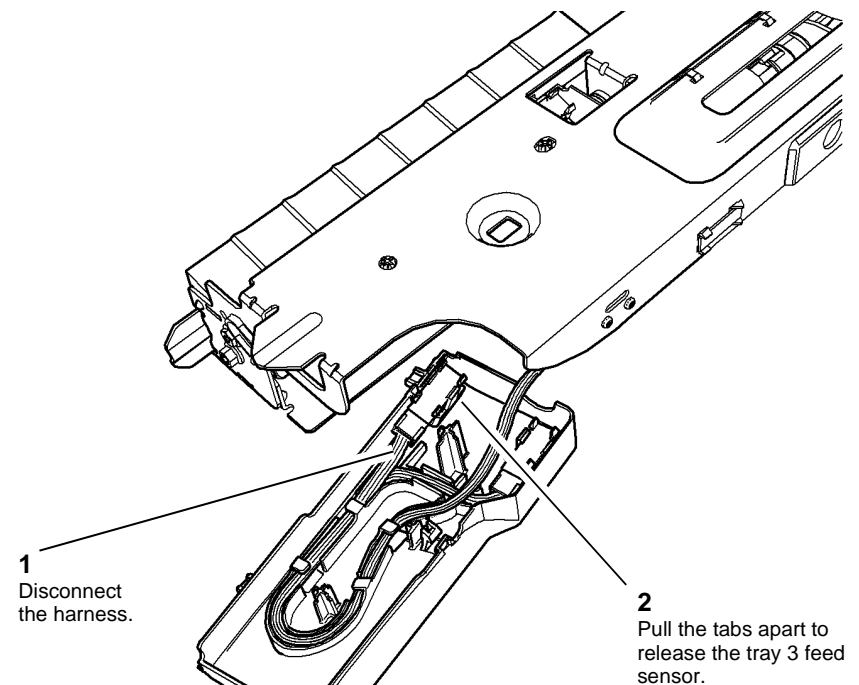
1. Remove the tray 3 paper feed assembly, [REP 80.20](#).
2. Release the sensor mounting, [Figure 1](#).



X-1-0739-A

Figure 1 Sensor mounting release

3. Remove the tray 3 feed sensor, [Figure 2](#).



X-1-0740-A

Figure 2 Sensor removal

Replacement

Replacement is the reverse of the removal procedure.

REP 80.31 Tray 4 Transport Clutch Drive Assembly

Parts List on [PL 80.36](#)

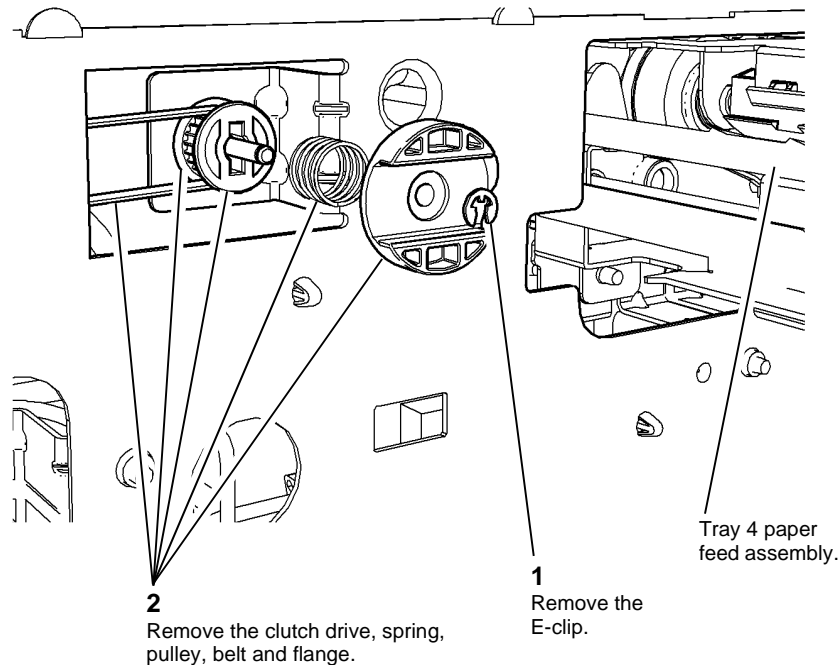
Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove tray 1 and 2, [REP 70.1](#).
2. Remove the tray 4 transport assembly, [REP 80.24](#).
3. Remove tray 3 [REP 70.5](#).
4. Remove the tray 4 transport gear pulley, [REP 80.23](#).
5. Remove the tray 4 transport clutch drive assembly, [Figure 1](#).



X-1-0756-A

Figure 1 Clutch drive removal

Replacement

1. If the flange has come off the pulley, locate the flange onto the pulley ensuring the three small pins locate correctly in the three holes in the pulley.
2. Assemble the belt, pulley, spring and clutch drive onto the shaft so that the legs of the clutch drive engage in the pulley. Rotate the pulley so that the central cut-out is vertical.
3. The E-clip is very small and difficult to locate in the groove of the shaft. Grip the E-clip with long nose pliers, compress the spring by pressing the clutch drive to the rear. Place the E-clip in the groove by passing the end of the pliers through the access hole in the base of the tray 1 and 2 cavity then snap the E-clip onto the shaft by re-positioning the pliers.
4. The remainder of the replacement is the reverse of the removal procedure.

REP 80.32 Tray 3 or Tray 4 Feed Clutch

Parts List on [PL 80.32](#), [PL 80.33](#).

Removal

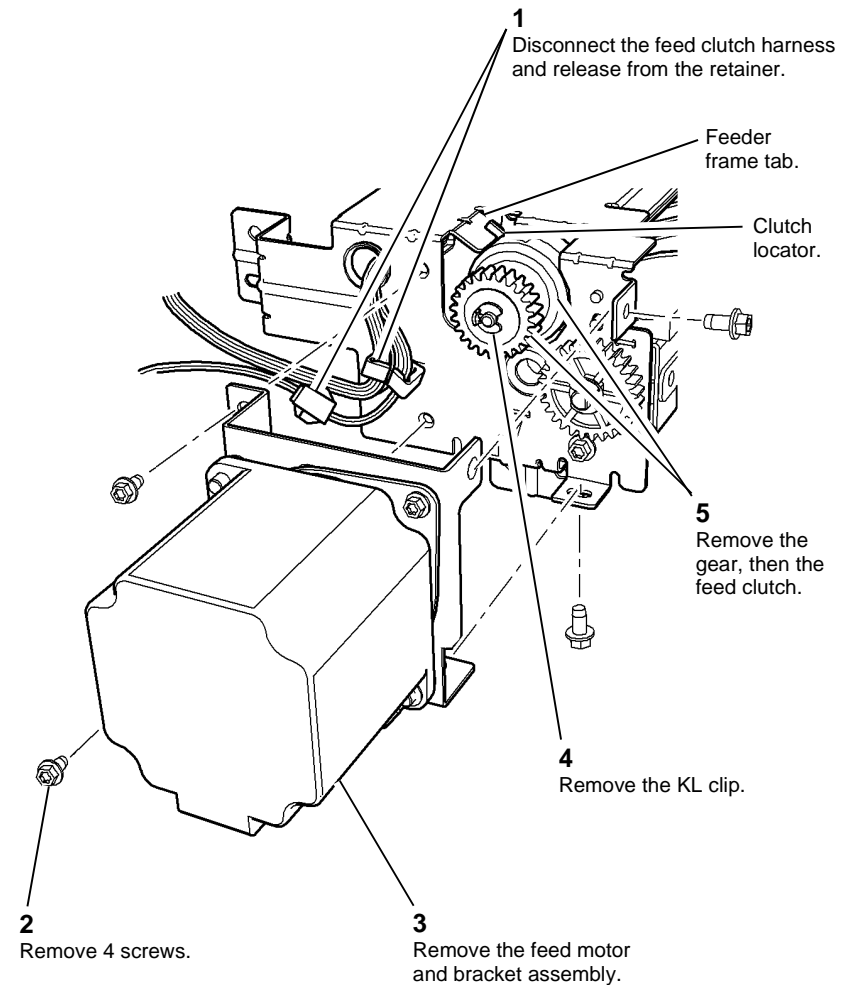

WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the appropriate paper feed assembly:
 - [REP 80.20](#) for tray 3.
 - [REP 80.21](#) for tray 4.
2. Remove the feed clutch, [Figure 1](#).



X-1-1425-A

Figure 1 Feed clutch removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. Ensure that the clutch locator is engaged with the feeder frame tab, [Figure 1](#).

REP 80.33 Left Door Harness Set

Parts List on [PL 80.10](#).

Set contents

This harness set consists of the items that follow:

- IOT PWB to left door harness, [PL 1.10 Item 23](#).
- IOT PWB to bypass tray intermediate harness, [PL 70.35 Item 30](#).
- Duplex motor harness, [PL 80.22 Item 23](#).
- Left door sensor and fan harness, [PL 80.10 Item 13](#).

IOT PWB to Left Door Harness Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Switch off the machine, [GP 14](#).
2. Remove the rear cover, [REP 28.2](#).
3. Disconnect PJ705/706 and PJ226/711, refer to PJ locations [Figure 9](#).
4. Disconnect PJ757, PJ759 and PJ750 from the IOT PWB, refer to PJ locations [Figure 15](#).
5. Release the harness from the harness retainers, then remove the harness from the machine.

IOT PWB to Left Door Harness Replacement

1. Replacement is the reverse of the removal procedure.
2. Ensure the harness is located correctly and held securely with harness retainers.

IOT PWB to Bypass Tray Intermediate Harness Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Switch off the machine, [GP 14](#).
2. Remove the rear cover, [REP 28.2](#).
3. Remove the left door cover, [REP 80.13](#).
4. Partially open tray 2 to improve the access to the harness and connectors.
5. Disconnect PJ708/709 and PJ705/706, refer to PJ locations [Figure 9](#).

6. Release the harness from two harness retainers on the IOT frame, then release the harness from the harness retainer on the left door frame.
7. Remove the harness through the holes in the IOT frame and left door frame.

IOT PWB to Bypass Tray Intermediate Harness Replacement

1. Replacement is the reverse of the removal procedure.
2. Ensure the harness is located correctly and held securely with harness retainers.

Duplex Motor Harness Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Switch off the machine, [GP 14](#).
2. Remove the rear cover, [REP 28.2](#).
3. Remove the left door cover, [REP 80.13](#).
4. Partially open tray 2 to improve the access to the harness and connectors.
5. Disconnect PJ222/223, refer to PJ locations [Figure 9](#).
6. Release the harness from two harness retainers on the IOT frame, then release the harness from the harness retainers on the left door frame.
7. Disconnect the harness from the duplex motor, then remove the harness through the holes in the IOT frame and left door frame.

Duplex Motor Harness Replacement

1. Replacement is the reverse of the removal procedure.
2. Ensure the harness is located correctly and held securely with harness retainers.

Left Door Sensor and Fan Harness Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Perform [REP 80.2](#) Tray 1 and Tray 2 TAR Sensors and Lower Left Door Paper Guide to release the left door sensor and fan harness from the tray 1 and tray 2 tar sensors.
2. Remove the left door cover, [REP 80.13](#).

3. Close the left door. Disconnect the harness from the duplex sensor, [Figure 1](#).

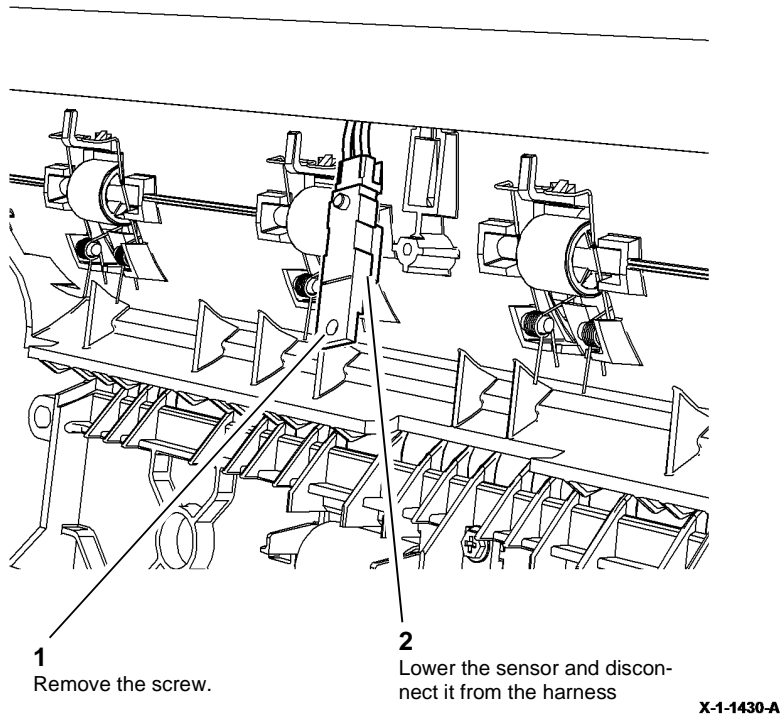


Figure 1 Duplex sensor disconnection

4. Open the left door. Disconnect the harness from the left door fan 1 and left door fan 2, [PL 80.11 Item 9](#).
5. Disconnect PJ226/711, refer to PJ locations [Figure 9](#).
6. Release the harness from two harness retainers on the IOT frame, then release the harness from the harness retainers on the left door frame.
7. Remove the harness through the holes in the IOT frame and left door frame.

Left Door Sensor and Fan Harness Replacement

1. Replacement is the reverse of the removal procedure.

NOTE: The connectors for the TAR sensors are identical. The harness for the tray 1 TAR sensor is identified by a single tie-wrap. The harness for the tray 2 TAR sensor is identified by two tie-wraps.

2. Ensure the harness is located correctly and held securely with harness retainers.

REP 80.34 Bypass Tray Mylar Retard Shield

Parts List on [PL 70.35](#)

Removal



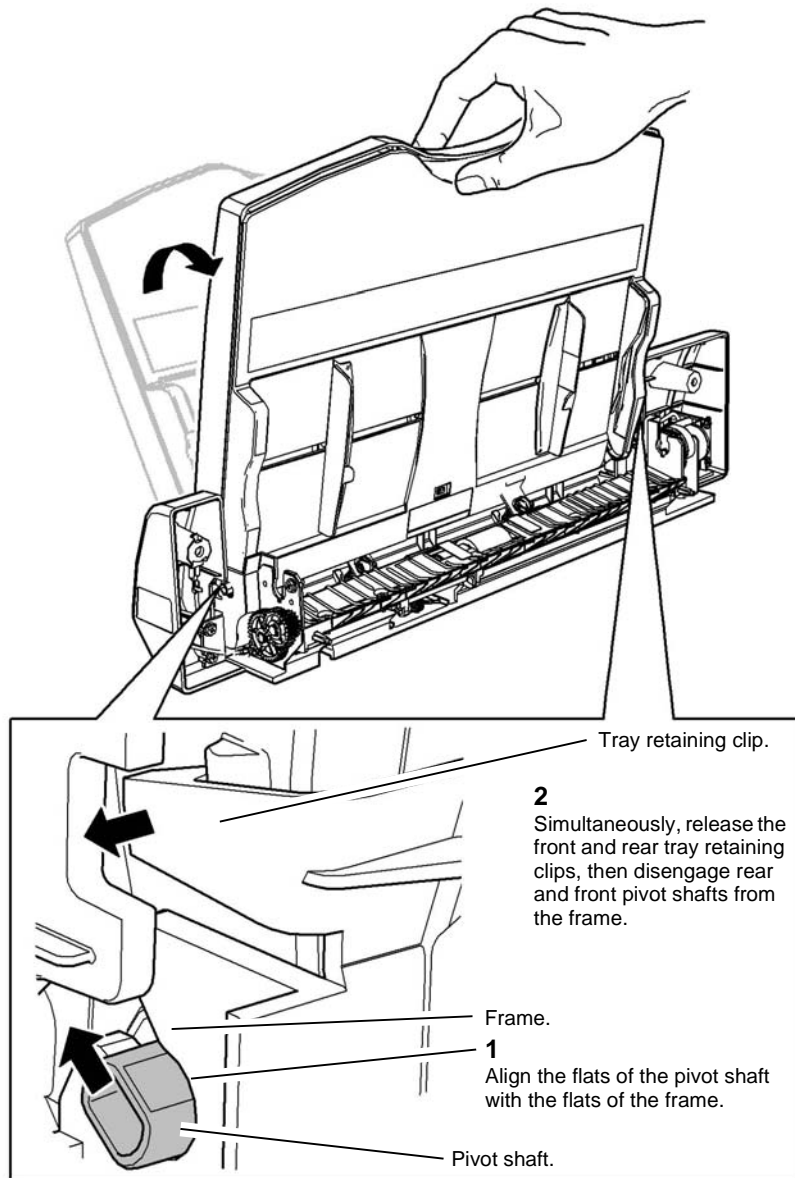
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

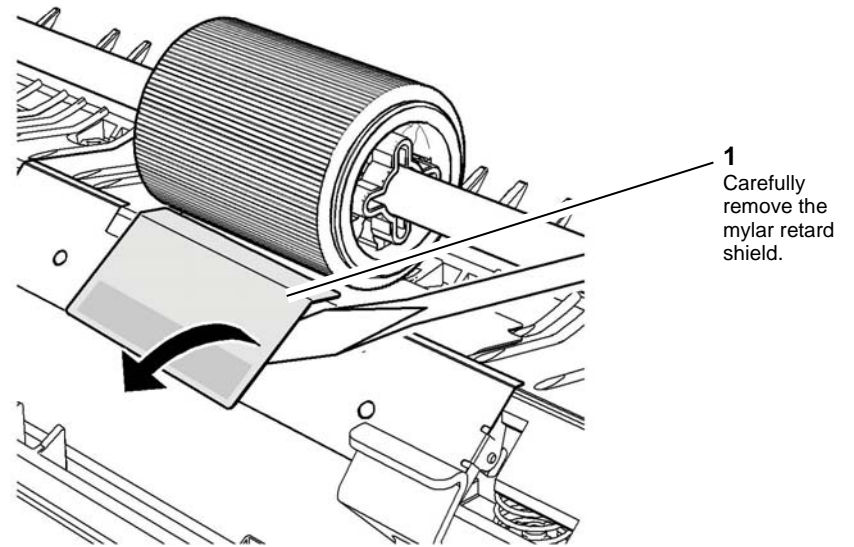
1. Remove the bypass tray assembly, [REP 70.2](#).
2. Release the bypass elevate tray assembly to gain access to the mylar retard shield, [Figure 1](#).

3. Remove the mylar retard shield, [Figure 2](#).



X-1-1462-A

Figure 1 Access the retard shield



X-1-1463-A

Figure 2 Retard shield removal

Replacement

1. Install the mylar retard shield, [Figure 3](#).

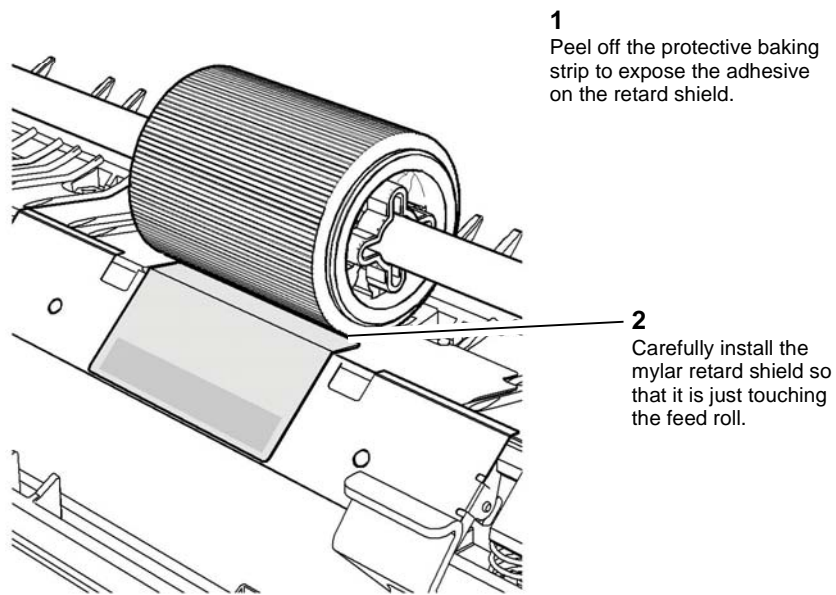


Figure 3 Retard shield installation

2. Ensure that the mylar retard shield is making contact with the feed roll

X-1-1464-A

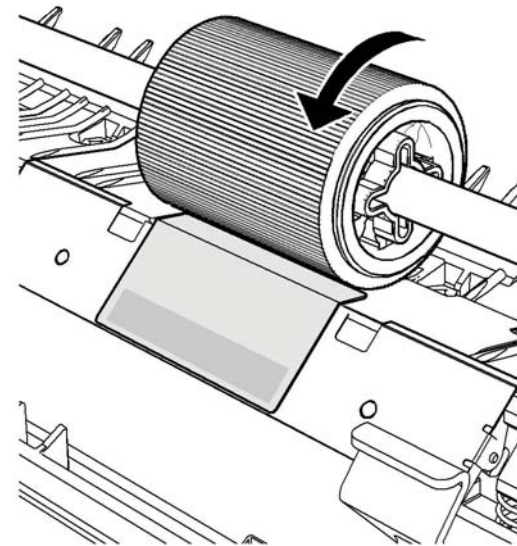


Figure 4 Check the contact pressure

X-1-1465-A

3. Install the bypass tray elevate assembly, refer to [Figure 1](#).
4. Install the bypass tray assembly, [REP 70.2](#).
5. Check the paper feeding performance. If necessary perform [ADJ 80.4 Bypass Tray Nip Pressure](#).

REP 80.35 Left Door Fan 1 and Fan 2

Parts List on [PL 80.11](#).

Removal


WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Open the left door.
2. [Figure 1](#), prepare to remove the left door fans.

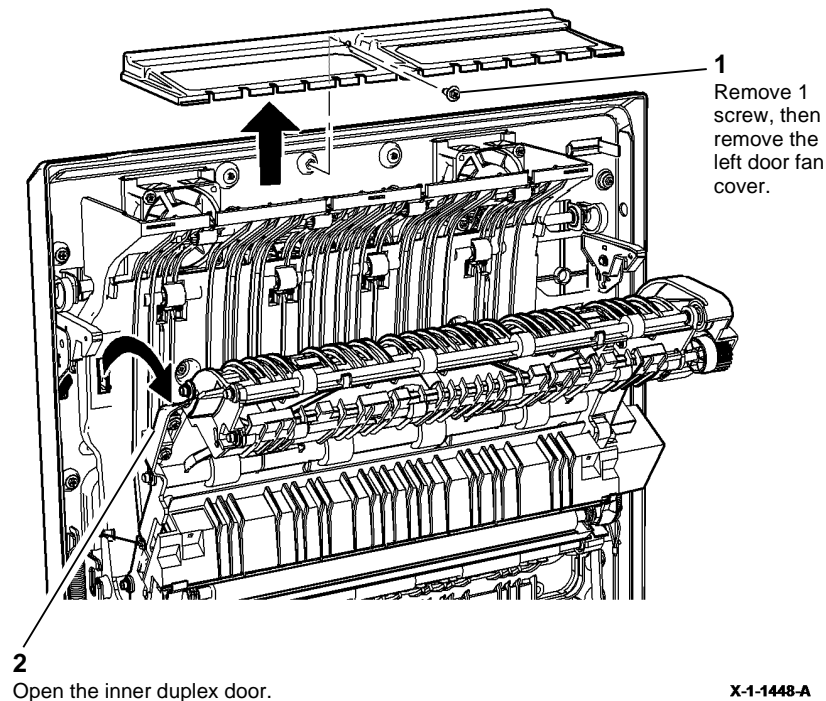
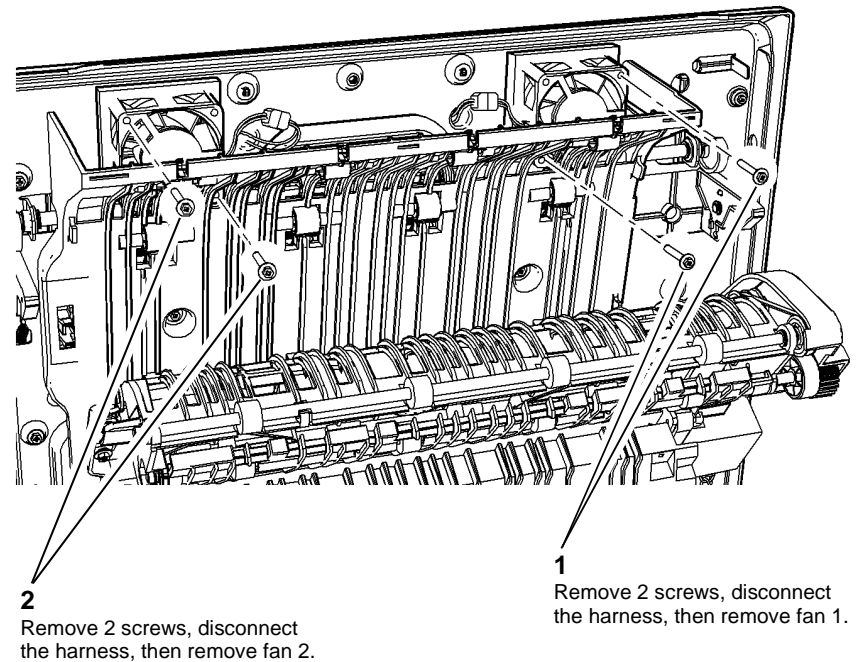


Figure 1 Preparation

3. [Figure 2](#), remove the left door fans.



X-1-1449-A

Figure 2 Left door fans removal

Replacement

Replacement is the reverse of the removal procedure.

REP 80.36 Tray 6 Feed Sensor

Parts List on [PL 80.41](#)

Removal



WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the top cover, [PL 75.60 Item 10](#).
2. Prepare to remove the tray 6 feed sensor, [Figure 1](#).

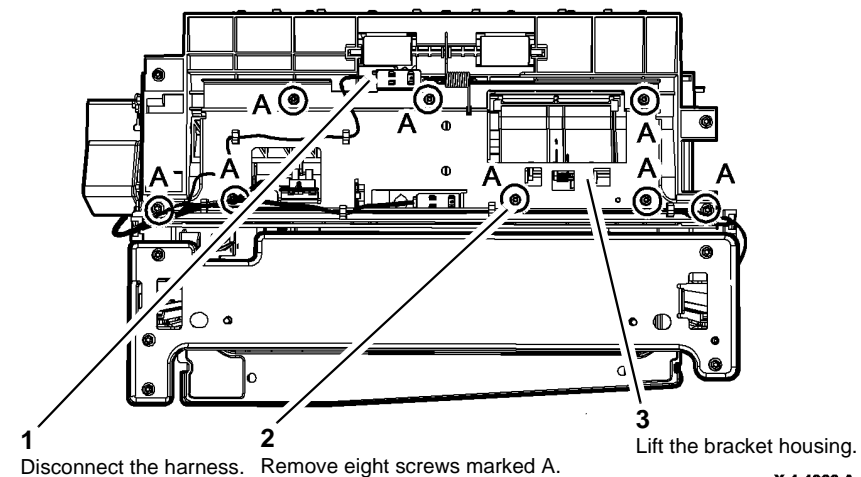


Figure 1 Preparation

3. Remove the tray 6 feed sensor, [Figure 2](#).

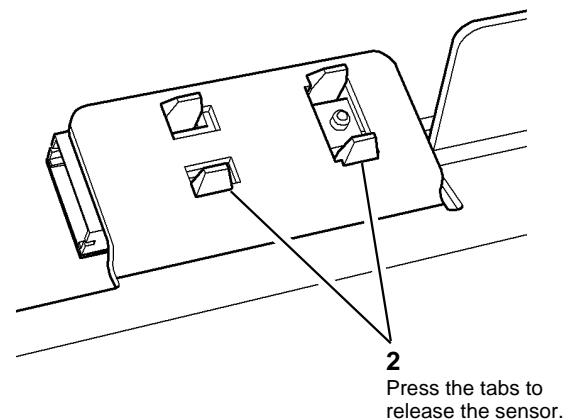


Figure 2 Feed sensor removal

Replacement

1. The replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting the screws.
2. Make sure that the spring on the paper feed assembly is in the correct position, [Figure 3](#).

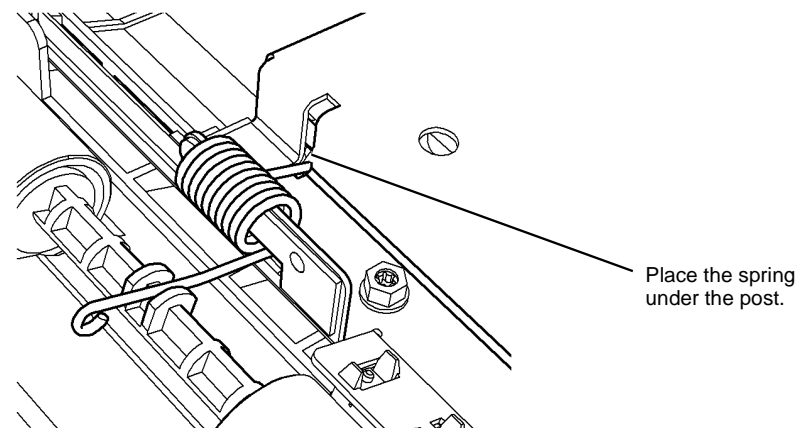
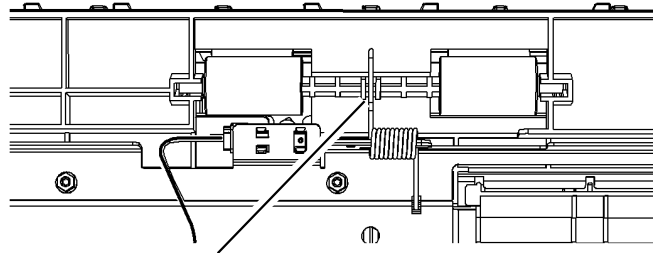


Figure 3 Spring position

3. Make sure that the spring is positioned on top of the nip roll shaft when the bracket housing is installed, [Figure 4](#).

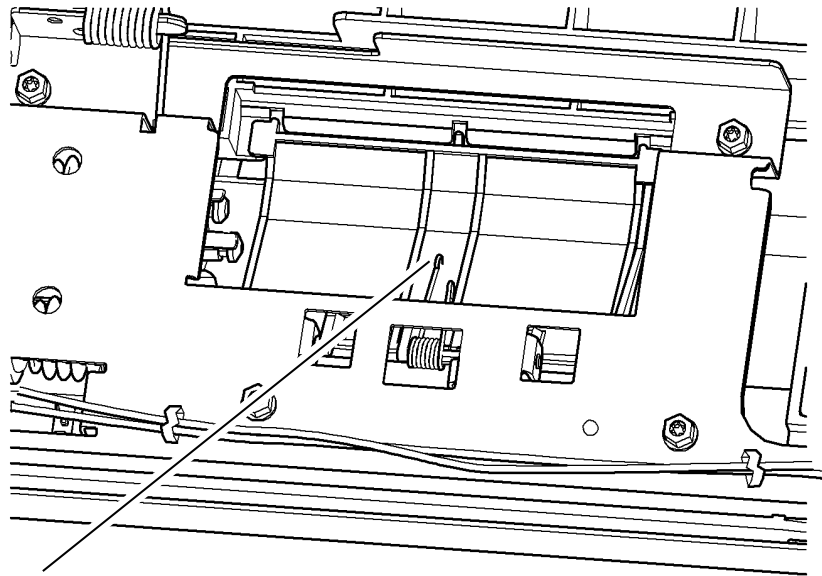


Spring position.

X-1-1969-A

Figure 4 Nip roll spring position

4. Make sure that the spring is positioned on top of the chute upper insert, [Figure 5](#).



Position the spring on the top of the chute upper insert.

X-1-1970-A

Figure 5 Upper insert chute spring

5. Check that the correct screw is used to attach the bracket housing.
6. Check that the harness routing is correct, [Figure 1](#).

REP 80.37 Tray 6 Transport Drive Belt

Parts List on [PL 80.40](#)

Removal



Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the rear cover, [PL 75.60](#) Item 9.
2. Prepare to remove the drive belt, [Figure 1](#).

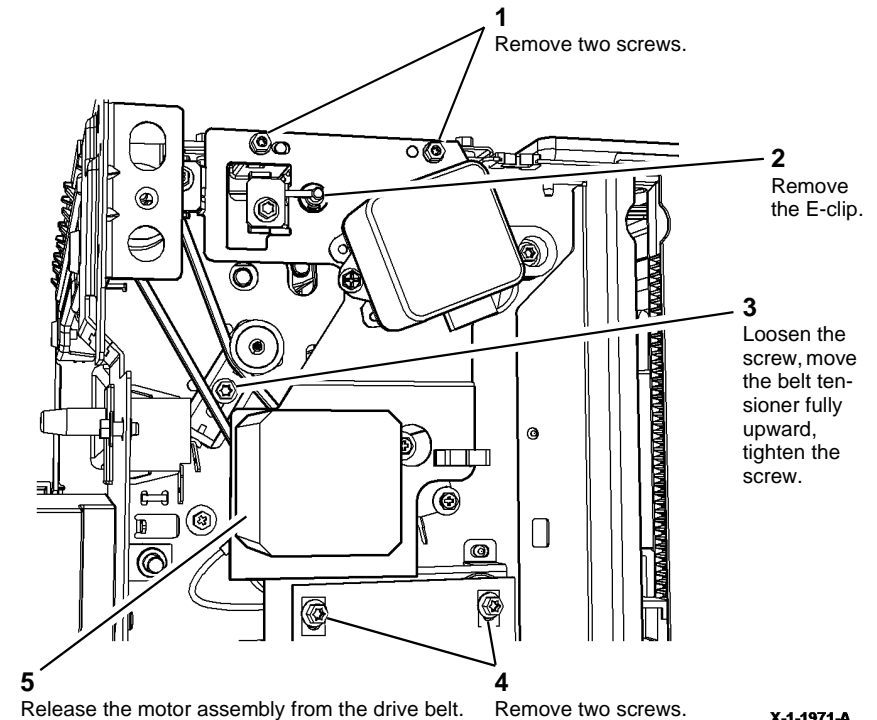


Figure 1 Preparation

X-1-1971-A

3. Remove the transport drive belt, [Figure 2](#).

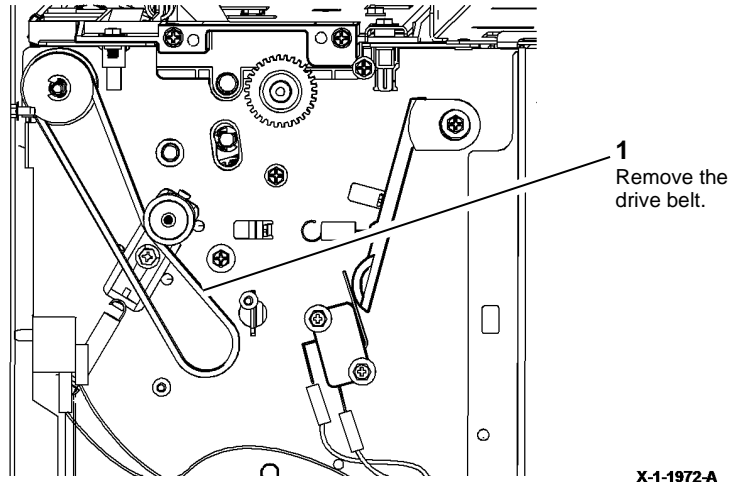


Figure 2 Drive belt removal

Replacement

1. Replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting the screws.
2. Allow the tension idler to tension the belt and then tighten the screw, [Figure 1](#).

REP 80.38 Tray 6 Feed Rolls

Parts List on [PL 80.41](#)

Removal


WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

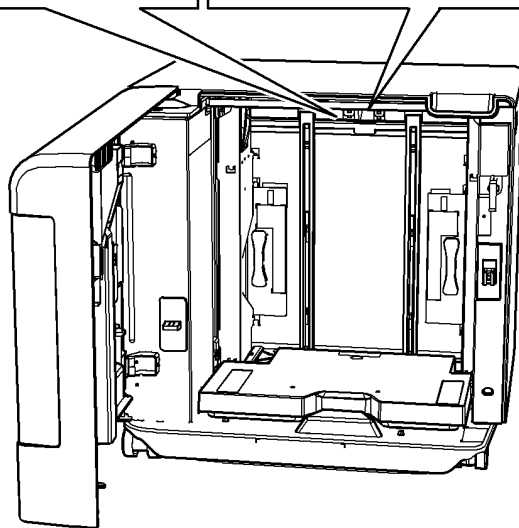
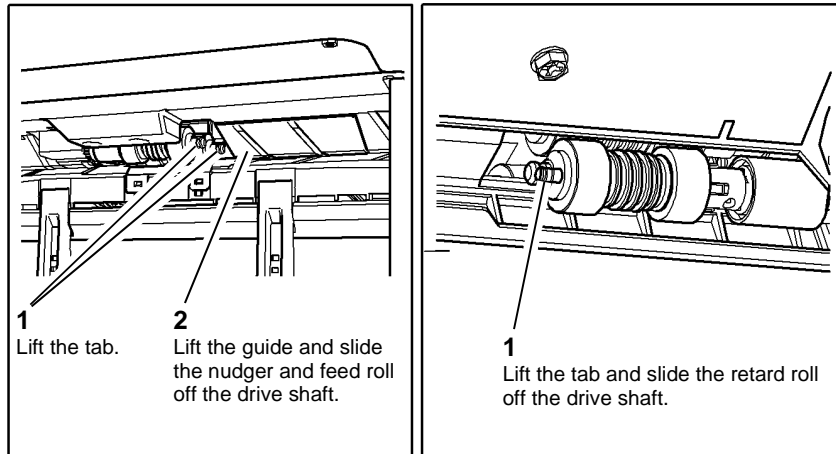
Take care during this procedure. Sharp edges may be present that can cause injury.

1. Open the tray 6 door and allow the tray to move down.
2. Remove the nudger and the feed roll from the front. Slide the tray 6 module away from the machine then remove the retard roll, [Figure 1](#).

REP 80.39 Tray 6 Feed Motor

Parts List on [PL 80.40](#)

Removal



X-1-1973-A

Figure 1 Feed rolls removal

Replacement

NOTE: If new rolls are required, install the feed roll retrofit kit, [PL 80.41 Item 21](#).

1. The replacement is the reverse of the removal procedure.
2. Ensure that the tabs on the feed roll are located in the drive shaft.
3. Check the registration, refer to [dC604 Registration Setup Procedure](#).
4. If a new nudge, feed and retard roll are installed, reset the tray 6 feed roll HFSI count. Refer to [dC135 CRU/HFSI Status](#).



WARNING

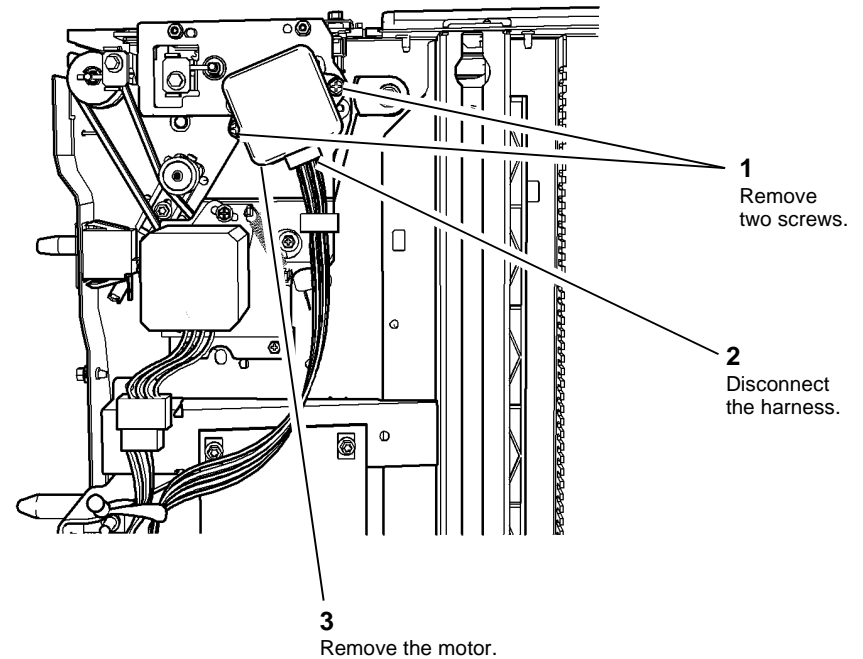
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the rear cover, [PL 75.60 Item 9](#).
2. Remove tray 6 feed motor, [Figure 1](#).



X-1-1974-A

Figure 1 Feed motor removal

Replacement

1. The replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting the screws.

REP 80.40 Tray 6 Transport Motor

Parts List on [PL 80.40](#)

Removal


WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the rear cover, [PL 75.60](#) Item 9.
2. Remove the drives plate, [Figure 1](#).

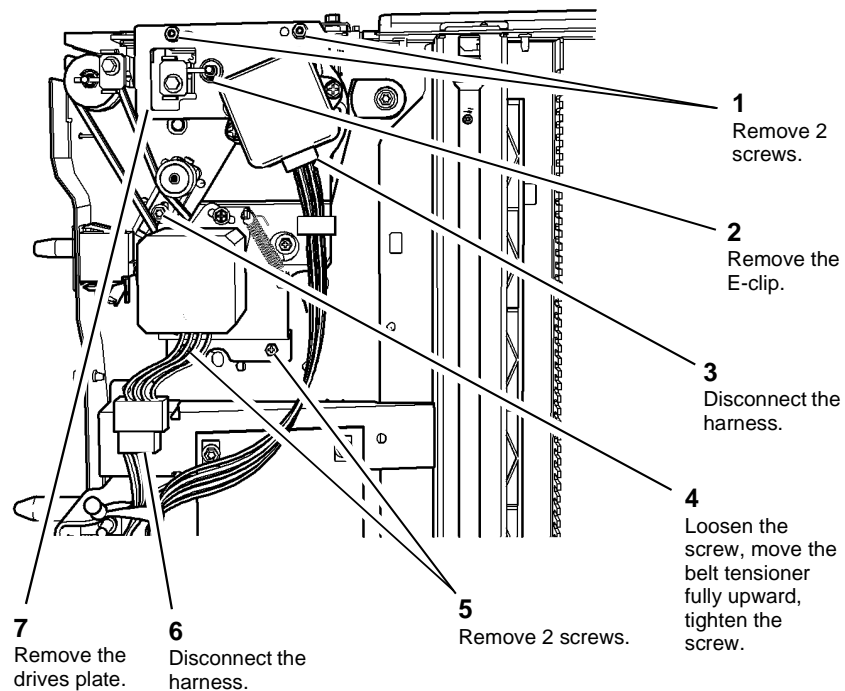


Figure 1 Drives plate removal

3. Remove the tray 6 transport motor, [Figure 2](#).

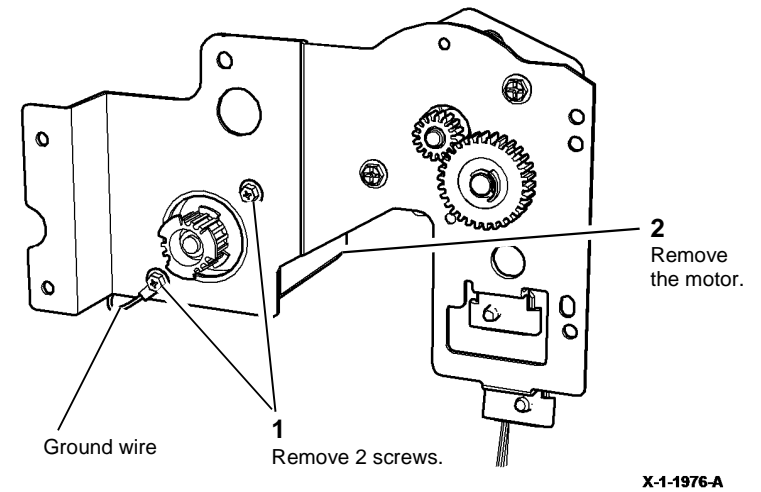


Figure 2 Transport motor removal

Replacement

1. The replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting the screws.
2. Ensure that the ground wire terminal is located under the motor securing screw, [Figure 2](#).

REP 80.41 Tray 6 Takeaway Roller

Parts List on [PL 80.42](#)

Removal



WARNING

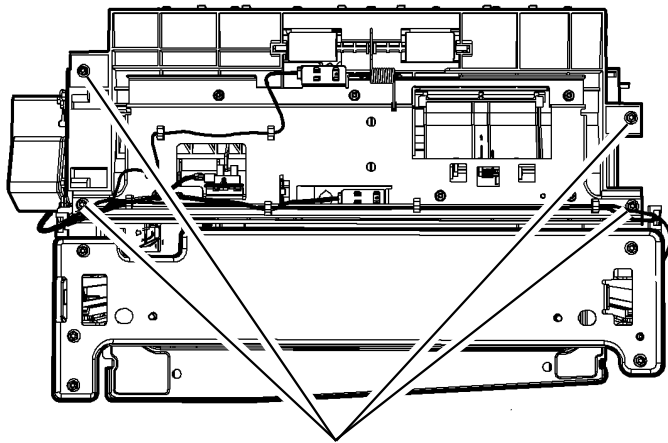
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the rear cover, [PL 75.60 Item 9](#).
2. Remove the top cover, [PL 75.60 Item 10](#).
3. Remove the tray 6 transport drive belt, [REP 80.37](#).
4. Prepare to remove the lower feed assembly, [Figure 1](#).



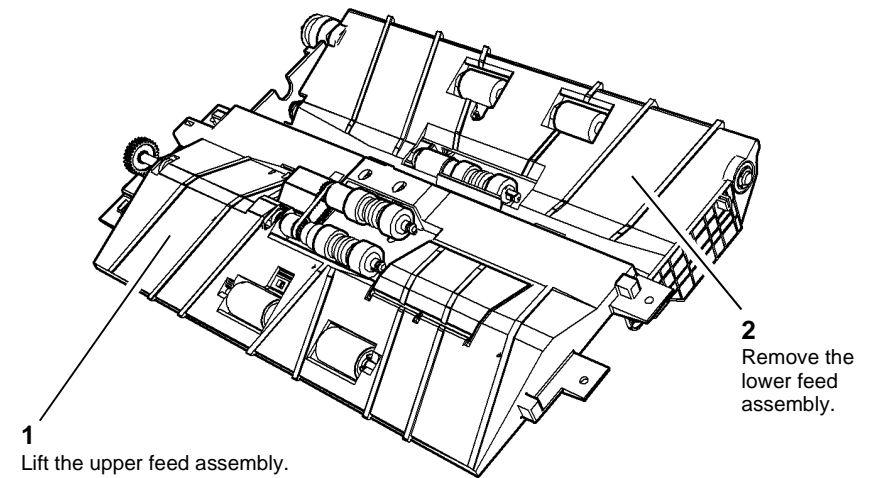
- 1 Remove four screws.

X-1-1977-A

Figure 1 Preparation

5. Loosen the retard shield, [PL 80.42 Item 11](#) retaining nut, refer to [ADJ 70.5](#), [Figure 6](#).

6. Remove the lower feed assembly, [Figure 2](#).



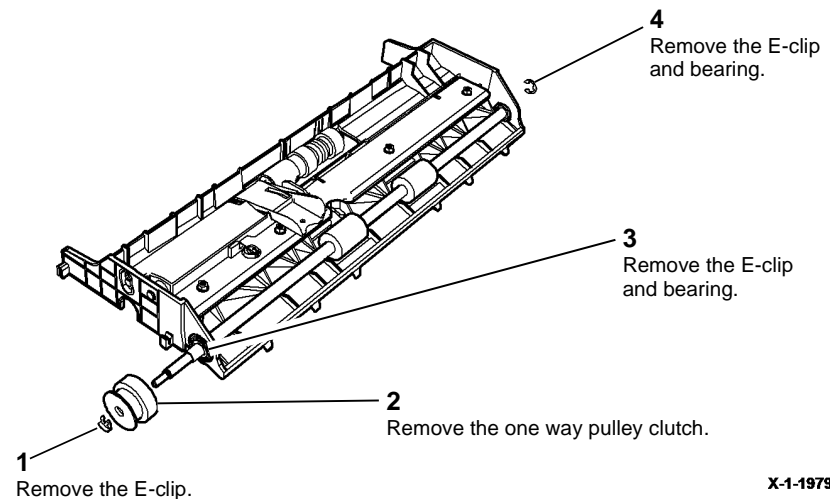
- 1 Lift the upper feed assembly.

- 2 Remove the lower feed assembly.

X-1-1978-A

Figure 2 Lower feed removal

7. Remove components, [Figure 3](#).



- 1 Remove the E-clip.

- 2 Remove the one way pulley clutch.

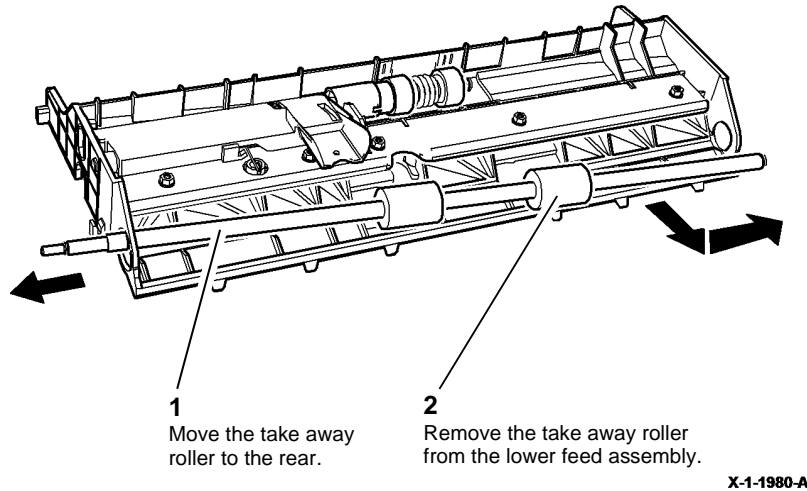
- 3 Remove the E-clip and bearing.

- 4 Remove the E-clip and bearing.

X-1-1979-A

Figure 3 Components removal

8. Remove the takeaway roller, [Figure 4](#).



1 Move the take away roller to the rear.

2 Remove the take away roller from the lower feed assembly.

X-1-1980-A

Figure 4 Takeaway roller removal

Replacement

1. The replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting the screws.
2. Check that the cable routing is correct, [Figure 1](#).
3. Perform [ADJ 70.5](#) Tray 6 Stack Height Sensor and Retard Shield.

REP 80.42 Tray 6 Upper Feeder Assembly

Parts List on [PL 80.40](#)

Removal


WARNING

Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the tray 6 rear cover, [PL 75.60 Item 9](#), front cover, [PL 75.60 Item 1](#) and top cover, [PL 75.60 Item 10](#).
2. Remove the tray 6 transport drive belt, [REP 80.37](#).
3. Disconnect the upper feeder assembly harness, [PL 80.40 Item 15](#), from the interlock switch, [PL 75.60 Item 6](#) and docking interlock switch, [PL 75.64 Item 1](#), and release the harness from the retainers.
4. Disconnect P/J505 and disconnect the harness at the tray down sensor, [PL 75.68 Item 9](#).
5. Release the harness from the retainers around the tray 6 PWB, [PL 75.68 Item 8](#).
6. Remove the upper feeder assembly, (4 screws), refer to [PL 80.40 Item 1](#).

Replacement

Replacement is the reverse of the removal procedure. Refer to [GP 6](#) before refitting screws into plastic components.

REP 90.1 Toner Dispense Module

Parts List on [PL 90.17](#)

Removal

NOTE: A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.

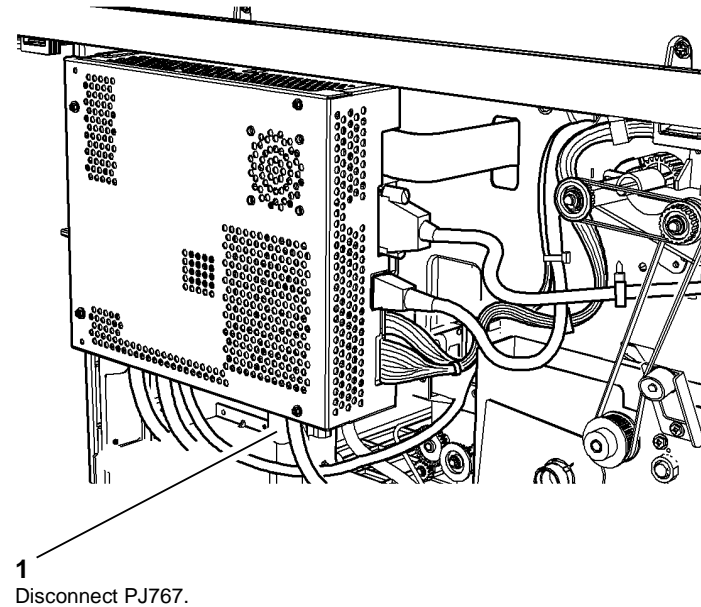


Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the toner cartridge, [PL 90.17 Item 2](#).
2. Remove the print cartridge, [PL 90.17 Item 9](#), then place it in a lightproof bag.
3. Remove the rear cover, [REP 28.2](#).
4. Remove the relevant component:
 - Centre output tray, [REP 10.9](#).
 - Horizontal transport, [REP 10.6](#).
5. Remove the inner machine cover, [PL 28.10 Item 12](#).
6. Disconnect PJ850 from the [SBC PWB](#), [Figure 1](#).



X-1-1315-A

Figure 1 PJ850 disconnection

- Remove the toner dispense module, [Figure 2](#).

NOTE: For clarity, the single board controller module is not shown in [Figure 2](#).

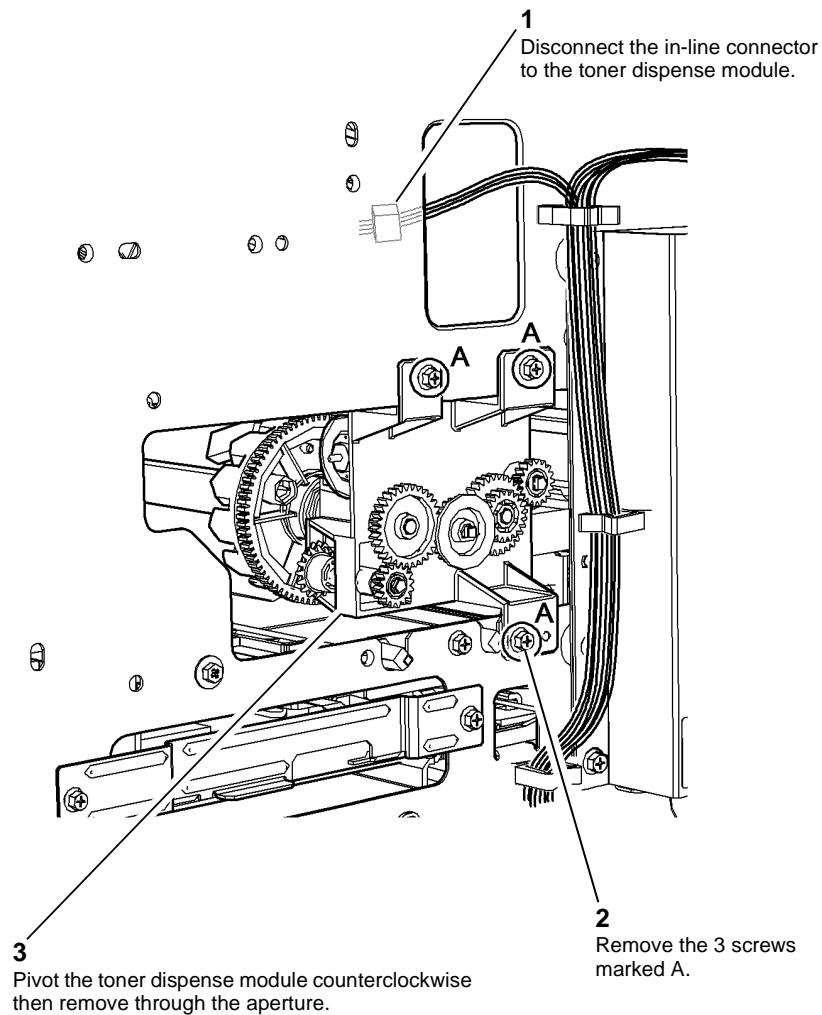


Figure 2 Module removal

Replacement

- The replacement is the reverse of the removal procedure.
- When installing the toner dispense module, ensure the locating pins on the HVPS tray assembly are inserted in the holes in the toner dispense module, [Figure 3](#).

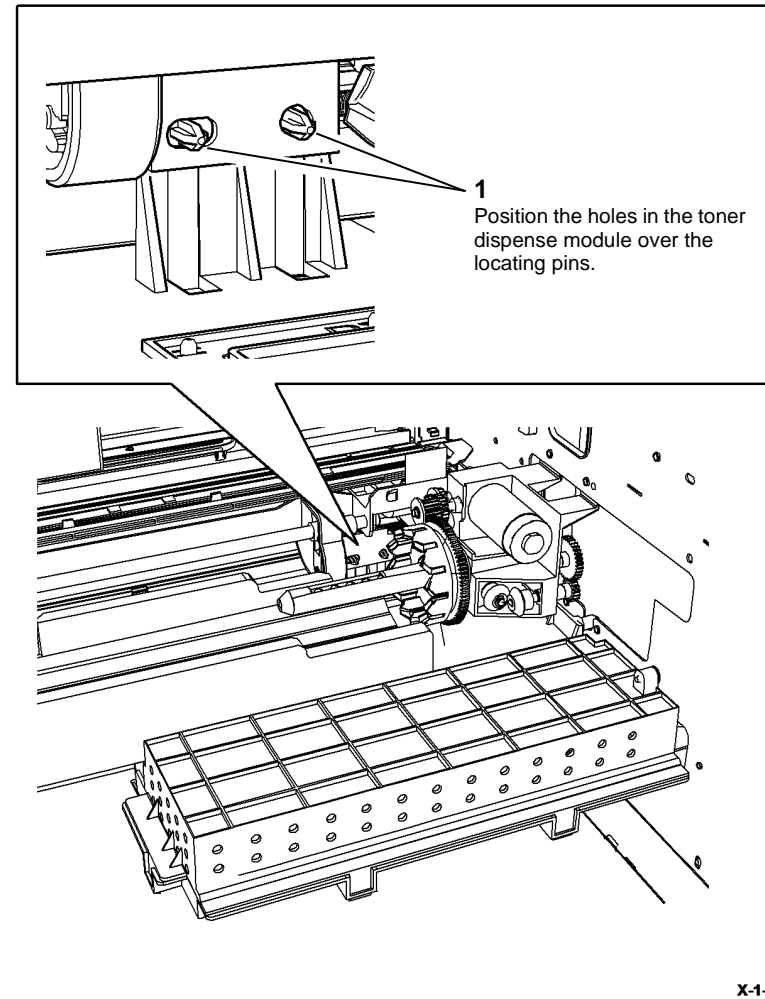


Figure 3 Installation

- Enter **dC330** code 093-045, print cartridge motor. Add the code 093-040, toner cartridge motor. Run the components for 40 seconds.

NOTE: The routine 093-040 times out after 5 seconds. Run the routine 8 times to deliver 40 seconds of dispense.

REP 90.2 Latch Housing Assembly

Parts List on [PL 90.17](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the toner cartridge, [PL 90.17 Item 2](#).
2. Remove the inner front cover, [PL 28.10 Item 10](#).
3. Remove the toner cartridge latch housing, [PL 90.17 Item 4](#).

Replacement

1. The replacement is the reverse of the removal procedure.

REP 90.3 HVPS Tray Assembly

Parts List on [PL 90.10](#)

Removal

NOTE: Removal and replacement videos of this procedure are available on the EDOC. The videos are accessible from the Library menu on the Service Interface.



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.



Take care not to damage the HVPS contacts and when removing or installing the HVPS cover assembly and HVPS tray assembly.

1. Remove the LED print head module, [REP 60.12](#).
2. Remove the HVPS, [REP 1.10](#).
3. Remove the main drive module, [REP 40.1](#).
4. Remove the toner dispense module, [REP 90.1](#).
5. Remove the toner cartridge latch housing, [REP 90.2](#).
6. Un-clip the toner cartridge PWB cover, [PL 90.17 Item 11](#). Remove the toner cartridge PWB, [PL 90.17 Item 12](#). Do not disconnect the PWB from the harness, but unclip the harness from the HVPS top cover and release the harness clip from the frame at the corner of the HVPS top cover. Lay the PWB and harness on the frame base.

7. Remove the print cartridge cooling duct assembly, [Figure 1](#).

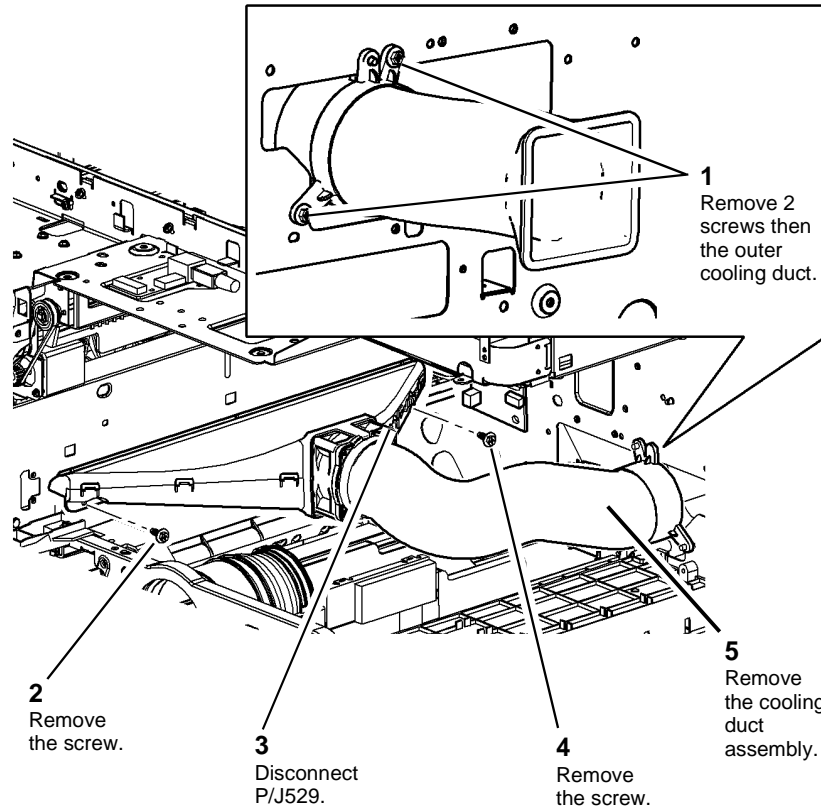


Figure 1 Cooling duct removal

X-1-0216-A

8. Remove the HVPS top cover, [Figure 2](#).

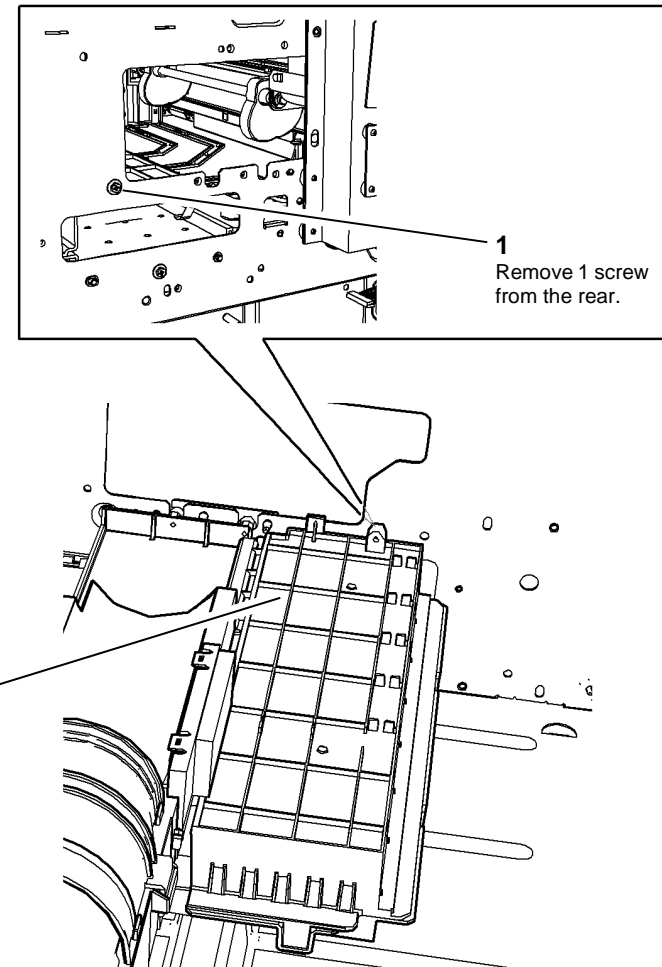


Figure 2 HVPS top cover removal

X-1-1107-A

9. Remove the toner cartridge housing, [Figure 3](#).

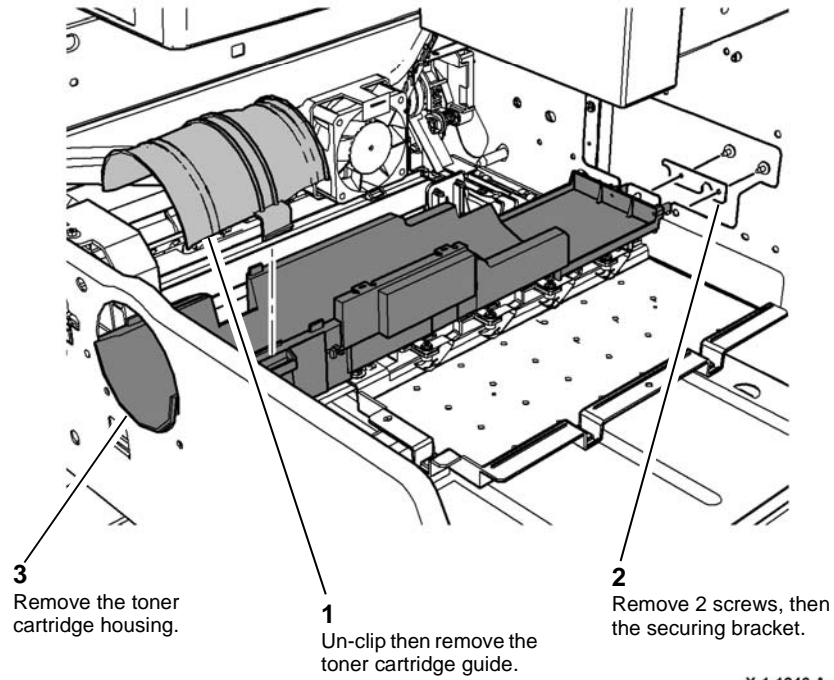


Figure 3 Toner cartridge removal

X-1-1246-A

10. Prepare to remove the HVPS tray assembly, [Figure 4](#).

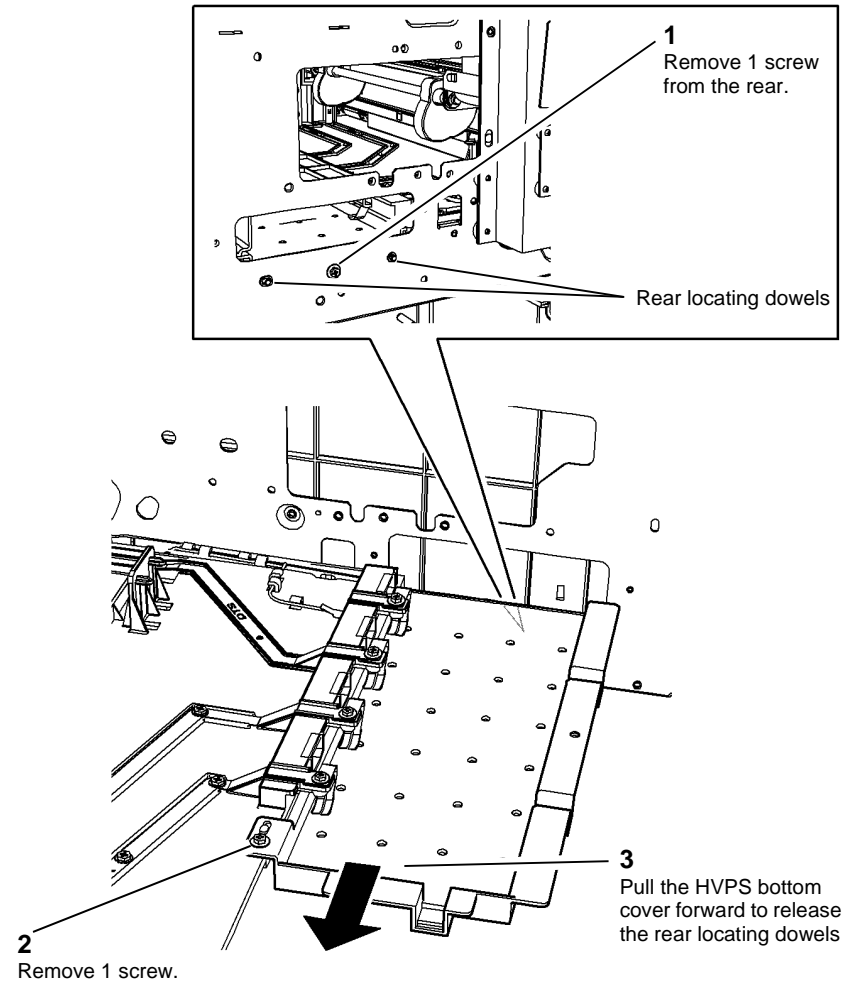
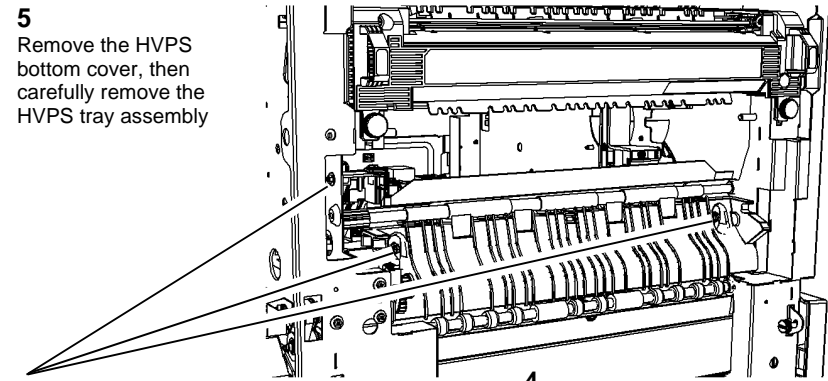


Figure 4 Preparation

X-1-1247-A

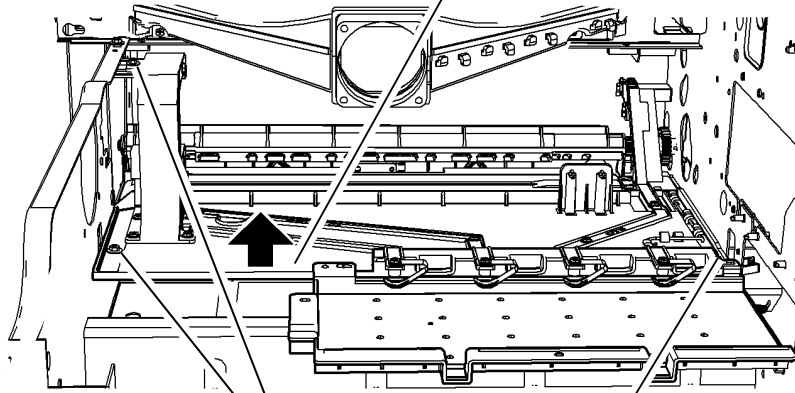
11. Remove HVPS bottom cover and the HVPS tray assembly, [Figure 5](#).

5
Remove the HVPS bottom cover, then carefully remove the HVPS tray assembly



1
Remove 2 screws from the left side and 1 screw from the rear.

4
Raise the right side of the tray to release the HVPS bottom cover.



2
Remove the 2 front screws.

3
Remove the rear screw.

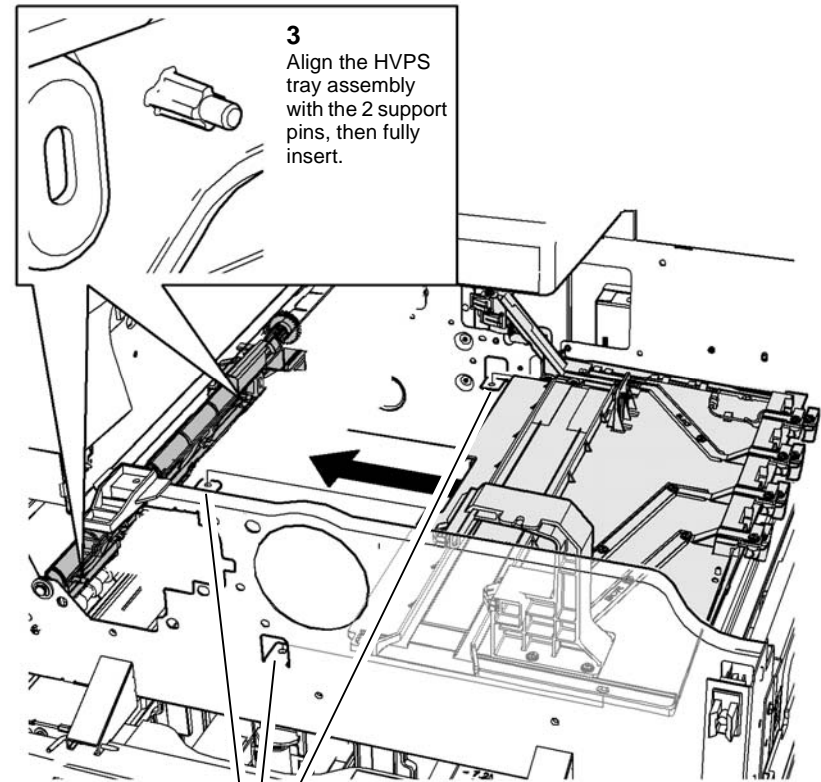
X-1-1108-A

Figure 5 Removal

Replacement

1. Install the HVPS tray assembly, [Figure 6](#).

NOTE: For clarity, the print cartridge fan duct is not shown in [Figure 6](#).



1
Carefully position the HVPS tray assembly in the machine cavity.

2
Move the HVPS tray assembly to the left. Ensure that the HVPS tray assembly is positioned above the tray support lugs.

X-1-1110-A

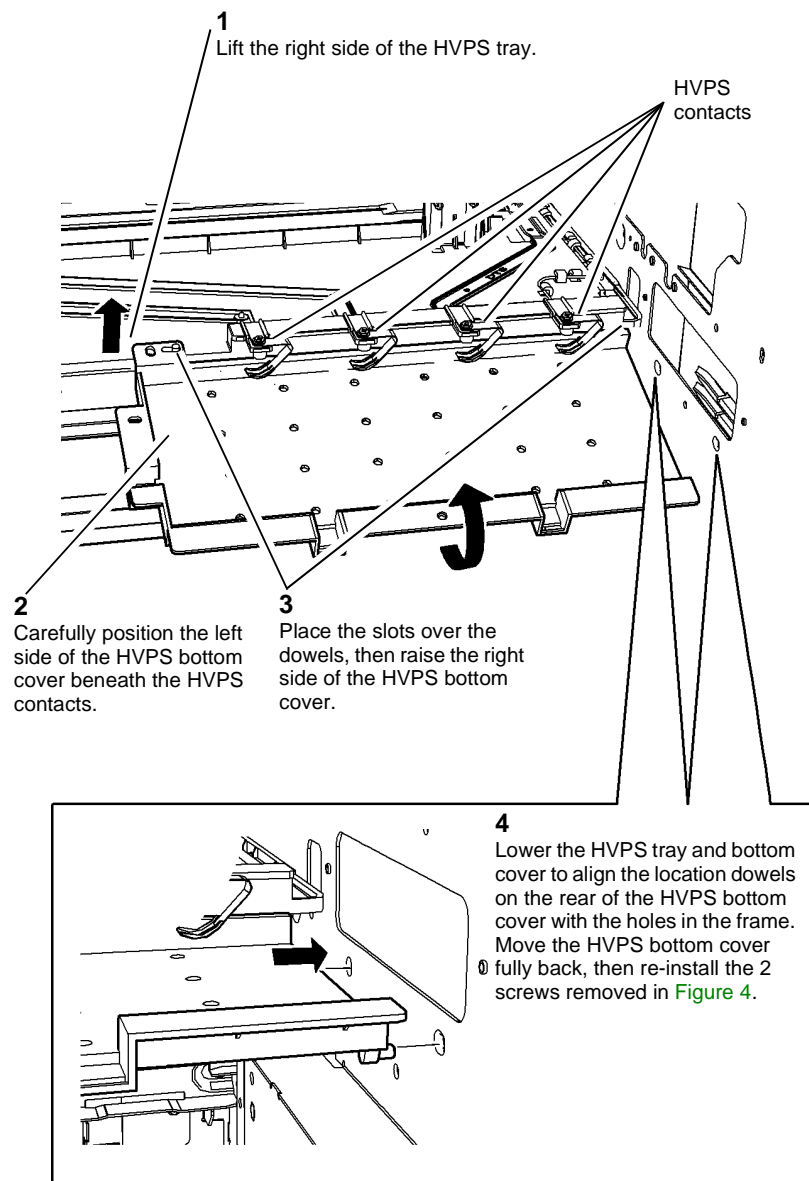
Figure 6 HVPS tray assembly installation

2. Install the HVPS bottom cover, [Figure 7](#).


CAUTION

The short black self tapping screw locates in the rear track support, PL 90.10 Item 10.

3. Install the 6 screws removed in [Figure 5](#).
4. Reverse the removal procedure to install the remaining components.



X-1-1109-A

Figure 7 Bottom cover install

REP 90.4 Environmental Sensors Assembly

Parts List on [PL 80.17](#)

Removal



Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the relevant component:
 - Centre output tray, [REP 10.9](#).
 - Horizontal transport, [REP 10.6](#).
2. Remove the inner machine cover, [PL 28.10 Item 12](#).
3. Remove the environmental sensors PWB, [Figure 1](#).

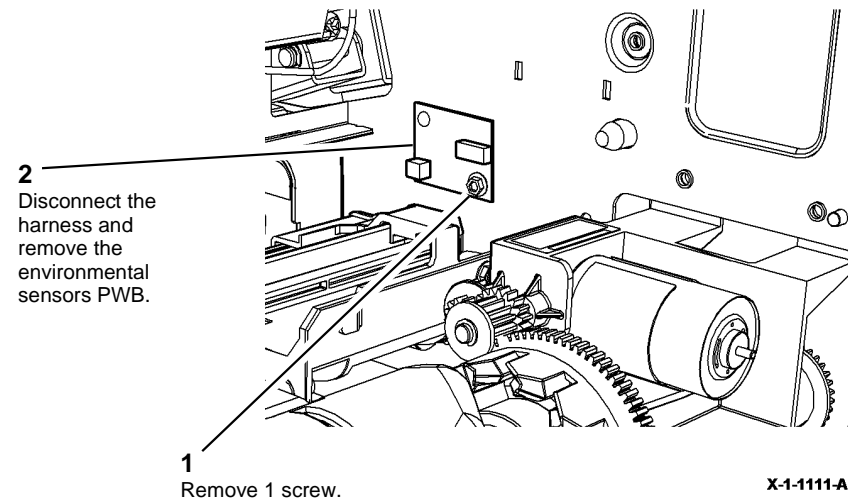


Figure 1 Removal

Replacement

1. The replacement is the reverse of the removal procedure.

ADJ 5.1 SPDH Height

Parts List on [PL 5.10](#) and [PL 60.15](#)

Purpose

To correctly set the distance between the scanner module and the SPDH.

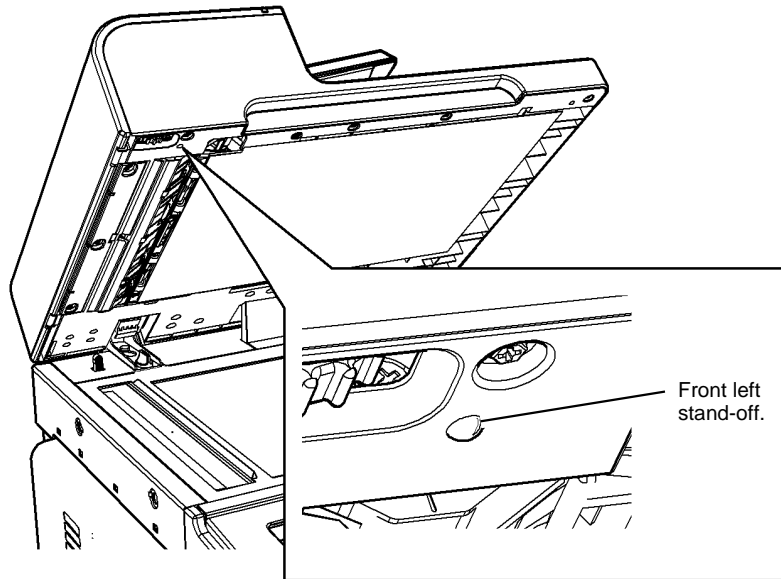
Important

This procedure must be performed in the order that follows:

1. [Left Side Check](#).
2. [Left Side Adjustment](#), if necessary
3. [Right Side Check](#).
4. [Right Side Adjustment](#), if necessary.

Left Side Check

1. Check the gap between the front left stand-off, [Figure 1](#), and the top cover assembly, [PL 60.15 Item 2](#).

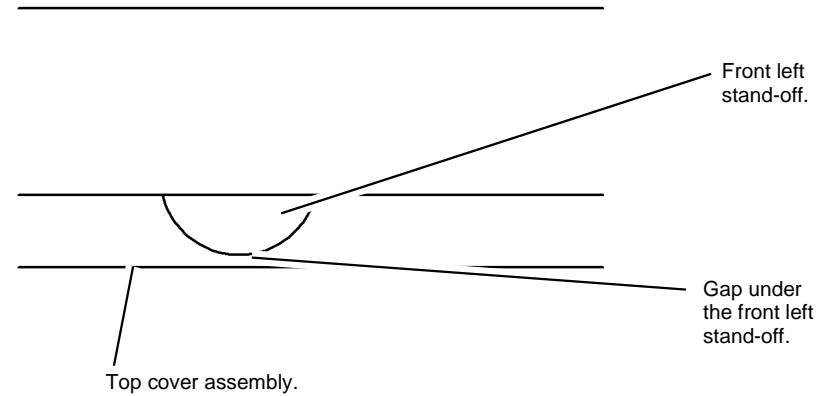


X-1-1931-A

Figure 1 Front left stand-off location

2. Switch the machine on, [GP 14](#).

3. View the front left stand-off gap, [Figure 2](#), in the space between the SPDH and the scanner module. The front left stand-off must just touch the top cover assembly.



X-1-1932-A

Figure 2 Front left stand-off gap

4. If the front left stand-off does not touch the top cover assembly perform the [Left Side Adjustment](#).

Left Side Adjustment

1. The height of the SPDH is adjusted by the screws on the top of the counterbalances. **Only the left counterbalance screw** should be adjusted during the left side adjustment.

NOTE: Adjusting the height of the left side of the SPDH can effect the height of the right side of the SPDH and vise versa. Ensure that the height of both stand-offs is checked at the end of the procedure.

2. Adjust the left counterbalance, [Figure 3](#).

NOTE: It should only be necessary to adjust the height by approximately 1 turn of the adjustment screw. Observe the front left stand-off whilst adjusting the screw. Stop when the stand-off in contact with the document glass frame.

NOTE: If the rear of the SPDH is lowered too far then it will start to lift the front off the document glass frame.

NOTE: If the front of the SPDH is lowered too far then it will start to lift the rear of the SPDH.

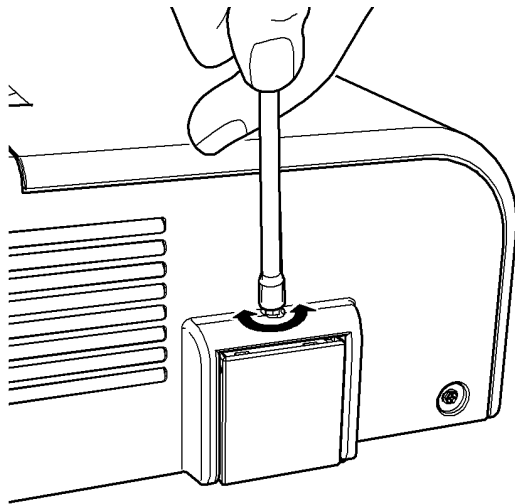


Figure 3 Left side adjustment

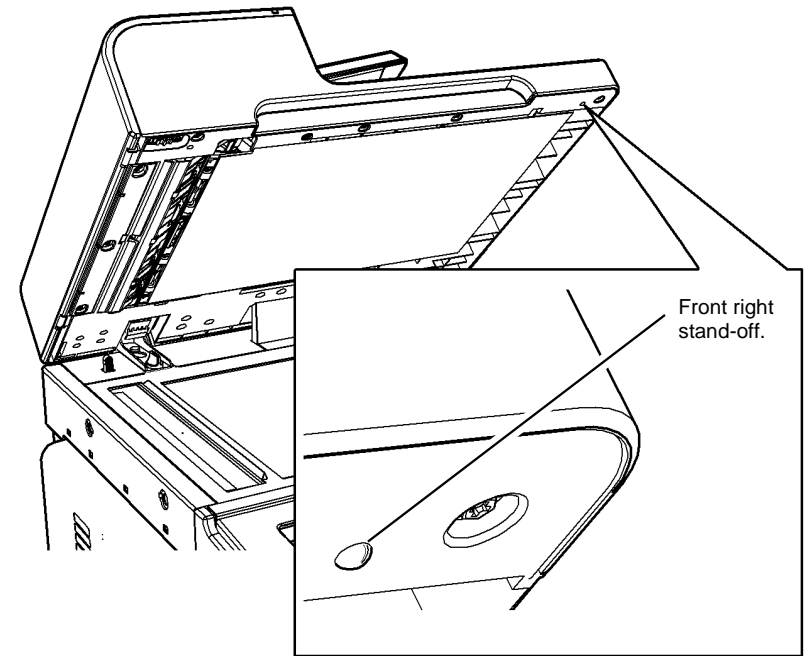
X-1-1933-A

Turn the screw clockwise to lower the front of the SPDH.

Turn the screw counterclockwise to raise the front of the SPDH.

Right Side Check

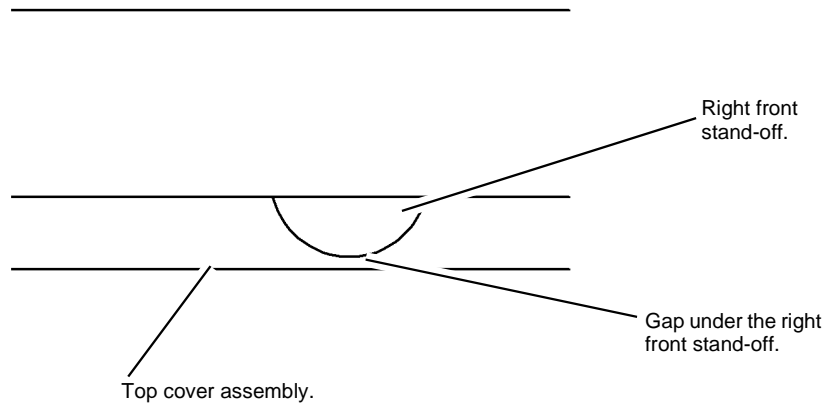
1. Check the gap between the front right stand-off, [Figure 4](#), and the top cover assembly.



X-1-1936-A

Figure 4 Front right stand-off location

- View the front right stand-off gap, [Figure 5](#), in the space between the SPDH and the scanner module. The front right stand-off must just touch the top cover assembly



X-1-1934-A

Figure 5 Front right stand-off gap

- If the front right stand-off does not touch the top cover assembly, perform the [Right Side Adjustment](#).

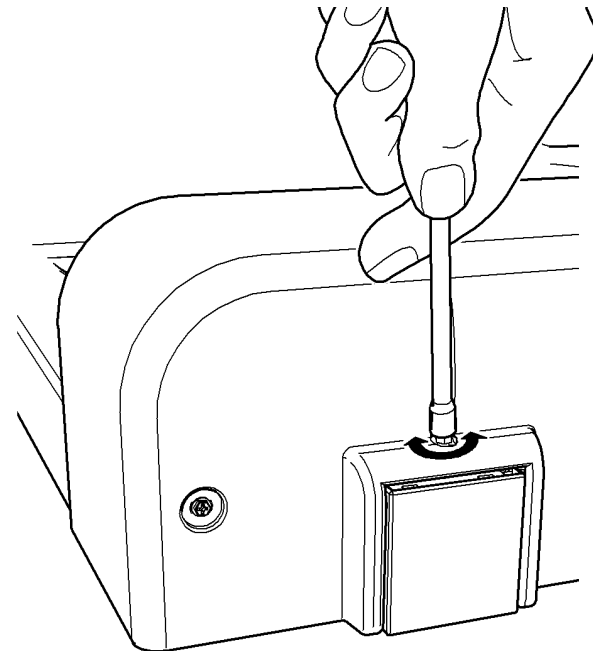
Right Side Adjustment

- The height of the SPDH is adjusted by the screws on the top of the counterbalances. **Only the right counterbalance screw** should be adjusted during the right side adjustment.

NOTE: Adjusting the height of the right side of the SPDH can effect the height of the left side of the SPDH and vice versa. Ensure that the height of both stand-offs is checked at the end of the procedure.

- [Figure 6](#), adjust the right counterbalance.

NOTE: It should only be necessary to adjust the height by approximately 1 turn of the adjustment screw. Observe the stand-off whilst adjusting the screw. Stop when the front right stand-off is in contact with the top cover assembly.



Turn the screw counterclockwise to raise the front of the SPDH.

Turn the screw clockwise to lower the front of the SPDH.

X-1-1935-A

Figure 6 Right side adjustment

- Check the height of both stand-offs. Re-adjust the counterbalances if necessary. If mis-registration is found after the SPDH is set to the correct height, perform [ADJ 60.3 IIT Registration, Magnification and Calibration](#).

ADJ 5.2 SPDH Skew

Parts List on [PL 5.10](#)

Purpose

To correct document feed skew induced by the SPDH.

Preparation

Perform the steps that follow:

1. Clean the CVT glass. Refer to [ADJ 5.3 SPDH Cleaning Procedure](#).
2. Check that the document width guides are adjusted correctly.
3. Ensure that the SPDH is set to the correct height. Refer to [ADJ 5.1 SPDH Height](#).
4. Check the document path for obstructions or foreign objects.
5. Perform the [Skew Check](#).

Skew Check

1. Print internal test pattern 16 (IQAF TP 16 Large Squares), refer to [dC612](#). Ensure the test pattern is completely free of skew.
2. Use the SPDH to make 5 side 1 copies of the test pattern, by placing the test pattern face up in the SPDH document tray.
3. Use the SPDH to make 5 side 2 copies of the test pattern, by placing the test pattern face down in the SPDH document tray and selecting duplex copies.

NOTE: Skew is always measured on the lead edge, irrespective of paper orientation.

4. Check the skew. Refer to [IQS 5 Skew](#).
5. If necessary, perform the [Side 1 Skew Adjustment](#) and/or the [Side 2 Skew Adjustment](#).

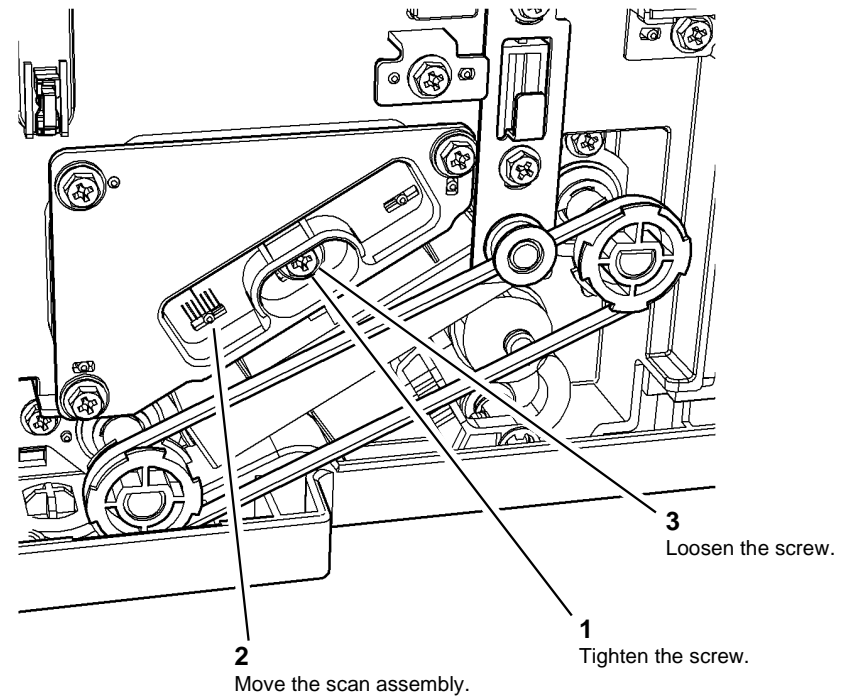
NOTE: If skew requires adjustment on both side 1 and side 2, the side 2 skew must be adjusted first.

Side 2 Skew Adjustment

1. Remove 4 screws then remove the SPDH front cover, [PL 5.10 Item 17](#).
2. Adjust the side 2 scan assembly position, [Figure 1](#).

NOTE: The notes that follow apply to the adjustment:

- One graduation of the scale will move the skew by 0.6mm on a A4 LEF sheet (0.024 inch on a 8.5 x 11 inch LEF sheet).
- If the indicator is moved upward on the scale, the image will be rotated clockwise.
- If the indicator is moved downward on the scale, the image will be rotated counter-clockwise.

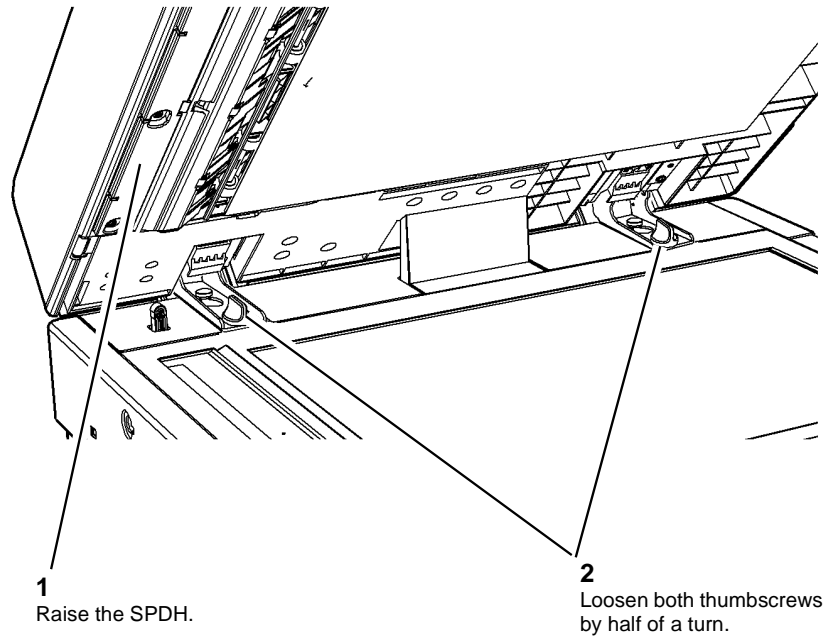


X-1-1938-A

Figure 1 Adjusting the scan assembly position

Side 1 Skew Adjustment

1. Prepare to adjust the side 1 skew, [Figure 2](#).

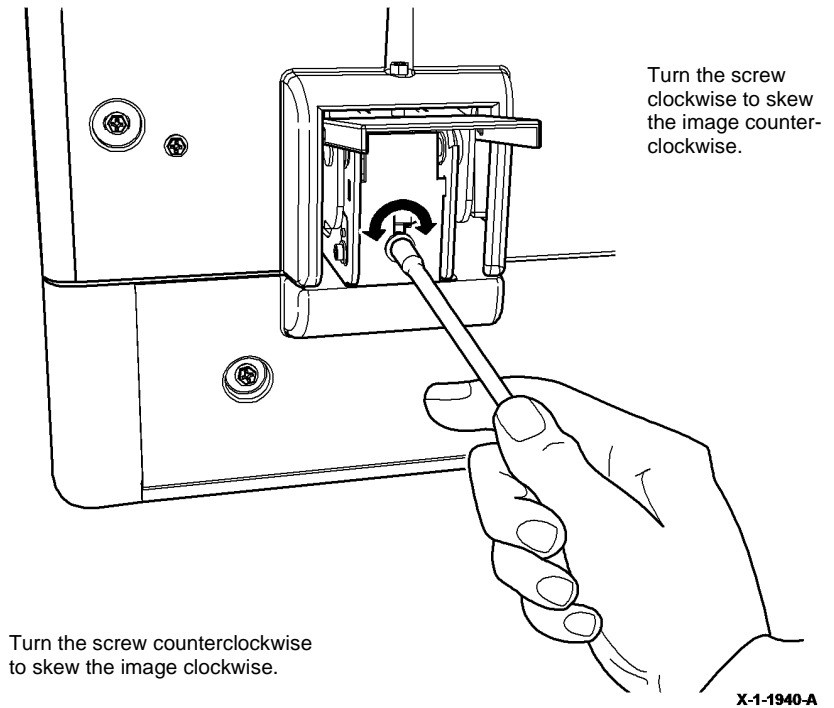


X-1-1939-A

Figure 2 Preparation

2. Adjust the side 1 skew, [Figure 3](#).

NOTE: Approximately 3 turns of the adjustment screw will move the skew by 1mm on a A4 LEF sheet (0.04 inch on a 8.5 x 11 inch LEF sheet).



X-1-1940-A

Figure 3 Side 1 skew adjustment

3. Tighten the thumbscrews.
4. Perform the [Skew Check](#) again. If necessary repeat the adjustments.
5. When the SPDH skew is within specification, perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

ADJ 5.3 SPDH Cleaning Procedure

Parts List on [PL 5.10](#)

Purpose

This procedure describes how to clean the SPDH. The wear of the feed rolls, paper dust and dirt in the environment can cause copy quality defects.

Adjustment



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Use a brush to clean length sensor 1, [PL 5.30 Item 5](#), and length sensor 2, [PL 5.30 Item 9](#).
2. Open the SPDH top cover.
3. Use a dry micro fiber wiper, [PL 26.10 Item 13](#), or brush to clean the document path area, top and bottom. Remove all loose material.
4. Clean the upper document path idlers and takeaway roll assembly [PL 5.17 Item 1](#), with a micro fiber wiper, [PL 26.10 Item 13](#), and water.
5. Remove the feed, nudger and retard rolls, [REP 5.2](#) and [REP 5.3](#). Clean the 3 rolls and the retard pad, [PL 5.30 Item 8](#), with a micro fiber wiper, [PL 26.10 Item 13](#), and water. Use a brush to clean the paper dust from the feed assembly and from the area around the separation assembly. Re-install the 3 roll assemblies.
6. Leave the top cover open. Raise the SPDH assembly.
7. Remove the lower pre scan roller assembly, [REP 5.6](#). Clean the 4 idler rolls with a micro fiber wiper, [PL 26.10 Item 13](#), and water.
8. Rotate the exit jam clearance knob, [PL 5.17 Item 5](#). Clean the pre scan roll assembly, [PL 5.17 Item 4](#), and the lower document path idlers with a micro fiber wiper, [PL 5.10 Item 13](#) and water.
9. Clean the document pad, [PL 5.10 Item 3](#), with a micro fiber wiper, [PL 26.10 Item 13](#), and water.
10. Lower the SPDH assembly.



CAUTION

Take care when cleaning the under side of the input tray. Do not damage the re-stack arm, [PL 5.30 Item 7](#).

11. Clean the input tray and the exit area below the input tray with a micro fiber wiper, [PL 26.10 Item 13](#), and antistatic fluid, [PL 26.10 Item 19](#).
12. Clean the CVT glass and the document glass. Refer to [ADJ 60.1](#) Scanner Cleaning Procedure.

ADJ 12.1-110 2K LCSS Bin 1 Level

Parts List on [PL 12.10](#)

Purpose

To ensure bin 1 is level, and achieve the best stacking performance.

Adjustment



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the rear cover and bin 1 elevator motor. Refer to [REP 12.5-110](#).
2. Move bin 1 to the lowest position.
3. Remove the rear belt clamp, [PL 12.30 Item 2](#), ensure the bin is fully down on both sides. Install the rear belt clamp.
4. Re-install the bin 1 elevator motor. Refer to [REP 12.5-110](#).
5. Switch on the machine, [GP 14](#).
6. Enter [dC330](#) code 012-242, bin 1 elevator motor cycle. Check that bin 1 cycles without giving any fault indications.

ADJ 12.2-110 Machine to 2K LCSS Alignment

Parts List on [PL 12.10](#)

Purpose

To correctly align the 2K LCSS for the reliable transfer of paper from the machine.

Adjustment



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Turn the hand wheels above the castors below bin 1 to adjust the alignment:

- Turn both hand wheels in the same direction to adjust the vertical alignment between the 2K LCSS and the machine. The 2K LCSS should be in vertical alignment with the machine, viewed from the front and rear, [Figure 1](#).

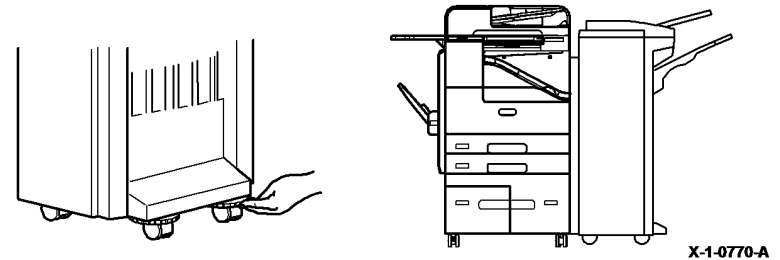


Figure 1 Machine to 2K LCSS alignment

ADJ 12.3-110 Motor Drive Belt Tensioning

Parts List on PL 12.40

Purpose

To set the tension of directly or indirectly driven belts that are tensioned by a spring attached to the motor.

Check

1. The shafts and pulleys are installed and properly located.
2. The drive belt is undamaged and correctly routed.
3. The adjustable motor or tensioning pulley bracket is positioned with fastening screws not tightened fully.

NOTE: For motors with pivoted brackets, the pivot screw must be fitted and tightened.

4. The tensioning spring is fitted between the bracket and frame locating point.

Adjustment

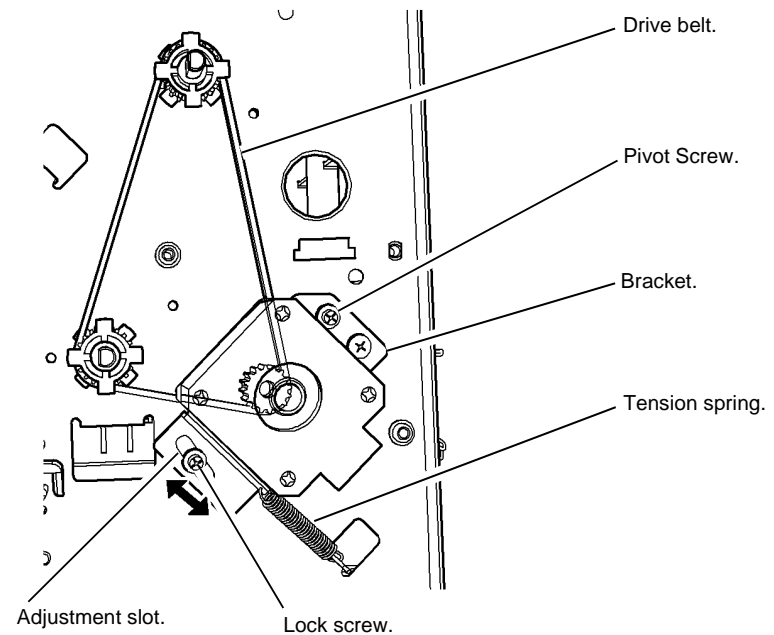


WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Figure 1 shows a typical arrangement. Press the belt midway between pulleys and check that the bracket moves to stretch the spring. Slacken the bracket screws if necessary. Allow the spring to pull the bracket and tension the drive belt, then tighten the bracket screws.

NOTE: Check the belt condition and routing if the tension spring is not extended, or the locking screw is at the end of the bracket adjustment slot.



Typical belt tensioning arrangement.

X-1-0773-A

Figure 1 Drive Belt Tensioning

ADJ 12.1-150 LVF BM Bin 1 Level

Parts List on [PL 12.320](#) and [PL 12.340](#)

Purpose

To ensure bin 1 is level, and achieve the best stacking performance.

Check

Move bin 1 to the lowest position by using the [dC330](#) codes that follow:

- 012-059 Elevator Motor Up.
- 012-060 Elevator Motor Down.
- 012-241 Bin 1 Elevator Motor Home.
- 012-242, Bin 1 Elevator Motor Cycle.

Check that the tray is level.

Enter [dC330](#), code 012-242, Bin 1 Elevator Motor Cycle. Check that bin 1 cycles without giving any fault indications. If necessary, perform the adjustment.

Adjustment



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the stacker tray drive and motor assembly, refer to [REP 12.5-150](#).
2. Move bin 1 to the lowest position.
3. Slacken the screw on the rear and front belt clamps, [PL 12.340 Item 2](#) and [PL 12.340 Item 8](#). Adjust the position they sit on the belts to level the tray. Lock the clamps.
4. Re-install the stacker tray drive and motor assembly refer to [REP 12.5-150](#).
5. Switch on the machine, [GP 14](#).
6. Enter [dC330](#) code 012-242, Bin 1 Elevator Motor Cycle. Check that bin 1 cycles without giving any fault indications.

ADJ 12.2-150 Machine to LVF BM Alignment

Parts List on [PL 12.320](#)

Purpose

To correctly align the LVF BM to achieve reliable transfer of paper from the machine to the LVF BM.

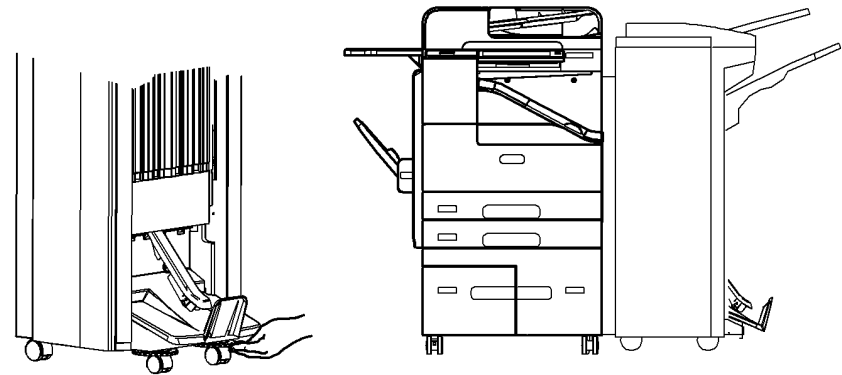
Adjustment



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. [Figure 1](#), turn both right hand wheels in the same direction to adjust the vertical alignment between the LVF BM and the machine viewed from the front or rear.



X-1-0774-A

Figure 1 Machine to LVF BM alignment

ADJ 12.3-150 Motor Drive Belt Tensioning

Purpose

To set the tension of directly or indirectly driven belts that are tensioned by a spring attached to the motor or tensioning pulley.

Check

1. The shafts and pulleys are installed and properly located.
2. The drive belt is undamaged and correctly routed.
3. The adjustable motor or tensioning pulley bracket is positioned with fastening screws tightened fully.

NOTE: For motors with pivoted brackets, the pivot screw must be fitted and tightened.

4. The tensioning spring is fitted between the bracket and frame locating point.

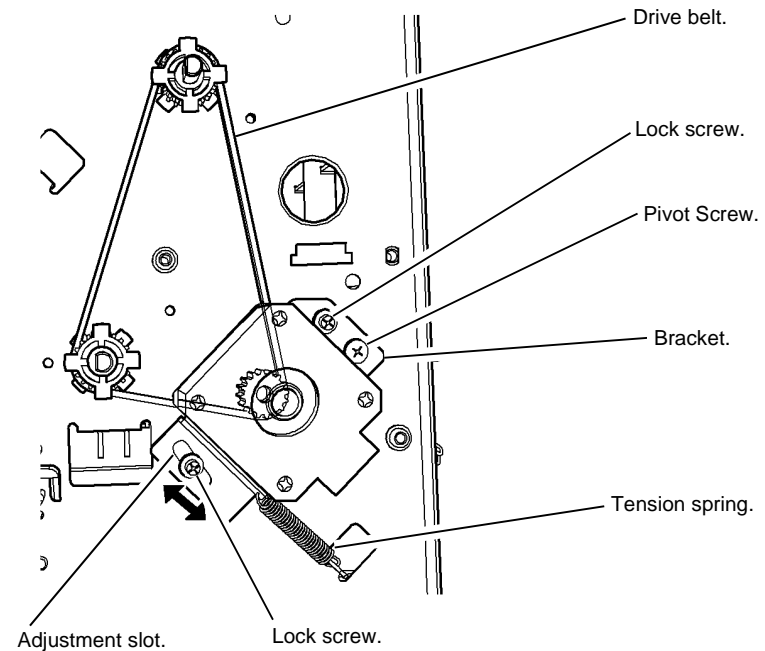
Adjustment



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Figure 1 shows a typical arrangement. Slacken the bracket lock screws. Press the belt midway between pulleys and check that the bracket moves and returns by the spring pull.
2. Release the belt and allow the spring to pull the bracket and tension the drive belt then tighten the lock screws.

NOTE: Check the belt condition and routing if the tension spring is not extended or the locking screw is at the end of the bracket adjustment slot.



Typical belt tensioning arrangement.

X-1-0777-A

Figure 1 Drive belt tensioning

ADJ 12.4-150 Booklet Crease Position

Purpose

To set the crease position of the booklet in relation to the centre of the booklet sheets.

Check

1. Run a copy job of 3 stapled 4 sheet booklets.
2. Observe the position of the crease in relation to the open end of the booklet. The fold should be central, so that the open ends of the booklet pages are equal from the fold. If necessary perform the adjustment.

Adjustment

1. Perform the steps that follow:
 - a. Enter **dC131**.
 - b. Select 712-101.
 - c. Select Read/Write.
 - d. Enter the new value to correct the error found during the check.

NOTE: Increasing the value increases the width of the top sheet of the booklet (moves the fold away from the left edge). Decreasing the value decreases the width of the top sheet of the booklet (moves the fold towards the left edge). 1 step = 0.1mm.

- e. Select Save, then OK.
2. Select Save, then select OK.
 3. When the crease position is correct, switch the machine off then on, **GP 14**.
 4. Record the new NVM value on the LVF BM NVM label.

ADJ 12.5-150 Booklet Staple Position

Purpose

To set the position of the staples so that they are positioned on the fold of the booklet.

Check

1. Run a copy job of 3 stapled 4 sheet booklets.
2. Observe the position of the staple in relation to the fold of the booklet. The staple should be positioned in the middle of the fold. If necessary perform the adjustment.

Adjustment

1. Perform the steps that follow:
 - a. Enter **dC131**.
 - b. Select 712-100.
 - c. Select Read/Write.
 - d. Enter the new value to correct the error found during the check.

NOTE: Increasing the value moves the staple position toward the left edge of the top sheet. Decreasing the value moves the staple position away from the left edge of the top sheet. 1 step = 0.1mm.

- e. Select Save, then OK.
2. Select Save, then select OK.
 3. Repeat the Check to ensure the staple position is correct.
 4. When the staple position is correct, switch the machine off then on, **GP 14**.
 5. Record the new NVM value on the LVF BM NVM label.
 6. If the staples are not correctly clinched, perform **ADJ 12.6-150 Booklet Stapler Anvil Position - Front**, or **ADJ 12.7-150 Booklet Stapler Anvil Position - Rear** as necessary.

ADJ 12.6-150 Booklet Stapler Anvil Position - Front

Purpose

To set the position of the BM staple head assembly so that it is correctly aligned with the front BM staple cartridge, to give correctly clinched staples.

Check

1. Run a copy job of 3 stapled 4 sheet booklets.
2. Observe the condition of the staple legs. Both staple legs should be formed to the same shape and by the same amount.
3. If the staple legs are not correctly clinched, perform the adjustment.

Adjustment



CAUTION

Do not enter NVM values of less than 6 or greater than 14. NVM values outside of these values may cause machine damage.

1. Perform the steps that follow:
 - a. Enter **dC131**.
 - b. Select 712-102.
 - c. Select Read/Write.
 - d. Enter the new value to correct the error found during the check.
 - If the lesser formed leg is towards the front, move the BM staple head assembly towards the rear (decrease the NVM value).
 - If the lesser formed leg is towards the rear, move the BM staple head assembly towards the front (increase the NVM value).

NOTE: Increasing the value will move the BM staple head assembly towards the front. Decreasing the value will move the BM staple head towards the rear. 1 step = 0.2666mm.

- e. Select Save, then OK.
2. Select Save, then select OK.
 3. Repeat the Check to ensure the staple clinching is correct.
 4. When the staple clinching is correct, switch the machine off then on, **GP 14**.
 5. Record the new NVM value on the LVF BM NVM label.

ADJ 12.7-150 Booklet Stapler Anvil Position - Rear

Purpose

To set the position of the BM staple head assembly so that it is correctly aligned with the rear BM staple cartridge, to give correctly clinched staples.

Check

1. Run a copy job of 3 stapled 4 sheet booklets.
2. Observe the condition of the staple legs. Both staple legs should be formed to the same shape and by the same amount.
3. If the staple legs are not correctly clinched, perform the adjustment.

Adjustment



CAUTION

Do not enter NVM values of less than 6 or greater than 14. NVM values outside of these values may cause machine damage.

1. Perform the steps that follow:
 - a. Enter **dC131**.
 - b. Select 712-103.
 - c. Select Read/Write.
 - d. Enter the new value to correct the error found during the check.
 - If the lesser formed leg is towards the front, move the BM staple head assembly towards the rear (decrease the NVM value).
 - If the lesser formed leg is towards the rear, move the BM staple head assembly towards the front (increase the NVM value).

NOTE: Increasing the value will move the BM staple head assembly towards the front. Decreasing the value will move the BM staple head towards the rear. 1 step = 0.2666mm.

- e. Select Save, then OK.
2. Select Save, then select OK.
 3. Repeat the Check to ensure the staple clinching is correct.
 4. When the staple clinching is correct, switch the machine off then on, **GP 14**.
 5. Record the new NVM value on the LVF BM NVM label.

ADJ 12.8-150 Booklet Skew

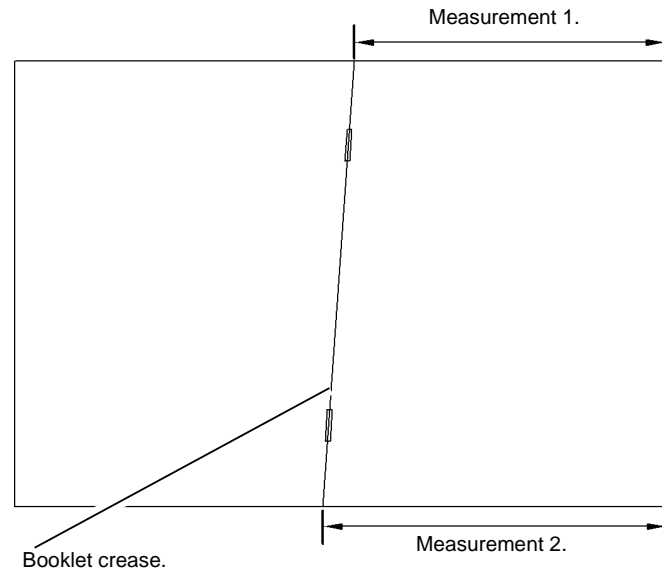
Purpose

To eliminate skew from the booklet crease by adjusting the position of the back stop assembly.

Check

1. Run a copy job of 3 stapled 4 sheet booklets.
2. Open out the booklet at the centre page and press it onto a flat surface. Measure the misalignment of the open side edges of the booklet, [Figure 1](#).

The amount of skew is the difference between the two measurements.



X-1-1412-A

Figure 1 Booklet skew

3. If the booklet has skew greater than given in [Table 1](#), perform the adjustment.

Table 1 Booklet crease skew

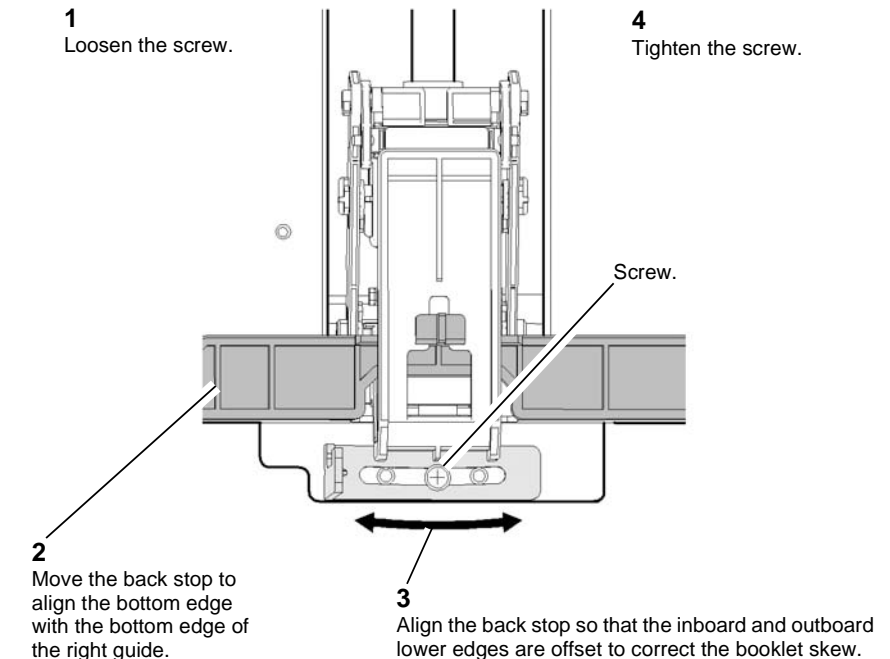
	Paper size	4 sheet booklet	15 sheet booklet
95% of booklets	A4/8.5x11 inch	1.5mm	2.0mm
	8.5x14 inch	1.5mm	2.0mm
	A3	2.0mm	2.5mm
	11x17 inch	1.5mm	2.0mm

Table 1 Booklet crease skew

	Paper size	4 sheet booklet	15 sheet booklet
Worst 5% booklets	A4/8.5x11 inch	2.0mm	3.0mm
	8.5x14 inch	2.0mm	3.0mm
	A3	2.5mm	3.5mm
	11x17 inch	2.0mm	3.0mm

Adjustment

1. Perform [REP 12.19-150](#) steps 1 to 7 to uncover the back stop right guide assembly.
2. [Figure 2](#), adjust the position of the back stop.



X-1-1413-A

Figure 2 Back stop adjustment

3. Re-assemble the removed components, except for the covers.
4. Run a copy job of 3 stapled 4 sheet booklets.
5. Open out the booklet at the centre page and press it onto a flat surface. Measure the misalignment of the open side edges of the booklet, [Figure 1](#). If the booklet skew is still outside of the tolerance, repeat the adjustment.
6. When the skew is within tolerance, re-install the covers.

ADJ 12.1-171 Machine to HVF/HVF BM, HVF BM to Tri-Folder Alignment

Purpose

To correctly align the HVF/HVF BM to achieve reliable transfer of paper from the machine to the output tray.

To correctly align the tri-folder, to achieve reliable transfer of paper from the HVF BM to the output tray.

Check

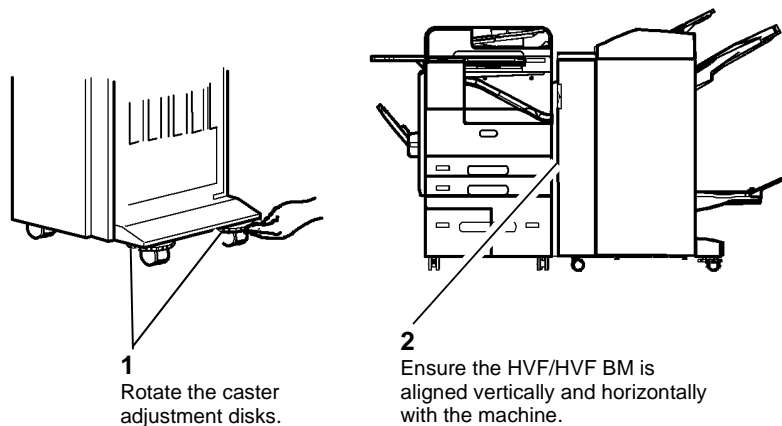
- Ensure the HVF/HVF BM is aligned both vertically and horizontally with the machine. If necessary perform the adjustment, [Figure 1](#).
- Ensure the Tri-folder is aligned vertically and horizontally with the HVF/HVF BM. If necessary perform the adjustment, [Figure 2](#).

Adjustment



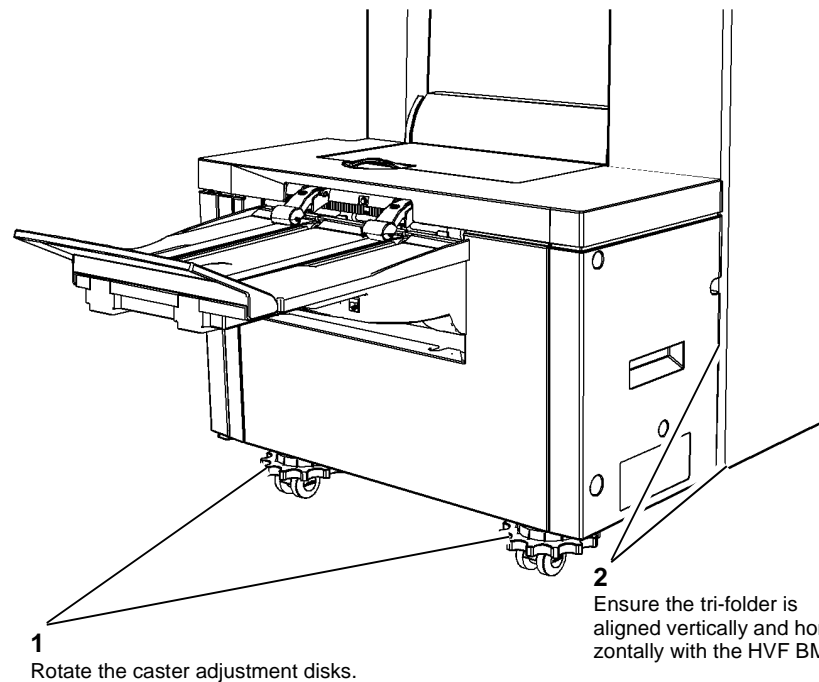
WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



X-1-0778-A

Figure 1 Machine to HVF BM alignment



X-1-0779-A

Figure 2 Tri-folder to HVF BM alignment

ADJ 12.2-171 Tri-Folder Paper Settings

Purpose

The purpose of the procedure is to place the fold in the correct position on 8.5 x 11 inch and A4 paper.

Check

1. Ensure that the tri-folder is at the same height as the HVF, [ADJ 12.1-171](#).
2. Run a copy job 4 sheets and check that the folds are in the correct place.
3. The paper should be folded into three equal parts and the folds parallel to the edge of the paper. If necessary perform the adjustment.

Adjustment

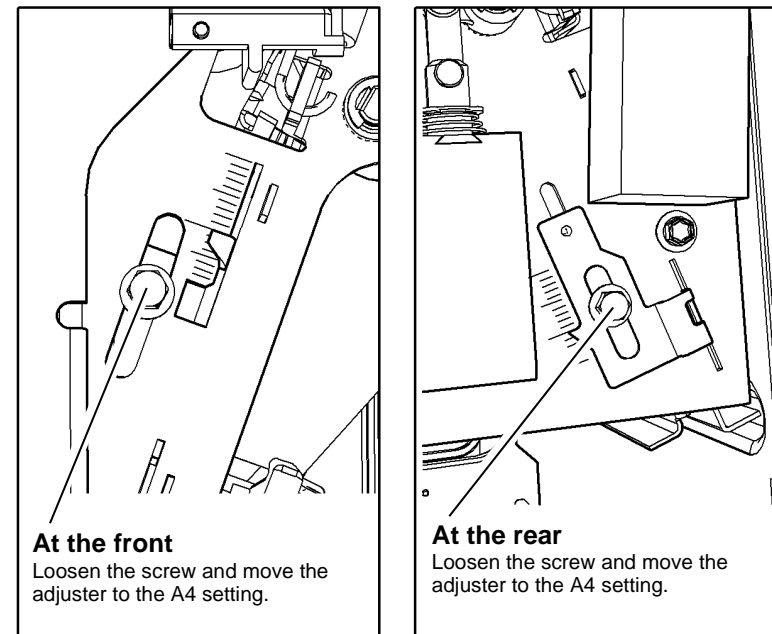


WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the front door, [PL 12.200 Item 2](#).
2. Remove the front cover, [PL 12.200 Item 12](#).
3. Remove the rear cover, [PL 12.200 Item 3](#).
4. Set the folder to the appropriate paper size:
 - To set the folder for A4 paper, [Figure 1](#).
 - To set the folder for 8.5 x 11 inch paper, [Figure 2](#).

NOTE: Do not over loosen the adjuster screws. The adjusters can detach from the backstop. Make sure the position of the backstop changes when the adjusters are moved.



X-1-0780-A

Figure 1 A4 paper setting

ADJ 12.3-171 Stapler Anvil Alignment

Parts List on [PL 12.185](#)

Purpose

To ensure the correct alignment of the stapler anvil to the stapler throat.

Special Tools Required

Stapler alignment tool, supplied with the HVF BM, located on the left of the BM frame.

NOTE: This procedure illustrates the front stapler. The procedure for adjusting the rear stapler is identical.

Adjustment

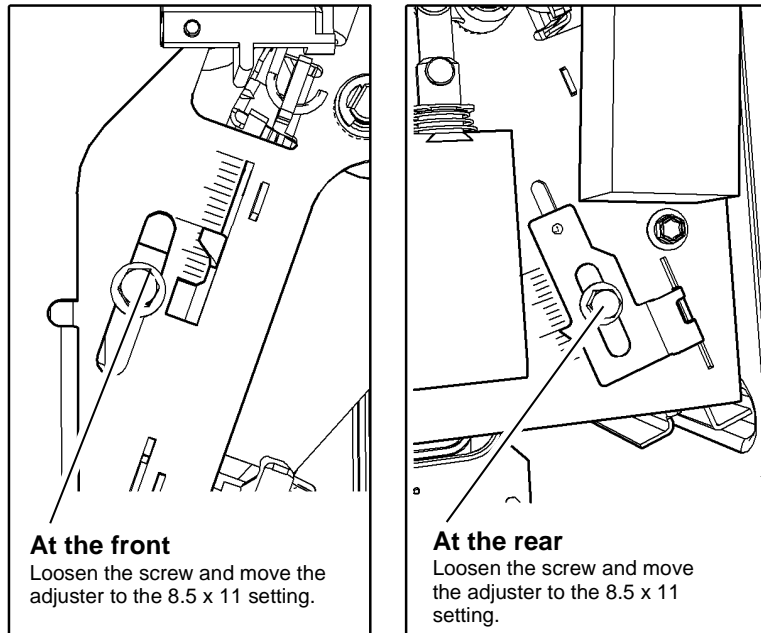

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.


WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. To improve the access to the two clamp screws for the anvil, remove the tamper assembly, [REP 12.30-171](#).
2. Fully pull out the BM module. Remove the stapler covers, one screw on each. Pull the stapler bracket handle and swing open the stapler bracket.



X-1-0781-A

Figure 2 8.5 x 11 inch paper setting

5. Ensure the front door interlock switch is cheated, [PL 12.115 Item 28](#). Run a four sheet C fold and Z fold copy job. Check that the copies are folded into three approximately equal parts, with the folds parallel to the edge of the paper.
6. Check the C and Z folded copies meet the customer requirements. If necessary make fine adjustments to the position of the folds. [ADJ 12.12-171 Tri-Folder Fold Adjustment](#).

3. **Figure 1**, insert the alignment tool.

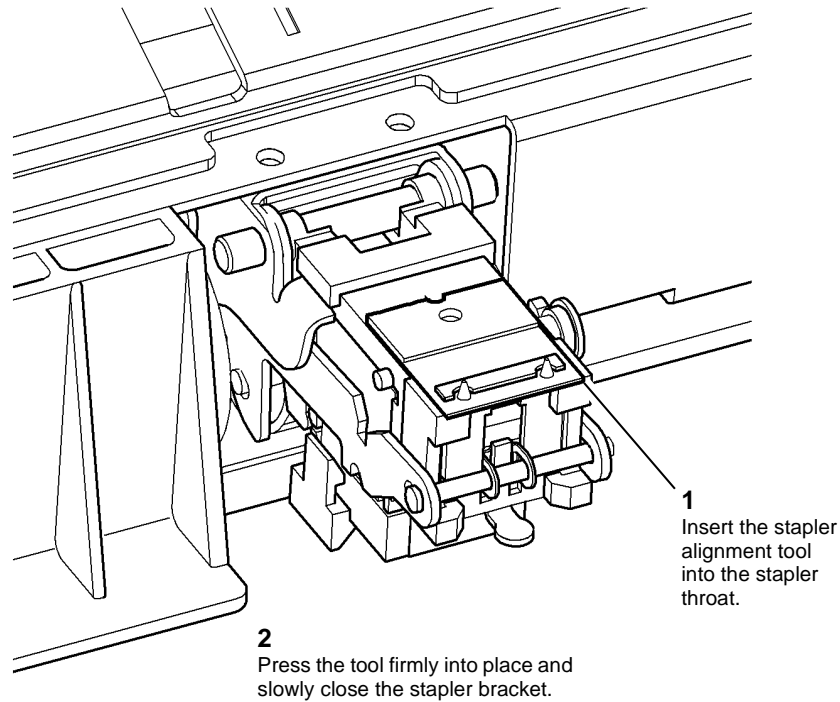


Figure 1 Alignment tool insertion

X-1-0782-A

4. **Figure 2**, loosen the anvil.

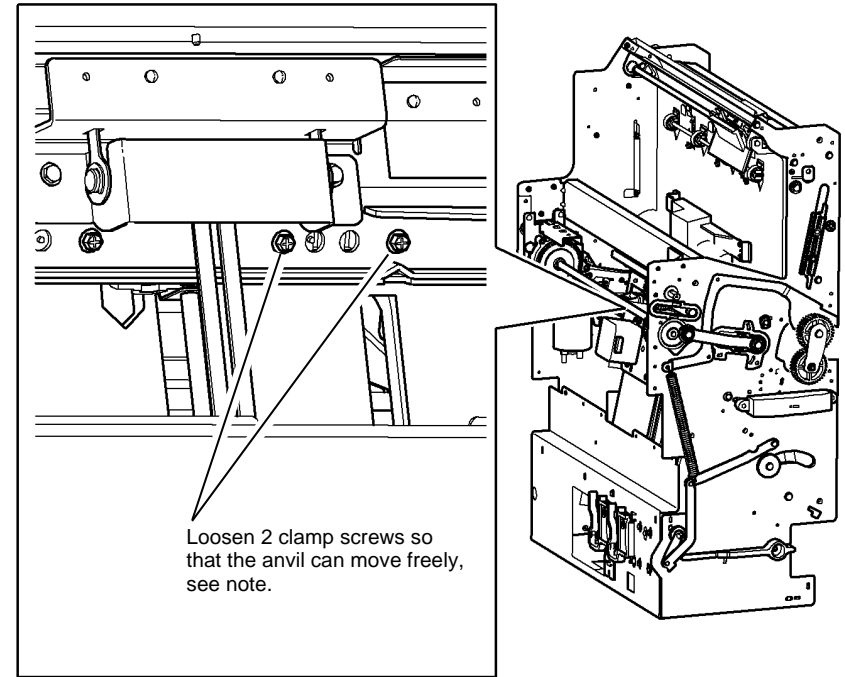
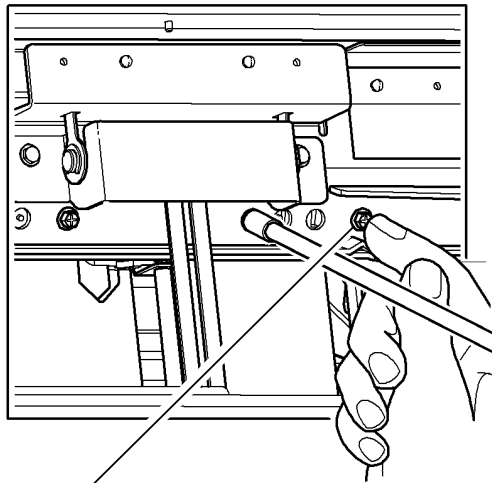
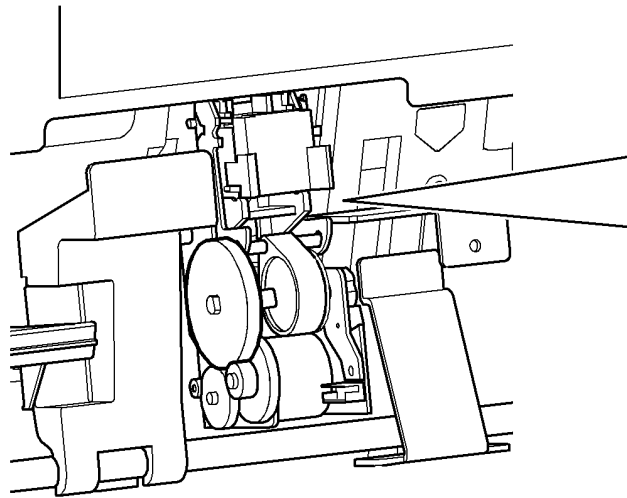


Figure 2 Loosening the anvil

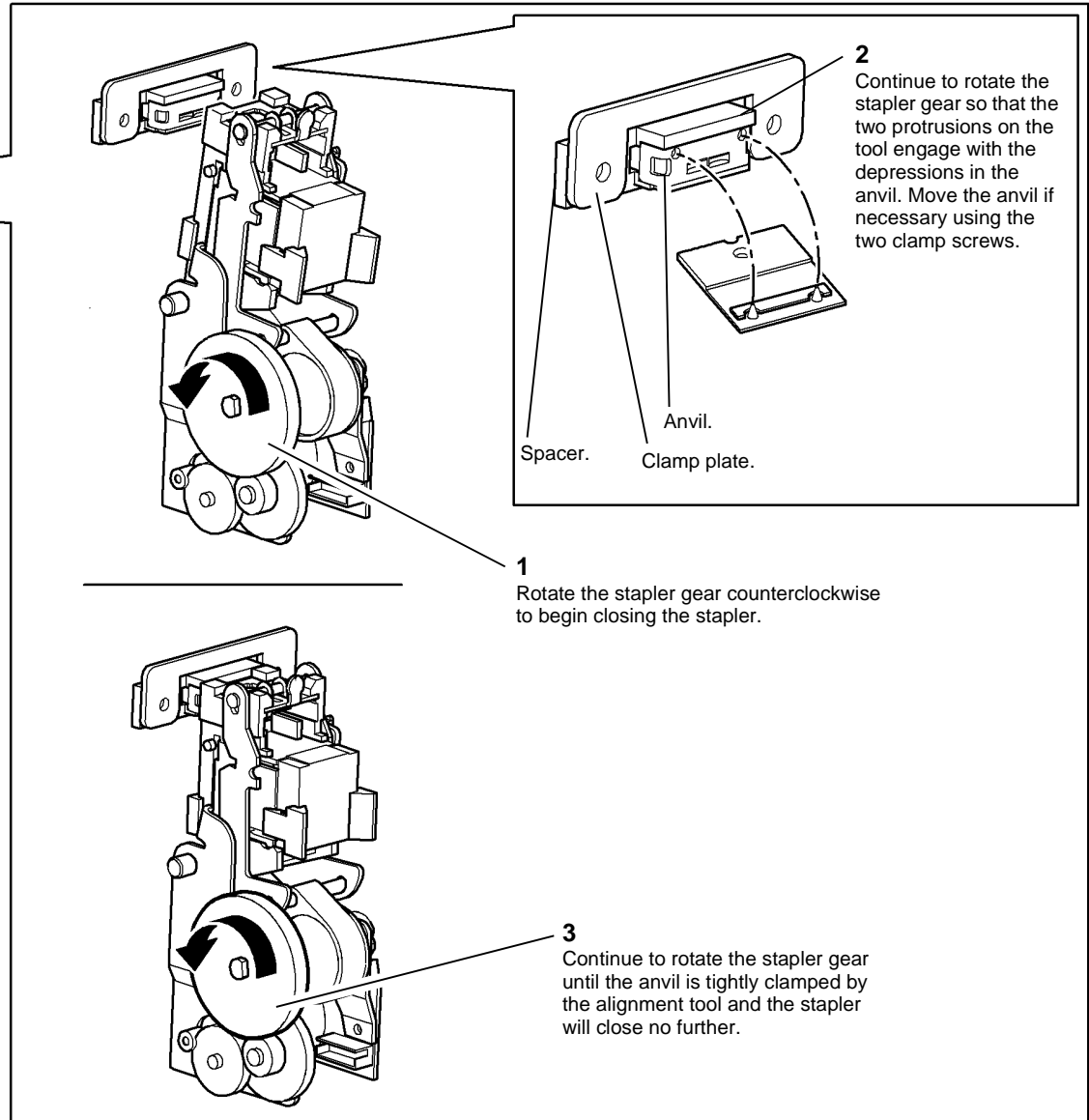
X-1-0783-A

NOTE: Take great care not to drop the anvil, spacer or clamp plate, **Figure 3**, as they can fall to the bottom of the BM module. If parts need to be retrieved from the bottom of the BM module it may be necessary to tilt the whole HVF BM to make the loose parts slide to the centre of the base, from where they can be easily removed.

5. Figure 3, close the stapler.



4
Tighten the two screws alternately a little at a time, while holding the free screw with a finger. Ensure that the anvil does not move as the screws are tightened.



1
Rotate the stapler gear counterclockwise to begin closing the stapler.

3
Continue to rotate the stapler gear until the anvil is tightly clamped by the alignment tool and the stapler will close no further.

2
Continue to rotate the stapler gear so that the two protrusions on the tool engage with the depressions in the anvil. Move the anvil if necessary using the two clamp screws.

Spacer.
Clamp plate.

X-1-0784-A

Figure 3 Closing the stapler

6. Open the stapler fully by use of the stapler gear, [Figure 3](#), then remove the alignment tool.
7. Perform the adjustment on the other stapler anvil if necessary.
8. Check the operation of the stapler by making a few stapled sets using 2 sheets of 80gsm (20 pound) paper. check the quality of the staple clinch.

ADJ 12.4-171 Crease Blade Position

Purpose

NOTE: *There is no adjustment needed for the crease blade position.*

The crease blade assembly is supplied with the blade set at the nominal position.

If the crease blade assembly is damaged or requires adjustment, install a new crease blade assembly, [PL 12.170 Item 13](#).

ADJ 12.5-171 Booklet Tamping

Purpose

To set the tamper travel to give neat booklets without edge damage.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Go to the appropriate check and adjustment from the following options:

- If only A4 paper is available, go to [A4 Paper Procedure](#).
- If only 8.5 X 11 inch paper is available, go to [8.5 X 11 Inch Procedure](#).

A4 Paper Procedure

Check

1. Open the HVF BM front door and insert an interlock cheater into the front door interlock switch.
2. Fully pull out the BM module and release the jam clearance handle [PL 12.150 Item 8](#), fully open the paper guide, [PL 12.150 Item 7](#).
3. Do the following:
 - a. Enter Service mode [GP 1](#).
 - b. Select Adjustment Routines.
 - c. Select [dC131](#) NVM Read / Write.
 - d. Enter NVMID 12-006 BookMkrTampRdyOff-set.
 - e. Select Read / Write and reduce the original value by 8.
 - f. Select Save, select OK, select Close, select Exit.
4. Enter Diagnostic Routine [dC330](#) code 012-255 BM Backstop Motor, select Start, allow the backstop to raise to the receive position (where it will pause), select Stop.
5. Enter [dC330](#) code 012-256 BM tamper 1 motor. Select Start to run the tamper motor, allow the tampers to move into the tamped position (where they will pause), select Stop.
6. Insert a single sheet of A4 paper, short edge downward into the booklet maker compiling area, so that it rests on the backstop and is located between the two tampers
7. Bias the sheet towards the rear of the machine until the sheet touches the rear tamper, [Figure 1](#).
8. Observe the position of the sheet between the tampers, [Figure 1](#).
 - If the sheet cannot reach the backstop because the tampers are too close together, the NVM value will need to be decreased to move the tampers further apart, perform the adjustment.
 - If the front tamper is not within 0.5 mm (0.02 inch) of the sheet edge without touching the sheet, the NVM value will need to be increased to move the tampers closer together, perform the adjustment.
 - If the tampers are in the correct position, within 0.5 mm (0.02 inch) of the sheet edge without touching the sheet, do the following:
 - a. Enter Service Mode [GP 1](#).

- b. Select Adjustment Routines.
- c. Select [dC131](#) NVM Read / Write.
- d. Enter NVMID 12-006 BookMkrTampRdyOff-set.
- e. Select Read / Write and increase the value by 8.
- f. Select Save, select OK, select Close, select Exit.

Adjustment

1. Do the following:
 - a. Enter Service Mode [GP 1](#).
 - b. Select Adjustment Routines.
 - c. Select [dC131](#) NVM Read / Write.
 - d. Enter NVMID 12-006 BookMkrTampRdyOff-set.
 - e. Select Read / Write and enter the new value to correct the error found during the check. Increasing the value lengthens the tamping stroke (tamps to a narrower dimension between the tampers. Decreasing the value shortens the tamping stroke (tamps to a wider dimension between the tampers). One step = 0.53 mm.
 - f. Select Save, select OK, select Close, select Exit.
2. Repeat the check to ensure the tampers are set correctly.
3. When the tamper travel is correct, do the following:
 - a. Enter Service Mode [GP 1](#).
 - b. Select Adjustment Routines.
 - c. Select [dC131](#) NVM Read / Write.
 - d. Enter NVMID 12-006 BookMkrTampRdyOff-set.
 - e. Select Read / Write and increase the value by 8.
 - f. Select Save, select OK, select Close, select Exit.
4. Switch the machine off then on, [GP 14](#).

8.5 X 11 Inch Procedure

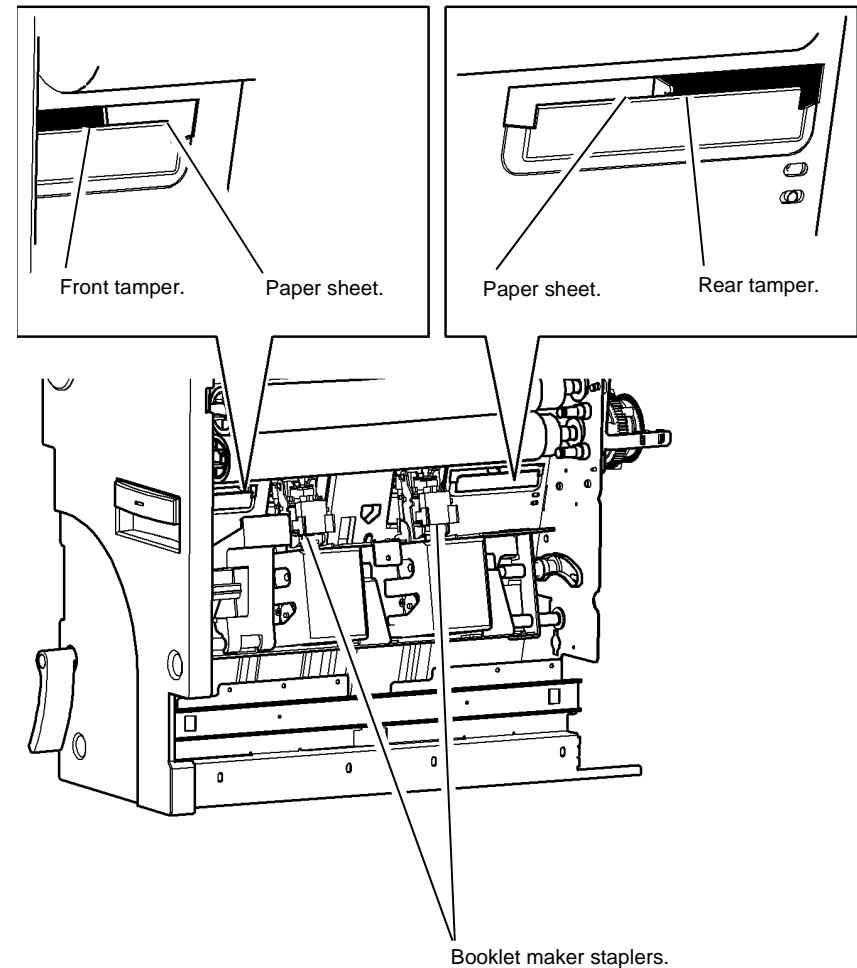
Check

1. Open the HVF BM front door and insert an interlock cheater into the front door interlock switch.
2. Fully pull out the booklet maker and release the jam clearance handle [PL 12.150 Item 8](#), fully open the paper guide [PL 12.150 Item 7](#).
3. Do the following:
 - a. Enter Service Mode [GP 1](#).
 - b. Select Adjustment Routines.
 - c. Select [dC131](#) NVM Read / Write.
 - d. Enter NVMID 12-006 BookMkrTampRdyOff-set.
 - e. Select Read/Write and reduce the original value by 19.
 - f. Select Save, select OK, select Close, select Exit.
4. Enter Diagnostic Routine [dC330](#) code 012-255 BM Backstop Motor, select Start, allow the backstop to raise to the receive position (where it will pause), select Stop.
5. Enter Diagnostic Routine [dC330](#) code 012-256 BM tamper 1 motor. Select Start to run the tamper motor, allow the tampers to move into the tamped position (where they will pause), select Stop.

6. Insert a single sheet of 8.5 X 11 inch paper, short edge downward into the booklet maker compiling area, so that it rests on the backstop and is located between the two tampers
7. Bias the sheet towards the rear of the machine until the sheet touches the rear tamper, [Figure 1](#).
8. Observe the position of the sheet between the tampers, [Figure 1](#).
 - If the sheet cannot reach the backstop because the tampers are too close together, the NVM value will need to be decreased to move the tampers further apart, perform the adjustment.
 - If the front tamper is not within 0.5 mm (0.02 inch) of the sheet edge without touching the sheet, the NVM value will need to be increased to move the tampers closer together, perform the adjustment.
 - If the tampers are in the correct position, within 0.5 mm (0.02 inch) of the sheet edge without touching the sheet, do the following:
 - a. Enter Service Mode [GP 1](#).
 - b. Select Adjustment Routines.
 - c. Select [dC131](#) NVM Read / Write.
 - d. Enter NVMID 12-006 BookMkrTampRdyOff-set.
 - e. Select Read / Write and increase the value by 19.
 - f. Select Save, select OK, select Close, select Exit.

Adjustment

1. Do the following:
 - a. Enter Service Routine [GP 1](#).
 - b. Select Adjustment Routines.
 - c. Select [dC131](#) NVM Read / Write.
 - d. Enter NVMID 12-006 BookMkrTampRdyOff-set.
 - e. Select Read / Write and enter the new value to correct the error found during the check. Increasing the value lengthens the tamping stroke (tamps to a narrower dimension between the tampers. Decreasing the value shortens the tamping stroke (tamps to a wider dimension between the tampers). One step = 0.53 mm.
 - f. Select Save, select OK, select Close, select Exit.
2. Repeat the check to ensure the tampers are set correctly.
3. When the tamper travel is correct, do the following:
 - a. Enter Service Mode [GP 1](#).
 - b. Select Adjustment Routines.
 - c. Select [dC131](#) NVM Read / Write.
 - d. Enter NVMID 12-006 BookMkrTampRdyOff-set.
 - e. Select Read / Write and increase the value by 19.
 - f. Select Save, select OK, select Close, select Exit.
4. Switch the machine off then on, [GP 14](#).



X-1-0785-A

Figure 1 Observing the tamper positions.

ADJ 12.6-171 Booklet Compiling Position

Purpose

To set the compiling position to ensure correct compiling without damage. When the compiling position is correctly set, each sheet is fed behind the BM entry roll to rest against the right side of the compiler.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

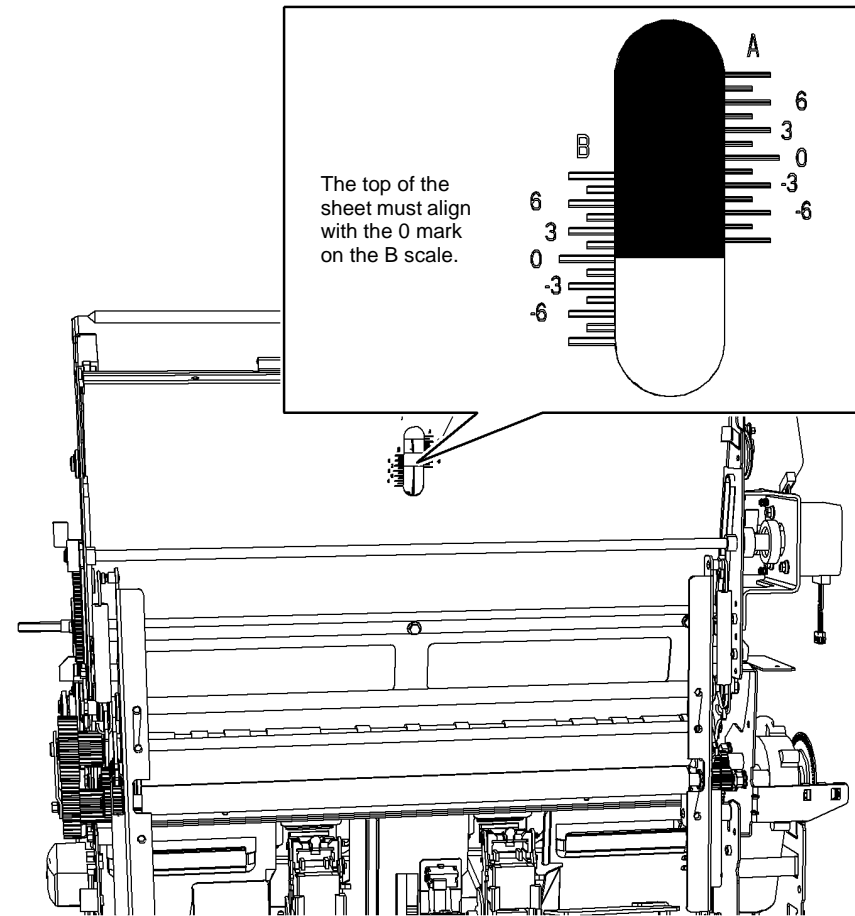
Go to the appropriate check and adjustment from the following options:

- If only A4 paper is available, go to [A4 Paper Procedure](#).
- If only 8.5 X 11 inch paper is available, go to [8.5 X 11 Inch Procedure](#).

A4 Paper Procedure

Check

1. Open the HVF BM front door and insert an interlock cheater into the front door interlock switch.
2. Fully pull out the BM module and release the jam clearance handle [PL 12.150 Item 8](#), fully open the paper guide [PL 12.150 Item 7](#).
3. Enter Diagnostic Routine [dC330](#) code 012-255 BM Backstop Motor, select Start, allow the backstop to raise to the receive position (where it will pause), select Stop.
4. Insert a single sheet of A4 paper short edge downward into the booklet maker compiling area, so that it rests on the backstop and is approximately central front to back. Tuck the top of the sheet behind the BM entry roll, [PL 12.150 Item 15](#).
5. If the BM right hand cover does not have a viewing hole, remove the BM right hand cover, [REP 12.56-171](#).
6. [Figure 1](#), check the alignment of the sheet against the scale.



X-1-0786-A

Figure 1 Top edge alignment

7. If the sheet is correctly aligned, exit diagnostics and re-install the BM right hand cover, if removed in step 5. If the sheet is not correctly aligned, perform the adjustment.

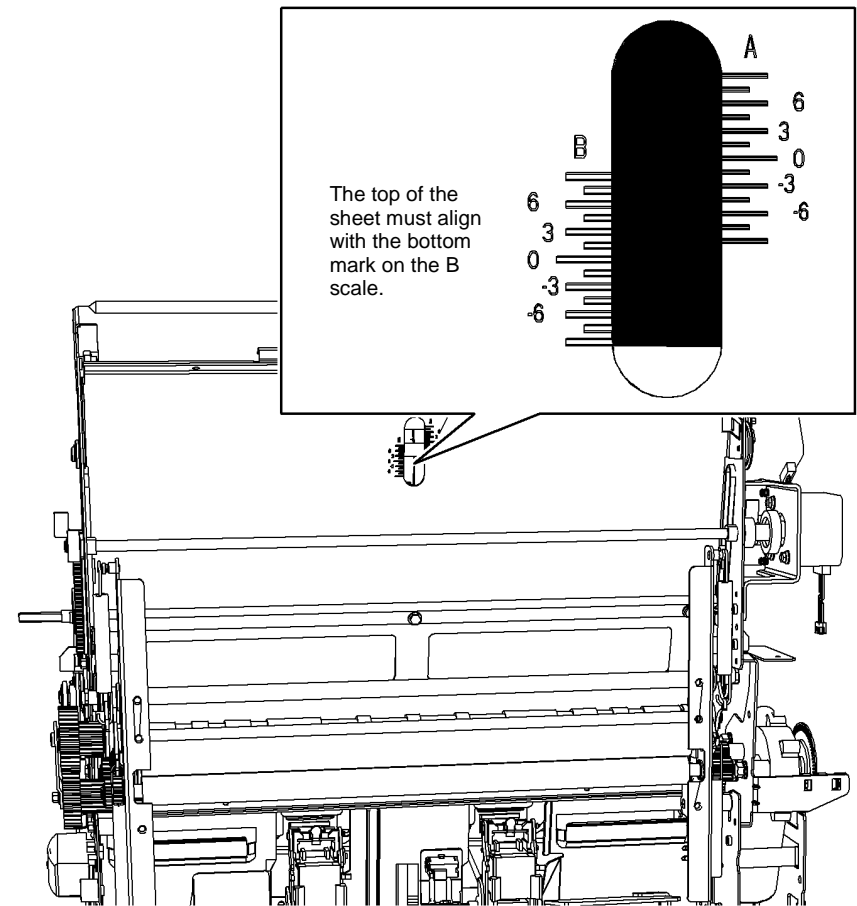
Adjustment

- Do the following
 - Enter Service Mode [GP 1](#).
 - Select Adjustment Routines.
 - Select [dC131](#) NVM Read / Write.
 - Enter NVMIID 12-003 BookMkrCompileOff-set.
 - Select Read / Write and enter the new value to correct the error found during the check. Increasing the value will raise the sheet. Decreasing the value will lower the sheet. One step = 0.1137 mm.
 - Select Save, select OK, select Close, select Exit.
- Repeat the Check to ensure the compiling position is correctly set.
- When the compiling position is correct, switch the machine off then on, [GP 14](#).

8.5 X 11 Inch Procedure

Check

- Open the HVF BM front door and insert an interlock cheater into the front door interlock switch.
- Fully pull out the BM module and release the jam clearance handle [PL 12.150 Item 8](#), fully open the paper guide [PL 12.150 Item 7](#).
- Do the following
 - Enter Service Mode [GP 1](#).
 - Select Adjustment Routines.
 - Select [dC131](#) NVM Read / Write.
 - Enter NVMIID 12-003 BookMkrCompileOff-set.
 - Select Read / Write and increase the original value by 80.
 - Select Save, select OK, select Close, select Exit.
- Enter Diagnostic Routine [dC330](#) code 012-255 BM Backstop Motor, select Start, allow the backstop to raise to the receive position (where it will pause), select Stop.
- Insert a single sheet of 8.5 X 11 inch paper short edge downward into the booklet maker compiling area, so that it rests on the backstop and is approximately central front to back. Tuck the top of the sheet behind the BM entry roll, [PL 12.150 Item 15](#).
- If the BM right hand cover does not have a viewing hole, remove the BM right hand cover, [REP 12.56-171](#).
- [Figure 2](#), check the alignment of the sheet against the scale.



X-1-0787-A

Figure 2 Top edge alignment

- If the sheet is correctly aligned, do the following:
 - Enter Service Mode [GP 1](#).
 - Select Adjustment Routines.
 - Select [dC131](#) NVM Read / Write.
 - Enter NVMIID 12-003 BookMkrCompileOff-set.
 - Select Read / Write and decrease the value by 80, this will return the NVM value to the original setting.

- f. Select Save, select OK, select Close, select Exit.
- g. Re-install the BM right hand cover, if removed in step 5.
9. If the sheet is not correctly aligned, perform the adjustment.

Adjustment

1. Do the following
 - a. Enter Service Routine **GP 1**.
 - b. Select Adjustment Routines.
 - c. Select **dC131** NVM Read / Write.
 - d. Enter NVMID 12-003 BookMkrCompileOff-set.
 - e. Select Read/Write and enter the new value to correct the error found during the check. Increasing the value will raise the sheet. Decreasing the value will lower the sheet. One step = 0.1137 mm.
 - f. Select Save, select OK, select Close, select Exit.
2. Repeat the Check to ensure the compiling position is correctly set.
3. Do the following:
 - a. Enter Service Mode **GP 1**.
 - b. Select Adjustment Routines.
 - c. Select **dC131** NVM Read / Write.
 - d. Enter NVMID 12-003 BookMkrCompileOff-set.
 - e. Select Read / Write and decrease the value by 80.
 - f. Select Save, select OK, select Close, select Exit.
 - g. Re-install the BM right hand cover, if removed in step 5.
4. When the compiling position is correct, switch the machine off then on, **GP 14**.

ADJ 12.7-171 Booklet Crease Position

Purpose

To set the crease position of the booklet in relation to the left edge of the top sheet of the booklet.

Check

1. Run a copy job of 3 stapled 4 sheet booklets.
2. Observe the position of the crease in relation to the open end of the booklet. The fold should be central, so that the open end of the booklet pages are equal from the fold. If necessary perform the adjustment.
3. Check the backstop home sensor bracket is in the correct position. Ensure the flag is central to the locator, **Figure 1**.

Adjustment



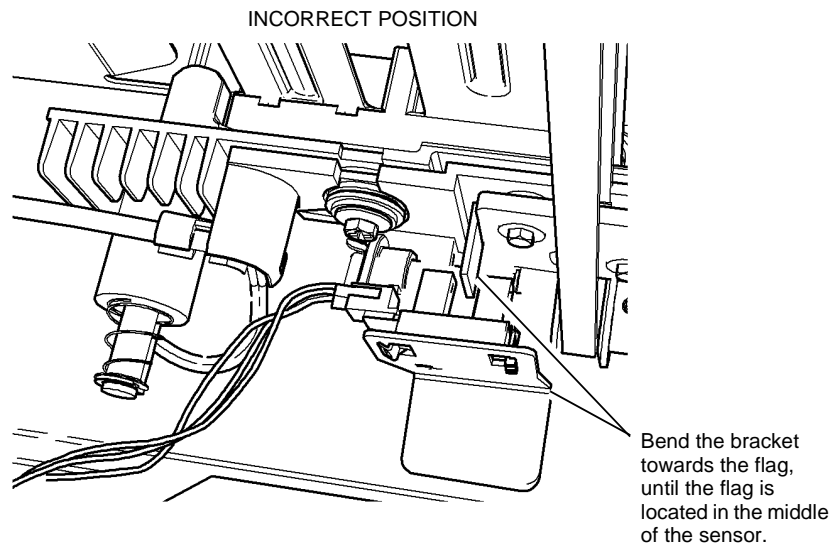
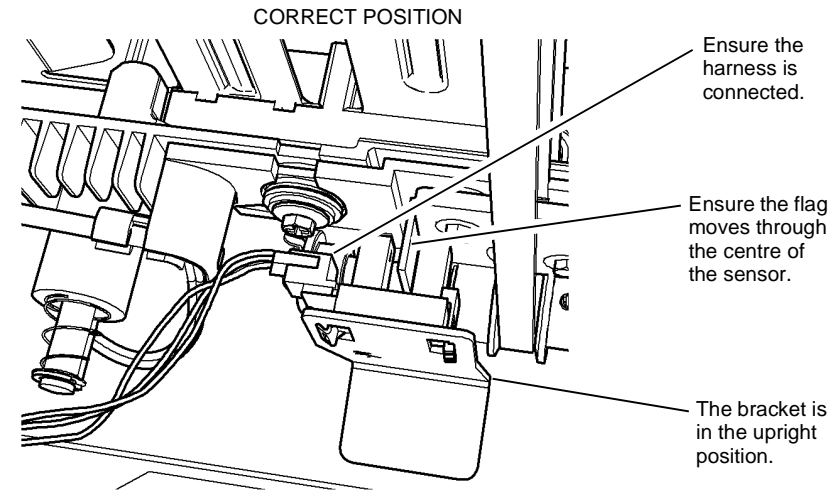
WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Perform the following:
 - a. Enter Service Mode GP 1
 - b. Select Adjustment Routines.
 - c. Select 131 NVM Read / Write...
 - d. Enter NVMID 12-005 BookMrkFoldOffset.
 - e. Select Read/Write.
 - f. Enter the new value to correct the error found during the check.

NOTE: Increasing the value increases the width of the top sheet of the booklet (moves the fold away from the left edge). Decreasing the value decreases the width of the top sheet of the booklet (moves the fold towards the left edge). One step = 0.1137 mm.

- g. Select Save, then OK.
2. Select Save, then select OK.
3. When the crease position is correct, switch the machine off then on, GP 14.



X-1-0788-A

Figure 1 Booklet maker back stop sensor bracket

ADJ 12.8-171 Booklet Staple Position

Purpose

To set the position of the staples so that they are positioned on the fold of the booklet.

Check

1. Run a copy job of 3 stapled 4 sheet booklets.
2. Observe the position of the staple in relation to the fold of the booklet. The staple should be positioned in the middle of the fold. If necessary perform the adjustment.

Adjustment



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Perform the following:
 - a. Enter Service Mode GP 1.
 - b. Select Adjustment Routines.
 - c. Select dC131 NVM Read / Write.
 - d. Enter the NVMID as required:
 - 12-004 BookMrkStapleOffset for 8.5 x 11 inch and A4.
 - 12-012 BookMrkStapleOffsetM for 8.5 x 13 inch and 8.5 x 14 inch.
 - 12-013 BookMrkStapleOffsetL for 11 x 17 inch and A3.
 - e. Select Read / Write.
 - f. Enter the new value to correct the error found during the check.

NOTE: One step = 0.1137 mm. If it is necessary to change the value for one size, the values of other sizes may also be incorrect. If paper is available, perform the Check for all size settings.

- g. Select Save, then OK.
- h. Enter NVMID 12-005 BookMrkFoldOffset.
- i. Select Read / Write.
- j. Change the value by the same amount as the BookMrkStapleOffset value.

NOTE: Increasing both values moves the staple position toward the left edge of the top sheet. Decreasing both values moves the staple position away. Changing only the BookMrkStapleOffset value will move the staple position and fold position the same amount.

- k. Select Save, then OK.
2. Repeat the Check to ensure the staple position is correct.
 3. When the staple position is correct, switch the machine off then on, GP 14.

ADJ 12.9-171 Booklet Maker Skew

Purpose

To adjust the skew of the booklet crease.

Check and complete the following adjustments:

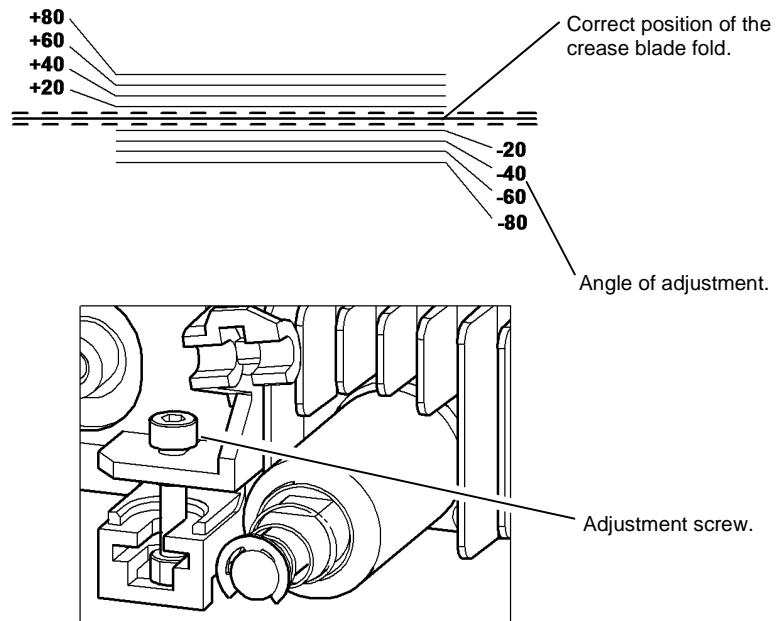
- ADJ 12.6-171 Booklet compiling position.
- ADJ 12.8-171 Booklet staple position.
- ADJ 12.7-171 Booklet crease position.

Check

1. Run a copy job of 3 stapled 4 sheet booklets.
2. Observe the position of the crease in relation to the open end of the booklet. The fold should be central, so that the open end of the booklet pages are equal from the fold. If necessary perform the adjustment.

Adjustment

1. Slide out the booklet maker and locate the adjustment screw on the booklet backstop, Figure 1.
2. Use a 2.5 mm allen head driver and turn the adjustment screw as follows:
 - Turn the screw clockwise to rotate the crease clockwise relative to the centre line.
 - Turn the screw anti-clockwise to rotate the crease anti-clockwise relative to the centre line.
 - One half turn of the adjustment screw will change the crease angle approximately 3 to 4 mm over the length of the crease.
3. Run a copy job of 3 stapled 4 sheet booklets to check that the crease is in the centre of the book. Repeat the adjustment if necessary.



X-1-0789-A

Figure 1 Booklet crease adjustment

ADJ 12.10-171 HVF Motor Drive Belt Tensioning

Purpose

To set the tension of belts that are tensioned by a spring attached to a motor. See also [ADJ 12.11-171 Idler Drive Belt Tensioning](#).

Check

1. The shafts and pulleys are installed and correctly located.
2. The drive belt is undamaged and correctly routed.
3. The adjustable motor or tensioning pulley bracket is positioned with fastening screws not tightened fully.

NOTE: For motors with pivoted brackets, the pivot screw must be fitted and tightened.

4. The tensioning spring is fitted between the bracket and frame locating point.

Adjustment



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. [Figure 1](#) shows a typical arrangement. Press the belt midway between pulleys and check that the bracket moves in the direction of the spring pull; slacken the bracket screws if necessary.
2. Release the belt and allow the spring to pull the bracket and tension the drive belt then tighten the lock and bracket screws.

NOTE: Check the belt condition and routing if the tension spring is not extended or the locking screw is at the end of the bracket adjustment slot.

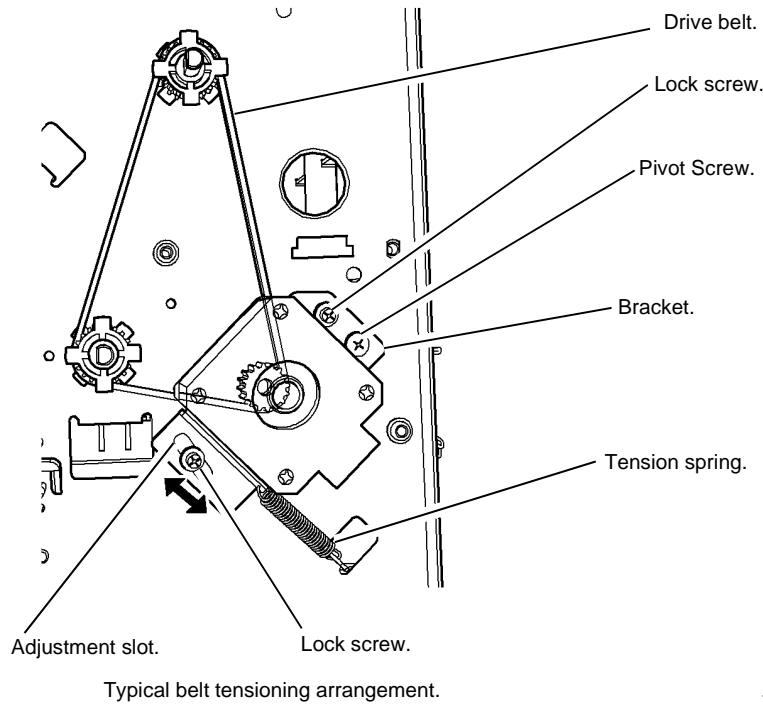


Figure 1 Drive Belt Tensioning

ADJ 12.11-171 HVF Idler Drive Belt Tensioning

Purpose

To set the tension of drive belts that are tensioned by a spring attached to an idler. See also [ADJ 12.10-171](#) Motor Drive Belt Tensioning.

Check

1. The shafts and pulleys are installed and properly located.
2. The drive belt is undamaged and correctly routed.
3. The tensioning spring is fitted between the idler bracket and frame locating point.

Adjustment



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. [Figure 1](#) shows a typical arrangement. Loosen the adjustment screw and allow the spring to tension the belt.
2. Tighten the adjustment screw.
3. If no more adjustment is available, but the belt is still slack, install new components as necessary.

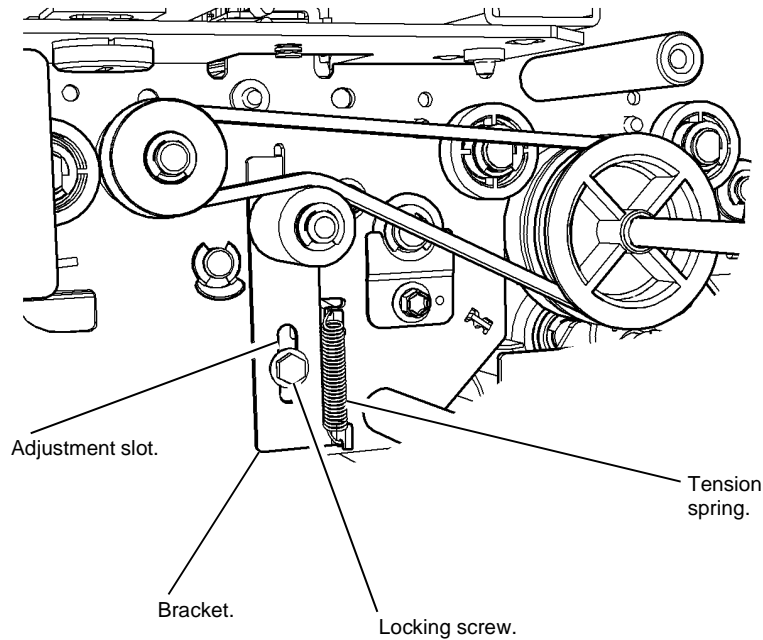
ADJ 12.12-171 Tri-Folder Fold Adjustment

Purpose

To adjust C or Z folded copies in accordance with the customer requirements.

Check

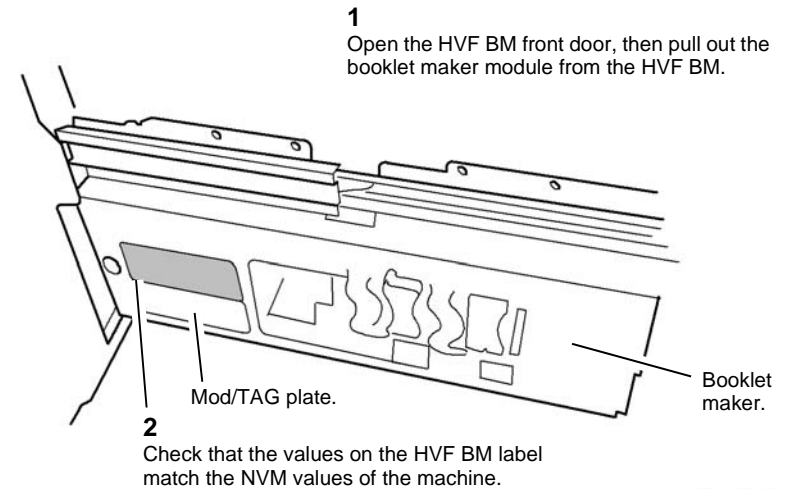
1. Ensure the tri-folder and the HVF BM are aligned correctly, [ADJ 12.1-171](#) Machine to HVF / HVF BM, HVF BM to Tri-Folder Alignment.
2. Ensure the tri-folder is set for the correct size of paper, [ADJ 12.2-171](#) Tri-Folder Paper Size Setting.
3. The NVM settings. Enter [dC131](#) then check the values for NVMID 12-009 (C folds), 12-010 (Z folds) and 12-011 (Trifold deskew) are set in accordance with the values on the HVF/BM label, [Figure 1](#).
 - If necessary, enter [dC131](#) and change the NVM values for codes 12-009, 12-010 and 12-011 to match with the values on the HVF BM label.
4. Ensure the front door interlock switch is checked, [PL 12.115](#) [Item 24](#). Run a four sheet C fold and Z fold copy job. Check that the copies are folded into three approximately equal parts, with the folds parallel to the edge of the paper.
5. Check that the C and Z folded copies meet with the customer requirements. If necessary make fine adjustments to the length of folds A and/or B. [Figure 2](#).



Typical belt tensioning arrangement.

X-1-0791-A

Figure 1 Drive Belt Tensioning



1

Open the HVF BM front door, then pull out the booklet maker module from the HVF BM.

2

Check that the values on the HVF BM label match the NVM values of the machine.

X-1-0792-A

Figure 1 HVF/BM NVM Value Label Location

Adjustment

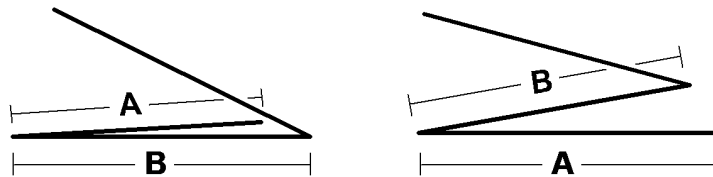


WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Perform the adjustments that follow as necessary to meet with the customer C fold and Z fold requirements, Figure 2.

NOTE: This Figure shows the orientation of a C and Z folded copy on the tri-folder output tray, as viewed from the front of the machine.



C Fold profile.

Z Fold profile.

X-1-0793-A

Figure 2 C folded and Z folded output copy profiles

A Folds

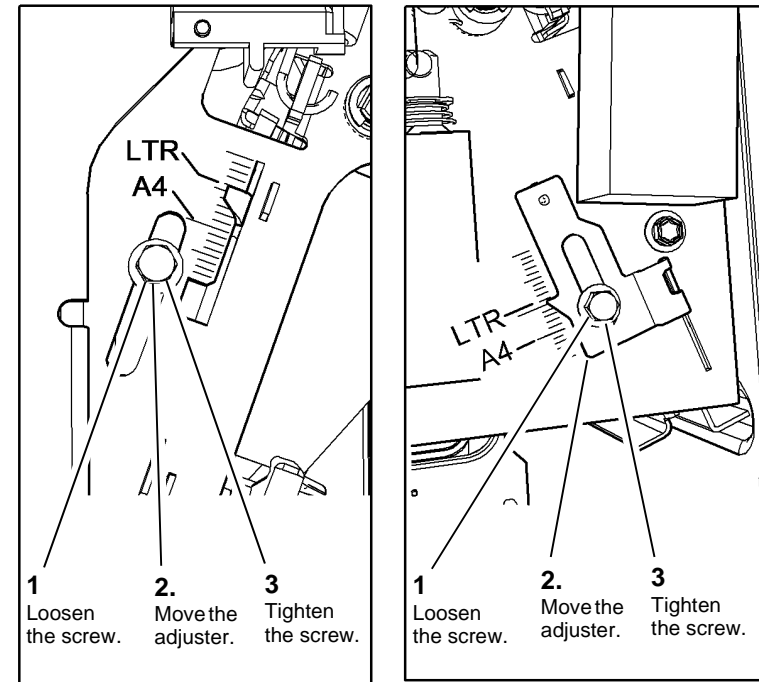
Figure 2. The folds marked A are created within the booklet maker module. The length of the A fold is determined by the NVM values in dC131. An increase to the NVM value by 30 will decrease the A fold by 1 mm. A decrease to the NVM value by 30 will increase the A fold by 1 mm.

- Use dC131 code 12-009 to make adjustments to C folded copies.
- Use dC131 code 12-010 to make adjustments to Z folded copies.

B Folds

Figure 2. The folds marked B are created within the tri-folder module. The length of the B fold is determined by the position of the paper setting adjusters. If necessary remove the front door, PL 12.200 Item 2, front cover PL 12.200 Item 12 and the rear cover PL 12.200 Item 3, then reposition the paper setting adjusters. Figure 3. An adjustment of 1 graduation on the paper size adjuster scale will adjust the position of fold B by 1 mm.

- Raise the paper setting adjusters to decrease fold B.
- Lower the paper setting adjusters to increase fold B.



X-1-0794-A

Figure 3 Set the paper size adjusters.

ADJ 40.1 Machine Lubrication

Purpose

To correctly lubricate the machine to prevent noise and wear.

Lubrication

Refer to [GP 18](#) Machine Lubrication for general guidance on the use of lubricants.



WARNING

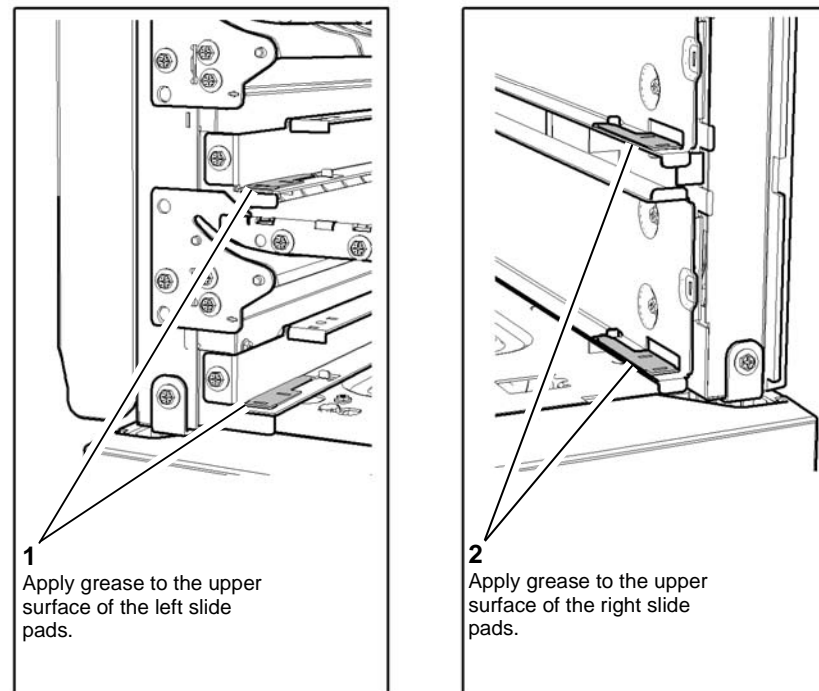
Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

The list that follows identifies the parts of the machine where lubrication is permitted. Go to the relevant procedure:

- [Tray 1 and 2 Slide Pads.](#)
- [Tray 1 and 2 Stack Height Mechanism Actuator.](#)
- [Registration Transport Housing.](#)
- [Main Drive Module.](#)
- [Exit Drive Gears.](#)
- [Left Door Link Assembly.](#)
- [Horizontal Transport Assembly.](#)
- [2K LCSS Drive Belt Tensioners.](#)
- [2K LCSS Bin 1 Drive Belt Pulleys and Idlers.](#)
- [2K LCSS Bin 1 Elevator Motor Worm and Gears.](#)
- [2K LCSS and LVF BM Tamper Assembly.](#)
- [2K LCSS and LVF BM Ejector Shafts and Slide Bearings.](#)
- [LVF BM Intermediate Paper Drive Belt Tensioner.](#)
- [LVF BM Bin 1 Drive Belt Pulleys and Idlers.](#)
- [LVF BM Bin 1 Elevator Motor Worm and Gears.](#)
- [HVF BM Support Pin.](#)

Tray 1 and 2 Slide Pads

1. Remove tray 1 and 2, [REP 70.1](#).
2. If the trays do not slide easily, apply plastislip grease, [PL 26.10 Item 8](#), to lubricate the slide pads, [Figure 1](#).



X-1-1207-A

Figure 1 Tray 1 and 2 slide pads

3. Install tray 1 and 2, [REP 70.1](#).

Tray 1 and 2 Stack Height Mechanism Actuator

1. Remove tray 1 and 2, [REP 70.1](#).
2. Remove the tray 1 and tray 2 paper feed assemblies, [REP 80.1](#).
3. Check that the actuator mechanism operates smoothly, if necessary apply plastislip grease, [PL 26.10 Item 8](#), to lubricate the actuator, [Figure 2](#).

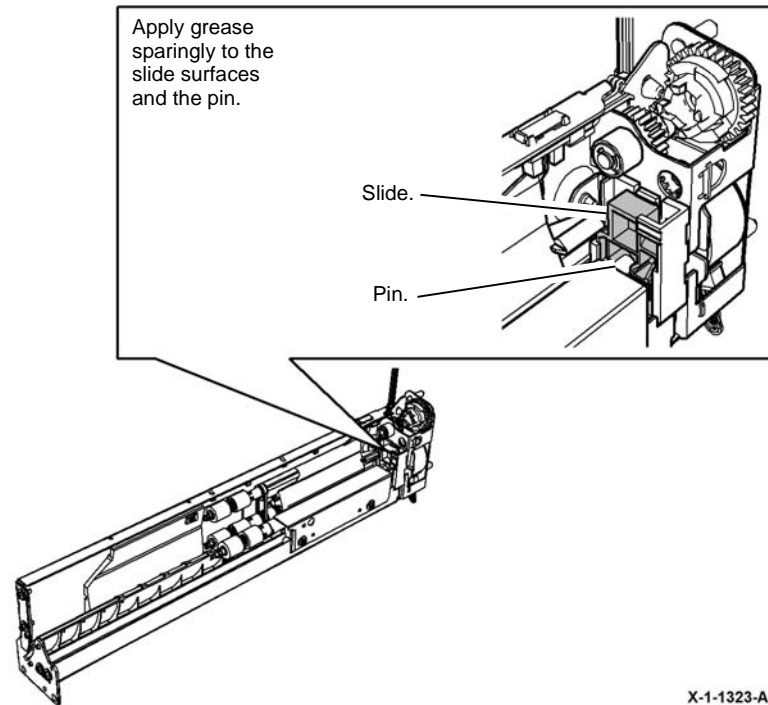
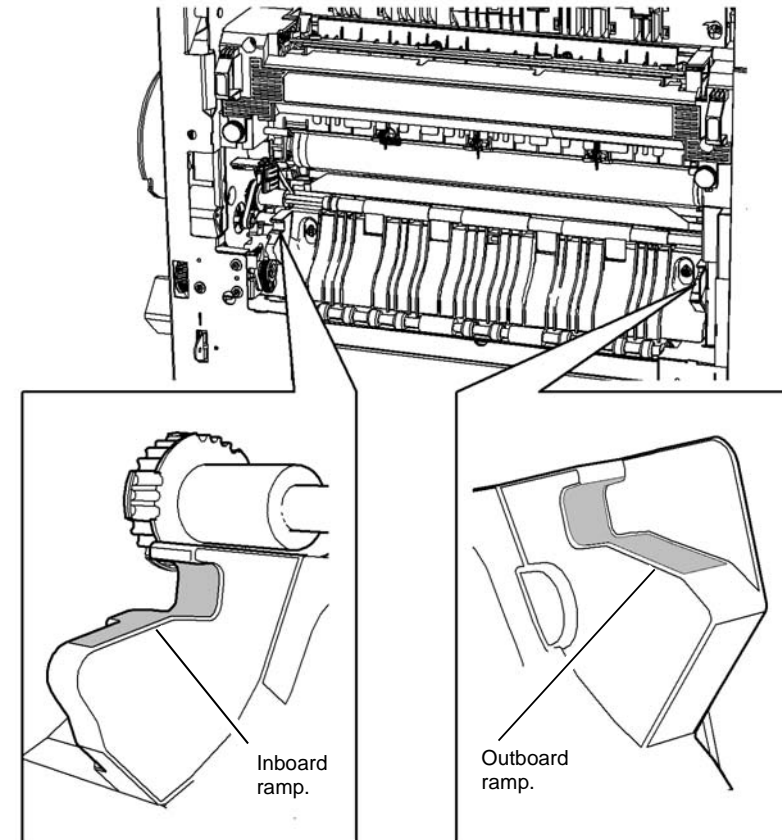


Figure 2 Actuator lubrication

4. Install tray 1 and tray 2 paper feed assemblies, [REP 80.1](#).
5. Install tray 1 and 2, [REP 70.1](#).

Registration Transport Housing

1. Open the left door.
2. Lubricate the registration transport location ramps with plastislip grease, [PL 26.10 Item 8](#), [Figure 3](#).



- 1**
Clean any residual lubricant or contamination from the two areas.

- 2**
Apply plastislip grease very sparingly to the two areas.

Figure 3 Ramps lubrication

3. Close the left door.

Main Drive Module

1. Remove the main drive module, [REP 40.1](#).
2. Check that the gears are adequately lubricated, if necessary apply plastislip grease, [PL 26.10 Item 8](#), to lubricate the main drive module, [Figure 4](#).

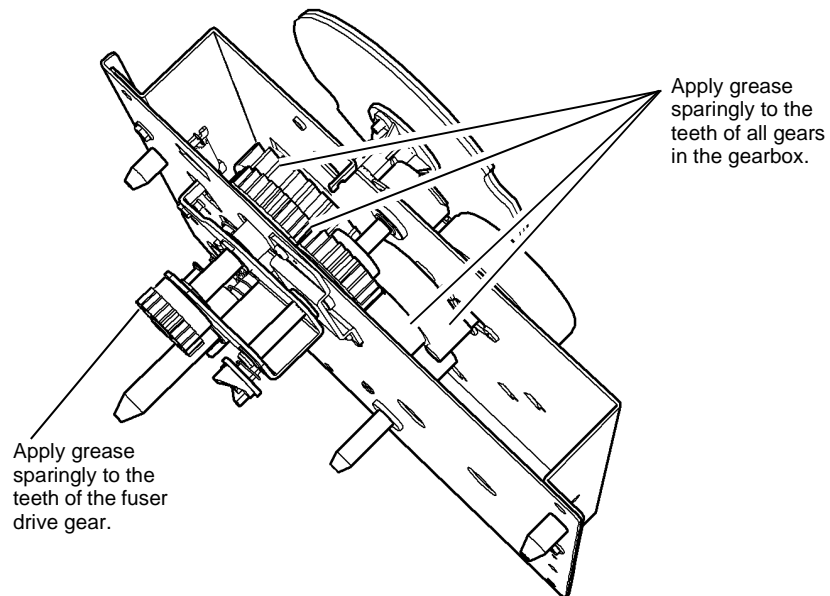
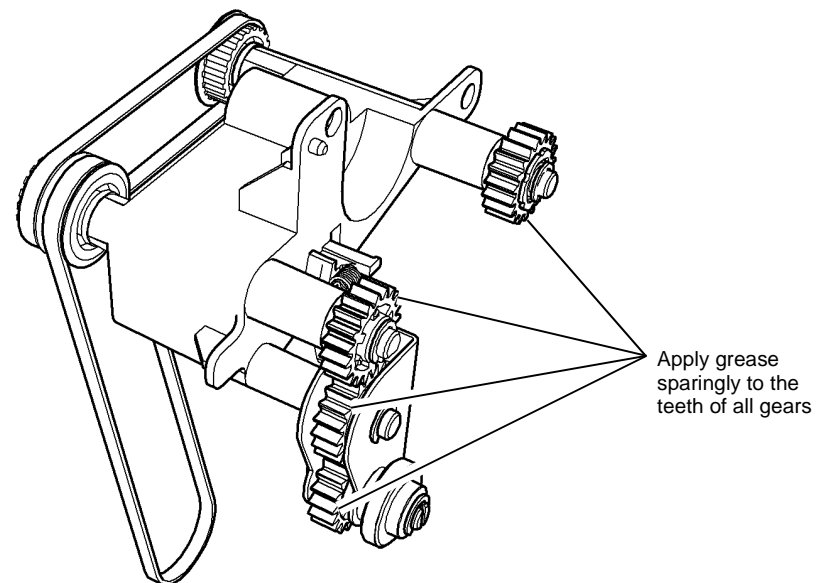


Figure 4 Main drive module

3. Install the main drive module, [REP 40.1](#).

Exit Drive Gears

1. Remove the exit drive assembly, [REP 10.2](#).
2. Check that the gears are adequately lubricated, if necessary apply plastislip grease, [PL 26.10 Item 8](#), to lubricate the exit drive assembly gears, [Figure 5](#).



X-1-1326-A

Figure 5 Exit drive assembly

3. Install the exit drive assembly, [REP 10.2](#).

Left Door Link Assembly

1. Open the left door.
2. **Figure 6**, check that the link assembly is adequately lubricated, if necessary apply plastislip grease, **PL 26.10 Item 8**.

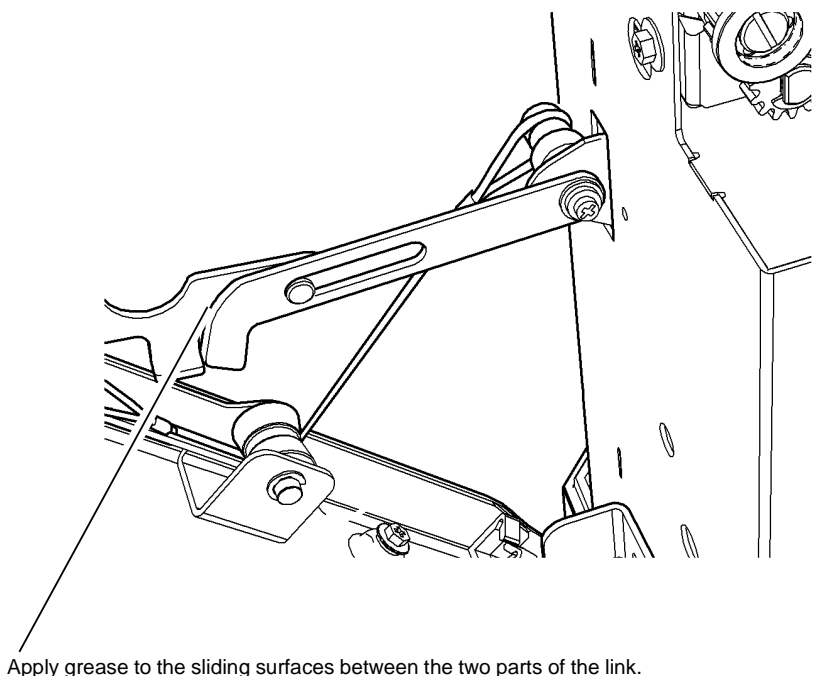


Figure 6 Door link lubrication

X-1-1411-A

Horizontal Transport Assembly

1. Remove the horizontal transport, **REP 10.6**.
2. Remove the horizontal transport exit cover, **PL 10.15 Item 4**.
3. Remove the four horizontal transport idler rolls, **PL 10.15 Item 5**.
4. Release the snap feature to remove the rolls from the idler roll shafts.
5. Apply plastislip grease, **PL 26.10 Item 8**, sparingly to the ends of the idler roll shafts ensuring the snap features are coated.
6. Re-assemble the rolls on the idler roll shafts. Ensure the outside of the rolls are not contaminated with grease.
7. Re-assemble the removed components.
8. Re-install the horizontal transport assembly in the machine.

2K LCSS Drive Belt Tensioners

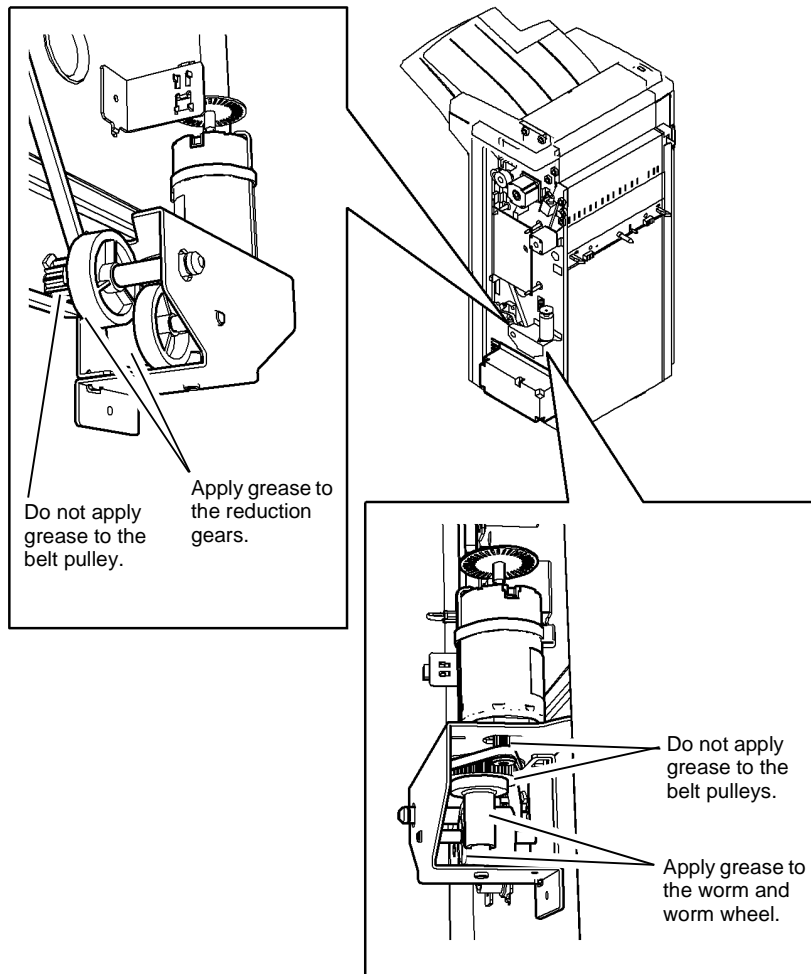
1. Remove the 2K LCSS top cover, front door cover assembly and rear cover, **REP 12.1-110**.
2. Remove and inspect the intermediate paper drive belt tensioner, **PL 12.60 Item 17**, if tensioner does not pivot freely or the pulley does not revolve freely, perform the steps that follow:
 - a. Remove the E-clip and pulley from the belt tensioner.
 - b. Apply plastislip grease, **PL 26.10 Item 8** to the shaft and pulley bore.
 - c. Re-assemble the pulley and E-clip on the belt tensioner.
 - d. Clean off the old lubricant and any contamination from the belt tensioner and 2K LCSS frame using a microfiber wiper, **PL 26.10 Item 13**.
 - e. Apply plastislip grease, **PL 26.10 Item 8**, to the whole contact face of the belt tensioner.
 - f. Install the belt tensioner.
3. Remove and inspect the Bin 1 drive belt tensioner, **PL 12.30 Item 13** (2 places), if the pulley does not revolve freely, perform the steps that follow:
 - a. Remove the E-clip and pulley from the belt tensioner.
 - b. Apply plastislip grease, **PL 26.10 Item 8** to the shaft and pulley bore.
 - c. Re-assemble the pulley and E-clip on the belt tensioner.
 - d. Install the belt tensioner.

2K LCSS Bin 1 Drive Belt Pulleys and Idlers

1. Remove the 2K LCSS top cover, front door cover assembly and rear cover, **REP 12.1-110**.
2. If necessary, remove the LCSS PWB, **PL 12.75 Item 1**.
3. Remove and inspect the relevant pulley or idler assembly:
 - Bin 1 drive belt idler, **PL 12.30 Item 15** (2 places).
 - Bin 1 drive belt pulley, **PL 12.30 Item 6** (4 places).If any pulley or idler does not turn freely, perform the steps that follow:
 - a. Remove the E-clip and pulley or idler from the bracket.
 - b. Apply plastislip grease, **PL 26.10 Item 8** to the shaft and pulley or idler bore.
 - c. Re-assemble the pulley or idler and E-clip on the bracket.
 - d. Install the pulley or idler assembly.

2K LCSS Bin 1 Elevator Motor Worm and Gears

1. Remove the 2K LCSS top cover and rear cover, [REP 12.1-110](#).
2. Check that the worm, worm wheel and reduction gears are adequately lubricated, if necessary use plastislip grease, [PL 26.10 Item 8](#), to lubricate the components, [Figure 7](#).



X-1-1319-A

Figure 7 Worm and gears

2K LCSS and LVF BM Ejector Shafts and Slide Bearings

1. Remove the 2K LCSS ejector assembly, [REP 12.10-110](#), or LVF BM ejector assembly [REP 12.10-150](#).
2. Check the ejector shafts are adequately lubricated and the slide bearings move freely along the ejector shafts:
 - 2K LCSS [PL 12.50 Item 10](#), [PL 12.50 Item 11](#) and [PL 12.50 Item 12](#).
 - LVF BM [PL 12.360 Item 11](#), [PL 12.360 Item 12](#), [PL 12.360 Item 13](#).
3. If the slide bearings are worn replace the ejector assembly:
 - 2K LCSS [PL 12.50 Item 1](#).
 - LVF BM [PL 12.360 Item 1](#).



CAUTION

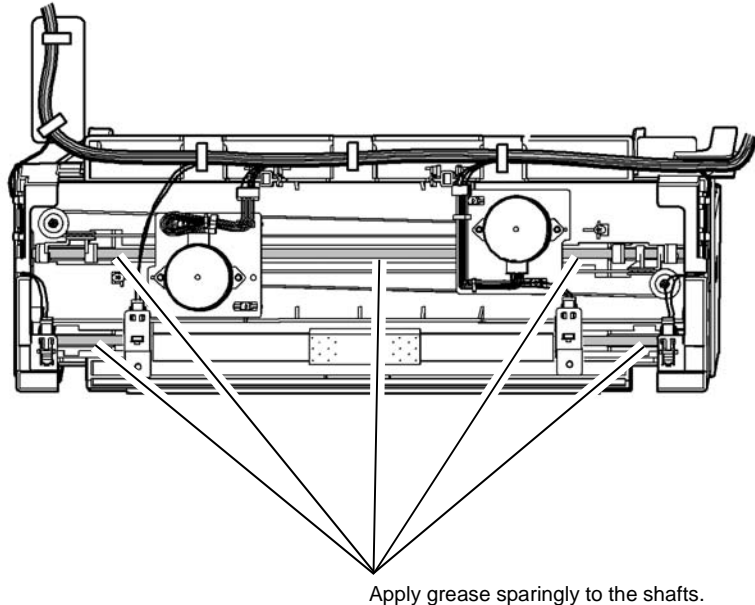
Do not mix the residual lubrication with new lubricant on the ejector shafts and slide bearings. Contamination of the manufacturer's lubricant with another will decrease durability and high temperature resistance.

4. If the assembly requires lubrication, perform the steps that follow:
 - a. Refer to [GP 18 Machine Lubrication](#).
 - b. Clean both ejector shafts and the 4 slide bearings with film remover, [PL 26.10 Item 4](#), so that they are completely free of existing residual lubricant and contamination.
 - c. Apply Hi-Lube grease, [PL 26.11 Item 6](#) sparingly to the ejector shafts, then manually move the ejector base along the ejector shafts to distribute the lubricant fully along the shafts and inside the slide bearings.
5. Re-install the ejector assembly in the machine.

2K LCSS and LVF BM Tamper Assembly

1. Remove the 2K LCSS top cover, [REP 12.1-110](#) or LVF BM top cover, [REP 12.1-150](#).
2. Check that the two tamper shafts are adequately lubricated, if necessary use plastislip grease, [PL 26.10 Item 8](#), to lubricate the tamper assembly, [Figure 8](#).

NOTE: The lubrication procedure is the same for the 2K LCSS and LVF BM.



X-1-1321-A

Figure 8 Lower vertical slides

LVF BM Intermediate Paper Drive Belt Tensioner

1. Remove the LVF BM top cover and rear cover, [REP 12.1-150](#).
2. Remove and inspect the intermediate paper drive belt tensioner, [PL 12.370 Item 17](#), if the tensioner does not pivot freely or the pulley does not revolve freely, perform the steps that follow:
 - a. Remove the E-clip and pulley from the belt tensioner.
 - b. Apply plastislip grease, [PL 26.10 Item 8](#) to the shaft and pulley bore.
 - c. Re-assemble the pulley and E-clip on the belt tensioner.
 - d. Clean off the old lubricant and any contamination from the belt tensioner and LVF BM frame using a microfiber wiper, [PL 26.10 Item 13](#).
 - e. Apply plastislip grease, [PL 26.10 Item 8](#), to the whole contact face of the belt tensioner.

- f. Install the belt tensioner.

LVF BM Bin 1 Drive Belt Pulleys and Idlers

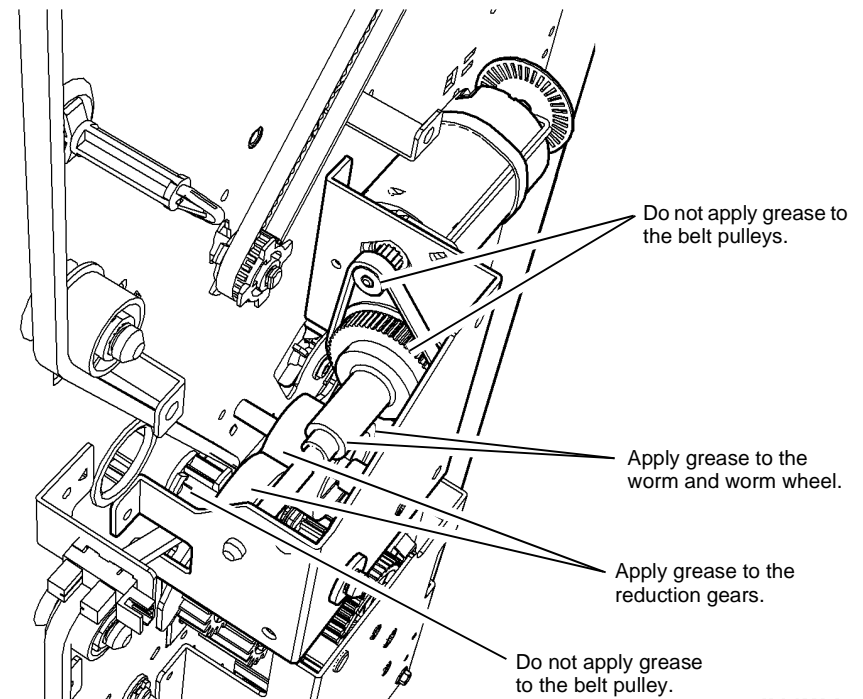
1. Remove the LVF BM top cover, front door cover assembly and rear cover, [REP 12.1-150](#).
2. If necessary, remove the LVF BM PWB, [REP 12.36-150](#).
3. Remove and inspect the relevant pulley or idler:
 - Bin 1 drive belt idler, [PL 12.340](#), (4 places).
 - Bin 1 drive belt pulley, [PL 12.340 Item 6](#), (4 places).

If any pulley or idler does not turn freely, perform the steps that follow:

- a. Remove the E-clip and pulley or idler from the bracket
- b. Apply plastislip grease, [PL 26.10 Item 8](#) to the shaft and pulley or idler bore.
- c. Re-assemble the pulley or idler and E-clip on the bracket.
- d. Install the pulley or idler assembly.

LVF BM Bin 1 Elevator Motor Worm and Gears

1. Remove the LVF BM top cover and rear cover, [REP 12.1-150](#).
2. Check that the worm, worm wheel and reduction gears are adequately lubricated, if necessary use plastislip grease, [PL 26.10 Item 8](#), to lubricate the components, [Figure 9](#).



X-1-1320-A

Figure 9 Worm and gears

HVF BM Support Pin

1. Open the BM front door.
2. Fully pull out the BM unit.
3. Figure 2, use plastislip grease, [PL 26.10 Item 4](#), to lubricate the BM support pin.

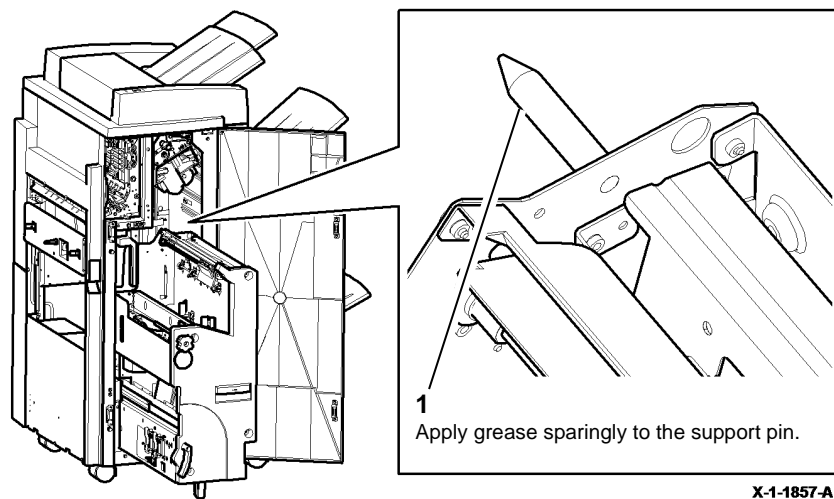


Figure 10 Support pin lubrication

4. Fully push in the BM unit and close the HVF BM front door.

ADJ 60.1 Scanner Cleaning Procedure

Parts List on [PL 60.15](#)

Purpose

To clean the optical components of the scanner ensuring optimum image quality.

NOTE: This adjustment must only be performed if directed to it from [dC945](#), an Image Quality RAP or if the optics cavity was opened to install a new component, and contamination can be seen.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Observe ESD precautions during this procedure.

1. Remove the top cover assembly, [REP 60.3](#).
2. Inspect the cleanliness of the scanner interior. If necessary, clean as follows:
 - a. Vacuum clean the area as necessary to remove all visible contamination. It may be necessary to move the carriage gently to the right. It is advisable to leave it in this position, but it can be returned to the home position. **Do not** vacuum clean the scan carriage.
 - b. Wash your hands.
 - c. Use an air duster, [PL 26.11 Item 1](#) to carefully clean any contamination from the scan carriage.
3. Examine the lenses of the document size sensors, [PL 60.20 Item 3](#). Clean if necessary with a microfiber wiper, [PL 26.10 Item 13](#).
4. Inspect the document glass and CVT glass. If necessary, clean them as follows:
 - a. Clean the under side of document glass and CVT glass using a microfiber wiper, [PL 26.10 Item 13](#), dampened with antistatic fluid, [PL 26.10 Item 19](#).
 - b. Polish the under side of document glass and CVT glass using a dry microfiber wiper, [PL 26.10 Item 13](#).
 - c. Install the top cover, taking care not to smear the cleaned underside, [REP 60.3](#).
 - d. Clean the upper side of document glass and CVT glass using a microfiber wiper, dampened with film remover, [PL 26.10 Item 4](#).
 - e. Polish the upper side of document glass and CVT glass using a dry, microfiber wiper.
5. Re-install the remainder of the removed components.

ADJ 60.2 Side 2 Scan Assembly Cleaning Procedure

Parts List on [PL 60.30](#)

Purpose

To clean the side 2 scanner ensuring optimum image quality.

NOTE: This adjustment must only be performed if directed to it from [dC945](#), an Image Quality RAP or if the side 2 scanner or SPDH have been removed.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Go to the appropriate procedure:

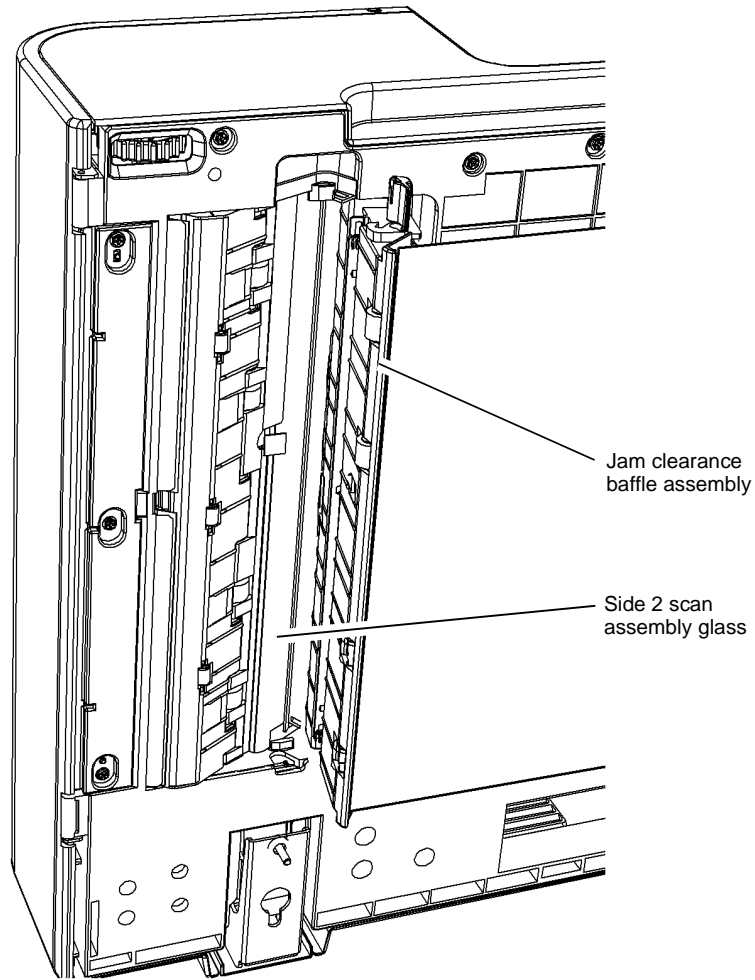
- [External Surface Cleaning](#).
- [Internal Surface Cleaning](#).

NOTE: Only clean the internal surface of the side 2 scan assembly glass if cleaning the external surface failed to resolve the defect.

External Surface Cleaning

1. Raise the SPDH.

2. Lower the jam clearance baffle assembly, [Figure 1](#).



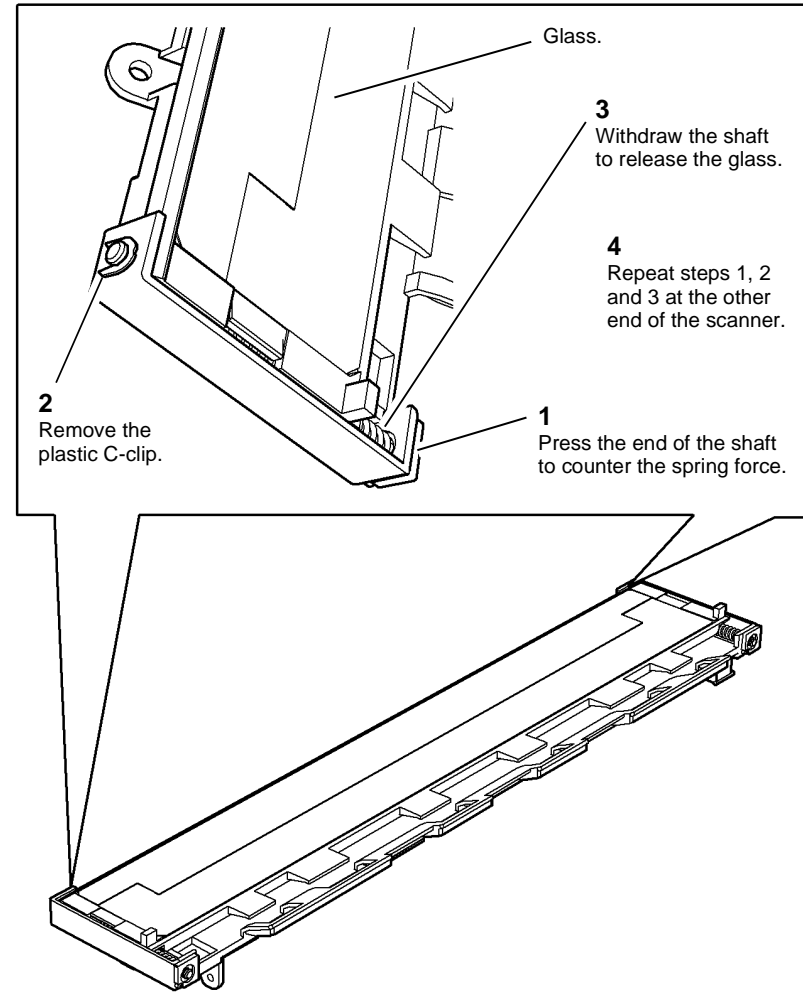
X-1-1858-A

Figure 1 Component location

3. Clean the side 2 scan assembly glass, [Figure 1](#). Perform the steps that follow:
 - a. Use a microfiber wiper, [PL 26.10 Item 13](#), dampened with antistatic fluid, [PL 26.10 Item 19](#) to clean the side 2 scan assembly glass.
 - b. Use a dry microfiber wiper, [PL 26.10 Item 13](#) to polish the side 2 scan assembly glass.

Internal Surface Cleaning

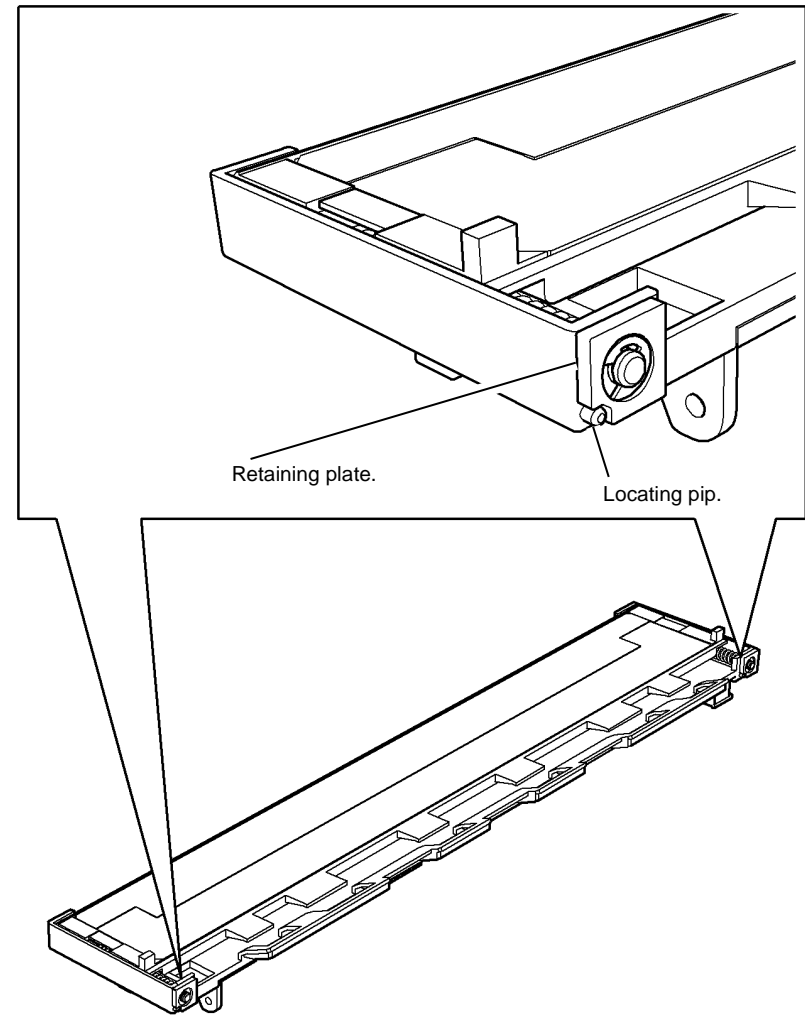
1. Remove the side 2 scan assembly, [REP 60.6](#).
2. Remove the side 2 scan assembly glass, [Figure 2](#).



X-1-1859-A

Figure 2 Side 2 scan glass assembly removal

3. Use a microfiber wiper, [PL 26.10 Item 13](#), dampened with antistatic fluid, [PL 26.10 Item 19](#) to clean the inside surface of the side 2 scan assembly glass.
4. Use a microfiber wiper, [PL 26.10 Item 13](#), to polish the inside surface of the side 2 scan assembly glass.
5. Reverse the removal process in [Figure 2](#) to replace the side 2 scan assembly glass.
6. Ensure that the retaining plate on the end of each shaft is positioned correctly relative to the locating pips on the side 2 scan assembly, [Figure 3](#).



X-1-1869-A

Figure 3 Retaining plate location

7. Replace the side 2 scan assembly. Refer to [REP 60.6](#).

ADJ 60.3 IIT Registration, Magnification and Calibration

Purpose

To correctly set all parameters associated with IIT registration, magnification and calibration.

Procedure

Perform the procedures that follow:

1. [dC609](#) Document Glass Registration.
2. [dC610](#) CCD Lamp Profile Adjustment.
3. [dC608](#) Document Registration Procedure.
4. [dC945](#) IIT Calibration.

ADJ 60.4 LED Print Head Cleaning Procedure

Parts List on [PL 60.35](#)

Purpose

To clean the LED print head ensuring optimum image quality.

Procedure



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



CAUTION

Observe ESD precautions during this procedure.

1. Open the front door assembly, [PL 28.10 Item 5](#).
2. Cam the LED print head away from the print cartridge.
3. Manually move the LED print head cleaner fully out, then in 3 times, [Figure 1](#).

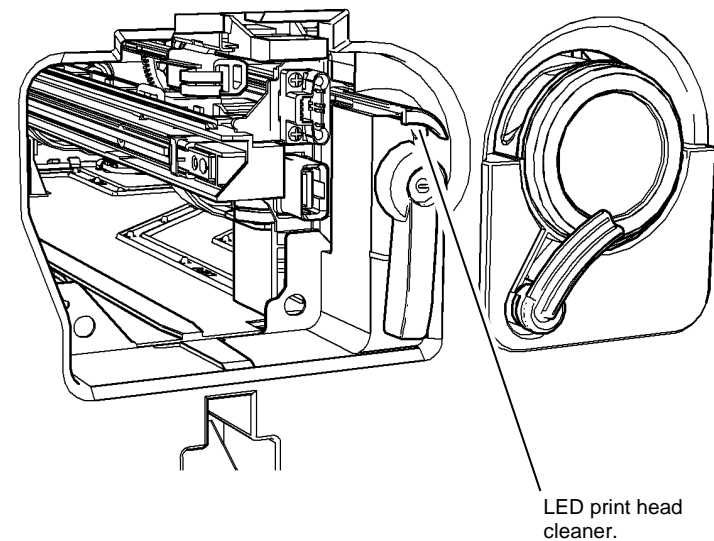


Figure 1 Component location

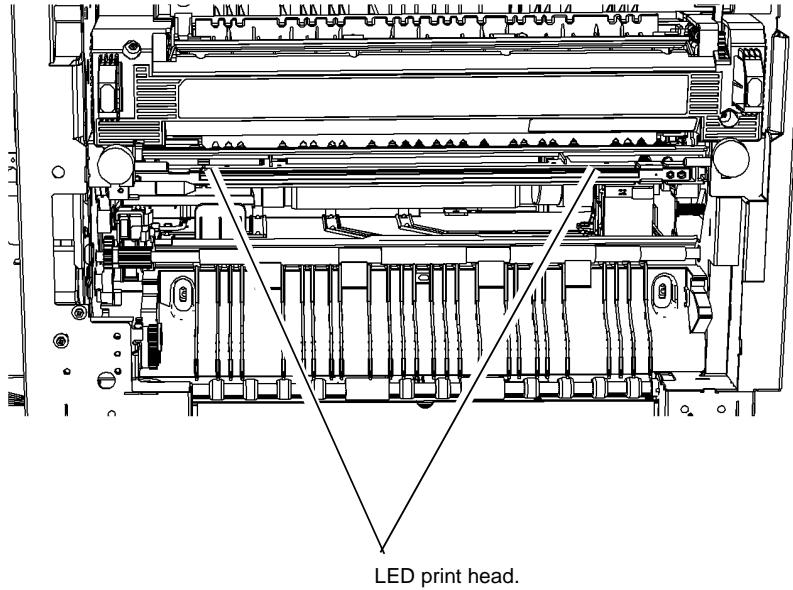
4. If contamination remains, perform the steps that follow:
 - a. Remove the print cartridge, [PL 90.17 Item 9](#), then place in a black bag.
 - b. Open the left door.



CAUTION

Use very light pressure when cleaning the LED print head.

- c. Use a lint free wiper, PL 26.10 Item 13 dampened with cleaning fluid, PL 26.10 Item 22 to clean the LED print head, Figure 2.



X-1-1861-A

Figure 2 Component location

ADJ 70.1 Tray 3 and Tray 4 Paper Tray Guide Setting

Parts List on [PL 70.18](#), [PL 70.19](#)

Purpose

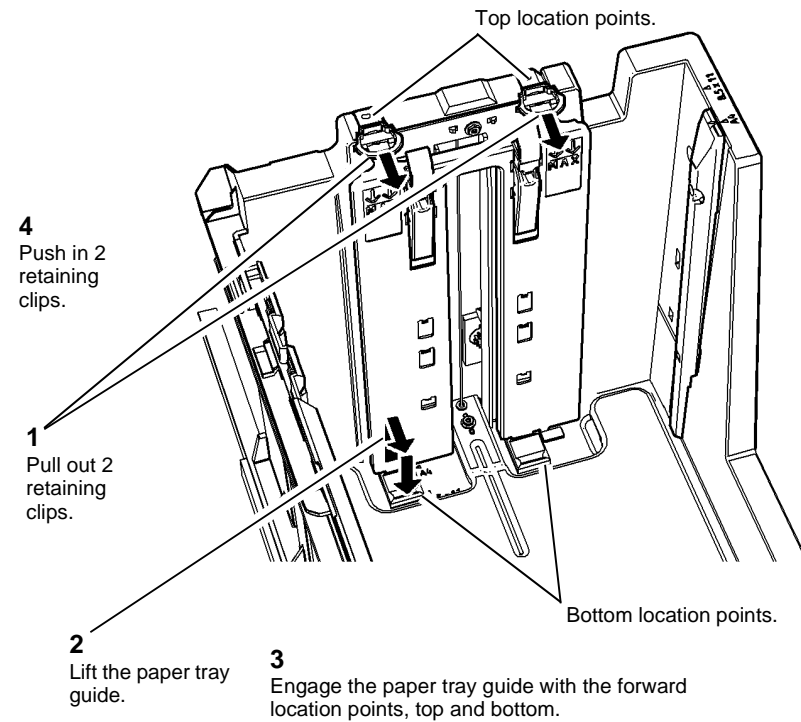
To adjust the paper tray guides in tray 3 and tray 4 for A4 or 8.5x11 inch paper.

Adjustment



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove tray 2, [REP 70.1](#).
2. Pull out the tray to be adjusted. Remove the paper from the tray.
3. To reset the paper tray guides:
 - Refer to [Figure 1](#) and [Figure 2](#) to change the paper tray guides from A4 paper size to 8.5x11 inch paper size.
 - Refer to [Figure 3](#) to change the paper guides from A4 paper size to 8.5x11 inch paper size.
 - Refer to [Figure 4](#) and [Figure 5](#) to change the paper tray guides and paper guides from 8.5x11 inch paper size to A4 paper size.
 - Refer to [Figure 6](#) to change the paper guides from 8.5x11 inch paper size to A4 paper size.



X-1-0795-A

Figure 1 Rear guide re-position

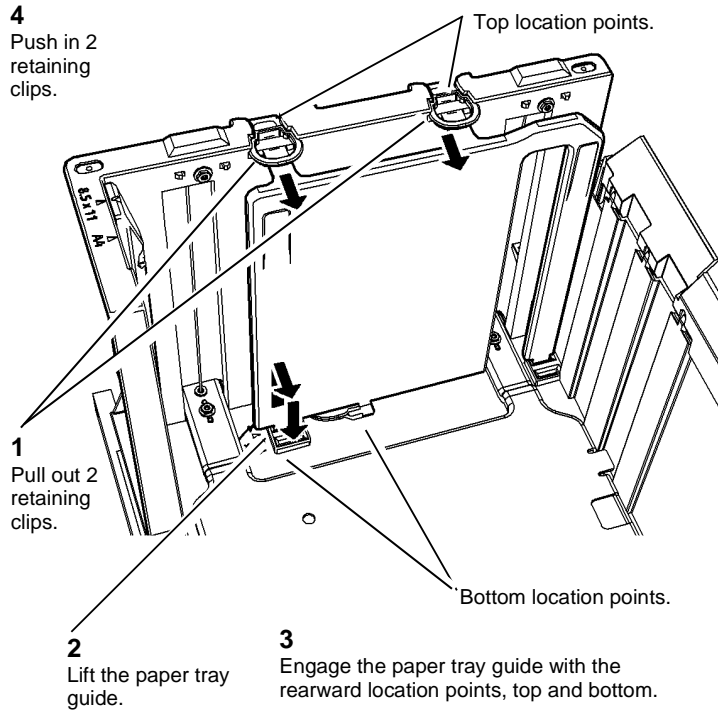


Figure 2 Front guide re-position

X-1-1011-A

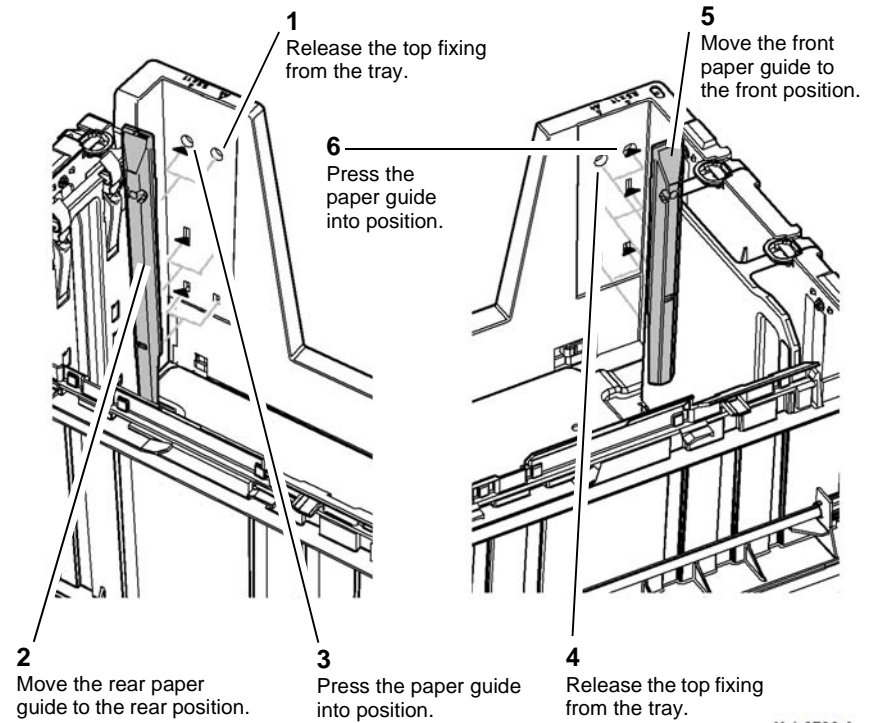
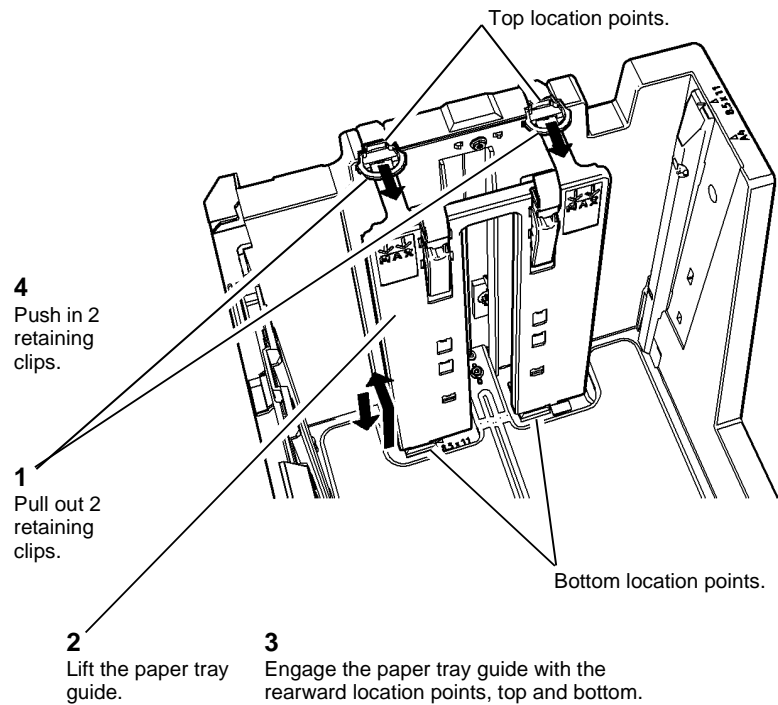


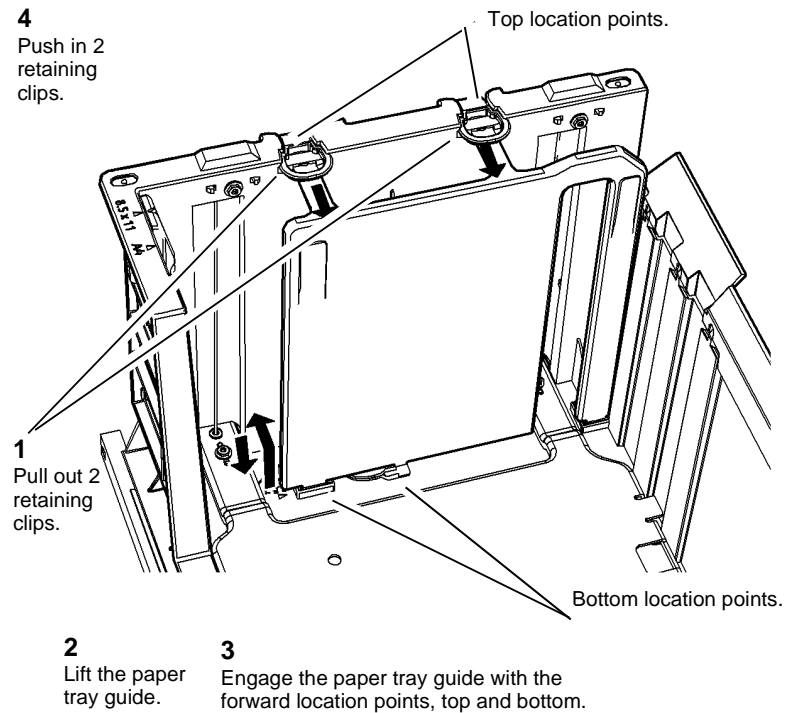
Figure 3 Paper guides re-position

X-1-0796-A



X-1-0797-A

Figure 4 Rear guide re-position



X-1-1012-A

Figure 5 Front guide re-position

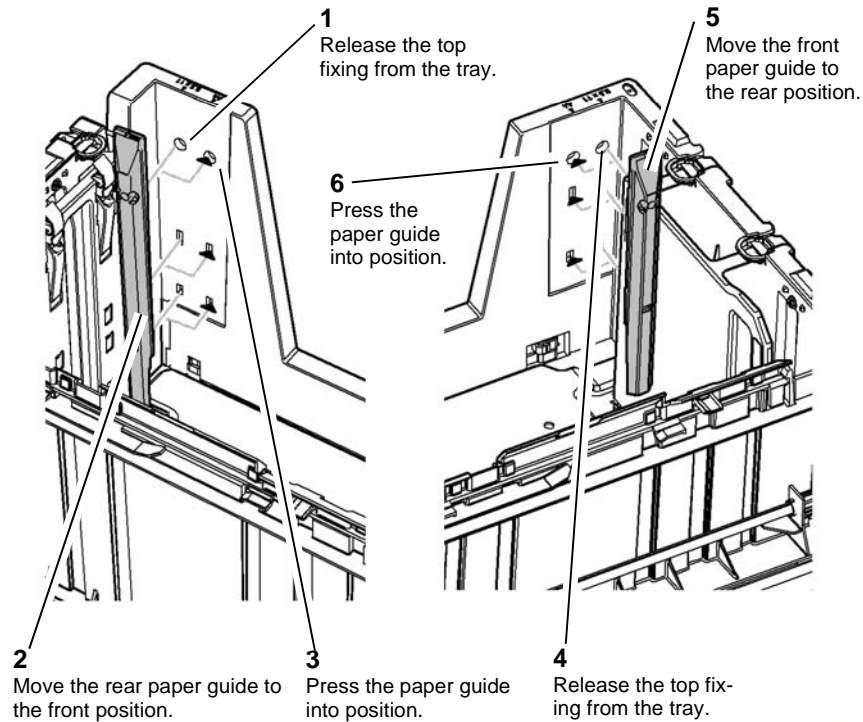


Figure 6 Paper guides re-position

X-1-0798-A

ADJ 70.2 Tray 6 Paper Tray Guides Setting

Parts List on [PL 75.64](#)

Purpose

To adjust the paper tray guides in tray 6 for A4/A3 or 8.5x11/11x17 inch paper.

Adjustment



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the tray 6 door and allow the tray to lower and remove the paper stack.
2. Adjust the paper guide to the required paper size, [Figure 1](#).

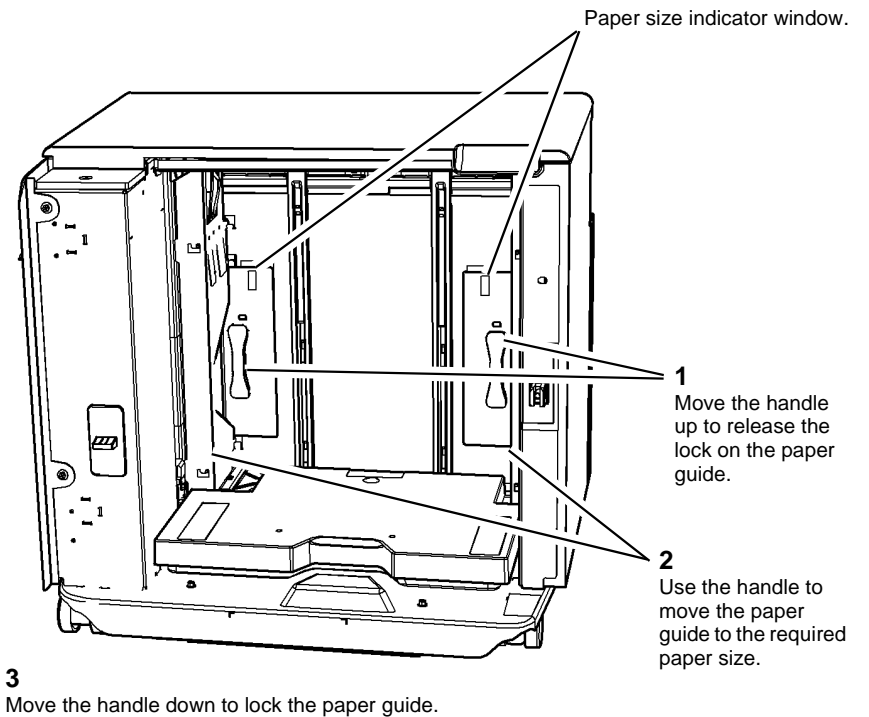


Figure 1 Paper guide adjustment

X-1-1885-A

- To set the paper tray guide to A4/A3 paper size, move the paper guide to the outer position.
 - To set the paper tray guide to 8.5x11/11x17 inch paper size, move the paper guide to the inner position.
3. Check the registration, refer to [dC604](#) Registration Setup Procedure.

ADJ 70.3 Tray 6 Module to Machine Alignment

Parts List on [PL 75.62](#)

Purpose

To correctly align the tray 6 module to achieve correct top edge registration and reliable transfer of paper from the tray 6 module to the machine.

Adjustment



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

The adjustment must be performed in the following order:

1. [Figure 1](#), turn the hand wheel in the centre of the tray 6 module to raise the casters off of the floor.

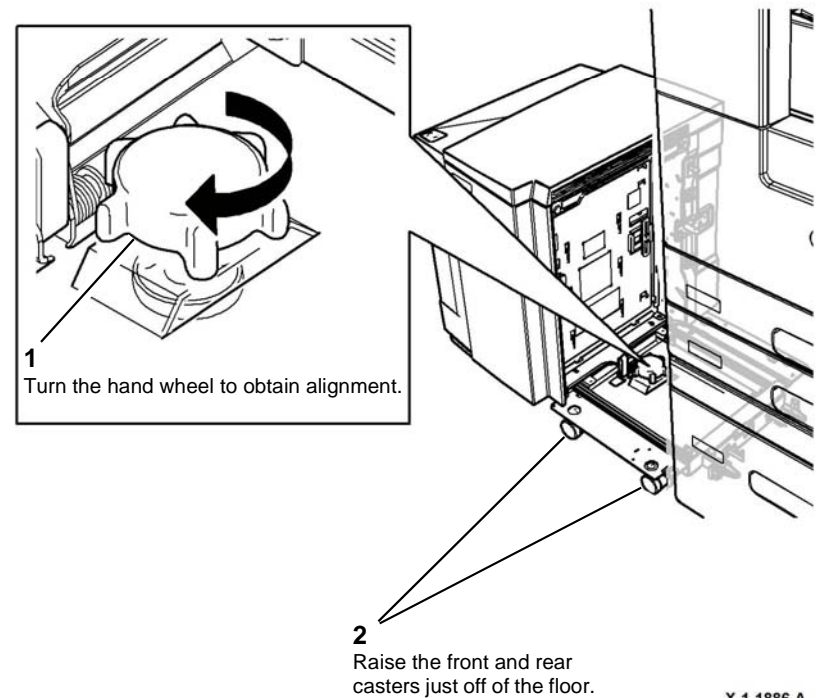


Figure 1 Tray 6 alignment

2. Check the registration, refer to [dC604](#) Registration Setup Procedure.

ADJ 70.4 Tray 6 Module Tray Alignment

Parts List on PL 75.64

Purpose

To align the tray 6 module paper tray with the paper trays in the IOT module. Use this adjustment when the top edge registration cannot be achieved using dC604 Registration Setup Procedure.

NOTE: Perform ADJ 70.3, Tray 6 Module to Machine Alignment, before starting this adjustment procedure. Use both ADJ 70.3 and this adjustment to achieve correct hole punch alignment.

Before performing this adjustment return the NVM values for tray 6 to the nominal values.

Adjustment

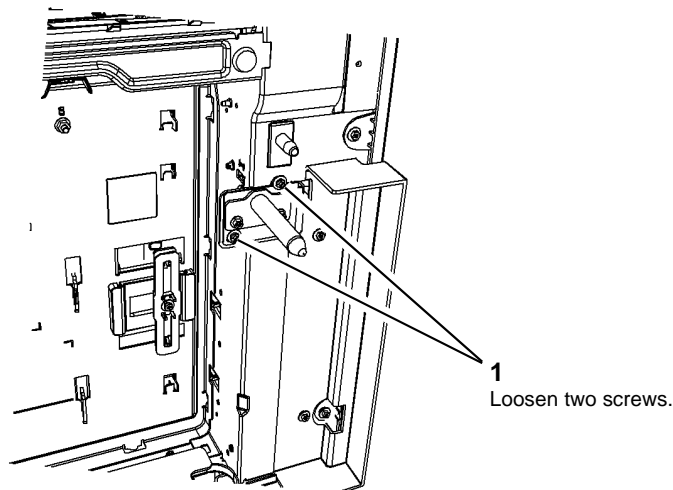


WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Make a sample print and determine which way and how far the tray needs to be moved.

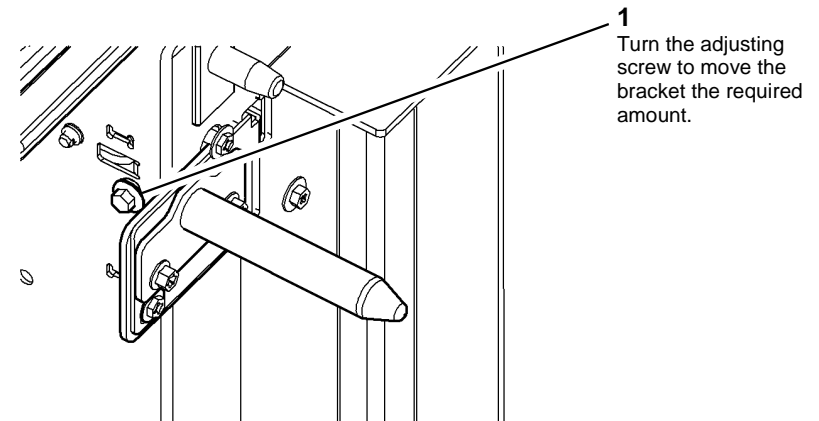
1. Loosen the two screws on the docking pin bracket, Figure 1.



X-1-1887-A

Figure 1 Docking pin bracket

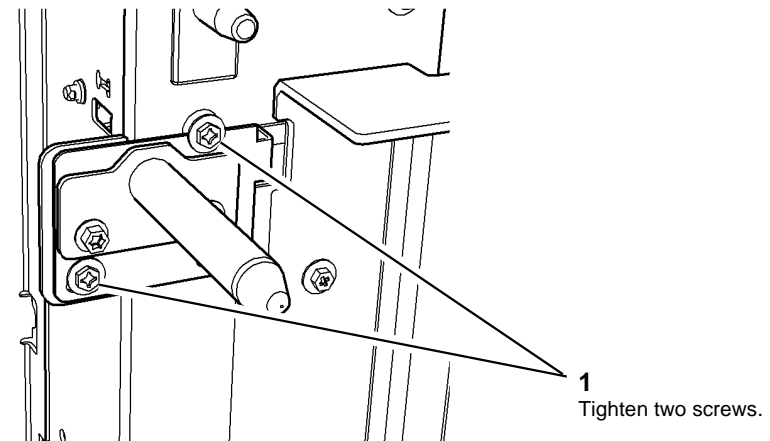
2. Turn the adjusting screw to move the docking pin bracket to the front or to the rear, Figure 2.



X-1-1888-A

Figure 2 Adjusting screw

3. Secure the docking pin bracket, Figure 3.



X-1-1890-A

Figure 3 Secure the docking pin bracket

4. Make sample prints and check the top edge registration.
5. Perform dC604 Registration Setup Procedure.
6. If the top edge registration is still out of range, repeat the adjustment.

ADJ 70.5 Tray 6 Stack Height Sensor and Retard Shield

Parts List on [PL 80.41](#), [PL 26.11](#)

Purpose

To enable the stack height sensor and retard shield to be set to their optimum positions on tray 6 modules. Thus extending the life of the feed, nudger and retard rolls.

NOTE: In the service engineering community tray 6 is also referred to as the PFP (Paper Feed Platform).

Preparation



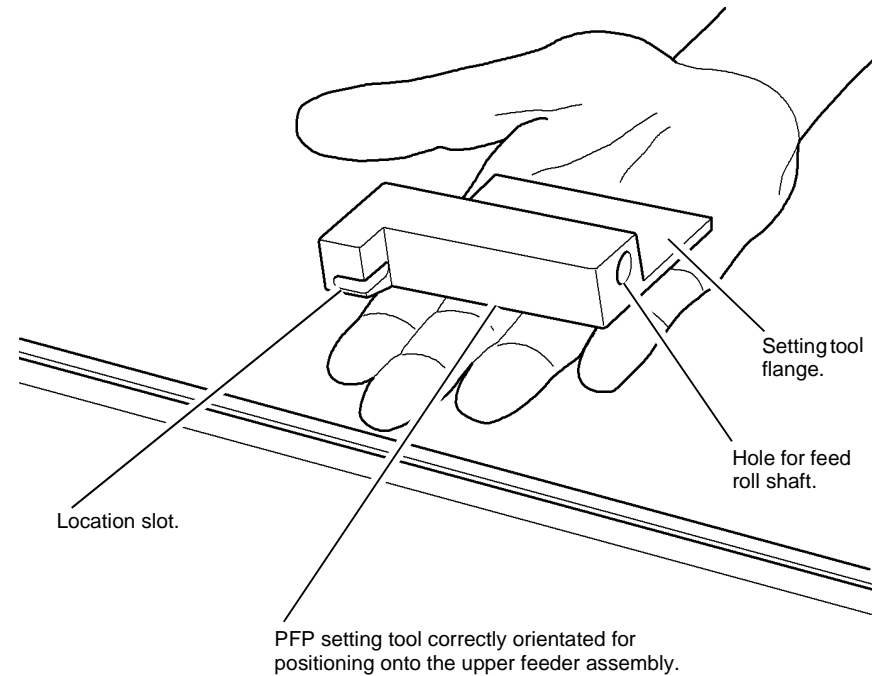
WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Special tool required - PFP stack height sensor and retard shield setting tool, [PL 26.11 Item 8](#) and [Figure 1](#).

1. Remove the following components from the upper feed assembly drive shafts;
 - Feed roll, [REP 80.38](#).
 - Clutch, [PL 80.41 Item 10](#).
 - One way coupling, [PL 80.41 Item 4](#).
 - Bearing, [PL 80.41 Item 14](#).
 - Roller belt, [PL 80.41 Item 15](#).
 - Nudger roll, [REP 80.38](#).
 - Nudger pulley, [PL 80.41 Item 3](#).
 - Retard roll, [REP 80.38](#).
 - Clutch, [PL 80.42 Item 7](#).
 - Retard clutch, [PL 80.42 Item 3](#).
2. Remove tray 6 top cover, [REP 70.25](#).

3. Prepare to locate the PFP setting tool onto the upper feed assembly, [Figure 1](#).



X-1-1597-A

Figure 1 Tool orientation

4. Install the PFP setting tool, [Figure 2](#).

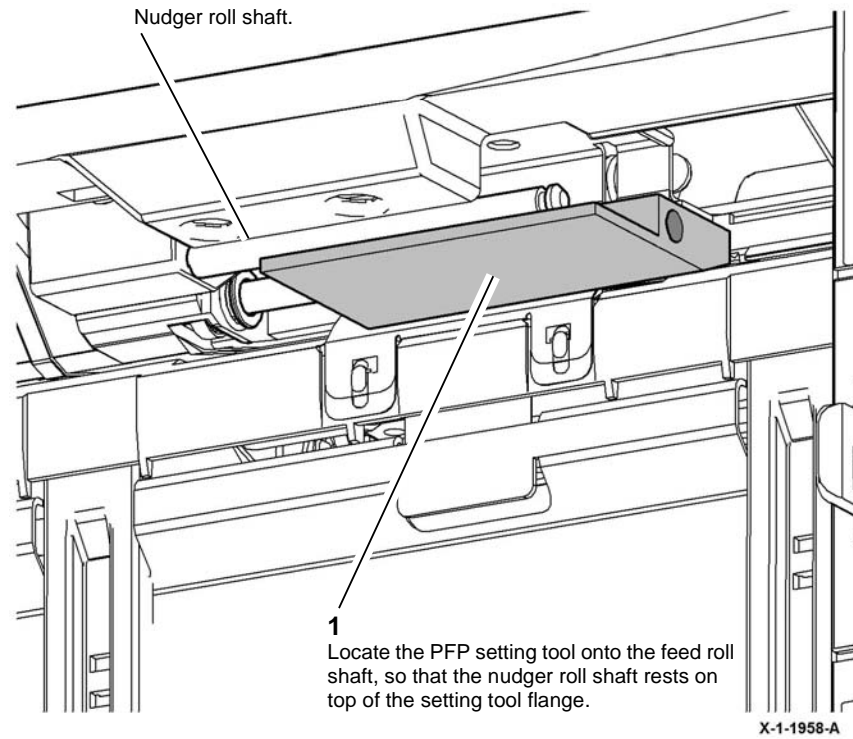


Figure 2 Setting tool location

5. Engage the tab in the setting tool location slot, [Figure 3](#).

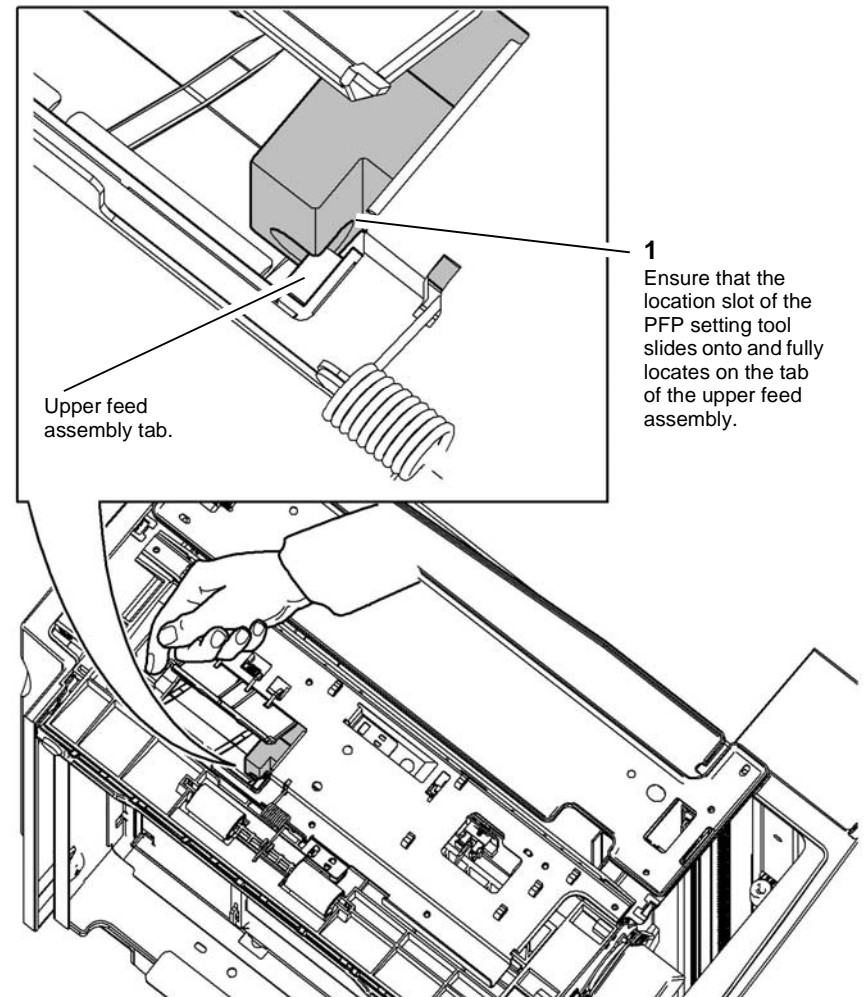


Figure 3 Tab location

6. Check that the tool is correctly located, as shown in [Figure 4](#).

NOTE: In [Figure 4](#), the spring loaded access cover is shown in ghosted form for clarity.

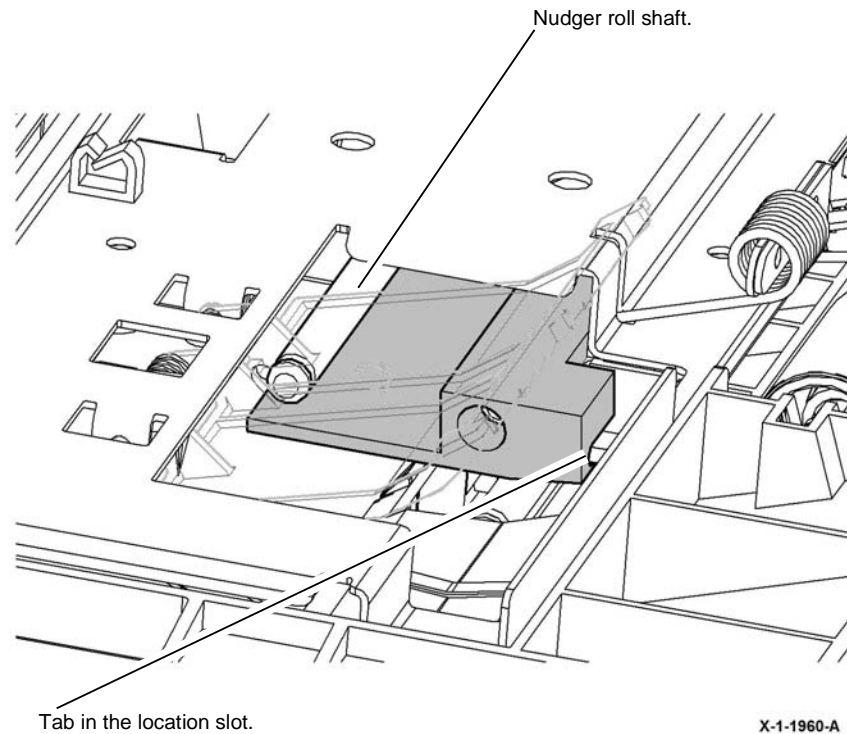


Figure 4 Correct tool location

Retard Shield Check and Adjustment

1. Check the position of the retard shield, [Figure 5](#).

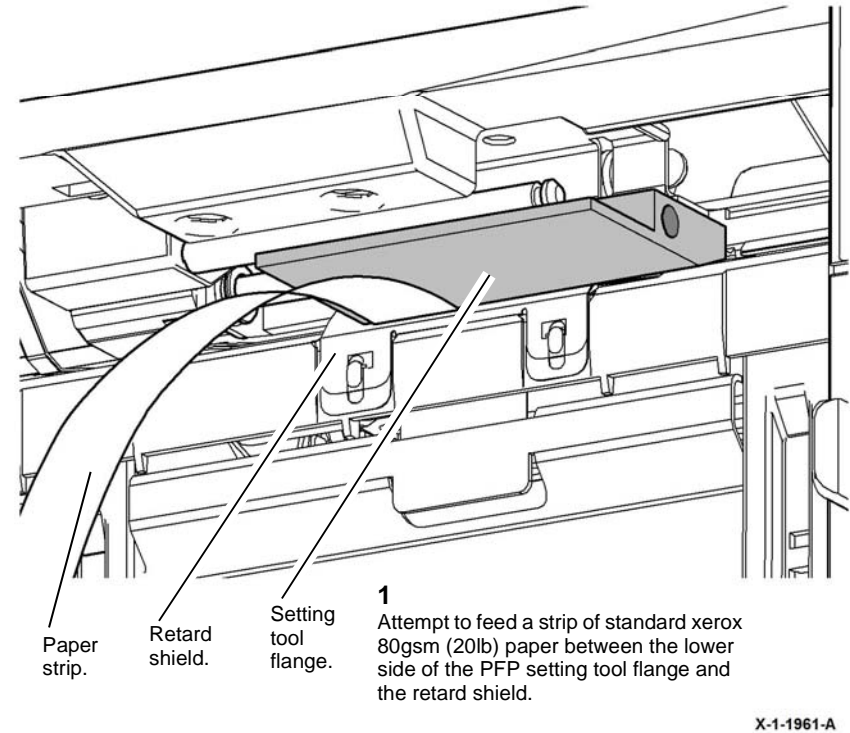


Figure 5 Retard shield check

2. If the paper strip does not feed between the flange of the PFP setting tool and the retard shield then retard shield is positioned correctly, proceed to [Stack Height Sensor Check and Adjustment](#).
If the paper strip does feed between the flange of the PFP setting tool and the retard shield then the retard shield requires adjustment, continue at step 3.
3. Prepare to adjust the position of the retard shield, [Figure 6](#).

