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# Xerox® WorkCentre® 5945 Family Multifunction Printer Service Manual



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About This Manual .....	iii
How To Use This Manual .....	iii
Remote Control Panel .....	iv
Change History.....	iv
Mod/Tag Identification .....	vi
Voltages Resistances and Tolerances .....	vi
Safety Information .....	ix
Health and Safety Incident reporting .....	x
Translation of Warnings .....	xi



## 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, 45 ppm or 55 ppm. 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 WorkCentre 5945/5955 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 August 2014](#)

### BUS Update August 2014

The following procedures are updated:

- SCP 2 Call Actions
- SCP 3 Service Call Procedures
- SCP 5 Final Actions
- 301B 0V Distribution RAP
- 301E +5V and +5VSB Distribution RAP
- 301G +24V Distribution RAP
- 301J Power On and LVPS Control Signal RAP
- 302A Touch Screen Failure RAP
- 303-346-00, 303-347-00 Single Board Controller PWB to UI Error RAP
- 305-940-00, 305-966-00 SPDH No Original RAP
- 310-153-00, 310-163-00 Lead Edge Late to Post Fuser Sensor RAP
- 310-154-00, 310-164-00 Trail Edge Late from Post Fuser Sensor RAP
- 310-170-00 Lead Edge Late to Horizontal Transport Entry Sensor RAP
- 310-171-00 Trail Edge Late to Horizontal Transport Entry Sensor RAP
- 310-320-00 Fuser Control Failure RAP
- 310-330-00, 310-340-00 Fuser Warm Up Failure RAP
- 310-330, 310-340-00 Fuser Warm Up Failure RAP
- 310-400-00 Fuser CRUM Communication Failure RAP
- 312-024-00-110, 312-025-00-110 Paddle Roll Failure RAP
- 312-043-00-110, 312-046-00-110 Hole Punch Operation Failure RAP
- 312-125-00-110, 312-126-00-110, 312-199-00-110 Paper Entry Jam RAP
- 312-127-00-110 Sheet Late to Hole Punch RAP
- 312-151-00-110, 312-152-00-110 Sheet Late to Bin 1 RAP
- 312-171-00-110, 312-172-00-110 Paper Exiting to Bin 0 RAP
- 312-198-00-110 Finisher Stray Sheet Detected RAP
- 312-310-00-110, 312-312-00-110, 312-313-00-110 Interlocks RAP
- 312-340-00-110, 312-341-00-110, 312-342-00-110 Ejector Movement Failure RAP
- 312-371-00-110, 312-372-00-110, 312-378-00-110 Staple Head Unit Movement Failure RAP
- 312-392-00-110, 312-393-00-110, 312-394-00-110 Front Tamper Move Failure RAP
- 312-396-00-110, 312-397-00-110, 312-398-00-110 Rear Tamper Move Failure RAP
- 312-462-00-110 Bin 1 Movement Failure RAP
- 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
- 312-125-00-150, 312-126-00-150, 312-199-00-150 Paper Entry Jam RAP

- 312-151-00-150, 312-152-00-150 Sheet Late to Bin 1 RAP
- 312-340-00-110, 312-341-00-110, 312-342-00-110 Ejector Movement Failure RAP
- 312C-150 LVF BM Initialization Failure RAP
- 312D-150 LVF BM Power Distribution RAP
- 341-301 CRUMs Bus Communications Error RAP
- 371-500-00 Tray 1 Open During Run RAP
- 372-500-00 Tray 2 Open During Run RAP
- 373-100-00, 373-217-00 Tray 3 Elevator Lift Failure RAP
- 373-500-00 Tray 3 Open During Run RAP
- 374-100-00, 374-217-00 Tray 4 Elevator Lift Failure RAP
- 374-500-00 Tray 4 Open During Run RAP
- 381-136-00 Lead Edge Late to Tray 3 Feed Sensor RAP
- 381-152-00 Trail Edge Late from Registration sensor RAP
- 381-155-00 Lead Edge Late to Registration Sensor From Bypass Tray
- 381-159-00 Lead Edge Late to HCF Exit Sensor from Tray 3 RAP
- 381A Paper Feed Retries RAP
- 391-365-00 Humidity Sensor Failure RAP
- 391-375-00 Ambient Temperature Sensor Failure RAP
- 391A HVPS RAP
- 392-400-00 Print Cartridge CRUM Communication Failure RAP
- 393-401-00 Toner Cartridge Missing RAP
- OF1 Unusual Noise RAP
- OF3 Dead Machine RAP
- OF4a Status Codes in Numerical Order
- OF4b Status Messages in Alphabetical Order
- OF6 Air Systems RAP
- OF7 IOT PWB Diagnostics RAP
- IQ8 IOT Skew RAP
- REP 10.7 Horizontal Transport Motor
- REP 60.15 LED Print Head Module
- REP 80.16 Bypass Tray Retard Roll Assembly
- REP 80.4 Registration Transport Assembly, Registration Roll and Registration Sensor
- REP 80.20 Tray 3 Paper Feed Assembly
- REP 80.21 Tray 4 Paper Feed Assembly
- ADJ 40.1 Machine Lubrication
- ADJ 60.1 Scanner Cleaning Procedure
- GP 4 Machine Software
- GP 8 Special Tools and Consumables
- GP 40 Glossary of Terms, Acronyms and Abbreviations
- dC330 Component Control
- PJ Locations, 2K LCSS PWB
- Wiring Diagram 4
- Wiring Diagram 7

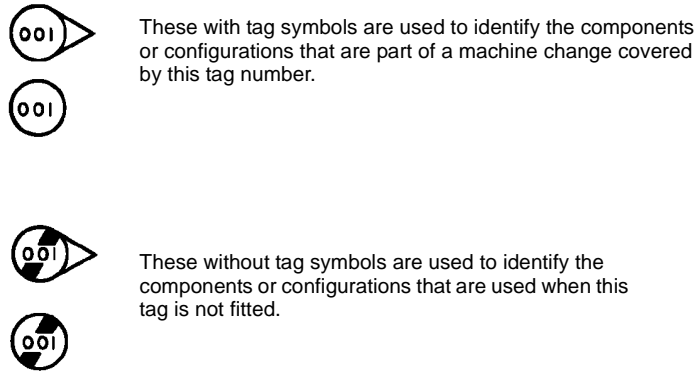
- Wiring Diagram 9
- Wiring Diagram 12
- Wiring Diagram 18

The following procedures are new:

- REP 70.18 Bypass Tray Harness
- GP 42 How to Disable the Toner Cartridge CRUM RFID Reader
- TAG 002
- TAG 003
- TAG 004
- TAG 013

## Mod/Tag Identification

Figure 1 shows the Mod/Tag identification symbols.



W-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.

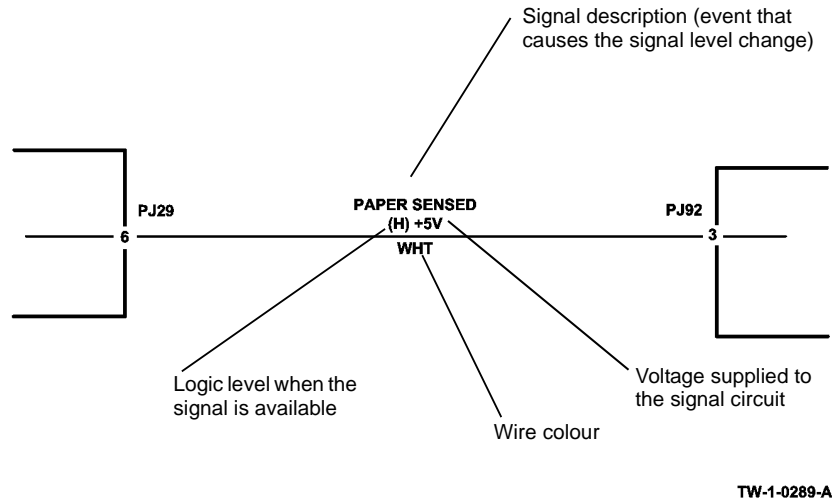


Figure 1 Signal Nomenclature

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](#).

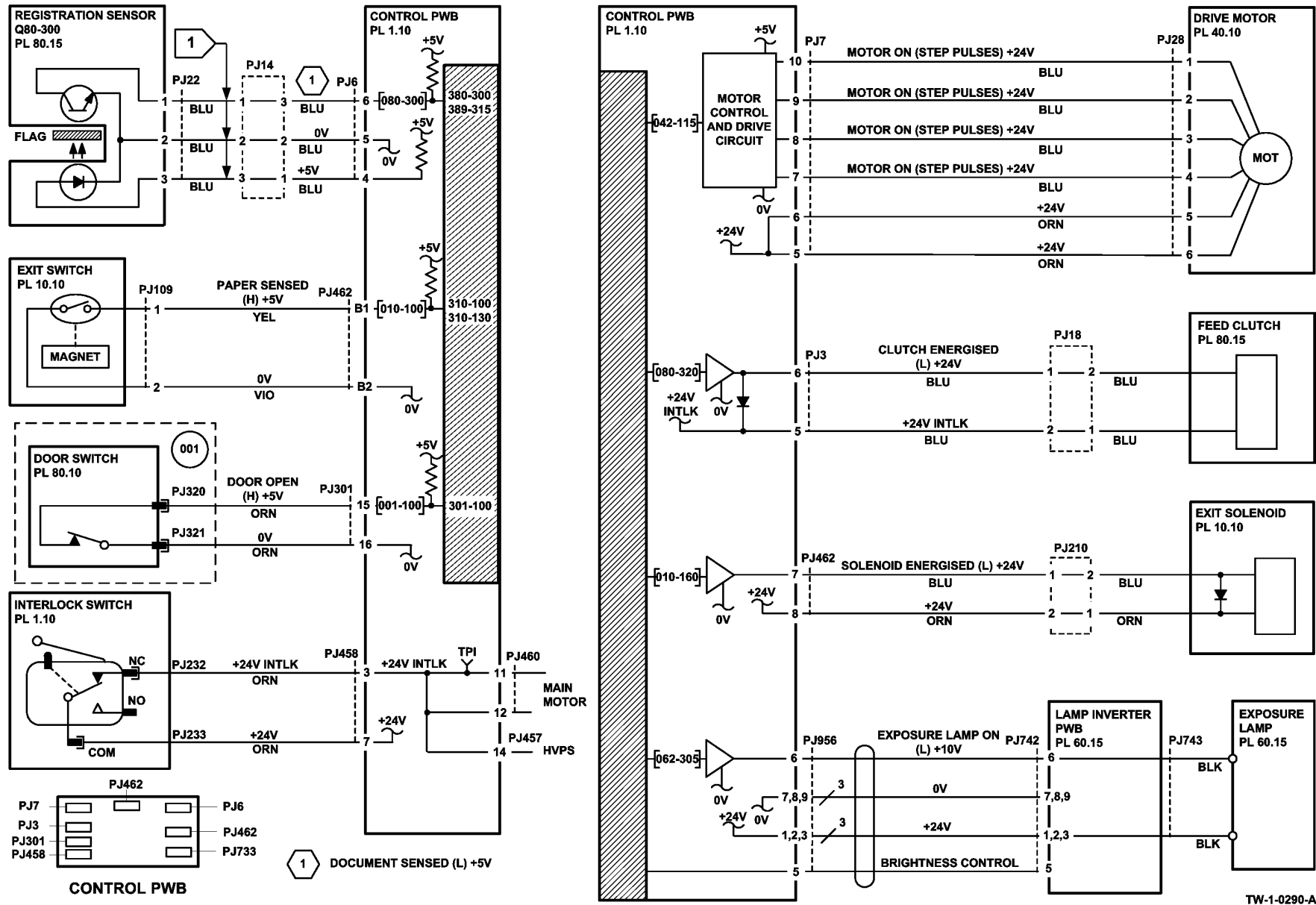
**NOTE:** This links to a RAP.

- 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](#).



TW-1-0290-A

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 any of the methods that follow:
  - For incidents in North America and Developing Markets West (Brazil, Mexico, Latin American North and Latin American South):
    - Phone\* Xerox EH&S at: 1-800-828-6571.
    - Electronic mail Xerox EH&S at: [usa.xerox.ehs@xerox.com](mailto:usa.xerox.ehs@xerox.com).
    - Fax Xerox EH&S at: 1-585-216-8817 [intelnet 8\*219-8817].
  - For incidents in Europe and Developing Markets East (Middle East, Africa, India, China and Hong Kong):
    - Phone\* Xerox EH&S at: +44 (0) 1707 353434.
    - Electronic mail Xerox EH&S at: [ehs-europe@xerox.com](mailto:ehs-europe@xerox.com).
    - Fax Xerox EH&S at: +44 (0) 1707 353914 [intelnet 8\*668 3914].

\*Initial notification made by phone must be followed within 24 hours by a completed incident report and sent to the indicated electronic mail address or fax number.

**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 folder \safety.
- 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:** Spegnere 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.

**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.



### 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.



### WARNING

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.



### 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.

**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.



### 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

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.



### WARNING

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.



### WARNING

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.



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# 1 Service Call Procedures

SCP 1 Initial Actions.....	1-3
SCP 2 Call Actions.....	1-3
SCP 3 Fault Analysis.....	1-4
SCP 4 Subsystem Maintenance.....	1-6
SCP 5 Final Actions .....	1-7
SCP 6 Machine Features .....	1-7



## 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](#).

### 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. Press the Machine Status button on the UI.
2. Select the Active Messages tab on the UI.
3. Select 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. Press the Machine Status button on the UI.
2. Select the Active Messages tab on the UI
3. Select Faults & Alerts from the pull 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.
- 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 panel lights 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 305C Document Present Failure RAP.
- If the message 'Due to a system error all scanned jobs have been deleted' is displayed, perform the 305B Last Sheet Out Sensor Failure RAP.
- If the SPDH is damaging documents, perform the 305D Damaged Documents RAP.
- If the machine locks up after the SPDH scans documents in duplex mode, perform the 305-960-00 SPDH LED Fan Lock Alarm 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.
- 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.
  - [312H-110](#) Copy Damage in the 2K LCSS RAP.
  - [312J-110](#) Mis-Registration in Stapled Sets and Non-Stapled Sets RAP.
  - [312K-110](#) 2K LCSS Poor Stacking RAP.
  - [312L-110](#) Stapling Prime Failure RAP.
- If the punched holes are out of position, perform [ADJ 12.3-110](#) Hole Punch Position.
- 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 [312L-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 punched holes are out of position, perform [ADJ 12.3-150](#) Hole Punch Position.
- 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.

### 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, 125,000 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.

## 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



#### WARNING

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:
  - SPDH reg sensor, [PL 5.18 Item 11](#).
  - 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](#).
  - SPDH last sheet out sensor, [PL 5.30 Item 18](#).
  - Post fuser sensor, [PL 10.11 Item 7](#) (centre output tray) or [PL 10.12 Item 7](#) (horizontal transport).
  - Horizontal transport entry sensor, [PL 10.15 Item 8](#).
  - 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](#).
  - 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](#).
2. Check the LVF BM staple cartridges. If necessary, install new LVF BM staple cartridges, [PL 12.395 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	250k prints	<a href="#">PL 10.8 Item 1</a>
Bias transfer roll	250k prints	<a href="#">PL 80.15 Item 3</a>
Print cartridge	147k prints	<a href="#">PL 90.17 Item 9</a>
Toner cartridge	25k prints at 6% area coverage	<a href="#">PL 90.17 Item 2</a>
SPDH feed roll kit	170k feeds	<a href="#">PL 31.12 Item 15</a>
Tray 1 and 2 feed rolls	750k feeds	<a href="#">PL 80.26</a>
Tray 3 feed rolls	400k feeds	<a href="#">PL 80.32 Item 9</a>
Tray 4 feed rolls	400k feeds	<a href="#">PL 80.33 Item 11</a>
Bypass tray feed rolls and retard pad	100k feeds	<a href="#">PL 70.35</a>
2K LCSS staple cartridge	5k staples	<a href="#">PL 12.55 Item 7</a>
LVF BM staple cartridge	5k staples	<a href="#">PL 12.365 Item 7</a>
LVF BM staple cartridge (book-let maker)	2k staples	<a href="#">PL 12.395 Item 8</a>

### 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 5.4 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 copy quality. To reset the registration, perform [dC604 Registration Setup Procedure](#). For copy 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

### Configuration Options

The WorkCentre 5945/5955 is available as a basic machine with trays 1, 2, 3, 4 and 5 (bypass tray). It is also available in various configurations using the options that follow:

#### 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

- Two 500 sheet paper trays (trays 1 and 2).
- 3600 sheet high capacity feeder (trays 3 and 4).
- 100 sheet bypass tray.
- 200 sheet single pass document handler (SPDH).

#### Output Options

- Office finisher (2K LCSS). A 2250 sheet 2 bin stapler stacker.
- Office finisher with booklet maker (LVF BM). A 2000 sheet 2 bin stapler stacker tray with booklet maker.

**NOTE:** A horizontal transport is also installed when a finisher is fitted.

#### Accessories and Kits

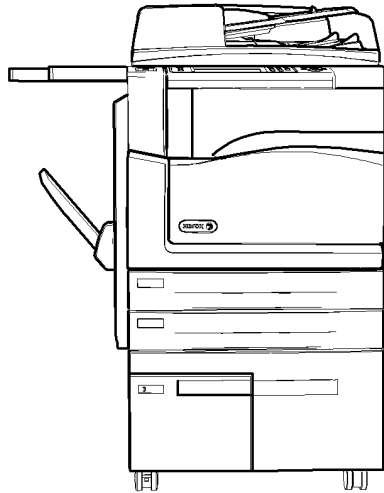
- Workshelf.
- 50 sheet convenience stapler.
- 2 hole punch kit.
- Legal 2 hole punch kit.
- 3 hole punch kit.
- 4 hole punch kit.
- Swedish 4 hole punch kit.
- 1 Line Fax kit.
- 2 Line Fax kit.
- Scan to PC desktop SE - standard.
- Scan to PC desktop SE - professional.
- Nationalization kits.
- Foreign device interface kit.
- Tray 2/4 lock kit.
- Envelope tray feed kit.
- Horizontal transport kit (used when a finisher is fitted).
- Unicode international printing kit.
- Secure access kit.
- Common access card.
- McAfee Integrity Control enablement kit.
- XPS enablement kit.
- Wireless print kit.
- Smartcard kit.

**NOTE:** The service manual covers all of the above configurations. Within the manual, ignore any references to options that are not installed.

## Machine Identification

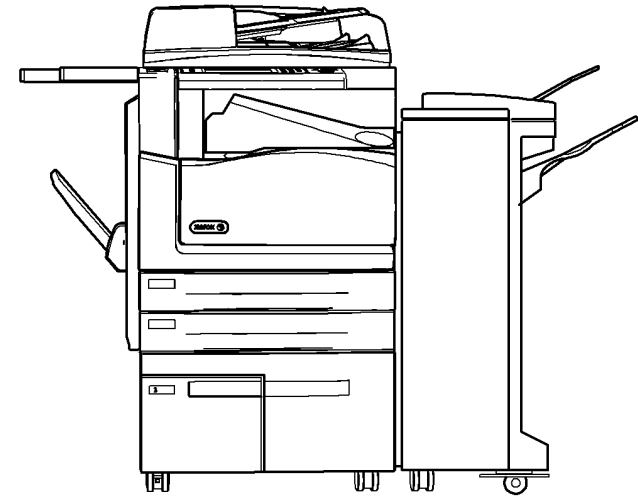
The diagrams that follow illustrate some of the machine configurations:

- **Figure 1** WorkCentre 5945 with trays 3 and 4, centre output tray and workshelf.
- **Figure 2** WorkCentre 5955 with trays 3 and 4, workshelf and 2K LCSS.
- **Figure 3** WorkCentre 5955 with trays 3 and 4, workshelf and LVF BM.



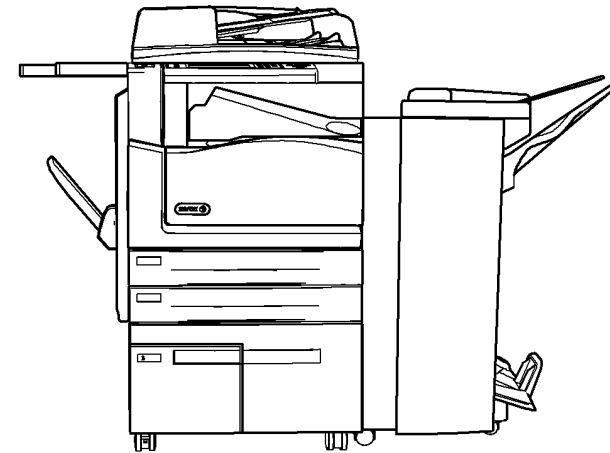
**Figure 1** WorkCentre 5945 with centre output tray

W-1-0899-A



**Figure 2** WorkCentre 5955 with 2K LCSS

W-1-0900-A



**Figure 3** WorkCentre 5955 with LVF BM

W-1-0901-A



## 2 Status Indicator RAPs

### Chain 1 - Standby Power

301-300-00 Front Door Open RAP .....	2-5
301-305-00 Left Door Open RAP .....	2-7
301A Ground Distribution RAP .....	2-9
301B 0V Distribution RAP .....	2-19
301C AC Power RAP .....	2-30
301D +3.3V Distribution RAP .....	2-33
301E +5V and +5VSB Distribution RAP .....	2-35
301F +12V Distribution RAP .....	2-40
301G +24V Distribution RAP .....	2-40
301H Short Circuit and Overload RAP .....	2-46
301J Power On and LVPS Control Signal RAP .....	2-52
301K Sleep Mode RAP .....	2-55
301L LVPS RAP .....	2-59

### Chain 2 - User Interface

302-302-00, 302-306-00, 302-308-00 Flash Failure RAP .....	2-63
302-315-00 Service Registry Bad Data RAP .....	2-63
302-316-00, 302-317-00 SRS Error RAP .....	2-64
302-320-00 Data Timeout Error RAP .....	2-64
302-321-00 XEIP Browser Dead RAP .....	2-65
302-380-00, 302-381-00 UI Communication Fault RAP .....	2-65
302-390-00 Configurable Services RAP .....	2-66
302A Touch Screen Failure RAP .....	2-66
302B UI Control Panel Button or Touch Screen RAP .....	2-68

### Chain 3 - Machine Run Control

303-306-00 Software Downgrade Not Permitted RAP .....	2-69
303-307-00 Software Upgrade Synchronization Failure RAP .....	2-69
303-316-00 CCM Cannot Communicate with IOT RAP .....	2-70
303-324-00, 303-327-00, 303-390-00 Software Upgrade Failure RAP .....	2-70
303-325-00 System Detects the Machine Clock Failed to Increment During Power On RAP .....	2-71
303-326-00 Software Upgrade Not Required RAP .....	2-71
303-329-00, 303-330-00 Software Upgrade Request RAP .....	2-72
303-331-00, 303-332-00 Main Controller and Network Controller on the SBC PWB Cannot Communicate RAP .....	2-72
303-338-00 SBC Main Controller Reset RAP .....	2-73
303-346-00, 303-347-00 Single Board Controller PWB to UI Error RAP .....	2-73
303-355-00 CCM POST Failure Detected RAP .....	2-74
303-360-00, 303-800-00 IOT to Finisher RAP .....	2-75
303-362-00 CCS Power Fault RAP .....	2-78
303-397-00 System Configuration Recovery Attempt RAP .....	2-78
303-398-00, 303-399-00 SOK 1 Not Detected RAP .....	2-79
303-401-00, 303-403-00 Fax Not Detected RAP .....	2-79
303-405-00, 303-406-00 SIM Card Fault RAP .....	2-80
303-417-00 Incompatible Fax Software RAP .....	2-80
303-777-00 Power Loss Detected RAP .....	2-81

303-788-00 Failed to Exit Power Save Mode RAP .....	2-81
303-790-00 Time Zone Cannot Be Set RAP .....	2-82
303A SBC PWB Battery RAP .....	2-82
303B Mark Service Unavailable RAP .....	2-83
303C Switch Off Failure RAP .....	2-84
303D SBC PWB Diagnostics RAP .....	2-86
303E Foreign Device PWB Fault RAP .....	2-88

### Chain 5 - SPDH

305-253-00 SPDH Communications Error RAP .....	2-91
305-300-00 SPDH Open RAP .....	2-92
305-305-00 SPDH Top Cover Open RAP .....	2-93
305-335-00, 305-336-00 SPDH Takeaway Sensor Paper Jam RAP .....	2-95
305-340-00, 305-341-00 SPDH Reg Sensor Failure RAP .....	2-98
305-342-00, 305-343-00 SPDH Side 2 Reg Sensor Failure RAP .....	2-101
305-940-00, 305-966-00 SPDH No Original RAP .....	2-104
305-941-00 Insufficient Originals RAP .....	2-105
305-958-00 SPDH Lift Home Position Sensor Failure RAP .....	2-106
305-959-00 SPDH Calibration Home Position Sensor Failure RAP .....	2-109
305-960-00 SPDH LED Fan Lock Alarm RAP .....	2-112
305-961-00 SPDH Motor Fan Lock Alarm RAP .....	2-113
305-962-00 SPDH Feed Sensor Adjustment Error RAP .....	2-115
305-963-00 SPDH Takeaway Sensor Adjustment Error RAP .....	2-116
305-964-00 SPDH Reg Sensor Adjustment Error RAP .....	2-118
305-965-00 SPDH Side 2 Reg Sensor Adjustment Error RAP .....	2-119
305A Document Size Sensors Failure RAP .....	2-121
305B Last Sheet Out Sensor Failure RAP .....	2-124
305C Document Present Failure RAP .....	2-125
305D Damaged Documents RAP .....	2-126

### Chain 10 - Fusing and Copy/Print Transportation

310-153-00, 310-163-00 Lead Edge Late to Post Fuser Sensor .....	2-127
310-154-00, 310-164-00 Trail Edge Late from Post Fuser Sensor RAP .....	2-130
310-170-00 Lead Edge Late to Horizontal Transport Entry Sensor RAP .....	2-133
310-171-00 Trail Edge Late from Horizontal Transport Entry Sensor RAP .....	2-136
310-172-00 Unexpected Sheet in Horizontal Transport RAP .....	2-138
310-201-00 Unexpected Sheet at Post Fuser Sensor RAP .....	2-138
310-320-00 Fuser Control Failure RAP .....	2-139
310-330-00, 310-340-00 Fuser Warm Up Failure RAP .....	2-142
310-338-00 Horizontal Transport Interlock Open in Run RAP .....	2-146
310-399-00 Fuser CRUM Authorization Failure RAP .....	2-147
310-400-00 Fuser CRUM Communication Fault RAP .....	2-148
310-702-00 Offset Motor Fault RAP .....	2-150
310A Centre Output Tray Poor Stacking RAP .....	2-152

**Chain 12-110 - 2K LCSS**

312-024-00-110, 312-025-00-110 Paddle Roll Failure RAP .....	2-153
312-043-00-110, 312-046-00-110 Hole Punch Operation Failure RAP .....	2-155
312-125-00-110, 312-126-00-110, 312-199-00-110 Paper Entry Jam RAP .....	2-158
312-127-00-110 Sheet Late to Hole Punch RAP .....	2-159
312-151-00-110, 312-152-00-110 Sheet Late to Bin 1 RAP .....	2-161
312-171-00-110, 312-172-00-110 Paper Exiting to Bin 0 RAP .....	2-164
312-198-00-110 Finisher Stray Sheet Detected RAP .....	2-167
312-310-00-110, 312-312-00-110, 312-313-00-110 Interlocks RAP .....	2-171
312-340-00-110, 312-341-00-110, 312-342-00-110 Ejector Movement Failure RAP .....	2-173
312-371-00-110, 312-372-00-110, 312-378-00-110 Staple Head Unit Movement Failure RAP .....	2-176
312-392-00-110, 312-393-00-110, 312-394-00-110 Front Tamper Move Failure RAP ..	2-179
312-396-00-110, 312-397-00-110, 312-398-00-110 Rear Tamper Move Failure RAP ...	2-182
312-462-00-110 Bin 1 Movement Failure RAP .....	2-185
312A-110 Chad Bin Present and Bin Full RAP .....	2-189
312B-110 Bin 1 Overload RAP .....	2-190
312C-110 2K LCSS Initialization Failure RAP .....	2-191
312D-110 2K LCSS Power Distribution RAP .....	2-192
312E-110 Staple Head Operation Failure RAP .....	2-195
312F-110 2K LCSS PWB DIP Switch Settings RAP .....	2-197
312G-110 2K LCSS PWB Damage RAP .....	2-197
312H-110 Copy Damage in the 2K LCSS RAP .....	2-199
312J-110 Mis-Registration in Stapled Sets and Non-Stapled Sets RAP .....	2-199
312K-110 2K LCSS Poor Stacking RAP .....	2-200
312L-110 Stapler Priming Failure RAP .....	2-200

**Chain 12-150 - LVF BM**

312-024-00-150, 312-025-00-150 Paddle Roll Failure RAP .....	2-203
312-043-00-150, 312-046-00-150 Hole Punch Operation Failure RAP .....	2-205
312-061-00-150 Crease Blade Move Failure RAP .....	2-208
312-062-00-150 Crease Roll Failure RAP .....	2-211
312-063-00-150, 312-414-00-150, 312-488-00-150, 312-490-00-150 Booklet Stapler Movement Failure RAP .....	2-212
312-065-00-150, 312-383-00-150, 312-484-00-150, 312-486-00-150 Back Stop Failure RAP .....	2-216
312-066-00-150, 312-384-00-150 Booklet Tamper 1 Move Failure RAP .....	2-219
312-125-00-150, 312-126-00-150, 312-199-00-150 Paper Entry Jam RAP .....	2-221
312-127-00-150 Sheet Late to Hole Punch RAP .....	2-222
312-151-00-150, 312-152-00-150 Sheet Late to Bin 1 RAP .....	2-224
312-160-00-150, 312-162-00-150 Booklet Maker Entry Jam RAP .....	2-227
312-171-00-150, 312-172-00-150 Paper Exiting to Bin 0 RAP .....	2-231
312-180-00-150, 312-182-00-150 Booklet Maker Exit Jam RAP .....	2-234
312-184-00-150, 312-494-00-150, 312-496-00-150 Booklet Maker Stray Sheet Detected RAP .....	2-238
312-198-00-150 Finisher Stray Sheet Detected RAP .....	2-241
312-310-00-150, 312-312-00-150, 312-313-00-150 Interlocks RAP .....	2-245
312-340-00-150, 312-342-00-150 Ejector Movement Failure RAP .....	2-247
312-352-00-150, 312-353-00-150 Booklet Stapler Assembly Failure RAP .....	2-250
312-371-00-150, 312-372-00-150, 312-378-00-150 Staple Head Unit Movement Failure RAP .....	2-253
312-377-00-150 Stapling Failure RAP .....	2-256

312-392-00-150, 312-393-00-150, 312-394-00-150 Front Tamper Move Failure RAP ..	2-259
312-396-00-150, 312-397-00-150, 312-398-00-150 Rear Tamper Move Failure RAP ...	2-262
312-418-00-150 Flapper Failure RAP .....	2-265
312-462-00-150 Bin 1 Movement Failure RAP .....	2-267
312A-150 Poor Stacking RAP .....	2-271
312B-150 Bin 1 Overload RAP .....	2-271
312C-150 LVF BM Initialization Failure RAP .....	2-272
312D-150 LVF BM Power Distribution RAP .....	2-273
312E-150 Staple Head Operation Failure RAP .....	2-278
312F-150 LVF PWB and LVF BM PWB DIP Switch Settings RAP .....	2-280
312G-150 Mis-Registration in Stapled Sets and Non-Stapled Sets RAP .....	2-280
312H-150 Copy Damage in the LVF BM RAP .....	2-281
312J-150 Booklet Quality RAP .....	2-281

**Chain 16 - Network Controller**

316-000-00 to 316-016-19 Network Faults 1 RAP .....	2-287
316-017-19 to 316-153-19 Network Faults 2 RAP .....	2-288
316-154-09 to 316-602-105 Network Faults 3 RAP .....	2-289
316-603-11 to 316-608-105 Network Faults 4 RAP .....	2-290
316-609-07 to 316-612-68 Network Faults 5 RAP .....	2-291
316-613-09 to 316-620-90 Network Faults 6 RAP .....	2-292
316-620-92 or 316-625-90 Network Faults 7 RAP .....	2-293
316-626-00 to 316-635-99 Network Faults 8 RAP .....	2-294
316-636-35 to 316-647-26 Network Faults 9 RAP .....	2-295
316-649-35 to 316-668-95 Network Faults 10 RAP .....	2-296
316-669-28 to 316-730-66 Network Faults 11 RAP .....	2-297
316-742-19 Hard Disk ODIO Failure RAP .....	2-298
316-750-07 to 316-750-95 Network Faults 12 RAP .....	2-298
316-751-00 to 316-753-95 Network Faults 13 RAP .....	2-299
316-754-09 to 316-756-93 Network Faults 14 RAP .....	2-300
316-757-09 to 316-760-99 Network Faults 15 RAP .....	2-301
316-761-09 to 316-765-93 Network Faults 16 RAP .....	2-302
316-766-09 to 316-772-95 Network Faults 17 RAP .....	2-303
316-770-09 to 316-779-95 Network Faults 18 RAP .....	2-304
316-780-00 to 316-789-47 Network Faults 19 RAP .....	2-305
316-790-09 to 316-799-47 Network Faults 20 RAP .....	2-306
316-800-09 to 316-809-47 Network Faults 21 RAP .....	2-307
316-810-00 to 316-839-47 Network Faults 22 RAP .....	2-308
316-840-47 to 316-879-47 Network Faults 23 RAP .....	2-309
316-880-47 to 316-929-19 Network Faults 24 RAP .....	2-310
316-930-19 to 316-969-19 Network Faults 25 RAP .....	2-311
316-975-19 to 316-989-19 Network Faults 26 RAP .....	2-312
316-990-00 to 316-999-35 Network Faults 27 RAP .....	2-313
316A Workflow Scanning Error Entry RAP .....	2-313
316B FTP or SMB Unable to Connect to Remote Server RAP .....	2-314
316C Remote Directory Lock Failed RAP .....	2-316
316D Wireless Connectivity RAP .....	2-316
316E Network Fault Checkout RAP .....	2-317

## Chain 19 - Image Processing

319-300-00 to 319-310-00 Hard Disk Drive Failure RAP .....	2-319
319-401-00, 319-402-00 Stress Out of Memory RAP .....	2-320
319-403-00 EPC Out of Memory RAP .....	2-320
319-409-00 Job Integrity Failure RAP .....	2-321
319-410-00 to 319-410-13 Image Structure Failure RAP .....	2-321
319-750-00 EPC Memory Change Detected RAP .....	2-322
319-752-00 Image Rotation Detected RAP .....	2-322
319-754-00 Hard Disk Drive Change RAP .....	2-323
319-760-00 Test Patterns Missing From EPC RAP .....	2-323

## Chain 20 - Fax

320-302-00, 320-303-00 Fax Reset Failure RAP .....	2-325
320-305-00 Fax System Low Memory Unrecoverable RAP .....	2-325
320-320-00 Fax Fault Not Cleared by Reset RAP .....	2-326
320-322-00 Non-Volatile Device Not Installed RAP .....	2-326
320-323-00, 320-324-00 Fax System Memory Low RAP .....	2-327
320-331-00, 320-338-00, 320-339-00, 320-341-00, 320-345-00 Fax Network Line 1 Fault RAP .....	2-327
320-332-00, 320-340-00 Fax Network Line 2 Fault RAP .....	2-328
320-342-00 Fax File Integrity Fault RAP .....	2-328
320-701-00 Fax Phone Book Download Failed RAP .....	2-329
320-710-00, 320-711-00 Image Overwrite Error RAP .....	2-329
320A Fax Entry RAP .....	2-330
320B Unable To Send A Fax RAP .....	2-331
320C Unable To Send A Fax To Some Machines RAP .....	2-332
320D Unable To Receive A Fax RAP .....	2-333
320E Fax Will Not Print RAP .....	2-334
320F Fax Tab Not Available RAP .....	2-335
320G Fax Module Checkout RAP .....	2-335
320H Fax Problems on Digital Networks RAP .....	2-336

## Chain 22 - System Errors

322-300-05 to 322-309-04 Other Network Faults 01 RAP .....	2-337
322-310-04 to 322-318-04 Other Network Faults 02 RAP .....	2-337
322-319-04 IOT Integrity Problem While Printing a Job RAP .....	2-338
322-320-00 Failed to Install Scan to File RAP .....	2-338
322-321-00 Failed to Remove Scan to File RAP .....	2-339
22-321-04 Proposal Response Timeout Error RAP .....	2-339
322-322-00 Failed to Install LAN Fax RAP .....	2-340
322-323-00 Failed to Remove LAN Fax RAP .....	2-340
322-324-00 Failed to Install Scan to E-mail RAP .....	2-341
322-325-00 Failed to Remove Scan to E-mail RAP .....	2-341
322-326-00 Failed to Install Internet Fax RAP .....	2-342
322-327-00 Failed to Remove Internet Fax RAP .....	2-342
322-328-00 Incomplete System Information RAP .....	2-343
322-330-00 PagePack PIN Entry Locked RAP .....	2-343
322-330-01 to 322-330-05 List Jobs Request Timed Out RAP .....	2-344
322-330-06 ESS Scan to Distribution Service not Responding to List Jobs RPC Call RAP .....	2-344
322-332-00 Invalid Plan Conversion RAP .....	2-345
322-335-00 Failed to Install Job Based Accounting RAP .....	2-345
322-336-00 Failed to Remove Job Based Accounting RAP .....	2-346

322-337-00 Failed to Install Disk Overwrite RAP .....	2-346
322-338-00 Failed to Remove Disk Overwrite RAP .....	2-347
322-339-00 Failed to Install Job Overwrite RAP .....	2-347
322-340-00 Failed to Remove Job Overwrite RAP .....	2-348
322-350-01, 322-350-02 Software Detects Non-Valid Xerox SOK RAP .....	2-348
322-351-01 to 322-351-03 SOK Write Failure RAP .....	2-349
322-352-00 to 322-353-01 Serial Number Fault RAP .....	2-349
322-360-00 Service Plan Mismatch RAP .....	2-350
322-370-00 Cannot Communicate to the XSA Database RAP .....	2-350
322-371-00, 322-372-00 Fax Application Registration Error RAP .....	2-351
322-407-00 Embedded Fax Install Failure RAP .....	2-351
322-417-00 Embedded Fax Remove Failure RAP .....	2-352
322-419-00 Embedded Fax Enable Failure RAP .....	2-352
322-421-00 Embedded Fax Disable Failure RAP .....	2-353
322-701-04 Module Completion Message Received RAP .....	2-353
322-720-00 Service Registry Bad Data/Corrupted RAP .....	2-354
322-721-00 No Response From The Service Registry RAP .....	2-354
322-750-17 to 322-755-17 Configuration Mismatch RAP .....	2-355

## Chain 40 - Main Drives

341-301 CRUMs Bus Communications Error RAP .....	2-357
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## Chains 61 to 66 - Imaging

361-100-00 LED Print Head Data Integrity Failure RAP .....	2-359
362-310-00 Scanner to SBC Communications Failure RAP .....	2-360
362-357-00, 362-960-00 Scanner Cooling Fan Fault RAP .....	2-361
362-399-00 SPDH to Scanner Data Cable Failure RAP .....	2-362
362-450-00 to 362-472-00 Scanner Calibration Faults RAP .....	2-363
362-473-00 UART RX Wrap Error RAP .....	2-365
362-474-00, 362-475-00 Stepper Speed/Reset Error RAP .....	2-366
362-476-00 Scan Carriage Home Sensor RAP .....	2-366
362-477-00 to 362-481-00, 362-782-00 Timing Errors RAP .....	2-368
362-484-00 Apps Code Not Present RAP .....	2-368
362-485-00 +12V Supply Error RAP .....	2-369
362-486-00 +24V Supply Error RAP .....	2-369
362-487-00 System Phase Lock Loop Error RAP .....	2-370
362-490-00, 362-491, 366-490-00, 366-491 Side 1 and Side 2 Data Steerer Error RAP .....	2-370
362-777-00, 362-778-00 Motor Communications Failure RAP .....	2-371
362-779-00, 362-780-00 Scanner Software Upgrade Error RAP .....	2-372
362-783-00, 366-783-00 SPDH Hotline Error RAP .....	2-372
362-784-00 Platen Hotline Error RAP .....	2-375
362A Side 1 Scanning Document Size RAP .....	2-376
362B Side 1 LED Exposure Lamp Failure RAP .....	2-379
366-450-00 to 366-463-00, 366-466-00 to 366-468-00 SPDH Side 2 Scanner Calibration Faults RAP .....	2-382
366-779-00, 366-780-00 SPDH Software Upgrade Error RAP .....	2-384
366A Side 2 LED Exposure Lamp Failure RAP .....	2-384

## Chains 70 to 75 - Paper Supply

370A Tray Out of Service RAP .....	2-387
371-100-00, 371-217-00 Tray 1 Elevator Lift Failure RAP .....	2-387
371-500-00 Tray 1 Open During Run RAP .....	2-389
371A Tray 1 and Tray 2 Empty RAP .....	2-391
372-100-00, 372-217-00 Tray 2 Elevator Lift Failure RAP .....	2-392
372-500-00 Tray 2 Open During Run RAP .....	2-394
373-100-00, 373-217-00 Tray 3 Elevator Lift Failure RAP .....	2-396
373-500-00 Tray 3 Open During Run RAP .....	2-399
373A Tray 3 False Low Paper Level RAP .....	2-400
373B Tray 3 Out of Paper RAP .....	2-401
374-100-00, 374-217-00 Tray 4 Elevator Lift Failure RAP .....	2-403
374-500-00 Tray 4 Open During Run RAP .....	2-407
374A Tray 4 False Low Paper Level RAP .....	2-409
374B Tray 4 Out of Paper RAP .....	2-411
375-100-00 Bypass Tray Lift Failure RAP .....	2-414
375A Bypass Tray RAP .....	2-417

## Chains 80 to 83 - Paper Transport

381-106-00 Lead Edge Late to TAR 1 Sensor from Tray 1 RAP .....	2-419
381-126-00 Lead Edge Late to TAR 2 Sensor from Tray 2 RAP .....	2-421
381-136-00 Lead Edge Late to Tray 3 Feed Sensor RAP .....	2-424
381-146-00 Lead Edge Late to Tray 4 Feed Sensor RAP .....	2-427
381-151-00 Lead Edge Late to Registration Sensor RAP .....	2-431
381-152-00 Trail Edge Late from Registration Sensor RAP .....	2-432
381-155-00 Lead Edge Late to Registration Sensor from the Bypass Tray RAP .....	2-435
381-159-00 Lead Edge Late to HCF Exit Sensor from Tray 3 RAP .....	2-438
381-161-00 Lead Edge Late to Registration Sensor Duplex Mode RAP .....	2-439
381-162-00 Trail Edge Late from Registration Sensor Duplex Mode RAP .....	2-442
381-167-00 Lead Edge Late to Tray 4 Exit Sensor RAP .....	2-445
381-190-00 Lead Edge Late to Registration Sensor from Tray 1 RAP .....	2-449
381-191-00 Lead Edge Late to Registration Sensor from Tray 2 RAP .....	2-450
381-192-00 Lead Edge Late to Registration Sensor from Tray 3 RAP .....	2-452
381-193-00 Lead Edge Late to Registration Sensor from Tray 4 RAP .....	2-455
381-194-00 Lead Edge Late to TAR 1 Sensor from Tray 2 RAP .....	2-458
381-195-00 Lead Edge Late to TAR 1 Sensor from Tray 3 RAP .....	2-461
381-196-00, Lead Edge Late to TAR 1 Sensor from Tray 4 RAP .....	2-463
381-197-00 Lead Edge Late to TAR 2 Sensor from Tray 3 RAP .....	2-465
381-198-00 Lead Edge Late to TAR 2 Sensor from Tray 4 RAP .....	2-467
381-199-00 Lead Edge Late to HCF Exit Sensor from Tray 4 RAP .....	2-469
381-200-00 Unexpected Sheet At Registration Sensor RAP .....	2-471
381-220-00 Motor Watchdog RAP .....	2-471
381-221-00 SheetSMTTransitionError RAP .....	2-472
381A Paper Feed Retries RAP .....	2-472
383-155-00, 383-156-00 Duplex Sensor RAP .....	2-473
383-157-00 Unexpected Sheet At Duplex Sensor RAP .....	2-477

## Chains 90 to 94 - Xerographics

391A HVPS RAP .....	2-479
391-365-00 Humidity Sensor Failure RAP .....	2-482
391-375-00 Ambient Temperature Sensor Failure RAP .....	2-483
391-377-00 Print Cartridge Cooling Failure RAP .....	2-484

392-399-00 Incompatible Print Cartridge RAP .....	2-485
392-400-00 Print Cartridge CRUM Communication Error RAP .....	2-485
392A Print Cartridge Motor Failure RAP .....	2-486
393-360-00 to 393-364-00 Toner Concentration Sensor Failure RAP .....	2-488
393-365-00 High AC Recovery RAP .....	2-491
393-390-00 Toner Cartridge Empty RAP .....	2-492
393-399-00 Incompatible Toner Cartridge RAP .....	2-494
393-401-00 Toner Cartridge Missing RAP .....	2-495

## Chain 95 - Software Upgrade Faults

395-000-00 to 395-009-00 SBC Software Upgrade Errors 1 RAP .....	2-497
395-011-00 UI Software Upgrade Errors RAP .....	2-497
395-038-00 Fax Software Upgrade Errors RAP .....	2-498
395-040-00 to 395-042-00 IOT Software Upgrade Errors RAP .....	2-498
395-060-00 2K LCSS Software Upgrade Error RAP .....	2-499
395-140-00 SBC Software Upgrade Errors 2 RAP .....	2-499
395-155-00 to 395-169-00 Scanner Software Upgrade Errors 1 RAP .....	2-500
395-214-00 to 395-217-00 SBC Software Upgrade Errors 3 RAP .....	2-500
395-222-00 LVF Software Upgrade Error RAP .....	2-501
395-224-00 LVF BM Software Upgrade Errors RAP .....	2-501
395-227-00 Scanner Software Upgrade Errors 2 RAP .....	2-502
395-228-00, 395-229-00 SPDH Software Upgrade Errors RAP .....	2-502
395-255-00 SBC Software Upgrade Errors 4 RAP .....	2-503
395-300-00 Software Upgrade Product Error RAP .....	2-503
395-301-00, 395-302-00 Software Upgrade Hardware Error RAP .....	2-504
395-303-00 Software DLM Downgrade Error RAP .....	2-504
395-304-00 Software DLM Sidegrade Error RAP .....	2-505
395-305-00 Software Upgrade Synchronization Error RAP .....	2-505

## OF - Other Faults

OF1 Unusual Noise RAP .....	2-507
OF2 POST Error RAP .....	2-510
OF3 Dead Machine RAP .....	2-512
OF4 Status Codes and Messages RAP .....	2-513
OF4a Status Codes in Numerical Order .....	2-513
OF4b Status Messages in Alphabetical Order .....	2-533
OF5 Boot Up Failure RAP .....	2-551
OF6 Air Systems RAP .....	2-553
OF7 IOT PWB Diagnostics RAP .....	2-553
OF8 Multi-feed RAP .....	2-554
OF9 False Fuser End Of Life RAP .....	2-555
OF10 Intermittent Failure RAP .....	2-556
OF11 Toner Contamination RAP .....	2-558
OF12 False Print Cartridge End of Life RAP .....	2-559
OF13 Convenience Stapler RAP .....	2-559
OF14 Xerox Extensible Interface Platform RAP .....	2-560
OF15 Xerox Secure Access RAP .....	2-560

## 301-300-00 Front Door Open RAP

301-300-00 The front door has opened during machine 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.

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](#). Check S01-300.

Refer to:

- [P/J763, 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.

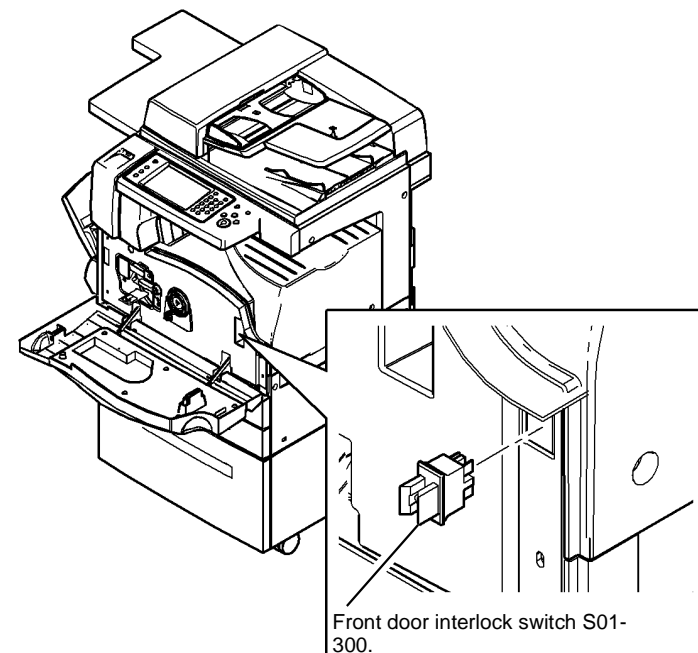
Check that the front door, [PL 28.10 Item 5](#) closes correctly. If not, check the components that follow:

- 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](#).



W-1-0988-A

Figure 1 Component location

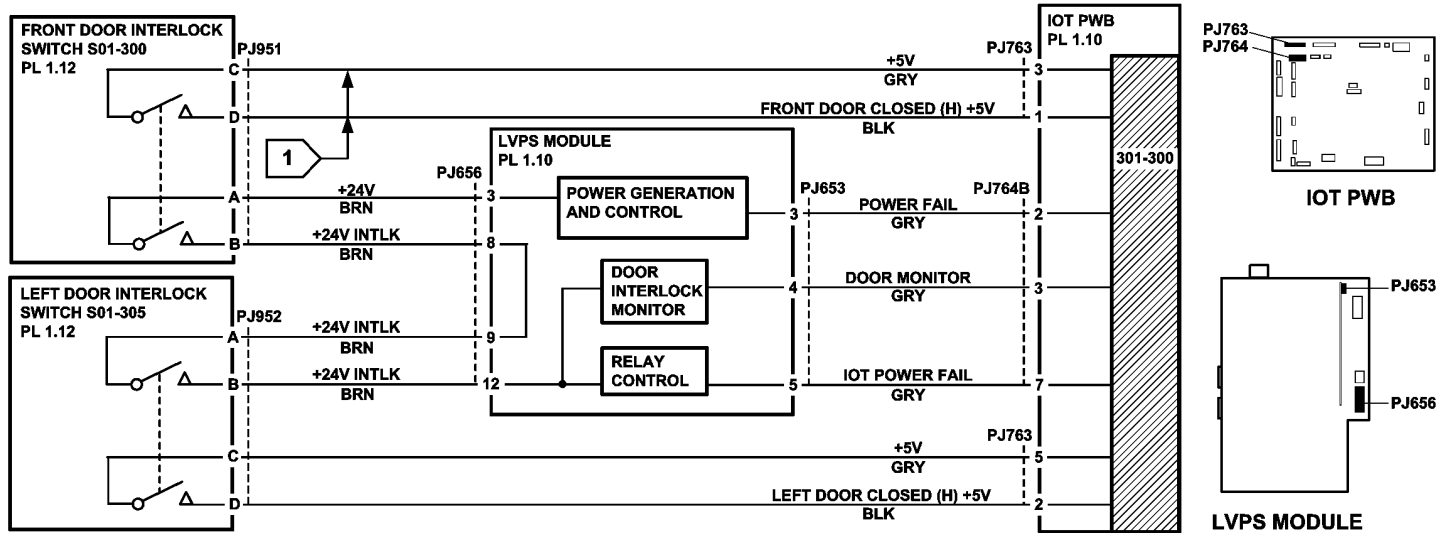


Figure 2 Circuit diagram

TW-1-0250-A

## 301-305-00 Left Door Open RAP

301-305-00 The left door has been opened during machine 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.

Enter [dC330](#), code 001-305, left door interlock. Open and close the left hand 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](#). Check S01-305.

Refer to:

- [P/J763, 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](#).

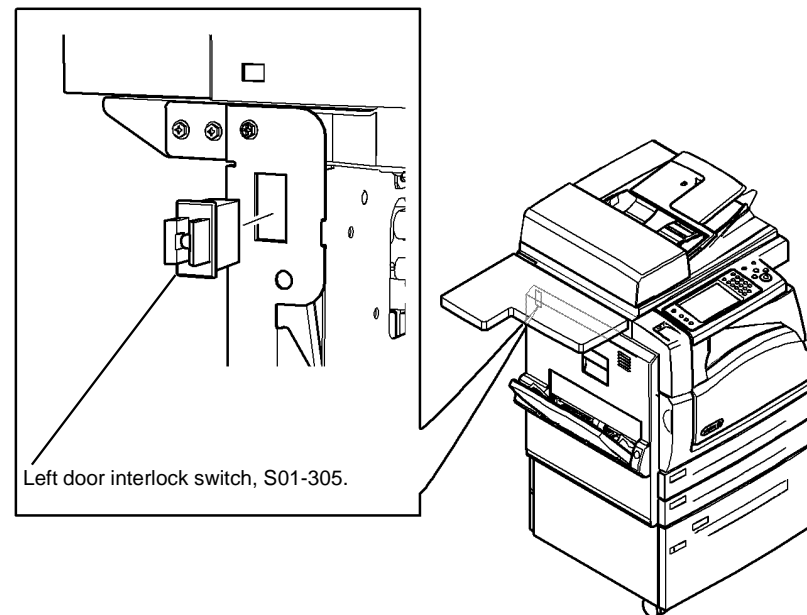
If the fault persists, perform [OF7](#) IOT PWB Diagnostics RAP.

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

- Door latch plate (2), [PL 80.11 Item 13](#).
- 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:

- Door latch plate (2), [PL 80.11 Item 13](#).
- 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](#).



Left door interlock switch, S01-305.

W-1-0989-A

Figure 1 component location

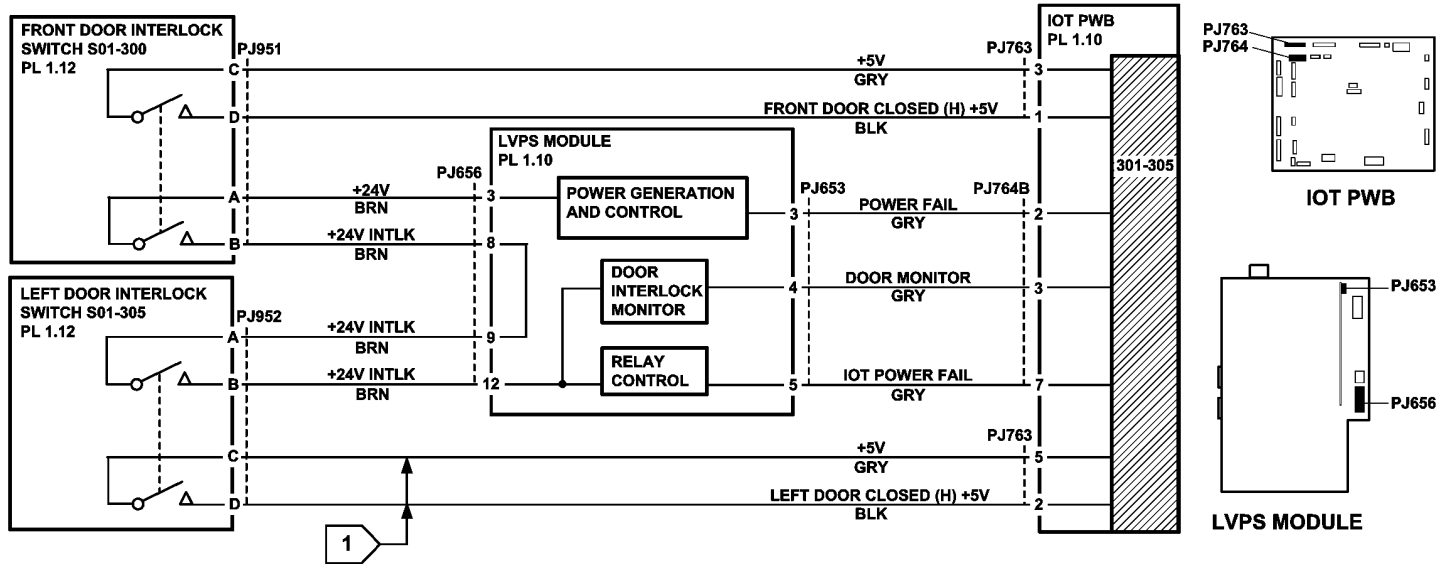


Figure 2 Circuit diagram

TW-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

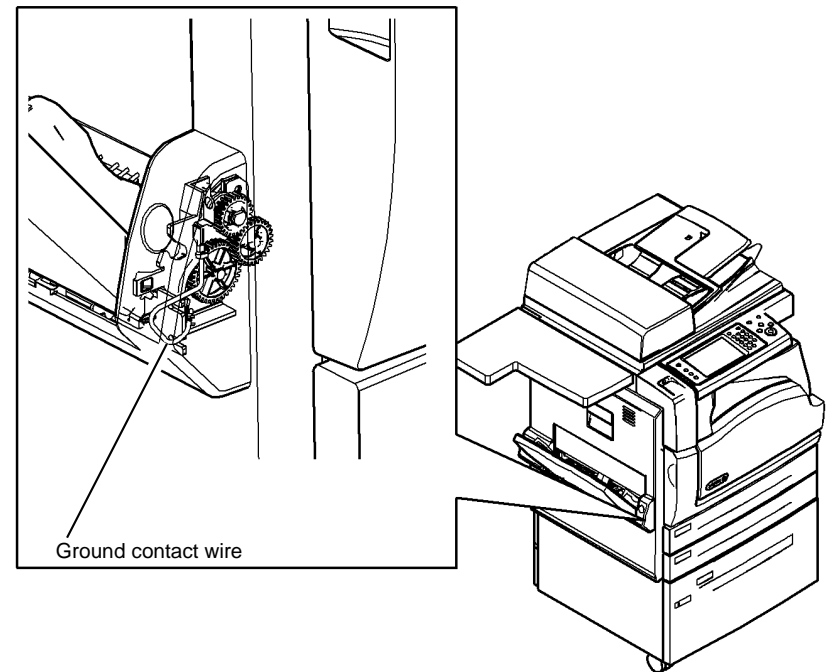


Figure 1 Bypass ground connections

## 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.

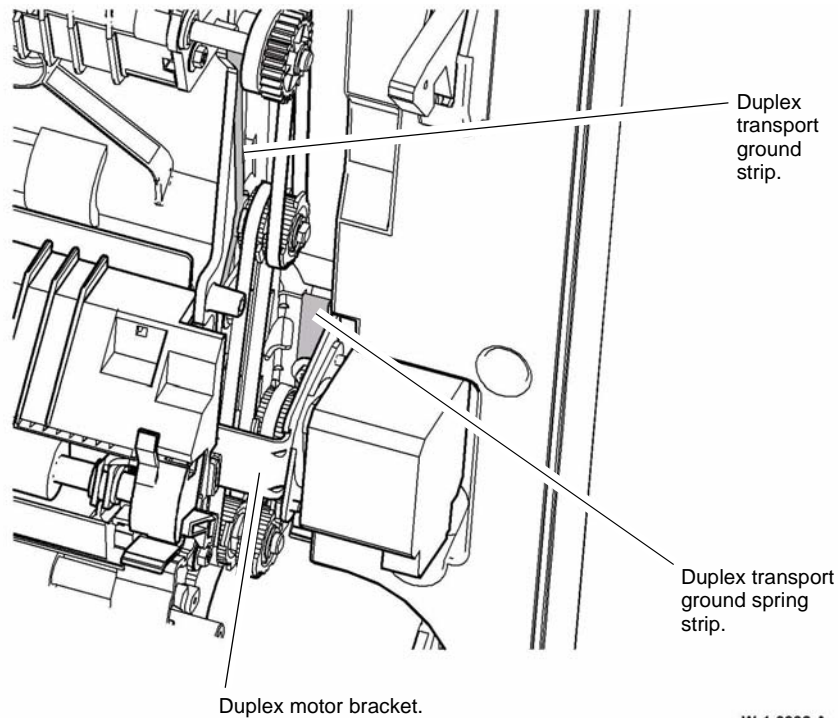


Figure 2 Duplex transport ground

## 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.

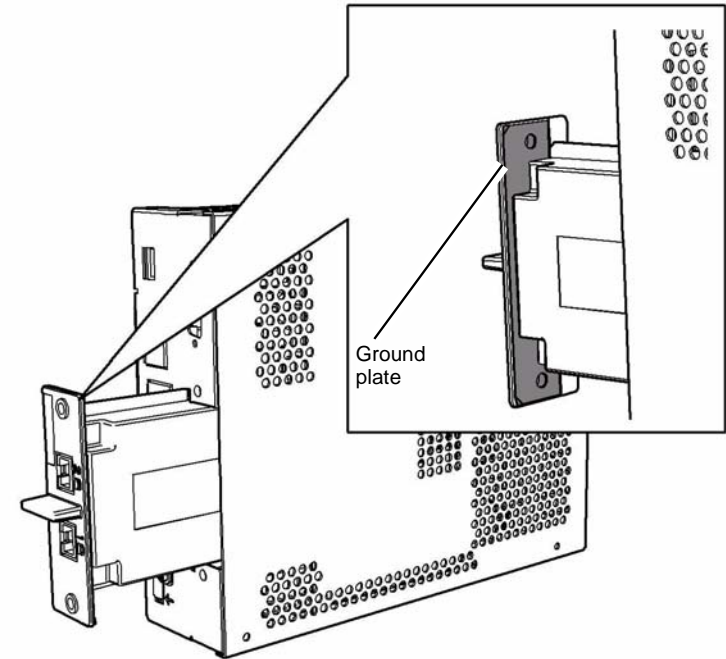


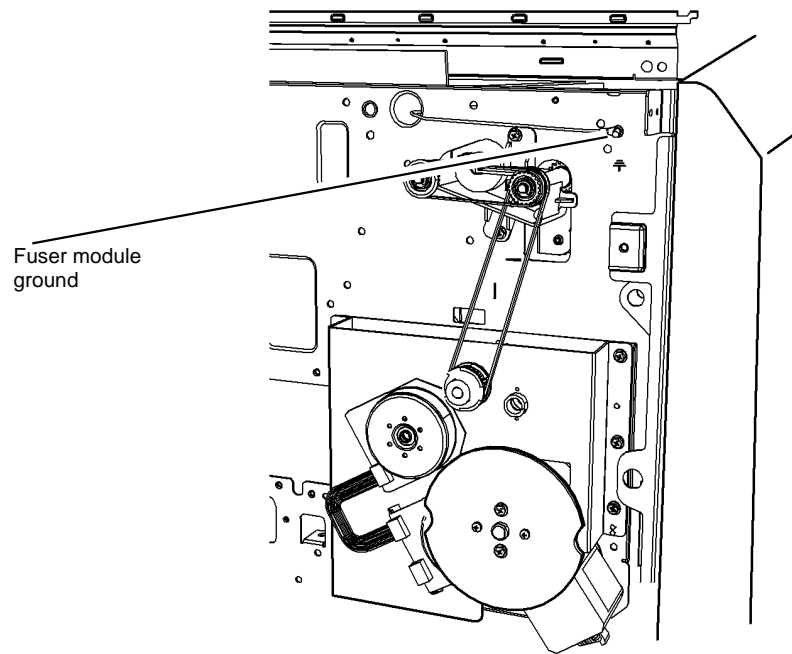
Figure 3 Fax module ground

## 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.

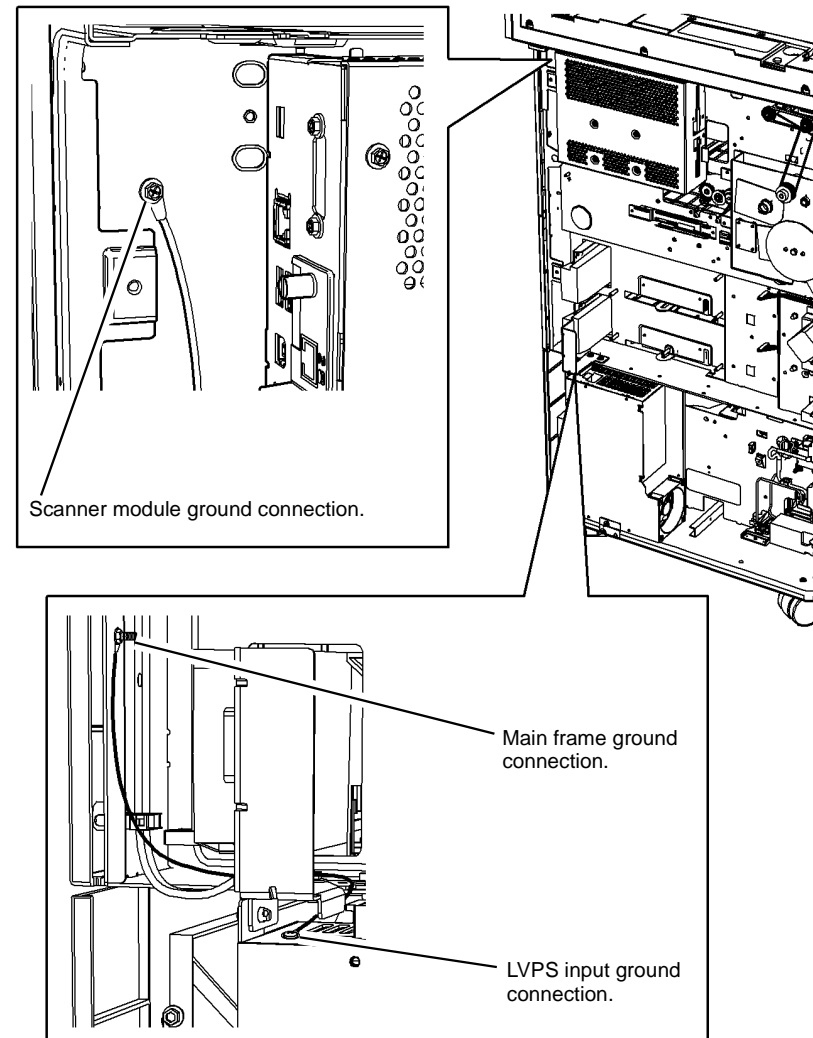


W-1-1005-A

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.

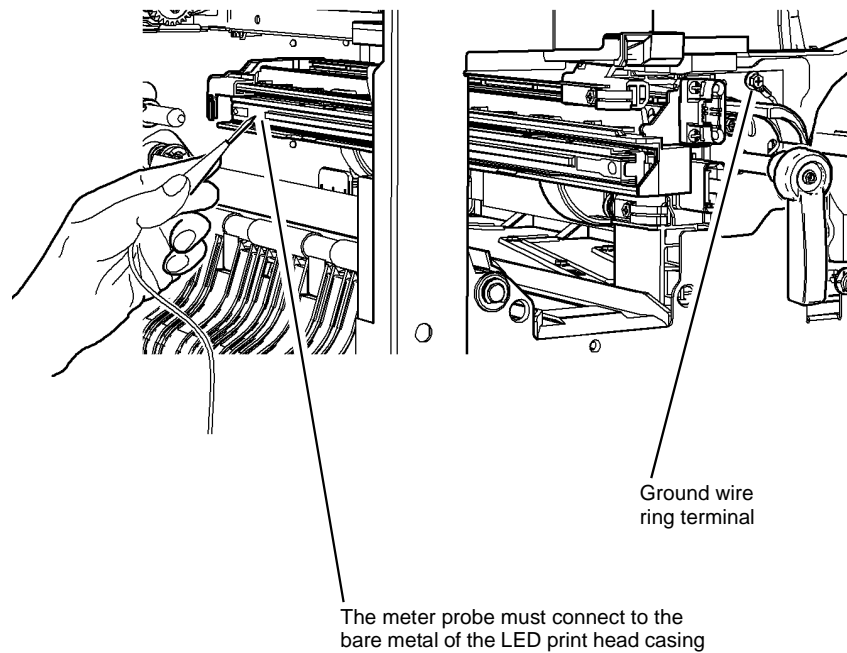


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Figure 5 Component location

## 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.

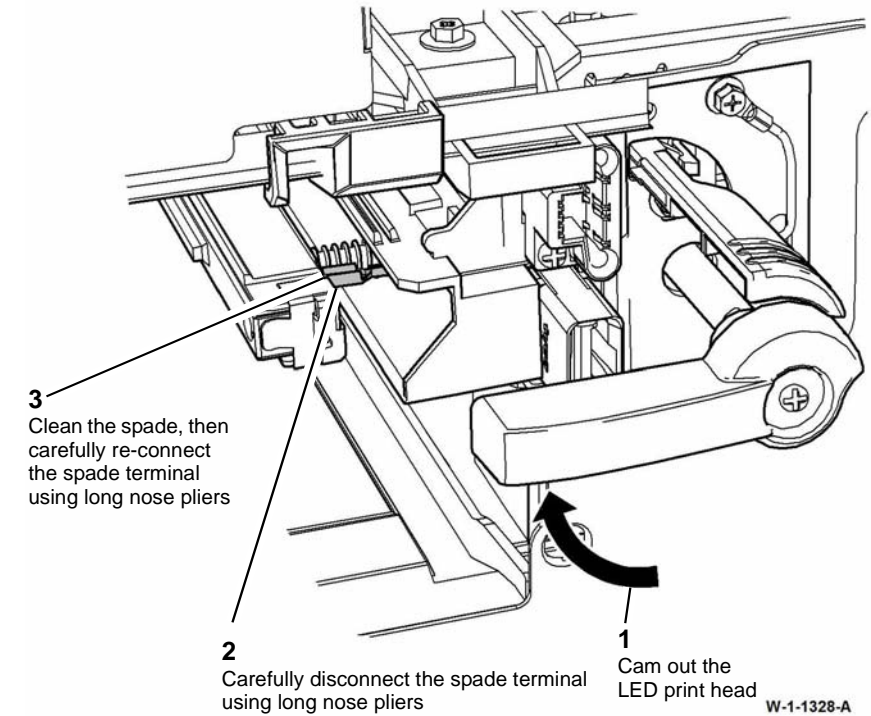


**Figure 6** LPH ground connection

To improve continuity, perform the actions that follow:

1. Remove the LED print head module, [REP 60.15](#).
2. Clean the contact faces of the ground wire ring terminal.

3. [Figure 7](#), clean the contact faces of the LPH ground spade connector.



**Figure 7** LPH ground spade connection

4. Install the LED print head module, [REP 60.15](#).

## 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](#).

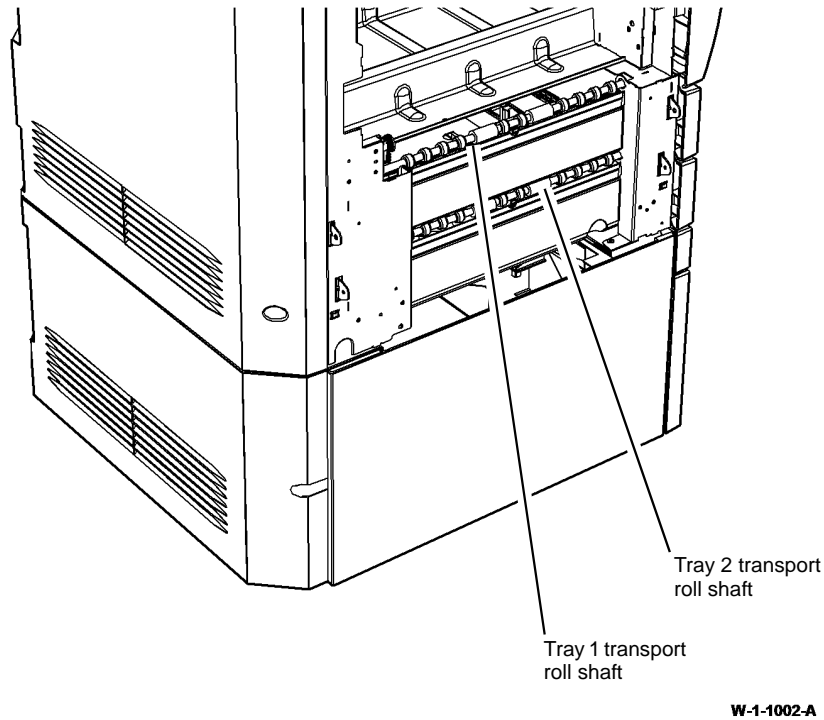


Figure 8 Paper transport rolls

## 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.

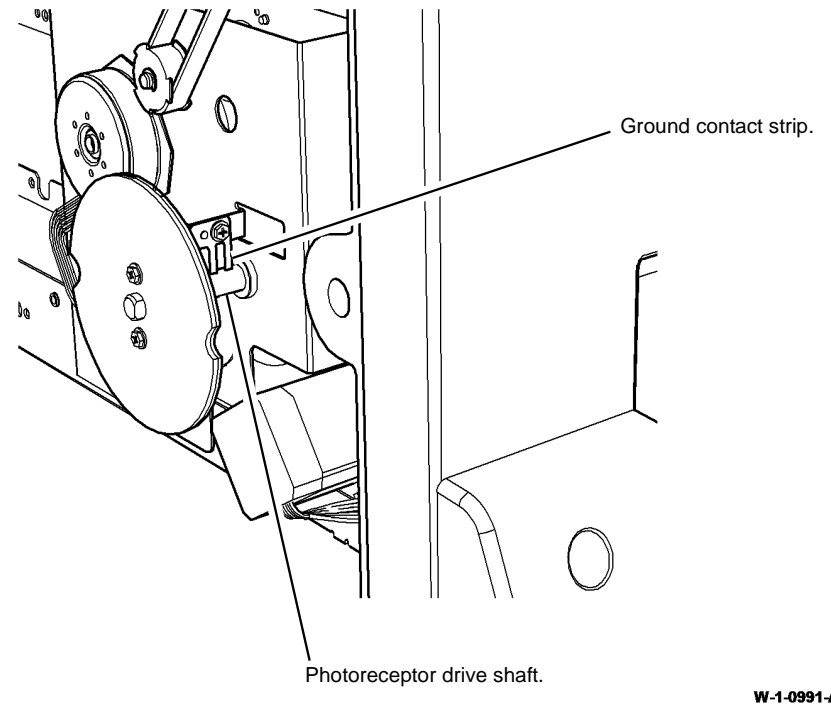


Figure 9 Print cartridge ground

  
**CAUTION**

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

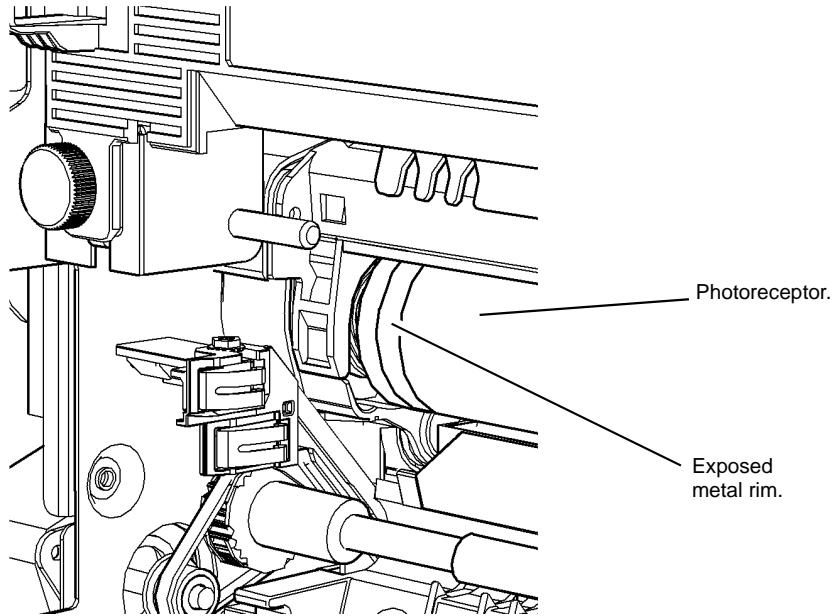
Refer to [Figure 10](#). Check for continuity of less than 20 ohms between the machine frame and the exposed metal rim at each end of the photoreceptor.

**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:

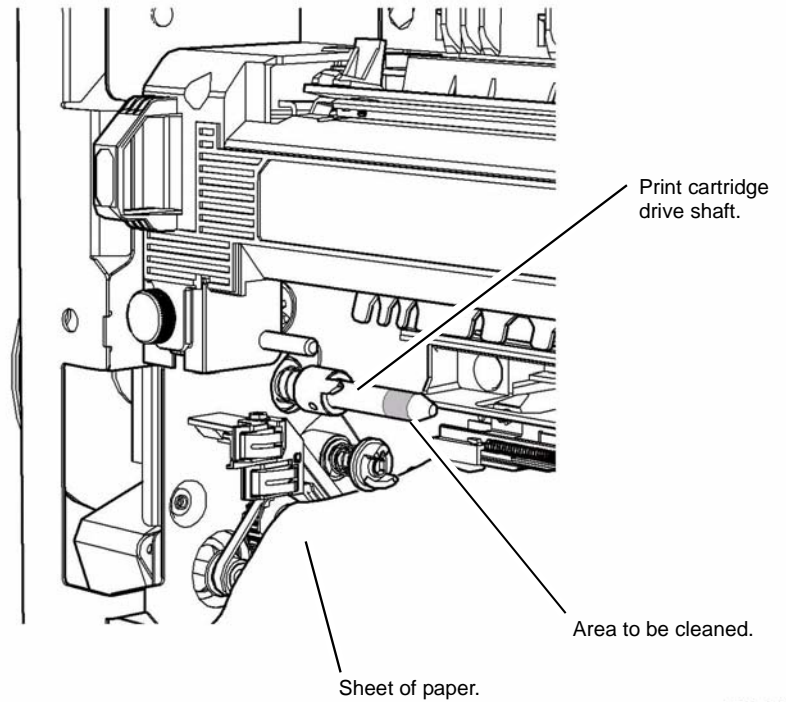
1. Remove the print cartridge, [PL 90.17 Item 9](#).
2. Put a sheet of paper beneath the print cartridge drive shaft, [Figure 11](#).

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



W-1-1403-A

Figure 10 Print cartridge ground

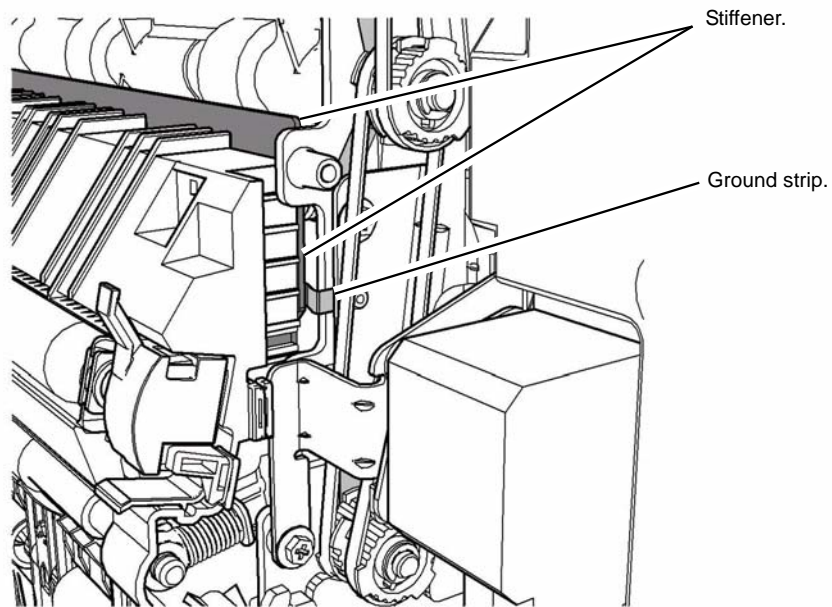


W-1-1402-A

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.



W-1-1251-A

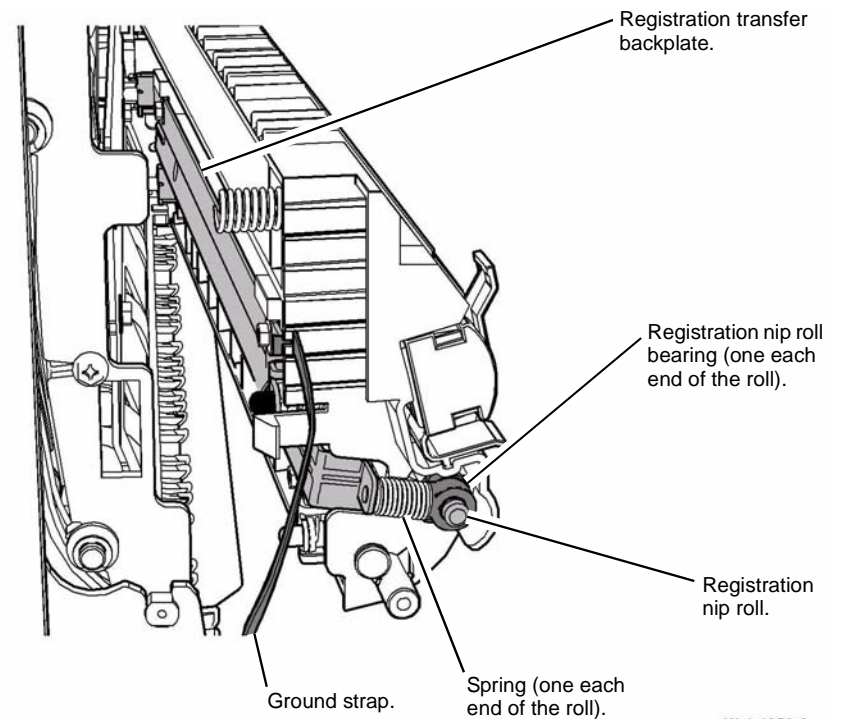
**Figure 12 Stiffener ground**

Refer to [Figure 12](#) and [Figure 13](#). Check for continuity of less than 10 ohms between the stiffener and the ground contact strip, [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.



W-1-1252-A

**Figure 13 Transfer ground**

## Scanner Module Ground

Refer to [Figure 14](#). Check the connections that follow:

- For continuity of less than 1 ohm between the main frame ground connection and the scanner frame, refer to [Figure 5](#). To improve continuity disconnect the scanner module ground connection, [Figure 5](#) and the other end of the ground wire at the scan carriage motor assembly, [PL 60.20 Item 2](#), clean the contact faces and re-assemble.
- For continuity of less than 10 ohms between the scanner frame, via 3 ground springs to the 3 mounting plates. To improve continuity disconnect the springs, clean the contact faces and re-assemble.
- For continuity of less than 10 ohms between the mounting plate and the grounding strip. To improve continuity disassemble the parts, clean the contact faces and re-assemble.
- For continuity of less than 10 ohms between the grounding strip 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 grounding strip 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](#).

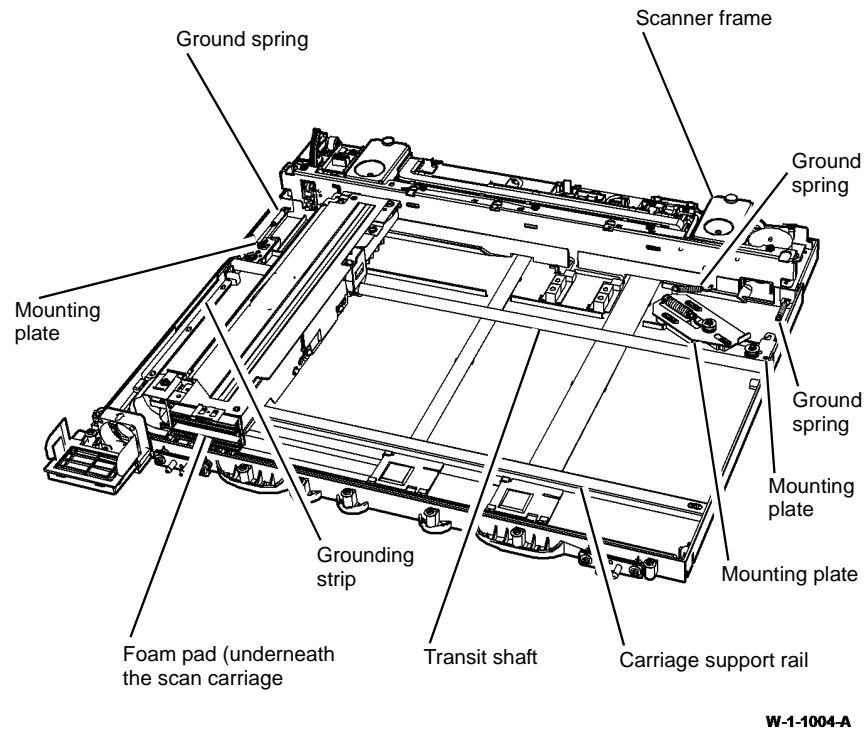


Figure 14 Scanner ground connections

## SPDH Ground

Refer to [Figure 15](#) and [Figure 16](#). Perform the checks that follow:

- Remove the SPDH rear cover, [PL 5.10 Item 1](#). Check for continuity of less than 1 ohm between the SPDH frame and the Scanner module ground connection, [Figure 5](#) via the SPDH frame to the left counterbalance ground spring, [Figure 16](#). To improve continuity, remove the SPDH, [REP 5.19](#) and clean the contact faces between the left counterbalance, [PL 5.10 Item 4](#) and the Machine. Also remove the SPDH frame to the left counterbalance ground spring, [Figure 16](#) and clean the contact faces, then re-assemble.
- Remove the feed assembly, [REP 5.2](#), but do not disconnect the harness. Check for continuity between the feed assembly ground points at the end of the green wires and the ground terminals shown in [Figure 15](#). To improve continuity disconnect, clean and re-assemble the connections.
- Check for continuity between the motor housings and the left counterbalance. To improve continuity disconnect, clean and reassemble the motor ground connections shown in [Figure 16](#).
- Remove the input tray assembly, [REP 5.4](#), but do not disconnect the harness. Check for continuity between the ground point at the end of the green wire next to the last sheet out sensor, [PL 5.30 Item 18](#) and the input tray ground connection indicated in [Figure 16](#). To improve continuity disconnect, clean and reassemble the connections.

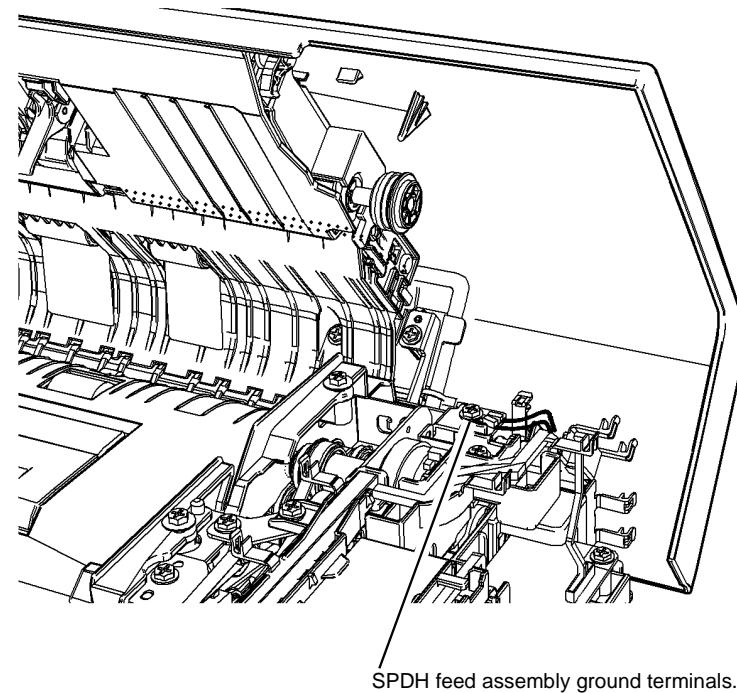


Figure 15 SPDH ground connections 1



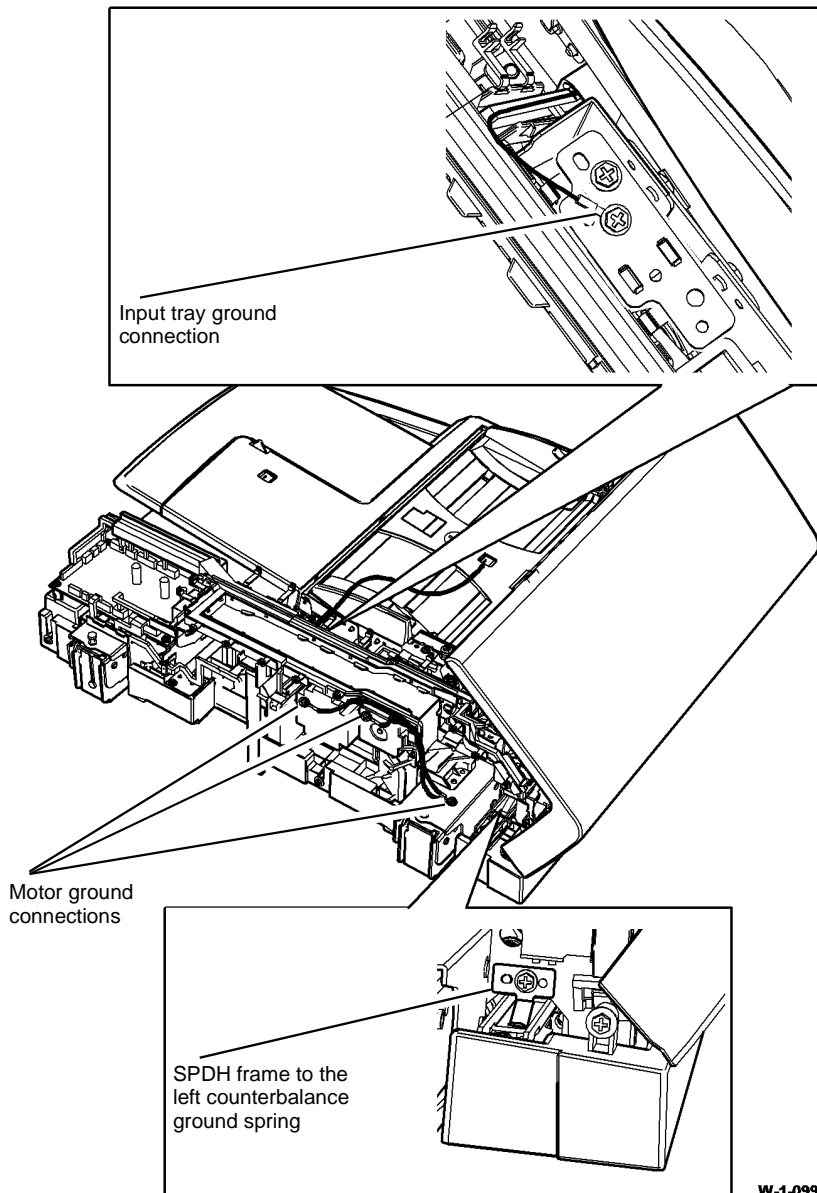
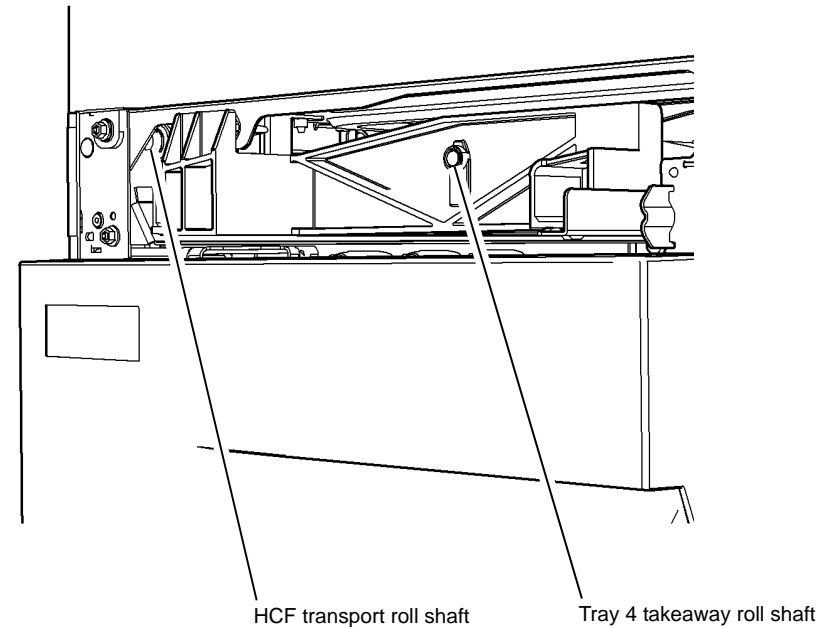


Figure 16 SPDH ground connections 2

### Tray 3 and 4 Ground

Remove the tray 4 front cover, [PL 70.26 Item 5](#) (4 screws). Refer to [Figure 17](#). 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.



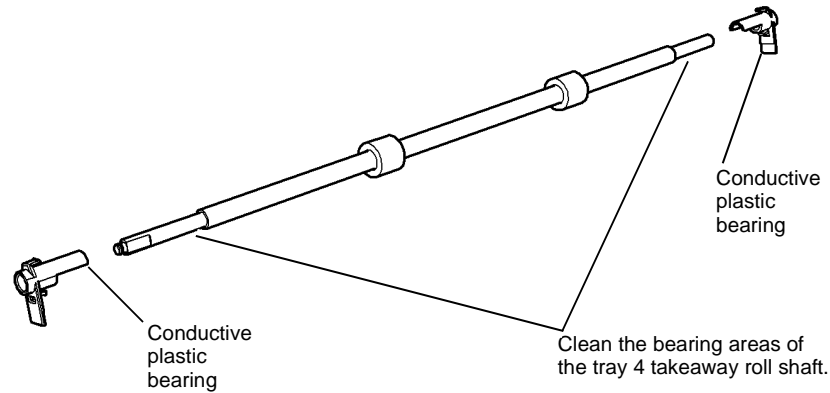
W-1-0997-A

Figure 17 Continuity check points

1. If necessary, open the tray then rotate the shafts. Close the tray and repeat the measurements.

- To improve continuity, remove the tray 4 takeaway roll, REP 80.26. Refer to Figure 18. Clean the conductive plastic bearings and shaft. Then install the removed components.

Clean inside and outside of the conductive plastic bearings.

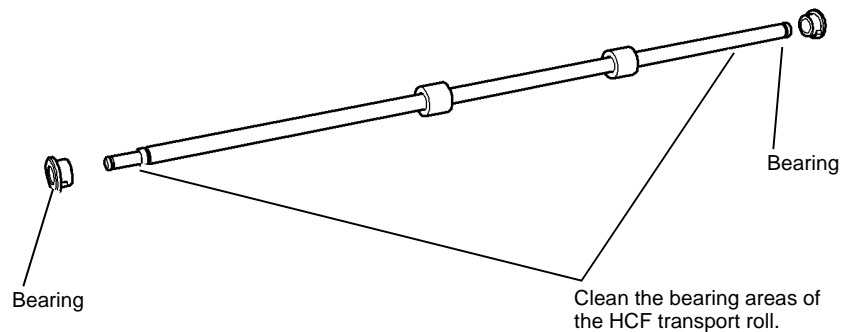


W-1-0998-A

Figure 18 Component cleaning

- To improve continuity, remove the HCF transport roll and bearings, REP 80.27. Refer to Figure 19. Clean the bearings and shaft. Then install the removed components.

Clean inside and outside of the conductive plastic bearings.



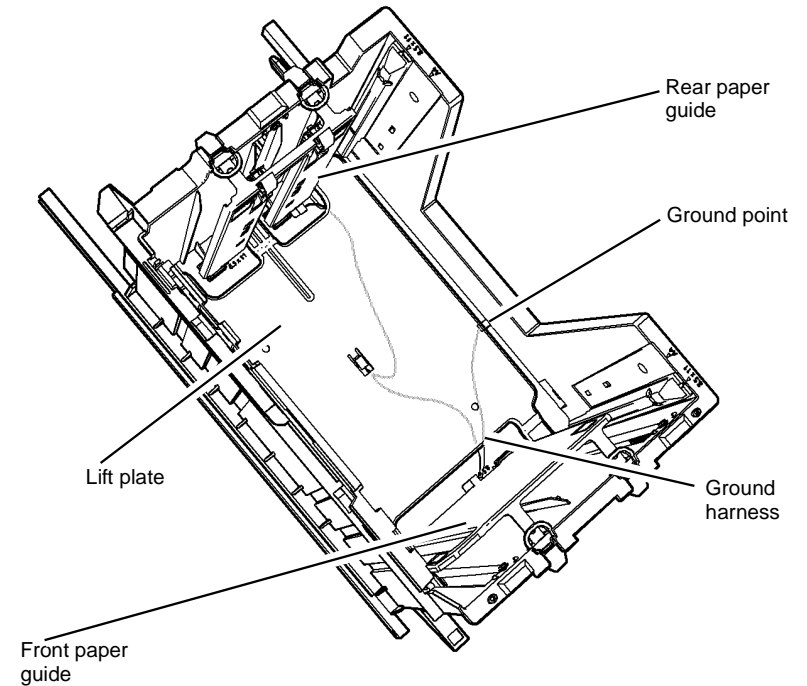
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Figure 19 Component cleaning

- Empty tray 4 of paper. Refer to Figure 20. 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.



W-1-1000-A

Figure 20 Tray 4 grounding

5. Empty tray 3 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.

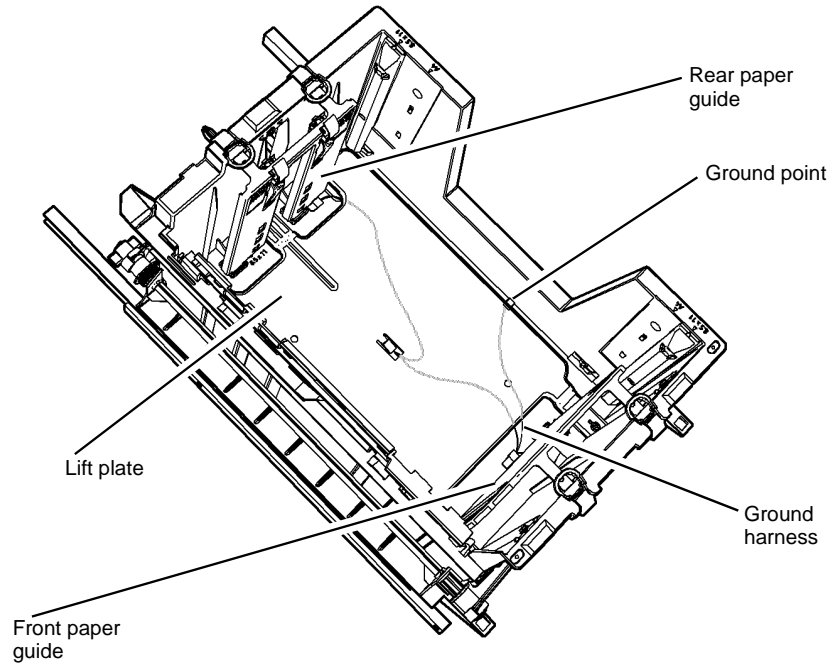


Figure 21 Tray 3 grounding

W-1-1001-A

## 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



**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 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, Q75-601, 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.
- UI control PWB, PL 2.10 Item 6.
  - Flag 4, P/J130, P/J864.
  - Flag 2, P/J850, P/J655.
- Fax connector PWB, PL 20.05 Item 4.
  - Flag 5, P/J1, P/J880.

- Flag 2, P/J850, P/J655.
- Fax module, PL 20.05 Item 1.
  - Flag 5, P/J1, P/J880.
  - Flag 2, P/J850, P/J655.
- Foreign device interface PWB. PL 3.22 Item 18.
  - Flag 6, P/J16, P/J881.
  - Flag 2, P/J850, P/J655.
- Foreign device.
  - Flag 9, PJ124, P/J100.
  - Flag 6, P/J16, P/J881.
  - Flag 2, P/J850, P/J655.
- Scanner PWB, PL 60.20 Item 4.
  - Flag 7, P/J410, P/J861.
  - Flag 2, P/J850, P/J655.
- SPDH PWB, PL 5.10 Item 5.
  - Flag 8, P/J459, P/J418.
  - Flag 7, P/J410, P/J861.
  - Flag 2, P/J850, P/J655.

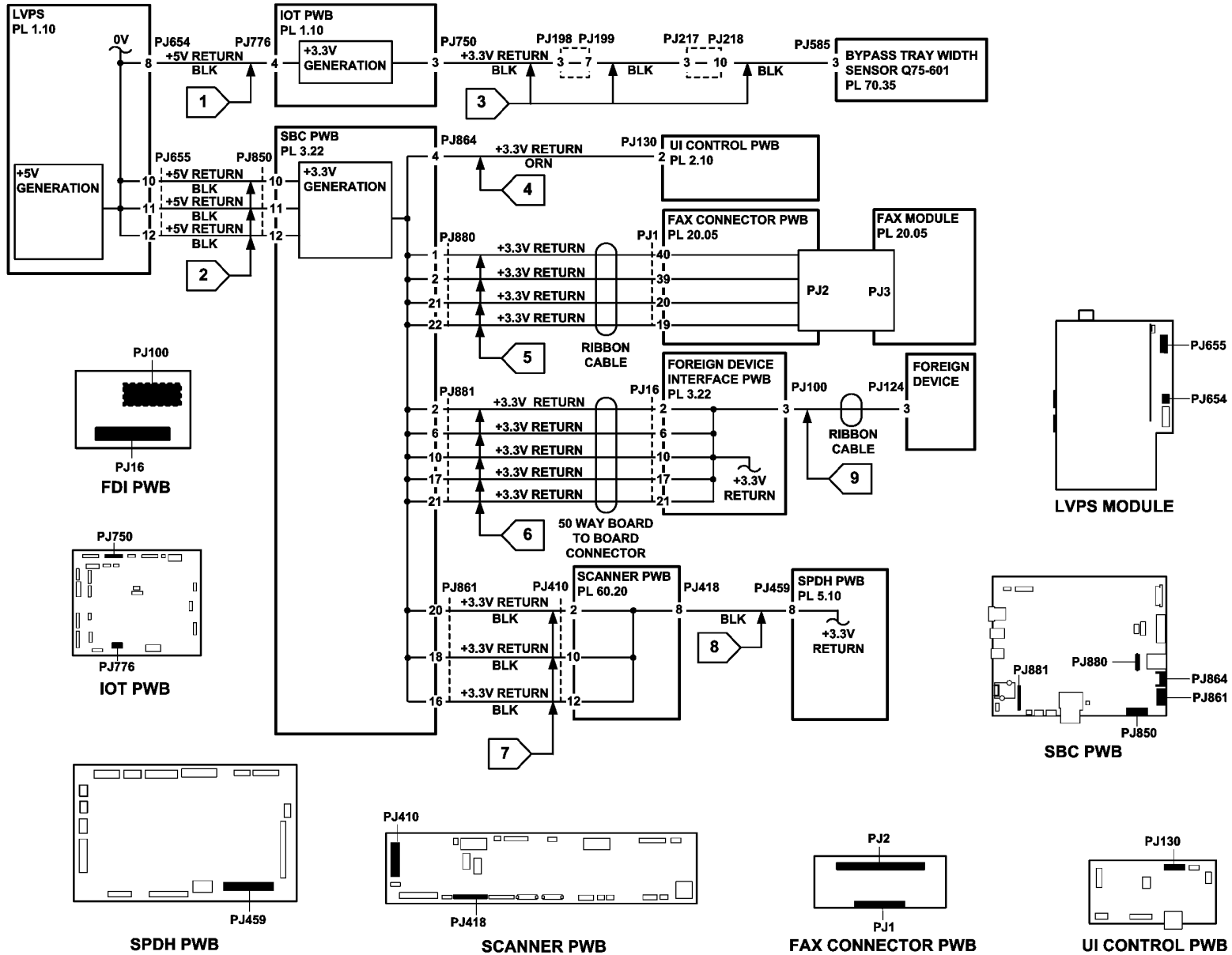


Figure 1 +3.3V return

## +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 10, P/J776, P/J654.
- Tray 1 stack height sensor, Q71-330, PL 80.26 Item 8.
  - Flag 21, PJ451, PJ178.
  - Flag 13, P/177, P/J751.
  - Flag 10, P/J776, P/J654.
- Tray 1 empty sensor, Q71-320, PL 80.26 Item 7.
  - Flag 22, PJ452, PJ178.
  - Flag 14, PJ177, P/J751.
  - Flag 10, P/J776, P/J654.
- Tray 2 stack height sensor, Q72-330, PL 80.26 Item 8.
  - Flag 23, PJ546, PJ179.
  - Flag 15, PJ180, P/J751.
  - Flag 10, P/J776, P/J654.
- Tray 2 empty sensor, Q72-320, PL 80.26 Item 7.
  - Flag 24, PJ547, PJ179.
  - Flag 16, PJ180, P/J751.
  - Flag 10, P/J776, P/J654.
- USB port harness, PL 2.10 Item 13.
  - Flag 17, PJ911, P/J867.
  - Flag 11, P/J850, P/J655.
- Scanner PWB, PL 60.20 Item 4.
  - Flag 18, P/J410, P/J861.
  - Flag 11, P/J850, P/J655.
- Document size sensor 2, Q62-253, PL 60.20 Item 3.
  - Flag 25, PJ435, P/J422.
  - Flag 11, P/J850, P/J655.
- Document size sensor 1, Q62-251, PL 60.20 Item 3.
  - Flag 26, PJ434, P/J422.
  - Flag 11, P/J850, P/J655.
- SPDH PWB, PL 5.10 Item 5.
  - Flag 27, P/J460, P/J417.
  - Flag 18, P/J410, P/J861.
  - Flag 11, P/J850, P/J655.
- Last sheet out sensor, Q05-308, PL 5.30 Item 18.
  - Flag 29, PJ482, P/J463.
  - Flag 27, P/J460, P/J417.
  - Flag 18, P/J410, P/J861.
  - Flag 11, P/J850, P/J655.
- Fax connector PWB, PL 20.05 Item 4.
  - Flag 19, P/J1, P/J880.
  - Flag 11, P/J850, P/J655.
- Fax module PL 20.05 Item 1.
  - Flag 28, PJ3, P/J2.
  - Flag 19, P/J1, P/J880.
  - Flag 11, P/J850, P/J655.
- Hard disk drive, PL 3.22 Item 2.
  - Flag 20, PJ211, P/J852.
  - Flag 11, P/J850, P/J655.
- Main drive module, PL 40.15 Item 1.
  - Flag 12, P/J973, P/J656.
- Tray 3 level encoder, Q73-340, PL 70.21 Item 5.
  - Flag 35, PJ515, P/J755.
  - Flag 10, P/J776, P/J654.
- HCF exit sensor, Q81-108, PL 80.32 Item 3.
  - Flag 36, PJ516, PJ248.
  - Flag 10, P/J776, P/J654.
- Tray 3 empty sensor, Q73-320, PL 80.32 Item 3.
  - Flag 37, PJ517, PJ251.
  - Flag 31, PJ250, PJ248.
  - Flag 10, P/J776, P/J654.
- Tray 3 feed sensor, Q81-103, PL 80.32 Item 3.
  - Flag 38, PJ518, PJ251.
  - Flag 32, PJ250, PJ248.
  - Flag 10, P/J776, P/J654.
- Tray 3 stack height sensor, Q73-330, PL 80.32 Item 6.
  - Flag 39, PJ519, PJ251.
  - Flag 33, PJ250, PJ248.
  - Flag 10, P/J776, P/J654.
- Tray 3 home sensor, Q73-300, PL 70.21 Item 4.
  - Flag 40, PJ520, PJ251.
  - Flag 34, PJ250, PJ248.
  - Flag 10, P/J776, P/J654.
- Tray 4 control PWB, PL 70.21 Item 2.
  - Flag 30, P/J155, P/J775.
  - Flag 10, P/J776, P/J654.
- Tray 4 level encoder, Q74-340, PL 70.21 Item 5.
  - Flag 41, P/J156.
  - Flag 30, P/J155, P/J775.
  - Flag 10, P/J776, P/J654.
- Tray 4 exit sensor, Q81-150, PL 80.33 Item 6.
  - Flag 42, P/J161.
  - Flag 30, P/J155, P/J775.

- Flag 10, P/J776, P/J654.
- Tray 4 feed sensor, Q81-104, PL 80.33 Item 6.
  - Flag 43, P/J161.
  - Flag 30, P/J155, P/J775.
  - Flag 10, P/J776, P/J654.
- Tray 4 empty sensor, Q74-320, PL 80.33 Item 6.
  - Flag 44, P/J157.
  - Flag 30, P/J155, P/J775.
  - Flag 10, P/J776, P/J654.
- Tray 4 stack height sensor, Q74.330, PL 80.33 Item 7.
  - Flag 45, P/J157.
  - Flag 30, P/J155, P/J775.
  - Flag 10, P/J776, P/J654.
- Tray 4 home sensor, Q74-300, PL 70.21 Item 4.
  - Flag 46, P/J157.
  - Flag 30, P/J155, P/J775.
  - Flag 10, P/J776, P/J654.
- **(W/O TAG 013)** Toner cartridge PWB, PL 90.17 Item 12.
  - Flag 47, P/J245, P/J782.
  - Flag 10, P/J776, P/J654.
- CRUM, part of the fuser module, PL 10.8 Item 1.
  - Flag 61, PJ409, PJ741, PJ740, PJ513, PJ187.
  - Flag 53, PJ188, P/J766.
  - Flag 10, P/J776, P/J654.
- CRUM, part of the print cartridge assembly, PL 90.17 Item 9.
  - Flag 61, PJ513, PJ187.
  - Flag 48, PJ188, P/J766.
  - Flag 10, P/J776, P/J654.
- Toner concentration sensor, part of the print cartridge assembly, PL 90.17 Item 9.
  - Flag 62, PJ510, PJ187.
  - Flag 48, PJ188, P/J766.
  - Flag 10, P/J776, P/J654.
- Duplex sensor, Q83-160, PL 80.10 Item 8.
  - Flag 63, PJ580, PJ226.
  - Flag 55, PJ227, P/J759.
  - Flag 10, P/J776, P/J654.
- Tray 1 TAR sensor, Q81-001, PL 80.10 Item 5.
  - Flag 64, PJ584, PJ226.
  - Flag 51, PJ227, P/J750.
  - Flag 10, P/J776, P/J654.
- Tray 2 TAR sensor, Q82-001, PL 80.10 Item 5.
  - Flag 65, PJ583, PJ226.
  - Flag 52, PJ227, P/J750.
- Flag 10, P/J776, P/J654.
- Bypass tray empty sensor, Q75-320 PL 70.35 Item 5.
  - Flag 66, PJ586, PJ218.
  - Flag 59, PJ217, PJ199.
  - Flag 53, PJ198, P/J750.
  - Flag 10, P/J776, P/J654.
- Bypass tray elevate sensor, Q75-040, PL 70.35 Item 20.
  - Flag 67, PJ587, PJ218.
  - Flag 60, PJ217, PJ199.
  - Flag 54, PJ198, P/J750.
  - Flag 10, P/J776, P/J654.
- Post fuser sensor, Q10-120, PL 10.12 Item 7.
  - Flag 68, PJ972, PJ185.
  - Flag 55, PJ184, P/J761.
  - Flag 10, P/J776, P/J654.
- Offset sensor, Q10-300, PL 10.11 Item 8.
  - Flag 69, PJ971, PJ185.
  - Flag 56, PJ184, P/J761.
  - Flag 10, P/J776, P/J654.
- Horizontal transport entry sensor, Q10-041, PL 10.15 Item 8.
  - Flag 57, PJ960, P/J773.
  - Flag 10, P/J776, P/J654.
- Horizontal transport interlock, Q10-042, PL 10.15 Item 16.
  - Flag 58, PJ962, P/J773.
  - Flag 10, P/J776, P/J654.
- Registration sensor, Q82-150, PL 80.17 Item 7.
  - Flag 70, PJ984, P/J763.
  - Flag 10, P/J776, P/J654.
- Environmental sensors PWB, PL 80.17 Item 8.
  - Flag 71, PJ982, P/J763.
  - Flag 10, P/J776, P/J654.

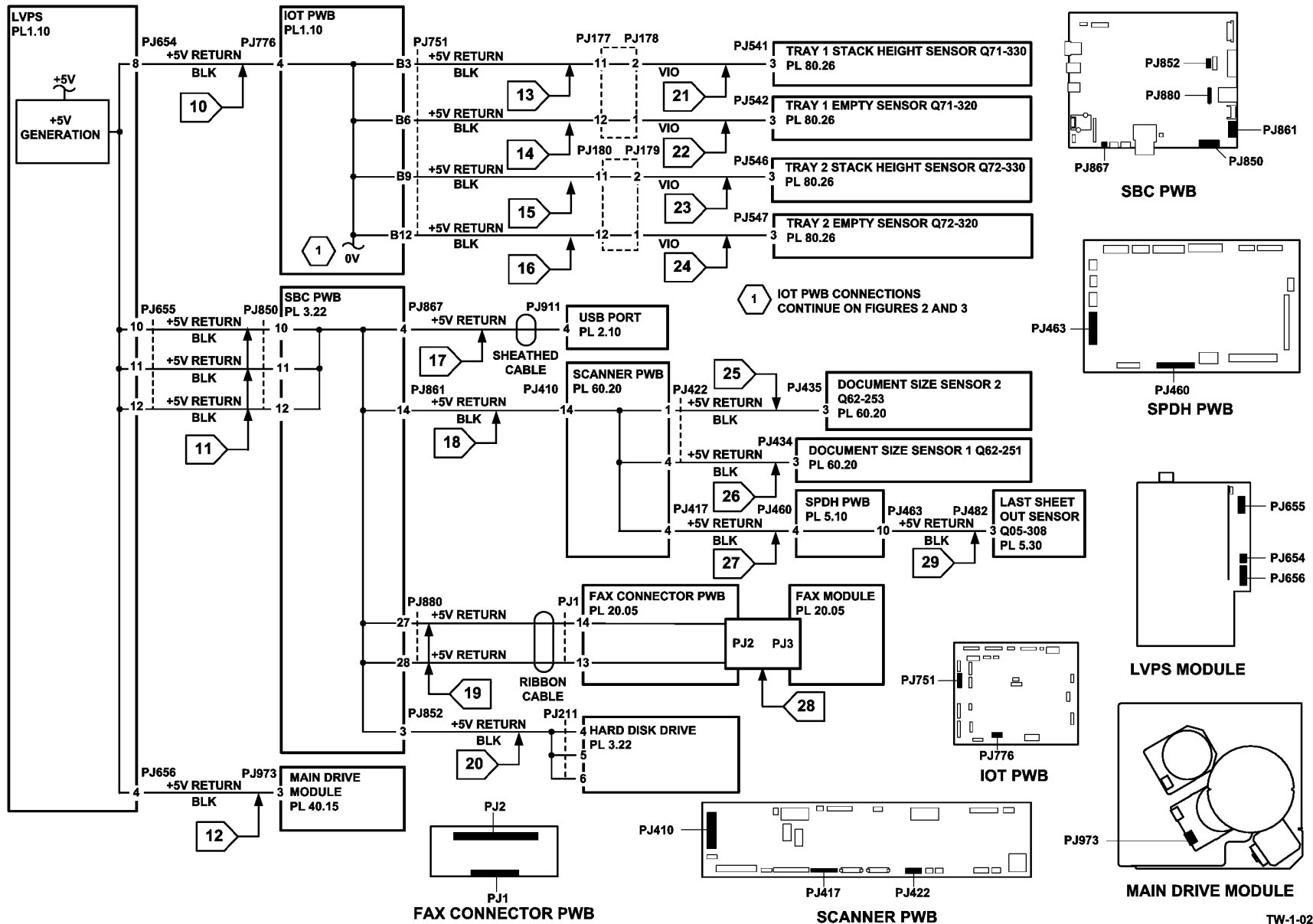


Figure 2 +5V return 1 of 3



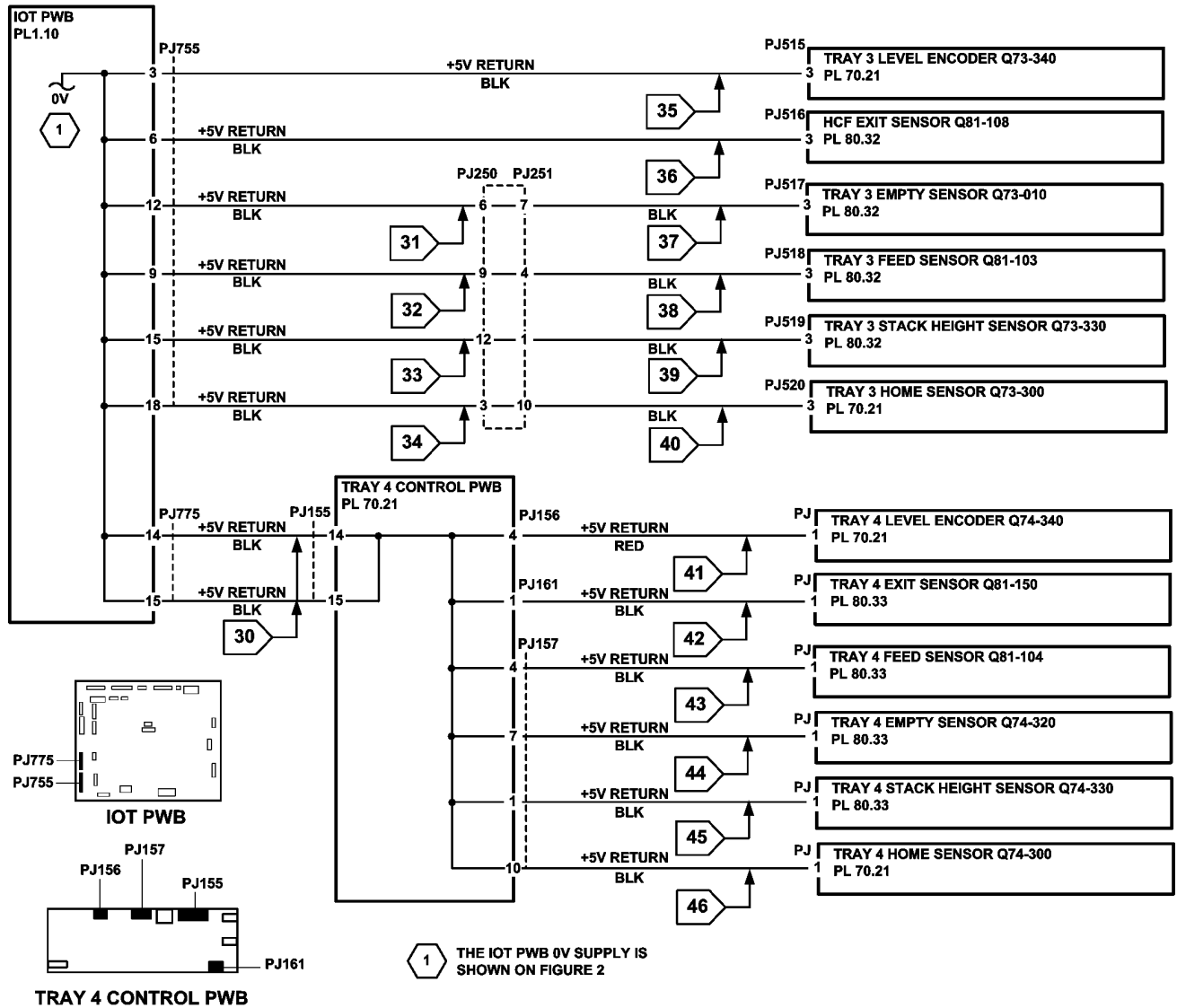
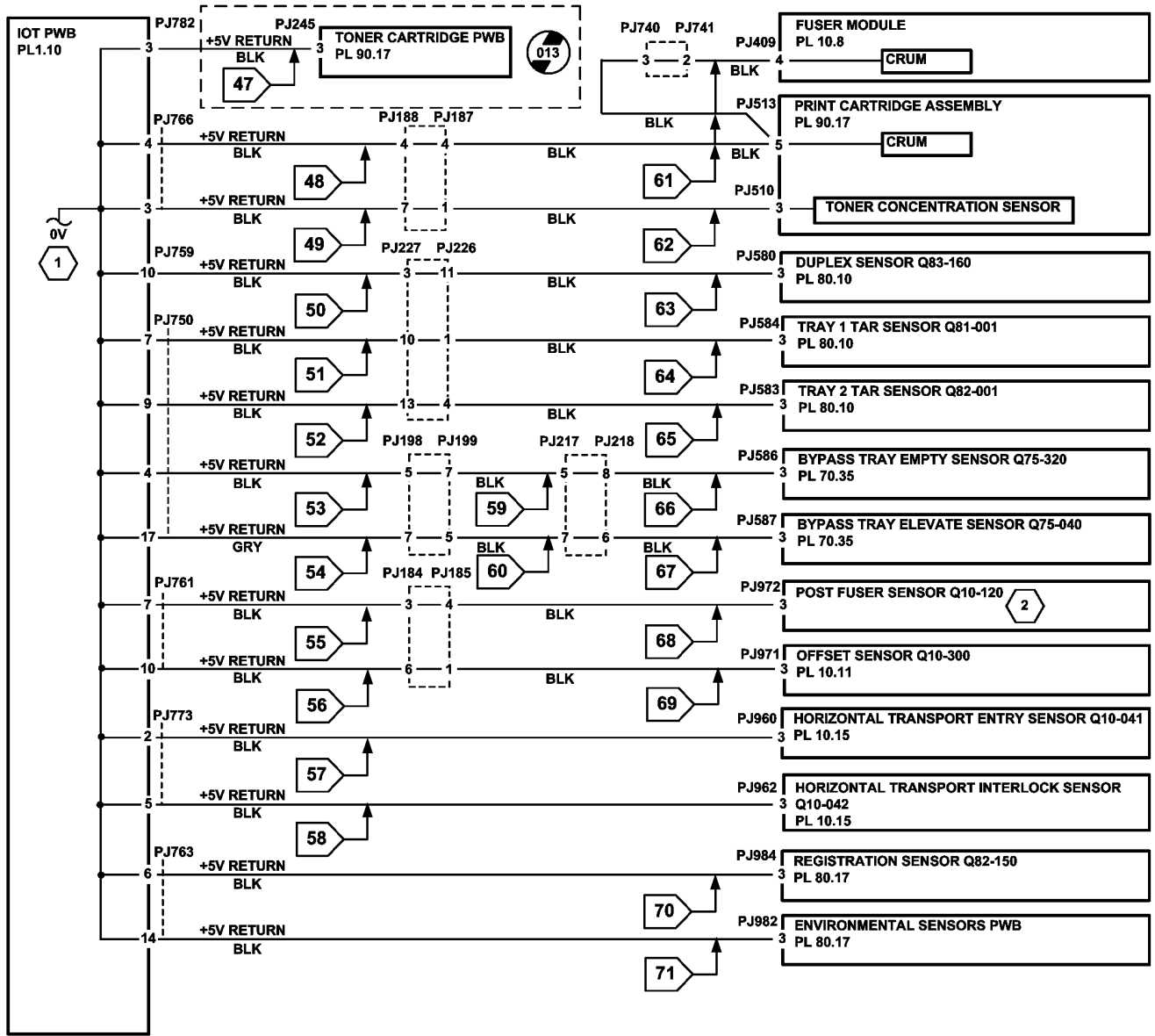


Figure 3 +5V return 2 of 3

TW-1-0244-A



- 1 THE IOT PWB 0V SUPPLY IS SHOWN ON FIGURE 2
- 2 WITH A CENTRE TRAY INSTALLED, PL 10.11  
WITH A HORIZONTAL TRANSPORT INSTALLED, PL 10.12

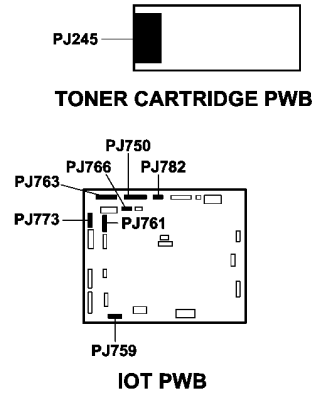


Figure 4 +5V return 3 of 3

## +12V Return

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

- UI control PWB, PL 2.10 Item 6.
  - Flag 73, P/J130, P/J864.
- Scanner PWB, PL 60.20 Item 4.
  - Flag 74, P/J410, P/J861.

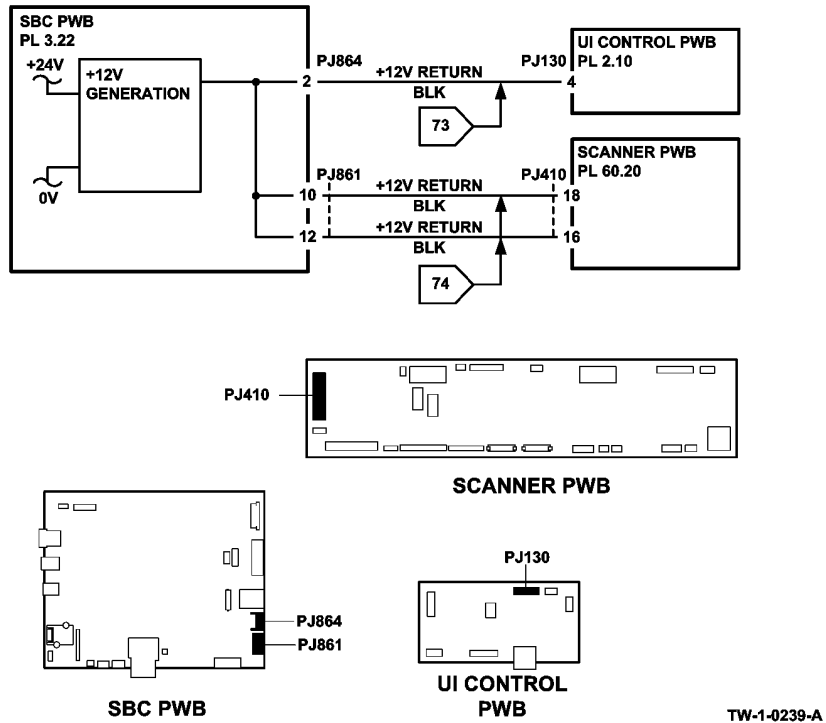


Figure 5 +12V Return

## +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 75, P/J776, P/J654.
- HVPS, PL 1.10 Item 3.
  - Flag 78, P/J830, P/J769.
  - Flag 75, P/J776, P/J654.
- Toner cartridge motor, part of the toner dispense module, PL 90.17 Item 1.

- Flag 79, P/J512, P/J767.
- Flag 75, P/J776, P/J654.
- Tray 4 control PWB, PL 70.21 Item 2.
  - Flag 76, P/J158, P/J656.
- Main drive module, PL 40.15 Item 1.
  - Flag 77, P/J973, P/J656.
  - Flag 80, PJ621, PJ623.
- SBC PWB, PL 3.22 Item 3.
  - Flag 81, P/J850, P/J655.
- Scanner PWB, PL 60.20 Item 4.
  - Flag 82, P/J410, P/J861.
  - Flag 81, P/J850, P/J655.
- Scanner CCD PWB, PL 60.25 Item 4.
  - Flag 83, P/J446, P/J416.
  - Flag 82, P/J410, P/J861.
  - Flag 81, P/J850, P/J655.
- Scanner LED drive PWB, PL 60.25 Item 6.
  - Flag 86, P/J448, P/J447.
  - Flag 83, P/J446, P/J416.
  - Flag 82, P/J410, P/J861.
  - Flag 81, P/J850, P/J655.
- Cooling fan, PL 60.15 Item 6.
  - Flag 84, P/J424.
  - Flag 82, P/J410, P/J861.
  - Flag 81, P/J850, P/J655.
- SPDH PWB, PL 5.10 Item 5.
  - Flag 85, P/J459, P/J418.
  - Flag 82, P/J410, P/J861.
  - Flag 81, P/J850, P/J655.
- Side 2 CCD PWB, PL 60.30 Item 4.
  - Flag 87, P/J452, P/J458.
  - Flag 85, P/J459, P/J418.
  - Flag 82, P/J410, P/J861.
  - Flag 81, P/J850, P/J655.
- Side 2 LED drive PWB, PL 5.10 Item 17.
  - Flag 91, P/J454, P/J492.
  - Flag 90, P/J456, P/J453.
  - Flag 87, P/J452, P/J458.
  - Flag 85, P/J459, P/J418.
  - Flag 82, P/J410, P/J861.
  - Flag 81, P/J850, P/J655.
- LED cooling fan, PL 5.18 Item 8.
  - Flag 88, PJ484, PJ483, P/J471.

- Flag 85, P/J459, P/J418.
- Flag 82, P/J410, P/J861.
- Flag 81, P/J850, P/J655.
- Motor cooling fan, PL 5.18 Item 7.
- Flag 89, P/J470.
- Flag 85, P/J459, P/J418.
- Flag 82, P/J410, P/J861.
- Flag 81, P/J850, P/J655.

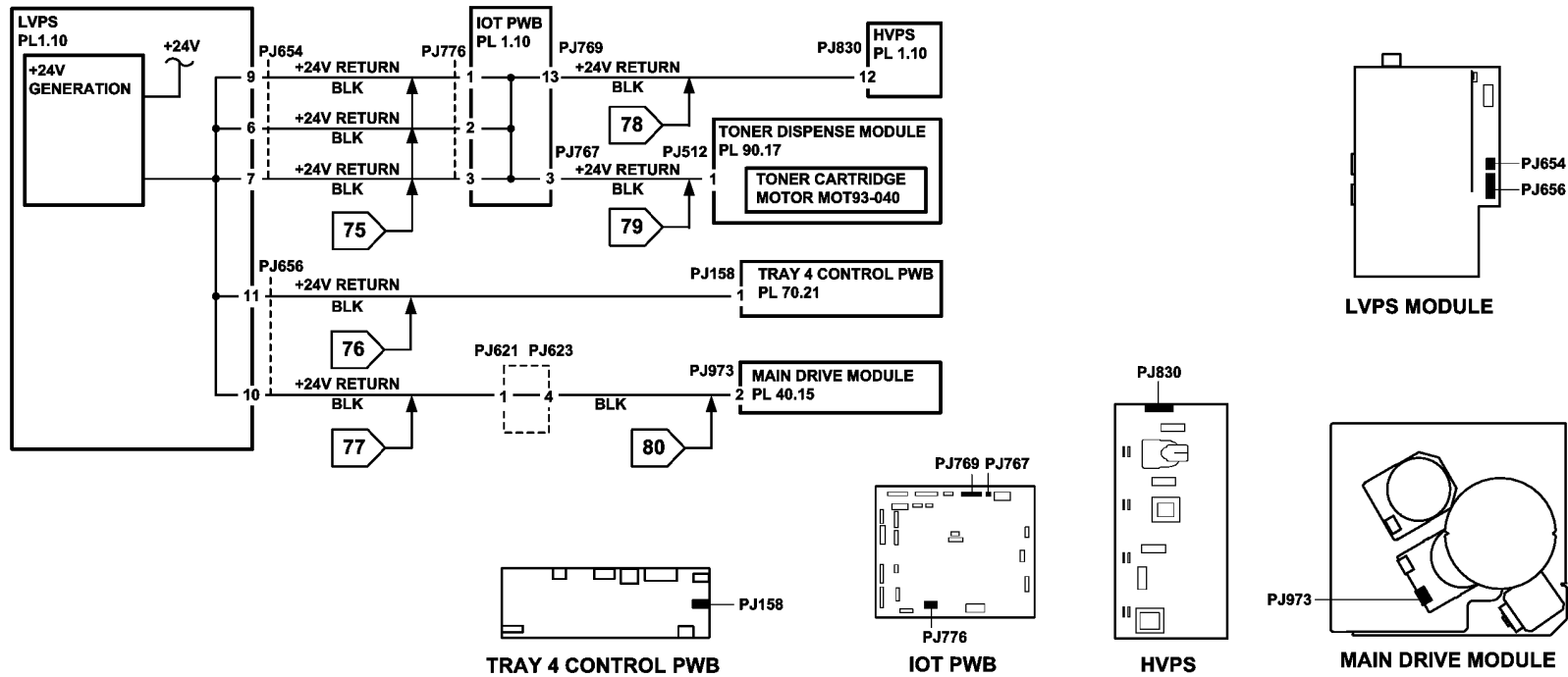


Figure 6 +24V return 1 of 2

TW-1-0246-A

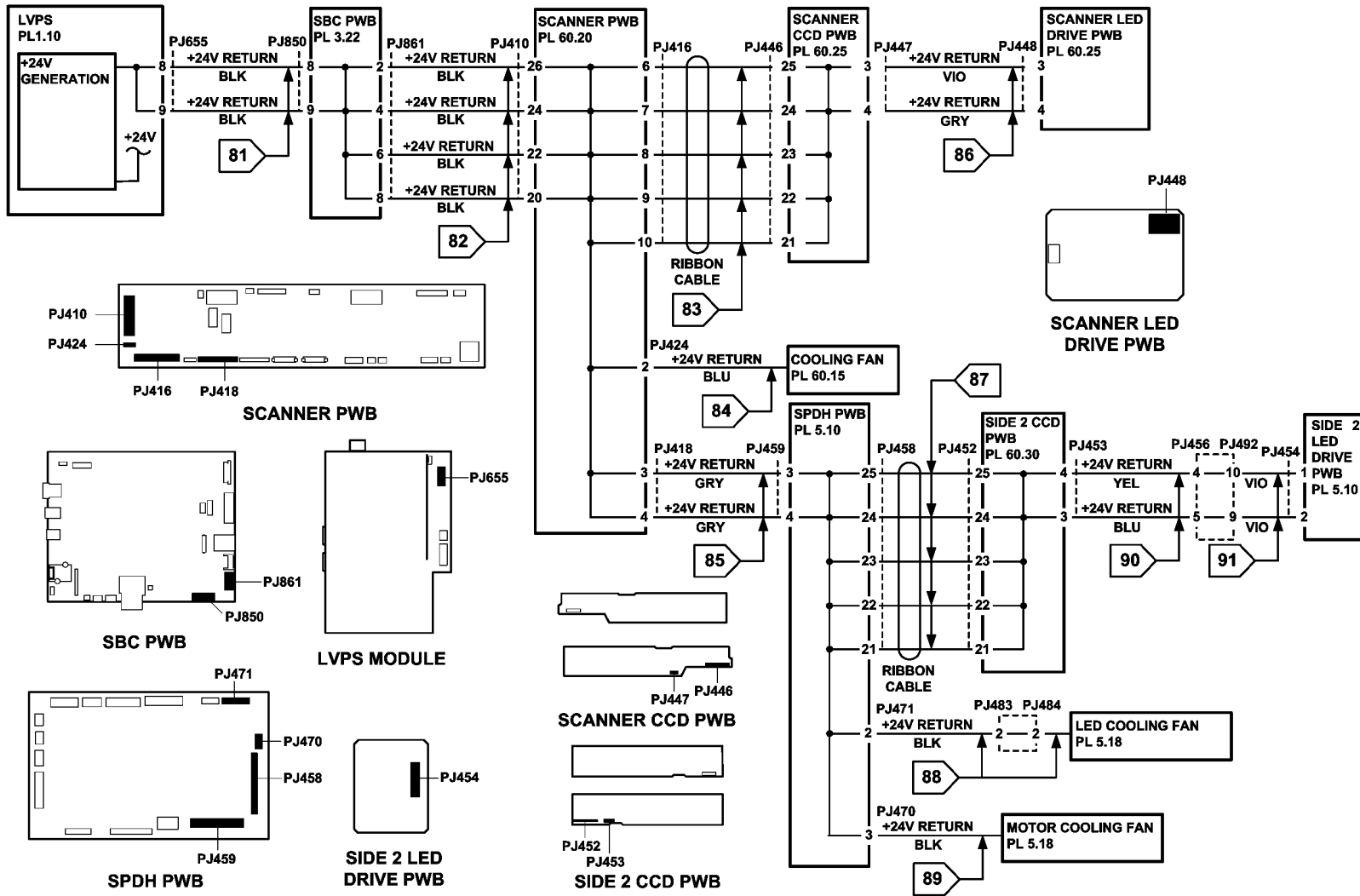


Figure 7 +24V return 2 of 2

TW-1-0247-A

## 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

Y N

Install a new fuser connector assembly, PL 10.8 Item 4. If the fault persists, perform the 301L LVPS RAP.

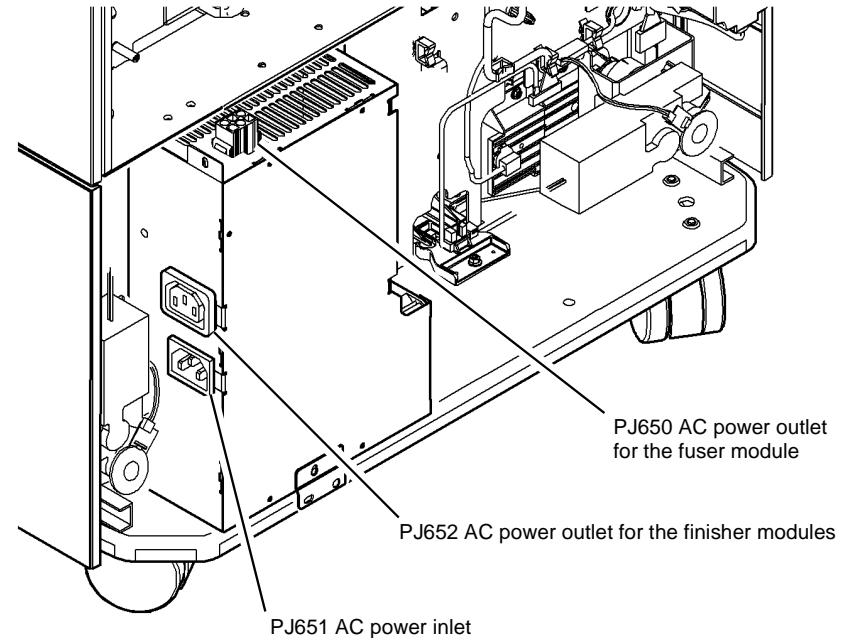
Perform the 301L LVPS RAP.

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.
- LVF BM, PL 12.425 Item 4.



W-1-1006-A

Figure 1 AC input and output

A B C

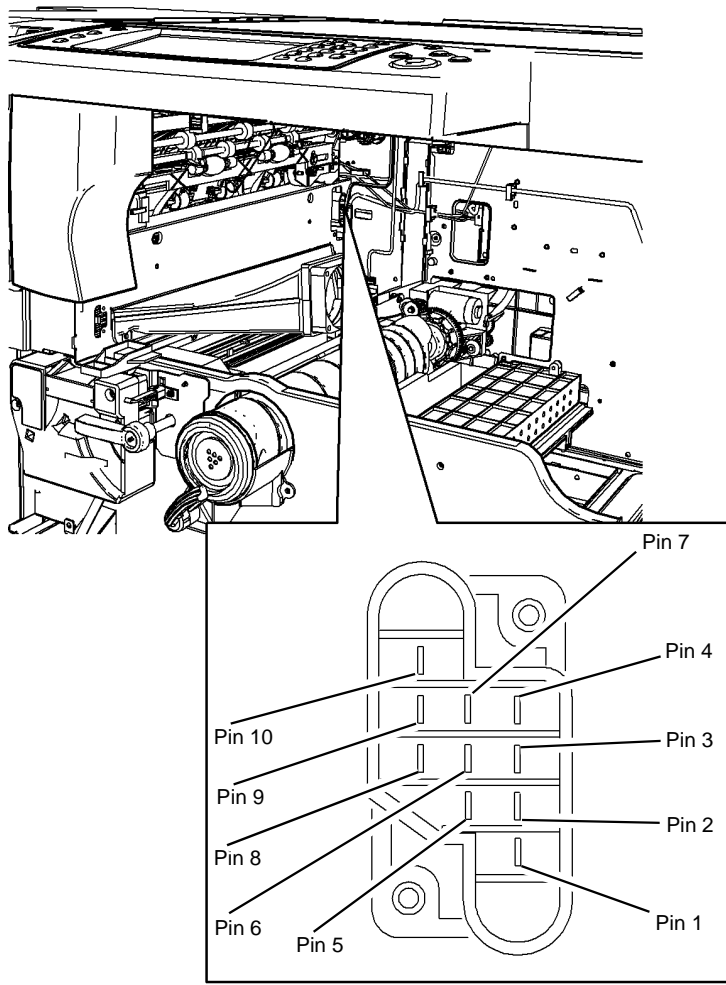


Figure 2 Supply to the fuser module

P/J100

W-1-1007-A

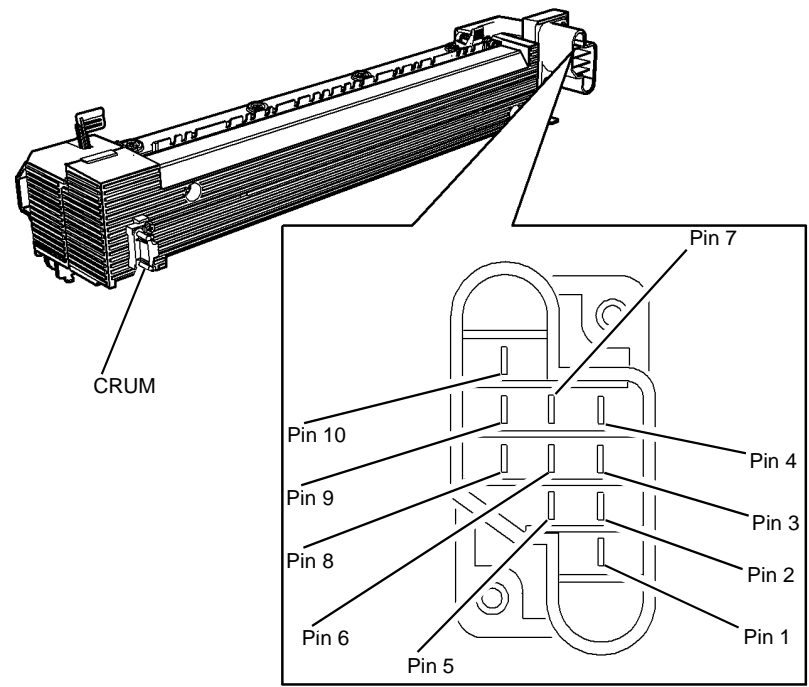


Figure 3 Fuser module

P/J 100

W-1-1008-A

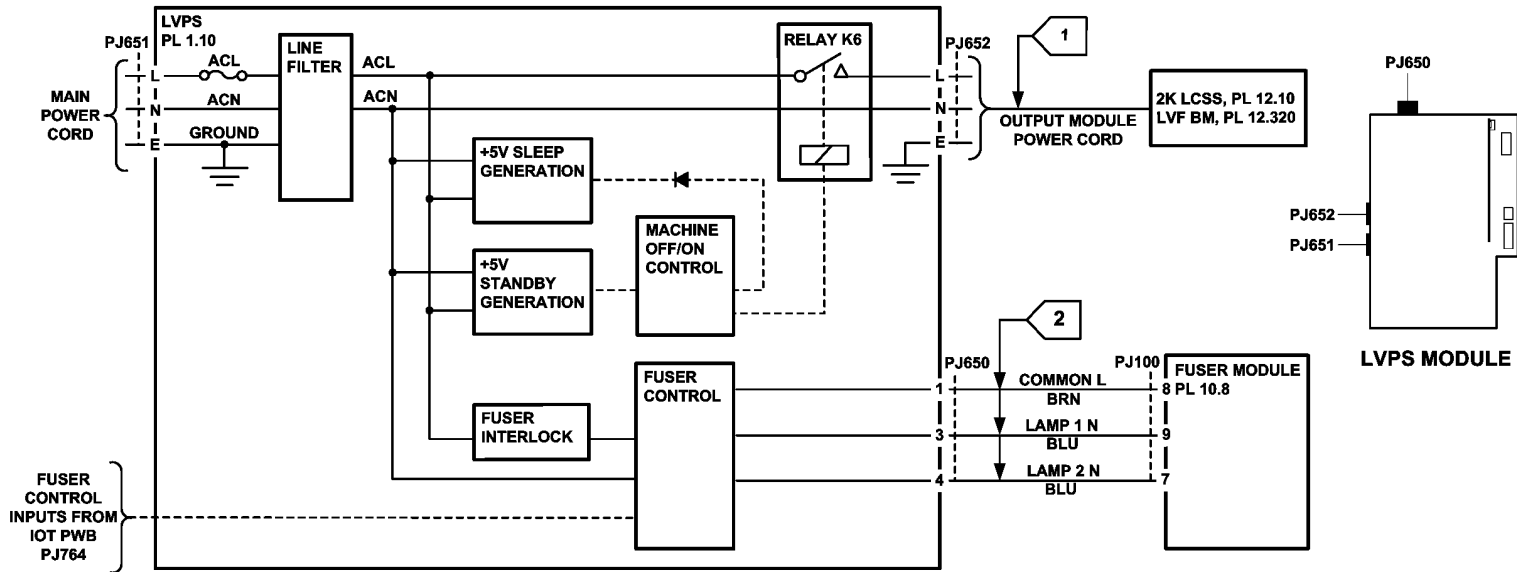


Figure 4 AC circuit diagram

TW-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, PJ585, PJ218, PJ217, PJ199, PJ198, P/J750.
  - Flag 1, P/J776, P/J654.
- SBC PWB, PL 3.22 Item 3.
  - Flag 2, P/J850, P/J655.
- UI control PWB, PL 2.10 Item 6.
  - Flag 4, P/J130, P/J864.
  - Flag 2, P/J850, P/J655.
- Fax connector PWB, PL 20.05 Item 4.
  - Flag 5, P/J1, P/J880.
  - Flag 2, P/J850, P/J655.
- Fax module, PL 20.05 Item 1.
  - Flag 5, PJ3, P/J2, P/J1, P/J880.
  - Flag 2, P/J850, P/J655.
- Foreign device interface PWB, PL 3.22 Item 18.
  - Flag 6, P/J16, P/J881.
  - Flag 2, P/J850, P/J655.
- Foreign device.
  - Flag 9, PJ124, P/J100.
  - Flag 6, P/J16, P/J881.
  - Flag 2, P/J850, P/J655.
- Scanner PWB, PL 60.20 Item 4.
  - Flag 7, P/J410, P/J861.
  - Flag 2, P/J850, P/J655.
- SPDH PWB, PL 5.10 Item 5.
  - Flag 8, P/J459, P/J418.
  - Flag 7, P/J410, P/J861.
  - Flag 2, P/J850, P/J655.
- Side 2 registration sensor Q05-343, PL 60.30 Item 8.
  - Flag 10, PJ500, PJ456, PJ492, P/J466.
  - Flag 8, P/J459, P/J418.
  - Flag 7, P/J410, P/J861.
  - Flag 2, P/J850, P/J655.
- DH registration sensor Q05-340, PL 5.18 Item 11.
  - Flag 11, PJ491, P/J467.
  - Flag 8, P/J459, P/J418.
  - Flag 7, P/J410, P/J861.
  - Flag 2, P/J850, P/J655.
- DH feed sensor Q05-330, PL 5.20 Item 10.
  - Flag 12, PJ498, P/J465.
  - Flag 8, P/J459, P/J418.
  - Flag 7, P/J410, P/J861.
  - Flag 2, P/J850, P/J655.
- DH takeaway sensor Q05-335, PL 5.20 Item 10.
  - Flag 13, PJ497, P/J465.
  - Flag 8, P/J459, P/J418.
  - Flag 7, P/J410, P/J861.
  - Flag 2, P/J850, P/J655.

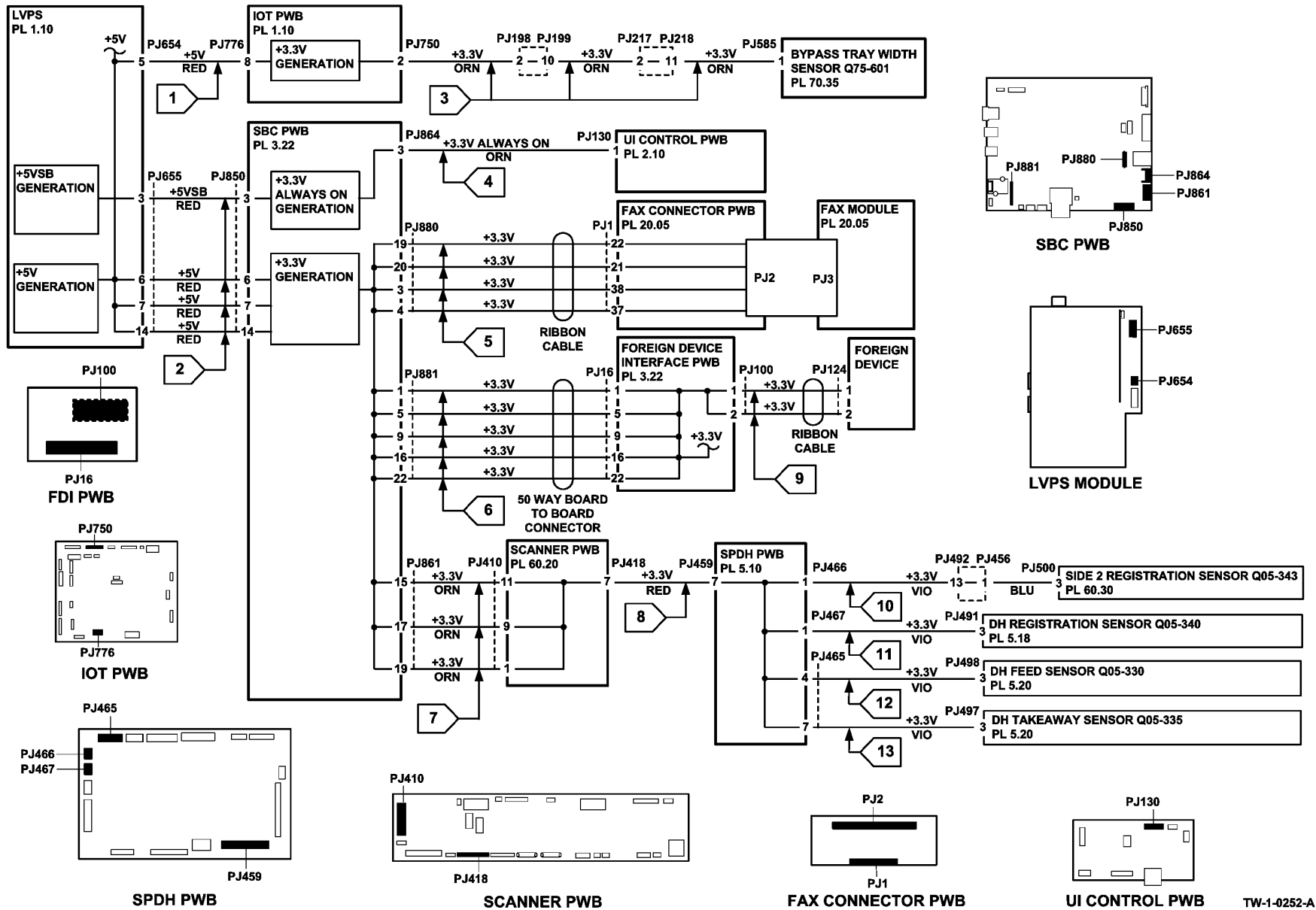


Figure 1 +3.3V distribution

## 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 12, PJ541, PJ178.
  - Flag 4, PJ177, P/J751.
  - Flag 1, P/J776, P/J654.
- Tray 1 empty sensor, Q71-320, PL 80.26 Item 7.
  - Flag 13, PJ542, PJ178.
  - Flag 5, PJ177 P/J751.
  - Flag 1, P/J776, P/J654.
- Tray 2 stack height sensor, Q72-330, PL 80.26 Item 8.
  - Flag 14, PJ546, PJ179.
  - Flag 6, PJ180, P/J751.
  - Flag 1, P/J776, P/J654.
- Tray 2 empty sensor, Q72-320, PL 80.26 Item 7.
  - Flag 15, PJ547, PJ179.
  - Flag 7, PJ180, P/J751.
  - Flag 1, P/J776, P/J654.
- SBC PWB (+5V and +5VSB), PL 3.22 Item 3.
  - Flag 2, P/J850, P/J655.
- USB port, PL 2.10 Item 13.
  - Flag 8, PJ911, P/J867.
  - Flag 2, P/J850, P/J655.
- Scanner PWB, PL 60.20 Item 4.
  - Flag 9, P/J410, P/J861.
- Document size sensor 2, Q62-253, PL 60.20 Item 3.
  - Flag 2, P/J850, P/J655.
  - Flag 16, PJ435, P/J422.
  - Flag 9, P/J410, P/J861.
  - Flag 2, P/J850, P/J655.
- Document size sensor 1, Q62-251, PL 60.20 Item 3.
  - Flag 17, PJ434, P/J422.
  - Flag 9, P/J410, P/J861.
  - Flag 2, P/J850, P/J655.
- SPDH PWB, PL 5.10 Item 5.
  - Flag 18, P/J460, P/J417.
  - Flag 9, P/J410, P/J861.
  - Flag 2, P/J850, P/J655.
- Last sheet out sensor, Q05-308, PL 5.30 Item 18.
  - Flag 20, PJ482, P/J463.
  - Flag 18, P/J460, P/J417.
  - Flag 9, P/J410, P/J861.
  - Flag 2, P/J850, P/J655.
- Fax connector PWB, PL 20.05 Item 4.
  - Flag 10, P/J1, P/J880.
  - Flag 2, P/J850, P/J655.
- Fax module, PL 20.05 Item 1.
  - Flag 19, PJ3, P/J2.
  - Flag 10, P/J1, P/J880.
  - Flag 2, P/J850, P/J655.
- Hard disk drive, PL 3.22 Item 2.
  - Flag 11, PJ211, P/J852.
  - Flag 2, P/J850, P/J655.
- Main drive module, PL 40.15 Item 1.
  - Flag 3, P/J973, PJ621, PJ623, P/J656.
- HCF exit sensor, Q81-108, PL 80.32 Item 3.
  - Flag 25, PJ516, PJ248.
  - Flag 1, P/J776, P/J654.
- Tray 3 empty sensor, Q73-320, PL 80.32 Item 3.
  - Flag 26, PJ517, PJ251.
  - Flag 21, PJ250, PJ248.
  - Flag 1, P/J776, P/J654.
- Tray 3 feed sensor, Q81-103, PL 80.32 Item 3.
  - Flag 27, PJ519, PJ251.
  - Flag 22, PJ250, PJ248.
  - Flag 1, P/J776, P/J654.
- Tray 3 stack height sensor, Q73-330, PL 80.32 Item 6.
  - Flag 28, PJ519, PJ251.

- Flag 23, PJ250, PJ248.
- Flag 1, P/J776, P/J654.
- Tray 3 home sensor, Q73-300, PL 70.21 Item 4.
  - Flag 29, PJ520, PJ251.
  - Flag 24, PJ250, PJ248.
  - Flag 1, P/J776, P/J654.
- Tray 4 control PWB, PL 70.21 Item 2.
  - Flag 20, P/J155, P/J775.
  - Flag 1, P/J776, P/J654.
- Tray 4 exit sensor, Q81-150, PL 80.33 Item 6.
  - Flag 30, P/J161.
  - Flag 20, P/J155, P/J775. Refer also to GP 30.
  - Flag 1, P/J776, P/J654.
- Tray 4 feed sensor, Q81-104, PL 80.33 Item 6.
  - Flag 31, P/J157.
  - Flag 20, P/J155, P/J775. Refer also to GP 30.
  - Flag 1, P/J776, P/J654.
- Tray 4 empty sensor, Q74-320, PL 80.33 Item 6.
  - Flag 32, P/J157.
  - Flag 20, P/J155, P/J775. Refer also to GP 30.
  - Flag 1, P/J776, P/J654.
- Tray 4 stack height sensor, Q74-330, PL 80.33 Item 7.
  - Flag 33, P/J157.
  - Flag 20, P/J155, P/J775. Refer also to GP 30.
  - Flag 1, P/J776, P/J654.
- Tray 4 home sensor, Q74-300, PL 70.21 Item 4.
  - Flag 34, P/J157.
  - Flag 20, P/J155, P/J775. Refer also to GP 30.
  - Flag 1, P/J776, P/J654.
- **(W/O TAG 013)** Toner cartridge PWB, PL 90.17 Item 12.
  - Flag 35, P/J245, P/J782.
  - Flag 1, P/J776, P/J654.
- Fuser module (CRUM), PL 10.8 Item 1.
  - Flag 49, PJ409, PJ741, PJ740, PJ513, PJ187.
  - Flag 36, PJ188, P/J766.
  - Flag 1, P/J776, P/J654.
- Print cartridge assembly (CRUM), PL 90.17 Item 9.
  - Flag 49, PJ513, PJ187.
  - Flag 36, PJ188, P/J766.
  - Flag 1, P/J776, P/J654.
- Toner concentration sensor, part of the print cartridge assembly, PL 90.17 Item 9.
  - Flag 50, PJ510, PJ187.
  - Flag 37, PJ188, P/J766.
- Flag 1, P/J776, P/J654.
- Duplex sensor, Q83-160, PL 80.10 Item 8.
  - Flag 51, PJ580, PJ226.
  - Flag 38, PJ227, P/J759.
  - Flag 1, P/J776, P/J654.
- Tray 1 TAR sensor, Q81-001, PL 80.10 Item 5.
  - Flag 52, PJ584, PJ226.
  - Flag 39, PJ227, P/J750.
  - Flag 1, P/J776, P/J654.
- Tray 2 TAR sensor, Q82-001, PL 80.10 Item 5.
  - Flag 53, PJ583, PJ226.
  - Flag 40, PJ227, P/J750.
  - Flag 1, P/J776, P/J654.
- Bypass tray paper empty sensor, Q75-320, PL 70.35 Item 5.
  - Flag 54, PJ586, PJ213.
  - Flag 47, PJ217, PJ199.
  - Flag 41, PJ198, P/J750.
  - Flag 1, P/J776, P/J654.
- Bypass tray elevate sensor, Q75-040, PL 70.35 Item 20.
  - Flag 55, PJ587, PJ213.
  - Flag 48, PJ217, PJ199.
  - Flag 42, PJ198, P/J750.
  - Flag 1, P/J776, P/J654.
- Post fuser sensor, Q10-120, PL 10.11 Item 7.
  - Flag 56, PJ972, PJ185.
  - Flag 43, PJ184, P/J761.
  - Flag 1, P/J776, P/J654.
- Offset sensor, Q10-300, PL 10.11 Item 8.
  - Flag 57, PJ971, PJ185.
  - Flag 44, PJ184, P/J761.
  - Flag 1, P/J776, P/J654.
- Horizontal transport entry sensor, Q10-041, PL 10.15 Item 8.
  - Flag 45, PJ960, P/J773.
  - Flag 1, P/J776, P/J654.
- Horizontal transport interlock, Q10-042, PL 10.15 Item 16.
  - Flag 46, PJ962, P/J773.
  - Flag 1, P/J776, P/J654.
- Registration sensor, Q82-150, PL 80.17 Item 7.
  - Flag 58, PJ984, P/J763.
  - Flag 1, P/J776, P/J654.
- Environmental sensors, ambient temperature sensor, Q91-602 and humidity sensor, Q91-601, PL 80.17 Item 8.
  - Flag 59, PJ982, P/J763.
  - Flag 1, P/J776, P/J654.