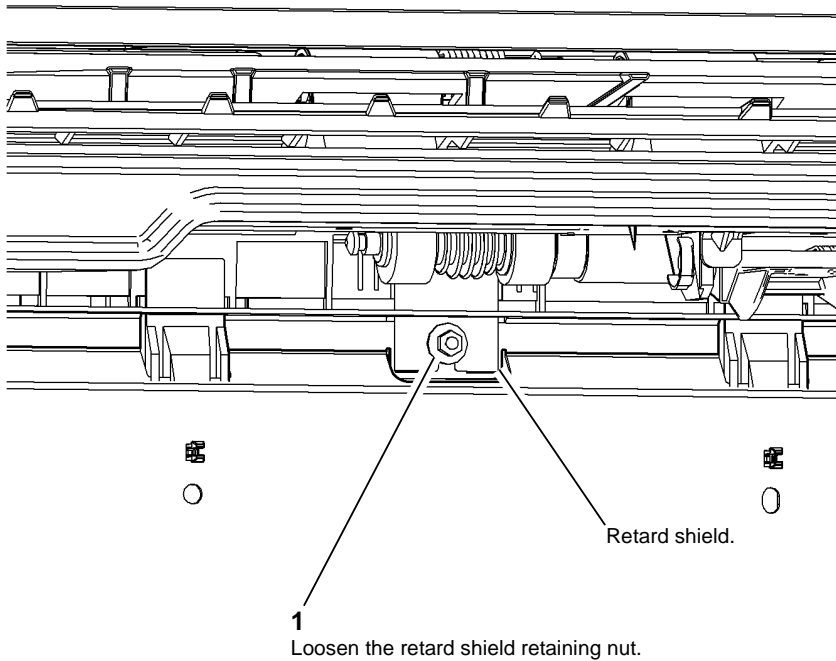


Figure 6 Preparation

X-1-1962-A

4. Adjust the position of the retard shield, [Figure 7](#).

NOTE: Take care not to move the PFP setting tool as the retard shield is repositioned.

NOTE: Ensure the retard shield remains parallel to the upper feed assembly.

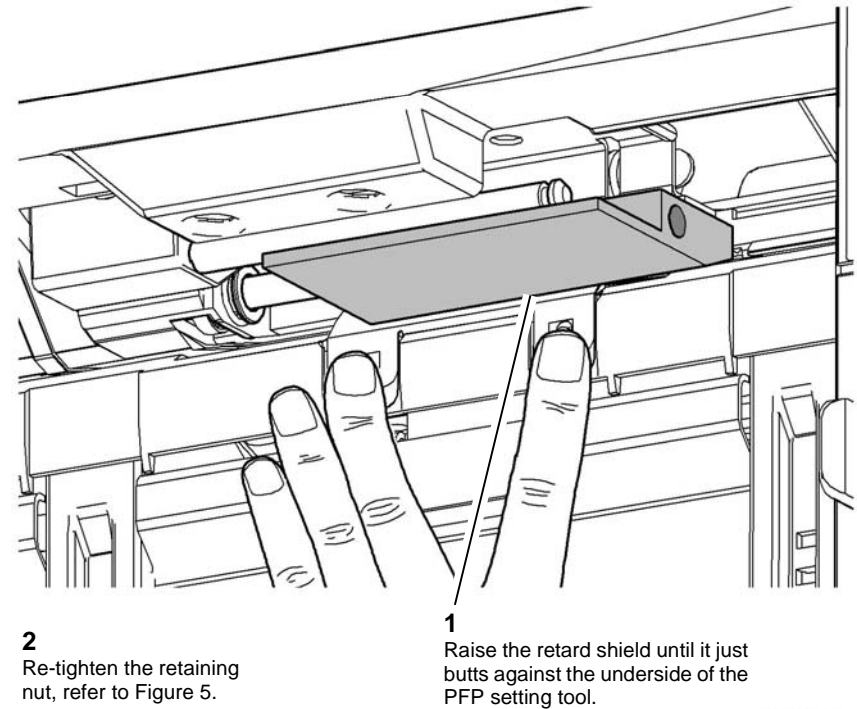


Figure 7 Retard shield adjustment

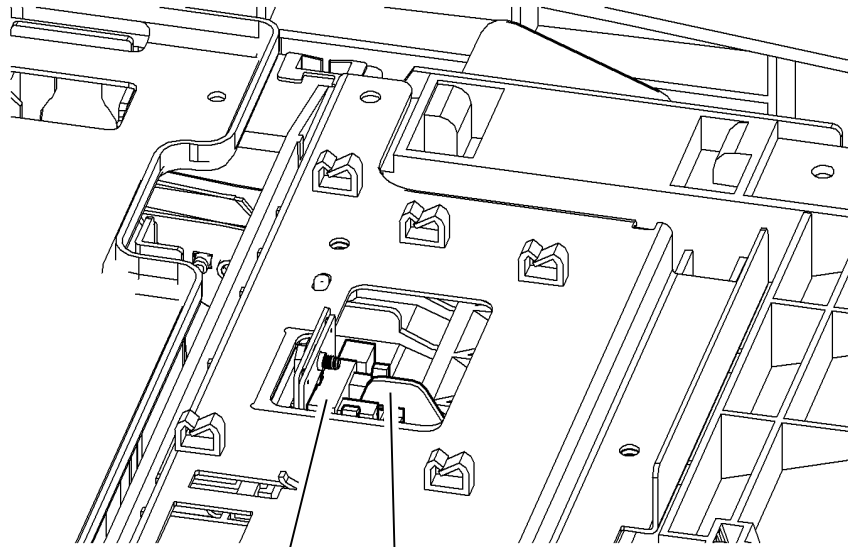
X-1-1963-A

5. Re-check the position of the retard shield, [Figure 5](#). If necessary repeat the adjustment of the retard shield.

Stack Height Sensor Check and Adjustment

1. Ensure the machine is switched on with the PFP door open so that the paper tray travels to and remains at the lowest position.
2. Enter **dC330** code 076-330 PFP stack height sensor Q76-330. Press Start. The display should read low.

3. Check the position of the stack height sensor, [Figure 8](#).



NOTE: The sensor flag is part of the upper feed assembly top cover.

Stack height sensor.

Sensor flag.

- 1 Rest a finger lightly on the flag of the stack height sensor and check the display has changed from low to high.

X-1-1964-A

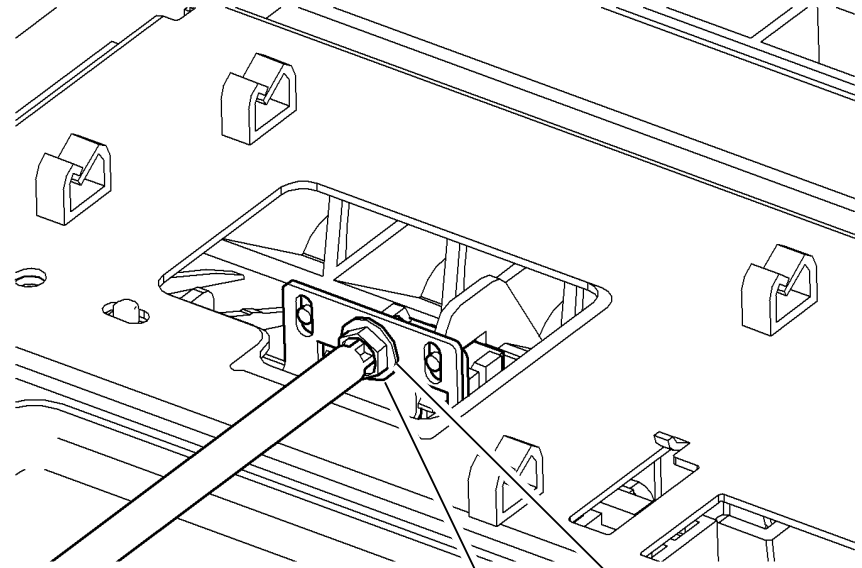
Figure 8 Sensor check

4. If the display has changed from low to high the sensor is positioned correctly. Proceed to step 7.

NOTE: The change of state of the sensor may be accompanied by an audible buzzer.

If the display does not change from low to high the sensor will require adjustment, continue at step 5.

5. Adjust the position of the stack height sensor, [Figure 9](#).



- 2 Carefully reposition the sensor to the point where the display just changes from low to high.

- 1 Loosen the screw.

- 3 Tighten the screw.

X-1-1965-A

Figure 9 Sensor adjustment

6. Check the position of the stack height sensor, [Figure 7](#). If necessary repeat the adjustment of the stack height sensor.
7. The adjustments are now complete, remove the PFP setting tool.
8. Install all the removed PFP components, refer to [Preparation](#) steps 1 and 2. Replacement is the reverse of the removal procedure.

ADJ 80.1 Tray 3 and Tray 4 Nudger Roll Pressure

Parts List on [PL 80.32](#) and [PL 80.33](#)

Purpose

To adjust the downward pressure of the nudger roll.

Reducing the downward pressure will make the nudging action less aggressive and may reduce the tendency of some papers from feeding more than 1 sheet from the top of the stack.

Increasing the downward pressure will make the nudging action more aggressive and may improve the feeding of glossy paper and thin paper.

Check

1. Remove the relevant paper feed assembly:
 - Tray 3, [REP 80.20](#).
 - Tray 4, [REP 80.21](#).
2. Check the number of nudger roll weights. Refer to [Figure 1](#).

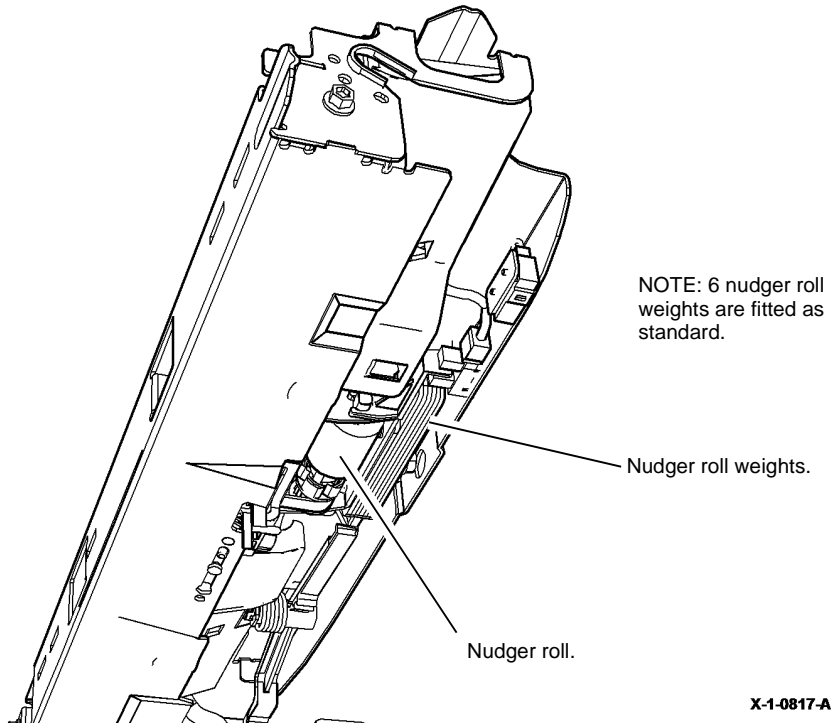


Figure 1 Weights position

Adjustment

1. Change the number of nudger roll weights to adjust the downward pressure of the nudger roll, [Figure 2](#).

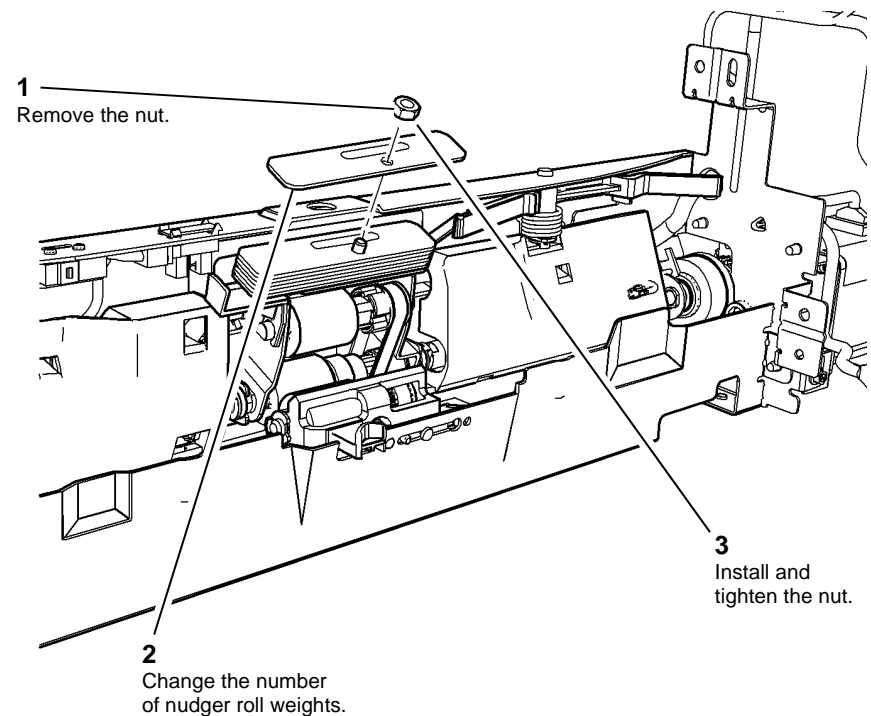


Figure 2 Spring seat adjustment

2. Install the LVPS module, [REP 1.1](#).
3. Install the feed assembly then check the paper feeding performance.

ADJ 80.2 Simplex and Duplex Buckle Timing

Purpose

To check and adjust the buckle timing on the simplex and duplex transport assemblies.

Simplex Buckle Timing

Check

Check the simplex skew measurement, [IQS 5](#).

Table 1 Simplex

Sheet Size	NVM Code	MVM Name	Default Value	Adjustment Range
≤216mm	500-020	SimplexBuckleStepsS1	90	0 to 500
>216mm & ≤365mm	500-021	SimplexBuckleStepsS2	90	0 to 500
>365mm	500-022	SimplexBuckleStepsS3	90	0 to 500

Adjustment

1. Adjust the 3 simplex buckle timing NVM values in increments of 10 in accordance with [Table 1](#).
2. Run 20 copies of test pattern number 11 (8.5x11 inch), 12 (A4), 13 (A3) or 14 (11x17 inch) in simplex mode. Check the copies for skew.
3. If necessary, repeat steps 1 and 2.
4. Record the new values in the machine log book.
5. Check the duplex buckle timing.

Duplex Buckle Timing

Check

Check the duplex skew measurement, [IQS 5](#).

Table 2 Duplex

Sheet Size	NVM Code	MVM Name	Default Value	Adjustment Range
≤216mm	500-024	DuplexBuckleStepsD1	115	0 to 1000
>216mm & ≤365mm	500-025	DuplexBuckleStepsD2	115	0 to 1000
>365mm	500-026	DuplexBuckleStepsD3	115	0 to 1000

Adjustment

1. Adjust the 3 duplex buckle timing NVM value in increments of 10 in accordance with [Table 2](#).
2. Run 20 copies of test pattern 11 (8.5x11 inch), 12 (A4), 13 (A3) or 14 (11x17 inch) in duplex mode. Check the copies for skew.
3. If necessary, repeat steps 1 and 2.
4. Record the new values in the machine log book.
5. Perform an NVM Save and Restore, [GP 5](#).

ADJ 80.3 Tray 3 and Tray 4 Retard Roll Pressure

Parts List on [PL 80.32](#) and [PL 80.33](#)

Purpose

To adjust the nip pressure of the retard roll.

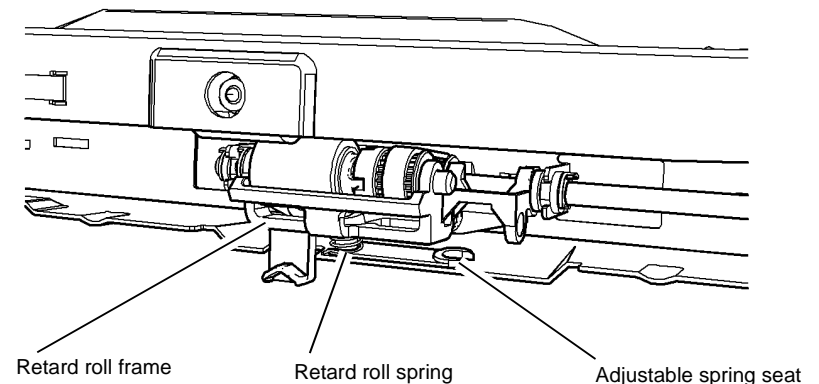
NOTE: If misfeeds are occurring, increase the nip pressure. If multifeeds are occurring, decrease the nip pressure.

The retard torque in the feeder is independent of the nip force, changing the nip pressure will not affect the retarding action.

Changing the nip pressure will provide more drive force to enable the feeder to overcome the retard torque and to get the sheet out of the feeder. If the nip pressure is increased too much, there is then enough drive force to feed more than one sheet through the separation nip.

Check

1. Remove the relevant paper feed assembly:
 - Tray 3, [REP 80.20](#).
 - Tray 4, [REP 80.21](#).
2. Check the position of the spring seat. Refer to [Figure 1](#).



X-1-0815-A

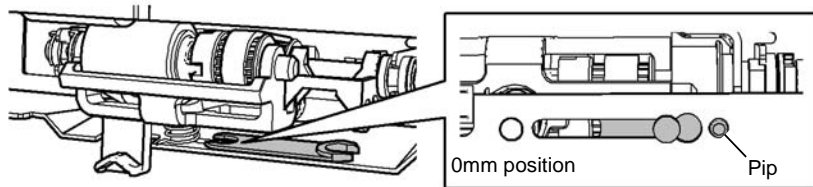
Figure 1 Spring seat position

Adjustment

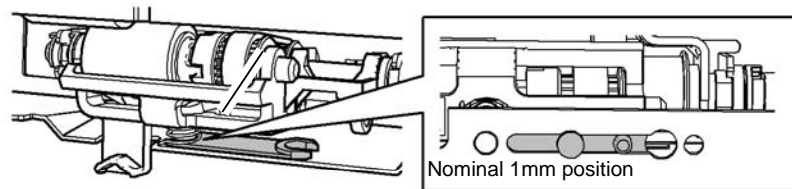
NOTE: The feeders have the spring seat set in the nominal (1mm) position during manufacture, [Figure 2](#).

1. Change the position of the spring seat to adjust the nip pressure of the retard roll, [Figure 2](#):

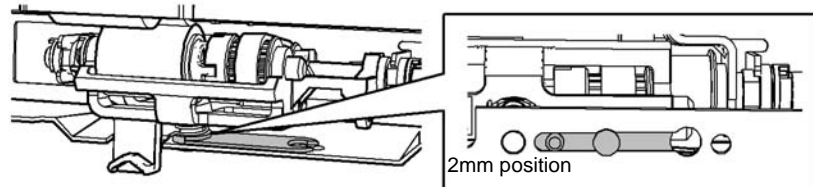
- Change the spring seat to the 2mm position to increase the retard roll pressure.
- Change the spring seat to the 0mm position to decrease the retard roll pressure.



To release the spring seat from this position, press down the pip then slide the spring seat away from the frame hole.
To locate the spring seat in this position, slide the spring seat along the slot until the pip drops into the frame hole.



To release the spring seat from this position, lift up the base of the spring then slide the spring seat away from the spring position.
To locate the spring seat in this position, lift the base of the spring then slide the spring seat along the slot until the thin end is located under the spring.



To release the spring seat from this position, lift up the base of the spring then slide the spring seat away from the spring position.
To locate the spring seat in this position, lift the base of the spring then slide the spring seat along the slot until the thick end is located under the spring.

Figure 2 Spring seat adjustment

2. Install the paper feed assembly. Check the paper feeding performance.

ADJ 80.4 Bypass Tray Nip Pressure

Parts List on [PL 70.35](#)

Purpose

To adjust the nip pressure between the mylar retard shield and the feed roll.

Check

1. Remove the bypass tray assembly, [REP 70.2](#).
2. Ensure the mylar retard shield is in good condition and installed correctly, refer to [REP 80.34](#).

Adjustment

NOTE: The XE operational group must only use a RoHS compliant M10 washer during this procedure, part number 651W10855.

1. Insert a M10 washer, thickness 1.8mm, outside diameter 19.0mm (part number 251W10855 or 651W10855 - See Note) underneath the retard force nip spring, refer to [PL 70.35 Item 18](#) and [Figure 1](#) and [Figure 2](#).

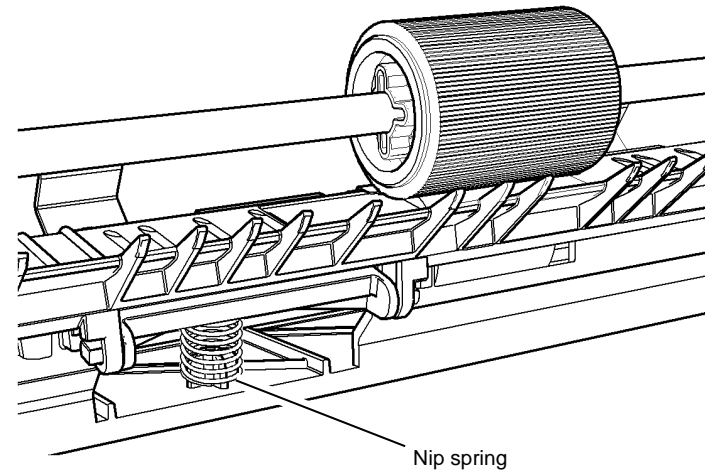
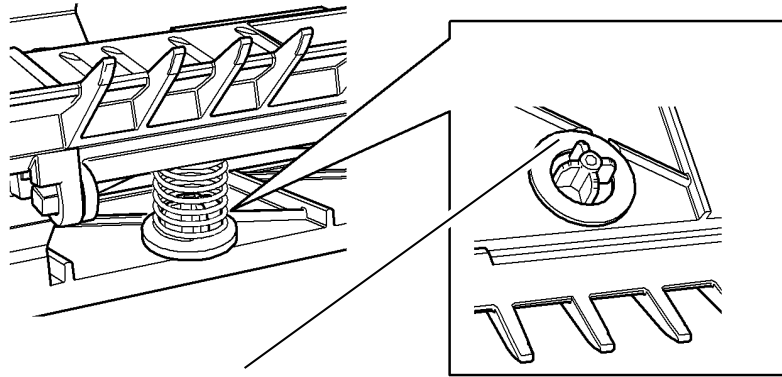


Figure 1 Retard force nip spring

X-1-1466-A



1
Ensure the washer is flat against the base of the bypass tray feeder frame. It may be necessary to remove part of a rib in the base.

X-1-1467-A

Figure 2 M10 washer in position

2. Replace the bypass tray assembly, [REP 70.2](#).
3. Enter [dC131](#) then change the NVM values as listed, [Table 1](#).

Table 1 NVM Values

dC 131 Location	New value
500-123 MSISimplexBuckleStepsS1	250
500-124 MSISimplexBuckleStepsS2	250
500-125 MSISimplexBuckleStepsS3	250
500-262 MSISimplexBuckleStepsS4	250
500-433 MSISimplexBuckleStepsS6	300

4. Check the paper feeding performance.

ADJ 80.5 Tray 4 Closing Alignment

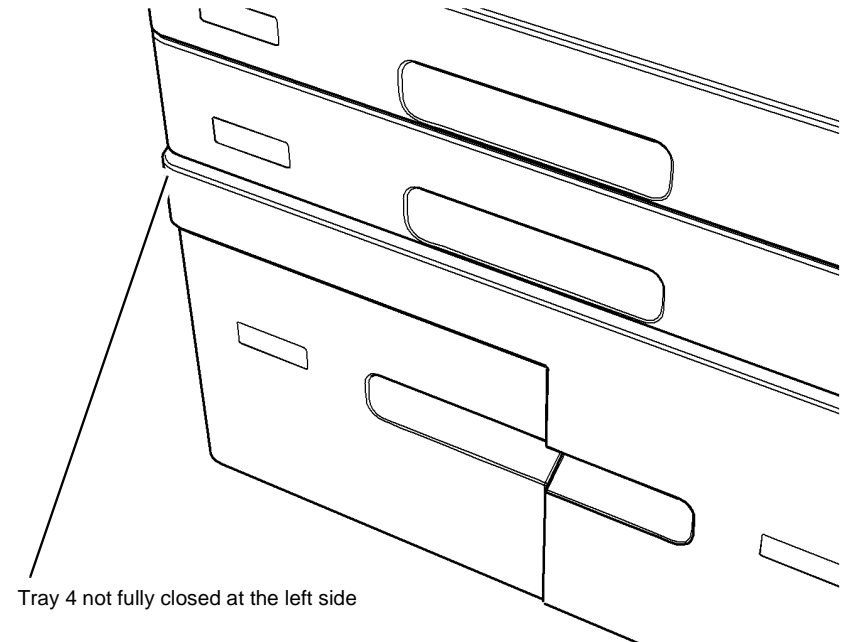
Parts List on [PL 70.18](#), [PL 70.26](#) and [PL 80.36](#)

Purpose

To adjust components of the tray 4 assembly so that it closes correctly to reduce occurrence of intermittent paper jams, mis-feeds and skew.

Check

Open and close tray 4 several times to check that the tray closes easily and fully. [Figure 1](#), shows a tray 4 that is not fully closed at the left side. The tray is closed enough to actuate the tray home sensor, but paper jams, mis-feeds and skew can occur. If tray 4 does not close easily and/or fully, perform the adjustment.



X-1-1453-B

Figure 1 Tray 4 not fully closed

Adjustment

1. Remove tray 1 and tray 2, [REP 70.1](#).
2. Remove tray 4, [REP 70.13](#).
3. Remove the tray 4 transport assembly, [REP 80.24](#).

4. Remove the rear cover, [REP 28.2](#).

NOTE: Removal of the rear cover and the tray 2 left guide is optional, but their removal makes the removal and re-installation of the front clip easier.

5. [Figure 2](#), remove the tray 2 left guide.

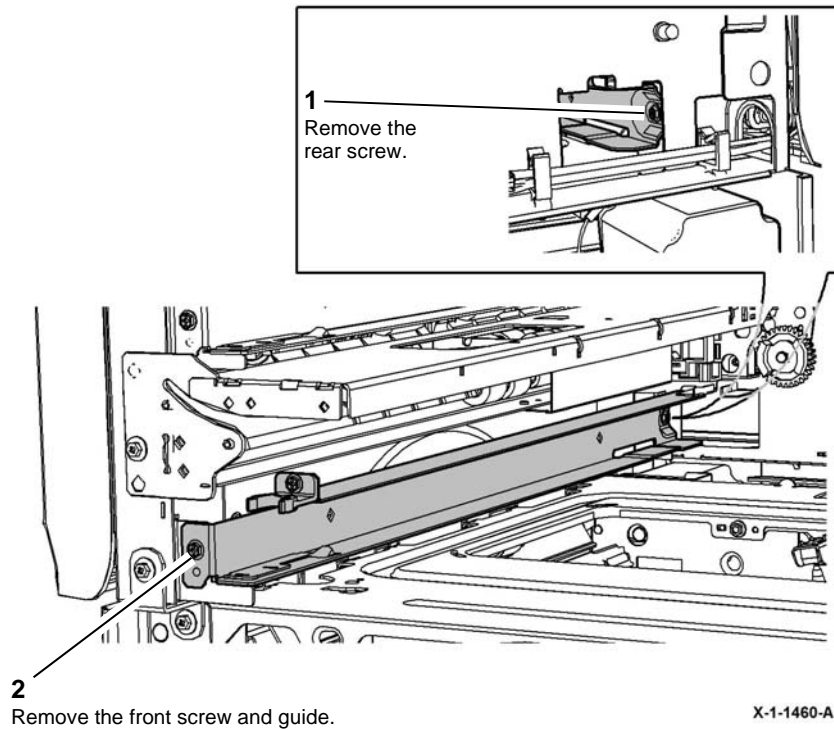


Figure 2 Left guide removal

6. [Figure 3](#), remove the front clip.

NOTE: For clarity, tray 3 is not shown in [Figure 3](#).

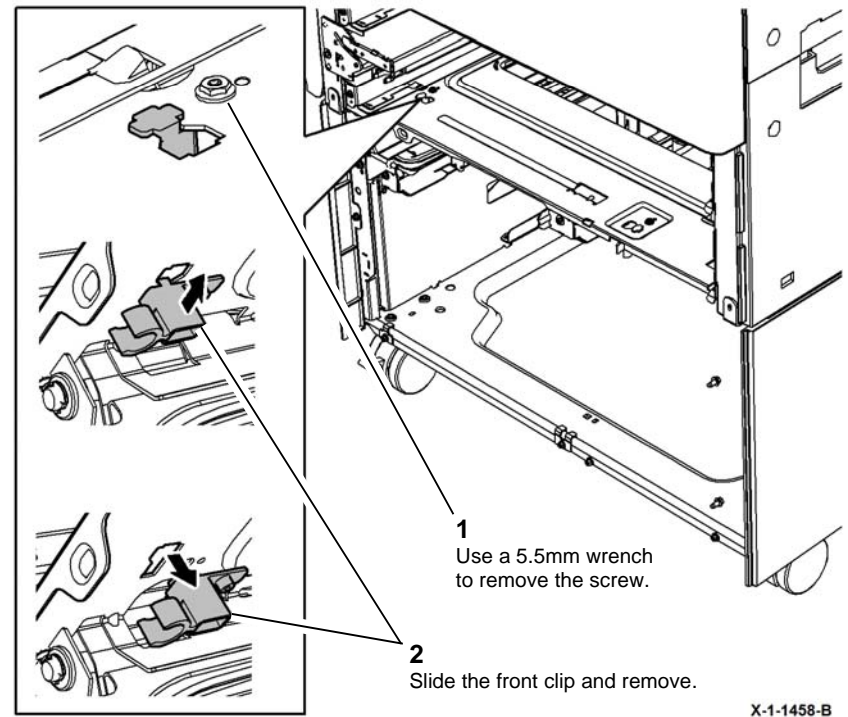


Figure 3 Front clip removal

7. **Figure 4**, Adjust the opening of the front clip.

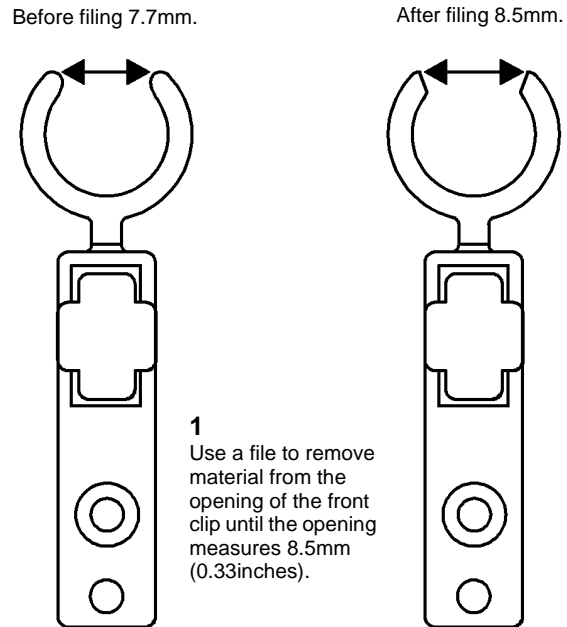


Figure 4 Front clip adjustment

8. Re-install the front clip,
9. If removed, re-install the tray 2 left guide and the rear cover.
10. Re-install tray 1 and tray 2.

11. **Figure 5**, apply a thin coating of plastislip grease, **PL 26.10 Item 8** to the tray 4 assembly rear peg.

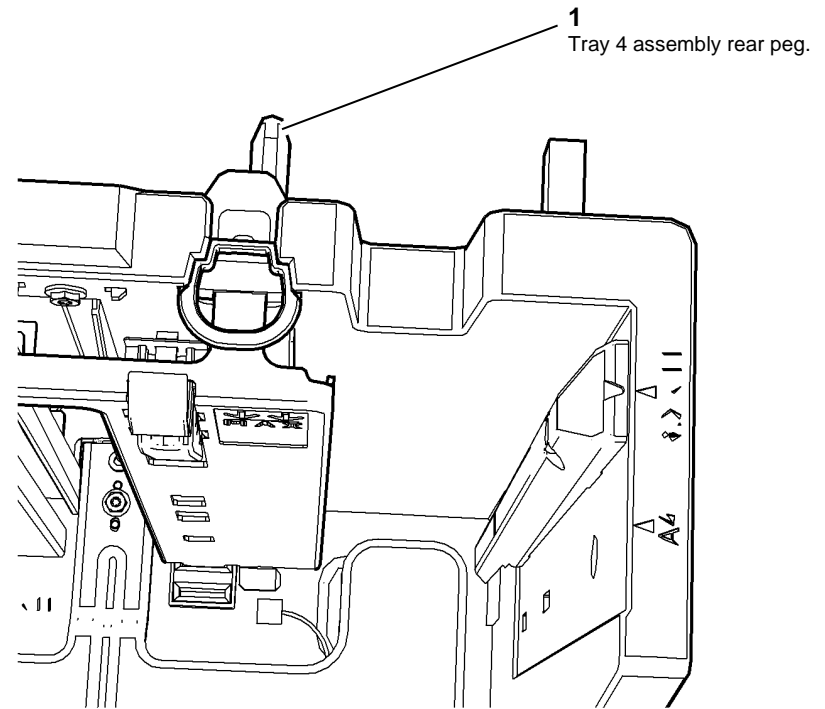
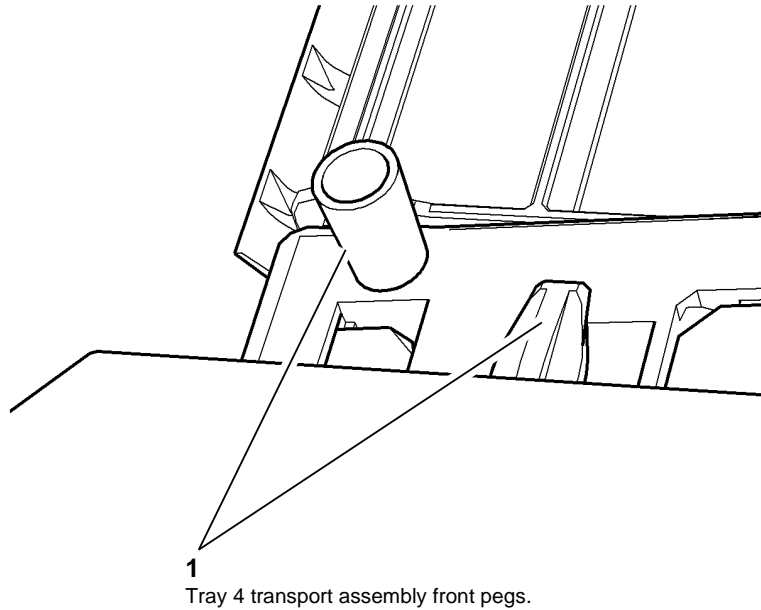


Figure 5 Tray 4 rear peg lubrication

12. Re-install tray 4, without the front cover.

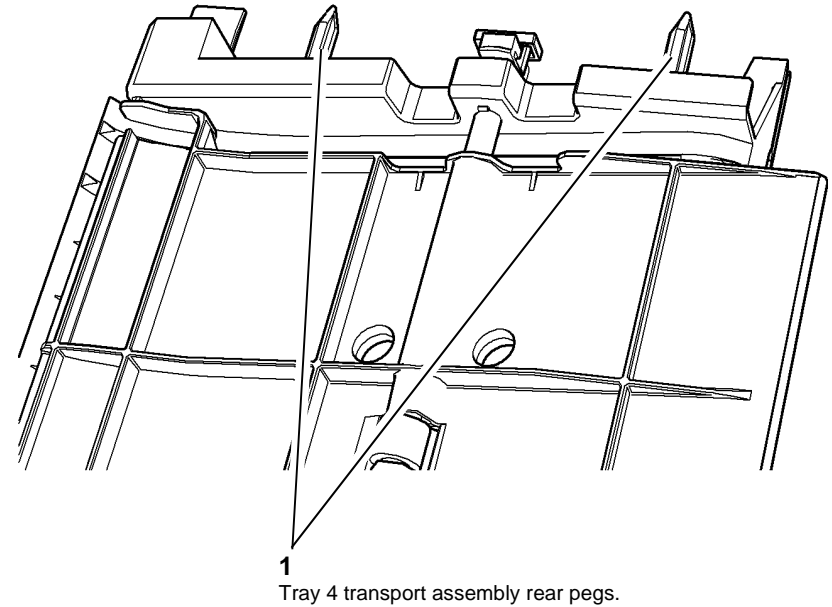
13. **Figure 6**, apply a thin coating of plastislip grease, **PL 26.10 Item 8** to the tray 4 transport assembly front pegs.



X-1-1455-A

Figure 6 Front pegs lubrication

14. **Figure 7**, apply a thin coating of plastislip grease, **PL 26.10 Item 8** to the tray 4 transport assembly rear pegs.

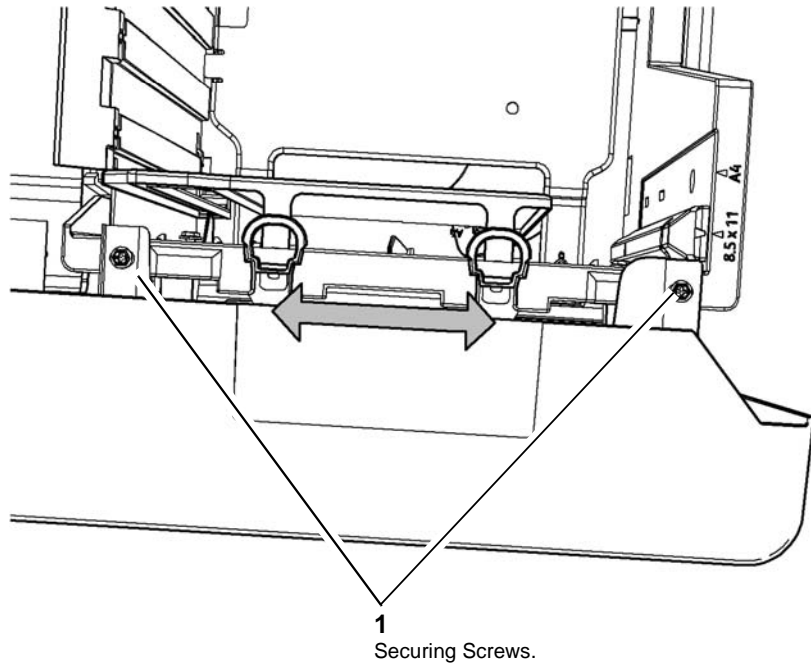


X-1-1456-A

Figure 7 Rear pegs lubrication

15. Apply a thin coating of plastislip grease, **PL 26.10 Item 8** at the 2 fixing screw boss areas on the inside of the front cover and around the screw boss areas on the top of the tray 4 assembly, refer to **Figure 8**.
16. Re-install the tray 4 front cover, but do not overtighten the screws, refer to GP 6 Screw Usage.

17. **Figure 8**, check that the tray 4 front cover will move to the left and right to allow the tray 4 transport assembly location pegs to align with the frame holes when the tray is closed. If necessary slightly loosen the two screws securing the tray 4 front cover to the tray 4 assembly until the front cover is free to move.



X-1-1454-B

Figure 8 Cover left/right movement

ADJ 90.1 Xerographics Cleaning

Parts List on [PL 90.17](#)

Purpose

To clean the xerographics area.

Adjustment



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the print cartridge, [PL 90.17 Item 9](#).
2. Use a lint free wiper, [PL 26.10 Item 13](#) dampened with cleaning fluid, [PL 26.10 Item 22](#) to clean the DEV and BCR contacts on the print cartridge, [Figure 1](#).

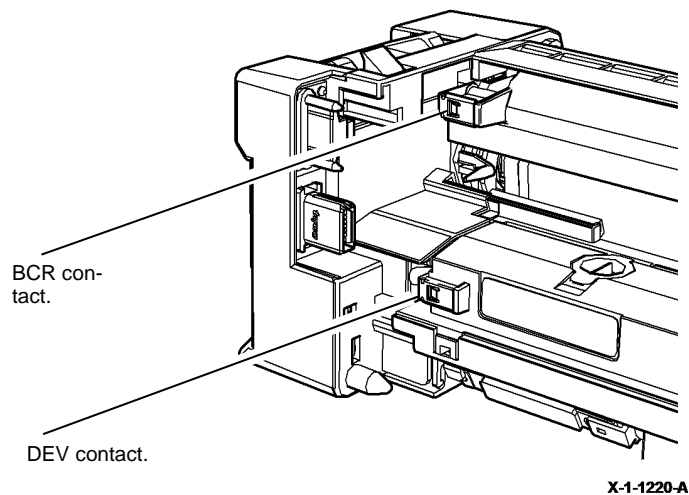


Figure 1 DEV and BCR contacts

3. Place the print cartridge in a black bag.
4. Use a lint free wiper, [PL 26.10 Item 13](#) dampened with cleaning fluid, [PL 26.10 Item 22](#) to clean the DEV and BCR spring contacts, [Figure 2](#).

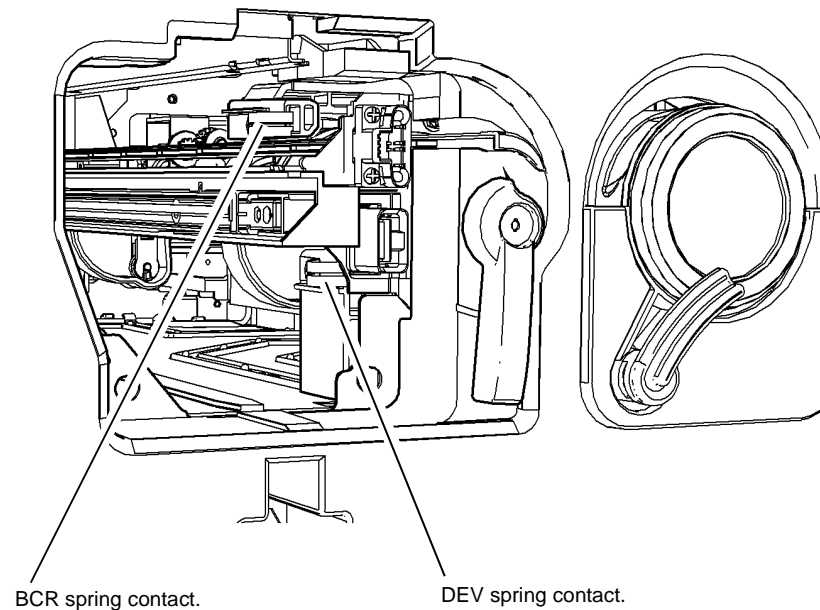


Figure 2 DEV and BCR spring contacts

5. Clean the LED print head, [ADJ 60.4](#).
6. Remove the toner cartridge, [PL 90.17 Item 2](#).
7. Remove the relevant component:
 - Centre output tray, [PL 28.10](#).
 - Horizontal transport, [REP 10.6](#).
8. Open the left door.
9. Use a toner vacuum cleaner to carefully clean the:
 - a. HVPS tracks and the HVPS tray assembly, [PL 90.10](#).
 - b. Toner dispense module, [PL 90.17 Item 1](#).
 - c. Toner cartridge housing, [PL 90.17 Item 3](#).

10. Use a lint free wiper, [PL 26.10 Item 13](#) dampened with cleaning fluid, [PL 26.10 Item 22](#) to clean the DTS and BTR contacts on the registration transfer assembly, [Figure 3](#).

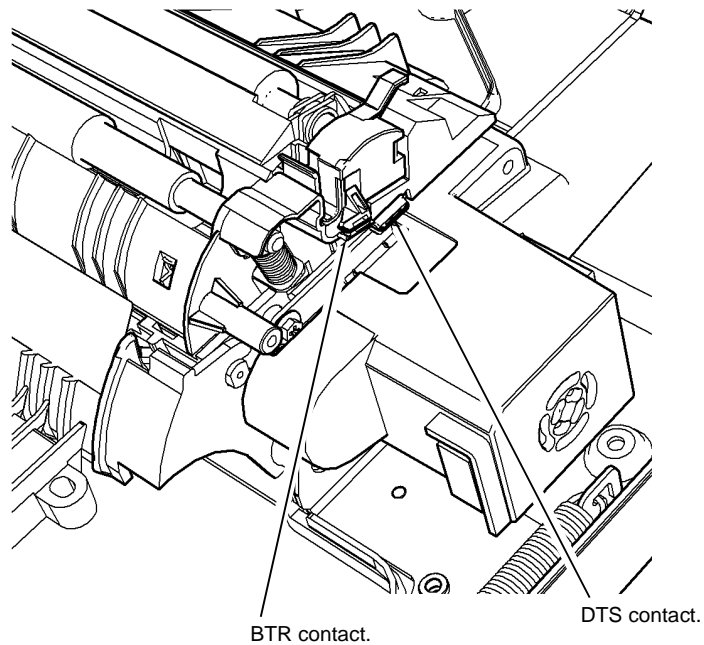


Figure 3 DTS and BTR contacts

X-1-1222-A

11. Use a lint free wiper, [PL 26.10 Item 13](#) dampened with cleaning fluid, [PL 26.10 Item 22](#) to clean the DTS and BTR spring contacts, [Figure 4](#).

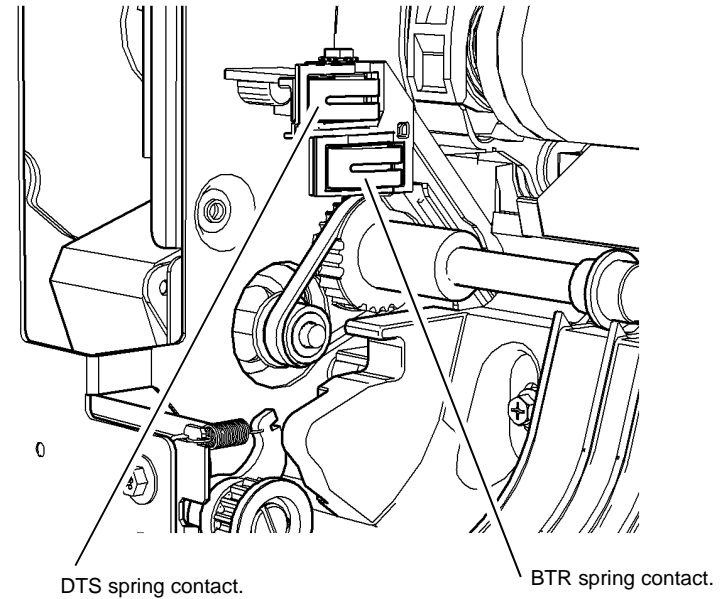


Figure 4 DTS and BTR spring contacts

X-1-1223-A

12. Remove the HVPS, [REP 1.10](#).
13. Use a toner vacuum cleaner to carefully clean the inside of the HVPS cover.
14. Use a lint free wiper, [PL 26.10 Item 13](#) dampened with cleaning fluid, [PL 26.10 Item 22](#) to carefully clean the HVPS spring contacts.

NOTE: To gain access to the HVPS contacts, it may be necessary to remove the toner cartridge housing. Refer to [REP 90.3 HVPS Tray Assembly](#).

15. To clean the bias transfer roll, [PL 80.15 Item 3](#), perform the steps that follow:
- Switch on the machine, [GP 14](#). Make 20 blank copies.
 - If contamination persists, use a toner vacuum cleaner to very carefully clean the bias transfer roll.

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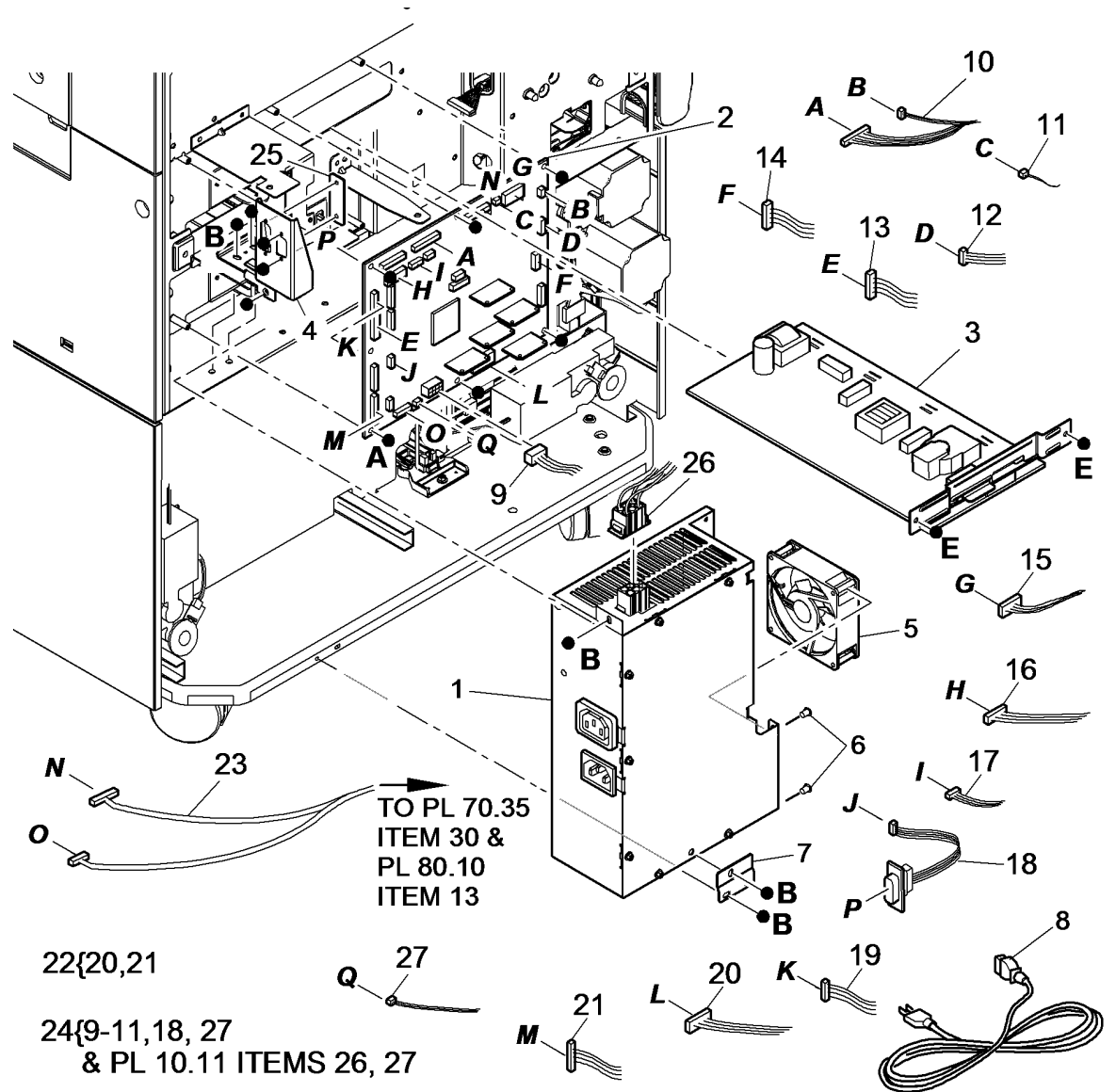
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PL 1.10 Power and Control Assembly

Item	Part	Description
1	105K39091	LVPS module (XE 45-90 ppm & XC 45-55 ppm) (REP 1.1)
-	105K39101	LVPS module 65-90 ppm (XC) (REP 1.1)
2	961K01342	IOT PWB (REP 3.1)
3	105K39071	HVPS (45-55 ppm) (REP 1.10)
-	105K39081	HVPS (60-90 ppm) (REP 1.10)
4	-	Top securing bracket (Not Spared)
5	-	LVPS cooling fan (P/O PL 1.10 Item 1)
6	-	Plastic rivet (P/O PL 1.10 Item 1)
7	-	Securing plate (P/O PL 1.10 Item 1)
8	-	Main power cord (REF: PL 1.15 Item 1)
9	-	IOT PWB to LVPS module harness (P/O PL 1.10 Item 24)
10	-	IOT PWB to HVPS harness (P/O PL 1.10 Item 24)
11	-	IOT PWB to Toner cartridge motor harness (P/O PL 1.10 Item 24)
12	-	IOT PWB to Horizontal transport / offset motor harness (Not Spared)
13	-	IOT PWB to tray 1 & 2 feed assembly harness (Not Spared)
14	-	IOT PWB to TAR/bypass tray motor harness (Not Spared)
15	-	IOT PWB to Reg motor harness (Not Spared)
16	-	IOT PWB to fuser power harness (Not Spared)
17	-	IOT PWB to Print cartridge harness (Not Spared)
18	-	IOT PWB to Finisher comms connector harness (Finisher only) (P/O PL 1.10 Item 24) (See NOTE 1)
19	-	IOT PWB to Horizontal transport harness (Not Spared)
20	-	IOT PWB to Tray 4 PWB harness (P/O PL 1.10 Item 22)
21	-	IOT PWB to HCF sensor harness (P/O PL 1.10 Item 22)
22	952K37771	HCF harness set
23	-	IOT PWB to Left door harness (P/O PL 80.10 Item 14) (REP 80.33)
24	952K61860	IOT integration harness set
25	-	Blanking plate (Not Spared) (See NOTE 2)
26	-	LVPS to Fuser module AC power harness (Not Spared)
27	-	IOT PWB to print cartridge fan harness (P/O PL 1.10 Item 24)



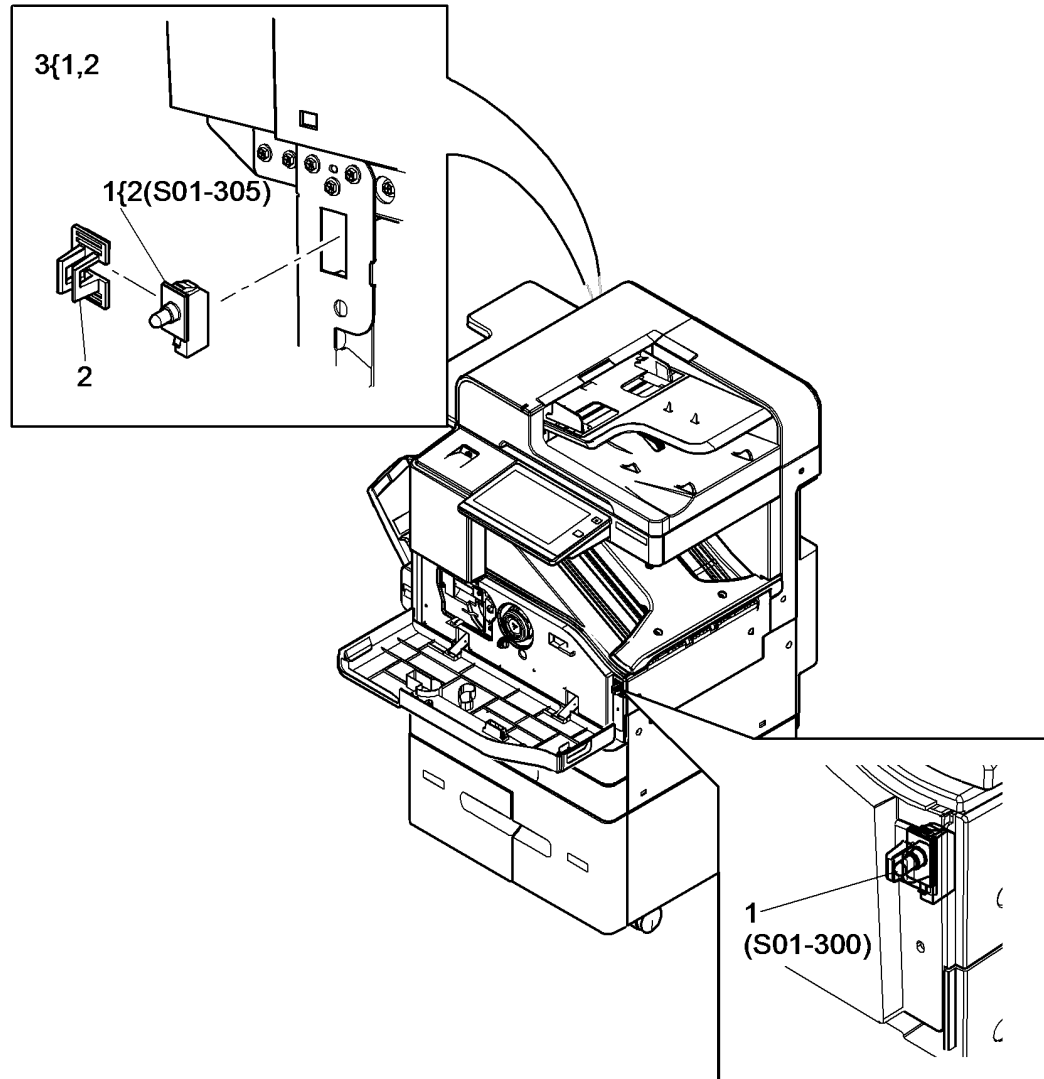
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NOTE: 1. Only used when a Finisher is installed.

NOTE: 2. Only used when a Centre tray is installed.

PL 1.12 Interlock Switches

Item	Part	Description
1	-	Front door interlock switch (S01-300) (REP 1.8)/ Left door interlock switch (S01-305) (REP 1.9) (P/O PL 1.12 Item 3)
2	-	Adapter (P/O PL 1.12 Item 3)
3	110K21900	Interlock switch assembly (REP 1.8)



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PL 1.15 Main Power Cables

Item	Part	Description
1	-	Main power cord (see below for variants)
-	-	United Kingdom (45-55 ppm) (Not Spared)
-	-	USSG/XCL (P/O PL 31.14 Item 9)
-	-	XE (Not Spared)
-	-	Denmark (45-55 ppm) (Not Spared)
-	-	South Africa (Not Spared)
-	-	Switzerland (45-55 ppm) (Not Spared)
-	-	Argentina (45-55 ppm) (Not Spared)
2	-	20 amp power cord (P/O PL 31.11 Item 15)

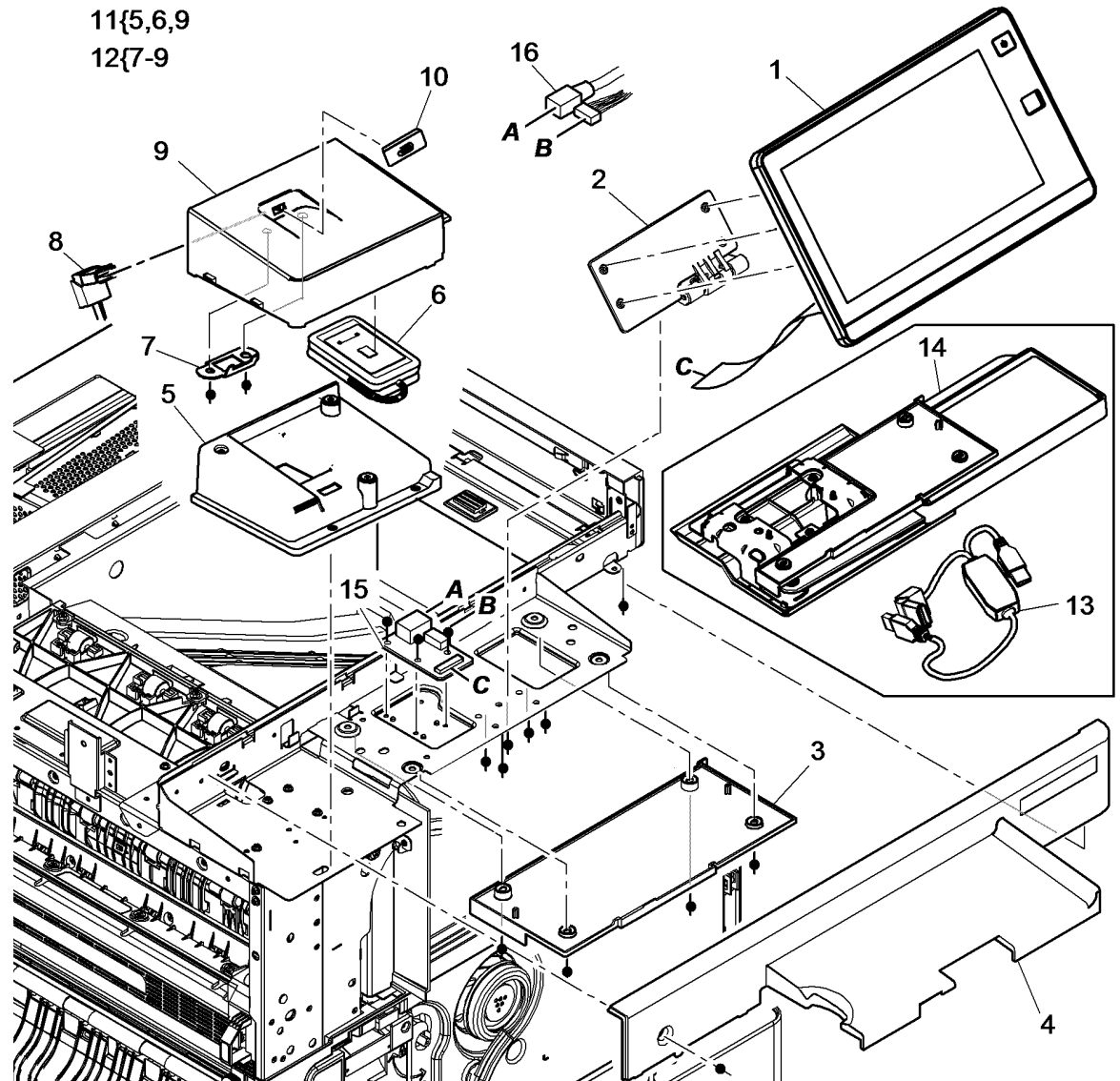
**NO EXPLODED
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X-8-0003-A

PL 2.10 User Interface

Item	Part	Description
1	084K43133	UI Module (USSG/XCL) (REP 2.1)
2	-	UI Module clamp & hinge assembly (P/O PL 2.10 Item 1)
3	-	UI Lower cover (Not Spared)
4	-	Scanner front cover (Not Spared)
5	-	Left column lower cover (RFID) (P/O PL 2.10 Item 11)
6	-	Card reader (RFID) (P/O PL 2.10 Item 11)
7	-	USB harness bracket (P/O PL 2.10 Item 12)
8	952K51010	USB harness (NOTE)
9	948K30482	Left column upper cover
-	-	Left column upper cover (RFID) (P/O PL 2.10 Item 11)
10	822E44802	USB socket cover
11	-	Left column upper cover assembly (RFID) (P/O PL 31.12 Item 13)
12	-	Left column upper cover assembly (Not Spared)
13	-	USB hub assembly (Keyboard) (P/O PL 31.12 Item 7)
14	-	USB keyboard assembly (P/O PL 31.12 Item 7)
15	961K01360	UI Interface PWB (REP 2.2)
16	-	SBC PWB to UI Interface PWB power/comms harness (REF: PL 3.22 Item 15)

NOTE: Also supplied as part of PL 31.12 Item 13.



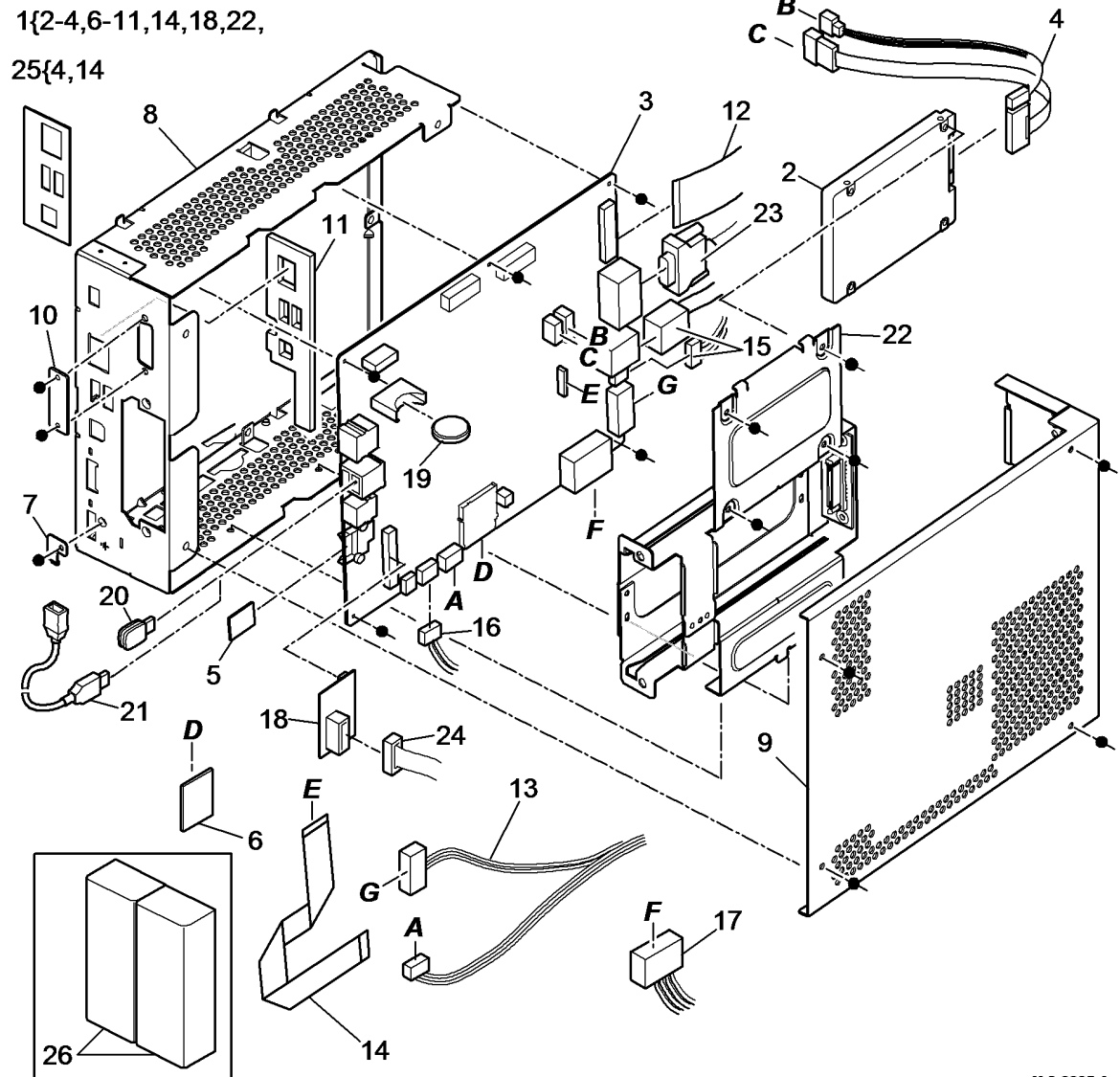
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PL 3.22 Single Board Controller PWB Module

Item	Part	Description
1	-	Single board controller module (Not Spared) (REP 3.6)
2	121E28131	Hard disk drive (250Gb) (See NOTE 2) (REP 3.2)
3	961K01352	SBC PWB (REP 3.3)
4	-	HDD cable (P/O PL 3.22 Item 25)
5	-	SIM card (P/O PL 31.14 Item 2)
6	237E28160	SD card (See NOTE 2) (REP 3.4)
7	-	Service connector cover (P/O PL 3.22 Item 1)
8	-	SBC cage (P/O PL 3.22 Item 1)
9	-	SBC cover (P/O PL 3.22 Item 1)
10	-	Foreign interface device blanking plate (P/O PL 3.22 Item 1)
11	-	Gasket (P/O PL 3.22 Item 1)
12	-	LED print head module to SBC PWB ribbon cable (P/O PL 60.35 Item 1)
13	-	SBC PWB to Scanner PWB power/comms harness (REF: PL 60.20 Item 5)
14	-	SBC PWB to Fax connector PWB ribbon cable (P/O PL 3.22 Item 25)
15	-	SBC PWB to UI Interface PWB power/comms harness (REF: PL 2.10 Item 16)
16	-	SBC PWB to IOT PWB harness (Not Spared)
17	-	SBC PWB to LVPS harness (P/O PL 1.10 Item 24)
18	960K27451	Foreign device interface PWB (See NOTE 1) (REP 3.5)
19	105K37230	Battery
20	-	Wireless network adapter (P/O PL 31.12 Item 10)
21	-	Extension cable (P/O PL 31.12 Item 10)
22	-	Fax module support (P/O PL 3.22 Item 1)
23	-	SBC PWB to Scanner PWB data cable (REF: PL 60.20 Item 18)
24	952K40550	Foreign device interface ribbon cable (REP 3.5)
25	952K37741	SBC harness set
26	115K02780	Conductive foam block (x2) (XE)(REP 3.6)

NOTE: 1. Also supplied as part of PL 31.12 Item 11.

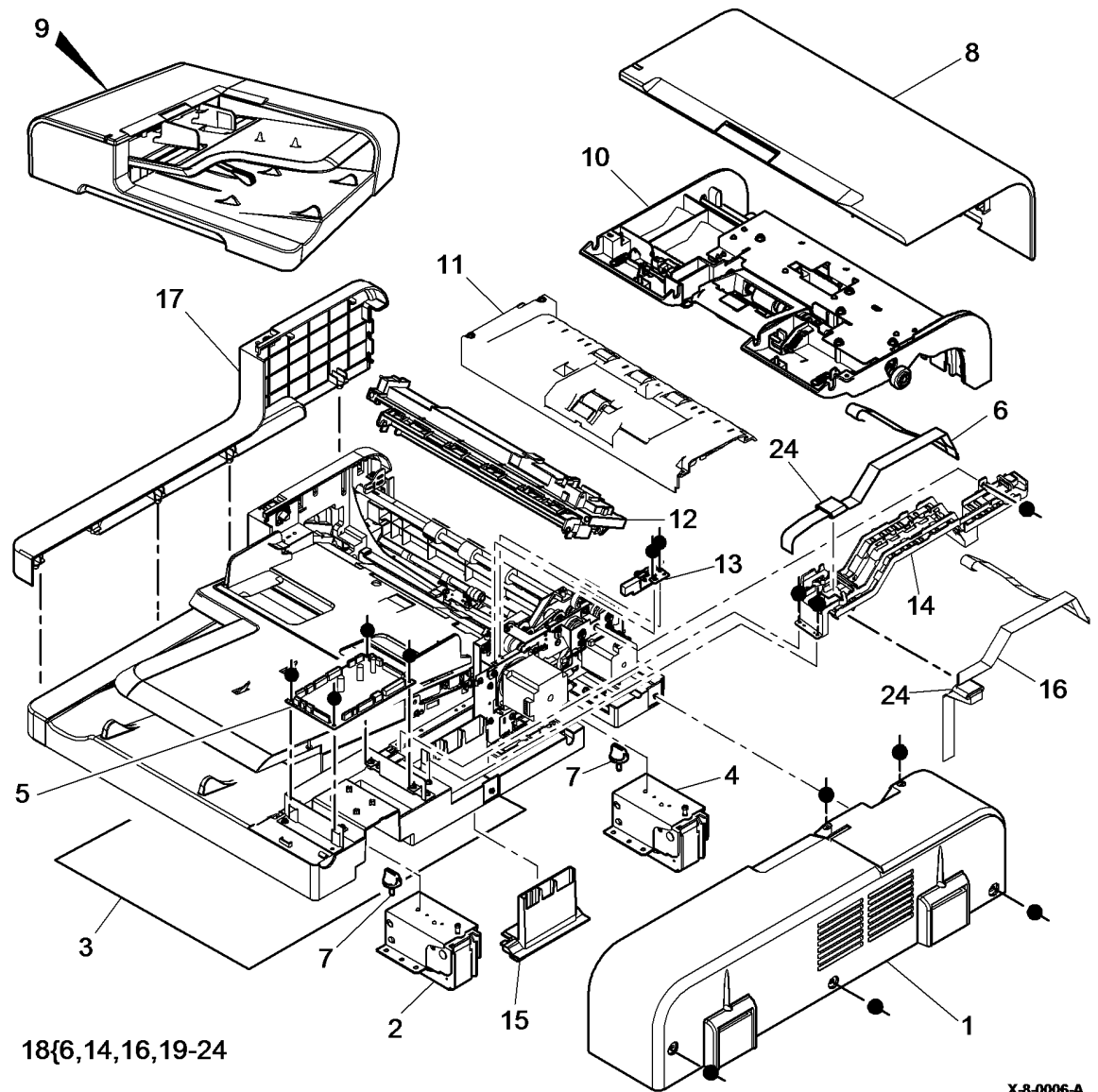
NOTE: 2. Refer to GP 41.



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PL 5.10 SPDH (Complete), Covers, SPDH PWB

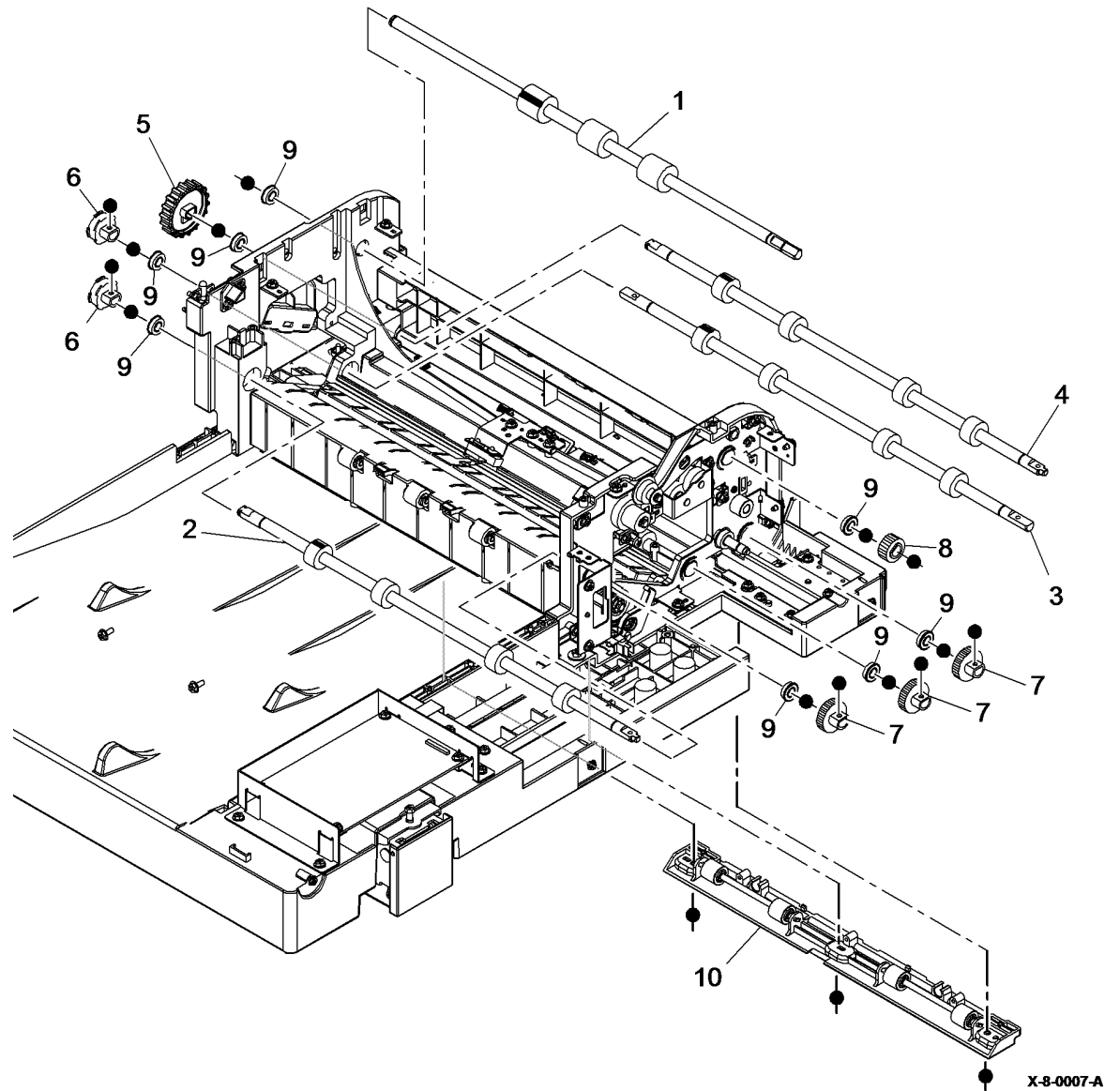
Item	Part	Description
1	948K29430	Rear cover
2	-	Right counterbalance (Not Spared) (ADJ 5.2, ADJ 5.3)
3	090E02690	Document pad
4	-	Left counterbalance (Not Spared) (ADJ 5.2, ADJ 5.3)
5	961K00060	SPDH PWB
6	-	Side 2 scan assembly power ribbon cable (P/O PL 5.10 Item 18) (REP 5.19)
7	826E85400	Thumbscrew
8	-	Top cover (REF: PL 5.20)
9	084K43040	SPDH (complete) (REP 5.18)
10	-	Feed assembly (REF: PL 5.20) (ADJ 5.3)
11	-	Separation assembly (REF: PL 5.25)
12	-	Side 2 scan assembly (REF: PL 60.30)
13	-	Top cover interlock switch (S05-305)(Not Spared)
14	-	Harness support (P/O PL 5.10 Item 18)
15	-	Harness guide (Not Spared)
16	-	Side 2 scan assembly data ribbon cable (P/O PL 5.10 Item 18) (REP 5.19)
17	948K29420	Front cover
18	952K60490	SPDH FFC harness assembly (REP 5.20)
19	-	Takeaway clutch harness (Not shown) (P/O PL 5.10 Item 18)
20	-	Feed clutch harness (Not shown) (P/O PL 5.10 Item 18)
21	-	Reg sensor harness (Not shown) (P/O PL 5.10 Item 18)
22	-	Feed motor harness (Not shown) (P/O PL 5.10 Item 18)
23	-	Read motor harness (Not shown) (P/O PL 5.10 Item 18)
24	-	Ferrite (P/O PL 5.10 Item 18)
25	-	Feed sensor harness (P/O PL 5.10 Item 18)



NOTE: To clean the SPDH, refer to ADJ 5.3.

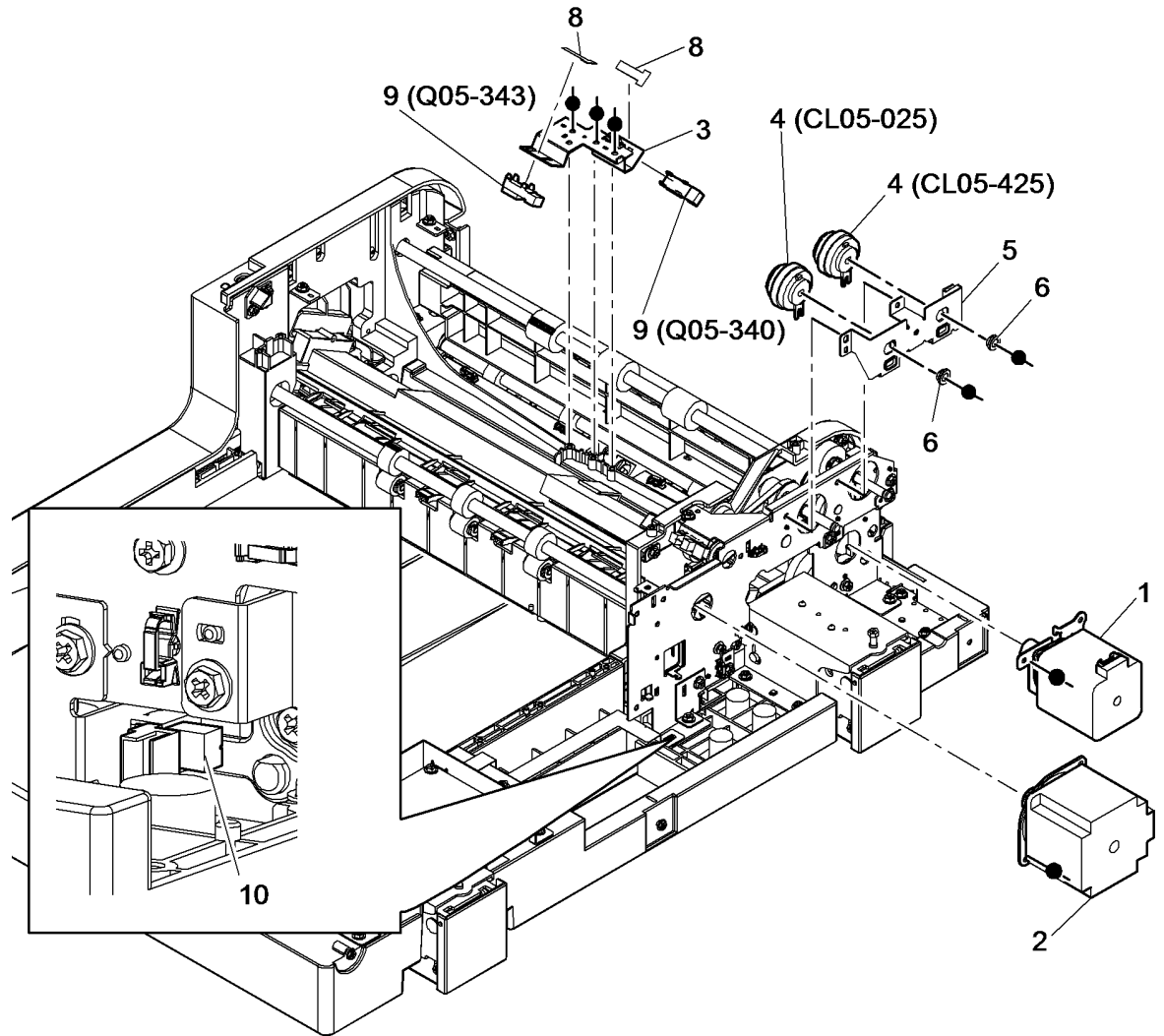
PL 5.17 SPDH Transport Assembly

Item	Part	Description
1	859K17110	Takeaway roll assembly (REP 5.5)
2	859K17140	Exit roll assembly (REP 5.7)
3	859K17130	Mid scan roll assembly (REP 5.16)
4	859K17120	Pre scan roll assembly (REP 5.17)
5	–	Exit jam clearance knob (Not Spared)
6	–	Idler gear (Not Spared)
7	–	Drive gear (Not Spared)
8	–	Gear (Not Spared)
9	–	Bearing (Not Spared)
10	859K17150	Lower pre scan roll assembly (REP 5.6)



PL 5.18 SPDH Drive Assembly

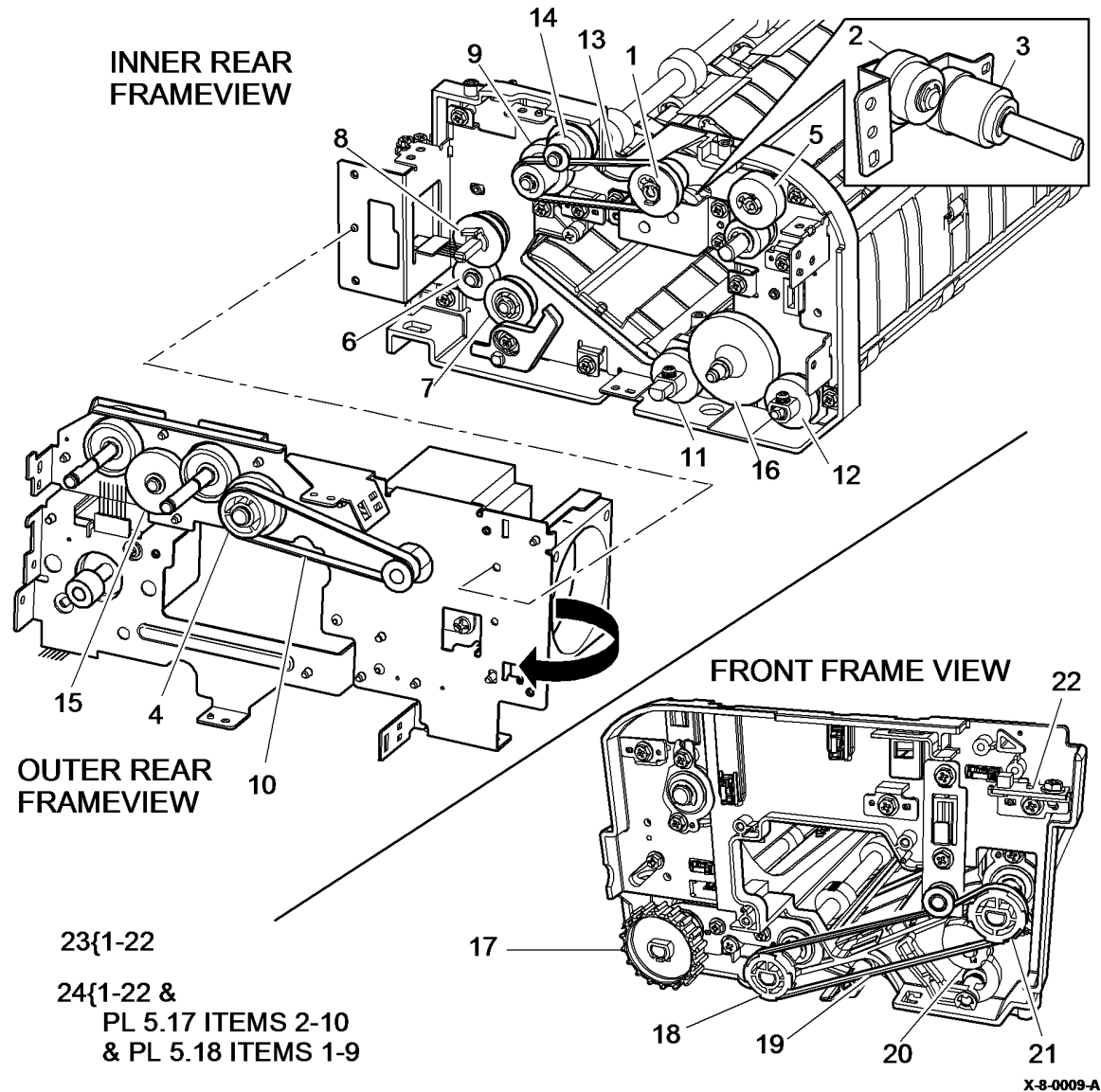
Item	Part	Description
1	127E18080	Read motor (MOT05-030) (REP 5.13)
2	127E18070	Feed motor (MOT05-020) (REP 5.12)
3	–	Sensor bracket (Not Spared)
4	005E44410	Feed clutch (CL05-025)/Takeaway clutch (CL05-425) (REP 5.14)
5	–	Bracket (Not Spared)
6	–	Bearing (Not Spared)
7	–	Not used
8	–	Sensor shim (Not Spared)
9	–	Side 2 Reg sensor (Q05-343) (REP 60.13)/Reg sensor (Q05-340) (REP 5.10)
10	–	Calibration home position sensor (Q05-360) (REP 5.11)



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PL 5.19 SPDH Read Assembly

Item	Part	Description
1	-	Retard roll intermediate drive gear/ pulley (P/O PL 5.19 Item 23)
2	-	Retard roll driven gear (P/O PL 5.19 Item 23)
3	-	Retard roll drive gear (P/O PL 5.19 Item 23)
4	-	Feed clutch drive gear/pulley (P/O PL 5.19 Item 23)
5	-	Takeaway roll drive gear (P/O PL 5.19 Item 23)
6	-	Calibration shutter idler gear/TAR clutch drive gear (P/O PL 5.19 Item 23)
7	-	Calibration shutter driven gear (P/O PL 5.19 Item 23)
8	-	Calibration shutter drive gear (P/O PL 5.19 Item 23)
9	-	Feed assembly drive gear /pulley (P/O PL 5.19 Item 23)
10	-	Feed motor belt (P/O PL 5.19 Item 23) (REP 5.12)
11	-	Pre-scan roll drive gear (P/O PL 5.19 Item 23)
12	-	Mid scan drive gear (P/O PL 5.19 Item 23)
13	-	Feed assembly drive belt (P/O PL 5.19 Item 23)
14	-	Feed assembly idler gear (P/O PL 5.19 Item 23)
15	-	Takeaway idler gear (P/O PL 5.19 Item 23)
16	-	Read motor idler gear (P/O PL 5.19 Item 23)
17	-	Exit jam clearance knob (P/O PL 5.19 Item 23)
18	-	Pre-scan roll pulley (P/O PL 5.19 Item 23)
19	-	Exit roll drive belt (P/O PL 5.19 Item 23)
20	-	Front calibration cam (P/O PL 5.19 Item 23)
21	-	Exit roll pulley (P/O PL 5.19 Item 23)
22	961K00070	Doc present LED PWB
23	-	SPDH drive kit (See NOTE)
24	007K27150	Read assembly (REP 5.20)



NOTE: Part number not available at time of publication.

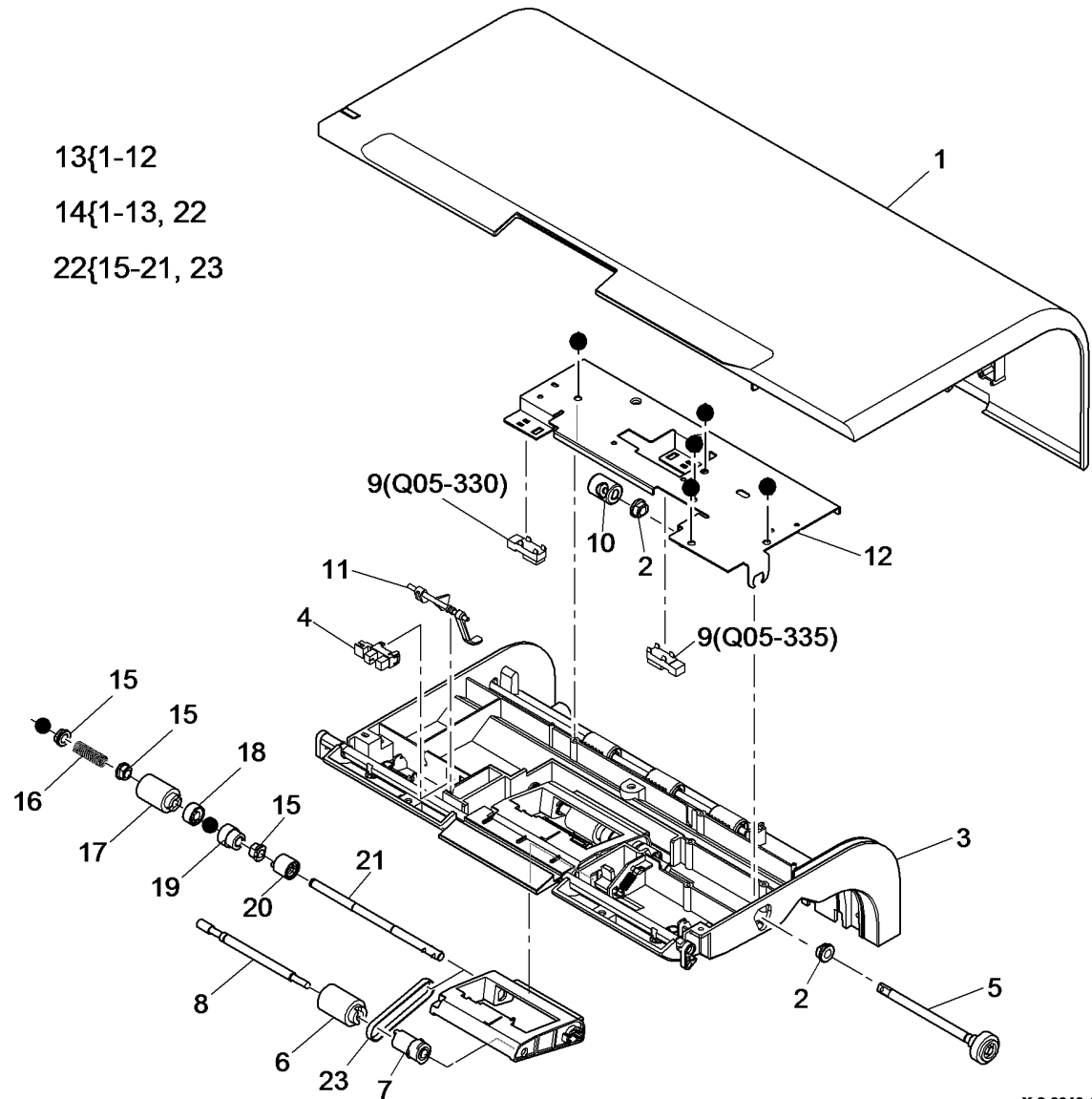
PL 5.20 SPDH Top Cover Assembly

Item	Part	Description
1	-	Top cover (P/O PL 5.20 Item 14) (REP 5.1)
2	-	Bearing (P/O PL 5.20 Item 14)
3	-	Feed assembly frame (P/O PL 5.20 Item 14) (REP 5.2)
4	-	Stack height sensor (Q05-310) (P/ O PL 5.20 Item 14) (REP 5.8)
5	-	Shaft (P/O PL 5.20 Item 14)
6	-	Nudger roll (P/O PL 5.20 Item 14) (REP 5.2) (See NOTE 2)
7	-	Clutch (P/O PL 5.20 Item 14)
8	-	Shaft (P/O PL 5.20 Item 14)
9	130E22830	Feed sensor (Q05-330)/ Takeaway sensor (Q05-335) (REP 5.8)
10	-	Coupling (P/O PL 5.20 Item 14)
11	-	Actuator (P/O PL 5.20 Item 14)
12	-	Sensor mounting plate (P/O PL 5.20 Item 14)
13	-	Feed assembly (P/O PL 5.20 Item 14) (REP 5.2)
14	859K17160	Top cover assembly (REP 5.1)
15	-	Bushing (P/O PL 5.20 Item 22)
16	-	Spring (P/O PL 5.20 Item 22)
17	859K18220	Feed roll (See NOTE 2 & 3) (REP 5.2)
18	-	Coupling (P/O PL 5.20 Item 22)
19	-	Feed drive roll (P/O PL 5.20 Item 22)
20	-	Spacer (P/O PL 5.20 Item 22)
21	-	Shaft (P/O PL 5.20 Item 22)
22	-	Feed roll assembly (REF: PL 5.20 Item 17) (REP 5.2)
23	-	Belt (P/O PL 5.20 Item 22)

NOTE: 1. For the top cover interlock switch, refer to PL 5.10 Item 13.

NOTE: 2. HFSI. To reset the HFSI count, refer to dC135.

NOTE: 3. Also supplied with PL 5.25 Item 3 & PL 5.20 Item 6.

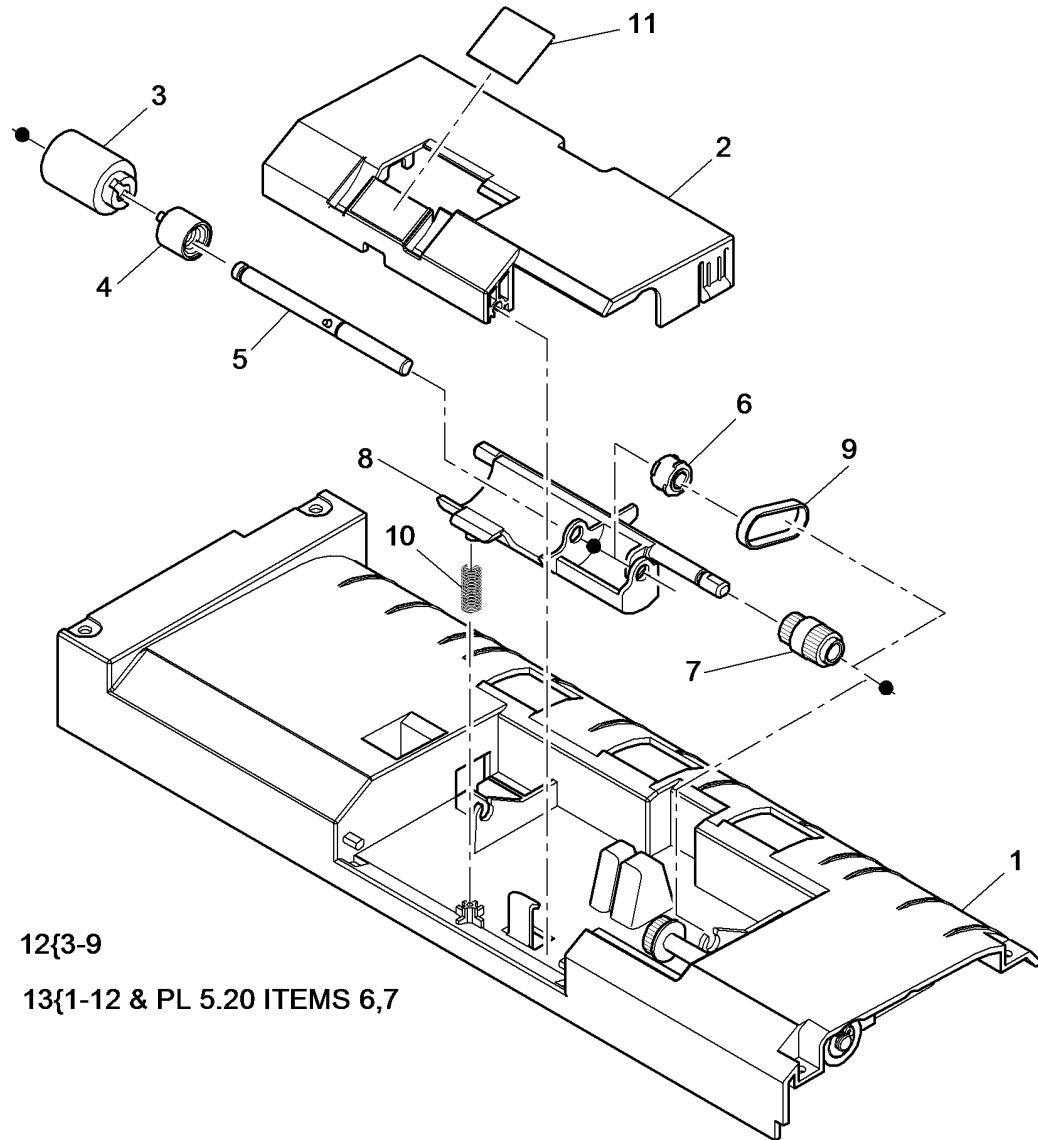


PL 5.25 SPDH Separation Assembly

Item	Part	Description
1	-	Separation frame (P/O PL 5.25 Item 13)
2	-	Retard roll cover (P/O PL 5.25 Item 13)
3	-	Retard roll (P/O PL 5.25 Item 12) (See NOTE 1 & 2) (REP 5.3)
4	-	Coupling (P/O PL 5.25 Item 12)
5	-	Shaft (P/O PL 5.25 Item 12)
6	-	Pulley (P/O PL 5.25 Item 12)
7	-	Drive gear (P/O PL 5.25 Item 12) (REP 5.3)
8	-	Retard roll housing (P/O PL 5.25 Item 12)
9	-	Belt (P/O PL 5.25 Item 12)
10	-	Spring (Not Spared)
11	-	Mylar guide (P/O PL 5.25 Item 2)
12	-	Retard roll assembly (P/O PL 5.25 Item 13) (REP 5.3)
13	-	Separation assembly (Not Spared) (REP 5.3)

NOTE: 1.HFSI. To reset the HFSI count, refer to dC135.

NOTE: 2. Supplied with PL 5.20 Item 17.



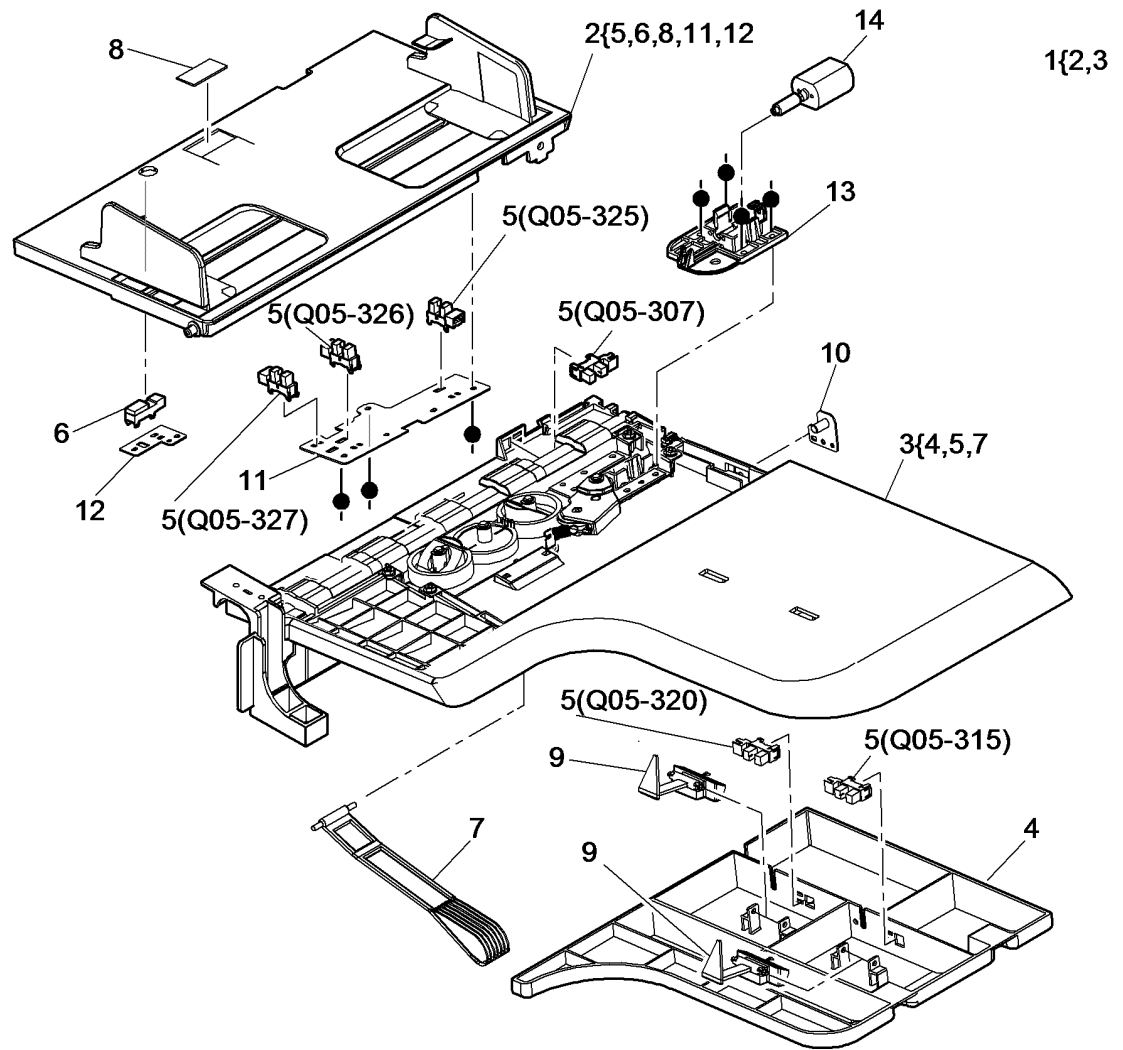
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PL 5.30 Input Tray Assembly

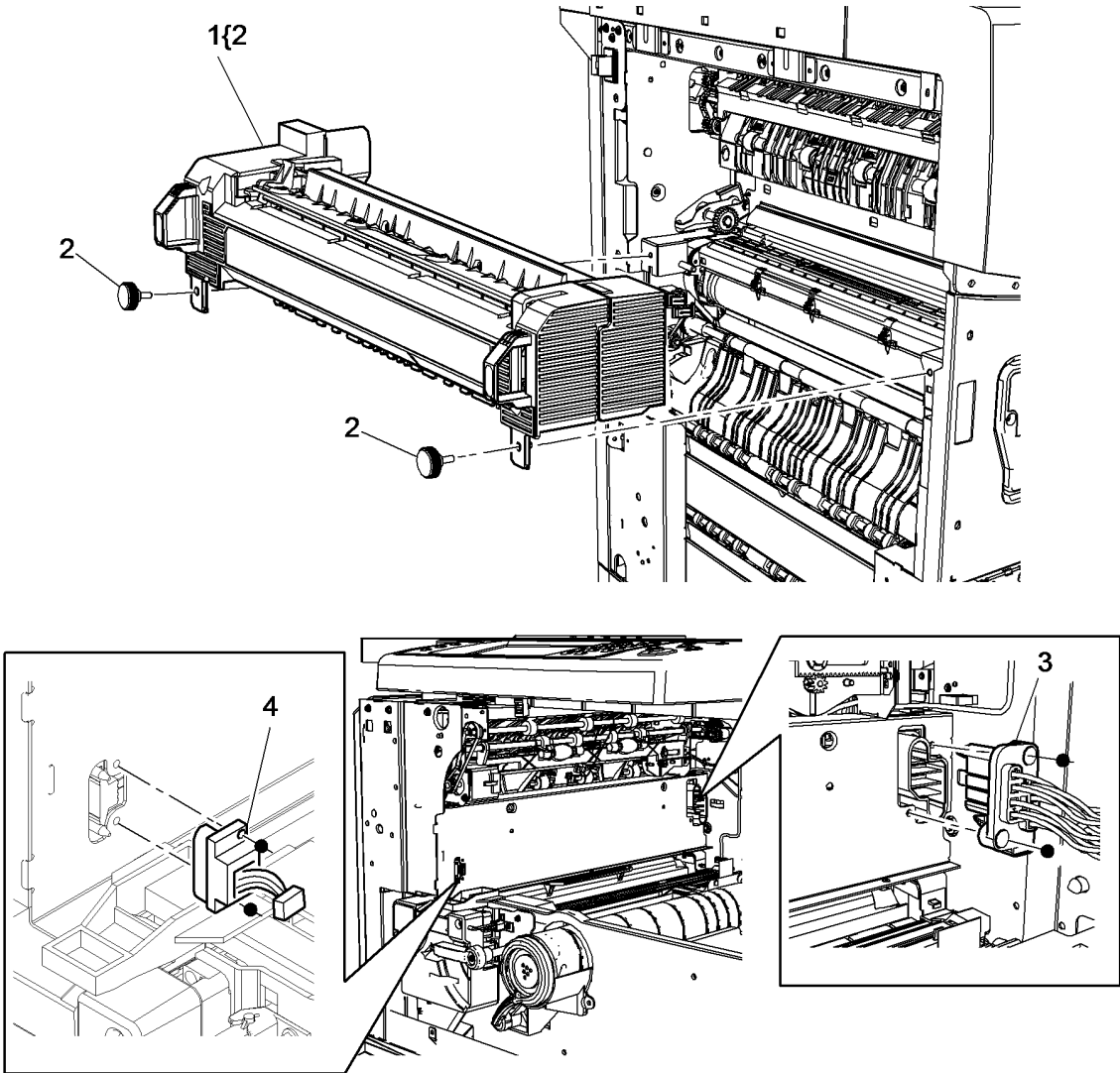
Item	Part	Description
1	850K03070	Input tray assembly (complete) (REP 5.23)
2	-	Tray upper assembly (P/O PL 31.14 Item 11) (REP 5.4)
3	-	Tray lower assembly (P/O PL 5.30 Item 1) (REP 5.4)
4	-	Tray lower cover (P/O PL 5.30 Item 3)
5	-	Length sensor 1 (Q05-315) (REP 5.9)/Length sensor 2 (Q05-320) (REP 5.9)/Lift home position sensor (Q05-307) (REP 5.4)/Width sensor 1 (Q05-325) (REP 5.15)/Width sensor 2 (Q05-326) (REP 5.15)/Width sensor 3 (Q05-327) (REP 5.15)
6	-	Doc present sensor (Q05-309) (REP 5.15)
7	-	Restack arm (P/O PL 5.30 Item 1)
8	819E27740	Retard pad
9	-	Length sensor 1 actuator (P/O PL 5.30 Item 3)
10	-	Tray upper hinge (Not Spared) (REP 5.4)
11	-	Sensor mounting plate (P/O PL 5.30 Item 2)
12	-	Sensor mounting bracket (P/O PL 5.30 Item 2)
13	-	Elevator tray motor mounting bracket (P/O PL 5.30 Item 1)
14	127E18090	Elevator tray motor (MOT05-390) (REP 5.21)



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PL 10.8 Fuser Module

Item	Part	Description
1	109R00848	Fuser module (50Hz) (45-55 ppm)
-	109R00849	Fuser (50Hz) (65-90 ppm)
-	109R00847	Fuser module (60Hz) (45-55 ppm)
-	109R00850	Fuser (60Hz) (65-90 ppm)
2	-	Thumbscrew (P/O PL 10.8 Item 1)
3	-	Fuser connector (Not Spared)
4	-	Fuser CRUM (Not Spared)

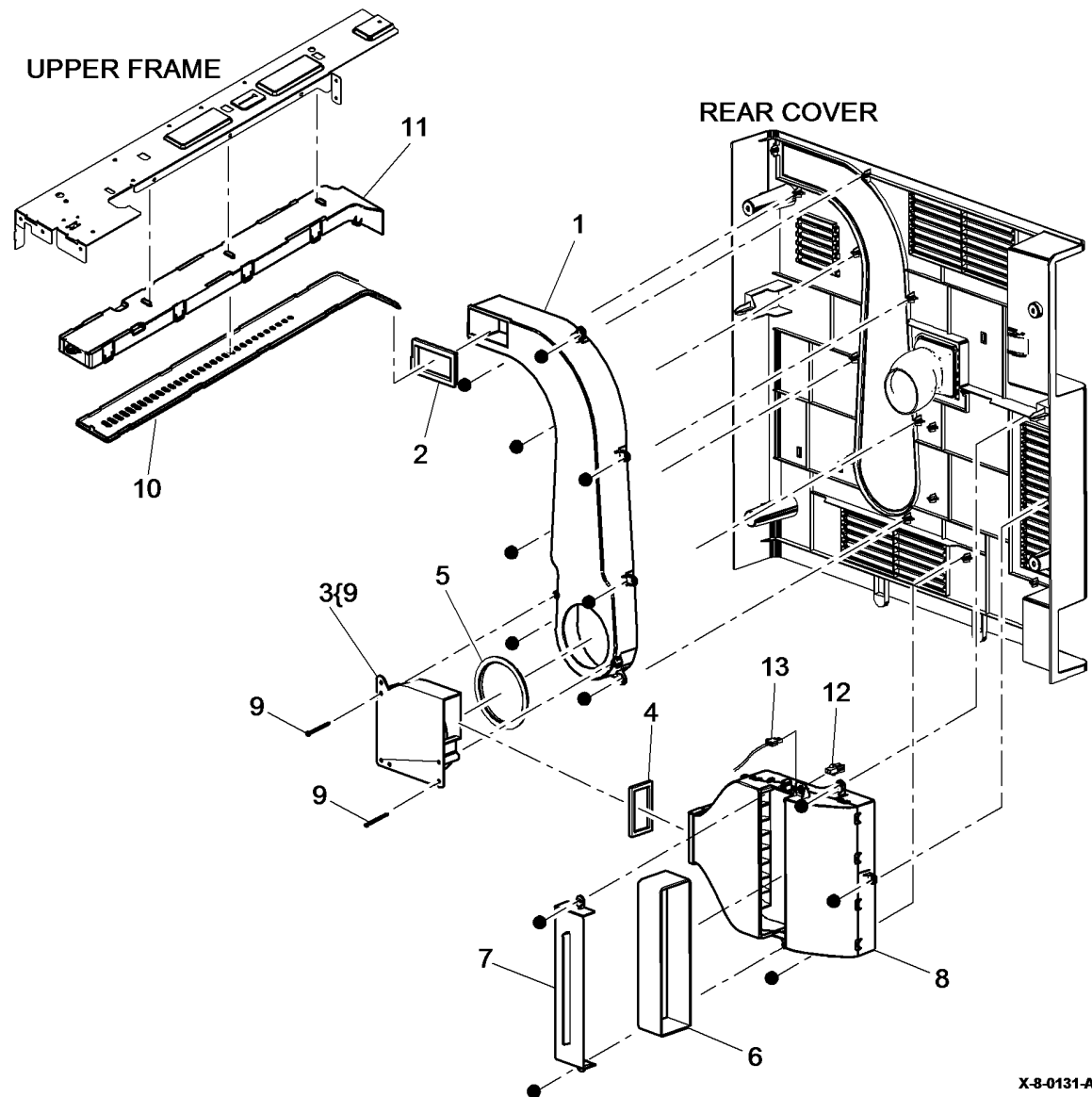


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PL 10.9 Fuser Module Cooling (65-90 ppm)

Item	Part	Description
1	-	Inner duct cover (P/O PL 28.10 Item 1)
2	-	Rear cover gasket (P/O PL 28.10 Item 1)
3	-	Rear exit fan (P/O PL 28.10 Item 1)
4	-	Exit fan duct gasket (P/O PL 28.10 Item 1)
5	-	Rear exit fan gasket (P/O PL 28.10 Item 1)
6	053E09320	Filter
7	-	Filter cover (P/O PL 28.10 Item 1)
8	-	Exit fan duct assembly (P/O PL 28.10 Item 1)
9	-	Securing screw (P/O PL 10.9 Item 3)
10	-	Lower duct cover (P/O PL 28.10 Item 1)
11	-	Upper duct cover (P/O PL 28.10 Item 1)
12	-	Temperature sensor (P/O PL 28.10 Item 1)
13	-	Sensor harness (Not Spared)

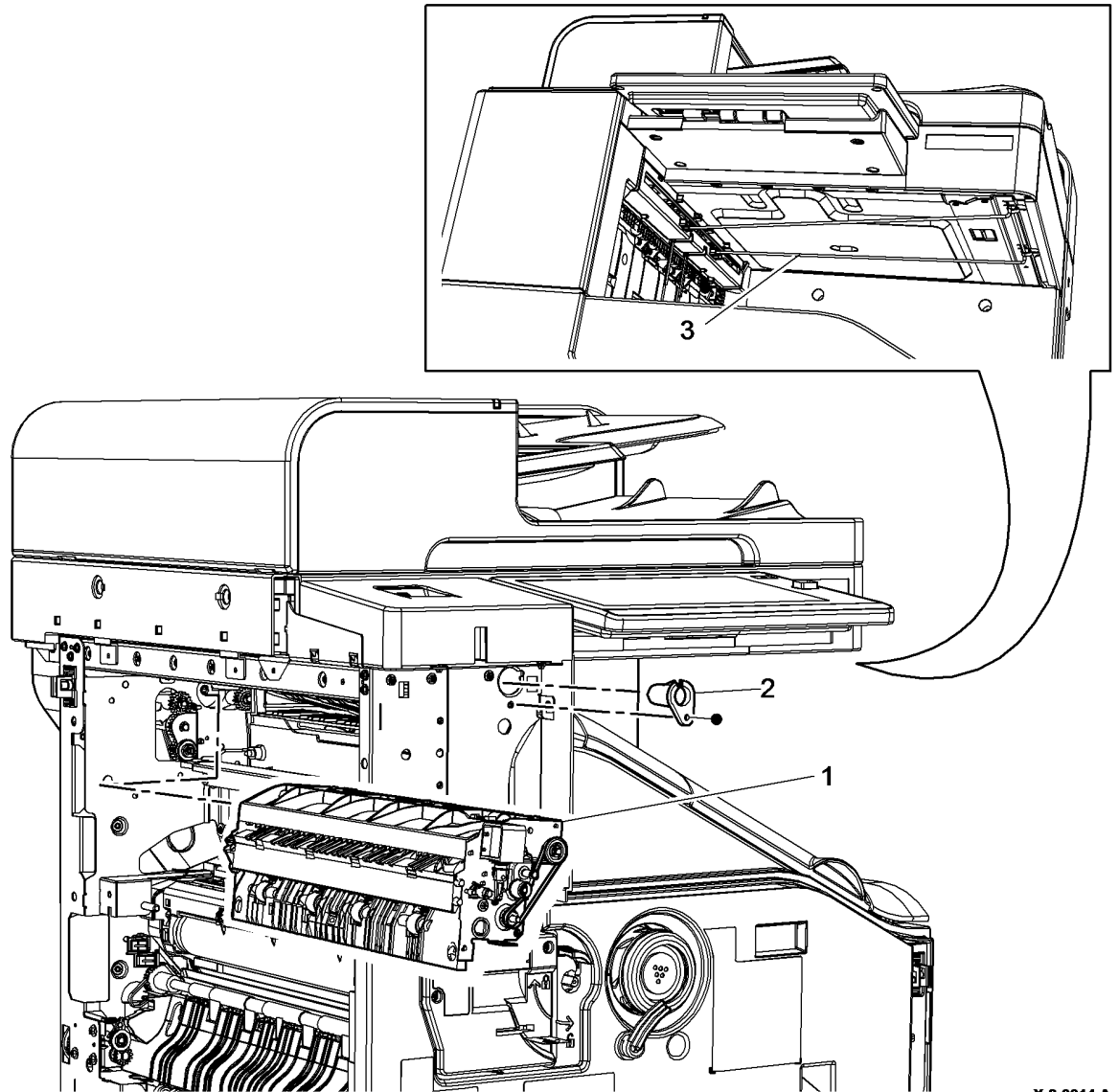
NOTE: All of these items are part of the 65-90 ppm rear cover assembly, PL 28.10 Item 1.



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PL 10.10 Inverter Assembly (1 of 3)

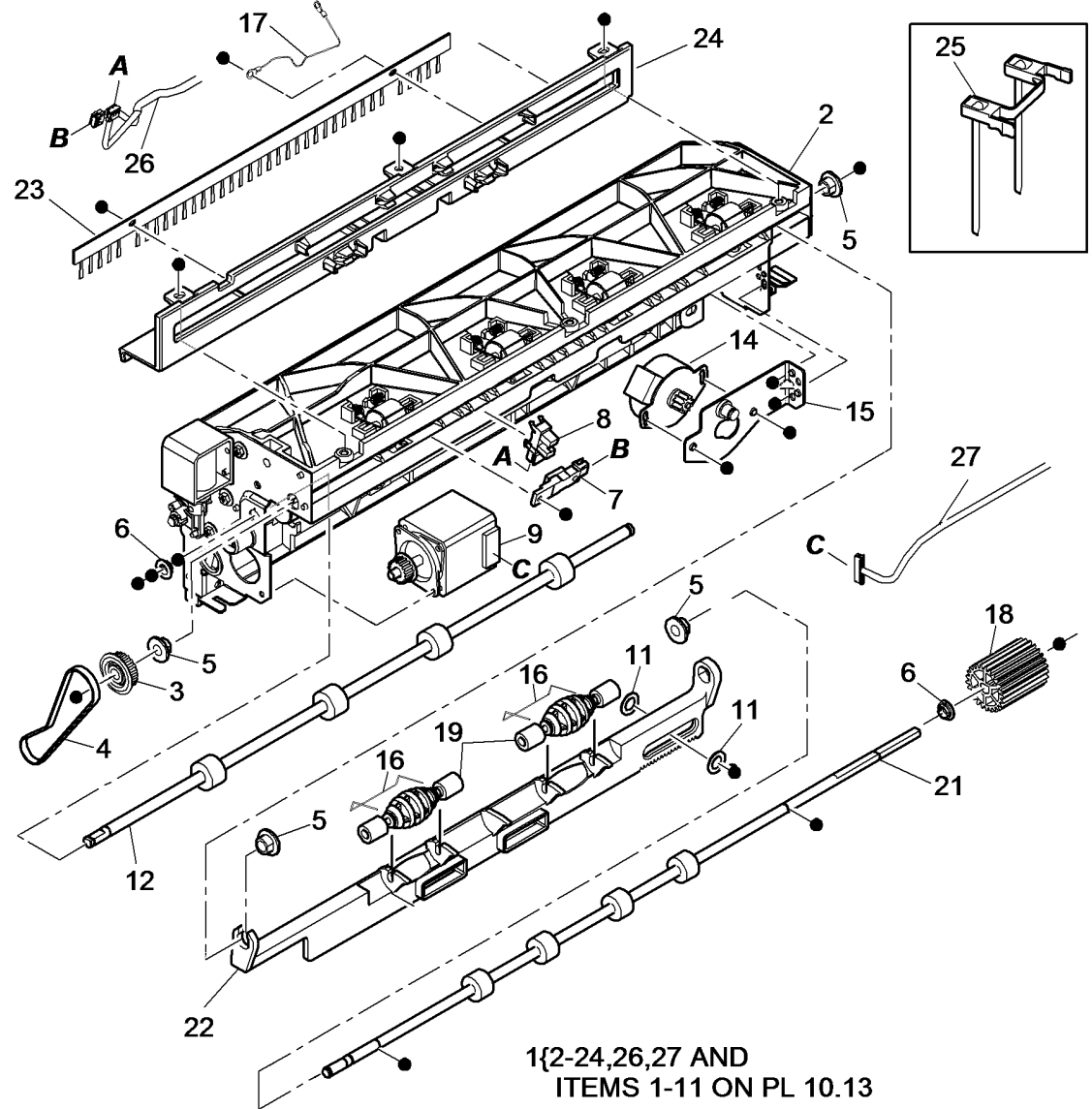
Item	Part	Description
1	-	Inverter assembly (REF: PL 10.11, PL 10.13) (REP 10.1)
2	-	Inverter locator (Not Spared) (REP 10.1)
3	-	Diverter output guide (Not Spared)



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PL 10.11 Inverter Assembly (2 of 3)

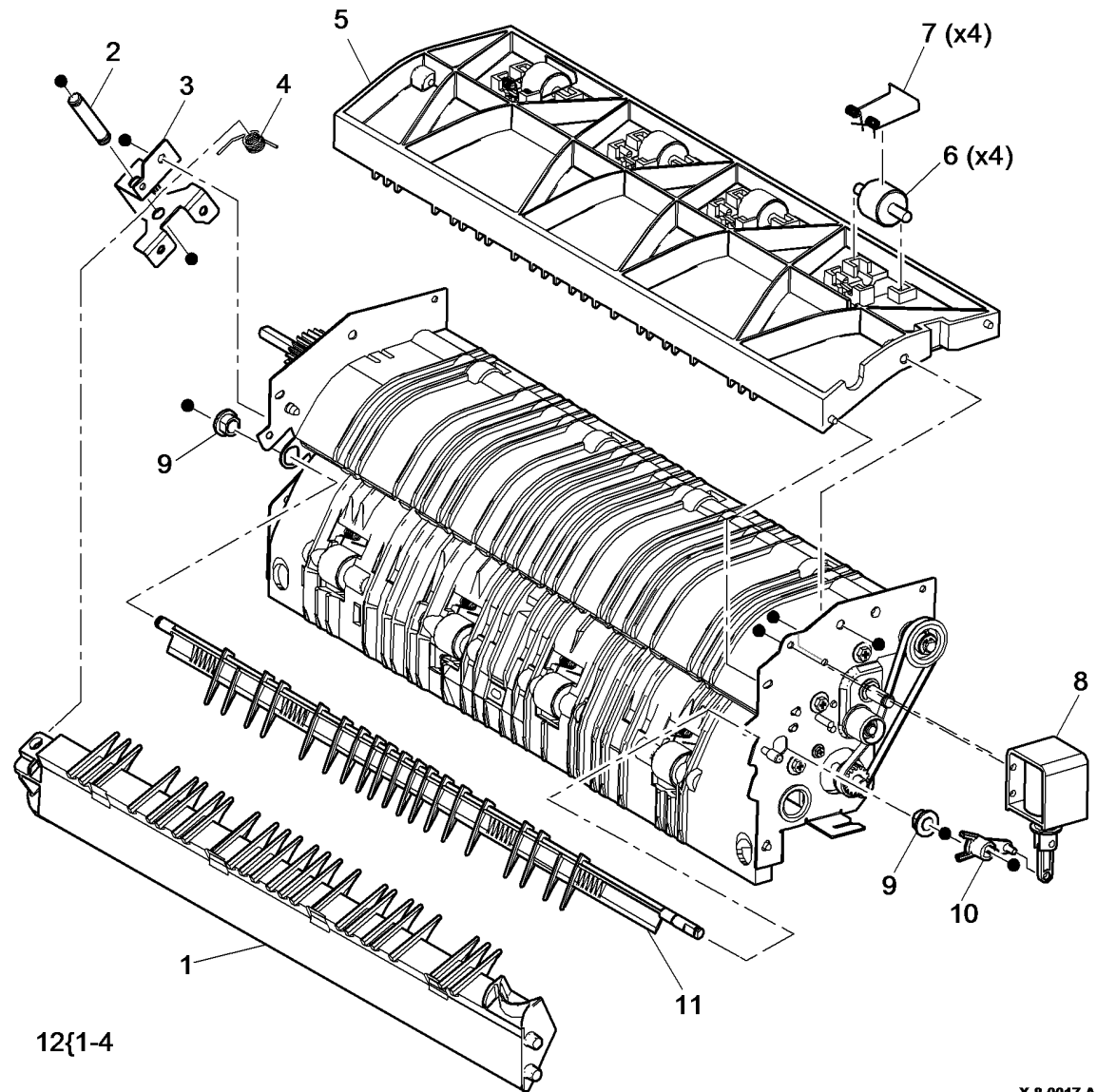
Item	Part	Description
1	112K01341	Inverter assembly (REP 10.1)
2	-	Exit guide housing (P/O PL 10.11 Item 1)
3	-	Pulley (21T) (P/O PL 10.11 Item 1)
4	-	Drive belt (P/O PL 10.11 Item 1)
5	-	Bearing (P/O PL 10.11 Item 1) (REP 10.5)
6	-	Shaft bearing (P/O PL 10.11 Item 1) (REP 10.5)
7	-	Post fuser sensor (Q10-120) (P/O PL 10.11 Item 1)
8	-	Offset sensor (Q10-300) (P/O PL 10.11 Item 1)
9	-	Inverter motor (MOT10-030) (P/O PL 10.11 Item 1) (REP 10.3)
10	-	Not used
11	-	Locking washer (P/O PL 10.11 Item 1)
12	-	Drive roll (P/O PL 10.11 Item 1)
13	-	Not used
14	-	Offset motor (MOT10-500) (P/O PL 10.11 Item 1) (REP 10.4)
15	-	Offset motor bracket (P/O PL 10.11 Item 1)
16	-	Nip spring (P/O PL 10.11 Item 1)
17	-	Ground wire (P/O PL 10.11 Item 1)
18	-	Exit drive gear (P/O PL 10.11 Item 1) (REP 10.5)
19	-	Corrugator roll (P/O PL 10.11 Item 1) (REP 10.5)
20	-	Not used
21	806E61930	Exit roll (REP 10.5)
22	059E15983	Shuttle (REP 10.5)
23	-	Static eliminator (P/O PL 10.11 Item 1)
24	-	Inverter cover (P/O PL 10.11 Item 1)
25	-	Bail arm assembly (REF: PL 10.17 Item 2)
26	-	Sensor harness (P/O PL 1.10 Item 24)
27	-	Inverter motor harness (P/O PL 1.10 Item 24)



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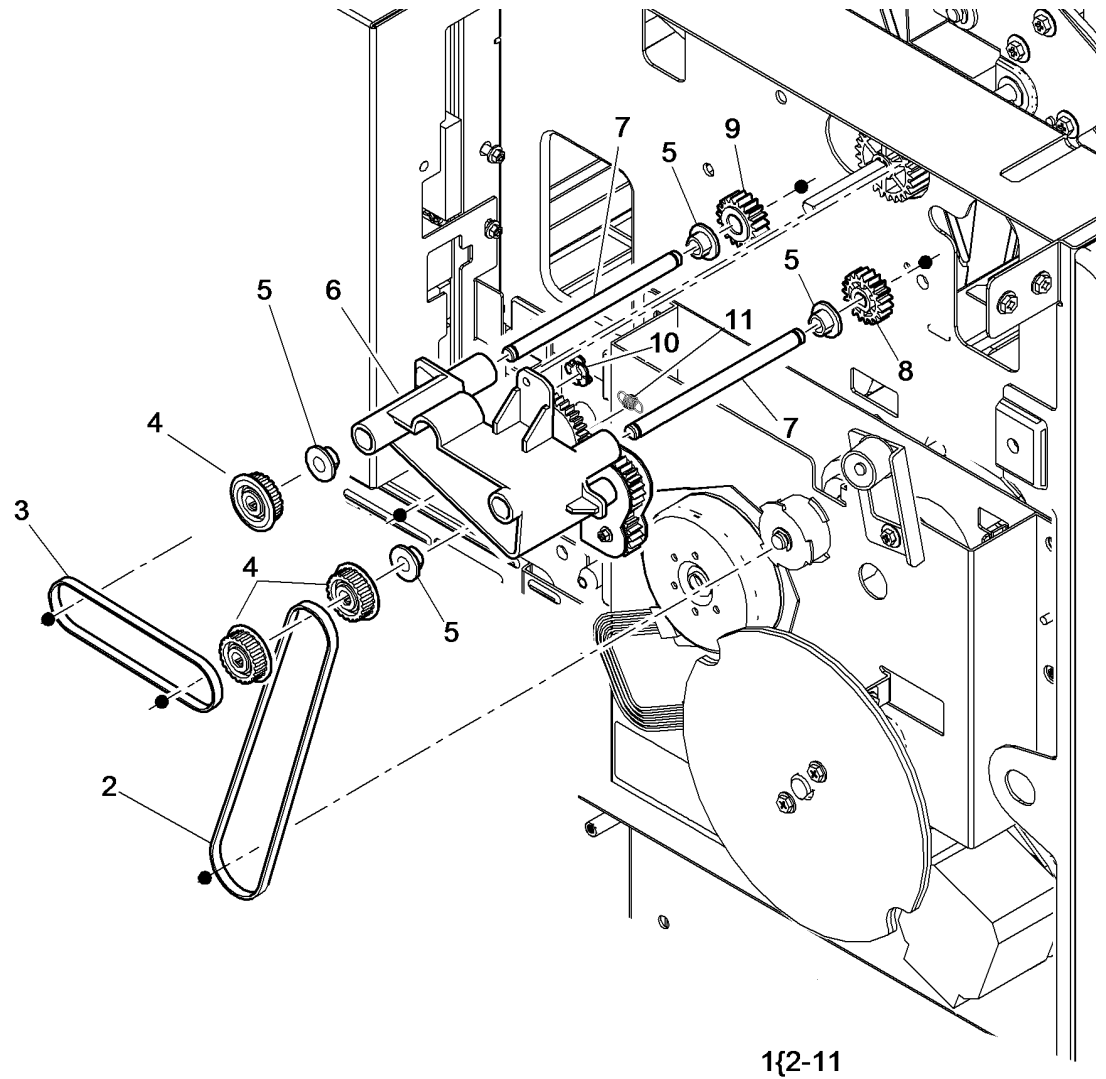
PL 10.13 Inverter Assembly (3 of 3)

Item	Part	Description
1	-	Jam clearance paper guide (P/O PL 10.13 Item 12)
2	-	Hinge pin (P/O PL 10.13 Item 12)
3	-	Hinge pin bracket (P/O PL 10.13 Item 12)
4	-	Spring (P/O PL 10.13 Item 12)
5	-	Upper exit guide (P/O PL 10.11 Item 1)
6	-	Idle roll (P/O PL 10.11 Item 1)
7	-	Spring (P/O PL 10.11 Item 1)
8	-	Inverter gate solenoid (SOL10-045) (P/O PL 10.11 Item 1)
9	-	Bearing (P/O PL 10.11 Item 1) (REP 10.5)
10	-	Pivot arm (P/O PL 10.11 Item 1)
11	-	Inverter gate (P/O PL 10.11 Item 1)
12	927K02460	Jam clearance paper guide & hinge assembly (REP 10.8)



PL 10.14 Exit Drive Assembly

Item	Part	Description
1	007K20735	Exit drive assembly (REP 10.2, ADJ 40.1)
2	-	Exit drive belt (P/O PL 10.14 Item 1)
3	-	Belt (P/O PL 10.14 Item 1)
4	-	Pulley (P/O PL 10.14 Item 1)
5	-	Bearing (P/O PL 10.14 Item 1)
6	-	Exit drive housing (P/O PL 10.14 Item 1)
7	-	Drive shaft (P/O PL 10.14 Item 1)
8	-	Drive gear (P/O PL 10.14 Item 1)
9	-	Clutch gear (P/O PL 10.14 Item 1)
10	-	Offset bearing (P/O PL 10.14 Item 1)
11	-	Spring (P/O PL 10.14 Item 1)

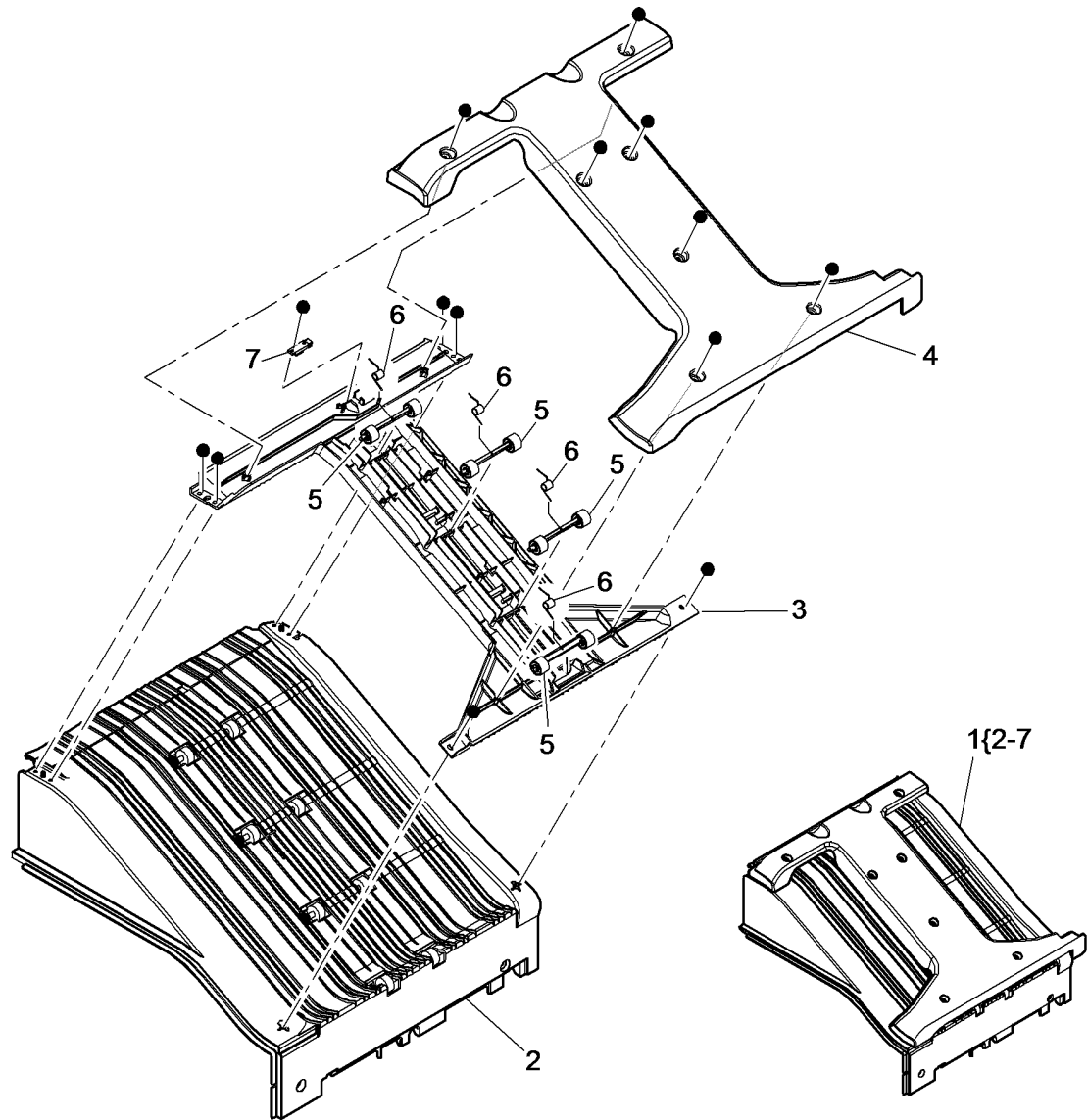


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PL 10.15 Horizontal Transport Assembly (1 of 2)

Item	Part	Description
1	859K18332	Horizontal transport assembly (S NOTE) (REP 10.6)
2	–	Lower transport assembly (P/O PL 10.15 Item 1)
3	–	Upper paper guide (P/O PL 10.15 Item 1)
4	–	Exit cover (P/O PL 10.15 Item 1)
5	–	Idler roll (P/O PL 10.15 Item 1)
6	–	Spring (P/O PL 10.15 Item 1)
7	–	Horizontal transport entry sensor (Q10-041) (P/O PL 10.15 Item 1)

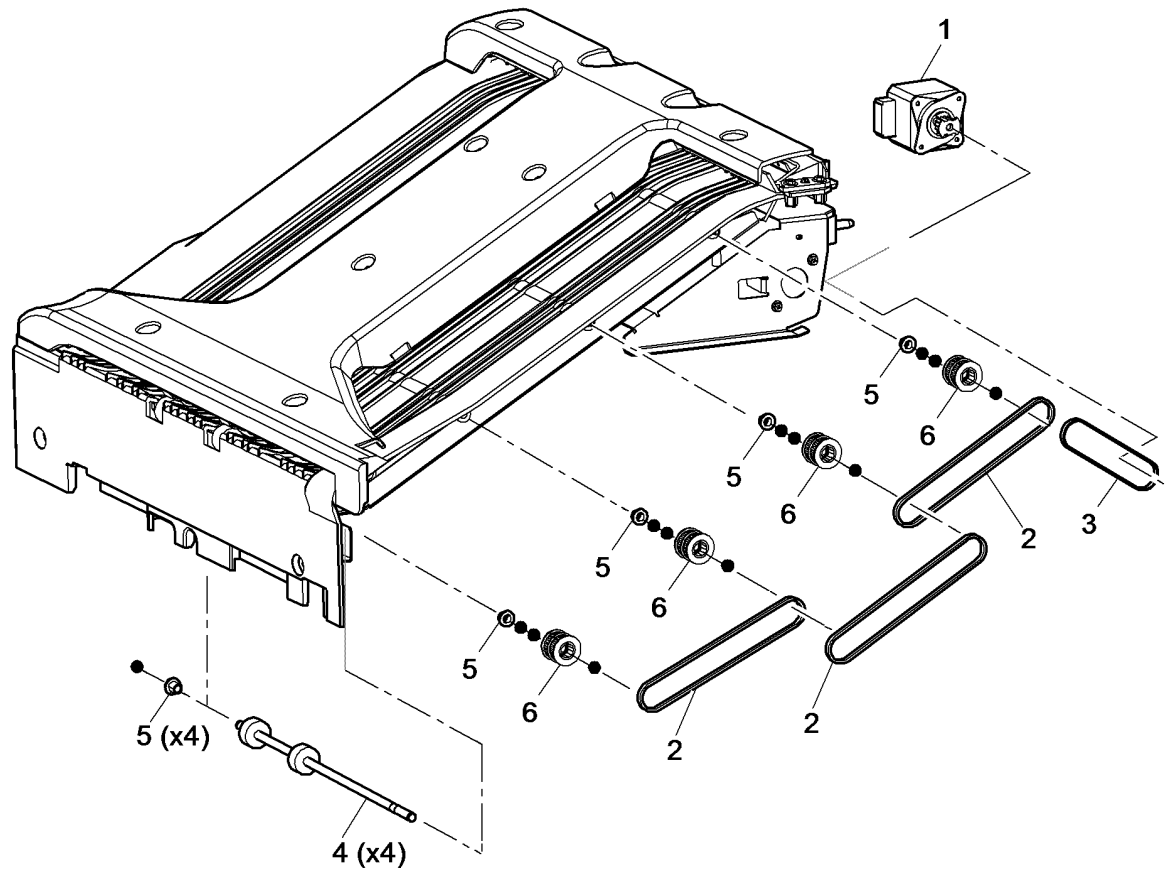
NOTE: Also supplied as part of PL 31.14 Item 5.



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PL 10.16 Horizontal Transport Assembly (2 of 2)

Item	Part	Description
1	927K02400	Horizontal transport motor (MOT10-040) (REP 10.7)
2	023E34400	Horizontal transport drive belt
3	-	Horizontal transport motor drive belt (REP 10.7)
4	-	Horizontal transport roll (P/O PL 10.15 Item 1)
5	-	Bearing (P/O PL 10.15 Item 1)
6	-	Pulley (P/O PL 10.15 Item 1)

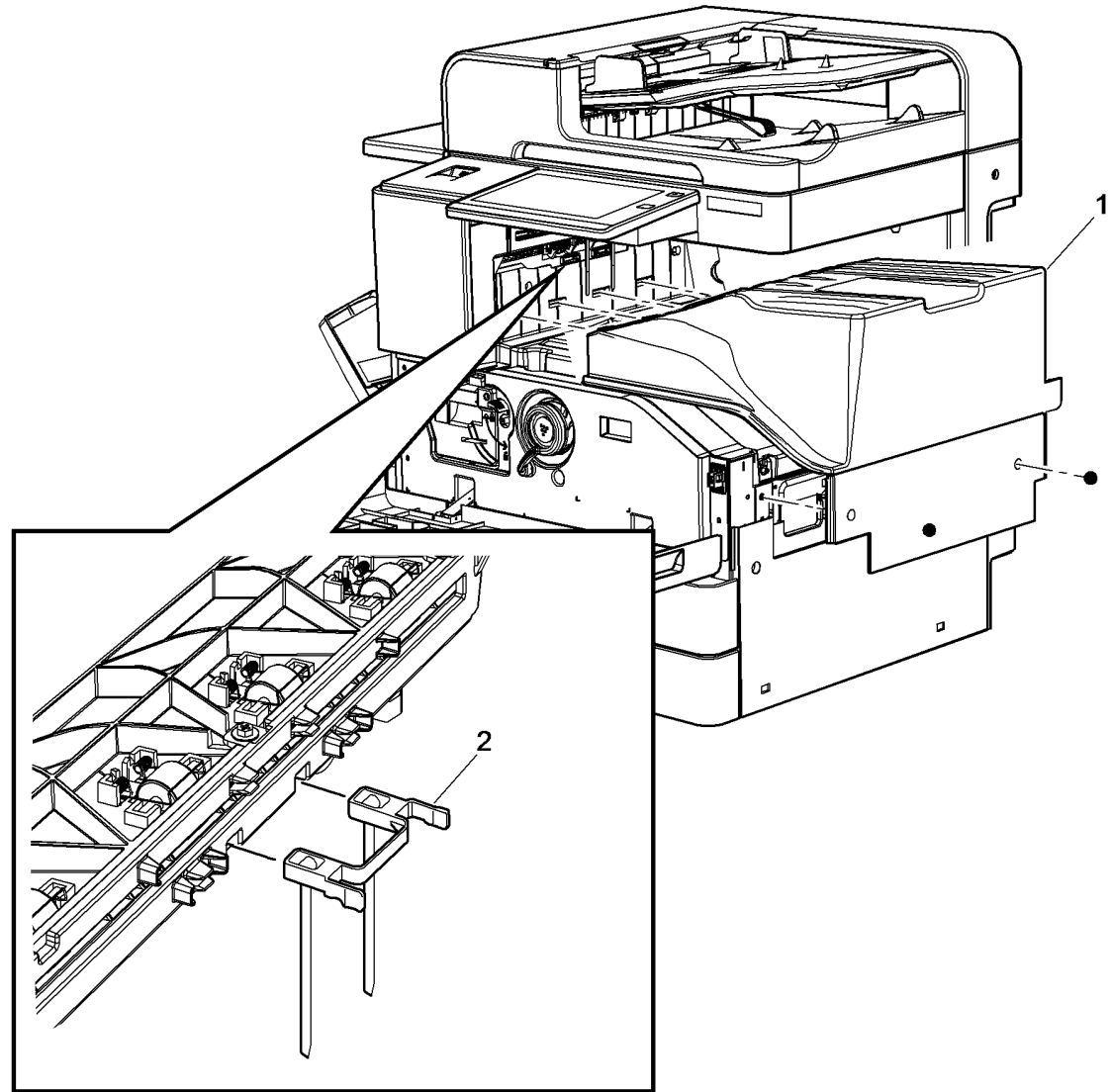


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PL 10.17 Centre Output Tray Assembly

Item	Part	Description
1	-	Centre output tray assembly (P/O PL 31.14 Item 16)
2	036K01793	Bail arm assembly (See NOTE)

NOTE: Also supplied as part of kit, PL 31.14 Item 16.

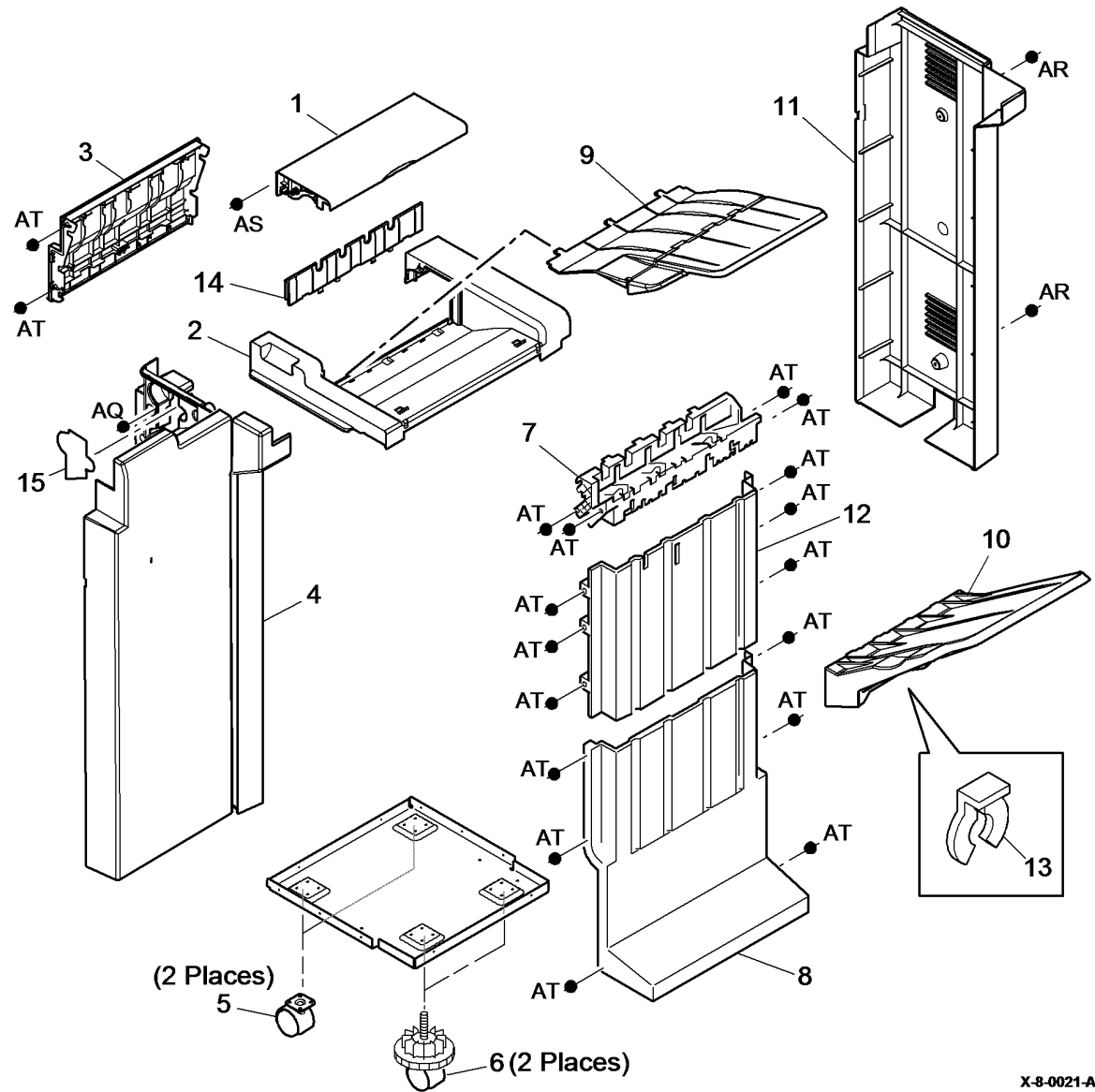


X-8-0132-A

PL 12.10 2K LCSS Covers

Item	Part	Description
1	948K25970	Exit cover
2	822E52611	Top cover (REP 12.1-110)
3	848K31330	Entry guide cover (REP 12.15-110)
4	948K22201	Front door cover assembly (REP 12.1-110)
5	017K03750	Fixed caster
6	017K04520	Adjustable caster
7	-	Output cover (Not Spared)
8	802K48320	Lower right cover
9	050K75970	Bin 0
10	050K75960	Bin 1 (ADJ 12.1-110)
11	948K25871	Rear cover (REP 12.1-110)
12	-	Upper right cover (Not Spared)
13	019K13380	Bin 1 alignment clip
14	848E97200	Top centre cover
15	-	Hole punch assembly cover (Not Spared)

NOTE: Refer to ADJ 12.2-110 to align the LCSS to the machine.

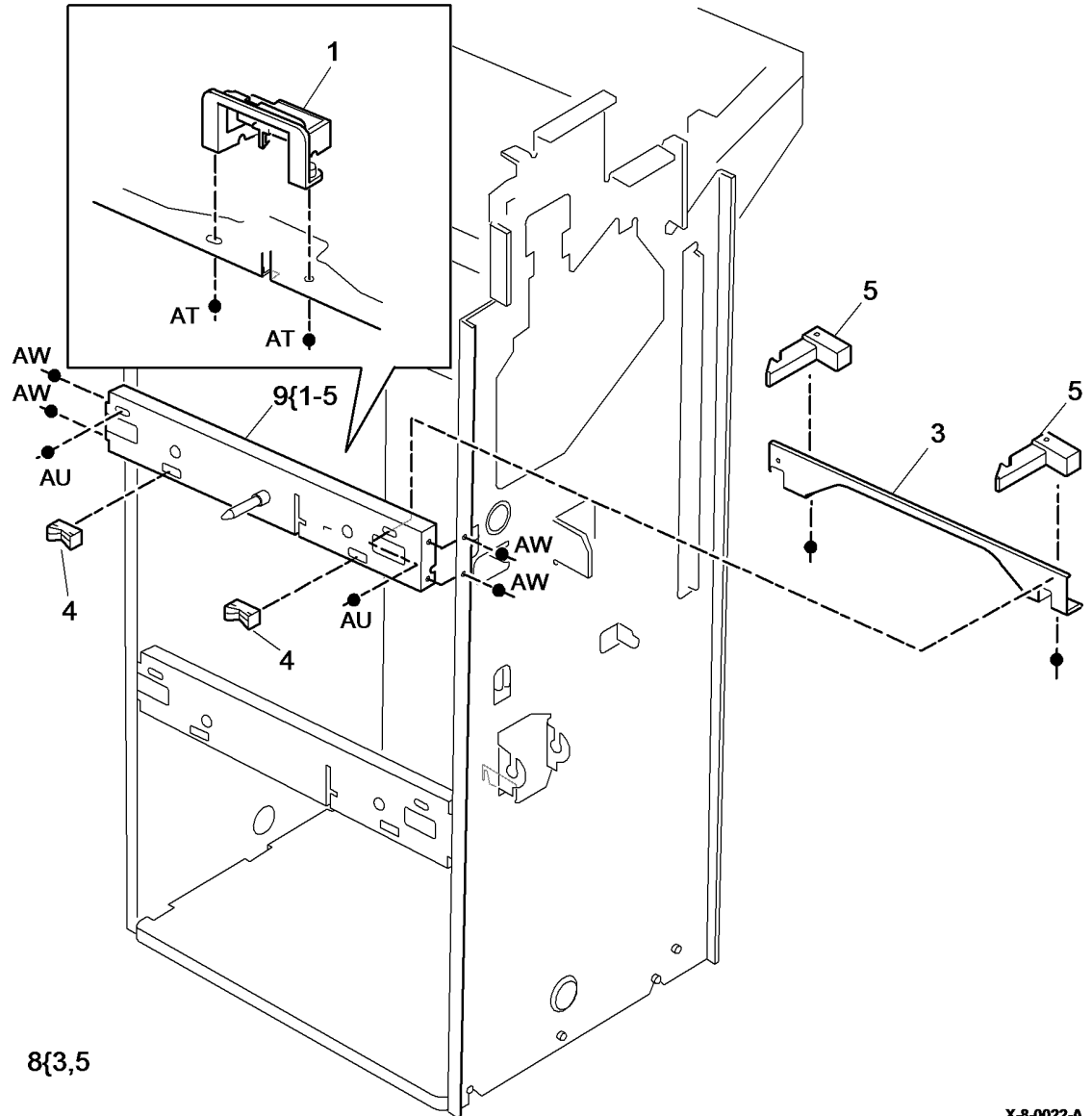


X-8-0021-A

PL 12.15 2K LCSS Docking Latch

Item	Part	Description
1	-	Sensor cover (P/O PL 12.15 Item 9)
2	-	Not used
3	-	Link bracket assembly (P/O PL 12.15 Item 8)
4	-	Stopper (P/O PL 12.15 Item 9)
5	-	Docking latch (P/O PL 12.15 Item 8)
6	-	Not used
7	-	Not used
8	003K25990	Docking latch assembly (See NOTE) (REP 12.16-110)
9	003K20940	Mounting stay assembly

NOTE: Also comes as part of mounting stay assembly PL 12.15 Item 9.

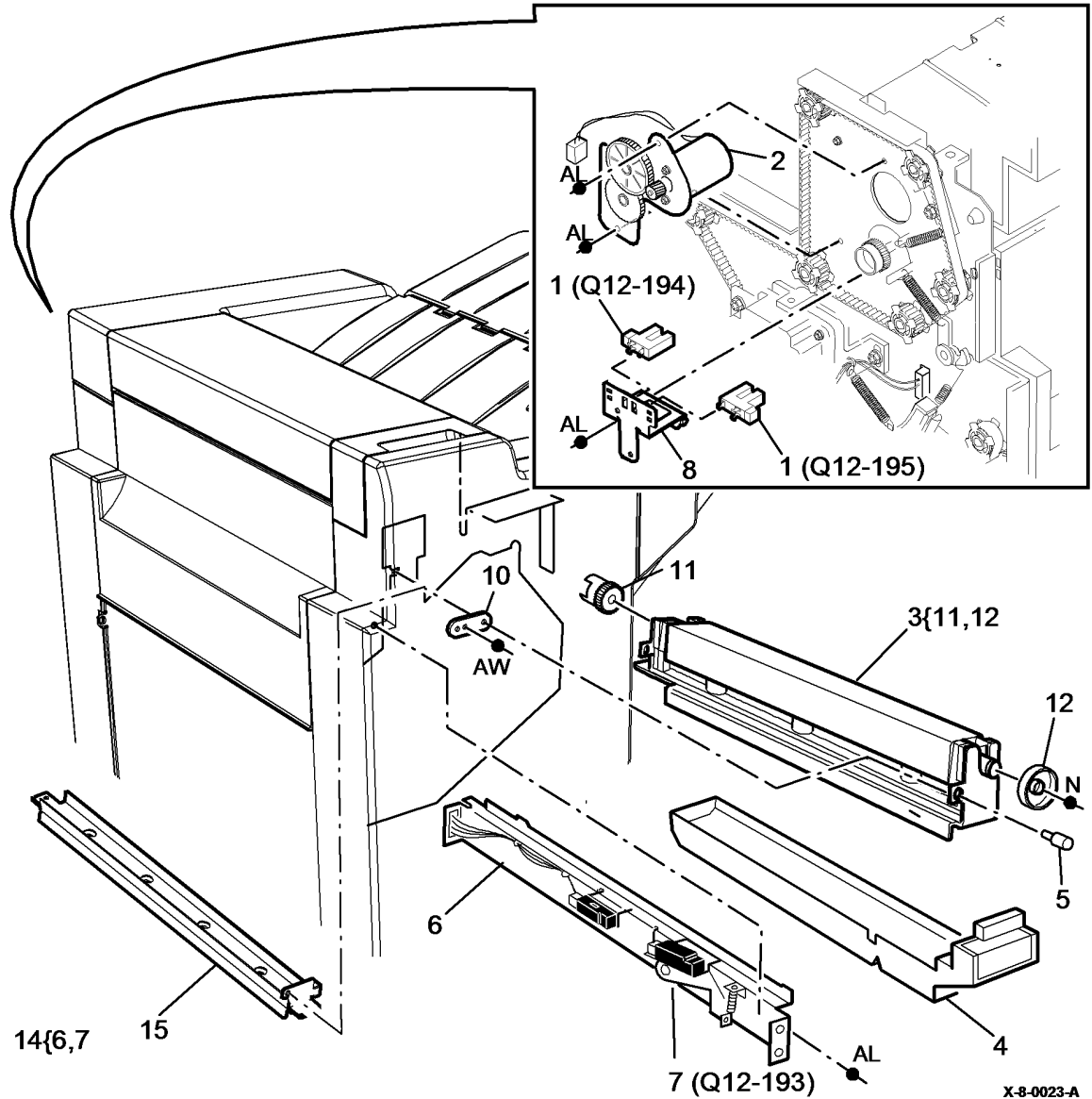


X-8-0022-A

PL 12.20 2K LCSS Hole Punch Unit

Item	Part	Description
1	130E10360	Punch head home sensor (Q12-194), Punch head present sensor (Q12-195) (REP 12.7-110)
2	127K55900	Punch head motor assembly (MOT12-244) (REP 12.7-110)
3	–	Hole punch unit (see below for variants) (See NOTE) (REP 12.7-110)
–	180K01540	2 Hole (P/O PL 31.11 Item 2) (XE)
–	–	4 Hole (Sweden) (P/O PL 31.11 Item 2)
–	–	4 Hole (XE) (P/O PL 31.11 Item 2)
–	180K01570	3 Hole (unique)
–	180K01550	3 Hole (standard)
4	093E03930	Chad bin
5	–	Thumbscrew (Not Spared)
6	–	Bracket (P/O PL 12.20 Item 14)
7	130E10380	Punch sensor 1 (Q12-078), Chad bin level sensor (Q12-193) (P/O PL 12.20 Item 14) (REP 12.7-110)
8	–	Sensor bracket (Not Spared)
9	–	Not used
10	–	Bracket (Not Spared)
11	–	Punch drive gear (P/O PL 12.20 Item 3)
12	–	Punch cam (P/O PL 12.20 Item 3)
13	–	Not used
14	–	Punch sensor assembly (Not Spared)
15	014K10610	Hole punch guide assembly

NOTE: Refer to PL 31.11 Item 2 for other LCSS hole punch kits.

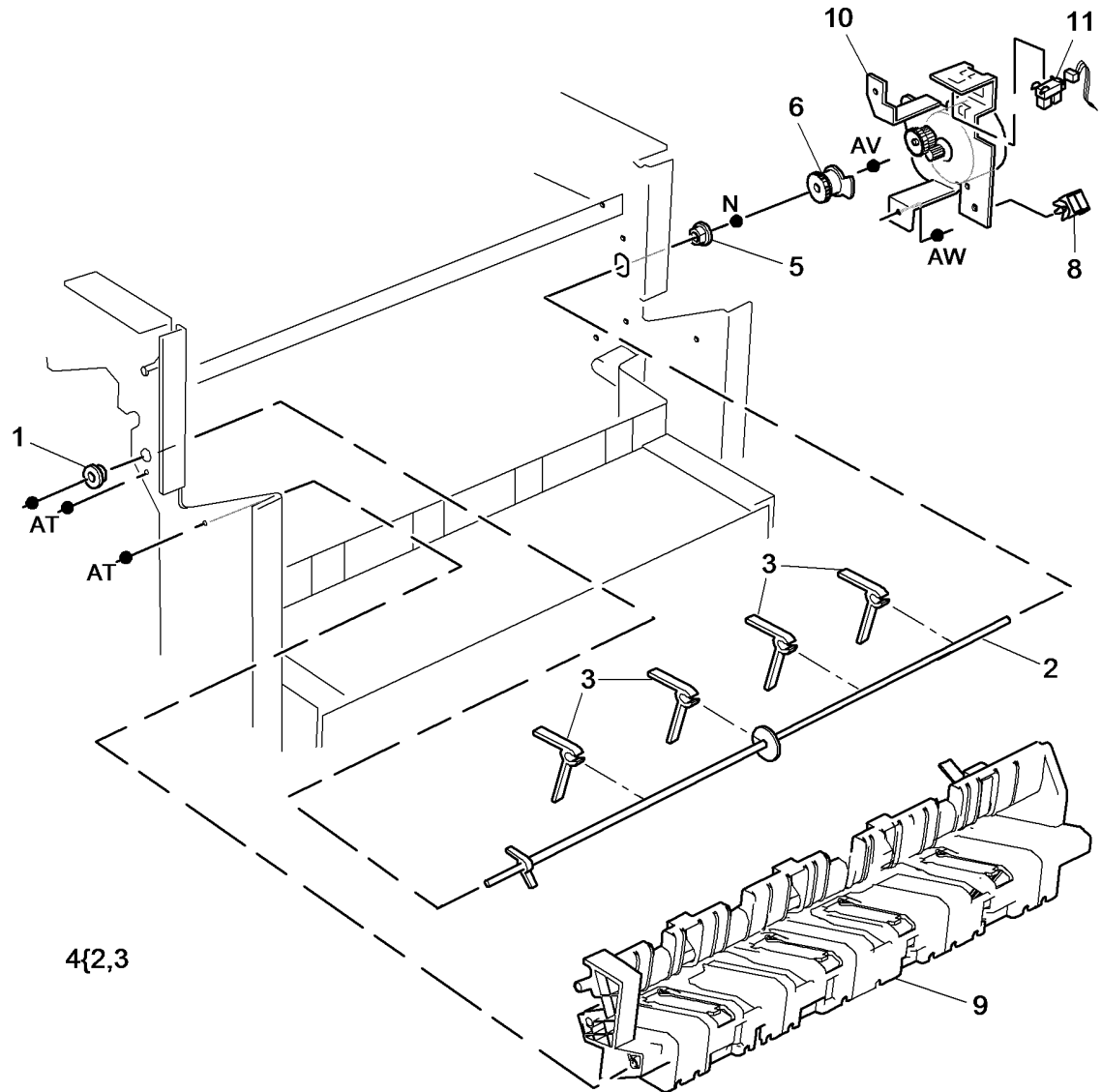


X-8-0023-A

PL 12.25 2K LCSS Paddle Shaft Assembly

Item	Part	Description
1	-	Bush (Not Spared)
2	-	Shaft (P/O PL 12.25 Item 4)
3	-	Paddle (P/O PL 12.25 Item 4) (See NOTE) (REP 12.18-110)
4	-	Paddle shaft assembly (REF: PL 31.12 Item 2) (REP 12.12-110)
5	013E25790	Nylon bearing
6	-	Gear and flag assembly (Not Spared)
7	-	Not used
8	-	Cable clamp (Not Spared)
9	-	Output cover (Not Spared)
10	127K62580	Paddle roll motor assembly (MOT12-238) (REP 12.12-110)
11	130E10360	Paddle roll home sensor (Q12-186)

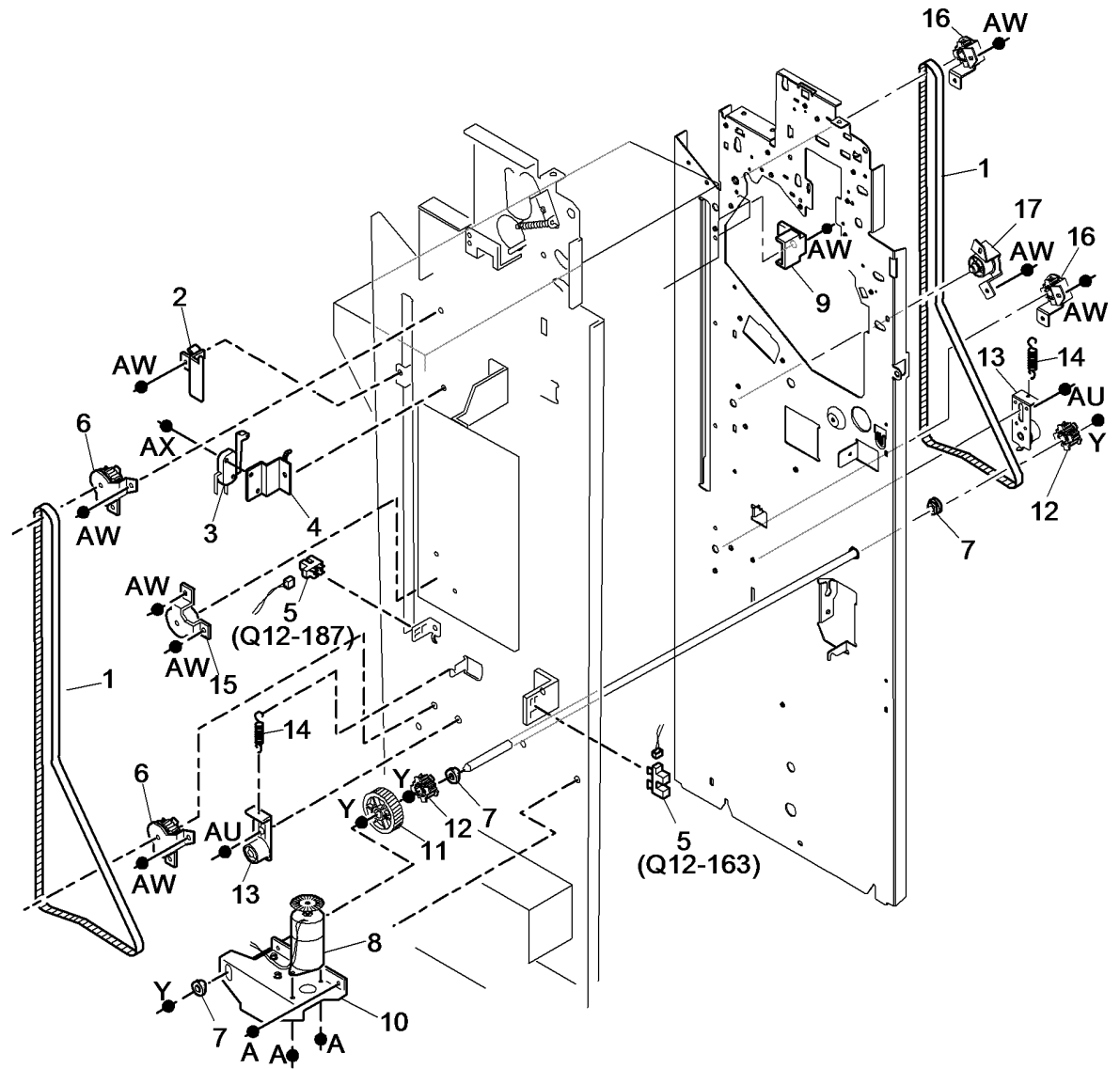
NOTE: Paddles are also supplied (4 off) as a kit PL 31.12 Item 5.



X-8-0024-A

PL 12.30 2K LCSS Bin 1 Control Components (1 of 2)

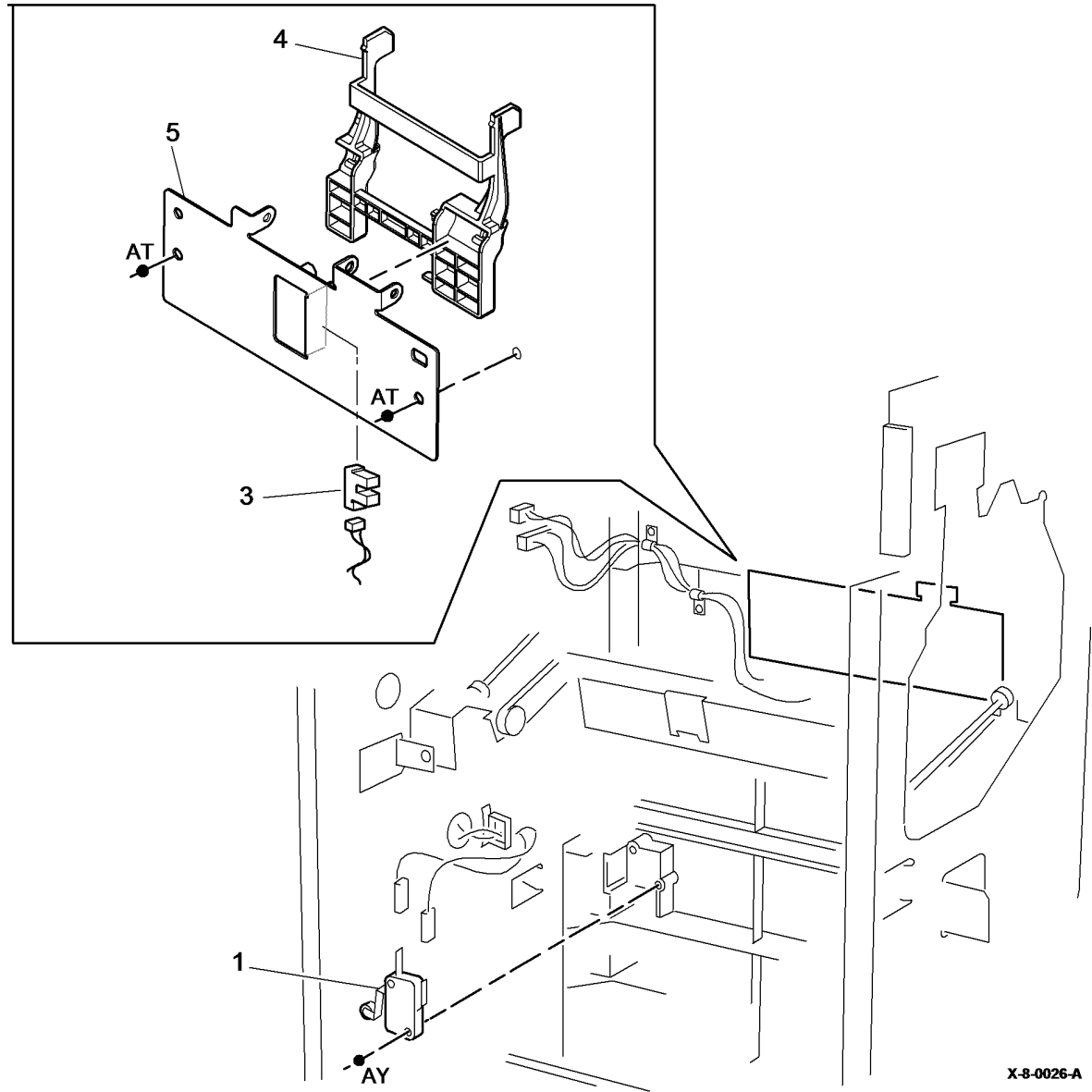
Item	Part	Description
1	023E24320	Bin 1 drive belt (REP 12.5-110)
2	-	Rear belt clamp (Not Spared) (ADJ 12.1-110)
3	110E20180	Bin 1 upper limit switch (S12-190)
4	-	Sensor bracket (Not Spared)
5	130E10360	Bin 1 90% full sensor (Q12-187)/ Bin 1 motor encoder sensor (Q12-163)
6	-	Rear pulley (Not Spared) (ADJ 40.1)
7	013E37470	Bearing
8	127K55891	Bin 1 elevator motor (MOT12-241)
9	-	Front belt clamp (Not Spared) (ADJ 12.1-110)
10	-	Motor bracket (Not Spared)
11	-	Drive gear (Not Spared)
12	-	Drive pulley assembly (Not Spared)
13	-	Belt tensioner (Not Spared) (ADJ 40.1)
14	-	Spring (Not Spared)
15	-	Rear idler (Not Spared) (ADJ 40.1)
16	-	Front pulley (Not Spared) (ADJ 40.1)
17	-	Front idler (Not Spared) (ADJ 40.1)



X-8-0025-A

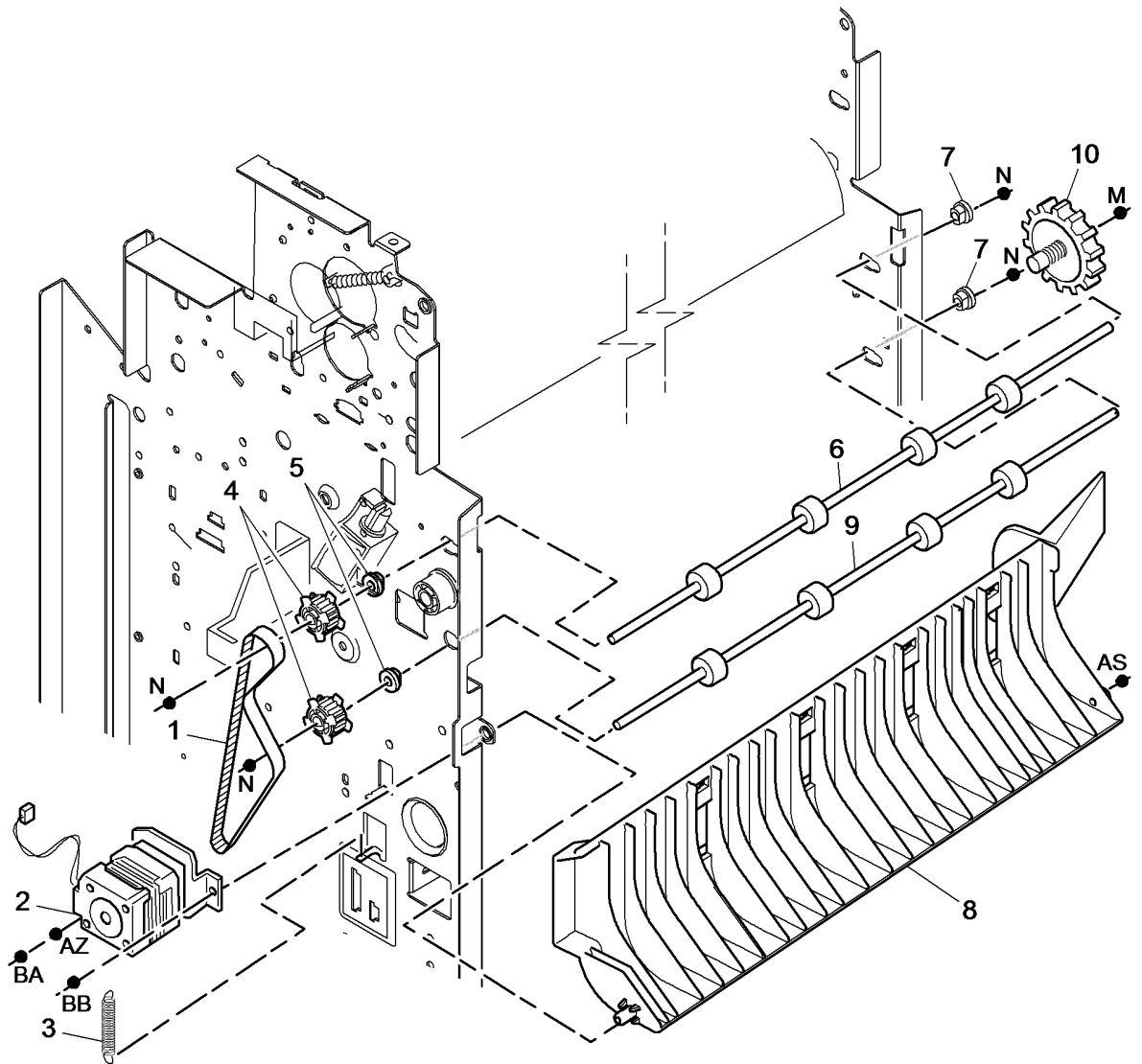
PL 12.35 2K LCSS Bin 1 Control Components (2 of 2)

Item	Part	Description
1	110K13990	Bin 1 lower limit switch (S12-191)
2	-	Not used
3	130E10360	Bin 1 upper level sensor (Q12-188) (REP 12.11-110)
4	-	Actuator (Not Spared)
5	-	Sensor support assembly (Not Spared)



PL 12.40 2K LCSS Paper Entry Transport

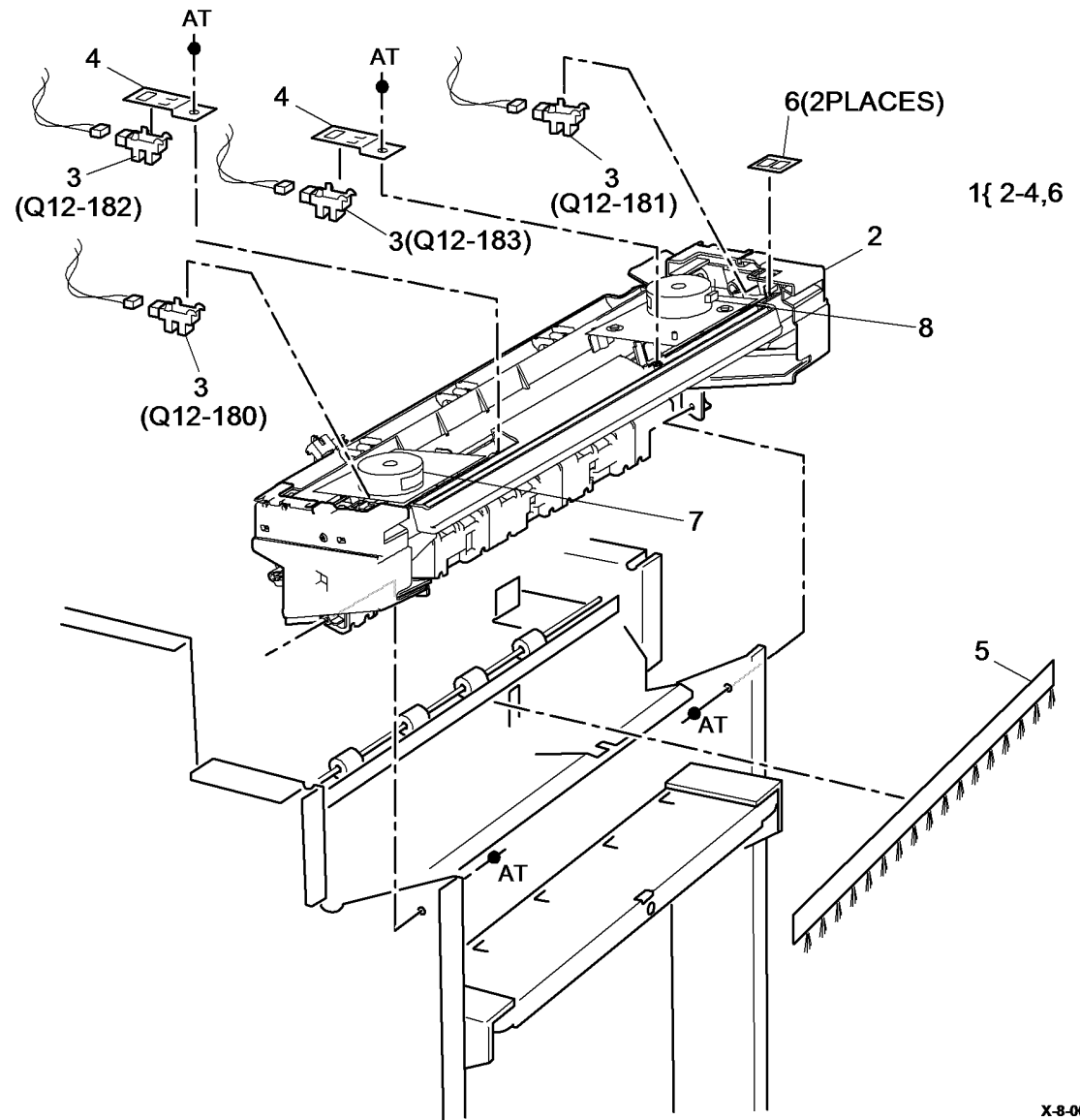
Item	Part	Description
1	023E24340	Input drive belt (REP 12.2-110)
2	127K55860	Transport motor 1 (MOT12-223) (REP 12.2-110, ADJ 12.3-110)
3	-	Spring (Not Spared)
4	-	Pulley (Not Spared)
5	013E37460	Bearing
6	-	Feed roll shaft (short) (Not Spared)
7	013E37470	Bearing
8	-	Jam clearance guide assembly (REF: PL 12.70 Item 1)
9	-	Feed roll shaft (long) (Not Spared)
10	006K32780	Thumb wheel



X-8-0027-A

PL 12.45 2K LCSS Tamper Assembly

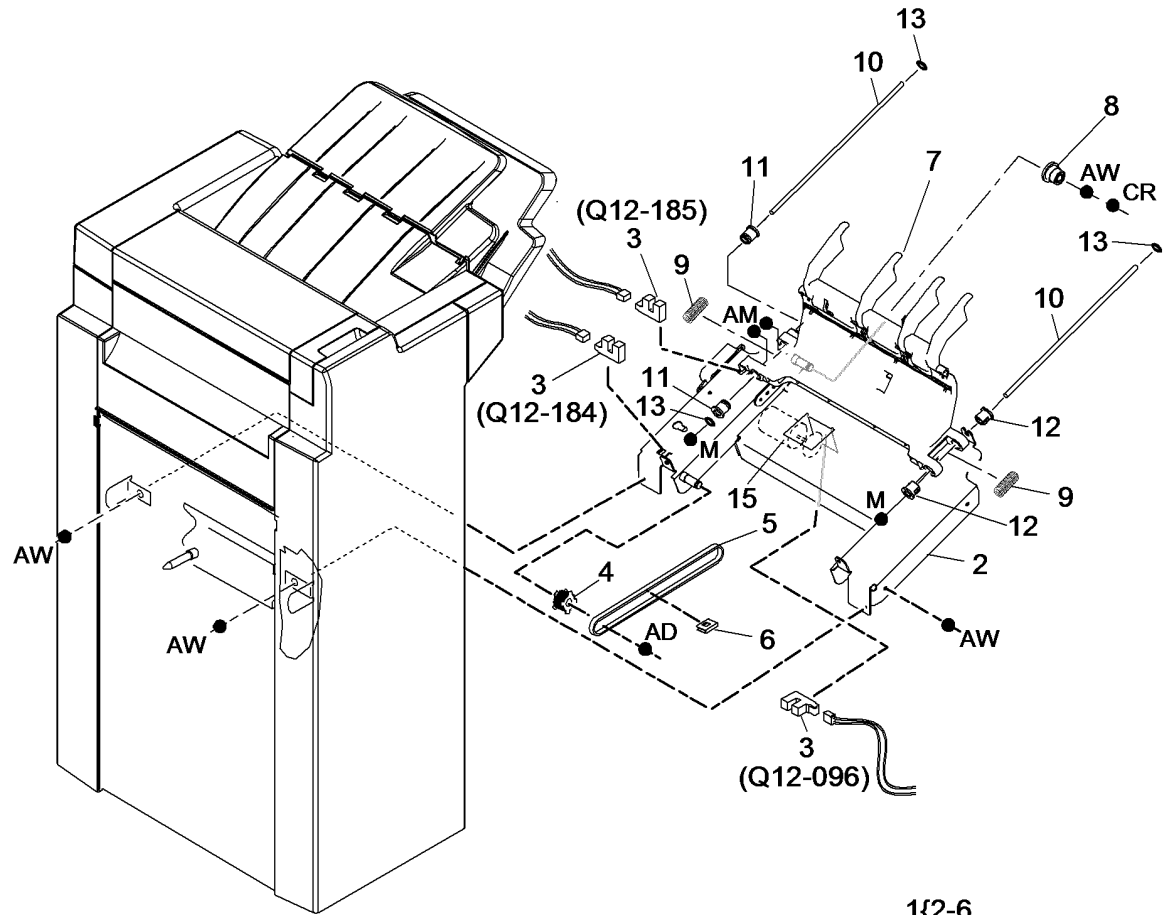
Item	Part	Description
1	049K50680	Tamper assembly (REP 12.6-110)
2	-	Tamper unit (P/O PL 12.45 Item 1)
3	130E10360	Front tamper home sensor (Q12-180), Front tamper away sensor (Q12-182), Rear tamper home sensor (Q12-181), Rear tamper away sensor (Q12-183)
4	-	Sensor bracket (P/O PL 12.45 Item 1)
5	-	Static eliminator (stacker) (REF: PL 12.65 Item 7)
6	-	Sensor retainer (P/O PL 12.45 Item 1)
7	-	Front tamper motor (MOT12-226) (P/O PL 12.45 Item 1)
8	-	Rear tamper motor (MOT12-227) (P/O PL 12.45 Item 1)
9	869E55190	Tamper arm (Not shown)



X-8-0028-A

PL 12.50 2K LCSS Ejector Assembly

Item	Part	Description
1	054K43583	Ejector assembly (REP 12.10-110)
2	-	Ejector base (P/O PL 12.50 Item 1)
3	130E10360	Ejector home sensor (Q12-184), Ejector out sensor (Q12-185), Ejector motor encoder sensor (Q12-096) (REP 12.10-110)
4	-	Pulley (P/O PL 12.50 Item 1)
5	023E24330	Ejector belt (REP 12.17-110)
6	-	Clip (P/O PL 12.50 Item 1)
7	019K13390	Support finger set (Qty. 4)
8	020K21490	Pulley/drive gear
9	-	Spring (P/O PL 12.50 Item 1)
10	-	Shaft (P/O PL 12.50 Item 1)
11	-	Slide ejector bearing (P/O PL 12.50 Item 14)
12	-	Wide slide ejector bearing (P/O PL 12.50 Item 14)
13	-	Cushion washer (P/O PL 12.50 Item 14)
14	604K67690	LCSS bearing assembly kit
15	-	Ejector motor (MOT12-234) (P/O PL 12.50 Item 1)



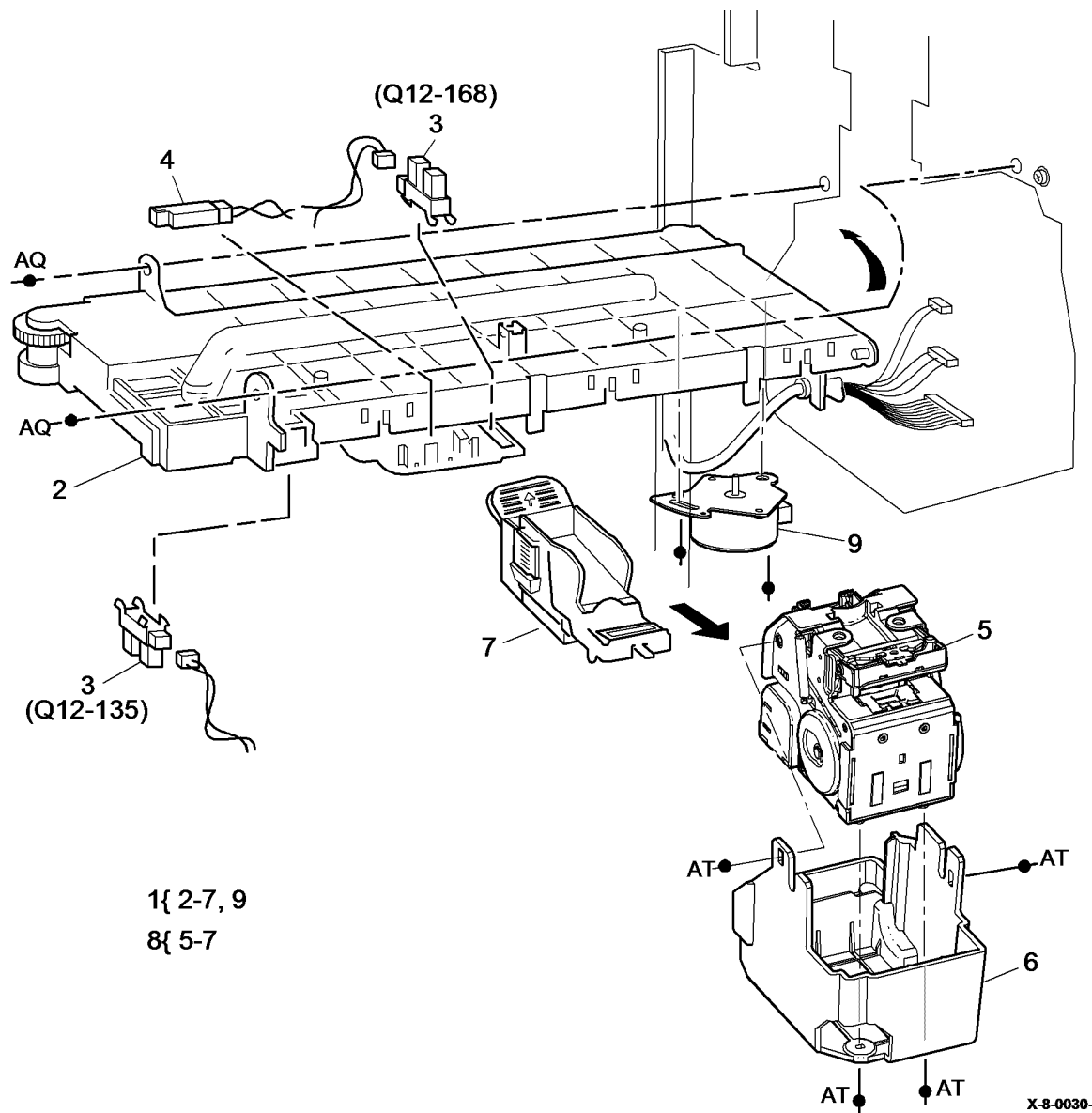
1{2-6
14{11-13

X-8-0029-A

PL 12.55 2K LCSS Staple Head Unit/ Traverse Assembly

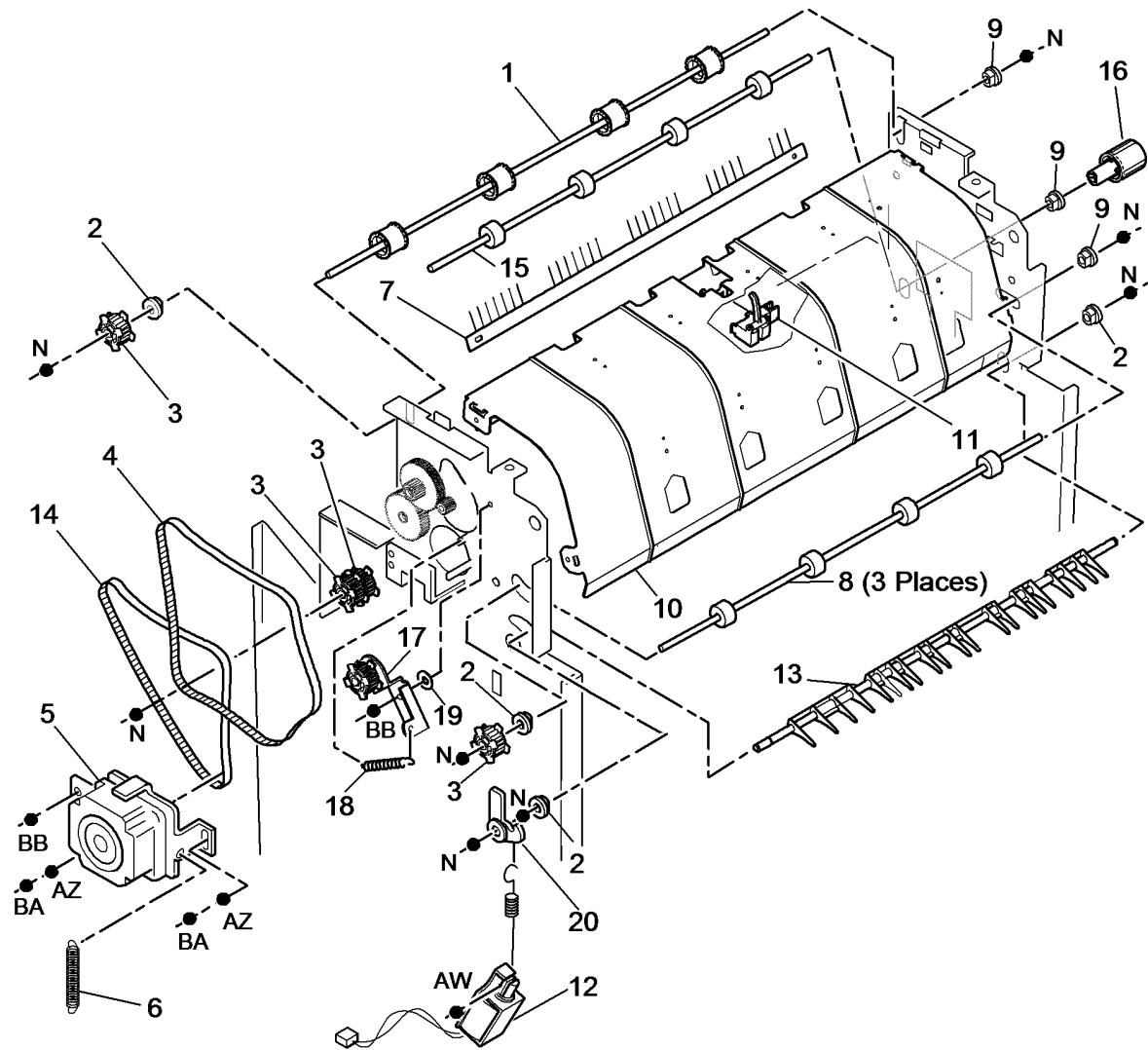
Item	Part	Description
1	014K11544	Stapler traverse assembly (REP 12.8-110)
2	-	Head traverse unit (P/O PL 12.55 Item 1)
3	130E10360	Staple home sensor (Q12-135), Stapler index sensor (Q12-168)
4	130E10380	SH1 Paper sensor (Q12-196)
5	-	Staple head unit (REP 12.9-110)
6	-	Stapler cover (P/O PL 12.55 Item 1)
7	-	Staple cartridge (REF: PL 26.10 Item 11) (See NOTE)
8	029K04691	Staple head assembly
9	-	Staple unit 1 motor (MOT12-249) (P/O PL 12.55 Item 1)

NOTE: To replace staples only, order PL 26.11 Item 4.



PL 12.60 2K LCSS Bin 0 Entry

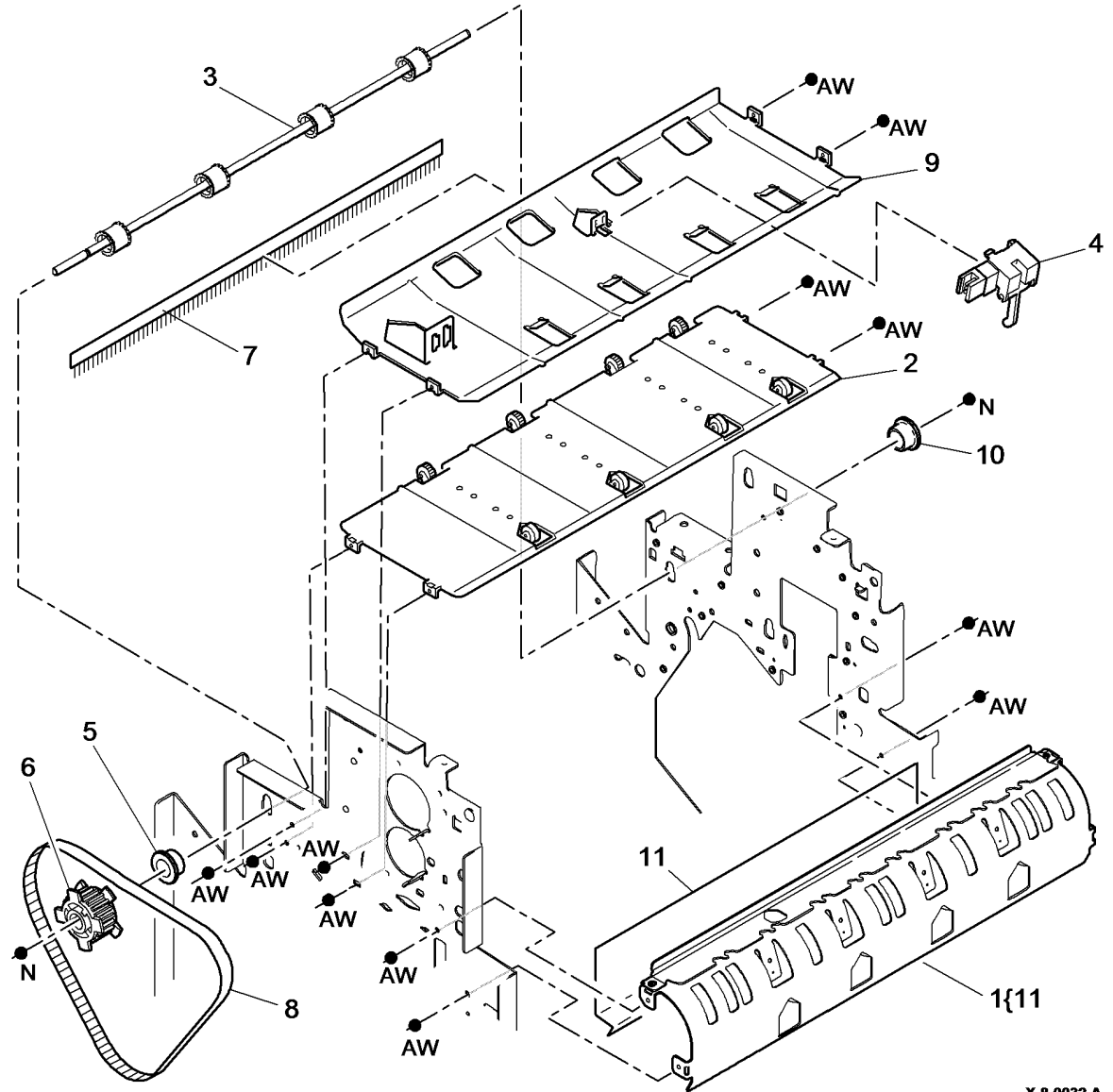
Item	Part	Description
1	006K32810	Top tray exit shaft
2	013E25790	Nylon bearing
3	-	Pulley (Not Spared)
4	023E24330	Intermediate paper drive belt (REP 12.3-110)
5	127K55870	Transport motor 2 (MOT12-224) (REP 12.4-110)
6	-	Spring (Not Spared)
7	115E13440	Static eliminator
8	006K32841	Feed roll shaft (short)
9	013E37460	Bearing
10	117K54510	Paper guide (REP 12.20-110)
11	130E11440	Top tray exit sensor (Q12-107) (REP 12.20-110)
12	121K45010	Exit diverter solenoid (SOL12-225)
13	-	Exit diverter gate (P/O PL 31.12 Item 14)
14	023E24340	Paper output drive belt (REP 12.4-110)
15	006K32800	Drive shaft assembly
16	006K33961	Jam clearance knob
17	-	Belt tensioner (Not Spared)
18	-	Spring (Not Spared)
19	-	Washer (Not Spared)
20	-	Actuator (Not Spared)



X-8-0031-A

PL 12.65 2K LCSS Bin 1 Entry

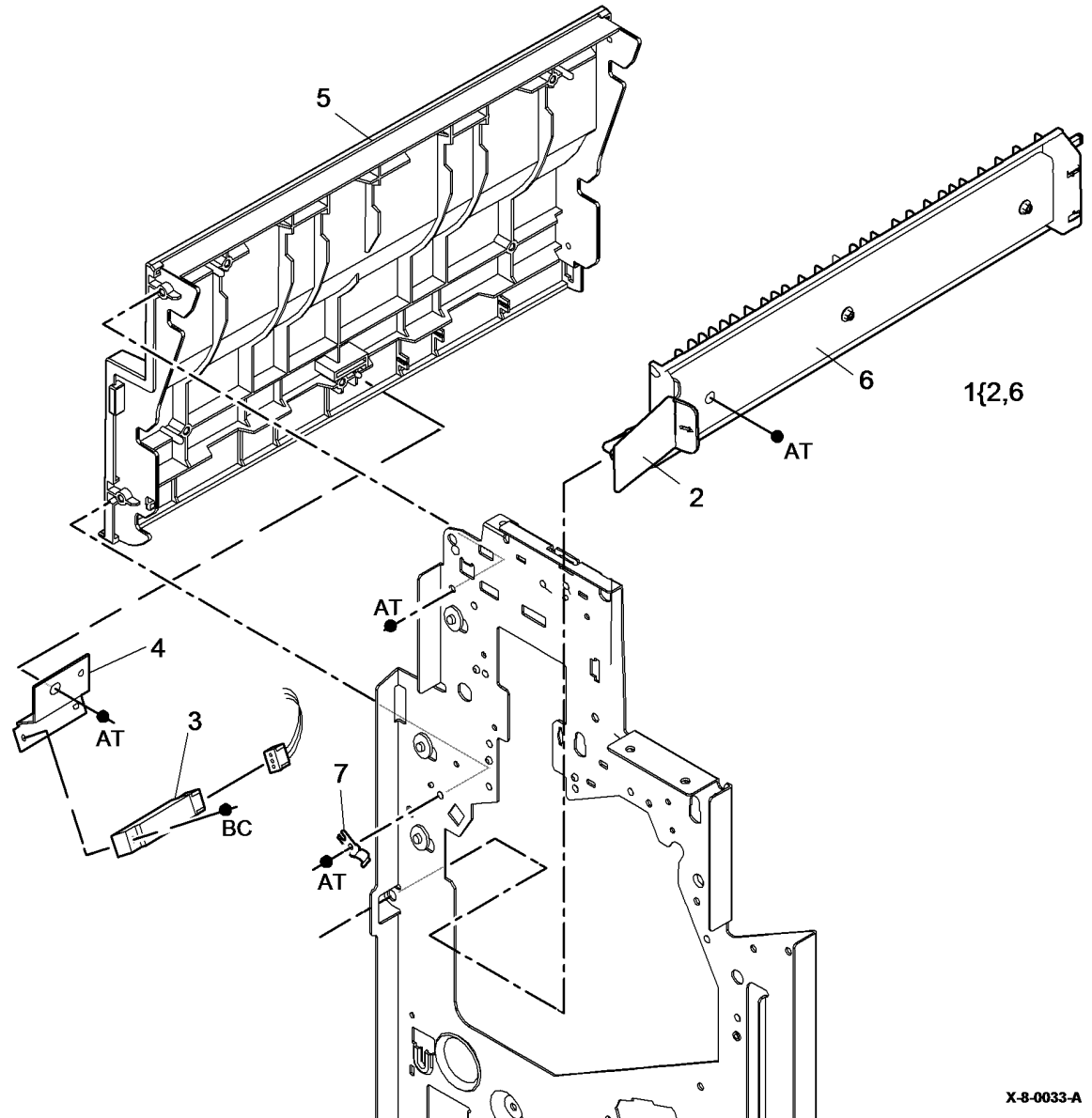
Item	Part	Description
1	032K04610	Left paper guide
2	-	Lower right paper guide (Not Spared) (REP 12.19-110)
3	006K32790	Ejector drive shaft (REP 12.19-110)
4	130E11440	Compiler exit sensor (Q12-106)
5	013E25790	Nylon bearing
6	-	Pulley (Not Spared)
7	115E11810	Static eliminator (stacker)
8	-	Paper output drive belt (REF: PL 12.60 Item 14)
9	-	Upper right paper guide (Not Spared) (REP 12.19-110)
10	013E37460	Bearing
11	-	Mylar safety cover (P/O PL 12.65 Item 1)



X-8-0032-A

PL 12.70 2K LCSS Entry Guide Cover/ Jam Clearance Guide

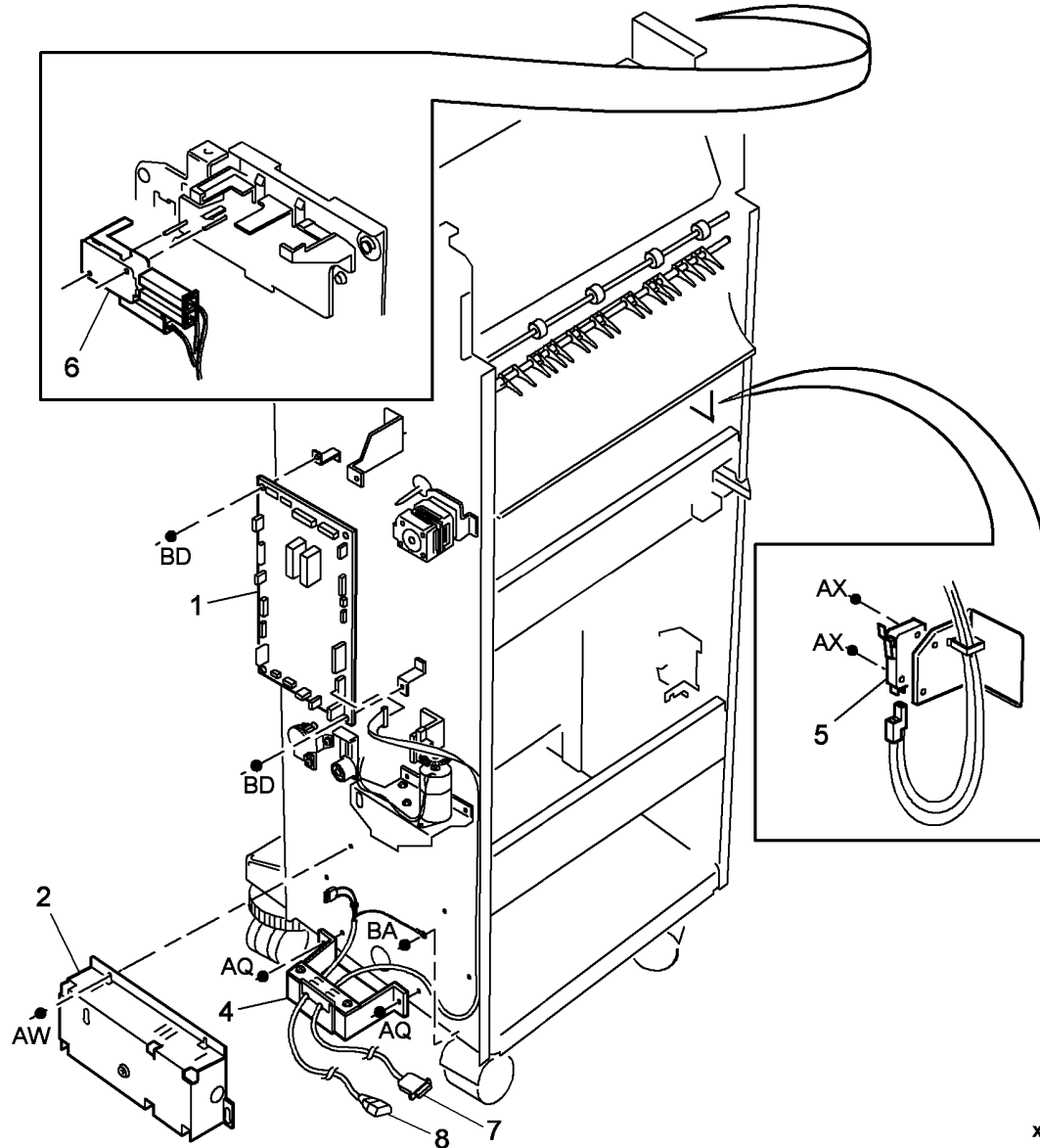
Item	Part	Description
1	032K09672	Jam clearance guide assembly
2	-	Jam clearance handle (P/O PL 12.70 Item 1)
3	130E10380	Entry sensor (Q12-077)
4	-	Sensor bracket (Not Spared)
5	-	Entry guide cover (REF: PL 12.10 Item 3) (REP 12.15-110)
6	-	Jam clearance guide (P/O PL 12.70 Item 1)
7	809E78390	Latch



X-8-0033-A

PL 12.75 2K LCSS Electrical

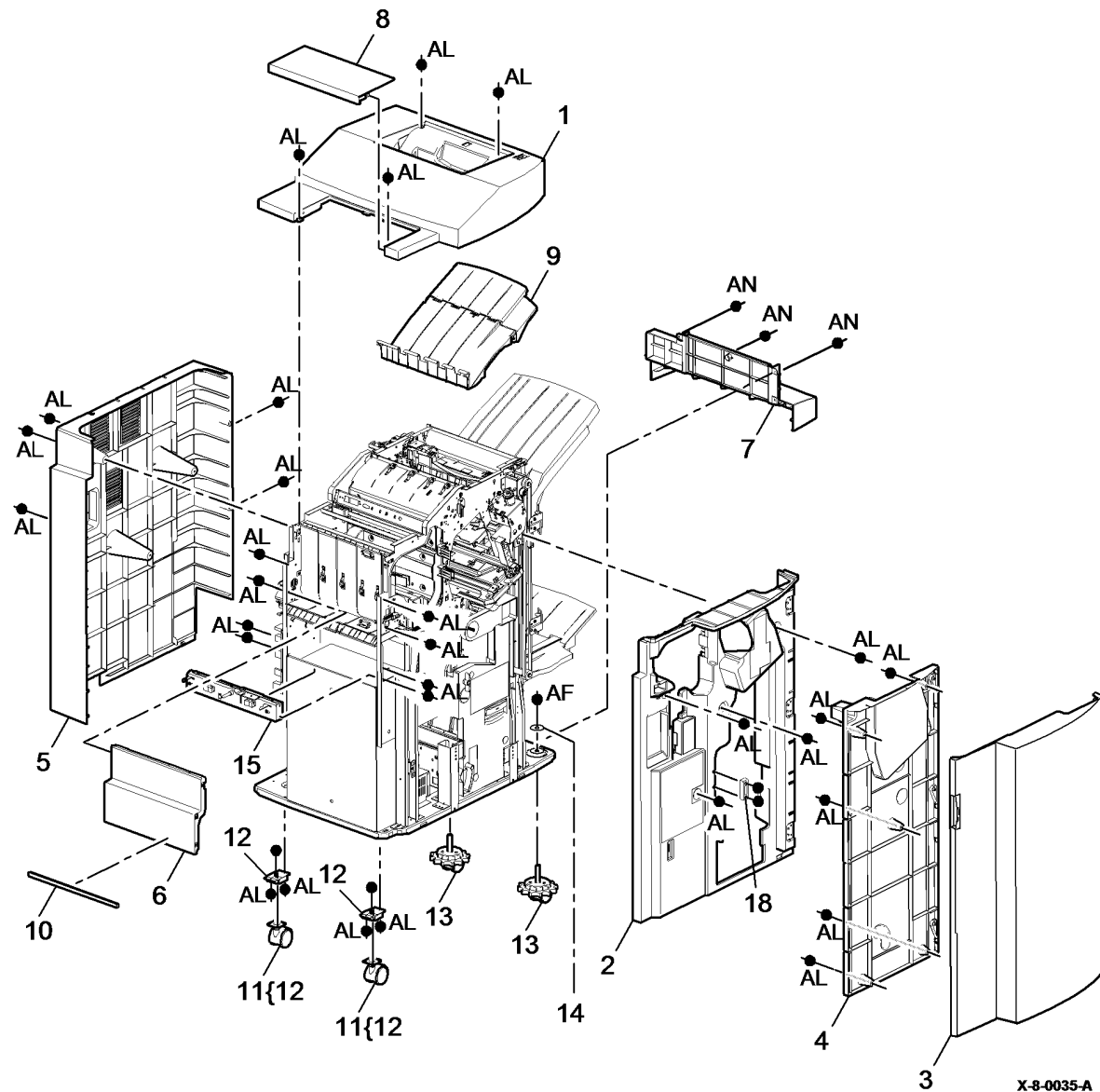
Item	Part	Description
1	960K97481	LCSS PWB (REP 12.14-110)
2	-	Power supply module (Not Spared)
3	-	Not used
4	962K56952	Cord bracket assembly
5	110K13980	Front door interlock switch (S12-303)
6	110K13970	Top cover interlock switch (S12-197)
7	-	LCSS communications harness (P/O PL 12.75 Item 4)
8	-	LCSS power cord (P/O PL 12.75 Item 4)



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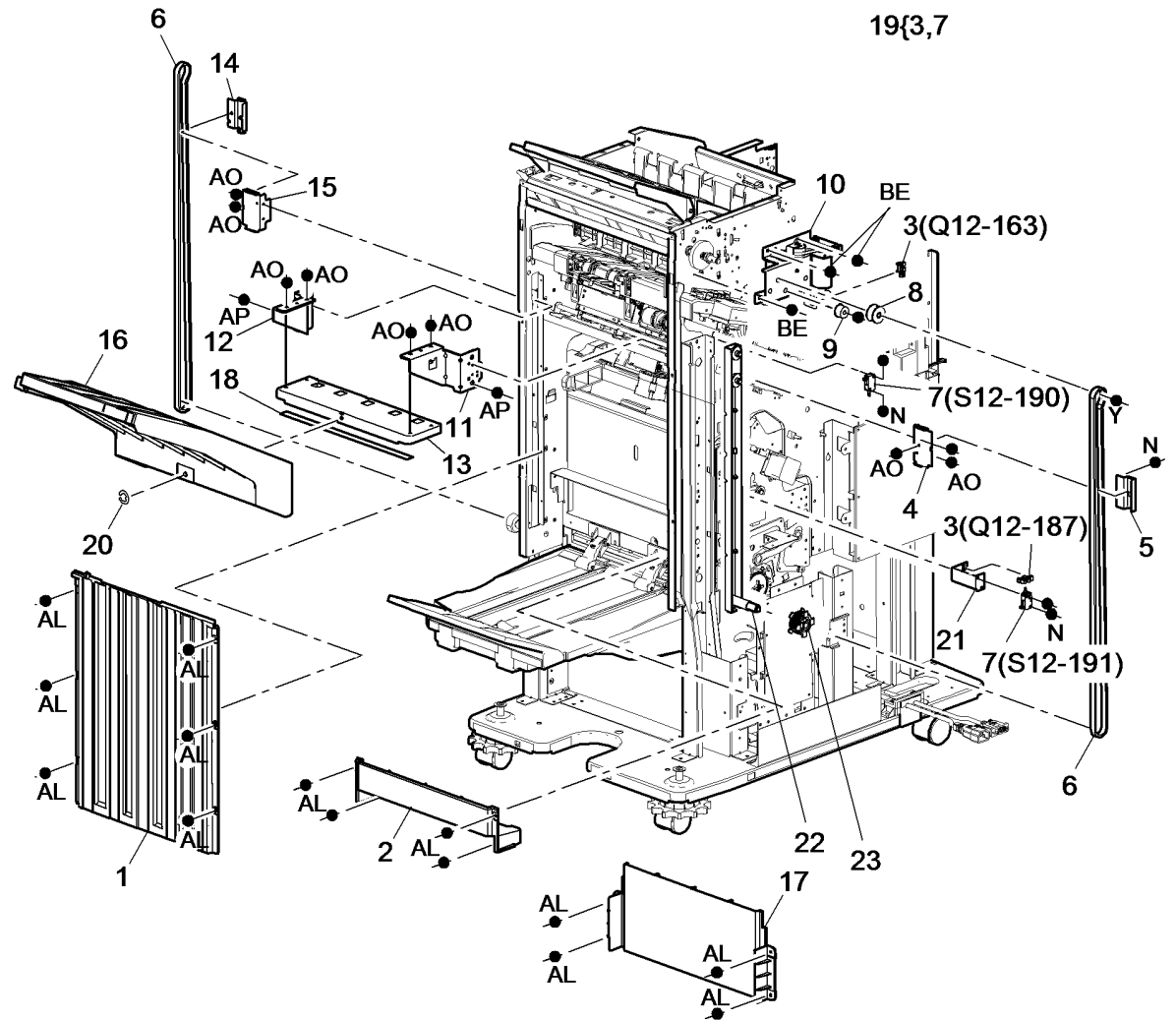
PL 12.100 HVF Covers and Docking

Item	Part	Description
1	948K23401	Top cover (REP 12.1-171)
2	948K25850	Front cover (REP 12.1-171)
3	848E17790	Front door (REP 12.1-171)
4	948K25860	Door support cover (REP 12.1-171)
5	822E58361	Rear cover (REP 12.1-171)
6	848K12530	Vent cover (REP 12.1-171)
7	848E17800	Foot cover (REP 12.1-171)
8	848E17810	Inserter cover (REP 12.1-171)
9	848E40500	Top tray (REP 12.3-171)
10	-	Seal (Not Spared)
11	017K04830	Fixed caster assembly (REP 12.96-171)
12	-	Fixed caster bracket (P/O PL 12.100 Item 11)
13	017K04630	Adjustable caster (REP 12.96-171)
14	-	Adjustable caster washer (P/O PL 12.100 Item 13)
15	017K06300	Docking latch assembly (REP 12.100-171)
16	-	Not used
17	-	Not used
18	049K13570	Bookletmaker interlock bracket



PL 12.105 HVF Stacker

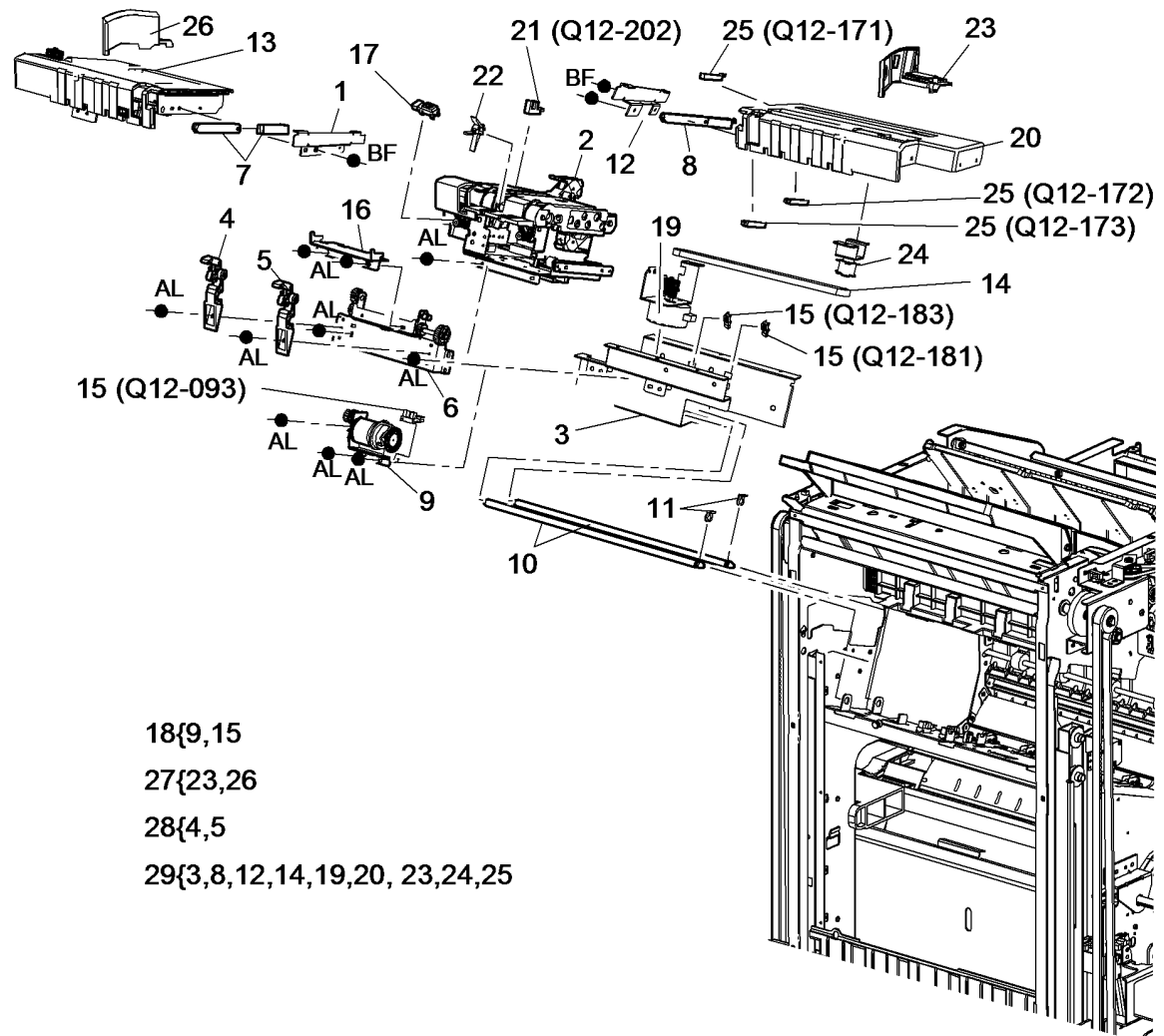
Item	Part	Description
1	848E40530	Upper right side cover (REP 12.5-171)
2	848E17840	Lower right side cover
3	130E12830	Bin 1 90% full sensor (Q12-187)/ Bin 1 motor encoder sensor (Q12-163)
4	-	Rear main belt clamp (1 of 2) (Not Spared)
5	-	Rear main belt clamp (2 of 2) (Not Spared)
6	023E31220	Bin 1 main drive belt (REP 12.38-171)
7	110K20890	Bin 1 upper limit switch (REP 12.75-171) (S12-190)/Bin 1 lower limit switch (REP 12.75-171) (S12-191)
8	-	Main belt pulley (Not Spared)
9	-	Main belt tensioner (Not Spared)
10	127K56592	Bin 1 elevator motor assembly (MOT12-241) (REP 12.12-171)
11	-	Bin 1 rear lift bar bracket (Not Spared)
12	-	Bin 1 front lift bar bracket (Not Spared)
13	-	Bin 1 lift bar (Not Spared)
14	-	Front main belt clamp (2 of 2) (Not Spared)
15	-	Front main belt clamp (1 of 2) (Not Spared)
16	050E28941	Bin 1 (REP 12.4-171)
17	848E17830	Middle right side cover
18	-	Bin 1 lift bar brace (Not Spared)
19	110K20880	Stacker full sensor and lower limit switch assembly (REP 12.75-171)
20	019K13380	Bin 1 retaining clip (REP 12.4-171)
21	-	Sensor/switch bracket (Not Spared)
22	110K21060	Stacker channel bracket
23	-	Pulley (P/O PL 12.105 Item 22)



X-8-0036-A

PL 12.110 HVF Ejector, Pressing and Support (1 of 3)

Item	Part	Description
1	-	Front tamper bracket (Not Spared)
2	-	Ejector assembly (P/O PL 31.12 Item 23) (REP 12.6-171)
3	-	Rear tamper support bracket (P/O PL 12.110 Item 29)
4	-	Front pressing plate finger (P/O PL 12.110 Item 28) (REP 12.7-171)
5	-	Rear pressing plate finger (P/O PL 12.110 Item 28) (REP 12.7-171)
6	049K23160	Pressing plate bracket
7	-	Front support finger (NOTE) (REP 12.8-171)
8	-	Rear support finger (NOTE) (REP 12.8-171)
9	-	Pressing and support motor (MOT12-323) (P/O PL 12.110 Item 18)
10	-	Offset rod (Not Spared)
11	019K13380	Offset rod KL clip
12	-	Rear tamper bracket (P/O PL 12.110 Item 29)
13	-	Front tamper (Not Spared) (REP 12.11-171)
14	-	Rear tamper drive belt (P/O PL 12.110 Item 29)
15	130E12830	Pressing and support encoder sensor (Q12-093)
16	-	Ejector assembly safety cover (P/O PL 31.12 Item 21)
17	130K75900	Paper pressing sensor (Q12-322)
18	127K56551	Motor encoder assembly
19	-	Rear tamper motor (MOT12-227) (P/O PL 12.110 Item 29) (REP 12.15-171)
20	-	Rear tamper (P/O PL 12.110 Item 29)
21	-	Ejector paper present sensor (Q12-202) (P/O PL 12.110 Item 2)
22	033K04850	Ejector paddle assembly (REP 12.58-171)
23	032E35301	Rear tamper arm
24	-	Rear tamper pulley (P/O PL 12.110 Item 29)
25	130E12810	Pressing and support sensor A (Q12-172), B (Q12-171), C (Q12-173)
26	868E36871	Front tamper arm
27	032E35341	Set of front and rear tamper arms
28	003K21101	Pressing plate kit
29	032K09682	Rear tamper assembly (REP 12.15-171)



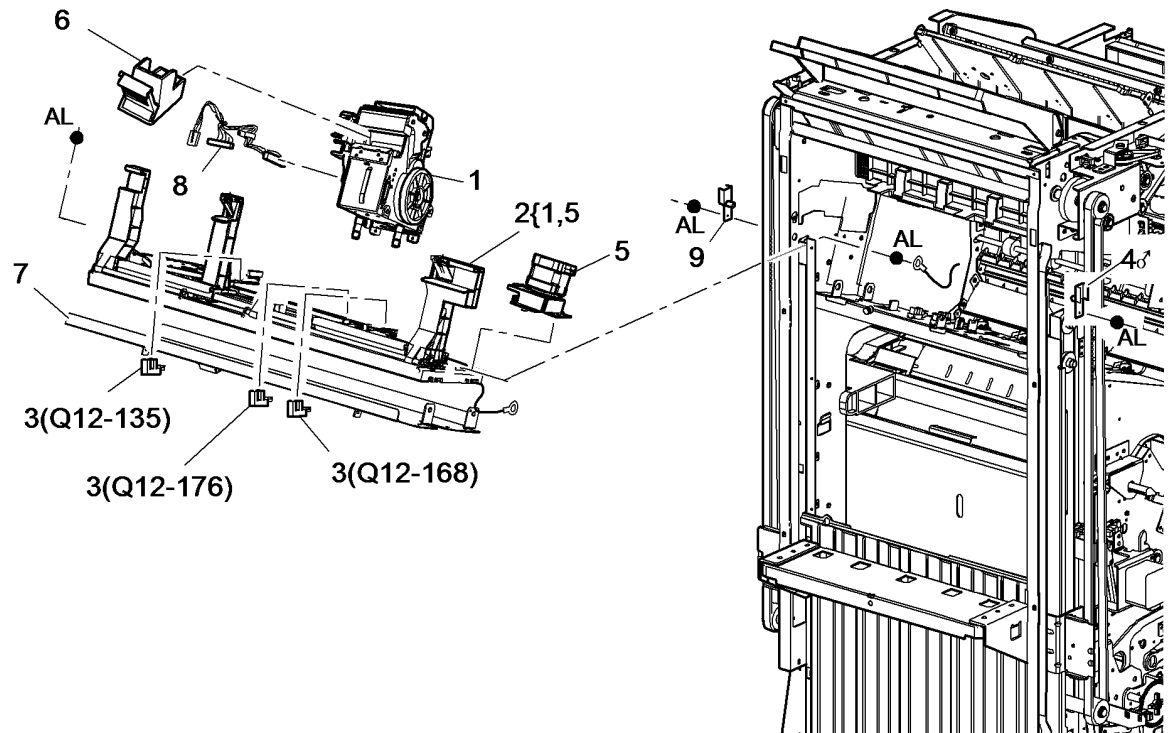
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NOTE: If both front and rear support finger assemblies are needed, then order PL 31.12 Item 22.

PL 12.111 HVF Ejector, Pressing and Support (2 of 3)

Item	Part	Description
1	–	Stapler unit (P/O PL 12.111 Item 2) (REP 12.2-171)
2	029K04671	Stapler assembly (REP 12.2-171)
3	130E12830	Stapler unit home sensor (Q12-135)/Stapler unit mid home sensor (Q12-176)/Stapler unit index sensor (Q12-168)
4	130K75470	Bin 1 upper level sensor (receiver) (Q12-188) (NOTE) (REP 12.76-171)
5	–	Stapler unit 1 motor (MOT12-249) (P/O PL 12.111 Item 2)
6	–	Staple cartridge (REF: PL 26.10 Item 15)
7	–	Support bracket (Not Spared)
8	962K82410	Stapler harness and P-clip
9	130K75480	Bin 1 upper level sensor (transmitter) (Q12-188) (See NOTE) (REP 12.76-171)

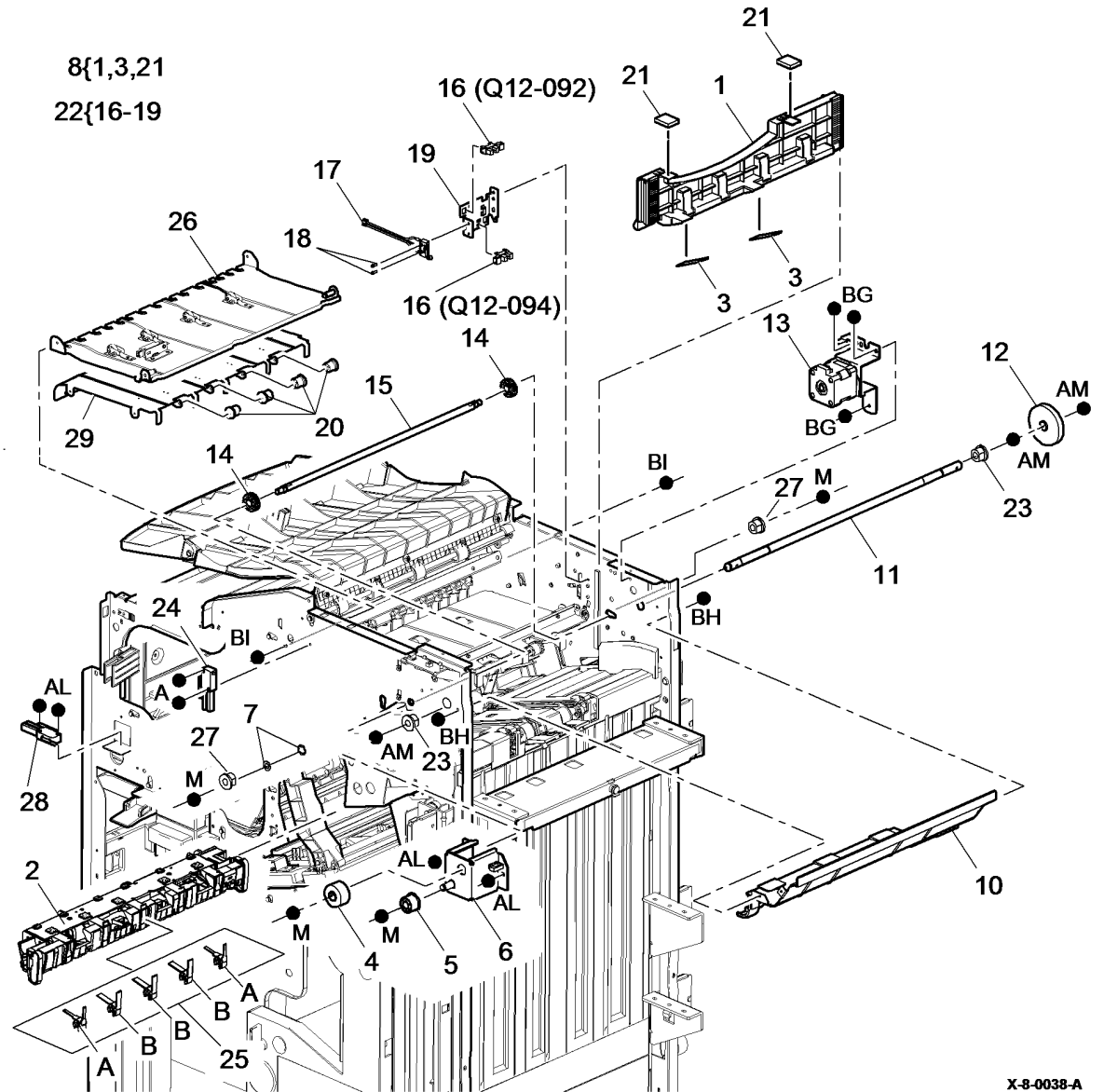
NOTE: If either item 4 or 9 need replacing then both of these items should be replaced at the same time.



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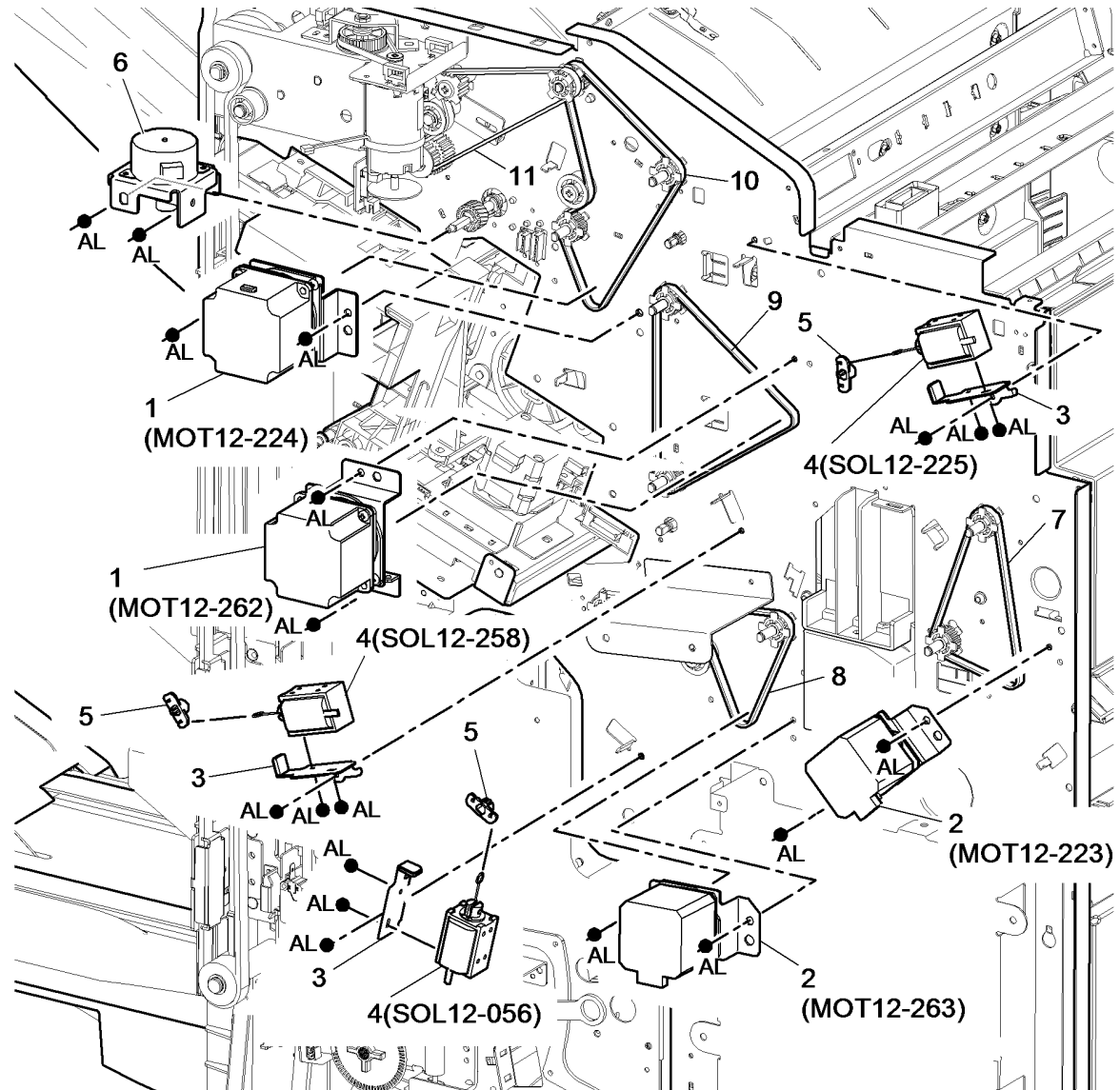
PL 12.115 HVF Ejector, Pressing and Support (3 of 3)

Item	Part	Description
1	-	Paper pusher (P/O PL 12.115 Item 8)
2	033K06101	Paddle unit (REP 12.49-171)
3	-	Pusher mylar (P/O PL 12.115 Item 8)
4	-	Timing belt pulley (Not Spared)
5	-	Timing belt tensioner (Not Spared)
6	-	Front stacker pulley bracket (Not Spared)
7	-	Thrust washer (Not spared)
8	050K68501	Paper pusher assembly (REP 12.53-171)
9	-	Not used
10	-	Compile exit upper guide (Not Spared)
11	-	Stacker main drive gear shaft (Not Spared) (REP 12.37-171)
12	-	Stacker main drive gear (Not Spared) (REP 12.37-171)
13	674K03550	Paper pusher motor assembly (MOT12-265) (REP 12.51-171)
14	-	Pinion gear (Not Spared)
15	-	Pinion gear shaft (Not Spared)
16	130E12830	Paper pusher upper sensor (Q12-092)/Paper pusher lower sensor (Q12-094) (REP 12.54-171)
17	-	Stapler gate safety switch (S12-319) (P/O PL 12.115 Item 22)
18	-	Sensor screw (P/O PL 12.115 Item 22)
19	-	Sensor assembly bracket (P/O PL 12.115 Item 22)
20	006K33390	Stacker idler roll (REP 12.10-171)
21	-	Pusher dampers (P/O PL 12.115 Item 8)
22	674K03541	Sensor assembly (REP 12.54-171)
23	013E37150	Stacker driving shaft bearing (REP 12.37-171)
24	110K13970	Top cover interlock switch (S12-197)
25	033K04651	Paddles (A) outer 2 off, (B) inner 3 off (REP 12.9-171)
26	059K69932	Top jam clearance guide assembly
27	013E25800	Copper bearing
28	110K13980	Front door interlock switch (S12-303)
29	-	Lower exit guide (Not Spared)



PL 12.120 HVF Main Drives

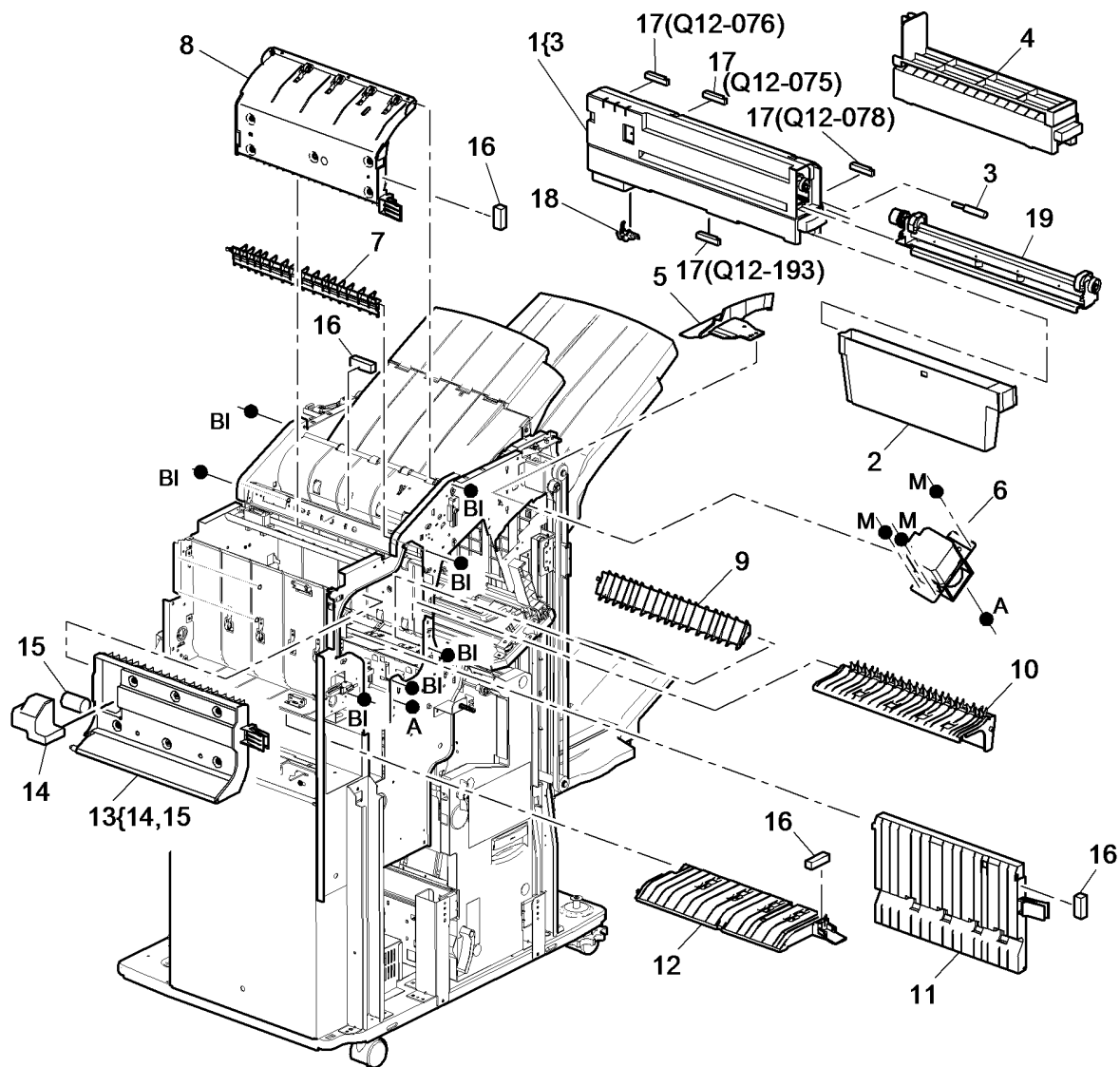
Item	Part	Description
1	127K56570	Buffer motor (MOT12-262) (REP 12.65-171)/Transport motor 2 (MOT12-224) (REP 12.66-171)
2	127K56560	Transport motor 1 (MOT12-223) (REP 12.63-171)/Bypass feed motor (MOT12-263) (REP 12.64-171)
3	-	Solenoid bracket (P/O PL 12.120 Item 4)
4	121K45290	BM diverter solenoid (SOL12-258)/Exit diverter solenoid (SOL12-225)/Set clamp solenoid (SOL12-056)
5	-	Solenoid connector (Not Spared)
6	127K56610	Paddle unit motor assembly (MOT12-239) (REP 12.48-171)
7	-	Transport motor 1 drive belt (Not Spared)
8	-	Bypass feed motor drive belt (Not Spared)
9	-	Buffer feed motor drive belt (Not Spared)
10	-	Transport motor 2 drive belt (A) (Not Spared)
11	-	Transport motor 2 drive belt (B) (Not Spared)



X-8-0039-A

PL 12.125 HVF Feed Assembly and Punch (1 of 3)

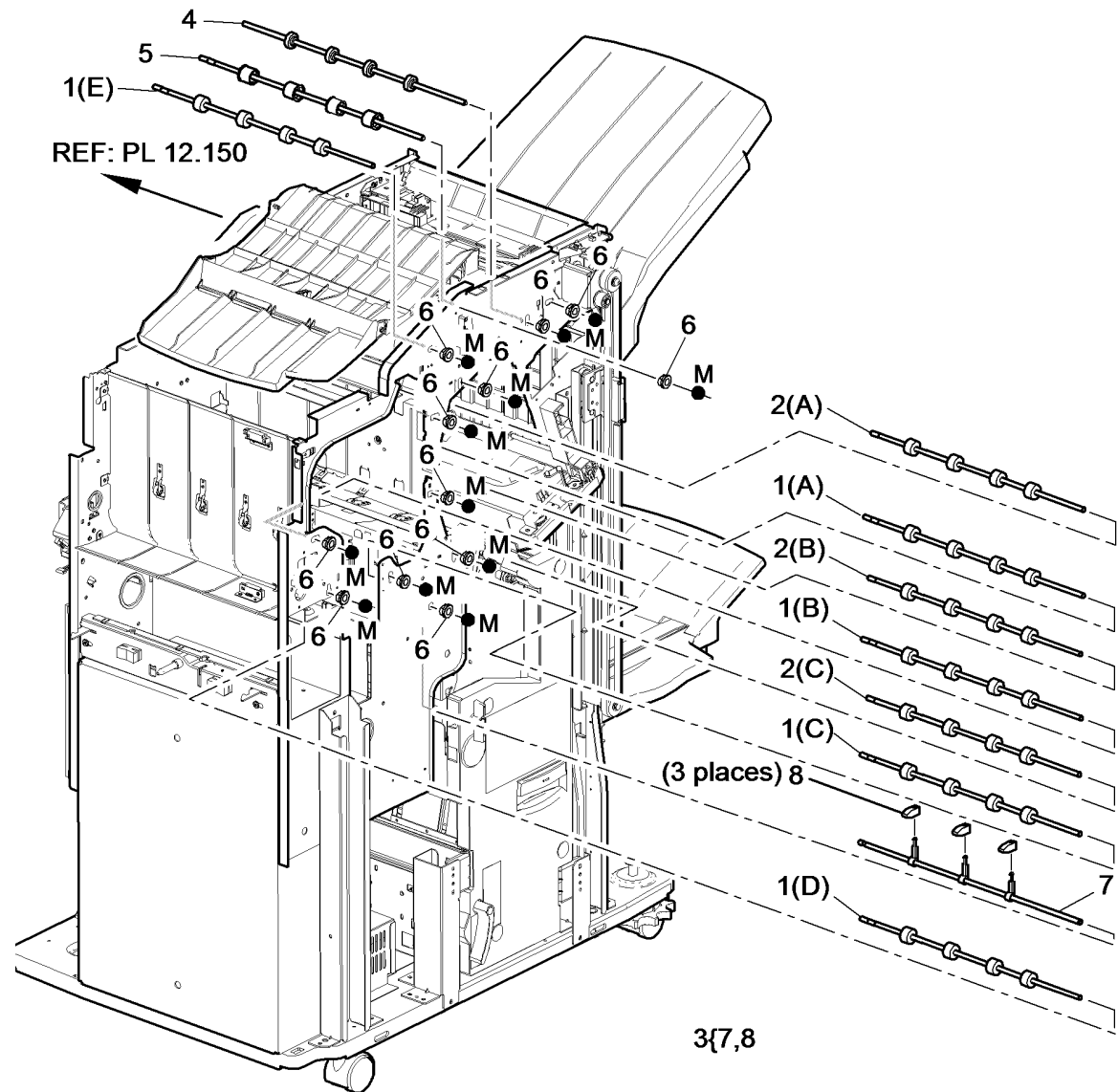
Item	Part	Description
1	604K55211	HVF hole punch carrier assembly
2	604K83750	HVF chad bin
3	-	Hole punch thumb screw (P/O PL 12.125 Item 1)
4	059K59551	Hole punch blanking assembly
5	-	Front tamper arm (Not Spared)
6	127K62570	Front tamper motor assembly (MOT12-226) (REP 12.11-171)
7	038E41350	Diverter exit gate (REP 12.35-171)
8	-	Upper exit guide (5c) (Not Spared) (REP 12.14-171)
9	038E41341	BM diverter gate (REP 12.39-171)
10	059K69950	Buffer pocket jam clearance guide (REP 12.33-171)
11	059K69982	Inserter jam clearance guide assembly (8a) (REP 12.34-171)
12	859K19430	Input jam clearance guide (5a) (REP 12.32-171)
13	059K69974	Buffer guide assembly (5b) (REP 12.31-171)
14	-	Nip split motor cover (P/O PL 12.125 Item 13)
15	-	Nip split motor (MOT12-264) (P/O PL 12.125 Item 13)
16	121K45300	Magnet
17	130E12810	Chad bin level sensor (Q12-193)/Punch sensor 1 (Q12-078)/Punch sensor 2 (Q12-075)/Punch sensor 3 (Q12-076)
18	130E12840	Chad bin present sensor (Q12-118)
19	-	Hole punch module (P/O PL 31.11 Item 2)



X-8-0040-A

PL 12.130 HVF Feed Assembly and Punch (2 of 3)

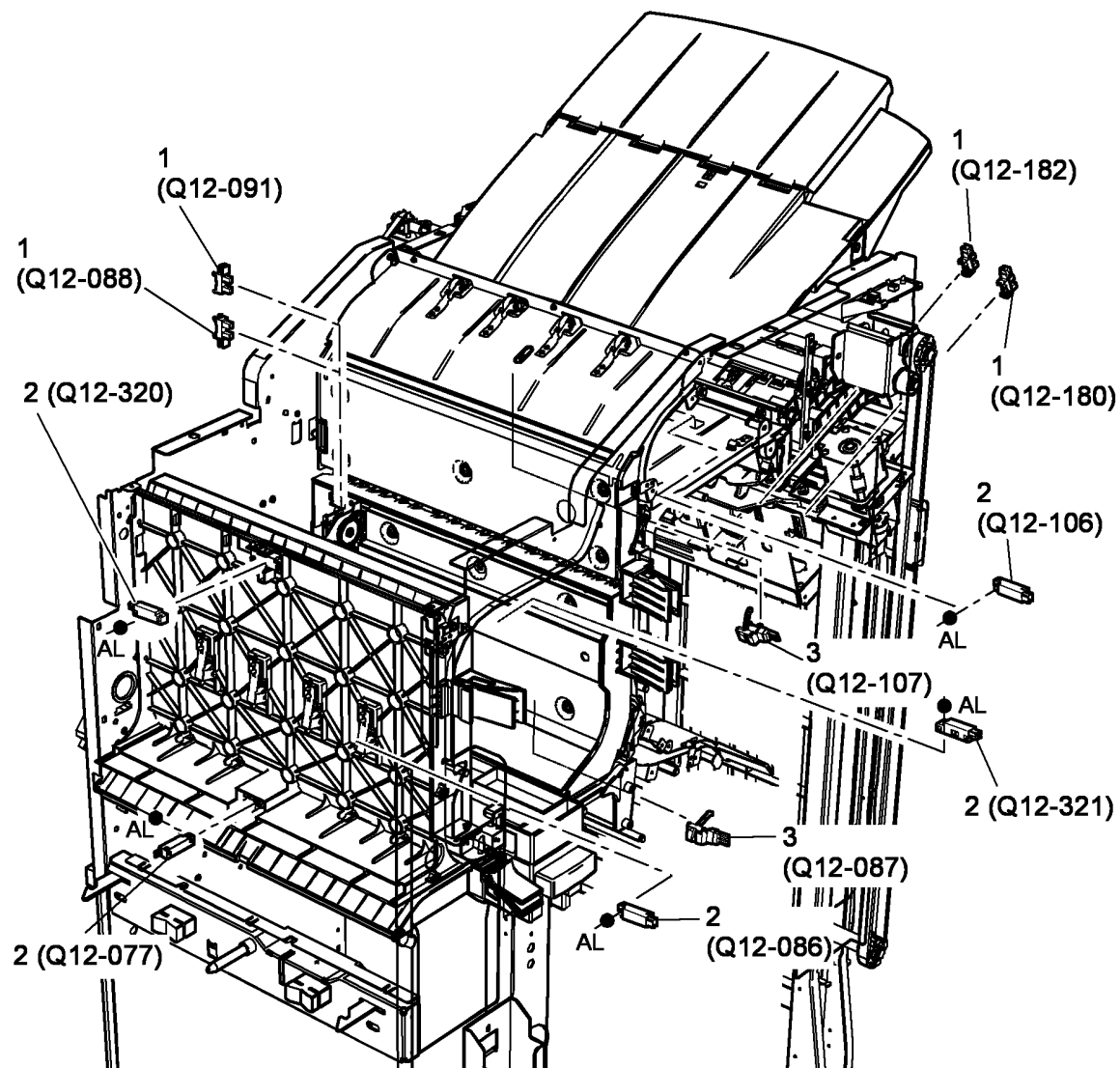
Item	Part	Description
1	006K32841	Feed roll assembly (Short shaft type)
-	-	Buffer upper roll (1A) (REP 12.45-171)
-	-	Inserter guide roll (1B) (REP 12.41-171)
-	-	Buffer pocket roll (1C) (REP 12.42-171)
-	-	Input roll (1D) (REP 12.40-171)
-	-	Top exit feed roll (1E) (REP 12.47-171)
2	006K32850	Feed roll assembly
-	-	Stacker exit feed roll (2A) (REP 12.46-171)
-	-	Buffer lower roll (2B) (REP 12.44-171)
-	-	Booklet entrance roll (2C) (REP 12.43-171)
3	019K13660	Buffer clamp assembly
4	006K32820	Stacker exit roll
5	006K32810	Top exit roll
6	013E25800	Copper bearing
7	-	Buffer clamp shaft (P/O PL 12.130 Item 3)
8	019K14420	Buffer clamp



X-8-0041-A

PL 12.135 HVF Feed Assembly and Punch (3 of 3)

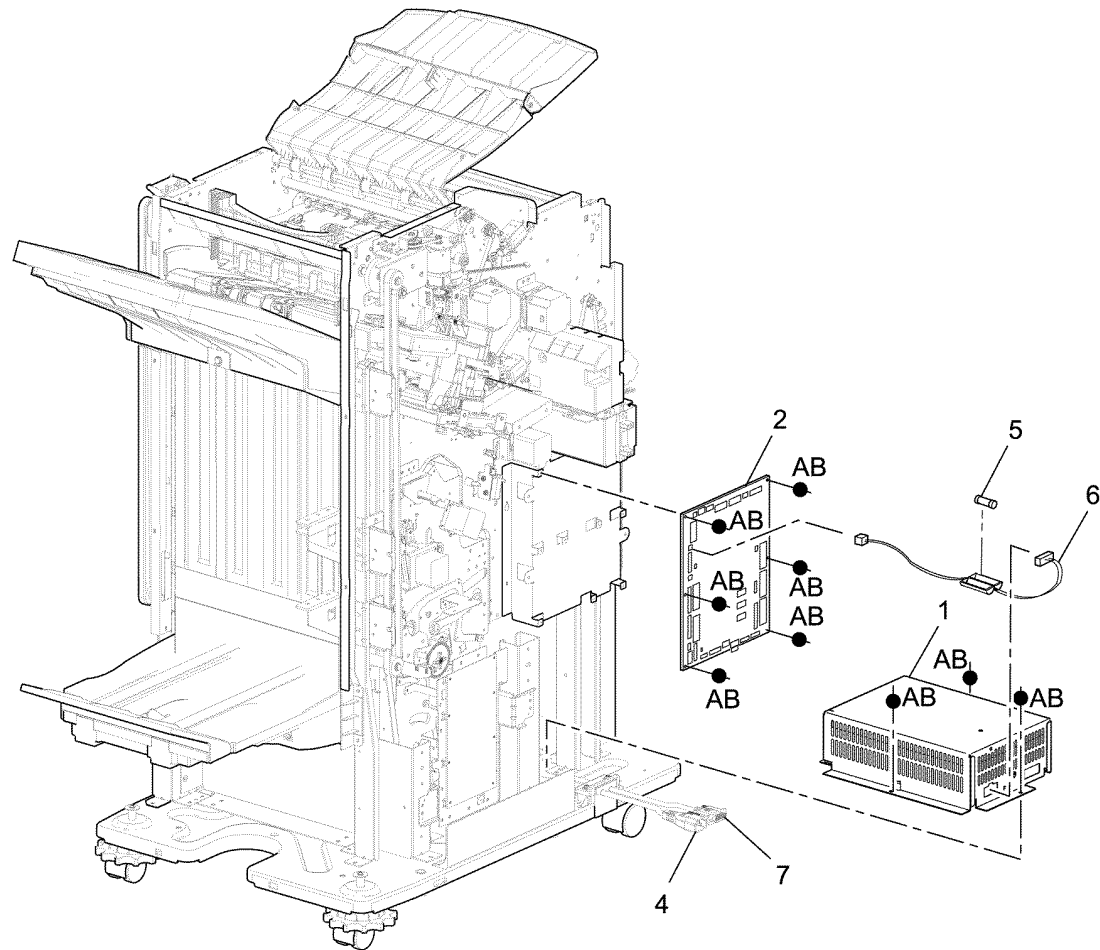
Item	Part	Description
1	130E12830	Tamper front home sensor (Q12-180)/Tamper front away sensor (Q12-182)/Nip split sensor (Q12-091)/Nip home sensor (Q12-088)
2	130E12810	Entry sensor (Q12-077)/Compiler exit sensor (Q12-106)/Buffer position sensor (Q12-086)/Buffer path sensor (Q12-321)/Inserter standby sensor (Q12-320)
3	130E12840	Top tray exit sensor (Q12-107)/HVF Booklet exit sensor (Q12-087)



X-8-0042-A

PL 12.140 HVF Power and Control

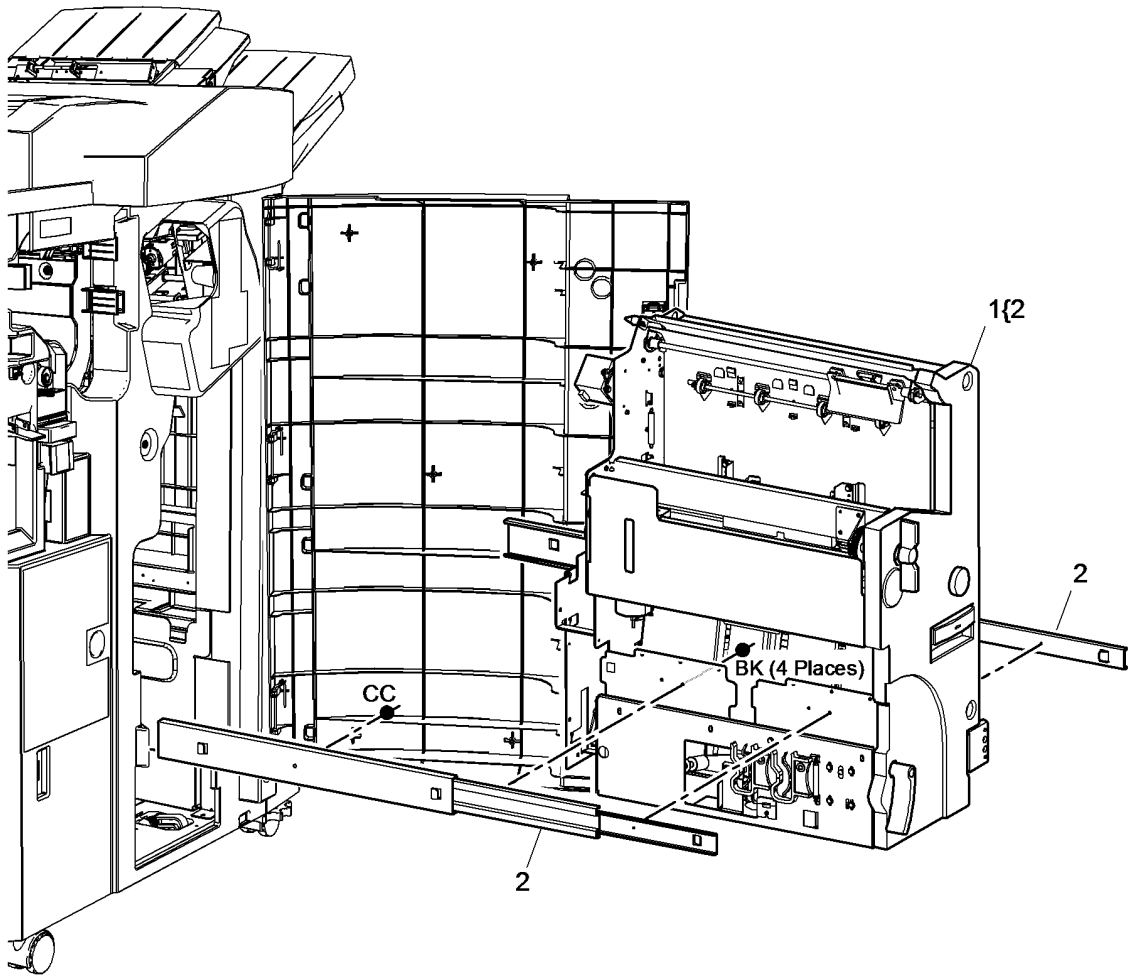
Item	Part	Description
1	105K35831	HVF power supply unit (REP 12.55-171)
2	960K97490	HVF PWB (REP 12.57-171)
3	-	Not used
4	105K40140	Power cord
5	-	In-line fuse (10A slo-blow) (Not Spared)
6	-	Harness (Not Spared)
7	952K00411	Power communications cable



X-8-0043-B

PL 12.145 HVF BM Module (Complete)

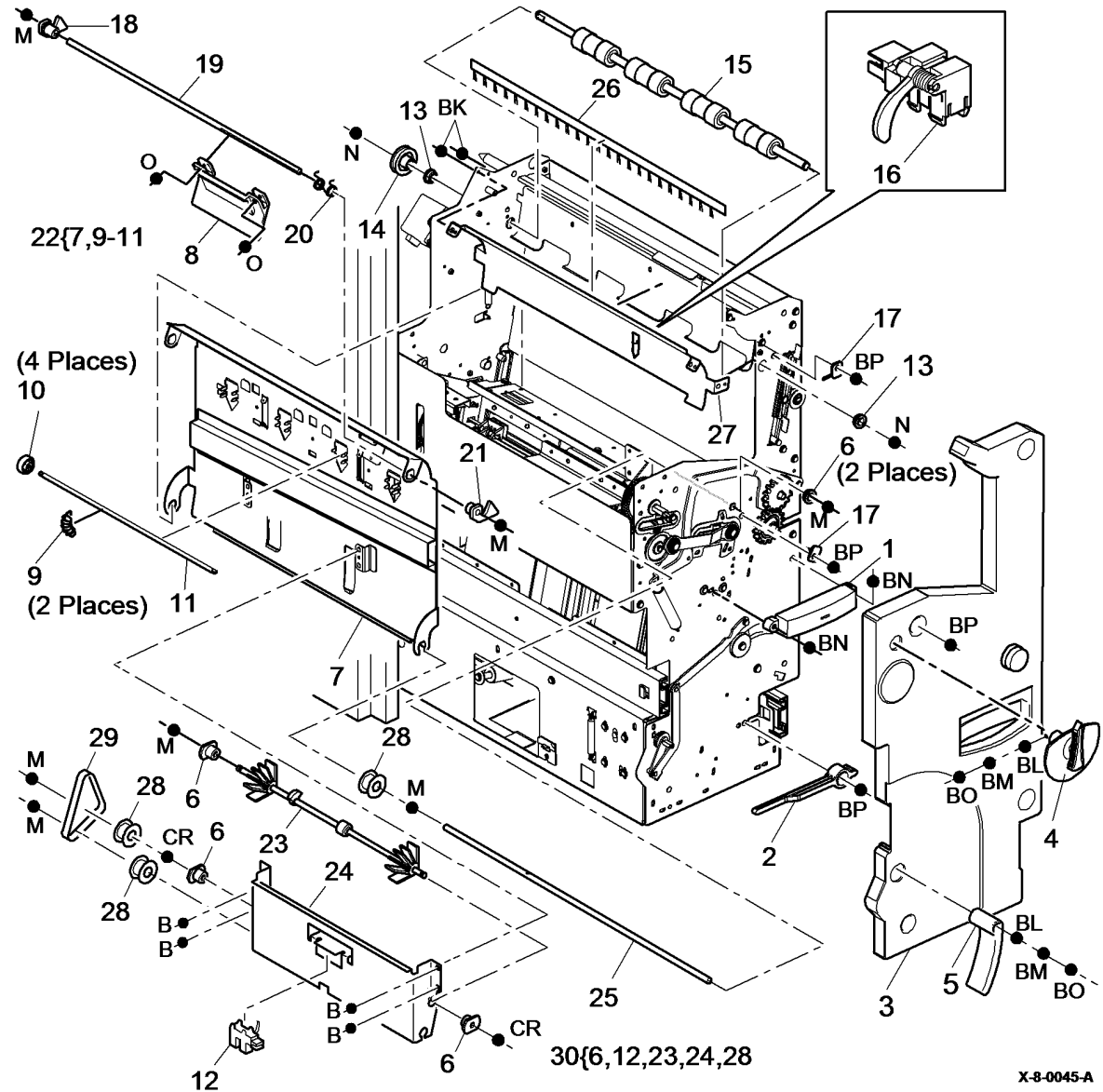
Item	Part	Description
1	084K37050	BM Module (REP 12.61-171)
2	-	Slide assembly (Not Spared) (REP 12.62-171)



X-8-0044-A

PL 12.150 HVF BM Entry and Front Cover

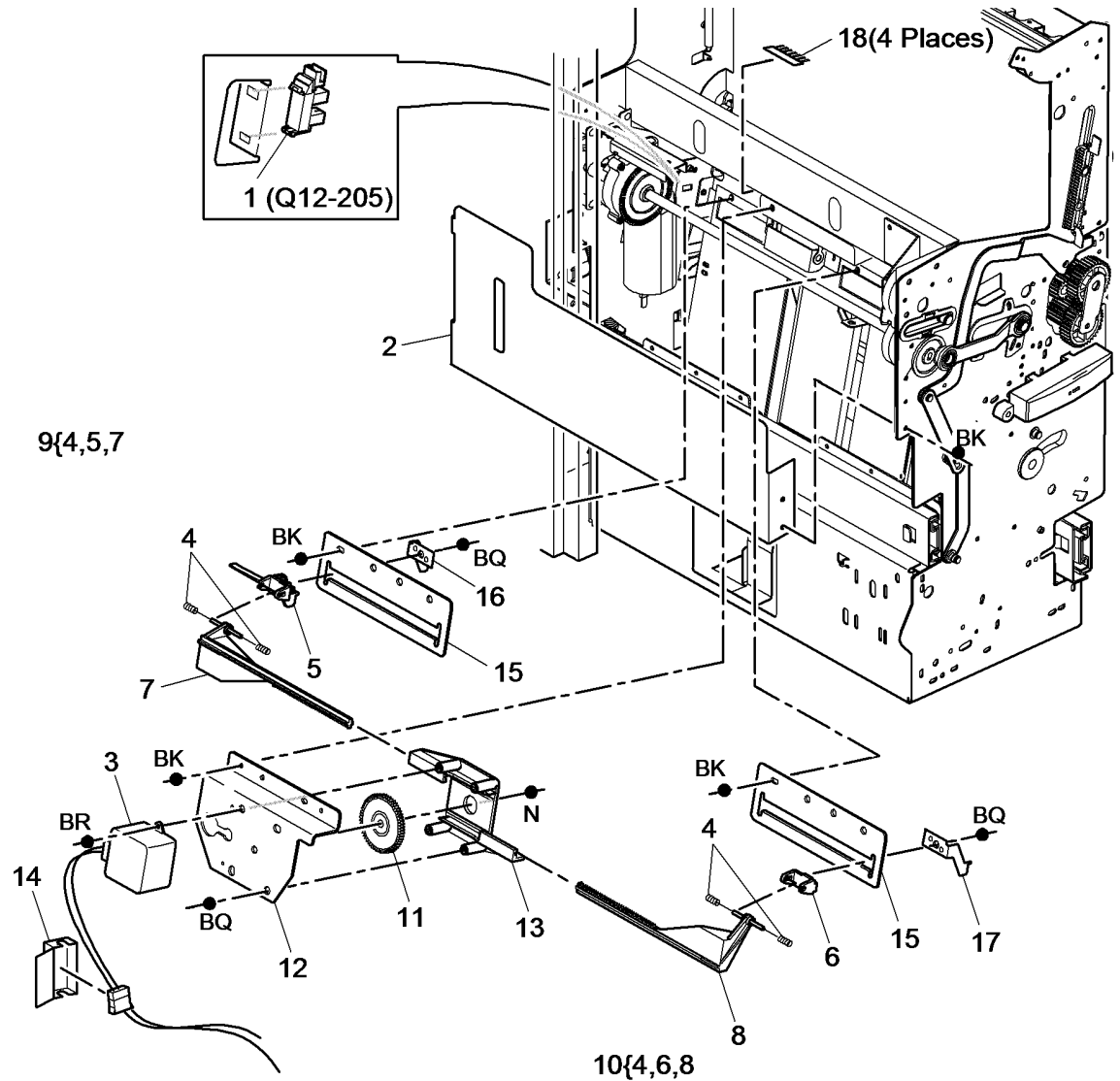
Item	Part	Description
1	003E69093	Drawer handle
2	-	Crease roll leaf spring (Not Spared)
3	848E40470	BM Front cover
4	803E14111	Crease blade knob (6d)
5	803E13851	Crease roll handle (6c)
6	013E12610	Nylon bearing
7	-	Paper guide (6e) (P/O PL 12.150 Item 22) (REP 12.60-171)
8	-	Jam clearance handle (Not Spared)
9	-	Nip spring (P/O PL 12.150 Item 22) (REP 12.60-171)
10	022E30620	Nip roll (REP 12.60-171)
11	-	Nip shaft (P/O PL 12.150 Item 22) (REP 12.60-171)
12	130K74072	Flapper home sensor (Q12-207) (REP 12.16-171)
13	-	Bearing (Not Spared)
14	020E39990	BM Entry roll pulley (REP 12.22-171)
15	006K28660	BM Entry roll (REP 12.22-171)
16	130K74110	BM Entry sensor (Q12-089) (REP 12.23-171)
17	125E00430	Static eliminator
18	-	Rear latch (Not Spared)
19	-	Shaft (Not Spared)
20	809E46411	Latch spring
21	-	Front latch (Not Spared)
22	-	Entrance baffle assembly (Not Spared) (REP 12.60-171)
23	-	BM Flapper (P/O PL 12.150 Item 30) (REP 12.16-171)
24	-	BM flapper bracket (P/O PL 12.150 Item 30)
25	-	BM Compiler shaft (Not Spared)
26	125K03831	Static eliminator
27	-	Top baffle (Not Spared)
28	-	Pulley (Not Spared)
29	-	BM flapper drive belt (Not Spared)
30	059K52940	BM Flapper assembly (REP 12.16-171)



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PL 12.155 HVF BM Tamper Assembly

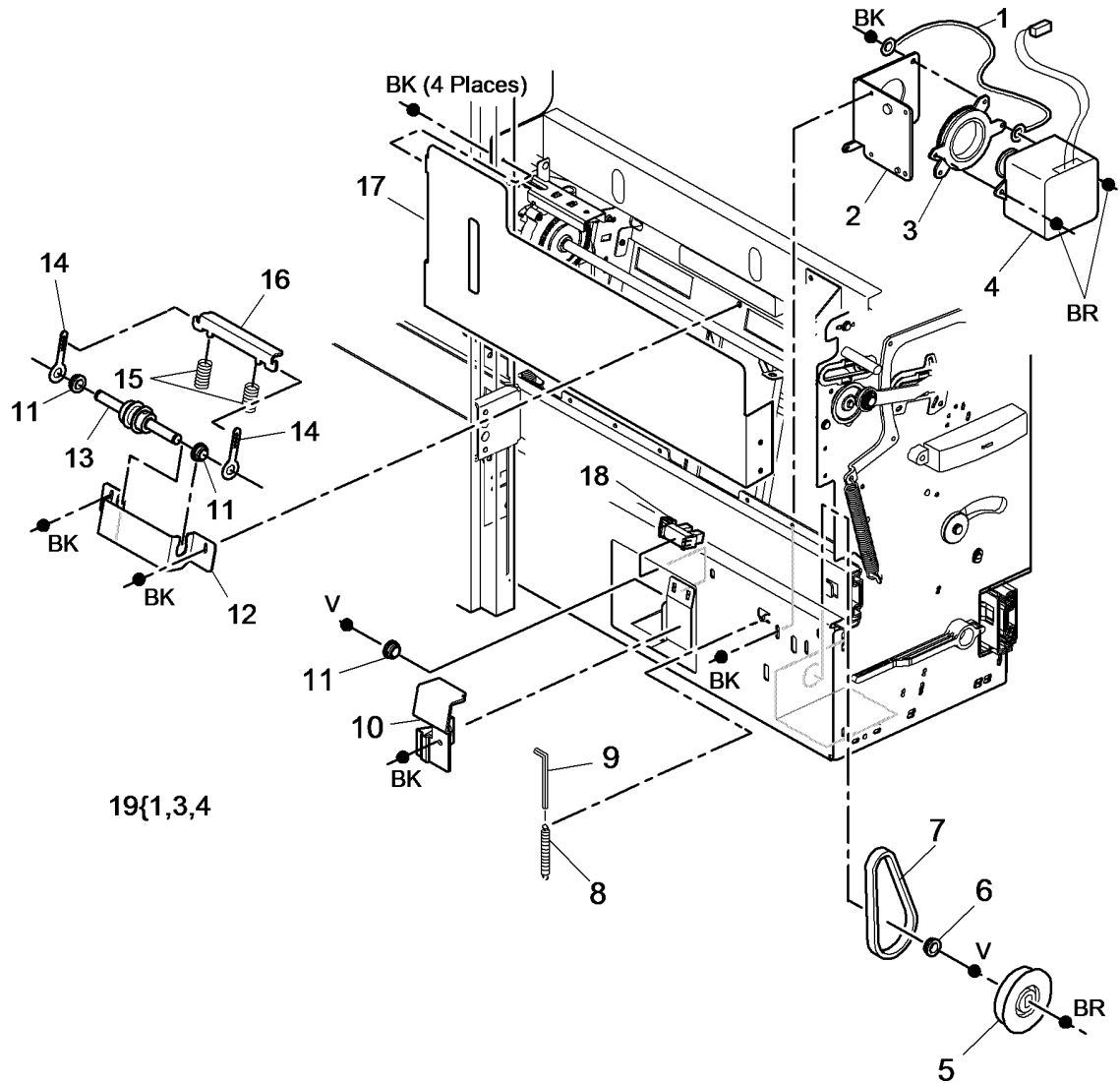
Item	Part	Description
1	107E22600	BM Tamper 1 home sensor (Q12-205)
2	-	LH Frame plate (Not Spared)
3	127K47660	BM Tamper 1 motor (MOT12-256) (REP 12.30-171)
4	-	BM Tamper spring (P/O PL 12.155 Item 10)
5	-	BM Rear tamper arm (P/O PL 12.155 Item 9) (REP 12.30-171)
6	-	BM Front tamper arm (P/O PL 12.155 Item 10) (REP 12.30-171)
7	-	BM Rear tamper rack (P/O PL 12.155 Item 9) (REP 12.30-171)
8	-	BM Front tamper rack (P/O PL 12.155 Item 10) (REP 12.30-171)
9	007K13190	BM Rear tamper assembly (REP 12.30-171)
10	007K13180	BM Front tamper assembly (REP 12.30-171)
11	807E15450	BM Tamper gear (REP 12.30-171)
12	-	BM Tamper bracket (Not Spared) (REP 12.30-171)
13	-	BM Tamper rack guide (Not Spared) (REP 12.30-171)
14	802E59410	BM Connector cover
15	-	BM Tamper guide plate (Not Spared) (REP 12.30-171)
16	-	BM Rear tamper finger (Not Spared) (REP 12.30-171)
17	-	BM Front tamper finger (Not Spared) (REP 12.30-171)
18	125K03593	BM Static eliminator



X-8-0046-A

PL 12.160 HVF BM Back Stop Motor

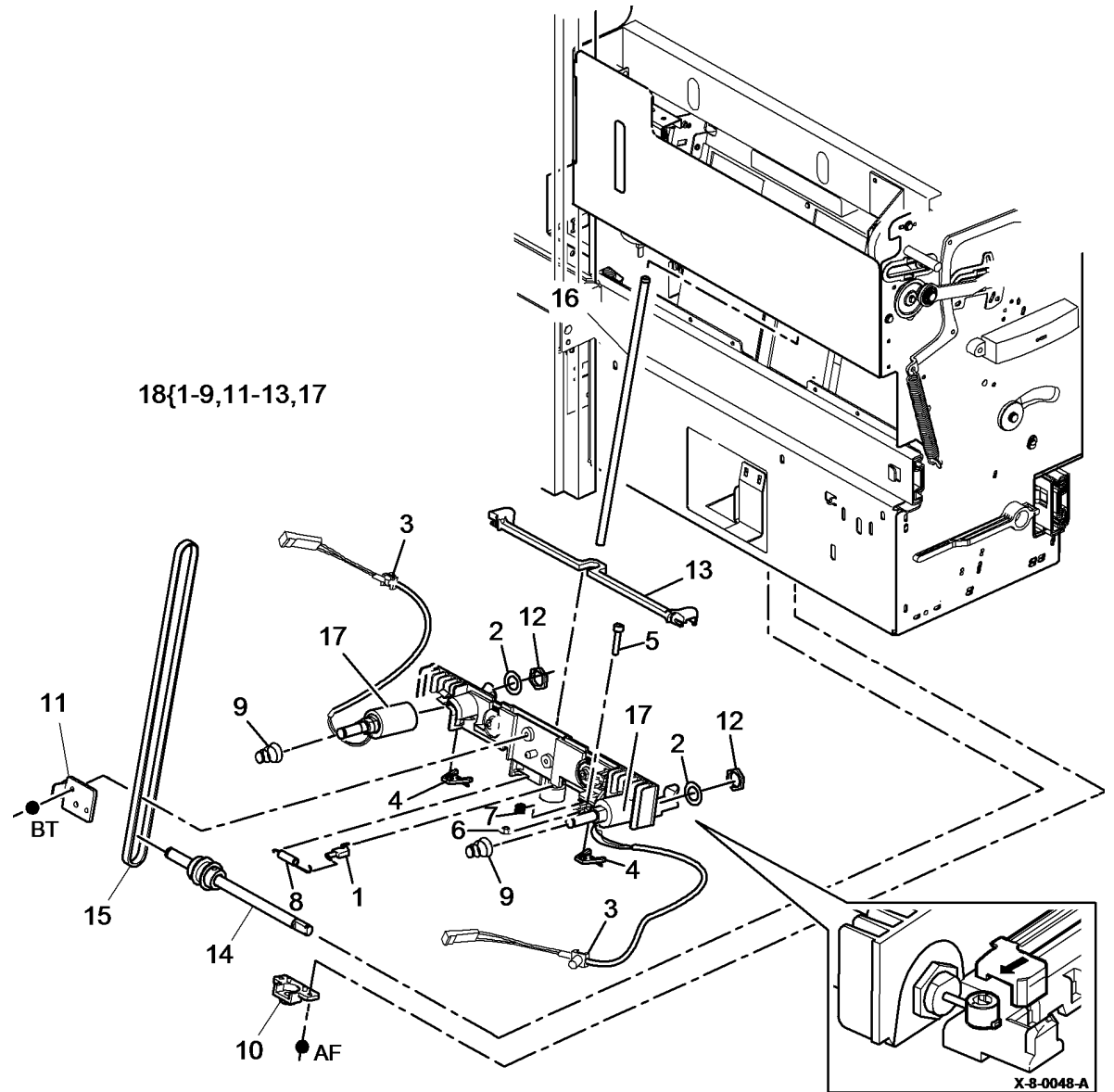
Item	Part	Description
1	-	Ground wire (P/O PL 12.160 Item 19)
2	-	Motor bracket (Not spared)
3	-	Motor damper (P/O PL 12.160 Item 19) (REP 12.20-171)
4	-	BM back stop motor (MOT12-255) (P/O PL 12.160 Item 19) (REP 12.20-171)
5	-	Pulley (Not Spared)
6	-	BM back stop bearing (Not Spared) (REP 12.26-171)
7	023E23300	BM back stop drive belt (REP 12.20-171)
8	809E78370	BM back stop tensioner spring (REP 12.20-171)
9	-	Allen key (3mm) (Not spared)
10	848E40480	Sensor cover
11	-	BM back stop bearing (Not Spared) (REP 12.26-171)
12	-	BM back stop idler bracket (Not Spared) (REP 12.26-171)
13	-	BM back stop idler shaft (Not Spared)
14	-	BM back stop tensioner link (Not Spared)
15	809E25100	BM back stop link spring (REP 12.26-171)
16	012E20870	BM back stop link (REP 12.26-171)
17	-	LH frame plate (Not spared)
18	107E22600	BM guide home sensor (Q12-204)
19	127K54710	BM back stop motor assembly (REP 12.20-171)



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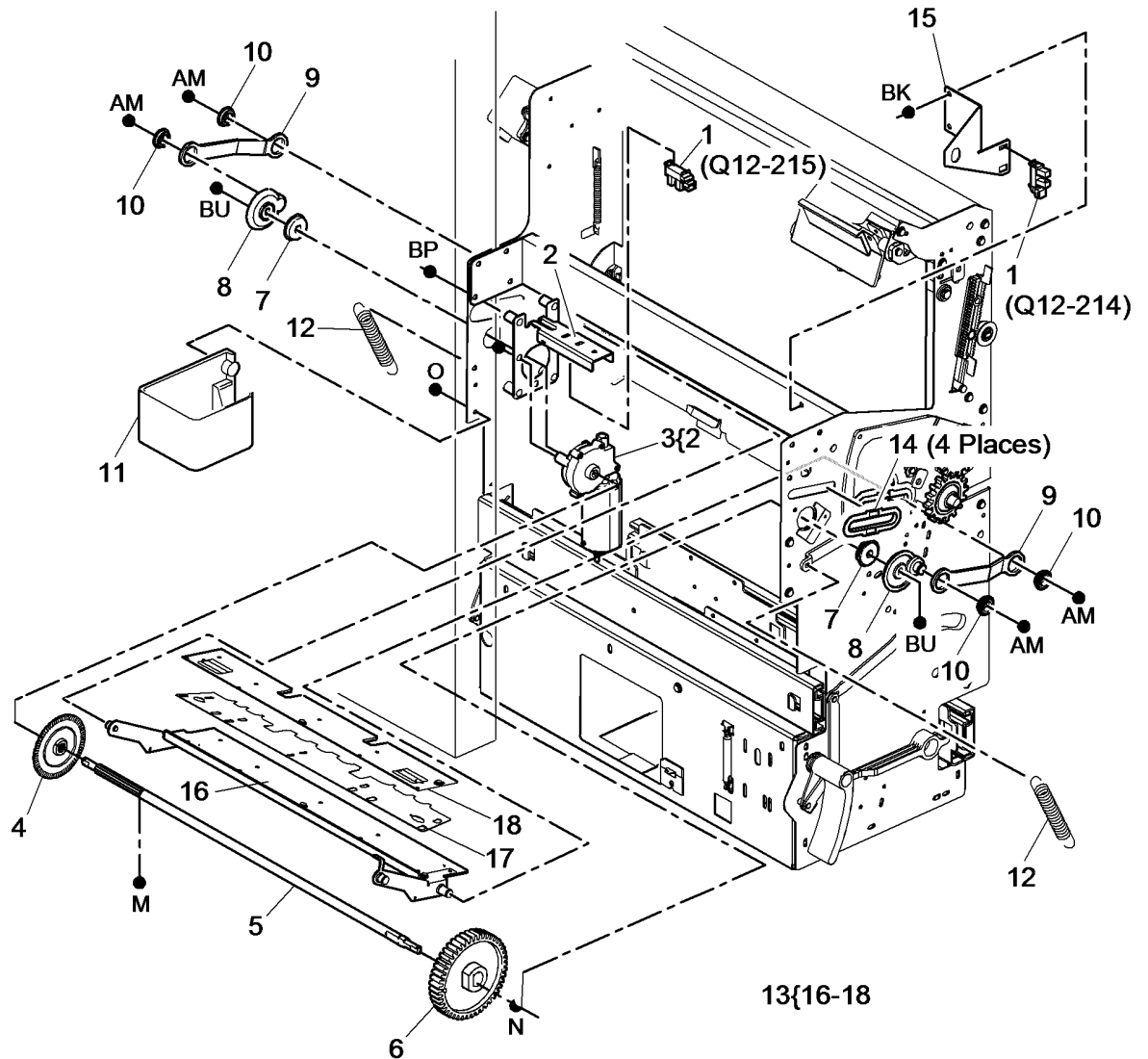
PL 12.165 HVF BM Back Stop Assembly

Item	Part	Description
1	019E74451	Anti-play shoe
2	-	BM back stop lock washer (P/O PL 12.165 Item 18)
3	-	Cable fastener (P/O PL 12.165 Item 18)
4	031E11300	Anti-rattle arm
5	-	Screw (P/O PL 12.165 Item 18)
6	-	Flanged hex nut (P/O PL 12.165 Item 18)
7	-	Back stop adjust spring (P/O PL 12.165 Item 18)
8	809E71970	Antiplay spring
9	-	Solenoid spring (P/O PL 12.165 Item 18)
10	-	Shaft support (Not Spared)
11	-	Belt clamp (P/O PL 12.165 Item 18)
12	-	BM back stop solenoid nut (P/O PL 12.165 Item 18)
13	-	Pivoting clamp (P/O PL 12.165 Item 18)
14	006K30790	BM back stop drive shaft (REP 12.26-171)
15	023E23140	BM back stop belt (REP 12.26-171)
16	-	BM back stop shaft (Not Spared)
17	-	BM stack hold solenoid (SOL12-259) (P/O PL 12.165 Item 18)
18	019K14160	BM back stop assembly (REP 12.21-171)



PL 12.170 HVF BM Crease Blade Motor

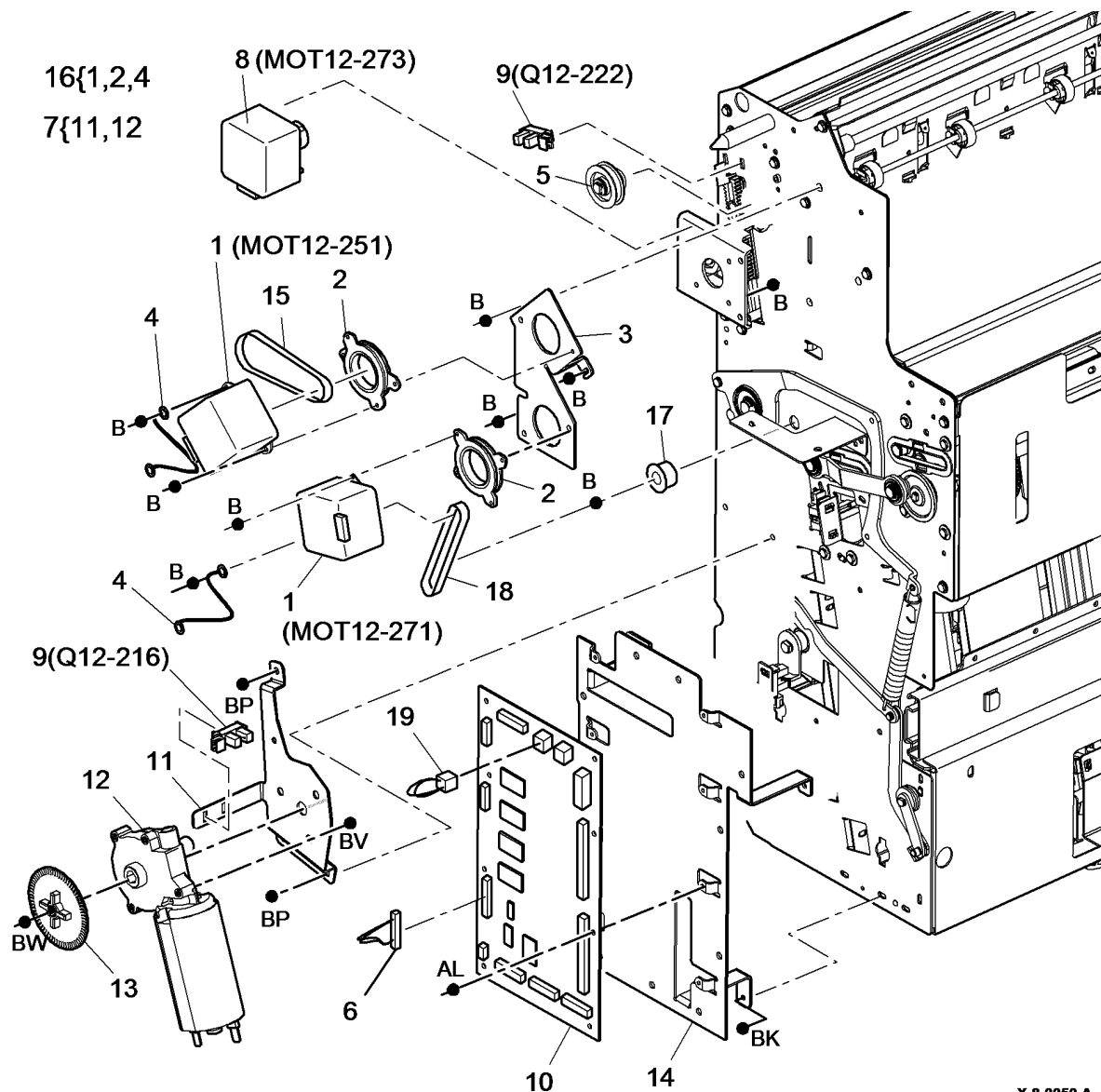
Item	Part	Description
1	107E22600	BM Crease blade motor encoder sensor (Q12-215), BM Crease blade home sensor (Q12-214) (REP 12.18-171)
2	-	Motor bracket (P/O PL 12.170 Item 3)
3	127K54690	BM Crease blade motor assembly (MOT12-252) (REP 12.18-171)
4	014E47460	Motor encoder (REP 12.18-171)
5	806E36200	Drive shaft
6	007E69830	Drive gear (40T)
7	413W30654	Bearing (REP 12.18-171)
8	008E08220	Crank (REP 12.18-171)
9	012E20860	Connecting rod (REP 12.36-171)
10	-	Bearing (Not Spared)
11	802E59171	Motor cover
12	809E42861	Crease nip spring
13	-	Crease blade assembly (Not Spared) (REP 12.36-171, ADJ 12.4-171)
14	032E19330	Crease blade support guide (REP 12.36-171)
15	-	Crease blade home sensor bracket (Not spared)
16	-	Lower mounting plate (P/O PL 12.170 Item 13)
17	815E56520	Crease blade folder plate
18	-	Upper mounting plate (P/O PL 12.170 Item 13)



X-8-0049-A

PL 12.175 HVF BM Crease Rolls Motor and PWB

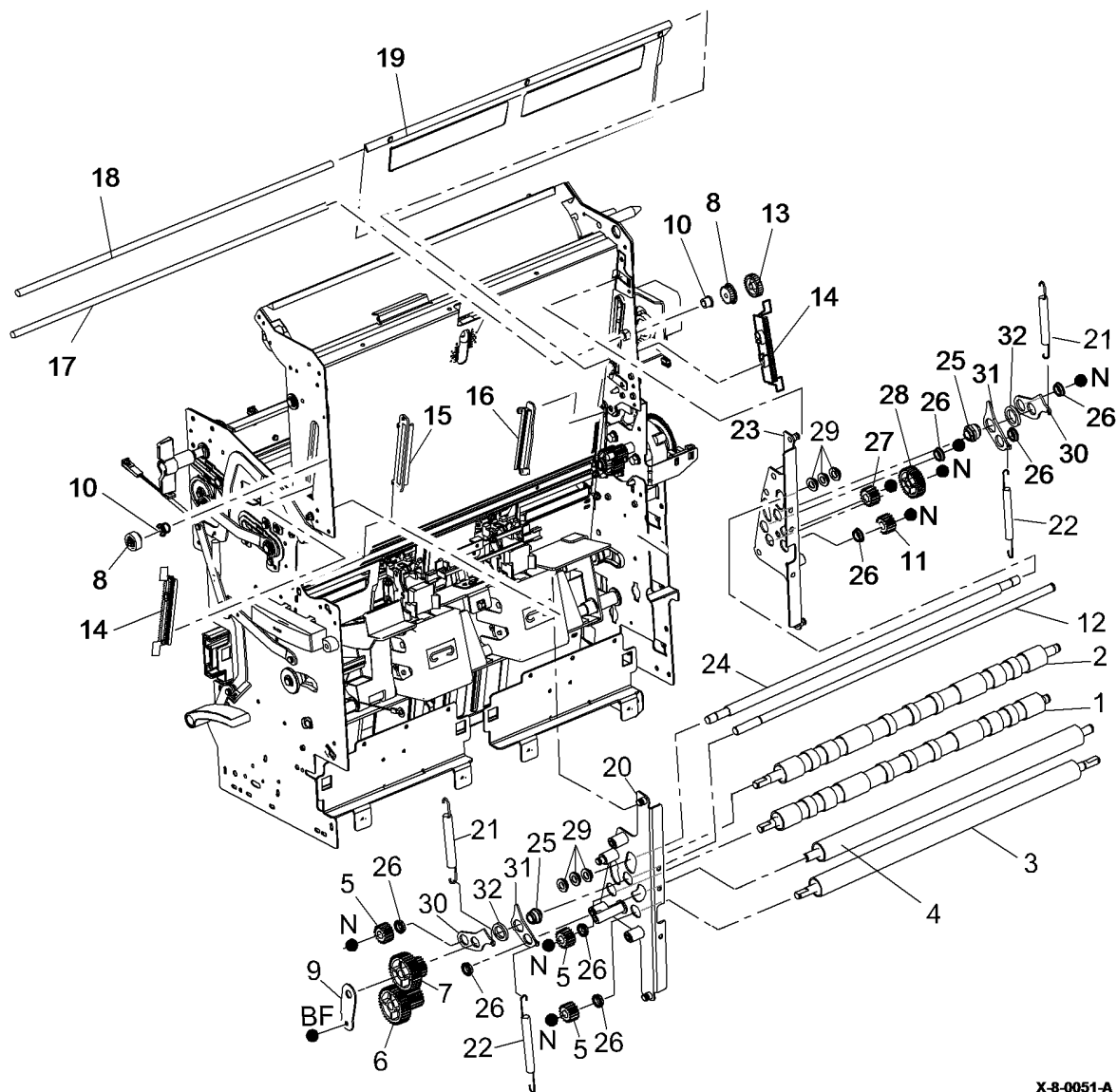
Item	Part	Description
1	127K43751	BM compiler motor (MOT12-251)/ BM flapper motor (MOT12-271) (REP 12.25-171)
2	-	Damper bracket (P/O PL 12.175 Item 16) (REP 12.25-171)
3	-	Motor bracket (Not Spared)
4	-	Ground wire (P/O PL 12.175 Item 16)
5	007E69000	Gear (50T)/pulley (24T)
6	-	Tri-folder logic cheat (PJ563) (Not Spared)
7	127K54680	BM Crease roll motor assembly
8	127K53620	BM crease roll gate motor (MOT12- 273) (REP 12.24-171)
9	107E22600	BM Crease roll gate home sensor (Q12-222), BM Crease roll motor encoder sensor (Q12-216)
10	960K52781	BM PWB (REP 12.17-171)
11	-	Motor bracket (P/O PL 12.175 Item 12)
12	127K62560	BM Crease roll motor (MOT12-253) (REP 12.19-171)
13	014E47460	BM Crease roll motor encoder
14	-	Support bracket (Not Spared)
15	023E25430	Compiler motor belt
16	127K55520	BM Compiler motor assembly (REP 12.25-171)
17	-	BM flapper motor pulley (Not Spared)
18	-	BM flapper motor drive belt (Not Spared)
19	-	Tri-folder interlock cheat (PJ553) (Not Spared)



X-8-0050-A

PL 12.180 HVF BM Crease Rolls and Support Leg

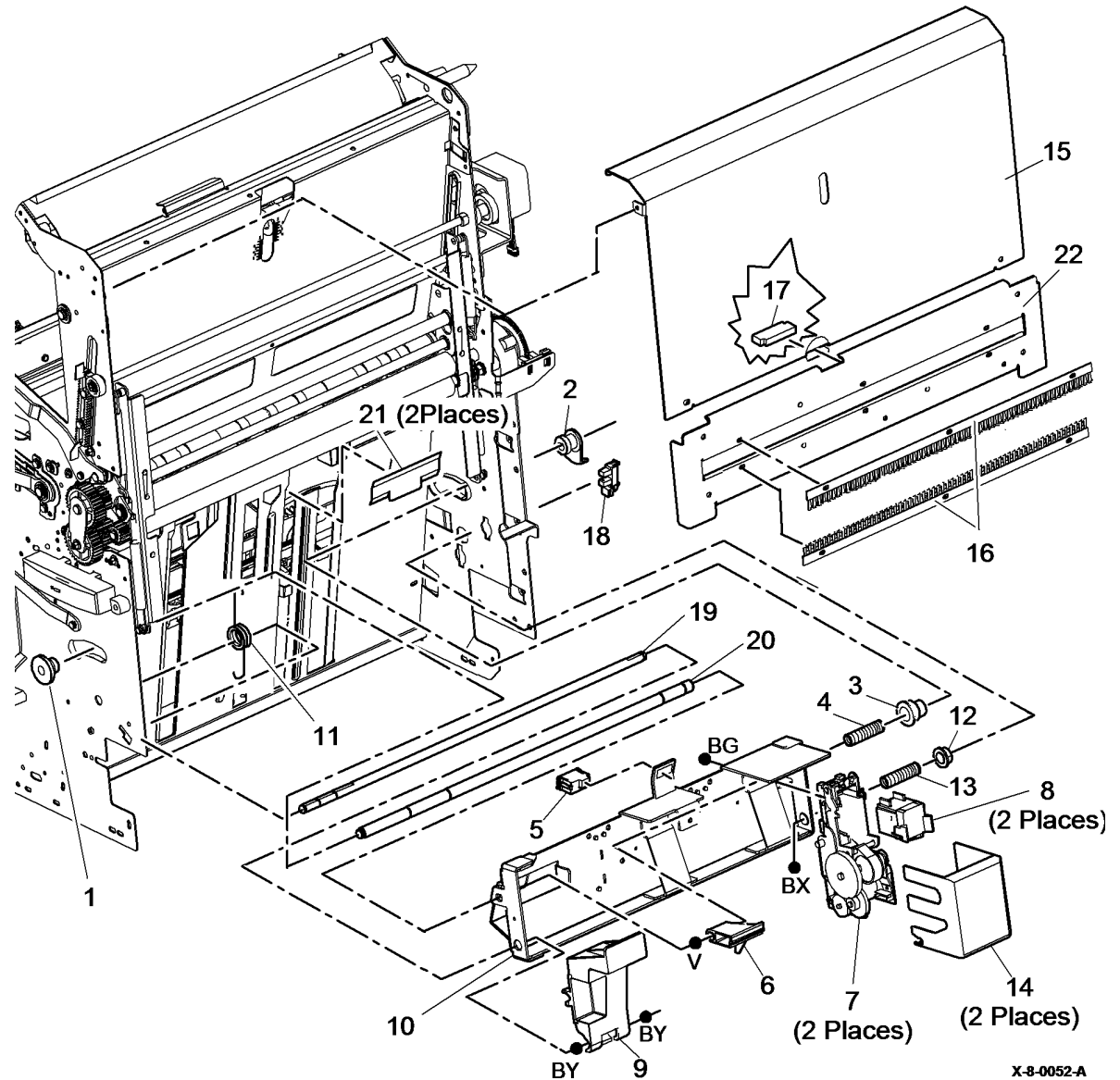
Item	Part	Description
1	006K32721	Crease roll assembly 1 (REP 12.52-171)
2	006K32731	Crease roll assembly 2 (REP 12.52-171)
3	006K32740	Crease roll assembly 3 (REP 12.52-171)
4	006K32750	Crease roll assembly 4 (REP 12.52-171)
5	807E34231	Gear crease roll 4
6	807E34240	Lower compound gear
7	807E34280	Upper compound gear
8	007E69081	Crease roll gate rack gear (REP 12.59-171)
9	-	Gear plate (Not Spared)
10	-	Bearing (Not Spared)
11	807E34261	Gear (16T)
12	-	Drive shaft (Not Spared)
13	007E69070	Crease roll gate rack drive gear (REP 12.59-171)
14	007E68951	Crease roll gate rack (REP 12.59-171)
15	020E54110	Crease roll gate front guide (REP 12.59-171)
16	020E54120	Crease roll gate rear guide (REP 12.59-171)
17	-	Crease roll drive shaft (Not Spared)
18	-	Crease roll gate shaft (Not Spared)
19	050E23160	Crease roll gate (REP 12.59-171)
20	-	Front frame assembly (Not Spared)
21	809E95060	Spring arm nip 1
22	809E95071	Spring arm nip 2
23	-	Rear frame assembly (Not spared)
24	-	Nip release shaft (Not Spared)
25	016E20010	Bush roll release
26	413W88650	Bearing flanged
27	807E34251	Gear (15T)
28	807E34270	Gear (30T)
29	016E20000	Bush follower
30	-	Nip arm 1 (Not Spared)
31	-	Nip arm 2 (Not Spared)
32	-	Thrust washer (Not Spared)



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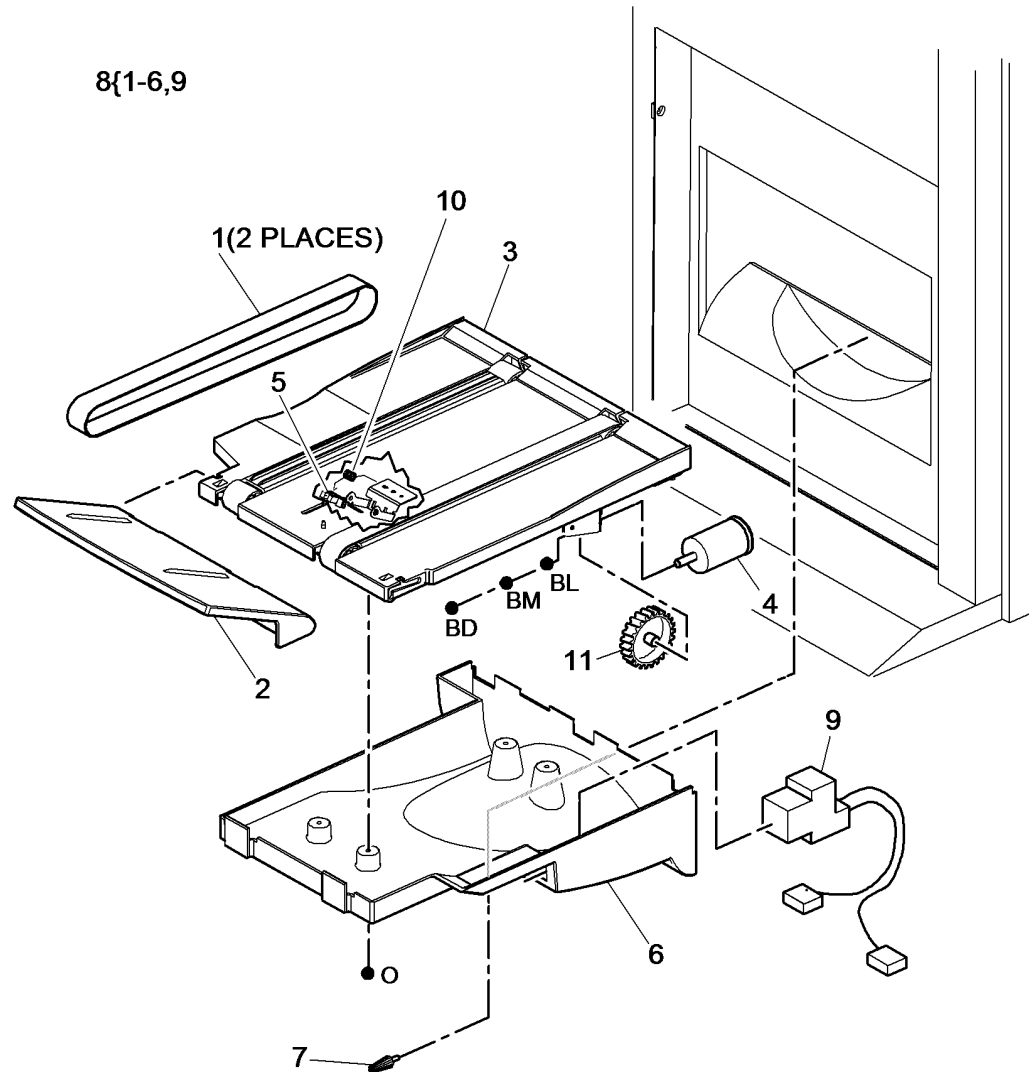
PL 12.185 HVF BM Stapler Assemblies

Item	Part	Description
1	020E38513	Front follower (REP 12.28-171)
2	016E17732	Actuator (REP 12.28-171)
3	-	Rear follower (Not Spared) (REP 12.28-171)
4	809E44010	Spring (REP 12.28-171)
5	130K74090	BM Paper present sensor (Q12-170) (REP 12.28-171)
6	008E06850	Latch slide (REP 12.28-171)
7	029K03233	BM Staple head assembly (REP 12.27-171, ADJ 12.3-171)
8	050K21270	Staple cartridge (1 x 2000)
9	-	Staple bracket handle (Not spared) (REP 12.28-171)
10	-	Stapler bracket assembly (Not Spared) (REP 12.28-171)
11	809E48830	Torsion spring (REP 12.28-171)
12	-	Bearing (Not Spared) (REP 12.28-171)
13	-	Spring (Not Spared) (REP 12.28-171)
14	802E42770	Staple head cover
15	-	BM right cover (Not Spared) (REP 12.56-171)
16	125K03831	Static eliminator
17	130E11640	BM exit sensor (Q12-213) (REP 12.50-171)
18	107E22600	BM Stapler head carrier closed sensor (Q12-217) (REP 12.28-171)
19	-	Lower shaft (Not Spared) (REP 12.28-171)
20	-	Upper shaft (Not Spared) (REP 12.28-171)
21	055E51870	Mylar guide
22	-	Exit plate (Not Spared)



PL 12.190 HVF BM Bin 2

Item	Part	Description
1	023E18612	Conveyor belt (REP 12.29-171)
2	050E21971	HVF BM Bin 2 extension
3	-	HVF BM Bin 2 upper cover (P/O PL 12.190 Item 8)
4	127K53630	BM Conveyor drive motor (MOT12-274)
5	019E61171	HVF BM Bin 2 90% full sensor (Q12-206)
6	-	HVF BM Bin 2 lower cover (P/O PL 12.190 Item 8)
7	826E32840	Thumbscrew
8	050K67740	HVF BM Bin 2 assembly
9	-	HVF BM Bin 2 connector (Not Spared)
10	809E47341	HVF Bin 2 actuator spring
11	007E69000	Gear (50T)/pulley (24T)

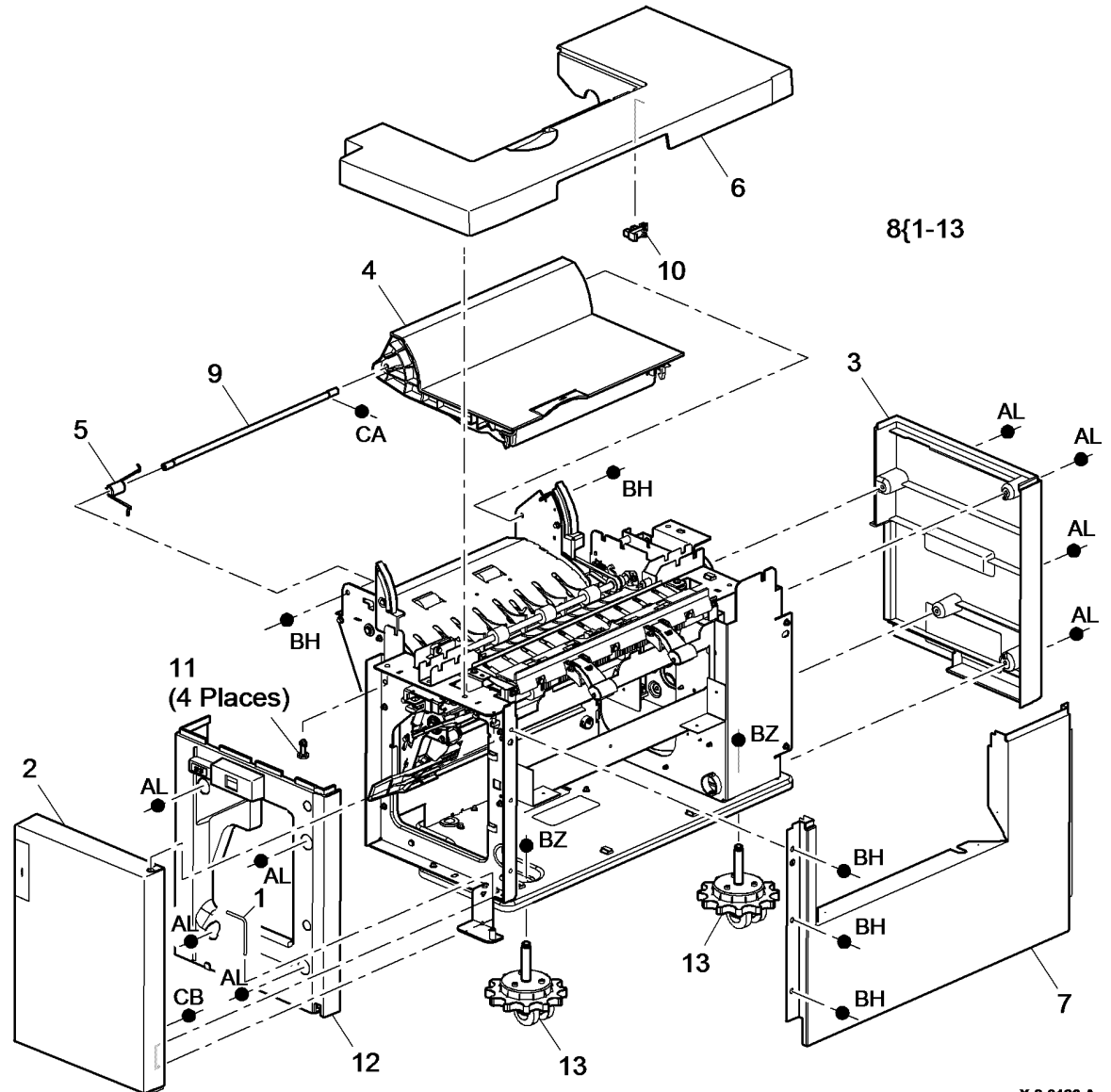


X-8-0053-A

PL 12.200 Tri-Folder Covers

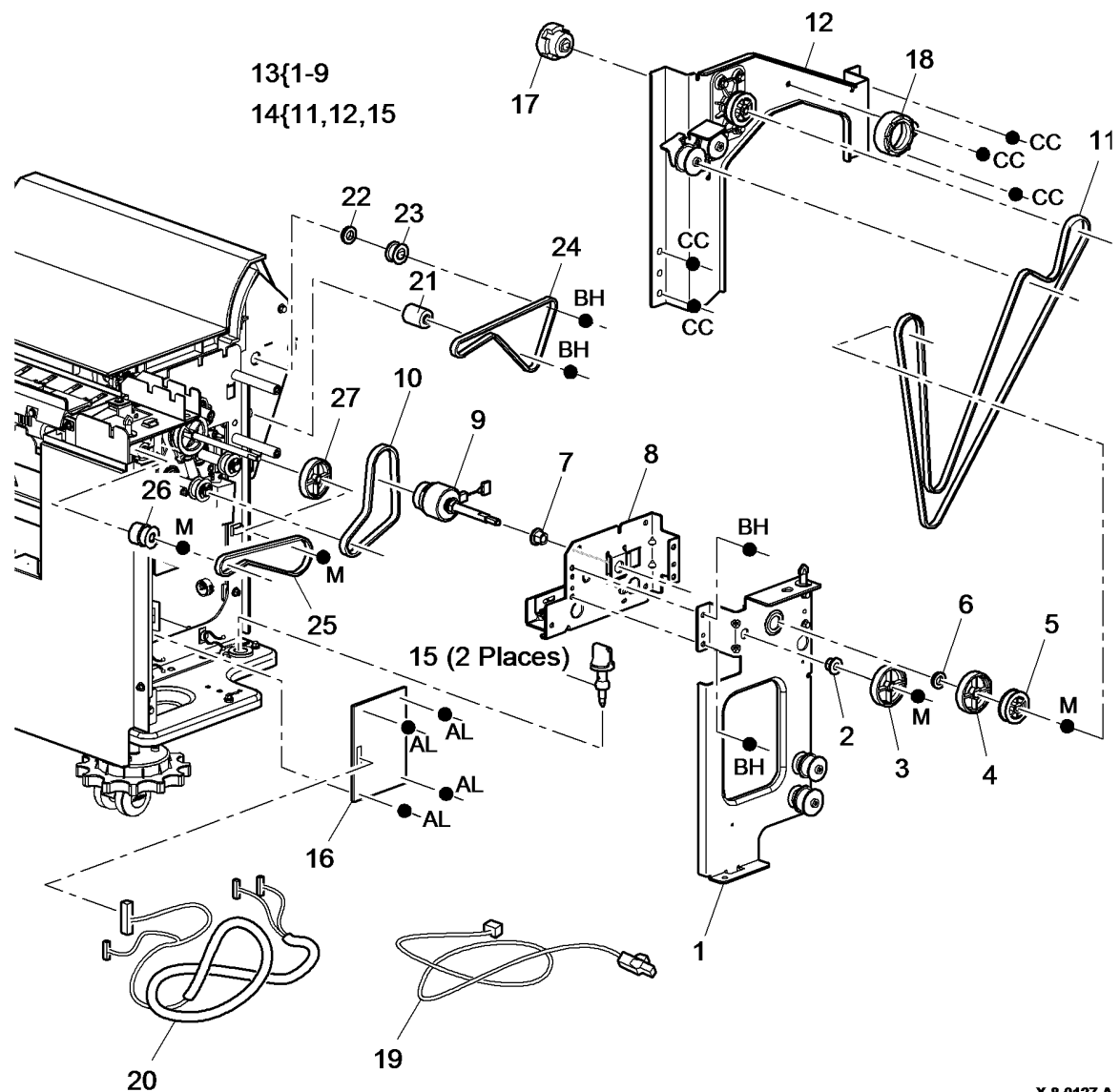
Item	Part	Description
1	–	Door pin (Not spared)
2	802K94010	Front door (REP 12.67-171)
3	848K11741	Rear cover (REP 12.67-171)
4	–	Top cover door assembly (P/O PL 12.200 Item 8) (REP 12.73-171)
5	–	Top cover door assembly spring (P/O PL 12.200 Item 8)
6	802E93931	Top cover
7	848E17430	Right hand side cover (REP 12.67-171)
8	–	Tri-Folder (complete) (Not Spared)
9	–	Top cover door assembly shaft (P/O PL 12.200 Item 8)
10	107E26490	Tri fold top cover interlock sensor (Q12-210) (REP 12.77-171)
11	–	Top cover locking stud (Not Spared)
12	802E99581	Front cover
13	017K04190	Caster

NOTE: For detail of bin 2, refer to PL 12.190.



PL 12.205 Tri-Folder Drives Module

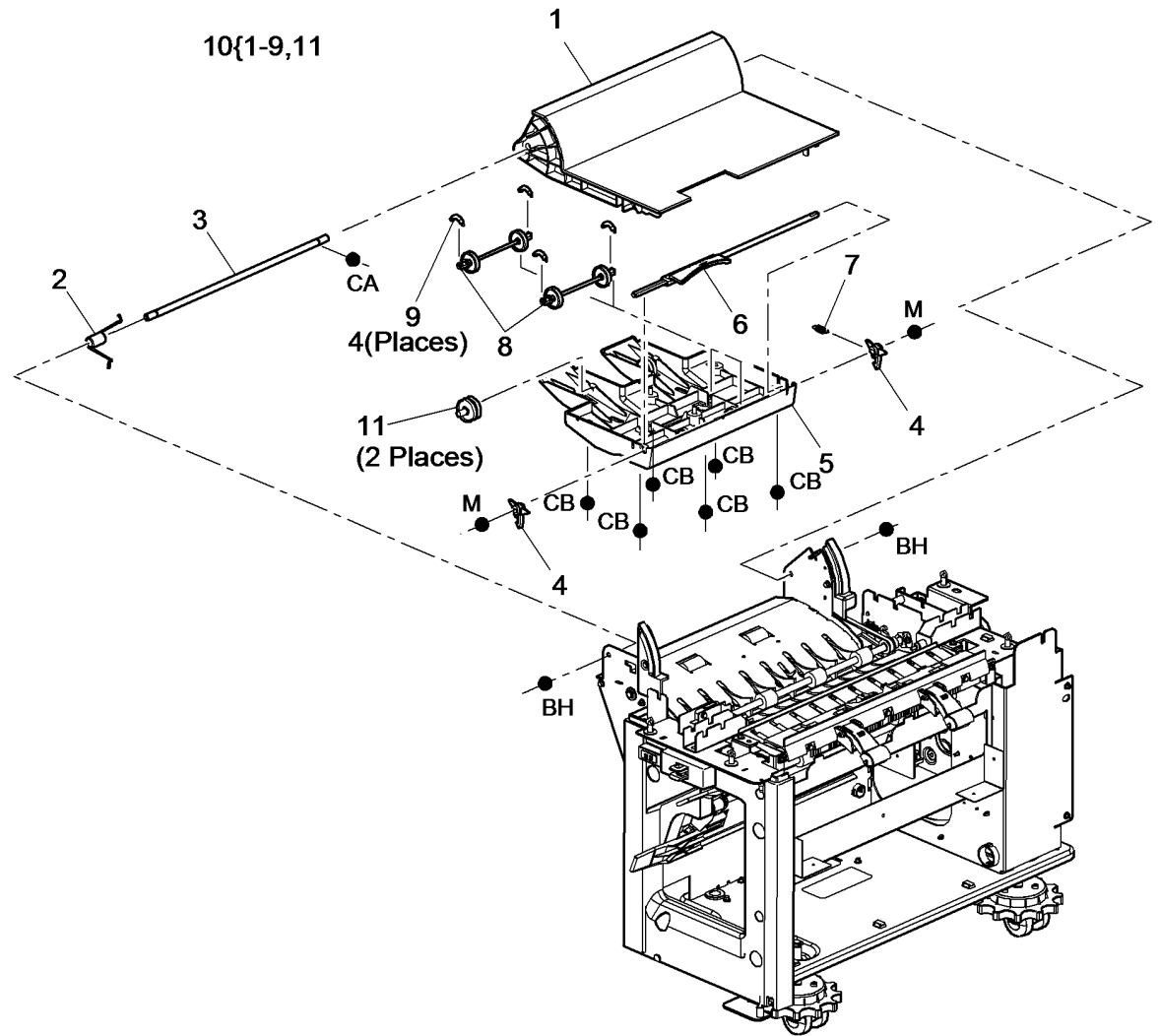
Item	Part	Description
1	-	Drive coupling assembly bracket (P/O PL 12.205 Item 13)
2	-	Bearing (P/O PL 12.205 Item 13)
3	-	Feed/exit roll drive gear (40T) (P/O PL 12.205 Item 13)
4	-	Gear (40T) (Black) (P/O PL 12.205 Item 13)
5	-	Driven pulley (P/O PL 12.205 Item 13)
6	-	Bearing (P/O PL 12.205 Item 13)
7	-	Bearing (P/O PL 12.205 Item 13)
8	-	Idler assembly bracket (P/O PL 12.205 Item 13)
9	-	Drive clutch (CL12-269) (P/O PL 12.205 Item 13)
10	-	Crease roll belt (Not Spared)
11	023E30780	Coupler drive belt (REP 12.68-171)
12	007K14460	Install kit drive assembly
13	005K12690	Drive coupling assembly (REP 12.69-171)
14	675K53640	Tri-Folder install kit (REP 12.68-171)
15	-	Thumb screw (P/O PL 12.205 Item 14)
16	960K24000	Tri-folder PWB (REP 12.80-171)
17	-	Drive coupler (Not Spared)
18	-	Align gauge coupler (Not Spared)
19	962K49592	Bin 2 tray harness (REP 12.81-171)
20	962K49571	Bookletmaker PWB to Tri-folder PWB harness (PJ602)
21	-	Drive belt tensioner pulley (Not Spared)
22	-	Feed roller bearing (Not Spared)
23	-	Feed roll pulley (Not Spared) (REP 12.70-171)
24	-	Feed roll belt (Not Spared) (REP 12.70-171)
25	023E23370	Feed roll drive belt
26	020E39921	Pulley gear (19T/20T) (BM)
27	020E39930	Pulley (38T)



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PL 12.210 Tri-Folder Top Door Cover Assembly

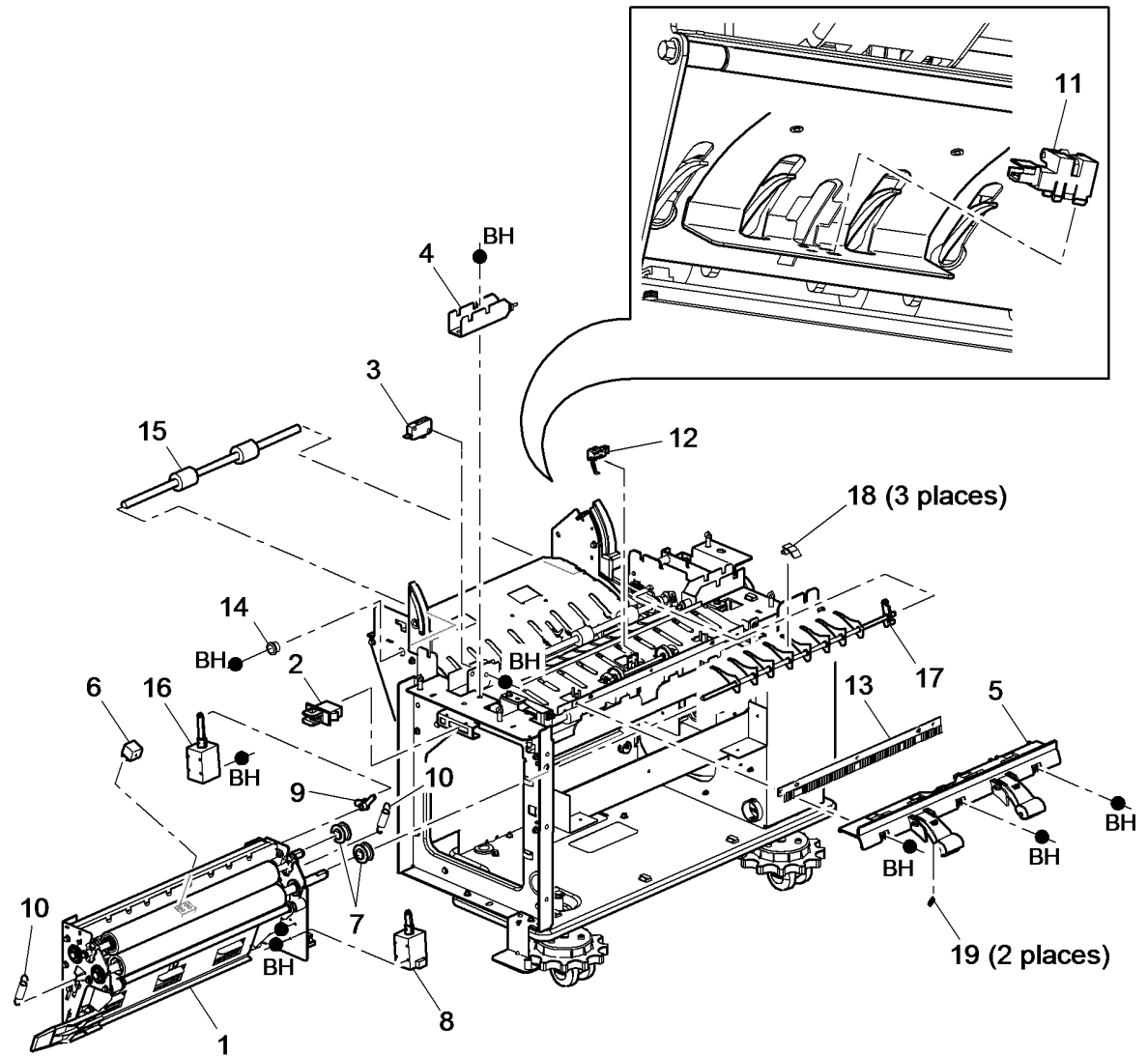
Item	Part	Description
1	-	Top access cover (P/O PL 12.210 Item 10)
2	-	Top cover door assembly spring (P/O PL 12.210 Item 10)
3	-	Top cover door assembly shaft (P/O PL 12.210 Item 10)
4	-	Latch hook (P/O PL 12.210 Item 10)
5	-	Top door cover assembly base (P/O PL 12.210 Item 10)
6	-	Latch handle (P/O PL 12.210 Item 10)
7	-	Latch spring (P/O PL 12.210 Item 10)
8	059K58690	Idler assembly (REP 12.73-171)
9	-	Idler spring (P/O PL 12.210 Item 10)
10	848K11680	Top cover door assembly (REP 12.73-171)
11	-	Idler assembly (P/O PL 12.210 Item 10)



X-8-0128-A

PL 12.215 Tri-Folder Main Drives Assembly

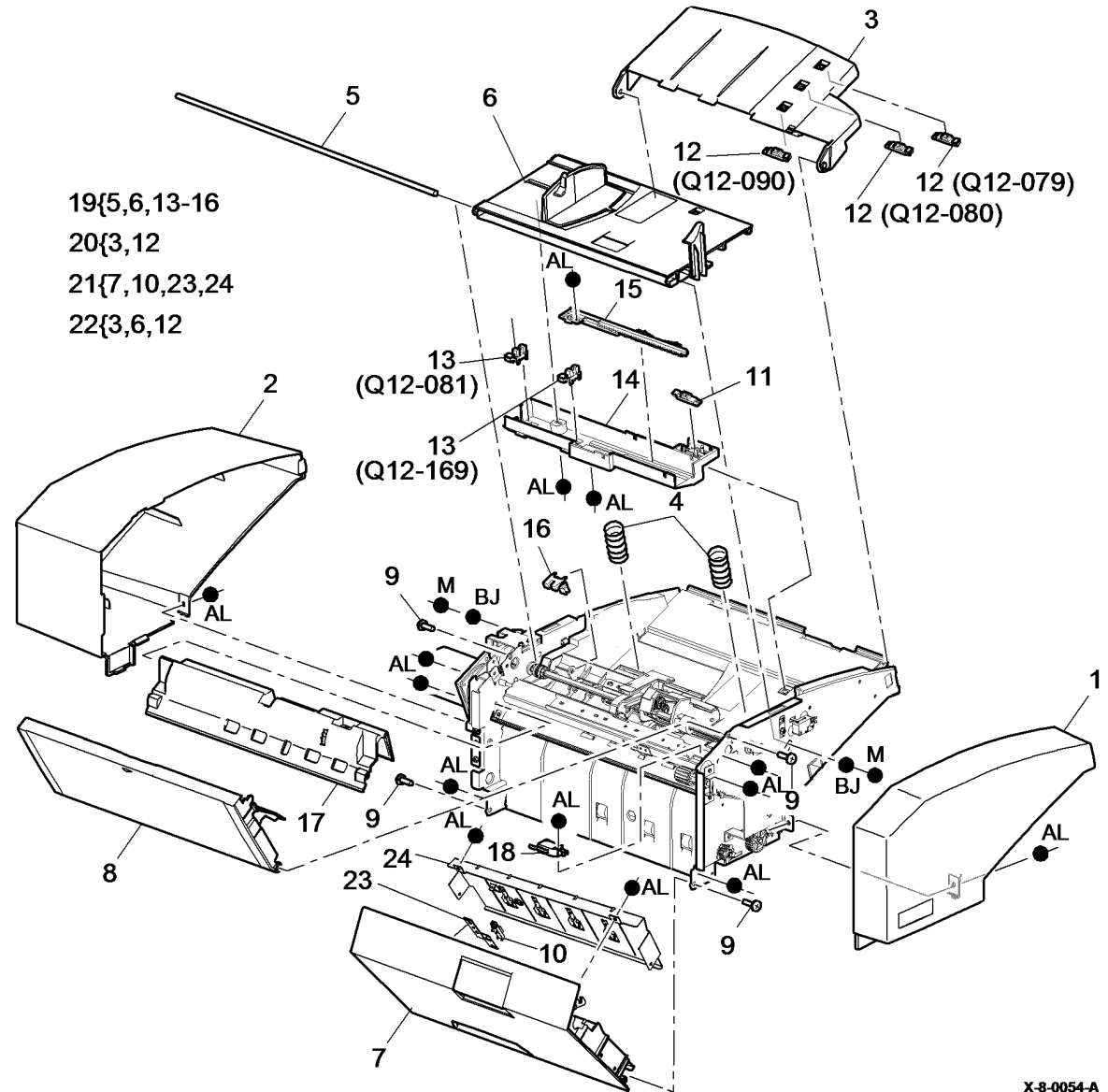
Item	Part	Description
1	-	Roller assembly (Not Spared) (REP 12.74-171)
2	110E19840	Front door interlock switch (S12-209) (REP 12.77-171)
3	110E19831	Top cover interlock switch (S 12-210) (REP 12.77-171)
4	-	Top access cover docking catch (Not Spared)
5	-	Pressing and stacking assembly (Not Spared)
6	130E11861	Assist gate sensor (Q12-165) (REP 12.78-171)
7	020E38480	Centerfold pulley (REP 12.74-171)
8	121K44660	Assist gate solenoid (SOL12-268) (REP 12.71-171)
9	011E13832	Centerfold entry gate lever (REP 12.74-171)
10	809E44040	Crease roll spring (REP 12.72-171)
11	130K74920	Tri folder entry sensor (Q12-164) (REP 12.78-171)
12	130K74051	Tri folder exit sensor (Q12-166) (REP 12.79-171)
13	-	Static eliminator (Not Spared)
14	-	Feed roller bearing (Not spared)
15	-	Feed roller (Not Spared) (REP 12.70-171)
16	121K44650	Tri folder diverter solenoid (SOL12-267) (REP 12.74-171)
17	050E23180	Diverter gate
18	050E28950	Diverter gate spring clip
19	809E95080	Nip spring



X-8-0129-A

PL 12.300 Inserter Covers

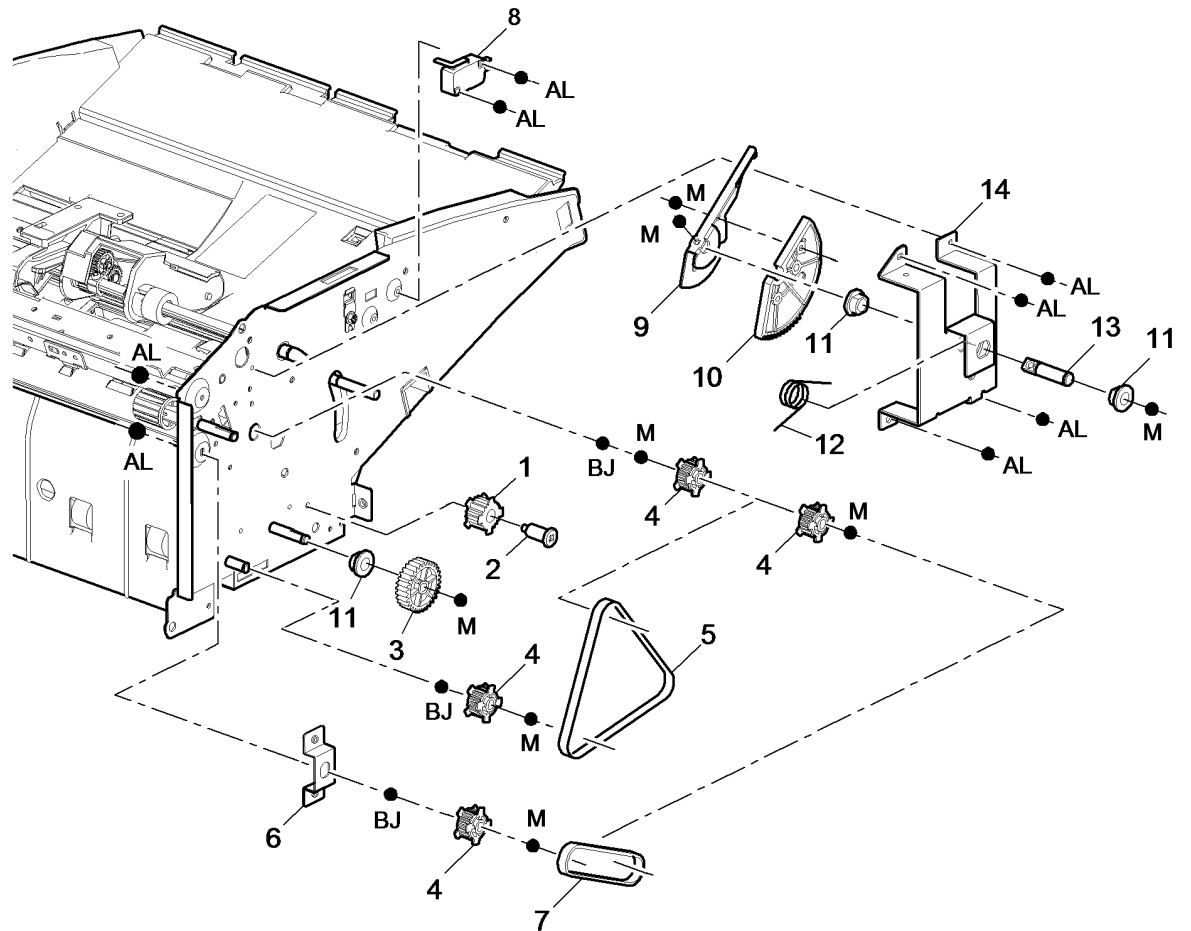
Item	Part	Description
1	-	Front cover (Not Spared) (REP 12.83-171)
2	-	Rear cover (Not Spared) (REP 12.83-171)
3	-	Sensor tray (P/O PL 12.300 Item 20) (REP 12.89-171)
4	-	Bottom tray spring (Not Spared)
5	-	Bottom tray shaft (Not Spared)
6	-	Bottom tray (P/O PL 12.300 Item 19) (REP 12.90-171)
7	-	Lower jam cover (P/O PL 12.300 Item 21) (REP 12.92-171)
8	-	Top cover door (REF: PL 12.310 Item 17)
9	-	Pivot pin (Not spared)
10	-	Inserter acceleration sensor (Q12-316) (P/O PL 12.300 Item 21) (REP 12.92-171)
11	-	Inserter unit empty sensor (Q12-082) (Not spared) (REP 12.90-171)
12	-	Inserter paper length 1 sensor (Q12-079)/Inserter paper length 2 sensor (Q12-080), Inserter paper length sensor 3 (Q12-090) (Not Spared) (REP 12.89-171)
13	-	Paper width sensor 1 (Q12-081), Paper width sensor 2 (Q12-169) (P/O PL 12.300 Item 19) (REP 12.90-171)
14	-	Bottom tray bracket (P/O PL 12.300 Item 19)
15	-	Bottom tray rack (P/O PL 12.300 Item 19)
16	-	Inserter bottom plate sensor (Q12-085) (P/O PL 12.300 Item 19) (REP 12.94-171)
17	-	Top inside cover (Not Spared)
18	-	Inserter jam cover interlock switch (S12-179) (Not Spared) (REP 12.88-171)
19	050K68510	Bottom tray assembly
20	848K31350	Sensor tray assembly
21	-	Lower jam cover assembly (Not Spared)
22	848K31370	Main tray assembly
23	-	Bracket (P/O PL 12.300 Item 21)
24	-	Lower jam inner cover (P/O PL 12.300 Item 21)



X-8-0054-A

PL 12.305 Inserter Main Drives (1 of 3)

Item	Part	Description
1	–	Idler (Not Spared)
2	–	Idler pin (Not Spared)
3	–	Gear (Not Spared)
4	–	Pulley (Not Spared)
5	–	Belt (Not Spared)
6	–	Bracket (Not Spared)
7	–	Jam drive belt (Not Spared)
8	–	Inserter top cover interlock switch (S12-178) (Not Spared) (REP 12.87-171)
9	–	Loading lever (Not Spared)
10	–	Loading gear (Not Spared)
11	–	Bearing (Not Spared)
12	–	Torsion spring (Not Spared)
13	–	Loading shaft (Not Spared)
14	–	Front loading bracket (Not Spared)

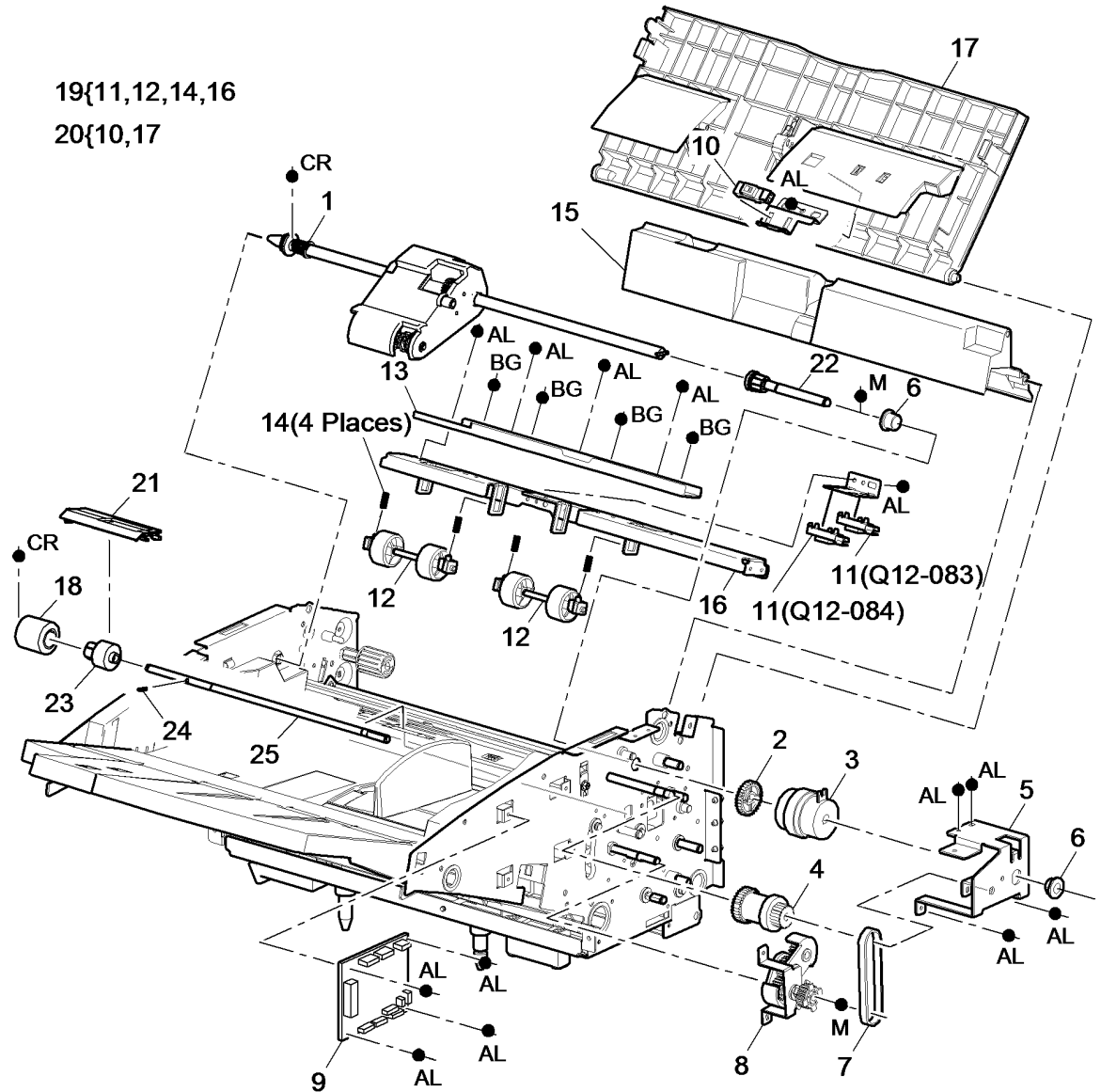


X-8-0055-A

PL 12.310 Inserter Main Drives (2 of 3)

Item	Part	Description
1	050K68520	Pickup assembly (REP 12.95-171) (See NOTE)
2	-	Pickup gear (Not spared)
3	005K12890	Inserter clutch (CL12-260) (REP 12.86-171)
4	-	Reverse roller drive idler (Not Spared)
5	-	Pickup assembly bracket (Not Spared)
6	-	Bearing (Not Spared)
7	-	Reverse roller drive belt (Not Spared)
8	-	Reverse roller drive (Not Spared)
9	960K46170	Inserter PWB (REP 12.85-171)
10	-	Inserter pickup sensor (Q12-315) (REP 12.91-171)(P/O PL 12.310 Item 20)
11	-	Inserter LE sensor (Q12-083)/ Inserter TE sensor (Q12-084) (REP 12.93-171)(P/O PL 12.310 Item 190)
12	-	Idle roller (Not Spared) (REP 12.98-171)
13	-	Idler roller bracket (Not Spared)
14	-	Idler roller spring (Not Spared)
15	-	Top inside cover (Not Spared)
16	-	Idler roller cover (P/O PL 12.310 Item 19)
17	-	Top cover (REP 12.91-171)(P/O PL 12.310 Item 20)
18	050K68090	Reverse feed roller (REP 12.95- 171)
19	006K32860	Idle roller assembly (REP 12.98- 171)
20	848K31360	Top cover door assembly
21	848K37330	Retard cover
22	-	Drive coupling (Not Spared)
23	-	Reverse feed roll core (Not Spared)
24	-	Pin (Not Spared)
25	-	Shaft (Not Spared)

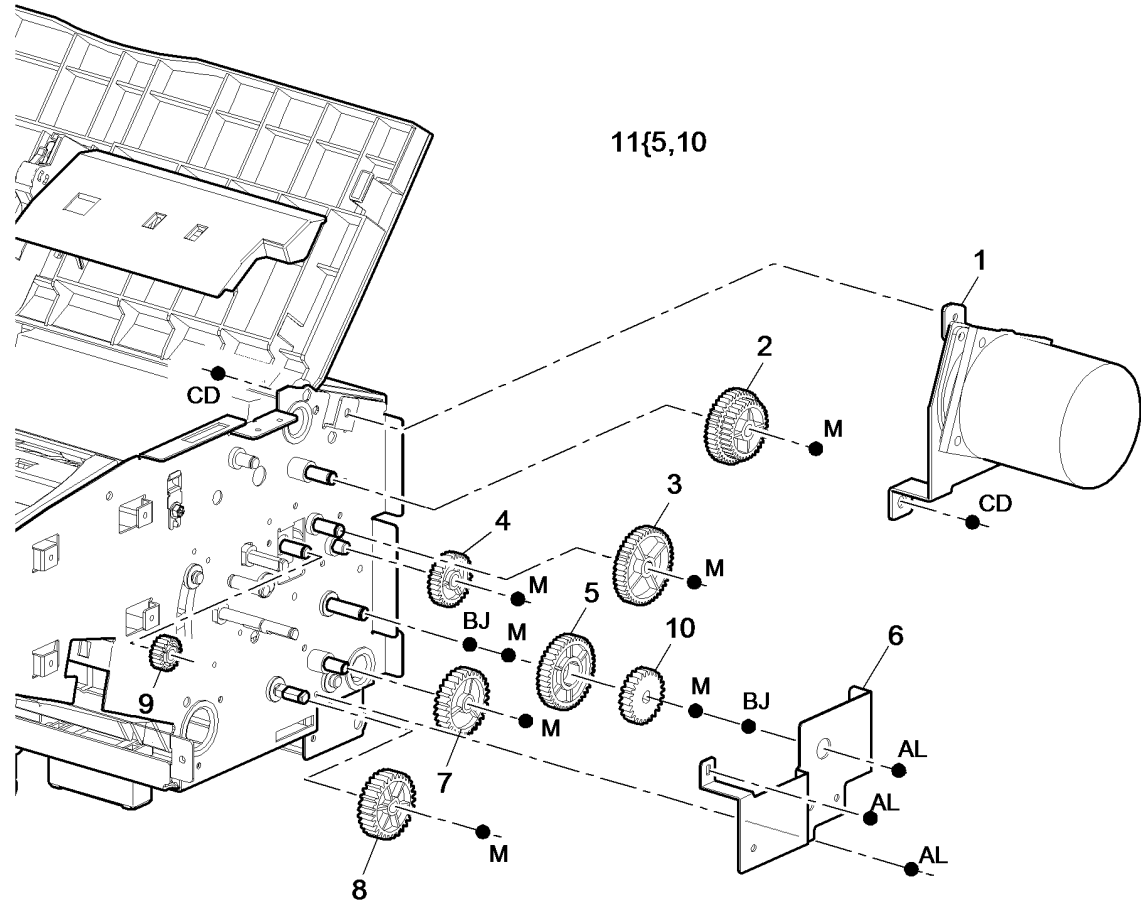
NOTE: To reset the HFSI count, go to dC135.



X-8-0056-A

PL 12.315 Inserter Main Drives (3 of 3)

Item	Part	Description
1	127K61990	Inserter motor (MOT12-261) (REP 12.84-171)
2	-	Idler (Not Spared)
3	-	Driver gear (Not Spared)
4	-	Idler (Not Spared)
5	-	Tray down gear (Not Spared)
6	-	Gear cover bracket (Not Spared)
7	-	Idler (Not Spared)
8	-	Bottom shaft drive (Not Spared)
9	-	Feed roller drive gear (Not Spared)
10	-	Tray down clutch (Not Spared)
11	-	Tray down clutch assembly (Not Spared)

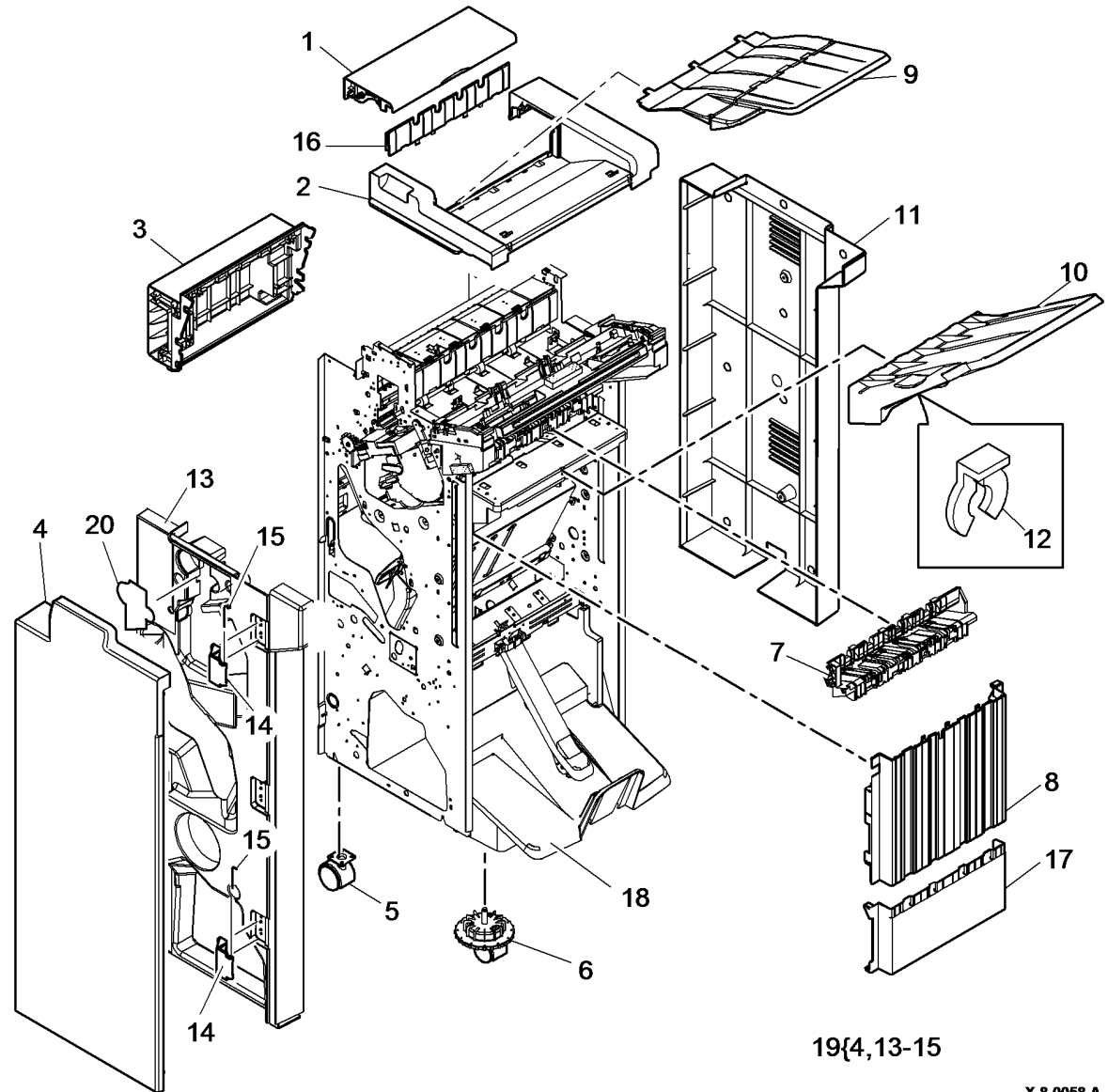


X-8-0057-A

PL 12.320 LVF BM - Covers

Item	Part	Description
1	948K25970	Exit cover
2	822E52611	Top cover (REP 12.1-150)
3	848K83730	Entry guide cover assembly (REP 12.15-150)
4	–	Front door (P/O PL 12.320 Item 19) (REP 12.1-150)
5	017K03750	Fixed castor
6	017K04520	Adjustable castor
7	–	Output cover (Not Spared)
8	–	Right cover (Not Spared)
9	050K75970	Bin 0
10	050K75960	Bin 1 (ADJ 12.1-150)
11	948K25841	Rear cover (REP 12.1-150)
12	019K13380	Bin 1 alignment clip
13	–	Front cover assembly (P/O PL 12.320 Item 19)
14	–	Hinge (P/O PL 12.320 Item 19)
15	–	Hinge pin (P/O PL 12.320 Item 19)
16	848E97200	Top centre cover
17	–	Lower right cover (REP 12.45-150)
18	–	Bin 2 (Not Spared)
19	948K22211	Front door cover assembly (REP 12.1-150)
20	–	Hole punch assembly cover (Not Spared)

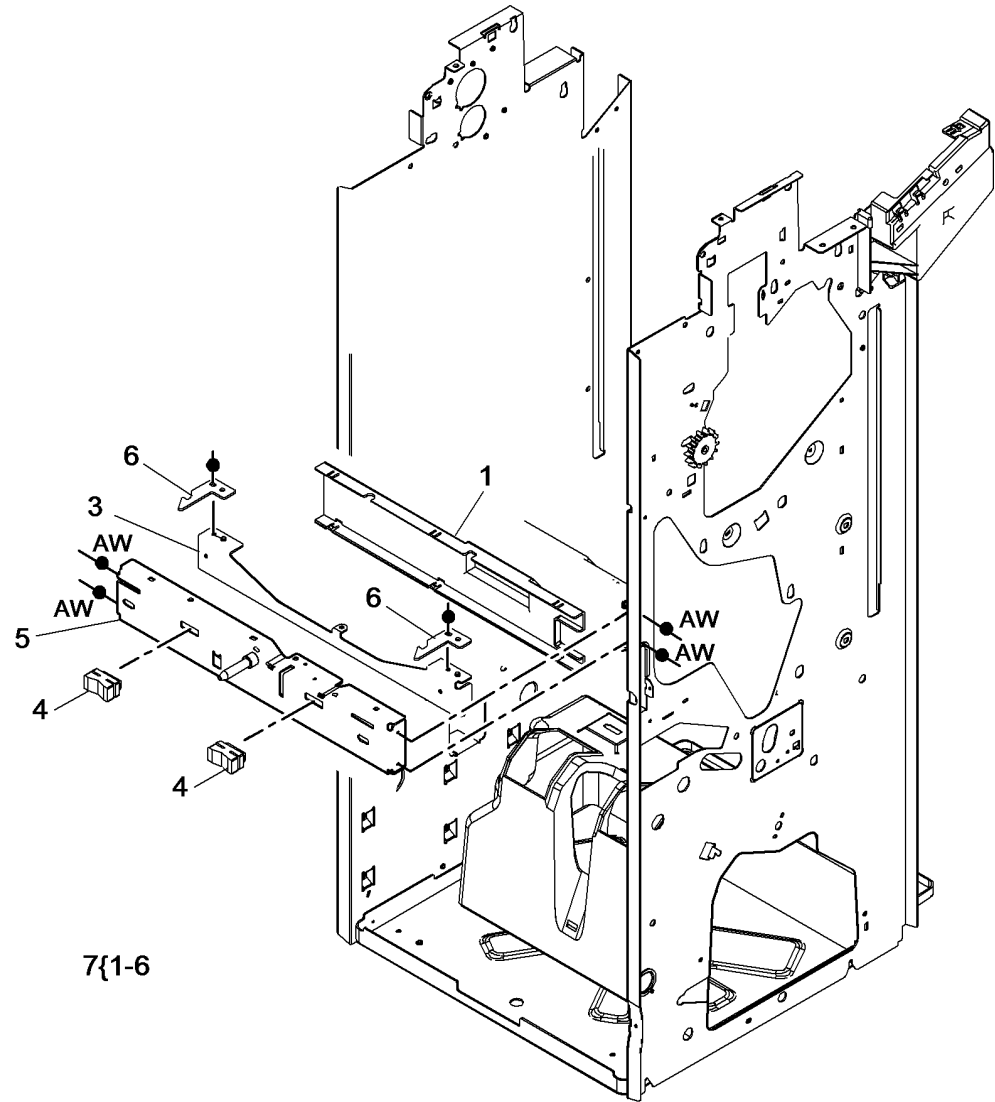
NOTE: Refer to ADJ 12.2-150 to align the LVF BM to the machine.



X-8-0058-A

PL 12.325 LVF BM Docking Latch

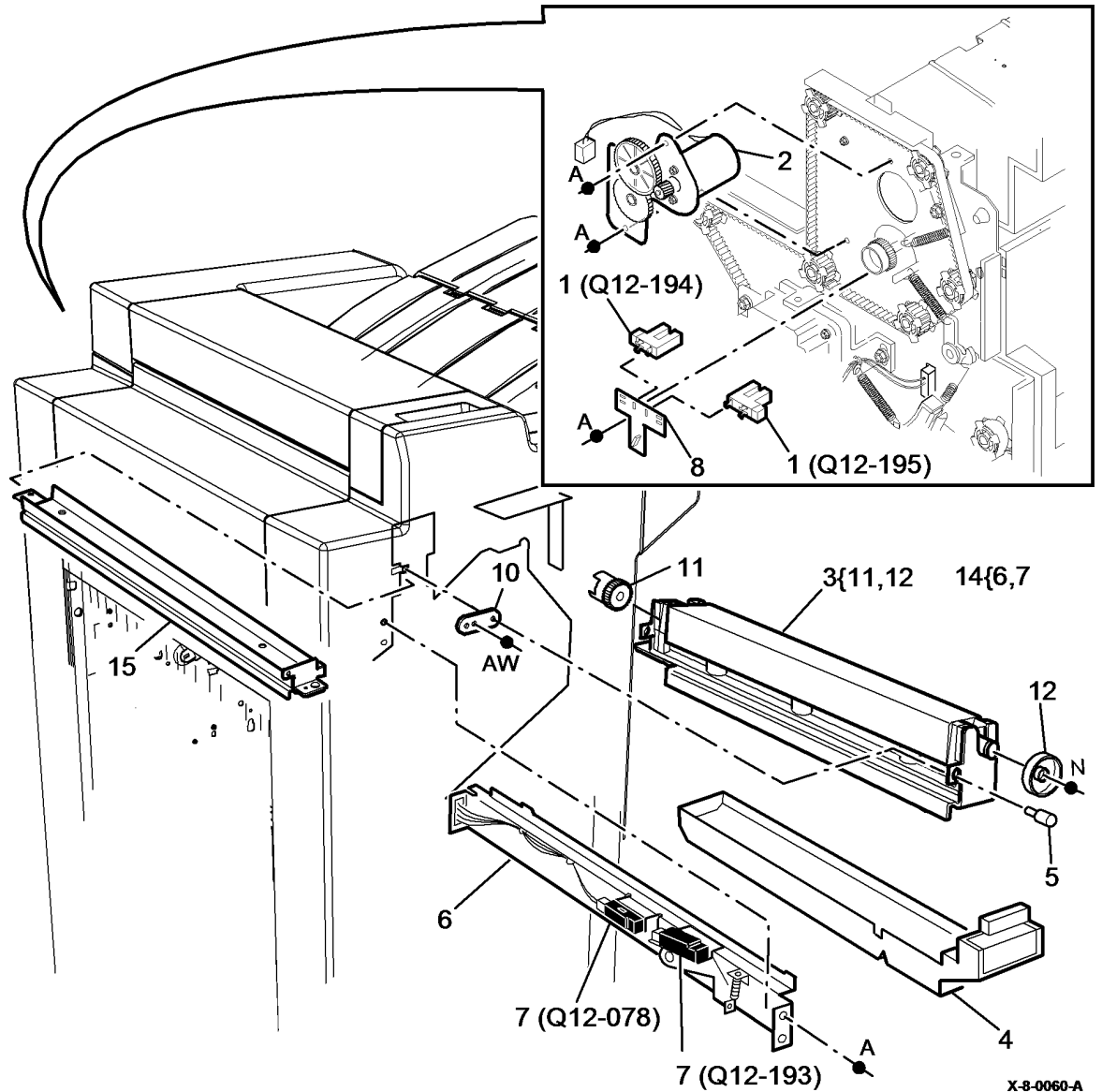
Item	Part	Description
1	–	Docking latch cover (Not Spared)
2	–	Not used
3	–	Link bracket assembly (P/O PL 12.325 Item 7)
4	–	Stopper (P/O PL 12.325 Item 7)
5	–	Docking latch (P/O PL 12.325 Item 7)
6	–	Latch hook (P/O PL 12.325 Item 7)
7	017K06290	Docking latch assembly (REP 12.16-150)



X-8-0059-A

PL 12.330 LVF BM Hole Punch Unit

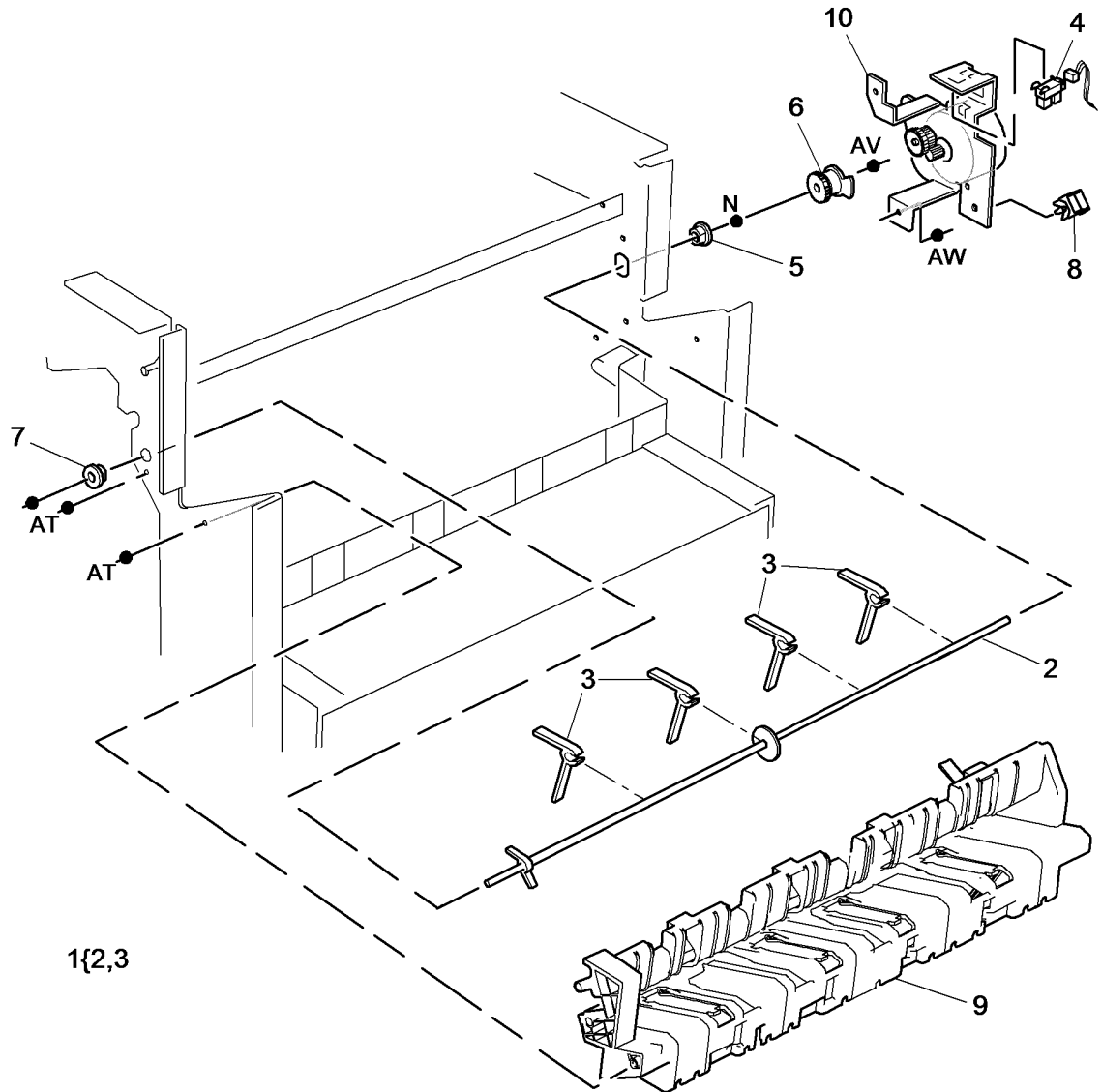
Item	Part	Description
1	130E10360	Punch head home sensor (Q12-194), Punch head present sensor (Q12-195) (REP 12.7-150)
2	127K55900	Punch head motor assembly (MOT12-243) (REP 12.7-150)
3	-	Hole punch unit (see below for variants) (REP 12.7-150)
-	180K01540	2 Hole (P/O PL 31.11 Item 2) (XE)
-	-	2 Hole legal (P/O PL 31.11 Item 2)
-	180K01570	3 Hole (USSG/XCL)
-	-	4 Hole (Sweden) (P/O PL 31.11 Item 2)
-	-	4 Hole (P/O PL 31.11 Item 2) (XE)
4	093E03930	Chad bin
5	-	Thumb screw (Not Spared)
6	-	Bracket (P/O PL 12.330 Item 14)
7	130E10380	Punch sensor 1 (Q12-078), Chad bin level sensor (Q12-193) (REP 12.7-150)
8	-	Sensor bracket (Not Spared)
9	-	Not used
10	-	Bracket (Not Spared)
11	-	Punch drive gear (P/O PL 12.330 Item 9)
12	-	Punch cam (P/O PL 12.330 Item 3)
13	-	Not used
14	-	Punch sensor assembly (Not Spared)
15	014K10610	Hole punch guide assembly



PL 12.335 LVF BM Paddle Shaft Assembly

Item	Part	Description
1	-	Paddle shaft assembly (REF: PL 31.12 Item 2) (REP 12.12-150)
2	-	Shaft (P/O PL 12.335 Item 1)
3	-	Paddle (P/O PL 12.335 Item 1) (See NOTE)
4	130E10360	Paddle roll home sensor (Q12-186)
5	013E25790	Nylon bearing
6	-	Gear and flag assembly (Not Spared)
7	-	Bushing (Not Spared)
8	-	Cable clamp (Not Spared)
9	-	Output cover (REF: PL 12.320 Item 7)
10	127K62580	Paddle roll motor assembly (MOT12-238) (REP 12.12-150)

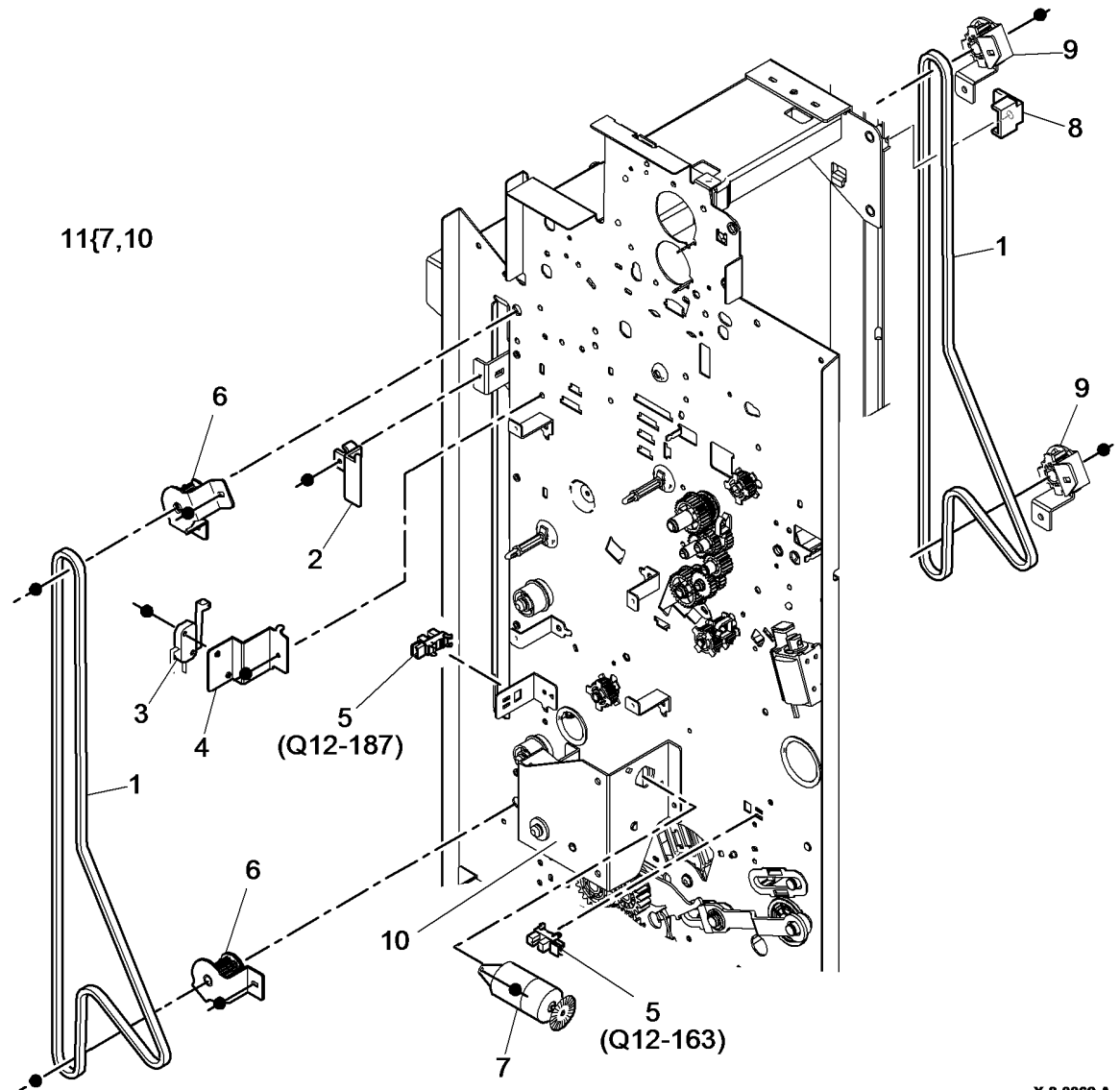
NOTE: Paddles are also supplied (4 off) as a kit PL 31.12 Item 5.



X-8-0061-A

PL 12.340 LVF BM Bin 1 Control Components (1 of 2)

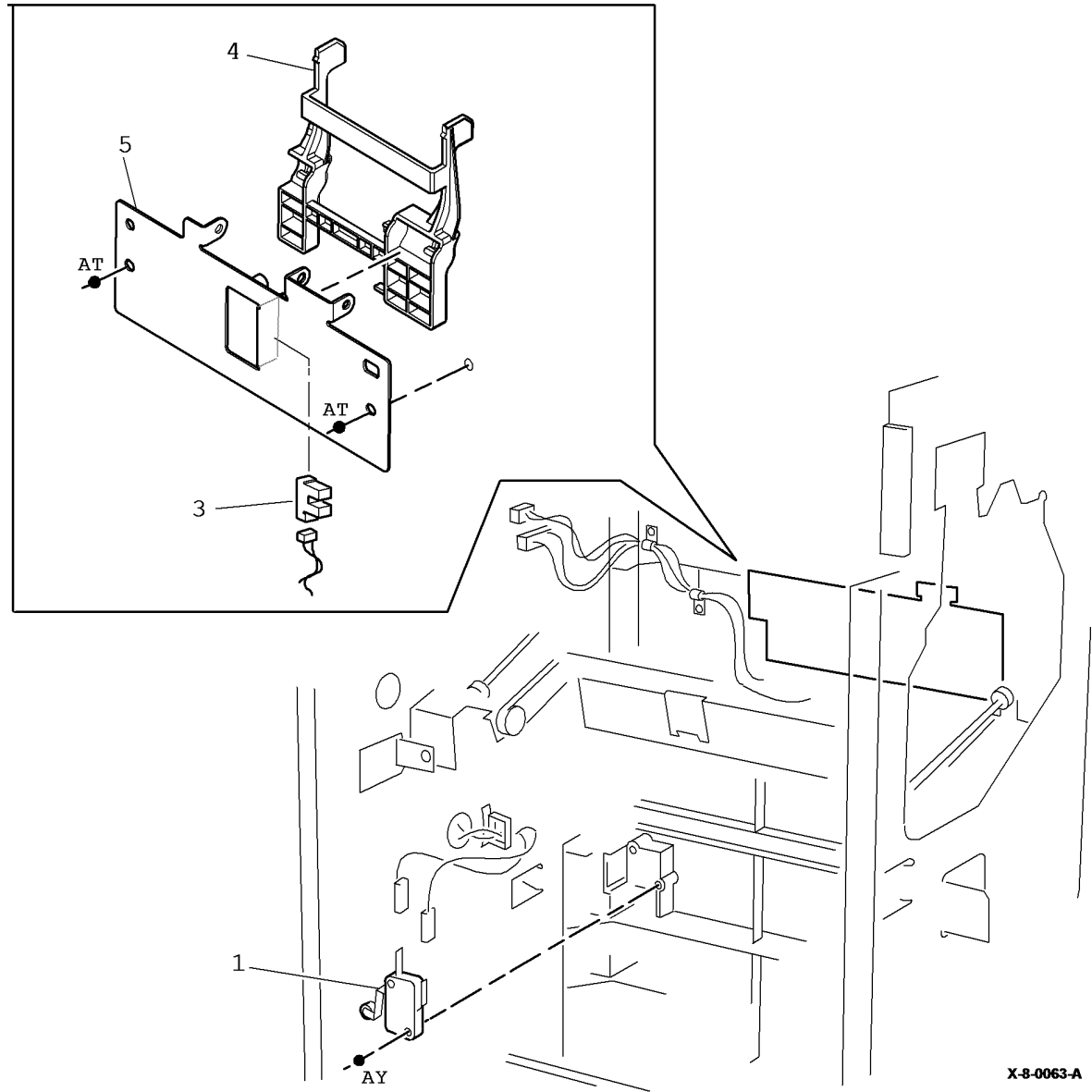
Item	Part	Description
1	023E24320	Bin 1 drive belt (REP 12.5-150)
2	-	Rear belt clamp (Not Spared) (ADJ 12.1-150)
3	110E20180	Bin 1 upper limit switch (S12-190)
4	-	Sensor bracket (Not Spared)
5	130E10360	Bin 1 90% full sensor (Q12-187)/ Bin 1 motor encoder sensor (Q12-163)
6	-	Rear pulley (Not Spared) (ADJ 40.1)
7	127K55891	Bin 1 elevator motor (MOT12-241)
8	-	Front belt clamp (Not Spared) (ADJ 12.1-150)
9	-	Front pulley (Not Spared) (ADJ 40.1)
10	-	Stacker tray drive assembly (P/O PL 12.340 Item 11)
11	007K20531	Stacker tray drive and motor assembly (REP 12.5-150)



X-8-0062-A

PL 12.345 LVF BM Bin 1 Control Components (2 of 2)

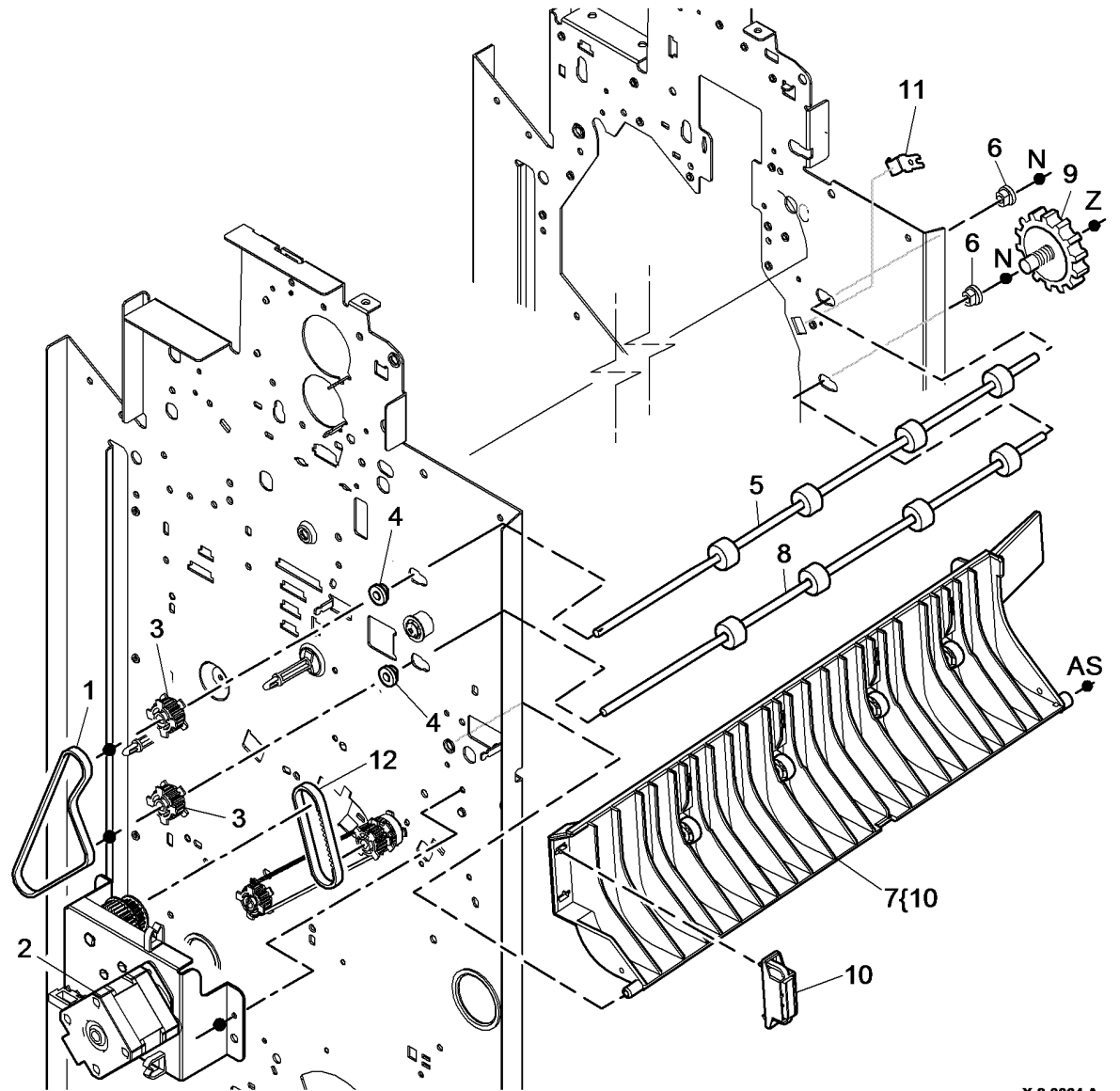
Item	Part	Description
1	110K13990	Bin 1 lower limit switch (S12-191) (REP 12.45-150)
2	-	Not used
3	130E10360	Bin 1 upper level sensor (Q12-188) (REP 12.11-150)
4	-	Actuator (Not Spared)
5	-	Sensor support assembly (Not Spared)



X-8-0063-A

PL 12.350 LVF BM Paper Entry Transport

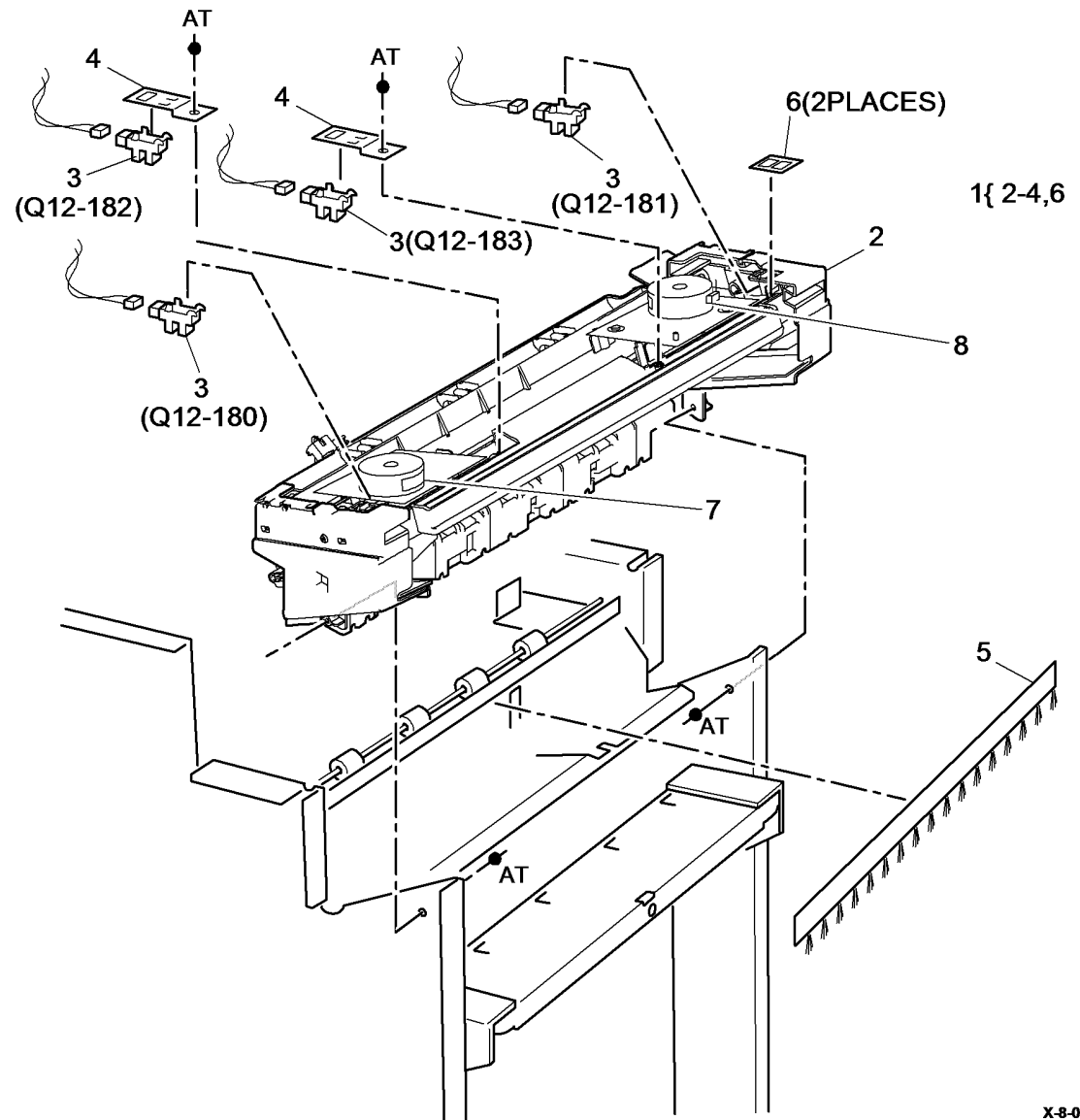
Item	Part	Description
1	023E24340	Input drive belt (REP 12.2-150)
2	927K01140	Transport motor 1 and gearbox assembly (MOT12-223) (REP 12.3-150)
3	-	Pulley (Not Spared)
4	013E25790	Nylon bearing
5	-	Upper feed roll assembly (Not Spared)
6	013E37460	Bearing
7	-	Paper entry guide assembly (Not Spared)
8	-	Lower feed roll assembly (Not Spared)
9	006K32780	Thumb wheel
10	-	Magnet (P/O PL 12.350 Item 7)
11	-	Latch (Not Spared)
12	-	Compiler entrance drive belt 1 (Not Spared) (REP 12.34-150)



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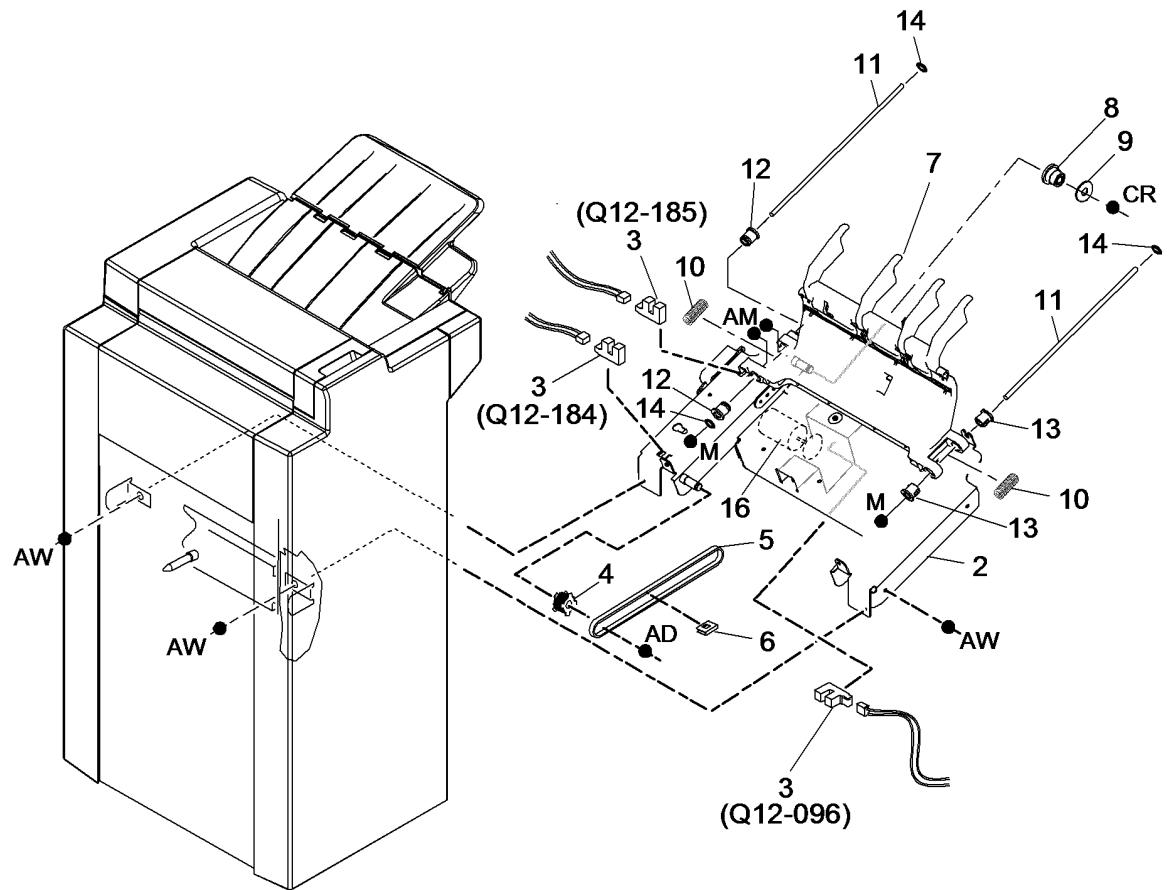
PL 12.355 LVF BM Tamper Assembly

Item	Part	Description
1	049K50680	Tamper assembly (REP 12.6-150)
2	-	Tamper unit (P/O PL 12.355 Item 1)
3	130E10360	Front tamper home sensor (Q12-180), Front tamper away sensor (Q12-182), Rear tamper home sensor (Q12-181), Rear tamper away sensor (Q12-183) (REP 12.6-150)
4	-	Sensor bracket (P/O PL 12.355 Item 1)
5	-	Static eliminator (stacker) (Not Spared)
6	-	Sensor retainer (Not Spared)
7	-	Front tamper motor (MOT12-226) (P/O PL 12.355 Item 1)
8	-	Rear tamper motor (MOT12-227) (P/O PL 12.355 Item 1)
9	869E55190	Tamper arm (Not shown)



PL 12.360 LVF BM Ejector Assembly

Item	Part	Description
1	054K54273	Ejector assembly (REP 12.10-150)
2	-	Ejector base (P/O PL 12.360 Item 1)
3	130E10360	Ejector home sensor (Q12-184), Ejector out sensor (Q12-185), Ejector motor encoder sensor (Q12-096) (REP 12.10-150)
4	-	Pulley (P/O PL 12.360 Item 1)
5	023E24330	Ejector belt (REP 12.17-150)
6	-	Clip (P/O PL 12.360 Item 1)
7	019K13390	Support finger (REP 12.10-150)
8	020K21490	Pulley drive gear
9	-	Washer (Not Spared)
10	-	Spring (P/O PL 12.360 Item 1)
11	-	Shaft (P/O PL 12.360 Item 1)
12	-	Slide ejector bearing (P/O PL 12.360 Item 15)
13	-	Wide slide ejector bearing (P/O PL 12.360 Item 15)
14	-	Cushion washer (P/O PL 12.360 Item 15)
15	604K67690	Bearing assembly kit
16	-	Ejector motor (MOT12-234) (P/O PL 12.360 Item 1)



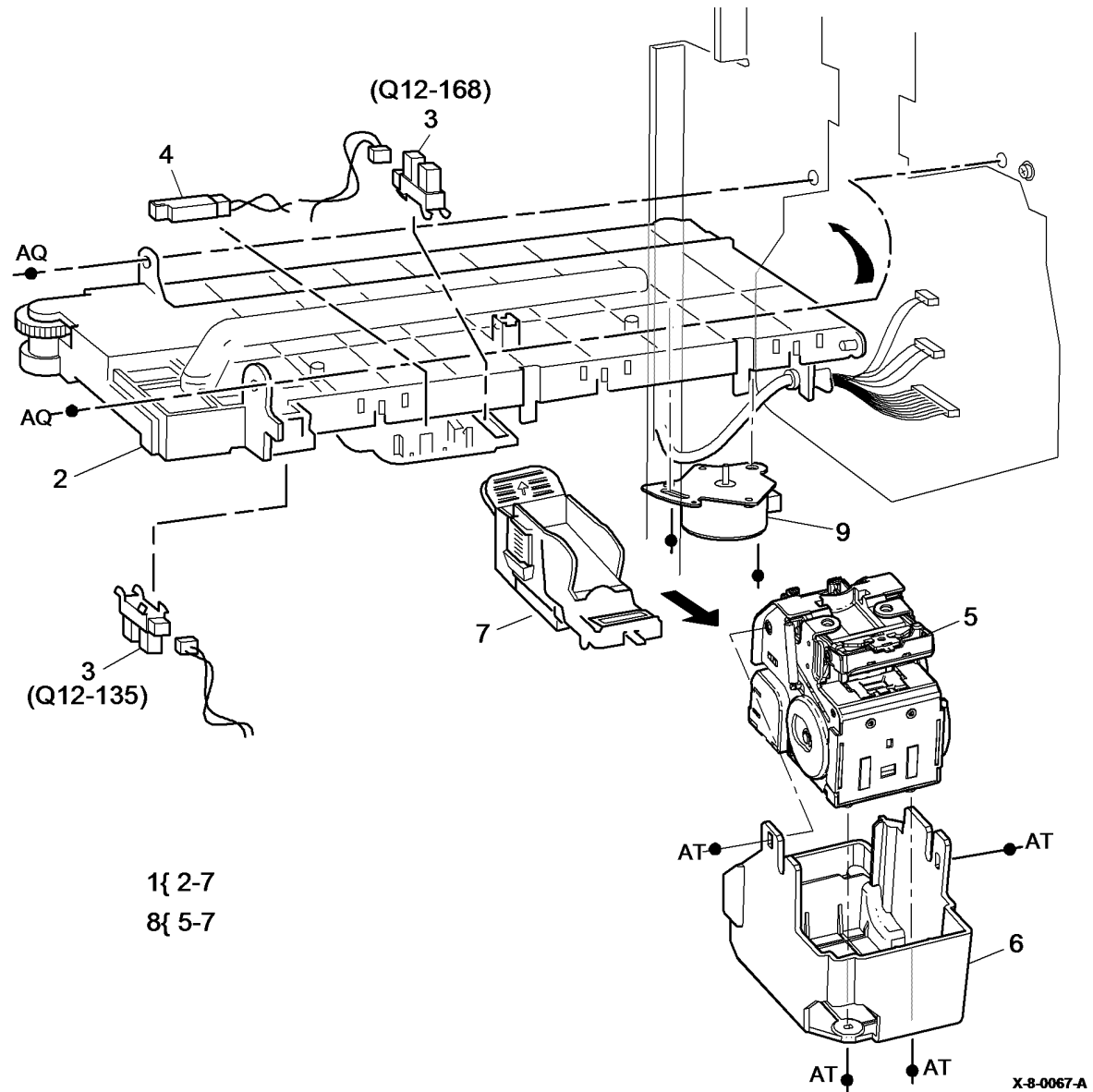
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PL 12.365 LVF BM Staple Head Unit/ Traverse Assembly

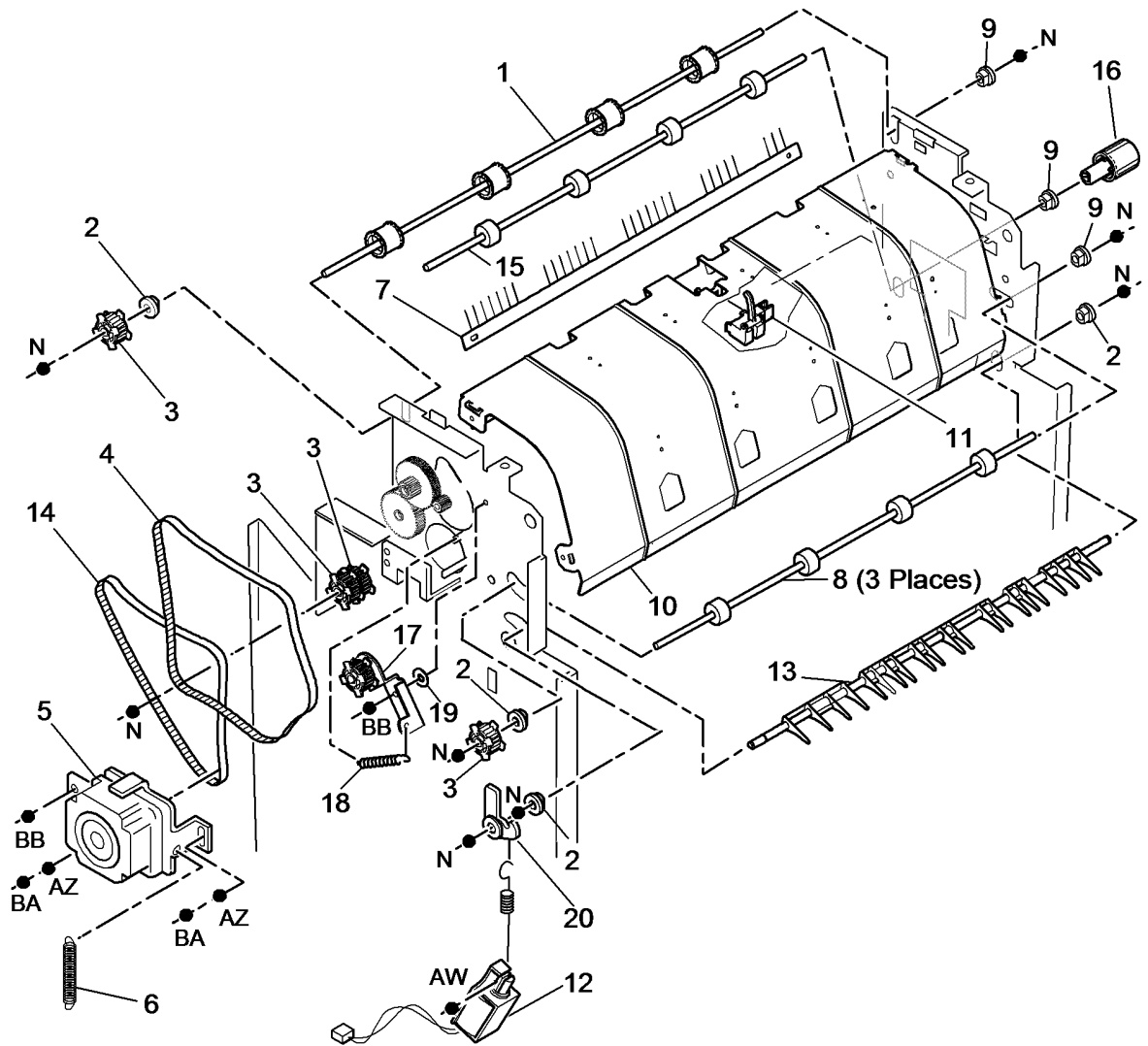
Item	Part	Description
1	014K11544	Stapler traverse assembly (REP 12.8-150)
2	-	Head traverse unit (P/O PL 12.365 Item 1)
3	130E10360	Stapler home sensor (Q12-135), Stapler index sensor (Q12-168) (REP 12.8-150)
4	130E10380	SH1 Paper sensor (Q12-196) (REP 12.8-150)
5	029K04691	Staple head unit (REP 12.9-150)
6	-	Stapler cover (P/O PL 12.365 Item 1)
7	-	Staple cartridge (REF: PL 26.10 Item 11) (See NOTE)
8	-	Staple head assembly (P/O PL 12.365 Item 1)
9	-	Staple unit 1 motor (MOT12-249) (P/O PL 12.365 Item 1)

NOTE: To replace staples only, order PL 26.11 Item 4.



PL 12.370 LVF BM Bin 0 Entry

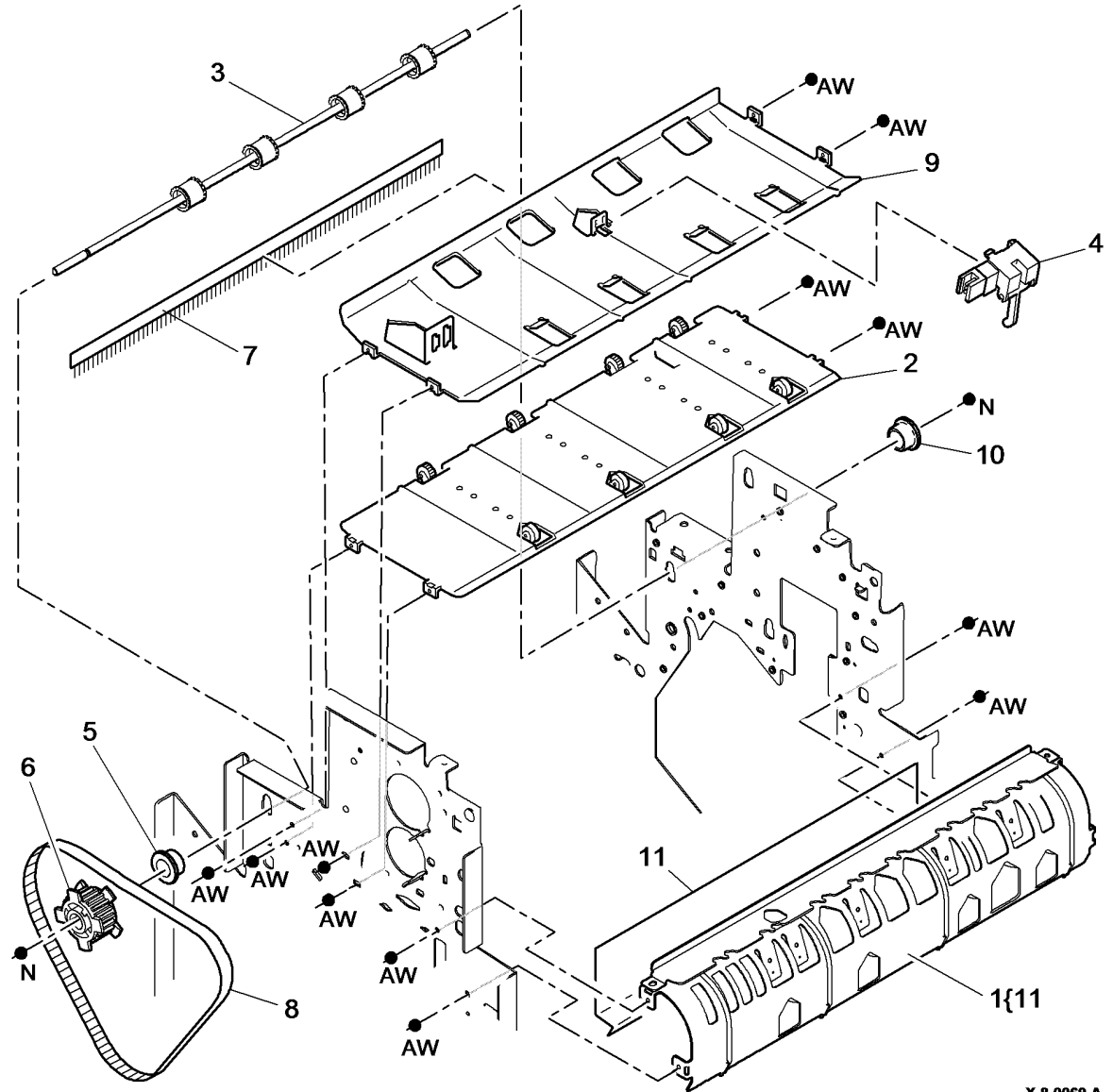
Item	Part	Description
1	006K32810	Top tray exit shaft
2	013E25790	Nylon bearing
3	-	Pulley (Not Spared)
4	023E24330	Intermediate paper drive belt (REP 12.3-150)
5	127K55870	Transport motor 2 (MOT12-224) (REP 12.4-150, ADJ 12.4-150)
6	-	Spring (Not Spared)
7	115E13440	Static eliminator
8	006K32841	Feed roll shaft (short)
9	013E37460	Bearing
10	117K54510	Paper guide (REP 12.46-150)
11	130E11440	Top tray exit sensor (Q12-107) (REP 12.46-150)
12	121K45010	Exit diverter solenoid (SOL12-225)
13	-	Exit diverter gate (Not Spared)
14	023E24340	Paper output drive belt (REP 12.4-150)
15	006K32800	Drive shaft assembly
16	006K33961	Jam clearance knob
17	-	Belt tensioner (Not Spared) (ADJ 40.1)
18	-	Spring (Not Spared)
19	-	Washer (Not Spared)
20	-	Actuator (Not Spared)



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PL 12.375 LVF BM Bin 1 Entry

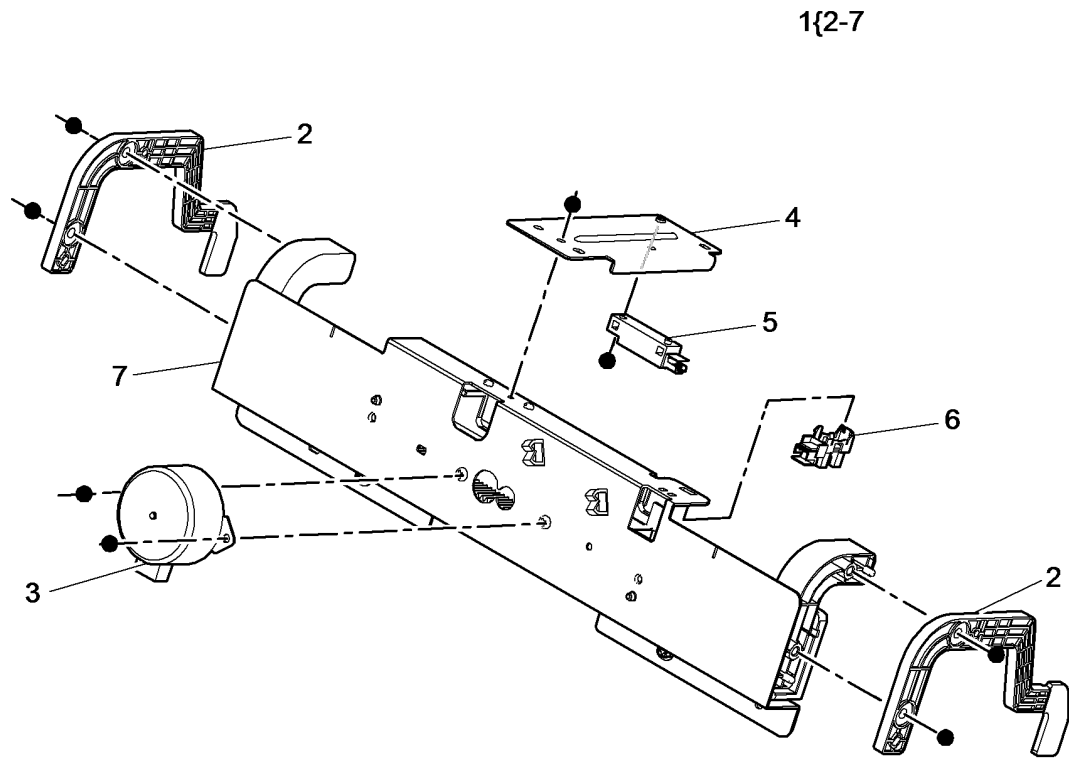
Item	Part	Description
1	032K04610	Left paper guide
2	-	Lower right paper guide (REP 12.47-150)
3	006K32790	Ejector drive shaft (REP 12.47-150)
4	130E11440	Compiler exit sensor (Q12-106)
5	013E25790	Nylon bearing
6	-	Pulley (Not Spared)
7	115E11810	Static eliminator (stacker)
8	-	Paper output drive belt (REF: PL 12.370 Item 14)
9	-	Upper right paper guide (Not Spared) (REP 12.47-150)
10	013E37460	Bearing
11	-	Mylar safety cover (P/O PL 12.375 Item 1)



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PL 12.380 LVF BM Booklet Tamper Assembly

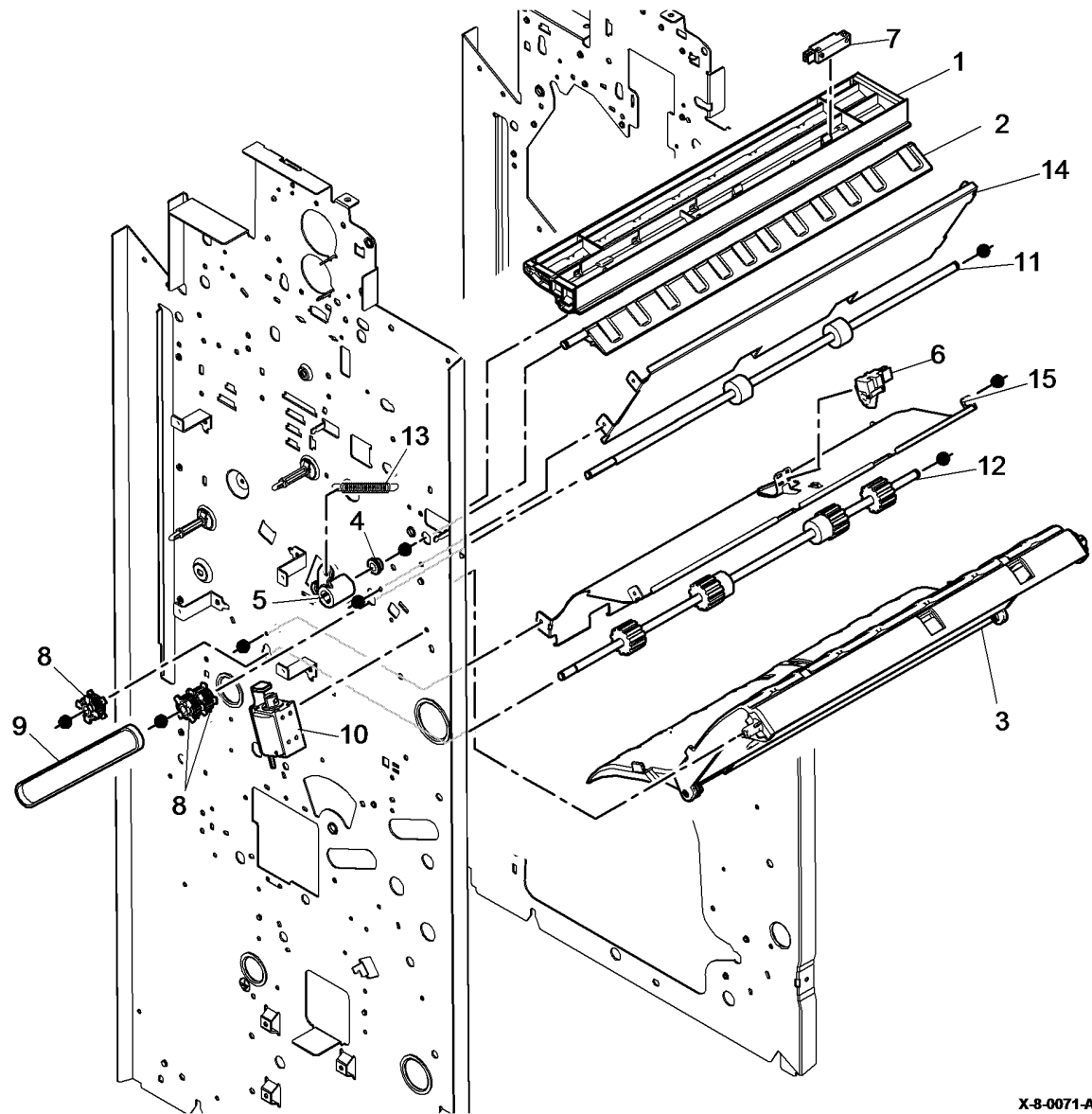
Item	Part	Description
1	090K02590	Booklet tamper assembly (REP 12.38-150)
2	031E16740	Booklet tamper arm (REP 12.42-150)
3	127E17690	BM Booklet tamper 1 motor (MOT12-256) (REP 12.41-150)
4	–	Sensor bracket (P/O PL 12.380 Item 1)
5	130E10380	BM paper present sensor (Q12-170) (REP 12.43-150)
6	130E10360	BM tamper 1 home sensor (Q12-205) (REP 12.40-150)
7	–	Booklet tamper frame (P/O PL 12.380 Item 1)



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PL 12.385 LVF BM Compiler Entrance Guides

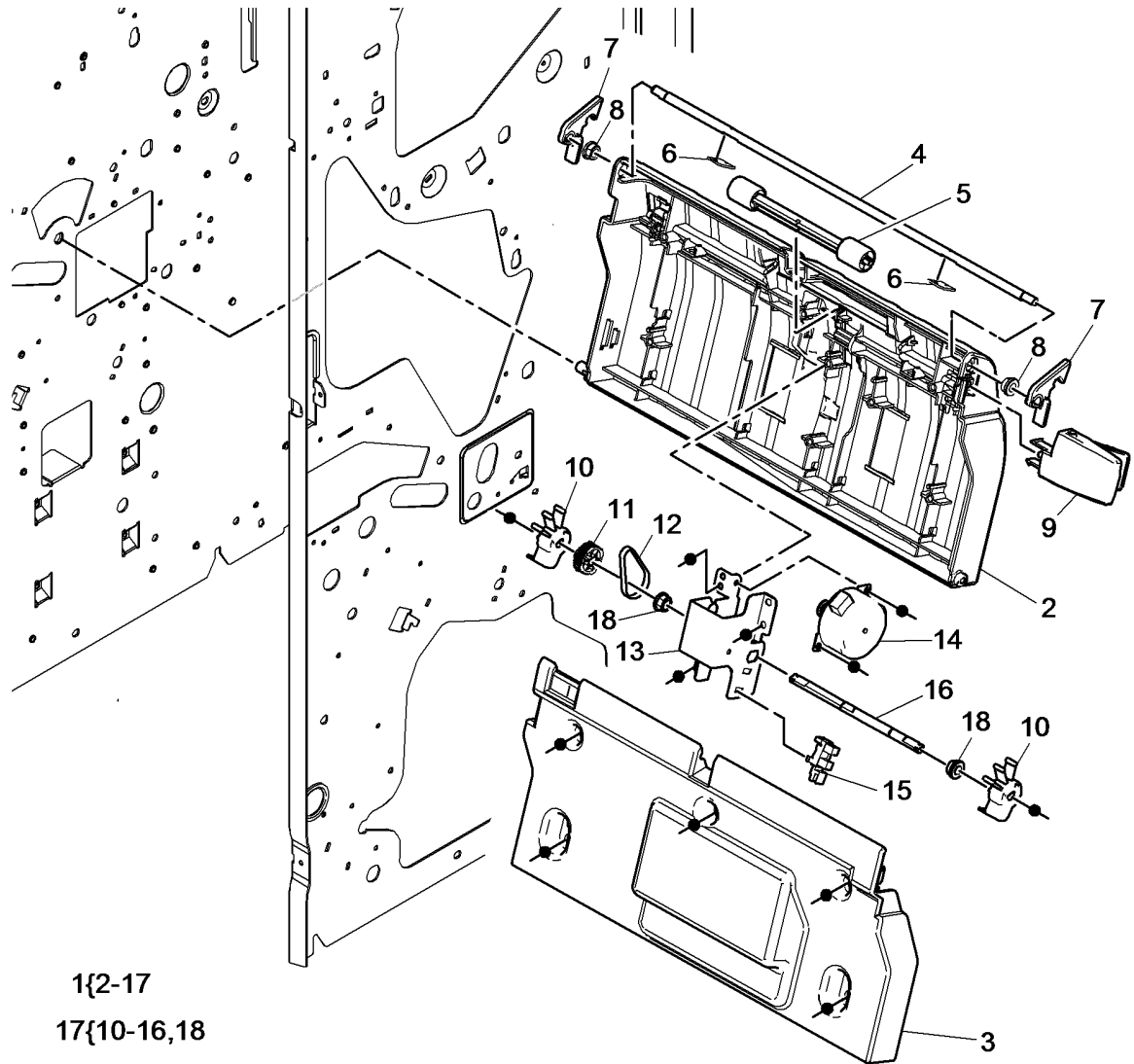
Item	Part	Description
1	-	Upper entrance guide (Not Spared) (REP 12.31-150)
2	850K04150	Booklet diverter gate (REP 12.33-150)
3	032K11720	BM entrance guide assembly (REP 12.32-150)
4	-	Bush (Not Spared)
5	-	Lever (Not Spared)
6	130E21610	BM Entry sensor (Q12-089) (REP 12.32-150)
7	130E10380	Entry sensor (Q12-077) (REP 12.31-150)
8	-	Pulley (Not Spared)
9	-	Compiler entrance drive belt 2 (Not Spared) (REP 12.34-150)
10	121K45010	Booklet diverter gate solenoid (SOL12-258)
11	059K84790	1st feed roll assembly (REP 12.34-150)
12	059K84800	2nd feed roll assembly (REP 12.35-150)
13	-	Spring (Not Spared)
14	-	Upper guide (Not Spared)
15	-	Lower guide (Not Spared) (REP 12.32-150)



X-8-0071-A

PL 12.390 LVF BM Compiler Guide Assembly

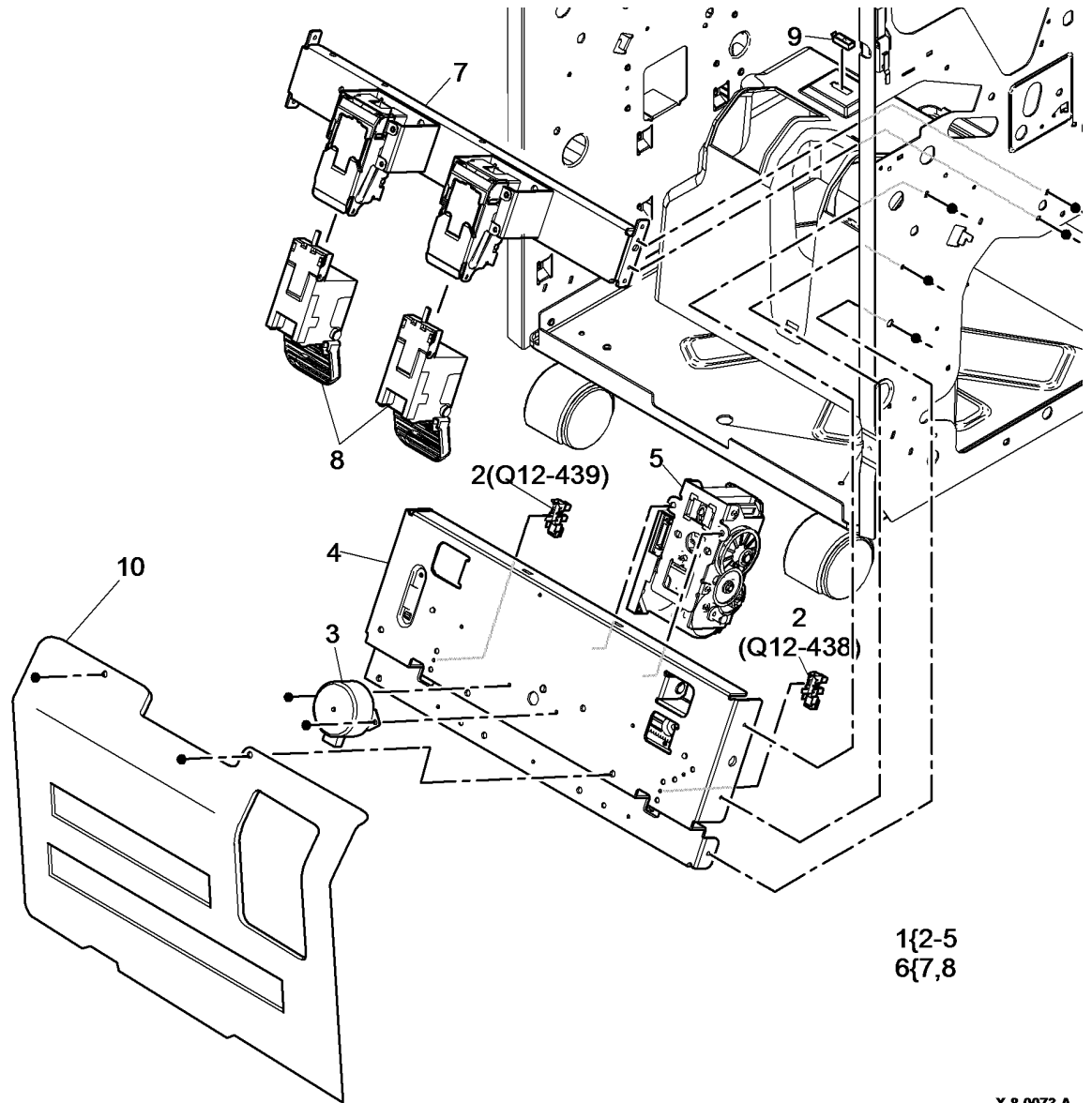
Item	Part	Description
1	055K45241	BM compiler guide assembly (REP 12.30-150)
2	-	Base (P/O PL 12.390 Item 1)
3	-	Cover (P/O PL 12.390 Item 1)
4	-	Shaft (P/O PL 12.390 Item 1)
5	-	Idler roll assembly (P/O PL 12.390 Item 1)
6	-	Static eliminator (P/O PL 12.390 Item 1)
7	-	Latch (P/O PL 12.390 Item 1)
8	-	Bearing (P/O PL 12.390 Item 1)
9	-	Handle (P/O PL 12.390 Item 1)
10	033K05270	BM compiler flapper (REP 12.30-150)
11	-	Pulley (P/O PL 12.390 Item 1)
12	-	Belt (P/O PL 12.390 Item 1)
13	-	Bracket (P/O PL 12.390 Item 1)
14	-	BM Flapper motor (MOT12-271) (P/O PL 12.390 Item 1)
15	130E10360	BM Flapper home sensor (Q12-207)
16	-	Drive shaft (P/O PL 12.390 Item 1)
17	055K44530	BM Flapper motor assembly (REP 12.30-150)
18	-	Bearing (P/O PL 12.390 Item 17)



X-8-0072-A

PL 12.395 LVF BM Booklet Stapler Assembly

Item	Part	Description
1	029K04812	BM stapler assembly (REP 12.38-150)
2	130E10360	Staple head home sensor (Q12-438)/Staple head away sensor (Q12-439) (REP 12.48-150)
3	127E17680	BM staple unit move motor (MOT12-435)
4	-	BM stapler frame (P/O PL 12.395 Item 1)
5	077E00081	BM staple head assembly (REP 12.48-150)
6	029K04800	BM staple cartridge assembly (REP 12.37-150)
7	-	Bracket (P/O PL 12.395 Item 6)
8	-	Staple cartridge (REF: PL 26.11 Item 2)
9	107E35740	Staple cartridge LED (REP 12.39-150)
10	822E18810	LVF BM Back stop cover (REP 12.1-150)



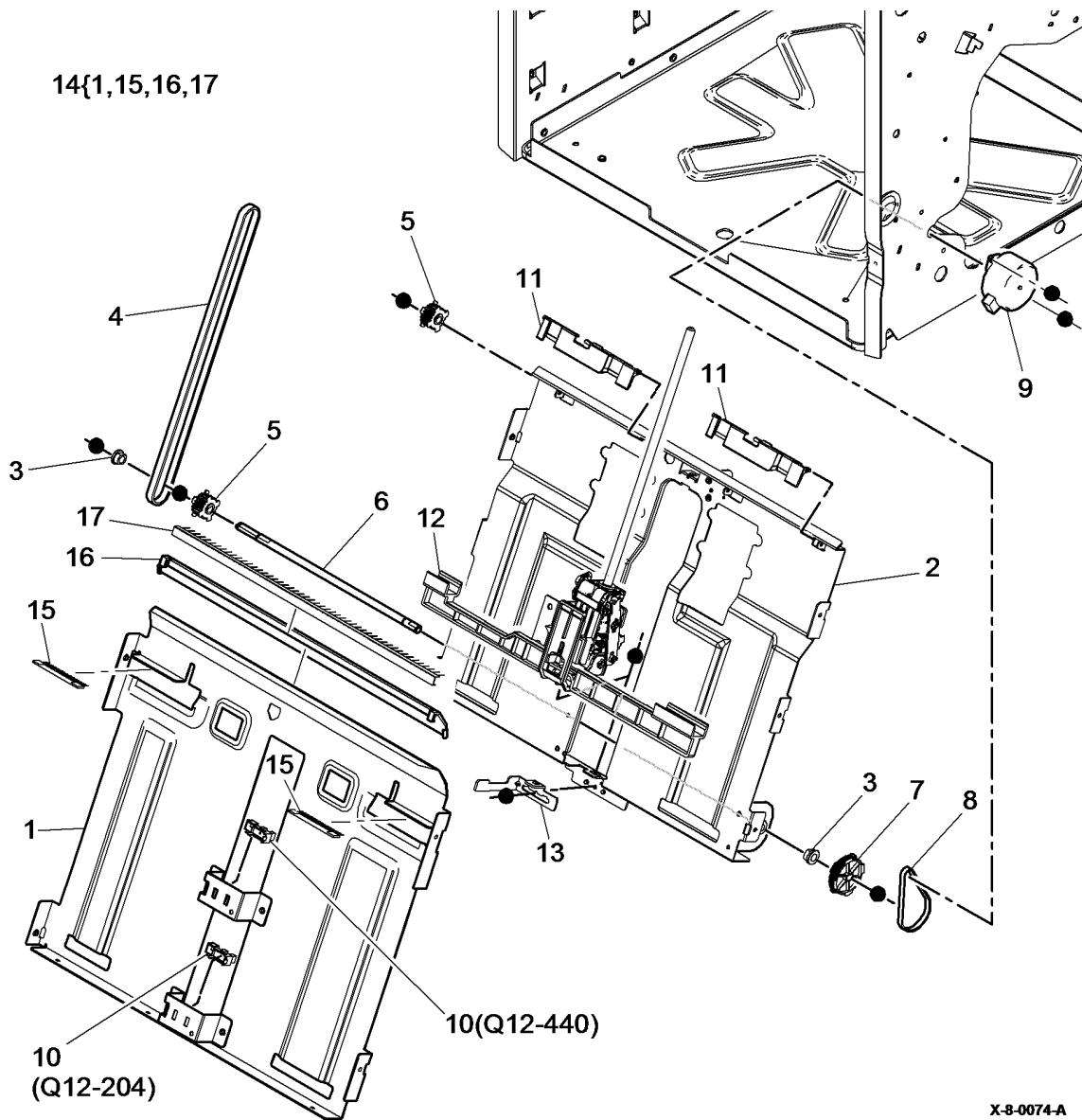
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PL 12.400 LVF BM Back Stop Assembly

Item	Part	Description
1	-	Left guide (P/O PL 12.400 Item 14) (REP 12.19-150)
2	-	Right guide (Not Spared) (REP 12.19-150)
3	016E21260	Bearing
4	-	Belt (Not Spared)
5	-	Pulley (Not Spared)
6	-	Shaft (Not Spared)
7	-	Drive pulley (Not Spared)
8	-	Drive Belt (Not Spared)
9	127K74620	BM Back stop motor (MOT12-255) (REP 12.18-150)
10	130E10360	BM guide home sensor (Q12-204)/ BM back stop mid home sensor (Q12-440) (REP 12.20-150)
11	-	Stapler stop guide (Not Spared)
12	674K08890	Back stop assembly (REP 12.19-150)
13	-	Bracket (Not Spared)
14	674K09350	Back stop left guide assembly (REP 12.19-150)
15	115E13910	Static eliminator (REP 12.19-150)
16	822E33440	Sub plate (See NOTE) (REP 12.19-150)
17	-	Static eliminator (P/O PL 12.400 Item 14)

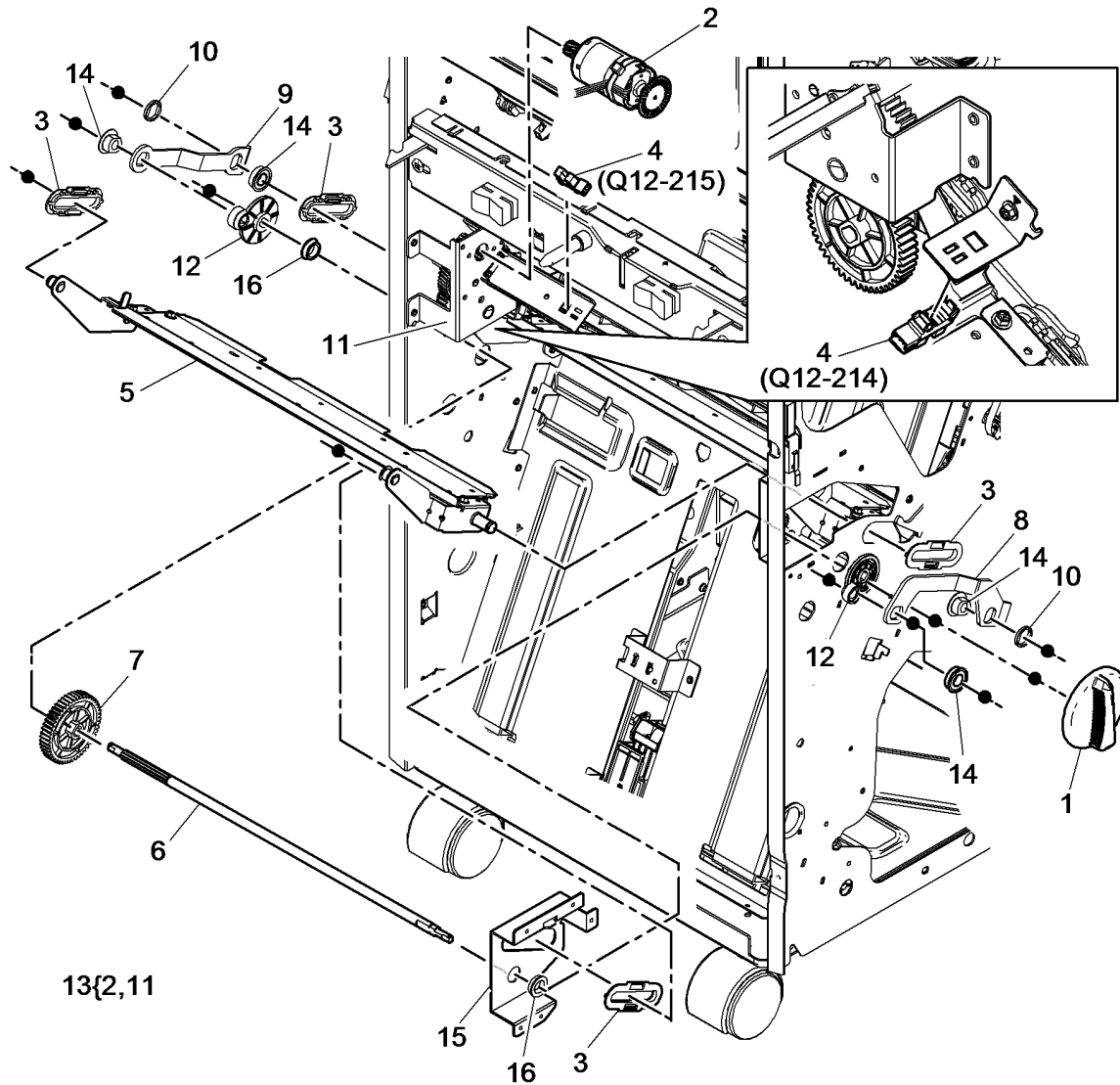
NOTE: Also part of PL 12.400 Item 14.



X-8-0074-A

PL 12.405 LVF BM Crease Blade Assembly

Item	Part	Description
1	803E20901	Crease blade handle (REP 12.23-150)
2	127E17650	BM Crease blade motor (MOT12-252) (REP 12.21-150)
3	011E30810	Crease blade guide (REP 12.22-150)
4	130E10360	BM Crease blade home sensor (Q12-214)/BM Crease blade motor encoder sensor (Q12-215) (REP 12.21-150)
5	037K01490	Crease blade assembly (REP 12.22-150)
6	-	Crease blade shaft (Not Spared)
7	807E46760	Crease blade drive gear (REP 12.23-150)
8	-	Front blade arm (Not Spared)
9	-	Rear blade arm (Not Spared)
10	-	Spacer (Not Spared)
11	-	Crease blade gearbox assembly (P/O PL 12.405 Item 13) (REP 12.21-150)
12	008E08860	Blade crank (REP 12.23-150)
13	007K20511	Crease blade motor assembly (REP 12.21-150)
14	016E21260	Crease blade bearing (REP 12.23-150)
15	-	Bracket (Not Spared)
16	013E43930	Crease blade shaft bearing

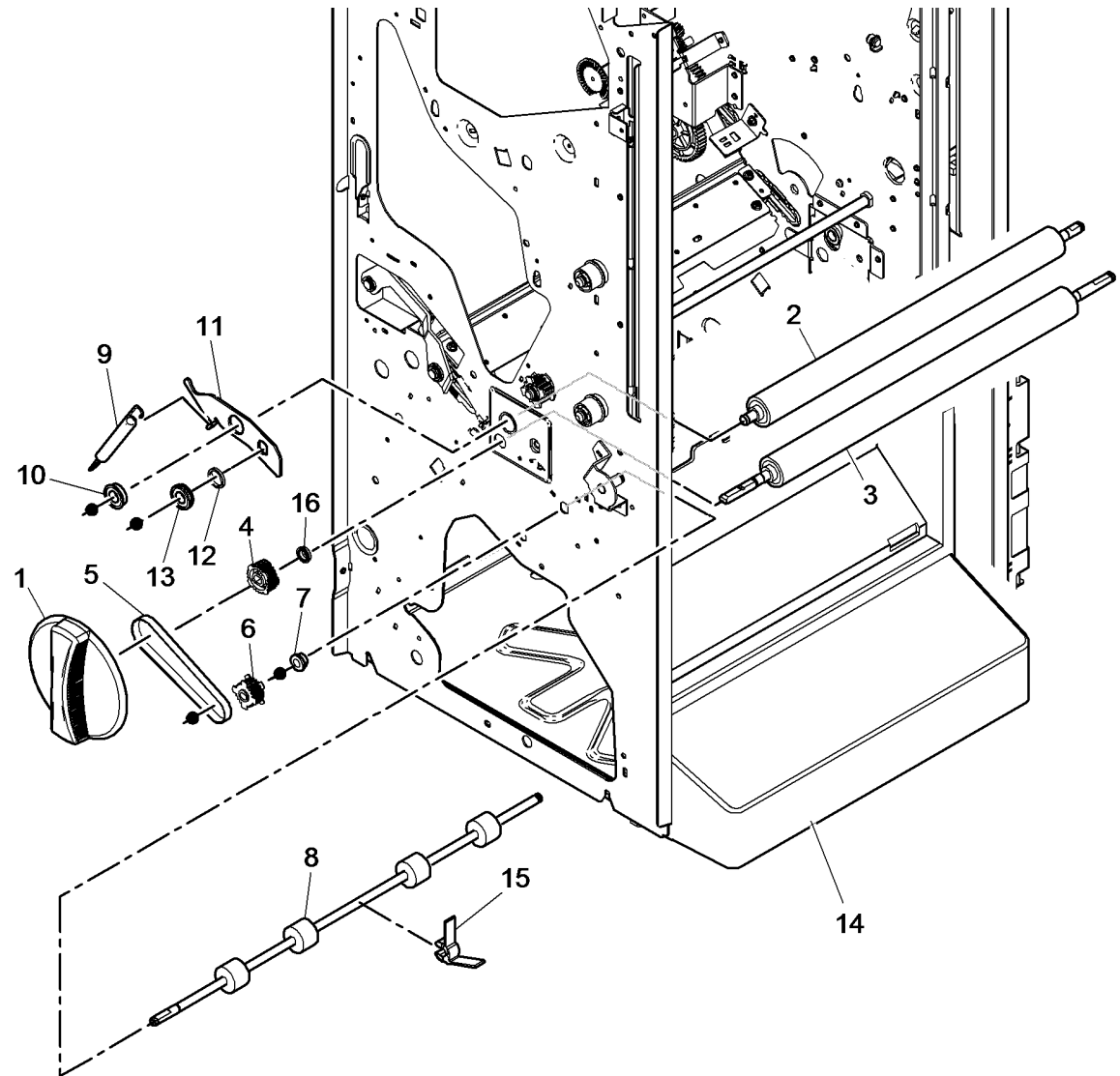


X-8-0075-A

PL 12.410 LVF BM Crease Roll Assembly (1 of 3)

Item	Part	Description
1	803E20911	Crease roll handle (REP 12.24-150)
2	059E11860	Upper crease roll (See NOTE) (REP 12.24-150)
3	059E11870	Lower crease roll (REP 12.24-150)
4	020E55510	Crease roll handle pulley (REP 12.24-150)
5	023E32470	Exit roll belt (REP 12.27-150)
6	020E55520	Exit roll pulley (REP 12.27-150)
7	016E21260	Bush (REP 12.27-150)
8	059K84780	BM exit roll assembly (REP 12.27-150)
9	899E07760	Crease roll spring (x2) (REP 12.24-150)
10	013E43940	Crease roll bearing (REP 12.24-150)
11	031E16710	Front crease roll lever (REP 12.24-150)
12	-	Spacer (Not Spared)
13	-	Bearing (Not Spared)
14	-	Bin 2 support (Not Spared) (REP 12.44-150)
15	-	Exit roll paddle (Not Spared) (REP 12.27-150)
16	013E43930	Lower crease roll bearing

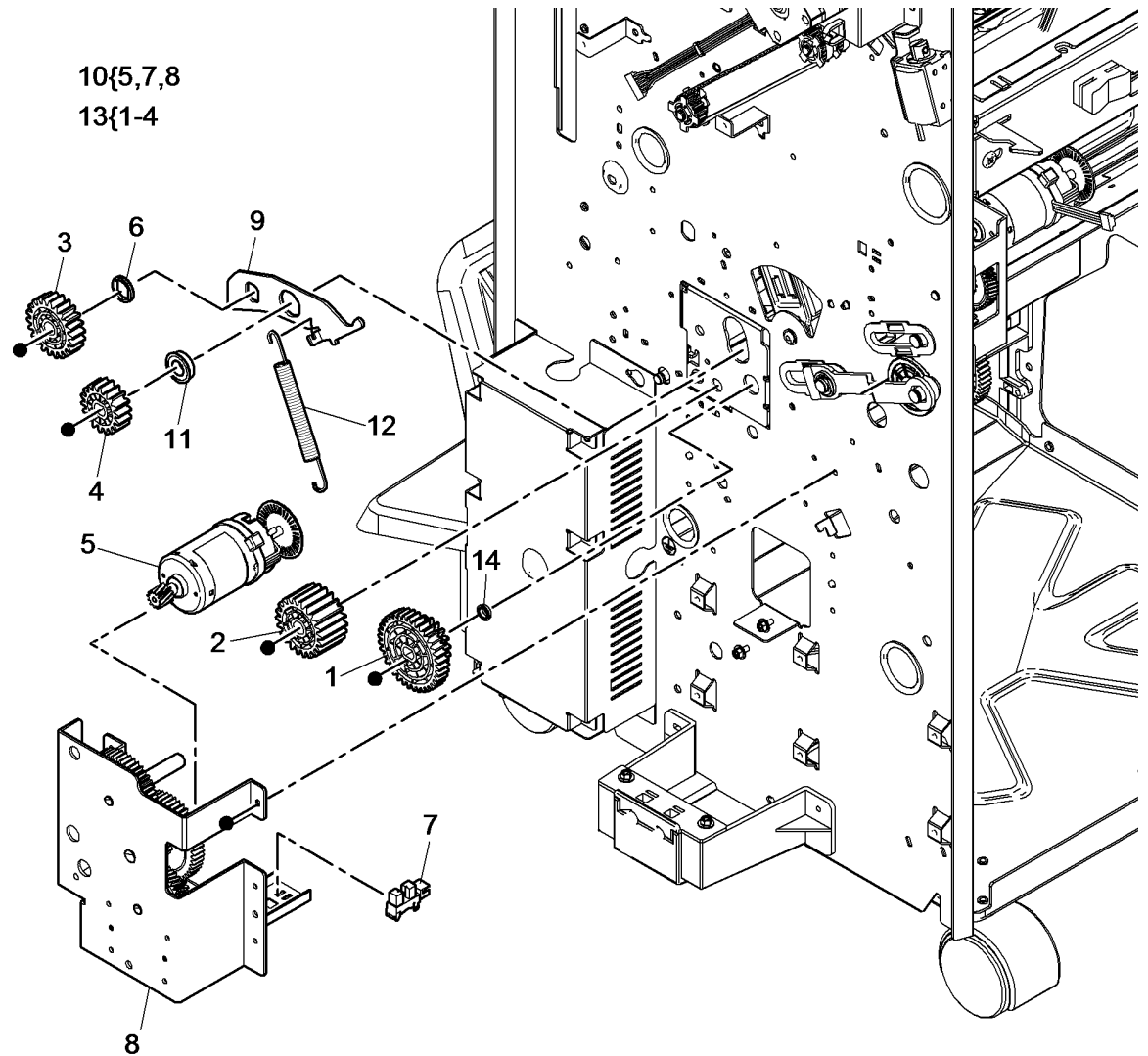
NOTE: Supplied as a pair.



X-8-0076-A

PL 12.415 LVF BM Crease Roll Assembly (2 of 3)

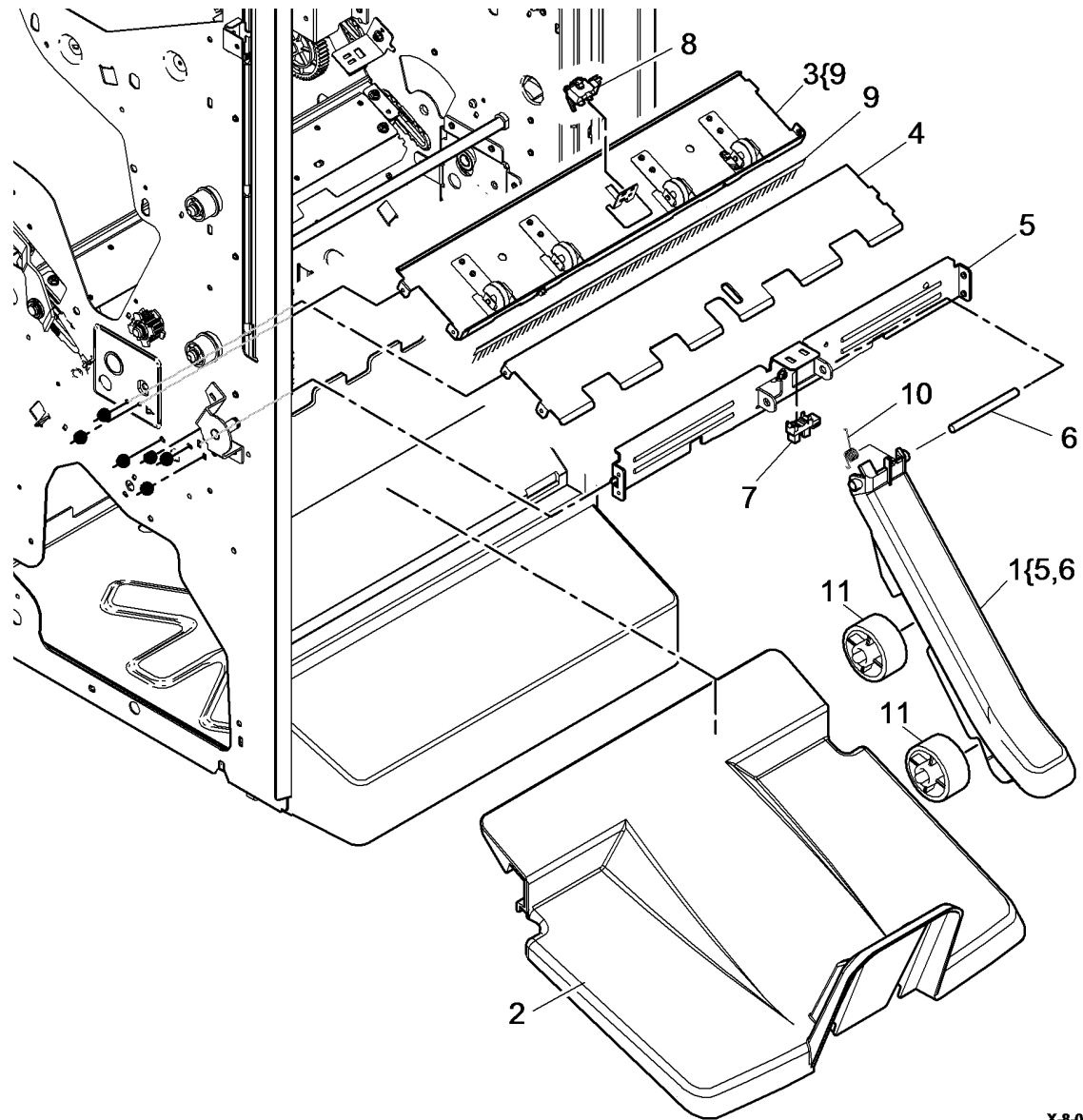
Item	Part	Description
1	-	Crease roll gear 1 (P/O PL 12.415 Item 13) (REP 12.26-150)
2	-	Crease roll gear 2 (P/O PL 12.415 Item 13) (REP 12.26-150)
3	-	Crease roll gear 3 (P/O PL 12.415 Item 13) (REP 12.26-150)
4	-	Crease roll gear 4 (P/O PL 12.415 Item 13) (REP 12.26-150)
5	-	BM Crease roll motor (MOT12-253) (P/O PL 12.415 Item 10) (REP 12.25-150)
6	-	Spacer (Not Spared)
7	130E10360	BM crease roll motor encoder sensor (Q12-216) (REP 12.25-150)
8	-	Crease roll gearbox assembly (P/O PL 12.415 Item 10)
9	031E16720	Rear crease roll lever (REP 12.24-150)
10	007K20520	Crease roll motor and gearbox assembly (REP 12.25-150)
11	013E43940	Crease roll bearing (REP 12.24-150)
12	899E07760	Crease roll spring (x2) (REP 12.24-150)
13	807E46770	Crease roll gear kit (REP 12.26-150)
14	013E43930	Lower crease roll bearing



X-8-0077-A

PL 12.420 LVF BM Crease Roll Assembly (3 of 3)

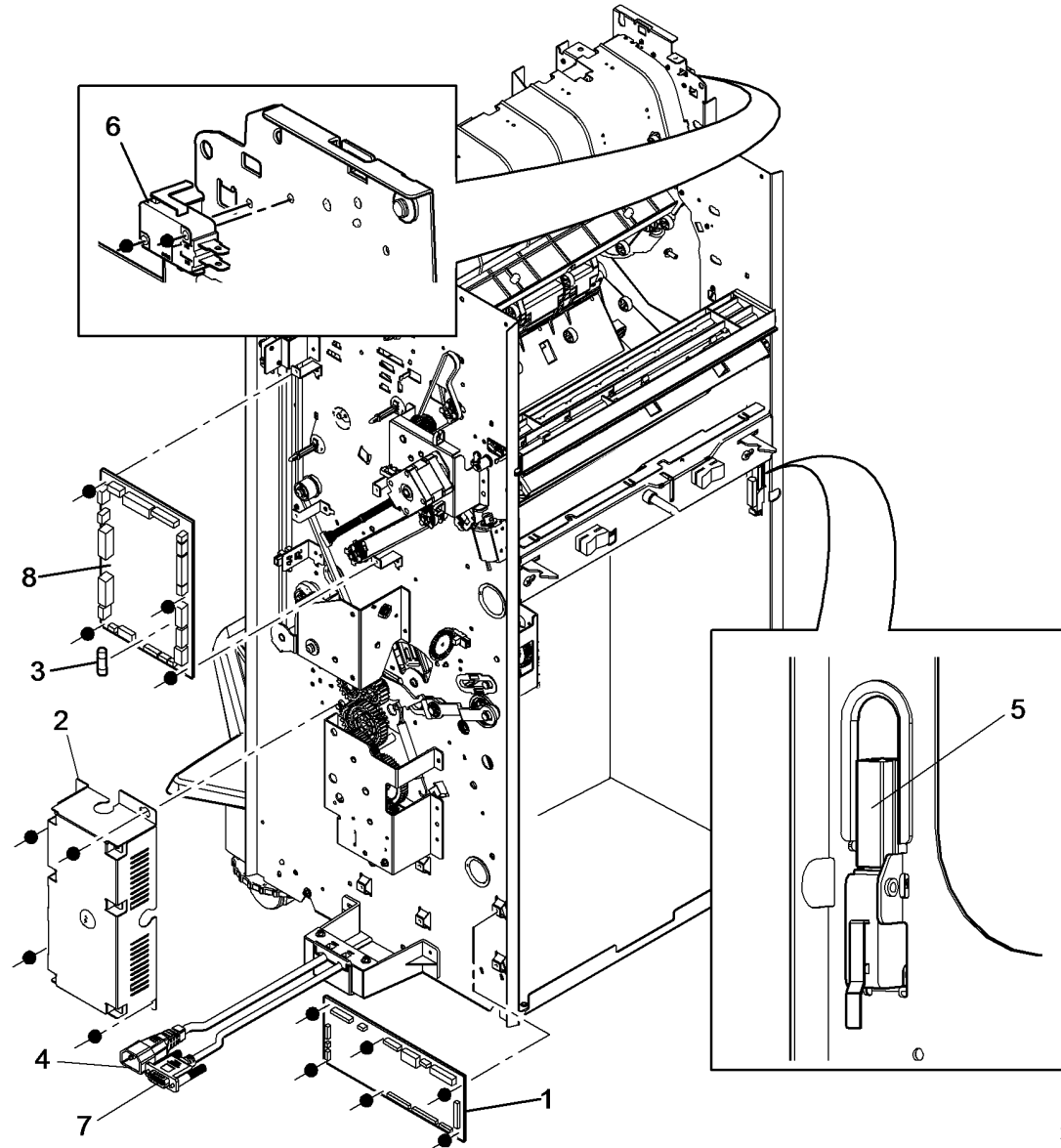
Item	Part	Description
1	031K09230	Bail arm assembly (REP 12.29-150)
2	050E29400	Bin 2
3	032K10330	Exit upper guide assembly (REP 12.28-150)
4	-	Exit lower guide (Not Spared)
5	-	Bail arm support bracket (P/O PL 12.420 Item 1)
6	-	Bail arm pin (P/O PL 12.420 Item 1)
7	130E10360	Bin 2 90% full sensor (Q12-206) (REP 12.29-150)
8	868E93710	BM exit sensor (Q12-213) (REP 12.28-150)
9	-	Static eliminator (P/O PL 12.420 Item 3)
10	899E07770	Bail arm spring (REP 12.29-150)
11	059E11880	Bail arm roller (x2) (REP 12.29-150)



X-8-0078-A

PL 12.425 LVF BM Electrical

Item	Part	Description
1	960K83180	LVF BM PWB (REP 12.36-150)
2	105E24900	Power supply module
3	–	Fuse (Not Spared)
4	–	Power cable (Not Spared)
5	110K13980	Front door interlock switch (S12-303)
6	110K13970	Top cover interlock switch (S12-197)
7	–	Communications cable (Not Spared)
8	960K97500	LVF PWB (REP 12.14-150)



X-8-0079-A

PL 17.00 Secure Access Additions

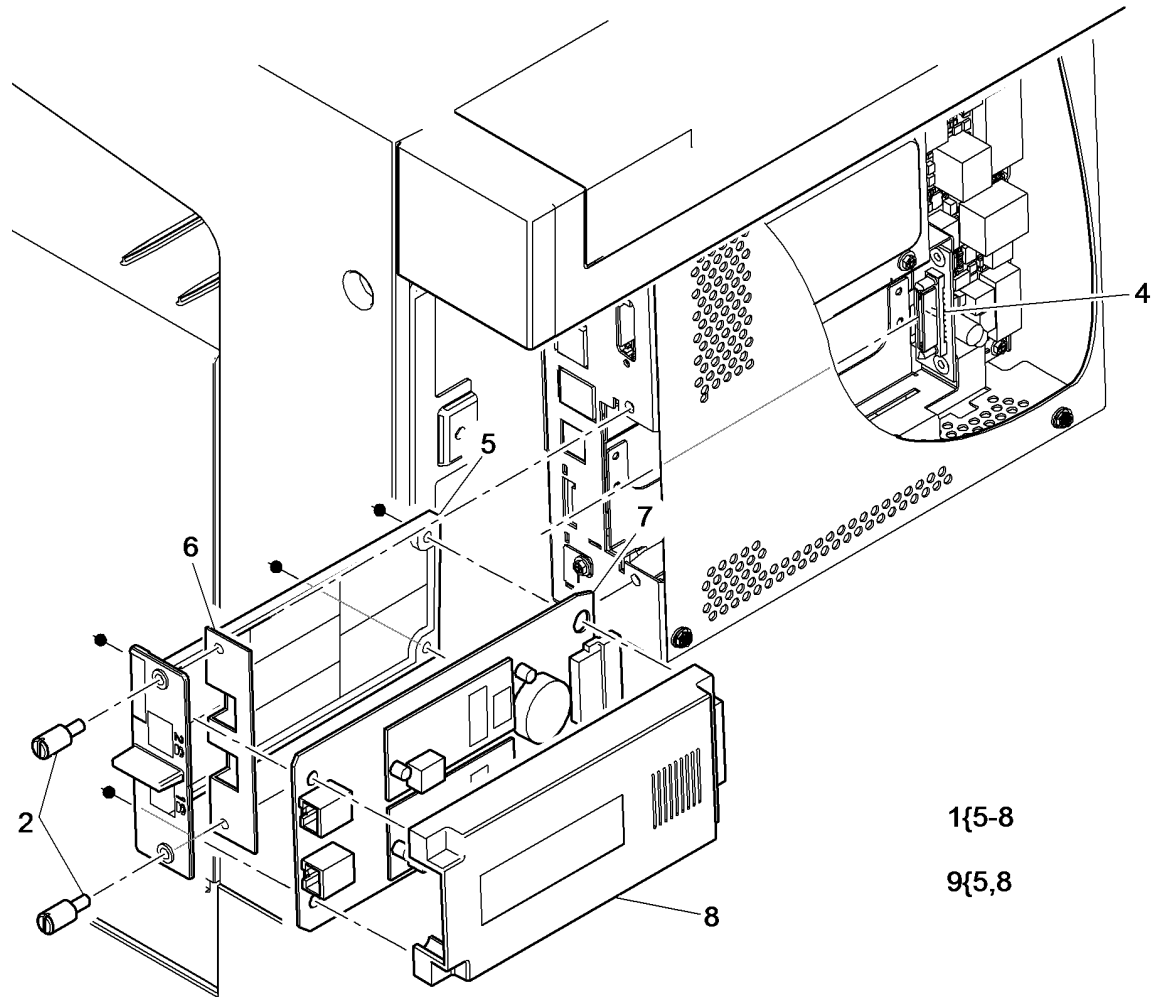
Item	Part	Description
1	–	Secure access controller (Not Spared)
2	–	Xerox secure access power supply (Not Spared)
3	–	Xerox secure access card reader (HID) (Not Spared)
4	–	Xerox secure access card reader (MAGSTRIPE) (Not Spared)
5	–	Xerox secure access card reader (MIFARE) (Not Spared)
6	–	Xerox secure access card reader (LEGIC) (Not Spared)
7	–	Xerox secure access power cord (NA) (Not Spared)
8	–	Xerox secure access power cord (EU) (Not Spared)
9	–	Xerox secure access power cord (UK) (Not Spared)

**NO EXPLODED
VIEW PROVIDED**

X-8-0080-A

PL 20.05 Fax Module

Item	Part	Description
1	-	Fax module
-	-	1 line (P/O PL 31.35 Item 1)
-	-	2 line (P/O PL 31.40 Item 1)
2	-	Thumbscrew (Not Spared)
3	-	Telephone cable - see variants below (not shown on illustration)(Not Spared)
-	-	USSG/XCL
-	-	United Kingdom
-	-	Germany
-	-	Italy
-	-	Netherlands
-	-	Belgium
-	-	Switzerland
-	-	Denmark
-	-	Austria
-	-	Sweden
-	-	France
-	-	Norway
-	-	Portugal/Spain
-	-	Finland
4	960K73340	Fax connector PWB
5	-	Front cover (P/O PL 20.05 Item 9) (REP 20.1)
6	-	Ground plate (P/O PL 20.05 Item 1)
7	-	Fax PWB (see below for variants) (REP 20.1)
-	-	1 line Cfax34 (P/O PL 31.35 Item 2) (REP 20.1)
-	-	2 line Cfax34 (P/O PL 31.40 Item 2) (REP 20.1)
8	-	Rear cover (P/O PL 20.05 Item 9) (REP 20.1)
9	848E74310	Covers assembly (REP 20.1)



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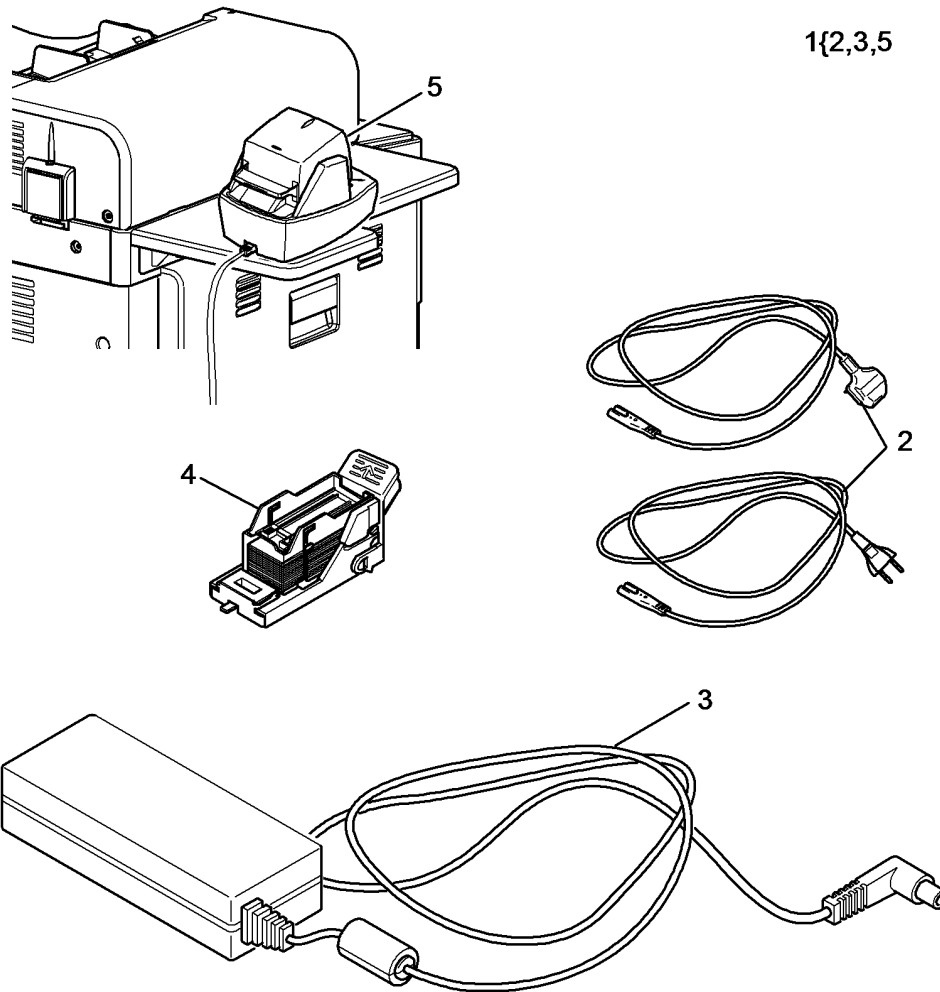
X-8-0081-A

PL 25.10 Convenience Stapler

Item	Part	Description
1	-	Convenience stapler kit (REF: PL 31.11 Item 5) (See NOTE)
2	-	Power cord (P/O PL 25.10 Item 1)
3	-	PSU (P/O PL 25.10 Item 1)
4	-	Staple cartridge (REF: PL 26.10 Item 11) (See NOTE 2)
5	-	Convenience stapler (P/O PL 25.10 Item 1) (XE)
-	-	Convenience stapler (USSG/XCL) (P/O PL 25.10 Item 1)

NOTE: 1. The convenience stapler has no serviceable parts.

NOTE: 2. To replace staples only, order PL 26.11 Item 4.



X-8-0082-A

PL 26.10 Consumables and Tools (1 of 2)

Item	Part	Description
1	043P00065	Abrasive cloth
2	043P00048	Formula A cleaning fluid (WARNING)
3	600T02133	Line test tool
4	043P00045	Film remover (WARNING)
5	600T02231	USB Cable
6	600T02252	Ethernet crossover cable
7	600T02261	Finisher bypass connector
8	043E00550	Plastislip grease
9	043P00081	Lens and mirrors cleaner
10	099P03037	Disposable gloves (general protection) (Qty. 100) (WARNING)
11	008R12964	Staple cartridge (1 cartridge x 5000 staples)
12	070P00072	Molykote silicone dry lubricant
13	035E56460	Wiper
14	082E02000	Test pattern (A3/11x17)
15	082E02010	Test pattern (A4)
16	082E02020	Test pattern (8.5x11)
17	082E08230	Test pattern (solid area density scale)
18	082P00448	Test pattern (visual scale)
19	008R90275	Antistatic fluid
20	070P00043	Molub grease 777
21	146E02700	USB Reader (HITAG)
22	008R90176	Cleaning fluid (WARNING)
23	070E00460	Moovit oil
24	600T02332	Data cable



WARNING

Wear protective gloves, PL 26.10 Item 10 and eye protection when using solvents and cleaning agents.

NO EXPLODED VIEW PROVIDED

X-8-0083-A

PL 26.11 Consumables and Tools (2 of 2)

Item	Part	Description
1	600T91940	Air duster
2	–	Staple cartridges
–	029K04820	1 cartridge (2000 staples)
–	108R01158	4 cartridges (4 x 2000 staples)
–	108R00493	Staple cartridge (3 x 5000) (LCSS/ LVF BM)
3	006R01604	Toner cartridge (x2) pack (WW Metered)
–	006R01605	Toner cartridge (x2) (USSG/XCL/ XE) SOLD
–	006R01683	Toner cartridge (x2) DMO SOLD
4	008R12941	Staple cartridge refill (staples only - 3 x 5000)
5	–	Handset tool (Not Spared)
6	070E01480	Hi-Lube grease (ADJ 40.1)
7	600T02470	LVPS Module test tool
8	600T02329	PFP stack height sensor and retard shield setting tool (ADJ 70.5)
9	603T80454	High conductive grease (50ml)
10	600T02490	RIFT service extension cable (Data and Power)
11	–	Staple cartridge (HVF)
–	008R12912	1 cartridge (1 x 5000)
–	008R12898	3 cartridges (3 x 5000)
12	008R12897	Staple cartridge (HVF BM) (8 x 2000 staples)

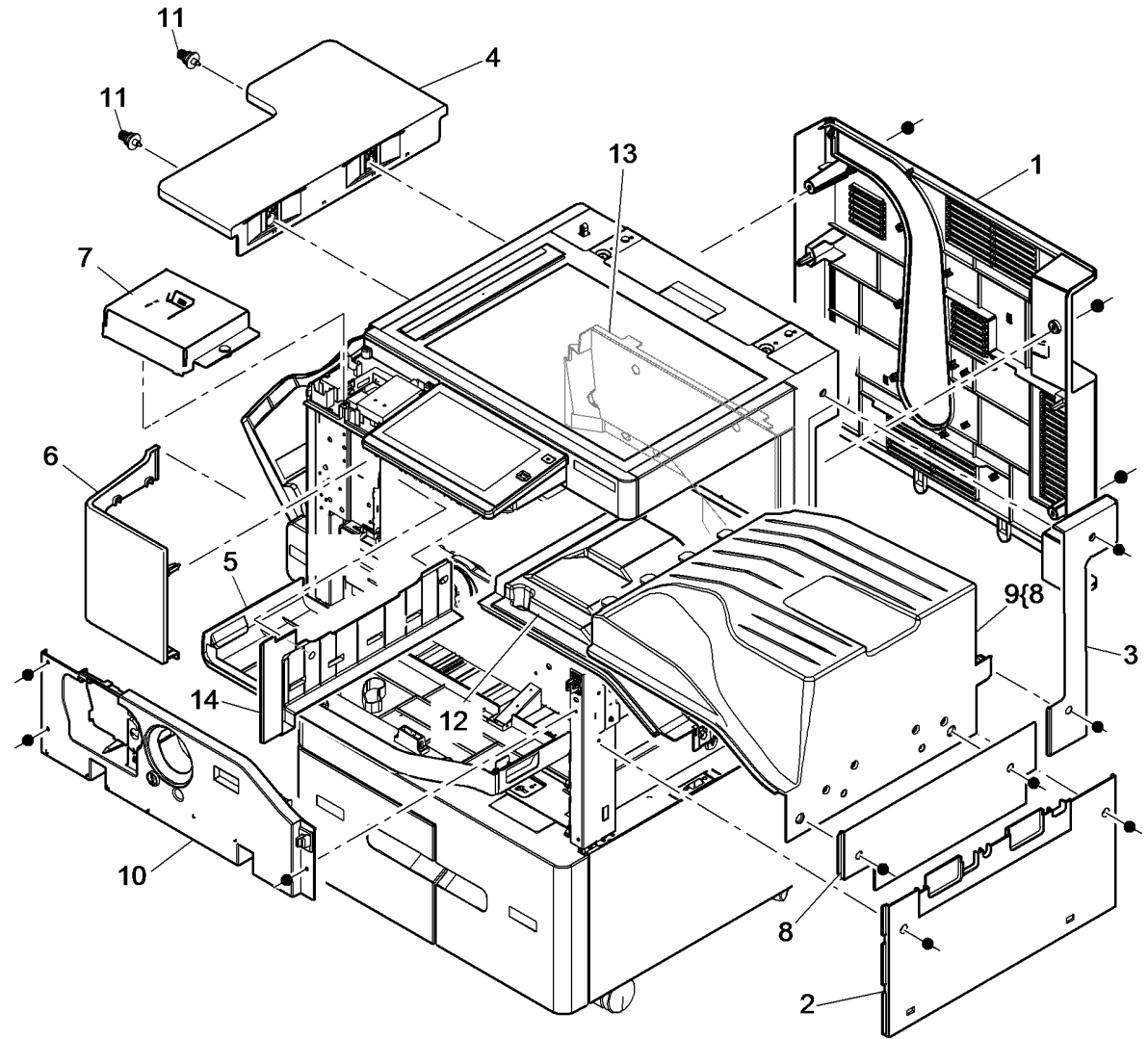
**NO EXPLODED
VIEW PROVIDED**

X-8-0084-A

PL 28.10 Main Covers

Item	Part	Description
1	948K30491	Rear cover (45-55ppm) (REP 28.2)
-	948K30503	Rear cover (REF: PL 10.9) (65-90 ppm) (See NOTE)
2	-	Right cover (Not Spared)
3	-	Upper right cover (Not Spared) (REP 28.1)
4	-	Work shelf (P/O PL 31.11 Item 13)
5	-	Front door assembly (REF: PL 28.11)
6	822E44753	Left frame cover (REP 28.1)
7	-	Left column upper cover (REF: PL 2.10 Item 9)
8	-	Centre output tray blanking cover (P/O PL 28.10 Item 9)
9	-	Centre output tray (P/O PL 31.14 Item 16) (REP 10.9)
10	948K24482	Inner front cover
11	-	Thumbscrew (P/O PL 28.10 Item 4)
12	-	Inner machine cover (Not Spared) (REP 28.3)
13	-	Back plate (Not Spared)
14	-	Left inside cover (Not Spared)

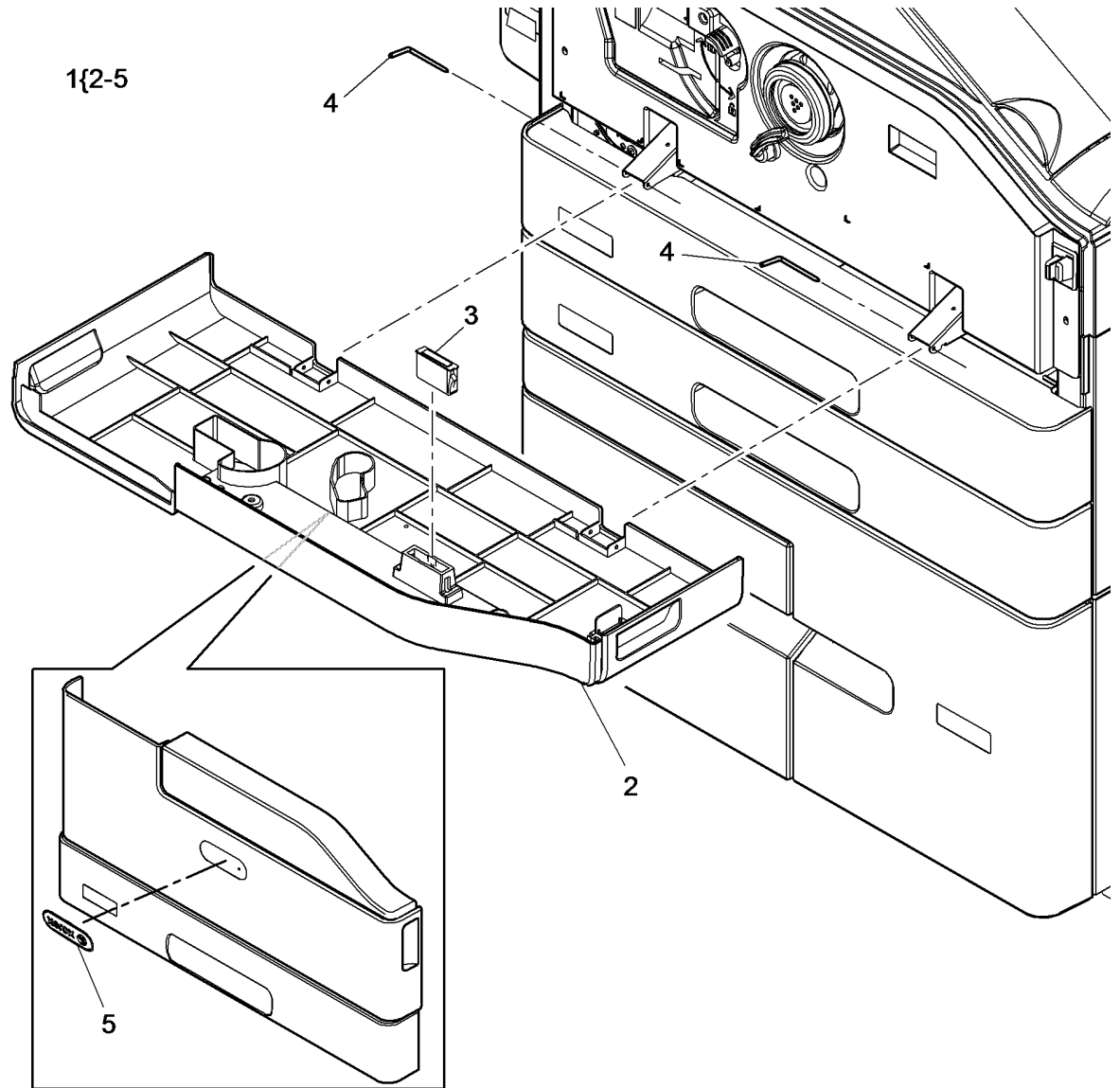
NOTE: This rear cover assembly also contains PL 10.9 Items 1-13.



X-8-0085-A

PL 28.11 Front Door Assembly

Item	Part	Description
1	948K24523	Front door assembly
2	-	Front cover assembly (P/O PL 28.11 Item 1)
3	-	Magnet (P/O PL 28.11 Item 1)
4	-	Door hinge pin (P/O PL 28.11 Item 1)
5	-	Logo badge (P/O PL 28.11 Item 1)



X-8-0086-A

PL 28.15 Covers

Item	Part	Description
1	–	SPDH covers (REF: PL 5.10)
2	–	Tray 3 and 4 assembly covers (REF: PL 70.26)
3	–	Main covers (REF: PL 28.10)
4	–	2K LCSS covers (REF: PL 12.10)
5	–	Scanner covers (REF: PL 60.15)
6	–	LVF BM covers (REF: PL 12.320)
7	–	HVF covers (REF: PL 12.100)
8	–	Tri-Folder covers (REF: PL 12.200)
9	–	Tray 6 covers (REF: PL 75.60)

**NO EXPLODED
VIEW PROVIDED**

X-8-0087-A

PL 31.11 Maintenance/Installation/ Removal Kits (1 of 3)

Item	Part	Description
1	–	Fax adapter kit (see below for variants) (Not Spared)
–	–	UK, Ireland, Spain, Portugal, Greece
–	–	France, Netherlands, Belgium
–	–	Germany, Austria, Italy, Switzerland
–	–	Sweden, Norway, Finland, Denmark
2	–	Hole punch kit (see below for variants)
–	604K55190	2 hole punch kit (legal) (USSG/XCL)
–	498K14090	4 hole punch kit (Sweden) (LCSS)
–	604K55180	4 hole punch kit (XE)
–	604K55200	4 hole punch kit (Sweden)
–	497K14960	3 hole punch kit
–	498K17940	4 hole punch kit (Sweden) (HVF)
–	498K17930	4 hole punch kit (XE) (HVF)
–	498K14080	2 hole punch kit (XE) (HVF)
–	498K14070	4 hole punch kit (XE) (LCSS)
–	498K14050	2 hole punch kit (XE) (HVF)
–	498K14041	3 hole punch kit (USSG/XCL) (HVF)
–	498K14030	2 hole punch kit (XE) (HVF)
3	–	Bin 1 tray kit (improved stacking) (Not Spared)
4	497K17160	Paper tray security kit
5	–	Convenience stapler kit (XE) (See NOTE 2)
–	–	Convenience stapler kit (USSG/XCL) (See NOTE 2)
6	–	Scanner drive kit (Not Spared)
7	–	SPDH feed roll kit (See NOTE 2)
8	604K83690	HCF transport roll kit
9	604K84840	Shaft and roll assembly spare kit
10	607K06880	Adjustable retard shield kit
11	607K08160	Lower feed assembly kit
12	604K55480	Feed roll kit
13	–	Work shelf kit (See NOTE 2)
14	604K84480	Feed roll retrofit kit
15	498K19200	20 Amp adapter kit

**NO EXPLODED
VIEW PROVIDED**

X-8-0088-A

NOTE: 1. Do not order 497/8K parts. 497/8K parts are customer install kits and are shown for reference only.

NOTE: 2 Part number not available at time of publication.

PL 31.12 Maintenance/Installation/ Removal Kits (2 of 3)

Item	Part	Description
1	–	BM back stop repair kit (Not Spared)
2	604K73060	Paddle shaft assembly
3	498K17546	Smarcard enablement kit
4	–	2K LCSS front door cover assembly kit (Not Spared)
5	604K73050	Paddle spares kit
6	607K04331	Feed head assembly spares kit
7	497K16610	Keyboard kit
8	604K96681	Tray 4 transport shaft kit
9	497K18180	Envelope tray kit
10	497K11500	Wireless network adapter kit
11	497K14650	Foreign device interface kit
12	–	Hole punch field repair kit (Not Spared)
13	497K17960	RFID kit
14	604K83720	LCSS diverter gate assembly spares kit
15	604K83641	Feed/Nudger/Retard roll spares kit
16	604K84020	Stack height sensor and shim kit
17	130K75900	HVF low level sensor - spares pack
18	–	Tray 6 Large paper kit (65-90 ppm) (See NOTE 2)
19	–	Tray 6 paper feed kit (A4 SEF option) (65-90 ppm) (See NOTE 2)
–	–	Tray 6 paper feed kit (8.5 x 11 SEF option) (See NOTE 2)
20	–	Tri-Folder install kit (complete) (See NOTE 2)
21	–	HVF ejector assembly safety cover kit (Not Spared)
22	607K07950	HVF support finger kit
23	607K08151	HVF ejector assembly kit
24	607K21090	HCF Right tray elevator motor kit

NOTE: 1. Do not order 497/8K parts. 497/8K parts are customer install kits and are shown for reference only. .

NOTE: 2 Part number not available at time of publication

**NO EXPLODED
VIEW PROVIDED**

X-8-0089-A

PL 31.14 Maintenance/Installation/ Removal Kits (3 of 3)

Item	Part	Description
1	–	Initialisation kits (see below for variants)
–	097S04856	45 ppm (Page pack enabled)
–	097S04857	55 ppm (Page pack enabled)
–	097S04858	45 ppm (Speed only)
–	097S04859	55 ppm (Speed only)
–	097S04864	65 ppm (Page pack enabled)
–	097S04865	65 ppm (Speed only)
–	097S04866	75 ppm (Speed only)
–	097S04869	90 ppm (Speed only)
–	097S04870	75 ppm (Page pack enabled)
–	097S04871	90 ppm (Speed only)
–	097S04873	90 ppm (Page pack enabled)
2	–	SIM kits (see below for variants)
–	607K17640	45 ppm (Page pack enabled) (XE)
–	607K17650	55 ppm (Page pack enabled) (XE)
–	–	Billing impression mode (45 ppm) (See NOTE 3)
–	–	Billing impression mode (55 ppm) (See NOTE 3)
–	607K17660	65 ppm (BIM - Page pack enabled) (XE)
–	607K17670	75 ppm (BIM - Page pack enabled) (XE)
–	607K17680	90 ppm (BIM - Page pack enabled) (XE)
3	607K04371	Left door repair kit (Not Spared)
4	604K84190	FAR HCF bowl curl kit
5	497K16590	Horizontal transport kit
6	604K97710	Tray 3 front cover kit
7	600T02458	Left door damper spring tool kit (See NOTE 2)
8	604K97721	Tray 4 front cover kit
9	–	Power cord kit (USSG/XCL) (Not Spared)
10	–	Doc present sensor actuator kit (Not Spared)
11	–	SPDH upper tray spares kit (Not Spared)
12	–	Last sheet out sensor spares kit (Not Spared)
13	–	Horizontal transport motor grounding kit (Not Spared)
14	–	SPDH Mylar kit (Not Spared)
15	–	Separation assembly kit (Not Spared)
16	–	Centre output tray kit (See NOTE 3)
17	607K18850	A3 Stopper kit

NOTE: 1. Do not order 497/8K parts. 497/8K parts are customer install kits and are shown for reference only.

NOTE: 2. Refer to GP 37 for correct use of these tools when removing left door assembly.

NOTE: 3 Part number not available at time of publication.

**NO EXPLODED
VIEW PROVIDED**

X-8-0090-A

PL 31.35 Line 1 Fax Kits

Item	Part	Description
1	–	Line 1 Fax kits (see below for variants) (See NOTE 1)
–	497K16410	CFax (XE)
–	497K16430	CFax (USSG/XCL)
–	497K16470	CFax34 (United Kingdom, Spain, Greece, Ireland, Portugal)
–	497K16480	CFax34 (Netherlands, Belgium, France)
–	–	CFax34 (Austria, Germany, Switzerland, Italy) (See NOTE 2)
–	497K16500	CFax34 (Sweden, Norway, Finland, Denmark)
–	497K16550	CFax34 (Brazil)
2	–	Line 1 Fax PWB kits (see below for variants)
–	607K09570	CFax34

NOTE: 1. Do not order 497/8K parts. 497/8K parts are customer install kits and are shown for reference only.

NOTE: 2. Part number not available at time of publication.

**NO EXPLODED
VIEW PROVIDED**

X-8-0091-A

PL 31.40 Line 2 Fax Kits

Item	Part	Description
1	–	Line 2 Fax kits (see below for variants) (See NOTE 1)
–	497K11290	Brazil
–	497K16420	CFax (XE)
–	497K16440	CFax (USSG/XCL)
–	497K16510	CFax34 (United Kingdom, Spain, Greece, Ireland, Portugal)
–	–	CFax34 (Austria, Germany, Switzerland, Italy) (See NOTE 2)
–	497K16530	CFax34 (Sweden, Norway, Finland, Denmark)
–	497K16540	CFax34 (Netherlands, Belgium, France)
–	497K16560	CFax34 (Brazil)
2	–	Line 2 Fax PWB kits (see below for variants)
–	607K09580	CFax34

NOTE: 1. Do not order 497/8K parts. 497/8K parts are customer install kits and are shown for reference only.

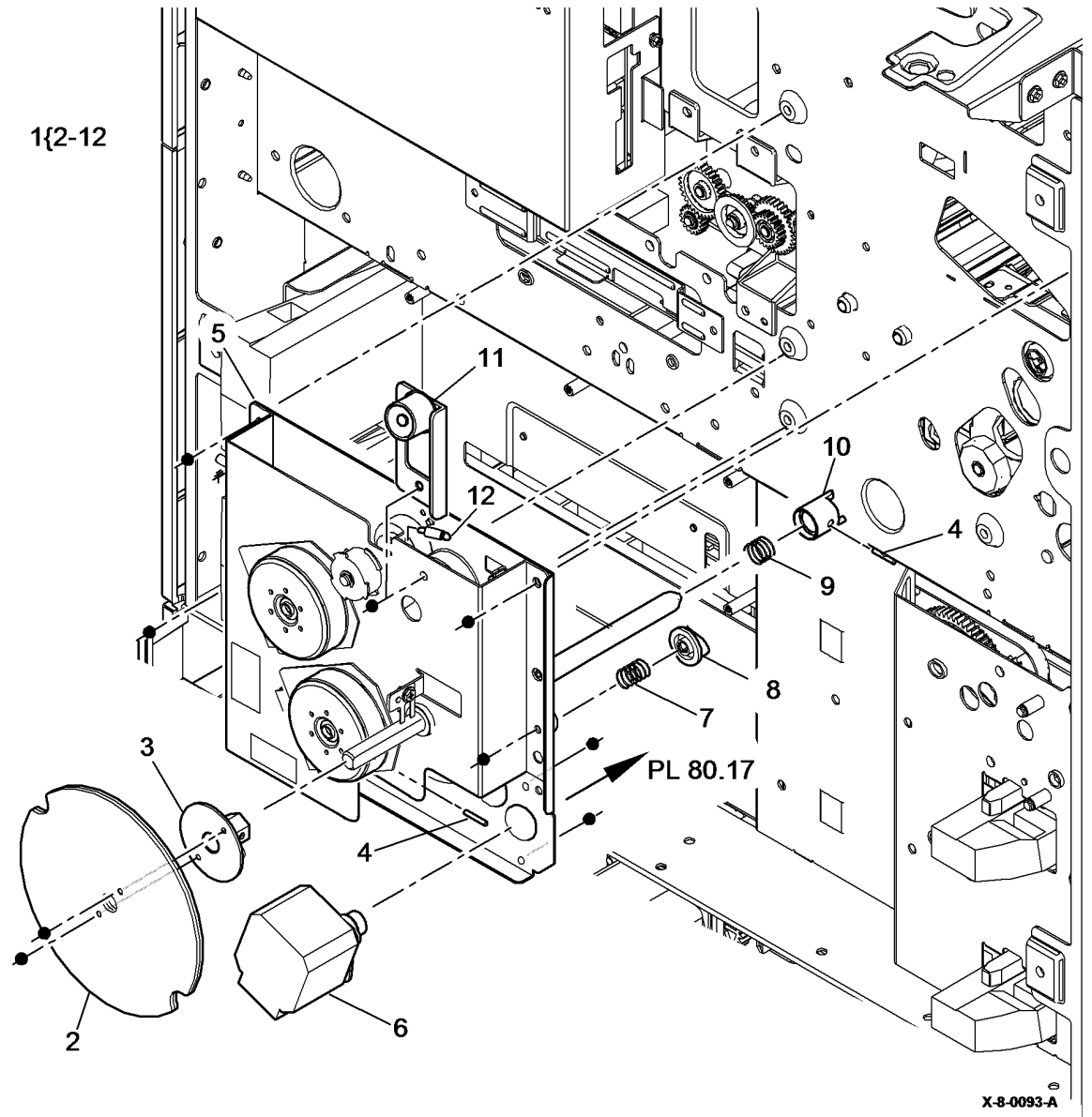
NOTE: 2. Part number not available at time of publication.

**NO EXPLODED
VIEW PROVIDED**

X-8-0092-A

PL 40.15 Main Drive Module

Item	Part	Description
1	007K20788	Main drive module (45-55 ppm) (REP 40.1, ADJ 40.1)
-	007K28170	Main drive module (65-90 ppm) (REP 40.1, ADJ 40.1)
2	-	Flywheel (P/O PL 40.15 Item 1)
3	-	Flywheel clamp (P/O PL 40.15 Item 1)
4	-	Dowel pin (P/O PL 40.15 Item 1)
5	-	Main drive unit (P/O PL 40.15 Item 1)
6	127E17792	Registration motor (REP 40.2)
7	-	Spring (P/O PL 40.15 Item 1)
8	-	Developer dog gear (P/O PL 40.15 Item 1)
9	-	Spring (P/O PL 40.15 Item 1)
10	-	Photoreceptor dog gear (P/O PL 40.15 Item 1)
11	-	Tensioner (P/O PL 40.15 Item 1)
12	-	Tension spring (P/O PL 40.15 Item 1)

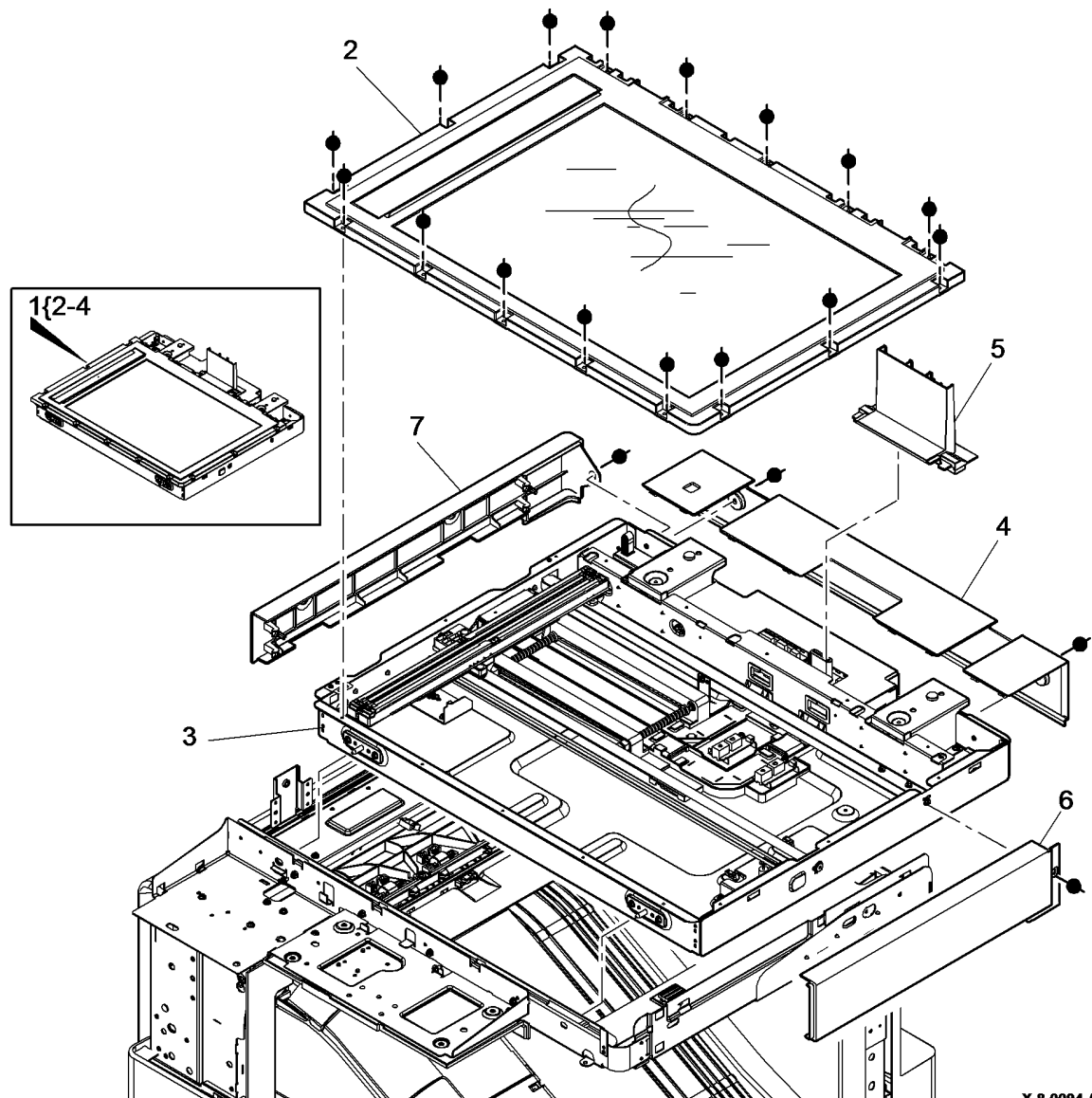


PL 60.15 Scanner Module, CVT/ Document Glass

Item	Part	Description
1	062K31110	Scanner module (REP 60.2)
2	948K29440	Top cover assembly (See NOTE 2) (REP 60.3)
3	–	Base (P/O PL 60.15 Item 1)
4	–	Rear cover (REP 60.1)
5	–	SPDH harness guide (P/O PL 60.15 Item 1)
6	–	Right cover (P/O PL 60.15 Item 1)
7	–	Left cover (P/O PL 60.15 Item 1)

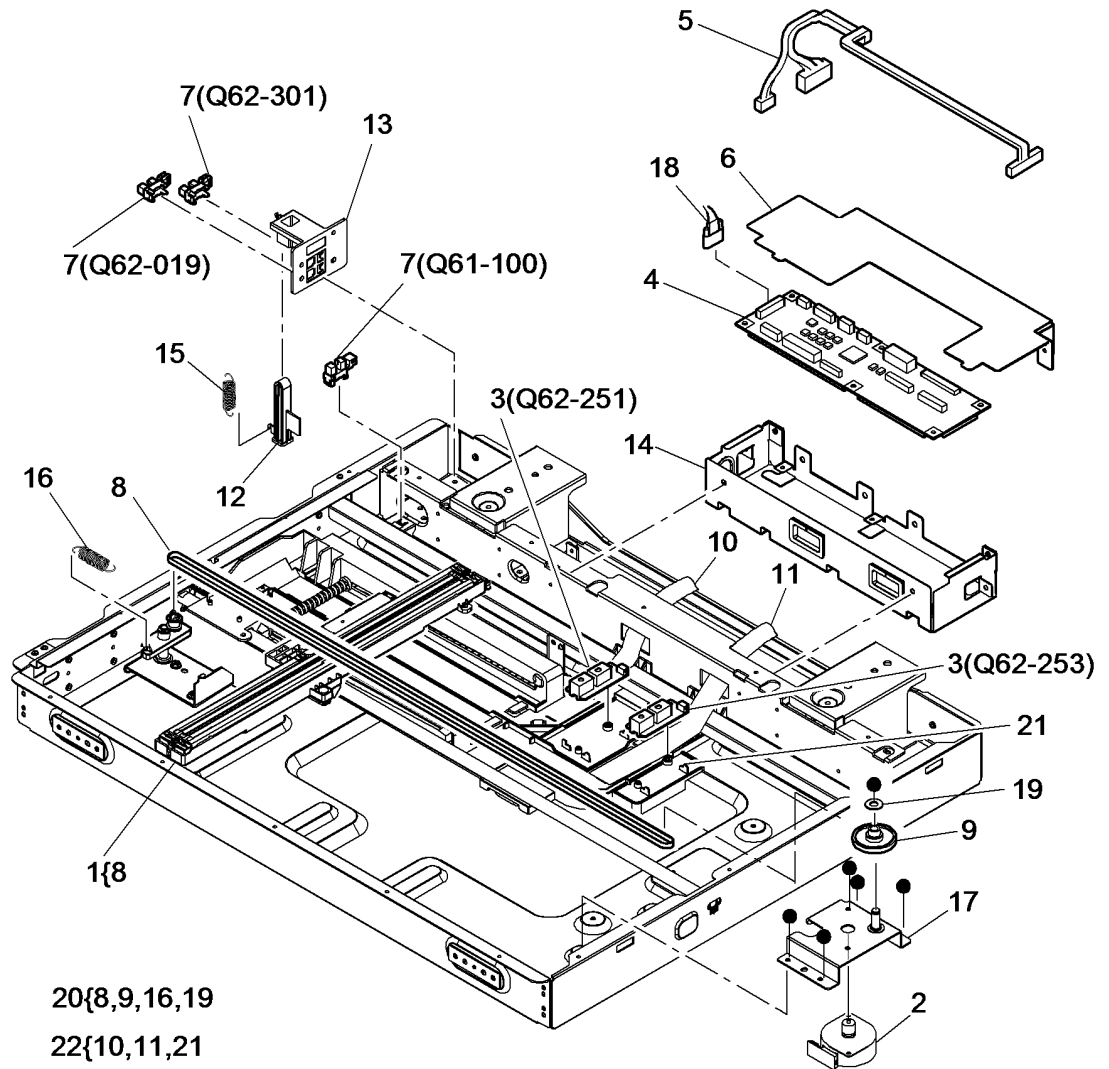
NOTE: 1.Refer to ADJ 60.1 for the scanner cleaning procedure.

NOTE: 2.The top cover assembly includes the CVT glass and the platen glass.



PL 60.20 Scanner Electrical Components

Item	Part	Description
1	-	Scan carriage assembly (REF: PL 60.25 Item 1) (REP 60.5)
2	927K06840	Scan carriage motor assembly (MOT62-031) (REP 60.9)
3	130E22840	Document size sensor 1 (Q62-251), Document size sensor 2 (Q62-253) (REP 60.11)
4	961K00080	Scanner PWB (REP 60.4)
5	-	SBC PWB/Scanner PWB comms/power harness (REF: PL 3.22 Item 13)
6	-	Faraday shield (Not Spared) (REP 60.1)
7	130E22820	Carriage home sensor (Q62-100)/DH angle sensor (Q62-301)/DH platen down sensor (Q62-019) (P/O PL 60.20 Item 13) (REP 60.8)
8	-	Scan carriage drive belt (P/O PL 60.20 Item 20) (REP 60.10)
9	-	Scan carriage drive pulley (P/O PL 60.20 Item 2) (REP 60.11)
10	117E50590	Scan carriage power ribbon cable (REP 60.7)
11	117E50580	Scan carriage data ribbon cable (REP 60.7)
12	-	SPDH angle sensor actuator (P/O PL 60.20 Item 13) (REP 60.8)
13	930K05880	Actuator support assembly (REP 60.8)
14	-	Scanner PWB support (Not Spared)
15	-	Actuator spring (P/O PL 60.20 Item 13)
16	-	Tension spring (Not Spared)
17	-	Mounting plate (P/O PL 60.20 Item 2)
18	117E50600	SBC PWB/Scanner PWB data cable (REF: PL 3.22 Item 23)
19	-	Pulley flange (P/O PL 60.20 Item 2)
20	-	Scanner drive kit (Not Spared)
21	-	Scanner harness support (P/O PL 60.20 Item 22)
22	952K60500	Scanner FFC harness assembly

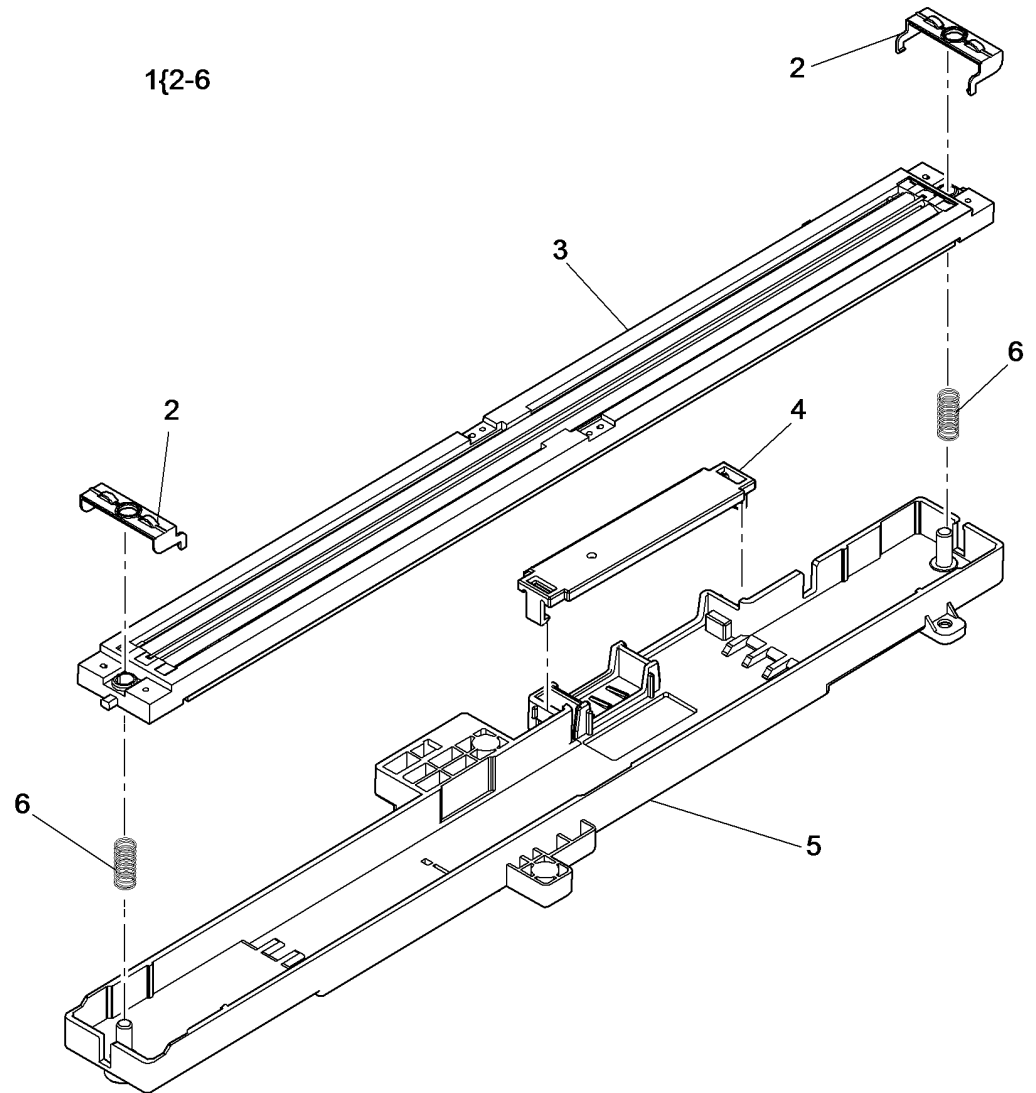


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NOTE: Refer to ADJ 60.1 for the scanner cleaning procedure.

PL 60.25 Scan Carriage Assembly

Item	Part	Description
1	041K07020	Scan carriage assembly (REP 60.5)
2	-	Retaining clip (P/O PL 60.25 Item 1)
3	-	Scanner assembly (P/O PL 60.25 Item 1)
4	-	Ribbon cable retainer (P/O PL 60.25 Item 1)
5	-	Scan carriage base (P/O PL 60.25 Item 1)
6	-	Spring (P/O PL 60.25 Item 1)

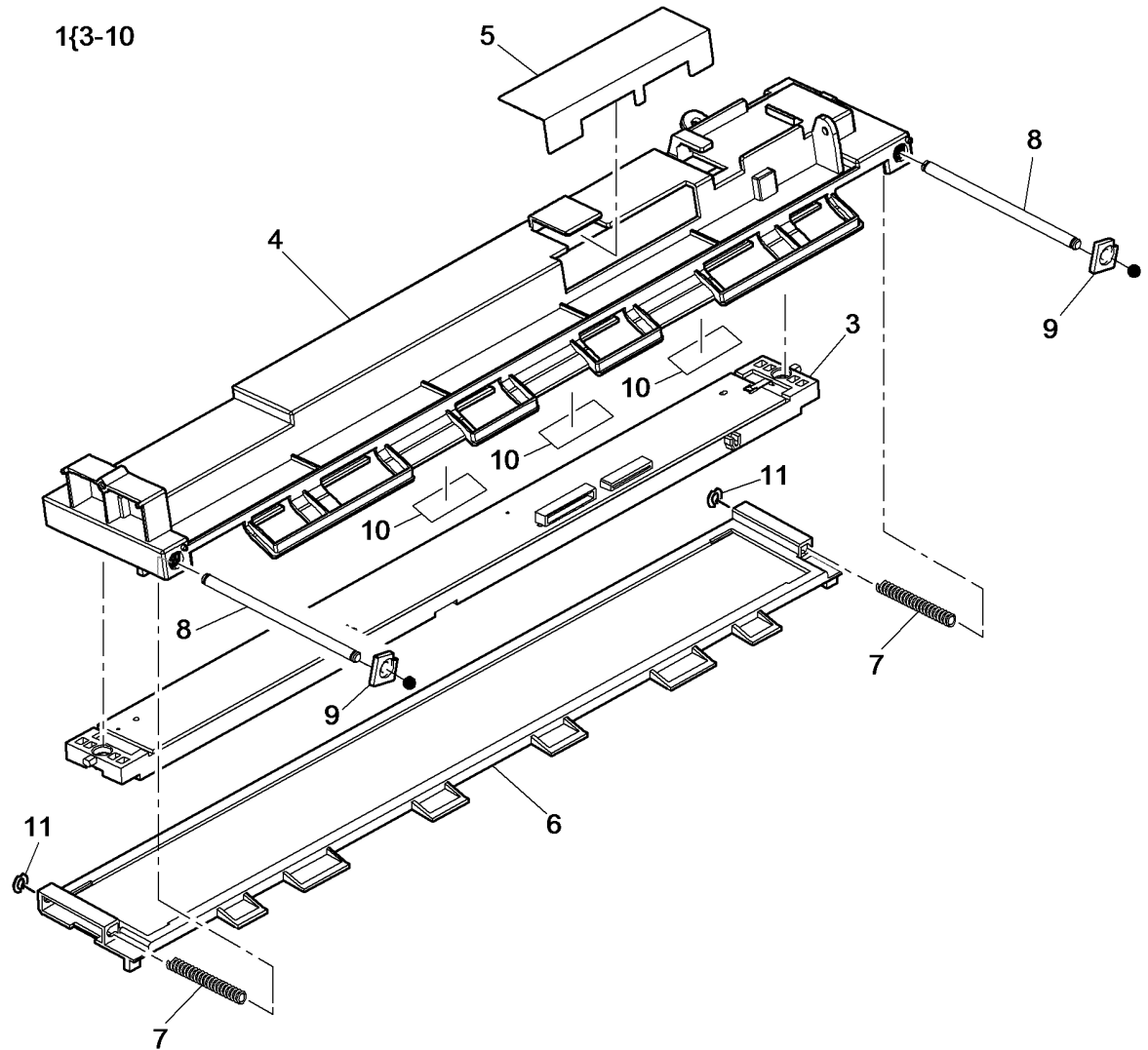


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PL 60.30 Side 2 Scan Assembly

Item	Part	Description
1	801K77730	Side 2 scan assembly (REP 60.6)
2	-	Not used
3	-	Side 2 scanner assembly (P/O PL 60.30 Item 1)
4	-	Scan carriage unit (P/O PL 60.30 Item 1)
5	-	Ribbon cable shield (P/O PL 60.30 Item 1)
6	-	Lower cover and glass assembly (P/O PL 60.30 Item 1)
7	-	Spring (P/O PL 60.30 Item 1)
8	-	Shaft (P/O PL 60.30 Item 1)
9	-	Front retaining clip (P/O PL 60.30 Item 1)
10	-	Mylar (P/O PL 60.30 Item 1)
11	-	Rear retaining clip (P/O PL 60.30 Item 1)

NOTE: Refer to ADJ 60.2 for the side 2 scan assembly cleaning procedure.

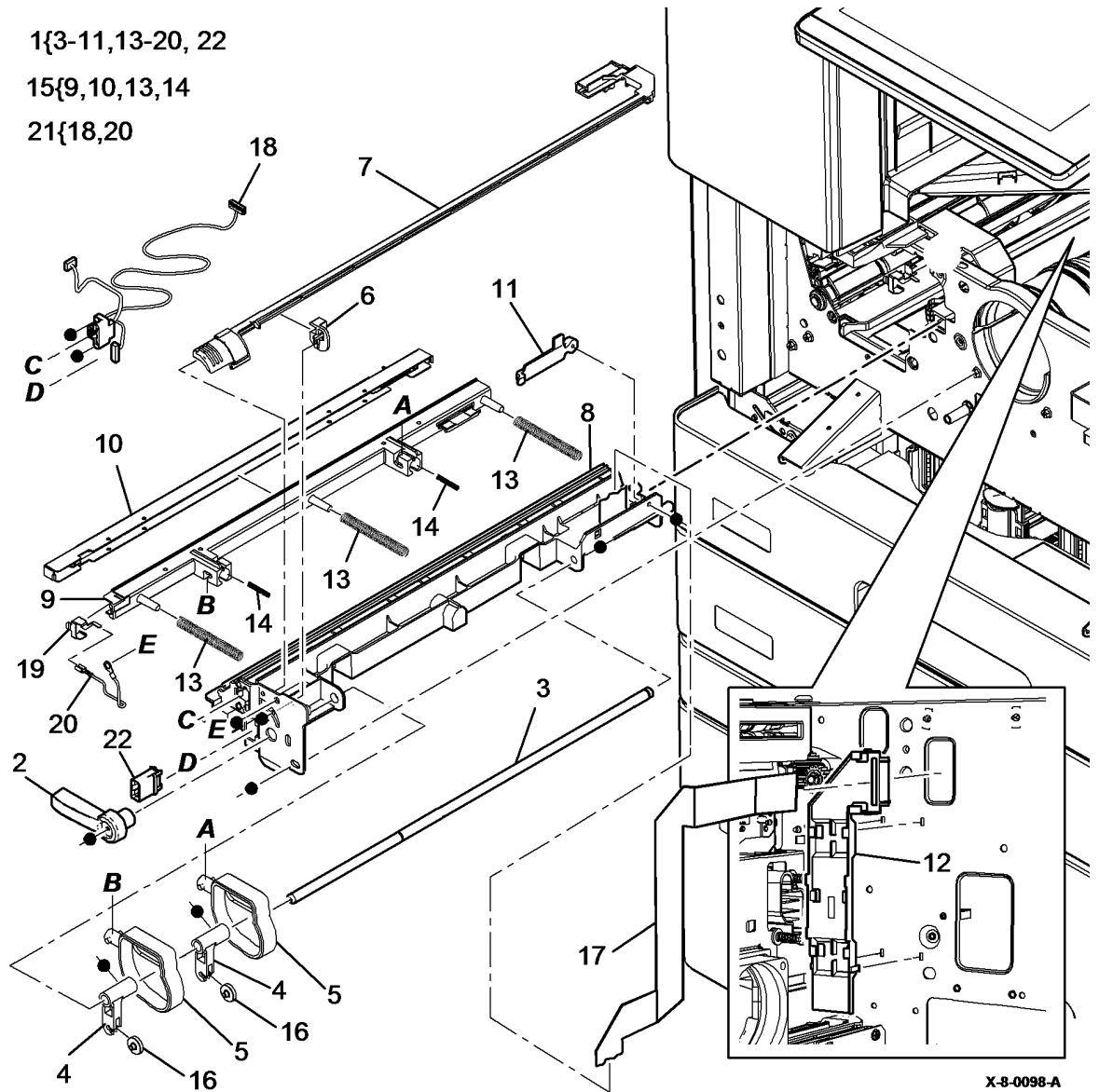


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PL 60.35 LED Print Head Module

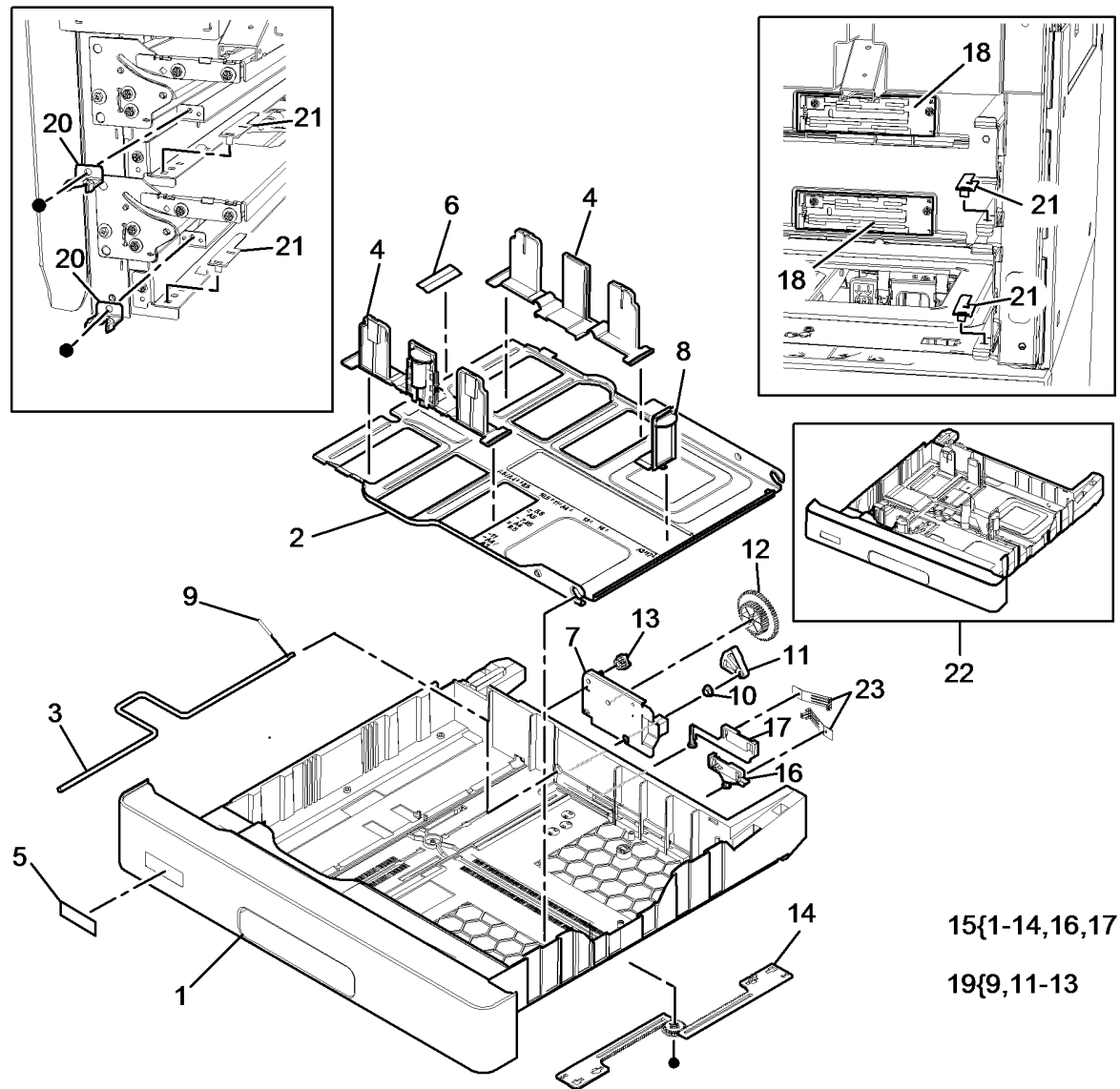
Item	Part	Description
1	008K02579	LED print head module (REP 60.12)
2	011E30932	Latch
3	-	Cam shaft (P/O PL 60.35 Item 1)
4	-	Cam (P/O PL 60.35 Item 1)
5	-	Cam cover (P/O PL 60.35 Item 1)
6	-	Locking bracket (P/O PL 60.35 Item 1)
7	-	LED print head cleaner (P/O PL 60.35 Item 1)
8	-	Housing (P/O PL 60.35 Item 1)
9	-	LED carrier (P/O PL 60.35 Item 1)
10	-	LED print head (P/O PL 60.35 Item 1)
11	-	Cable clamp (P/O PL 60.35 Item 1)
12	-	Ribbon cable support (Not Spared)
13	-	LED spring (P/O PL 60.35 Item 1)
14	-	Cam spring (P/O PL 60.35 Item 1)
15	-	LED print head assembly (P/O PL 60.35 Item 1) (REP 60.12)
16	-	Cam roller (P/O PL 60.35 Item 1)
17	-	LED print head module to SBC PWB ribbon cable (P/O PL 60.35 Item 1)
18	-	CRUM connectors assembly (P/O PL 60.35 Item 21) (REP 60.12)
19	-	Retaining clip (P/O PL 60.35 Item 1)
20	-	Grounding cable (P/O PL 60.35 Item 21)
21	952K37725	LED print head harness set
22	-	Connector (P/O PL 60.35 Item 1)

NOTE: Refer to ADJ 60.4 for cleaning the LED print head.