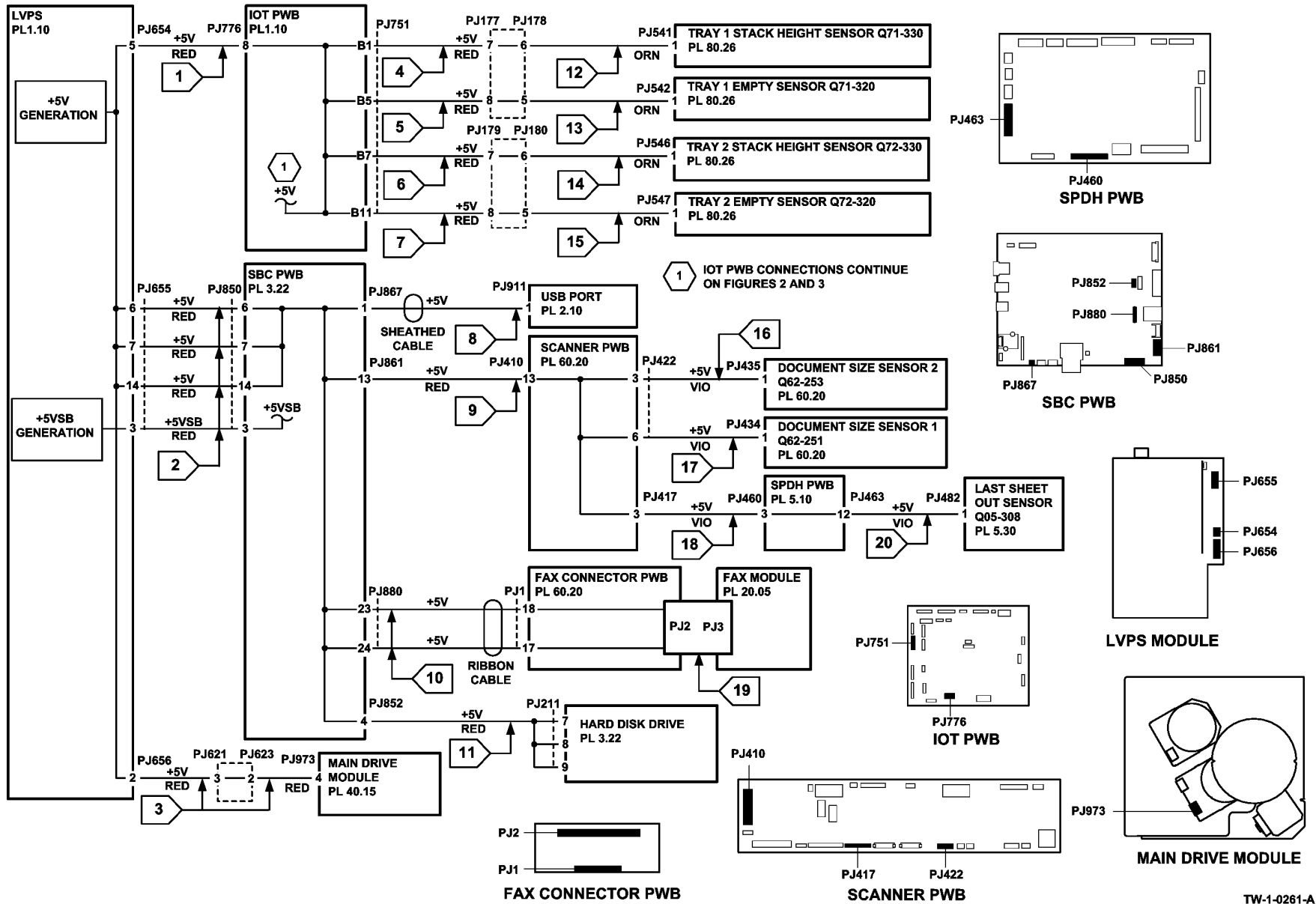
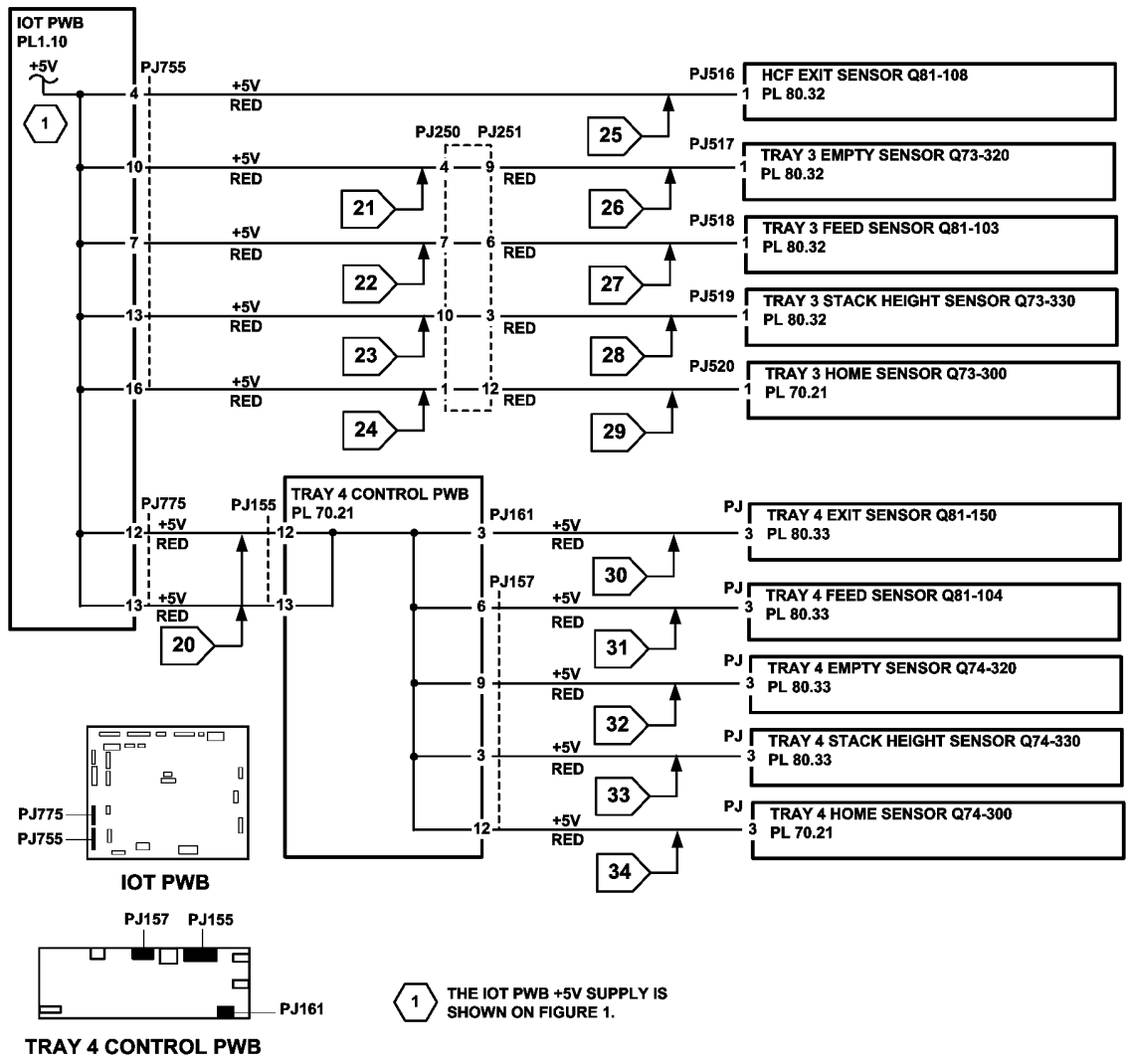
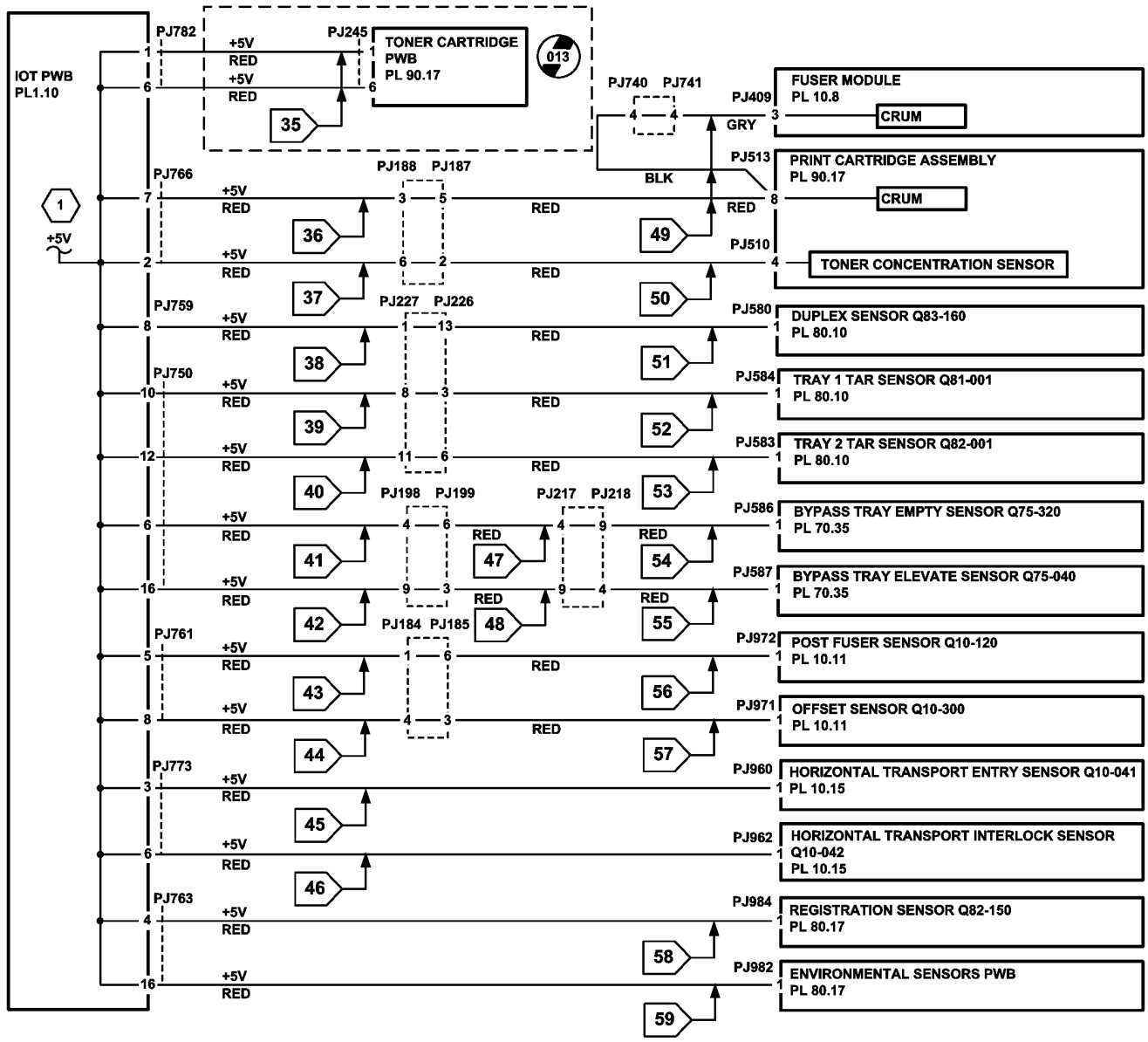


Figure 1 +5V distribution 1 of 3



TW-1-0262-A

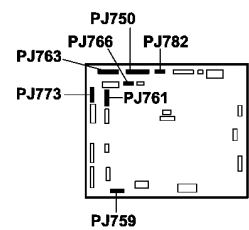
Figure 2 +5V distribution 2 of 3



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



TONER CARTRIDGE PWB



IOT PWB

TW-1-0263-B

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**.

- UI control PWB, PL 2.10 Item 6.
  - Flag 1, P/J130, P/J864.
- Scanner PWB, PL 60.20 Item 4.
  - Flag 2, P/J410, P/J861.

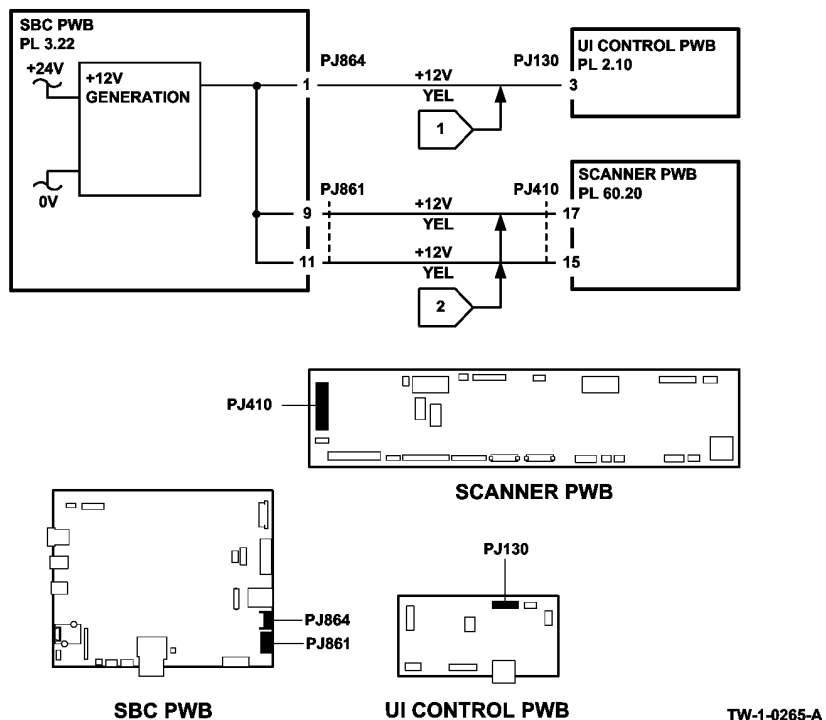


Figure 1 +12V Distribution

TW-1-0265-A

## 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/J178.
  - Flag 4, P/J177, 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/J179.
  - Flag 6, P/J180, 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/J218, P/J217, P/J199, P/J198, P/J757.
  - Flag 1, P/J776, P/J654.
- Print cartridge fan, MOT80-016, PL 90.15 Item 2.
  - Flag 10, P/J529, P/J783.
  - Flag 1, P/J776, P/J654.
- Inverter gate solenoid, SOL10-045, PL 10.13 Item 8.
  - Flag 11, P/J970, P/J762.
  - Flag 1, P/J776, P/J654.
- Left door fan 2, PL 80.11 Item 9.



- Flag 12, PJ581, PJ226, PJ227, P/J759.
- Flag 1, P/J776, P/J654.
- Left door fan 1, PL 80.11 Item 9.
  - Flag 13, PJ582, PJ226, PJ227, P/J759.
  - Flag 1, P/J776, P/J654.
- Tray 3 elevator motor, MOT73-010, PL 70.21 Item 1.
  - Flag 15, PJ508, P/J756.
  - Flag 14, P/J776, P/J654.
- Tray 3 feed clutch, CL81-033, part of the tray 3 feed frame assembly, PL 80.32 Item 14.
  - Flag 16, PJ507, P/J756.
  - Flag 14, P/J776, P/J654.
- Tray 3 feed motor, MOT81-030, PL 80.32 Item 8.
  - Flag 17, PJ505, P/J756.
  - Flag 14, P/J776, P/J654.
- HCF transport motor, MOT81-045, PL 80.36 Item 13.
  - Flag 18, PJ506, P/J756.
  - Flag 14, P/J776, P/J654.
- **(W/O TAG 003 Only)** Tray 3 over elevate switch, PL 80.32 Item 7.
  - Flag 19, PJ514, P/J756.
  - Flag 14, P/J776, P/J654.
- Tray 4 control PWB, PL 70.21 Item 2.
  - Flag 20, P/J158, P/J656.
- **(W/O TAG 004 Only)** Tray 4 over elevate switch, PL 80.33 Item 8.
  - Flag 21, P/J159.
  - Flag 20, P/J158, P/J656. Refer also to GP 30.
- Tray 4 elevator motor, MOT74-010, PL 70.21 Item 1.
  - Flag 22, P/J160.
  - Flag 20, P/J158, P/J656. Refer also to GP 30.
- Tray 4 feed clutch, CL81-043, part of the tray 4 feed frame assembly, PL 80.33 Item 13.
  - Flag 23, Flag 24, P/J162.
  - Flag 20, P/J158, P/J656. Refer also to GP 30.
- Tray 4 feed motor, MOT81-040, PL 80.33 Item 10.
  - Flag 25, P/J162.
  - Flag 20, P/J158, P/J656. Refer also to GP 30.
- Main Drive Module, PL 40.15 Item 1.
  - Flag 20, P/J973, PJ623, PJ621, P/J656.
- SBC PWB, PL 3.22 Item 3.
  - Flag 26, P/J850, P/J655.
- Scanner PWB, PL 60.20 Item 4.
  - Flag 27, P/J410, P/J861.
  - Flag 26, P/J850, P/J655.
- Scanner CCD PWB, PL 60.25 Item 4.
  - Flag 29, P/J446, P/J416.
- Flag 27, P/J410, P/J861.
- Flag 26, P/J850, P/J655.
- Scanner LED drive PWB, PL 60.25 Item 6.
  - Flag 28, P/J448, P/J447.
  - Flag 29, P/J446, P/J416.
  - Flag 27, P/J410, P/J861.
  - Flag 26, P/J850, P/J655.
- SPDH PWB, PL 5.10 Item 5.
  - Flag 30, P/J459, P/J418.
  - Flag 27, P/J410, P/J861.
  - Flag 26, P/J850, P/J655.
- Side 2 CCD PWB, PL 60.30 Item 4.
  - Flag 31, P/J452, P/J458.
  - Flag 30, P/J459, P/J418.
  - Flag 27, P/J410, P/J861.
  - Flag 26, P/J850, P/J655.
- Side 2 LED drive PWB, PL 5.10 Item 17.
  - Flag 33, P/J454, PJ492.
  - Flag 32, PJ456, P/J453.
  - Flag 31, P/J452, P/J458.
  - Flag 30, P/J459, P/J418.
  - Flag 27, P/J410, P/J861.
  - Flag 26, P/J850, P/J655.
- Cooling fan, PL 60.15 Item 6.
  - Flag 34, P/J424.
  - Flag 27, P/J410, P/J861.
  - Flag 26, P/J850, P/J655.
- Top cover interlock switch, PL 5.10 Item 13.
  - Flag 35, P/J461.
  - Flag 30, P/J459, P/J418.
  - Flag 27, P/J410, P/J861.
  - Flag 26, P/J850, P/J655.
- Motor cooling fan, PL 5.18 Item 7.
  - Flag 36, P/J470.
  - Flag 30, P/J459, P/J418.
  - Flag 27, P/J410, P/J861.
  - Flag 26, P/J850, P/J655.
- LED cooling fan, PL 5.18 Item 8.
  - Flag 37, PJ484, PJ483, P/J471.
  - Flag 30, P/J459, P/J418.
  - Flag 27, P/J410, P/J861.
  - Flag 26, P/J850, P/J655.
- Feed clutch, CL05-025, PL 5.18 Item 4.

- Flag 38, PJ486, PJ485, P/J471.
- Flag 30, P/J459, P/J418.
- Flag 27, P/J410, P/J861.
- Flag 26, P/J850, P/J655.
- Takeaway clutch, CL05-425, PL 5.18 Item 4.
  - Flag 39, PJ488, PJ487, P/J471.
  - Flag 30, P/J459, P/J418.
  - Flag 27, P/J410, P/J861.
  - Flag 26, P/J850, P/J655.

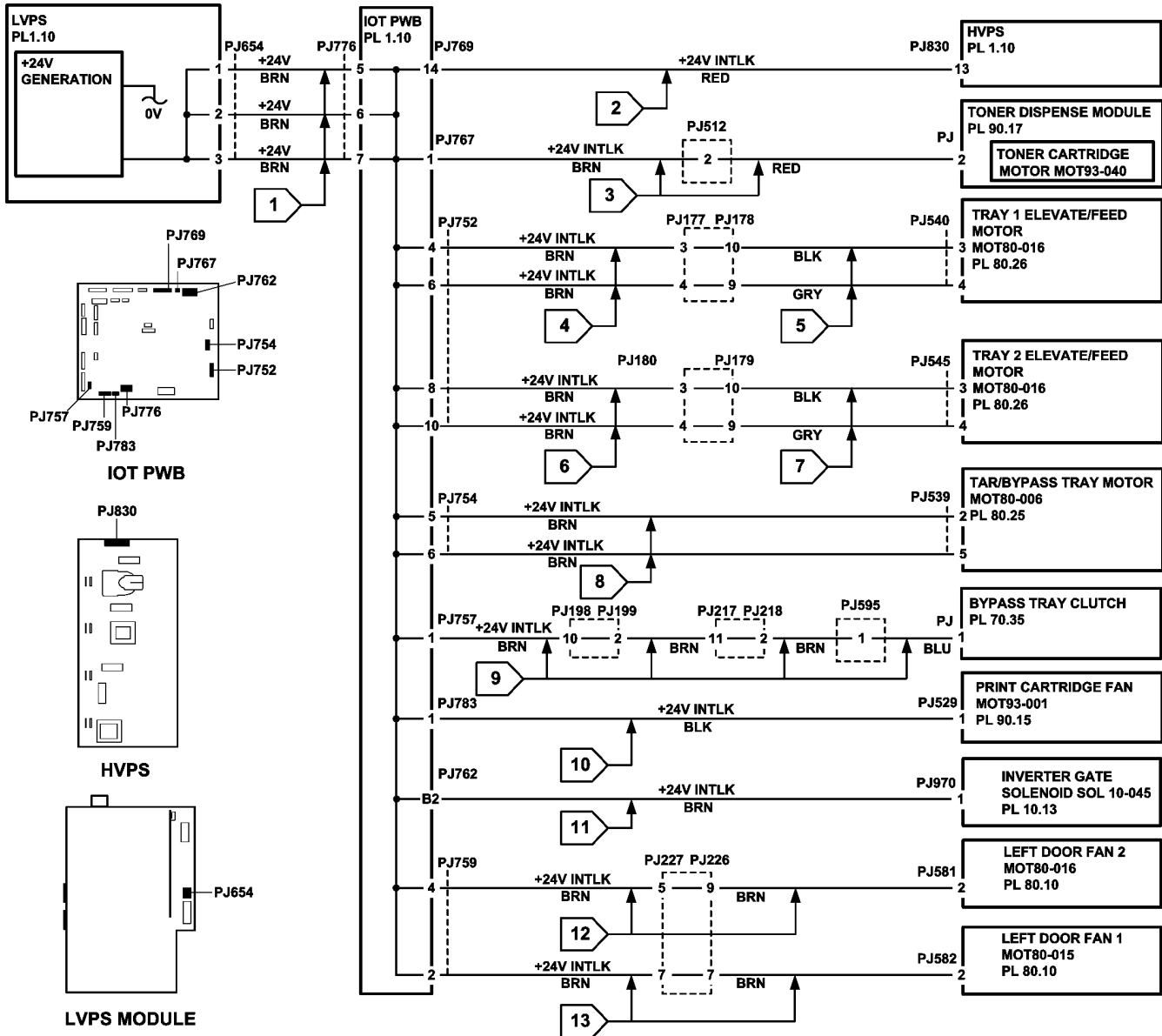


Figure 1 +24V Distribution 1 of 3

TW-1-0266-A

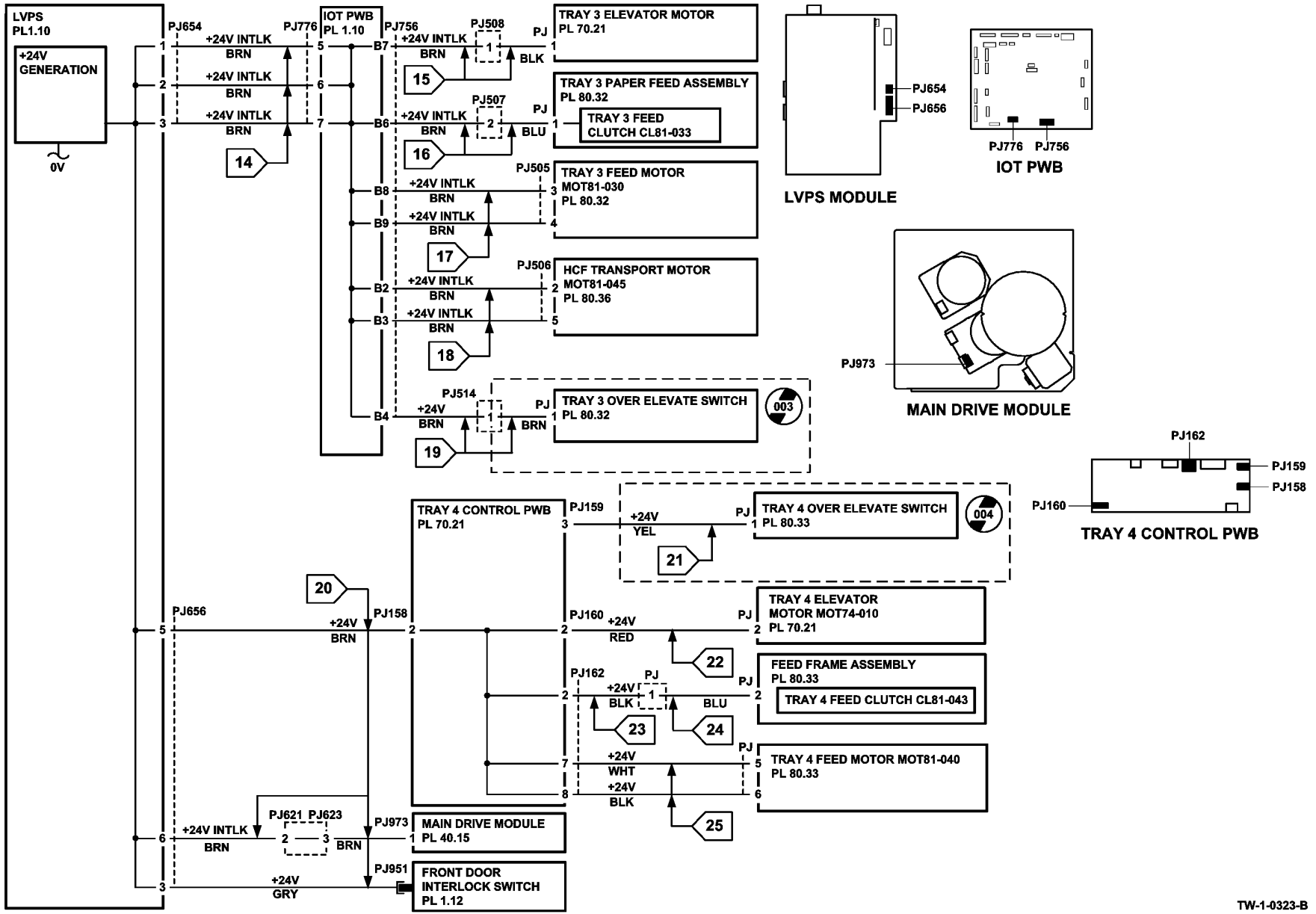
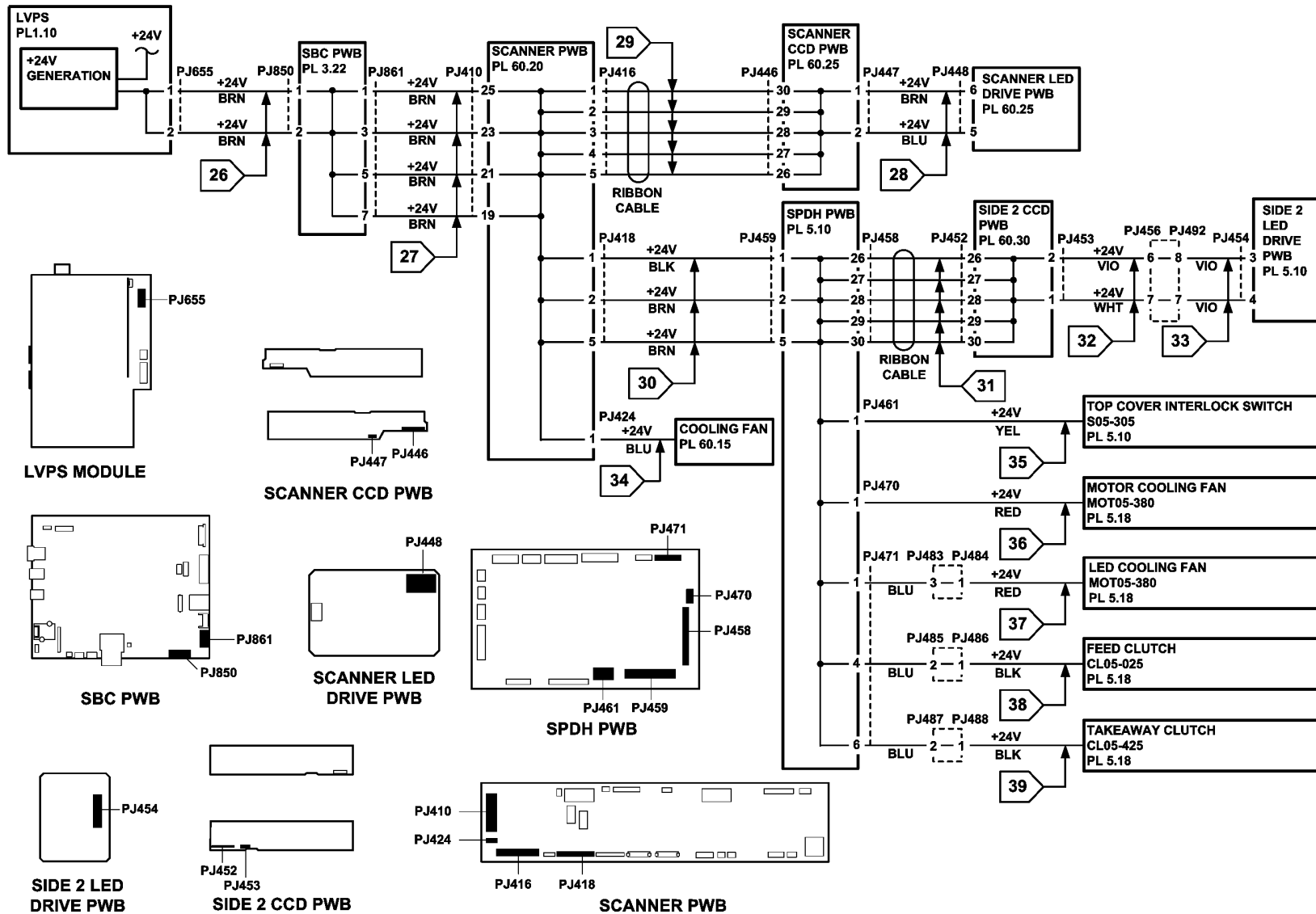


Figure 2 +24V Distribution 2 of 3



TW-1-0267-B

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, [PL 28.10](#) Item 1. Remove the SBC cover, [PL 3.22](#) Item 9. Reconnect the power cord. **CR23 (micro supervisor heartbeat) on the SBC is flashing, [Figure 2](#).**

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:

- 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.
- 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 or the tray 4 level encoder sensor. Refer to [WD 6](#). If after 10 seconds the LEDs remain off, reconnect [P/J755](#) and continue at the next check.
- Go to [Flag 13](#). Disconnect [P/J775](#). If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the tray 4 paper sensors or the tray 4 control PWB. Refer to [WD 11](#) and [WD 18](#). If after 10 seconds the LEDs remain off, reconnect [P/J775](#) and continue at the next check.
- 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.

A B C

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 sensors and the jam clearance LED. Refer to **WD 11**. 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 humidity sensor. 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 SBC PWB/UI USB port harness. 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** and **Flag 36**. Disconnect **P/J416**. If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the scanner LED drive PWB through the scanner CCD PWB. Refer to **WD 16**. If after 10 seconds the LEDs remain off, reconnect **P/J416** and continue at the next check.
14. Go to **Flag 35** and **Flag 38**. Disconnect **P/J458**. If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the side 2 LED drive PWB through the side 2 CCD PWB. Refer to **WD 13**. If after 10 seconds the LEDs remain off, reconnect **P/J458** and continue at the next check.
15. Go to **Flag 39**. Disconnect **P/J462** and **P/J463**. If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the length 2 sensor and last sheet out sensor. Refer to **WD 13**. If after 10 seconds the LEDs remain off, reconnect **P/J462** and **P/J463**. Continue at the next check.

16. Go to **Flag 33** and **Flag 34**. Disconnect **P/J418** and **P/J417**. If CR13 and CR16 are now illuminated, repair the short circuit in the wiring to the SPDH PWB. Refer to **WD 16**. If the wiring is good, install a new SPDH PWB, **PL 5.10 Item 5**. If after 10 seconds the LEDs remain off, reconnect **P/J418** and **P/J417**. Continue at the next check.
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 CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the Fax module. Refer to **WD 4**. If after 10 seconds the LEDs remain 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 1** and **Flag 8**. Disconnect **P/J656**. If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the tray 4 feed motor and tray 4 feed clutch through the tray 4 control PWB. Refer to **WD 1** and **WD 18**. If after 10 seconds the LEDs remain off, reconnect **P/J656** 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.

A B

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 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.
11. 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 12**. If after 10 seconds the LEDs remain off, reconnect **P/J769** and continue at the next check.
12. Go to **Flag 32** and **Flag 36**. Disconnect **P/J416**. If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the scanner LED drive PWB through the scanner CCD PWB. Refer to **WD 16**. If after 10 seconds the LEDs remain off, reconnect **P/J416** and continue at the next check.
13. Go to **Flag 35** and **Flag 38**. Disconnect **P/J458**. If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the side 2 LED drive PWB through the side 2 CCD PWB. Refer to **WD 13**. If after 10 seconds the LEDs remain off, reconnect **P/J458** and continue at the next check.
14. Go to **Flag 40**. Disconnect **P/J461**, **P/J470** and **P/J471**. If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the top cover interlock switch, LED fan, feed clutch, TAR clutch and motor fan. Refer to **WD 13** and **WD 15**. If after 10 seconds the LEDs remain off, reconnect **P/J461**, **P/J470** and **P/J471** and continue at the next check.
15. Go to **Flag 33**. Disconnect **P/J418**. If CR13 and CR51 are now illuminated, repair the short circuit in the wiring to the SPDH PWB. Refer to **WD 16**. If the wiring is good, install a new SPDH PWB, **PL 5.10 Item 5**. If after 10 seconds the LEDs remain off, reconnect **P/J418**. Continue at the next check.
16. 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.
17. 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**.

A D E

A D E

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.

**CR7 on the SBC PWB, Figure 2 is illuminated.**

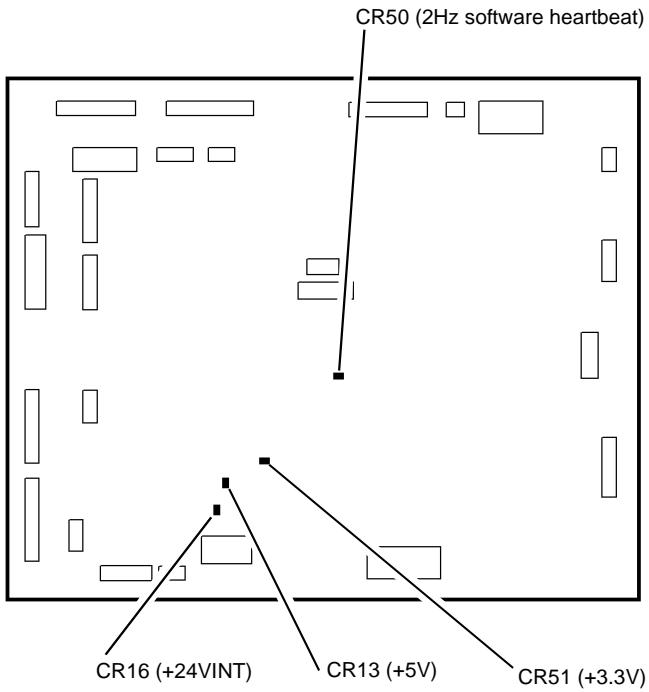
Y N

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 CR7 is now illuminated, repair the short circuit in the wiring to the UI control PWB. Refer to **WD 4**. If after 10 seconds the LED remains off, reconnect **P/J864** and continue at the next check.
2. Go to **Flag 30**, disconnect **P/J880**. If CR7 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 **P/J416**. If CR13 and CR7 is now illuminated, repair the short circuit in the wiring to the scanner CCD PWB. Refer to **WD 16**. If after 10 seconds the LED remains off, reconnect **P/J416** and continue at the next check.
4. Go to **Flag 37**, disconnect **P/J462**, **P/J463**, **P/J464**, **P/J465** and **P/J467**. If CR7 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 **P/J462**, **P/J463**, **P/J464**, **P/J465** and **P/J467**. Continue at the next check.
5. Go to **Flag 35**. Disconnect **P/J458**. If CR7 is now illuminated, repair the short circuit in the wiring to the side 2 CCD PWB. Refer to **WD 13**. If after 10 seconds the LED remains off, reconnect **P/J458** and continue at the next check.
6. Go to **Flag 33** and **Flag 34**. Disconnect **P/J418** and **P/J417**. If CR7 now illuminated, repair the short circuit in the wiring to the SPDH PWB. Refer to **WD 16**. If the wiring is good, install a new SPDH PWB, **PL 5.10 Item 5**. If after 10 seconds the LEDs remain off, reconnect **P/J418** and **P/J417**. Install a new SBC PWB, **PL 3.22 Item 3**.

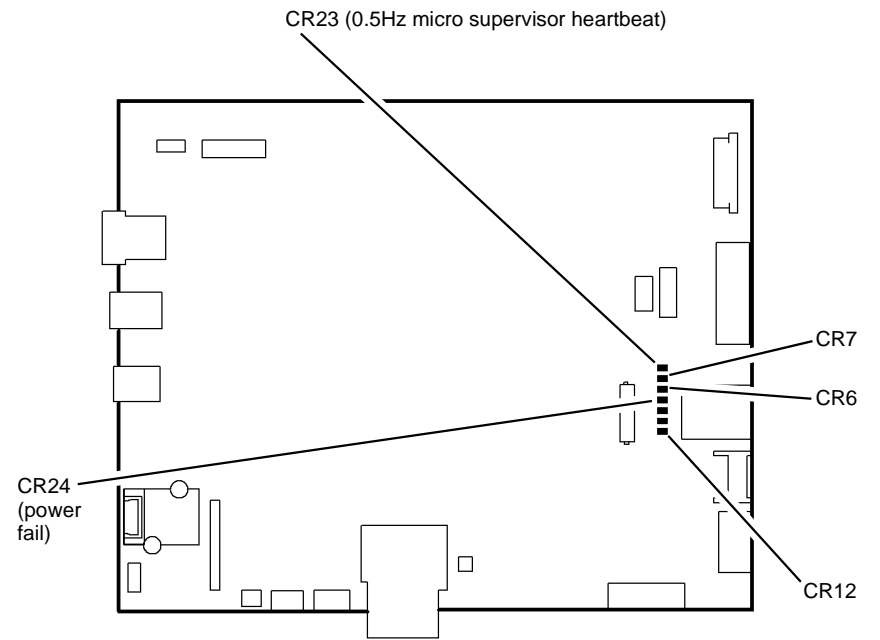
No short circuits have been found. Perform **SCP 5 Final Actions**.





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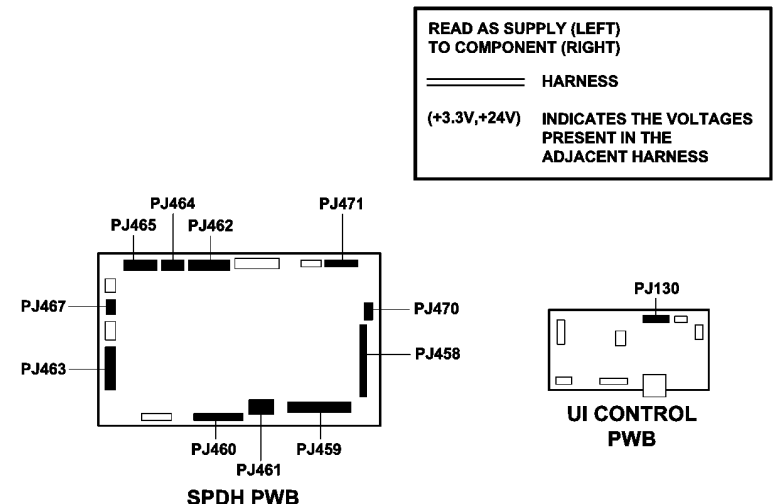
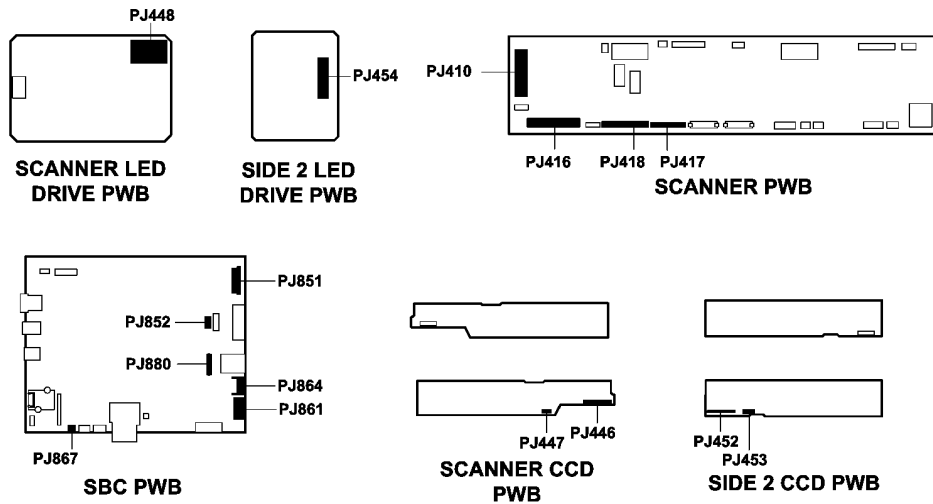
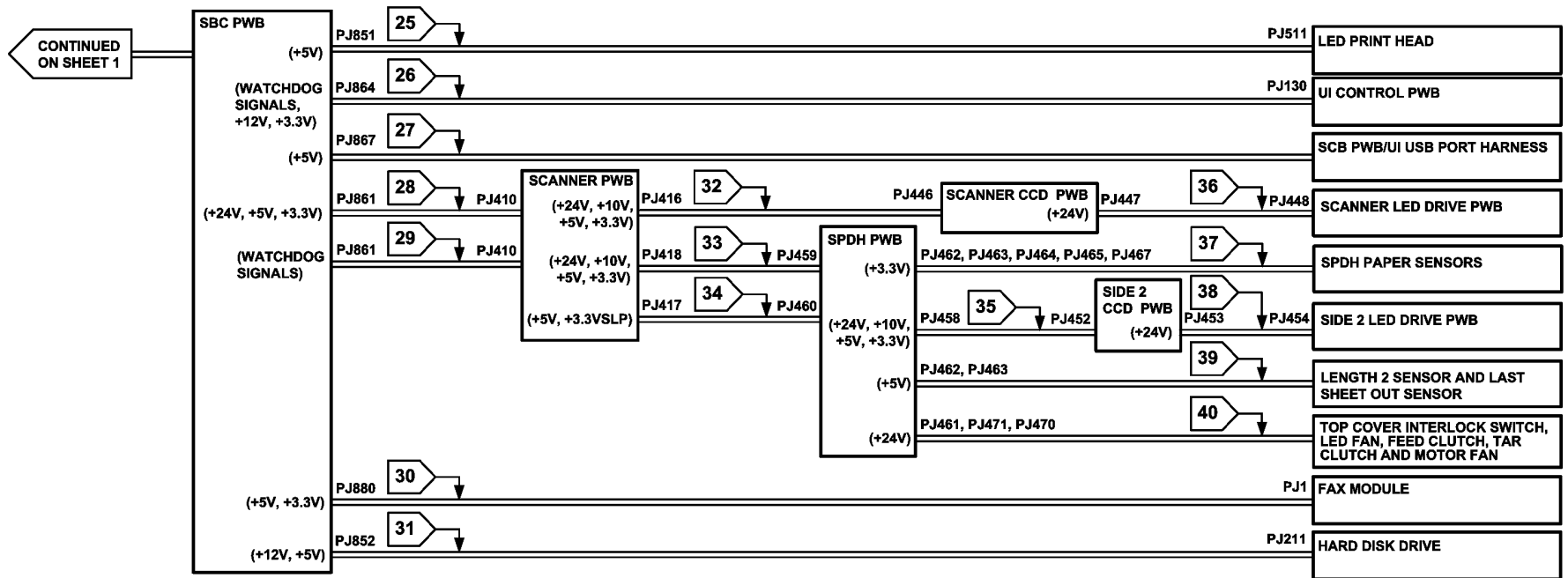
Figure 1 IOT PWB LEDs



W-1-1083-A

Figure 2 SBC PWB LEDs





TW-1-0272-A

Figure 4 Low voltage distribution 2 of 2

# 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, PL 28.10 Item 1. Remove the SBC cover, PL 3.22 Item 9. Reconnect the power cord. CR23 (micro supervisor heartbeat) on the SBC is flashing, Figure 2.

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

A B  
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/J81 on the UI control PWB between pins 2 and 3.  
Y N  
Disconnect P/J81. +3.3V is available at the disconnected end of the harness, P/J81 between pins 2 and 3.  
Y N  
+3.3V is available at P/J864 on the SBC PWB between pins 6 and 7.  
Y N  
Install a new SBC PWB, PL 3.22 Item 3.  
Check the wiring and connectors between P/J81 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. Ensure that the button is not sticking in the UI surround. If necessary, install a new UI keyboard PWB, PL 2.10 Item 9.
- Repair the connector P/J81. If necessary install a new UI control PWB, PL 2.10 Item 6.

Press the power button on the UI. The voltage at P/J81 pin 2 changes from +3.3V to 0V.

Y N  
Go to Flag 1. Check the ribbon cable and connectors P/J907 and P/J910. Refer to REP 1.2 Wiring Harness Repairs.  
If necessary install new components:

- Control to keyboard PWB ribbon cable, PL 2.10 Item 10.
- UI keyboard PWB, PL 2.10 Item 9.
- UI control PWB, PL 2.10 Item 6.

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 9 is 0V.  
Y N  
Perform the 301L LVPS RAP.  
Check the harness and connectors between P/J764 and P/J653. Refer to REP 1.2 Wiring Harness Repairs.

C D  
 Go to **Flag 5**, +24V is available at **P/J776** between pins 8 and 1, also +5V is available between pins 8 and 4.  
 Y N  
 +24V is available at **P/J654** between pins 4 and 5, also +5V is available between pins 4 and 8.  
 Y N  
 Perform the **301L** LVPS RAP.  
 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.

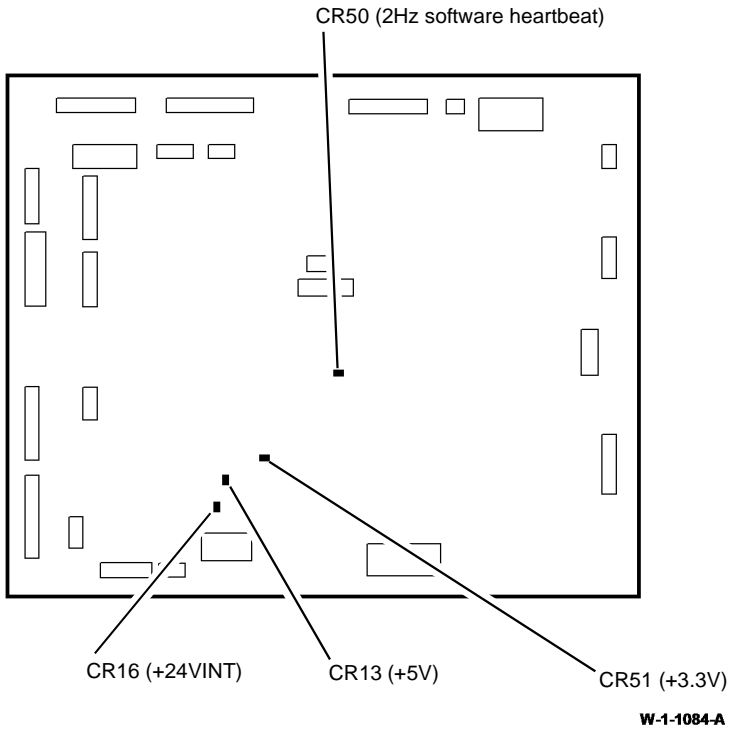


Figure 1 IOT PWB LEDs

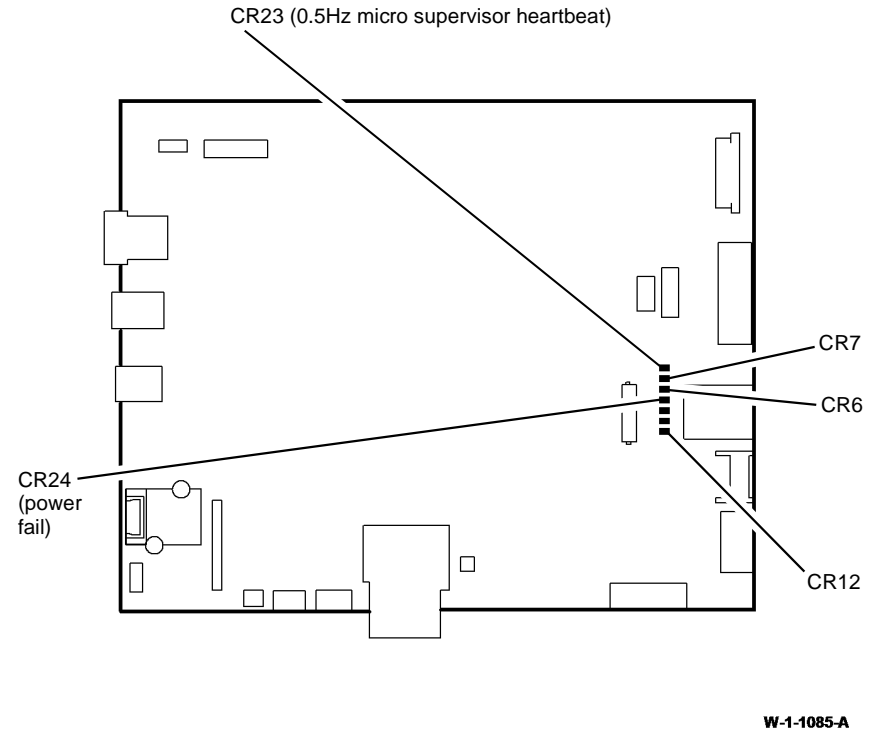


Figure 2 SBC PWB LEDs

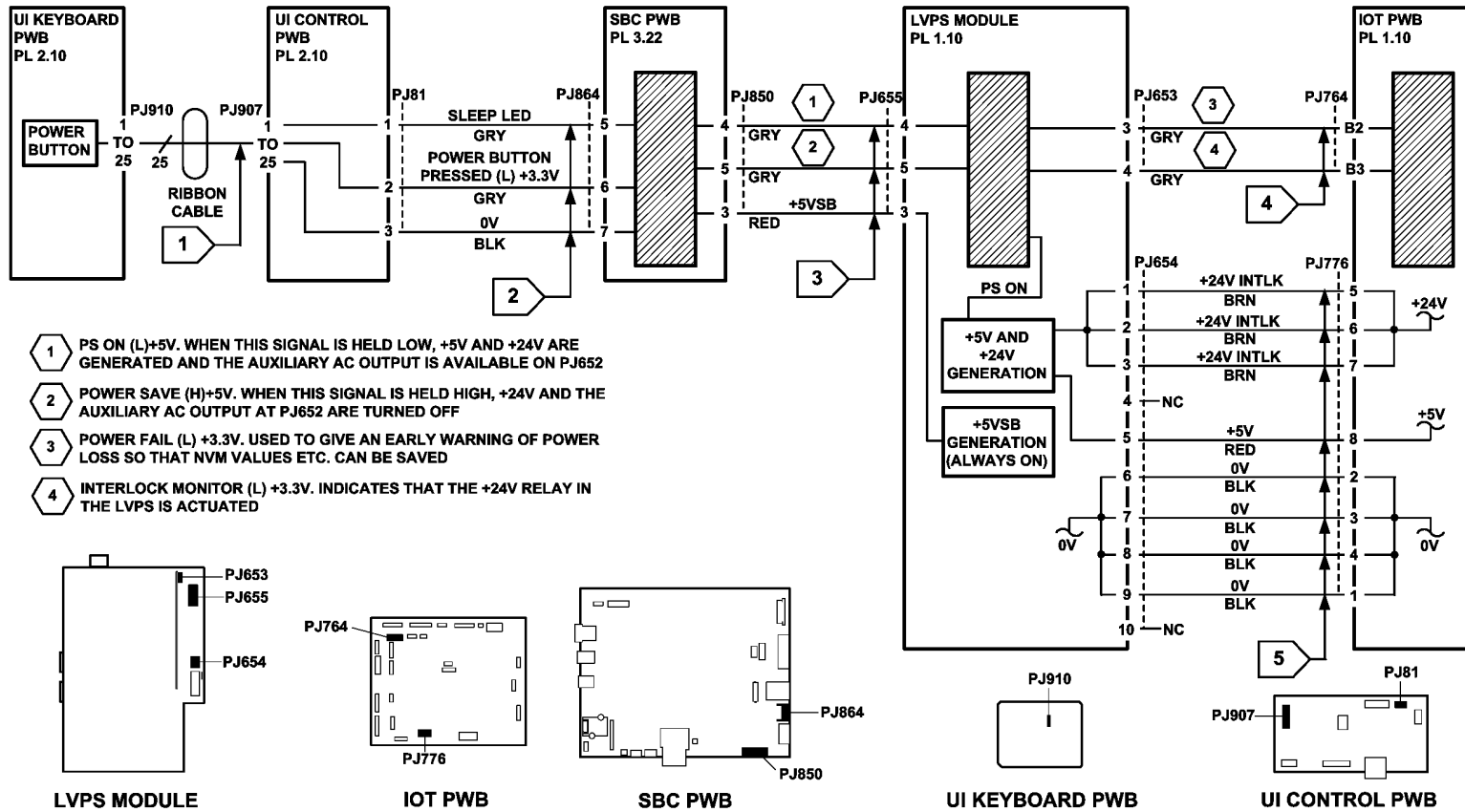


Figure 3 Circuit diagram

TW-1-0274-A

## 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. The machine has 3 power modes:

- Standby or run mode - full power consumption. In this mode, the power button, [Figure 1](#), is not illuminated.
- Low power mode - the fuser temperature is reduced to save power, yet allows a quick return to run temperature. In this mode, the power button is blinking.
- Sleep mode - power consumption for the whole machine is reduced to below 10 watts by powering down all but the essential parts, see the note below. In this mode, the power button is illuminated.

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

### Plug In Off to Run Mode

The power button on the UI is wired through the UI control PWB to the micro supervisor on the SBC PWB, [Flag 1](#) and [Flag 2](#). When the power button is pressed, the micro supervisor forces the PS on signal low, signalling the LVPS to power on the +5V and +24V outputs and also enable AC power to the finisher. The micro supervisor keeps the PS on signal low during run mode.

### Run Mode to Sleep Mode

After a period of machine inactivity that equates to the sum of the low power mode duration plus the sleep mode duration, as set in the customer tools options, the micro supervisor changes the PS on signal to high, causing the +5V and +24V outputs of the LVPS to switch off. The +5VSB power supply stays on.

### Sleep Mode to Run Mode

Exit from sleep mode requires the occurrence of one of the wake events that follows:

- An operator presses the power button. The power button on the UI is wired through the UI control PWB to the micro supervisor on the SBC PWB. When the power button is pressed, the micro supervisor forces the PS on signal low and sends it to the LVPS to power on the +5V and +24V outputs and also enables AC power to the finisher. The micro supervisor keeps the PS on signal low during run mode.
- An incoming Fax job. The Fax PWB will generate a power management event/wake up (PME/wake up) signal via the Fax connector PWB through the PCI bus to the SBC PWB micro supervisor. The micro supervisor forces the PS on signal low and sends it to the LVPS to power on the +5V and +24V outputs and also enables AC power to the finisher. The micro supervisor keeps the PS on signal low during run mode.
- An incoming print job to the SBC PWB will generate a power management event/wake up (PME/wake up) signal that is passed to the SBC PWB micro supervisor. The micro supervisor forces the PS on signal low and sends it to the LVPS to power on the +5V and +24V outputs and also enables AC power to the finisher. The micro supervisor keeps the PS on signal low during run mode.

### Reading or Setting the Power Save Duration Times

Access the power save feature by performing the steps that follow:

1. Access the Customer Administration Tools screen, [GP 24](#).
2. Select **Device Settings / General / 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.
  - **Scheduled** - wakes up and sleeps at set times on a daily basis.
4. If the scheduled option is chosen, set the necessary times.

**NOTE:** The default time for standby mode to low power mode is 15 minutes, the minimum value is 1, the maximum value is 120.

**NOTE:** The default time for low power mode to sleep mode is 45 minutes, the minimum value is 10, the maximum value is 120.

**NOTE:** To change either of the timing values, touch the appropriate input area, enter the new value using the keypad.
5. Select the **Save** 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 [Sleep Mode to Run Mode](#). The machine remains in sleep mode after a wake event.

Y N

Refer to [Run Mode to Sleep Mode](#). The machine remains in standby mode or low power mode after both power save duration times have 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](#). Set the standby mode to low power mode to 1 minute and the low power mode to sleep mode values 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](#).

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.

A B C

**A B C**  
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**. Set the standby mode to low power mode to 1 minute and the low power mode to sleep mode values 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 1 minute the power button flashes, then after a further 10 minutes the power button illuminates.**

**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.

Remove the rear cover, **PL 28.10 Item 1**. Remove the SBC cover, **PL 3.22 Item 9**. Observe the LEDs on the SBC PWB, **Figure 2**. **CR23 is lit.**

**Y N**  
Disconnect the power cord from the machine. Wait 2 minutes, then re-connect the power cord. **CR23 is lit.**

**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**. If necessary, 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.

**The wake event is from the network.**

**Y N**  
**The wake event is 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**.

- D**
3. Refer to **Reading or Setting the Power Save Duration Times**. Set the standby mode to low power mode to 1 minute and the low power mode to sleep mode values to 10 minutes.
  4. Go to **Flag 3**. Measure the voltage at **P/J850** pin 4 on the SBC PWB.
  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.

Go to **Flag 5**. Check the network connection **P/J884** 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**. Set the standby mode to low power mode to 1 minute and the low power mode to sleep mode values 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 this 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 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.**



E

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.

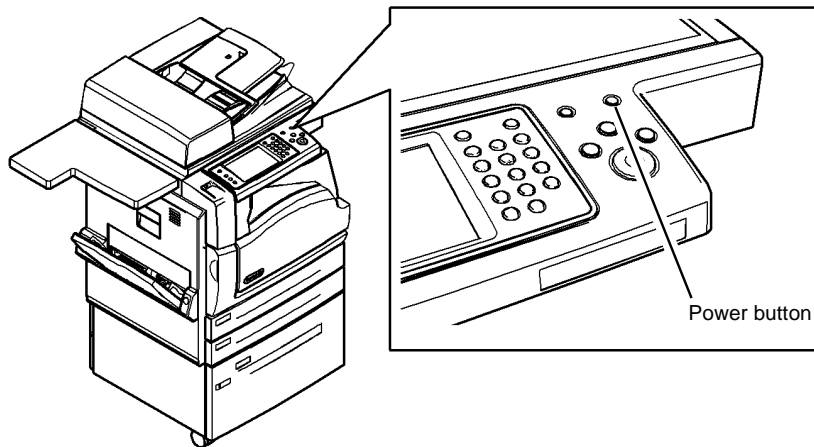
Check the wiring and connectors between P/J850 and P/J655. Repair the wiring as necessary, REP 1.2. If the wiring and connectors are good, perform the 301L LVPS RAP. Return the power save settings to the previous values and reconnect the fax and network lines. Perform SCP 5 Final Actions.

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

Y N

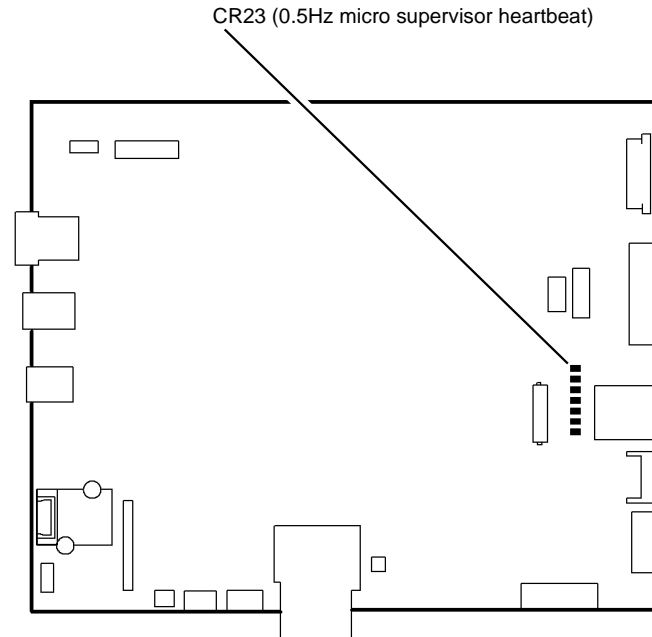
Check the wiring and connectors between P/J655 and P/J850. Repair the wiring as necessary, REP 1.2.

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.



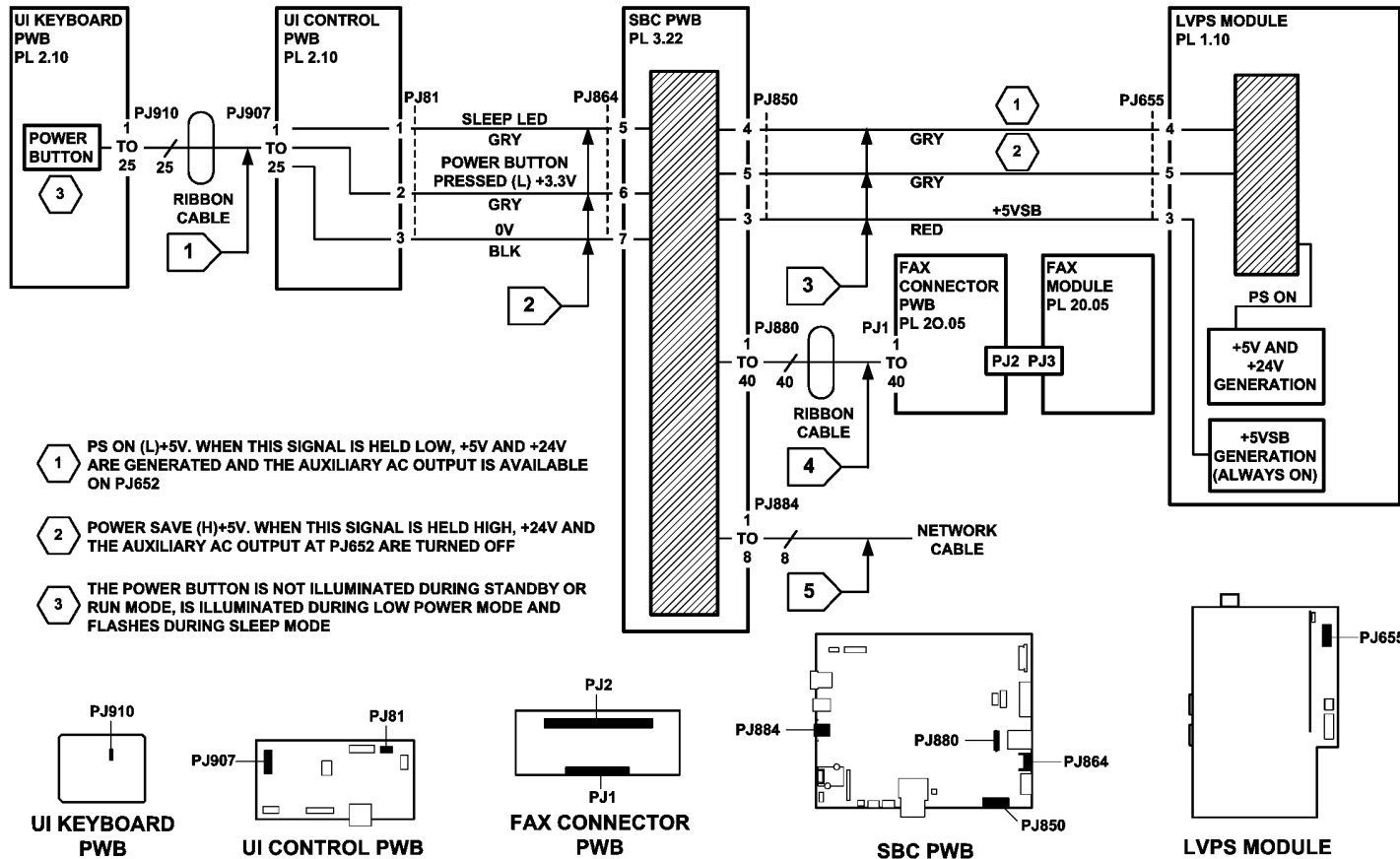
W-1-1086-A

Figure 1 Power button location



W-1-1087-A

Figure 2 Component location



- 1 PS ON (L)+5V. WHEN THIS SIGNAL IS HELD LOW, +5V AND +24V ARE GENERATED AND THE AUXILIARY AC OUTPUT IS AVAILABLE ON PJ652
- 2 POWER SAVE (H)+5V. WHEN THIS SIGNAL IS HELD HIGH, +24V AND THE AUXILIARY AC OUTPUT AT PJ652 ARE TURNED OFF
- 3 THE POWER BUTTON IS NOT ILLUMINATED DURING STANDBY OR RUN MODE, IS ILLUMINATED DURING LOW POWER MODE AND FLASHES DURING SLEEP MODE

TW-1-0278-A

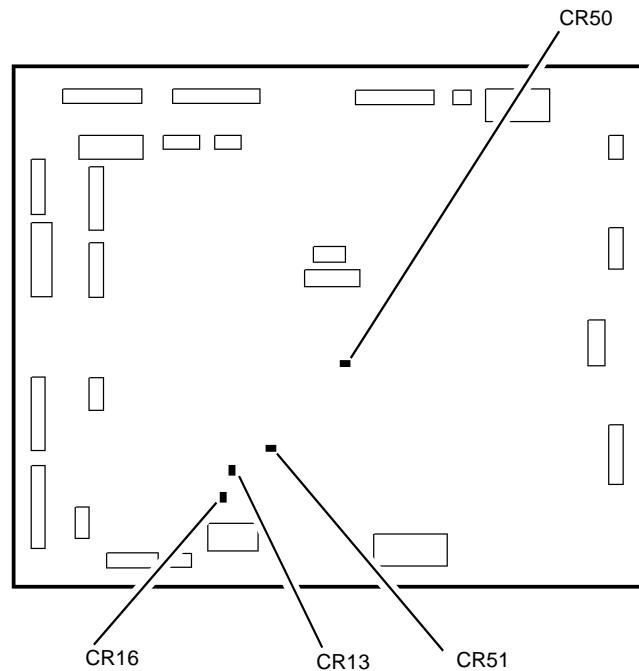
Figure 3 Circuit diagram

## 301L LVPS RAP

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

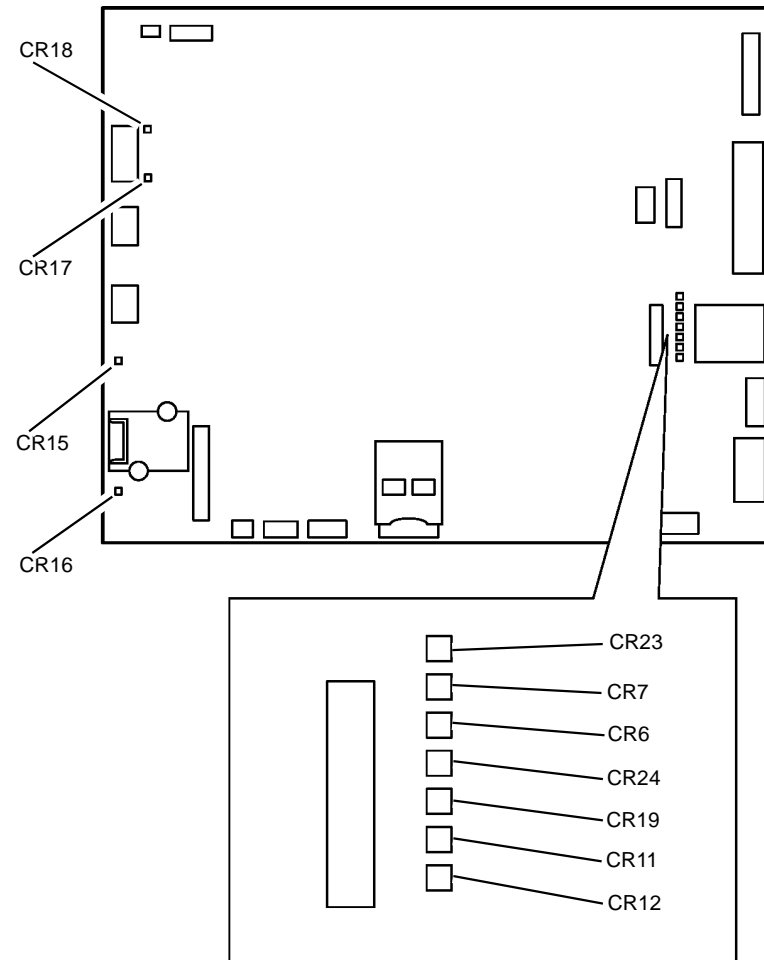
- The machine does not respond after the power button on the UI has been pressed. The LEDs that follow may be observed on the SBC PWB, [Figure 2](#):
  - CR23 is flashing green at 0.5Hz to indicate the SBC heartbeat.
  - CR24 is illuminated red to indicate a power failure to the SBC microprocessor.
 This indicates a loss of +5V and +24V from the LVPS.
- 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.



W-1-1314-A

Figure 1 IOT PWB LED locations



W-1-1313-A

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.**

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:

- [P/J650](#) - fuser power.
- [P/J655](#) - SBC PWB power.
- [P/J654](#) - IOT PWB power.
- [P/J656](#) - tray 4 PWB power, 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:

- Main power cord, [PL 1.15 Item 1](#).
- LVPS module, [PL 1.10 Item 1](#).

Perform the actions that follow:

- 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.
- Go to [Flag 1](#). Check the wiring and connectors between [P/J655](#) and [P/J850](#).

Repair any damaged wiring or connectors, [REP 1.2](#).

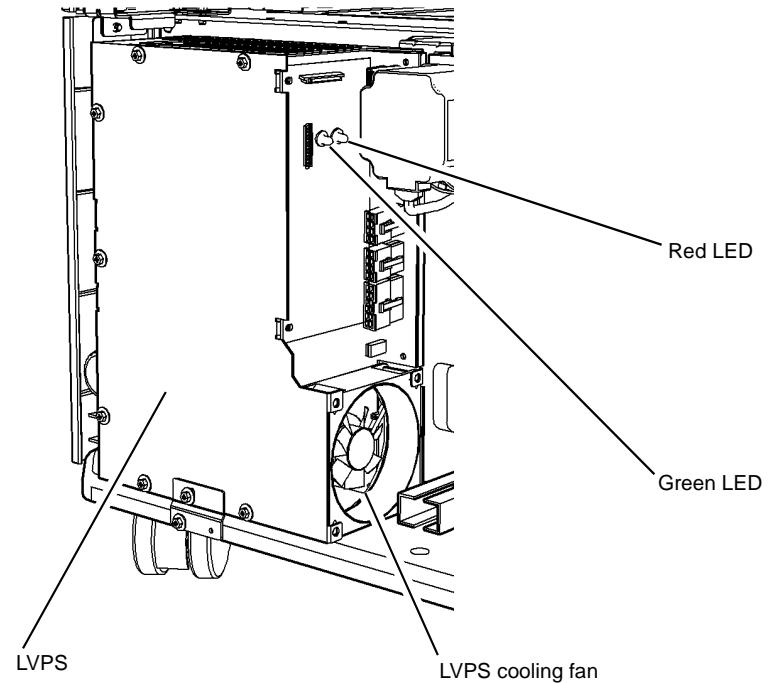
**A B**

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.



**Figure 3 Component location**

**W-1-1307-A**

**A B**

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 <a href="#">301H</a> Short Circuit and Overload RAP, troubleshoot the +24V distribution. If the distribution wiring and components are good, install a new LVPS module, <a href="#">PL 1.10 Item 1</a> .
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 <a href="#">301H</a> Short Circuit and Overload RAP, troubleshoot the +5V distribution. If the distribution wiring and components are good, install a new LVPS module, <a href="#">PL 1.10 Item 1</a> .
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 <a href="#">301H</a> 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, <a href="#">PL 1.10 Item 1</a> .
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.	<a href="#">Figure 3</a> , check that the LVPS cooling fan runs in standby and run mode, if necessary install a new LVPS module, <a href="#">PL 1.10 Item 1</a> . If the fan does run, check that the ventilation grilles in the rear covers are clear. Refer to <a href="#">GP 21</a> , check that the installation space requirements are met. Refer to <a href="#">GP 23</a> , 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 <a href="#">301H</a> Short Circuit and Overload RAP, troubleshoot the +5V distribution. If the distribution wiring and components are good, install a new LVPS module, <a href="#">PL 1.10 Item 1</a> .
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 <a href="#">301H</a> 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 <a href="#">301H</a> 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 <a href="#">301H</a> 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, <a href="#">PL 1.10 Item 1</a> .
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, <a href="#">PL 1.10 Item 1</a> .

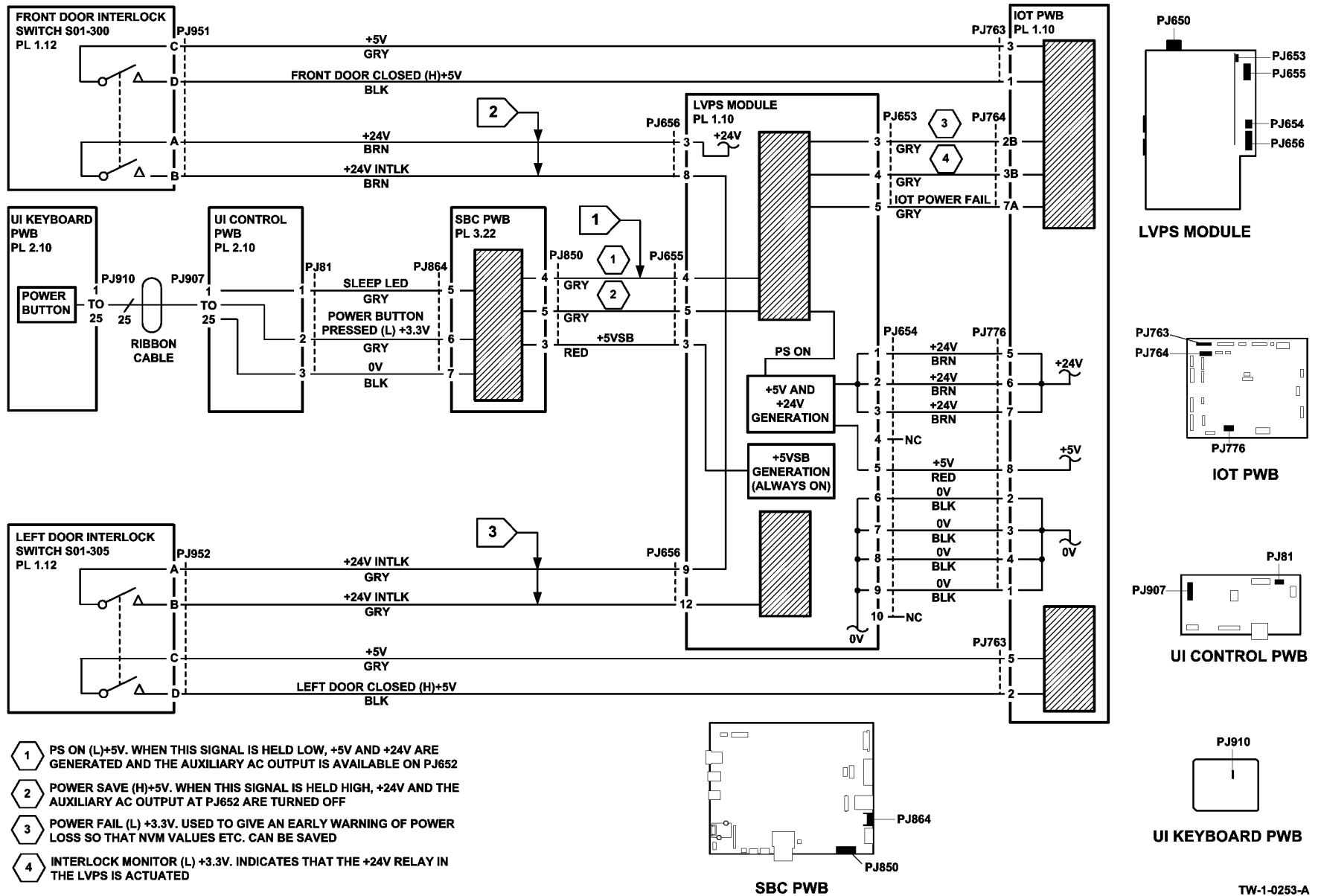


Figure 4 Circuit diagram

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

302-302-00 Flash rewrite failure.

302-306-00 Flash erase failure.

302-308-00 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](#).

### 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](#).

### 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 returned UI invalid fields, invalid data or missing data.

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

### 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](#).

### 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 Data Timeout Error RAP

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

### Initial Actions

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

### 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. Check the wiring between the [SBC PWB](#) and the [UI Control PWB](#). Refer to [WD 4](#). Repair the wiring, [GP 7](#), or install new components as necessary:
  - SBC PWB to UI control PWB power/comms harness, [PL 2.10 Item 3](#).
  - SBC PWB to UI control PWB data cable, [PL 2.10 Item 14](#).
2. Perform an AltBoot, [GP 4](#).
3. Install new components as necessary:
  - Hard disk drive, [PL 3.22 Item 2](#).
  - UI control PWB, [PL 2.10 Item 6](#).
4. If the fault persists, perform the [303D SBC PWB Diagnostics RAP](#).



## 302-321-00 XEIP Browser Dead RAP

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

### 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. Ensure that Extensible Services are enabled, as detailed in the System Administrator's Guide. If necessary, reload the software, [GP 4](#).
3. Check that the machine is communicating with the network, for example by sending a print job. If necessary, check the network cable and check with the customer that their network and web browser are running correctly.
4. Check the wiring between PJ130 on the [UI control PWB](#) and PJ864 on the [SBC PWB](#). Refer to [WD 4](#). Repair the wiring or install new components as necessary:
  - SBC PWB to UI control PWB power/comms harness, [PL 2.10 Item 3](#).
  - UI control PWB, [PL 2.10 Item 6](#).
5. If the fault persists, perform the [303D SBC PWB Diagnostics RAP](#).

## 302-380-00, 302-381-00 UI Communication Fault RAP

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

**302-381-00** Communication via USB connection between SBC and UI panel 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.**

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 14](#).
2. Check the cable between PJ905 on the [UI control PWB](#) and PJ865 on the [SBC PWB](#). Refer to [WD 4](#). Install new components as necessary:
  - SBC PWB to UI control PWB data cable, [PL 2.10 Item 14](#).
  - UI control PWB, [PL 2.10 Item 6](#).
3. If the fault persists, perform the [303D SBC PWB Diagnostics RAP](#).

## 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.

### 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. Switch off, then switch on the machine, **GP 14**.
2. 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



#### 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 Tools / Device Settings / Display Brightness. Adjust the UI brightness level.
- Check and re-seat all connectors on the UI control PWB, **PL 2.10 Item 6**, UI status PWB, **PL 2.10 Item 7** and the UI keyboard PWB, **PL 2.10 Item 9**.

**NOTE:** Refer to **REP 2.1** to access the UI assembly.

- If the problem occurs while entering or exiting sleep mode, perform the **301K** Sleep Mode RAP.

### Procedure

Go to **Flag 1**. **+12V is available at P/J130 between pin 3 and 4.**

Y N

Check the wiring between **P/J130** on the **UI control PWB** and **P/J864** on the **SBC PWB**.  
**The wiring is good.**

Y N

Repair the wiring, **REP 1.2** or install a new SBC PWB to UI control PWB power/comms harness, **PL 2.10 Item 3**.

Check the +12V power supply.

Refer to:

- **301F** +12V Distribution RAP.
- **301B** 0V Distribution RAP.

Go to **Flag 2**. **+3.3V is available at P/J130 between pin 1 and 2.**

Y N

Check the wiring between **P/J130** on the **UI control PWB** and **P/J864** on the **SBC PWB**.  
**The wiring is good.**

Y N

Repair the wiring, **REP 1.2** or install a new SBC PWB to UI control PWB power/comms harness, **PL 2.10 Item 3**.

Check the +3.3V power supply.

Refer to:

- **301D** +3.3V Distribution RAP.
- **301B** 0V Distribution RAP.

Go to **Flag 3**. Check the harness and wiring, **GP 7**. **The wiring is good.**

**Y N**  
 Repair the wiring, [REP 1.2](#) or install a new SBC PWB to UI control PWB power/comms harness, [PL 2.10 Item 3](#).

Go to [Flag 4](#). Check the harness and wiring, [GP 7](#). **The wiring is good.**

**Y N**  
 Repair the wiring, [REP 1.2](#) or install a new SBC PWB to UI control PWB power/comms harness, [PL 2.10 Item 3](#).

Go to [Flag 5](#). Check the cable. **The cable is good.**

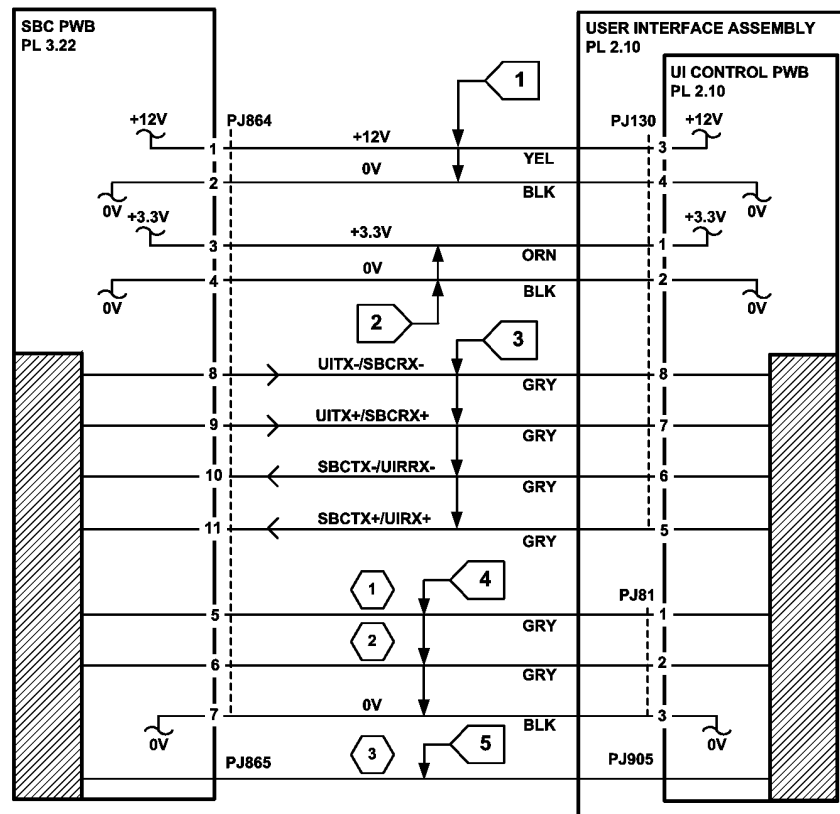
**Y N**  
 Install a new SBC PWB to UI control PWB data cable, [PL 2.10 Item 14](#).

Install new components as necessary:

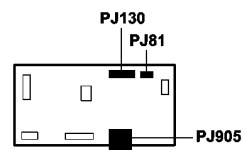
- UI control PWB, [PL 2.10 Item 6](#).
- UI touch screen, [PL 2.10 Item 4](#).

If the fault persists, perform the steps that follow, as necessary:

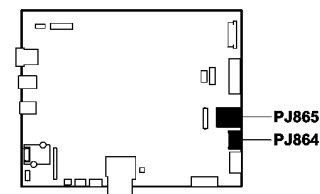
- A short circuit in the +24V distribution can cause UI faults. Perform the [301G](#) +24V Distribution RAP.
- [303D](#) SBC PWB Diagnostics RAP.



- 1 +3V IN SLEEP. 0V DURING NORMAL OPERATION.
- 2 0V IN POWER SAVE. +3V DURING NORMAL OPERATION.
- 3 10 WIRE TWISTED PAIR CABLE



UI CONTROL PWB



SBC PWB

TW-1-0003-B

Figure 1 Circuit Diagram

## 302B UI Control Panel Button or Touch Screen RAP

Use this RAP if the user interface is illuminated, but there is no information.

### 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 UI software, [GP 4](#).
3. Check the harness connections between the user interface, [PL 2.10](#) and the SBC PWB, [PL 3.22 Item 3](#). Refer to [WD 4](#):
  - PJ864 on the [SBC PWB](#) to PJ130 on the [UI control PWB](#).
  - PJ864 on the [SBC PWB](#) to PJ81 on the [UI control PWB](#).
  - PJ865 on the [SBC PWB](#) to PJ905 on the [UI control PWB](#).
4. Install new components as necessary:
  - UI control PWB, [PL 2.10 Item 6](#).
  - UI touch screen, [PL 2.10 Item 4](#).
5. If the fault persists, perform the [303D SBC PWB Diagnostics RAP](#).

## 303-306-00 Software Downgrade Not Permitted RAP

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

### 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 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

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

## 303-307-00 Software Upgrade Synchronization Failure RAP

303-307-00 Software upgrade synchronization 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.

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

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

## 303-316-00 CCM Cannot Communicate with IOT RAP

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

### 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 fault codes. If the 303-XXX fault codes occur randomly, the cause may be due to electrical noise. Perform the [OF10](#) Intermittent Failure RAP.
- Switch off, then switch on the machine, [GP 14](#).

### Procedure

**NOTE:** The machine may continue to boot with this fault, but printing may be disabled. The status codes, 303-505 and 303-561 are raised with this fault code.

1. Check the wiring between PJ866 on the [SBC PWB](#) and PJ768 on the [IOT PWB](#). Refer to [WD 10](#). Repair as necessary, [REP 1.2](#).
2. Perform the procedures that follow, as necessary:
  - [303D](#) SBC PWB Diagnostics RAP.
  - [OF7](#) IOT PWB Diagnostics 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.

### 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

1. Switch off, then switch on the machine, [GP 14](#).
2. Reload the software, [GP 4](#).
3. If the fault persists, the software .dlm file may be corrupt. Source another .dlm file, then reload the software, [GP 4](#).

## 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.

### 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 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

**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.

1. Switch off, then switch on the machine, **GP 14**.
2. Reload the software, **GP 4**.
3. If the fault persists, perform the **303D** SBC PWB Diagnostics RAP.

## 303-326-00 Software Upgrade Not Required RAP

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

### 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 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

Code shown for information only. No service action necessary.

## 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.

### 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 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

1. Exit diagnostics or the active security feature.
2. Reload the software, [GP 4](#).

## 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.

### 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 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

1. Switch off, then switch on the machine, [GP 14](#).
2. Check the network connection to the [SBC PWB](#), PJ885 is correctly inserted.
3. Reload the software, [GP 4](#).
4. If the fault persists, perform the [303D](#) SBC PWB Diagnostics 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.

### 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

1. Switch off, then switch on the machine, **GP 14**.
2. Reload the software, **GP 4**.
3. If the fault persists, perform the **303D** SBC PWB Diagnostics 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

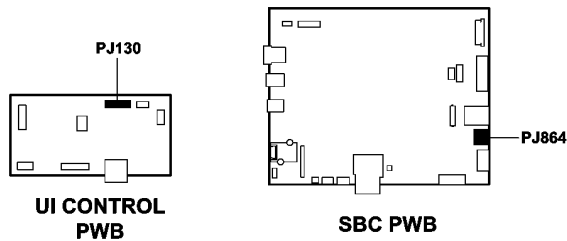
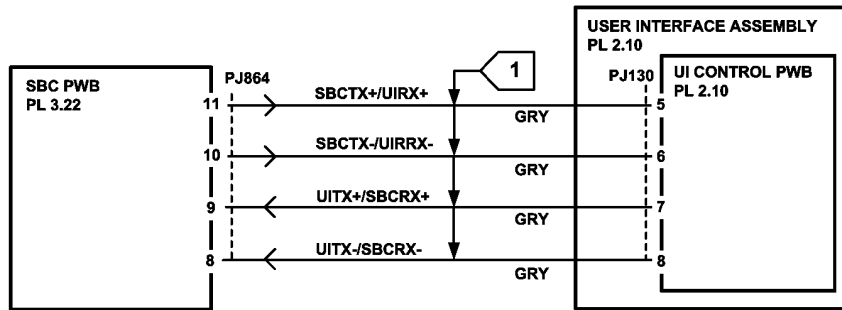
Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 14**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

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

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 14**.
2. Go to **Flag 1**. Check the wiring between **P/J130** on the **UI control PWB** and **P/J864** on the **SBC PWB**. Repair the wiring, **REP 1.2**. Install new components as necessary:
  - SBC PWB to UI PWB harness, **PL 3.22 Item 15**.
  - UI control PWB, **PL 2.10 Item 6**.
3. If the fault persists, perform the **303D** SBC PWB Diagnostics RAP.



TW-1-0178-B

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.

### 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.
- Re-seat the SD Card, PL 3.22 Item 6.

### Procedure

**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.

1. Switch off, then switch on the machine, GP 14.
2. Reload the software, GP 4.
3. Install a new SD card, PL 3.22 Item 6.
4. If the fault persists, perform the 303D SBC PWB Diagnostics RAP.

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

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

**303-800** Finisher communications reset after a machine crash.

### 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 finisher power cord is connected to PJ652 on the [LVPS](#).
- Switch off, then switch on the machine, [GP 14](#).
- 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.
- **(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 8](#) is correctly installed.

### 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.

The machine has a 2K LCSS.

**Y N**  
The machine has an LVF BM. 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.

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](#).

A

- The OF7 IOT PWB Diagnostics RAP.

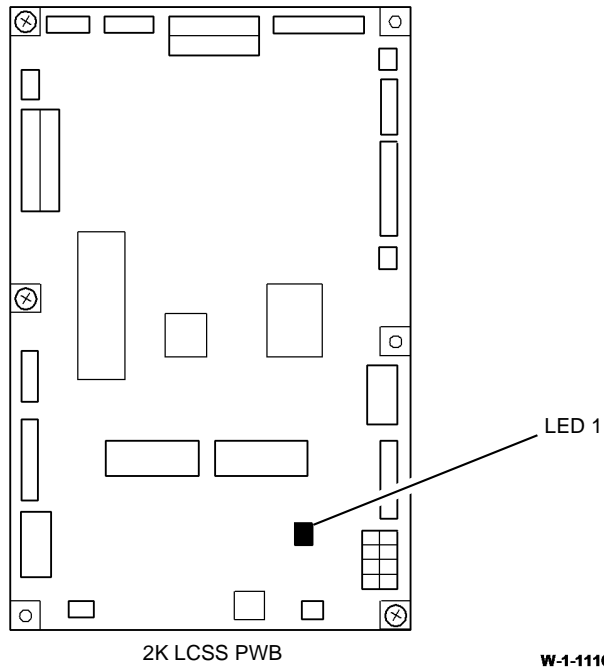


Figure 1 2L LCSS component location

W-1-1116-A

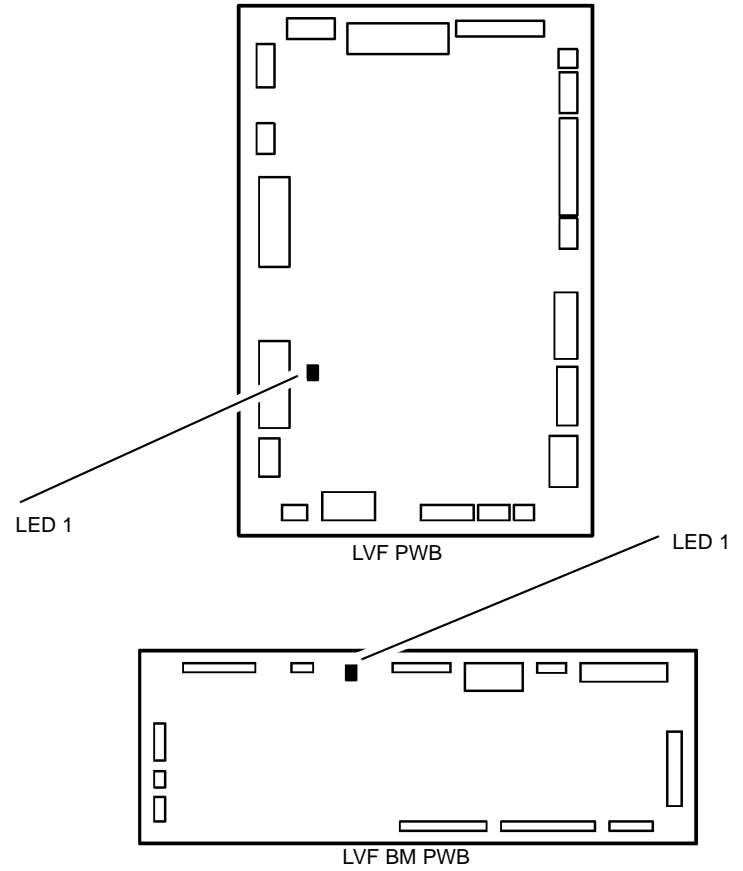
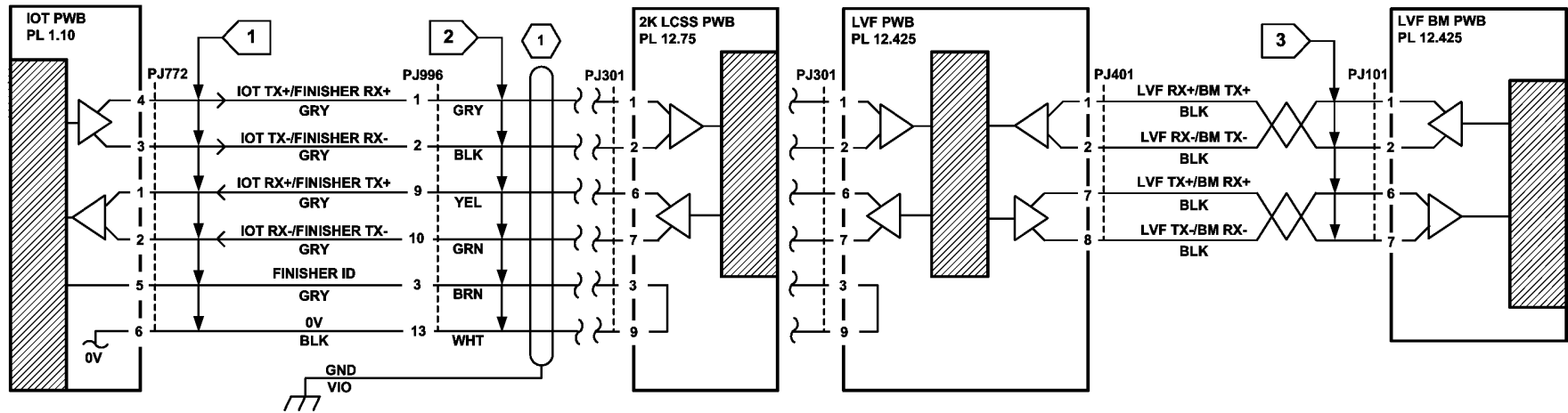


Figure 2 LVF BM component location

W-1-1066-A



1 SHROUD

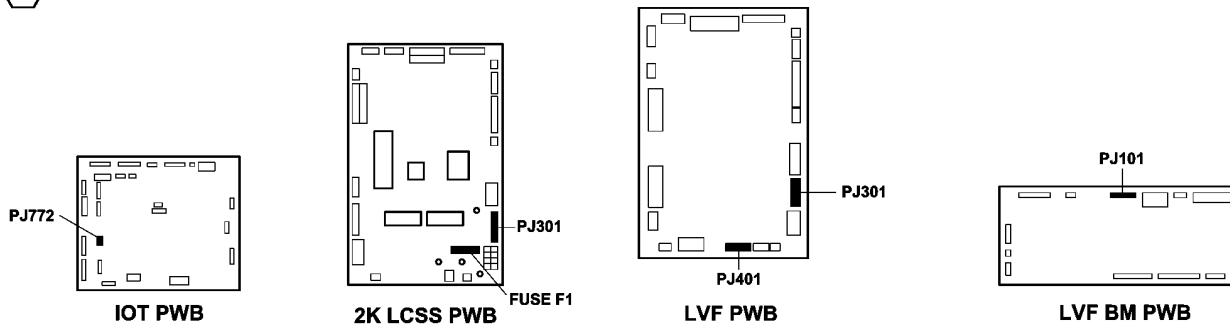


Figure 3 Circuit diagram

TW-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.

### 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 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

1. Switch off, then switch on the machine, **GP 14**.
2. Check the wiring and connections between PJ655 on the **LVPS** and PJ850 on the **SBC PWB**. Refer to **WD 2**. Repair the wiring as necessary, **REP 1.2**.
3. 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.
4. If necessary, install a new SBC PWB to LVPS harness, **PL 3.22 Item 17**.
5. If the fault persists, perform the procedures that follow:
  - **303D** SBC PWB Diagnostics RAP.
  - **301L** LVPS RAP.

## 303-397-00 System Configuration Recovery Attempt RAP

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

### 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 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.
- Switch off, then switch on the machine, **GP 14**.

### Procedure

1. Go to the **303-405-00**, **303-406-00** SIM Card Fault 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.

### 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. For 303-398-00 only, perform the steps that follow:
  - a. If possible, install the original SIM card that was supplied with the machine.
  - b. If the original SIM card is not available, 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.
  - c. Enter the correct serial number. Refer to [dC132](#) Serial Number.
2. If the fault persists, 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.

### 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 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

1. Switch off, then switch on the machine, [GP 14](#).
2. Check that the fax module, [PL 20.05 Item 1](#), has been installed.
3. Perform the Initial Actions in [320A](#) Fax Entry RAP.
4. Perform the [320G](#) Fax Module Checkout RAP.
5. If necessary, reload the software, [GP 4](#).
6. Install new components as necessary:
  - 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](#).
7. If the fault persists, perform the [303D](#) SBC PWB Diagnostics 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



**Ensure that the electricity to the machine is switched off while performing tasks 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.
- Ensure **dC131** NVM location 616-328 is set to default.
- Check that the machine serial number is correct. Refer to **dC132** Serial Number.

### Procedure

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:

- 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.

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.

## 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.

### 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 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

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

Perform the steps that follow:

1. Reload the software, **GP 4**.
2. If necessary, install a new fax PWB, **PL 20.05** Item 7.



## 303-777-00 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.

### 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. Check with the customer that the AC mains (line) input power supply is not experiencing interruptions.
2. Check with the customer 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.
3. 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.
4. Perform the **301C** AC Power RAP. Check the power input circuit and its connectors.

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

**303-788-00** The SBC software failed to enter power save mode. The SBC software was unable to update its parameters from the UI, when the machine previously came out of sleep mode. It was then unable to re-enter sleep mode.

### 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 **303-346-00**, **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.

### 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

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

## 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.



#### 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.

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 green LED CR23, Figure 2. This is the SBC microprocessor heartbeat and should flash at approximately 0.5Hz to show that the microprocessor is running correctly. **LED CR23 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 CR23. **LED CR23 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.

The battery and SBC PWB are good. If necessary Set the Correct Date and Time.

A

A  
Install a new battery, [PL 3.22 Item 19](#). Connect the power lead from the power supply outlet to the machine. Observe the green LED CR23, [Figure 2](#). This is the SBC microprocessor heartbeat and should flash at approximately 0.5Hz to show that the microprocessor is running correctly. **LED CR23 is flashing correctly.**

Y N  
Press and hold the power button on the UI for 15 seconds. This should reset the SBC microprocessor heartbeat. **LED CR23 is flashing correctly.**

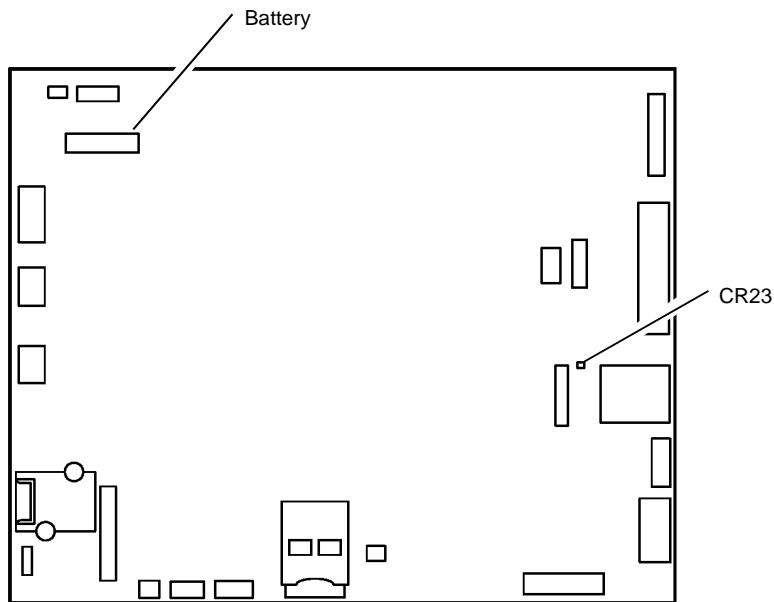
Y N  
Install a new SBC PWB, [PL 3.22 Item 3](#), then [Set the Correct Date and Time](#).

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.



W-1-1070-A

Figure 2 SBC PWB

## 303B Mark Service Unavailable RAP

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

### 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. Switch off the machine, [GP 14](#). Disconnect the power cord and ensure all the P/Js are properly connected to the [IOT PWB](#) and the [SBC PWB](#).
2. Reload the software, [GP 4](#).
3. Ensure that the output device communications cord is connected and secure at PJ966 at the rear of the machine.
4. Check the wiring between PJ966 at the rear of the machine and PJ772 on the [IOT PWB](#).
5. Perform the procedures that follow as necessary:
  - [OF7 IOT PWB Diagnostics RAP](#).
  - [303D SBC PWB Diagnostics RAP](#).

## 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 1](#). Disconnect and check the ribbon cable. Check that the cable locks on [P/J910](#) and [P/J907](#) are working effectively. **The ribbon cable and P/Js are good.**

Y N

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

- Control to keyboard PWB ribbon cable, [PL 2.10 Item 10](#).
- UI keyboard PWB, [PL 2.10 Item 9](#).
- UI control PWB, [PL 2.10 Item 6](#).

Go to [Flag 2](#). Disconnect [P/J81](#) 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 Diagnostics RAP](#).

Perform the steps that follow as necessary:

- [303D SBC PWB Diagnostics RAP](#).
- [OF7 IOT PWB Diagnostics RAP](#).
- Install a new UI keyboard PWB, [PL 2.10 Item 9](#).
- Install a new UI control PWB, [PL 2.10 Item 6](#).

A B

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

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.

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 keyboard PWB, [PL 2.10 Item 9](#).

A B

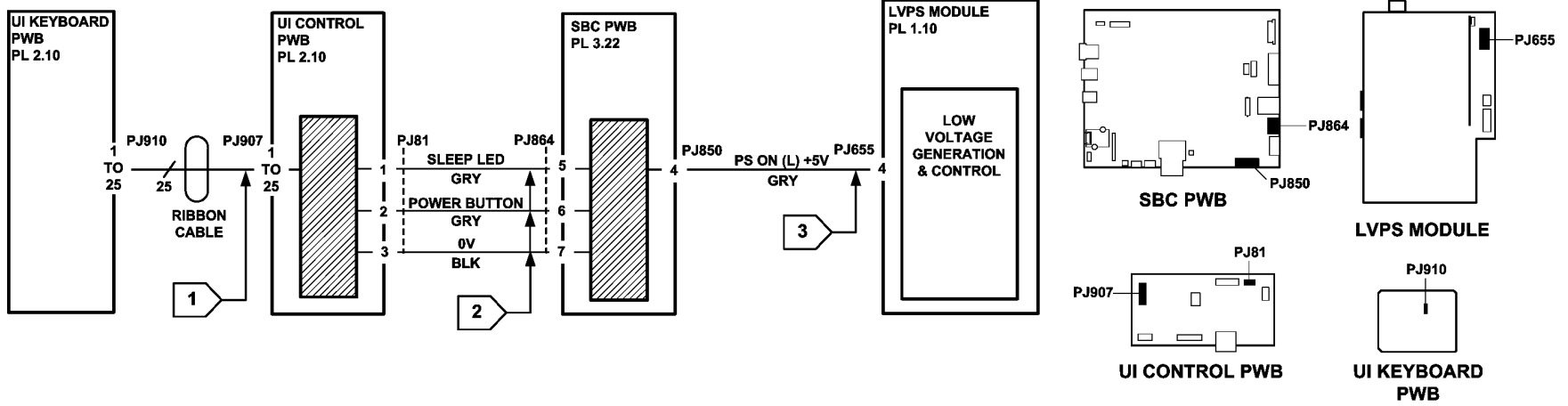


Figure 1 Circuit diagram

TW-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 +124V 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	LED Colour	Description
CR6	Green	Image path power good - this LED is lit when the machine is in normal power mode and there is no fault preventing full image path functionality. If the LED is not lit, switch off, then switch on the machine, GP 14. If the fault persists, install a new SBC PWB, PL 3.22 Item 3.
CR7	Green	Power supply good - this LED is lit when power is good. If this LED is not lit, switch off, then switch on the machine, GP 14. If the fault persists, install a new SBC PWB, PL 3.22 Item 3.
CR11	Green	SBC Kama FPGA configuration incomplete - this LED is lit in a fault condition. Switch off, then switch on the machine, GP 14. If the fault persists, install a new SBC PWB, PL 3.22 Item 3.
CR12	Green	Image path sleep - this LED is lit when there is no image path activity when the machine is in low power mode. No service action required.
CR15	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, check that the card and socket contacts are clean. If necessary, install a SIM card, PL 3.22 Item 17 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.
CR16	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 17 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.
CR17	Bi-colour	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.

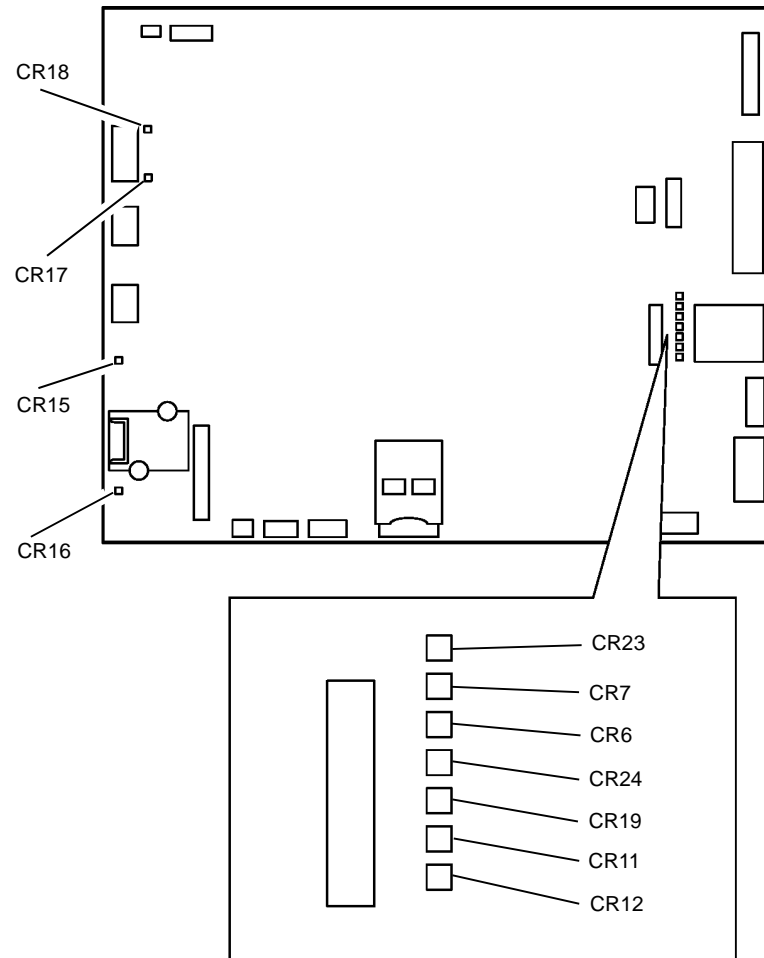
**Table 1 LED identifiers**

LED Identifier	LED Colour	Description
CR18	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.
CR19	Green	SBC Horizon FPGA configuration incomplete - this LED is lit in a fault condition. Switch off, then switch on the machine, <a href="#">GP 14</a> . If the fault persists, install a new SBC PWB, <a href="#">PL 3.22 Item 3</a> .
CR23	Green	SBC microprocessor heartbeat - this LED flashes at approximately 0.5Hz to show that the microprocessor is running correctly. Switch off, then switch on the machine, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">303A SBC PWB Battery RAP</a> .
CR24	Red	SBC microprocessor power fail - this LED is lit when there is a power supply problem to the SBC microprocessor. Switch off, then switch on the machine, <a href="#">GP 14</a> . If the fault persists, install a new SBC PWB, <a href="#">PL 3.22 Item 3</a> .

**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 3.2](#). 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](#).



W-1-1158-A

**Figure 2 SBC PWB LED locations**

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

A	B	C	D
			Install a new foreign interface PWB, <a href="#">PL 3.22 Item 18</a> .
			Install a new foreign device interface harness, <a href="#">PL 3.22 Item 24</a> .
			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, <a href="#">PL 3.22 Item 18</a> . 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, <a href="#">PL 3.22 Item 18</a> . If the fault persists, perform the <a href="#">303D</a> 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.



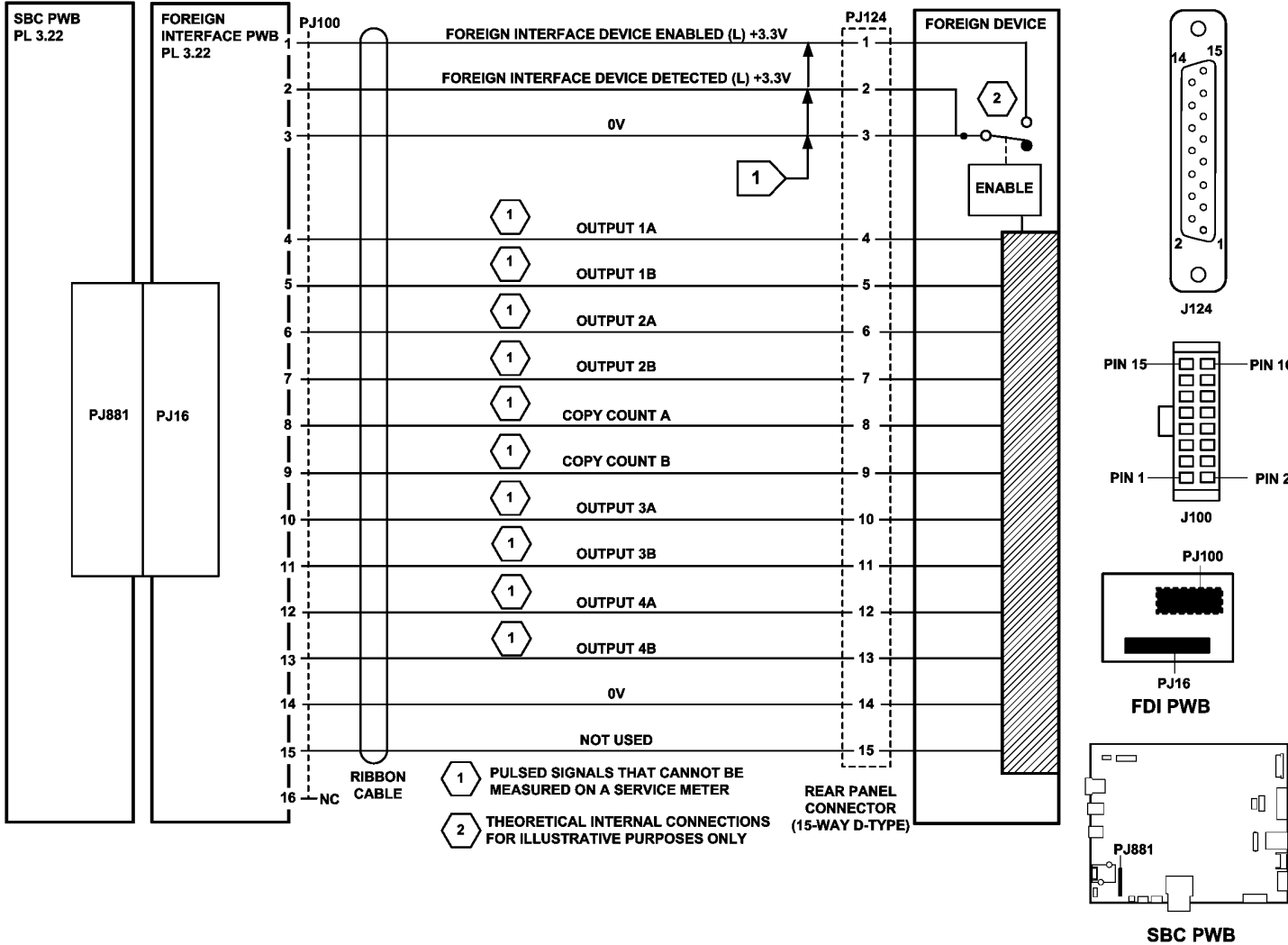


Figure 1 Circuit diagram

TW-1-0179-A



# 305-253-00 SPDH Communications Error RAP

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

Switch off, then switch on the machine, GP 14. The fault is fixed.

Y N

Flag 1. Disconnect, then check the ribbon cable between P/J460 on the SPDH PWB and P/J417 on the Scanner PWB. The ribbon cable and connectors are undamaged.

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 P/J460 to P/J417 ribbon cable. Go to Flag 2. Disconnect, then check the data cable and connectors, P/J411 on the Scanner PWB and P/J854 on the SBC PWB. The data cable and connectors are undamaged.

The data cable and connectors are undamaged.

Y N

Clean or repair the data cable connectors. If necessary, install new components:

- SBC PWB/scanner PWB data cable, PL 60.20 Item 22.
- Scanner PWB, PL 60.20 Item 4.

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.

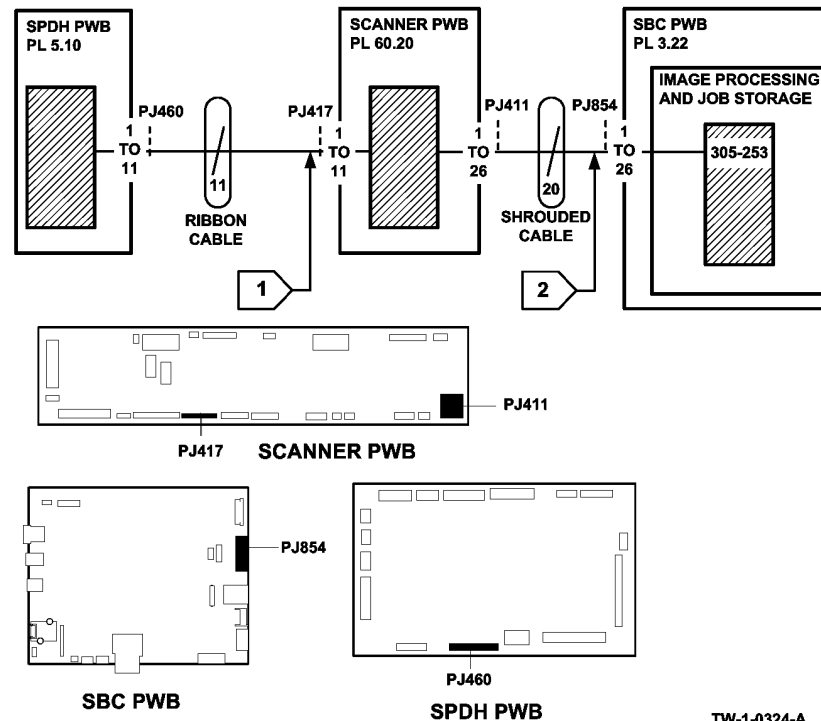


Figure 1 Circuit diagram

## 305-300-00 SPDH Open RAP

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

### 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 operation of the DH angle sensor actuator, [PL 60.20 Item 12](#) and the actuator spring, [PL 60.20 Item 11](#). 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.

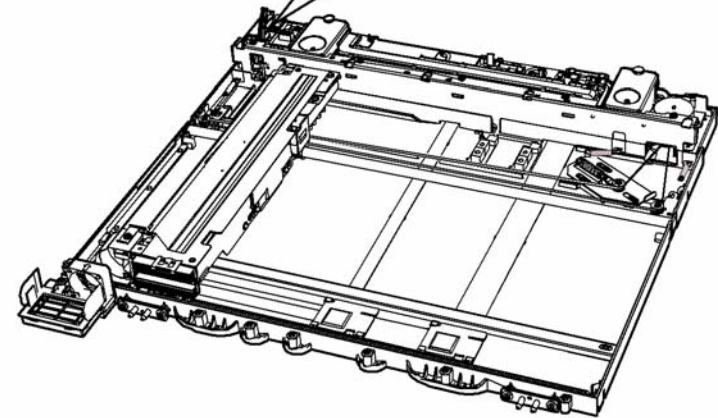
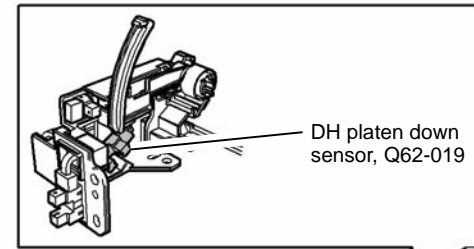
Y N  
Go to [Flag 1](#). Check Q62-019.  
Refer to:

- [Figure 1](#).
- [GP 11](#), How to Check a Sensor.
- [P/J423, 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.



W-1-0004-A

Figure 1 Component location

## 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



**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 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.

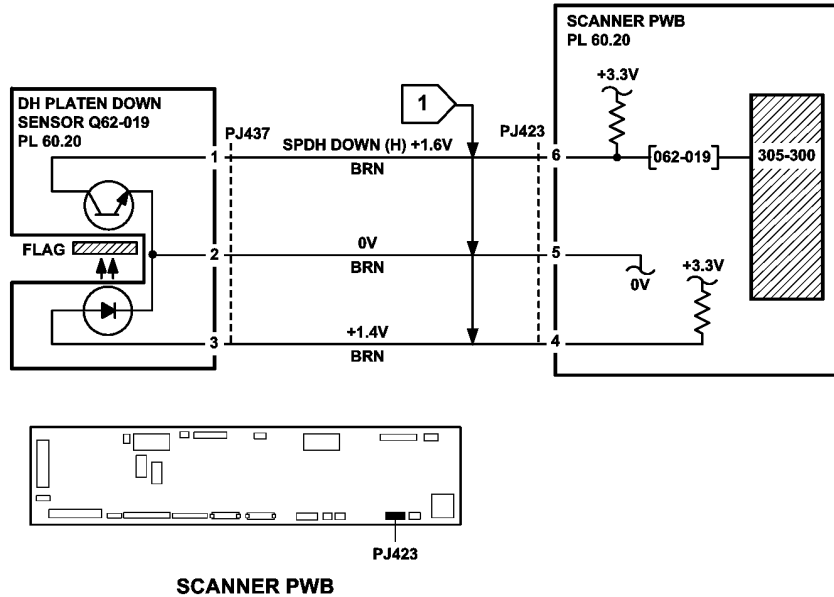
Refer to:

- [GP 13](#) How to Check a Switch.
- [P/J461](#), [Scanner 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 S05-305 is installed correctly and that the switch arm is not bent or damaged. The switch should be heard to click as it is actuated or de-actuated by closing and opening the top cover.



TW-1-0006-A

Figure 2 Circuit diagram

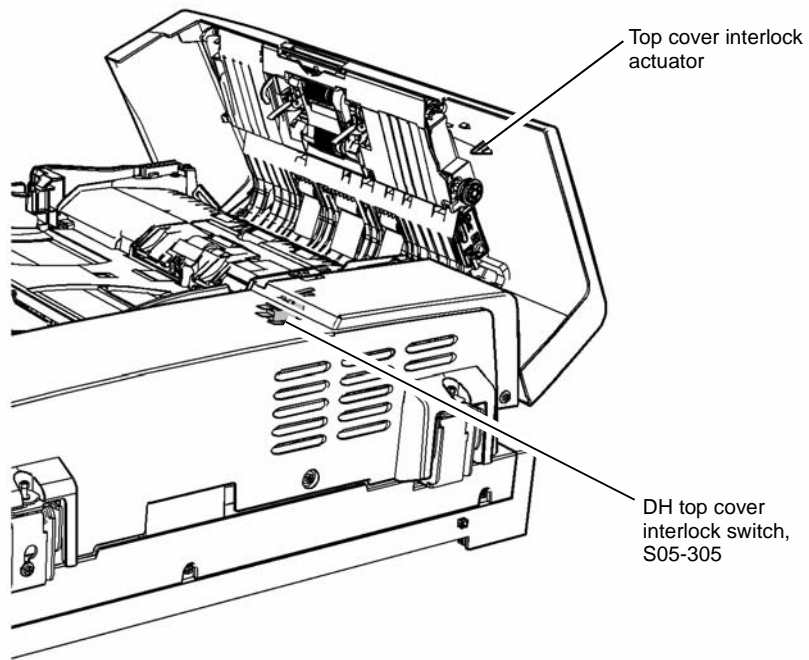


Figure 1 Component location

w-1-0005-A

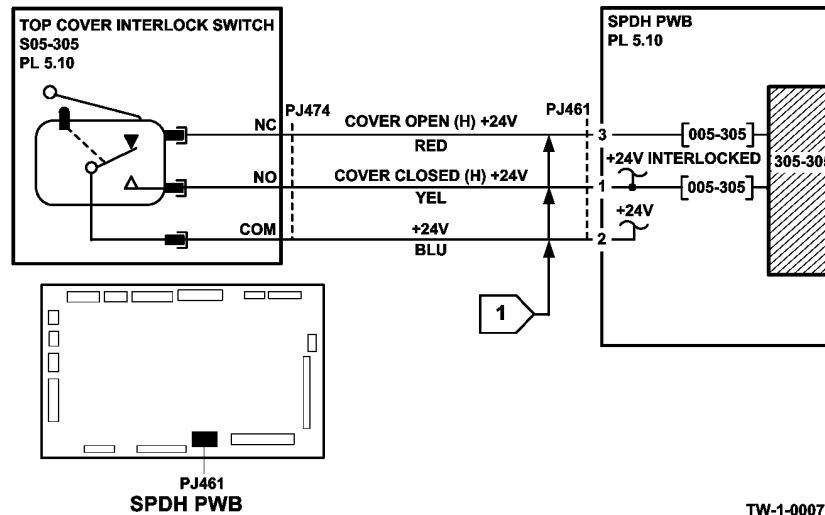


Figure 2 Circuit diagram

## 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.

### 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 paper path of the SPDH. Remove any obstructions such as paper debris, staples or paper clips.

### Procedure

Open the SPDH top cover, [PL 5.10 Item 8](#). Enter **dC330**, code 005-335, takeaway sensor, Q05-335, [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:

- [GP 38](#) How to Check an Adaptive Sensor.
- [P/J465](#), [Scanner PWB](#).
- [301D](#) +3.3V Distribution RAP.

Install new components as necessary:

- Takeaway sensor, [PL 5.20 Item 10](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Open the SPDH top cover, [PL 5.10 Item 8](#). Hold the top cover interlock switch closed 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.
- [P/J468](#), [Scanner 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](#).

**A**  
Hold the top cover interlock switch closed. 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 takeaway roll rotates.**

**Y N**  
Go to [Flag 3](#). Check CL05-025.  
Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [P/J471](#), [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 19](#). 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 Item 15](#)).
- Feed clutch drive gear/pulley, [PL 5.19 Item 4](#).

Install new components as necessary:

- Feed clutch, CL05-025, [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](#).

Enter **dC330** code 005-310, stack height sensor, Q05-310. Actuate Q05-310 using the sensor actuating arm, [Figure 1](#). **The display changes.**

**Y N**  
Go to [Flag 4](#). Check Q05-310.  
Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J465](#), [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 15](#)).
- 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 18](#).

**A**

**B**

B

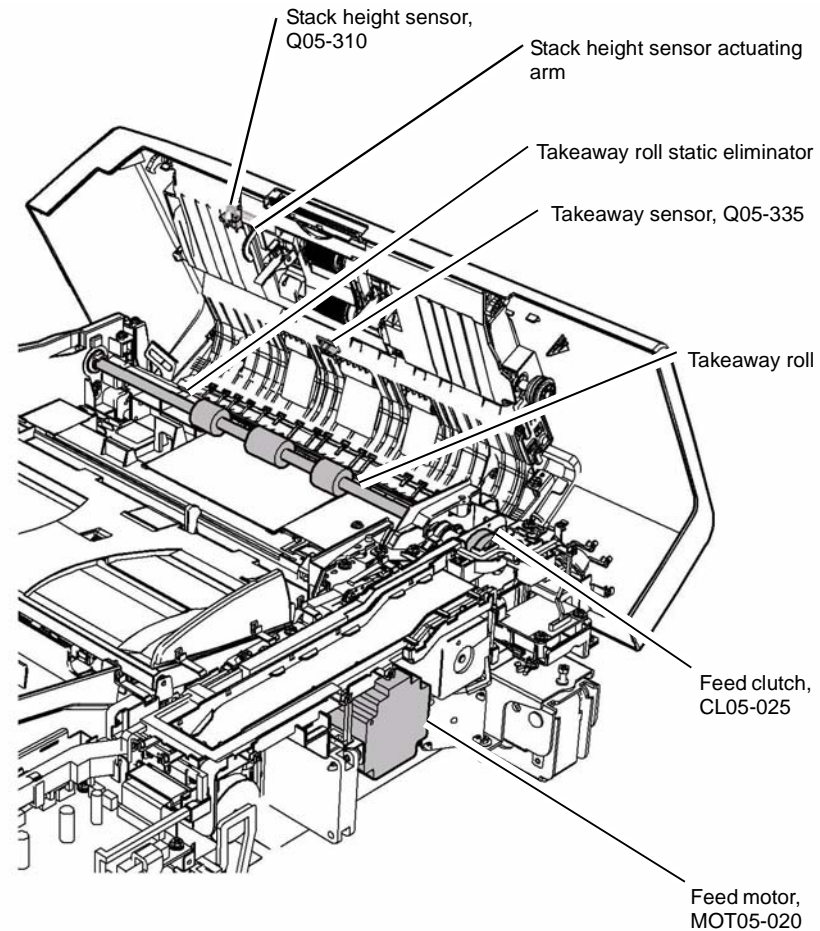
- Nudger roll housing, [PL 5.20 Item 8](#).
- Shaft, [PL 5.20 Item 5](#).
- Shaft, [PL 5.20 Item 12](#).

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:

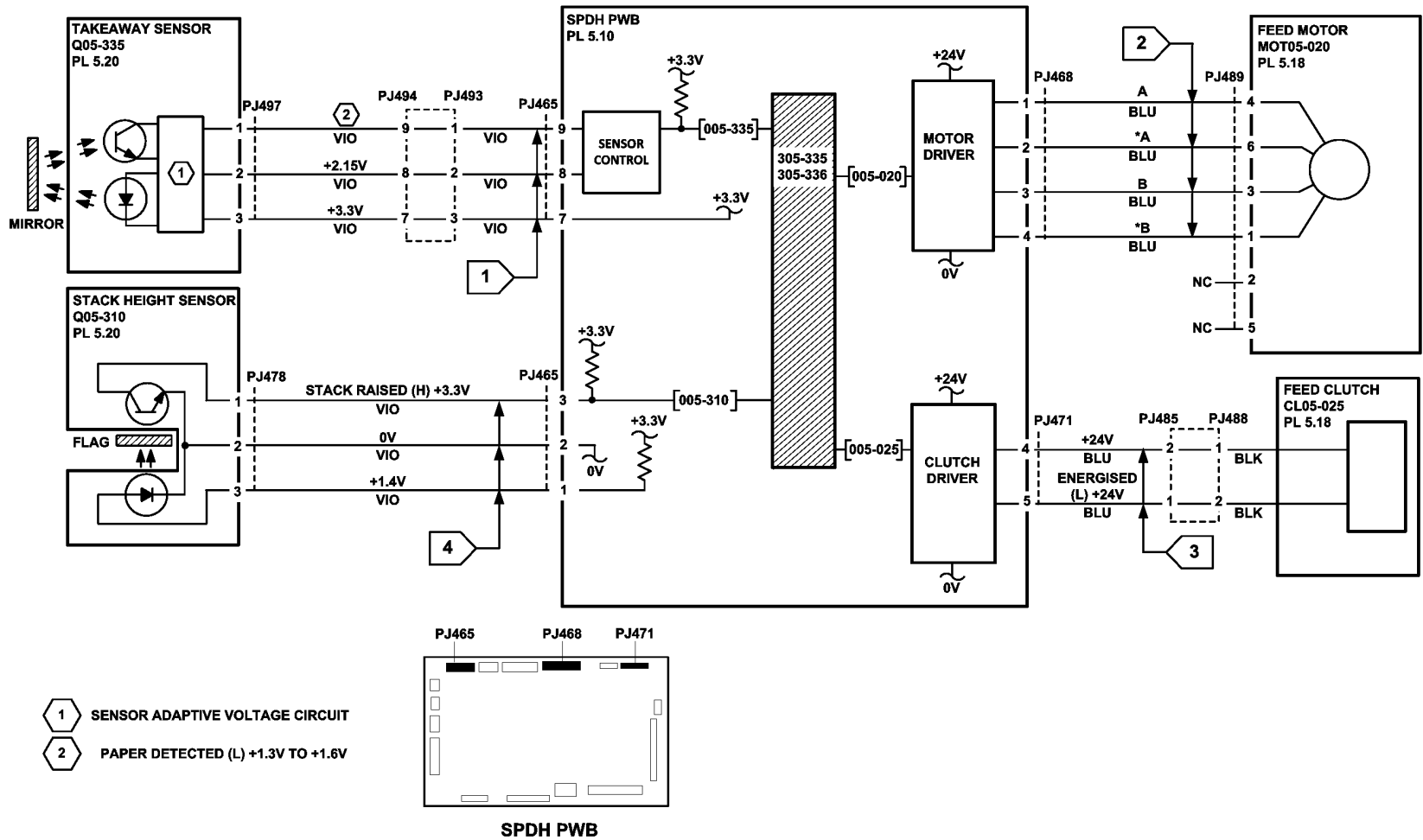
- Check the takeaway roll static eliminator, [Figure 1](#).
- Ensure that the SPDH is connected to ground correctly. Refer to [301A Ground Distribution RAP](#).
- Check the condition and operation of the items that follow. If necessary clean the items or install new components:
  - Feed roll, [PL 5.20 Item 6](#).
  - Nudger roll, [PL 5.20 Item 7](#).
  - Retard roll, [PL 5.25 Item 3](#).
- Check for a malfunction of the last sheet out sensor, Q05-308. Perform the [305B Last Sheet Out Sensor 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](#).



W-1-0006-A

Figure 1 Component location





TW-1-0008-A

Figure 2 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.

### 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 paper path of the SPDH. Remove any obstructions such as paper debris, staples or paper clips.

### Procedure

Enter **dC330**, code 005-340, reg sensor, Q05-340, **Figure 1**. Open the SPDH. Actuate Q05-340 using a strip of paper. **The display changes.**

- Y N**
- Go to **Flag 1**. Check Q05-340.  
Refer to:
- **GP 38** How to Check an Adaptive Sensor.
  - **P/J467, SPDH PWB.**
  - **301D +3.3V** Distribution RAP.
- Install new components as necessary:
- Reg sensor, **PL 5.18 Item 11.**
  - SPDH PWB, **PL 5.10 Item 5.**

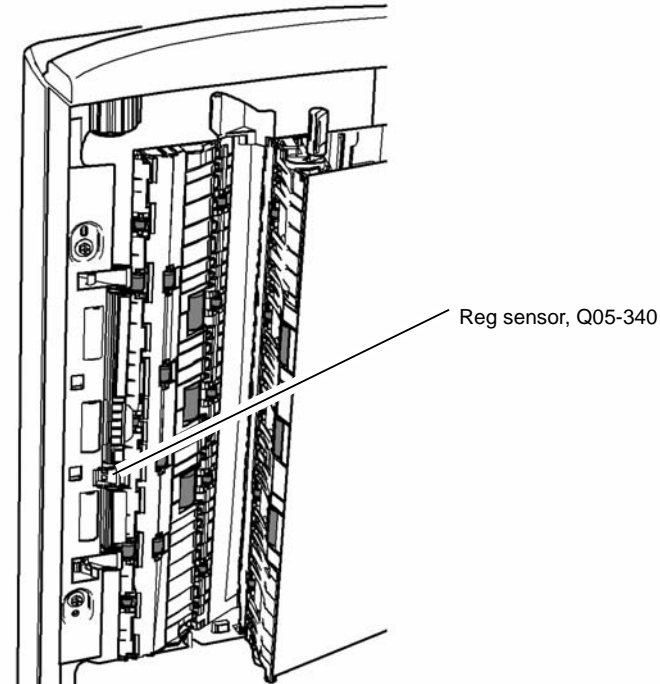
Remove the SPDH rear cover, **PL 5.10 Item 1**. Hold the top cover interlock switch closed. Enter **dC330**, code 005-030 to run the read motor, MOT05-030. **The motor runs.**

- Y N**
- Go to **Flag 2**. Check MOT05-030.  
Refer to:
- **GP 10** How to Check a Motor.
  - **P/J468, 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.**

Perform the steps that follow:

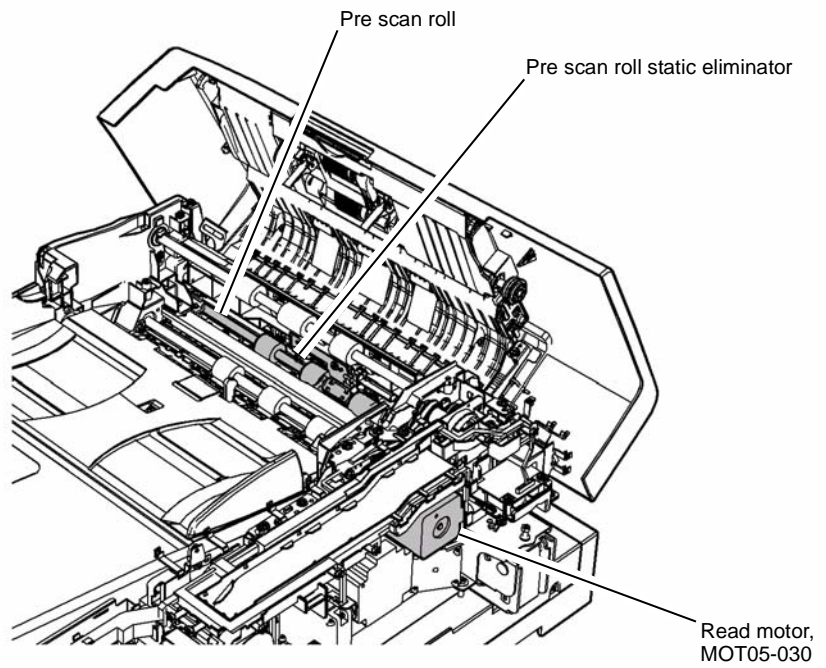
- Check the items that follow. Refer to **GP 7** Miscellaneous Checks:
  - Read motor belt, **PL 5.19 Item 18**. Perform **ADJ 5.1**. SPDH Drive Belts if necessary.

- Mid scan drive belt, **PL 5.19 Item 21**. Perform **ADJ 5.1**. SPDH Drive Belts if necessary.
  - Pre scan drive belt, **PL 5.19 Item 20**. Perform **ADJ 5.1**. SPDH Drive Belts if necessary.
  - Pre scan roll assembly, **PL 5.17 Item 4**.
  - Pre scan roll drive pulley, **PL 5.19 Item 12**.
  - Mid scan roll drive pulley, **PL 5.19 Item 13**.
- 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.



W-1-0904-A

**Figure 1** Component location



W-1-0007-A

Figure 2 Component location

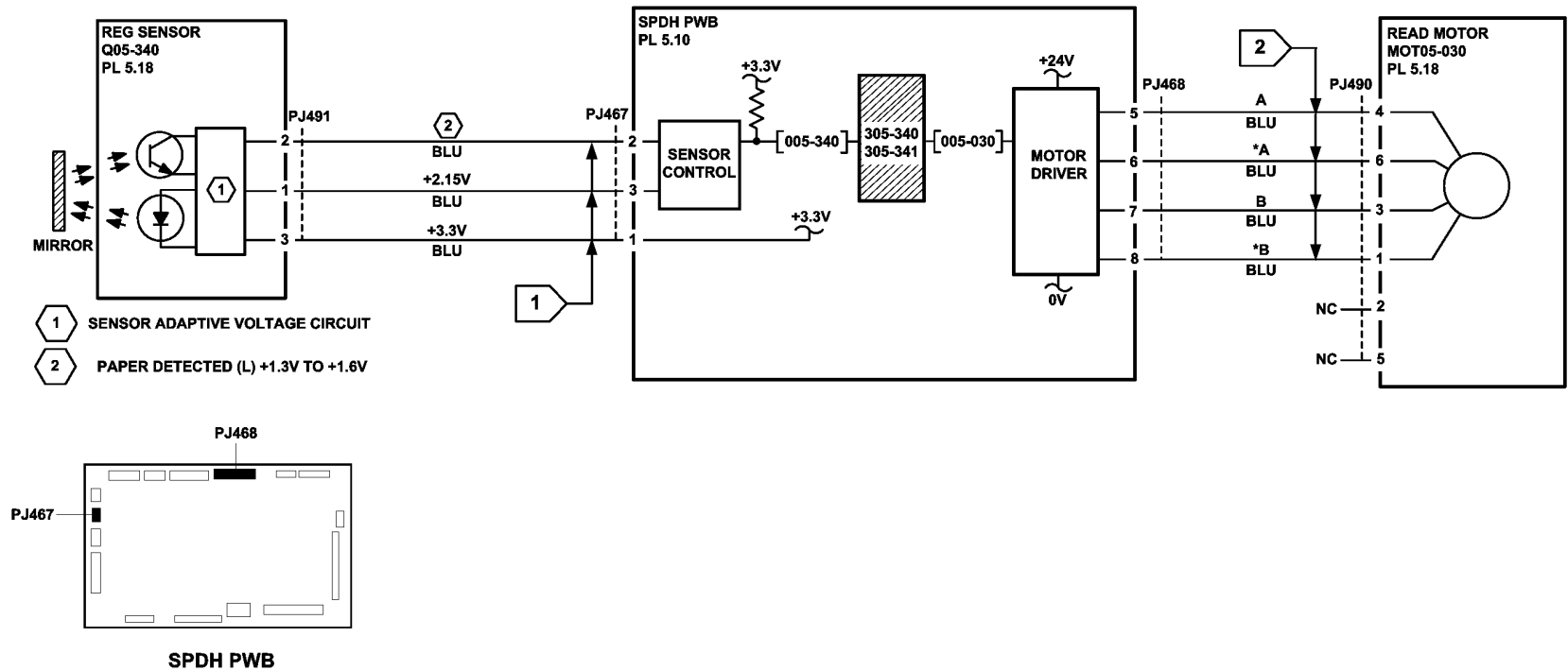


Figure 3 Circuit diagram

TW-1-0009-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.

### 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.

- Remove all documents from the SPDH.
- Check the paper path of the SPDH. Remove any obstructions such as paper debris, staples or paper clips.

### Procedure

Enter [dC330](#), code 005-343, side 2 reg sensor, Q05-343. Open the SPDH. Open and close the jam clearance baffle to actuate Q05-343, [Figure 1](#). The display changes.

**Y N**

Go to [Flag 1](#). Check Q05-343.

Refer to:

- [GP 38](#) How to Check an Adaptive Sensor.
- [P/J466](#), [SPDH PWB](#).
- [301D](#) +3.3V Distribution RAP.

Install new components as necessary:

- Side 2 reg sensor, [PL 60.30 Item 8](#).
- 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.
- [P/J468](#), [SPDH PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

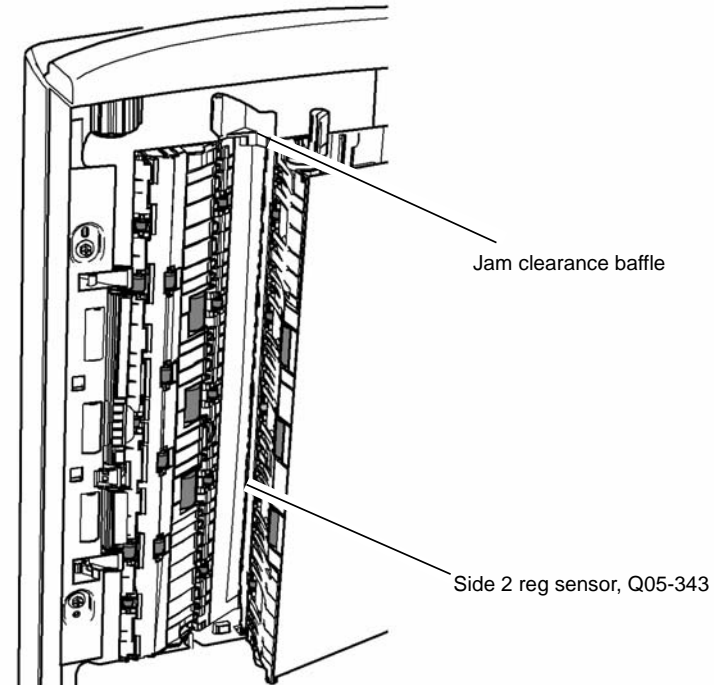
Install new components as necessary:

- Read motor, [PL 5.18 Item 1](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Perform the steps that follow:

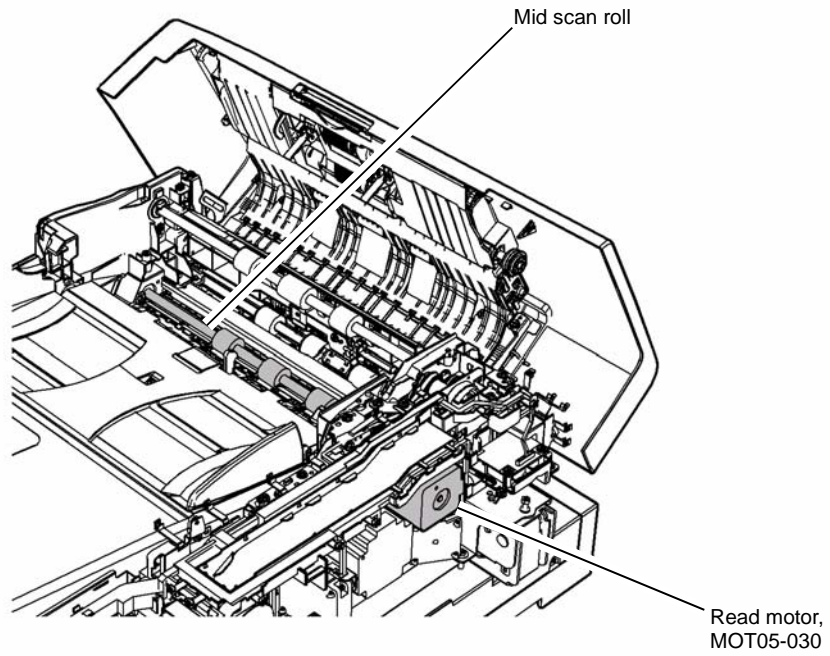
- Check the items that follow. Refer to [GP 7](#) Miscellaneous Checks:

- Read motor belt, [PL 5.19 Item 18](#). Perform [ADJ 5.1](#). SPDH Drive Belts if necessary.
- Mid scan drive belt, [PL 5.19 Item 21](#). Perform [ADJ 5.1](#). SPDH Drive Belts if necessary.
- Mid scan roll assembly, [PL 5.17 Item 4](#).
- Mid scan roll drive pulley, [PL 5.19 Item 13](#).
- Ensure that the SPDH is connected to ground correctly. Refer to the [301A](#) Ground Distribution RAP.



W-1-0009-A

Figure 1 Component location



W-1-0008-A

Figure 2 Component location

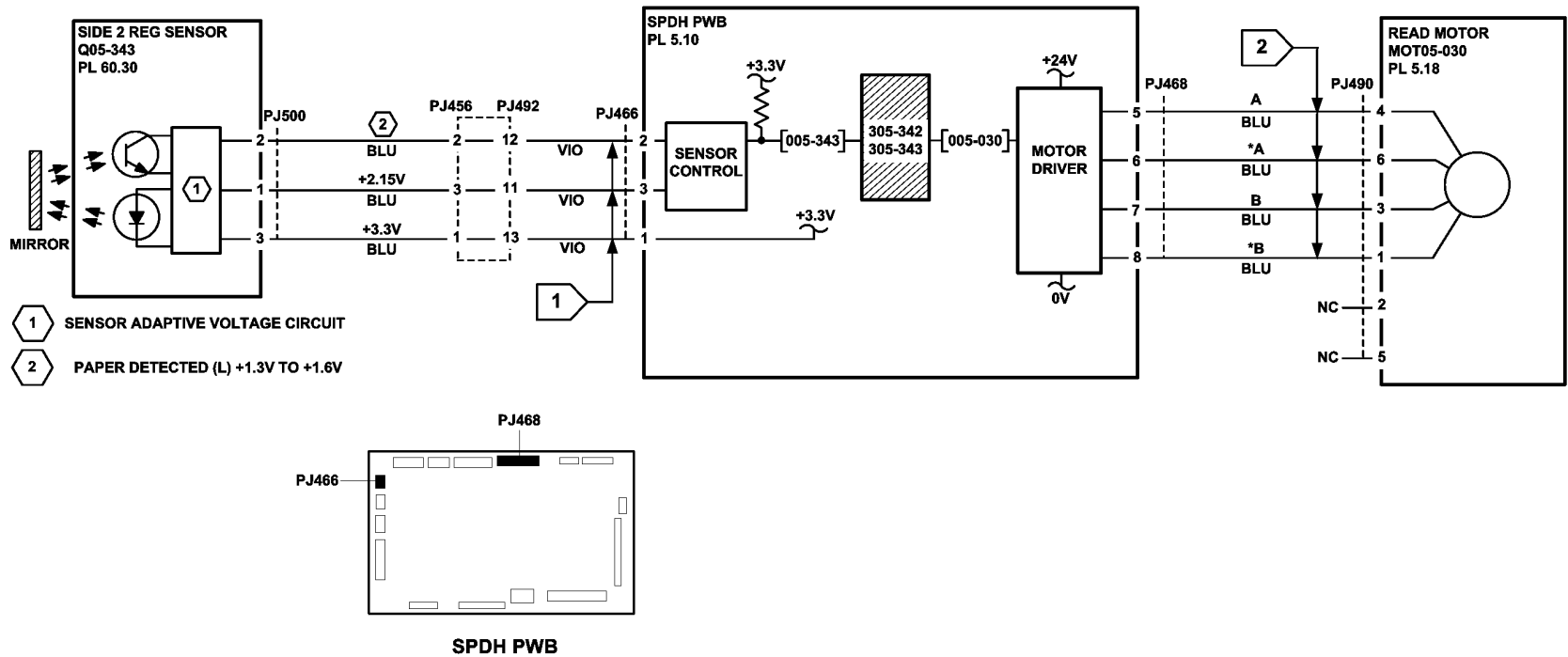


Figure 3 Circuit diagram

TW-1-0010-A

## 305-940-00, 305-966-00 SPDH No Original RAP

**305-940-00** The SPDH doc present sensor detected that the original has been removed.

**305-966-00** The SPDH doc present sensor detected that the original has not been fully inserted in the input tray.

**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.

### 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.

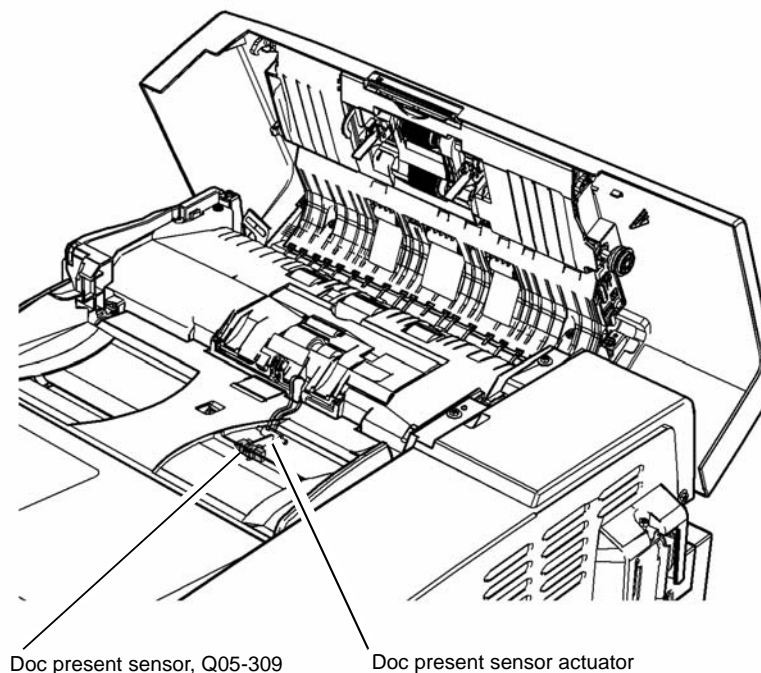
- Remove all documents from the SPDH.
- Check the condition of the originals. Curl or folds may prevent the originals being detected.
- Check around the input tray. Remove any obstructions such as paper debris, staples, or paper clips.
- Ensure that the document width guides are set correctly for the originals in use.

### Procedure

Enter [dC330](#), code 005-309, doc present sensor, Q05-309. Actuate Q05-309 using the doc present sensor actuator, [Figure 1](#). The display changes.

- Y N**
- Go to [Flag 1](#). Check Q05-309.
- Refer to:
- [GP 11](#) How to Check a Sensor.
  - [P/J462, SPDH PWB](#).
  - [301D](#) +3.3V Distribution RAP.
  - [301B](#) 0V Distribution RAP.
- Install new components as necessary:
- Doc present sensor, [PL 5.30 Item 5](#).
  - SPDH PWB, [PL 5.10 Item 5](#).

Check that Q05-309, [PL 5.30 Item 5](#) and the doc present sensor actuator, [PL 5.30 Item 6](#) are correctly installed and undamaged.



W-1-0010-A

**Figure 1 Component location**



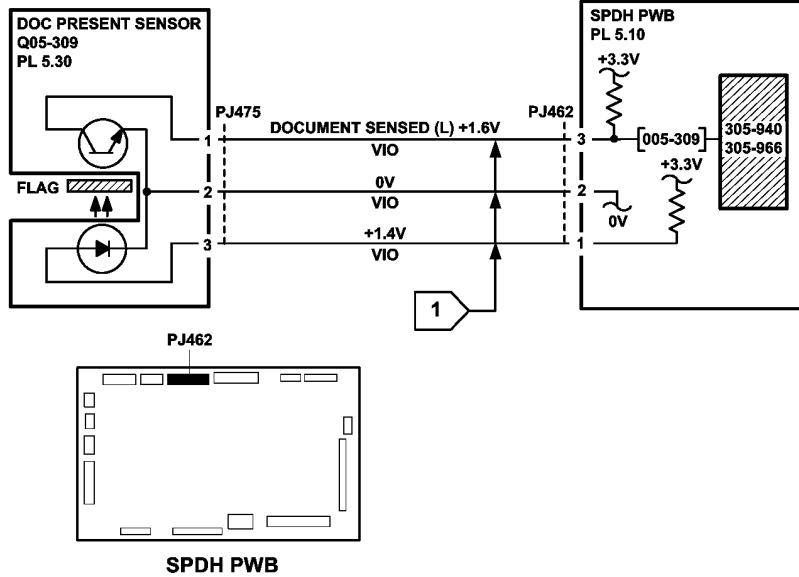


Figure 2 Circuit diagram

TW-1-0011-A

## 305-941-00 Insufficient Originals RAP

305-941-00 The machine detected that too few originals were re-loaded after jam clearance.

### 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. 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 elevator motor drove the input tray 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.**

- Remove all documents from the SPDH.
- Check around the input tray. Remove any obstructions such as paper debris, staples or paper clips.

### Procedure

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**  
Remove the SPDH rear cover **PL 5.10 Item 1**. Remove the sensor bracket, **PL 5.18 Item 10**. Turn over the bracket to access the lift home position sensor, **Figure 1**. Enter **dC330** code 005-307, lift home position sensor, Q05-307. Actuate Q05-307 using a piece of paper. **The display changes.**

**Y N**  
Go to **Flag 1**. Check Q05-307.  
Refer to:

- **GP 11** How to Check a Sensor.
- **P/J462, SPDH PWB.**
- **301D** +3.3V Distribution RAP.
- **301B** 0V Distribution RAP.

Install new components as necessary:

- Lift home position sensor, **PL 5.18 Item 9**.
- SPDH PWB, **PL 5.10 Item 5**.

Enter **dC330**, code 005-309, doc present sensor, Q05-309. Actuate Q05-309 using the doc present sensor actuator, **Figure 2**. **The display changes.**

**Y N**  
Go to **Flag 3**. Check Q05-309.  
Refer to:

- **GP 11** How to Check a Sensor.
- **P/J462, SPDH PWB.**
- **301D** +3.3V Distribution RAP.
- **301B** 0V Distribution RAP.

Install new components as necessary:

- Doc present sensor, **PL 5.30 Item 5**.
- SPDH PWB, **PL 5.10 Item 5**.

**A B**  
Open the top cover to access the stack height sensor, Q05-310, **Figure 2**. Enter **dC330**, code 005-310, stack height sensor, Q05-310. Actuate Q05-310 using the sensor actuating arm. **The display changes.**

**Y N**  
Go to **Flag 4**. Check Q05-310.  
Refer to:

- **GP 11** How to Check a Sensor.
- **P/J465, 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 15**).
- SPDH PWB, **PL 5.10 Item 5**.

Go to **Flag 2**. Check MOT05-390.  
Refer to:

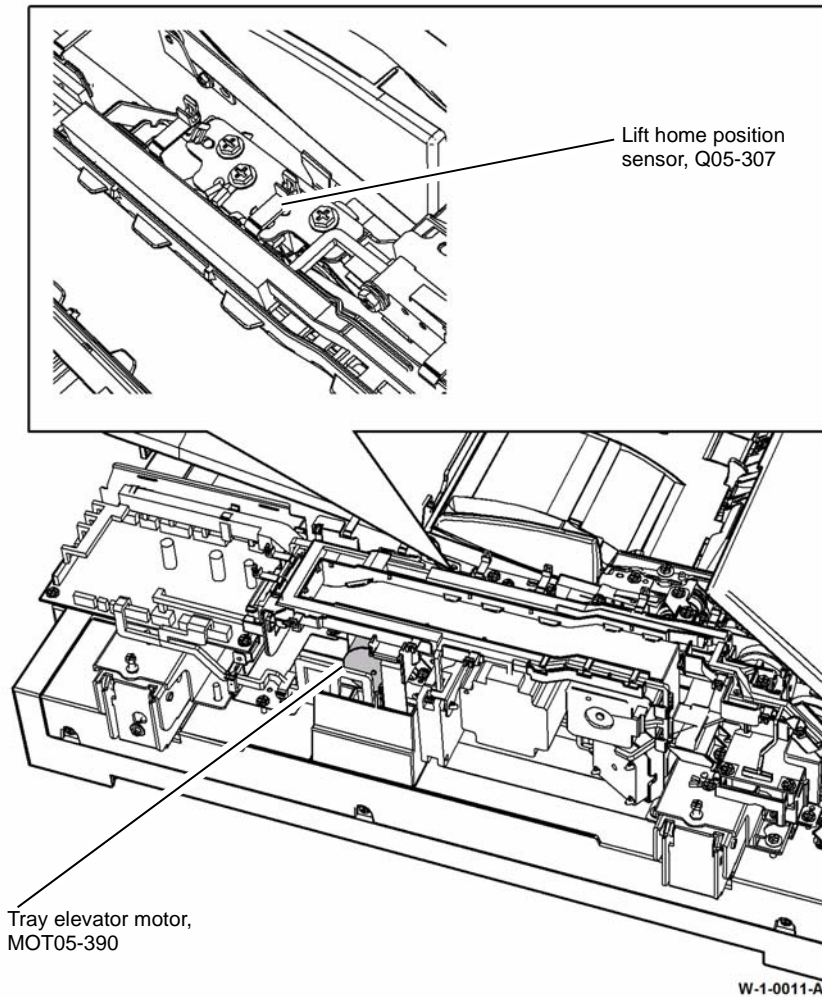
- **GP 10** How to Check a Motor.
- **P/J469, SPDH PWB.**
- **301G** +24V Distribution RAP.
- **301B** 0V Distribution RAP.