PL 70.10 Tray 1 and 2 Assembly

Item	Part	Description
1	-	Tray housing (P/O PL 70.10 Item 15)
2	-	Lift plate (P/O PL 70.10 Item 15)
3	-	Lift arm (P/O PL 70.10 Item 15)
4	-	Paper width guide (P/O PL 70.10 Item 15) (REP 70.3)
5	-	Label (P/O PL 70.10 Item 15)
6	-	Pad (P/O PL 70.10 Item 15)
7	-	Retaining plate (P/O PL 70.10 Item 15) (REP 70.12)
8	-	Paper length guide (P/O PL 70.10 Item 15) (REP 70.3)
9	-	Dowel pin (P/O PL 70.10 Item 19) (REP 70.12)
10	-	Bearing (P/O PL 70.10 Item 15) (REP 70.12)
11	-	Quadrant gear (60T) (P/O PL 70.10 Item 19) (REP 70.12)
12	-	Gear (60T) (P/O PL 70.10 Item 19) (REP 70.12)
13	-	Gear (13T) (P/O PL 70.10 Item 19) (REP 70.12)
14	-	Rack assembly (P/O PL 70.10 Item 15)
15	850K04110	Tray assembly (REP 70.1, ADJ 40.1)
16	-	Length sensor bracket assembly (P/O PL 70.10 Item 15)
17	-	Width sensor bracket assembly (P/O PL 70.10 Item 15)
18	960K79745	Paper size sensing PWB (REP 70.4)
19	859K04220	Lift gear kit (REP 70.12)
20	819E15872	Tray clip
21	819E20350	Slide pad
22	-	Envelope tray assembly (P/O PL 31.12 Item 9)
23	869E35810	Paper size leaf spring



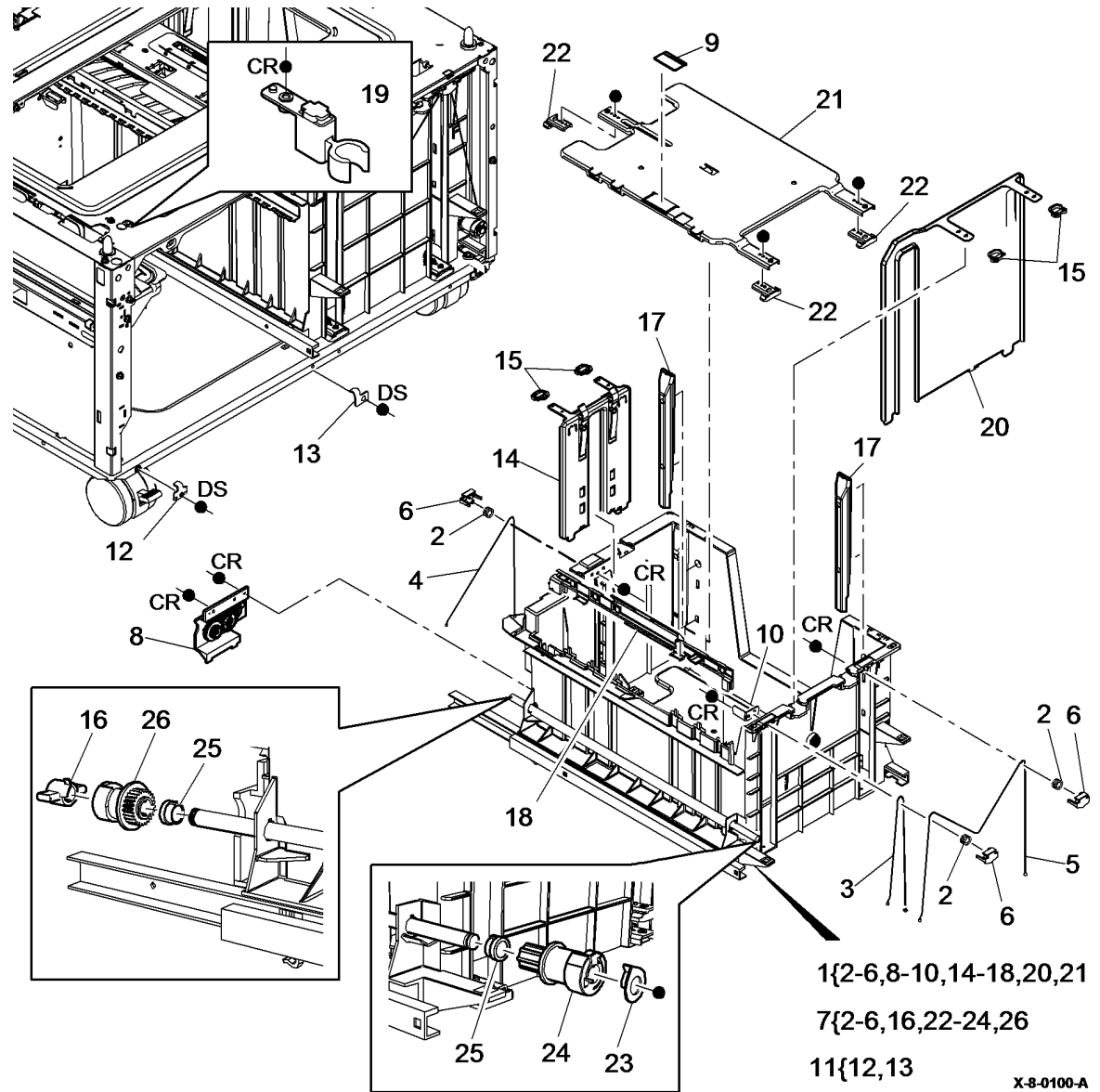
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19{9,11-13

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PL 70.18 Tray 3 Assembly

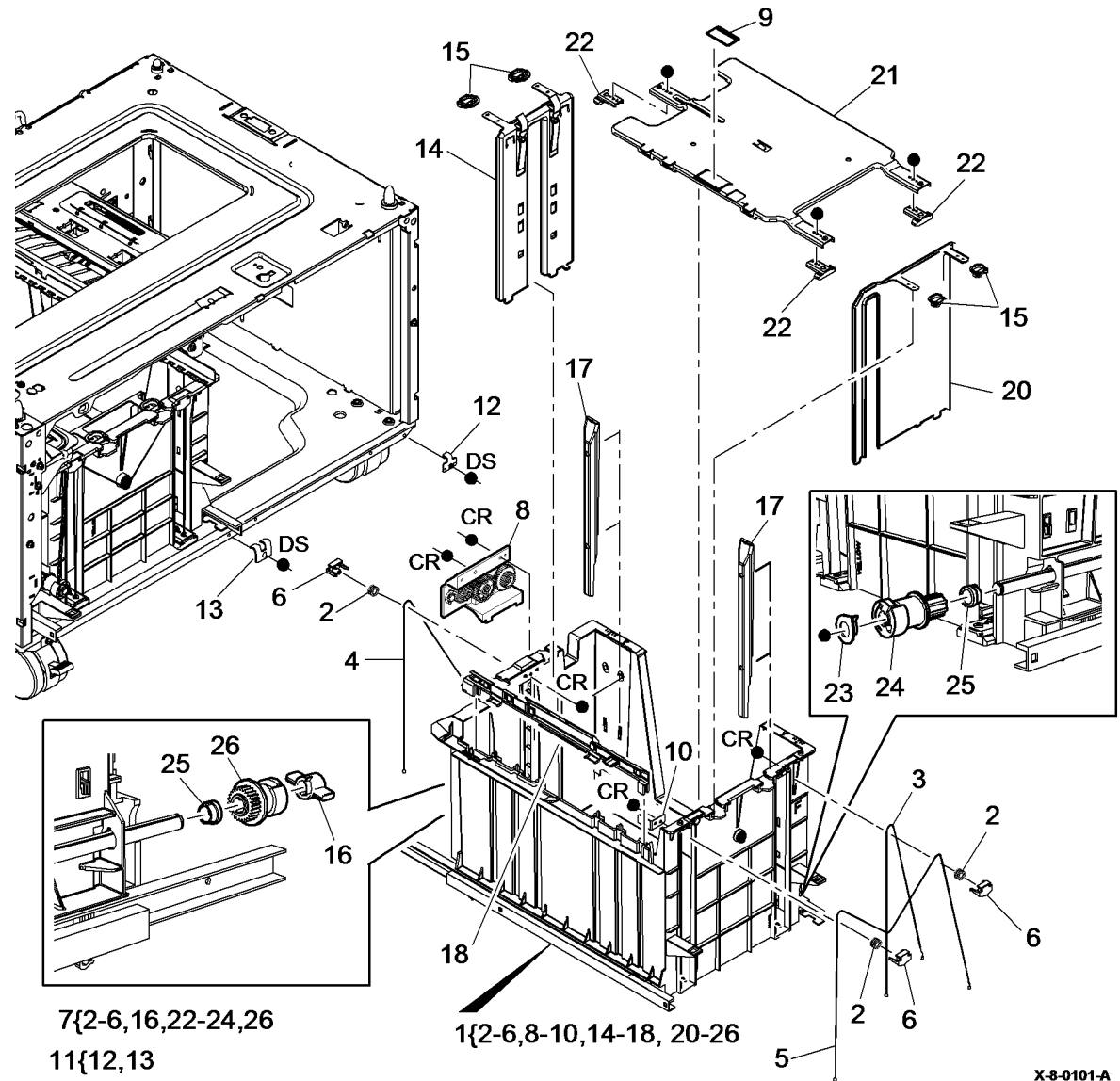
Item	Part	Description
1	050K77271	Tray 3 assembly (REP 70.5)
2	-	Tray hoist pulley (P/O PL 70.18 Item 7)
3	-	Front short elevator cable (P/O PL 70.18 Item 7)
4	-	Rear elevator cable (P/O PL 70.18 Item 7)
5	-	Front long elevator cable (P/O PL 70.18 Item 7)
6	-	Pulley carrier (P/O PL 70.18 Item 7)
7	604K84091	Tray 3 elevator cable kit (REP 70.8)
8	004K07860	Tray 3 elevate damper assembly (REP 70.11)
9	-	Retard pad (Not Spared)
10	-	Tray 3 skew bracket (P/O PL 31.14 Item 4)
11	604K83671	Tray 3 and 4 clamp kit
12	-	Side clamp (2 off) (P/O PL 70.18 Item 11)
13	-	Centre clamp (P/O PL 70.18 Item 11)
14	-	Rear paper guide (P/O PL 70.18 Item 1) (ADJ 70.1)
15	819E27770	Retaining clips
16	-	Elevator drives gear coupling (P/O PL 70.18 Item 7)
17	-	Tray 3 paper guide (P/O PL 70.18 Item 1)
18	815E92301	Separation strip
19	819E20420	Front clip (ADJ 80.5)
20	-	Front paper guide (P/O PL 70.18 Item 1) (ADJ 70.1)
21	-	Lift plate (P/O PL 70.18 Item 1)
22	-	Guide plate (P/O PL 70.18 Item 7)
23	-	Spacer (P/O PL 70.18 Item 7)
24	-	Elevator pulley (P/O PL 70.18 Item 7)
25	-	Bearing (P/O PL 70.18 Item 1)
26	-	Elevator gear (P/O PL 70.18 Item 7)



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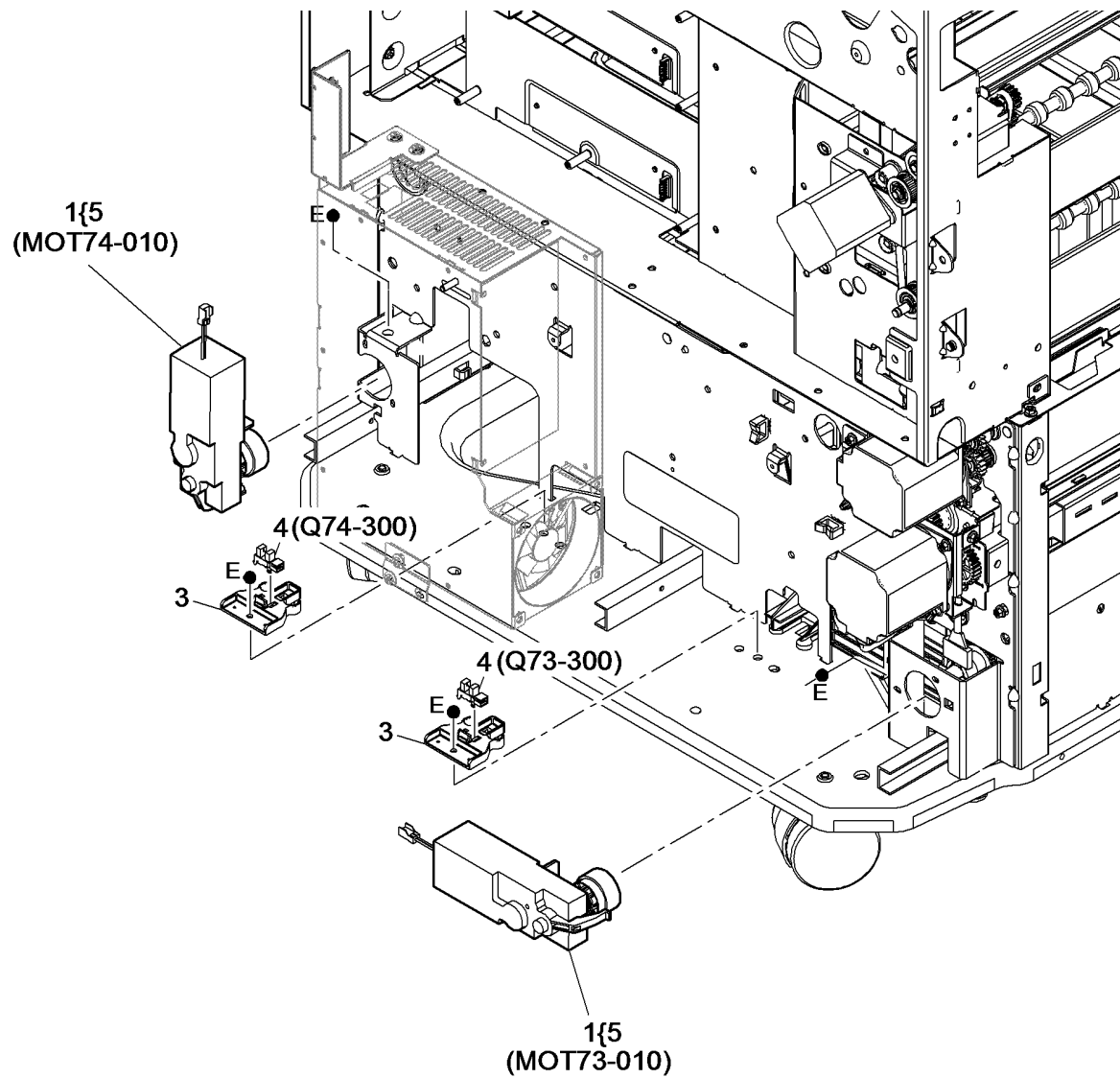
PL 70.19 Tray 4 Assembly

Item	Part	Description
1	050K74923	Tray 4 assembly (REP 70.13)
2	-	Tray hoist pulley (P/O PL 70.19 Item 7)
3	-	Front short elevator cable (P/O PL 70.19 Item 7)
4	-	Rear elevator cable (P/O PL 70.19 Item 7)
5	-	Front long elevator cable (P/O PL 70.19 Item 7)
6	-	Pulley carrier (P/O PL 70.19 Item 7)
7	604K84081	Tray 4 elevator cable kit (REP 70.8)
8	004K07870	Tray 4 elevate damper assembly (REP 70.11)
9	-	Retard pad (Not Spared)
10	-	Tray 4 skew bracket (P/O PL 31.14 Item 4)
11	604K83671	Tray 3 and 4 clamp kit
12	-	Side clamp (2 off) (P/O PL 70.19 Item 11)
13	-	Centre clamp (P/O PL 70.19 Item 11)
14	-	Rear paper guide (P/O PL 70.19 Item 1) (ADJ 70.1)
15	819E27770	Retaining clips
16	-	Elevator drives gear coupling (P/O PL 70.19 Item 7)
17	-	Tray 4 paper guide (P/O PL 70.19 Item 1)
18	815E92301	Separation strip
19	-	Not used
20	-	Front paper guide (P/O PL 70.19 Item 1) (ADJ 70.1)
21	-	Lift plate (P/O PL 70.19 Item 1)
22	-	Guide plate (P/O PL 70.19 Item 7)
23	-	Spacer (P/O PL 70.19 Item 7)
24	-	Elevator pulley (P/O PL 70.19 Item 7)
25	-	Bearing (Not Spared)
26	-	Elevator gear (P/O PL 70.19 Item 7)



PL 70.21 Elevator Motor and Control PWB

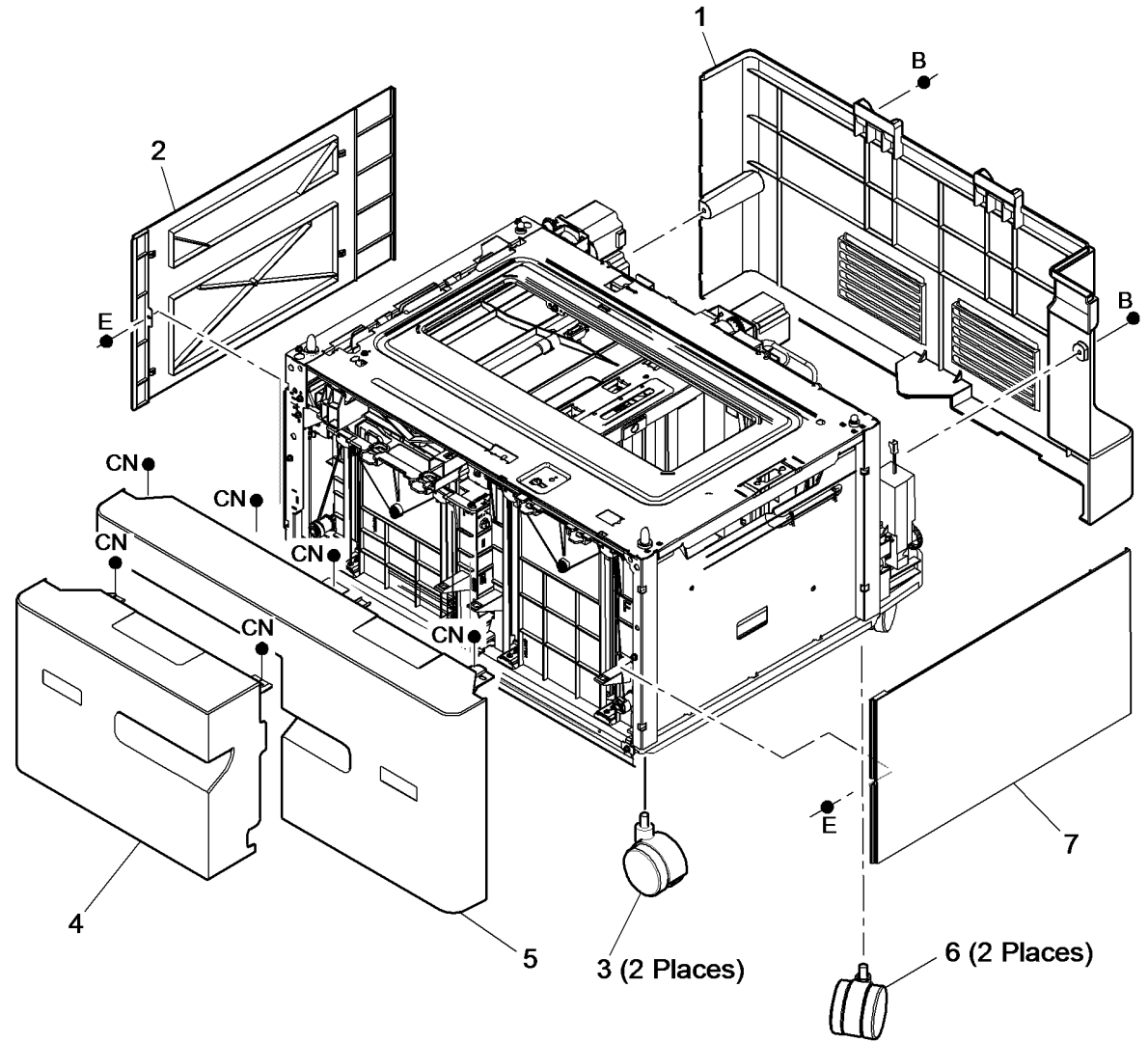
Item	Part	Description
1	127K78351	Tray 3 elevator motor (MOT73-010) (REP 70.6)/ Tray 4 elevator motor (MOT74-010)(W/O TAG 030) (REP 70.14)
-	-	Tray 4 elevator motor (MOT74-010) (W/TAG 030)(P/O PL 31.12 Item 24)
2	-	Not used
3	819E21570	Sensor holder
4	-	Tray 3 home sensor (Q73-300)/ Tray 4 home sensor (Q74-300) (REP 70.10)



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PL 70.26 Tray 3 and 4 Assembly Covers

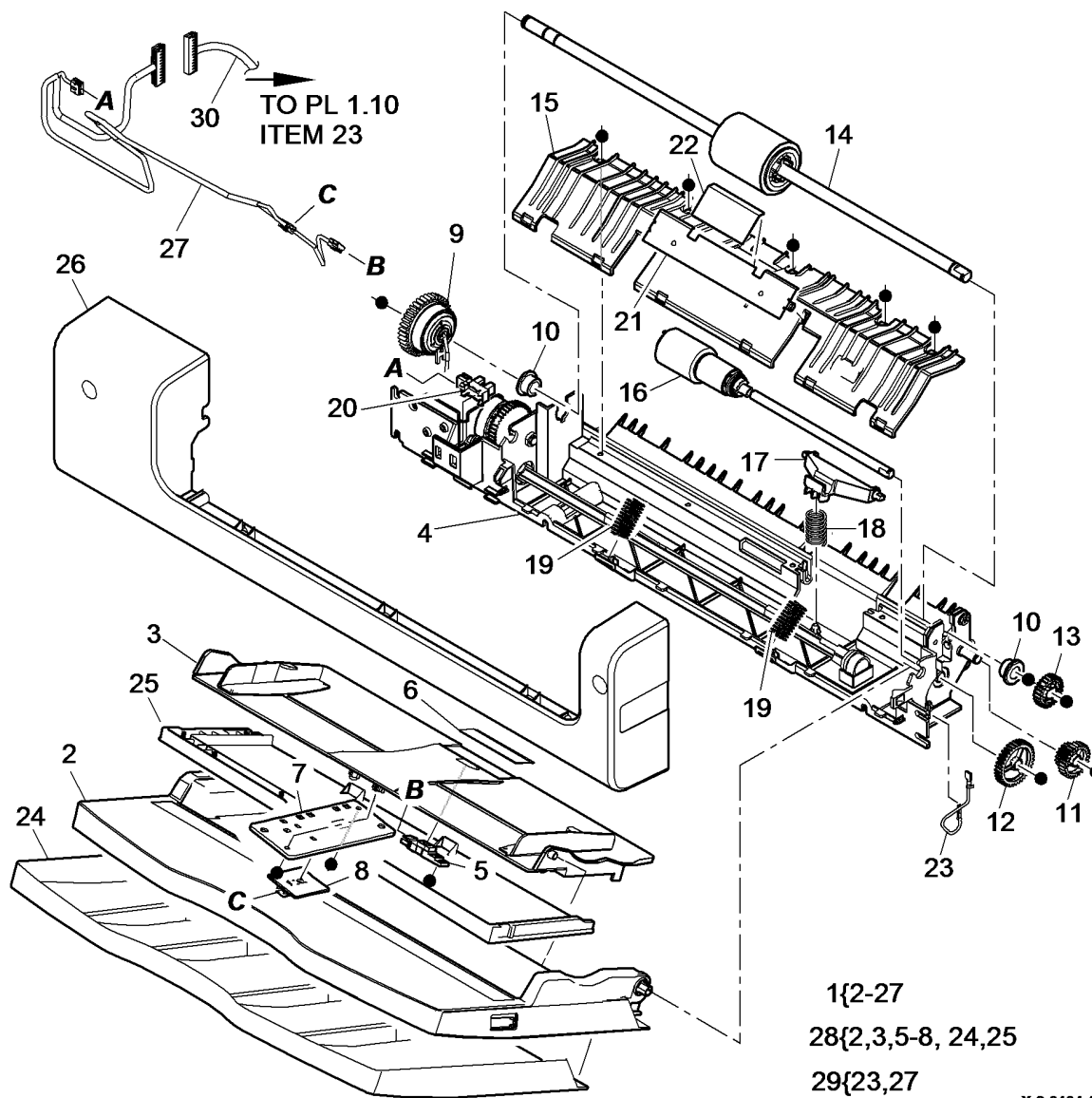
Item	Part	Description
1	822E50368	Lower rear cover
2	822E53824	Left cover
3	859K03060	Castor (locking)
4	822E68940	Tray 3 front cover (REP 70.5)
5	822E68950	Tray 4 front cover
6	-	Castor (Not Spared)
7	822E15371	Right cover



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PL 70.35 Bypass Tray Assembly (Tray 5)

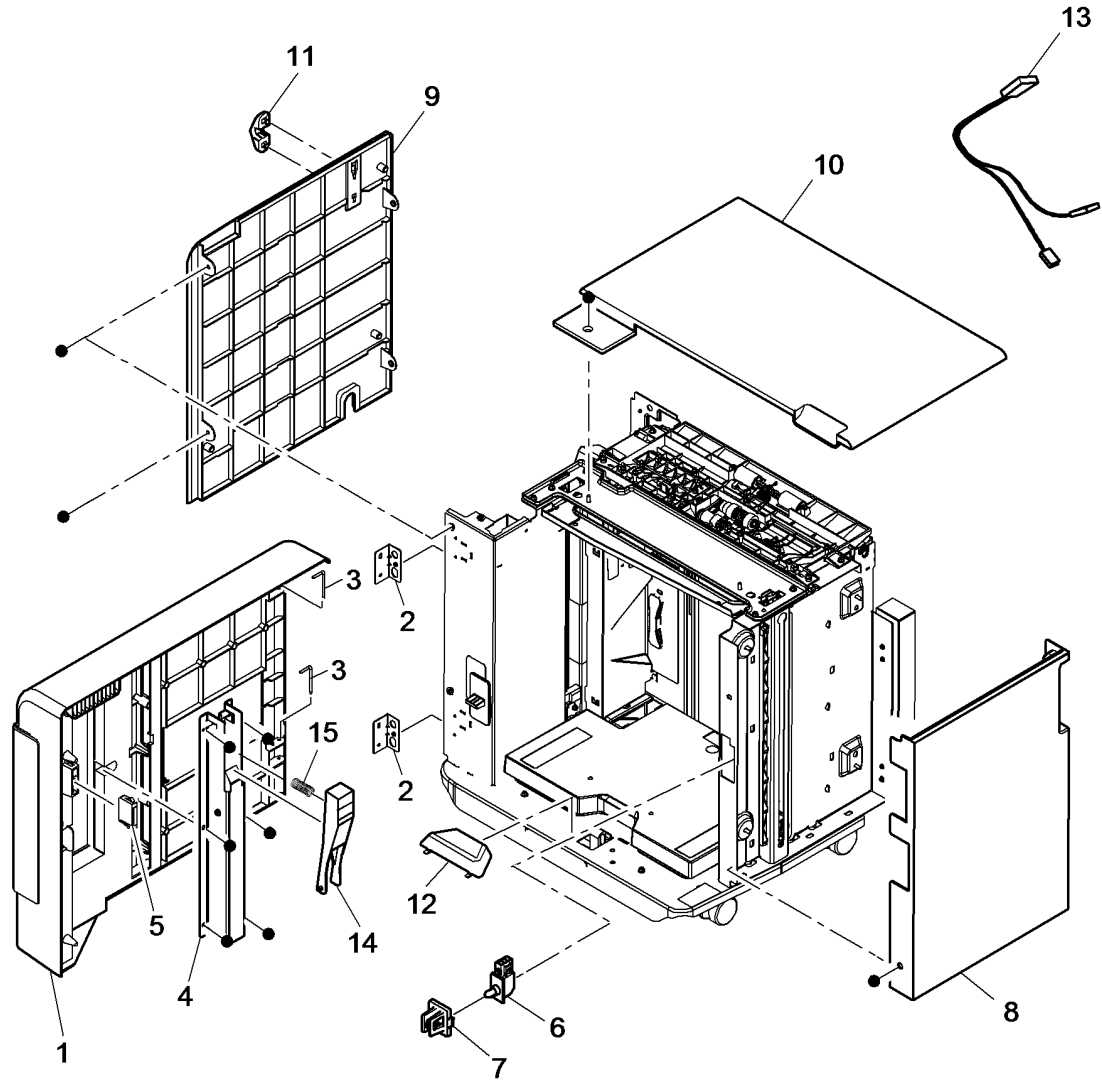
Item	Part	Description
1	850K04130	Bypass tray assembly (REP 70.2)
2	-	Upper tray assembly (P/O PL 70.35 Item 28)
3	-	Paper tray guide assembly (P/O PL 70.35 Item 28)
4	-	Feeder frame (P/O PL 70.35 Item 1)
5	-	Bypass tray empty sensor (Q75-320) (P/O PL 70.35 Item 28)
6	019K20200	Retard pad (See NOTE)
7	-	Bracket (P/O PL 70.35 Item 28)
8	-	Bypass tray width sensor (Q74-350) (P/O PL 70.35 Item 28) (REP 70.7)
9	007K20755	Bypass tray clutch (CL75-325) (REP 80.15)
10	-	Bearing (P/O PL 70.35 Item 1)
11	-	Idler gear (P/O PL 70.35 Item 1)
12	-	Retard shaft gear (P/O PL 70.35 Item 1)
13	-	Feed shaft gear (P/O PL 70.35 Item 1)
14	006K34444	Feed roll assembly (See NOTE) (REP 80.15)
15	-	Baffle (P/O PL 70.35 Item 1)
16	006K34432	Retard roll assembly (See NOTE) (REP 80.16)
17	-	Retainer (P/O PL 70.35 Item 1)
18	-	Nip spring (P/O PL 70.35 Item 1)
19	-	Elevator tray spring (P/O PL 70.35 Item 1)
20	-	Bypass tray elevate sensor (Q75-040)
21	-	Paper guide (P/O PL 70.35 Item 1)
22	801E35571	Mylar retard shield (REP 80.34, ADJ 80.4)
23	-	Grounding cable (P/O PL 70.35 Item 29)
24	-	Lower tray (P/O PL 70.35 Item 28)
25	-	Sensor cover (P/O PL 70.35 Item 28)
26	-	Bypass tray feedhead cover (P/O PL 70.35 Item 1)
27	-	Bypass tray harness (P/O PL 70.35 Item 27) (REP 70.17)
28	050K77187	Bypass elevate tray assembly (REP 70.17)
29	952K37733	Bypass tray harness set
30	-	IOT PWB to Bypass tray intermediate harness (P/O PL 80.10 Item 14) (REP 80.33)



NOTE: HFSI. To reset the HFSI count, refer to dC135.

PL 75.60 Tray 6 Covers

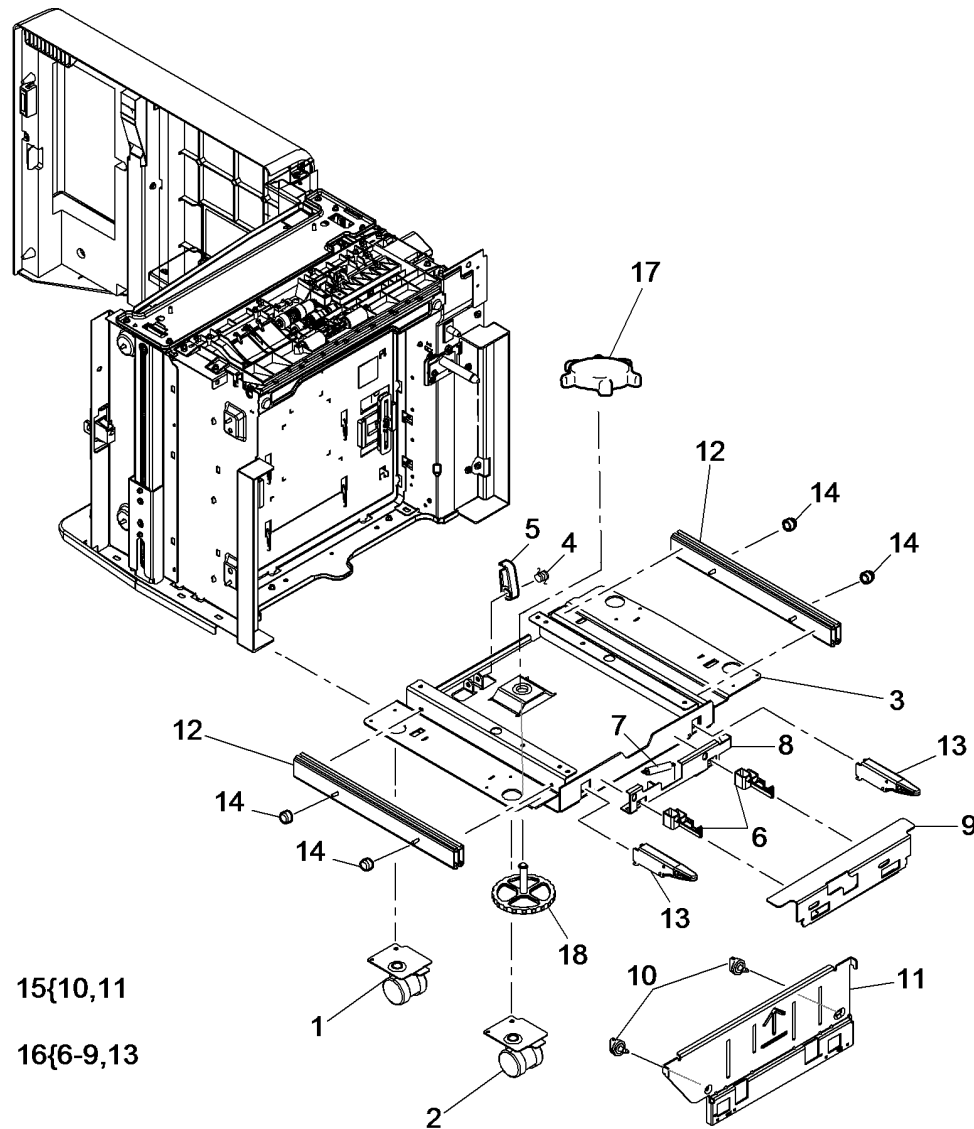
Item	Part	Description
1	948K22269	Front door assembly
2	-	Front door hinge (P/O PL 75.60 Item 1)
3	-	Front door hinge pin (P/O PL 75.60 Item 1)
4	-	Trail edge guide assembly (P/O PL 75.60 Item 1)
5	-	Latch magnet (P/O PL 75.60 Item 1)
6	110E22080	Interlock switch (S76-300)
7	-	Interlock switch adapter (Not Spared)
8	948K33410	Front cover (REP 70.25)
9	822E50474	Rear cover (REP 70.25)
10	822E50464	Top cover (REP 70.25)
11	-	Cable clamp (P/O PL 75.60 Item 9)
12	848E05863	Bias knuckle cover
13	952K63180	Front door interlock harness (PJ507)
14	-	Tamper guide lever (P/O PL 75.60 Item 1)
15	-	Tamper lever compression spring (P/O PL 75.60 Item 1)



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PL 75.62 Tray 6 Base

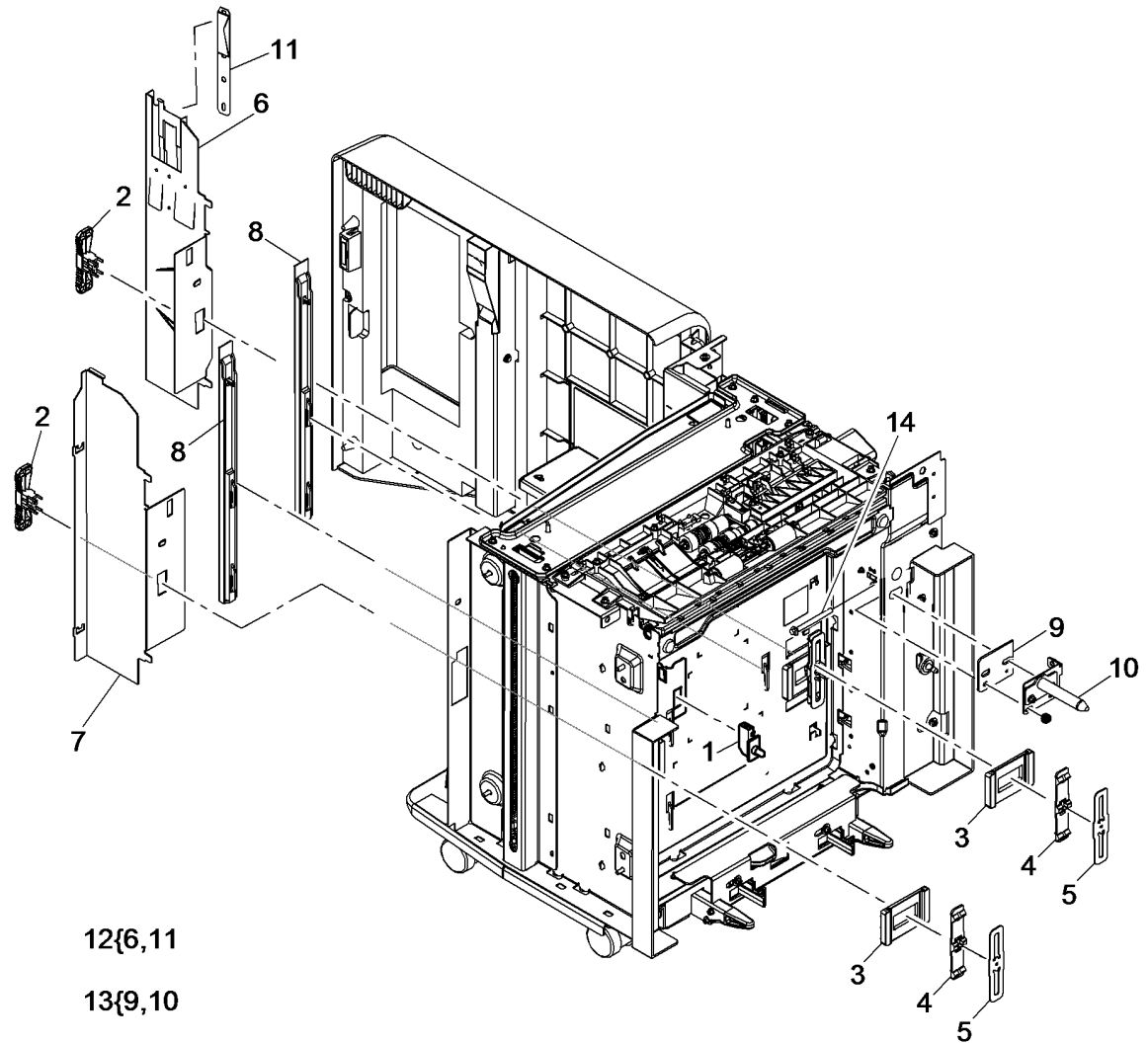
Item	Part	Description
1	-	Adjustable caster (Not spared)
2	-	Caster (Not Spared)
3	-	Platform assembly (Not Spared)
4	009E74211	Spring bias
5	003E76870	Latch bias
6	003E78020	Docking latch (REP 70.26)
7	-	Docking latch spring (P/O PL 75.62 Item 16)
8	-	Docking latch bracket (P/O PL 75.62 Item 16)
9	-	Docking latch main bracket (P/O PL 75.62 Item 16)
10	803E13680	Docking latch thumb screw
11	-	Docking plate (Not Spared)
12	-	Slide assembly (Not Spared)
13	-	Docking guides (P/O PL 75.62 Item 16)
14	-	Slide assembly locking nut (Not Spared)
15	049K49841	Docking bracket assembly
16	003K20681	Latch assembly
17	-	Adjuster wheel (Not Spared) (ADJ 70.3)
18	-	Adjuster wheel base (Not Spared)



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PL 75.64 Tray 6 Guides

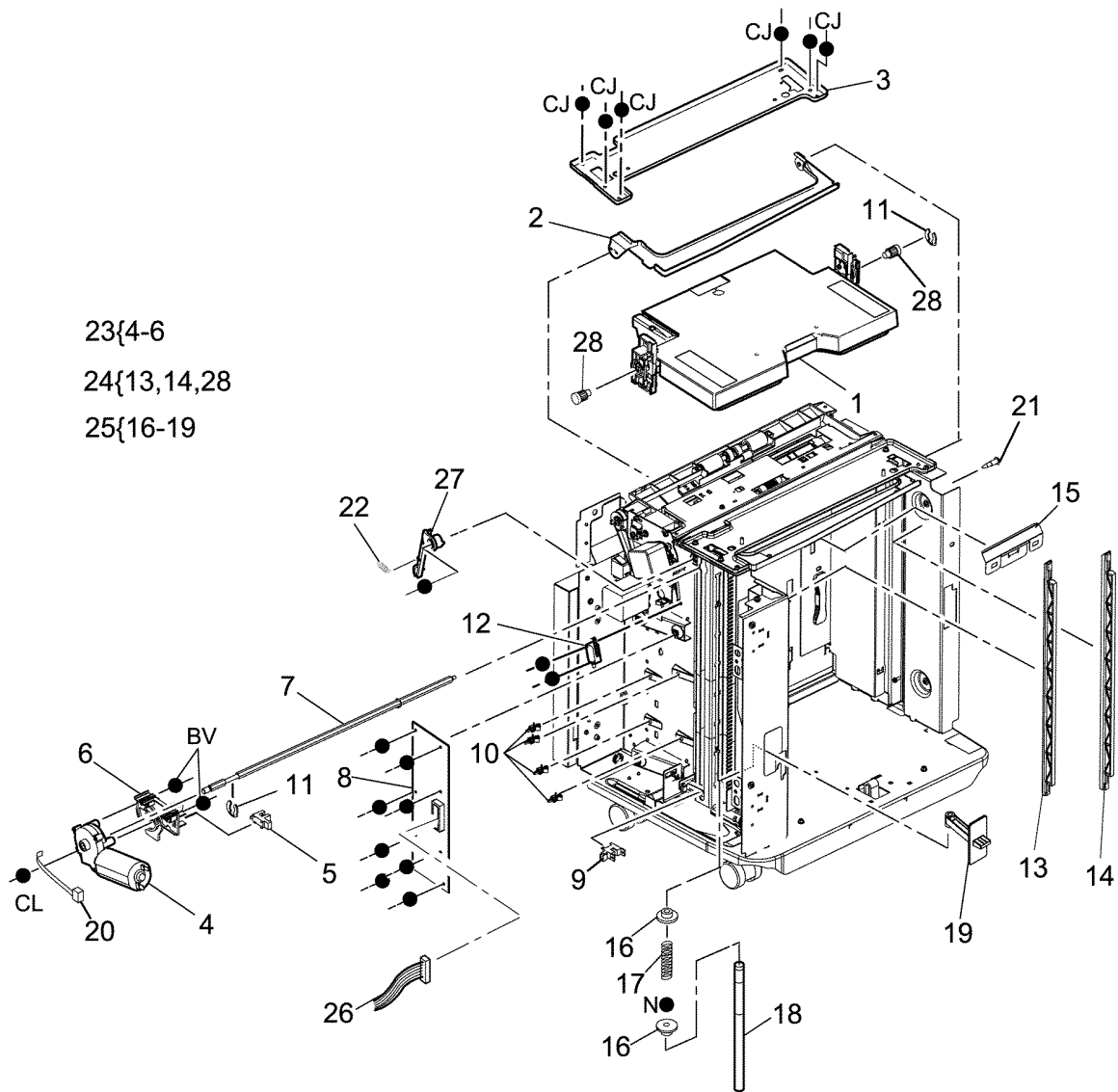
Item	Part	Description
1	110K21080	Tray 6 docking interlock switch (S76-310)
2	-	Handle latch (Not Spared)
3	-	Latch spacer (Not Spared)
4	-	Slide latch (Not Spared)
5	-	Spring leaf (Not Spared)
6	-	Rear guide (P/O PL 75.64 Item 12) (ADJ 70.2)
7	-	Front guide assembly (Not Spared) (ADJ 70.2)
8	038E53361	Guide strip
9	-	Adjustment plate (Not Spared)
10	-	Interlock guide (Not Spared)
11	-	Rear guide assembly spring (P/O PL 75.64 Item 12)
12	038K25780	Rear guide assembly
13	029K05000	Docking pin assembly
14	-	Securing bolt (Not Spared)



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PL 75.68 Tray 6 Lift Assembly (1 of 2)

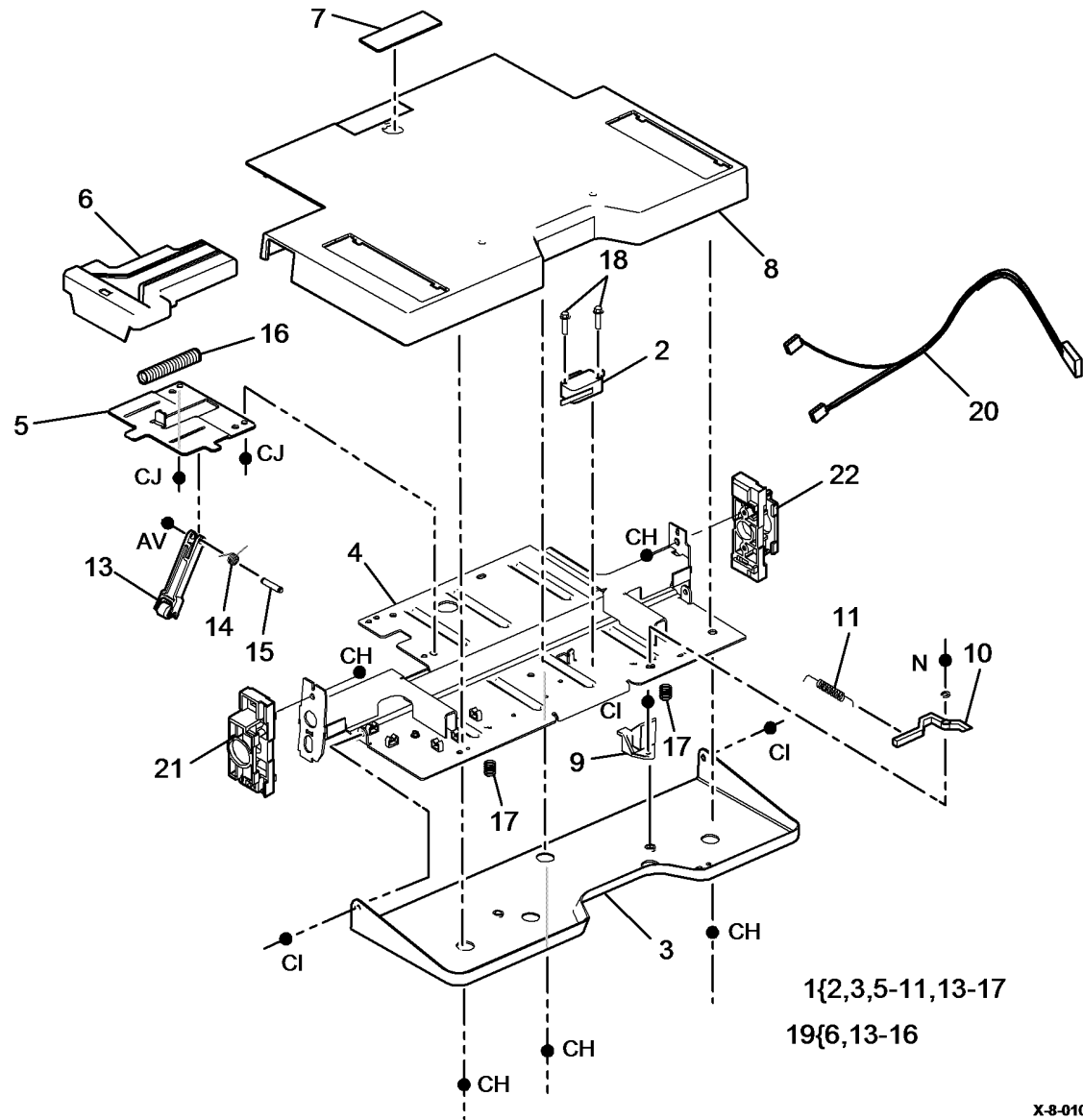
Item	Part	Description
1	-	Tray assembly (complete) (Not Spared)
2	-	Crash bar (Not Spared)
3	-	Frame top brace (Not Spared)
4	-	Elevator motor (MOT76-010) (P/O PL 75.68 Item 23)
5	930K01410	Elevator encoder sensor (Q76-340)
6	869E49121	Elevator motor bracket
7	-	Elevator motor shaft (Not Spared)
8	961K03670	Tray 6 Control PWB
9	130K75511	Tray down sensor (Q76-335) (REP 70.20)
10	-	Standoff (Not Spared)
11	-	Tray level drive gear clip (Not Spared)
12	110E06961	Upper limit switch (S75-412) (REP 70.22)
13	-	Rear elevator rack (P/O PL 75.68 Item 24)
14	-	Front elevator rack (P/O PL 75.68 Item 24)
15	-	Retard roller shield (Not Spared)
16	-	Shipping pin bearing (Not Spared)
17	-	Shipping pin spring (Not Spared)
18	-	Shipping pin (Not Spared)
19	-	Shipping pin handle (Not Spared)
20	-	Cable tie (Not Spared)
21	-	Clinch stud (Not Spared)
22	-	Actuator spring (Not Spared)
23	927K05801	Elevator motor assembly (REP 70.21)
24	007K25090	Elevator rack assembly (REP 70.27)
25	003K20950	Shipping pin handle assembly
26	-	Media path driver PWB to Tray 6 PWB harness (Not Spared) (PJ502, PJ513)
27	-	Upper limit switch actuator (Not Spared)
28	-	Tray level drive gear (P/O PL 75.68 Item 24)



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PL 75.70 Tray 6 Lift Assembly (2 of 2)

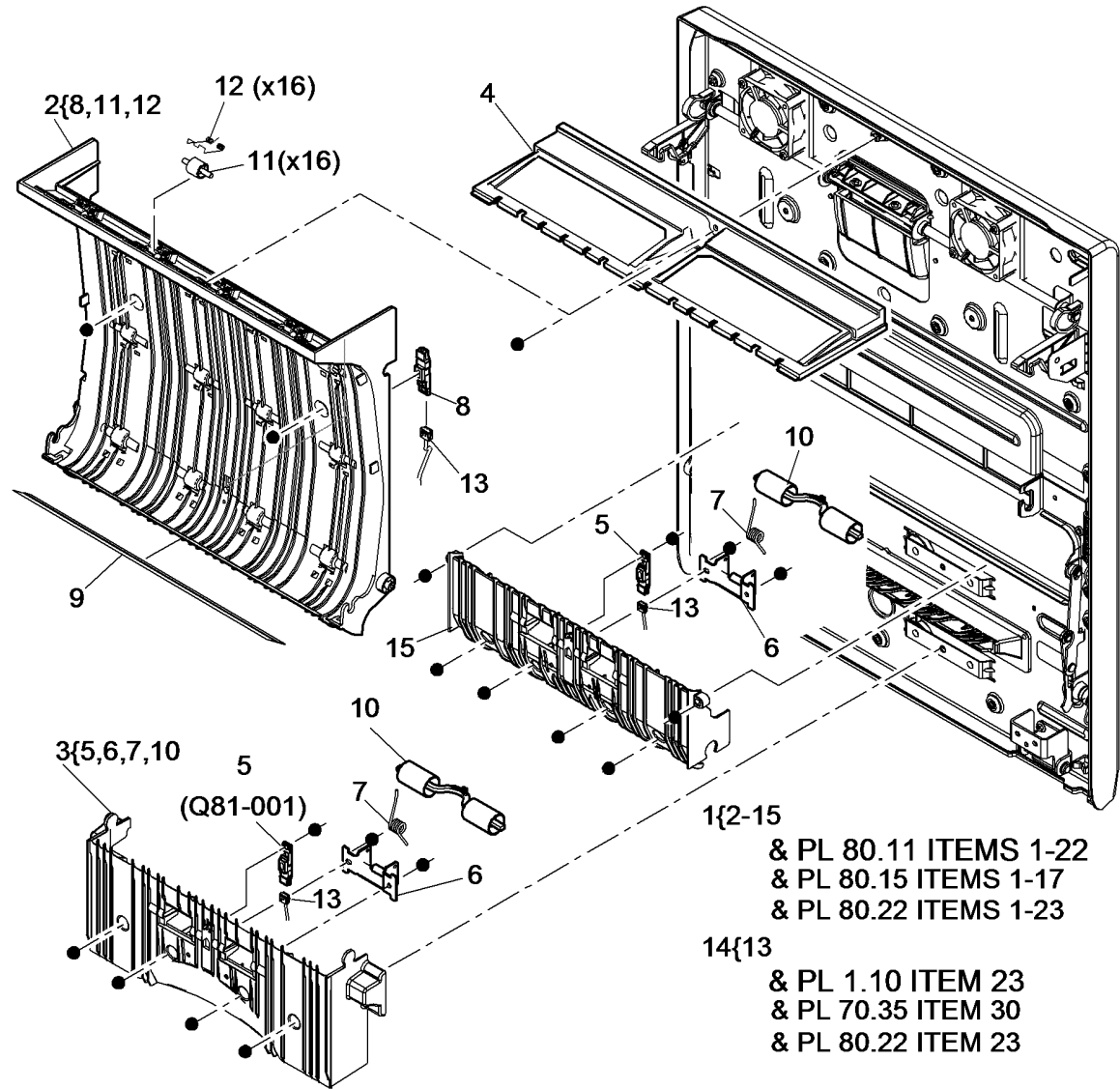
Item	Part	Description
1	-	Tray lift assembly (Not Spared)
2	110E06961	Tray down limit switch (S75-415) (REP 70.23)
3	-	Lower safety bar (P/O PL 75.70 Item 1)
4	-	Lift plate (Not Spared)
5	-	Fixing plate (Not Spared)
6	-	Infill plate (P/O PL 75.70 Item 19)
7	019K13470	Cork pad
8	-	Tray lift top cover (P/O PL 75.70 Item 1)
9	-	Lift plate crash bar actuator 2 (P/O PL 75.70 Item 1)
10	-	Lift plate crash bar actuator 1 (P/O PL 75.70 Item 1)
11	-	Crash bar actuator spring (P/O PL 75.70 Item 1)
12	-	Not used
13	-	Infill actuator arm (P/O PL 75.70 Item 19)
14	-	Infill actuator arm spring (P/O PL 75.70 Item 19)
15	-	Infill actuator arm pin (P/O PL 75.70 Item 19)
16	-	Infill plate spring (P/O PL 75.70 Item 19)
17	-	Lower safety spring (Not Spared)
18	612W25655	Tray down limit switch screw
19	815K11380	Infill plate assembly
20	962K50461	Tray 6 elevator harness (PJ504)
21	032E29800	Rear elevator tray guide (REP 70.28)
-	-	Rear elevator tray guide (P/O PL 31.12 Item 18)
22	032E29790	Front elevator tray guide (REP 70.28)
-	-	Front elevator tray guide (P/O PL 31.12 Item 18)



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PL 80.10 Left Door Assembly (1 of 2)

Item	Part	Description
1	948K33111	Left door assembly (45-55 ppm) (REP 80.7)
-	948K33141	Left door assembly (65-90 ppm) (REP 80.7)
2	-	Duplex outer guide assembly (P/O PL 80.10 Item 1) (REP 80.9)
3	038K25820	Lower left door paper guide (REP 80.2)
4	-	Left door fan cover (P/O PL 80.10 Item 1) (45-55 ppm)
-	-	Left door fan cover (P/O PL 80.10 Item 1) (65-90 ppm)
5	-	Tray 1 TAR sensor (Q81-001)/ Tray 2 TAR sensor (Q82-001) (P/O PL 80.10 Item 3) (REP 80.2)
6	-	Bracket (P/O PL 80.10 Item 3)
7	-	Tension spring (P/O PL 80.10 Item 3)
8	-	Duplex sensor (Q83-160) (P/O PL 80.10 Item 2) (REP 80.9)
9	-	Mylar (P/O PL 80.10 Item 2)
10	-	Nip roll assembly (P/O PL 80.10 Item 3)
11	-	Duplex roll idler (P/O PL 80.10 Item 2)
12	-	Idler spring (P/O PL 80.10 Item 2)
13	-	Left door sensor and fan harness (P/O PL 80.10 Item 14) (REP 80.33)
14	952K62160	Left door harness set (65-90 ppm) (REP 80.33)
-	952K62150	Left door harness set (45-55 ppm)
15	038K25800	Upper left door paper guide
16	-	Duplex guide assembly (Not Spared)



1{2-15
& PL 80.11 ITEMS 1-22
& PL 80.15 ITEMS 1-17
& PL 80.22 ITEMS 1-23

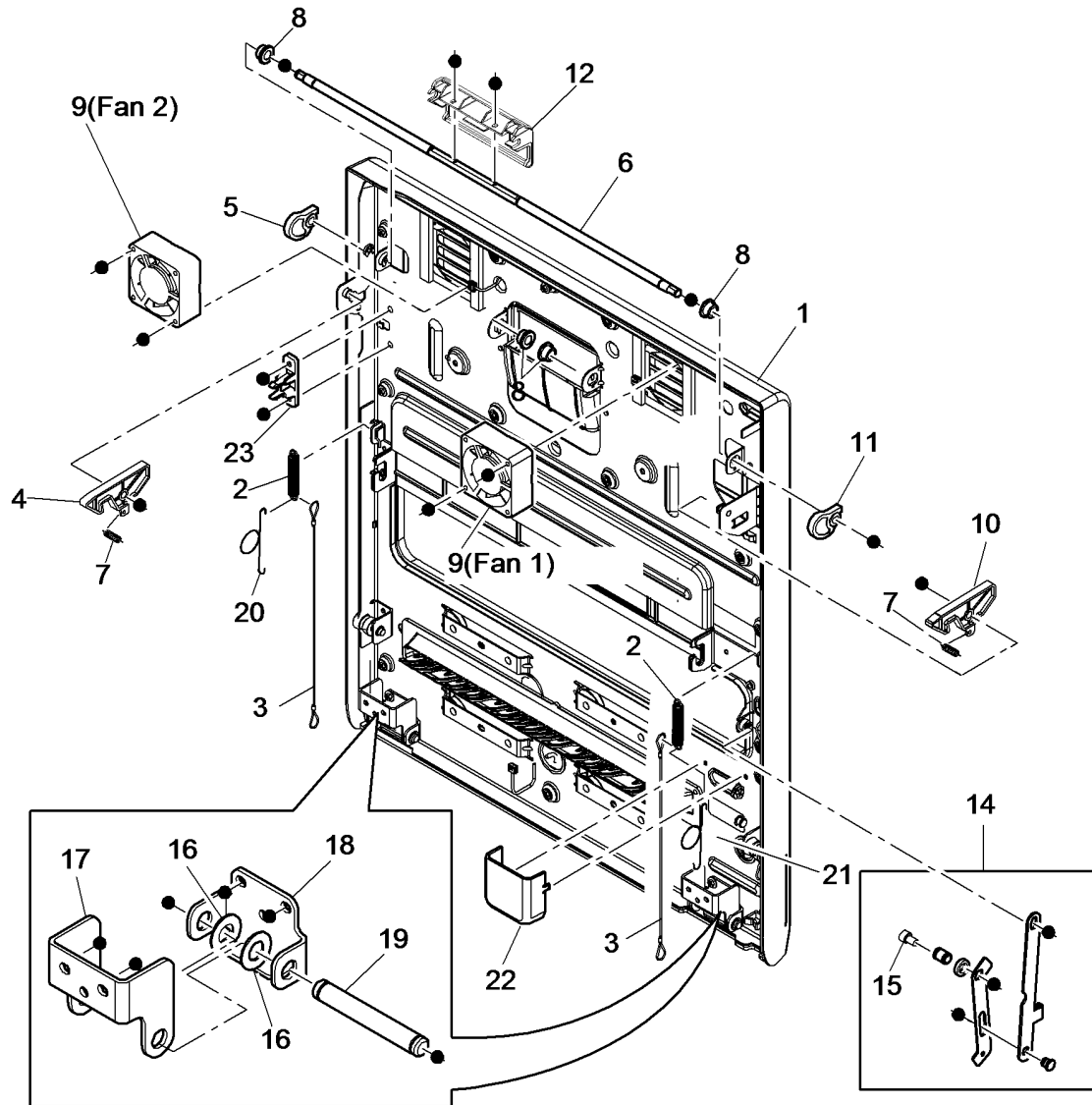
14{13
& PL 1.10 ITEM 23
& PL 70.35 ITEM 30
& PL 80.22 ITEM 23

16{2 & PL 80.22 ITEM 1

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PL 80.11 Left Door Assembly (2 of 2)

Item	Part	Description
1	-	Left door frame and cover assembly (P/O PL 80.10 Item 1) (REP 80.13)
2	-	Damper spring (P/O PL 31.14 Item 3)
3	-	Damper cable (P/O PL 31.14 Item 3)
4	-	Front latch (P/O PL 80.10 Item 1) (REP 80.11)
5	-	Front latch cam (P/O PL 80.10 Item 1)
6	-	Latch handle shaft (P/O PL 80.10 Item 1)
7	-	Latch spring (P/O PL 80.10 Item 1) (REP 80.11)
8	-	Bearing (P/O PL 80.10 Item 1)
9	127E17991	Left door fan 1 / Left door fan 2 (MOT80-015) (45-55 ppm) (REP 80.35)
10	-	Rear latch (P/O PL 80.10 Item 1) (REP 80.11)
11	-	Rear latch cam (P/O PL 80.10 Item 1)
12	-	Latch handle (P/O PL 80.10 Item 1)
13	-	Not used
14	-	Door link assembly (P/O PL 31.14 Item 3)
15	-	Door link locking screw (P/O PL 80.10 Item 1)
16	-	Plastic washer (P/O PL 80.10 Item 1)
17	-	Hinge support bracket (P/O PL 80.10 Item 1)
18	-	Hinge bracket (P/O PL 80.10 Item 1)
19	-	Hinge pin (P/O PL 80.10 Item 1)
20	-	Front damper spring tensioner tool (P/O PL 31.14 Item 7) (See NOTE)
21	-	Rear damper spring tensioner tool (P/O PL 31.14 Item 7) (See NOTE)
22	-	Connector cover (P/O PL 80.10 Item 1)
23	803E36100	Duplex outer guide catch

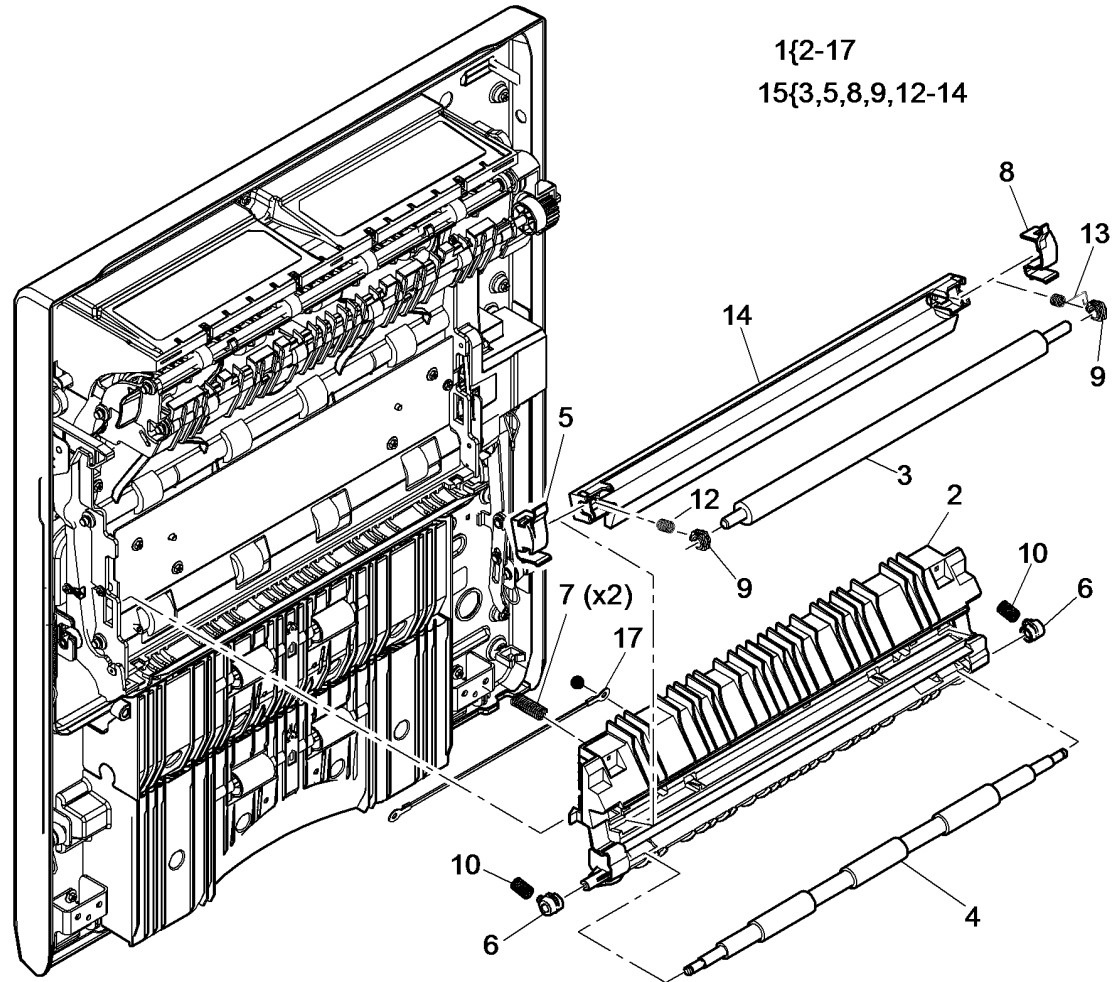


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NOTE: Refer to GP 37 for correct use of these tools when removing left door assembly.

PL 80.15 Registration Transfer Assembly

Item	Part	Description
1	948K33130	Registration transfer assembly (REP 80.3)
2	-	Registration transfer housing (P/O PL 80.15 Item 1)
3	-	Bias transfer roll (P/O PL 80.15 Item 15)
4	-	Registration nip roll (P/O PL 80.15 Item 1) (REP 80.3)
5	-	Front retaining clip (P/O PL 80.15 Item 15)
6	-	Registration nip roll bearing (P/O PL 80.15 Item 1)
7	-	Spring (P/O PL 80.15 Item 1)
8	-	Rear retaining clamp (P/O PL 80.15 Item 15)
9	-	Bias transfer roll bearing (P/O PL 80.15 Item 15)
10	-	Support spring (P/O PL 80.15 Item 1)
11	-	Not used
12	-	Front housing spring (P/O PL 80.15 Item 15)
13	-	Rear housing spring (P/O PL 80.15 Item 15)
14	-	Bias transfer roll housing (P/O PL 80.15 Item 15)
15	008R13178	Bias transfer roll housing assembly
16	-	Not used
17	-	Ground strap (P/O PL 80.15 Item 1)

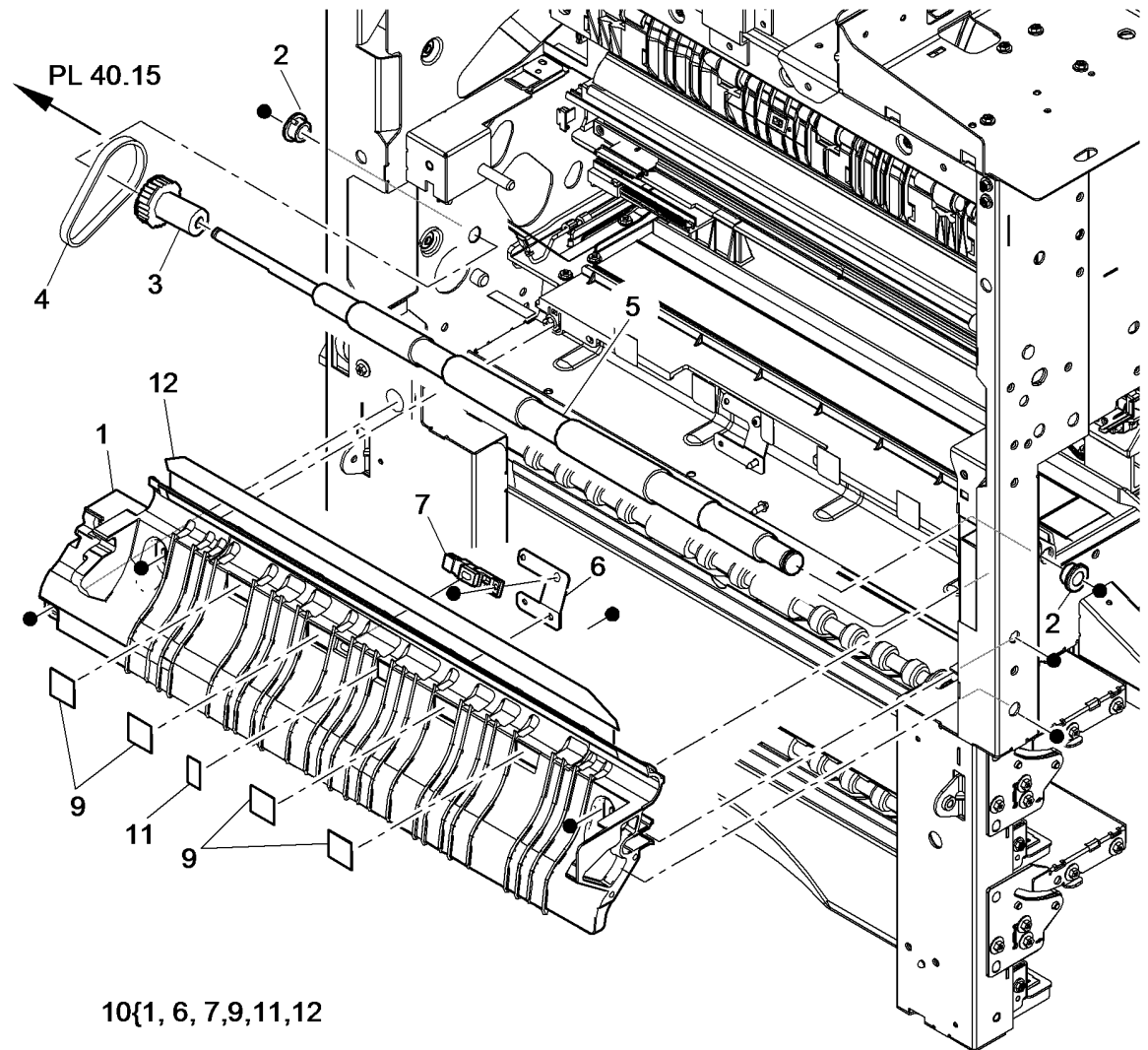


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PL 80.17 Registration Transport

Item	Part	Description
1	-	Registration transport housing (P/O PL 80.17 Item 10) (REP 80.4)
2	-	Bearing (Not Spared)
3	-	Registration drive pulley (Not Spared) (ADJ 40.1)
4	-	Registration roll drive belt (Not Spared)
5	806E53400	Registration roll (REP 80.4)
6	-	Registration sensor bracket (P/O PL 80.17 Item 10)
7	-	Registration sensor (Q82-150) (P/O PL 80.17 Item 10) (REP 80.4)
8	-	Not used
9	-	Mylar (P/O PL 80.17 Item 10)
10	859K05394	Registration transport assembly (REP 80.4)
11	-	Mylar (P/O PL 80.17 Item 10)
12	038E52180	Pressure blade (See NOTE)

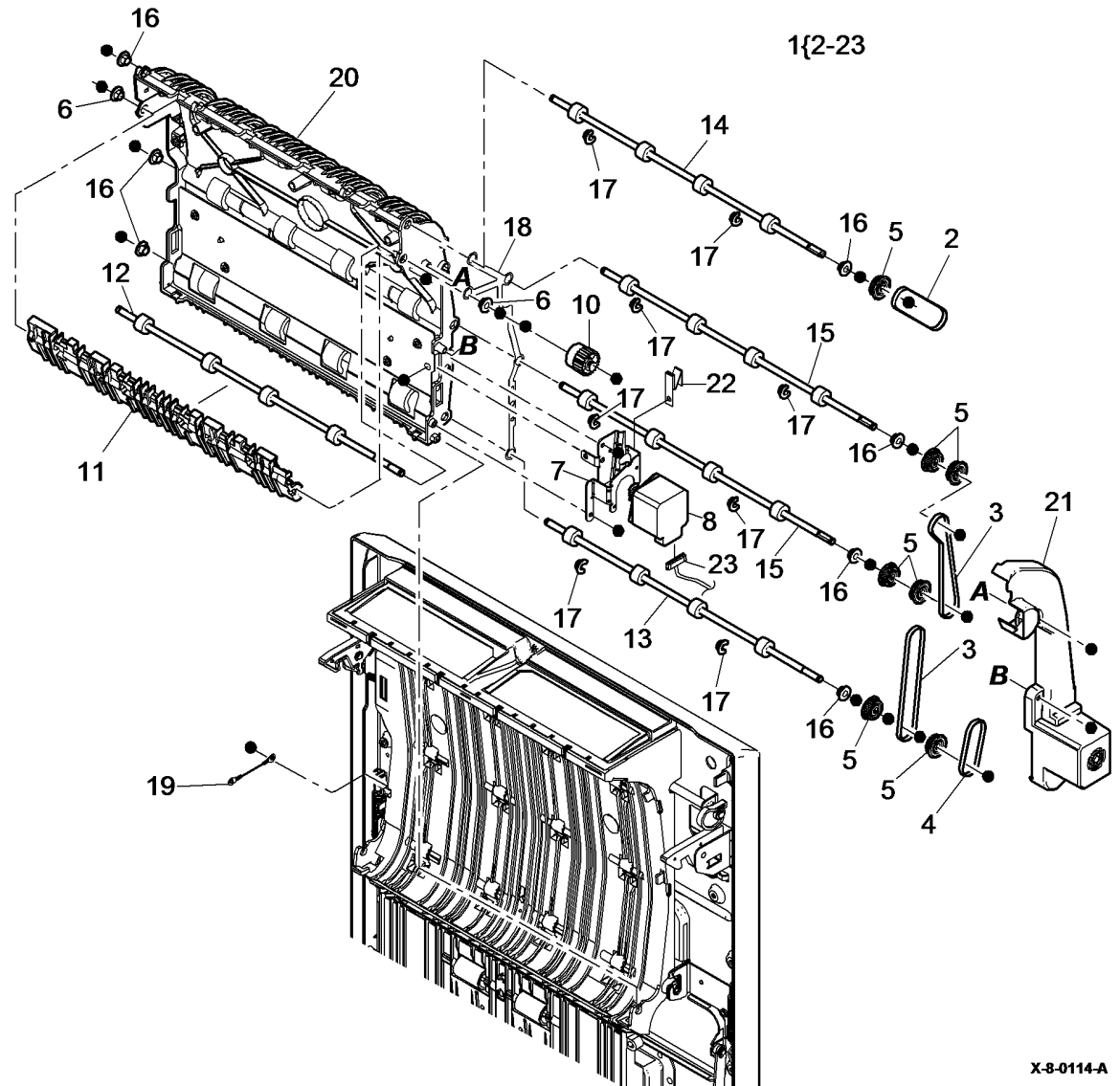
NOTE: Also supplied as part of PL 80.17 Item 10.



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PL 80.22 Duplex Transport Assembly

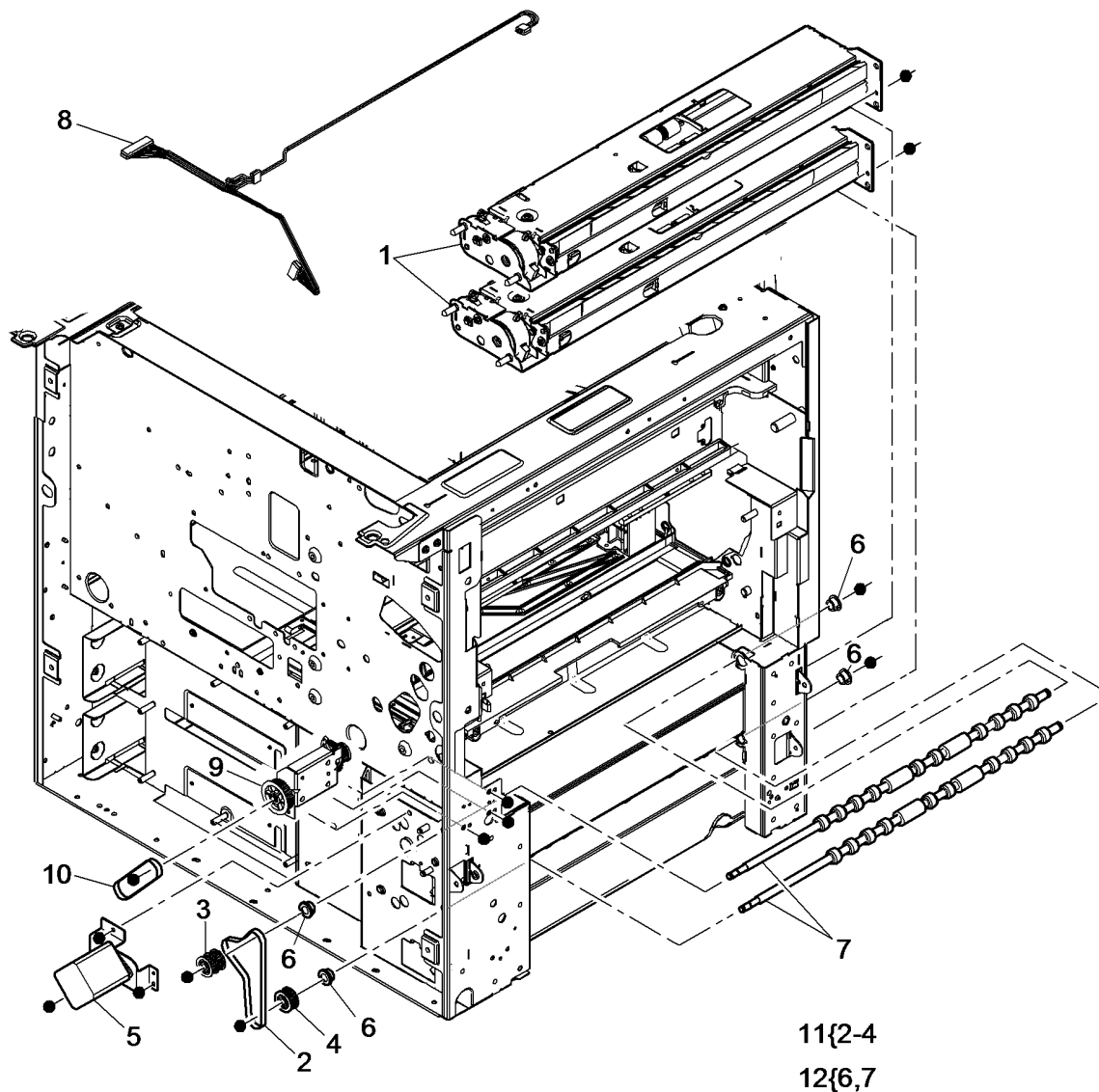
Item	Part	Description
1	948K33121	Duplex transport assembly (45-55 ppm) (REP 80.5)
-	948K33151	Duplex transport assembly (65-90 ppm)
2	-	Drive belt (65T) (P/O PL 80.22 Item 1)
3	-	Drive belt (89T) (P/O PL 80.22 Item 1)
4	-	Drive belt (40T) (P/O PL 80.22 Item 1)
5	-	Pulley (21T) (P/O PL 80.22 Item 1)
6	-	Post fuser roll bearing (P/O PL 80.22 Item 1)
7	-	Mounting bracket (Not Spared) (REP 80.12)
8	-	Duplex motor assembly (P/O PL 80.22 Item 1) (45-55 ppm) (REP 80.12)
-	927K07900	Duplex motor assembly (65-90 ppm) (REP 80.12)
9	-	Not used
10	-	Gear (P/O PL 80.22 Item 1)
11	-	Post fuser guide (P/O PL 80.22 Item 1)
12	-	Post fuser roll (P/O PL 80.22 Item 1)
13	-	Lower duplex roll (P/O PL 80.22 Item 1)
14	-	Upper duplex roll (P/O PL 80.22 Item 1)
15	-	Mid duplex roll (P/O PL 80.22 Item 1)
16	-	Bearing (P/O PL 80.22 Item 1)
17	-	Half bearing (P/O PL 80.22 Item 1)
18	-	Ground strip (P/O PL 80.22 Item 1)
19	-	Limiter (P/O PL 80.22 Item 1)
20	-	Inner duplex door (P/O PL 80.22 Item 1)
21	-	Duplex drives cover (P/O PL 80.10 Item 1)
22	-	Ground contact strip (P/O PL 80.22 Item 1)
23	-	Duplex motor harness (P/O PL 80.10 Item 14) (REP 80.33)



PL 80.25 Tray 1 and 2 Paper Feed Assembly (1 of 2)

Item	Part	Description
1	-	Tray 1 or 2 paper feed assembly (REF: PL 80.26 Item 1)
2	-	Transport roll drive belt (P/O PL 80.25 Item 11) (REP 80.8)
3	020K21561	Drive pulley (See NOTE) (REP 80.10)
4	-	Pulley (P/O PL 80.25 Item 11) (REP 80.10)
5	007K28181	TAR/Bypass tray motor (MOT80-006) (65-90 ppm) (REP 80.8)
-	007K21820	TAR/Bypass tray motor (MOT80-006) (45-55 ppm) (REP 80.8)
6	-	Transport roll bearing (P/O PL 80.25 Item 12) (REP 80.10)
7	807E47174	Transport roll (REP 80.10)
8	-	Power harness (Not Spared)
9	007K20748	Bypass tray drive assembly (REP 80.4)
10	-	Bypass tray drive belt (Not Spared) (REP 80.6)
11	020K21640	Transport drive belt kit (REP 80.8)
12	-	Transport roll assembly (Not Spared)

NOTE: Also part of PL 80.25 Item 11.

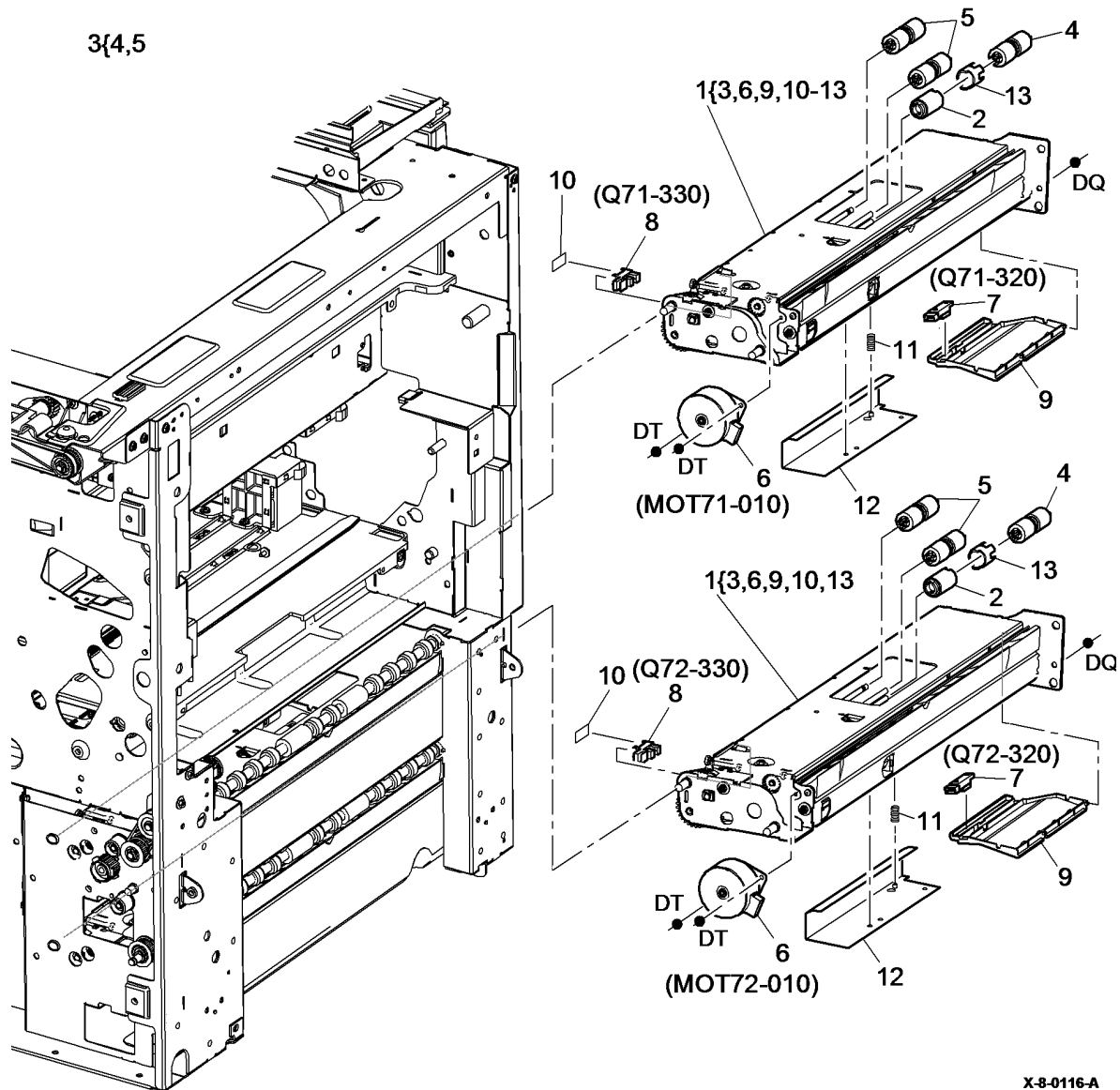


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PL 80.26 Tray 1 and 2 Paper Feed Assembly (2 of 2)

Item	Part	Description
1	859K04214	Tray 1 or Tray 2 paper feed assembly (REP 80.1, ADJ 40.1)
2	005K12242	Friction clutch (REP 80.19)
3	059K69802	Roll assembly (3 rolls) (See NOTE) (REP 80.18)
4	-	Retard roll (P/O PL 80.26 Item 3)
5	-	Feed/Nudger roll assembly (P/O PL 80.26 Item 3)
6	127K61850	Tray 1 elevate/feed motor (MOT71-010)/Tray 2 elevate/feed motor (MOT72-010)
7	130E12770	Tray 1 empty sensor (Q71-320)/Tray 2 empty sensor (Q72-320)
8	130E19350	Tray 1 stack height sensor (Q71-330)/Tray 2 stack height sensor (Q72-330)
9	-	Guide (P/O PL 80.26 Item 1)
10	014E67650	Shim
11	809E84180	Retard roll gate spring
12	-	Retard roll gate (P/O PL 80.26 Item 1)
13	-	Clutch coupling (P/O PL 80.26 Item 1) (REP 80.19)

NOTE: HFSI. To reset the HFSI count, refer to dC135.

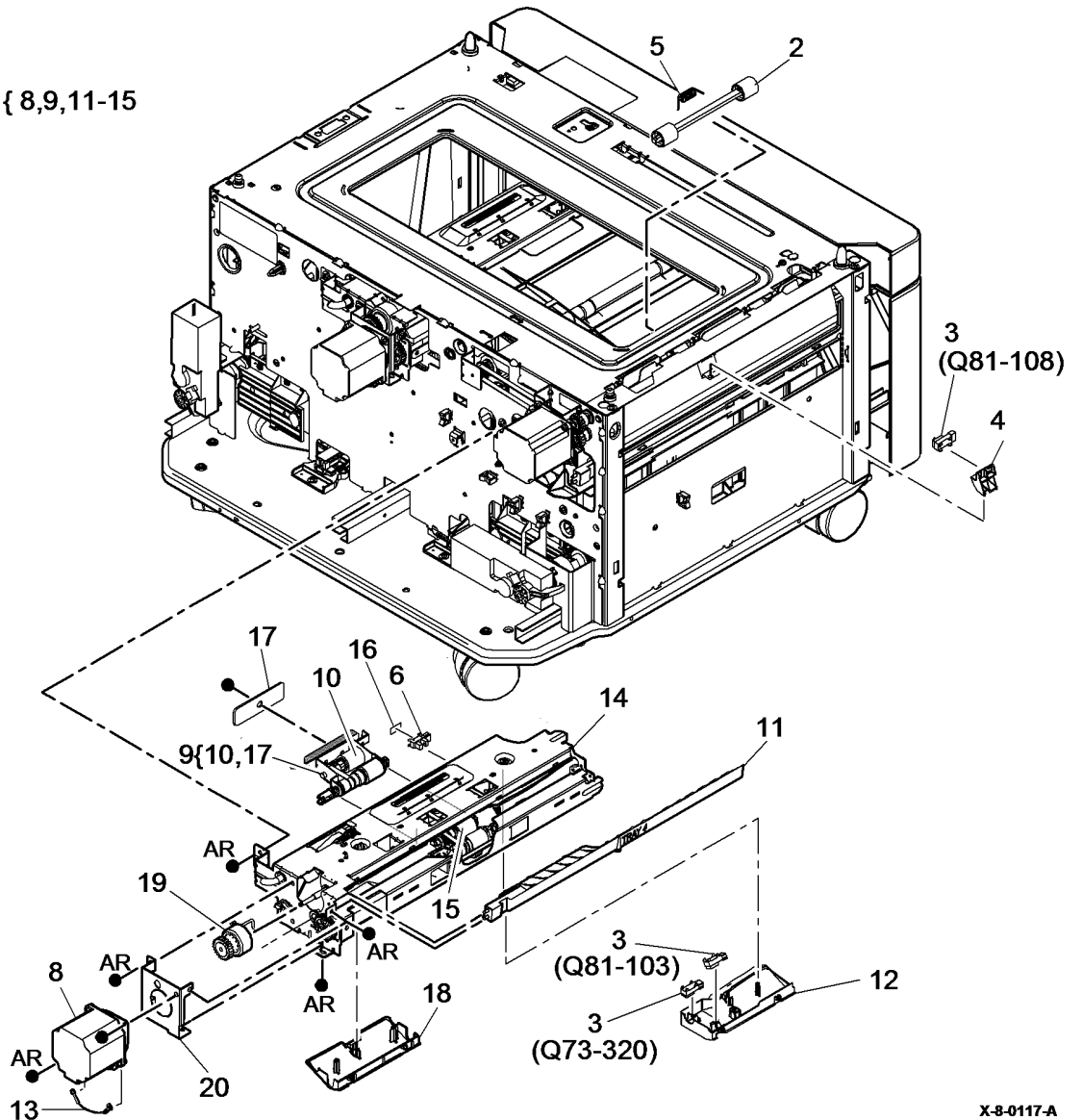


PL 80.32 Tray 3 Paper Feed Assembly

Item	Part	Description
1	-	Tray 3 paper feed assembly (P/O PL 31.12 Item 6) (REP 80.20)
2	859K04280	Idler roll assembly (metal shaft) (REP 80.27)
3	130E11610	Tray 3 empty sensor (Q73-320) (REP 70.15) / Tray 3 feed sensor (Q81-103) (REP 80.30)/ HCF exit sensor (Q81-108)
4	-	HCF exit sensor bracket (Not Spared)
5	-	Spring (Not Spared)
6	-	Tray 3 stack height sensor (Q73-330) (P/O PL 31.12 Item 16) (REP 70.9)
7	-	Not used
8	-	Tray 3 feed motor (MOT81-030) (P/O PL 80.32 Item 1)
9	-	Feed roll assembly (P/O PL 31.12 Item 15) (See NOTE) (REP 80.17)
10	-	Nudger roll (P/O PL 80.32 Item 9) (REP 80.17, ADJ 80.1)
11	-	Tray 3 paper guide (P/O PL 80.32 Item 1) (REP 80.28)
12	-	Sensor mounting (P/O PL 80.32 Item 1)
13	-	Ground cable (P/O PL 80.32 Item 1)
14	-	Feed frame assembly (P/O PL 80.32 Item 1)
15	-	Retard roll (P/O PL 31.12 Item 15) (See NOTE) (REP 80.17, ADJ 80.3)
16	-	Shim (P/O PL 31.12 Item 16)
17	-	Nudger roll weight (P/O PL 80.32 Item 9) (ADJ 80.1)
18	-	Gull wing cover (P/O PL 31.14 Item 4)
19	121E27552	Feed clutch (REP 80.32)
20	-	Bracket (P/O PL 80.32 Item 1)

NOTE: HFSI. To reset the HFSI count, refer to dC135.

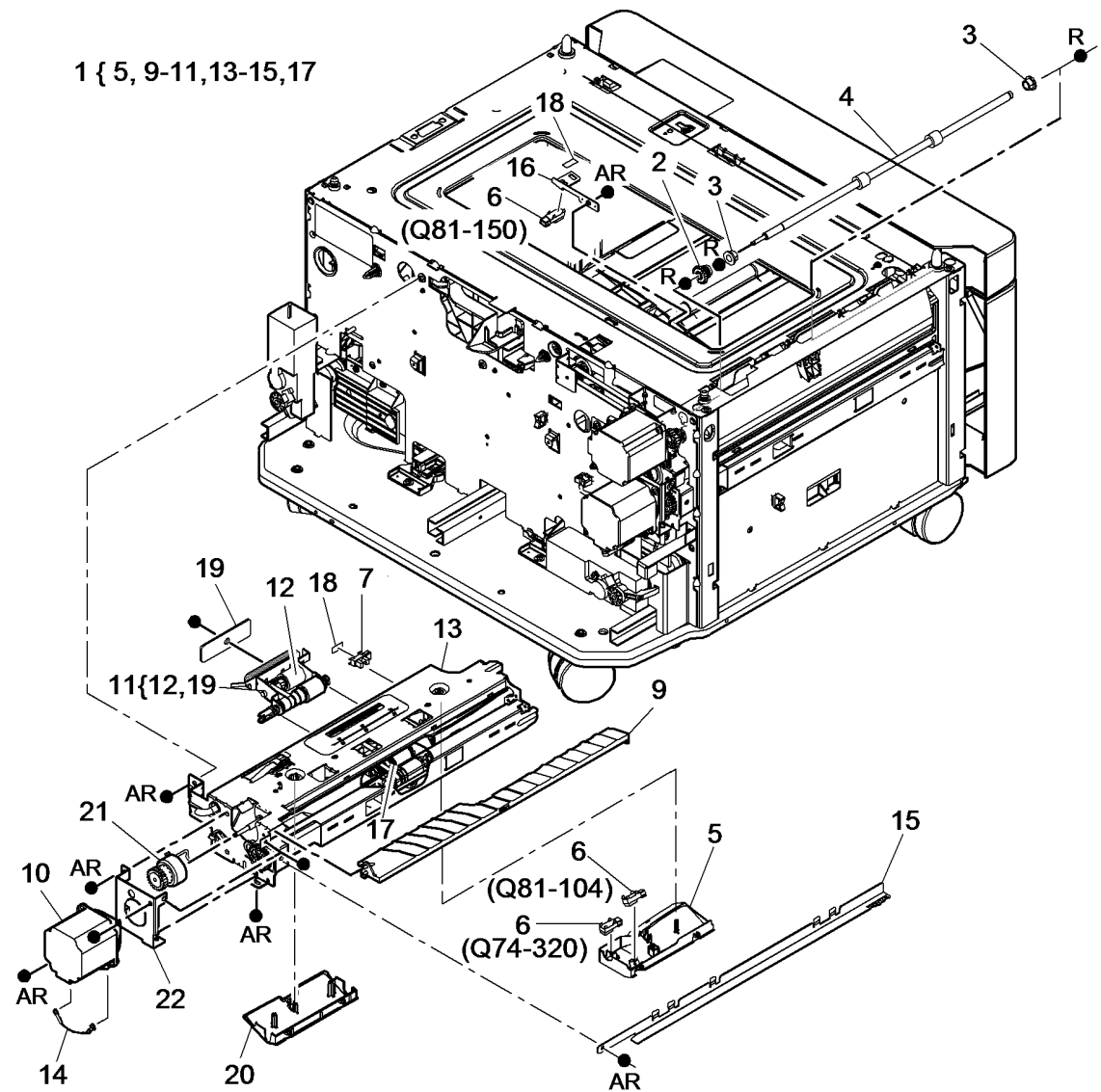
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PL 80.33 Tray 4 Paper Feed Assembly

Item	Part	Description
1	-	Tray 4 paper feed assembly (P/O PL 31.12 Item 6) (REP 80.21)
2	007K20321	Gear (See NOTE 2) (REP 80.27)
3	-	Bearing (P/O PL 31.11 Item 8)
4	-	HCF transport roll (P/O PL 31.11 Item 8) (REP 80.27)
5	-	Sensor mounting (P/O PL 80.33 Item 1)
6	130E11610	Tray 4 empty sensor (Q74-320) (REP 70.16)/Tray 4 feed sensor (Q81-104) (REP 80.14)/Tray 4 exit sensor (Q81-150) (REP 80.25)
7	-	Tray 4 stack height sensor (Q74-330) (P/O PL 31.12 Item 16) (REP 70.9)
8	-	Not used
9	-	Tray 4 paper guide (P/O PL 80.33 Item 1) (REP 80.29)
10	-	Tray 4 feed motor (MOT81-040) (P/O PL 80.33 Item 1)
11	-	Feed roll assembly (P/O PL 31.12 Item 15) (See NOTE 1) (REP 80.17)
12	-	Nudger roll (P/O PL 80.33 Item 11) (REP 80.17, ADJ 80.1)
13	-	Feed frame assembly (P/O PL 80.33 Item 1)
14	-	Ground cable (P/O PL 80.33 Item 1)
15	-	Support bracket (P/O PL 80.33 Item 1)
16	-	Tray 4 exit sensor bracket (Not Spared) (REP 80.25)
17	-	Retard roll (P/O PL 31.12 Item 15) (See NOTE 1) (REP 80.17, ADJ 80.3)
18	-	Shim (P/O PL 31.12 Item 16)
19	-	Nudger roll weight (P/O PL 80.33 Item 11) (ADJ 80.1)
20	-	Gull wing cover (P/O PL 31.14 Item 4)
21	121E27552	Feed clutch (REP 80.32)
22	-	Bracket (P/O PL 80.33 Item 1)

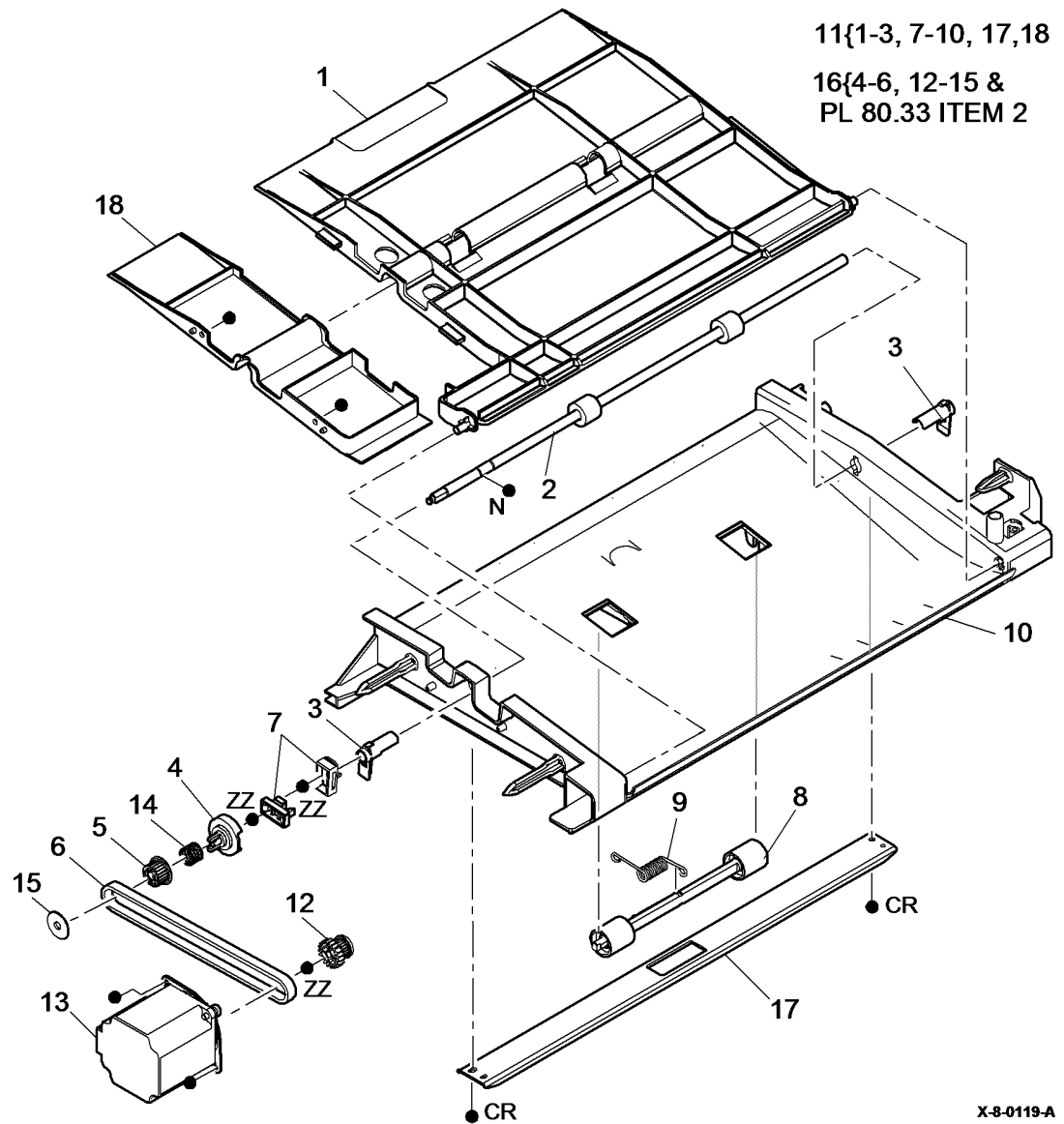


NOTE: 1. HFSI. To reset the HFSI count, refer to dC135.

NOTE: 2. Also part of the Transport motor and drives kit, PL 80.36 Item 16.

PL 80.36 Tray 4 Transport Assembly

Item	Part	Description
1	-	Jam clearance door (P/O PL 80.36 Item 11)
2	-	Takeaway roll assembly (P/O PL 31.12 Item 8) (REP 80.26)
3	-	Takeaway roll bearing (P/O PL 31.12 Item 8) (REP 80.26)
4	-	Clutch drive (P/O PL 80.36 Item 16) (REP 80.31)
5	-	Pulley (P/O PL 80.36 Item 16) (REP 80.31)
6	-	Drive belt (P/O PL 80.36 Item 16) (REP 80.31)
7	-	Drive coupling (P/O PL 31.12 Item 8)
8	859K04280	Idler roll assembly (metal shaft) (REP 80.26)
9	-	Spring (P/O PL 80.36 Item 11)
10	-	Base (P/O PL 80.36 Item 11)
11	038K24381	Tray 4 transport assembly (REP 80.24)
12	-	Transport gear pulley (P/O PL 80.36 Item 16) (REP 80.23)
13	-	HCF transport motor (MOT81-045) (P/O PL 80.36 Item 16) (REP 80.22)
14	-	Spring (P/O PL 80.36 Item 16) (REP 80.31)
15	-	Pulley flange (P/O PL 80.36 Item 16) (REP 80.31)
16	604K97740	Transport motor and drives kit
17	-	Tray 4 transport brace (P/O PL 80.36 Item 11)
18	-	Top fixed guide (P/O PL 80.36 Item 11)

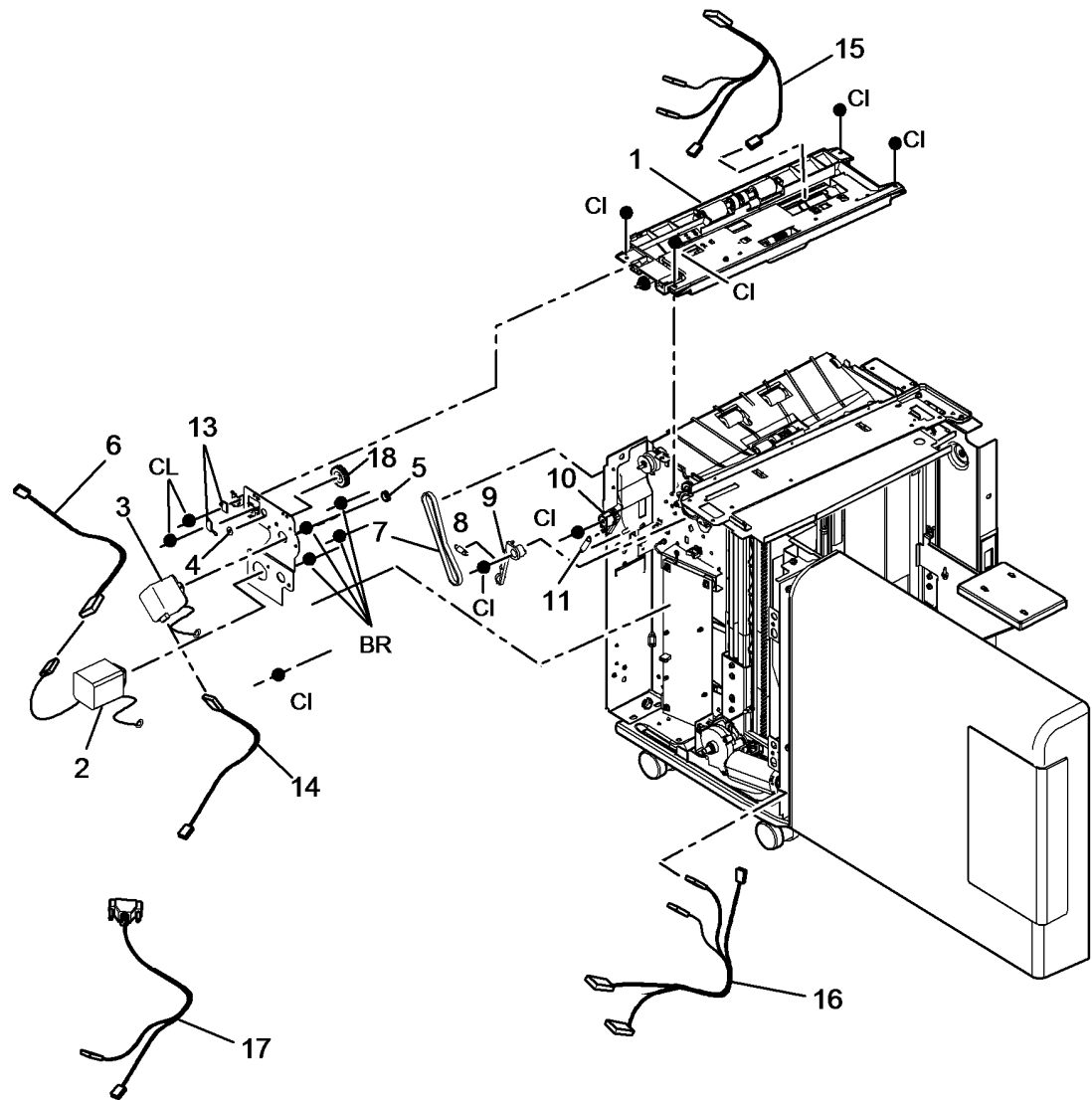


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PL 80.33 ITEM 2

X-8-0119-A

PL 80.40 Tray 6 Feed Assembly (1 of 3)

Item	Part	Description
1	-	Upper feeder assembly (REF: PL 80.41 Item 1)
2	127K56453	Tray 6 transport motor (MOT76-018) (REP 80.40)
3	127K61980	Feed motor (MOT76-117) (REP 80.39)
4	-	Bearing (Not Spared)
5	-	Gear 14T (P/O PL 80.40 Item 3)
6	-	Feed/elevator motor harness (Not Spared)
7	423W09050	Drive belt (REP 80.37)
8	-	Upper limit actuator spring (Not Spared)
9	-	Upper limit actuator (Not Spared)
10	-	Belt tensioner (Not Spared)
11	-	Belt tensioner spring (Not Spared)
12	-	Not used
13	-	Static eliminator (Not Spared)
14	-	Transport motor harness (Not Spared) (PJ511)
15	-	Tray 6 upper feeder assembly harness (Not Spared) (PJ505)
16	952K60370	Elevator motor harness (PJ504)
17	952K57540	Centre reg interface harness
18	007K14401	Gear 30T Bearing



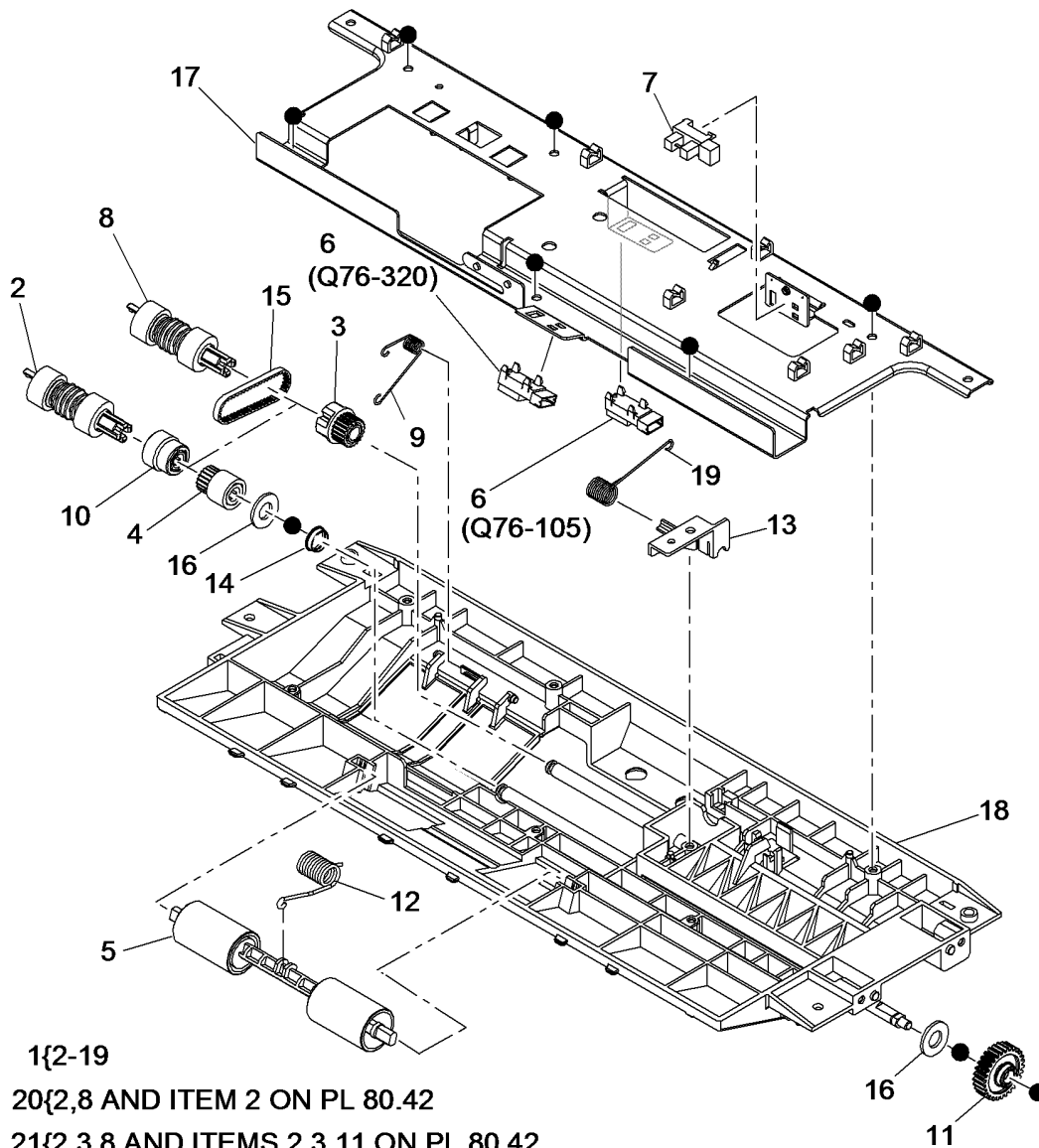
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PL 80.41 Tray 6 Feed Assembly (2 of 3)

Item	Part	Description
1	859K12330	Upper feeder assembly (REP 80.42)
2	-	Feed roller (P/O PL 80.41 Item 1) (See NOTE 1) (REP 80.38)
3	-	Nudger pulley (P/O PL 80.41 Item 1)
4	-	One way coupling (P/O PL 80.41 Item 1)
5	-	Take away idler roller (P/O PL 31.12 Item 6)
6	130E11610	Tray 6 empty sensor (Q76-320) (REP 70.18)/Feed sensor (Q76-105) (REP 80.36)
7	130E20360	Stack height sensor (Q76-330) (REP 70.19, ADJ 70.5)
8	-	Nudger roller (P/O PL 80.41 Item 20) (REP 80.38) (See NOTE 1)
9	-	Torsion spring (P/O PL 80.41 Item 1)
10	-	Clutch (P/O PL 80.41 Item 1)
11	-	Gear (29T) (P/O PL 80.41 Item 1)
12	-	Housing spring (P/O PL 80.41 Item 1)
13	-	Support plate (P/O PL 80.41 Item 1)
14	-	Bearing (P/O PL 80.41 Item 1)
15	-	Roller belt (P/O PL 80.41 Item 1)
16	-	Washer (P/O PL 80.41 Item 1)
17	-	Upper feed assembly top cover (Not Shown)
18	-	Upper feed assembly base (P/O PL 80.41 Item 1)
19	-	Torsion nudger spring (P/O PL 80.41 Item 1)
20	-	Feed roll kit (Pack of 3) (REF: PL 31.11 Item 12) (REP 80.38)
21	-	Feed roll retrofit kit (See NOTE 2)

NOTE: 1. To reset the HFSI count, go to dC135.

NOTE: 2. Part number not available at time of publication.

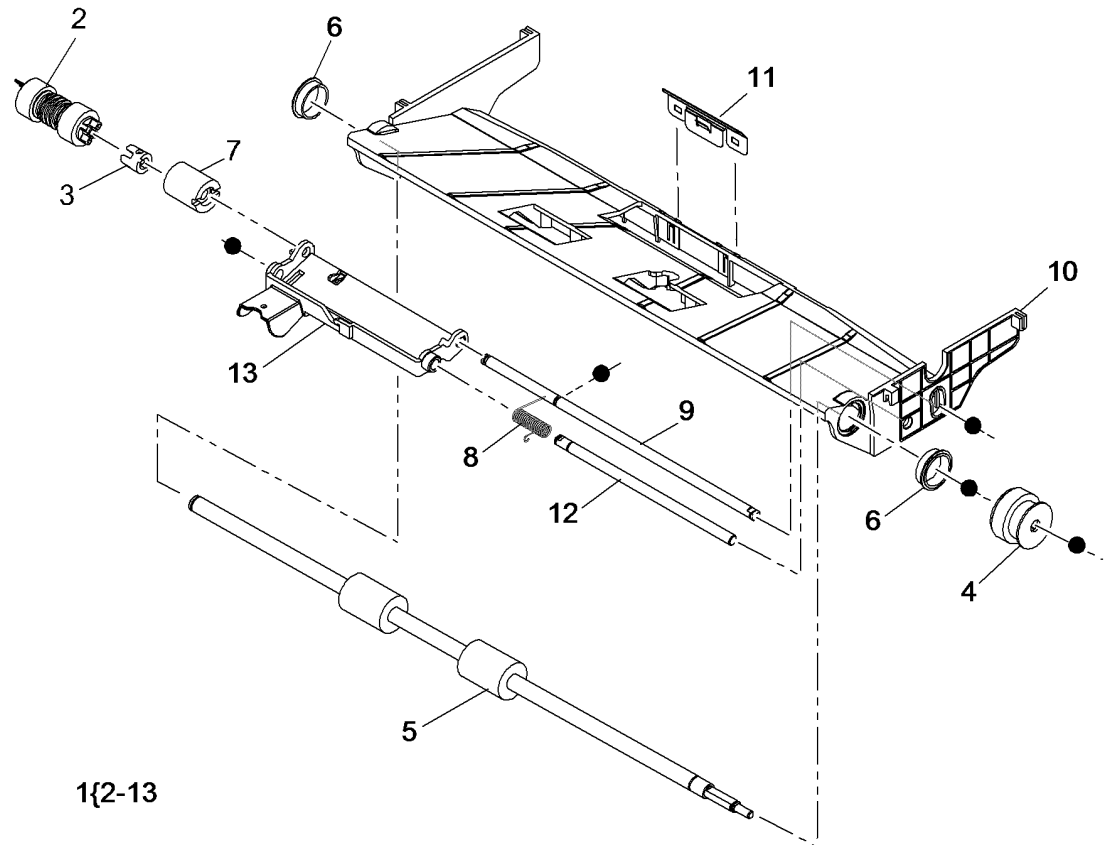


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PL 80.42 Tray 6 Feed Assembly (3 of 3)

Item	Part	Description
1	-	Lower feed assembly (P/O PL 31.11 Item 11)
2	-	Retard roller (P/O PL 80.42 Item 1)(See NOTE)
3	-	Retard clutch (P/O PL 80.42 Item 1)
4	-	One way pulley clutch (P/O PL 80.42 Item 1)
5	-	Take away roller (P/O PL 31.12 Item 6) (REP 80.41)
6	-	Bearing (P/O PL 80.42 Item 1)
7	005E29070	Clutch
8	-	Torsion retard spring (P/O PL 80.42 Item 1)
9	-	Retard roller shaft (P/O PL 80.42 Item 1)
10	-	Lower feed assembly base (P/O PL 80.42 Item 1)
11	-	Retard shield (P/O PL 80.42 Item 1)
12	-	Actuator pivot shaft (P/O PL 80.42 Item 1)
13	-	Support Plate (P/O PL 80.42 Item 1)

NOTE: To reset the HFSI count, go to dC135.

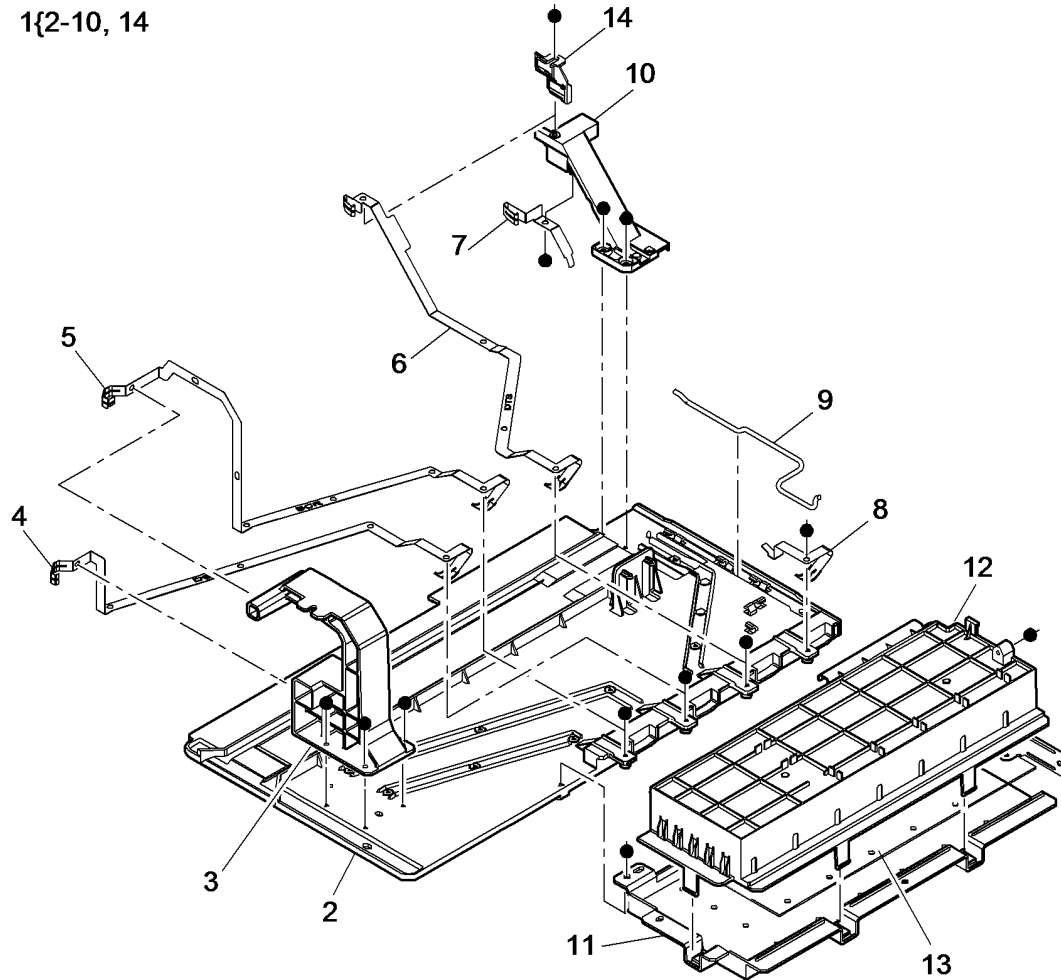


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PL 90.10 High Voltage Power Distribution Assembly

Item	Part	Description
1	859K01027	HVPS tray assembly (REP 90.3)
2	-	Tray (P/O PL 90.10 Item 1)
3	-	Front track support (P/O PL 90.10 Item 1)
4	-	Track (DEV) (P/O PL 90.10 Item 1)
5	-	Track (BCR) (P/O PL 90.10 Item 1)
6	-	Track (DTS) (P/O PL 90.10 Item 1)
7	-	Track (BTR 1) (P/O PL 90.10 Item 1)
8	-	Track (BTR 2) (P/O PL 90.10 Item 1)
9	-	Track cable (P/O PL 90.10 Item 1)
10	-	Rear track support (P/O PL 90.10 Item 1)
11	-	HVPS bottom cover (Not Spared)
12	-	HVPS top cover (Not Spared)
13	-	HVPS (REF: PL 1.10 Item 3)
14	-	Track cover (P/O PL 90.10 Item 1)

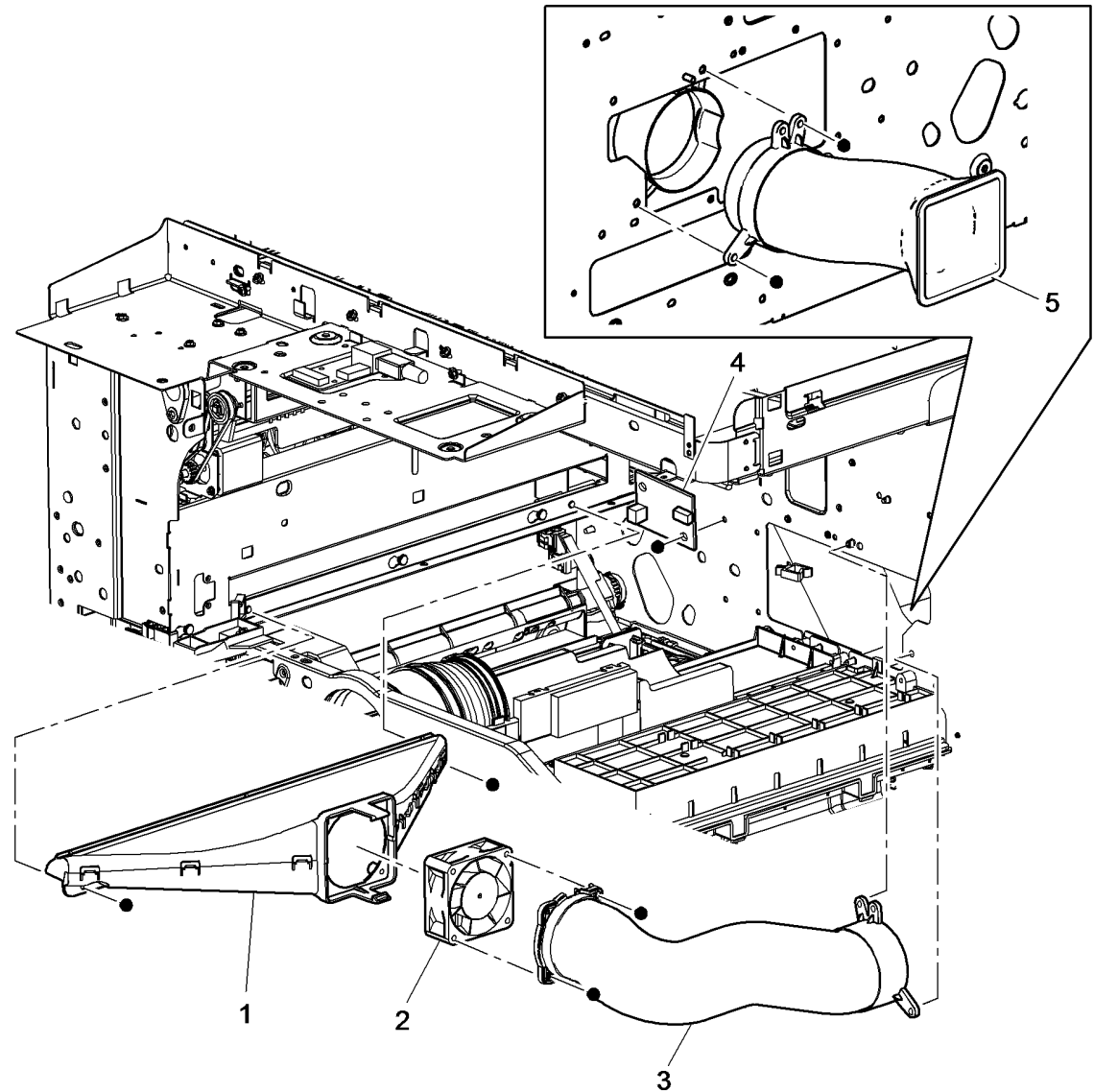
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PL 90.15 Print Cartridge Cooling

Item	Part	Description
1	-	Print cartridge fan duct (Not Spared)
2	127E17991	Print cartridge fan
3	-	Inner cooling duct (Not Spared) (65-90ppm)
4	-	Environmental sensors PWB (Not Spared) (REP 90.4)
5	-	Outer cooling duct (Not Spared)

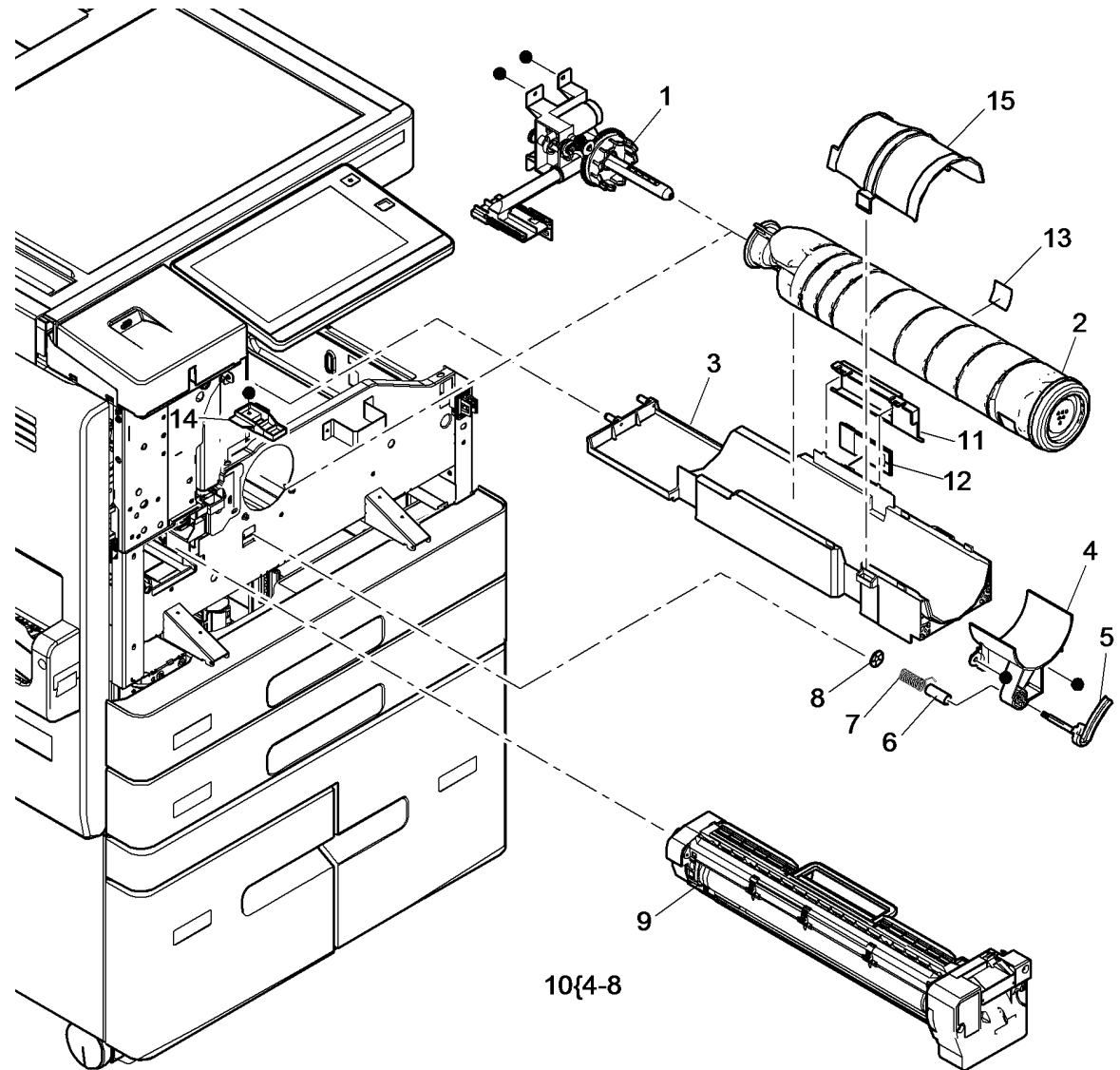


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PL 90.17 Toner/Print Cartridges

Item	Part	Description
1	094K05506	Toner dispense module (REP 90.1)
2	-	Toner cartridge (REF: PL 26.11 Item 3)
3	-	Toner cartridge housing (Not Spared)
4	-	Latch housing (P/O PL 90.17 Item 10)
5	-	Toner dispense latch (P/O PL 90.17 Item 10)
6	-	Sleeve (P/O PL 90.17 Item 10)
7	-	Spring (P/O PL 90.17 Item 10)
8	-	Push on fastener (P/O PL 90.17 Item 10)
9	013R00675	Print cartridge
10	-	Latch housing assembly (REP 90.2) (Not Spared)
11	-	Cover (Not Spared)
12	960K25380	Toner cartridge PWB
13	-	Toner cartridge CRUM (Not Spared)
14	869E05955	Latch bracket
15	-	Toner cartridge guide (Not Spared)

NOTE: Refer to ADJ 90.1 for xerographics cleaning.



Common Hardware

Item	Part	Description
A	–	Screw M3x6 Taptite (Zinc finish)
B	–	Screw M4x8 Taptite
C	–	Screw M4x12 Self Tapping
D	–	Screw M3.9.5 Taptite
E	–	Screw M3x8 Taptite
F	–	Screw M3x7.5 Taptite
G	–	Screw M4x12 Self Tapping
H	–	Screw M3x4.5 Machine
I	–	Screw M4x16 Self Tapping
J	–	Screw M3x14 Self Tapping (Countersunk)
K	–	Screw M3x16 Self Tapping
L	–	Screw M4x10 Self Tapping
M	–	E-Clip M4
N	–	E-Clip M5
O	–	Screw M4x12 Self Tapping
P	–	Screw M4x12 Taptite
Q	–	Screw M4x11 Self Tapping
R	–	KL Clip M6
S	–	Screw M4x30 Taptite
T	–	Screw M3x10 Self Tapping
U	–	Screw M3x10 Taptite
V	–	Screw M3x6 Taptite
W	–	Screw M3x16 Self Tapping
X	–	Screw M3x6 Self Tapping
Y	–	E-Clip M8
Z	–	E-Clip M4
AA	–	E-Clip M7
AB	–	Screw M3x25 Self Tapping
AC	–	Screw M3x4 Taptite
AD	–	E-Clip M6
AE	–	Washer M8
AF	–	Spring Washer M6
AG	–	Screw M3.5x10 Self Tapping
AH	–	Circlip M5
AI	–	Circlip M8
AJ	–	Star Washer M4
AK	–	Screw M4x9.5 Machine
AL	–	Screw M5x18 Self Tapping
AM	–	Star Washer M3.5
AN	–	Screw M3.5x5.5 Machine
AO	–	Screw M3.5x6 Machine
AP	–	Screw M5x11 Taptite
AQ	–	Screw M3x8 Taptite
AR	–	Screw M4x8 Machine
AS	–	Screw M4x10 Self Tapping
AT	–	Screw M4x10 Self Tapping
AU	–	Screw M3x5 Machine
AV	–	E-Clip M3.5
AW	–	Screw M3x5.5 Taptite

AX	–	Screw M3x14 Machine
AY	–	Screw M3x18 Self Tapping
AZ	–	Washer M4
BA	–	Screw M4x16 Machine
BB	–	Screw M4x5 Machine
BC	–	Screw M3x10 Machine
BD	–	Screw M3x6 Machine
BE	–	Screw M4x7.5 Machine
BF	–	Screw M3x5.5 Machine
BG	–	Washer M3
BH	–	Spring Washer M3
BI	–	Screw M3x6 Machine
BJ	–	Screw M3x22 Self Tapping
BK	–	Retaining Ring (Skiffy) M7
BL	–	Circlip M10
BM	–	Screw M3x8 Machine
BN	–	Screw M4x8 Self Tapping
BO	–	Screw M3x6 Taptite
BP	–	Screw M3x4 Machine (Countersunk)
BQ	–	Screw M3x16 Machine
BR	–	Screw M3x9.5 Self Tapping
BT	–	Screw M4x8 Self Tapping
BU	–	Screw M3x5.5 Self Tapping
BV	–	Screw M4x7 Taptite
BW	–	Screw M3x6 Self Tapping
BX	–	Screw M3x8 Self Tapping
BY	–	Screw M4x8 Self Tapping
BZ	–	Screw M4x16 Taptite
CA	–	Screw M3x8 Self Tapping
CB	–	Screw M4x10 Self Tapping
CC	–	Screw M4x8 Self Tapping
CD	–	Screw M3x10 Self Tapping
CE	–	Screw M3x12 Self Tapping
CF	–	Screw M4x5 Taptite
CG	–	Circlip M6
CH	–	Screw M3x10 Machine
CI	–	Screw M4x5 Machine
CJ	–	Screw M3x11 Self Tapping
CK	–	E-clip M2.5
CL	–	Washer M5
CM	–	Screw M4x9 Self Tapping
CN	–	Screw M3x14 Self Tapping
CO	–	Screw M3x8 Self Tapping
CP	–	Screw M4x15 Taptite
CQ	–	Spring Washer M8
CR	–	Screw M3x8 Self Tapping
CS	–	Screw M4x8 Machine
CT	–	Screw M3x5.5 Machine
CU	–	Screw M3x9 Self Tapping
CV	–	Nut M3
CW	–	Nut M3
CX	–	Screw M4x6 Machine

CY	–	Screw M4x11.5 Taptite
CZ	–	Screw M3x7.5 Taptite
DA	–	Screw M4x7 Self Tapping
DB	–	Screw M3x6 Self Tapping
DC	–	Screw M3x12 Self Tapping
DD	–	Screw M5x12 Self Tapping
DE	–	Circlip M7
DF	–	Screw M3x6 Machine
DG	–	Screw M3x7.5 Self Tapping
DH	–	Screw M4x7 Self Tapping
DI	–	Screw M4x34 Self Tapping
DJ	–	Screw M4x16 Self Tapping
DK	–	Screw M4x7 Self Tapping
DL	–	Screw M4x6 Taptite
DM	–	M3 Star Washer
DN	–	Screw M4x6 Machine
DO	–	Screw M3x6 Self Tapping
DP	–	M3 Nut (Washer Head)
DQ	–	Screw M4x11 Machine
DR	–	Washer M8 (Nylatron)
DS	–	Screw M3 x 8
DT	–	Screw M3x17 Taptite
DU	–	Screw M2.5x8 Taptite
DV	–	Screw M3.5x10 Torx
DW	–	Screw M3.5x10 Taptite
EA	–	Screw M4x6 Machine
EB	–	Screw M4x10 Machine
EC	–	Screw M4x8 Machine
EF	–	Screw M5x6 machine
EH	–	Pivot pin M4X10 Hex Head
EI	–	Nylon bearing
EJ	–	6mm x 10mm x 13mm bush (bronze)
ET	–	M4 x 5.5 Screw/Machine/Pozi/Wash Hd Brass
EU	–	M3x16 Screw/Machine/Pozi/Pan Hd
EV	–	KL Clip M4
EW	–	Screw M4 x 25 Self Tapping
EX	–	KL Clip M7
ZZ	–	E-clip M3

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GP 1 Service Mode

Purpose

This procedure describes how to enter and exit service mode and the available service routines. Refer also to [GP 3](#).

NOTE: When service mode is entered, all existing copy jobs are cancelled and an 'Offline' screen message is displayed.

How to Enter Service Mode

NOTE: Entry to service mode is not possible with an XEIP application running. To exit the XEIP application, press the Services Home button.

NOTE: Do not enter service mode if the Replace Toner Cartridge dialog box is displayed. Entry to service mode with the dialog box displayed will stop the machine printing test patterns. Confirm either yes or no, then enter service mode.

1. Switch on the machine, [GP 14](#).
2. When the machine is ready press and hold the **Home** button for 7 seconds. The passcode screen will display when the button is released.
3. Enter the passcode, 6789. Press the **OK** button on the UI.

NOTE: Five incorrect entries cause the entry screen to lock for 3 minutes.

4. Select the relevant tab:
 - [General Information Tab](#)
 - [Service Information Tab](#)
 - [Diagnostics Tab](#)
 - [Adjustments Tab](#)
 - [Maintenance Tab](#)

Call Closeout Button

NOTE: Do not exit service mode until the machine has recovered from all diagnostic routines.

1. Select the Call Closeout button to exit service mode.
2. If necessary, select Reset Counters.
3. Select Exit and Reboot.

General Information Tab

- Product code
- Serial number
- Total image count
- Images since last call
- System software version
- IPV4 address
- Device name
- IPV6 address

Service Information Tab

The service info tab contains routines used to track faults that have occurred in the machine. Refer to [Table 1](#).

Table 1 General Information Tab

Routine	Description
dC104	Usage Counters
dC108	Software Version
dC120	Fault Counters
dC122	Fault History
dC135	CRU / HSFI Status

Diagnostics Tab

The diagnostic tab contains routines used to test specific areas of the machine. Refer to [Table 2](#).

Table 2 Diagnostics Tab

Routine	Description
dC140	Analog Monitor
dC304	LED Print Head Validation
dC305	UI Panel Diagnostics Test
dC312	Network Echo Test
dC330	Component Control
dC612	Print Test Pattern

Adjustments Tab

The adjustment tab contains routines used to modify the set-up or to calibrate specific areas of the machine. Refer to [Table 3](#).

Table 3 Adjustments Tab

Routine	Description
dC131	NVM Read/Write
dC301	NVM Initialization
dC361	NVM Save and Restore
dC604	IOT Registration
dC608	Document Feeder Registration
dC609	Document Glass Registration
dC610	CCD Lamp Profile Adjustment
dC945	IIT Calibration

Maintenance Tab

The maintenance tab contains routines that give information about the history of the machine, consumables and selected billing mode. Refer to [Table 4](#).

Table 4 Maintenance Tab

Routine	Description
dC120	Fault Counters
dC122	Fault History
dC132	Machine Serial Number
dC134	Market Region
dC135	CRU / HSM
dC136	Service Plan
dC137	PagePack

Service Copy Mode

Service copy mode provides access to the machine that is greater than that of a user, but less than that of the System Administrator. This mode allows the CSE to perform a number of checks and run copies without compromising the customer's security settings. This mode can be used if the Administrator user name and passcode are not at the default, and the Administrator is not available to enter the admin passcode. Perform the steps that follow:

1. Press and hold the **Home** button for 7 seconds. The passcode screen will display when the button is released.
2. Enter the passcode 2732. press the **OK** button on the UI.

NOTE: Five incorrect entries cause the entry screen to lock for 3 minutes.

3. The **Log In** button will change to display **CSE**.

NOTE: The tools available in this mode are a subset of those available in Administrator mode. CSE service copy mode remains active until the **login/CSE** button is pressed again. When finished with always log out of service copy mode by pressing the **CSE** button and confirming log out.

GP 2 Fault Codes and History Files

Purpose

To describe access to fault history information and explain the fault code structure.

- History files can be accessed from the UI using the [Machine Status Button](#) or from service mode under the Service Info tab. Refer to [Fault Data Available from Service Mode](#).
- For information on fault codes, refer to [Function, Fault, Component Codes](#).
- For information on status codes, refer to [OF4 Status Codes and Messages RAP](#).
- For information on power on self test (POST), refer to [OF2 POST Error RAP](#).

Machine Status Button

The most recent fault and status codes can be displayed on the UI by pressing the Machine Status button. Select the Active Messages tab on the UI then select the appropriate option:

- Fault History.
- From the pulldown menu:
 - Faults and Alerts.
 - Faults.
 - Alerts.

Fault Data Available from Service Mode

The Service Info tab in service mode ([GP 1](#)) gives access to the fault history options that follow:

- Fault Counters ([dC120](#)) - Displays the titles of all faults separated into chains, sortable by chain or frequency.
- Fault History ([dC122](#)) - Displays the last 40 faults. Selecting a fault will display it in detail.

Function, Fault, Component Codes

Refer to:

- [Table 1](#) Function and fault code prefixes. Also known as the chain code.
- [Table 2](#) Finisher fault code and status code suffixes.

For example, displayed code 373-215-00, Tray 3 hoist failure:

- 3 - Indicates that this is a Discovery 2 software platform fault code. All AltaLink® B8090 fault codes begin with 3.
- 73 - The fault is located in chain 7, 'Paper supply and tray 3'. Refer to [Table 1](#).
- 215 - This is the link code. These numbers have no significant meaning for the CSE.
- 00 - This is the extension code. These numbers have no significant meaning for the CSE.

NOTE: Where possible, the component related fault codes are the same as the component control codes.

Table 1 Function and fault code prefixes

Chain Code	Function
01	Standby power
02	User interface
03	Machine run control
05	Document transportation
10	Fusing and copy/print transportation
12	Finishers
16	Network controller
19	Video image manipulation
20	Fax
22	System Errors
40	Main drives
6X	LED print head, scanners
7X (X = tray No.)	Paper supply (paper trays and bypass)
8X	Paper feed and transport
9X	Xerographics
95	Software upgrade errors

Table 2 Finisher code suffix numbers

Suffix No.	Finisher Identifier
110	2K LCSS
150	LVF BM
171	HVF

NOTE: The finisher fault and status code suffix numbers are not normally visible.

GP 3 Service Information

Purpose

To provide machine hardware and software information.

Service Information From The Service Mode Screen

Enter service mode, [GP 1](#). Select the Service Info tab. This gives the options that follow:

- Information Routines.
 - dC104 Usage Counters.
 - dC108 Software Version.
 - dC120 Fault Counters.
 - dC122 Fault History.
 - dC135 CRU/HFSI Status.
- General Information.
 - Product Code.
 - Serial Number.
 - Total Images.
 - Images since Last Call.
 - Software Set Version.
 - IP Address.

Service Information From The UI Machine Information Tab

Press the Machine Status (i) button to the left of the UI to display the Machine Information tab. This gives the options that follow:

- General Information.
 - Customer Support.
Web site: www.xerox.com.
 - Model.
 - Serial Number. Refer to [dC132](#) Serial Number.
 - Current System Software.
000.00.000
 - IPv4 Address.
 - IPv6 Address.
 - Host Name.
- Paper Tray Status.
- Information Pages.
- Installed Options.
- Maintenance Assistant.

Machine Serial Number

To locate the machine serial number, open the left door, the serial number plate is located on the upper left frame of the machine.

The serial number for the XC markets is in the format: XXX #####. Where XXX is the product code (see [Product Code](#)) and ##### is the serial number.

The serial number for the XE markets is in the format: MMM#####C. MMM is the manufacturing location code, ##### is the serial number and C is the check digit, for example 2327020103.

Product Code

The machine product codes are shown below, [Table 1](#).

Table 1 Machine product codes

Product Code	Machine Configuration	Manufacture location
Y3X	AltaLink® B8045/55 system - SPDH/ MF mono 4 tray HCF XE(50Hz).	Malaysia (Senai)
Y4X	AltaLink® B8045/55 system - SPDH/ MF Mono 4 tray HCF XC(60Hz).	Malaysia (Senai)
Y4X N	AltaLink® B8045/55 system - SPDH/ MF Mono 4 tray HCF XC - GSA (60Hz).	Singapore (Changi)
1AG	AltaLink® B8065/75/90 system - SPDH/ MF mono 4 tray HCF XE (50Hz)	Malaysia (Senai)
3AG	AltaLink® B8065/75/90 system - SPDH/ MF mono 4 tray HCF XC(60Hz)	Malaysia (Senai)
3AG N	AltaLink® B8065/75/90 system - SPDH/ MF mono 4 tray HCF XC - GSA (60Hz)	Singapore (Changi)
-	Finisher / Horizontal Transport Option Kit	-
-	Centre / Output Catch Tray (OCT) Option Kit	-
2AH	Office Finisher (2K LCSS) (no hole punch as standard)	Vietnam
1AH	Low Volume Finisher with Booklet Maker (LVF BM)	Vietnam
6BN	High Volume Finisher (HVF) 3K (no hole punch as standard)	Vietnam
3BM	High Volume Finisher with Booklet Maker (HVF BM) 3K (no hole punch as standard)	Vietnam
BHU	Post Process Inserter (Tray 7) for HVF	Vietnam
BHV	C/Z Tri folder (HVF BM)	China
7AU	Paper Feed Platform (PFP) (Tray 6)	Vietnam

Other Serial Number Locations

The SPDH module. Lift up the SPDH top cover assembly. The serial number plate is located on the inside of the top cover on the outboard side.

The scanner module. Perform steps 1 to 5 of [REP 60.3](#) Top Cover Removal. The serial number label is located on the centre front of the scanner top cover.

The IIT module (scanner module with SPDH module). Remove the rear cover, [PL 28.10](#) Item 1. The serial number plate is located on the underside of the scanner at the rear/left.

The 2K LCSS module. Un-dock the 2K LCSS. Refer to [REP 12.13-110](#). The serial number plate is located in the base pan of the 2K LCSS.

The LVF BM module. Undock the LVF BM module. Refer to [REP 12.13-150](#). The serial number plate is located on the booklet tamper assembly, [PL 12.380](#) Item 1.

The HVF BM module. Undock the HVF BM module, Refer to [REP 12.13-171](#). The serial number is located on the metal panel under the docking latch.

GP 4 Machine Software

Purpose

To provide machine software information and explain the software loading procedures.

Machine software can be loaded from a USB flash drive, via network connection from a web browser or from a PWS. These options are described below.

Initial Requirements

- If possible, complete or delete all pending print jobs. If the prints jobs cannot be deleted, warn the customer that all pending jobs will be lost.

NOTE: The procedure will take approximately 35 minutes.

- Before software is loaded, ensure that the machine is in a fully operational condition. Any active faults or jams must be resolved before loading software.

- Check the release notes and the current software loaded on the machine. Ensure that the upgrade can be applied.
- If the software loading procedure fails, enter **dC122** Fault History. Check for chain 95 fault codes. Perform the relevant RAPs.

Refer to **Figure 1** for network connections to the machine.

Refer to **Table 1** for upgrade, downgrade, reload capabilities for machine modules depending on the software installation process used.

NOTE: POSU: Power On Software Upgrade. During the machine power on process the SBC checks the software versions of all the PWBs against the **Software Compatibility Database (SCD)** and upgrades or downgrades accordingly so that all modules are correct.

Table 1 Module Capabilities - Upgrade, Downgrade, Reload Options

Process Type of software load/ reload, upgrade or downgrade	Network Controller	Copy Controller (fax and UI application code are included but not displayed)	User Interface	Scan Engine (document feeder is included but not displayed)	Print/Copy Engine (Marking Engine)	Finishing	Tray 6 (Paper Feeder Platform)
USB Upgrade Downgrade Reload	Upgrade Downgrade Reload	Upgrade Downgrade Reload	N/A	After POSU if required	After Upgrade POSU if required	After POSU if required	After POSU if required
Embedded Web Server Upgrade Downgrade Reload	Upgrade Downgrade Reload	Upgrade Downgrade Reload	N/A	After POSU if required	After POSU if required	After POSU if required	After POSU if required
Auto FTP Upgrade	Upgrade	Upgrade	N/A	After Upgrade POSU if required	After Upgrade POSU if required	After Upgrade POSU if required	After Upgrade POSU if required
Power On Software Upgrade (POSU)	N/A	N/A	N/A	Upgrade Downgrade	Upgrade Downgrade	Upgrade Downgrade	Upgrade Downgrade
USB AltBoot	Upgrade Downgrade Reload	Upgrade Downgrade Reload	N/A	After Altboot POSU if required	After Altboot POSU if required	After Altboot POSU if required	After Altboot POSU if required
USB ForcedAltBoot	Upgrade Downgrade Reload	Upgrade Downgrade Reload	Upgrade Downgrade Reload	Upgrade Downgrade Reload	Upgrade Downgrade Reload	Upgrade Downgrade Reload	Upgrade Downgrade Reload
PWSAltBoot - Option 5 (Install ESS Software)	Upgrade Downgrade Reload	Upgrade Downgrade Reload	N/A	After Altboot POSU if required	After Altboot POSU if required	After Altboot POSU if required	After Altboot POSU if required
PWSForcedAltBoot - Option 10 (Forced Install ESS Software)	Upgrade Downgrade Reload	Upgrade Downgrade Reload	Upgrade Downgrade Reload	Upgrade Downgrade Reload	Upgrade Downgrade Reload	Upgrade Downgrade Reload	Upgrade Downgrade Reload

Software Loading Options

Software Install Using USB Flash Drive

NOTE: Loading software by the USB connection is only suitable for a machine that is in Standby/Ready Mode.

1. Upgrade. Refer to [USB Flash Drive Upgrade](#). This procedure can only be used to perform an upgrade.
2. USB AltBoot. Refer to [USB AltBoot Procedure](#). This procedure can be used to upgrade, downgrade or reload the software.
3. USB Forced AltBoot. Refer to [USB Forced AltBoot Procedure](#). This procedure can be used to upgrade, downgrade or reload the software.

NOTE: Refer to [Altboot and Forced Altboot - the differences](#)

Software Upgrade Using Web UI (Embedded Web Server)

NOTE: The Web UI can only be used to upgrade software.

The Web UI may be reached via a web browser on the customer network or using the PWS.

- If using the customer's network, or any other web browser, follow the instructions in [Software Upgrade Over the Web UI](#).
- If using the PWS perform the following steps:
 1. Refer to [Accessing the Web UI of a Machine Via a PWS](#). Return to this procedure when set up.
 2. Refer to [Software Upgrade Over the Web UI](#) for the remainder of the procedure.

Software Install Using PWS

The PWS can be used to install the software using the AltBoot procedure. There are two types of PWS AltBoot, regular and forced. The PWS AltBoot and PWS Forced AltBoot procedures can be used to upgrade, downgrade or reload the software.

NOTE: Refer to [Altboot and Forced Altboot - the differences](#)

Refer to the full procedure [PWS AltBoot and PWS Forced AltBoot](#).

NOTE: PWS Altboot and PWS Forced Altboot are identical from the point of view of the PWS. Once the files (FKS and DLM) are transferred to the machine the software upgrade (within the machine) takes over. At this time, the Altboot and Forced Altboot are regulated by software upgrade and behave like the Altboot or Forced Altboot from the flash drive.

USB Procedures

USB Flash Drive Upgrade

Perform the steps that follow:

1. Obtain the correct DLM file from Xerox.com, GSN Library 15767 or the appropriate SPAR software as required.
2. Login as an Admin user, [GP 24](#).
3. Enable software upgrade.
 - a. From the Home screen select Device.
 - b. Select Tools.
 - c. On the Device Settings tab scroll down to select Device Software Upgrade.
 - d. Select Enable and select OK.
4. Return to the Home screen by pressing the Home button.

NOTE: The machine must be on the Home screen for the machine to recognise the USB flash drive.

5. Insert the USB flash drive in any of the USB ports. If necessary perform the [USB Port Security Setting Check](#) to check that the USB ports are enabled.
6. The USB Drive Detected screen will display. Select the Install File option.

NOTE: The Install File Option will not display if the machine does not detect a valid DLM file.

7. The UI will display the option to Navigate to the folder where the DLM file is located.

NOTE: All folders on the flash drive will be shown but only valid DLM files will be shown within the folders. All other folders will appear empty.

8. Select the desired DLM file and select Install.
9. Refer to [Software Loading Progress](#) as the software loads.

USB AltBoot Procedure



CAUTION

The AltBoot software loading procedure erases the Smart eSolutions and the wireless settings. These will be automatically reloaded at the end of the AltBoot procedure.

NOTE: AltBoot upgrades should be performed with the device in wired connectivity mode. Upgrades attempted while the device is in wireless mode may result in unpredictable network/device behavior that will require a reset to default configuration action, then a device reboot in order to resolve issues.

NOTE: If the optional features, McAfee Integrity Control or XPS fail automatically to reload after an AltBoot, refer to [GP 17 How to Re-Enter Optional Feature Installation Keys](#).

Hardware requirements:

- USB Flash drive.

Software requirements:

- The DLM file to be loaded.

Perform the steps that follow:

1. Create a top level folder on the USB Flash drive named AltBoot.

2. Copy the DLM file into the AltBoot folder of the USB flash drive.

NOTE: If there is more than 1 version of a DLM file in the AltBoot folder on the USB flash drive the machine will always access the latest version.

3. If possible, perform an NVM save. Refer to [dC361 NVM Save and Restore](#).
4. Check that the USB ports are enabled. Perform the [USB Port Security Setting Check](#).
5. Switch off the machine, [GP 14](#).
6. Connect the USB flash drive to the front USB port or either of the 2 USB ports on the right of the SBC PWB module.
7. Switch on the machine [GP 14](#). The upgrade will start. Refer to [Software Loading Progress](#).

NOTE: If the Upgrade Failed screen displays at this time, it is an indication of hard disk drive failure. Refer to the [319-300-00 to 319-310-00 Hard Disk Drive Failure RAP](#).

NOTE: If the Progress screen is not displayed after 5 minutes, restart the process.

8. The AltBoot process should complete after approximately 5 minutes and the AltBoot Complete screen will open. Follow the on screen instructions.
9. If the AltBoot process fails, the AltBoot Failed screen will open. Follow the on-screen instructions. Restart the procedure and refer to [Troubleshooting](#) as necessary.

NOTE: You have the option to remove the USB drive when notified it is Safe to do so or waiting for message to remove it and hit the 0 button.

10. The UI displays the Data Encryption/Decryption progress screen.

NOTE: Do not switch off the machine until directed to on the UI. During the reboot, the hard disk drive is encrypted. Switching off the machine can cause only partial encryption of the hard disks partitions. The AltBoot process may need to be re-run if power is removed at this step.

11. Before returning to a ready state, the machine will reboot several times as the previous settings are reloaded. The previous settings message screen will display. If a power on failure screen appears, switch off, then switch on the machine, [GP 14](#).
12. Check that the software set has been installed. Refer to the printed software upgrade report or by pressing the Machine Status button.
13. Perform a NVM restore. Refer to [dC361 NVM Save and Restore](#).
14. Switch off, then switch on the machine, [GP 14](#) to complete the USB AltBoot procedure.

USB Forced AltBoot Procedure

Use this procedure to load software onto a faulty machine. Only use this procedure if directed.



CAUTION
Do not perform a forced AltBoot unless absolutely necessary. If a problem occurs during the upgrade, some PWBs could be irretrievably damaged and new components will have to be installed.



CAUTION
The AltBoot software loading procedure erases the SMart eSolutions and the wireless settings. These must be reloaded at the end of the forced AltBoot procedure.

NOTE: AltBoot upgrades should be performed with the device in wired connectivity mode. Upgrades attempted while the device is in wireless mode may result in unpredictable network/device behavior that will require a reset to default configuration action, then a device reboot in order to resolve issues.

NOTE: If the optional features, McAfee Integrity Control or XPS fail automatically to reload after an AltBoot, refer to [GP 17 How to Re-Enter Optional Feature Installation Keys](#).

Hardware requirements:

- USB Flash drive.

Software requirements:

- The FORCED_UPGRADE file.
- The DLM file to be loaded.

Perform the steps that follow:

1. Create a folder named AltBoot (not case sensitive) on a USB Flash drive.
2. Locate the FORCED_UPGRADE file (the file size = 0 KB) in GSN library 15767.
3. Unzip, then copy the FORCED_UPGRADE file into the AltBoot folder on the USB Flash drive.
4. Copy the DLM file into the AltBoot folder on the USB Flash drive.
5. If possible, perform an NVM save. Refer to [dC361 NVM Save and Restore](#).
6. Check that the USB ports are enabled. Perform the [USB Port Security Setting Check](#).
7. Switch off the machine, [GP 14](#).
8. Connect the USB flash drive to the front USB port or either of the 2 USB ports on the right of the SBC PWB module.
9. Switch on the machine, [GP 14](#). The upgrade will start. Refer to [Software Loading Progress](#).
10. When the software loading is complete, enter Customer Administration Tools, [GP 24](#). Select Tools / Device Settings / General / Revert to Previous Settings. This will reload the customer optional services.

NOTE: If the optional features, McAfee Integrity Control or XPS fail to reload, refer to [GP 17 How to Re-Enter Optional Feature Installation Keys](#).

11. Check that the software set has been installed. Refer to the printed software upgrade report or by pressing the machine status button.

12. If the NVM was saved at the beginning of this procedure, perform an NVM restore. Refer to [dC361 NVM Save and Restore](#).
13. Switch off, then switch on the machine, [GP 14](#) to complete the Forced USB Altboot Procedure.
14. If the Forced AltBoot process fails, restart the procedure. Refer to [Troubleshooting](#) if necessary.

Software Upgrade Over the Web UI

1. Print a configuration report to identify the machine's IP address. Enter the IP address into the address bar of the web browser.
2. In the machine's web page, click on the Properties tab.
3. Login as the Administrator, i.e. Login: Admin. Password: 1111 (default).
4. Open the General Setup folder, then select Software Upgrade.
5. Select Manual Upgrade.

NOTE: If necessary, enable manual software upgrades.

6. Click on the browse button in the middle of the screen.
7. Browse to the correct location of the saved DLM being loaded, then click open.
8. Click on the Install Software button.
9. The DLM is displayed in the machine's print queue. The upgrade begins in approximately 10 minutes. The progress of the software loading procedure will be displayed on the UI. For more information, refer to [Software Loading Progress](#).
10. When the upgrade has completed the machine will reboot automatically.

NOTE: When the machine reboots, the connection to the machine's web page is lost.

11. After the machine has rebooted, a configuration report will be printed. Check the software version against the software version in the machine details screen on the UI.
12. Compare the configuration reports. Ensure that the configuration report generated after the upgrade shows the same machine configuration as before the upgrade.
13. If the proxy server setting on the PWS was changed, return the setting to the original value.
14. Connect the customer's network cable to the machine. Switch off, then switch on the machine, [GP 14](#) to complete the Software Upgrade Over Web UI.

Accessing the Web UI of a Machine Via a PWS

Perform the steps that follow:

1. Print a configuration report.
2. Ensure that Windows fire wall and wireless network connectivity on the PWS are turned off, [GP 36](#).
3. Set the proxy server on the PWS. Refer to [GP 34](#) How to Set the IP Address of the PWS. Be aware of the points that follow:
 - Before changing the proxy server settings, record the original IP address and subnet mask. The original settings are reset at the end of this procedure.
 - Refer to the configuration report. Set the IP address of the PWS one number higher than the machine. For example, if the IP address of the machine is 192.168.196.112, set the IP address of the PWS to 192.168.196.113.
 - Refer to the configuration report. Set the subnet mask of the PWS to the same as the subnet mask of the machine.

- A default gateway setting is not required.
 - If any settings are changed, reboot the PWS.
4. Switch off then switch on the machine, [GP 14](#).
 5. Disconnect the ethernet cable from the machine.
 6. Connect the ethernet crossover cable, [PL 26.10 Item 6](#) between the machine and the PWS.

NOTE: The machine has a network 802.1x Authentication option. If this option is enabled the PWS will not connect to the machine. To make a successful connection, perform the steps that follow:

- a. Enter Customer Administration Tools, [GP 24](#).
 - b. Press the Machine Status button.
 - c. Select Tools / Advanced Settings / 802.1X.
 - d. Disable 802.1X.
7. If the web browser on the PWS is set to use a proxy server, it will not connect to the machine's web page. Perform the steps that follow:
 - a. Open the web browser on the PWS.
 - b. Select Tools, then select Internet Options.
 - c. Select the Connections tab.
 - d. Click on the LAN Settings button. The LAN settings dialog box will now be displayed.
 - e. The 'Use a proxy server for your LAN' box should not be checked.
 8. Open the web browser. Enter the machine's IP address in the web browser's Address field, then click on the enter key. The machine's web page will open.

NOTE: Refer to the configuration report for the machine's IP address.

PWS Procedures

PWS AltBoot and PWS Forced AltBoot

NOTE: This procedure describes the process for PWS AltBoot and PWS Forced AltBoot. Refer to the specific details in the procedure for each.



CAUTION

Do not perform a forced AltBoot unless absolutely necessary. If a problem occurs during the upgrade, some PWBs could be irretrievably damaged and new components will have to be installed.



CAUTION

The AltBoot software loading procedure erases the SMart eSolutions and the wireless settings. These will be automatically reloaded at the end of the AltBoot procedure.

NOTE: AltBoot upgrades should be performed with the device in wired connectivity mode. Upgrades attempted while the device is in wireless mode may result in unpredictable network/device behavior that will require a reset to default configuration action, then a device reboot in order to resolve issues.

NOTE: If the optional features, McAfee Integrity Control or XPS fail automatically to reload after an AltBoot, refer to [GP 17](#) How to Re-Enter Optional Feature Installation Keys.

Hardware requirements:

- Data cable, [PL 26.10](#) Item 24.
- Ethernet crossover cable, [PL 26.10](#) Item 6.



CAUTION

For the AltaLink product, both the Linux kernel file and Linux root file system files are specific to the DLM file. These 2 files are not interchangeable with a different DLM file, they will only work with the DLM version it matches. The file name is not to be altered as the system uses it to verify they match the DLM load being attempted.

Software requirements:

- Linux kernel file: explorer60_wrl60-wrt60-x64-hd1_kfs_10000809601.gz
- Linux root file system file: explorer60_wrl60-wrt60-x64-hd1_kfs_10000809601.bzImage
- The DLM file to be loaded:
Altalink_B8405-B8090_system-sw#10000805709601#ENG_MOD.DLM

NOTE: The above files can be located in GSN library 15767.

For PWS AltBoot or PWS Forced AltBoot perform the steps that follow:

1. Print a configuration report.



CAUTION

The Forced AltBoot process will delete all saved NVM files.

2. If possible, perform an NVM save. Refer to [dC361](#) NVM Save and Restore.
3. Switch off the machine, [GP 14](#).

4. Prepare the PWS:
 - a. Ensure that Windows firewall and wireless network connectivity on the PWS are turned off.
 - b. Set the proxy server. Refer to [GP 34](#) How to Set the IP Address of the PWS. Be aware of the points that follow:
 - Before changing the proxy server settings, record the original IP address and subnet mask. The original settings are reset at the end of this procedure.
 - Set the IP address of the PWS to 192.168.0.2.
 - Set the subnet mask of the PWS to 255.255.255.0.
 - A default gateway setting is not required.
 - If any settings are changed, reboot the PWS.
5. Disconnect the ethernet cable from the machine.
6. Connect the crossover ethernet cable from the PWS network port to the machine network port. Connect the data cable from the PWS USB port to the machine data cable connector, [Figure 1](#).
7. For both the PWS AltBoot and the PWS Forced AltBoot start the PWS AltBoot tool.
8. Browse to, and highlight the folder that contains the upgrade files, [Figure 2](#). Select OK.

NOTE: When connecting the data cable, ensure that the ground connector (marked GND) is aligned with ground symbol on the SBC module. Also, ensure that the data cable terminals are not misaligned with the PJ44 pins.

NOTE: During the PWS AltBoot or the PWS Forced AltBoot procedure the COM port gets set automatically to an available port between 1 and 9.

NOTE: A check is performed by the Tool and will give an error message if

- one or both of the Support file's naming convention is not correct (file name and extension),
 - one of the Support file version does not match the other,
 - incorrect number of Support files or missing Support file (requires 1 each),
 - one or both of the Support files do not match the DLM version being loaded.
9. If a **Connection Failed** window appears, this may be because there is not a suitable COM port available on the PWS.
If ports 1 to 9 on the PWS are not available, one of the ports will need to be freed to enable auto connection to occur. Perform the steps that follow:
 - a. Open the PWS Control Panel window.
 - b. Select System Security, then System, then Device Manager.
 - c. In the Device Manager window select Ports (COM and LPT1). Note the USB serial port (COM#) number displayed.
NOTE: If the COM# is not between 1 and 4, right click on Communications Port (COM#). In the Communications Port (COM#) Properties window select Advanced. In the Advanced settings for COM# window select the COM Port Number dropdown list and select a COM port between 1 and 4.
 - d. Close the Device Manager window and the Control Panel window.
 - e. Click on OK in the Connection Failed window. The SBC Alternate Boot window appears.

- f. Select Settings, then COM Port Select. Change the COM port number to that noted in step c.
- g. Select OK.
10. Switch on the machine, [GP 14](#). After approximately 10 seconds, the transfer of the image and uboot files will begin.
11. After file transfer, the settings menu is displayed in the terminal window, [Figure 3](#).

NOTE: Check that the 'Received packet' line is displayed and that the IP address is set 1 digit away from the packet that was received from the address.

Press 'y' at the prompt and continue. If the valid netmask is not set, press 'n' and change it to the value shown in [Figure 3](#).

12. From the next menu, [Figure 4](#), select the option required.
 - For PWS AltBoot select option 5, Install ESS software.
 - For PWS Forced AltBoot select option 11, Forced Install ESS software.
13. At the proceed prompt, [Figure 5](#), select 'Y'.
14. At the second proceed prompt, [Figure 6](#), select 'Y'.
15. From the next menu, [Figure 7](#), select option 4, Continue.
16. From the next menu, [Figure 8](#), select the correct DLM file to download to the machine. A transfer progress window will then open.
17. After the DLM file has been downloaded to the machine the upgrade will start. Refer to [Software Loading Progress](#).

NOTE: If the Upgrade Failed screen displays at this time, it is an indication of hard disk failure. Refer to the [319-300-00 to 319-310-00 Hard Disk Drive Failure RAP](#).

NOTE: If the upgrade process screen is not displayed after 5 minutes, restart the process.

18. Allow the process to run:
 - The AltBoot process should complete after approximately 15 minutes, and the Alt-Boot complete screen will open. Ignore the instruction to remove the USB flash drive, press 0 to continue.
 - The Forced AltBoot process should complete after approximately 35 minutes and the AltBoot Complete screen will open. Ignore the instruction to remove the USB flash drive, press 0 to continue.
19. If the AltBoot or the Forced AltBoot process fails the AltBoot failed screen will open. Follow the on-screen instructions. Restart the procedure. Refer to [Troubleshooting](#) as necessary.
20. The UI displays the Data Encryption/Decryption progress screen.

NOTE: Do not switch off the machine until directed to on the UI. During the reboot, the hard disk drive is encrypted. Switching off the machine can cause only partial encryption of the hard disks partitions. The AltBoot or Forced AltBoot process may need to be re-run if power is removed at this step.

21. Before returning to a ready state the machine will reboot several times as the previous settings are reloaded. In the SBC-AlternateBoot window the following message should display.

```
*****
*** ESS System is 'OPERATIONAL' ***
*****

*****
*** ESS System 'SYNCHRONIZED' with SYSTEM MANAGER ***
*****

*****
*** DIGITAL COPIER PLATFORM 'AVAILABLE' ***
*****

*****
*** UI PLATFORM 'AVAILABLE' ***
*****
```

If a power on failure screen appears, switch off, then switch on the machine, [GP 14](#).

22. Disconnect the data cable and the special crossover ethernet cable from the PWS and the machine.
 23. Connect the ethernet cable to the machine.
 24. If PWS Forced AltBoot is being used the following options are available:
 - Enter Customer Administration Tools, [GP 24](#). Select Tools / Device Settings / General / Revert to Previous Settings. This will reload the customer optional services.
- NOTE:** If the optional features McAfee Integrity Control or XPS fail to reload, refer to [GP 17 How to Re-Enter Optional Feature Installation Keys](#).
25. Check that the software set has been installed. Refer to the printed software upgrade report or by pressing the machine status button.
 26. If the NVM was saved at the beginning of this procedure, perform a NVM restore. Refer to [dC361 NVM Save and Restore](#). The PWS AltBoot or Forced Altboot Procedure is complete.

Additional Information and Supplementary Procedures

Software Loading Progress

As the software loads the following screens and machine restarts will be observed:

1. The Software Upgrade start screen is displayed.
2. After 5 minutes the machine will restart.
3. The UI will display a splash screen with information in the status region.
The status region will a message, "Software installation in progress."
Further status region messages will display while the update is in progress.
4. The machine will restart.
5. The UI will indicate software components are being updated.
 - Network Controller
 - Copy ControllerA circular progress indicator displays against each component. As each components completes a tick is displayed.
6. The machine will restart.
 - If the update is from a USB stick a USB symbol is displayed with the message, "Software upgrade is completed. Remove the USB Drive to reboot the device." Remove the USB drive from the machine.
 - If the update is from a PWS or over a network the machine moves on to restart.
7. After restarting the UI will display the message, "Device Not Available"
Further status region messages will display while the update is in progress.
8. The machine will restart.
9. The UI will display the Home screen with the message, "Apps are being optimized."
Further status region messages will display while the update is in progress.
10. The UI will display the message, "Device Not Available."
Further status region messages will display while the update is in progress.
11. The machine will restart.
12. The UI will display the message, "Software installation in progress." The status region will display the message, "Software upgrade in progress."
The UI will indicate software components are being updated.
 - Print/Copy Engine
 - Scan Engine

NOTE: The list of components will differ from this list. This list is an example.

A circular progress indicator displays against each component. As each components completes a tick is displayed.

13. The machine will restart. The Home screen will display as normal and the machine will come to a steady state.

NOTE: The machine may restart at other times during this procedure depending on the update being implemented.

14. If the system upgrade process fails, perform an AltBoot. Return to [Initial Requirements](#) and select a suitable AltBoot option.
15. If the power on failure screen is displayed, switch off, then switch on the machine, [GP 14](#).

16. After the software has upgraded,
 - a software upgrade report will be printed.
 - a configuration report will be printed.

Common Upgrade Behavior

Power On Software Upgrade (POSU) is initiated if a new hardware module is installed which has an earlier or later software version.

NOTE: This does not apply to the SD card, SBC PWB or hard disk drive. An Altboot load is still required.

When an upgrade has been initiated the machine will reboot with all modules in upgrade mode. Progress and errors are displayed on the UI. When the upgrade is complete, the machine will reboot.

When a machine is switched on, the SBC PWB module compares its [Software Compatibility Database \(SCD\)](#) with the software in the hardware modules. If necessary, a software upgrade or downgrade is instigated by the SBC PWB module.

The [Software Compatibility Database \(SCD\)](#) is updated on successful completion of the upgrade.

USB Port Security Setting Check

Perform the steps that follow:

1. Login to Customer Administration Tools, [GP 24](#).
2. Press the **Machine Status** button.
3. Select the **Tools** tab, the tools pathway menus are displayed.
4. Select **Security Settings**.
5. Select **USB Port Security**.
6. If necessary, change the setting to **Enabled**.
7. Exit Customer Administration Tools. If the USB port security setting was changed, switch off, then switch on the machine, [GP 14](#).

NOTE: If it is not possible to access Customer Administration Tools, or the USB flash drive is not recognized, update the software from the PWS.

Troubleshooting

Listed below are possible problems that may stop AltBoot software loading:

Possible causes and solutions are:

- Incompatible USB flash drive. Use a Xerox approved model of USB flash drive.
- Corrupt DLM file. Replace the DLM file.
- Incorrect spelling of the AltBoot directory on USB flash drive.
- Bad data connection to a HDD. Re-seat the HDD cable, [PL 3.22 Item 4](#).
- Hard disk drive corruption or failure.
- USB port damage. Use a different USB port.
- UI failure. Refer to [302A Touch Screen Failure RAP](#).
- SBC PWB failure, [PL 3.22 Item 3](#).

When an upgrade fails, the SCD module version that failed to upgrade is printed on the software upgrade report. Refer to [Table 2](#).

NOTE: If an upgrade report is printed that shows an SCD module version that is not listed in [Table 2](#), no service action is necessary.

Table 2 Software module numbers

Module	SCD Module Versions	Go to
SBC PWB	0, 1, 2, 8, 9, 11, 140, 214, 216, 217, 226	395-000-00 to 395-009-00 SBC Software Upgrade Errors 1 RAP
IOT PWB	40, 41, 42	395-040-00 to 395-042-00 IOT Software Upgrade Errors RAP
UI PWB	19	395-011-00 UI Software Upgrade Errors RAP
Fax	38	395-038-00 Fax Software Upgrade Errors RAP
Scanner PWB	155, 163, 164, 169, 227	395-155-00 to 395-169-00 Scanner Software Upgrade Errors 1 RAP
SPDH PWB	228, 229	395-228-00, 395-229-00 SPDH Software Upgrade Errors RAP
2K LCSS PWB	60	395-060-00 2K LCSS Software Upgrade Errors RAP
LVF PWB	222	395-222-00 LVF Software Upgrade Errors RAP
LVF BM PWB	224	395-224-00 LVF BM Software Upgrade Errors RAP

Summary of Terms

Altboot and Forced Altboot - the differences

AltBoot

AltBoot will upgrade only the software modules module(s) that require upgrade.

Use the AltBoot load to get a machine functional when reloading the same version. Typically when reloading software for boot up problems or when replacing the Hard Disk Drive or Single Board Controller for instance. Clone settings are automatically re-applied so is also used in an attempt to retain these settings (except on HDD replacement).

Forced AltBoot

Forced AltBoot will upgrade all the software modules regardless of the current software version on the machine.

Use Forced AltBoot to reload the same version software where other platforms besides the Network Controller and Copy Controller are required to load. Clone settings are not automatically reapplied but are available if desired, see step 24 in the [PWS AltBoot and PWS Forced AltBoot](#).

Software Sets and Modules

Software sets are compilations of the various software modules, and together with a software compatibility database (SCD) are bundled into a DLM file.

A software module is defined as a programmable piece of software existing as a file in its own right. Software modules reside on hardware modules.

Software Compatibility Database (SCD)

The SCD comprises of the system software version in the format below:

AltaLink_B8045-B8090_system-sw#(AAa)(PPS)(TTY)(DDD)(RR)#.d1m

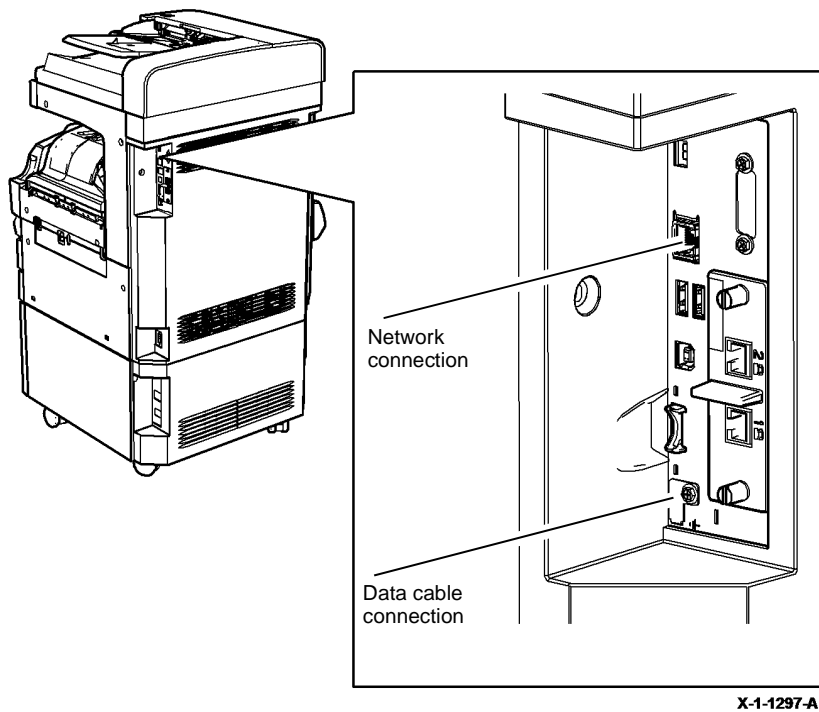
AltaLink_B8045-B8090_system-sw#{100}(008)(037)(038)(32)#.d1m

The description of the system software file name is:

- AA - major architecture release number (range 00 to 24).
- a - minor architecture release number (range 0 to 9).
- PP - product code (range 00 to 24).
- S - service maintenance pack (SMP) release number (range 0 to 9).
- TT - release type (range 0 to 24).
- Y - release year (range 0 to 9).
- DDD - release day, in the year (range 001 to 366).
- RR - daily revision number (range 00 to 99).

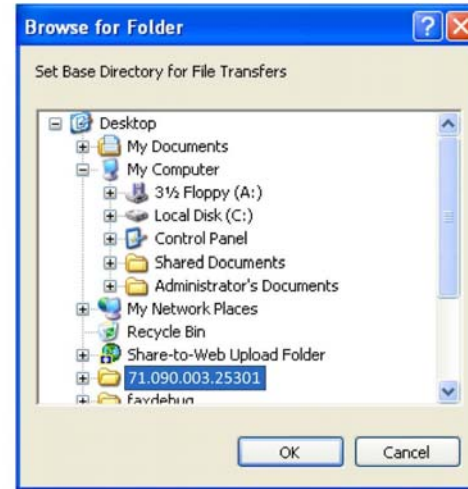
NOTE: The system software version is displayed on the UI under Device > About and on the General Information tab in service mode.

The primary function of an SCD is to ensure that all software on the machine is compatible.



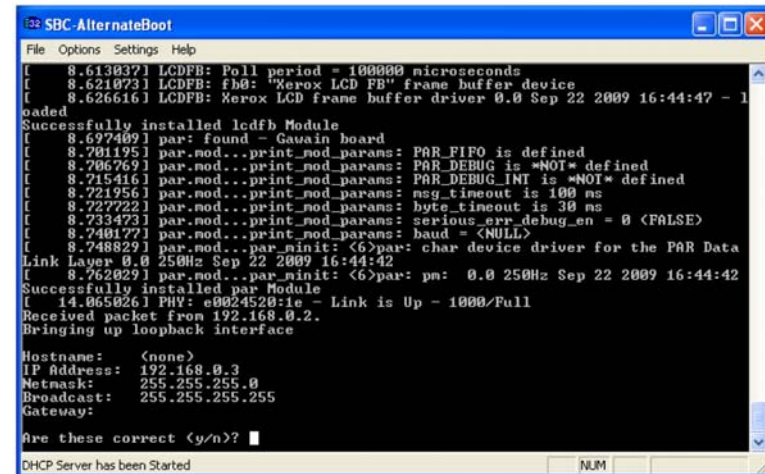
X-1-1297-A

Figure 1 Data cable connection



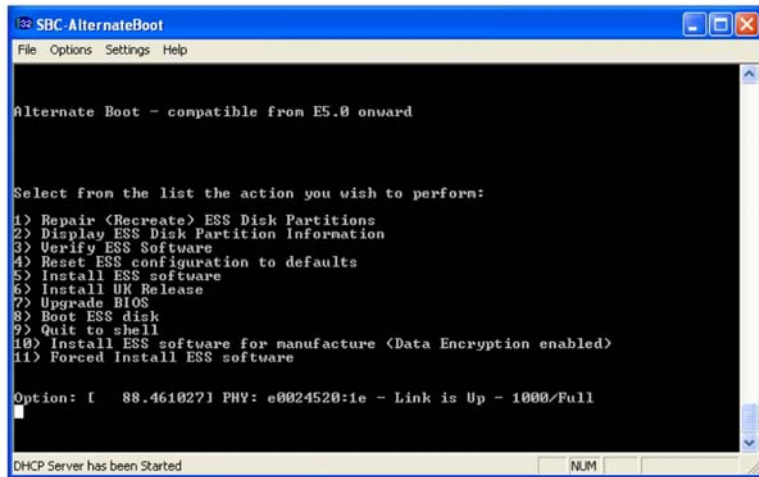
X-1-1357-A

Figure 2 Browse for folder



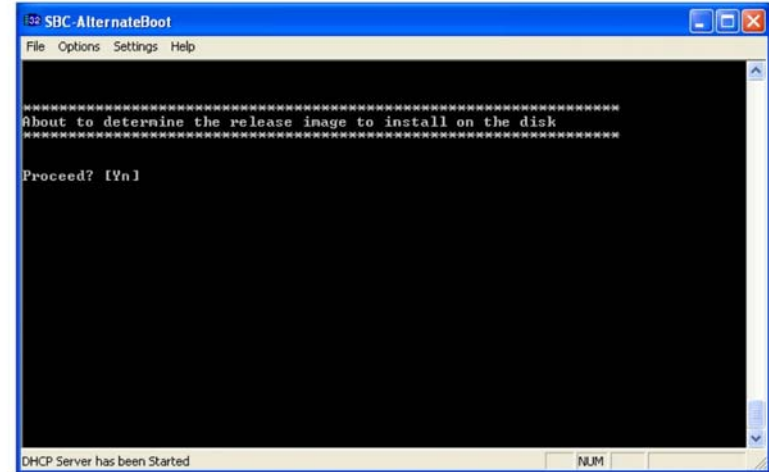
X-1-1358-A

Figure 3 Settings menu



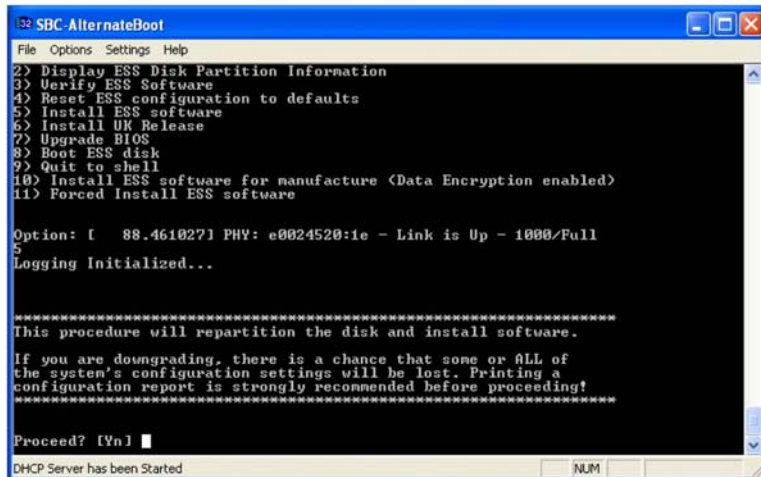
X-1-1359-A

Figure 4 Action menu



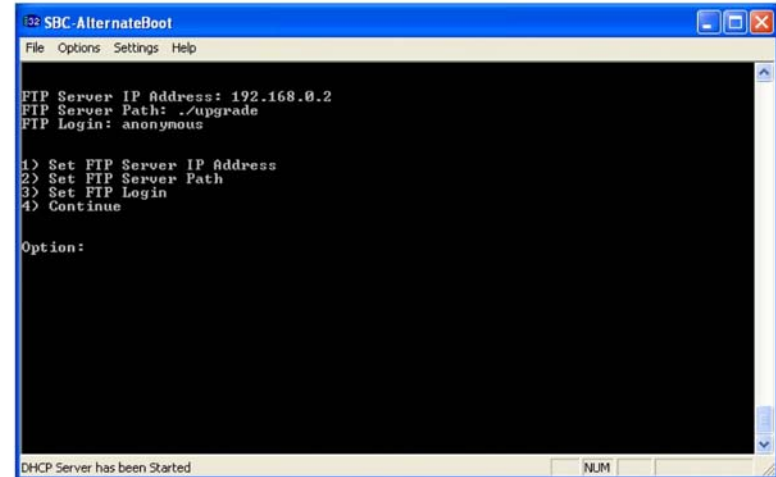
X-1-1361-A

Figure 6 Release image install window



X-1-1360-A

Figure 5 Install confirmation window



X-1-1362-A

Figure 7 Option menu

GP 5 Portable Work Station and Tools

Purpose

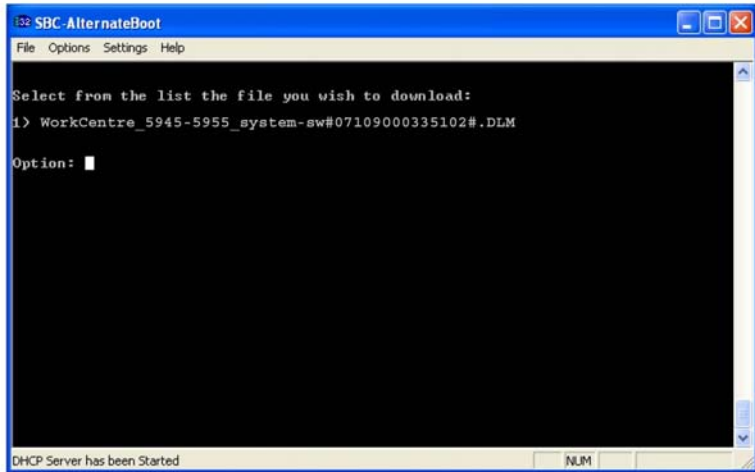
To describe the PWS diagnostic tools that are available for use with the AltaLink® B8090F of machines.

Description

The only PWS Diagnostic Tool that is available is the [SBC AltBoot Tool](#).

SBC AltBoot Tool

Use this tool to perform a AltBoot software load when the USB flash drive method cannot be used. Refer to [GP 4 Machine Software](#). Refer to the GSN library for the latest version of the AltBoot tool.



X-1-1363-A

Figure 8 DLM list

GP 6 Screw Usage

Purpose

To prevent damage to parts by screws not being installed correctly.

Procedure

Replacing Existing Screws

Always use the correct driver for the type of screw head. Use a nut driver if possible; this gives a better grip than a slotted or cross-head driver.

Take care not to install self-tapping screws into machine-screw holes, or machine-screws into self-tapping holes.

When replacing self-tapping screws into plastic components, turn the screw counterclockwise to engage the original thread, then turn the screw clockwise. Do not overtighten. If a new thread is cut, the plastic component will lose the ability to hold the screw as firmly, and eventually not at all. This also applies, to a lesser degree, to metal components.

NOTE: Reverse the direction of turn for left-hand threads.

Use the same method for machine thread screws and nuts to avoid cross threading.

Inserting a Screw into an Un-threaded Hole

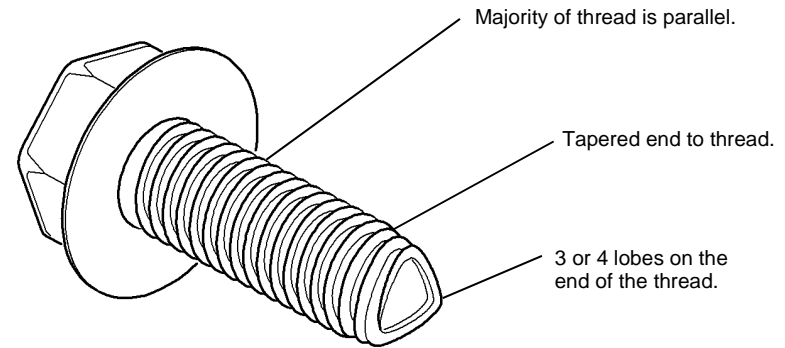
Some new components are supplied with fastening holes that do not have the screw thread pre-cut. It is the insertion of the first screw into the hole that forms the thread.



CAUTION

Use the procedure that follows to avoid broken screws and damaged holes:

1. Ensure that the screw is a thread forming screw, refer to [Figure 1](#).



X-1-1370-A

Figure 1 Thread forming screw

If the screw that is used to fasten the component does not appear to be a thread forming screw, temporarily use a thread forming screw from another location on the machine.

2. Do not assemble the new part into the machine yet. Form the screw threads first.
3. Use the correct screw driver or nut driver to ensure a good grip on the head of the screw.
4. Using a moderate axial force, insert the screw to form the thread in the hole, then remove the screw.
5. Repeat step 4 as necessary until all fastening holes in the new component are threaded
6. Assemble the component on the machine.

GP 7 Miscellaneous Checks

Purpose

To indicate which types of problems to look for when checking or inspecting parts of the machine.

Procedure

1. Assess the fault. Check if the part is broken, too loose or too tight. Check if it needs cleaning or lubricating.
2. Check the components that follow as appropriate:
 - [Actuators](#).
 - [Bearings](#).
 - [Drive Belts](#).
 - [Gears](#).
 - [Gravity Fingers and Stripper Fingers](#).
 - [Harnesses and Wiring](#).
 - [Rollers](#).
 - [Shafts](#).

Actuators

- Free movement.
- Damage
- Contamination.

Bearings

- Wear.
- Damage.
- Contamination.

Drive Belts

- Wear.
- Damaged teeth.
- Correct tension.
- Contamination of tension rollers and support shafts.

Gears

- Contamination.
- Chips or cracks.
- Wear.
- Misalignment.

Gravity Fingers and Stripper Fingers

- Free movement.
- Missing fingers.
- Damage.
- Contamination on the fingers, rollers or on the pivot shaft.

Harnesses and Wiring

- Continuity.

- Short circuits caused by physical damage or contamination of conductors, terminals or connectors.
- Overheated insulation.
- Damaged insulation near moving parts and sharp edges.
- Pin and receptacle damage on connectors.

NOTE: For making harness and wiring repairs, refer to [REP 1.2](#).

Rollers

- Flats.
- Tears.
- Contamination.
- Secure E-clips and other retainers.

Shafts

- Contamination.
- Misalignment.
- Rotates without binding.

GP 8 Special Tools and Consumables

Description

Refer to the list that follows:



Wear protective gloves, PL 26.10 Item 10 and eye protection when using solvents and cleaning agents.

- Data cable, PL 26.10 Item 24.
 - Xerox approved USB pen drive.
 - USB cable, PL 26.10 Item 5.
 - PWS (portable work station) to SBC PWB.
 - Ethernet crossover cable, PL 26.10 Item 6.
 - PWS to machine.
 - Finisher bypass harness, PL 26.10 Item 7.
 - Electrical cheat for PJ151.
 - Antistatic fluid, PL 26.10 Item 19.
 - Cleaning agent.
 - Disposable gloves, PL 26.10 Item 10.
 - General protection.
 - Film remover, PL 26.10 Item 4.
 - Cleaning agent.
 - Formula A cleaning fluid, PL 26.10 Item 2.
 - General cleaning.
 - Lens and mirror cleaner, PL 26.10 Item 9.
 - Optics cleaning.
 - Cleaning fluid, PL 26.10 Item 22.
 - Air Duster, PL 26.11 Item 1.
 - Microfiber wiper, PL 26.10 Item 13.
 - General cleaning.
 - Plastislip grease, PL 26.10 Item 8.
 - Lubrication for plastic gears and components.
 - Convenience stapler, 2K LCSS and LVF BM staple cartridge, PL 26.10 Item 11.
 - LVF BM staple cartridge (booklet maker), PL 26.11 Item 2.
 - Test pattern, A3/11X17, PL 26.10 Item 14.
 - IQS 1 Solid Area Density and Tone Reproduction and IQS 2 Background.
 - Test pattern, A4, PL 26.10 Item 15.
 - IQS 1 Solid Area Density and Tone Reproduction and IQS 2 Background.
 - Test pattern, 8.5 X 11, PL 26.10 Item 16.
 - IQS 1 Solid Area Density and Tone Reproduction and IQS 2 Background.
 - Test pattern, solid area density scale, PL 26.10 Item 17.
 - IQS 1 Solid Area density.
- Test pattern, visual scale, PL 26.10 Item 18.
 - IQS 2 Background.

GP 9 Machine SIM Card Matrix

Purpose

To identify SIM cards.

See also [GP 39](#) Service Plans and Consumables.

Each SIM card defines the following information:

- The machine speed
- Billing mode

Billing modes:

- PagePack - billing system based on a service contract for a fixed duration. The service plan is not related to the number of pages printed.
- BIM (Billing Impressions Mode) - billing mechanism that quantifies billing into page sized blocks dependent on the size of media. Two systems are used, typically known as:
 - Single Click, a fixed price for all media sizes.
 - Double Click, one price for A4/8.5x11 and a higher price for media larger than A4/8.5x11

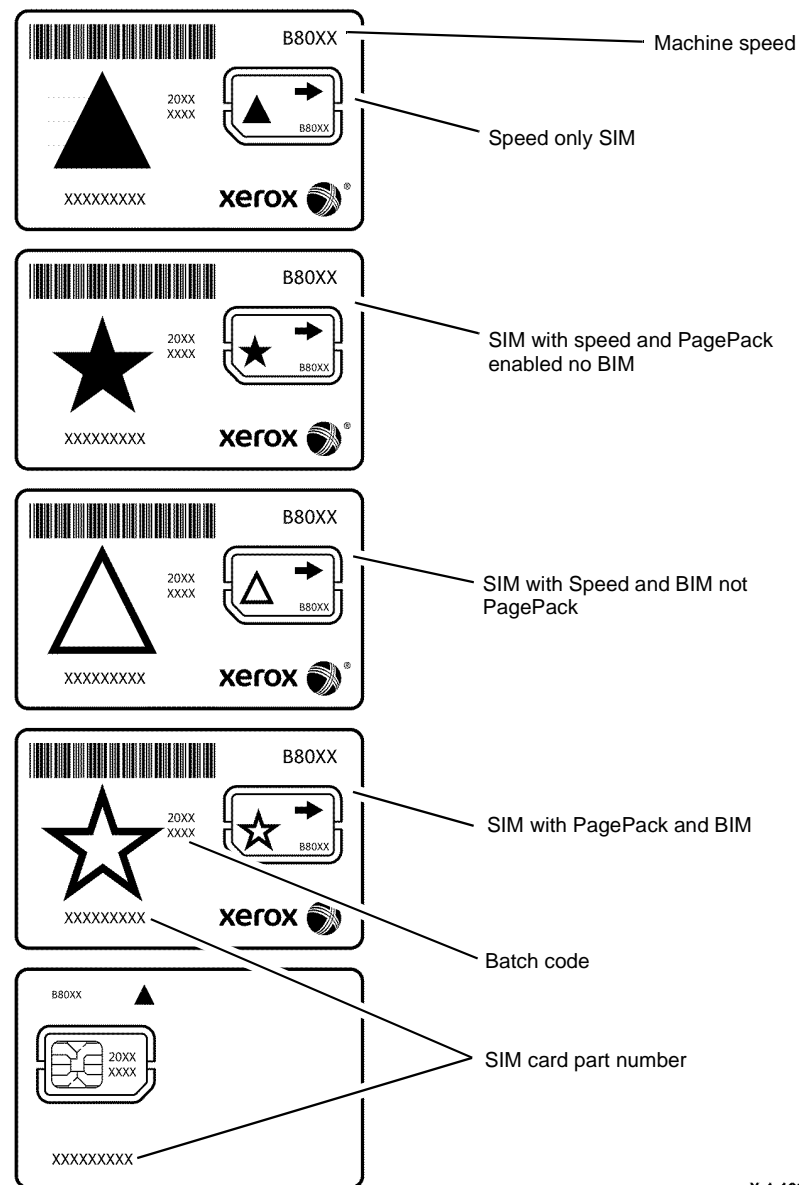
Procedure

Install a SIM card, [PL 3.22 Item 5](#), that is compatible with the speed of the machine and the PagePack or BIM requirement:

- Solid black triangle indicates the SIM sets the speed only.
- Solid black star indicates the SIM sets the machine speed with PagePack not BIM
- Triangle outline with white inner indicates the SIM sets the machine speed and BIM, not PagePack.
- Star outline with white inner indicates the SIM sets the machine speed with PagePack and BIM.

Refer to [Figure 1](#). Be aware of the points that follow:

- The PagePack function is enabled in all XE installations. Depending on the customer's full service maintenance agreement, the PagePack function may need to be enabled when a USSG/XCL machine is installed in an XE region.
- A new SIM is pre-programmed with the machine speed and either PagePack and/or BIM enabled or not enabled. When the SIM is installed, the machine serial number is permanently written to the SIM. The SIM can not be reused in another machine.
- Each SIM card carries a batch code in date format.
- Each SIM card carries a part number that combines the designated machine speed and billing mode.



X-1-1224-A

Figure 1 SIM cards

GP 10 How to Check a Motor

This procedure describes how to check the motors that follow:

- Two Wire DC Motors.
- Four Wire Stepper Motor.
- Six Wire Stepper Motor.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Check that the motor is free to rotate.
2. Check that all the motor's mechanisms are clean, free to move and lubricated correctly.
3. If necessary check any interlock switches on doors and covers.
4. Enter the component control code for the motor. Refer to dC330. Run the motor for 30 seconds. If the motor shows signs of, or can be heard to slow down, then the motor is defective. Replace the motor.
5. Perform the appropriate procedure:
 - Two Wire DC Motors.
 - Four Wire Stepper Motor.
 - Six Wire Stepper Motor.

NOTE: The voltages, PJ numbers, pin numbers and PWB names shown are an example only. Go to the circuit diagram in the RAP for the correct information.

NOTE: For the motors supplied through the IOT PWB, refer to the OF7 IOT Diagnostics RAP.

Two Wire DC Motors

NOTE: In cases where the motor may be driven forward or backward, the same 2 feed wires are used, but the voltages on them are reversed, to reverse the motor direction. Such motors may have 2 component control codes, for forward and reverse. A typical application is a tray lift motor with a tray-up and a tray-down direction.

- Go to **Flag 2**. Disconnect PJB. Check that +24V is measured when the component control code for the motor is entered.
- Go to **Flag 1**. Disconnect PJA. Check for +24V on the LVPS.
- Go to **Flag 3**. Disconnect PJC. Check that the signal changes on the IOT PWB when the component control code for the motor is entered.
- Check the wiring and the connectors for the motor circuit.

References:

- 301G +24V Distribution RAP.
- 301B 0V Distribution RAP.
- REP 1.2 Wiring Harness Repairs.

Four Wire Stepper Motor

NOTE: A stepper motor with an internal open circuit may appear to be fully functional under dC330 component control. However, under normal operation it will run with intermittent failure. Use the standard digital meter to check that the resistance of the stepper motor coils are similar.

NOTE: In some service manuals, the phase winding wires, A, /A, B and /B may be marked: A+, A-, B+ and B-, or as: phase A+, phase A-, phase B+ and phase B-.

- Go to **Flag 5**. Disconnect PJH. Check the motor on pulses on the harness when the component control code for the motor is entered.
- Go to **Flag 5**. Disconnect PJG. Check the motor on pulses on the harness when the component control code for the motor is entered.
- Check the wiring and the connectors for the motor circuit.

References:

- 301G +24V Distribution RAP.
- 301B 0V Distribution RAP.
- REP 1.2 Wiring Harness Repairs.

Six Wire Stepper Motor

NOTE: A stepper motor with an internal open circuit may appear to be fully functional under dC330 component control. However, under normal operation it will run with intermittent failure. Use the standard digital meter to check that the resistance of the stepper motor coils are similar.

NOTE: In some service manuals, the phase winding wires, A, /A, B and /B may be marked: A+, A-, B+ and B-, or as: phase A+, phase A-, phase B+ and phase B-.

- Go to **Flag 4**. Disconnect PJD. Check the +24V intlk supplies when the component control code for the motor is entered.
- Go to **Flag 4**. Disconnect PJF. Check the +24V intlk supplies when the component control code for the motor is entered.
- Go to **Flag 4**. Check the clock pulses.
- Check the wiring and the connectors for the motor circuit.

References:

- 301G +24V Distribution RAP.
- 301E +5V distribution RAP.
- 301B 0V Distribution RAP.
- REP 1.2 Wiring Harness Repairs.

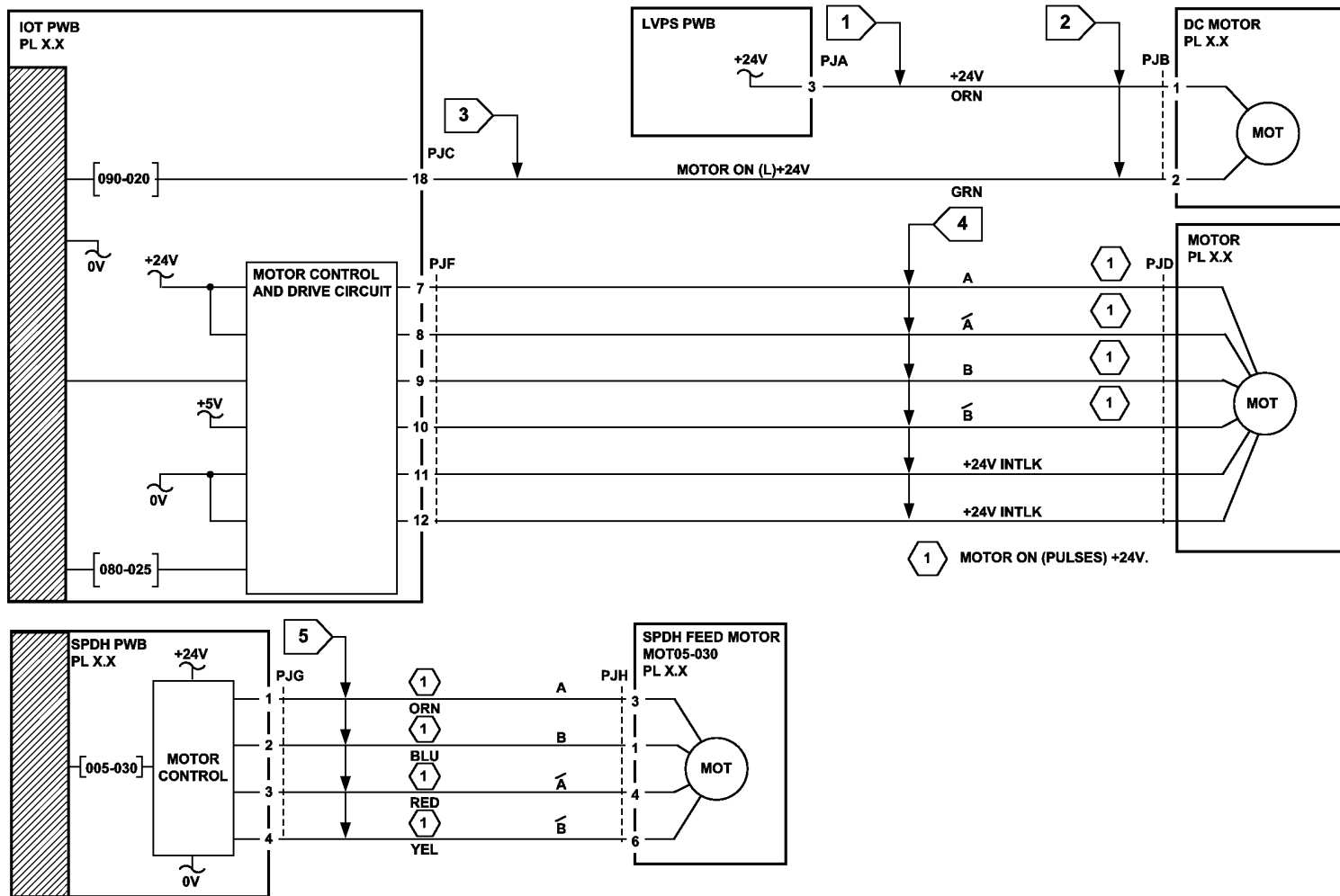


Figure 1 Circuit diagram

TX-1-0210-A

GP 11 How to Check a Sensor

Description

Use this procedure to check the operation of all types of sensor, except adaptive reflective sensors.

NOTE: The upper circuit diagram in Figure 1 shows a flag sensor. Some sensors have a resistor within the sensor. Other sensors require a resistor on the PWB, such as R1 in Figure 1. The resistor limits the current through the LED. This decreases the voltage on the sensor LED to 1.2V, typically.

NOTE: The voltages, PJ numbers, pin numbers and PWB names shown are an example only. Go to the circuit diagram in the RAP for the correct information.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Ensure that the sensor is installed correctly.
2. Clean the sensor and the area around the sensor.
3. If a flag actuator is installed, check that it has free movement.
4. Check that the paper path is clear.
5. If the sensor activates by a surface that reflects, check that the surface is clean. Also ensure that there is not an obstruction between the sensor and the surface.
6. If the sensor actuates by an encoder disc, ensure the holes or gaps in the disc are aligned correctly with the sensor.

Sensor Action

In the upper sensor in Figure 1, when light from the LED is allowed to fall on the photo-sensitive transistor, the sensing line, PJA, pin 2, is low. When light from the LED is blocked by the flag, the sensing line is high.

In the lower sensor in Figure 1, when light from the LED is reflected by the paper onto the photo-sensitive transistor, the sensing line, PJE, pin 2 is low. When no paper is present, no light falls on the transistor and the sensing line is high.

Quick Sensor Check

Enter the component control code for the sensor. Refer to dC330. Activate the sensor. If the display changes, the sensor operates correctly. If the display does not change, perform the procedure.

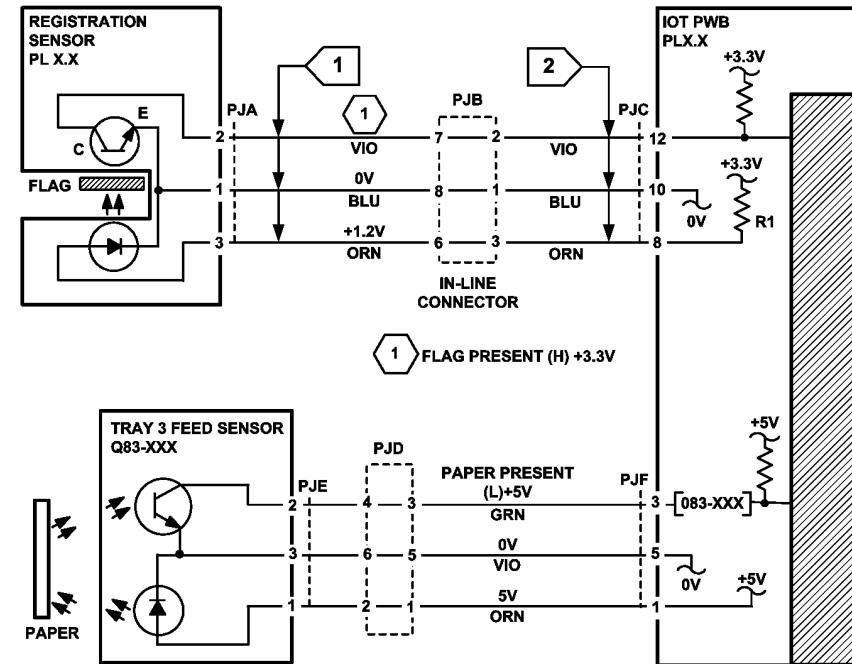
Procedure

For the upper sensor in Figure 1:

- Go to **Flag 1**. Disconnect PJA. Check for +3.3V and 0V at PJA on the harness.
- Go to **Flag 2**. Disconnect PJC. Check the wiring and the connectors for the sensor circuit.
- Go to **Flag 2**. Check for +3.3V and 0V at PJC on the IOT PWB.
- If necessary, install new components or repair the wiring.

References:

- 301B 0V Distribution RAP.
- 301D +3.3V Distribution RAP.
- REP 1.2 Wiring Harness Repairs.



TX-1-0211-A

Figure 1 Circuit diagram

GP 12 How to Check a Solenoid or Clutch

Description

Use this procedure to check a clutch or solenoid.

Initial Actions



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. For a clutch, check that the mechanical components are clean, free to move and are lubricated correctly
2. For a solenoid, check that the armature and associated mechanical components are free to move.

Procedure

NOTE: The voltages, PJ numbers, pin numbers and PWB names shown are an example only. Go to the circuit diagram in the RAP for the correct information.

NOTE: When a solenoid is energized in service mode, armature movement is seen. When a clutch is energized in service mode, the sound of the clutch action is heard. If possible, energize the motor connected to the clutch to confirm when the clutch is energized.

- Go to **Flag 1**. Disconnect PJA. Check that the signal changes on the IOT PWB when the component control code for the clutch or solenoid is entered.
- Go to **Flag 2**. Disconnect PJC. Check that +24V is measured when the component control code for the clutch or solenoid is entered.
- Go to **Flag 3**. Disconnect PJD. Check for +24V on the LVPS.
- Check the wiring and the connectors for the clutch or solenoid circuit.

References:

- **301B** 0V Distribution RAP.
- **301G** +24V Distribution RAP.
- **REP 1.2** Wiring Harness Repairs.

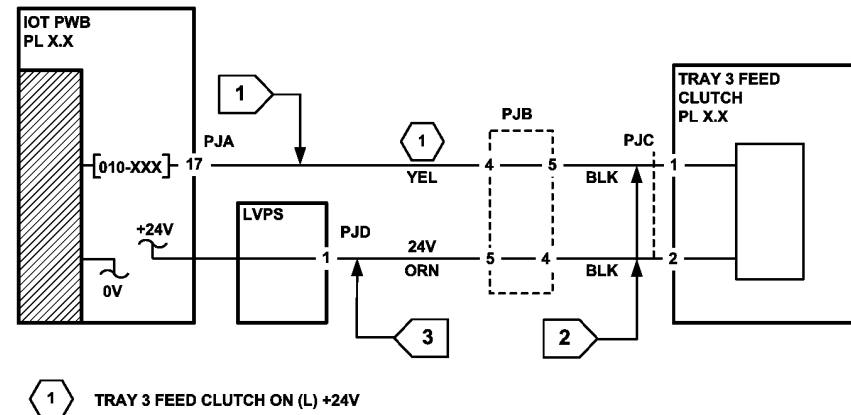


Figure 1 Circuit diagram

GP 13 How to Check a Switch

Description

Use this procedure to check the operation of a switch.

NOTE: The circuit in [Figure 1](#) shows an interlock switch activated by the closing of a door.

Initial Actions



WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Manually check that the switch operates. Ensure that the magnet or other actuator has enough mechanical movement to operate the switch.

NOTE: The voltages, PJ numbers, pin numbers and PWB names shown are an example only. Go to the circuit diagram in the RAP for the correct information.

Procedure

- Go to [Flag 1](#). Disconnect PJA. Check the electrical operation of the switch.
- Go to [Flag 1](#). Disconnect PJB. Check for +5V and 0V on the IOT PWB.
- Go to [Flag 1](#). Check the wiring and the connectors for the switch circuit.

References:

- [301B](#) 0V Distribution RAP.
- [301E](#) +5V Distribution RAP.
- [REP 1.2](#) Wiring Harness Repairs.

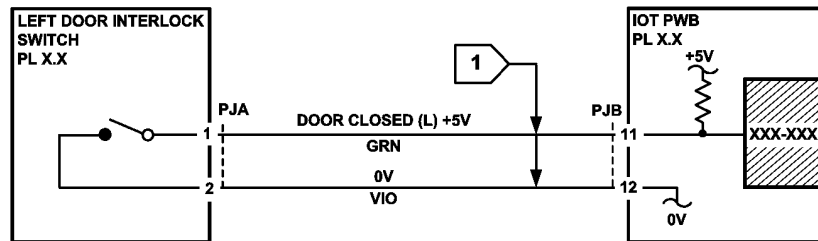


Figure 1 Circuit diagram

GP 14 How to Switch Off the Machine or Switch On the Machine

Purpose

To show how to switch off or switch on the machine, without the loss of customer data or damage to the system hardware.



WARNING

Do not use the power button as a safety disconnect device. The power button is not a disconnect device. Disconnect the power cord from the supply to isolate the equipment.

Refer to:

- [Switch Off Procedure](#).
- [Switch Off Failure Procedure](#).
- [Quick Restart](#).
- [Switch On Procedure](#).
- [Energy Saver Mode](#).

Switch Off Procedure



CAUTION

Do not disconnect the power cord or interrupt the electricity supply before the power down is complete unless advised. The data and software can become damaged.

1. Press the Power button on the UI, [Figure 1](#). The Power Down Options window will display.

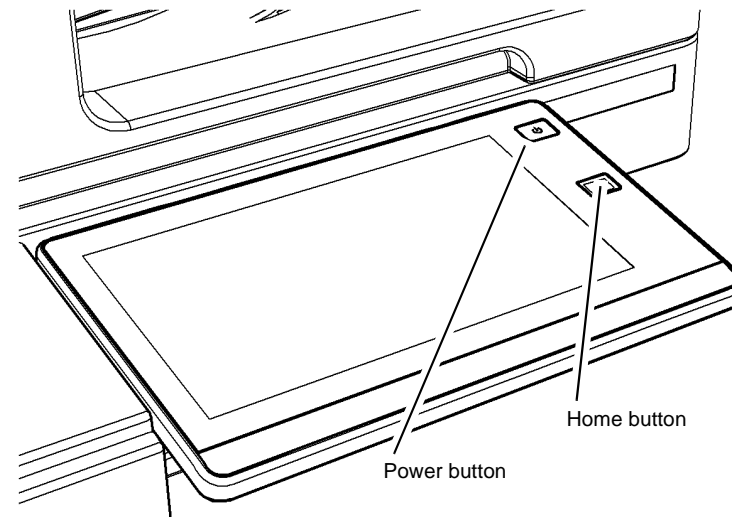


Figure 1 Power button

X-1-0907-A

2. Select the Power Off button on the UI.
3. When the machine has switched off, remove the power lead from the outlet.
4. If the machine does not switch off, perform the [Switch Off Failure Procedure](#).

General

1. When Power Off is selected, the machine should power down automatically. This should take approximately 30 seconds. The Powering Down screen will be displayed.
2. If possible, the system finishes all jobs.
3. The machine stops processing all jobs that remain in the queue.
4. A warning message displays on the UI.
5. If a module does not respond and the power down is possible, the power down completes after a maximum of 2 minutes.

Switch Off Failure Procedure

1. Press the Power button, [Figure 1](#), for approximately 5 seconds which should switch off the machine via a software command. If the machine fails to switch off, press the Power button for 15 seconds which should switch off the machine immediately.
2. If the machine still fails to switch off, disconnect the power cord.
3. If necessary, reconnect the power cord after 2 minutes.
4. If the machine again fails to switch off, perform the [303C Power Off Failure RAP](#).

Quick Restart

The quick restart causes the system to reset the software of the SBC PWB, the IOT PWB and the UI.

1. Press the Power button on the UI, [Figure 1](#). The Power Down Options window will display.
2. Select the Quick Restart button on the UI touch screen.

Switch On Procedure

1. After the machine has been switched off, wait a minimum of 2 minutes before the machine is switched on.
2. After a service call, ensure that all service tools are removed from the machine.
3. Connect the power lead from the power supply outlet to the machine.
4. Press the Power button on the UI, [Figure 1](#).
5. The machine will perform a power on self test (POST). The POST checks that the hardware resources are available to run the operating system. If a POST fault is detected, the machine is prevented from booting. The fault is communicated via a 7-Segment LED display unit on the rear of the machine attached to the SBC PWB. Refer to the [OF2 POST Error Rap](#).
6. If the machine does not initialize, perform the appropriate RAP as follows:
 - If the machine switches on, but the UI is blank, perform [302A UI Touch Screen Failure RAP](#).
 - If the machine does not respond, perform the [OF3 Dead Machine RAP](#).
 - If the machine switches on, but does not respond, perform the [OF5 Boot Up Failure RAP](#).

General

1. When the power lead is connected, the LVPS +3.3VSB supply is energized. The LVPS +3.3VSB supply provides +3.3VSB to the IOT PWB.

2. When the Power button is pressed, the LVPS is energized. The +5V, +24V and AC voltage for the auxiliary output sockets and fuser module is distributed.
3. Each module manages its POST and power-up sequence.

NOTE: Refer to [GP 22 Electrical Power requirements](#) for further information.

Energy Saver Mode

Energy Saver mode is selected from the Power Down window. When pressed, the machine should enter Energy Saver mode within 30 seconds.

NOTE: If the energy saver feature is disabled, the option is not displayed. Refer to [GP 22 Electrical Power Requirements](#) for further information.

GP 15 Remote Diagnostics

Purpose

To show how to remotely login to the machine and use diagnostics.

Procedure

1. Before starting this procedure, contact the customer to check that remotely accessing the machine is convenient. Also ask the customer for the IP address of the machine.

NOTE: The IP address of the machine is printed on the configuration report.

It may also be necessary to get access to the machine through the customer's firewall. This procedure may be OPCO dependent. Contact your local OPCO.

NOTE: If the machine UI is busy, session timer active, then the remote diagnostics will need to be accepted at the machine UI. Alternatively, wait until the machine UI is not busy.

2. Access remote diagnostics. Perform the steps that follow:
 - a. Open a web browser. Enter the machine's IP address in the web browser Address field, then click on the enter key. The machine's web page will open.
 - b. Select Support.
 - c. Select **Remote Control Panel**.
 - d. Beneath the **Configuration** heading look for 'Enabled For Admin and Diagnostics Users Only' If not refer to [Enable/Disable Remote Diagnostics](#).
 - e. To prevent a local user overriding remote selections, under the **Access** heading, check the box 'Block Local Control Panel (user can only observe).'
 - f. Beneath the illustration of the UI select the **Start Remote Session** button.
 - g. A login popup window will open. Enter the user name 'diag' (case sensitive) and the password '3424'. Select Login.
 - h. The remote UI will now open and a Service Diagnostics button is available on the remote UI.

NOTE: The message 'Remote session is active' is displayed to inform local users that the machine is being accessed remotely.

NOTE: If the remote control panel screen does not show the diagnostics button as shown in, it is for one of the following reasons:

- Admin and Diagnostics Users Only is not selected in settings. See [Enable/Disable Remote Diagnostics](#).
- Logged in as Admin /1111. Log out and log back in using the login Diag/3424.
- Selected remote control panel before logging in. Close out of remote control panel and login in with diag/3424 before opening the remote control panel.

- i. Click on Service Diagnostics. In the Login window, enter the passcode '6789'. Select Enter.
- j. The machine will enter diagnostics (service mode). All diagnostic functions are available. Refer to [GP 1 Service Mode](#).
- k. To exit service mode, select Call Closeout, then Exit and Reboot.

NOTE: If the remote UI session is closed without exiting diagnostics, the machine will remain in diagnostics and the remote UI will not be accessible.

NOTE: Remember to reset the Configuration to the previous setting.

- l. Close the remote UI window.
- m. Select Logout. In the Logout window, click on Logout.

Enable/Disable Remote Diagnostics

1. Open a web browser. Enter the machine's IP address in the web browser Address field, then click on the enter key. The machine's web UI will open.
2. Select Support.
3. Select Remote Control Panel.

NOTE: The Remote Control Panel can be enabled to 3 levels.

- For Admin Only
- For Admin and Diagnostics Only
- For All Users

4. Beneath the **Configuration** heading look for 'Enabled For Admin and Diagnostics Users Only'

If this is not displayed select **Edit** and login with the ID admin and the password 1111.

NOTE: Make a note of the configuration to reset it at the end of the procedure.

5. Select 'For Admin and Diagnostic Users Only and click **Save**.
6. Select admin-Logout and in the Logout window, click Logout to confirm. The **Configuration** heading should display 'Enabled For Admin and Diagnostics Users Only'

GP 16 How to Safely Lift or Move Heavy Modules

Purpose

Use this procedure when lifting or moving heavy modules.

Procedure

When removing heavy modules from the machine, the instructions that follow must be observed:

1. Ensure that a suitable stable surface to support the module after removal is located in close proximity to the machine.

NOTE: *Other parts of the machine are not a suitable stable surface.*

2. Ensure that the height of the support surface is between 750mm and 1000mm (30 inches and 39 inches).
3. Ensure that there are no hazards or obstacles between the machine and the support surface.
4. If instructed to remove the module toward the rear of the machine and only 1 person is available, the module must be removed while standing at the rear of the machine. If 2 people are available, the module may be removed while standing at the front of the machine.
5. Two people are required if the module is to be lifted on to the floor or lifted from the floor.

GP 17 How to Re-Enter Optional Feature Installation Keys

Purpose

To explain how to re-enter optional feature installation keys if they fail to reload after an Alt-Boot.

NOTE: *McAfee Integrity Control and XPS are the optional features available on the AltaLink® B8090F.*

Procedure

Perform the steps that follow:

1. Obtain the valid feature installation key(s) by either:
 - Asking the customer.
 - Logging in to the SWAP, www.xeroxlicensing.xerox.com/fik. From the Welcome screen, select Find an existing key. Enter the machine serial number in the window. Select Next.
 - **USSG/XCL** Contact the Licensing Admin Centre through Level 2 Support.
 - **XE/DMO** Contact Xerox the applicable sales representative.
2. Enter the feature installation key(s). Perform the steps that follow:
 - a. Select the **Device** icon.
 - b. Scroll down and select **Tools**.
 - c. Select **Device Settings**, then **General**.
 - d. Select **Feature Installation**. Enter the feature installation key. Select **OK**. If necessary, enter the second feature installation key.

GP 18 Machine Lubrication

Purpose

To give information on the use of lubricants.

Procedure



Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.



Only use lubricants as directed. Incorrect use of lubricants could seriously affect the performance of the machine.

Take the precautions that follow when performing machine lubrication:

- Wear disposable gloves, PL 26.10 Item 10.
- Only use lubricants that are specified in the Parts List.
- Only lubricate parts of the machine as directed in the relevant RAPs, Repairs, Adjustments and General Procedures.
- Apply only the smallest amount of lubricant, sufficient to lubricate the parts. To prevent contamination, remove any surplus lubricant before the machine is run.
- Take great care not to contaminate other parts of the machine with the lubricant.

GP 19 Network Clone Procedure

Purpose

To save and restore the customer's unique network configuration setting.

The clone file (to hard disk) must be performed at the first service call and whenever the customer changes the network settings or after the system software is changed.

Procedure

How to Save a Clone File

1. On the customer's workstation, open the web browser. Enter the machine's IP address in the web browser Address field. Click on the enter key. The machine web page will open.

NOTE: Refer to the configuration report for the machine's IP address.

2. Click on Properties.
3. Enter the Administrator user ID and password. Refer to GP 24 Customer Administration Tools.
4. Select General Setup.
5. Select Cloning.
6. Select the relevant settings to clone.
7. Click on Clone.
8. In the Cloning Instructions area, right-click on the (Cloning.dlm) link. Select Save Target As.
9. Ask the customer to specify a file name and location.

NOTE: Ensure the file extension is .dlm.

10. Select Save.

How to Install a Clone File - Option 1

1. On the customer's workstation, open the web browser. Enter the machine IP address in the web browser Address field. Click on the enter key. The machine web page will open.

NOTE: Refer to the configuration report for the machine IP address.

2. Select **Login** and enter the Administrator user ID and password. Refer to GP 24 Customer Administration Tools.
3. Scroll down and select the **Cloning** icon.
4. Use the browse button to select the clone file.
5. Select **Install**.

NOTE: The machine will reboot and be unavailable for several minutes.

How to Install a Clone File - Option 2

1. On the customer's workstation, open the web browser. Enter the machine IP address in the web browser Address field. Click on the Enter key. The machine web page will open.

NOTE: Refer to the configuration report for the machine IP address.

2. Select **Properties** then Login with the Administrator user ID and password. Refer to GP 24 Customer Administration Tools.
3. Scroll down to the **Cloning** heading and click **View**.

4. Use the **Browse** button to select the clone file.
5. Click on Install.

NOTE: *The machine will reboot and be unavailable for several minutes.*

GP 20 Paper and Media Size Specifications

Purpose

To list the paper and media size specifications.

Specifications

The baseline papers used in this specification are defined as:

- Xerox 4200 (20lb/75 gsm) 8.5 x 11 inch.
- Xerox Premier TCF 80 gsm A4.

The machine design and performance is optimized for these papers.

NOTE: Check that the paper tray settings match the paper size in the tray.

Refer to the tables that follow:

- **Table 1** Performance indication. Use this table to determine the meaning of the alpha numeric codes in **Table 2** and **Table 3**.
- **Table 2** European papers.
- **Table 3** American papers.
- **Table 4** U.S. paper weight conversion. Use this table to determine approximate equivalent points in weight specifications other than for U.S. bond weight.
- **Table 5** Input/output paper sizes. The table defines the paper sizes that are recognized by the SPDH, document glass and the paper trays when using a centre tray configured machine.

- **Table 6** 2K LCSS output paper sizes. The table defines the paper sizes that can be delivered to the output trays of a 2K LCSS.
- **Table 7** LVF BM output paper sizes. The table defines the paper sizes that can be delivered to the output bins of the LVF BM.
- **Table 8** HVF output paper sizes. The table defines the paper sizes that can be delivered to the output bins of the HVF.
- **Table 9** Output stock performance. The table shows the media (stock) performance constraints for the output. Performance will not be guaranteed for media not listed in the table. Media that is smaller than 139 mm (5.5 inches) in either the process or cross process direction cannot be duplexed.
- **Table 10** Input document material definitions.
- **Table 11** Input document quality definitions.
- **Table 12** Envelope specifications.

Table 1 Performance indication

Code	Description
3	Nominal performance
2	Slightly degraded performance (Good IQ, some jams or poor stacking)
1	Significantly degraded performance (IQ defects, increased jams or bad stacking)
X	Not recommended (or outside specification)
N	Size unrecognized and not acceptable
U	Size unrecognized but acceptable
Y	Size recognized and accepted

Table 2 European papers

Paper Size	Paper Weight gsm	Feed Direction	Paper Type	Tray 1/2	Tray 3/4	Bypass (tray 5)	Duplex	Tray 6	Defects
A4	60	LEF	Plain paper	2	2	2	2	2	Duplex show through
A4	60	SEF	Plain paper	2	X	2	2	X	Duplex show through
A4	61 - 120	LEF	Plain paper	3	3	3	3	3	None
A4	61 - 120	SEF	Plain paper	3	X	3	3	X	None
A4	121 - 200	LEF	Plain paper	2	2	2	2	2	None
A4	121 - 200	SEF	Plain paper	2	X	2	2	X	None
A4	201 - 216	LEF / SEF	Plain paper	X	X	2	X	X	None
A4	-	LEF / SEF	Labels (see NOTE 2)	X	X	2	X	X	None
A4	-	LEF / SEF	Plain transparency	X	X	2	X	X	None
A4	-	LEF	White strip transparency	X	X	2	X	X	None
A4	-	SEF	White strip transparency	X	X	X	X	X	Out of specification
A4	-	LEF	Paper backed transparency	X	X	2	X	X	None
A4	-	SEF	Paper backed transparency	X	X	X	X	X	Out of specification
Oversize A4	-	LEF	Tabs	2	X	2	X	X	Productivity reduction
Oversize A4	-	LEF	Covers	2	X	2	X	X	Productivity reduction
A3	60	SEF	Plain paper	2	X	2	1	X	Curl

Table 2 European papers

Paper Size	Paper Weight gsm	Feed Direction	Paper Type	Tray 1/2	Tray 3/4	Bypass (tray 5)	Duplex	Tray 6	Defects
A3	61 - 120	SEF	Plain paper	3	X	3	3	X	None
A3	120 - 161	SEF	Plain paper	2	X	2	2	X	None
A3	161 - 200	SEF	Plain paper	2	X	2	1	X	Mis-registration and skew
A5	60	LEF	Plain paper	2	X	2	1	X	Curl
A5	60	SEF	Plain paper	X	X	2	1	X	Curl
A5	61 - 120	LEF	Plain paper	3	X	3	3	X	None
A5	61 - 120	SEF	Plain paper	X	X	3	3	X	None
A5	121 - 200	LEF	Plain paper	2	X	2	2	X	None
A5	121 - 200	SEF	Plain paper	X	X	2	1	X	Mis-registration and skew
A6	60	LEF	Plain paper	X	X	X	X	X	Out of specification.
A6	60	SEF	Plain paper	X	X	2	X	X	Out of specification.
A6	61 - 120	LEF	Plain paper	X	X	X	X	X	Out of specification.
A6	61 - 120	SEF	Plain paper	X	X	3	X	X	Out of specification.
A6	121 - 200	LEF	Plain paper	X	X	X	X	X	Out of specification.
A6	121 - 200	SEF	Plain paper	X	X	1	X	X	Out of specification.
A4	60	LEF / SEF	Nekosa	1	1	1	1	1	Jams
8.5 x 12.4 inch	All	SEF	Spanish Folio	2	X	2	2	X	Not tested
A4	200	LEF / SEF	Premier TCF	2	2	2	2	2	Poor fusing on 35-65 ppm machines.
All	All	LEF / SEF	Envelopes (see NOTE 1)	2	X	2	X	X	Wrinkle
All	100	LEF / SEF	Conqueror finely ridged laid	2	2	2	2	2	Poor fusing on 35-65 ppm machines.
All	80	LEF / SEF	Recycled	1	1	1	1	1	Excessive curl
Any	Any	LEF / SEF	Jobs with covers	1	X	1	1	X	Rear cover of stapled sets of more than 35 sheets plus 2 covers, may be mis-registered in the 1K LCSS and 2K LCSS.
All	200	LEF / SEF	Colortech (coated paper)	2	2	2	2	2	Stapling more than 10 sheets not recommended
A4	200	LEF / SEF	Beaverboard	2	2	2	2	2	Poor fusing on 35-65 ppm machines.

NOTE: 1. An optional envelope tray kit is required to feed envelopes from tray 2.

Table 3 American papers

Paper Size inches	Paper Weight US bond lb.	Feed Direction	Paper Type	Tray 1/2	Tray 3/4	Bypass (tray 5)	Duplex	Tray 6	Defects
8.5 x 11	16	LEF	Plain paper	2	2	2	2	2	Duplex show through
8.5 x 11	16	SEF	Plain paper	2	X	2	2	X	Duplex show through
8.5 x 11	20 - 32	LEF	Plain paper	3	3	3	3	3	None
8.5 x 11	20 - 32	SEF	Plain paper	3	X	3	3	X	None
8.5 x 11	34 - 53	LEF	Plain paper	2	2	2	2	2	None
8.5 x 11	34 - 53	SEF	Plain paper	2	X	2	2	X	None
8.5 x 11	57	LEF / SEF	Plain paper	X	X	2	X	X	None
8.5 x 11	-	LEF / SEF	Labels (see NOTE 2)	2	X	2	X	X	None

Table 3 American papers

Paper Size inches	Paper Weight US bond lb.	Feed Direction	Paper Type	Tray 1/2	Tray 3/4	Bypass (tray 5)	Duplex	Tray 6	Defects
8.5 x 11	-	LEF / SEF	Plain transparency	X	X	2	X	X	None
8.5 x 11	-	LEF	White strip transparency	X	X	2	X	X	None
8.5 x 11	-	SEF	White strip transparency	X	X	X	X	X	Out of specification
8.5 x 11	-	LEF	Paper backed transparency	X	X	2	X	X	None
8.5 x 11	-	SEF	Paper backed transparency	X	X	X	X	X	Out of specification
Oversize 8.5 x 11	-	LEF	Tabs	2	X	2	X	X	Productivity reduction
Oversize 8.5 x 11	-	LEF	Covers	2	X	2	X	X	Productivity reduction
11 x 17	16	SEF	Plain paper	2	X	2	1	X	Curl
11 x 17	20 - 32	SEF	Plain paper	3	X	3	3	X	None
11 x 17	34 - 53	SEF	Plain paper	2	X	2	1	X	Mis-registration and skew
8.5 x 14	16	SEF	Plain paper	2	X	2	1	X	Curl
8.5 x 14	20 - 32	SEF	Plain paper	3	X	3	3	X	None
8.5 x 14	34 - 53	SEF	Plain paper	2	X	2	1	X	Mis-registration and skew
8.5 x 5.5	16	LEF	Plain paper	2	X	2	1	X	Not tested
8.5 x 5.5	16	SEF	Plain paper	X	X	2	1	X	Not tested
8.5 x 5.5	20 - 32	LEF	Plain paper	3	X	3	3	X	Not tested
8.5 x 5.5	20 - 32	SEF	Plain paper	X	X	3	3	X	Not tested
8.5 x 5.5	34 - 53	LEF	Plain paper	2	X	2	2	X	Not tested
8.5 x 5.5	34 - 53	SEF	Plain paper	X	X	2	1	X	Not tested
5.5 x 4.25	16	LEF	Plain paper	X	X	X	X	X	Out of specification.
5.5 x 4.25	16	SEF	Plain paper	X	X	2	X	X	Out of specification.
5.5 x 4.25	20 - 32	LEF	Plain paper	X	X	X	X	X	Out of specification.
5.5 x 4.25	20 - 32	SEF	Plain paper	X	X	3	X	X	Out of specification.
5.5 x 4.25	34 - 53	LEF	Plain paper	X	X	X	X	X	Out of specification.
5.5 x 4.25	34 - 53	SEF	Plain paper	X	X	1	X	X	Out of specification.
All	All	LEF / SEF	Envelopes (see NOTE 1)	2	X	2	X	X	Wrinkle
11 x 17	32	SEF	Domtar (10% recycled)	1	X	1	1	X	Bad stacking due to curl
8.5 x 11	110	LEF / SEF	Bristol Vellum	2	2	2	2	2	Poor fusing on 35-65 ppm machines.
Any	Any	LEF / SEF	Jobs with covers	1	1	1	1	1	Rear cover of stapled sets of more than 35 sheets plus 2 covers, may be mis-registered in the LCSS

NOTE: 1. An optional envelope tray kit is required to feed envelopes from tray 2.

Table 4 U.S. paper weight conversion

US Postcard Thickness (mm) (see NOTE)	US Bond Weight (lb.)	US Text/Book Weight (lb.)	US Cover Weight (lb.)	US Bristol Weight (lb.)	US Index Weight (lb.)	US Tag Weight (lb.)	Metric Weight (gsm)
-	16	41	22	27	33	37	60
-	17	43	24	29	35	39	64
-	20	50	28	34	42	46	75

Table 4 U.S. paper weight conversion

US Postcard Thickness (mm) (see NOTE)	US Bond Weight (lb.)	US Text/Book Weight (lb.)	US Cover Weight (lb.)	US Bristol Weight (lb.)	US Index Weight (lb.)	US Tag Weight (lb.)	Metric Weight (gsm)
-	21	54	30	36	44	49	80
-	22	56	31	38	46	51	83
-	24	60	33	41	50	55	90
-	27	68	37	45	55	61	100
-	28	70	39	49	58	65	105
-	32	80	44	55	67	74	120
-	34	86	47	58	71	79	128
-	36	90	50	62	75	83	135
0.18	39	100	55	67	82	91	148
0.19	42	107	58	72	87	97	158
0.20	43	110	60	74	90	100	163
0.23	47	119	65	80	97	108	176
0.25	51	128	70	86	105	117	190
0.26	53	134	74	90	110	122	199
0.27	54	137	75	93	113	125	203
0.29	58	146	80	98	120	133	216
0.32	65	165	90	111	135	150	244
0.33	66	169	92	114	138	154	250
0.34	67	171	94	115	140	155	253
0.35	70	178	98	120	146	162	264
0.36	72	183	100	123	150	166	271

NOTE: U.S. Post Card measurements are approximate. Use for reference only.

Table 5 Input/output paper sizes

Paper Size			Orientation	Paper Tray Size Sensing				SPDH Size Sensing			Document Glass Size Sensing			Notes
Common Name	Inch (W x L) +/-1/32 inch	mm (W x L) +/-1 mm	LEF/SEF	Tray 1 and 2	Tray 3 and 4	Bypass tray (tray 5)	Tray 6 (PFP)	USSG/ XCL	Eur/ Asia	Latin	USSG/ XCL	Eur/ Asia	Latin	
Letter	8.5 x 11	216 x 279	SEF	Y	N	Y	N	Y	Y	Y	Y	Y	Y	-
Letter	8.5 x 11	216 x 279	LEF	Y	Y*	Y	N	Y	Y	Y	Y	Y	Y	*Fixed size depending on purchased option
Ledger (tabloid)	11 x 17	279 x 432	SEF	Y	N	Y	N	Y	Y	Y	Y	Y	Y	-
Invoice (statement)	8.5 x 5.5	216 x 140	SEF	Y	N	Y	N	Y*	Y*	Y*	Y	Y	Y	*ISO A5 or 8.5 x 5.5 depending on market region setting
Invoice (statement)	8.5 x 5.5	216 x 140	LEF	N	N	Y	N	Y*	Y*	Y*	Y	Y	Y	*ISO A5 or 8.5 x 5.5 depending on market region setting
Postcard	4.25 x 5.5	108 x 140	SEF	N	N	Y	N	N	N	N	Y	U	U	-

Table 5 Input/output paper sizes

Paper Size			Orientation	Paper Tray Size Sensing				SPDH Size Sensing			Document Glass Size Sensing			Notes
Common Name	Inch (W x L) +/-1/32 inch	mm (W x L) +/-1 mm		LEF/SEF	Tray 1 and 2	Tray 3 and 4	Bypass tray (tray 5)	Tray 6 (PFP)	USSG/ XCL	Eur/ Asia	Latin	USSG/ XCL	Eur/ Asia	
Postcard	4.25 x 5.5	108 x 140	LEF	N	N	N	N	N	N	N	U	U	U	Cannot be fed in IOT
Legal	8.5 x 14	216 x 356	SEF	Y	N	Y	N	Y	Y	Y	Y	U	U	
ISO A4	8.26 x 11.69	210 x 297	SEF	Y	N	Y	N	Y*	Y*	Y*	Y	Y	Y	*ISO A4 or 8.5 x 13 depending on NVM 1 setting.
ISO A4	8.26 x 11.69	210 x 297	LEF	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	-
ISO A3	11.69 x 16.54	297 x 420	SEF	Y	N	Y	N	Y	Y	Y	Y	Y	Y	-
ISO A5	5.83 x 8.27	148 x 210	SEF	Y	N	Y	N	Y*	Y*	Y*	U	Y	U	*ISO A5 or 8.5 x 5.5 depending on market region setting
ISO A5	5.83 x 8.27	148 x 210	LEF	N	N	Y	N	Y*	Y*	Y*	U	Y	U	*ISO A5 or 8.5 x 5.5 depending on market region setting
ISO A6	4.13 x 5.83	105 x 148	SEF	N	N	Y	N	N	N	N	U	Y	Y	-
ISO A6	4.13 x 5.83	105 x 148	LEF	N	N	N	N	N	N	N	U	U	U	-
Foolsap or Euroletter	8.5 x 13	216 x 330	SEF	Y	N	Y	N	Y*	Y*	Y*	U	Y	Y	*ISO A4 or 8.5 x 13 depending on NVM 1 setting
JIS B5	7.17 x 10.12	182 x 257	SEF	N	N	Y	N	Y	Y	Y	Y	Y	Y	-
JIS B5	7.17 x 10.12	182 x 257	LEF	Y	N	N	N	Y	Y	Y	Y	Y	Y	-
JIS B4	10.12 x 14.33	257 x 364	SEF	Y	N	Y	N	U*	U*	U*	Y	Y	Y	*Detected as ISO B4
JIS B6	5.08 x 7.17	128 x 182	SEF	N	N	Y	N	N	N	N	Y	Y	Y	-
JIS B6	5.08 x 7.17	128 x 182	LEF	N	N	N	N	U*	U*	U*	U	U	U	*Detected as ISO B5
ISO B5	6.93 x 9.84	176 x 250	SEF	Y	N	Y	N	Y	Y	Y	U	U	U	
ISO B5	6.93 x 9.84	176 x 250	LEF	N	N	Y	N	Y	Y	Y	U	U	U	
ISO B4	9.84 x 13.9	250 x 353	SEF	Y	N	Y	N	Y	Y	Y	Y	Y	Y	
SB4	9.9 x 14.09	252 x 358	SEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B4
Postcard-Lakes	4.5 x 6	114 x 152	SEF	N	N	Y	N	N	N	N	U	U	U	-
Postcard-Lakes	4.5 x 6	114 x 152	LEF	N	N	N	N	U*	U*	U*	U	U	U	*Detected as ISO A5 or 8.5 x 5.5 depending on NVM 2 setting
Postcard	5 x 7	127 x 178	SEF	N	N	Y	N	N	N	N	U	U	U	-
Postcard	5 x 7	127 x 178	LEF	N	N	N	N	U*	U*	U*	U	U	U	*Detected as ISO A5 or 8.5 x 5.5 depending on NVM 2 setting
5.5 x 7 inch	5.5 x 7	140 x 178	SEF	N	N	Y	N	U	U	U	U	U	U	-
5.5 x 7 inch	5.5 x 7	140 x 178	LEF	N	N	Y	N	U	U	U	U	U	U	-
Oufuku-Hagaki Postcard	5.83 x 7.87	148 x 200	SEF	N	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO A5 or 8.5 x 5.5 depending on NVM 2 setting
Oufuku-Hagaki Postcard	5.83 x 7.87	148 x 200	LEF	N	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO A5 or 8.5 x 5.5 depending on NVM 2 setting

Table 5 Input/output paper sizes

Paper Size			Orientation	Paper Tray Size Sensing				SPDH Size Sensing			Document Glass Size Sensing			Notes
Common Name	Inch (W x L) +/-1/32 inch	mm (W x L) +/-1 mm	LEF/SEF	Tray 1 and 2	Tray 3 and 4	Bypass tray (tray 5)	Tray 6 (PFP)	USSG/ XCL	Eur/ Asia	Latin	USSG/ XCL	Eur/ Asia	Latin	
6 x 9 inch	6 x 9	152 x 229	SEF	N	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO A5 or 8.5 x 5.5 depending on NVM 2 setting
6 x 9 inch	6 x 9	152 x 229	LEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO A5 or 8.5 x 5.5 depending on NVM 2 setting
Royal Octavo	6 x 9.5	152 x 241	SEF	N	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO A5 or 8.5 x 5.5 depending on NVM 2 setting
Royal Octavo	6 x 9.5	152 x 241	LEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B5
Foolscap Quarto	6.5 x 8.25	165 x 206	SEF	N	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B5
Foolscap Quarto	6.5 x 8.25	165 x 206	LEF	N	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
Crown Quarto	7.25 x 9.5	184 x 241	SEF	N	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B5
Crown Quarto	7.25 x 9.5	184 x 241	LEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B5
Executive	7.25 x 10.5	184 x 267	SEF	N	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
Executive	7.25 x 10.5	184 x 267	LEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
16K Taiwan	7.64 x 10.51	194 x 267	SEF	N	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
16K Taiwan	7.64 x 10.51	194 x 267	LEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
Quarto	8 x 10	203 x 254	SEF	N	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
Quarto	8 x 10	203 x 254	LEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8 x 10.5	203 x 267	SEF	N	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8 x 10.5	203 x 267	LEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
8 x 13 inch foolscap	8 x 13	203 x 330	SEF	N	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8.26 x 10	210 x 254	SEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8.26 x 10	210 x 254	LEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8.26 x 10.63	210 x 270	SEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8.26 x 10.63	210 x 270	LEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8.26 x 13	210 x 330	SEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO A4 or 8.5 x 13 depending on NVM 1 setting
Foolscap Folio	8.25 x 13.06	209 x 333	SEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO A4 or 8.5 x 13 depending on NVM 1 setting
Demi Quarto	8.46 x 10.7	215 x 273	SEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
Demi Quarto	8.46 x 10.7	215 x 273	LEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8.46 x 10.83	215 x 275	SEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO A4 or 8.5 x 13 depending on NVM 1 setting

Table 5 Input/output paper sizes

Paper Size			Orientation	Paper Tray Size Sensing				SPDH Size Sensing			Document Glass Size Sensing			Notes
Common Name	Inch (W x L) +/-1/32 inch	mm (W x L) +/-1 mm	LEF/SEF	Tray 1 and 2	Tray 3 and 4	Bypass tray (tray 5)	Tray 6 (PFP)	USSG/ XCL	Eur/ Asia	Latin	USSG/ XCL	Eur/ Asia	Latin	
-	8.46 x 10.83	215 x 275	LEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO A4 or 8.5 x 13 depending on NVM 1 setting
Folio (Spain)	8.46 x 12.4	215 x 315	SEF	Y#	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO A4 or 8.5 x 13 depending on NVM 1 setting. #Detected as 8.5 x 13
-	8.66 x 13	220 x 330	SEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO A4 or 8.5 x 13 depending on NVM 1 setting.
-	8.75 x 11.69	223 x 297	SEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO A4 or 8.5 x 13 depending on NVM 1 setting.
-	8.75 x 11.69	223 x 297	LEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO A4 or 8.5 x 13 depending on NVM 1 setting.
Arch A	9 x 12	229 x 305	SEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO A4 or 8.5 x 13 depending on NVM 1 setting.
SB4	9.92 x 14.09	252 x 258	SEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B4
SB4	9.92 x 14.09	252 x 258	LEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B4
Accounting	10 x 14	254 x 356	SEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B4
-	10 x 15	254 x 381	SEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B4
8K Taiwan	10.51 x 15.28	267 x 388	SEF	Y	N	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B4

Table 6 2K LCSS output paper sizes

Paper Size			Orientation	Output		Staple Position			Option
Common Name	Inch (W x L)	mm (W x L)	LEF/SEF	Bin 0	Bin 1	Front	Rear	Dual	Hole Punch (All Types)
Letter	8.5 x 11	216 x 279	SEF	Y	Y	Y	Y	N	Y
Letter	8.5 x 11	216 x 279	LEF	Y	Y	Y	N	Y	Y
Ledger	11 x 17	279 x 432	SEF	Y	Y	Y	N	Y	Y
Invoice (statement)	8.5 x 5.5	216 x 140	SEF	Y	Y	Y	N	N	N
Invoice (statement)	8.5 x 5.5	216 x 140	LEF	Y	Y	Y	Y	N	Y
5.5 x 7	5.5 x 7	140 x 178	SEF	Y	Y	N	N	N	Y
5.5 x 7	5.5 x 7	140 x 178	LEF	Y	Y	N	N	N	Y
Postcard	4.25 x 5.5	108 x 140	SEF	Y	N	N	N	N	N
Postcard	4.25 x 5.5	108 x 140	LEF	N	N	N	N	N	N
Legal	8.5 x 14	216 x 356	SEF	Y	Y	Y	Y	N	Y
ISO A4	8.26 x 11.69	210 x 297	SEF	Y	Y	Y	Y	N	N
ISO A4	8.26 x 11.69	210 x 297	LEF	Y	Y	Y	N	Y	Y
ISO A3	11.69 x 16.54	297 x 420	SEF	Y	Y	Y	N	Y	Y
ISO A5	5.83 x 8.27	148 x 210	SEF	Y	Y	Y	N	N	N
ISO A5	5.83 x 8.27	148 x 210	LEF	Y	Y	Y	N	N	N

Table 6 2K LCSS output paper sizes

Paper Size			Orientation	Output		Staple Position			Option
Common Name	Inch (W x L)	mm (W x L)	LEF/SEF	Bin 0	Bin 1	Front	Rear	Dual	Hole Punch (All Types)
ISO A6	4.13 x 5.83	105 x 148	SEF	Y	N	N	N	N	N
ISO A6	4.13 x 5.83	105 x 148	LEF	N	N	N	N	N	N
Foolscap or Euroletter	8.5 x 13	216 x 330	SEF	Y	Y	Y	Y	N	Y
JIS B5	7.17 x 10.12	182 x 257	SEF	Y	Y	Y	N	N	N
JIS B5	7.17 x 10.12	182 x 257	LEF	Y	Y	Y	N	N	N
JIS B4	10.12 x 14.33	257 x 364	SEF	Y	Y	Y	N	N	N
JIS B6	5.08 x 7.17	128 x 182	SEF	Y	N	N	N	N	N
JIS B6	5.08 x 7.17	128 x 182	LEF	N	N	N	N	N	N
ISO B5	6.93 x 9.84	176 x 250	SEF	Y	Y	Y	N	N	N
ISO B5	6.93 x 9.84	176 x 250	LEF	Y	Y	Y	N	N	N
ISO B4	9.84 x 13.9	250 x 353	SEF	Y	Y	Y	N	N	N
ISO B4	9.92 x 14.09	252 x 358	SEF	Y	Y	Y	N	N	N
ISO A4 Cover or Tab	8.78 x 11.69	297 x 223	SEF	Y	Y	Y	N	N	N
ISO A4 Cover or Tab	8.78 x 11.69	297 x 223	LEF	Y	Y	Y	N	N	N
Letter Cover or Tab	9 x 11	229 x 279	SEF	Y	Y	Y	N	N	N
Letter Cover or Tab	9 x 11	229 x 279	LEF	Y	Y	Y	N	N	N
Postcard-Lakes	4.5 x 6	114 x 152	SEF	Y	N	N	N	N	N
Postcard-Lakes	4.5 x 6	114 x 152	LEF	N	N	N	N	N	N
Postcard	5 x 7	127 x 178	SEF	Y	N	N	N	N	N
Postcard	5 x 7	127 x 178	LEF	N	N	N	N	N	N
Oufuku-Hagaki Postcard	5.83 x 7.87	148 x 200	SEF	Y	Y	Y	N	N	N
Oufuku-Hagaki Postcard	5.83 x 7.87	148 x 200	LEF	Y	Y	Y	Y	N	N
6 x 9 inch	6 x 9	152 x 229	SEF	Y	Y	Y	N	N	N
6 x 9 inch	6 x 9	152 x 229	LEF	Y	Y	Y	N	N	N
Royal Octavo	6 x 9.5	152 x 241	SEF	Y	Y	Y	N	N	N
Royal Octavo	6 x 9.5	152 x 241	LEF	Y	Y	Y	N	N	N
Foolscap Quarto	6.5 x 8.25	165 x 206	SEF	Y	Y	Y	N	N	N
Foolscap Quarto	6.5 x 8.25	165 x 206	LEF	Y	Y	Y	Y	N	N
Crown Quarto	7.25 x 9.5	184 x 241	SEF	Y	Y	N	N	N	N
Crown Quarto	7.25 x 9.5	184 x 241	LEF	Y	Y	Y	N	N	N
Executive	7.25 x 10.5	184 x 267	SEF	Y	Y	N	N	N	N
Executive	7.25 x 10.5	184 x 267	LEF	Y	Y	Y	N	N	N
16K Taiwan	7.64 x 10.51	194 x 267	SEF	Y	Y	Y	N	N	N
16K Taiwan	7.64 x 10.51	194 x 267	LEF	Y	Y	Y	N	N	N
Quarto	8 x 10	203 x 254	SEF	Y	Y	Y	Y	N	N
Quarto	8 x 10	203 x 254	LEF	Y	Y	Y	N	N	N
-	8 x 10.5	203 x 267	SEF	Y	Y	Y	Y	N	N
-	8 x 10.5	203 x 267	LEF	Y	Y	Y	N	N	N
-	8 x 13	203 x 330	SEF	Y	Y	Y	Y	N	N

Table 6 2K LCSS output paper sizes

Paper Size			Orientation	Output		Staple Position			Option
Common Name	Inch (W x L)	mm (W x L)	LEF/SEF	Bin 0	Bin 1	Front	Rear	Dual	Hole Punch (All Types)
-	8.26 x 10	210 x 254	SEF	Y	Y	Y	Y	N	N
-	8.26 x 10	210 x 254	LEF	Y	Y	Y	N	N	N
-	8.26 x 10.63	210 x 270	SEF	Y	Y	Y	Y	N	N
-	8.26 x 10.63	210 x 270	LEF	Y	Y	Y	N	N	N
Foolscap Folio	8.25 x 13.06	209 x 333	SEF	Y	Y	Y	Y	N	N
-	8.26 x 13	210 x 330	SEF	Y	Y	Y	Y	N	N
Demi Quarto	8.46 x 10.7	215 x 273	SEF	Y	Y	Y	Y	N	N
Demi Quarto	8.46 x 10.7	215 x 273	LEF	Y	Y	Y	N	N	N
-	8.46 x 10.83	215 x 275	SEF	Y	Y	Y	Y	N	N
-	8.46 x 10.83	215 x 275	LEF	Y	Y	Y	N	N	N
Folio (Spain)	8.46 x 12.4	215 x 315	SEF	Y	Y	Y	Y	N	N
-	8.66 x 13	220 x 330	SEF	Y	Y	Y	Y	N	N
-	8.75 x 11.69	223 x 297	SEF	Y	Y	Y	N	N	N
-	8.75 x 11.69	223 x 297	LEF	Y	Y	Y	N	Y	Y
Arch A	9 x 12	229 x 305	SEF	Y	Y	Y	N	N	N
SB4	9.92 x 14.09	252 x 358	SEF	Y	Y	Y	N	N	N
Accounting	10 x 14	254 x 356	SEF	Y	Y	Y	N	N	N
-	10 x 15	254 x 381	SEF	Y	Y	Y	N	N	N
8K Taiwan	10.51 x 15.28	267 x 388	SEF	Y	Y	Y	N	N	N

Table 7 LVF BM output paper sizes

Paper Size			Orientation	Output			Staple Position				Option
Common Name	Inch (W x L)	mm (W x L)	LEF/SEF	Bin 0	Bin 1	Bin 2	Front Edge	Front Corner	Dual	Rear	Hole Punch (All Types)
Letter	8.5 x 11	216 x 279	SEF	Y	Y	Y	Y	Y	N	Y	Y
Letter	8.5 x 11	216 x 279	LEF	Y	Y	N	Y	Y	Y	N	Y
Ledger	11 x 17	279 x 432	SEF	Y	Y	Y	Y	Y	Y	N	Y
Invoice (statement)	8.5 x 5.5	216 x 140	SEF	Y	Y	N	Y	Y	N	N	N
Invoice (statement)	8.5 x 5.5	216 x 140	LEF	Y	Y	N	Y	Y	N	Y	N
Postcard	4.25 x 5.5	108 x 140	SEF	Y	N	N	N	N	N	N	N
Postcard	4.25 x 5.5	108 x 140	LEF	N	N	N	N	N	N	N	N
Legal	8.5 x 14	216 x 356	SEF	Y	Y	Y	Y	Y	N	Y	Y
ISO A4	8.26 x 11.69	210 x 297	SEF	Y	Y	Y	Y	Y	N	Y	N
ISO A4	8.26 x 11.69	210 x 297	LEF	Y	Y	N	Y	Y	Y	N	Y
ISO A3	11.69 x 16.54	297 x 420	SEF	Y	Y	Y	Y	Y	Y	N	Y
ISO A5	5.83 x 8.27	148 x 210	SEF	Y	Y	N	Y	Y	N	N	N
ISO A5	5.83 x 8.27	148 x 210	LEF	Y	Y	N	Y	Y	N	Y	N

Table 7 LVF BM output paper sizes

Paper Size			Orientation	Output			Staple Position				Option
Common Name	Inch (W x L)	mm (W x L)	LEF/SEF	Bin 0	Bin 1	Bin 2	Front Edge	Front Corner	Dual	Rear	Hole Punch (All Types)
ISO A6	4.13 x 5.83	105 x 148	SEF	Y	N	N	N	N	N	N	N
ISO A6	4.13 x 5.83	105 x 148	LEF	N	N	N	N	N	N	N	N
Foolscap or Euroletter	8.5 x 13	216 x 330	SEF	Y	Y	Y	Y	Y	Y	N	Y
JIS B5	7.17 x 10.12	182 x 257	SEF	Y	Y	N	Y	Y	N	N	N
JIS B5	7.17 x 10.12	182 x 257	LEF	Y	Y	N	Y	Y	N	N	N
JIS B4	10.12 x 14.33	257 x 364	SEF	Y	Y	N	Y	Y	N	N	N
JIS B6	5.08 x 7.17	128 x 182	SEF	Y	N	N	N	N	N	N	N
JIS B6	5.08 x 7.17	128 x 182	LEF	N	N	N	N	N	N	N	N
ISO B6	4.92 x 6.93	125 x 176	SEF	Y	N	N	N	N	N	N	N
ISO B5	9.84 x 6.93	250 x 176	SEF	Y	Y	N	Y	Y	N	N	N
ISO B5	6.93 x 9.84	176 x 250	LEF	Y	Y	N	Y	Y	N	N	N
ISO B4	9.84 x 13.9	250 x 353	SEF	Y	Y	N	Y	Y	N	N	N
SB4	9.92 x 14.09	252 x 358	SEF	Y	Y	N	Y	Y	N	N	N
ISO A4 Cover	8.78 x 11.69	297 x 223	SEF	Y	Y	N	Y	Y	N	N	Y
ISO A4 Cover	8.78 x 11.69	297 x 223	LEF	Y	Y	N	Y	Y	N	N	Y
Letter Cover	9 x 11	229 x 279	LEF	Y	Y	N	Y	Y	N	N	Y
Postcard Lakes	4.5 x 6	114 x 152	SEF	Y	N	N	N	N	N	N	N
Postcard Lakes	4.5 x 6	114 x 152	LEF	N	N	N	N	N	N	N	N
Postcard	5 x 7	127 x 178	SEF	Y	N	N	N	N	N	N	N
Postcard	5 x 7	127 x 178	LEF	Y	N	N	N	N	N	N	N
Postcard	5.5 x 7	139.7 x 178	SEF	Y	N	N	N	N	N	N	N
Postcard	5.5 x 7	139.7 x 178	LEF	Y	N	N	N	N	N	N	N
Oufuku-Hagaki Postcard	5.83 x 7.87	148 x 200	SEF	Y	Y	N	Y	Y	N	N	N
Oufuku-Hagaki Postcard	5.83 x 7.87	148 x 200	LEF	Y	Y	N	Y	Y	N	Y	N
6 x 9 inch	6 x 9	152 x 229	SEF	Y	Y	N	N	Y	N	N	N
6 x 9 inch	6 x 9	152 x 229	LEF	Y	Y	N	N	Y	N	N	N
Royal Octavo	6 x 9.5	152 x 241	SEF	Y	Y	N	Y	Y	N	N	N
Royal Octavo	6 x 9.5	152 x 241	LEF	Y	Y	N	Y	Y	N	N	N
Foolscap Quarto	6.5 x 8.25	165 x 206	SEF	Y	Y	N	Y	Y	N	N	N
Foolscap Quarto	6.5 x 8.25	165 x 206	LEF	Y	Y	N	Y	Y	N	Y	N
Crown Quarto	7.25 x 9.5	184 x 241	SEF	Y	Y	N	Y	Y	N	N	N
Crown Quarto	7.25 x 9.5	184 x 241	LEF	Y	Y	N	Y	Y	N	N	N
Executive	7.25 x 10.5	184 x 267	SEF	Y	Y	N	Y	Y	N	N	N
Executive	7.25 x 10.5	184 x 267	LEF	Y	Y	N	Y	Y	N	N	N
16K Taiwan	7.64 x 10.51	194 x 267	SEF	Y	Y	N	N	Y	N	N	N
16K Taiwan	7.64 x 10.51	194 x 267	LEF	Y	Y	N	Y	Y	N	N	N
Quarto	8 x 10	203 x 254	SEF	Y	Y	N	N	Y	N	Y	N
Quarto	8 x 10	203 x 254	LEF	Y	Y	N	Y	Y	N	N	N

Table 7 LVF BM output paper sizes

Paper Size			Orientation	Output			Staple Position				Option
Common Name	Inch (W x L)	mm (W x L)	LEF/SEF	Bin 0	Bin 1	Bin 2	Front Edge	Front Corner	Dual	Rear	Hole Punch (All Types)
-	8 x 10.5	203 x 267	SEF	Y	Y	N	Y	Y	N	Y	N
-	8 x 10.5	203 x 267	LEF	Y	Y	N	Y	Y	N	N	N
-	8 x 13	203 x 330	SEF	Y	Y	N	Y	Y	N	Y	N
-	8.26 x 10	210 x 254	SEF	Y	Y	N	Y	Y	N	Y	N
-	8.26 x 10	210 x 254	LEF	Y	Y	N	Y	Y	N	N	N
-	8.26 x 10.63	210 x 270	SEF	Y	Y	N	Y	Y	N	Y	N
-	8.26 x 10.63	210 x 270	LEF	Y	Y	N	Y	Y	N	N	N
Foolscap Folio	8.25 x 13.06	209 x 333	SEF	Y	Y	N	Y	Y	N	Y	N
-	8.26 x 13	210 x 330	SEF	Y	Y	N	Y	Y	N	Y	N
Demi Quarto	8.46 x 10.7	215 x 273	SEF	Y	Y	N	Y	Y	N	Y	N
Demi Quarto	8.46 x 10.7	215 x 273	LEF	Y	Y	N	Y	Y	N	N	N
-	8.46 x 10.83	215 x 275	SEF	Y	Y	N	Y	Y	N	Y	N
-	8.46 x 10.83	215 x 275	LEF	Y	Y	N	Y	Y	N	N	N
Folio (Spain)	8.46 x 12.4	215 x 315	SEF	Y	Y	N	Y	Y	N	Y	N
-	8.66 x 13	220 x 330	SEF	Y	Y	N	Y	Y	N	Y	N
-	8.75 x 11.69	223 x 297	SEF	Y	Y	N	Y	Y	N	N	N
-	8.75 x 11.69	223 x 297	LEF	Y	Y	N	Y	Y	Y	N	N
Arch A	9 x 12	229 x 305	SEF	Y	Y	N	Y	Y	N	N	N
SB4	9.92 x 14.09	252 x 358	SEF	Y	Y	N	Y	Y	Y	Y	N
Accounting	10 x 14	254 x 356	SEF	Y	Y	Y	Y	Y	N	N	N
-	10 x 15	254 x 381	SEF	Y	Y	N	Y	Y	N	N	N
8K Taiwan	10.51 x 15.28	267 x 388	SEF	Y	Y	N	Y	Y	N	N	N
-	12 x 18	305 x 457	SEF	Y	N	N	N	N	N	N	N
SRA3	12.6 x 17.72	320 x 450	SEF	Y	N	N	N	N	N	N	N
Custom sizes	Various	Various	-	Y	N	N	N	N	N	N	N

Table 8 HVF output paper sizes

Paper Size			Orientation	Output	Staple position				Option	Output	
Common Name	Inch (W x L)	mm (W x L)	LEF / SEF	Stack	Front	Rear	Dual	Multiple	Hole punch (all types)	Top Tray	Booklet maker
Letter	8.5 x 11	216 x 279	SEF	Y	Y	Y	Y	Y	Y	Y	Y
Letter	8.5 x 11	216 x 279	LEF	Y	Y	Y	Y	Y	Y	Y	N
Ledger	11 x 17	279 x 432	SEF	Y	Y	Y	Y	Y	Y	Y	Y
Invoice (statement)	8.5 x 5.5	216 x 140	SEF	Y	N	N	N	N	N	Y	N
Invoice (statement)	8.5 x 5.5	216 x 140	LEF	Y	Y	Y	Y	Y	Y	Y	N
Postcard	4.25 x 5.5	108 x 140	SEF	N	N	N	N	N	N	Y	N

Table 8 HVF output paper sizes

Paper Size			Orientation	Output	Staple position				Option	Output	
Common Name	Inch (W x L)	mm (W x L)	LEF / SEF	Stack	Front	Rear	Dual	Multiple	Hole punch (all types)	Top Tray	Booklet maker
Postcard	4.25 x 5.5	108 x 140	LEF	N	N	N	N	N	N	N	N
Legal	8.5 x 14	216 x 356	SEF	Y	Y	Y	Y	Y	Y	Y	Y
ISO A4	8.26 x 11.69	210 x 297	SEF	Y	Y	Y	Y	Y	N	Y	Y
ISO A4	8.26 x 11.69	210 x 297	LEF	Y	Y	Y	Y	Y	Y	Y	N
ISO A3	11.69 x 16.54	297 x 420	SEF	Y	Y	Y	Y	Y	Y	Y	Y
ISO A5	5.83 x 8.27	148 x 210	SEF	Y	N	N	N	N	N	Y	N
ISO A5	5.83 x 8.27	148 x 210	LEF	Y	Y	Y	Y	Y	N	Y	N
ISO A6	4.13 x 5.83	105 x 148	SEF	N	N	N	N	N	N	Y	N
ISO A6	4.13 x 5.83	105 x 148	LEF	N	N	N	N	N	N	N	N
Foolscap or Euroletter	8.5 x 13	216 x 330	SEF	Y	Y	Y	Y	Y	Y	Y	Y
JIS B5	7.17 x 10.12	182 x 257	SEF	Y	Y	Y	Y	Y	N	Y	N
JIS B5	7.17 x 10.12	182 x 257	LEF	Y	Y	Y	Y	Y	N	Y	N
JIS B4	10.12 x 14.33	257 x 364	SEF	Y	Y	Y	Y	Y	N	Y	N
JIS B6	5.08 x 7.17	128 x 182	SEF	N	N	N	N	N	N	Y	N
JIS B6	5.08 x 7.17	128 x 182	LEF	N	N	N	N	N	N	N	N
ISO B5	6.93 x 9.84	176 x 250	SEF	Y	Y	N	N	N	N	Y	N
ISO B5	6.93 x 9.84	176 x 250	LEF	Y	Y	Y	Y	Y	N	Y	N
ISO B4	9.84 x 13.9	250 x 353	SEF	Y	Y	Y	Y	Y	N	Y	N
ISO A4 Cover	8.78 x 11.69	297 x 223	SEF	Y	Y	Y	Y	Y	N	Y	N
ISO A4 Cover	8.78 x 11.69	297 x 223	LEF	Y	Y	Y	Y	Y	N	Y	N
ISO A4 Tab Stock	-	-	LEF	Y	Y	Y	Y	Y	Y	Y	N
Letter Cover	9 x 11	229 x 279	SEF	Y	Y	Y	Y	Y	N	Y	N
Letter Cover	9 x 11	229 x 279	LEF	Y	Y	Y	Y	Y	N	Y	N
8.5 x 11 inch Tab Stock	-	-	LEF	Y	Y	Y	Y	Y	Y	Y	N
Postcard-Lakes	4.5 x 6	114 x 152	SEF	Y	N	N	N	N	N	Y	N
Postcard-Lakes	4.5 x 6	114 x 152	LEF	N	N	N	N	N	N	N	N
Postcard	5 x 7	127 x 178	SEF	Y	N	N	N	N	N	Y	N
Postcard	5 x 7	127 x 178	LEF	N	N	N	N	N	N	N	N
Oufuku-Hagaki Postcard	5.83 x 7.87	148 x 200	SEF	Y	N	N	N	N	N	Y	N
Oufuku-Hagaki Postcard	5.83 x 7.87	148 x 200	LEF	Y	Y	Y	Y	Y	N	Y	N
6 x 9 inch	6 x 9	152 x 229	SEF	Y	N	N	N	N	N	Y	N
6 x 9 inch	6 x 9	152 x 229	LEF	Y	Y	Y	Y	Y	N	Y	N
Royal Octavo	6 x 9.5	152 x 241	SEF	Y	N	N	N	N	N	Y	N
Royal Octavo	6 x 9.5	152 x 241	LEF	Y	Y	Y	Y	Y	N	Y	N
Foolscap Quarto	6.5 x 8.25	165 x 206	SEF	Y	N	N	N	N	N	Y	N
Foolscap Quarto	6.5 x 8.25	165 x 206	LEF	Y	Y	Y	Y	Y	N	Y	N
Crown Quarto	7.25 x 9.5	184 x 241	SEF	Y	Y	Y	Y	Y	N	Y	N
Crown Quarto	7.25 x 9.5	184 x 241	LEF	Y	Y	Y	Y	Y	N	Y	N

Table 8 HVF output paper sizes

Paper Size			Orientation	Output	Staple position				Option	Output	
Common Name	Inch (W x L)	mm (W x L)	LEF / SEF	Stack	Front	Rear	Dual	Multiple	Hole punch (all types)	Top Tray	Booklet maker
Executive	7.25 x 10.5	184 x 267	SEF	Y	Y	Y	Y	Y	N	Y	N
Executive	7.25 x 10.5	184 x 267	LEF	Y	Y	Y	Y	Y	N	Y	N
16K Taiwan	7.64 x 10.51	194 x 267	SEF	Y	Y	Y	Y	Y	N	Y	N
16K Taiwan	7.64 x 10.51	194 x 267	LEF	Y	Y	Y	Y	Y	N	Y	N
Quarto	8 x 10	203 x 254	SEF	Y	Y	Y	Y	Y	N	Y	N
Quarto	8 x 10	203 x 254	LEF	Y	Y	Y	Y	Y	N	Y	N
-	8 x 10.5	203 x 267	SEF	Y	Y	Y	Y	Y	N	Y	N
-	8 x 10.5	203 x 267	LEF	Y	Y	Y	Y	Y	N	Y	N
-	8 x 13	203 x 330	SEF	Y	Y	Y	Y	N	N	Y	N
-	8.26 x 10	210 x 254	SEF	Y	Y	Y	Y	Y	N	Y	N
-	8.26 x 10	210 x 254	LEF	Y	Y	Y	Y	Y	N	Y	N
-	8.26 x 10.63	210 x 270	SEF	Y	Y	Y	Y	Y	N	Y	N
-	8.26 x 10.63	210 x 270	LEF	Y	Y	Y	Y	Y	N	Y	N
Foolscap Folio	8.25 x 13.06	209 x 333	SEF	Y	Y	Y	Y	Y	N	Y	N
-	8.26 x 13	210 x 330	SEF	Y	Y	Y	Y	Y	N	Y	N
Demi Quarto	8.46 x 10.7	215 x 273	SEF	Y	Y	Y	Y	N	N	Y	N
Demi Quarto	8.46 x 10.7	215 x 273	LEF	Y	Y	Y	Y	Y	N	Y	N
-	8.46 x 10.83	215 x 275	SEF	Y	Y	Y	Y	Y	N	Y	N
-	8.46 x 10.83	215 x 275	LEF	Y	Y	Y	Y	Y	N	Y	N
-	8.66 x 13	220 x 330	SEF	Y	Y	Y	Y	Y	N	Y	N
Arch A	9 x 12	229 x 305	SEF	Y	Y	Y	Y	Y	N	Y	N
SB4	9.92 x 14.09	252 x 358	SEF	Y	Y	Y	Y	Y	N	Y	N
SB4	9.92 x 14.09	252 x 358	LEF	N	N	N	N	N	N	N	N
Accounting	10 x 14	254 x 356	SEF	Y	Y	Y	Y	Y	N	Y	N
-	10 x 15	254 x 381	SEF	Y	Y	Y	Y	Y	N	Y	N
8K Taiwan	10.51 x 15.28	267 x 388	SEF	Y	Y	Y	Y	Y	N	Y	N
Custom size, cross process direction (minimum)	4.13	105	-	N	N	N	N	N	N	Y	N
Custom size, process direction (minimum)	5.5	138	-	N	N	N	N	N	N	Y	N
Custom size, cross process direction (maximum)	11.69	297	-	N	N	N	N	N	N	Y	N
Custom size, process direction (maximum)	17.01	432	-	N	N	N	N	N	N	Y	N

Table 9 Output stock performance

Stock Type	Trays 1 and 2	Bypass	Trays 3 and 4	Duplex	Offset	Stack	Staple	Hole Punch	Booklet Maker	Notes
Bond/standard 70 gsm to 90 gsm (16lbs to 24lbs)	Y	Y	Y	Y	Y	Y(1)	Y(2)	Y	Y	(1) There may be some slight performance degradation if small documents are stacked on large. Stacking registration cannot be assured if large documents are stacked on small. (2) For stapled sets, staple build up may affect stack quality.
Index	Y	Y	Y	Y	Y	Y(1)	Y(2)	Y	Y	
Recycled	Y	Y	Y	Y	Y	Y(1)	Y(2)	Y	Y	
Transparency (non paper backed)	N	Y	N	N	Y(1)	Y(1)	N	N	N	(1) An increase in set scatter or set to set registration may occur with greater than 20 sheets.
Transparency (paper backed) (2)	N	Y	N	N	Y(1)	Y(1)	N	N	N	(1) An increase in set scatter or set to set registration may occur with greater than 20 sheets. (2) Must be fed with sealed edge leading. Must not be inverted.
Labels (1)	Y	Y	N	N	N	N	N	N	N	(1) 2K LCSS and LVF BM = top tray only.
Card stock, 120 gsm to 200 gsm	Y	Y	Y	Y	Y	Y(1)	Y	Y	Y(2)	(1) Pro-rata reduction in capacity with weight of stock. (2) One cover may be included within the quoted sheet capacity consistent with paper weight of the body of the booklet.
Card stock, 200 gsm to 216 gsm	N	Y	N	Y	N	Y	Y(1)	Y	Y(2)	
Punched	Y	Y	Y	Y	Y	Y	Y	Y	N	-
Envelopes (1)	Y	Y	N	N	N(2)	N	N	N	N	(1) Must not be inverted. (2) 2K LCSS = Top tray only.
Carbonless paper	N	Y	Y(3)	N	N(1)	Y(1)(2)	N	N	N	(1) LCSS = top tray only (2) Except for hospital labels SEF (3) Degraded performance

Table 10 Input document material definitions

Category	Material	Image Type
Group I. Common usage input	80 gsm (20lb.) to 120gsm (32lb.) or equivalent weight range (rag bond offset and ledger paper). This group includes 4040 paper.	Impact typewriter, offset image, Xerographic image, gravure image, Letterpress image, pencil 2H or harder, ballpoint pen, ink pen
Group II. Heavyweight common usage input.	121gsm (32.1lb.) to 200gsm (110lb.) index or equivalent weight range (rag bond and ledger paper).	Impact typewriter, offset image, Xerographic image, gravure image, Letterpress image, pencil 2H or harder, ballpoint pen, ink pen
Group III. Lightweight common usage input.	60gsm (16lb) to 79gsm (19.9lb.) bond or equivalent weight range (rag bond, offset, mimo/duplicator, and NCR paper).	Impact typewriter, offset image, Xerographic image, gravure image, Letterpress image, pencil 2H or harder, ballpoint pen, ink pen
Group IV. Common surface finished paper	60gsm (16lb) to 200gsm (110lb.) index or equivalent (Bristol text, magazine, cover, vellum, safety paper)	Impact typewriter, offset image, Xerographic image, gravure image, Letterpress image, pencil 2H or harder, ballpoint pen, ink pen
Group V. Uncommon and other input	80 gsm (20lb.) to 200gsm (110lb.) or equivalent weight: plastic laminated paper: metallic cover stock: tag stock: plastic transparencies: Telecopier paper: label stock: silver photographic paper: Electrofax paper (ZnO) race-erase: paste ups with loose edges type 1, 2 and 3: XE approved punched or perforated stock: Continuous computer forms	Impact typewriter, offset image, Xerographic image, gravure image, Letterpress image, pencil 2H or harder, ballpoint pen, ink pen. Liquid developed electrostatic image
Group VI. Lightweight input	49gsm (13lb.) to 59gsm 15.9lb.) bond or equivalent weight range (rag bond, ledger mimeo or GSE papers)	Impact typewriter, offset image, Xerographic image, gravure image, Letterpress image, pencil 2H or harder, ballpoint pen, ink pen
Group VII	34gsm (9lb) to 48gsm (12.9lb) bond or equivalent weight range (rag bond, ledger mimeo or GSE papers)	Impact typewriter, offset image, Xerographic image, gravure image, Letterpress image, pencil 2H or harder, ballpoint pen, ink pen

Table 11 Input document quality definitions

Defect	Acceptable	Marginal	Unacceptable	Notes
Holes	Maximum of 3 cleanly punched holes up to 6mm. (0.25 inch) diameter	4 to 9 cleanly punched holes	Rough or torn holes	-
Staples	Cleanly removed staples	Poorly removed staples resulting in dog-ears*	Staples not removed	
Edge defects	None	Any cut or tear near a corner less than 3mm. (0.125 inch) in length	Any cut or tear not at a corner or greater than 3 mm. (0.125 inch) in length	-
Folds* (in the feed direction)	2 letter folds less than 1.5 mm. (0.062 inch) high	2 letter folds less than 3mm. (0.125 inch) high	Any fold greater than 3mm. (0.125 inch) high	* Folds must be flattened to within 6mm (0.25 inch) height before placing in the input device
Folds* (across the feed direction)	None	1 fold not to exceed 3mm. (0.125 inch) high	Any fold greater than 3mm. (0.125 inch) high	* Folds must be flattened to within 6mm (0.25 inch) height before placing in the input device
Curl (measured from a flat surface)	None	In-ream or inherent curl up to 13mm. (0.5 inch) maximum	Curl greater than 13mm	
Wrinkle	None	Multiple moderate wrinkles, up to 38mm. (1.5 inch) long in any direction, 3mm. (0.125 inch) in height	Severe wrinkles greater than 38mm. (1.5 inch) long in any direction, greater than 3mm. (0.125 inch) in height	-
Foreign material on the surface	None	Hole reinforcement, correction fluid or dry glue no greater than 13 square millimeters. (0.02 square inch) per correction	Correction tape major paste-up or correction fluid greater than 13 square millimeters. (0.02 square inch) per correction	-
Bent corners ("dog-ears")*	No bent corners	1 bent corner up to 75mm. (3 inch) diagonal length	1 or more bent corner exceeding 75mm. (3 inch) diagonal length	* Dog ears must be flattened to within 6mm (0.25 inch) height before placing in the input device
Computer fan fold sheets	-	Perforated tractor feed edges cleanly removed	Perforated tractor feed edges not removed	-

Envelope Specifications

Tray 2 (With Optional Kit):

Refer to [Table 12](#) and [Table 13](#) for the envelope sizes that can be fed from tray 2 if the optional envelope kit is installed.

Table 12 European envelope sizes

ID	Size	Flap Minimum Length	Flap Maximum Length	Feed Orientation
DL	110 x 220mm (4.33 x 8.66 inch)	25mm (1.0 inch)	55mm (2.1 inch)	LEF, open trailing flap, printable face up
C5	162 x 229mm (6.38 x 9.02 inch)	-	55mm (2.1 inch)	LEF, open trailing flap or closed outboard flap, printable face up

Table 13 American envelope sizes

ID	Size	Flap Minimum Length	Flap Maximum Length	Feed Orientation
7 3/4 (Monarch)	98 x 190mm (3.87 x 7.5 inch)	36mm (1.4 inch)	55mm (2.1 inch)	LEF, open trailing flap, printable face up
9	98 x 225mm (3.87 x 8.87inch)	36mm (1.4 inch)	55mm (2.1 inch)	LEF, open trailing flap, printable face up
10	105 x 241mm (4.12 x 9.5 inch)	29mm (1.1 inch)	55mm (2.1 inch)	SEF, closed leading flap, printable face up

Bypass tray:

Refer to [Table 14](#) and [Table 15](#) for the envelope sizes that can be fed from the bypass tray.

Table 14 European envelope sizes

ID	Size	Flap Minimum Length	Flap Maximum Length	Feed Orientation
DL	110 x 220mm (4.33 x 8.66 inch)	25mm (1.0 inch)	55mm (2.1 inch)	LEF, open trailing flap, printable face down
C5	162 x 229mm (6.38 x 9.02 inch)	-	55mm (2.1 inch)	LEF, open trailing flap or closed outboard flap, printable face down

Table 15 American envelope sizes

ID	Size	Flap Minimum Length	Flap Maximum Length	Feed Orientation
7 3/4 (Monarch)	98 x 190mm (3.87 x 7.5 inch)	36mm (1.4 inch)	55mm (2.1 inch)	LEF, open trailing flap, printable face down
9	98 x 225mm (3.87 x 8.87 inch)	36mm (1.4 inch)	55mm (2.1 inch)	LEF, open trailing flap, printable face down
10	105 x 241mm (4.12 x 9.5 inch)	29mm (1.1 inch)	55mm (2.1 inch)	LEF, open trailing flap, printable face down

NOTE: All sizes quoted are with the flap closed. Except for C5 envelopes, only envelopes with flaps on the long edge are acceptable. Envelopes must not be inverted. Some wrinkle is expected on the back of envelopes. Envelopes must have a body length of 135mm or greater (with the flap closed).

Acceptable flap types:

- Diamond/Banker.
- Pocket.
- Wallet.

Weight:

- Lightweight.
- Medium weight.

Acceptable sealing:

- Gummed.
- Press and seal.

Exclusions:

- No windows.

- No board backed.
- No gusset type.
- No padded.
- No 'peel and seal'.

GP 21 Installation Space Requirements

Purpose

To outline the general space requirements to enable safe use and adequate access for service.



Do not work in a confined space. 1 m (39 inches) space is needed for safe working.



USA and Canada. Do not install this machine in a hallway or exit route that does not have 1.12 m (44 inches) of space additional to the normal space requirements in front of the machine. To conform with fire regulations this additional 1.12 m (44 inches) of space is needed in front of the machine in hallway and exit routes.

Machine Height

- Machine height with the SPDH lowered = 1150mm (45.2 inches).
- Machine height with the SPDH raised = 1510mm (59.4 inches).

Machine Weight

Fully configured machine weight = 120kg (264.5lb).

Finishers

- 2K LCSS = 29.5kg (65lb).

- LVF BM = 45.4kg (100 lb).
- HVF BM = 109kg (240 lb)
- HVF BM + PPI = 116.2 (256 lb)
- HVF BM + PPI + tri-folder = 136.5 (301 lb)
- Tray 6 (PFP) = 30 (66 lb)

Machine Dimensions and Installation Space Requirements

Table 1 shows the dimensions of the XxxxXxxx 80XX/80XX machines and the installation space required for safe operation.

NOTE: The installation dimensions in Table 1 allow for a 1 metre (39.4 inches) minimum safety work space around the machine. To acquire this minimum safety work space, it may be necessary to move the machine within the area specified.

A gap of 100mm (4 inches) is required at the rear for airflow to fans. This is also sufficient for the SPDH when raised. A gap of 440mm (17 inches) is required to the left of the machine to allow the left door to open.

Figure 1 represents a plan view of a machine installation and is to be read in conjunction with Table 1. The dimensions A and B outline a footprint of the machine within the boundary of safe operation, dimensions C and D. The dimension E indicates the area required for airflow/work space at the rear of the machine. The dimension F indicates the area required to open the left door.

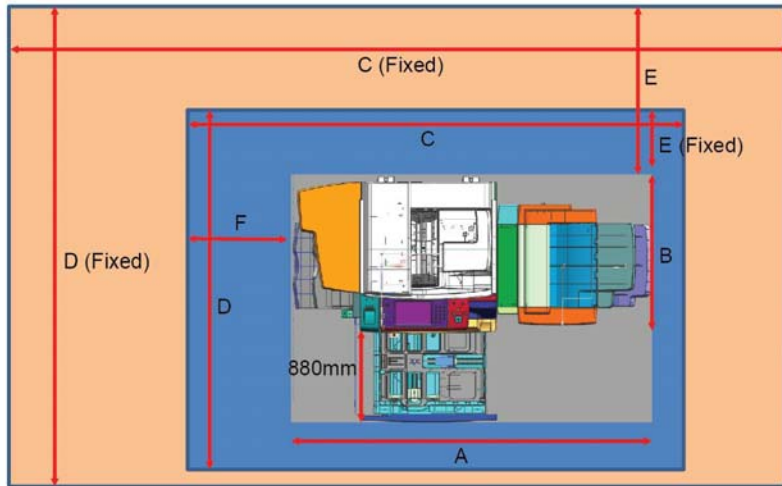
NOTE: The required install width (dimension C) includes the extra space required (dimension F) to open the left door.

Table 1 Dimensions and space requirements

Configuration	Machine Width (A) mm/inches	Machine Depth (B) mm/inches	Install Width Required (C) mm/inches		Install Depth Required (D) mm/inches		Install Airflow/Service Work Space (E) mm/inches		Left Door Access Space (F) mm/inches
			Moveable	Fixed	Moveable	Fixed	Moveable	Fixed	
Basic machine without finisher (centre tray)	850 / 33.5	665 / 26.2	2043 / 80.4	3043 / 119.8	1665 / 65.5	2665 / 105.0	100 / 4	1000 / 39.4	440 / 17
Basic machine with 2K LCSS	1305 / 51.4	665 / 26.2	2663 / 104.8	3663 / 144.2	1665 / 65.5	2665 / 105.0	100 / 4	1000 / 39.4	440 / 17
Basic machine with 2K LCSS and tray 6 (PFP)	1685 / 66.3	665 / 26.2	2892 / 113.8	3892 / 153.2	1665 / 65.5	2665 / 105.0	100 / 4	1000 / 39.4	440 / 17
Basic machine with LVFBM	1365 / 53.7	665 / 26.2	2723 / 107.2	3723 / 146.6	1665 / 65.5	2665 / 105.0	100 / 4	1000 / 39.4	440 / 17
Basic machine with LVFBM and tray 6 (PFP)	1745 / 68.7	665 / 26.2	2952 / 116.2	3892 / 153.2	1665 / 65.5	2665 / 105.0	100 / 4	1000 / 39.4	440 / 17
Basic machine with HVF BM	1775 / 69.9	665 / 26.2	3144 / 123.8	4144 / 163.1	1665 / 65.5	2665 / 105.0	100 / 4	1000 / 39.4	440 / 17
Basic machine with HVF BM and tri folder	2085 / 82.1	665 / 26.2	3482 / 135.7	4482 / 175.7	1665 / 65.5	2665 / 105.0	100 / 4	1000 / 39.4	440 / 17
Basic machine with HVF BM and tray 6 (PFP)	2135 / 84.1	665 / 26.2	3373 / 130.2	4373 / 170.2	1665 / 65.5	2665 / 105.0	100 / 4	1000 / 39.4	440 / 17
Basic machine with HVF BM, tri folder and tray 6 (PFP)	2485 / 97.8	665 / 26.2	3711 / 144.7	4711 / 184.7	1665 / 65.5	2665 / 105.0	100 / 4	1000 / 39.4	440 / 17

Table 1 Dimensions and space requirements

Configuration	Machine Width (A) mm/inches	Machine Depth (B) mm/inches	Install Width Required (C) mm/inches		Install Depth Required (D) mm/inches		Install Airflow/Service Work Space (E) mm/inches		Left Door Access Space (F) mm/inches
			Moveable	Fixed	Moveable	Fixed	Moveable	Fixed	



X-1-1172-A

Figure 1 Installation plan

Refer to [Table 1](#).

Table 1 Electrical power requirements

Nominal Voltage	Average Current		Comments
	45-55 ppm	65-90 ppm	
110VAC (60Hz) Plus 6% minus 10%	Less than or equal to 15A RMS.	Less than or equal to 20A RMS.	Specific XLA markets only.
127VAC (60Hz) Plus 6% minus 10%	Less than or equal to 15A RMS.	Less than or equal to 20A RMS.	Mandatory for Saudi Arabia only.
127VAC (60Hz) Plus 6% minus 10%	Less than or equal to 15A RMS.	Less than or equal to 20A RMS.	To operate at 127VAC +10% for long periods. Mandatory for Mexico only.
120VAC (60Hz) Plus 6% minus 10%	Less than or equal to 12A RMS.	Less than or equal to 16A RMS.	Run mode, USA and Canada.
120VAC (60Hz) Plus 6% minus 10%	Less than or equal to 15A RMS.	Less than or equal to 20A RMS.	Warm up, All 60Hz markets including USA and Canada.
220VAC (50Hz) Plus 6% minus 10%	Less than or equal to 10A RMS.	Less than or equal to 10A RMS.	Europe and other 50Hz markets.
230VAC (50Hz) Plus 6% minus 10%	Less than or equal to 10A RMS.	Less than or equal to 10A RMS.	Europe and other 50Hz markets.
240VAC (50Hz) Plus 6% minus 10%	Less than or equal to 10A RMS.	Less than or equal to 10A RMS.	Europe and other 50Hz markets.

Power Modes

The machine can be in five conditions.

- Plug in/off
- Standby/ready mode
- Run mode

- Semi conscious mode
- Deep sleep mode

For details see [Power Generation and Distribution](#) in the Principles of Operation.

Power consumption

Refer to [Table 2](#) for power the consumption in all modes.

Table 2 Power consumption in all modes

Variant	Run (Watt)	Standby (Watt)	Sleep (Watt)	Plug-in/Off Mode (Watt)	EPA Typical Energy Consumption Value (Kwh/week)
B8045	Less than or equal to 1150	Less than or equal to 45	Less than or equal to 4	Less than or equal to 0.4	Less than or equal to 4.2
B8055	Less than or equal to 1250	Less than or equal to 45	Less than or equal to 4	Less than or equal to 0.4	Less than or equal to 5.1
B8065	Less than or equal to 1300	Less than or equal to 45	Less than or equal to 4	Less than or equal to 0.4	Less than or equal to 6.0
B8075	Less than or equal to 1400	Less than or equal to 45	Less than or equal to 4	Less than or equal to 0.4	Less than or equal to 7.0
B8090	Less than or equal to 1550	Less than or equal to 45	Less than or equal to 4	Less than or equal to 0.4	Less than or equal to 8.0
Additional power with 2K LCSS	Less than or equal to 80	Less than or equal to 10	0	0	N/A
Additional power with LVF BM	Less than or equal to 80	Less than or equal to 10	0	0	N/A
Additional power with HVF BM	Less than or equal to 190	Less than or equal to 30	0	0	N/A

GP 23 Environmental Data

Operating

- Temperature range: 10 to 32 degrees C (50 to 90 degrees F).
- Relative humidity: 95% maximum for primary insulation systems only.
- Noise:

NOTE: Blue Angel Europe criteria measured in accordance with RAL-UZ 122.

- Table 1 contains the maximum value in decibels (sound pressure level) generated by the basic machine.
- Table 2 contains the maximum value in decibels (sound pressure level) generated by the machine in other configurations.

Table 1 Noise limits, basic machine

Variant	Standby (dBA)	Run Continuous (dBA)	Run Impulse (dBA)
B8045	35	57.1	60.1
B8055	35	60.6	63.6
B8065	35	64.1	67.1
B8075	35	67.6	70.6
B8090	35	71.3	74.3

Table 2 Noise limits, all configurations

Variant	Standby (dBA)	Run continuous (dBA)	Run Impulse (dBA)
B8045	35	59	63
B8055	35	59	63
B8065	35	60	63
B8075	35	60	63
B8090	35	61	64

- Altitude: 0 to 3200 metres (0 to 10500 feet).

Storage

Temperature and humidity range:

- 55 degrees C (131 degrees F) 85% RH max.
- -25 degrees C (-13 degrees F) 15% RH max.

GP 24 Customer Administration Tools

Purpose

To gain access to Customer Administration Tools pathway on the UI.

How to Enter Customer Administration Tools

Perform the steps that follow:

1. Switch on the machine, [GP 14](#).
2. When the machine is ready, select **Login** on the user interface.
3. The Login screen displays. Enter user name 'admin' (case sensitive). Select **Next**.
4. Enter the password '1111' (default setting). Select **Done**. If the password is not 1111, ask the customer for the current password. If the customer does not know the password, go to [Admin Password Reset](#).
5. Press the **Device** Icon.
6. Select the **Tools** tab, the tool menus are displayed.

NOTE: After entering Customer Administration Tools, all existing copy jobs are cancelled. The network controller will stop accepting jobs and a 'Offline' screen message is displayed. When exiting Customer Administration Tools, an 'Online' screen message is displayed.

The Customer Administration Tools feature contents are listed below:

- Device Settings:
 - General...
 - Paper Management...
 - Timers...
 - Input...
 - Output...
 - Supplies...
 - Device Software Upgrade...
 - Additional Install Options...
 - Display Brightness...
 - Configuration/Information Pages...
 - Reset UI to Factory Settings...
 - Interrupt Printing Enablement...
 - Display Device Information...
- App Settings:
 - Display...
 - Device Address Book...
 - Copy App...
 - ID Card Copy App...
 - Jobs App...
 - Fax App... (if installed)
 - Job Sheets...
 - Weblet Settings...
- Network Settings:

- USB Settings...
- Online/Offline...
- Network Connectivity...
- TCP/IP Settings...
- Advanced Settings...
- Network Logs...
- Accounting Settings:
 - Accounting Mode...
 - Copy Activity Report...
- Security Settings:
 - USB Port Security...
 - Audit Log...
 - Image Overwrite Security...
 - Change Admin Password...
 - Valid Recipients...
- Troubleshooting:
 - Resets...
 - Network...
 - Fax... (if installed).

Call Closeout

Perform the steps that follow:

1. Select Admin in the top left corner of the UI to exit Customer Administration Tools.
2. Select Logout.

Admin Password Reset

Resetting the admin password will require the information that follows:

- Physical access to the machine UI.
- The serial number of the machine.
- The current total page count on the machine.
- The ability for the customer to talk to someone at a Xerox Support office that has access to the utility or, for a Xerox person, to run the passcode reset utility.

NOTE: The utility runs with *gsnlock* so it can only be run by authorized Xerox employees. However, it is convenient for the Xerox person to run the utility in their office or on the laptop and give the customer the code over the phone.

The customer is encouraged to perform the actual reset. They can obtain the code for their particular machine from Xerox Support, or from a technician over the phone.

Xerox Support or the Xerox Technician must perform the steps that follow:

1. Run the utility Admin Password Reset Tool. (Go to GSN Library 10231 or Contact Level 2 Support)
2. Enter the serial number of the device with no punctuation or spaces.
3. Enter the total page count from the device.
4. Click on **Calculate**.
5. Note the 12 digit reset code.

The Customer at the device must perform the steps that follow:

1. Press the **Device** icon.
2. Select **Tools**.
3. Select **General**.
4. Select **Feature Installation**.
5. Enter the 12 digit reset code obtained above.
6. Select **Enter**.

If the reset code matches the correct one for that serial number and page count, the admin passcode will be reset to the factory default (1111).

NOTE: An entry is made in the customer audit log, if enabled and via e-mail alert to the System Administrator, and in engineering logs whether successful, or not.

The System Administrator has the ability to lock out this function so that it will not work. If they do that, an error message will appear stating that the System Administrator has disabled the function.

NOTE: The passcode formula has some flexibility on the page count in case the machine is used to print or copy while this reset code is being entered. However, if the machine is in heavy use it may be necessary to update the calculation as the page count changes.

GP 25 First Copy/Print Out Time and Power On/Off Time

Table 1 Machine timing

	Power on from off	Sleep Recovery (touch power button)	Ready from restart	Power off from ready
Power LED on UI flashes	Less than 2 seconds	N/A	Less than 41 seconds	N/A
First UI screen displayed	N/A	Less than 1 second	N/A	N/A
Services Home Screen displayed	Less than 1 minute 15 seconds Note 1	Less than 15 seconds	Less than 1 minute 56 seconds Note 1	N/A
Ready to Scan (Fax, File or E-mail send)	Less than 1 minute 25 seconds Note 1	Less than 15 seconds Note 2	Less than 2 minutes 6 seconds Note 1	N/A
Ready to Scan (Copy) (Note 3)	Less than 1 minute 25 seconds Note 1	Less than 15 seconds Note 2	Less than 2 minutes 6 seconds Note 1	N/A
Ready to Mark	Less than 1 minute 25 seconds Note 1	Less than 28 seconds	Less than 2 minutes 6 seconds Note 1	N/A
Power Off	N/A	N/A	N/A	Less than 36 seconds

NOTE: 1

The time taken for a machine to power on is dependent on the number and type of services enabled on the device being evaluated. The values shown in the table assume the basic configuration as shipped from the factory. i.e. Copy; Print From; ID Copy; Server Fax: Additionally, automatic data integrity routines that can occur randomly after 20 power on events from a software alt-boot, can add up to 90 seconds to these times. Therefore measurement of power on times need to be done shortly after an Alt-boot.

NOTE: 2

Recovery from sleep is dependent on which of two sleep modes the machine has entered. Recovery from sleep can be considerably faster than the time shown.

NOTE: 3

Ready to Copy is indicated by the message "Ready to Scan" being displayed on the GUI.

GP 26 Restriction of Hazardous Substances (RoHS)

Purpose

To give information on the RoHS Directive.

The RoHS Directive restricts the use of certain hazardous substances in electrical and electronic equipment. It applies to equipment placed in the European Union (EU) market. The directive takes effect from 1st July 2006.

NOTE: Currently these restrictions are only for the European Union (EU) market and some associated countries. For more information go to www.Xerox.com. However, Xerox has mandated that all AltaLink® B8090F machines must be maintained as RoHS compliant.

The hazardous substances are:

- Lead (Pb)
- Mercury (Hg)
- Cadmium (Cd)
- Hexavalent Chromium (Cr 6+, Cr [VI])
- Polybrominated Diphenyl Ethers (PBDE's)
- Polybrominated Biphenyls (PBB's)

Identification of a RoHS Compliant Machine

Xerox will maintain a central list of RoHS compliant machines.

All XxxxXxxx xxx/xxx machines are RoHS compliant at time of manufacture.

Procedure



Failure to comply with RoHS guidelines can result in product recalls, imprisonment, fines or penalties.

Use only spares that are listed in the AltaLink® B8090F Spare Parts List. Do not use spare parts from other similar machines, even if the parts look identical. All AltaLink® B8090F machines are RoHS compliant at time of manufacture and must be maintained as RoHS compliant.

GP 27 Machine Configuration Control and Recovery

Purpose

To install and maintain the core configuration parameters of the machine i.e, serial number, machine speed, market region and service plan.

The information that follows details the machine install and use of the Subscriber Identity Module (SIM), and the recovery methods for each of the core configuration parameters. Refer to [GP 9](#) to identify the SIM card types.

NOTE: The Subscriber Identity Module (SIM) is also referred to as a Software Option Key (SOK) in some procedures within this service manual.

Prerequisite

For the recovery of the core configuration parameters, it is fundamental that all machines are delivered to the customer in a fully tested and defined state. This defined state includes a default speed, a valid serial number, default service plan, market region and machine class, set to match the configuration of the machine.

During the install procedure the copy, print, scan and fax services are not made available to the customer until a compatible SIM has been installed.

SIM and Machine Configuration

The install process sets the speed of the machine using a new un-serialized secure SIM card, programmed to set a single speed. When a SIM card is successfully used to set the speed of a machine the relevant NVMs are updated with the appropriate settings. The serial number of that machine is then written to that SIM card to prevent it being used on any another machine.

Once the core configuration parameters of the machine i.e, serial number, machine speed, market region and service plan have been set, they are stored in 3 physical locations i.e, hard disk, IOT PWB and the scanner PWB.

Two unique versions of SIM card are available for each speed of machine, i.e with PagePack enablement and without PagePack enablement. Refer to [GP 9](#) Machine SIM Card Matrix.

Configuration Parameters and Machine Recovery

The core configuration parameters of a machine are stored in 3 different physical locations to safeguard them against being inadvertently lost, in the event of a failure or installation of a new hard disk, IOT PWB or scanner PWB. Refer to [Precautions and Best Practises](#).

At power on the machine's system reconciles the core configuration parameters in all 3 locations. If all 3 locations report the same values the machine will continue with normal operation. If there are any discrepancies then the machine will implement a recovery procedure. If any 1 location should lose a value then the other locations will provide correction. Should any 2 locations lose their values the other locations may provide correction, [Table 1](#).

NOTE: A copy of the CSS NVM data from the hard disk is also stored on the SD card. The CSS NVM data stored on the SD card is not used when the machine reconciles the core configuration parameters.

Table 1 Recovery matrix

Hard Disk	IOT PWB	Scanner PWB	SIM	Machine Reaction
A	A	A	A	None, machine is correct
B	A	A	A	Hard disk will be corrected
A	B	A	A	IOT PWB will be corrected
A	A	B	A	Scanner PWB will be corrected
A	B	C	A	Machine recovers from locked SIM speed only. Perform Manual Recovery from step 2.

Key:
A = parameters are good and from the expected machine.
B = parameters are bad from a different machine.
C = parameters are bad from a different machine.

There are scenarios when the core parameters are not machine correctable, especially when a PWB containing NVM values is replaced with a PWB that has been previously installed on another machine, [Table 2](#).

Table 2 Non recovery matrix

Hard Disk	IOT PWB	Scanner PWB	SIM	Machine Reaction
A	B	C	Missing	Machine stops and asks for the SIM to be inserted. Perform Manual Recovery .

Key:
A = parameters are good and from the expected machine.
B = parameters are bad from a different machine.
C = parameters are bad from a different machine.

Manual Recovery

- To recover the machine speed, insert either:
 - The locked SIM that was used during the installation of the machine.
 - A new unlocked blank SIM with a compatible speed for the machine's chassis type. Refer to [dC132](#) Serial Number.

NOTE: If a new unlocked SIM is to be ordered and installed, check if the customer requires the PagePack service plan function, refer to [GP 9](#).

- To recover the machine's service plan, refer to [dC136](#) Service Plan.
- To recover the market region, refer to [dC134](#) Market Region.

Precautions and Best Practices

- Do not remove the SIM card from the machine once installed.
- Do not replace more than one of the listed components at a time, without first switching on the machine after each replacement:

- Hard disk.
- IOT PWB.
- Scanner PWB.
- If a configuration problem occurs, use the dC routines to correct it.
- Save the NVM to an external USB pen drive prior to any major maintenance. Refer to [dC361](#) NVM Save and Restore.
- Save the NVM regularly to the hard disk at a time when you know the machine is working well, e.g at the end of every service call. Refer to [dC361](#) NVM Save and Restore.

GP 28 USB Connection Mode

Purpose

To set the USB connection mode.

NOTE: In order to use the CAT/PWS tools, the USB connection mode must be set to Software Tools.

Procedure

Perform the steps that follow:

1. Enter the Administrator user ID and password. Refer to [GP 24](#) Customer Administration Tools.
2. Select the **Device** icon.
3. Select **Tools**.
4. Select **Network Settings**.
5. Select **USB Settings**.
6. Select **USB Connection Mode**.
7. Select either **Software Tools** or **Direct Printing Using Driver**.
8. Select **Save**.
9. Exit Customer Administration Tools, [GP 24](#).

GP 29 Embedded Customer Documentation

Purpose

To explain how to print the embedded customer documentation.

Procedure

Perform the steps that follow:

1. Select the **Device** icon.
2. Select **Information Pages**.
3. Select **Quick Use Guide**, then select **Print**.

GP 30 Upgrade Software and Save Settings

Purpose

To identify methods of upgrading software, saving machine data and when the procedures are used.

Table 1 Upgrade Software and Save Settings

Procedure Title	Description	Purpose
GP 4 Machine Software	To explain the software upgrade procedures	The customer service engineer should use this procedure to install machine software or reload software when required.
GP 19 Network Clone Procedure	To save and restore the customer's unique network configuration setting.	The customer administrator or the customer service engineer should use this procedure. Used to copy customer network settings from one machine to another.
dC361 NVM Save and Restore	To save NVM data to the hard disk on the machine.	The customer service engineer should use this procedure to copy NVM data before installing new software or other tasks when NVM data may otherwise be lost.
Backup and Restore. Accessed via the web UI.	To back up customer data to the hard disk on the machine.	The System Admin should perform this procedure. Used to restore the machine settings at any time, such as when the settings have changed in error. The procedure can also be used to backup the settings of a machine before a software upgrade. The backups are customer data and should not be deleted or overwritten by a service engineer. For more information refer to the System Admin Guide on Xerox.com

GP 31 How to Set the Date and Time

Purpose

To set the machine's date and time.

Procedure

Perform the steps that follow:

1. Enter Customer Administration Tools, [GP 24](#).
2. Select the **Device** icon.
3. Scroll down and select **Tools**.
4. Select **Device Settings**.
5. Select **General**.
6. Select **Date and Time**.
7. Set the correct Time Zone, Date and Time, then select **Save**.
8. Log out of Customer Administration Tools.

GP 32 How to Enable HTTP

Purpose

To enable the hyper text transfer protocol (HTTP) networking protocol.

Procedure

Perform the steps that follow:

1. Enter Customer Administration Tools, [GP 24](#).
2. Select the **Device** icon.
3. Scroll down and select **Tools**.
4. Select **Network Settings**.
5. Select **Advanced Settings**.
6. Select **HTTP Settings**.
7. Select **Enable**.
8. Select **Save**.
9. Select **Close**.
10. Log out of Customer Administration Tools.

GP 33 How to Configure the PWS to Ping a Device

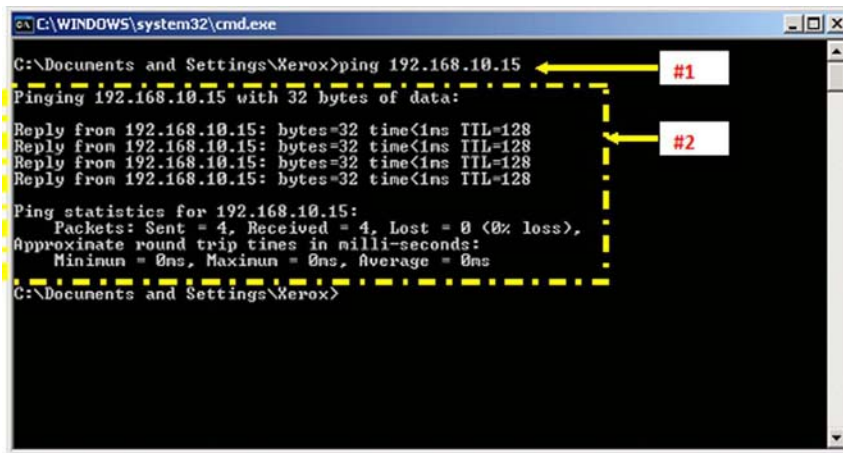
Purpose

To configure the PWS to ping a device on a network.

Procedure Windows 7

Perform the steps that follow:

1. Set the IP address of the PWS one digit higher or lower than the device to be pinged. For example, if the IP address of the device is 192.168.10.15, set the PWS to 192.168.10.14 or 192.168.10.16. To set the IP address of the PWS, refer to [GP 34](#).
2. Set the subnet mask of the PWS the same as the device to be pinged.
3. Perform the steps that follow:
 - a. Click on the Windows Start icon.
 - b. In the Search programs and files dialog box, type cmd.
 - c. Click on OK. A command window will open.
4. In the command window, type 'ping' and the address of the device. Refer to number 1 in [Figure 1](#).
5. If the ping command is successful, a reply from the device will be received. Refer to number 2 in [Figure 1](#).

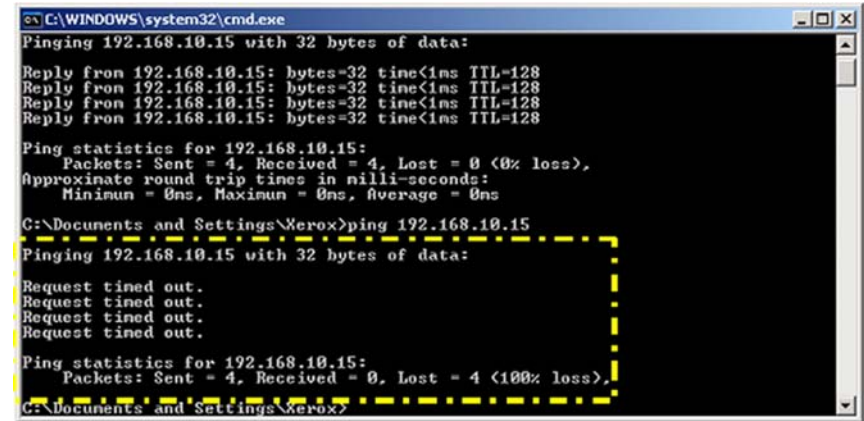


```
C:\WINDOWS\system32\cmd.exe
C:\Documents and Settings\Xerox>ping 192.168.10.15
Pinging 192.168.10.15 with 32 bytes of data:
Reply from 192.168.10.15: bytes=32 time<1ms TTL=128
Reply from 192.168.10.15: bytes=32 time<1ms TTL=128
Reply from 192.168.10.15: bytes=32 time<1ms TTL=128
Reply from 192.168.10.15: bytes=32 time<1ms TTL=128
Ping statistics for 192.168.10.15:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\Documents and Settings\Xerox>
```

Figure 1 Successful ping command

X-1-0874-A

6. If the ping command is unsuccessful, a timed out message will be received, [Figure 2](#).



```
C:\WINDOWS\system32\cmd.exe
Pinging 192.168.10.15 with 32 bytes of data:
Reply from 192.168.10.15: bytes=32 time<1ms TTL=128
Reply from 192.168.10.15: bytes=32 time<1ms TTL=128
Reply from 192.168.10.15: bytes=32 time<1ms TTL=128
Reply from 192.168.10.15: bytes=32 time<1ms TTL=128
Ping statistics for 192.168.10.15:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\Documents and Settings\Xerox>ping 192.168.10.15
Pinging 192.168.10.15 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 192.168.10.15:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\Documents and Settings\Xerox>
```

Figure 2 Unsuccessful ping command

X-1-0875-A

GP 34 How to Set the IP Address of the PWS

Purpose

To set the IP address of the PWS.

Windows 7

Perform the steps that follow:

1. Open Start / Control Panel / Network and Sharing Centre.
2. From the left pane, select Change adapter settings.
3. Right-click on the Local Area Connection icon. Select Properties. The Local Area Connection Properties window will open.
4. Highlight Internet Protocol Version 4 (TCP/IPv4). Select Properties, refer to Figure 1. The Internet Protocol Version 4 (TCP/IPv4) Properties window will open.

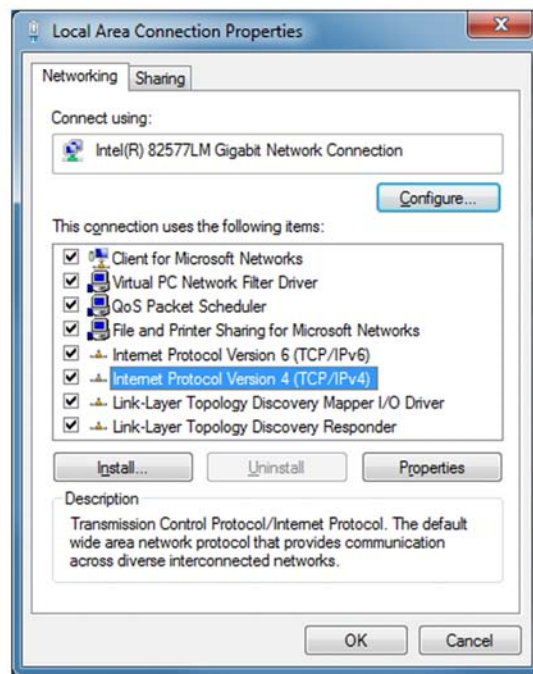


Figure 1 Properties window

5. Double-click the entry Internet Protocol Version 4 (TCP/IPv4).

6. Select Use the following IP address. Enter the IP address and subnet mask, Figure 2.

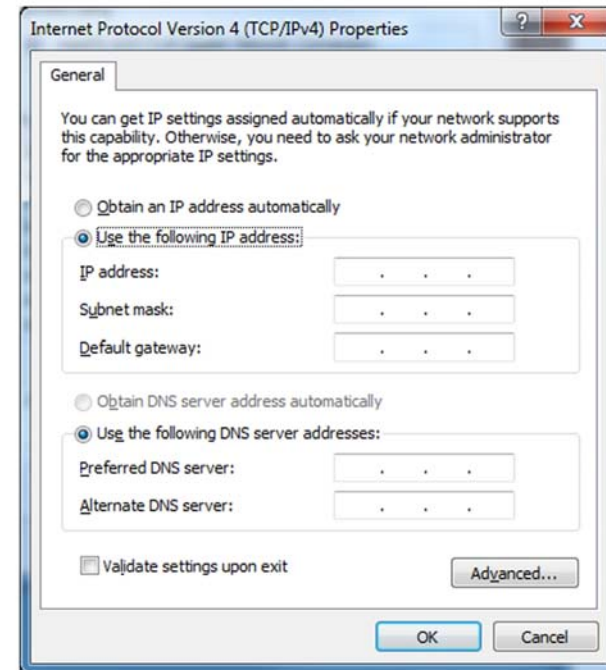


Figure 2 Properties window

7. Refer to the configuration report. Set the IP address of the laptop one number higher than the device. For example, if the IP address of the device is 192.168.196.112, set the IP address of the laptop to 192.168.196.113.
8. Refer to the configuration report. Set the Subnet mask of the laptop to the same as the Subnet mask of the device.
9. Click on OK to close the properties dialog box, then OK to close the second properties dialog box.
10. Close the Local Area Connection Status dialog box.

X-1-0876-A

X-1-0877-A

GP 35 How to Change Ethernet Speed

Purpose

To change the machine's ethernet speed.

Procedure

Perform the steps that follow:

1. Enter Customer Administration Tools, [GP 24](#).
2. Press the **Machine Status** button.
3. Select the **Tools** tab.
4. Select **Network Settings**.
5. Select **Advanced Settings**.
6. Select **Ethernet Physical Media**.
7. Select the speed, then **OK**.
8. Log out of Customer Administration Tools.

GP 36 How to Disable the Firewall of the PWS

Procedure

Go to the relevant procedure:

- [Windows 7 \(32 bit and 64 bit\)](#).
- [Windows 10 \(64 Bit\)](#).

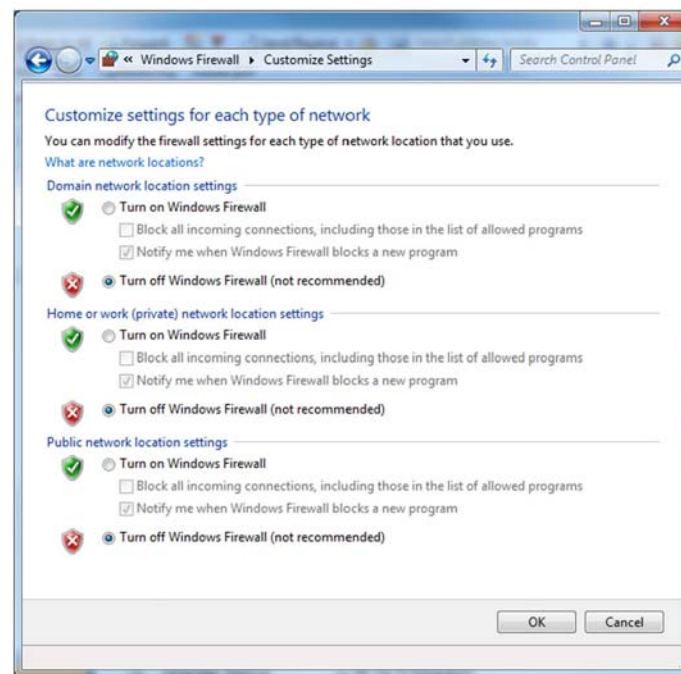
Purpose

To disable the firewall of the PWS.

Windows 7 (32 bit and 64 bit)

Perform the steps that follow:

1. Open Start / Control Panel / Windows Firewall.
2. From the left pane, select Turn Windows Firewall on or off.
3. Select all 3 Turn off Windows Firewall (not recommended) radio buttons to disable the windows firewall, [Figure 1](#).



X-1-0880-A

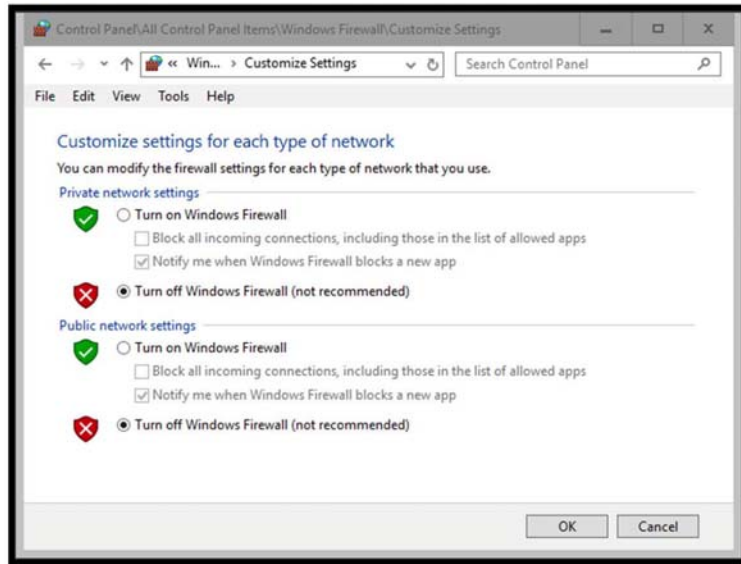
Figure 1 Settings buttons

4. Select OK.

Windows 10 (64 Bit)

Perform the steps that follow:

1. From the task bar select the Search icon and type Firewall / then select Windows Firewall.
2. On the left side of the Control Panel window select Turn Windows Firewall on or off.
3. Select both Turn off Windows Firewall (not recommended) radio buttons to disable the windows firewall [Figure 1](#).



X-1-1989-A

Figure 2 Settings buttons

4. Select OK.

GP 37 Left Door Assembly Service position

Purpose

To position the left door assembly into the service safety position.

Procedure



CAUTION

Do not lower the left door assembly further than the authorized service position, GP 37. Lowering of the left door assembly beyond the service position will cause the left door cover to collide with the IOT to HCF inboard fixing bolt.

1. Ensure you have a damper spring tensioner tool kit before commencing this general procedure, PL 31.14 Item 7.
2. Ensure the machine is positioned in accordance with the minimum safe working space requirement, GP 21.
3. Ensure both the front castors are locked, PL 70.26 Item 3.
4. Remove the lower rear cover, PL 70.26 Item 1. This cover is utilized to support the left door assembly in the service position.
5. Remove the print cartridge, PL 90.17 Item 9, then place in a lightproof bag.
6. Identify the front and rear spring tensioner tools, Figure 1.

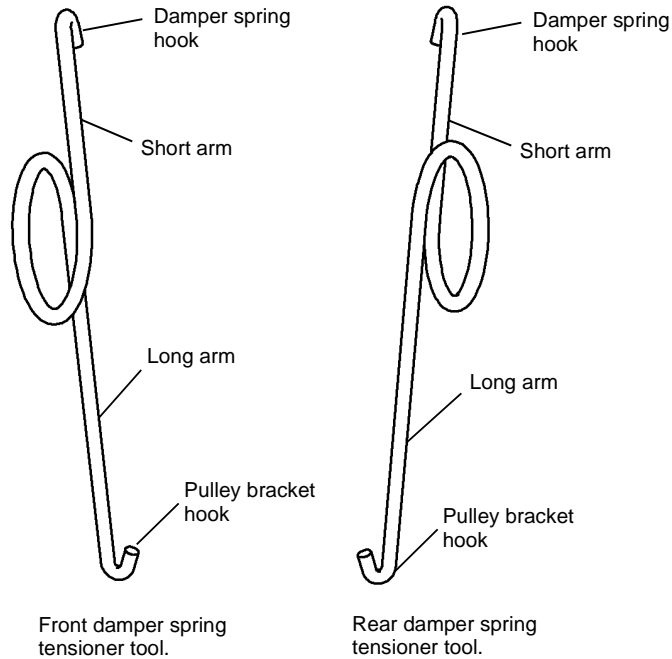
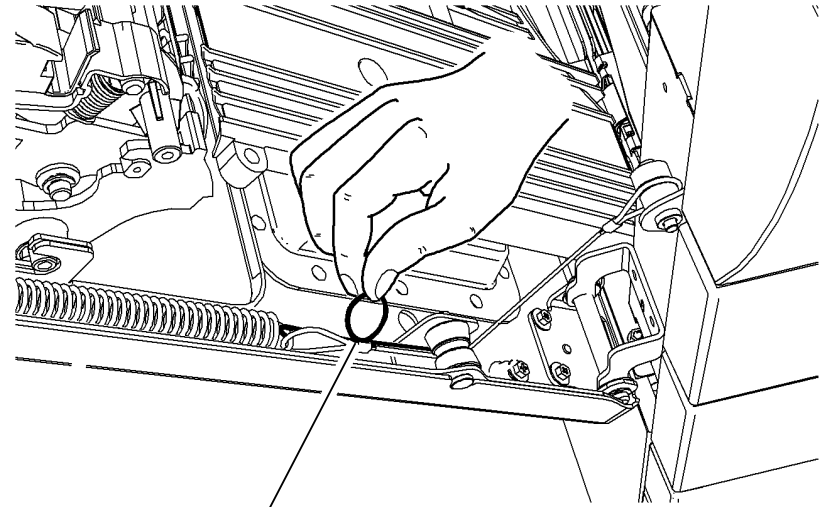


Figure 1 Tool identification

X-1-1371-A

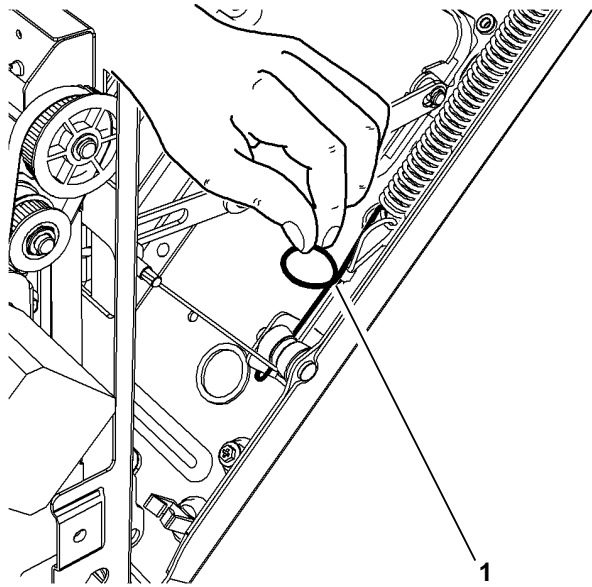
7. Install the front and rear damper spring tensioner tools. Hook the short arm of each tool to the bottom loop of the respective damper spring, then hook the long arm to the inner side of the pulley bracket, Figure 2 and Figure 3.



- 1 With the left door fully open install the front damper spring tensioner tool.

X-1-1335-A

Figure 2 Front damper spring tensioner tool

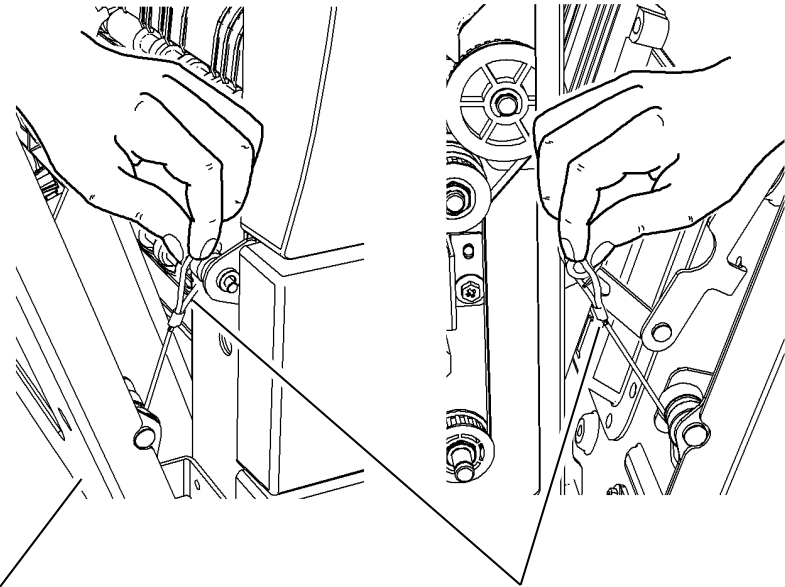


1
With the left door fully open install the rear damper spring tensioner tool.

X-1-1336-A

Figure 3 Rear damper spring tensioner tool

8. Release the front and rear damper cables, [Figure 4](#).



1
Partially close the left door, leaving just sufficient access to the looped ends of the front and rear damper cables.

2
Pull the damper cables off the front and rear anchor pulleys.

X-1-1341-A

Figure 4 Release the damper cables

- Position the left door assembly into the service position, [Figure 5](#).

1

Lower, then hold the left door assembly in a position to allow access to the door link assembly, with no load on the linkage itself.

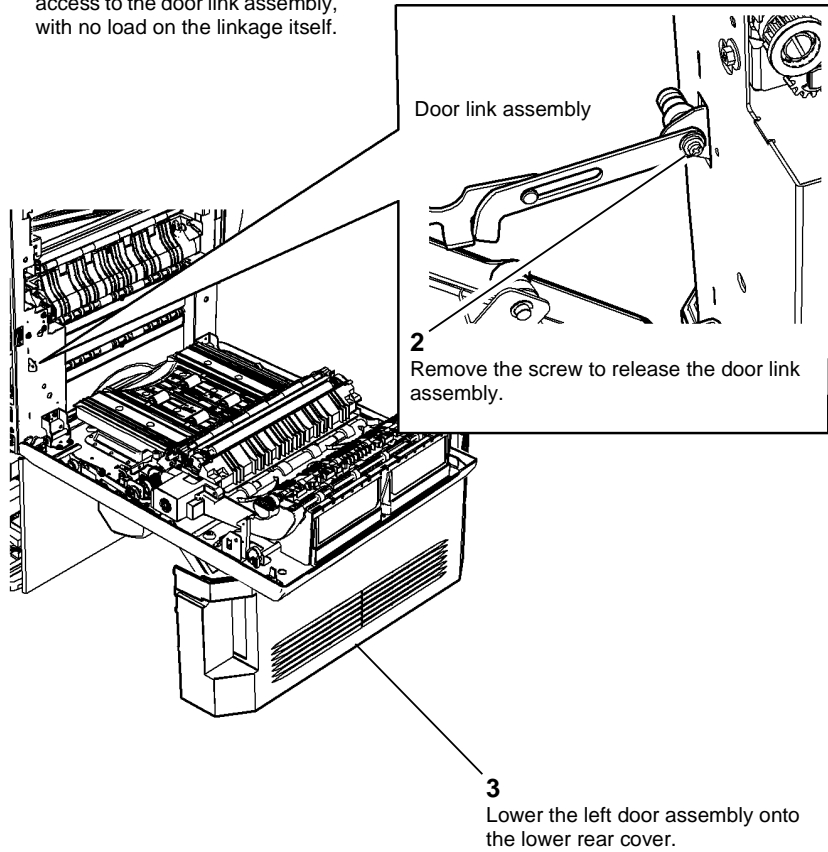


Figure 5 Left door service position

X-1-1343-A

Replacement

- The replacement is the reverse of the removal procedure.
- Ensure the front and rear damper cables are located in the grooves of their pulleys, [Figure 6](#).

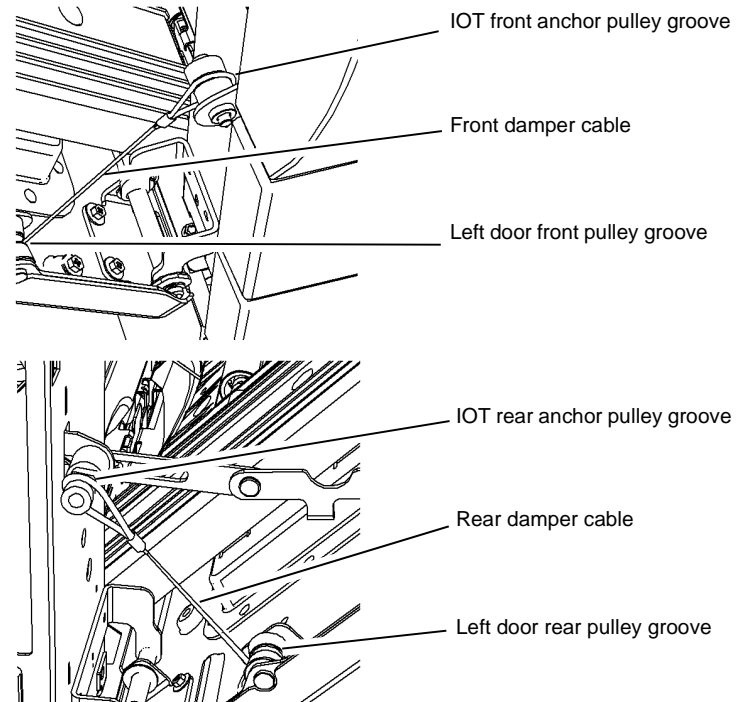


Figure 6 Pulley grooves

X-1-1344-A

GP 38 Obtaining Audit and Device Logs

Purpose

To obtain then download device data for analysis by 2nd level support.

NOTE: It may not be possible to obtain a device log if the device executed a reboot after an error occurred. To enable the device log collection enter dC131 then set the NVM chain-link code 700-530 value to 0. Repeat the device log procedure then reset the NVM chain-link code 700-530 value back to 1.

Three types of logs may be taken

- Network controller log
- Copy log
- IOT log

Logs may be saved in 3 ways.

- Over a network using the Web UI.
- At the machine using the local UI
- At the machine using the a USB pen drive

Obtaining Logs Using the Embedded Web Server

1. Open a web browser. Enter the machine's IP address in the web browser Address field, then click on the enter key. The machine's web page will open.
2. On the web UI log in as an administrator, refer to [GP 24](#).
3. At the top of the web browser select the **Properties** tab.
4. At the left side of the browser screen select **General Setup** then from the drop down menu select **Remote Services Setup**.
5. Scroll down the screen and select **Synchronize Now**.
6. The browser will show a progress screen until a green tick is displayed with the message "Communication with Xerox successful."
7. At the left side of the browser screen select **Network Logs**.
8. Select either of the following:
 - Download Files:
 - a. Select **Start Download**. A progress screen will display.
 - b. Select the button **Download File Now**.
 - c. Follow the instructions on the browser to select a location to save the file.
 - d. Select **Close**.
 - Send to Xerox:
 - a. Select **Send**.
 - b. Ensure the customer reads and understands the message about information security before selecting **OK**.
 - c. A progress screen will display until a green tick is displayed with the message "Diagnostic information successfully sent to Xerox."
 - d. Select **Close**.
9. Select **Admin Logout** before logging out of the web UI

Obtaining Logs Using the Local UI

1. At the machine UI login as an administrator, refer to [GP 24](#).
2. Select **Device**.
3. Scroll down to select **Tools**.
4. On the **Network Settings** tab scroll down to select **Network Logs**.
5. Insert a USB drive and select Download Log Files.

Obtaining Logs Using a USB Pen Drive

NOTE: This method allows log files to be obtained when the UI is not functional.

1. Obtain a folder called "AltaLinkLogs". This folder can be found on the GSN Library or from Level 2 Support. The folder should contain a file called AltaLinkLogs.dlm.
2. Copy the altalinklogs folder to the root folder of the USB drive.

NOTE: If the USB drive contains any of the following folders they should be disabled by renaming the folder.

- *altboot*
 - *upgrade*
3. Power down the machine.
 4. Insert the USB drive in the machine.
 5. Power on the machine.
 6. The UI will display a series of messages as the archive is copied and encrypted on the USB drive followed by a progress count. When instructed remove the USB drive from the machine.
 7. The UI will display a message to indicate that the machine is rebooting.

GP 39 Service Plans and Consumables

Purpose

To identify the different types of consumables and their compatibility.

See below for:

- [Service Plans](#)
- [Consumable Types](#)
- [Ordering Consumables](#)
- [How to Check the Service Plan](#)
- [How to Change the Service Plan](#)
- [First Toner Replacement](#)

See also [GP 9 Machine SIM Card Matrix](#).

Service Plans

Initial Service Plan

NOTE: All AltaLink B8090F machines are shipped in a neutral state. The ongoing service plan of the machine is determined when the first toner cartridge is replaced. Refer to [First Toner Replacement](#) for details.

The machine is in the factory shipped neutral state if the following details are true:

- Service plan **Metered**. Displayed on the config report.
- Fitted with a toner cartridge with OpCode = **Metered**.
- Toner Learning Mode = **Enabled**. NVM 505-28 1 is enabled for learning mode.

Service Plan Types

The service plan governs which consumables are compatible with the machine. Refer to the following for the combination of compatible consumables and machine settings. Installing a combination of consumables not shown will result in a fault.

- **Sold:**
 - This includes USSG, XCL & XIO.
 - The Xerox service plan **Sold** does not include the cost of consumables. Consumables are purchased by the end user.
 - May use any print cartridge. All print cartridges are designated **Sold**.
 - May use any fuser of the correct voltage, either 110V or 230V. All fusers are designated **Sold**.
 - May **ONLY** use toner cartridges designated **Sold** (from either USSG or XE).
- **DMO Sold (Developing Markets Overseas Sold):**
 - This includes (DMO-E/DMO-W) XIO.
 - The Xerox service plan **DMO Sold** (Developing Markets Overseas Sold) does not include the cost of consumables. Consumables are purchased by the end user.
 - May use any print cartridge. All print cartridges are designated **Sold**.
 - May use any 230V fuser. All fusers are designated **Sold**.
 - May **ONLY** use toner cartridges designated **DMO Sold**.
- **Metered (worldwide):**
 - This does not include PagePack.
 - The Xerox service plan **Metered** includes toner supplied as part of the service contract. Consumables other than toner are purchased separately.
 - May use any print cartridge. All print cartridges are designated **Sold**.
 - May use any fuser of the correct voltage, either 110V or 230V. All fusers are designated **Sold**.
 - May use toner cartridges designated **Sold** (from USSG or XE), **DMO Sold**, or **Metered (Worldwide)**.
- **PagePack**
 - This includes XIO
 - The same as **Metered** but has a predetermined duration. At the end of the duration the service plan reverts to another pre-set service plan such as **Sold**. The customer is then required to purchase supplies or renew the **PagePack** contract to obtain further supplies. PagePack is only available in the XE market.
- **3rd Party/Other**
 - The machine will accept 3rd party toner cartridges that are not fitted with a CRUM, non-Xerox and OEM supplied toner cartridge.
NOTE: There is no communication with the CRUM when the system is configured to 'other' (3rd party).
 - Allows the use of 3rd party consumables.

Consumable Types

There are three types of consumables:

- Print cartridge
 - One cartridge available as **Sold** for all service plans
- Toner cartridge
 - Available as **Sold** in USSG and XE regions
 - Available as **DMO Sold** in applicable DMO regions
 - Available as **Metered (Worldwide)** suitable for all service plans
- Fuser
 - 110V Available only as **Sold**
 - 230V Available only as **Sold**

Ordering Consumables

For consumables identification, part numbers and ordering, refer to [PL 26.11](#).

If an incompatibility problem occurs after first toner replacement, the customer may have received the wrong toner in a consumables order; either because the wrong part number was ordered, or the shipment did not match the order. In this case the customer should exchange the toner for the correct part.

If the wrong toner was installed at the [First Toner Replacement](#) after install then the Machine Service Plan will have been changed to match the Op Code for the toner cartridge. Refer to [How to Change the Service Plan](#).

How to Check the Service Plan

At the Machine UI

1. At the machine UI select the **device** icon.
2. Select **Informational Pages**.
3. Select **Configuration Report**.
4. Print a configuration report.
5. The service plan is shown on the configuration report under the General Setup heading. Refer to [Service Plan Types](#) for a full explanation of service plans.
6. To change the service plan refer to [How to Change the Service Plan](#).

At the Web UI

1. Enter the machine IP address from the configuration report.
2. On the Welcome screen scroll to the bottom and select **Configuration Report**.
3. The screen displays the configuration report in alphabetical order. Select General Setup.
4. The service plan is shown in the list. Refer to [Service Plan Types](#) for a full explanation of service plans.
5. To change the service plan refer to [How to Change the Service Plan](#).

How to Change the Service Plan

NOTE: Depending on the service plan being converted different process are required. Each process requires a code. Refer to [How to Get the Code](#).

- To convert from Sold to Metered or Metered to Sold use Plan Conversion Code
- To convert from Sold to PagePack or Page Pack to Sold use a Supplies Plan Activation Code.

- [How To Change the Service Plan from the Machine UI](#).
- [How to Change the Service Plan from the Web UI](#)

See also:

- [dC136](#).
- [dC137](#).

How to Get the Code

1. Login as Admin, refer to [GP 24](#).
2. At machine UI select the **Device** icon.
3. Select **Tools**.
4. On the **Device Settings** tab scroll down and select **Supplies**.
5. Select **Enter Plan Conversion**. Make a note of the device serial number, current service plan and the total impressions.
 - a. Call the Xerox Service Centre Give the Device Serial Number and Total Impressions.

NOTE: depending on the local organization refer to the following:

- Contact the relevant OPCO:
 - DMO - Follow the local process.
 - US - Call Xerox Corporate Licensing Systems (XDSS) directly on 1-800-890-3260 or 1-800-635-8054 prompt 8 (license strings) for toner conversions. Provide the machine serial number and the number of total impressions.
 - GIS - All requests for such conversions must be approved by the GIS Headquarter VP of Service. Technicians should request that their field service manager contact their GIS Company VP of Service for directions. The GIS Core Company VP of Service will require authorization to convert the machine from sold to metered and provide a status of your request. Do not call field engineering to obtain a service plan conversion pin code.
 - USCU- Call PageConnect at 1-888-892-6483 or send an email to page-connectprogram@xerox.com requesting a pin code. Provide the machine serial number and the total number of impressions.
 - XCL - Call the Customer Delivery Organization (CDO) field support number 1-800-647-1331 prompt 8 (license strings) for a toner conversion PIN. Provide the machine serial number and the total number of impressions.
 - XE- Contact office.europe.page.pack.pin@xerox.com

6. A 6 character pin code will be provided.

NOTE: The plan conversion pin code is valid for approximately 500 additional impressions after being generated.

How To Change the Service Plan from the Machine UI.

NOTE: This procedure describes Plan Conversion and Supplies Plan Activation Code

1. From the Home screen select the **Device** icon.
2. Select **Tools**.
3. Select **Supplies**.
4. The Supplies screen displays the options:

NOTE: If only Supplies Plan Activation Code is visible it may be necessary to log in as Admin, [GP 24](#).

- **Enter Supplies Plan Activation Code** - used to convert from Sold to PagePack or PagePack to Sold
Enter the code. The entry screen will display an OK button when a valid 6 digit code has been entered. Select OK.

NOTE: If converting from Metered to Sold or PagePack to Sold an appropriate Sold toner cartridge must be installed immediately after the conversion process or the machine will display an incompatible toner message.

- **Enter Plan Conversion** - to convert from Sold to Metered or Metered to Sold
Enter the code. The entry screen will display an OK button when a valid 6 digit code has been entered. Select OK.
The Service Plan screen will display again. Select **Change Service Plan**.

5. Confirm the service plan is correct by printing a configuration report via **Home > Device > Information Pages**.

How to Change the Service Plan from the Web UI

NOTE: This procedure applies to **Supplies Plan Activation Code** only. Plan Conversion Code should be performed at the Machine UI.

1. Print a configuration report to identify the machine's IP address. Enter the IP address into the address bar of the web browser.
2. Select the **Properties** tab.
3. From the list on the left side select **General Setup**.
4. From the dropdown list select **Supplies Plan Activation Code**.
5. Enter the 6 character pin code and select **Apply**.

NOTE: If converting from Metered to Sold or PagePack to Sold an appropriate Sold toner cartridge must be installed immediately after the conversion process or the machine will display an incompatible toner message.

6. Confirm the service plan is correct by printing a configuration report via **Home > Device > Information Pages**.

First Toner Replacement



CAUTION

FIRST TONER REPLACEMENT - All AltaLink® B8090F machines dispatched from all manufacturing centres are configured with service plan 'Metered'. At the point of installation of the first replacement toner cartridge the machine adopts the service plan from the replacement toner cartridge being installed.

The replacement toner cartridge that is installed must be the correct type for the intended service plan. Installing the incorrect toner cartridge at first replacement will affect the service plan of the machine and may result in incompatibilities.

The machine service plan will change at first swap only if:

- the machine service plan has not changed and is still **Metered**.
- Toner Learning Mode is still enabled.

NOTE: Toner Learning Mode is always changed to disabled when the first replacement is made. If the first replacement toner cartridge is Metered the service plan will be locked as Metered.

PagePack - details

- PagePack is a method that manages a contract length via entry of a 6 digit PIN. In Europe, every machine is supplied with a SIM card that activates PagePack. At install or within 1000 sheets of install the PagePack PIN must be entered that governs the contract period (e.g. 1 year, 2 years, 6 months, 0 months etc) and also sets the machine service plan when the contract period expires (ie Sold, DMO Sold etc) The PagePack PIN is a 6 digit number that contains a contract length, and expiry service plan together with a sequence number. PagePack numbers must be entered in sequence with a matching sequence number to stop previous PagePack numbers from being used again.

For example, a European machine may be purchased with a 2 year PagePack supply and support contract. At the end of the 2 year period, the machine service plan reverts to DMO sold

- At install, if PagePack is enabled, a valid Page Pack PIN number must be entered before a page count of 1000 is reached. If the page count reaches 1000 before the PIN number is entered, the machine will stop operating, until a valid PagePack number is entered.
- A PagePack PIN can be entered at any time, even part way through an existing contract.
- If an incorrect PIN is entered 3 times, the machine will lock out PIN entry for 24 hours. After 24 hours, another 3 attempts to enter the PIN can be made.

GP 40 Glossary of Terms, Acronyms and Abbreviations

Where possible unit designations as appear in ISO 1000 (International Organization for Standardization) and Xerox Standard MN2-905 have been used. All measurements appear in ISO units followed by any conversion in brackets e.g.; 22.5mm (0.885 inches)

Refer to [Table 1](#).

Table 1 Abbreviations

Term	Description
AAA	Authentication, Authorisation and Accounting
ABS	Automatic Background Suppression.
AC	Alternating Current
ACAST	Anti Counterfeiting Activities Support/Strategy Team
ACL	Alternating Current Live
ACN	Alternating Current Neutral
AGC	Automatic Gain Control
AHA	Advanced Hardware Architecture
ANSAM	Answer Tone, Amplitude Modulated
APS	Auto Paper Selection
ARP	Address Resolution Protocol. Converts an IP address to a MAC address. See RARP.
ASIC	Application Specific Integrated Circuit
B	Bels (applies to sound power level units)
Binding	Part of the communication between modules.
BM	Booklet Maker
BootP	Boot Protocol. AN IP protocol for automatically assigning IP addresses.
BPS	Bits Per Second
BS	Behavior Specification
BT	Busy Tone
BCR	Bias Charge Roll
BTR	Bias Transfer Roll
C	Celsius
CAT	Customer Admin Tool
CBC	Customer Business Center
CCD	Charged Coupled Device
CCM	Copy Controller Module
CCS	Copy Controller Service
CIPS	Common Image Path Software
CIS	Contact Image Sensor
CL	Copy Lighter. A copy density setting
CQ	Copy Quality
CRC	Cyclic Redundancy Check
CRU	Customer Replaceable Unit

Table 1 Abbreviations

Term	Description
CRUM	Customer Replaceable Unit Monitor
CSE	Customer Service Engineer
CVT	Constant Velocity Transport
CWIS	CentreWare Internet Services (also known as Web UI) The new term for this is Embedded Web Server.
dB	Decibel (applies to sound pressure level units)
dC	Diagnostic code
DC	Device Controller, generic term for any module that acts as a image handling device e.g., SIP. Digital Copier
DC	Direct Current
DCN	Disconnect
DCS	Digital Command Signal
DDNS	Dynamic Domain Name System
DH	Document Handler
DHCP	Dynamic Host Config Protocol (similar to BootP)
DIMM	Dual In-line Memory Module
DIP	Dual In-line Package (switch)
DIS	Digital Identification Signal
DLM	Dynamically Loadable Module
DM	Document Manager
DMA	Direct Memory Access
DMO	Developing Markets Operations
DMO-E	Developing Markets Operations East
DMO-W	Developing Markets Operations West
DPI	Dots per inch
DRAM	Dynamic Random Access Memory
DST	Daylight Saving Time
DT	Dial Tone
DTMF	Dual Tone Multiple Frequency
DTS	Detack Saw
Dust Off	Routine to return machine to pre-install state
DVMA	Direct Virtual Memory Access
EH&S	Environmental Health and Safety
EJS	Easy Java Simulation
ELT	Extract, Load, Transform
Embedded Fax	A fax system included in a system device
EMC	Electromagnetic Compatibility
EME	Electromagnetic Emission
ENS	Event Notification Service. Used by a software module to alert another module of an event.
EOM	End Of Message

Table 1 Abbreviations

Term	Description
EOP	End Of Procedure
EOR	End Of Retransmission
EPA	Environmental Protection Agency
EPC	Electronic Page Collation (memory dedicated to temporary retention of images captured from the scanner and network controller)
EPROM	Erasable / Programmable Read Only Memory
ERR	End Retransmission Response
ERU	Engineer Replaceable Unit
ESD	Electrostatic Discharge
ESS	Electronic Sub-System (equivalent to NC)
EU	European Union
EUR	Europe
EWS	Embedded Web Server, formerly known as CentreWare Internet Services (also known as Web UI).
FAR	Fully Active Retard feeder
Fax	Facsimile
FCOT	First Copy Out Time
FDI	Foreign Device Interface
FIFO	First In First Out
Firmware	Software in a ROM
FLASH	On board erasable and re-programmable non volatile memory
FOIP	Fax Over Internet Protocol
FPGA	Field Programmable Gate Array
FPOT	First Print Out Time
FRU	Field Replaceable Unit
FRU	Fuser Replacement Unit
FTP	File Transfer Protocol
FX	Fuji Xerox
G3	Group 3
GMT	Greenwich Mean Time
GND	Ground
GSM	Grams per square metre
GUI	Graphical User Interface
HCF	High Capacity Feeder
HDD	Hard Disk Drive
HFSI	High Frequency Service Intervals
HTTP	Hyper Text Transfer Protocol
HVPS	High Voltage Power Supply
Hz	Hertz
I/O	Input/Output

Table 1 Abbreviations

Term	Description
I2C-bus	Inter Integrated Circuit bus. This provides a simple bidirectional 2-wire bus for efficient inter-IC control. All I2C-bus compatible devices incorporate an interface which allows them to communicate directly with each other via the I2C-bus.
ID	Identification
IDG	Inter document gap
IFax	Internet Fax
IIT	Image Input Terminal
Intlk	Interlock
ioctl	input/output control
IOT	Image Output Terminal
IP	Internet Protocol
IPA	Image Processing Accelerator. Used by the machine scanning services to convert scanned images to a standard format e.g. for scan to file / scan to E-mail for network transmission.
IPS	Image Processing Service
IPSec	Internet Protocol Security
IPX	Internetwork Protocol eXchange
IQ	Image Quality
IQS	Image Quality Specification
IR	Intelligent Ready
ISDN	Integrated Services Digital Network / International Standard Data Network
ISO	International Standards Organization
ITP	Internal Test Pattern
JBA	Job Based Accounting (Network Accounting)
JIS	Japanese Industrial Standards
kg	kilogram
kHz	kilohertz
Kill All	Routine to return all NVM, including protected NVM, to a virgin state. Factory use only
KO	Key Operator
LAN	Local Area Network
LCD	Liquid Crystal Display
LCSS	Low Capacity Stapler Stacker
LDAP	Lightweight Directory Access Protocol (allows sharing of corporate phone book information)
LE	Lead edge
LED	Light Emitting Diode
LEF	Long Edge Feed
LOA	Load Object Attributes
LPD	Line Printer Daemon

Table 1 Abbreviations

Term	Description
LPH	LED Print Head. An LED array in close proximity to and the same width as the photoreceptor. Individual LEDs are switched on/off to develop the image on the xerographic drum.
lpi	Lines per inch
LVF BM	Low Volume Finisher Booklet maker
LVDS	Low Voltage Differential Signal
LVPS	Low Voltage Power Supply
LUI	Local user Interface
m	metre
MAC Address	Media Access Code. This is the basic, unique identifier of a networked device. An incoming message is analyzed and an address in another form, such as an IP address, is resolved by a lookup table to a MAC address. The message is then directed to, and accepted by the equipment thus identified. It is the burnt-in, hardware address of a NIC.
Mark Service	Mark Service is the software module that tells the hardware to put toner on paper.
MB	Megabyte (one MB = 1,048,576 bytes = 1024 kilobytes). Mail Box
Mb	Mega bit (one million bits)
MCF	Message Confirmation
MF	Multifunction
mm	millimeter
Modem	MOdulator/DEModulator. Hardware unit that converts the 'one' and 'zero' binary values from the computer to 2 frequencies for transmission over the public telephone network (modulation). It also converts the 2 frequencies received from the telephone network to the binary values for the computer (demodulation).
Moire	Image quality defect caused by interference between patterned originals and the digital imaging process. Moire patterns are repetitive and visible as bands, plaids or other texture.
MSG	Management Steering Group
ms	millisecond
N	Newton
NA	North America
NC	Network Controller (equivalent to ESS)
NC	Normal Contrast. Copy contrast setting
NCR	No Copying Required
NetBIOS	Network Basic Input / Output System. Software developed by IBM that provides the interface between the PC operating system, the I/O bus, and the network. Since its design, NetBIOS has become a de facto standard.
Nm	Newton metre
NOHAD	Noise, Ozone, Heat, Airflow and Dust
NTP	Network Time Protocol

Table 1 Abbreviations

Term	Description
NVM	Non-Volatile Memory
OA	Open Architecture
ODIO	On Demand Image Overwrite
OEM	Original Equipment Manufacturer
OpCo	Operating Company
OS	Operating System
P/R	Photoreceptor
PABX	Private Automatic Branch Exchange
PC	Personal Computer
PC Fax	Personal Computer Fax
PCI	Peripheral Component Interface
PCL	Printer Control Language
PDF	Adobe Acrobat Portable Document Format
PFM	Paper Feed Module
PIN	Procedural Interrupt Negative
PIN	Personal Identification Number
ping	Packet InterNet Groper. Tool to test connections between nodes by sending and returning test data.
PME	Power Management Event
POPO	Power Off Power On
POO or P of O	Principles of Operation
POST	Power On Self Test
POTS	Plain Old Telephone System
PPM	Prints per minute / Parts Per Million
PR	Photo-Receptor
Process Death	A process has stopped working.
PS	Post Script
PS	Power Supply
PSTN	Private Switched Telephone Network
PSW	Portable Service Workstation
Pthread	Process Thread. A very low level operating system concept for code execution.
PWB	Printed Wiring Board
PWBA	Printed Wiring Board Assembly
PWM	Pulse-Width Modulation
PWS	Portable Work Station
RAM	Random Access Memory
RARP	Reverse Address Resolution. Reverse of ARP. Converts a MAC address to an IP address. The document centre resolves its address using RARP. See also MAC, NIC and ARP.
RDT	Remote Data Transfer

Table 1 Abbreviations

Term	Description
Reg	Registration
Registration Service	Monitors when RPC services go on and offline.
RF	Radio Frequency
RFID	Radio Frequency Identification
RPC	Remote Procedure Call. How the device communicates internally between software modules.
RH	Relative humidity
RMS	Root Mean Square (AC effective voltage)
RNR	Receive Not Ready
RoHS	Restriction of Hazardous Substances
ROM	Read Only Memory
RR	Receive Ready
RS-232, RS-423, RS-422, RS-485	Series of standards for serial communication of data by wire. RS-232 operates at 20kbits/s, RS-423 operates at 100kbits/s, RS-422 and RS-485 operate at 10Mbits/s. See FireWire and USB.
RTC	Real Time Clock
Rx	Receive
S2F	Scan-to-File
SA	Systems Administration
SAKO	Systems Administration Key Operator
SAR	Semi-Active Retard feeder
SBC	Single board controller. Copy, print and UI controllers all on one PWB within the image processing module.
SCD	Software Compatibility Database
SD	Secure Digital, memory card format
Server Fax	A fax system that uses a remote Fax server. Faxes transmit as a Scan to File job sent to the server. Fax receive as print jobs submitted to the Connection Device.
SEF	Short Edge Feed
Semaphore	A variable or abstract data type.
SESS	Strategic Electronic Sub-System
SH	Staple Head
SIM	Subscriber Identity Module (also known as a SOK-Software Option Key)
SIM	Scanner Input Module
SIP	Scanning and Image Processing
SIR	Standard Image Reference
SLP	Service Location Protocol (finds servers)
SM	Scheduled Maintenance
SMART	Systematic Material Acquisition Release Technique
SMB	Server Message Block. Microsoft Server / Client Communications protocol

Table 1 Abbreviations

Term	Description
SMP	Service Maintenance Pack (contains a software package)
SNMP	Simple Network Management Protocol
Snr	Sensor
SOK	Software Option Key (also known as a SOIM-Subscriber Identity Module)
SPAR	Software Problem Action Request
SPDH	Single Pass Document Handler
spi	Spots per inch
SPI	Service Provider Interface. Steps to process a job.
SR	Service Representative
SRS	Service Registry Service
SS or S/S	Sub System
SSDP	Simple Service Discovery Protocol
SSID	Service Set Identifier (wireless network name)
SU	Staple Unit
SW	Switch
SW or S/W	Software
sync	synchronize
TAR	Take Away Roll
TAR or tar	An archive file format, derived from Tape ARchive
TBC	To Be Confirmed
TBD	To Be Defined
TC	Toner Concentration
TCF	Training Check Field
TCO	Thermal Cutout
TCP/IP	Transmission Control Protocol/Internet Protocol
TE	Trail Edge
Template	A collection of Scan to File attributes that can be conveniently re-used.
TIFF	Tagged Image File Format
TP	Test Point
TRC	Toner Reproduction Curve
TTY	Teletype Terminal
Tx	Transmit
UART	Universal Asynchronous Receiver Transmitter
U-boot	Universal Boot Loader
UI	User Interface (display screen)
UK	United Kingdom
UM	Unscheduled Maintenance
USB	Universal Serial Bus. High speed successor to parallel port for local device communications. Operates at 12Mbits/s. See FireWire and RS-232.
USCO	United States Customer Operations

Table 1 Abbreviations

Term	Description
USSG	United States Solutions Group
V.17 / V.29 / V.34	Modem standards
VOIP	Voice Over Internet Protocol
WC	WorkCentre
WEB UI	Web User Interface. This is an internal Xerox term. The formal term used in customer documentation is Embedded Web Server. This was formally known as CentreWare Internet Services.
XCL	Xerox Canada Limited
XE	Xerox Europe
XEIP	Xerox Extensible Interface Platform
XLA	Xerox Latin America
XML	eXtensible Markup Language
XPS	XML Paper Specification (printing format)
XRU	Xerographic Replacement Unit
XSA	Xerox Standard Accounting

GP 41 Reporting Usage Counter Resets

Purpose

To describe how to report any resets to the usage counters (billing meters).

USSG Procedure

The CSE is required to call in usage counter reads to one of the Customer Business Centers that follow when a machine's usage counters have been reset:

- Chicago CBC: 1-888-771-5225 (7am - 7pm Central Time). Choose option 4 - (All other administrative Inquiries).
- St. Petersburg CBC: 1-888-435-6333 (8am - 8pm Eastern Standard Time). Choose option 4 - (If you have questions regarding your invoice or account).
- Dallas CBC: 1-888-339-7887 (7am - 6pm Central Time). Choose option 4 - (If you have questions regarding your invoice or account).

The Customer Business Centers will require the information that follows:

- CSE / analyst / service agent name and employee number
- 9 digit equipment serial number.
- Old usage counter reads and date.
- New usage counter reads and date.

All Other Countries Procedure

In all other countries the CSE should follow the local procedure to report usage counter resets.

GP 42 How to Disable the Toner Cartridge CRUM RFID Reader

Purpose

To disable the RFID functionality of the toner cartridge CRUM, then remove the toner cartridge PWB and associated wiring. This is a requirement in high security environments where RFID readers are not permitted.

Procedure

1. Contact your regions Hardware Level 2 Technical Support Center to obtain a Feature Installation Key.
2. Select the **Device** icon.
3. Scroll down and select **Tools**.
4. Select **General**.
5. Select **Feature Installation**.
6. Enter the Feature Installation Key.
7. Switch off the machine, [GP 14](#).
8. Remove the relevant component:
 - Horizontal transport assembly, [PL 10.15 Item 1](#).
 - Centre output tray, [PL 10.17 Item 1](#).
9. Remove the inner machine cover, [REP 28.3](#).
10. Un-clip the toner cartridge PWB cover, [PL 90.17 Item 11](#).
11. Disconnect the harness from the toner cartridge PWB, [PL 90.17 Item 12](#). Remove the toner cartridge PWB.
12. Disconnect PJ782 from the [IOT PWB](#).

NOTE: The toner cartridge PWB harness should remain in the machine for possible future use.

13. Re-install the toner cartridge PWB cover.
14. Re-install either the horizontal transport assembly or the centre output tray.
15. Locate the processor module Mod/Tag plate. Strike off [TAG 013](#).
16. Switch on the machine, [GP 14](#).

GP 43 Billing Impression Mode

Purpose

To explain Billing Impression Mode

Overview

AltaLink® B8090F devices can be ordered with the option to bill customers two meter clicks for oversized media using Billing Impression Mode 'A4 Impressions'. Sales will order the equipment using a market code to determine if Billing Impression Mode is 'A3 Impressions' or 'A4 Impressions'

What is considered oversized and how do the meter's work?

If Billing Impression Mode is set for 'A4 Impressions', any media over 145 square inches will bill 2 meter clicks. Example $8.5 \times 14 = 119$ square inches so it will always be billed 1 click. $11 \times 17 = 187$ square inches (bigger than 145 square inches), so if machine is setup for BIM 'A4 Impressions' 11×17 would bill as 2 meter clicks.

How to Check Billing Impressions Mode from the User Interface

1. Select the **Device** icon
2. Select **Tools**.
3. Select **General**.
4. Select **Billing Impression Mode** to see the current setting.

How to Check Billing Impressions Mode from the Web UI

1. On the customer's workstation, open the web browser. Enter the machine's IP address in the web browser Address field. Click on the enter key. The machine web page will open.

NOTE: Refer to the configuration report for the machine's IP address.

2. Select the **Support** icon.
3. Select the **Billing Impression Mode** link.
4. The Billing Impression Mode is displayed.

How to change the Billing Impression Mode

NOTE: The sequence number and the device serial number is required to obtain a new BIM PIN code.

NOTE: Billing Impression Mode can only be changed if it does not match the customer contract. If the customer disagrees, they should contact their Sales Representative to discuss their contract.

If the Billing Impression Mode May Have Been Set Wrong

Call the appropriate support organization to verify the customer's contract. The support organization will need the device's Serial number and the current Sequence number. If the device does not match the customer's contract, the support organization can generate a PIN code to correct the BIM. Refer to the appropriate region.

- USEU/XCL/USCU = XDSS Licensing Hotline at 1-800-890-3260
- GIS = Contact your Service Manager
- XE/DMO - Have the customer contact their Sales Representative

Once a support organization has generated a PIN code, they can provide it over the phone, via email, or it can be found on Xerox Software Activation Portal:

[<https://www.xeroxlicensing.xerox.com/fik/>]

Once a 6-digit PIN code has been obtained, it can be entered via the Control Panel UI or the Web UI

To Enter a BIM PIN Code Via the Control Panel UI.

1. Select the **Device** icon.
2. Select **Tools**.
3. Select **General**.
4. Select **Impression Mode**.
5. Enter the 6-digit PIN code.
6. Select **OK**.
7. Verify that the Billing Impression Mode has been changed and now matches the contract

To Enter a BIM PIN Code Via the WEB UI.

1. On the customer's workstation, open the web browser. Enter the machine's IP address in the web browser Address field. Click on the enter key. The machine web page will open.

NOTE: Refer to the configuration report for the machine's IP address.

2. Select the **Support** icon.
3. Select the **Billing Impression Mode** link.
4. Enter the PIN and select **Apply** to authorize the change.
5. Verify that the Billing Impression Mode has been changed and now matches the contract

GP 44 How to Procure a New SIM Card

Purpose

To provide information about the process to follow when a SIM card is needed for a replacement configuration.

Initialization Kit Part Numbers

Either of the following conditions may apply.

- During machine installation the machine does not recognize the SIM card
- The machine displays a fault code or message that requires a new SIM card.

NOTE: Due to control of machine speed, SIM cards will not be supported in spares as a standard spare part.

Refer to [Table 1](#) for part numbers for kits.

Table 1 AltaLink® B8090F Initialization Kits

Initialization Kit	Part Number	OPCO
Initialization kit B8045 - BIM (double click) Speed only 8.5 x 11	097S04858	XC
Initialization kit B8055 - BIM (double click) Speed only 8.5 x 11	097S04859	XC
Initialization kit B8065 - BIM (double click) Speed only 8.5 x 11	097S04865	XC
Initialization kit B8075 - BIM (double click) Speed only 8.5 x 11	097S04866	XC
Initialization kit B8090 - BIM (double click) Speed only 8.5 x 11	097S04871	XC
Initialization kit B8045 - Single Click - Speed only SIM 8.5 x 11	097S04860	XC & DMO-W
Initialization kit B8055 - Single Click - Speed only SIM 8.5 x 11	097S04861	XC & DMO-W
Initialization kit B8065 - Single Click - Speed only SIM 8.5 x 11	097S04867	XC & DMO-W
Initialization kit B8075 - Single Click - Speed only SIM 8.5 x 11	097S04868	XC & DMO-W
Initialization kit B8090 - Single Click - Speed only SIM 8.5 x 11	097S04872	XC & DMO-W
Initialization kit B8045 A4 PAGE PACK - BIM (Double Click)	097S04856	XE
Initialization kit B8055 A4 PAGE PACK - BIM (Double Click)	097S04857	XE
Initialization kit B8065 A4 PAGE PACK - BIM (Double Click)	097S04864	XE
Initialization kit B8075 A4 PAGE PACK - BIM (Double Click)	097S04870	XE
Initialization kit B8090 A4 PAGE PACK - BIM (Double Click)	097S04873	XE
Initialization kit B8045 (Speed only Single Click A4)	097S04854	DMO-E
Initialization kit B8055 (Speed only Single Click A4)	097S04855	DMO-E
Initialization kit B8065 (Speed only Single Click A4)	097S04862	DMO-E
Initialization kit B8075 (Speed only Single Click A4)	097S04863	DMO-E
Initialization kit B8090 (Speed only Single Click A4)	097S04869	DMO-E

NOTE: The SIM card is supplied as part of the Initialization Kits, Speed Badge, CDs, Customer Documentation and Install Instructions.

Procedure

Refer to [Table 1](#) for the initialization kit part number. Refer to the direction for relevant directions OPCO

- **USEU:** The SIM card is part of the Product Coded Initialization Kit and must be ordered using the DOA (Dead on Arrival) or IDR (Identical Replacement) tools.
 - If a replacement is needed at the time of install and the equipment has not been recorded as installed yet, use the DOA tool to order the Initialization Kit accessory only. The DOA should be requested to be shipped via air to ensure timely delivery.
 - If the SIM card is needed after the machine has been recorded as installed, use the IDR process to obtain a new SIM CARD. The IDR should be requested to be shipped via air to ensure timely delivery.
- **USCU:**
 - US Authorized Service Provider: Please use this link to order a SIM card:
[\[https://www.office.xerox.com/partners/productreplacementform/index.cfm\]](https://www.office.xerox.com/partners/productreplacementform/index.cfm)
 - In the Box **Description of technical problem and any steps taken to resolve**, enter, **SIM card request**.
 - In the Box **Options**, enter **SIM card only**.
 - Under **Reason for Return**, select **Other** and enter **SIM Card only** in the comments section.
- **GIS:** Replacement SIM card for GIS Field Service should be ordered as product coded Initialization Kit via the standard Returned Goods Equipment Spares Consumables GIS Process Guide (Version 2011.05.16).
- **DMOW:** Log a complaint request in the system PNP. ISC STW (Integrated Supply Chain Service Team West) will handle the complaint and arrange shipment.
- **DMOE:** Log a complaint in the system PNP. ISC STE (Integrated Supply Chain Service Team East) will handle the complaint and arrange shipment.
- **XCL:** For the SIM card replacement process, please contact the Local OTI Delivery Analyst.
- **XE:** For SIM card replacements, follow the standard product replacement process (DOA/TEX) for the relevant part number

dC104 Usage Counters

Purpose

To display the various usage counters.

Procedure

1. Enter service mode, GP 1.
2. Select the Service Info tab.
3. Select dC104 Usage Counters.
4. Select the relevant counters from the pull down menu.
5. Select Close to exit the routine.
6. Select Call Closeout.
7. Select Exit and Reboot.

dC108 Software Version

Purpose

To identify the version of the installed software on all major modules.

Procedure

1. Enter service mode, GP 1.
2. Select the Service Info tab.
3. Select dC108 Software Versions.
The dC108 Software Versions screen will display the software and version numbers installed on the machine.
4. Select Close to exit the routine.
5. Select Call Closeout.
6. Select Exit and Reboot.

dC120 Fault Counters

Purpose

To view the faults raised by the machine. dC120 Fault Counters records the number of occurrences of a fault, allows the counters to be sorted by occurrences and allows a specific fault to be found by chain.

Procedure

1. Enter service mode, [GP 1](#).
2. Select the Service Info tab.
3. Select dC120 Fault Counters.

NOTE: *There will be a delay while the machine retrieves the fault counter data.*

4. A list of faults that have occurred on the machine is displayed.
 - The list can be sorted by number of occurrences and to include zero occurrences. Selecting these options will resort the list upon selection.

NOTE: *When selecting Include Zero Occurrences, there may be a delay as the list is reconfigured.*

- The list can be sorted by chain.
 - a. Select the chain field.
 - b. Enter a 3 digit chain number using the numeric keypad.
 - c. Select Find.
5. Select Close to exit the routine.
 6. Select Call Closeout.
 7. Select Exit and Reboot.

dC122 Fault History

Purpose

To view shutdown faults in chronological order and in more detail than is shown in [dC120](#) Fault Counters.

Procedure

1. Enter service mode, [GP 1](#).
2. Select the Service Info tab.
3. Select dC122 Fault History.
4. The dC122 Fault History screen is displayed with the last 40 faults shown in chronological order. The most recent fault is at the top of the list.
5. To observe the details of the fault, select the fault and select Details on the pop-up window. Select Close to return to the fault table.
6. Select Close to exit the routine.
7. Select Call Closeout.
8. Select Exit and Reboot.

dC131 NVM Read/Write

Purpose

To review and modify values within the machine configuration and control parameters stored in NVM.

NOTE: This does not include customer administration or accounting data, these are accessible from the billing and auditor facilities. Refer to the User Guide.

Description

Each NVM item is identified using an NVM ID and NVM index numbers in the form XXX-XXX, where XXX- is the ID prefix, and -XXX is the NVM ID. Index numbers range from 0 to 999. For example 610-001. Refer to [GP 2 Fault Codes and History Files](#).

Procedure

1. Save the NVM to disk. Refer to NVM Save and Restore, [dC361](#).
2. Enter service mode, [GP 1](#).
3. Select the Adjustments tab.
4. Select dC131 NVM Read/Write.
 - To read NVM:
 1. Enter the required 3 digit NVM ID in the first field.
 2. Enter the NVM Index in the second field.
 3. Select Read.
 4. Use the Up/Down arrows to move between memory locations.
 - To write NVM:
 1. Enter the required 3 digit NVM ID in the first field.
 2. Enter the NVM Index in the second field.
 3. Enter a new value in the field beneath the heading 'Value of xxxx' where xxxx is the description of the NVM location.

NOTE: Select +/- to switch between positive and negative values.
 4. Select write.
 5. Select Close to exit the routine.
 6. Select Call Closeout.
 7. Select Exit and Reboot.

Refer to the tables that follow for NVM locations and parameters:

NOTE: The Edoc CD must be in the CD drive to use the link below.

- NVM Tables for the Finisher, IIT, CCS and IOT, refer to the [\[IOT NVM Document\]](#).
- For the fax NVM tables, refer to the [\[Fax NVM Document\]](#).

NOTE: If the NVM default characters exceed 10 characters, only the first 8 characters are displayed in the list. The full string is displayed in the Read/Write window.

NOTE: Selecting Reset will cause the selected NVM location to be reset to its default value. Selecting Cancel closes the window and cancels any changes made in the now closed window.

NOTE: NVM that contains customer administrative or accounting data can not be read or modified.

NOTE: The Read Only (protected) NVM can only be changed using a password obtained from Xerox. Protected NVM cannot be reset from [dC132](#) NVM initialisation.

dC132 Serial Number

Purpose

To restore the machine serial number.

Procedure

1. Enter service mode, [GP 1](#).
2. Select the Maintenance tab.
3. Select dC132 Machine Serial Number.
4. The machine identifier code (serial number) or '#####' is displayed.
5. If the displayed serial number does not match the number on the serial number label ([Figure 1](#)) or '#####' is displayed, the serial number is corrupt. Perform [Serial Number Restore](#).

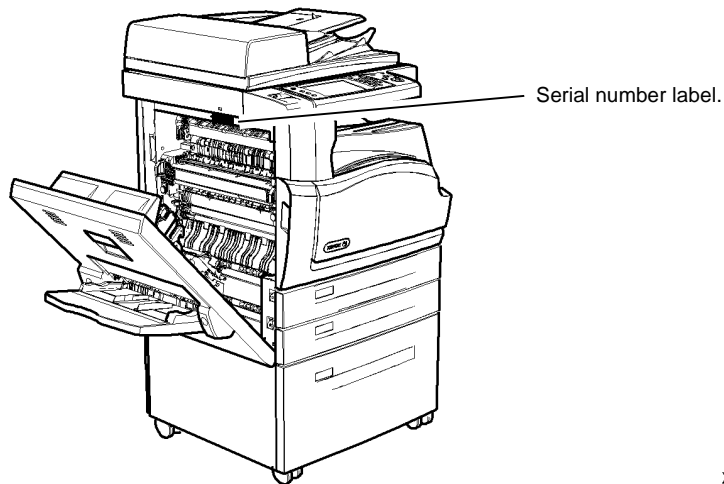


Figure 1 Label location

X-1-1353-A

Serial Number Restore

1. Select the Generate New Identifier Code button. The new machine identifier code will be displayed in the window above the button.
2. Contact your next level of support to complete, then submit an ACAST form that includes the new machine identifier code (called machine unique identifier on the ACAST form) and other required information.
3. Once the ACAST form is processed, a new passcode will be provided. Re-enter dC132, then select Enter Passcode.
4. Enter the new passcode.
5. Select Enter.
6. Select Close to exit the routine.
7. Select Call Closeout to exit service mode. Select Exit and Reboot.

dC134 Market Region

Purpose

To provide the option to select and set the appropriate market region for the machine.

Procedure

1. Enter service mode, [GP 1](#).
2. Select the Maintenance tab.
3. Select dC134 Market Region from the scroll list.
4. Select the 0 - US button for operation in North America or Canada.
Select the 5 - Europe button for operation in all other market regions.
5. Select Save.
6. Select Close to exit routine.
7. Select Call Closeout to exit service mode.
8. Select Exit and Reboot.

dC135 CRU/HFSI Status

Purpose

To view the counters for customer replacement units (CRU) and high frequency service items (HFSI) indicating the type, name and percent remaining.

There are 2 types of CRUs. Some of the CRUs are equipped with CRU Monitor (CRUM) chips that are used for the management of data relevant to that particular CRU. Other CRUs do not have CRUMs; the management of these consumables is dependant upon the user to confirm replacement.

ERU's - Engineer Replaceable Units. These are typically replaced by a service technician, and do not trigger user warnings as end of life is reached. Of these, some are classified as HFSI, meaning that these will probably need to be replaced during the normal life expectancy of the machine.

Procedure

NOTE: The upper entry in the HFSI list is blank.

1. Enter service mode, [GP 1](#).

2. Select the Service Info tab.
3. Select dC135 CRU/HFSI.
4. Refer to [Table 1](#) to observe the status of the items.
5. To reset the HFSI file:
 - a. Select the HFSI item.
 - b. Select Reset Counter.
 - c. Select Reset to confirm.
 To edit the life of the HFSI file:
 - a. Select the HFSI item.
 - b. Select Edit Life.
 - c. Enter the new value.
 - d. Select Save to confirm.
6. Select Close to exit the routine.
7. Select Call Closeout to exit service mode.
8. Select Exit and Reboot.

Table 1 HFSI Details

Name	Parts List Reference	Est Life	Mgmt Type	End of Life Threshold NVM	Default End of Life Threshold	End of Life CSE adjustable
Tray 1 Feed Roll	PL 80.26 Item 4 (retard roll) PL 80.26 Item 5 (feed and nudger rolls)	500K Feeds	Counter	606-518	750K	Yes
Tray 2 Feed Roll	PL 80.26 Item 4 (retard roll) PL 80.26 Item 5 (feed and nudger rolls)	500K Feeds	Counter	606-519	750K	Yes
Tray 3 Feed Roll	PL 80.32 Item 9 (feed roll) PL 80.32 Item 10 (nudger roll) PL 80.32 Item 15 (retard roll)	1500K Feeds	Counter	606-520	400K	Yes
Tray 4 Feed Roll	PL 80.33 Item 11 (feed roll) PL 80.33 Item 12 (nudger roll) PL 80.33 Item 17 (retard roll)	1500K Feeds	Counter	609-319	400K	Yes
Tray 5 (Bypass Tray) Feed Roll	PL 70.35 Item 14 (feed roll) PL 70.35 Item 16 (retard roll) PL 70.35 Item 6 (retard pad)	100K Feeds	Counter	606-521	100K	Yes
Tray 6 Feed Roll	PL 80.41 Item 2 (feed roll) PL 80.41 Item 8 (nudger roll) PL 80.42 Item 2 (retard roll)	500K Feeds 500K Feeds 500K Feeds	Counter	606-522	750K	Yes
Document Feeder Feed Roller	PL 5.20 Item 6 (feed roll) PL 5.20 Item 7 (nudger roll) PL 5.25 Item 3 (retard roll)	170K Feeds	Counter	606-516	170K	Yes

dC136 Service Plan

Purpose

To allow the service plan to be changed from metered to sold. An authorization code is required from the Xerox service centre.

Refer to [GP 39 Service Plans and Consumables](#) for details of consumables and compatibility with service plans.

Refer to

Procedure

1. Enter service mode, [GP 1](#).
2. Select the **Maintenance** tab.
3. Scroll down and select **dC136 Service Plan**.
The service plan information is displayed.
4. Enter the authorization code to change the service plan. (Refer to [GP 39](#) for further information.)

NOTE: *The service plan can be changed from and to any service plan.*

5. Follow the on screen instructions.
6. Select X to exit the routine.
7. Select Call Closeout.
8. Select Exit and Reboot.

dC137 PagePack

Purpose

To enable or disable the PagePack function. When enabled, a customer typically pays a fixed amount per month, or per page, for supplies and/or service plan.

Refer to the [PagePack - details](#) procedure to enter a PagePack PIN.

dC140 Analog Monitor

Purpose

To provide tools to start (actuate) and stop (de-actuate) monitoring of specific analog components. The nominal range of the analog value and, when monitoring is active, the current value is displayed. The values are updated at least every second to allow the component state to be monitored.

Refer to [Table 1](#) for the component list.

Procedure

1. Enter service mode, [GP 1](#).
2. Select the Diagnostics tab.
3. Select dC140 Analog Monitor. The dc140 Analog Monitor screen is displayed.
4. Scroll the table to display the available analog components.
5. Select the required item from the table.
6. A popup menu will be displayed, select Start to confirm.
 - The table will display a status against the selected component.
 - While service mode is activated the components are not active so the value will not change.
 - To check the component, either manipulate the component manually or make a note of the value, exit Analog Monitor then go to [dC330](#) Component Control. Run the component, then return to dc140 Analog Monitor.
 - Multiple components may be selected.
 - To stop monitoring, select the required component, then select Stop.
 - Selecting Stop All stops monitoring of all components.
7. Select Close to return to the Diagnostic Routine window.
8. Select Call Closeout to exit service mode.
9. Select Exit and Reboot.

Table 1 Component List

ID Code	Component Name	Range	Comments
010-601	Fuser Front Temp Sensor	0 to 255	Display value in degrees C or degrees F
010-602	Fuser Mid Temp Sensor	0 to 255	Display value in degrees C or degrees F
075-601	Bypass Tray Width Sensor	0 to 300	Display value in mm or inches
091-601	Humidity Sensor	0 to 100	Display value in% RH
091-602	Ambient Temperature Sensor	0 to 255	Display value in degrees C or degrees F
092-601	Toner Concentration Sensor	0 -to 255	Display value in%

dC301 NVM Initialization

General

The purpose of the NVM initialization routine is to reset the values of all applicable NVM parameters to default. There are 3 machine domains and 3 types of initialization.

The 3 machine domains are:

- [Copier NVM Initialization](#).
- [Network Controller NVM Initialization](#)
- [Fax NVM Initialization](#).

The 3 types of initialization are:

- **User data** That data which defines the way the customer prefers that the equipment operates (i.e. customer preference, SA/KO settings, configuration).
- **System data** That data which defines the way the equipment operates in relation to its environment (i.e. machine variables).
- **All data:** That additional data (on top of System and User data) which may be initialized without significantly impacting the machine's operation. (i.e. machine variables, SA/KO settings, fault log).

Copier NVM Initialization

Purpose

To reset specific machine variable NVM, or all machine variable NVM (with the exception of protected NVM for which a password is required) to their default values.

NOTE: Initialization does not affect the usage (billing) counters and accounting.

Procedure

1. Save the NVM to disk. Refer to [dC361NVM Save and Restore](#).
2. Enter service mode, [GP 1](#).
3. Select the Adjustments tab.
4. Select dC301 NVM Initialization.
5. Select Copier.
6. Select the sub-domain. Refer to [Table 1](#) for the functions in each sub domain.
 - Copy Controller.
 - Scanner.
 - Print Engine.
 - Finisher.
7. Select the NVM data to reset. Refer to [Table 1](#) for the functions that are reset to default.
 - User.
 - System.
 - All.
8. Select Initialize. When the pop-up window appears, confirm the request.
A message will be displayed to indicate successful completion.
9. Exit dc301 NVM initialization.
10. Select Call Closeout to exit service mode.
11. Select Exit and Reboot.

NOTE: If a Reset All has been performed then go to the [Post Reset All Procedure](#).

Post Reset All Procedure

If a Reset All has been selected, perform the steps that follow:

1. Open the paper trays and allow them to fully lower. Close each tray to determine the amount of paper correctly.
2. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

Network Controller NVM Initialization

Purpose

To return to default the network controller NVM settings that are stored on the hard disk.

Procedure

1. Save the NVM to disk, refer to [dC361 NVM Save and Restore](#).
2. Enter Service Mode, [GP 1](#).
3. Select the Adjustments tab.
4. Select dc301 NVM Initialization.
5. Select Network Controller.
6. Select Initialize, when the pop-up window appears confirm the request.
A message will be displayed to indicate successful completion.
7. Refer to [Table 2](#) for the functions that are reset.
8. Exit dc301 NVM initialization.
9. Select Call Closeout to exit service mode.
10. Select Exit and Reboot.

Fax NVM Initialization

Purpose

To return to default the fax NVM settings that are stored on the fax card. Refer to the [\[Fax NVM Document\]](#)

NOTE: The Edoc CD must be in the CD drive to use the Fax Document link.

Procedure

1. Save the NVM to disk. Refer to [dC361 NVM Save and Restore](#).
2. Enter service mode, [GP 1](#).
3. Select the Adjustments tab.
4. Select dC301 NVM Initialization.
5. Select Fax.
 - User.
 - System.
 - All.
7. Select Initialize. When the pop-up window appears, confirm the request.
8. A message will be displayed to indicate successful completion.
9. Exit dc301 NVM Initialization.
10. Select Call Closeout to exit service mode.

11. Select Exit and Reboot.

Table 1 Copier NVM

Sub-Domain	NVM Initialization Type	User Data NVM	System Data NVM	All Data NVM
Copy Controller	All	N	N	N
	Billing Counter	N	N	N
	System Usage Counter			Y
	Fault Counter (1)			Y
	Diagnostic Counter (1)			Y
	SA / KO Setting	Y		Y
	Fault Log			Y
	Configuration			Y
	Diagnostics			Y
	Debug			Y
	Machine Variable		Y	Y
	Machine Variable Xerox		Y	Y
	Machine Variable Registration		Y	Y
	Machine Variable Paper Path		Y	Y
	Machine Variable SPDH		Y	Y
	Machine Variable Platen		Y	Y
	Auditron	Y		Y
	ESS	N	N	N
	Crash Recovery Type			Y
	Completed Job Log			Y
	Controlled Access	N	N	N
	Machine Speed, Market Region			
	JBA Database	Y		Y
	JBA Configuration	Y		Y
	Auditron Configuration	Y		Y
	Xerox Standard Accounting	N	N	N
	HFSI Counter	N	N	N
Scanner	NVM Machine Variable		Y	Y
	SA/KO Setting	Y		Y
	Configuration			Y
Printer	NVM Machine Variable		Y	Y
	SA/KO Setting	Y		Y
	Configuration			Y
Finisher	NVM Machine Variable		Y	Y
	SA/KO Setting	Y		Y
	Configuration			Y

(1) These counters are reset using the Reset Counters option provided in the Call Closeout feature.

NOTE: The booklet maker NVM is not reset as it is custom set for each unit.

Table 2 Network Controller NVM

NVM Initialization Type	Notes
Custom Certificates	Includes netscape, trusted, racoon, OSCP and root certificates.
NVRAM Configuration	Reset to default.
Network Device Configurations	
NC Data Store	Generated at runtime.
Runtime Generated Configuration Files	
Scan Templates	Used by Workflow Scanning.
Completed Job Logs	To prevent a list of old processed jobs displaying on the UI.
NC Debug Logs	
Print Spool Files	To prevent unwanted active jobs in the queue.
JBA Accounting Files	
Stored Images	Retaining these may breach confidentiality.
Temporary Jobs From The Scan Directory	Retaining these may breach confidentiality.
Cloning Data	Retaining these may breach confidentiality.
Downloadable Email Address Books	Retaining these may breach confidentiality.
Set FTP and TELNET access to OFF	Security measure.
Weblet and EIP Applications	These are deleted.

Table 3 Fax NVM

NVM Initialization Type	User Data NVM	System Data NVM	All Data NVM
Controlled Access (2)			Y
Completed Job Log	Y		(Y)
Auditron	Y		(Y)
Configuration	Y	Y	(Y)
SA/KO Setting	Y		(Y)

(2) The Fax functionality for the NVM All Data Initialization will result in all of the NVM data being deleted, which is why the other categories are shown in brackets.

dC304 LED Print Head Validation

Purpose

To check the connectivity and data transfer integrity between the software on the SBC PWB and the LED Print Head.

Procedure

1. Enter service mode, [GP 1](#).
2. Select the Diagnostics tab.
3. Select dC304 LED Print Head Validation.
4. Select Start Test.

At test start, all EEPROM data is retrieved from the LED print head. The checksum of the retrieved data is calculated. The calculated checksum is compared with the retrieved checksum. The LED print head average power level and serial number are displayed.

If the retrieved and calculated check sums match, the test indicates 'Pass'.

5. Select Close to exit the routine.
6. Select Call Closeout to exit service mode.
7. Select Exit and Reboot.

dC305 Panel Diagnostics Test

Purpose

To test the functions of the user interface

Procedure

1. Enter service mode, [GP 1](#).
2. Select the Diagnostics tab.
3. Select dC305 Panel Diagnostics Test.
4. Select the relevant routine:
 - [LCD Pixel Test](#)
 - [Touch Panel Test](#)
 - [Button Test](#)
 - [Display Vertical Test](#)
 - [LED Test](#)
 - [Sounds Test](#)
5. Select Call Closeout to exit service mode.
6. Select Exit and Reboot.

LCD Pixel Test

1. Select the relevant pixels to test.
2. Select Close to exit the test.

Touch Panel Test

1. Select either Touch Panel Test or Touch Panel Track Test
2. Select Close to exit the test.

Button Test

1. To test, press either the Power or Home button.
2. Select Close to exit the test.

Display Vertical Test

1. Select the relevant test.
2. Select Close to exit the test.

LED Test

1. Select the LEDs to be diagnosed and
 - Amber LED (Warning / Error)
 - Blue LED (Interaction)
 - Power LED
 - NFC LED
2. Select the display frequency, then On. The selected LEDs are switched on.
3. Select Close to exit the test.

Sounds Test

1. Select the Sound Type to be diagnosed. Select the action, the audio sounds.
2. Adjust the volume as necessary.
3. Select Close to exit the test.

dC312 Network Echo Test

Purpose

To check network connectivity.

Procedure

1. Enter service mode, [GP 1](#).
2. Select the Diagnostics tab.
3. Select dC312 Network Echo Test.
4. Select the required protocol from TCP/IP, AppleTalk or Novel or IPX.
5. Select Start Test.

The status region at the top of the user interface indicates that the test is in progress.

The status region indicates the result of the test before returning to the previous display.

6. Select Close to exit the routine.
7. Select Call Closeout to exit service mode.
8. Select Exit and Reboot.

dC330 Component Control

Purpose

To show the status of input components e.g. sensors, and to run or energize output components e.g. motors, solenoids.

Description

Output and input component codes are entered into the Component Control Table on the UI, and then checked individually or in permitted groups. The codes in the tables are grouped in function chain order. Refer to [GP 2](#) Fault Codes and History Files.

NOTE: To check the operation of the fuser temperature, humidity, ambient temperature, bypass width, toner concentration or developer temperature sensors, refer to [dC140 Analog Monitor](#).

Procedure

1. Enter service mode, [GP 1](#).
2. Select the Diagnostics tab.
3. Select dC330 Component Control.



CAUTION

Check the component control tables for components that will damage the machine if run together.

4. Select the required codes as follows:
If the component control code is not known:
 - a. Select a chain from the drop down list.
 - b. Select the required component and select Add.If the required component control code is known:
 - a. Select the Chain field and enter the 3 digit chain number using the numeric keypad.
 - b. Select the Link field and enter the required link number using the numeric keypad.
 - c. Select Add.
5. Once the required component control codes are in the lower list, select the required code and choose options from the menu as required.
Go to the appropriate procedure:
 - [Input Components](#).
 - [Output Components](#).
6. Select Close to exit dc330 Component Control.
7. Select Call Closeout to exit service mode.
8. Select Exit and Reboot.

Input Components

When the appropriate code is entered, the status of the component is shown on the UI.

NOTE: The logic level shown on the circuit diagrams with the signal name is the actual signal as measured with a service meter. This is not necessarily the same as the logic state shown on the UI, especially where the output is inverted. When testing components using these control codes, look for a change in state, not for a high or low.

The displayed status of the input component can be changed by causing the component status to change, e.g. operating a sensor with a sheet of paper.

Go to the appropriate table:

- [Table 1](#) Input codes 001.
- [Table 2](#) Input codes 003.
- [Table 3](#) Input Codes 005.
- [Table 4](#) Input Codes 010.
- [Table 5](#) Input Codes 012.
- [Table 6](#) Input Codes 061 to 602.
- [Table 7](#) Input Codes 071 to 076.
- [Table 8](#) Input Codes 081 to 083.
- [Table 9](#) Input Codes 091.

Output Components

When the appropriate code is entered, the component runs or energizes for a set time. The default timeout for most components is set at 90 seconds, but can be as short as 5 seconds. Some components require that other components are run or energized at the same time. It is possible to enter and run or energize up to 6 component control codes (not fax), but only in permitted groups. If illegal combinations of codes are entered, the components do not run or energize.

Go to the appropriate table:

- [Table 10](#) Output Codes 005.
- [Table 11](#) Output Codes 010.
- [Table 12](#) Output Codes 012.
- [Table 13](#) Output Codes 020.
- [Table 14](#) Output Codes 062 to 066.
- [Table 15](#) Output Codes 071 to 076.
- [Table 16](#) Output Codes 080 to 083.
- [Table 17](#) Output Codes 093.

Input Codes

Table 1 Input codes 001

Code	Displayed Name	Description	General
001-300	Front Door Interlock	Front door interlock switch (S01-300).	High = door closed, low = door open
001-305	Left Door Interlock	Left hand door interlock (S01-305).	High = door closed, low = door open

Table 2 Input codes 003

Code	Displayed Name	Description	General
003-047	24V Present	Indicates the state of 24V input monitor.	High = 24V present

Table 3 Input codes 005

Code	Displayed Name	Description	General
005-305	DH top cover interlock	SPDH top cover interlock switch (S05-305).	High = cover closed, low = cover open
005-307	Lift home position sensor	SPDH lift home position sensor (Q05-307).	High = document present, low = no document
005-308	DH last sheet out sensor	SPDH last sheet out sensor (Q05-308).	High = document present, low = no document
005-309	DH doc present sensor	SPDH document present sensor (Q05-309).	High = document present, low = no document
005-310	DH stack height sensor	SPDH stack height sensor (Q05-310).	High = document present, low = no document
005-315	DH length sensor 1	SPDH length sensor 1 (Q05-315).	High = document present, low = no document
005-320	DH length sensor 2	SPDH length sensor 2 (Q05-320).	High = document present, low = no document
005-325	DH width sensor 1	SPDH width sensor 1 (Q05-325).	High = document present, low = no document
005-326	DH width sensor 2	SPDH width sensor 2 (Q05-326).	High = document present, low = no document
005-327	DH width sensor 3	SPDH width sensor 3 (Q05-327).	High = document present, low = no document
005-330	DH feed sensor	SPDH feed sensor (Q05-330).	High = document present, low = no document
005-335	DH takeaway sensor	SPDH takeaway sensor (Q05-335).	High = document present, low = no document
005-340	DH reg sensor	SPDH registration sensor (Q05-340).	High = document present, low = no document
005-343	DH side 2 reg sensor	SPDH side 2 registration sensor (Q05-343).	High = document present, low = no document

Table 3 Input codes 005

Code	Displayed Name	Description	General
005-360	DH Cal home position sensor	SPDH calibration home position sensor (Q05-360). Detects when the calibration strip of the side 2 scan assembly is in the home position.	High = Calibration strip home
005-375	DH LED fan lock alarm	SPDH LED fan lock alarm.	High = Alarm present
005-385	DH motor fan lock alarm	SPDH motor fan lock alarm.	High = Alarm present

Table 4 Input codes 010

Code	Displayed Name	Description	General
010-041	Horizontal Transport Entry Sensor	Horizontal transport entry sensor (Q10-041).	High/Low
010-042	Horizontal Transport Interlock	Horizontal transport interlock sensor (Q10-042).	High/Low
010-044	IOTC PME	IOTC PME	High/Low
010-120	Post fuser sensor	IOT exit sensor (Q10-120), detects when paper exits the IOT.	High = paper present, low = no paper
010-300	Offset Sensor	Offset sensor (Q10-300).	High/Low

Table 5 Input codes 012

Code	Displayed Name	Description	General
012-075	Punch sensor 2	HVF punch sensor 2 (Q12-075).	On = made
012-076	Punch sensor 3	HVF punch sensor 3 (Q12-076).	On = made
012-077	Entry sensor	2K LCSS, LVF BM and HVF BM entry sensor (Q12-077).	On = made
012-078	Punch sensor 1	2K LCSS, LVF BM and HVF BM punch position sensor (Q12-078).	On = made
012-079	Inserter paper length sensor 1	HVF inserter paper length 1 sensor (Q12-079).	On = made
012-080	Inserter paper length sensor 2	HVF inserter paper length 2 sensor (Q12-080).	On = made
012-081	Inserter paper width sensor 1	HVF Inserter paper width sensor 1 (Q12-081).	On = made
012-082	Inserter unit empty sensor	HVF inserter unit empty sensor (Q12-082).	On = made
012-083	Inserter LE sensor	HVF Inserter LE sensor (Q12-083).	On = made
012-084	Inserter TE sensor	HVF Inserter TE sensor (Q12-084).	On = made

Table 5 Input codes 012

Code	Displayed Name	Description	General
012-085	Inserter bottom plate sensor	HVF inserter bottom plate sensor (Q12-085).	On = made
012-086	Buffer position sensor	HVF buffer position sensor (Q12-086).	On = made
012-087	HVF booklet exit sensor	HVF booklet exit sensor (Q12-087)>	On = made
012-088	Nip home sensor	HVF nip home sensor (Q12-088).	On = made
012-089	BM entry sensor	LVF BM and HVF BM entry sensor (Q12-089) detects paper entry to the booklet maker.	High = paper present, low = no paper
012-090	Inserter paper length sensor 3	HVF Inserter Paper Length Sensor 3 (Q12-090).	On = made
012-091	Nip split sensor	HVF nip split sensor (Q12-091).	On = made
012-092	Paper pusher upper sensor	HVF paper pusher upper sensor (Q12-092)	On = made
012-093	Pressing & support encoder snr	HVF pressing & support encoder sensor (Q12-093).	On = made
012-094	Paper pusher lower sensor	HVF paper pusher lower sensor (Q12-094).	On = made
012-096	Ejector motor encoder sensor	2K LCSS, LVF BM and HVF ejector module motor encoder sensor (Q12-096) detects the timing for ejector module motor.	High = made, low = not detected
012-097	Ejector roll motor encoder snr	HVF ejector roll motor encoder sensor (Q12-097).	On = made
012-098	Ejector plate home sensor	HVF ejector plate home sensor (Q12-098).	On = made
012-099	Ejector lower paddle home switch	HVF Ejector lower paddle home switch (S12-099).	On = made
012-106	Compiler exit sensor	2K LCSS, LVF BM and HVF BM compiler exit sensor (Q12-106).	On/Off
012-107	Top tray exit sensor	2K LCSS, LVF BM and HVF BM top tray exit sensor (Q12-107).	On/Off
012-114	Punch unit home sensor	HVF punch unit home sensor (Q12-114).	High/low
012-118	Chad bin present sensor	HVF chad bin present sensor (Q12-118).	High/low
012-133	Low staple sensor	2K LCSS, LVF BM and HVF BM low staple sensor (Q12-133).	On/Off
012-134	Self priming sensor	2K LCSS, LVF BM and HVF BM self priming sensor (Q12-134).	On/Off
012-135	Staple home sensor	2K LCSS, LVF BM and HVF BM stapler unit home sensor (Q12-135).	On/Off

Table 5 Input codes 012

Code	Displayed Name	Description	General
012-163	Bin 1 Motor Encoder Sensor	2K LCSS, LVF BM and HVF BM bin 1 motor encoder sensor (Q12-162) detects the timing for stacker unit motor.	High = made, low = not detected
012-164	Tri folder entry sensor	HVF BM tri-folder entry sensor (Q12-164).	On = made
012-165	Tri folder assist gate sensor	HVF BM tri-folder assist gate sensor (Q120165).	On = made
012-166	Tri folder exit sensor	HVF BM tri-folder exit sensor (Q12-166).	On = made
012-168	Stapler index sensor	2K LCSS, LVF BM and HVF BM stapler unit is in index position (Q12-168).	On = made
012-169	Inserter paper width sensor 2	HVF inserter paper width sensor 2 (Q12-168).	On = made
012-170	BM paper present sensor	LVF BM and HVF BM paper present sensor (Q12-170).	On = made
012-171	Pressing & support B sensor	HVF pressing & support sensor A (Q12-171).	On = made
012-172	Pressing & support A sensor	HVF pressing & support sensor B (Q12-172).	On = made
012-173	Pressing & support C sensor	HVF pressing & support sensor C (Q12-173).	On = made
012-174	Paddle unit upper sensor	HVF paddle unit upper sensor (Q12-174).	On = made
012-175	Paddle unit lower sensor	HVF paddle unit lower sensor (Q12-175).	On = made
012-176	Stapler unit mid home sensor	HVF stapler unit mid home sensor (Q12-176).	On = made
012-178	Inserter top cover interlock	HVF inserter top cover interlock switch (S12-178).	On = made
012-179	Inserter jam cover interlock	HVF inserter jam cover interlock switch (S12-179).	On = made
012-180	Front tamper home sensor	2K LCSS, LVF BM and HVF BM front tamper home sensor (Q12-180) detects if front tamper is home.	High = home, low = not home
012-181	Rear tamper home sensor	2K LCSS, LVF BM and HVF BM rear tamper home sensor (Q12-181), detects if rear tamper is home.	High = home, low = not home
012-182	Front tamper away sensor	2K LCSS, LVF BM and HVF BM front tamper away sensor (Q12-182), detects if front tamper is away.	High = home, low = not home

Table 5 Input codes 012

Code	Displayed Name	Description	General
012-183	Rear tamper away sensor	2K LCSS, LVF BM and HVF BM rear tamper away sensor (Q12-183), detects if rear tamper is away.	High = home, low = not home
012-184	Ejector home sensor	2K LCSS, LVF BM and HVF BM ejector home sensor (Q12-184) detects the home position of the ejector assembly.	High = home, low = not home
012-185	Ejector out sensor	2K LCSS, LVF BM and HVF BM Ejector out sensor (Q12-185) detects the out position of the ejector assembly.	High = out, low= not out
012-186	Paddle roll home sensor	2K LCSS, LVF BM and HVF BM paddle roll position sensor (Q12-186) detects the home position of the paddle roll.	High = home, low = not home
012-187	Bin 1 90% full sensor	2K LCSS, LVF BM and HVF BM bin 1 90% full sensor (Q12-187) detects when bin 1 is 90% or more full.	High = 90% or more full, low = less than 90% full
012-188	Bin1 upper level sensor	2K LCSS, LVF BM bin 1 upper level sensor (Q12-188) detects the top of the paper stack in bin 1.	High = stack sensed, low = stack not sensed
012-190	Bin1 upper limit switch	2K LCSS, LVF BM and HVF BM bin 1 upper limit switch (S12-190) detects the upper limit of bin 1 movement.	High = bin detected, low = bin not detected
012-191	Bin1 lower limit switch	2K LCSS, LVF BM and HVF BM bin 1 upper limit switch (S12-191) detects the lower limit of bin 1 movement.	High = bin detected, low = bin not detected
012-193	Chad bin level sensor	2K LCSS, LVF BM and HVF BM chad bin full sensor (Q12-193) detects when the level of the chad reaches a pre-set value.	High = bin full, low = bin not full
012-194	Punch head home sensor	2K LCSS, LVF BM and HVF BM punch head home sensor (Q12-194) detects the home position of the punch head.	High = punch home, low = punch not home
012-195	Punch head present sensor	2K LCSS and LVF BM punch head present sensor (Q12-195) detects if a hole punch is installed.	High = punch installed, low = punch not installed

Table 5 Input codes 012

Code	Displayed Name	Description	General
012-196	SH1 paper sensor	2K LCSS and LVF BM staple head 1 home sensor (Q12-196) detects when the staple head is fully open (home position).	High = home, low = not home
012-197	Top cover interlock	2K LCSS, LVF BM and HVF BM top cover interlock switch (S12-197) detects if the finisher top cover is open.	High = closed
012-202	Ejector paper present sensor	HVF ejector paper present sensor (Q120202).	High = closed
012-204	BM guide home sensor	LVF BM and HVF BM guide home sensor (Q12-204) detects when the backstop is in the home position.	High = home, low = not home
012-205	BM tamper 1 home sensor	LVF BM and HVF BM tamper 1 home sensor (Q12-205) detects when the BM tampers are in the home position.	High = home, low = not home
012-206	BM Bin 2 90% full sensor	LVF BM and HVF BM bin 2 90% full sensor (Q12-206) detects when bin 2 is 90% or more full.	High = 90% or more full, low = less than 90% full
012-207	Flapper home sensor	LVF BM and HVF BM flapper home sensor (Q12-207).	High = home
012-208	PTU Switch	HVF pause to unload switch (S12-208).	On = made
012-209	Tri fold front dr interlock	HVF BM tri-folder front door interlock switch (S120209).	On = made
012-210	Tri fold top cover interlock	HVF BM tri-folder top cover interlock sensor (Q12-210).	On = made
012-213	BM exit sensor	LVF BM and HVF BM exit sensor (Q12-213) detects booklets exiting the booklet maker.	High = detected, low = not detected
012-214	BM crease blade home	LVF BM and HVF BM crease blade home sensor (Q12-214) detects when the crease blade is fully retracted.	High = home, low = not home
012-215	BM crease blade motor encoder	LVF BM and HVF BM crease blade motor encoder sensor (Q12-215) generates motor speed pulses.	High = bar in encoder wheel, low = gap in encoder wheel
012-216	BM crease roll motor encoder	LVF BM and HVF BM crease roll motor encoder sensor (Q12-216) generates motor speed pulses.	High = bar in encoder wheel, low = gap in encoder wheel
012-217	BM SH Carrier Closed	HVF BM Stapler head carrier closed sensor (Q12-217)	On = made

Table 5 Input codes 012

Code	Displayed Name	Description	General
012-218	BM SH1 home sensor	HVF BM stapler head 1 home sensor (Q12-218).	On = made
012-219	BM SH1 staples low	HVF BM stapler head 1 staples low Sensor (Q12-219).	On = made
012-220	BM SH2 home sensor	HVF BM stapler head 2 home sensor (Q12-220).	On = made
012-221	BM SH2 staples low	HVF BM stapler head 2 staples low Sensor (Q12-221).	On = made
012-222	BM crease roll gate home	HVF BM crease roll gate home sensor (Q12-222).	On = made
012-303	Finisher front door interlock	2K LCSS, LVF BM and HVF front door interlock (Q12-303) detects if the finisher front door is open.	High = closed, low = open
012-315	Inserter pickup sensor	HVF inserter pickup sensor (Q12-315).	On = made
012-316	Inserter acceleration sensor	HVF inserter acceleration sensor (Q12-316).	
012-317	Stapler cartridge sensor	2K LCSS, LVF BM and HVF BM stapler cartridge sensor (Q12-317).	On = made, Off = clear
012-318	Stapler jaw home sensor	2K LCSS, LVF BM and HVF BM stapler jaw home sensor (Q12-318).	On = made, Off = clear
012-319	Stapler safety switch	HVF stapler safety switch (S12-319).	High/low
012-320	Inserter standby sensor	HVF inserter standby sensor (Q12-320).	High/low
012-321	Buffer path sensor	HVF buffer path sensor (Q12-321).	High/low
012-322	Paper pressing sensor	HVF paper pressing sensor (Q12-322).	High/low
012-363	SH1 cartridge sensor	LVF BM and HVF BM SH1 cartridge sensor (Q12-363).	High = made
012-411	BM Stapler Jaw Home Sensor	Booklet maker staple jaw home sensor (Q12-411).	High = home, low = not home
012-412	BM Front Staple Cartridge Low Sensor	BM Front Staple Cartridge Low Sensor (Q12-412).	High = almost empty, low = plentiful staples
012-414	BM Rear Staple Cartridge Low Sensor	BM Rear Staple Cartridge Low Sensor (Q12-414).	High = almost empty, low = plentiful staples
012-438	BM staple unit home sensor	LVF BM staple unit home sensor (Q12-438).	High = home, low = not home
012-439	BM staple unit away sensor	LVF BM staple unit away sensor (Q12-439).	High = at away position, low = not at away position

Table 5 Input codes 012

Code	Displayed Name	Description	General
012-440	BM back stop mid home sensor	LVF BM end stop mid home sensor (Q12-440).	High = at mid home position, low = not at mid home position
012-442	BM front staple cartridge primed sensor	LVF BM staple 1 prime sensor (Q12-442).	High = ready, low = not ready
012-443	BM rear staple cartridge primed sensor	LVF BM staple 2 prime sensor (Q12-443).	High = ready, low = not ready
012-450	BM Front Staple Cartridge Present Sensor	BM Front Staple Cartridge Present Sensor (Q12-450)	High = present, low = not present
012-451	BM Rear Staple Cartridge Present Sensor	BM Rear Staple Cartridge Present Sensor (Q12-451)	High = present, low = not present

Table 6 Input codes 061 to 062

Code	Displayed Name	Description	General
062-019	DH Platen Down Sensor	SPDh platen down sensor (Q62-019).	High = SPDh lowered
062-020	DH 24 Volts	SPDh 24V	High = 24V present
062-034	Platen Scan Cooling Fan Input	Detects when the scanner cooling is running.	High = Fan off
062-100	Carriage Home Sensor	Carriage home sensor (Q62-100). This must be used in conjunction with 62-023 Carriage Home Sensor Test. Add both components, start the sensor test, then the carriage home sensor test. The sensor will cycle its state as the carriage moves to and from home.	High = carriage home
062-251	Doc Size Sensor 1	Document size sensor 1 (Q62-251).	High = document not sensed, low = document sensed
062-253	Doc Size Sensor 2	Document size sensor 2 (Q62-253).	High = document not sensed, low = document sensed
062-301	DH Angle Sensor	Input module angle sensor (Q62-301) detects the input module at 30% angle for size sensing.	High = input module lowered, low input module raised
062-322	Platen Hotline	Platen hotline	High/Low

Table 7 Input codes 071 to 076

Code	Displayed Name	Description	General
071-320	T1 Empty Sensor	Tray 1 empty sensor (Q71-320).	High = tray empty, low = paper in tray
071-330	T1 stack height sensor	Tray 1 stack height sensor (Q71-330).	High = top of stack sensed, low = top of stack not sensed
072-320	T2 Empty Sensor	Tray 2 empty sensor (Q72-320).	High = paper in tray, low = tray empty
072-330	T2 stack height sensor	Tray 2 stack height sensor (Q72-330).	High = top of stack sensed, low = top of stack not sensed
073-300	T3 Home Sensor	Tray 3 home sensor (Q73-300).	High = tray home. low = tray not home
073-320	T3 Empty Sensor	Tray 3 empty sensor (Q73-320).	High = tray empty, low = paper in tray
073-330	T3 Stack Height Sensor	Tray 3 stack height sensor (Q73-330).	High = top of stack sensed, low = top of stack not sensed
073-340	T3 Level Encoder	Detects tray 3 paper level encoder status (Q73-340).	High = top of stack sensed, low = top of stack not sensed
074-300	T4 Home Sensor	Tray 4 home sensor (Q74-300).	High = tray home. low = tray not home
074-320	T4 Empty Sensor	Tray 4 empty sensor (Q74-320).	High = paper in tray, low = tray empty
074-330	T4 Stack Height Sensor	Tray 4 stack height sensor (Q74-330).	High = top of stack sensed, low = top of stack not sensed
074-340	T4 Level Encoder	Detects tray 4 paper level encoder status (Q74-340).	High = top of stack sensed, low = top of stack not sensed
075-040	Bypass Tray Elevate Sensor	Bypass tray elevate sensor (Q75-040).	High = tray elevated
075-320	Bypass Empty Sensor	Bypass empty sensor (Q75-320).	High = tray empty, low = paper in tray

Table 8 Input codes 081 to 083

Code	Displayed Name	Description	General
081-001	Tray 1 TAR Sensor	Tray 1 TAR sensor (Q81-001).	High/Low
081-103	T3 Feed Sensor	Detects when lead edge of paper is at tray 3 feed sensor, (Q81-103).	High = paper present, low = no paper
081-104	T4 Feed Sensor	Detects when lead edge of paper is at tray 4 feed sensor, (Q81-104).	High = paper present, low = no paper

Table 8 Input codes 081 to 083

Code	Displayed Name	Description	General
081-108	HCF Exit Sensor	Detects a sheet being fed from the HCF.	High = paper present, Low = no paper
081-150	Tray 4 Exit Sensor	Detects a sheet being fed through the tray 4 horizontal transport. (tray 4 exit sensor Q81-150).	High/Low
082-001	Tray 2 TAR Sensor	Tray 2 TAR sensor (Q82-001).	High/Low
082-150	Registration Sensor	Detects when paper is at the registration sensor (Q82-150).	High = paper present, low = no paper
083-160	Duplex Sensor	Detects when paper is at the duplex sensor (Q83-160).	High = paper present, low = no paper

Table 9 Input codes 091

Code	Displayed Name	Description	General
091-077	Bias Charge Roll DC	Switches on the bias charge roll voltage.	High = on, low = off
091-078	Developer Bias DC	Switches on the developer bias voltage.	High = on, low = off

Output Codes

Table 10 Output codes 005

Code	Displayed Name	Description	General
005-020	DH feed motor	Runs the SPDH feed motor (MOT05-020) clockwise.	On/off. 90 seconds timeout
005-025	DH feed clutch	Energizes the SPDH feed clutch (CL05-025).	On/off. 30 seconds timeout
005-030	DH read motor	Runs the SPDH read motor (MOT05-030) clockwise.	On/off. 90 seconds timeout
005-370	DH LED fan motor	Runs the SPDH LED fan (MOT05-370).	On/off
005-380	DH motor cooling fan	Runs the SPDH motor fan motor (MOT05-380).	On/off
005-390	DH tray elevate motor	SPDH tray elevator motor (MOT05-390).	On/off
005-400	DH Reflection sensor adjustment	SPDH Reflection sensor adjustment.	On/off
005-420	Feed motor (CCW)	Runs the SPDH feed motor (MOT05-020) counter clockwise.	On/off
005-425	DH take away clutch	Energizes the SPDH takeaway clutch (CL05-425).	On/off
005-430	Read motor (CCW)	Runs the SPDH read motor (MOT05-030) counter clockwise.	On/off

Table 11 Output codes 010

Code	Displayed Name	Description	General
010-020	Fuser Drive Motor	Runs the fuser/exit motor (MOT10-020).	On/off. 90 seconds timeout
010-030	Inverter Motor Forward at process speed	Runs the inverter motor (MOT10-030) forward at process speed.	On/off. 90 seconds timeout
010-035	Inverter Motor Reverse at process speed	Runs the inverter motor (MOT10-030) in reverse at process speed.	On/off. 90 seconds timeout
010-036	Inverter Motor Duplex Hi Speed forward	Runs the inverter motor (MOT10-030) forward at high speed.	On/off. 90 seconds timeout
010-037	Inverter Motor Duplex Hi Speed reverse	Runs the inverter motor (MOT10-030) in reverse at high speed.	On/off. 90 seconds timeout
010-040	Horizontal Transport Motor	Runs the horizontal transport motor (MOT10-040).	On/off
010-045	Inverter Gate Solenoid	Energizes the invert path solenoid (SOL10-045). When de-energized sheets are fed to the inverter.	On/off. 5 seconds timeout
010-500	Offset Motor - Forward	Runs the offset motor (MOT10-500) forward.	On/off
010-501	Offset Motor - Reverse	Runs the offset motor (MOT10-500) in reverse.	On/off

Table 12 Output codes 012

Code	Displayed Name	Description	General
012-045	SU1 Motor Backward	Runs the 2K and HVF Stapling unit 1 increment backward.	On/off. 110 mseconds timeout
012-056	Set clamp solenoid on	Energizes the HVF set clamp solenoid (SOL12-056)	On/off 100 mseconds timeout
012-059	Elevator Motor Up	Runs the 2K LCSS, LVF BM and HVF bin 1 elevate motor (MOT12-241) by increments up.	On/off. 500 mseconds timeout
012-060	Elevator Motor Down	Runs the 2K LCSS, LVF BM and HVF bin 1 elevate motor (MOT12-241) by increments down.	On/off. 500 mseconds timeout
012-223	Transport Motor 1	Runs the 2K LCSS, LVF BM and HVF transport Motor 1 (MOT12-223).	On/off. 90 seconds timeout
012-224	Transport Motor 2	Runs the 2K LCSS, LVF BM and HVF transport motor 2 (MOT12-224).	On/off. 90 seconds timeout

Table 12 Output codes 012

Code	Displayed Name	Description	General
012-225	Exit Diverter Solenoid	Energizes the 2K LCSS, LVF BM and HVF exit diverter gate solenoid (SOL12-225).	On/off. 5 seconds timeout
012-226	Front Tamper Motor Home	Runs the 2K LCSS, LVF BM and HVF front tamper motor (MOT12-226) to the home position.	On/off. 5 seconds timeout
012-227	Rear Tamper Motor Home	Runs the 2K LCSS, LVF BM and HVF rear tamper motor (MOT12-227) to home position.	On/off. 5 seconds timeout
012-228	Front Tamper Motor Move	Runs the 2K LCSS, LVF BM and HVF front tamper motor (MOT12-226) move inbound.	On/off. 5 seconds timeout
012-229	Rear Tamper Motor Move	Runs the 2K LCSS, LVF BM and HVF rear tamper motor (MOT12-227) move inbound.	On/off. 5 seconds timeout
012-230	Tampers to A4LEF	Moves the 2K LCSS and LVF BM tampers to A4LEF position.	On/off. 5 seconds timeout
012-231	Tampers to 8.5x11LEF	Moves the 2K LCSS and LVF BM tampers to 8.5"x11" LEF position.	On/off. 5 seconds timeout
012-232	Tamper Motor Cycle	Cycles the 2K LCSS and LVF BM tampers in and out until timeout or stop.	On/off. 90 seconds timeout
012-233	Ejector roll motor	Runs the HVF ejector roll motor until timeout or stop.	On/off. 90 seconds timeout
012-234	Ejector Motor Home	Runs the 2K LCSS and LVF BM ejector motor (MOT12-234) to the home position.	On/off. 5 seconds timeout
012-235	Ejector Motor Move	Runs the 2K LCSS and LVF BM ejector motor (MOT12-234) to the out position.	On/off. 5 seconds timeout
012-236	Ejector Motor Cycle	Runs the 2K LCSS, LVF BM and HVF ejector motor (MOT12-234) cycle routine until timeout or stop. CAUTION <i>Do not run the following codes together: 012-045, 012-233, 012-236, 012-242, 012-244, 012-249, 012-250. Running these codes at the same time can cause damage to the machine.</i>	On/off. 90 seconds timeout
012-237	Paddle Roll Motor Home	Runs the 2K LCSS and LVF BM paddle roll motor (MOT12-237) to the home position.	On/off. 15 seconds timeout

Table 12 Output codes 012

Code	Displayed Name	Description	General
012-238	Paddle Roll Motor Run	Runs the 2K LCSS, LVF BM and HVF paddle roll motor (MOT12-237) until timeout or stop.	On/off. 15 seconds timeout
012-240	Paddle unit motor lift	Runs the HVF paddle unit motor (MOT12-240) to lift the paddle unit until timeout or stop.	On/off. 90 seconds timeout
012-241	Bin 1 Elevator Motor Home	Runs the 2K LCSS, LVF BM and HVF bin 1 elevate motor (MOT12-241) to the home position.	On/off. 15 seconds timeout
012-242	Bin1 Elevator Motor Cycle	Runs the 2K LCSS, LVF BM and HVF bin 1 elevate motor (MOT12-242) to cycle bins up/down until timeout or stop. CAUTION <i>Do not run the following codes together: 012-045, 012-233, 012-236, 012-242, 012-244, 012-249, 012-250. Running these codes at the same time can cause damage to the machine.</i>	On/off. 90 seconds timeout.
012-243	Punch head move home	Runs the 2K LCSS and LVF BM hole punch motor (MOT12-243) to the home position.	On/off. 15 seconds timeout
012-244	Punch Head Run	Runs the 2K LCSS, LVF BM and HVF hole punch motor (MOT12-244) continuously. CAUTION <i>Do not run the following codes together: 012-045, 012-233, 012-236, 012-242, 12-244, 012-249, 012-250. Running these codes at the same time can cause damage to the machine.</i>	On/off. 15 seconds timeout
012-245	Punch unit motor forward	Runs the HVF punch unit motor (MOT12-245) to move the punch unit forward.	-
012-246	Punch unit motor reverse	Runs the HVF punch unit motor (MOT12-245) to move the HVF punch unit reverse.	-

Table 12 Output codes 012

Code	Displayed Name	Description	General
012-247	Staple Head 1 Motor	Runs the 2K LCSS, LVF BM and HVF staple head 1 motor (MOT12-247). CAUTION <i>Do not run code 012-247 without 2 sheets of paper in the stapler jaws. Running this code without the paper in position can cause damage to the machine.</i>	On/off. 15 seconds timeout
012-248	SH 1 Motor Reverse Home	Runs the 2K LCSS and LVF BM staple head 1 motor (MOT12-248) in reverse to the home position.	On/off. 15 seconds timeout
012-249	SU1 Motor Forward	Runs the 2K LCSS, LVF BM and HVF stapling unit 1 motor (MOT12-249) increment forward. CAUTION <i>Do not run the following codes together: 012-045, 012-233, 012-236, 012-242, 012-244, 012-249, 012-250. Running these codes at the same time can cause damage to the machine.</i>	On/off. 15 seconds timeout
012-250	SU1 Motor Cycle	Runs the 2K LCSS, HVF and HVF stapling unit 1 motor (MOT12-250) cycle routine. CAUTION <i>Do not run the following codes together: 012-045, 012-233, 012-236, 012-242, 012-244, 012-249, 012-250. Running these codes at the same time can cause damage to the machine.</i>	On/off. 90 seconds timeout
012-251	BM compiler motor	Runs the HVF BM and LVF BM compiler motor (MOT12-251) until timeout or stop.	
012-252	BM Crease Blade Motor	Runs the LVF BM and HVF BM crease blade motor (MOT12-252) cycle routine.	On/off. 90 seconds timeout
012-253	Crease Roll Motor	Runs the LVF BM and HVF BM crease roll motor (MOT12-253).	On/off. 6 seconds timeout

Table 12 Output codes 012

Code	Displayed Name	Description	General
012-254	BM staple head 1 motor	Runs the LVF BM and HVF BM staple head 1 motor (MOT12-254) until time out or stop.	On/off 90 seconds timeout
012-255	BM Backstop Motor	Runs the LVF BM or HVF BM backstop motor (MOT12-255) to receive, staple, then crease positions.	On/off. 90 seconds timeout
012-256	BM Tamper 1 Motor	Runs the LVF BM and HVF BM tamper motor (MOT12-256).	On/off. 90 seconds timeout
012-258	BM Diverter Solenoid	Energizes the LVF BM and HVF BM diverter gate solenoid (SOL12-258).	On/off. 5 seconds timeout
012-259	BM stack hold solenoid	Energizes the LVF BM and HVF BM stack hold solenoid (SOL12-259) until timeout or stop.	On/off 5 seconds timeout
012-260	Insertor clutch	Energizes the HVF insertor clutch (CL12-260)	-
012-261	Insertor motor	Runs the HVF insertor motor (MOT12-261).	-
012-262	Buffer motor	Runs the HVF buffer motor (MOT12-262).	-
012-263	Bypass feed motor	Runs the HVF bypass feed motor (MOT12-263).	-
012-264	Nip split motor	Runs the HVF nip split motor (MOT12-264).	-
012-265	Paper pusher motor	Runs the HVF paper pusher motor (MOT12-265).	-
012-266	Curl suppressor solenoid	Energizes the HVF curl suppressor solenoid (SOL12-266).	-
012-267	Tri folder diverter solenoid	Energizes the HVF tri-folder diverter solenoid (SOL12-267).	-
012-268	Tri folder assist gate solenoid	Energizes the HVF tri-folder assist gate solenoid (SOL12-268).	-
012-269	Clutch drive	Energizes the HVF tri-folder drive clutch (CL12-269).	-
012-271	BM flapper motor	Runs the LVF BM and HVF BM flapper motor (MOT12-271).	On/off. 90 seconds timeout
012-273	BM crease roll gate motor	Runs the HVF BM crease roll gate motor (MOT12-273) until timeout or stop.	On/off 90 seconds timeout
012-274	BM conveyor drive motor	Runs the HVF BM conveyor drive motor (MOT12-274)	-

Table 12 Output codes 012

Code	Displayed Name	Description	General
012-275	BM staple head 2 motor	Runs the HVF BM staple head 2 motor (MOT12-275) unit timeout or stop.	On/off 5 seconds timeout
012-276	BM crease roll gate motor open	Runs the HVF BM crease roll gate motor (MOT12-273) to open the grease roll gate.	On/off 90 seconds timeout
012-323	Pressing and support motor	Runs the HVF pressing and support motor (MOT12-323).	On/off 90 seconds timeout
012-324	PTU LED	Illuminates the HVF pause to unload LED.	On/off 90 seconds timeout
012-239	Paddle unit motor descend	Runs the HVF paddle unit motor (MOT12-240) to lower the paddle unit until timeout or stop.	On/off 90 seconds timeout
012-435	BM Stapler Unit Move to Home.	Runs the BM staple unit move motor (MOT12-435) to drive the stapler unit to home.	On/off. 5 seconds timeout
012-436	BM Stapler Unit Move to Away.	Runs the BM staple unit move motor (MOT12-435) to drive the stapler unit away from home.	On/off. 5 seconds timeout
012-437	BM Staple Clinch Motor	BM Saddle Stitch Run 1 Cycle (Clinching).	On/off. 15 seconds timeout

Table 13 Output codes 020

Code	Displayed Name	Description	General
020-010	Sngl Tone 0Hz Ln1	Emits single tone 0Hz on line 1.	On/off
020-011	Sngl Tone 400Hz Ln1	Emits single tone 400Hz on line 1.	On/off
020-012	Sngl Tone 1100Hz Ln1	Emits single tone 1100Hz on line 1.	On/off
020-013	Sngl Tone 1300Hz Ln1	Emits single tone 1300Hz on line 1.	On/off
020-014	Sngl Tone 1650Hz Ln1	Emits single tone 1650Hz on line 1.	On/off
020-015	Sngl Tone 1850Hz Ln1	Emits single tone 1850Hz on line 1.	On/off
020-016	Sngl Tone 2100Hz Ln1	Emits single tone 2100Hz on line 1.	On/off
020-017	ANSAM Ln1	Switches on the line 1 ANSAM tone.	On/off
020-018	CI Ln1	Switches line 1 to off hook quiet mode.	On/off
020-020	DTMF # Line1	Emits DTMF # on line 1.	On/off
020-021	DTMF * Line1	Emits DTMF * on line 1.	On/off
020-022	DTMF 0 Line1	Emits DTMF 0 on line 1.	On/off

Table 13 Output codes 020

Code	Displayed Name	Description	General
020-023	DTMF 1 Line1	Emits DTMF 1 on line 1.	On/off
020-024	DTMF 2 Line1	Emits DTMF 2 on line 1.	On/off
020-025	DTMF 3 Line1	Emits DTMF 3 on line 1.	On/off
020-026	DTMF 4 Line1	Emits DTMF 4 on line 1.	On/off
020-027	DTMF 5 Line1	Emits DTMF 5 on line 1.	On/off
020-028	DTMF 6 Line1	Emits DTMF 6 on line 1.	On/off
020-029	DTMF 7 Line1	Emits DTMF 7 on line 1.	On/off
020-030	DTMF 8 Line1	Emits DTMF 8 on line 1.	On/off
020-031	DTMF 9 Line1	Emits DTMF 9 on line 1.	On/off
020-032	DTMF A Line1	Emits DTMF A on line 1.	On/off
020-033	DTMF B Line1	Emits DTMF B on line 1.	On/off
020-034	DTMF C Line1	Emits DTMF C on line 1.	On/off
020-035	DTMF D Line1	Emits DTMF D on line 1.	On/off
020-040	V.21 300 bps Line1	Emits V.21 300 bps on line 1.	On/off
020-041	V.27ter 2400 bps Line1	Emits V.27ter 2400 bps on line 1.	On/off
020-042	V.27ter 4800 bps Line1	Emits V.27ter 4800 bps on line 1.	On/off
020-043	V.29 7200 bps Line1	Emits V.29 7200 bps on line 1.	On/off
020-044	V.29 9600 bps Line1	Emits V.29 9600 bps on line 1.	On/off
020-045	V.17 7200 bps Line1	Emits V.17 7200 bps on line 1.	On/off
020-046	V.17 9600 bps Line1	Emits V.17 9600 bps on line 1.	On/off
020-047	V.17 12000 bps Line1	Emits V.17 12000 bps on line 1.	On/off
020-048	V.17 14400 bps Line1	Emits V.17 14400 bps on line 1.	On/off
020-049	V.34 2400 bps Line1	Emits V.34 2400 bps on line 1.	On/off
020-050	V.34 4800 bps Line1	Emits V.34 4800 bps on line 1.	On/off
020-051	V.34 7200 bps Line1	Emits V.34 7200 bps on line 1.	On/off
020-052	V.34 9600 bps Line1	Emits V.34 9600 bps on line 1.	On/off
020-053	V.34 12000 bps Line1	Emits V.34 12000 bps on line 1.	On/off
020-054	V.34 14400 bps Line1	Emits V.34 14400 bps on line 1.	On/off

Table 13 Output codes 020

Code	Displayed Name	Description	General
020-055	V.34 16800 bps Line1	Emits V.34 16800 bps on line 1.	On/off
020-056	V.34 19200 bps Line1	Emits V.34 19200 bps on line 1.	On/off
020-057	V.34 21600 bps Line1	Emits V.34 21600 bps on line 1.	On/off
020-058	V.34 24000 bps Line1	Emits V.34 24000 bps on line 1.	On/off
020-059	V.34 26400 bps Line1	Emits V.34 26400 bps on line 1.	On/off
020-060	V.34 28800 bps Line1	Emits V.34 28800 bps on line 1.	On/off
020-061	V.34 31200 bps Line1	Emits V.34 31200 bps on line 1.	On/off
020-062	V.34 33600 bps Line1	Emits V.34 33600 bps on line 1.	On/off
020-080	Sngl Tone 0Hz Ln2	Emits single tone 0Hz on line 2.	On/off
020-081	Sngl Tone 400Hz Ln2	Emits single tone 400Hz on line 2.	On/off
020-082	Sngl Tone 1100Hz Ln2	Emits single tone 1100Hz on line 2.	On/off
020-083	Sngl Tone 1300Hz Ln2	Emits single tone 1300Hz on line 2.	On/off
020-084	Sngl Tone 1650Hz Ln2	Emits single tone 1650Hz on line 2.	On/off
020-085	Sngl Tone 1850Hz Ln2	Emits single tone 1850Hz on line 2.	On/off
020-086	Sngl Tone 2100Hz Ln2	Emits single tone 2100Hz on line 2.	On/off
020-087	ANSAM Ln2	Switches on the line 2 ANSAM tone.	On/off
020-088	CI Ln2	Switches line 2 to off hook quiet mode.	On/off
020-090	DTMF # Line2	Emits DTMF # on line 2.	On/off
020-091	DTMF * Line2	Emits DTMF * on line 2.	On/off
020-092	DTMF 0 Line2	Emits DTMF 0 on line 2.	On/off
020-093	DTMF 1 Line2	Emits DTMF 1 on line 2.	On/off
020-094	DTMF 2 Line2	Emits DTMF 2 on line 2.	On/off
020-095	DTMF 3 Line2	Emits DTMF 3 on line 2.	On/off
020-096	DTMF 4 Line2	Emits DTMF 4 on line 2.	On/off
020-097	DTMF 5 Line2	Emits DTMF 5 on line 2.	On/off
020-098	DTMF 6 Line2	Emits DTMF 6 on line 2.	On/off
020-099	DTMF 7 Line2	Emits DTMF 7 on line 2.	On/off

Table 13 Output codes 020

Code	Displayed Name	Description	General
020-100	DTMF 8 Line2	Emits DTMF 8 on line 2.	On/off
020-101	DTMF 9 Line2	Emits DTMF 9 on line 2.	On/off
020-102	DTMF A Line2	Emits DTMF A on line 2.	On/off
020-103	DTMF B Line2	Emits DTMF B on line 2.	On/off
020-104	DTMF C Line2	Emits DTMF C on line 2.	On/off
020-105	DTMF D Line2	Emits DTMF D on line 2.	On/off
020-110	V.21 300 bps Line2	Emits V.21 300 bps on line 2.	On/off
020-111	V.27ter 2400 bps Line2	Emits V.27ter 2400 bps on line 2.	On/off
020-112	V.27ter 4800 bps Line2	Emits V.27ter 4800 bps on line 2.	On/off
020-113	V.29 7200 bps Line2	Emits V.29 7200 bps on line 2.	On/off
020-114	V.29 9600 bps Line2	Emits V.29 9600 bps on line 2.	On/off
020-115	V.17 7200 bps Line2	Emits V.17 7200 bps on line 2.	On/off
020-116	V.17 9600 bps Line2	Emits V.17 9600 bps on line 2.	On/off
020-117	V.17 12000 bps Line2	Emits V.17 12000 bps on line 2.	On/off
020-118	V.17 14400 bps Line2	Emits V.17 14400 bps on line 2.	On/off
020-119	V.34 2400 bps Line2	Emits V.34 2400 bps on line 2.	On/off
020-120	V.34 4800 bps Line2	Emits V.34 4800 bps on line 2.	On/off
020-121	V.34 7200 bps Line2	Emits V.34 7200 bps on line 2.	On/off
020-122	V.34 9600 bps Line2	Emits V.34 9600 bps on line 2.	On/off
020-123	V.34 12000 bps Line2	Emits V.34 12000 bps on line 2.	On/off
020-124	V.34 14400 bps Line2	Emits V.34 14400 bps on line 2.	On/off
020-125	V.34 16800 bps Line2	Emits V.34 16800 bps on line 2.	On/off
020-126	V.34 19200 bps Line2	Emits V.34 19200 bps on line 2.	On/off
020-127	V.34 21600 bps Line2	Emits V.34 21600 bps on line 2.	On/off
020-128	V.34 24000 bps Line2	Emits V.34 24000 bps on line 2.	On/off

Table 13 Output codes 020

Code	Displayed Name	Description	General
020-129	V.34 26400 bps Line2	Emits V.34 26400 bps on line 2.	On/off
020-130	V.34 28800 bps Line2	Emits V.34 28800 bps on line 2.	On/off
020-131	V.34 31200 bps Line2	Emits V.34 31200 bps on line 2.	On/off
020-132	V.34 33600 bps Line2	Emits V.34 33600 bps on line 2.	On/off

Table 14 Output codes 061 to 066

Code	Displayed Name	Description	General
062-002	Platen Exposure Lamp	Energizes the scanner exposure lamp.	On/off. 90 seconds timeout
062-023	Carriage Home Sensor Test	Scanner carriage home sensor test. This must be used in conjunction with 62-100 Carriage Home Sensor. Add both components, start the sensor test, then the carriage home sensor test. The sensor will cycle its state as the carriage moves to and from home.	On/off. 90 seconds timeout
062-024	Carriage Move Doc Size Position	Drives the scanner carriage to the document size position.	On/off. 90 seconds timeout
062-025	Carriage Move CVT Position	Drives the scanner carriage to the CVT position.	On/off. 90 seconds timeout
062-026	Carriage Move Test Position A	Drives the scanner carriage to test position A.	On/off. 90 seconds timeout
062-027	Carriage Move Test Position B	Drives the scanner carriage to test position B.	On/off. 90 seconds timeout
062-028	Carriage Move Test Position C	Drives the scanner carriage to test position C.	On/off. 90 seconds timeout
062-029	Scan Cooling Fan	Runs the scanner cooling fan.	On/off. 90 seconds timeout
062-030	Carriage Move Cal Strip Position	Drives the scanner carriage to the calibration position.	On/off. 90 seconds timeout
062-031	Carriage Move Home Position	Drives the scanner carriage to the home position.	On/off. 90 seconds timeout
066-002	DH Exposure Lamp	Energizes the SPDH exposure lamp.	On/off.
066-030	DH move Cal Strip Position	Drives the SPDH calibration strip to the home position.	On/off.

Table 15 Output codes 071 to 076

Code	Displayed Name	Description	General
071-010	T1 Elevate Motor	Runs the tray 1 elevator motor (MOT71-010) up.	On/off. Linked to tray 1 home sensor. Only run with tray out. 5 seconds timeout
072-010	T2 Elevate Motor	Runs the tray 2 elevator motor (MOT72-010) up.	On/off. Linked to tray 2 home sensor. Only run with tray out. 5 seconds timeout
073-010	T3 Elevate Motor	Runs the tray 3 elevator motor (MOT73-010) up.	On/off. Linked to tray 3 home sensor. Only run with tray out. 10 seconds time-out
074-010	T4 Elevate Motor	Runs the tray 4 elevator motor (MOT74-010) up.	On/off. Linked to tray 4 home sensor. Only run with tray out. 10 seconds time-out

Table 16 Output codes 080 to 083

Code	Displayed Name	Description	General
080-006	TAR/Bypass Tray Motor (TAR Rolls) Process speed	Runs the TAR/bypass tray motor (MOT80-006) forward at process speed to drive the tray 1 and 2 transport rolls.	On/off. 60 seconds timeout.
080-007	TAR/Bypass Tray Motor (TAR Rolls) Hi Speed	Runs the TAR/bypass tray motor (MOT80-006) forward at high speed to drive the tray 1 and 2 transport rolls.	On/off. 60 seconds timeout.
080-015	Left Door Fans	Runs both left door fans, PL 80.11 Item 9 (45-55ppm variants) Runs rear exit fan, PL 10.9 Item 3 (65ppm to 90ppm variants) (MOT80-015)	On/off. 90 seconds timeout.
080-025	TAR/Bypass Tray Motor (Bypass)	Runs the TAR/bypass tray motor (MOT80-006) to drive the bypass tray feed roll.	On/off. 60 seconds timeout.
080-040	Registration Motor	Runs the registration motor (MOT80-040).	On/off. 5 seconds timeout.
081-010	T1 Feed Motor	Runs the tray 1 feed motor (MOT81-010).	On/off. Linked to tray 1 home sensor. Paper tray must be open when motor energized. 60 seconds timeout
081-020	T2 Feed Motor	Runs the tray 2 feed motor. (MOT81-020).	On/off. Linked to tray 2 home sensor. Paper tray must be open when motor energized. 60 seconds timeout

Table 16 Output codes 080 to 083

Code	Displayed Name	Description	General
081-030	T3 Feed Motor	Runs the tray 3 feed motor (MOT81-030).	On/off. Linked to tray 3 home sensor. Paper tray must be open when motor energized. 90 seconds timeout
081-033	T3 Feed Clutch	Energizes the tray 3 feed clutch (CL81-033). NOTE: The bypass tray clutch will also energize when component control code 081-033 is entered.	On/off. Linked to tray 3 home sensor. Paper tray 3 must be open when the solenoid is energized
081-040	T4 Feed Motor	Runs the tray 4 feed motor (MOT81-040).	On/off. Linked to tray 4 home sensor. Paper tray must be open when motor energized. 90 seconds timeout
081-043	T4 Feed Clutch	Energizes the tray 4 feed clutch (CL81-043).	On/off. Linked to tray 4 home sensor. Paper tray 4 must be open when the solenoid is energized. 90 seconds timeout
081-045	HCF Transport Motor	Runs the tray 3 and 4 transport motor (MOT81-045).	On/off. 90 seconds timeout
083-060	Duplex Motor Slow	Runs the duplex motor (MOT83-060) at simplex speed.	On/off. 90 seconds timeout
083-062	Duplex Motor Fast	Runs the duplex motor (MOT83-060) at duplex speed.	On/off. 90 seconds timeout

Table 17 Output codes 093

Code	Displayed Name	Description	General
093-001	Print Cartridge Fan	Runs the print cartridge fan (MOT93-001)	On/off. 90 seconds timeout.
093-040	Toner Cartridge Motor	Runs the toner cartridge motor (MOT93-040).	On/off. 60 seconds timeout
093-045	Print Cartridge Motor	Runs the print cartridge motor (MOT93-045).	On/off. 60 seconds timeout

dC361 NVM Save and Restore

Purpose

To restore the NVM parameters of the machine to their previous values after completion of a service action; i.e. NVM expansion, SBC PWB replacement, or any others that would necessitate a full NVM initialization. It can also be used to recover a machine's NVM values to a recent service call, in the event that a complete NVM failure occurred. As an additional tool, the ability to copy files between the hard drive and a USB drive is provided.

The NVM save to hard disk must be performed at the first service call and whenever the system software is changed.

This procedure will save and restore only the SBC and IIT NVM.

NOTE: After a USB flash drive is first connected to the machine, a UI screen message offering scan to and print from USB options will display. This screen message can be closed or left open before entering diagnostics without effecting the NVM save/restore processes. The USB screen message will not reappear on exit from service mode.

Procedure

NVM Save

1. If necessary, connect the USB flash drive to the USB port in the UI housing.
2. Enter service mode, [GP 1](#).
3. Select the Adjustments tab.
4. Select dC361 NVM Save and Restore.
The screen displays the NVM data.

NOTE:

- The top entry displays the live NVM data for the machine.
- If the data has previously been saved to the hard disk, these will be displayed in a list below the live data.
- If a USB device containing NVM data is connected, these will be displayed below the hard disk data. To be recognized by the machine, the USB device must be connected at the time dC361 is started.

5. Save the NVM data.
 - To save the live data to the hard disk, select the live data entry, then select Save to Hard Drive.
 - To save the hard disk data to a USB device, select the hard disk entry, then select Save to USB Device.
 - To save the USB data to the hard disk, select the USB entry, then select Save to HDD.

NOTE: Data cannot be saved or restored directly to or from the USB device to the machine.

6. Select Close to return to the service mode window.
7. Select Call Closeout to exit service mode

NVM Restore

1. If necessary, connect the USB drive to the USB port in the UI housing.

2. Enter service mode, [GP 1](#).
3. Select the Adjustments tab.
4. Select dC361 NVM Save and Restore.
The screen displays the NVM data.
5. Restore the NVM data.
 - a. Select the entry from the available NVM data on the hard drive.
NOTE: NVM data on a USB device should be copied to the hard drive before it can be restored.
 - b. Select Restore Machine NVM.
The status region at the top of the screen will report that the NVM was restored successfully.
6. Select Close to return to the service mode window.
7. Select Call Closeout to exit service mode.
8. Select Exit and Reboot.

dC604 Registration Setup Procedure

Description

The **dC604** routine allows the measurement and adjustment of image to paper registration for the Image Output Terminal.

Purpose

To measure and adjust the lead edge and top edge image to paper registration of the image output terminal by performing the routines that follow:

1. Image Output Terminal Registration **All Trays** side 1 - simplex lead and top edge registration adjustment.
2. Image Output Terminal Registration **All Trays** side 2 - duplex lead and top edge registration adjustment.
3. Image Output Terminal Registration **Individual trays** side 1 - simplex lead and top edge registration adjustment.
4. Image Output Terminal Registration **Individual trays** side 2 duplex lead and top edge registration adjustment.

Initial Action

- Ensure that 8.5 x 11 or A4 LEF paper is loaded in tray 1.

Procedure

NOTE: During the registration routines, the zone areas are either shifted or cropped, and the remaining lengths of the remaining test pattern rulers are used to calculate the new registration NVM values, *Figure 2*. The test pattern is designed for both market regions, therefore the size of the edge deletions will depend on the paper size.

- For A4 LEF paper, all edges have a 10mm deletion, but the bottom edge (Zone C on *Figure 1*) measures 28mm from the edge of the paper.
- For 8.5 x 11 LEF paper, all edges have a 10mm deletion, but the trail edge (Zone B on *Figure 1*) measures 16mm from the edge of the paper.

NOTE: Always perform the IOT Registration Side 1 adjustments before performing any other registration adjustment, as the IOT Registration Side 1 adjustment affects the others.

NOTE: Always perform an All Trays registration before the registration of any Individual Trays. If the processes are run in reverse order the registration of any individual trays will be overwritten and lost.

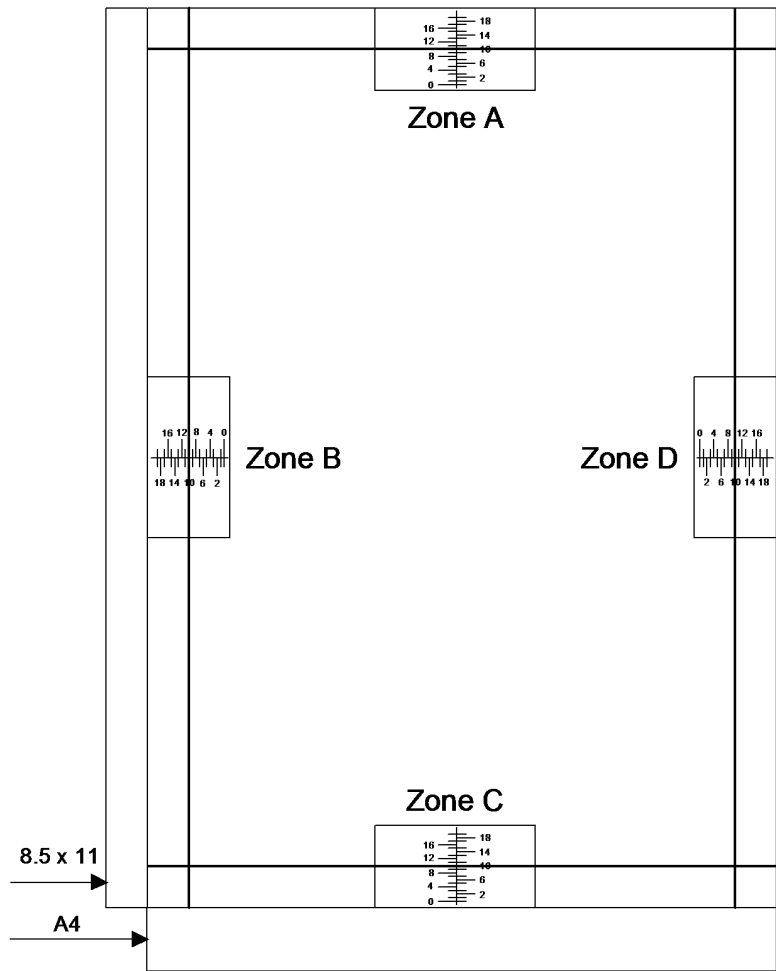
1. Enter service mode, **GP 1**.
2. Select the Adjustment tab.
3. Select dC604 Registration Setup.
4. Select **dC604 IOT Registration**.
5. Select **All Trays**.

NOTE: Do not select individual trays unless directed by the documentation.

6. Select Side 1.
7. Select Print Test Patterns, then follow the UI screen prompts.
8. Select Side 2.
9. Select Print Test Patterns, then follow the UI screen prompts.

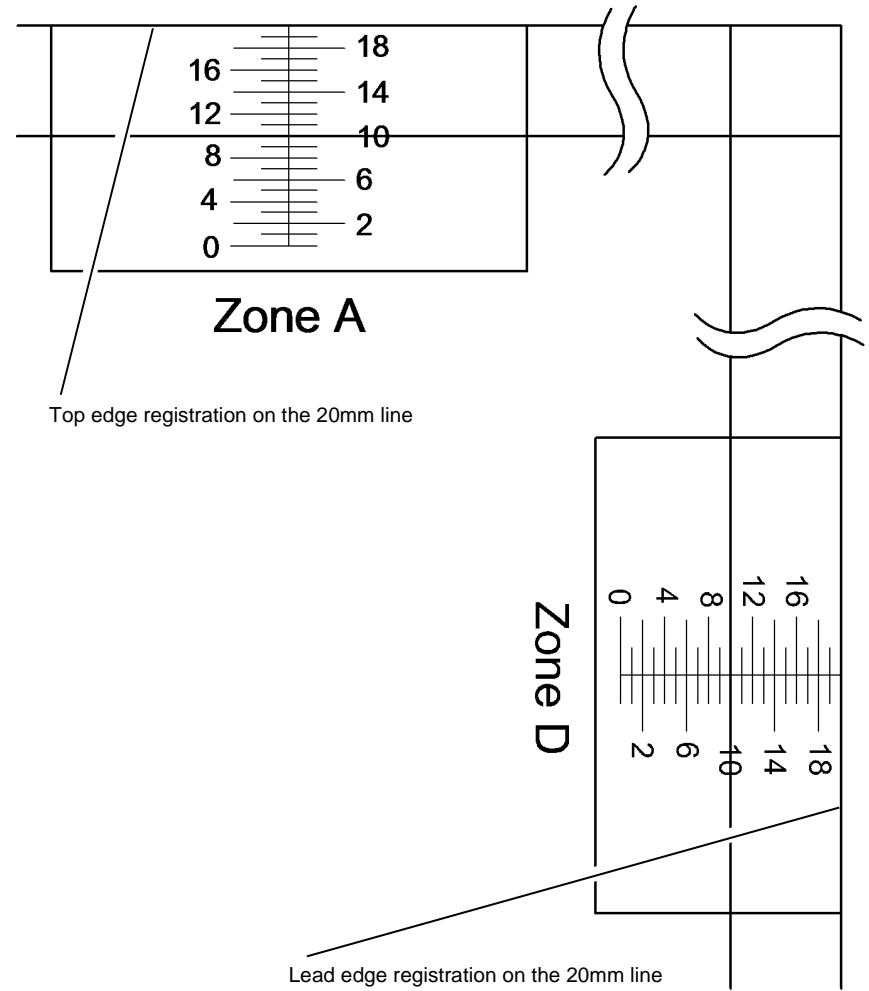
NOTE: The output prints are duplex. Side 2 is face up in the output tray.

10. If the correct registration can not be obtained because the registration scales are out of range or off the page, enter **dC301** NVM Initialization. Select Machine Variable NVM and initialize. This will reset all of the registration values to default. Return to step 3.
11. The individual trays can be adjusted to compensate for any mechanical variation between the trays, which may cause an error in the top edge registration.
The individual tray top edge has an adjustment range of +/-10mm with increments of 0.5mm. When saved, the adjustment will update the NVM offset value for the specific tray.
To adjust the top edge registration on individual trays perform the steps that follow:
 - a. Enter service mode **GP 1**.
 - b. Select the Adjustments tab.
 - c. Select dC604 Registration Setup.
 - d. Select **Individual trays**.
 - e. Select Print Test Patterns, then follow the UI screen prompts.
 - f. Select Image Output Terminal Registration Side 2. Repeat the above procedure as necessary.
 - g. Select Close to return to the service mode window.
 - h. Select Call Closeout to exit service mode.
 - i. Select Exit and Reboot.
12. Check for skew. Refer to **IQS 5** Skew.



X-1-1308-A

Figure 1 Registration test pattern



X-1-1309-A

Figure 2 IOT registration

dC608 Document Feeder Registration

Purpose

This feature checks the registration of the document feeder and corrects any misalignments. The process runs automatically and does not require any user intervention other than inserting 6 blank sheets, short edge feed in the document feeder.

Initial Action

This routine must be run in conjunction and in numerical order with the dC routines listed in [Table 1](#).

Table 1 dC routine order

IIT Conjunctional dC Routine Sequence
1. dC604 Image Output Terminal Registration
2. dC609 Document Glass Registration
4. dC610 CCD Lamp Profile Adjustment
5. dC608 Document Feeder Registration
6. dC945 IIT Calibration

Procedure

1. Enter service mode, [GP 1](#).
2. Select the Adjustments tab.
3. Perform all the listed dC routines preceding this routine in [Table 1](#).

NOTE: Do not continue with this routine unless [dC604](#), [dC609](#) and [dC610](#) have been performed.

4. Select [dC608](#) Document Feeder Registration.
5. Insert 3 blank A4 or 8.5x11 inch white sheets, SEF, into the document feeder.
6. Ensure the document guides are correctly adjusted.
7. Select Start.
The document feeder feeds the documents.
The screen displays the registration values.
8. Select Close to exit the routine.
9. Perform all the listed dC routines following this routine in [Table 1](#).
10. Select Call Closeout to exit service mode
11. Select Exit and Reboot.

NOTE: Ensure that [dC945](#) is performed after this routine has been completed.

dC609 Document Glass Registration

Purpose

This feature checks the registration of the document glass and corrects any misalignments. The process runs automatically and does not require any user intervention. Place a blank 8.5 x 11 inch or A4 sheet on the document glass and close the document handler.

Initial Action

This routine must be run in conjunction and in numerical order with the dC routines listed in [Table 1](#).

Table 1 dC routine order

IIT Conjunctional dC Routine Sequence
1. dC604 Image Output Terminal Registration
2. dC609 Document Glass Registration
4. dC610 CCD Lamp Profile Adjustment
5. dC608 Document Feeder Registration
6. dC945 IIT Calibration

Procedure

1. Enter service mode, [GP 1](#).
2. Select the Adjustments tab.
3. Perform all the listed dC routines preceding this routine in [Table 1](#).

NOTE: Do not continue with this routine unless [dC604](#), has been performed.

4. Select [dC609](#) Document Glass Registration.
The screen displays the current registration values.
5. Open the SPDH. Remove any documents from the document glass.
NOTE: The SPDH should remain open until this procedure is complete.
6. Select Start to run the routine.
The screen displays the values for before and after registration.
7. Select Close to exit the routine.
8. Perform all the listed dC routines following this routine in [Table 1](#).
9. Select Call Closeout to exit service mode.
10. Select Exit and Reboot.

NOTE: Ensure that [dC610](#), [dC608](#) and [dC945](#) are performed after this routine has been completed.

dC610 CCD Lamp Profile Adjustment

Purpose

To adjust the side 1 (scanner), then the side 2 (SPDH) scan lamps to maintain optimum image quality.

Initial Action

This routine must be run in conjunction and in numerical order with the dC routines listed in [Table 1](#).

Table 1 dC routine order

IIT Conjunctive dC Routine Sequence
1. dC604 Image Output Terminal Registration
2. dC609 Document Glass Registration
4. dC610 CCD Lamp Profile Adjustment
5. dC608 Document Feeder Registration
6. dC945 IIT Calibration

Procedure

1. Enter service mode, [GP 1](#).
2. Select the Adjustment tab.
3. Perform all the listed dC routines preceding this routine in [Table 1](#).

NOTE: Do not continue with this routine unless [dC604](#) and [dC609](#) have been performed.

4. Select [dC610](#) CCD Lamp Profile Adjustment., ensure the document handler is lowered,
5. Select Start to run the routine.
6. Select Close to exit the routine.
7. Perform all the listed dC routines following this routine in [Table 1](#).
8. Select Call Closeout to exit service mode.
9. Select Exit and Reboot.

NOTE: Ensure that [dC608](#) and [dC945](#) are performed after this routine has been completed.

dC610 Failure

- If [dC610](#) reports a failure when adjusting the side 1 (scanner), check the fault history of the machine. Clear any faults, Run [dC610](#) again. If side 1 still fails, check all wiring and connectors between the scanner PWB and the scan carriage assembly, refer to [WD15](#). Pay particular attention to ensure the ribbon cable connections are good.
- If [dC610](#) reports a failure when adjusting the side 2 (SPDH), check the fault history of the machine. Clear any faults, Run [dC610](#) again. If side 2 still fails, check all wiring connectors between the SPDH PWB and the side 2 scan assembly, refer to [WD12](#) and [WD15](#). Also check the wiring and connectors between the SPDH PWB and the scanner PWB, refer to [WD12](#). Pay particular attention to ensure the ribbon cable connections are good.

dC612 Print Test Pattern

Purpose

To print the internal test patterns.

NOTE: All test prints should be printed long edge feed.

Procedure

1. Enter service mode, [GP 1](#).
2. Select the Diagnostics tab.
3. Select [dC612](#) Print Test Pattern
4. Select the test pattern required. Refer to [IQ1](#) Image Quality Entry RAP. Select from the available options for the required test pattern.

NOTE: In most instances the recommended paper size is Letter/A4, but the test can be run from all trays, paper sizes or paper types.

5. Select Close to exit the routine.
6. Select Call Closeout to exit service mode.
7. Select Exit and Reboot.

NOTE: For details of test patterns, descriptions of their application, media size and other features, refer to [IQ1](#) Image Quality Entry RAP.

dC945 IIT Calibration

Purpose

To automatically calculate and set the white-reference correction factor for paper white and calibration strip variations. This procedure must be run whenever a side 2 scan assembly, scan carriage assembly, scanner module, scanner module component, or a complete SPDH is removed.

Initial Action

- Perform as appropriate [ADJ 60.1](#) Scanner Cleaning Procedure and/or [ADJ 60.2](#) Side 2 Scan Assembly Cleaning Procedure.
- This routine must be run in conjunction and in numerical order with the dC routines listed in [Table 1](#).

Table 1 dC routine order

IIT Conjunctional dC Routine Sequence
1. dC604 Image Output Terminal Registration
2. dC609 Document Glass Registration
4. dC610 CCD Lamp Profile Adjustment
5. dC608 Document Feeder Registration
6. dC945 IIT Calibration

Procedure

1. Enter service mode, [GP 1](#).
2. Select the Adjustments tab.

NOTE: This routine requires the use of 1 of the 5 approved paper types, set to a corresponding NVM value, [Table 2](#). If a correct paper type is not available, do not run the dC 945 routine. Leave the NVM setting at default, [Table 3](#).

3. Set the NVM value to your approved paper type, [Table 2](#). Refer to [dC131](#) NVM Read/Write.
4. Perform all the listed dC routines preceding this routine in [Table 1](#).

NOTE: Do not continue with this routine before [dC604](#), [dC609](#), [dC610](#) and [dC608](#) have been performed.

5. Select dC945 IIT Calibration.
6. Select Document Handler.
7. Follow the on screen instructions.
8. Repeat this procedure and confirm that the GUI values return the same numbers within +/- 3 run to run. If they return 255 run the routine until numbers less than 255 are displayed.
9. Select Platen.
10. Follow the on screen instructions.
11. Repeat this procedure and confirm that the GUI values return the same numbers within +/- 3 run to run. If they return 255 run the routine until numbers less than 255 are displayed.
12. Select Close to exit the routine.
13. Select Call Closeout to exit service mode.

14. Select Exit and Reboot.

Table 2 Approved paper types

Approved Paper Types for dC945	Approved Paper Size	ScannerPaperCode NVM Location 801-80 Value Setting
Xerox Performer 3R90569 80gsm	A3	1
Xerox Colour Impressions 3R97664, 90gsm	A3	5
Xerox ColorTechPlus 3R98839, 90gsm	A3	6
Discovery 75gsm	A3	7
Xerox Business 3R91821, 80gsm	A3	8

dC945 Failure

If [dC945](#) fails, perform the steps that follow:

1. Set the NVM values listed in [Table 3](#) to their default value. Refer to [dC131](#) NVM Read/Write.
2. Go to [SCP 1](#) Initial Actions. Then check the fault history of the machine. Clear any faults, then perform [dC945](#).

Table 3 NVM Values

Description	NVM Location	NVM Value
PlatenWhiteRefRed	801 - 81	260
PlatenWhiteRefGreen	801 - 82	262
PlatenWhiteRefBlue	801 - 83	260
PlatenWhiteRefMono	801 - 84	262
CvtWhiteRefMono	801 - 20	296
CvtWhiteRefRed	801 - 21	304
CvtWhiteRefGreen	801 - 22	301
CvtWhiteRefBlue	801 - 23	290
CvtWhiteRefMono	803 - 20	294
CvtWhiteRefRed	803 - 21	295
CvtWhiteRefGreen	803 - 22	295
CvtWhiteRefBlue	803 - 23	286

Tags

Purpose

To provide a list of all the tag numbers used, together with a description of each of the machine modifications.

Description

Each modification to the system is assigned a unique tag number. This section of the service documentation contains a listing and brief description of all change tags.

Change tags listed in this section are listed by machine module. The module to which the tag relates is identified by the tag prefix letter. For example; Tag F048 applies to the 2K LCSS. The module prefixes are:

- **Processor Tags** - 001 to 250 (no prefix).
- **SPDH Tags** - D001 to D050.
- **Scanner Tags** - S001 to S050.
- **2K LCSS Tags** - F001 to F050.
- **LVF BM Tags** - B001 to B050.
- **HVF BM Tags** - V001 to V050.
- **Tray 6 Tags** - P001 to P050.
- **Tray 7 Inserter Tags** - I001 to I050.
- **Fax Tags** - X001 to X050.

Tag Information

Information that may be included with each tag item is as follows:

- **Tag** - indicates the control number for the tag.
- **Class** - indicates the classification codes as listed in [Table 1](#).
- **Use** - identifies the multinational operating markets affected by the modification.
- **Manufacturing Serial Number** - indicates the serial number of the factory-built machines with the modification installed.
- **Purpose** - provides a brief description of the modification.
- **Name** - identifies the name of the part or modification.
- **Kit Number** - identifies the part number of the kit or part required to install the modification.
- **Reference or Parts List On** - indicates the parts list where the kit or modification part can be found.

Mod/Tag Plate Location

The Processor module. Open the left door assembly. The Mod/Tag plate is located on the inboard rear of the IOT frame.

The SPDH module. Lift up the SPDH top cover assembly. The Mod / Tag plate is located on the inside of the top cover on the outboard side.

The scanner module. Remove the scanner rear cover, [PL 5.10 Item 1](#). The Mod/Tag plate is located on the inside of the rear cover.

The 2K LCSS module. Un-dock the 2K LCSS. Refer to [REP 12.13-110](#). The Mod/Tag plate is located in the base pan of the 2K LCSS.

The LVF BM module. Undock the LVF BM module. Refer to [REP 12.13-150](#). The Mod/Tag plate is located on the booklet tamper assembly, [PL 12.380 Item 1](#).

The HVF module. Un-dock the HVF. Refer to [REP 12.13-171](#). The Mod/Tag plate is located on the metal panel below the docking latch.

Fax module. The Mod/Tag plate is located on the underside of the fax module.

Classification Codes

The class or classification codes are described in [Table 1](#).

Table 1 Classification codes

NASG Code	XE Code	Description
-	1	Safety: install this tag immediately.
M	2	Mandatory: install this tag at the next opportunity.
R	3	Repair: install this tag as a repair, at the failure of a component.
O	4	Optional: install as a customer option or a field engineering decision.
S	4	Situational: install as the situation demands.
N	5	Manufacturing: cannot be installed in the field.
-	6	Refurbishing only.

Processor Tags

TAG: 013

CLASS: 4

NAME: Disabled Toner Cartridge CRUM RFID Reader

PURPOSE: To disable the RFID functionality of the toner cartridge CRUM, then remove the toner cartridge PWB and associated wiring. This is a requirement in high security environments where RFID readers are not permitted. Refer to GP 42.

PARTS LIST ON: [PL 90.17](#)

TAG: 015

CLASS: 5

NAME: Foam Block for Radio Frequency Emissions

PURPOSE: To reduce radio frequency emissions by adding a conductive foam block between the SBC cage and the main chassis.

PARTS LIST ON: [PL 3.22 Item 26](#)

NOTE: This change applies only to XE build machines.

TAG: 016

CLASS: 5

NAME: Ferrite for Radio Frequency Emissions

PURPOSE: To reduce radio frequency emissions by adding a ferrite to the main motor harness.

PARTS LIST ON: None

NOTE: This change applies only to XE build machines.

TAG: 017

CLASS: 4

NAME: Tray 6 Short Edge Feed Kit

PURPOSE: To equip the tray 6 module with the short edge paper feed options for A4 and 8.5 x 11 inch/8.5 x 14 inch

PARTS LIST ON: [PL 31.12 Item 19](#)

TAG: 030

CLASS: 4

NAME: HCF Right Tray Elevator Motor Kit

PURPOSE: To install a replacement HCF right side elevator motor to reduce motor failures in the field.

PARTS LIST ON: [PL 31.12 Item 24](#)

SPDH Tags

TAG: D-000

Scanner Tags

TAG: S-000

2K LCSS Tags

TAG: F-000

LVF BM Tags

TAG: B-000

HVF BM Tags

TAG: V-010

CLASS: 3

NAME: HVF Ejector Assembly Kit

PURPOSE: To improve the stacking performance of the HVF finisher.

PARTS LIST ON: [PL 31.12 Item 23.](#)

Tray 6 Tags

TAG: P-000

Tray 7 Inserter Tags

TAG: I-000

Fax Tags

TAG: X-000

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Wiring Diagrams

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PJ Locations

PJ Location Tables

To locate a PJ go to the appropriate table.

NOTE:

- Connection numbers may be used in more than one location. The same PJ number may appear on the main machine, one of the finishers or the tray 6 module (PFP).
- For numbers that represent connections on an accessory device the connection number will show either LCSS, LVF, HVF or PFP. Where a PJ number (or other connection designator) shows no suffix then the connection is to be found within the main machine.
- Numbering formats vary across different devices. Connections are listed in numerical order. Leading zeros are included to differentiate similar numbers.

- HVPS Contacts, [Table 1](#).
- CN1 to CN40, [Table 2](#).
- PJ1 to PJ99, [Table 3](#).
- PJ100 to PJ199, [Table 4](#).
- PJ200 to PJ299, [Table 5](#).
- PJ300 to PJ399, [Table 6](#).
- PJ400 to PJ499, [Table 7](#).
- PJ500 to PJ599, [Table 8](#).
- PJ600 to PJ699, [Table 9](#).
- PJ700 to PJ799, [Table 10](#).
- PJ800 to PJ899, [Table 11](#).
- PJ900 to PJ999, [Table 12](#).
- PJX (HVF) to PJXX (HVF), [Table 13](#).
- A series, [Table 14](#).
- R series, [Table 15](#).
- S series, [Table 16](#).
- T series, [Table 17](#).
- TR series, [Table 18](#).

Location Figures for PWB Connectors and In-line Connectors

NOTE: Part list references are given with each figure.

NOTE: The pin numbers shown on the location figures depict the location of the pins as marked on the PWB. If the pin numbers marked on a harness connector differ, the PWB pin numbers take precedence.

1. 2K LCSS PWB, [Figure 1](#).
2. BM PWB, [Figure 2](#).
3. Environmental sensors PWB, [Figure 3](#).
4. Fax connector PWB, [Figure 4](#).
5. Finisher communications connector, [Figure 5](#).
6. Foreign device interface PWB, [Figure 6](#).
7. Fuser module, [Figure 7](#).
8. HVF PWB, [Figure 8](#).
9. HVPS, [Figure 9](#).
10. Inserter PWB, [Figure 10](#).
11. In-line connectors PJ177/178 and PJ179/180, [Figure 11](#).
12. In-line connectors PJ184/185, PJ187/188, PJ224/225 and PJ512, [Figure 12](#).
13. In-line connectors PJ198/199, PJ217/218, PJ222/223, PJ226/227 and PJ595, [Figure 13](#).
14. In-line connectors PJ250/251, PJ507, PJ508 and PJ514, [Figure 14](#).
15. In-line connector PJ620/622 and PJ621/623, [Figure 15](#).
16. In-line connector PJ740/741, [Figure 16](#).
17. IOT PWB, [Figure 17](#).
18. LED print head module, [Figure 18](#).
19. LVF PWB, [Figure 19](#).
20. LVF BM PWB, [Figure 20](#).
21. LVPS, [Figure 21](#).
22. Main drive module, [Figure 22](#).
23. Print cartridge, [Figure 23](#).
24. SBC PWB, [Figure 24](#).
25. Scanner PWB, [Figure 25](#).
26. SPDH PWB, [Figure 26](#).
27. Toner cartridge PWB, [Figure 27](#).
28. Tray 1 paper size sensing PWB, [Figure 28](#).
29. Tray 2 paper size sensing PWB, [Figure 29](#).
30. Tray 6 control PWB, [Figure 30](#).
31. Tri folder PWB, [Figure 31](#).
32. UI control PWB, [Figure 32](#).
33. UI emotive PWB, [Figure 33](#).
34. UI interface PWB, [Figure 34](#).
35. UI Status PWB, [Figure 35](#).

Table 1 HVPS contacts

PJ Number	Figure No.	PJ Location	Wiring Diagram
BTR	Figure 9	HVPS	WD 10
DTS	Figure 9	HVPS	WD 10
DB	Figure 9	HVPS	WD 10
BCR	Figure 9	HVPS	WD 10

Table 2 CN1 to CN 99

CN Number	Figure No.	PJ Location	Wiring Diagram
2	Figure 25	Scanner PWB	WD 3
3	Figure 25	Scanner PWB	WD 12
4	Figure 25	Scanner PWB	WD 15
5	Figure 25	Scanner PWB	WD 15
6	Figure 25	Scanner PWB	WD 15
7	Figure 25	Scanner PWB	WD 3
8	Figure 25	Scanner PWB	WD 15
9	Figure 25	Scanner PWB	WD 15
10	Figure 25	Scanner PWB	WD 12
11	Figure 26	SPDH PWB	WD 12
12	Figure 26	SPDH PWB	WD 12
13	Figure 26	SPDH PWB	WD 13
17	Figure 26	SPDH PWB	WD 13
21	Figure 26	SPDH PWB	WD 13
31	Figure 26	SPDH PWB	WD 13
33	Figure 26	SPDH PWB	WD 13
34	Figure 26	SPDH PWB	WD 13
35	Figure 26	SPDH PWB	WD 13
36	Figure 26	SPDH PWB	WD 14
37	Figure 26	SPDH PWB	WD 14
40	Figure 26	SPDH PWB	WD 14

Table 3 PJ1 to PJ99

PJ Number	Figure No.	PJ location	Wiring Diagram
1	Figure 4	Fax connector PWB	WD 4
1	Figure 21	LVPS	WD 1
1 (HVF)	Figure 10	Insertter PWB	WD 45
2	Figure 4	Fax connector PWB	WD 4

Table 3 PJ1 to PJ99

PJ Number	Figure No.	PJ location	Wiring Diagram
2 (HVF)	Figure 10	Insertter PWB	WD 45
3 (HVF)	Figure 10	Insertter PWB	WD 45
4 (HVF)	Figure 10	Insertter PWB	WD 45
4 (HVF)	Figure 10	Insertter PWB	WD 46
5 (HVF)	Figure 10	Insertter PWB	WD 45
6 (HVF)	Figure 10	Insertter PWB	WD 45
7 (HVF)	Figure 10	Insertter PWB	WD 45
8 (HVF)	Figure 10	Insertter PWB	WD 45
8 (HVF)	Figure 10	Insertter PWB	WD 46
9 (HVF)	Figure 10	Insertter PWB	WD 46
10 (HVF)	Figure 10	Insertter PWB	WD 46
11 (HVF)	Figure 10	Insertter PWB	WD 46
12 (HVF)	Figure 10	Insertter PWB	WD 46
16	Figure 6	Foreign device interface PWB	WD 4
25	Figure 24	SBC PWB	WD 3

Table 4 PJ100 to PJ199

PJ Number	Figure No.	PJ Location	Wiring Diagram
100	Figure 6	Foreign device interface PWB	WD 4
100	Figure 7	Fuser module	WD 9
101 (LVF)	Figure 20	LVF BM PWB	WD 26, WD 27
101 (HVF)	Figure 8	HVF PWB	WD 31
101 (HVF)	Figure 8	HVF PWB	WD 31
102 (LVF)	Figure 20	LVF BM PWB	WD 26, WD 27
102 (HVF)	Figure 8	HVF BWB	WD 31, WD 32
103 (LVF)	Figure 20	LVF BM PWB	WD 27
103 (HVF)	Figure 8	HVF PWB	WD 32
104 (LVF)	Figure 20	LVF BM PWB	WD 27
104 (HVF)	Figure 8	HVF PWB	WD 32
105 (LVF)	Figure 20	LVF BM PWB	WD 28
106 (LVF)	Figure 20	LVF BM PWB	WD 28
107 (LVF)	Figure 20	LVF BM PWB	WD 28
108 (LVF)	Figure 20	LVF BM PWB	WD 28
109 (LVF)	Figure 20	LVF BM PWB	WD 28
110 (LVF)	Figure 20	LVF BM PWB	WD 29
111 (LVF)	Figure 20	LVF BM PWB	WD 29
111 (HVF)	Figure 8	HVF PWB	WD 30, WD 32
112 (LVF)	Figure 20	LVF BM PWB	WD 29
112 (HVF)	Figure 8	HVF PWB	WD 30, WD 32

Table 4 PJ100 to PJ199

PJ Number	Figure No.	PJ Location	Wiring Diagram
113 (LVF)	Figure 20	LVF BM PWB	WD 29
113 (HVF)	Figure 8	HVF PWB	WD 30, WD 32
121 (HVF)	Figure 8	HVF PWB	WD 33
124	Figure 6	Foreign device	WD 4
131 (HVF)	Figure 8	HVF PWB	WD 30, WD 33
132 (HVF)	Figure 8	HVF PWB	WD 30, WD 33
133 (HVF)	Figure 8	HVF PWB	WD 33
141	Figure 7	Fuser module	WD 9
177	Figure 11	In-line connector IOT PWB side	WD 5, WD 6
180	Figure 11	In-line connector IOT PWB side	WD 5, WD 6
184	Figure 12	In-line connector IOT PWB side	WD 7
185	Figure 12	In-line connector component side	WD 7
187	Figure 12	In-line connector cartridge side	WD 9
188	Figure 12	In-line connector IOT PWB side	WD 9

Table 5 PJ200 to PJ299

PJ Number	Figure No.	PJ Location	Wiring Diagram
200		In-line connector component side	WD 5, WD 6
201		in-line connector component side	WD 15
201 (HVF)	Figure 8	HVF PWB	WD 33
202 (HVF)	Figure 8	HVF PWB	WD 34
202 (HVF)	Figure 8	HVF PWB	WD 34
222	Figure 13	In-line connector IOT PWB side	WD 8
223	Figure 13	In-line connector motor side	WD 8
224	Figure 12	In-line connector IOT PWB side	WD 8
225	Figure 12	In-line connector motor side	WD 8
226	Figure 13	In-line connector component side	WD 5
245	Figure 27	Toner cartridge PWB	WD 12
279		In-line connector component side	WD 5, WD 6

Table 6 PJ300 to PJ399

PJ Number	Figure No.	PJ Location	Wiring Diagram
300 (LCSS)	Figure 1	2K LCSS PWB	WD 19
300 (LVF)	Figure 19	LVF PWB	WD 23
301 (LCSS)	Figure 1	2K LCSS PWB	WD 19
301 (LVF)	Figure 19	LVF PWB	WD 23
301 (HVF)	Figure 8	HVF PWB	WD 34

Table 6 PJ300 to PJ399

PJ Number	Figure No.	PJ Location	Wiring Diagram
302 (LCSS)	Figure 1	2K LCSS PWB	WD 19
302 (LVF)	Figure 19	LVF PWB	WD 23
303 (LCSS)	Figure 1	2K LCSS PWB	WD 19
303 (LVF)	Figure 19	LVF PWB	WD 23
304 (LCSS)	Figure 1	2K LCSS PWB	WD 19
304 (LVF)	Figure 19	LVF PWB	WD 23
305 (LCSS)	Figure 1	2K LCSS PWB	WD 19
305 (LVF)	Figure 19	LVF PWB	WD 23
306 (LCSS)	Figure 1	2K LCSS PWB	WD 20
306 (LVF)	Figure 19	LVF PWB	WD 24
307 (LCSS)	Figure 1	2K LCSS PWB	WD 20
307 (LVF)	Figure 19	LVF PWB	WD 24
308 (LCSS)	Figure 1	2K LCSS PWB	WD 20
308 (LVF)	Figure 19	LVF PWB	WD 24
309 (LCSS)	Figure 1	2K LCSS PWB	WD 21
309 (LVF)	Figure 19	LVF PWB	WD 25
310 (LCSS)	Figure 1	2K LCSS PWB	WD 21
310 (LVF)	Figure 19	LVF PWB	WD 25
311 (LCSS)	Figure 1	2K LCSS PWB	WD 21
311 (LVF)	Figure 19	LVF PWB	WD 25
312 (LCSS)	Figure 1	2K LCSS PWB	WD 21
312 (LVF)	Figure 19	LVF PWB	WD 25
313 (LCSS)	Figure 1	2K LCSS PWB	WD 22
314 (LCSS)	Figure 1	2K LCSS PWB	WD 22
314 (LVF)	Figure 19	LVF PWB	WD 26
315 (LCSS)	Figure 1	2K LCSS PWB	WD 22
315 (LVF)	Figure 19	LVF PWB	WD 26
316 (LCSS)	Figure 1	2K LCSS PWB	WD 22
316 (LVF)	Figure 19	LVF PWB	WD 26
317 (LCSS)	Figure 1	2K LCSS PWB	WD 22
318 (LCSS)	Figure 1	2K LCSS PWB	WD 22
318 (LVF)	Figure 19	LVF PWB	WD 26

Table 7 PJ400 to PJ499

PJ Number	Figure No.	PJ Location	Wiring Diagram
400 (LVF)	Figure 19	LVF PWB	WD 26
401 (LVF)	Figure 19	LVF PWB	WD 26
401 (HVF)	Figure 8	HVF PWB	WD 36
402 (LVF)	Figure 19	LVF PWB	WD 26

Table 7 PJ400 to PJ499

PJ Number	Figure No.	PJ Location	Wiring Diagram
402 (HVF)	Figure 8	HVF PWB	WD 36
403 (HVF)	Figure 8	HVF PWB	WD 36

Table 8 PJ500 to PJ599

PJ Number	Figure No.	PJ Location	Wiring Diagram
501 (HVF)	Figure 8	HVF PWB	WD 36
502 (HVF)	Figure 8	HVF PWB	WD 37
503 (HVF)	Figure 8	HVF PWB	WD 48
507	Figure 14	In-line connector tray 3 feed clutch	WD 7
508	Figure 14	In-line connector tray 3 elevator motor	WD 7
510	Figure 23	Print cartridge	WD 9
511	Figure 18	LED print head module	WD 2
512	Figure 12	In-line connector	WD 9
513	Figure 23	Print cartridge	WD 9
537	Figure 28	Tray 1 paper size sensing PWB	WD 5
544	Figure 29	Tray 2 paper size sensing PWB	WD 5
551 (HVF)	Figure 2	BM PWB	WD 40
551 (HVF)	Figure 2	BM PWB	WD 40
552 (HVF)	Figure 2	BM PWB	WD 40
552 (HVF)	Figure 2	BM PWB	WD 41
553 (HVF)	Figure 2	BM PWB	WD 30
553 (HVF)	Figure 2	BM PWB	WD 41
554 (HVF)	Figure 2	BM PWB	WD 41
554 (HVF)	Figure 2	BM PWB	WD 41
555 (HVF)	Figure 2	BM PWB	WD 41
555 (HVF)	Figure 2	BM PWB	WD 42
556 (HVF)	Figure 2	BM PWB	WD 42
556 (HVF)	Figure 2	BM PWB	WD 42
557 (HVF)	Figure 2	BM PWB	WD 42
559 (HVF)	Figure 2	BM PWB	WD 30
559 (HVF)	Figure 2	BM PWB	WD 43
560 (HVF)	Figure 2	BM PWB	WD 43
562 (HVF)	Figure 2	BM PWB	WD 43
563 (HVF)	Figure 2	BM PWB	WD 43
571		In-line connector IOT PWB side	WD 18
577 (HVF)		In-line connector BM crease roll gate motor	WD 42
578 (HVF)		In-line connector BM compiler motor	WD 41
579 (HVF)		In-line connector BM back stop motor	WD 41

Table 8 PJ500 to PJ599

PJ Number	Figure No.	PJ Location	Wiring Diagram
580 (HVF)		In-line connector	WD 41

Table 9 PJ600 to PJ699

PJ Number	Figure No.	PJ Location	Wiring Diagram
601 (HVF)	Figure 31	Tri-folder PWB	WD 30
601 (HVF)	Figure 8	HVF PWB	WD 37
601 (HVF)	Figure 8	HVF PWB	WD 37
601 (HVF)	Figure 31	Tri folder PWB	WD 44
602 (HVF)	Figure 8	HVF PWB	WD 37
602 (HVF)	Figure 31	Tri folder PWB	WD 44
603 (HVF)	Figure 31	Tri folder PWB	WD 44
604 (HVF)	Figure 31	Tri folder PWB	WD 44
605 (HVF)	Figure 31	Tri folder PWB	WD 44
606 (HVF)		In-line connector	WD 44
620	Figure 15	In-line connector IOT PWB side	WD 9
621	Figure 15	In-line connector LVPS side	WD 1
622	Figure 15	In-line connector fuser side	WD 9
623	Figure 15	In-line connector main drive module side	WD 1
650	Figure 21	LVPS	WD 1, WD 9
651	Figure 21	LVPS	WD 1
652	Figure 21	LVPS	WD 1
653	Figure 21	LVPS	WD 1, WD 9
654	Figure 21	LVPS	WD 1, WD 12
655	Figure 21	LVPS	WD 1, WD 2
656	Figure 21	LVPS	WD 30, WD 1,
660 (HVF)		In-line connector HVFBM bin 2 assembly	WD 42

Table 10 PJ700 to PJ799

PJ Number	Figure No.	PJ Location	Wiring Diagram
701 (HVF)	Figure 8	HVF PWB	WD 37
701 (HVF)	Figure 8	HVF PWB	WD 38
702 (HVF)	Figure 8	HVF PWB	WD 38
703 (HVF)	Figure 8	HVF PWB	WD 38
703 (HVF)	Figure 8	HVF PWB	WD 30
705		In-line connector IOT PWB side	WD 5

Table 10 PJ700 to PJ799

PJ Number	Figure No.	PJ Location	Wiring Diagram
706		In-line connector sensor side	WD 5
708		In-line connector IOT PWB side	WD 5
709		In-line connector sensor side	WD 5
711		In-line connector IOT PWB side	WD 5
712		In-line connector IOT PWB side	WD 6
713		In-line connector sensor side	WD 6
740	Figure 16	In-line connector print cartridge side	WD 9
741	Figure 17	In-line connector fuser side	WD 9
750	Figure 17	IOT PWB	WD 5
751	Figure 17	IOT PWB	WD 5
752	Figure 17	IOT PWB	WD 6
754	Figure 17	IOT PWB	WD 6
755	Figure 17	IOT PWB	WD 6
756	Figure 17	IOT PWB	WD 7
757	Figure 17	IOT PWB	WD 7
759	Figure 17	IOT PWB	WD 7
761	Figure 17	IOT PWB	WD 7
762	Figure 17	IOT PWB	WD 8
763	Figure 17	IOT PWB	WD 8
764	Figure 17	IOT PWB	WD 9
766	Figure 17	IOT PWB	WD 9
767	Figure 17	IOT PWB	WD 9
768	Figure 17	IOT PWB	WD 10
769	Figure 17	IOT PWB	WD 10
770	Figure 17	IOT PWB	WD 10
772	Figure 17	IOT PWB	WD 10
773	Figure 17	IOT PWB	WD 10
776	Figure 17	IOT PWB	WD 12
782	Figure 17	IOT PWB	WD 12
785	Figure 17	IOT PWB	WD 17
786	Figure 17	IOT PWB	WD 17
791	Figure 17	IOT PWB	WD 12

Table 11 PJ800 to PJ899

PJ Number	Figure No.	PJ Location	Wiring Diagram
801 (HVF)	Figure 8	HVF PWB	WD 38
801 (HVF)	Figure 8	HVF PWB	WD 39
801 (HVF)	Figure 8	HVF PWB	WD 39
802 (HVF)	Figure 8	HVF PWB	WD 39

Table 11 PJ800 to PJ899

PJ Number	Figure No.	PJ Location	Wiring Diagram
802 (HVF)	Figure 8	HVF PWB	WD 39
830	Figure 9	HVPS	WD 10
850	Figure 24	SBC PWB	WD 2
851	Figure 24	SBC PWB	WD 2
852	Figure 24	SBC PWB	WD 2
853	Figure 24	SBC PWB	WD 2
861	Figure 24	SBC PWB	WD 3
864	Figure 24	SBC PWB	WD 4
865	Figure 24	SBC PWB	WD 4
866	Figure 24	SBC PWB	WD 10, WD 4
867	Figure 24	SBC PWB	WD 4
880	Figure 24	SBC PWB	WD 4
881	Figure 24	SBC PWB	WD 4
882	Figure 24	SBC PWB	WD 4
889	Figure 24	SBC PWB	WD 4

Table 12 PJ900 to PJ999

PJ Number	Figure No.	PJ Location	Wiring Diagram
901 (HVF)	Figure 8	HVF PWB	WD 39
902	Figure 32	UI control PWB	WD 4
911		In-line connector	WD 4
920	Figure 34	UI interface PWB	WD 4
921	Figure 34	UI interface PWB	WD 4
922	Figure 34	UI interface PWB	WD 4
973	Figure 22	Main drive module	WD 1
977	Figure 22	Main drive module	WD 8
982		Environmental sensors PWB	WD 8

Table 13 PJ Alphabetical Series

PJ Letter	Figure No.	PJ Location	Wiring Diagram
PJXX (HVF)		In-line connector	WD 35

Table 14 A Series

PJ Letter	Figure No.	PJ Location	Wiring Diagram
A077		In-line connector	WD 47

Table 15 R Series

R Number	Figure No.	PJ Location	Wiring Diagram
1 (HVF)		in-line connector	WD 34
1 (HVF)		In-line connector	WD 38
2 (HVF)		In-line connector	WD 34
2 (HVF)		In-line connector	WD 35
3 (HVF)		In-line connector	WD 36
4 (HVF)		In-line connector	WD 35
4 (HVF)		In-line connector	WD 35
4 (HVF)		In-line connector HVF PWB side	WD 38
5 (HVF)		In-line connector	WD 35
5 (HVF)		In-line connector	WD 35
5 (HVF)		In-line connector	WD 36
5 (HVF)		In-line connector HVF PWB side	WD 39
6 (HVF)		In-line connector	WD 35
6 (HVF)		In-line connector HVF PWB side	WD 39
8 (HVF)		In-line connector HVF PWB side	WD 39
8 (HVF)		In-line connector HVF PWB side	WD 39
9 (HVF)		IN-line connector HVF PWB side	WD 39
10 (HVF)		In-line connector	WD 36
021 (HVF)		In-line connector	WD 31
21 (HVF)		In-line connector sensor side	WD 38
21 (HVF)		In-line connector inserter PWB side	WD 38
026 (HVF)		In-line connector HVF control PWB side	WD 31
027 (HVF)		In-line connector HVF PWB side	WD 38
071 (HVF)		In-line connector	WD 36
071 (HVF)		In-line connector HVF PWB side	WD 48
072 (HVF)		In-line connector	WD 36
072 (HVF)		In-line connector	WD 36
72 (HVF)		In-line connector HVF PWB side	WD 47
073 (HVF)		In-line connector HVF PWB side	WD 47
201 (HVF)		In-line connector	WD 33
211 (HVF)		in-line connector	WD 33
211 (HVF)		in-line connector	WD 34
221 (HVF)		In-line connector	WD 33
0211 (HVF)		In-line connector	WD 31
0211 (HVF)		In-line connector sensor side	WD 31
0227 (HVF)		In-line connector	WD 31
301 (HVF)		In-line connector	WD 34
301 (HVF)		In-line connector	WD 35

Table 15 R Series

R Number	Figure No.	PJ Location	Wiring Diagram
401 (HVF)		In-line connector ejector assembly side	WD 39
402 (HVF)		In-line connector ejector roll motor side	WD 39
403 (HVF)		In-line connector sensor side	WD 36
403 (HVF)		In-line connector pressing and support motor side	WD 39
404 (HVF)		In-line connector ejector motor side	WD 39
404 (HVF)		In-line connector ejector roll motor side	WD 39
404 (HVF)		In-line connector pressing and support motor side	WD 39
411 (HVF)		In-line connector	WD 39
411 (HVF)		In-line connector sensor side	WD 36
411 (HVF)		In-line connector	WD 35
412 (HVF)		In-line connector	WD 39
421 (HVF)		In-line connector	WD 39
421 (HVF)		In-line connector	WD 35
421 (HVF)		In-line connector sensor side	WD 36
422 (HVF)		In-line connector	WD 35
702 (HVF)		In-line connector HVF PWB side	WD 38

Table 16 S Series

S Number	Figure No.	PJ Location	Wiring Diagram
071 (HVF)		In-line connector sensor side	WD 36
071 (HVF)		In-line connector sensor side	WD 36
071 (HVF)		In-line connector sensor side	WD 36
071 (HVF)		In-line connector punch head motor side	WD 47
071 (HVF)		In-line connector punch unit motor side	WD 47
072 (HVF)		In-line connector sensor side	WD 47
831 (HVF)		In-line connector	WD 34
831 (HVF)		In-line connector stapler unit side	WD 38
841 (HVF)		In-line connector	WD 34
841 (HVF)		In-line connector	WD 34
841 (HVF)		In-line connector rear tamper motor side	WD 38

Table 17 T Series

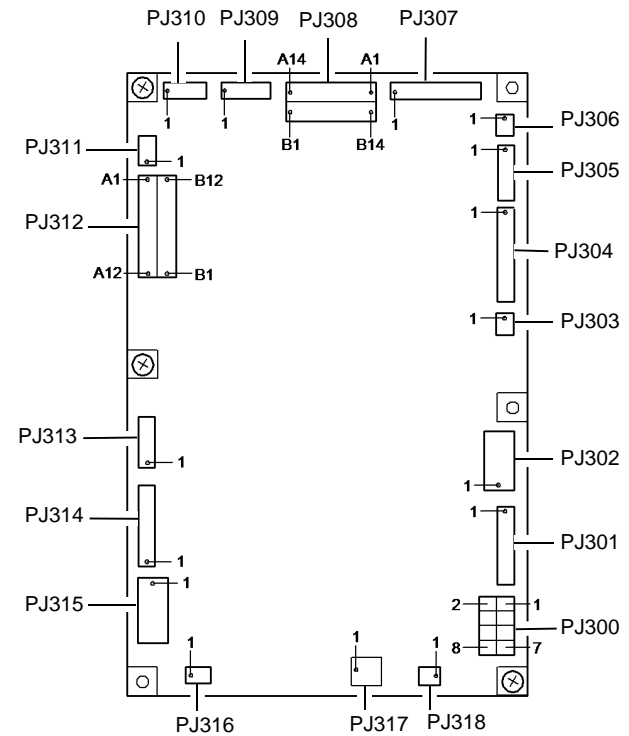
T Number	Figure No.	PJ Location	Wiring Diagram
055 (HVF)		In-line connector	WD 37
055 (HVF)		In-line connector HVF PWB side	WD 38
074 (HVF)		In-line connector	WD 37
077 (HVF)		In-line connector	WD 36
077 (HVF)		In-line connector inserter PWB side	WD 38
077 (HVF)		In-line connector	WD 47
077A (HVF)		In-line connector	WD 47

Table 18 TR Series

TR Number	Figure No.	PJ Location	Wiring Diagram
0217 (HVF)		In-line connector	WD 31

2K LCSS PWB

Location: [PL 12.75 Item 1.](#)



X-1-0863-A

Figure 1 2K LCSS PWB

BM PWB

Location: [PL 12.175 Item 10.](#)

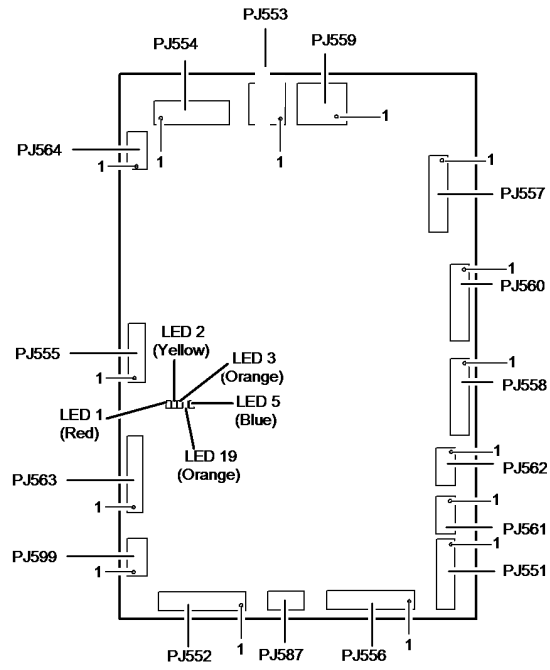


Figure 2 BM PWB

X-1-1999-A

Environmental Sensors PWB

Location: [PL 90.15 Item 4.](#)

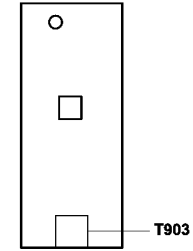


Figure 3 Environmental sensors PWB

X-1-2018-A

Fax Connector PWB

Location: [PL 20.05 Item 4.](#)

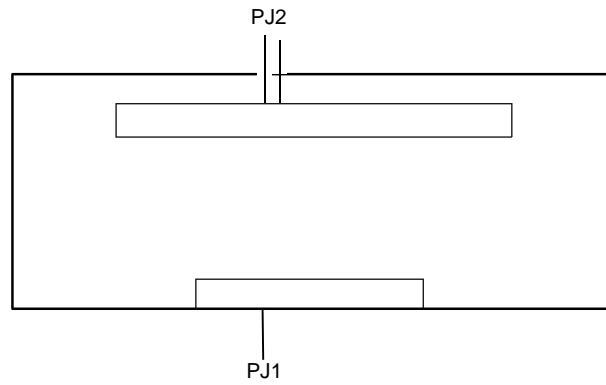
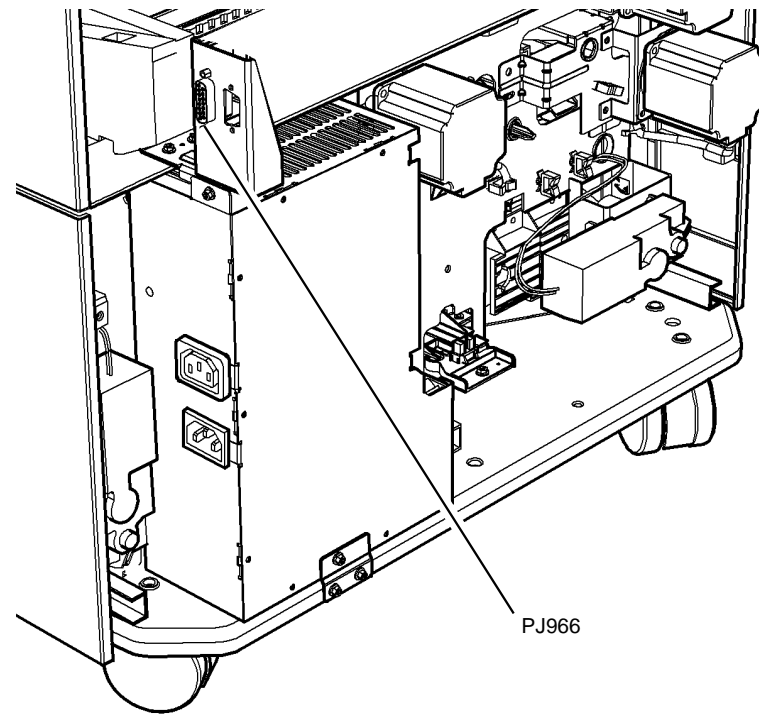


Figure 4 Fax connector PWB

X-10898-A

Finisher Communications Connector PJ966

Location: [PL 1.10.](#)



X-1-1306-A

Figure 5 Finisher communications connector

Foreign Device Interface PWB

Location: PL 3.22 Item 18.

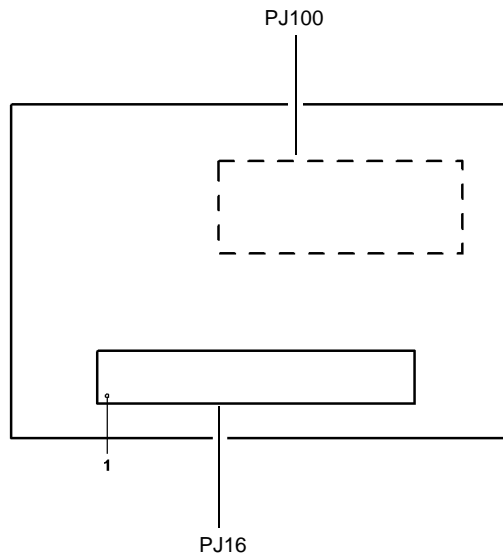


Figure 6 Foreign device interface PWB

X-1-0897-A

Fuser Module

Location: PL 10.10 Item 1.

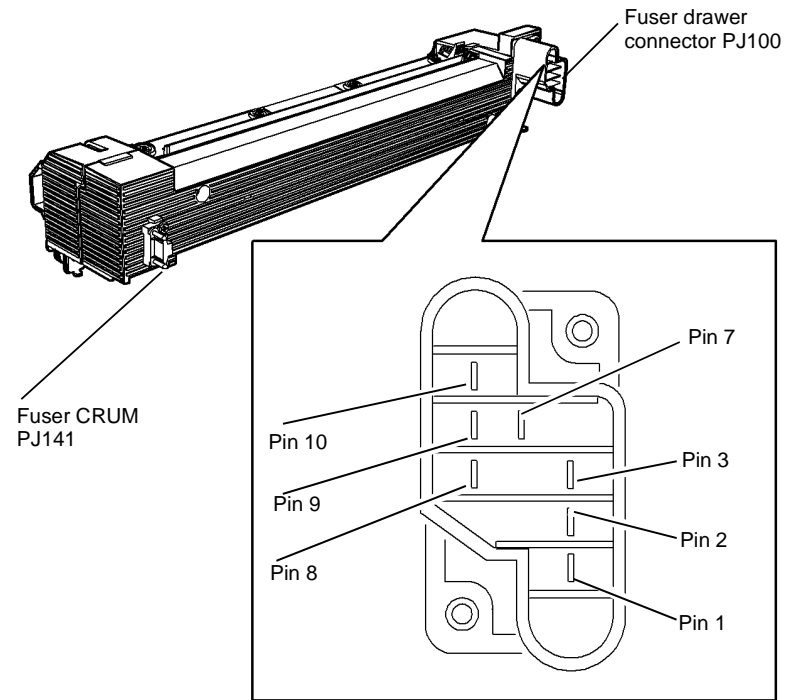


Figure 7 Fuser module

X-1-1304-A

HVF PWB

Location: PL 12.140 Item 3.

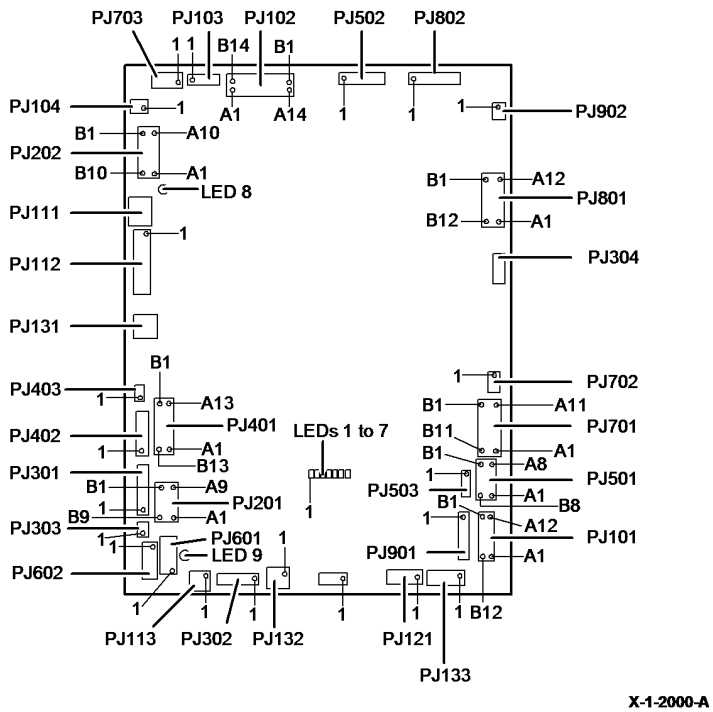


Figure 8 HVF PWB

HVPS

Location: PL 1.10 Item 4.

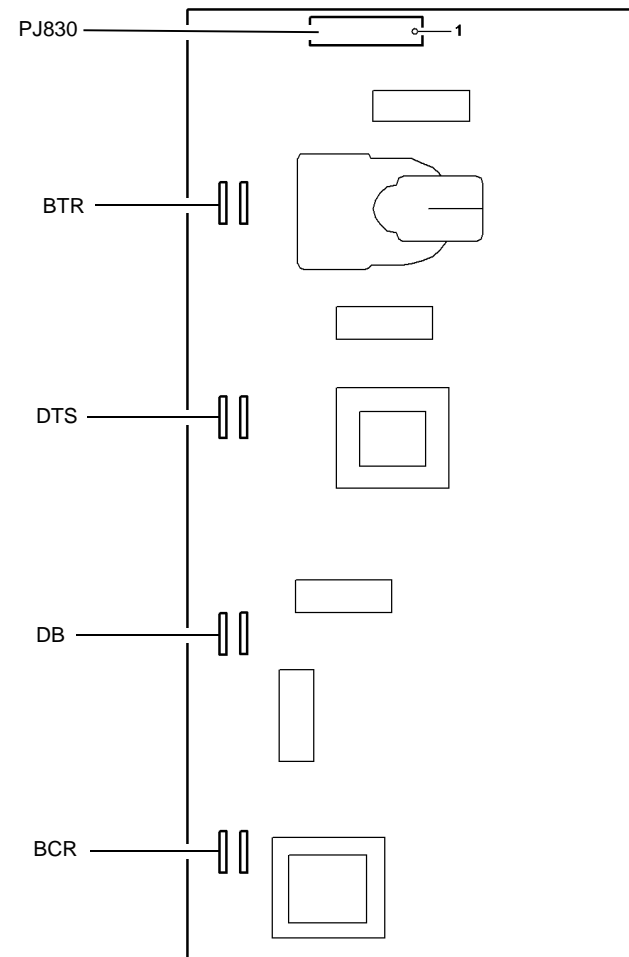
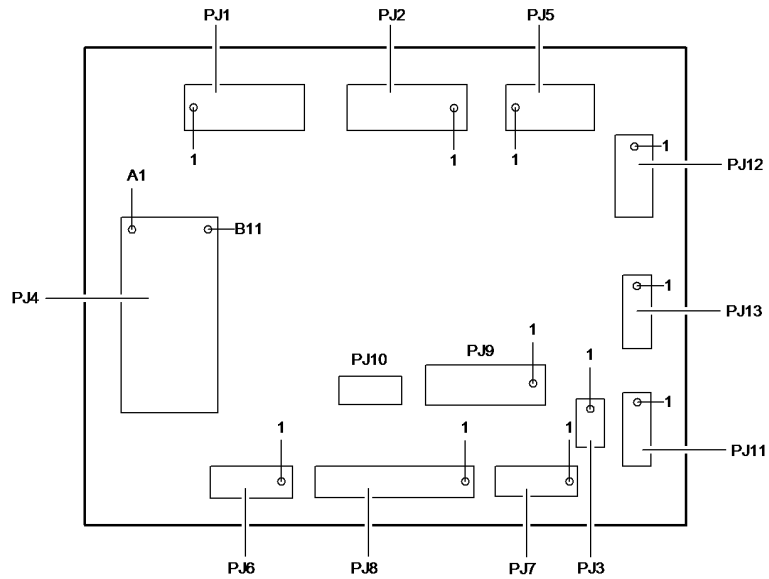


Figure 9 HVPS

Inserter PWB

Location: [PL 12.310](#) Item 9.

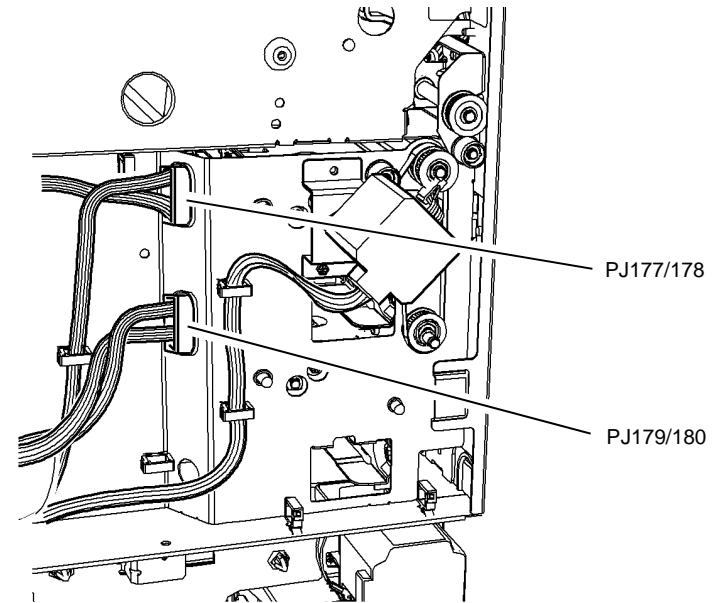


X-1-2001-A

Figure 10 Inserter PWB

In-line Connectors PJ177/178 and PJ179/180

Location: [PL 80.26](#).

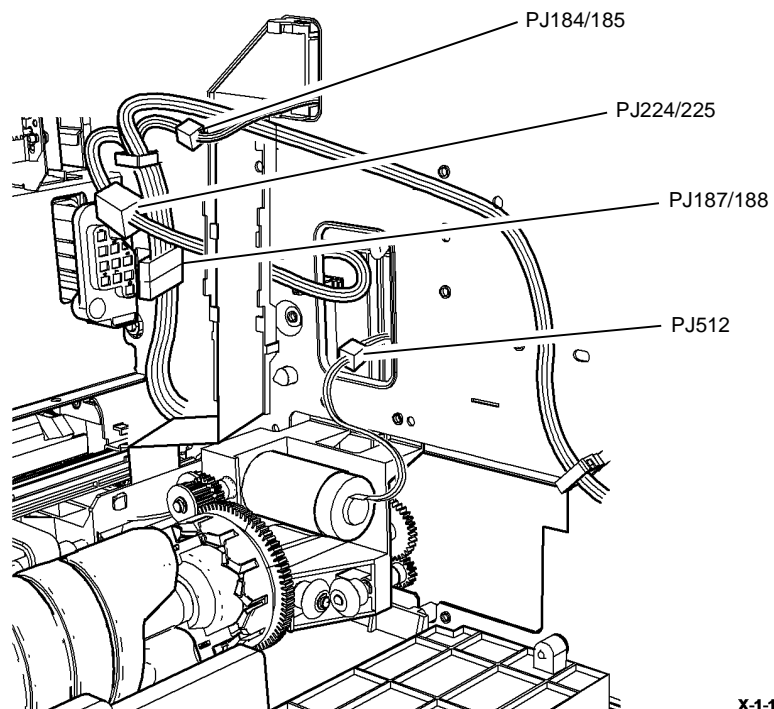


X-1-1166-A

Figure 11 In-line connectors

In-line Connectors PJ184/185, 187/188, PJ224/225 and PJ512

Location: [PL 10.11](#), [PL 10.13](#) and [PL 90.17](#).



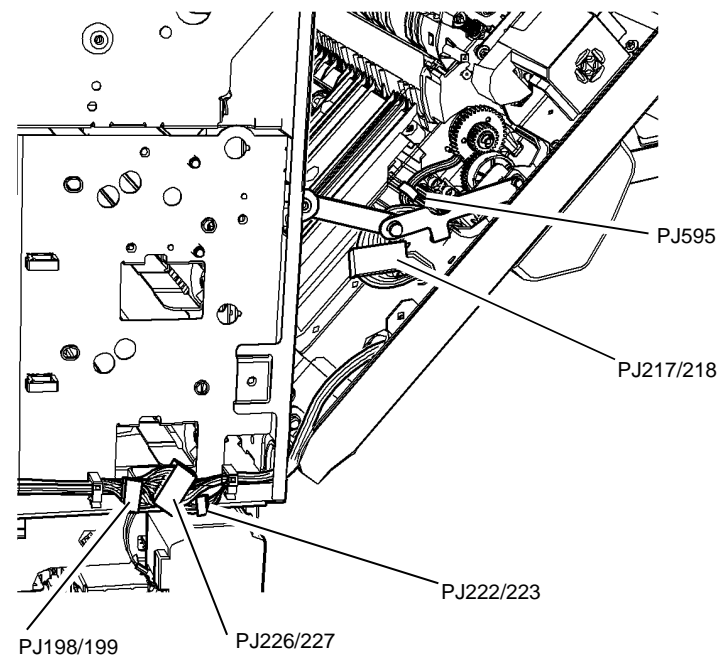
X-1-1170-A

Figure 12 In-line connectors

In-line Connectors PJ198/199, PJ217/218, PJ222/223, PJ226/227 and PJ595

Location: [PL 70.21](#).

NOTE: For clarity, the connector cover, [PL 80.11 Item 22](#) is not shown in [Figure 13](#).



X-1-1165-A

Figure 13 In-line connectors

In-line Connectors PJ250/251, PJ507, PJ508 and PJ514

Location: [PL 70.21](#).

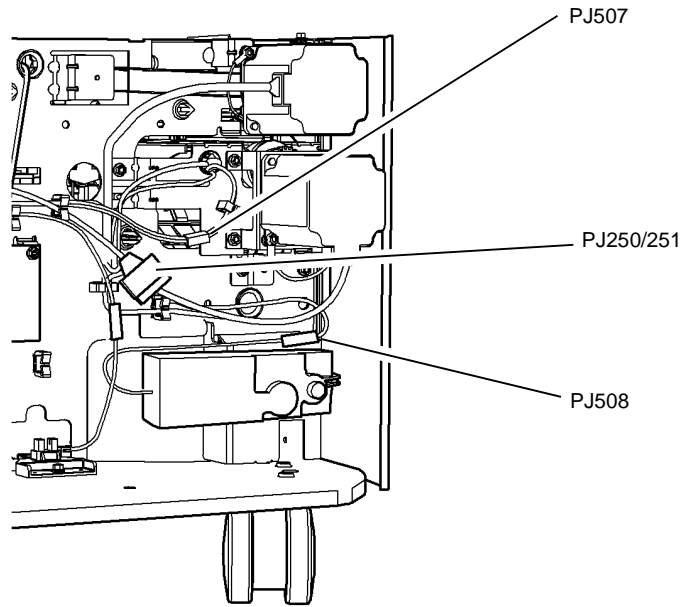


Figure 14 In-line connectors

X-1-1302-A

In-line Connectors PJ620/622 and PJ621/623

Location: [PL 40.15](#).