Install new components as necessary:

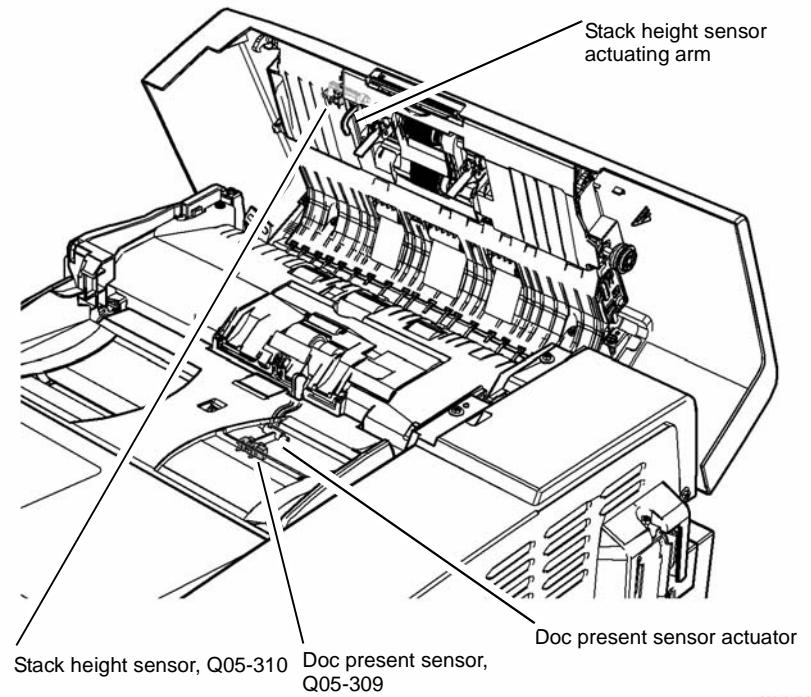
- Tray elevator motor, **PL 5.18 Item 3**.
- SPDH PWB, **PL 5.10 Item 5**.

Check the drive components between MOT05-390 and the input tray shaft assembly. If necessary install new tray elevator reduction gears, **PL 5.19 Item 9**.

Perform **SCP 5** Final actions.



**Figure 1 Component location**



**Figure 2 Component location**

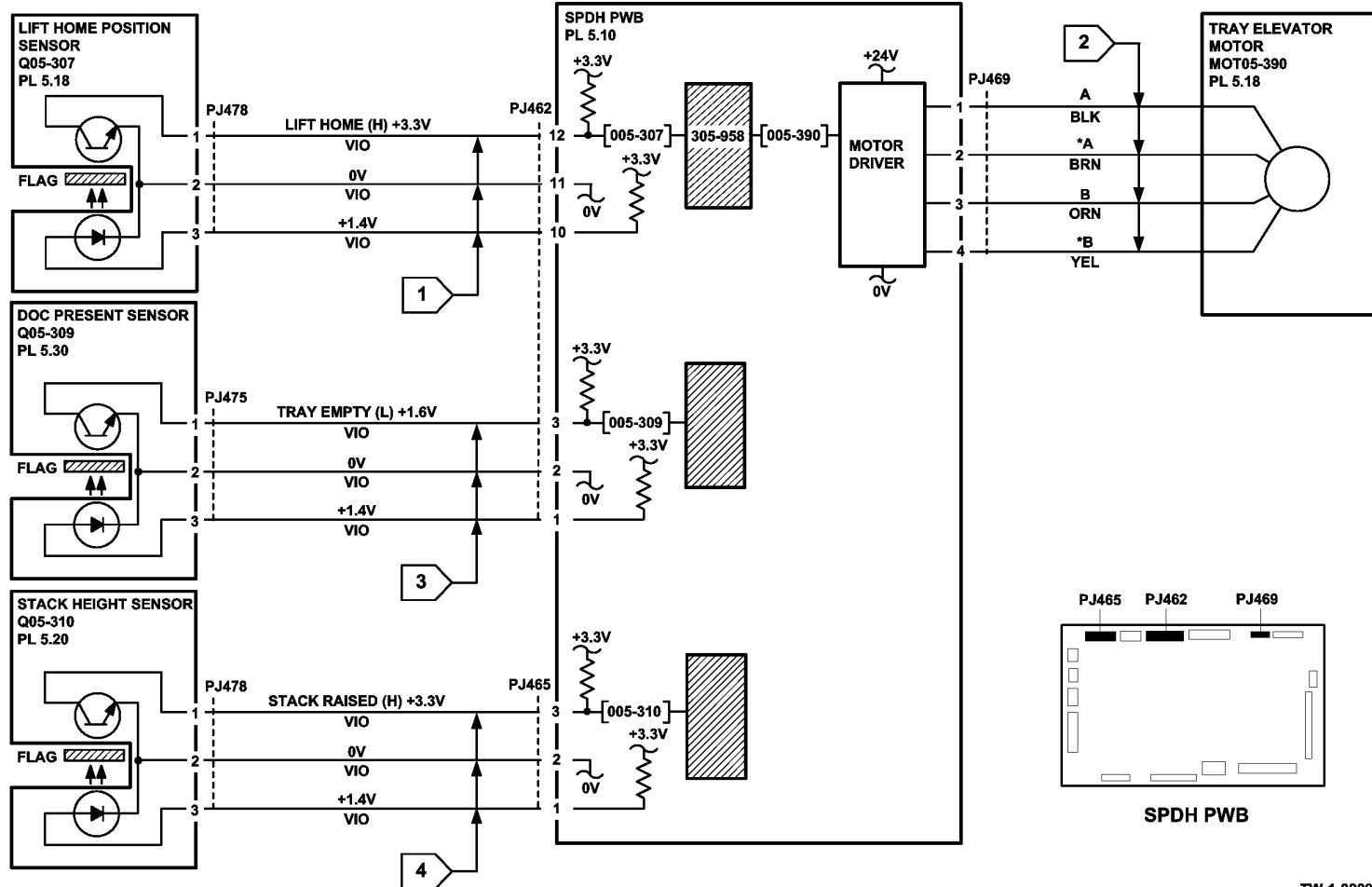


Figure 3 Circuit diagram

TW-1-0209-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.

### 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 around the calibration mechanism. Remove any obstructions such as paper debris, staples or paper clips.

### Procedure

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, [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.
- [P/J464](#), [SPDH PWB](#).
- [301D](#) +3.3V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Calibration home position sensor, [PL 5.18 Item 9](#).
- 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.
- [P/J468](#), [SPDH PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

A B

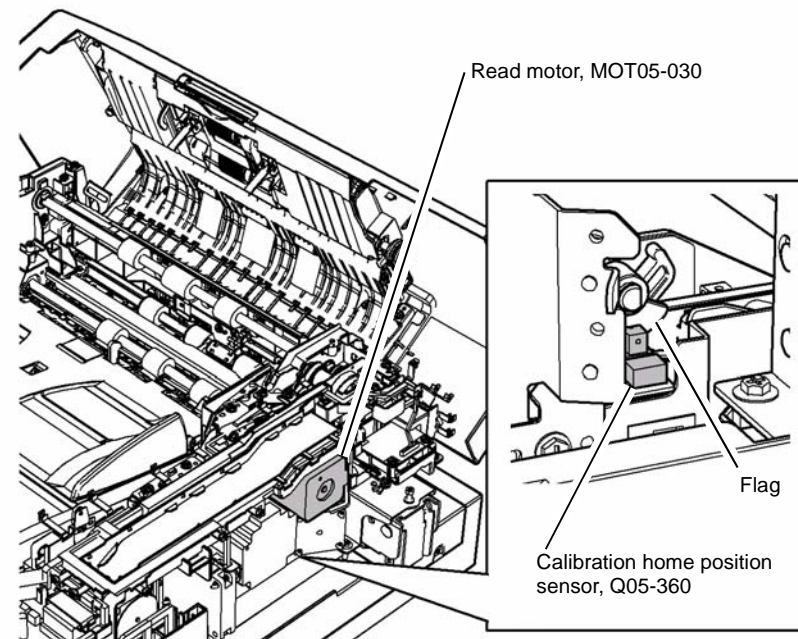
Install new components as necessary:

- 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.  
Install new components as necessary:

- Read motor belt, [PL 5.19 Item 18](#).
- Mid scan drive belt, [PL 5.19 Item 21](#).
- Exit roll drive pulley, [PL 5.19 Item 12](#).
- Calibration shutter drive gear, [PL 5.19 Item 10](#).
- Calibration shutter idler gear, [PL 5.19 Item 7](#).
- Calibration shutter driven gear, [PL 5.19 Item 8](#).

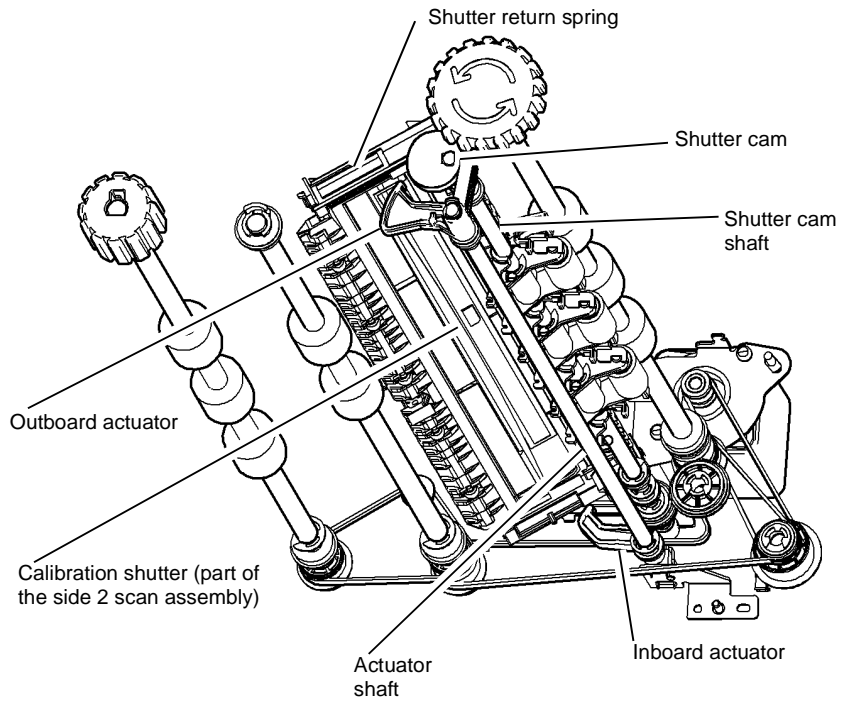
Check the calibration shutter mechanism, [Figure 2](#). Repair any damaged components if possible. If necessary install a new SPDH, [PL 5.10 Item 9](#).



W-1-0014-A

Figure 1 Component location

A B



W-1-0015-A

Figure 2 Calibration shutter mechanism

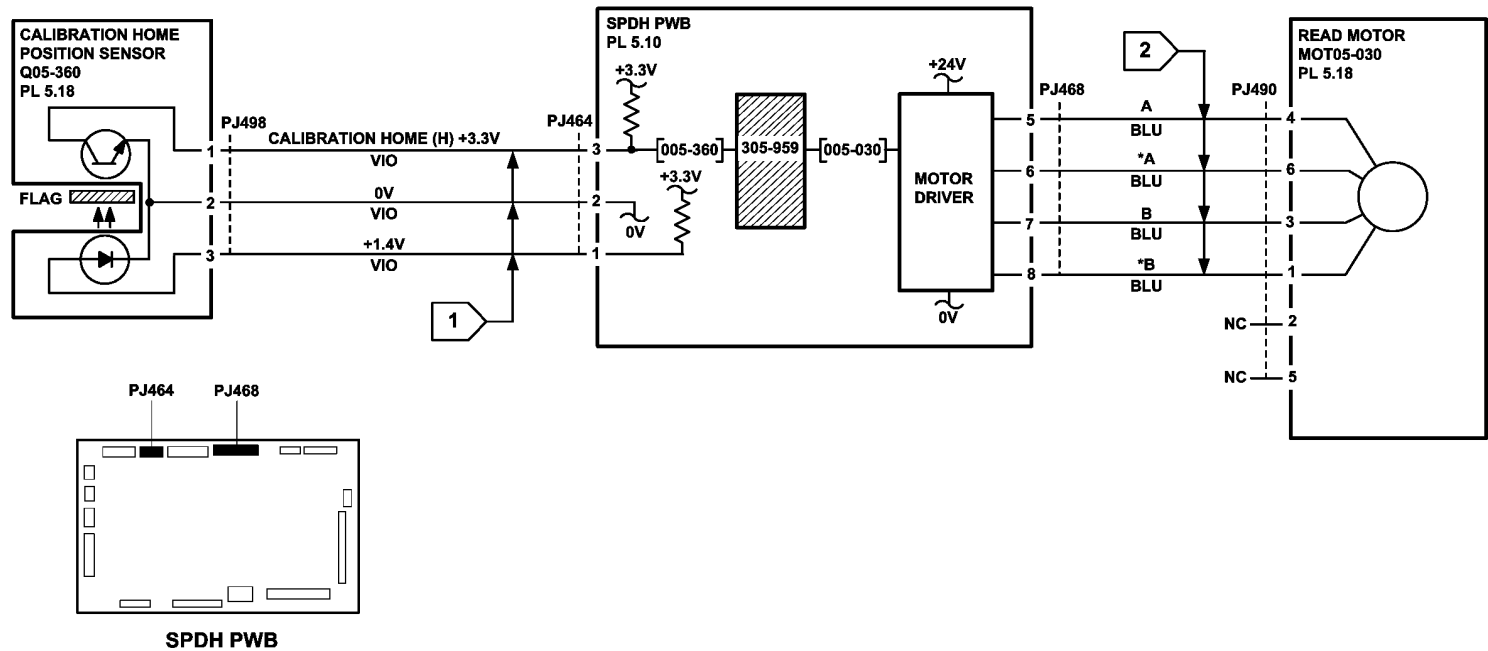


Figure 3 Circuit diagram

TW-1-0012-A

## 305-960-00 SPDH LED Fan Lock Alarm RAP

305-960-00 The LED cooling fan failed to rotate.

### 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](#). Hold the top cover interlock switch closed. Enter [dC330](#), code 005-370 to run the LED cooling fan, MOT05-370, [Figure 1](#). The motor runs.

Y N

Go to [Flag 1](#). Check MOT05-370.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J471](#), [SPDH PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- LED cooling fan, [PL 5.18 Item 8](#).
- SPDH PWB, [PL 5.10 Item 5](#).

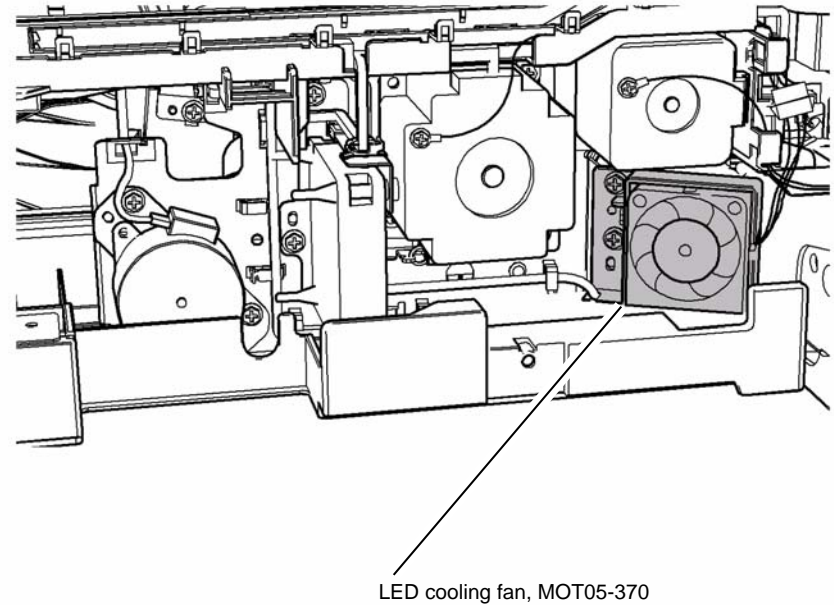
Add the [dC330](#), code 005-375 to check the DH LED fan lock alarm. The display reads high.

Y N

Switch off, then switch on the machine. If the fault persists, install new components:

- LED cooling fan, [PL 5.18 Item 8](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Install a new LED cooling fan, [PL 5.18 Item 8](#).



W-1-0016-A

Figure 1 Component location



## 305-961-00 SPDH Motor Fan Lock Alarm RAP

305-961-00 The motor cooling fan failed to rotate.

### 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. Hold the top cover interlock switch closed. Enter [dC330](#), code 005-380 to run the motor cooling fan, MOT05-380, [Figure 1](#). The motor runs.

Y N

Go to [Flag 1](#). Check MOT05-380.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J470](#), [SPDH PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Motor cooling fan, [PL 5.18](#) Item 7.
- SPDH PWB, [PL 5.10](#) Item 5.

Add the [dC330](#) code 005-385 to check the DH motor fan lock alarm. The display reads high.

Y N

Switch off, then switch on the machine, [GP 14](#). If the fault persists, install new components:

- Motor cooling fan, [PL 5.18](#) Item 7.
- SPDH PWB, [PL 5.10](#) Item 5.

Install a new motor cooling fan, [PL 5.18](#) Item 7.

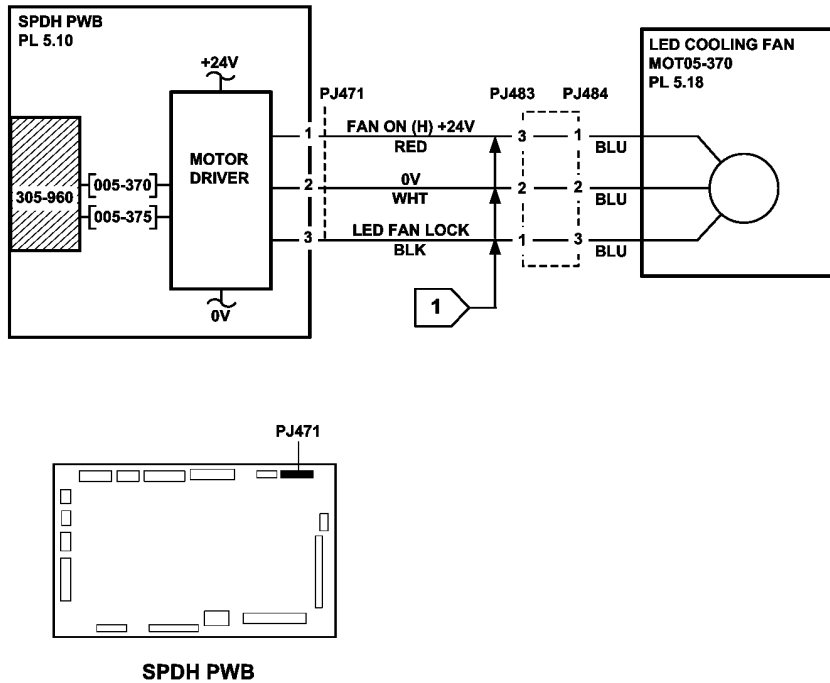


Figure 2 Circuit diagram

TW-1-0014-A

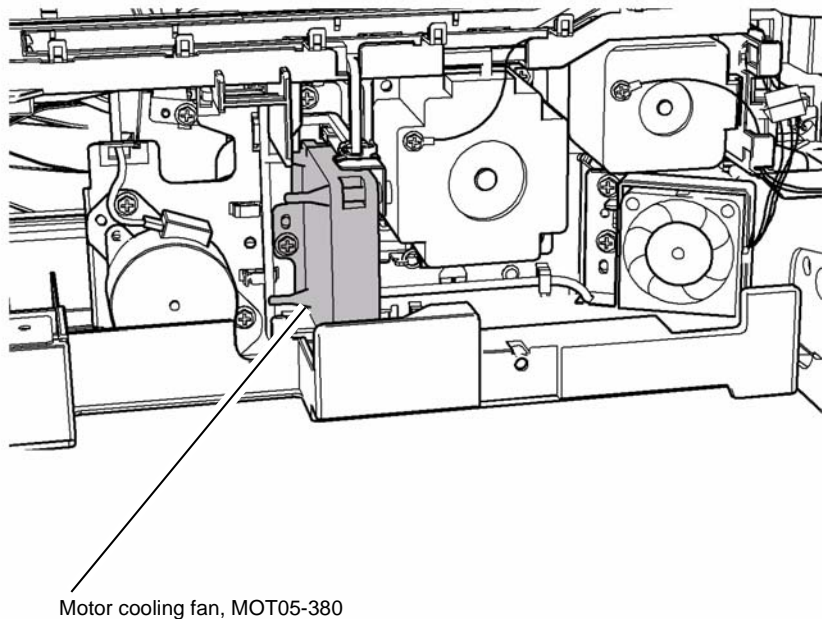
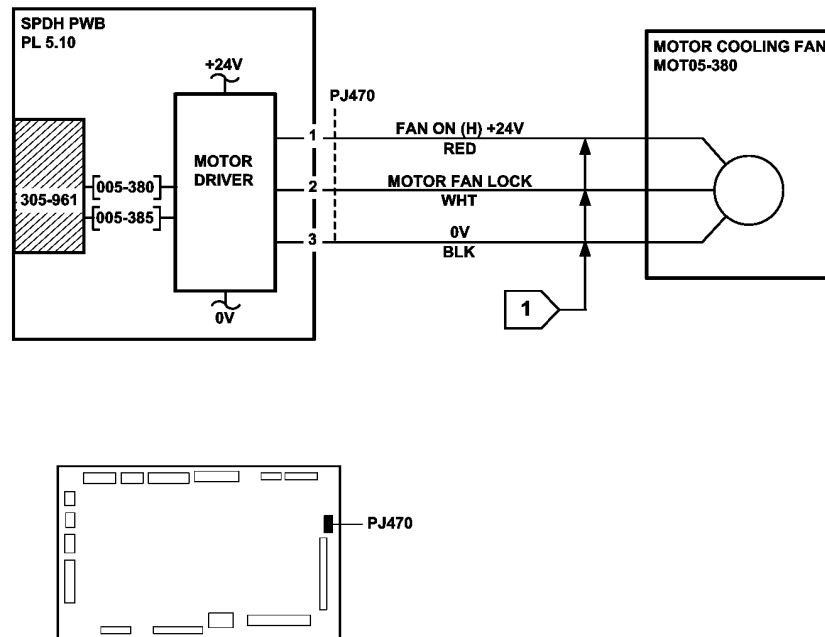


Figure 1 Component location

W-1-0017-A



SPDH PWB

Figure 2 Circuit diagram

TW-1-0015-A

## 305-962-00 SPDH Feed Sensor Adjustment Error RAP

305-962-00 An error occurred during the automatic adjustment of the feed 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.

Open the SPDH top cover, PL 5.10 Item 8. Insert a strip of paper over the mirror for the feed sensor. Close the SPDH top cover. Enter dC330, code 005-330, DH feed sensor, Q05-330, Figure 1. Actuate Q05-330 by moving the paper strip on and off of the mirror. The display changes.

Y N  
Go to Flag 1. Check Q05-330.

Refer to:

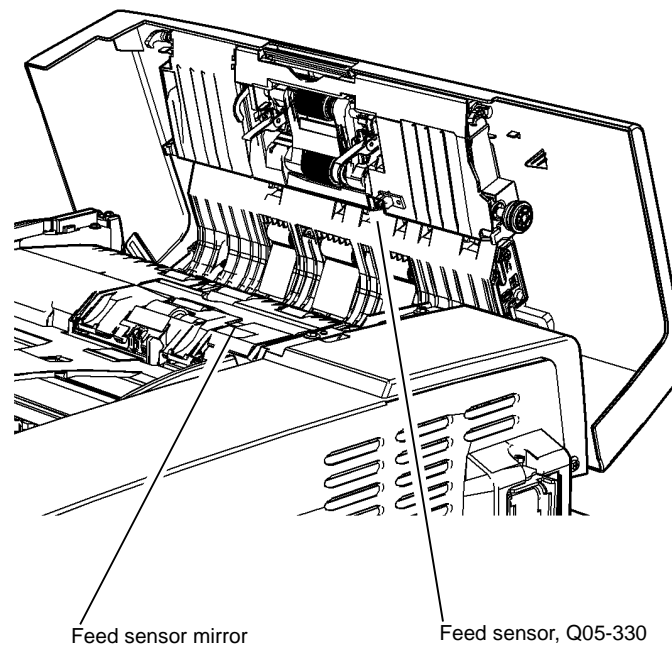
- GP 38 How to Check an Adaptive Sensor.
- P/J465, SPDH PWB.
- 301D +3.3V Distribution RAP.

Install new components as necessary:

- Feed sensor, PL 5.20 Item 10.
- SPDH PWB, PL 5.10 Item 5.

Clean the feed sensor mirror, Figure 1. Switch off, then switch on the machine, GP 14. If the fault persists, install new components:

- Feed sensor, PL 5.20 Item 10.
- SPDH PWB, PL 5.10 Item 5.



W-1-0018-A

Figure 1 Component location

## 305-963-00 SPDH Takeaway Sensor Adjustment Error RAP

305-963-00 An error occurred during the automatic adjustment of the takeaway 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.

Open the SPDH top cover, PL 5.10 Item 8. Insert a strip of paper over the mirror for the takeaway sensor. Close the SPDH top cover. Enter dC330, code 005-335, takeaway sensor, Q05-335, Figure 1. Actuate Q05-335 by moving the paper strip on and off of the sensor mirror.

The display changes.

Y N

Go to Flag 1. Check Q05-335.

Refer to:

- GP 38 How to Check an Adaptive Sensor.
- P/J465, SPDH PWB.
- 301D +3.3V Distribution RAP.

Install new components as necessary:

- Takeaway sensor, PL 5.20 Item 10.
- SPDH PWB, PL 5.10 Item 5.

Clean the takeaway sensor mirror, Figure 1. Switch off, then switch on the machine, GP 14. If the fault persists, install new components:

- Takeaway sensor, PL 5.20 Item 10.
- SPDH PWB, PL 5.10 Item 5.

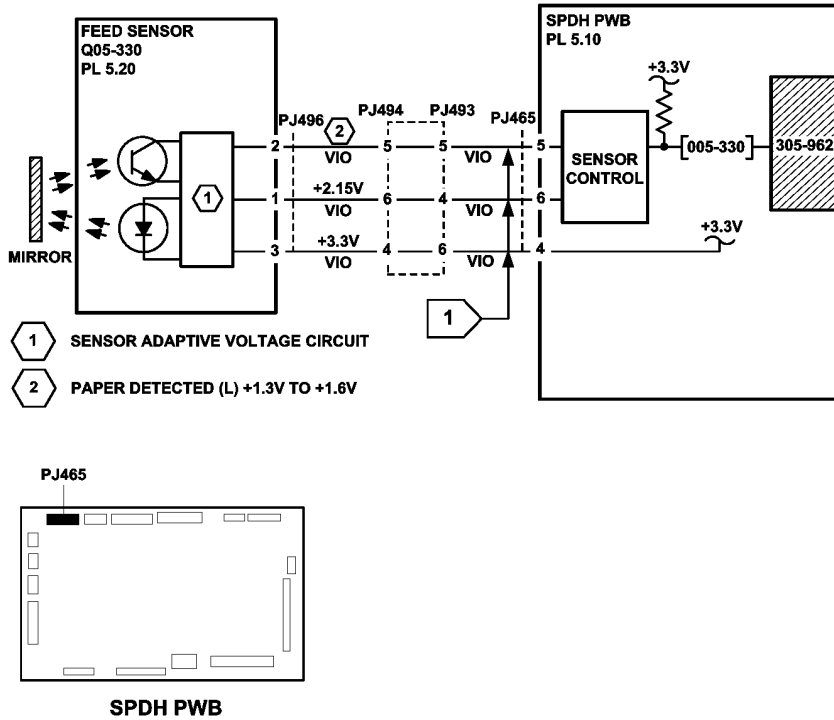


Figure 2 Circuit diagram

TW-1-0016-A

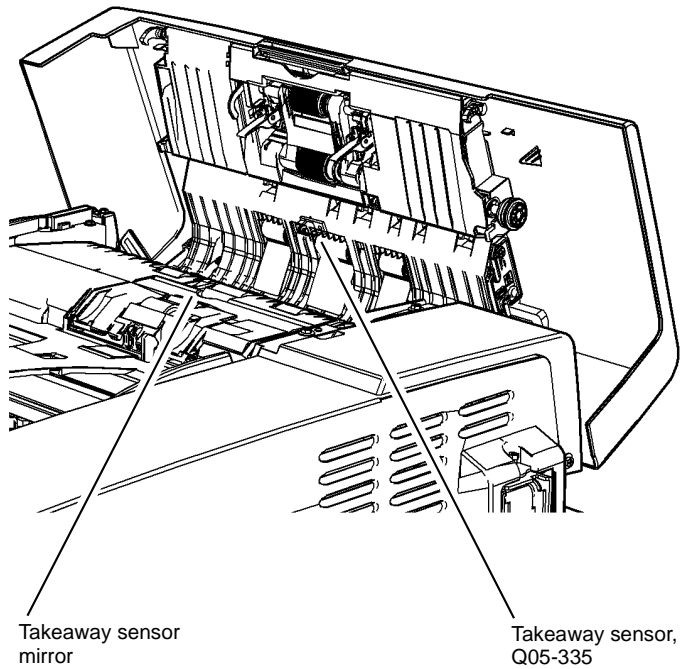


Figure 1 Component location

W-1-0019-A

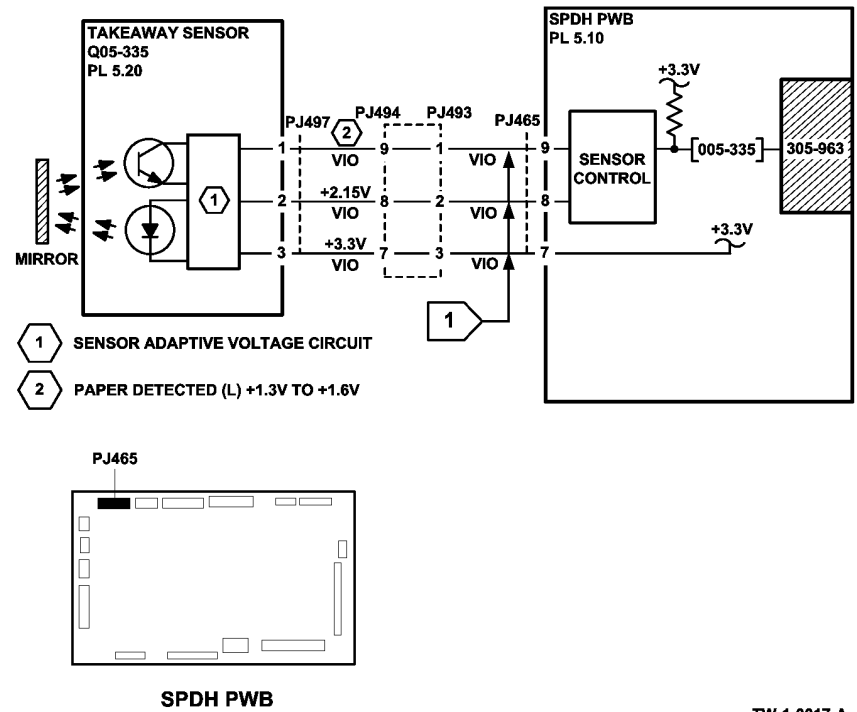


Figure 2 Circuit diagram

TW-1-0017-A

## 305-964-00 SPDH Reg Sensor Adjustment Error RAP

305-964-00 An error occurred during the automatic adjustment of the registration 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 005-340, reg sensor, Q05-340, [Figure 1](#). Actuate Q05-340 using a strip of paper. **The display changes.**

Y N

Go to [Flag 1](#). Check Q05-340.

Refer to:

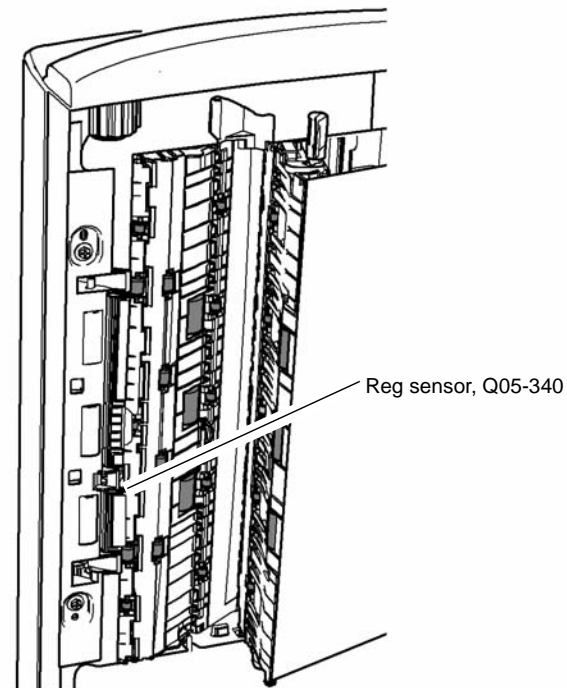
- [Figure 1](#).
- [GP 38](#) How to Check an Adaptive Sensor.
- [P/J467](#), [SPDH PWB](#).
- [301D +3.3V](#) Distribution RAP.

Install new components as necessary:

- Reg sensor, [PL 5.18 Item 11](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Clean the reg sensor mirror, [Figure 1](#). Switch off, then switch on the machine, [GP 14](#). If the fault persists, install new components:

- Reg sensor, [PL 5.18 Item 11](#).
- SPDH PWB, [PL 5.10 Item 5](#).



W-1-0020-A

Figure 1 Component location

## 305-965-00 SPDH Side 2 Reg Sensor Adjustment Error RAP

**305-965-00** An error occurred during the automatic adjustment of the side 2 registration 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 005-343, side 2 reg sensor, Q05-343. Open the SPDH. Open and close the jam clearance baffle to actuate Q05-343, [Figure 1](#). The display changes.

Y N

Go to [Flag 1](#). Check Q05-343.

Refer to:

- [GP 38](#) How to Check an Adaptive Sensor.
- [P/J466](#), [SPDH PWB](#).
- [301D](#) +3.3V Distribution RAP.

Install new components as necessary:

- Side 2 reg sensor, [PL 60.30](#) [Item 8](#).
- [SPDH PWB](#), [PL 5.10](#) [Item 5](#).

Clean the side 2 reg sensor mirror, [Figure 1](#). Switch off, then switch on the machine, [GP 14](#). If the fault persists, install new components:

- Side 2 reg sensor, [PL 60.30](#) [Item 8](#).
- [SPDH PWB](#), [PL 5.10](#) [Item 5](#).

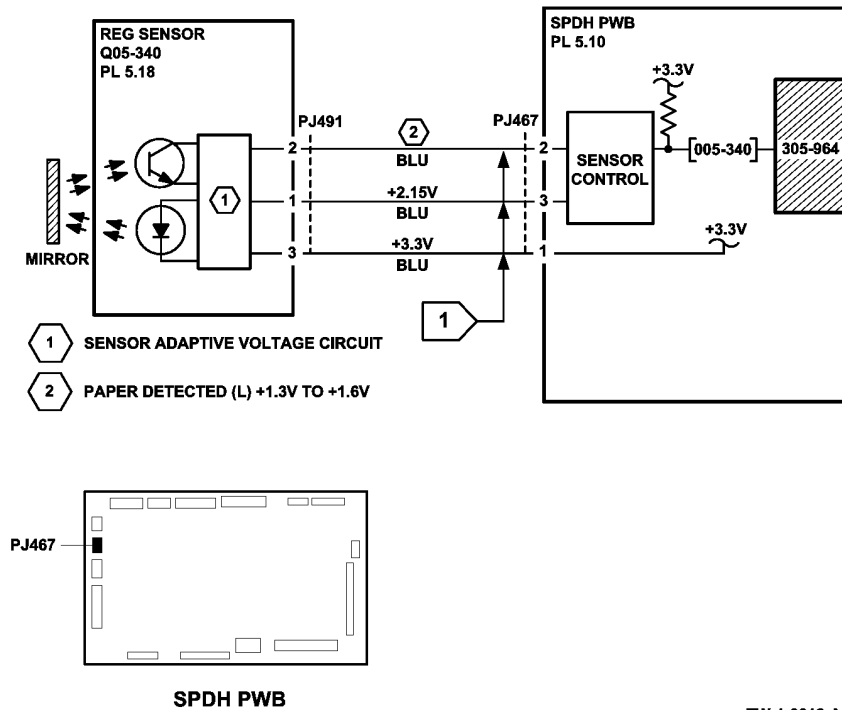


Figure 2 Circuit diagram

TW-1-0018-A

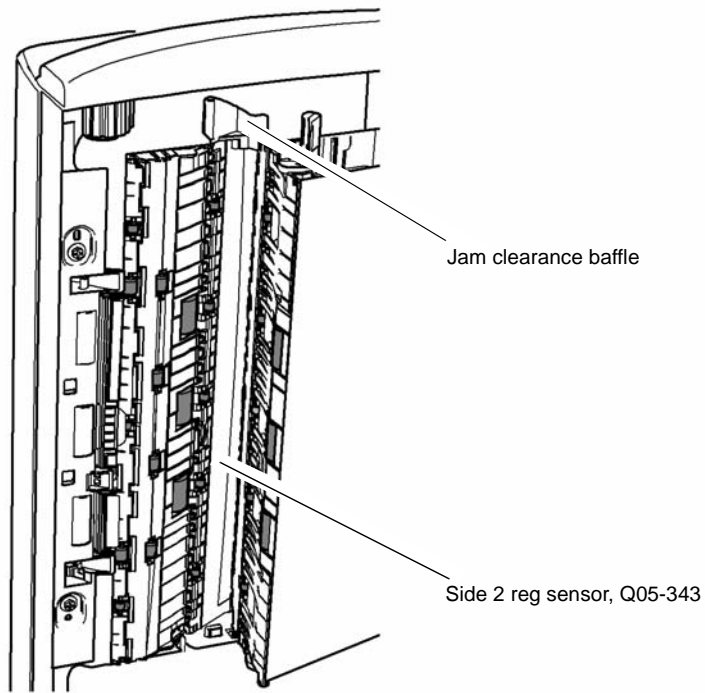


Figure 1 Component location

W-1-0021-A

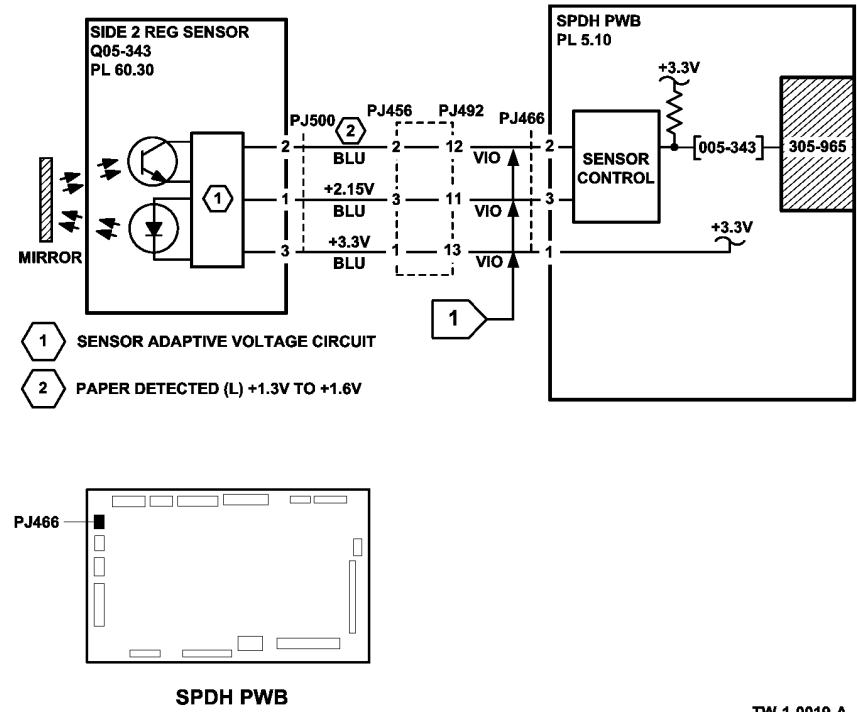


Figure 2 Circuit diagram

TW-1-0019-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.

### 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 that the machine is not positioned below a bright light.
- Remove all documents from the SPDH and input tray.
- Ensure that the sensors and the area around the sensors are clean.

### Procedure

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.
- [P/J462, 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 9](#). Actuate Q05-320. **The display changes.**

Y N

Go to [Flag 2](#). Check Q05-320.

Refer to:

- [GP 11](#) How to Check a Sensor.
- [P/J462, SPDH PWB](#).
- [301D](#) +3.3V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Length sensor 2, [PL 5.30 Item 9](#).
- 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.
- [P/J463, 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.
- [P/J463, 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.
- [P/J463, 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](#).

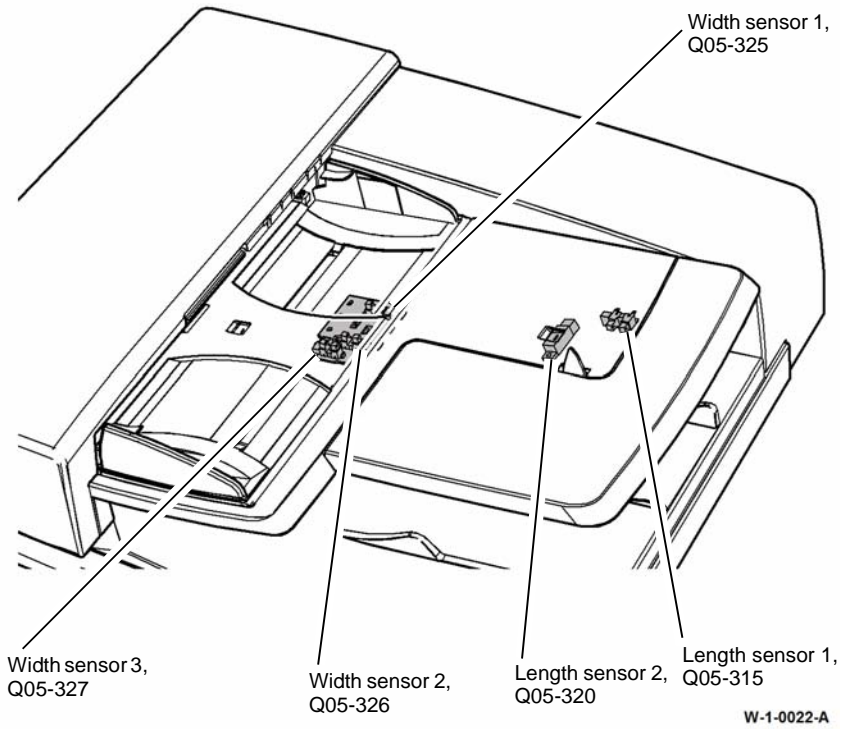
Enter **dC131**. Check that the IIT SPDH NVM parameters that follow are set to the default values:

- 800-007, Detect Paper Size 1.
- 800-008, Detect Paper Size 2.

Install new components as necessary:

- SPDH PWB, [PL 5.10 Item 5](#).
- SPDH input tray assembly, [PL 5.30 Item 1](#).

A



**Figure 1 Component location**

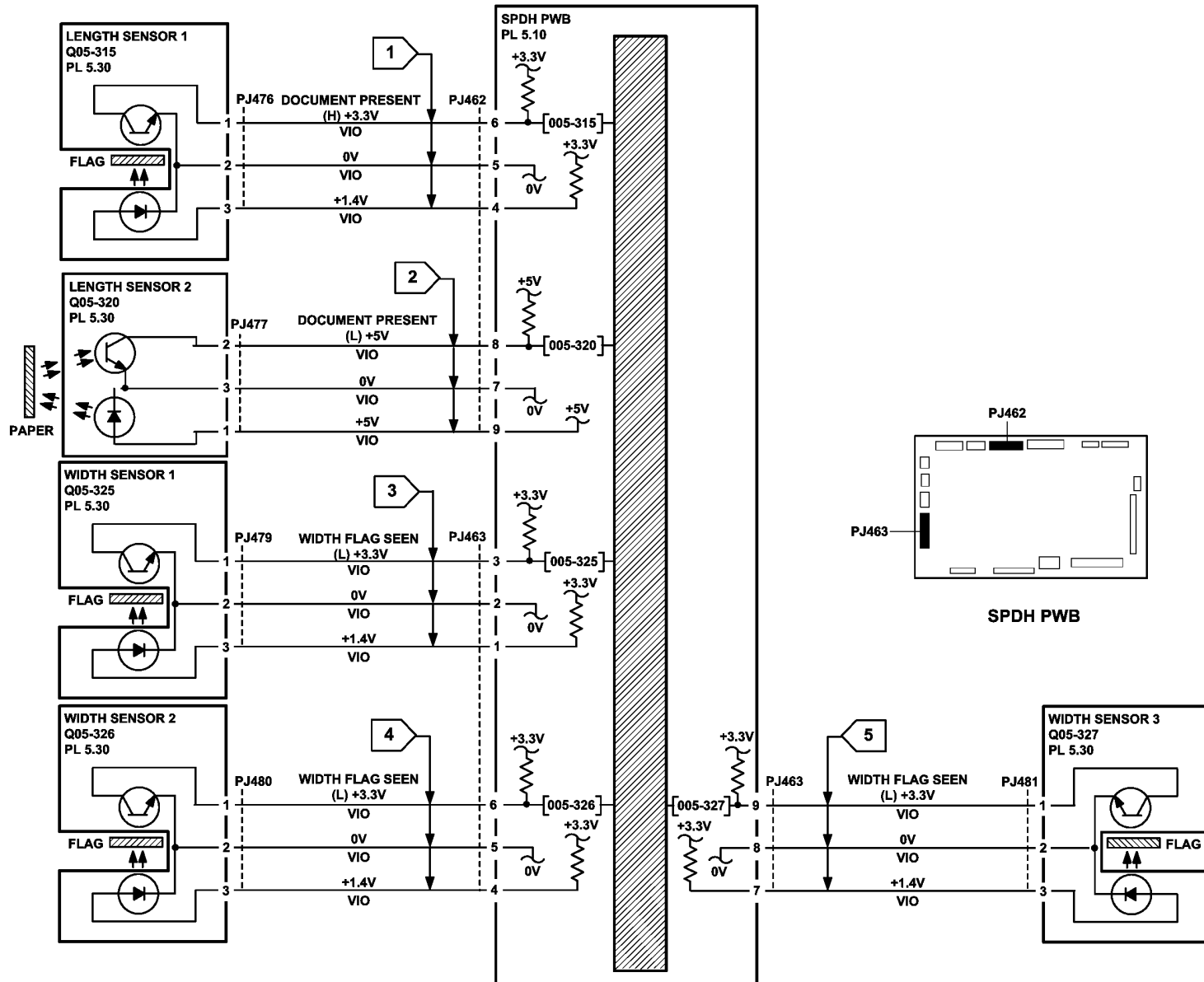


Figure 2 Circuit diagram

TW-1-0020-A

## 305B Last Sheet Out Sensor Failure RAP

Use this RAP if the message 'Due to a system error all scanned jobs have been deleted' is displayed during a scanning or copying job.

### 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.

- Remove all documents from the SPDH and input tray.
- Ensure that:
  - The machine is not positioned below a bright light.
  - The sensors and the area around the sensors are clean.
  - There is nothing placed on the top cover that could overhang the input tray.

### Procedure

Enter [dC330](#), code 005-308 to check the last sheet out sensor, Q05-308, [PL 5.30 Item 9](#). Actuate Q05-308. **The display changes.**

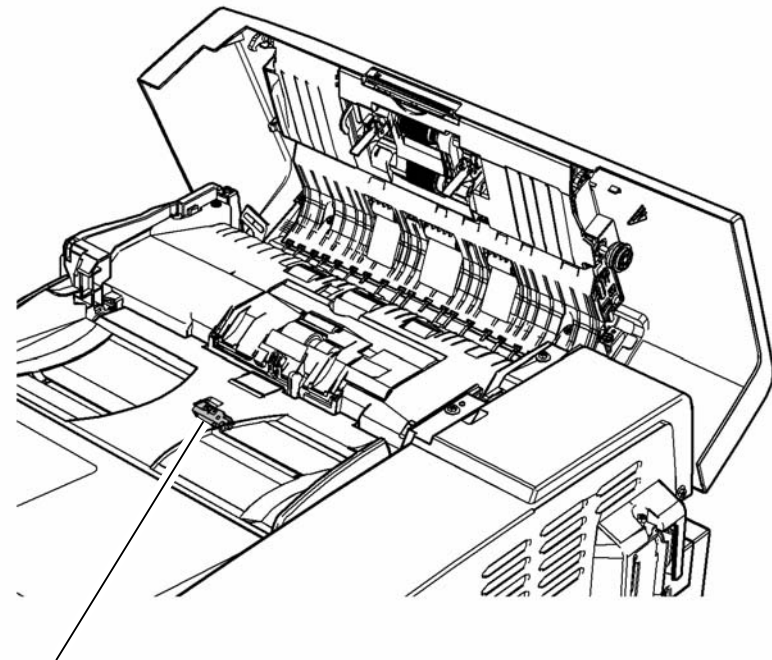
**Y N**  
Go to [Flag 1](#). Check Q05-308.  
Refer to:

- [Figure 1](#).
- [GP 11](#) How to Check a Sensor.
- [P/J463, SPDH PWB](#).
- [301D](#) +3.3V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Last sheet out sensor, [PL 5.30 Item 18](#).
- SPDH PWB, [PL 5.10 Item 5](#).

Perform [SCP 5](#) Final Actions.



Last sheet out sensor,  
Q05-308

W-1-0023-A

Figure 1 Component location

## 305C Document Present Failure RAP

Use this RAP when the SPDH behaves as follows:

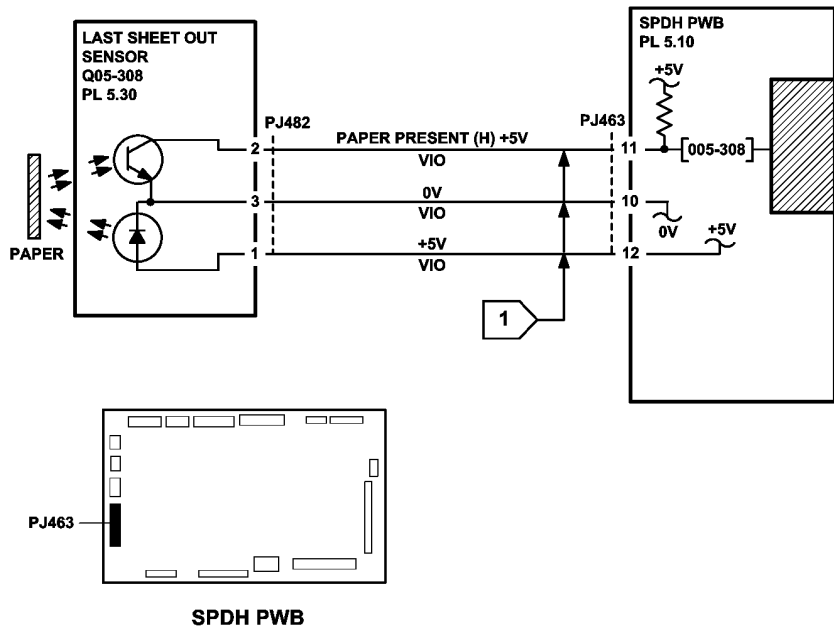
- The SPDH detects a document when a document is not present in the input tray during the startup procedure.
- The SPDH detects a document when a document is not present in the input tray after a jam.

**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](#).



TW-1-0021-A

Figure 2 Circuit diagram

## 305D Damaged Documents RAP

Use this RAP if the documents are damaged by the SPDH.

### Procedure

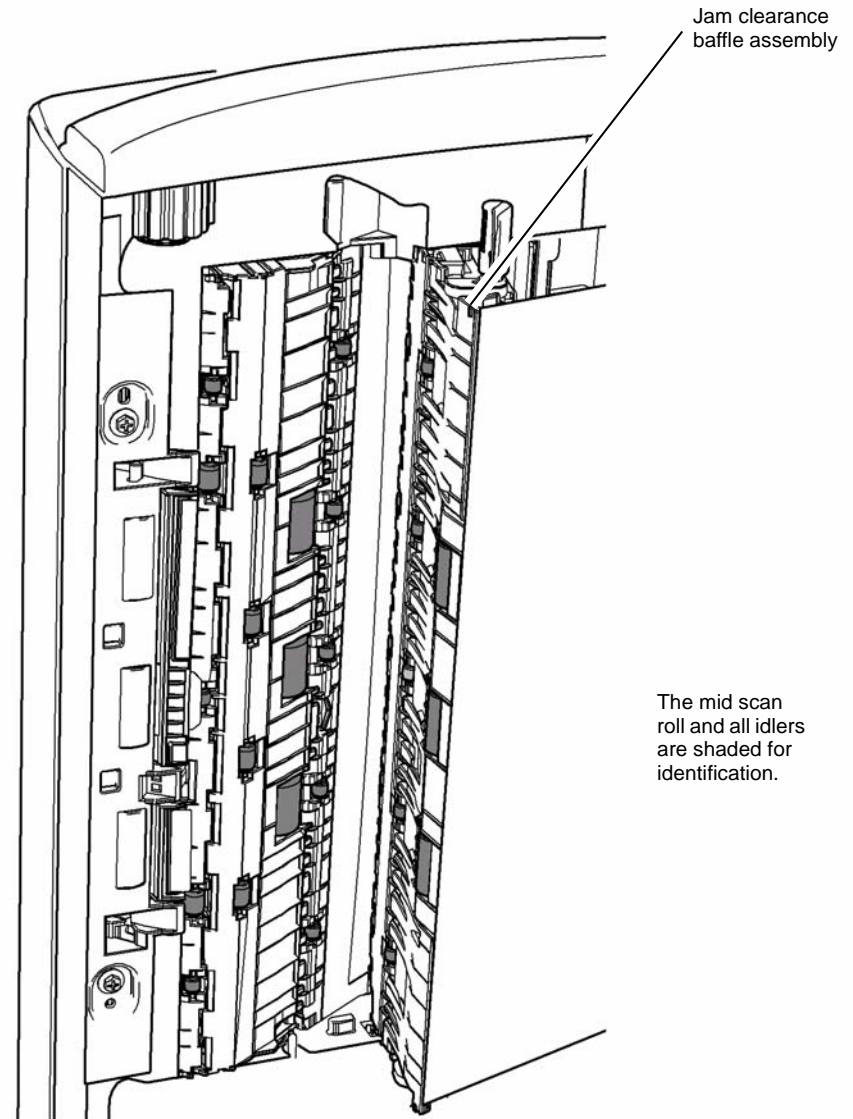


#### WARNING

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 5.2 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 5.4.
  - Check the feed roll, PL 5.20 Item 6, nudger roll, PL 5.20 Item 7 and retard roll, PL 5.25 Item 3 for contamination or damage, refer to ADJ 5.4 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 5.4 SPDH Cleaning Procedure.
5. Check the CVT ramp assembly for contamination or damage.
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 5.17. 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 5.4 SPDH Cleaning Procedure.
8. Ensure that the customer's documents are within the specification, refer to GP 20.



W-1-0024-A

Figure 1 Component location

## 310-153-00, 310-163-00 Lead Edge Late to Post Fuser Sensor

**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.

### 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:

- 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](#).
- For paper in the fuser module, [PL 10.8 Item 1](#).
- 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 paper path for obstructions.
- That the left door latches correctly.
- 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](#).
- [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.**

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](#).

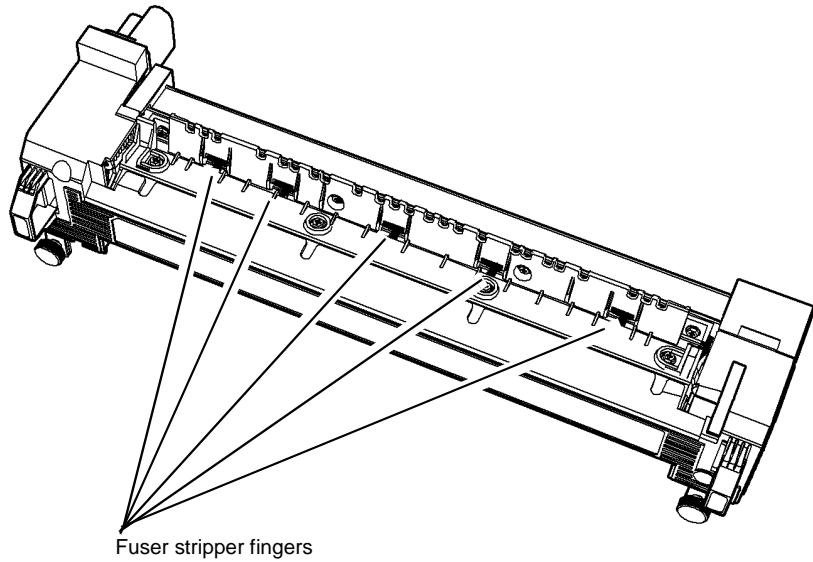
A

B

B

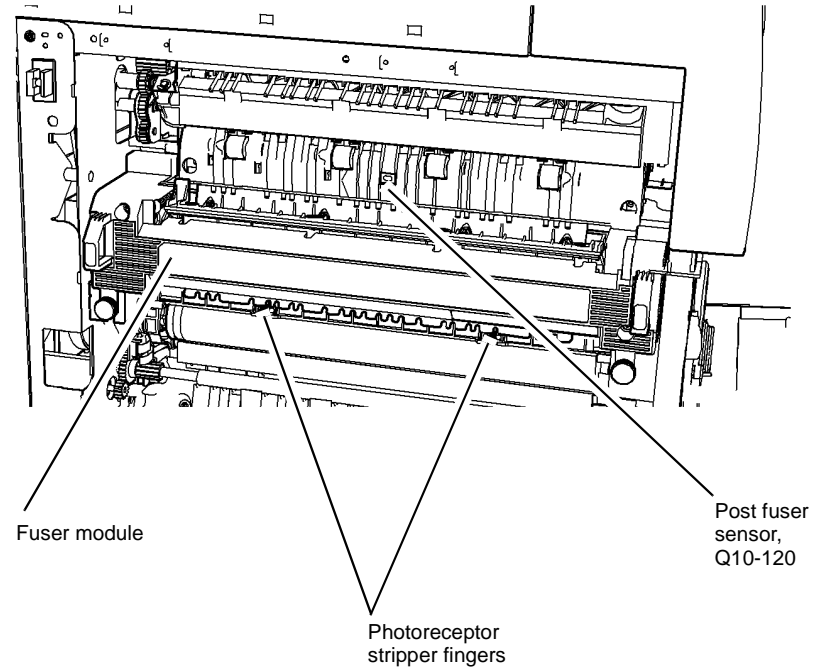
- Registration roll, [PL 80.17 Item 6](#).
  - Registration drive gear, [PL 80.17 Item 3](#).
  - Track (DTS), [PL 90.10 Item 6](#), from the detack saw to the HVPS.
- If the fault persists, perform the [381A Paper Feed Retries RAP](#).

Perform the [381-155-00 Lead Edge Late to Registration Sensor from the Bypass Tray RAP](#).



W-1-1081-A

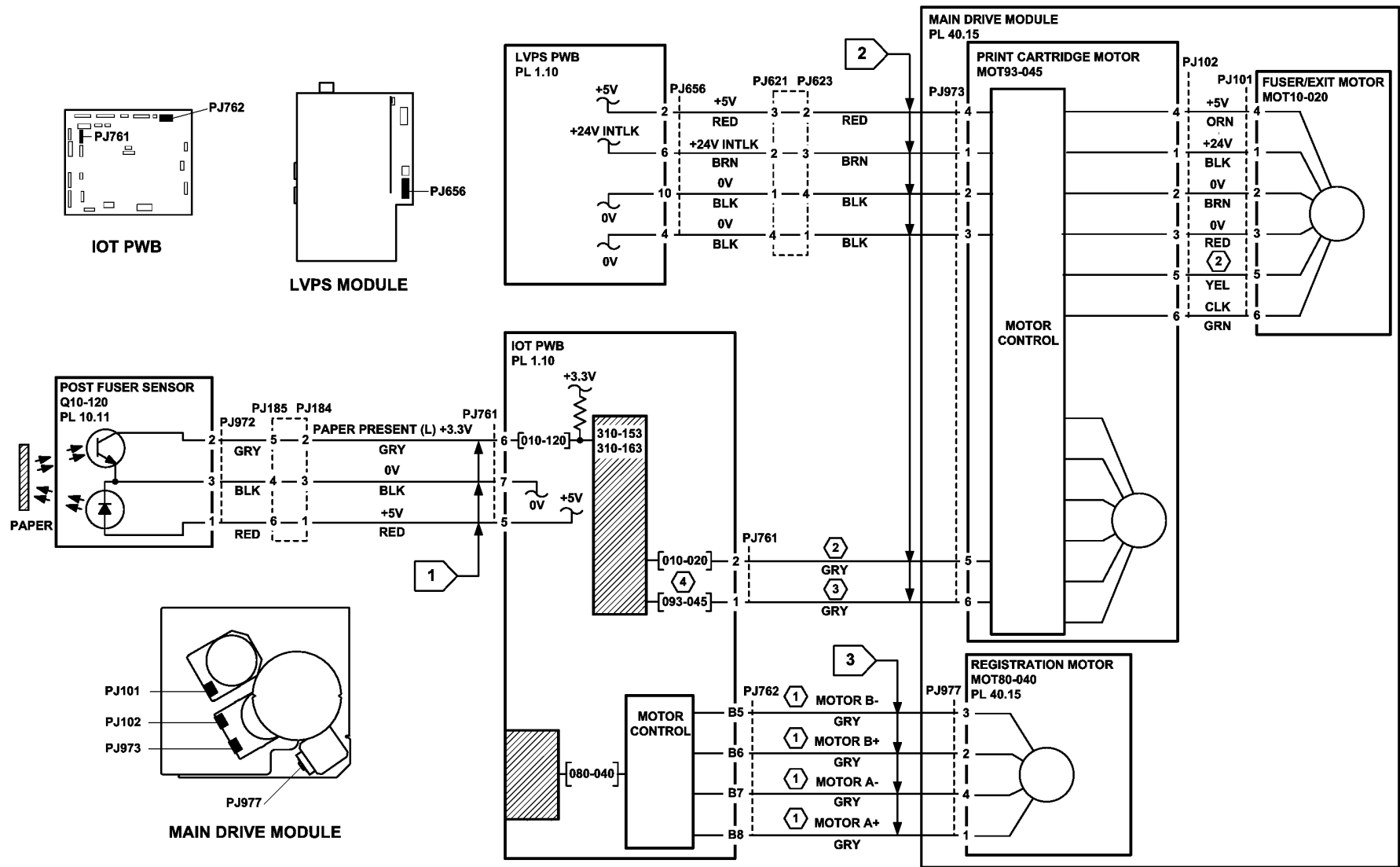
Figure 1 Component location



W-1-1080-A

Figure 2 Component location





- ① MOTOR ON PULSES (H) +24V
- ② FUSER ENABLE (L) +5V
- ③ PRINT CARTRIDGE ENABLE (L) +5V
- ④ 010-020 FUSER MOTOR 093-045 PRINT CARTRIDGE MOTOR

TW-1-0280-A

Figure 3 Circuit diagram

## 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.

### 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:

- 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.
- For paper in the fuser module, [PL 10.8 Item 1](#).
- 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 horizontal transport, [PL 10.15 Item 1](#) for obstructions.
- The horizontal transport top cover, [PL 10.15 Item 11](#) latches correctly.
- The centre output tray, [PL 28.10 Item 9](#) for obstructions.
- 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.
- [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 10.12 Item 8](#). **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:

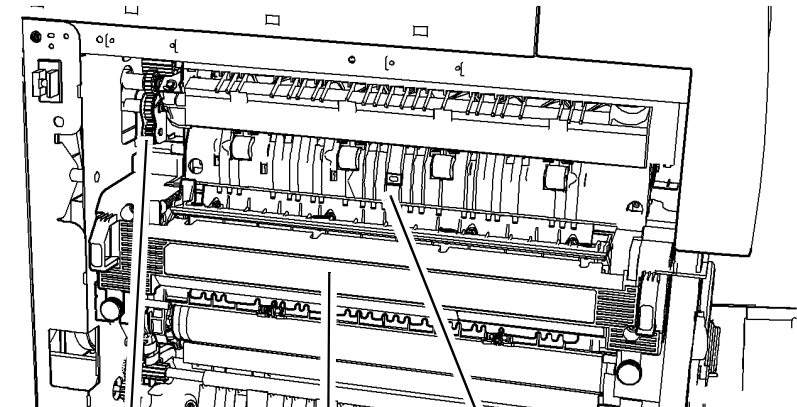
- Inverter motor, **PL 10.11 Item 9** (centre output tray) or **PL 10.12 Item 8** (horizontal transport).
- Drive belt, **PL 10.11 Item 4** (centre output tray) or **PL 10.12 Item 4** (horizontal transport).

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

Refer to **GP 7**. Check the components that follow:

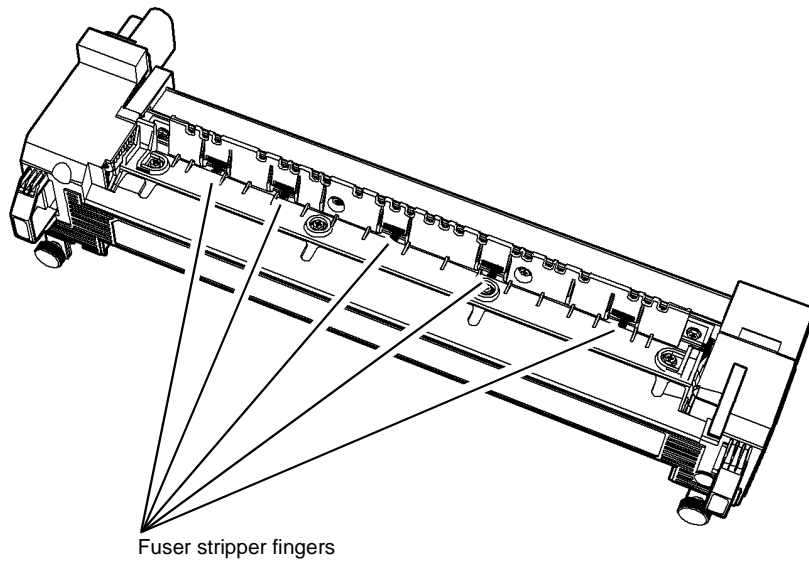
- Post fuser roll, **PL 80.22 Item 12**.
- Horizontal transport assembly, **PL 10.15 Item 1**.
- Inverter assembly, **PL 10.10 Item 1**.

If the fault persists, perform the **381A** Paper Feed Retries RAP.



Exit drive gears Fuser module Post fuser sensor, Q10-120

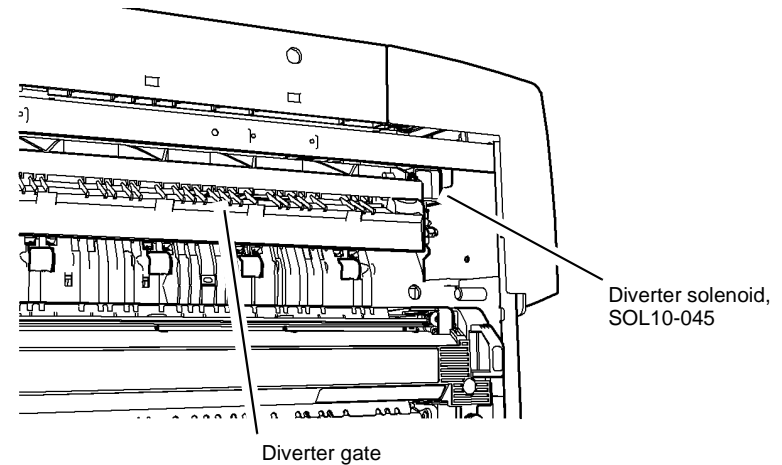
Figure 2 Component location



Fuser stripper fingers

W-1-1090-A

Figure 1 Component location

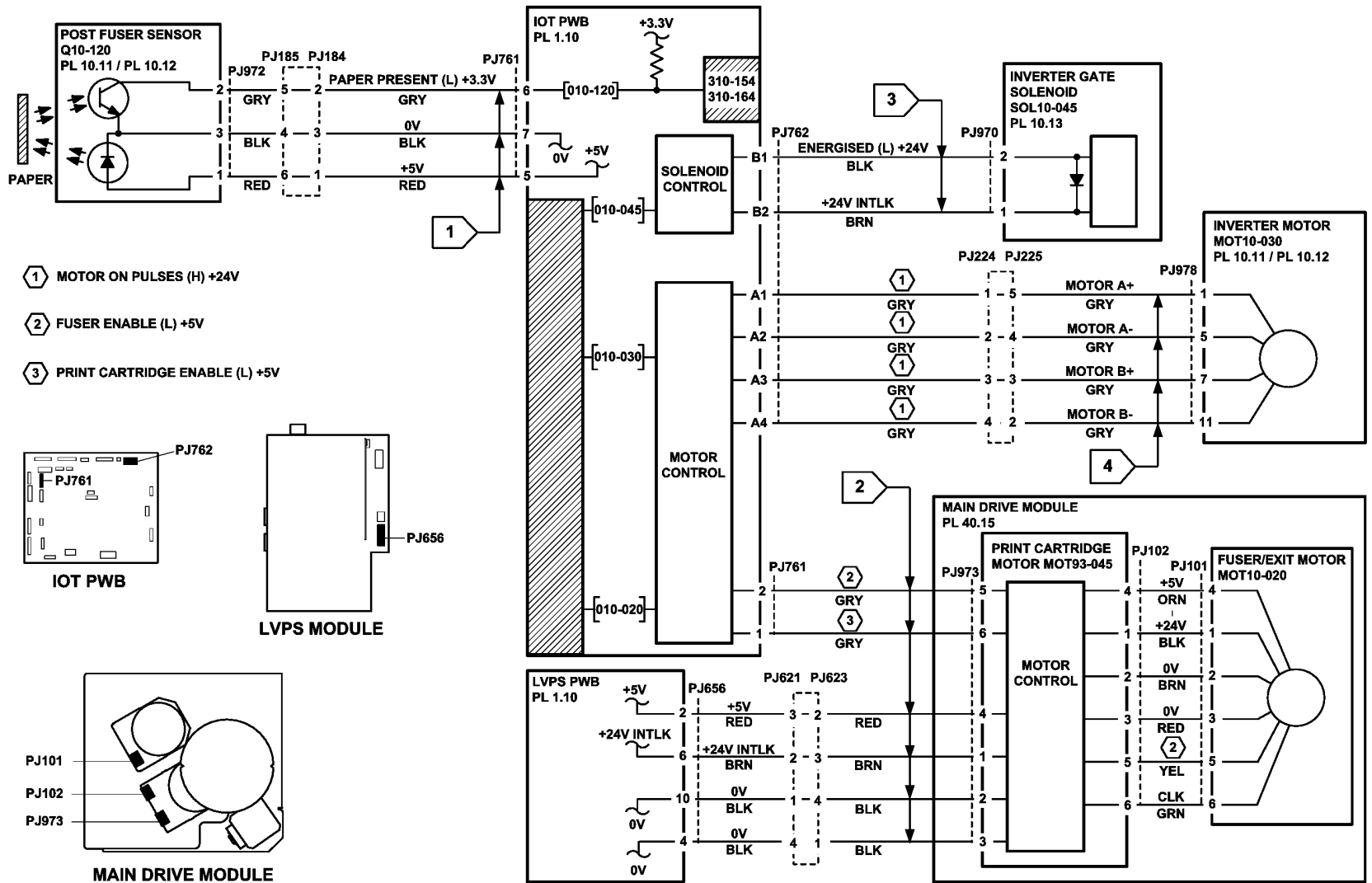


Diverter solenoid, SOL10-045

Diverter gate

W-1-1092-A

Figure 3 Component location



TW-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.

### 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:

- 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.
- That the horizontal transport top cover, [PL 10.15 Item 11](#) latches correctly.
- For paper in the fuser module, [PL 10.8 Item 1](#).
- 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](#).

### Procedure

**NOTE:** Ensure that the door interlock switches are cheated when checking +24V components.

Open the horizontal transport top cover. Enter [dC330](#) code 010-041, horizontal transport entry sensor, Q10-041, [PL 10.15 Item 8](#). 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 8](#).

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

**A**

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](#).

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.

**A**

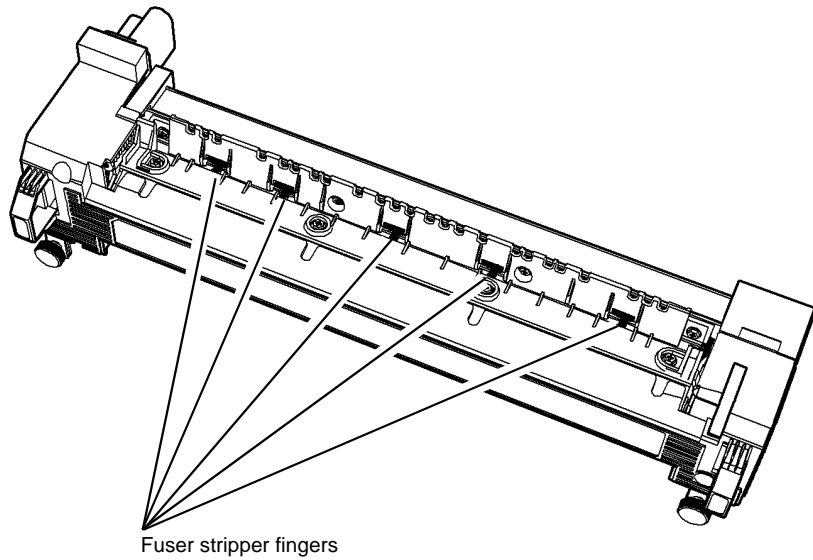


Figure 1 Component location

W-1-1093-A

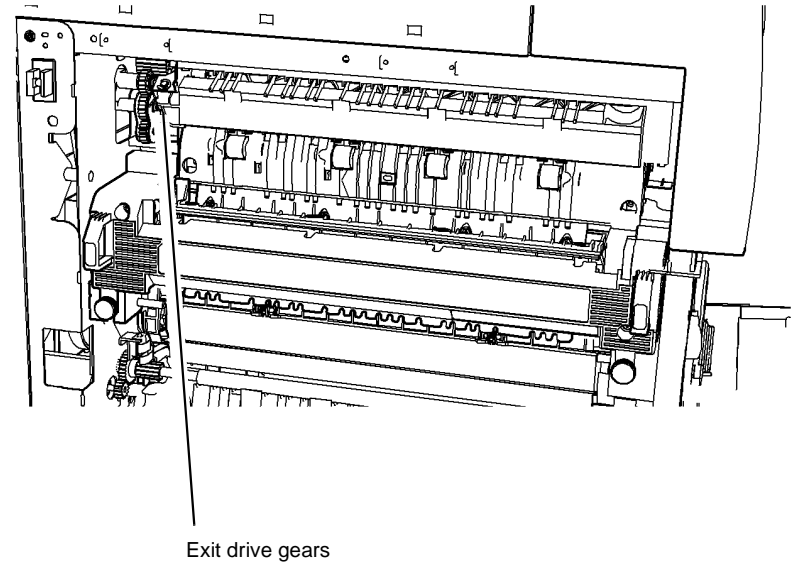


Figure 2 Component location

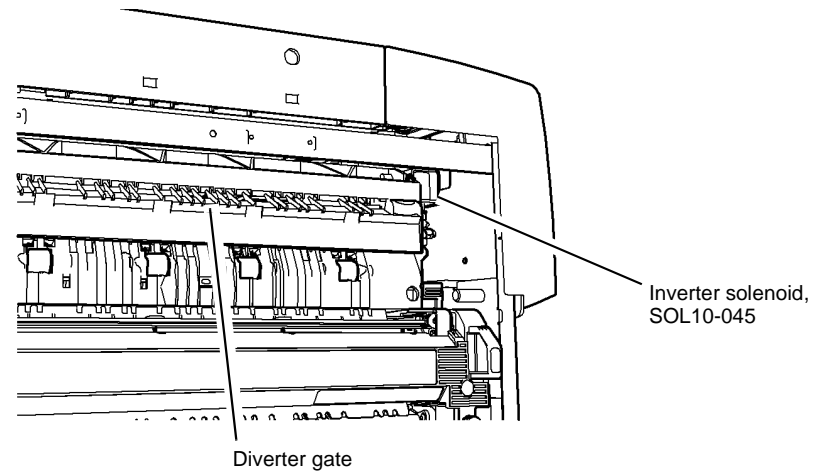
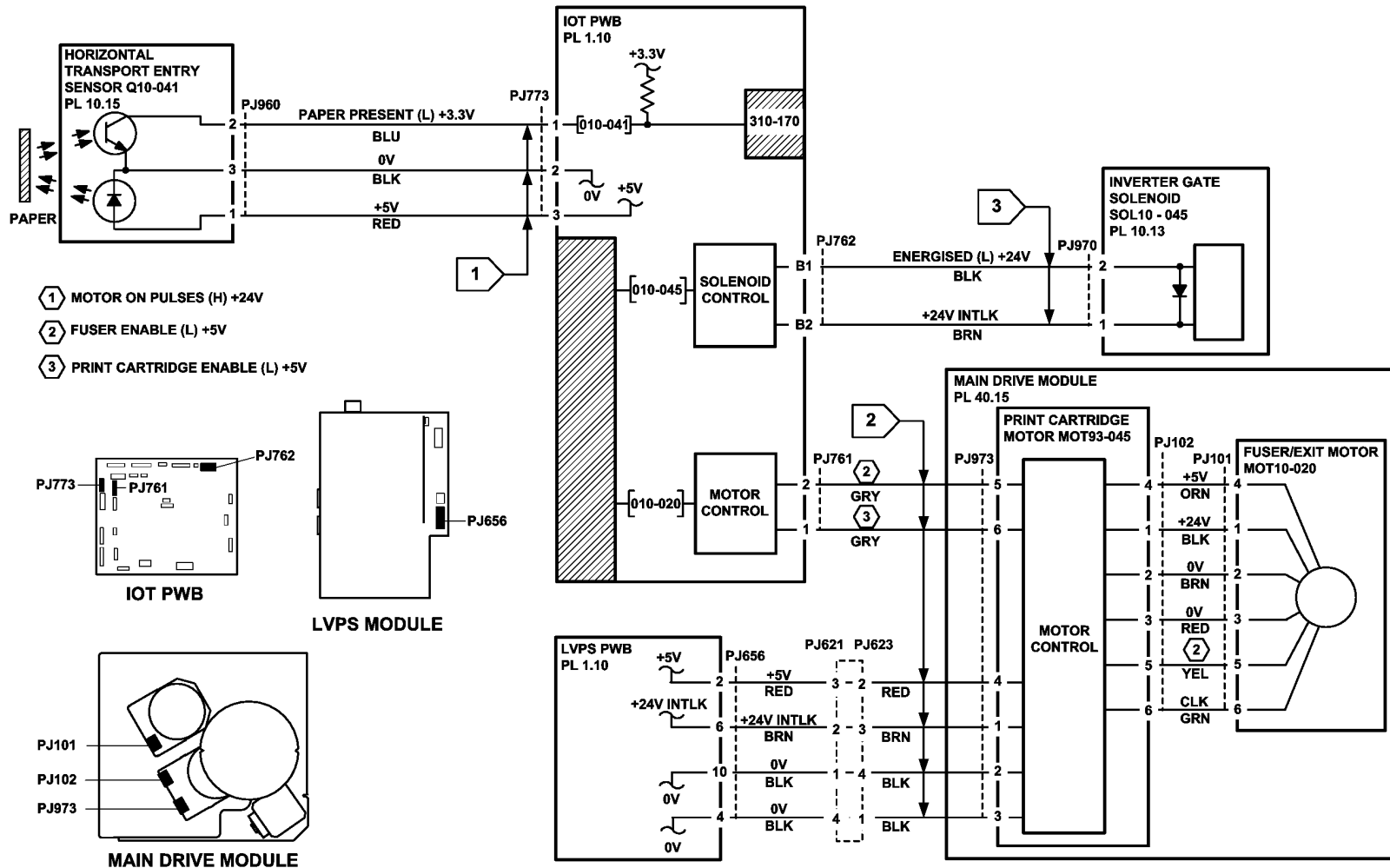


Figure 3 Component location

W-1-1094-A



TW-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.

### 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:

- 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.
- That the horizontal transport top cover, [PL 10.15 Item 11](#) latches correctly.
- The inverter assembly, [PL 10.10 Item 1](#) for obstructions.
- The paper for skew. Refer to [IQ8 Skew RAP](#).

### Procedure

**NOTE:** Ensure that the door interlock switches are cheated when checking +24V components.

Open the horizontal transport top cover. Enter [dC330](#) code 010-041, horizontal transport entry sensor, Q10-041, [PL 10.15 Item 8](#). 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 8](#).  
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](#). Open the horizontal transport top cover. 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 8](#).
- Horizontal transport rolls, [PL 10.16 Item 4](#).

- Transport roll pulleys, [PL 10.16 Item 7](#).
- 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.

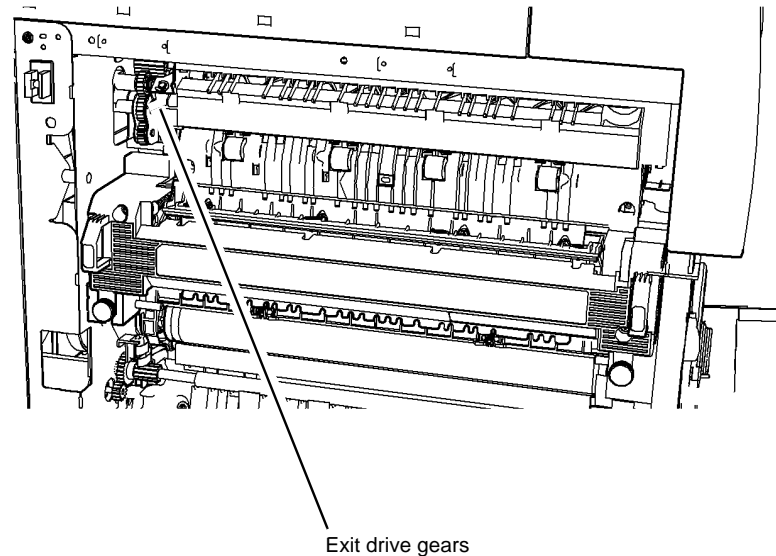
Check the components that follow:

- Exit roll, [PL 10.12 Item 16](#).
- Exit drive gear, [PL 10.12 Item 13](#).
- 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](#).

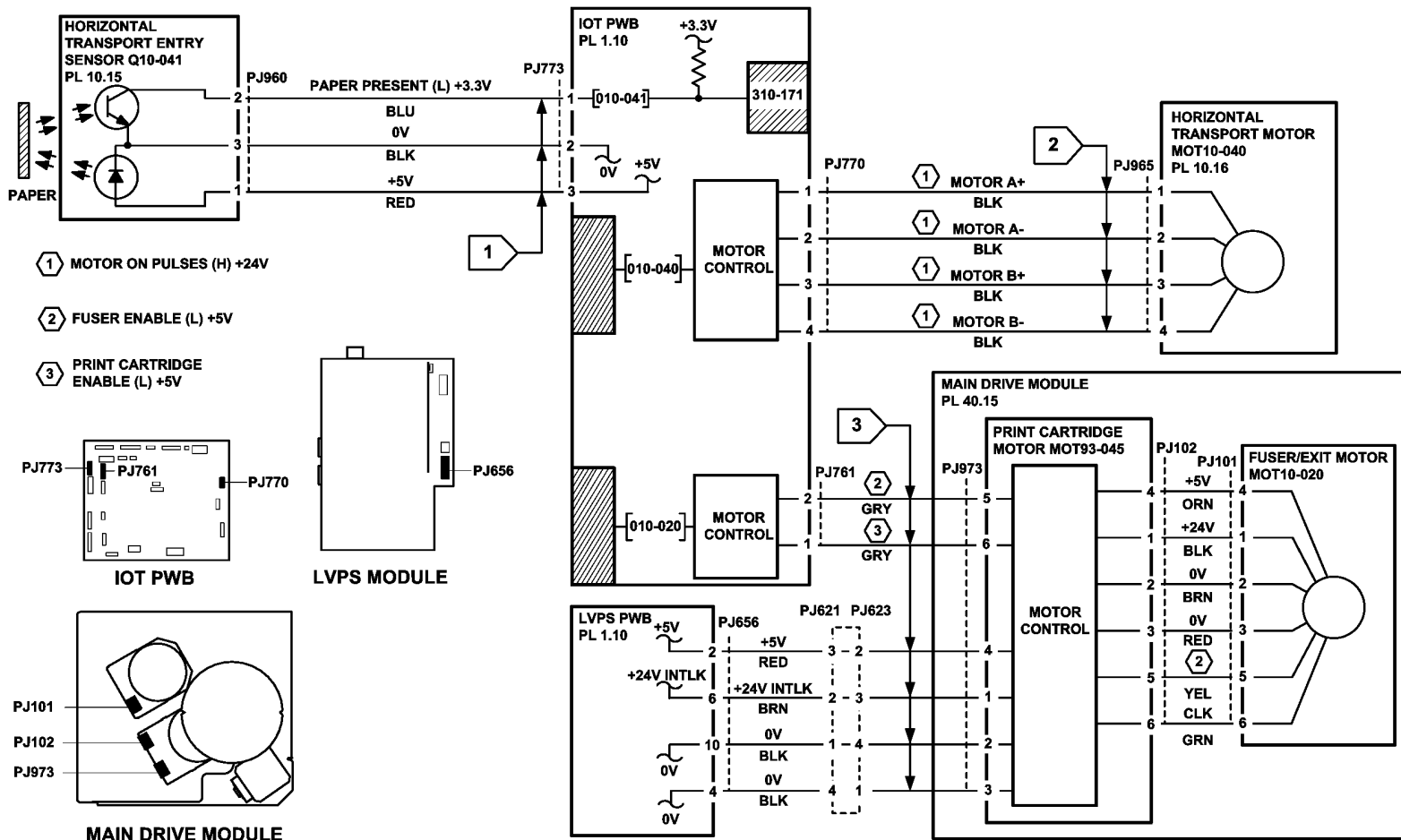
If the fault persists, perform [OF7](#) IOT PWB Diagnostics RAP and [301L](#) LVPS RAP.

If the fault persists, perform the [381A](#) Paper Feed Retries RAP.



**Figure 1** Component location





TW-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.

### 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.

- Press the **Machine Status** button. Select **Active Messages**. Refer to **OF4** Status Codes and Message RAP for the jam clearance procedure.
- Check for paper or paper fragments in the horizontal transport, **PL 10.15 Item 1**.
- Check for paper in the machine paper path at all the sensor locations.

### 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.

### 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.

- Press the **Machine Status** button. Select **Active Messages**. Refer to **OF4** Status Codes and Messages RAP for the jam clearance instruction.
- Check for paper or paper fragments in the locations that follow:
  - Fuser module, **PL 10.8 Item 1**.
  - Inverter assembly, **PL 10.10 Item 1**.
- Check for paper in the machine paper path at all the sensor locations.

### 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](#).

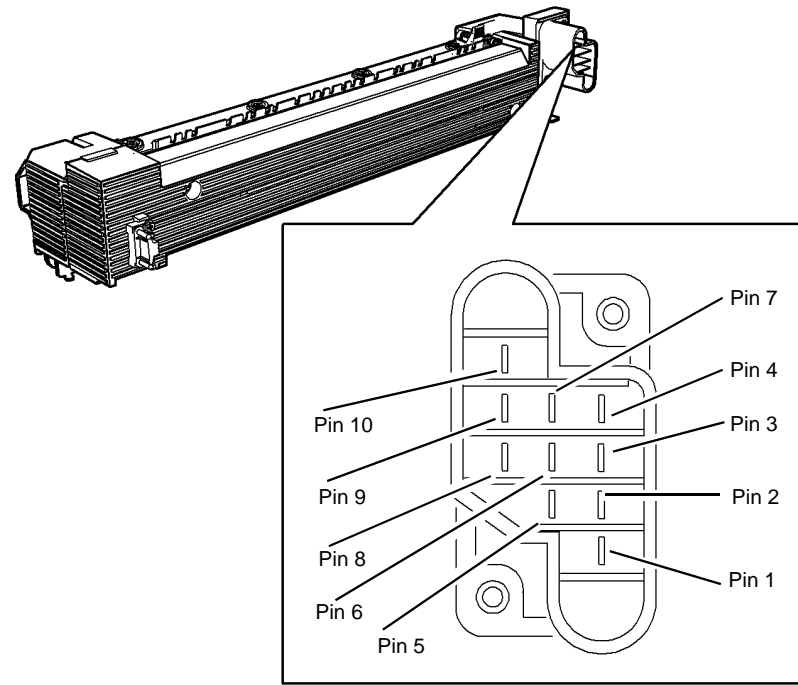
Before new components are installed, restore the NVM values to default.

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](#).

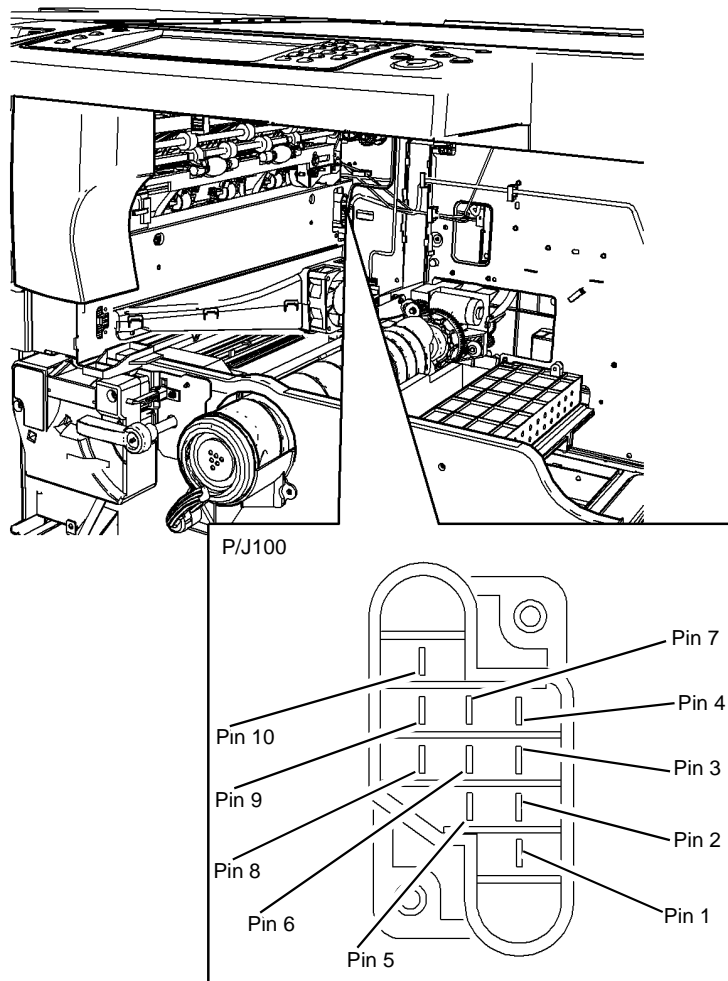
If the fault persists, install a new fuser module, [PL 10.8 Item 1](#).

Perform [SCP 5](#) Final Actions.



W-1-0959-A

**Figure 1 Component location**



W-1-0961-A

Figure 2 Component location

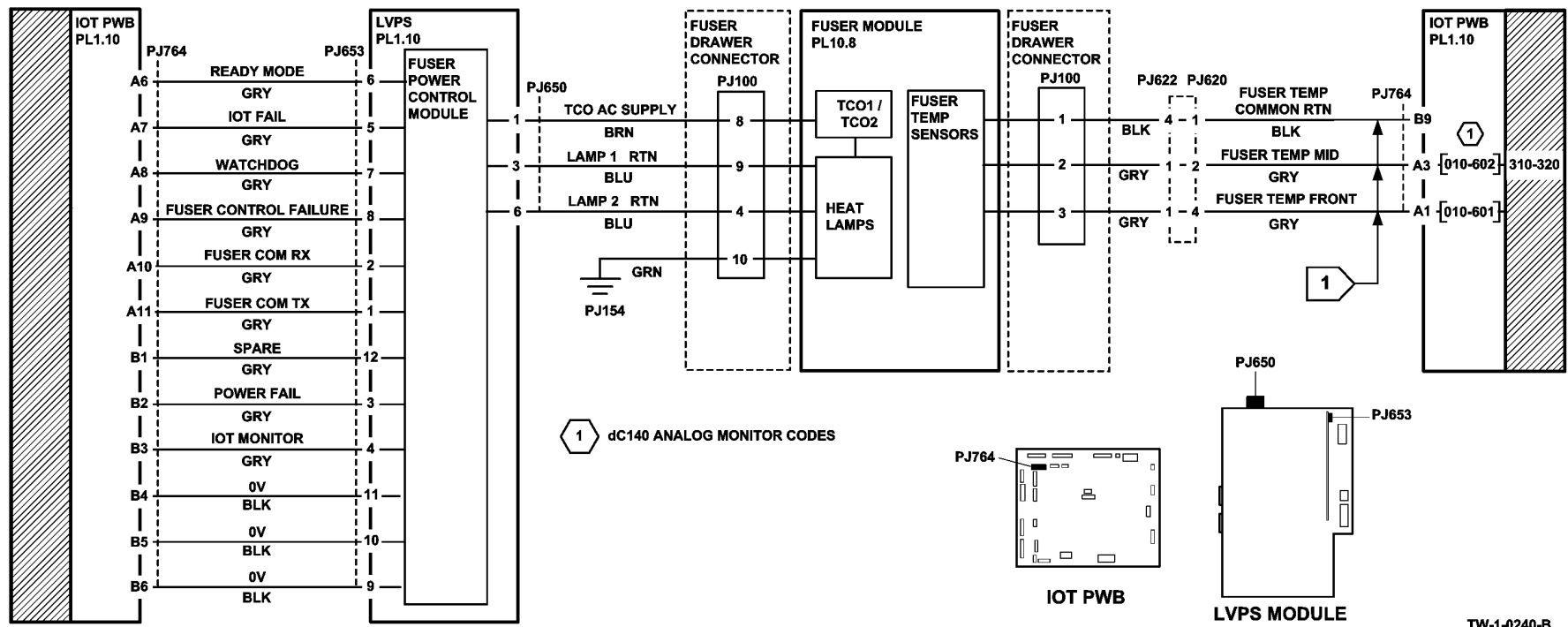


Figure 3 Circuit diagram

TW-1-0240-B

## 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.

### 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.

- Switch off, then switch on the machine, GP 14.
- 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 4.
- 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.



**WARNING**

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

**NOTE:** The voltage will be 100% of the ACL voltage when the machine is switched on from cold, and will pulse between 60% and 100% 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 4. 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.

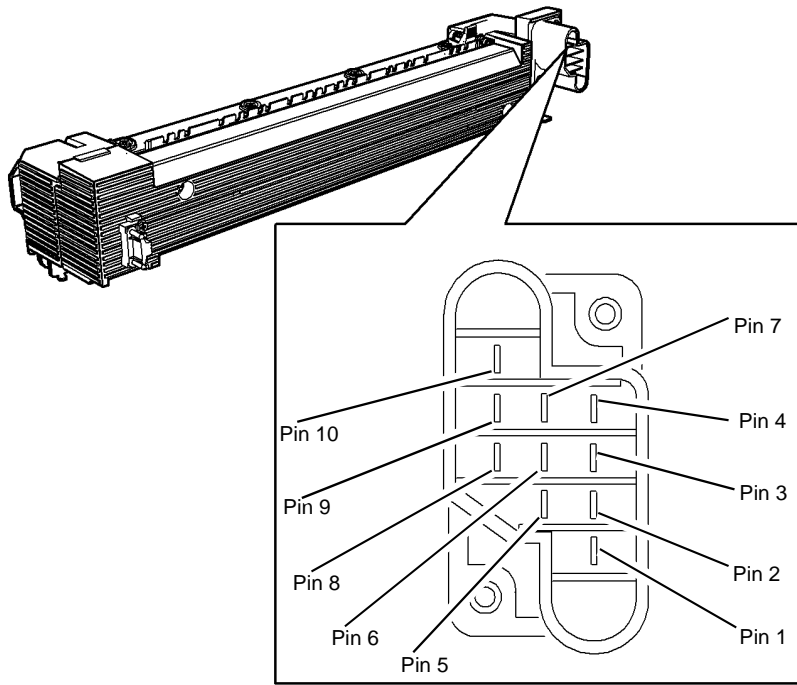
Y N

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.

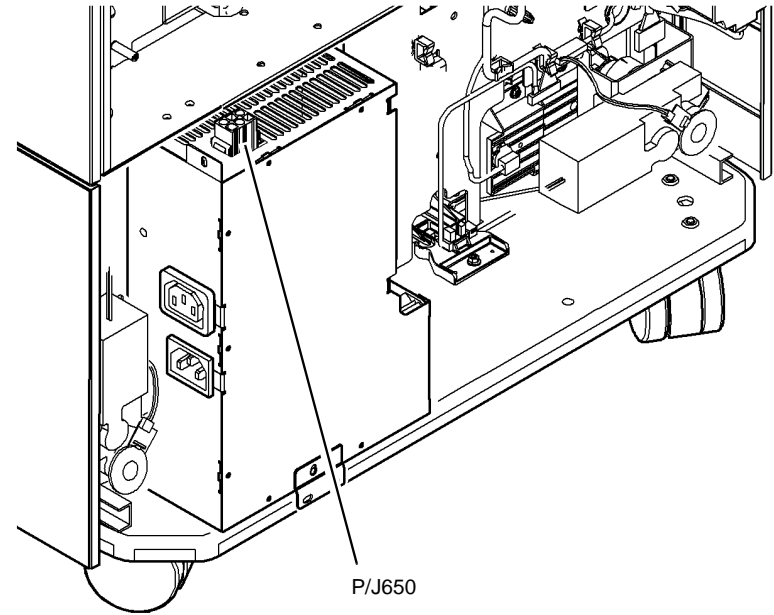
Perform the OF7 IOT PWB Diagnostics RAP. If the fault persists, install a new fuser module, PL 10.8 Item 1.

If the fault persists, install a new fuser module, PL 10.8 Item 1.



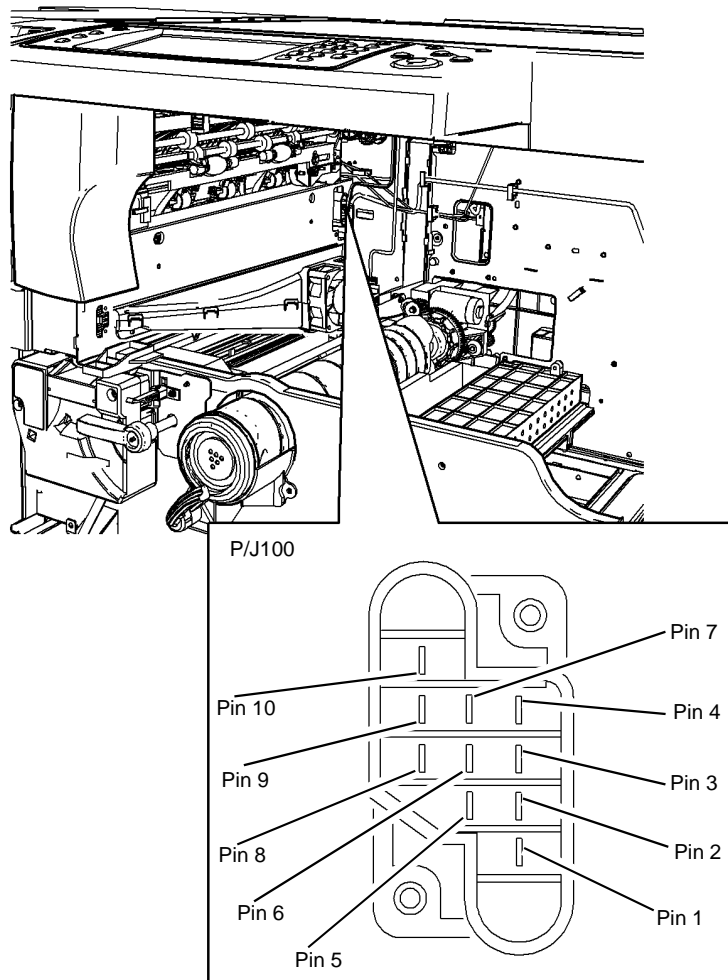
W-1-0960-A

Figure 1 Component location



W-1-0963-A

Figure 2 Component location



W-1-0962-A

Figure 3 Component location



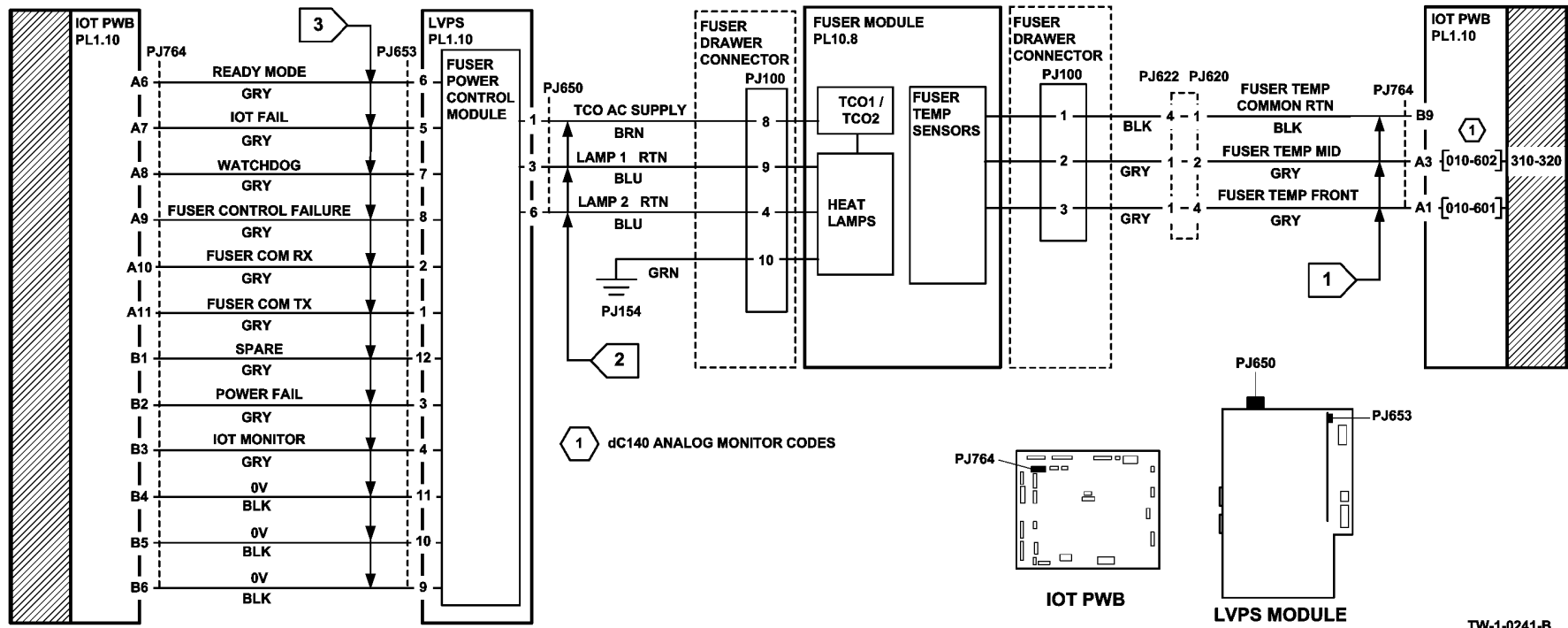


Figure 4 Circuit diagram

## 310-338-00 Horizontal Transport Interlock Open in Run RAP

310-338-00 The horizontal transport top cover was opened during machine 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.

Enter dC330 code 010-042, horizontal transport interlock, Q10-042, Figure 1. Open and close the jam clearance cover. The display changes.

**Y N**  
Go to Flag 1. Check Q10-042.

Refer to:

- GP 11, How to Check a Sensor.
- P/J773, IOT PWB.
- 301E +5V and +5VSB Distribution RAP.
- 301B 0V Distribution RAP.

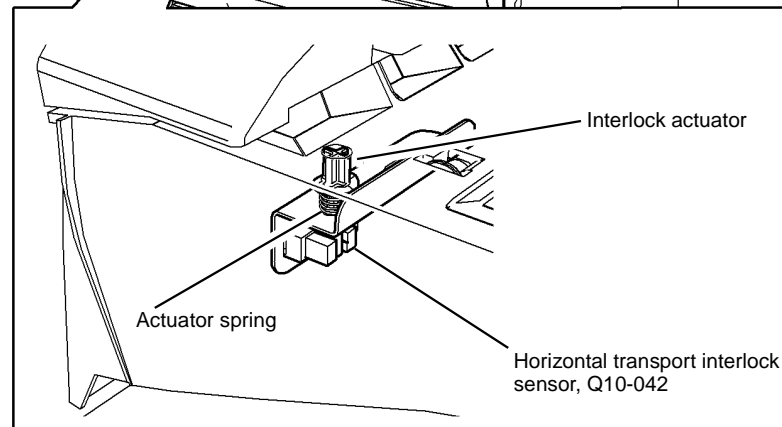
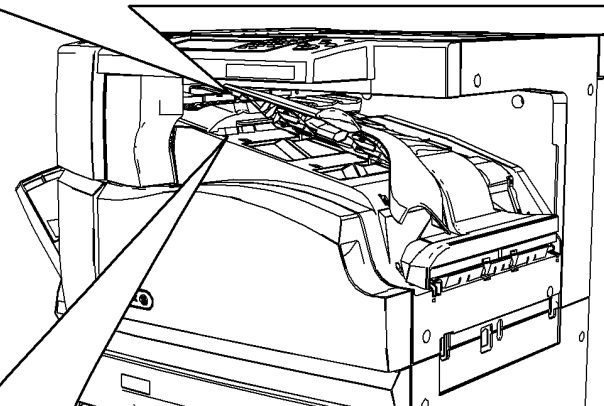
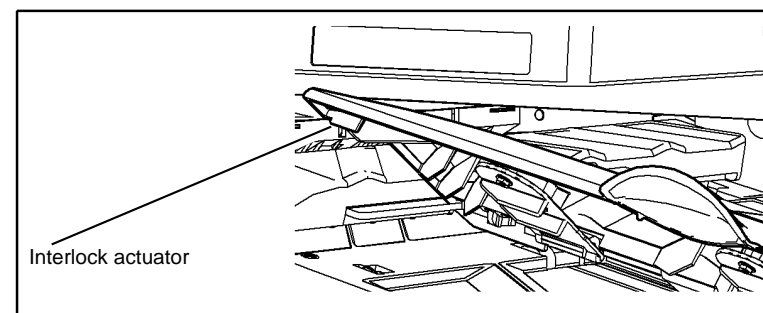
If necessary, install a new horizontal transport interlock sensor, PL 10.15 Item 16.

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

Check that the jam clearance cover closes correctly. Refer to Figure 1. Check the items that follow:

- The interlock actuator on the jam clearance cover.
- The interlock actuator and spring.
- The jam clearance cover left hinge, PL 10.15 Item 4 and jam clearance cover right hinge, PL 10.15 Item 5.

If necessary, install a new horizontal transport assembly, PL 10.15 Item 1.



W-1-1115-A

Figure 1 Component location

## 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.



**WARNING**

**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](#).

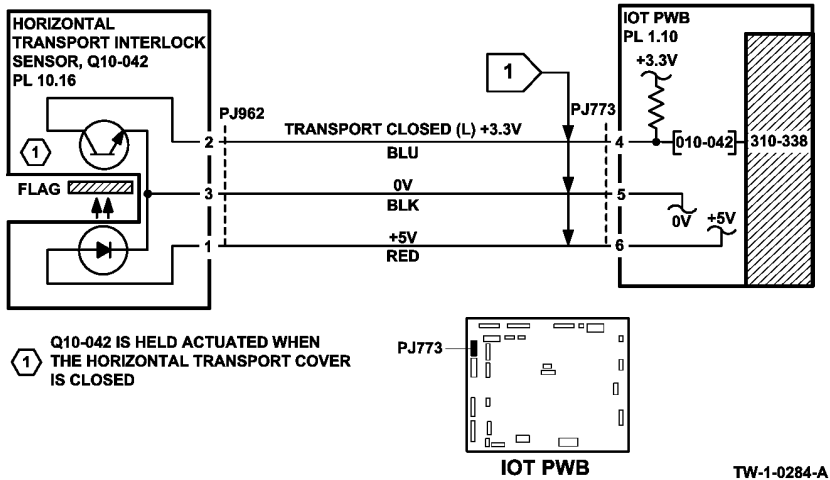


Figure 2 Circuit diagram

## 310-400-00 Fuser CRUM Communication Fault RAP

310-400-00 The fuser CRUM communications have 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.

- 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.

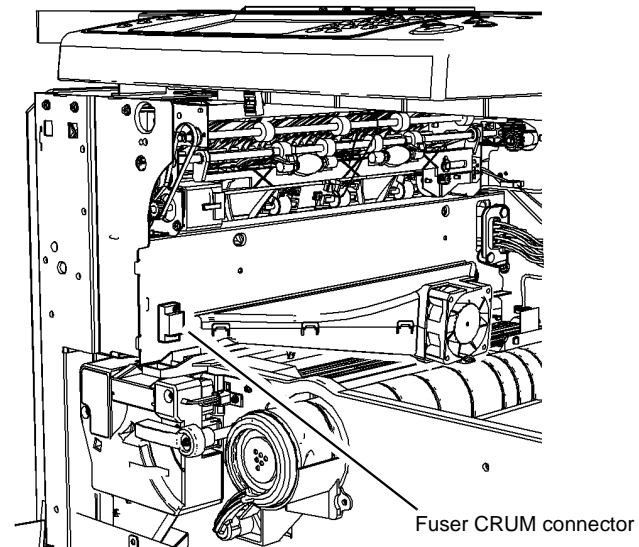
### Procedure



#### CAUTION

Remove the fuser module and print cartridge to prevent damage to the CRUMs when checking for continuity.

1. Ensure that P/J766 on the IOT PWB is correctly and securely connected.
2. Go to Flag 1. Check the harness, GP 7, and measure the voltages. Refer to:
  - 301B 0V Distribution RAP.
  - 301E +5V and +5VSB Distribution RAP.
3. Go to Flag 2. Check the items that follow:
  - The harness, GP 7. Repair as necessary, REP 1.2.
  - The fuser CRUM connector, Figure 1, for damage or contamination.
4. Go to Flag 3. Check the items that follow:
  - The harness, GP 7. Repair as necessary, REP 1.2.
  - The print cartridge CRUM connector, Figure 2, for damage or contamination.
5. Perform the OF7 IOT PWB Diagnostics RAP.
6. If the fault is intermittent, the cause may be due to electrical noise. Go to OF10 Intermittent Failure RAP.
7. Install new components as necessary:
  - Fuser module, PL 10.8 Item 1.
  - Print cartridge, PL 90.17 Item 9.



W-1-1074-A

Figure 1 Fuser CRUM connector location

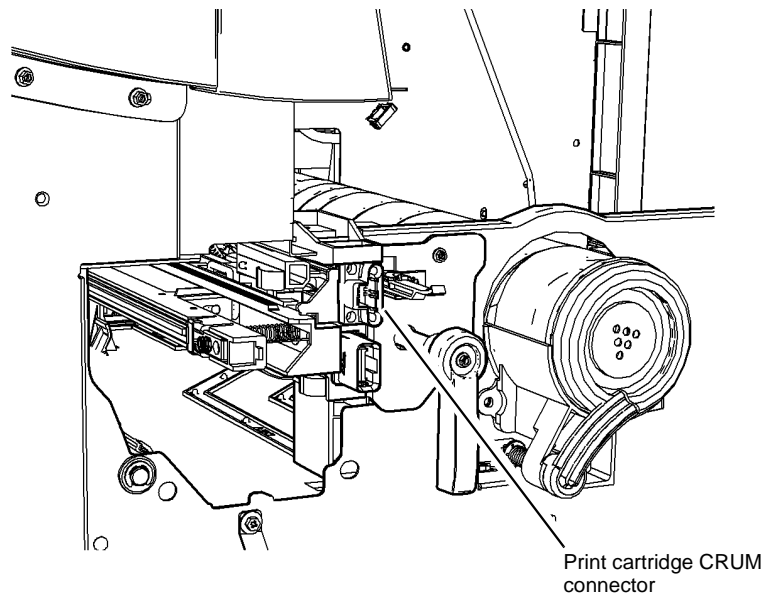


Figure 2 Print cartridge CRUM connector location

W-1-1075-A

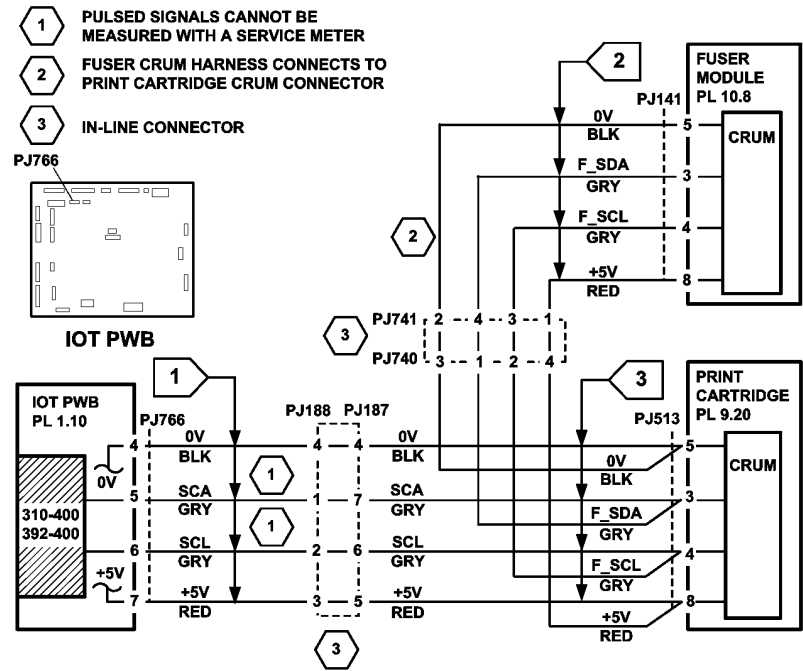


Figure 3 Circuit diagram

TW1-0275-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/J761](#), [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 28.1](#). 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:

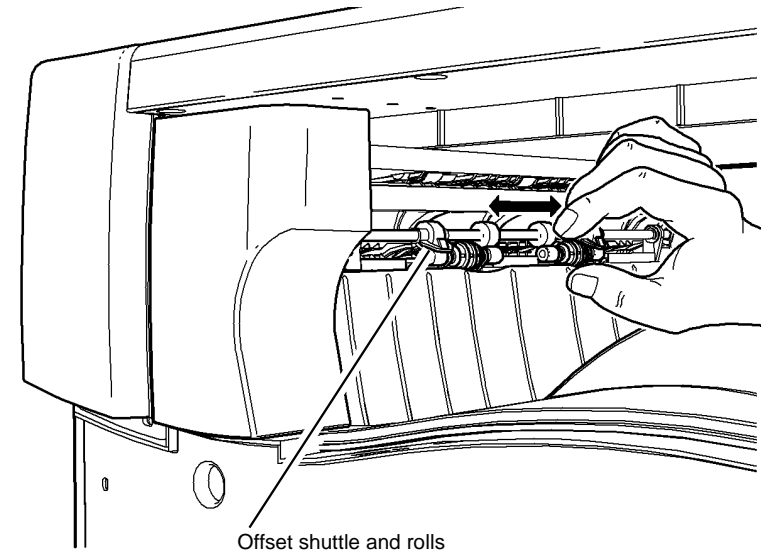
- [GP 10](#), How to Check a Motor.
- [P/J770](#), [IOT PWB](#).

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:

- Offset shuttle, [PL 10.11 Item 22](#).
- Inverter assembly, [PL 10.10 Item 1](#).



W-1-1117-A

Figure 1 Component location

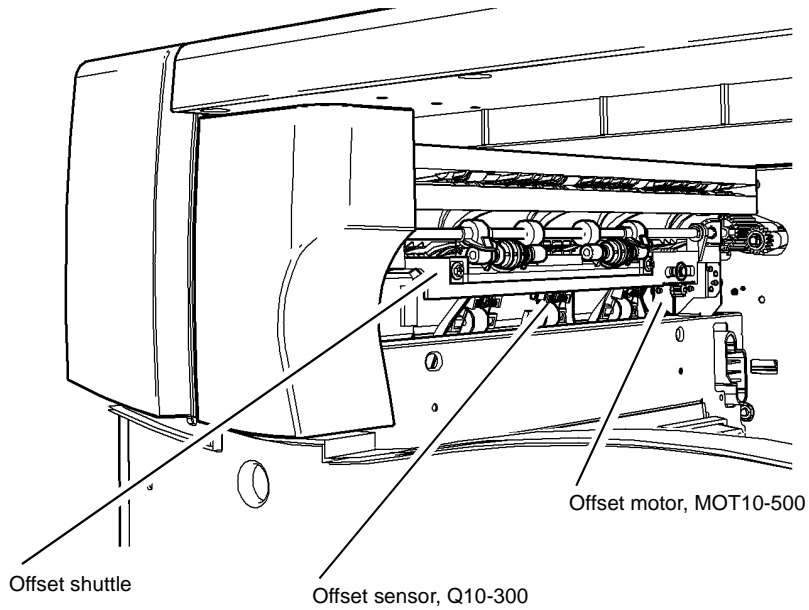
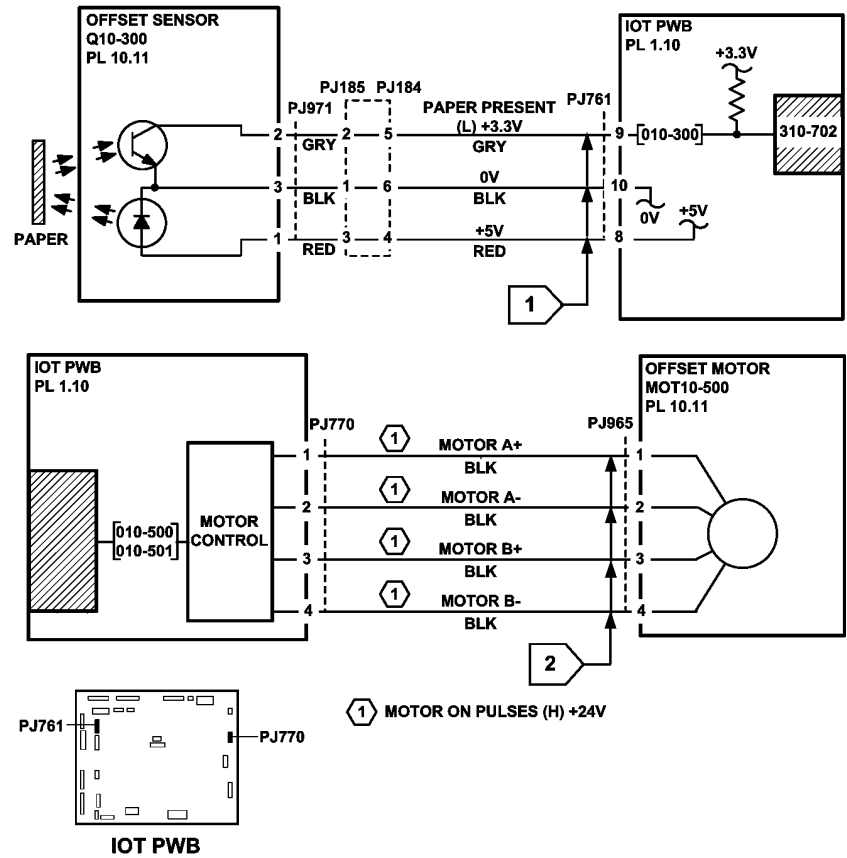


Figure 2 Component location

W-1-1118-A



TW-1-0286-A

Figure 3 Circuit diagram

## 310A Centre Output Tray Poor Stacking RAP

Use this RAP to identify the cause of poor stacking in the centre output tray.

### 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:

- 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.



## 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.

### 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:

- That there is no paper or other obstructions in the vicinity of the paddle.
- 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.
- 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 **312J-110** Mis-Registration in Stapled Sets and Non-stapled Sets RAP.
- 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:

- **312G-110** 2K LCSS PWB Damage RAP.
- **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:

- **312G-110** 2K LCSS PWB Damage RAP.
- **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.

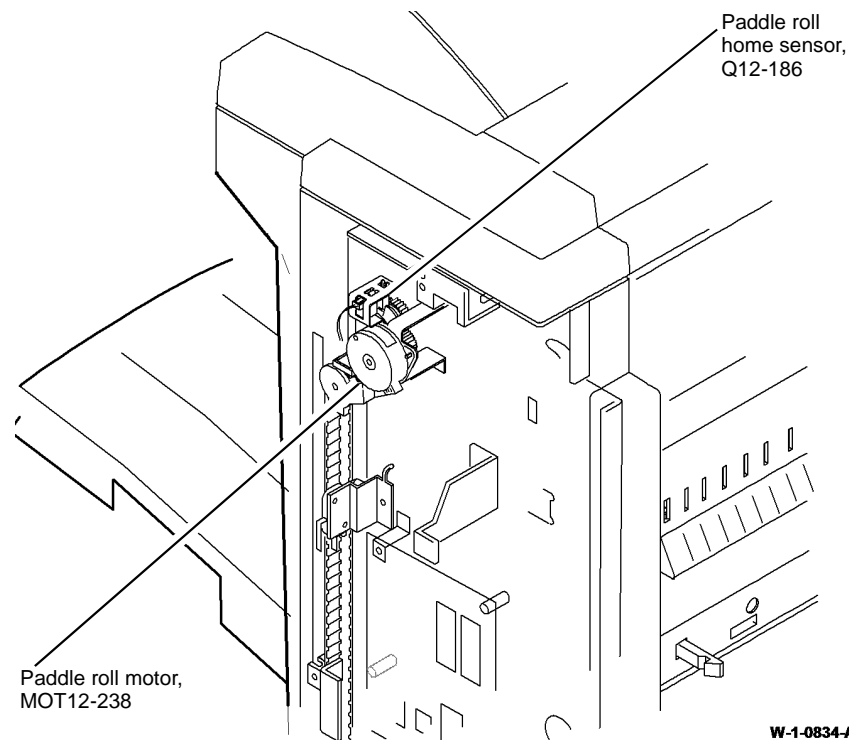


Figure 1 Component location

W-1-0834-A

A

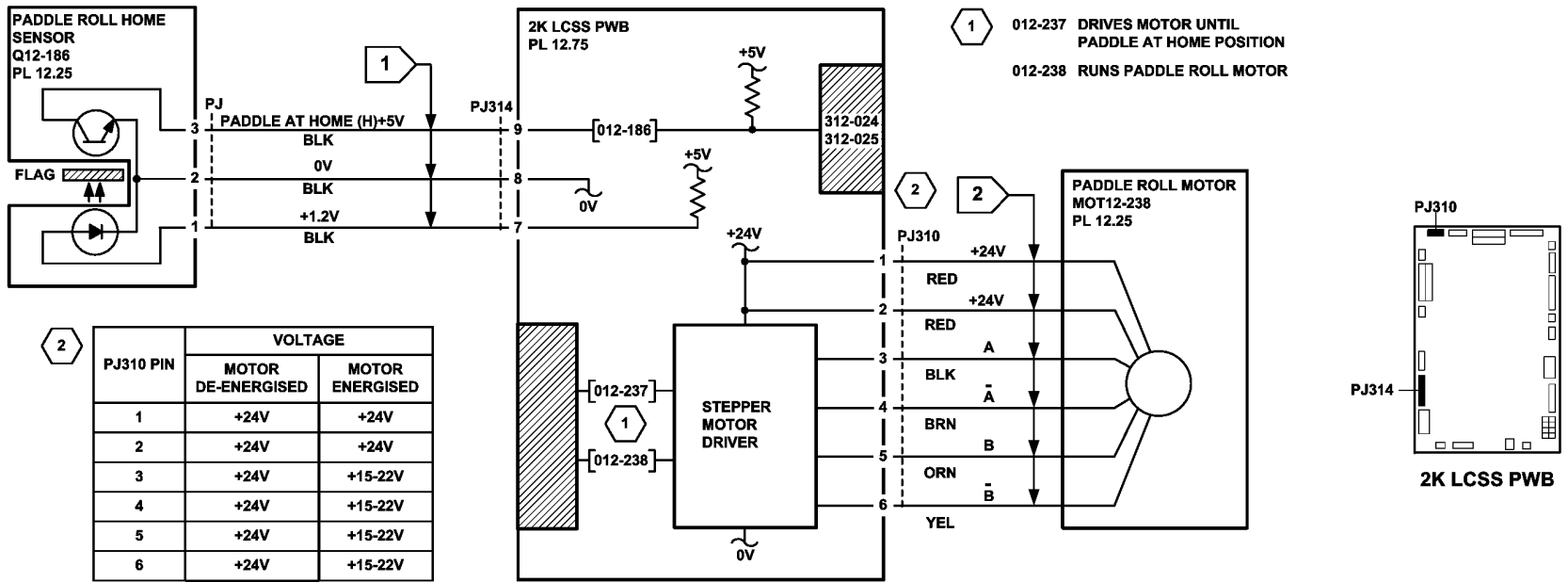


Figure 2 Circuit diagram

TW-1-0068-B

## 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.

### 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.
- 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.

**NOTE:** The home position of the punch unit is when the cut-out in the actuator is between the punch head home sensor jaws.

### 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:

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [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](#).

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:

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [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:

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [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.

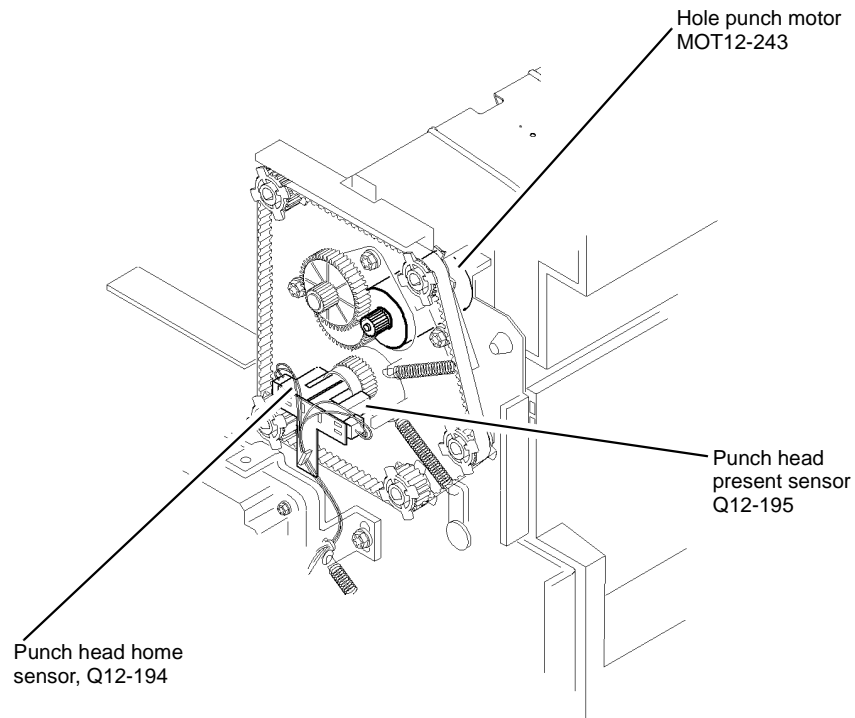
Refer to:

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [GP 11](#) How to Check a Sensor.
- [P/J307](#), [2K LCSS PWB](#).
- [312D-110](#) 2K LCSS Power Distribution RAP.

Install new components as necessary:

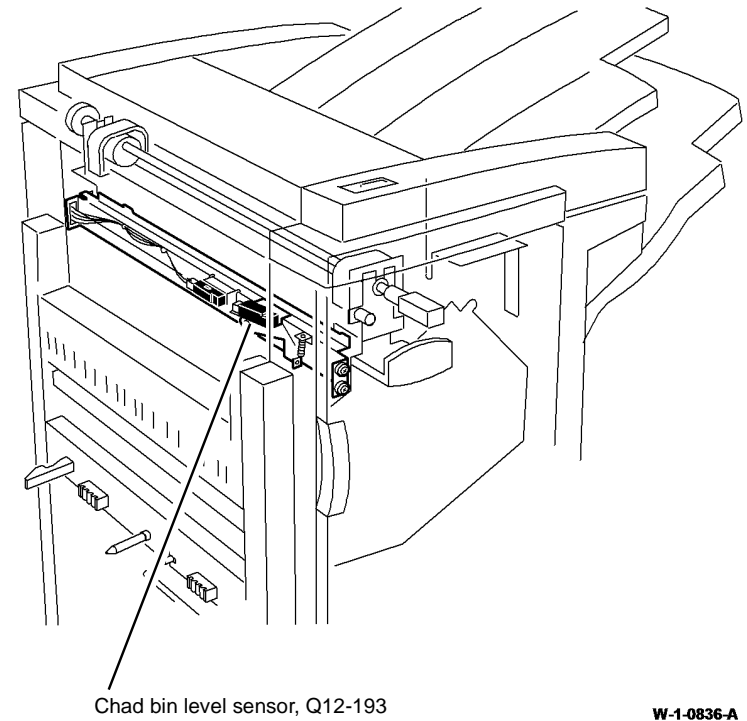
- Chad bin level sensor, [PL 12.20 Item 7](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Perform [SCP 5](#) Final Actions.



W-1-0835-A

Figure 1 Component location



W-1-0836-A

Figure 2 Component location

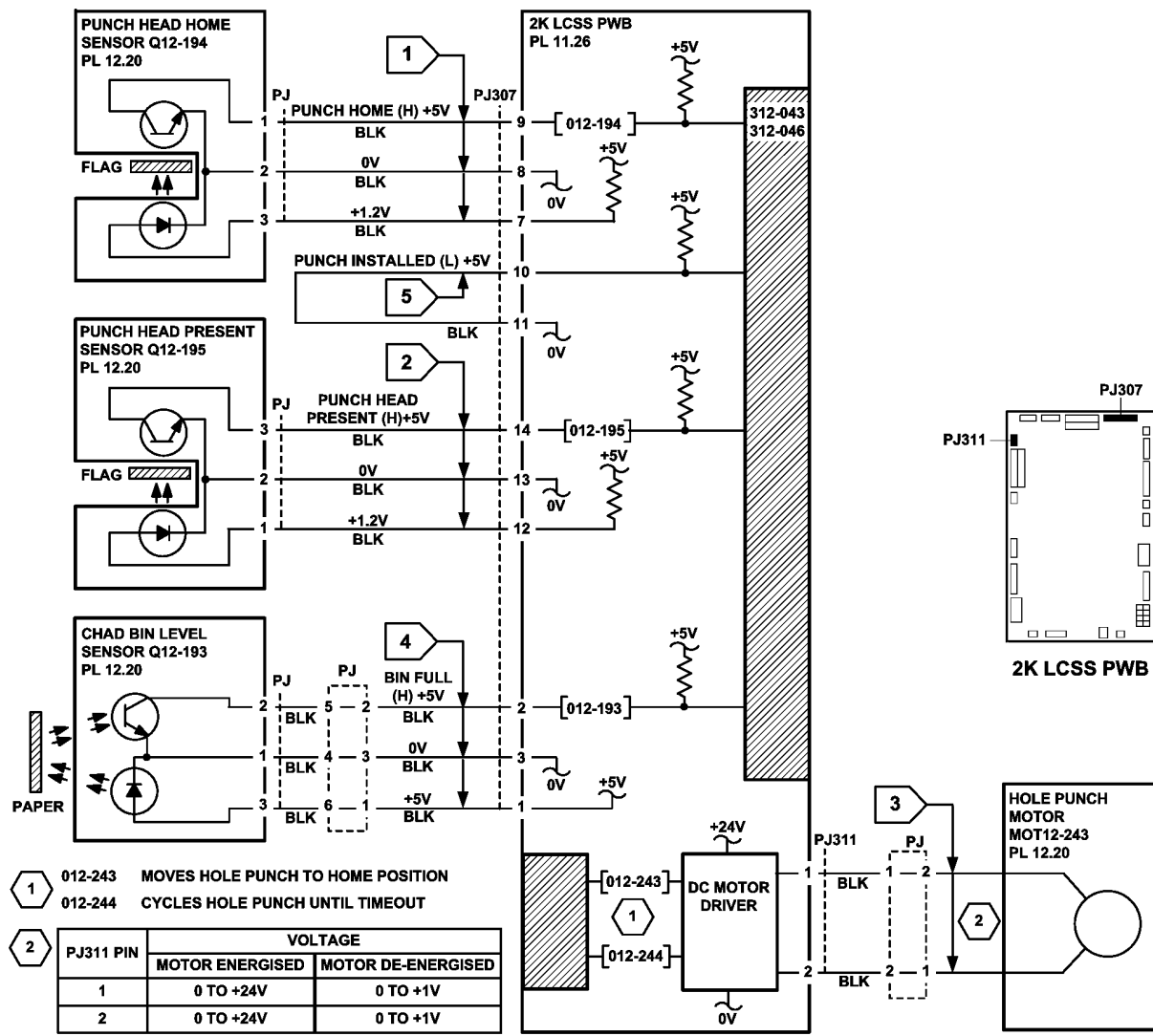


Figure 3 Circuit diagram

TW-1-0069-B

## 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.

### 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:

- If the fault code is 312-199-00, switch off then switch on the machine, [GP 14](#).
- 2K LCSS PWB DIP switch settings. Refer to the [312F-110](#) 2K LCSS PWB DIP Switch Settings RAP.
- That the paper tray guides are set to the correct position for the size of paper in the tray.
- 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.
- Horizontal transport assembly, [PL10.15/1](#), for obstructions.
- Feeding performance from a paper tray loaded with a new ream of paper.

### Procedure

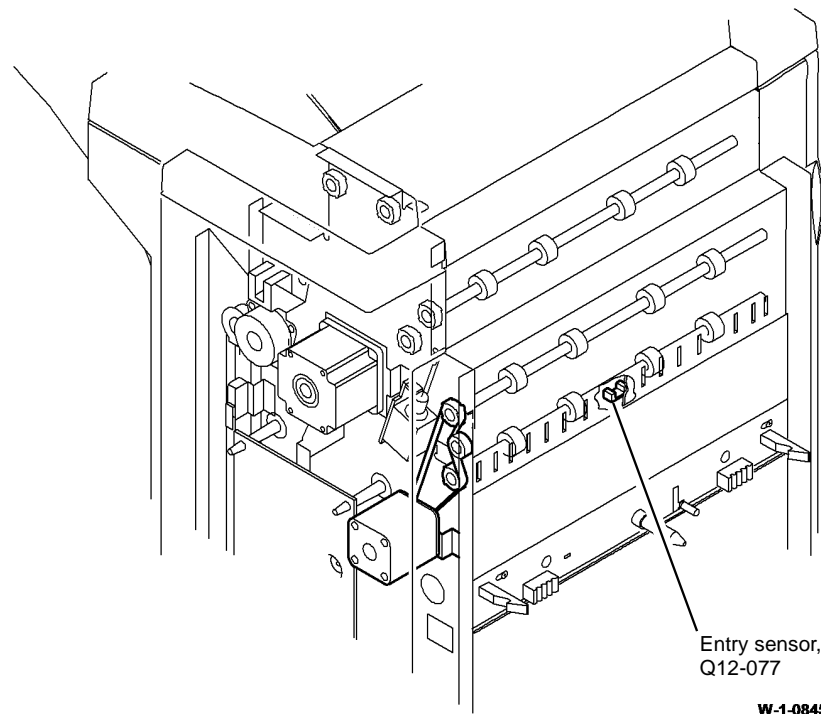
Lower the paper entry guide assembly, [PL 12.40 Item 8](#), to access the entry sensor. Enter [dC330](#) code 012-077. Actuate the entry sensor, Q12-077, [Figure 1](#). **The display changes.**

**Y N**  
Go to [Flag 1](#). Check Q12-077.  
Refer to:

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [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.



W-1-0845-A

Figure 1 Component location

## 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.

### 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.
- 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 [312H-110](#) Copy Damage in the 2K LCSS 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:

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [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.

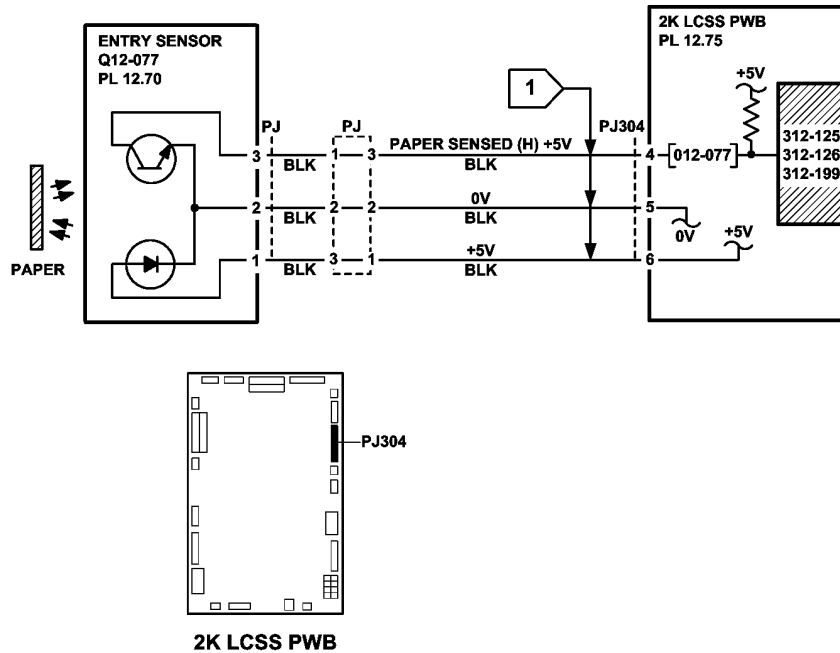
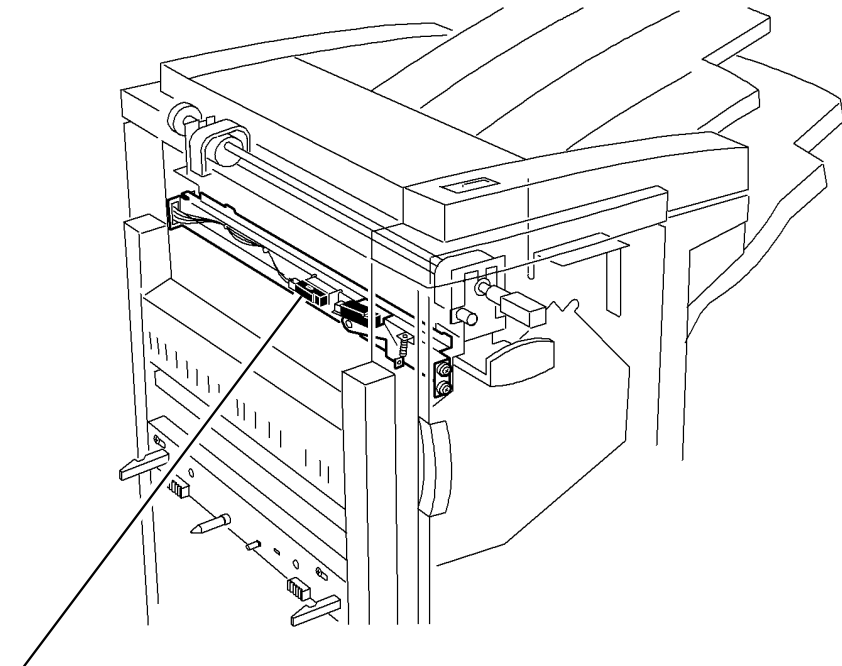


Figure 2 Circuit diagram

TW-1-0083-B



Punch sensor 1, Q12-078

Figure 1 Component location

W-1-0837-A

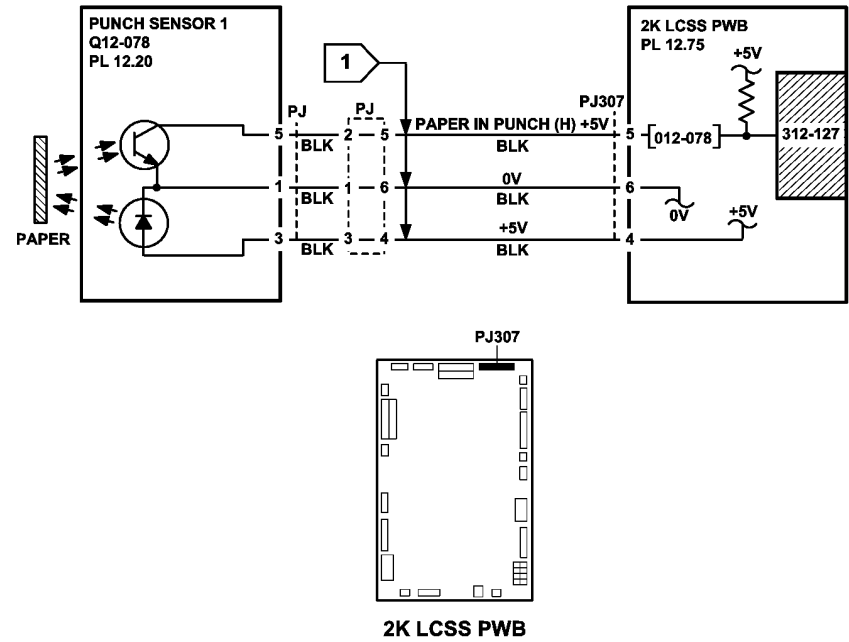


Figure 2 Circuit diagram

TW-1-0070-B



## 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.

### 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.
- Ensure the paper tray guides are set to the correct position for the size of paper in all trays.
- 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 12.4-110](#).
- 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 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.

### 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.  
Refer to:

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [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:

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [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:

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [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:

- [312G-110](#) 2K LCSS PWB Damage RAP.

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- 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
- 312H-110 Copy Damage in the 2K LCSS RAP
- 312J-110 Mis-Registration in Stapled Sets and Non-Stapled Sets RAP.

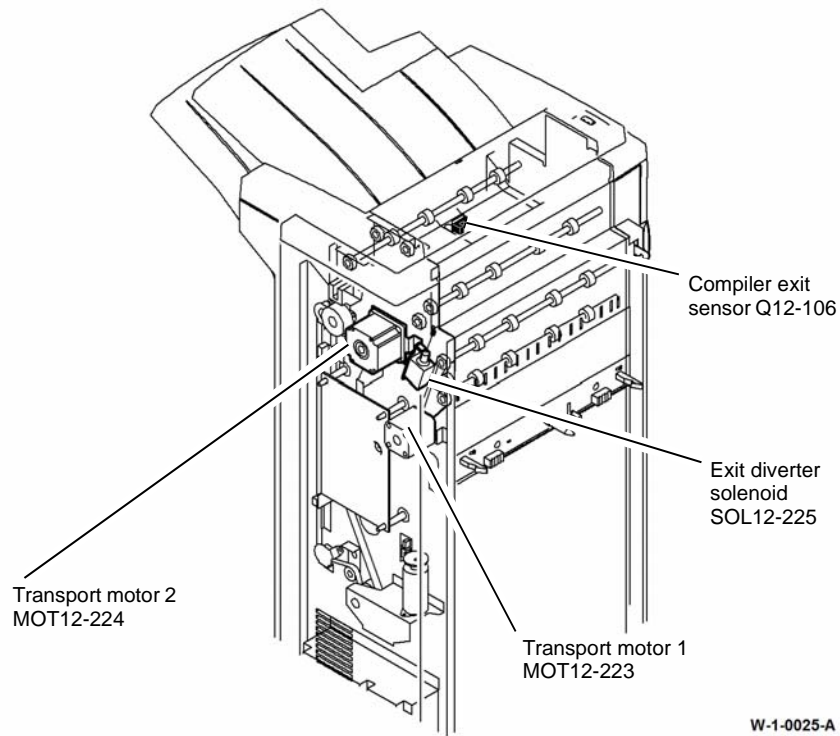


Figure 1 Component location

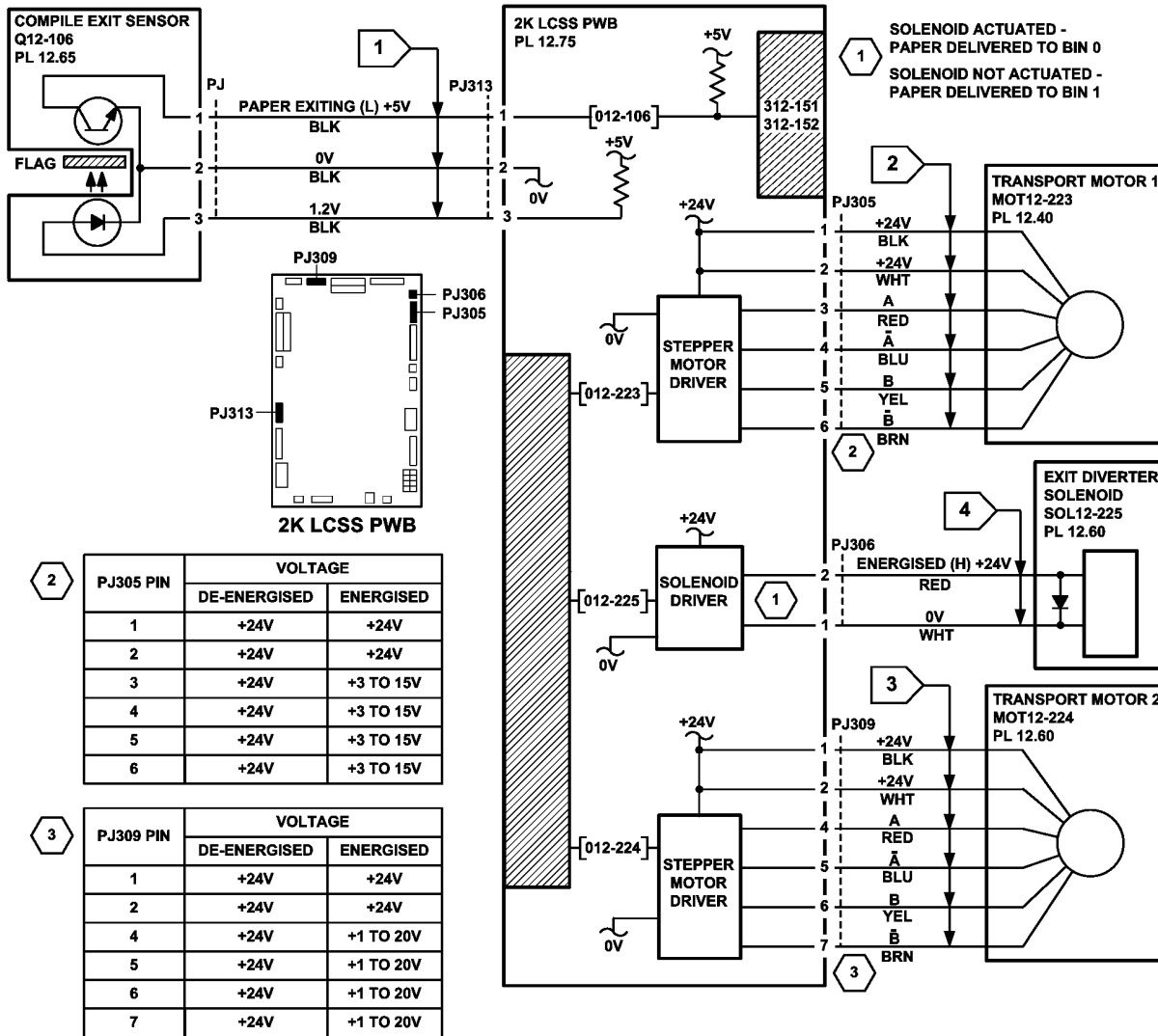


Figure 2 Circuit diagram

TW-1-0072-B

## 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.

### 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.
- Ensure the paper tray guides are set to the correct position for the size of paper in the tray
- 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 bin 0.
- Torn paper fragments from a previous jam clearance action.
- 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:

- 312G-110 2K LCSS PWB Damage RAP.
- 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:

- 312G-110 2K LCSS PWB Damage RAP.
- 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:

- 312G-110 2K LCSS PWB Damage RAP.
- 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:

- 312G-110 2K LCSS PWB Damage RAP.
- GP 10, How to Check a Motor.

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- 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
- 312H-110 Copy Damage in the 2K LCSS RAP
- 312J-110 Mis-Registration in Stapled Sets and Non-Stapled Sets RAP.

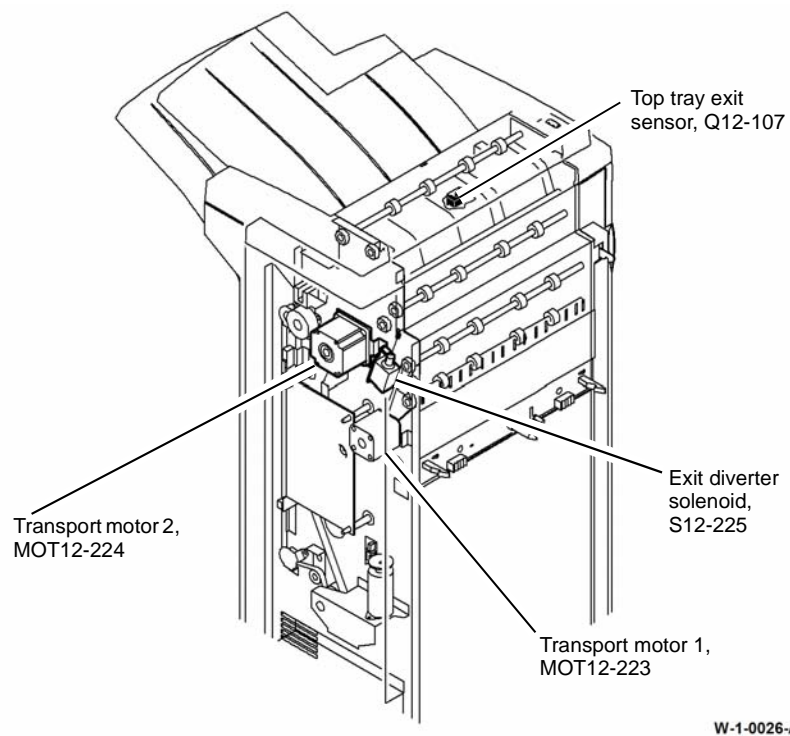


Figure 1 Component location

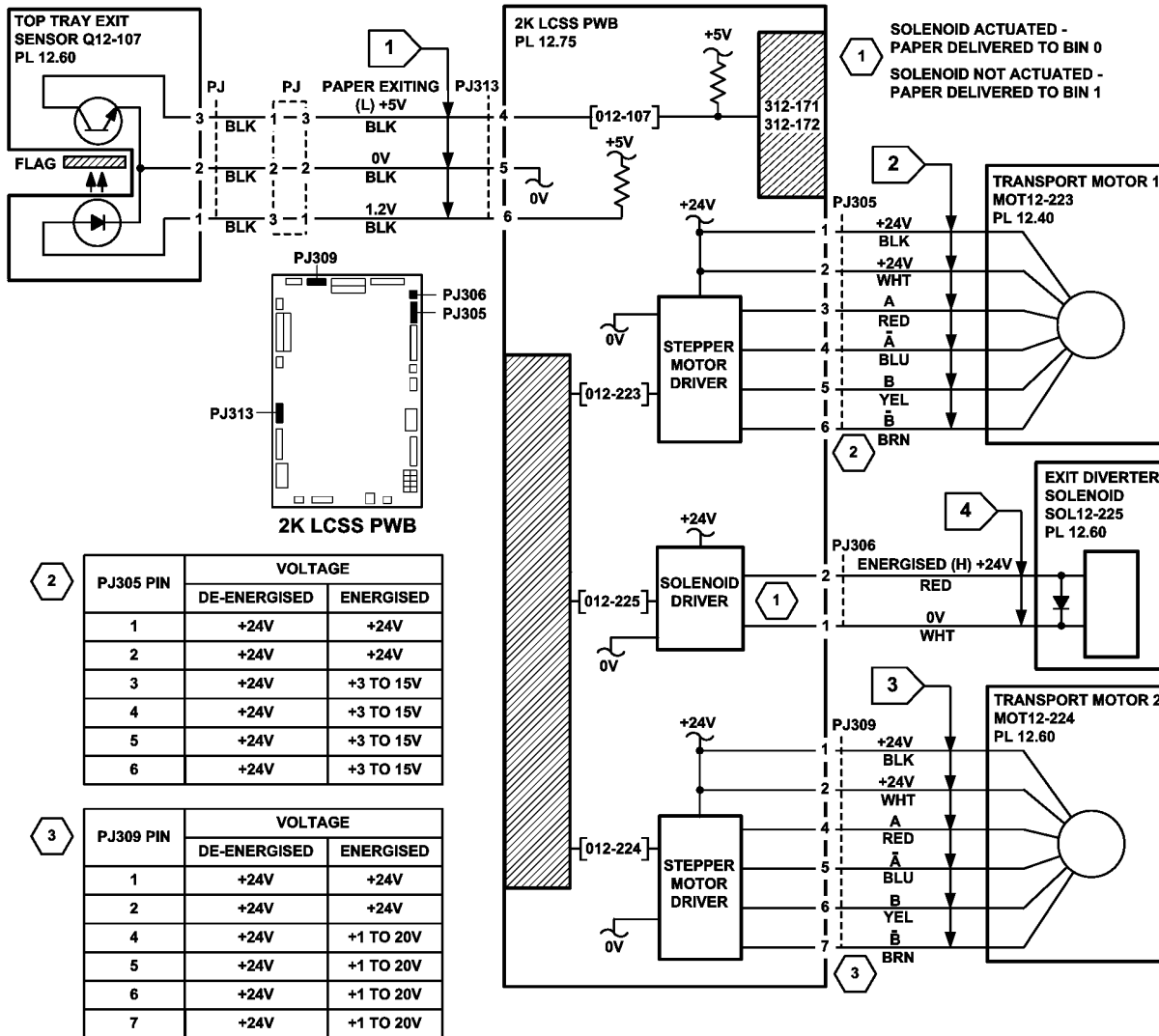


Figure 2 Circuit diagram

TW-1-0071-B

## 312-198-00-110 Finisher Stray Sheet Detected RAP

312-198-00-110 A stray sheet was detected in the finisher after jam clearance.

### Initial Actions

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:

- 312G-110 2K LCSS PWB Damage RAP.
- 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:

- 312G-110 2K LCSS PWB Damage RAP.
- 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:

- 312G-110 2K LCSS PWB Damage RAP.
- 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.

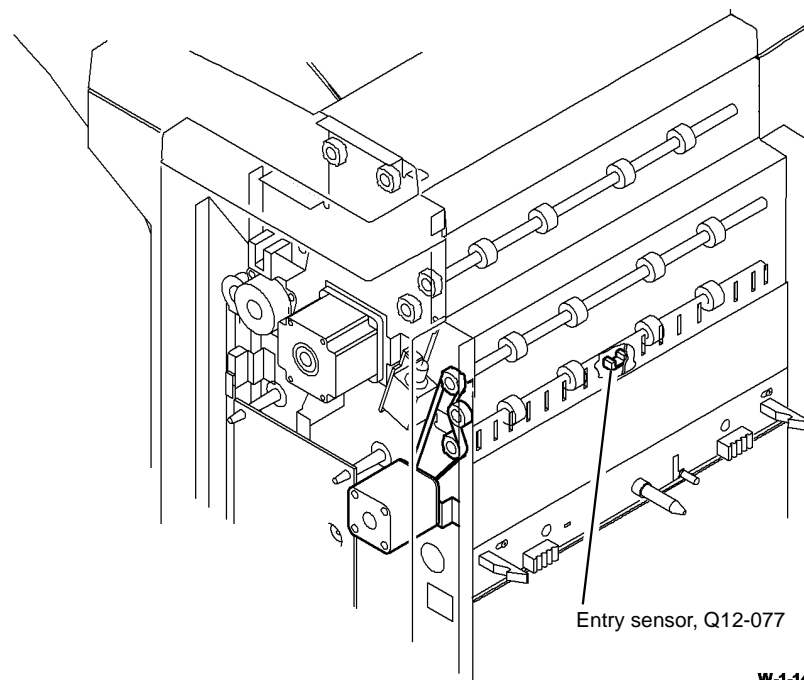
Refer to:

- 312G-110 2K LCSS PWB Damage RAP.
- 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.

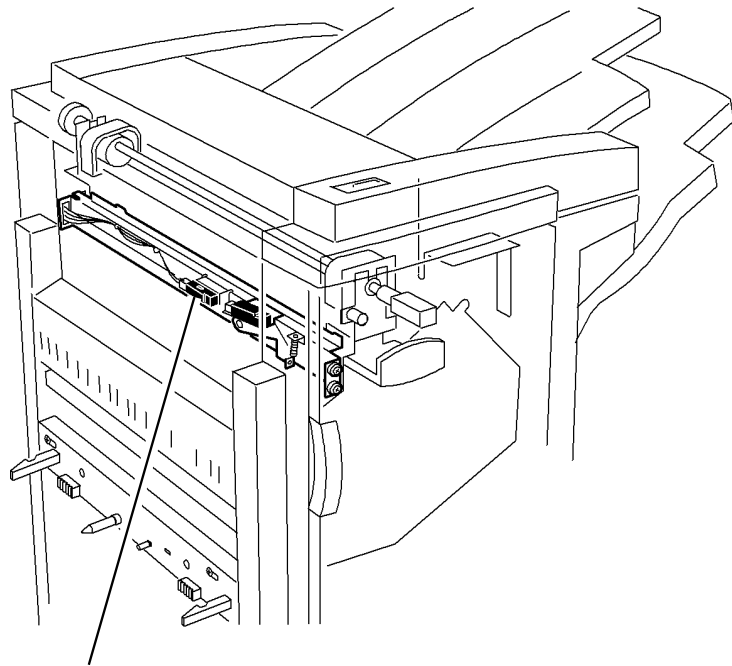
Perform SCP 5 Final Actions.



W-1-1407-A

Figure 1 Component location

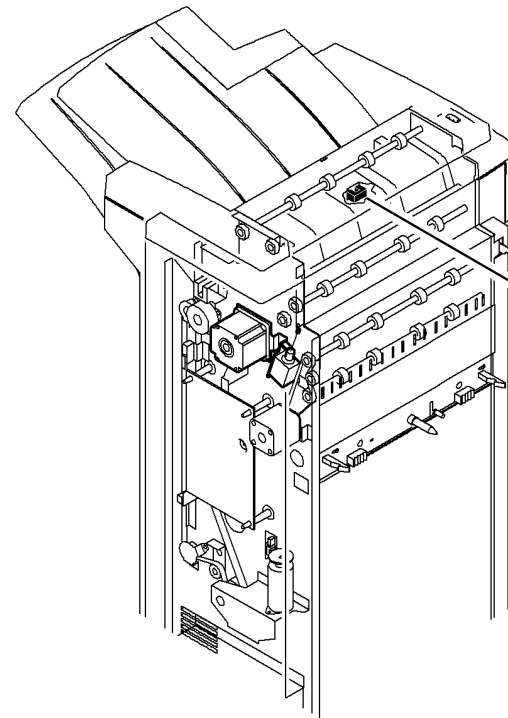
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Punch sensor 1, Q12-078

W-1-1408-A

Figure 2 Component location

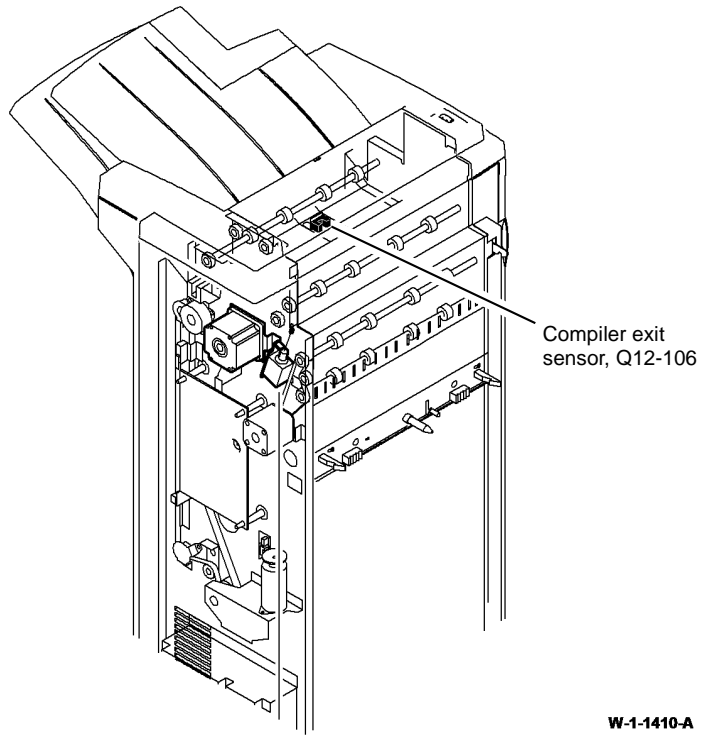


Top tray exit  
sensor, Q12-107

W-1-1409-A

Figure 3 Component location





W-1-1410-A

Figure 4 Component location

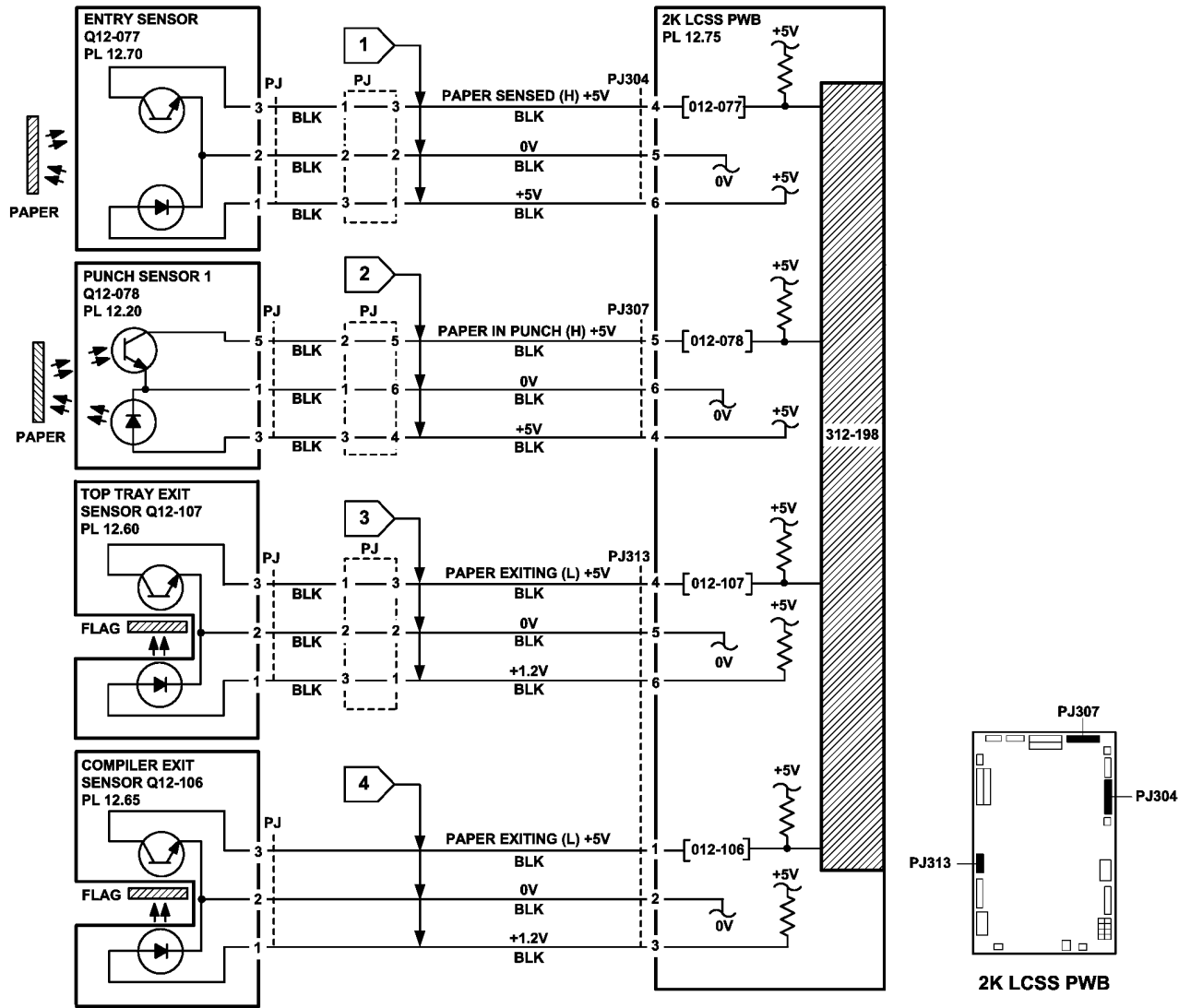


Figure 5 Circuit diagram

TW-1-0326-B

## 312-310-00-110, 312-312-00-110, 312-313-00-110 Interlocks RAP

**312-310-00-110** The docking interlock was open during run mode.

**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.

### 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 the checks that follow:
  - The 2K LCSS is docked to the machine.
  - The 2K LCSS front door is closed.
  - The 2K LCSS top cover is closed.

### 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:

- **312-310-00-110** Docking Interlock Checkout.
- **312-312-00-110** Top Cover Interlock Checkout.
- **312-313-00-110** Front Door Interlock Checkout.

### 312-310-00-110 Docking Interlock Checkout

#### Procedure

Un-dock the 2K LCSS, refer to **REP 12.13-110**. Enter **dC330** code 012-177, docking interlock switch, S12-177, **Figure 1**. Actuate S12-177. **The display changes.**

Y N

Go to **Flag 1**. Check S12-177.

Refer to:

- **GP 13**, How to Check a Switch.

**NOTE:** The wiring harness passes underneath the docking interlock switch housing. If this harness is not correctly positioned, the switch can be mis-located, giving intermittent docking interlock problems.

- **P/J302, 2K LCSS PWB**.

Install new components as necessary:

- Docking interlock switch, **PL 12.15** Item 2.
- 2K LCSS PWB, **PL 12.75** Item 1.

Check the interlock actuator on the machine is not damaged or missing, If necessary install a new docking actuator, **PL 12.15** Item 7.

### 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 3**. 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 2**. 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.

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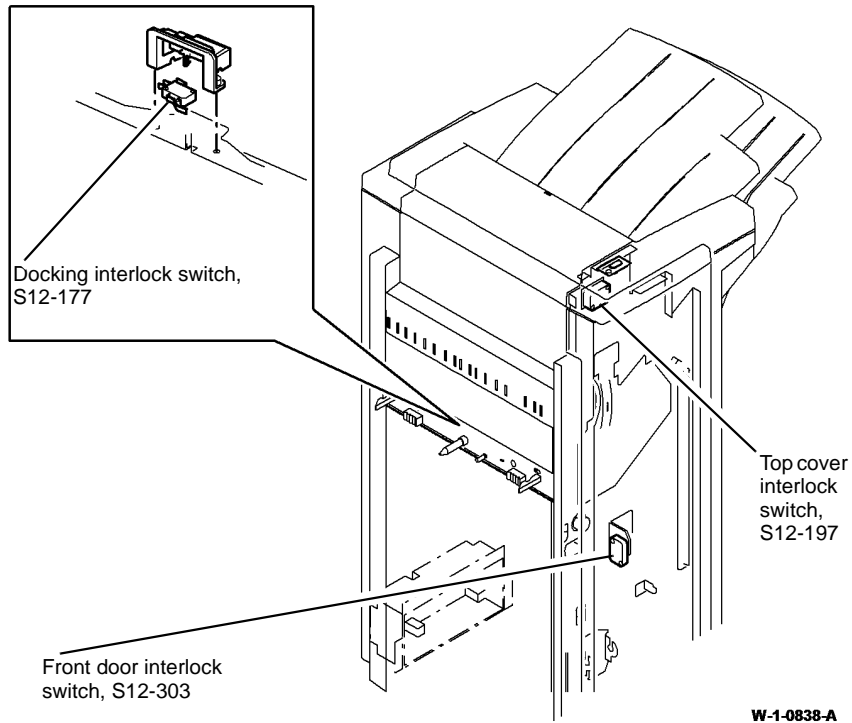


Figure 1 Component location

W-1-0838-A

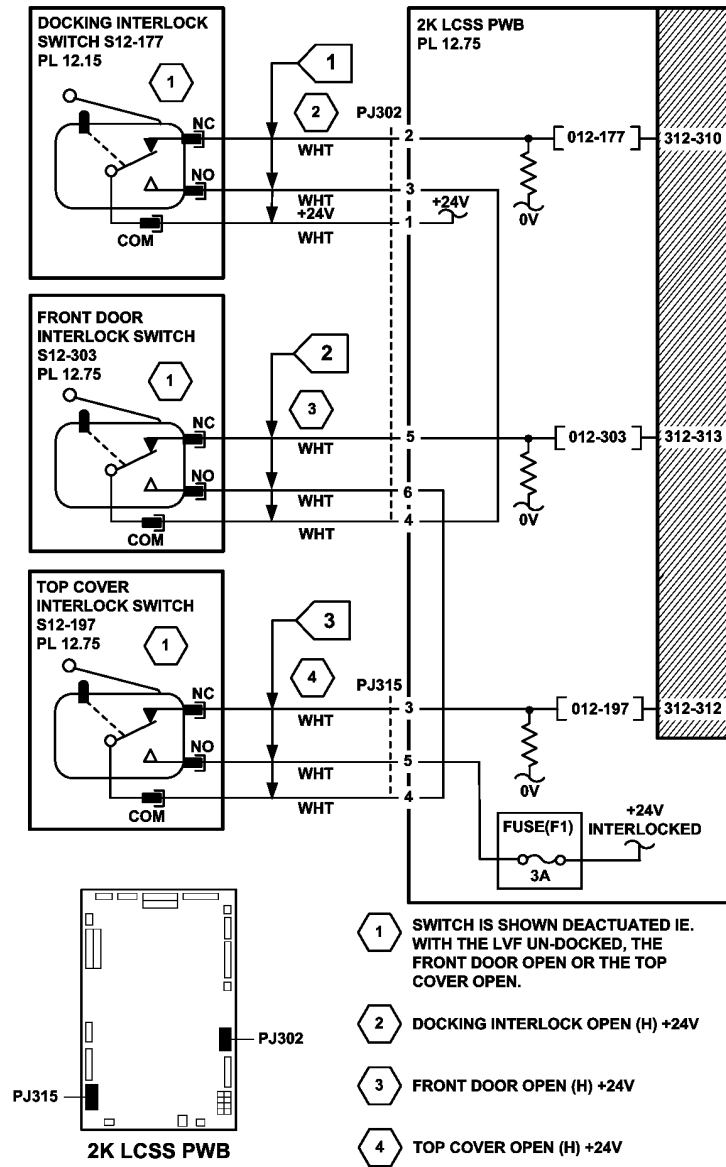


Figure 2 Circuit diagram

TW-1-0074-B

## 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.



Do not mix the residual lubrication on the ejector shafts and slide bearings. Contamination of the manufacturer's lubricant with another will decrease durability and high temperature resistance. Clean the ejector shafts and slide bearings free from existing residual lubricant or contaminate before applying Molykote Silicone Dry Lubricant PL 26.10 Item 12 or Moovit oil PL 26.10 Item 23 and leave slightly wet.

- 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. Cheat the docking interlock switch.
- 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:
- **312G-110** 2K LCSS PWB Damage RAP.
  - **GP 11** How to Check a Sensor.
  - **P/J304**, **2K LCSS PWB**.

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- **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**.

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:
- **312G-110** 2K LCSS PWB Damage RAP.
  - **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:
- **312G-110** 2K LCSS PWB Damage RAP.
  - **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**.

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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:

- [312G-110 2K LCSS PWB Damage RAP](#).
- [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 motor encoder sensor, [PL 12.50 Item 3](#).
- 2K LCSS PWB, [PL 12.75 Item 1](#).

Perform the [312G-110 2K LCSS PWB Damage RAP](#). If necessary install a new 2K LCSS PWB, [PL 12.75 Item 1](#).

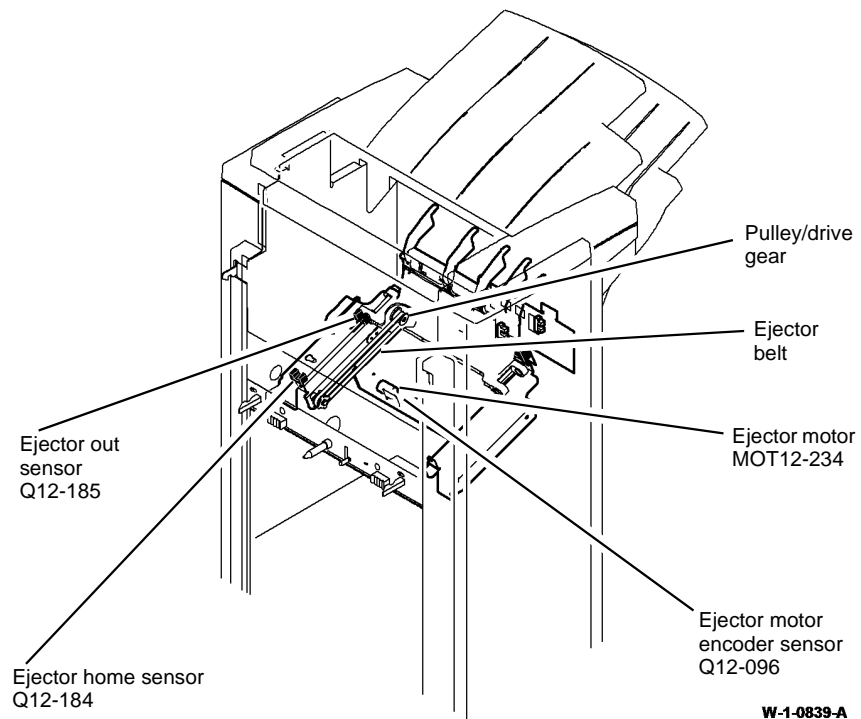


Figure 1 Component location

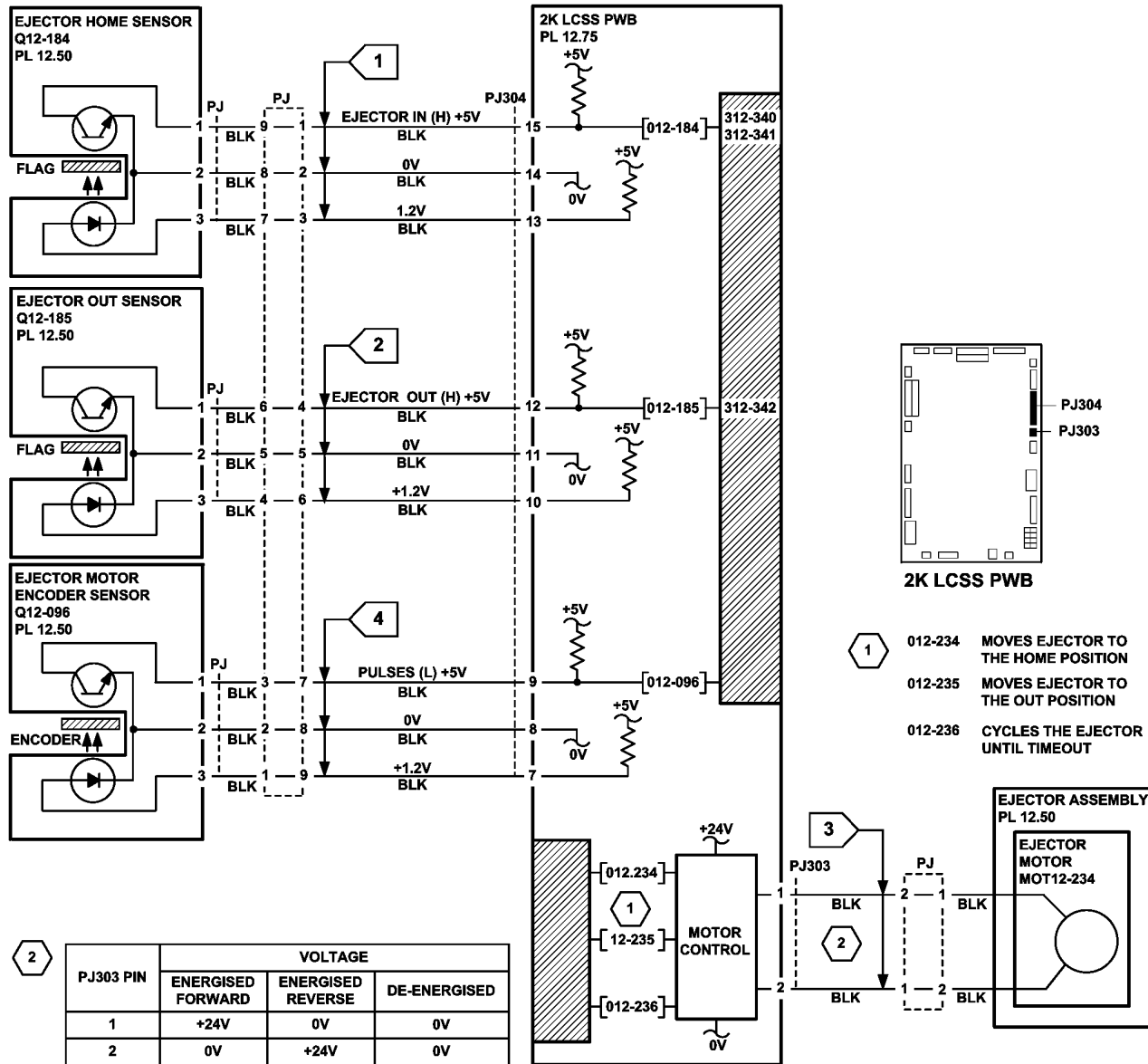


Figure 2 Circuit diagram

TW-1-0075-B

## 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:

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [GP 10](#), How to Check a Motor.
- [P/J308](#), 2K LCSS PWB.

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- [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:

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [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:

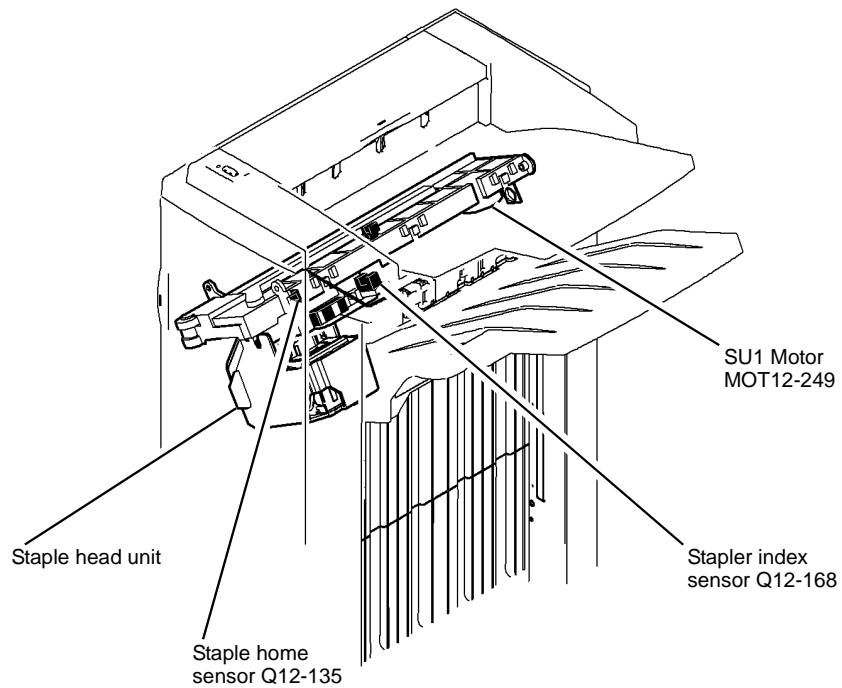
- [312G-110](#) 2K LCSS PWB Damage RAP.
- [GP 11](#) How to Check a Sensor.
- [P/J308](#), 2K LCSS PWB.
- [312D-110](#) 2K LCSS Power Distribution RAP.

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.





W-1-0027-A

Figure 1 Component location

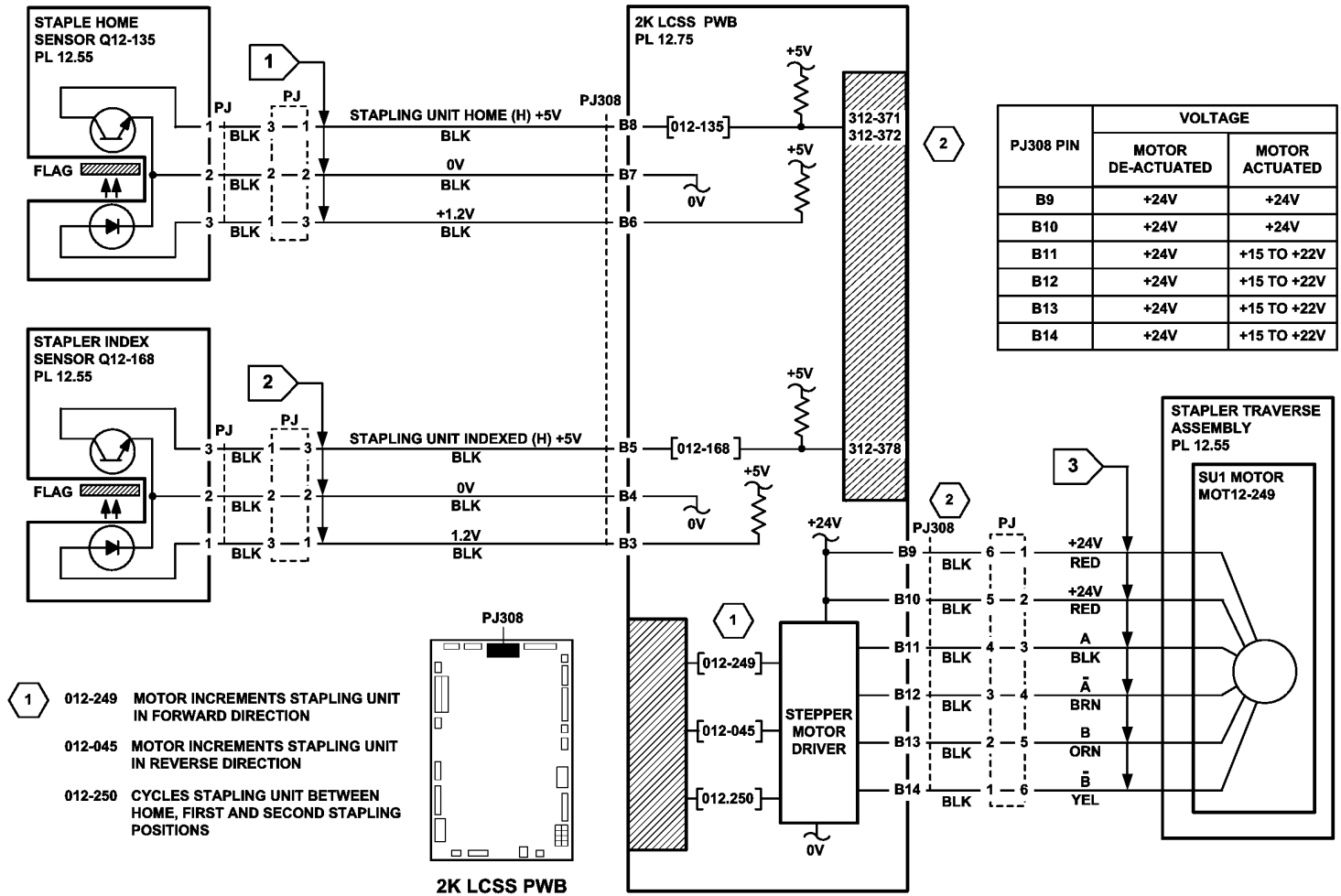


Figure 2 Circuit diagram

TW-1-0076-B

## 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.

### 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](#).
- 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.
- 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 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](#).
  - [312J-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:

- [312G-110 2K LCSS PWB Damage RAP](#).
- [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:

- [312G-110 2K LCSS PWB Damage RAP](#).
- [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.

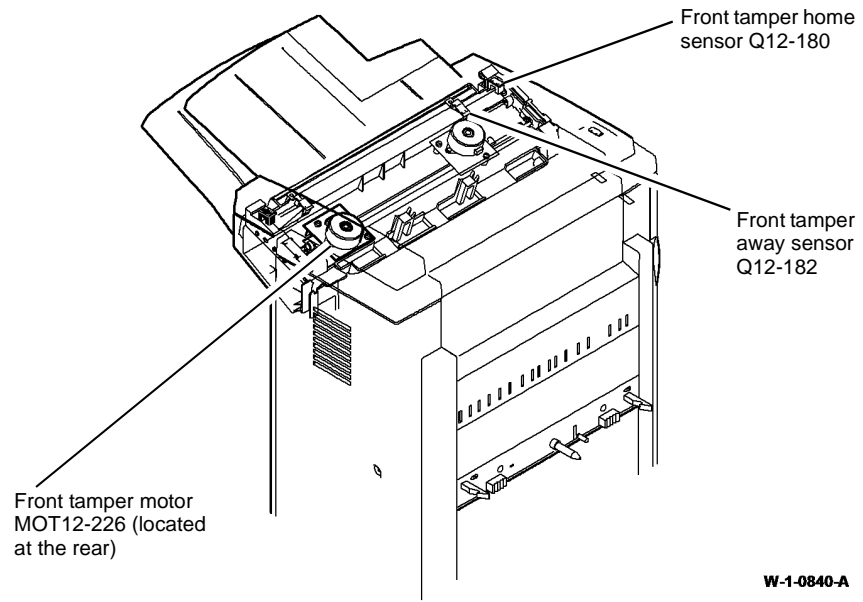
Refer to:

- [312G-110 2K LCSS PWB Damage RAP](#).
- [GP 11](#), How to Check a Sensor.
- [P/J314, 2K LCSS PWB](#).
- [312D-110 2K LCSS Power Distribution RAP](#).

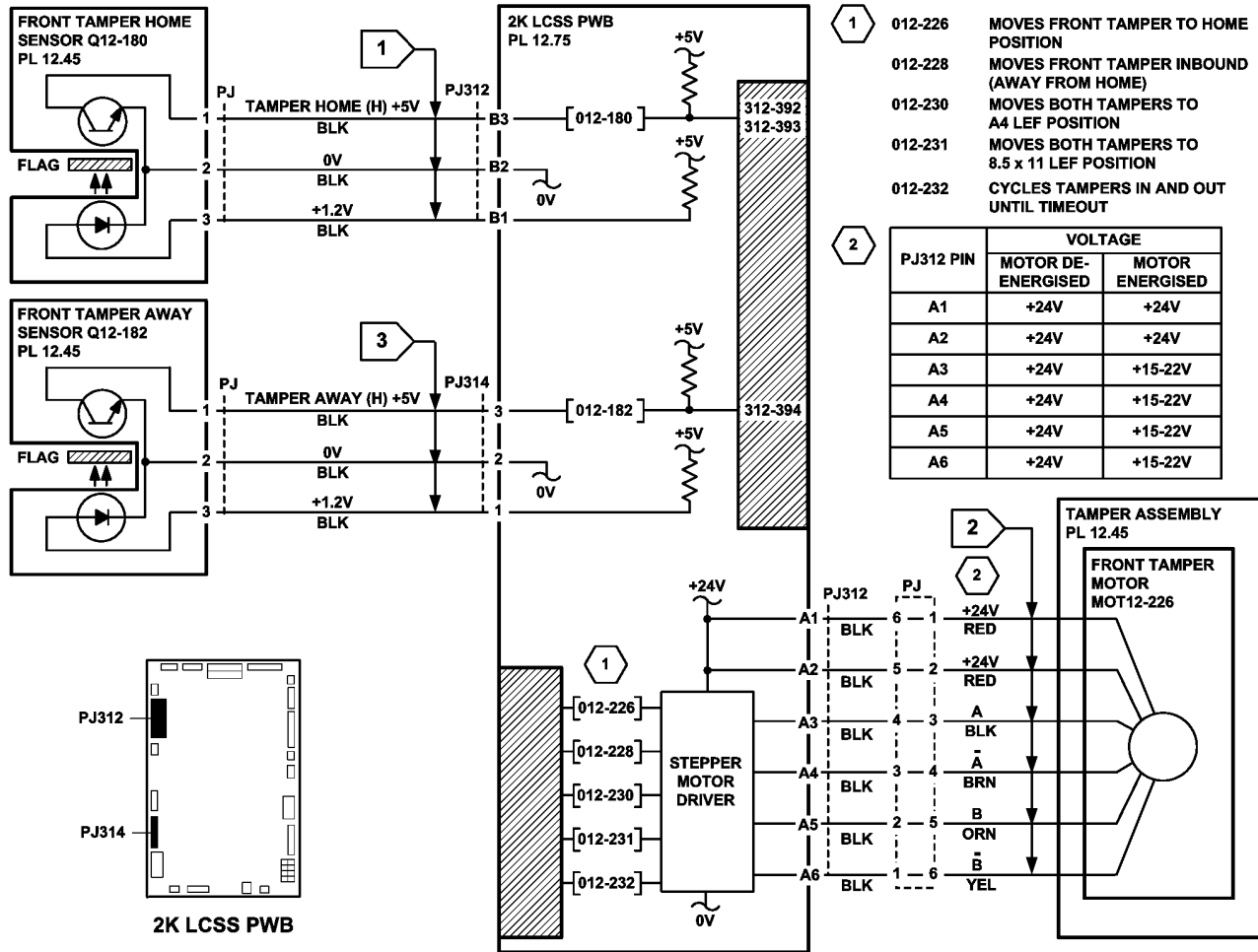
Install new components as necessary:

- 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**



TW-1-0077-B

Figure 2 Circuit diagram

## 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.

### 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](#).
- 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 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](#).
  - [312J-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:

- [312G-110 2K LCSS PWB Damage RAP](#).
- [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:

- [312G-110 2K LCSS PWB Damage RAP](#).
- [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.

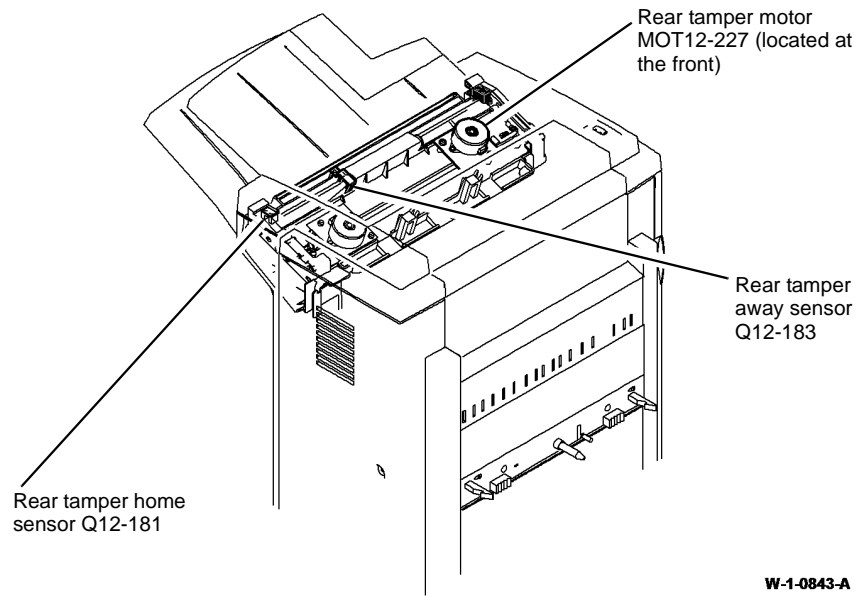
Refer to:

- [312G-110 2K LCSS PWB Damage RAP](#).
- [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**

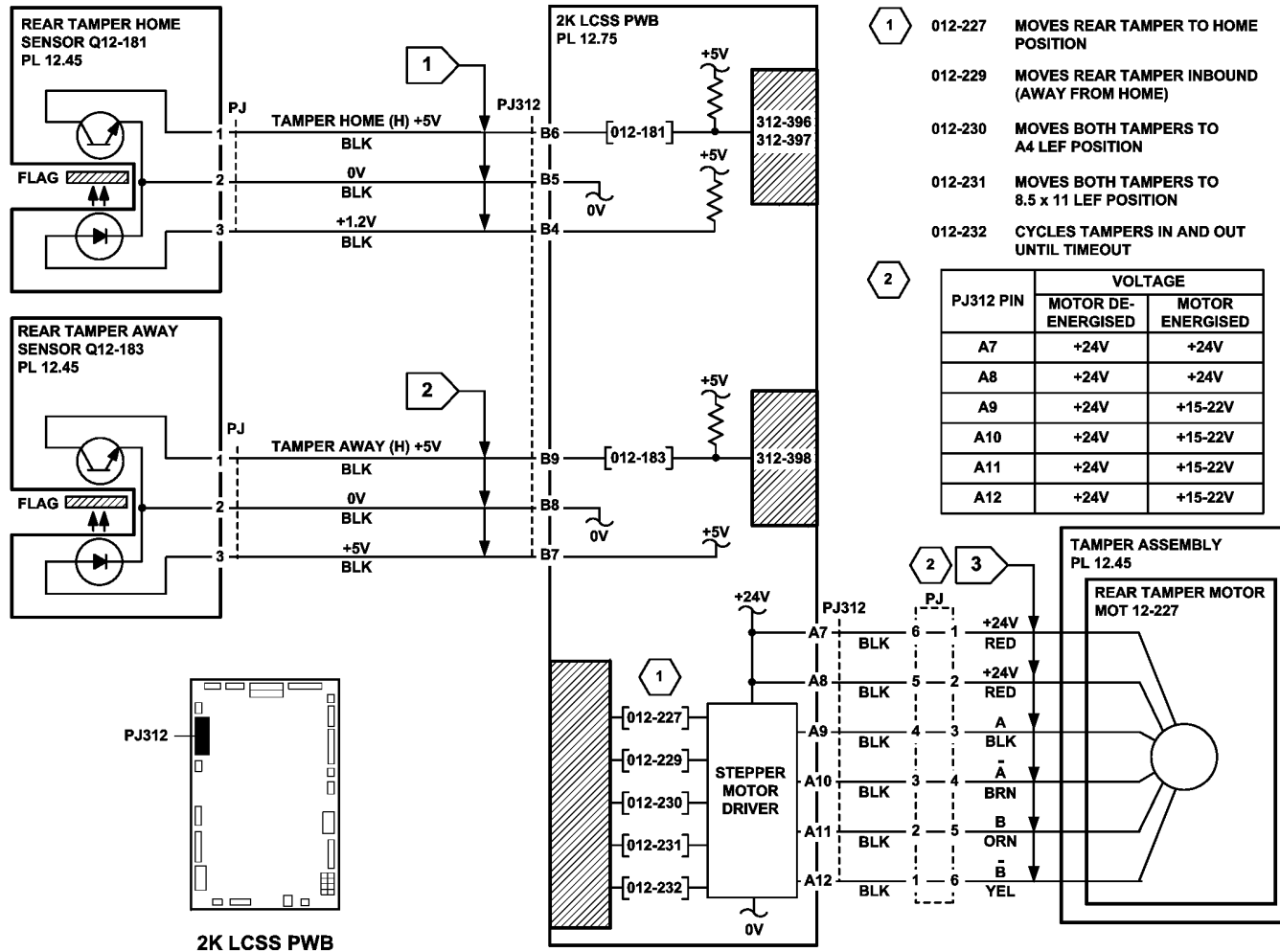


Figure 2 Circuit diagram



## 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](#).

### 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 steps that follow:

- Check for a physical obstruction that would prevent bin 1 from moving, such as an item of furniture.
- 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 [312J-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:

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [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:

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [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:

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [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](#).

A

A

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.

Refer to:

- 312G-110 2K LCSS PWB Damage RAP.
- 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:

- 312G-110 2K LCSS PWB Damage RAP.
- 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:

- 312G-110 2K LCSS PWB Damage RAP.
- GP 11 How to Check a Sensor.
- P/J316, 2K LCSS PWB.
- Figure 2, Component location.
- 312D-110, 2K LCSS Power Distribution RAP.

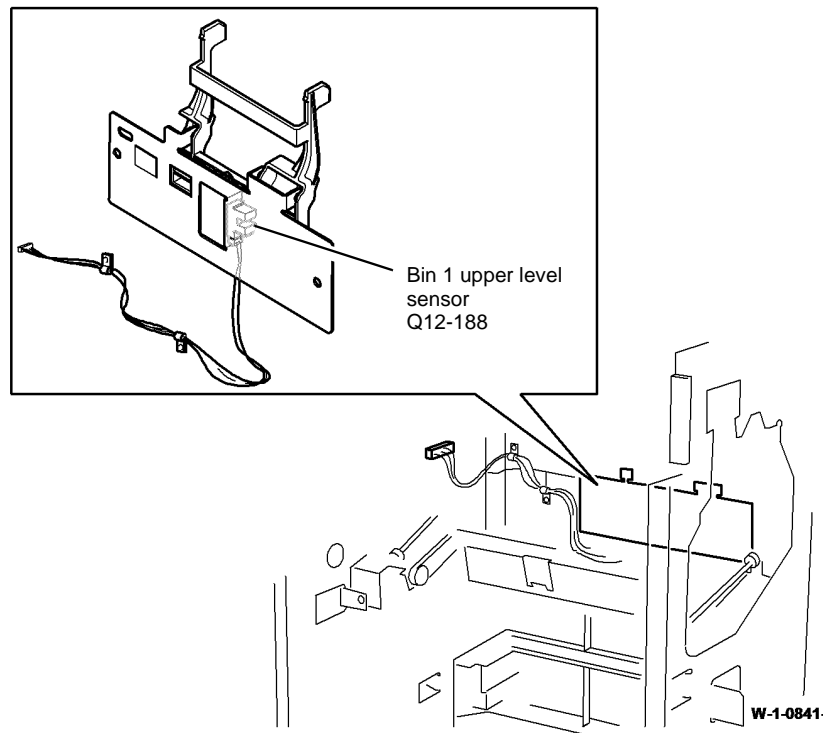
Install new components as necessary:

- Bin 1 90% full sensor, PL 12.30 Item 5.
- 2K LCSS PWB, PL 12.75 Item 1.

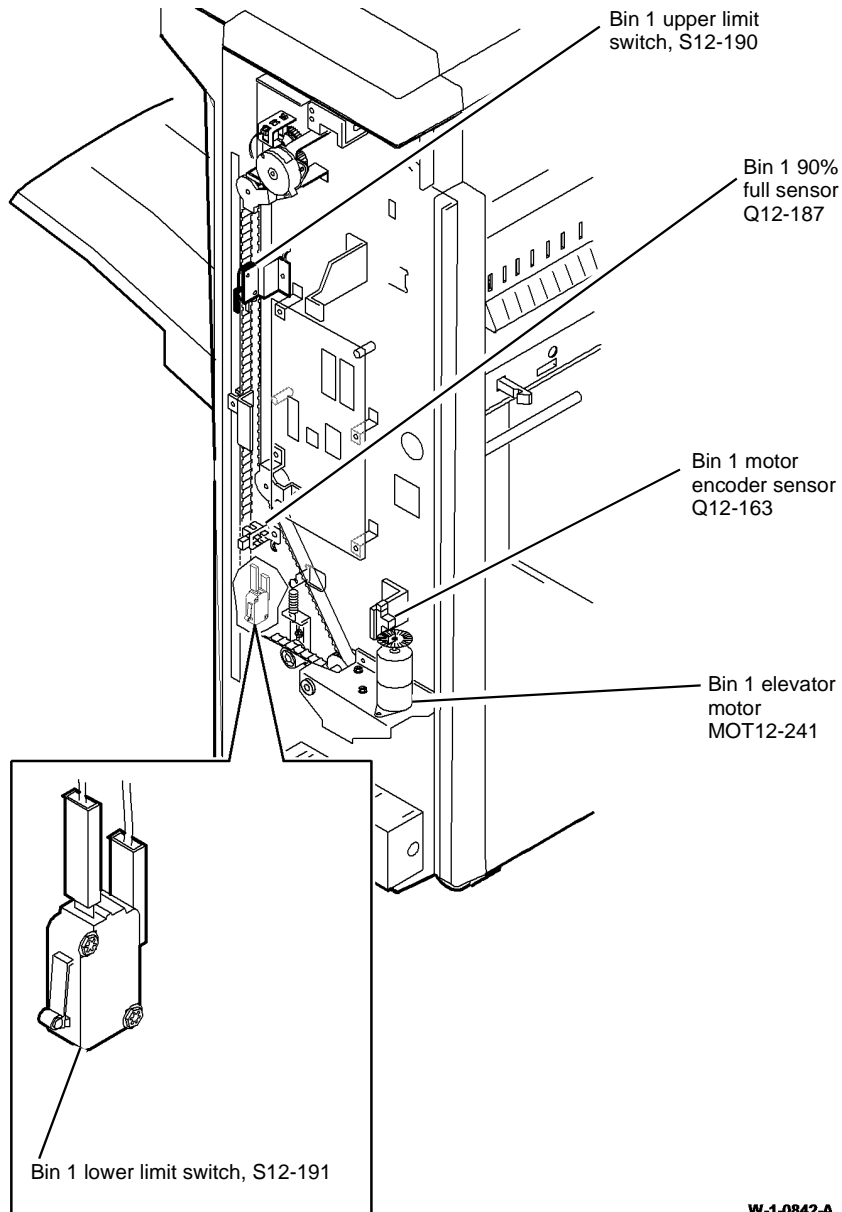
As final actions, check the sequence of operation that follows:

- 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.

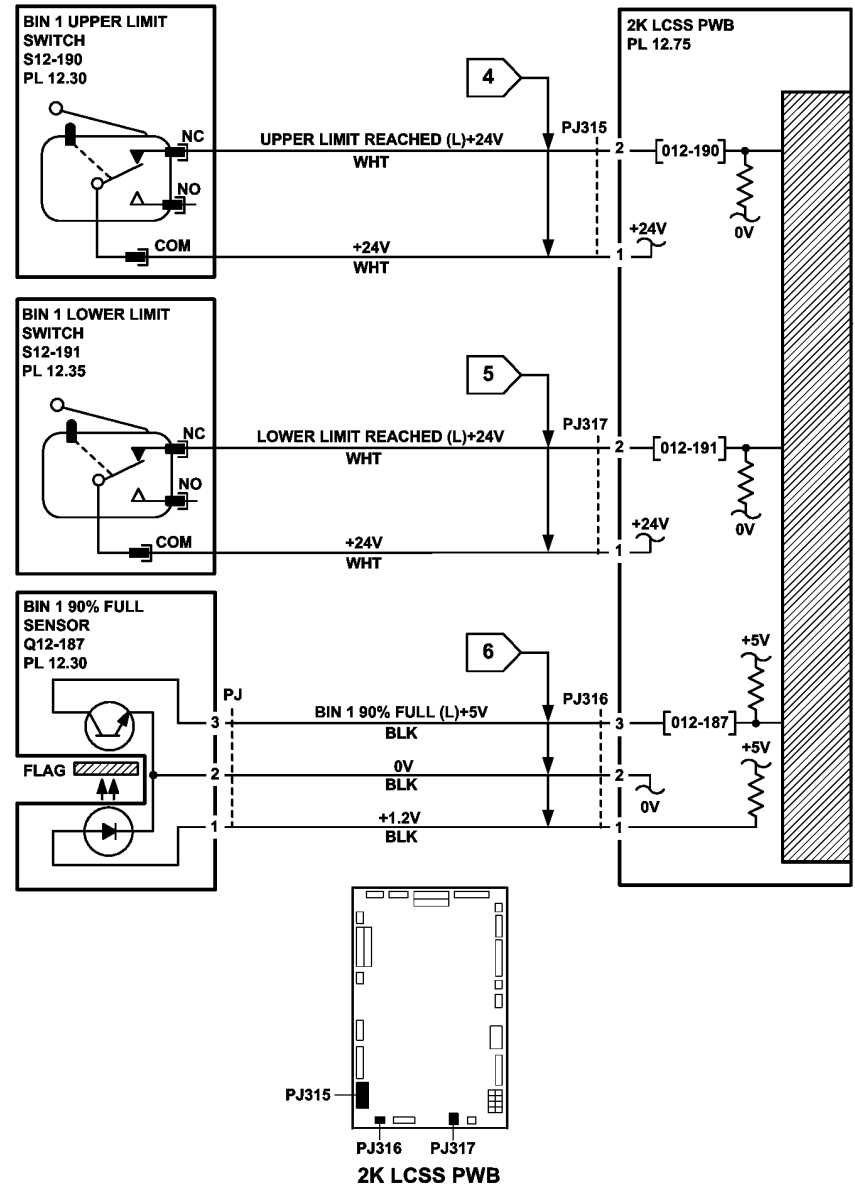


**Figure 1 Component location**



W-1-0842-A

Figure 2 Component location



TW-1-0079-B

Figure 3 Circuit diagram

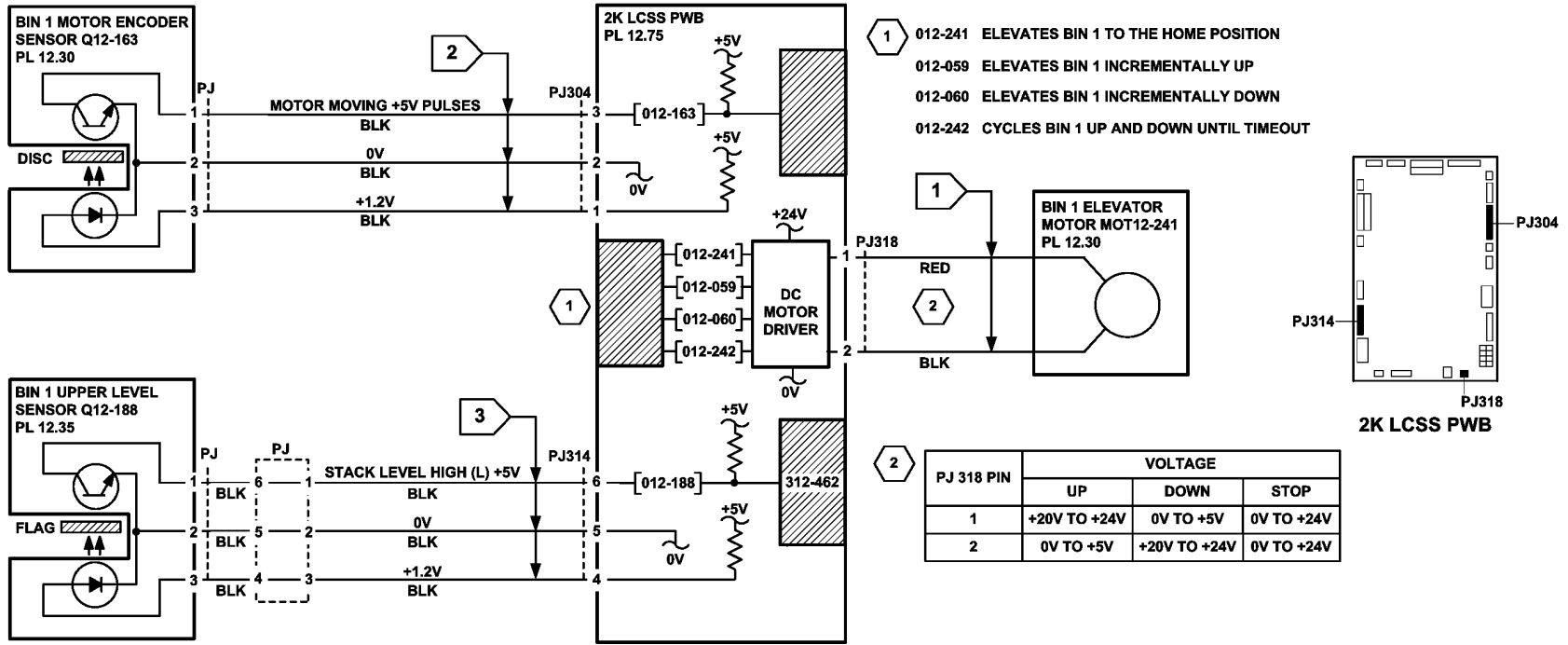


Figure 4 Circuit diagram

TW-1-0080-B

## 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.

### 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 chad bin is fully inserted.
- Check that the actuator for the chad bin level sensor engages in the slot of the chad bin.
- Check that the sensor hole in the side of the chad bin is clear of obstructions.

### 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.**

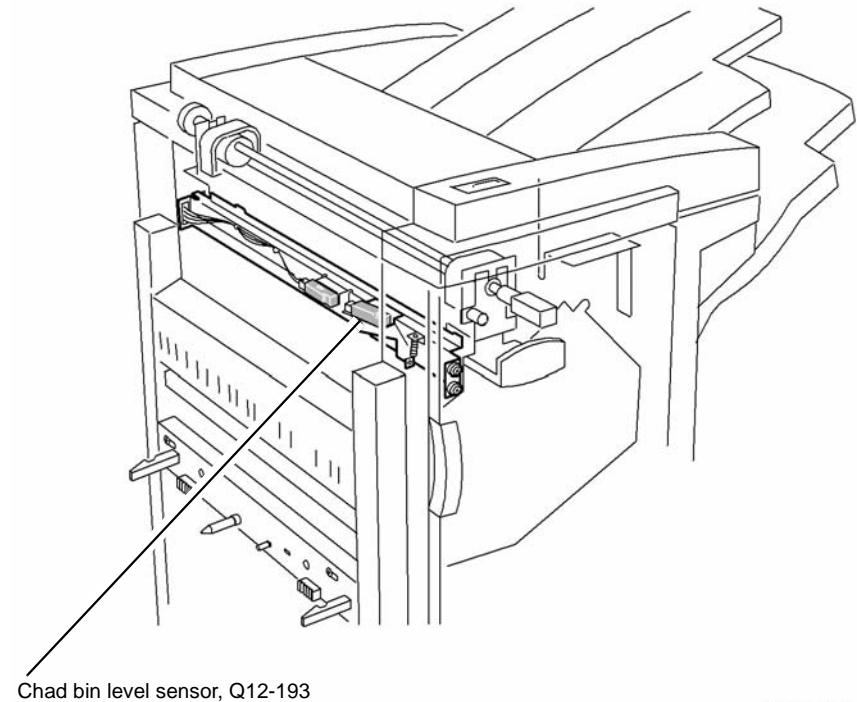
**Y** **N**  
Go to [Flag 1](#). Check Q12-193.  
Refer to:

- [312G-110 2K LCSS PWB Damage RAP](#).
- [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.



W-1-0903-A

**Figure 1 Component location**

## 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:

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [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.

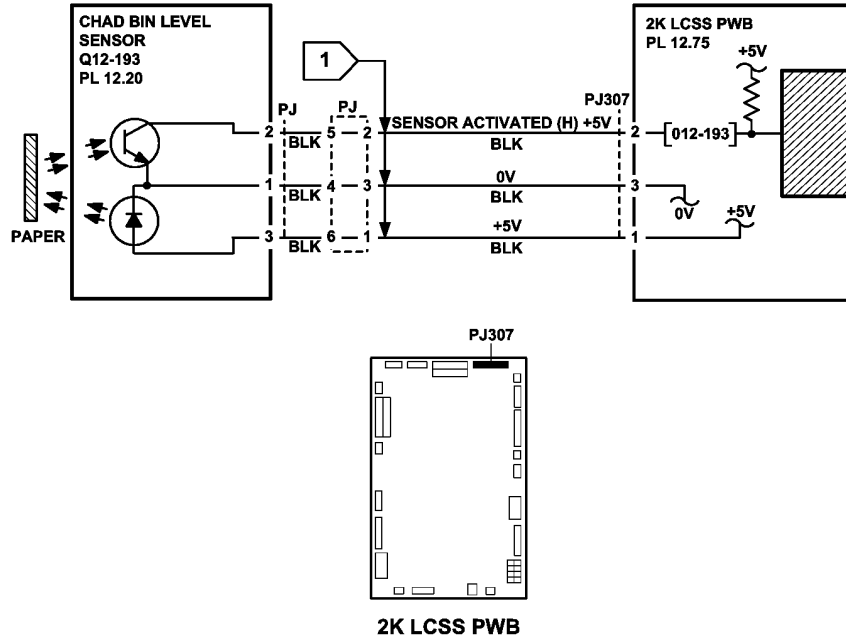


Figure 2 Circuit diagram

TW-1-0208-B

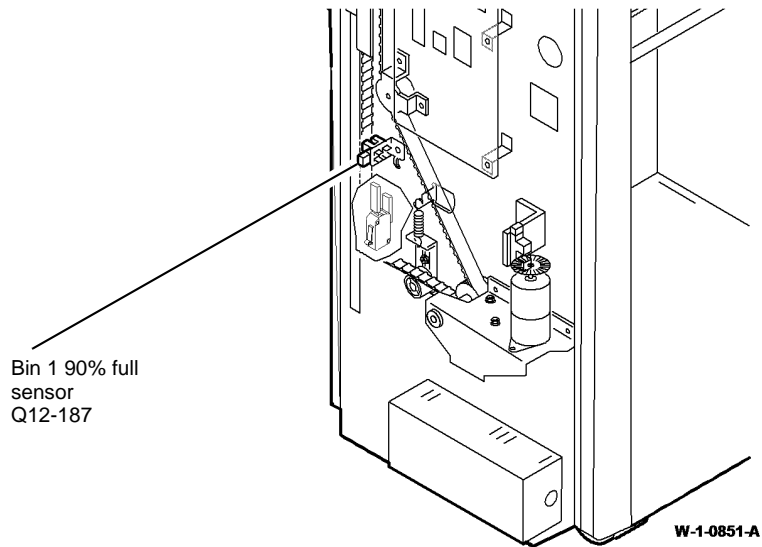


Figure 1 Component location

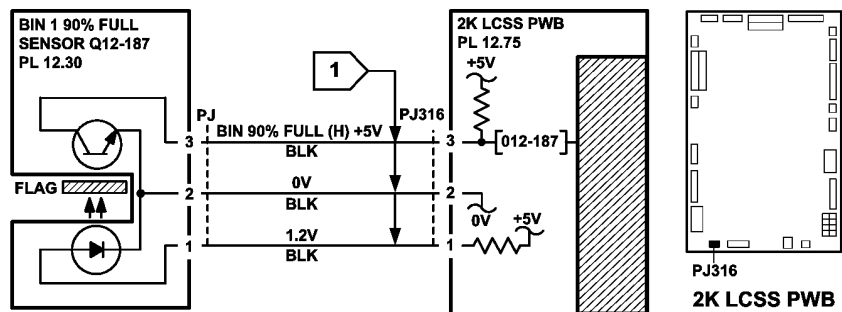


Figure 2 Circuit diagram

## 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:
  - If the staple head is not at the home position, it is driven to the home position.
  - 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.

  - 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 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.

### 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.



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 312-310-00-110, 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.

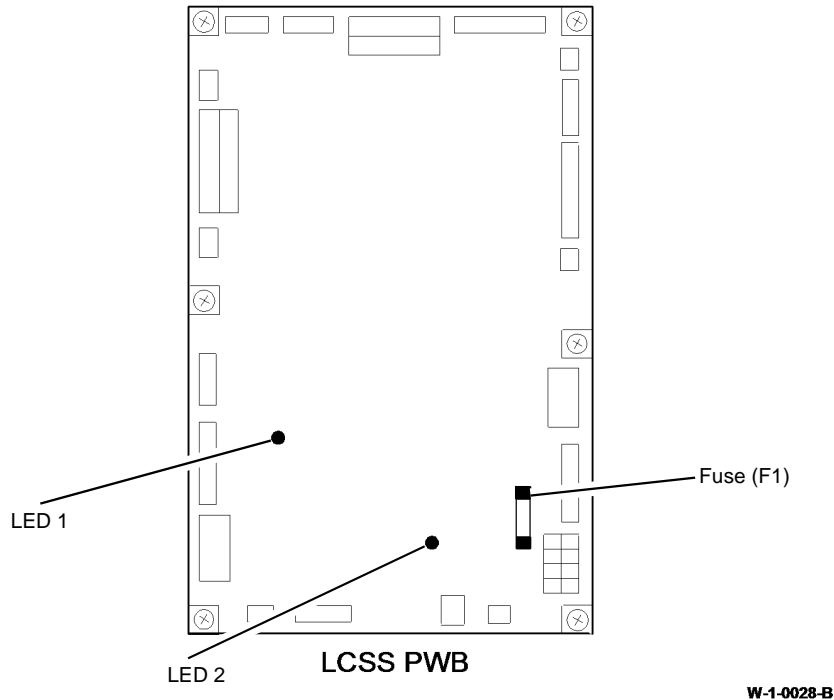


Figure 1 LED location

## 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



Ensure that the electricity to the machine is switched off while performing tasks 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 2K LCSS interlocks. **LED2 on the 2K LCSS PWB is illuminated.**

Y	N	
		<b>+24V is available at FUSE (F1) on the 2K LCSS PWB.</b>
Y	N	
		Go to <a href="#">Flag 2</a> . Check for +24V between the pins that follow on <a href="#">P/J300</a> :
		<ul style="list-style-type: none"> <li>• Pin 1 and pin 2.</li> <li>• Pin 1 and pin 3.</li> <li>• Pin 1 and pin 6.</li> <li>• Pin 1 and pin 7.</li> <li>• Pin 5 and pin 2.</li> <li>• Pin 5 and pin 3.</li> <li>• Pin 5 and pin 6.</li> <li>• Pin 5 and pin 7.</li> </ul>
		<b>+24V is available between all the checked pins.</b>
Y	N	
		Disconnect <a href="#">P/J300</a> . Check for +24V between the pins that follow on the end of the harness:
		<ul style="list-style-type: none"> <li>• Pin 1 and pin 2.</li> <li>• Pin 1 and pin 3.</li> <li>• Pin 1 and pin 6.</li> <li>• Pin 1 and pin 7.</li> <li>• Pin 5 and pin 2.</li> <li>• Pin 5 and pin 3.</li> <li>• Pin 5 and pin 6.</li> <li>• Pin 5 and pin 7.</li> </ul>
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 [312-310-00-110](#), [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 4 and 6, and between pins 7 and 8.**

Y N

Disconnect [P/J300](#). **+5V is available at [P/J300](#) between pins 4 and 6, and between pins 7 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

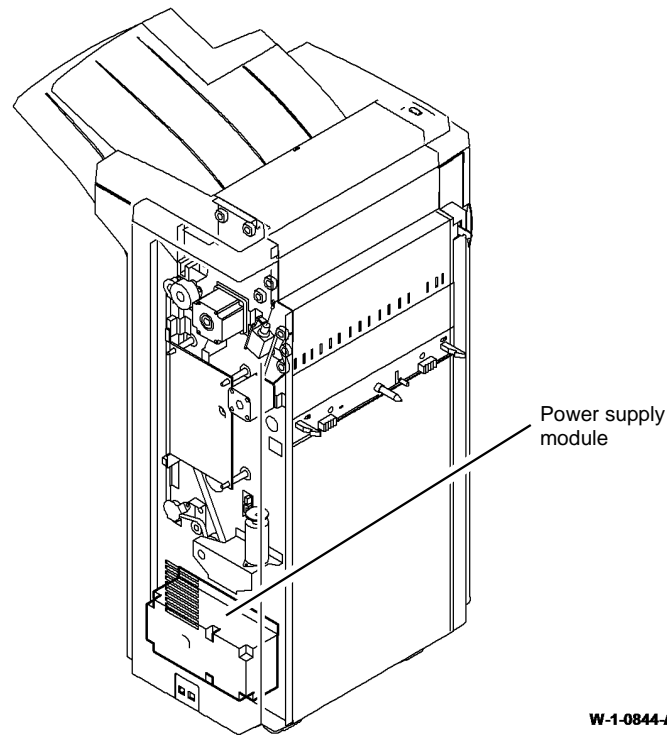
Repair the wiring.

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.

Perform the [312G-110 2K LCSS PWB Damage RAP](#), if necessary install a new 2K LCSS PWB, [PL 12.75 Item 1](#).



W-1-0844-A

Figure 1 Component location

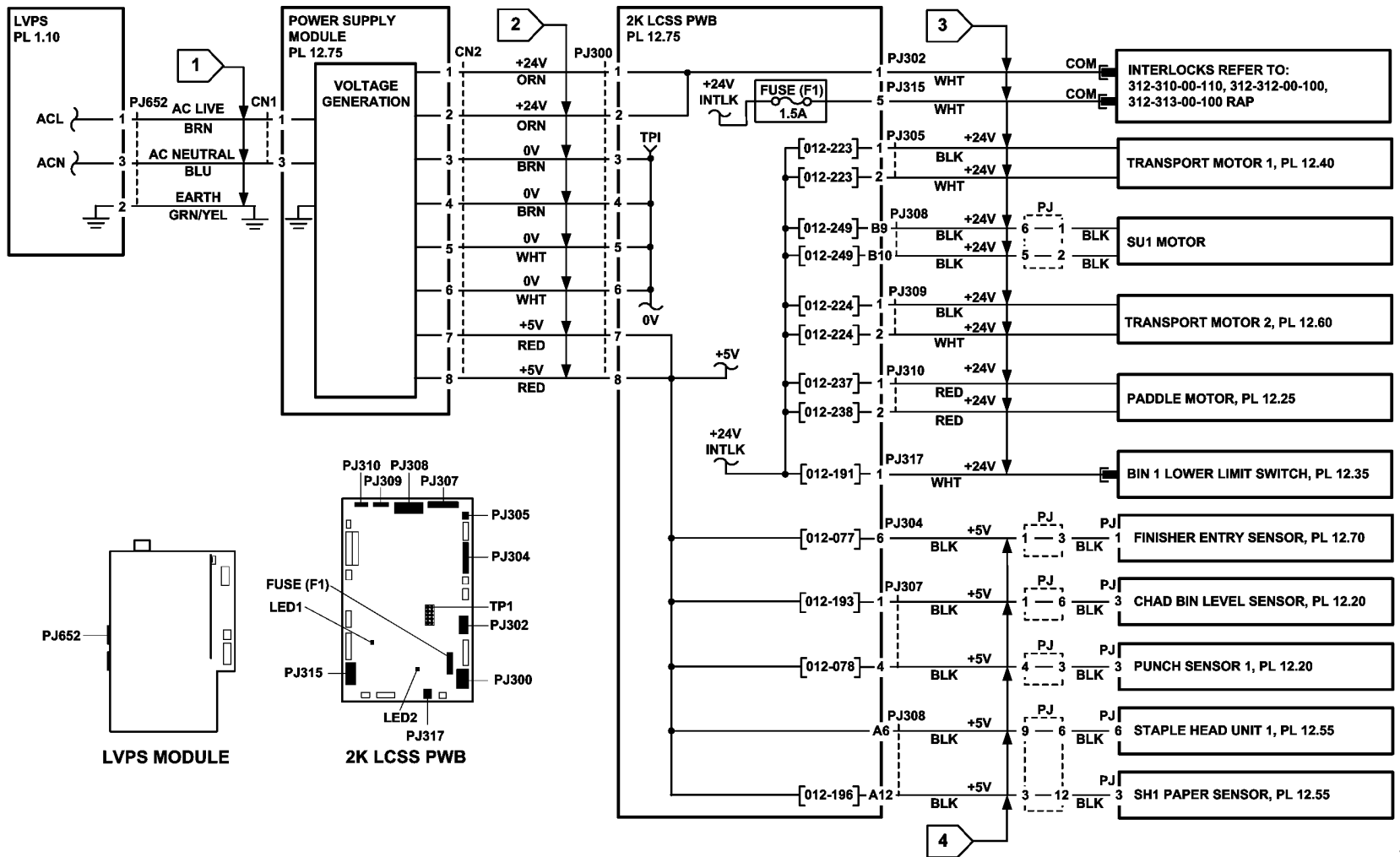


Figure 2 Circuit diagram

TW-1-0082-B

## 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.

### 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.

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

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:

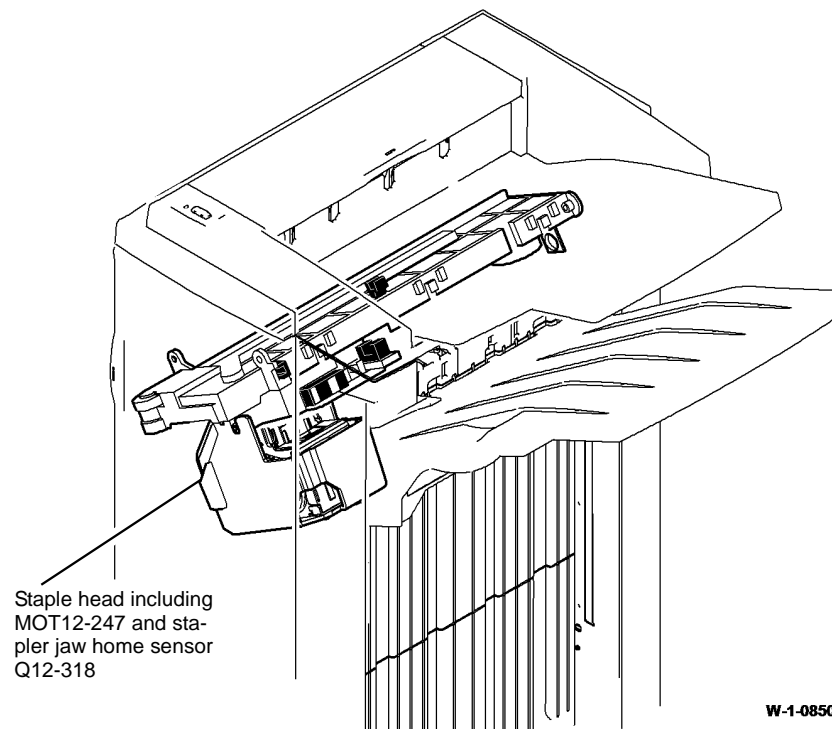
- [312G-110](#) 2K LCSS PWB Damage RAP.
- [GP 13](#), How to Check a Switch.
- [P/J308](#), 2K LCSS PWB.
- [Figure 1](#), Component location.
- [312D-110](#) 2K LCSS Power Distribution RAP.

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

W-1-0850-A

Figure 1 Component location

A

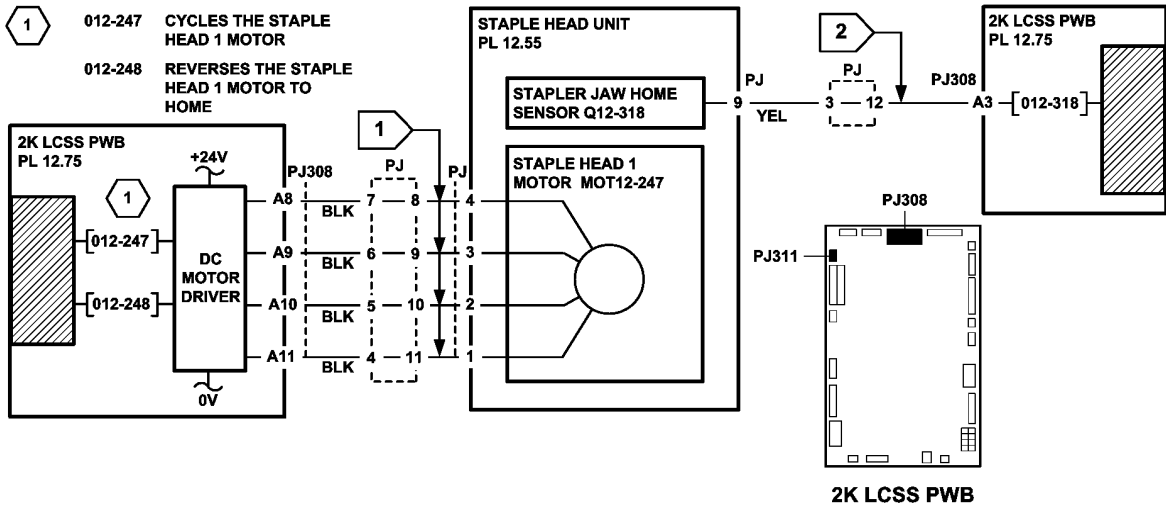


Figure 2 Circuit diagram

TW-1-0085-B

## 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.



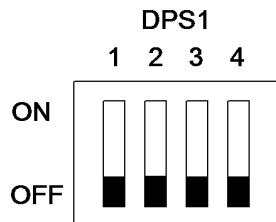
#### WARNING

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 behaviour 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](#).



W-1-0029-A

Figure 1 DIP switch settings

## 312G-110 2K LCSS PWB Damage RAP

Use this RAP to determine the cause of damage to the 2K LCSS PWB, so that the cause can be repaired before a new 2K LCSS PWB is installed.

### 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

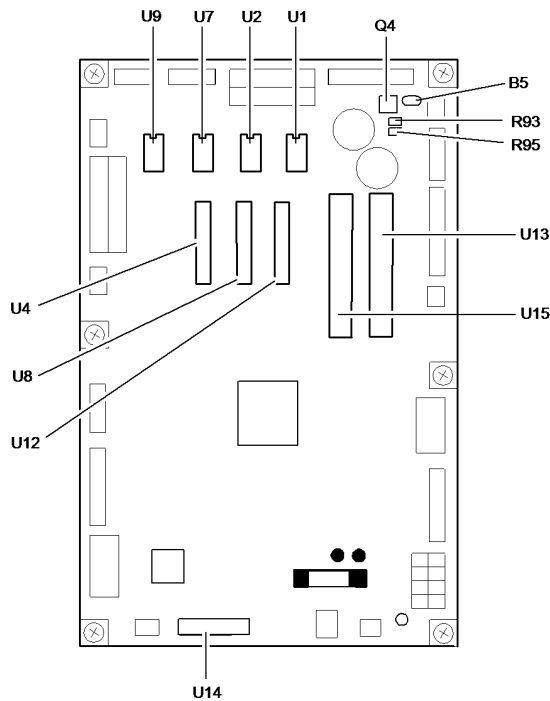
Take care not to topple the 2K LCSS. The 2K LCSS is unstable when undocked from the machine. Do not show the customer how to undock the 2K LCSS.

Check the fuse on the 2K LCSS PWB. If the fuse is good, continue at the procedure. If the fuse is not good, install a new 2K LCSS PWB, [PL 12.75 Item 1](#).

### Procedure

The 2K LCSS PWB can be damaged by a component connected to it going short-circuit. If a new 2K LCSS PWB is installed and power applied to the machine, the new 2K LCSS PWB will be damaged in the same way. The cause of the damage must be found by performing this procedure.

Remove the 2K LCSS PWB and inspect the components shown in [Figure 1](#) for damage. The damage to the component may be in the form of a crack, a small crater or a burnt patch. Refer to [Table 1](#) to locate the component causing the damage to the 2K LCSS PWB.



W-1-0030-A

Figure 1 2K LCSS PWB components

Table 1 2K LCSS PWB Drive Components

2K LCSS PWB Component	Driven Component	Normal Resistance Measurement +/- 10%	Parts List and RAP References
U9	Rear tamper motor	PJ312 pin A1 to A3 = 29 ohms. PJ312 pin A1 to A4 = 29 ohms. PJ312 pin A2 to A5 = 29 ohms. PJ312 pin A2 to A6 = 29 ohms.	Tamper assembly, PL 12.45 Item 1. 312-396-00-110, 312-397-00-110, 312-398- 00-110 RAP
U8	Staple head motor	PJ308 pin A8 to A10 = 20 ohms. PJ308 pin A9 to A11 = 20 ohms	Staple head unit, PL 12.55 Item 5. 312E-110 RAP
U7	Front tamper motor	PJ312 pin A7 to A9 = 29 ohms. PJ312 pin A7 to A10 = 29 ohms. PJ312 pin A8 to A11 = 29 ohms. PJ312 pin A8 to A12 = 29 ohms.	Tamper assembly, PL 12.45 Item 1. 312-392-00-110, 312-393-00-110, 312-394- 00-110 RAP

Table 1 2K LCSS PWB Drive Components

2K LCSS PWB Component	Driven Component	Normal Resistance Measurement +/- 10%	Parts List and RAP References
U13	Transport motor 1	PJ305 pin 1 to 3 = 2.8 ohms. PJ305 pin 1 to 4 = 2.8 ohms. PJ305 pin 2 to 5 = 2.8 ohms. PJ305 pin 2 to 6 = 2.8 ohms.	Transport motor 1, PL 12.40 Item 2. 312-171-00-110, 312-172-00-110 RAP
U15	Transport motor 2	PJ309 pin 1 to 4 = 1.3 ohms. PJ309 pin 1 to 5 = 1.3 ohms. PJ309 pin 2 to 6 = 1.3 ohms. PJ309 pin 2 to 7 = 1.3 ohms.	Transport motor 2, PL 12.60 Item 5. 312-171-00-110, 312-172-00-110 RAP
U4	Hole punch motor	PJ311 pin 1 to 2 = 6 ohms	Hole punch motor, PL 12.20 Item 2. 312-043-00-110, 312-046-00-110 RAP
U2	Paddle motor	PJ310 pin 1 to 3 = 29 ohms. PJ310 pin 1 to 4 = 29 ohms. PJ310 pin 2 to 5 = 29 ohms. PJ310 pin 2 to 6 = 29 ohms.	Paddle motor assembly, PL 12.25 Item 10. 312-024-00-110, 312-025-00-110 RAP
U1	SU1 motor (stapler indexing)	PJ308 pin B9 to B11 = 20 ohms. PJ308 pin B9 to B12 = 20 ohms. PJ308 pin B10 to B13 = 20 ohms. PJ308 pin B10 to B14 = 20 ohms.	Stapler traverse assembly, PL 12.55 Item 1. 312-371- 00-110, 312-372-00-110, 312-378-00-110 RAP
U12	Ejector motor	PJ303 pin 1 to 2 = 8 ohms	Ejector assembly, PL 12.50 Item 1. 312-340-00-110, 312-341-00-110, 312-342- 00-110 RAP
Q4, B5, R93, R95	Diverter gate solenoid	PJ306 pin 1 to pin 2 = 74 ohms	Exit diverter solenoid, PL 12.60 Item 12. 312-171-00-110, 312-172-00-110 RAP
U14	Bin 1 elevator motor	PJ318 pin 1 to 2 = 7.7 ohms	Bin 1 elevator motor, PL 12.30 Item 8. 312-462-00-110 RAP

**NOTE:** If difficulty is found in connecting the service meter probes to the connector headers on the 2K LCSS PWB, refer to the RAP quoted in Table 1 and make the measurement at another point in the harness to the driven component.

If the defective driven component is found using the table checks, disconnect the connector closest to the driven component, then check the driven component again to identify any short circuit in the wiring to the driven component. Repair the wiring or install new components as necessary.

If the defective driven component can not be found using the table checks, refer to GP 7. Check each driven component to ensure that it is not seized. Motors should rotate reasonably easily. Solenoid armatures should slide easily in the coil. Also check the drive components to ensure that they rotate easily. If necessary install new components.

When a new driven component has been installed or the defective drive components have been repaired, install a new 2K LCSS PWB, PL 12.75 Item 1.

## 312H-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



Ensure that the electricity to the machine is switched off while performing tasks 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:

- 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.

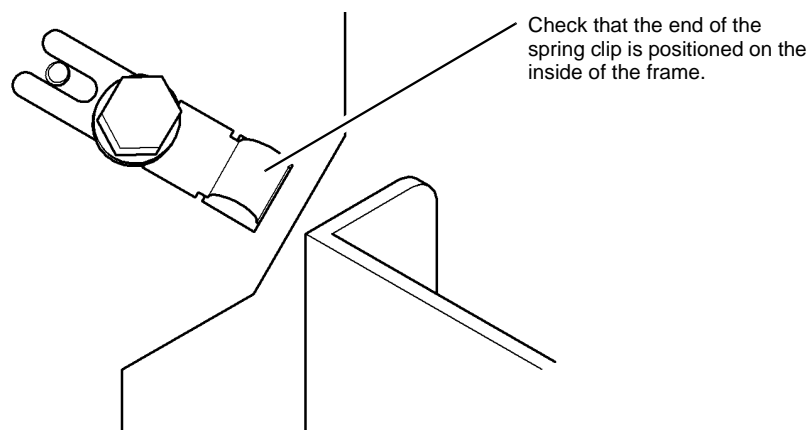


Figure 1 Position of the spring clip

## 312J-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 [312H-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.

## 312K-110 2K LCSS Poor Stacking RAP

Use this RAP to find the cause of poor stacking 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.

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.

## 312L-110 Stapler Priming Failure RAP

Use this RAP when the staples in the stapling head are not 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.



#### 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.

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

- [312G-110](#) 2K LCSS PWB Damage RAP.
- [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



A

**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**.

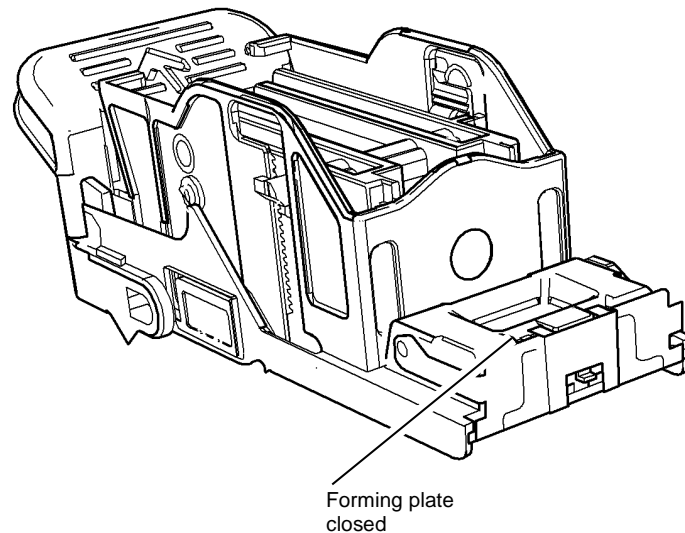


Figure 2 Staple cartridge closed

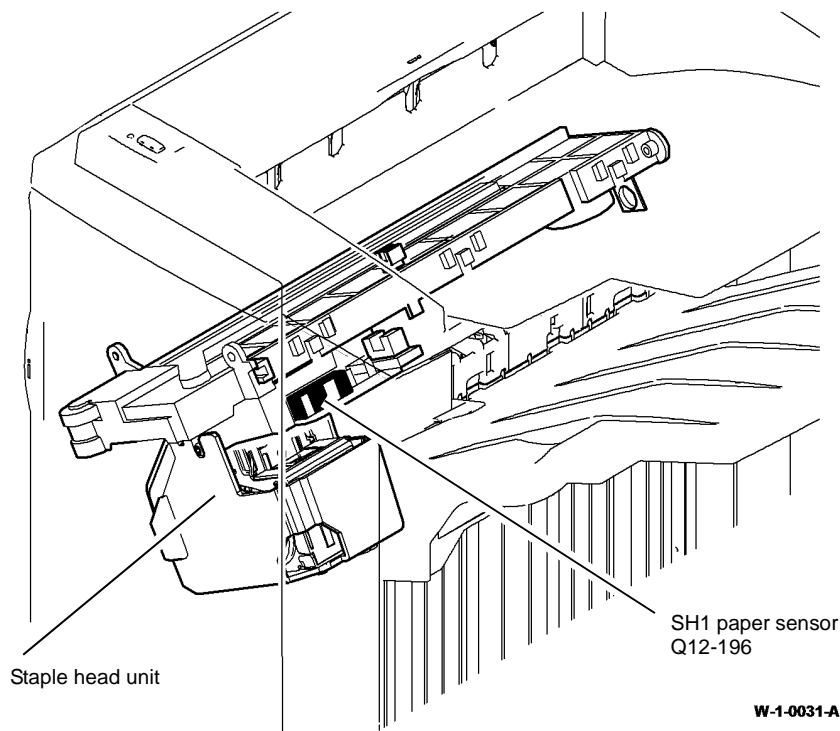


Figure 1 Component location

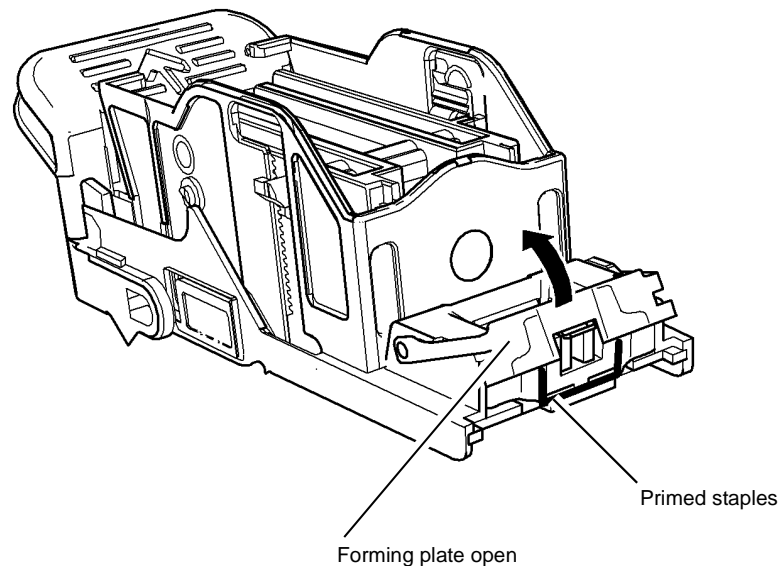
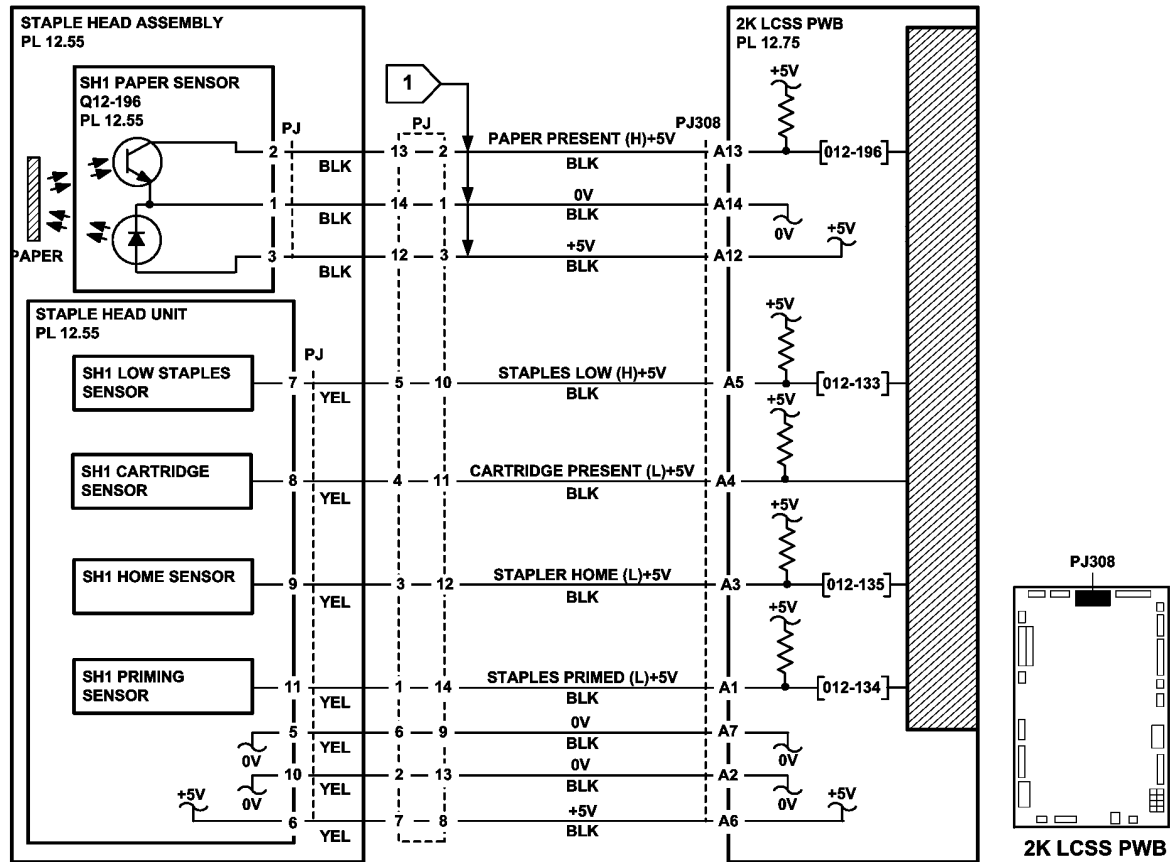


Figure 3 Staple cartridge open



TW-1-0084-B

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.

### 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:

- That there is no paper or other obstruction in the vicinity of the paddle.
- 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.
- 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](#).
- 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](#).

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.

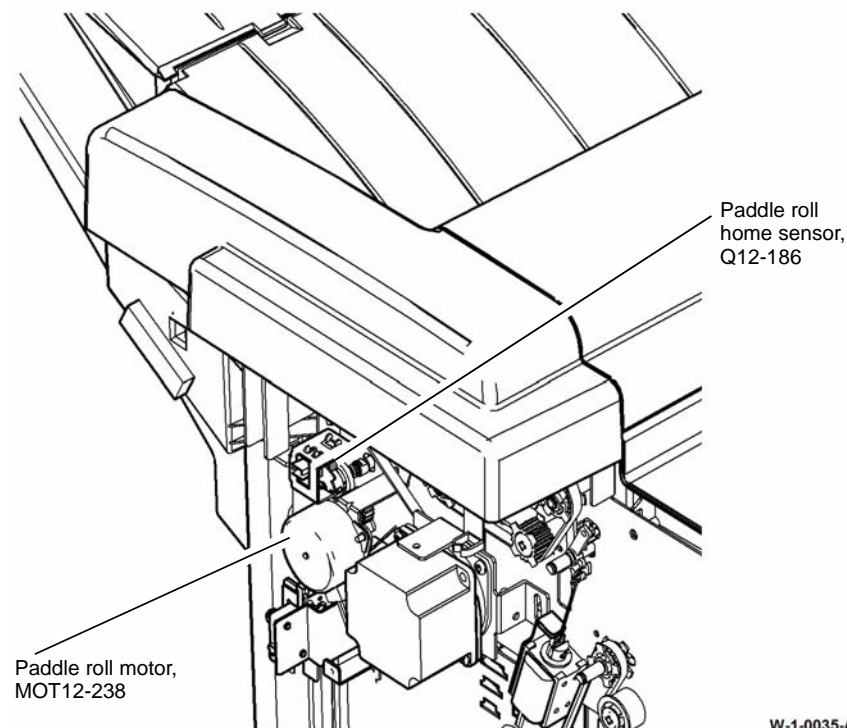


Figure 1 Component location

W-1-0035-A

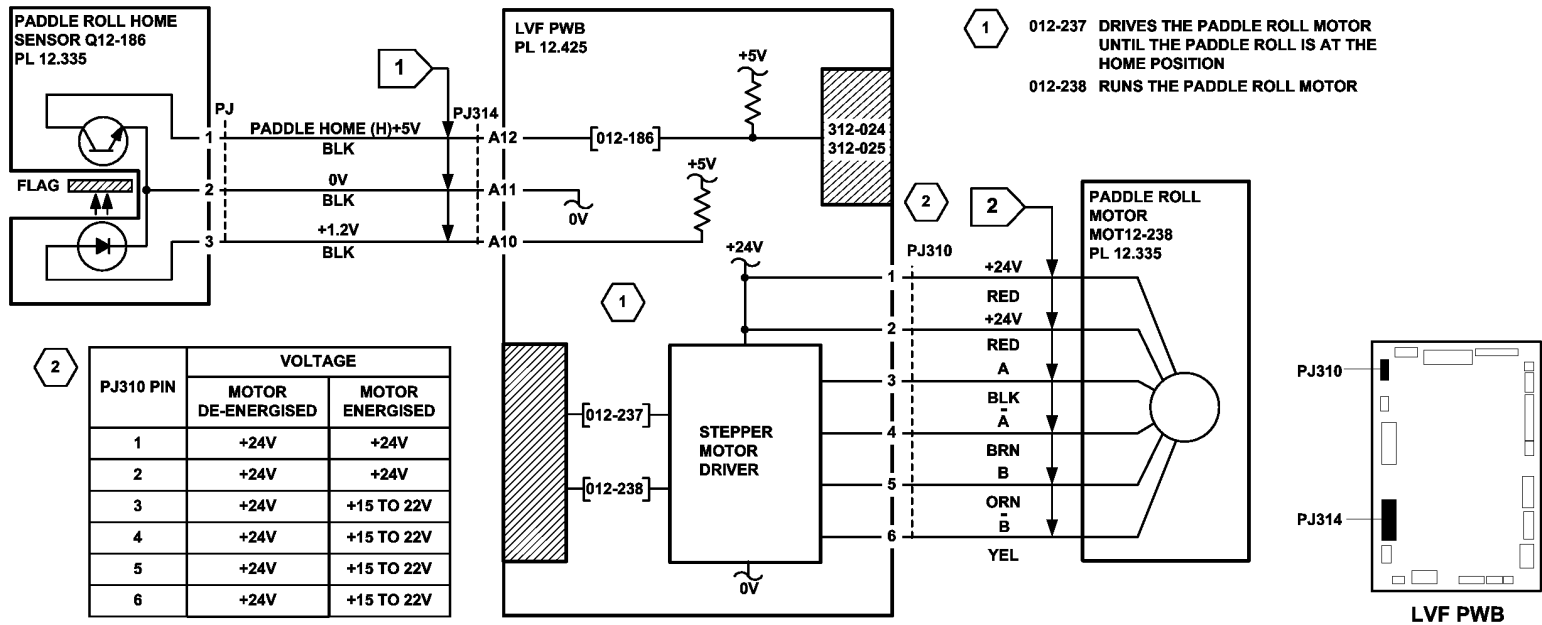


Figure 2 Circuit diagram

TW-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.

### 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 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.

### 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 hole punch motor, 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.

Perform **SCP 5** Final Actions.

A

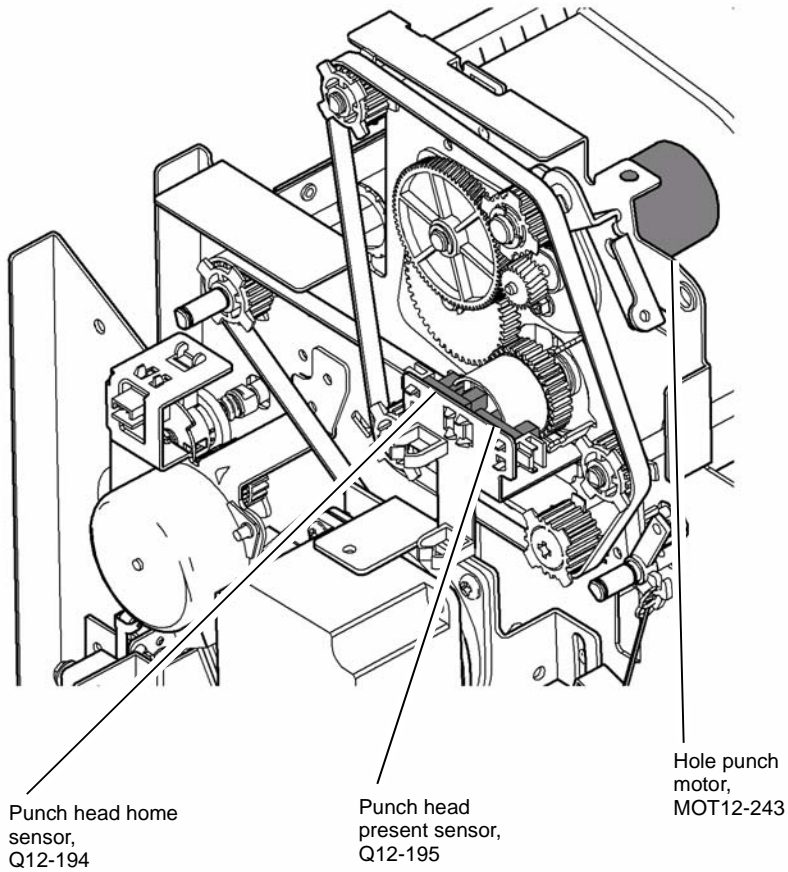


Figure 1 Component location

W-1-0038-A

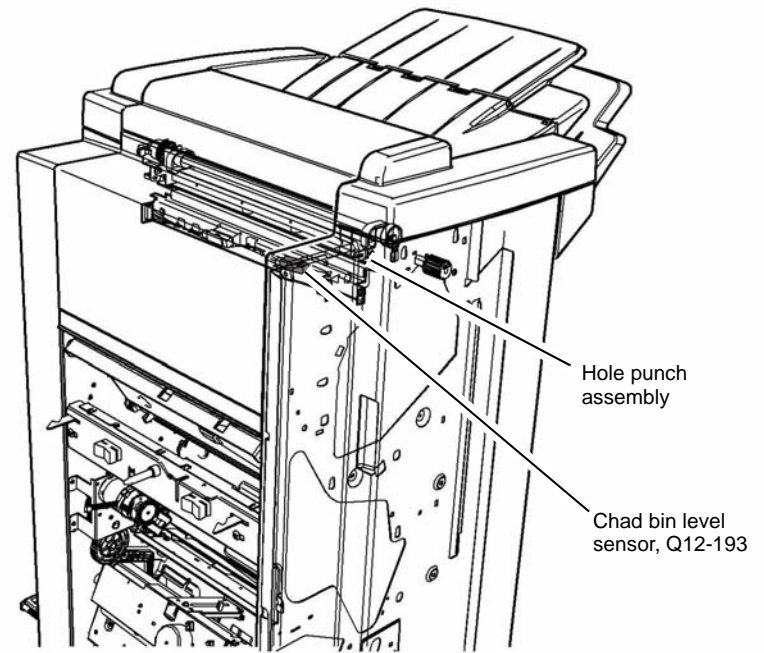
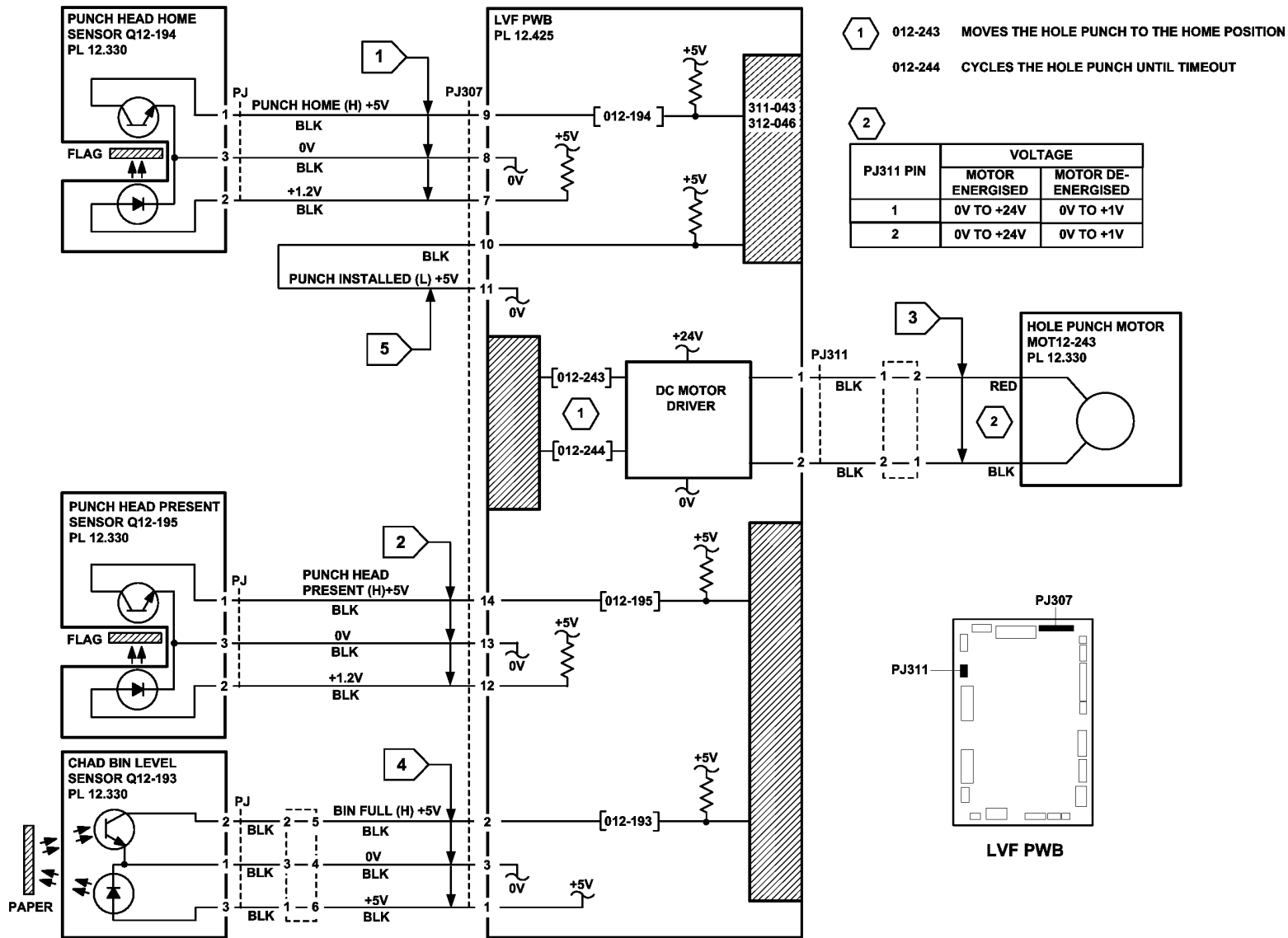


Figure 2 Component location

W-1-0039-A



TW-1-0026-A

Figure 3 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.

### Initial Actions



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.

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.

### Procedure

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.

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:

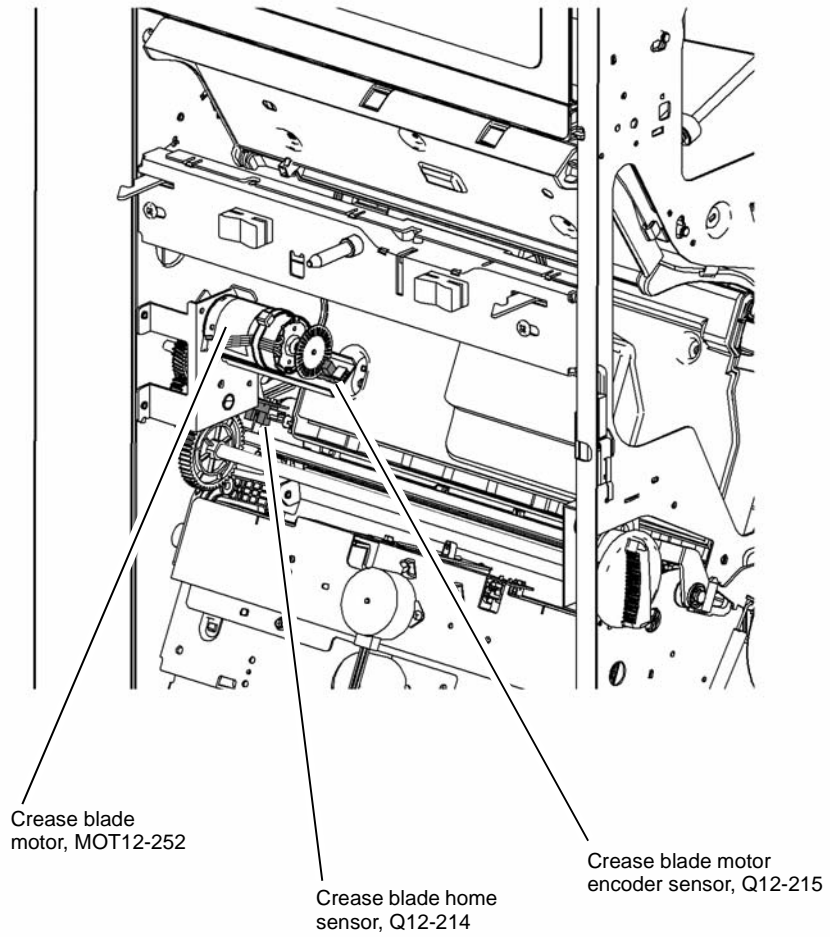
- GP 10, How to Check a Motor.
- P/J104, LVF BM PWB.
- 312D-150 LVF BM Power Distribution RAP.

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.





W-1-0042-A

Figure 1 Component location

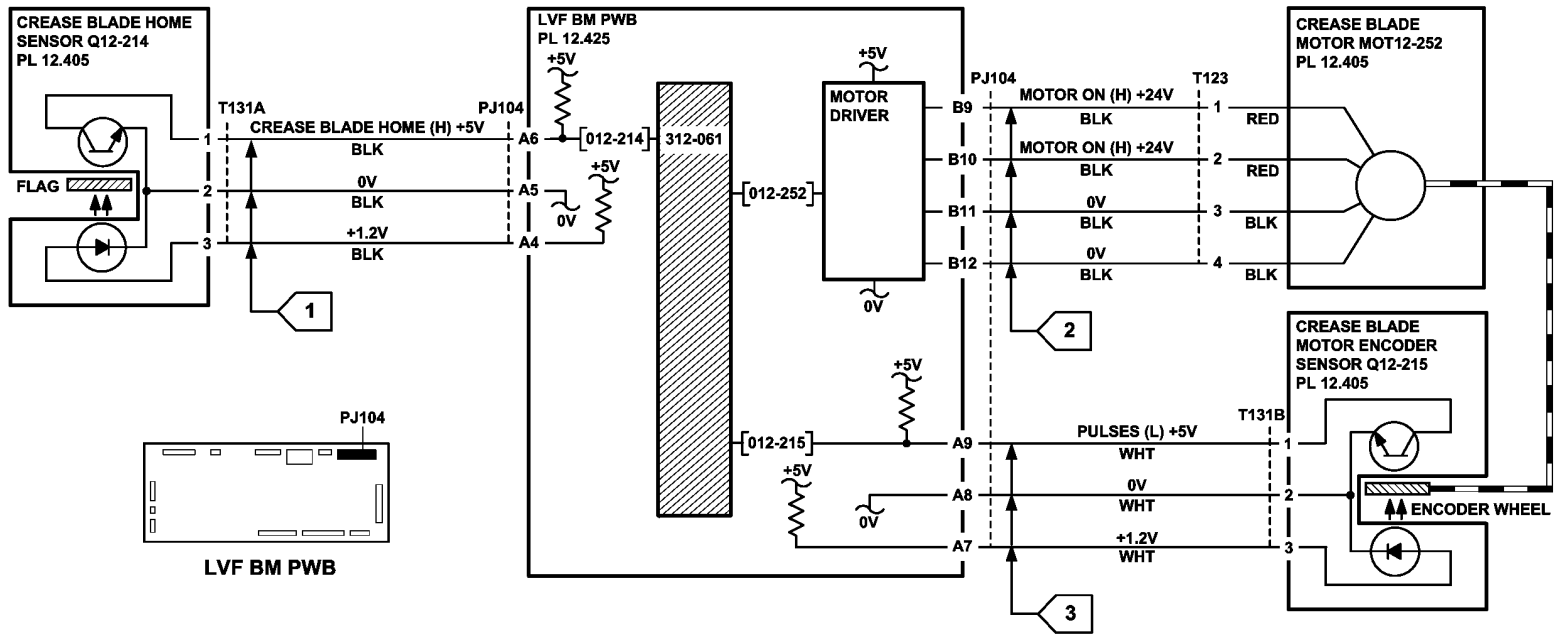


Figure 2 Circuit diagram

TW-1-0029-A

## 312-062-00-150 Crease Roll Failure RAP

312-062-00-150 The crease roll motor failed to run.

### 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.

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.

### Procedure

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.

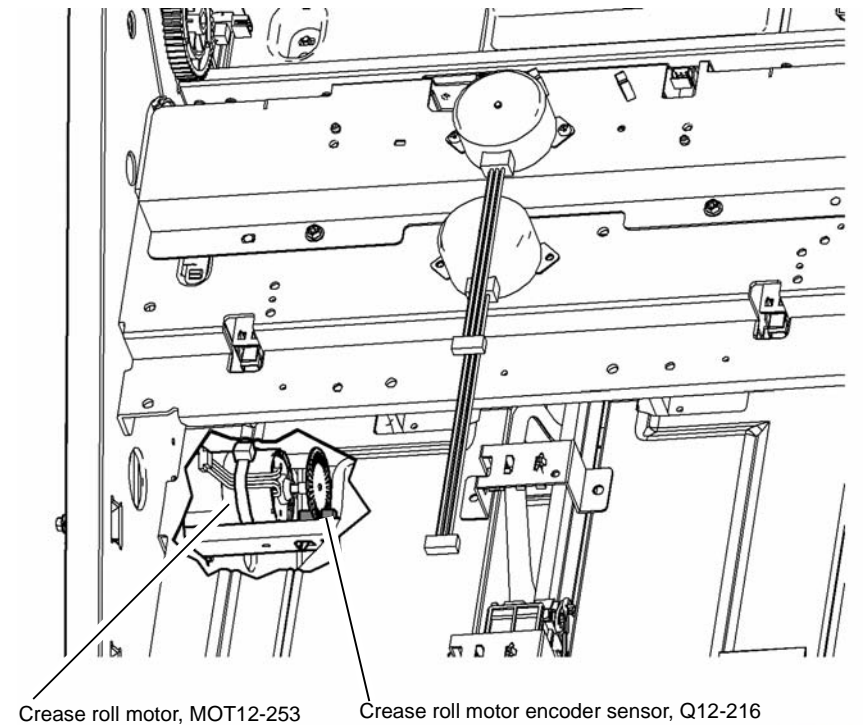
Refer to:

- 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.



W-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.

### 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 for a paper jam, paper debris or damage in the stapler area that would hinder the movement of the BM staple head assembly,

### Procedure

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.**

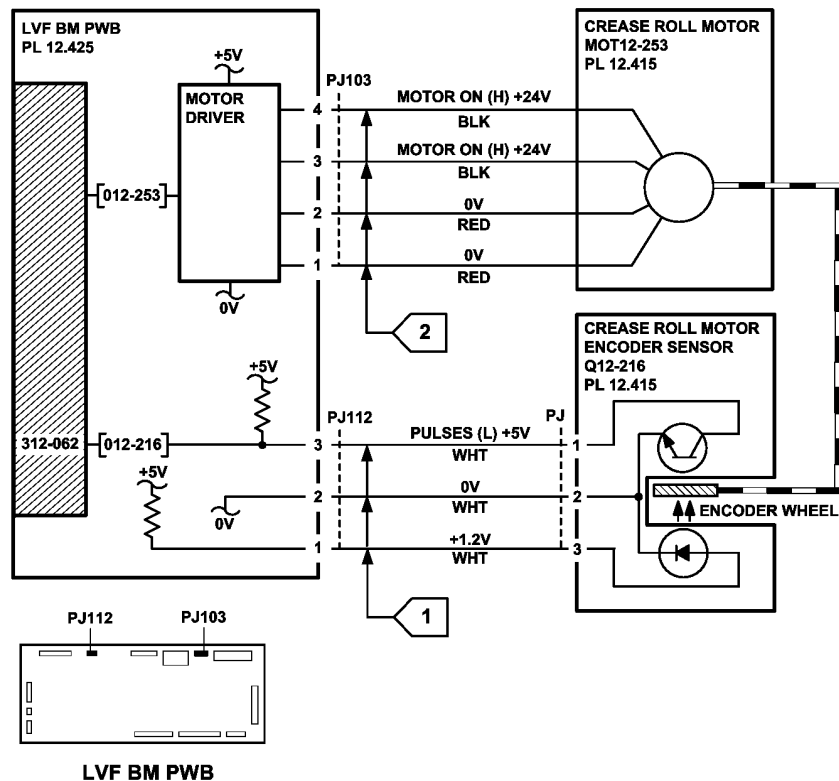
**Y N**

Go to **Flag 2**. Check Q12-439.

Refer to:

- **GP 11**, How to Check a Sensor.

**A**



TW-1-0030-A

Figure 2 Circuit diagram

A

- 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

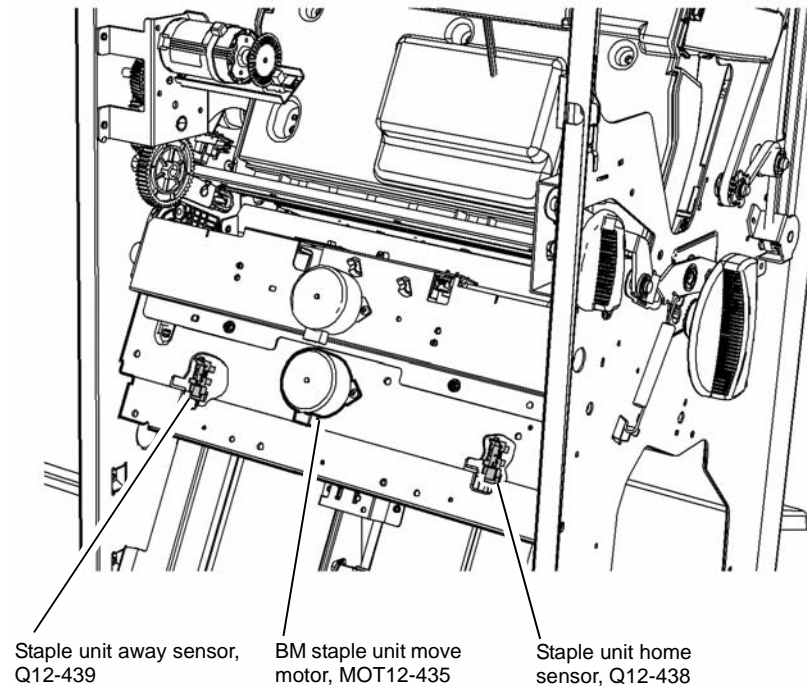
Go to Flag 4. Check the staple unit move motor, MOT12-435.  
Refer to:

- GP 10, How to Check a Motor.
- P/J106, LVF BM PWB.
- 312D-150 LVF BM Power Distribution RAP.

Install new components as necessary:

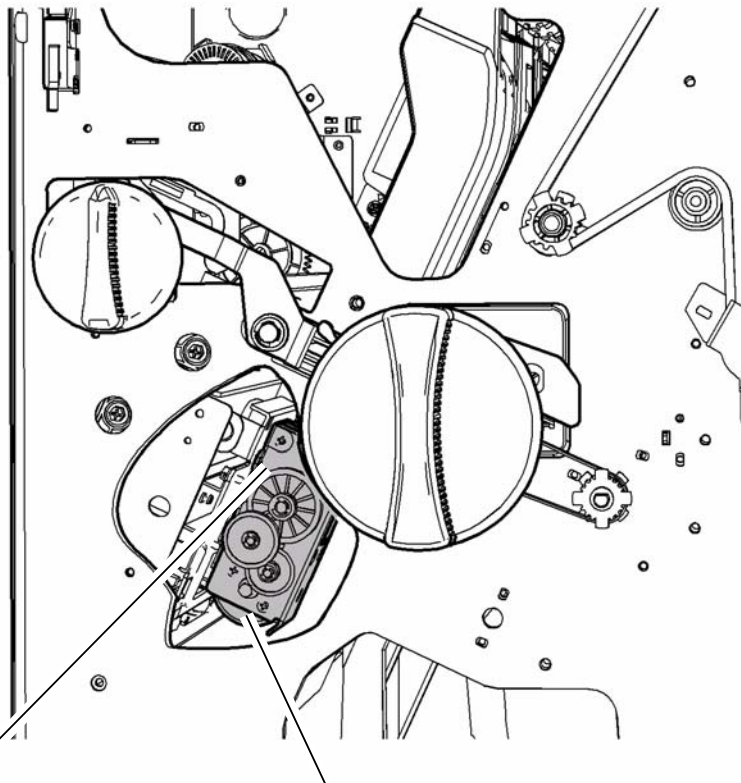
- LVF BM PWB, PL 12.425 Item 1.
- BM staple unit move motor, PL 12.395 Item 3.

The fault may be intermittent. Check for damaged wiring or connectors. If necessary repair the wiring, REP 1.2, or install new components.



W-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)

W-1-0060-A

**Figure 2 Component location**

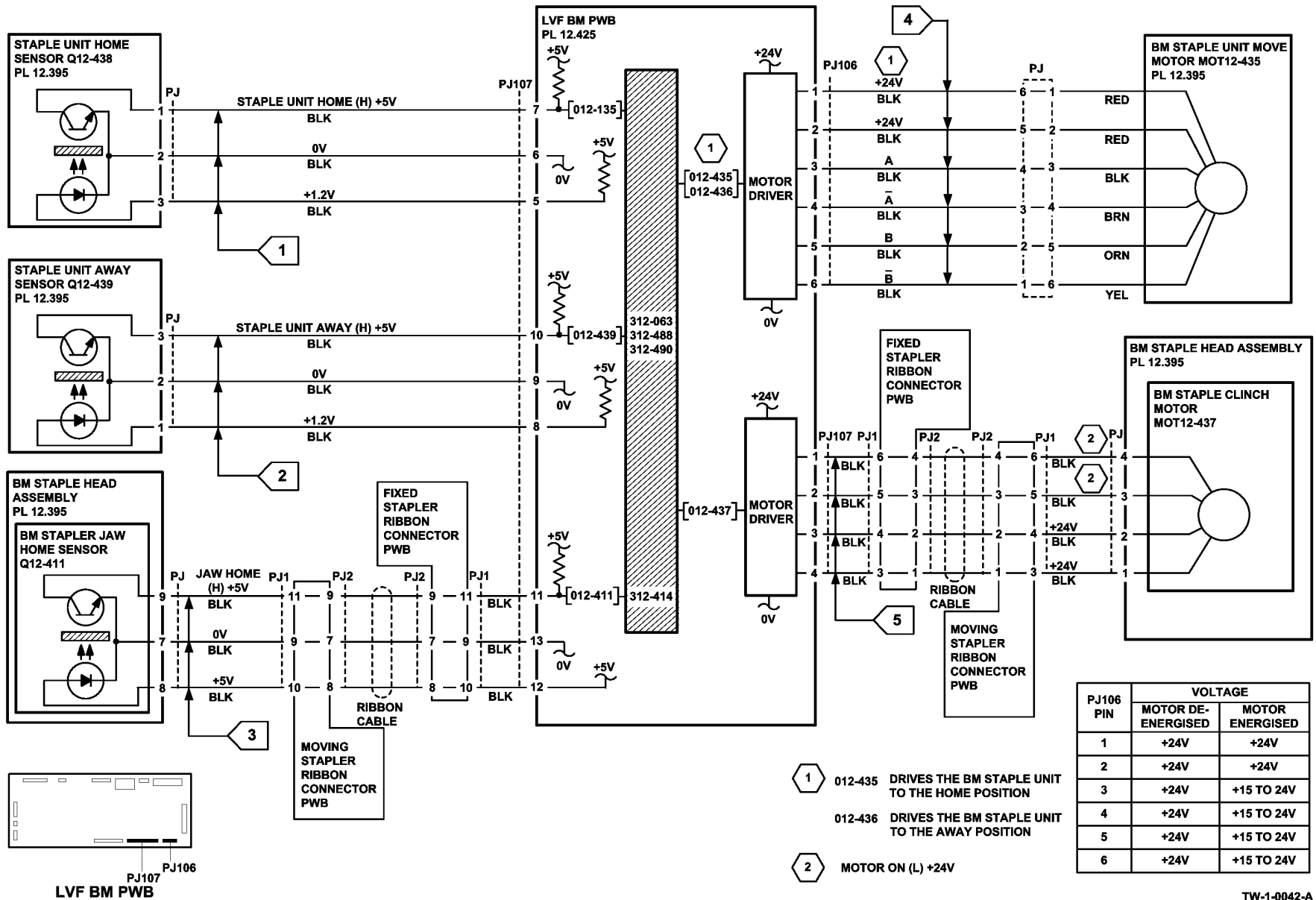


Figure 3 Circuit diagram

## 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.

### 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 for any paper jams in the booklet compiler. If necessary clear any stray sheets or paper debris.

### Procedure

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.

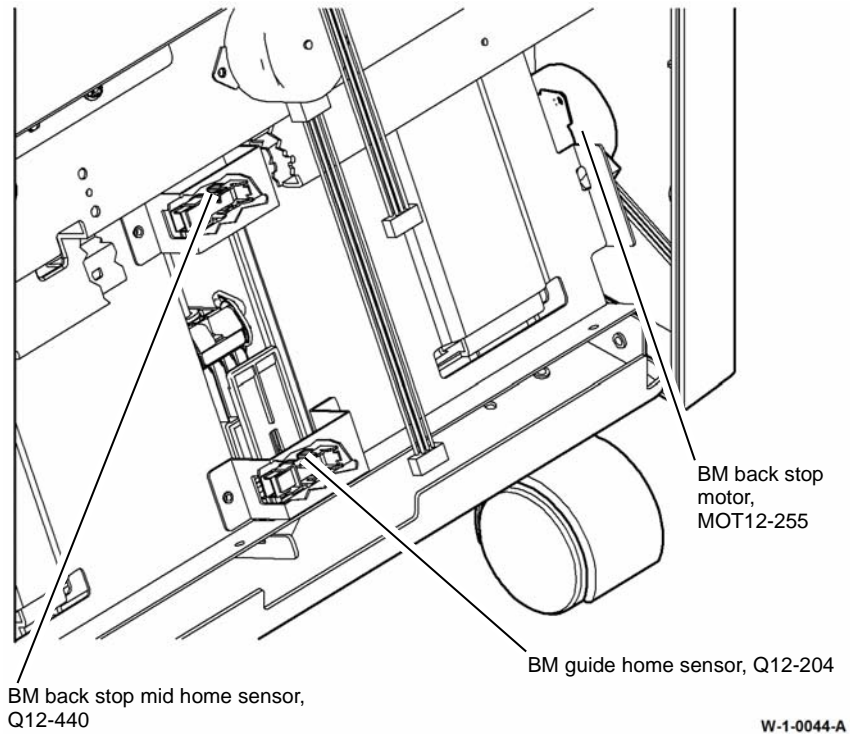
Install new components as necessary:

- LVF BM PWB, [PL 12.425 Item 1](#).
- BM back stop motor, [PL 12.400 Item 9](#).

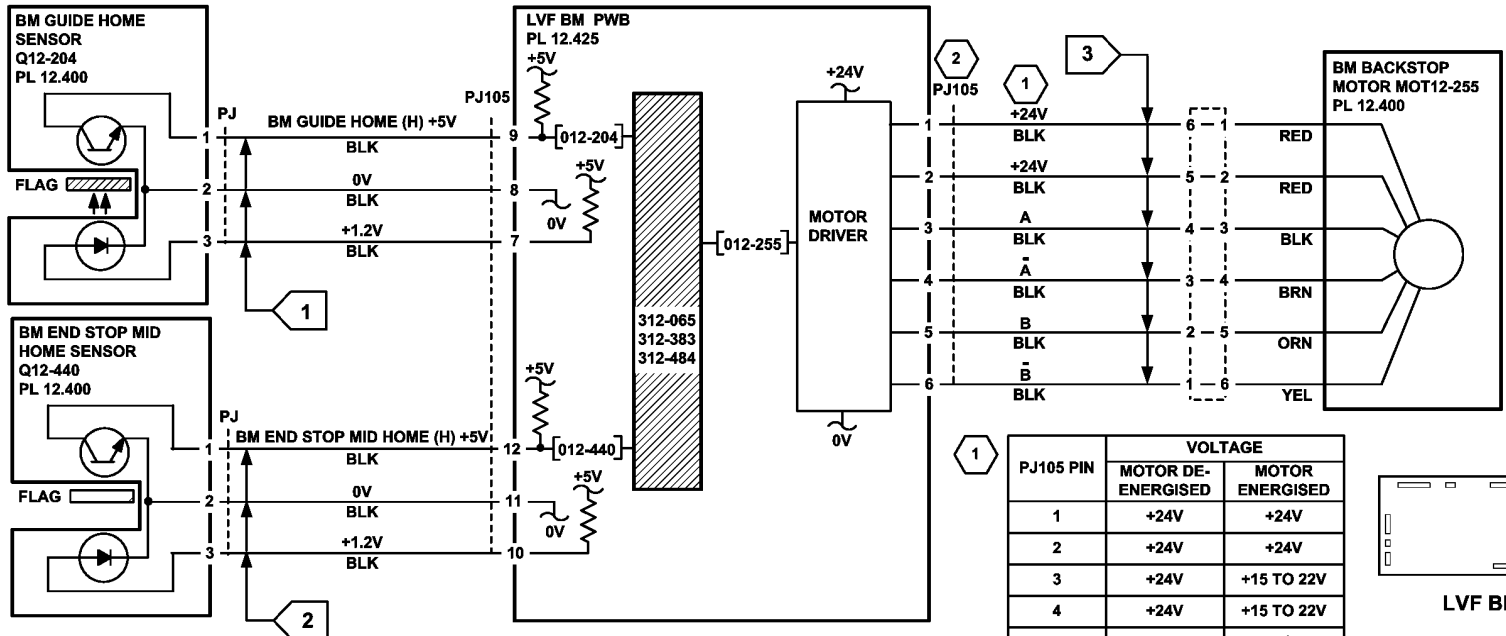
The fault may be intermittent. Check for damaged wiring or connectors. If necessary repair the wiring, [REP 1.2](#), or install new components.

A





**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

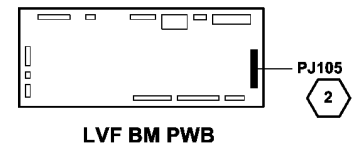


Figure 2 Circuit diagram

TW-1-0031-A

## 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.

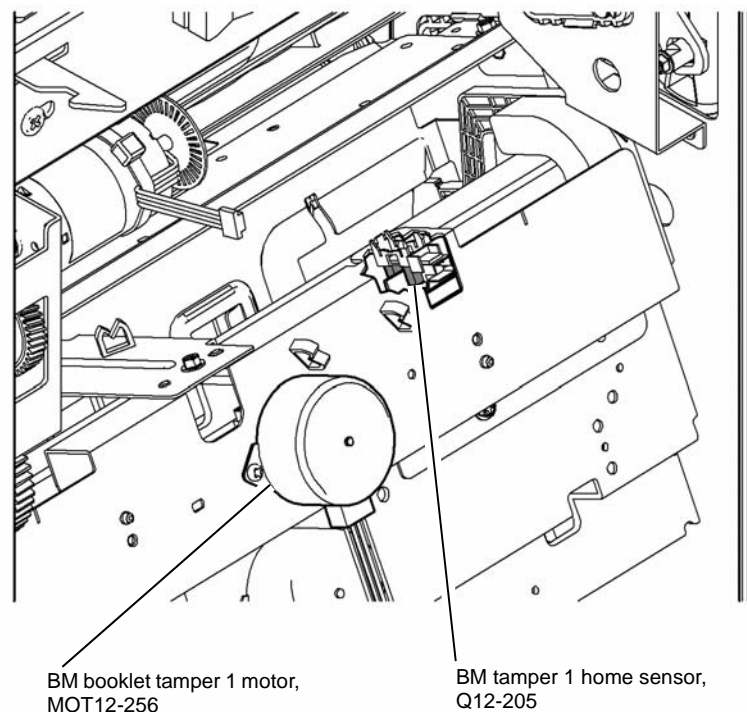
Refer to:

- **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.



W-1-0045-A

Figure 1 Component location

A

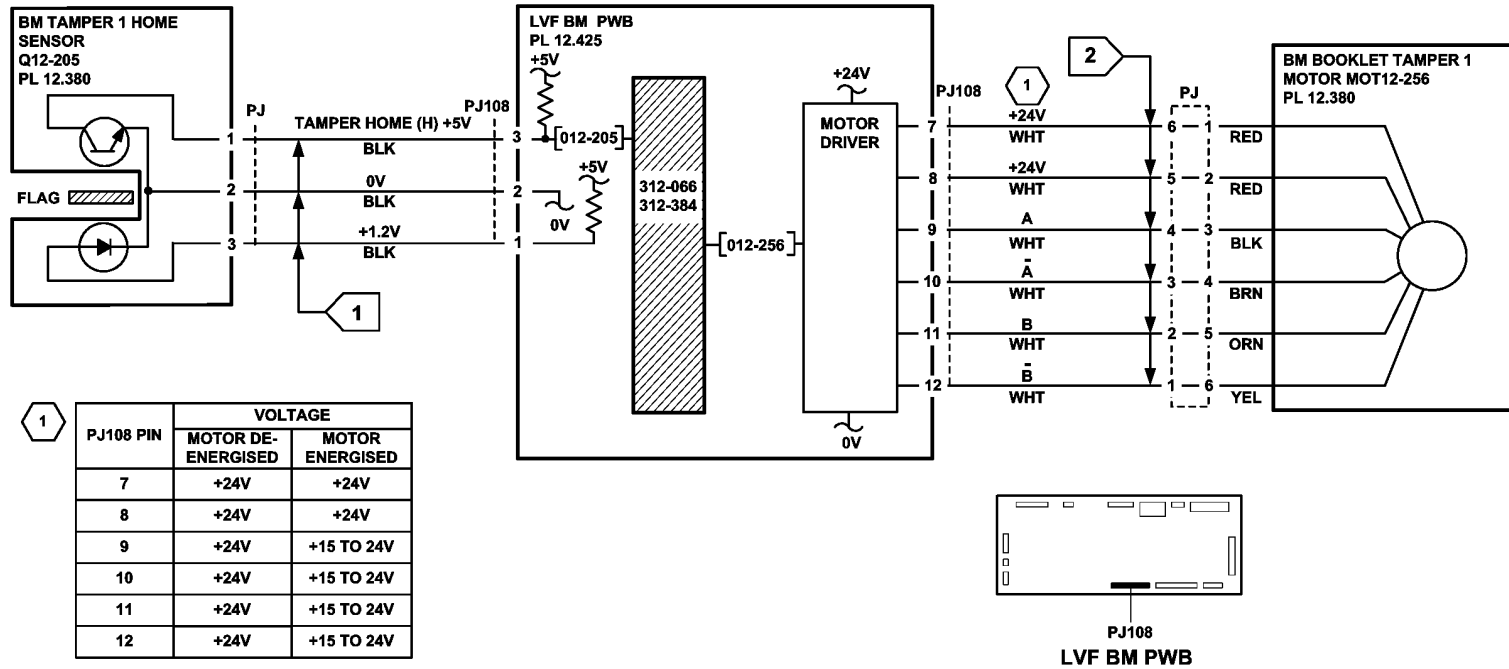


Figure 2 Circuit diagram

TW-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.

### 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:

- If the fault code is 312-199-00, switch off then switch on the machine, [GP 14](#).
- LVF PWB DIP switch settings. Refer to [312F-150](#) LVF PWB and LVF BM PWB DIP Switch Settings RAP.
- That the paper tray guides are set to the correct position for the size of paper in the tray.
- 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.
- Feeding performance from a paper tray loaded with a new ream of paper.

### 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.

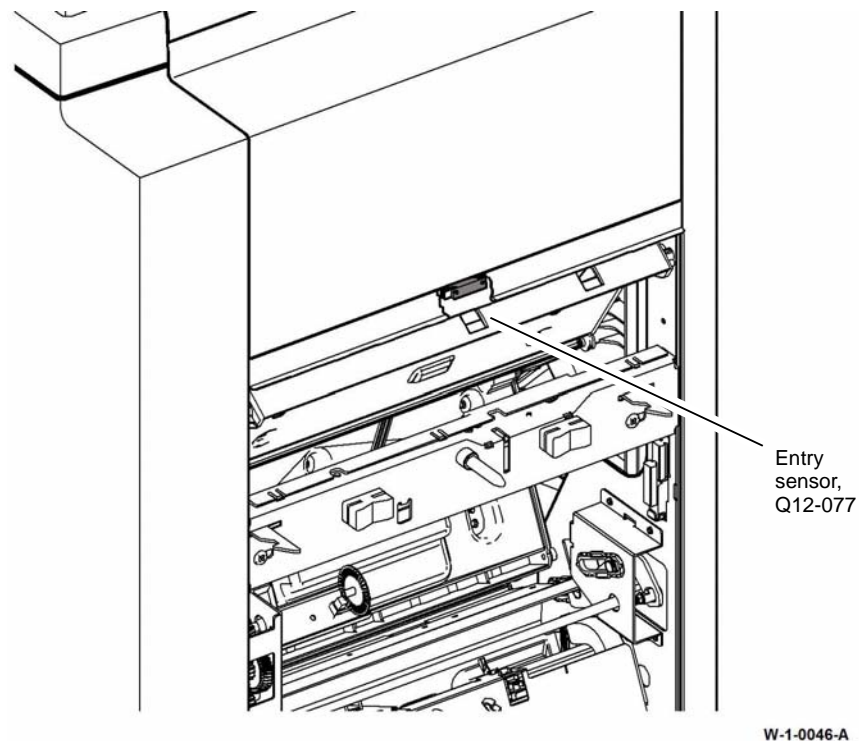
Refer to:

- [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](#).

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.



W-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.

### 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.
- That 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 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.

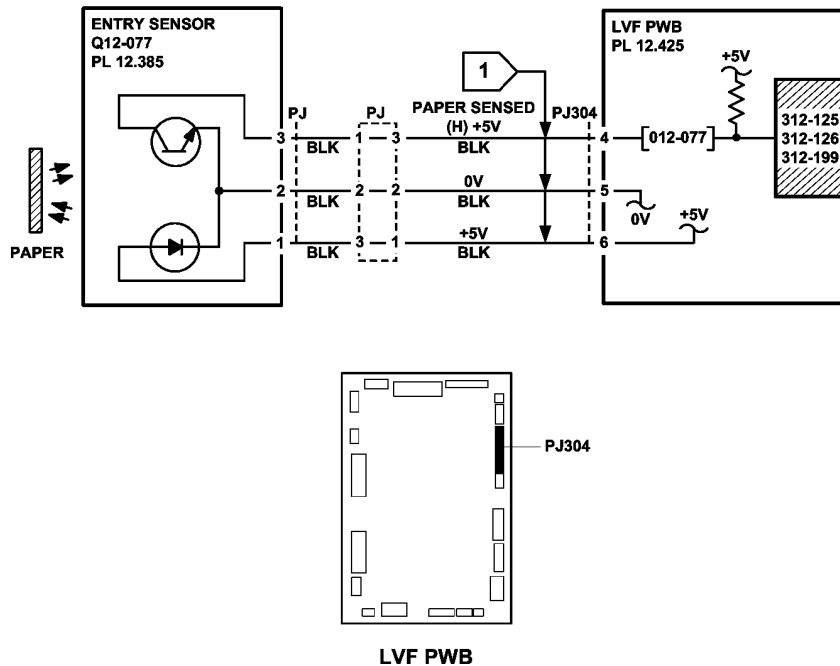
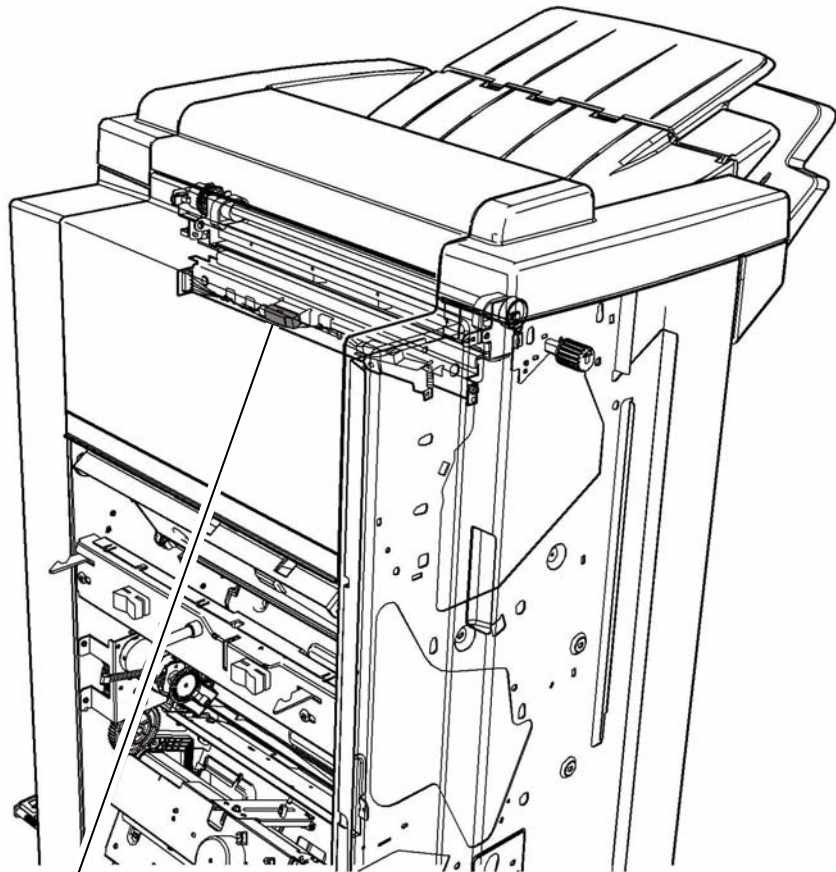


Figure 2 Circuit diagram

TW-1-0033-B



Punch sensor 1, Q12-078

Figure 1 Component location

W-1-0047-A

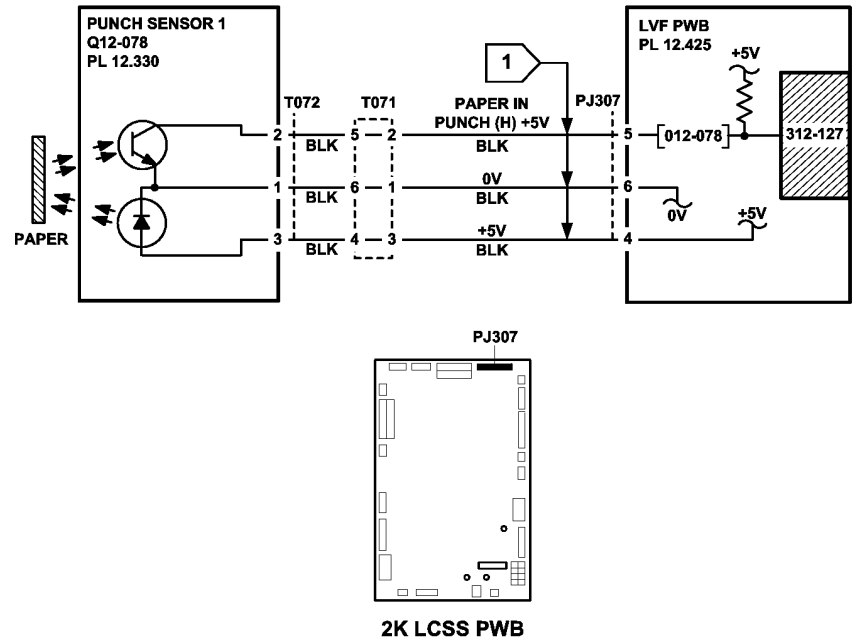


Figure 2 Circuit diagram

TW-1-0034-A

## 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.

### 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.
- 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.
- 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 12.4-150](#).
- 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:

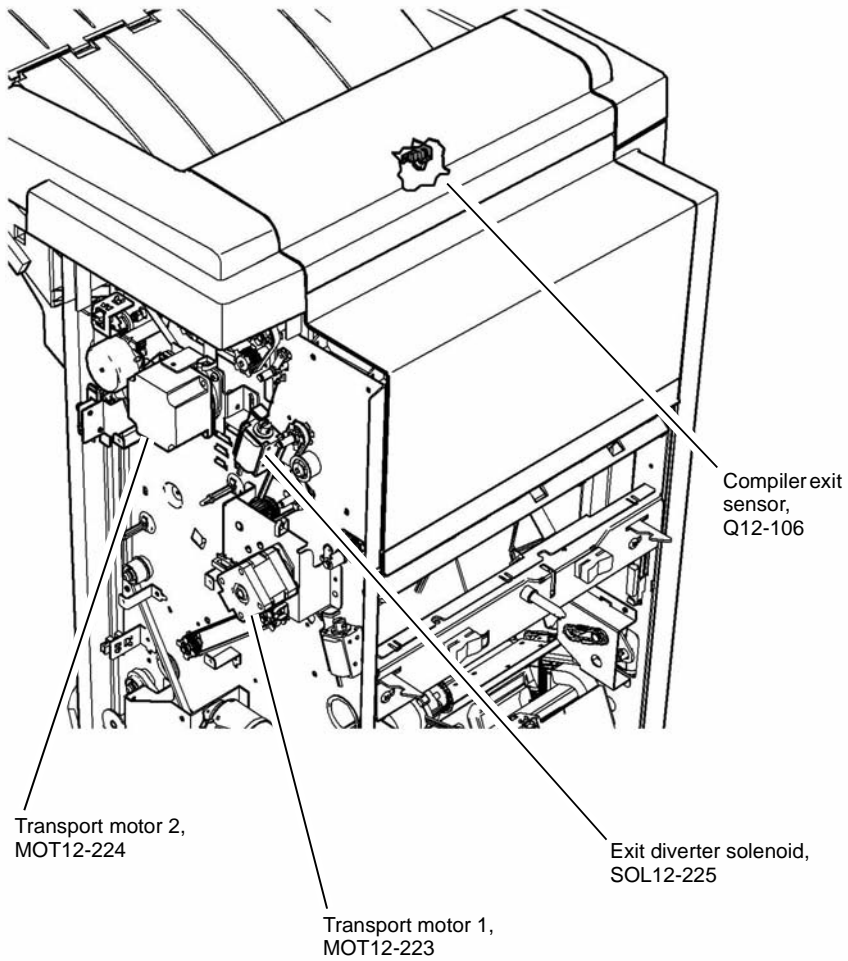
- [GP 10](#), How to Check a Motor.
- [P/J305](#), [LVF PWB](#).
- [312D-150](#) LVF BM Power Distribution RAP.

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.





W-1-0049-A

Figure 1 Component location

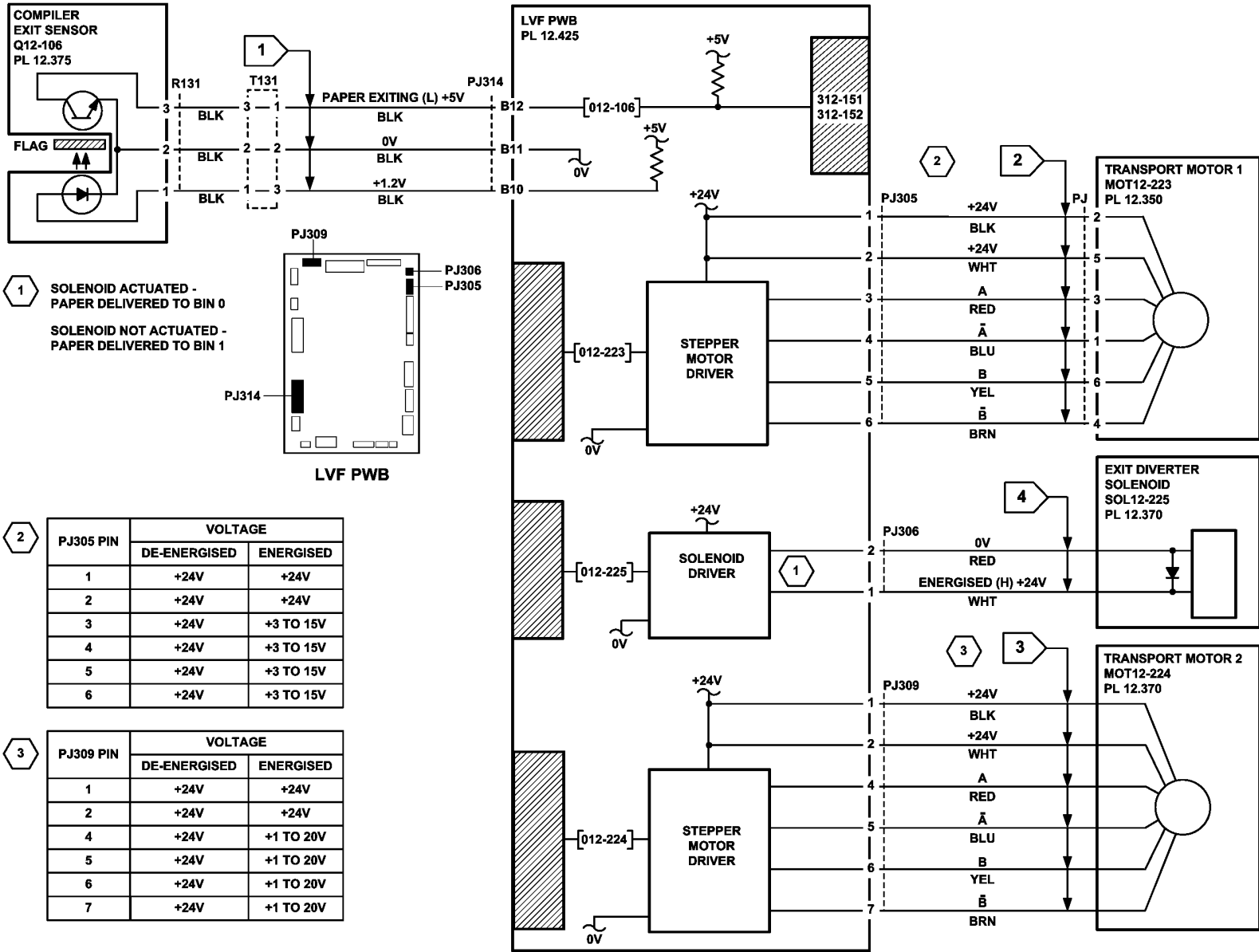


Figure 2 Circuit diagram

TW-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.

### 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

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 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.

### Procedure

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:

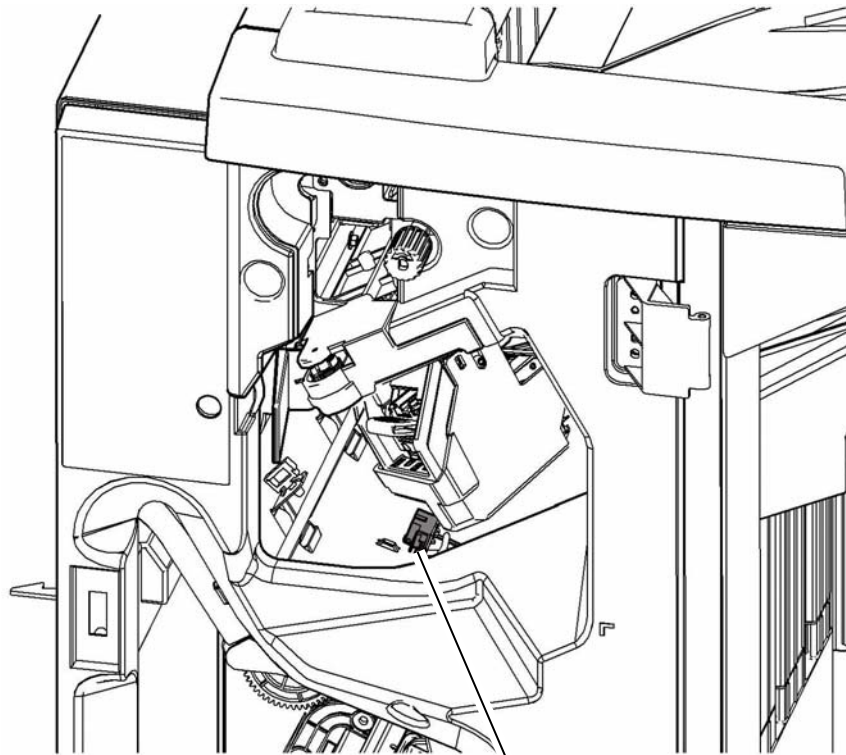
- [GP 10](#), How to Check a Motor.
- [P/J104, LVF BM PWB](#).
- [312D-150 LVF BM Power Distribution RAP](#).

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.

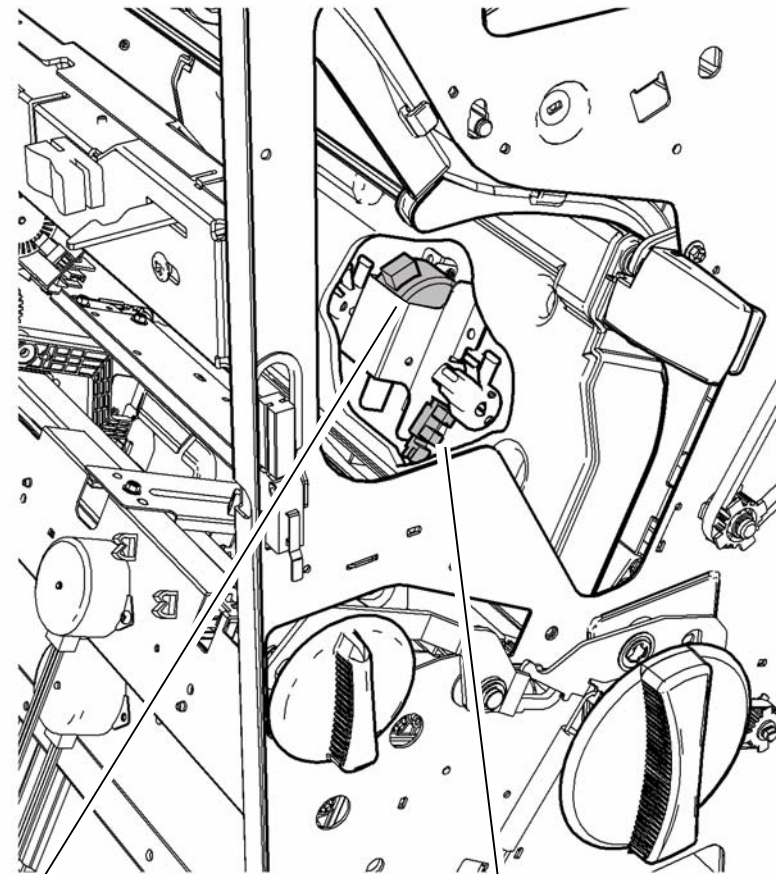
A



BM entry sensor, Q12-089

W-1-0051-A

Figure 1 Component location



BM flapper motor,  
MOT12-271

BM flapper home  
sensor, Q12-207

W-1-0052-A

Figure 2 Component location

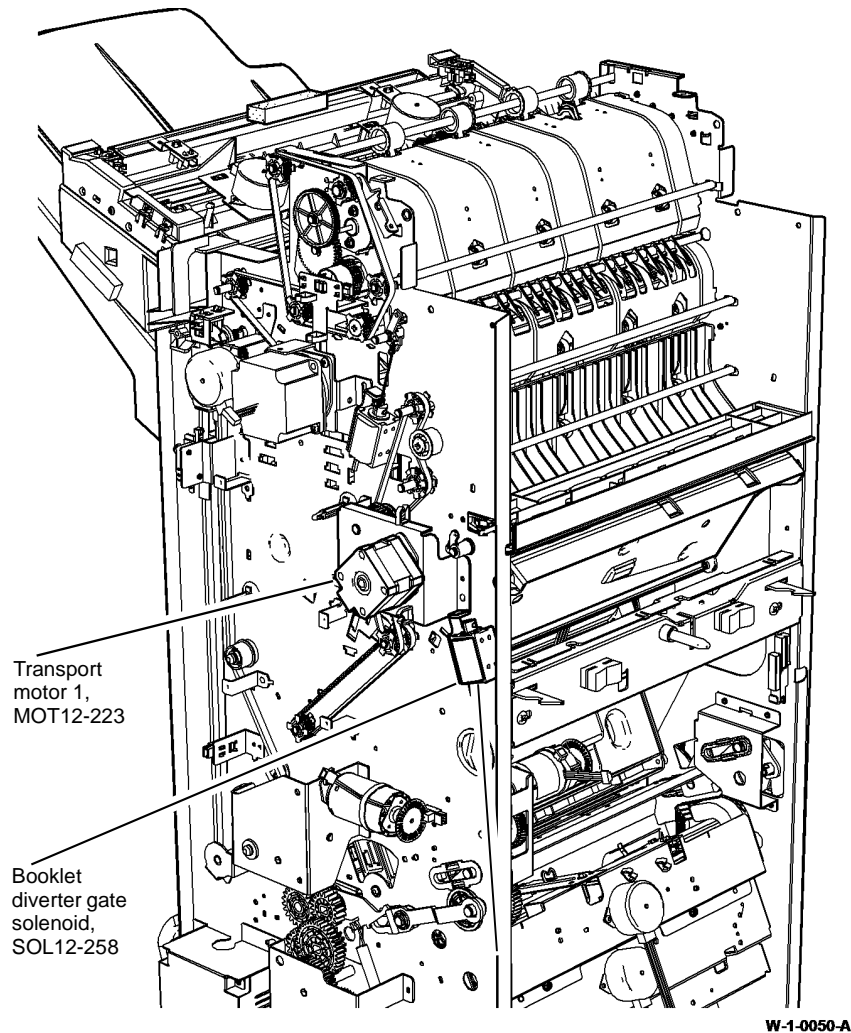


Figure 3 Component location

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

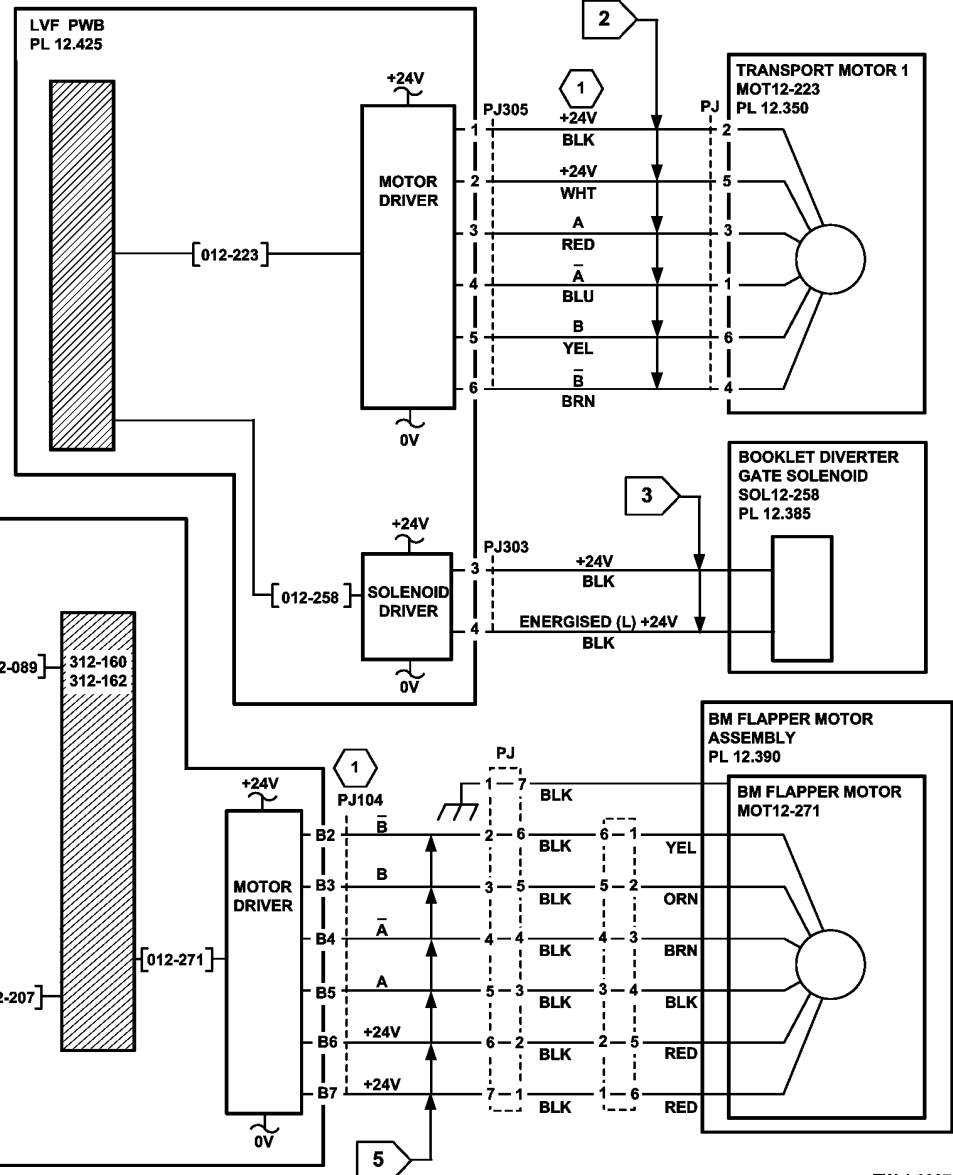
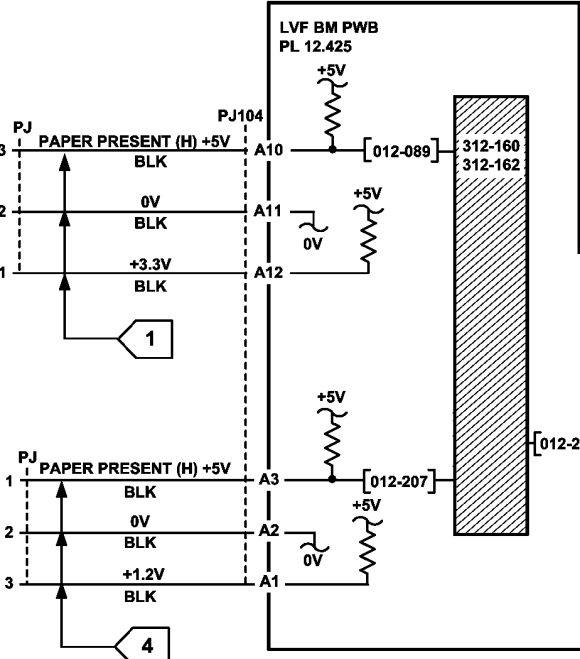
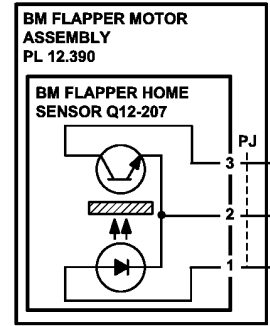
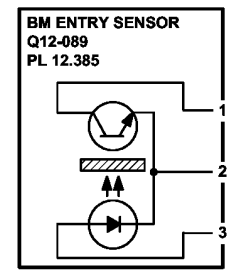
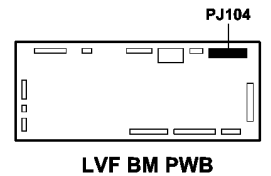
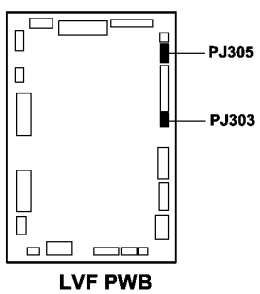


Figure 4 Circuit diagram

TW-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.

### 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.
- That the paper tray guides are set to the correct position for the size of paper in the tray.
- 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.
- 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.

**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](#).

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.