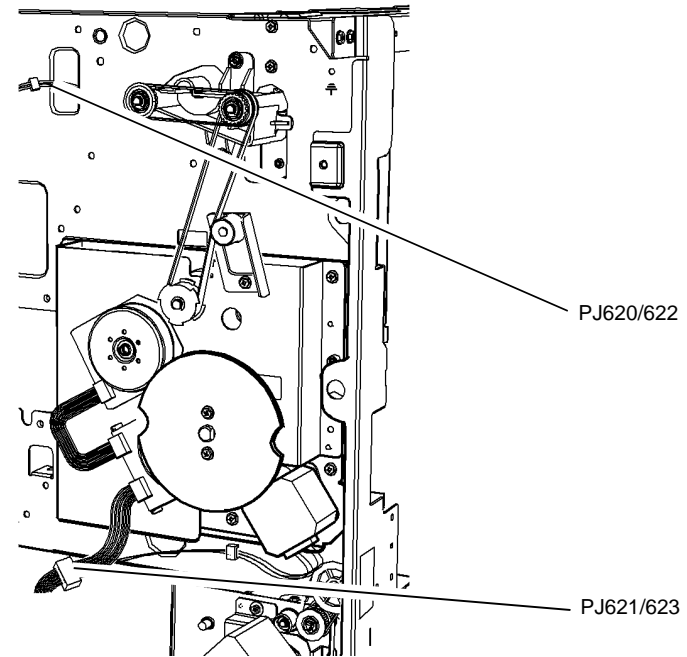
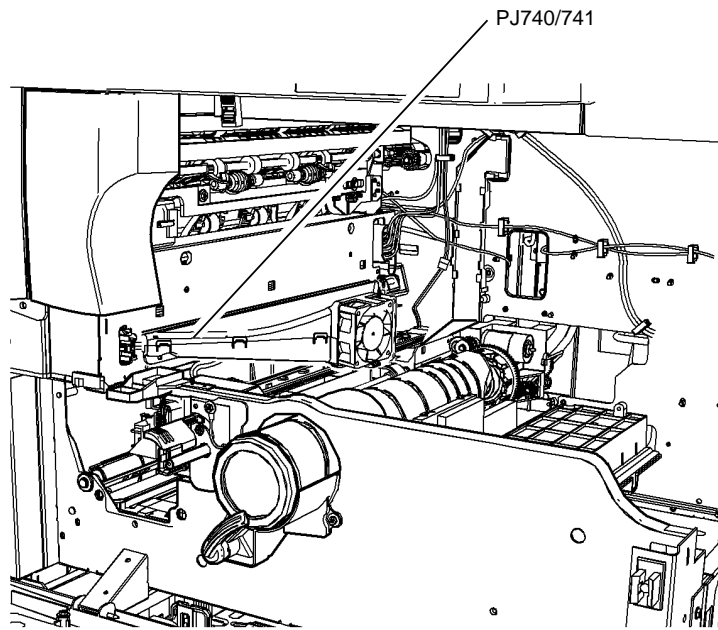


Figure 15 In-line connector

X-1-1380-A

In-line Connector PJ740/741

Location: [PL 60.35](#).

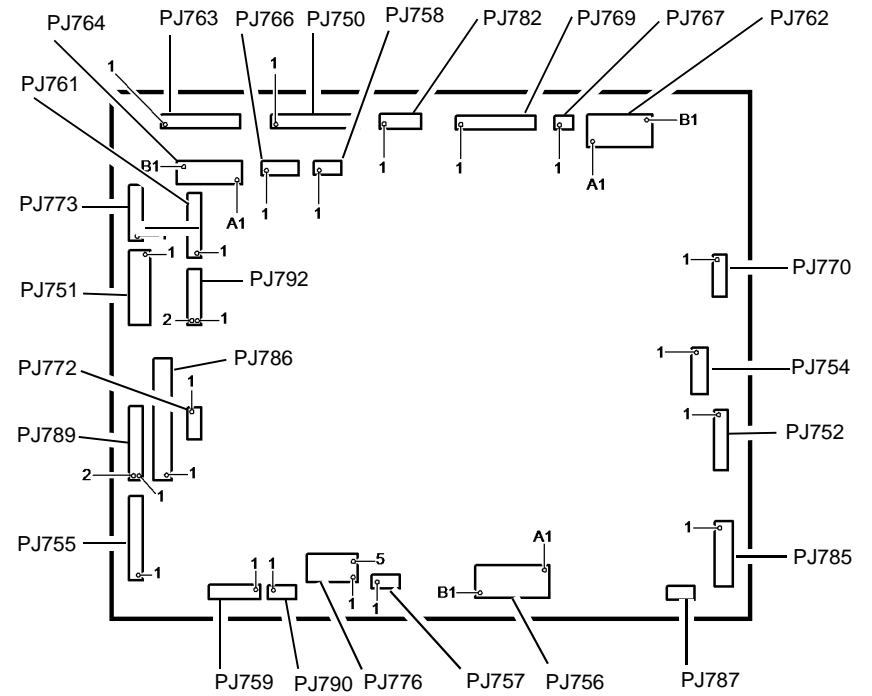


X-1-1312-A

Figure 16 In-line connector

IOT PWB

Location: [PL 1.10 Item 2](#).



X-1-0861-A

Figure 17 IOT PWB

LED Print Head Module

Location: [PL 60.35 Item 1.](#)

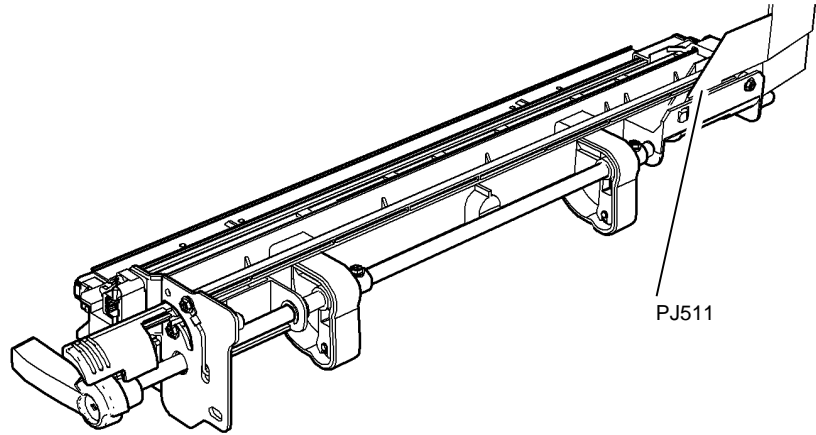


Figure 18 LED print head module

X-1-0953-A

LVF PWB

Location: [PL 12.425 Item 8.](#)

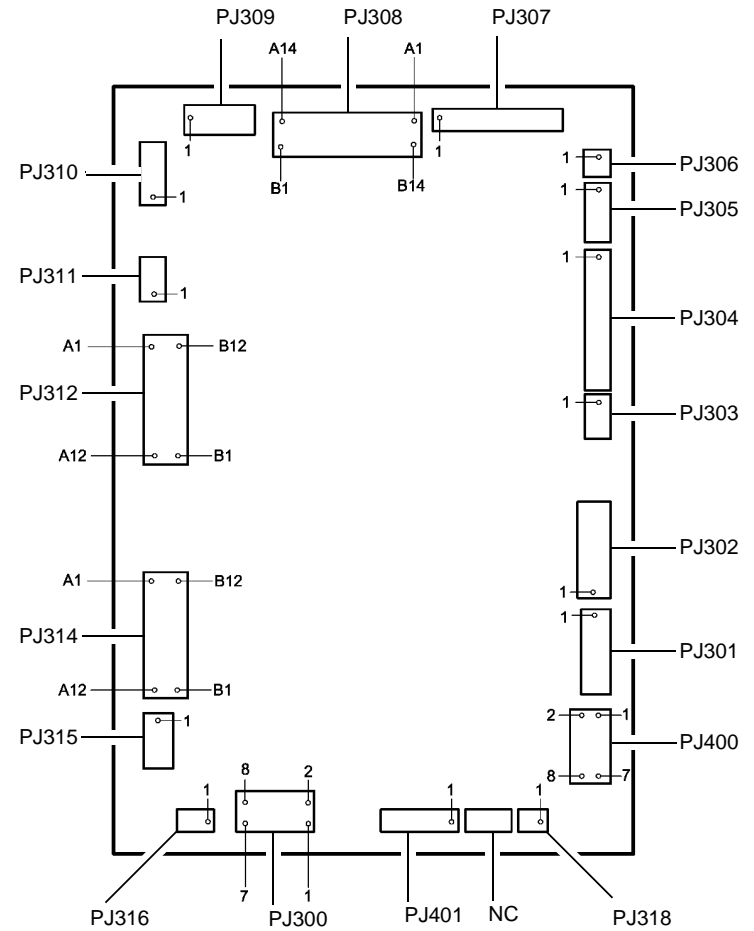


Figure 19 LVF PWB

X-1-0870-A

LVF BM PWB

Location: PL 12.425 Item 1.

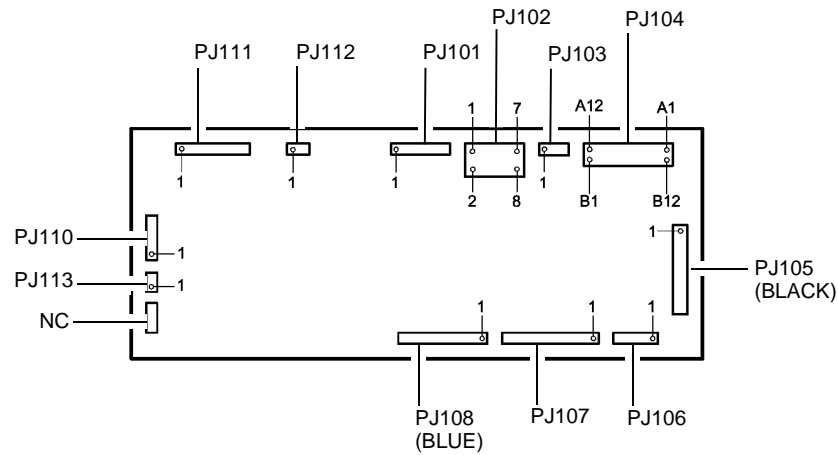


Figure 20 LVF BM PWB

LVPS

Location: PL 1.10 Item 1.

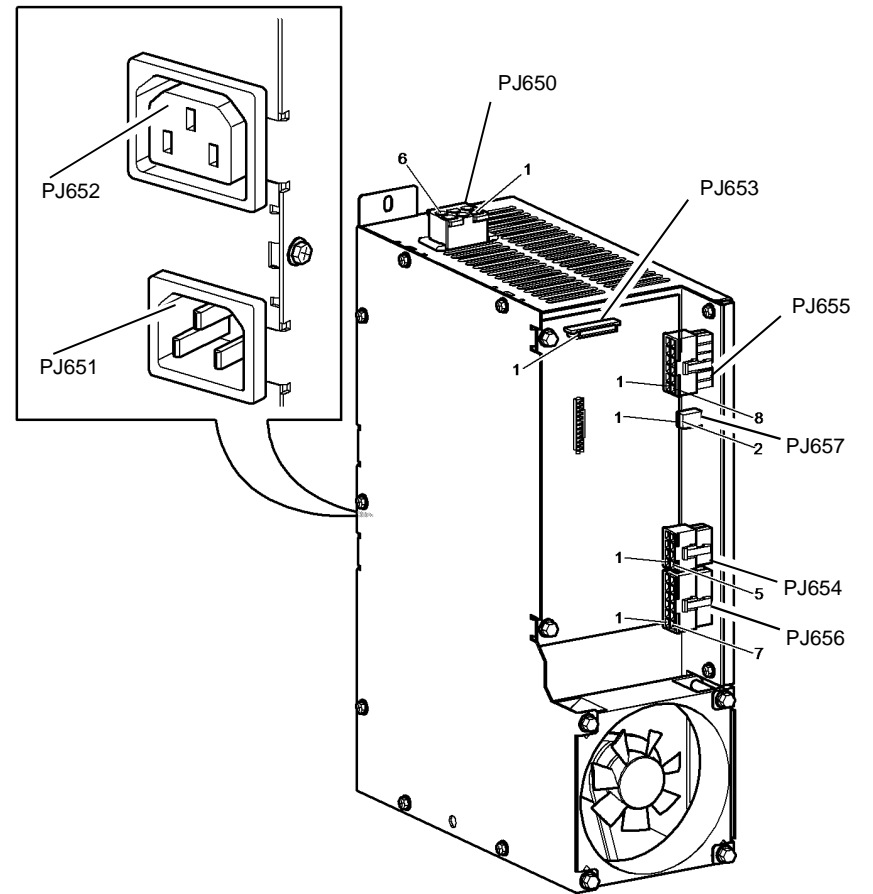
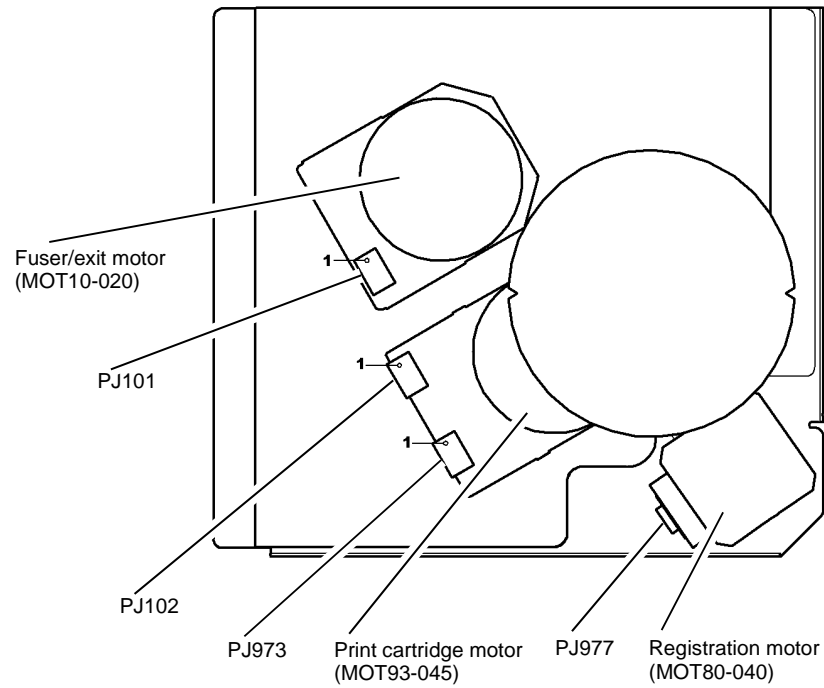


Figure 21 LVPS

Main Drive Module

Location: PL 40.15 Item 1.

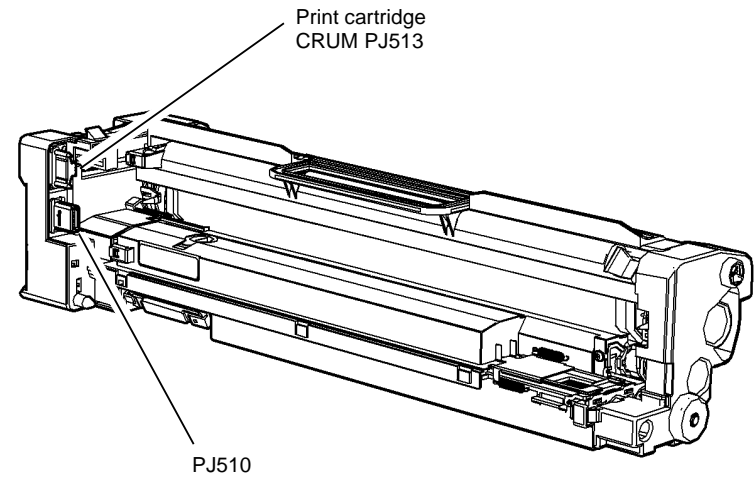


X-1-0958-A

Figure 22 Main drive module

Print Cartridge

Location: PL 90.17 Item 9.



X-1-1305-A

Figure 23 Print cartridge

SBC PWB

Location: PL 3.22 Item 3.

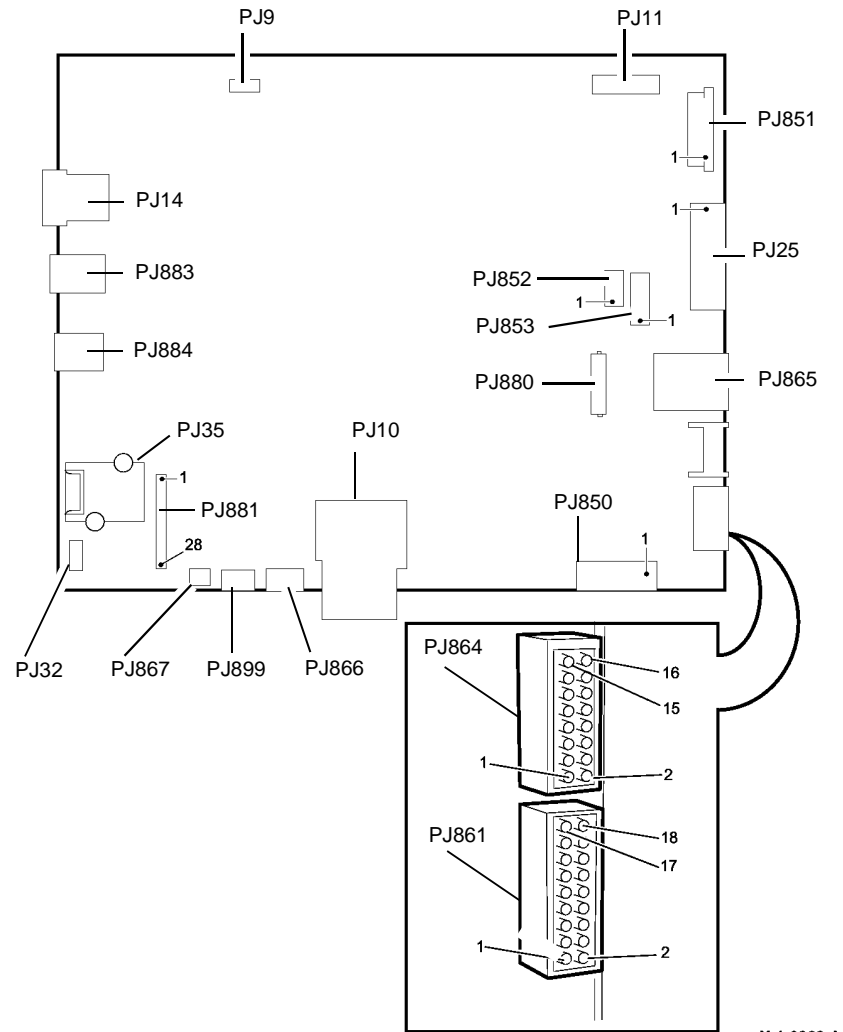


Figure 24 SBC PWB

X-1-0868-A

Scanner PWB

Location: PL 60.20 Item 4.

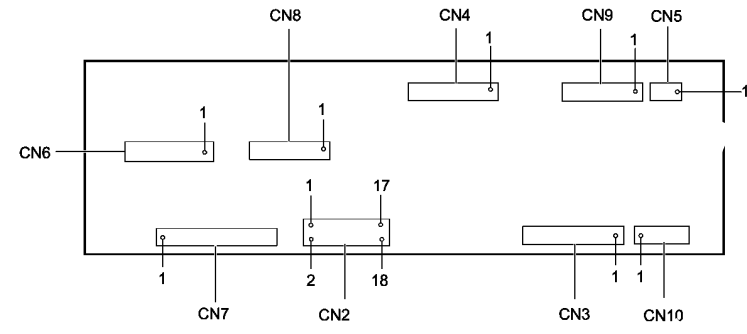


Figure 25 Scanner PWB

X-1-0860-A

SPDH PWB

Location: PL 5.10 Item 5.

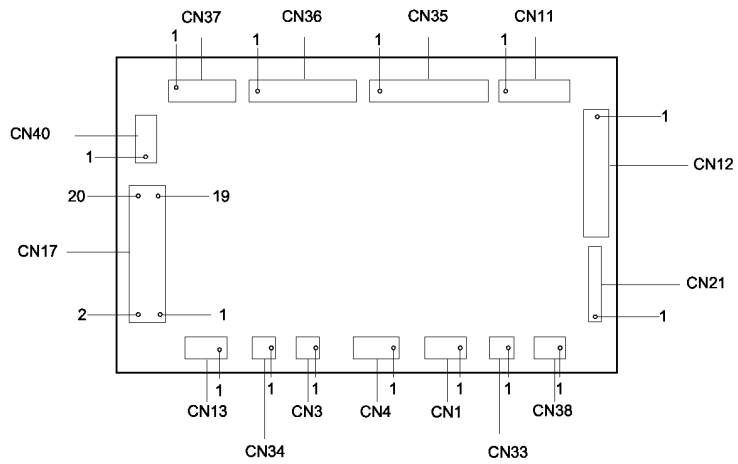


Figure 26 SPDH PWB

X-1-0853-A

Toner Cartridge PWB

Location: PL 90.17 Item 12.

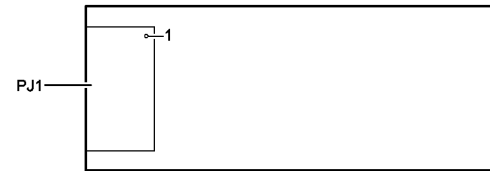


Figure 27 Toner cartridge PWB

X-1-2002-A

Tray 1 Paper Size Sensing PWB

Location: PL 70.10 Item 18.

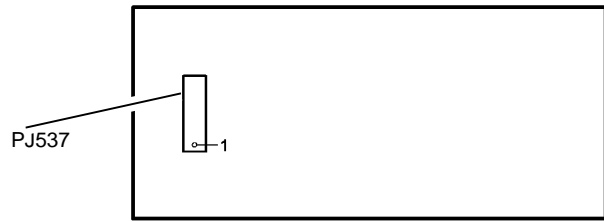


Figure 28 Tray 1 paper size sensing PWB

Tray 2 Paper Size Sensing PWB

Location: PL 70.10 Item 18.

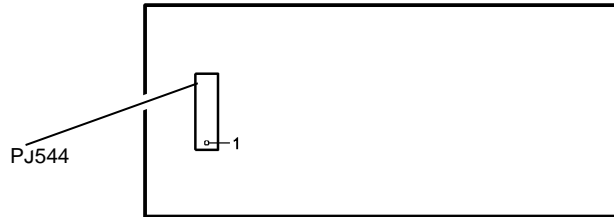


Figure 29 Tray 2 paper size sensing PWB

Tray 6 Control PWB

Location: PL 75.68 Item 8.

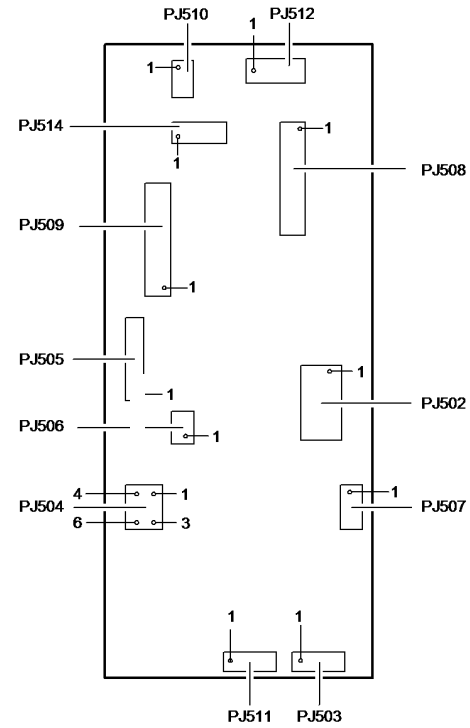


Figure 30 Tray 6 Control PWB

X-1-1072-A

X-1-1073-A

X-1-2003-A

Tri-folder PWB

Location: PL 2.10 Item 1

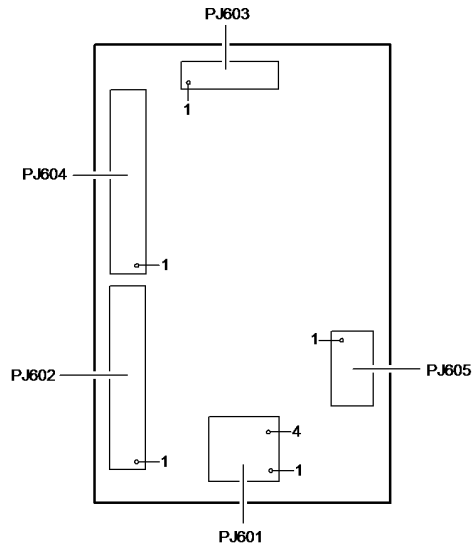


Figure 31 Tri-folder PWB

X-1-2004-A

UI Control PWB

Location: Part of PL 2.10 Item 1

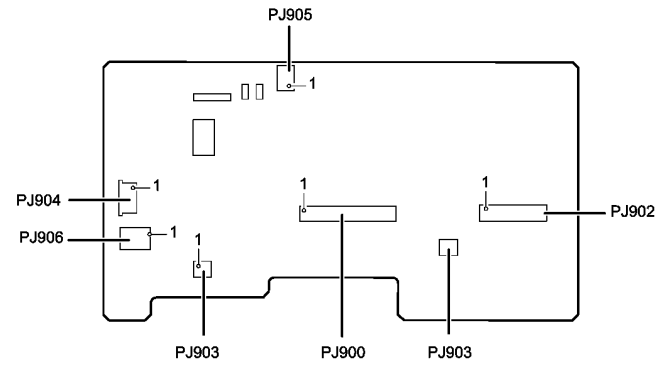


Figure 32 UI control PWB

X-1-2005-A

UI Emotive PWB

Location: Part of PL 2.10 Item 1.

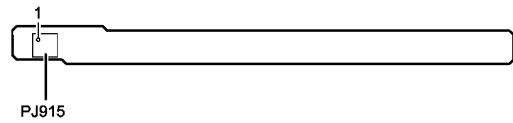


Figure 33 UI emotive PWB

X-1-2006-A

UI Interface PWB

Location: Part of PL 2.10 Item 15.

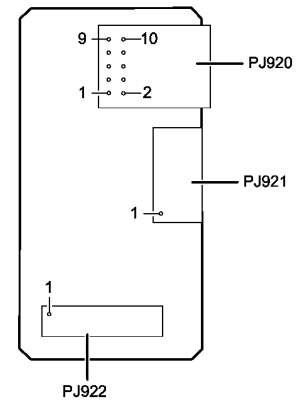
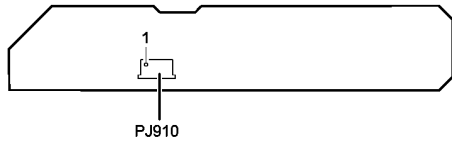


Figure 34 UI interface PWB

X-1-2007-A

UI Status PWB

Location: Part of [PL 2.10 Item 1](#).



X-1-2008-A

Figure 35 UI status PWB

Wiring Diagrams

Purpose

Wiring diagrams are an aid to trace wiring faults. Wiring diagrams are used to complement the circuit diagram in the relevant RAP.

Introduction

The main PWB connections are in the wiring diagrams that follow:

- 2K LCSS PWB, [WD 19](#), [WD 20](#), [WD 21](#), [WD 22](#).
- BM PWB, [WD 40](#), [WD 41](#), [WD 42](#), [WD 43](#).
- HVF PWB, [WD 30](#), [WD 31](#), [WD 32](#), [WD 33](#), [WD 34](#), [WD 35](#), [WD 36](#), [WD 37](#), [WD 38](#), [WD 39](#), [WD 47](#).
- IOT PWB, [WD 5](#), [WD 6](#), [WD 7](#), [WD 8](#), [WD 9](#), [WD 10](#), [WD 11](#), [WD 15](#).
- Inserter PWB, [WD 45](#), [WD 46](#).
- LVF PWB, [WD 23](#), [WD 24](#), [WD 25](#), [WD 26](#).
- LVF BM PWB, [WD 27](#), [WD 28](#), [WD 29](#).
- LVPS, [WD 1](#).
- SBC PWB, [WD 2](#), [WD 3](#), [WD 4](#).
- Scanner PWB, [WD 16](#).
- SPDH, [WD 12](#), [WD 13](#), [WD 14](#).
- Tray 6 Control PWB, [WD 17](#), [WD 18](#).
- Tri folder PWB, [WD 44](#).

The diagrams have the features that follow:

- The connections on the PWBs are in PJ numerical sequence where possible.
- The complete component to PWB wiring is shown. All interconnecting connectors are shown, in part or in whole. Connectors shown in part have reference to other wiring diagrams as necessary.
- Where necessary, components have references to show additional connections to them.
- Straight through tracks on the PWBs are shown.
- The pin numbers shown depict the location of the pins as marked on the PWB. If the pin numbers marked on a harness connector differ, the PWB pin numbers take precedence.

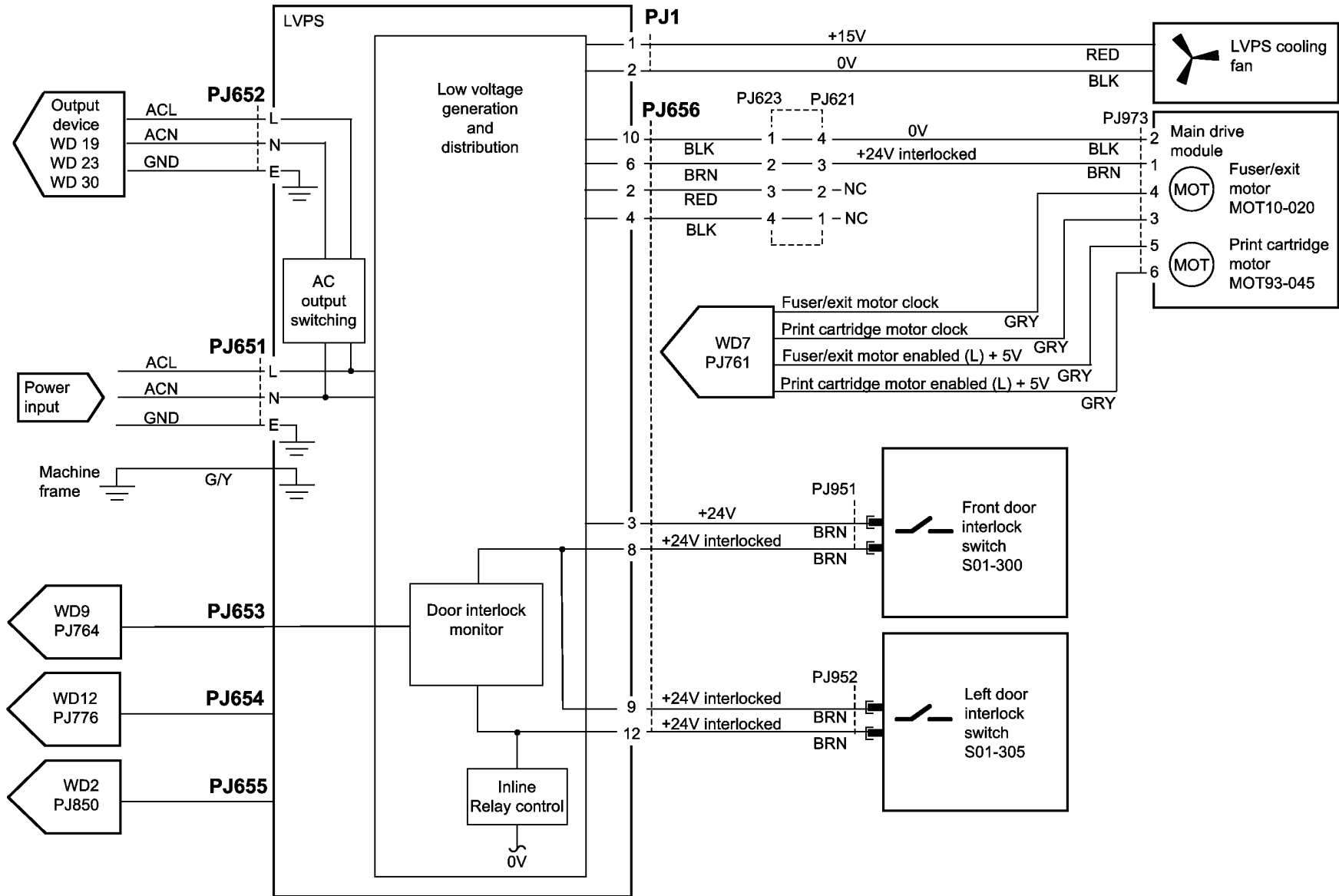
How to Use Wiring Diagrams

NOTE: All Adjustments, Repairs and Part List references are shown in the relevant RAP.

Wiring diagrams are used in conjunction with the circuit diagrams and their supporting RAPs. The steps that follow should be used:

1. From the circuit diagram in the RAP, note the name of the PWB.
2. Note the component and its harness connection on the PWB.
3. Go to the relevant wiring diagram.
4. Locate the connector on the PWB.
5. Assess the dependency of other components in the same harness connected to the PWB.
6. Isolate and repair the wiring fault.

Wiring Diagram 1



TX-1-0327-A

Figure 1 Wiring Diagram 1

Wiring Diagram 2

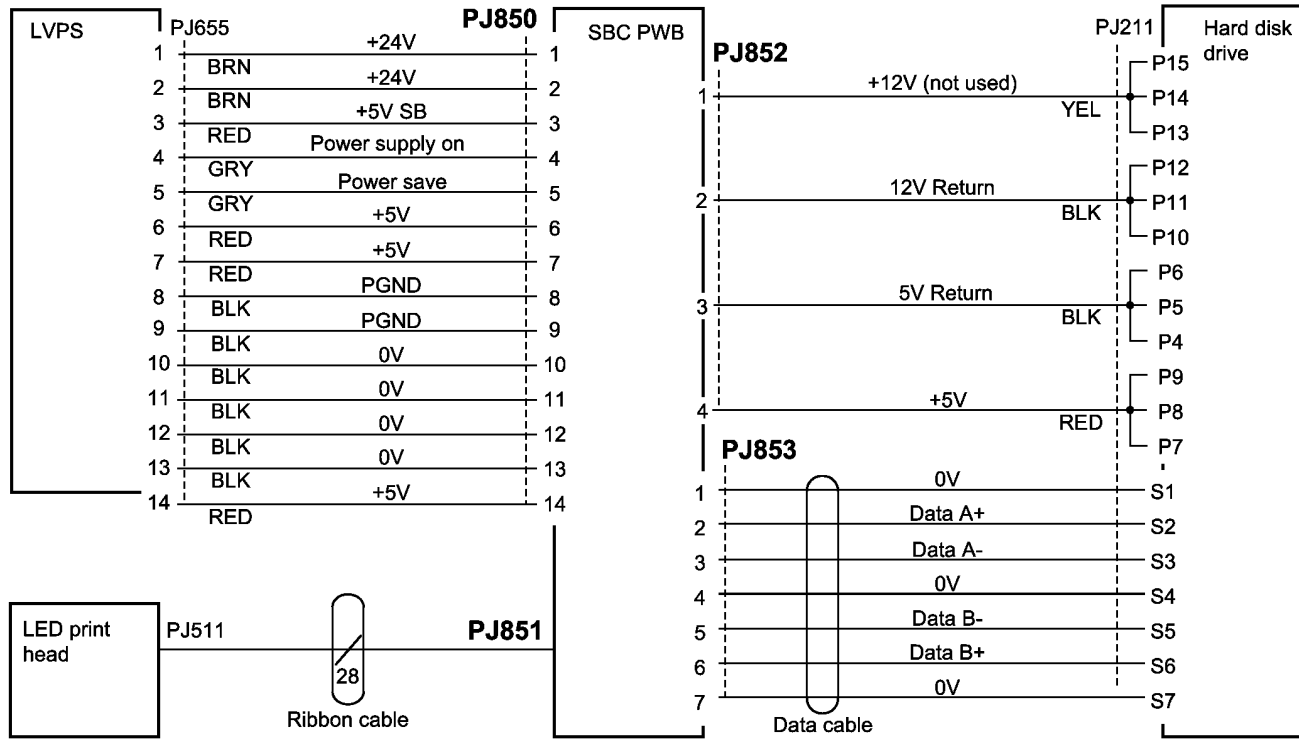
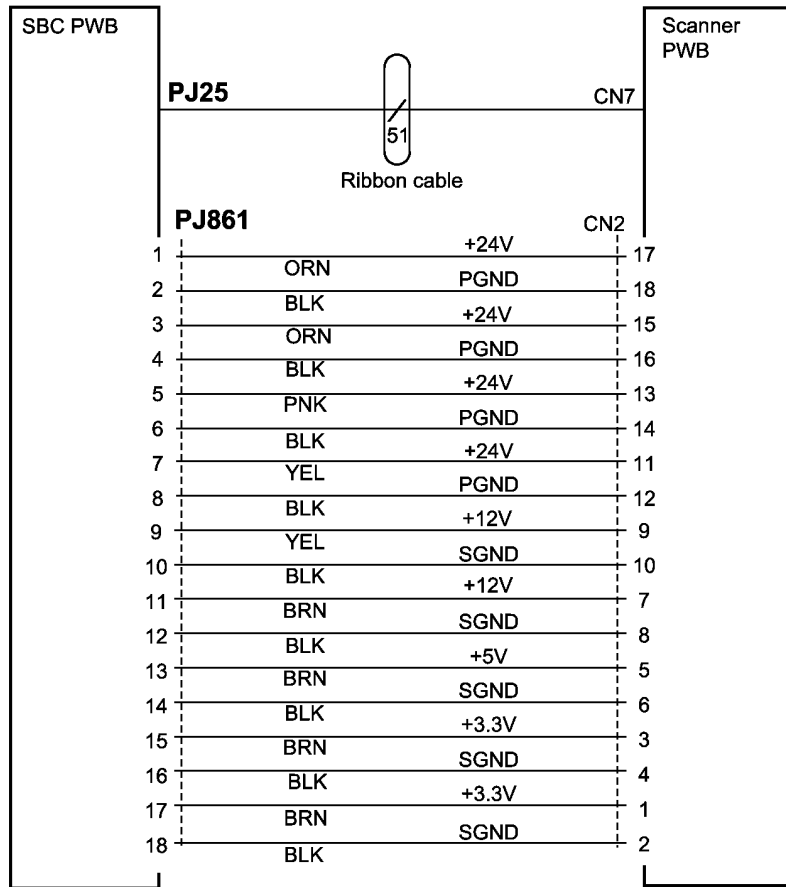


Figure 2 Wiring Diagram 2

TX-1-0173-A

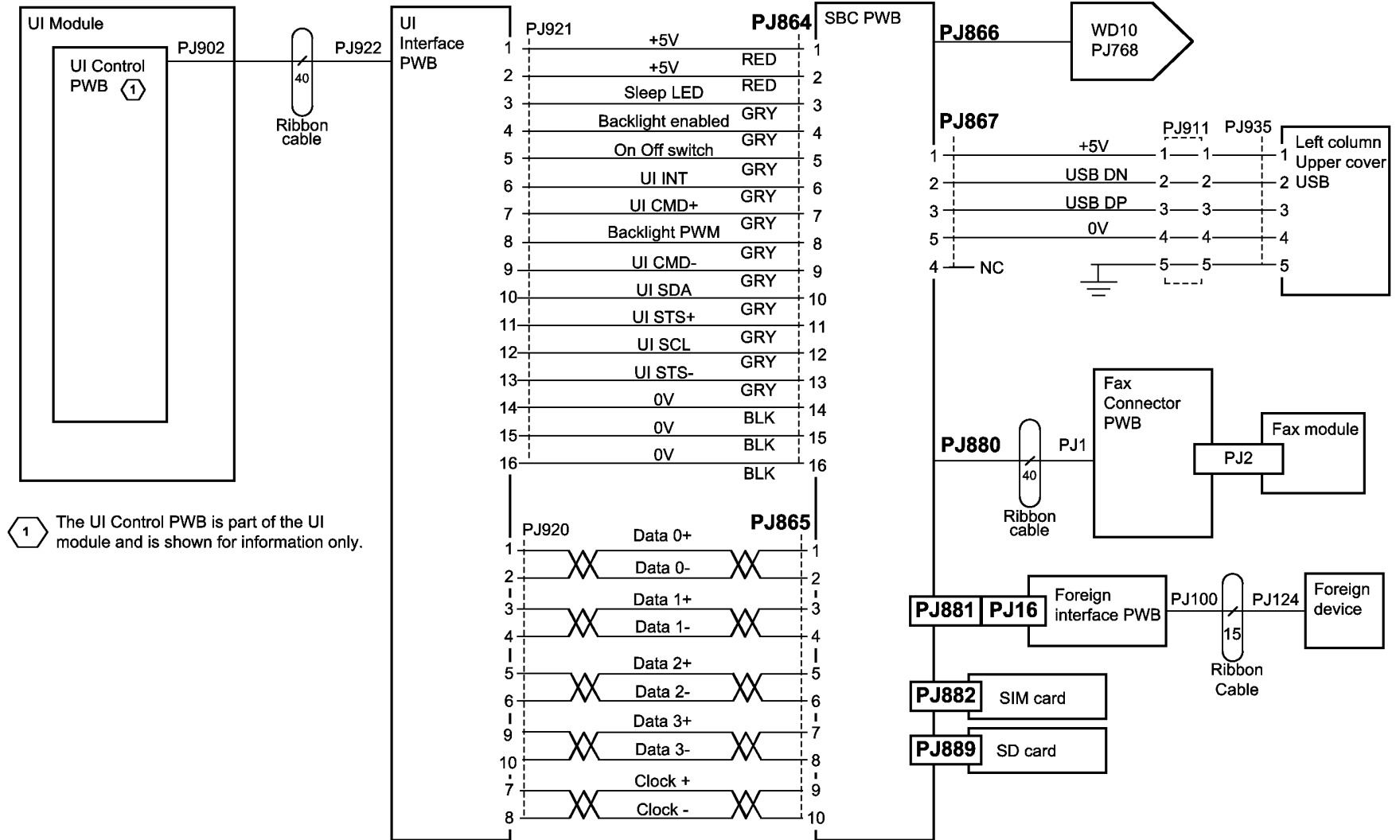
Wiring Diagram 3



TX-1-0174-A

Figure 3 Wiring Diagram 3

Wiring Diagram 4

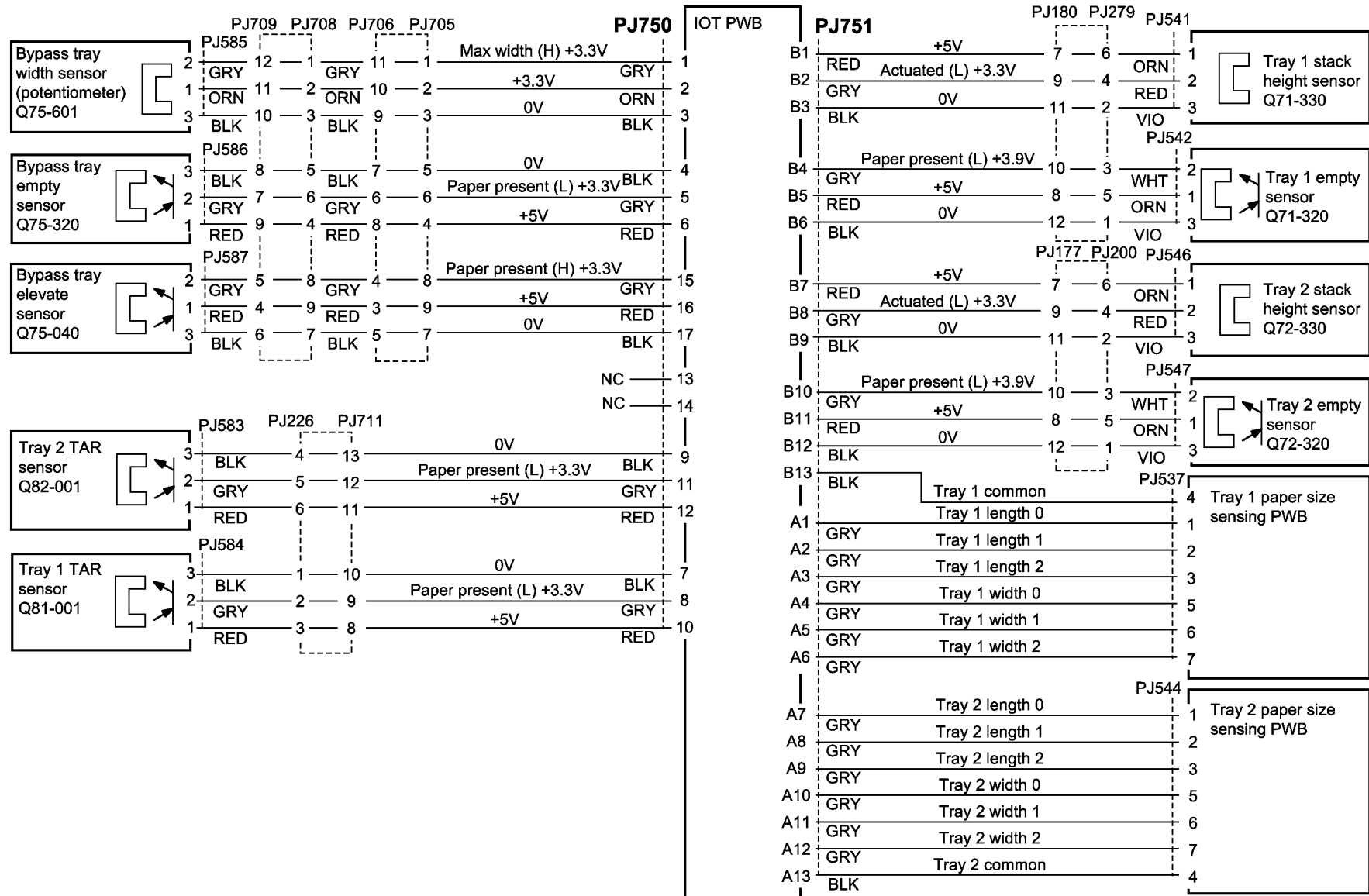


1 The UI Control PWB is part of the UI module and is shown for information only.

TX-1-0175-A

Figure 4 Wiring Diagram 4

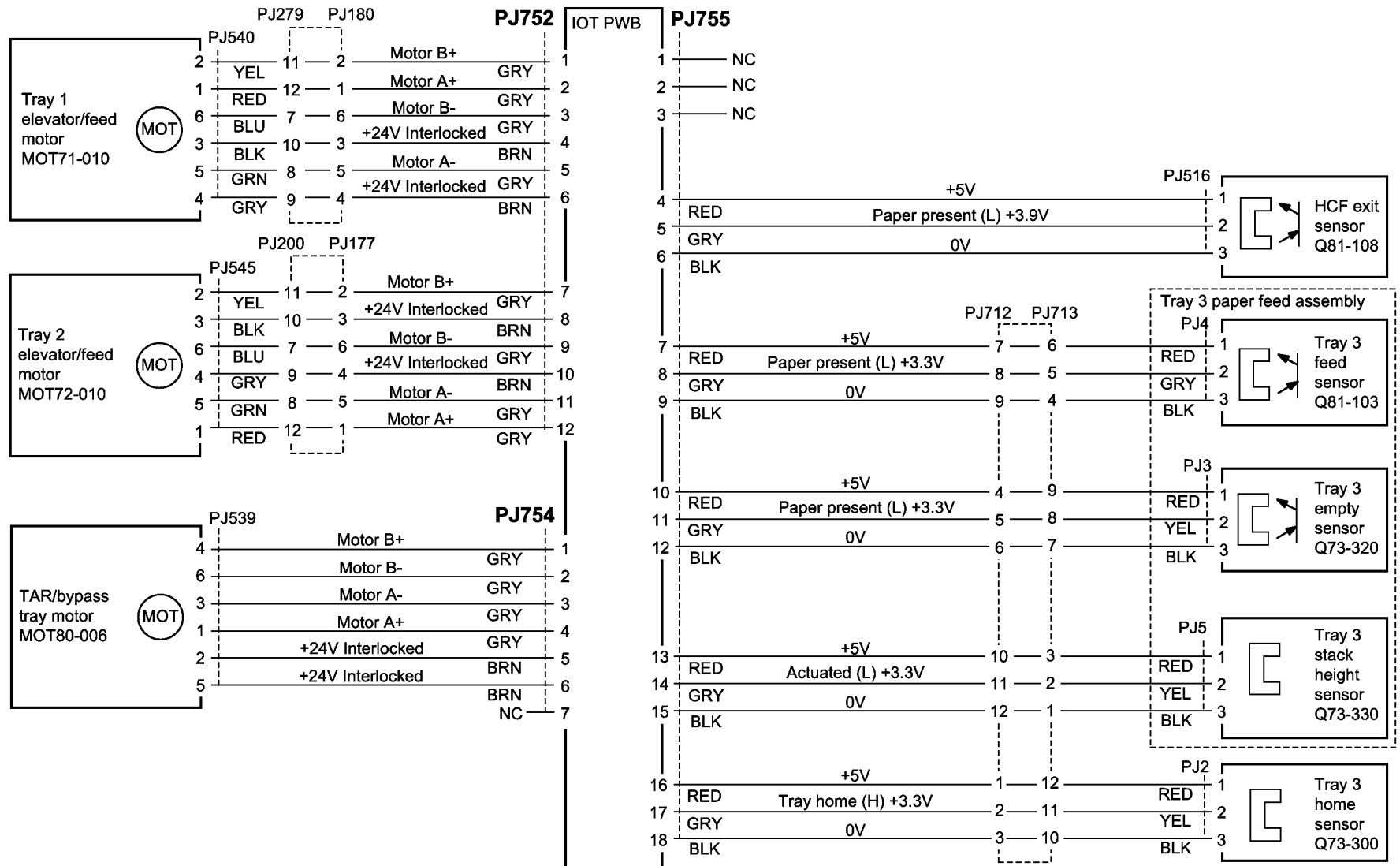
Wiring Diagram 5



TX-1-0165-A

Figure 5 Wiring Diagram 5

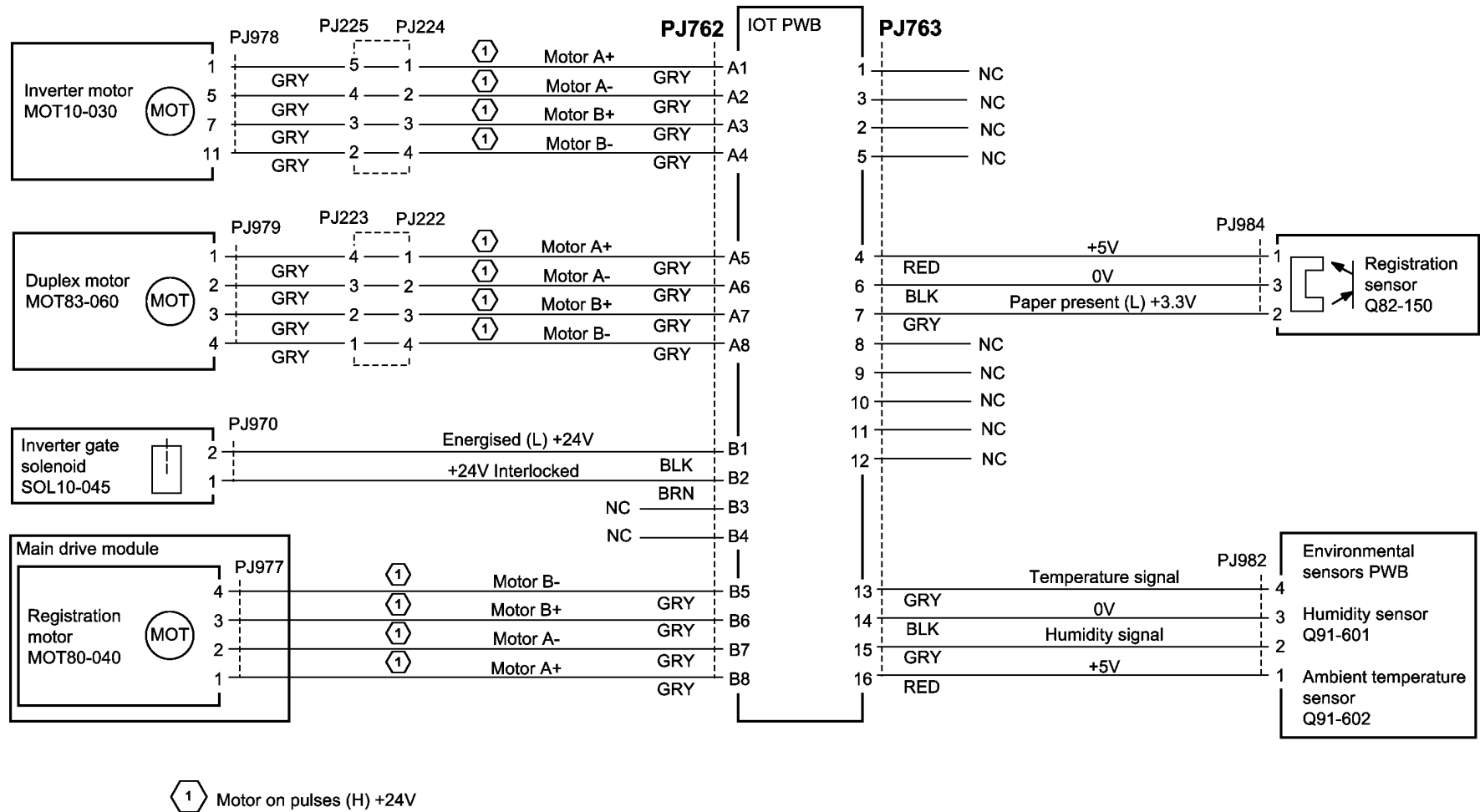
Wiring Diagram 6



TX-1-0166-A

Figure 6 Wiring Diagram 6

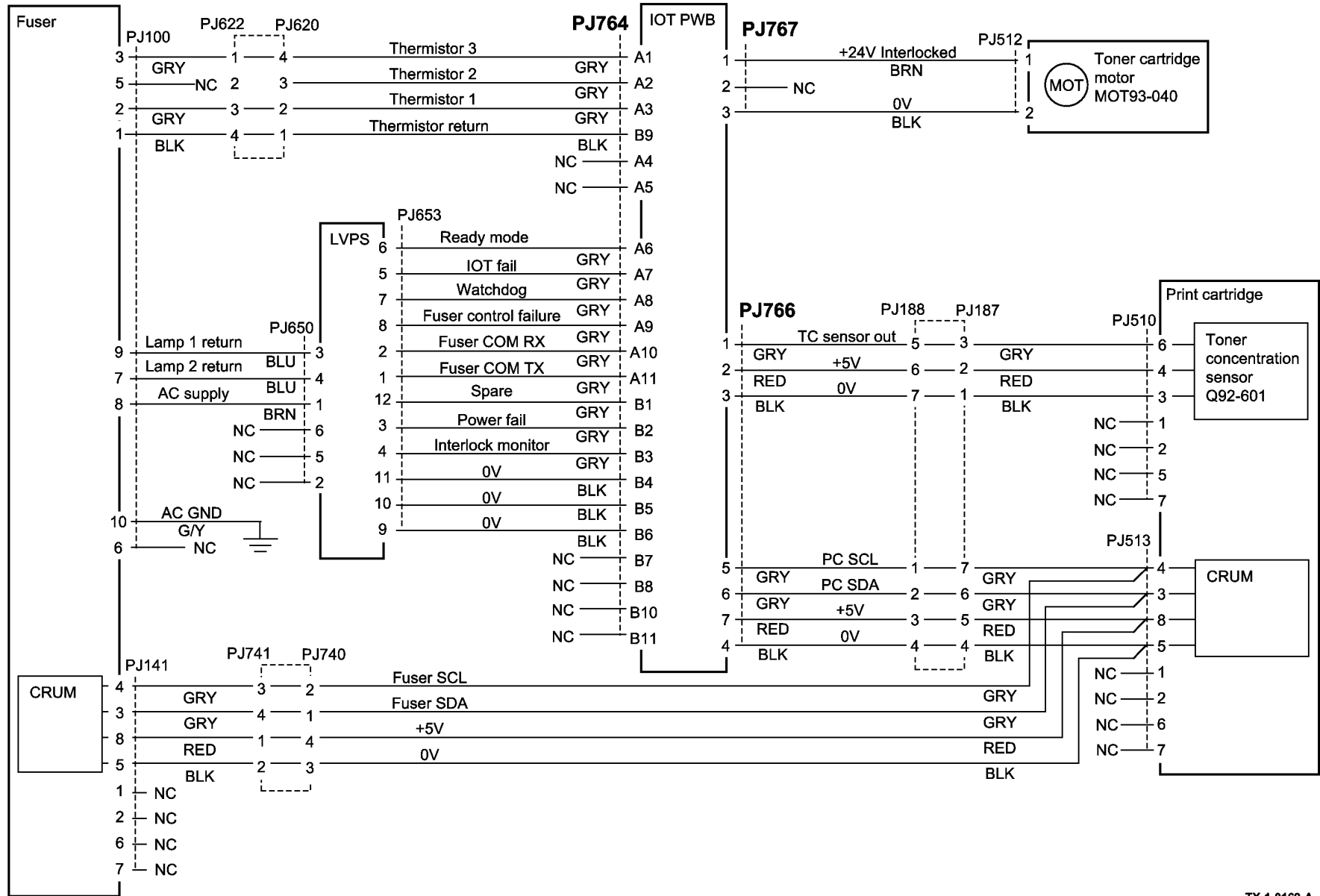
Wiring Diagram 8



TX-1-0168-A

Figure 8 Wiring Diagram 8

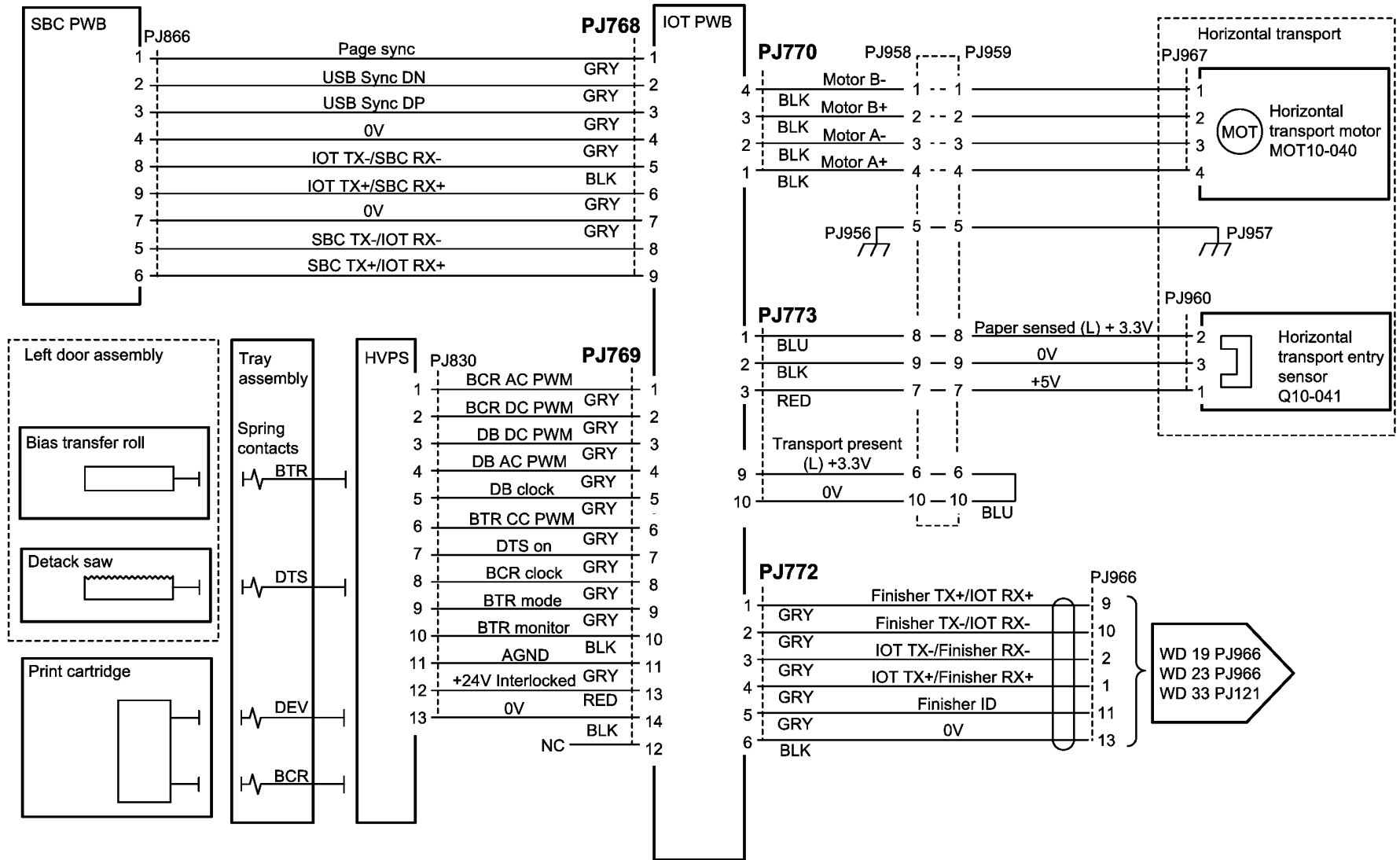
Wiring Diagram 9



TX-1-0169-A

Figure 9 Wiring Diagram 9

Wiring Diagram 10



TX-1-0170-A

Figure 10 Wiring Diagram 10

Wiring Diagram 11

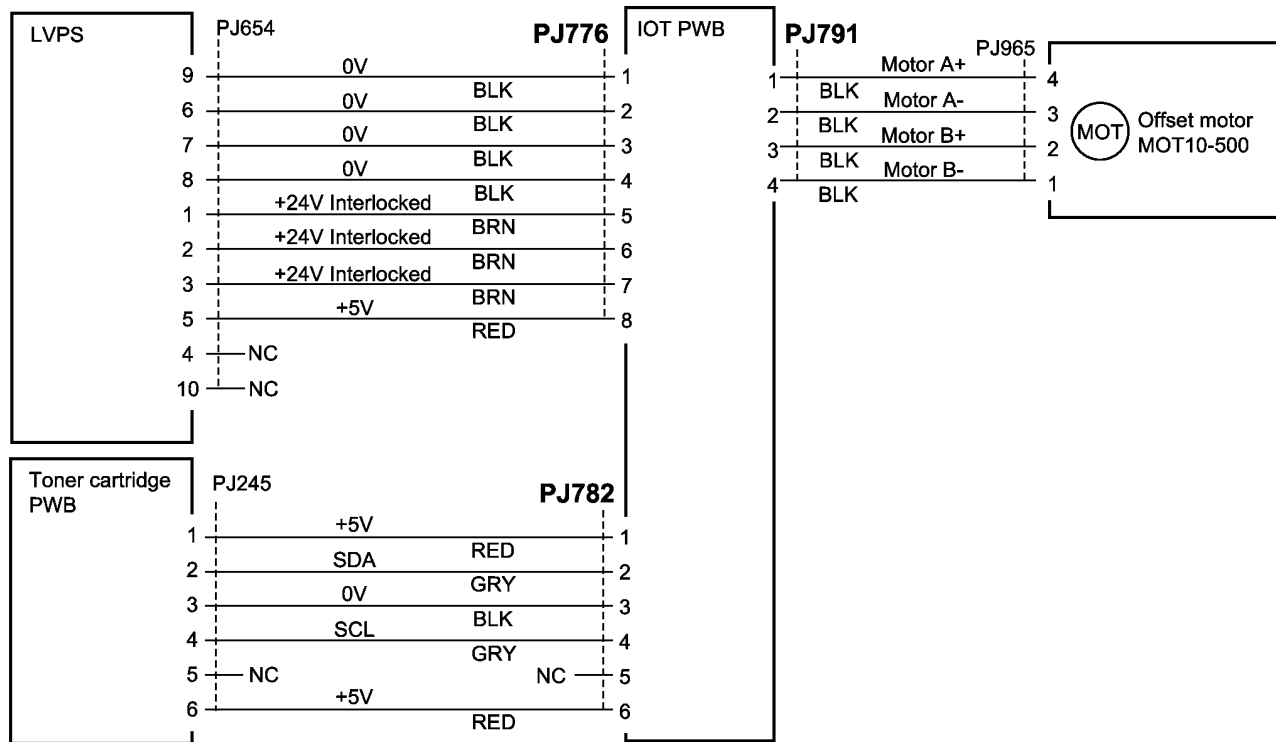
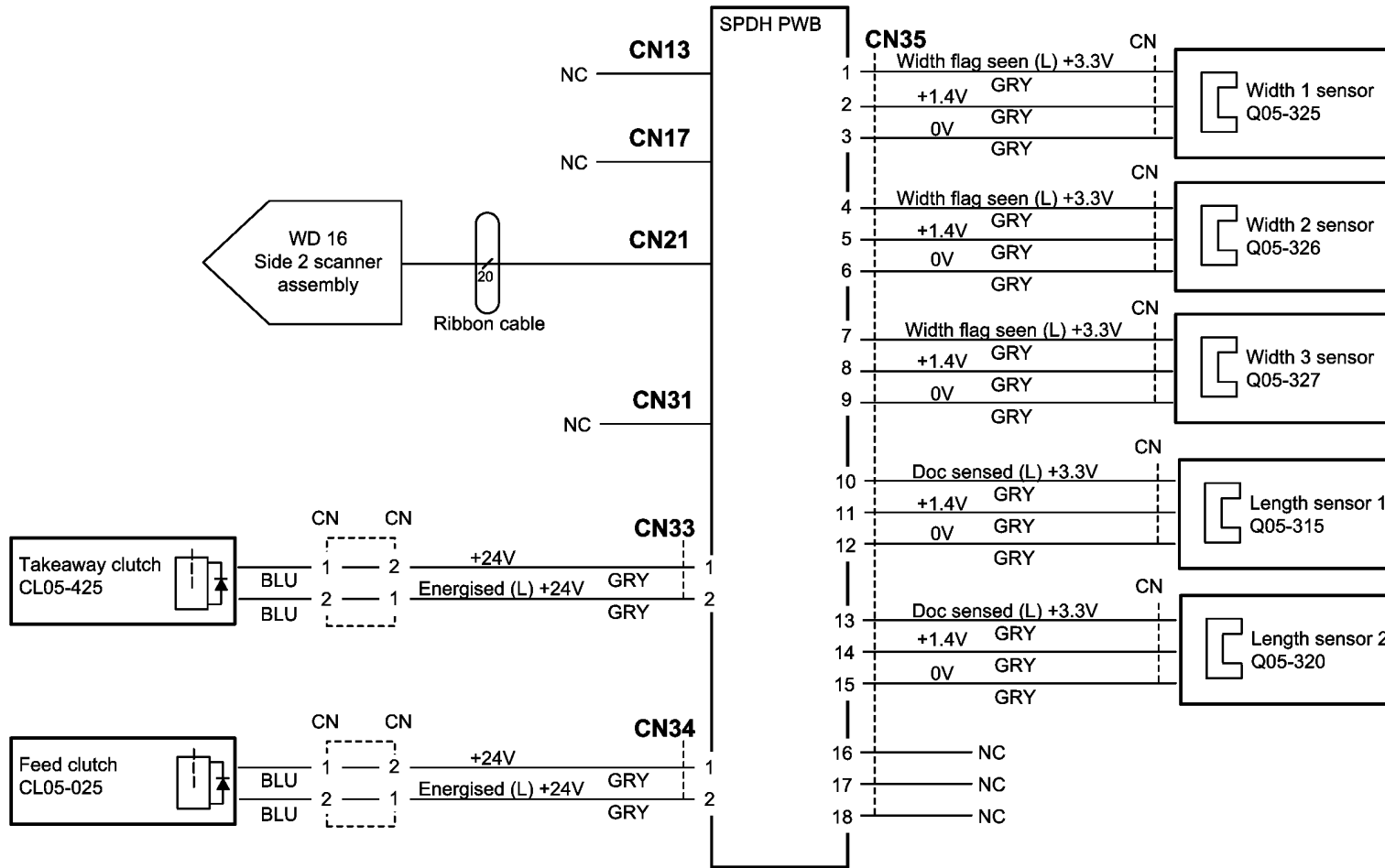


Figure 11 Wiring Diagram 11

TX-1-0172-A

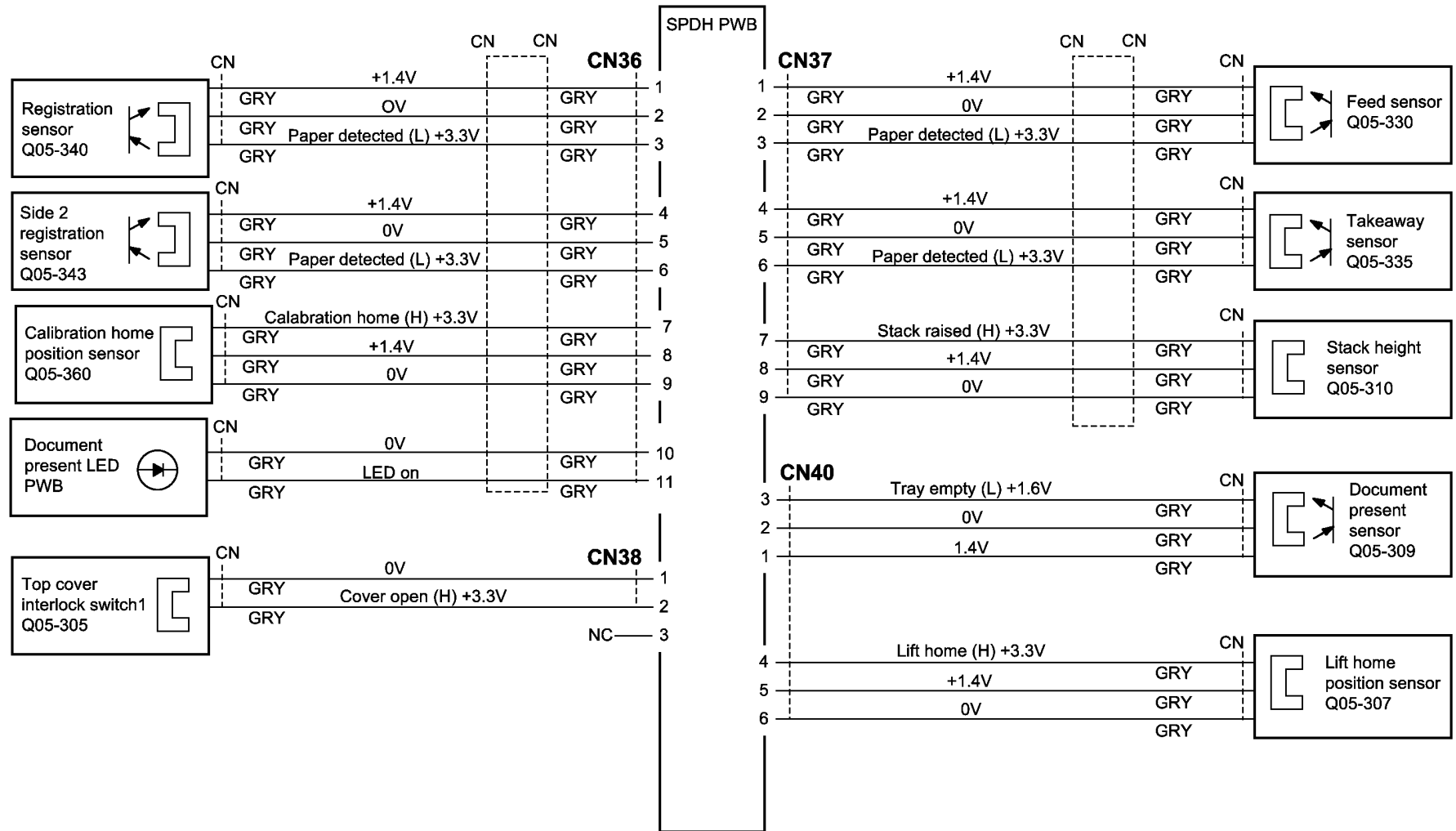
Wiring Diagram 13



TX-1-0184-A

Figure 13 Wiring Diagram 13

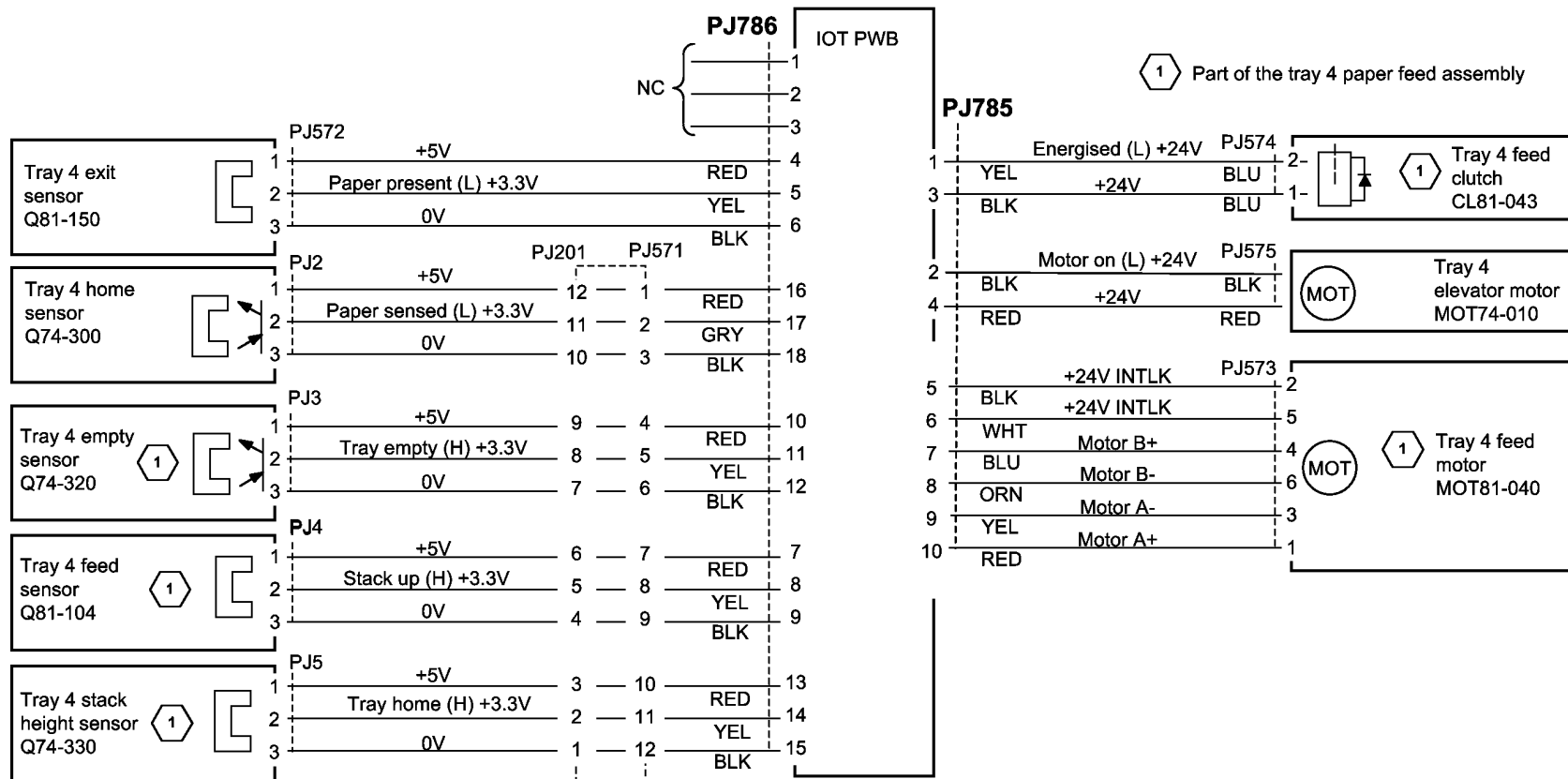
Wiring Diagram 14



TX-1-0183-A

Figure 14 Wiring Diagram 14

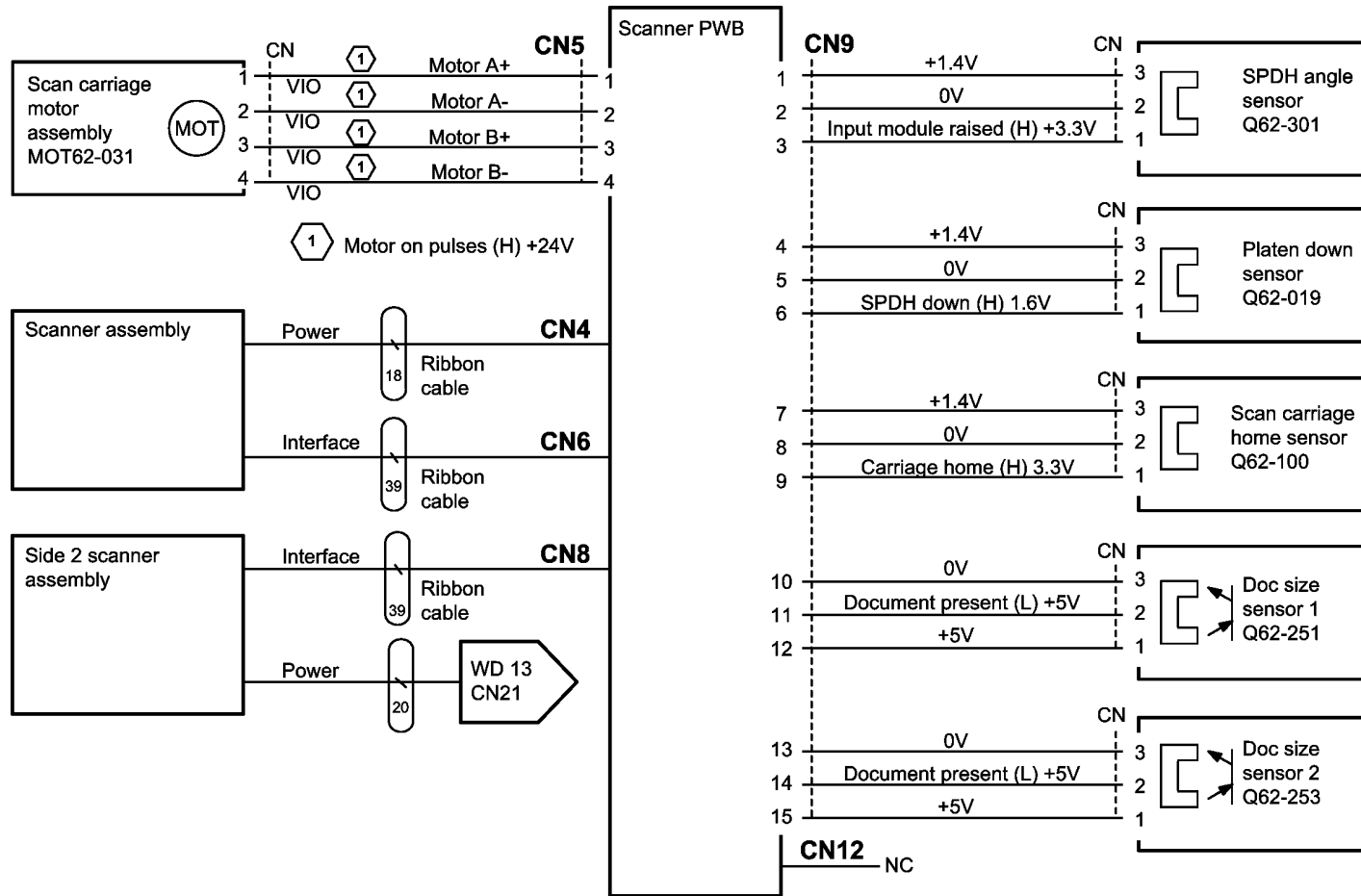
Wiring Diagram 15



TX-1-0229-A

Figure 15 Wiring Diagram 15

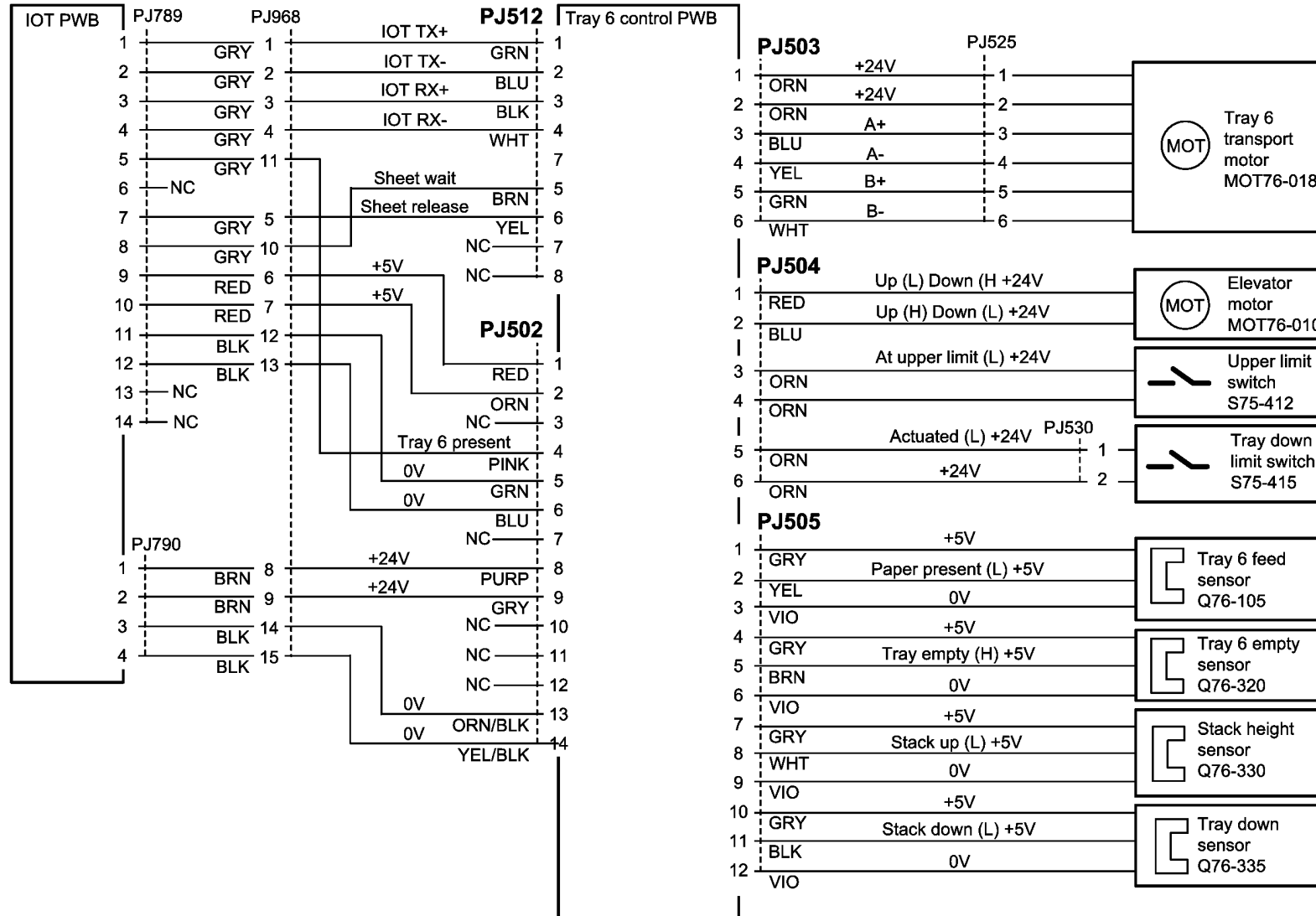
Wiring Diagram 16



Tx-1-0438-A

Figure 16 Wiring Diagram 16

Wiring Diagram 17



TX-1-0416-A

Figure 17 Wiring Diagram 17

Wiring Diagram 18

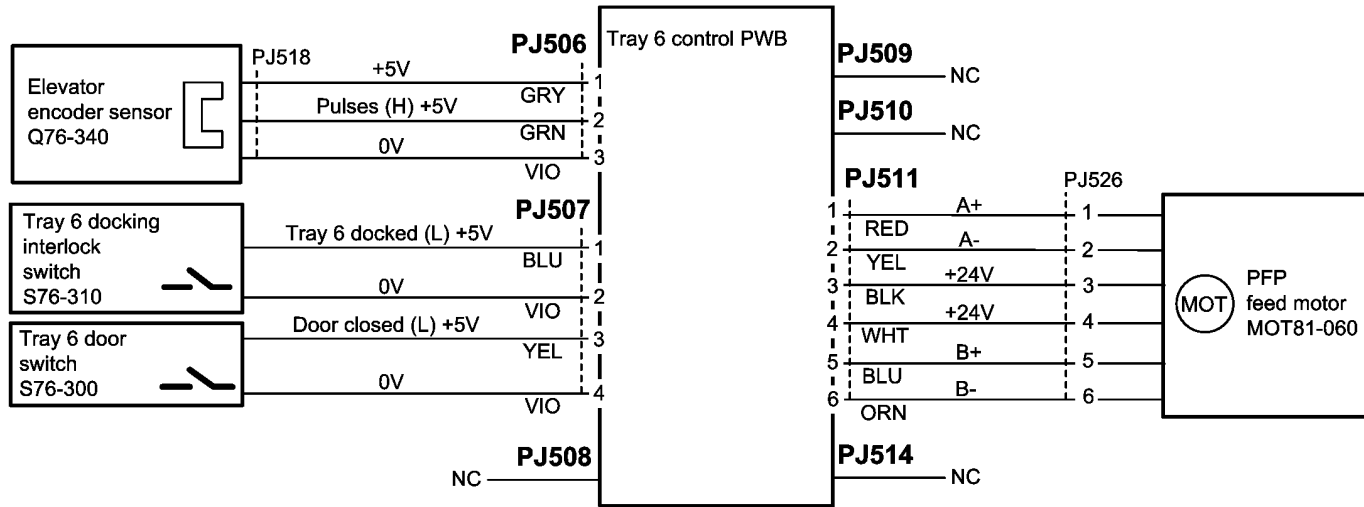
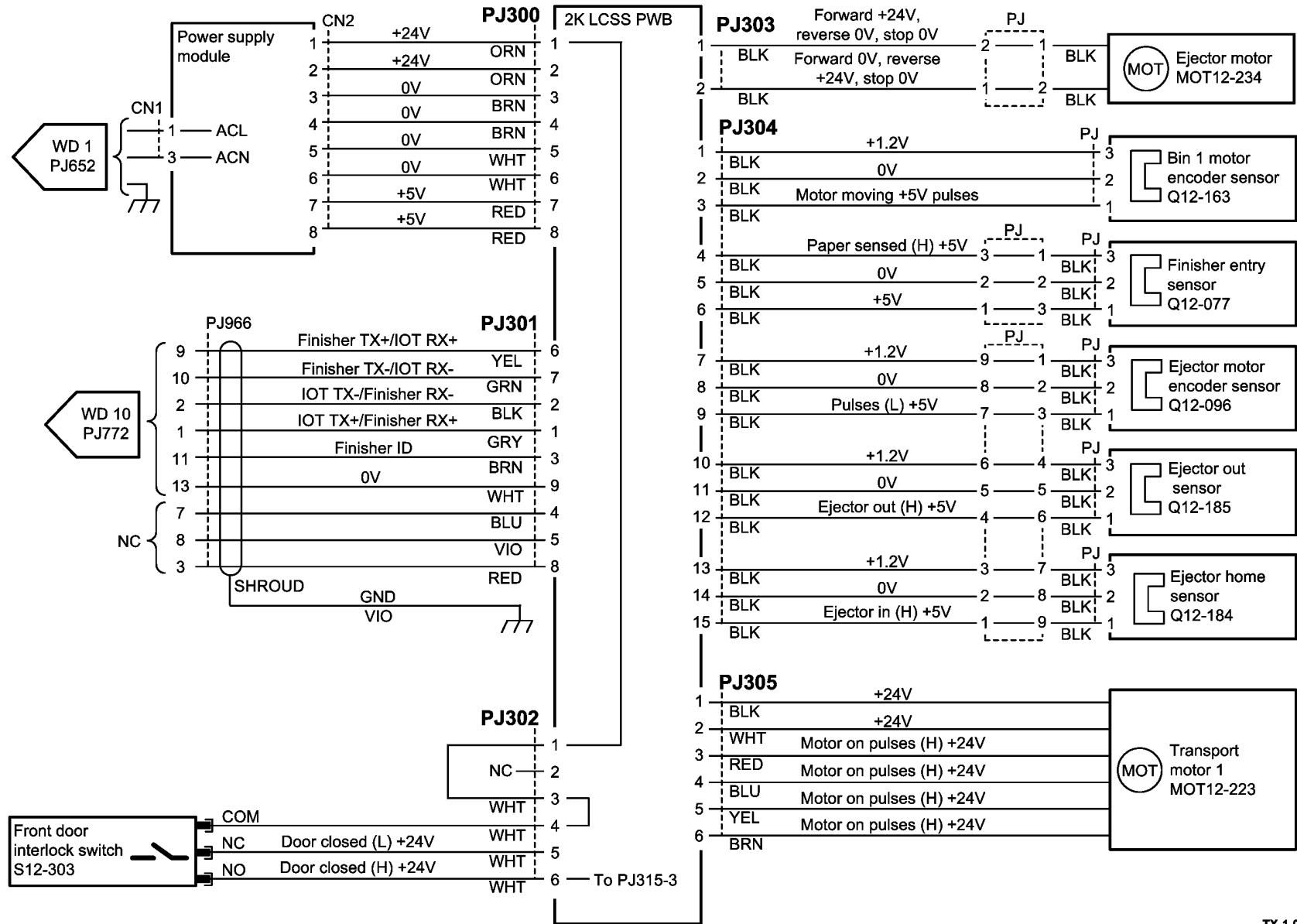


Figure 18 Wiring Diagram 18

TX-1-0417-A

Wiring Diagram 19



TX-1-0192-A

Figure 19 Wiring Diagram 19

Wiring Diagram 20

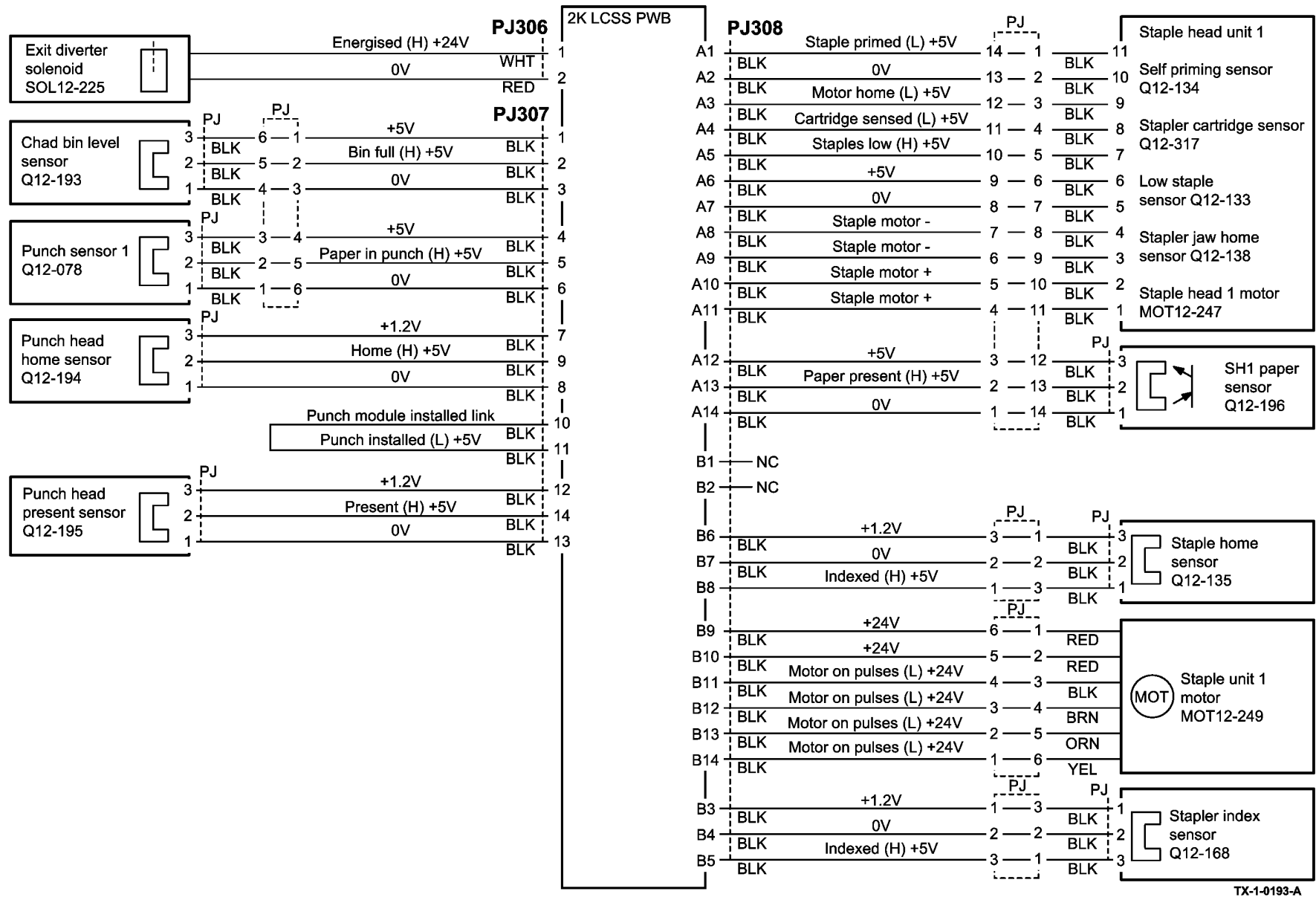
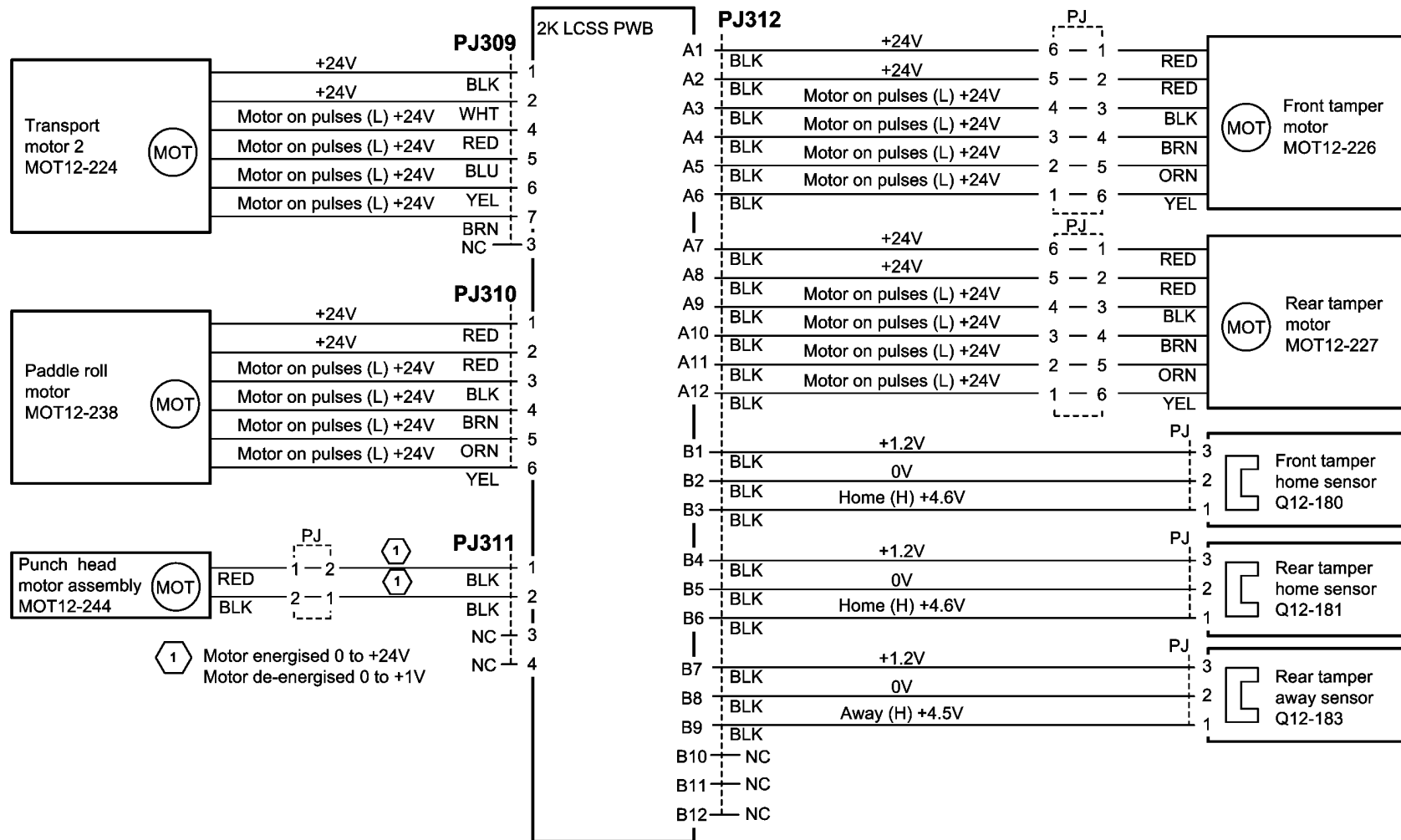


Figure 20 Wiring Diagram 20

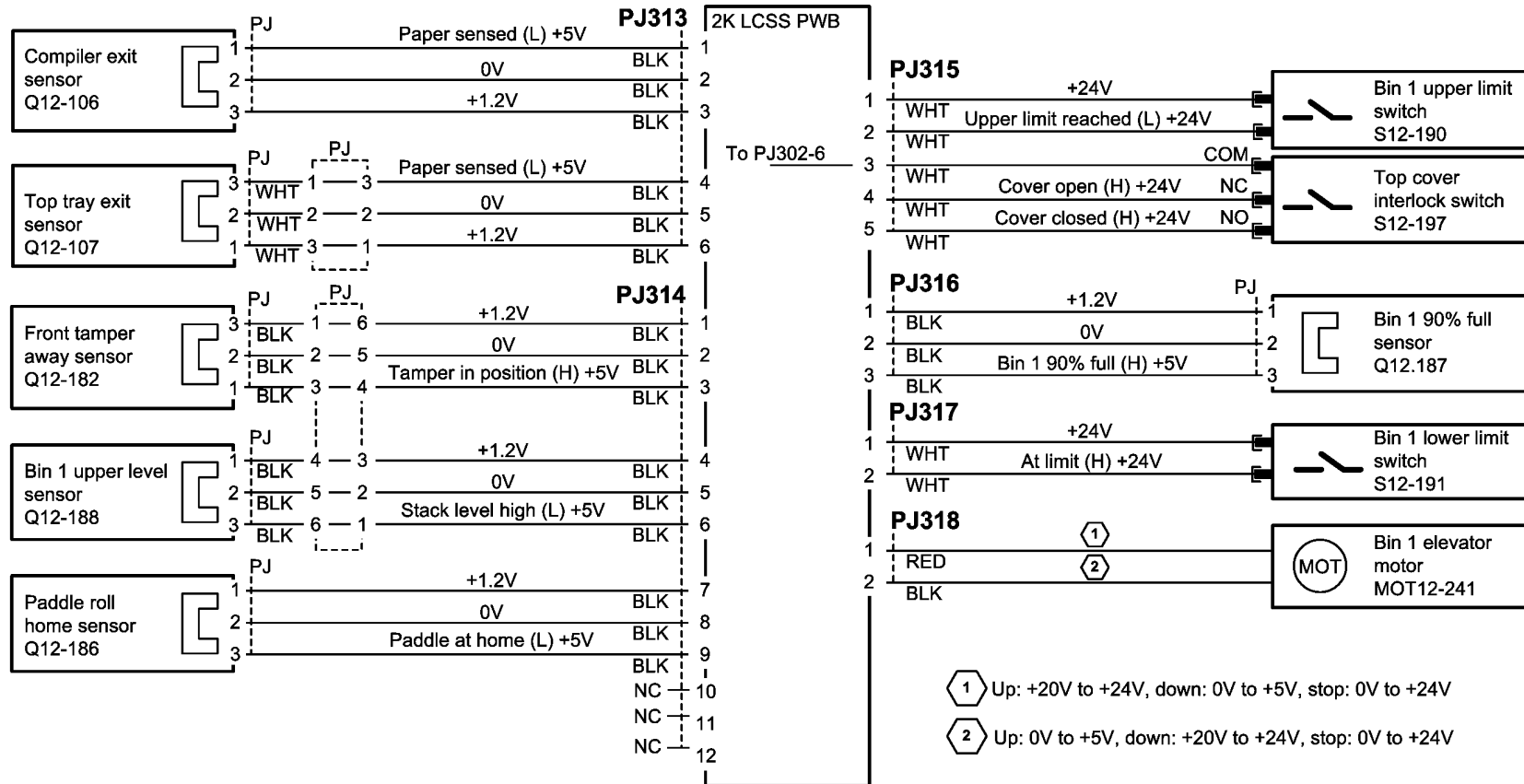
Wiring Diagram 21



TX-1-0194-A

Figure 21 Wiring Diagram 21

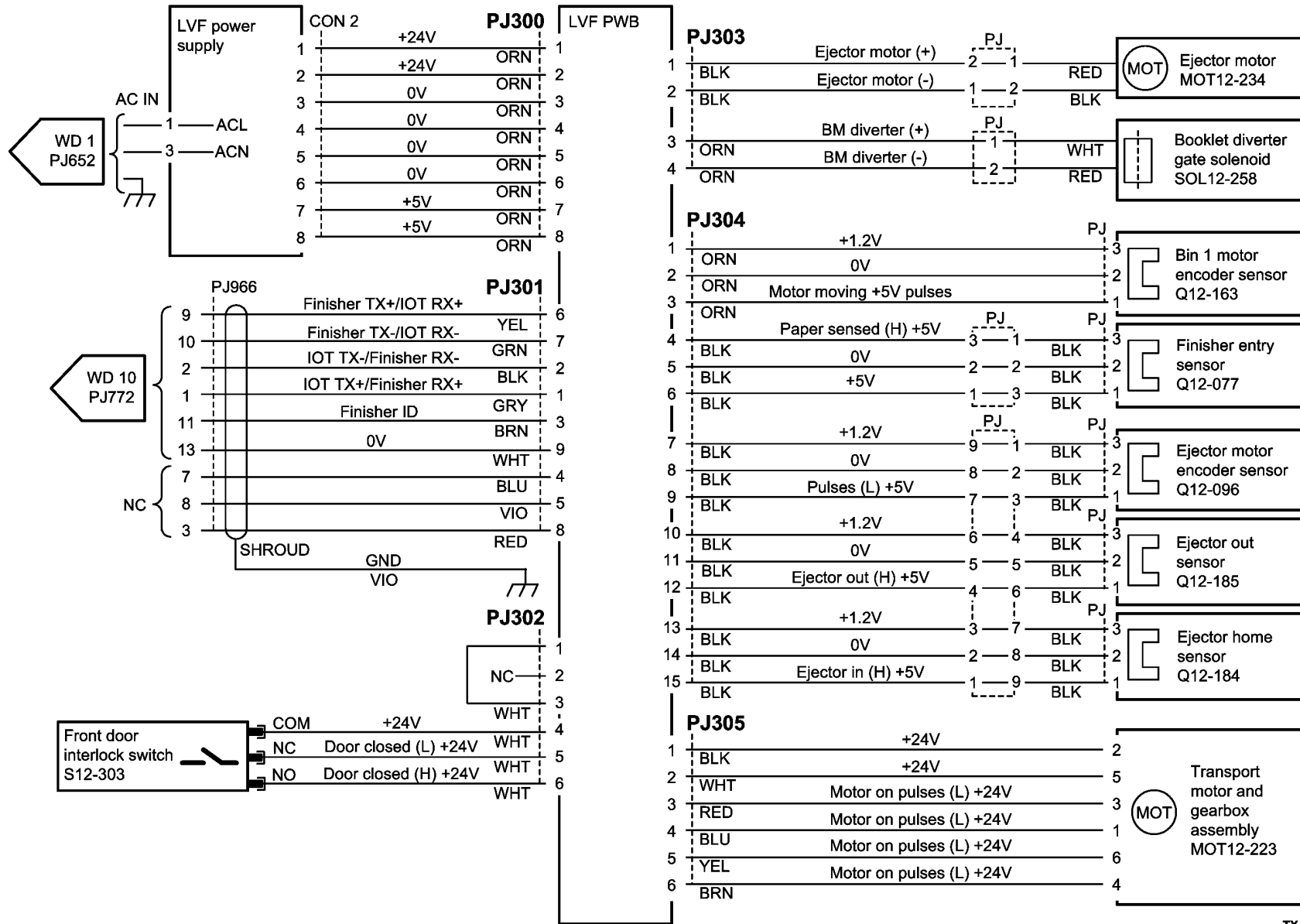
Wiring Diagram 22



TX-1-0195-A

Figure 22 Wiring Diagram 22

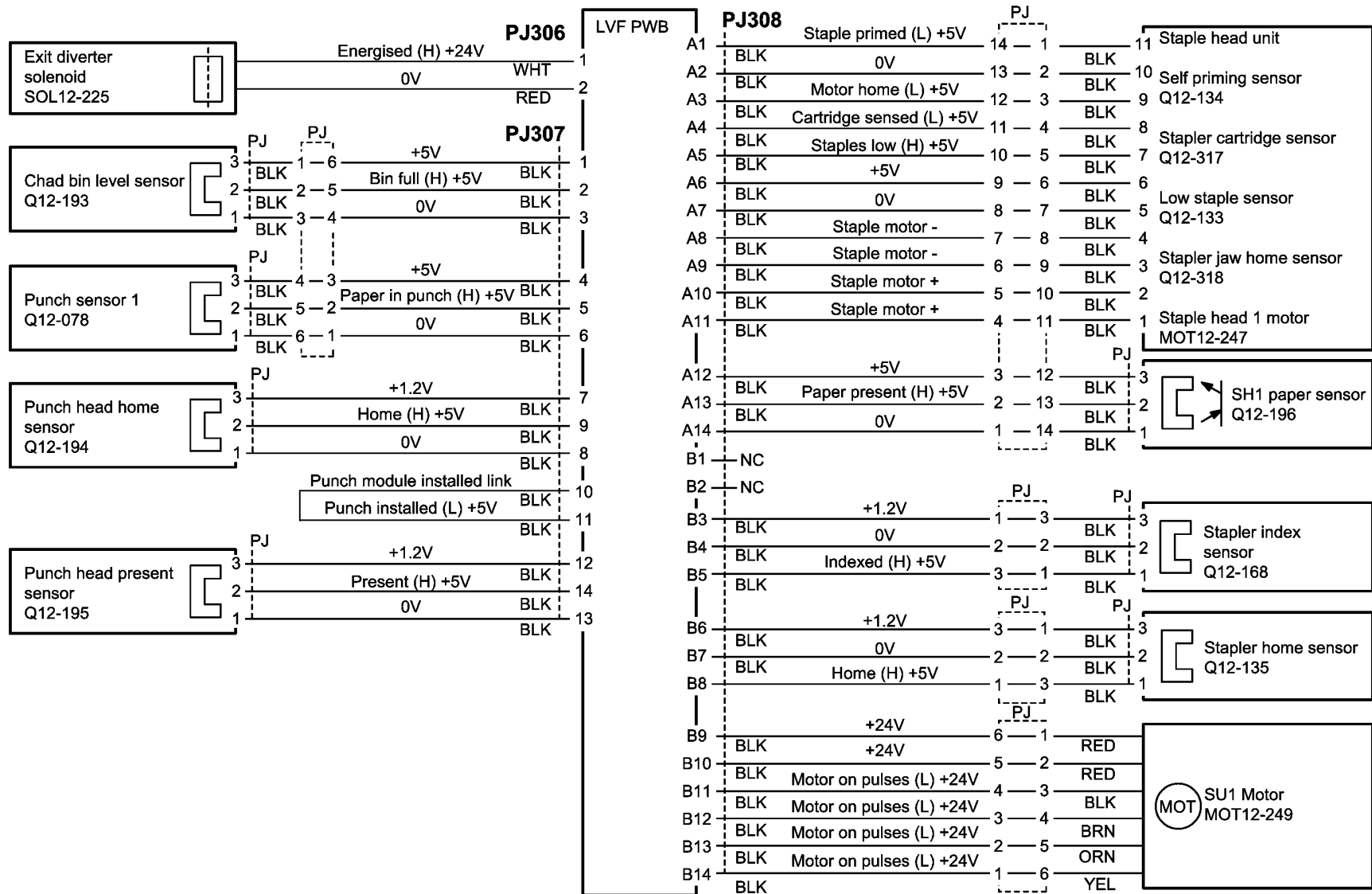
Wiring Diagram 23



TX-1-0185-A

Figure 23 Wiring Diagram 23

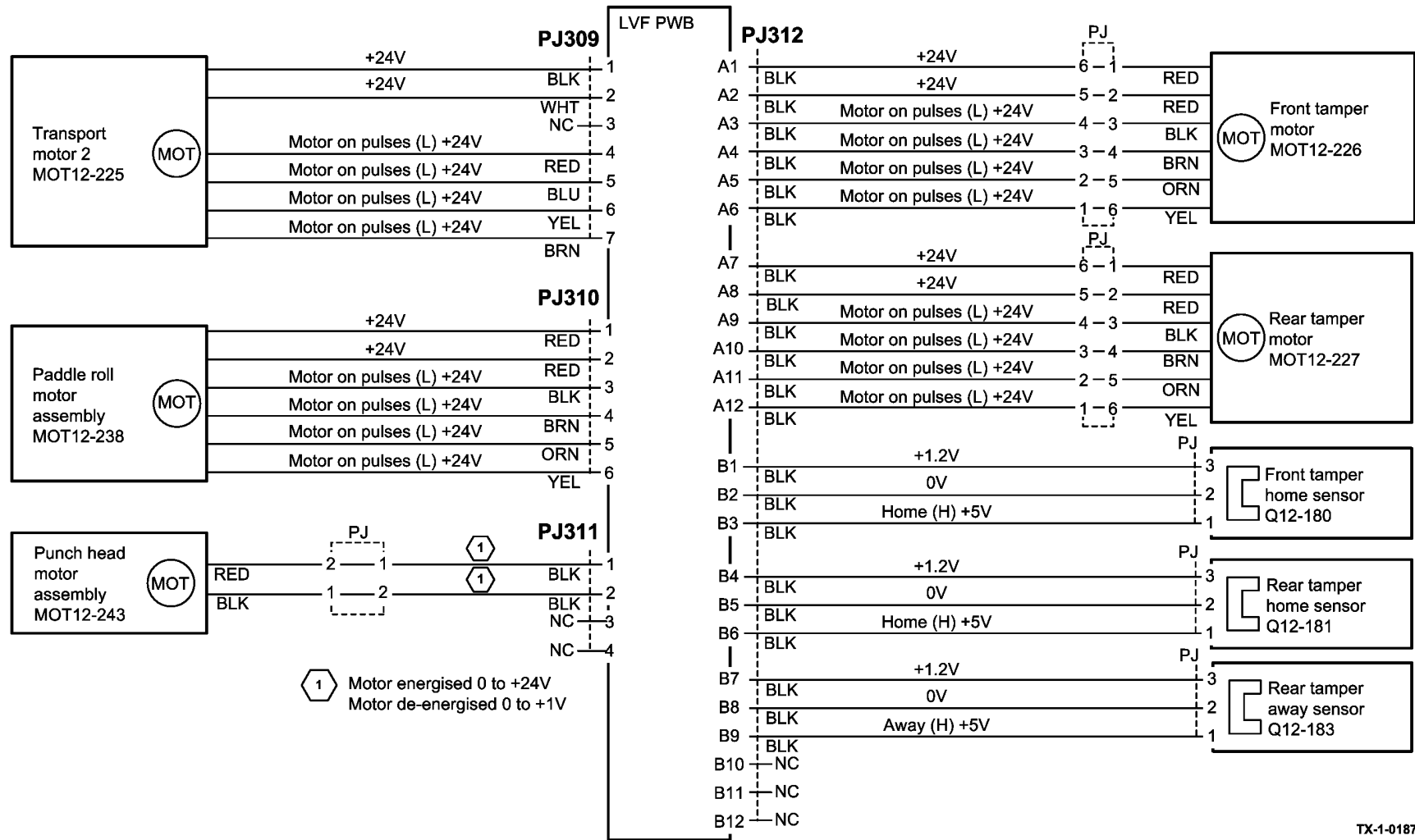
Wiring Diagram 24



TX-1-0186-A

Figure 24 Wiring Diagram 24

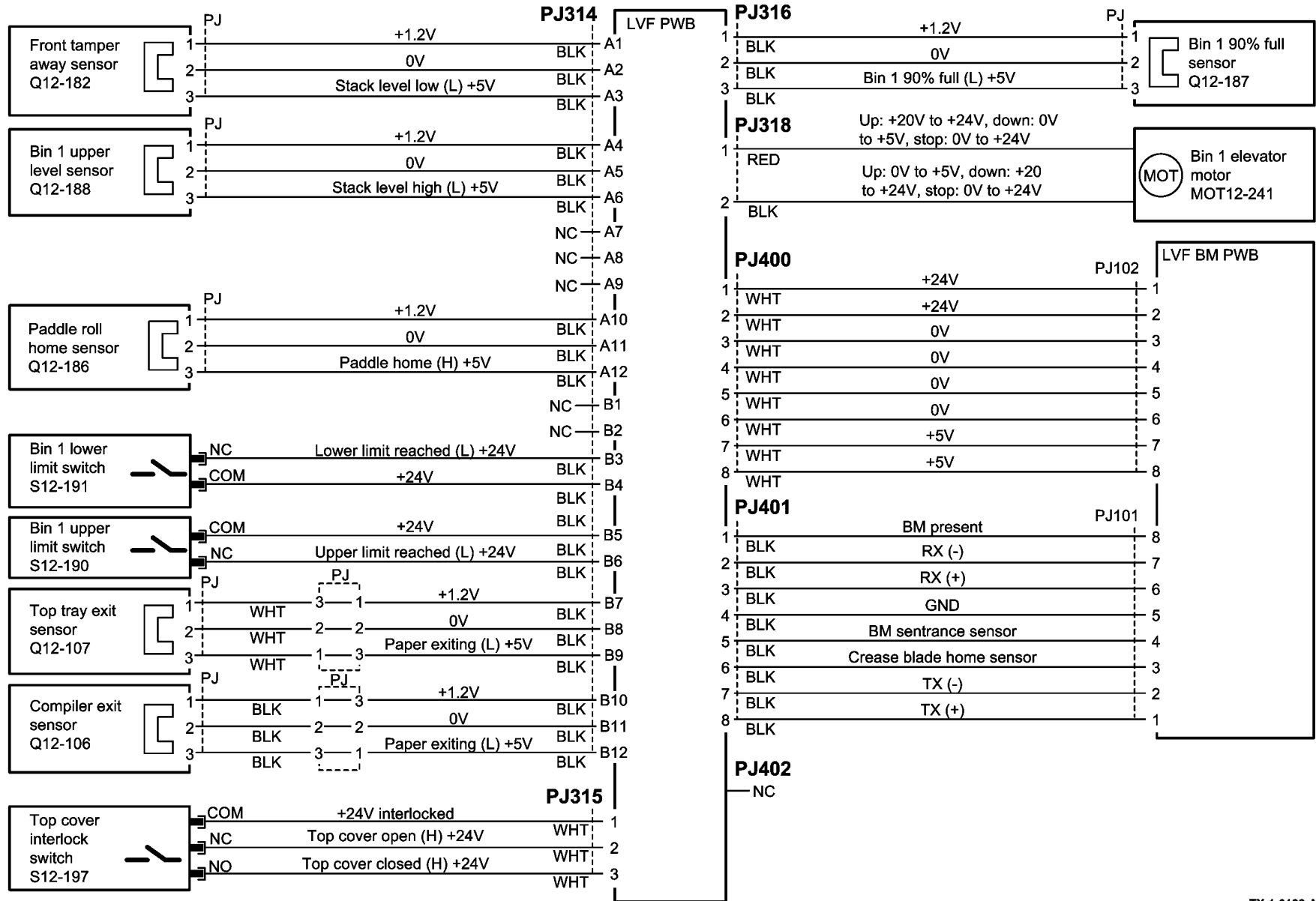
Wiring Diagram 25



TX-1-0187-A

Figure 25 Wiring Diagram 25

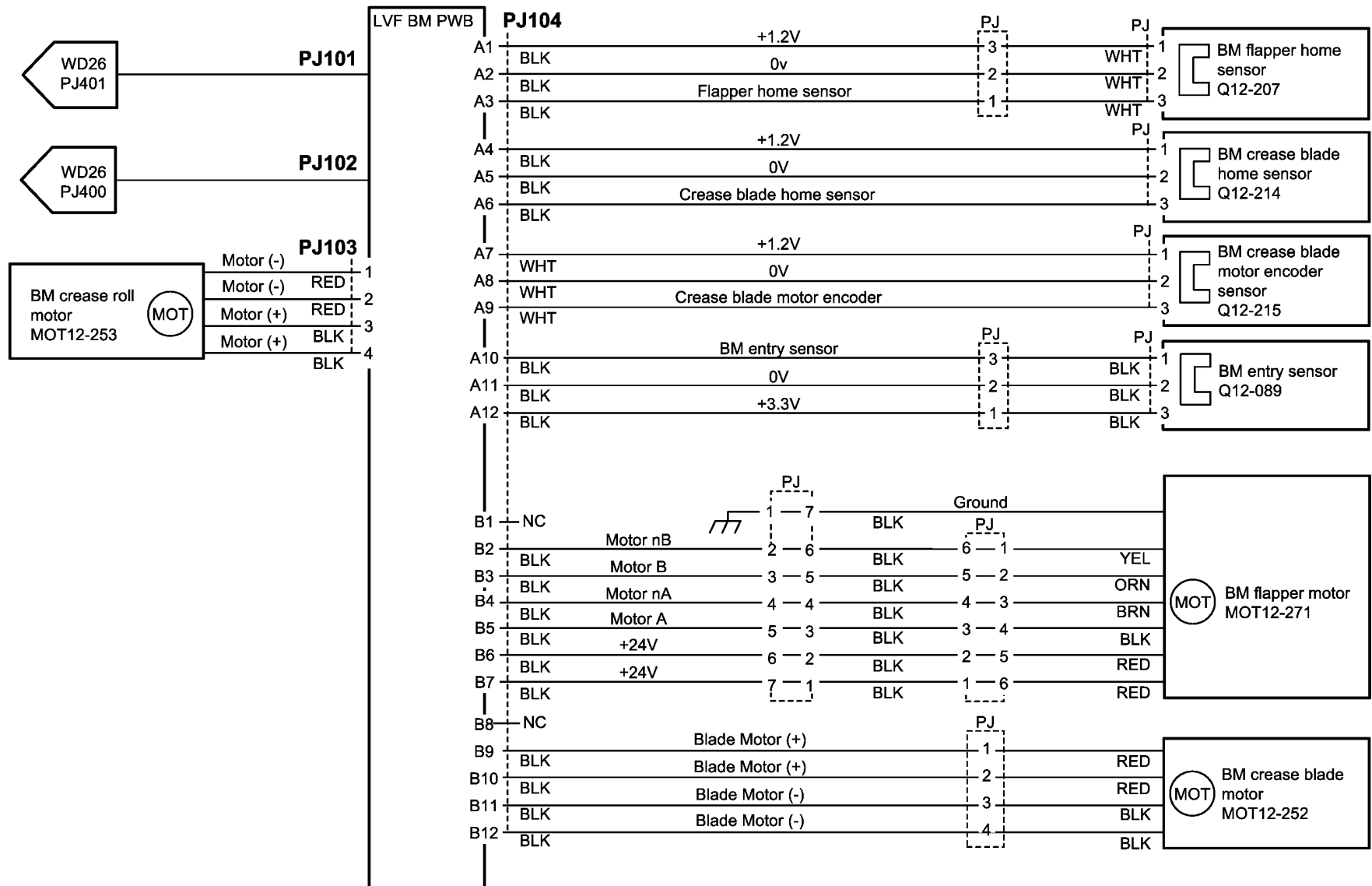
Wiring Diagram 26



TX-1-0188-A

Figure 26 Wiring Diagram 26

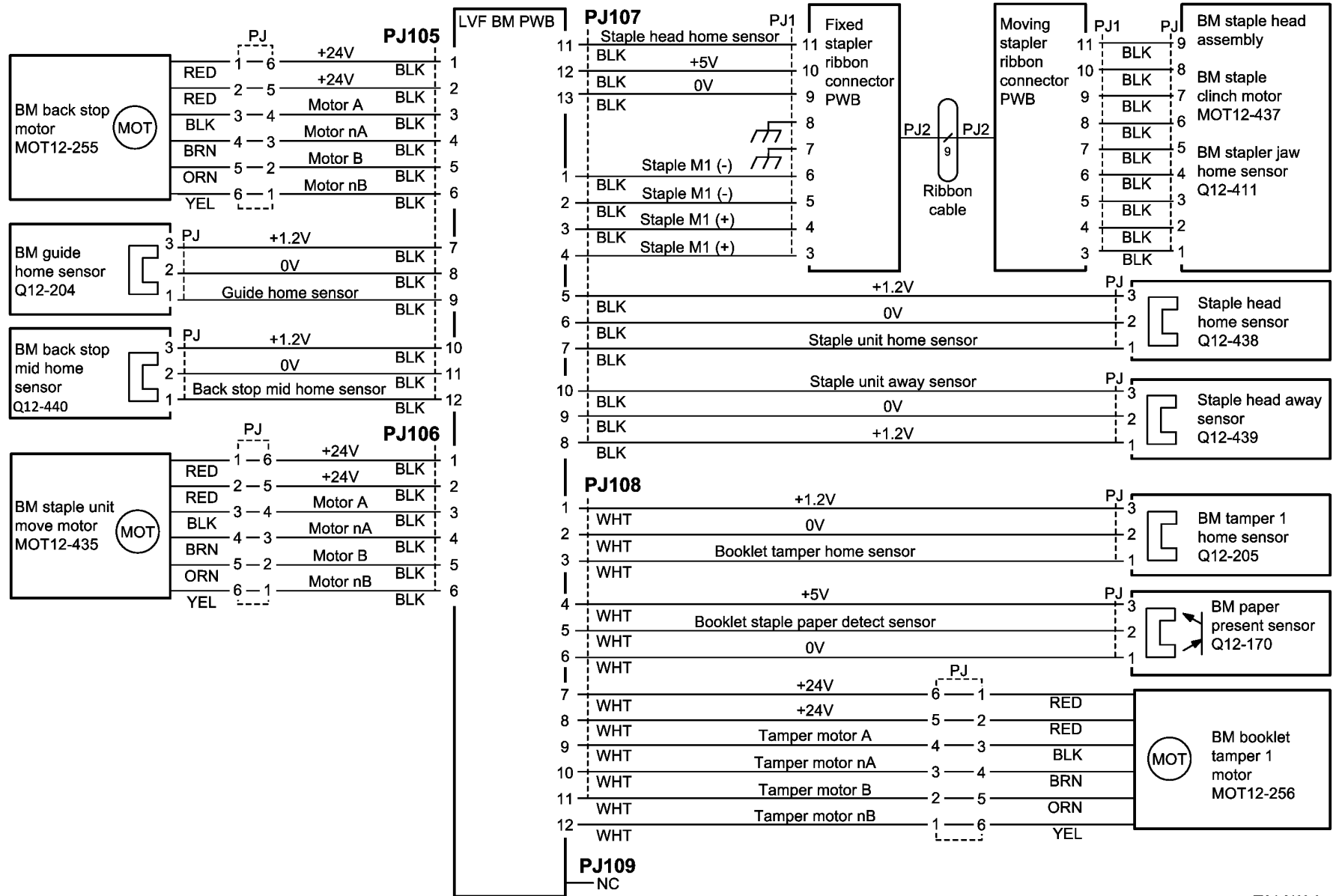
Wiring Diagram 27



TX-1-0189-A

Figure 27 Wiring Diagram 27

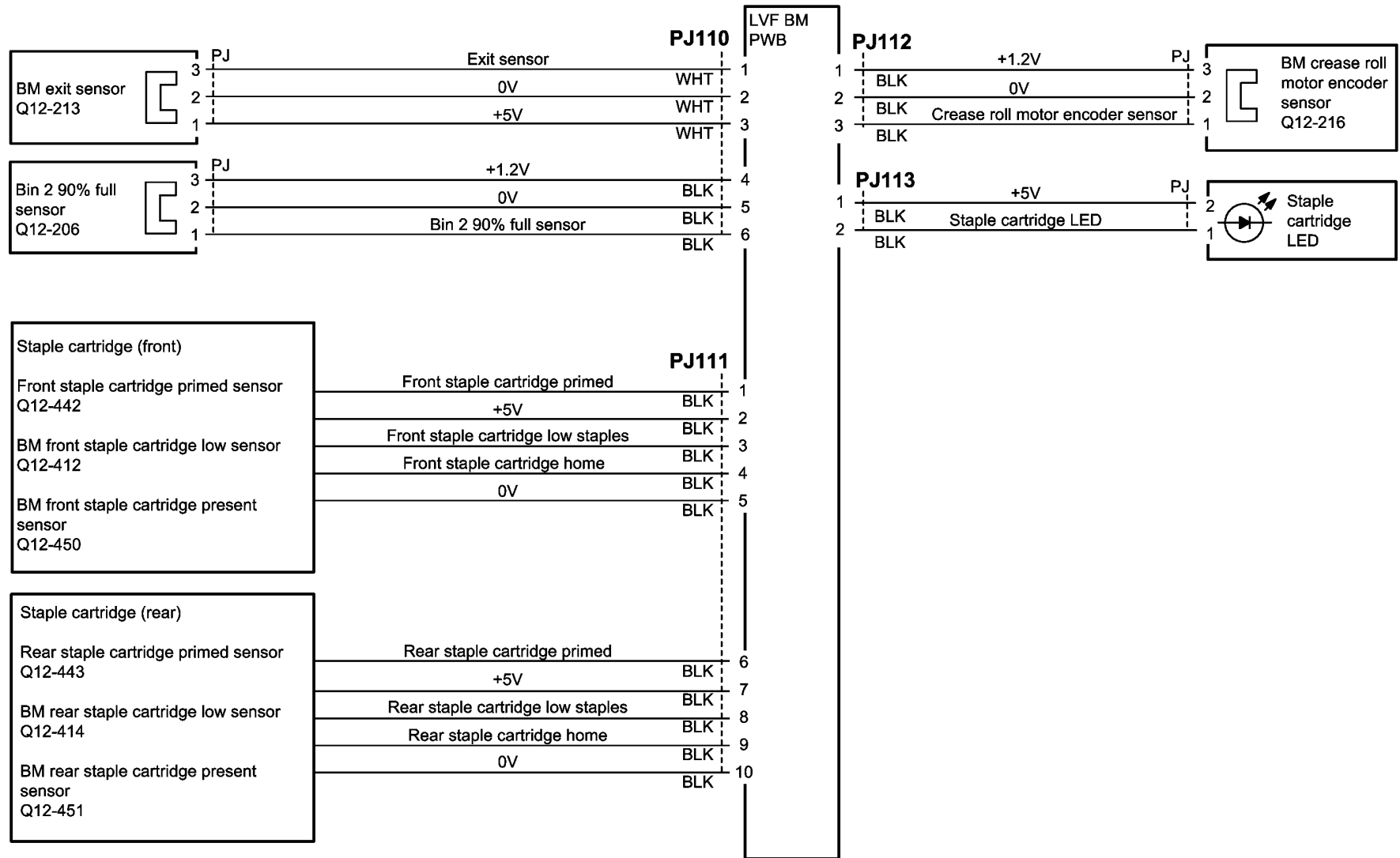
Wiring Diagram 28



TX-1-0190-A

Figure 28 Wiring Diagram 28

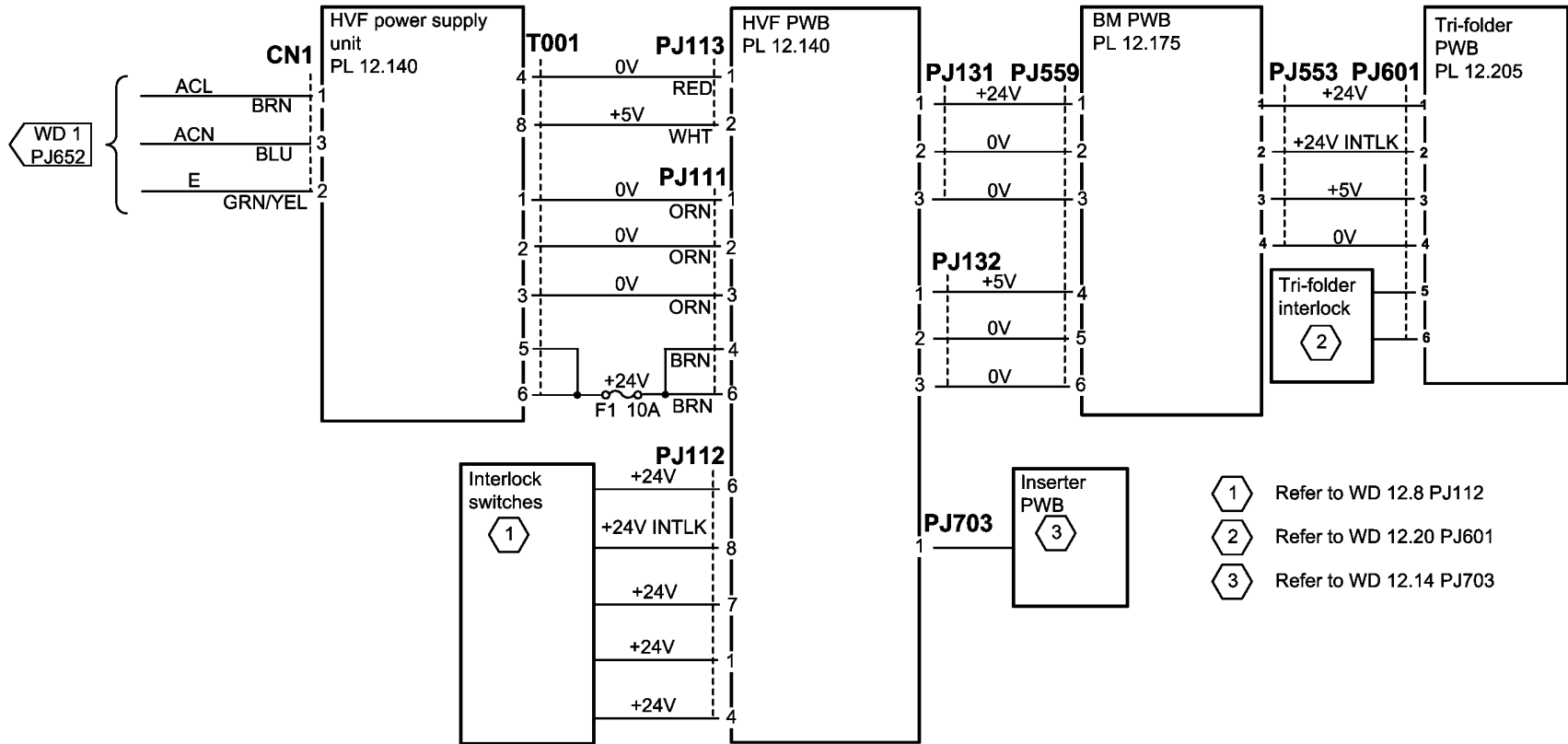
Wiring Diagram 29



TX-1-0191-A

Figure 29 Wiring Diagram 29

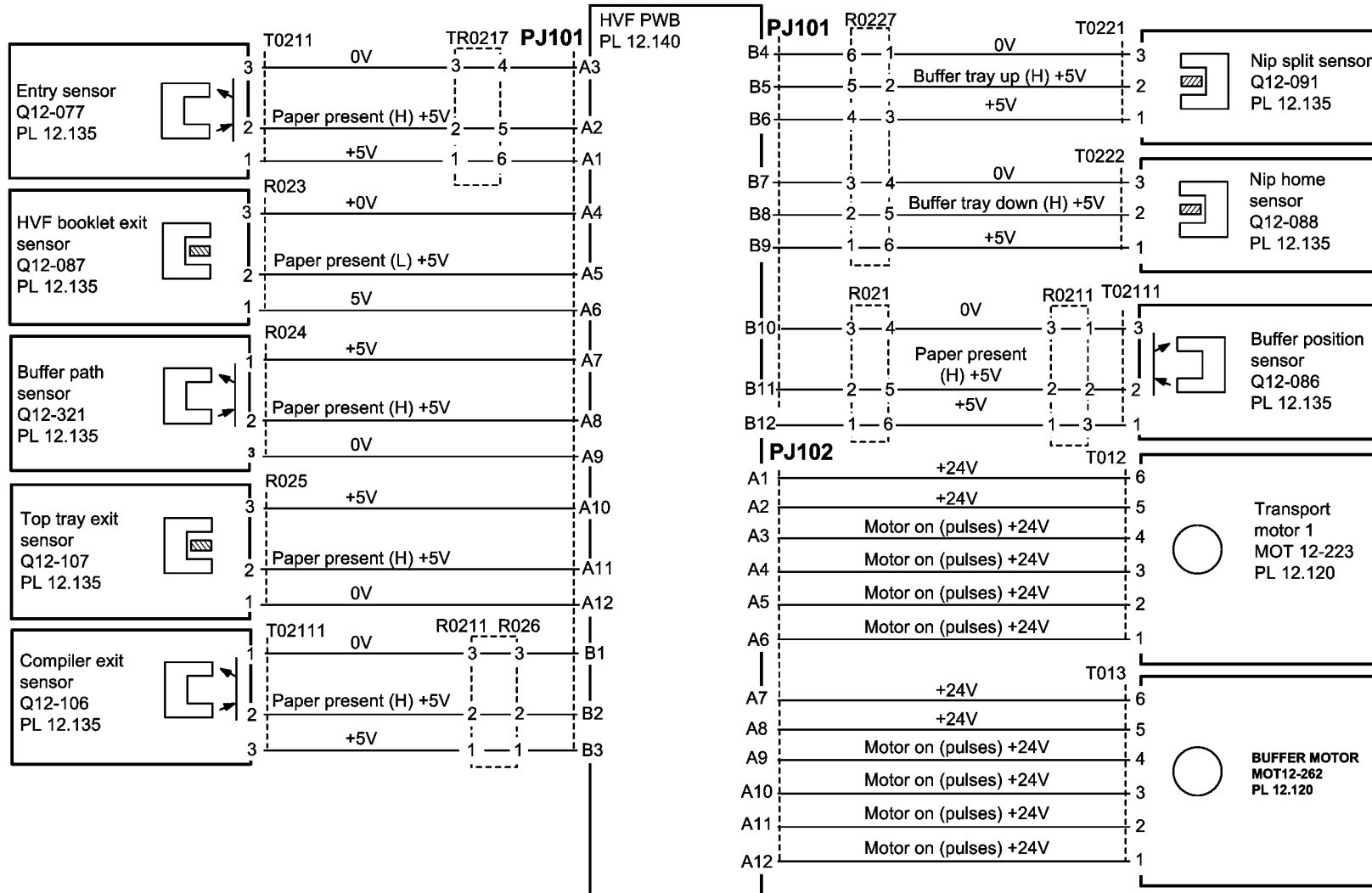
Wiring Diagram 30



TX-1-0418-A

Figure 30 Wiring Diagram

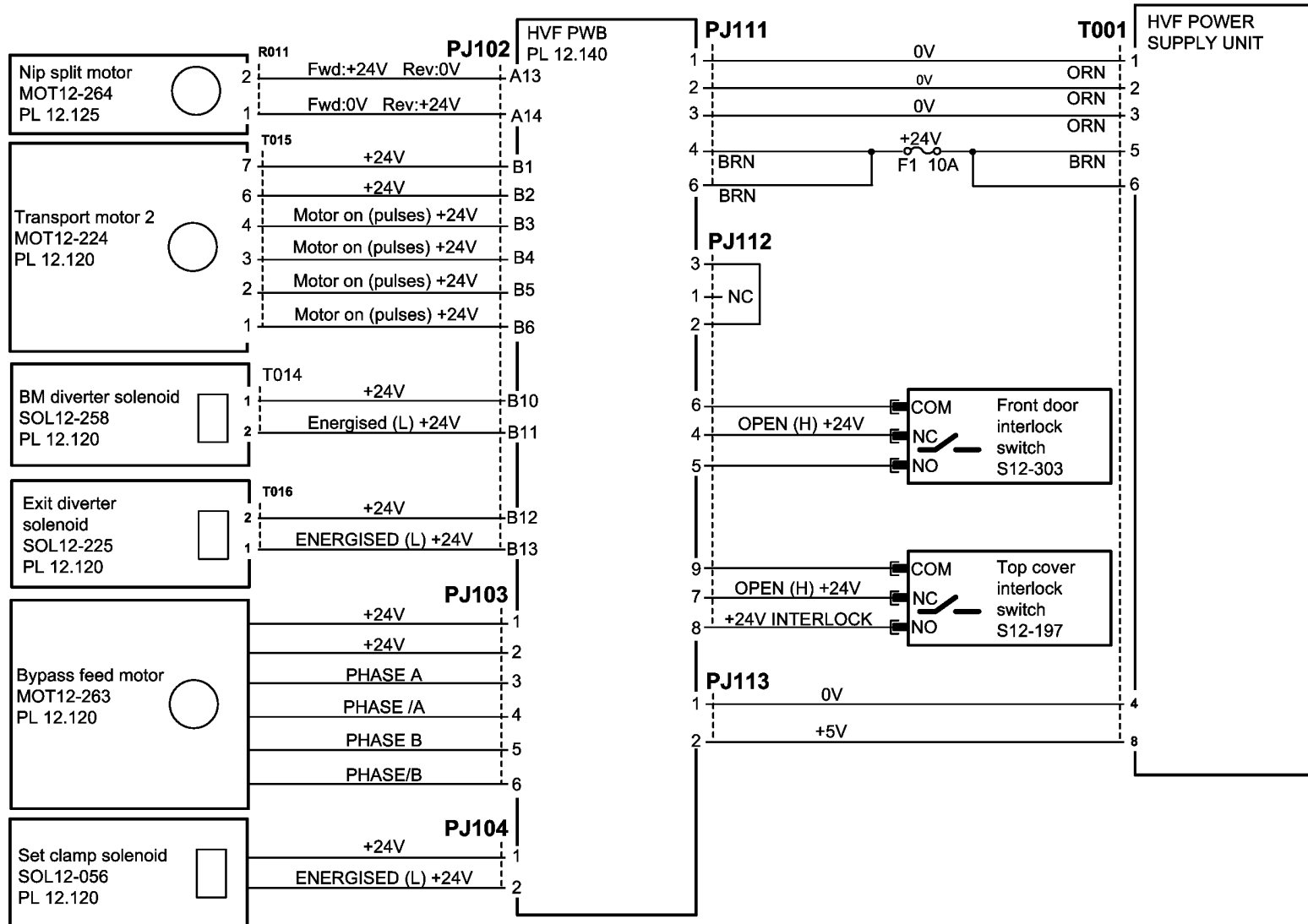
Wiring Diagram 31



TX-1-0419-A

Figure 31 Wiring Diagram 31

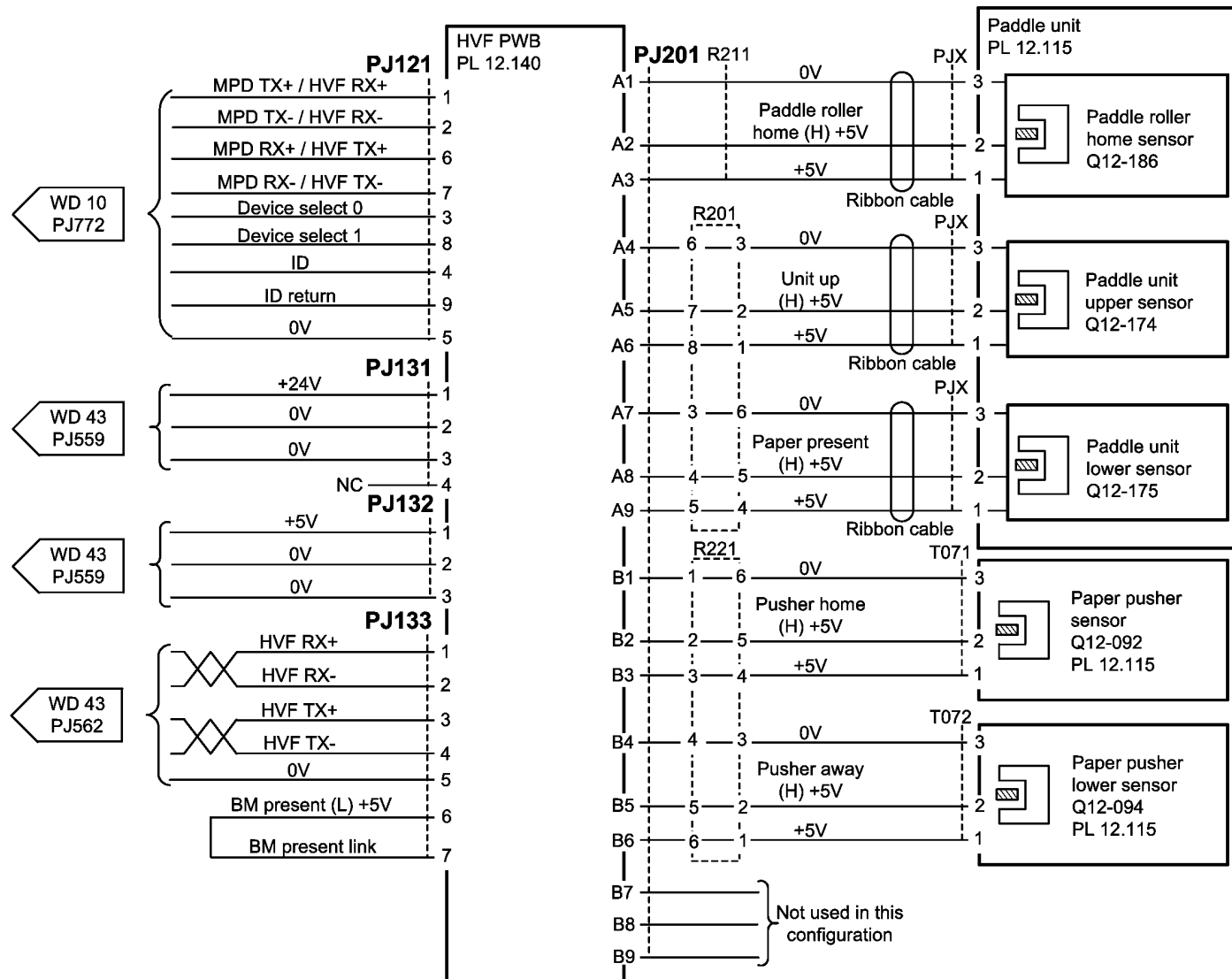
Wiring Diagram 32



TX-1-0420-A

Figure 32 Wiring Diagram 32

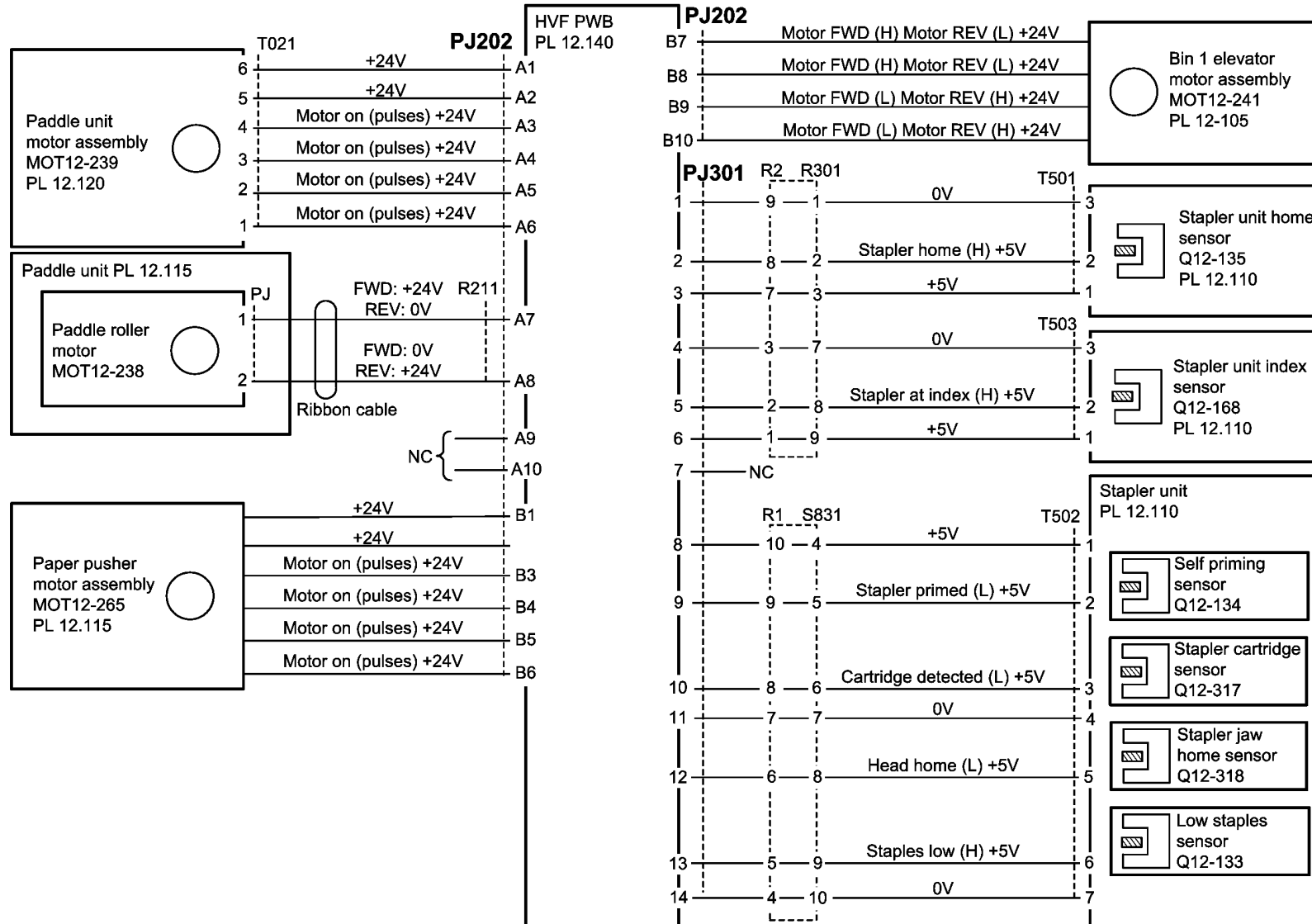
Wiring Diagram 33



TX-1-0421-A

Figure 33 Wiring Diagram 33

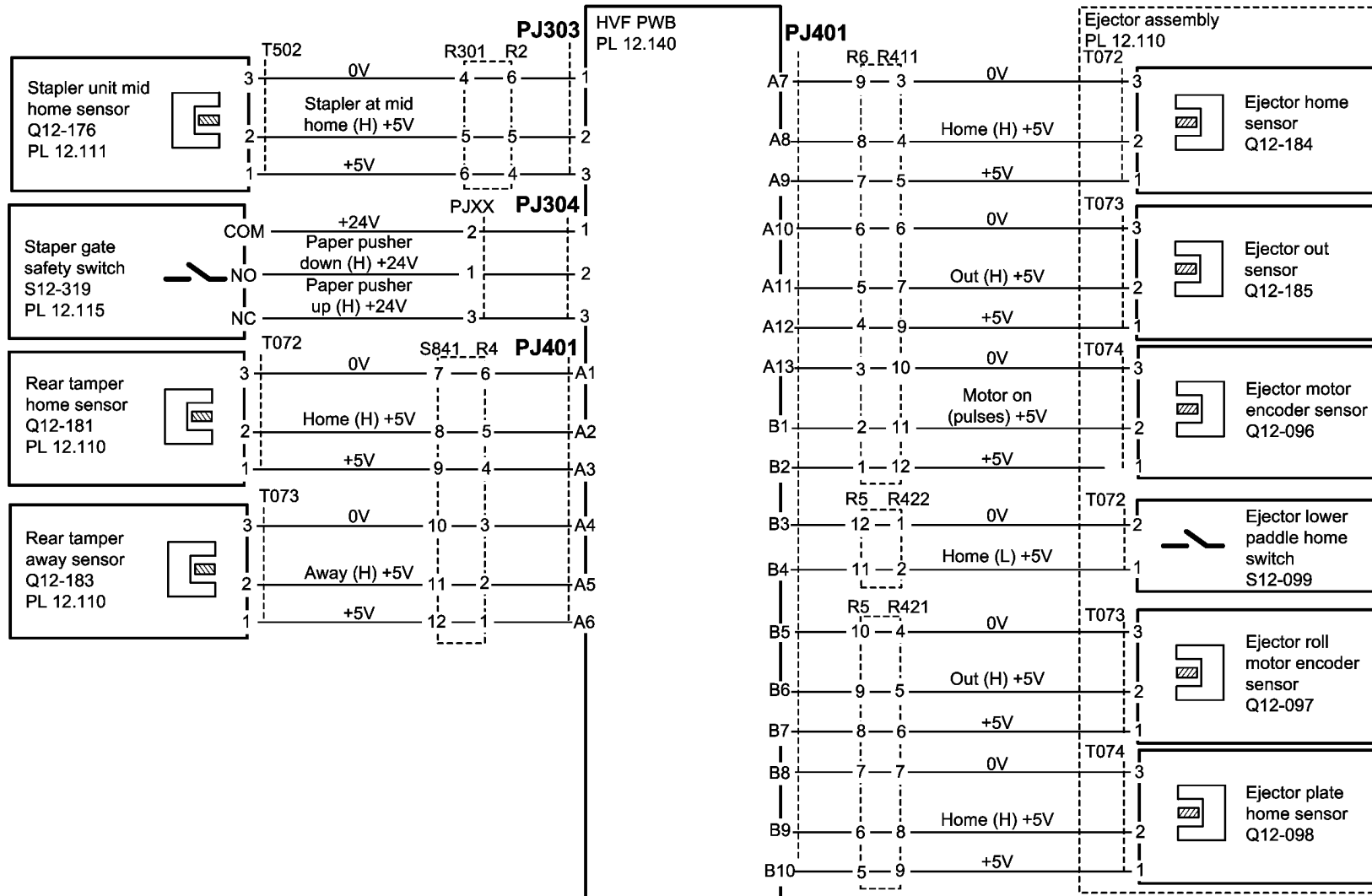
Wiring Diagram 34



TX-1-0422-A

Figure 34 Wiring Diagram 34

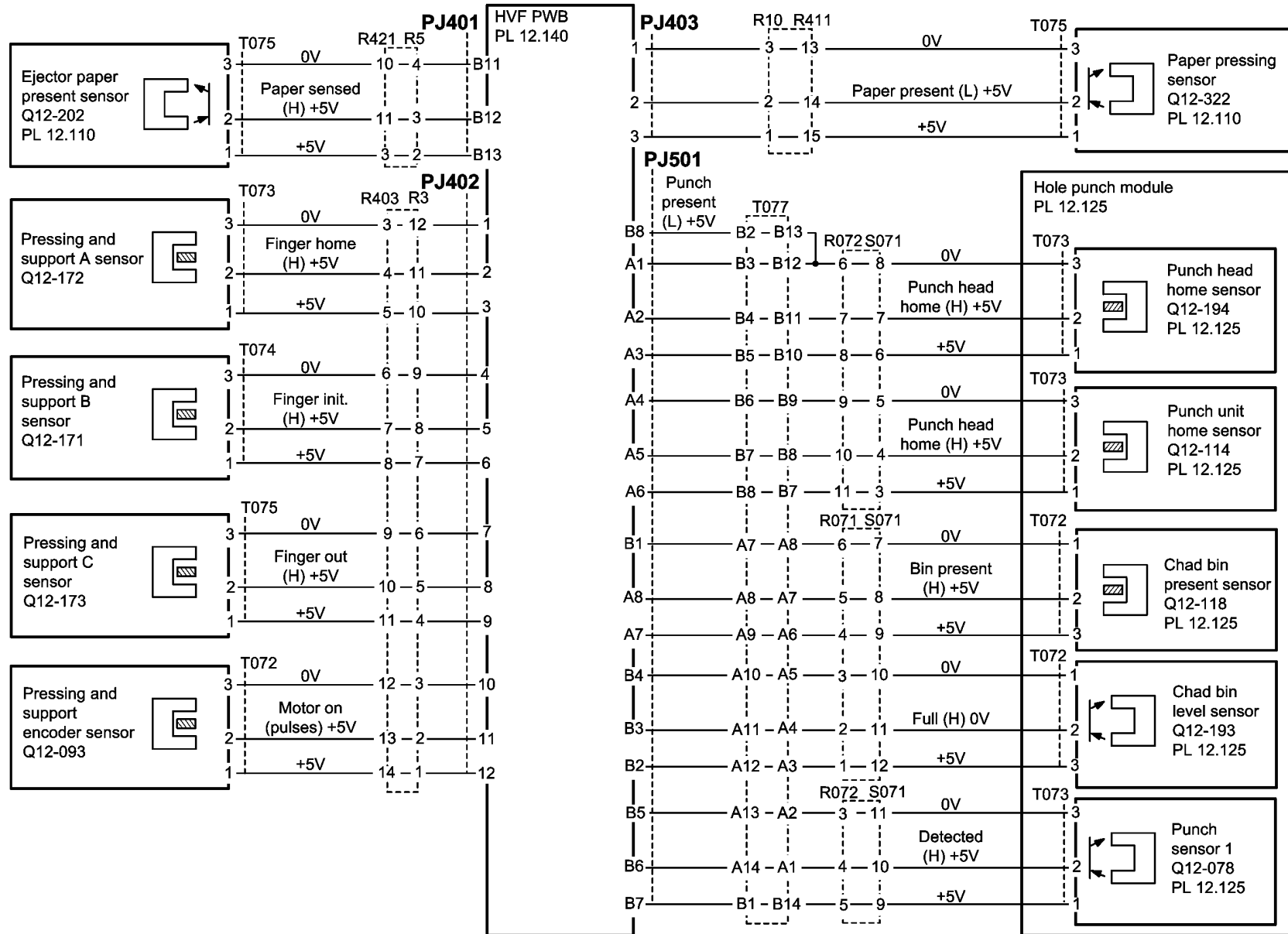
Wiring Diagram 35



TX-1-0423-A

Figure 35 Wiring Diagram 35

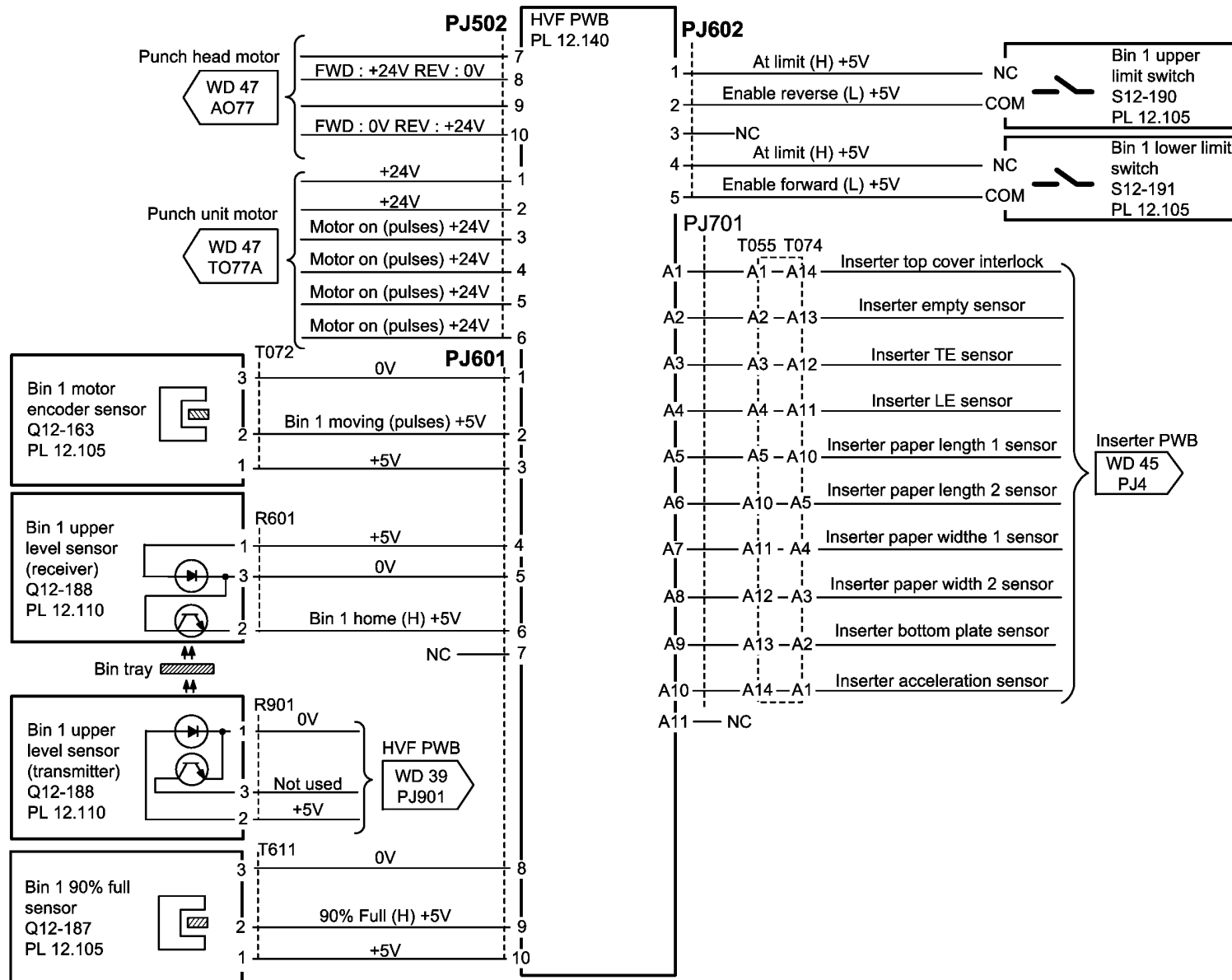
Wiring Diagram 36



TX-1-0424-F

Figure 36 Wiring Diagram 36

Wiring Diagram 37



TX-1-0425-A

Figure 37 Wiring Diagram 37

Wiring Diagram 38

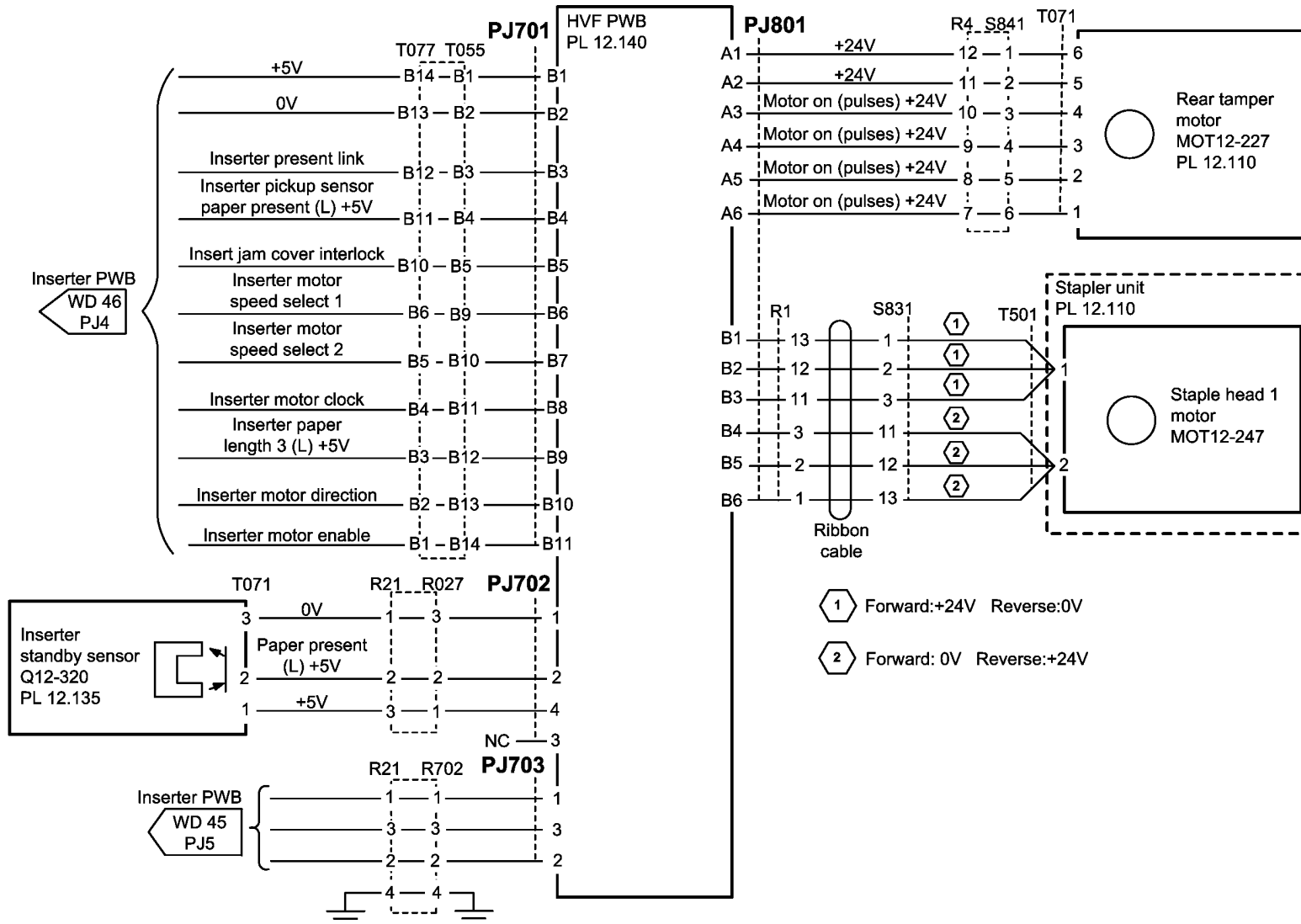
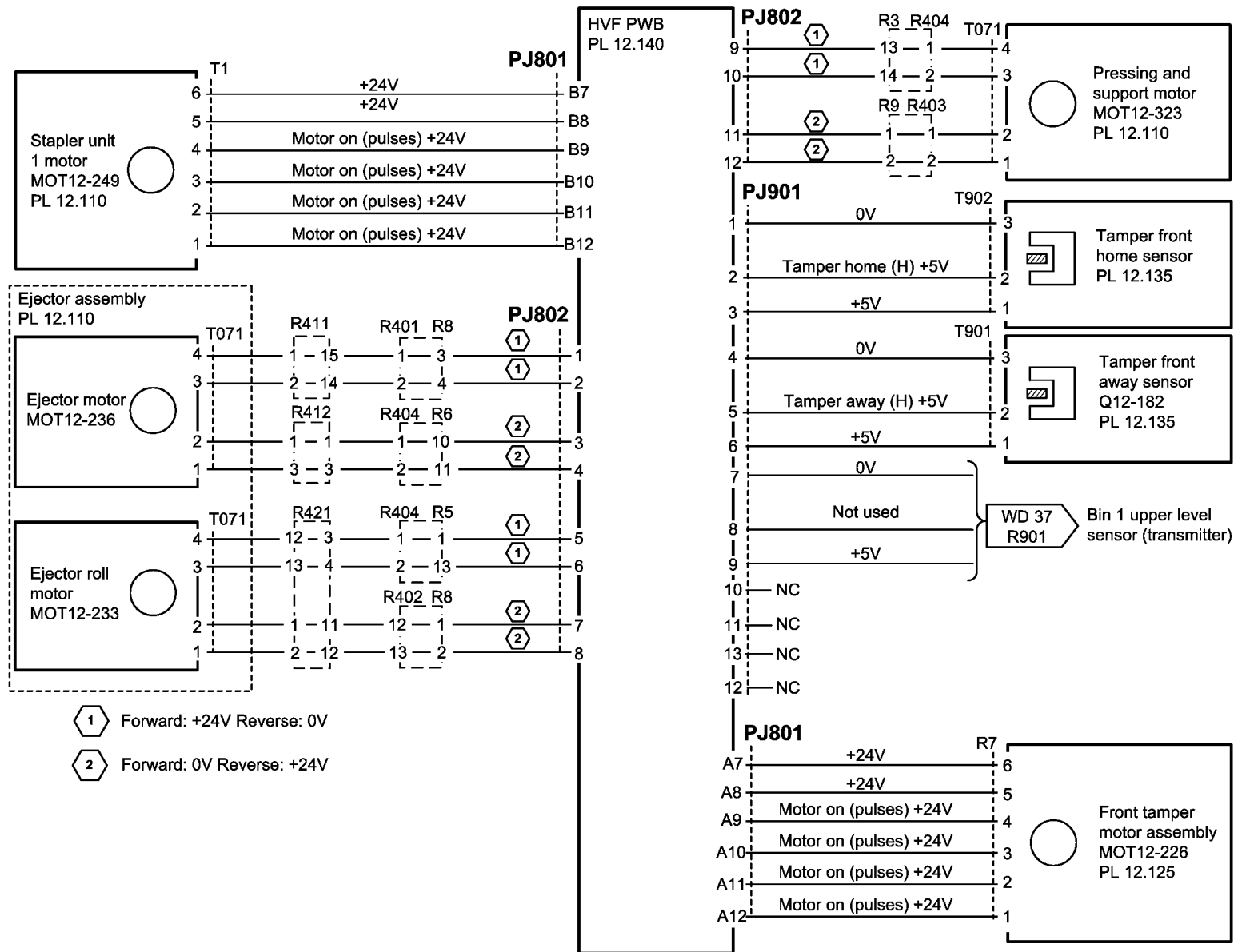


Figure 38 Wiring Diagram 38

TX-1-0426-A

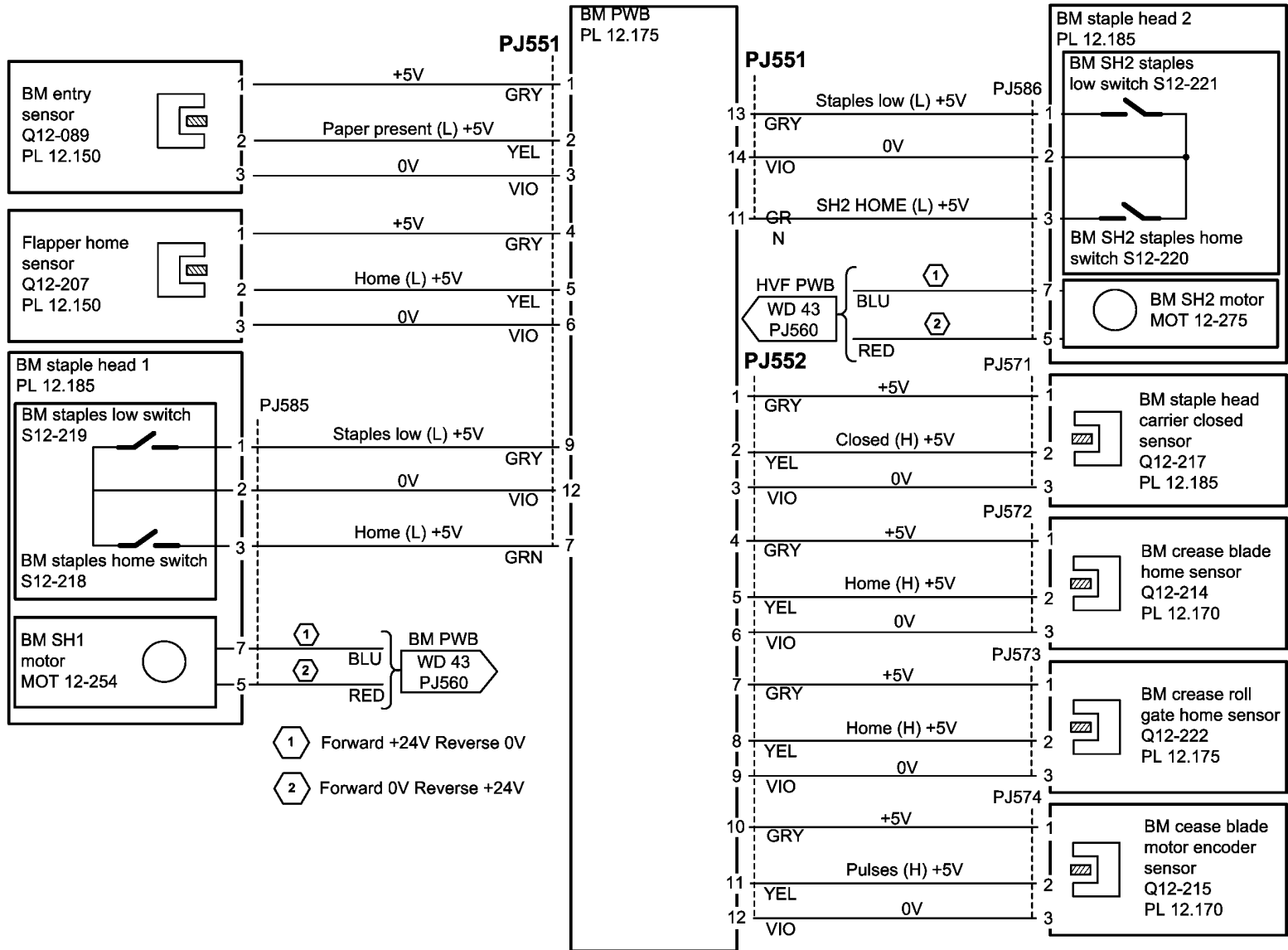
Wiring Diagram 39



TX-1-0427-B

Figure 39 Wiring Diagram 39

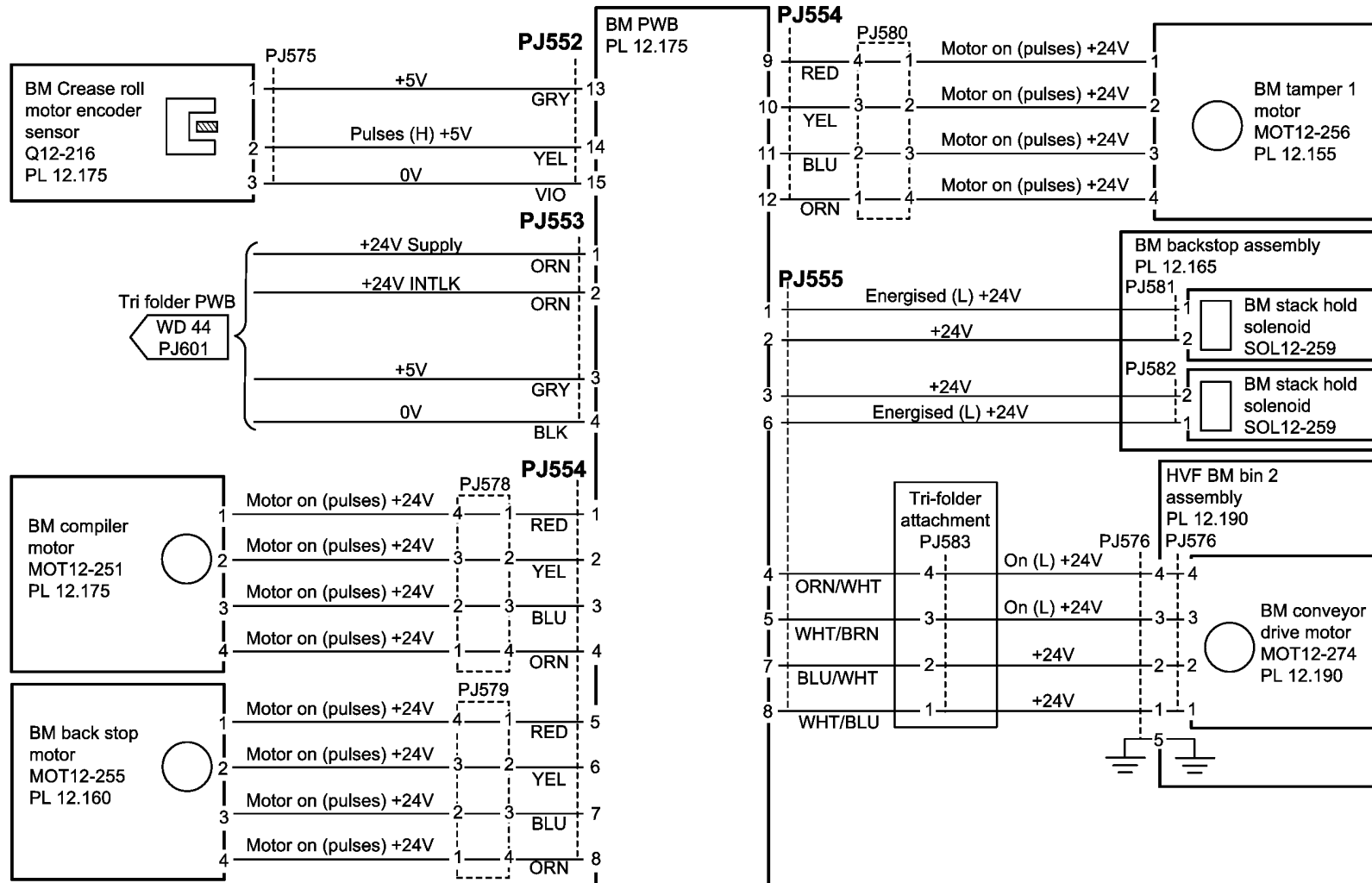
Wiring Diagram 40



TX-1-0428-A

Figure 40 Wiring Diagram 40

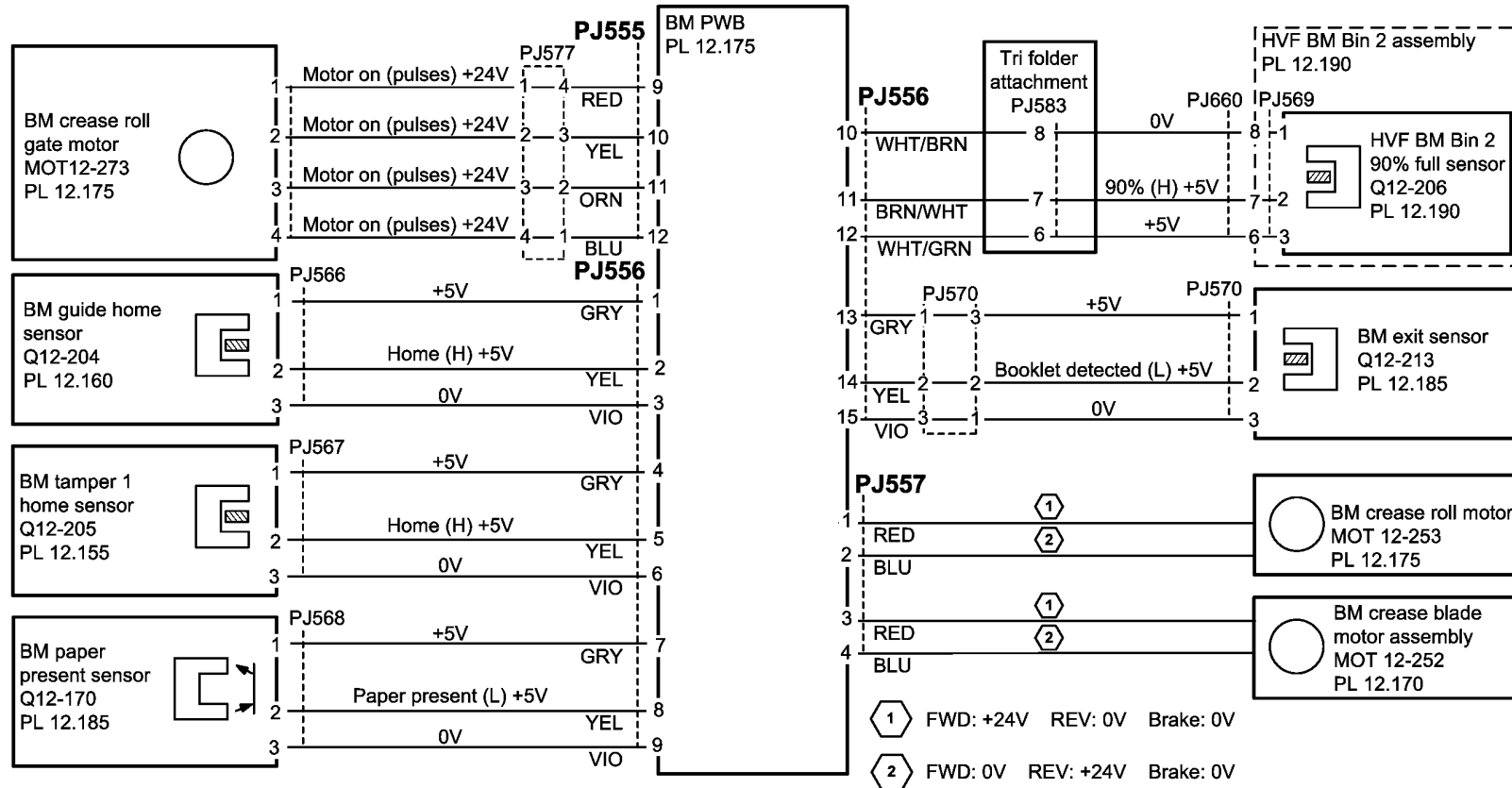
Wiring Diagram 41



TX-1-0429-A

Figure 41 Wiring Diagram 41

Wiring Diagram 42



TX-1-0430-A

Figure 42 Wiring Diagram 42

Wiring Diagram 43

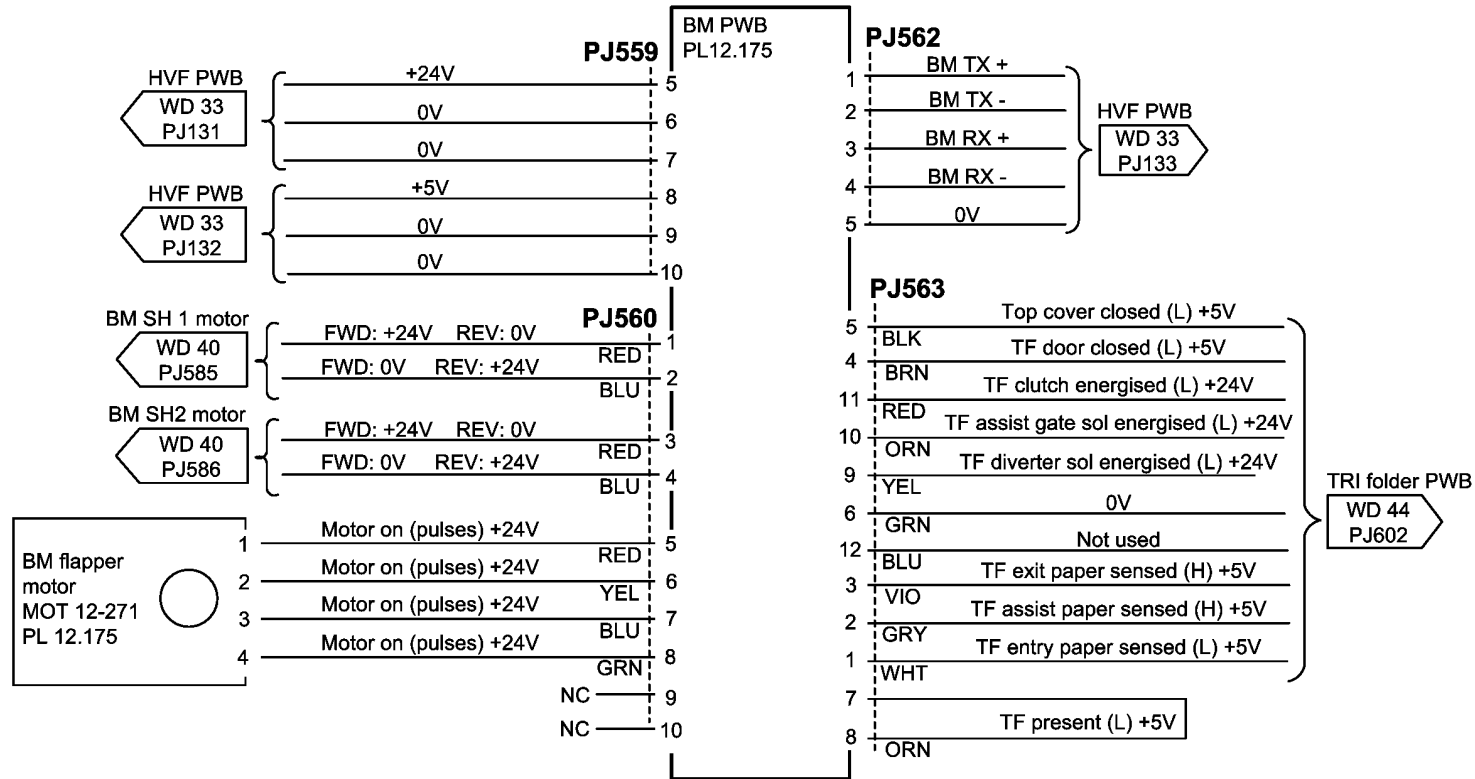
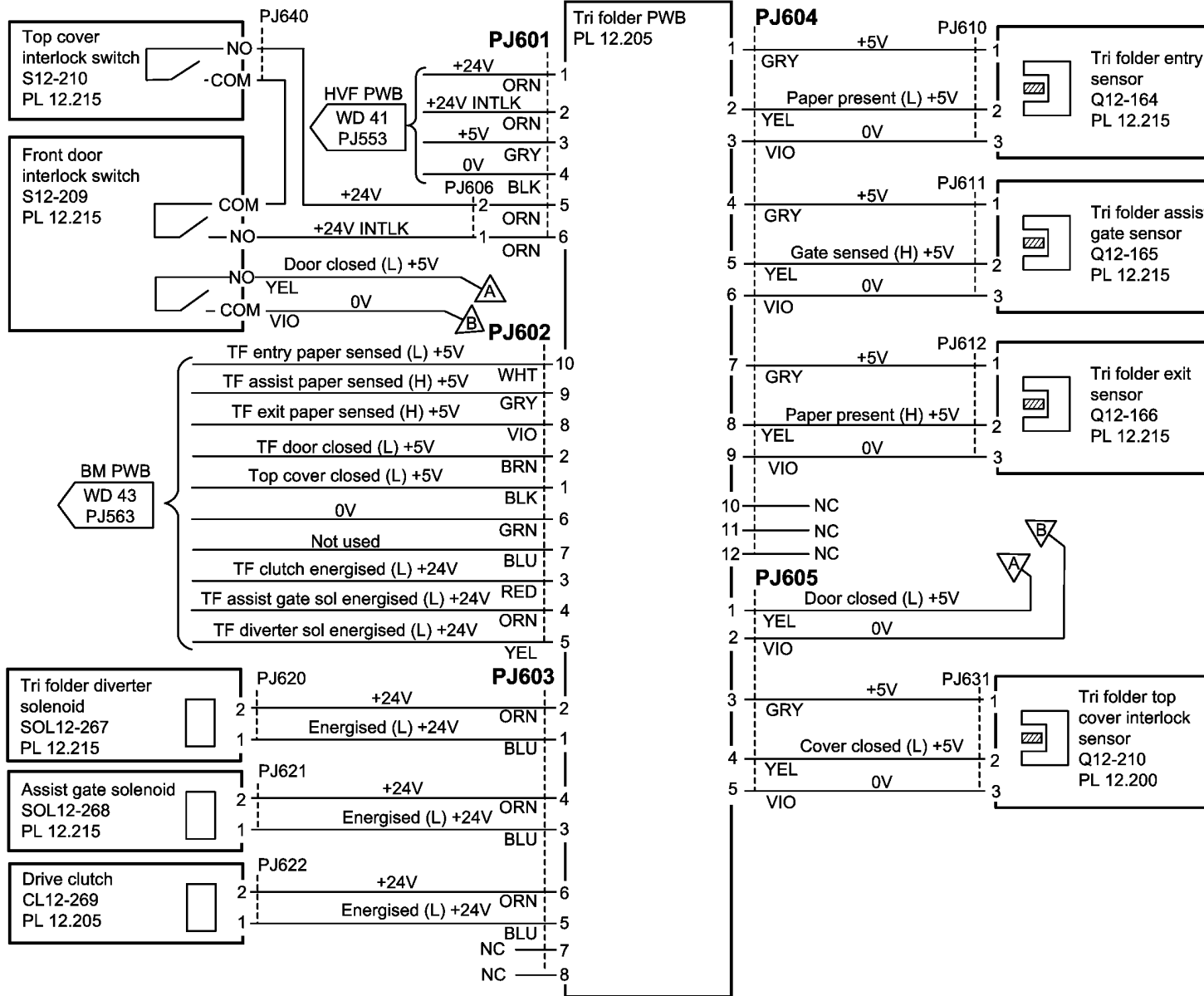


Figure 43 Wiring Diagram 43

TX-1-0431-A

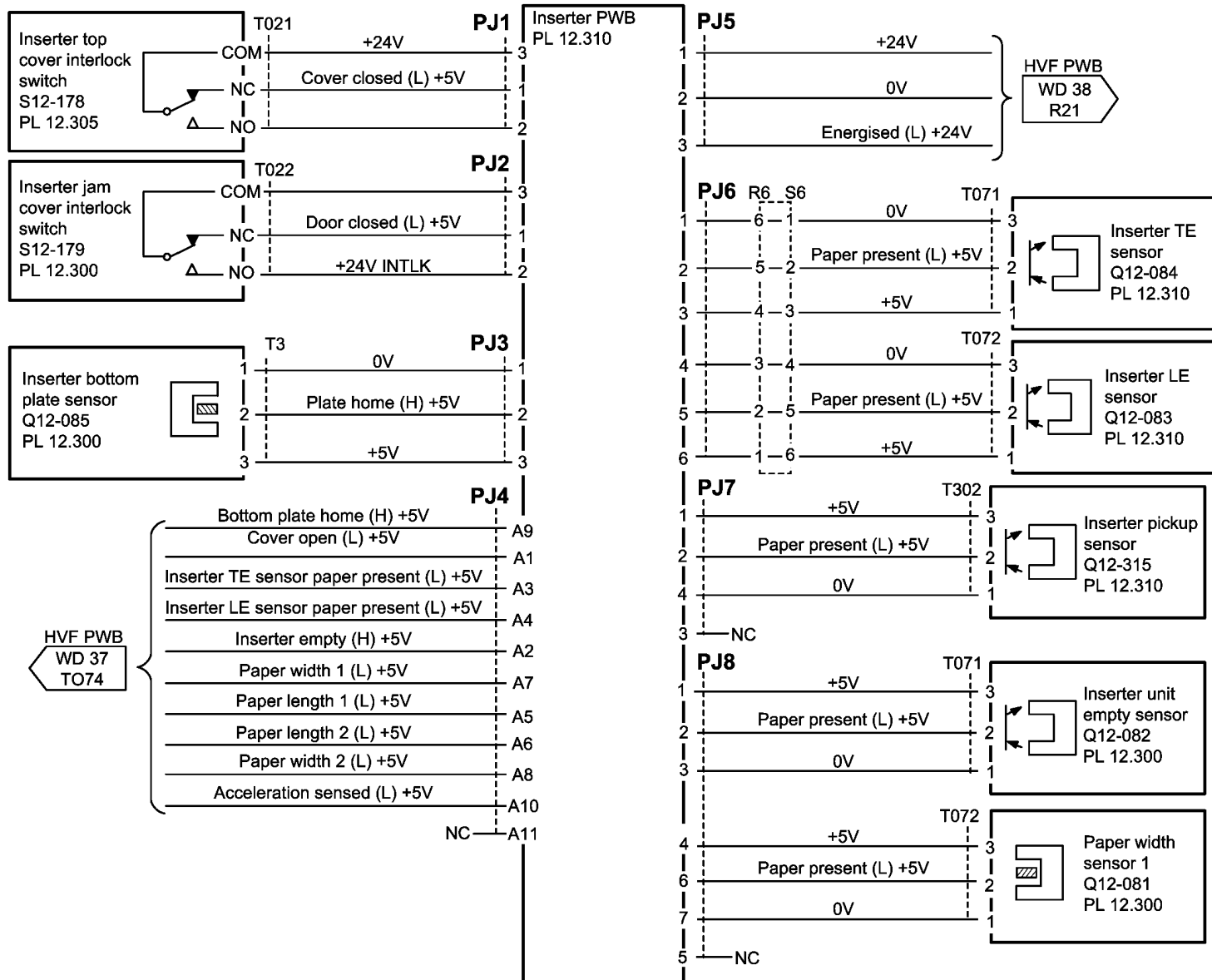
Wiring Diagram 44



TX-1-0432-A

Figure 44 Wiring Diagram 44

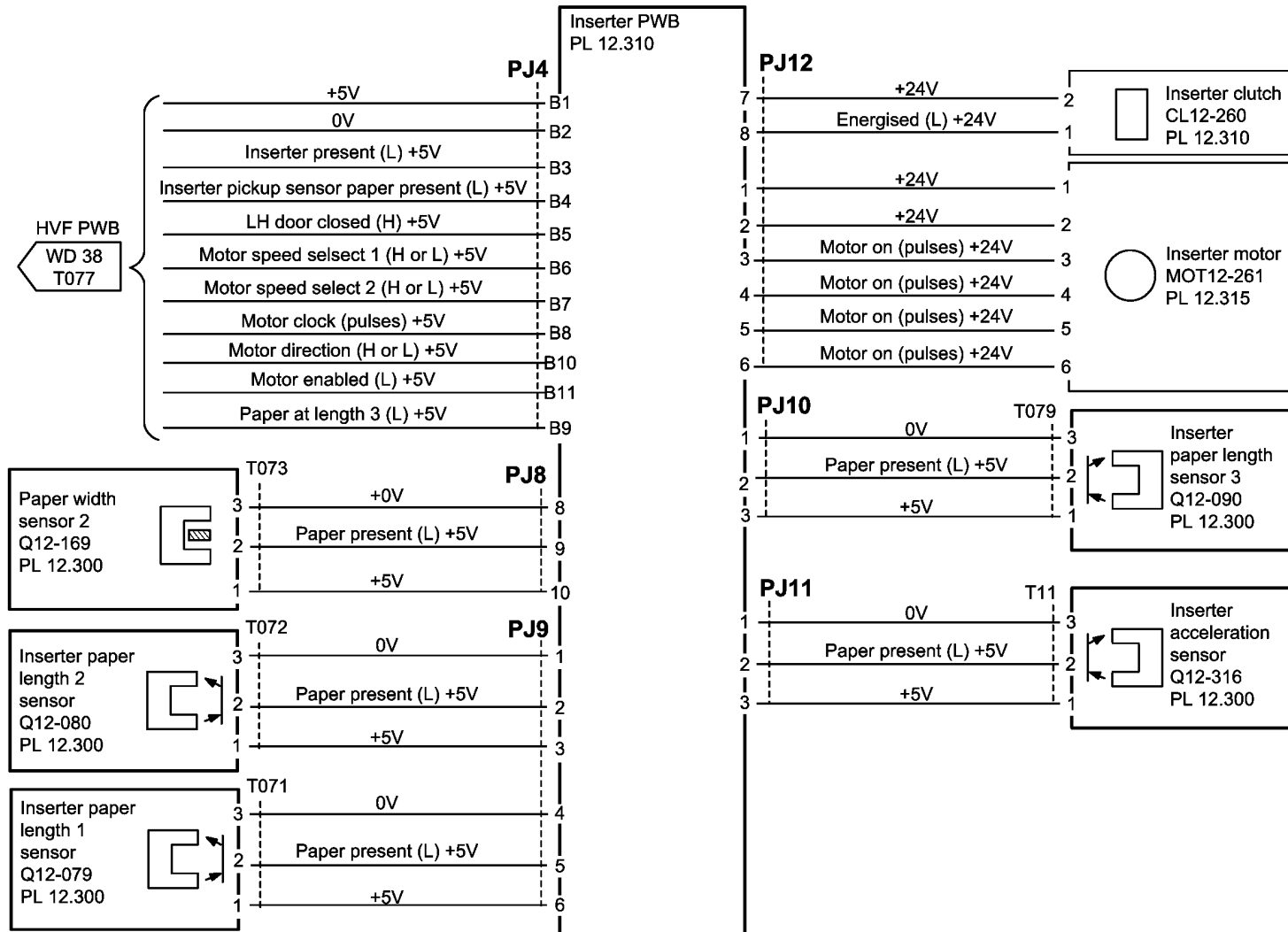
Wiring Diagram 45



TX-1-0433-A

Figure 45 Wiring Diagram 45

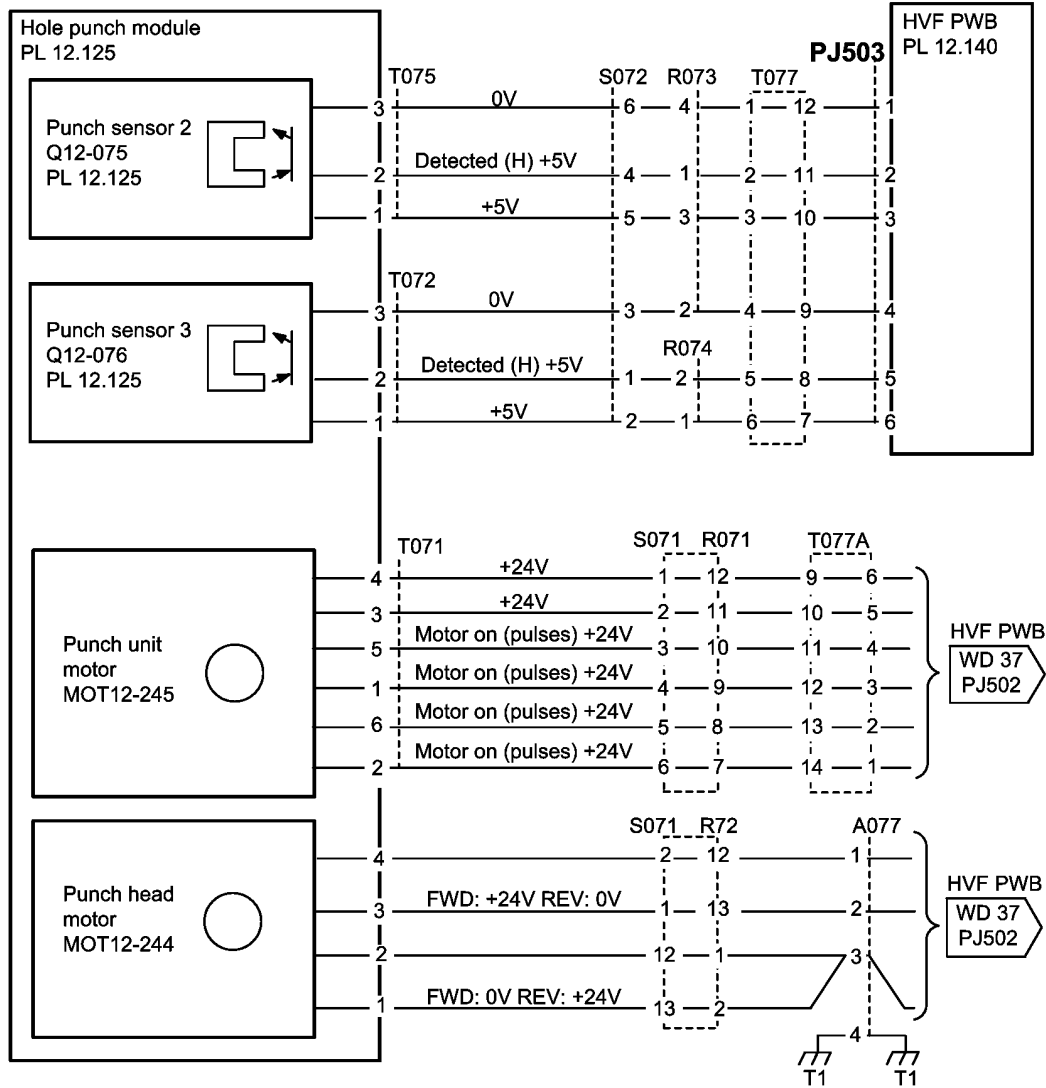
Wiring Diagram 46



TX-1-0434-A

Figure 46 Wiring Diagram 46

Wiring Diagram 47



TX-1-0436-A

Figure 47 Wiring Diagram 47

8 Principles of Operation

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Machine Overview

Configuration Options

The Xerox® AltaLink® B8090 Family is available as a basic machine with trays 1, 2, 3, 4 and 5 (bypass tray) plus an optional tray 6 (external paper feeder platform - PFP). Five machine speeds are available in two variants.

First machine variant:

- AltaLink® B8045 - 45 ppm
- AltaLink® B8055 - 55 ppm

Second machine variant:

- AltaLink® B8065 - 65 ppm
- AltaLink® B8075 - 75 ppm
- AltaLink® B8090 - 90 ppm

Refer to [Overview](#) within the Main Drive Module section for details of the two variants and how the speeds are achieved.

General

For the space requirements, environment range and the print out time. Refer to:

- [GP 21](#) Installation Space Requirements.
- [GP 23](#) Environmental Data.
- [GP 25](#) First Copy / Print Out Time and Power On / Off Time.

Paper Supply and Paper Handling Options

- 200 sheet single pass document handler (SPDH).
- Two 500 sheet paper trays (designated tray 1 and tray 2).
- 3600 sheet high capacity feeder (designated trays 3 and 4).
- 100 sheet bypass tray (designated tray 5).
- Optional 3300 sheet high capacity feeder (designated tray 6).

Output Options

- A horizontal transport is also installed when a finisher is fitted.
- Office finisher (2K LCSS). See [2K LCSS General Description](#).
- Office finisher with booklet maker (LVF BM). See [LVF BM General Description](#).
- High volume finisher (HVF). See [HVF General Description](#).
- High volume finisher with booklet maker (HVF BM). See [Booklet Maker Module](#).
- Post print inserter (PPI) used with an HVF BM. See [Tray 7 Inserter](#).
- Tri-folder used with an HVF and HVF BM. See [Tri-Folder](#).

[Table 1](#) describes finisher and paper handling options for each speed variant.

Table 1 Paper handling and finisher options

	Tray 6 (PFP)	Centre tray or horizontal transport	2K LCSS	LVF BM	HVF BM Tri folder/ PPI
45ppm	Yes	Centre tray or horizontal transport	Yes	Yes	No
55ppm	Yes	Centre tray or horizontal transport	Yes	Yes	No
65ppm	Yes	Centre tray or horizontal transport	Yes	Yes	Yes
75ppm	Yes	Centre tray or horizontal transport	Yes	Yes	Yes

Table 1 Paper handling and finisher options

	Tray 6 (PFP)	Centre tray or horizontal transport	2K LCSS	LVF BM	HVF BM Tri folder/ PPI
90ppm	Yes	Horizontal transport only	No	No	Yes

NOTE: If an incompatible finisher is installed the status line will display Status Code 12.765 Incompatible/unknown finisher detected.

Registration

The AltaLink® B8090F are centre registered multifunction printers as follows:

- Side 1 scanning:
 - Centre registered document guides are used when the document is scanned through the single pass document handler.
 - Edge registered when the document is manually placed on the platen glass.
- Side 2 scanning - centre registered document guides are used when the document is scanned through the single pass document handler.
- All paper trays use centre registered paper guides.
- The paper is not actively registered along the paper path.
- 2K LCSS:
 - Stacking - centred by tampers
 - Stapling - centred by tampers
 - Hole punching - no active registration
- LVF BM:
 - Stacking - centred by tampers
 - Stapling - centred by tampers
 - Hole punching - no active registration
 - Booklet making - centred by tampers
- HVF BM:
 - Stacking - centred by tampers
 - Stapling - centred by tampers
 - Hole punching - centred by active registration. A sensor detects the top edge of the paper. The control board commands a motor to move the punch into the desired position.
 - Booklet making - centred by tampers

Accessories and Kits

- Workshelf.
- 50 sheet convenience stapler.
- 2 hole punch kit.
- Legal 2 hole punch kit.
- 3 hole punch kit.
- 4 hole punch kit.
- Swedish 4 hole punch kit.
- 1 Line Fax kit.
- 2 Line Fax kit.
- Scan to PC desktop SE - standard.

- Scan to PC desktop SE - professional.
- Nationalization kits.
- Foreign device interface kit.
- Tray 2/4 lock kit.
- Envelope tray feed kit.
- Unicode international printing kit.
- Secure access kit.
- Common access card.
- McAfee Integrity Control enablement kit.
- XPS enablement kit.
- Wireless print kit.
- Smartcard kit.
- User interface external keyboard.

Consumables and Billing

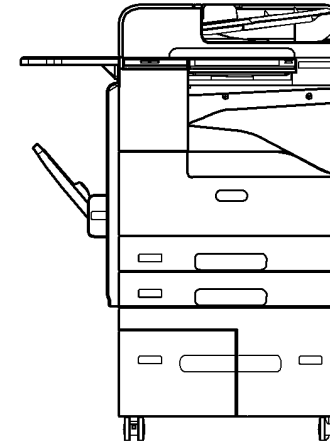
There are three types of consumables:

- Print cartridge
- Toner cartridge
- Fuser

for full details of consumables refer to [GP 39](#). For full details of billing and service plans refer to [GP 9](#).

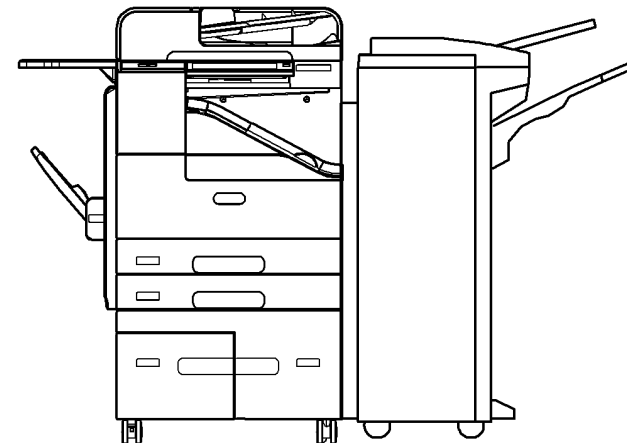
Machine Identification

- [Figure 1](#) AltaLink® B8075 with centre output tray and workshelf.
- [Figure 2](#) AltaLink® B8055 with 2K LCSS.
- [Figure 3](#) AltaLink® B8065/B8075 with LVF BM.
- [Figure 4](#) AltaLink® B8090 with tray 6, HVF BM, inserter and tri folder.



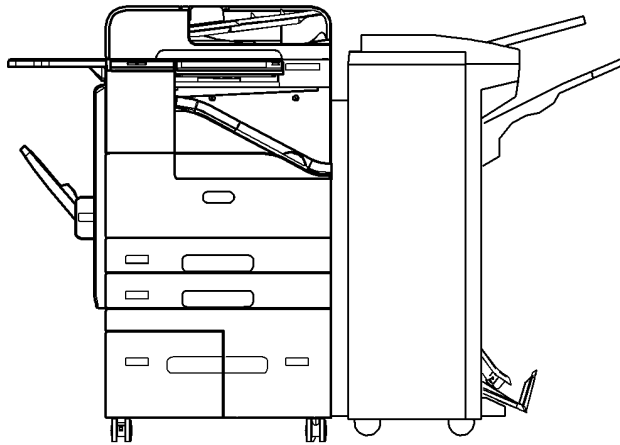
X-5-0149-A

Figure 1 With centre output tray and workshelf



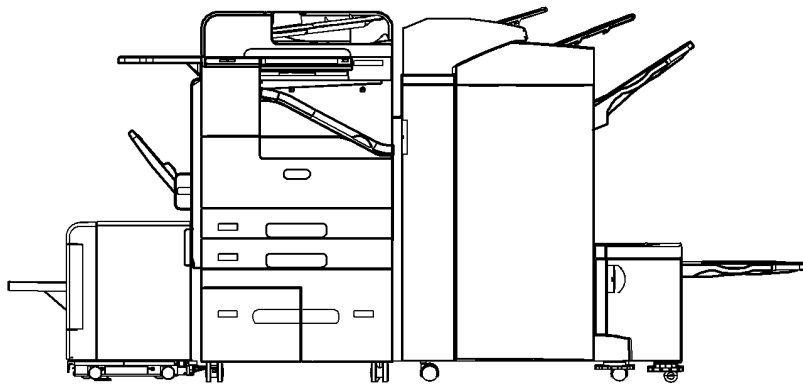
X-5-0150-A

Figure 2 Machine with 2K LCSS



X-5-0151-A

Figure 3 Machine with LVB BM



X-5-0152-A

Figure 4 With tray 6, HVB BM, tray 7, tri-folder

Power

Power Generation and Distribution

System Operating Modes

In order to comply with the environmental agency requirements the system must have different power states called operating modes. Each mode has different levels of power consumption and system functionality. See also [GP 22 Electrical Power Requirements](#).

Plug-in/Off Mode

This is not an operating mode. Plug in/off is the condition of the machine when power is connected but the machine is powered down. When the power button is pressed to shut down (and confirmed) this is the condition of the machine.

This is the lowest power state that the machine can enter. Only the LVPS and power management circuitry on the SBC is active.

The only method that can be used to power the machine on, in this mode, is to press the UI power button.

Standby/Ready Mode

Also referred to as Level 1 power (Blue Angel RAL-UZ 171 specifications).

This is the normal operating condition of the machine when it is ready for walk-up copying. The UI is active and illuminated in this mode. This is the condition of the machine while a user is programming a job via the UI or performing any other UI activity.

In this mode the system is ready to print/copy/fax with little or no delay in hard copy output. The system has full functionality when in this mode, is capable of meeting FCOT (first copy out time) and FPOT (first print out time) requirements when in this mode only.

Run Mode

This is the condition of the machine when it is actively printing a job. The machine enters this mode when a user selects the final command to run a copy job. The machine enters this state when it executes a print job via the network.

In this mode the system is in the process of marking images and/or collating in an output device.

Sleep States

NOTE: The user will not be able to tell the difference semi-conscious state and deep sleep state. Visually the machine appears the same.

Semi-Conscious Mode

The machine enters semi-conscious mode after a period of inactivity after the most recent print job or copy job. In semi-conscious mode the UI is inactive and the power button is illuminated. The delay time is preset but is adjustable by the customer in the range 0 to 30 minutes.

Semi-conscious mode allows the system to perform the following limited functions:

- Access to the remote control panel via the web UI.

- Wireless printing (if installed)
- All non print related network requests (including HDD access), such as access from the web UI.

NOTE: If Wake on USB is enabled the system remains in semi conscious mode and does not enter deep sleep mode.

Deep Sleep Mode

Also referred to as S3 power (Blue Angel RAL-UZ 171 specifications).

Recovery from this mode to standby/ready is from either pressing the UI power button or an incoming fax and or print job. The machine does not wake from sleep mode upon insertion of a USB drive.

- Only standby power is available. SBC network control, power management.
- The system is able to wake up for network printing or incoming fax (if installed).
- The system is able to wake up when the user presses the UI power button.
- The system will be 'ready to scan' from any wake up event in less than 15 seconds with UI available within 1 second.

Auto Power Off

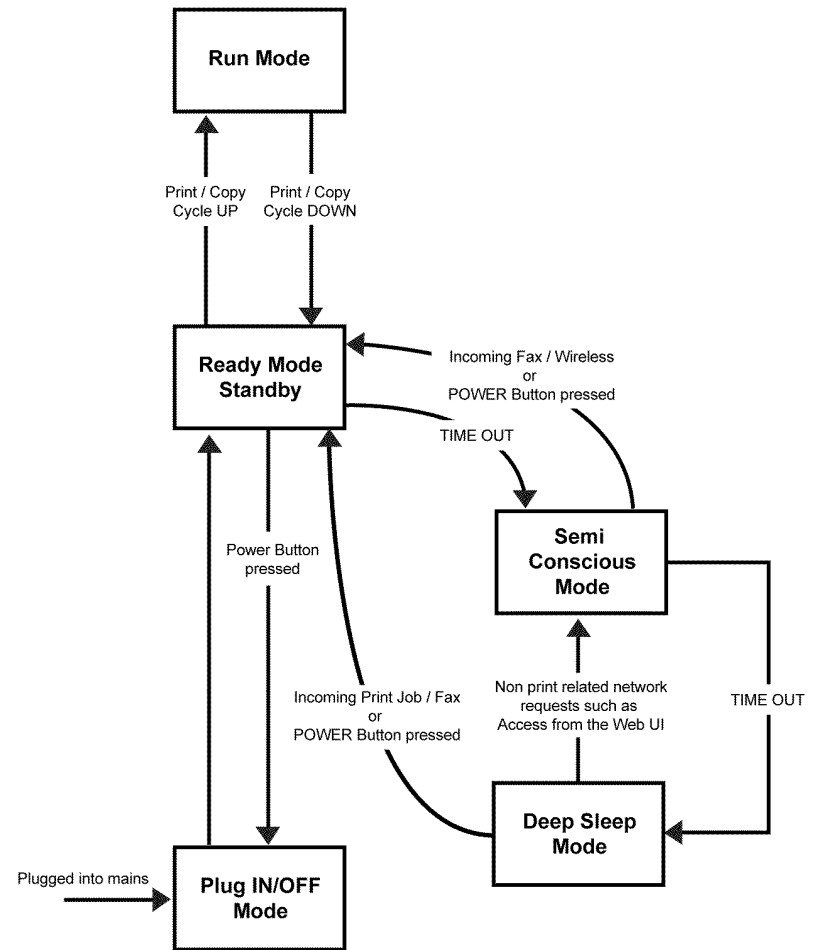
Enables the system to switch off after a specified time in deep sleep mode via an adjustable timeout that is accessed using tools or in the Web UI. The default is 'disabled'. Once the machine has switched off it can be switched on via the power switch on the UI. When the machine has powered down automatically it is in the same state as it would be after first connecting mains power.

Operating Mode Transitions

Warm Up

In this condition the system is booting up from plug in/off mode or recovering from sleep mode. The system will be 'ready to scan' within 135 seconds from power up. Product performance specification warm up times quoted are from 'power save' to 'system ready' (acceptance of scan, print or fax input). Fuser warm up time will vary depending on line voltage, ambient temperature and time since machine was last switched on, etc.

Figure 1 shows the system operating modes and the associated transitions from mode to mode that are required to ensure the system meets all environmental agency energy requirements.



TX-5-0045-A

Figure 1 Operating mode state transition diagram

LVPS Functions

The LVPS is split into the following main functions:

- Provides a +5V stand-by supply to the power management control circuitry on the SBC PWB. In plug-in off mode this consumes less than 0.5W AC to enable monitoring for the power button.
- Switches on and off AC power to the output device outlet, and +5V and +24V main as directed by the SBC PWB.

- Provides +5V and +24V to power the SBC PWB in ready, and run modes.
- Provides main +5V interlocked power to the IOT PWB during normal operation.
- Provides main +24V non-interlocked power to the IOT PWB during normal operation.
- Provides power to the fuser using a combination of cycle switching and phase control patterns. Firmware within the LVPS uses look up tables based on power demanded by the IOT software and the line voltage detected at the LVPS input.

There are two types of LVPS (PL 1.10 Item 1):

- A single 12 amp LVPS is used for the AltaLink® B8045/B8055 110V or 230V and for the AltaLink® B8065/B8075/B8090 230V.
- A 16 amp LVPS is used for the AltaLink® B8065/B8075/B8090 110V. This LVPS has an IEC320 C20 type mains connector.

Control Lines and Operating Modes

This section describes the control lines between the SBC PWB, IOT PWB and LVPS used to control the operating modes by the switching of AC and DC supplies in the system.

Interlock Switches

When the interlock switches are closed and the IOTC Fail signal is low, the LVPS enables the +24V INTLK, and enables fuser power.

The front door interlock switch, S01-300, and the left door interlock switch, S01-305, are connected in series to the LVPS.

IOT-LVPS Interface Hotlines

POWER_FAIL

The IOTC_Fail signal is an early warning of an imminent loss of AC power.

LVPS to IOT Comms Line

The LVPS communicates with the IOT to signal power availability.

SBC-LVPS interface hotlines

PS_ON

When this signal is enabled (low), the LVPS enables main +5V, +24V and +24 Interlocked power.

Entering/Exiting Power Modes

From Plug In/Off Mode

+5VSB power is active during all modes as soon as the machine is plugged into a powered wall socket to monitor the UI power button.

From plug in/off mode to ready: User presses the UI power button which causes the power management circuitry on the SBC PWB to enable the PS_ON signal to switch on the main LVPS outputs. The system can then boot up and perform initialisation and the warm up sequence.

From Ready (Ready to Scan) Mode:

All power supply outputs are 'on' in this mode. A user pressing the UI power button invokes the pop-up: 'power down options, quick restart, enter power saver mode or power off' selection screen on the UI.

From ready (ready to scan) mode to plug-in off mode: If "power down" is selected, after confirmation from all modules is accepted, the SBC PWB disables the PS_ON hotline. This in turn, removes all AC and DC outputs, except +5VSB. An additional method to achieve this is to keep the power button pressed for 5 seconds which overrides software.

From ready (ready to scan) mode to sleep mode: If "enter sleep mode" is selected, after confirmation from all modules is accepted, the PS_ON signal is disabled which removes the main DC outputs from the LVPS as well as AC power to the finisher. +5VSB remains on in this mode.

From ready (ready to scan) mode to quick restart: If quick restart is selected, the SBC PWB and IOT PWB perform soft resets and re-initialize the system as per switch on from plug in mode.

From Deep Sleep Mode or Semi Conscious Mode:

+5VSB output is active in this mode. Only the SBC PWB, fax module and the UI power button are active in this mode.

From sleep mode to stand-by mode via wake up from incoming print job: The SBC PWB is capable of waking the system from sleep mode on receipt of any incoming job that requires marking. The SBC PWB enables the PS_ON signal, which enables all main power.

From sleep mode to stand-by mode via wake up from incoming fax job: The fax module is capable of waking the system from sleep mode on receipt of an incoming job that requires marking. The PME signal is used to indicate to the SBC PWB that the wake up call has been initiated. The SBC PWB enables the PS_ON signal, which enables all main power.

From sleep mode to stand-by mode via wake up from user intervention at UI: The UI is capable of waking the system from sleep mode by pressing the power button. The On Off Button signal is detected by the SBC PWB, which enables the PS_ON signal, which enables all main power.

DC Power Distribution

Table 1 below shows how the power is distributed from the LVPS to the rest of the sub-systems (excluding the AC distribution to the finisher and the fuser).

Table 1 LVPS DC power distribution

Module Description	+5VSB	+5V	+24V INTLK	+24V non INTLK
Image output terminal controller (IOTC)		yes	yes	yes
Single board controller (SBC)	yes	yes		yes
Drives module			yes	

Other voltages are generated and distributed by the SBC and IOT PWBs. Refer to [Table 2](#) and [Table 3](#).

Table 2 SBC DC power distribution

Module Description	+3.3V	+5V	+12V	+24V
Fax module	yes	yes		
LED Print head (LPH)		yes		
Scanner module	yes	yes	yes	yes
User interface (UI)		yes		
Hard disk drive (HDD)		yes		

Table 3 IOT PWB DC power distribution

Module Description	+3.3V	+5V	+24V INTLK	+24V non INTLK
High voltage power supply (HVPS)			yes	
Paper feed module (PFM), tray 1 and 2		yes	yes	
High capacity feeder (HCF), tray 3 and tray 4		yes		yes
Tray 6		yes		yes
HCF transport motor				yes
Left door		yes	yes	
Tray 5 (bypass tray)		yes		
Bypass tray clutch				yes
Horizontal transport		yes	yes	
Drives Module		yes		

System Power On/Off Times

Refer to [Table 4](#).

Table 4 System power on/off times

Power Timings	Power on from off	Sleep Recovery (touch power button)	Ready from Restart	Power off from Ready
Power LED on UI flashes	<2s	N/A	<41s	N/A
First UI screen displayed	N/A	<4.5s	N/A	N/A
Services Home Screen displayed	<120s (1)	<15s	<161s (1)	N/A
Ready to Scan (Fax, File or E-mail send)	<135s (1)	<15s (2)	<176s (1)	N/A
Ready to Scan (Copy) (3)	<135s (1)	<15s (2)	<176s (1)	N/A
Ready to Mark	<160s (1)	<28s	<201s (1)	N/A
Power Off	N/A	N/A	N/A	<36s
Blue Angel recovery time (45ppm) (4)	N/A	<25.58s(4)	N/A	N/A

NOTE:

1. The time taken for a machine to power on, is dependent on the number and type of services enabled on the device being evaluated. The values shown in the table assume the basic configuration as shipped from the factory. i.e. Copy; Print From; ID Copy; Server Fax:. Additionally, automatic data integrity routines that can occur randomly after 20 power on events from a software alt-boot, can add up to 90 seconds to these times. Therefore measurement of power on times needs to be done shortly after an Alt-boot.
2. Recovery from sleep is dependent on which of two sleep modes the machine has entered. Recovery from sleep can be considerably faster than the time shown.
3. Ready to Copy is indicated by the message "Ready to Scan" being displayed on the GUI.
4. Tested as per Blue Angel RAL UZ-171 on 45ppm only. Higher speed machines have higher limits hence this is critical path.

High Voltage Power Supply

The high voltage power supply generates the voltages used by the xerographics system.

The IOT PWB supplies 24V to the HVPS.

The IOT PWB sends the following control signals to the HVPS. Refer to [Table 5](#).

Table 5 HVPS control signals

Signal	Description
BCR AC PWM	Pulse-width-modulation control line for activation and setting of the BCR AC current source.
BCR DC PWM	Pulse-width-modulation control line for activation and setting of the BCR DC voltage source.
BCR CLOCK	Control line for BCR frequency. Typical 1.6 kHz.
DB AC PWM	Pulse-width-modulation control line for activation and setting of the DB AC current source.
DB DC PWM	Pulse-width-modulation control line for activation and setting of the DB DC voltage source.
DB CLOCK	Control line for DB frequency. Typical 9 kHz.
BTR CC PWM	Pulse-width-modulation control line for activation and setting of the BTR positive current source.
BTR MODE	Control line which disables the BTR constant current mode, and then enables the BTR negative constant voltage mode.
DTS ON	Control line which enables the DTS negative voltage source.

The HVPS returns a BTR MON signal to the IOT PWB. The voltage is scaled according to this formula: $BTR\ MON = 2.5 + (0.00045 \times BTR\ Voltage)$. For example, BTR MON = 2.5 when BTR voltage = 0.

Based on the inputs, the HVPS supplies the following to the xerographics system:

- BCR (Bias Charge Roll) is the sum of the BCR AC and BCR DC sources.
- DB (Developer Bias) is the sum of the DB AC and DB DC sources.
- BTR (Bias Transfer Roll) is either the BTR CC or BTR CV source, depending on the state of the BTR MODE input. Both sources are DC.
- DTS (DeTack Saw) is simply the DTS negative voltage source.

User Interface

The UI module is made of four assemblies, the LCD module, the control PWB, the emotive LED PWB and the status/LED PWB, [PL 2.10](#).

The UI includes the following features.

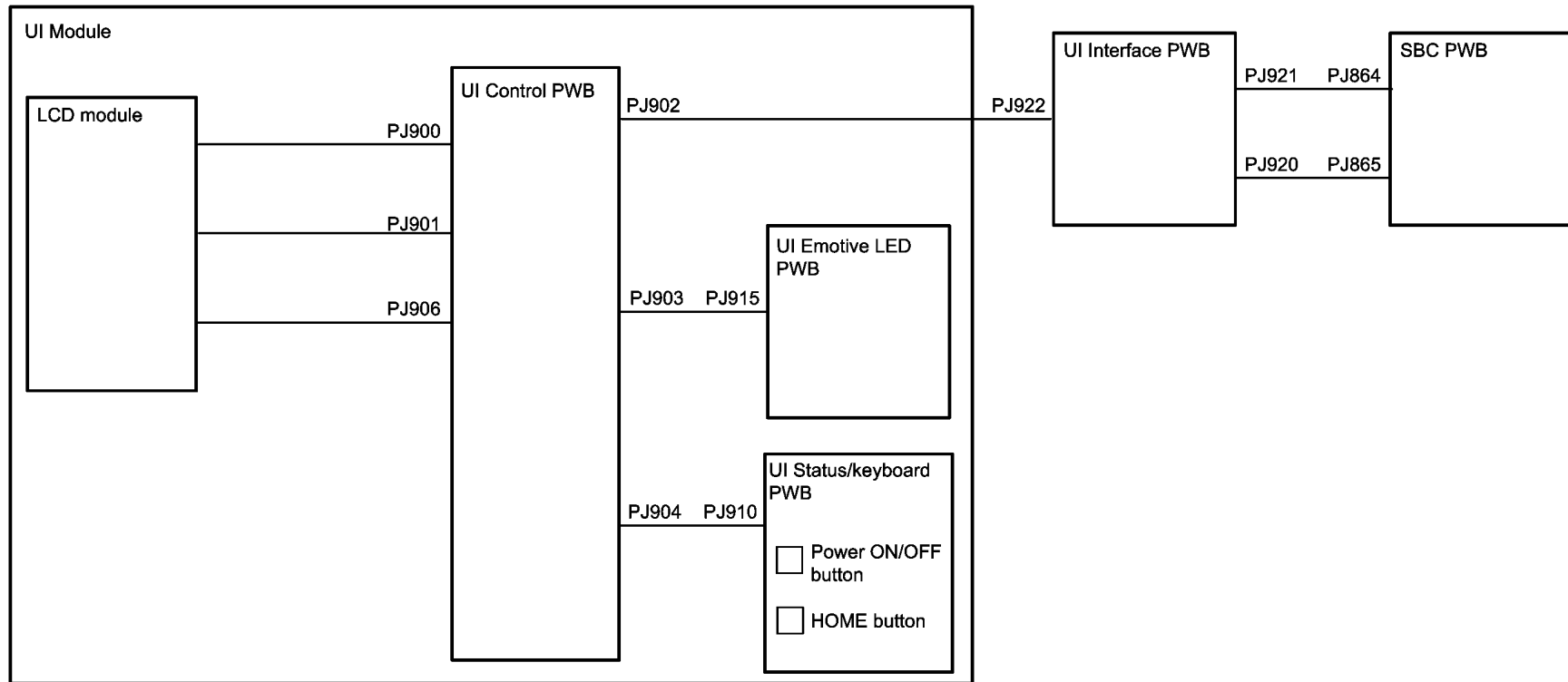
- A 10.1" LCD display and capacitive multi touch LCD screen.
- Emotive LED bar, an array of LED's for machine status indication.
- Machine power ON/OFF control with white LED backlight for power saver mode indication.
- Audio speaker.
- Near field communication (NFC) module.

The UI consists of 5 components, [Figure 1](#).

1. LCD module (within the UI module).
2. UI control PWB (within the UI module).
3. UI status PWB (within the UI module).
4. UI emotive LED PWB (within the UI module).
5. UI interface PWB (mounted within machine frame).
6. External keyboard (accessory).

Only the following components are accessible:

- UI module, [PL 2.10 Item 1](#).
- UI interface PWB, [PL 2.10 Item 15](#).



TX-5-0175-A

Figure 1 User interface components

LCD Module

The LCD module comprises,

- a color TFT screen (Thin Film Transistor),
- embedded backlight,
- capacitive touch panel.

The cables are wired directly into the LCD module. All the LCD module cables connect to the UI control PWB. PJ numbers are detailed on the UI control PWB.

Display video input for the TFT display is provided from the control PWB; four Pairs of LVDS display data and one pair of clock from the PS8622 device which converts display port data to required LVDS data which is driven to the TFT display through buffer FIN1108.

UI Control PWB

The control board is the main board in the UI assembly which supplies power and the required ON/OFF sequence for the TFT LCD module. Microcontroller MSP430F5510 provides PWM drive for the emotive LED and audio, required control signals for power sequencing and I2C bus for EEPROM access which stores EDID data. An RS-422 interface is used for communication to the SBC.

The UI module provides an auditory response that indicates machine statuses such as fault conditions, authentication, power saver entry/exit and touch tones. The UI control PWB stores all the audio files and includes a speaker on the board for the audio output.

Connections on the UI control PWB

- PJ900 to the LCD module - 1024 x 600 color TFT
- PJ901 to the LCD module - capacitive touch panel
- PJ902 to the UI interface PWB
- PJ903 to the UI emotive LED PWB
- PJ904 to the UI status PWB
- PJ906 to the LCD module - LED backlight

UI Status/Keyboard PWB

The Status/keyboard PWB contains the machine power button and the home button.

- The power ON/OFF button is for system power ON/OFF and features an array of white LEDs as a back light driven directly from the SBC PWM signal. This LED is for power saver indication.
- The Home button returns the system to the home screen. This signal is mapped directly to the SBC GPIO.

The UI module is provided with an NFC (near field communication) tag to enable printing functionality through NFC. The NFC antenna and chip are mounted on the UI status PWB. A white light LED on the UI status PWB illuminates when the NFC is active.

NFC provides the RF interface for contactless communication with an external reader/writer, serial interface for contact communication with an external host, control logic for command processing and various controls. It also consists of access restriction of RF communication by password. Supply voltage provided is 3.3 V.

- PJ910 connects to the UI control PWB.

UI Emotive LED PWB

The emotive LED PWB contains 4 blue LEDs and 4 amber LEDs. The emotive PWB also contains the required biasing resistor and the main drive circuit is located in the control PWB.

- PJ915 connects to the UI control PWB.

UI Interface PWB

The UI interface PWB, [PL 2.10 Item 15](#), connects the UI control PWB to the rest of the machine.

- PJ920 connects to the SBC PWB.
- PJ921 connects to the SBC PWB.

External Interface connectors/signal details

The SBC interface to the main control PWB is via the UI interface board through an RJ150 connector for video and an 18 way DF11 connector for control and power signals. The connector into the UI module from the UI interface board is via a 40 way FFC connector.

Grounding scheme

There is a common single digital ground. All the return current is passed to the SBC via the interface connector. There is no chassis ground for the UI module as it is made of plastic.

External keyboard (accessory)

A slide out keyboard, connected to a USB port, can be mounted beneath the main UI module. This keyboard can be used as an alternative to the touchscreen keyboard. ([PL 2.10 Item 14](#))

Machine Run Control

Overview

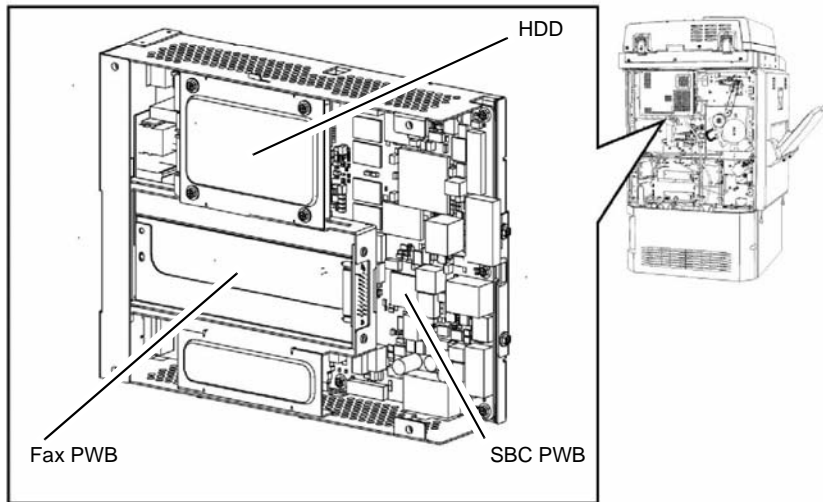
The Single Board Controller (SBC) PWB interfaces with the Image Output Terminal (IOT) PWB, scanner, network, fax, and the UI. Control of the subsystems is delegated to the IOT PWB, or the PWBs within the subsystem, while the SBC maintains system level control.

SBC Module Overview

The SBC module has different configuration options. When optional configurations are not used, blanking plates are needed.

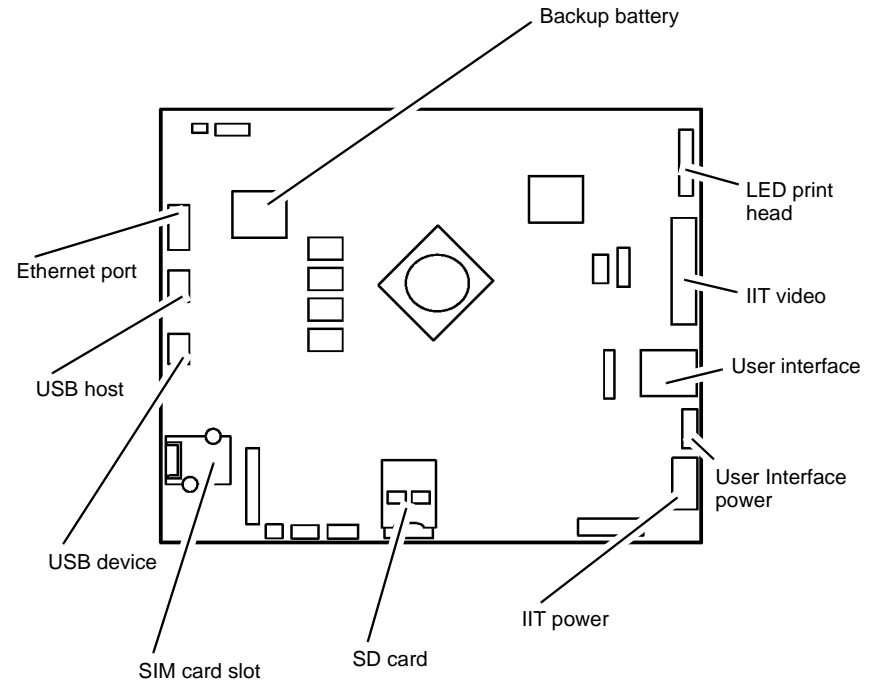
The SBC PWB supports existing optional PWB interfaces such as FDI, Common Interface Fax (CIF) and PWS.

Refer to PL 3.22. The SBC PWB is contained in a chassis. The SBC PWB chassis consists of a metal cage, interior bracket, and top cover. The module contains the SBC PWB, HDD, and optionally, the fax module and FDI PWB, along with mechanical parts and harnesses. Refer to Figure 1 and Figure 2.



X-5-0068-A

Figure 1 SBC PWB module



X-5-0174-A

Figure 2 SBC PWB

SBC Performance

The image path for this color scanner brings the scanner video directly to the Software Image Path (SWIP).

The SWIP is used as the main video controller for the high speed digital printer and multi function digital copier color applications. The device is controlled through a 32 bit, 66 MHz host PCI bus. The Calypso SWIP scan image processing (with JPEG), print image processing, image data compression/decompression capability, rotation and merge engines, input data interfaces, and image output capability. Image data may be stored in either EPC or system memory.

The SBC PWB also contains a USB device (single) and USB host (single and dual) ports, as well as a three-speed (10/100/1000) Ethernet port, a debug port, a SIM port to configure machine speed and a Foreign Device Interface. The FDI PWB requires the use of a separate cable from the bulkhead to the actual FDI PWB.

Backup Battery

The backup battery is used to supply power to the real-time clock and the power management circuitry when the machine is not plugged in.

SBC PWB Interfaces

The SBC PWB interfaces with:

- IOT PWB (including hotlines)
- User interface
- Image input terminal
- LED print head
- Portable workstation
- Network
- Fax
- External debug communication port.

The SBC PWB has provisions for the plug in items listed in [Table 1](#).

Table 1 Plug in items

Standard Configuration	Optional Configuration
SD Memory Card	FDI
HDD	Common Interface Fax
SIM Card	

UI Interface

- The RS-422 (TX and RX only) at a baud rate of 480K.
- A USB host is connected to the SBC PWB USB port through an on-board connector.
- The SBC PWB provides +3.3V DC and +12V DC power to the UI.
- The SBC PWB is capable of waking up from the UI Wake up switch (Wake UP switch signal).
- The interface supports a low voltage differential signal (LVDS) output to drive a color LCD.

Image Input Terminal

- The SBC PWB supplies +3.3V, +5V, +12V, and +24V DC to the scanner.
- The RS422 (RX and TX Only) at a baud rate up to 480K.
- The scanner PWB further connects to the SPDH PWB.

SD Memory Card

The SD card replaces the software module used on other products. The card will support these functions:

- Boot ROM
- NVM
- MFD feature key

NOTE: *These functions are not accessible by the customer.*

SIM Card Interface

Provides a slot accessible to the user for configuring the machine.

A cryptomemory card can be plugged into a SIM card slot on the SBC PWB to authenticate machine features. The SBC will control this device via an I2C bus.

System Memory

System memory is 2GByte of DDR3 RAM. The chips are mounted directly to the SBC PWB.

Ethernet Base 10/100/1000T

- The Ethernet interface connects directly to the network.
- Is capable of waking up from sleep mode on detection of network traffic.

USB Interface

- The SBC PWB has 3 USB host ports and 1 USB device port. The USB host port 3 is connected to the UI USB port through an on-board connector.
- The Host ports support potential host functions, such as flash-drive plugability, biometrics (security), USB printing, software upgrade and other user-identification devices, etc. There are 2 ports accessible through the SBC tray front and 1 port accessible within the SBC tray for front of machine (UI) access.

NOTE: *The USB Host power for attached peripherals is limited to 2.5W per port.*

- The device port supports functions such as field service PWS (Portable Work Stations) connection, and direct USB printing.

Debug

- **UART.** The SBC provides a UART interface for software debug/Altboot. This interface supports industry standard baud rates.
- **Video.** Video data, produced by the image path captured through debug connector on the SBC PWB.
- **JTAG.** As required for any board updates and for access to CPU for software debug.
- **7 segment LED display.** As required for debug purposes.

SATA HDD (Hard Disk Drive)

- The system provides one SATA HDD with a capacity of 78GB and a data rate of approximately 100MB/s (for sequential data).
- The HDD is used to store jobs from scan to export and some other jobs as well as to store Ethernet jobs coming from the network.

Fax Card (Option)

The SBC PWB accommodates an interface to the Fax. A Flat Printed Circuit (FPC) cable provides the electrical interface. The module provides 2 telephone lines, each serviced by a Fax Modem.

Foreign Device Interface (Option)

- The FDI PWB is an optional PWB. It is used to interface to external input devices such as coin input device.
- The FDI PWB option is an upgrade intended to be performed by a Xerox representative.

Harnesses

The SBC PWB module has its own set of harnesses to enable connectivity of power and data to the items within itself. The module internal harnesses are:

- SBC PWB to HDD (power and data).
- SBC PWB to fax connector PWB.
- FDI PWB to cage backplane.

Mechanical Enclosure of the SBC Module

The SBC enclosure consists of a removable cover which allows access to the HDD and Fax bracket. The bracket is removed to gain access to the SBC PWB. This enclosure is located at the rear of the machine.

The SBC complies with MN2-950 and contains ESD warnings.

SBC Power Up Sequence

The following events occur after the machine is plugged in.

1. The LVPS begins generating +5VSB for the SBC.
2. On the SBC PWB, the +5VSB is converted to +3.3V for the power management circuitry.
3. The power management circuitry begins flashing LED CR23 on the SBC PWB.

When the user presses the power button:

1. The power management circuitry activates the PS_ON signal.
2. The LVPS activates the main +5V and +24V supplies.
3. The power management circuitry begins enabling the remainder of the SBC.
4. The +5V is used to generate a number of voltages used by the main CPU.
5. The PWR_GOOD LED (CR7) will light.
6. The CPU will load the initial boot software from the SD card.
7. The initial boot software will enable the memory controller, SATA hard drive controller, etc. and update the 7-segment display.
8. The initial boot software will load configuration for the Horizon FPGA, and then switch off the Horizon_Configuration_Not_Done LED (CR19).
9. The Horizon FPGA will enable image path power, and hard disk power.
10. The KAMA_Configuration_Not_Done LED (CR11), and Image_Power_OK LED (CR6) will switch on, and the Xerox screen will appear on the UI.
11. The initial boot software will load the configuration for the KAMA FPGA from the SD card, and then switch off the KAMA_Configuration_Not_Done LED (CR11).
12. The initial boot software will read version number from each device on the SBC.
13. The main software kernel is loaded from the SD card.
14. The USB ports are searched for a software upgrade file. If available, the software is upgraded.

If no upgrade is found, the main software code is loaded from the hard drive.

IOT PWB

The IOT PWB is responsible for the control of all functions within the IOT. It is an intelligent controller containing a CPU with built-in flash ROM, RAM, and Magnetoresistive Random-Access Memory (MRAM) to store NVM. Its primary function is to drive the motors, solenoids and clutches within the IOT, supply control to the HVPS, control the fuser power and monitor sensors. The IOT PWB has the following interfaces:-

- Serial RS422 and page sync control interface to the SBC PWB.
- Serial RS422 interfaces to optional finishing devices.
- Motor drives for trays 1, 2, 3 and 4.
- Control of the main drive module in AltaLink® B8065/B8075/B8090.

Power On

On application of power, the IOT PWB will perform its POST (power on self-test). On successful POST:

- The IOT application will flash the IOT diagnostic LED (0.5 second on / 0.5 second off). The IOT will set sub-system defaults i.e. (load a copy of NVM to RAM pre-sets and messages. e.g. fuser off and motors off).

The IOT will check communication channels (in order):

1. RS422/USB.
2. I2C for CRUM RFID reader.
3. Communication synchronisation is attempted between the IOT and finisher. If communications between IOT PWB and finisher can not be established, a fault is declared to the device controller.
4. Communication synchronisation is attempted with the SBC PWB.
5. Check paper path sensors are clear (no paper present).
6. Check interlocks are closed.
7. initialize the fuser (warm up).
8. initialize the paper trays (raise).
9. initialize the toner dispense system (ready to mark).

Power Off

When the power off button is pressed, the user will be offered the option to initiate a controlled power off via the user interface, put the system into power saver mode, reboot or cancel the power off request.

When the SBC software has established that power can be removed it will disable the PS_ON signal to the LVPS.

Prior to any occurrence of stopping the IOT, the IOT PWB will save CRUM data to NVM.

Software Loading

Overview

Software loading may be performed as part of a repair procedure or as a customer upgrade.

Software upgrades may include software fixes, enhancements, maintenance, client software tools and optional features.

Software Upgrade Methods

There are various methods to upgrade the software. Refer to [Table 2](#).

Table 2 Software upgrade methods

User	Upgrade Type	Occurs when	Further information
	Power on upgrade.	At install if an optional device is fitted which has a different software level to the machine. During service when a new component is installed that has a different software level to the machine.	
Customer	DLM upgrade via a network.	A customer requires a SPAR or later software installed.	Refer to the ReadMe supplied with the software. GP 4 .
	DLM upgrade via USB.	A customer requires a SPAR or later software installed.	GP 4 .
CSE	Altboot via USB (see Note).	As directed by service procedures	GP 4 .
	Altboot via PWS (see Note).		

NOTE: A normal or forced AltBoot can be performed.

Software Compatibility Database (SCD)

Software upgrade relies on the Software Compatibility Database (SCD). The SCD specifies a set of compatible software versions for all software modules that can be part of the system. The SCD also holds a collective version number known as the Software Set Number which uniquely defines the set of software versions in the SCD.

The Software Set Number includes a Product ID that is used to check that the Software Set is correct for the product to be upgraded. Product IDs are defined by the Software Configuration Management (SCM) team.

The machine SCD is stored by the machine and is retained across power cycles. The machine SCD specifies the set of software versions that the machine expects to be on its modules, known as the Machine Software Set. In addition to the software versions, the machine SCD holds the Machine Software Set Number which uniquely defines the set of software versions in the machine SCD.

Software Upgrade Process Descriptions

DLM

The System Administrator sends a *.dlm file containing all device software to the device via the network (received as a print job). The device recognizes the print job as a 'DLM upgrade' and extracts the file. The DLM then updates the device.

NOTE: DLM needs to be enabled first.

Power on Software Compatibility Checking

At power on the system verifies all module software versions. All incompatible software versions in any module are upgraded automatically.

USB Drive Upgrade

A software upgrade can be performed locally by downloading a DLM file from a USB drive to the device. This feature allows non-connected devices to have system upgrades without requiring a PWS or network drop.

NOTE: This is not an AltBoot upgrade and does not erase all of the data on the hard disk.

USB Drive AltBoot

USB drive AltBoot is used to repair problems where the network controller fails to boot due to a software problem. AltBoot erases all the data on the hard disk. USB drive AltBoot is invoked by inserting a USB drive with an AltBoot file on it.

If there is more than one AltBoot software file on the USB drive in the AltBoot directory the AltBoot software file with the most recent version will be selected.

Normal and Forced AltBoot Modes

Normal Altboot

A normal (unforced) AltBoot will repartition and reformat the hard disk and when applicable, then install the software on the SBC hard disk drive and the memory module. If a later version of software has been installed, the AltBoot will be followed by a power on upgrade of all modules that had were at a lower software level.

Critical data and user settings are preserved by the AltBoot (as summarised below):

- Network Configuration settings including:
 - User NVM settings.
 - Web certificates.
 - Local template pool web user interface created Scan to File templates.

All other data is not backed up or restored by the AltBoot.

Forced Altboot

In addition to repartitioning and reformatting the hard disk then installing software, a forced AltBoot will upgrade all upgradable modules regardless of the current software version.

Software Upgrade Progress

During the software upgrade, a progress screen is displayed on the UI (refer to [GP 4](#)).

Refer to [Table 3](#) for details of which modules are represented by each progress bar during the software upgrade.

Table 3 Represented modules

Progress bar	Module
User Interface	UI PWB
Copy Controller	Hard disk drive
Network Controller	Hard disk drive and memory module
Print / Copy Engine	IOT PWB
Scan Engine	Scanner PWB
Fax	HDD SBC
Finisher	2K LCSS PWB, LVF PWB, HVF PWB

Upgradable Modules

Refer to [Figure 3](#) and [Figure 4](#). The following modules are upgradable by a software upgrade ([GP 4](#)):

- SBC PWB SD card.
- Hard disk drive.
- Scanner PWB.
- SPDH PWB.
- UI PWB.
- IOT PWB.
- Finishers (2K LCSS, LVF BM or HVF BM).
- Tray 6 module (Paper Feeder Platform)

SBC PWB (CC/XUI/NC)

The copy controller, UI and network controller software modules run on the same SBC hardware platform (subsystem).

Software Upgrade (SWUP) runs on the SBC hardware platform and receives software upgrades for the software modules on the SBC PWB itself and the other parts of the machine. The SWUP may obtain software upgrades from the network controller, a USB drive, or the PWS.

UI

For the purposes of a software upgrade, the UI is connected to the SBC PWB. The UI module is upgradable by the SBC PWB.

Scanner and SPDH

Both the scanner PWB and SPDH PWB are upgradable by the SBC PWB.

IOT PWB and Finishers

The IOT PWB is connected to the SBC PWB and the finisher. The IOT PWB receives software upgrades from the SBC PWB and sends software upgrades to the finisher. The IOT PWB receives version numbers from each installed finisher and sends the version numbers to the SBC PWB.

Tray 6 Module (Paper Feeder Platform)

The IOT PWB is connected to the tray 6 control PWB. The IOT PWB receives software upgrades from the SBC PWB and sends software upgrades to the tray 6 control PWB. The IOT PWB receives version the number from the installed tray 6 module and sends the version number to the IOT PWB.

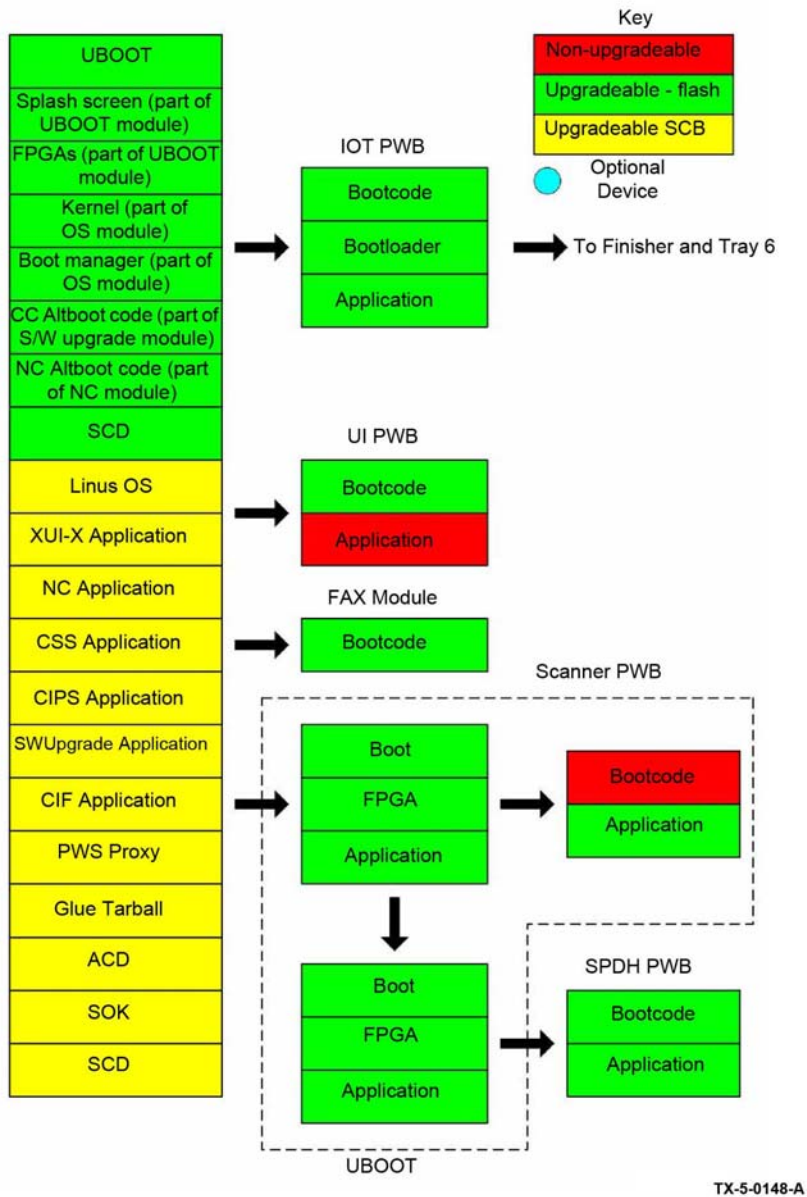


Figure 3 Software upgrade information (1 of 2)

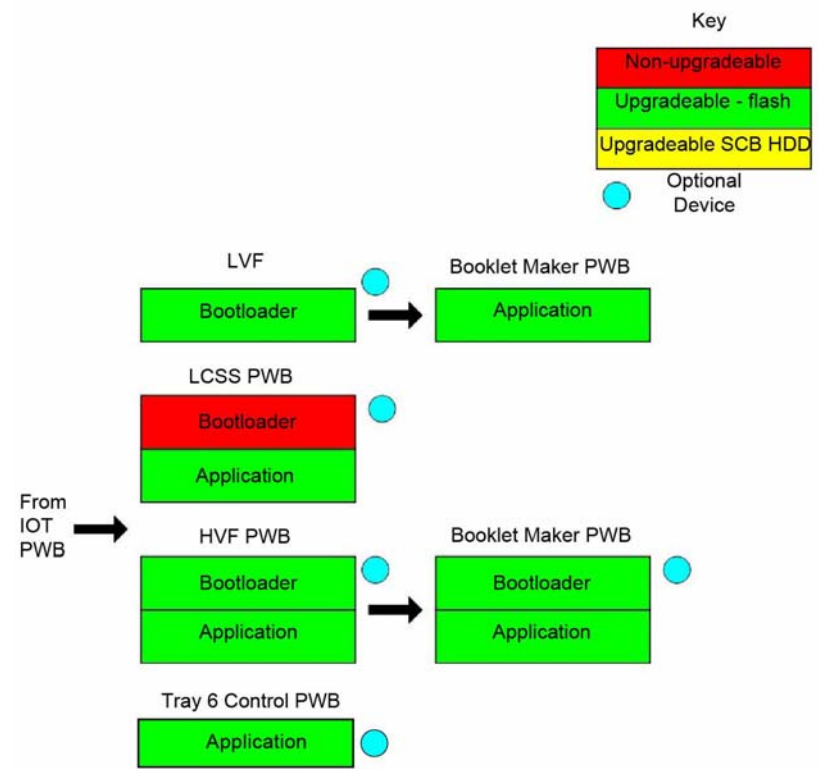


Figure 4 Software upgrade information (2 of 2)

Single Pass Document Handler (SPDH)

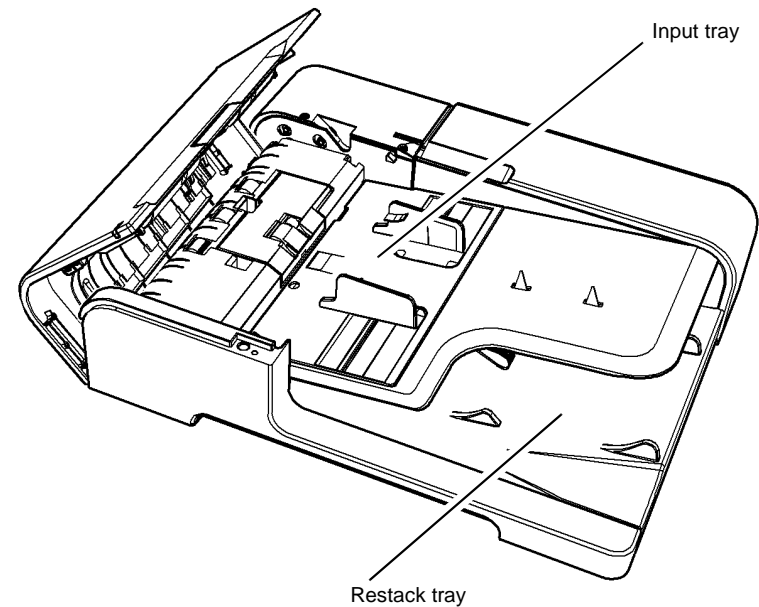
Overview

The Single Pass Document Handler (SPDH) is mounted above the platen scanner. Together the SPDH and platen scanner form the image input terminal (IIT) for the AltaLink® B8090F machines. (See also Scanner [Overview](#).)

The SPDH allows a user to scan original documents of various sizes and original types to enable either the system copy or system scan to file functionality. The user interacts with the SPDH in the following ways:

- Lifting and lowering the SPDH to access the document glass for registering original documents for platen scanning
- Lifting and lowering the SPDH to access the document glass and CVT glass surfaces for cleaning and maintenance
- Loading original documents into the input tray of the SPDH
- Adjusting the document width guide positions to register the original document
- Removing re-compiled original documents from the SPDH output tray once scanning is complete
- Lifting and lowering the SPDH to open the SPDH paper path for the removal of jammed sheets, and to allow access to the side 2 scan assembly for cleaning

The SPDH is a center registered automatic document handler, that separates and feeds up to 200 (face up) original documents of 80gsm individually in 1 to N order. It is capable of scanning simplex (this mode scans only one side of a document set) and duplex (this mode scans both sides of a document set) documents. For simplex images the SPDH transports documents over the CVT window of the platen scanner. The document is then transported to the re-stack tray. For duplex images side 2 of the document is scanned via the side 2 scan assembly as the document is transported to the re-stack tray. The side 2 scan assembly is mounted internal to the SPDH. Document output to the re-stack tray will be in the same order as input (face down), [Figure 1](#).



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Figure 1 SPDH

Counterbalances

Two counterbalance assemblies, [Figure 2](#), secure the document handler to the scanner frame. A counterbalancing force is generated by compression springs acting on a cam-follower arrangement, all housed within sheet metal brackets. Above a set drop-down angle, the SPDH will hold or rise slowly to the maximum opening angle. Below the set drop-down angle, the SPDH will gently close onto the scanner. The right hand bracket provides a means of adjustment for document skew. In addition, the counterbalance assemblies are double-hinged to allow a customer to close the SPDH onto books of up to 25mm in thickness without applying excessive force to the document glass of the scanner. This feature is known as book-mode operation.

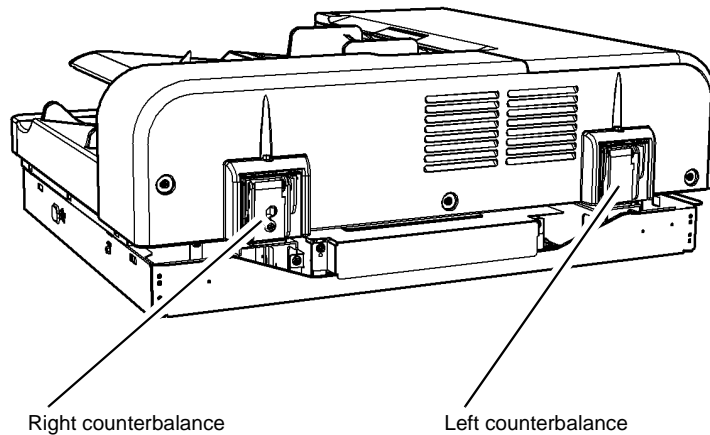


Figure 2 Counterbalances

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SPDH Power

The SPDH top cover interlock switch, S05-305, [Figure 3](#), is located at the rear of the SPDH. S05-305 controls the +24V supply to all clutches, solenoids, motors and the side 2 scan assembly via the SPDH PWB. The SPDH top cover switch isolates the SPDH +24V circuit when the top cover assembly is opened. The interlock is used to ensure operator safety by removing power to the SPDH drives when not actuated. The scanner PWB supplies +3.3V, +5V, +12V and +24V to the SPDH PWBA. The SPDH PWB then controls the output of power to all the components in the SPDH.