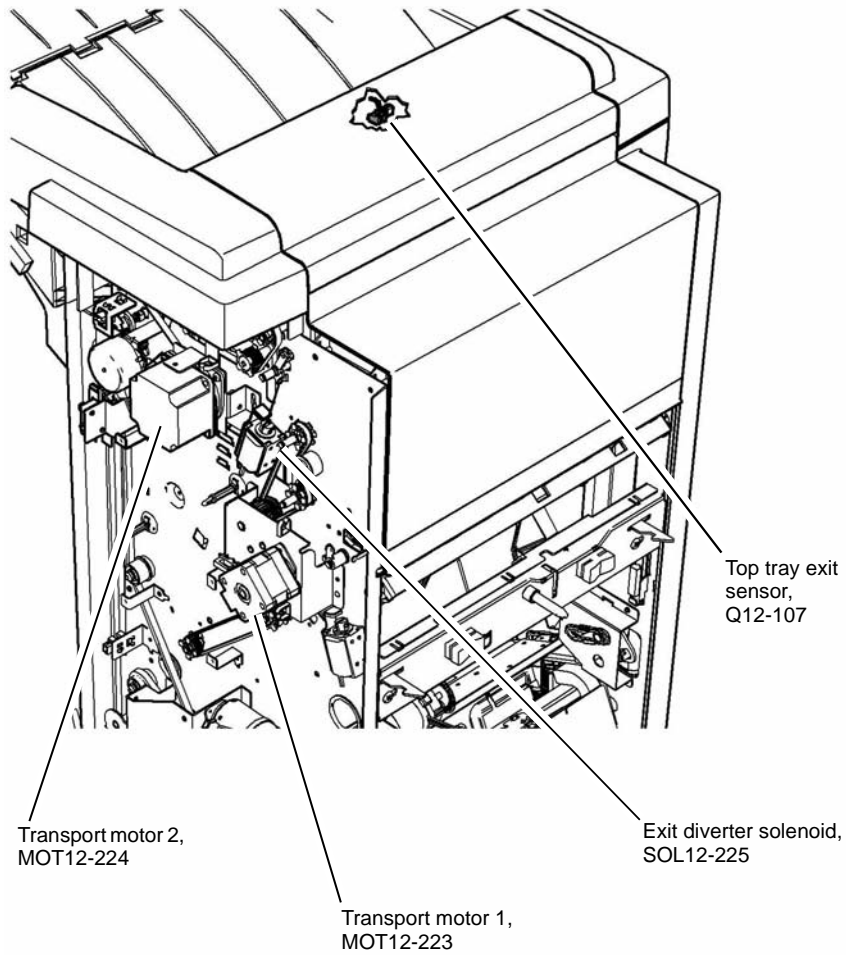
Refer to:

- [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.



W-1-0048-A

Figure 1 Component location



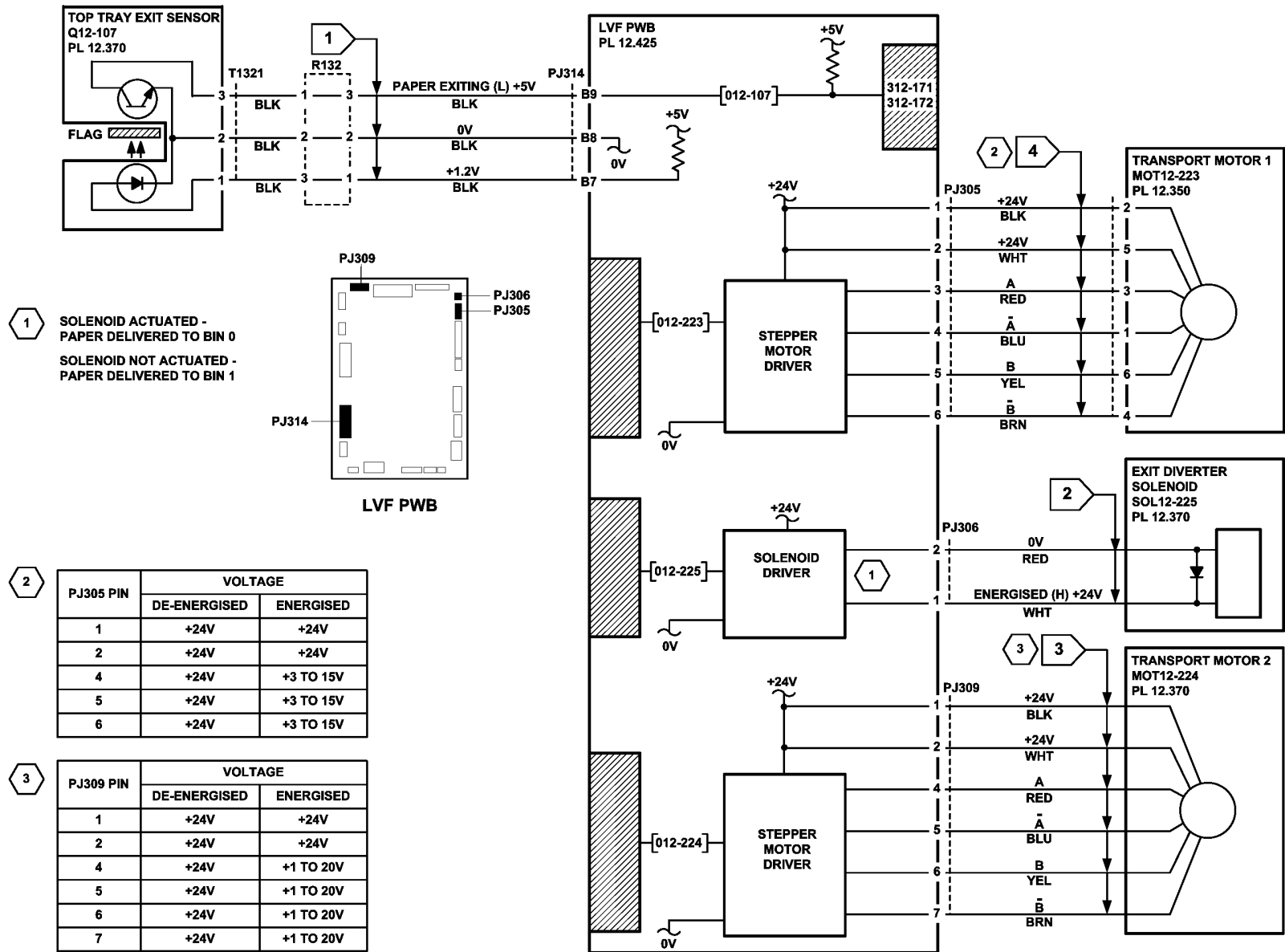


Figure 2 Circuit diagram

TW-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.

### 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.

Turn the crease blade handle to ensure that the crease blade mechanism is free to move. if necessary, clear any paper jam in the exit area.

### Procedure

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.

A

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](#).

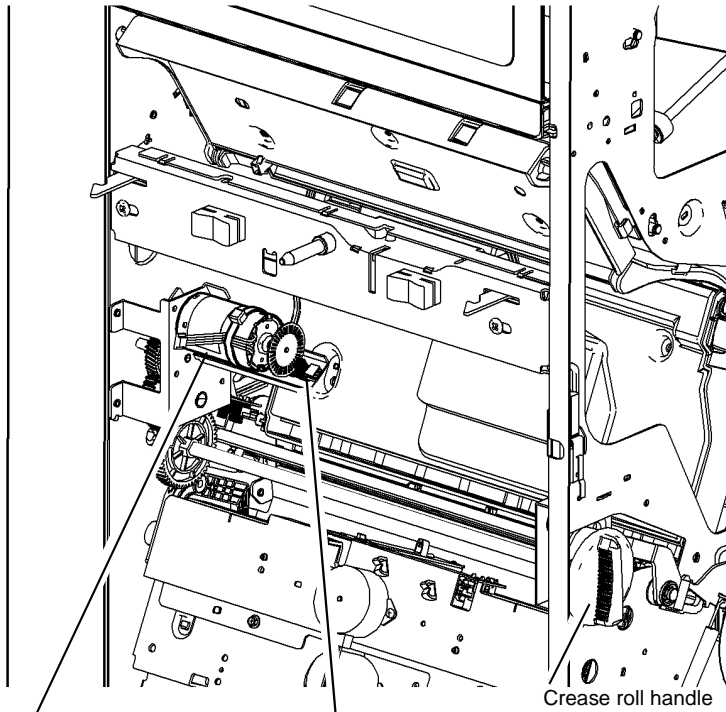


Figure 1 Component location

W-1-1046-A

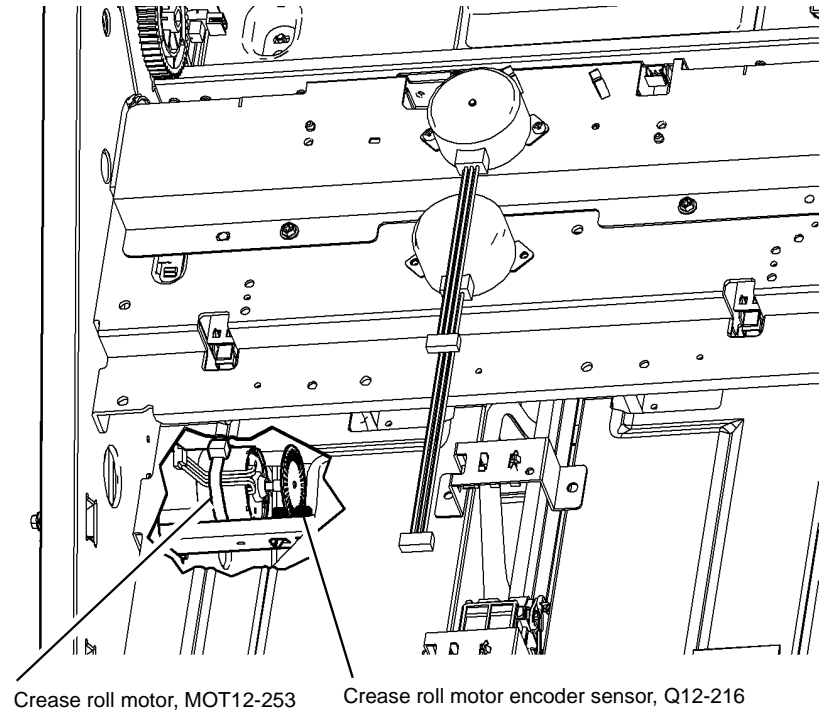
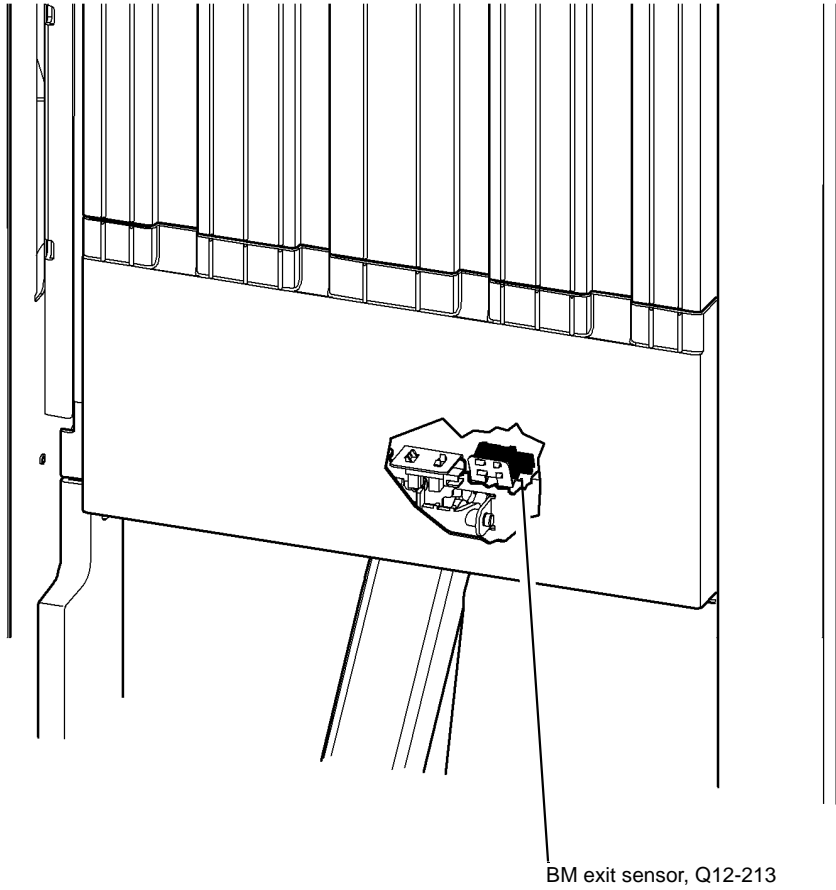


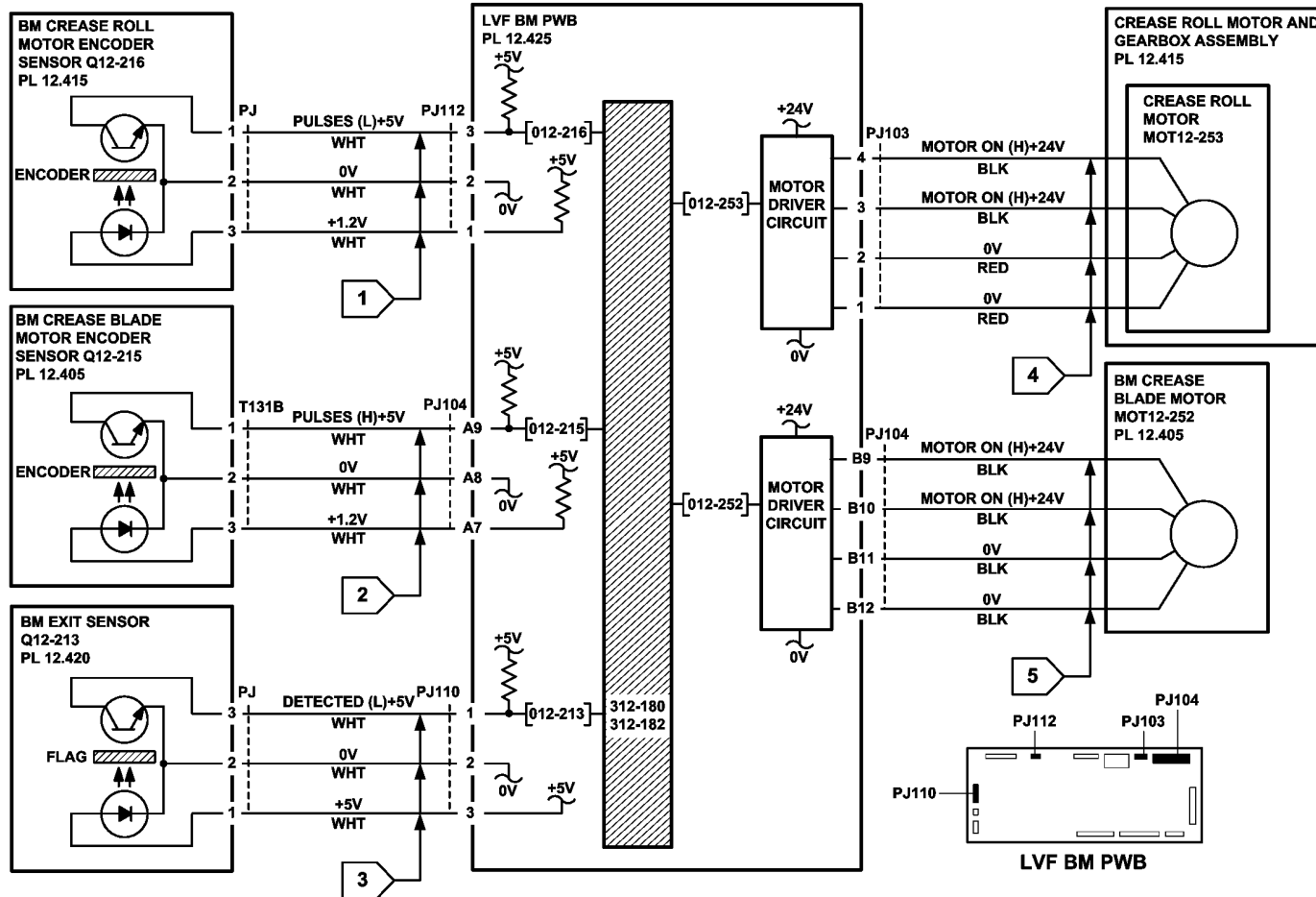
Figure 2 Component location

W-1-1045-A



W-1-1047-A

Figure 3 Component location



TW-1-0264-A

Figure 4 Circuit diagram

## 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.

### 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 paper path to the booklet compiler. Clear the paper path of any jams or paper debris. Ensure the compiler guide assembly is correctly latched.

### Procedure

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.
- [312D-150](#) LVF BM Power Distribution RAP.

A

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:

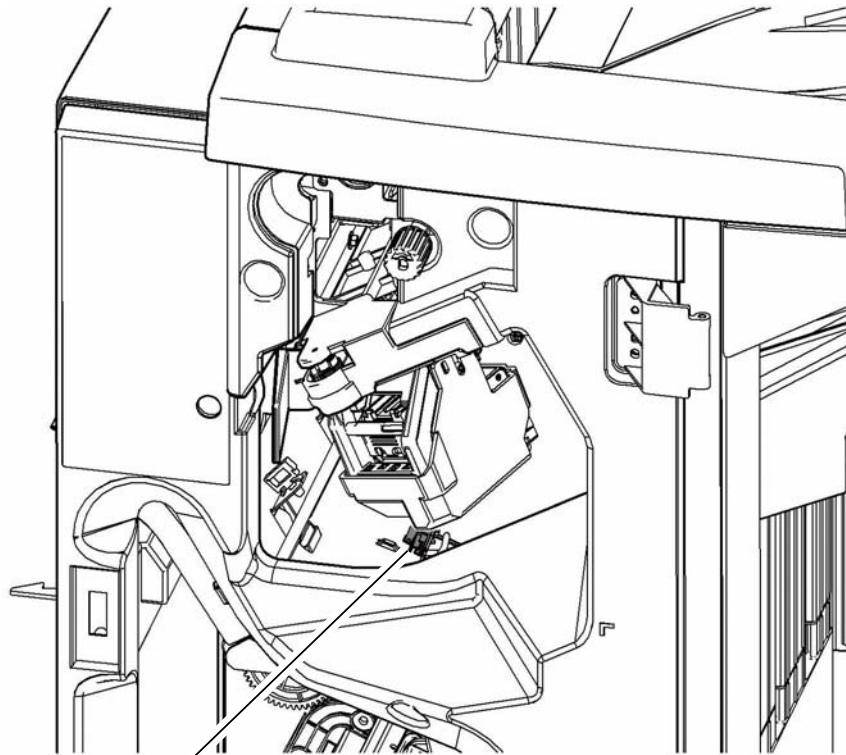
- [GP 11](#), How to Check a Sensor.
- [P/J108](#), LVF BM PWB.
- [312D-150](#) LVF BM Power Distribution RAP.

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.

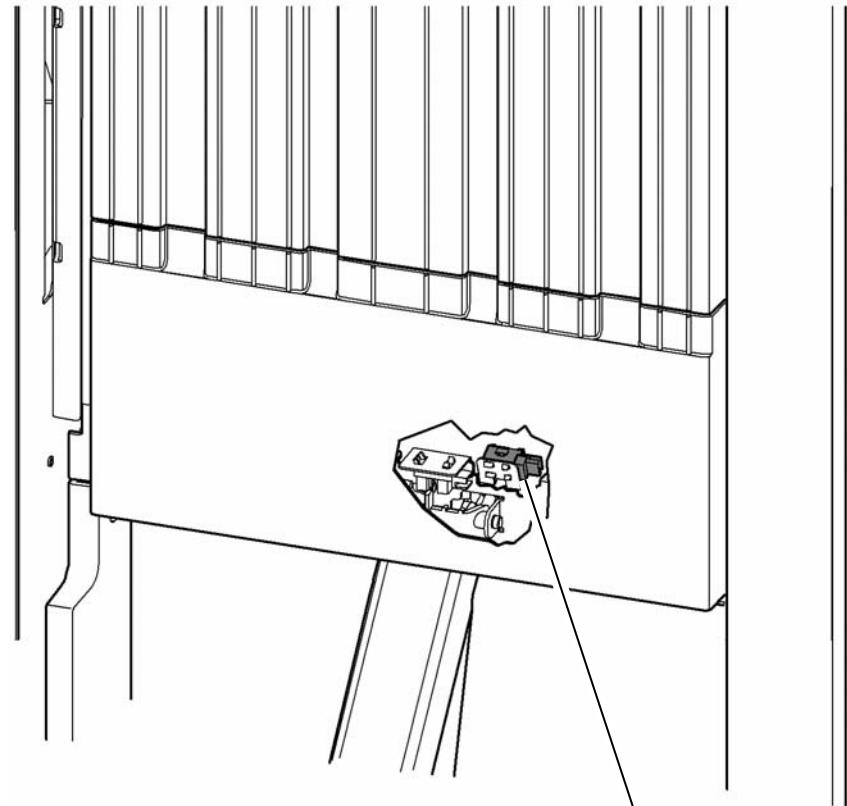
A



BM entry sensor,  
Q12-089

W-1-0055-A

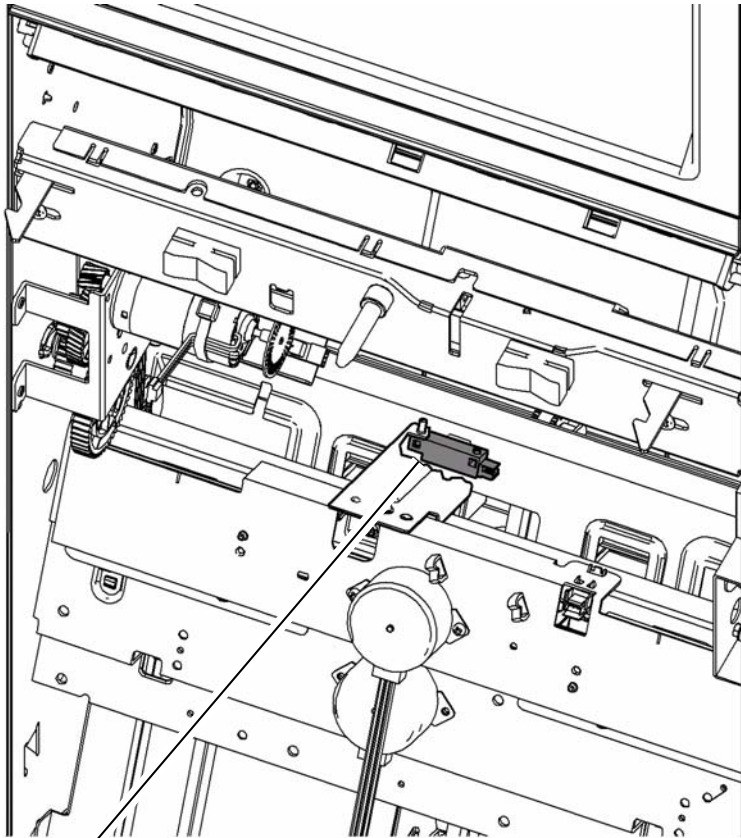
Figure 1 Component location



BM exit sensor,  
Q12-213

W-1-0054-A

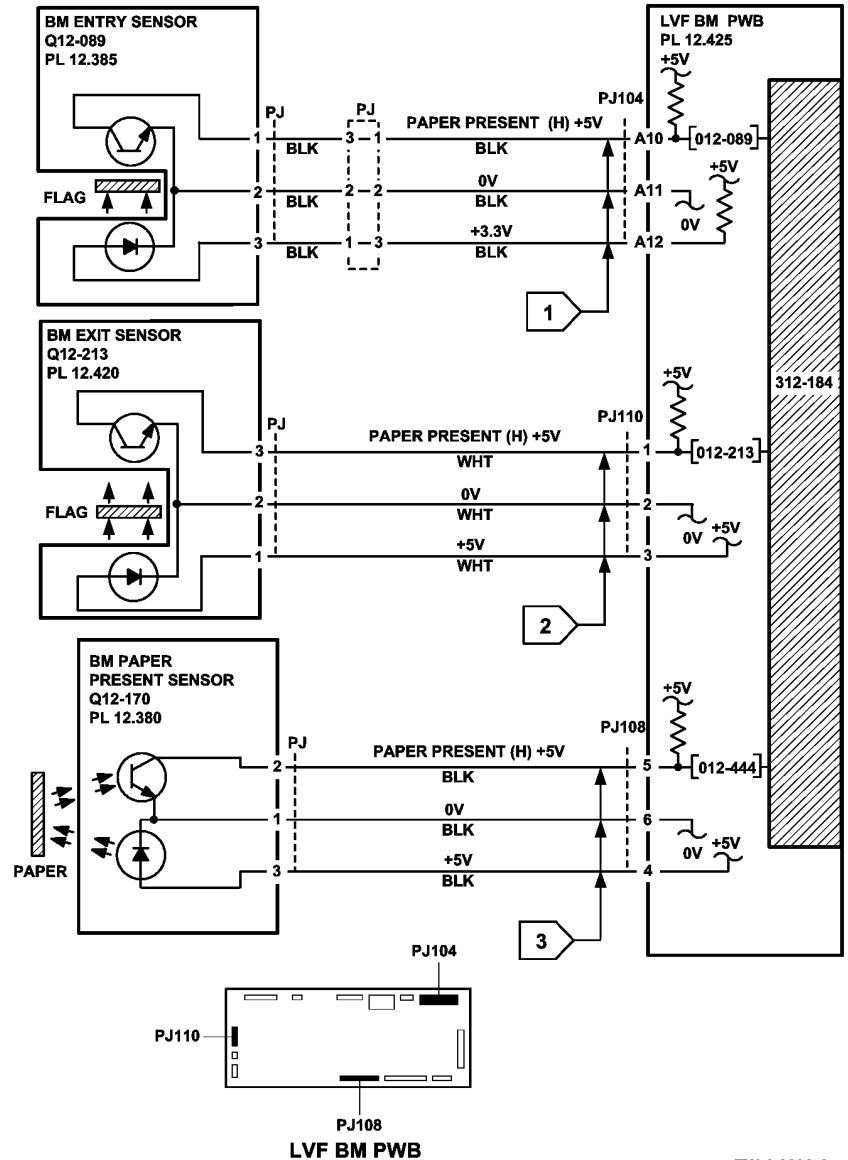
Figure 2 Component location



BM paper present sensor, Q12-170

W-1-0053-A

Figure 3 Component location



TW-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.

### Initial Actions

Check the paper path in the LVF. 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](#), [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.

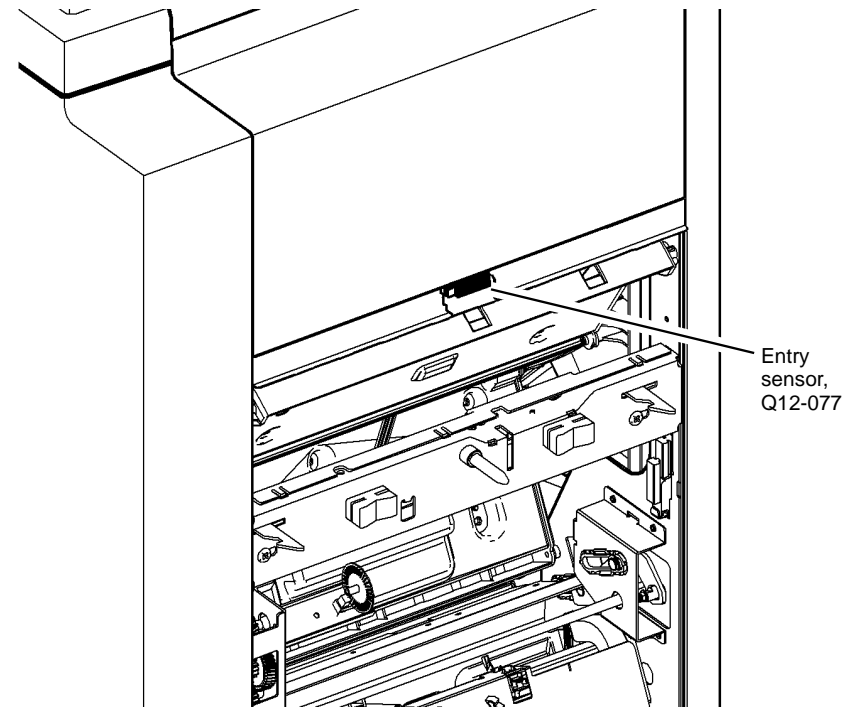
Refer to:

- [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](#).

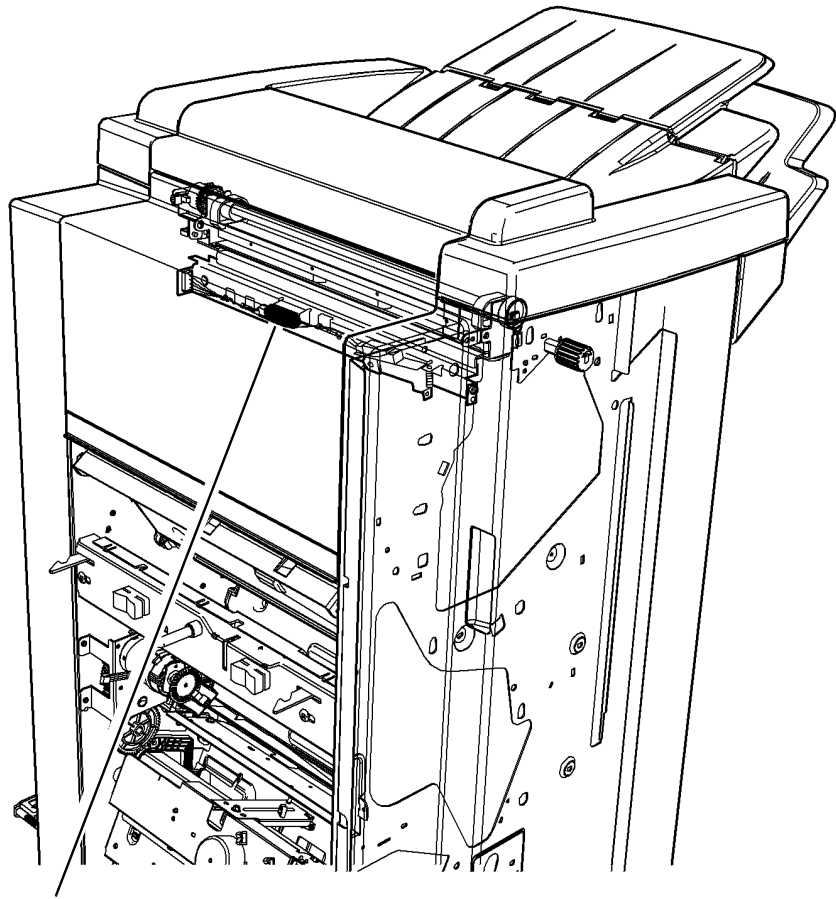
Perform [SCP 5](#) Final Actions.



W-1-1143-A

Figure 1 Component location

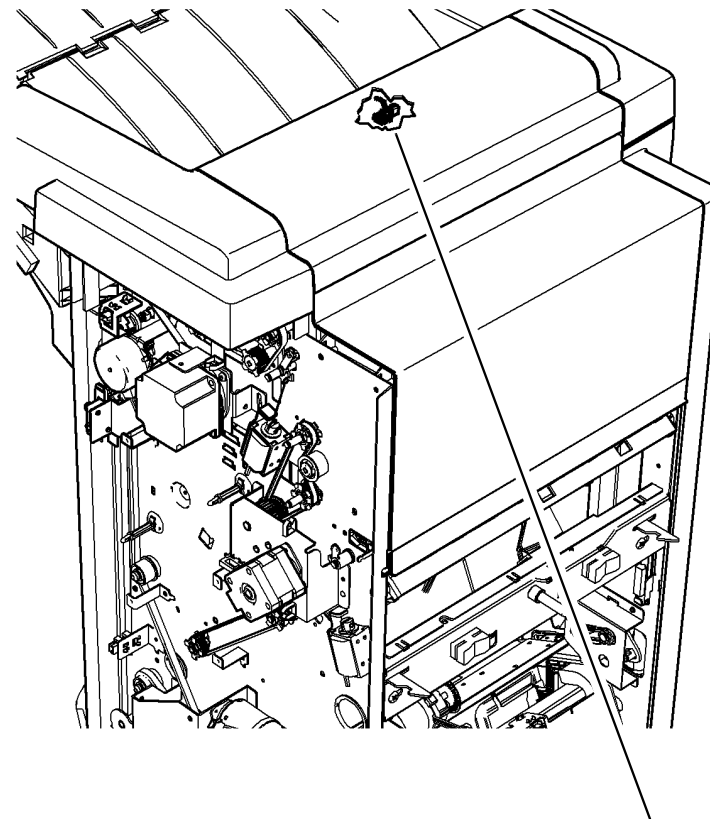
A



Punch sensor 1, Q12-078

W-1-1144-A

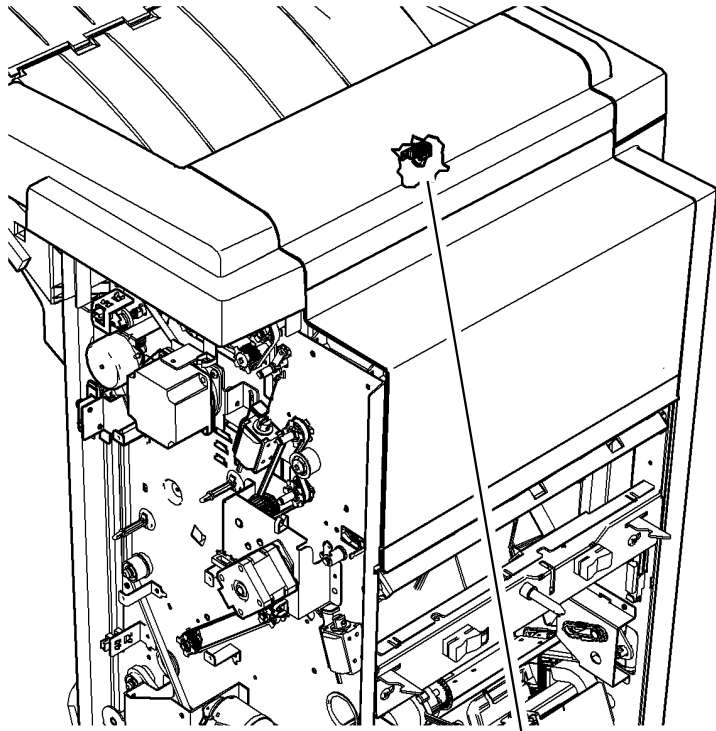
Figure 2 Component location



Top tray exit  
sensor, Q12-107

W-1-1145-A

Figure 3 Component location



Compiler exit sensor,  
Q12-106

W-1-1146-A

Figure 4 Component location

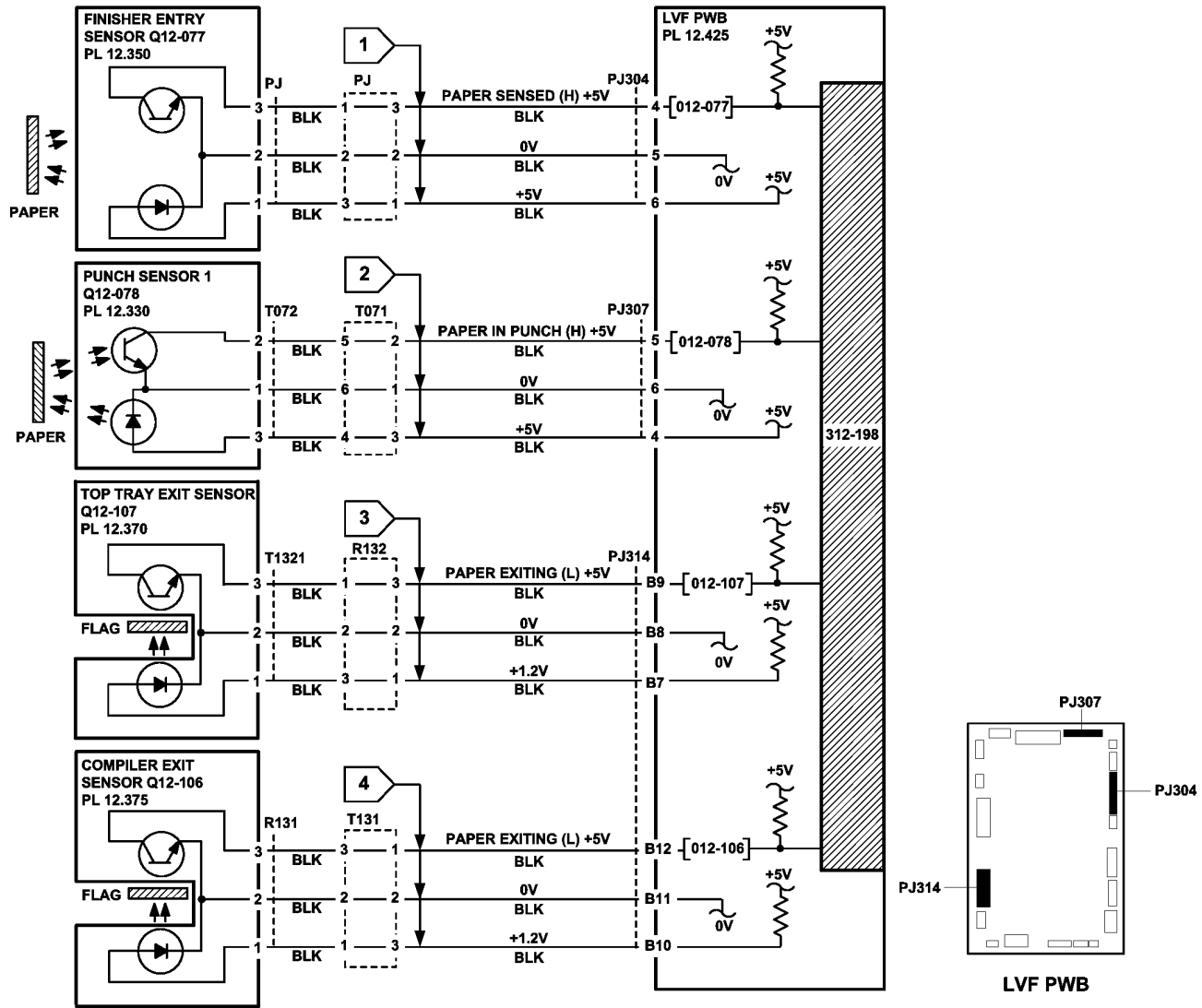


Figure 5 Circuit diagram

TW-1-0288-A

## 312-310-00-150, 312-312-00-150, 312-313-00-150 Interlocks RAP

**312-310-00-150** The LVF BM docking interlock was open during run mode.

**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.

### 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 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.
- Check the items that follow:
  - The LVF BM is docked to the machine.
  - The LVF BM front door is closed.
  - The LVF BM top cover is closed.

### Procedure

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:

- [312-310-00-150 Docking Interlock RAP](#).
- [312-312-00-150 Top Cover Interlock RAP](#).
- [312-313-00-150 Front Door Interlock RAP](#).

### 312-310-00-150 Docking Interlock RAP

Un-dock the LVF BM, [REP 12.13-150](#), Check the docking interlock switch, S12-177 as follows:

- Check the interlock actuator on the machine is not damaged or missing.
- Enter [dC330](#), code 012-177, docking interlock switch, S12-177. Actuate S12-177. 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 S12-177.
- If necessary, install a new switch, [PL 12.325](#) [Item 2](#).

### 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 3](#). 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 2](#). 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.

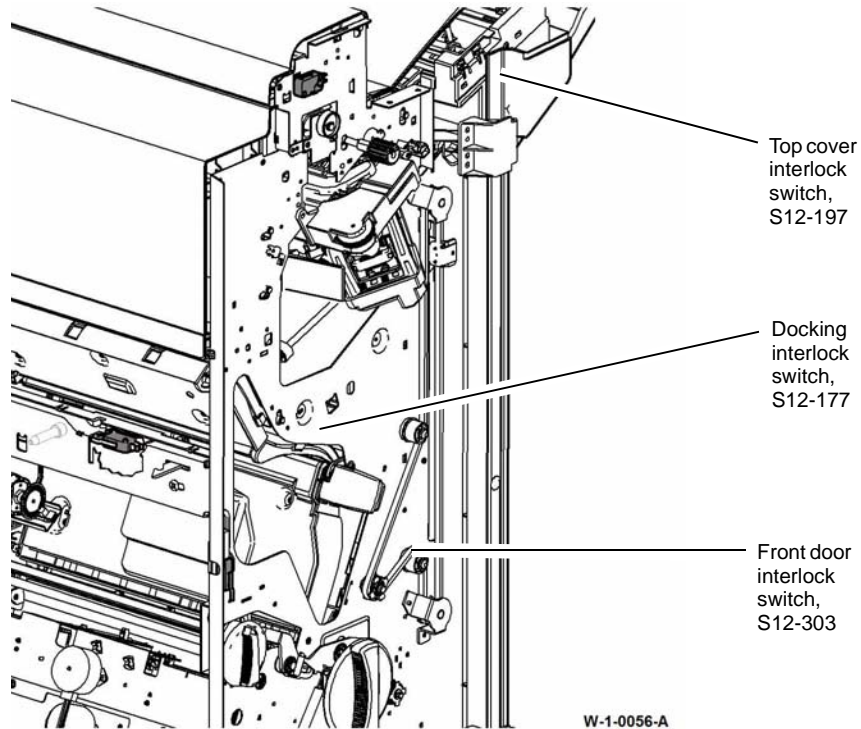


Figure 1 Component location

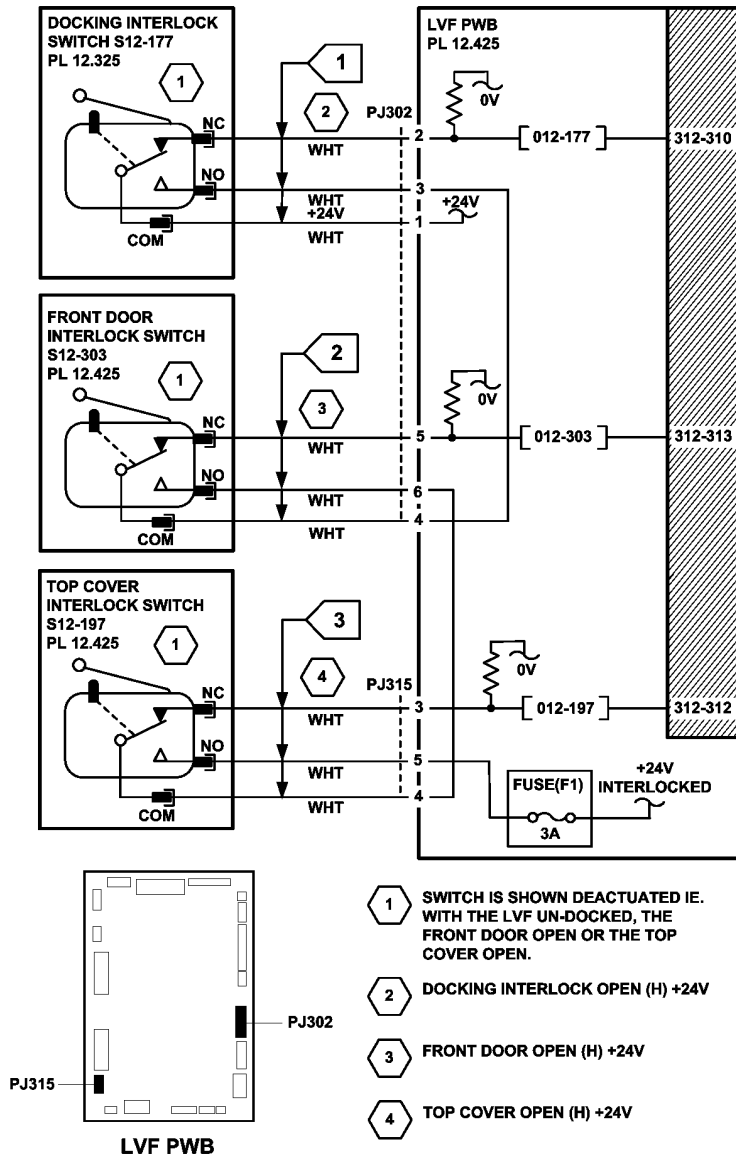


Figure 2 Circuit diagram

TW-1-0039-A

## 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 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.

### 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.

**Y N**  
Go to [Flag 1](#). Check Q12-184.  
Refer to:

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

- A**
- [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.  
Refer to:

- [GP 11](#) How to Check a Sensor.
- [Figure 1](#).

A

B

B

- 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.

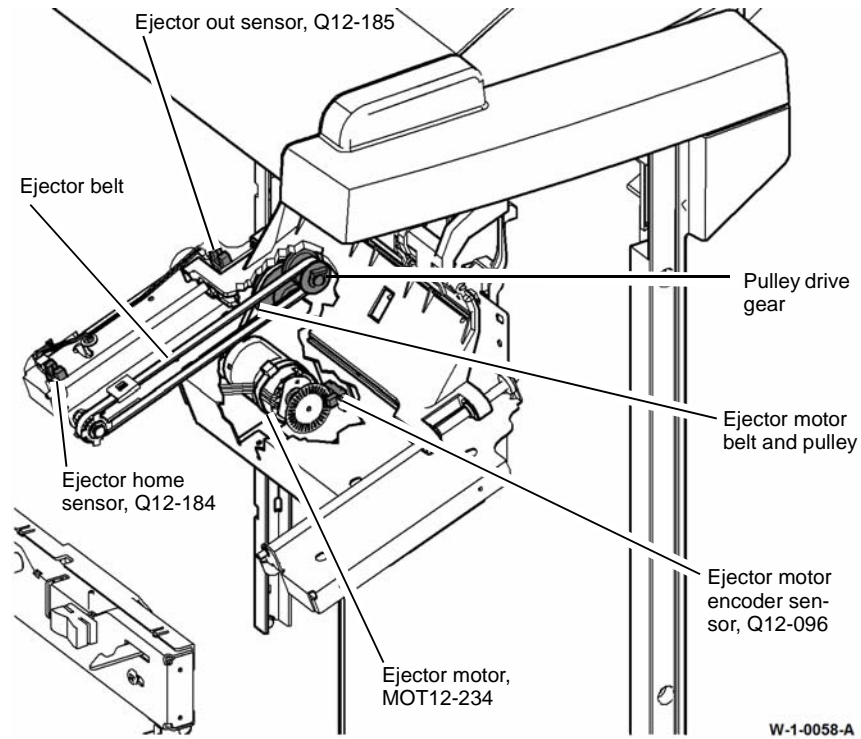
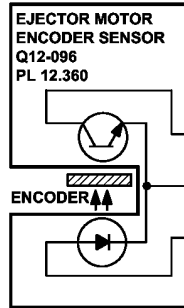
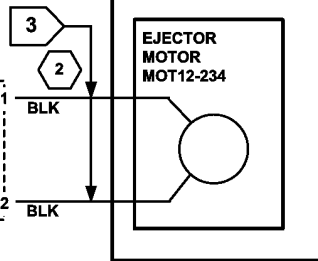
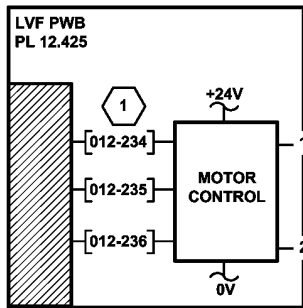
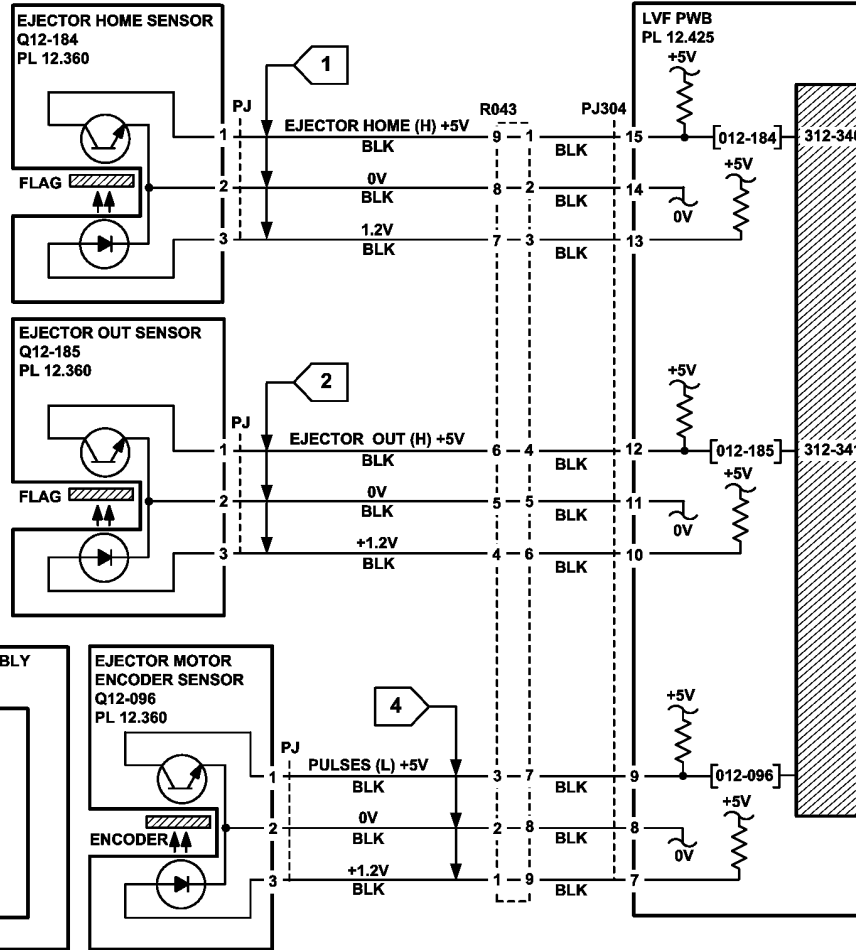
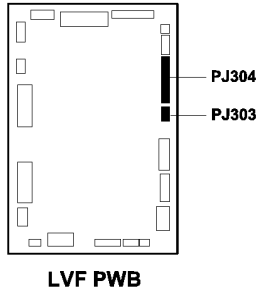


Figure 1 Component location



- 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



TW-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.

### 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 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.  
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.**

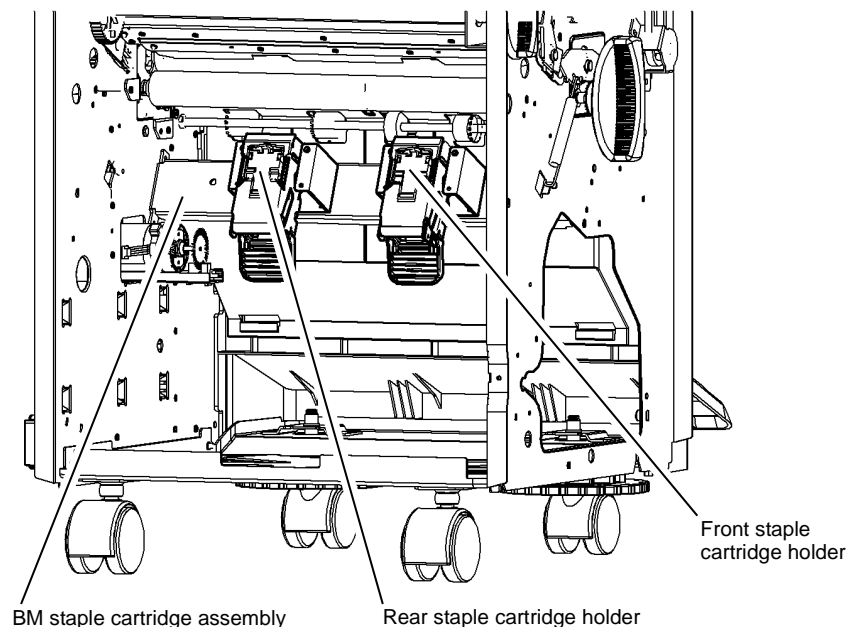
**Y N**  
Go to [Flag 2](#). Check Q12-443.  
Refer to:

- [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.

W-1-0064-A

Figure 1 Component location

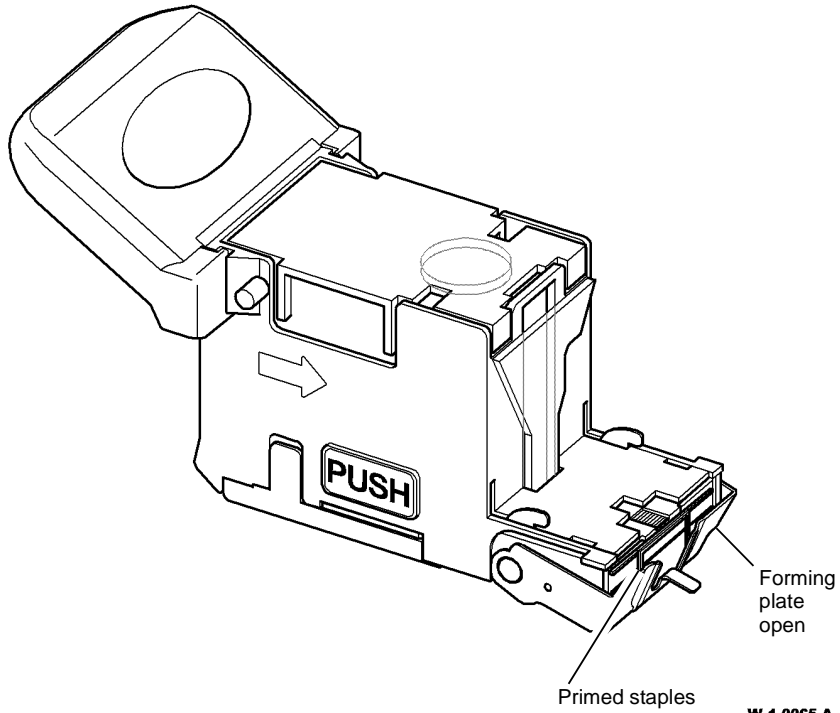


Figure 2 Staple cartridge open

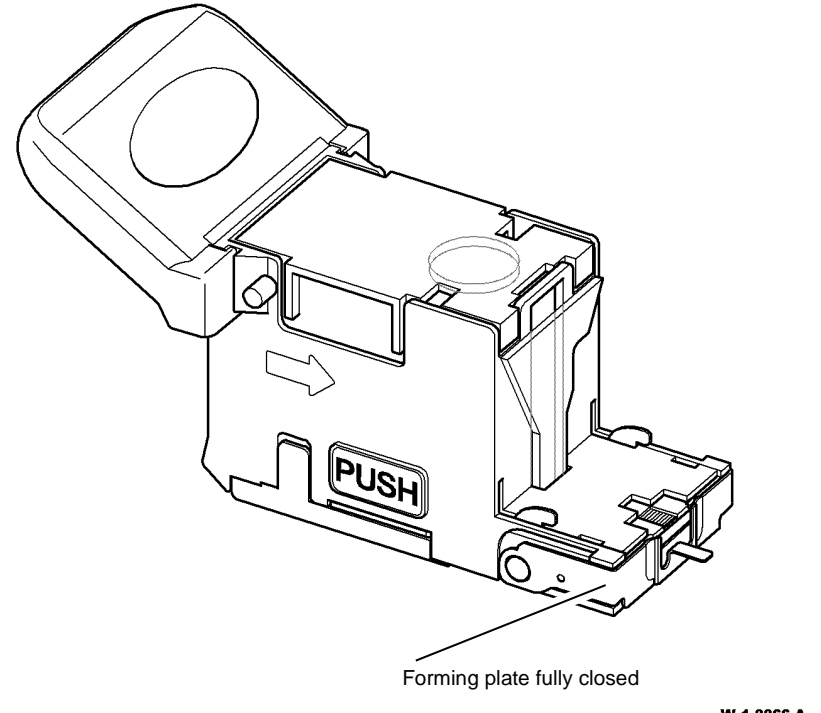
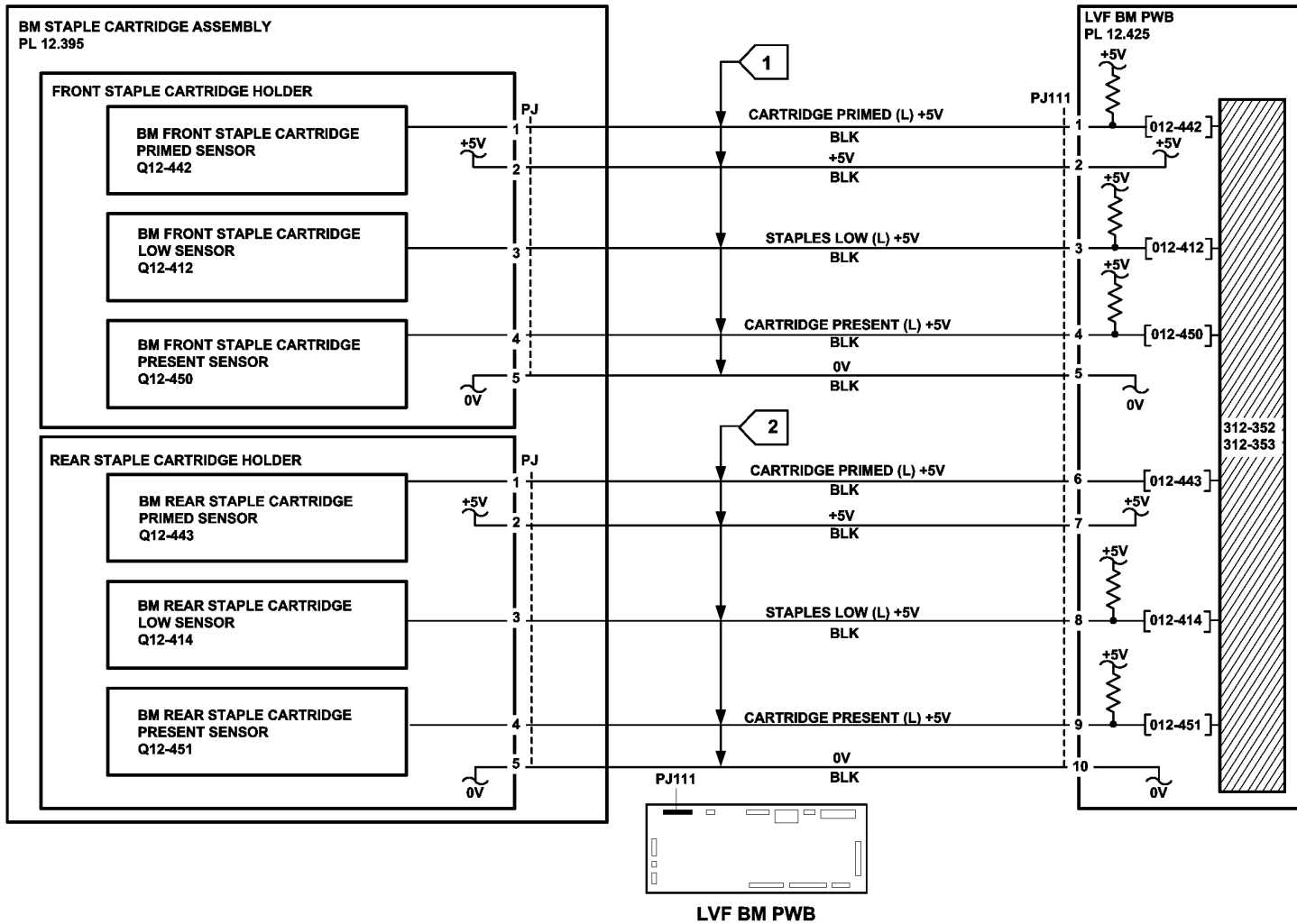


Figure 3 Staple cartridge closed



TW-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:

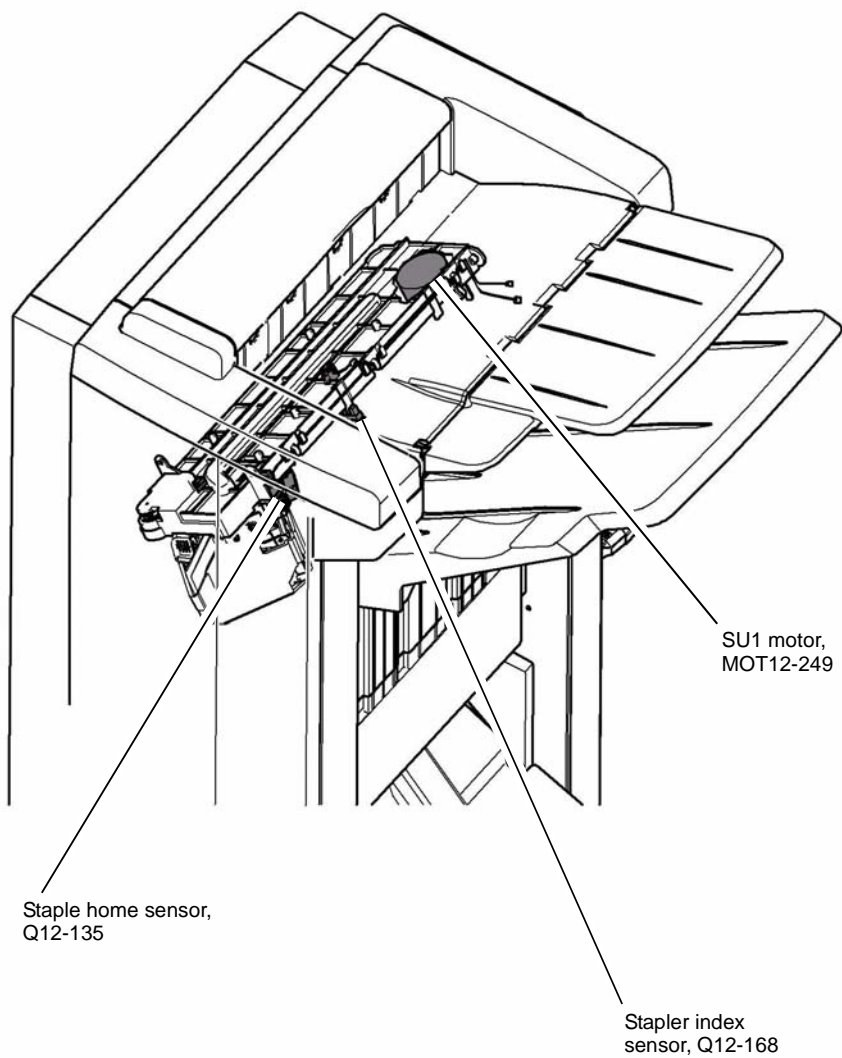
- [GP 11](#) How to Check a Sensor.
- [P/J308, LVF PWB](#).
- [312D-150 LVF BM Power Distribution RAP](#).

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.

A



W-1-0041-A

Figure 1 Component location

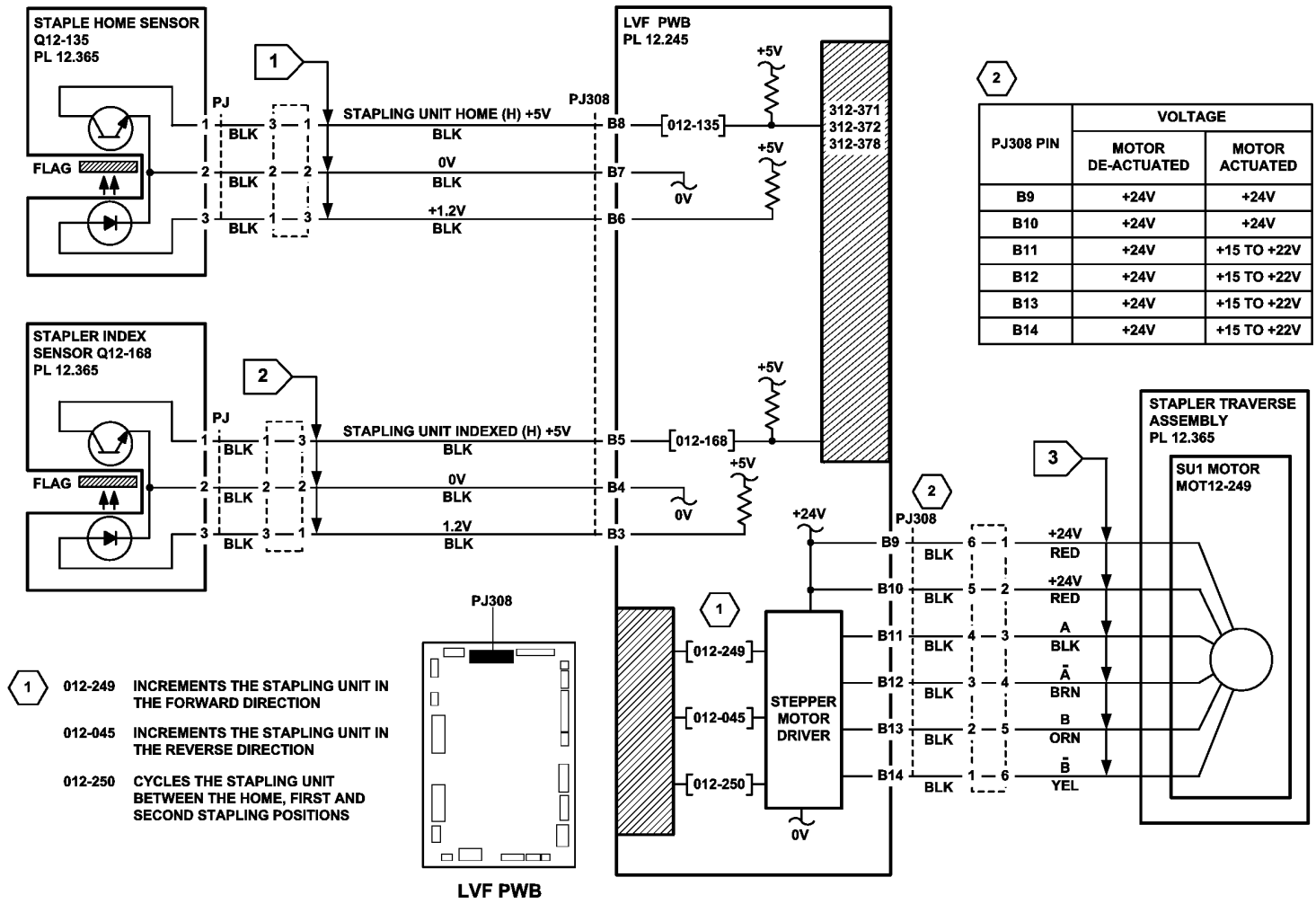


Figure 2 Circuit diagram

TW-1-0028-A

# 312-377-00-150 Stapling Failure RAP

312-377-00-150 Staples in the staple head unit were not 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.

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

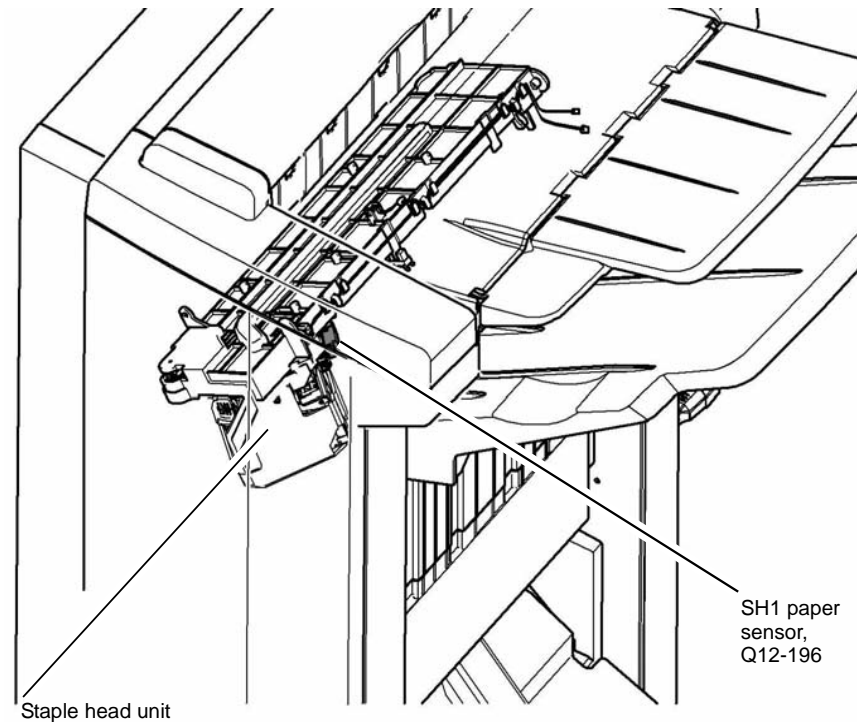
**NOTE:** If the SH1 priming sensor does not see staples in the primed position, the staple head cycles a number of times to prime the staple head. This occurs when the LVF BM interlocks are made.

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.



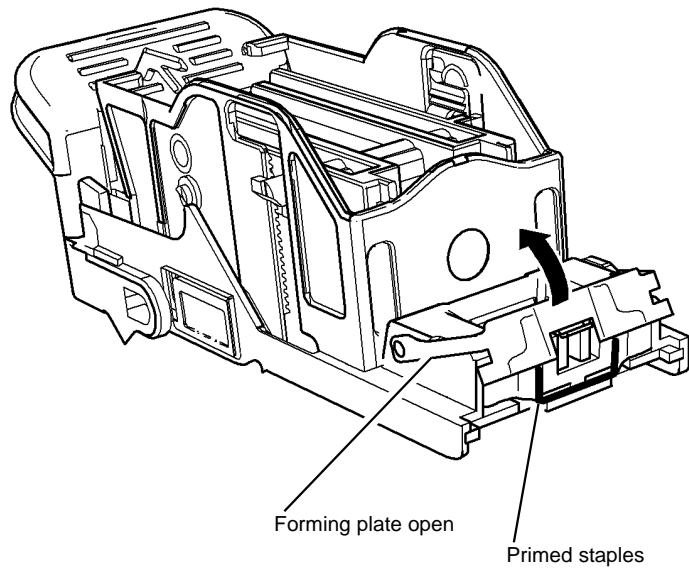
SH1 paper sensor, Q12-196

Staple head unit

W-1-0061-A

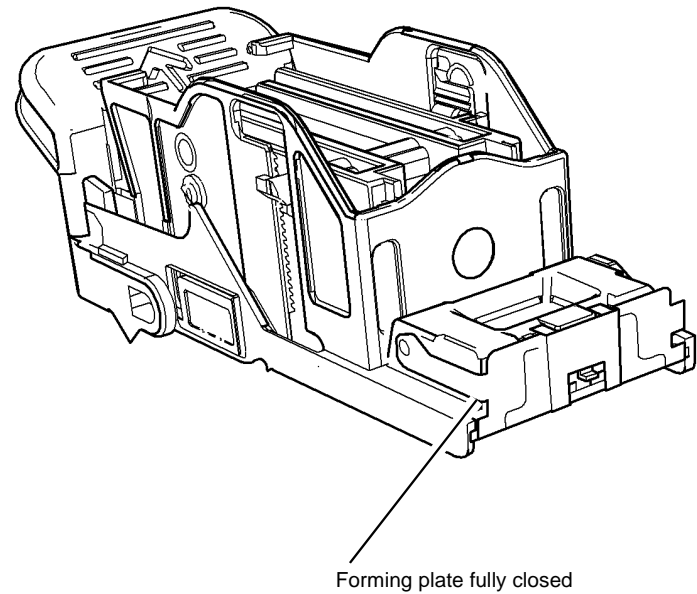
Figure 1 Component location





W-1-0062-A

Figure 2 Staple cartridge open



W-1-0063-A

Figure 3 Staple cartridge closed

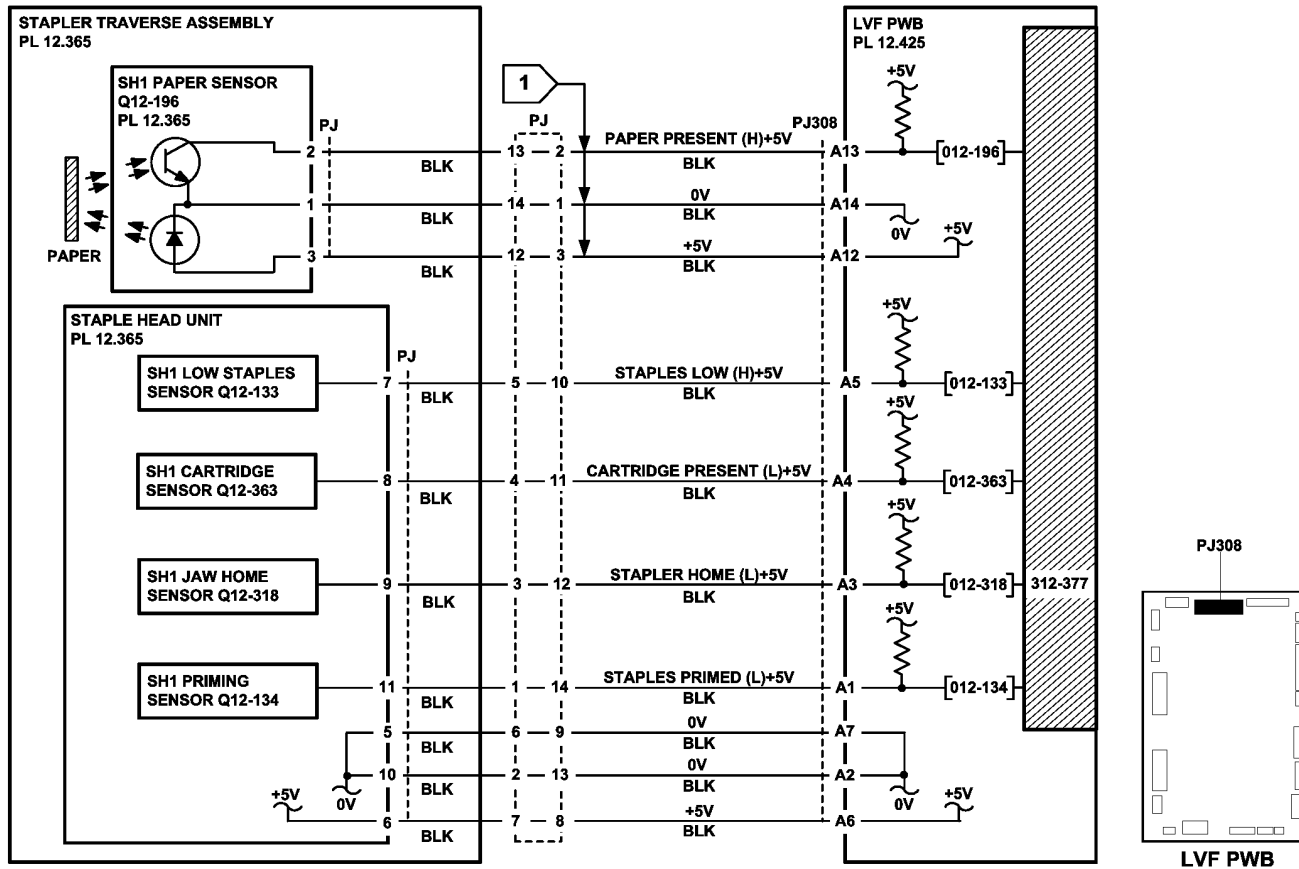


Figure 4 Circuit diagram

TW-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.

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.

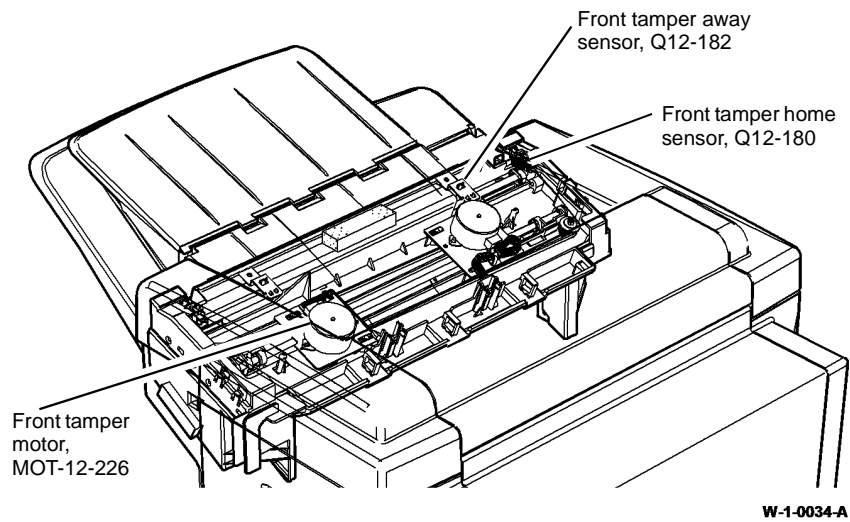


Figure 1 Component location

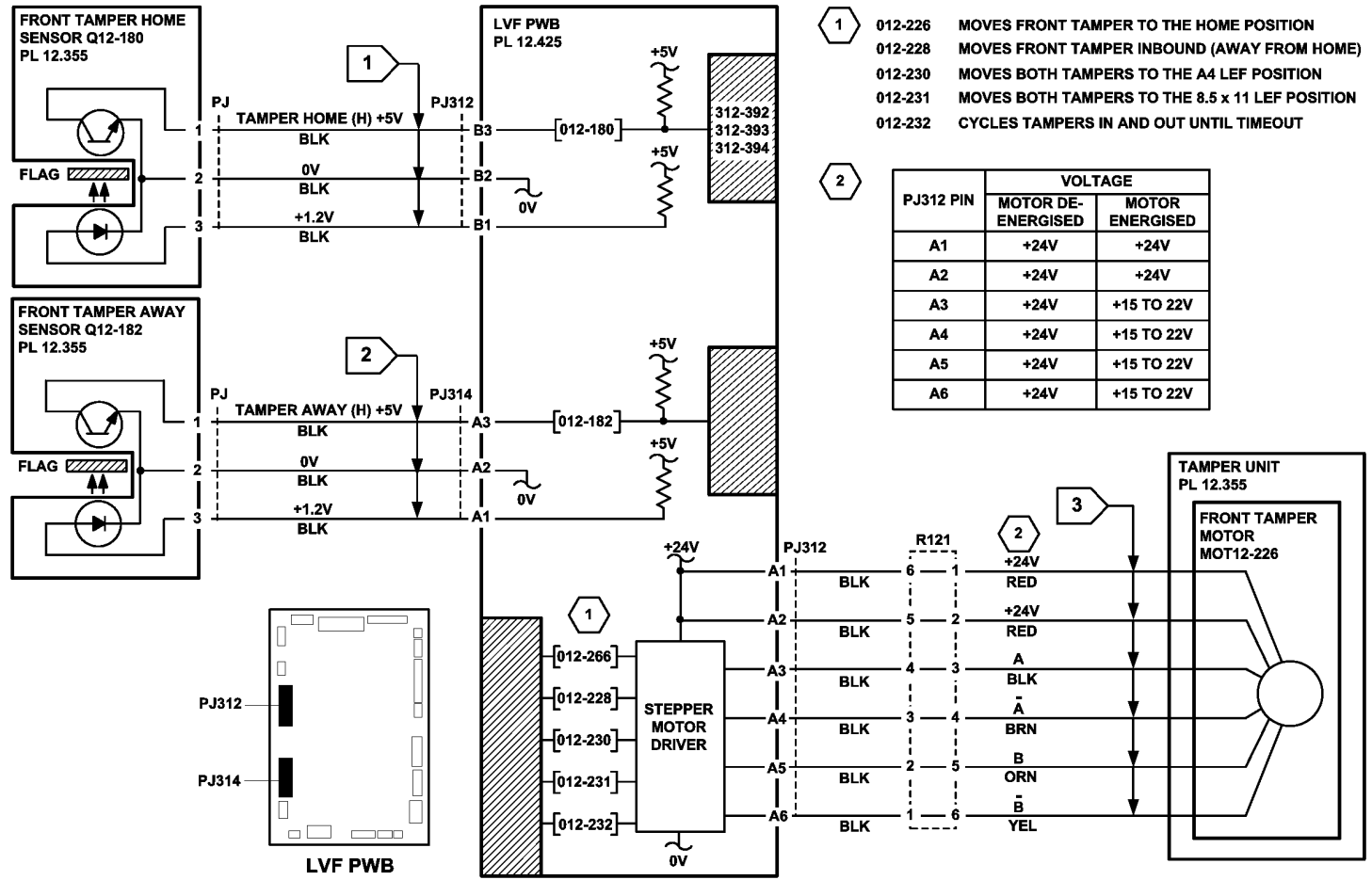


Figure 2 Circuit diagram

TW-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



**Ensure that the electricity to the machine is switched off while performing tasks 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.  
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 012-181, 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.

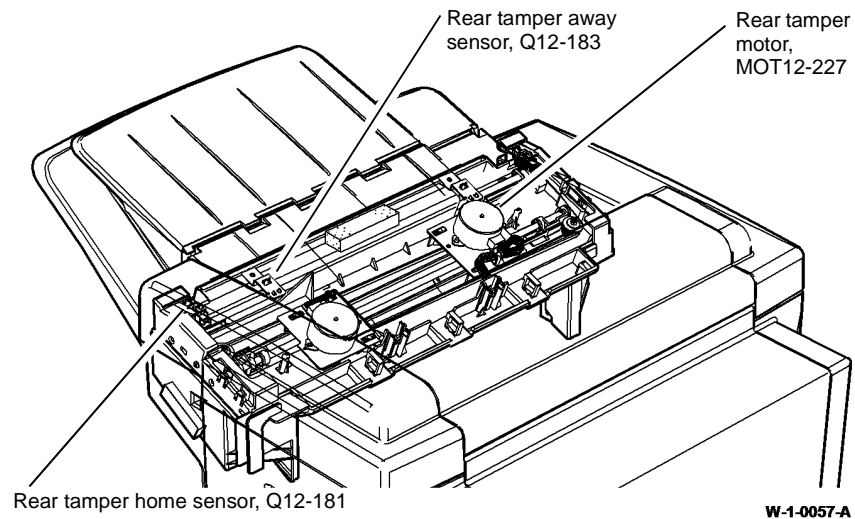
**The display changes.**

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**

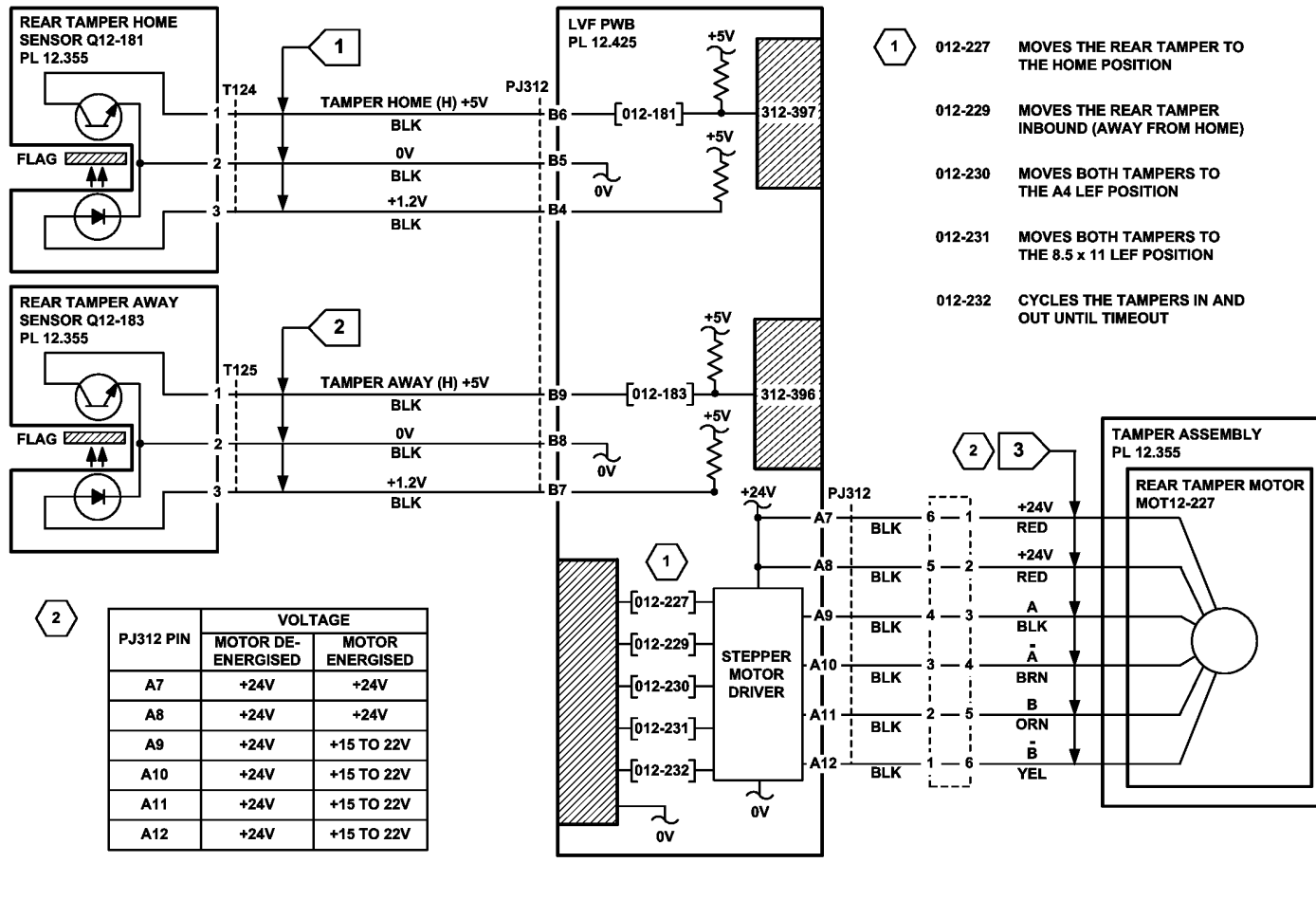


Figure 2 Circuit diagram



## 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.

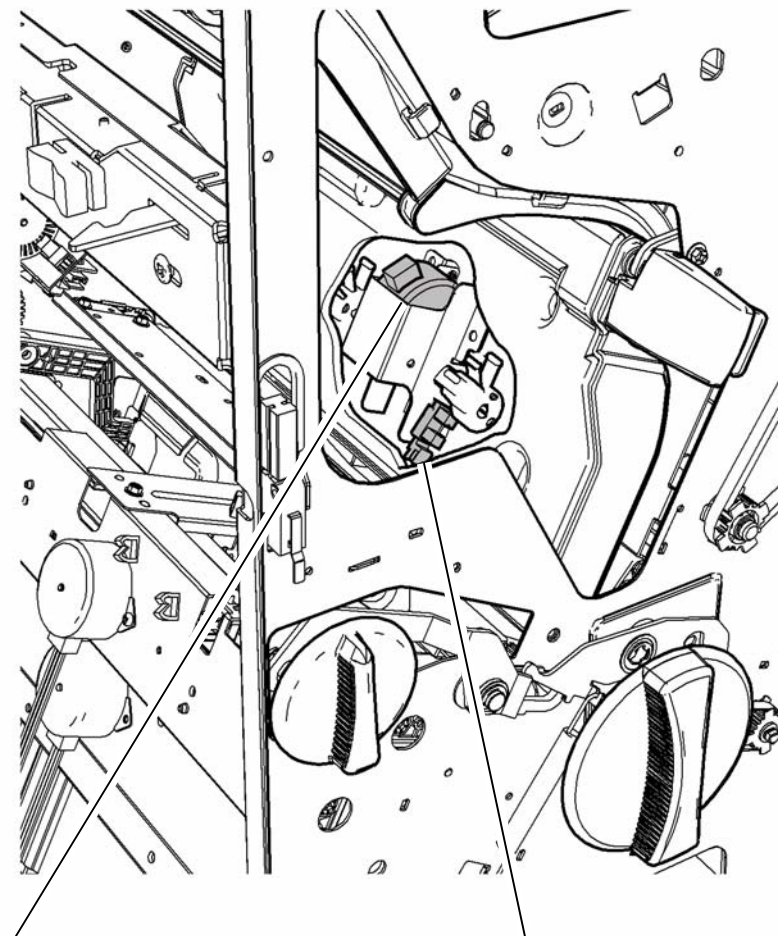
Refer to:

- **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

W-1-0067-A

Figure 1 Component location

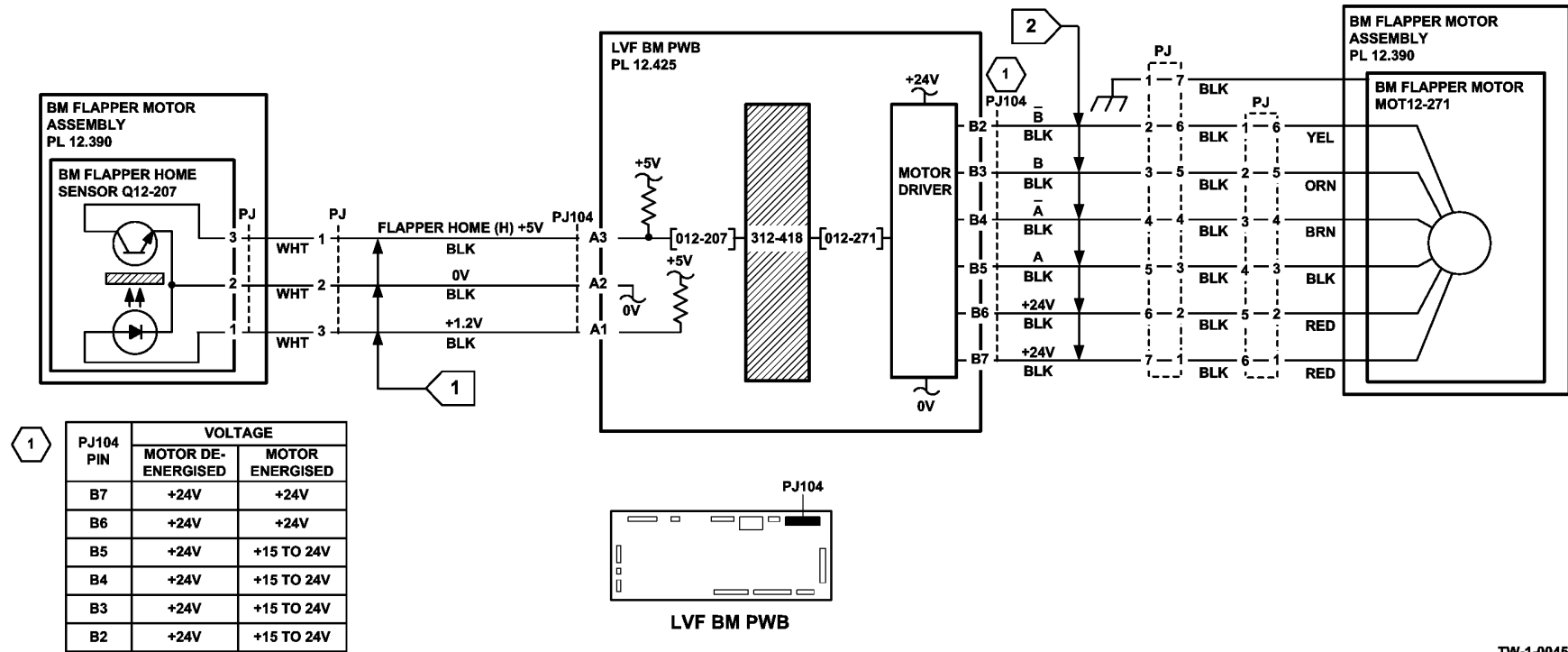


Figure 2 Circuit diagram

TW-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](#).

### 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:

- Check for a physical obstruction that would prevent bin 1 from moving, such as an item of furniture.
- 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.

A

- [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.

B

A

B

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.

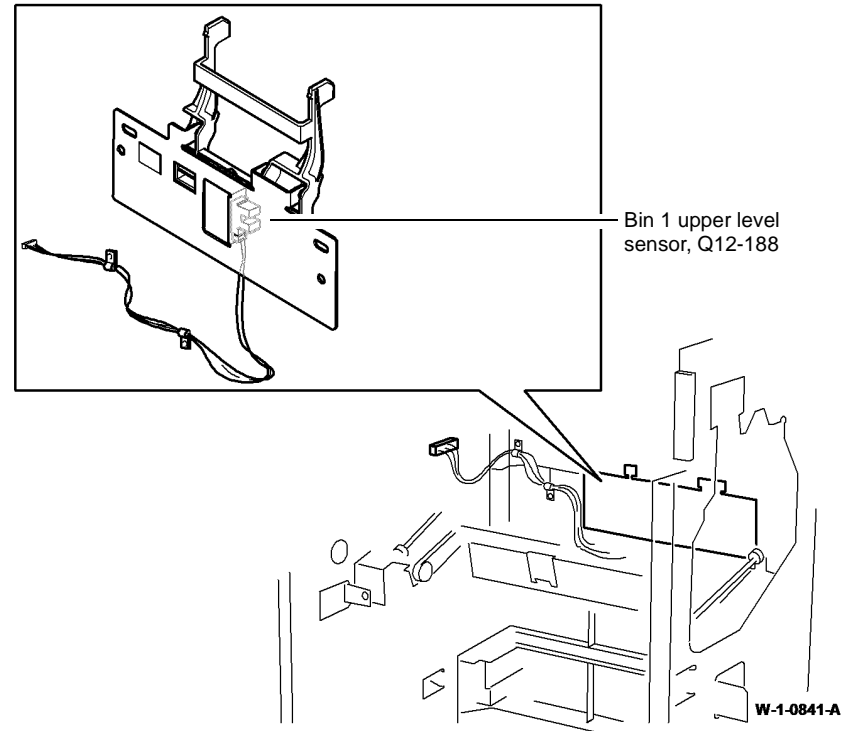


Figure 1 Component location

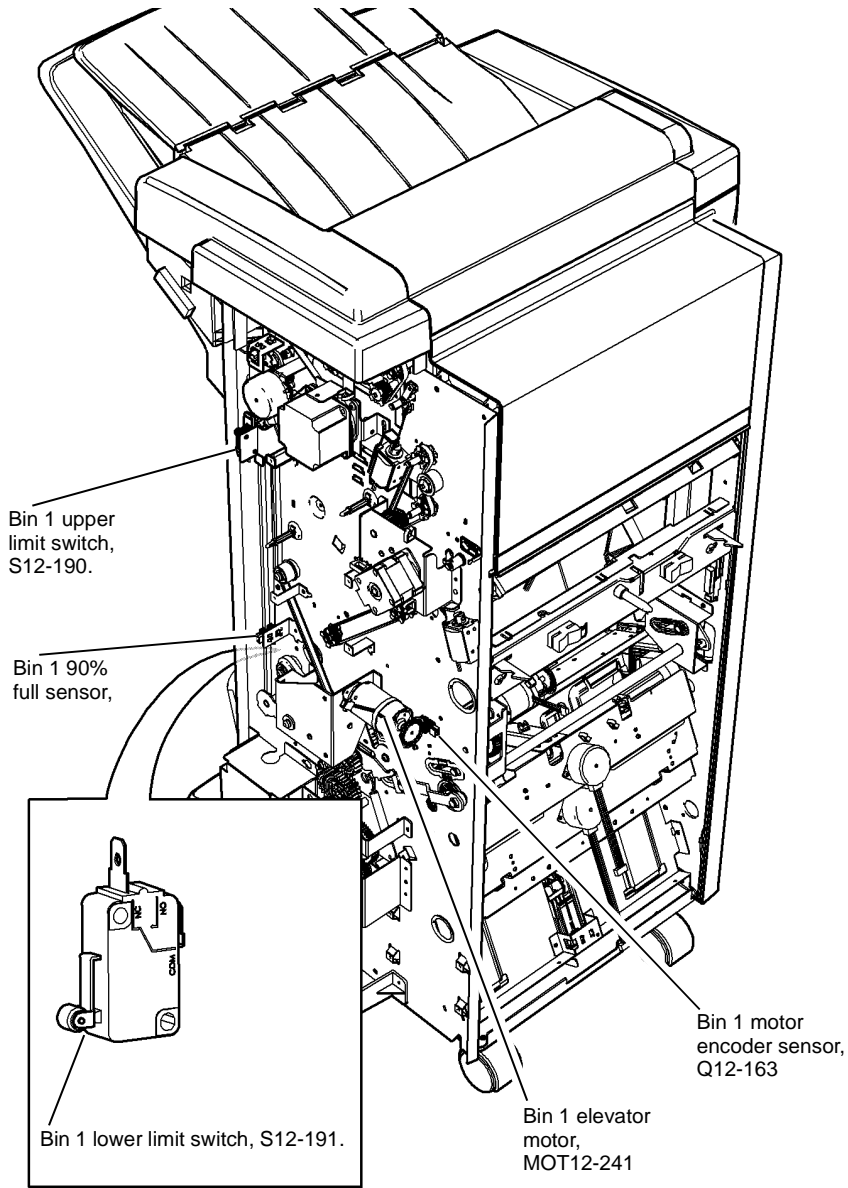


Figure 2 Component location

W-1-0037-A

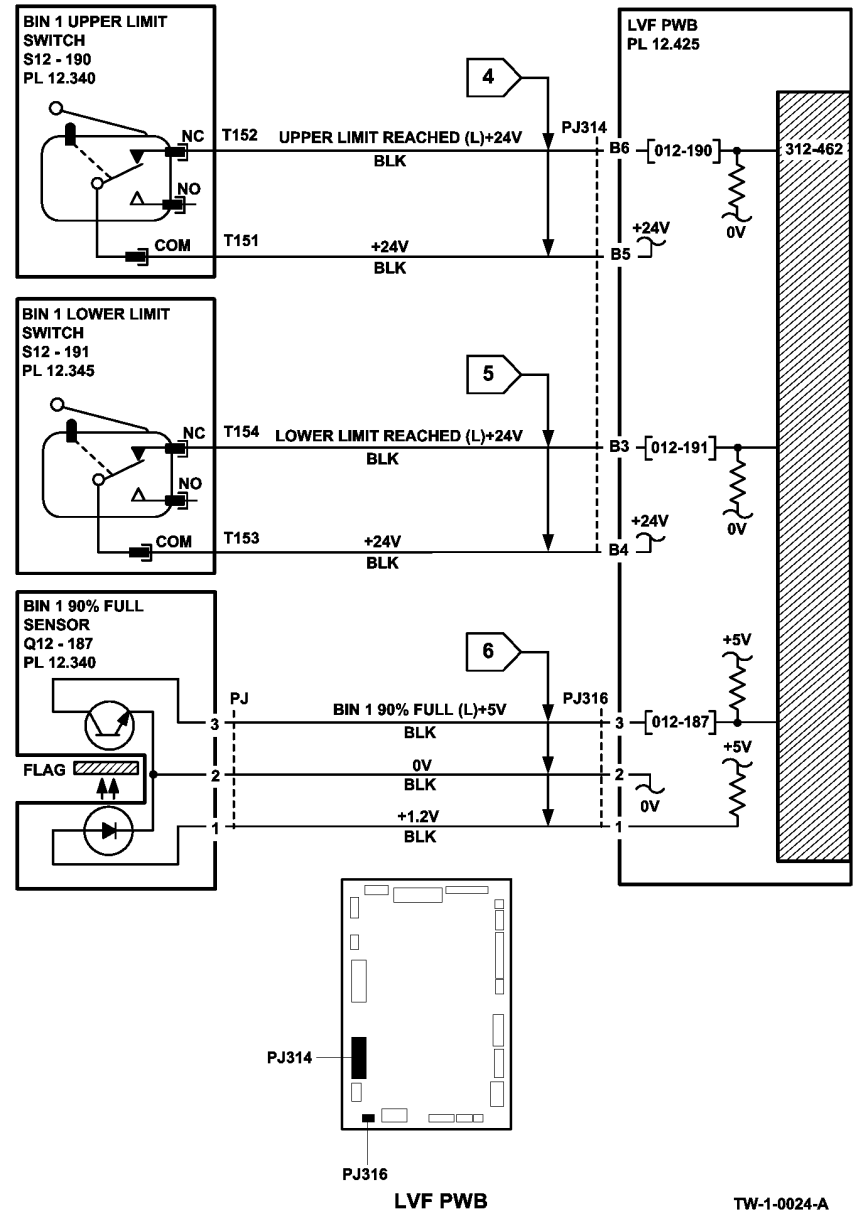


Figure 3 Circuit diagram

TW-1-0024-A

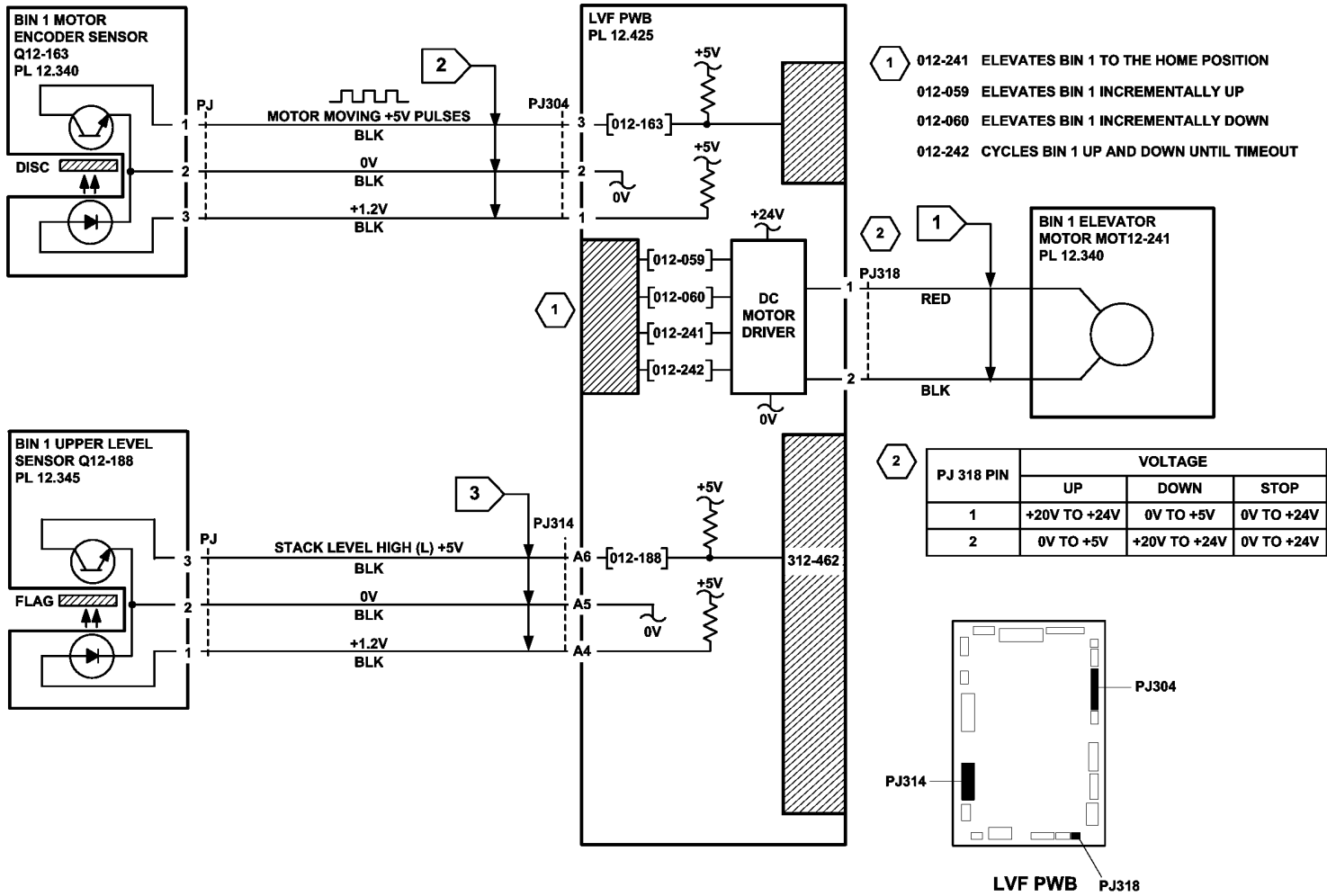


Figure 4 Circuit diagram

TW-1-0025-A

## 312A-150 Poor Stacking RAP

Use this RAP to find the cause of poor stacking in the LVF 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 items that follow;

- Look 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.
  - Check that bin 1 is seated correctly and the bin 1 alignment clip is in position, [PL 12.320](#) [Item 12](#).
- 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.
- 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 Tamber Move Failure RAP and [312-396-00-150](#), [312-397-00-150](#), [312-398-00-150](#) LVF BM Rear Tamber 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.

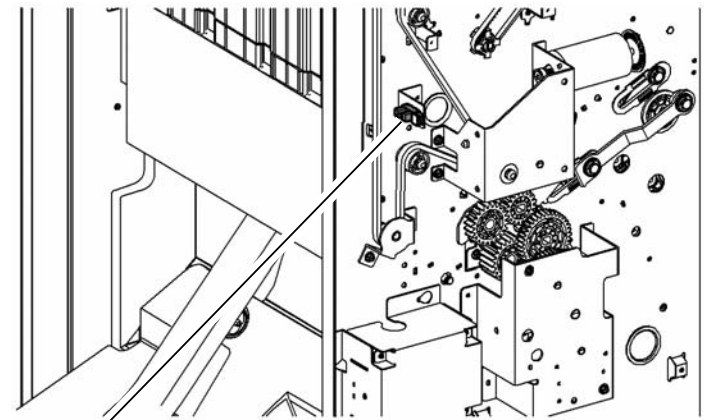
Refer to:

- [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](#).

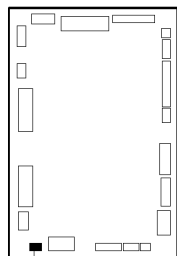
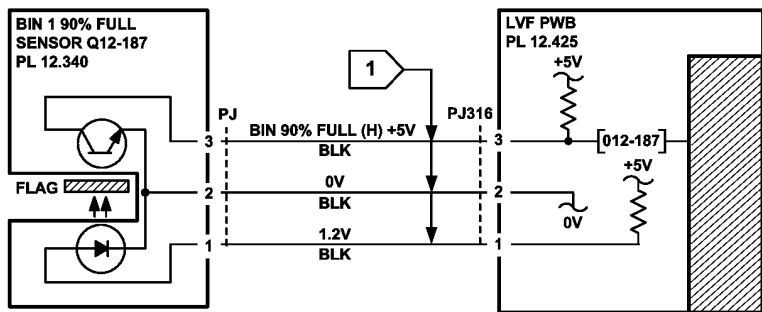
Perform [SCP 5](#) Final Actions.



Bin 1 90% full sensor, Q12-187

W-1-0068-A

Figure 1 Component location



PJ316  
LVF PWB

TW-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:
    1. If the staple head is not at the home position, it is driven to the home position.
    2. If the staple head unit is not at the home position, it is driven to the home position.
    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:
    - 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:
    1. If the BM back stop is not at the home position, it is driven to the home position.
    2. If the BM tampers are not in the home position, they are driven to the home position.
    3. If the BM stapler is not at the home position, it is driven to the home position.
    4. If the BM crease blade is not at the home position, it is driven to the home position.
    5. If the BM paddles are not in the home position, they are driven to the home position.
    6. 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 312-310-00-150, 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.

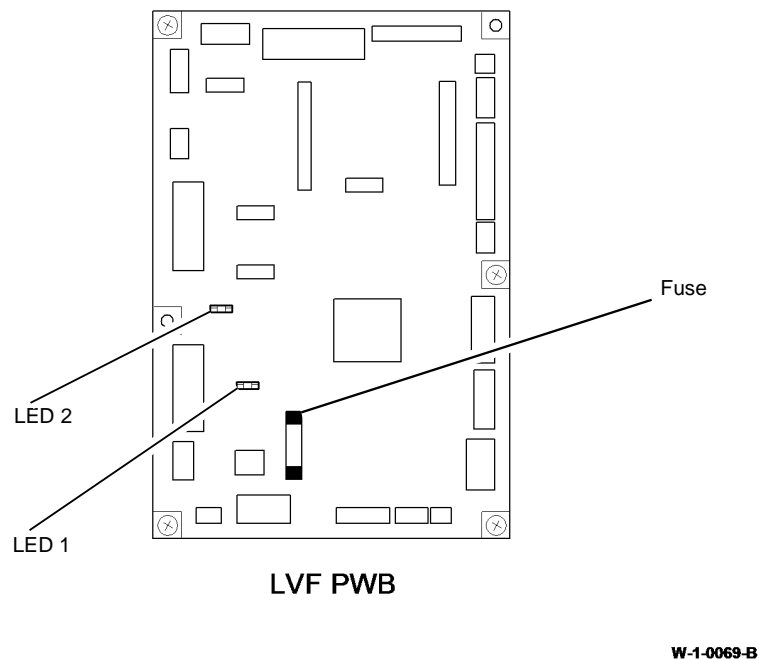


Figure 1 LED location

## 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  
+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

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 312-310-00-150, 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

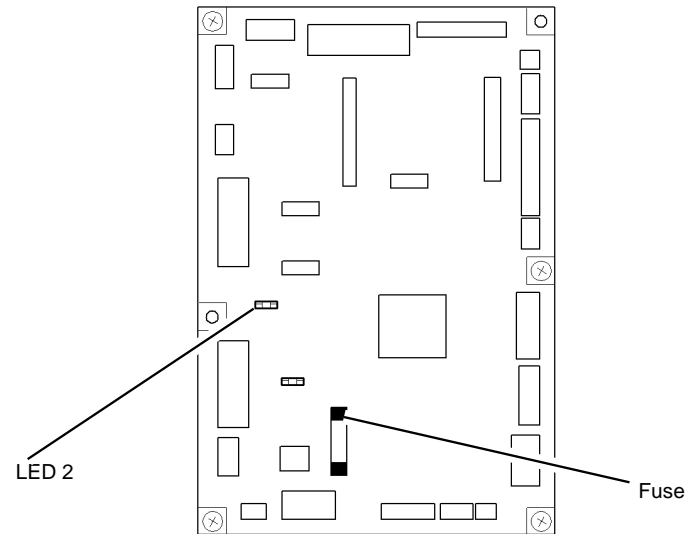
Repair the wiring, REP 1.2.

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.

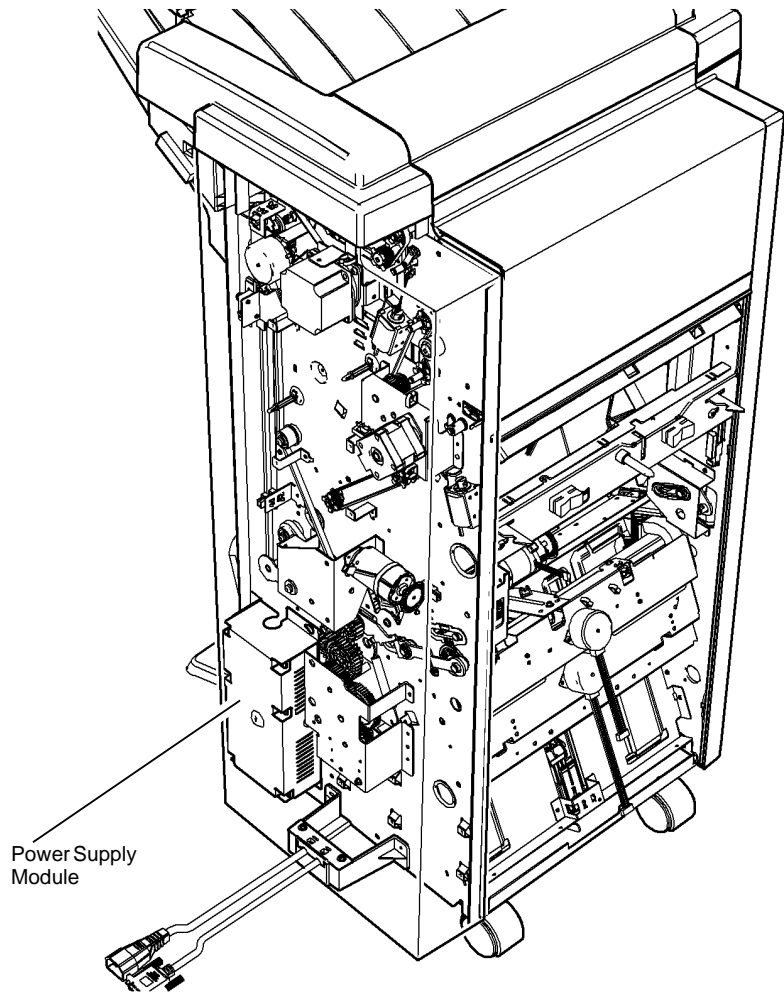
Perform SCP 5 Final Actions.



LVF PWB

Figure 1 LED location

W-1-0954-B



W-1-0070-A

Figure 2 Component location

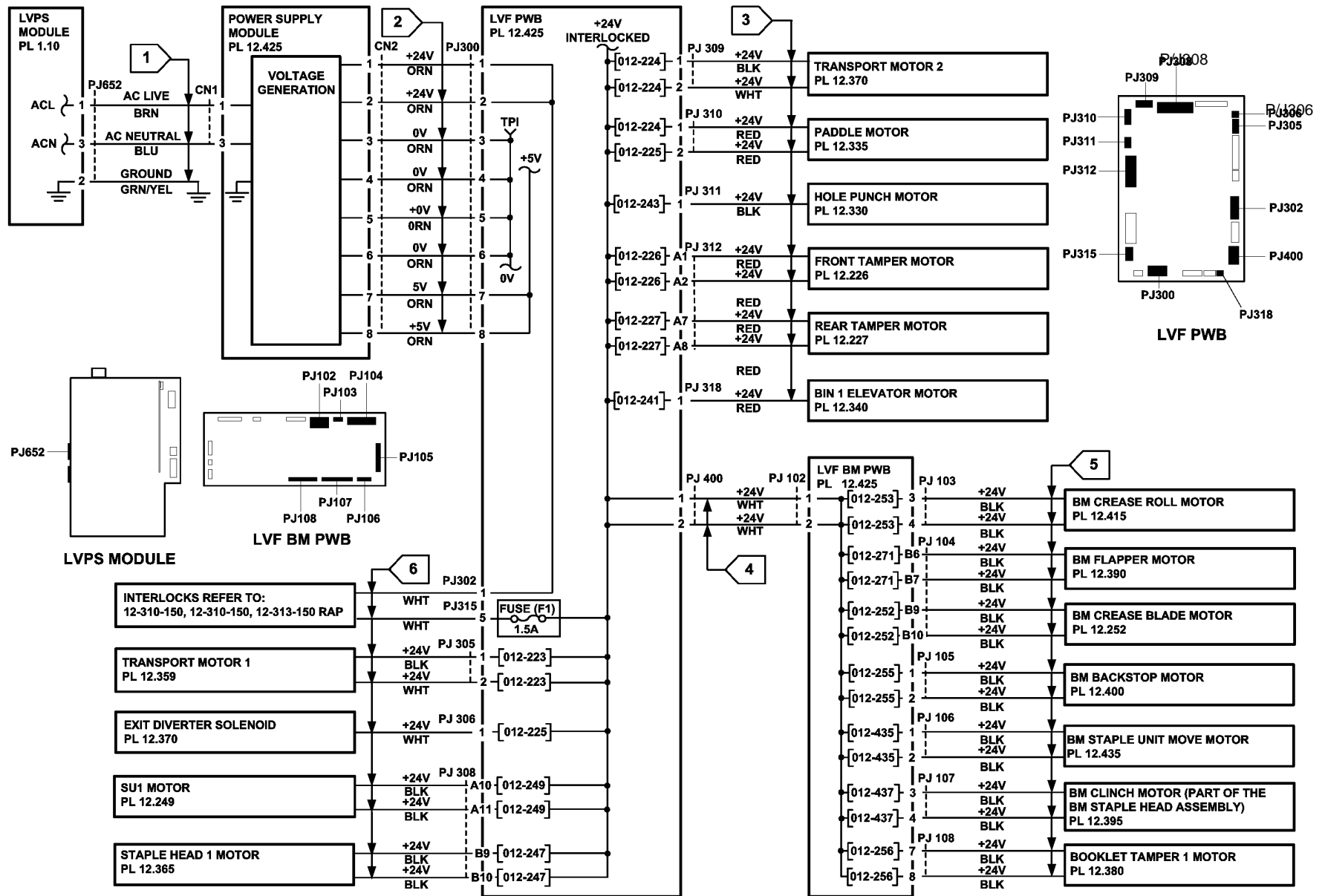
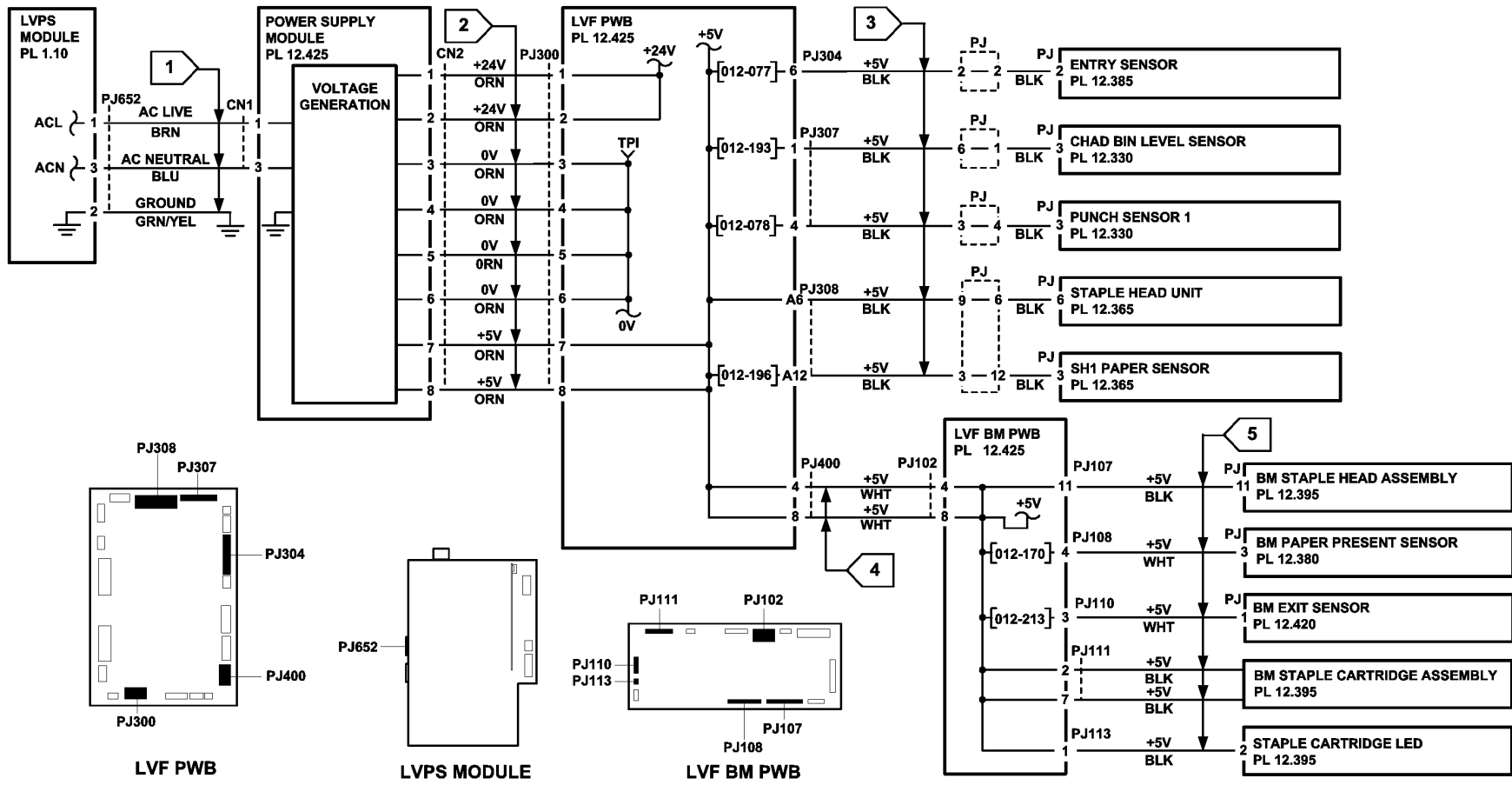


Figure 3 +24V circuit diagram



TW-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.

### 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.

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

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.**

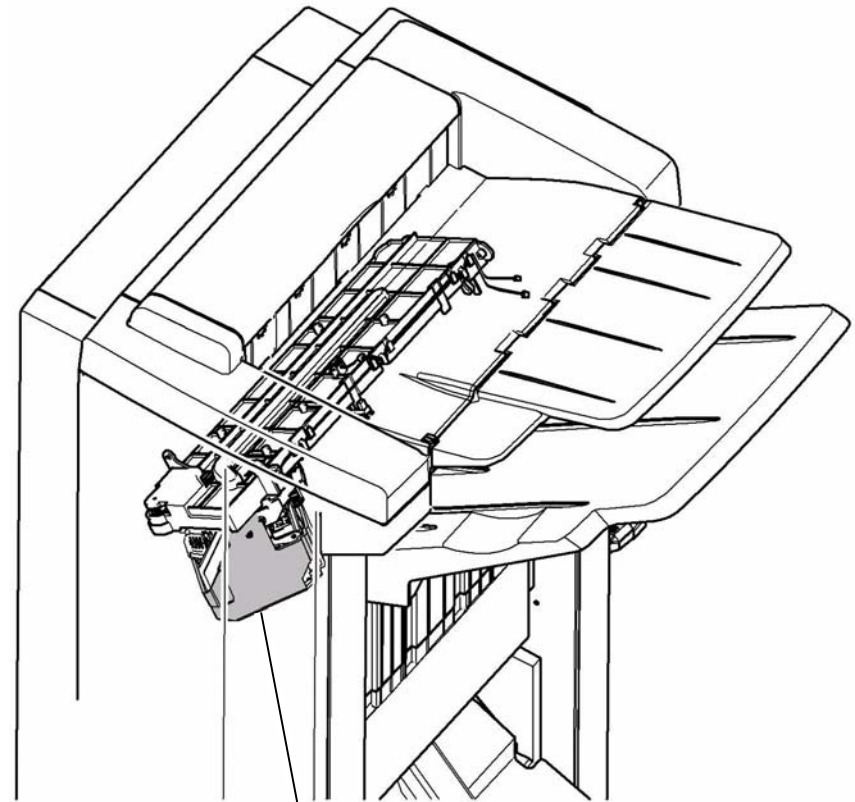
Y N  
Go to Flag 1 and Flag 2. Check the wiring and connectors between the LVF PWB and the staple head. **The wiring is good.**

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

W-1-0040-A

Figure 1 Component location

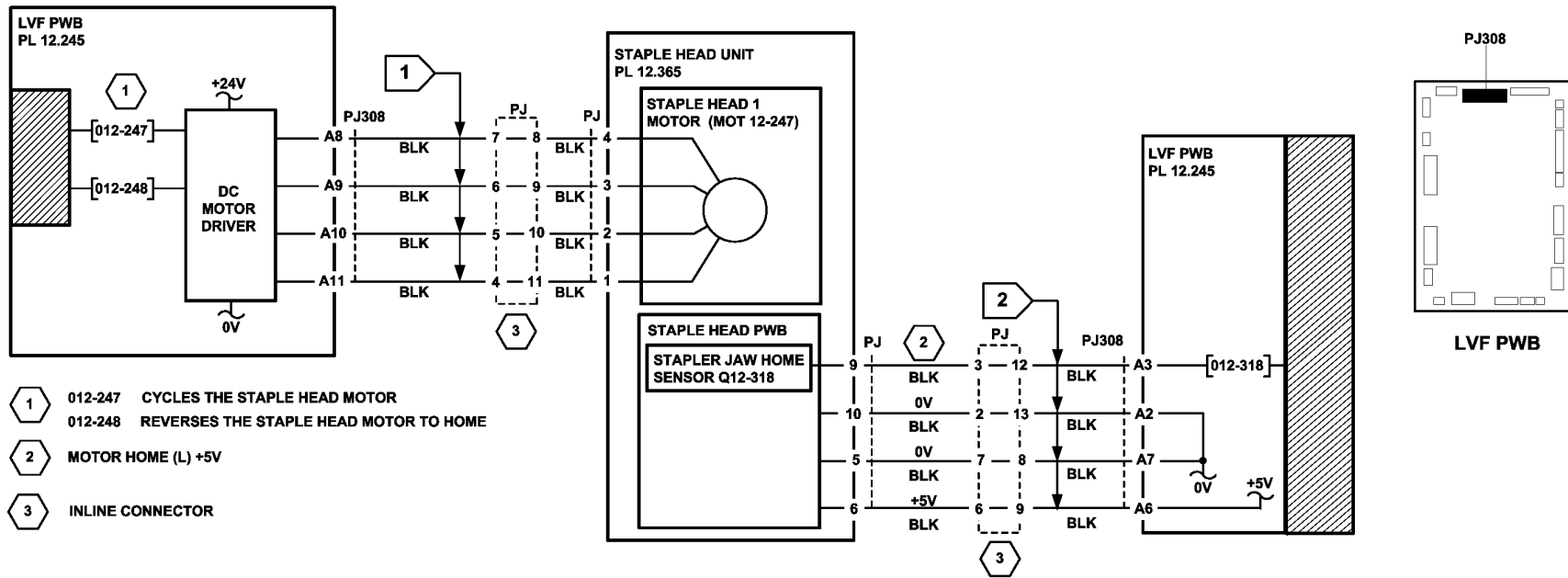


Figure 2 Circuit diagram

TW-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](#).

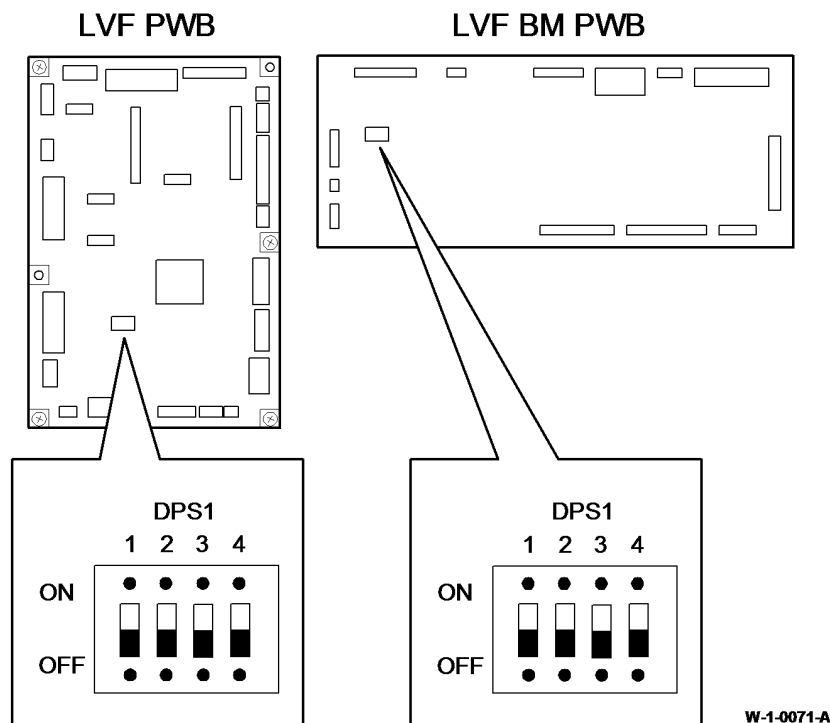


Figure 1 DIP switch settings

## 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.

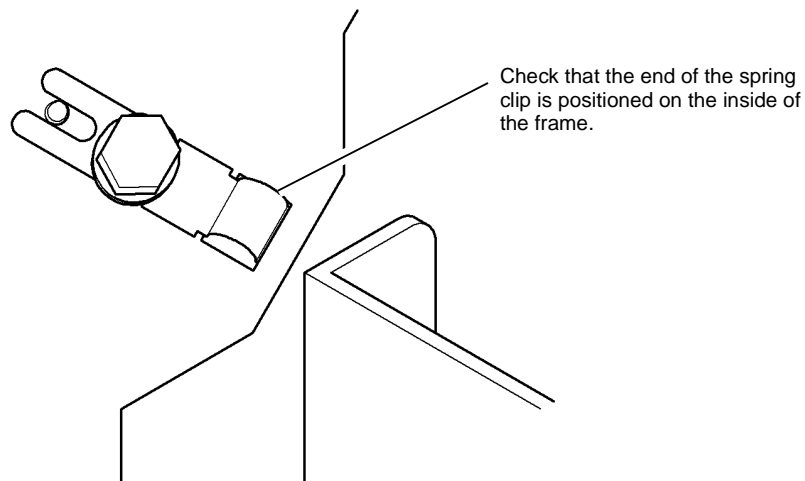


Figure 1 Position of the spring clip

## 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.

### 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 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 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)	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

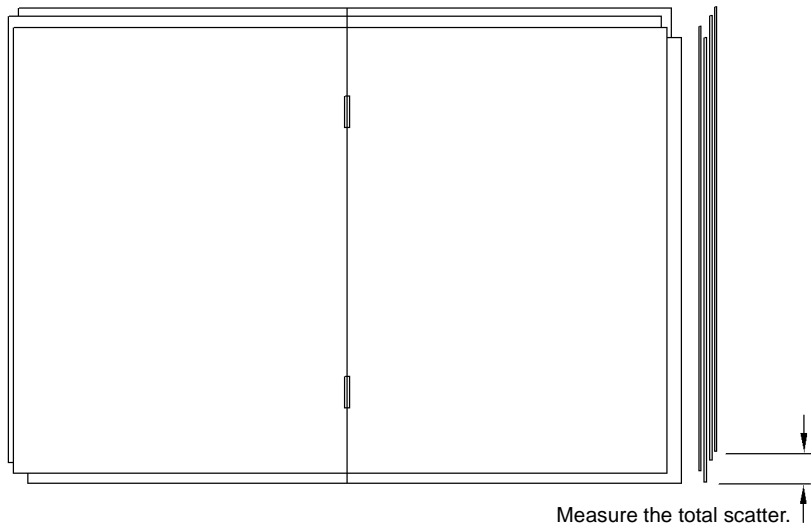
Produce three 4 sheet/16 page booklets using 80gsm (20lb) paper. Paper size and weight must conform to [GP 20 Paper and Media Size Specification](#).

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](#).



W-1-1345-A

Figure 1 Top and bottom alignment

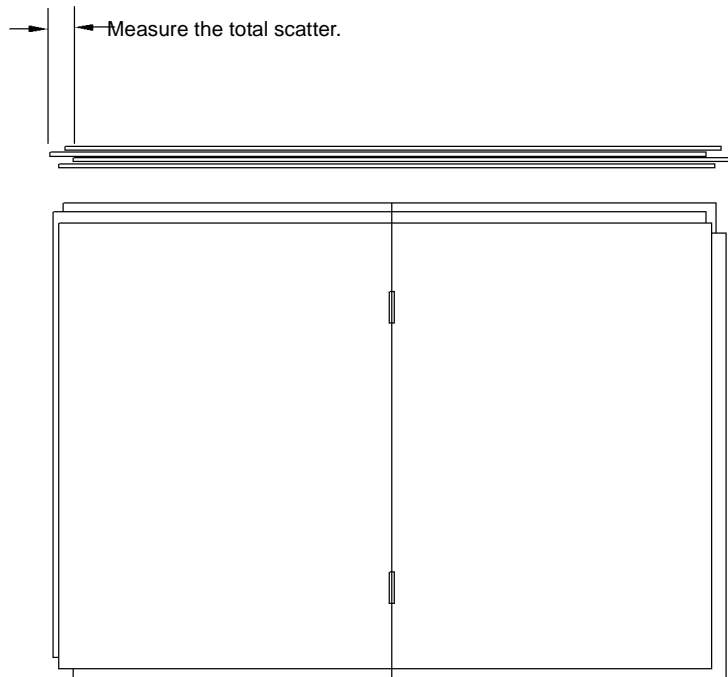
Table 2 Top and bottom edge alignment

	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](#).



W-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.

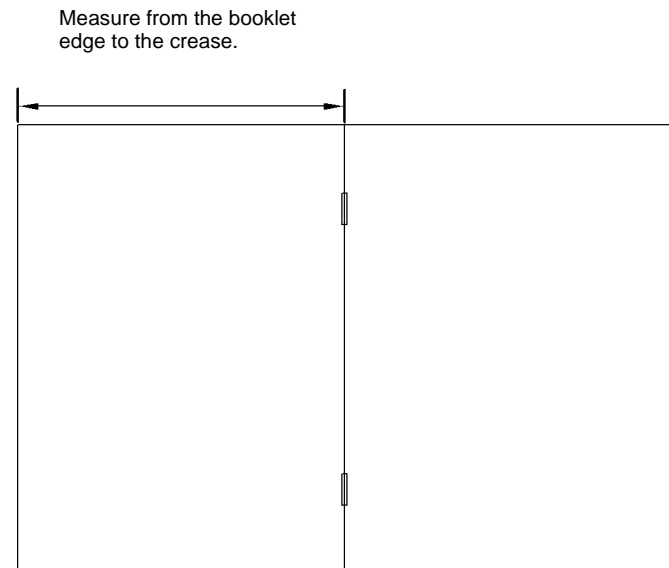
### Badly Formed Booklet Staples

If the front booklet staples are not formed correctly, perform [ADJ 12.7-150 Booklet Stapler Anvil Position - Front](#).

If the rear booklet staples are not formed correctly, perform [ADJ 12.8-150 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](#).



W-1-1348-A

Figure 3 Booklet skew

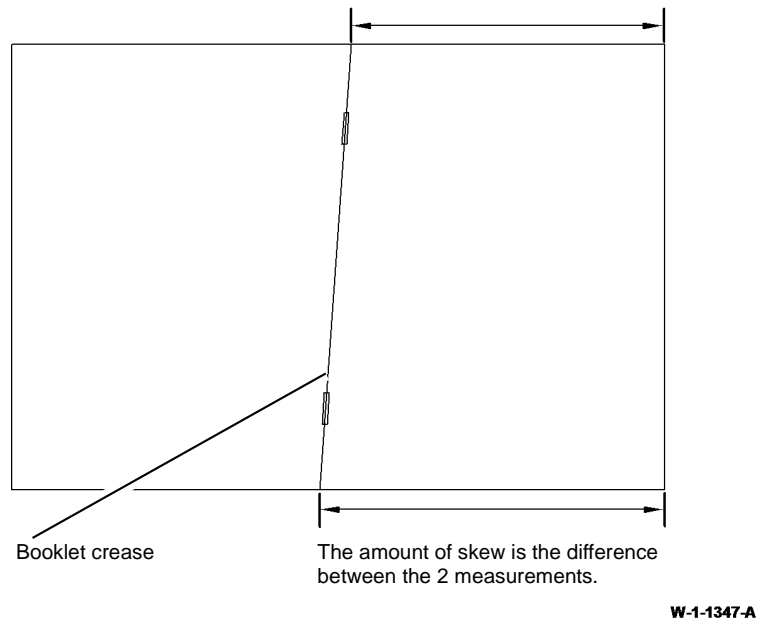
**Table 4 Crease position and tolerance**

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 12.5-150 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](#).



**Figure 4 Booklet crease skew**

**Table 5 Booklet crease skew**

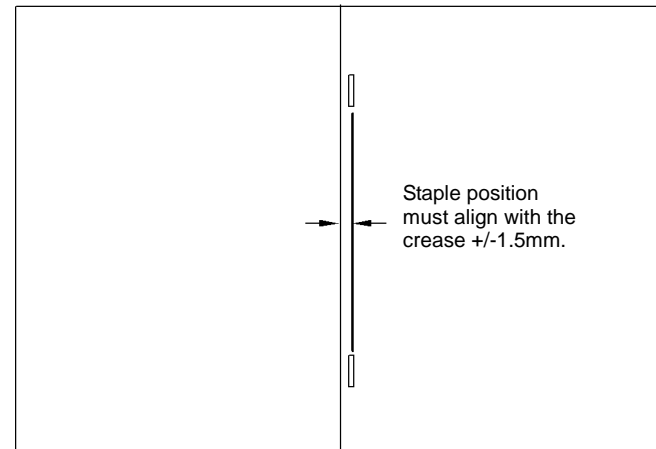
	Paper size	4 sheet booklet	15 sheet booklet
95% of booklets	A4/8.5x11 inch	1.5mm	2.0mm
	8.5x14 inch	1.5mm	2.0mm
	A3	2.0mm	2.5mm
	11x17 inch	1.5mm	2.0mm
Worst 5% booklets	A4/8.5x11 inch	2.0mm	3.0mm
	8.5x14 inch	2.0mm	3.0mm
	A3	2.5mm	3.5mm
	11x17 inch	2.0mm	3.0mm

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 12.9-150](#) 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](#).

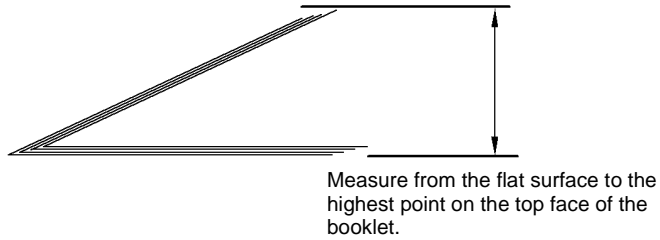


**Figure 5 Booklet staple position**

If the booklet staple position does not conform to the specification in [Figure 5](#), perform [ADJ 12.6-150 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](#).



W-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](#).
- 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](#).



## 316-000-00 to 316-016-19 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.

### 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.

316-600-07 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.

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.

316-609-105 Too many IPC handlers.

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.

316-610-00 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.

316-611-38 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.

316-611-46 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 DMPPR 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 or 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.

**316-626-67** Memory allocation failed.

**316-628-07** Range environment variable not set. Set to invalid numeric string.

**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.

**316-628-09** Unable to complete RPC call.

**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.

**316-629-67** 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.

316-654-38 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.

316-702-00 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.

## 316-742-19 Hard Disk ODIO Failure RAP

316-742-19 Hard disk ODIO 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. 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



#### 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.

## 316-751-00 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.

**316-752-00** 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.

316-755-93 Unable to initialize with IFS.

316-755-99 Unable to abort job fault.

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.

316-756-35 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.

316-756-93 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.

316-757-35 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.

316-757-93 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.

316-758-35 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.

316-759-46 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.

316-760-46 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.

**316-761-46** 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.

**316-764-46** 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.

**316-765-46** 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



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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.

**316-766-46** 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.

**316-767-46** 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

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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



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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



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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.

**316-790-47** 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



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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



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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

316-813-47 SESS diagnostic failure.

316-814-00 Scan compressor death error.

316-814-09 Scan compressor service unavailable.

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 perfuming 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



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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



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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

316-892-00 Edge server communication failed

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.

316-908-19 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



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1. If a single occurrence, take no action.
2. For multiple occurrences, go to the 316E Network Fault Checkout RAP.

## 316-930-19 to 316-969-19 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.

### Procedure



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1. If a single occurrence, take no action.
2. For multiple occurrences, go to the [316E](#) Network Fault Checkout RAP.

## 316-975-19 to 316-989-19 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.

**316-984-35** 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.

**316-985-35** 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.

**316-986-35** 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.

**316-987-35** 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.

**316-988-35** 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.

**316-989-35** Unknown plex value returned. Unable to map attribute. Invalid information received 3.

**316-985-19** Network scanning application registration error.

**316-986-19** Network scanning application un-registration error.

**316-987-19** Server fax application registration error.

**316-988-19** Server fax application un-registration error.

**316-989-19** Disk encryption 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.



## 316-990-00 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 CWIS 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



#### 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 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 CWIS page. **The machine's CWIS page 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.**

**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 **Customer's 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 **Customer's 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.**

Y N

Perform the [Customer's 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 [Customer's 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 [Customer's 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.

## Customer's 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 CWIS 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 CWIS 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.



## 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](#).

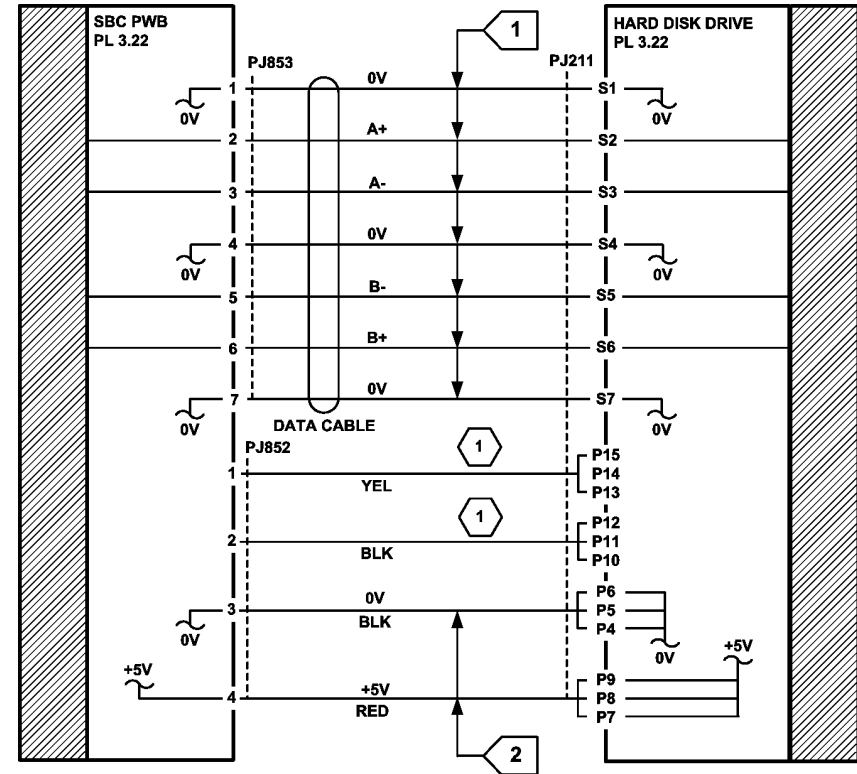
Go to [Flag 2](#). Check for +5V between pins 3 and 4 on [PJ211](#) at the hard disk drive. **+5V was measured.**

**Y N**  
Check the voltages.  
Refer to:

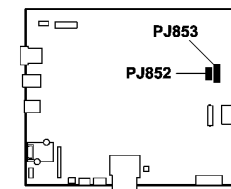
- [301E +5V and +5VSB Distribution RAP](#).
- [301B 0V Distribution RAP](#).

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

TW-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



#### 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.

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



#### 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 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.  
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



Ensure that the electricity to the machine is switched off while performing tasks 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.

## 320-332-00, 320-340-00 Fax Network Line 2 Fault RAP

**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



Ensure that the electricity to the machine is switched off while performing tasks 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



Ensure that the electricity to the machine is switched off while performing tasks 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 [320-332-00](#), [320-340-00](#), then perform the appropriate RAP.
- Enter Customer Administration Tools, [GP 24](#). Select **Service Settings / Embedded Fax Settings / Print Fax Reports**. Print an activity report. Check for error codes.
- Select **Service Settings / Embedded Fax Settings / 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 **Service Settings / Embedded Fax Settings / Line 1 Setup** to change if necessary.
  - Line 2 setup (if present) is set to 'Send and Receive'.  
Select **Service Settings / Embedded Fax Settings / Line 2 Setup** to change if necessary.
  - Fax country setting is correct.  
Select **Service Settings / Embedded Fax Settings / 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



**Ensure that the electricity to the machine is switched off while performing tasks 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.

**The Fax tab is available.**

Y N  
perform the [320F](#) Fax Tab 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 **Service Settings / Embedded Fax Settings / 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.

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- 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.

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- 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.

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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.

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

Perform the [320G Fax Module Checkout RAP](#).  
Install new components as necessary:

- Fax PWB, [PL 20.05 Item 7](#).
- Telephone cable, [PL 20.05 Item 3](#).

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](#).

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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 **Service Settings / Embedded Fax Settings / 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.

## 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**.

## 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 Incomplete 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 **Service Settings / Embedded Fax Settings / 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 **Save**.
  - 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 **Service Settings / Embedded Fax Settings / Incoming Fax Defaults**:
  - Select **Paper Sizes, Other Sizes**.
  - For Small, Long or Large paper sizes, select **None** if the corresponding paper is not loaded in the paper trays. Select **Save**.
  - Change **Paper Settings** back to **Automatic**. Save, then exit.

## 320F Fax Tab 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 **Service Settings / Embedded Fax Settings / 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 **Service Settings / Service Registration**. 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 **All Services** button on the UI. **The Fax tab 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 tab 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.

## 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



Ensure that the electricity to the machine is switched off while performing tasks 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



Ensure that the electricity to the machine is switched off while performing tasks 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.
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 to 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 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](#).



## 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.

### 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 dC304 LED Print head Validation. **The LED print head validation test failed.**

Y N  
Perform SCP 5 Final Actions.

Switch off, then switch on the machine, GP 14. **The fault persists.**

Y N  
Perform SCP 5 Final Actions.

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.

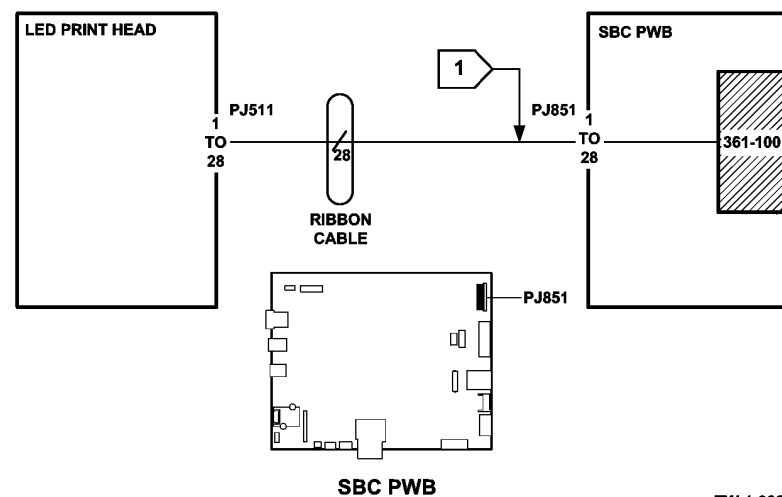
Re-install the ribbon cable. Perform dC304 LED Print Head Validation. **The LED print head validation test failed.**

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.



TW-1-0228-A

## 362-310-00 Scanner to SBC Communications Failure RAP

362-310-00 A communication failure occurred between the scanner PWB and the SBC PWB.

### Initial Actions

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

### 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 and connectors, P/J411 on the Scanner PWB and P/J854 on the SBC PWB. The data cable and connectors are clean and undamaged.

Y N

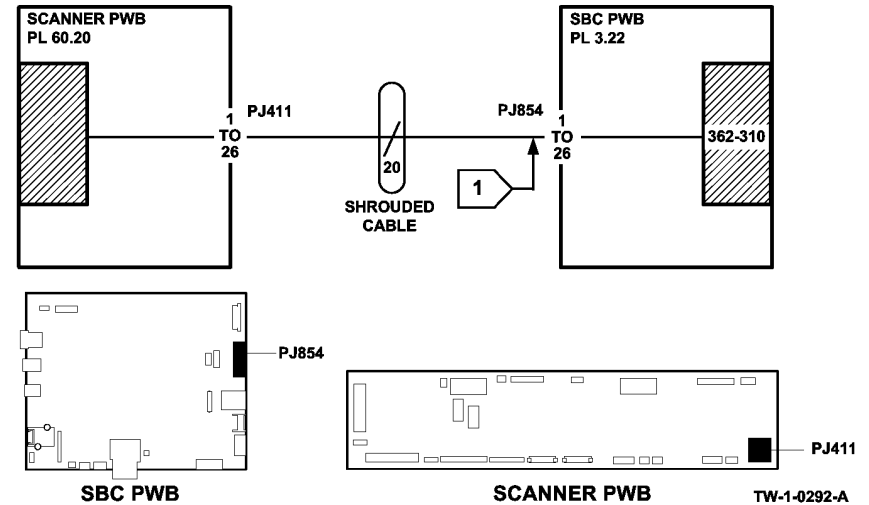
Clean or repair the ribbon cable or connectors. Install new components as necessary:

- SBC PWB/scanner PWB data cable, PL 60.20 Item 22.
- 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 data cable, PL 60.20 Item 22.
- Install a new scanner PWB, PL 60.20 Item 4.
- The 303D SBC PWB Diagnostics RAP.





## 362-357-00, 362-960-00 Scanner Cooling Fan Fault RAP

**362-357-00** A scanner cooling fan signal error was detected.

**362-960-00** The cooling fan was not rotating.

### 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 scanner module top cover assembly, [PL 60.15 Item 2](#). Hold the top cover interlock switch closed. Enter [dC330](#) code 062-029 to run the cooling fan, MOT62-029, [Figure 1](#). The motor runs.

Y N

Go to [Flag 1](#). Check MOT62-029.

Refer to:

- [GP 10](#) How to Check a Motor.
- [P/J424](#), [Scanner PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Cooling fan, [PL 60.15 Item 6](#).
- Scanner PWB, [PL 60.20 Item 4](#).

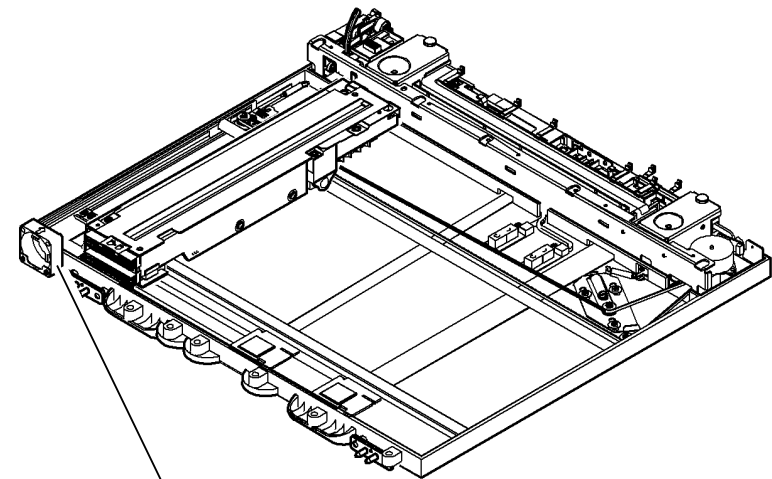
Add the [dC330](#) code 062-034 to check the cooling fan lock alarm. The display reads high.

Y N

Switch off, then switch on the machine. If the fault persists, install new components as necessary:

- Cooling fan, [PL 60.15 Item 6](#).
- Scanner PWB, [PL 60.20 Item 4](#).

Install a new cooling fan, [PL 60.15 Item 6](#).



Cooling fan, MOT62-029

W-1-0912-A

Figure 1 Component location

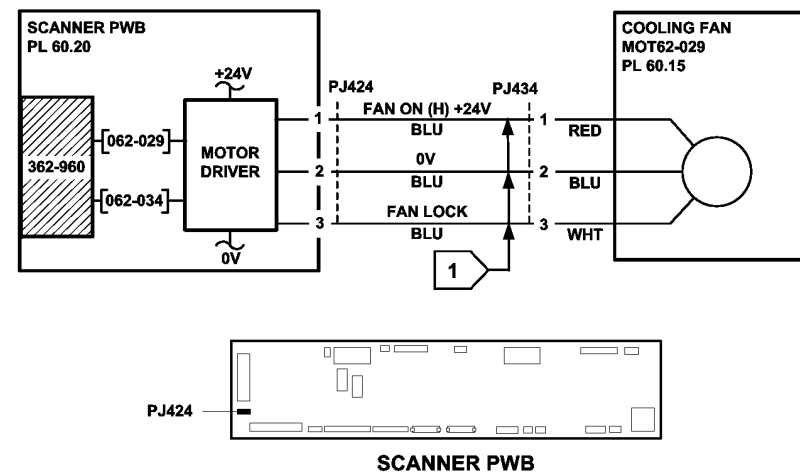


Figure 2 Circuit diagram

TW-1-0216-A

# 362-399-00 SPDH to Scanner Data Cable Failure RAP

362-399-00 A cable failure occurred between the SPDH and the scanner.

## Initial Actions

- 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.*

Go to [Flag 1](#). Disconnect, then check the side 2 scan assembly data ribbon cable, and connectors [P/J451](#) on the [Side 2 CCD PWB](#) and [P/J413](#) on the [Scanner PWB](#). **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](#).

Re-install the ribbon cable. Check the operation of the machine. **The fault persists.**

Y N

Perform [SCP 5 Final Actions](#).

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](#).

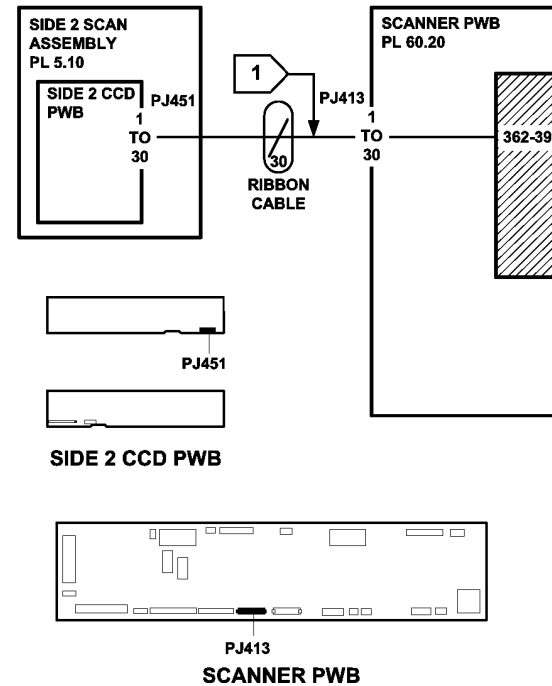


Figure 2 Circuit diagram

TW-1-0214-A

## 362-450-00 to 362-472-00 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 comm's 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 comm's time-out.

### Initial Actions

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 scan carriage data ribbon cable and connectors, [P/J445](#) on the [Scanner CCD PWB](#) and [P/J412](#) 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 17](#).
- Scan carriage assembly, [PL 60.20 Item 1](#).
- Scanner PWB, [PL 60.20 Item 4](#).

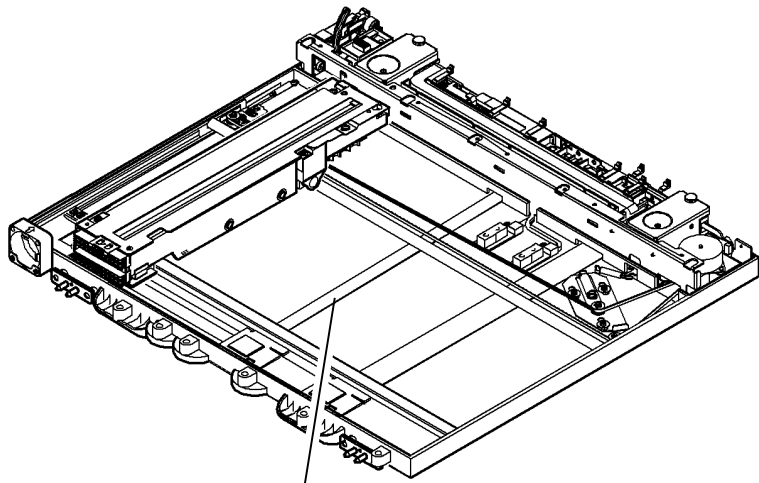
Reconnect the scan carriage data ribbon cable. Go to [Flag 2](#). Disconnect, then check the SBC PWB/scanner PWB data cable and connectors, [P/J411](#) on the [Scanner PWB](#) and [P/J854](#) on the [SBC PWB](#). **The data cable and connectors are clean and undamaged.**

**Y N**  
Clean or repair the ribbon cable or connectors. Install new components as necessary:

- SBC PWB/scanner PWB data cable, [PL 60.20 Item 22](#).
- 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 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

W-1-1159-A

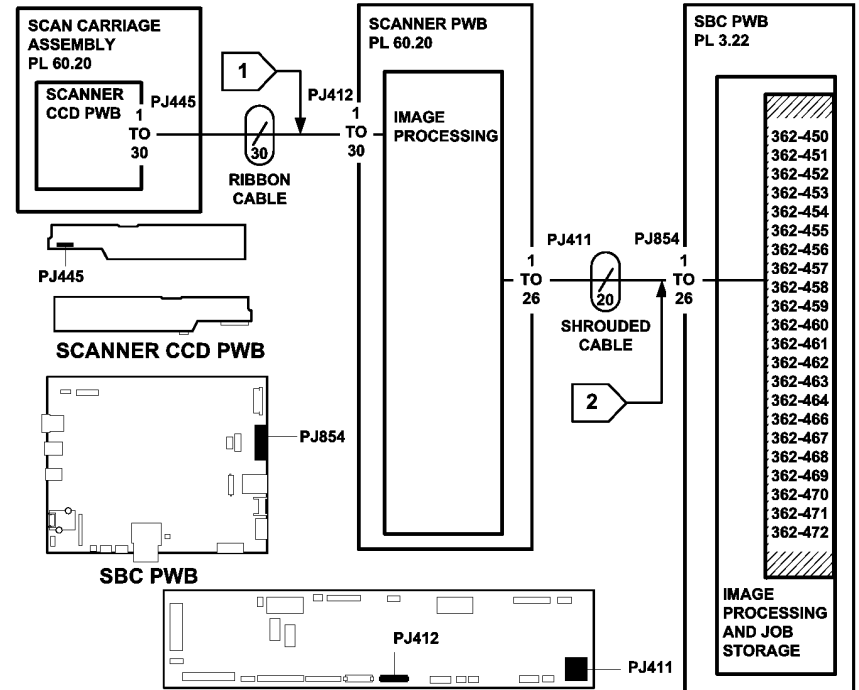


Figure 3 Circuit diagram

TW-1-0293-A

# 362-473-00 UART RX Wrap Error RAP

362-473-00 UART RX wrap error.

## Initial Actions

- 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



## 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 and connectors P/J411 on the Scanner PWB and P/J854 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 data cable, PL 60.20 Item 22.
- 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 data cable, PL 60.20 Item 22.
- Install a new scanner PWB, PL 60.20 Item 4.
- The 303D SBC PWB Diagnostics RAP.

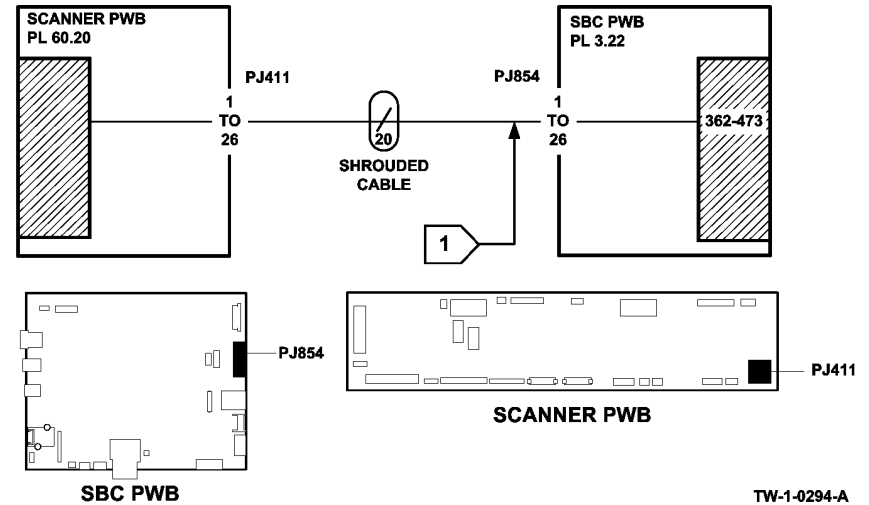


Figure 2 Circuit diagram

TW-1-0294-A

## 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.

### Initial Actions

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

### 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.

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 60.11](#) 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.
- [P/J438](#), [P/J421](#), [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.
- [P/J439](#), [P/J40](#), [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.