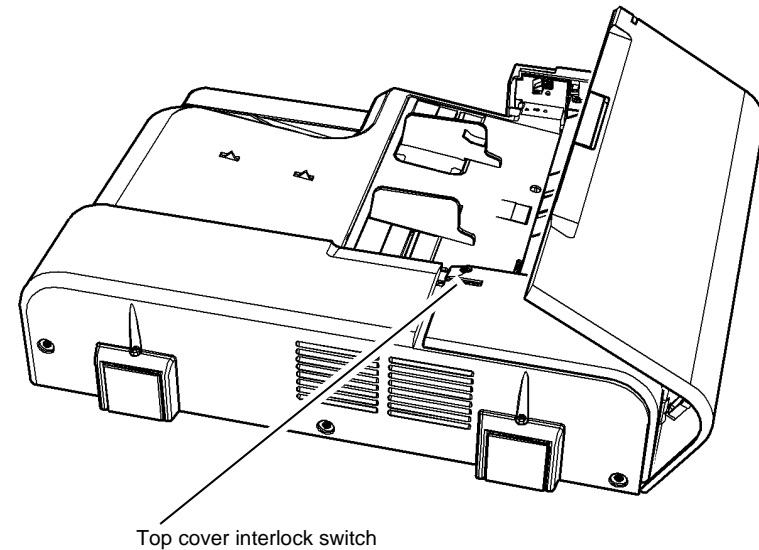


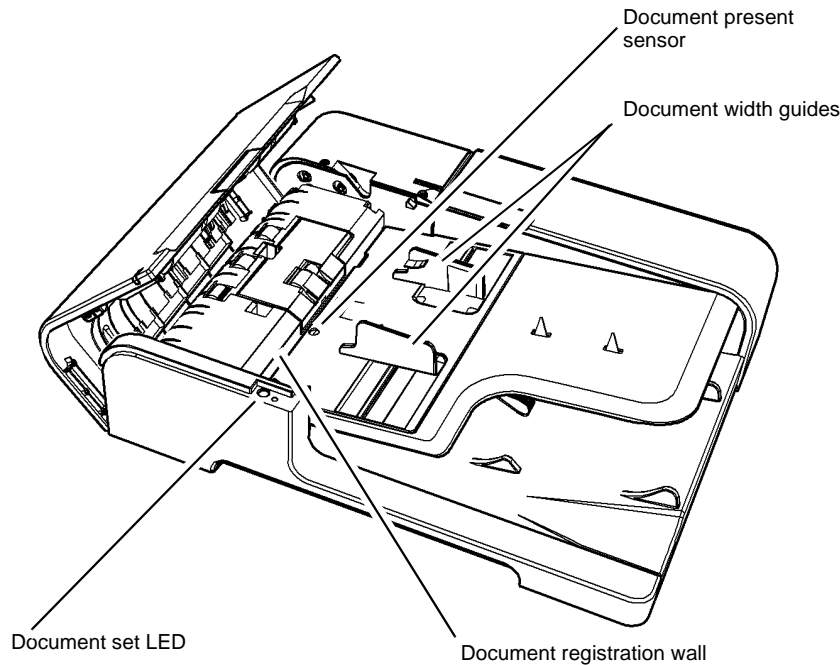
Figure 3 Top cover interlock switch

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Input Tray

Copies are placed into the input tray face up, 1 to N order. The capacity of the input tray is 200 originals of 80gsm weight. The minimum size original is A5 (5.5 X 8.5 inch), SEF or LEF. The maximum size of original is A3 (11 X 17 inch), SEF only. Table 1 lists recognized paper sizes and orientations. Intermixed lengths (feed direction) are acceptable for a limited number of document pairs, which are described below in the Mixed Size Mode section. The tray will provide for center feeding in 1 to N sequence. Movable tray guides for the document width are provided. Correct guide adjustment by the operator is imperative for reliable feeding and auto paper select. The SPDH document present sensor (Q05-309), detects originals loaded against the document registration wall. When the SPDH document present sensor is actuated the document set LED (LP05-084), illuminates. Refer to Figure 4.

Refer to Table 1 and Table 2 for details of document sizes.



X-5-0160-A

Figure 4 Input tray

Table 1 Document sizes

Document Sizes	SEF Document	LEF Document
A5 or 5.5 x 8.5 (1)	Yes	Yes
B5	Yes	Yes

Table 1 Document sizes

Document Sizes	SEF Document	LEF Document
A4	Yes	Yes
8.5 x 11	Yes	Yes
8.5 x 13 or 8.5 x 14 (1)	Yes	No
B4	Yes	No
A3	Yes	No
11 x 7	Yes	No

NOTE: (1) The SPDH cannot differentiate between these sizes. The UI will display relevant media size dependent upon market region stored in NVM.

Table 2 Document sizes

Maximum and Minimum document size in the process direction	Maximum and Minimum document size in the cross process direction
138mm/5.4 inches to 432mm/17 inches	138mm/5.4 inches to 432mm/17 inches

Document Size Sensing and Selection

Document size sensing and selection is achieved by a combination of:

- Width sensing (cross-process direction).
- Static and dynamic length detection (process direction).
- Mixed Size Mode.

Static Size Sensing

The SPDH determines the size of the original document and whether the paper is being fed long-edge feed (LEF) or short-edge feed (SEF) upon the combined signals from the document side guide width sensors and the input tray length sensors. Each combination of the input tray sensing regions have an associated default paper size, so when a user places a document into the input tray the SPDH makes an assumption of the loaded document size.

Static Width Sensing

Three document width sensors determine the width of the original document, width sensor 1 (Q05-325), width sensor 2 (Q05-326), and width sensor 3 (Q05-327). The width sensors detect flags mounted to the bottom of the movable in-board and out-board document side guides. The document side guides are centrally registered and synchronously move via a rack and pinion mechanism. As the guides move, the flags block and unblock the width sensors. The SPDH uses the signals from the width sensors to determine paper width of the original document. If the guides are not positioned correctly then the top edge registration and LE skew of the scanned documents cannot be guaranteed. The guides provide some resistance to movement so that they remain in position during the scanning of the original document. The side guides also limit the maximum thickness of original document stack that can be loaded with stack limiting features.

Static Length Sensing

Static length detection is used to determine document length of the original document, for most document sizes and orientations. This is accomplished with two sensors, length sensor 1, Q05-315, and length sensor 2, Q05-320, located in the input tray, which are at appropriate distances from the document registration wall. The state of these two length sensors when documents are loaded from against the document registration wall at start of a job will determine the stack length range.

Dynamic Length Sensing

Dynamic length sensing is utilized to determine the length of documents that are not recognized by the static length sensors. This feature only works if the paper supply automatically select feature has been chosen by the operator.

At the start of a copy job the image data of the first scanned document of unknown length is reconciled with document length data stored on SBC PWB. If the scanned image length is matched with stored document length data on the SBC PWB, image processing will continue. If no document length match is found the SBC PWB will request a UI status message to be displayed to the operator to enter the required paper size.

Dynamic length sensing is required for the document sizes shown in [Table 3](#).

Table 3 Document sizes

Document size
8.5" x 11" SEF
A5 LEF
8.5" x 5.5" LEF
A5 SEF
8.5" x 5.5" SEF

Mixed Size Mode

This option is selected through the features in the user interface and allows the user to copy a set of documents that contain two different sizes as listed in [Table 4](#). With all Mixed size original jobs, both sizes in the pair must be of the same cross-process width.

[Table 4](#) lists the valid pairs of document sizes which the IIT will recognise and enable as a mixed size mode job. During mixed size mode dynamic length sensing will be performed on each individual scanned document.

Table 4 Document sizes

Valid document pair	Short doc length
A3 SEF + A4 LEF	210mm
A4 SEF +A5 LEF	148mm
8.5" x 11 SEF + 8.5 x 5.5 LEF	139.7mm
8.5 x 14 SEF + 8.5 x 11 SEF	279.4mm
11 x 17 SEF + 8.5 x 11 LEF	216mm

Table 4 Document sizes

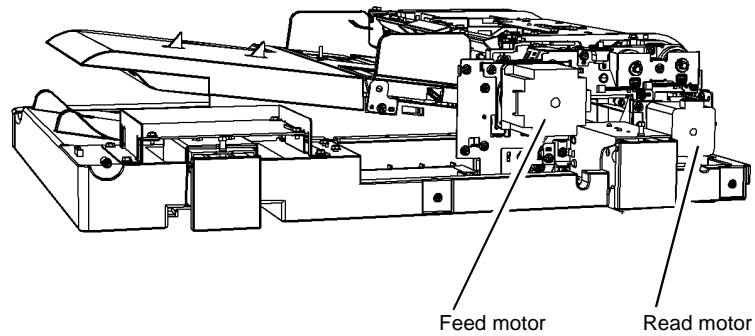
Valid document pair	Short doc length
B4 SEF + B5 LEF	176mm

Auto Reduction/Enlargement

In combination with mixed size mode the user can select auto reduction/enlargement. When selected the document will be scanned to the copy paper size. All copy enlargement and reduction is controlled by the SBC PWB.

Drives

Three 24V motors provide the drive for the SPDH components, the feed motor and read motors are shown on [Figure 5](#), the Tray elevator motor is shown on [Figure 8](#).

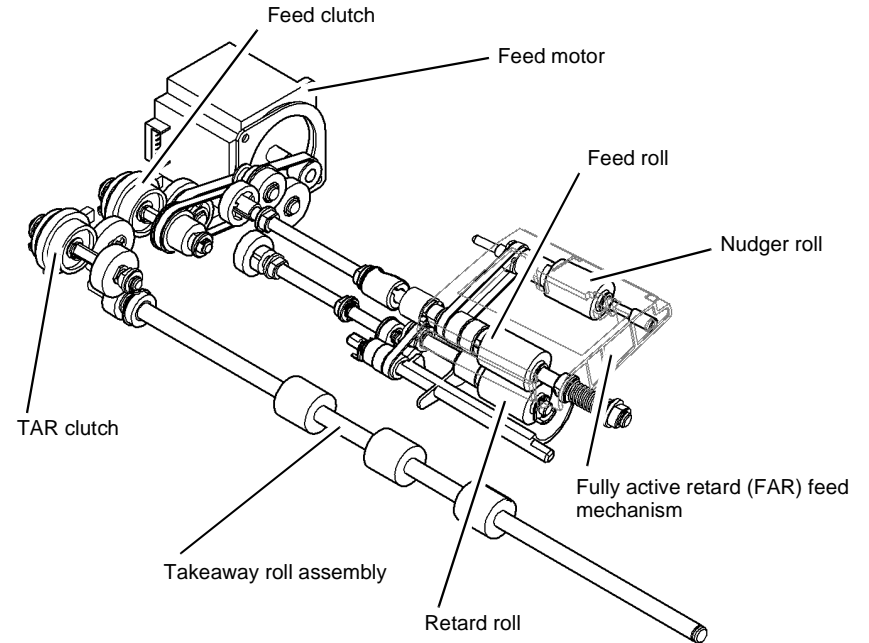


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Figure 5 Feed motor and read motor

Feed Motor

The feed motor ([PL 5.18 Item 2](#)) supplies continuous drive via a toothed belt and gears to both the takeaway roll clutch, CL05-425, and feed clutch, CL05-025, during the scan process of the document. The TAR clutch, when energized provides drive to the takeaway roll. The feed clutch when energized provides drive to the feed, nudger and retard rolls that form the fully active retard feed assembly, via their respective gear trains, [Figure 6](#).

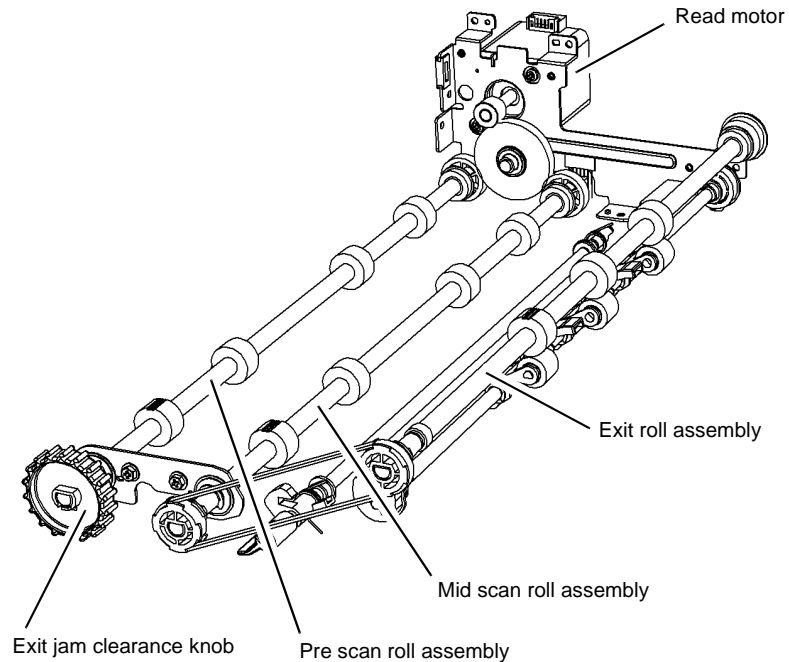


X-5-0162-A

Figure 6 Feed motor

Read Motor

The read motor (PL 5.18 Item 1) supplies continuous drive to the pre scan roll assembly and mid scan roll assembly. The exit roll assembly is driven by a pulley and toothed belt arrangement from the mid scan roll, Figure 7. The read motor also provides the drive (when run in reverse) for the side 2 scan assembly calibration mechanism, shown in detail in Figure 16. The exit jam clearance knob (PL 5.17 Item 5), under the front left corner of the SPDH, can be used to clear jams and feed documents along the document path to activate sensors for diagnostics.



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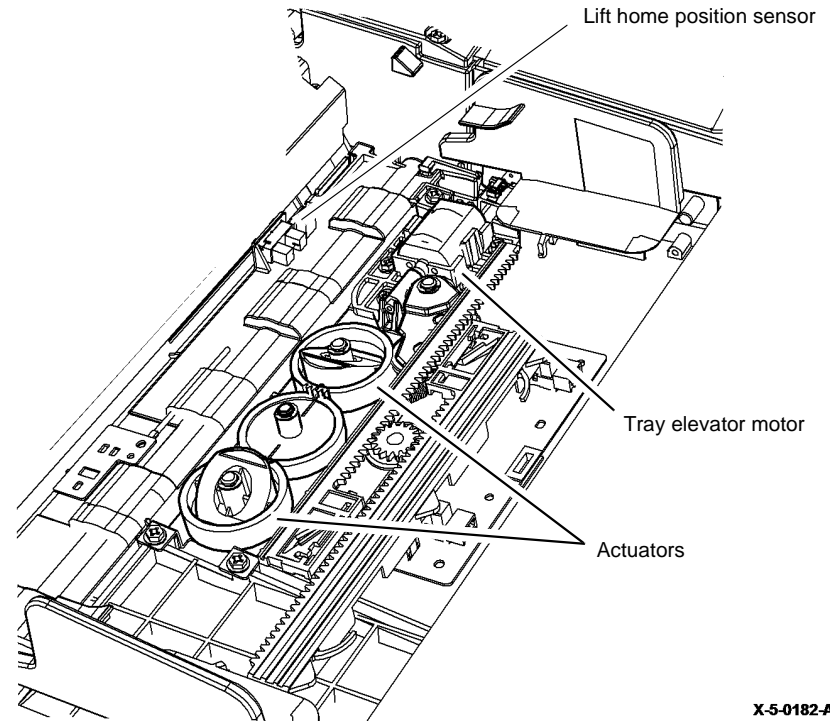
Figure 7 Read motor

Tray Elevator Motor

The tray elevator motor (PL 5.30 Item 14) raises and lowers the input tray in order to maintain the document stack at the optimum feed position, Figure 8. The motor drives a gear chain that rotates a pair of actuators that raise and lower the tray.

Lift Home Position Sensor

The lift home position (lowered) sensor, Q05-307, is a flag actuated sensor that senses the input tray is in the home position, Figure 8.



X-5-0182-A

Figure 8 Tray elevator motor

Scanning Process

1. The document present sensor, Q05-309, detects that a document has been loaded onto the input tray and positioned against the registration wall of the separation assembly.
2. At the detection of a document, or at power on, the SPDH initializes the calibration of the side 2 scan module and platen scanner.
3. The size of the document is calculated by a combination of signals from width sensor 1, Q05-325, width sensor 2, Q05-326, width sensor 3, Q05-327, and length sensor 1 Q05-315, and length sensor 2, Q05-320.
4. The input tray elevator mechanism, in conjunction with the stack height sensor Q05-310, raises the input tray to position the document stack at the optimum height for feeding at the start of a copy job. The tray height will raise in increments (approximately at every 25 sheet feed for xerox 80gsm paper) to maintain an optimum feeding position throughout a copy job.
5. By means of a fully active retard feed mechanism the SPDH feeds the documents from the input tray into the paper path of the SPDH. The feed and read motor are activated and the feed clutch is energized. On activation of the feed clutch the nudger roll is driven down onto the document stack. Simultaneously as the feeder mechanism drives the nudger roll down it raises the two gate fingers. The nudger drives the top document off the stack across to the separation assembly and into the fully active retard nip, formed by the feed and retard rolls (see Document Separation). The nudger roll remains energized until the lead edge of the document arrives at the feed sensor, Q05-330. When the last document has been fed the feed motor momentarily runs in reverse, this enable the feeder mechanism to raise the nudger roll and drop the two gate fingers.
6. The feed sensor, Q05-330, positioned between the TAR nip and the separation nip detects the lead edge (LE) of a document once it has been acquired and then the trail edge (TE) to confirm an inter document gap (IDG).
7. The document momentarily butts against the takeaway roll assembly where the document realigns if skewed. The document has space to corrugate without creasing within the buckle chamber of the document handler.
8. The feed clutch, CL05-025, is deenergized, thereby de-coupling the nudger and feed rolls and the takeaway clutch, CL05-425, is energized and the takeaway roll assembly pulls the document through the FAR nip.
9. The document continues through the takeaway nip until the lead edge is detected at the registration sensor, Q05-340, and the takeaway clutch, CL05-425, is deenergized. If the SPDH has not received a feed request signal from the scanner PWB the takeaway clutch, CL05-425, will de-energise and the document feed will stop. If the feed request signal has been received the document will continue to be scanned.
10. The feed request signal starts the scanning operation. The read motor drives the pre scan roll assembly, which transports the document across the image array for scanning, and onto the mid scan roll assembly. Since the rolls driving the paper are controlled by the same timing belt and motor, the velocity of the paper is constant.
11. If a simplex job has been requested the document passes the CVT window, is lifted by the CVT ramp, and is delivered into the re-stack tray. If a duplex job has been requested a scan of side two of the document is made. The side 2 registration sensor, Q05-343, detects the lead edge of the document in order to time the start of the side two scan. The document then continues into the re-stack tray after side two is scanned.

Document Separation

The separation of documents is performed by the feeder assembly working in conjunction with the separation assembly and operates on a differential of friction principle. The feed assembly contains the nudger and feed rolls and the separation assembly contains the retard roll. The retard roll is driven via a slip clutch, and in the operational position it is sprung loaded against the feed roll to form the separation nip.

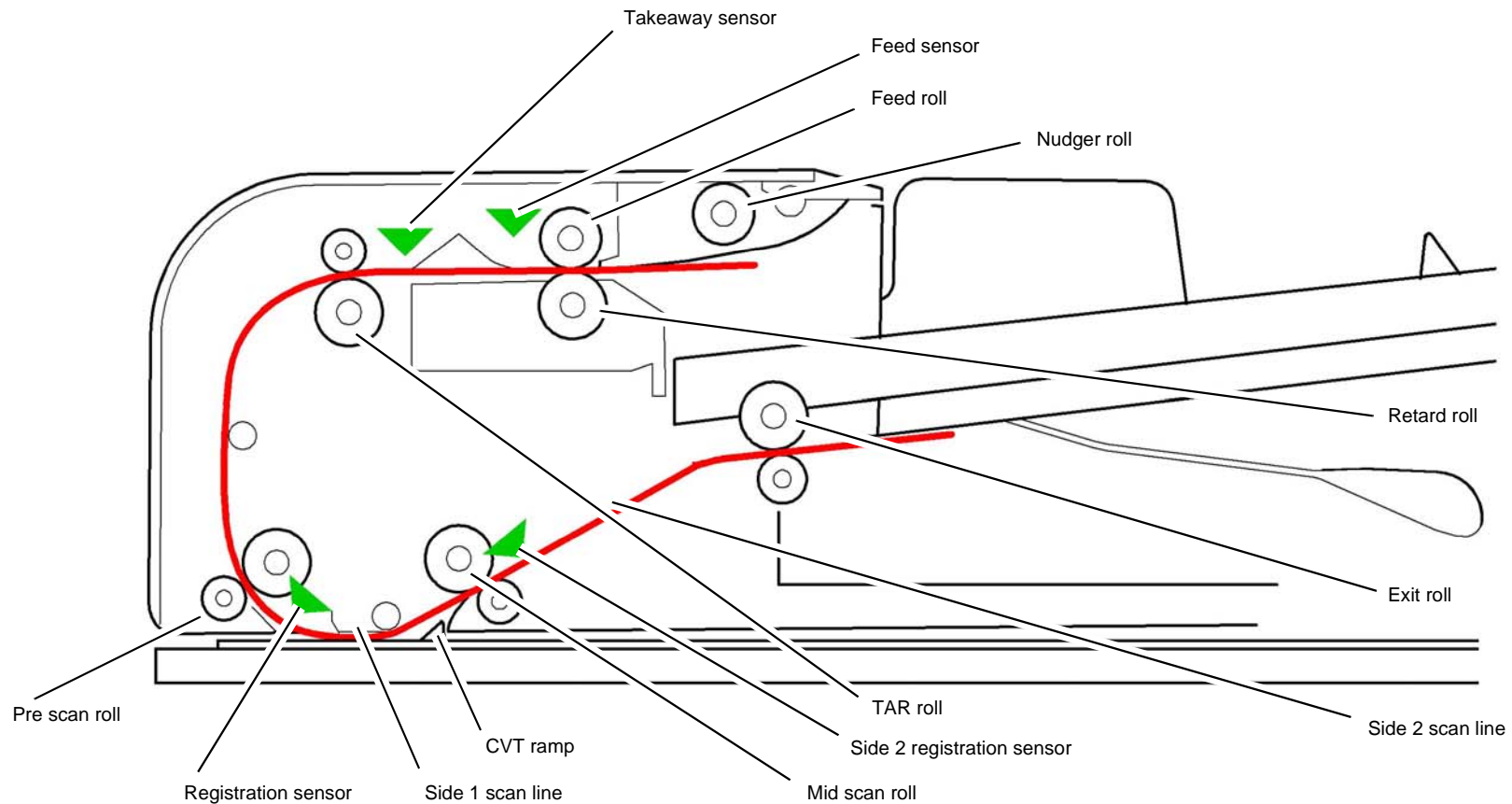
The feed roll has a high coefficient of friction with the documents fed from the input tray. The retard roll also has a coefficient of friction with the documents fed from the input tray but one that is lower than that of the feed roll, though higher than the coefficient of friction between two documents.

Once activated the nudger roll feeds the top document off the input tray and into the separation nip. In turn the feed roll drives the top document towards the TAR assembly while the retard roll is driven in the opposite direction, in order to segregate all documents other than the top document passing through the FAR nip.

The feed roll transports the top document in the process direction because it has a high coefficient of friction with the top document. The top document is given a coefficient of friction due to the force imparted by the feed roll and overcomes the torque supplied by the slip clutch of the retard roll. This causes the retard roll to be driven by the feed roll. If more than one document is fed from the document stack on the input tray, documents other than the top document are put in contact with the retard roll. These lower documents are prevented from being transported in the process direction because the torque of the retard roll slip clutch is not overcome by the friction between the two documents, resulting in only the top sheet being transported in the process direction toward the TAR assembly.

5.4 SPDH Sensors

There are several sensors located throughout the document path to detect the position of the document. The signals from these sensors initiate operations within the SPDH, and also assist with jam detection, [Figure 9](#).



X-5-0165-A

Figure 9 SPDH document path

Sensor Types and Locations

Document Present Sensor

The document present sensor, Q05-309 (PL 5.30 Item 6), is a reflection actuated sensor that senses the presence of a document loaded into the input tray, Figure 10. When the SPDH document present sensor is actuated the document set LED, LP05-084, illuminates in the SPDH top cover. When the last sheet has left the input tray the sensor triggers the signal to stop the document feeding process.

Stack Height Sensor

The stack height sensor, Q05-310 (PL 5.20 Item 4), is a flag actuated sensor that senses the paper stack and maintains the stack height by triggering activity of the tray elevator motor, Figure 10.

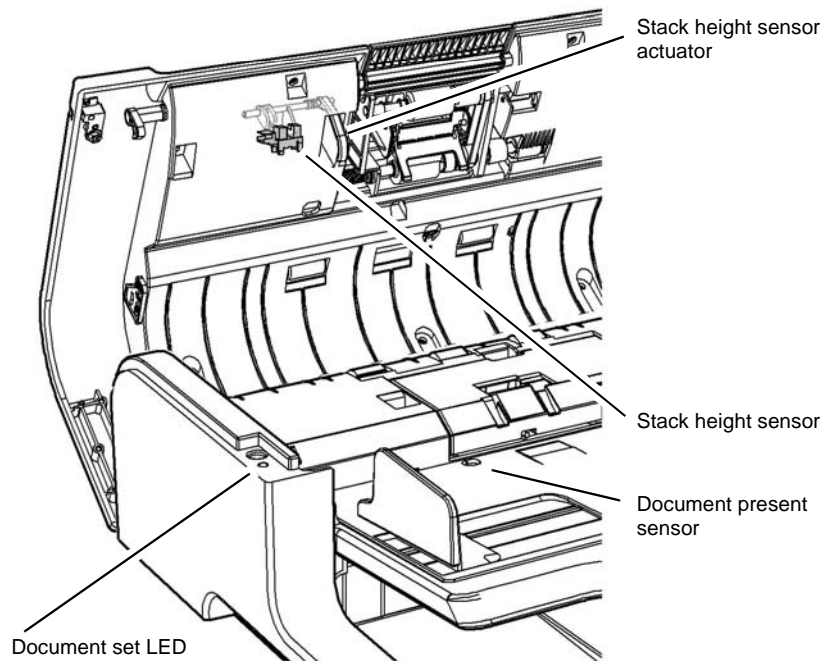


Figure 10 Paper stack sensors

Calibration Home Position Sensor

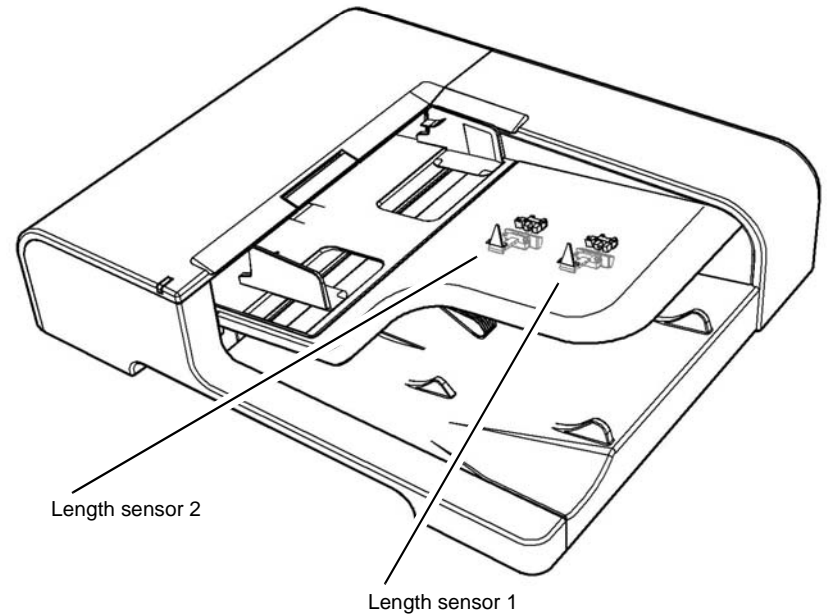
The calibration home position sensor, Q05-360 (PL 5.18 Item 9), is a flag actuated sensor that senses that the calibration strip of the side 2 scan assembly is in the home position, Figure 12.

Length Sensor 1

The length sensor 1, Q05-315 (PL 5.30 Item 5), is a flag actuated sensor that senses documents in the input tray longer than 300mm, Figure 11.

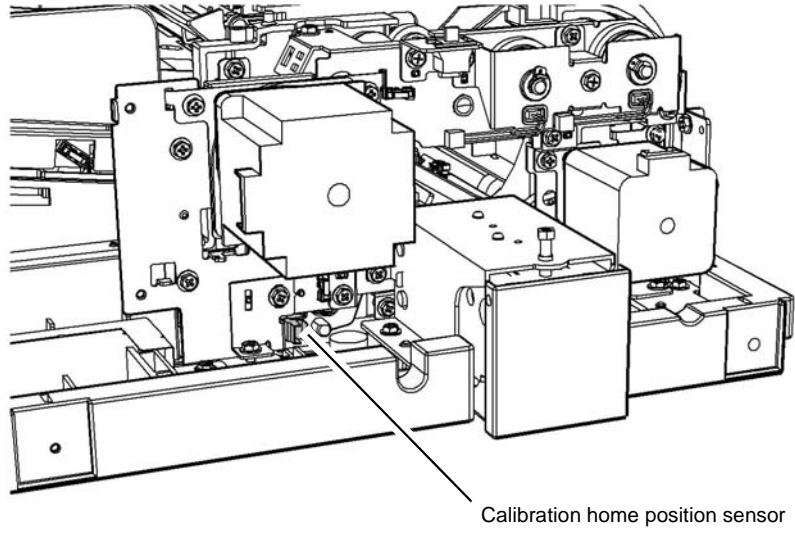
Length Sensor 2

Length sensor 2, Q05-320 (PL 5.30 Item 5), is a flag actuated sensor that senses documents in the input tray longer than 240mm, Figure 11.



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Figure 11 Length sensors

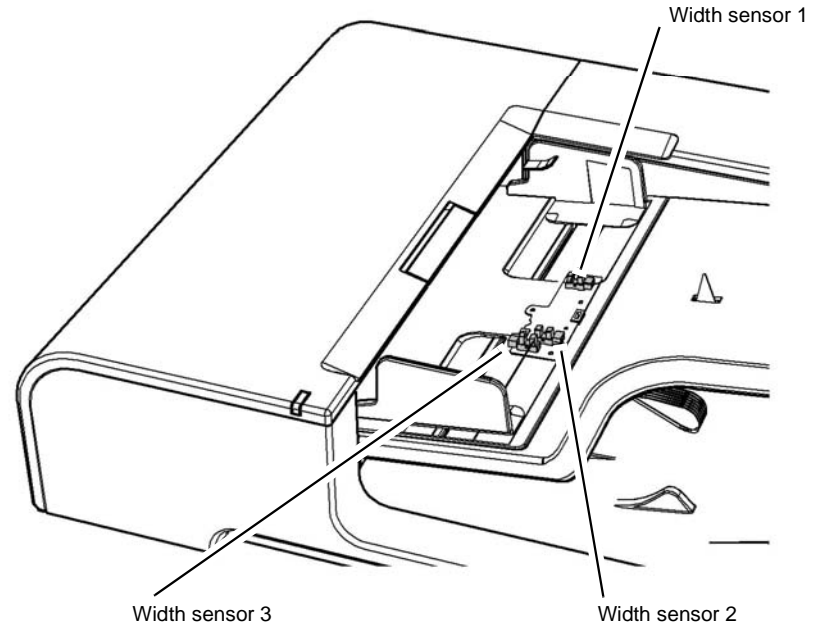


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Figure 12 Calibration home position sensor

Width Sensors: 1, 2 and 3

Width sensors (PL 5.30 Item 5) 1, Q05-325, 2, Q05-326, and 3, Q05-327, are actuated by flags attached to the document width guides of the input tray. The 3 width sensors are positioned to allow the detection of common document widths. Working with length sensors 1 and 2 they enable the machine software to determine various document sizes, Figure 13.



X-5-0170-A

Figure 13 Width sensors

Feed Sensor

The feed sensor, Q05-330 (PL 5.20 Item 9), is a reflection activated sensor that senses the lead edge and trail edge of documents leaving the feed assembly to confirm the presence of an inter document gap, Figure 14.

TAR Sensor

The takeaway sensor, Q05-335 (PL 5.20 Item 9), is a reflection activated sensor that senses the lead edge and trail edge of documents entering the takeaway roll assembly. This sensor triggers the stop of the separation nip and nudger rotation. This allows the takeaway roll assembly to pull the document through the separation nip to ensure an interdocument gap, Figure 14.

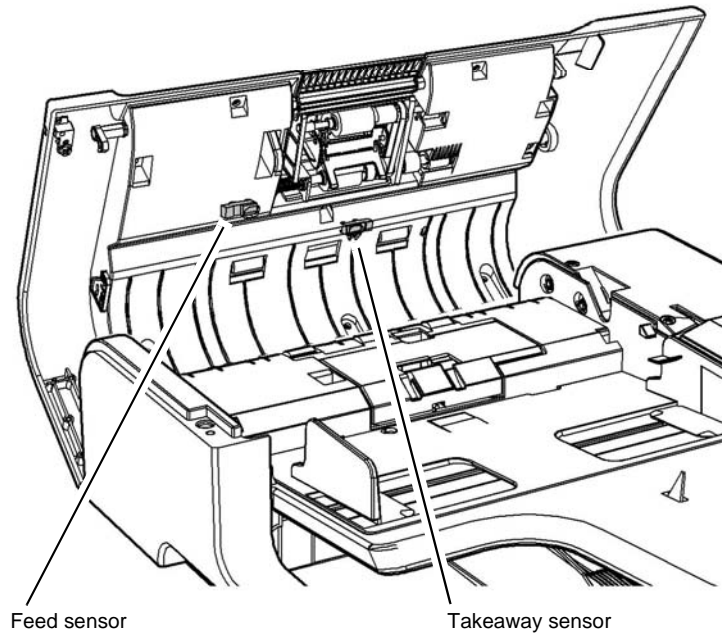


Figure 14 Feed and takeaway sensors

Registration Sensor

Registration sensor, Q05-340 (PL 5.18 Item 9), is a reflection activated sensor that senses the lead edge and trail edge of documents just prior to the side 1 scan area, Figure 15.

Side 2 Registration Sensor

The side 2 registration sensor, Q05-343 (PL 5.18 Item 9), is a reflection activated sensor that senses the lead edge and trail edge of documents just prior to the side 2 scan area, Figure 15.

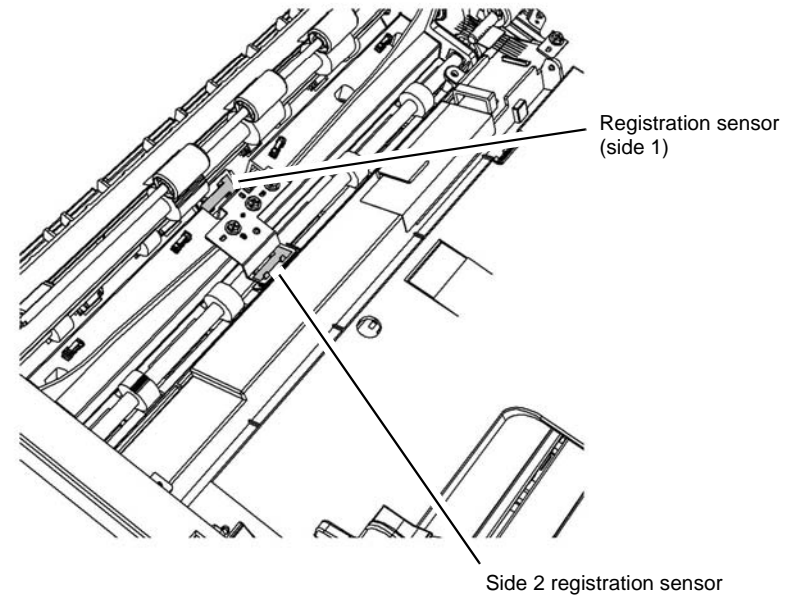


Figure 15 Registration sensors

Side 2 Scan Assembly Calibration

The calibration mechanism consists of a white calibration strip attached to the glass surface of the scanner face on the underside of the scanner. The white strip on the glass surface operates as a spring loaded sliding shutter driven by a pair of cams. The white calibration strip provides a scannable area for the full width of the side 2 scan assembly, and serves as a uniform reference for the video control system that uses it to calibrate the video data.

Calibration is necessary because tolerance variations in the scanner may result in different video data. The calibration procedure scans the calibration strip, compares the signals to set point values stored as Non-Volatile Memory (NVM) data, and then calculates a white point value to ensure consistent video data. There is no black calibration strip. Black calibration is performed with the lamp off.

Calibration of the side 2 scan assembly is performed at power on or the sensing of a document in the input tray. At the time of calibration the read motor is driven in the opposite rotational direction to that of the scanning process. The spring loaded sliding glass of the side 2 scan assembly is moved by a cam and actuator arrangement. A pair of cams is rotated on a cam-shaft via a belt and pulley system. In normal operation the mechanism is prevented from rotation by the use of a one way clutch-gear.

As the cams rotate they push against followers at either end of a pivot shaft that move a pair of actuators. The inboard and outboard actuators push against pegs attached to the scanner glass. The action of the actuators on the pegs cause the glass to slide in the scan process direction, positioning the calibration strip directly under the scan line of the side 2 scan assembly. Once the calibration strip is in this position the calibration process takes place.

Further reverse rotation of the cam disengages the two actuators and the spring loaded shutter returns to its scanning operation position. A flag on the inboard end of the cam shaft signals the calibration home position sensor, Q05-360, that the calibration strip of the side 2 scan assembly is in the home position, [Figure 16](#).

Side 2 Scan Assembly Calibration Drive Train

The drive train for the side 2 scan assembly calibration mechanism is as follows (refer to [Figure 16](#)):

1. Read motor, [PL 5.18 Item 1](#)(not shown).
2. Read motor idler gear, [PL 5.19 Item 16](#).
3. Mid scan drive gear, [PL 5.19 Item 12](#).
4. Mid scan roll, [PL 5.17 Item 3](#).
5. Mid scan roll pulley [PL 5.19 Item 18](#).
6. Exit roll drive belt, [PL 5.19 Item 19](#).
7. Exit roll pulley, [PL 5.19 Item 21](#).
8. Exit roll assembly, [PL 5.17 Item 2](#).
9. Calibration shutter drive gear, [PL 5.19 Item 8](#).
10. Calibration shutter idler gear, [PL 5.19 Item 6](#).
11. Calibration shutter driven gear, [PL 5.19 Item 7](#).
12. One way gear clutch.
13. Cam shaft
14. Front calibration cam, [PL 5.19 Item 20](#).
15. Cam follower
16. Pivot shaft.
17. Outboard (front) actuator and inboard (rear) actuator.

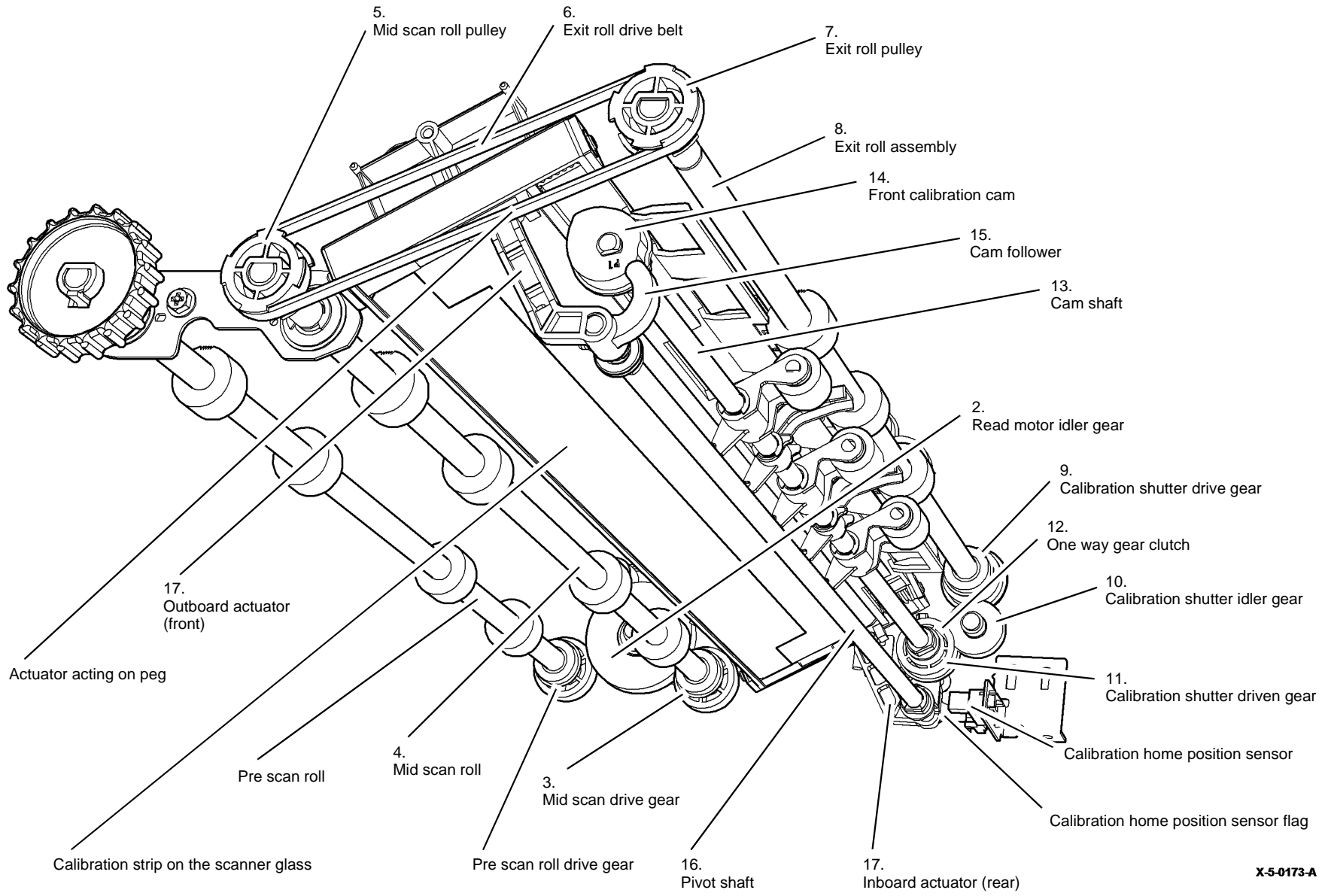


Figure 16 SPDH scanner calibration

X-5-0173-A

DC Routines and Adjustments

- **dC604** Registration Setup Procedure. This routine measures and adjustments image to paper registration for the Image Output Terminal. It must be performed whenever a part is changed, removed or replaced within the SPDH and scanner module.
- **dC608** Document Feeder Registration. This routine checks the registration of the document feeder and corrects any misalignment. The process runs automatically and does not require any user intervention other than inserting three blank sheets in the document feeder. This routine must be performed whenever a part is changed, removed or replaced, including a complete SPDH module.
- **dC609** Document Glass Registration. This feature checks the registration of the document glass and corrects any misalignment. The process runs automatically and does not require any user intervention other than keeping the SPDH open during the operation. It routine must be performed whenever a part is changed, removed or replaced within the scanner module.
- **dC610** CCD Lamp Profile Adjustment. This routine adjusts the side 1 (scanner) then the side 2 (SPDH) scan lamps to maintain optimum image quality.
- **dC945** IIT Calibration. This routine automatically calculates and sets the white-reference correction factor for paper white and calibration strip variations. This procedure must be run whenever a side 2 scan assembly, scan carriage assembly, scanner module, scanner module component, or a complete SPDH is removed
- **ADJ 5.1** SPDH Drive Belts Adjustment
- **ADJ 5.1** SPDH Height Adjustment
- **ADJ 5.2** SPDH Skew Adjustment
- **ADJ 5.3** SPDH Cleaning Procedure

Fusing and Copy Transportation

Fusing

The primary function of the fuser module is to fix the toner to the media and to transport that media from the pre fuser transport to the post fuser transport with no damage or excessive curl. Fixing the toner to the media is done by a combination of heat and pressure. There are four fuser module configurations 45-55ppm (50Hz and 60Hz) and 65-90ppm (50Hz and 60Hz).

Heat warning labels and flocking are used to prevent the customer from contacting high temperature surfaces.

The fuser module receives its drive from the drive assembly. After the toner image is transferred to the paper, the paper passes through the fuser. The pressure roller is pressed against the heat roller to melt the toner and bond the image to the paper.

The fuser module is a customer replaceable unit (CRU) (PL 10.8). The average life of the fuser module is 350,000 prints. A CRU monitor (CRUM) in the fuser module ensures the correct module is installed for the market region of the machine and monitors the remaining life of the fuser. When a new fuser module is installed, the fuser life counters are reset.

There are four types of fuser (PL 10.8 Item 1):

- 50Hz for AltaLink® B8045/B8055
- 50Hz for AltaLink® B8065/B8075/B8090
- 60Hz for AltaLink® B8045/B8055
- 60Hz for AltaLink® B8065/B8075/B8090

If a 50Hz fuser is installed in a US market region machine or if a 60Hz fuser is installed in a European market region machine a 310-399-00 Fuser CRUM incompatibility fault will be declared.

The following information pertaining to fuser module life is available to the customer via the UI:

- Projected end of life (estimated days remaining).
- Image count (estimated pages remaining).
- Life remaining (estimated percent remaining).
- Re-order notification.
- Configuration of re-order information (set by System Administrator - 0 to 20 days).

Fuser Components

Fuser Roll

The fuser roll is heated by two internal halogen lamps, and contacts the pressure roll to form a nip through which the media is transported. The toner is melted by the fuser roll and pressed into the media by the pressure roll. Drive for the fuser module is provided by the main drive via a gear on the fuser roll.

The fuser roll is a steel tube with a PFA coating. It has a symmetric profiled shape to ensure the edges of the paper move slightly faster than the center for wrinkle control.

- AltaLink® B8045/B8055 - the fuser roll is 0.75mm thick and has a nominal 30mm diameter.
- AltaLink® B8065/B8075/B8090 - the fuser roll is 0.75mm thick and has a nominal 30mm diameter.

Pressure Roll

The pressure roll is a metal shaft coated with a hard silicone rubber and a PFA sleeve. It maintains pressure on the paper passing between it and the heat roller. This pressure bonds the melted toner to the paper.

Springs are used to force the fuser roll and pressure roll together. The pressure roll is pulled upwards into the fuser roll by springs maintaining nip force. The pressure roll is at a 10 degree angle to the fuser roll. The pressure roll has a slight symmetrical profile with nominal outside diameter of 30mm.

Heat Lamps

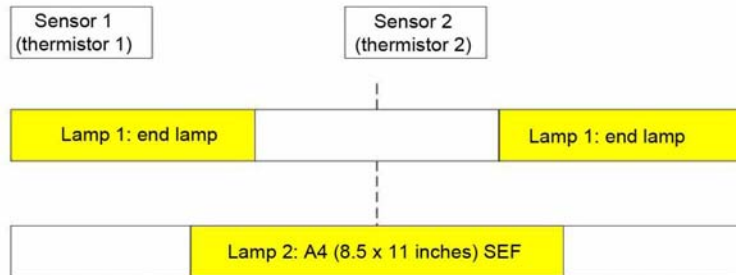
Two halogen lamps are used to heat the fuser roll and are mounted in parallel along the bore of the fuser roll. Refer to Table 1 for the heat lamp power.

Table 1 Heat lamp power

Machine speed	Frequency	End lamp	A4 (8.5 x 11 inches) SEF
45-55ppm	50Hz	825W @230V AC	655W @230V AC
65-90ppm	50Hz	825W @230V AC	910W @230V AC
45-55ppm	60Hz	825W @115V AC	655W @115V AC
65-90ppm	60Hz	825W @115V AC	910W @115V AC

Temperature Sensors

The temperature sensors are contact thermistors having a known value of resistance that varies with temperature. There are two temperature sensors in the fuser. One is located at the center of the heat roller, the other is located toward the front of the heat roller. Both thermistors monitor the temperature of the heat roller. Refer to [Figure 1](#).



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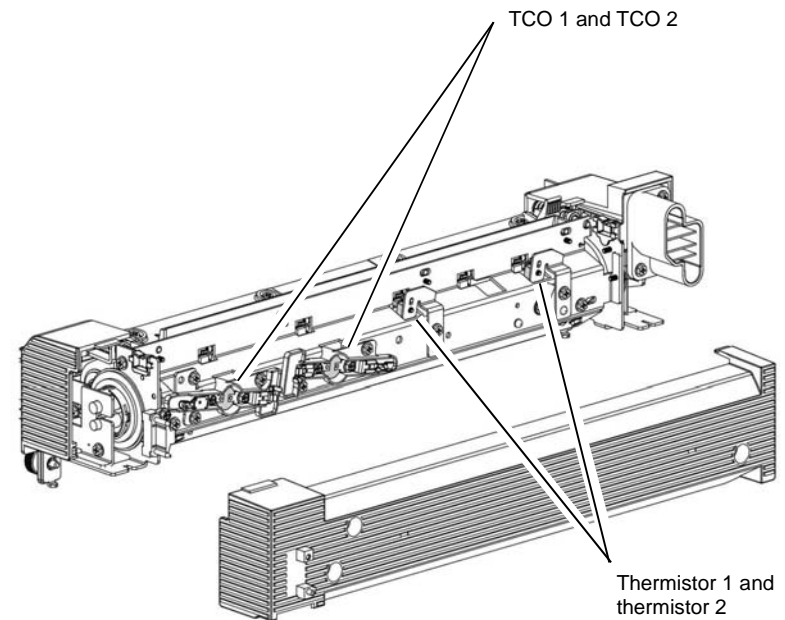
Figure 1 Lamps and temperature sensors layout

Thermostats - Thermal Cutouts (TCO)

Two non resettable thermostats (TCOs) are mounted directly above the center of the fuser roll. They provide the final level of safety for the fuser system.

- In a case where the temperature control system fails to operate correctly the TCO will blow when the temperature at the thermistor is 227 degrees C.
- There is a temperature differentiation between the thermistor and the fuser due to the air gap between the two.
- When the thermistor detects 227 degrees C the temperature at the fuser roll will be approximately 272 degrees C.

When the TCO blows power to the lamps is cut preventing damage to the module. If a TCO blows a new fuser module must be installed. Refer to [Figure 2](#).

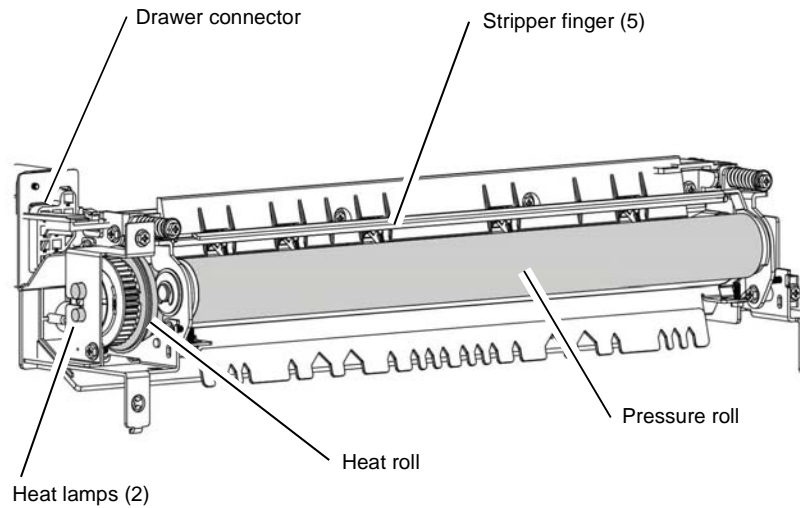


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Figure 2 TCOs and thermistors

Stripper Fingers

Five stripper fingers are kept in light contact with the fuser roll by spring tension. These prevent paper from remaining attached to the fuser roll. Refer to [Figure 3](#).

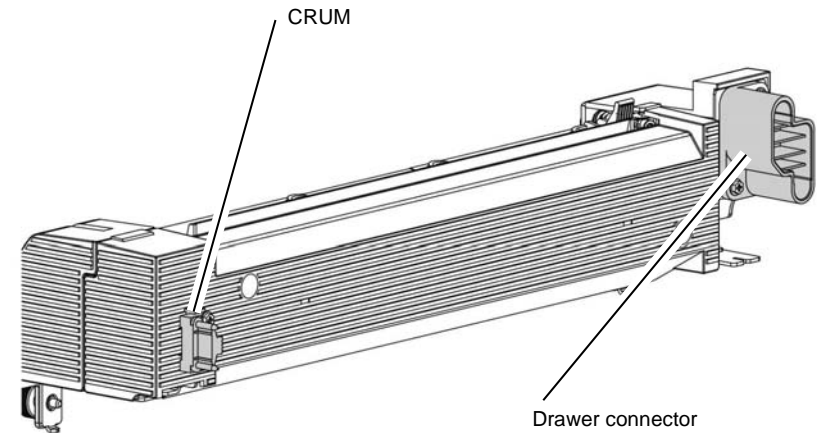


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Figure 3 Fuser components

CRUM

The CRU monitor (CRUM) is used to identify the type and age of the fuser module. It also identifies the market region and stores the print count. It also acts as an interlock. If the machine senses that the CRUM is disconnected, the machine will not run. Refer to [Figure 4](#).



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Figure 4 CRUM and drawer connector

Drawer Connector

The drawer connector (Figure 4) provides the interface to the power and control for the fuser. Refer to Figure 5 for pin number locations on the fuser side, PJ100:

- Pin 1 thermistor 1 and thermistor 2 RET.
- Pin 2: thermistor 1.
- Pin 3: thermistor 2.
- Pin 7: lamp 2 RET (A4 SEF).
- Pin 8: AC Supply.
- Pin 9: lamp 1 RET (A4 LEF).
- Pin 10: AC GND.

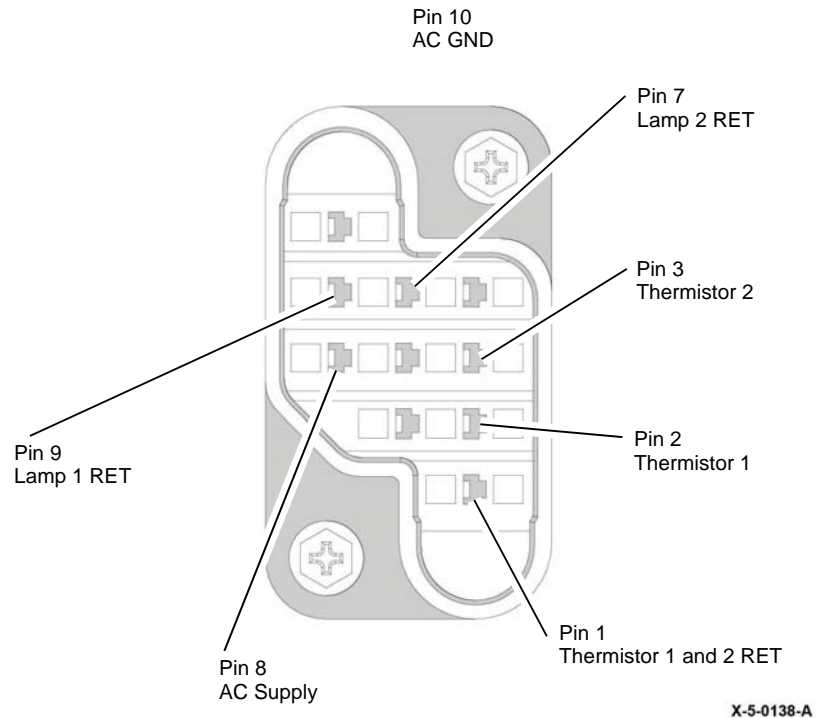


Figure 5 Fuser drawer connector pins

Fuser Paper Guides

Refer to Figure 6. The fuser has the following paper guides:

- Left input guide. This guides the paper into the fuser.
- Right input guide. The right input guide is flocked and has the dual function of assisting with the alignment of the media on fuser entry and preventing an operator from gaining access to the hot fuser roll. In addition, it helps guide the paper into the fuser, ensuring that the lead edge contacts the fuser roll first.
- Left output guide. This guide hinges open to aid jam clearance.
- Right output guide. This guides the paper to the post fuser transport roller. The stripper fingers are mounted to this guide.

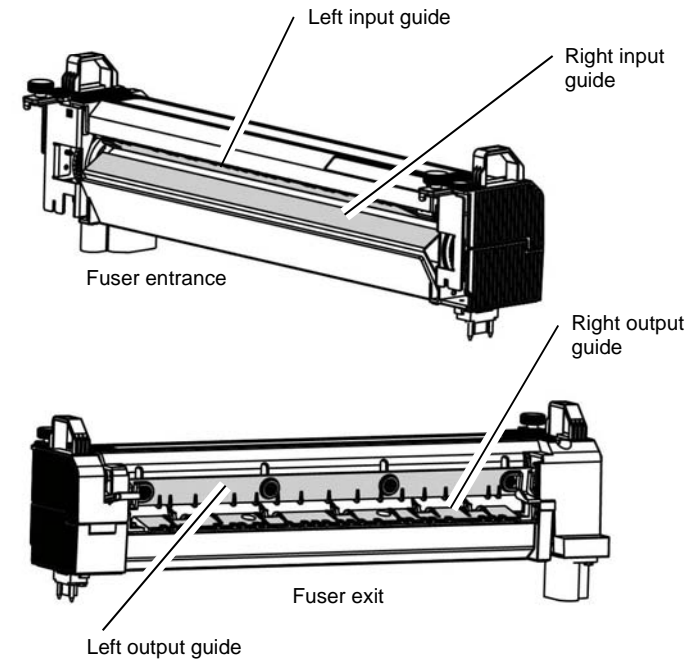


Figure 6 Fuser guides

Fuser Life Expectancy

Life expectancy of the fuser is dependent on the speed of the machine:

- 45ppm - 264,000 prints
- 55ppm - 300,000 prints
- 65ppm - 315,000 prints
- 76ppm - 330,000 prints
- 90ppm - 345,000 prints

Several other factors can reduce fuser life:

- Greater than 5% coverage.
- Paper use larger than letter size.
- Printing on heavy media.
- Printing short-edge feed.
- Printing on transparencies or speciality media.

Fuser Operating States

Refer to [Table 2](#). The fuser has the following operating states:

- Warm up state.
- Stand-by state.
- Run state.
- Power save (off) state.
- Power save (simmer) state.

Table 2 Fuser temperatures

NVM	Description	Machine speed (PPM)				
		45	55	65	75	90
FsrStandby-Temp	Target temperature during standby mode.	60 C.	60 C.	60 C.	60 C.	60 C.
FsrRange	Temperature range below FsrStandbyTemp at which start print can begin.	20 C	20 C	20 C	20 C	20 C
FsrRunTemp	Target temperature during run mode.	195 C.	195 C.	200 C.	200 C.	200 C.
HeavyWeight-MediaTempOffset	Temperature offset added to fuser temperature media over 120gsm.	+10 C	+10 C	+10 C	+10 C	+ 10 C

Warm up State

The fuser enters the warm up state when 'thermistor measured temperature is less than (NVM value FsrStandbyTemp minus NVM value FsrRunTemp) when IOT is powered from power off state'.

When the fuser is in the warm up state, the IOT informs the device controller that the fuser is in the warm up state. The user is informed via the UI that the fuser is warming up and printing is inhibited until the measured temperature is within (NVM value FsrStandbyTemp minus NVM value FsrRunTemp) standby mode target temperature.

Warm-up is also triggered by user interaction with the device, such as placing a document in the SPDH or a print command.

Standby State

When in the standby state, the measured temperature does not drop by greater than 2 degrees of the target temperature (NVM value FsrStandbyTemp).

The standby state may be entered from the following states:

- Warm-up
- Run
- Recovery
- Suspend

Run State

When in the run state, the fuser uses the nominal target temperature of NVM value FsrRunTemp plus any offset applied.

When in the run state and A4 (8.5 x 11 inches) LEF media is selected, the measured temperature does not drop by greater than 2 degrees of the target temperature, NVM value FsrRunTemp plus any offset applied.

To compensate the type of media being fused and to ensure that the pressure roll has acquired an even temperature, the fuser roll may need additional time to reach and establish a stable run temperature. This is achieved by introducing a delay when sending a ready to print status to the IOT.

Power Save (Off) State

Entry to the power save (off) state is from the following states:

- Warm Up
- Stand-by
- Power Save (simmer)

When the front door interlock and the left door interlocks are broken, AC power to the fuser module is removed. The IOT, via the LVPS, is informed that power has been removed. When the IOT detects that power has been removed the fuser enters the power off state.

Power to the fuser is not be applied when:

- A fuser module is not detected.
- The CRUM is not validated.
- Interlocks are broken.

In the power save (off) state the fuser uses power level 0. When in the power save (off) state, the fuser does not raise a thermistor fault when the front door interlock and the left door interlocks are broken.

Fuser Control Watchdog Signal

The fuser is controlled by the TTL serial commands sent to the LVPS by the IOT PWB. The commands can range from 0 to 20. The fuser contains two lamps that are controlled independently.

The watchdog time function is incorporated in the serial link. The current demand for each lamp must be communicated to the IOT PWB every 2000ms or power to the lamps will be turned off by the LVPS.

Temperature Control

The fuser temperature needs to be controlled constantly and the temperature profile varied depending on the machine's operating mode. The fuser transitions between four operating modes, warm-up, ready, print, and low power. Both heat lamps can be controlled independently to achieve all the required operating temperatures and which comply with all safety and environmental legislation.

The surface temperature of the fuser roll is monitored using two thermistors. The output from each thermistor is monitored by the IOT PWB, which then controls the output power to the heat lamps, via the fuser power control module. This maintains a constant temperature across the entire length of the fuser roll, regardless of the width of paper being passed through the fuser.

As the resistance of each thermistor changes with a change in fuser roll temperature, the resultant change in voltage is monitored by the IOT PWB, via an analogue to digital converter. A control algorithm uses this feedback signal to vary the AC power to the heat lamps, in order to maintain the required temperature. The heat lamps are controlled independently within the fuser power control module.

Temperature Control and Productivity

To maintain a uniform temperature across the fuser roll surface, productivity is reduced to 10ppm for media with a width less than or equal to 150mm.

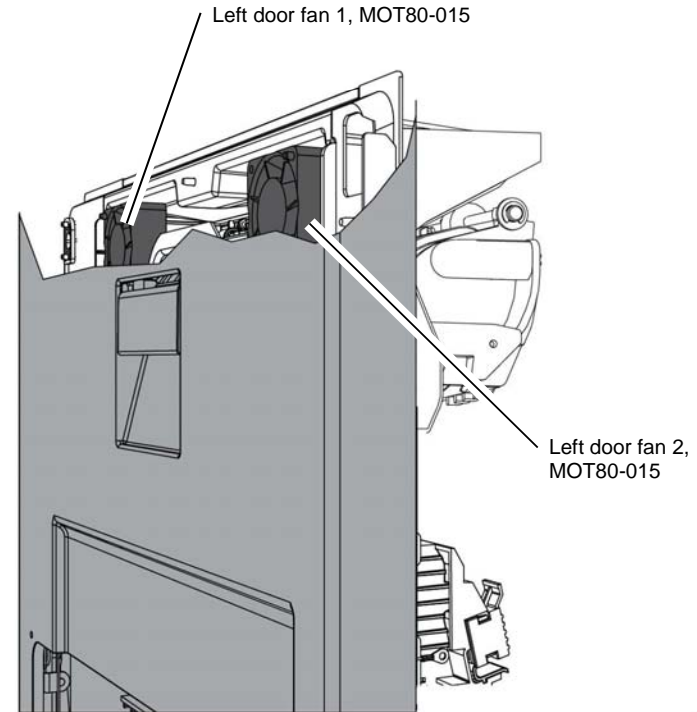
For low input voltage conditions, productivity will be reduced to allow the fuser to maintain temperature set point.

Fuser Cooling

The AltaLink® B8045/B8055 variants and the AltaLink® B8065/B8075/B8090 variants have differing cooling arrangements.

AltaLink® B8045/B8055 variants

Two fans, MOT80-015 (PL 80.11 Item 9), mounted in the left door assembly provide cooling for the fuser and remove hot air from the xerographic subsystem. Refer to [Figure 7](#) and [Figure 8](#).



X-5-0118-A

Figure 7 Cooling fans in left door assembly

AltaLink® B8065/B8075/B8090 variants

The higher speed variants do not have fans in the left door. A duct along the top of the left frame member extracts heat from the machine and connects to a duct utilizing a single large fan inside the rear cover, [Figure 9](#).

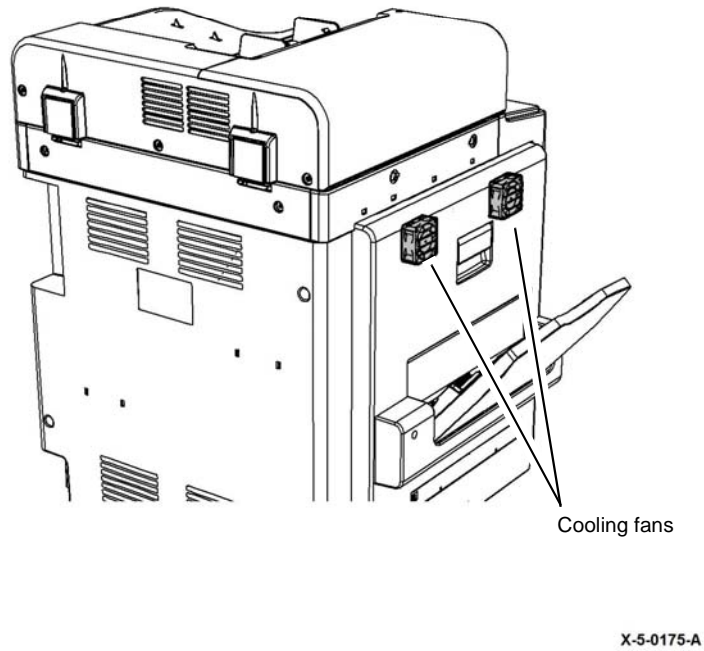


Figure 8 Cooling fans in left door assembly

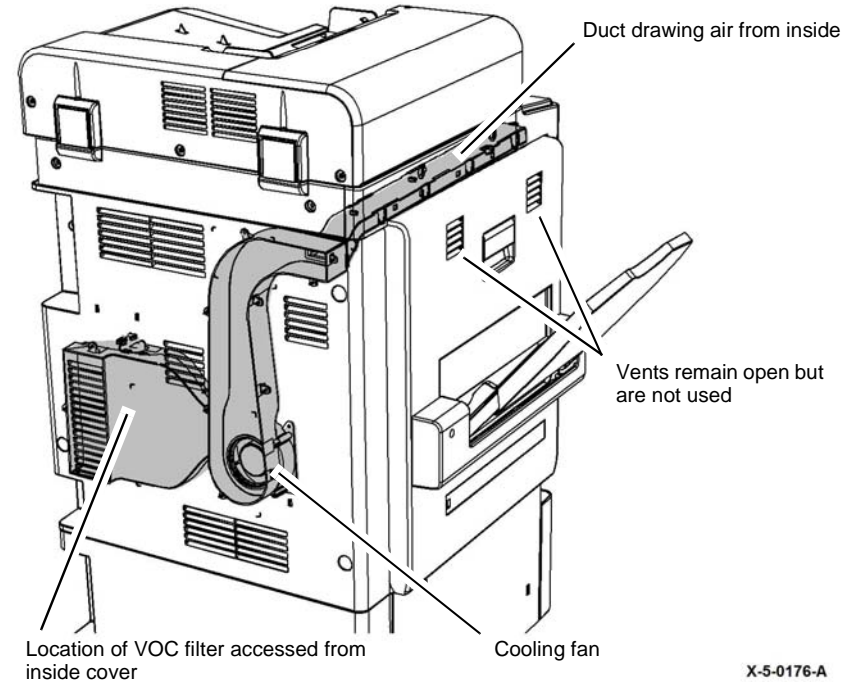


Figure 9 Cooling duct and fan 65/75/90 machines

Fuser Cooling Fans Operation and Component Control

The fuser cooling fans don't run continuously. The fans are started by the software depending on a number of factors including the number of prints in a print run and environmental conditions outside of the spec of the machine.

Component control code 80-015 is used to energise the fuser cooling fans in both speed variants. Component control code 80-015 will energise the left door fans or the rear fan depending on the speed variant of the machine. Component control code 80-015 is called Left Door Fans in both speed variants.

Removal of Volatile Organic Compounds (VOC)

- The B8065, B8075 and B8095 variants feature a filter to remove volatile organic compounds, such as ozone. The filter is situated in the air flow from the fuser as shown in [Figure 9](#).
- The B8045 and B8055 variants do not include a VOC filter.

Fuser Safety

There are 3 fuser safety levels:

1. Feedback control software detects the thermistor temperature. If the temperature goes high, software cuts the power (current software shutdown temperature is 240 degrees C).
2. Hardware comparator circuit trips and latches if the temperature goes too high (current hardware comparator is set to 255 degrees C).
3. The thermostats (see TCOs in [Fuser Components](#)) blow at 227 degrees C. If this happens, a new fuser module must be installed.

Copy/Print Transportation

The function of the copy transportation subsystem is to transport imaged sheets after they have been fused to one of the following:

- The output tray.
- The horizontal transport (for transport to the finisher).
- The inverter for side 2 imaging.

NOTE: *The duplex transport is located in the left door assembly.*

The function of the horizontal transport is to transport simplex or duplex copies to one of the following finishing devices:

- Low capacity stapler stacker (2K LCSS).
- Low volume finisher/booklet maker (LVF BM).
- High volume finisher/booklet maker (HVF BM).

NOTE: *The horizontal transport is installed when one of the optional finishing devices is installed.*

Machine Speed

Machine speeds of 45, 55, 65, 75 and 90 prints per minute are available.

- The 45-55ppm IOT paper path runs at a process speed of 258.0 mm/s. Changing the inter document gap enables 45 or 55 prints per minute.
- The 65-90ppm IOT paper path runs at a different process speed for each print speed.
 - 65ppm process speed = 300.5 mm/s.
 - 75ppm process speed = 340.5 mm/s
 - 90ppm process speed = 362.6 mm/s

Refer to the main drive module [Overview](#) section for further details.

Copy/print Path

The system can operate in the following modes:

- Simplex to the IOT exit.
- Duplex to the IOT exit.

Copy/print Transport

Refer to [Figure 10](#) and [Figure 11](#). The following describes the flow of operation of the paper transport subsystem:

1. A sheet is received from a paper tray.
2. The sheet is transported from the registration transport to the xerographic module.
3. The sheet is received from xerographic module and transported to the fuser module.
4. The sheet is received from the fuser module.

5. The sheet is output:
 - to the horizontal transport and then to the finisher.
 - inverted sheets to the duplex path.
6. The sheet is re-registered at the registration rolls.
7. The sheet is transported to the xerographic module for duplex printing.
8. The sheet is received from xerographic module and transported to the fuser module.
9. The sheet is received from the fuser module.
10. The 2-sided sheet is output to the horizontal transport, then to the finisher.

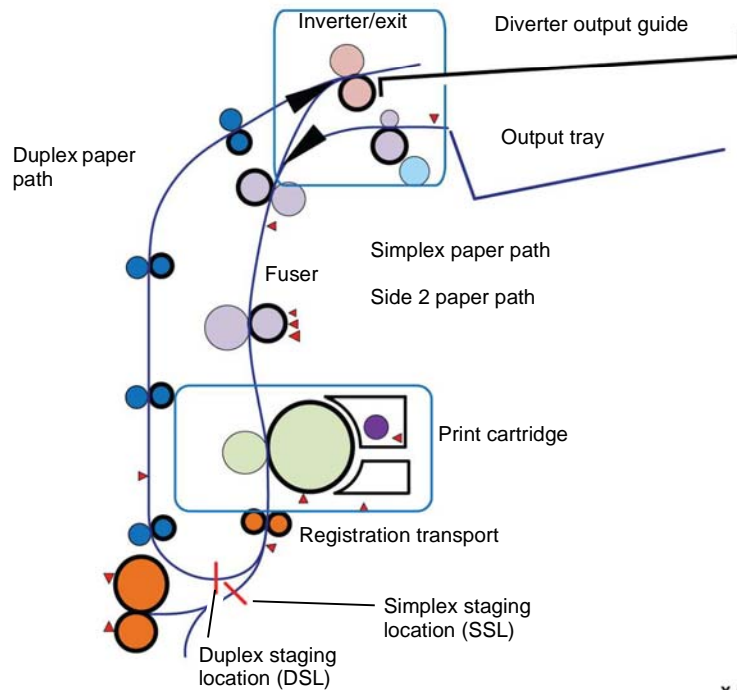
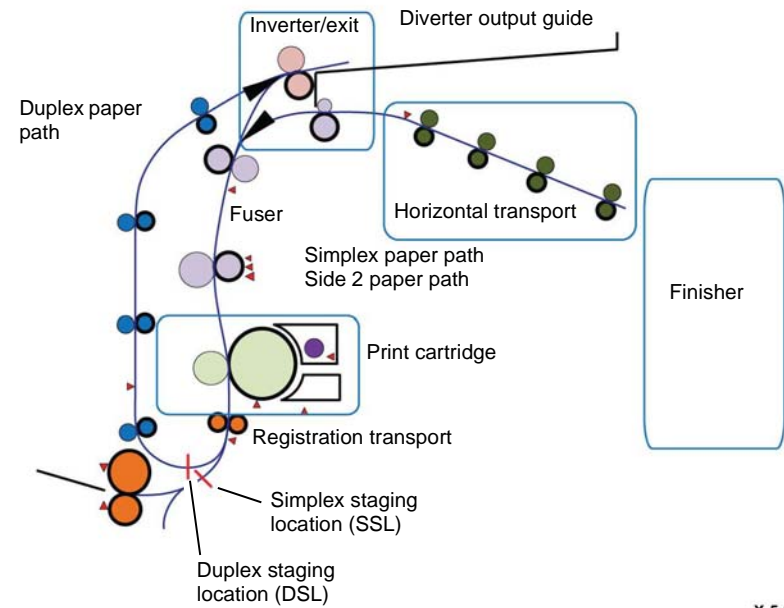


Figure 10 Copy/print transport with output tray

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X-5-0141-A

Figure 11 Paper path with horizontal transport

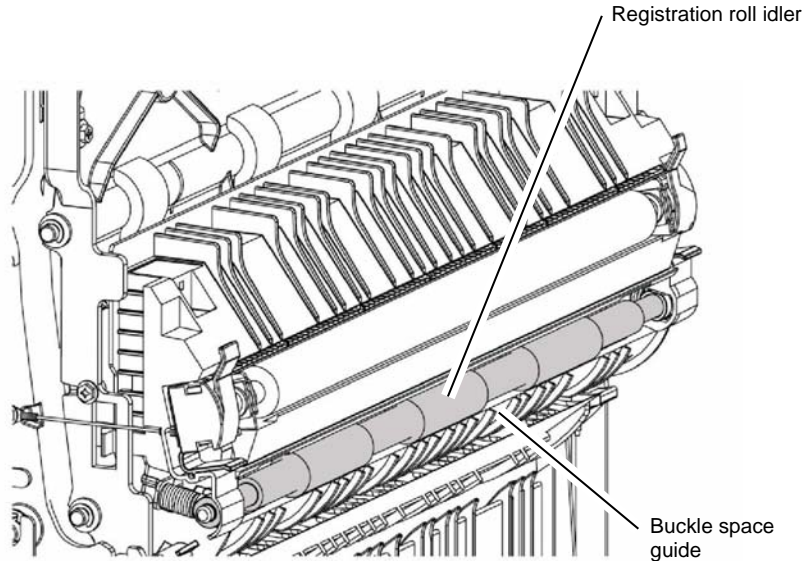
Registration and Deskew

Refer to Figure 12. The lead edge of sheets arriving from the vertical transport, tray 5, or the duplex transport arrive at the registration rolls, which are stopped, before the sheet's lead edge arrives at the registration nip.

For sheets coming from one of the paper trays, the TAR/bypass tray motor continues to run. As these nips push the sheet forward, the sheet is forced to buckle against the stationary registration nip. If the sheet is skewed, the buckle becomes differential in the cross-process direction resulting in the lead edge of the sheet orientating itself square against the registration nip. The deskewing processes for the simplex and duplex sheets are similar but use different nips and the same buckle area.

For sheets coming from the duplex transport, the duplex motor continues to run. As the duplex nips push the sheet forward, the sheet is forced to buckle against the stationary registration nip. If the sheet is skewed, the buckle becomes differential in the cross-process direction resulting in the lead edge of the sheet orientating itself square against the registration nip. The deskewing processes for the simplex and duplex sheets are similar but use different nips and buckling spaces.

The time the buckling lasts is a parameter controlled by the IOT PWB. For simplex and duplex, the registration sensor signal is used as a trigger to start a timer. When the timer has expired, the registration motor is energized and the sheet is transported to the xerographic subsystem.



X-5-0142-A

Figure 12 Registration transport

Lead Edge Registration

The time the sheet's lead edge arrives at the photoreceptor drum is governed mainly by the time the registration motor rotation is started.

Invert to Duplex

Inverter Motor

The inverter motor, MOT10-030 is a 4-phase stepper motor used to rotate the inverter roll in forward and reverse direction. The inverter roll is used to invert the paper to the duplex paper path. If the duplex paper path is selected, the inverter motor speed varies according to the paper size. The speed and direction of the motor is controlled by the IOT PWB.

- For sheets longer than 216mm in the process direction, the inverter motor operates at process speed.
- For sheets equal to or shorter than 216mm in the process direction, the inverter motor speed is increased.

Diverter

Refer to Figure 13. The paper path has one active diverter and one passive gate. The active diverter named the inverter gate, is driven by the inverter gate solenoid, SOL10-045. The inverter gate defaults to deliver sheets to the IOT exit. When the inverter gate solenoid is energized, if the sheet follows a path to the inverter. The inverter motor, MOT10-030, will drive the sheet forward until the trail edge is past the passive diverter. Once the trail edge of the sheet is past the passive diverter, the inverter motor will operate in the reverse direction to drive the sheet to the duplex paper path.

The passive inverter gate, PL 10.13 Item 11 is located between the simplex paper path and the duplex paper path.

The sheet diverted to the duplex path travels under the passive gate until the trail edge is clear of the fingers. The trail edge then flips up above the gate. This is due to the geometry between the gate and the drive rolls. The rolls' nip being higher than the gate causes the trail edge to flip up above the gate's fingers. When the motor reverses the sheet then passes over the top of the gate and into the exit path.

The machine will by default deliver sheets to the IOT exit nip image facing down.

The inverter function is provided by an inverter roll that rotates in the forward direction and the reverse direction. The inverter gate guides the sheet to the inverter after the post fuser nip.

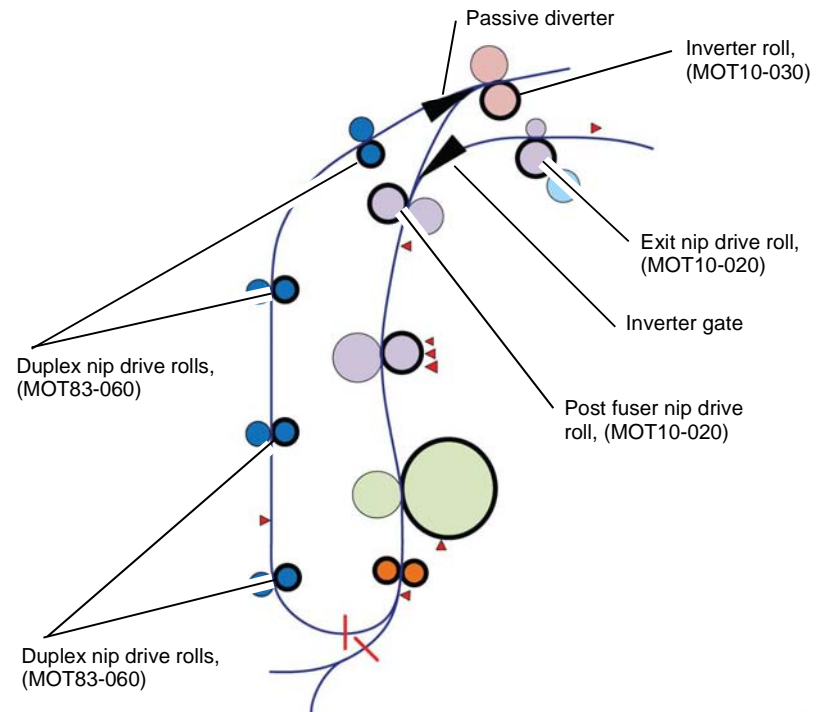


Figure 13 Inverter and duplex paper path

Fuser/Exit Motor

The fuser/exit motor, MOT10-020 is a brushless DC motor and drives the fuser nip, the post fuser nip and the exit nip.

Offset Motor

The offset motor, MOT10-500 moves the offset shuttle inboard to outboard to provide offset between sheets or sets being delivered to the output tray.

If a horizontal transport is fitted the offset shuttle is not used and the offset shuttle is held in place by the offset motor.

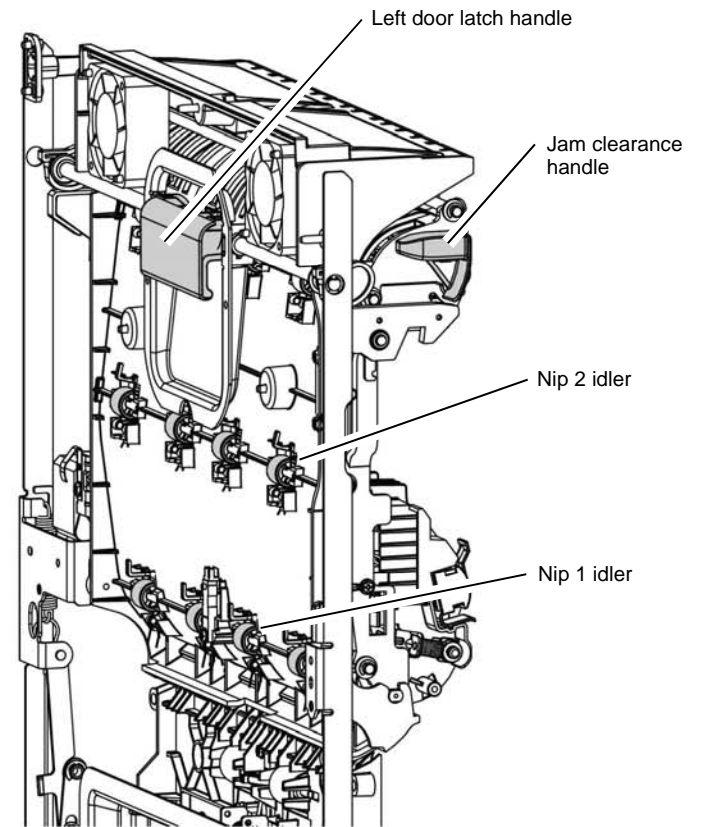
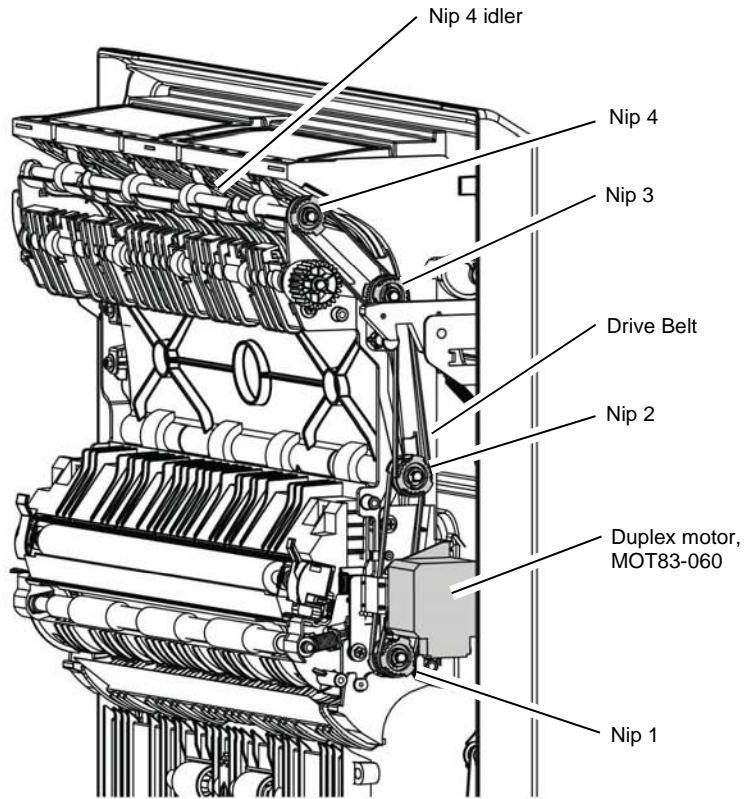
Duplex Transport

The duplex transport is a racetrack type duplex system. The nips in the duplex transport are driven by the duplex motor, MOT83-060 via a drive gear and drive belt. The speed of the motor is controlled by the IOT PWB.

Duplex Motor

Refer to [Figure 14](#). The duplex motor, MOT83-060 is a 4-phase stepper motor used to rotate 4 sets of duplex paper path rolls within the duplex transport. The duplex transport is located in the left door assembly. The duplex motor runs at duplex speed to transport the lead edge of the sheet from the inverter to the duplex staging location (DSL). The speed of the motor is controlled by the IOT PWB.

The AltaLink® B8065/B8075/B8090 variants use a more powerful duplex motor to cope with the increased speed, [PL 80.22 Item 8](#).



X-5-0144-A

Figure 14 Duplex transport

Print/copy Path Sensor Locations

Refer to Figure 15 and Figure 16.

1. Registration Sensor

The registration sensor, Q82-150 is located in the print/copy path immediately before the registration rolls. This sensor is used for print/copy path timing, jam detection and buckle creation.

2. Post Fuser Sensor

The post fuser sensor, Q10-120 is located in the print/copy path downstream of the fuser. This sensor is used for print/copy path timing and jam detection.

3. Duplex Sensor

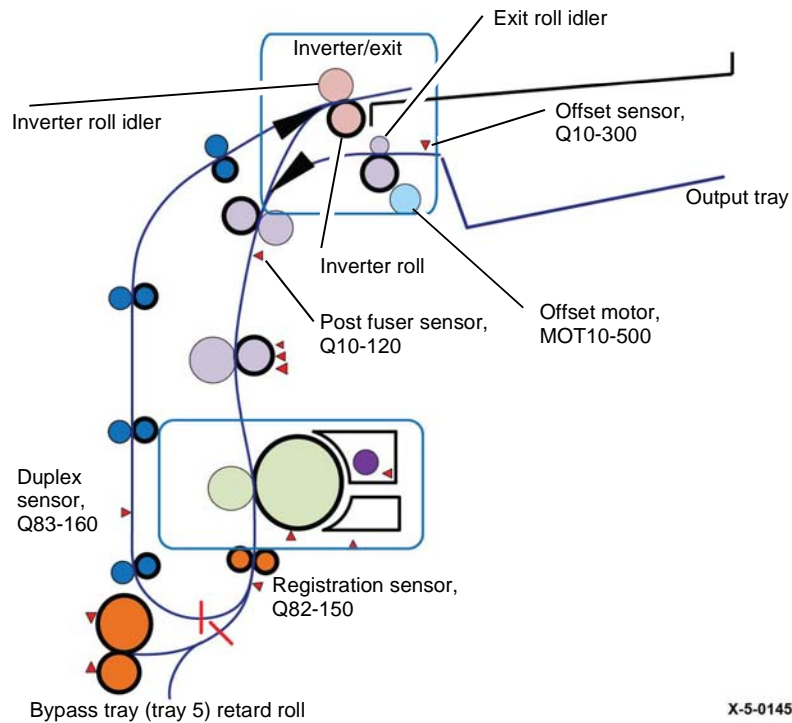
The duplex sensor, Q83-160 is located between the 3rd duplex nip and 4th duplex nip. This sensor is used for print/copy path timing and jam detection.

4. Offset Sensor

The offset sensor, Q10-120 is located just past the IOT exit nip and detects the position of the offset shuttle. The sensor is located in the center of the print/copy path.

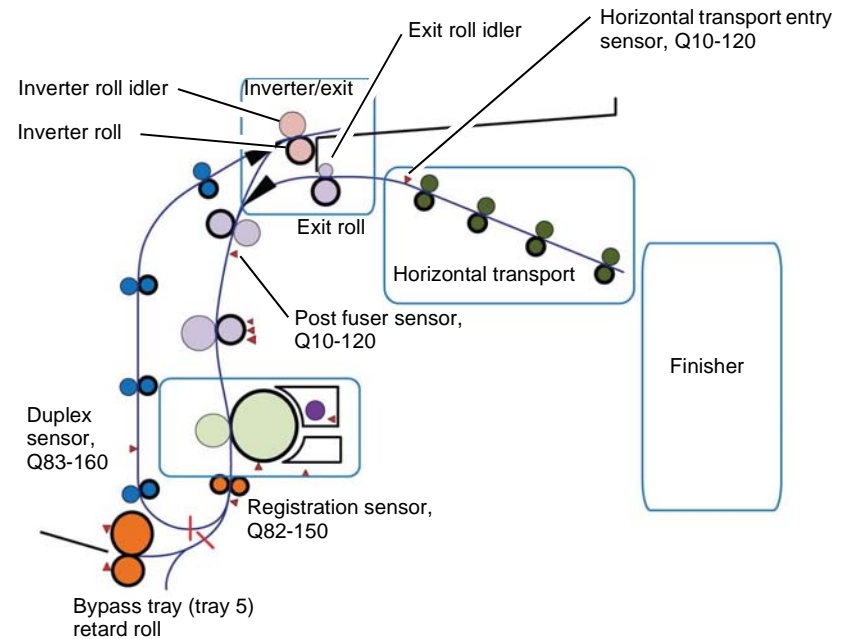
5. Horizontal Transport Entry Sensor

In a machine equipped with a finishing device, the horizontal transport entry sensor, Q10-141 is located just before the first nip in the horizontal transport. This sensor is used for print/copy path timing and jam detection.



X-5-0145-A

Figure 15 Paper path with output tray



X-5-0146-A

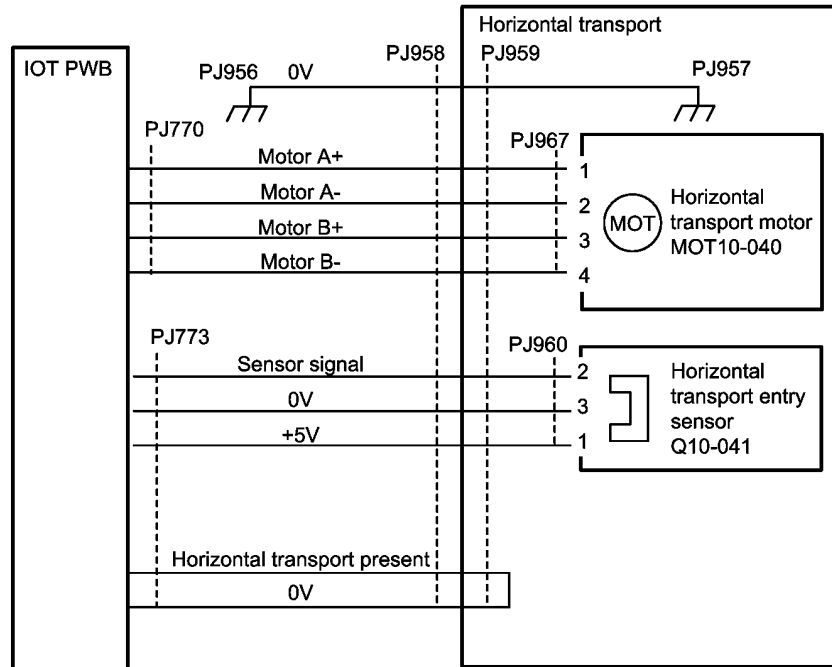
Figure 16 Paper path with horizontal transport

Horizontal Transport Assembly

The horizontal transport module is installed when a finisher is installed.

Refer to Figure 17. The electrical components in the horizontal transport are:

- Horizontal transport motor, MOT10-040 (PL 10.16 Item 1).
- Horizontal transport entry sensor, Q10-041 (PL 10.15 Item 7).



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Figure 17 Circuit diagram

Refer to Figure 18 and Figure 19 for details of components in the horizontal transport.

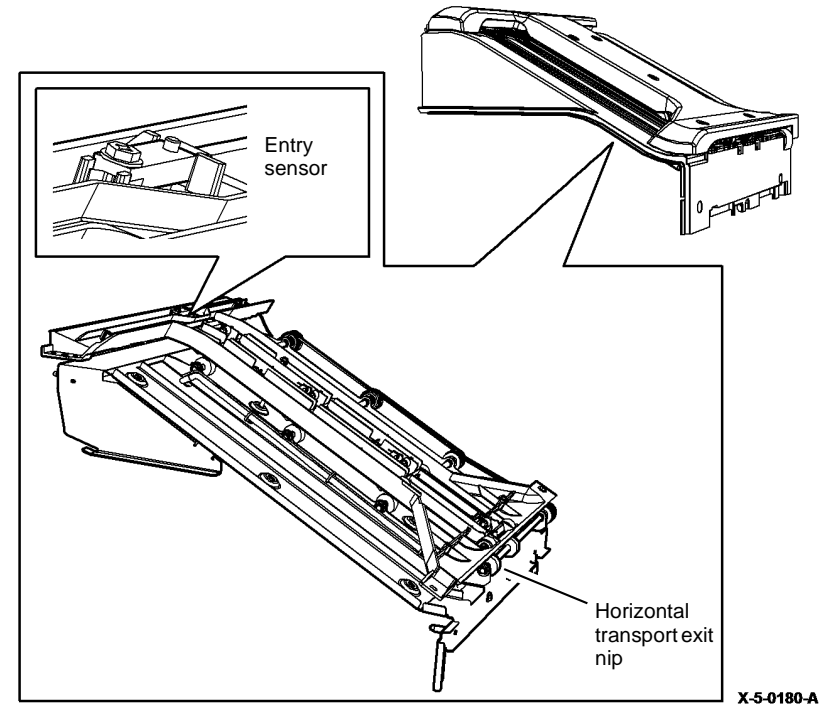
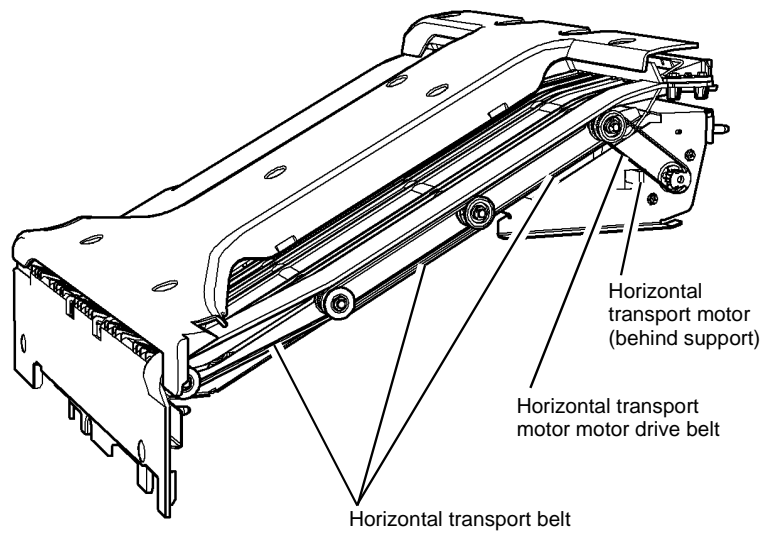


Figure 18 Horizontal transport module front view



X-5-0181-A

Figure 19 Horizontal transport module rear view

All of the pulleys on the horizontal transport act as one-way clutches. This allows the finisher to accelerate sheets out while the sheet is still in the transport nips. The clutches facilitate jam clearance from the finisher side while the trail edge of a sheet is still in the transport.

Low Capacity Stapler Stacker (2K LCSS)

2K LCSS General Description

The 2K LCSS provides two destinations bins, a 250 sheet capacity top tray and a high capacity 2000 sheet stacker tray. Refer to [Table 1](#) for the capacity of the top tray (bin 0), the stacker tray (bin 1). Refer to [Table 2](#) for media constraints.

When the top tray is selected the output will be stacked. When the high capacity stacker tray is selected the output will be compiled, tamped, and sets will be offset 20mm to 30mm for set separation.

Table 1 2K LCSS bin capacity

	Sheet Capacity (80gsm)	Paper sizes	Paper weight
Top Tray Bin 0	250	A6 (4.25 x 5.5 inches) SEF to A3 (11 x 17 inches) SEF	60 - 216gsm (16-57lb)
Stacker tray Bin 1	2000	A5 (8.5 x 5.5 inches) SEF or LEF to A3 (11 x 17 inches) SEF	60 - 216gsm (16-57lb)

Table 2 Media constraints

Media type	Specification
Tabs	Top tray only, tabs must be on lead edge
Envelopes	Top Tray only

The user may choose from the following finishing options when output is directed to the stacker tray.

- Offsetting of sets (25mm) to create a visible set boundary stacking feature.
- Hole punching of sheets 2, 3 or 4 hole, Swedish 4 and Legal 2 hole configuration.
- Automatic stapling of up to 50 sheets (80gsm, 20lb) sets, with the user able to select one of the following three positions dependant upon paper size and feed direction:
 - Single front
 - Single rear
 - Dual

Configuration

The 2K LCSS is configured with two output bins; bin 0 (top tray) and bin 1 (stacker tray). The capacity of the compiler is 50 sheets in collating or collating and stapling mode.

Machine Interface

The 2K LCSS PWB receives and sends serial input and output data to and from the IOT PWB.

The machine interface comprises of the 2K LCSS PWB, the communication cable, a bulkhead connector, and a harness.

The communication cable is the electrical connection between the IOT PWB and the 2K LCSS PWB.

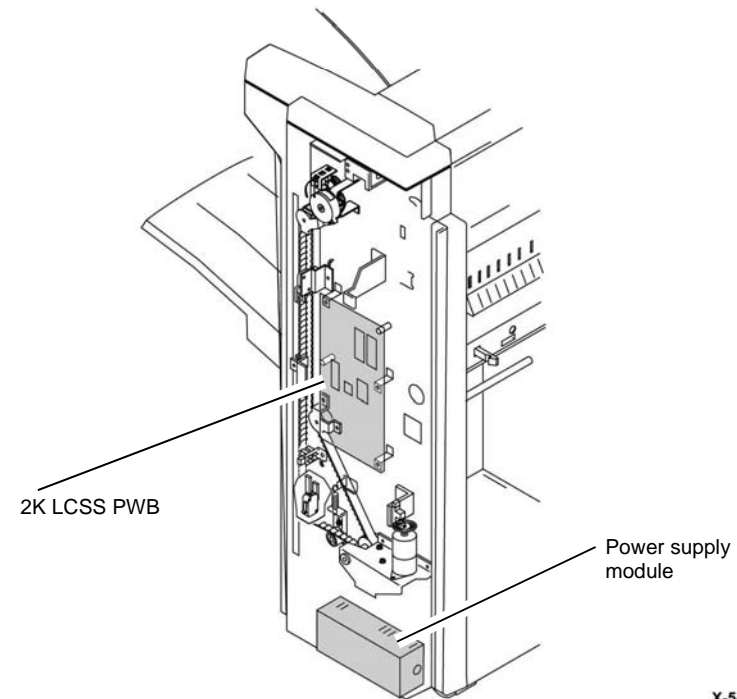
Communications between the IOT PWB and the 2K LCSS PWB are provided by the communication cable.

Power/Interlock

Refer to [Figure 1](#). The 2K LCSS requires a dedicated power cord which is connected to the self adjusting 2K LCSS power supply module located inside the 2K LCSS. The power supply module will accept 90 to 265V AC at 50Hz or 60Hz.

Refer to [Figure 2](#). Interlock switches in the 2K LCSS interrupt +24V power when either of the following are open during jam clearance or service:

- Front door interlock switch, S12-303
- Top cover interlock switch, S12-197



X-5-0032-A

Figure 1 Power supply module and 2K LCSS PWB

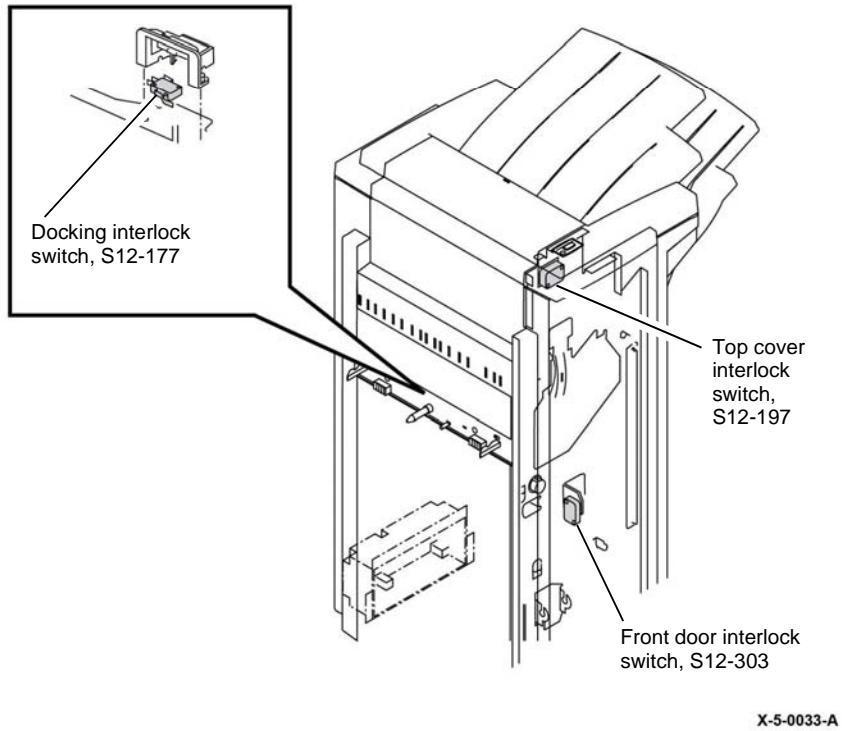
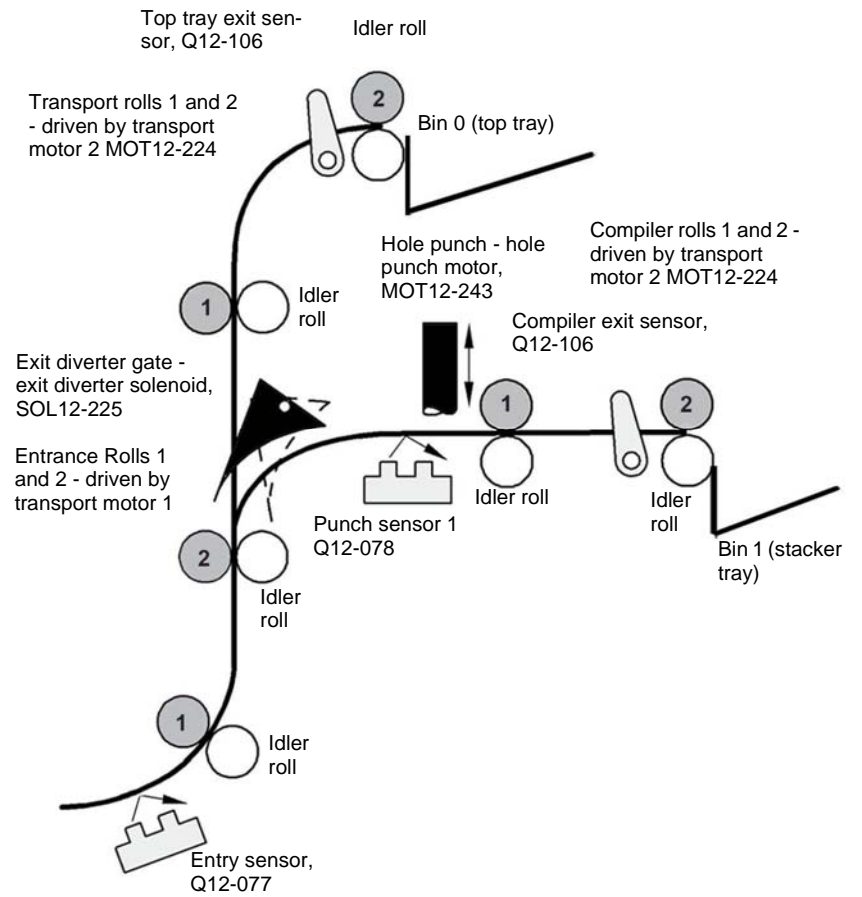


Figure 2 2K LCSS interlock switches

2K LCSS Paper Path

Refer to [Figure 3](#).



X-5-0034-A

Figure 3 2K LCSS paper path

Entrance Paper Path

The entrance paper path is located in the middle left side of the 2K LCSS. It receives printed sheets from the host machine and transports the sheets through the vertical paper transport. From there the sheets are directed to either bin 0 (top tray) or to the hole punch unit and compiler and then to bin 1 (stacker tray).

Entry Sensor

Refer to Figure 4. The entry sensor, Q12-077 is located in the 2K LCSS entrance paper path. In addition to supplying the 2K LCSS PWB with jam detection information, the sensor signal is used to time the operation of components in the 2K LCSS.

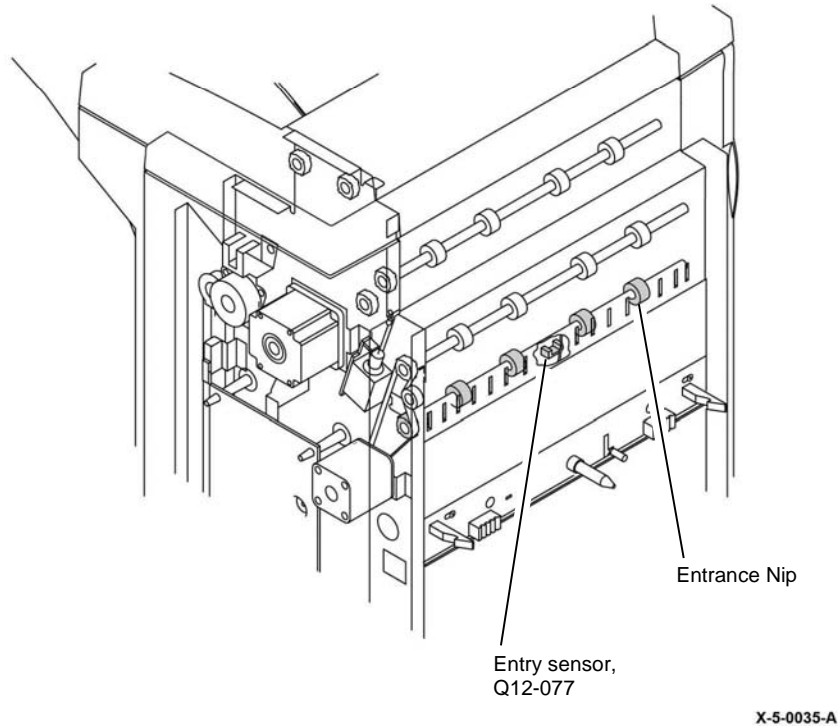


Figure 4 Entry sensor

Transport Motor 1

Refer to Figure 5. Transport motor 1, MOT12-223, is a stepper motor located on the rear frame. The output shaft of the motor drives a toothed timing belt, that transfers mechanical drive to two sets of nip rolls in the entrance paper path.

Exit Diverter Gate

Sheets continue up the entrance paper path, by way of two sets of nip rolls, to the exit diverter gate. The gate is opened by the exit diverter gate solenoid, SOL12-225.

If the gate is open, sheets are diverted to bin 0. If the gate is closed, sheets continue to the hole punch unit, compiler, and bin 1 (stacker tray).

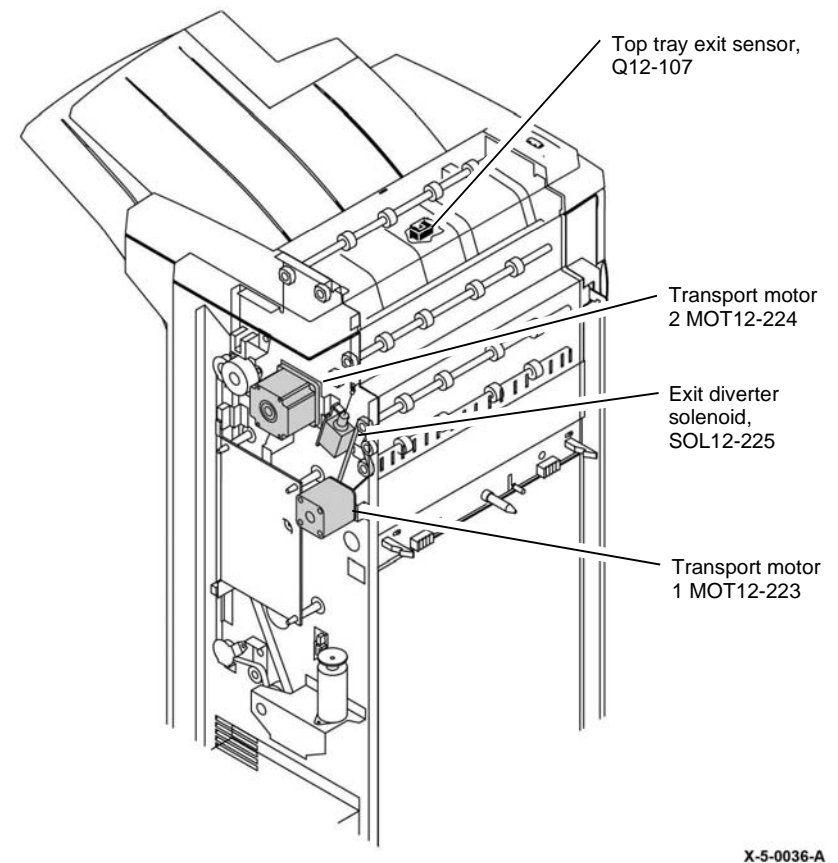


Figure 5 Transport components

Bin 0 (Top Tray)

Bin 0 receives all transparency jobs, label jobs and all jobs not selected by the operator to be made into compiled sets or compiled and stapled sets.

Bin 0 Paper Path and Transport Motor 2

Refer to [Figure 5](#). Transport motor 2, MOT12-224, is a stepper motor located on the rear frame. The output shaft of the motor drives a toothed timing belt, that transfers mechanical drive to the driven components in the upper paper path. Sheets leaving the vertical transport via the opened upper diverter gate are transported to bin 0 (top tray) by the upper paper path.

Bin 0 Operation

Refer to [Figure 5](#). The top tray exit sensor, Q12-107 is used to detect jams in the top tray. When the trail edge clears the sensor, it signals the control logic that the sheet has exited the upper paper path.

Sheet edge detection is disabled until just before either edge is expected (approximately 30mm). This is done to avoid reading false signals caused by sensor bounce.

As the paper is ejected, it drops vertically to the surface of the top tray. Subsequent sheets settle on top of the previous sheets, creating a stack.

Hole Punch Unit

Refer to [Figure 6](#). As sheets are received in the 2K LCSS entrance paper path, the exit diverter gate remains closed and the sheets are directed to the hole punch unit. If hole punching is not requested, sheets pass straight through the hole punch unit to the compiler.

If hole punching has been requested, punch sensor 1, Q12-078 senses the trail edge of the sheet, the sheet is halted in the correct position by the 2K LCSS PWB controlling transport motor 2, MOT12-223. The hole punch motor, MOT12-243 is then energized to punch the sheet, the hole punch motor continues to be driven until the punch head home sensor, Q12-194 sends a signal to the 2K LCSS PWB, so that the hole punch motor is stopped at the home position.

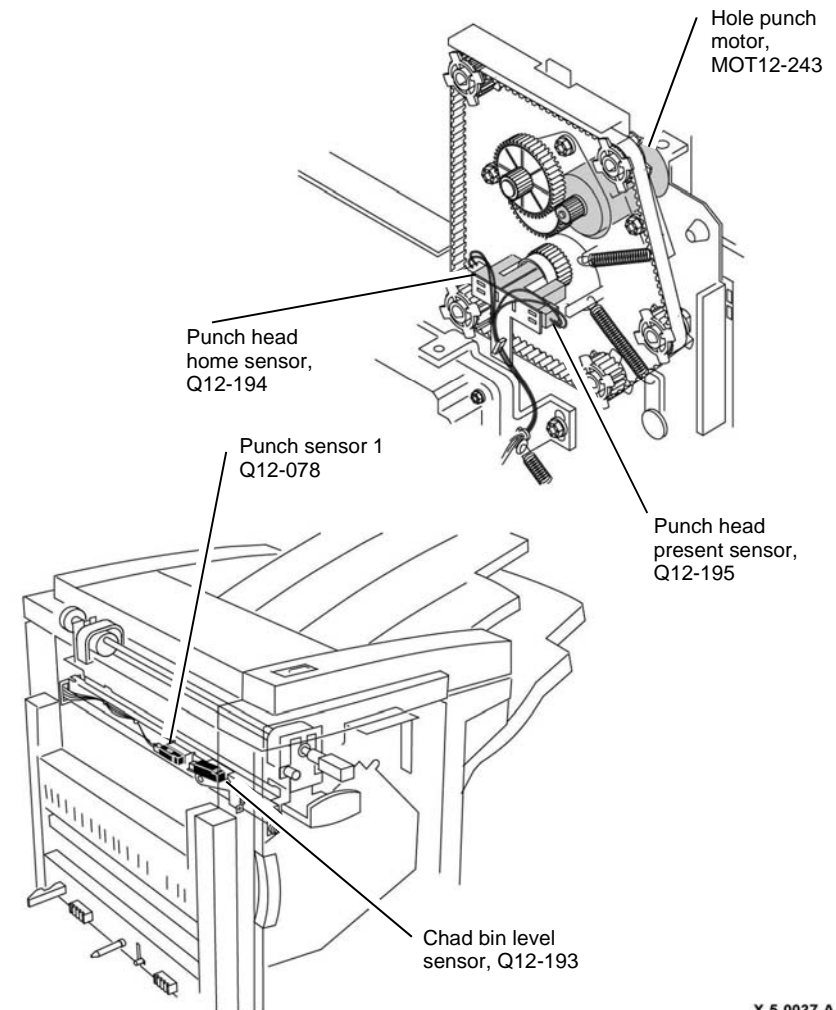


Figure 6 Hole punch unit

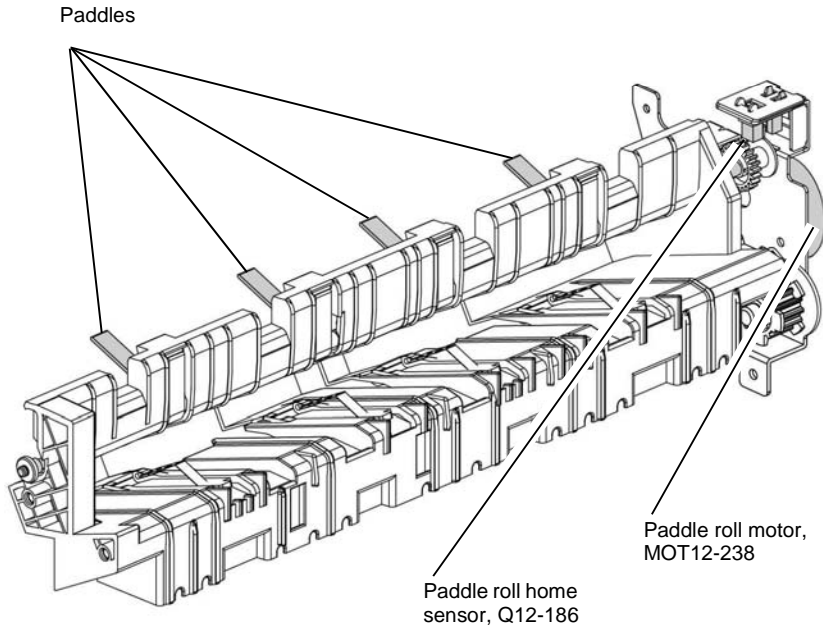
X-5-0037-A

Compiling

Refer to [Figure 7](#). As each sheet arrives in the compiler, the paddle shaft assembly is rotated by the paddle roll motor, MOT12-238, one revolution from the home position to drive the sheet fully to the left of the compiler. The home position is sensed when the flag on the paddle shaft enters the paddle home sensor, Q12-186.

The home position is arranged to park the paddle fingers inside of the output cover profile, so that set ejection is not impeded by the rubber paddle fingers.

As each sheet is registered against the backstops, it is tamped to ensure a neat set. When the set is complete it is stapled, if required, before being ejected into bin 1 (stacker tray).

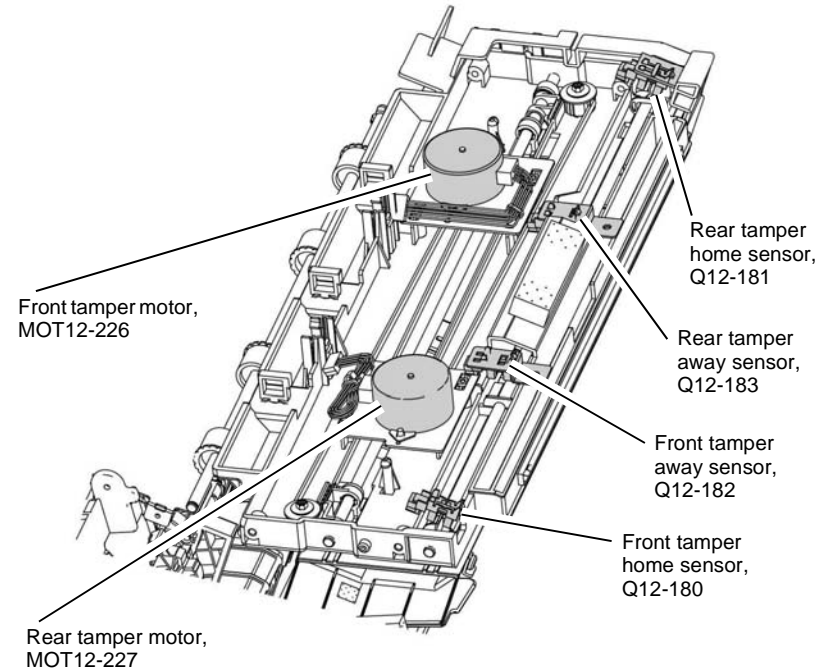


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Figure 7 Paddle shaft assembly

Tamping

Refer to [Figure 8](#). The purpose of the tamping function is to align the sheets in the compiler to eliminate skew and offset. Tamping registers all sheets in the correct position, as a set, for correct stapling.



X-5-0039-A

Figure 8 Tamping components

When the first sheet of a set is about to enter the compiler, the tamper arms are moved from the home or away position to the ready position. The ready position is paper size dependent and the information is obtained from the IOT. When each sheet of the set is fully within the compiling area, the tamper arms are moved to the tamp position and then back to the ready position to wait for the next sheet. The tamper arms are moved back to the ready position at a slower speed so that an over-tamp buckle is avoided which could move sheets out of the registered position.

The front tamper is moved along a track by a toothed belt driven by the front tamper motor, MOT12-226. The home position of the front tamper is sensed by the front tamper home sensor, Q12-180. This home position is used for wide paper. The away position of the front tamper is sensed by the front tamper away sensor, Q12-182. This away position is used for narrower paper to reduce front tamper movement when tamping narrower paper. The task of the front tamper is to align the front of the set, half of the paper width from the centre of the finisher.

The rear tamper is moved along a track by a toothed belt driven by the rear tamper motor, MOT12-227. The home position of the rear tamper is sensed by the rear tamper home sensor, Q12-181. This home position is used for wide paper. The away position of the rear tamper is sensed by the rear tamper away sensor, Q12-183. This away position is used for narrower paper to reduce rear tamper movement when tamping narrower paper. The task of the rear tamper is to align the rear of the set half of the paper width from the centre of the finisher.

The tampers are also used to perform the required offset to the finished set by moving in unison by 25mm (1 inch) to the rear as alternate finished sets are ejected to bin 1.

Stapling

Refer to [Figure 9](#) and [Figure 10](#). The purpose of the stapler is to staple the compiled sets in the compiler tray. Up to 50 sheets of (80gsm/20lb) paper can be stapled. Single or double stapling is available on the left edge of the set, corner stapling is also available.

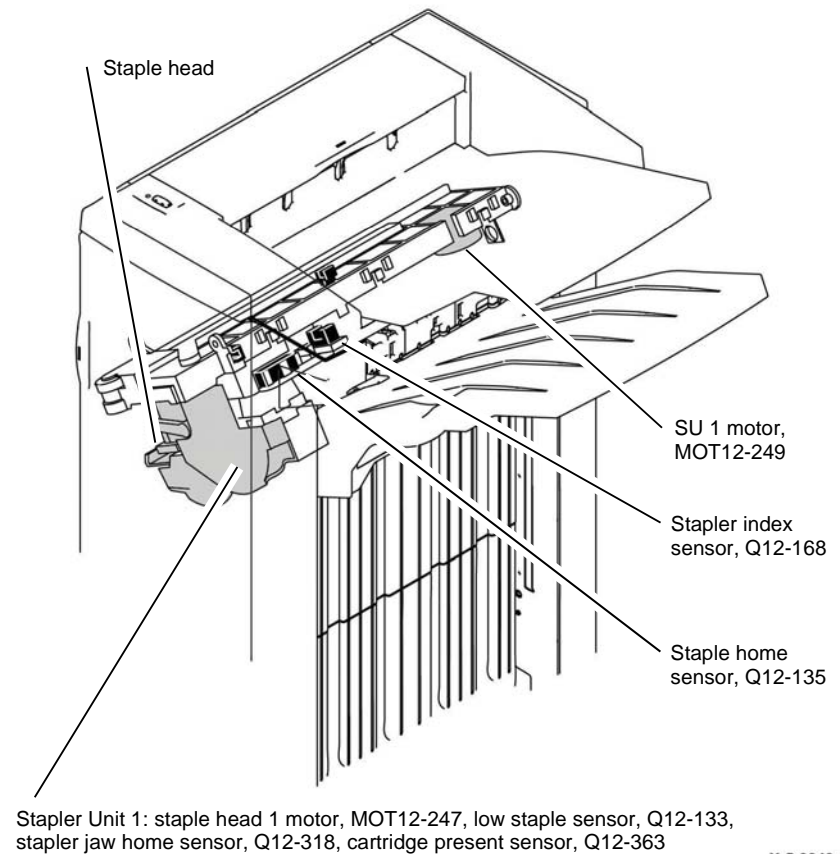


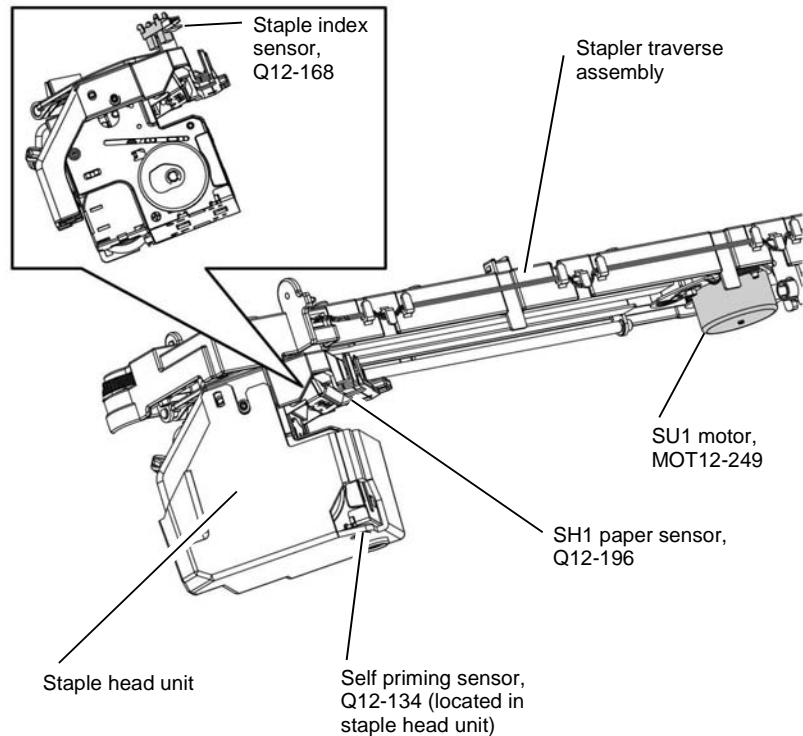
Figure 9 Stapler unit 1 components

The staple head unit 1 assembly is mounted on the stapler traverse assembly, which moves the stapler to the various stapling positions within the compiler. Drive is provided by the SU 1 motor, MOT12-249 which drives the stapler mounting along a track via a toothed rubber belt, to position the stapler. The stapler home sensor, Q12-135 senses when the stapler is at the home position.

Once the signal has been received to staple, the staple head 1 motor, MOT12-247 (located within the staple head) is energized. The motor remains energized until the cam has made a complete revolution and the stapler jaw home sensor, Q12-318 has been actuated. The one revolution of the cam enables a staple to be driven through the set, clinched, and then return the staple head to the home (open) position for the next staple.

SU 1 Motor, MOT12-249

The stapler traverse assembly contains a linear slide and 'J' shaped guide with a sliding stapler mounting which is driven by the SU 1 motor, MOT12-249. The stapler traverse assembly positions the stapler at the various positions necessary for the stapling operation



X-5-0041-A

Figure 10 Staple head and traverse assembly

Stapler Index Sensor, Q12-168

The stapler index sensor, Q12-168 is located at the right of the stapler mounting. All stapler traverse positions are achieved by this sensor locating fixed flags at each stapling position on the stapler traverse assembly.

Self Priming Sensor, Q12-134

Priming of the staple head is the pre-forming of the first two staples in the staple stick. If the staple head home sensor is low at machine initialization, the SH1 priming sensor (located within the staple head) is checked for staple head primed (H) (high = primed). If the sensor is high then the initialization is complete. If the staple head primed signal is low, the control logic will cycle the staple head 1 motor, MOT12-247 until the self priming sensor, Q12-134 signal goes (H).

Stapler Jaw Home Sensor, Q12-318

After the staple has been formed in the compiled set, the staple head cam continues to rotate until it has made one complete revolution and the stapler jaw home sensor, Q12-318 (located within the staple head) has been actuated, sending a (H) signal to the control logic to stop the staple head 1 motor at the home position.

Low Staple Sensor, Q12-133

The low staple sensor, Q12-133 (located within the staple head) is used to detect the presence of staples in the staple head unit. The sensor signals the control logic when the cartridge is low on staples.

Cartridge Present Sensor, Q12-363

The cartridge present sensor, Q12-363 (located within the staple head) is used to detect the presence of a staple cartridge in the staple head unit. The sensor signals the control logic when the cartridge is missing.

Set Ejection

The ejector ejects sets in the compiler into bin 1 when the following conditions are met:

- A maximum of 50 sheets of an unstapled job is in the compiler
- An unstapled collated job has completed
- A stapled job has been completed.

Refer to [Figure 11](#). When any of these conditions are met, the ejector motor, MOT12-234 is run to eject the set. The motor rotates clockwise, driving the ejector belt. The ejector belt moves the ejector forward to eject the set into bin 1 (stacker tray). When the ejector actuates the ejector out sensor, Q12-185, the ejector motor rotates counter clockwise. When the ejector actuates the ejector home sensor, Q12-184, the motor is stopped.

Ejector Out Sensor, Q12-185

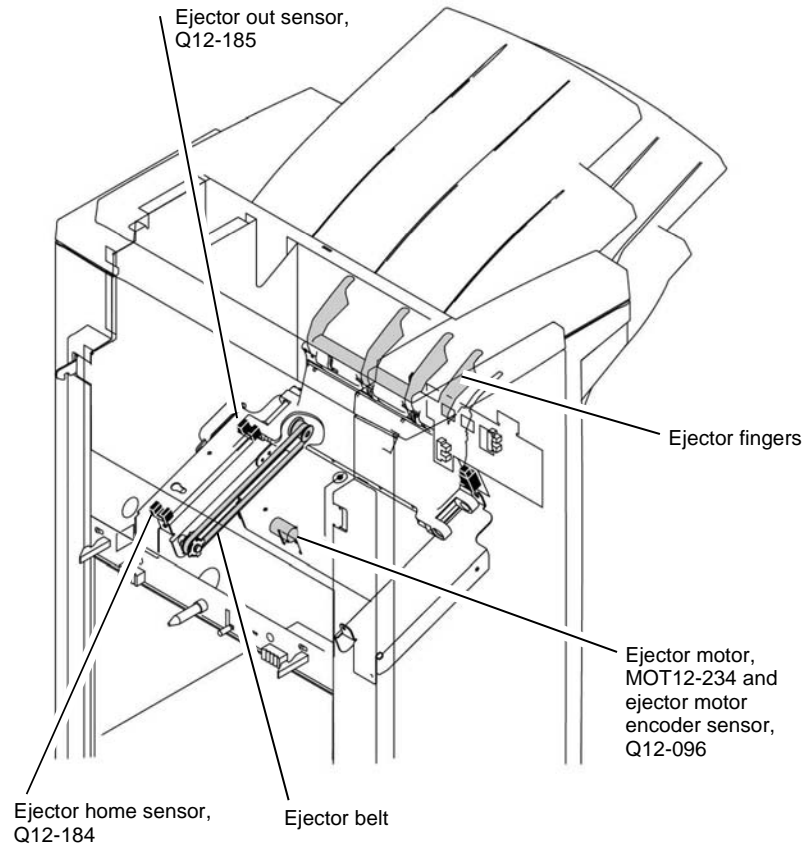
The ejector out sensor, Q12-185 detects the ejector when it is in the fully forward (eject) position.

Ejector Home Sensor, Q12-184

The ejector home sensor, Q12-184 detects the ejector when it is in the home position.

Ejector Motor, MOT12-234

The ejector motor, MOT12-234 drives a pulley which in turn drives the ejector belt to move the ejector. The rotates counter clockwise to eject sets and clockwise to return to the home position.



X-5-0042-A

Figure 11 Eject assembly components

Bin 1 Stacking and Positioning

Refer to [Figure 12](#) and [Figure 13](#). Bin 1 of the 2K LCSS provides a platform to stack up to 2000 sheets. The bin 1 tray surface or the top of the stack in bin 1, assists in the compiling mode by providing an extended surface to support longer documents, e.g. SEF A4 (8.5 x 11 inches) and A3 (11 x 17 inches).

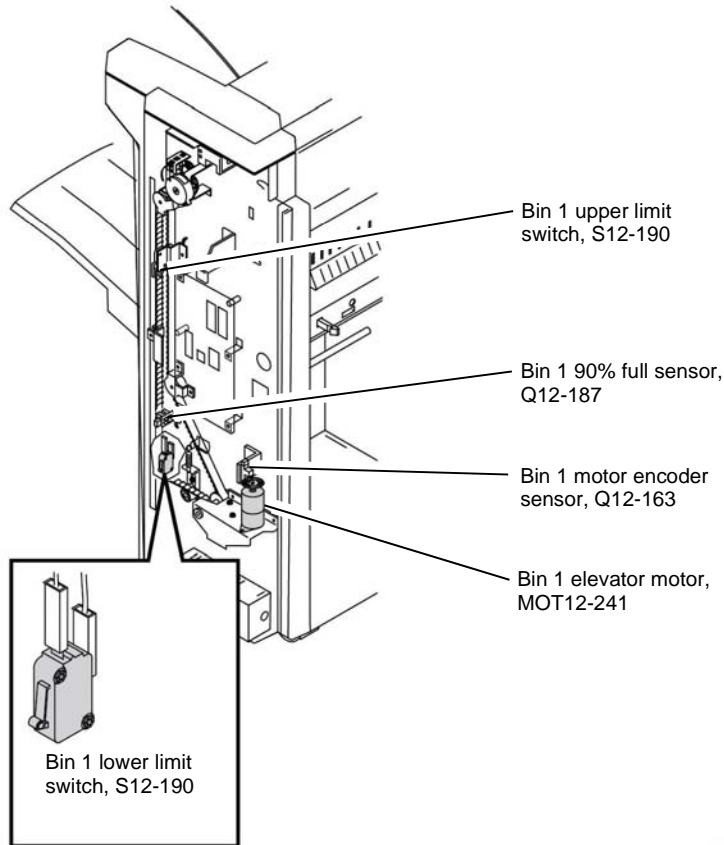


Figure 12 Bin 1 components

As the paper stack increases in the tray, the bin 1 elevator motor, MOT12-241 lowers the tray to the appropriate eject height to receive the set.

The bin 1 upper level sensor, Q12-188 senses the top of the stack. This signal is used by the 2K LCSS PWB to determine when to lower bin 1 in steps to maintain the correct stack height, with regard to the output from the compiler. The bin 1 90% full sensor, Q12-187 is used to signal when bin 1 is 90% full. The control logic will allow 10% more set feeds prior to declaring a bin 1 full status to the 2K LCSS PWB.

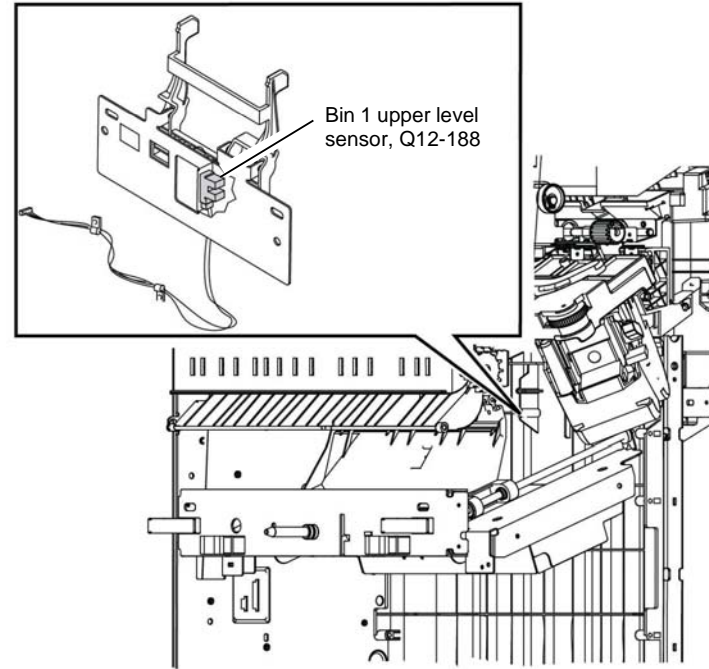


Figure 13 Bin 1 upper level sensor

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X-5-0044-A

LVF BM

LVF BM General Description

The LVF provides three selectable destination bins. Refer to [Table 1](#) for the capacity of the top tray (bin 0), the stacker tray (bin 1), and the booklet maker (bin 2). Refer to [Table 2](#) for media constraints.

Table 1 LVF BM bin capacity

	Sheet Capacity (80gsm)	Paper sizes	Paper weight
Top Tray Bin 0	250	A6 (4.25 x 5.5 inches) SEF to A3 (11 x 17 inches) SEF	60 - 216gsm (16-57lb)
Stacker tray Bin 1	2000	A5 (8.5 x 5.5 inches) SEF or LEF to A3 (11 x 17 inches) SEF	60 - 216gsm (16-57lb)
Booklet maker Bin 2	30 booklets of 1-5 sheets	A3 (11 x 17 inches), 8.5 x 14 inches, A4 (8.4 x 11 inches), and 8.5 x 13 inches SEF	60 - 216gsm (16-57lb)
	20 booklets of 6-10 sheets		
	10 booklets of 11-15 sheets		

Table 2 Media constraints

Media type	Specification
Tabs	Top tray only, tabs must be on lead edge
Envelopes	Top Tray only

When bin 0 is the destination, the output will be stacked un-tamped.

When bin 1 is the destination, the output will be compiled and tamped. The user may choose the following finishing options when output is directed to the stacker tray:

- Offsetting of sets (25mm) to create a visible set boundary - stacking feature.
- Punching (optional 2, 3 or 4 hole).
- Automatic stapling of up to 50 sheet (80gsm) sets, with the user able to select one of the following three positions dependant upon paper size and feed direction:
 - Single front (front corner)
 - Single rear
 - Dual

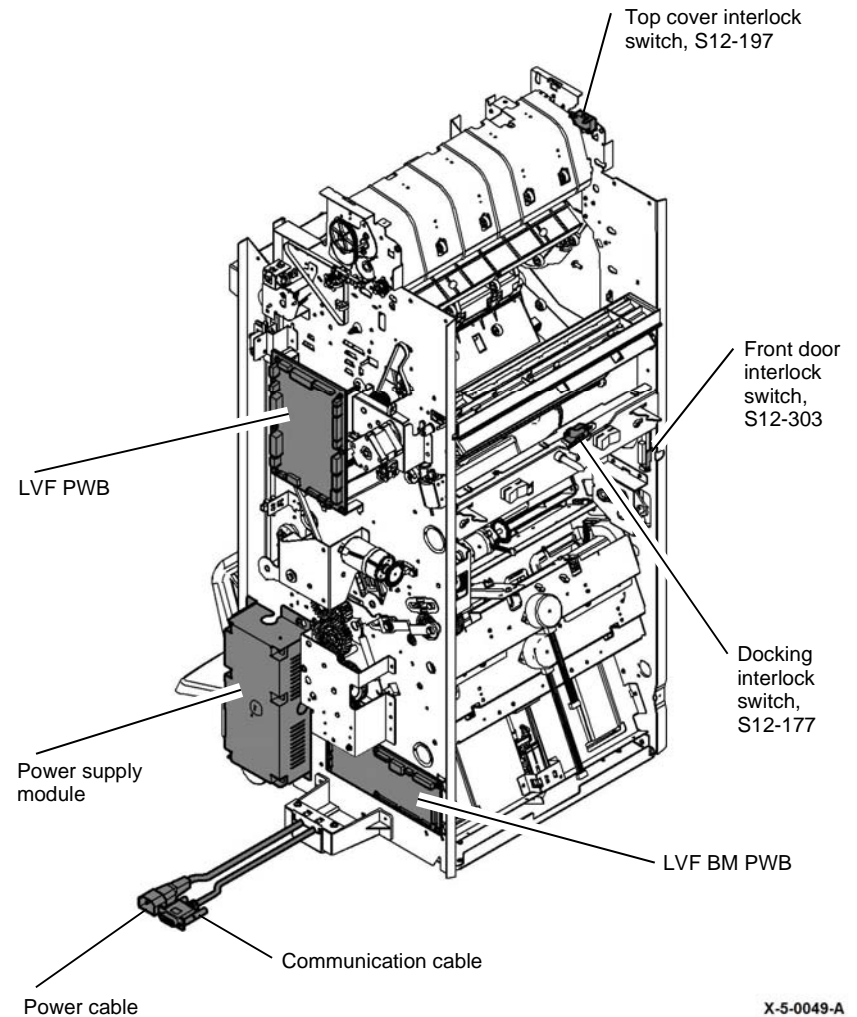
When bin 2 is the destination, the user may select between fold mode or staple and fold mode.

Power Supply

AC power is supplied from the IOT via a power cable to the power supply module in the rear of the LVF BM. The LVF BM is powered on/off by the IOT. The power supply module is supplied with an input of either 220 to 240V AC at 50Hz or 110 to 127V AC at 60Hz and has outputs of +24V, +5V and 0V.

Control

Refer to [Figure 1](#). The functions of the LVF BM are controlled by the IOT via a communications cable connected between the IOT PWB and the LVF PWB. Communication signals travel in both directions to and from the processors in both devices.



X-5-0049-A

Figure 1 Power, control and interlock components

Safety Interlocks

Refer to [Figure 1](#). Safety interlocks are provided to prevent the energizing of motors and solenoids while components may be exposed during jam clearance or maintenance operations.

The top cover interlock switch, S12-197 cuts the +24V supply from the power supply module if the exit cover is open.

The front door interlock switch, S12-303 cuts the +24V supply from the power supply module if the LVF BM front door is open.

Paper Paths

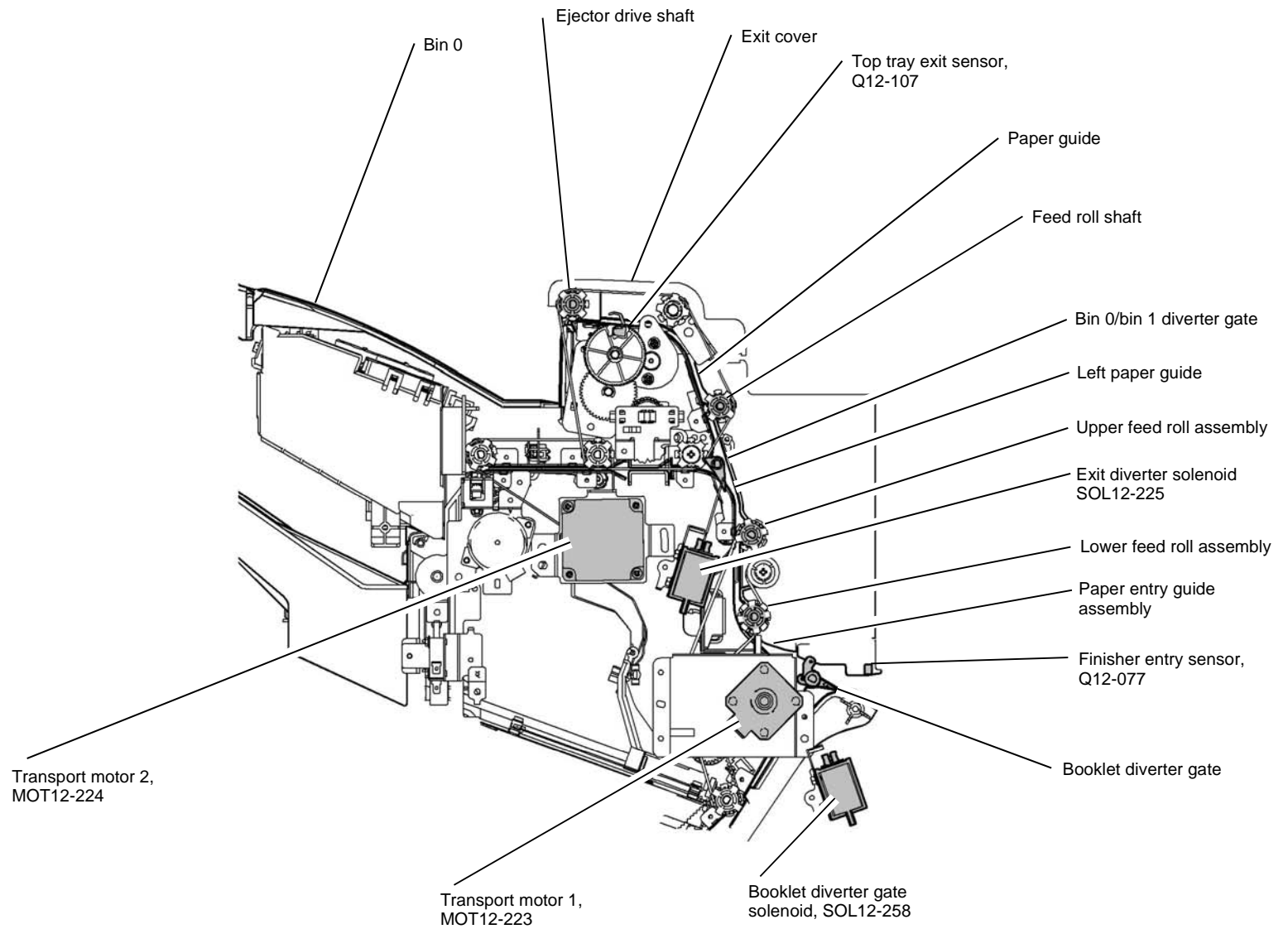
Paper entering the LVF BM has three possible output destinations:

- Bin 0 on the top of the LVF BM. This output has no finishing capabilities and a capacity of 250 sheets of 80gsm (20 lb) paper.
- Bin 1 on the right side of the LVF BM. This output has the capability of hole punching, set collating, set stapling, offsetting and stacking, with a capacity of 2000 sheets of 80gsm (20 lb) paper.
- Bin 2 on the bottom right of the LVF BM. This output has a capability of producing stapled and un-stapled booklets and a capacity of 20 booklets of 6 to 10 sheets of 80gsm (20 lb) paper.

Paper Path to Bin 0

Refer to [Figure 2](#). Paper feed sequence to bin 0:

1. Paper enters the LVF BM, then actuates the finisher entry sensor, Q12-077.
2. The de-energized booklet diverter gate solenoid, SOL12-258 holds the booklet diverter gate in position to send the paper upwards through the paper entry guide assembly and left paper guide to the bin0/bin 1 diverter gate. The paper is driven by the lower feed roll assembly and the upper feed roll assembly, both are driven by transport motor 1, MOT12-223.
3. The energized bin 0/bin 1 diverter solenoid holds the bin 0/bin 1 diverter gate in position to send the paper upwards between the paper guide and the exit cover, driven by the feed roll shaft.
4. The paper actuates the top tray exit sensor, Q12-107 and gets fed into bin 0 by the ejector drive shaft. The feed roll shaft and the ejector drive shaft are driven by transport motor 2, MOT12-224.



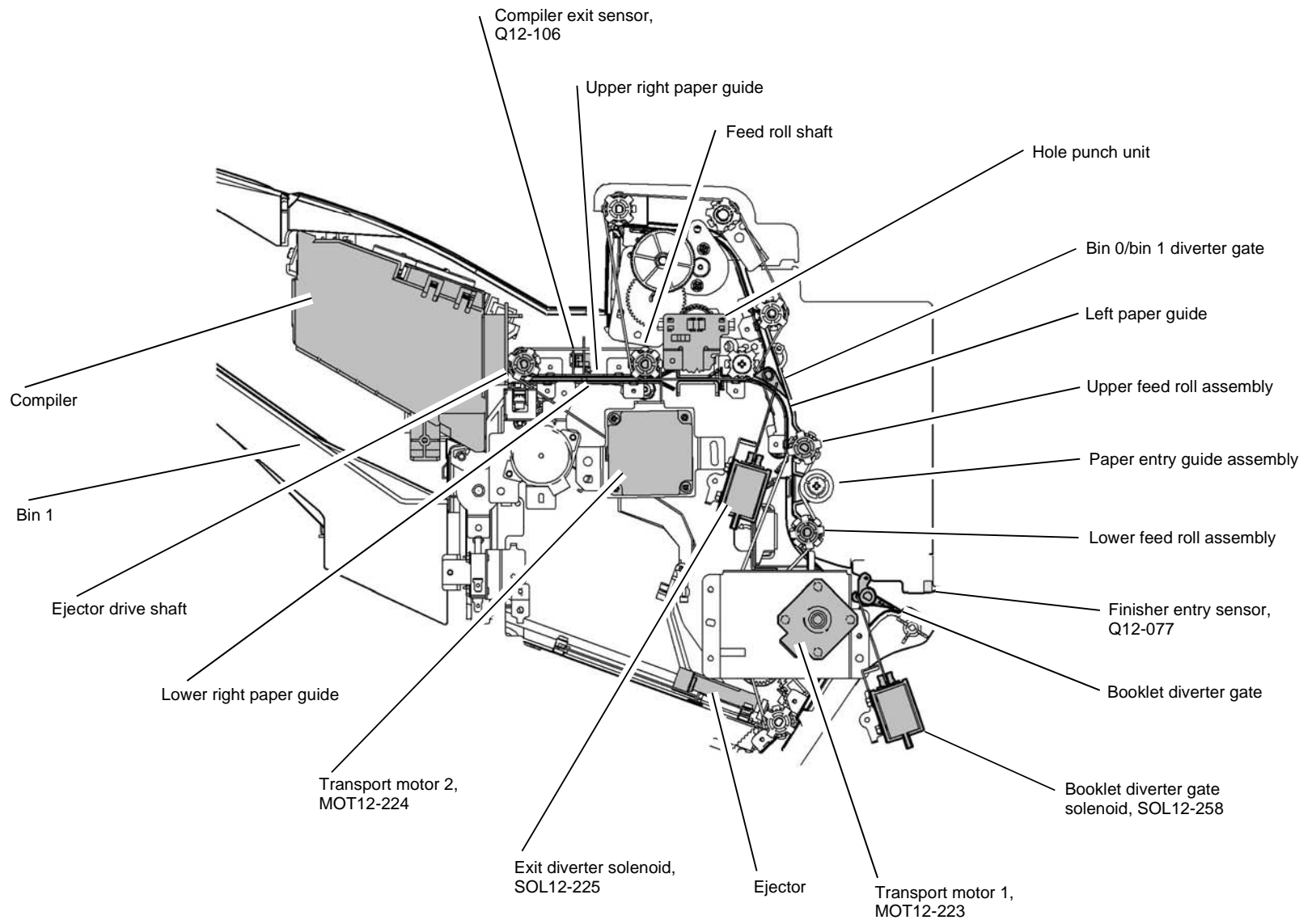
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Figure 2 Paper path to bin 0 components

Paper Path to Bin 1

Refer to [Figure 3](#). Paper feed sequence to bin 1:

1. Paper enters the LVF BM, then actuates the finisher entry sensor, Q12-077.
2. The de-energized booklet diverter gate solenoid, SOL12-258 holds the booklet diverter gate in position to send the paper upwards through the paper entry guide and left paper guide to the bin0/bin 1 diverter gate. The paper is driven by the lower feed roll assembly and the upper feed roll assembly, both are driven by transport motor 1, MOT12-223.
3. The de-energized bin 0/bin 1 diverter solenoid holds the bin 0/bin 1 diverter gate in position to send the paper to the right and through the left paper guide and hole punch.
4. The paper is then driven by the feed roll shaft through the gap between the upper and lower right paper guides.
5. The paper actuates the 2nd to top tray exit sensor, Q12-107 and gets fed into the compiler by the ejector drive shaft. The feed roll shaft and the ejector drive shaft are driven by transport motor 2, MOT12-224.
6. The compiler receives the paper. If set compiling is required the pages are accumulated and tamped into a set. If set stapling is required, the stapler is energized to staple the set in the specified places. The completed set is then ejected into bin 1 by the ejector.



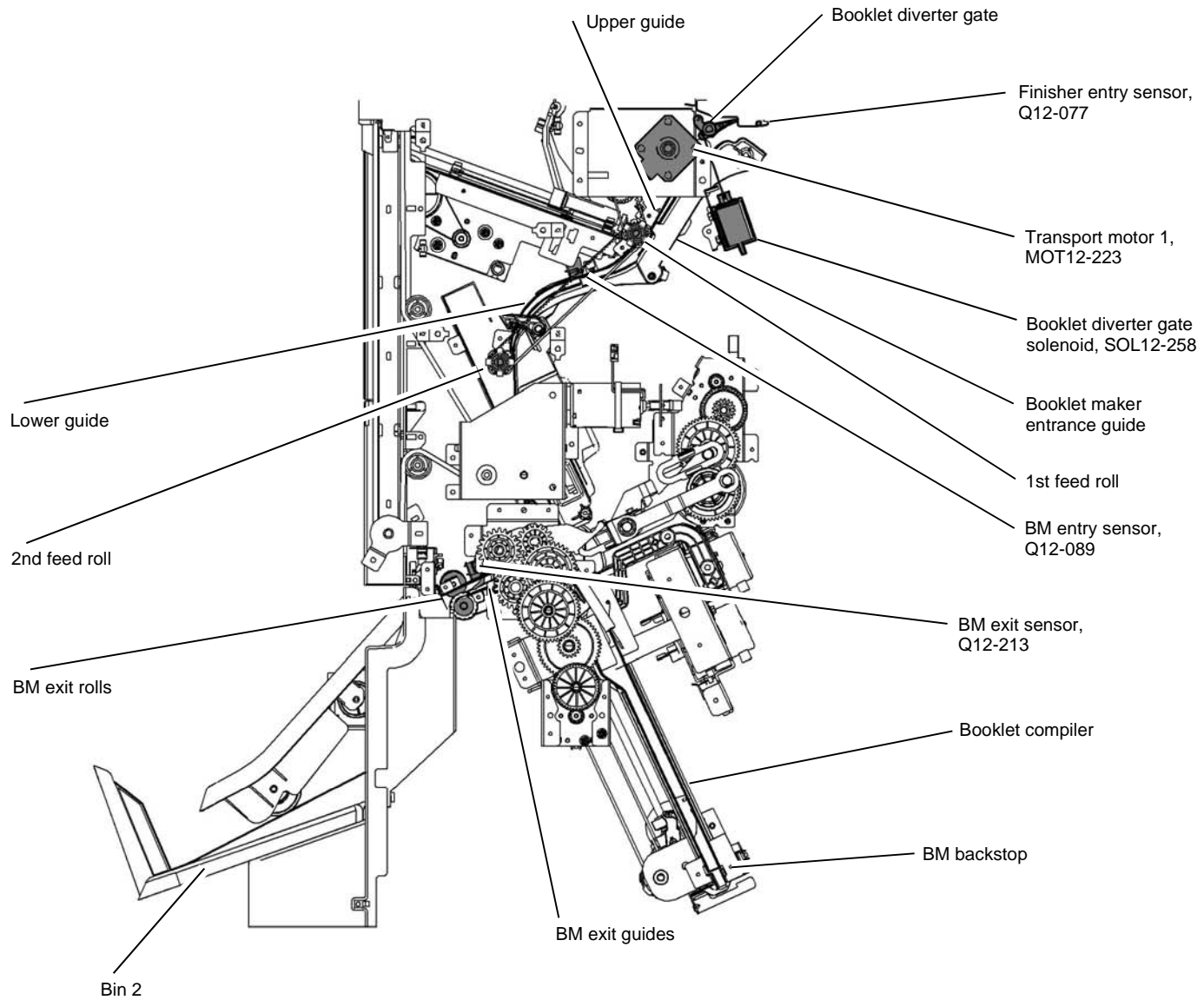
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Figure 3 Paper path to bin 1 components

Paper Path to Bin 2

Refer to [Figure 4](#). Paper feed sequence to bin 2:

1. Paper enters the LVF BM, then actuates the finisher entry sensor, Q12-077.
2. The energized booklet diverter gate solenoid, SOL12-258 holds the booklet diverter gate in position to send the paper downwards through the upper and lower guides then actuates the BM entry sensor, Q12-089.
3. The crease rolls are driven in reverse as the lead edge of the first sheet only passes the crease rolls to avoid the lead edge stubbing into the static rolls.
4. The paper continues into the booklet compiler area where the flapper motor rotates the flappers to register the pages against the previously positioned back stop.
5. If stapling is required, when the full set of booklet pages have been compiled, the back-stop clamps and lifts the set to the stapling position, two staples are inserted by the booklet stapler assembly.
6. The set is then lifted further to the crease position where the crease blade presses a fold into the set and pushes the fold into the nip of the crease rollers.
7. The crease rollers turn to pull the booklet through the nip, the nip rollers are driven backwards and forwards a few times to improve the crease, then they feed the completed booklet to the exit roll assembly where the booklet is ejected past the BM exit sensor, Q12-213 into bin 2.



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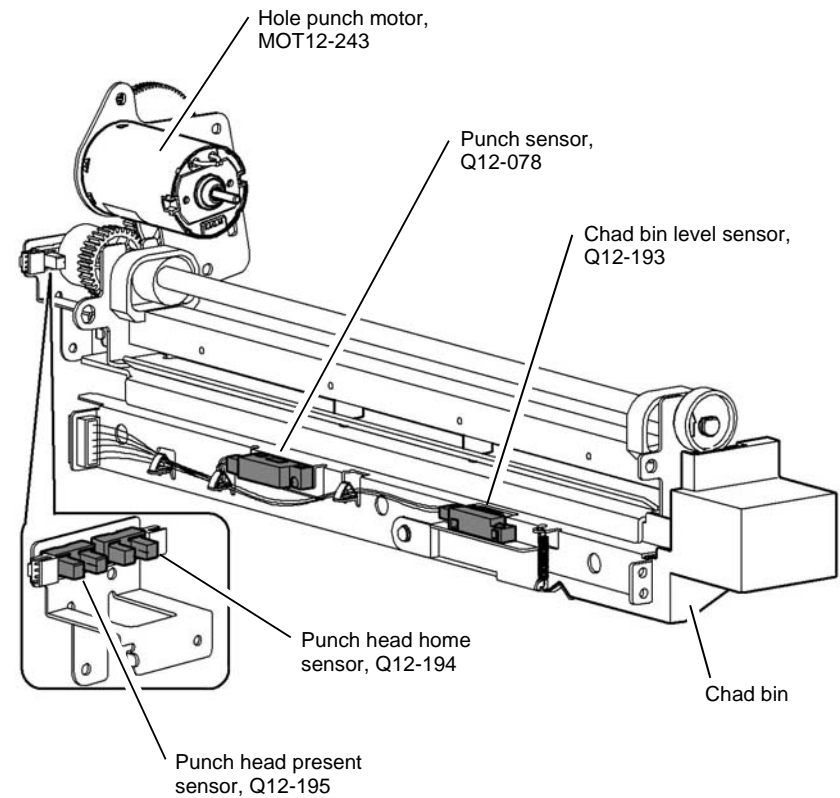
Figure 4 Paper path to bin 2 components

Hole Punch Unit

Refer to [Figure 5](#). A hole punch unit is available as a kit. Once the kit is installed, the existence of a hole punch option is reported to the system controller by the punch head present sensor, Q12-195. Hole punching is made available to the user via the user interface. The specific type of punch (2, 3 or 4 hole) is not reported.

Pages that are required to be punched are sent along the paper path towards bin 1. The punch sensor, Q12-078 signals the LVF PWB controller when the trail edge of the sheet is seen. The LVF PWB then drives the hole punch motor for one cycle to punch the paper one sheet at a time. The punch head home sensor, Q12-194 signals the LVF PWB controller when the rotation of the punch cam shaft has reached the home position, the LVF PWB controller then turns off the hole punch motor.

The chad from the hole punching operation falls down into the chad bin below the hole punch. A cam on the front of the hole punch unit rotates to tamp the chad in the chad bin to settle the contents and increase the capacity. The chad bin level sensor, Q12-193 signals the LVF PWB controller when the chad bin needs to be emptied, this results in a message being displayed on the user interface, requesting that the chad bin be emptied.



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Figure 5 Hole punch unit components

Compiler

Refer to Figure 6. The compiler collects pages of output and compiles them into sets that can be stapled in various ways, then offsets the sets into bin 1. The left section of the compiler is formed by the shape of the output cover, the right side of the compiler is formed by the two tamper arms. The support fingers of the ejector assembly support the pages from below.

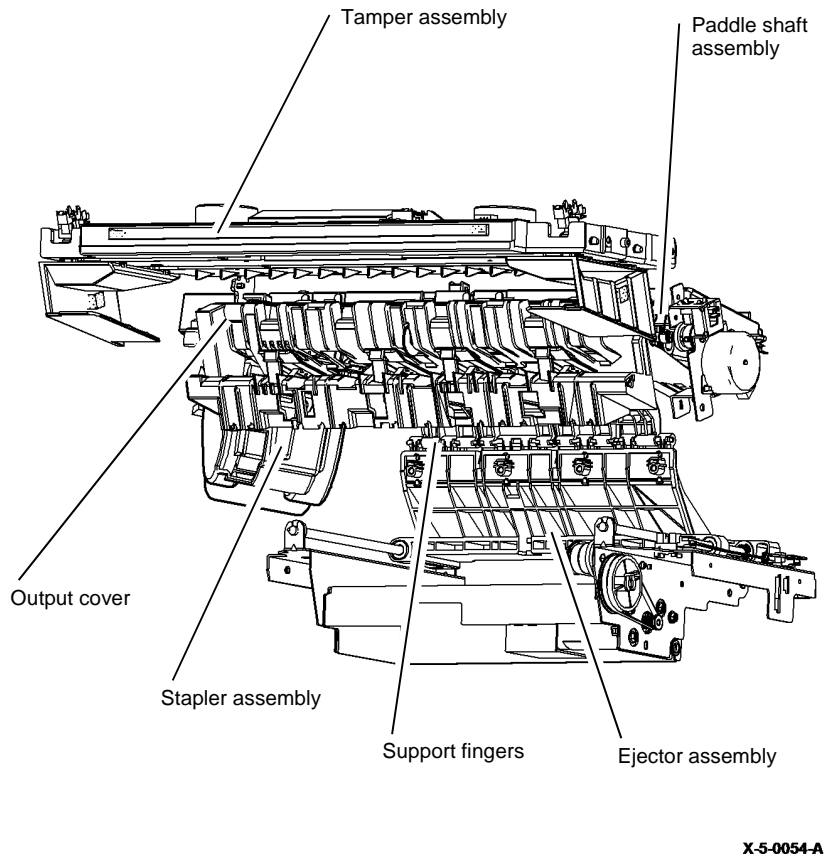


Figure 6 Compiler components

Tamper Assembly

Refer to Figure 7. The purpose of the tamping function is to align the sheets in the compiler carriage to eliminate skew and offset. Tamping registers all sheets in the correct position, as a set, for correct stapling.

When the first sheet of a set is about to enter the compiler, the tamper arms are moved from the home position to the ready position. The ready position is paper size dependent and the information is obtained from the IOT. When each sheet of the set is fully within the compiling area, the tamper arms are moved to the tamp position and then back to the ready position to wait for the next sheet. The tamper arms are moved back to the ready position at a slower speed so that an overtamp buckle is avoided which could move sheets out of the registered position.

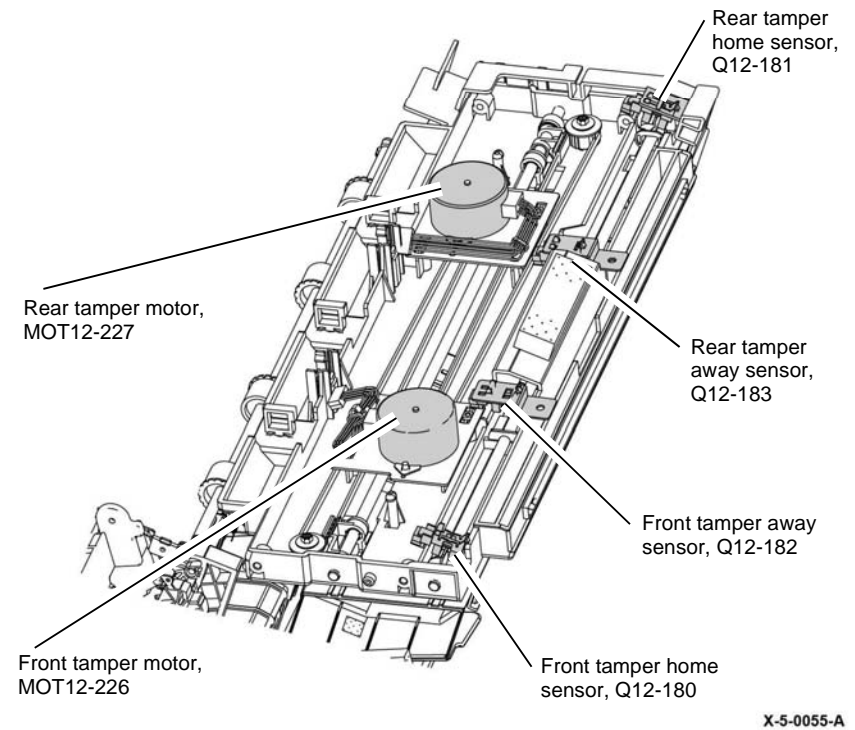


Figure 7 Tamper assembly components

The front tamper is moved along a track by a toothed belt driven by the front tamper motor, MOT12-226. The home position of the front tamper is sensed by the front tamper home sensor, Q12-180. The task of the front tamper is to align the front of the set with the inner front wall of the output cover, this alignment position is the same for all paper sizes.

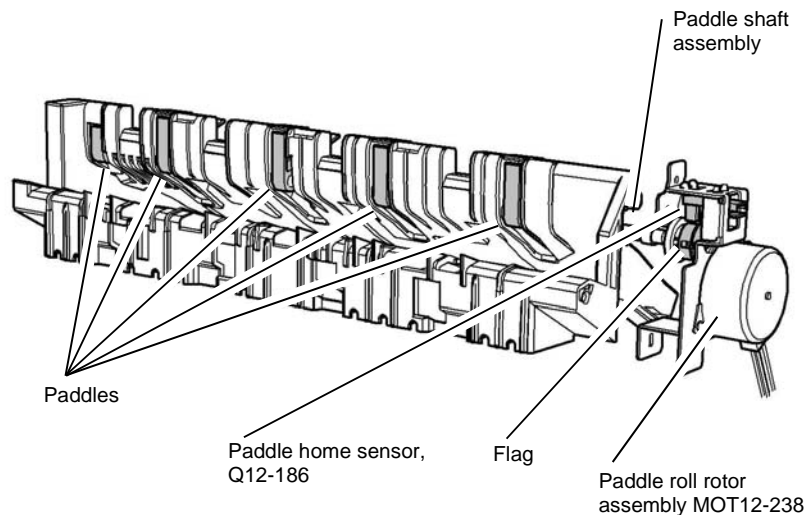
The rear tamper is moved along a track by a toothed belt driven by the rear tamper motor, MOT12-227. The home position of the rear tamper is sensed by the rear tamper home sensor, Q12-181. This home position is used for wide paper. The away position of the rear tamper is sensed by the rear tamper away sensor, Q12-183. This away position is used for narrower paper to reduce rear tamper movement when tamping narrower paper. The task of the rear tamper is to align the rear of the set. This alignment position varies for different paper sizes and is derived from the size of the paper registered in the paper tray being used.

The tampers are also used to perform the required offset to the finished set by moving in unison by 25mm (1 inch) to the rear as the finished set is ejected to bin 1.

Paddle Shaft Assembly

Refer to [Figure 8](#). The paddle shaft assembly is positioned in the top section of the output cover and is used to drive the sheets of paper fully left against the edge of the output cover.

As each sheet arrives in the compiler, the paddle shaft assembly is rotated one revolution from the home position to drive the sheet fully to the left of the compiler. The home position is sensed when the flag on the paddle shaft enters the paddle home sensor, Q12-186. The home position is arranged to park the paddle fingers inside of the output cover profile, so that paper movement is not impeded by the rubber paddle fingers.



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Figure 8 Paddle wheel assembly components

Stapler Assembly

Refer to [Figure 9](#). The stapler assembly is used to staple the compiled sets in the compiler. Up to 50 sheets of 80gsm (20lb) paper can be stapled. Single or double stapling is available in portrait or landscape mode, corner stapling is also available.

The stapler is mounted on a traverse assembly, which moves the stapler to the various stapling positions within the compiler. Drive is provided by the stapler unit motor, MOT12-249 which drives the stapler traverse assembly, to position the stapler. The stapler home sensor, Q12-135 senses when the staple head is at the home (corner) position.

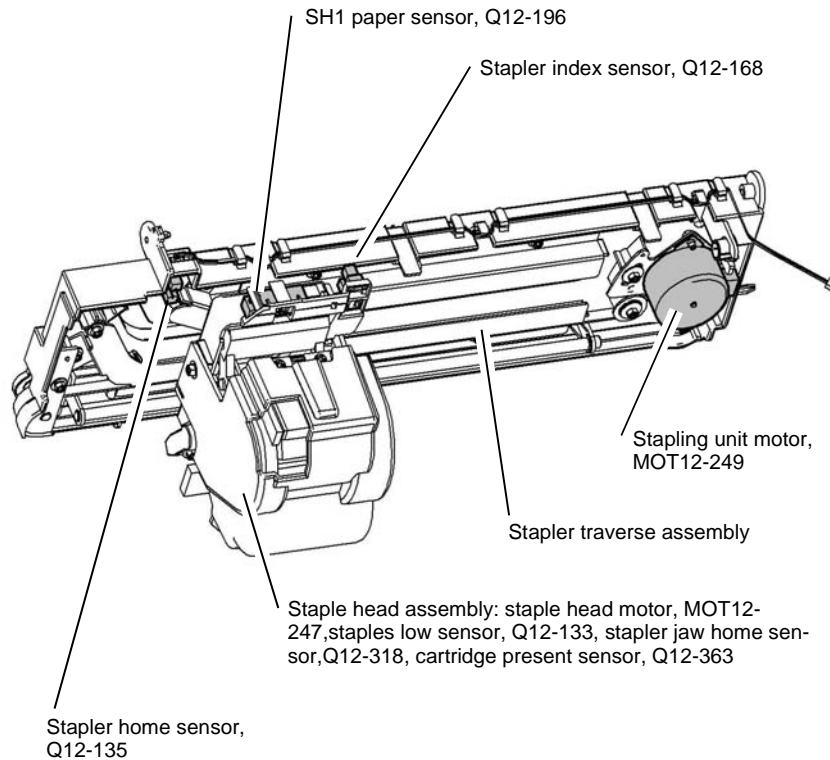
Once the signal has been received to staple, the tamper arms are moved to the tamp position to hold the set until the stapling operation is completed. The stapler head 1 motor, MOT12-247 (located within the staple head) is then energized. The motor remains energized until the cam has made a complete revolution and the stapler jaw home sensor, Q12-318 (located within the staple head) has been actuated. The one revolution of the cam enables a staple to be driven through the set, clinched, and then return the staple head to the home (open) position for the next staple.

During machine initialization, the stapler unit motor, MOT12-249, is driven towards the rear for a short distance. After this movement, the motor is stopped and driven towards the front until the home position is detected by the stapler home sensor, Q12-135. All traverse values for stapling positions are relative to the home position.

Priming of the staple head is the pre-forming of the first two staples in the staple stick. If the stapler jaw home sensor, Q12-318 is low at machine initialization, the self priming sensor, Q12-134 (located within the staple head) is checked for staple head primed (H) (high = primed). If the sensor is high then the initialization is complete. If the staple head primed signal is low, the control logic will cycle the stapler head 1 motor, MOT12-247 until the self priming sensor signal goes high.

The SH1 low staples sensor, Q12-133 (located within the staple head) is used to detect the presence of staples in the stapler. The sensor signals the control logic when the cartridge is low on staples.

The cartridge present sensor, Q12-363 (located within the staple head) is used to detect the presence of a staple cartridge in the stapler. The sensor signals the control logic when the cartridge is missing from the staple head.



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Figure 9 Stapler assembly components

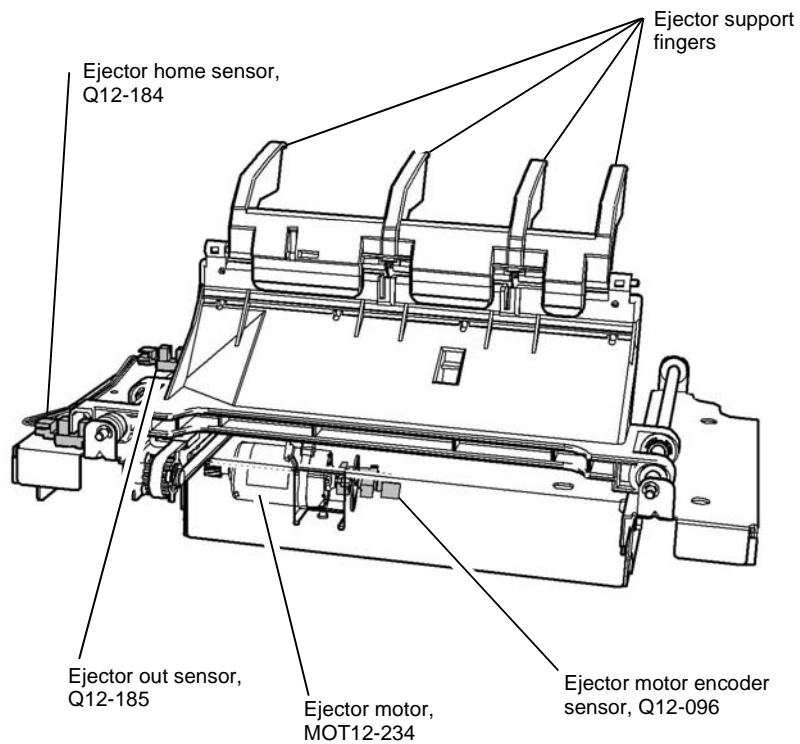
Ejector assembly

Refer to [Figure 10](#). The ejector is used to move the finished set from the compiler to bin 1.

When the first sheet of a set is about to enter the compiler, the ejector is moved from the home position to the out position. This is done so that the ejector support fingers can support the set from below as the set is built in the compiler. This also gives the staple head enough room to traverse to all staple positions if required.

The ejector slides between the home and out positions supported on two parallel shafts and is driven by the ejector motor, MOT12-234. The ejector home sensor, Q12-184 monitors the home position of the ejector and the ejector out sensor, Q12-185, monitors the out position of the ejector.

The ejector support fingers are spring mounted onto the ejector. When the set is complete and the stapler head is in the home (corner) position, the ejector is driven to the home position, during travel to the home position the support fingers are deflected downwards under the set and spring back upwards at the home position where they are clear of the edge of the set. The ejector is then moved to the out position thereby ejecting the set to bin 1. If the set just produced was the last or only set of the job, the ejector now returns to the home position. If there are further sets to be produced in the job, the ejector remains in the out position while the next set is built in the compiler.



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Figure 10 Ejector assembly components

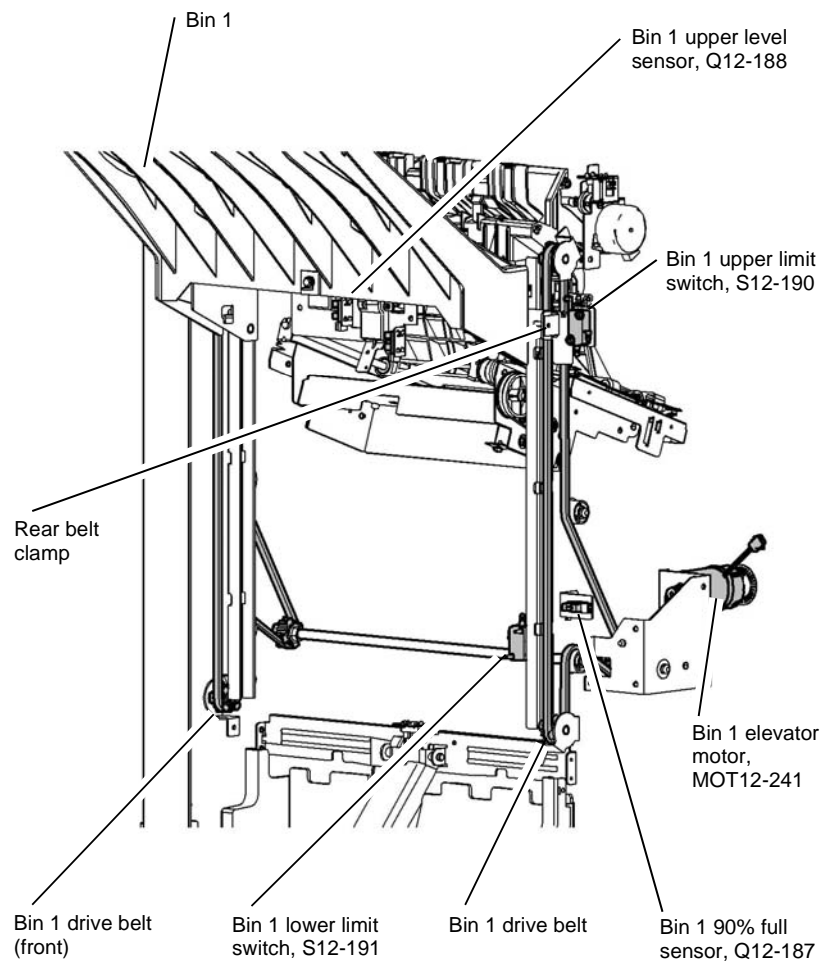
Bin 1

Refer to [Figure 11](#). Bin 1 of the LVF BM provides a platform to stack up to 2000 sheets. The bin 1 tray surface or the top of the stack in bin 1, assists in the compiling mode by providing an extended surface to support longer documents, e.g. SEF A4 (8.5 x 11 inches) and A3 (11 x 17 inches).

As the paper ejected from the compiler increases the stack height in the bin, the top of the stack actuates the bin 1 upper level sensor, Q12-188. When the LVF BM controller sees this signal. It energizes the bin 1 elevator motor, MOT12-241 to lower bin 1. The controller then de-energizes the bin 1 elevator motor.

The bin 1 90% full sensor, Q12-187 is positioned so that a flag mounted on the rear belt clamp enters the sensor when bin 1 is approximately 90% full. The signal from this sensor results in a message being displayed on the user interface requesting the operator to unload bin 1.

The bin 1 upper limit switch, S12-190 and bin 1 lower limit switch, S12-191 are positioned to monitor any over travel of bin 1. They will remove the +24V supply to the bin 1 elevator motor, MOT12-241 if over travel occurs due to component failure.

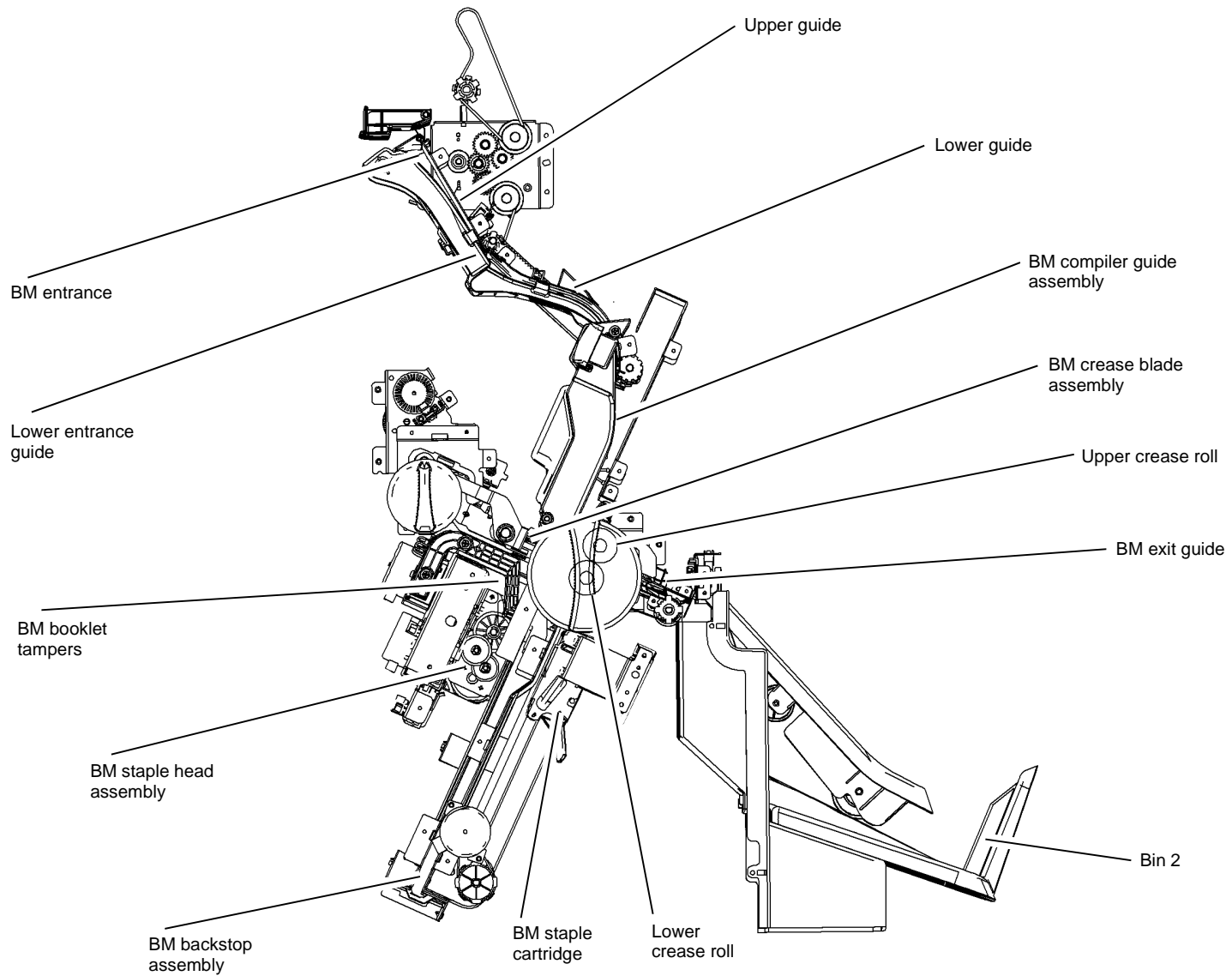


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Figure 11 Bin 1 elevator components

Booklet Maker

Refer to [Figure 12](#). The booklet maker can collect and process output to form booklets from A3 (11 x 17 inches), A4 (8.5 x 11 inches), 8.5 x 14 inches, 8.5 x 13 inches, and 8.5 x 11 inches short edge feed stock to form A4 (8.5 x 11 inches), A5 (8.5 x 5.5 inches), 8.5 x 7 inches and 8.5 x 6.5 inches booklets respectively (stapled and non stapled). The finished booklets are stacked on bin 2. If stapled booklets are selected they will be dual stapled on the fold line.



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Figure 12 Booklet maker components

Fold Mode

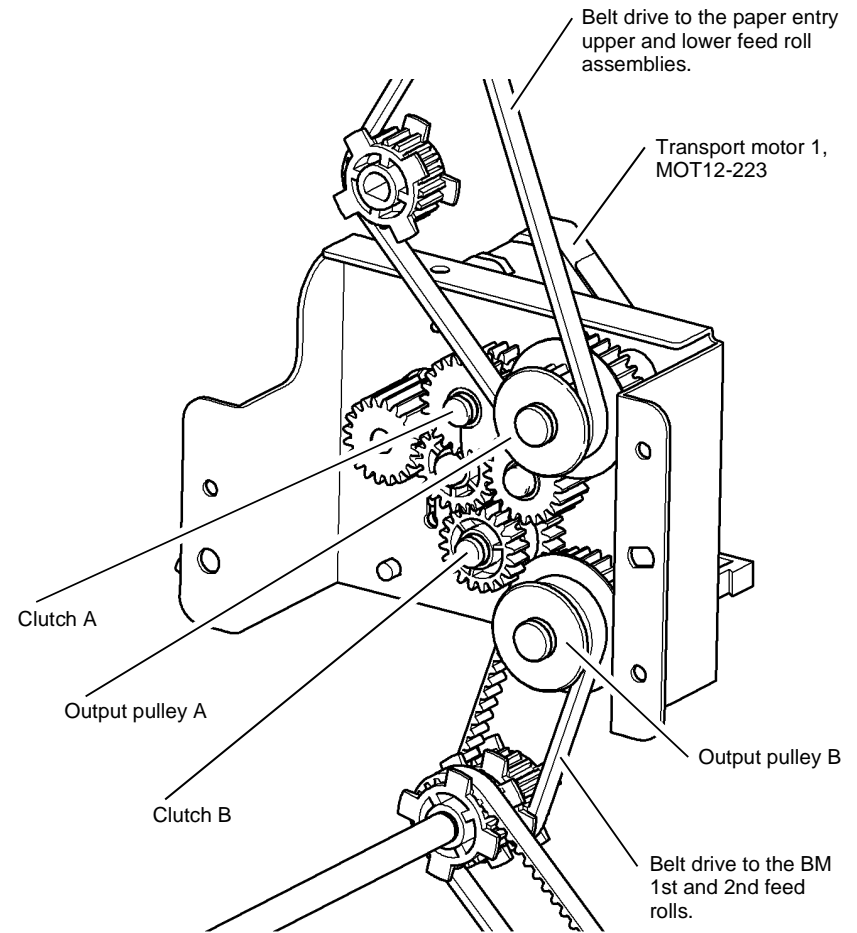
This mode collates and folds between 1-5 sheets of 80gsm (20lb) paper delivered to bin 2. The fold position, relative to the center line of the sheet, is service engineer adjustable via NVM within +/-3mm.

Staple and Fold Mode

This mode staples and folds up to 15 sheets of 80gsm (20lb) paper or equivalent thickness (e.g. 10 sheets of 120gsm), parallel to the lead edge with no trimming, delivered to bin 2. One cover of up to 216gsm may be included within the quoted sheet capacity consistent with the paperweight of the body of the booklet (i.e. 13 sheets 80gsm + 1 cover sheet of 160gsm). Staple orientation will be with the clinched legs on the inside of the fold. The fold position, relative to the center line of the sheet, is service engineer adjustable via NVM within +/-3mm.

Transport Motor 1 and Gearbox

Refer to Figure 13. Transport motor 1, MOT12-223 is used to drive the paper entry upper and lower feed roll assemblies (for bin 0 and bin 1) and also the booklet maker 1st and 2nd feed rolls. This is achieved by taking the drive from the motor through two one way clutches. Clutch A is arranged to engage in a counter clockwise direction, clutch B is arranged to engage in a clockwise direction. In this way when the motor is driven clockwise, clutch B will engage, clutch A will disengage and drive is taken to output pulley B to drive the booklet maker 1st and 2nd feed rolls. When the motor is driven in a counter clockwise direction, clutch A will engage, clutch B will disengage and drive is taken to output pulley A to drive the upper and lower feed roll assemblies.



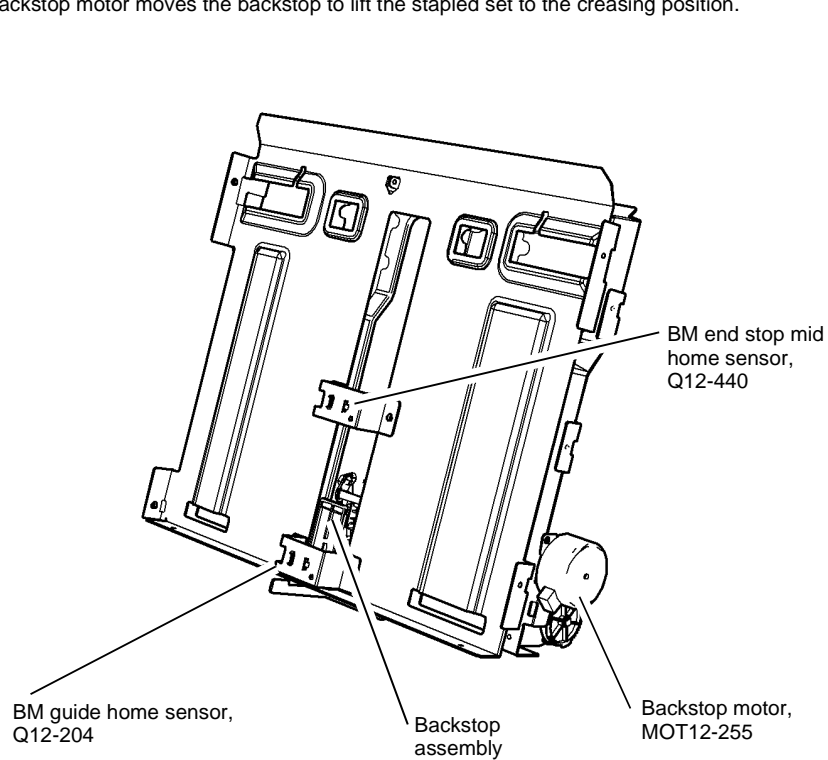
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Figure 13 Transport motor 1 components

BM Backstop Assembly

Refer to [Figure 14](#). When the first sheet arrives at the BM entry sensor, Q12-089, the tampers are moved to the ready position. If the sheet is longer than 330mm the backstop motor, MOT12-255 is energized to move the backstop assembly to a ready position based on the paper size value provided by the IOT PWB. The positioning of the backstop for long paper such as A3 (11 x 17 inches), is measured in stepper motor pulses from the backstop home sensor, Q12-204. For shorter paper such as A4 (8.5 x 11 inches), the backstop positioning is measured from the backstop mid home position sensor, Q12-440.

After the last sheet of the set has been received and compiled, the BM backstop motor moves the backstop to lift the set the stapling position, the upward movement causes the set clamp arm to move to the right and hold the set in place during movement. After stapling, the BM backstop motor moves the backstop to lift the stapled set to the creasing position.



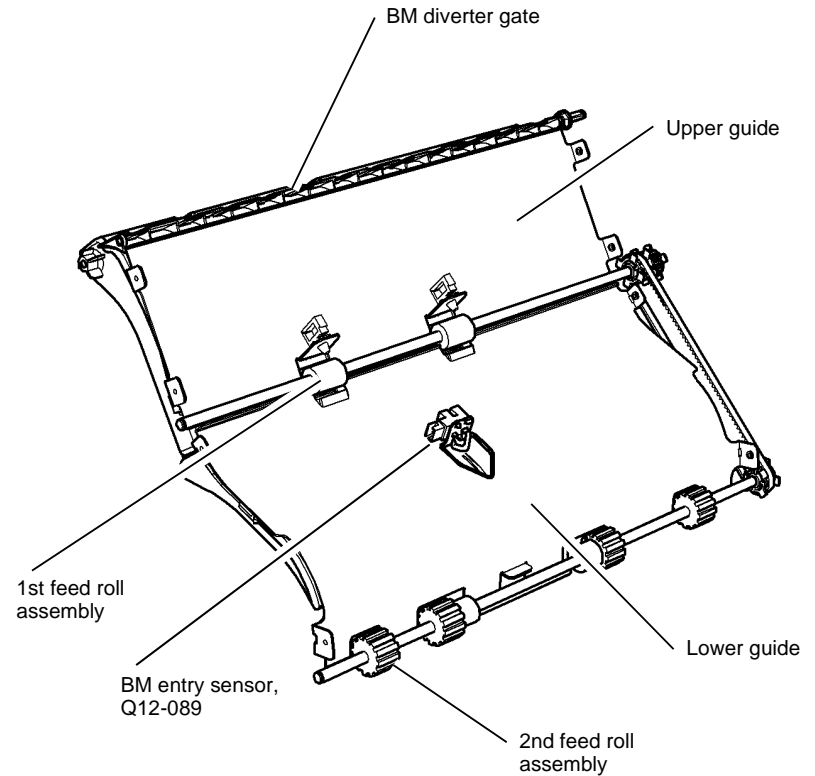
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Figure 14 BM backstop assembly components

BM Entrance

Refer to [Figure 15](#). The booklet maker receives sheets from the BM diverter gate, through the 1st feed roll nip, the BM entry sensor, Q12-089 and the 2nd feed roll nip. As each sheet is fed through the 2nd feed roll nip, it is driven downwards until it rests against the backstop.

The 2nd feed roll has smaller hard rollers and larger soft foam rollers. As the lead edge of each sheet touches the backstop, the trail edge is released by the hard roller nip, but is still held by the soft roller, which pushes the sheet under the roller and against the right side of the booklet compiler. This ensures that the trail edge of every compiled sheet is always located on the right side of the following sheet, thus eliminating both stubbing and sheet order errors.



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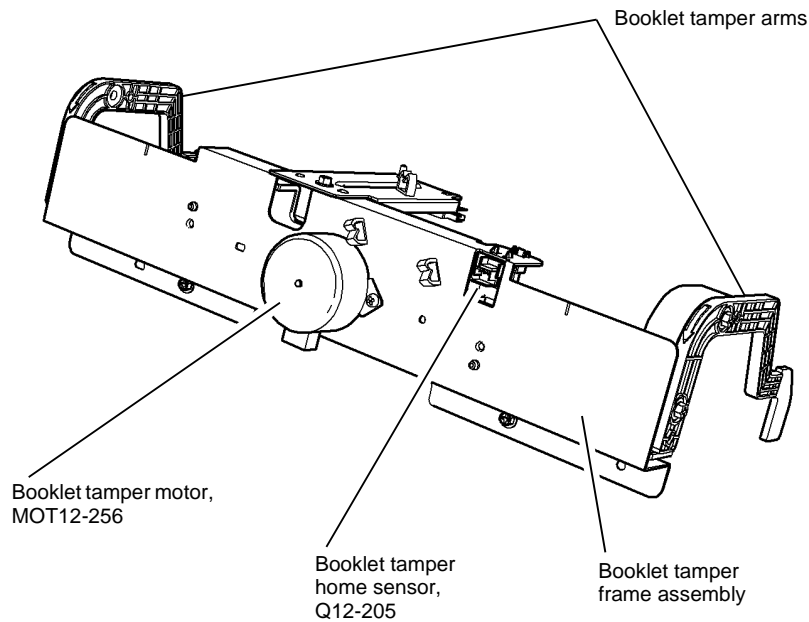
Figure 15 BM entrance components

BM Booklet Tamperers

Refer to [Figure 16](#). Cross process registration of the booklet is maintained by using two tamperers, which move in opposite directions simultaneously, and are driven by the booklet tamper motor, MOT12-256. Tamping aligns the center of the sheets with the center of the booklet compiler tray. The tamping position is a preset number of motor steps from the booklet tamper home sensor, Q12-205 and is based on the paper size of the compiled sheet, provided by the IOT PWB.

The tamperers are moved from the home position to a ready position stored in NVM, when the lead edge of the first sheet in the set is detected at the BM entry sensor, Q12-089.

700ms after the trail edge of each sheet has left the BM entry sensor, the tamperers are moved from the ready position to the tamping position, then returned to the ready position. For the last sheet of the set, the tamping stroke is repeated once more. After the last sheet in a set is compiled and tamped, the tamperers are moved to the home position.



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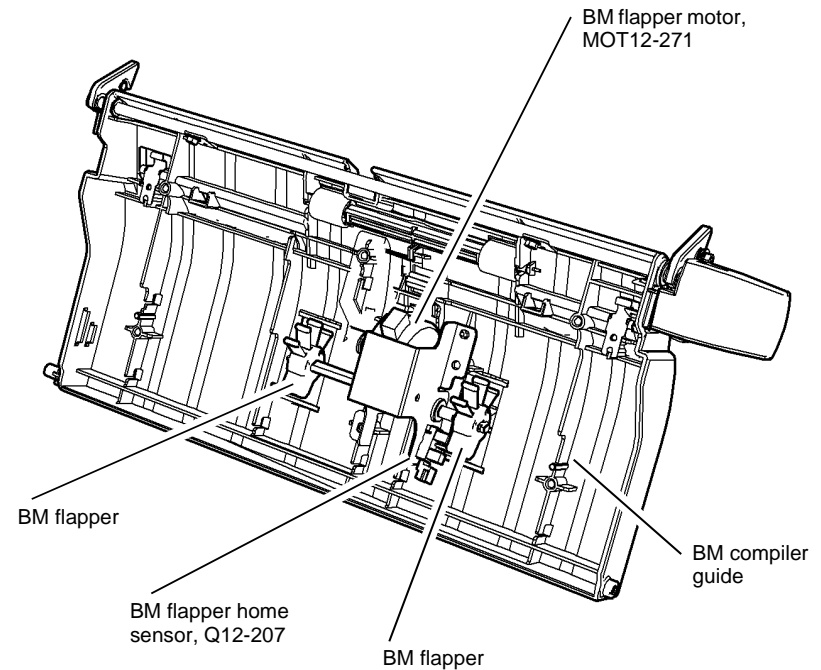
Figure 16 Booklet tamper components

BM Flapper Assembly

Refer to [Figure 17](#). The BM flapper (located within the BM compiler guide assembly) is powered for two cycles 280ms after the trail edge of each sheet has left the BM entry sensor. The BM flapper motor, MOT12-271 provides mechanical drive to the BM flapper and the position of the flapper is controlled by the flapper home sensor, Q12-207. The fingers on the flapper push the sheet into the booklet tray to aid the registration and de-skewing process. The flapper rotates after each sheet is tamped. The flappers are then parked in the home position, so that the fingers on the flapper do not impede the next sheet fed into the booklet compiler tray.

At the end of the set compilation:

- If the accumulated weight of the set is less than 400gsm the flappers are cycled 3 times.
- If the accumulated weight of the set is between 400 and 800gsm the flappers are cycled 4 times.
- If the accumulated weight of the set is more than 800gsm the flappers are cycled 5 times.



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Figure 17 BM flapper assembly components

BM Booklet Stapler Assembly

Refer to [Figure 18](#). On the right side of the booklet compiler, two BM staple cartridge assemblies are mounted on a fixed bracket in the base of the finisher. Each staple cartridge assembly contains the forming jaws and the stock of flat staple pins as well as three sensors.

The BM front staple cartridge primed sensor, Q12-442 monitors that the staples have been primed to the forming jaws of the front staple cartridge. The BM SH1 staples low sensor, Q12-412 monitors the stock level of the staple pins of the front staple cartridge. The BM front cartridge present sensor, Q12-450 monitors that the front staple cartridge is correctly installed.

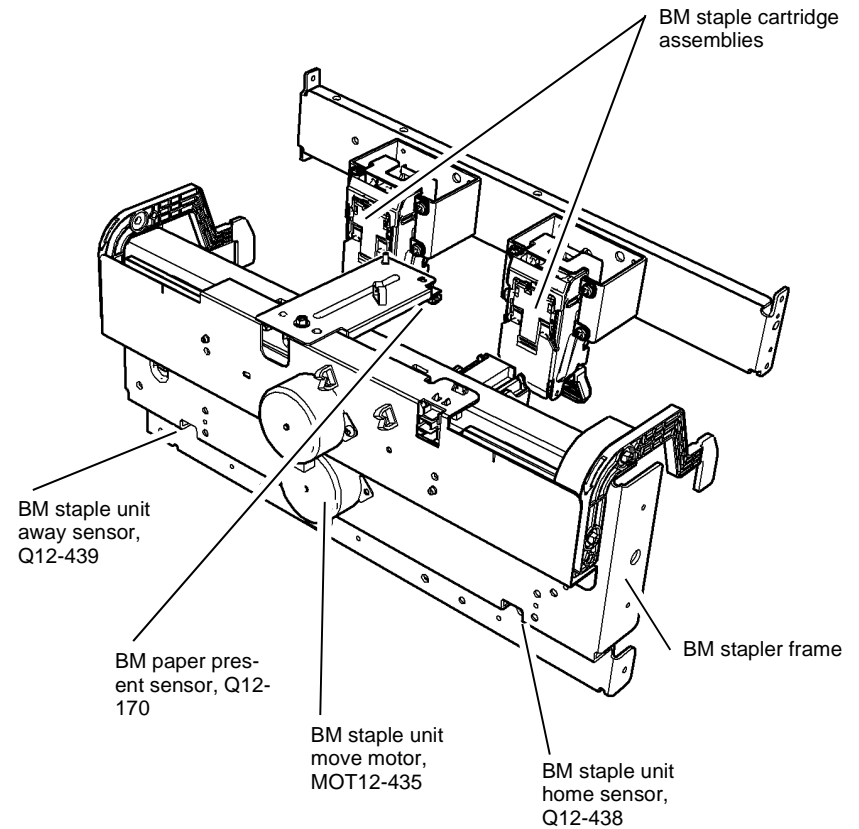
The BM rear staple cartridge primed sensor, Q12-443 monitors that the staples have been primed to the forming jaws of the rear staple cartridge. The BM SH2 staples low sensor, Q12-414 monitors the stock level of the staple pins of the rear staple cartridge. The BM rear staple cartridge present sensor, Q12-451 monitors that the rear staple cartridge is correctly installed.

On the left side of the booklet compiler, the booklet stapler assembly is mounted on a fixed frame. The booklet stapler is a travelling stapler anvil that is used to first clinch the front (home) staple, then travel to the rear (away) staple position to clinch the rear staple, in this way, two staples are placed in the center of the compiled set, spaced 120mm apart using a single stapler.

The stapler is cam driven by a BM stapler stitch motor, MOT 12-437 and contains a stapler jaw home sensor, Q12-441. The BM paper present sensor, Q12-170 is mounted on a bracket connected to the booklet tamer assembly. This sensor is used to prevent the staplers being energized if there is no paper present in the booklet compiler, thereby preventing staple jams.

Once the stapler jaw reaches the home position, a dynamic brake is applied to prevent over-run. The stapler motor will be reversed if the stapler jaw home sensor, Q12-411 is not made after the stapling operation, in an attempt to bring the stapler home and avoid a fault.

Once the front staple has been completed the BM staple unit move motor, MOT12-435 is energized to move the BM staple head from the home position to the away position. The BM staple unit home sensor, Q12-438 monitors the home position of the BM staple head. The BM staple unit away sensor, Q12-439 monitors the away position of the BM staple head. Once the rear staple has been completed the BM staple unit move motor, MOT12-435 is energized to move the BM staple head from the away position to the home position in readiness for the next booklet.



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Figure 18 BM stapling assembly components

Creasing

Refer to [Figure 19](#). The booklet creasing system consists of a crease blade, a pair of crease rolls, crease roll cover guides and the backstop assembly.

The crease roll cover guides are used to cover the entry nip into the crease rolls. This prevents sheets from coming into contact with the crease rolls during compiling. The crease roll cover guides are spring loaded and are moved by the action of the crease blade to provide access to the crease rolls.

After the set is compiled and stapled (if stapling was selected), the backstop raises the set to the fold position, so that the center line of the set is directly in line with the crease blade.

The crease roll motor, MOT12-253 is energized when the backstop reaches the fold position. An encoder wheel is mounted on the shaft of the crease roll motor. The encoder wheel is read by the crease roll motor encoder sensor, Q12-216 to control the roll surface speed and position of the blade.

A stapled set is folded by the combined function of the crease rolls and the crease blade. The crease blade pushes the center of the set into the crease rolls nip. The crease blade is driven by the crease blade motor, MOT12-252. The crease blade home sensor, Q12-214 and the crease blade motor encoder sensor, Q12-215 are used to monitor the location of the crease blade during the folding process.

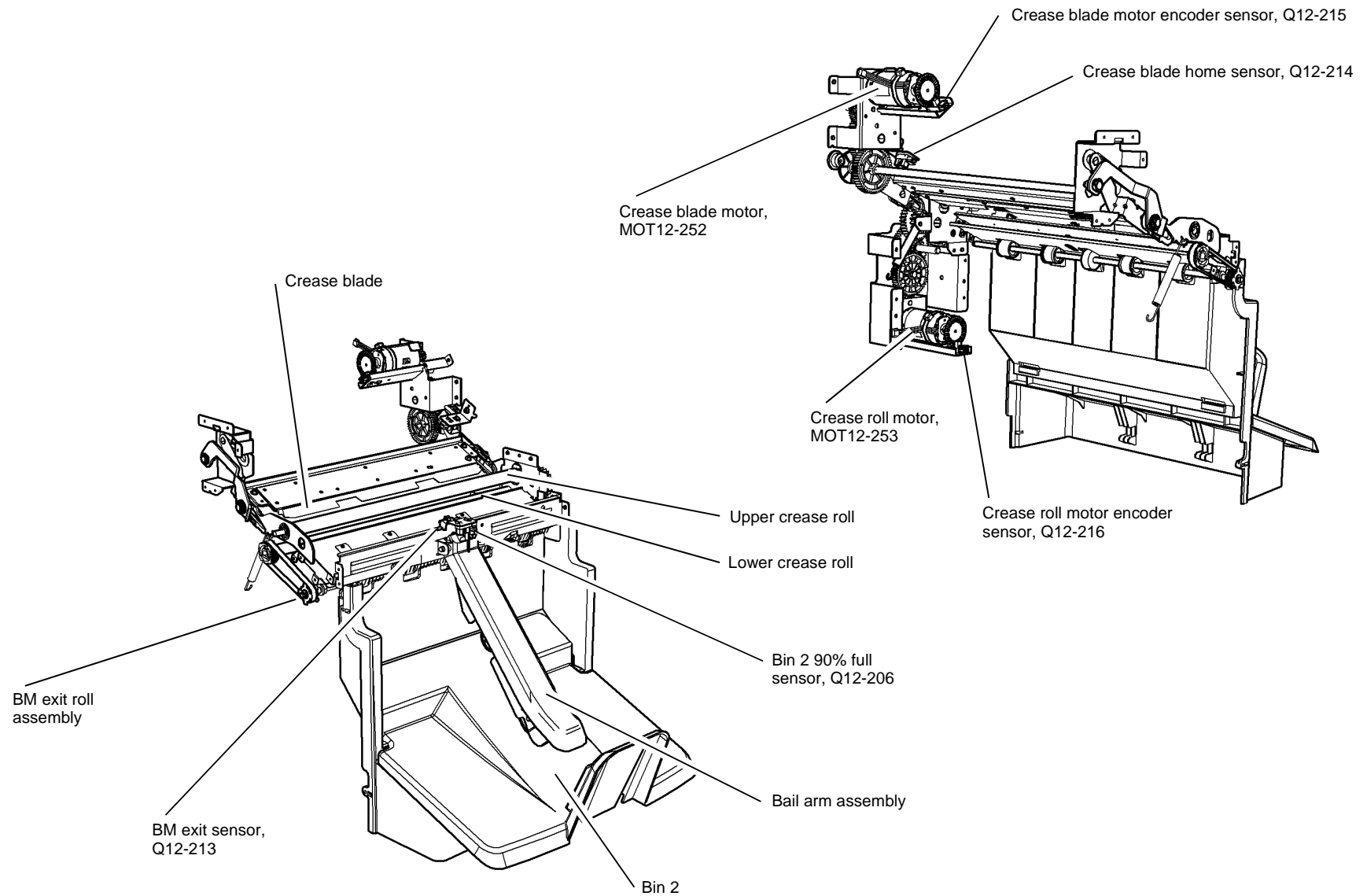
During booklet folding, the crease blade moves from the home position by a preset number of encoder pulses towards the crease rolls to fold the set and push it into the crease rolls. The crease roll motor is then reversed to the home position. As the crease blade approaches the nip of the crease rolls, the crease blade bearings contact the front and rear crease roll levers, these levers open the crease roll nip slightly to aid the entry of the folded set into the nip. This is done to prevent the tendency of the outer sheet being torn away from the staples.

The crease roll motor is controlled to roll the booklet fold 2 times for a sheet length of more than 400mm (15.75 inches) or 4 times for a sheet length of less than 400mm (15.75 inches). At the end of the creasing operations, the crease roll motor continues to run until the BM exit sensor, Q12-213 is made, the crease roll motor is then run at a faster speed to eject the booklet into bin 2. When the BM exit sensor goes clear, the crease roll motor is de-energized.

The BM exit roll assembly is driven by a toothed belt from the lower crease roll. The BM exit roll assembly assists in the transport of the finished booklet to bin 2.

The BM exit sensor, Q12-213, located just after the crease rolls, is also used to detect jams.

As the booklets accumulate on bin 2, they lift the bail arm assembly. The bin 2 90% full sensor, Q12-206 is actuated by a flag on the bail arm resulting in a message being displayed asking the operator to empty bin 2.



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Figure 19 BM creasing components

High Volume Finisher (HVF)

HVF General Description

The high volume finisher (HVF) provides the following functions:

- A top tray with a capacity of 250 sheets at 80gsm/20lb.
- A bin 1 output, providing compiled, multiple sheet sets, with a capacity of 3000 sheets at 80gsm/20lb. When a tri-folder module is fitted, the bin 1 capacity is 2000 sheets at 80gsm/20lb.
- A booklet maker with a minimum capacity of 10 sets of 15-sheet, stapled booklets at 80gsm / 20lb.
- A tri-folder, capable of producing Z-folds or C-folds. This has an output bin with a minimum capacity of 50 single-sheet tri-folder jobs at 80gsm, (20lb). It can fold 60-120gsm, (15-30lb) sheets.
- An HVF stapler with a maximum capacity of 100 sheets at 80gsm/20lb.
- An HVF hole punch.
- Inserter, which will allow paper to be inserted at any point into compiled sets.

The range of paper weights handled by the top tray, bin 1, booklet maker and inserter is 60 to 216gsm, 15 to 54lb. The tri-folder paper weight range is 60 to 120gsm, 15 to 30lb.

Configuration

The HVF comprises the following main systems which are described in this document:

- [Machine Interface](#)
- [Power/Interlocks](#)
- [Paper Paths](#)
- [Compiler](#)
- [Stacker](#)
- [Hole Punch](#)
- [Tray 7 Inserter](#)
- [Booklet Maker Module](#)
- [Tri-Folder](#)
- [Booklet Maker Bin 2](#)

Machine Interface

The harness between the rear of the machine, (PJ966), and the HVF PWB carries the communications between the two modules on serial data lines. The machine identifies the type of output device by the voltages on the ID lines in this harness. Communications between the HVF PWB, (PJ133), and the booklet maker PWB are carried on serial data lines. A 'booklet maker present' link is also present in this harness. The inserter module does not have dedicated communications to the HVF PWB. The 'inserter present' information is carried on PJ701 to the HVF PWB. The tri-folder module does not include a dedicated communications line to the booklet maker PWB. The 'tri-folder present' link is carried in the harness to PJ563 into the booklet maker PWB.

Power/Interlocks

Power to the HVF module is supplied by a dedicated PSU in the base of the HVF. This supplies +5V and +24V. This PSU includes its own power cord.

A harness from the HVF control PWB, (PJ131), to the booklet maker PWB supplies +5V and +24V. The booklet maker PWB, (via PJ553), supplies the tri-folder with +5V and +24V.

The inserter module is powered from the HVF control PWB, through a complex connector at the base of the inserter. This connector has of two lines of terminals, TO55 / TO77, supplying the signals and the +5V, and AO55 / AO77. It also provides one higher current terminal at each corner of the connector body, supplying the +24V, 0V and ground to the inserter, plus the drive line for the inserter electric clutch. The inserter interlocks are described in the Inserter section, and the tri-folder interlocks are described in the Tri-folder section.

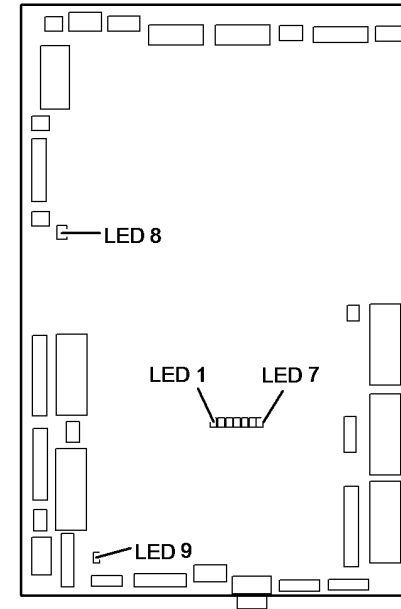
In the HVF module, two interlocks, wired in series, pass +24V to the module. These are:

- Top cover interlock switch, S12-197.
- Front door interlock switch, S12-303.

When all three interlock switches are closed, the +24V interlock indicator, LED 8 on the HVF control PWB is lit and the +24V supply is available to motors, solenoids and clutches.

Figure 1 shows the LEDs on the HVF PWB. These are:

- LED 1 - red, toggling. The LED changes state every time one of the following events occurs:
 - When the support fingers are fully extended.
 - When the rear wall sensor stops sensing the paper stack rear wall.
 - When the stapler mode for the current set is not multiple, dual or rear stapling.
- LED 2 - red. Not used.
- LED 3 - red, flashing. The LED indicates CPU function. When flashing at 2Hz, (every 1/2 second), the software is running normally. When flashing at about 1/4Hz, (every 4 seconds), this indicates that the software is encountering a code problem and a possible software upgrade is needed. If this LED is OFF, the CPU does not function and a new HVF control PWB is required.
- LED 4 - red. Not used.
- LED 5 - red, toggling. The LED changes state whenever the paper is accelerated to 1,300 m/s. It is only used for paper that is longer than 220mm.
- LED 6 - red, steady. When the LED is illuminated, a paper jam has been detected. It remains illuminated until the HVF successfully initializes. In all other cases this LED is off.
- LED 7 - red. The LED is used during the machine production and is connected with the activity of the stacker nearly full sensor.
- LED 8 - red, steady. The indicates that the HVF top cover, front door and docking interlocks are all closed and +24V is available at the HVF module.
- LED 9 - red, steady. The LED indicates that the +5V supply is present in the HVF module.



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Figure 1 LEDs on the HVF control PWB

Figure 2 shows the LEDs on the BM PWB. These are:

- LED 1 - red, steady. The LED indicates a fault or other abnormal status.
- LED 2 - yellow, flashing at about 1Hz. The LED indicates that the software is operating in normal mode. In other modes, e.g., software downloading, the flashing rate is higher.
- LED 3 - orange, steady. The LED indicates either:
 - that the tri-folder front door and top cover interlocks are closed, and +24V is available to the BM module or, if the tri-folder is not installed;
 - that the interlock cheater is present in PJ553 on the BM control PWB the logic cheater is present in PJ563 on the BM control PWB.
- LED 4 - orange, steady. The LED indicates that the +24V supply is within voltage and current limits, and that the power limiting circuit has not been active over a set time limit.
- LED 5 - blue, steady. The LED indicates that the +5V supply is present in the BM module.

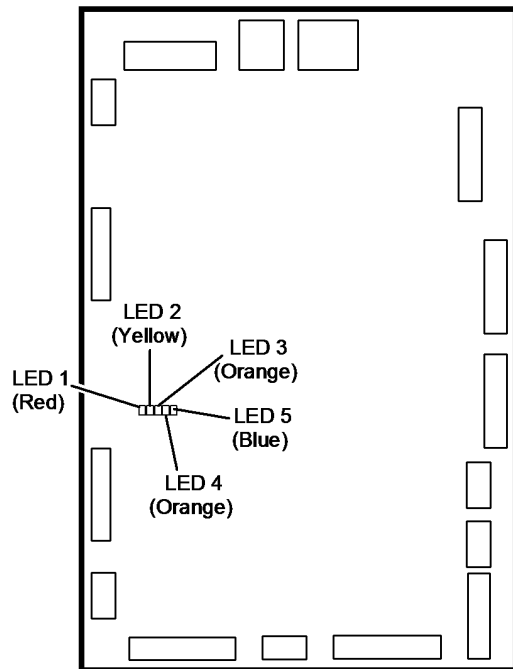


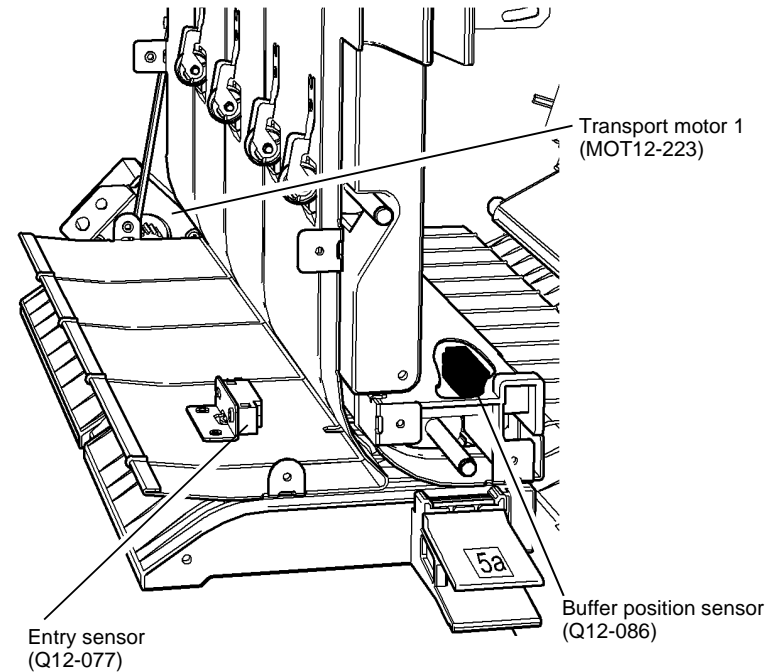
Figure 2 LEDs on the BM control PWB

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Paper Paths

This covers the motors, sensors and solenoids, etc., along the paper paths.

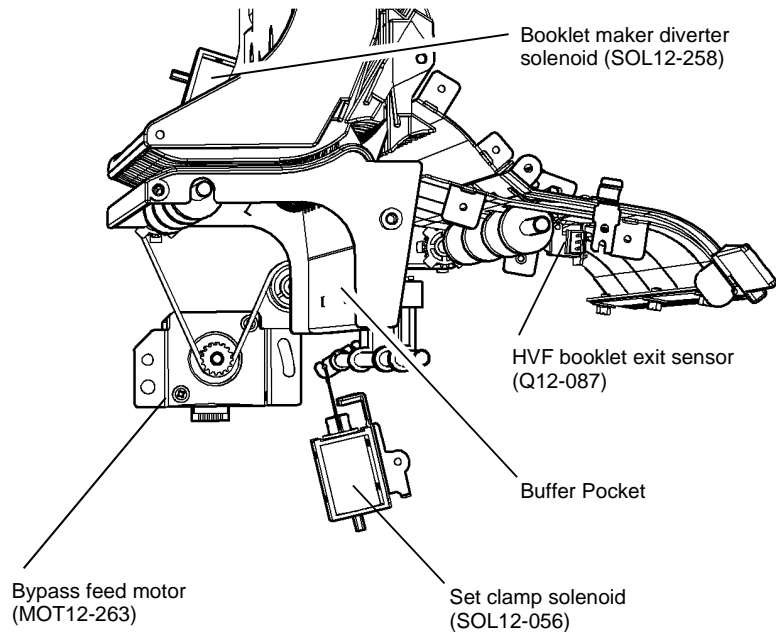
- Entry Sensor, Q12-077. This is a reflective sensor at the HVF input transport, receiving paper from the finisher transport. Refer to Figure 3.
- Buffer position sensor, Q12-086. A reflective sensor at the end of the input transport. This senses paper fed to the hole punch and beyond, to the buffer transport. Refer to Figure 3.
- Transport motor 1, MOT12-223. This is a stepper motor, located at the rear of the HVF, and driving a toothed belt. This provides the drive to the input path from the finisher transport. It also drives the vertical paper path from the inserter and takes the paper through to the hole punch. Refer to Figure 3.



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Figure 3 Entry sensor and entry feed motor

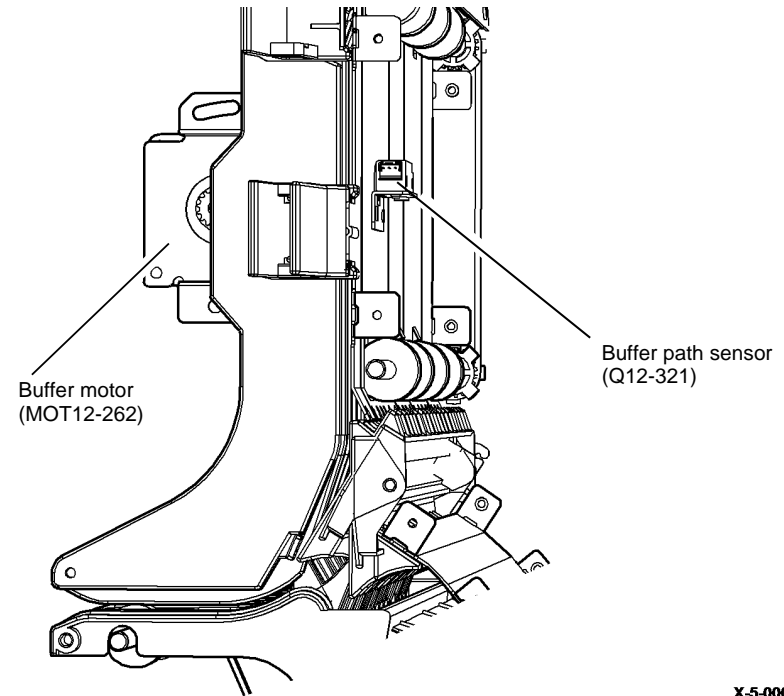
- Bypass feed motor, MOT12-263. A stepper motor, located at the rear of the HVF and driving a toothed belt. It takes the paper from the hole punch to the buffer transport or to the booklet maker, depending on the action of the booklet maker diverter solenoid. Refer to [Figure 4](#).
- Set clamp solenoid, SOL12-056. Actuates during multiple-sheet compiled output jobs. When actuated, it holds the trailing edge of the sheet in the buffer pocket until the arrival of the second sheet, at which time both sheet are fed to the ejector. The action is as follows:
 - The first sheet is fed vertically up into the buffer transport until it is released by the action of the nip split motor, which moved the idler rolls to the left, away from the paper. At the same time, the buffer feed motor stops.
 - The sheet then drops into the buffer pocket, where it is held by the set clamp solenoid until the second sheet arrives. This action maintains the inter-set gap. Refer to [Figure 4](#).
- Booklet maker diverter solenoid, SOL12-258. Actuates to pass paper to the booklet maker. In the non-actuated condition, it allows paper to pass to the buffer transport. Refer to [Figure 4](#).
- HVF booklet exit sensor, Q12-087. A flag sensor, located in the paper guide leading to the booklet maker. It senses paper exiting the HVF for the booklet maker. Refer to [Figure 4](#).



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Figure 4 Buffer area components

- Buffer motor, MOT12-262. A stepper motor located at the rear of the HVF. It takes the paper from the booklet maker diverter to the top tray or stacker. Refer to [Figure 5](#).
- Buffer path sensor, Q12-321. A reflective sensor, located in the buffer transport. It senses paper being fed to the top tray or stacker. Refer to [Figure 5](#).



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Figure 5 Buffer motor and buffer path sensor

- Nip split motor, MOT12-264. A DC motor, located in a housing at the rear of the 5b jam clearance guide. It opens the nip in the vertical buffer path by moving the idler rolls to the left, away from the paper. This allows the first sheet of a multi-sheet compiled job, to drop into the buffer pocket, as explained in the 'Buffer clamp solenoid' bulleted item, above. Refer to [Figure 6](#).
- Nip split sensor, Q12-091. A flag sensor, operated by a cylindrical flag on the nip split cam shaft. It senses the open position of the nip. Refer to [Figure 6](#).
- Nip home sensor, Q12-088. A flag sensor, operated by a cylindrical flag on the nip split cam shaft. It senses the closed position of the nip. Refer to [Figure 6](#).

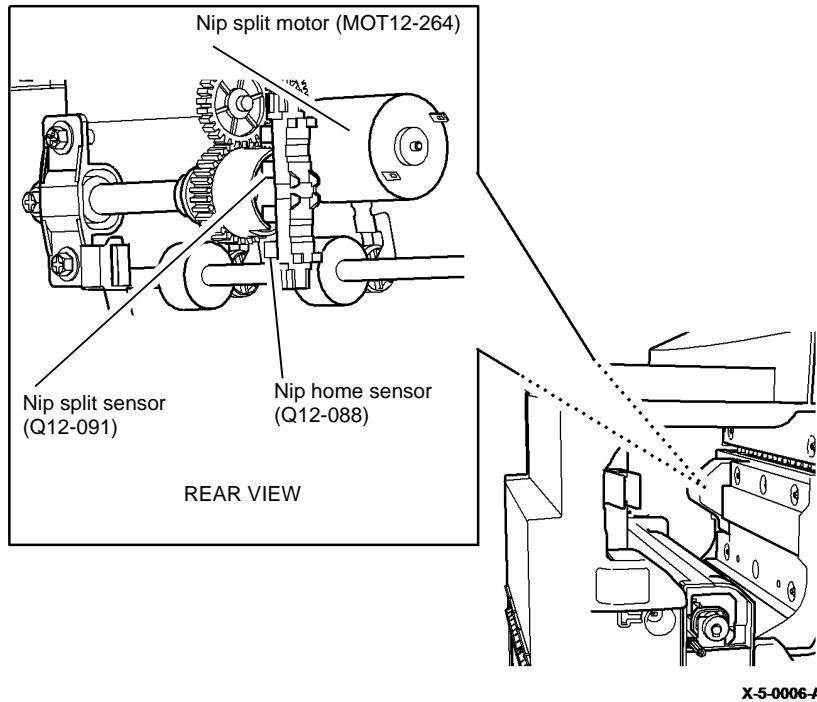


Figure 6 Nip split mechanism

- Transport motor 2, MOT12-224. A stepper motor, located at the rear of the HVF and driving two toothed belts. It takes the paper from the exit diverter and feeds it either to the top tray, via the top exit sensor, or to the stacker, via the stacker exit sensor. Refer to [Figure 7](#).
- Exit diverter solenoid, SOL12-225. Actuates to divert the paper from the buffer to the top tray. In the non-actuated condition, it allows the paper to pass to the stacker. Refer to [Figure 7](#).
- Top tray exit sensor, Q12-107. A flag sensor located in the upper exit paper guide. It senses paper passing out to the top tray. Refer to [Figure 7](#).

- Compiler exit sensor, Q12-106. A reflective sensor located on the top jam clearance paper guide. It senses paper passing out to the stacker. Refer to [Figure 7](#).

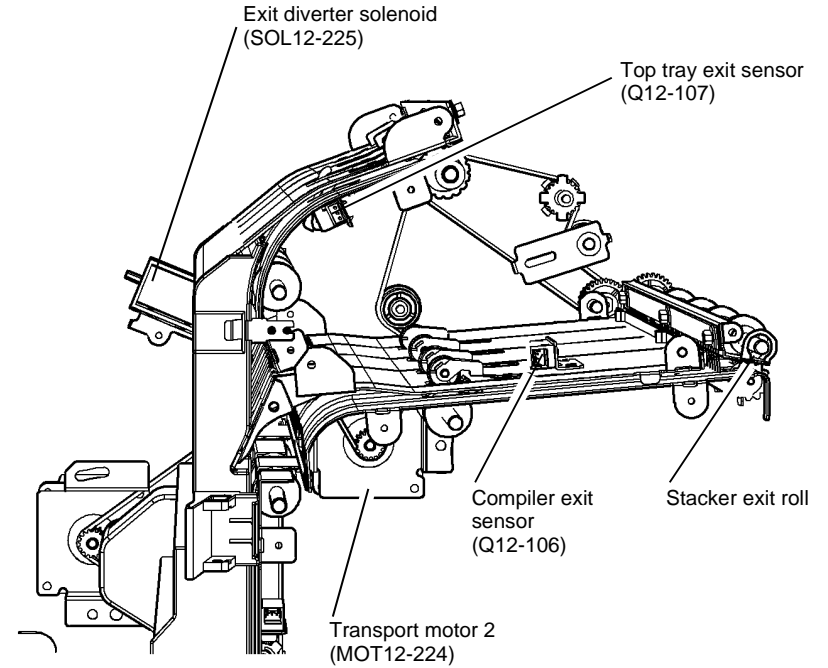


Figure 7 Top tray and stacker components

Compiler

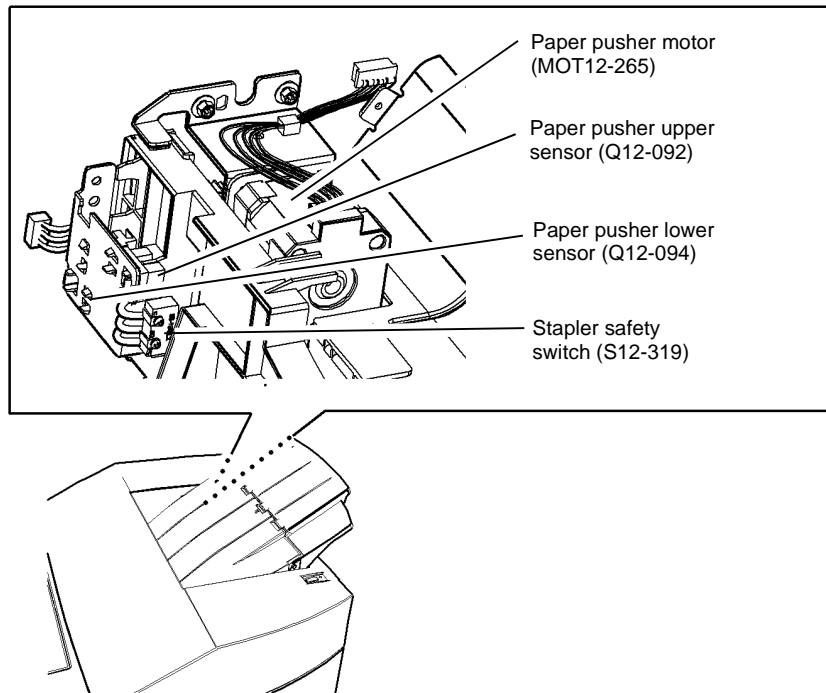
This section includes the functions of paper pusher, upper and lower paddles, tamping, stapling, paper ejection, pressing and support.

Paper Pusher: The final roll at the stacker exit (refer to [Figure 7](#)), corrugates the paper to give it stiffness. The paper pusher moves down as each sheet leaves the final roll, and pushes the sheet down to the ejector unit. The components associated with the paper pusher are:

- Paper pusher motor, MOT12-265. A stepper motor located at the inboard end of the compile exit upper guide. The motor drives pinions that engage with racks integral with the pusher. Refer to [Figure 8](#).
- Paper pusher upper sensor, Q12-092. A flag sensor that detects the pusher in the upper position. Refer to [Figure 8](#).
- Paper pusher lower sensor, Q12-094. A flag sensor that detects the pusher in the lower position. Refer to [Figure 8](#).
- Stapler safety switch, S12-319. A micro switch located at the inboard left of the paper pusher. This switch disables the +24V supply to the stapler when the paper pusher is away from the lower position. This is to ensure personal safety when it is possible to reach the stapler jaws, under the paper pusher. Refer to [Figure 8](#).

Upper Paddle: As the paper pusher moves down with the first sheet, the paddle unit moves to the lower position. As the paper pusher returns to the upper position, ready for the next sheet, the paddles rotate to position the first sheet correctly in the ejector. The sheet is correctly positioned when its trailing edge is in contact with the upright posts in the stapler module.

The number of cycles the paddle rotates depends on the size and orientation of the paper. The paddle unit remains in the lower position and every sheet in the set is positioned in this way. When the final sheet in the set has been positioned by the paddle, the paddle unit returns to the upper position.



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Figure 8 Paper pusher components

The components associated with the paddle unit are:

- Paddle unit motor, MOT12-239. A stepper motor located on the rear frame. It drives the paddle unit down to the working position and back up at the end of each set. Refer to [Figure 9](#).
- Paddle unit lower sensor, Q12-175. A flag sensor located on a bracket beside the paddle unit, and sensing the paddle unit in the lower position. Refer to [Figure 9](#).
- Paddle unit upper sensor, Q12-174. A flag sensor located on a bracket beside the paddle unit, and sensing the paddle unit in the upper position. Refer to [Figure 9](#).

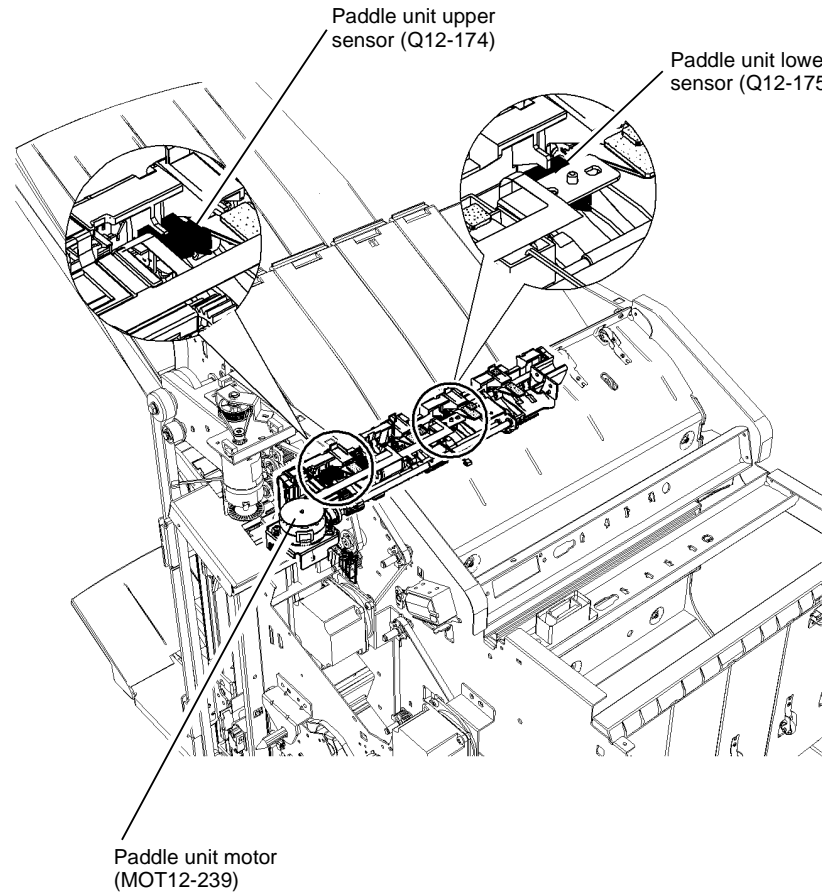


Figure 9 Paddle unit components

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- Paddle roll motor, MOT12-238. A DC motor located in the paddle unit. The paddle is turned one complete revolution. Refer to [Figure 10](#).
- Paddle roll home sensor, Q12-186. A flag sensor located in the paddle unit, sensing the paddle roller in the home position. Refer to [Figure 10](#).

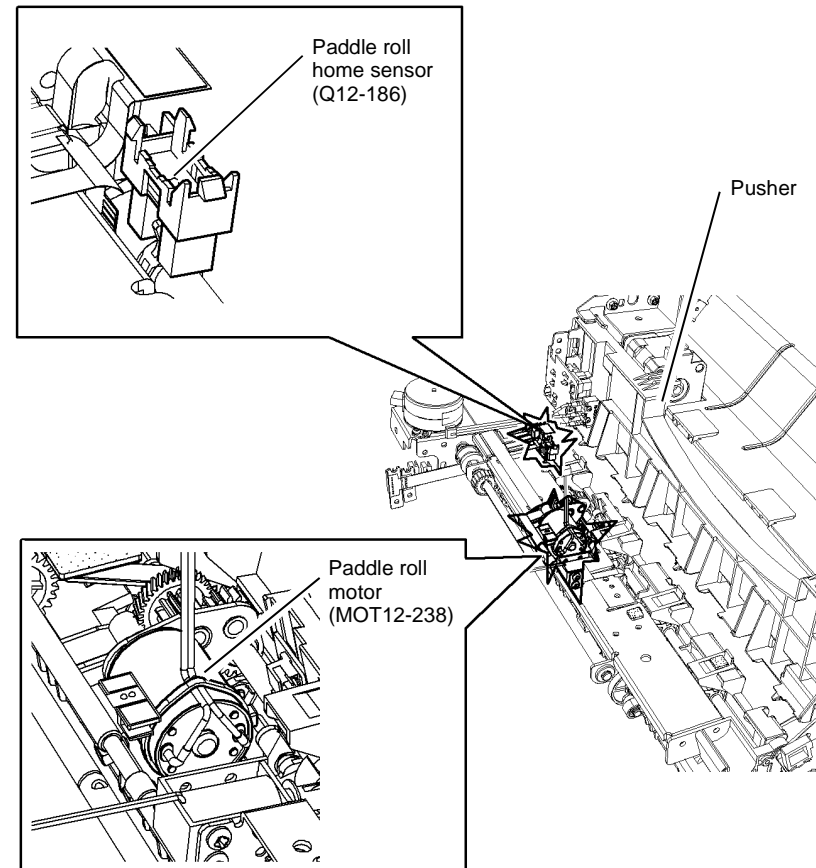


Figure 10 Paddle roller components

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Lower Paddle: A single paddle that is integrated into the ejector unit, which operates on the first sheet only in each set. The lower paddle turns at the same time as the upper paddle. It is actuated by the ejector roll motor, turning in the reverse direction. The action of this motor in the forward direction is described later. The components associated with the lower paddle function are:

- Ejector roll motor, MOT12-233. A DC motor located at the rear underside of the ejector unit. It runs in the reverse direction to rotate the lower paddle. Refer to [Figure 11](#).
- Ejector roll motor encoder sensor, Q12-097. A normal flag type encoder sensor, sensing the motor rotation. Refer to [Figure 11](#).
- Ejector home sensor, Q12-184. A normal flag type sensor, sensing the ejector home. Refer to [Figure 11](#).

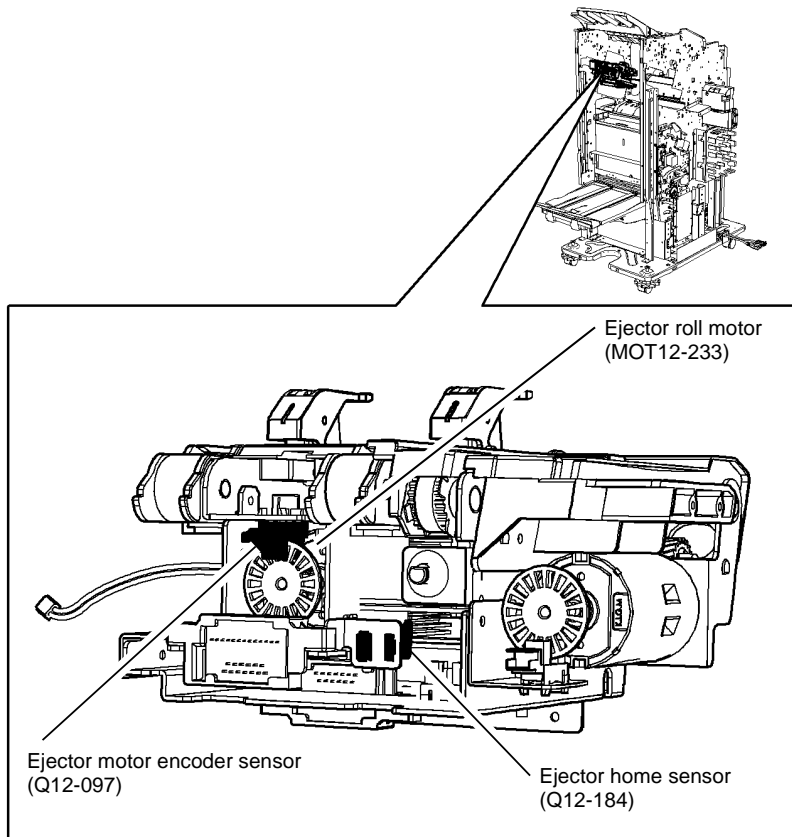


Figure 11 Ejector roll motor and sensors

- Ejector lower paddle home switch, S12-099. A micro switch located at the front underside of the ejector unit, sensing the home position of the lower paddle. This switch allows the paddle to rotate for one complete cycle. Refer to [Figure 12](#).

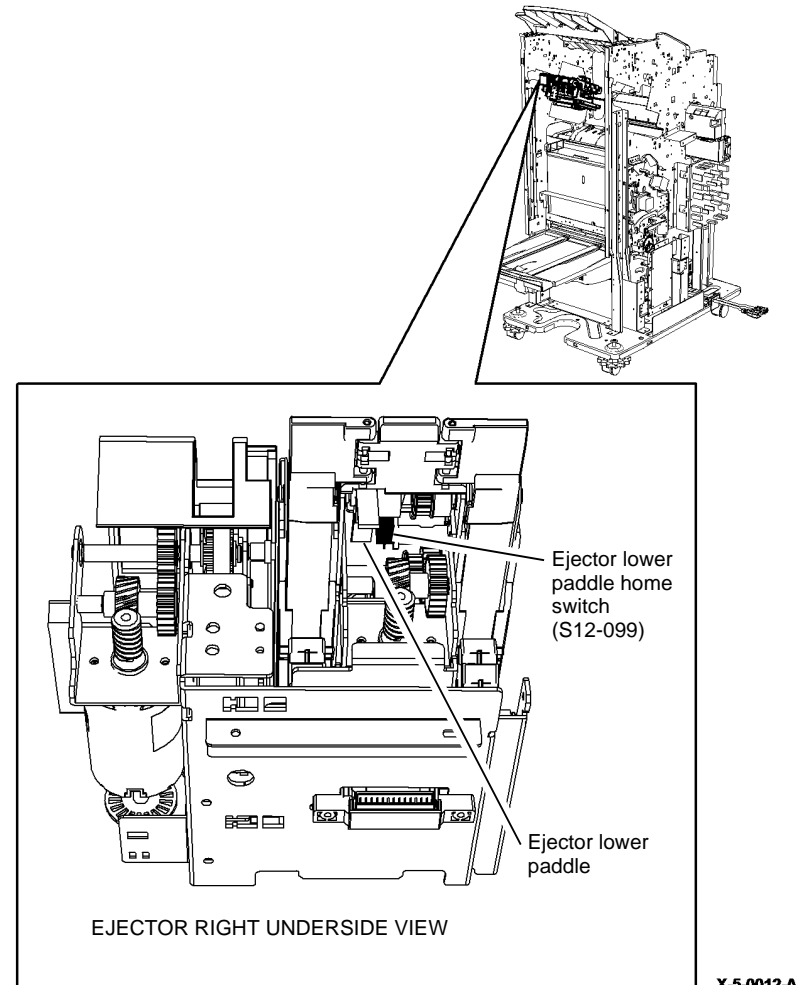
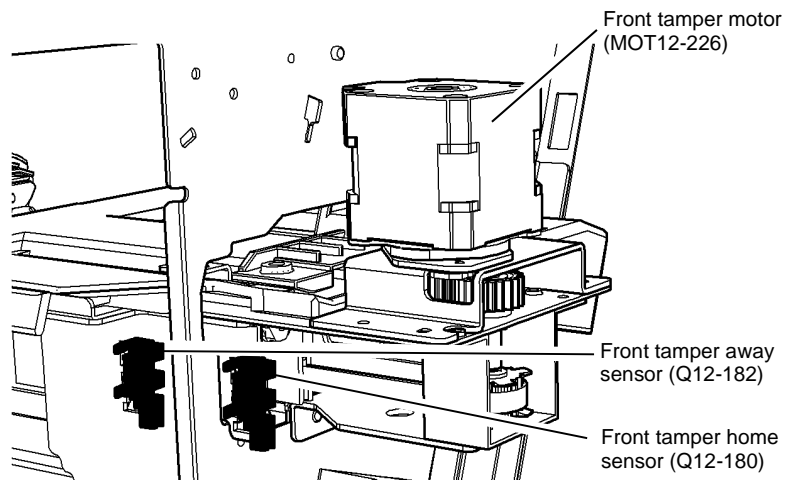


Figure 12 Ejector lower paddle and home sensor

Tamping and Offsetting: Offsetting of the compiled sets is performed by the front and rear tamper. Offsetting is performed immediately before ejection. If stapling is selected, offsetting is performed after stapling. When a stapling operation is selected, the rear tamper operates before stapling, to ensure that each set is correctly positioned for stapling at its outboard end. After stapling the sets are alternately either left at the outboard end, or offset towards the inboard end by the front tamper. The components associated with the tamping and offset functions are:

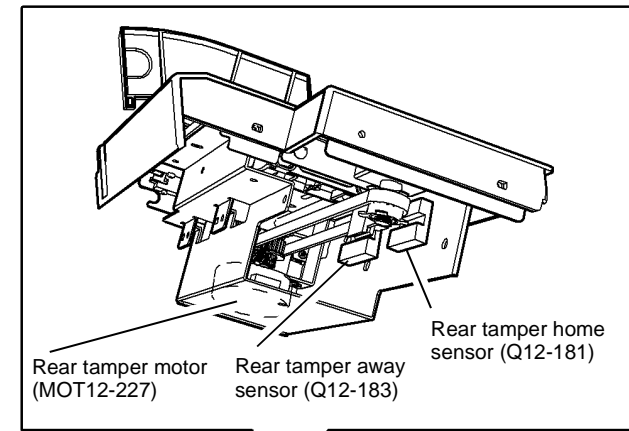
- Front tamper motor, MOT12-226. A DC motor, located above the bracket on the front frame. This motor moves the front tamper to the away and home positions. Refer to [Figure 13](#).
- Front tamper home sensor, Q12-180. A flag sensor, located under the bracket on the front frame. This sensor detects the front tamper in the home position. Refer to [Figure 13](#).
- Front tamper away sensor, Q12-182. A flag sensor, located under the bracket on the front frame. This sensor detects the front tamper in the away position. Refer to [Figure 13](#).



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Figure 13 Front tamper components

- Rear tamper motor, MOT12-227. A stepper motor, located immediately to the rear of the ejector unit. This motor moves the rear tamper between the rear and home positions. Refer to [Figure 14](#).
- Rear tamper home sensor, Q12-181. A flag sensor, located to the rear of the rear tamper motor. This sensor detects the rear tamper in the home position. Refer to [Figure 14](#).
- Rear tamper away sensor, Q12-183. A flag sensor, located to the rear of the rear home sensor. This sensor detects the rear tamper in the away position. Refer to [Figure 14](#).

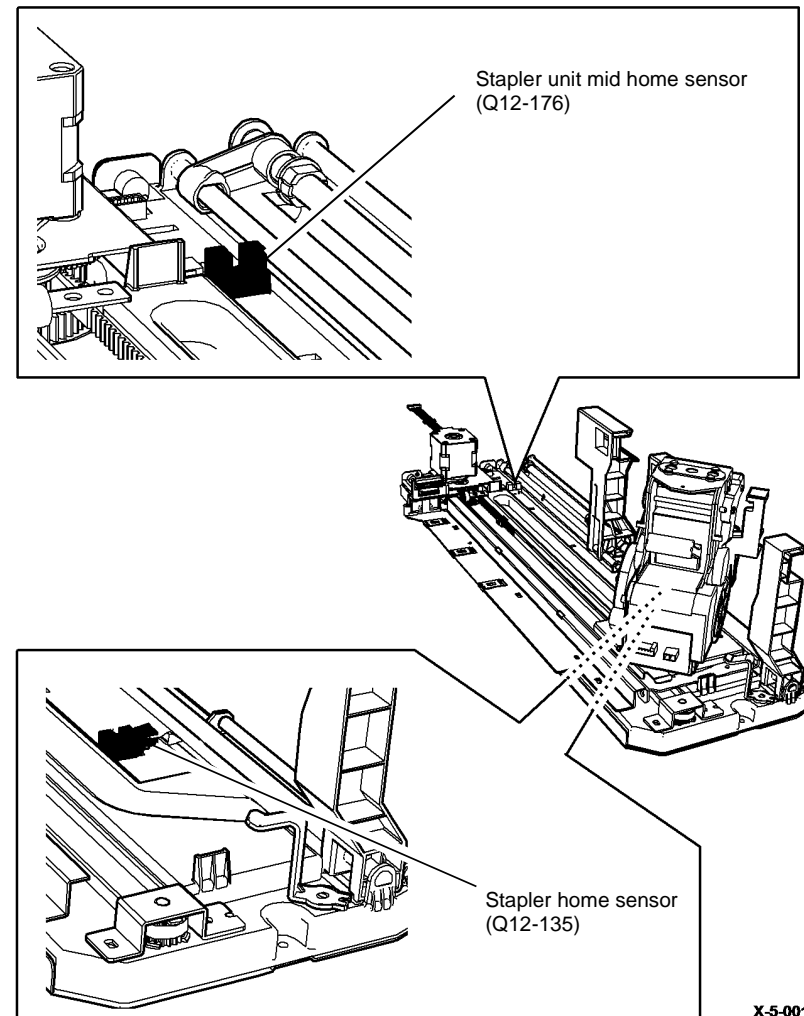


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Figure 14 Rear tamper components

Stapling: The stapling functions of the HVF, are distinct from those of the booklet maker and are performed on each set immediately after compiling the last sheet of each set. A single, travelling stapler unit is used. When 'one staple' is selected, the stapler unit remains at the outboard end of its travel, and the corner of each set is stapled. When two or more staples are selected, the stapler unit travels from outboard to inboard between each staple, then travels to the mid home position where it remains during the tamping and ejection functions. The stapler unit then returns to the home position. The components associated with the stapling function are:

- Stapler head 1 motor, MOT12-247. A DC motor that drives the closing of the stapler jaws and the forming of the staple from a straight bar. The motor is an integral part of the stapler and cannot be serviced. The high current to the stapler necessitates multiple wires between the HVF PWB and the stapler unit.
- Stapler self priming sensor, Q12-134. This is an integral part of the stapler and cannot be serviced. It detects the staples in the correct position, ready for forming and stapling.
- Stapler cartridge sensor, Q12-317. This is an integral part of the stapler and cannot be serviced. It detects the presence of cartridge, correctly fitted in position.
- Stapler jaw home sensor, Q12-318. This is an integral part of the stapler and cannot be serviced. It senses that the stapler jaws are correctly positioned, ready for a stapling cycle.
- Low staples sensor, Q12-133. This is an integral part of the stapler and cannot be serviced. It senses when the staples are running low and warns the user.
- Stapler safety switch, S12-319. This is described also in the paper pusher section. The stapler gate safety switch is a micro switch located at the inboard left of the paper pusher. This switch disables the +24V supply to the stapler motor drive circuit, when the paper pusher is away from the lower position. This is to ensure personal safety when it is possible to reach the stapler jaws, under the paper pusher. Refer to [Figure 8](#).
- Stapler home sensor, Q12-135. A flag sensor, located at the outboard end of the bed of the stapler unit. It detects the stapler unit in the home position. Refer to [Figure 15](#).
- Stapler unit mid home sensor, Q12-176. A flag sensor, located towards the inboard end of the bed of the stapler module. It detects the stapler at the inboard end of its travel. Refer to [Figure 15](#).

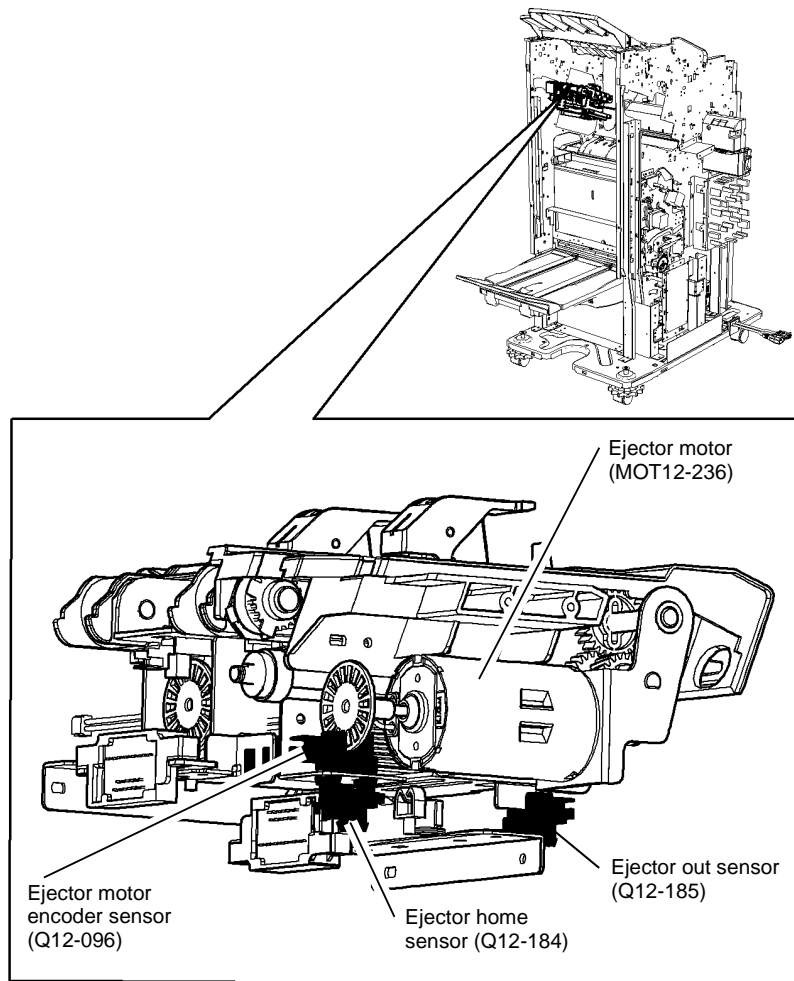


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Figure 15 Stapling components

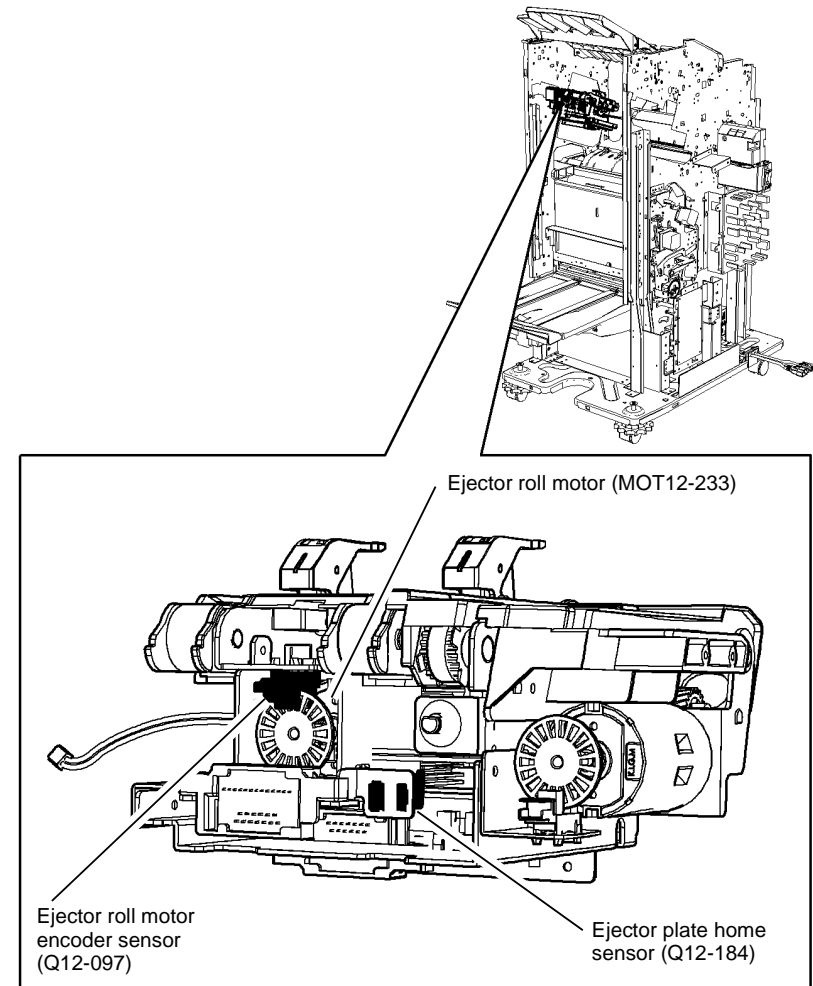
Paper ejection, pressing and support: Includes all actions necessary to transfer the paper sets from the compiler to the stacker. When the set is compiled, and the paper pusher and paddle units have returned to the upper position the ejector unit moves to the out position. The support fingers move out, taking the pressing fingers down to hold the previous set in place on the stacker. The ejector roll motor turns the belts and the ejector fingers push the set out to the stacker. The pressing and support fingers then return to the home position. The ejector fingers are carried round on the belts to their home position as the ejector unit moves back to its home position. The components associated with these functions are:

- Ejector motor, MOT12-236. A DC motor, located at the front underside of the ejector unit. This motor moves the ejector unit to the 'out' and 'home' positions. Refer to [Figure 16](#).
- Ejector motor encoder sensor, Q12-096. A standard flag, encoder-disc sensor, sensing the rotation of the ejector unit motor. Refer to [Figure 16](#).
- Ejector out sensor, Q12-185. A flag sensor that senses the ejector unit in the out position. Refer to [Figure 16](#).
- Ejector home sensor, Q12-184. A flag sensor that senses the ejector unit in the home position. Refer to [Figure 16](#).
- Ejector roll motor, MOT12-233. A DC motor, located at the rear underside of the ejector unit. This motor turns in the forward direction to move the belts holding the ejector fingers. Its function in the reverse direction was described earlier. Refer to [Figure 17](#).
- Ejector roll encoder sensor, Q12-097. A flag sensor located at the rear of the ejector roll motor. This senses the movement of the ejector roll motor. Refer to [Figure 17](#).
- Ejector home sensor, Q12-184. A flag sensor, located at the rear of the ejector assembly, under the ejector belt. This detects the eject fingers in the home position. Refer to [Figure 17](#).