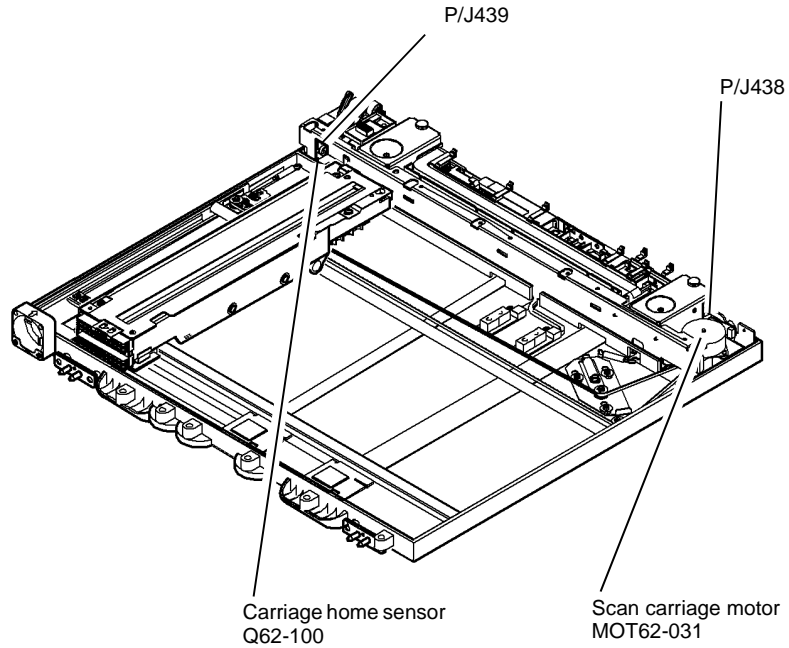
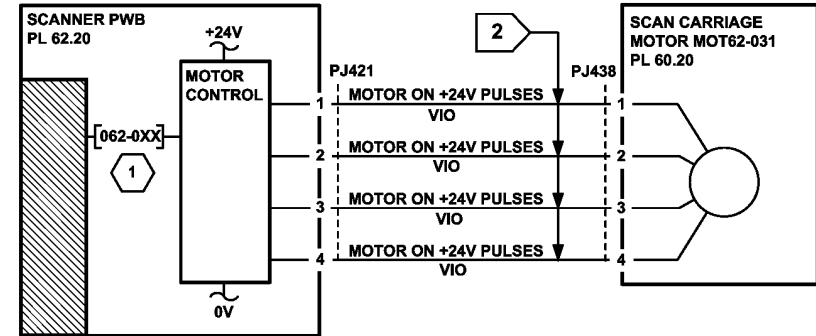
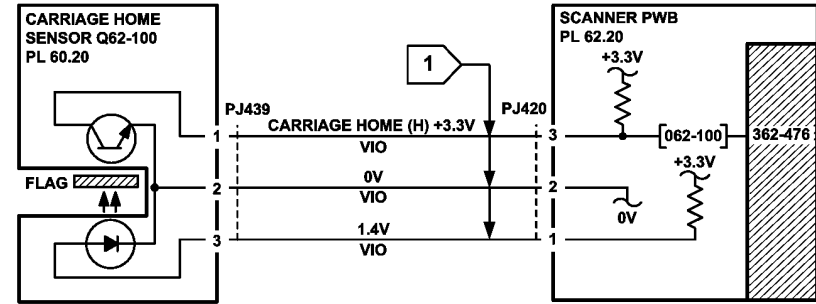


Figure 1 Component location

W-1-0909-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

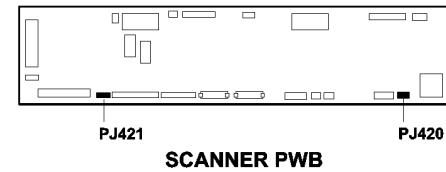


Figure 2 Circuit diagram

TW-1-0222-A

## **362-477-00 to 362-481-00, 362-782-00 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.

### **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.

### Initial Actions

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

### 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.

### Initial Actions

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

### 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.

## 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.

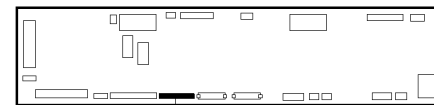
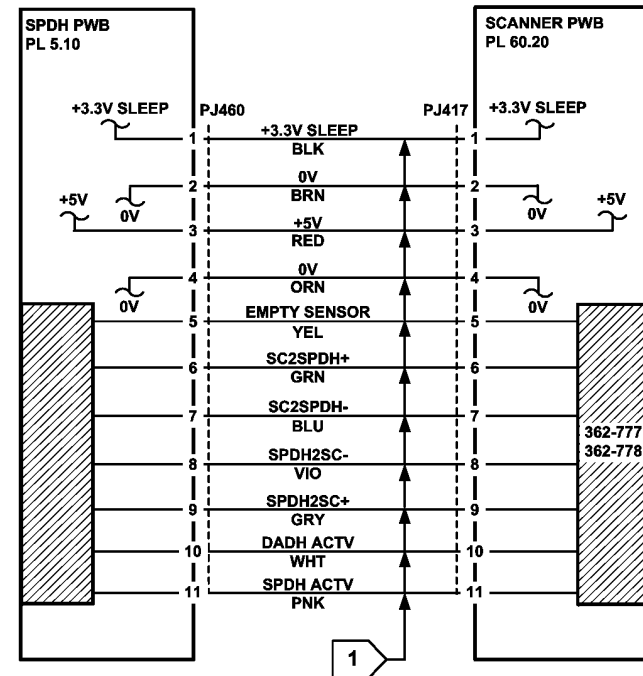
Go to Flag 1. Disconnect and check the harness and connectors, P/J417 on the SPDH PWB and P/J460 on the Scanner PWB. The harness and connectors are good.

- 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.

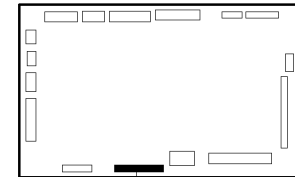
- Y N**
- Perform SCP 5 Final actions.

- Install new components as necessary:
- SPDH PWB, PL 5.10 Item 5.
  - Scanner PWB, PL 60.20 Item 4.



P/J417

SCANNER PWB



P/J460

SPDH PWB

TW-1-0215-A

Figure 1 Circuit diagram

## 362-779-00, 362-780-00 Scanner Software 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.

### 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 harness and connectors, [P/J460](#) on the [SPDH PWB](#) and [P/J417](#) 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 6.

Re-install the harness. Check the operation of the machine. **The fault persists.**

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

Go to [Flag 2](#). Disconnect, then check the [SBC PWB](#)/scanner [PWB](#) comms/power harness and connectors, [P/J410](#) on the [Scanner PWB](#) and [P/J860](#) 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 6](#). 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](#).

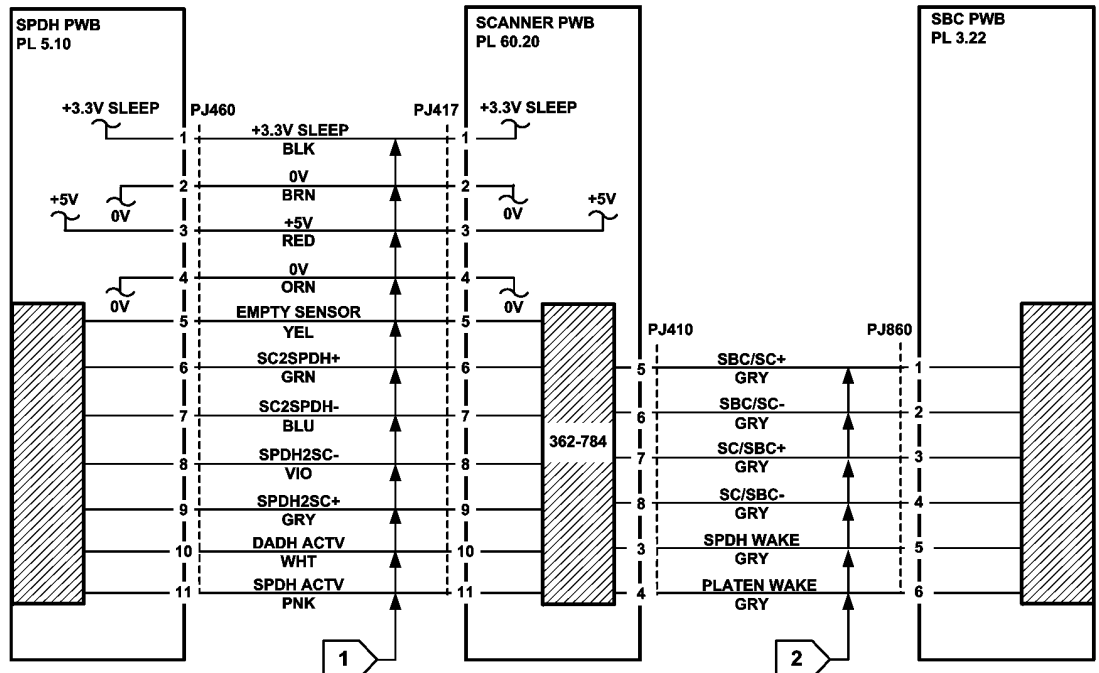


Figure 2 Circuit diagram

TW-1-0255-A

# 362-784-00 Platen Hotline Error RAP

362-784-00 Platen hotline error.

## 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 SBC PWB/scanner PWB comms/power harness and connectors, P/J410 on the Scanner PWB and P/J860 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 6. 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 362A Scan Carriage Position RAP. **The fault is fixed.**

A

A  
Y N  
Perform SCP 5 Final Actions.

Y N  
Install a new scanner PWB, PL 60.20 Item 6. If the fault persists, perform the 303D SBC PWB Diagnostics RAP.

Perform SCP 5 Final Actions.

Perform SCP 5 Final Actions.

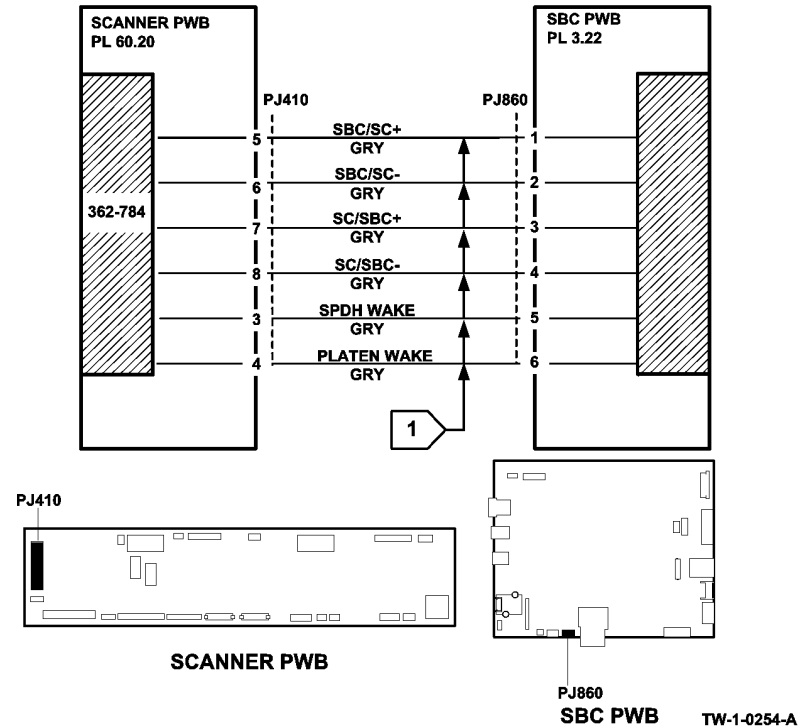


Figure 2 Circuit diagram

## 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



**Ensure that the electricity to the machine is switched off while performing tasks 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.
- [P/J423](#), [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.
- [P/J423](#), [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 to scanner PWB data cable, and the connectors [P/J411](#) on the, [Scanner PWB](#) and [P/J854](#) on the [SBC PWB](#). **The SBC PWB/Scanner PWB data cable and P/J connectors are clean and undamaged.**

Y N

Clean or repair the SBC PWB/scanner PWB data cable or connectors, [REP 1.2](#). Install new components as necessary:

- SBC PWB/scanner PWB data cable, [PL 60.20 Item 22](#).
- 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](#).



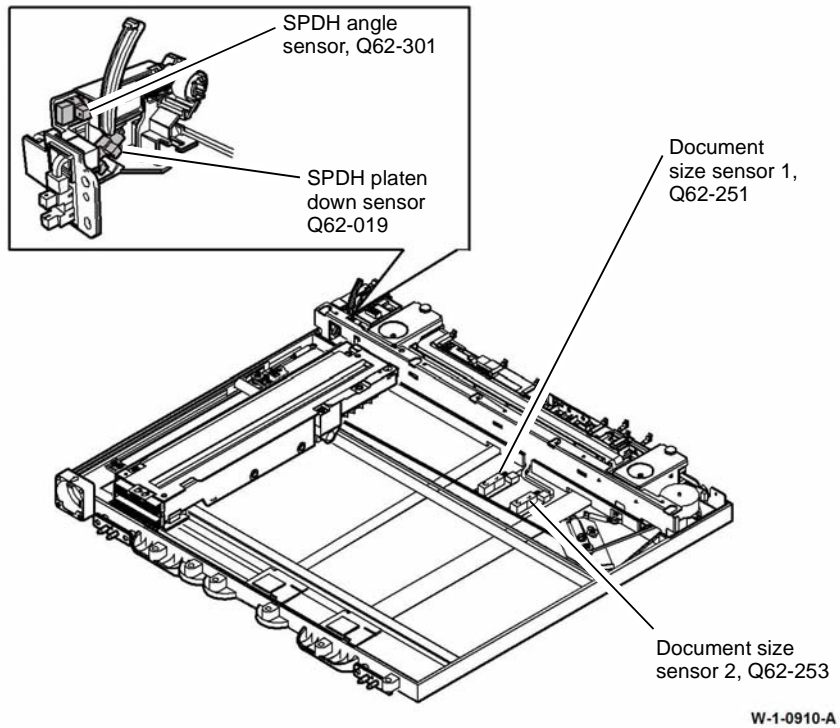


Figure 1 Component location

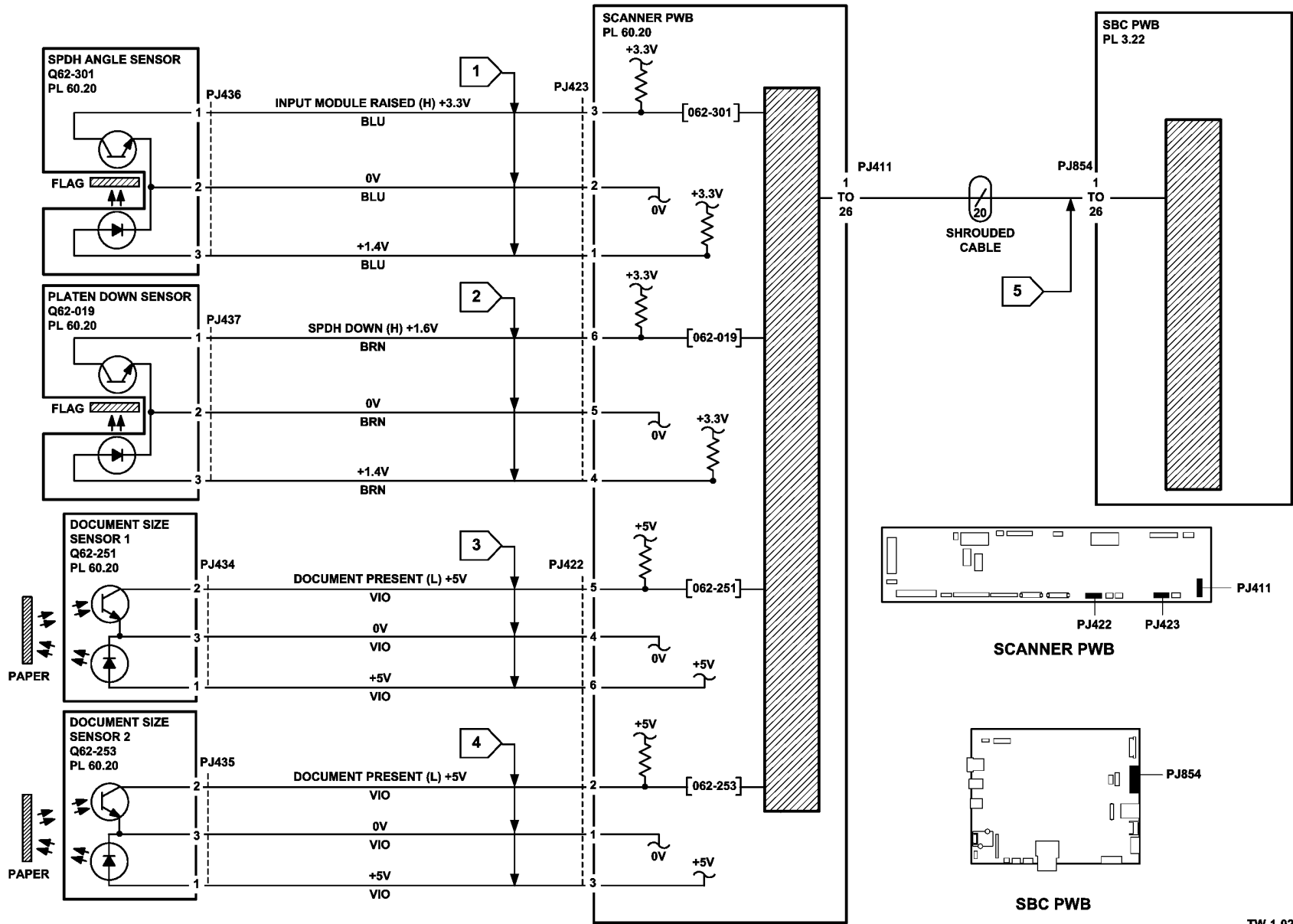


Figure 2 Circuit diagram

TW-1-0219-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



**Ensure that the electricity to the machine is switched off while performing tasks 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 4**. +24V is available at **P/J447** between pin 1 and pin 3, and between pin 2 and pin 4.

**Y N**  
Go to **Flag 1**. +24V is available at **P/J410** between pins 19 and 20, between pins 21 and 22, and between pins 23 and 24.

**Y N**  
+24V is available at **P/J861** between pins 7 and 8, between pins 5 and 6, between pins 3 and 4, and between pins 1 and 2.

**Y N**  
Check the power supply.  
Refer to:

- 301B 0V Distribution RAP.
- 301G +24V Distribution RAP.

Check the SBC PWB/scanner PWB comms/power harness, **PL 60.20 Item 5**. Also check the connectors **P/J861** on the **SBC PWB** and **P/J410** on the **Scanner PWB**. Repair as necessary, **REP 1.2**.

Go to **Flag 1** and **Flag 2**. Check and clean if necessary, then reconnect **P/J410**, **P/J416** and **P/J446**. +24V is now available at **P/J447** between pin 1 and pin 3, and between pin 2 and pin 4.

**Y N**  
Install new components as necessary:

- Scan carriage power ribbon cable, **PL 60.20 Item 10**.
- Scanner CCD PWB, **PL 60.25 Item 4**.
- Scanner PWB, **PL 60.20 Item 4**.

Go to **Flag 4**. +24V is available at **P/J448** between pin 6 and pin 4, and between pin 5 and pin 3.

**Y N**  
Check the wiring and connectors between **P/J447** and **P/J448**. Repair as necessary, **REP 1.2**.

**A B C**  
Go to **Flag 5**. Check the wiring and connectors between **P/J449** and **P/J450**. The wiring and connectors are good.

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

Go to **Flag 3**. Check that both ends of the scan carriage data ribbon cable are clean and securely connected. The scan carriage data ribbon cable connections are good.

**Y N**  
Clean and reconnect or if necessary, install a new scan carriage data ribbon cable, **PL 60.20 Item 17**.

Install a new scan carriage assembly, **PL 60.25 Item 1**.

Go to **Flag 4**. +24V is available at **P/J448** between pin 6 and pin 4, and between pin 5 and pin 3.

**Y N**  
Check the wiring and connectors between **P/J447** and **P/J448**. Repair as necessary, **REP 1.2**.

Go to **Flag 5**. Check the wiring and connectors between **P/J449** and **P/J450**. The wiring and connectors are good.

**Y N**  
Repair the wiring or connectors as necessary. Refer to **REP 1.2**.

Go to **Flag 3**. 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 17**.

Perform the steps that follow:

1. Install a new scan carriage assembly, **PL 60.25 Item 1**.
2. **ADJ 60.3** IIT Registration, Magnification and Calibration.
3. **SCP 5** Final Actions.

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.

Go to **Flag 3**. 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 17**.

Install a new scan carriage data ribbon cable, **PL 60.20 Item 17**.

A B C

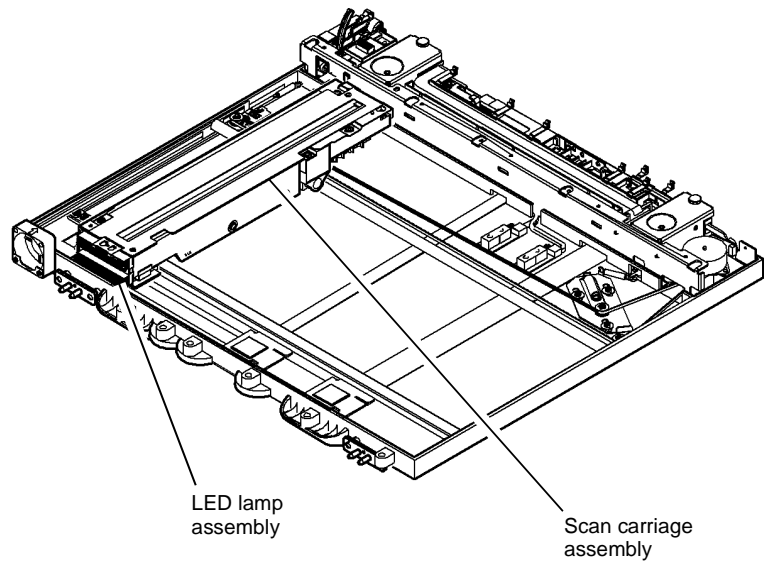


Figure 1 Component location

W-1-0911-A

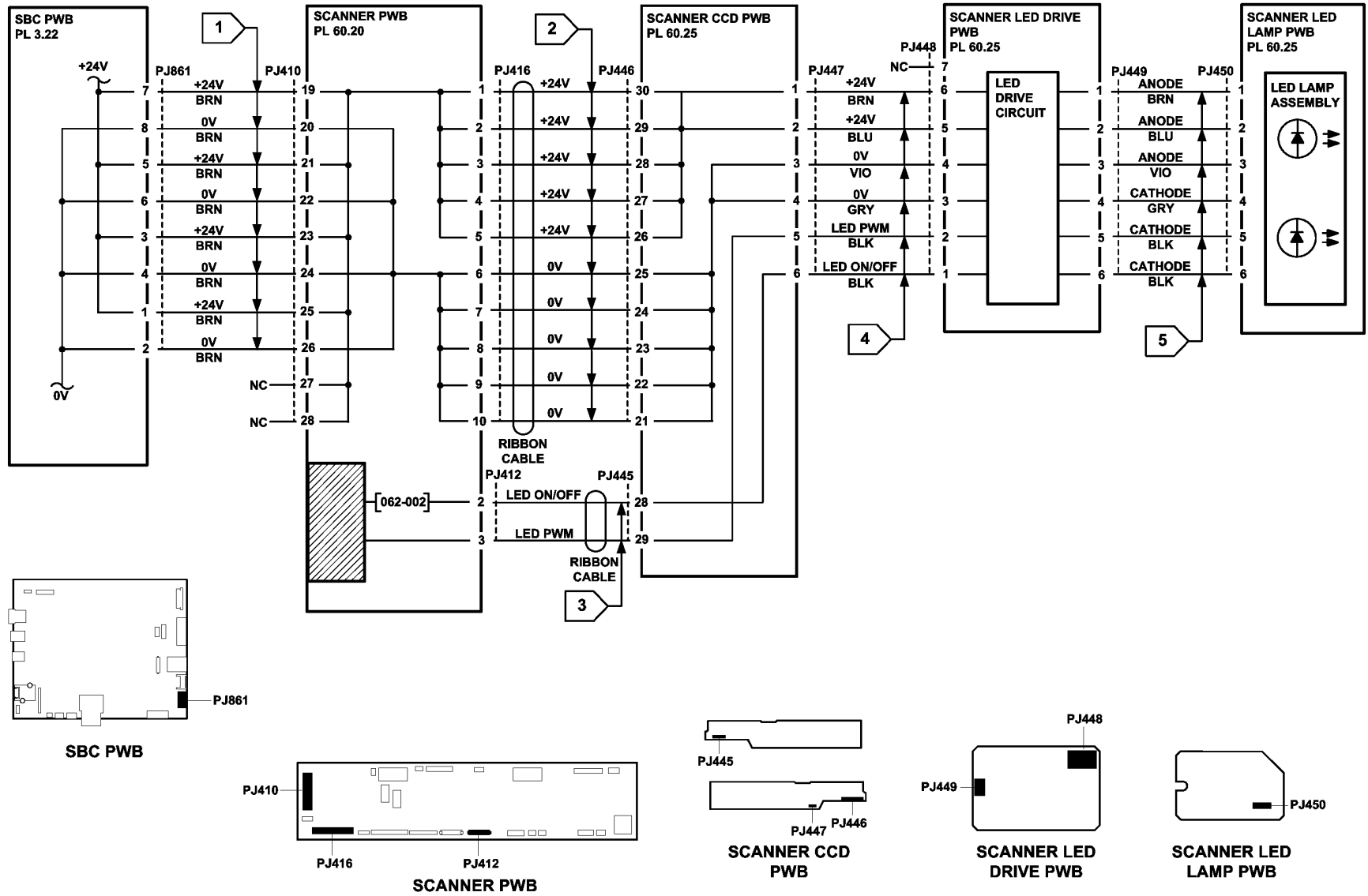


Figure 2 Circuit diagram

TW-1-0220-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.

### 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 connectors P/J451 on the Side 2 CCD PWB and P/J413 on the Scanner PWB. **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 P/J451 to P/J413 side 2 scan assembly data ribbon cable. Go to Flag 2. Disconnect then check the SBC PWB/scanner PWB data cable, PL 60.20 Item 22. Check the connectors P/J411 on the Scanner PWB and P/J854 on the SBC PWB. **The SBC PWB/scanner PWB data cable and the P/J connectors are clean and undamaged.**

**Y N**  
Clean or repair the SBC PWB/scanner PWB data cable 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.

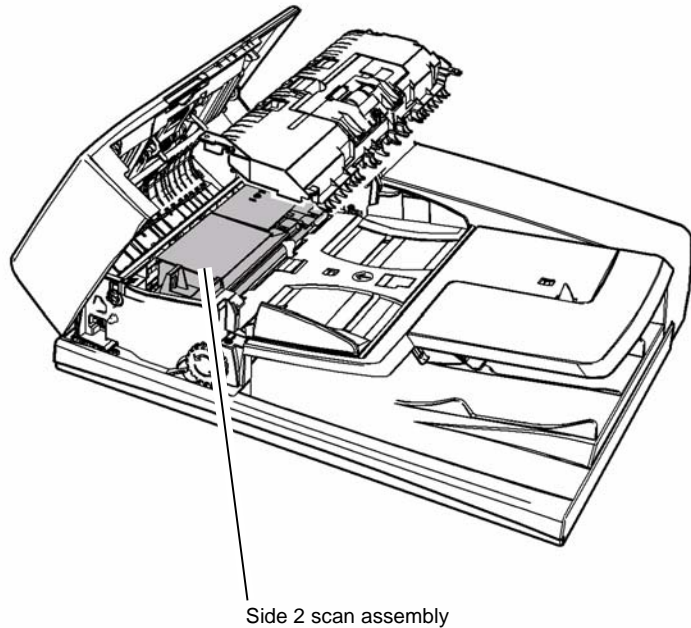


Figure 2 Component location

W-1-0913-A

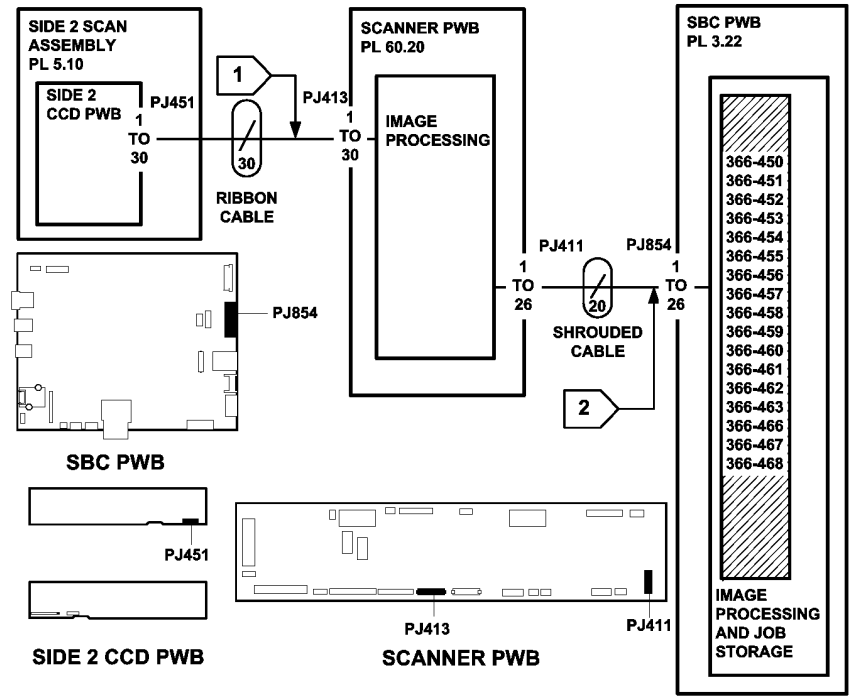


Figure 3 Circuit diagram

TW-1-0218-A

## 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



**Ensure that the electricity to the machine is switched off while performing tasks 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](#). 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 5](#). +24V is available at [P/J453](#) between pin 1 and pin 3, and between pin 2 and pin 4.

Y N

Go to [Flag 1](#). +24V is available at [P/J410](#) between pins 19 and 20, between pins 21 and 22, between pins 23 and 24, and between pins 25 and 26.

Y N

+24V is available at [P/J861](#) between pins 7 and 8, between pins 5 and 6, between pins 3 and 4, and between pins 1 and 2.

Y N

Check the power supply.

Refer to:

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

Check the SBC PWB/scanner PWB comms/power harness, [PL 60.20](#) [Item 5](#). Check [P/J861](#) on the [SBC PWB](#) and [P/J410](#) on the [Scanner PWB](#). Repair as necessary, [REP 1.2](#).

Go to [Flag 1](#), [Flag 2](#) and [Flag 3](#). Disconnect, check and clean if necessary, then reconnect [P/J410](#), [P/J418](#), [P/J459](#), [P/J458](#) and [P/J452](#). +24V is now available at [P/J453](#) between pin 1 and pin 3, and between pin 2 and pin 4.

Y N

Install new components as necessary:

- Side 2 scan assembly power ribbon cable, [PL 5.10](#) [Item 6](#).
- Side 2 CCD PWB, [PL 60.30](#) [Item 4](#).
- SPDH PWB, [PL 5.10](#) [Item 5](#).
- Scanner PWB, [PL 60.20](#) [Item 4](#).

Go to [Flag 6](#). +24V is available at [P/J454](#) between pin 1 and pin 3, and between pin 2 and pin 4.

Y N

Check the wiring and connectors between [P/J453](#) and [P/J454](#). Repair as necessary, [REP 1.2](#).

Go to [Flag 7](#) and [Flag 8](#). Check the wiring and connectors between [P/J454](#) and [P/J455](#). **The wiring and connectors are good.**

A B



A B

Y N  
Repair the wiring or connectors as necessary. Refer to REP 1.2.

Go to Flag 4. Check that both ends of the side 2 scan assembly data ribbon cable are clean and securely connected. **The ribbon cable connections are good.**

Y N  
Clean and reconnect the ribbon cable. If necessary, install a new side 2 scan assembly data ribbon cable, PL 5.10 Item 16.

Install a new side 2 scan assembly data ribbon cable, PL 5.10 Item 16.

Go to Flag 6. +24V is available at P/J454 between pin 1 and pin 3, and between pin 2 and pin 4.

Y N  
Check the wiring and connectors between P/J453 and P/J454. Repair as necessary, REP 1.2.

Go to Flag 7 and Flag 8. Check the wiring and connectors between P/J454 and P/J455. **The wiring and connectors are good.**

Y N  
Repair the wiring or connectors as necessary. Refer to REP 1.2.

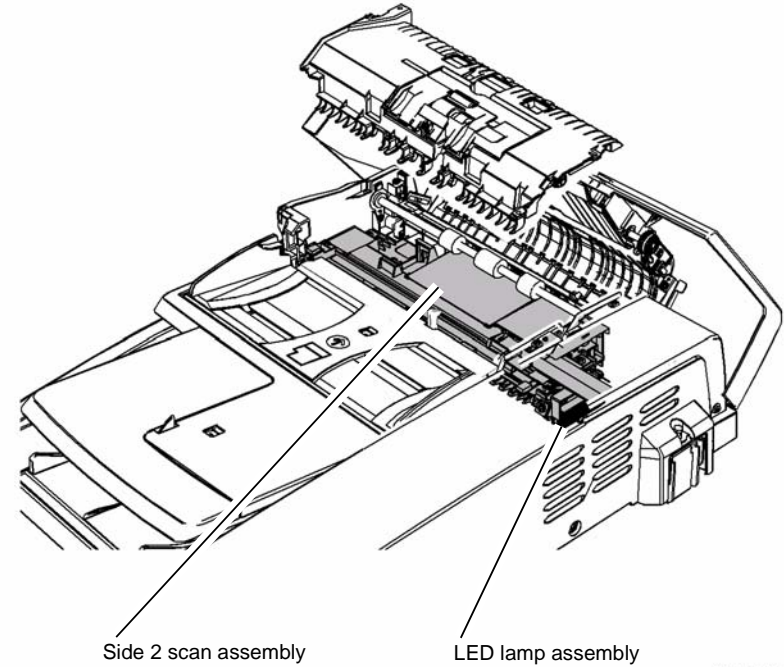
Go to Flag 4. Check that both ends of the side 2 scan assembly data ribbon cable are clean and securely connected. **The ribbon cable connections are good.**

Y N  
Clean and reconnect the ribbon cable. If necessary, install a side 2 scan assembly data ribbon cable PL 5.10 Item 16.

Perform the steps that follow:

1. Install a new side 2 scan assembly data ribbon cable, PL 5.10 Item 16.
2. ADJ 60.3 IIT Registration, Magnification and Calibration.
3. SCP 5 Final Actions.

Perform SCP 5 Final Actions.



W-1-0914-A

Figure 1 Component location

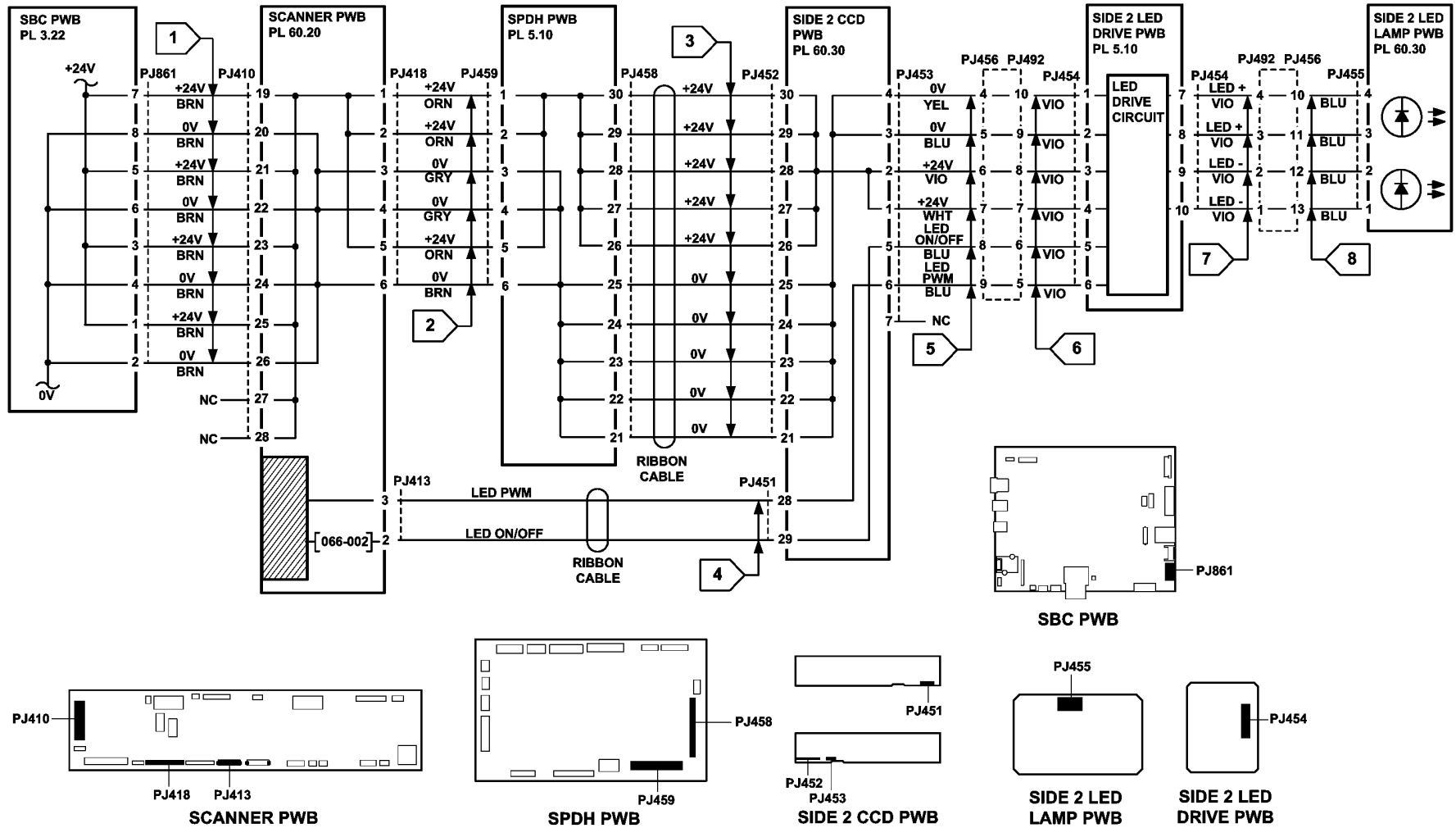


Figure 2 Circuit diagram

## 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.'

### 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:

- Switch off, then switch on the machine, [GP 14](#).
- Check that the tray elevator cables and mechanisms are located correctly.
- Check that the tray is pushed fully home.
- 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.

## 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.

### 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.

A

A

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](#).

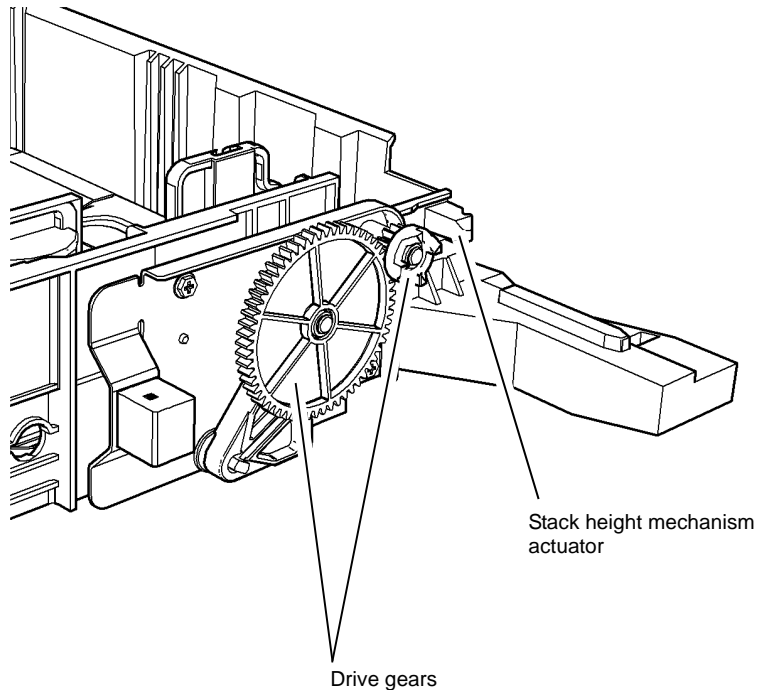
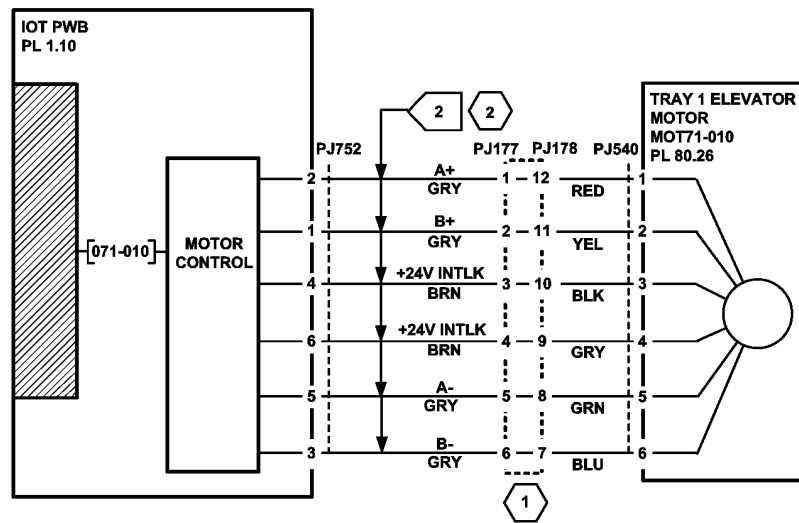
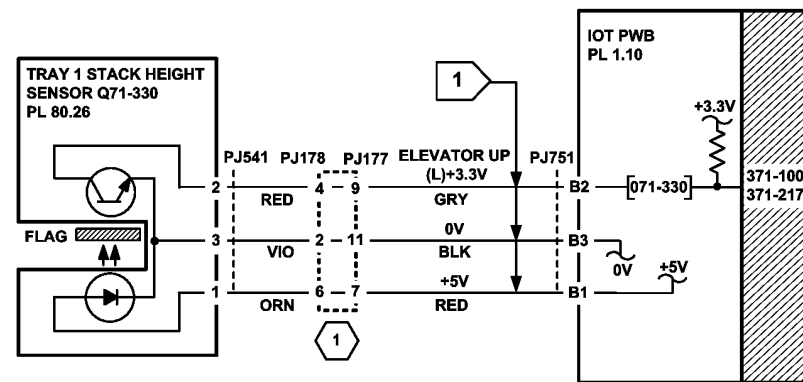
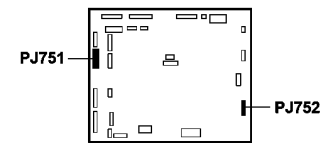


Figure 1 Component location

W-1-0964-A



- 1 IN-LINE CONNECTOR
- 2 DATA LINES A AND B PULSE BETWEEN 0V AND +24V WHEN THE MOTOR IS RUNNING.



IOT PWB

TW-1-0231-A

Figure 2 Circuit diagram

## 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 recognise any changes made.

### 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:

- Ensure that the tray is pushed fully home.
- 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 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 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.

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.
- Check that the rack assembly and link arms are undamaged.
- If necessary, install a new paper 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.

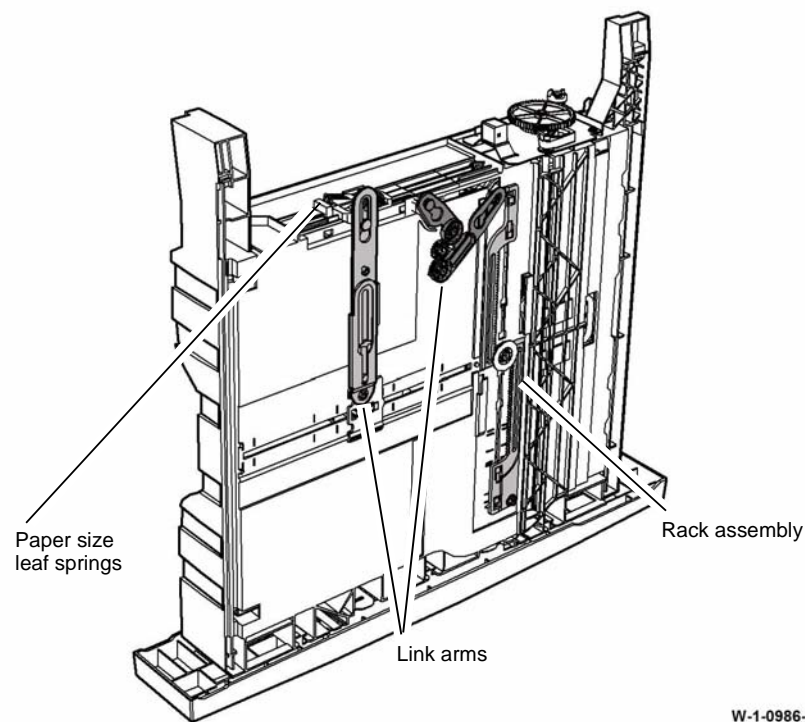
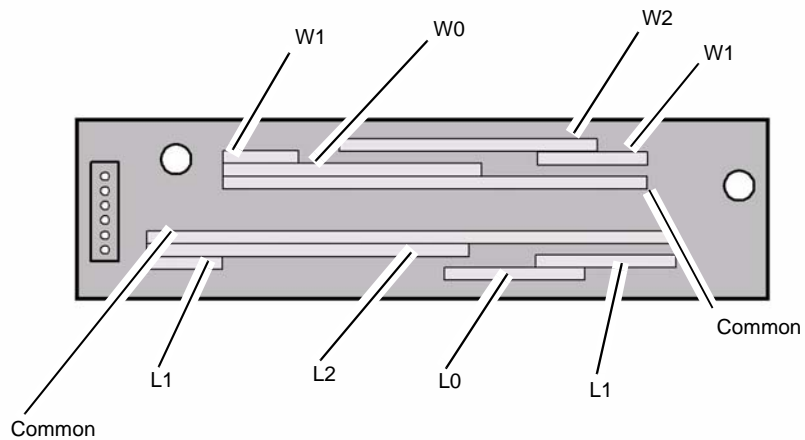


Figure 1 Component location

W-1-0986-A

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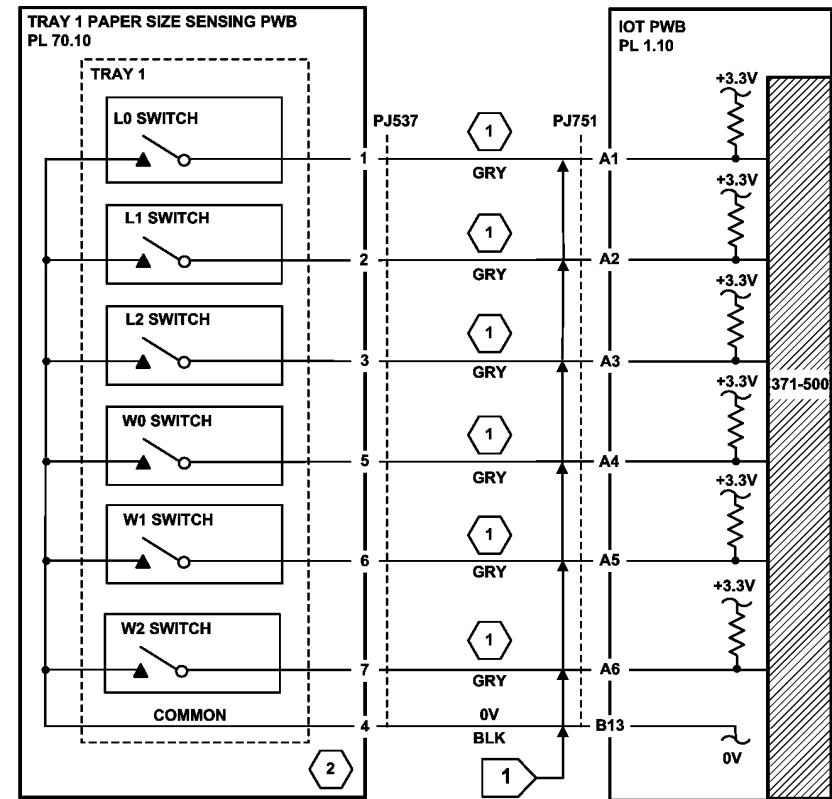


W-1-1076-A

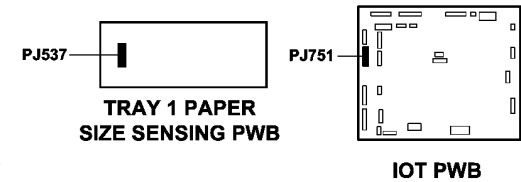
Figure 2 Tray 1 paper size sensing PWB layout

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



- 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 1.



TW-1-0269-A

Figure 3 Circuit diagram

## 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.

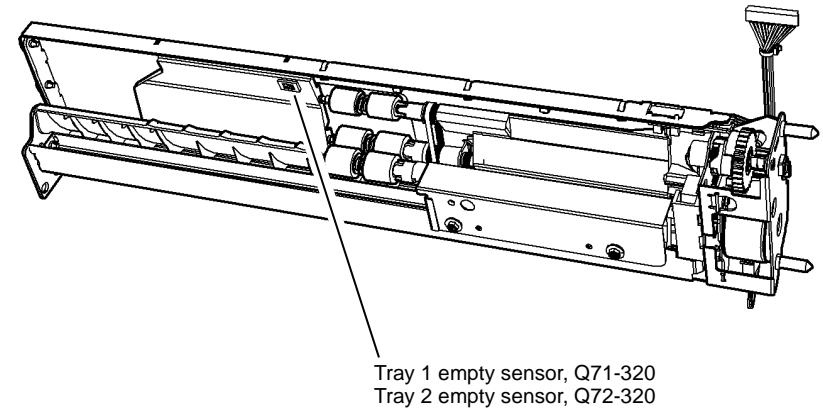
Install new components as necessary.

- 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.

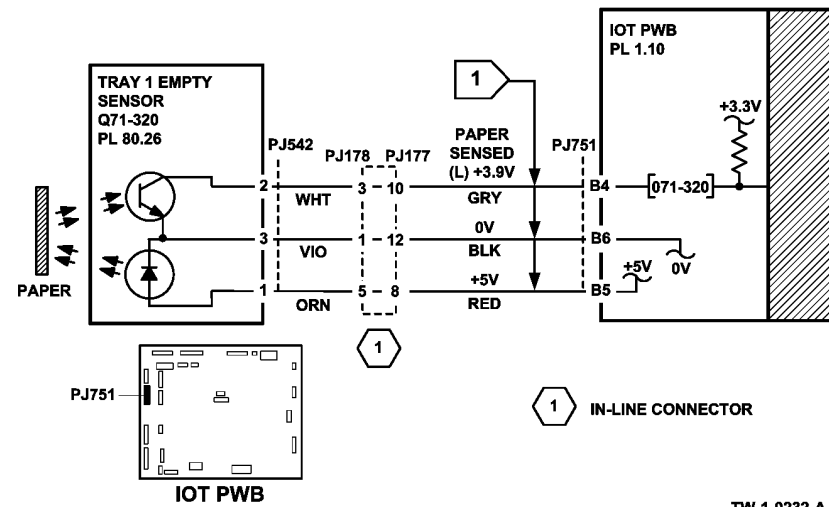
Perform the steps that follow:

- Check that the sensor is free of paper dust.
- Check the paper feed assembly, **PL 80.26** Item 1.



W-1-0966-A

Figure 1 Component location



TW-1-0232-A

Figure 2 Tray 1 circuit diagram

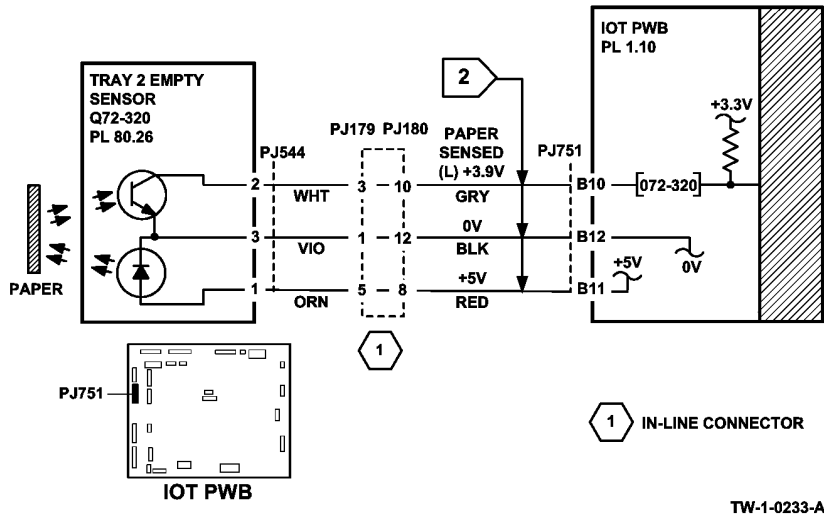


Figure 3 Tray 2 circuit diagram

## 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.

### 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

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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](#).

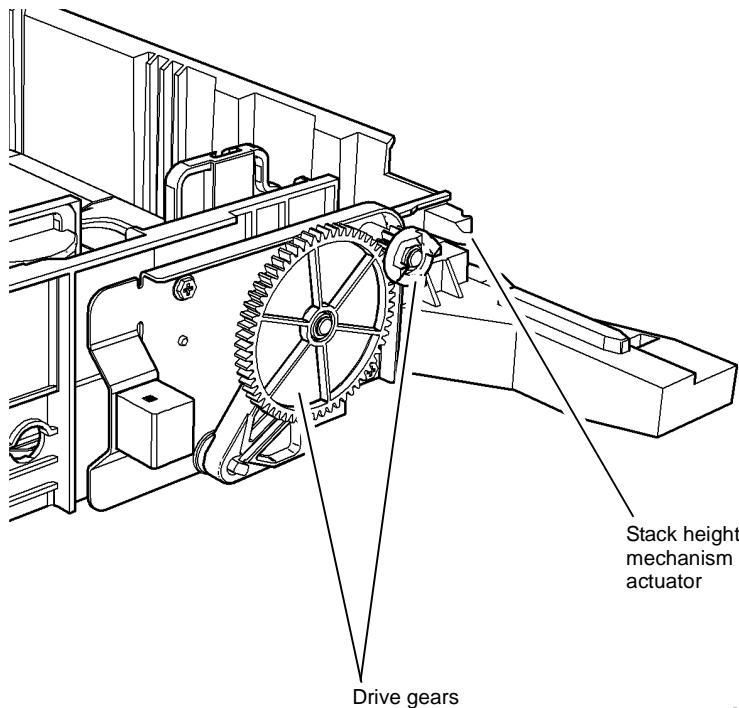
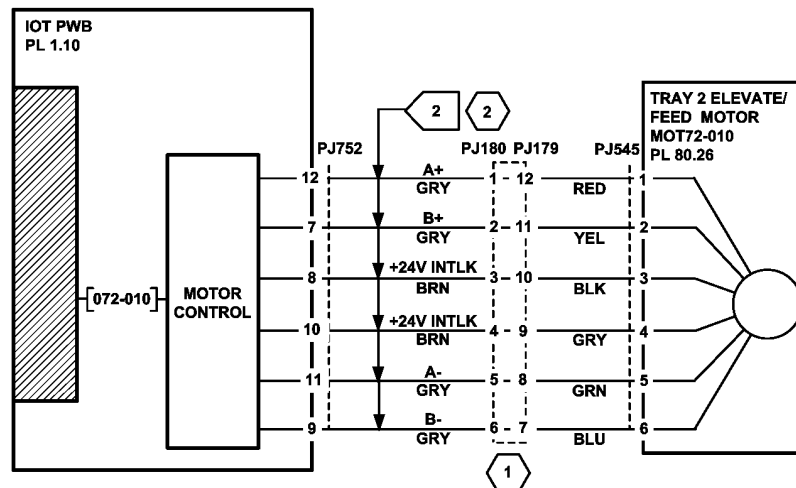
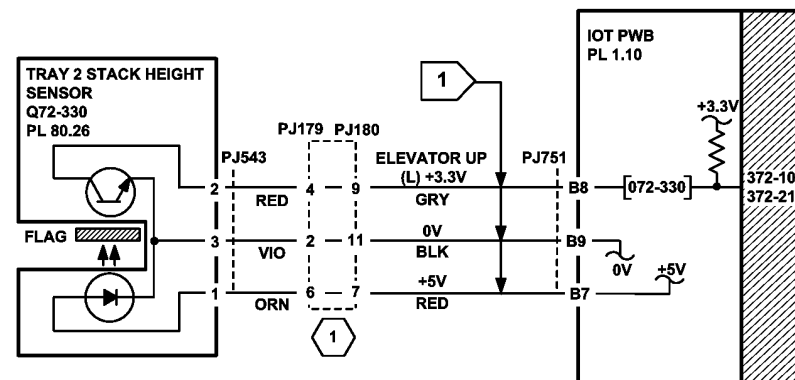


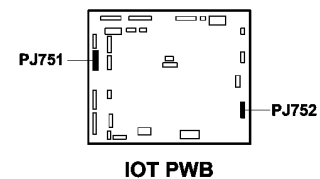
Figure 1 Component location

W-1-0965-A



1 IN-LINE CONNECTOR

2 DATA LINES A AND B PULSE BETWEEN 0V AND +24V WHEN THE MOTOR IS RUNNING.



IOT PWB

TW-1-0234-A

Figure 2 Circuit diagram

## 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 recognise any changes made.

### 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:

- Ensure that the tray is pushed fully home.
- 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.
- 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.

### 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, tray 2 paper size sensing PWB layout.
- 301D +3.3V Distribution RAP.
- 301B 0V Distribution RAP.

**A B**  
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 mounted correctly.
- Check that the rack assembly and link arms are undamaged.
- If necessary, install a new paper 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.

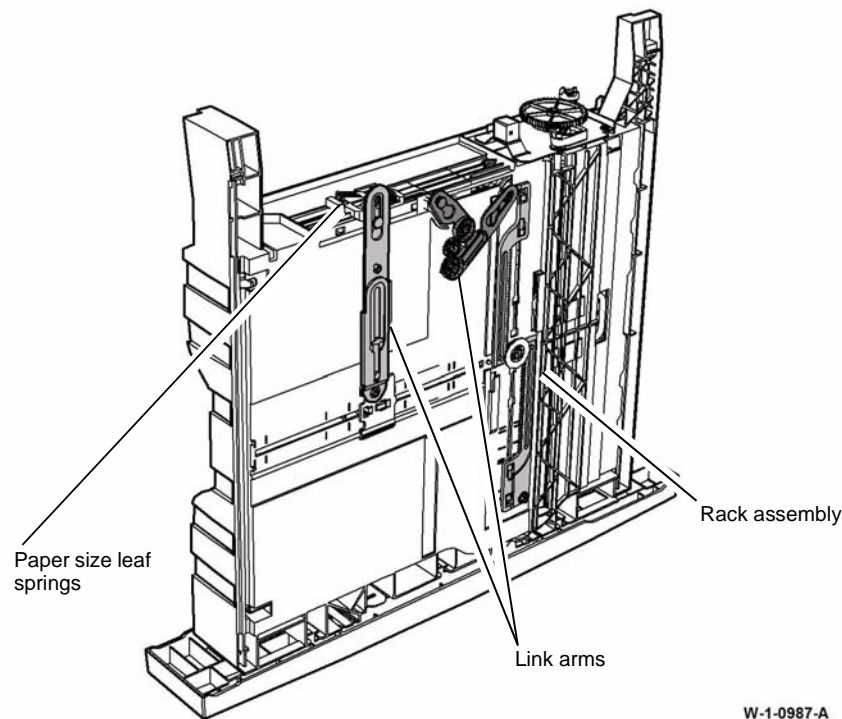
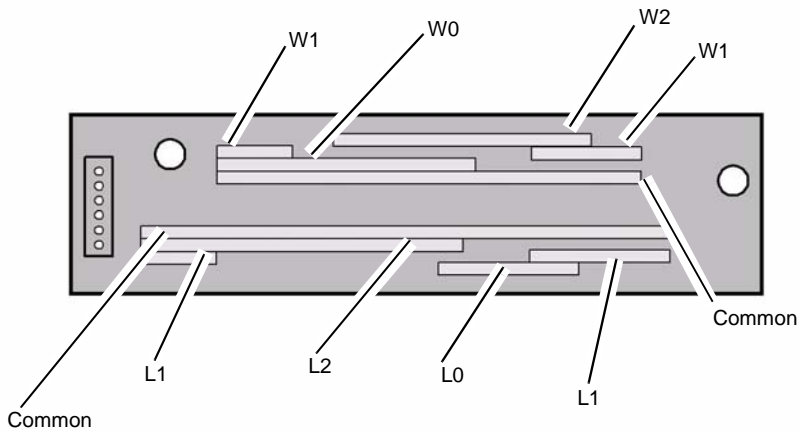


Figure 1 Component location

W-1-0987-A

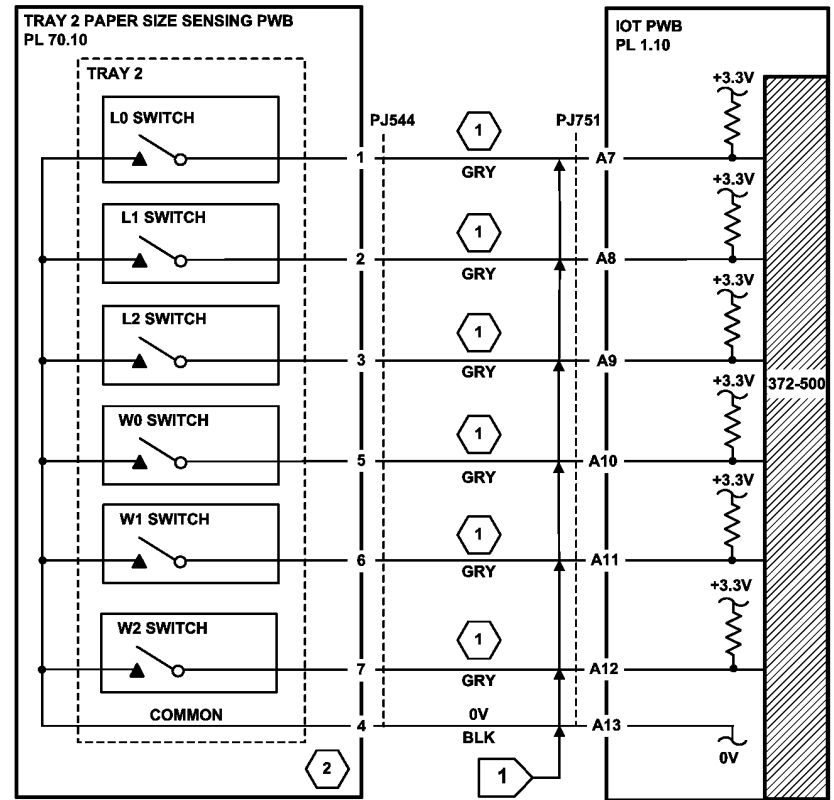


W-1-1077-A

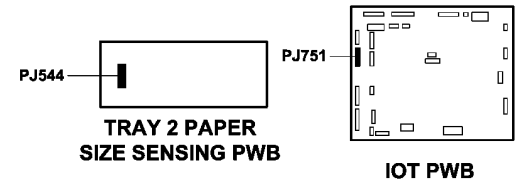
Figure 2 Tray 2 paper size sensing PWB layout

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.



TW-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.

### 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.

A

(**W/O TAG 003 Only**). Disconnect [P/J756](#) on the [IOT PWB](#). Connect a service meter between pin 1 and pin 2 on the wiring side of the connector. **Continuity is measured when the stack limit switch is deactuated and an open circuit is measured when the switch is actuated.**

Y N

Go to [Flag 3](#). Check the tray 3 over elevate switch.

Refer to:

- [GP 13](#) How to Check a Switch.
- [P/J756](#), [IOT PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

If necessary, install a new tray 3 over elevate switch, [PL 80.32 Item 7](#). 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 4](#). 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](#).

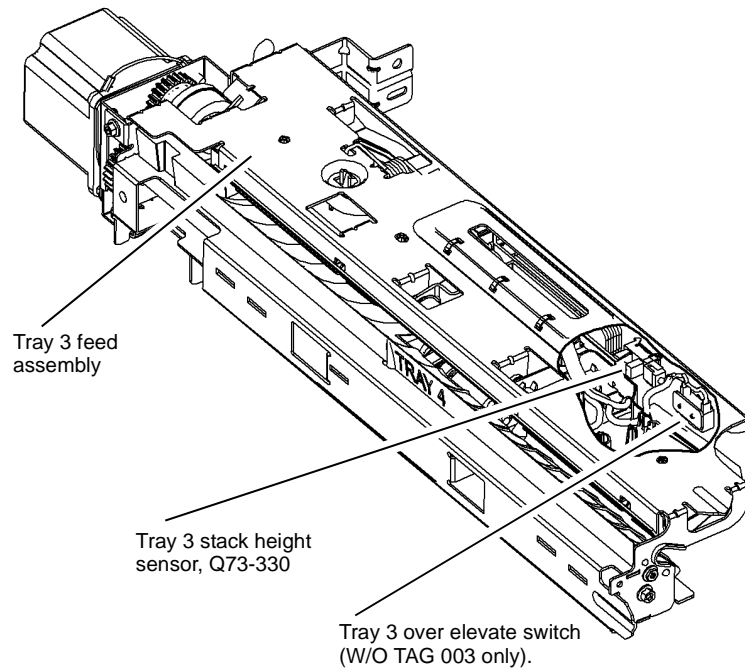
If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

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](#).

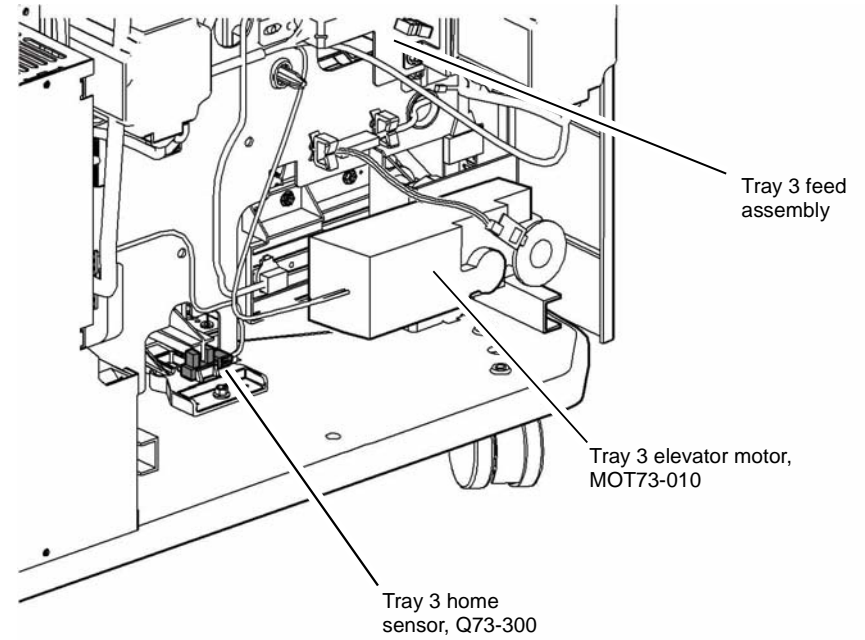
If the fault persists, perform the [373B](#) Tray 3 Out of Paper RAP.

A



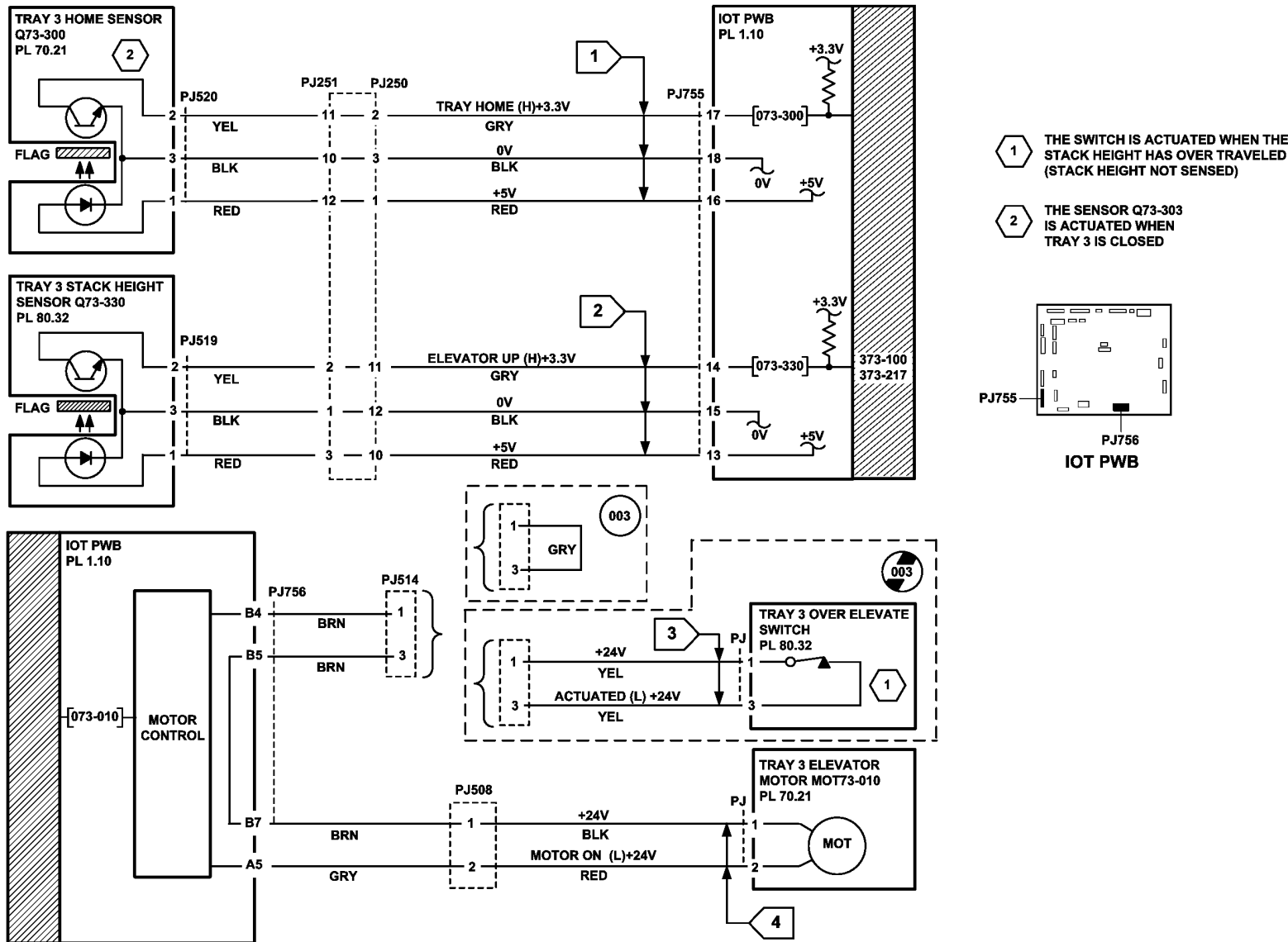
W-1-0967-A

Figure 1 Component location



W-1-0968-A

Figure 2 Component location



1 THE SWITCH IS ACTUATED WHEN THE STACK HEIGHT HAS OVER TRAVELED (STACK HEIGHT NOT SENSED)

2 THE SENSOR Q73-303 IS ACTUATED WHEN TRAY 3 IS CLOSED

PJ755

PJ756

IOT PWB

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.

### 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.

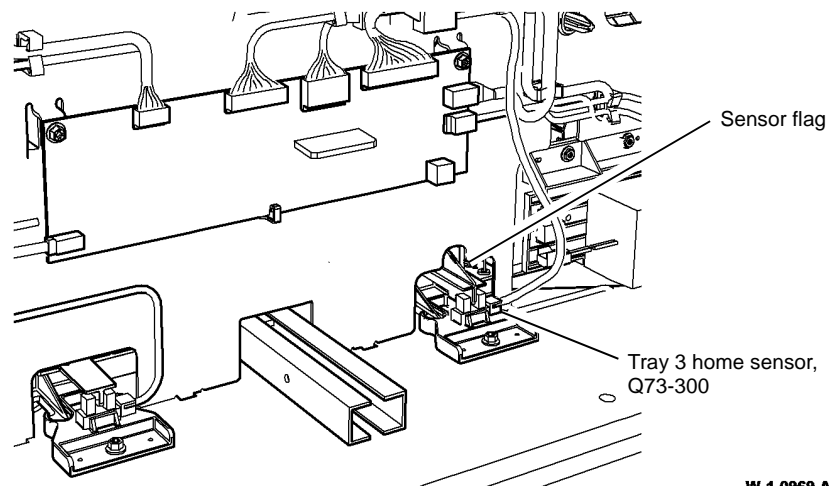
Refer to:

- **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.

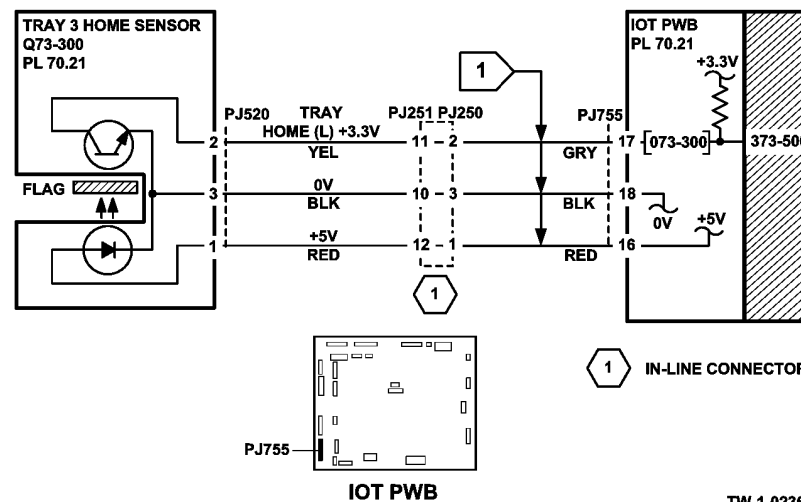
The fault may be intermittent. Perform the steps that follow:

- 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.



W-1-0969-A

Figure 1 Component location



TW-1-0236-A

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 timeout 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 is low on paper' has cleared.**

Y N

Go to Flag 1. Check the tray 3 level encoder, Q73-340.

Refer to:

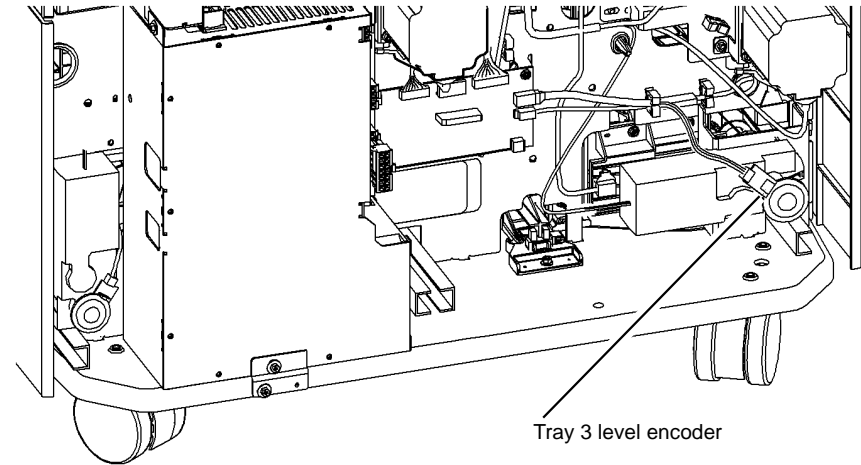
- GP 11 How to Check a Sensor.

**NOTE:** In this check, use a piece of paper to actuate the sensor. The check is difficult due to the problem in moving the timing disc.

- Figure 1.
- P/J755, IOT PWB.
- 301E +5V and +5VSB Distribution RAP.
- 301B 0V Distribution RAP.

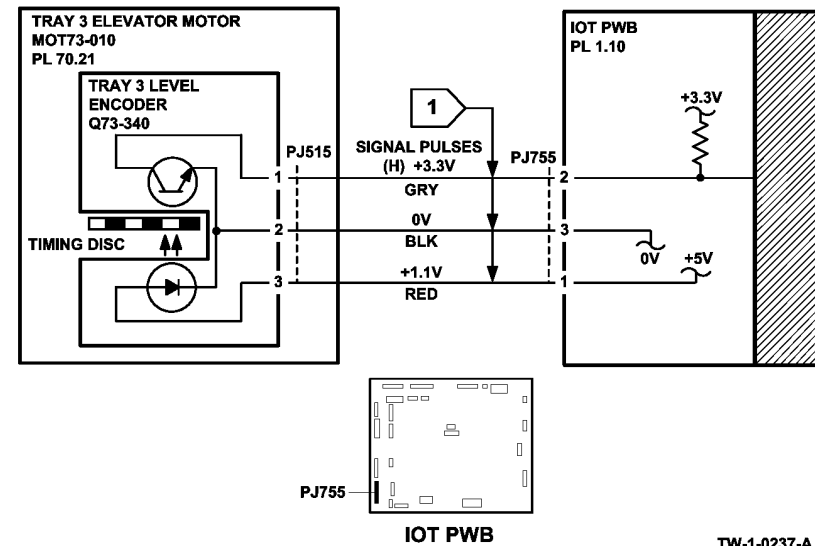
If necessary, install a new tray 3 elevator motor, PL 70.21 Item 1. If the fault persists, perform the OF7 IOT PWB Diagnostics RAP.

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.



W-1-0970-A

Figure 1 Component location



WT-1-0237-A

Figure 2 Circuit diagram



## 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.

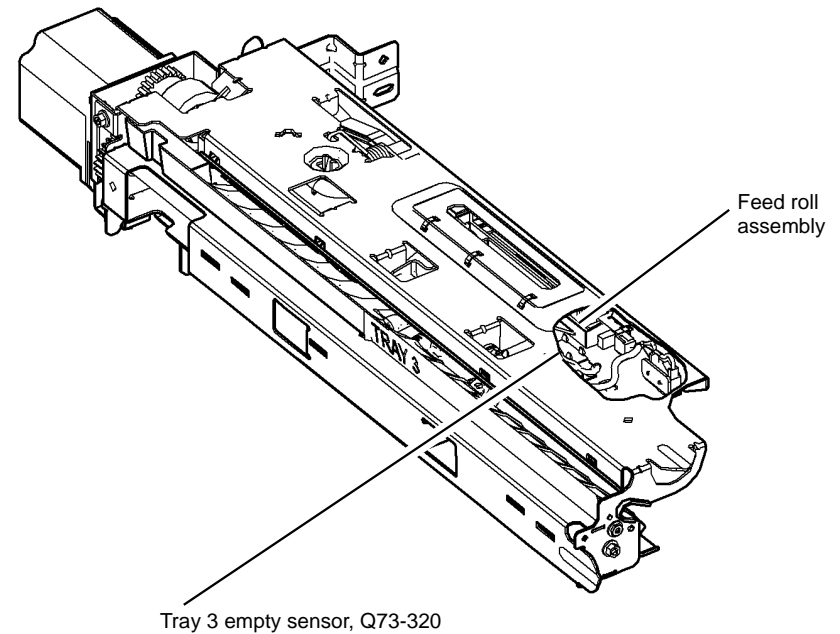
If necessary install a new tray 3 empty sensor, [PL 80.32 Item 3](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

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.



W-1-0971-A

Figure 1 Component location

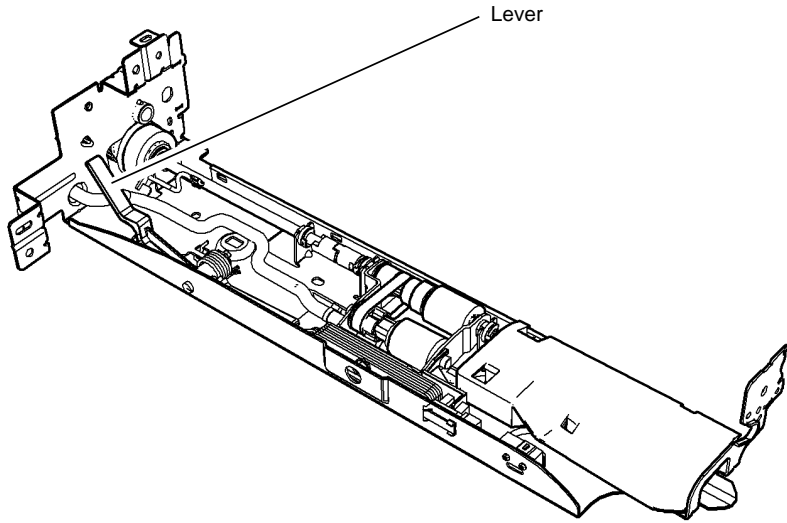


Figure 2 Component location

W-1-1299-A

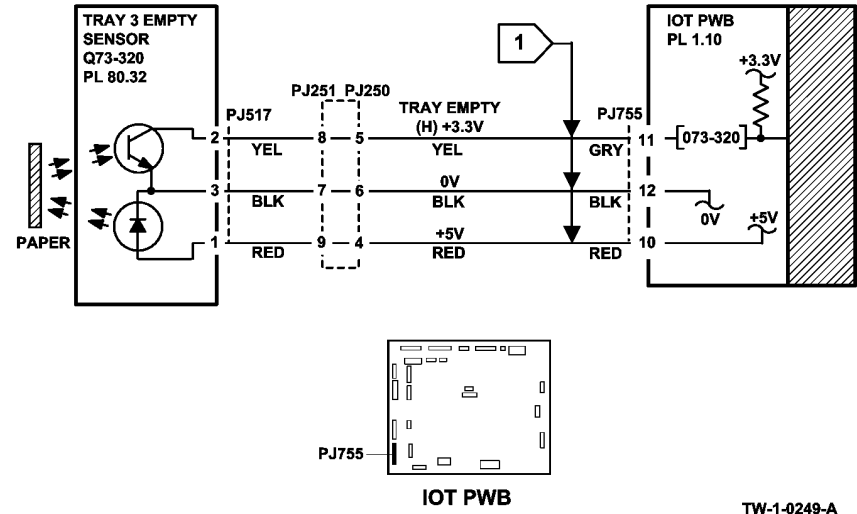


Figure 3 Circuit diagram

TW-1-0249-A

## 374-100-00, 374-217-00 Tray 4 Elevator Lift Failure RAP

**374-100-00** Tray 4 stack height sensor failed to actuate within the correct time after the elevator motor turned on.

**374-217-00** Tray 4 failed to elevate during printing as sheets were fed from the tray.

**NOTE:** Rapid closure of tray 3 when tray 4 is being elevated may cause this fault.

### 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

Failure of the tray 4 feed motor, MOT81-040 can cause damage to the +24V circuit of the tray 4 control PWB. Before installing a new tray 4 control PWB, ensure that the tray 4 feed motor is operational.

Perform the steps that follow:

- Check the tray 4 feed motor, MOT81-040. Refer to the 381-136-00 Tray 4 Misfeed 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.
- GP 30 Tray 4 Control PWB Test Points.
- P/J157, Tray 4 control PWB.
- P/J775, 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.
- Tray 4 control PWB, PL 70.21 Item 2.

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.
- GP 30 Tray 4 Control PWB Test Points.
- P/J157, Tray 4 control PWB.
- P/J775, IOT PWB.
- 301E +5V and +5VSB Distribution RAP.
- 301B 0V Distribution RAP.

Install new components as necessary:

- Tray 4 stack height sensor, PL 80.33 Item 7.
- Tray 4 control PWB, PL 70.21 Item 2.

(W/O TAG 004 Only). Disconnect P/J159 on the Tray 4 control PWB. Connect a service meter between pin 1 and pin 2 on the wiring side of the connector. **Continuity is measured when the stack limit switch is deactuated and open circuit is measured when the switch is actuated.**

Y N

Go to Flag 3. Check the tray 4 over elevate switch.

Refer to:

- GP 13 How to Check a Switch.
- GP 30 Tray 4 Control PWB Test Points.
- P/J159, Tray 4 control PWB.
- 301G +24V Distribution RAP.
- 301B 0V Distribution RAP.

Install new components as necessary:

- Tray 4 over elevate switch, PL 80.33 Item 8.
- Tray 4 control PWB, PL 70.21 Item 2.



#### 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 4. Check the wiring between the LVPS and tray 4 control PWB.

A

B

C

Refer to:

- GP 30 Tray 4 Control PWB Test Points.
- P/J158, Tray 4 control PWB.
- P/J656, LVPS.
- 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/J158 pin 1.**

Y N

If necessary, install a new tray 4 control PWB, PL 70.21 Item 2.  
If the fault persists, perform the 301L LVPS RAP.

Go to Flag 5. Check the wiring between the IOT PWB and tray 4 control PWB.

Refer to:

- GP 30 Tray 4 Control PWB Test Points.
- P/J775, IOT PWB.
- P/J155, Tray 4 control PWB.
- 301E +5V and +5VSB Distribution RAP.
- 301B 0V Distribution RAP.

**The wiring is good.**

Y N

Repair the wiring, REP 1.2.

**+5V is present at P/J155 pin 11.**

Y N

Perform OF7 IOT PWB Diagnostics RAP.

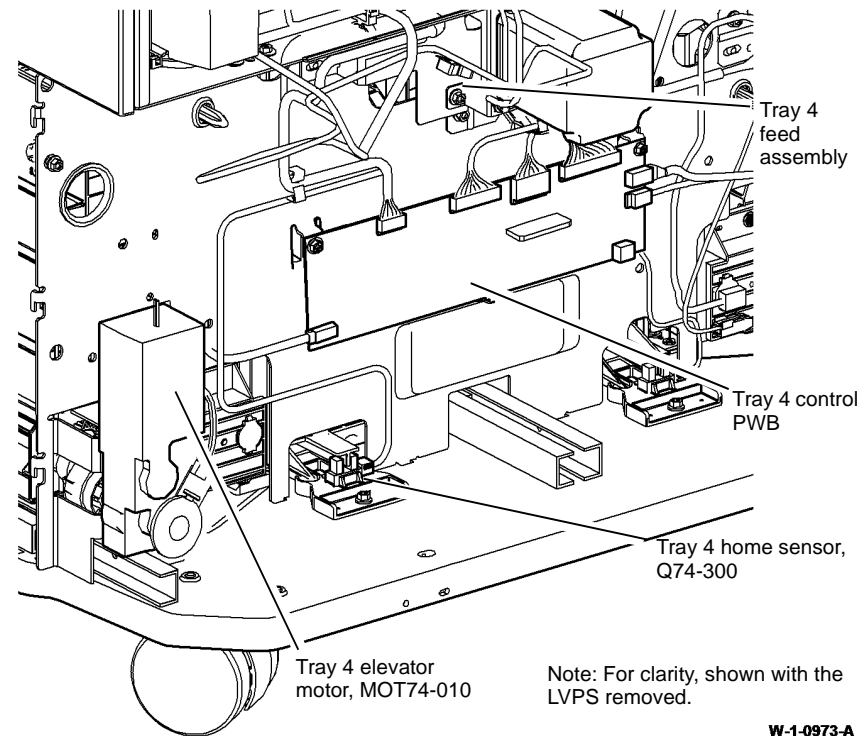
Install a new tray 4 control PWB, PL 70.21 Item 2.

Install a new tray 4 elevator motor, PL 70.21 Item 1.

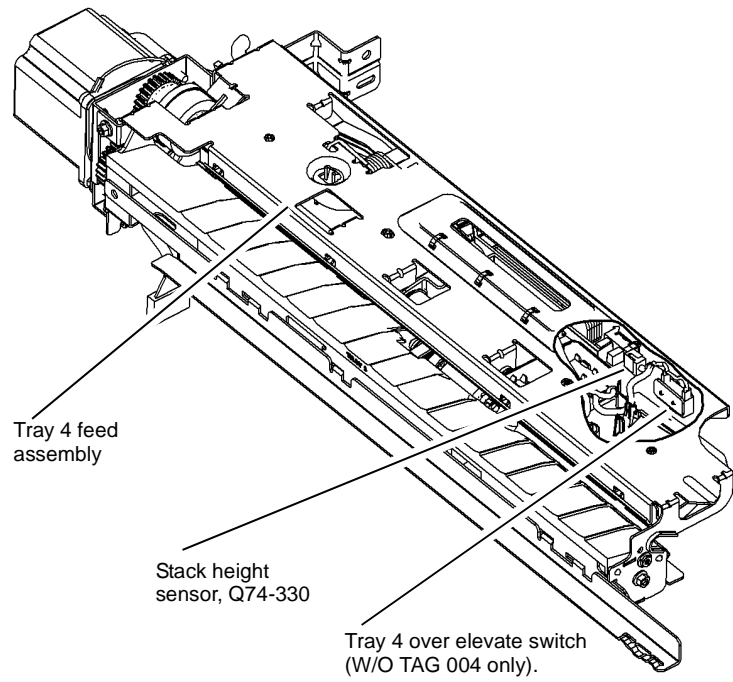
Check the components that follow:

- 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.



**Figure 1 Component location**



W-1-0972-A

**Figure 2 Component location**

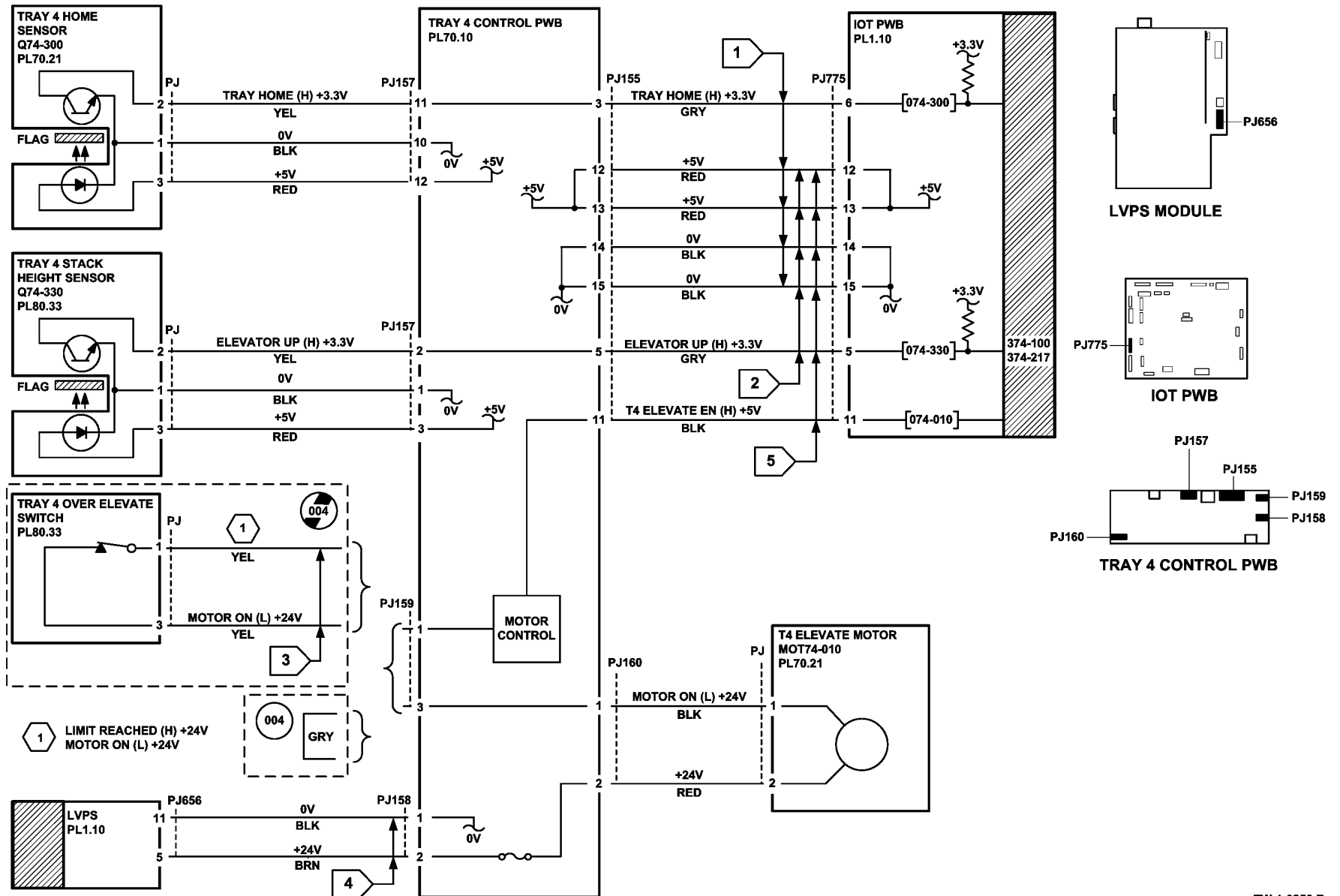


Figure 3 Circuit diagram

## 374-500-00 Tray 4 Open During Run RAP

374-500-00 Tray 4 was opened during run when sheets were fed from the tray.

### 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 70.14](#) 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:

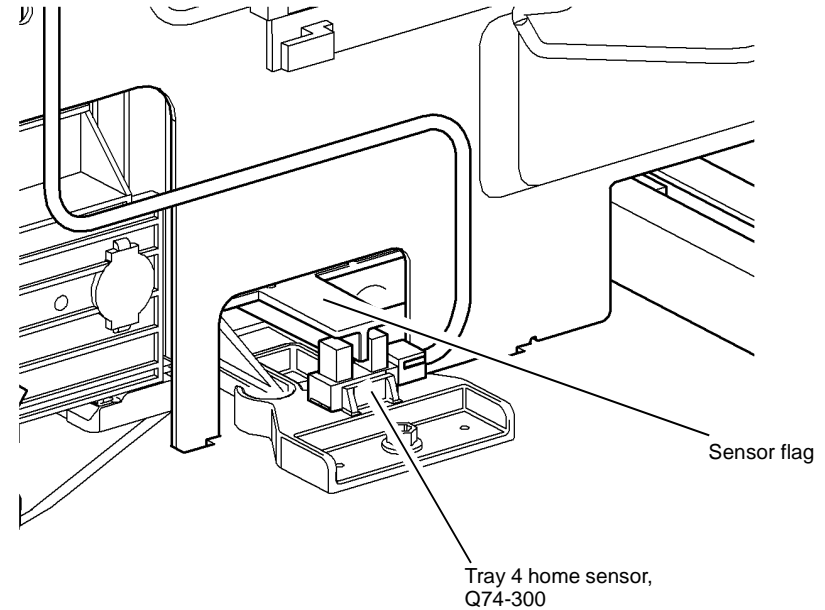
- [GP 11](#) How to Check a Sensor.
- [GP 30](#) Tray 4 Control PWB Test Points.
- [P/J155](#), [Tray 4 control PWB](#).
- [P/J775](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 4 home sensor, [PL 70.21](#) [Item 4](#).
- Tray 4 control PWB, [PL 70.21](#) [Item 2](#).

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](#).
- Install a new tray 4 control PWB, [PL 70.21](#) [Item 2](#).
- [OF7](#) IOT PWB Diagnostics RAP.



W-1-0974-A

Figure 1 Component location

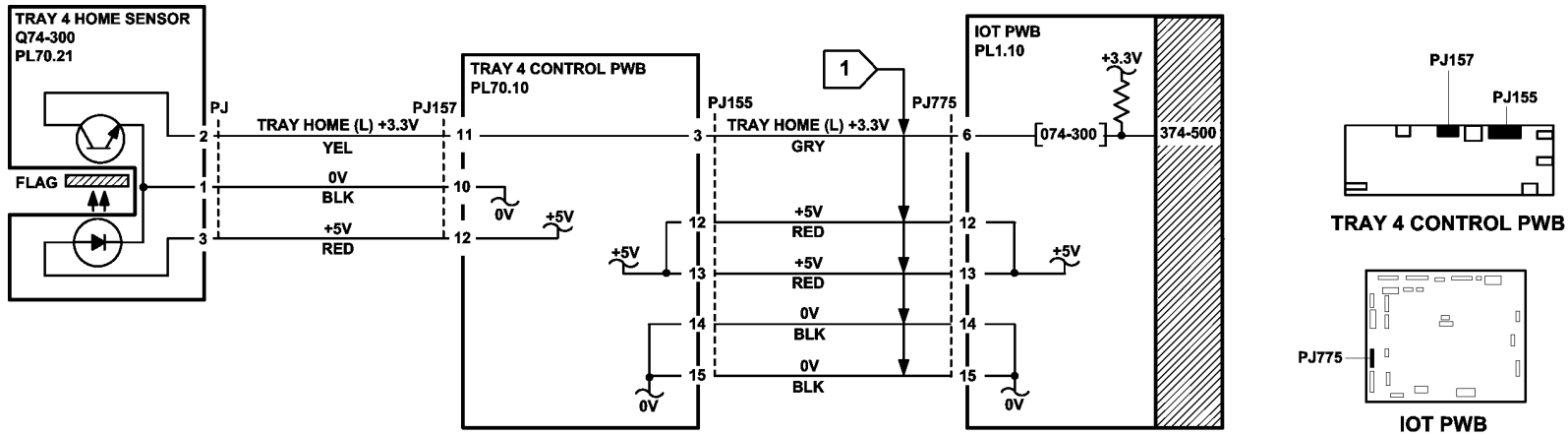


Figure 2 Circuit diagram

TW-1-0258-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 timeout 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 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 is low on paper' has cleared.**

Y N  
Go to Flag 1. Check the tray 4 level encoder, Q74-340.  
Refer to:

- GP 11 How to Check a Sensor.

**NOTE:** In this check, use a piece of paper to actuate the sensor. The check is difficult due to the problem in moving the timing disc.

- GP 30 Tray 4 Control PWB Test Points.
- Figure 1.
- P/J156, Tray 4 control PWB.
- P/J775, IOT PWB.
- 301E +5V and +5VSB Distribution RAP.
- 301B 0V Distribution RAP.

Install new components as necessary.

- Tray 4 elevator motor, PL 70.21 Item 1.
- Tray 4 control PWB, PL 70.21 Item 2.

If necessary, 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.

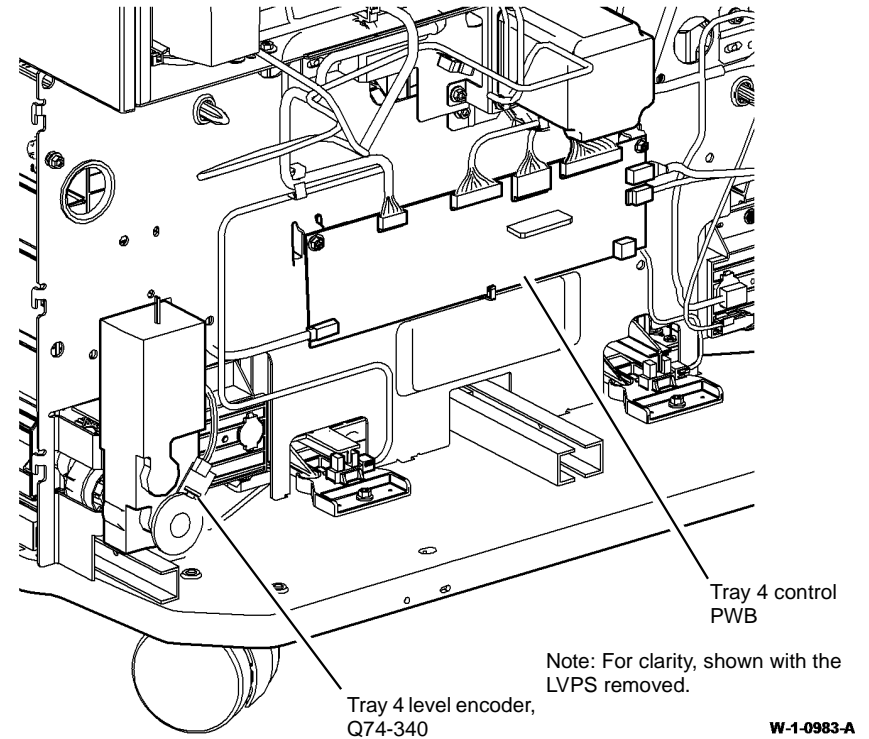
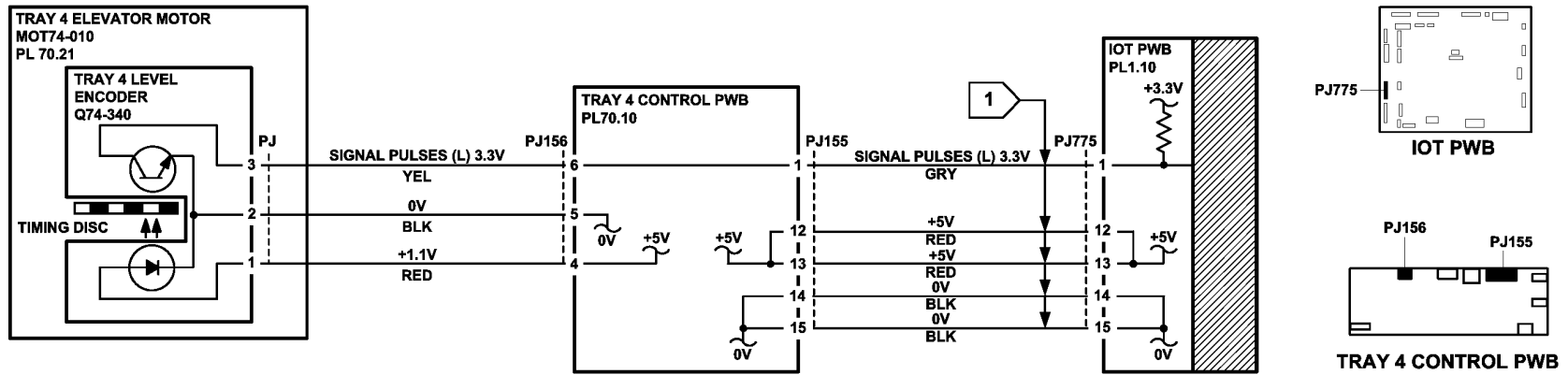


Figure 1 Component location



TW-1-0259-A

Figure 2 Circuit Diagram

## 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.
- [GP 30](#) Tray 4 Control PWB Test Points.
- [P/J157](#), [Tray 4 control PWB](#).
- [P/J775](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

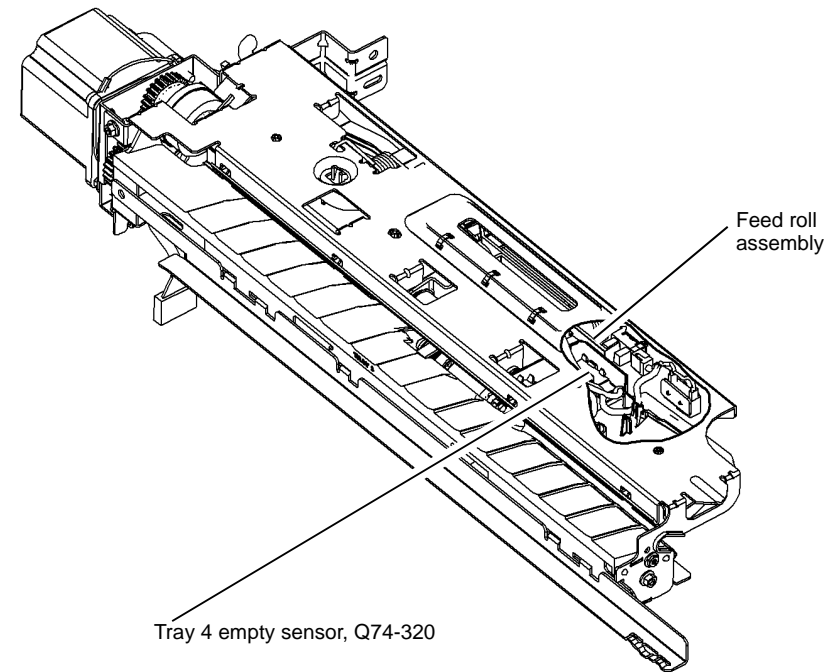
- Tray 4 empty sensor, [PL 80.33 Item 6](#).
- Tray 4 Control PWB, [PL 70.21 Item 2](#).

Remove the tray 4 front cover, refer to [REP 70.14](#) Tray 4 Removal. Close tray 4. **The feed roll assembly drops when tray 4 is closed.**

Y N

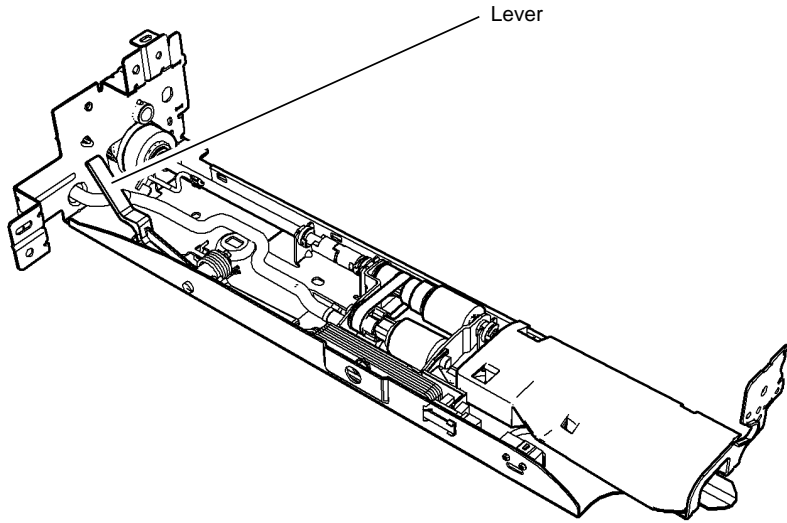
Remove the tray 4 paper feed assembly, [REP 80.21](#). Ensure the lever is undamaged and operates correctly, [Figure 2](#). If necessary, install a new tray 4 paper feed assembly, [PL 80.33 Item 1](#).

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.



W-1-0984-A

Figure 1 Component location



W-1-1300-A

Figure 2 Component location

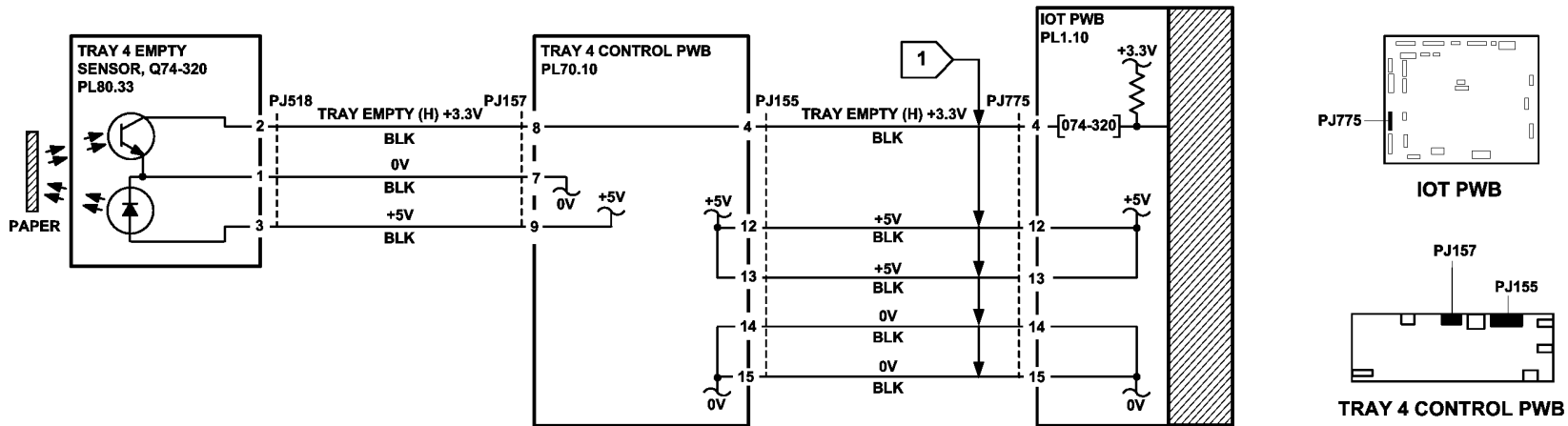


Figure 3 Circuit diagram

TW-1-0260-A

## 375-100-00 Bypass Tray Lift Failure RAP

375-100-00 The bypass tray elevate sensor failed to actuate within the correct time.

### 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 obstructions or debris in the bypass tray.

### Procedure

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.

A

A

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](#).

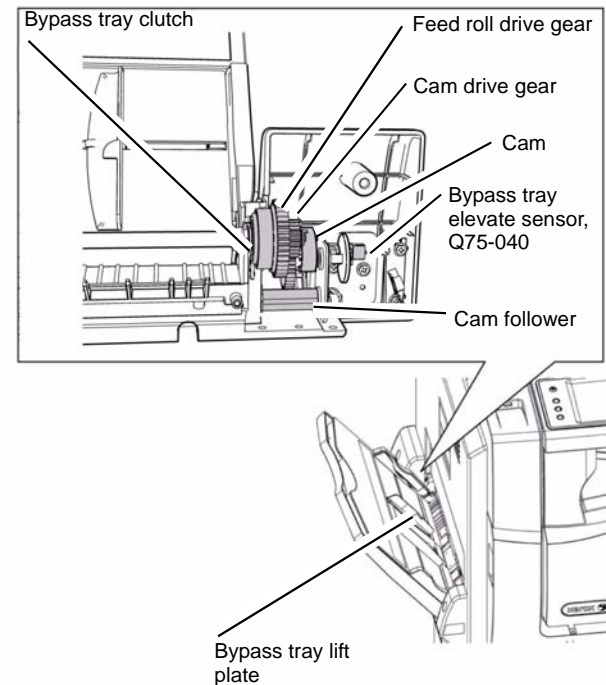
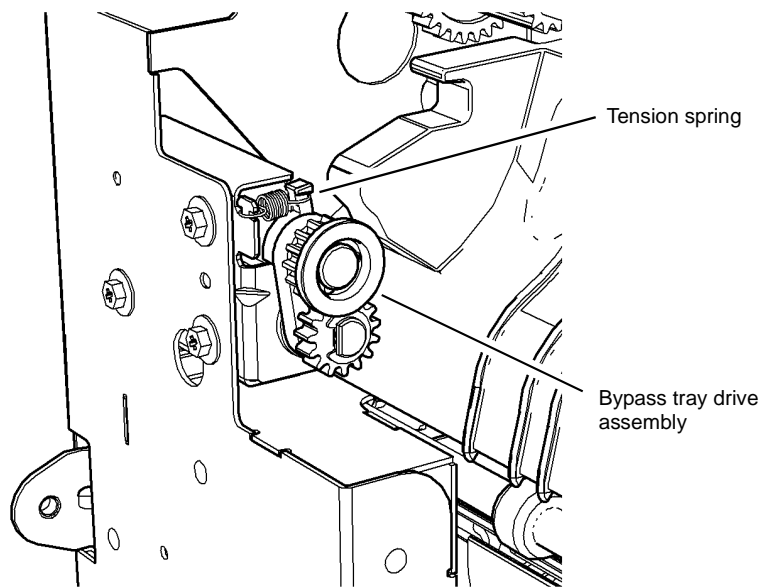


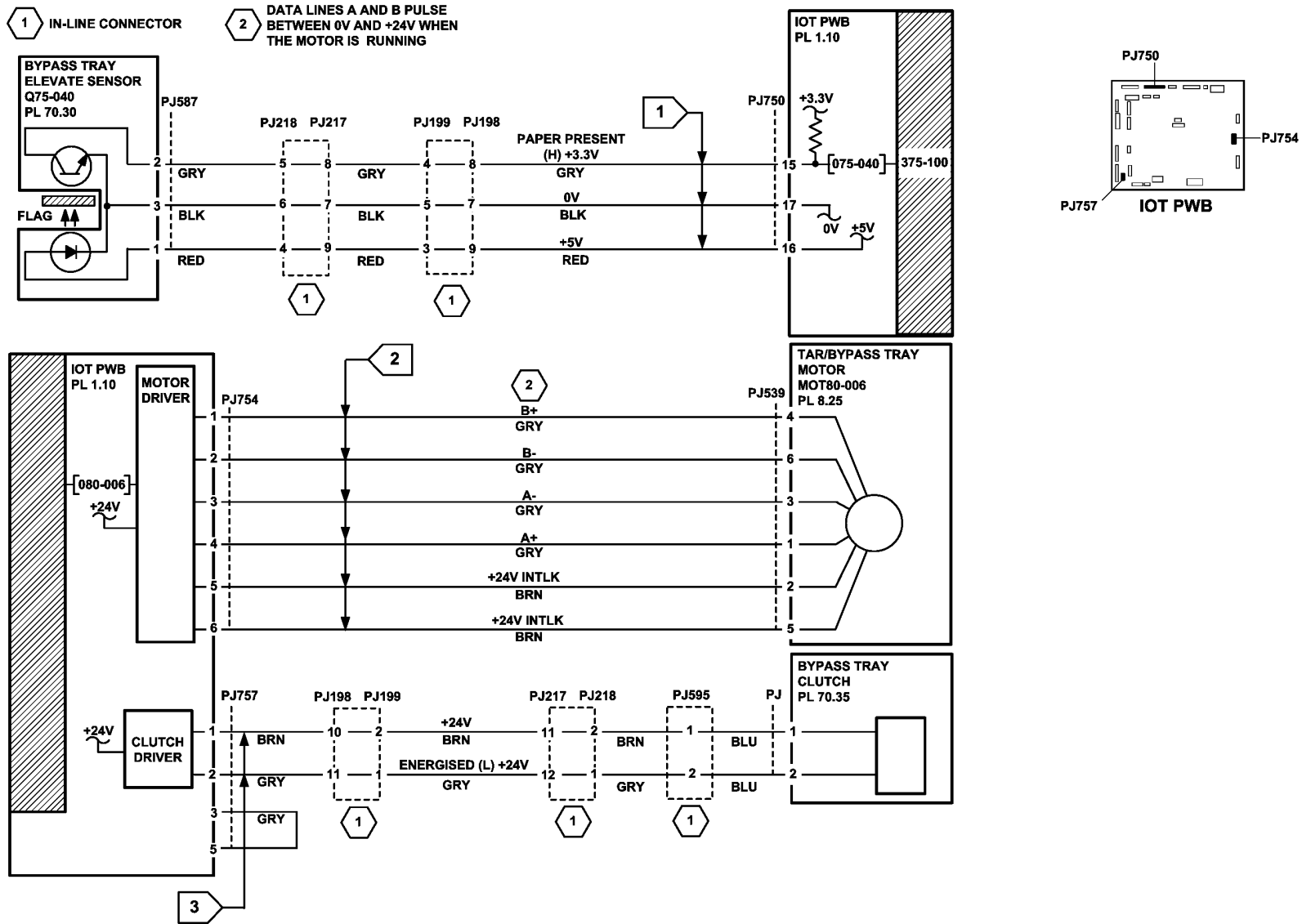
Figure 1 Component location

W-1-1249-A



W-1-1250-A

Figure 2 Component location



TW-1-0306-A

Figure 3 Circuit diagram



## 375A Bypass Tray RAP

Use this RAP to identify and correct problems when using the bypass tray.

### 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 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 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.

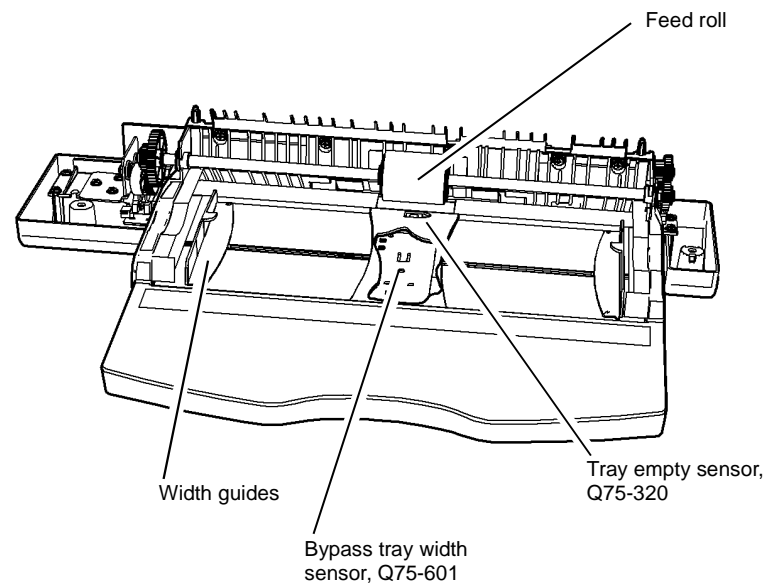
**Y N**  
Go to [Flag 1](#). Check Q75-601.  
Refer to:

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

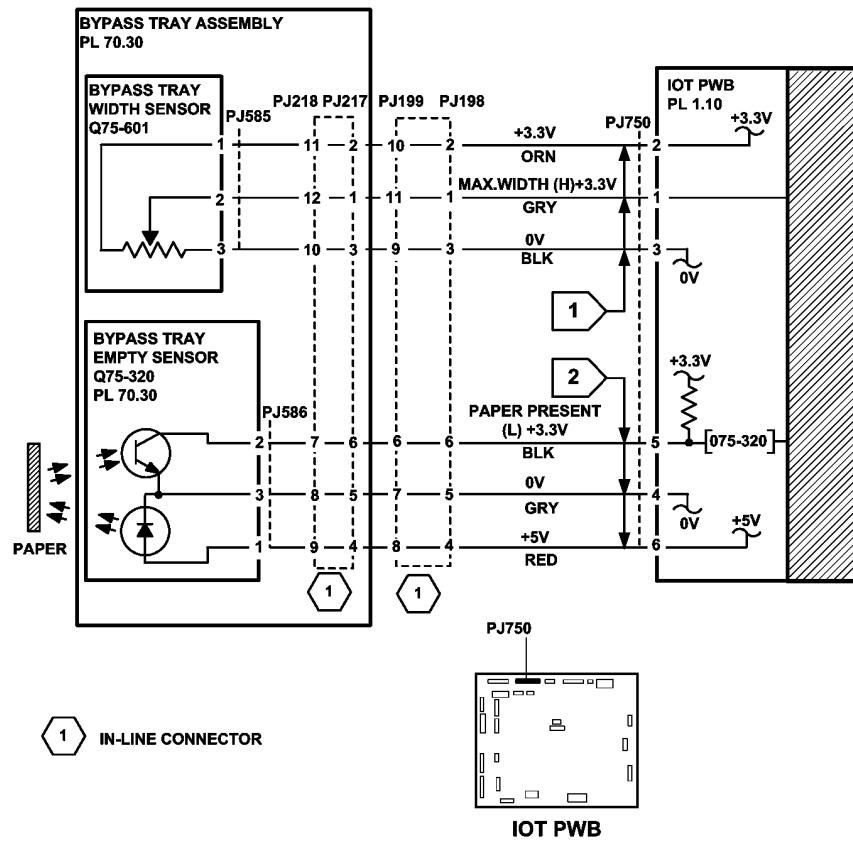
- Ensure that the customer is not filling the tray above the max fill line.
- For feeding problems from the bypass tray, perform the [381-155-00 Lead Edge Late to Registration Sensor from Bypass Tray RAP](#).



W-1-0985-A

Figure 1 Component location

A



TW-1-0248-A

Figure 2 Circuit diagram

## 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.

### 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 paper in tray 1. Refer to [IQ1](#) and [GP 20](#).
- Check that the paper guides are set correctly.
- Observe the feeder and check for obstructions.
- Turn and change the paper in the tray.
- 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.

Observe the nudger roll, [PL 80.26](#) [Item 5](#). **The nudger roll rotates.**

A

Y N

Check the nudger roll drive belt and drive coupling for damage. If necessary, install new components, [PL 80.26](#).

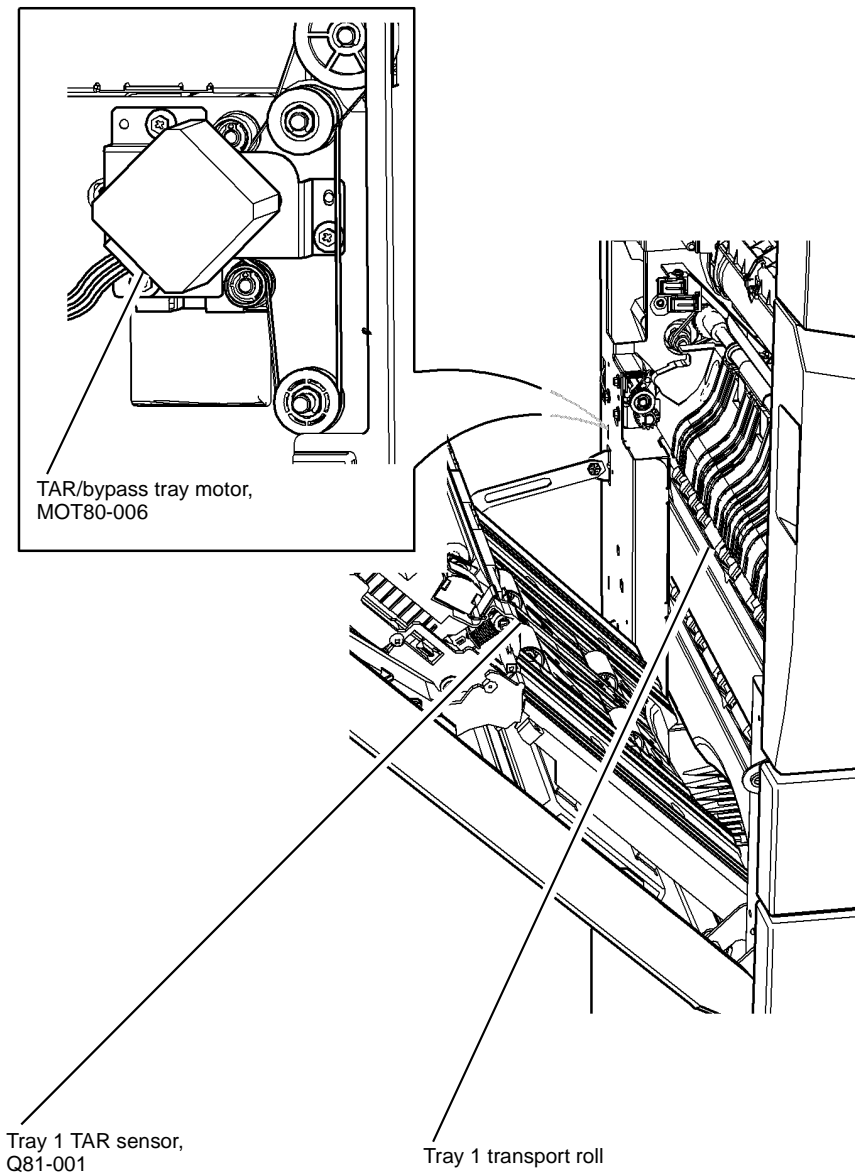
Remove the paper tray. Manually actuate the retard nip split mechanism. **The retard roll moves against the feed roll.**

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](#).



W-1-0155-A

Figure 1 Component location

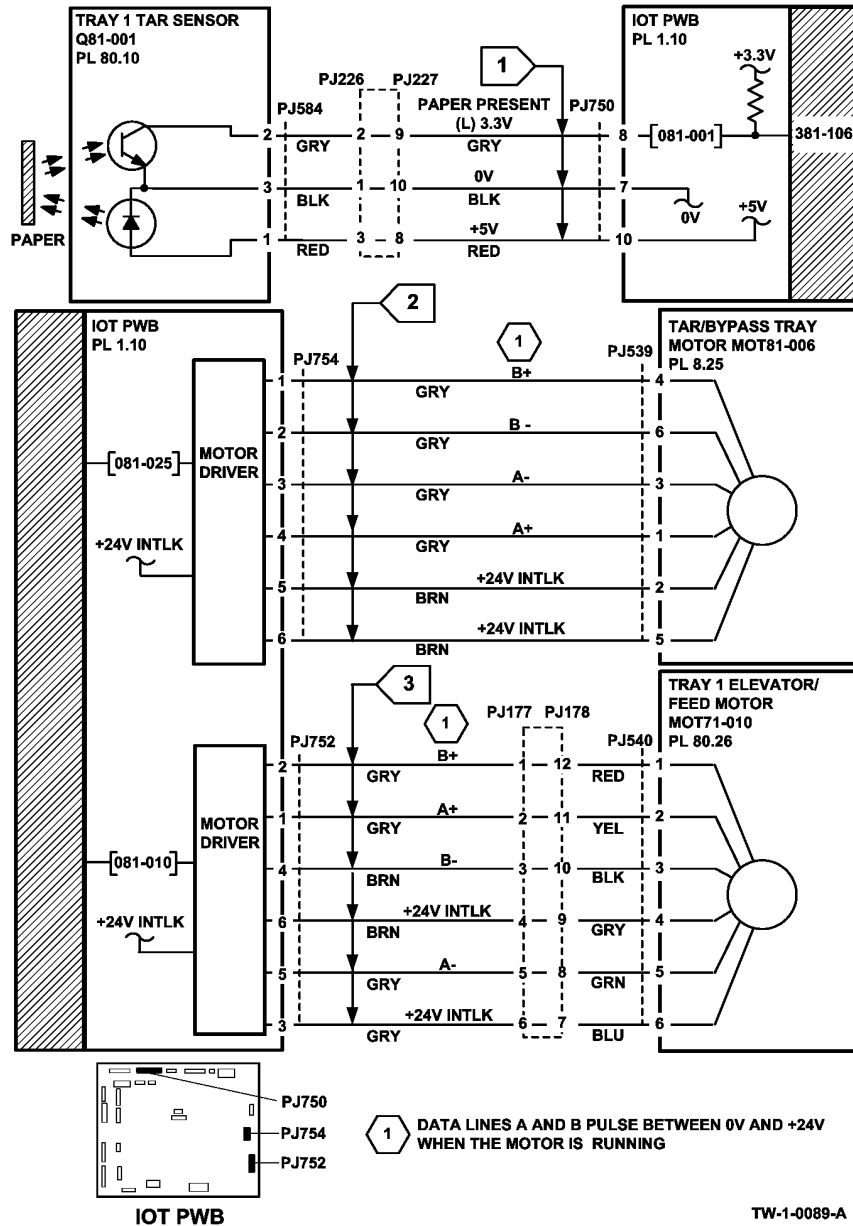


Figure 2 Circuit diagram

## 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.

### 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 condition of the paper in tray 2. Refer to **IQ1** and **GP 20**.
- Check that the paper guides are set correctly.
- Observe the feeder and check for obstructions.
- Turn and change the paper in the tray.
- 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.
- **P/J754**, **IOT PWB**.
- **301G** +24V Distribution RAP.

A

- 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](#).

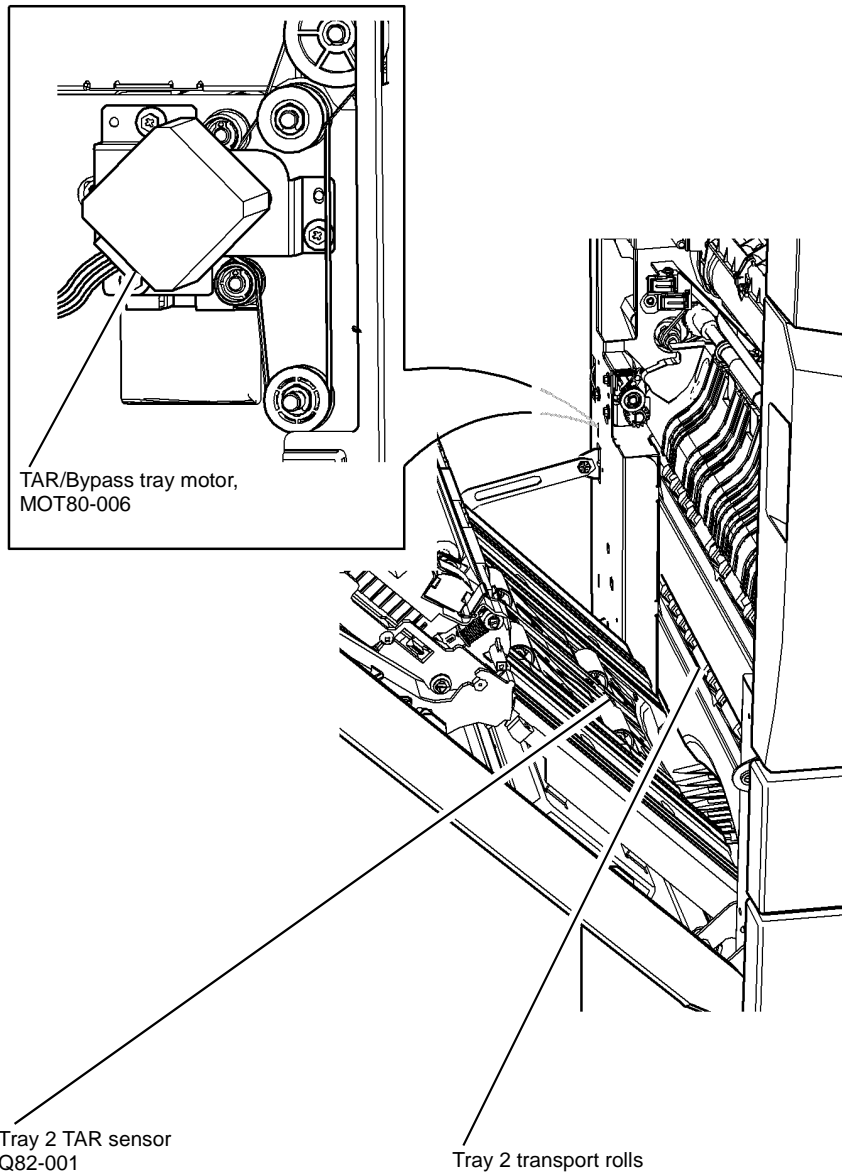


Figure 1 Component location

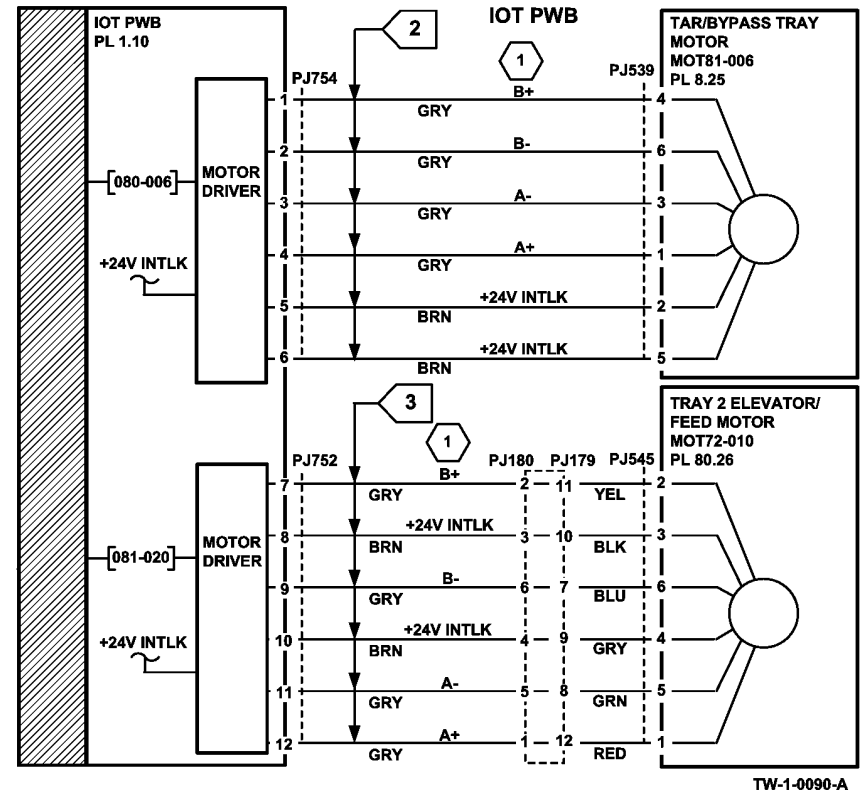
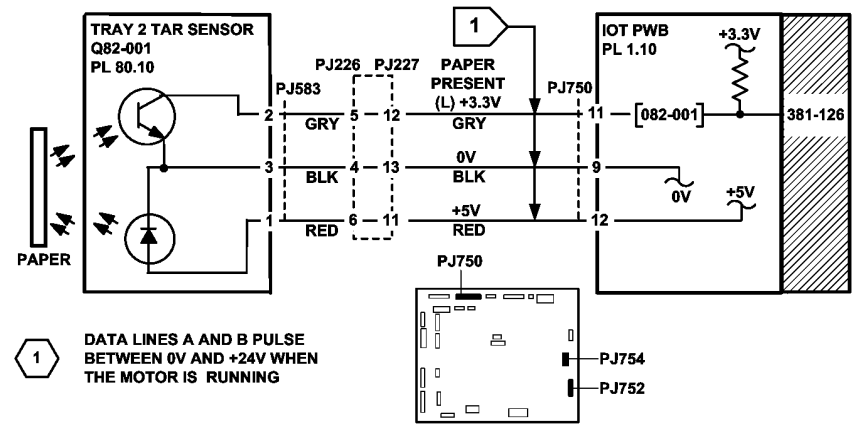


Figure 2 Circuit diagram

## 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.

### 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 condition of the paper in tray 3. Refer to [IQ1](#) and [GP 20](#).
- Ensure that the tray is pushed fully home.
- Check that the left door is latched correctly.
- 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.

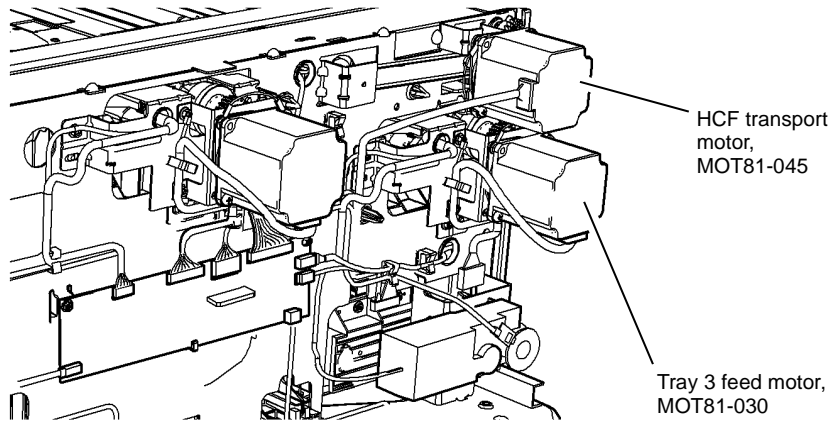
If necessary, install a new tray 3 paper feed assembly, [PL 80.32](#) [Item 1](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

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.
  - [ADJ 80.1](#) Tray 3 and Tray 4 Nudger Roll Pressure.

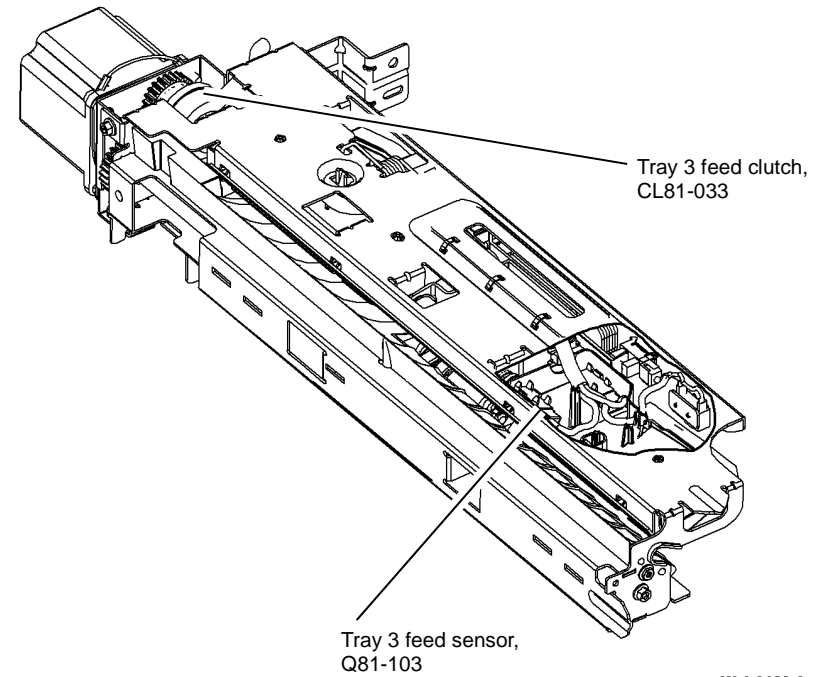


- Check the tray 3 stack height sensor actuator on the feed assembly, [PL 80.32 Item 6](#).
- Check the tray is level.
  1. Pull out tray 3 and remove all of the paper from the tray.
  2. Remove the tray 3 front cover.
  3. Manually elevate the tray to the top of its travel by rotating the elevator cable 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](#).



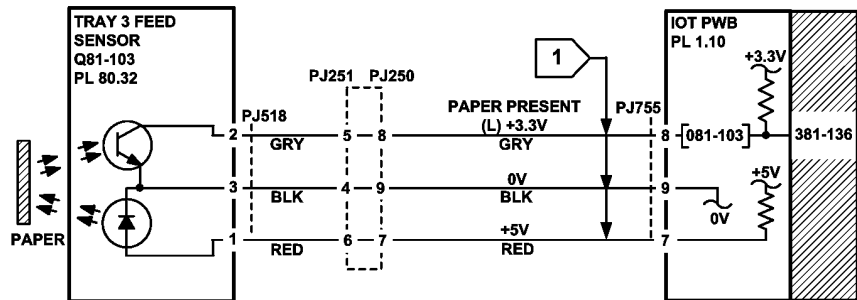
**Figure 1 Component location**

W-1-0159-A



**Figure 2 Component location**

W-1-0160-A



1 DATA LINES A AND B PULSE BETWEEN 0V AND +24V WHEN THE MOTOR IS RUNNING

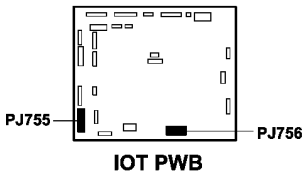
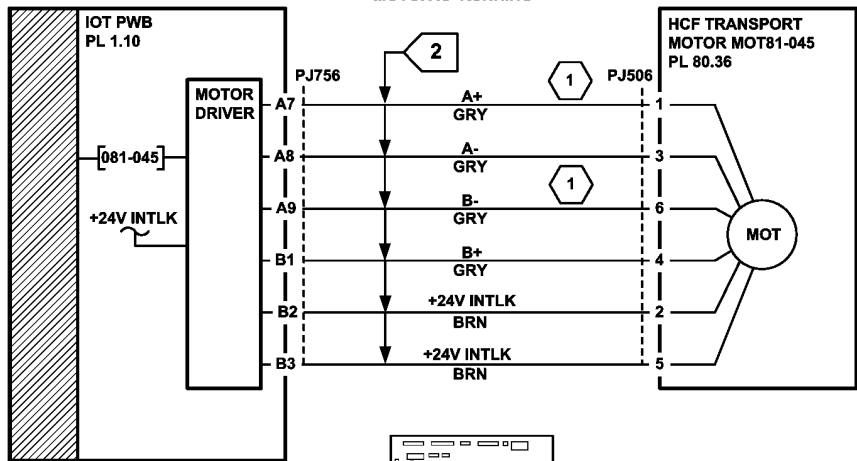
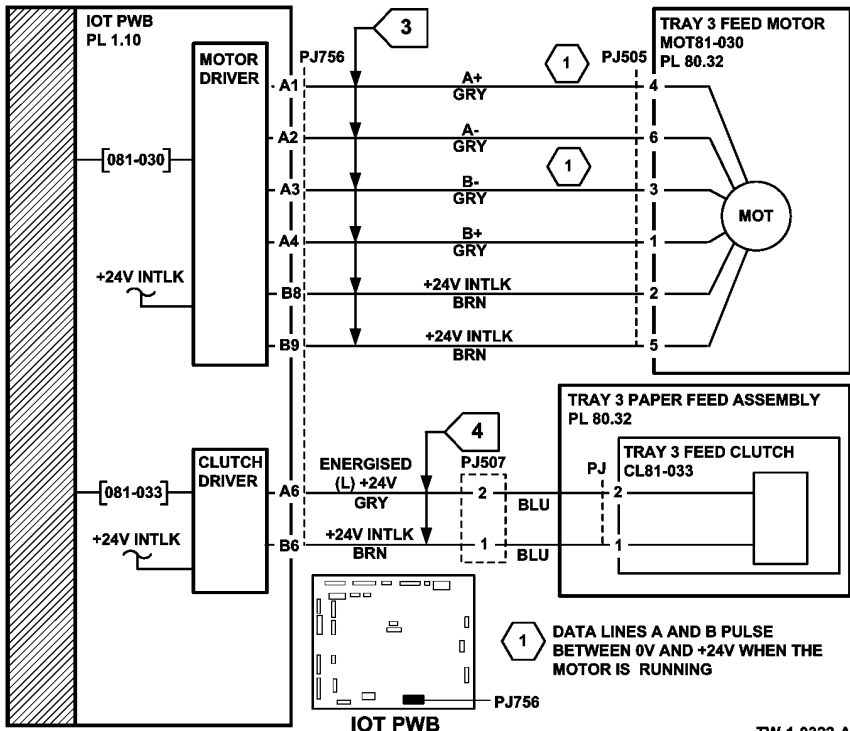


Figure 3 Circuit diagram

TW-1-0092-A



1 DATA LINES A AND B PULSE BETWEEN 0V AND +24V WHEN THE MOTOR IS RUNNING

Figure 4 Circuit diagram

TW-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.

### 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.
- Check the condition of the paper in tray 4. Refer to [IQ1](#) and [GP 20](#).
- Ensure that the tray is pushed fully home.

### 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.
- [GP 30](#) Tray 4 Control PWB Test Points.
- [P/J157](#), [Tray 4 control PWB](#).
- [P/J775](#), [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  
Go to [Flag 2](#). Check the wiring between the [Tray 4 control PWB](#) and [IOT PWB](#).

Refer to:

- [GP 30](#) Tray 4 Control PWB Test Points.
- [P/J155](#), [Tray 4 control PWB](#).
- [P/J775](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

**The wiring is good.**

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

A B C  
+5V is present at [P/J155](#) pin 3.  
Y N  
Perform [OF7](#) IOT PWB Diagnostics RAP.  
Install a new tray 4 control PWB, [PL 70.21](#) Item 2.



#### 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 6](#). Check MOT81-040.

Refer to:

- [GP 10](#) How to Check a Motor.
- [GP 30](#) Tray 4 Control PWB Test Points.
- [P/J162](#), [Tray 4 control 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  
Go to [Flag 3](#). Check the wiring between the [Tray 4 control PWB](#) and [IOT PWB](#).

Refer to:

- [GP 30](#) Tray 4 Control PWB Test Points.
- [P/J155](#), [Tray 4 control PWB](#).
- [P/J775](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

**The wiring is good.**

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

**+5V is present at [P/J155](#) pin 10.**

Y N  
Perform [OF7](#) IOT PWB Diagnostics RAP.

Install a new tray 4 control PWB, [PL 70.21](#) Item 2. **The motor runs.**

Y N  
Go to [Flag 5](#). Check the wiring between the [LVPS](#) and [Tray 4 control PWB](#).

Refer to:

- [GP 30](#) Tray 4 Control PWB Test Points.
- [P/J158](#), [Tray 4 control PWB](#).
- [P/J656](#), [LVPS](#)
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

A B C

D E F

D E F

The wiring is good.

Y N  
Repair the wiring, REP 1.2.

+24V is present at P/J158 pin 2.

Y N  
Perform the 301L LVPS RAP.

Install a new tray 4 control PWB, PL 70.21 Item 2.

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 4. Check CL81-043.  
Refer to:

- GP 12 How to Check a Solenoid or Clutch.
- GP 30 Tray 4 Control PWB Test Points.
- P/J162, Tray 4 control PWB.
- 301G +24V Distribution RAP.
- 301B 0V Distribution RAP.

Install new components as necessary:

- Tray 4 paper feed assembly, PL 80.33 Item 1.

Go to Flag 3. Check the wiring between the Tray 4 control PWB and IOT PWB.

Refer to:

- GP 30 Tray 4 Control PWB Test Points.
- P/J155, Tray 4 control PWB.
- P/J775, IOT PWB.
- 301E +5V and +5VSB Distribution RAP.
- 301B 0V Distribution RAP.

The wiring is good.

Y N  
Repair the wiring, REP 1.2.

+5V is present at P/J155 pin 10.

Y N  
Perform OF7 IOT PWB Diagnostics RAP.

Install a new tray 4 control PWB, PL 70.21 Item 2.

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.
  - ADJ 80.1 Tray 3 and Tray 4 Nudger Roll Pressure.
- 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.

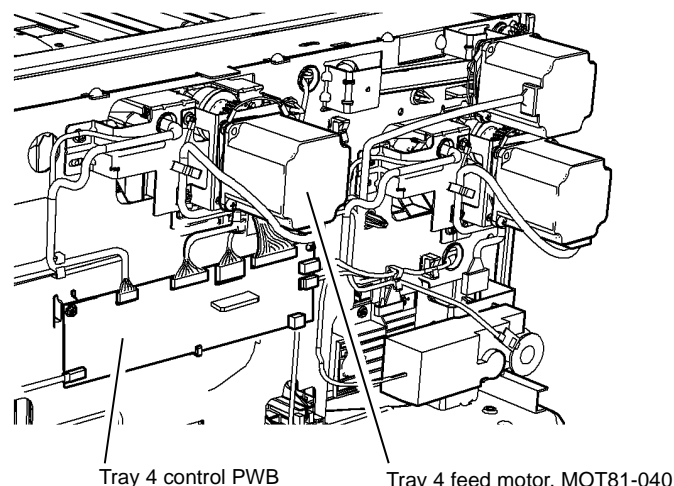
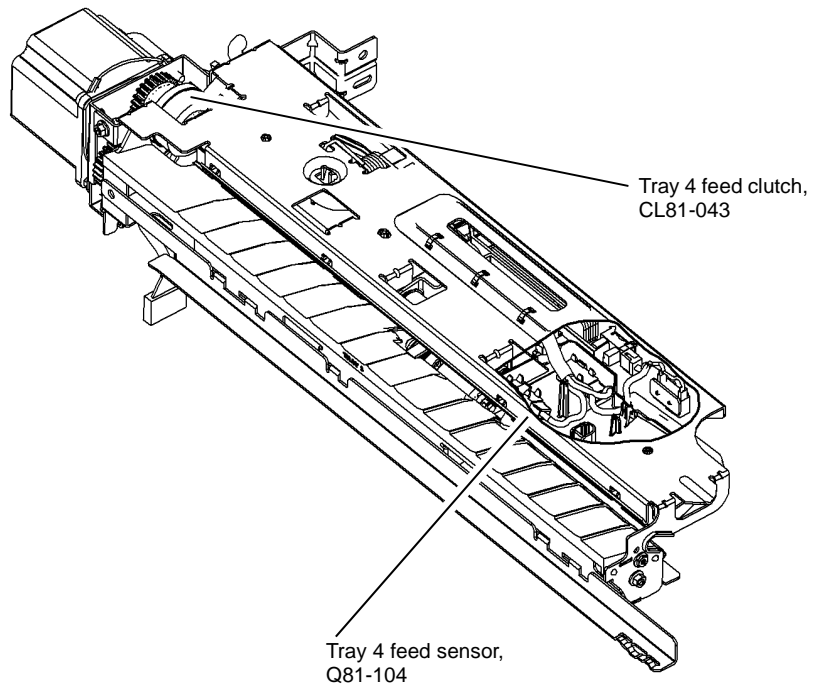


Figure 1 Component location

W-1-0157-A



W-1-0158-A

Figure 2 Component location

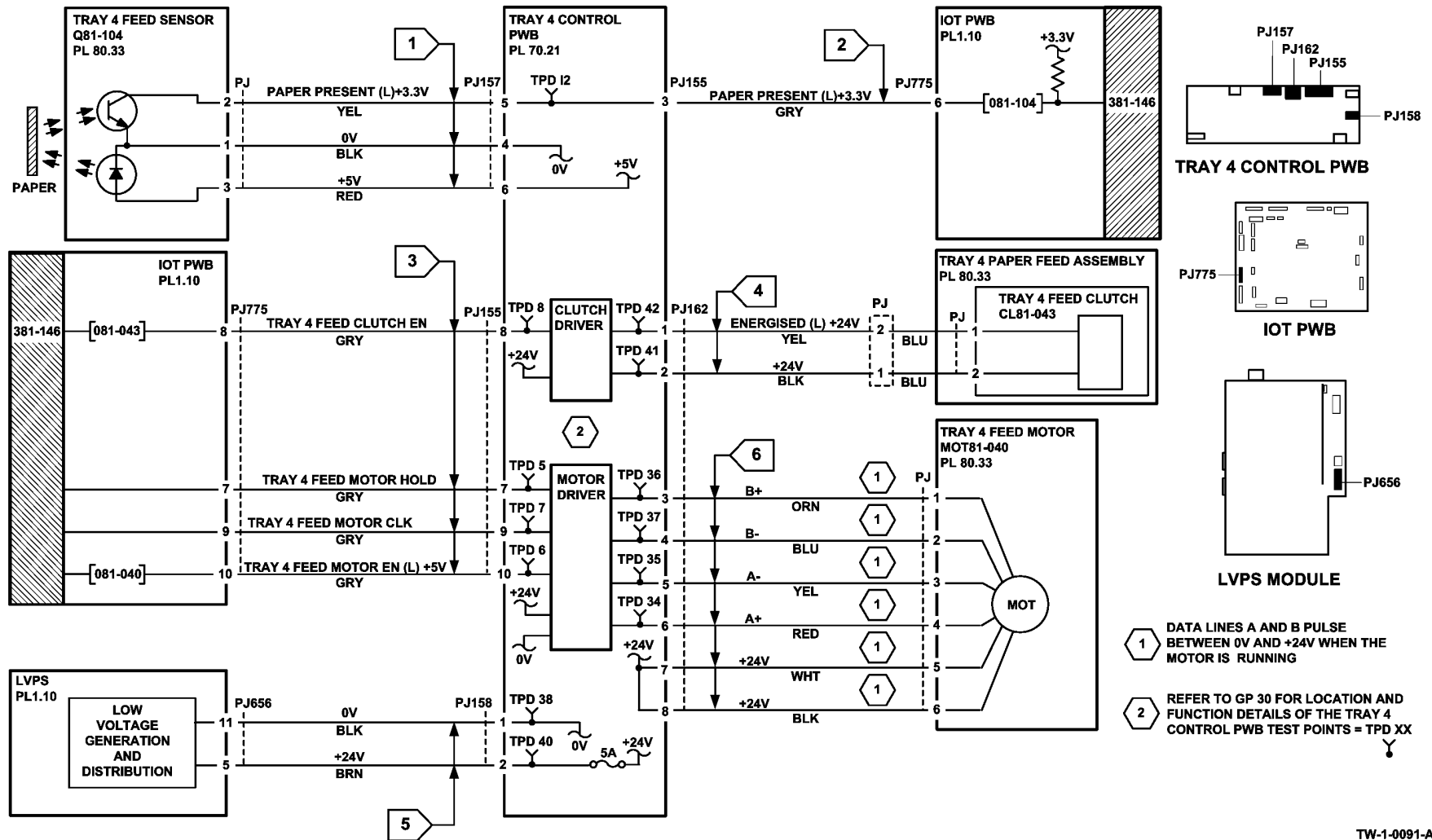


Figure 3 Circuit diagram

TW-1-0091-A

## 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.

### 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 Late to Registration Sensor from Bypass Tray RAP.
- If 2 sheets of paper are jammed at the registration rolls. Perform the OF8 Multifeed RAP.
- If multifeads 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 multifeads. Perform ADJ 80.3.
- Check the condition of the paper in all trays. Refer to IQ1 and GP 20.
- 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 left door is latched correctly.
- 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.

### 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:

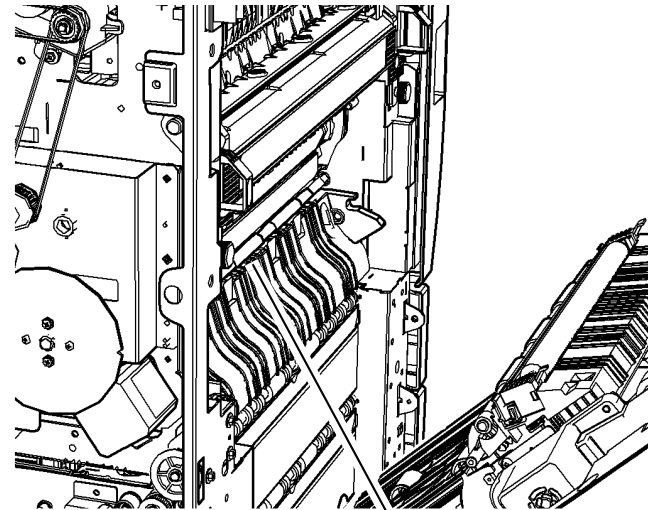
- GP 11 How to check a Sensor.
- P/J763, IOT PWB.
- 301E +5V and +5VSB Distribution RAP.
- 301B 0V Distribution RAP.

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.



Registration sensor, Q82-150

Figure 1 Component location

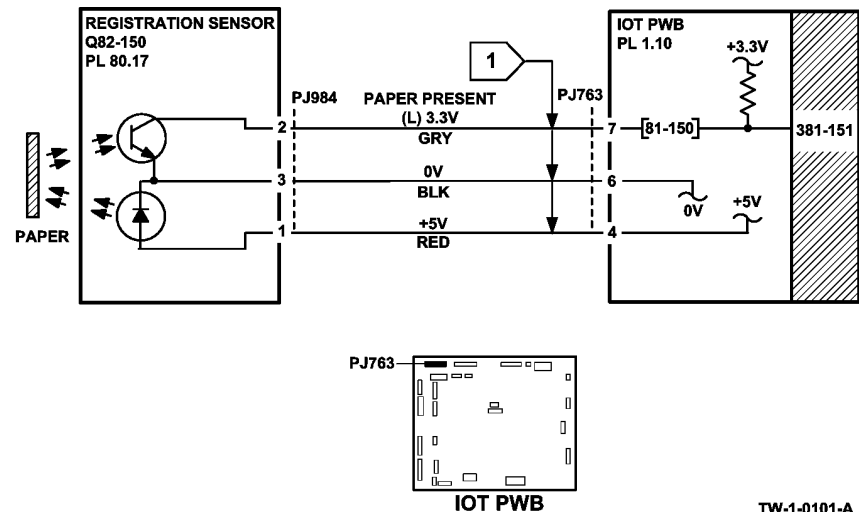


Figure 2 Circuit diagram

TW-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.

### 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 multifeeds 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 multifeeds. Perform **ADJ 80.3**.
- If the fault occurs from the bypass tray, perform the **381-155-00** Late to Registration Sensor from Bypass Tray RAP.
- Check the condition of the paper in all trays. Refer to **IQ1** and **GP 20**.
- 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 left door is latched correctly.
- 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.

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 **381A** Paper Feed Retries RAP.