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Figure 16 Ejector unit components



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Figure 17 Ejector roll components

- Pressing and support motor, MOT12-323. A DC motor, located below the HVF rear tamper. This motor moves the support fingers to the 'out', 'init' and 'home' positions. The pressing fingers are mechanically linked to the support fingers so that as the support fingers leave the home position, the pressing fingers move down to hold the previous set on the stack. Refer to [Figure 18](#).
- Pressing and support encoder sensor, Q12-093. This is a standard flag, encoder-disc sensor, sensing the rotation of the pressing and support motor. Refer to [Figure 18](#).
- Pressing and support A sensor, Q12-172. A flag sensor, detecting the support fingers in the 'home' position. Refer to [Figure 18](#).
- Pressing and support B sensor, Q12-171. A flag sensor, detecting the support fingers in the 'init' position. Refer to [Figure 18](#).
- Pressing and support C sensor, Q12-173. A flag sensor, detecting the support fingers in the 'out' position. Refer to [Figure 18](#).

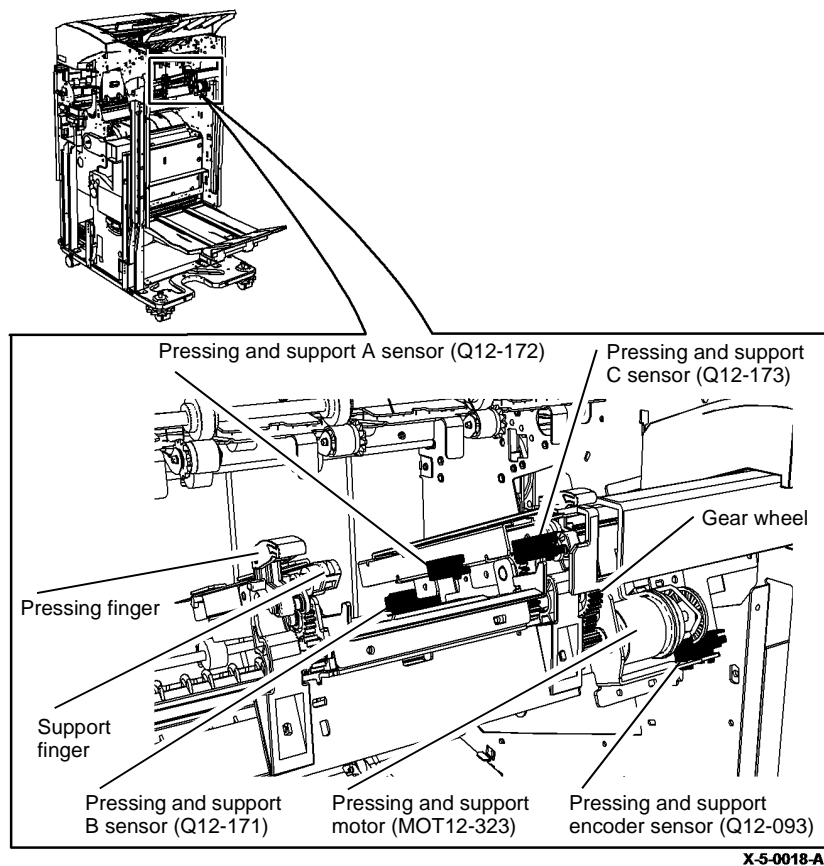
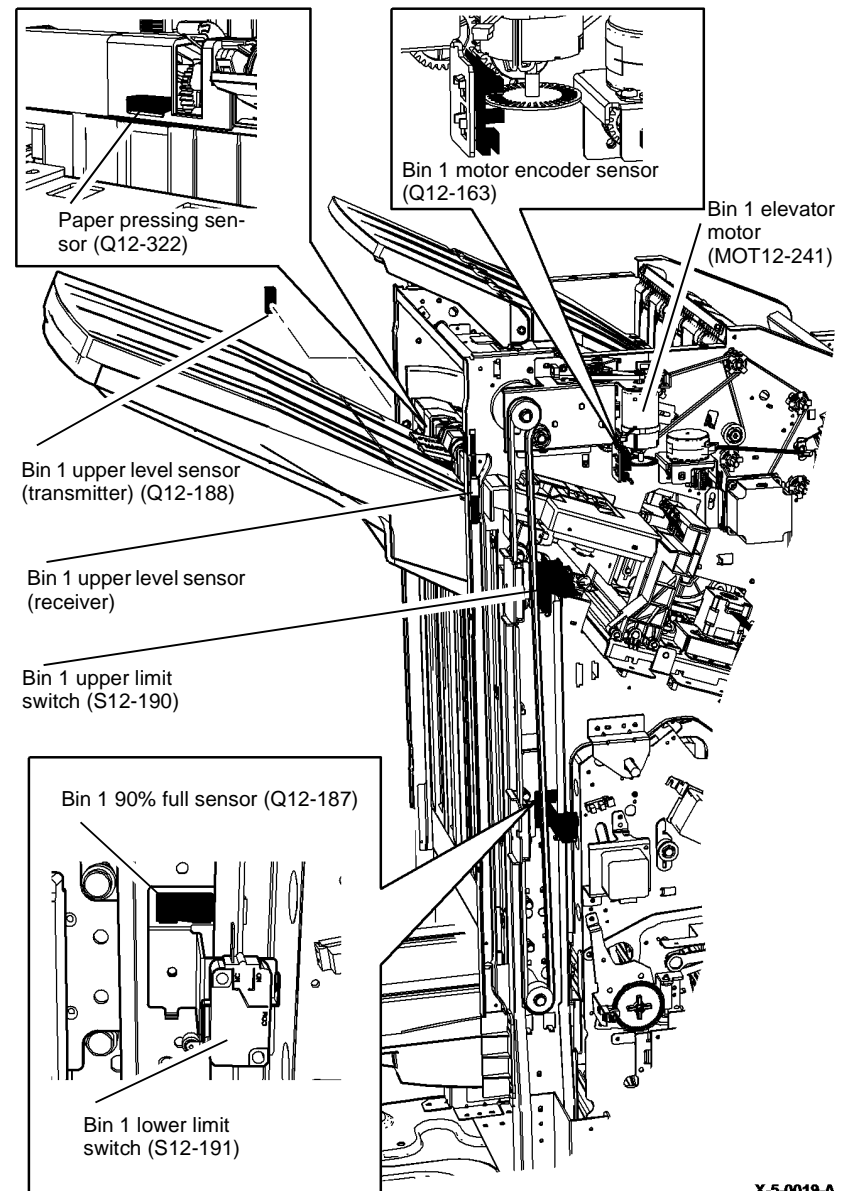


Figure 18 Ejector roll components

Stacker

This section covers bin 1 tray movement and control. As the bin fills, the tray moves down to maintain the top of the stack at the correct level. This is controlled by the bin 1 upper level sensor, which is in two parts, and also by the paper pressing sensor that senses the top edge of the rear wall of the stack of paper. If the paper stack is flat, the paper pressing sensor will control the stack height, and if the paper stack is curved, the bin 1 upper level sensor will detect the top of the stack and control its height. There is a 90% full sensor, used to warn the user that the bin is nearly full, and there are upper and lower limit switches, to keep the tray within its allowable range of movement. The active components comprising the stacker are:

- Bin 1 elevator motor, MOT12-241. A DC motor, located on the rear frame. This motor lifts and lowers the paper stack via a gear chain, driving two toothed belts. In the forward direction, this motor drives the stack down. In the reverse direction, the stack is driven up. Refer to [Figure 19](#).
- Bin 1 motor encoder sensor, Q12-163. A standard flag, encoder-disc sensor, sensing the rotation of the bin 1 elevator motor. Refer to [Figure 19](#).
- Bin 1 upper level sensor, Q12-188 - Consisting of two sensors, located in the frame at the front and the rear of the tray. The rear sensor is used as the receiving sensor, while the front sensor is used as the transmitter sensor. Refer to [Figure 19](#).
- Paper pressing sensor, Q12-322. A reflective sensor, located beneath the ejector front cover. This sensor detects the top of the rear wall of the paper stack. Refer to [Figure 19](#).
- Bin 1 90% full sensor, Q12-187. A flag sensor, located on the rear frame and mounted on the same bracket as the lower limit switch. The bracket has two possible positions; the lower position, used when a tri-folder module is not installed, and the upper position, used when a tri-folder is present. This sensor is actuated by a flag on the bin 1 rear bar lift bracket. Refer to [Figure 19](#).
- Bin 1 upper limit switch, S12-190. A micro switch, located on the rear frame. This switch is actuated when the tray is above its normal level of operation. When this switch is actuated, the reverse, upwards, direction of the elevator motor is disabled, but the motor is allowed to drive the stack down. Refer to [Figure 19](#).
- Bin 1 lower limit switch, S12-191. A micro switch, located on the rear frame and mounted on the same bracket as the 90% full sensor. The switch is actuated when the tray is at its lowest allowable limit of operation. When this switch is actuated, the forwards, downwards, direction of the elevator motor is disabled, but the motor is allowed to drive the stack up. Refer to [Figure 19](#).



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Figure 19 Stacker components

Hole Punch

The hole punch is an optional module, providing 2 or 3 hole options, 4 hole, Swedish 4 hole and Legal 2 hole. Each option is provided as a kit, easily installed, using a knurled thumb screw. When the hole punch module is not installed, a blanking assembly is fitted in its place. When the hole punch is installed, the punch present link is detected at power on by the HVF PWB, and the hole punch is acknowledged on the UI. The active components of the hole punch are:

- Punch head motor, MOT12-244. A DC motor, driving the punch head to operate all punches simultaneously, via eccentric cams. Refer to [Figure 20](#).
- Punch head home sensor, Q12-194. A flag sensor, detecting the punch head in the home position, via a notched, cylindrical flag at the end of the cam shaft. Refer to [Figure 20](#).
- Punch unit motor, MOT12-245. A stepper motor, driving the punch unit between the home and 'paper edge detected' positions. Refer to [Figure 20](#).
- Punch unit home sensor, Q12-114. A flag sensor, detecting the punch unit in the home, (outboard), position. Refer to [Figure 20](#).
- Punch sensor 1, Q12-078. A reflective sensor, detecting the front, (outboard), edge of 8.5 x 11 inch LE fed paper. The punch unit motor MOT12-245, drives the punch unit forwards until the paper edge is detected. The punch unit is then in the correct position for the punch head to operate. Refer to [Figure 20](#).
- Punch sensor 2, Q12-075. A reflective sensor, detecting the rear, (inboard), edge of 8.5 x 11 inch SE fed paper. The punch unit motor MOT12-245, drives the punch unit forwards until the paper edge is detected. The punch unit is then in the correct position for the punch head to operate. Refer to [Figure 20](#).
- Punch sensor 3, Q12-076. A reflective sensor, detecting the rear, (inboard), edge of A4 LE fed paper. The punch unit motor drives the punch unit forwards until the paper edge is detected. The punch unit is then in the correct position for the punch head to operate. Refer to [Figure 20](#).

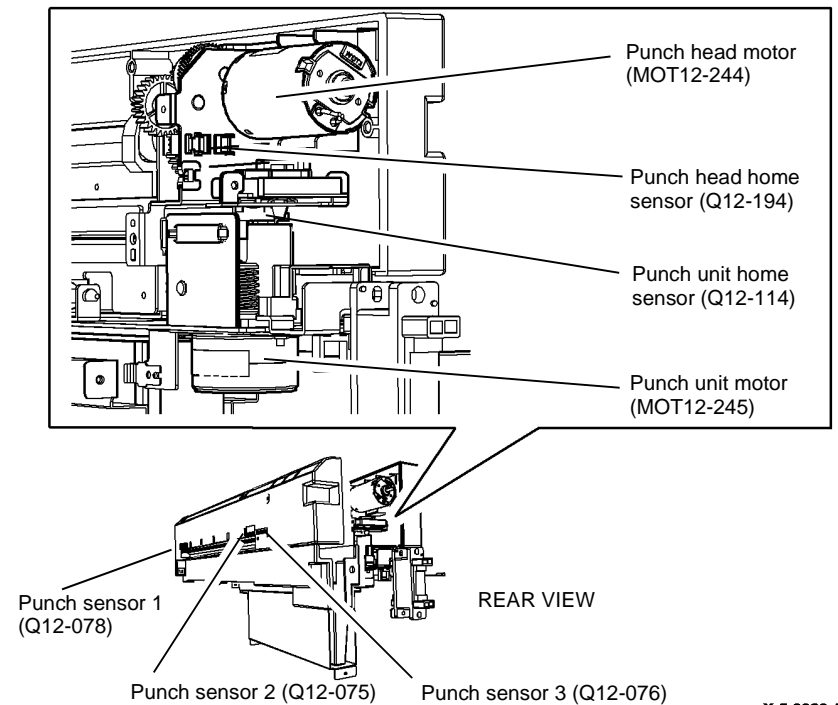
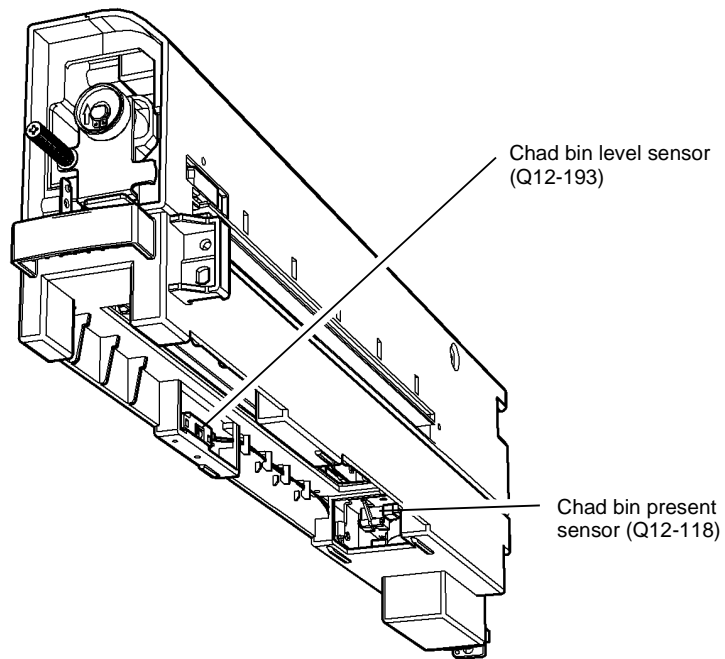


Figure 20 Hole punch components

- Chad bin present sensor, Q12-118. A flag sensor, detecting the presence of a chad bin, under the hole punch module. Refer to [Figure 21](#).
- Chad bin level sensor, Q12-193. A reflective sensor, detecting the presence of chad, through a hole, high in the side of the chad bin. Refer to [Figure 21](#).



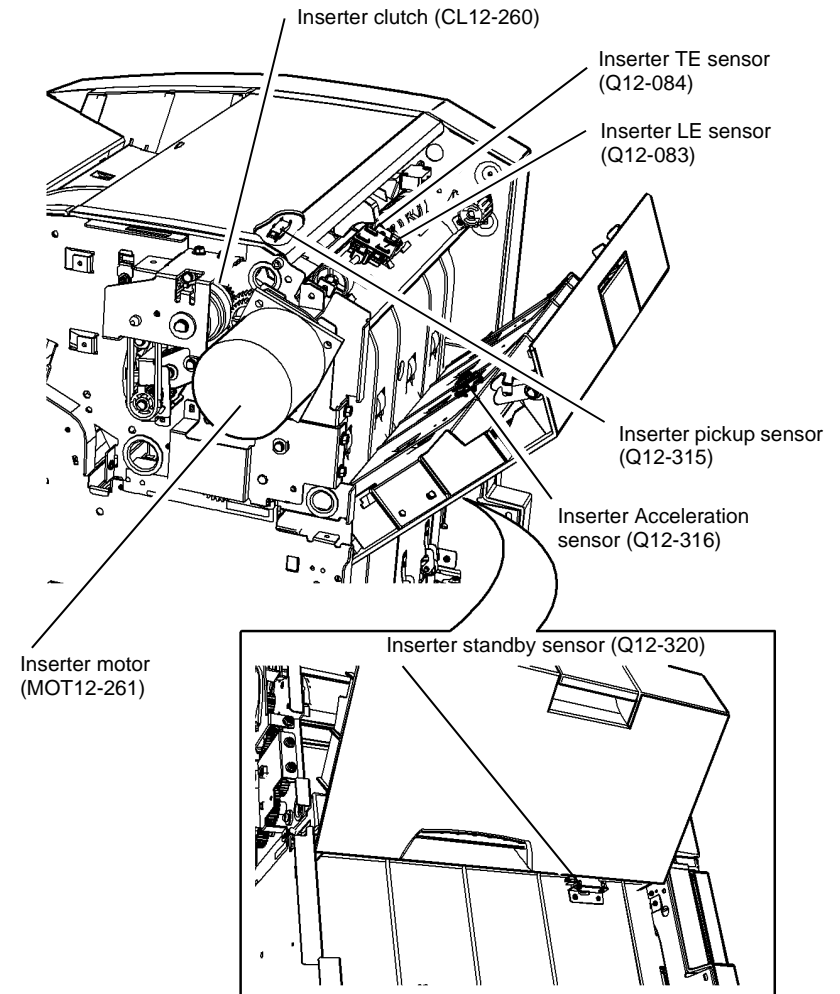
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Figure 21 Chad bin components

Tray 7 Inserter

The inserter enables the user to insert a sheet at a pre-defined point in a set. For example it may be used to insert cover sheets or separators. The media inserted can be hole-punched, stapled or folded, as required. The active components of the Inserter are:

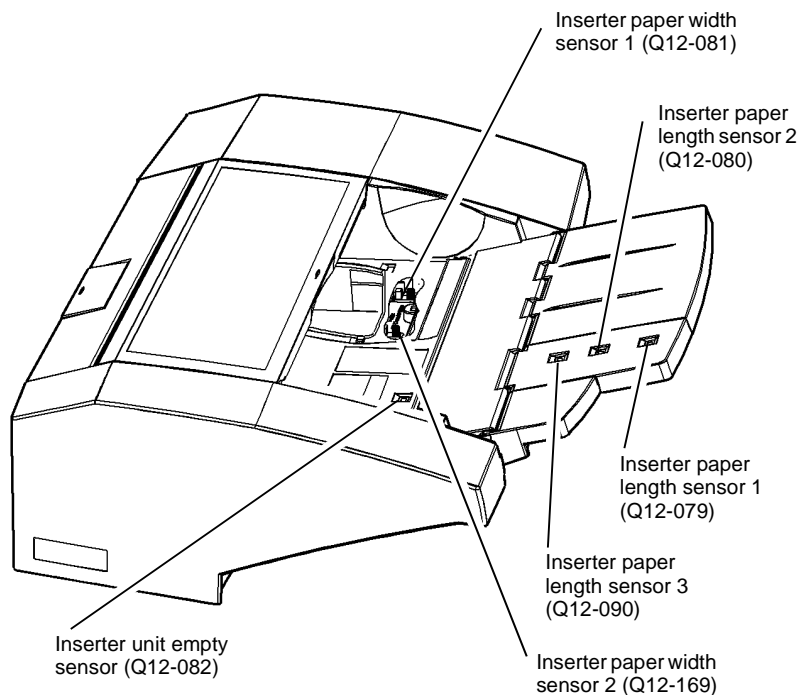
- Inserter motor, MOT12-261. A stepper motor, located at the rear of the inserter. This motor runs forward to drive the paper tray up and to feed the paper. The motor runs in reverse to drive the paper tray down. This is a variable speed motor, under the control of the software. The variable speed is used to synchronize the inserted media with the printed sheets coming from the IOT, and compensates for any speed mis-match. In the forward direction, this motor turns the retard roll in the reverse direction, via a torque limiter. The retard roll thus acts as a retard pad, continually renewing its point of contact with the paper, thereby increasing its life and effectiveness. Refer to [Figure 22](#).
- Inserter clutch, CL12-260. Located at the rear of the inserter, this clutch passes the drive to the feed roll and nudger roll. Refer to [Figure 22](#).
- Inserter pickup sensor, Q12-315. A reflective sensor, located on the underside of the inserter top cover. The pickup sensor controls the electric clutch to start feeding. Refer to [Figure 22](#).
- Inserter TE sensor, Q12-084. This is a reflective sensor, located mid-module, immediately in front of the feed roll. The pickup sensor detects the trailing edge of the sheet, to control the electric clutch and is part of the speed compensation system. Refer to [Figure 22](#).
- Inserter LE sensor, Q12-083. A reflective sensor, located mid-module, immediately after the feed roll. The paper path sensor detects the leading edge of the sheet, to verify that the sheet was successfully fed. Refer to [Figure 22](#).
- Inserter acceleration sensor, Q12-316. A reflective sensor, located behind the inserter left hand door. This sensor detects the leading edge of the sheet and operates together with the inserter LE sensor, to determine the speed of the paper. When the speed has been measured, the information is used to control the speed of the inserter motor. Refer to [Figure 22](#).
- Inserter standby sensor, Q12-320. A reflective sensor, located on the HVF vertical transport, below the inserter. It senses the leading edge of the sheet passing into the HVF from the inserter and provides the final go/wait information, for feeding the sheet into the HVF at the correct inter-document gap (IDG). Refer to [Figure 22](#).



X-5-0022-A

Figure 22 Inserter paper path components

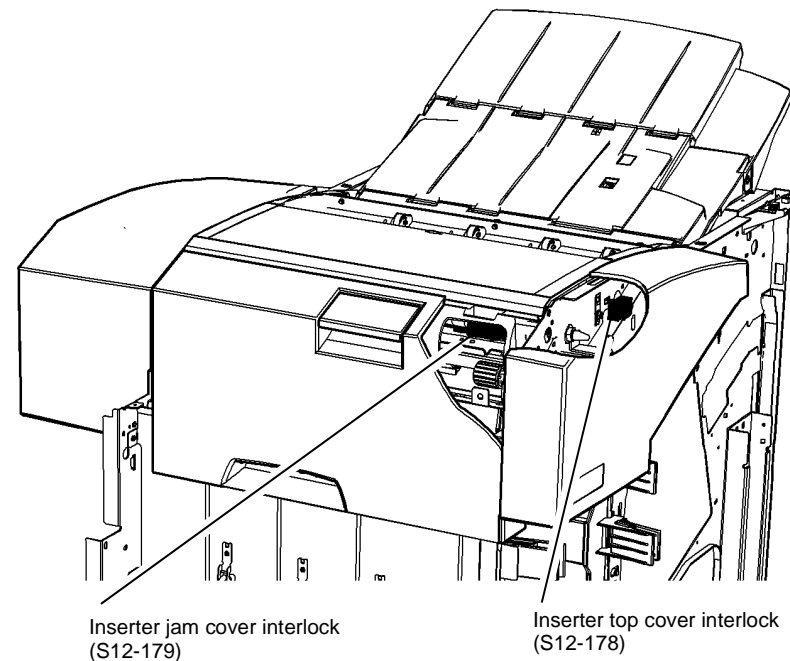
- Inserter unit empty sensor, Q12-082. A reflective sensor, located on the inserter paper tray. This sensor detects the presence of paper in the tray. In normal operation, once this sensor detects no paper in the tray, the tray lowers after approximately two seconds. Refer to [Figure 23](#).
- Inserter paper length sensor 1, Q12-079. A reflective sensor, located on the sensor tray. It detects paper longer than 203 x 330mm (8 x 13 inches). Refer to [Figure 23](#).
- Inserter paper length sensor 2, Q12-080. A reflective sensor, located on the sensor tray. It detects paper longer than 203 x 280mm (8 x 11 inches). Refer to [Figure 23](#).
- Inserter paper length sensor 3, Q12-090. A reflective sensor, located on the sensor tray. It detects paper less than 203 x 280mm (8 x 11 inches). Refer to [Figure 23](#).
- Inserter paper width sensor 1, Q12-081. The detector incorporates two width sensors. Width sensor 1 is a flag sensor, actuated by the paper width guide position. The sensor changes state at 285mm, (11 1/4 inches) and 210mm, (8 1/4 inches) paper widths. Refer to [Figure 23](#).
- Inserter paper width sensor 2, Q12-169. A flag sensor, actuated by the paper width guide position. The sensor changes state at 273mm, (10 3/4 inches) paper width. Refer to [Figure 23](#).



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Figure 23 Inserter paper sensors

- Inserter jam cover interlock, S12-179. A micro switch, located behind the top inside cover. This switch is wired in series with the inserter top cover interlock, to supply +24V to the inserter. When both interlocks are closed, the +24V LED on the inserter PWB is lit. Refer to [Figure 24](#).
- Inserter top cover interlock, S12-178. A micro switch, located behind the front cover. This switch is wired in series with the inserter left hand door interlock, to supply +24V to the inserter. When both interlocks are closed, the +24V LED on the inserter PWB is lit. Refer to [Figure 24](#).



X-5-0024-A

Figure 24 Inserter interlocks

Booklet Maker Module

The booklet maker module receives, compiles, staples, folds and delivers finished booklets to bin 2. Booklets can be up to 15 sheets, including a cover.

Compiling and Tamping

When a booklet maker job is requested, but prior to the first sheet arriving at the booklet maker, the BM backstop motor, MOT12-255 is energized to move the backstop assembly to a preset receiving position based on the paper size value provided by the media path driver PWB. The positioning of the backstop is measured in stepper motor pulses from the BM guide home sensor, Q12-204.

The booklet maker module receives sheets from the lower diverter gate and through the BM entry roll nips. As each sheet is fed through the entry nip, it is driven downwards until it rests against the backstop.

The BM entry roll has smaller hard rollers and larger soft foam rollers. As the lead edge of each sheet touches the backstop, the trail edge is released by the hard roller nip, but is still held by the soft roller, which pushes the sheet under the roller and against the right side of the booklet compiler tray. This ensures that the trail edge of every compiled sheet is always located on the same side of the following sheet, thus eliminating both stubbing and sheet order errors.

Cross process registration is maintained by using two tampers, which move in opposite directions simultaneously, and are driven by the BM tamper 1 motor, MOT 12-256. Tamping aligns the centre of the sheets with the centre of the booklet compiler tray.

The tamping position is a preset number of motor steps from the BM tamper 1 home sensor, Q12-205 and is based on the paper size of the compiled sheet, provided by the media path driver PWB.

The tampers are moved from the home position to a ready position stored in NVM, when the lead edge of the first sheet in the set is detected at the BM entry sensor, Q12-089.

As each sheet enters the booklet compiler tray, the tampers are moved from the ready position to the tamping position, then returned to the ready position. For the last sheet of the set, the tamping stroke is repeated once more. After the last sheet in a set is compiled and tamped, the tampers are moved to the home position.

The BM flapper is utilized when the tampers start their return stroke from the tamp position to the ready position. The BM flapper motor, MOT12-271 provides mechanical drive to the BM flapper and the position of the flapper is controlled by the flapper home sensor Q12-207. The fingers on the flapper push the sheet into the booklet tray to aid the registration and de-skewing process. The flapper rotates after each sheet is tamped. The flappers are then parked in the home position, so that the fingers on the flapper do not impede the next sheet fed into the booklet compiler tray.

The set is then ready to be moved into position for the next operation of stapling.

Backstop Movement

The BM backstop system consists of a backstop assembly, mounted on a near vertical slide driven by the BM backstop motor, MOT12-255, via a toothed belt. A flag mounted on the backstop assembly actuates the BM guide home sensor, Q12-204 to signal the home position of the backstop.

After the last sheet of the set has been received and compiled, the BM stack hold solenoids, SOL12-259 are energized to hold the set in place. The BM backstop motor then moves the backstop to the stapling position. The BM motor now performs a short up, then down to jog the set into place. After stapling, the BM backstop motor moves the backstop to the creasing position.

Booklet Stapling

Two BM staple head assemblies are mounted on a bracket, which can be pivoted open for staple jam clearance. The BM staple head carrier closed sensor, Q12-217 detects the closed position of the stapler bracket assembly.

When the staplers are actuated, two staples are placed in the centre of the compiled stack, spaced 120mm apart. The maximum capacity for the stapling and folding in the booklet maker is given in [Table 1](#).

Table 1 Booklet maker stapling and folding capacity

Media	Paper weight	Maximum No. of sheets	Maximum No. of booklet pages
Plain paper	60 to 80gsm (16 to 21lb bond)	15	60
Heavyweight	90gsm (24lb bond)	13	52
Heavyweight	120gsm (32lb bond)	10	40
Heavyweight	160gsm (43lb bond)	7	28
Heavyweight	216gsm (58lb bond)	5	20
Plain paper with heavyweight cover	60 to 80gsm (16 to 21lb bond) with 160gsm (43lb bond) cover	14 including 1 cover	56

Each stapler is cam driven by a DC motor and contains a home position switch. Each of the staplers also contain a low staples switch to inform the control logic of a low staples condition. The BM paper present sensor, Q12-170 is mounted on the stapler bracket assembly between the two staplers. This sensor is used to prevent the staplers being energized if there is no paper present in the booklet compiler tray, thereby preventing staple jams.

The stapling sequence operates as follows:

1. The tampers are energized to engage the stack and keep both edges in place.
2. After 50ms, the front stapler is energized.
3. After a further 80ms the rear stapler is energized.

This sequence prevents wrinkling of the paper and limits the load imposed on the power supply.

Once the staplers reach the home position, a dynamic brake is applied to prevent overrun. The stapler motor will be reversed if the home switch is not made, after the stapling operation, in an attempt to bring the stapler home and avoid a fault.

Folding and Creasing

The booklet creasing system consists of a crease blade, two pairs of crease rolls, a crease roll gate and the backstop assembly.

The crease roll gate is used to cover the entry nip into the crease rolls. This prevents sheets from coming into contact with the crease rolls during compiling. The crease roll gate is raised to expose the crease rolls, or lowered to cover the opening to the crease rolls, by the crease roll gate motor, MOT12-273. The home position (fully raised) is sensed by the BM crease roll gate home sensor, Q12-222.

After the stapling operation is complete, the backstop raises the stapled set to the fold position, so that the centre line of the set is directly in line with the crease blade. At the same time, the crease roll gate motor moves the crease roll gate up until it actuates the crease roll gate home sensor.

The BM crease roll motor, MOT12-253 is energized when the backstop reaches the fold position, and continues to run until 220ms after the trail edge of the folded book is detected at the BM exit sensor, Q12-213. An encoder wheel is mounted on the output shaft of the BM crease roll motor. The encoder wheel is read by the BM crease roll motor encoder sensor, Q12-216 to control the roll surface speed.

A stapled set is folded by the combined function of the crease rolls and the crease blade. The crease blade pushes the centre of the set into the crease rolls nip. The crease blade is driven by the BM crease blade motor, MOT12-252. The BM crease blade home sensor, Q12-214 and the BM crease blade motor encoder sensor, Q12-215 are used to monitor the location of the crease blade during the folding process.

During booklet folding, the crease blade moves from home position when the backstop reaches the fold position. The blade stroke is 36 pulses of the crease blade motor encoder sensor from the blade home position.

During banner sheet folding, a delay of 700ms from the trail edge at the BM entry sensor is used before the crease blade moves from the home position.

The crease blade is held at the fold position by a dynamic brake for 250ms to allow the banner sheet or stapled set to be drawn into the crease rolls. The BM crease blade motor is then reversed to drive the crease blade back to its home position as the crease rolls crease and feed the booklet. The BM exit sensor, Q12-213, located just after the crease rolls, detects jams. When the BM eject sensor is clear, the crease roll gate motor moves the crease roll gate down to cover the crease rolls.

For a booklet consisting of 10 or more sheets, or when handling 8.5 x 11 inch paper, folding is executed four times before ejecting to provide extra creasing.

Bin 2

After a booklet is folded, it is ejected onto bin 2 by the crease roll nip.

Bin 2 is mounted at the lower right side of the booklet maker, below bin 1. Bin 2 has two bail arms and two parallel conveyor belts over a flat surface. With the tray extension raised, bin 2 has a capacity of 10 booklets of 11-15 sheets, or 20 booklets of 6-10 sheets, or 30 booklets of 1-5 sheets. With the tray extension lowered, the booklets can be allowed to drop into a suitable box on the floor.

The BM eject sensor, located at the exit, provides control logic signals and monitors the paper path for jam detection and timing control for actuation of the BM conveyor belt drive motor.

When a booklet has been compiled, it passes under the BM eject sensor and pushes partially through the bail arm rollers. 200 ms after the lead edge is detected at the BM eject sensor, the BM conveyor belt drive motor, MOT12-274, is turned on and drives the two conveyor belts for a preset time dependent on the booklet size.

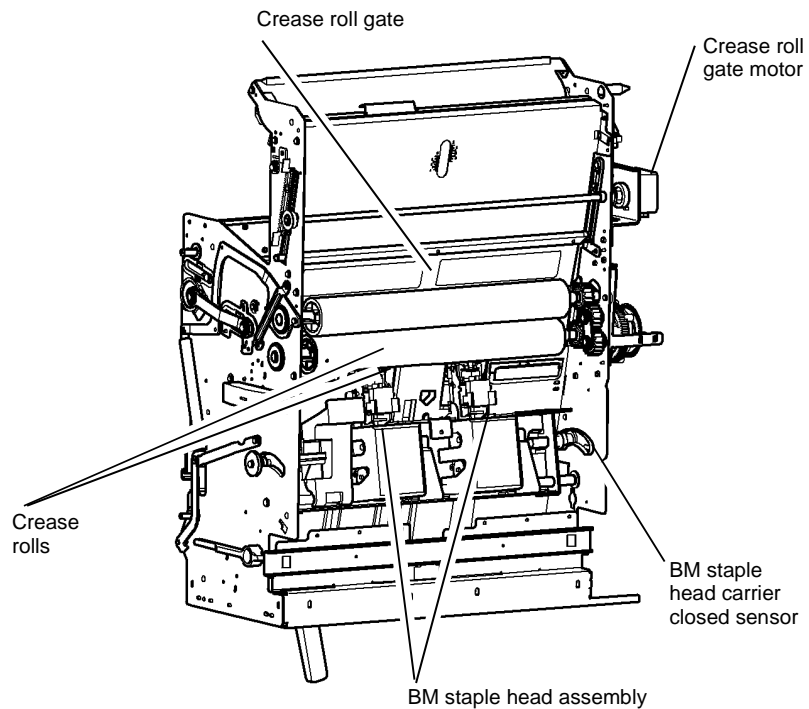
The BM bin 2 90% full sensor, Q12-206 is an optical sensor located at the right of bin 2 between the conveyor belts.

As the booklets travel along the conveyor belts, they will actuate the BM bin 2 90% full sensor. After 2000ms, the control logic will declare a 90% tray full condition. At this point a counter is set and the total number of books allowed after that point is determined by the number of books already on the tray. Any additional books allowed to be stacked is based on the number of times the BM eject sensor is actuated and the sizes of the books.

BM Paper Path Transport Motor

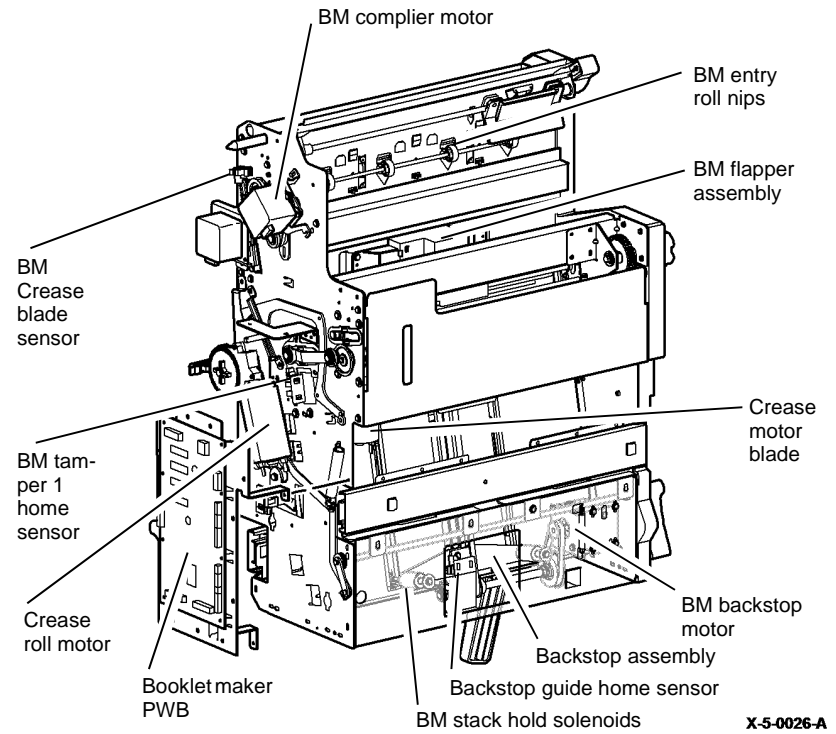
The BM compiler motor, MOT12-251 is driven at host speed and provides mechanical drive to the BM entry roll nip.

Refer to [Figure 25](#) and [Figure 26](#) for component location.



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Figure 25 Booklet maker module components (1)



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Figure 26 Booklet maker module components (2)

Tri-Folder

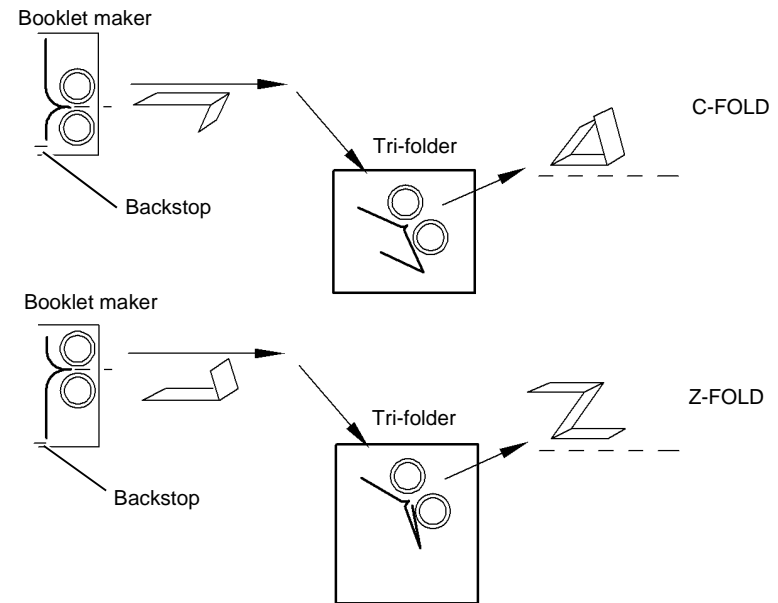
When the job does not require a tri-fold, the tri-folder becomes a straight-through paper path from the booklet maker to the output tray. When a tri-fold is requested, the tri-folder clutch, diverter solenoid, and for C-folds only, the assist gate solenoid are brought into use.

The tri-folder does not require a dedicated drive motor, but takes its motive power using a toothed belt and drive coupler, from the crease roll motor in the booklet maker. The drive coupler engages when the booklet maker is pushed into the home position. The belt turns as each sheet is folded and stops as each sheet leaves the tri-folder.

When the tri-folder is not installed, a shorting link fitted to PJ553 in the booklet maker PWB, simulates the tri-folder interlocks, to feed +24V to the booklet maker PWB.

The tri-folder works in conjunction with the booklet maker, to produce 'C' or 'Z' folds. The booklet maker makes the first fold, and passes the sheet to the tri-folder to make the second fold. One sheet at a time is folded, and the tri-folder can fold 60-120gsm, (15-30lbs) sheets.

Figure 27 shows how the C-folds and the Z-folds are formed. The difference lies in where the first fold is made in the sheet, by the booklet maker. For a C-fold, the backstop is raised to produce a fold near the leading edge of the sheet. For a Z-fold, the backstop is lowered to produce a fold near the trailing edge of the sheet, effectively inverting the sheet.



X-5-0027-A

Figure 27 C and Z folds

The active components of the tri-folder are:

- Tri-folder entry sensor, Q12-164. A flag sensor, located in the input paper guide. This sensor detects the sheet entering the tri-folder from the booklet maker. Refer to [Figure 28](#).
- Crease roll clutch drive, CL12-269. The clutch is located at the rear of the tri-folder, and actuates to drive the tri-folder crease rolls via a toothed belt. Refer to [Figure 28](#).
- Tri-folder diverter solenoid, SOL12-267. The solenoid is located at the rear of the tri-folder, and diverts single, tri-fold job sheets into the folder mechanism. It is actuated immediately after the drive belt from the BM starts to turn, and de-actuates as each sheet leaves the tri-folder. Refer to [Figure 28](#).
- Tri-folder assist gate sensor, Q12-165. A flag sensor, located in the roller assembly, and is mounted on the adjustable backstop plate. This sensor detects the sheet entering the roller assembly to be folded. Refer to [Figure 28](#).
- Tri-folder assist gate solenoid, SOL12-268. The solenoid is located at the rear of the tri-folder. The assist gate solenoid is only actuated during C-folds, to assist the first folded flap into the crease rolls. It actuates as the sheet enters the crease rolls and ensures that the trailing edge of the first fold stays inside the crease of the second fold. Refer to [Figure 28](#).

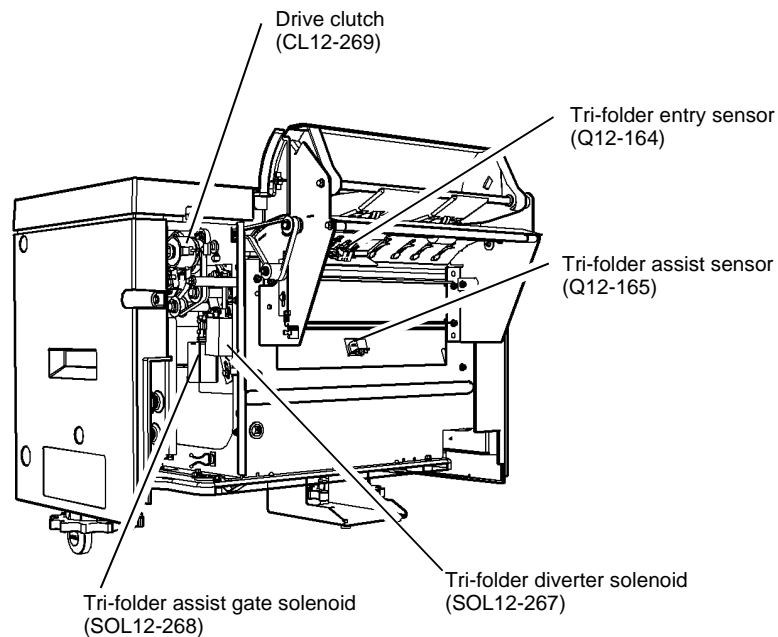


Figure 28 Entry sensor and folding components

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- Tri-folder exit sensor, Q12-166. A flag sensor, located in the exit paper guide. This sensor detects the sheets as they leave the tri-folder. Refer to [Figure 29](#).

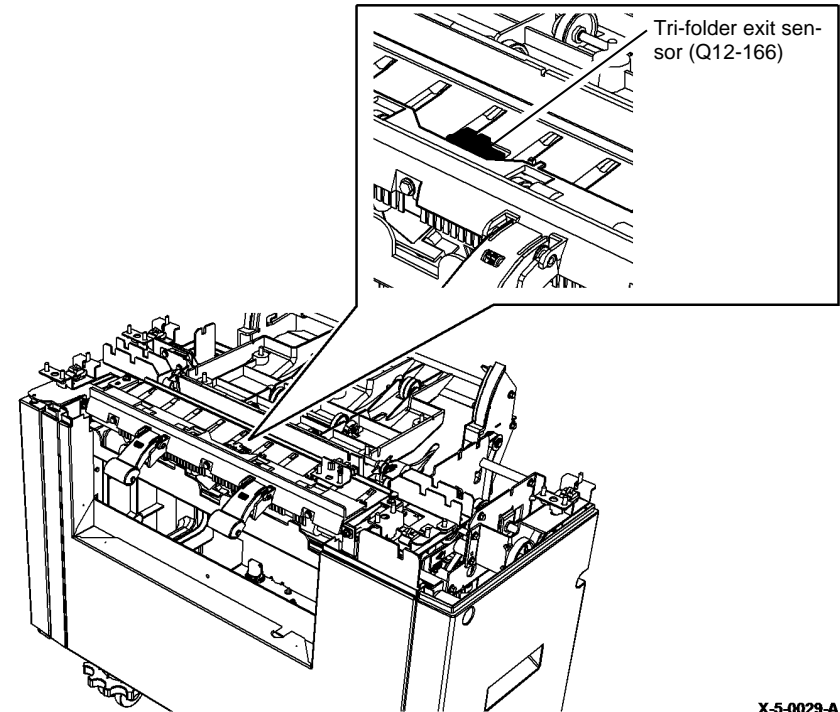
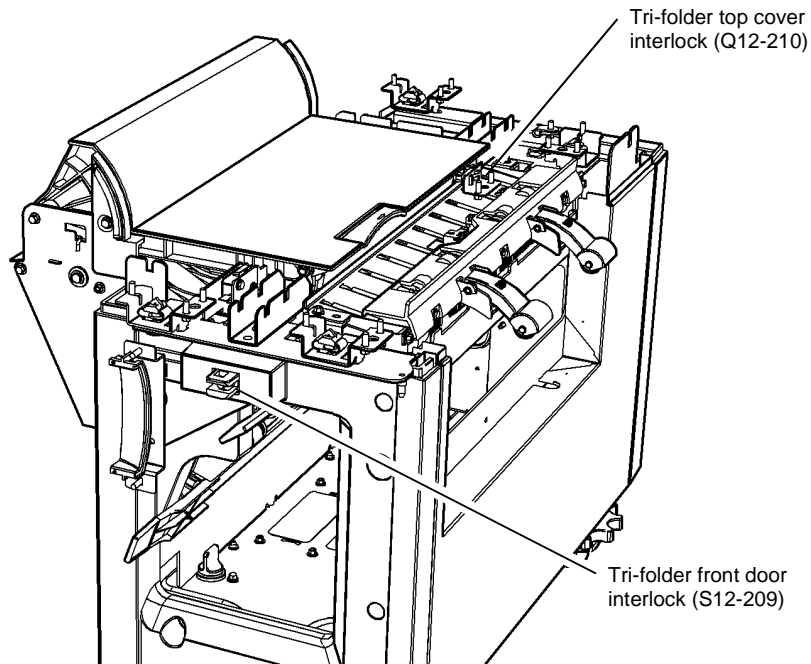


Figure 29 Tri-folder exit sensor

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- Tri-folder top cover interlock switch, S12-209. A single-pole micro switch, located at the front of the tri-folder. This switch is connected in series with the front door interlock switch, S12-209. When both switches are made, the +24V supply is fed to the tri-folder PWB and the BM PWB. The BM PWB has +24V LED indication, as described in [Power/Interlocks](#). Refer to [Figure 30](#).
- Tri-folder top cover interlock sensor, Q12-210. A flag sensor, located towards the rear of the tri-folder top cover. This sensor detects whether the top cover is open or closed. Refer to [Figure 30](#).
- Tri-folder front door interlock switch, S12-209. A double-pole switch, located behind the top of the tri-folder front door. One pole of this switch is connected in series with the tri-folder top cover interlock switch. When both switches are made, the +24V supply is fed to the tri-folder PWB and the BM PWB. The second pole of this switch detects whether the tri-folder front door is open or closed. Refer to [Figure 30](#).



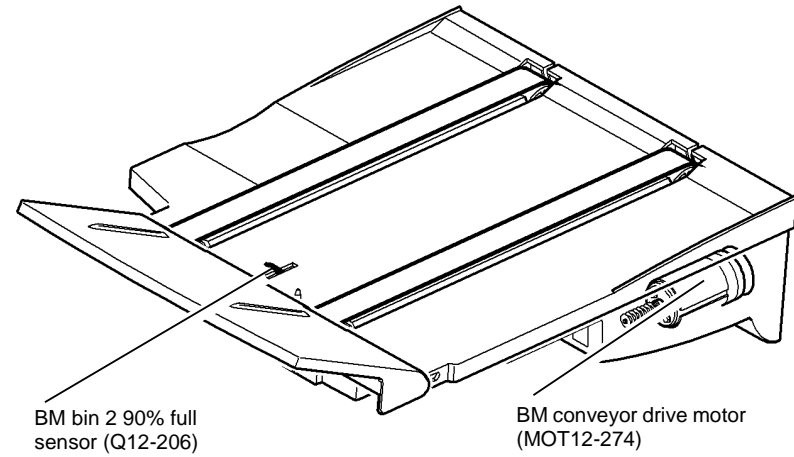
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Figure 30 Tri folder interlock components

Booklet Maker Bin 2

Bin 2 receives the folded output from the tri-folder, and the booklets from the booklet maker and/or the tri-folder module. The components associated with this tray are:

- BM conveyor drive motor, MOT12-274. A stepper motor, driving the conveyer belts. Refer to [Figure 31](#).
- Bin 2 90% full sensor, Q12-206. A flag sensor, detecting a nearly-full tray. Refer to [Figure 31](#).



X-5-0031-A

Figure 31 Bin 2 components

Fax

Overview

The common interface Fax (CIF) is an optional 1 or 2 line fax module located in the card cage with the single board controller (SCB) and the hard disk drive (HDD). Refer to [Figure 1](#)

The fax PWB is fitted with either one or two MultiTech MT9234SMI modems. The PWB supports fax modem reset control, presence indicator, audio volume control and board revision information. The Fax PWB is connected directly to the SCB PWB, and is controlled by software running on the SBC PWB.

Fax functionality is selected and controlled via the UI.

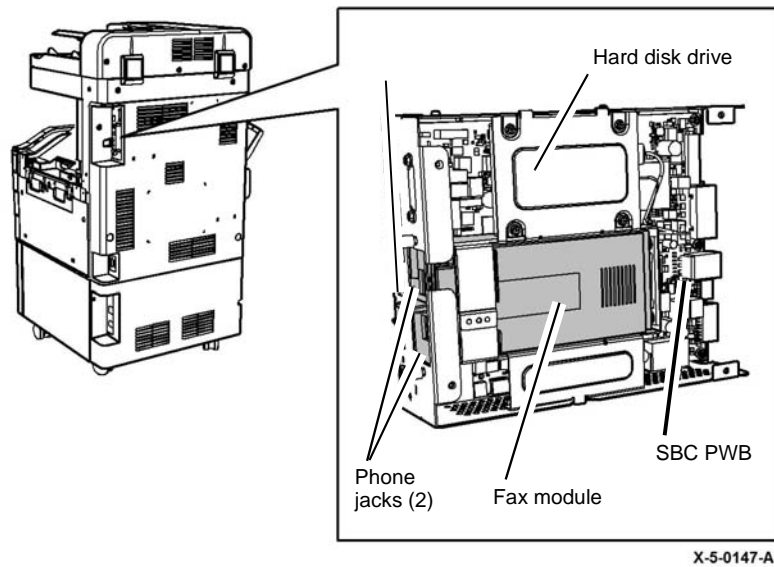


Figure 1 Fax location

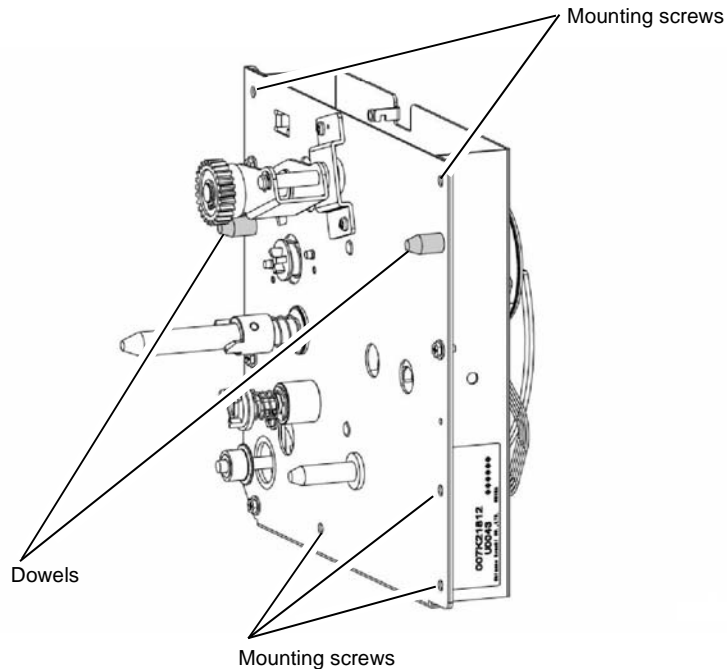
Main Drive Module

Overview

There are 2 separate drive modules, a 45-55 ppm module and a 65-90 ppm module.

- The 2 machine variants AltaLink® B8045/B8055 and AltaLink® B8065/B8075/B8090 have differing main drive modules with the same fit and identical harnessing.
- Motor speeds on the 45/55ppm variant are controlled direct from the main drive module clock.
- Motor speeds on the 65/75/90ppm variant are under software control from the IOT PWB.
- The 45/55 ppm module runs at a process speed of 257 mm/s. Changing the inter document gap enables 45 or 55 prints per minute.
- The 65/75/90 ppm module runs at 3 process speeds controlled by the IOT.
 - 65 ppm - 300mm/s
 - 75 ppm - 340mm/s
 - 90 ppm - 362mm/s

Refer to [Figure 1](#). The main drive module is mounted directly to the rear frame of the IOT and is located by 2 dowels and secured by 6 screws.



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Figure 1 Main Drive Module mounting

The main drive module has three motors:

- Fuser drive motor
- Cartridge drive motor
- Registration motor

Description of Operation

Fuser Drive Motor

The fuser drive motor is a brushless DC motor and is used to provide drive to the fuser and the post fuser drive components. The fuser motor provides drive to:

- The fuser through a swing-arm gear drive mechanism.
- The post fuser paper path and exit paper path through a belt and drive pulley.

Registration Motor

A stepper motor is used to rotate the registration shaft. It is controlled by the IOT PWB. It is switched on after a print request and off after a controlled time.

The registration motor provides drive to the registration drive shaft via a drive gear.

Print Cartridge Drive Motor

A brushless DC motor is used to rotate the photoreceptor, the developer, and the toner recycle auger in the process direction. It is controlled by an enable signal from the IOT PWB in the form of a logic signal. It is switched on after a print request and off after a controlled time.

The cartridge drive motor provides drive to:

- The photoreceptor through a shaft and drive coupling.
- The developer through a drive coupling.
- The toner recycle auger through a drive coupling.

Electrical Connections

Refer to [Figure 2](#). The only inputs to the main drive module are electrical.

The AltaLink® B8045/B8055 and the AltaLink® B8065/B8075/B8090 variants use the same harnessing to the main drive module.

The Low Voltage Power Supply (LVPS) provides the following via PJ656:

- +24V (used on both speed variants)
- +24V RET (used on both speed variants)
- +5V logic supply (not connected)
- Ground (DC Return) (not connected)

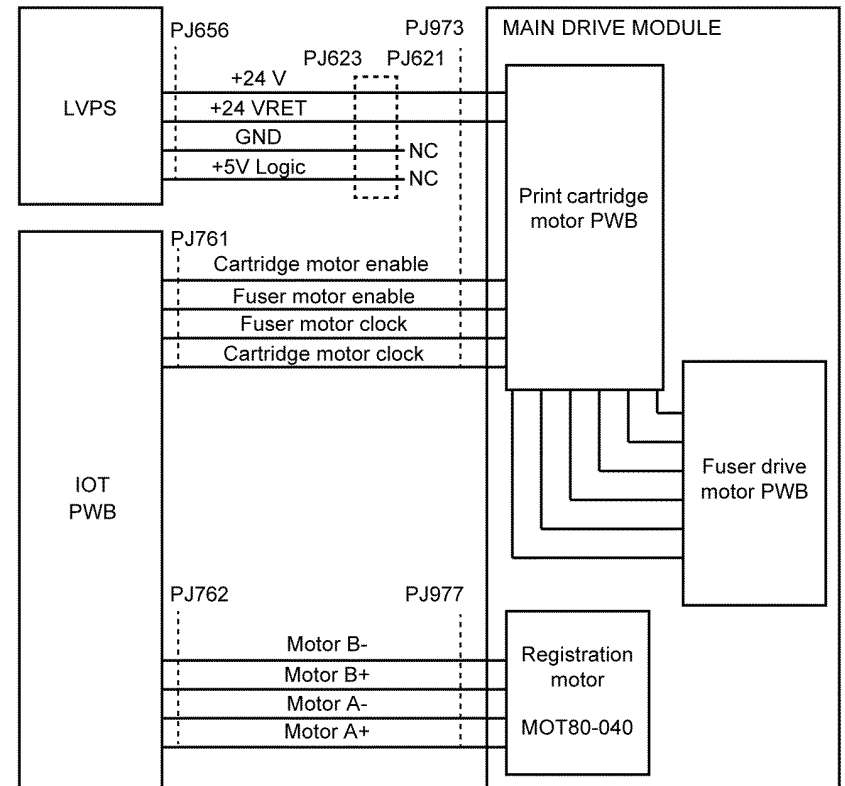
The IOT PWB provides the following via PJ761:

- Fuser drive motor enable signal (used on both speed variants)
- Cartridge motor enable signal (used on both speed variants)
- Fuser motor clock (used on 65/75/90ppm variant only)
- Cartridge motor clock (used on 65/75/90ppm variants only)

The IOT PWB provides the following via PJ762:

- Registration motor pulse A+
- Registration motor pulse A-
- Registration motor pulse B+
- Registration motor pulse B-

Refer to [Overview](#) for a full explanation of how the speeds are achieved.



TX-5-0071-A

Figure 2 Circuit diagram

Component Locations

Figure 3 shows the location of the main drive motors in the main drive module. The main drive module on the AltaLink® B8045/B8055 and the AltaLink® B8065/B8075/B8090 variants are visually identical.

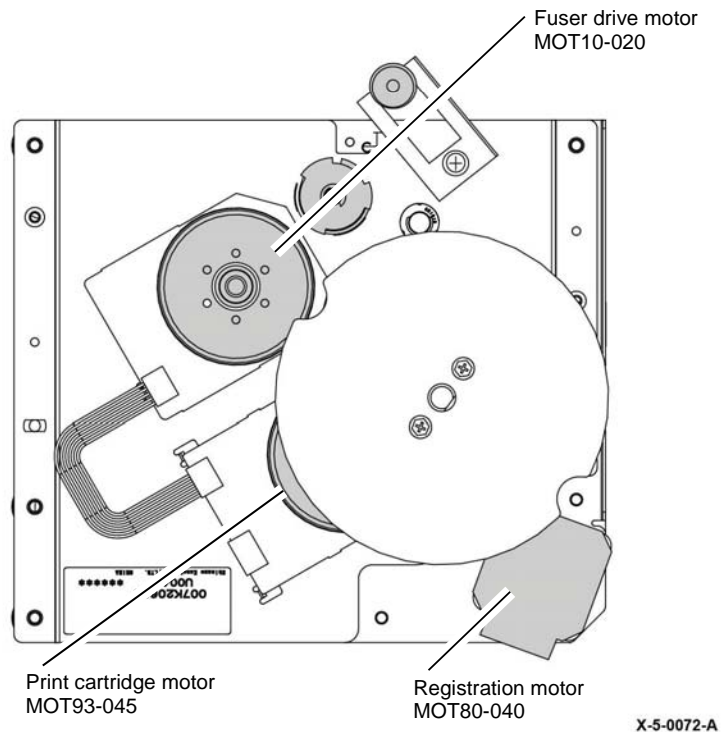


Figure 3 Main drive module

Figure 4 shows the location of the drive gears and couplings driven by the main drive motors.

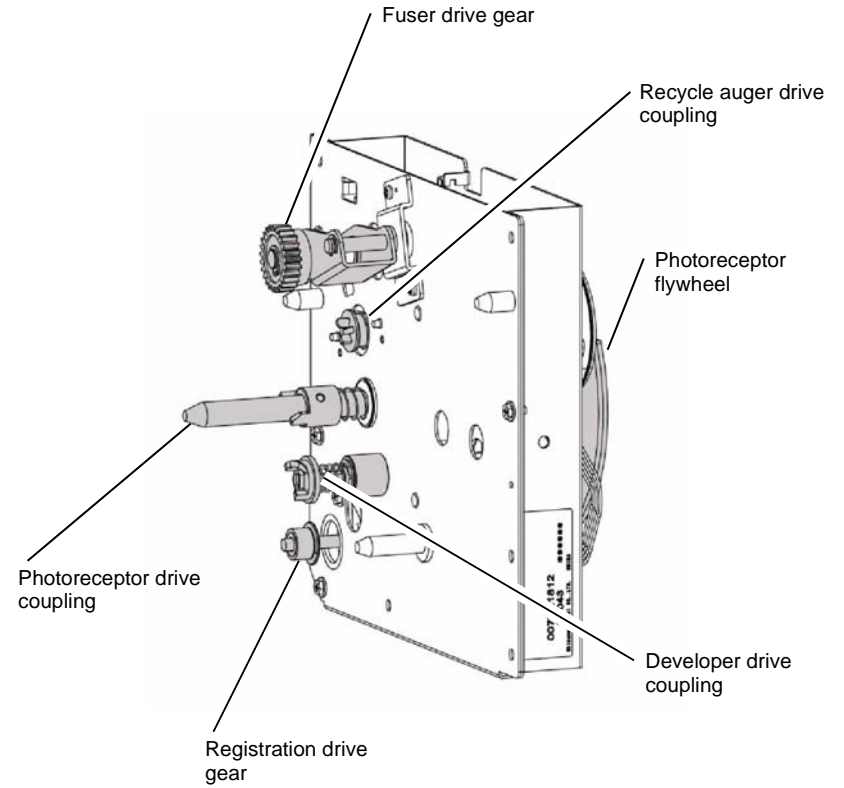
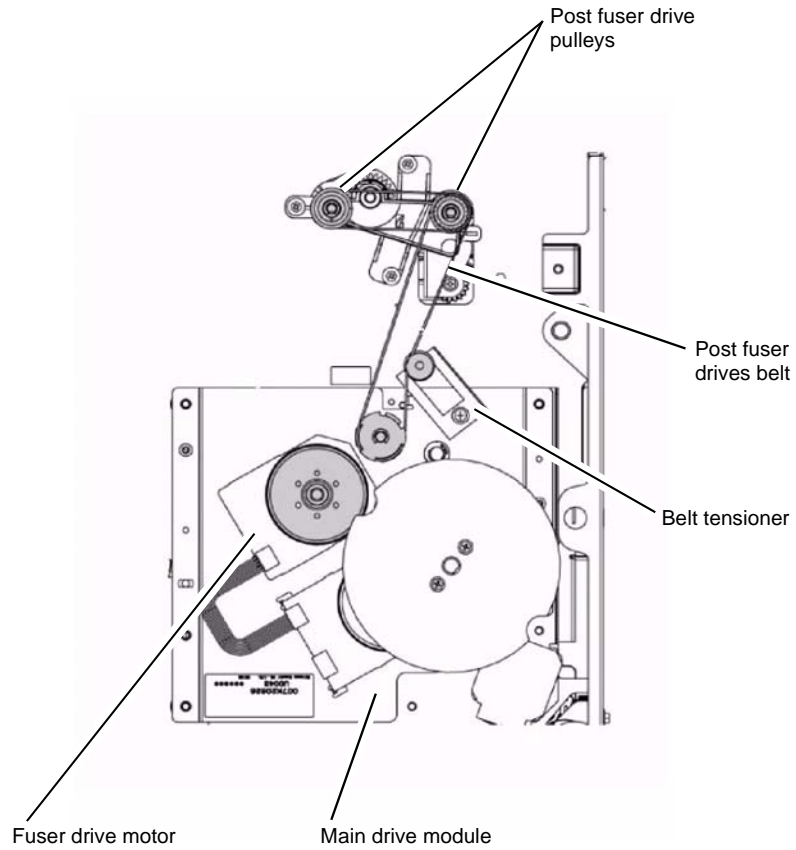


Figure 4 Main drive components

Figure 5 shows the post fuser paper path drive.



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Figure 5 Post fuser paper path drive components

Scanner Module

Overview

The scanner module and the single pass document handler (SPDH) form the image input terminal (IIT) for the AltaLink® B8090F machines. (See also [SPDH Overview](#).)

The scanner module is designed to support monochrome copying and color or greyscale scan to file/email operations, and conversion of the optical image into a digitised video signal that is then sent to the SBC PWB for image processing.

The scanner module automatically detects the size of the original placed on the platen. Both inch and metric size paper are detected without changing any machine settings. Document registration on the document glass is from the left rear corner of the glass. Documents up to A3 (11 x 17 inches) can be accommodated.

The 600dpi scanner uses a contact image sensor. The optics module has integral LED illumination.

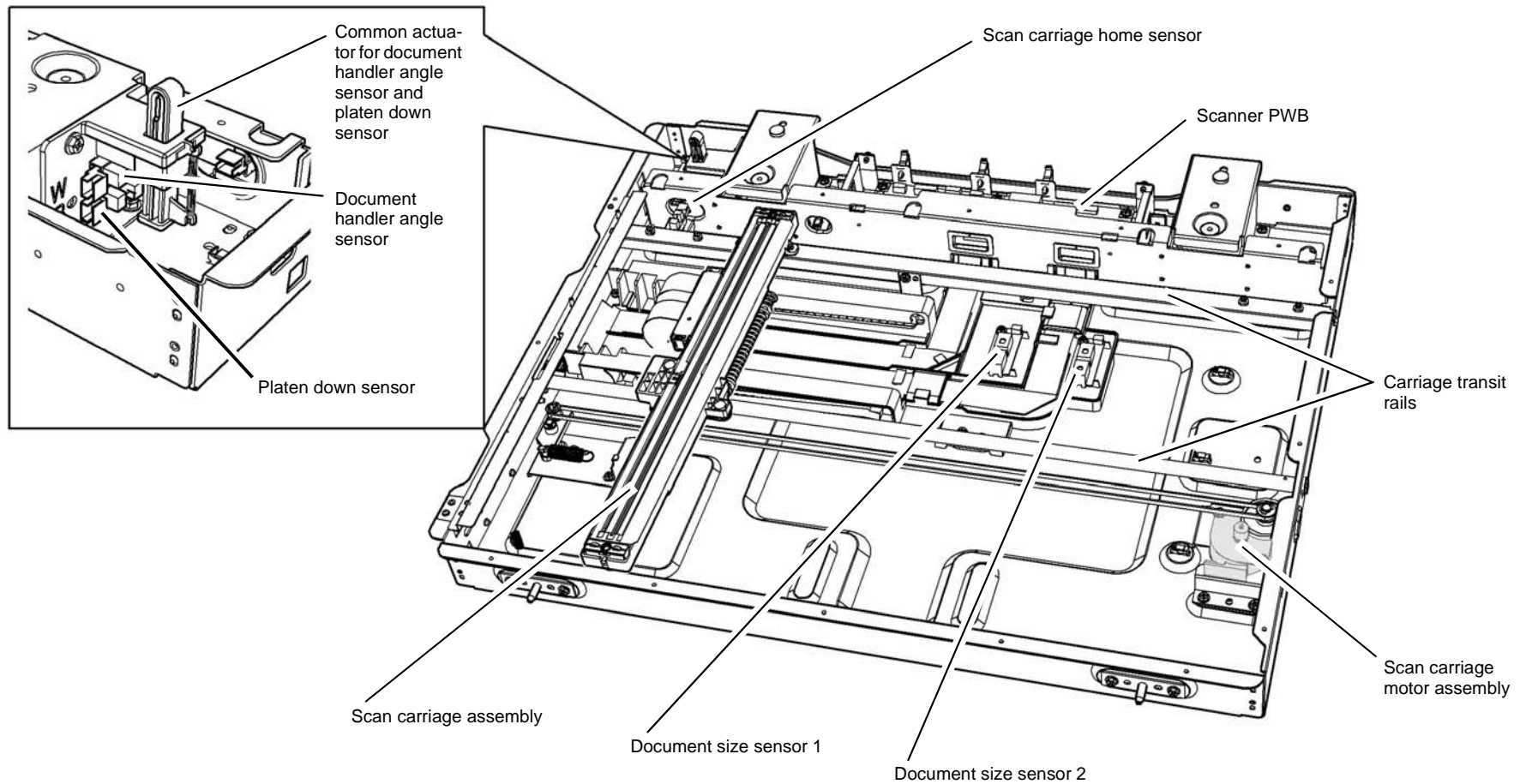
The scanner has two modes of operation:

- CVT mode, where the scan carriage assembly stays fixed in place while documents are moved over it by the SPDH.
- Document glass mode, where the document remains stationary while the scan carriage moves beneath the document. The scanner uses mechanical drives to scan documents on the document glass, or to position the scan carriage under the CVT glass, when the SPDH is used in CVT mode.

For duplex copy jobs the scanner module is required to work in conjunction with the side 2 scan assembly of the SPDH. In this duplex mode as well as operating in its own CVT mode the scanner PWB will also receive video data from the SPDH side 2 scan assembly. Side 1 and side 2 data is then sent simultaneously to the SBC PWB.

To the front of the scanner enclosure are the scan carriage assembly, scan carriage motor assembly, scan carriage drive belt and pulley system, document size sensors 1 and 2, and the scan carriage transit rails. [Figure 1](#).

To the rear of the scanner enclosure, between the hinges, is the the electronics enclosure tray which houses the scanner PWB within electromagnetic emissions (EME) shielding. To the left of the electronics enclosure are the scan carriage home sensor, document handler angle sensor and platen down sensor.



X-5-0153-A

Figure 1 Scanner module

Scan Carriage Assembly

The scan carriage assembly slides on front and rear rails. Drive to the scan carriage assembly is provided by the scan carriage drive belt. The drive belt is driven by the scan carriage motor assembly on the right side of the scanner cavity. The scan carriage is clamped to the drive belt, so that rotation of the scan carriage motor causes the scan carriage assembly to translate to the left or right. The scan motor power and control comes from the scanner PWB located in the electronics enclosure of the scanner module. [Figure 1](#).

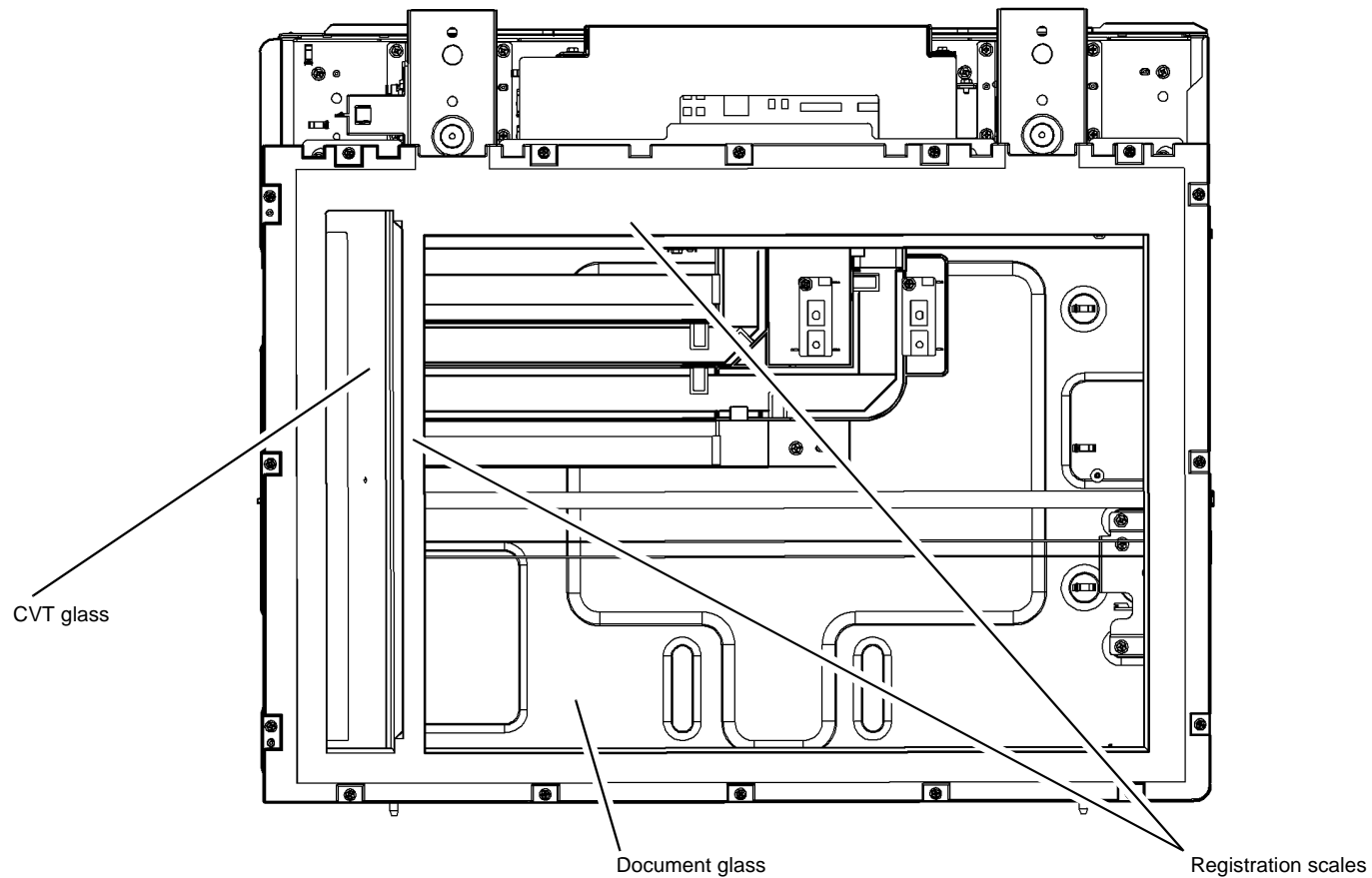
There are two ribbon cables. One supplies power from the scanner PWB to the CIS module. The second cable carries image data from the CIS module to the scanner PWB.

Calibration

Calibration Strip

A white calibration strip is located on the under side of the top cover assembly, between the CVT and the document glass. This white strip stretches from the front to the back of the top cover assembly, providing a scannable area for the full width of the scan carriage assembly, [Figure 2](#).

The calibration strip provides a uniform reference for the video control system, which uses it to calibrate the video data. Calibration is necessary because tolerance variations in the scanner may result in different video data. The calibration procedure scans the calibration strip, compares the signals to set point values stored as Non-Volatile Memory (NVM) data, and then calculates a white point value to ensure consistent video data. There is no black calibration strip. Black calibration is performed with the lamp off.



X-5-0154-A

Figure 2 Document platen

Calibration from Power On

When the scanner is switched on from cold, calibration is performed. Calibration is also done prior to each job. Automatic Gain Control is run within a job to compensate for any drift in the illumination.

Calibration from Power Save

When the machine is in power save mode the calibration process is the same as from switch on.

Image Processing

Digital image information from the scanner PWB passes to the single board controller PWB and is stored in the EPC memory. The image is processed through the image pipeline where modifications to the image can be made according to selections by the user, such as reduction/enlargement, copy lighter/darker or booklet mode. The image is then stored in the EPC memory, this allows for multiple copies and delays in the printing or network. The image is then sent to the fax module, the network controller or the IOT for processing or printing.

The single board controller PWB provides scanner control and processing of the scanned image. Communications with the scanner components use an RS422 asynchronous serial interface in full duplex mode. The link is used to send commands to the scanner to control actions.

Document and CVT Glass

Document Glass

The document glass can accept documents up to A3 (11 x 17 inches). A registration scale is provided on the left and rear of the document glass and the registration position is at the left rear corner, Figure 2.

CVT Glass

The CVT (Constant Velocity Transport) glass is positioned to the left of the document glass. In CVT mode, the scan carriage is positioned under the CVT glass. Documents from the SPDH pass over the glass and are returned to the SPDH re-stack tray, Figure 2.

Document Size and SPDH Sensing

Two document size sensors are located in the base of the scanner. The output of the sensors together with edge position data from the CIS sensor is used by the SWIP to determine document size information when in scanning mode.

Document Size Sensor 1, Q62-251

This optical sensor looks up at the document on the document glass and is used by the image processing software to determine if the original document is smaller than A4 (8.5 x 11 inches) in size. The image processing software uses information from this sensor in conjunction with document size sensor 2 and the data from the CIS to determine the size of the document on the document glass.

- **dC609** Document Glass Registration. This routine must be performed whenever a part is

Document Size Sensor 2, Q62-253

This sensor has the same function as size sensor 1, but further along the document glass so that it can detect larger sheets of paper such as A3 (11 x 17 inches).

Document Handler Angle Sensor, Q62-301

The document handler angle sensor, Q62-301, is located on the actuator support within the scanner module. It detects that the SPDH is currently open more or less than a fixed angle. The signal from the input module angle sensor is used to provide timing information to the scanner PWB, so that the document size measurement is taken before the SPDH is closed.

Platen Down Sensor, Q62-019

The platen down sensor, Q62-019, is located on the actuator support assembly within the scanner module. It is actuated by a flag mounted on the input module angle sensor actuator. It monitors if the SPDH is fully down.

Imaging

LED illuminator

The LED illuminator is mounted on the scan carriage assembly. Two LED lamps provide the light source that is transmitted by two light pipes along the full width of the scan carriage read opening. The LEDs produce a light of even intensity. The LED power supply is via a programmable constant current regulator.

Optical Path

Light from the LED illuminator on the scan carriage, is directed through the document glass to illuminate the document. Light from the document passes vertically downwards through the document glass, through a selfoc lens to the CIS sensor.

CIS

The CIS contains silicon detectors which convert the light levels reflected from the document into analogue voltage levels.

Each silicon detector produces one pixel (picture element) of image information. Each pixel represents one spot of white, grey, black or color, corresponding to the image on the document at a resolution of 600dpi.

Scanner Initialization

At power on initialization is performed. The scan carriage moves to the scan carriage home sensor to set the home position of the carriage. This is used as a reference from which all scan carriage movements are calculated.

DC Routines and Adjustments

- **dC604** Registration Setup Procedure. This routine must be performed whenever a part is changed, removed or replaced within the SPDH and scanner module.
- **dC609** Document Glass Registration. This routine must be performed whenever a part is changed, removed or replaced within the scanner module.

- **dC608** Document Feeder Registration. This routine must be performed whenever a part is changed, removed or replaced, including a complete SPDH module.
- **dC610** CCD Lamp Profile Adjustment. This routine maintains optimum scan lamp quality.
- **dC945** IIT Calibration. This routine automatically calculates and sets the white-reference correction factor for paper white and calibration strip variations. This routine must be run whenever a side 2 scan assembly, scan carriage assembly, scanner module, scanner module component, or a complete SPDH is removed
- **ADJ 60.1** Scanner Cleaning Procedure.

LED Print Head (LPH)

Overview

Refer to [Figure 1](#). The function of the LED print head (LPH) is to expose the photoreceptor in the required pattern as constructed by the image processing electronics. The resultant latent image is then developed, transferred and fixed onto the print media to form the required hard copy output.

The LED print head consists of 38 chips each with 48 8-LED arrays (14592 LEDs in total), and a focused rod lens array (SLA20DG). The print head writes latent image in a straight line to the photoreceptor drum.

Light power variation compensation is applied for every dot and every chip by LED-drive current-control-circuit with built-in driver IC. This compensation value for each dot and each chip is stored in built-in EEPROM (128kb) which is pre-loaded in manufacturing with the compensation data for the LED print head. This data is extracted from the EPROM and loaded into the LED drivers on initialization of the print head at power up. The print head has a built-in temperature sensor IC. LED drive current can be regulated and light power changed to compensate for temperature variations.

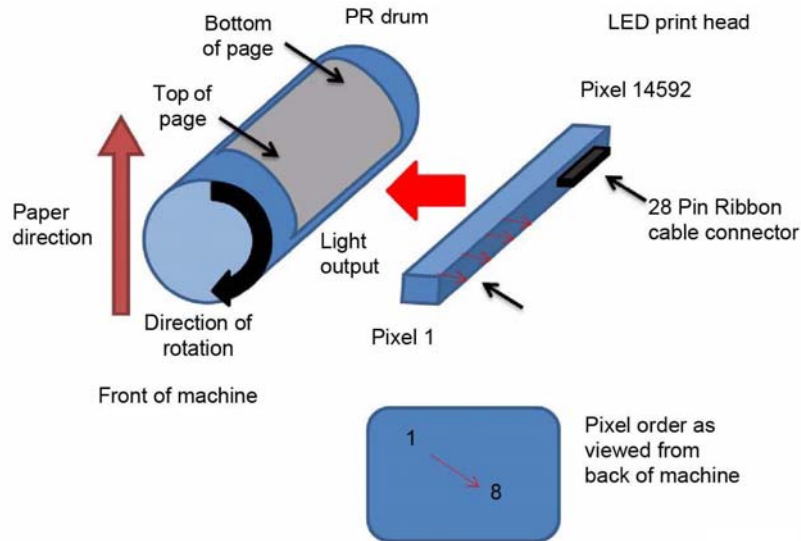


Figure 1 LED print head and drum

TX-5-0075-A

Operation Modes

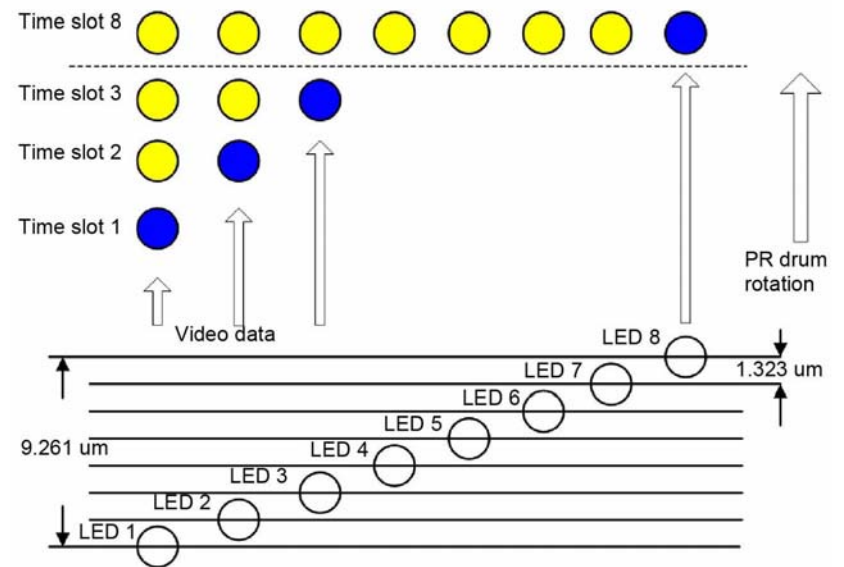
The LED print head has the following four operation modes:

- Transfer print data to LED driver (normal video write).
- Transfer of LED compensation data to LED driver.
- Reading of LED compensation data from EEPROM.
- Low consumption power mode.

LED Layout and Video Data

The LED's are arranged in (19+19) chips with 48 elements, each with an 8 LED array. This angled arrangement results in a high resolution LED print head

The LED print head data is sent sequentially for each of the 8 rows of LEDs. The timing of the data to each row is set such that the LEDs form a continuous line when written on the photoreceptor as illustrated in [Figure 2](#). As the drum rotates each LED line is written, eventually forming a continuous line on the drum.



TX-5-0076-A

Figure 2 Writing video data on the drum

Compensation Data

Each LED emits a light level controlled by the current supplied by the respective LED driver (one LED driver for one LED). Each driver has a light intensity compensation function based on 4 bits of compensation data which is transferred from the serial EEPROM built in to the head, current to be supplied to an LED is controlled at 16 levels, in a -14% to + 16% range, to compensate light intensity.

When the machine powers up or comes out of low-power consumption mode, the software transfers compensation data from the EPROM to the head driver IC before printing.

Power

The electrical interface is a Low Voltage Differential Signal (LVDS) interface using a Double Data Rate (DDR) method data transfer. A maximum of 56Mbps/data-line transmission is possible via a 28-pin ribbon cable

The connections to the 28 pin ribbon cable are shown in [Table 1](#).

Table 1 Ribbon cable pins and signals

Terminal number	Signal	Signal name
24	VDD	Power (logic and common use)
25	GND (LED_GND)	LED ground
26	VDD	Power (logic and common use)
27	GND (LED_GND)	LED ground
28	VDD	Power (logic and common use)

Table 1 Ribbon cable pins and signals

Terminal number	Signal	Signal name
1	VSS (Logic_GND)	Logic signal ground
2	CLK-P	LVDS Input terminal
3	CLK-N	LVDS Input terminal
4	VSS (Logic_GND)	Logic signal ground
5	LOAD/WPN/HOLDN	Load input terminal ROM: Write-protect hold
6	HSYNC/CSN	Horizontal sync input terminal ROM: Chip select
7	DATA13	2 Block data input terminal
8	DATA12	2 Block data input terminal
9	DATA11	2 Block data input terminal
10	DATA10	2 Block data input terminal
11	DATA03	1 Block data input terminal
12	DATA02	1 Block data input terminal
13	DATA01	1 Block data input terminal
14	DATA00	1 Block data input terminal
15	STBN/SI	Strobe Input terminal ROM: Data input
16	SCK	EEPROM Clock terminal
17	SO	EEPROM Data output
18	VDD3 (+3.3V)	+3.3V A4 (8.5 x 11 inches) EEPROM Power
19	GND (LED_GND)	LED ground
20	VDD	Power (logic and common use)
21	GND (LED_GND)	LED ground
22	VDD	Power (logic and common use)
23	GND (LED_GND)	LED ground

LPH Positioning

The LED print head has a short focal length and is located close to the photoreceptor drum. To maintain the correct distance from the photoreceptor drum, the print head rests on 2 datum pins that are on the print cartridge.

Refer to [Figure 3](#). The LED print head must be cammed off and moved away from the photoreceptor drum before removing the print cartridge CRU. It is important that the LED print head is correctly positioned (cammed in) for normal operation. This should be confirmed to ensure correct imaging on the photoreceptor Drum.

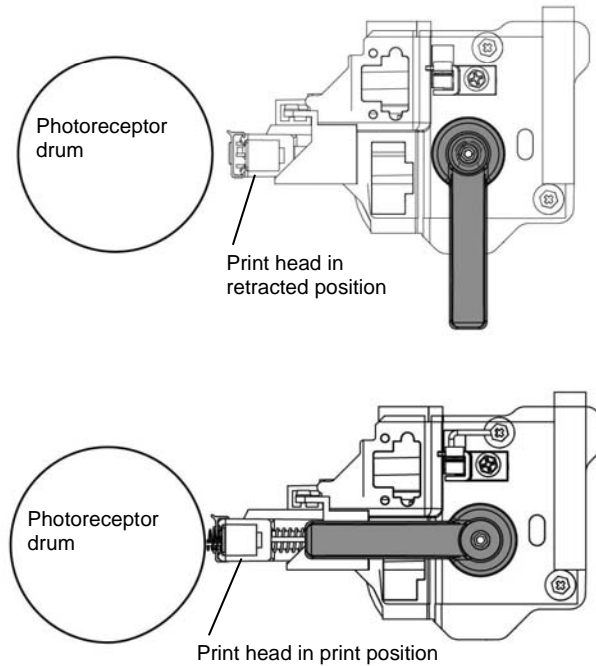


Figure 3 LPH positioning (1 of 2)

X-5-0077-A

Refer to [Figure 4](#). The LPH is retracted from the photoreceptor drum by rotating the camming lever clockwise.

When the lever is rotated, the cams rotate and allow the return springs to move the print head away from the surface of the drum.

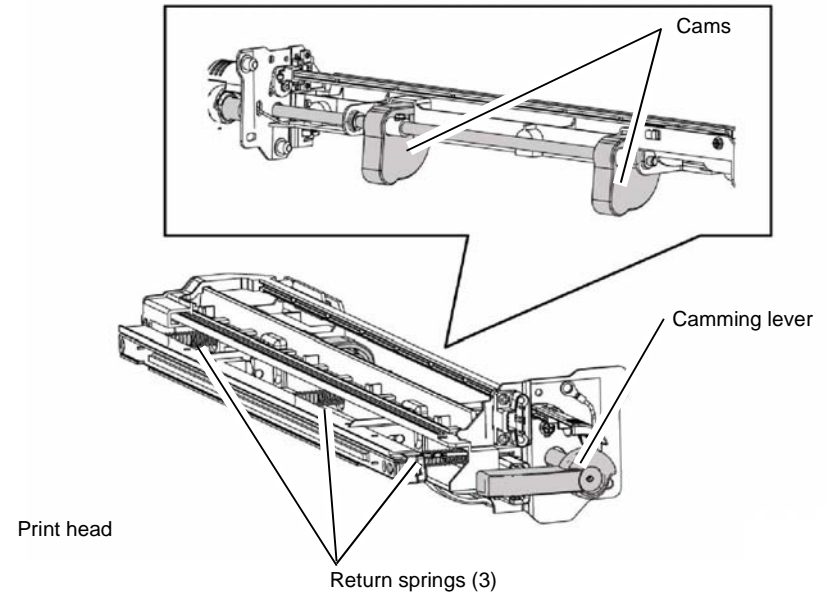


Figure 4 LPH positioning (2 of 2)

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LPH Cleaning

Refer to [Figure 5](#). The manual cleaner should be used if the image shows streaks.

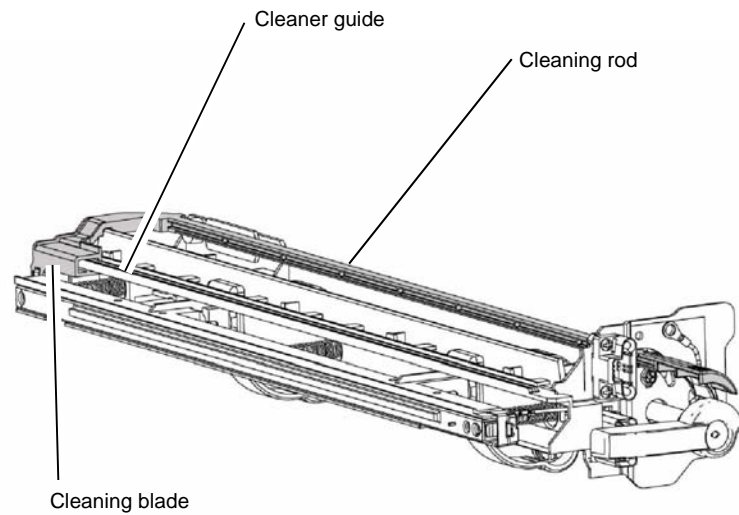
The manual cleaner consists of the cleaning blade and a cleaning rod that are installed on the cleaner guide at the top of the LPH.

To clean the print head, gently draw the cleaning rod back and forth across the entire length of travel two or three times. Be sure the cleaning rod is in the home position before moving the LPH back into the print position.



CAUTION

The manual cleaner must only be operated with the LED print head cammed away from the photoreceptor drum. It must be returned to its fully home position before the LED print head is cammed into the print position.



X-5-0079-A

Figure 5 LPH manual cleaner

DC Routines and Adjustments

dC304 LED Print Head Validation. This routine checks the connectivity and data transfer integrity between the software on the SBC PWB and the LED print head.

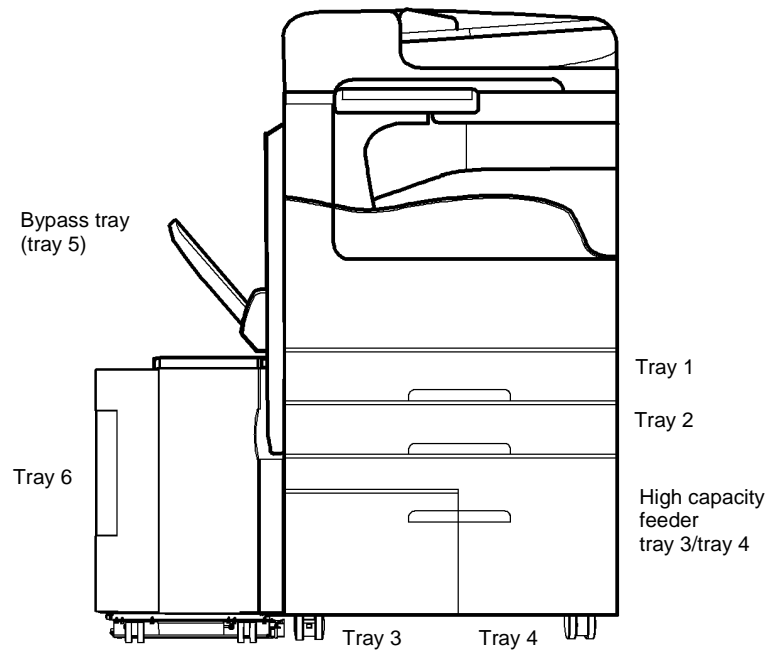
Paper Supply

Overview

The following modules within the IOT are used to supply paper:

- Trays 1 and 2.
- Trays 3 and 4 (HCF) (optional).
- Bypass tray (tray 5).
- Tray 6 (PFP) (optional).

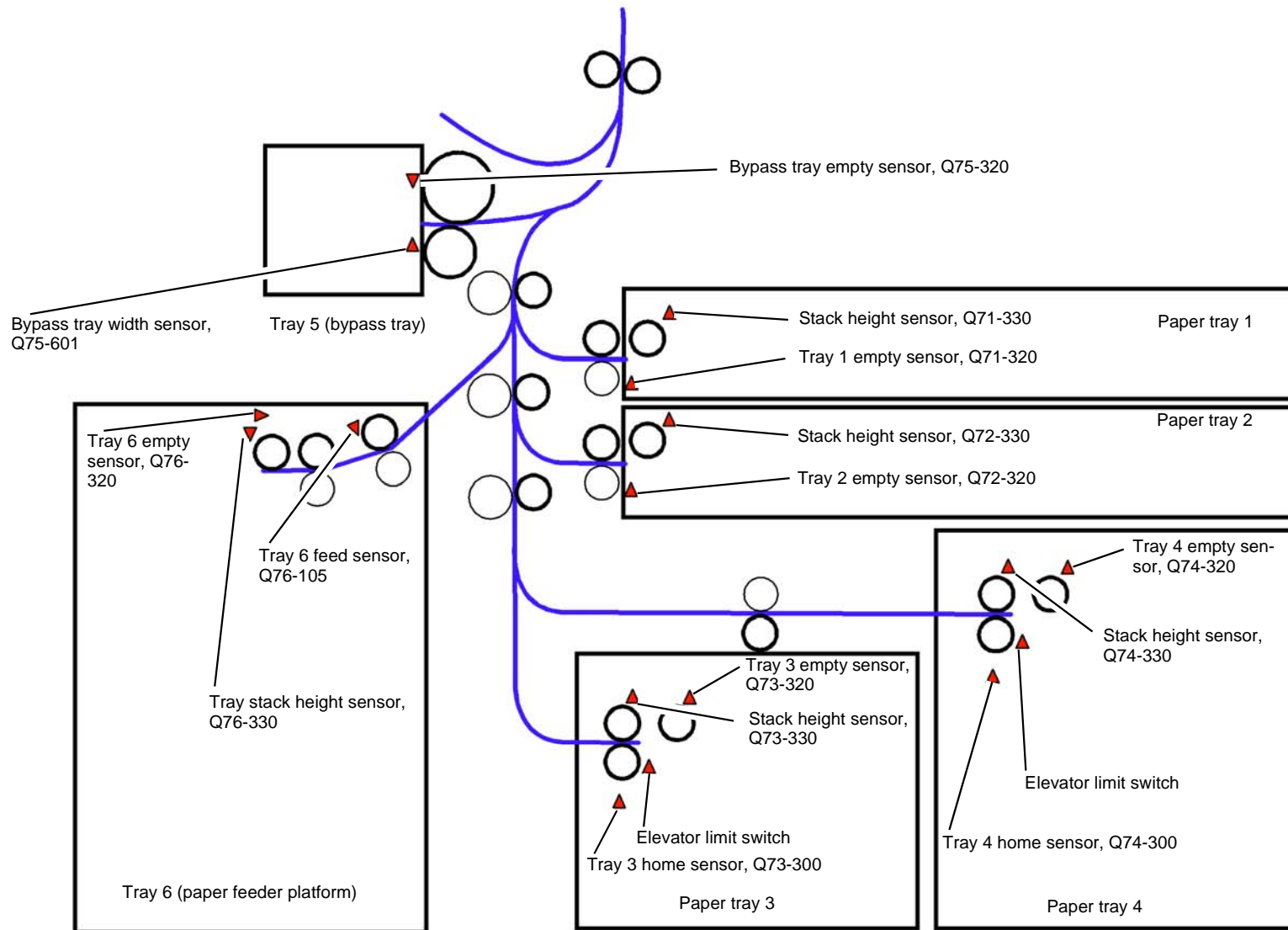
Figure 1 shows the position of the paper trays with the optional tray 3/tray 4 (HCF) and tray 6 (PFP).



X-5-0080-A

Figure 1 Paper trays

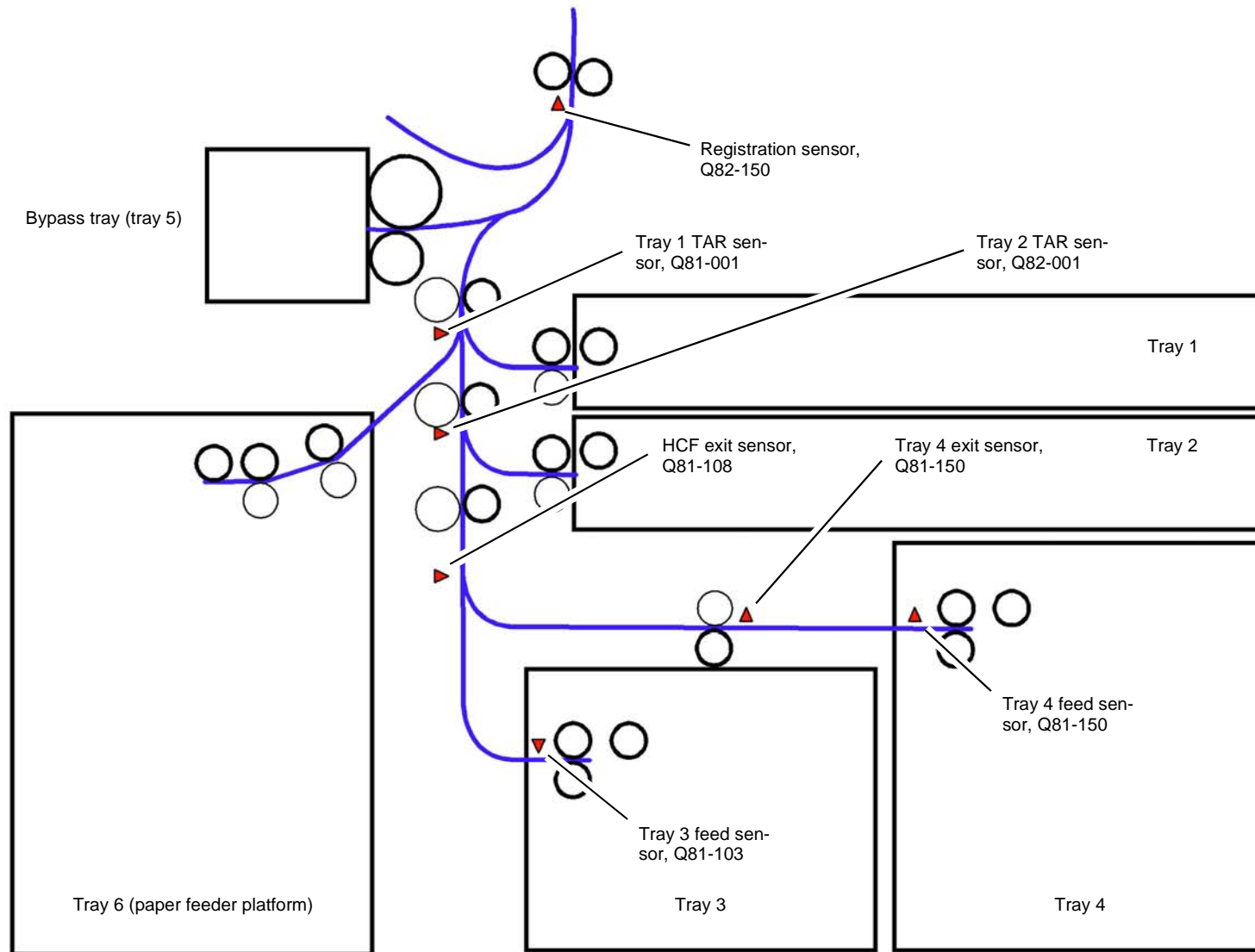
Figure 2 shows the location of the paper supply sensors.



X-5-0081-B

Figure 2 Paper supply sensors

Figure 3 shows the location of the paper feed sensors.



X-5-0082-A

Figure 3 Paper feed sensors

Tray 1 and 2 (Paper Feed Module)

Overview

The base IOT configuration provides 2 internal paper trays (trays 1 and 2) each with a capacity of 500 sheets of 80gsm paper. Both trays are physically identical and can supply the size, quantity and paper present status. The tray loading sequence for an internal tray starts when the tray is pulled out. The tray home signal sent by the paper size sensing PWB goes to 'not home', indicating the tray has been pulled out. The tray loading sequence is completed when the tray is pushed back into the IOT with the IOT PWB sending a tray home status message to the device controller.

Pre-formatted paper, including hole punched labels and pre-printed stock has to be loaded face down, bind edge to the left. Low paper level is detected via a sensor in the feed assembly that shows when the tray is approximately 25% full.

The size of the paper loaded in a fully adjustable tray is determined by:

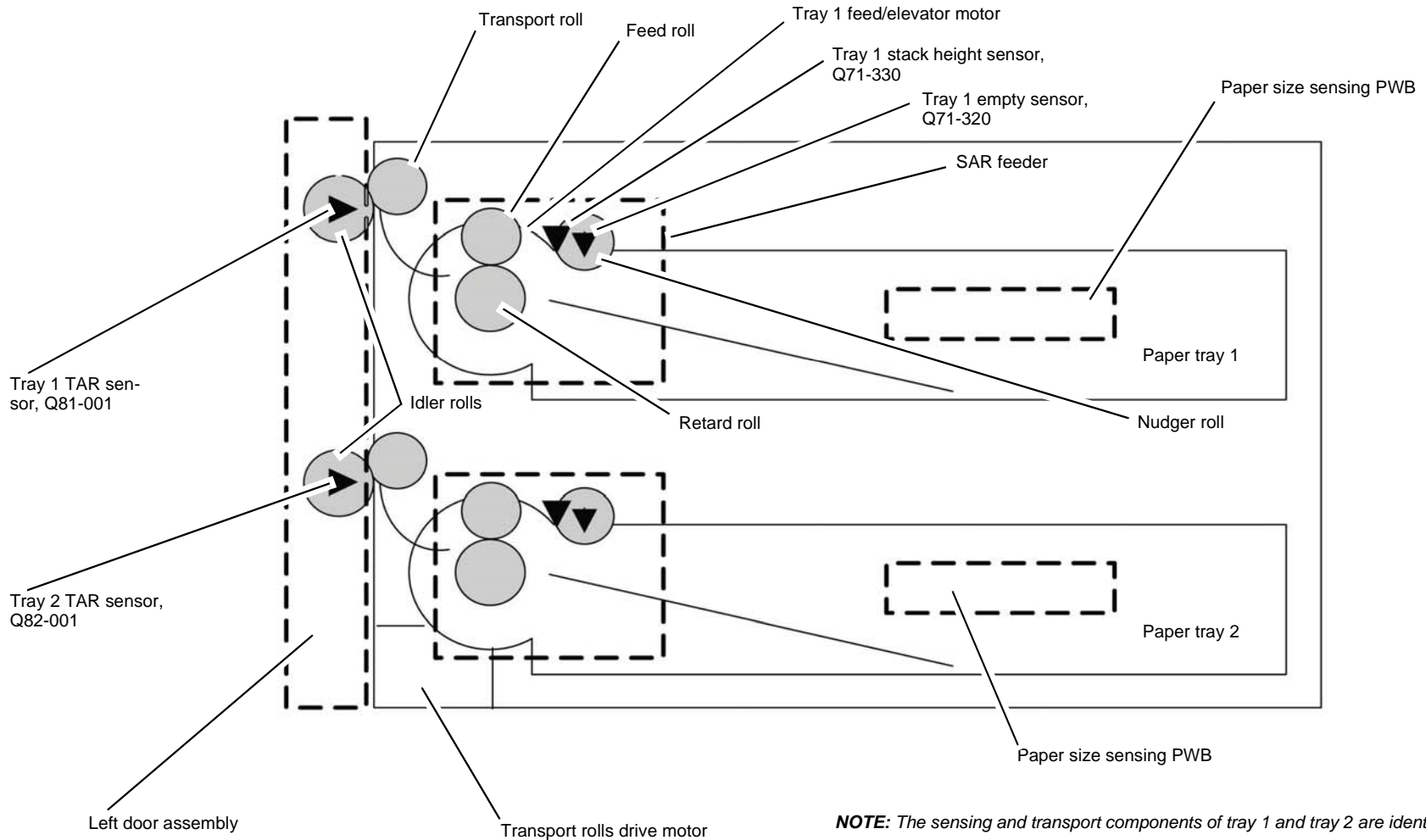
- the market region setting for the system.
- the SA/KO settings.
- tray sizing sensors.

Trays 1 and 2 will automatically detect a standard set of paper sizes using a combination of 2 spring contacts and the paper size sensing PWB. The paper width and length are determined by the position of the trail edge guide and the side edge guide. Each edge guide is mechanically linked via a sliding flexible set of spring contacts. Each contact has 4 fingers that are electrically connected. As the edge guides are moved to contact the edge of the paper stack, the contacts slide horizontally along the back of the paper tray.

If the paper size sensing fails to detect one of the known sizes, the operator will be prompted to make a paper size selection on the UI and confirm the selection. In most cases, the local user will be able to modify the size of paper in fully adjustable trays. The SA/KO and CSE are able to modify the default sizes for each of the zones in the adjustable trays and bypass tray.

The paper feeder module (PFM) provides the IOT with a source of controlled print media. The PFM consist of the following sub assemblies, paper trays 1 and 2, two semi active retard (SAR) feeder assemblies and a tray paper size sensing PWB. The PFM also forms part of the paper path vertical transport system with the left hand door assembly. [Figure 4](#) shows the location of the main components of the PFM.

NOTE: The sensing and transport components of tray 1 and tray 2 are identical.



NOTE: The sensing and transport components of tray 1 and tray 2 are identical

X-5-0083-A

Figure 4 Tray 1 and tray 2 component locations

Main features of the PFM module:

- Tray 1 and 2 each has a capacity of 550 sheets of 80gsm paper.
- Tray 1 and 2 paper sizes are between A5 (5.5 x 8.5 inches) LEF to A3 (11 x 17 inches) SEF.
- Paper weights from 60gsm to 200gsm.
- Paper low warning utilizing the elevate pulses taken to reach a given elevate plate position equivalent to 25% stock remaining in tray 1 and tray 2.
- Tray 1 and 2 can be used to feed paper backed transparencies and labels.
- The paper size sensing PWB provides the following information to the IOT, via PJ271:
 - The paper path sensors status.

- Paper present status for each tray.
- Tray open/closed status for each tray.
- Approximate paper levels for each tray, (encoder pulse count for tray 1 and 2 elevator motors).
- Tray in use status.
- Paper size detected by the use of 2 spring loaded contacts and a size sensing PWB for paper trays 1 and 2.
- Left hand lower door open/closed status.

Machine Interface

In paper tray 1 and paper tray 2, the paper size sensing PWB receives paper size, paper tray present, and paper tray in position signals and relays this information to the IOT PWB.

The trays will be in one of the following modes once powered up:

- Tray initialized:
 - Trays are in the ready to feed state (or will auto initialize when closed after being opened).
 - Sheets may be fed on response to a feed request from the IOT PWB.
 - Tray specific faults can be reported.
 - Component control/diagnostics can be exercised.
- Tray unknown (un-initialized):
 - Feeder related activity is stopped.
 - No auto tray initialisation after tray open/closed.
 - Unable to feed sheets when requested by IOT PWB.
 - Component control/diagnostics can be exercised.
- Tray in fault mode:
 - All activities are stopped and a fault/error condition is declared to IOT PWB.
 - The paper size sensing PWB requires an IOT PWB 'initialize' command to recover from a fault mode.
 - Any tray state change will be sent to the IOT PWB during this mode.
 - Component control/diagnostics can be exercised.

Paper loading

Paper tray 1 and 2 are adjustable to paper sizes between A5 (5.5 x 8.5 inches) LEF to A3 (11 x 17 inches) SEF. The paper stack is positioned in the front left corner of the tray (front lead edge). The paper side edge guide and trail edge guide are moved individually to support the paper stack. Both the paper side and trail edge guides are moved individually by using pinch grip/release handles. The slides have detents at given sizes. In between these standard sizes, the guides will still lock in position via a ratchet/pawl feature to support custom sized media.

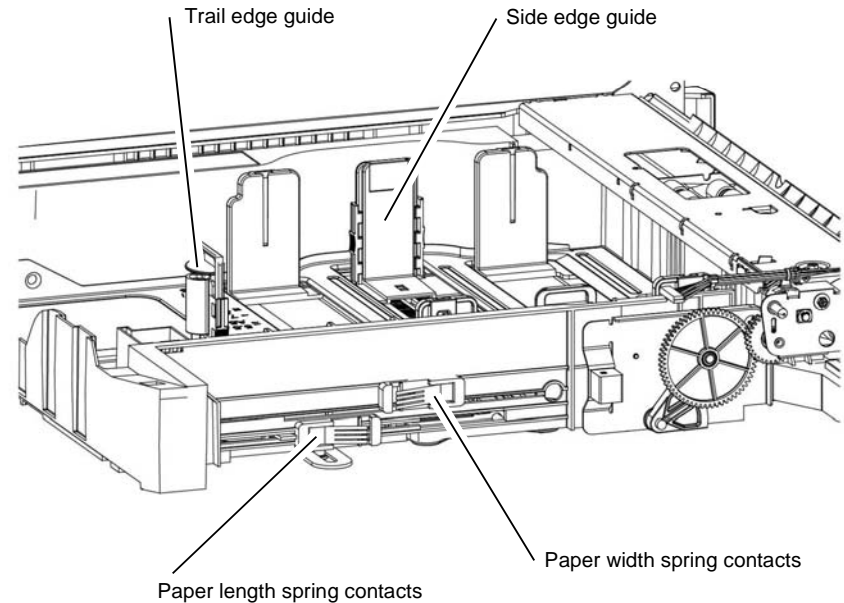
Paper Size Sensing

Paper trays 1 and 2 are identical in construction. The paper trays can accommodate various paper sizes. The paper width and length are determined by the position of the trail edge guide and the side edge guide. Each edge guide is mechanically linked via a sliding flexible set of spring contacts. Each contact has 4 fingers that are electrically connected. As the edge guides are moved to contact the edge of the paper stack, the contacts slide horizontally along the back of the paper tray.

Each paper size sensing PWB has 2 sets of traces for paper size sensing. The 5 traces are of various lengths and positions on the PWB. One trace is ground (GND) and the contacts will connect 1 or 2 of the other 4 traces to ground. Depending upon the combination of traces electrically connected to ground by the contacts on the edge guides, paper width and length is detected. The contacts will connect 1 or 2 traces to ground at one time.

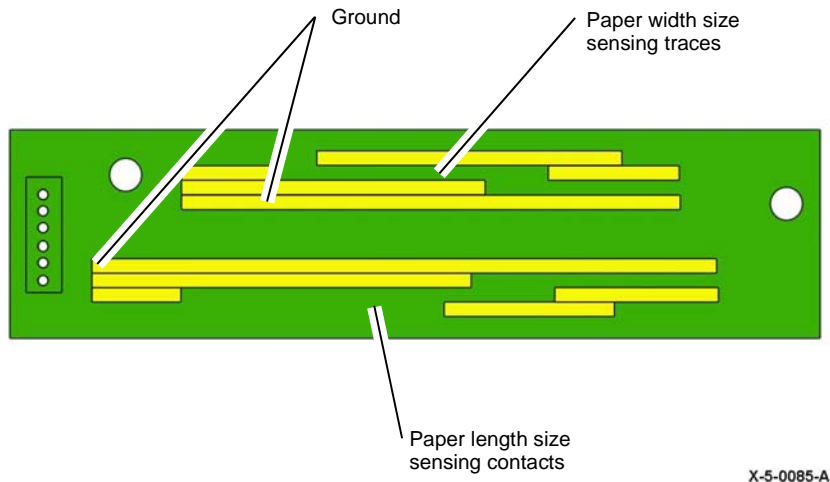
There is not a separate tray home sensor for paper tray 1 or paper tray 2. Any paper size sensed indicates that the paper tray is present and in the home position. When the tray is closed, the operator will be prompted to make a paper size selection on the UI and confirm the selection.

The paper size sensing PWB for paper tray 1 and paper tray 2 is shown in [Figure 5](#) and [Figure 6](#).



X-5-0084-A

Figure 5 Tray 1 and tray 2 sensing components

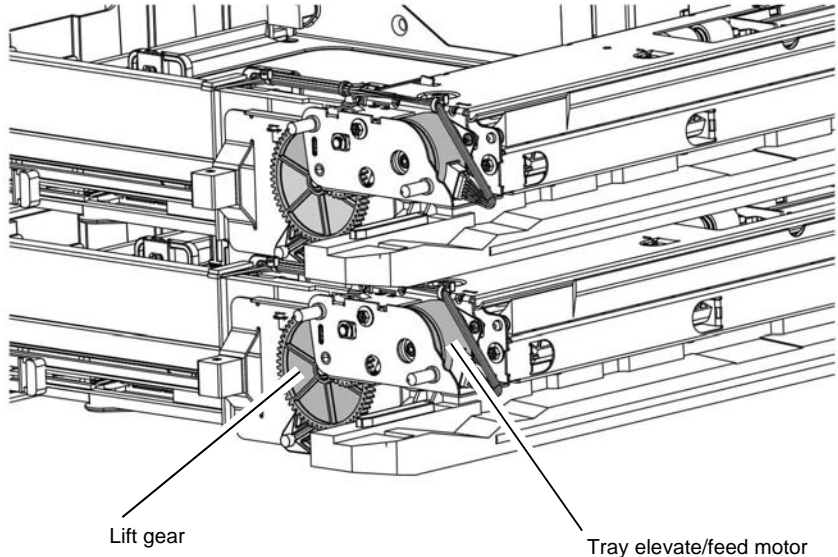


X-5-0085-A

Figure 6 Paper size sensing PWB

Paper Tray Elevation

Paper trays 1 and 2 each have an elevate system which lifts the paper stack. In order to position the paper stack at the feed position the elevate plate, which is hinged to the rear of the paper tray, is raised by a lift bar. Elevation of the paper tray is achieved by driving the tray feed motor in the reverse direction through a gear train and a one-way clutch. [Figure 7](#).



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Figure 7 Tray elevate/feed motors

- Tray 1 elevate/feed motor, MOT71-010:
 - For elevating tray 1, the component control code is 071-010.
 - For feeding from tray 1, the component control code is 081-010.
- Tray 2 elevate/feed motor MOT72-010:
 - For elevating tray 2, the component control code is 072-010.
 - For feeding from tray 2, the component control code is 082-010.

Each semi active retard feeder has an integrated stack height sensor that controls the top of the paper stack at the correct elevation. The stack height sensor is flagged by the nudger roll pivot arm. Figure 8 and Figure 9 show the tray 1 and tray 2 elevator components.

The nudger roll is turned by a small belt drive from the feeder roll shaft, which is driven by the elevate/feed motor. When the top sheet is fed to the feed roll, a single sheet has sufficient friction to turn the retard roll, and continue being fed. If two sheets are fed, there will not be enough friction between the two sheet to drive the retard roll, and therefore the lower of the two sheets is stalled in the nip and is not fed through the feed nip.

The fed sheet is then detected by the TAR sensor located within the left door assembly as it is passed to the registration area of the IOT. The sheet from tray 1 is passed via transport roll 1 with its associated TAR sensor. The sheet from tray 2 is passed via transport roll 2 with its associated TAR sensor.

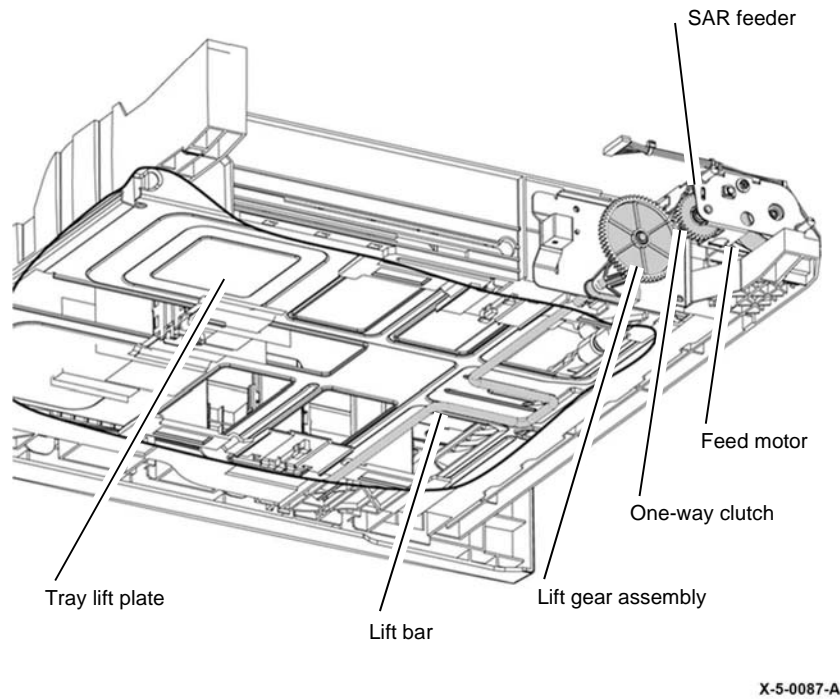


Figure 8 Tray 1 and tray 2 elevate system

Paper Feed

Trays 1 and 2 have identical semi active paper feeders. Figure 9 shows the paper feeder component location. When the tray is closed the following occurs:

1. The tray elevate/feed motor energizes, rotating the lift gear that drives the lift bar. The lift bar then raises the paper lift plate.
2. The nudger assembly lowers.
3. As the tray is raised, the stack of paper contacts the nudger roll.
4. The tray continues to raise until the flag on the nudger assembly actuates the stack height sensor.
5. When the stack height sensor changes state, the tray elevate / feed motor is de-energized.

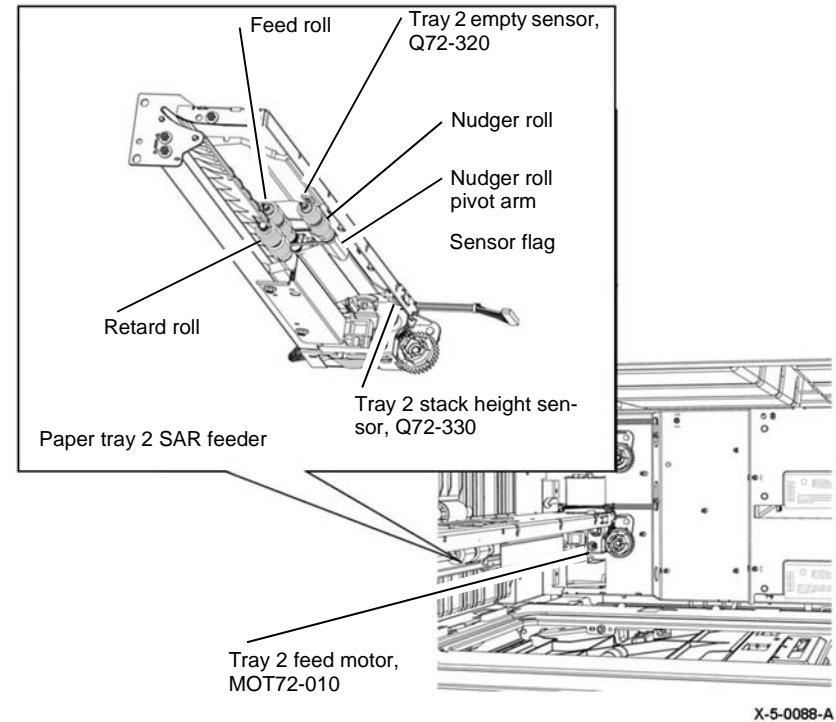


Figure 9 Tray 1 and tray 2 feed components

High Frequency Service Items (HFSI)

Each of the two trays (tray 1 and tray 2) has two HFSIs. These HFSIs are part of the roll assembly, and are to be replaced at the same time:

- Feed nudger roll assembly.
- Retard roll.

The sheet feed count for trays 1 and 2 is logged for use within the HFSI counters.

This information, along with the expected life of the unit recorded in the HFSI NVM location, will be used by the CSE to determine when to install new units.

Tray 3 and 4 (High Capacity Feeder)

General Description

The High Capacity feeder (HCF) is an optional two tray paper source that is intended to be used as the primary feeder for the commonly used media either A4 or 8.5 x 11 inches, LEF. The trays can be set by the System Administrator and/or Key Operator and are constrained to be 'dedicated' only.

Paper is detected in the trays by the respective tray empty sensor. Pulling the trays open causes the tray to lower and allows reloading. The tray rises to the feed position when the tray is closed. A tray home sensor detects if the tray is fully located and ready to elevate. Paper level sensing is obtained by measuring the time taken for the tray to elevate to the feeding position from the fully lowered position. Quantities of 25%, 50%, 75% and 100% are displayed. A separate sensor for each tray is mounted in the elevator motor assembly and used to display low paper level (25%).

- Tray 3 is designed to hold 1500 sheets of 80gsm paper in a stack height of 155.5mm.
- Tray 3 is designed to hold 1600 sheets of 75gsm paper in a stack height of 155.5mm.
- Tray 4 is designed to hold 1900 sheets of 80gsm paper in a stack height of 215.5mm.
- Tray 4 is designed to hold 2000 sheets of 75gsm paper in a stack height of 215.5mm.

Tray 4 has a paper transport mechanism that feeds across the top of tray 3 to reach the HCF exit nip.

Each HCF paper tray has its own elevator motor to lift the stack up to the feeding position. When the top of the stack reaches its operating position, it activates the stack height sensor triggering the elevate motor to stop.

24v power supply

The following HCF components are powered by a non-interlocked 24V supply. The non-interlocked 24V supply is present whenever the machine is fully powered and is only switched off in sleep mode.

- Tray 3 elevator motor, [PL 70.21 Item 1](#).
- Tray 3 feed motor, [PL 80.32 Item 8](#).
- Tray 3 clutch, [PL 80.32 Item 19](#).
- Tray 4 elevator motor, [PL 70.21 Item 1](#).
- Tray 4 feed motor, [PL 80.33 Item 10](#).

- Tray 4 clutch, [PL 80.33 Item 21](#).
- HCF transport motor, [PL 80.36 Item 4](#).

Jam Clearance

If the left door is opened to clear a jam in the exit from trays 3 and 4 the HCF transport motor (MOT81-045) is driven to clear the jam. Sheets in the exit from trays 3 and 4 are fed into the opening between the takeaway rolls and the open door where they can be removed by the operator.

Feeder Mechanism

[Figure 10](#) shows the main components of the paper feeder mechanism.

The feed head mechanism is a Fully Active Retard (FAR) type which is expected to give superior performance with less media jams.

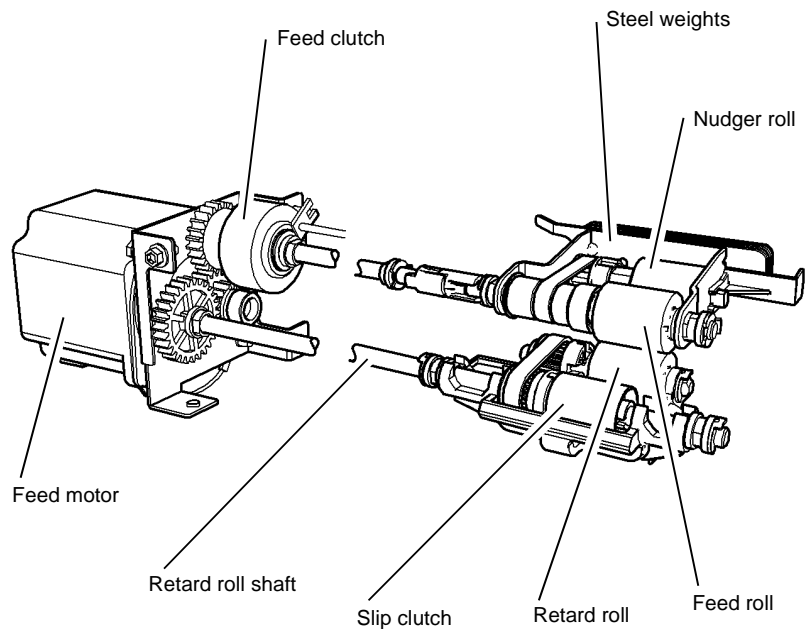
The FAR mechanism consists of a nudger roll that is mounted on a pivoting arm and a separation nip formed by the feed roll and retard roll. The nudger roll is pivoted to allow it to move down and rest on the stack of paper in order to determine/control the stack height and to nudger the top sheet of the paper stack forward into the feed roll nip.

The downward force exerted by the nudger roll to provide the frictional force to feed the paper from the top of the stack is provided by a stack of steel weights. It is possible to vary the number of weights to adjust for different paper feeding requirements.

The retard roll shaft is driven in the opposite direction to the paper feed by the feed motor, the retard roll is connected to the shaft via a slip clutch.

The feed roll and nudger roll are driven from the feed motor via an electromagnetic feed clutch. When the feed clutch is engaged the feed roll and nudger roll are driven in the forward direction.

When paper feed is initiated the feed motor and feed clutch are energized. The feed roll and nudger roll are driven in the forward direction. The nudger roll rests on top of the paper stack, the top sheet is driven into the feed nip as the nudger rotates. The retard roll turns in forward direction due to the drive force from the feed roll (the slip clutch slips).



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Figure 10 Fully active retard feeder mechanism

If only one sheet enters the feed nip, the retard roller continues to turn forward due to the drive force imparted by the sheet.

If two or more sheets enter the feed nip, the paper to paper friction force on the bottom sheet is not large enough to overcome the slip clutch torque and the retard roller will begin turning in the reverse direction. This motion reverses the lower sheets back into the tray.

When the lead edge of the sheet is in the nip of the takeaway roll (for tray 4 feeds) or the tray 3 and 4 transport roll (for tray 3 feeds), the feed clutch is de-energized. The feed roll and HCF transport roll continue to revolve in the forward direction due to the pull of the sheet from the next feed nip. When the trail edge of the sheet clears the feed sensor, the feed motor is de-energized.

Feeder Sequence of Operation

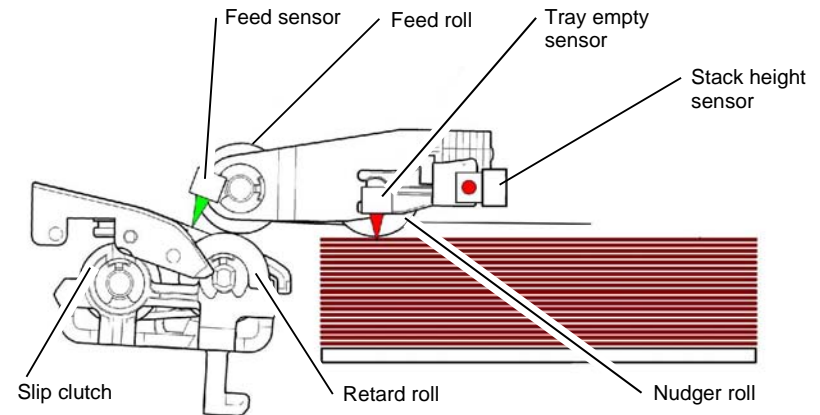
A step by step sequence of events that occur when a fully active retard feeder is in operation is shown. Refer to:

- [Normal Feed Sequence](#)
- [Multi-Feed Sequence](#)

Normal Feed Sequence

The normal feeding sequence is shown in the following steps:

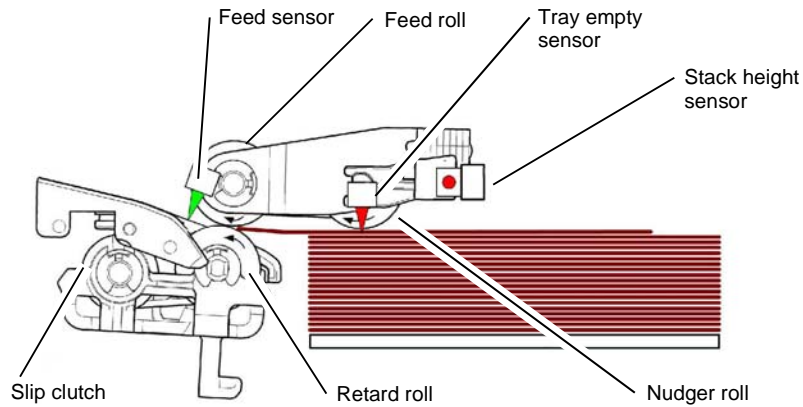
1. Just prior to paper feed. Refer to [Figure 11](#).
2. Start of feed. Refer to [Figure 12](#).
3. Sheet lead edge at feed sensor. Refer to [Figure 13](#).
4. Sheet lead edge past feed sensor. Refer to [Figure 14](#).
5. Sheet exists top of stack. Refer to [Figure 15](#).
6. Sheet trail edge at feed sensor. Refer to [Figure 16](#).
7. Sheet exists the paper tray. Refer to [Figure 17](#).



Feed motor off, feed clutch off. Just prior to paper feed, the nudger roll, feed roll, and retard roll are stationary.

X-5-0090-A

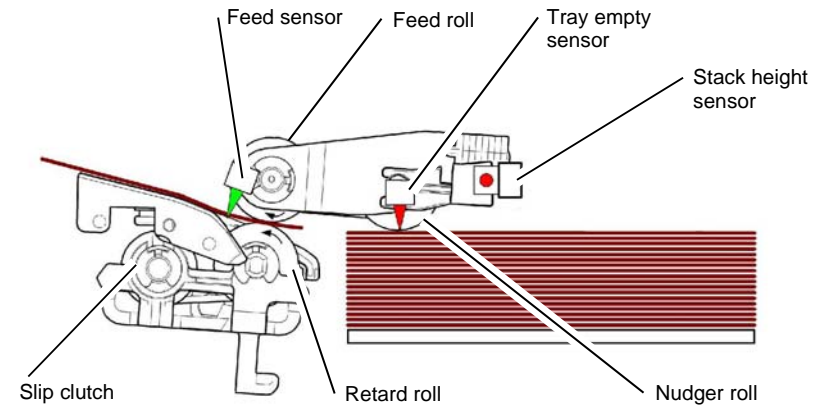
Figure 11 Feed sequence step 1



Feed motor on, feed clutch on, feeding the top sheet from the stack. The feed roll drives the retard roll and the slip clutch slips.

X-5-0091-A

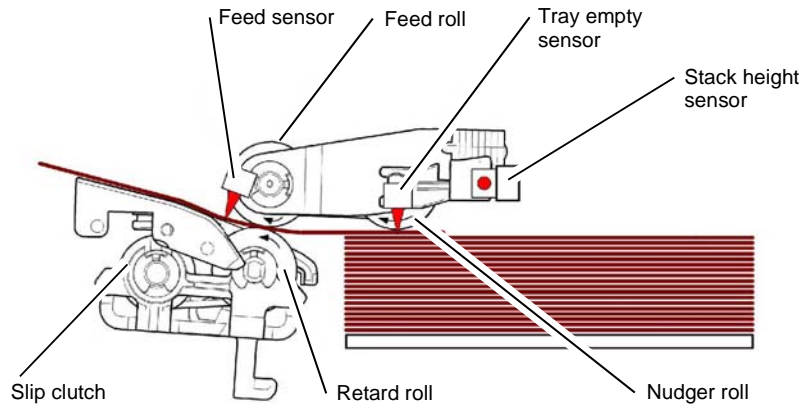
Figure 12 Feed sequence step 2



Feed motor on, feed clutch off, the sheet exits the top of the stack. The nudger roll drops to the next sheet. The sheet is pulled by the nip of the takeaway roll. (The takeaway roll is in the paper path in the left door.) The feed roll and retard roll are driven by paper friction.

X-5-0094-A

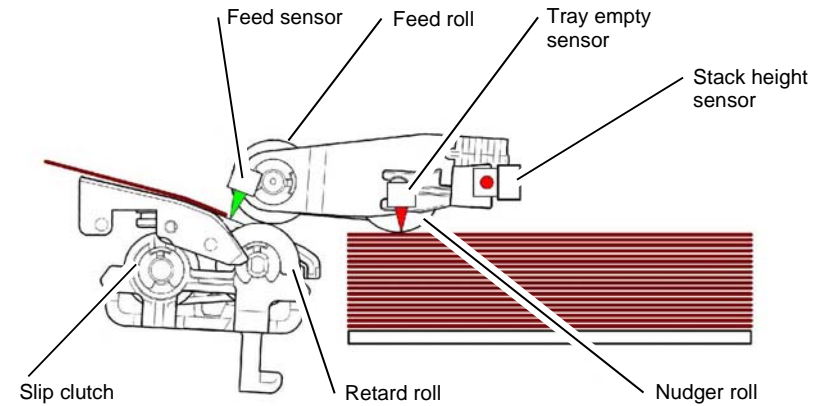
Figure 14 Feed sequence step 5



Feed motor on, feed clutch on, the sheet continues along the paper path. Paper friction drives the retard roll, and the slip clutch slips.

X-5-0093-A

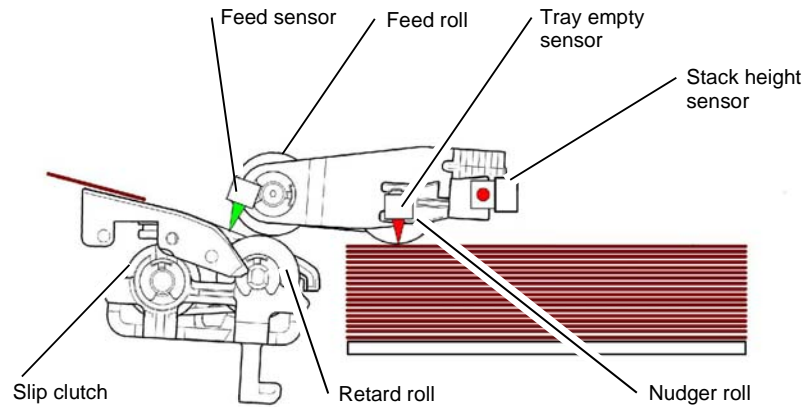
Figure 13 Feed sequence step 4



The trail edge of the sheet is at the feed sensor, the feed motor is off, and the feed clutch is off. The sheet continues along the paper path.

X-5-0095-A

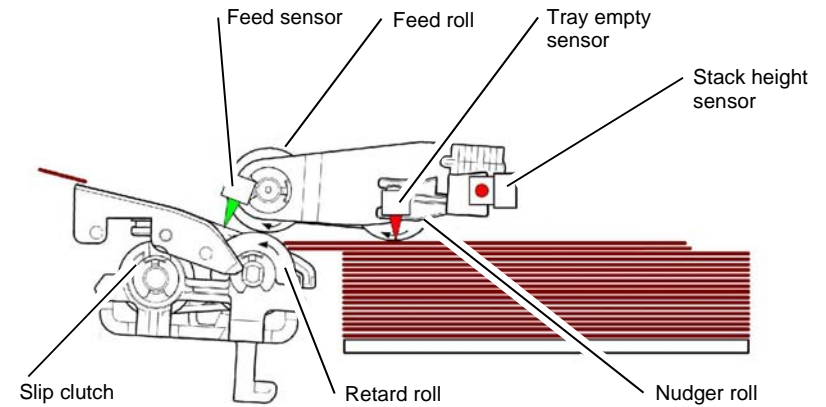
Figure 15 Feed sequence step 6



The sheet continues along the paper path. The feed motor and the feed clutch are off.

X-5-0096-A

Figure 16 Feed sequence step 7



Feed motor on and feed clutch on. The feed roll drives the retard roll and the slip clutch slips. A multi-feed is shown leaving the top of the paper stack.

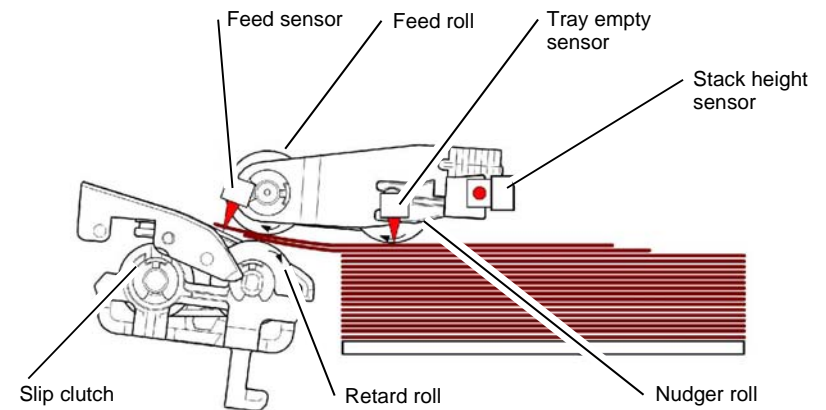
X-5-0097-A

Figure 17 Multi-feed sequence step 1

Multi-Feed Sequence

The multi-feed sequence is shown in the following steps:

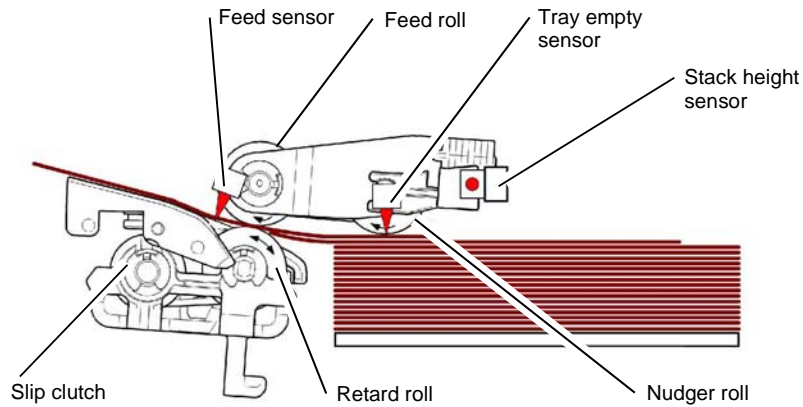
1. Start of multi-feed. Refer to [Figure 17](#).
2. Multi-feed in the feed nip. Refer to [Figure 18](#).
3. Multi-feed (lower) sheet pushed back. Refer to [Figure 19](#).
4. Top sheet exists top of stack. Refer to [Figure 20](#).
5. Multi-feed sheet fed from tray. Refer to [Figure 21](#).
6. Multi-feed sheet trail edge at feed sensor. Refer to [Figure 22](#).
7. Multi-feed sheet exists top of stack. Refer to [Figure 23](#).
8. Multi-feed sheet continues along paper path. Refer to [Figure 24](#).
9. Multi-feed sheet trail edge at feed sensor. Refer to [Figure 25](#).
10. Multi-feed sheet exists the paper tray. Refer to [Figure 26](#).



Feed motor on and feed clutch on. The multi-sheet feed is now in the feed nip. The feed roll grips the top sheet, but since the inter-sheet friction is low, the retard roll now grips the lower sheet and pushes it back toward the paper tray.

W-5-0098-A

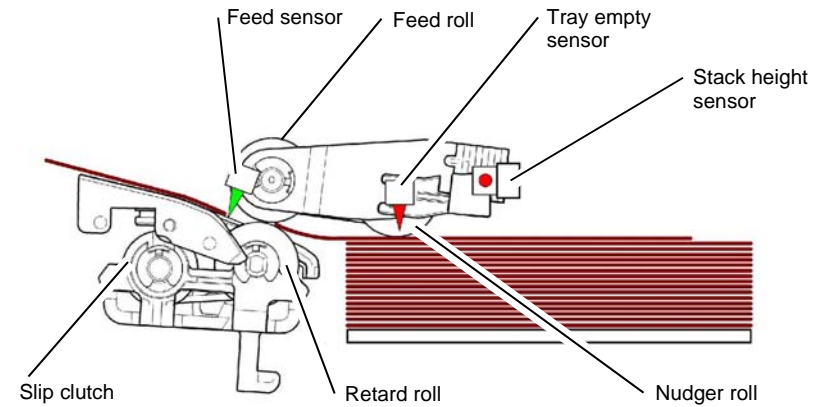
Figure 18 Multi-feed sequence step 2



Feed motor on and feed clutch on. The lower sheet of the multi-feed will be pushed back toward the paper tray. The top sheet continues to be fed by the feed roll.

X-5-0099-A

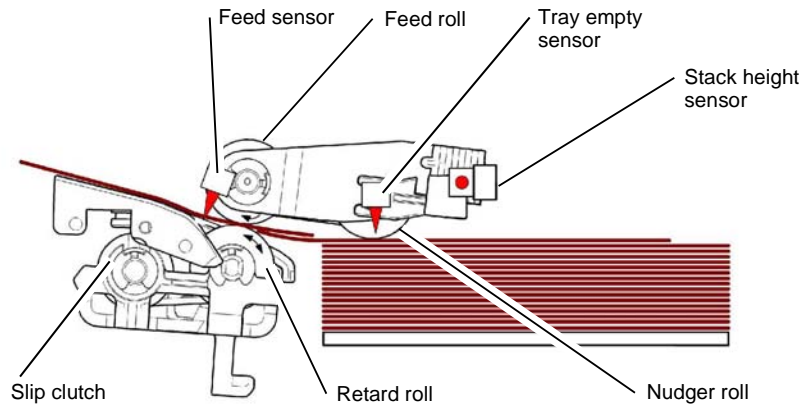
Figure 19 Multi-feed sequence step 3



The trail edge of the sheet is at the feed sensor and the feed motor and the feed clutch are off. The held sheet from the multi-feed is held in the feed nip awaiting the next sheet feed command.

X-5-0101-A

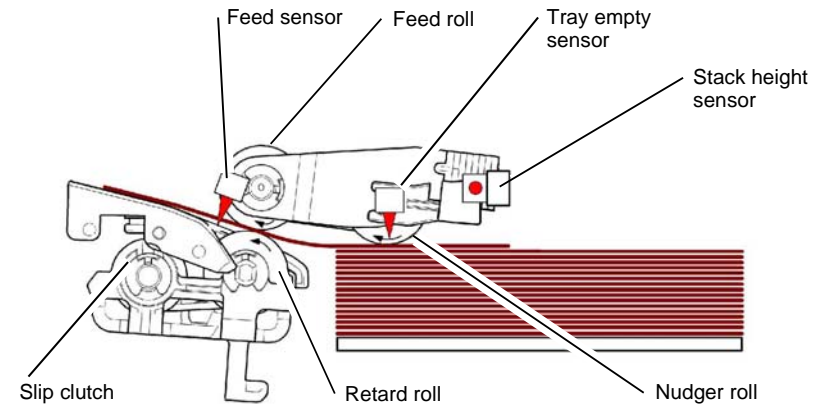
Figure 21 Multi-feed sequence step 5



Feed motor on and feed clutch off. The sheets exit the top of the stack and the nudger roll drops to the next sheet. The lower sheet of the multi-feed will continue to be held by the retard roll. The sheet is pulled by the nip of the takeaway roll. (The takeaway roll is in the paper path in the left door.) The feed roll is driven by paper friction.

X-5-0100-A

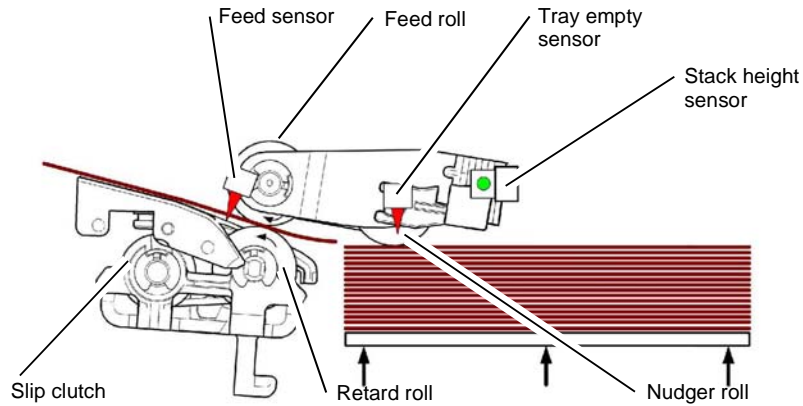
Figure 20 Multi-feed sequence step 4



Feed motor and the feed clutch are on. The held sheet from the multi-feed is now fed out of the tray.

X-5-0102-A

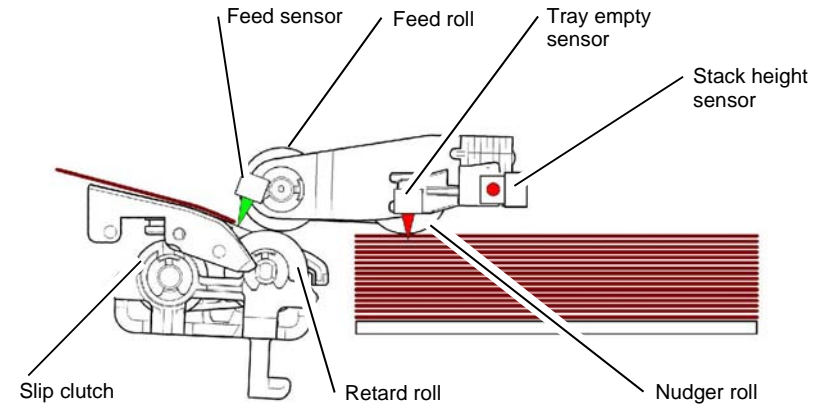
Figure 22 Multi-feed sequence step 6



Feed motor on, feed clutch off, the sheet exits the top of the stack. The nudger roll drops to the next sheet. The sheet is pulled by the nip of the takeaway roll. The feed roll and retard roll are driven by paper friction. The stack height sensor does not detect a flag, so the elevator motor is energized to lift the tray.

X-5-0103-A

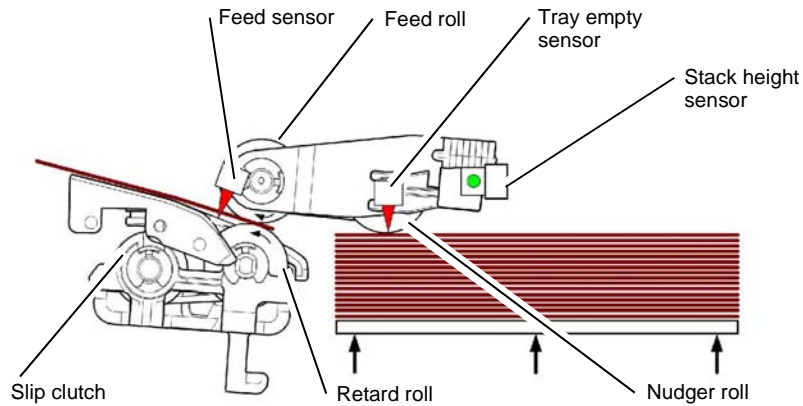
Figure 23 Multi-feed sequence step 7



Feed motor off and feed clutch off. The trail edge of the sheet is at the feed sensor. The tray elevator is stopped.

X-5-0105-A

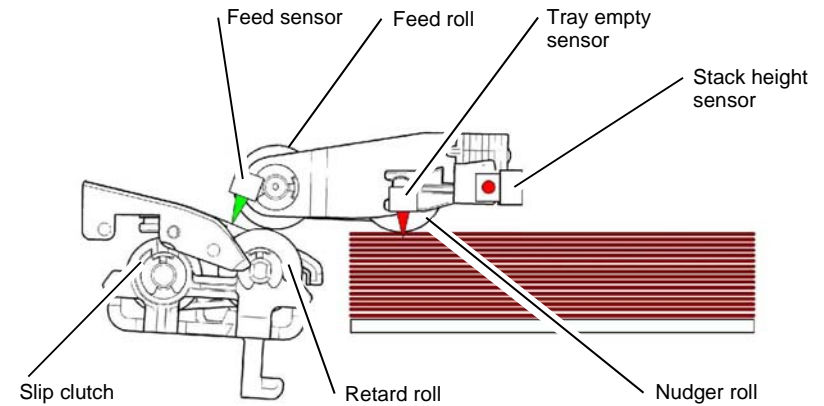
Figure 25 Multi-feed sequence step 9



Feed motor off and feed clutch off. The sheet continues along the paper path. The feed roll and the retard roll are driven by paper friction. The stack height sensor detects the top of the paper stack, causing the tray elevator motor to stop.

X-5-0104-A

Figure 24 Multi-feed sequence step 8



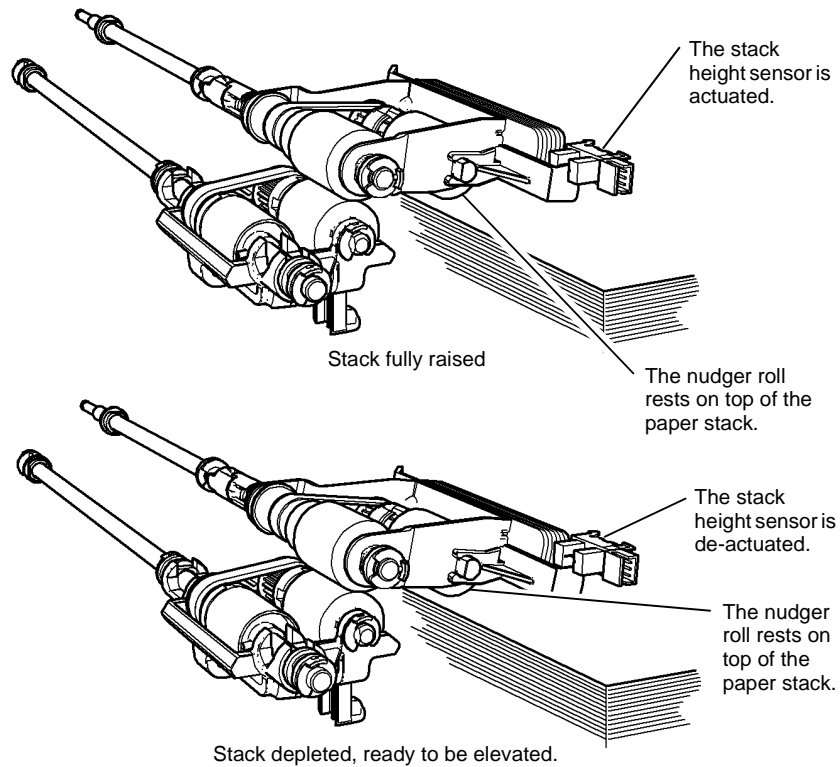
Feed motor off and feed clutch off. The sheet has left the feeder area. The feeder awaits the next feed command.

X-5-0106-A

Figure 26 Multi-feed sequence step 10

Stack Position

Figure 27 shows the mechanism for monitoring the paper stack height.

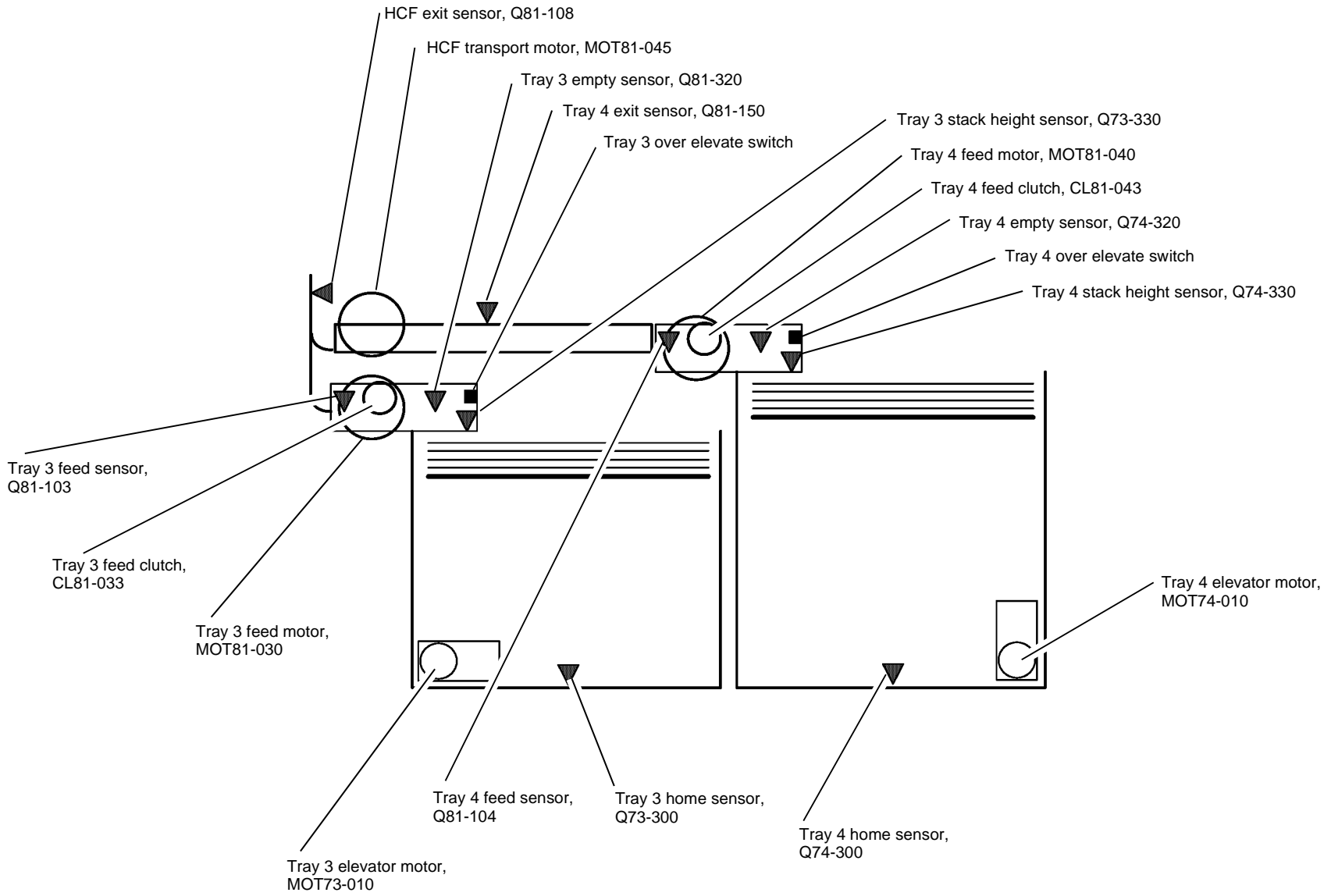


X-5-0107-A

Figure 27 Paper stack height monitoring

HCF Electrical Components

Figure 28 shows the electrical components in the HCF.



X-5-0108-B

Figure 28 HCF electrical components

HCF Active Components

The HCF component names and descriptions are shown in [Table 1](#). Refer to [Figure 28](#) for a schematic showing the location of components within the HCF.

Table 1 HCF active components

Component Name	Description
Tray 3 home sensor, Q73-300	Detects when tray 3 is at the home position.
Tray 3 elevator motor, MOT73-010	Elevates tray 3 to the feed position.
Tray 3 stack height sensor, Q73-330	Detects when the tray 3 stack is at the feed position.
Tray 3 empty sensor, Q73-320	Detects when tray 3 becomes empty.
Tray 3 feed motor, MOT81-030	Drives the tray 3 retard roll and feed clutch.
Tray 3 feed clutch, CL81-033	Drives the tray 3 nudger roll and feed roll.
Tray 3 feed sensor, Q81-103	Detects the lead and trail edge of a sheet being fed from tray 3.
Tray 4 home sensor, Q74-300	Detects when tray 4 is at the home position.
Tray 4 elevator motor, MOT74-010	Elevates tray 4 to the feed position.
Tray 4 stack height sensor, Q74-330	Detects when the tray 4 stack is at the feed position.
Tray 4 empty sensor, Q74-320	Detects when tray 4 becomes empty.
Tray 4 feed motor, MOT81-040	Drives the tray 4 retard roll and feed clutch.
Tray 4 feed clutch, CL81-043	Drives the tray 4 nudger roll and feed roll.
Tray 4 feed sensor, Q81-104	Detects the lead and trail edge of a sheet being fed from tray 4.
Tray 4 exit sensor, Q81-150	Detects a sheet that has been fed from tray 4.
HCF transport motor, MOT81-045	Feeds sheets in the tray 4 transport and tray 3 to the PFM.
HCF exit sensor, Q81-108	Detects lead and trail edge of a sheet being released from tray 3 and tray 4.

Tray Configuration

The HCF is located below the PFM at the base of the machine and feeds paper from right to left into the left door paper path of the PFM and tray 2 transport roll nip. Tray 4 has a paper transport system across the top of tray 3 to reach the HCF transport roll nip.

The tray 3 and tray 4 paper tray guides can be set to enable each tray to be configured to hold either A4 (8.5 x 11 inches) media LEF. The HCF has a combined tray capacity of approximately 3400 sheets of 80gsm paper with tray 3 holding approximately 1500 sheets and tray 4 holding approximately 1900 sheets.

Tray Opening, Loading and Elevation

To allow access for loading paper, the trays can be opened. There is no locking mechanism to prevent a tray from being opened whilst it is in use. If the user opens a tray that is currently feeding, a jam may result. When the trays are not specifically in use, either tray can be opened and re-loaded with media while the system is printing from another tray.

When either tray is opened the tray base lowers. When the tray is closed and elevated, a pop-up confirmation screen is provided to the user to solicit confirmation of the media type loaded.

Tray Open

- When tray 3 is open, status 573-301-00 (tray 3 open) is raised.
- When tray 4 is open, status 574-301-00 (tray 4 open) is raised.

Tray Open in Run

Should a tray be opened while feeding from the tray then a jam may result. The paper jam may be unclearable by the user and result in an unscheduled maintenance call.

If tray 3 is opened when feeding from tray 3, printing will be halted and fault 373-500-00 (tray 3 open while feeding) will be raised.

If tray 4 is opened when feeding from tray 4, printing will be halted and fault 374-500-00 (tray 4 open while feeding) will be raised.

Tray Elevation

When the tray is opened by the user the tray base will drop. Dependent on the weight of the media in the tray this may take between 3 and 10 seconds to fully drop. When the tray is closed the tray base needs to be elevated and the media stack driven up so that the top of the media stack is against the feed head, ready to feed.

- When tray 3 is closed, tray 3 is elevated until the tray 3 stack height sensor changes state.
- When tray 4 is closed, tray 4 is elevated until the tray 4 stack height sensor changes state.
- While tray 3 is elevating, a status code indicating tray 3 is lifting, will be raised.
- While tray 4 is elevating, a status code indicating tray 4 lifting, will be raised.

At power on, at exit from power save or when in stand-by the tray stack needs to be elevated to ensure that the stack is against the feed head at all times, ready for feeding. This also ensures that any stack settling is accounted for during a long idle phase.

When the system is idle and tray 3 is closed and the tray 3 stack height does not change state, tray 3 is elevated until the stack height sensor changes state.

When the system is idle and tray 4 is closed and the tray 4 stack height sensor does not change state, tray 4 is elevated until the stack height sensor changes state.

Tray Elevation Failure

If a fault occurs that prevents the tray base from elevating then the elevation attempt will be cancelled after a period of time to prevent damage occurring to the elevation mechanism.

When tray 3 is elevating, if the tray 3 stack height sensor does not change state within 40 seconds from commencement of elevation then:

- The tray 3 elevator motor will be stopped.
- Fault code 373-100 (tray 3 elevate failure) will be raised.
- Tray 3 will be taken out of service.

Opening then closing tray 3 will cause another elevation attempt of tray 3 to occur.

When tray 4 is elevating, if the tray 4 stack height sensor does not change state within 40 seconds from commencement of elevation then:

- The tray 4 elevator motor will be stopped.
- Fault code 374-100 (tray 4 elevate failure) will be raised.
- Tray 4 will be taken out of service.

Opening then closing tray 4 will cause another elevation attempt of tray 4 to occur.

Media Management

When a tray is sensed as out of media (tray empty) a message is displayed on the user interface indicating that the tray is out of paper and requesting the user to refill the tray.

Detecting media present or tray empty is only possible once the tray has been elevated.

When tray 3 is closed and the tray 3 stack height sensor changes state and the tray 3 empty sensor registers no media present then:

- The out of media status 07-533-00 (tray 3 out of paper) will be raised.
- Tray 3 will not be selectable as a media source.

When tray 4 is closed and the tray 4 stack height sensor changes state and the tray 4 empty sensor registers no media present then:

- The out of media status 07-534-00 (tray 4 out of paper) will be raised.
- Tray 4 will not be selectable as a media source.

When no media is detected in tray 3 (tray 3 out of paper) any feeds from tray 3 will be inhibited and status 07-533-00 (tray 3 out of paper) will be raised.

When no media is detected in tray 4 (tray 4 out of paper) any feeds from tray 4 will be inhibited and status 07-534-00 (tray 4 out of paper) will be raised.

Media Level Gauge

When a tray is opened the tray base drops. However, the tray does not drop instantly, it is slowed by a tray damper assembly. If a tray is only open for a short period of time and the tray base does not fully drop, then when the tray is closed the elevation distance will not be representative of the media quantity. Only when the tray has been open for a time sufficient for the base to fully drop will the media level be determined.

Media level can be determined when a fully lowered tray is closed and the tray elevated until the stack height sensor is made. The amount of tray elevation can be used to determine the percentage of media in the tray. The complete tray elevation distance (100%) is sectioned into 10 levels representing media quantity levels with a 10% reporting granularity.

When the tray has been open for a time greater than 'TrayOpenTimeTreshold' (NVM) seconds the media level will be determined.

At power on, if the elevation time equates to greater than a certain distance, then the assumption is that the tray has been opened whilst the machine was powered off, the tray is in the lowered state and the media level needs to be determined.

At power on, if the elevation distance is greater than 'MinTrayElevateDist' (NVM) the media level will be determined.

When the media level in tray 3 is below 10%, status code 73-535-00 (tray 3 paper low) will be raised.

When the media level in tray 4 is below 10%, status code 74-535-00 (tray 4 paper low) will be raised.

Bumping

As media is fed from the tray, the media height (stack height) needs to be maintained in order to keep the top sheet against the feed roll. This is termed bumping, e.g. the stack is bumped up to compensate for sheets removed and hence maintain the stack height. In order not to affect feeding performance, bumping needs to take place after the sheet is firmly in the feed rollers. The strategy is to elevate the stack until the stack height sensor registers 'stack up'.

During feeding from tray 3, when the lead edge of the sheet has reached the tray 3 exit sensor, if the tray 3 stack height sensor registers continuously clear for greater than 30ms (fixed) then tray 3 will be elevated (bumped) until the tray 3 stack height sensor changes state.

During feeding from tray 4, when the lead edge of the sheet has reached the HCF exit sensor, if the tray 4 stack height sensor registers continuously clear for greater than 30ms (fixed) then tray 4 will be elevated (bumped) until the tray 4 stack height sensor changes state.

Sheet Acquisition

Sheet acquisition can only commence once the media stack has been elevated and the top sheet on the stack has been placed firmly against the feed roll. The sheet acquisition starts when there has been a feed sheet command received from the system. The feed rolls are driven by the feed motor. After a delay the feed clutch is energized causing the feed roll and nudger roll to rotate. The top sheet is driven out of the tray by the feed roll.

During feeding from tray 3, once the top sheet is detected to have passed the feed roll by the feed sensor, the sheet is fed to the HCF exit sensor and then waits for the sheet in front to exit the HCF before being moved forwards.

During feeding from tray 4, once the top sheet is detected to have passed the feed roll by the feed sensor, the sheet is fed a further short distance and then waits for the sheet in front to exit the HCF before being moved forwards

The feed motor will stop when:

- Either the acquired sheet has been moved to the desired position.
- Or the acquisition time is greater than the lead edge late to feed sensor threshold.

In the latter case the appropriate fault will be raised, lead edge late to tray 3 feed sensor or lead edge late to tray 4 feed sensor, after 5 retry attempts to feed the sheet.

Sheet Transport

In the second part of the feed cycle the sheet is fed from its position near the feed head past the exit sensor to the HCF wait point, where it will remain until the release sheet command is received from the IOT. The next sheet, from the tray 4 stack will start to move when the feed sensor goes clear. The next sheet from the HCF exit sensor, will only start to move when the HCF exit sensor is clear indicating that the previous sheet has, or will shortly exit the HCF. The HCF transport motor and feed motor are energized and the sheet fed into the transport mechanism. The feed motor is switched off at the point where the remaining un-fed paper behind the feed nips can be pulled through by the HCF transport motor. Once the HCF exit sensor is made the sheet is fed to the HCF wait point and the HCF transport motor is stopped if a release sheet command has not been received from the IOT.

Sheet Exit

In the third and final part of the feed cycle the release sheet command is received from the IOT and the HCF transport motor is energized. The transport motor is de-energized when the HCF exit sensor goes clear.

High Frequency Service Items (HFSI)

Each of the two trays within the HCF (tray 3 and tray 4) has two HFSIs. These HFSIs are part of the feed/nudger/retard roll spares kit, and are to be replaced at the same time.

- Feed roll and nudger roll assembly
- Retard roll

The sheet feed count for trays 3 and 4 is logged for use within the HFSI counters.

This information, along with the expected life of the unit recorded in the HFSI NVM location, will be used by the CSE to determine when to install new units.

Jam Clearance

When a feeding fault is detected and a fault code raised the machine shuts down to prevent damage to other mechanical parts. At this point the users help is required to clear the mis-fed sheet.

When a paper feeding fault is detected:

1. Appropriate fault action will be taken to protect the machine.
2. The associated fault code and status code will be raised.

Stray Sheet Detection

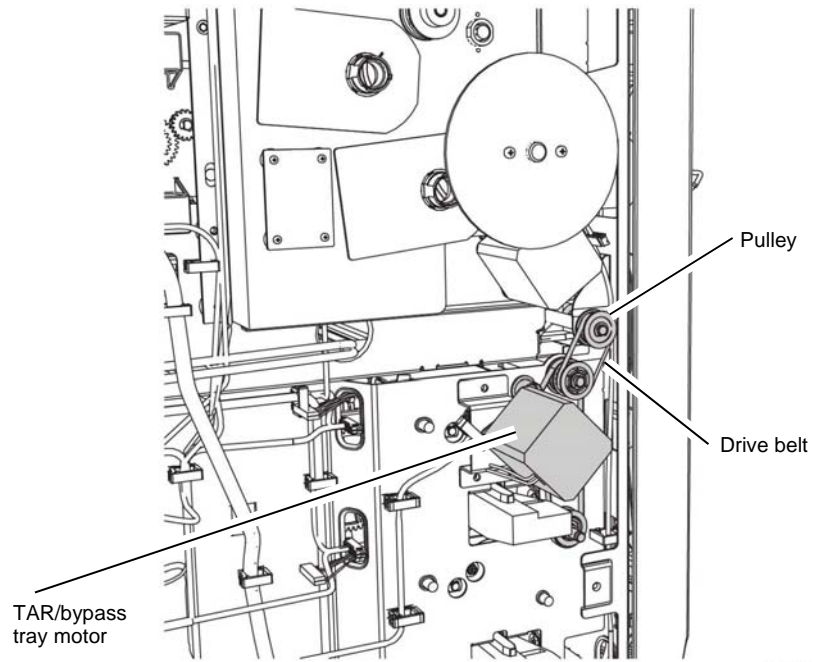
After any jam clearance, when tray 3 or tray 4 has been requested to be opened, the HCF will check that media has not been left in the tray 4 horizontal transport. It is expected that media may be pre-fed in the feed nips and the feed sensor may be covered so it is not possible to determine if a sheet has been cleared or not in the feeding area. Sheets are purged to the left door, which the operator opens to clear the jam.

Tray 5 (bypass tray)

Refer to [Figure 29](#), [Figure 30](#) and [Figure 31](#). The bypass tray is on the left-hand side of the IOT with a capacity of approximately 100 sheets of 80gsm paper. Drive for the bypass tray is provided by the TAR/bypass tray motor MOT80-006. Drive for the bypass tray drive gears is provided by a belt that is driven by a pulley on the tray 1 transport roll shaft. The feed clutch, when energized, transfers drive from the bypass tray drive gear to the shaft of the feed roll.

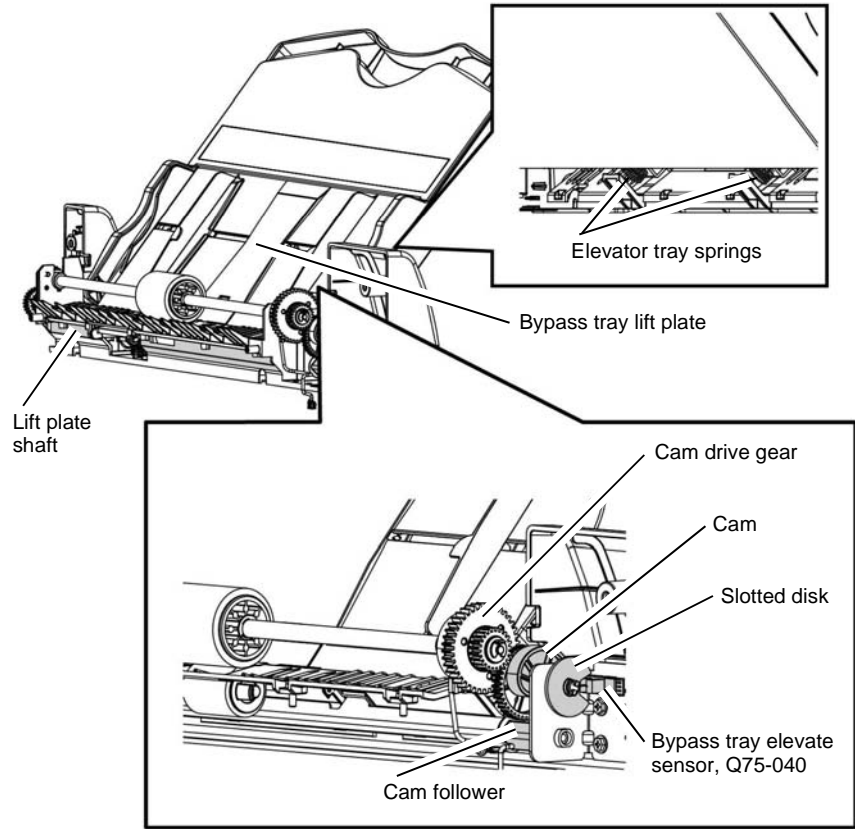
The bypass tray is mounted to the left door assembly and consists of the following:

- Cam
- Cam follower
- Slotted disk
- Lift plate shaft
- Bypass tray lift plate
- Elevator tray spring (2)
- Bypass tray elevate sensor, Q75-040
- Bypass tray clutch, CL75-325 (powered by a non interlocked 24V supply)
- Feed roll
- Retard roll
- Feed roll drive gear



X-5-0109-A

Figure 29 Drive components (IOT side)



X-5-0110-A

Figure 30 Elevate components

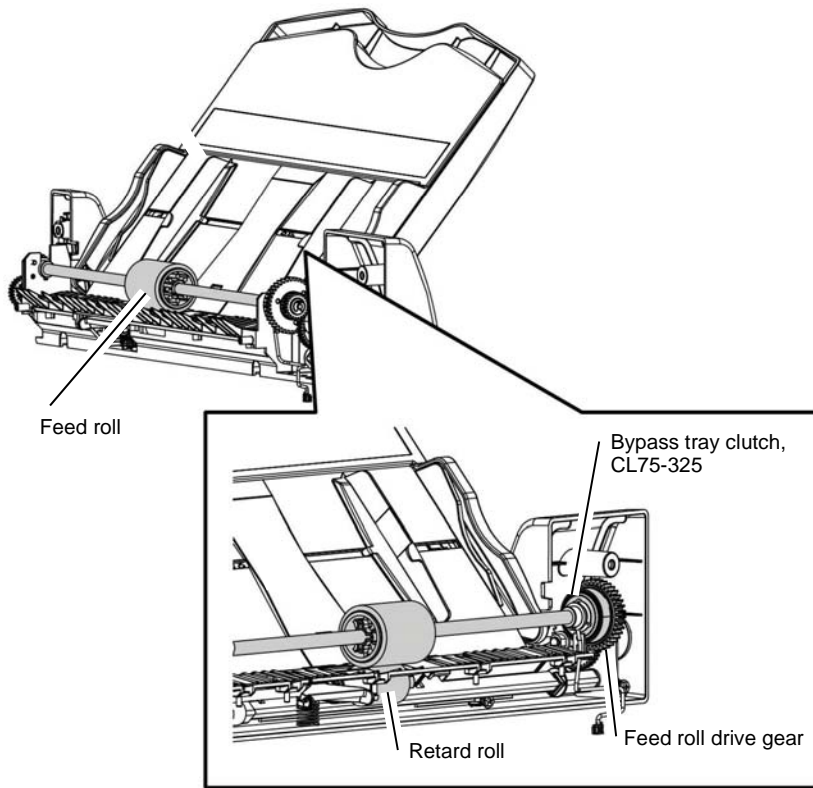
Tray 5 Paper Size Sensing (bypass tray)

Paper Width

An analogue sensor senses placement of the side guide to detect paper width. This sensor provides various size zones, each of which has a size range associated with it.

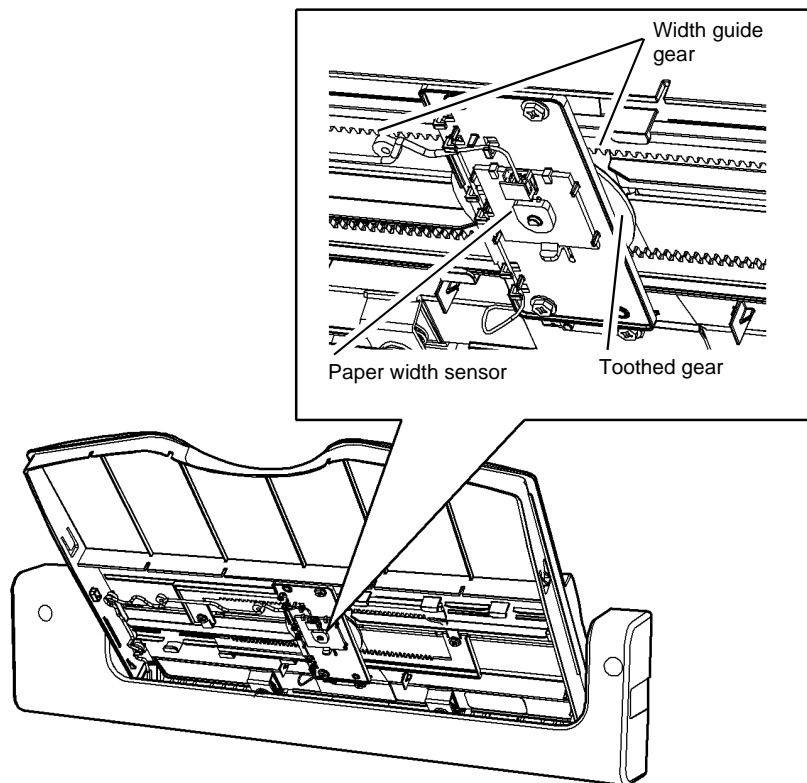
Both the front paper side guide and the rear paper side guide are connected to a gear rack on the underside of the tray. As the paper side guides are moved, both gear racks rotate a toothed gear. This gear is mounted on a D-shaft. When the shaft rotates, it rotates the paper width sensor potentiometer. The voltage sensed is used by the control logic to determine paper width. Refer to [Figure 32](#).

The paper sizes handled by the bypass tray range from A6 (4.25 x 5.5 inches) to A3 (11 x 17 inches). In addition to standard stock, the bypass tray may be used to feed other substrates such as tabs, transparencies and envelopes etc. There is no level detection in the bypass tray, when the last sheet feeds from the tray it shows a not ready condition, i.e. the tray empty sensor is off.



X-5-0111-A

Figure 31 Feed components



X-5-0112-A

Figure 32 Bypass tray paper width sensing

Paper Length

When paper is loaded in the bypass tray, a pop-up confirmation screen is provided to the user to solicit confirmation of the media type and length loaded.

The size detection sequence is repeated if any of the following occur:

- The machine is switched off, then back on.
- The bypass tray becomes empty and is then reloaded.
- A different width paper is loaded in the bypass tray.

Bypass Tray Operation

The bypass tray operates as follows:

- When the bypass becomes empty, it is 'not ready'.

- When media is placed in the bypass tray:
 - If the sensed zone does not change from the previously confirmed one, the system will assume the previously confirmed size and attributes. The UI will display these and offer the user the opportunity to optionally alter and to confirm the values.
 - If the sensed zone does change from the previously confirmed one, the user is presented with a UI display showing the new default size (corresponding to the new zone) and the system default attributes; offering the user the option to alter them and confirm the values.

Whenever the bypass tray zone changes, the UI will update the display of the inferred contents to match the latest conditions. Once confirmed, the bypass tray becomes 'ready'.

Feeding Operation

The stack of paper in the bypass tray rests on a spring loaded bypass tray lift plate. The lift plate ensures that the lead edge of the top sheet in the tray is in contact with the feed roll. When a request for feeding from the bypass tray is received, the following occurs:

- The TAR/bypass tray motor, MOT80-006 runs in reverse to drive the:
 - Feed roll forward.
 - Retard roll backward through a drag clutch.
- The cam rotates off the cam follower to release the elevator tray springs.
- Both elevator tray springs elevate the bypass tray lift plate and push the paper stack against the feed roll.
- The feed clutch energizes to rotate the feed roll to feed the top sheet. At the same time, the retard roll runs in the reverse direction to prevent multi sheet feeds.
- After a few degrees of rotation, the cam depresses the elevator tray springs, lowering the bypass tray lift plate and the paper stack.
- When the lead edge of the sheet reaches the registration sensor, Q82-150, the TAR/bypass tray motor stops, creating a deskew buckle.
- Machine timing then runs the TAR/bypass tray motor forward and the registration motor, MOT80-040 to feed the sheet to the transfer area.
- When the lead edge of the sheet reaches the desired position relative to transfer, the feed clutch is de-energized to stop the feed roll.
- When the bypass tray elevate sensor, Q75-040 detects the home position, the TAR/bypass tray motor stops. The bypass tray lift plate is now in the down position and ready for the start of the next feed cycle.

Tray 6 Module (PFP)

Overview

The tray 6 module is an optional high capacity paper source that can be used as the primary paper feeder for the system. It provides a single tray with a dedicated paper size setting that can be set to A4 or 8.5 x 11 inch (LEF). It provides paper at the rate required by the machine to which it is attached.

The tray 6 module is positioned to the left of the machine, refer to [Figure 1](#). It is attached to the machine by a fixed base. Runners on the base allow the unit to be moved to the left for access to the left hand door, for jam clearance.

Power is derived from the main machine via a combined, communications connector. The tray can be reloaded with paper while other paper sources are in use.

A transport lock mechanism allows the tray 6 module to be moved safely, when not attached to the machine.

Configuration

The paper tray size is a mechanical setting that can be adjusted to accept 3300 sheets either A4 or 8.5 x 11 inch (80gsm/20 lb.), long edge feed stock. The paper size is pre-set at the factory and is dependant on the market region. There is no paper size sensing available in tray 6.

Kits are available to convert tray 6 to accept the following media:

- A4, short edge feed.
- 8.5 x 11 inch, short edge feed.
- 8.5x14 inch, short edge feed.
- A3, short edge feed.
- 11 x 17 inch, short edge feed.

When one of these kits is installed, the door is not present and the door switch is replaced by a manual tray loading switch.

Tray 6 contains the following main elements:

- Paper tray.
- Semi-active retard (SAR) feed head.
- Paper transport system.
- Tray elevator.
- Docking and interlocks.
- Component location.

Machine Interface

The serial interface is a hi-speed communication interface for transferring low-level data. This is done in the form of sensor data from the tray 6 hardware to the machine and control data from the machine to the tray 6 hardware.

The machine interface comprises of the tray 6 control PWB, the communication cable, a bulk-head connector, a harness and the host controller PWB. The communication cable also provides +5V and +24V to the tray 6 components. The harness terminates at the IOT PWB. The 24V supply is not interrupted by the activation of interlocks within the main machine.

If any communications data lines become open circuit or short circuit, a communications fault is indicated by the machine.

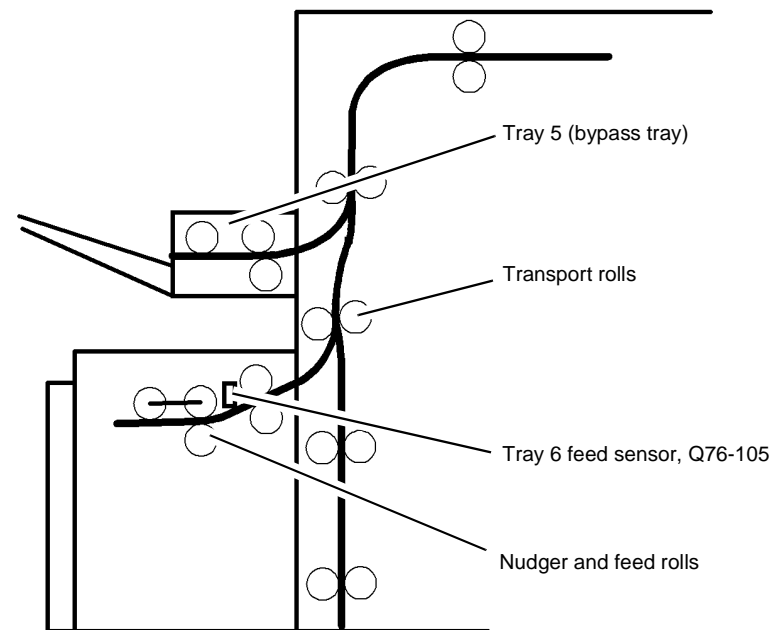
The software is capable of handling all stock formats, and the UI setting should match the tray setting. As there is no paper size detection on tray 6, and therefore no size information is fed to the machine, failure to set the UI size to match the tray 6 stock may result in faults such as; jams, image quality faults, finisher tamping errors, etc.

Interlocks

An interlock switch within the tray 6 module interrupts the 24V power when the tray 6 front door is opened. A second interlock switch interrupts 24V power when the module is undocked for jam clearance or service. The interlocks must be closed to enable initialization.

Paper Path

[Figure 33](#) shows the paper path between tray 6 and the machine.



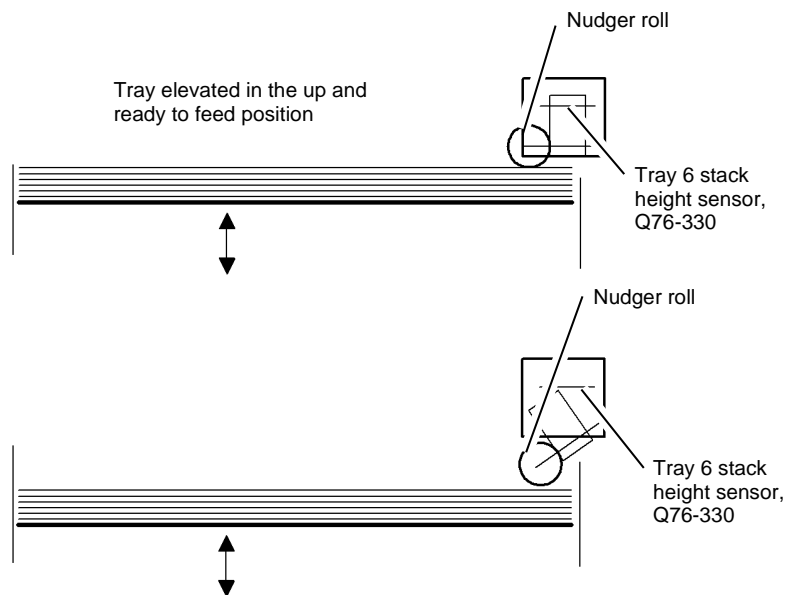
X-5-0119-A

Figure 33 Paper path

The nudger roll and the feed rolls are driven by the tray 6 feed motor, MOT76-117 and feed the sheet to the feed rolls, (SAR feeder). The feed rolls transport the sheet past the tray 6 feed sensor, Q76-105 to the tray 6 transport rolls. Because of the inherent slippage in SAR (Semi Active Retard) feed heads, the paper does not arrive at a well defined time. The transport rolls, which are not SAR, are driven by the tray 6 transport motor, MOT76-018, whose speed is controlled by the software. The time for the sheet to reach the tray 6 feed sensor is measured, and the speed of the transport motor is adjusted to ensure the leading edge of the sheet arrives at the machine at the correct time.

Semi-Active Retard Feed Head (SAR)

This consists of a nudger roll, mounted on a pivoting arm, as shown in Figure 34.



NOTE: Retard roll and other parts of SAR assembly not shown.

X-5-0120-A

Figure 34 SAR feeders

A separation nip is formed by the nudger roll and a retard roll which is not shown. The nudger roll is sprung and rests on the stack to feed the top sheet. If the stack is not within the feeding position, the tray 6 stack height sensor, Q76-330 triggers the elevator to rise to the feeding position.

The SAR mechanism substantially reduces the incidence of multi-sheet feeding.

Because the speed of the sheet is slightly reduced by the effect of the retard roll, when the leading edge reaches the tray 6 feed sensor, Q76-105 the feeding speed is controlled to ensure the sheet reaches the hand-over point in the machine within the allowable time window.

Paper Feed and Retard Rolls

The tray 6 feed roll/retard rolls are accessible from tray door access and by sliding the tray away from the machine. The host controller monitors their usage, recording the sheet feed count in the NVM, along with their life expectancy, to inform the customer service engineer (CSE) when their end of life occurs.

Paper Present Detection

When the tray is less than 10% full, and the tray is in the up position, the software checks after each sheet feed for an 'out of paper' condition. The tray 6 empty sensor, Q76-320 is a reflective type and is situated directly over a hole in the paper tray, normally covered by paper. There will be no reflection when the last sheet has been fed, and an 'out of paper' condition will be declared. The UI instructs the operator to refill the tray and further paper feeds will be inhibited. In a normal tray 6 module, with A4 or 8.5 x 11 inch LEF stock and a door present, the tray is automatically lowered. If there is no door, and a paper kit is installed, the tray is lowered when the manual push button is pressed and released. The out of paper status is raised to the host controller. The tray will elevate again when the door is closed after refilling the tray.

Tray Height Sensor

The machine keeps track of the tray height, based on the distance travelled from the start of lift. A software height counter is zeroed when the tray starts to rise and the tray 6 stack down sensor, Q76-335 goes low. As the tray rises, the tray 6 elevator motor encoder sensor, Q76-340 increments the height counter for each pulse sensed from the vertical encoder track. When the tray reaches its upper position, and the tray 6 stack height sensor, Q76-330 is actuated by the nudger roll, the value of the height counter is passed to the machine, as a percentage of the tray 6 paper stock left on the tray. The machine holds the stack height value as 0%, 5%, 10% and at 10% intervals up to 100% full, and this is available for display to the remote web UI. The counter value is updated whenever the tray 6 elevator motor encoder sensor changes state, and is saved to the NVM each time. If an expected change in state of the height encoder does not occur, when the elevator motor is operating, a fault condition is declared.

Stack Height when Feeding

The tray 6 stack height sensor, Q76-330 maintains the stack height by triggering activity of the tray 6 elevator motor, MOT76-010. When a change in the condition of this sensor is detected, there is a de-bounce delay of 33 milliseconds to allow the condition to settle, and if the change in the state of the sensor is confirmed, the elevator motor raises the tray, after the paper leading edge has passed the transport rolls. The amount of movement is determined by the current position of the tray. This position is used to read the 'motor-on time' from a look-up table, held within the machine.

Tray Overload

If the tray 6 stack height sensor, Q76-330 indicates the tray is at the feeding position, and at the same time the tray 6 stack down sensor, Q76-335 detects the tray in the fully lowered position, the 'overloaded tray' status is raised. The elevator motor movement is inhibited and an error is raised. This error condition is maintained until the conditions producing it no longer apply.

Elevator Motor Stop

The tray 6 elevator motor, MOT76-010 is never stopped by simply removing the power and allowing it to coast to a stop. Whenever the motor is stopped, it is dynamically, actively braked to a stand still.

Elevator Upper and Lower Positions

The commonly used tray control sensors are:

- Tray 6 stack height sensor, Q76-330.
- Tray 6 stack down sensor, Q76-335.
- Tray 6 tray empty sensor, Q76-320.
- Tray 6 elevator motor encoder sensor, Q76-340.

The safety limit switches are:

- Tray down limit switch.
- Tray upper limit switch.

The tray down limit switch breaks the +24V supply to the elevator motor in the down direction only. The tray upper limit switch breaks the +24V supply to the elevator motor in the up direction only. This allows the tray to recover its position, while preventing damage that would occur through further movement in the wrong direction.

The limit switches are connected to the tray 6 control PWB motor drive circuitry, rather than the sensing circuitry. Therefore, if one of the limit switches is actuated, the elevator movement is stopped, the lack of movement is detected by the software and a fault condition is declared.

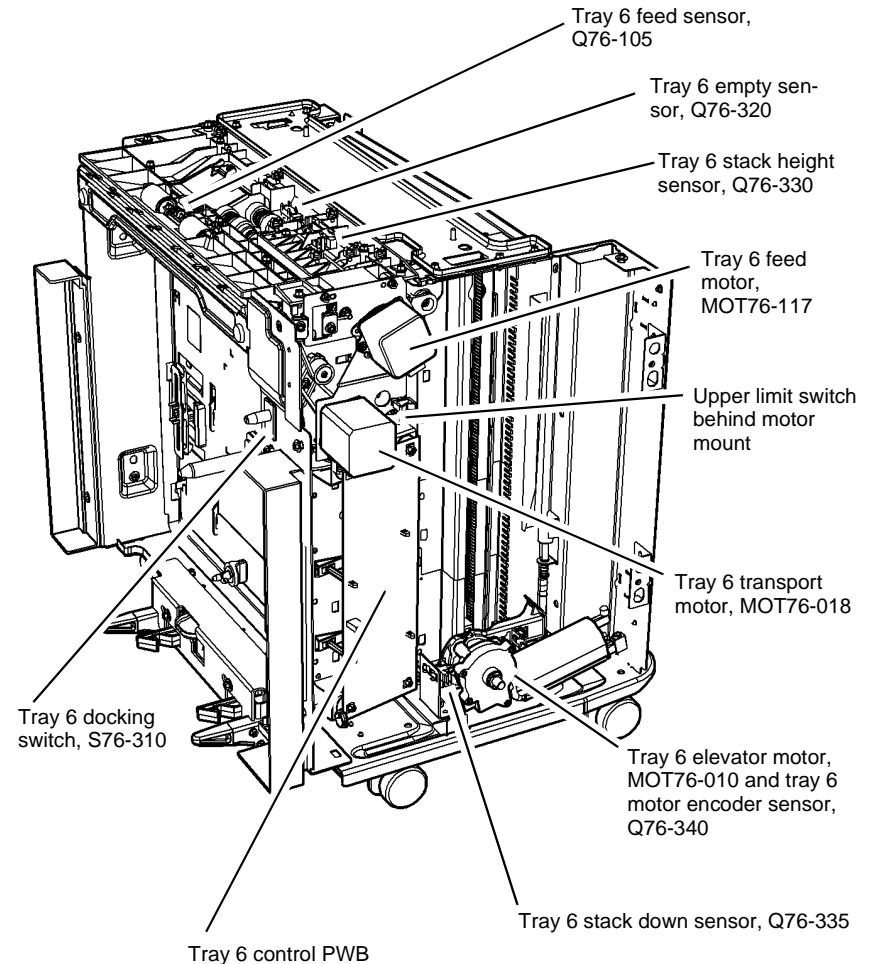
Component Location

Table 2 lists the active components of tray 6.

Table 2 Active components

Name	Function
Tray 6 feed sensor, Q76-105	Detects the leading edge and trailing edge of the paper
Tray empty sensor, Q76-320	Detects paper present in the tray
Stack height sensor, Q76-330	Detects the tray at the feed position
Stack down sensor, Q76-335	Detects the tray in the fully lowered position
Tray 6 elevator motor encoder sensor, Q76-340	Detects teeth on the vertical encoder, used to determine stack height
Tray 6 docking switch, S76-310	Detects tray 6 in the docked position
Tray 6 door switch, S76-300	Detects the tray 6 door open or closed
Tray 6 upper limit switch	Cuts the +24V to stop tray when moving to the up position
Tray 6 down limit switch	Cuts +24V to stop tray when moving in the down direction
Tray 6 transport motor, MOT76-018	Stepper motor feeding paper out of tray 6
Tray 6 feed motor, MOT76-117	Stepper motor to separate sheets and move the paper to the transport rolls
Tray 6 elevator motor, MOT76-010	Moves the tray up and down
Tray 6 control PWB	Controls the operation of tray 6

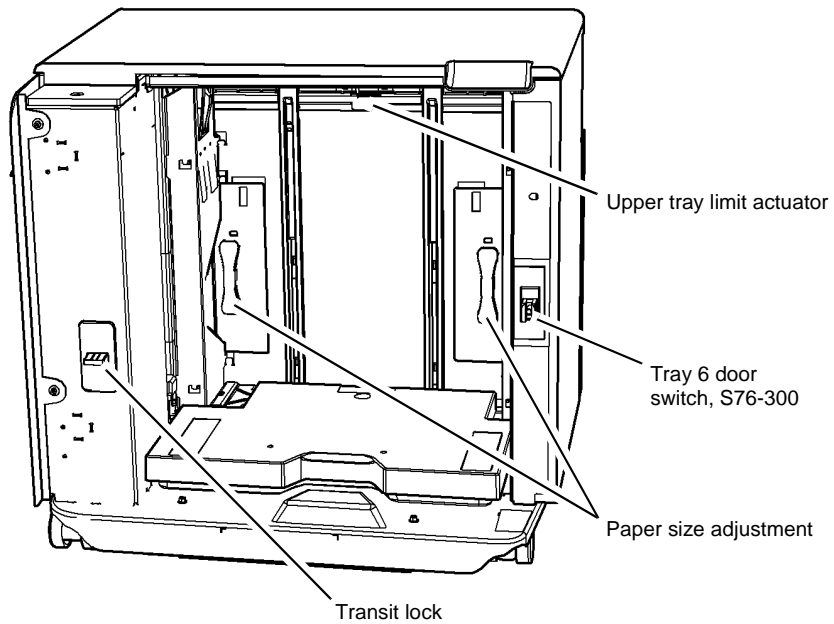
Refer to Figure 35 for the location of components, motors and sensors.



X-5-0155-A

Figure 35 Component location

Refer to [Figure 36](#) for the location of the transit lock, paper size adjustment, door switch and upper limit switch.



X-5-0156-A

Figure 36 Component location

Adjustments

Tray 6 has the following adjustment procedures:

- [ADJ 70.2](#), Tray 6 Paper Tray Guide Setting. This is performed to adjust the paper tray guide in tray 6 for A4 / A3, or for 8.5 x 11 inch / 11 x 17 inch paper.
- [ADJ 70.3](#), Tray 6 Module to Machine Alignment. This is performed to align the tray 6 module to the machine. This is the first adjustment in achieving correct registration and reliable paper transfer between tray 6 and the machine.
- [ADJ 70.4](#), Tray 6 Module Tray Alignment. This is the second adjustment to be performed when aligning tray 6 to the machine. It is performed when top edge registration cannot be achieved, using only the NVM values.
- [ADJ 70.5](#), Tray 6 Stack Height Sensor and Retard Shield. To enable the stack height sensor and retard shield to be set to their optimum positions on tray 6 modules. This extends the life of the feed, nudger and retard rolls.

Paper Transportation and Registration

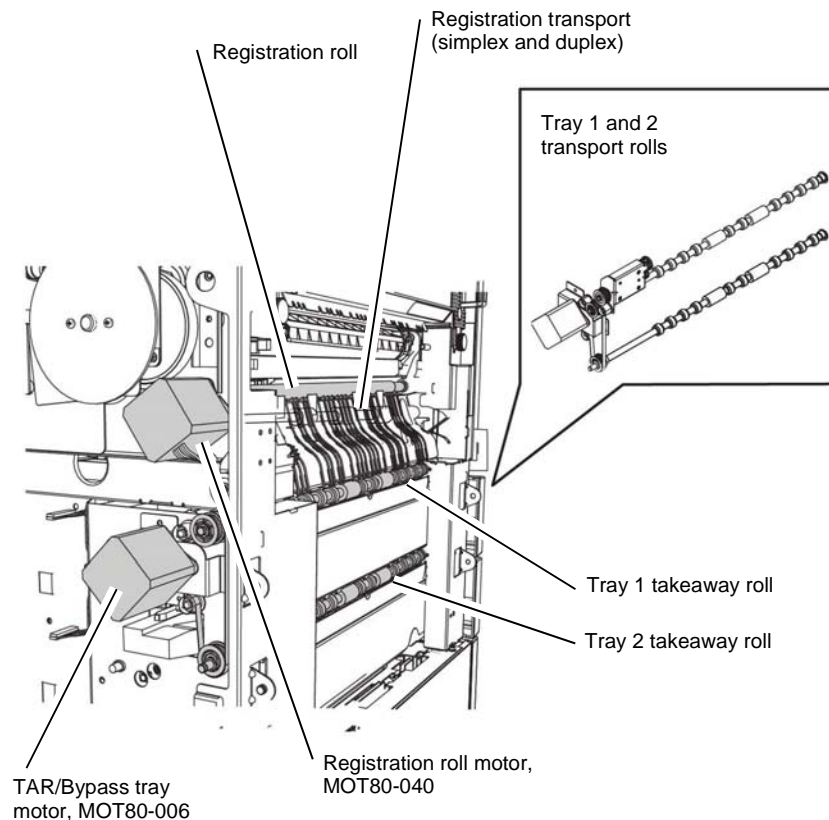
Introduction

This subsystem receives the paper that has been fed from the paper trays, transports the paper to the registration area, and delivers the paper to the xerographic subsystem.

The paper transportation and idlers for the registration subsystem are located in the left door, the drive for the registration transport are on the IOT side. Refer to [Table 1](#), [Figure 1](#) and [Figure 2](#).

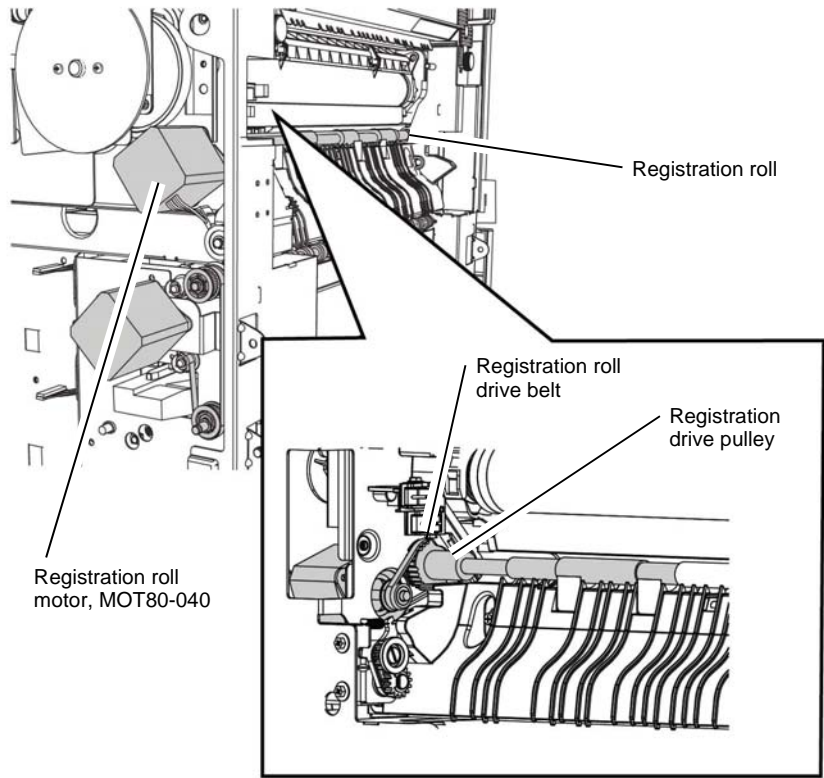
Table 1 Paper transportation and registration components

Component Name	Description
TAR/Bypass tray motor	In the forward direction, this motor drives the transport rolls for tray 1 and tray 2. In the reverse direction, this motor provides drive for the feed roll in the bypass tray.
Registration motor, MOT80-040 (part of the main drive module)	This motor provides drive for the registration rolls via the registration roll drive belt and the registration drive pulley on the registration roll. The registration rolls move the paper from the registration transport to the xerographic subsystem where the image is transferred to the paper. The registration idler rolls are located in the left door assembly.
Registration sensor, Q82-150	Detects the paper just prior to the registration transport.
Tray 1 TAR sensor Q81-001 PL 80.10 Item 5	As the paper is transported from trays 1-4, this sensor detects the paper as it exits the tray 1 TAR nip.
Tray 2 TAR sensor, Q82-001 PL 80.10 Item 5	As the paper is transported from trays 2-4, this sensor detects the paper as it exits the tray 1 TAR nip.
HCF transport motor, MOT81-045	This motor drives the HCF transport roll and also the transport roll in a 2 tray HCF configuration.
HCF exit sensor, Q81-108	Detects the paper as it leaves the HCF. The paper is exiting tray 3 or the tray 4 transport.
Duplex motor, MOT83-060 (45 & 55 ppm variants) PL 80.22 Item 8	This motor provides drive for the upper, mid and lower duplex rolls. It takes the copies that have been inverted and delivers them to the registration area.
Duplex motor, MOT83-062 (65, 75 and 90 PPM variants) PL 80.22 Item 8	This motor provides drive for the upper, mid and lower duplex rolls. It takes the copies that have been inverted and delivers them to the registration area.



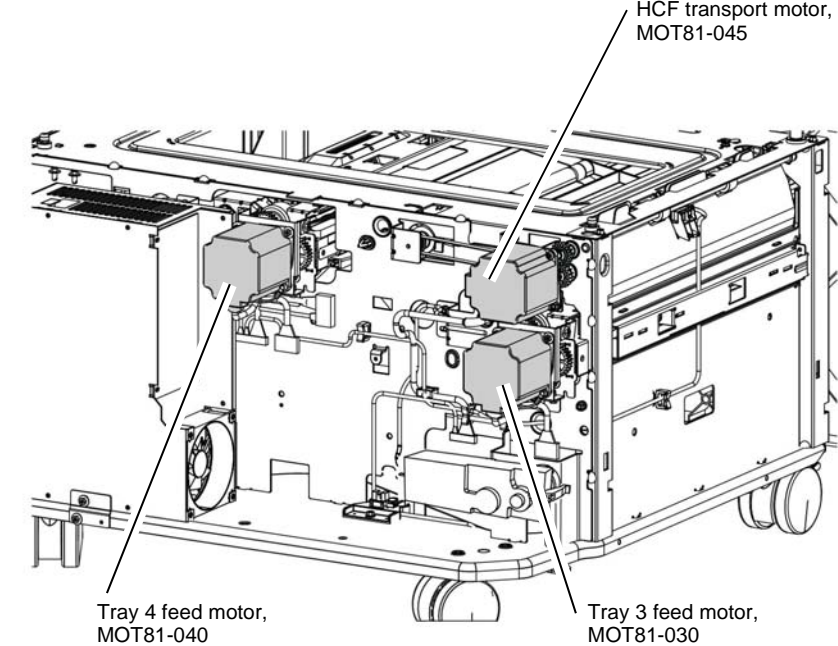
X-5-0113-A

Figure 1 Paper transport components



X-5-0114-A

Figure 2 Paper registration components



X-5-0115-A

Figure 3 HCF motors

Sheet Transport from Paper Tray 1 to Registration Rolls

Refer to Figure 1, Figure 2, Figure 3 and Figure 4. When the tray 1 feed motor, MOT81-010 is run in the forward direction to feed a sheet from tray 1, the TAR/bypass tray motor, MOT80-006 is run to drive the transport roll nip. The TAR/bypass tray motor transports the sheet until the lead edge is at the Simplex Stage Location (SSL). The motor speed varies dependent on image to sheet scheduling. If necessary, the sheet will be paused at the SSL to maintain the inter document gap.

Once the sheet has been released from the SSL and the lead edge actuates the registration sensor, Q82-150, the TAR/bypass tray motor accelerates the sheet to process speed. The sheet is driven by the TAR/bypass tray motor to the registration rolls and stopped. A buckle is formed in the sheet at the registration rolls to remove skew. At this point there is a small delay for sheet scheduling. Once this time has expired, the TAR/bypass tray motor and the registration motor, MOT80-040 are run to transport the sheet to the transfer area.80

Sheet Transport from Paper Tray 2 to Registration Rolls

Refer to [Figure 1](#), [Figure 2](#), [Figure 3](#) and [Figure 4](#). When the tray 2 feed motor, MOT81-020 is run in the forward direction to feed a sheet from tray 2, the TAR/bypass tray motor, MOT80-006 is run to drive the transport roll nip. The TAR/bypass tray motor transports the sheet until the lead edge is at the Simplex Stage Location (SSL). The motor speed varies dependent on image to sheet scheduling. If necessary, the sheet will be paused at the SSL to maintain the inter document gap.

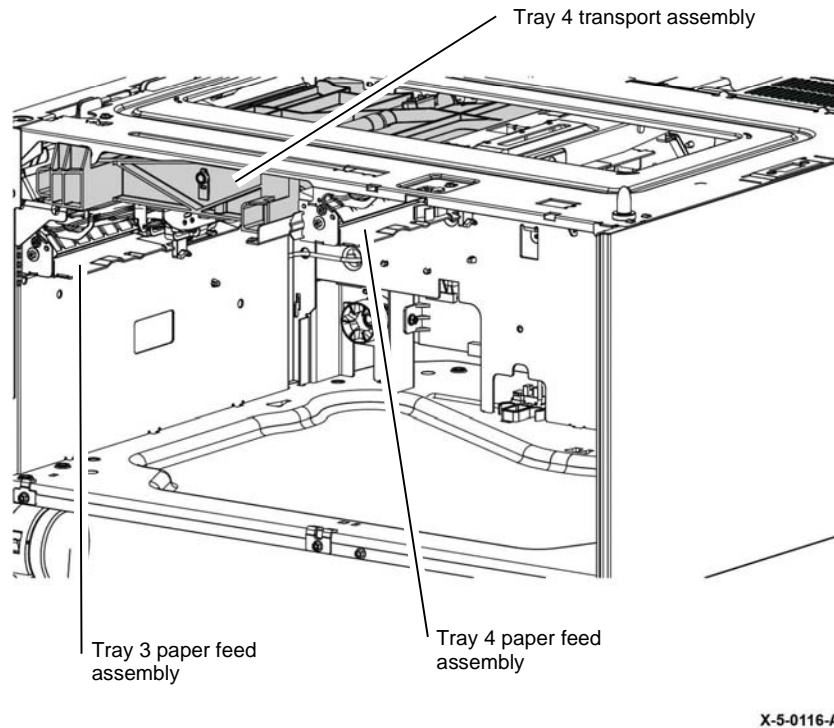


Figure 4 Tray 4 transport assembly

Once the sheet has been released from the SSL and the lead edge actuates the registration sensor, Q82-150, the TAR/bypass tray motor accelerates the sheet to process speed. The sheet is driven by the TAR/bypass tray motor to the registration rolls and stops. A buckle is formed in the sheet at the registration rolls to remove skew. At this point there is a small delay for sheet scheduling. After this time has expired, the TAR/bypass tray motor and the registration motor, MOT80-040 are run to transport the sheet to the transfer area.

Sheet Transport from Paper Tray 3 to Registration Rolls

Refer to [Figure 3](#) and [Figure 4](#). When the tray 3 feed motor, MOT81-030 is run in the forward direction to feed a sheet from tray 3, the TAR/bypass tray motor, MOT80-006 is run to drive the nips to transport the lead edge of the sheet to the Simplex Stage Location (SSL). The motor speed varies dependent on image to sheet scheduling. If necessary, the sheet will be paused at the SSL to maintain the inter document gap.

Once the sheet has been released from the SSL and the lead edge actuates the registration sensor, Q82-150, the TAR/bypass tray motor, MOT80-006 accelerates the sheet to process speed. The sheet is driven by the motors to the registration rolls and stops. A buckle is formed in the sheet at the registration rolls to remove skew. At this point there is a small delay for sheet scheduling.

After this time has expired, the TAR/bypass tray motor, MOT80-006 and the registration motor, MOT80-040 are run to transport the sheet to the transfer area.

Sheet Transport from Paper Tray 4 to Registration Rolls

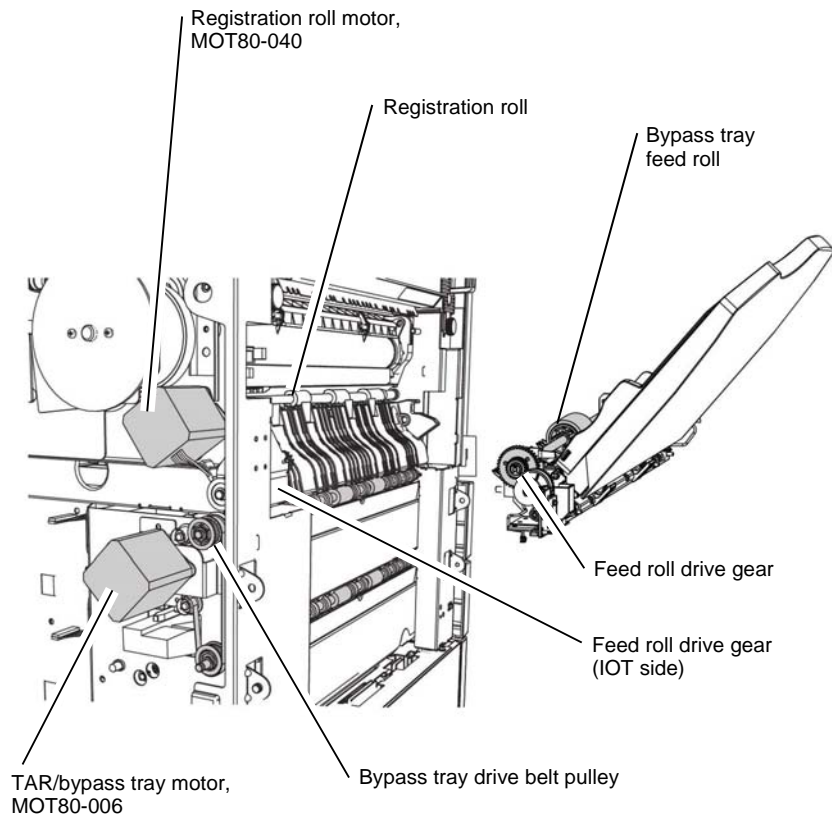
Refer to [Figure 3](#) and [Figure 4](#). When the tray 4 feed motor, MOT81-040 is run in the forward direction to feed a sheet from tray 4, the HCF transport motor, MOT081-045 and the TAR/bypass tray motor, MOT80-006 are run to drive the nips to transport the lead edge of the sheet to the Simplex Stage Location (SSL). The sheet is driven from the tray 4 takeaway rolls to the vertical transport via the tray 4 transport assembly located just above paper tray 3. The motor speed varies dependent on image to sheet scheduling. If necessary, the sheet will be paused at the SSL to maintain inter document gap.

Once the sheet has been released from the SSL and the lead edge actuates the registration sensor, Q82-150, the TAR/bypass tray motor, MOT80-006 accelerates the sheet to process speed. The sheet is driven by the motors to the registration rolls and stops. A buckle is formed in the sheet at the registration rolls to remove skew. At this point there is a small delay for sheet scheduling. After this time has expired, the TAR/bypass tray motor, MOT80-006 and the registration motor, MOT80-040 are run to transport the sheet to the transfer area.

Sheet Transport from Tray 5 to Registration Rolls

Refer to [Figure 5](#). When the TAR/bypass tray motor, MOT80-006 is run in the reverse direction, it provides drive for the bypass tray feed roll, and for the elevate function in the bypass tray via a cam and cam follower. The TAR/bypass tray motor, MOT80-006 transports the sheet to the registration transport.

Once the lead edge actuates the registration sensor, Q82-150, the TAR/bypass tray motor MOT80-006, accelerates the sheet to process speed. The sheet is driven by the motor to the registration rolls and then stops. A buckle is formed in the sheet at the registration rolls to remove skew. At this point there is a pause for sheet scheduling. After this time has expired, the TAR/bypass tray motor, MOT80-006 (in reverse) and the registration motor, MOT80-040 are run to transport the sheet to the transfer area.



X-5-0117-A

Figure 5 Bypass tray paper feed and registration

Sheet Transport from Tray 6 to Registration Rolls

When the tray 6 feed motor, MOT76-117, is run in the forward direction to feed a sheet from tray 6, the TAR/bypass tray motor, MOT80-006, is run to drive the transport roll nip. The TAR/bypass tray motor transports the sheet until the lead edge is at the Simplex Stage Location (SSL). The motor speed varies dependent on image to sheet scheduling. If necessary, the sheet will be paused at the SSL to maintain the inter document gap.

Once the sheet has been released from the SSL and the lead edge actuates the registration sensor, Q82-150, the TAR/bypass tray motor accelerates the sheet to process speed. The sheet is driven by the TAR/bypass tray motor to the registration rolls and stopped. A buckle is formed in the sheet at the registration rolls to remove skew. At this point there is a small delay for sheet scheduling. Once this time has expired, the TAR/bypass tray motor and the registration motor, MOT80-040 are run to transport the sheet to the transfer area.

Xerographics

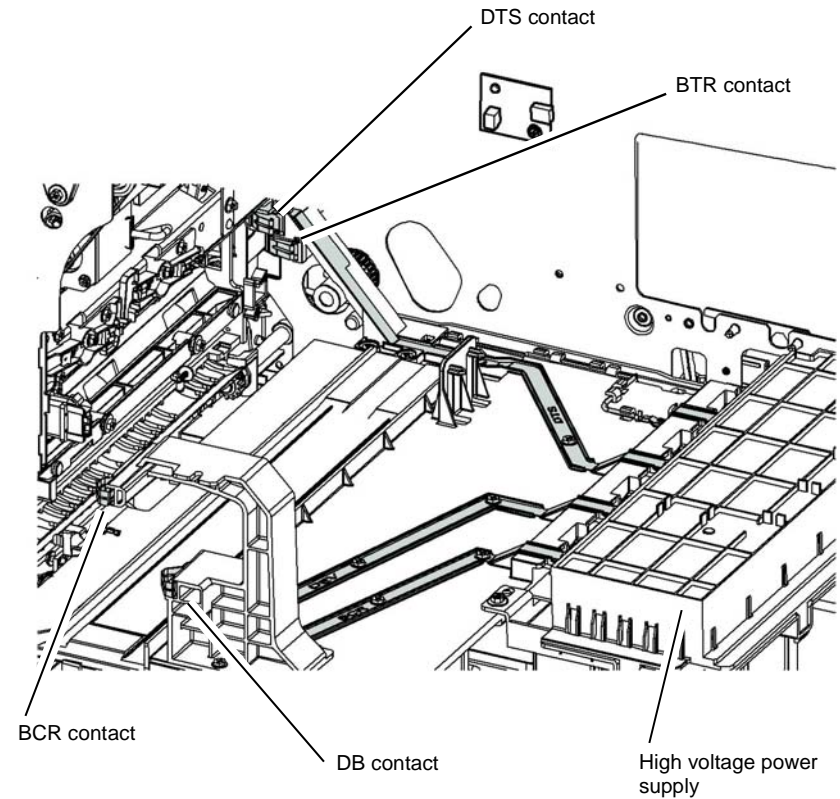
Introduction

The xerographic subsystem consists of the following:

- Toner cartridge (CRU).
- Toner dispense assembly.
- Print cartridge (CRU).
- Print cartridge fan, MOT93-001.
- Bias transfer roll (CRU).
- Environmental sensors to measure ambient temperature and relative humidity.

Refer to [Figure 1](#). The xerographics system is supplied the following from the high voltage power supply:

- Bias charge roll (BCR) voltage: - 755V and an AC signal. AC Frequency = 1.6KHz, AC current = 2.0u amps
- Developer bias (DB) voltage: - 600V and an AC signal. AC Frequency 9KHz, AC Voltage 1000V AC.
- Bias transfer roll (BTR) voltage: Controlled by changing the current (Constant current mode)
- Detack saw (DTS) voltage: -2500V



X-5-0123-A

Figure 1 High voltage power distribution

Toner Cartridge

The toner cartridge is a customer replaceable unit (CRU). The amount of toner in the cartridge will print approximately 88k prints per 2 bottle carton. Measured by ISO/IEC 19752 standard.

CRU Monitor (CRUM)

An RFID label (CRUM) is affixed to the outside of the toner cartridge. When the toner cartridge is inserted into the toner dispense assembly, the CRUM will be read by the CRUM PWB, a PWB mounted to the toner cartridge housing. Data is sent from the CRUM to the IOT PWB via the CRUM PWB and data is written to the CRUM.

The following data is stored on or written to the CRUM:

- Service Op Code: The service plan/region identifier restricts use of the toner cartridge to certain regions (compared with the system market region set). The service op code must be compatible with the machine market regions. Refer to [Table 1](#).
- Service Plan: Metered/Sold - compared with the system service plan to restricted usage of metered toner cartridges in metered machines. The service plan must be compatible with the machine service plan. Refer to [Table 2](#).
- End of Life (EOL): Sets the EOL flag for the toner cartridge. This prevents a toner cartridge that has been refilled from being used.

Table 1 Service Op code and market region

Toner Cartridge	Service Op Code	Market Region
Configuration 1	Sold	US and EUR
Configuration 2	Metered	World Wide
Configuration 3	Sold	DMO

Table 2 Machine service plan

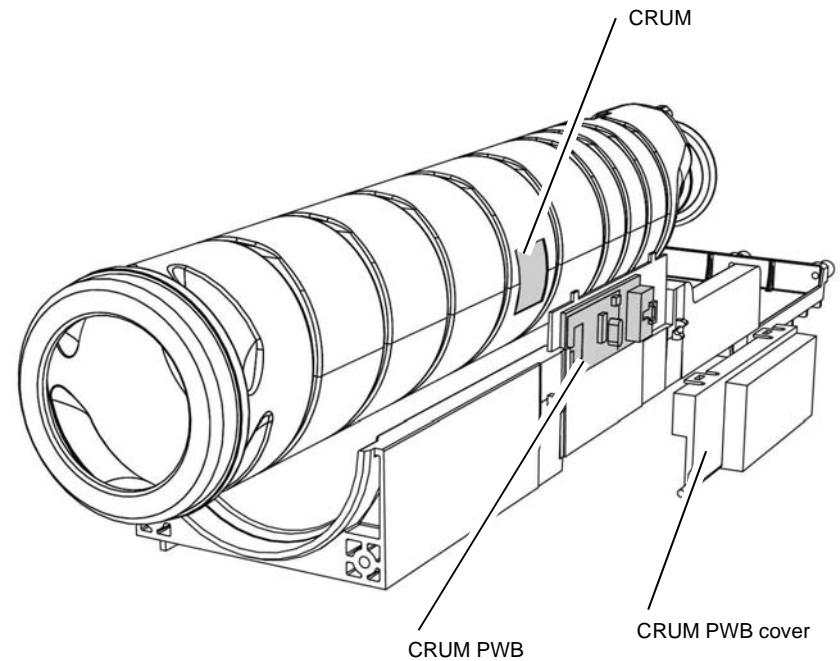
Machine Settings		Toner Cartridge	
Market Region	Service Plan	Configuration #	Parameters
US	Sold	1	Sold, US and EUR
EUR	Sold	1	Sold, US and EUR
DMO	Sold	3	Sold, DMO
US	Metered	1	Sold, US and EUR
		2	Metered, worldwide
EUR	Metered	1	Sold, US and EUR
		2	Metered, worldwide

The following information pertaining to toner cartridge life is available to the customer via the UI:

- Projected end of life (estimated days remaining).
- Image count based on toner dispensed (estimated pages remaining).
- Life remaining (estimated percent remaining).
- Re-order notification.
- Configuration of re-order information (set by System Administrator - 0 to 20 days).
- End of life replacement notification.

- Replacement instructions.

[Figure 2](#) shows the location of the toner cartridge CRUM and the CRUM PWB.



X-5-0124-A

Figure 2 Toner cartridge and CRUM

Toner Dispense Assembly and Toner Delivery

Toner Dispense Assembly

The toner dispense assembly moves toner from the toner cartridge through a dispense tube to the print cartridge. Out of toner sensing is done by the control system monitoring of the TC sensor voltage.

Toner Cartridge Motor

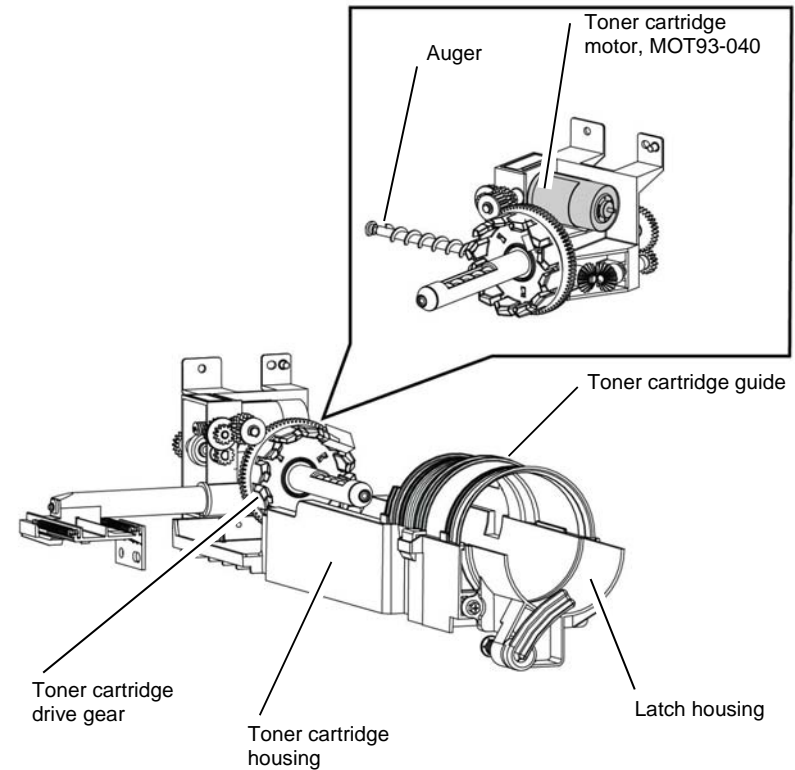
The toner cartridge motor, MOT93-040 drives the toner dispense tube augers in the toner dispense assembly to deliver toner to the print cartridge.

Process Controls

Process controls takes into account 2 parameters:

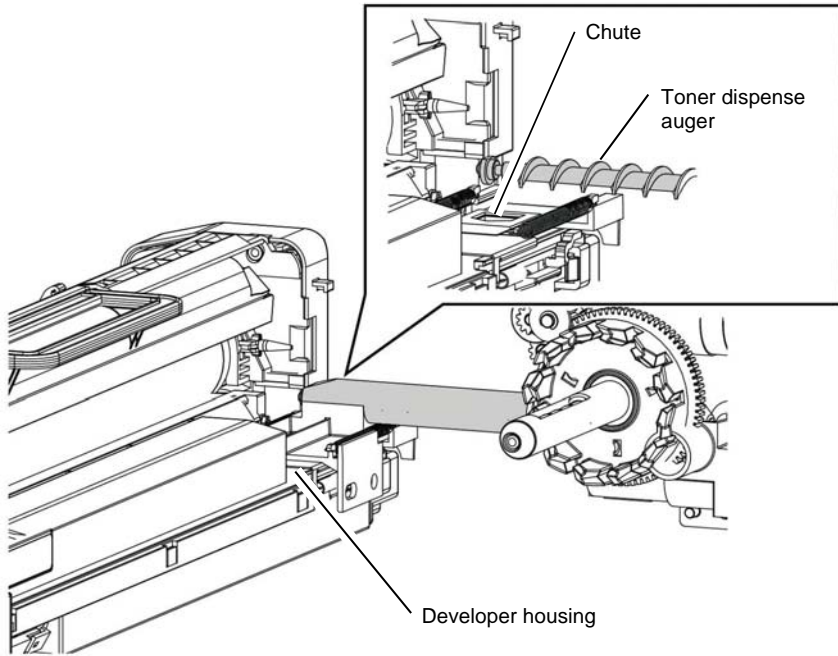
- Automatic toner control (TC) sensor (located inside the developer).
- Pixel count of the sheets being submitted to print.

If these values indicate that more toner is required, the toner cartridge motor, MOT93-040 will run. The motor rotates the toner cartridge (bottle) via the toner cartridge drive gear and drives the toner dispense auger. The auger delivers toner to the developer where it drops into a chute located on the print cartridge. When the TC sensor detects that there is the required amount of toner in the developer, the toner cartridge motor stops. Refer to [Figure 3](#) and [Figure 4](#).



X-5-0125-A

Figure 3 Toner dispense assembly



X-5-0126-A

Figure 4 Dispense auger and print cartridge

Print Cartridge

The print cartridge contains a developer section and a photoreceptor section. The developer section consists of a dual auger ring housing approximately 280g of developer material in its sump, a toner concentration sensor, a trim bar and a magnetic roll assembly. It interfaces to the dispense module where fresh toner is added as required to maintain uniform image quality. There is no trickle system associated with this developer section.

The photoreceptor section has a bias charge roll to effect charging, a bias roller foam cleaner, a photoreceptor polyurethane cleaner blade and an auger to return cleaned-off toner back to the developer sump for 100% recycle. Three stripper fingers are positioned cross process and rest on the photoreceptor drum surface and act as back up to aid paper detack and stripping post transfer.

Print Cartridge Life Expectancy

The print cartridge is a customer replaceable unit (CRU) and has a life dependent on the speed of the machine. There is a hard stop of 220,000 prints or 725,000 cycles (whichever is lowest). Once the hard stop is reached, printing will not resume until a new print cartridge is installed.

Print cartridge life expectancy is dependent on machine speed:

- 45 ppm - 155,000
- 55 ppm - 190,000
- 65/75/90 ppm - 200,000

CRU Monitor (CRUM)

When the print cartridge is inserted into the machine, the CRUM connector on the cartridge is seated in the connector on the machine frame. The CRUM data is sent the IOT PWB via the serial data line (SDL) and data is written to the print cartridge CRUM. Refer to [Figure 5](#) for the location of the CRUM connectors.

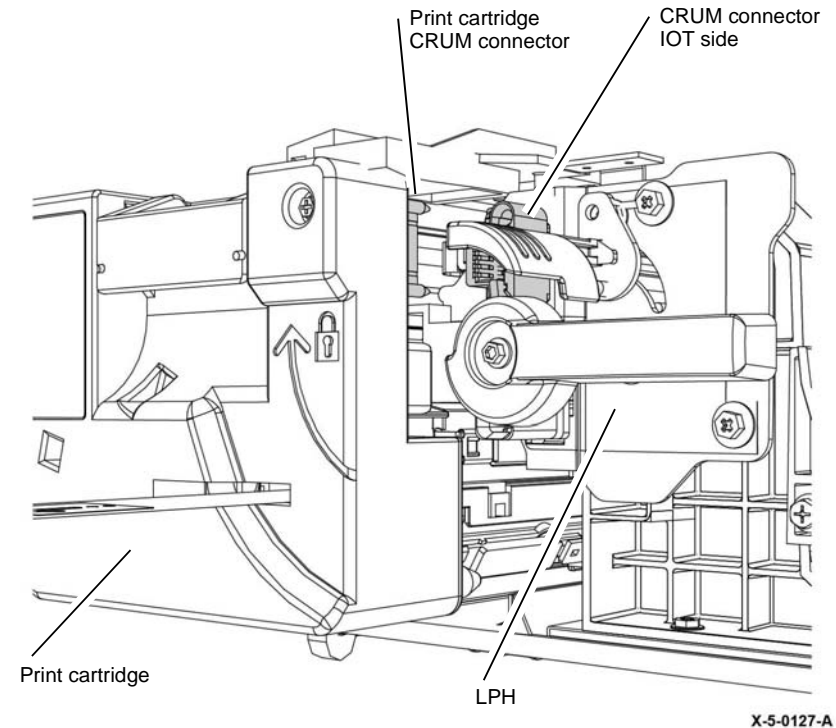


Figure 5 Print cartridge CRUM connectors

The following data is stored on or written to the print cartridge CRUM:

- Print cartridge unique serial number: Used to determine if the print cartridge has changed to trigger a revalidation.
- Unique xerographic data for TC set point.
- Service Op Code: The service plan/region identifier restricts use of the print cartridge to certain regions (compared with the system market region set).
- Service Plan: Metered/Sold - compared with the system service plan to restricted usage of metered cartridges in metered machines.
- End of Life (EOL): Sets the EOL flag for the print cartridge.
- Reuse flag: Allows the tag to be reused a number of times.
- Machine serial number: The machine serial number of the last machine the print cartridge was used in and is written to the CRUM.

The following information pertaining to print cartridge life is available to the customer via the UI:

- Projected end of life (estimated days remaining).
- Image count based on images marked (estimated pages remaining).
- Life remaining (estimated percent remaining).
- Re-order notification.
- Configuration of re-order information (set by System Administrator - 0 to 20 days).
- End of life replacement notification.
- Replacement instructions.

Photoreceptor Drum

Refer to [Figure 6](#). The photoreceptor drum is an aluminium cylinder coated with a layer of photoconductive material that retains electrical charges on its surface until selectively exposed to infra-red pixels to create a latent image. An LED print head is used for exposure of the latent image on the drum.

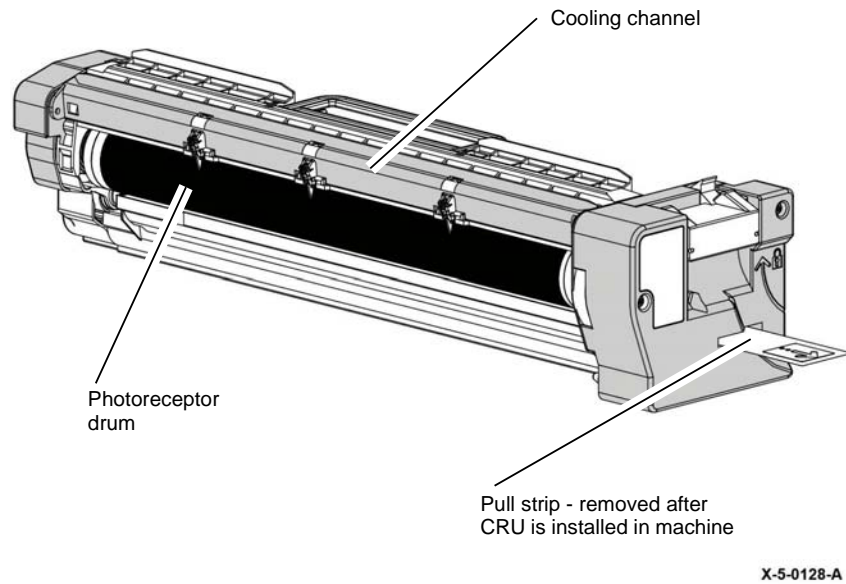


Figure 6 Print cartridge CRU

Bias Charge Roller (BCR)

Refer to [Figure 7](#). The BCR uniformly distributes electrical charges over the drum surface, and erases the previous charge pattern. There is no separate erase lamp. The BCR is connected to the high voltage power supply and the input voltage has both a DC and an independently switchable high frequency (1kHz AC) input.

BCR Cleaning foam roll

Refer to [Figure 7](#). The BCR cleaning foam roll removes particles from the surface of the BCR roll.

Magnetic Roller

Refer to [Figure 7](#). A thin layer of developer (carrier blended with toner) adheres to the surface of this roller, which transports the developer to the development zone

Trim Bar

Refer to [Figure 7](#). The trim bar controls the mass of developer per unit area on the magnetic roller, and the trimming process assists with the generation process of negative charges on the toner through triboelectrical exchange with the carrier particles.

Cleaning Blade

The cleaning blade removes toner remaining on the photoreceptor drum and causes it to empty into the cleaner housing inside the print cartridge. A lower thin seal prevents the cleaned-off toner from escaping from the housing. An auger inside the cleaner housing continually augers the toner back into the developer housing.

Reclaim Auger

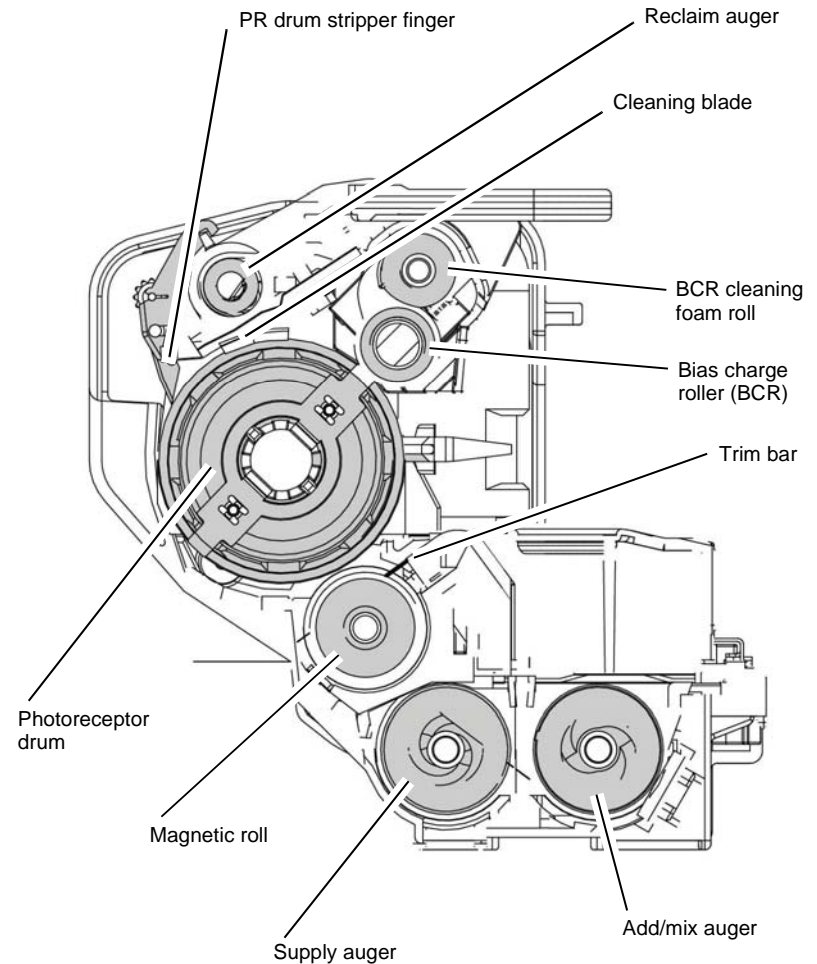
Refer to [Figure 7](#). The reclaim auger picks up residual material at the cleaner blade and recycles it to the Inboard end of the print cartridge where this material is delivered to the add/mix auger.

Add/Mix Auger

Refer to [Figure 7](#). The add/mix auger mixes the developer material with fresh toner added from the toner dispense system and any residual material delivered by the reclaim auger.

Supply Auger

Refer to [Figure 7](#). The supply auger delivers sufficient developer material to the mag roll.



X-5-0129-A

Figure 7 Print cartridge cross section view

Toner Sensor

The toner sensor is a magnetic permeability sensor that measures toner concentration in the print cartridge. The output of this sensor feeds data into the process controls system of the machine which decides when and for how long to activate fresh toner introduction to the developer housing by pulsing on and off the dispense motor on the dispense module. Refer to [Figure 8](#).

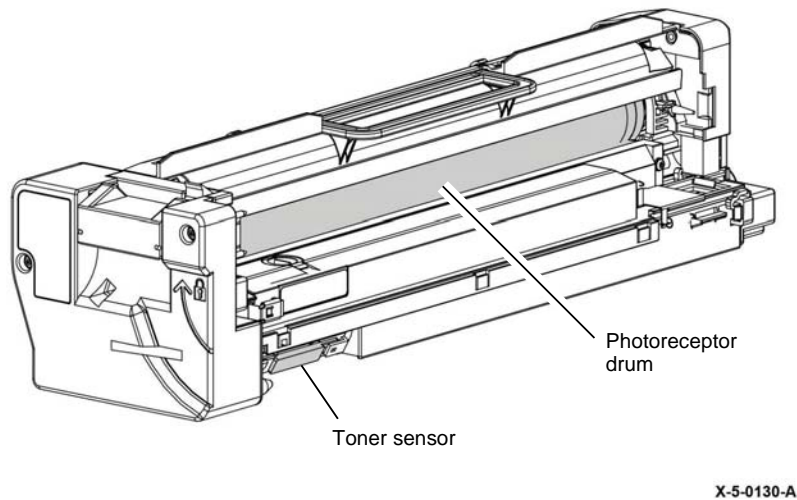


Figure 8 Toner sensor

Print Cartridge Cooling

Refer to [Figure 9](#). Print cartridge cooling consists of:

- Print cartridge fan, MOT93-001.
- Print cartridge fan duct.
- Cooling channel (mounted to the print cartridge).

The print cartridge fan directs air through a duct and onto the print cartridge via the cooling channel. The print cartridge fan helps prevent overheating of the print cartridge and increases the life of the print cartridge.

A count is kept based on the media size and the number of simplex or duplex prints. The fan switches on once that count is exceeded. This is only likely to occur during long print runs. Otherwise the fan will only run after printing has finished.

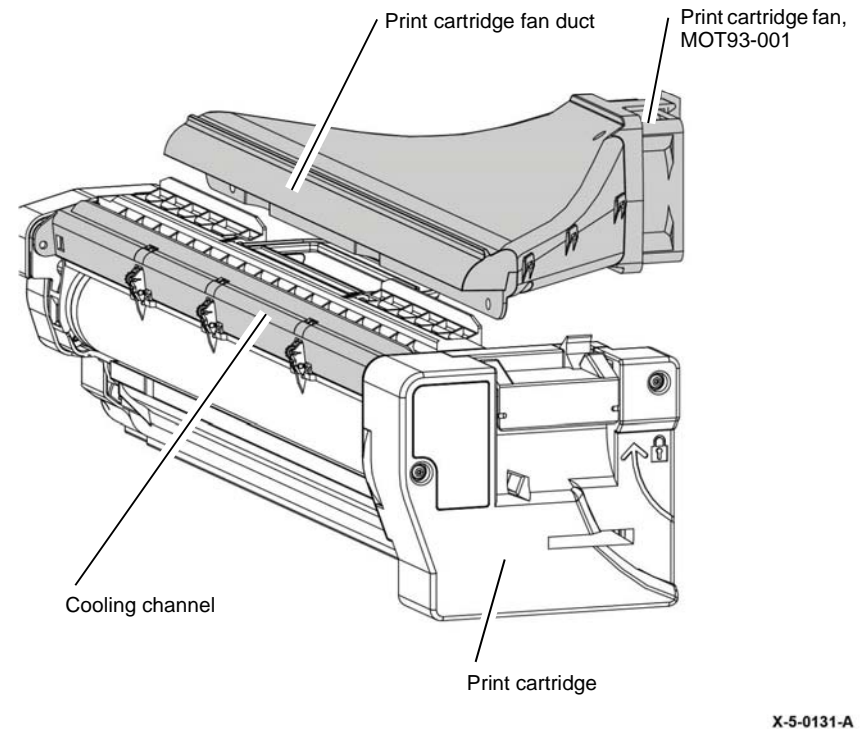


Figure 9 Print cartridge cooling

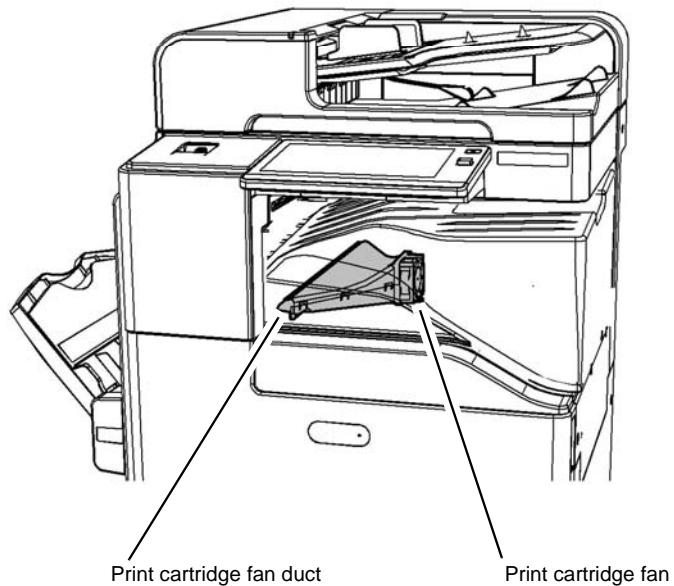
Difference between AltaLink® B8045/B8055 and B8065/B8075/B8090 variants

- The B8045/B8055 variants draw air from the cavity below the horizontal transport or center output tray.

- The B8065/B8075/B8090 variants draw air from outside the machine via an inner cooling duct.

AltaLink® B8045/B8055 Variants

The lower speed variants have a fan and duct blowing air onto the print cartridge. The air is taken from inside the machine and blown onto the print cartridge, [Figure 10](#).

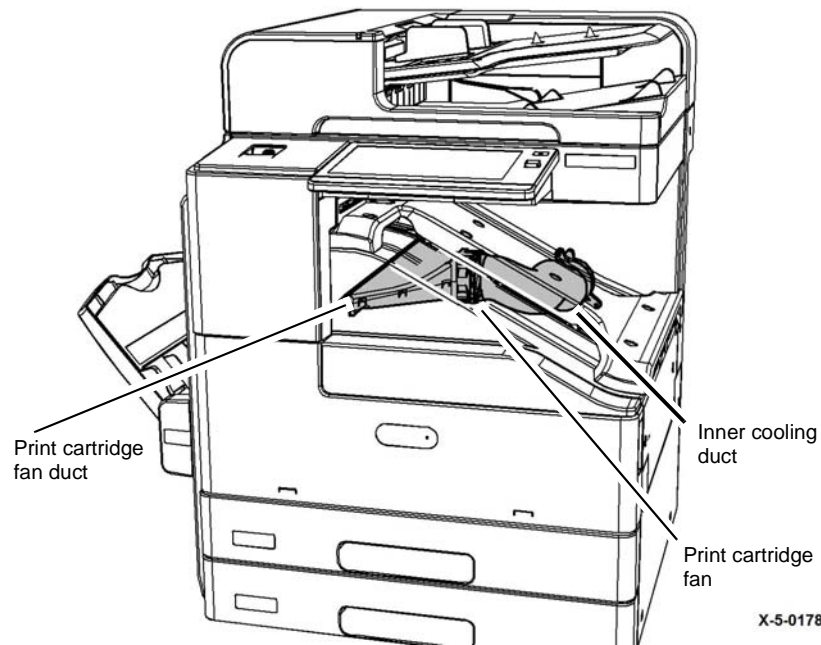


X-5-0177-A

Figure 10 Print head cooling 45/55 variants

AltaLink® B8065/B8075/B8090 Variants

The higher speed variants have a fan and duct blowing air onto the print cartridge. The air is taken from outside the machine at the rear via a duct and blown onto the print cartridge, [Figure 11](#).

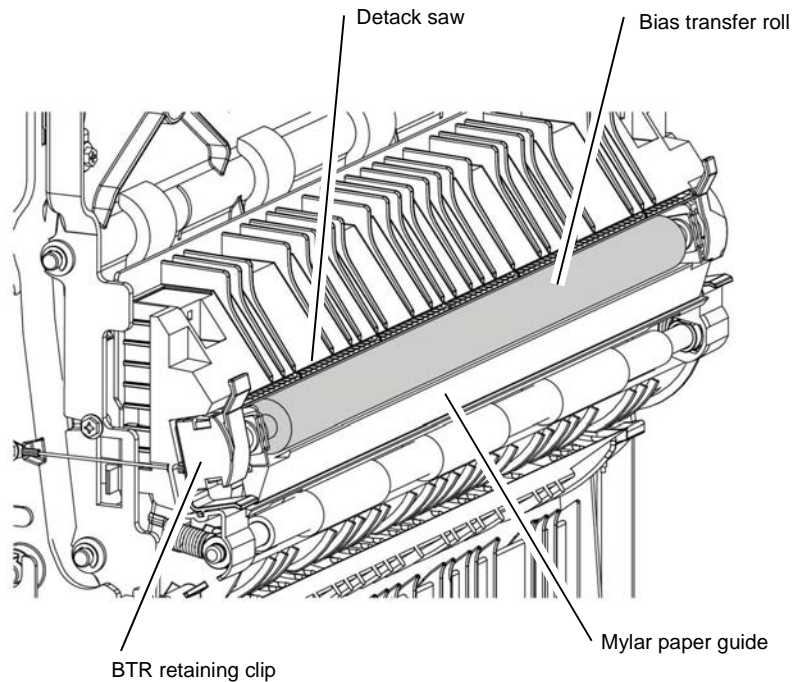


X-5-0178-A

Figure 11 Print head cooling 65/75/90 variants

Bias Transfer Roll (BTR)

Refer to [Figure 12](#). The bias transfer roll is located in the left door assembly. Drive for the transfer roller is accomplished by the roller being in direct contact with the photoreceptor drum. When paper moves between the bias transfer roll and photoreceptor drum, the bias transfer roll applies a positive charge to the rear surface of the paper. The negatively charged, developed image on the drum is attracted by the positive charge on the rear surface of the paper. Thus, the developed image is transferred from the surface of the drum to the surface of the paper. The detack saw, located adjacent and above the transfer roll, helps to separate the paper from the drum surface by introducing a stream of negatively charged ions onto the non-image side of the page.



X-5-0132-A

Figure 12 Bias transfer roll

Xerographic Process

There are seven xerographic processing steps:

1. The photoreceptor is charged by the bias charge roll.
2. The LPH discharges a selected area thereby creating the latent image.
3. The latent image is developed by the developer brush, which transfers toner onto the electrostatic image.
4. The latent image on the photoreceptor drum is transferred from the drum onto paper (or other media), by the transfer roll.
5. The transferred image is then peeled from the photoreceptor by the detack saw.
6. The photoreceptor is cleaned mechanically by the cleaning blade.
7. The transferred toner (image) on the media is fixed to the media by the fuser.

Environmental Sensors

Refer to [Figure 13](#). The ambient temperature sensor, Q91-062, and the humidity sensor, Q91-061, are mounted on the environmental sensors PWB.

The outputs for both the temperature and humidity sensors get converted to a 10-bit value by an A/D converter. The software then converts this bit value to degrees C and percentage RH. The measurement range of relative humidity is 30% to 80% and the temperature range is 5 to 50 degrees C.

The sensor outputs (both Temp and RH) are used in the algorithms to adjust the xerographic system settings to maintain image quality across a range of environmental conditions that the machine may encounter.

The environmental sensors (both ambient temperature and humidity) begin monitoring the environment 60 seconds after sensor power on or exit from sleep mode. This allows the sensor readings to settle. The sensor response time to reach 90% of actual humidity is 1 minute.

The sensors stop monitoring the environment at power save entry.

Faults and Statuses

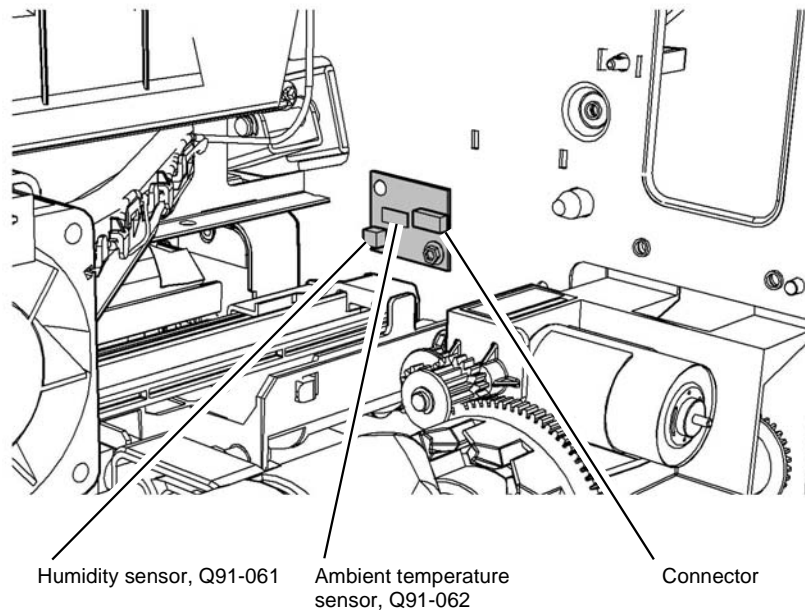
If a reading is out of range the appropriate sensor failure counter will be incremented. If consecutive reading failure counts occur then:

The ambient temperature sensor, Q91-062 will:

- Stop reading the ambient temperature.
- Log a temperature sensor fault (91-375) and raise a status (91-376) informing the user of the failure.

The humidity sensor, Q91-061 will:

- Stop reading the relative humidity.
- Log a humidity sensor fault (91-365) and raise a status (91-366) informing the user of the failure.



X-5-0133-A

Figure 13 Environmental sensors PWB

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(When Filled In)



EHS 700 - Health & Safety Incident Report Form for Incidents Involving a Xerox Product

For incidents in Canada: PIPEDA consent given	<input type="checkbox"/> YES <input type="checkbox"/> NO	EH&S Office Use ONLY EH&S Incident Reference Number:
PIPEDA is the Canadian "Personal Information Protection and Electronic Documents Act."		
For incidents in the EU: Safe Harbour Complaint	<input type="checkbox"/> YES <input type="checkbox"/> NO	

*Date Of Incident (mm / dd / yyyy):

Product Description

*Model No. or Product Name:

Product Serial Number:

Serial Number(s) of Accessory (ies):

Installation Date:

Total Copy Meter:

Date of last service maintenance:

List damaged and affected part(s) of the machine by description and part number:

*Description

Part Number

*Location of product and affected part(s):

Customer Identification

*Customer Name:

*Name of Customer Contact Person:

*Address:

E-mail:

*Telephone:

Fax:

Customer Service Engineer Identification

*Name (required for Xerox serviced equipment):

Employee:

E-mail:

Location:

*Phone (required for Xerox serviced equipment):

Individual Providing Notification

*Name:

*Title:

*Telephone Number:

*Organization:

E-Mail:

Mailing Address:

*Date Report Submitted:

* Required information is preceded by asterisk, **title shown in red**, with a tan wash background



Details of Incident

***Description Of Incident:** (Check all that apply)

Smoke

Describe quantity and duration of smoke:

- Fire with open flames seen
- Electric shock to operator or service representative
- Physical injury/illness to operator or service representative

Describe:

Other, describe:

MANDATORY DESCRIPTION (above): Provide a detailed description of all valid factors that may have contributed to the incident. Hardware involved in the incident should be preserved and retained for further investigation should investigation be deemed necessary by EH&S.

LIST INCIDENT DESCRIPTIONS AND SUPPORT DIAGRAMS/DATA INCLUDED OR ATTACHED:

***Any damage to customer property?** No Yes Describe:

***Did external emergency response provider(s) such as a fire department, ambulance, etc. respond?**

No Yes Identify: (i.e., source, names of individuals)

Apparent cause of incident (identify part that is suspected to be responsible for the incident)

***Preliminary actions taken to mitigate incident:**

Instructions: E-mail or fax both pages of this completed form to EH&S:

e-mail: usa.product.incident@xerox.com or fax 585-422-8217 [Intelnet 8*222-8217]

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