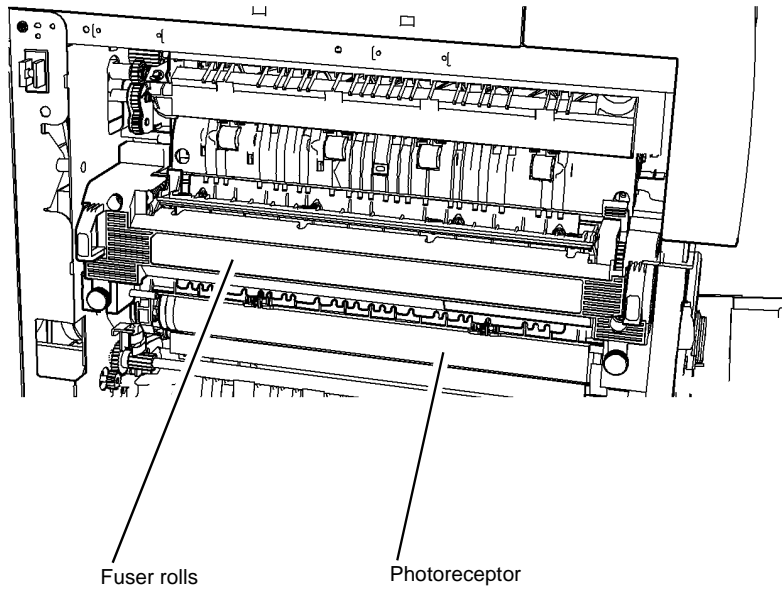


Figure 1 Component location

W-1-0166-A

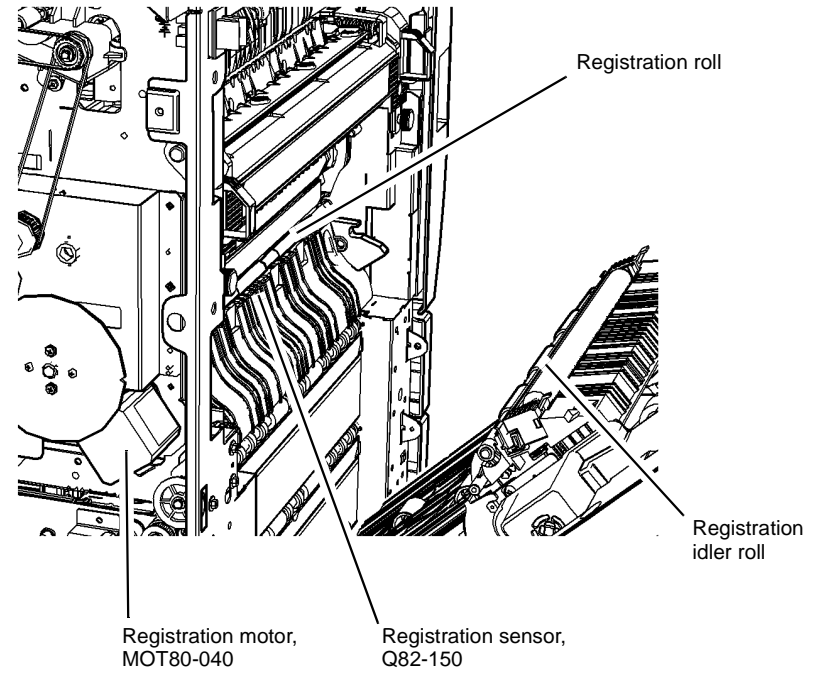


Figure 2 Component location

W-1-1213-A

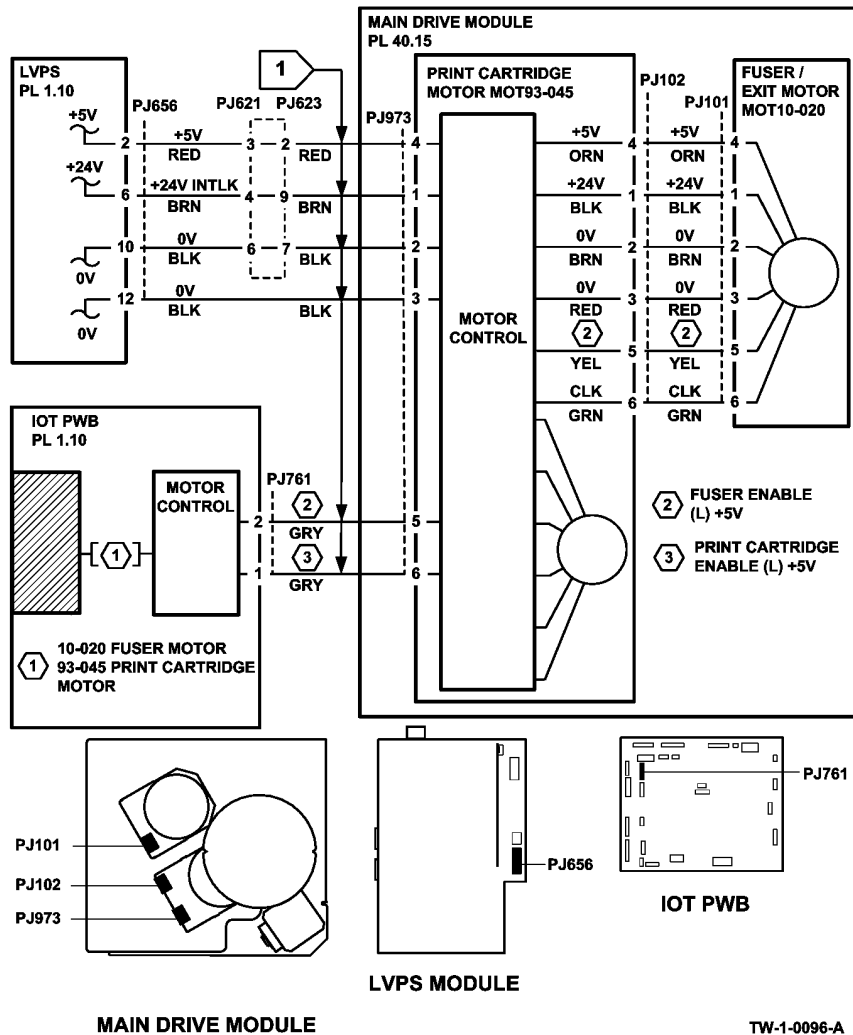


Figure 3 Circuit diagram

TW-1-0096-A

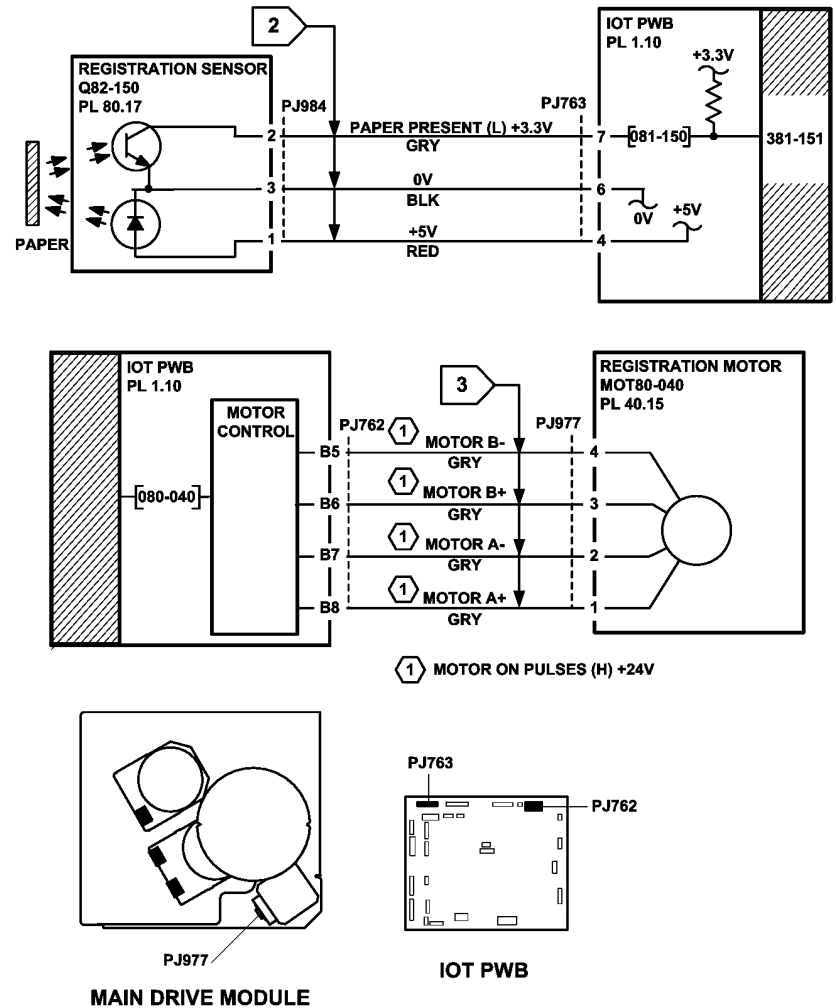


Figure 4 Circuit diagram

TW-1-0100-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.

### 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 condition of the paper in the bypass tray. Refer to [IQ1](#) and [GP 20](#).
- Ensure that the bypass tray is not overfilled.
- 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](#).

### 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](#).

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.**

**Y N**  
Go to [Flag 2](#). Check MOT80-006.

Refer to:

- [GP 10](#), How to Check a Motor.
- [P/J754, IOT PWB](#).

- A**
- [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, [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](#).

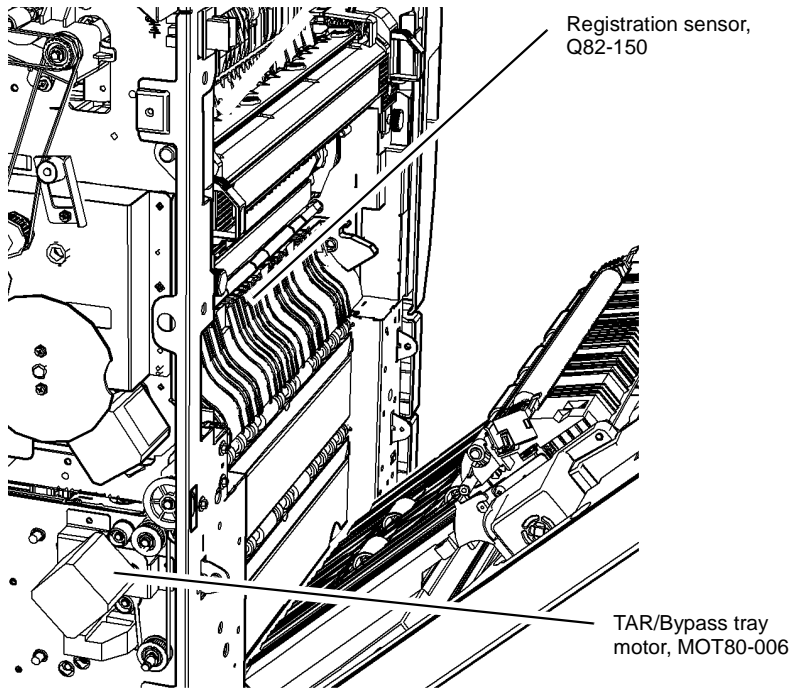
Install new components as necessary:

- 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:

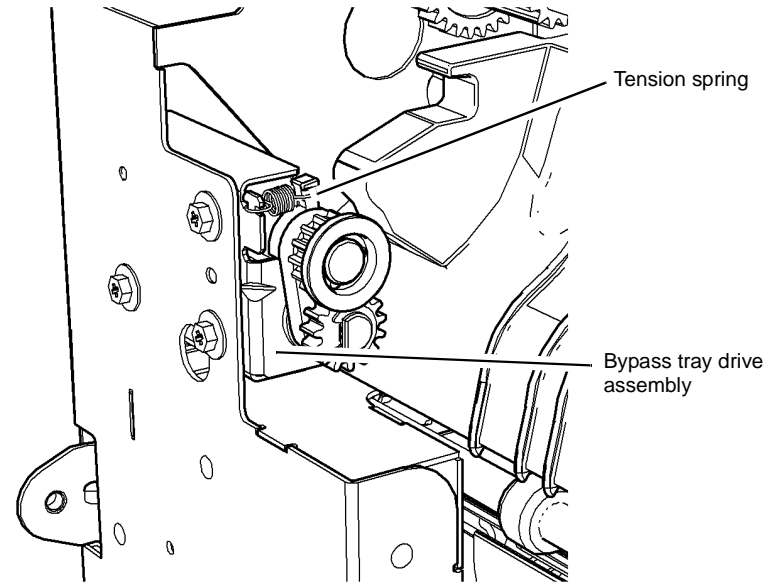
- Check the bypass tray feed roll, [PL 70.35 Item 14](#), retard roll, [PL 70.35 Item 16](#) and retard pad, [PL 70.35 Item 6](#).
- If necessary clean the feed roll, retard roll and retard pad using a cloth dampened with water.
- If necessary install new components, [PL 70.35](#).

**A**



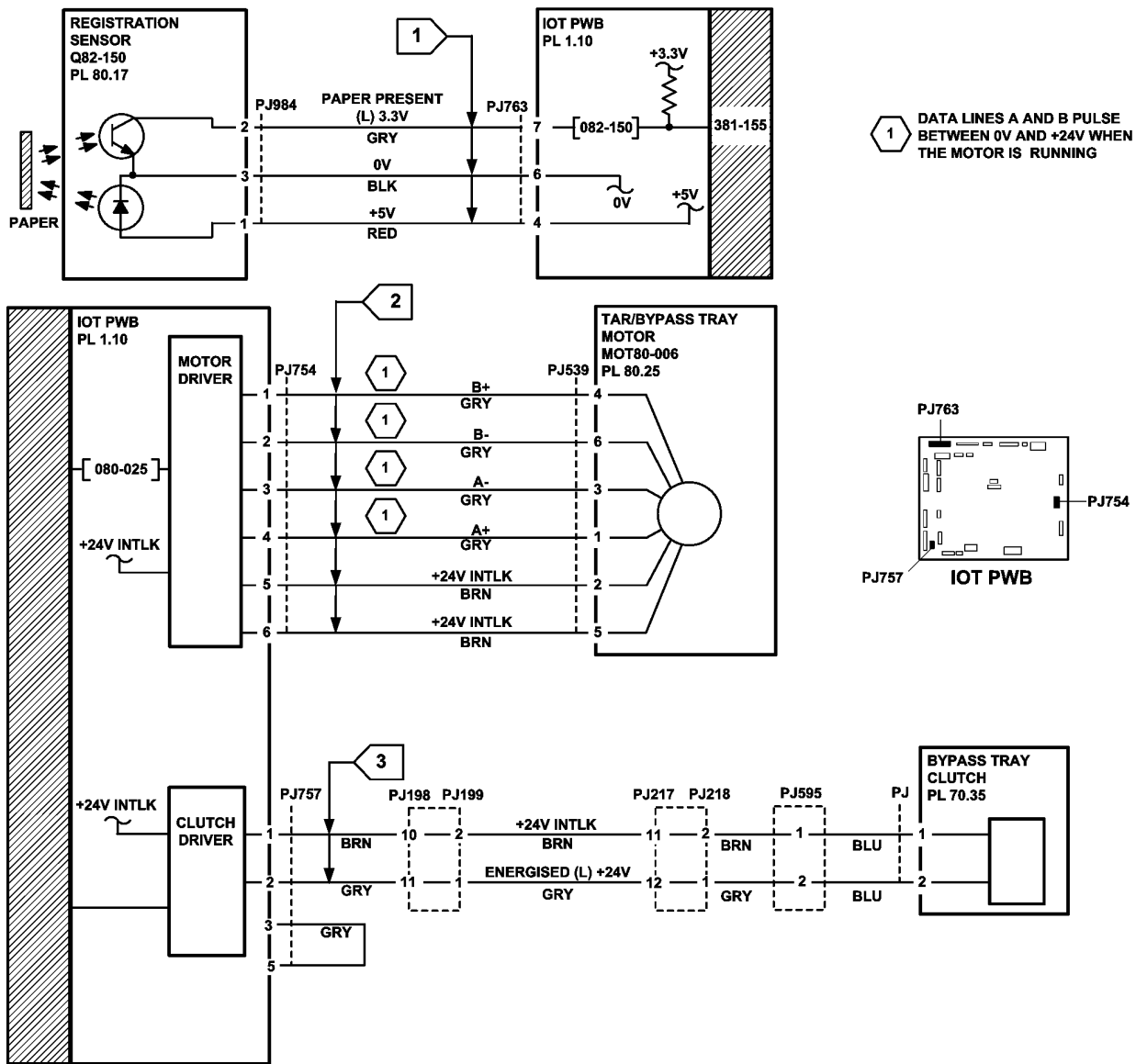
W-1-1215-A

Figure 1 Component location



W-1-1214-A

Figure 2 Component location



1 DATA LINES A AND B PULSE BETWEEN 0V AND +24V WHEN THE MOTOR IS RUNNING

TW-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.

### 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 paper in tray 3. Refer to [IQ1](#) and [GP 20](#).
- Check for obstructions in tray 3 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](#).
- Ensure that tray 3 is pushed fully home.
- 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.

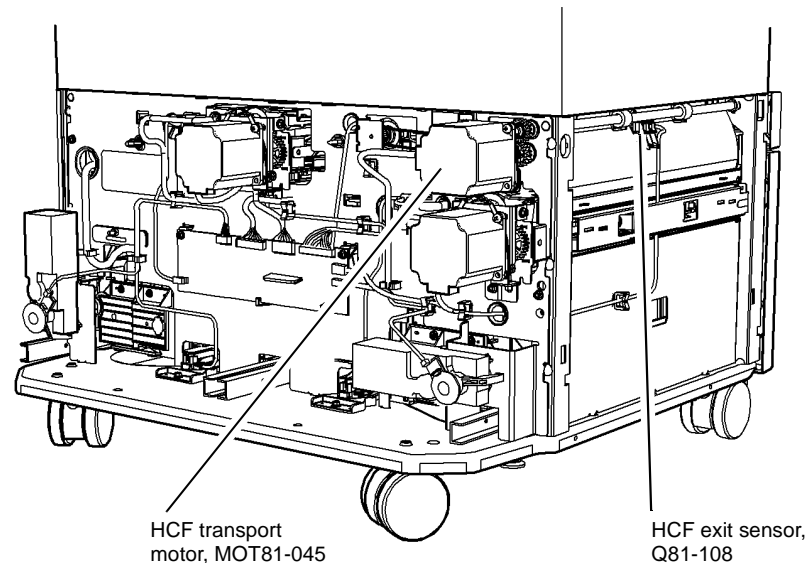
Y N

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 [381-136-00](#) Lead Edge Late to Tray 3 Feed Sensor RAP



W-1-1253-A

Figure 1 Component location

## 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.

### 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 condition of the paper in all trays. Refer to [IQ1](#) and [GP 20](#).
- Check for paper in the inverter and duplex transport.
- Check for obstructions in the paper path.
- Check the left door assembly is fully closed.

### Procedure



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.**

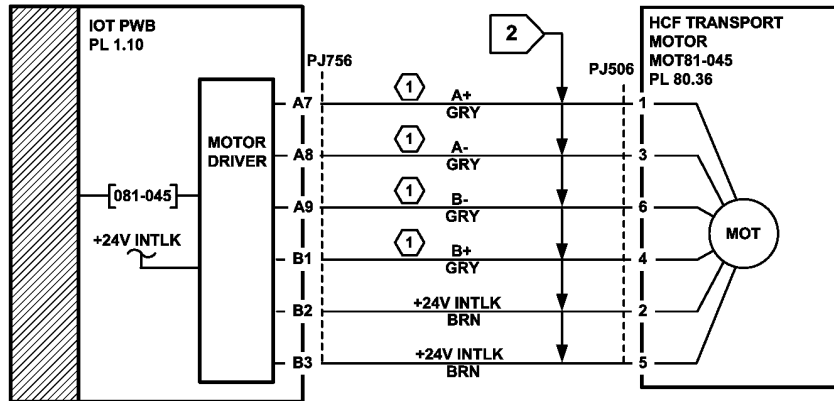
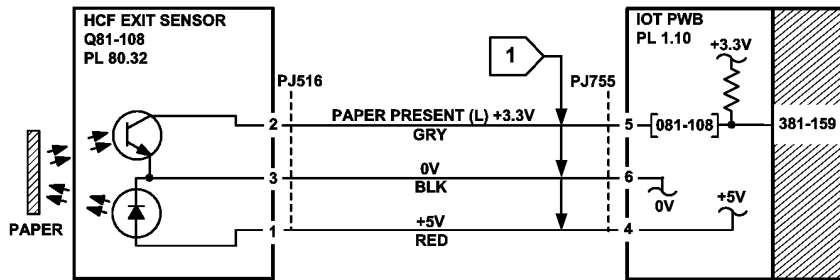
Y N

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



1 DATA LINES A AND B PULSE BETWEEN 0V AND 24V WHEN THE MOTOR IS RUNNING

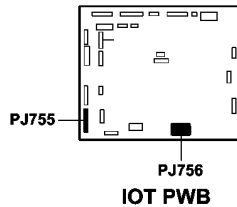


Figure 2 Circuit diagram

TW-1-0307-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. **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.
- [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](#).

B

B

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.

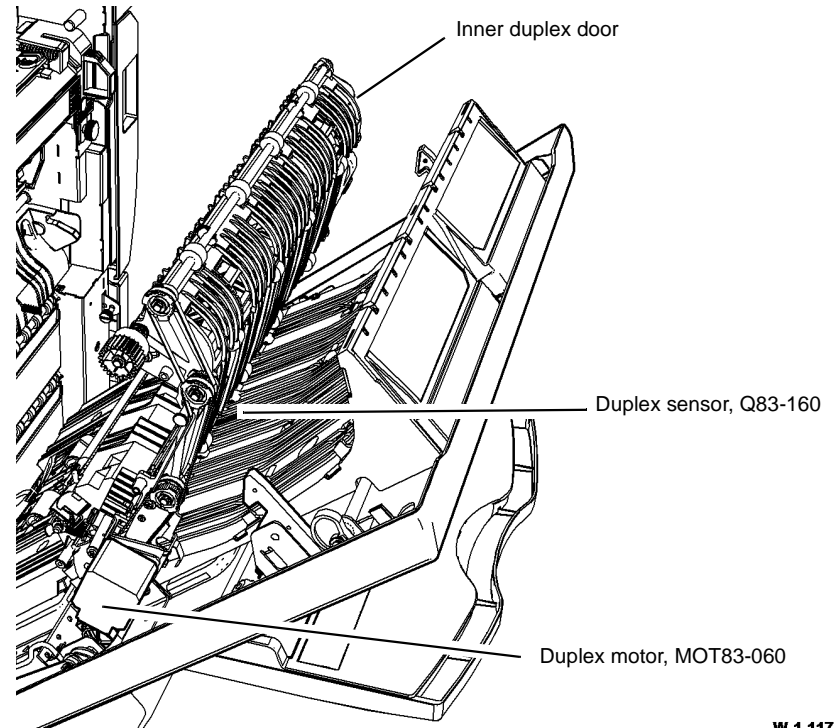
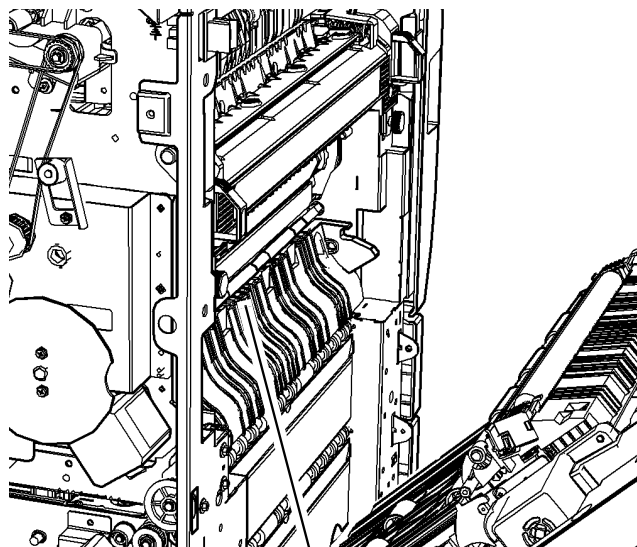


Figure 1 Component location

W-1-1173-A

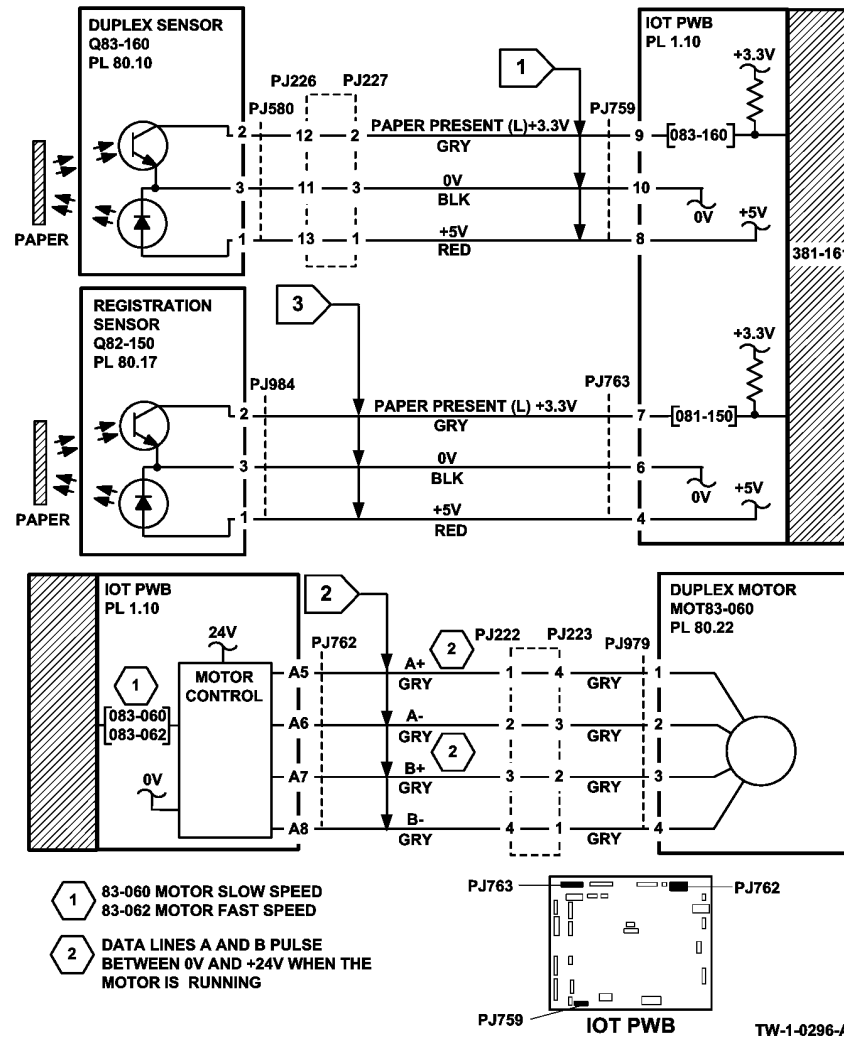




Registration sensor,  
Q82-150

Figure 2 Component location

W-1-1217-A



# 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.

## 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 paper in all trays. Refer to [IQ1](#) and [GP 20](#).
- Check for paper in the inverter and duplex transport.
- Check for obstructions in the paper path.
- Check the left door assembly is fully closed.

## 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.
- [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.

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, [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.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Main drive module, [PL 40.15 Item 1](#).
- Print cartridge, [PL 90.17 Item 9](#).

B

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:

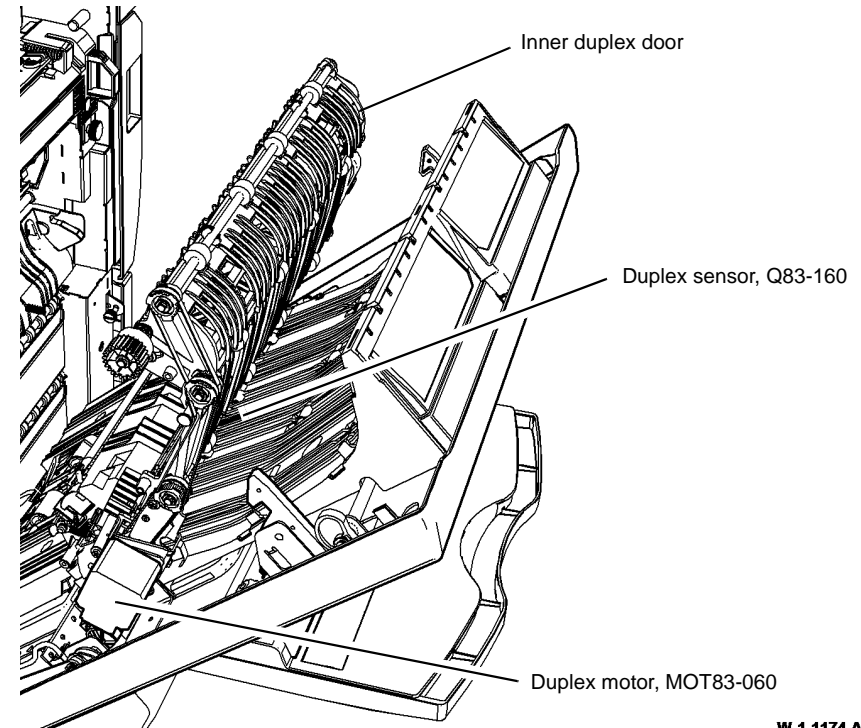
- **GP 10**, How to Check a Motor.
- **P/J762, IOT PWB.**

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.



W-1-1174-A

Figure 1 Component location

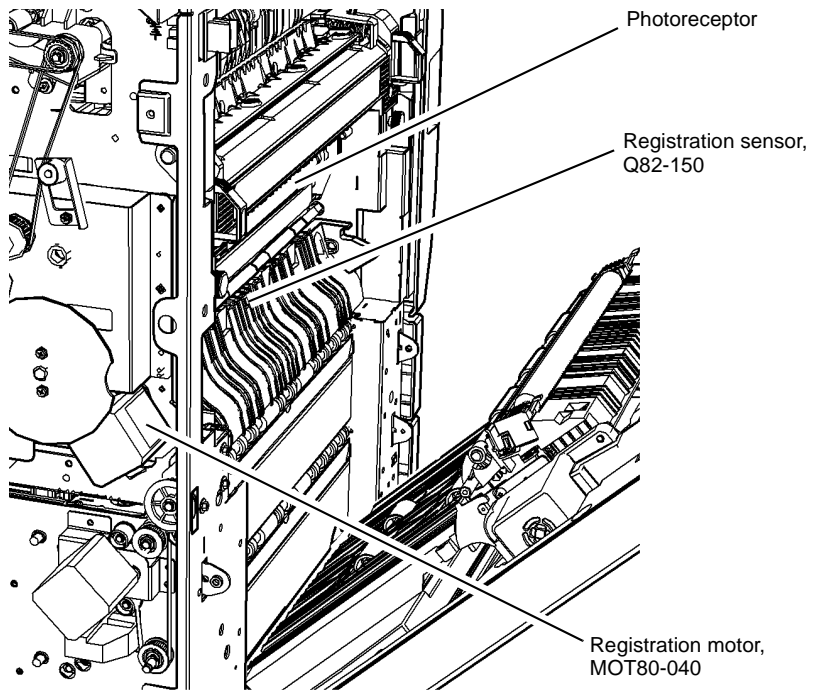


Figure 2 Component location

W-1-1216-A

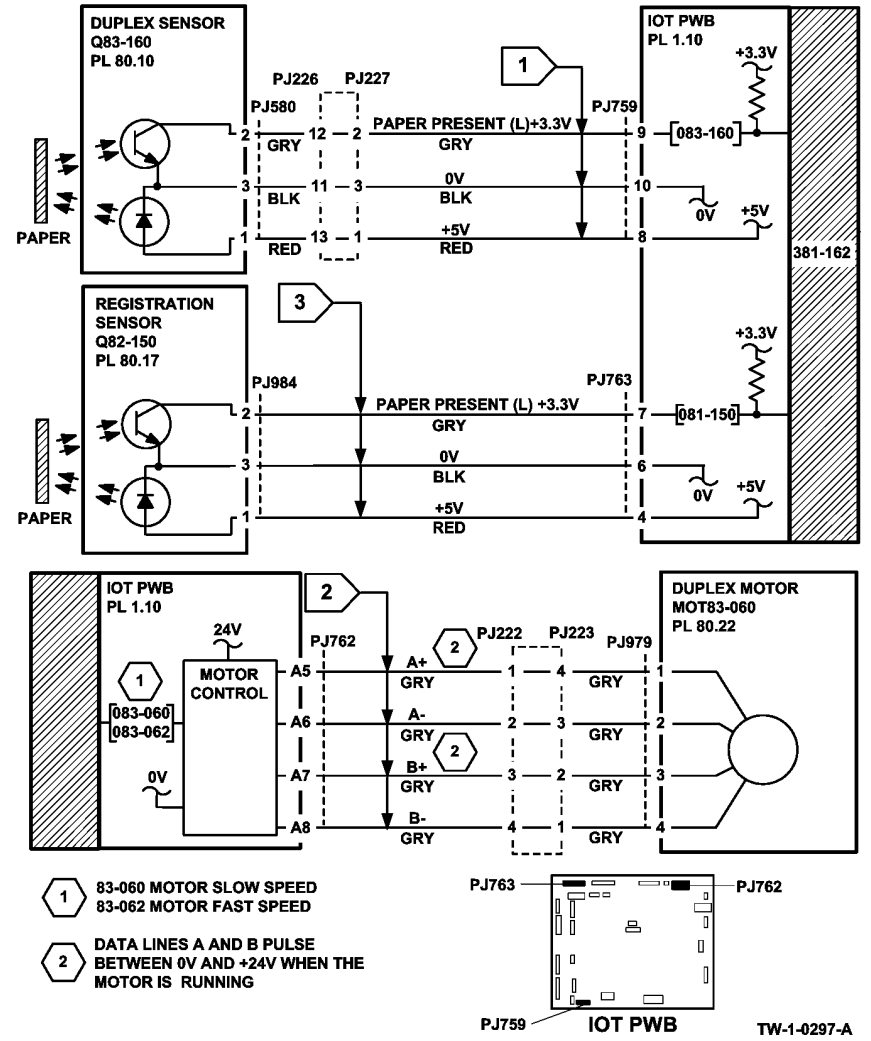


Figure 3 Circuit diagram

## 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.

### 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 the condition of the paper in tray 4. Refer to [IQ1](#) and [GP 20](#).
- Ensure that the tray is pushed fully home.
- 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.
- [GP 30](#) Tray 4 Control PWB Test Points.
- [P/J161](#), [Tray 4 control PWB](#).
- [P/J775](#), [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

Go to [Flag 2](#). Check the wiring between the [Tray 4 control PWB](#) and [IOT PWB](#).

Refer to:

- [GP 30](#) Tray 4 Control PWB Test Points.
- [P/J155](#), [Tray 4 control PWB](#).
- [P/J775](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

The wiring is good.

A B

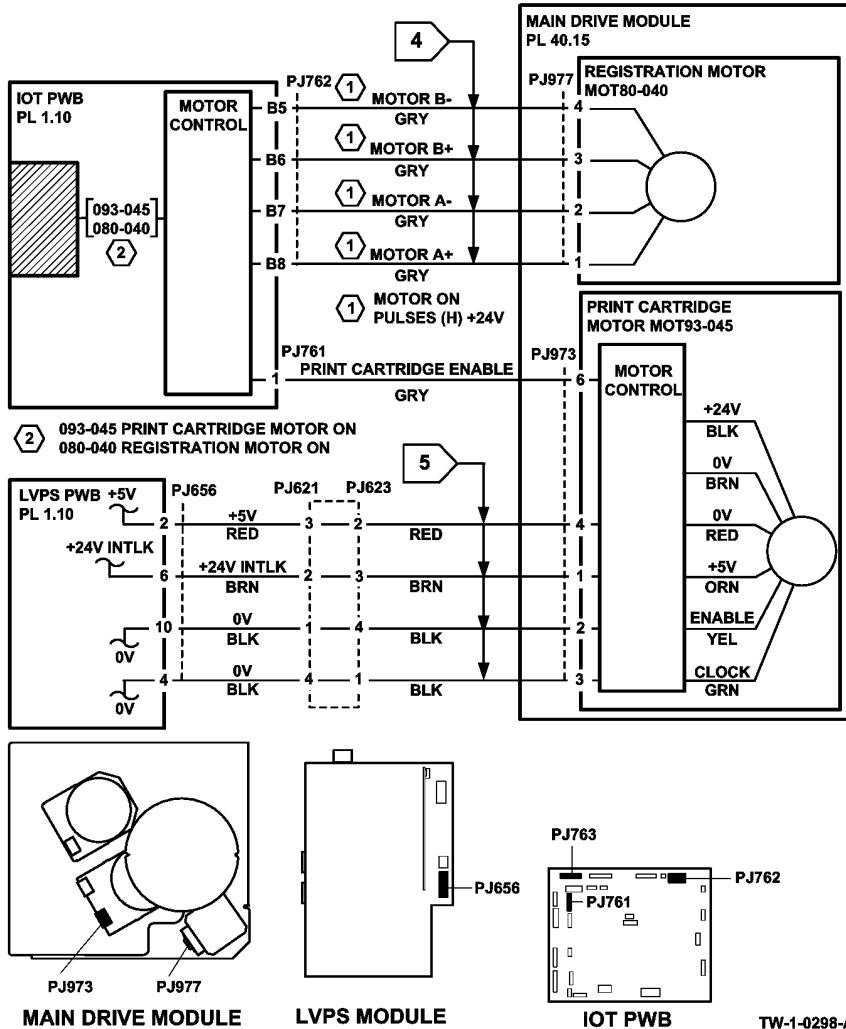


Figure 4 Circuit Diagram

TW-1-0298-A

A B  
 Y N  
 Repair the wiring, [REP 1.2](#).  
**+5V is present at [P/J155](#) pin 2.**  
 Y N  
 Perform [OF7](#) IOT PWB Diagnostics RAP.  
 Install a new tray 4 control PWB, [PL 70.21](#) Item 2.



**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 6](#). Check MOT81-040.  
 Refer to:

- [GP 10](#) How to Check a Motor.
- [GP 30](#) Tray 4 Control PWB Test Points.
- [P/J162](#), [Tray 4 control 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  
 Go to [Flag 3](#). Check the wiring between the [Tray 4 control PWB](#) and [IOT PWB](#).  
 Refer to:

- [GP 30](#) Tray 4 Control PWB Test Points.
- [P/J155](#), [Tray 4 control PWB](#).
- [P/J775](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

**The wiring is good.**

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

**+5V is present at [P/J155](#) pin 10.**

Y N  
 Perform [OF7](#) IOT PWB Diagnostics RAP.

Install a new tray 4 control PWB, [PL 70.21](#) Item 2. **The motor runs.**

Y N  
 Go to [Flag 5](#). Check the wiring between the [LVPS](#) and [Tray 4 control PWB](#).  
 Refer to:

- [GP 30](#) Tray 4 Control PWB Test Points.
- [P/J158](#), [Tray 4 control PWB](#).

- C D E
- [P/J656](#), [LVPS](#)
  - [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/J158](#) pin 2.**

Y N  
 Perform the [301L](#) LVPS RAP.

Install a new tray 4 control PWB, [PL 70.21](#) Item 2.

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 4](#). Check CL81-043.  
 Refer to:

- [GP 12](#) How to Check a Solenoid or Clutch.
- [GP 30](#) Tray 4 Control PWB Test Points.
- [P/J162](#), [Tray 4 control PWB](#).
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

Install new components as necessary:

- Tray 4 paper feed assembly, [PL 80.33](#) Item 1.

Go to [Flag 3](#). Check the wiring between the [Tray 4 control PWB](#) and [IOT PWB](#).

Refer to:

- [GP 30](#) Tray 4 Control PWB Test Points.
- [P/J155](#), [Tray 4 control PWB](#).
- [P/J775](#), [IOT PWB](#).
- [301E](#) +5V and +5VSB Distribution RAP.
- [301B](#) 0V Distribution RAP.

**The wiring is good.**

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

**+5V is present at [P/J155](#) pin 10.**

Y N  
 Perform [OF7](#) IOT PWB Diagnostics RAP.

Install a new tray 4 control PWB, [PL 70.21](#) Item 2.

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.
  - ADJ 80.1 Tray 3 and Tray 4 Nudger Roll Pressure.
  - 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.

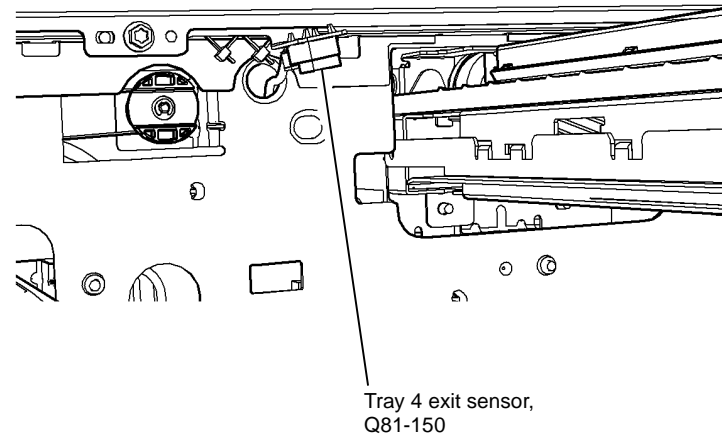


Figure 2 Component location

W-1-0169-A

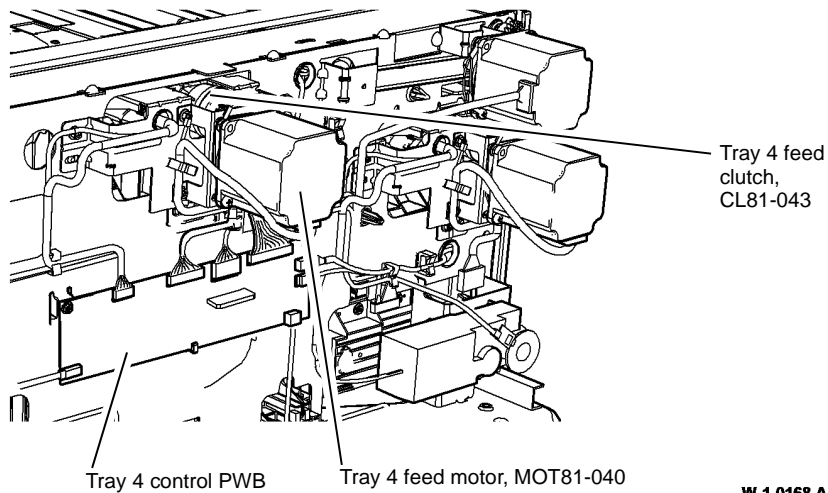


Figure 1 Component location

W-1-0168-A

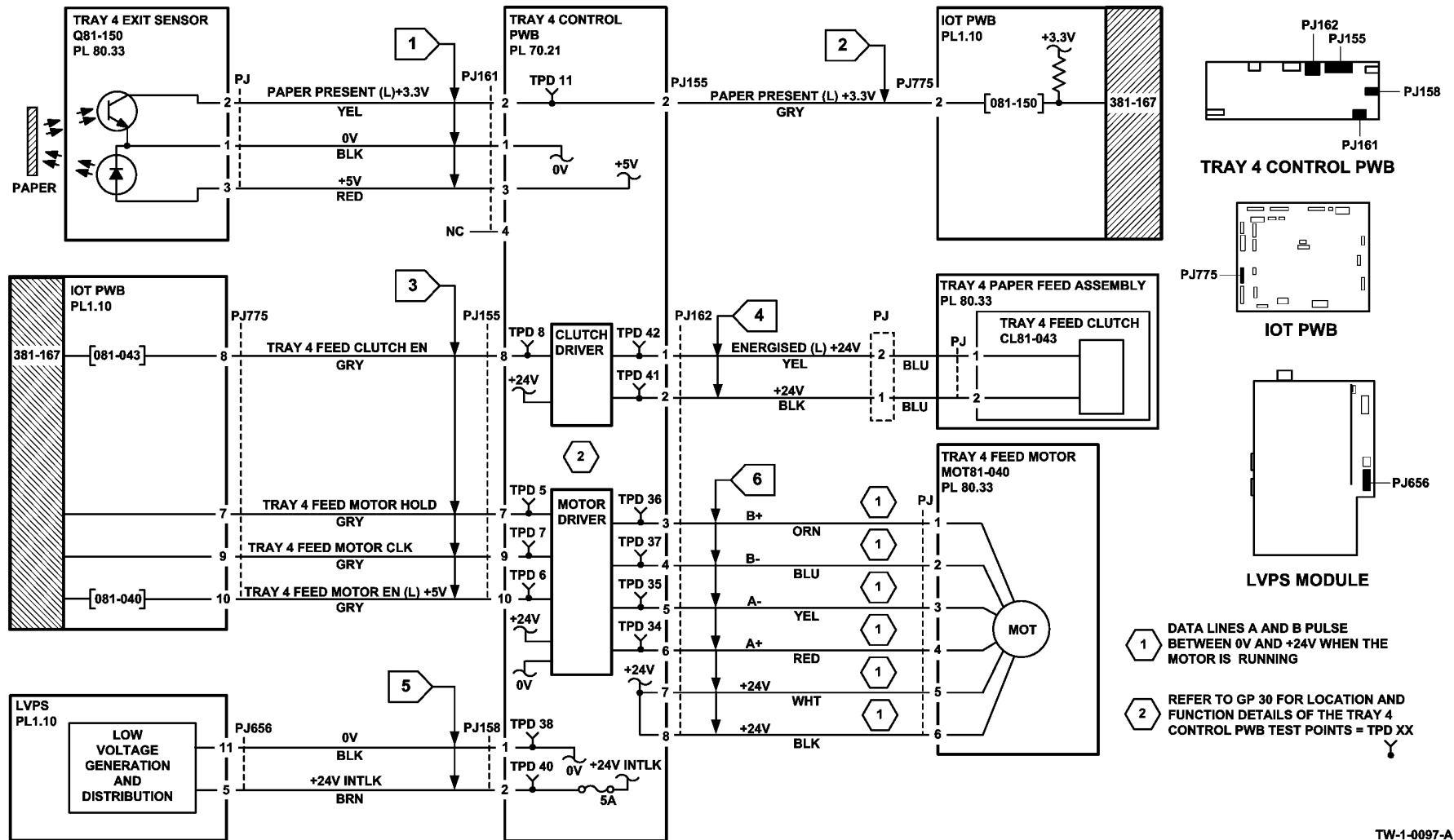


Figure 3 Circuit diagram

TW-1-0097-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.

### 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.
- Check the condition of the paper in tray 1. Refer to **IQ1** and **GP 20**.
- 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 left door is latched correctly.
- 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.

### 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.

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**.

If the fault persists, perform the **381-106-00** Lead Edge Late to TAR 1 Sensor from Tray 1 RAP.

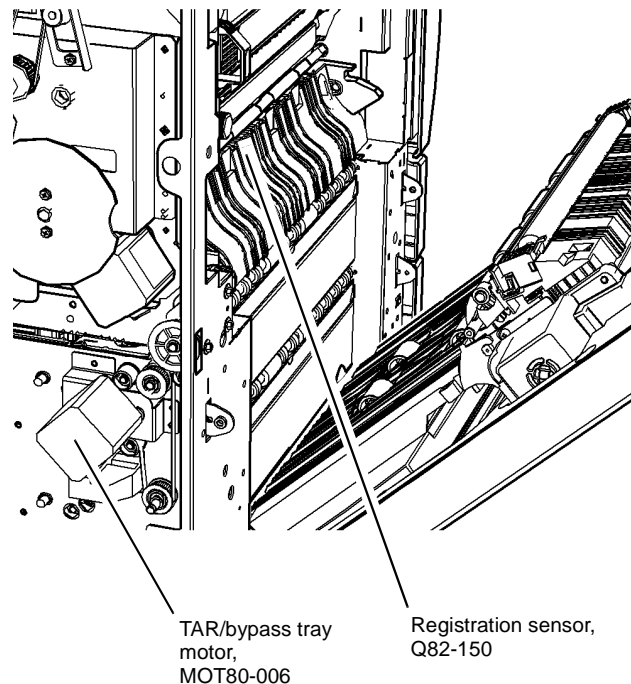


Figure 1 Component location

W-1-1256-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.

### 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.
- Check the condition of the paper in tray 2. Refer to **IQ1** and **GP 20**.
- 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 left door is latched correctly.
- 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.

### 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.

If the fault persists perform the **381-194-00** Lead Edge Late to TAR 1 Sensor from Tray 2 RAP.

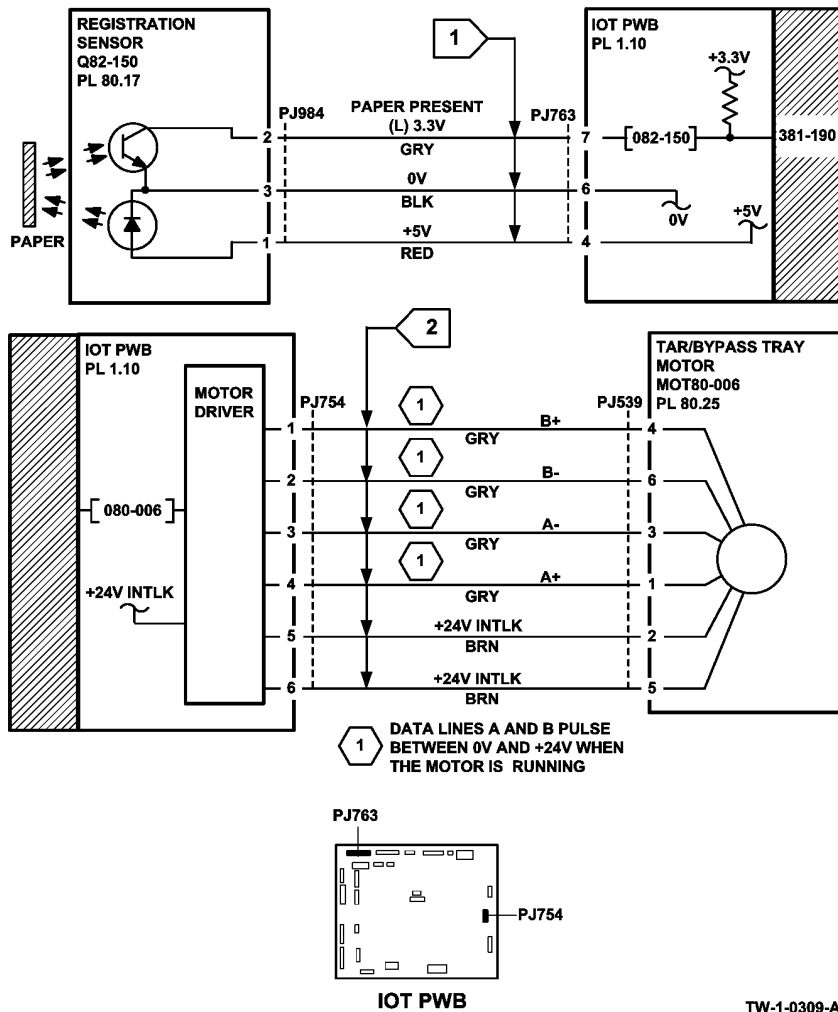
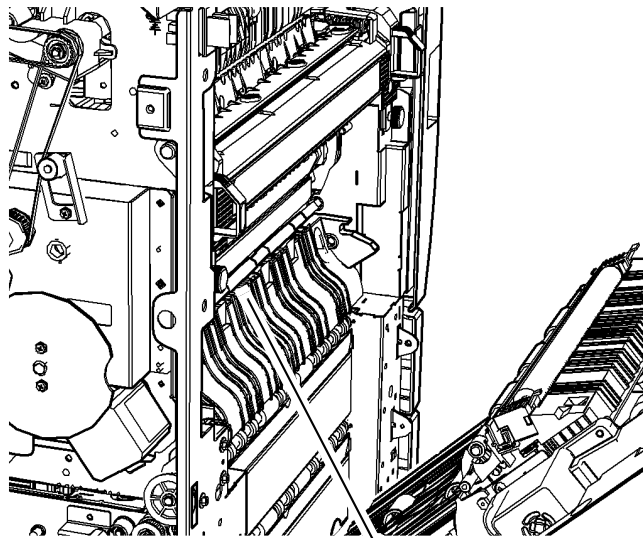


Figure 2 Circuit diagram

TW-1-0309-A



Registration sensor,  
Q82-150

Figure 1 Component location

W-1-1257-A

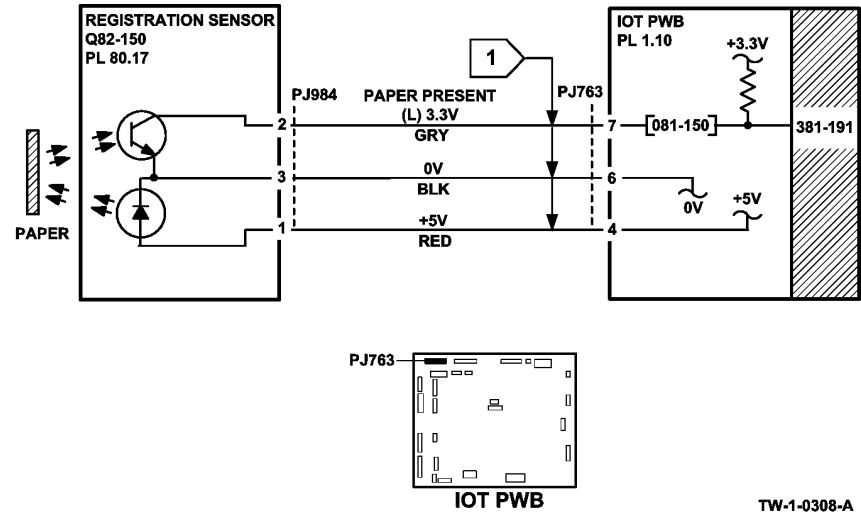


Figure 2 Circuit diagram

TW-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.

### 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](#).
- Check the condition of the paper in tray 3. Refer to [IQ1](#) and [GP 20](#).
- 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 left door is latched correctly.
- 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.

### 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.

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.
- [P/J754, IOT PWB](#)
- [301G](#) +24V Distribution RAP.
- [301B](#) 0V Distribution RAP.

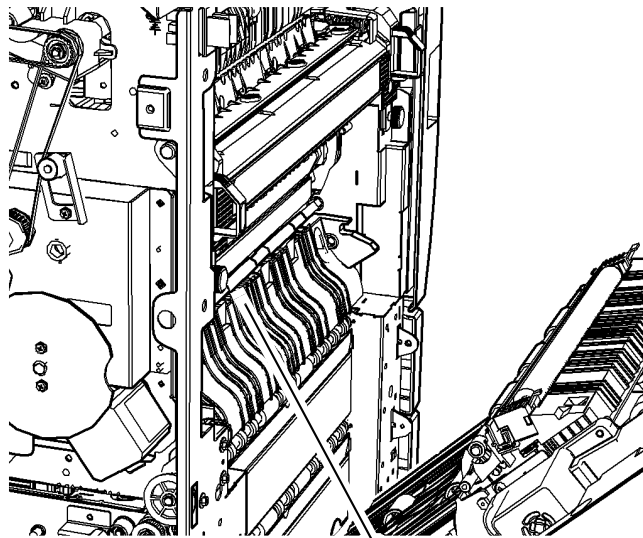
If necessary, install a new TAR/bypass tray motor, [PL 80.25 Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

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](#).

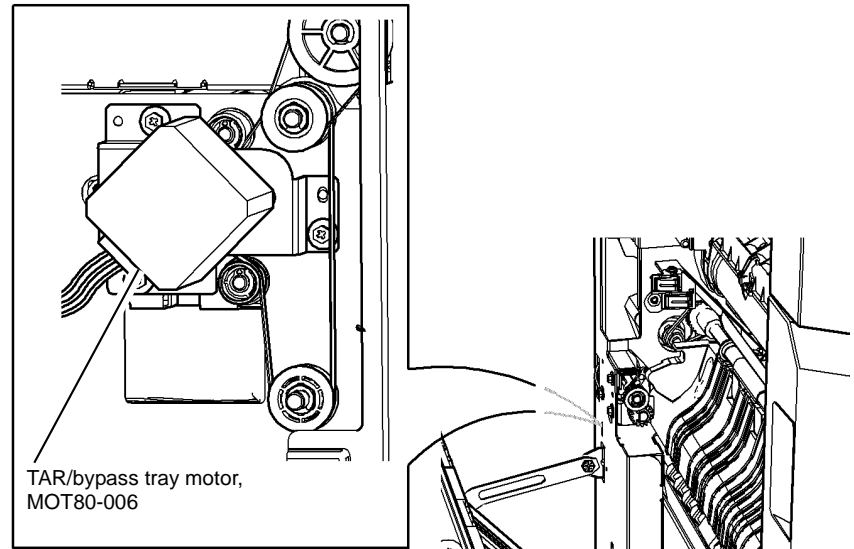
If the fault persists perform the [381-159-00](#) Late to HCF Exit Sensor from Tray 3 RAP.



Registration sensor,  
Q82-150

Figure 1 Component location

W-1-1259-A



TAR/bypass tray motor,  
MOT80-006

Tray 1 TAR sensor,  
Q81-001

Tray 2 TAR sensor,  
Q82-001

Figure 2 Component location

W-1-1266-A

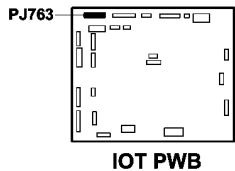
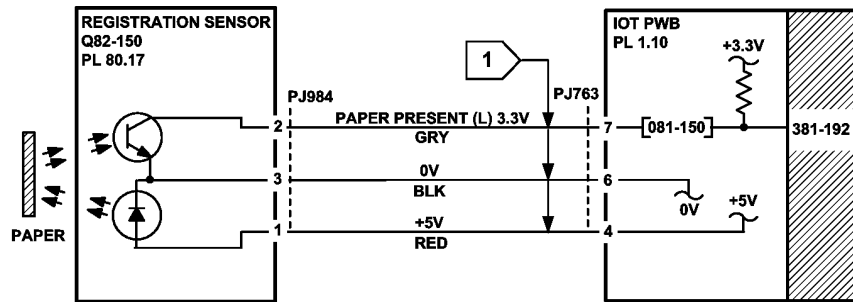
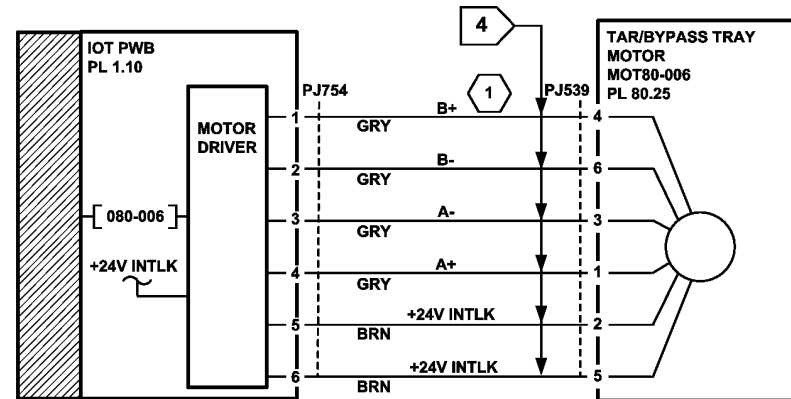
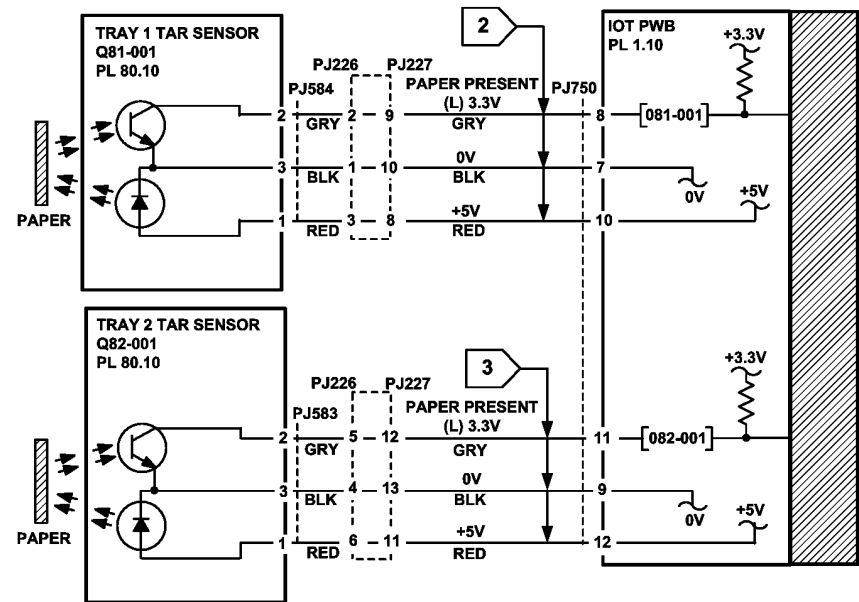


Figure 3 Circuit Diagram

TW-1-0311-A



1 DATA LINES A AND B PULSE BETWEEN 0V AND +24V WHEN THE MOTOR IS RUNNING

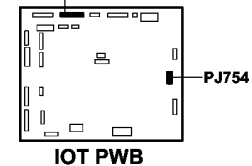


Figure 4 Circuit diagram

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.

### 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.
- Check the condition of the paper in tray 4. Refer to [IQ1](#) and [GP 20](#).
- 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 left door is latched correctly.
- 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.

### 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.

**A**  
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.

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.
  - [P/J754, IOT PWB](#).
  - [301G](#) +24V Distribution RAP.
  - [301B](#) 0V Distribution RAP.

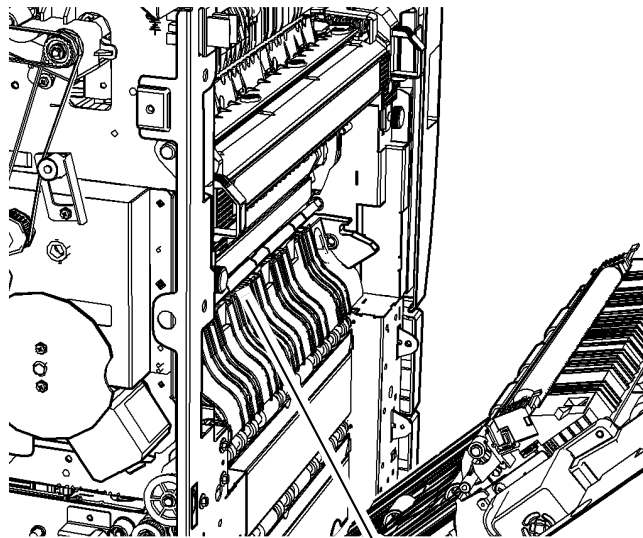
If necessary, install a new TAR/bypass tray motor, [PL 80.25 Item 5](#). If the fault persists, perform the [OF7](#) IOT PWB Diagnostics RAP.

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](#).

If the fault persists, perform the [381-199-00](#) Late to HCF Exit Sensor from Tray 4 RAP.

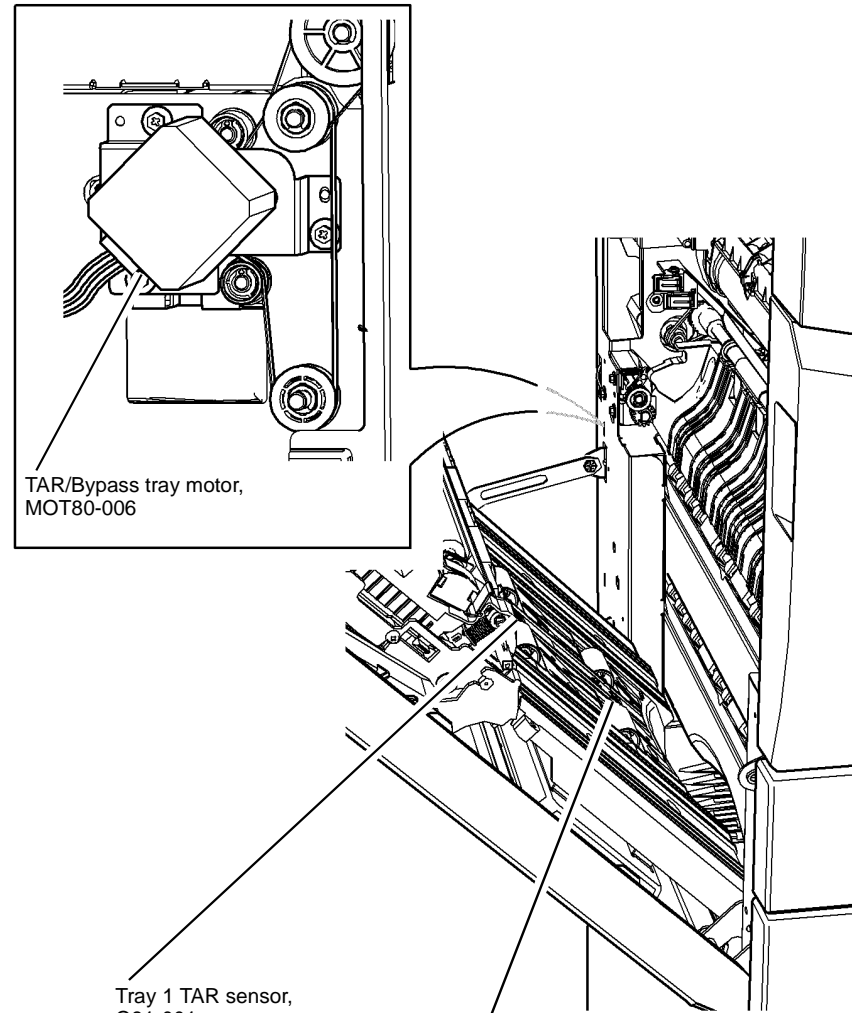
**A**



Registration sensor,  
Q82-150

Figure 1 Component location

W-1-1267-A



TAR/Bypass tray motor,  
MOT80-006

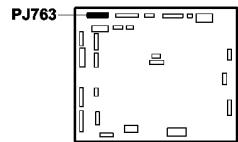
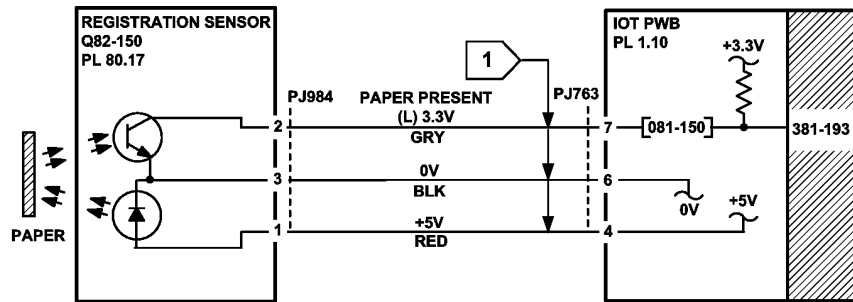
Tray 1 TAR sensor,  
Q81-001

Tray 2 TAR sensor,  
Q82-001

Figure 2 Component location

W-1-1268-A

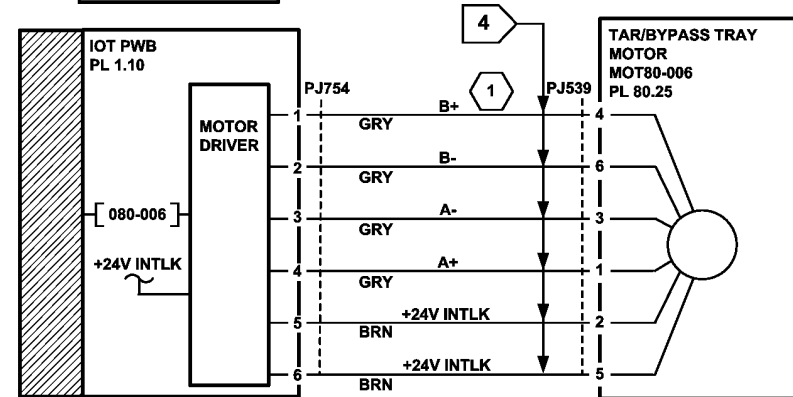
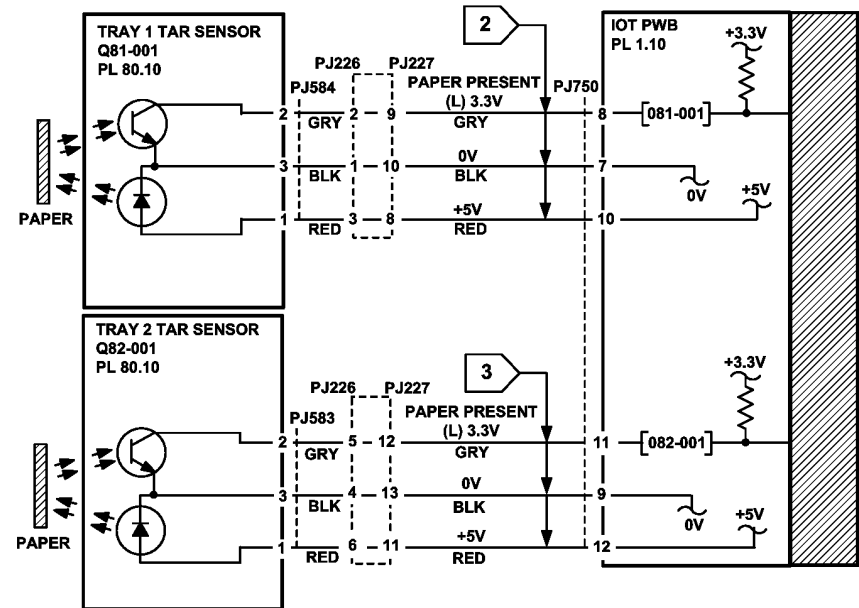




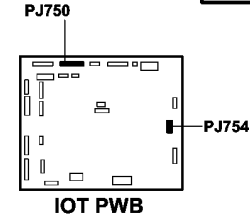
IOT PWB

Figure 3 Circuit Diagram

TW-1-0312-A



1 DATA LINES A AND B PULSE BETWEEN 0V AND +24V WHEN THE MOTOR IS RUNNING



IOT PWB

Figure 4 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.

### 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 condition of the paper in tray 2. Refer to [IQ1](#) and [GP 20](#).
- Check that the paper guides are set correctly.
- Observe the feeder and check for obstructions.
- Turn and change the paper in the tray.
- 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 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](#).

### 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](#).

- A**
- [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 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](#).



**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 081-020, tray 2 elevator/feed motor MOT072-010. Pull out the tray. **The feed rolls rotate.**

**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](#).

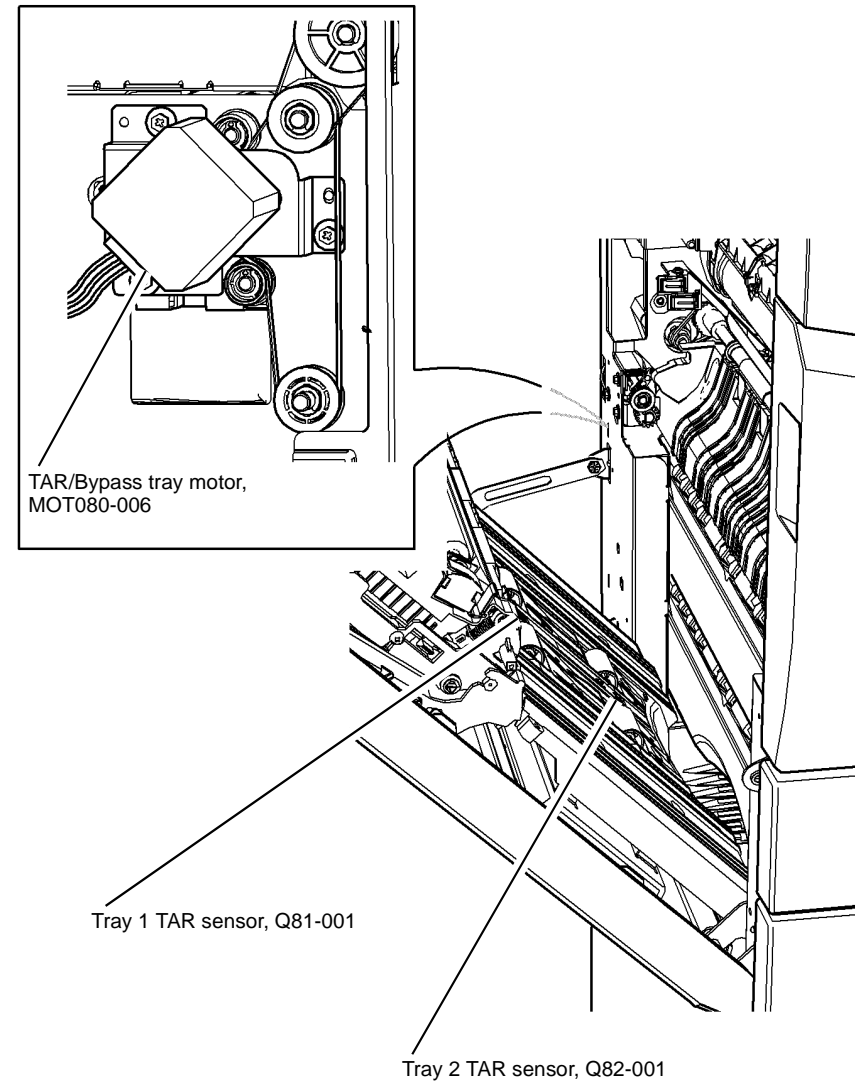
Remove the paper tray. Manually activate the retard nip split mechanism. **The retard roll moves against the feed roll.**

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](#).



W-1-1269-A

Figure 1 Component location

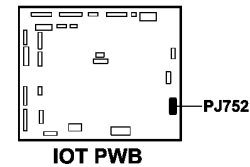
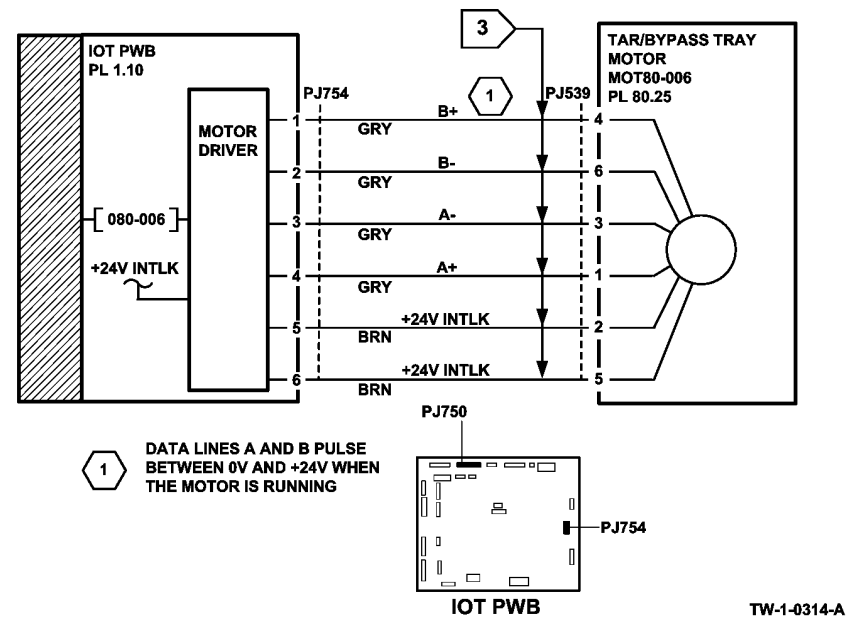
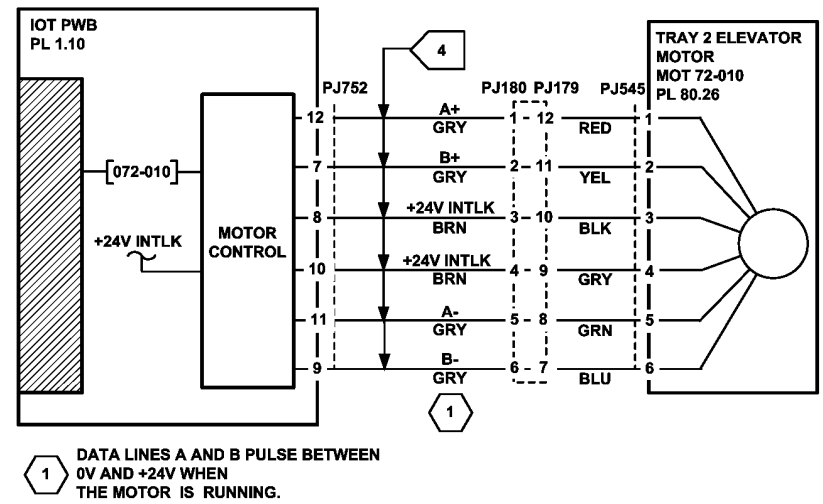
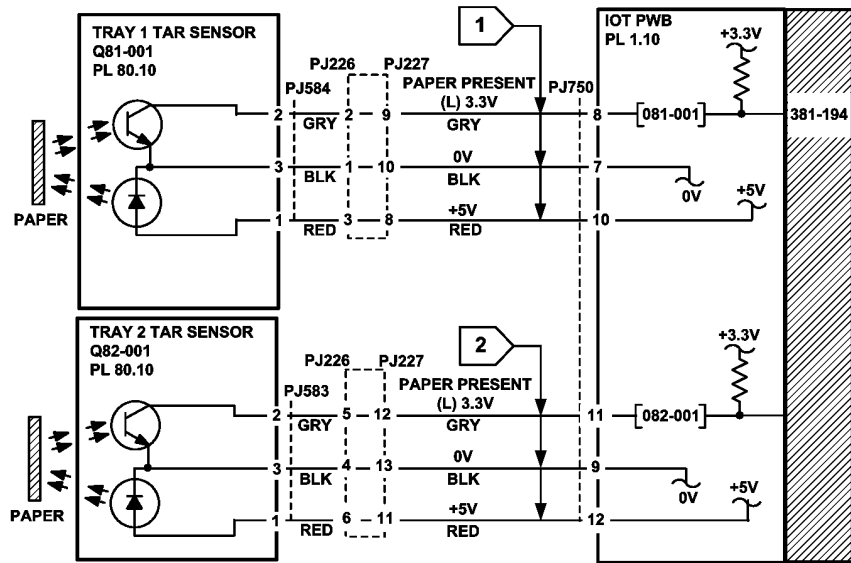


Figure 3 Circuit diagram

TW-1-0315-A

Figure 2 Circuit diagram

TW-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.

### 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 condition of the paper in tray 3. Refer to [IQ1](#) and [GP 20](#).
- Check that the paper guides are set correctly.
- Observe the feeder and check for obstructions.
- Turn and change the paper in the tray.
- Check that the left door assembly is latched correctly.
- 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.

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](#).

If the fault persists perform the [381-159-00](#) Late to HCF Exit Sensor from Tray 3 RAP.

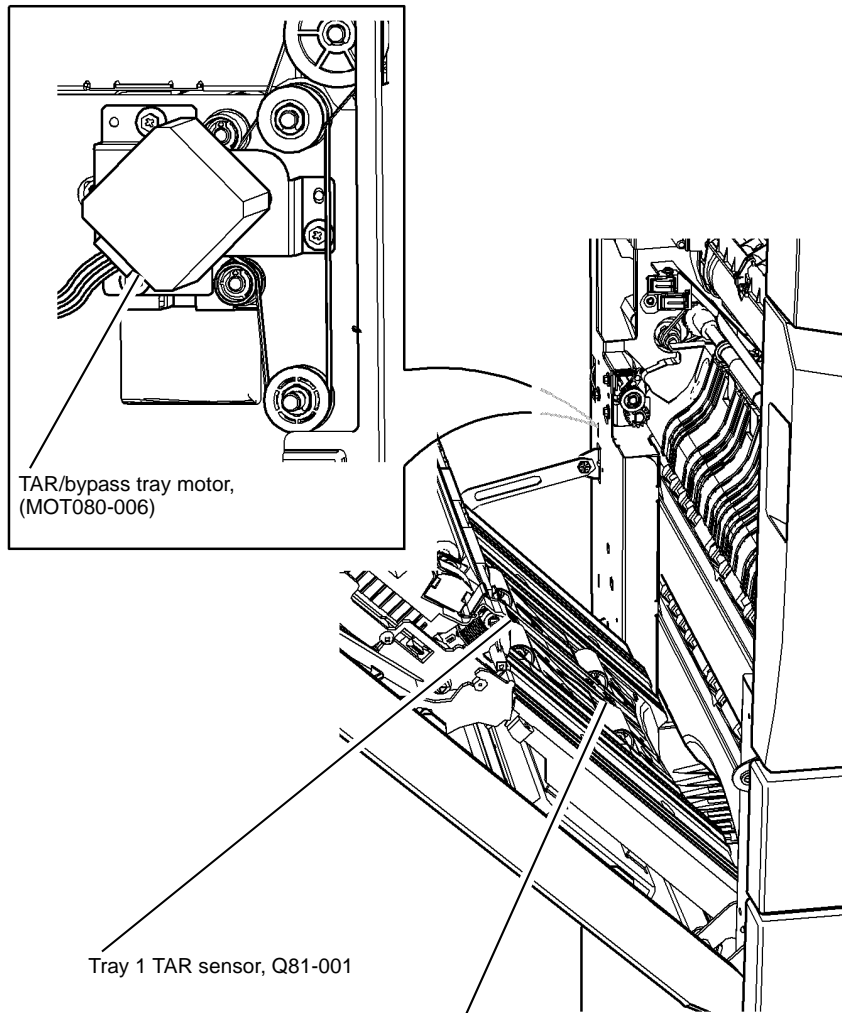


Figure 1 Component location

W-1-1270-A

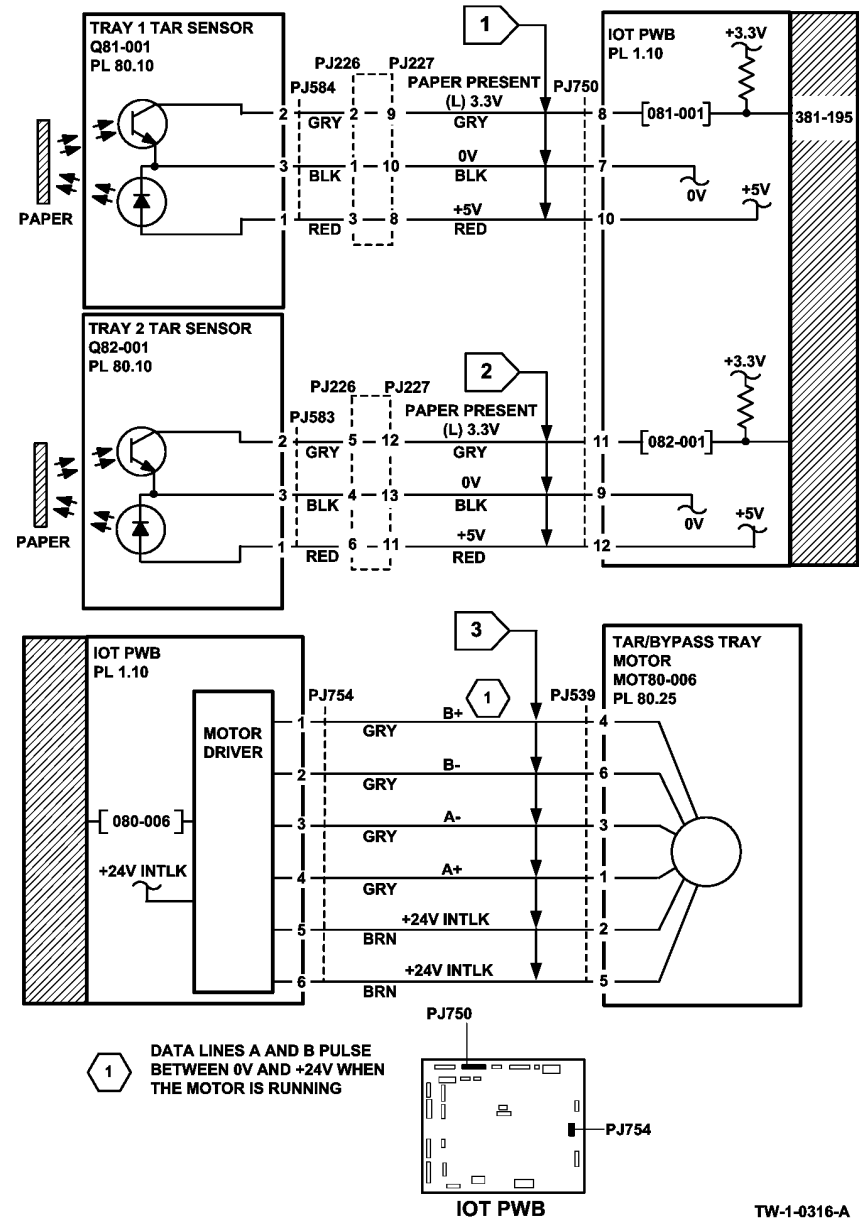


Figure 2 Circuit diagram

TW-1-0316-A

## 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.

### 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 the condition of the paper in tray 4. Refer to [IQ1](#) and [GP 20](#).
- Check that the paper guides are set correctly.
- Observe the feeder and check for obstructions.
- Turn and change the paper in the tray.
- Check that the left door assembly is latched correctly.
- 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.

A  
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, [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](#).

If the fault persists, perform the [381-199-00](#) Late to HCF Exit Sensor from Tray 4 RAP.

A

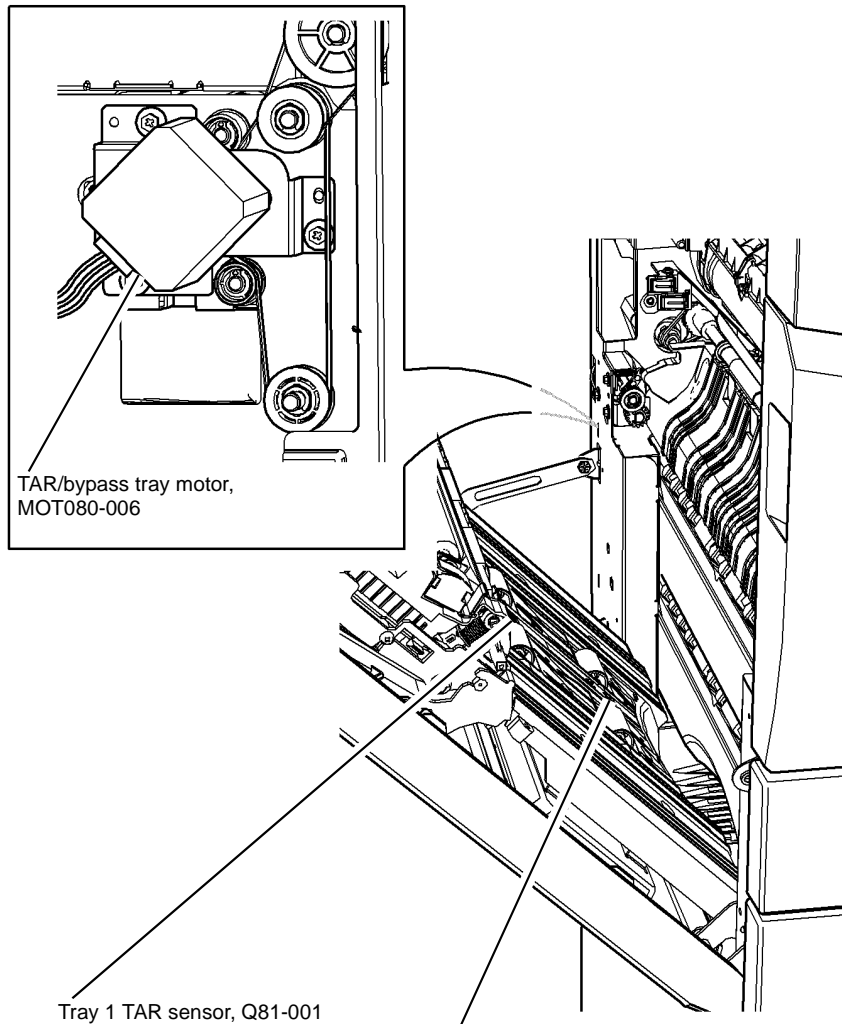


Figure 1 Component location

W-1-1271-A

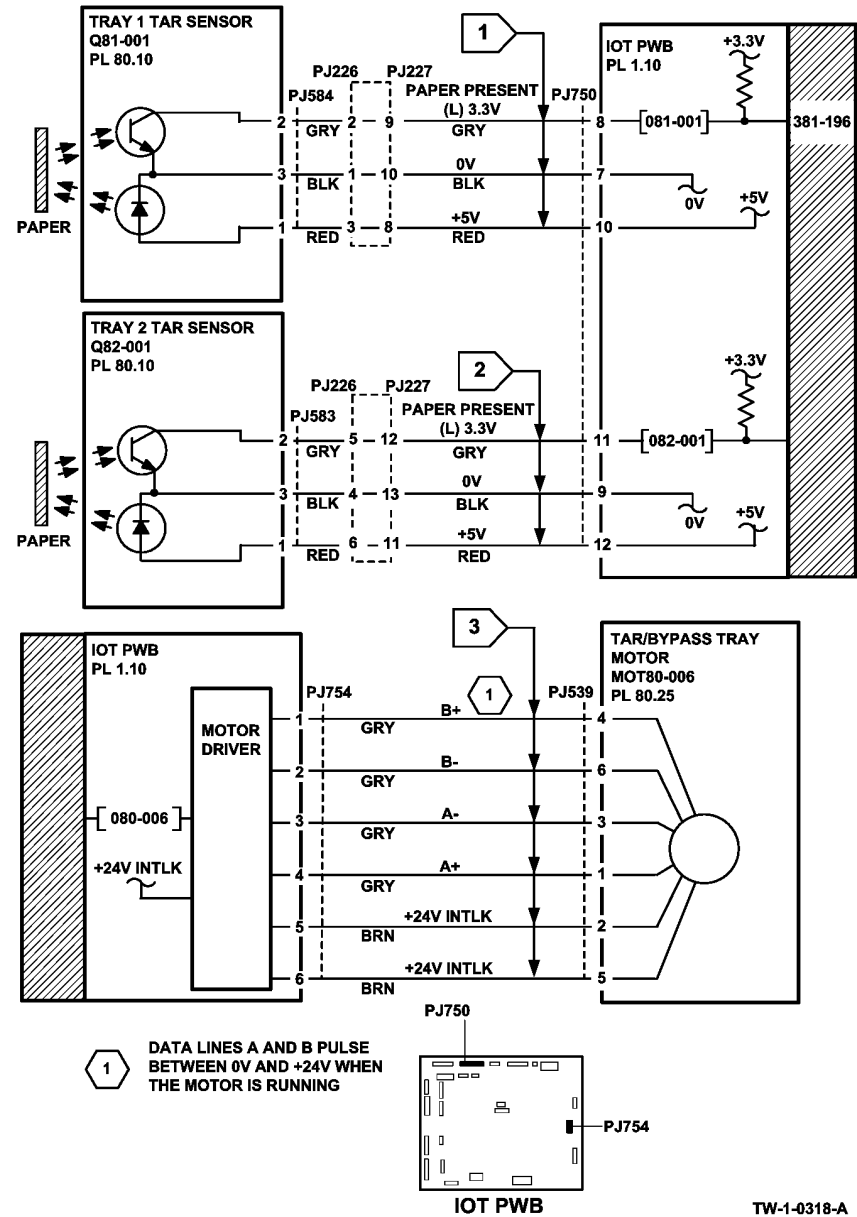


Figure 2 Circuit diagram

TW-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.

### 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 condition of the paper in tray 3. Refer to [IQ1](#) and [GP 20](#).
- Check that the paper guides are set correctly.
- Observe the feeder and check for obstructions.
- Turn and change the paper in the tray.
- Check that the left door assembly is latched correctly.
- 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.

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](#).

If the fault persists perform the [381-159-00](#) Late to HCF Exit Sensor from Tray 3 RAP.

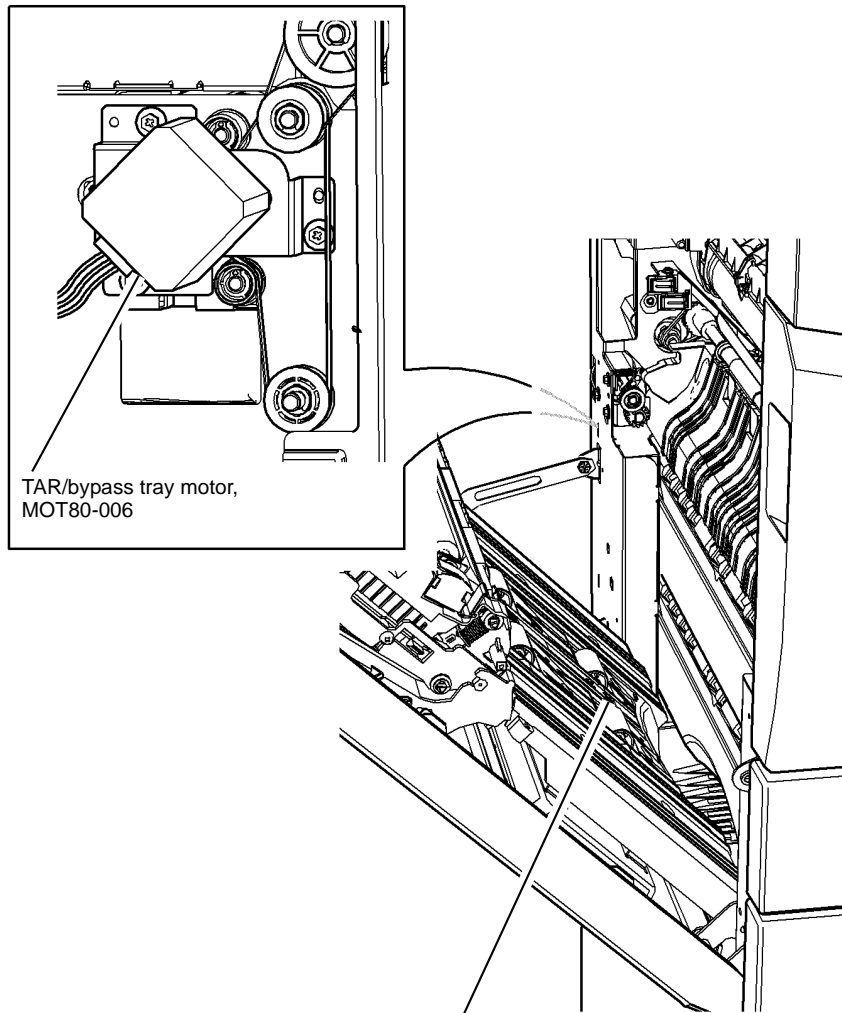


Figure 1 Component location

W-1-1271-A

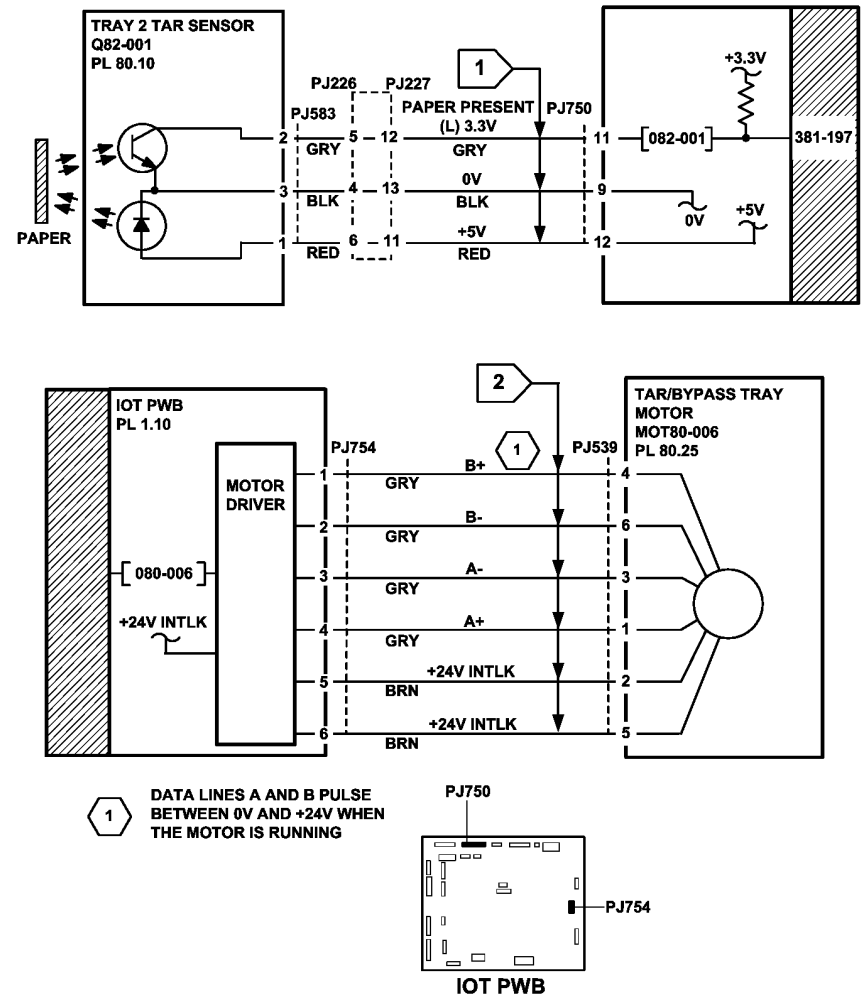


Figure 2 Circuit diagram

TW-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.

### 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.
- Check the condition of the paper in tray 4. Refer to [IQ1](#) and [GP 20](#).
- Check that the paper guides are set correctly.
- Observe the feeder and check for obstructions.
- Turn and change the paper in the tray.
- Check that the left door assembly is latched correctly.
- 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.

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.

If the fault persists perform the [381-199-00](#) Late to HCF Exit Sensor from Tray 4 RAP.

A

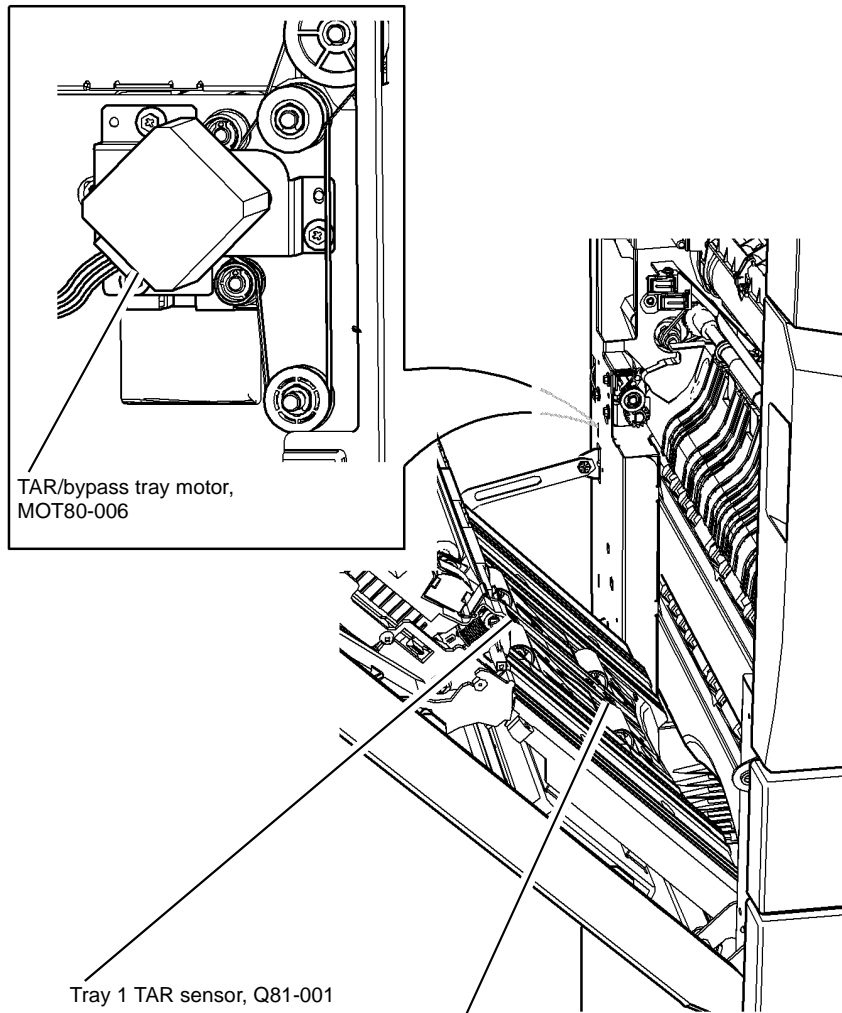


Figure 1 Component location

W-1-1273-A

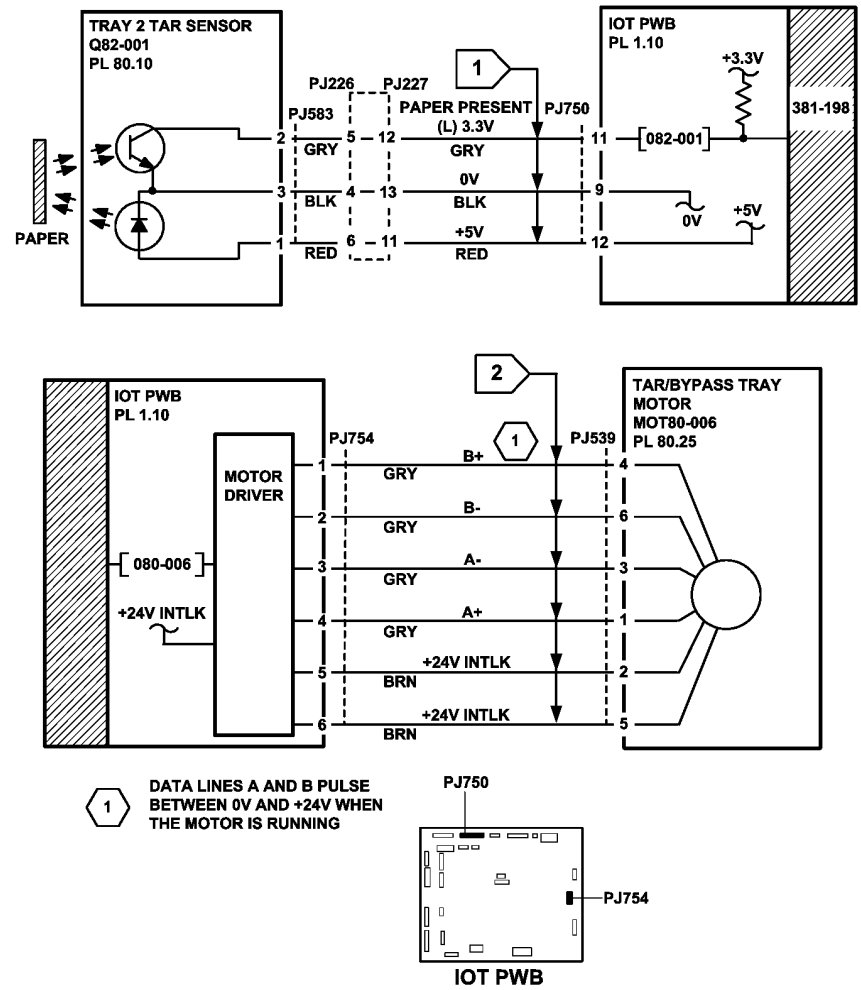


Figure 2 Circuit diagram

TW-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.

### 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 paper in tray 4. Refer to **IQ1** and **GP 20**.
- Check for obstructions in tray 4 paper path, **Figure 2**.
- Ensure that tray 4 is pushed fully home.

### 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 rotate.

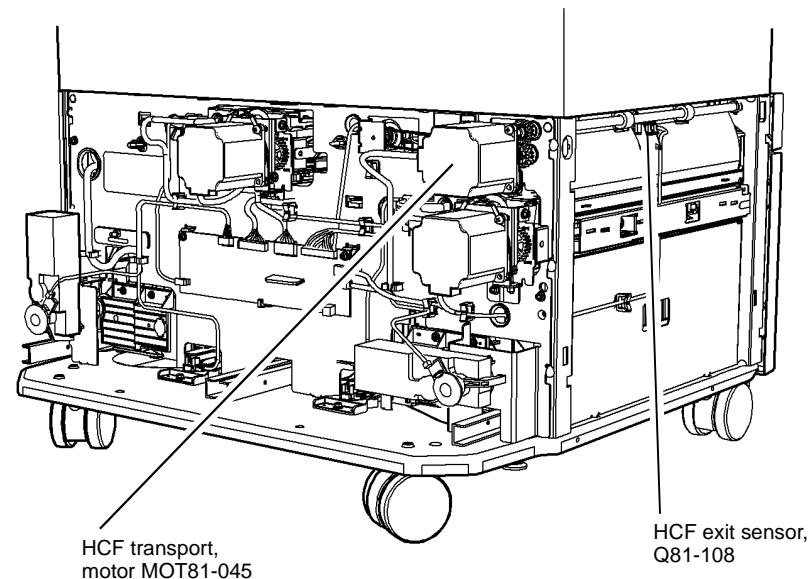
Y N

Check the components that follow:

A

- 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.

Perform the **381-167-00** Lead Edge Late to Tray 4 Exit Sensor RAP.



W-1-1274-A

Figure 1 Component location

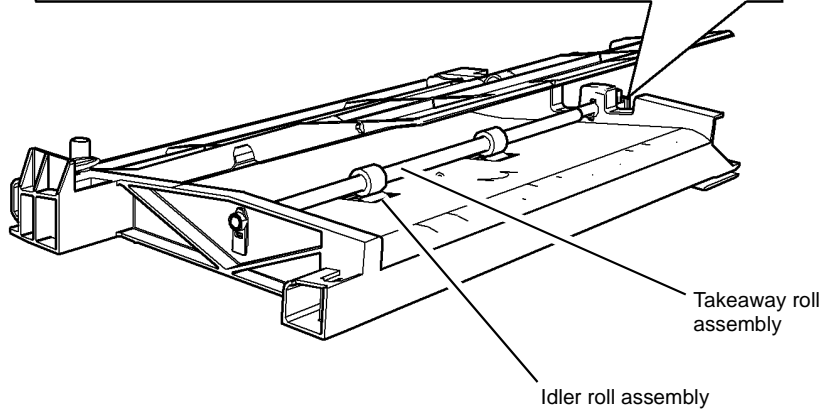
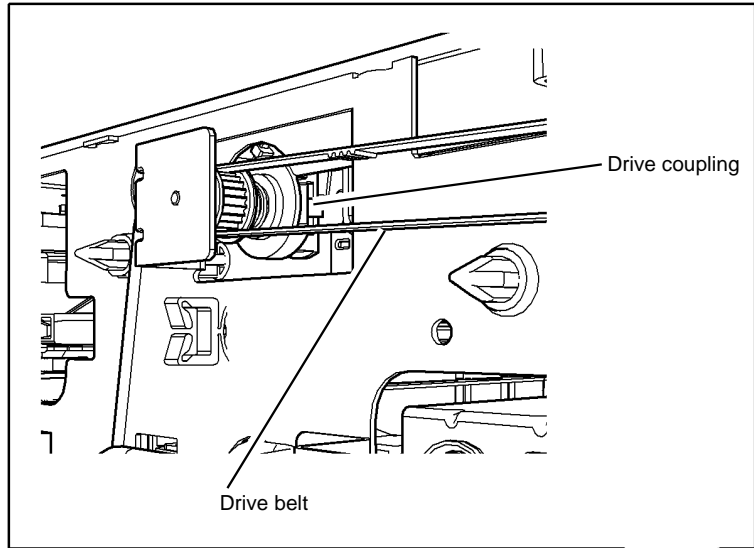
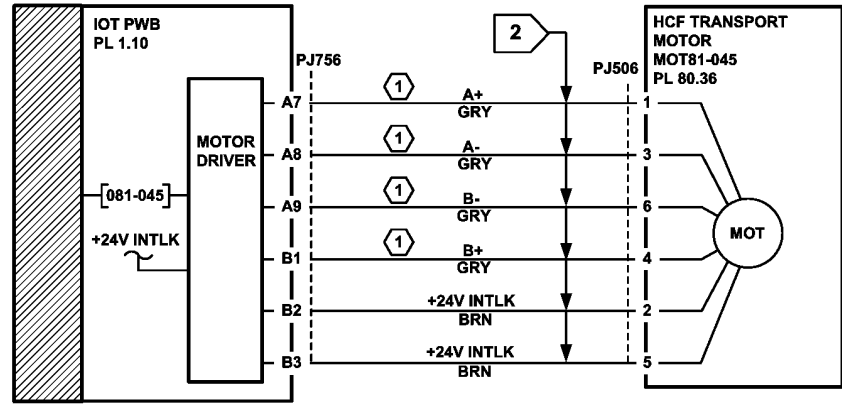
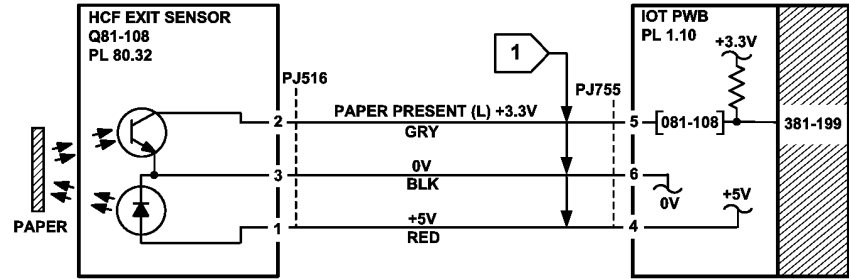
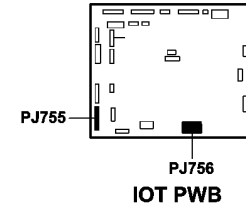


Figure 2 Component location

W-1-1275-A



1 DATA LINES A AND B PULSE BETWEEN 0V AND 24V WHEN THE MOTOR IS RUNNING



IOT PWB

Figure 3 Circuit diagram

TW-1-0321-A

## 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.

### 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 the machine status mode and check for the active messages. Refer to **OF4** Status Codes and Message RAP for the jam clearance procedure.
- 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 for paper or paper fragments in the locality of the registration transfer assembly, **PL 80.15** Item 1.
- Check for paper or paper fragments in the locality of the registration transport assembly, **PL 80.17** Item 10.
- Check for paper in the machine paper path at all the sensor locations.

### 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.

## 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.

## 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.

### 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 condition of the paper in all trays. Refer to [IQ1](#) and [GP 20](#).
- Check for paper in the inverter and duplex transport.
- Check for obstructions in the paper path.
- Check the diverter output guide is correctly installed, [PL 10.10 Item 3](#).
- Check for obstructions on the diverter output guide, [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



**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 centre exit cover [REP 28.1](#). Locate the inverter motor MOT10-030, [PL 10.11 Item 9](#). 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.

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.

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.**

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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.

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:

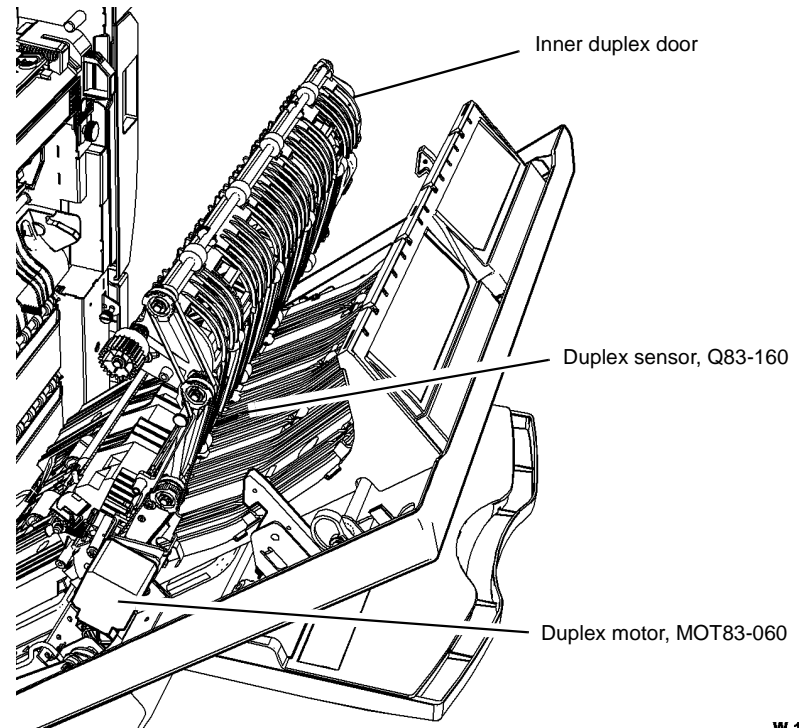
- [GP 10](#), How to Check a Motor.
- [P/J762](#), [IOT PWB](#).

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.



W-1-0179-A

Figure 1 Component location

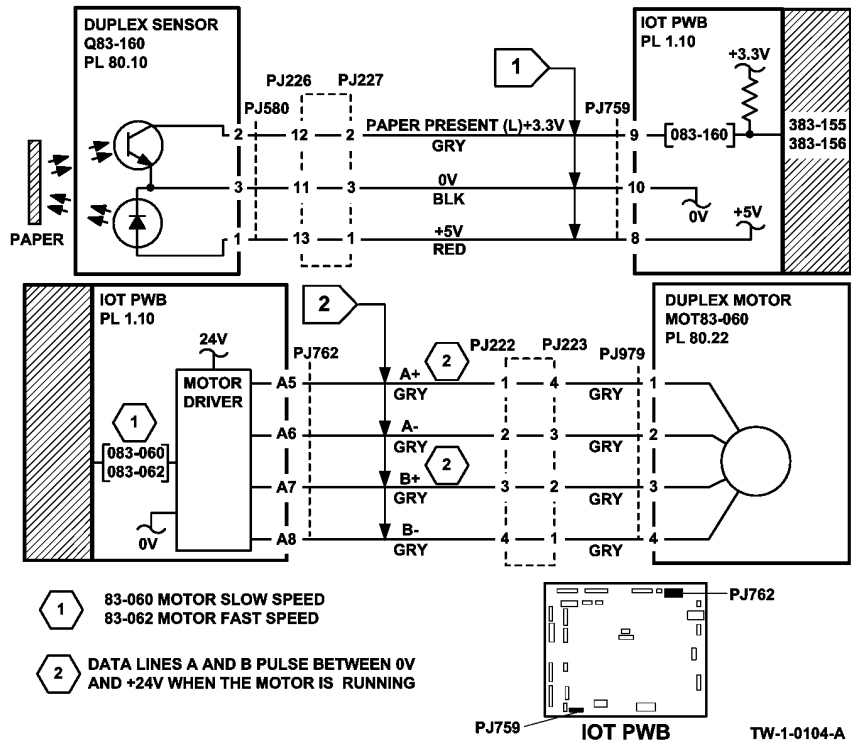


Figure 2 Circuit diagram

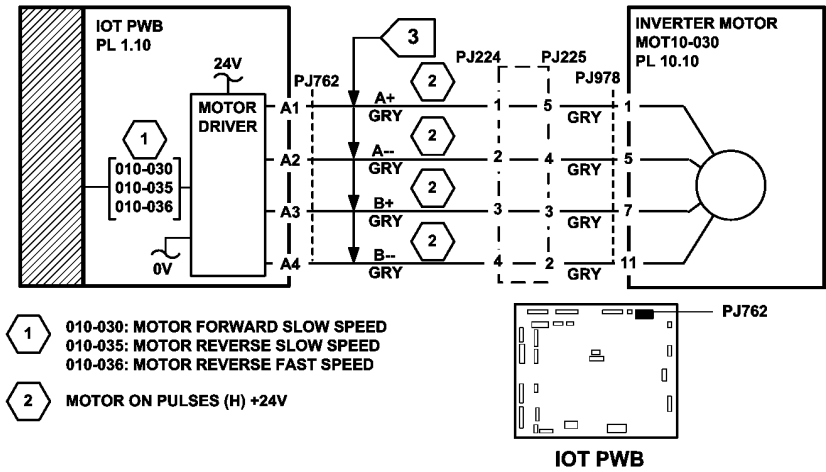
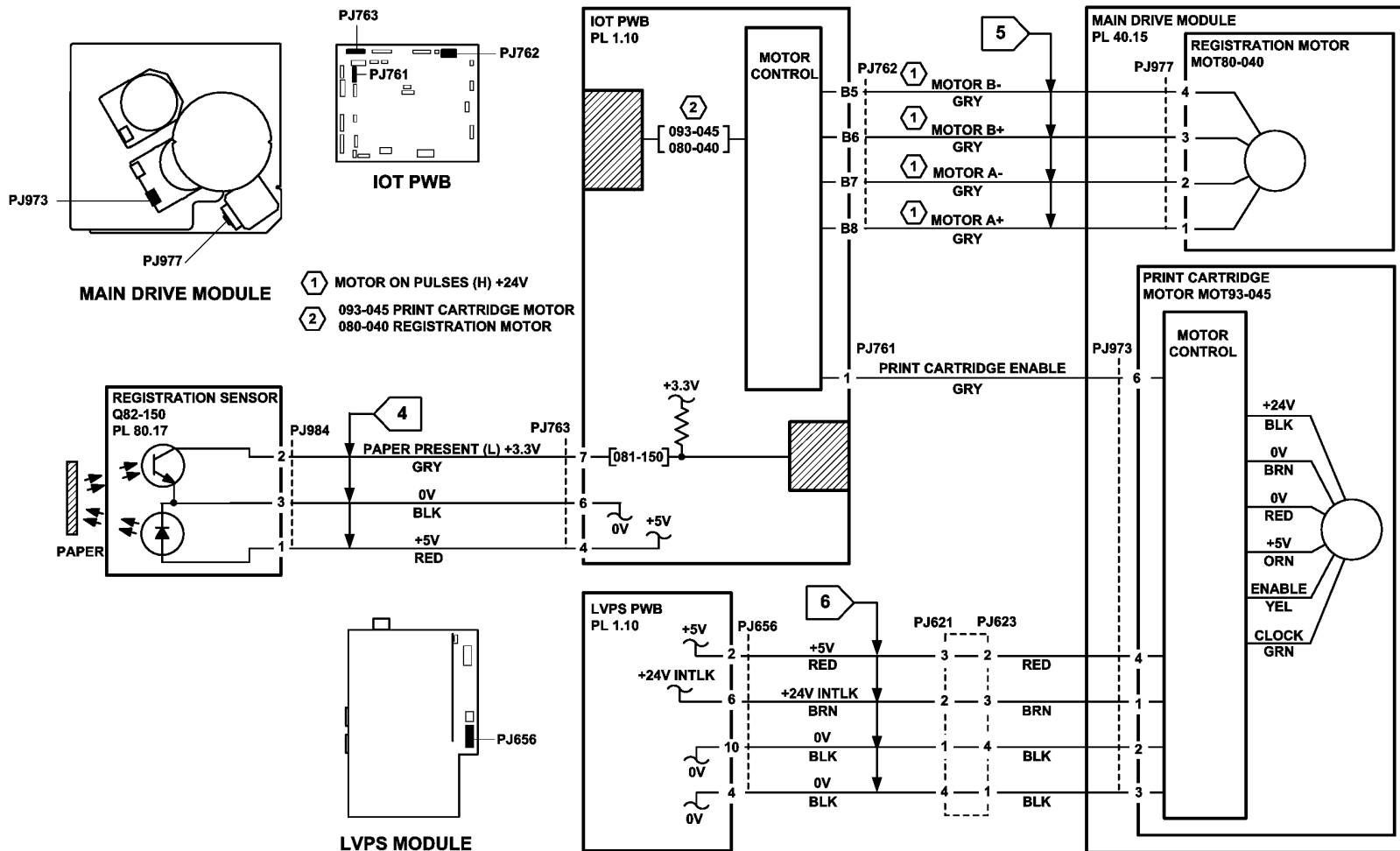


Figure 3 Circuit diagram



TW-1-0095-A

Figure 4 Circuit Diagram

## 383-157-00 Unexpected Sheet At Duplex Sensor RAP

**383-157-00** The IOT stray sheet detection mechanism detected an unexpected sheet of paper at the duplex sensor.

### 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 the machine status mode and check for the active messages. Refer to **OF4** Status Codes and Message RAP for the jam clearance procedure.
- Check for paper or paper fragments in the locality of the left door assembly, **PL 80.10** Item 1.
- Check for paper in the machine paper path at all the sensor locations.

### 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, 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.



### 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 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.

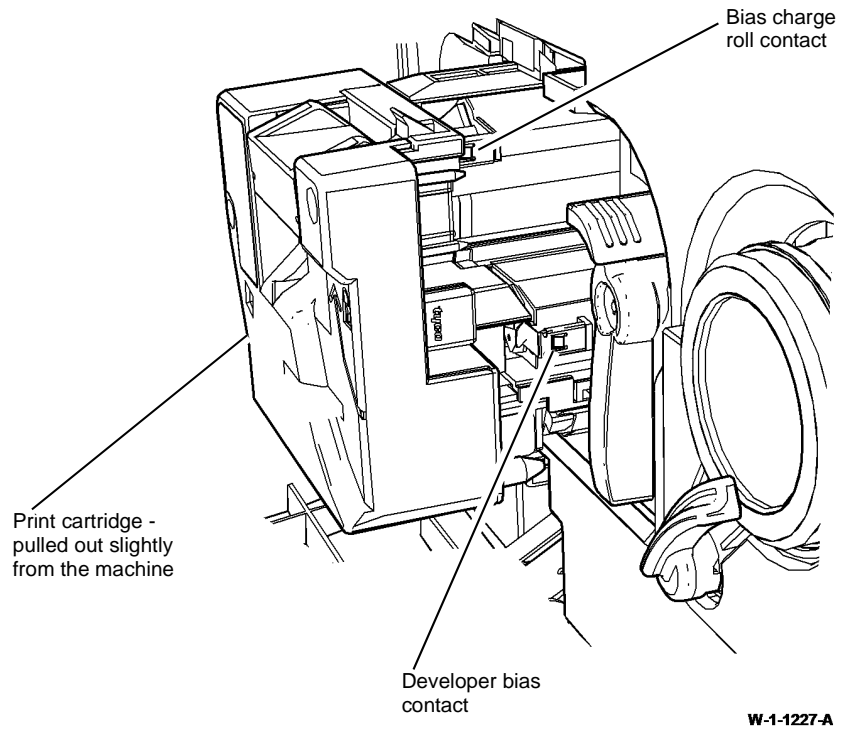


Figure 1 Component location

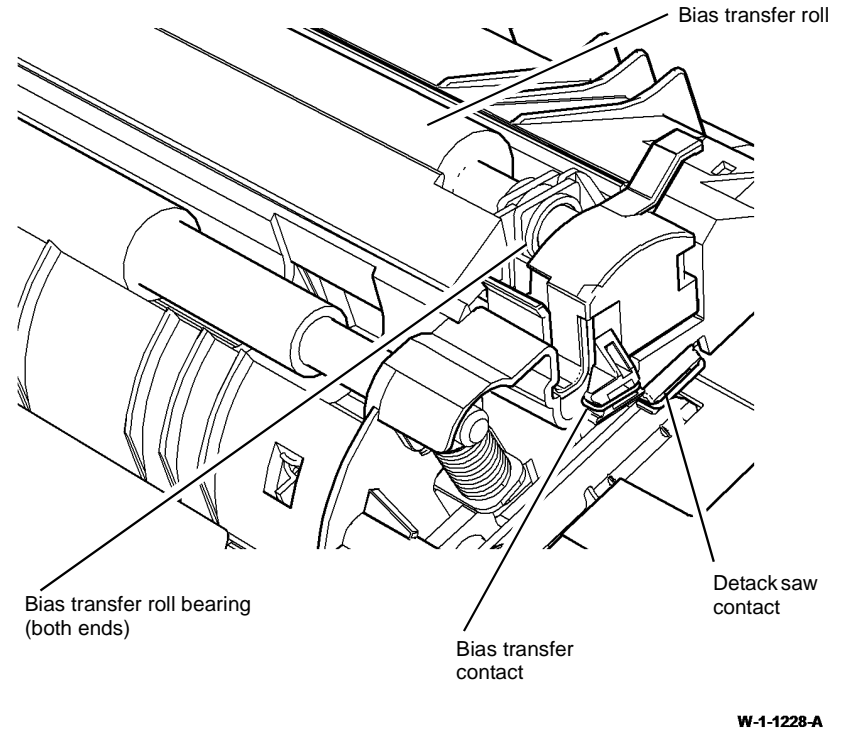


Figure 2 Component Location



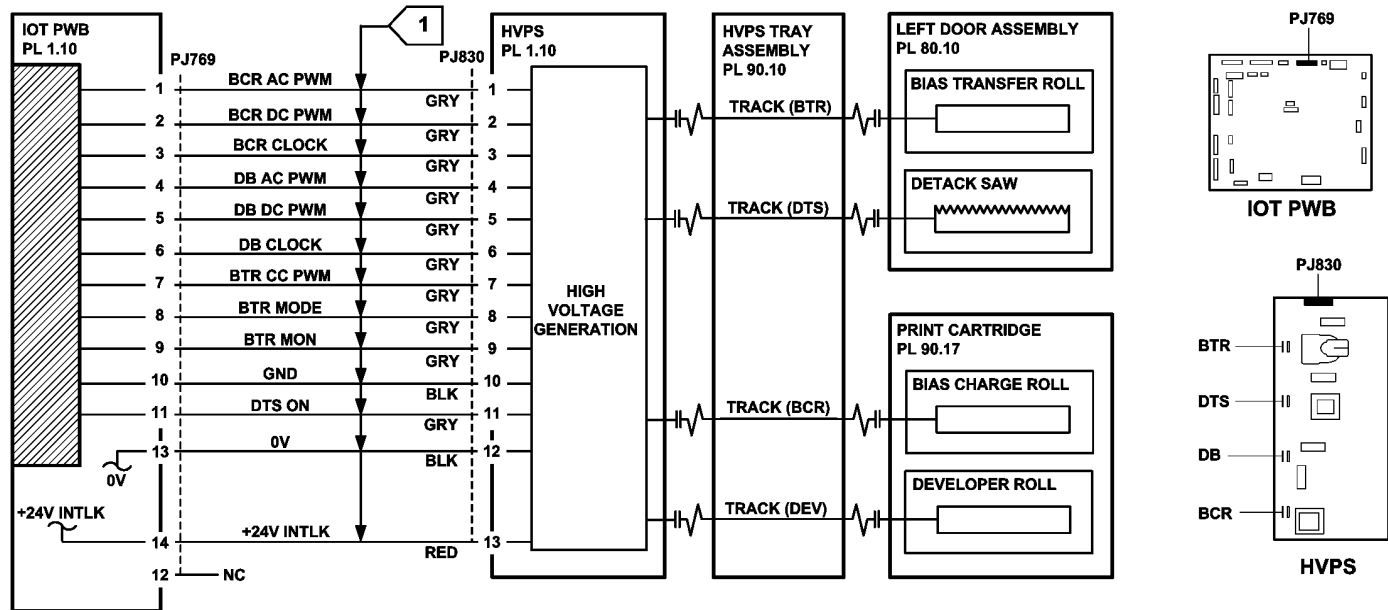


Figure 3 Circuit diagram

TW-1-0300-A

# 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.

## 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

Remove trays 1 and 2. Remove the tray 1 paper feed assembly, REP 80.1. 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. 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 80.17 Item 8. 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 80.17 Item 8.

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

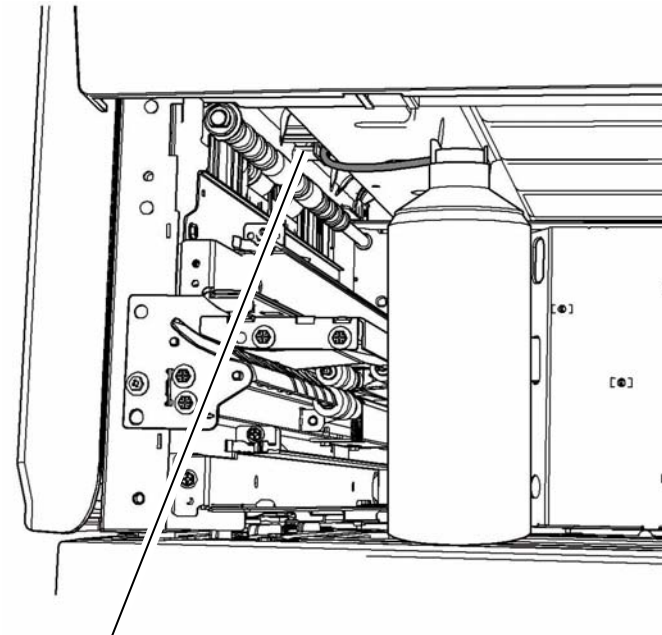
If the fault is intermittent, perform the steps that follow:

- 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.

W-1-1354-A

Figure 1 Component location

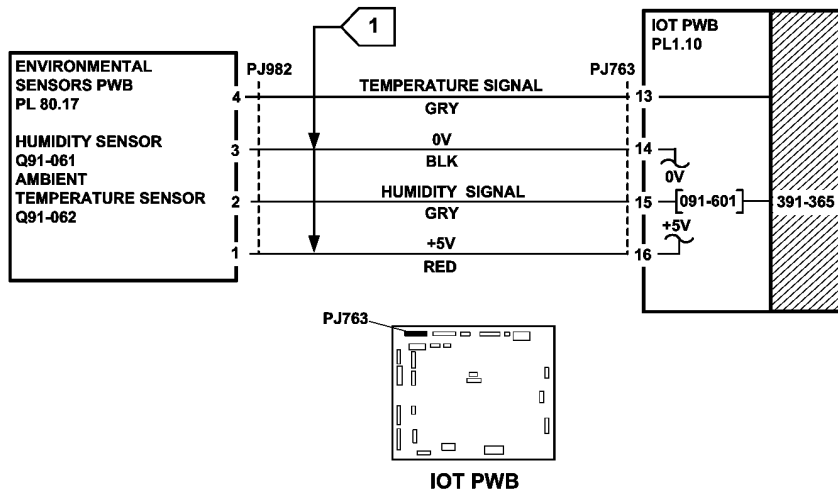


Figure 2 Circuit diagram

TW-1-0277-A

## 391-375-00 Ambient Temperature Sensor Failure RAP

391-375-00 The average ambient temperature was out of limits.

### 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.

### Procedure

Remove trays 1 and 2. Remove the tray 1 paper feed assembly, REP 80.1. 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. 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 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 80.17 Item 8. 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.

## 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

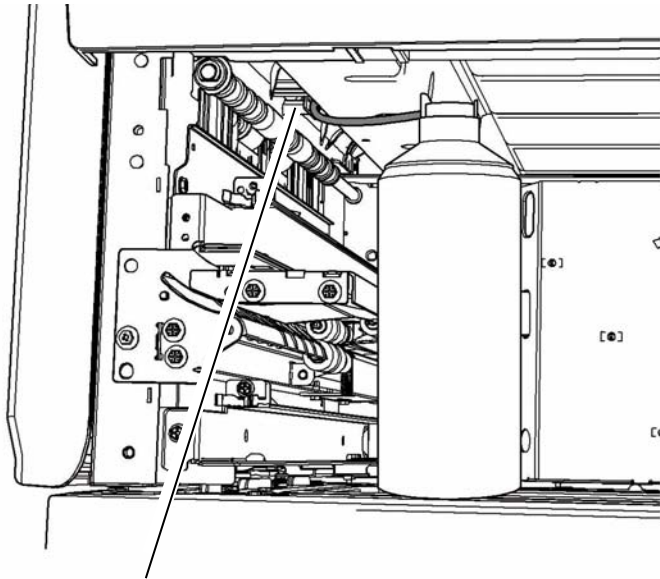


### WARNING

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:

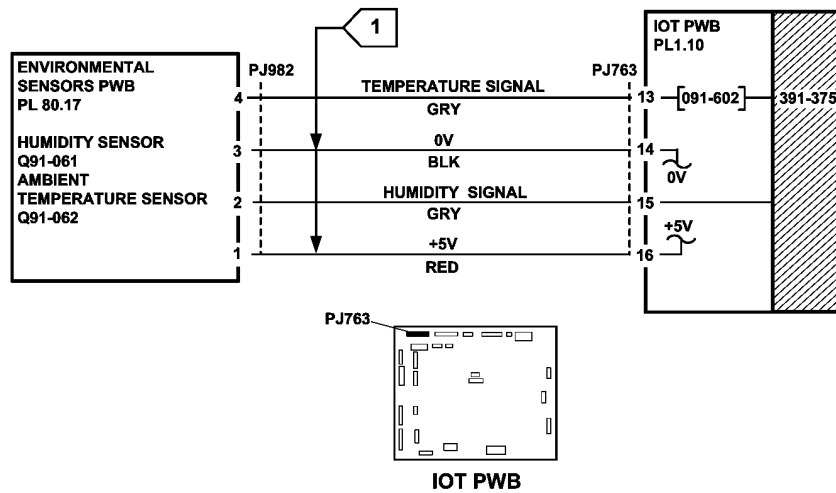
1. Check the print cartridge cooling fan, refer to the **OF6** Air Systems RAP.
2. Check the left door fans 1 and 2, refer to the **OF6** Air Systems RAP.
3. Ensure **dC131** NVM location 616-002 is set to default.
4. Check the temperature sensor, go to the **391-375-00** Ambient Temperature Sensor Failure RAP.



Ambient temperature sensor (Q91-062), part of the environmental sensors PWB.

W-1-1355-A

Figure 1 Component location



TW-1-0273-A

Figure 2 Circuit diagram

## 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.

### 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.

### 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 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**.

### Procedure

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.

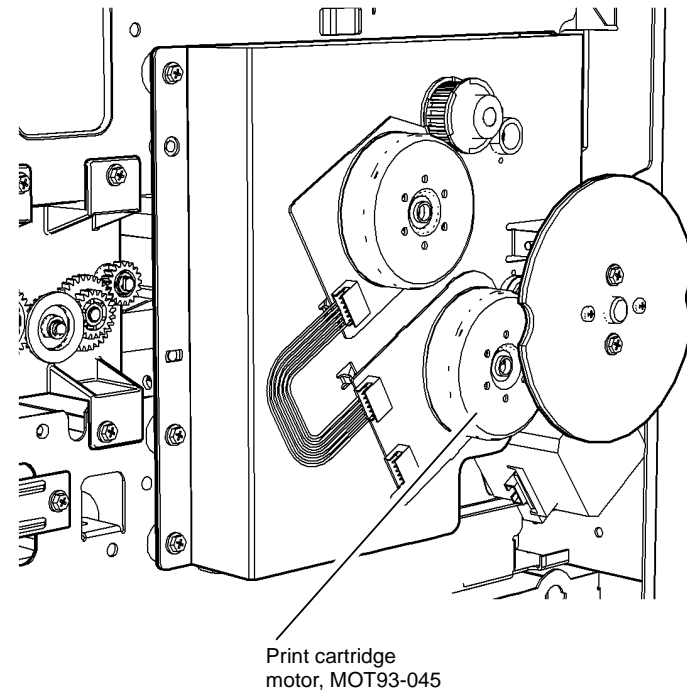
Refer to:

- [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.



W-1-1164-A

Figure 1 Component location

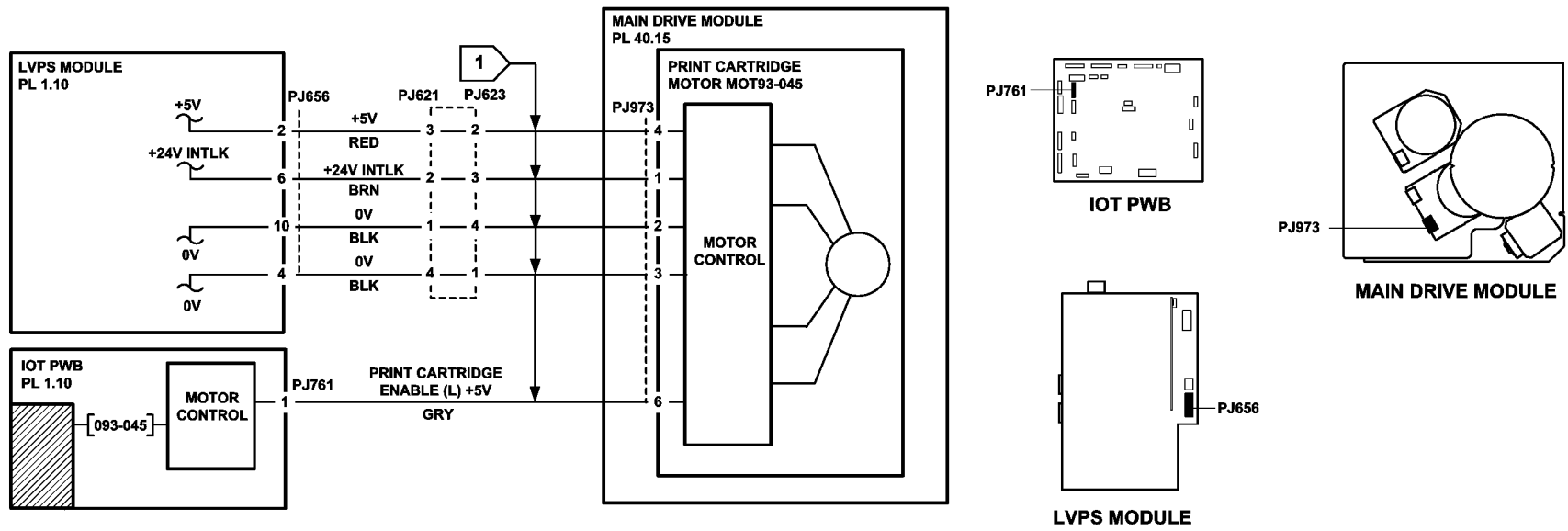


Figure 2 Circuit diagram

TW-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.

### 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 toner cartridge is not empty. If the toner cartridge is empty, install a new toner cartridge, PL 90.17 Item 2.
- Enter dC131 location 501-359 SystemLockoutFault. Set the value to 0.
- **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.
- Switch off, then switch on the machine, GP 14.

### Procedure

**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.

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.
- Ensure the print cartridge is correctly installed.
- If the fault persists, perform the OF7 IOT PWB Diagnostics RAP.



A  
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 **PJ512**. 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.
6. Check the image quality.
7. Reconnect **PJ512**.
8. Re-enter **dC131** location 501-230 TCHighCdEnable. Set the value 1.

### TC Increase Adjustment

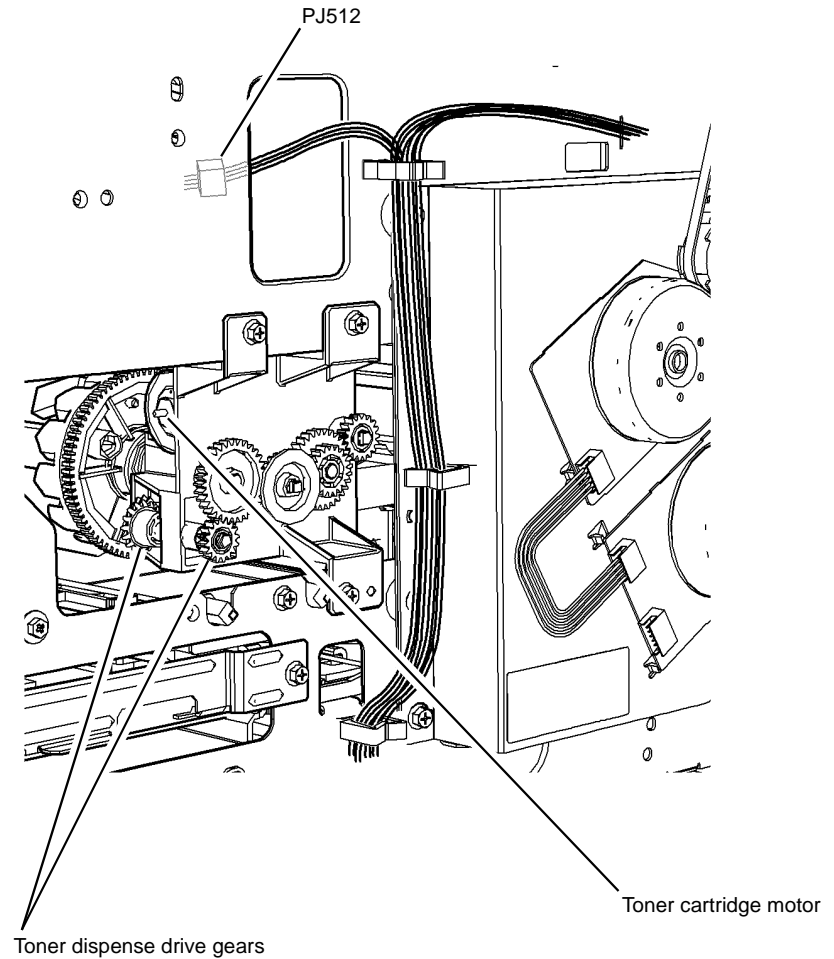
Perform the steps that follow:

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.
4. Check the image quality. Refer to **IQS 1 Solid Area Density and Tone Reproduction**.

### NVM Check

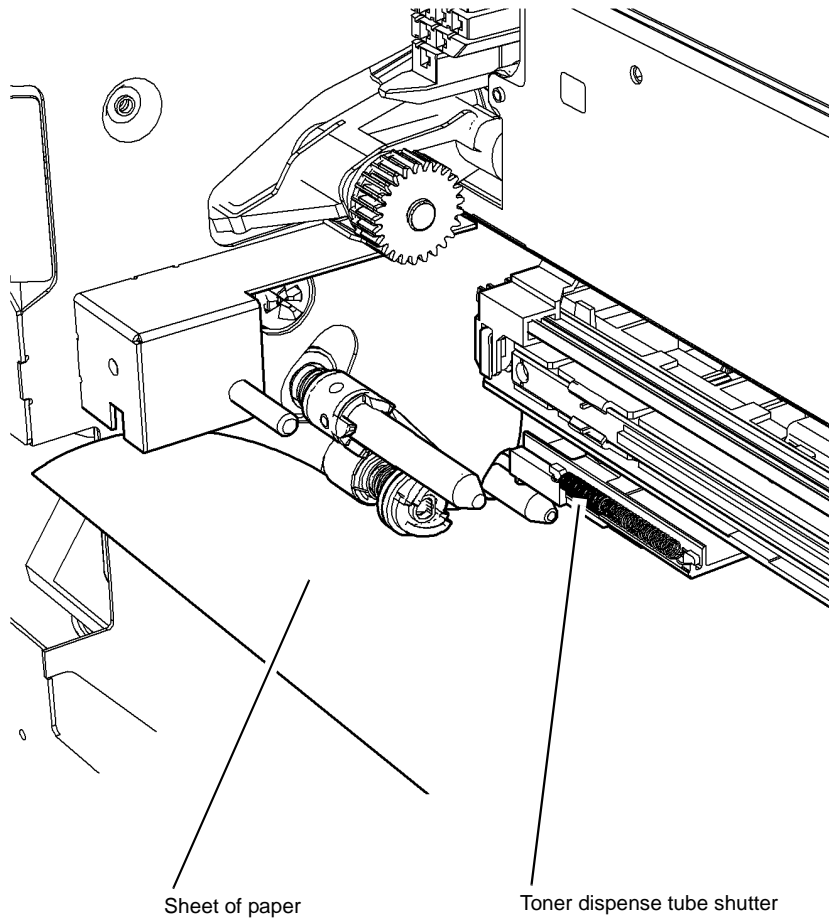
Enter **dC131**, ensure the NVM locations that follow are set as listed:

- 501-223 TcFailCyDnEn, set to 1.
- 501-229 TCLowCdEnable, set to 1.
- 501-230 TCHighCdEnable, set to 1.
- 501-359 SystemLockoutFault, set to 0.



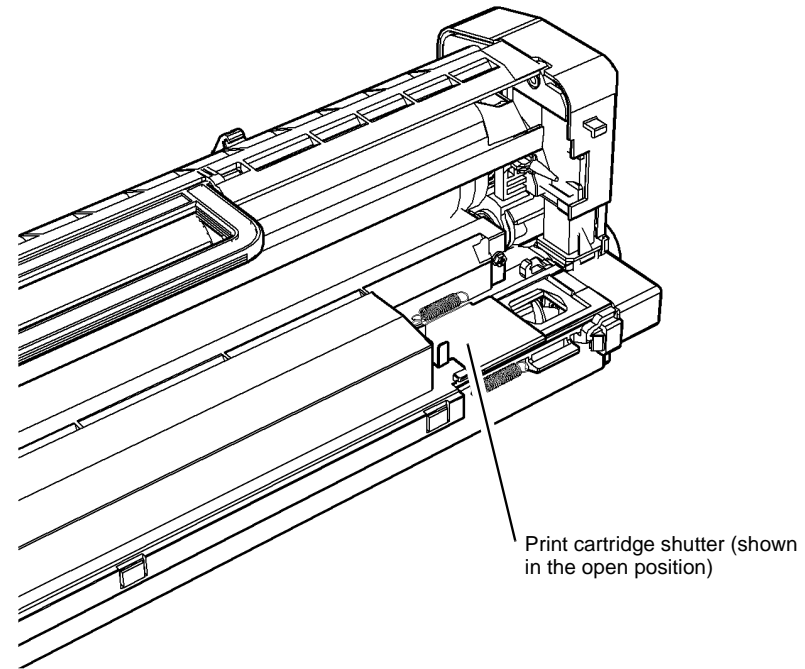
W-1-1098-A

Figure 1 Toner dispense module



W-1-1099-A

Figure 2 Toner dispense tube



W-1-1100-A

Figure 3 Print cartridge shutter

## 393-365-00 High AC Recovery RAP

393-365-00 The machine remained in high AC mode, dispensing toner, for more than 90 seconds.

### Initial Actions



**WARNING**

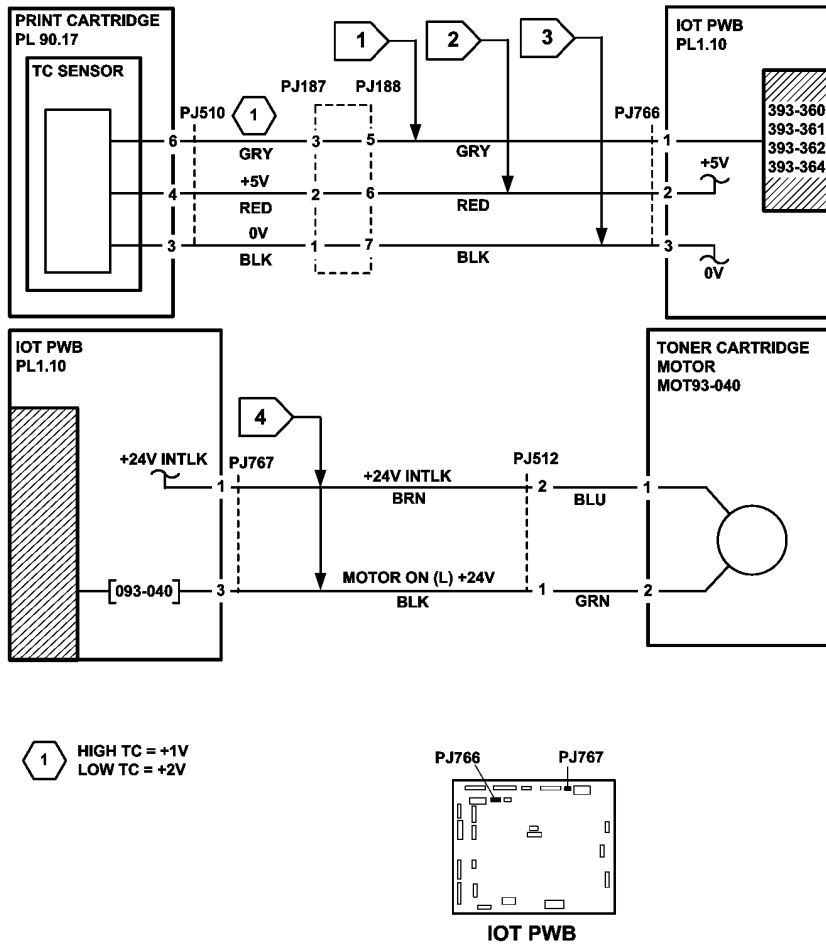
Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 14. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

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

### Procedure

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.



TW-1-0279-A

Figure 4 Circuit diagram

## 393-390-00 Toner Cartridge Empty RAP

393-390-00 Based on the toner concentration sensor reading, the toner cartridge is empty.

### 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 toner cartridge is not empty. If the toner cartridge is empty, 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.

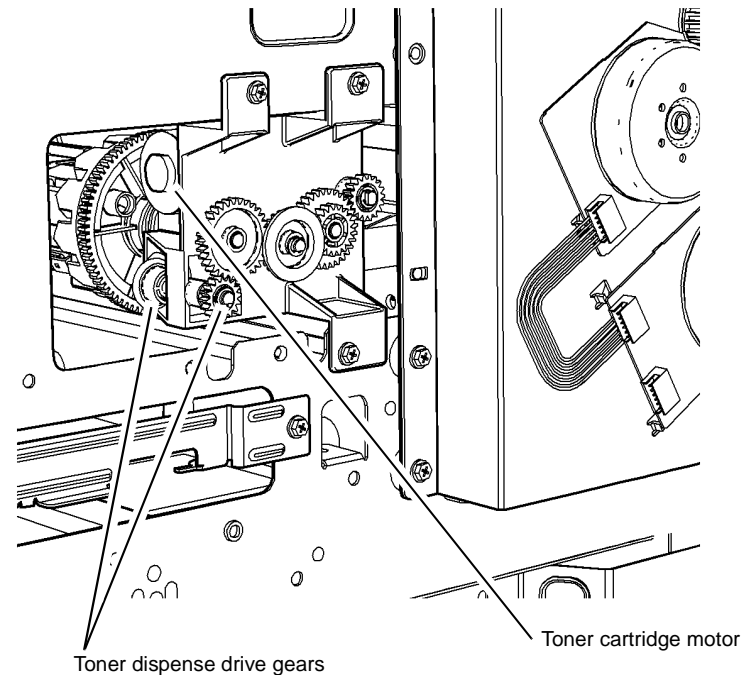
If necessary, install a new toner dispense module, PL 90.17 Item 1. If the fault persists, perform the OF7 IOT PWB Diagnostics RAP.

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 10.8 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.**

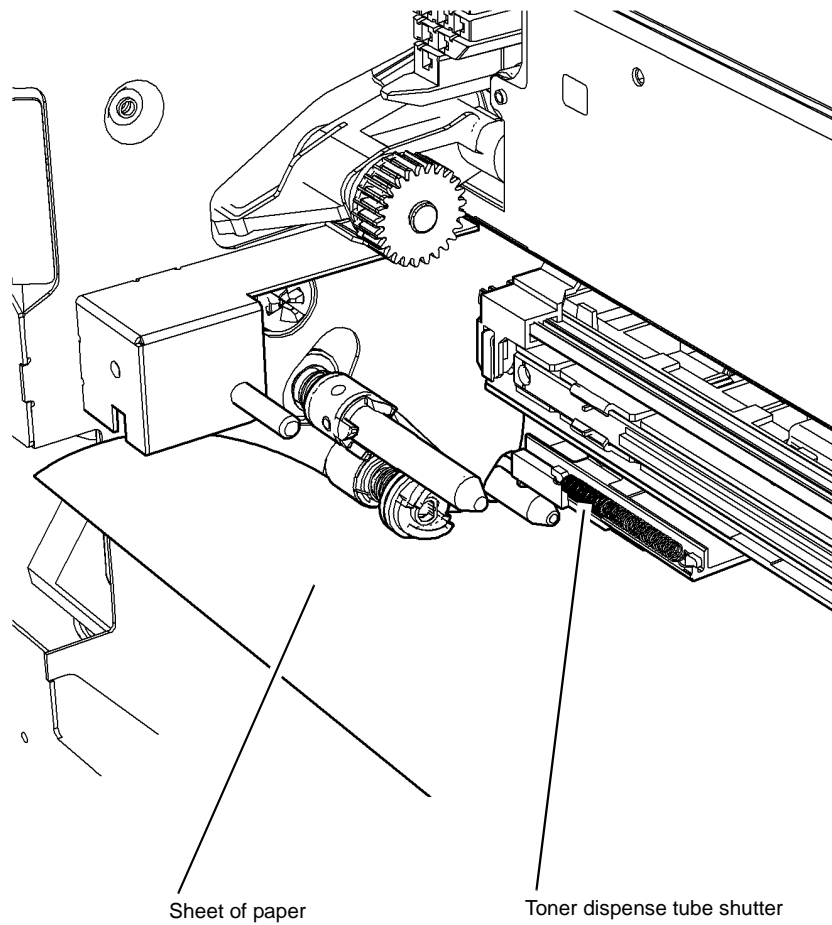
Y N  
Ensure the shutter on the toner dispense tube opens and closes correctly. If necessary, install a new toner dispense module, PL 90.17 Item 1.

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.



W-1-1101-A

Figure 1 Toner dispense module

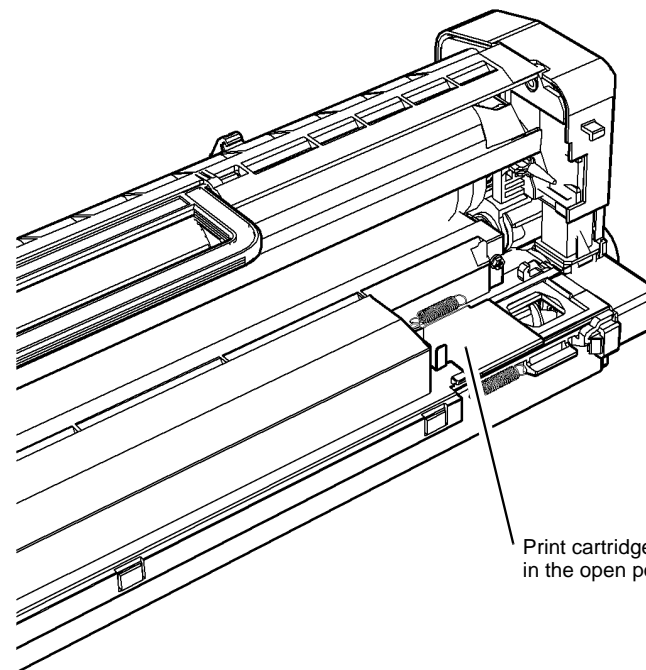


Sheet of paper

Toner dispense tube shutter

W-1-1102-A

Figure 2 Toner dispense tube



Print cartridge shutter (shown in the open position)

W-1-1103-A

Figure 3 Print cartridge shutter

## 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.

### 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](#).
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 Consumables Compatibility Information](#).

### How to Check the Service Plan

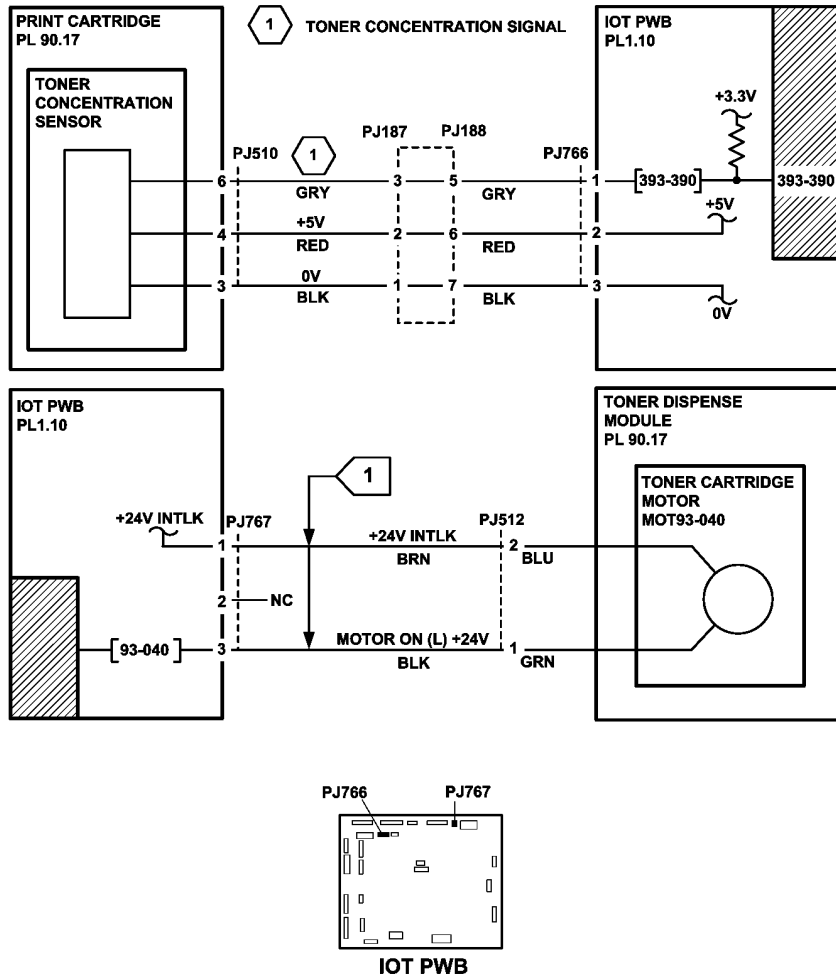
1. Enter Customer Administration Tools, [GP 24](#).
2. Select **Service Settings**.
3. Scroll down and select **Service Plan**.
4. The current service plan is displayed. Refer to [Table 1](#) for details. To change the service plan, refer to [How to Change the Service Plan](#).

**NOTE:** All new machines are configured to 'metered'. A customer with a sold plan should only have a new sold toner cartridge.

Table 1 Service plan

Service Plan Type	Service Plan Description
Sold	Xerox service agreement does not include the cost of the toner cartridge.
Metered	Xerox service agreement does include the cost of the toner cartridge.
Other	System will accept non-Xerox and OEM supplied toner cartridge with no CRUM.

**NOTE:** There is no communication with the CRUM when the system is configured to 'other' (3rd party).



TW-1-0276-A

Figure 4 Circuit diagram

## How to Change the Service Plan

1. Contact the market region technical specialist for a service plan authorization number.
2. Select the **Service Plan Authorization Number** entry field on the UI screen. Enter the authorization number.
3. Select **Change Service Plan**.
4. Select **Close**.
5. Exit Customer Administration Tools, [GP 24](#).
6. Check that the service plan is correct.

## 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.

**NOTE:** The toner cartridge PWB is not present on *W/TAG 013* machines.

### 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 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](#).

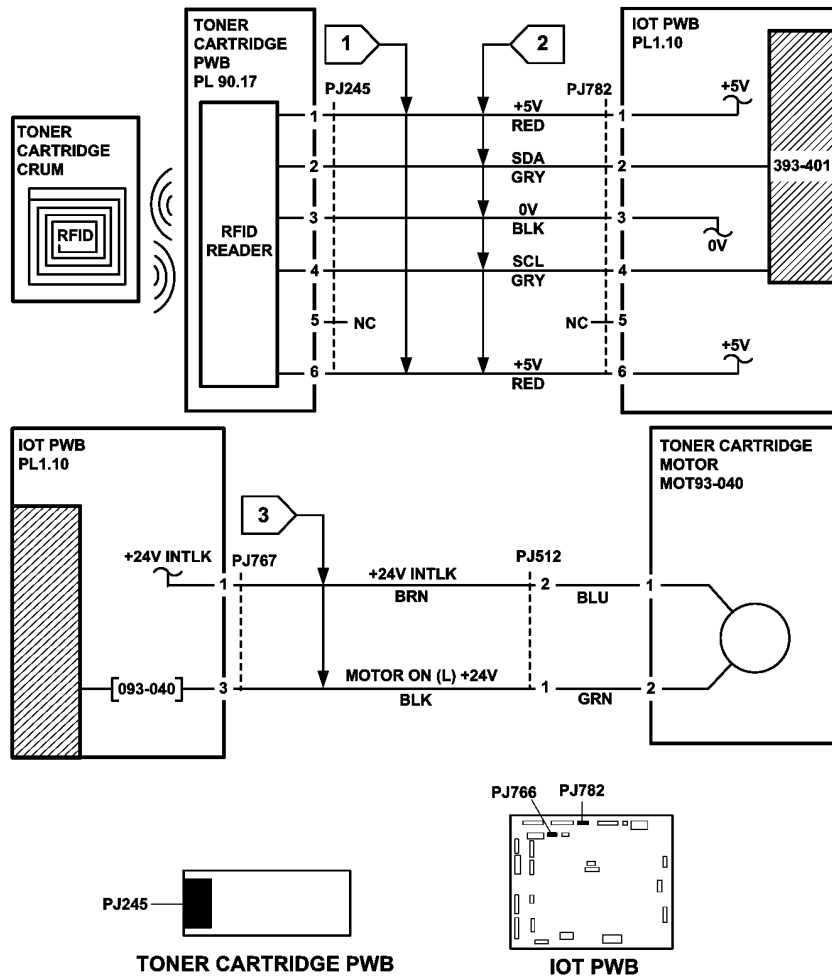
Remove the toner cartridge PWB cover, [PL 90.17 Item 11](#). Go to [Flag 2](#). Check the wiring between the toner cartridge PWB and [P/J782](#) on the [IOT PWB](#). **The wiring is good.**

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.



TW-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



#### 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. 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



#### 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. 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	<b>395-000-00 to 395-009-00</b> SBC Software Upgrade Errors 1 RAP
UI PWB	19	<b>395-011-00</b> UI Software Upgrade Errors RAP
SPDH PWB	228, 229	<b>395-228-00, 395-229-00</b> SPDH Software Upgrade Errors RAP
Fax	38	<b>395-038-00</b> Fax Software Upgrade Errors RAP
IOT PWB	40, 41, 42	<b>395-040-00 to 395-042-00</b> IOT Software Upgrade Errors RAP
2K LCSS PWB	60	<b>395-060-00</b> 2K LCSS Software Upgrade Errors RAP
Scanner PWB	155, 163, 164, 169, 227	<b>395-155-00 to 395-169-00</b> Scanner Software Upgrade Errors 1 RAP
LVF PWB	222	<b>395-222-00</b> LVF Software Upgrade Errors RAP
LVF BM PWB	224	<b>395-224-00</b> 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.
  - Xerographics.
  - Fuser Module.
  - Horizontal Transport.
  - 2K LCSS.
  - LVF 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 (centre output tray), or PL 10.12 Item 16 (horizontal transport).
  - 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 7 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.

## 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.

## 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 [312L-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.

## Scanner

Possible causes and potential solutions are:

- **Symptom: loud clicking noise.**

Possible causes are:

- The scanner transit lock is engaged.

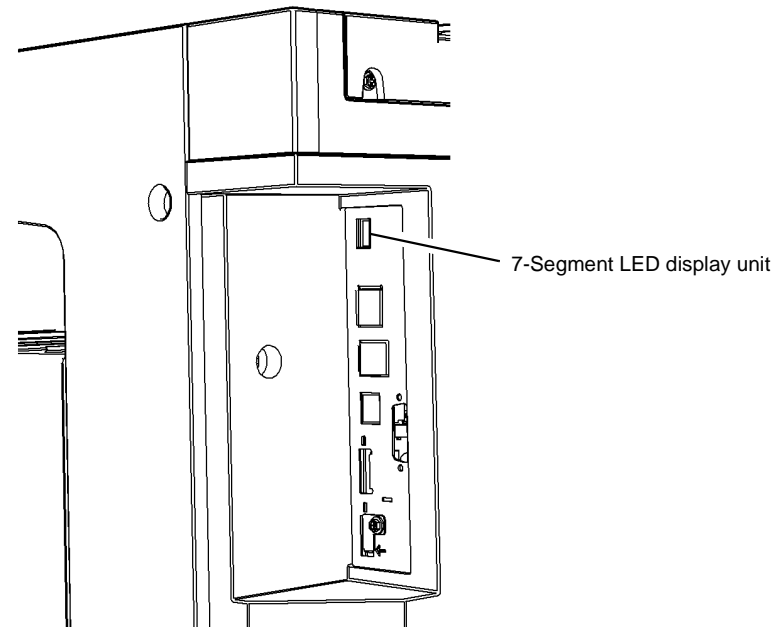
Potential solutions.

- 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](#).



W-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	Initial entry to kernel code	Flashing	In U-boot, no POST fault.	Install a new SD card, <b>PL 3.22 Item 6</b> .
1	PWB	Off	Failed explorer controller.	Install a new SBC PWB, <b>PL 3.22 Item 3</b> .
2	System memory	Flashing	Failed system memory.	Install a new SBC PWB, <b>PL 3.22 Item 3</b> .
3	EPC memory	Flashing	Failed EPC memory.	Install a new SBC PWB, <b>PL 3.22 Item 3</b> .
4	NVM	Flashing	Failed NVM memory.	Install a new SD card, <b>PL 3.22 Item 6</b> .
5	SD card	Flashing	Failed flash memory.	See NOTE 2.
6	External hard drive	Flashing	Failed hard drive.	Go to the <b>319-300-00 to 319-310-00</b> Hard Disk Drive Failure RAP.
7	RTC module	Flashing	Failed RTC.	Install a new SBC PWB, <b>PL 3.22 Item 3</b> .
8	Display test	On	Initial 7-segment display test.	Remove, then re-install the SD card, <b>PL 3.22 Item 6</b> . If the fault persists, see NOTE 2.
9	U-boot complete	Flashing	U-boot hand over control to kernel.	Reload the software, <b>GP 4</b> .
A	UI platform available	Flashing	UI platform available.	See NOTE 1. Reload the software, <b>GP 4</b> .

**Table 1 7-Segment LED display**

Fault Code	POST Code Name	Decimal Point Status	Code Description	Service Action
b	IIT comms established	Flashing	IIT comms established.	See NOTE 1. Reload the software, <b>GP 4</b> . If the fault persists, perform the <b>362-310-00</b> Scanner to SBC Communications Failure RAP.
C	NC platform available	Flashing	NC platform available.	See NOTE 1. Reload the software, <b>GP 4</b> .
d	DC platform available	Flashing	DC platform available.	See NOTE 1. Reload the software, <b>GP 4</b> .
E	IOT comms established	Flashing	IOT comms established.	See NOTE 1. Reload the software, <b>GP 4</b> . If the fault persists, perform the <b>303-316-00</b> CCM Cannot Communicate with IOT RAP.
F	Fax comms established	Flashing	Fax comms established. Only if Fax installed.	See NOTE 1. Reload the software, <b>GP 4</b> . If the fault persists, perform the <b>303-401-00, 303-403-00</b> Fax Not Detected RAP.
H	Machine attempting sleep wake-up	Flashing	OS resuming drivers.	Reload the software, <b>GP 4</b> . If the fault persists, install a new SBC PWB, <b>PL 3.22 Item 3</b> .
L	Machine attempting sleep entry	Flashing or off	OS suspending drivers, entering sleep.	Reload the software, <b>GP 4</b> . If the fault persists, install a new SBC PWB, <b>PL 3.22 Item 3</b> .
r	Machine in sleep state	Off	Resting in sleep.	None, for diagnostic information only.
t	Machine in semi-conscious state	Flashing	Running in semi-conscious mode.	Reload the software, <b>GP 4</b> . If the fault persists, install a new SBC PWB, <b>PL 3.22 Item 3</b> .
u	Kernel starting user space	Flashing	Kernel starting user space.	Go to the <b>319-300-00 to 319-310-00</b> Hard Disk Drive Failure RAP.

### NOTE:

1. During power up, the 7-segment display cycles, displaying these codes until the relevant platform has fully synchronized with the system. A code displayed after power up indicates this event has not been detected in software.
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.

## 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.*

Remove the rear cover, [PL 28.10 Item 1](#). Connect the main power cord to the machine and the customer's power outlet. **CR23, the top LED in the strip of LEDs at the middle right of the SBC PWB is the only illuminated LED (flashing).**

**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:

- 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, 303-800-00](#) IOT to Finisher Error RAP.
- If the SPDH failed to reset, perform the [362-399-00](#) SPDH to Scanner Data Cable Failure 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 pressing the Machine Status button on the keypad, selecting the Active Messages tab on the UI then selecting as appropriate:

- Faults and Alerts.
- Faults.
- Alerts.
- Fault History.

**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 <a href="#">301-300-00</a> 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 <a href="#">301-305-00</a> 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 <a href="#">301-305-00</a> 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.

**Table 1 01-5XX-XX Status codes**

Status Code	UI Message	Reason for Message	Reference/Action
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 <a href="#">371-500-00</a> 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 <a href="#">372-500-00</a> 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.

**Table 2 02-5XX-XX Status codes**

Status Code	UI Message	Reason for Message	Reference/Action
02-17-00	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.
02-20-00	The machine is not available	Software error has occurred.	Switch the machine off then on, <a href="#">GP 14</a> .
02-521-00	Extensible Services not available Power Off then On and Notify System.	XEIP browser is dead.	Perform the <a href="#">302-321-00</a> RAP.
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, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">302-390-00</a> 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, <a href="#">GP 14</a> .
03-504-01	The machine is offline.	NC status code.	Switch the machine off then on, <a href="#">GP 14</a> .
03-505-00	System error. Power Off then On and Notify System Administrator.	The machine is not available.	Perform the <a href="#">303-325-00</a> RAP and <a href="#">303-355-00</a> RAP.
03-518-00	Network Controller not available. Power Off then On and Notify System Administrator.	The network controller is not available.	Perform the <a href="#">303-331-00</a> , <a href="#">303-332-00</a> RAP.
03-20-00	-	CCM to UI communication not established in 30 sec.	Perform the <a href="#">303-346-00</a> , <a href="#">303-347-00</a> RAP.
03-521-00	-	CCM to UI communication are lost.	Perform the <a href="#">303-346-00</a> , <a href="#">303-347-00</a> 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, <a href="#">GP 4</a> . Refer to the <a href="#">303-417-00</a> 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, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">303-401-00</a> , <a href="#">303-403-00</a> 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 <a href="#">303-401-00</a> , <a href="#">303-403-00</a> RAP.

**Table 3 03-5XX-XX Status codes**

Status Code	UI Message	Reason for Message	Reference/Action
03-549-00	Fax memory error. Power Off then On and Notify System Administrator.	Fax POST failure status.	Switch the machine off, then on <b>GP 14</b> . If the fault persists, perform the <b>303-401-00, 303-403-00</b> RAP.
03-550-00	A Fax service error has occurred. Power Off then On.	Fax card is unavailable.	Switch the machine off then on, <b>GP 14</b> . If the fault persists, perform the <b>303-401-00, 303-403-00</b> 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, <b>GP 14</b> . If the fault persists, perform the <b>303-401-00, 303-403-00</b> RAP.
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 <b>dC301</b> . 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.
03-558-00	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 then On and Notify System Administrator.	Paper tray error.	Switch the machine off then on, GP 14.
03-581-00	System Error. Power Off then On and Notify System Administrator.	Paper tray error.	Switch the machine off then on, GP 14.
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.
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.

**Table 3 03-5XX-XX Status codes**

Status Code	UI Message	Reason for Message	Reference/Action
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.	IOT controller communication failure.	System fault. Switch the machine off then on, GP 14.
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 305-960-00 RAP.
05-330-00	Misfeed in the Document Feeder.	Jam in document feeder, feed sensor covered.	Perform the 305-962-00 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.

**Table 5 05-5XX-XX Status codes**

Status Code	UI Message	Reason for Message	Reference/Action
05-340-00	Misfeed in the Document Feeder.	Jam in document feeder, reg sensor covered.	Perform the <a href="#">305-340-00</a> , <a href="#">305-341-00</a> RAP
05-343-00	Misfeed in the Document Feeder.	Jam in document feeder, side 2 reg sensor covered.	Perform the <a href="#">305-342-00</a> , <a href="#">305-343-00</a> RAP
05-344-00	Misfeed in the Document Feeder.	Jam in document feeder, calibration home sensor covered.	Perform the <a href="#">305-959-00</a> 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 <a href="#">305-962-00</a> and <a href="#">305-335-00</a> , <a href="#">305-336-00</a> 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 <a href="#">305-962-00</a> , <a href="#">305-335-00</a> , <a href="#">305-336-00</a> , <a href="#">305-340-00</a> , <a href="#">305-341-00</a> or <a href="#">305-342-00</a> , <a href="#">305-343-00</a> 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 <a href="#">305-340-00</a> , <a href="#">305-341-00</a> and <a href="#">305-342-00</a> , <a href="#">305-343-00</a> RAP.
05-01-00	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 <a href="#">305-305-00</a> 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.
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 <a href="#">305-335-00</a> , <a href="#">305-336-00</a> , <a href="#">305-340-00</a> , <a href="#">305-341-00</a> or <a href="#">305-342-00</a> , <a href="#">305-343-00</a> RAP.

**Table 5 05-5XX-XX Status codes**

Status Code	UI Message	Reason for Message	Reference/Action
05-571-00	Original not fully inserted.	Document not fully inserted in the document feeder.	Remove any sheets from the document feeder to allow the device to initialize. Is necessary, perform the <a href="#">305-940-00</a> , <a href="#">305-966-00</a> RAP.

**Table 6 09-XXX Status codes**

Status Code	UI Message	Reason for Message	Reference/Action
09-521-00	Replace Print Cartridge (R2).	IOT detects a print cartridge failure.	Install a new print cartridge, <a href="#">PL 90.17 Item 9</a> .
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, <a href="#">PL 26.11 Item 3</a> .
09-588-00	Replace Toner Cartridge (R1).	Replace toner cartridge (R1).	Install new toner cartridge. If the fault persists perform <a href="#">393-390-00</a> 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, <a href="#">PL 10.8 Item 1</a> , but do not replace until prompted.
09-596-00	Toner control system failure.	Toner control system fault.	Switch off, then switch on the machine, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">393-360-00</a> to <a href="#">393-364-00</a> RAP.
09-597-00	Toner control system failure.	Toner control out of limits (high or low).	Perform the <a href="#">393-360-00</a> to <a href="#">393-364-00</a> RAP.
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 <a href="#">393-401-00</a> RAP.
09-676-00	-	Reorder toner cartridge (R1) but do not replace until prompted.	Order a toner cartridge, <a href="#">PL 90.17 Item 2</a> .
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 <a href="#">392-399-00</a> RAP.

**Table 6 09-XXX Status codes**

Status Code	UI Message	Reason for Message	Reference/Action
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 <a href="#">393-399-00</a> 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, <a href="#">PL 80.15 Item 3</a> , but do not replace until prompted.
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, <a href="#">PL 80.15 Item 3</a> .

**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 <a href="#">393-360-00</a> to <a href="#">393-364-00</a> 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 <a href="#">310-170-00</a> or <a href="#">310-171-00</a> RAP.
10-505-00	Please wait... Fuser is warming up.	Fuser is not at run temperature.	Perform the <a href="#">310-330-00</a> , <a href="#">310-340-00</a> RAP.

**Table 7 10-XXX-XX Status codes**

Status Code	UI Message	Reason for Message	Reference/Action
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 replacing.	Install a new fuser, <a href="#">PL 10.8 Item 1</a> .
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, <a href="#">PL 10.8 Item 1</a> , 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, <a href="#">dC134</a> . Install the correct fuser, <a href="#">PL 10.8 Item 1</a> .
10-547-00	Check Fuser is inserted correctly.	IOT is unable to read from the fuser CRUM. The fuser module is missing or not installed correctly.	Ensure the fuser module is correctly installed. If necessary, switch the machine off, <a href="#">GP 14</a> . Re-install the fuser then switch the machine on.
10-548-00	Check Print Cartridge is inserted correctly.	Print cartridge is missing or CRUM communications problems. The print cartridge is missing or not installed correctly.	Ensure the print cartridge is correctly installed. If necessary, switch the machine off, <a href="#">GP 14</a> . Re-install the print cartridge, then switch the machine on.
10-550-00	Printer failed to warm up.	Fuser warmup failure.	Perform the <a href="#">310-330-00</a> , <a href="#">310-340-00</a> Fuser Warm Up Failure RAP.
10-565-00	Paper Transport Cover is open.	Finisher paper transport cover is open.	Close the horizontal transport cover, <a href="#">PL 10.15 Item 11</a> .
10-73-00	Please wait... Printer is warming up.	Warming up.	No service action.
10-702-00	Centre Tray Offsetting is not available. Power Off then On and Notify System Administrator.	Offset motor offset fail.	Switch the machine off then on, <a href="#">GP 14</a> .

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 312-310-00-110, 312-312-00-110, 312-313-00-110 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 312-310-00-150, 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.
12-595-00	Jam in Horizontal Transport.	Paper covering the horizontal transport sensor.	Clear the jam. If the fault persists, perform the 310-170-00 or 310-171-00 RAP.
12-600-00	Finisher is not docked. Re-dock finisher now.	The 2K LCSS is not correctly docked. Printing has stopped.	Dock the output module. If the fault persists, perform the 312-310-00-110, 312-312-00-110, 312-313-00-110 RAP.
12-600-03	Finisher is not docked. Re-dock finisher now.	The LVF BM is not correctly docked. Printing has stopped.	Dock the output module. If the fault persists, perform the 312-310-00-150, 312-312-00-150, 312-313-00-150 RAP.
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 312-310-00-110, 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 312-310-00-150, 312-312-00-150, 312-313-00-150 RAP.
12-610-00	Paper Jam in the Finisher.	Paper is detected over the 2K LCSS entry sensor.	Clear the paper jam. If the fault persists, perform the 312-125-00-110, 312-199-00-110 RAP.

Table 8 12-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
12-610-03	Paper Jam in the Finisher.	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.
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.
12-618-03	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 stacker 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.
12-620-03	Paper Jam in the Finisher.	Paper is detected over the LVF BM stacker 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.
12-630-03	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.
12-636-03	Paper Jam in the Finisher.	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.

Table 8 12-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
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.
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, <a href="#">PL 12.365 Item 7</a> 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, <a href="#">PL 12.365 Item 7</a> or the LVF BM. Printing can continue, but stapled booklet making is unavailable.
12-644-03	-	The LVF booklet maker staple cartridge is empty.	Install a new booklet maker staple cartridge, <a href="#">PL 12.365 Item 7</a> .
12-649-00	The Hole Punch Waste Container is full. Empty the Hole Punch Waste Container.	The 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 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.	Stapling disabled, out of service.	Switch the machine off then on, <a href="#">GP 14</a> .
12-665-00	Finisher Main Tray is out of service. Power Off then On and Notify System Administrator.	Bin 1 out of service status.	Switch the machine off then on, <a href="#">GP 14</a> .
12-692-00	Finisher Top Tray is full. Empty Top Tray.	The finisher top tray is full.	Empty the top tray.
12-714-01	-	2K LCSS main staple cartridge is empty.	Install a new staple cartridge, <a href="#">PL 12.55 Item 7</a> .
12-714-03	-	LVF BM main staple cartridge is empty.	Install a new staple cartridge, <a href="#">PL 12.365 Item 7</a> .

Table 8 12-XXX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
12-715-00	Replace Staple Cartridge (R7).	The finisher's main staple cartridge is empty.	Install new staple cartridge, <a href="#">PL 12.55 Item 7</a> for the 2K LCSS, <a href="#">PL 12.365 Item 7</a> for the LVF BM.
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. <a href="#">PL 12.55 Item 7</a> for the 2K LCSS, <a href="#">PL 12.365 Item 7</a> for the LVF BM.
12-717-03	Paper Jam in the Finisher.	Sheet over the LVF BM compiler paper present sensor.	Clear the LVF BM paper present sensor area 6e. If the fault persists, perform the <a href="#">312-184-00-150</a> , <a href="#">312-494-00-150</a> , <a href="#">312-496-00-150</a> RAP.
12-720-00	Booklet Stapler not available. Power Off then On and Notify System Administrator.	Booklet making unavailable.	Switch the machine off then on, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">312-352-00-150</a> , <a href="#">312-353-00-150</a> RAP.
12-726-00	Booklet Stapler not available. Power Off then On and Notify System Administrator.	Failure of the booklet maker stapling functions.	Perform the <a href="#">312-352-00-150</a> , <a href="#">312-353-00-150</a> 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.
12-730-00	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.
12-734-00	Finisher Main Tray is nearly full.	Stacker tray bin is nearly full.	No action necessary.



**Table 8 12-XXX-XX Status codes**

Status Code	UI Message	Reason for Message	Reference/Action
12-740-00	Tray is ready for unloading. Press the button on Finisher to return tray to ready position.	Finisher tray is ready for unloading.	Follow the instructions to unload the tray.
12-741-00	Please wait... The output tray is lowering.	Finisher is about to go back on-line.	No action necessary.
12-742-00	Output Tray on-line.	Finisher has gone back on-line.	No action necessary.
12-762-00	Finisher Communications Error. Check Cabling. Power Off then On.	Communication failure between SBC and finisher.	Switch the machine off then on, <b>GP 14</b> . Check the finisher communication harness. If the fault persists, perform the <b>303-360-00, 303-800-00</b> RAP.
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, <b>GP 14</b> . 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, <b>GP 14</b> . If the fault persists, perform <b>312E-110</b> RAP for the 2K LCSS, <b>312E-150</b> RAP for the LVF BM.
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, <b>GP 14</b> . 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, <b>GP 14</b> . If the fault persists, perform <b>312-043-00-110, 312-046-00-110</b> RAP for the 2K LCSS, <b>312-043-00-150, 312-046-00-150</b> RAP for the LVF BM.
12-692-01	Output tray is full.	The centre output tray is full.	Empty the centre output tray.
12-729-01	Output tray is nearly full.	The centre output tray is nearly 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 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 <b>GP 14</b> . 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 <b>316E</b> 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, <b>GP 14</b> . All machine services are disabled.
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, <b>GP 14</b> . 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, <b>GP 14</b> . If the fault persists check the network connections.

Table 10 16-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
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.
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
16-513-00	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
16-17-00	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.
16-19-00	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.
16-20-00	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.
16-22-00	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, <a href="#">GP 14</a> .

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 <a href="#">316D</a> 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, <a href="#">GP 14</a> . 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, <a href="#">GP 14</a> .
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, <a href="#">GP 14</a> .

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.
16-91-00	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 <b>GP 14</b> . Copying and printing with local connections can continue. If the fault persists, perform the <b>316E</b> 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 <b>GP 14</b> . Printing can continue with other submission methods. If the fault persists, perform the <b>316E</b> 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, <b>GP 14</b> . Print and other machine services are unaffected. If the fault persists, perform the <b>316E</b> 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, <b>GP 14</b> . Print and other machine services are unaffected. If the fault persists, perform the <b>316E</b> 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, <b>GP 14</b> . Printing can continue with other job formats. If the fault persists, perform the <b>316E</b> 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, <b>GP 14</b> . Copy and fax services (if installed) can continue. If the fault persists, perform the <b>316E</b> 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, <b>GP 14</b> . Printing can continue with other submission methods. If the fault persists, perform the <b>316E</b> 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, <b>GP 14</b> .

**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, <b>GP 14</b> . 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, <b>GP 14</b> . 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, <b>GP 14</b> .
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.
17-551-00	Server Fax Service cannot Register. Power Off then On and Notify System Administrator.	Server fax service cannot register.	Switch the machine off then on, <b>GP 14</b> . Server fax is disabled, print and other machine services are unaffected. If the fault persists, perform the <b>316E</b> Network Fault Checkout RAP.
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, <b>GP 14</b> . Internet fax is disabled, print and other machine services are unaffected. If the fault persists, perform the <b>316E</b> Network Fault Checkout RAP.

Table 11 17-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
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, <b>GP 14</b> . Scan to e-mail is disabled, print and other machine services are unaffected. If the fault persists, perform the <b>316E</b> 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, <b>GP 14</b> . Server fax is disabled, print and other machine services are unaffected. If the fault persists, perform the <b>316E</b> 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, <b>GP 14</b> . Internet fax is disabled, print and other machine services are unaffected. If the fault persists, perform the <b>316E</b> 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, <b>GP 14</b> . Scan to e-mail is disabled, print and other machine services are unaffected. If the fault persists, perform the <b>316E</b> Network Fault Checkout RAP.
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, <b>GP 14</b> . Scan service is disabled, print and other machine services are unaffected. If the fault persists, perform the <b>316E</b> 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, <b>GP 14</b> . Scan service is disabled, print and other machine services are unaffected. If the fault persists, perform the <b>316E</b> 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, <b>GP 14</b> . Re-printing of saved jobs is disabled. If the fault persists, perform the <b>316E</b> Network Fault Checkout RAP.

Table 11 17-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
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 <b>316E</b> 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 <b>316E</b> 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, <b>GP 14</b> . Machine services are unaffected.
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.
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.
17-91-00	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.
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.

Table 12 19-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
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.
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.



Table 13 20-5XX-XX Status codes

Status Codes	UI Message	Reason for Message	Reference/Action
20-550-00	Fax line 2 is unavailable. Notify your System Administrator.	Extended fax card failure detected.	Switch the machine off then on, <b>GP 14</b> . 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, <b>GP 14</b> . Printing and other machine services are unaffected. If the fault persists, perform the <b>320-331-00, 320-338-00, 320-339-00, 320-341-00, 320-345-00</b> 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, <b>GP 14</b> . Printing and other machine services are unaffected. If the fault persists, perform the <b>320-322-00</b> 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, <b>GP 14</b> . Printing and other machine services are unaffected. If the fault persists, perform the <b>320-320-00</b> RAP.
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 <b>320-331-00, 320-338-00, 320-339-00, 320-341-00, 320-345-00</b> 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 <b>320-332-00, 320-340-00</b> 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, <b>GP 14</b> . Fax and LAN fax are disabled.

Table 13 20-5XX-XX Status codes

Status Codes	UI Message	Reason for Message	Reference/Action
20-570-00	Fax system error. Power Off then On and Notify System Administrator.	Fax service error.	Switch the machine off then on, <b>GP 14</b> . Fax and LAN fax are disabled. Printing and other machine services are unaffected.
20-71-00	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, <b>GP 14</b> . Fax and LAN fax are disabled. Printing and other machine services are unaffected. If the fault persists, perform the <b>320-331-00, 320-338-00, 320-339-00, 320-341-00, 320-345-00</b> RAP.
20-72-00	Fax line 2 is unavailable. Call for assistance.	Fax service error. Fax line 2 is unavailable.	Switch the machine off then on, <b>GP 14</b> . Fax and LAN fax are degraded. Printing and other machine services are unaffected. If the fault persists, perform the <b>320-332-00, 320-340-00</b> 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.
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, <b>GP 14</b> . Fax and LAN fax are disabled. Printing and other machine services are unaffected. If the fault persists, perform the <b>320-331-00, 320-338-00, 320-339-00, 320-341-00, 320-345-00</b> RAP.

Table 14 22-5XX-XX Status codes

Status Codes	UI Message	Reason for Message	Reference/Action
22-502-04	Select the Current Messages button in the Machine Status for more information.	An active message has been produced.	Go to the <b>Status</b> screen and select the <b>Faults</b> tab. Select the <b>Active Messages</b> 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.

Table 14 22-5XX-XX Status codes

Status Codes	UI Message	Reason for Message	Reference/Action
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 305-941-00 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.
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 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.
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 RAP.

Table 14 22-5XX-XX Status codes

Status Codes	UI Message	Reason for Message	Reference/Action
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.
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.
22-559-00	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.
22-563-00	System Error. Power Off then On and Notify System Administrator.	Incomplete system information.	Switch the machine off then on, GP 14.
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.

**Table 14 22-5XX-XX Status codes**

Status Codes	UI Message	Reason for Message	Reference/Action
22-567-00	The Fax Service cannot Un-Register. Notify your System Administrator.	Fax service cannot un-register.	Switch the machine off then on, <b>GP 14</b> . All machine services are disabled. If the fault persists, perform the <b>322-371-00, 322-372-00</b> 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.
22-72-00	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, <b>GP 14</b> . If the fault persists, perform the <b>303-405-00, 303-406-00</b> RAP.
22-580-00	Register for your Supplies Plan.	Service plan registration alert.	Perform the <b>322-360-00</b> RAP.
22-81-00	Enter an Activation Code for print services to become available.	Service plan is undetermined.	Perform the <b>322-360-00</b> 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, <b>GP 14</b> .

**Table 15 41-5XX-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, <b>GP 14</b> . If the fault persists, perform the <b>341-301</b> RAP.

**Table 16 6X-5XX-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, <b>GP 14</b> . If the fault persists, perform the <b>361-100-00</b> RAP.

**Table 17 7X-5XX-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 <b>371-500-00</b> RAP.
71-302-00	Check paper and close the tray.	Adjustable tray 1 is open.	Close the tray. If the fault persists, perform the <b>371-500-00</b> RAP.
71-313-00	Tray 1 is not available. Notify your System Administrator.	Mechanical failure for tray 1.	Switch the machine off, then on, <b>GP 14</b> .
71-530-00	Tray1 is empty. Add paper.	Tray 1 out of media.	Add paper to tray 1. If the fault persists, perform the <b>371A</b> RAP.
71-536-00	Tray 1 lifting.	Tray 1 lifting.	No service action required. Print and copy services can continue from other rays if the correct media is available. If the fault persists, perform the <b>371-100-00, 371-217-00</b> RAP.
72-301-00	Check paper and close the tray.	Dedicated tray 2 is open.	Close the tray. If the fault persists, perform <b>372-500-00</b> RAP.
72-302-00	Check paper and close the tray.	Adjustable tray 2 is open.	Close the tray. If the fault persists, perform <b>372-500-00</b> RAP.

**Table 17 7X-5XX-XX Status codes**

Status Code	UI Message	Reason for Message	Reference/Action
72-313-00	Tray 2 is not available. Notify your System Administrator.	Mechanical failure for tray 2.	Switch the machine off, then on, <a href="#">GP 14</a> .
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 <a href="#">371A RAP</a> .
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, <a href="#">372-100-00</a> , <a href="#">372-217-00</a> RAP.
73-301-00	Check paper and close the tray.	Dedicated tray 3 is open.	Close the tray. If the fault persists, perform the <a href="#">373-500-00</a> RAP.
73-313-00	Tray 3 is not available. Notify your System Administrator.	Mechanical failure for tray 3.	Switch the machine off, then on, <a href="#">GP 14</a> .
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 <a href="#">373B RAP</a> .
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 <a href="#">373-100-00</a> , <a href="#">373-217-00</a> RAP.
74-102-00	Misfeed in Tray 4.	Misfeed in tray 4.	Clear the paper jam.
74-115-00	Misfeed in Tray 4.	Paper jam in tray 4.	Clear the paper jam.
74-116-00	Misfeed in Tray 4.	Paper over HCF exit sensor.	Clear the paper jam.
74-301-00	Check paper and close the tray.	Tray 4 is open.	Close tray 4.
74-313-00	Tray 4 is not available. Notify your System Administrator.	Mechanical failure for tray 4.	Switch the machine off, then on, <a href="#">GP 14</a> .
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 <a href="#">374B RAP</a> .
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 <a href="#">374-100-00</a> , <a href="#">374-217-00</a> RAP.

**Table 17 7X-5XX-XX Status codes**

Status Code	UI Message	Reason for Message	Reference/Action
75-150-00	Tray 5 is not available. Empty and reload.	A paper jam has occurred after feeding from the bypass tray.	Remove, then reload the media in the bypass tray.
75-313-00	Tray 5 is not available. Notify your System Administrator.	Mechanical failure of the bypass tray.	Switch the machine off, then on, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">375A RAP</a> .
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 <a href="#">375A RAP</a> .

**Table 18 8X-5XX-XX Status codes**

Status Code	UI Message	Reason for Message	Reference/Action
81-200-00	Paper Jam behind the Left Side Door.	Jam in left door when sheets fed from trays 1-5.	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 1-5.	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.
81-204-00	Misfeed in Tray 4.	Misfeed in tray 4.	Clear the paper jam in tray 4.
81-204-00	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 initialisation.	No service action required, please wait. If the fault persists, switch the machine off, then on, <a href="#">GP 14</a> .

## 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 1 to 9 and A to F.
- [Table 2](#) Status Messages G to N.
- [Table 3](#) Status Messages O to R.
- [Table 4](#) Status Messages S to X.

Table 19 Chain 9X-5XX-XX Status codes

Status Code	UI Message	Reason for Message	Reference/Action
91-366-00	IOT Environmental Temperature out of limits.	IOT humidity sensor Averaged reading out of limits.	Perform the <a href="#">391-375-00</a> RAP.
91-376-00	IOT Environmental Humidity out of limits.	IOT temperature sensor averaged reading out of limits.	Perform the <a href="#">391-365-00</a> 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 <a href="#">391-377-00</a> Print Cartridge Cooling Failure RAP.
91-400-00	Please wait...Print Engine cooling in progress.	Print cartridge cooling fan is on.	No service action required.

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, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">303-401-00</a> , <a href="#">303-403-00</a> RAP.
A Fax service error has occurred. Power Off then On.	03-550-00	Fax card is unavailable.	Switch the machine off then on, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">303-401-00</a> , <a href="#">303-403-00</a> 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, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">303-401-00</a> , <a href="#">303-403-00</a> 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
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, <a href="#">GP 14</a> . 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 <a href="#">319-409-00</a> RAP
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.

**Table 1 Status messages A to F**

UI Message	Status Code	Reason for Message	Reference/Action
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 <b>dC131</b> 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 <b>dC131</b> 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, <b>GP 14</b> . Printing can continue if other network protocols are used.
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, <b>PL 12.365 Item 7</b> for the LVF BM.
Booklet Stapler not available. Power Off then On and Notify System Administrator.	12-720-00	Booklet making unavailable.	Switch the machine off then on, <b>GP 14</b> . If the fault persists, perform the <b>312-352-00-150, 312-353-00-150</b> RAP.
Booklet Stapler not available. Power Off then On and Notify System Administrator.	12-726-00	Failure of the booklet maker stapling functions.	Perform the <b>312-352-00-150, 312-353-00-150</b> RAP.
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, <b>GP 14</b> .

**Table 1 Status messages A to F**

UI Message	Status Code	Reason for Message	Reference/Action
Check Fuser is inserted correctly.	10-547-00	IOT is unable to read from the fuser CRUM. The fuser module is missing or not installed correctly.	Ensure the fuser module is correctly installed. If necessary, switch the machine off, <b>GP 14</b> . Re-install the fuser then switch the machine on.
Check paper and close the tray.	71-301-00	Dedicated tray 1 is open.	Close the tray. If the fault persists, perform the <b>371-500-00</b> RAP.
Check paper and close the tray.	71-302-00	Adjustable tray 1 is open.	Close the tray. If the fault persists, perform the <b>371-500-00</b> RAP.
Check paper and close the tray.	72-301-00	Dedicated tray 2 is open.	Close the tray. If the fault persists, perform <b>372-500-00</b> RAP.
Check paper and close the tray.	72-302-00	Adjustable tray 2 is open.	Close the tray. If the fault persists, perform <b>372-500-00</b> RAP.
Check paper and close the tray.	73-301-00	Tray 3 is open.	Close the tray. If the fault persists, perform the <b>373-500-00</b> RAP.
Check paper and close the tray.	74-301-00	Tray 4 is open.	Close tray 4.
Check Print Cartridge is inserted correctly.	10-548-00	Print cartridge is missing or CRUM communications problems. The print cartridge is missing or not installed correctly.	Ensure the print cartridge is correctly installed. If necessary, switch the machine off, <b>GP 14</b> . Re-install the print cartridge, then switch the machine on.
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.
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 <b>312-310-00-110, 312-312-00-110, 312-313-00-110</b> 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 <b>312-310-00-150, 312-312-00-150, 312-313-00-150</b> RAP.
Configuration mismatch.	19-550-00	The single board controller cannot access the EPC memory or the image disk.	Switch the machine off then on, <b>GP 14</b> . Install a new memory module, <b>PL 3.22 Item 11</b> . Install a new hard disk drive, <b>PL 3.22 Item 2</b> . Install a new single board control PWB, <b>PL 3.22 Item 3</b> .

Table 1 Status messages A to F

UI Message	Status Code	Reason for Message	Reference/Action
Configuration Parameter error.	22-557-00	Serial number sync failure, power on failed.	Switch the machine off then on, <b>GP 14</b> . Go to <b>dC132</b> , check the serial number is correct. Enter <b>dC131</b> NVM ID 616-003, check the machine configuration. Perform the <b>303-405-00, 303-406-00</b> RAP.
Contact System Administrator to enter activation code.	22-583-00	Service plan registration expiration warning.	Enter the registration code.
DHCPv6 services are not available. Notify your System Administrator.	17-512-00	DHCPv6 failure status.	Switch the machine off then on, <b>GP 14</b> . Printing can continue with other submission methods.
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, <b>GP 14</b> .
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, <b>GP 14</b> . 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, <b>GP 14</b> . Scan to e-mail is disabled, print and other machine services are unaffected. If the fault persists, perform the <b>316E</b> Network Fault Check-out RAP.
Empty the Hole Punch Waste Container.	12-649-00	The 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.
Empty the Hole Punch Waste Container.	12-649-01	The 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.

Table 1 Status messages A to F

UI Message	Status Code	Reason for Message	Reference/Action
Ensure the USB Wireless Network Interface is properly connected.	16-540-00	USB wireless network not connected.	Perform the <b>316D</b> RAP.
Enter an Activation Code for print services to become available.	22-581-00	Service plan is undetermined.	Perform the <b>322-360-00</b> RAP.
Enter your access code or the current job may be deleted.	03-559-02	Walk up code entered 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.
Extensible Services are not responding. Power machine Off then On.	17-565-00	XEIP service not responding.	Switch the machine off then on, <b>GP 14</b> . Machine services are unaffected.
Extensible Services not available Power Off then On and Notify System Administrator.	02-521-00	XEIP browser is dead.	Perform the <b>302-321-00</b> 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, <b>GP 14</b> . 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, <b>GP 14</b> . Fax and LAN fax are disabled. Printing and other machine services are unaffected. If the fault persists, perform the <b>320-331-00, 320-338-00, 320-339-00, 320-341-00, 320-345-00</b> RAP.

Table 1 Status messages A to F

UI Message	Status Code	Reason for Message	Reference/Action
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 <a href="#">320-331-00</a> , <a href="#">320-338-00</a> , <a href="#">320-339-00</a> , <a href="#">320-341-00</a> , <a href="#">320-345-00</a> RAP.
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, <a href="#">GP 14</a> . Fax and LAN fax are degraded. Printing and other machine services are unaffected. If the fault persists, perform the <a href="#">320-332-00</a> , <a href="#">320-340-00</a> 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 <a href="#">320-332-00</a> , <a href="#">320-340-00</a> 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 <a href="#">303-401-00</a> , <a href="#">303-403-00</a> RAP.
Fax line 2 is unavailable. Notify your System Administrator.	20-550-00	Extended fax card failure detected.	Switch the machine off then on, <a href="#">GP 14</a> . 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 <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">303-401-00</a> , <a href="#">303-403-00</a> 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, <a href="#">GP 14</a> . Fax and LAN fax are disabled. Printing and other machine services are unaffected. If the fault persists, perform the <a href="#">320-323-00</a> , <a href="#">320-324-00</a> RAP

Table 1 Status messages A to F

UI Message	Status Code	Reason for Message	Reference/Action
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 <a href="#">320-323-00</a> , <a href="#">320-324-00</a> 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.
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, <a href="#">GP 14</a> . Printing and other machine services are unaffected. If the fault persists, perform the <a href="#">320-331-00</a> , <a href="#">320-338-00</a> , <a href="#">320-339-00</a> , <a href="#">320-341-00</a> , <a href="#">320-345-00</a> 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, <a href="#">GP 14</a> . Printing and other machine services are unaffected. If the fault persists, perform the <a href="#">320-322-00</a> 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, <a href="#">GP 14</a> . Printing and other machine services are unaffected. If the fault persists, perform the <a href="#">320-320-00</a> RAP.
Fax system error. Power Off then On and Notify System Administrator.	20-570-00	Fax service error.	Switch the machine off then on, <a href="#">GP 14</a> . 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, <a href="#">GP 14</a> . Fax and LAN fax are disabled. Printing and other machine services are unaffected. If the fault persists, perform the <a href="#">320-331-00</a> , <a href="#">320-338-00</a> , <a href="#">320-339-00</a> , <a href="#">320-341-00</a> , <a href="#">320-345-00</a> RAP.



**Table 1 Status messages A to F**

UI Message	Status Code	Reason for Message	Reference/Action
Finisher Communications Error. Check Cabling. Power Off then On.	12-762-00	Communication failure between SBC and finisher.	Switch the machine off then on, <a href="#">GP 14</a> . Check the finisher communication harness. If the fault persists, perform the <a href="#">303-360-00</a> , <a href="#">303-800-00</a> RAP.
Finisher is not docked. Re-dock finisher now.	12-600-00	The 2K LCSS is not correctly docked. Printing has stopped.	Dock the output module. If the fault persists, perform the <a href="#">312-310-00-110</a> , <a href="#">312-312-00-110</a> , <a href="#">312-313-00-110</a> RAP.
Finisher is not docked. Re-dock finisher now.	12-600-03	The LVF BM is not correctly docked. Printing has stopped.	Dock the output module. If the fault persists, perform the <a href="#">312-310-00-150</a> , <a href="#">312-312-00-150</a> , <a href="#">312-313-00-150</a> RAP.
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	Bin 1 out of service status.	Switch the machine off then on, <a href="#">GP 14</a> .
Finisher Main Tray out of service. Check for obstructions in the Main Tray.	12-902-00	The finisher is in degraded mode, stacker tray is out of service.	Switch the machine off then on, <a href="#">GP 14</a> . Check for obstructions in the tray.
Finisher Top Tray is full. Empty Top Tray.	12-692-00	The 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 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, <a href="#">GP 14</a> . If the fault persists, perform <a href="#">312-043-00-110</a> , <a href="#">312-046-00-110</a> RAP for the 2K LCSS, <a href="#">312-043-00-150</a> , <a href="#">312-046-00-150</a> 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, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">312-043-00-150</a> , <a href="#">312-046-00-150</a> RAP for the LVF, <a href="#">312-043-00-110</a> , <a href="#">312-046-00-110</a> for the 2K LCSS.
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.	The system is unable to read from the image disk. Jobs may take longer than normal. Perform the <a href="#">319-300-00</a> to <a href="#">319-310-00</a> 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.	The system is unable to read from the image disk. Printing has stopped. Perform the <a href="#">319-300-00</a> to <a href="#">319-310-00</a> 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, <a href="#">GP 14</a> .

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, <a href="#">GP 4</a> . Refer to the <a href="#">303-417-00</a> RAP.
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, <a href="#">GP 14</a> . Check the finisher communication harness.
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, <a href="#">dC134</a> . Install the correct fuser, <a href="#">PL 10.8 Item 1</a> .
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 <a href="#">392-399-00</a> 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, <a href="#">GP 14</a> . Printing and scanning can continue. If the fault persists, perform the <a href="#">316E</a> Network Fault Checkout RAP.
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, <a href="#">GP 14</a> . Printing and scanning can continue. If the fault persists, perform the <a href="#">316E</a> 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.	16-583-00	The network controller ESS counters utility process has stopped.	Switch the machine off then on, <a href="#">GP 14</a> . 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, <a href="#">GP 14</a> . Print and other machine services are unaffected. If the fault persists, perform the <a href="#">316E</a> 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, <a href="#">GP 14</a> . Print and other machine services are unaffected. If the fault persists, perform the <a href="#">316E</a> 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 <a href="#">303-405-00</a> , <a href="#">303-406-00</a> 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, <a href="#">GP 14</a> .
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, <a href="#">GP 14</a> . Internet fax is disabled, print and other machine services are unaffected. If the fault persists, perform the <a href="#">316E</a> 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 <a href="#">305A</a> RAP.
IOT Environmental Humidity out of limits.	91-376-00	IOT temperature sensor averaged reading out of limits.	Perform the <a href="#">391-365-00</a> RAP.
IOT Environmental Temperature out of limits.	91-366-00	IOT humidity sensor averaged reading out of limits.	Perform the <a href="#">391-375-00</a> RAP.

**Table 2 Status messages G to N**

UI Message	Status Code	Reason for Message	Reference/Action
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.	12-595-00	Paper covering the horizontal transport sensor.	Clear the jam. If the fault persists, perform the 310-170-00 or 310-171-00 RAP.
Job stuck waiting to print.	-	Software error.	Switch the machine off then on, GP 14.
Job stuck paused.	-	Software error.	Switch the machine off then on, GP 14.
Job stuck scanning.	-	Software error.	Switch the machine off then on, GP 14.
Job queue error. Power Off then On and Notify System Administrator.	16-74-00	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.
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 SW 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.

**Table 2 Status messages G to N**

UI Message	Status Code	Reason for Message	Reference/Action
Misfeed in the Document Feeder.	05-330-00	Jam in document feeder, feed sensor covered.	Perform the 305-962-00 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 305-962-00 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 305-962-00, 305-335-00, 305-336-00, 305-340-00, 305-341-00 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 4.	81-204-00	Misfeed in tray 4.	Clear the paper jam in tray 4.
Misfeed in Tray 4.	74-102-00	Misfeed in tray 4.	Clear the paper jam.
Misfeed in Tray 4.	74-115-00	Paper jam in tray 4.	Clear the paper jam.
Misfeed in Tray 4.	74-116-00	Paper over HCF exit sensor.	Clear the paper jam.
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, <a href="#">GP 14</a> . Print and other machine services are unaffected. If the fault persists, perform the <a href="#">316E</a> Network Fault Checkout RAP.
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, <a href="#">GP 14</a> .
Network Controller not available. Power Off then On and Notify System Administrator	03-518-00	The network controller is not available.	Perform the <a href="#">303-331-00</a> , <a href="#">303-332-00</a> RAP.
Network Printing disabled. Notify your System Administrator.	16-571-00	Network controller - print service has failed.	Switch the machine off then on, <a href="#">GP 14</a> . Printing cannot continue. If the fault persists, perform the <a href="#">316E</a> 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, <a href="#">GP 14</a> . Printing cannot continue. If the fault persists, perform the <a href="#">316E</a> Network Fault Checkout RAP.
Network Printing disabled. Notify your System Administrator.	16-573-00	Network controller - ESS print service has failed.	Switch the machine off then on, <a href="#">GP 14</a> . Printing cannot continue. If the fault persists, perform the <a href="#">316E</a> 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, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">316E</a> Network Fault Checkout RAP.

Table 2 Status messages G to N

UI Message	Status Code	Reason for Message	Reference/Action
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, <a href="#">GP 14</a> . Print and other machine services are unaffected. If the fault persists, perform the <a href="#">316E</a> 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, <a href="#">GP 14</a> . 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, <a href="#">GP 14</a> . 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, <a href="#">GP 14</a> . If the fault persists check the network connections.
Network Services involving Scan to e-mail process failed.	16-510-00	Scan to e-mail process failed.	Switch the machine off then on, <a href="#">GP 14</a> . If the fault persists check network connections.
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, <a href="#">GP 14</a> .
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, <a href="#">GP 14</a> .

Table 2 Status messages G to N

UI Message	Status Code	Reason for Message	Reference/Action
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, <a href="#">GP 14</a> . 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, <a href="#">GP 14</a> .
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, <a href="#">GP 14</a> .
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, <a href="#">GP 14</a> .
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, <a href="#">GP 14</a> . If the fault persists check network connections.
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, <a href="#">GP 14</a> . 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.	16-520-00	Web services server controller interface does not work.	Switch the machine off then on, <a href="#">GP 14</a> . 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. Switch the machine off then on, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">316E Network Fault Checkout RAP</a> .
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, <a href="#">GP 14</a> . Printing can continue with other submission methods. If the fault persists, perform the <a href="#">316E Network Fault Checkout RAP</a> .
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.
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 <a href="#">316E Network Fault Checkout RAP</a> .
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 <a href="#">316E Network Fault Checkout RAP</a> .
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 <a href="#">322-310-04 to 322-318-04 RAP</a> .

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
Original not fully inserted.	05-571-00	Document not fully inserted in the document feeder.	Remove any sheets from the document feeder to allow the device to initialize. As necessary, perform the 305-940-00, 305-966-00 RAP.
Output tray is full.	12-692-01	The centre output tray is full.	Empty the centre output tray.
Output tray is nearly full.	12-729-01	The centre output tray is nearly 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.
Output Tray on-line.	12-742-00	Finisher has gone back on-line.	No action necessary.
Paper Jam behind the Left Side Door.	81-200-00	Jam in left door when sheets fed from trays 1-5.	Clear the jam in the left door.
Paper Jam behind the Left Side Door.	81-200-01	Jam in left door when sheets fed from trays 1-5.	Clear the jam in the left door.
Paper Jam in the finisher.	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, 312-199-00-110 RAP.
Paper Jam in the Finisher.	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 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.

Table 3 Status messages O to R

UI Message	Status Code	Reason for Message	Reference/Action
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.
Paper Jam in the Finisher.	12-620-00	Paper is detected over the 2k LCSS stacker exit sensor at power-up, interlock status change or after shutdown.	Clear the paper jam. If the fault persists, perform the <a href="#">312-151-00-110</a> , <a href="#">312-152-00-110</a> RAP.
Paper Jam in the Finisher.	12-620-03	Paper is detected over the LVF BM stacker exit sensor at power-up, interlock status change or after shutdown.	Clear the paper jam. If the fault persists, perform the <a href="#">312-151-00-150</a> , <a href="#">312-152-00-150</a> 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 <a href="#">312-160-00-150</a> , <a href="#">312-162-00-150</a> RAP.
Paper Jam in the Finisher.	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 <a href="#">312-180-00-150</a> , <a href="#">312-182-00-150</a> RAP.
Paper Jam in the Finisher.	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 <a href="#">312-184-00-150</a> , <a href="#">312-494-00-150</a> , <a href="#">312-496-00-150</a> RAP.
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.
Paper Transport Cover is open.	10-565-00	Finisher paper transport cover is open.	Close the horizontal transport cover, <a href="#">PL 10.15 Item 11</a> .
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.

Table 3 Status messages O to R

UI Message	Status Code	Reason for Message	Reference/Action
Please insert card into the external accounting device to access this service.	03-558-01	Walk up 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: coins 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... Adjustments are in progress.	81-220-00	Post jam clearance initialisation.	No service action required, please wait. If the fault persists, switch the machine off, then on, <a href="#">GP 14</a> .
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 <a href="#">319-401-00</a> , <a href="#">319-402-00</a> RAP.
Please wait... Fuser is warming up.	10-505-00	Fuser is not at run temperature.	Perform the <a href="#">310-330-00</a> , <a href="#">310-340-00</a> 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 <a href="#">dC301</a> . Perform a copier NVM initialization and NVM data select all.
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 <a href="#">391-377-00</a> Print Cartridge Cooling Failure RAP.

Table 3 Status messages O to R

UI Message	Status Code	Reason for Message	Reference/Action
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.
Please wait... The output tray is lowering	12-741-00	Finisher is about to go back on-line.	No action necessary.
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 scanner is initializing.	03-556-00	Power on while the IIT is being initialized.	-
Printer failed to warm up.	10-550-00	Fuser warmup failure.	Perform the 310-330-00, 310-340-00 RAP.
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.

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.	03-559-00	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 FD: 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.	03-559-05	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: 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. 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: 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. 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.
Register for your Supplies Plan.	22-580-00	Service plan registration alert.	Perform the 322-360-00 RAP.



**Table 3 Status messages O to R**

UI Message	Status Code	Reason for Message	Reference/Action
Reload sheets in document feeder	05-326-00	Documents are in the SPDH at power on or exit from power save.	Remove all documents from the SPDH. If the fault persists, perform the <a href="#">305-960-00 RAP</a> .
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, <a href="#">PL 80.15 Item 3</a> , 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, <a href="#">PL 10.8 Item 1</a> , 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, <a href="#">PL 10.8 Item 1</a> , 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, <a href="#">PL 12.365 Item 7</a> or the LVF BM. Printing can continue, but stapled booklet making is unavailable.
Replace Fuser Module (R3).	10-523-00	The fuser needs replacing.	Install a new fuser, <a href="#">PL 10.8 Item 1</a> .
Replace Print Cartridge (R2).	09-521-00	IOT detects a print cartridge failure.	Install a new print cartridge, <a href="#">PL 90.17 Item 9</a> .
Replace Staple Cartridge (R7).	12-715-00	The finisher's main staple cartridge is empty.	Install new staple cartridge, <a href="#">PL 12.55 Item 7</a> for the 2K LCSS, <a href="#">PL 12.365 Item 7</a> for the LVF BM.
Replace Toner Cartridge (R1).	09-588-00	Replace toner cartridge (R1).	Install new toner cartridge. If the fault persists perform <a href="#">393-390-00 RAP</a> .

**Table 4 Status messages S to X**

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, <a href="#">GP 14</a> .
Scanner Fault.	14-517-00	Scanner fault.	Switch the machine off then on <a href="#">GP 14</a> . 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 <a href="#">322-330-06 RAP</a> .
Select the Current Messages button in the Machine Status for more information.	22-502-04	An active message has been produced.	Go to the <b>Status</b> screen and select the <b>Faults</b> tab. Select the <b>Active Messages</b> button and perform the action appropriate to the message.
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, <a href="#">GP 14</a> . Server fax is disabled, print and other machine services are unaffected. If the fault persists, perform the <a href="#">316E Network Fault Checkout RAP</a> .
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.
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, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">303-405-00</a> , <a href="#">303-406-00 RAP</a> .
Some jobs may have been deleted	03-562-00	When some jobs may have been deleted.	No service action.

Table 4 Status messages S to X

UI Message	Status Code	Reason for Message	Reference/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 <a href="#">319-403-00 RAP</a> .
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, <a href="#">GP 14</a> . Print and other machine services are unaffected. If the fault persists, perform the <a href="#">316E Network Fault Checkout RAP</a> .
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, <a href="#">GP 14</a> . Print and other machine services are unaffected. If the fault persists, perform the <a href="#">316E Network Fault Checkout RAP</a> .
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, <a href="#">GP 14</a> . Printing and scanning can continue. If the fault persists, perform the <a href="#">316E Network Fault Checkout RAP</a> .
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, <a href="#">GP 14</a> .
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, <a href="#">GP 14</a> . 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 <a href="#">GP 14</a> . Copying and printing with local connections can continue. If the fault persists, perform the <a href="#">316E Network Fault Checkout RAP</a> .

Table 4 Status messages S to X

UI Message	Status Code	Reason for Message	Reference/Action
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 <a href="#">GP 14</a> . Local printing can continue. If the fault persists, perform the <a href="#">316E Network Fault Checkout RAP</a> .
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, <a href="#">GP 14</a> . Printing can continue if other submission methods are used. If the fault persists, perform the <a href="#">316E Network Fault Checkout RAP</a> .
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, <a href="#">GP 14</a> . 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, <a href="#">GP 14</a> . 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, <a href="#">GP 14</a> . 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, <a href="#">GP 14</a> . 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, <a href="#">GP 14</a> , to enable PCL printing. Printing can continue if other job format methods are used.

Table 4 Status messages S to X

UI Message	Status Code	Reason for Message	Reference/Action
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 <a href="#">GP 14</a> . Printing can continue with other submission methods. If the fault persists, perform the <a href="#">316E Network Fault Checkout RAP</a> .
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, <a href="#">GP 14</a> .
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, <a href="#">GP 14</a> .
Some Network Services involving TCP/IP are not available. Notify your System Administrator.	16-598-00	Network controller - TCP/IP address is already in use on the network.	Another IP address needs to be used. Switch the machine off then on, <a href="#">GP 14</a> . Copy and fax services (if installed) can continue. If the fault persists, perform the <a href="#">316E Network Fault Checkout RAP</a> .
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, <a href="#">GP 14</a> . Printing can continue with other job formats. If the fault persists, perform the <a href="#">316E Network Fault Checkout RAP</a> .
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. <a href="#">PL 12.55 Item 7</a> for the 2K LCSS, <a href="#">PL 12.365 Item 7</a> for the LVF.
Stapling fault. Power Off then On and Notify System Administrator.	12-653-00	Stapling disabled, out of service.	Switch the machine off then on, <a href="#">GP 14</a> .
Start cannot be accepted at this time.	-	Software error.	Switch the machine off then on, <a href="#">GP 14</a> .

Table 4 Status messages S to X

UI Message	Status Code	Reason for Message	Reference/Action
System Error. Power Off then On and Notify System Administrator.	03-565-00	System fault.	Switch the machine off then on, <a href="#">GP 14</a> .
System Error. Power Off then On and Notify System Administrator.	03-578-00	Paper tray error.	Switch the machine off then on, <a href="#">GP 14</a> .
System Error. Power Off then On and Notify System Administrator.	03-581-00	Paper tray error.	Switch the machine off then on, <a href="#">GP 14</a> .
System error. Power Off then On and Notify System Administrator.	03-505-00	The digital copier is not available.	Perform <a href="#">303-325-00 RAP</a> and <a href="#">303-355-00 RAP</a> .
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, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">303-788-00 RAP</a> .
System Error. Power Off then On and Notify System Administrator.	04-565-00	IOT controller communication failure	System fault. Switch the machine off then on, <a href="#">GP 14</a> .
System Error. Power Off then On and Notify System Administrator.	16-503-00	Incomplete system information.	Switch the machine off then on, <a href="#">GP 14</a> . All machine services are disabled.
System Error. Power Off then On and Notify System Administrator.	22-563-00	Incomplete system information.	Switch the machine off then on, <a href="#">GP 14</a> .
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, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">341-301 RAP</a> .

Table 4 Status messages S to X

UI Message	Status Code	Reason for Message	Reference/Action
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, <a href="#">GP 14</a> .
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, <a href="#">GP 14</a> .
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, <a href="#">GP 14</a> .
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 <a href="#">305-305-00</a> 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 <a href="#">305A</a> 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, <a href="#">GP 14</a> . Scan to e-mail is disabled, print and other machine services are unaffected. If the fault persists, perform the <a href="#">316E</a> Network Fault Checkout RAP.

Table 4 Status messages S to X

UI Message	Status Code	Reason for Message	Reference/Action
The Fax Service cannot Register. Notify your System Administrator.	22-566-00	Fax service cannot register.	Switch the machine off then on, <a href="#">GP 14</a> . Fax and LAN fax are disabled. Other machine services are unaffected. If the fault persists, perform the <a href="#">322-371-00</a> , <a href="#">322-372-00</a> 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, <a href="#">GP 14</a> . All machine services are disabled. If the fault persists, perform the <a href="#">322-371-00</a> , <a href="#">322-372-00</a> 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 <a href="#">312-310-00-110</a> , <a href="#">312-312-00-110</a> , <a href="#">312-313-00-110</a> 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 <a href="#">312-310-00-150</a> , <a href="#">312-312-00-150</a> , <a href="#">312-313-00-150</a> RAP.
The Front Door is open.	01-510-00	The front door is open.	Copying and printing services are disabled. Perform the <a href="#">301-300-00</a> RAP.
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, <a href="#">GP 14</a> . Internet fax is disabled, print and other machine services are unaffected. If the fault persists, perform the <a href="#">316E</a> 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 <a href="#">301-305-00</a> 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 <a href="#">301-305-00</a> RAP.
The machine is not available.	02-520-00	Software error has occurred.	Switch the machine off then on, <a href="#">GP 14</a> .
The machine is offline.	03-504-00	NC status code.	Switch the machine off then on, <a href="#">GP 14</a> .
The machine is offline.	03-504-01	NC status code.	Switch the machine off then on, <a href="#">GP 14</a> .
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.

Table 4 Status messages S to X

UI Message	Status Code	Reason for Message	Reference/Action
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.
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.
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.
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.
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.
The Network Controller connection is about to be reset.	16-75-00	The network controller ESS registration service process has stopped.	Automatic network controller reset. If the fault persists, perform the <b>316E</b> 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, <b>GP 14</b> . If the fault persists, perform the <b>316E</b> 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 <b>316E</b> Network Fault Checkout RAP.

Table 4 Status messages S to X

UI Message	Status Code	Reason for Message	Reference/Action
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 <b>303-331-00, 303-332-00</b> RAP.
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 <b>305-941-00</b> RAP.
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, <b>GP 14</b> . Re-printing of saved jobs is disabled. If the fault persists, perform the <b>316E</b> 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, <b>GP 14</b> . Server fax is disabled, print and other machine services are unaffected. If the fault persists, perform the <b>316E</b> Network Fault Checkout 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, <b>GP 14</b> . Scan service is disabled, print and other machine services are unaffected. If the fault persists, perform the <b>316E</b> Network Fault Checkout 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 <b>393-399-00</b> 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 <b>393-401-00</b> RAP.

Table 4 Status messages S to X

UI Message	Status Code	Reason for Message	Reference/Action
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, <a href="#">PL 26.11 Item 3</a> .
Toner control system failure.	09-596-00	Toner control system fault.	Switch off, then switch on the machine, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">393-360-00 to 393-364-00 RAP</a> .
Toner control system failure.	09-597-00	Toner control out of limits (high or low).	Perform the <a href="#">393-360-00 to 393-364-00 RAP</a> .
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 <a href="#">371-500-00 RAP</a> .
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 <a href="#">372-500-00 RAP</a> .
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 <a href="#">371-100-00, 371-217-00 Tray 1 Elevator Lift Failure RAP</a> .
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 <a href="#">374-100-00, 374-217-00 Tray 4 Elevator Lift Failure RAP</a> .
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, <a href="#">372-100-00, 372-217-00 Tray 2 Elevator Lift Failure RAP</a> .
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 <a href="#">373-100-00, 373-217-00 Tray 3 Elevator Lift Failure RAP</a> .
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 <a href="#">374-100-00, 374-217-00 Tray 4 Elevator Lift Failure RAP</a> .

Table 4 Status messages S to X

UI Message	Status Code	Reason for Message	Reference/Action
Tray 1 is empty. Add paper.	71-530-00	Tray 1 out of media.	Add paper to tray 1. If the fault persists, perform the <a href="#">371A Tray 1 and 2 Empty RAP</a> .
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 <a href="#">371A Tray 1 and 2 Empty RAP</a> .
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 <a href="#">373B Tray 3 Out of Paper RAP</a> .
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 <a href="#">374B Tray 4 Out of Paper RAP</a> .
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 <a href="#">375A Bypass Tray RAP</a> .
Tray 1 is not available. Notify your System Administrator.	71-313-00	Mechanical failure for tray 1.	Switch the machine off, then on, <a href="#">GP 14</a> .
Tray 2 is not available. Notify your System Administrator.	72-313-00	Mechanical failure of tray 2.	Switch the machine off, then on, <a href="#">GP 14</a> .
Tray 3 is not available. Notify your System Administrator.	73-313-00	Mechanical failure of tray 3.	Switch the machine off, then on, <a href="#">GP 14</a> .
Tray 4 is not available. Notify your System Administrator.	74-313-00	Mechanical failure of tray 4.	Switch the machine off, then on, <a href="#">GP 14</a> .
Tray 5 is not available. Empty and reload.	75-150-00	A paper jam has occurred after feeding from the bypass tray.	Remove, then reload the media in the bypass tray.
Tray 5 is not available. Notify your System Administrator.	75-313-00	Mechanical failure of the bypass tray.	Switch the machine off, then on, <a href="#">GP 14</a> . If the fault persists, perform the <a href="#">375A RAP</a> .
Tray is ready for unloading. Press the button on Finisher to return tray to ready position.	12-740-00	Finisher tray is ready for unloading.	Follow the instructions to unload the tray.

Table 4 Status messages S to X

UI Message	Status Code	Reason for Message	Reference/Action
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, <a href="#">GP 14</a> . If the fault persists, perform <a href="#">312E-110</a> RAP for the 2K LCSS, <a href="#">312E-150</a> RAP for the LVF BM.
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, <a href="#">GP 14</a> . Scan service is disabled, print and other machine services are unaffected. If the fault persists, perform the <a href="#">316E</a> Network Fault Check-out 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



Ensure that the electricity to the machine is switched off while performing tasks 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 the correct plug to connect a power lead to a power outlet.



Incorrect voltage may damage the machine. The machine must only be connected to the power outlet of the correct voltage.

CR23 on the SBC PWB is flashing, [Figure 1](#).

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 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.

**CR23 and CR24 on the SBC PWB are on.**

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.

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.**

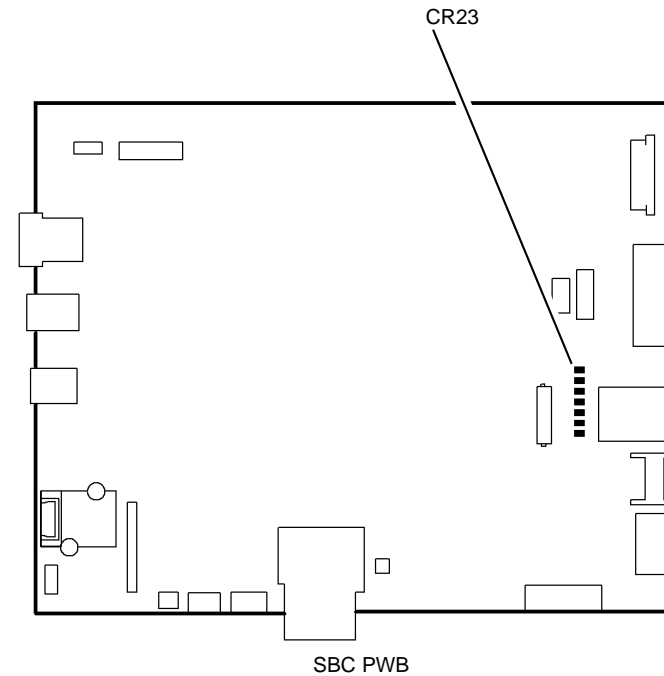
Y N

Install new components as necessary:

- Fax PWB, PL 20.05 Item 7.
- SBC PWB, PL 3.22 Item 3.

A

If necessary, reload the software, GP 4.



**Figure 1 Component location**

W-1-1088-A

A



## 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.
- Scanner Cooling Fan.
- SPDH Motor Cooling Fan.
- SPDH LED Cooling Fan.
- Left Door Fans 1 and 2.
- Print Cartridge Cooling Fan

### 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](#).

### Scanner Cooling Fan

This fan draws air in through a filtered vent situated in the lower left corner of the scanner module, then directs the air flow onto the LED heat sink of the scan carriage assembly. Refer to [PL 60.15 Item 6](#) and [WD 17](#). The fan generates a lock alarm signal that outputs the status of the fan motor. To check the fan, refer to [362-357-00](#), [362-960-00](#) Scanner Cooling Fan Fault RAP.

### SPDH Motor Cooling Fan

This fan draws air in at the rear of the SPDH, then directs the air flow onto the SPDH feed motor. Refer to [PL 5.18 Item 7](#) and [WD 15](#). The fan generates a lock alarm signal that outputs the status of the fan motor. To check the fan, refer to [305-961-00](#) SPDH Motor Fan Lock Alarm.

### SPDH LED Cooling Fan

This fan draws air in at the rear of the SPDH, then directs the air flow via a duct onto the LED heat sink of the side 2 scan assembly. Refer to [PL 5.18 Item 8](#) and [WD 15](#). The fan generates a lock alarm signal that outputs the status of the fan motor. To check the fan, refer to [305-960-00](#) SPDH LED Fan Lock Alarm.

### Left Door Fans 1 and 2

The 2 fans mounted in the left door assembly provide cooling for the fuser unit and remove warm air from the xerographic subsystem. If one or both fans run continuously, inspect the fan harnesses for shorts to the left door frame. 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](#).

### Print Cartridge Cooling Fan

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. Refer to [PL 90.15 Item 2](#) and [WD 12](#).

## 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:

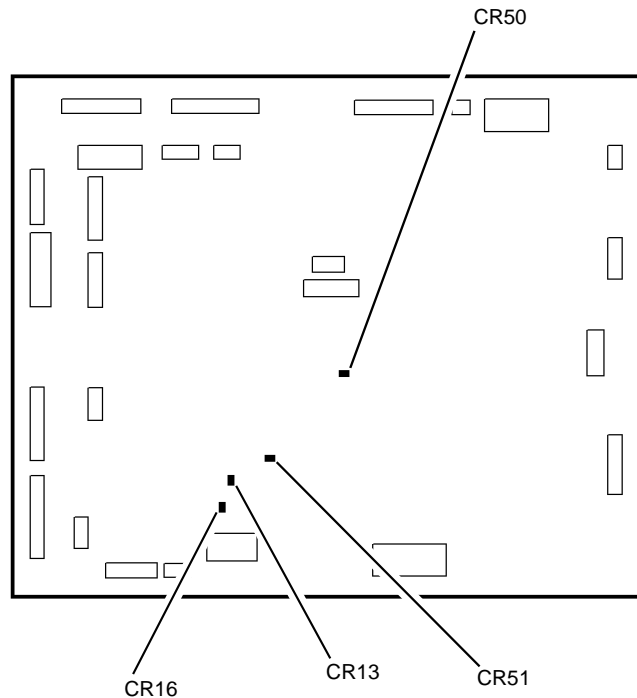
1. Enter [dC131](#) location 501-292, Photoreceptor and Developer Unit Age (number of cycles). Note the age value. Check when the print cartridge was installed, to ensure that the age value is correct.
2. Go to [dC301](#) NVM initialization.
3. Select Domain = Copier.
4. Select, Sub Domain = **Copy Controller**.
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

- 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).
- If no LEDs are on, or only [CR13](#) is on, perform the [301H](#) Short Circuits and Overloads RAP.

## IOT PWB Communications Check

- 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).
- If any of the above conditions still fail, then install a new IOT PWB, [PL 1.10 Item 2](#).



W-1-1089-A

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, increasing the retard roll nip pressure will make the retard action more aggressive and may 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.

### 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.

## OF11 Toner Contamination RAP

Use this RAP if there is excessive toner contamination in the machine or on the customer's floor.

### Procedure

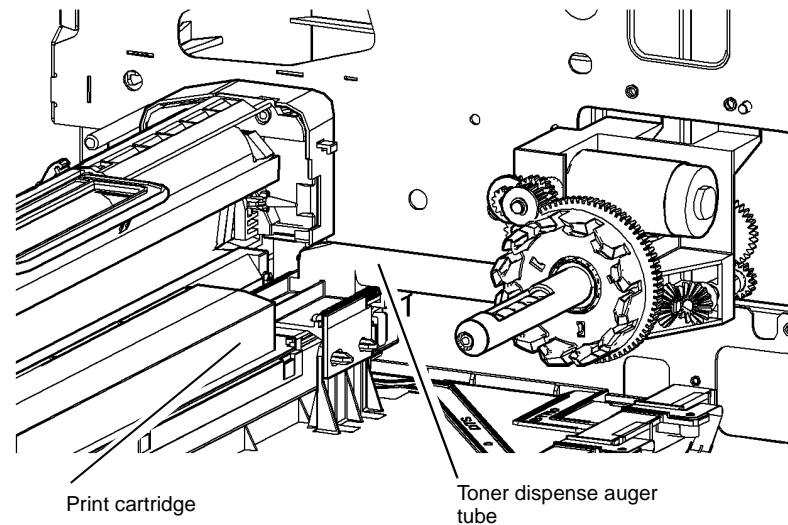


### WARNING

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.



W-1-1230-A

Figure 1 Component location

## OF12 False Print Cartridge End of Life RAP

Use this RAP if the print cartridge has prematurely reached its end of life, 147,000 prints.

### 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.

Enter **dC131** locations 658-128, 658-129 and 658-130. Check the print cartridge image counts. If the image counts are unexpectedly high, 130,000 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.

## 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**.

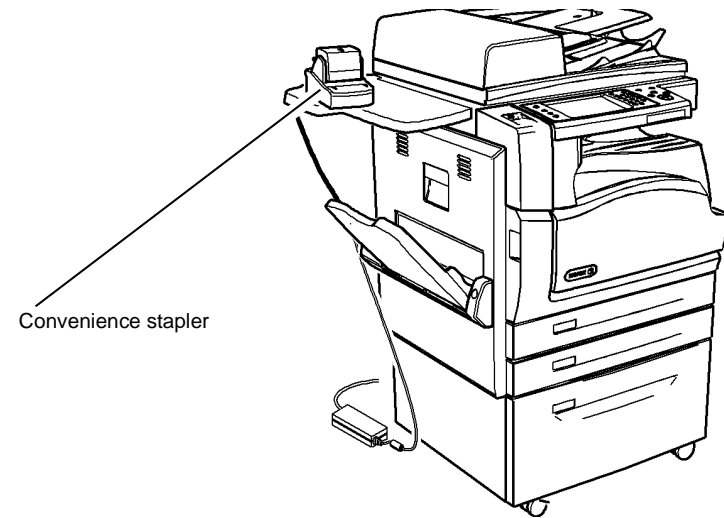


Figure 1 Component location

## 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.

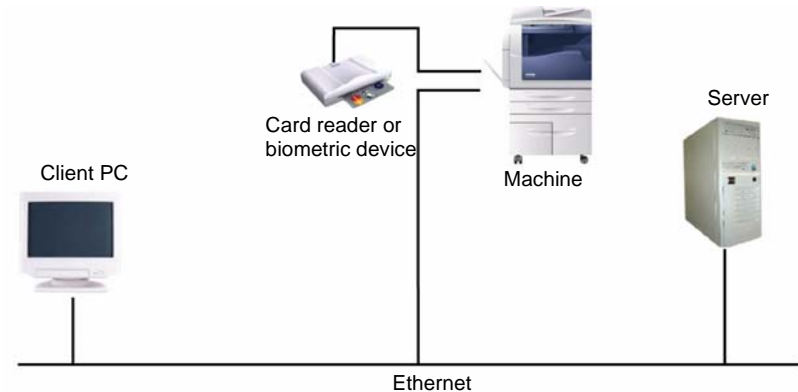
- As necessary, perform the steps that follow:
  - Perform an AltBoot, GP 4. Ask the customer to resubmit the XEIP enablement file and restore XEIP settings.
  - Install a new UI control PWB, PL 2.10 Item 6.
  - Perform the 303D SBC PWB Diagnostics RAP.
- Request the customer to check their network and 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 CWIS. 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.



W-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 LED's 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 LED's 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, CWIS 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 CWIS page. 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.



## Image Quality RAPs

IQ1 Image Quality Entry RAP.....	3-3
IQ2 IOT IQ Defects RAP .....	3-17
IQ3 Xerographic RAP.....	3-27
IQ4 Fuser Module RAP .....	3-29
IQ5 Print Damage RAP .....	3-30
IQ6 Narrow Bands RAP .....	3-31
IQ7 Document Glass and Scanner IQ Defects RAP .....	3-32
IQ8 IOT Skew RAP .....	3-35
IQ9 Unacceptable Received Fax Image Quality RAP .....	3-37
IQ10 Copy Quality Improvement RAP.....	3-37
IQ11 Print Quality Improvement RAP.....	3-38
IQ12 Side 2 Scanner IQ Defects RAP.....	3-40

## Image Quality Specifications

IQS 1 Solid Area Density and Tone Reproduction.....	3-43
IQS 2 Background.....	3-44
IQS 3 Fusing .....	3-45
IQS 4 Resolution .....	3-46
IQS 5 Skew .....	3-46
IQS 6 Copy / Print Defects .....	3-49
IQS 7 Registration.....	3-50
IQS 8 Magnification .....	3-51



## 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.

- 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. 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 [305D 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

Place the test pattern 82E2010 (A4) or 82E2020 (8.5 x11inch) face up 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. View the resultant file on a computer screen. **The file image for side 1 is good.**

Y N

Go to the [IQ7 Document Glass and Scanner IQ Defects RAP](#) and perform the Side 1 SPDH Skew procedure.

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 the [305D 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.

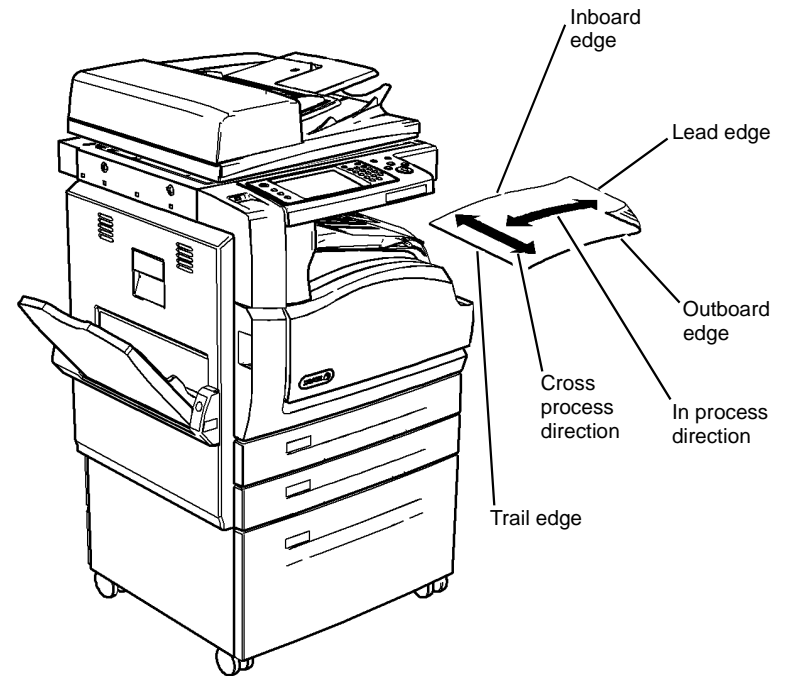
Make a simplex scan to USB file of test pattern 82E2010 (A4) or 82E2020 (8.5 x11inch) from the document glass. Ensure that the test pattern is correctly registered against the document guides and is not disturbed when the SPDH is lowered. View the resultant file on a computer screen. **The file image 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. View the resultant file on a computer screen. **The file image for side 2 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.



W-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
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)	Figure 10 Figure 12 - Figure 13
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
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)	Figure 4 Figure 10 Figure 12 - Figure 13
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 off-setting 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
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

**Table 1 Image quality defects**

Image Quality Defect	Description of Defect	Optimum Internal Test Pattern	Example Test Pattern Image
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	Figure 4
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

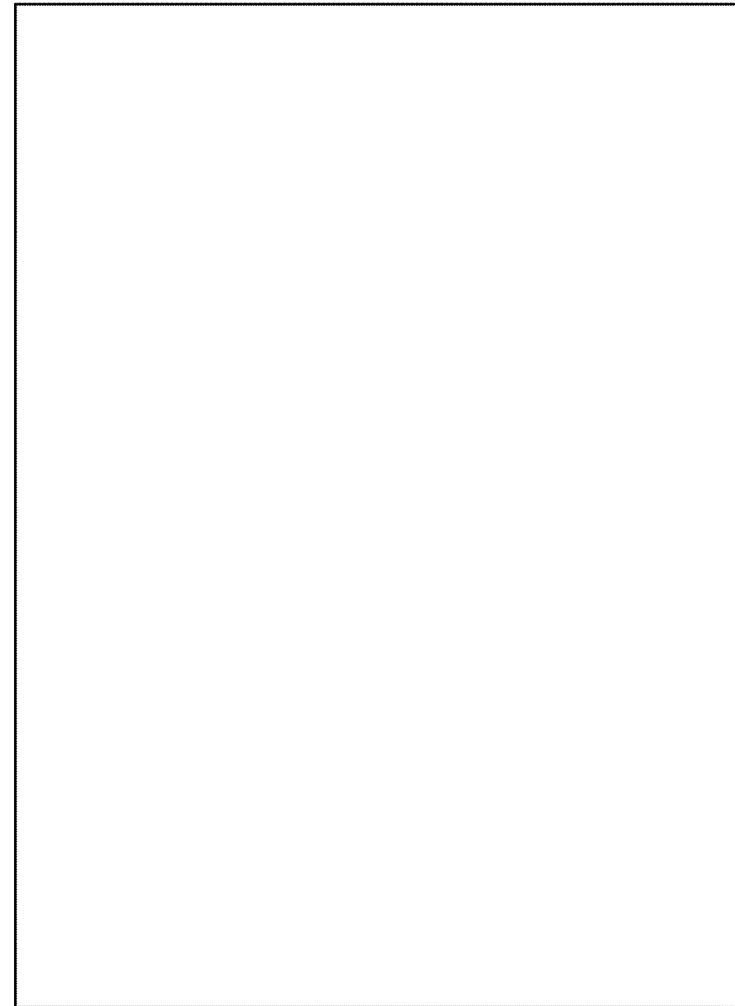
**Table 2 Internal test patterns**

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



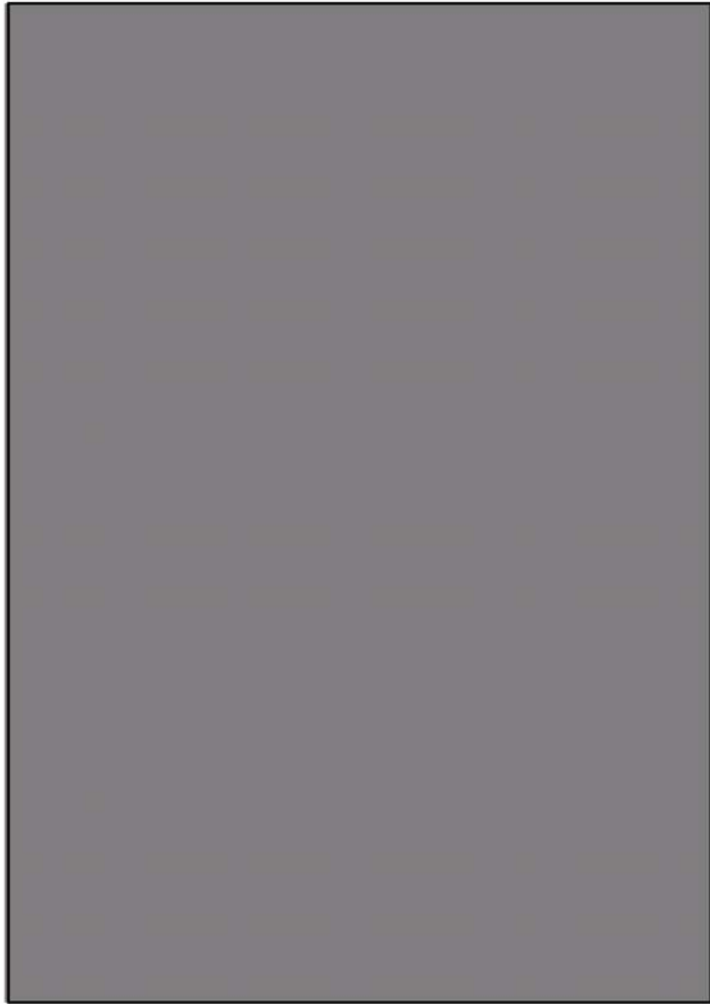
**Table 2 Internal test patterns**

<b>Internal Test Pattern Number</b>	<b>Name</b>	<b>Intended Use</b>	<b>Sample Illustration</b>
17	IQAF TP 21 Piano Keys (11x17)	For service engineer's general use.	<a href="#">Figure 16</a>
18	IQAF TP 36	For service engineer's general use.	<a href="#">Figure 17</a>
19	IQAF Smear (11x17inch)	For service engineer's general use.	<a href="#">Figure 18</a>
20	100% coverage	For service engineer's general use.	<a href="#">Figure 19</a>
21	ITP 11 Error Diffused IOT TRC+MQ	Use to check solid area density, tone reproduction and resolution.	<a href="#">Figure 20</a>



W-1-1175-A

**Figure 2 Internal test pattern 1**



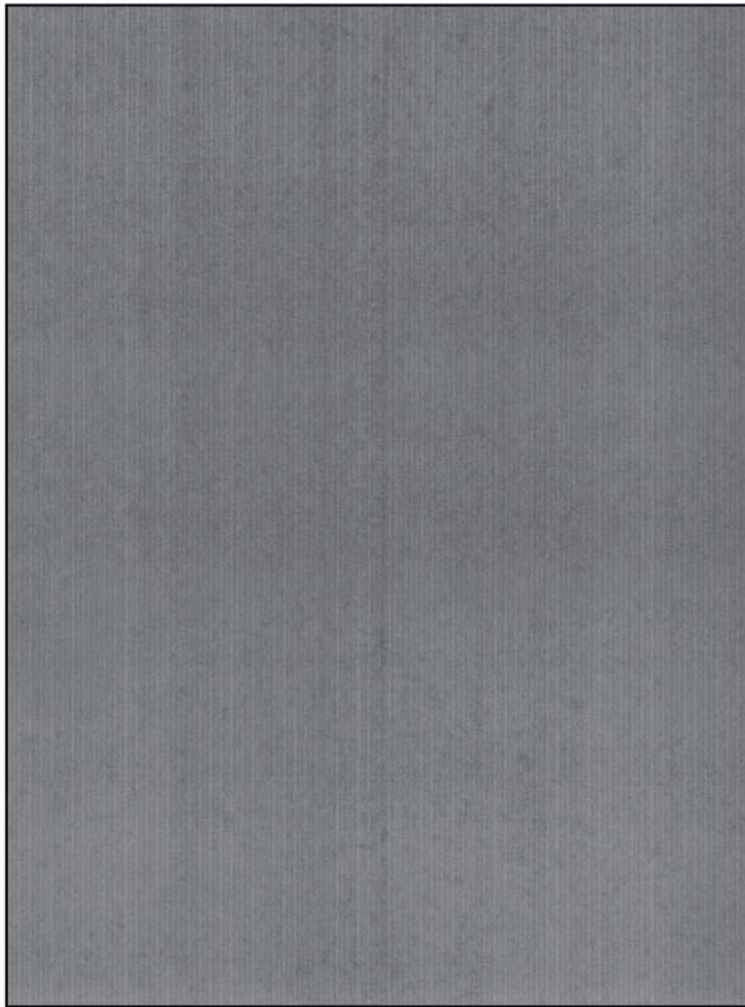
W-1-1176-A

Figure 3 Internal test pattern 2



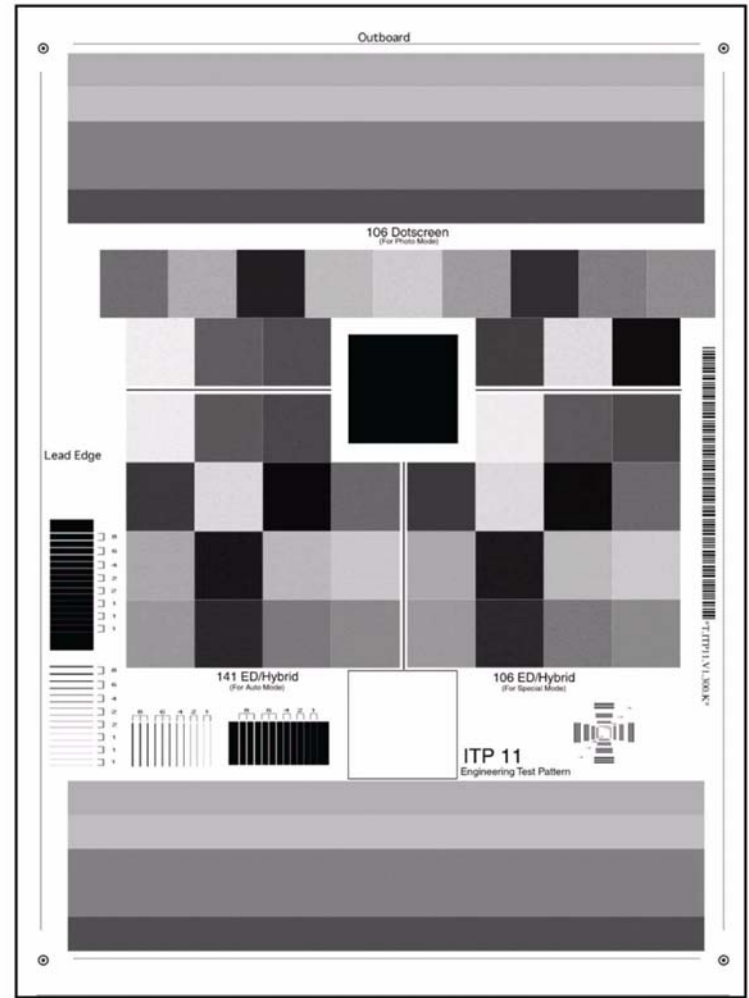
W-1-1177-A

Figure 4 Internal test pattern 3



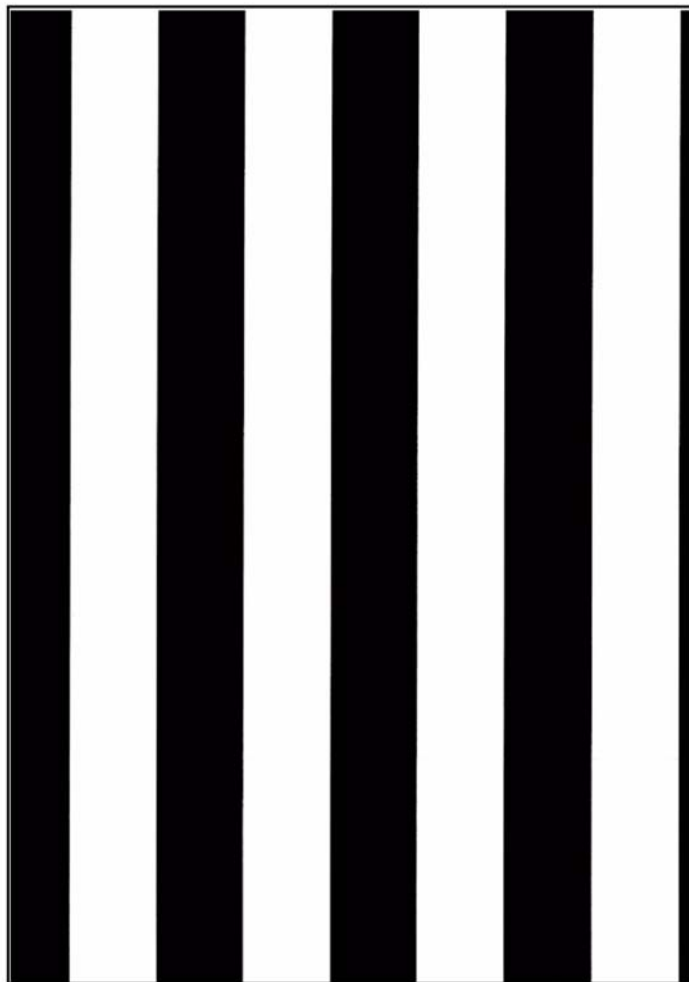
W-1-1178-A

Figure 5 Internal test pattern 4



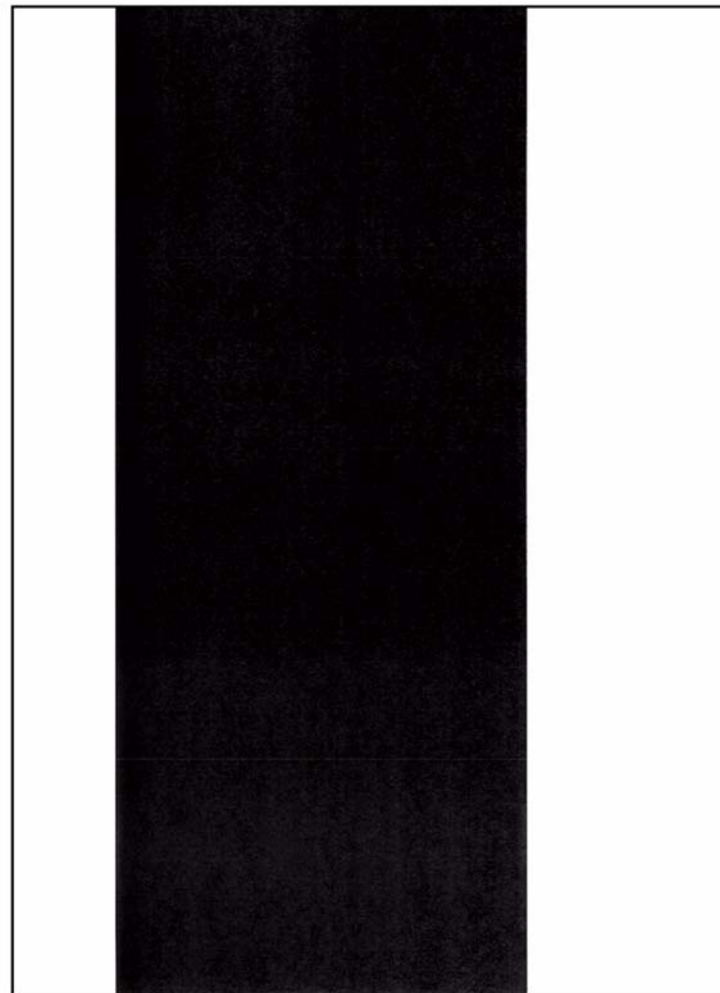
W-1-1179-A

Figure 6 Internal test pattern 5



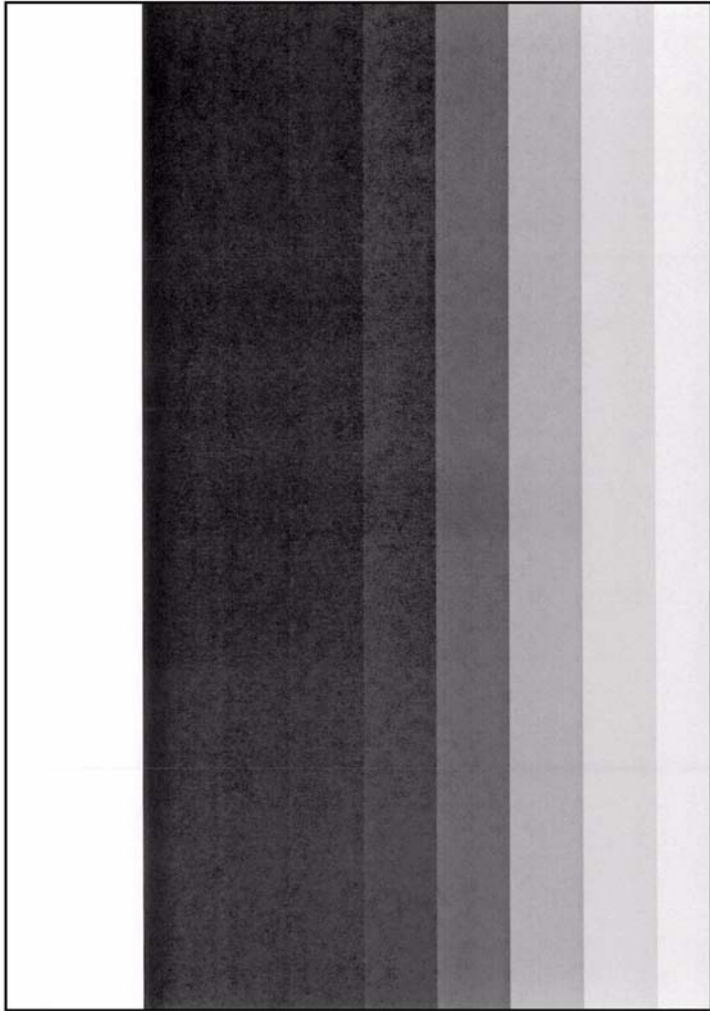
W-1-1180-A

Figure 7 Internal test pattern 6



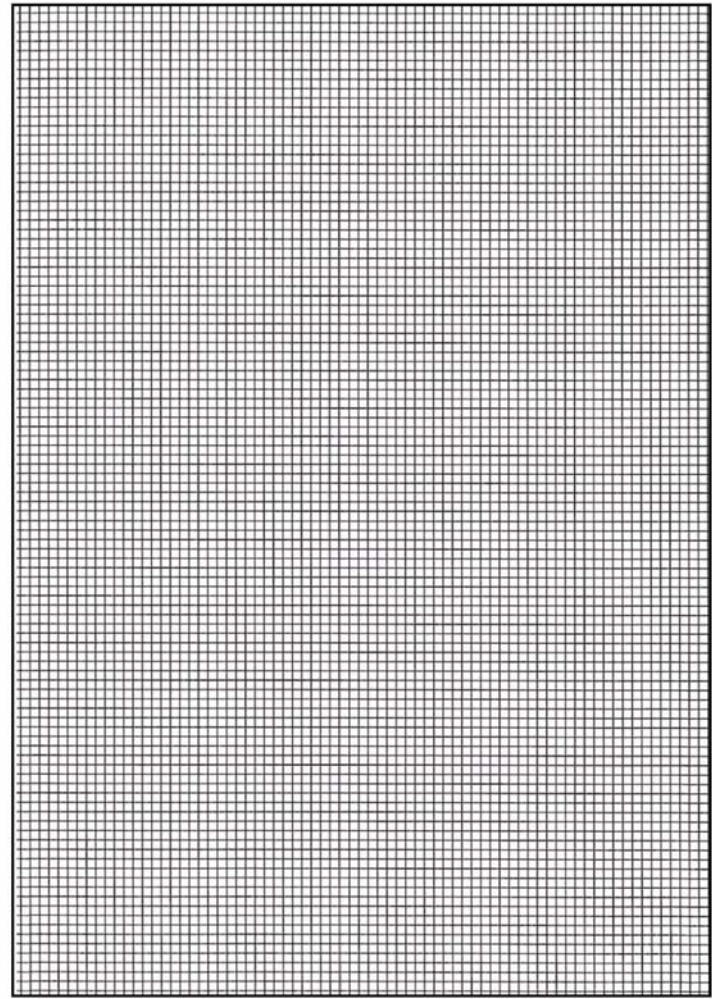
W-1-1181-A

Figure 8 Internal test pattern 7



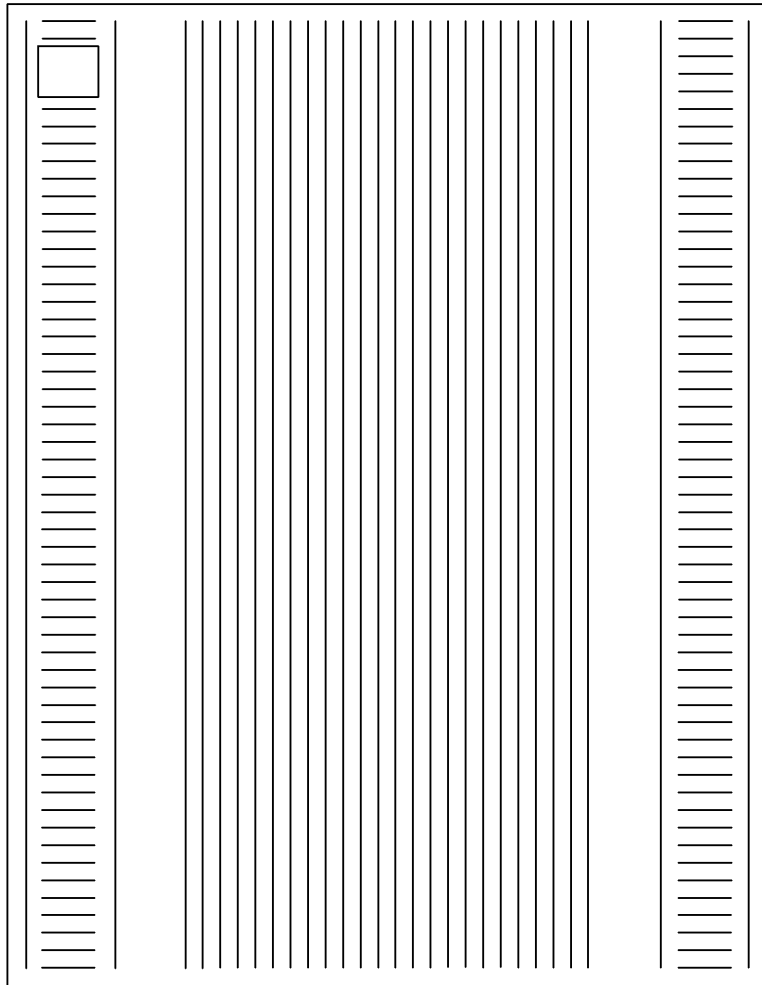
W-1-1182-A

Figure 9 Internal test pattern 8



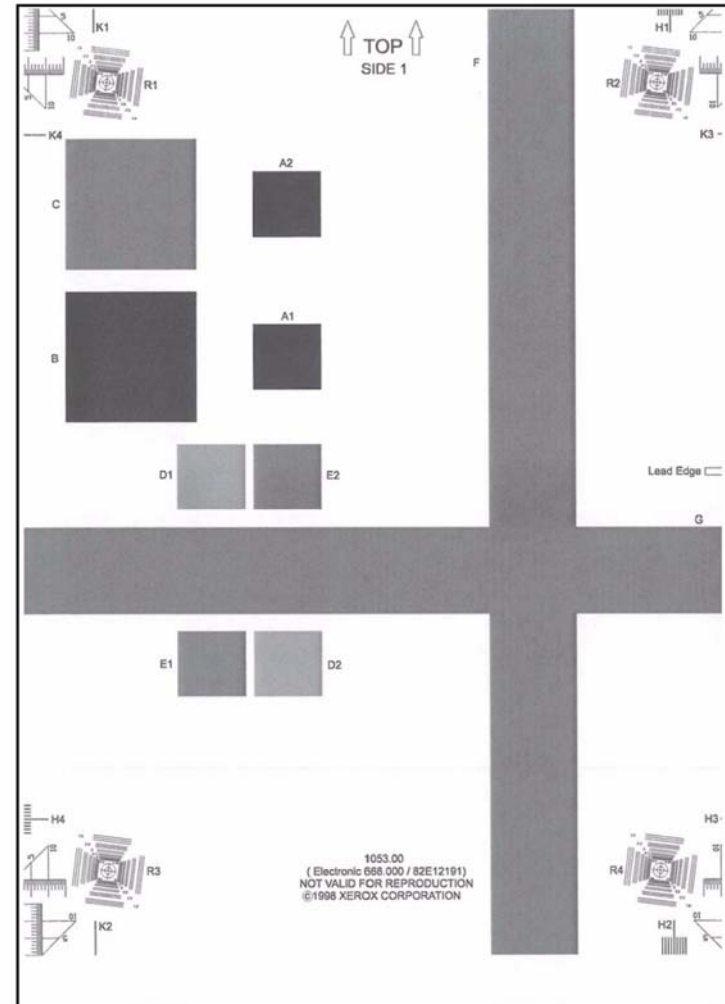
W-1-1183-A

Figure 10 Internal test pattern 9



W-1-1184-A

Figure 11 Internal test pattern 10



W-1-1185-A

Figure 12 ITP 11, 12 13 and 14 (side 1)

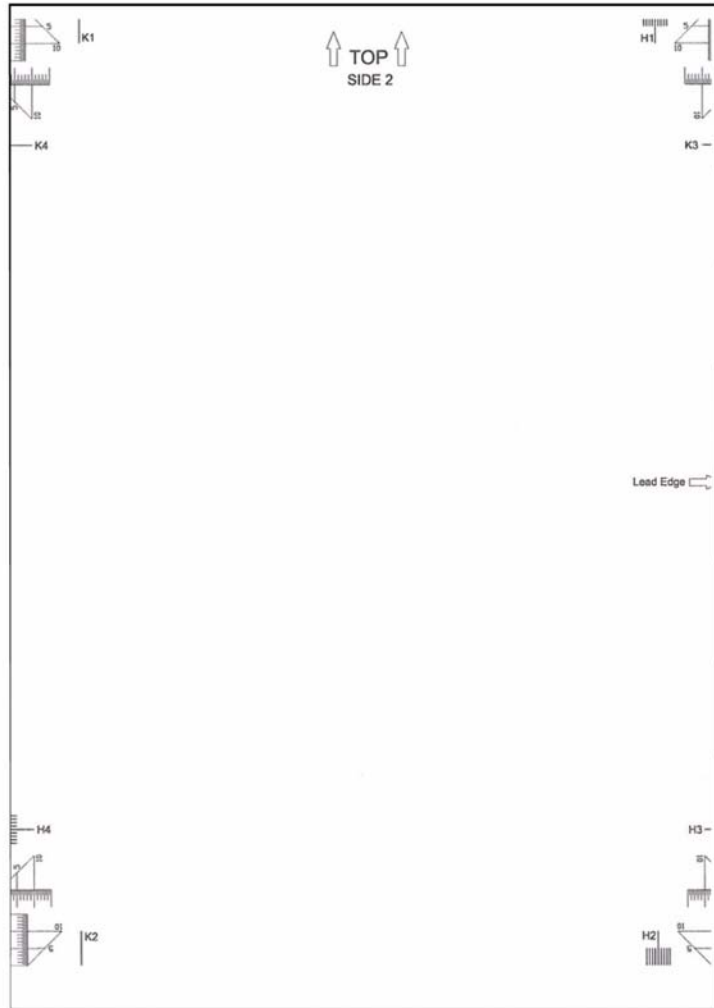


Figure 13 ITP 11, 12 13 and 14 (side 2)

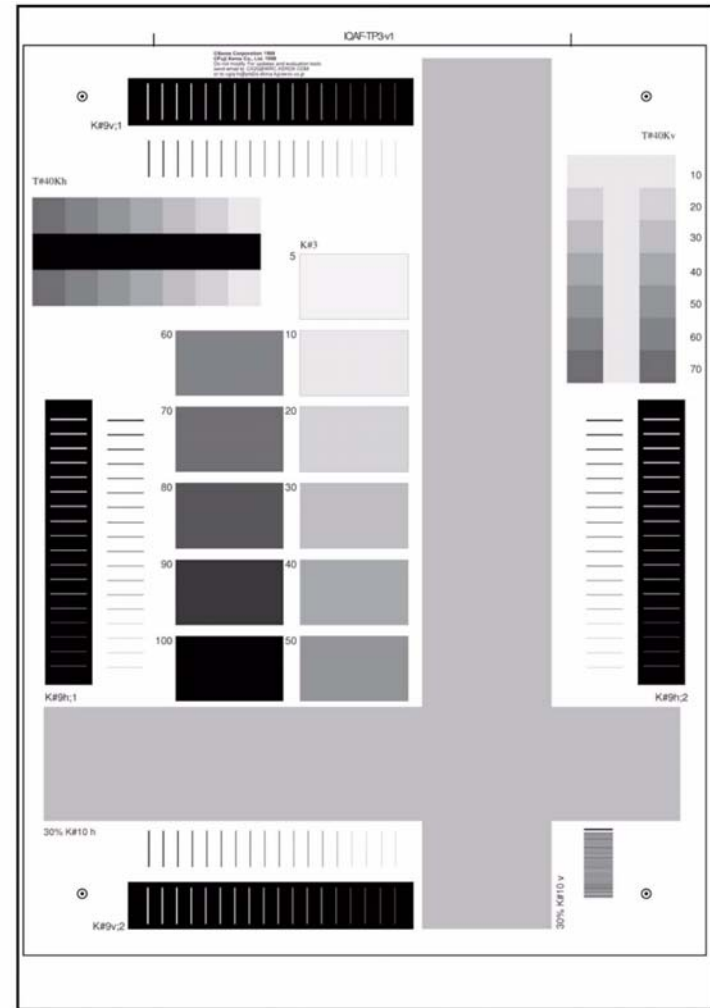
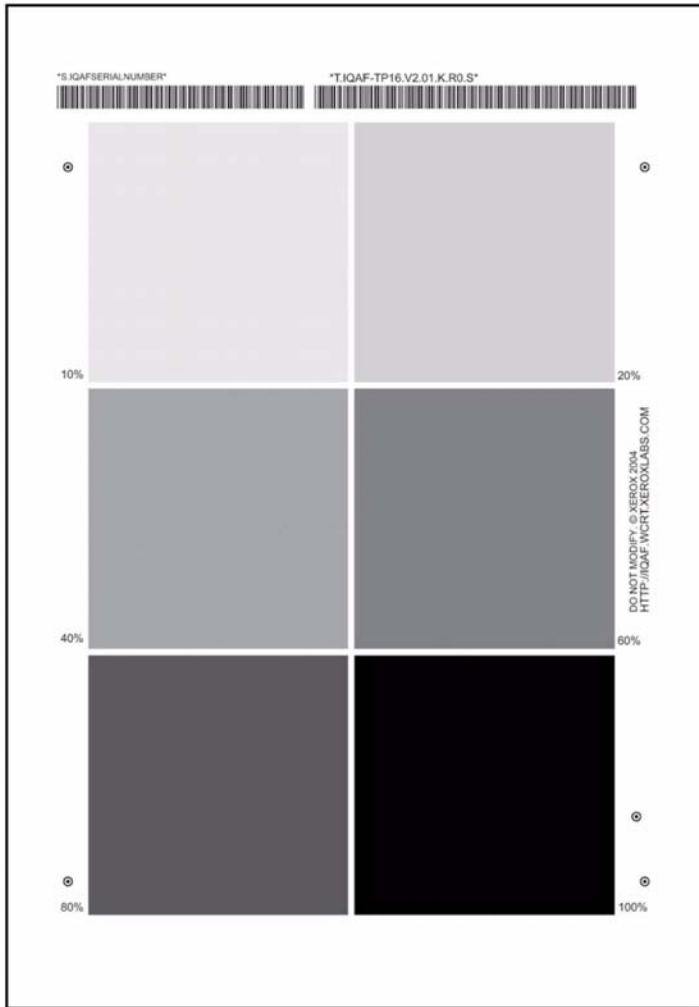
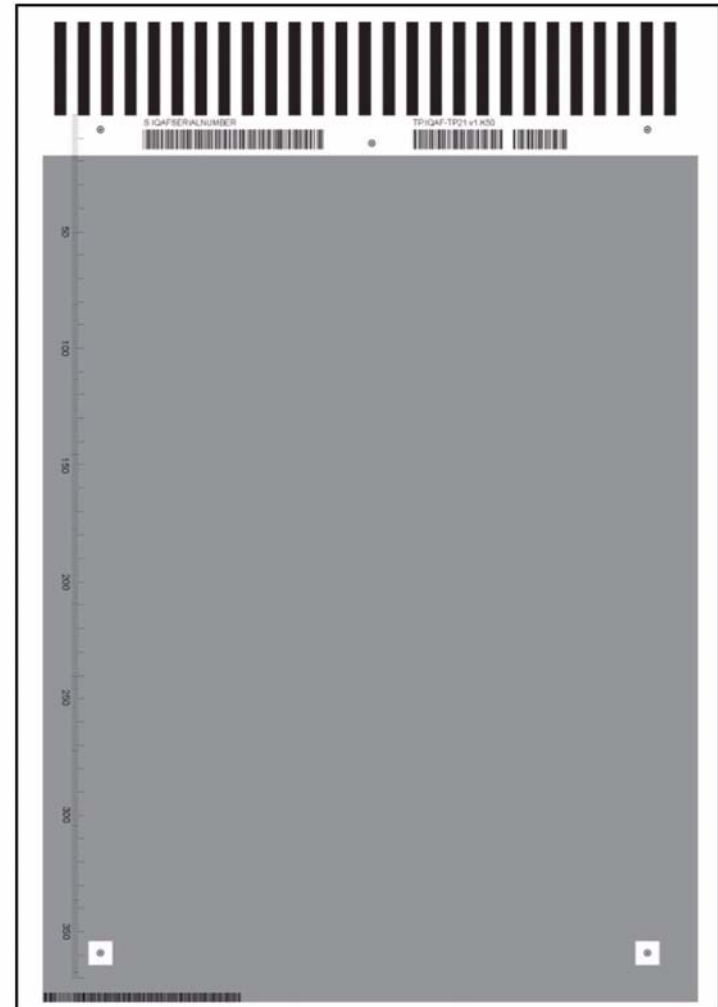


Figure 14 Internal test pattern 15



W-1-1188-A

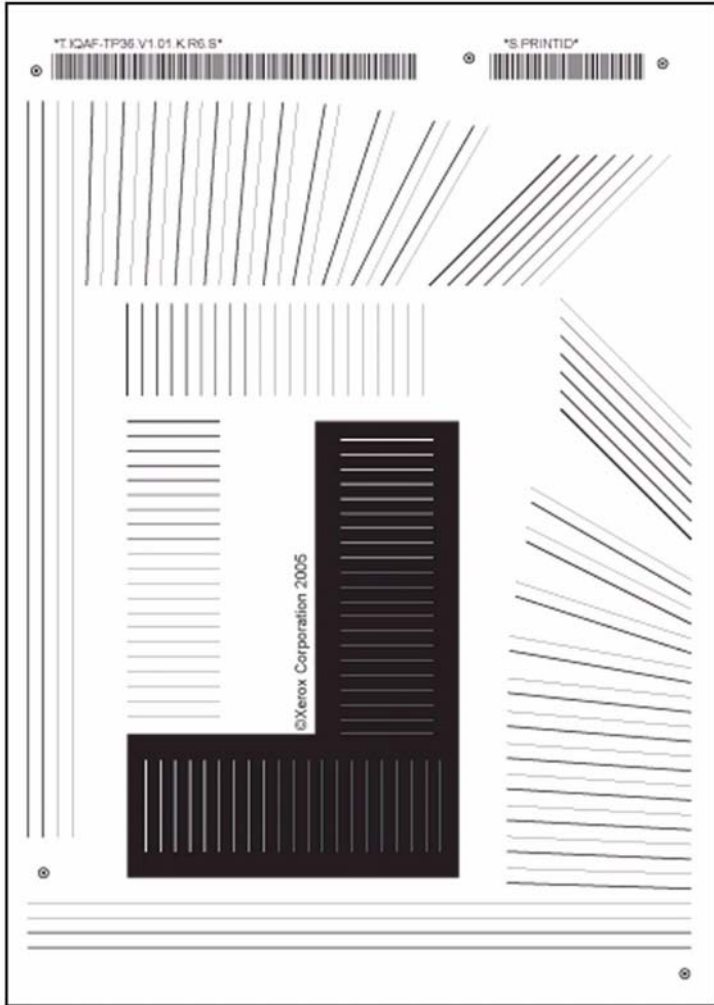
Figure 15 Internal test pattern 16



W-1-1189-A

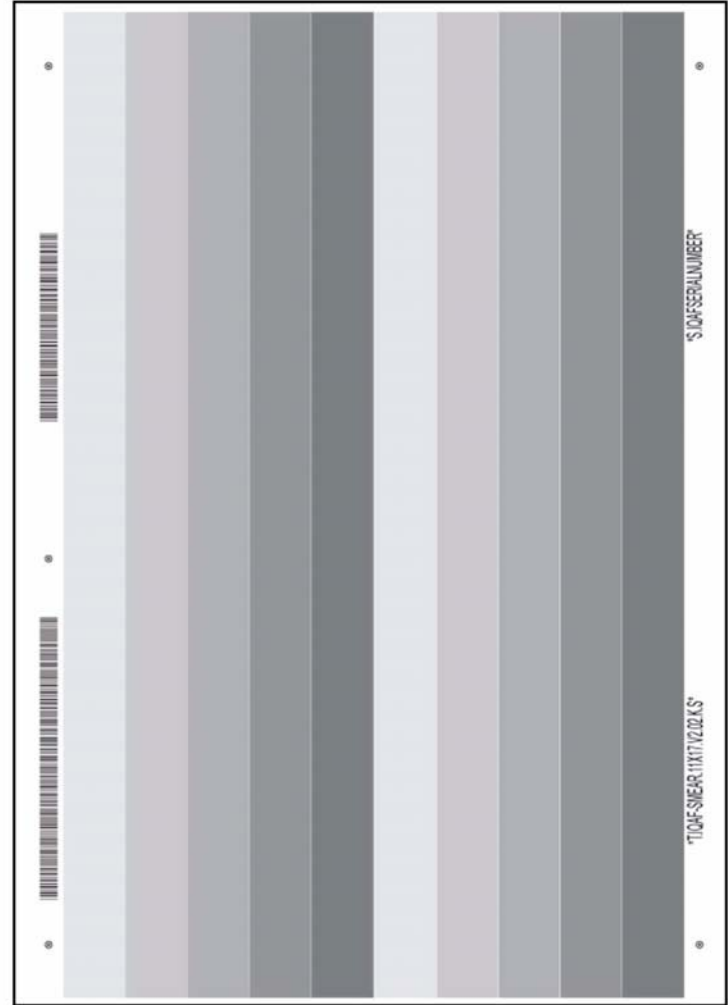
Figure 16 Internal test pattern 17





W-1-1190-A

Figure 17 Internal test pattern 18



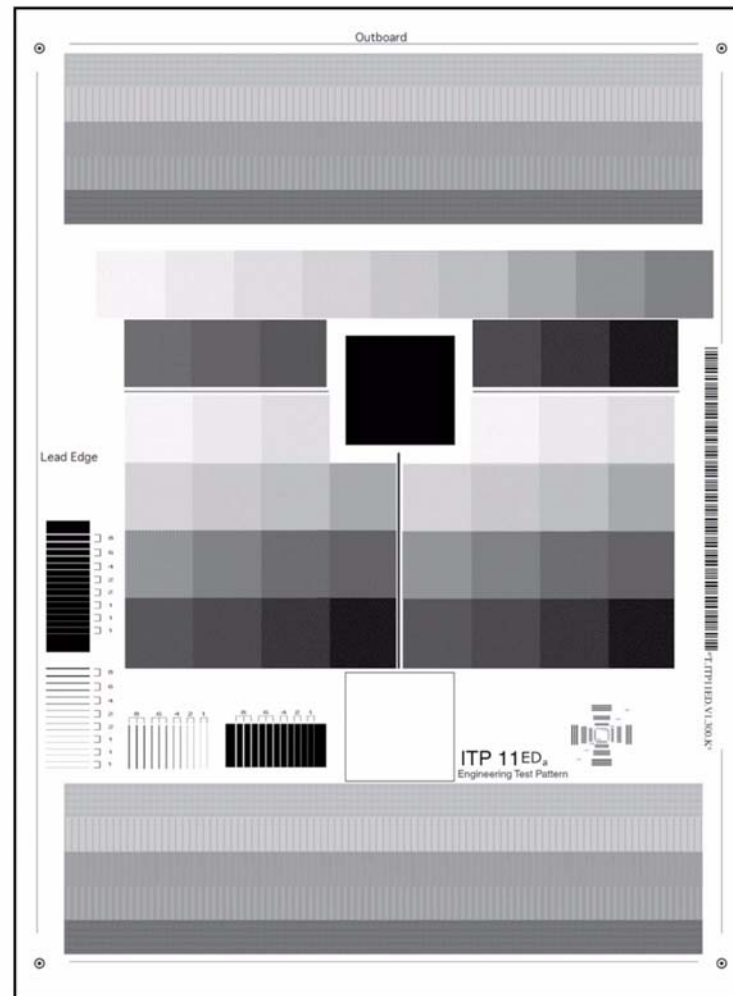
W-1-1191-A

Figure 18 Internal test pattern 19



W-1-1192-A

Figure 19 Internal test pattern 20



W-1-1231-A

Figure 20 Internal test pattern 21

## IQ2 IOT IQ Defects RAP

Use this RAP to resolve image quality defects produced in the IOT.

### 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.**

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](#).
- [Light Copies or Prints](#).
- [Misregistration](#).
- [Mottled Copies or Prints](#).
- [Narrow Bands in the Cross Process Direction](#).
- [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](#).

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](#), 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.

## 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 fly-wheel, [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. Check the LED print head module:
  - Check the 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.
  - Clean the LED print head, [ADJ 60.4](#).
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](#).

- 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](#).

## 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.

### Procedure

Perform the procedures that follow:

- [IQ6 Narrow Bands RAP](#).
- Go to the [IQ3 Xerographic RAP](#) and perform the [LED Print Head Checkout](#).

## 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 BTReverseBiasCycleIn.
    - 501-168 BTReverseBiasRun.
  - 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.
- [ADJ 60.4 LED Print Head Cleaning Procedure](#).
- 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](#).
  - 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](#).

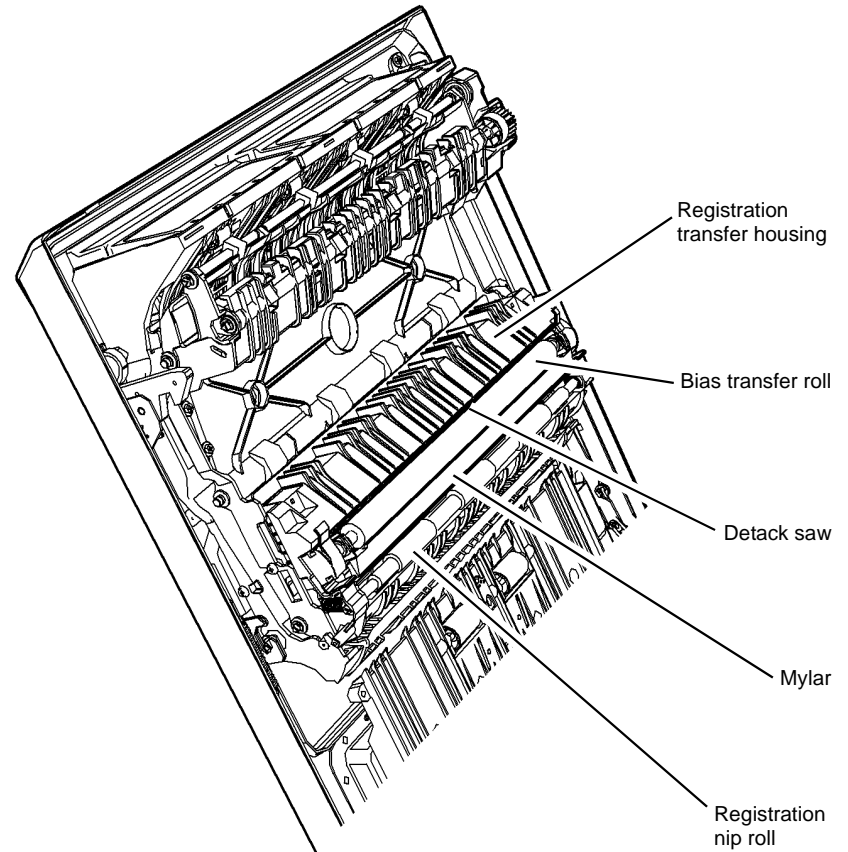
## White Spots

### 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.



W-1-1151-A

Figure 1 Component location

## Image Quality Defect Samples

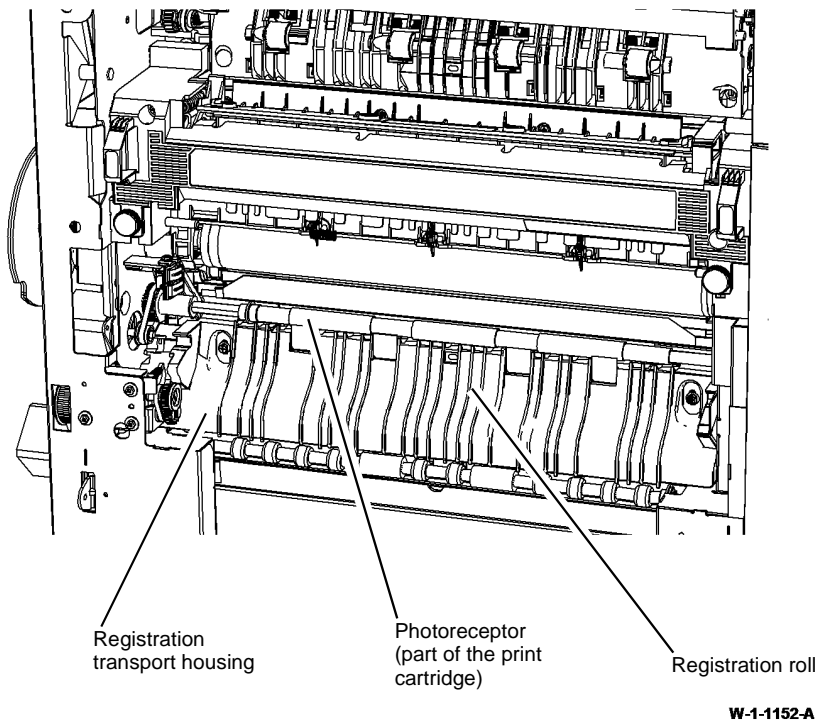


Figure 2 Component location

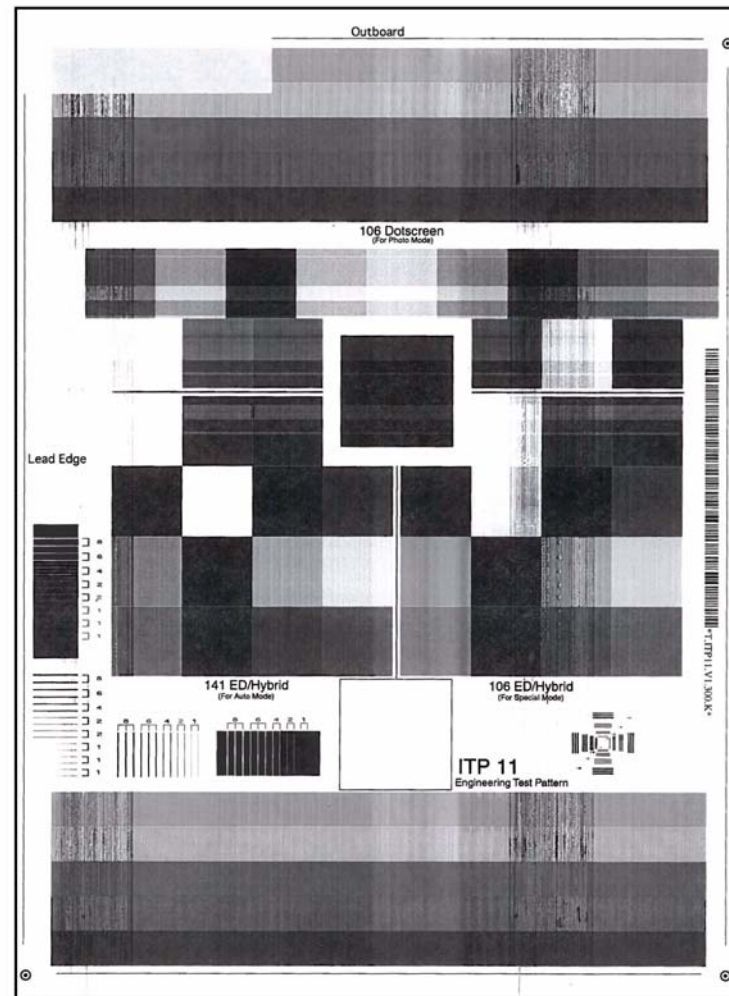
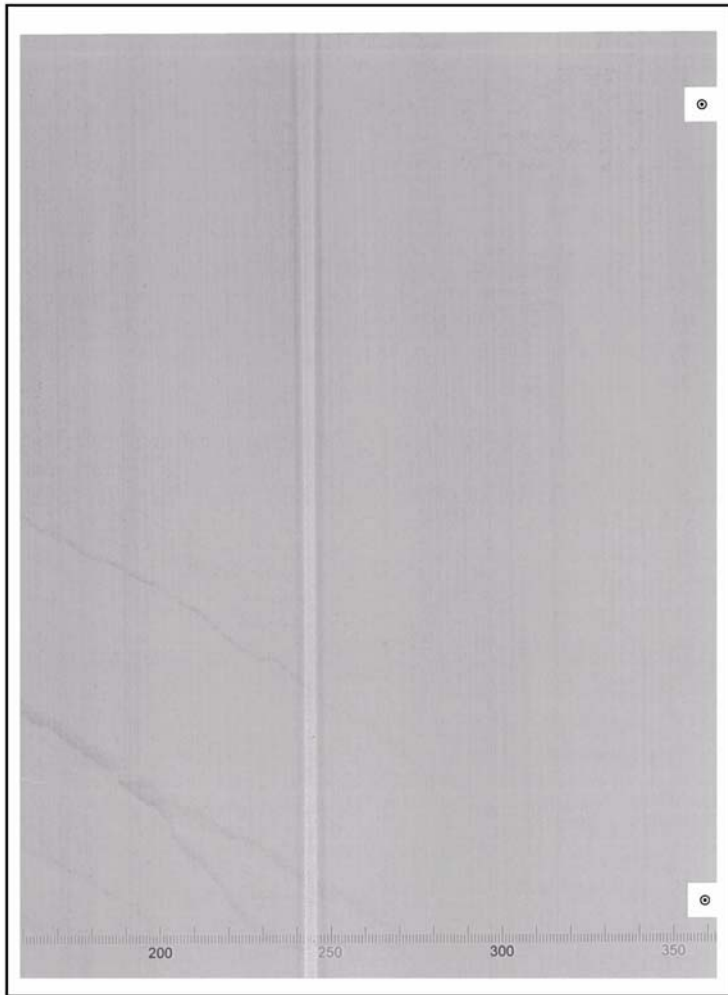


Figure 3 IQ defect sample

The defect shown in Figure 3 is a result of electrostatic discharge (ESD) affecting the LED print head, caused by a loss of grounding.

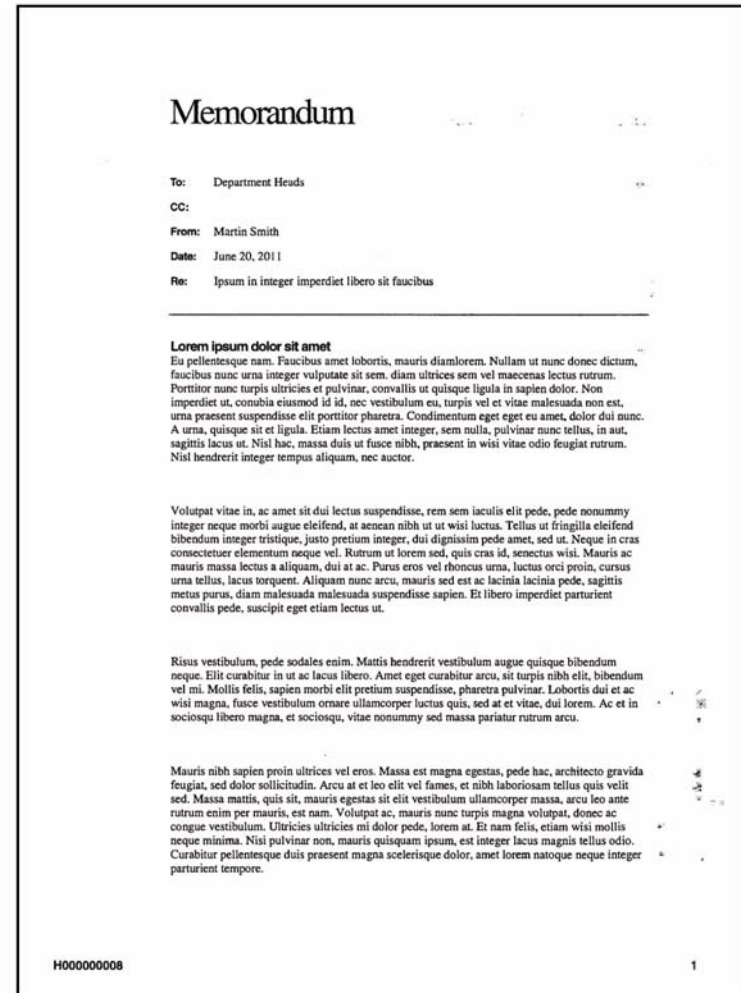




W-1-1277-A

Figure 4 IQ defect sample

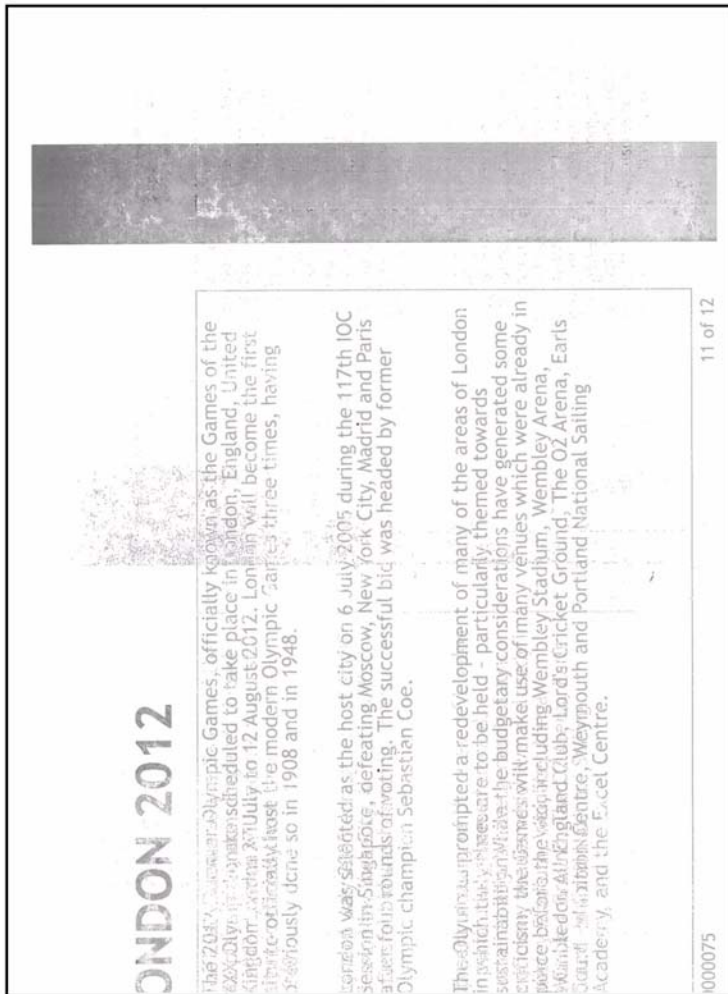
The defect shown in Figure 4 is the result of a light shocked photoreceptor caused by the LED print head being energized while the photoreceptor is stationary.



W-1-1278-A

Figure 5 IQ defect sample

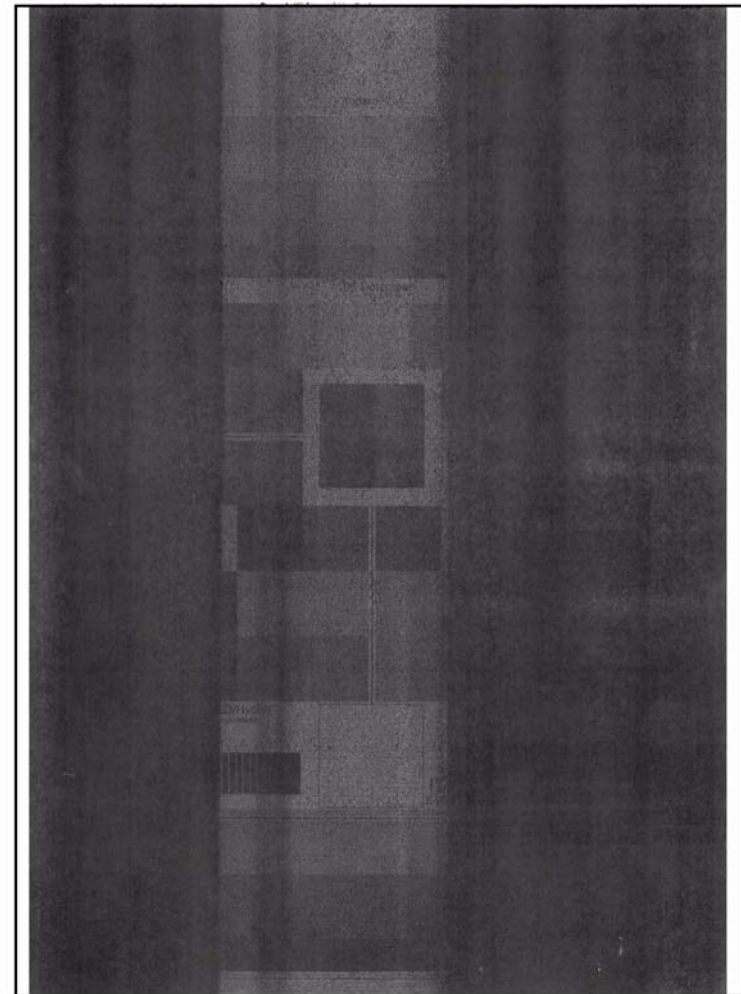
The defect shown in Figure 5 is the result of contamination on the fuser guide. This can be seen as image disturbance and contamination deposits towards the trail edge from the image areas of the page.



W-1-1279-A

Figure 6 IQ defect sample

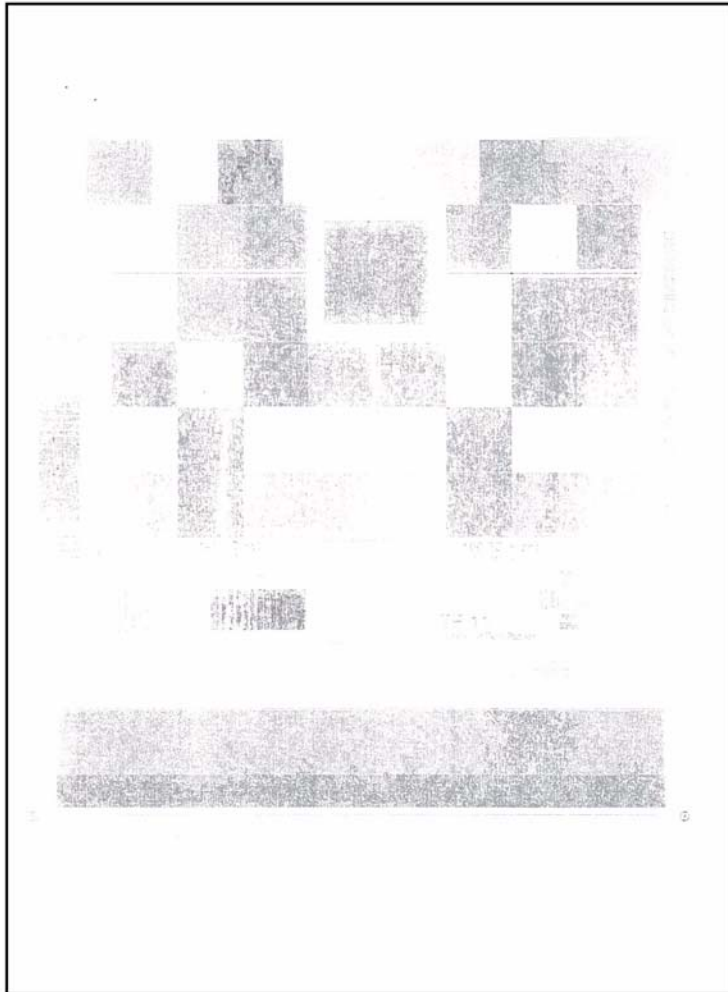
The defect shown in Figure 6 is a toner image that adheres to the fuser roll or pressure roll and transfers to another area of the print. The repeat interval for a fuser roll defect or a pressure roll defect is 94.3mm (3.71 inches).



W-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.

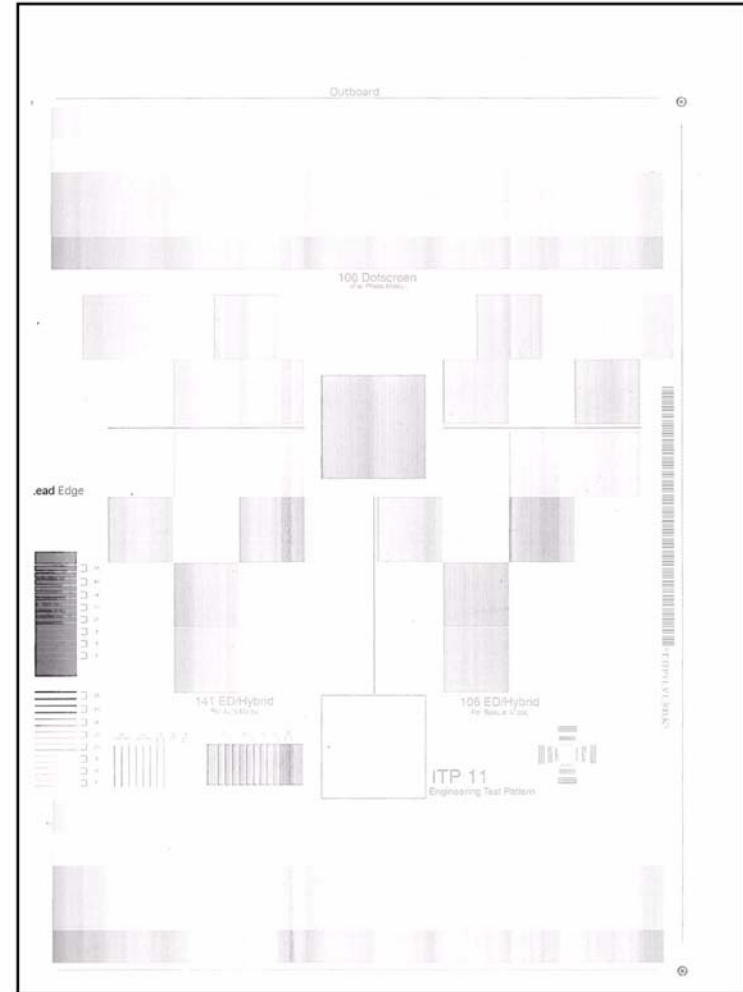


W-1-1281-A

Figure 8 IQ defect sample

The defect shown in Figure 8 could be caused by one of the causes that follow:

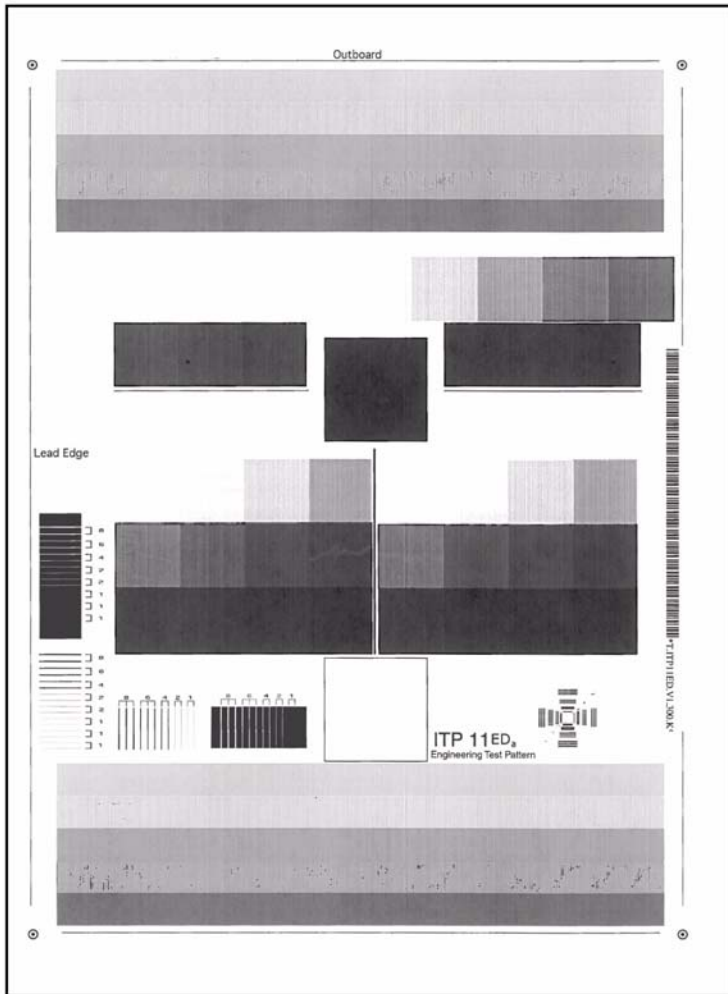
- Loss of the developer bias AC voltage.
- Loss of the BTR voltage due to a damaged BTR track, PL 90.10 Item 7.
- A failed HVPS.



W-1-1282-A

Figure 9 IQ defect sample

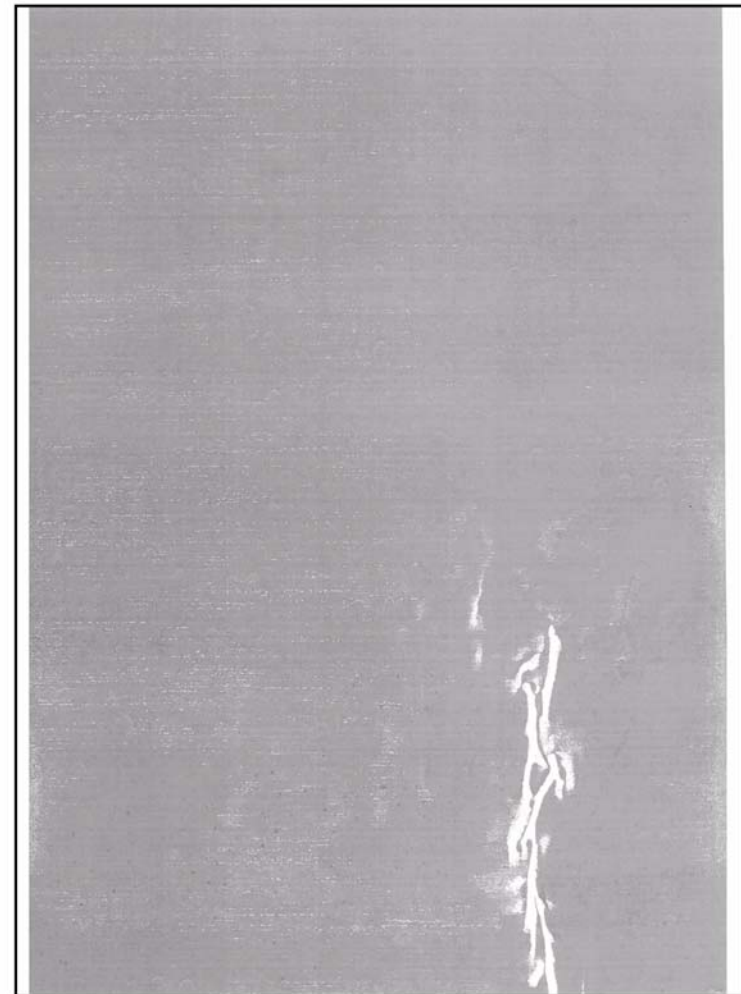
The defect shown in Figure 9 is a result of the loss of the developer bias DC voltage.



W-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.



W-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.

## 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



#### 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. If necessary, install new components:

- 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.
- 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 2, 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.

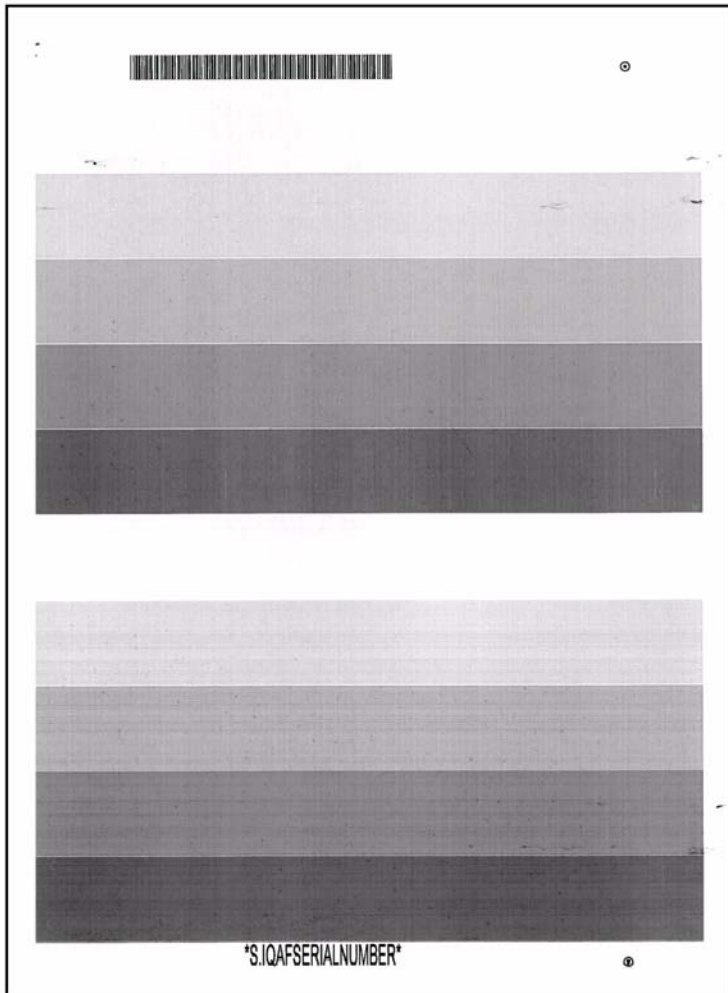
### Procedure

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.



W-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.

## Print Cartridge Checkout

- Three marks/dots/spots on the edge or the body of the prints/copies, that align with the 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.

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:

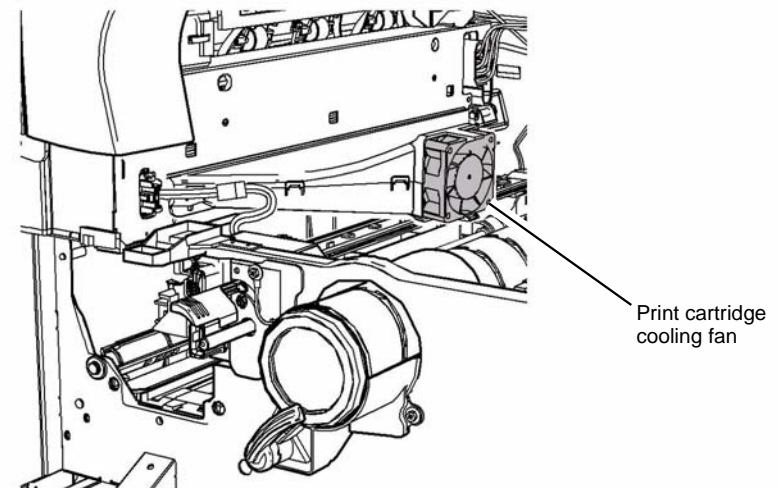
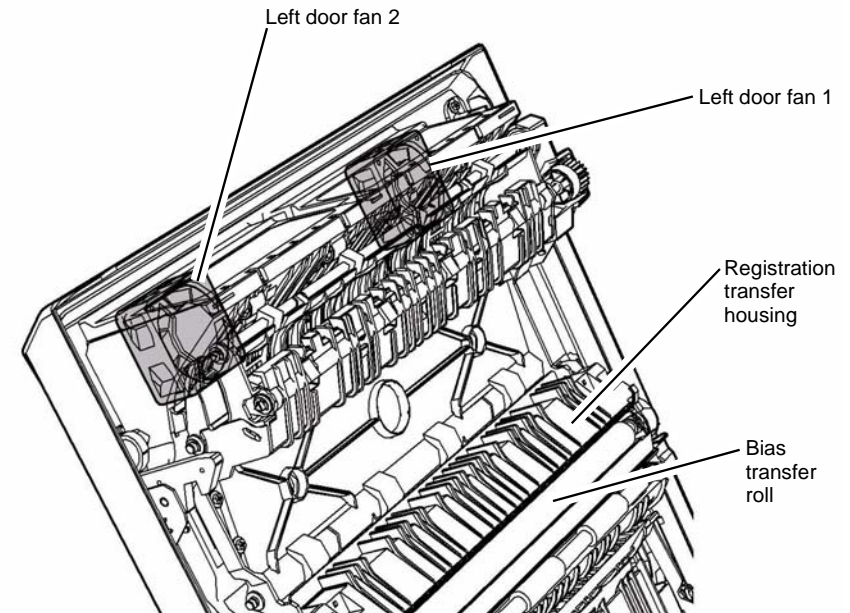
1. Ensure the track (DTAK), [PL 90.10 Item 6](#) makes good contact with the HVPS.
  2. Ensure the track (DTAK), [PL 90.10 Item 6](#) touches the detack saw contact when the left door is closed, by connecting one meter lead to the back of the detack saw contact wire and the other meter lead to the track (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. 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, clean 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](#).
- 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.
- 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](#).



W-1-1156-A

Figure 1 Component location

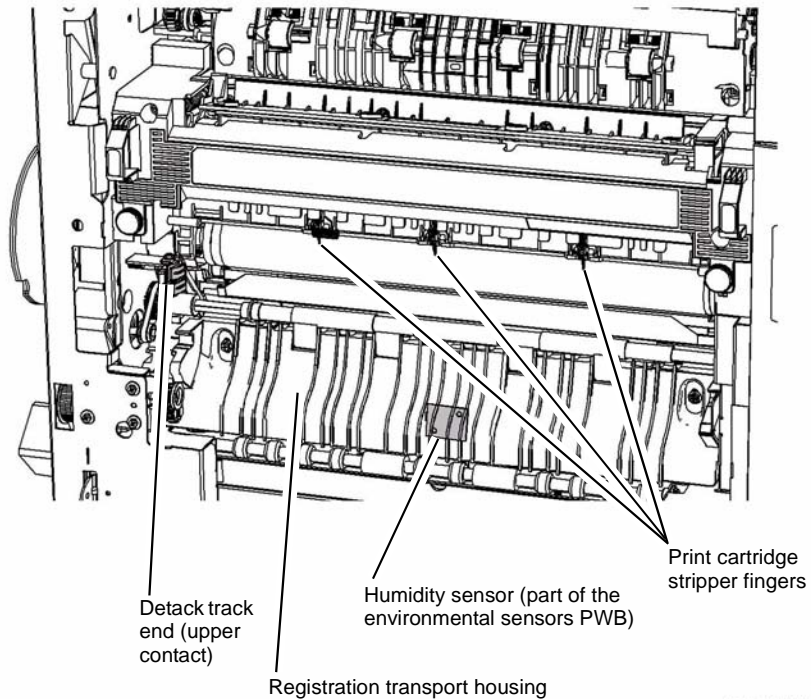


Figure 2 Component location

W-1-1157-A

## 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



**Ensure that the electricity to the machine is switched off while performing tasks 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.
  - 312K-110 2K LCSS Poor Stacking RAP.
  - 312A-150 LVF BM Poor Stacking RAP.

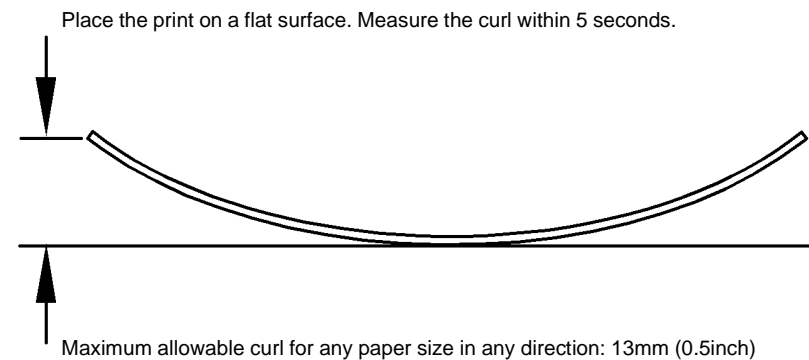
- Remove the output device, then connect a finisher bypass connector, PL 26.10 Item 7.
  - Check the paper path through the inverter assembly, PL 10.10 Item 1.
  - Check the paper path through the horizontal transport, PL 10.15 Item 1.

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.



W-1-1021-A

Figure 1 Curl height measurement



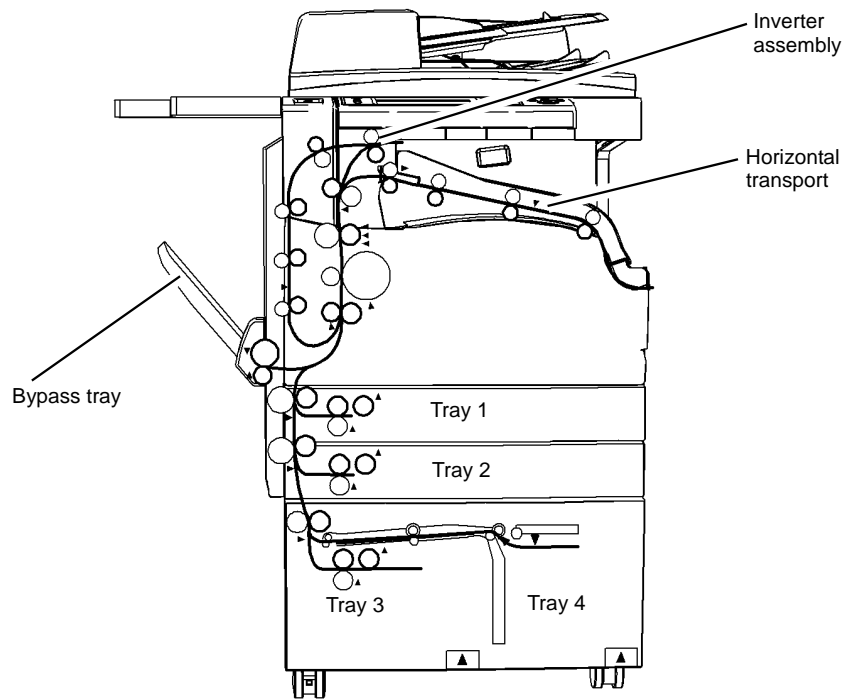


Figure 2 Paper path

W-1-1022-A

## 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



### 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 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](#).
- [Part Image / Part Black Image](#).
- [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 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](#) 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.

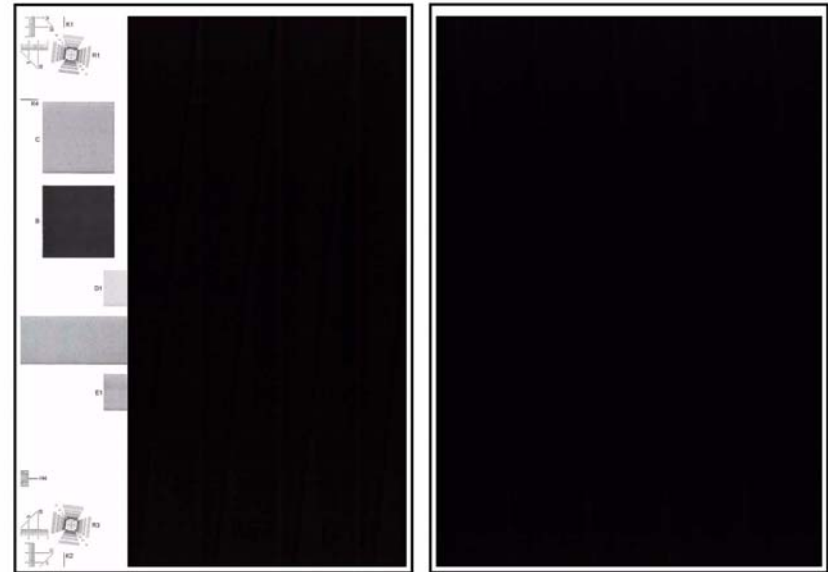
### Procedure

Perform the [362A Side 1 Scanning Document Size RAP](#).

### Part Image / Part Black Image

#### Description

Refer to [Figure 1](#). A strip of the image next to the leading edge is good but the remainder of the page is black, with a sharp joint between the 2 parts that runs from inboard to outboard. If the output is duplex, side 2 of the copy/scan will have a larger proportion of black or may be completely black. The fault history may contain 362-960 codes.



Side 1

Side 2

W-1-1296-A

Figure 1 IQ sample

### Procedure

Perform the [362-357-00, 362-960-00 Scanner Cooling Fan Fault 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 60.11](#).

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 17](#) from the [scanner CCD PWB](#), PJ445 to the [Scanner PWB](#), PJ412. Refer to [WD 16](#).
  - The scan carriage power ribbon cable, [PL 60.20 Item 10](#) from the [scanner CCD PWB](#), PJ446 to the [Scanner PWB](#), PJ416. Refer to [WD 16](#).
  - The SBC PWB to scanner PWB data cable, [PL 60.20 Item 22](#) from the [scanner PWB](#), PJ411 to the [SBC PWB](#), PJ862. Refer to [WD 16](#). 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](#), PJ410 to the [SBC PWB](#), PJ860 and PJ861. Refer to [WD 16](#).

- 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.
- 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.

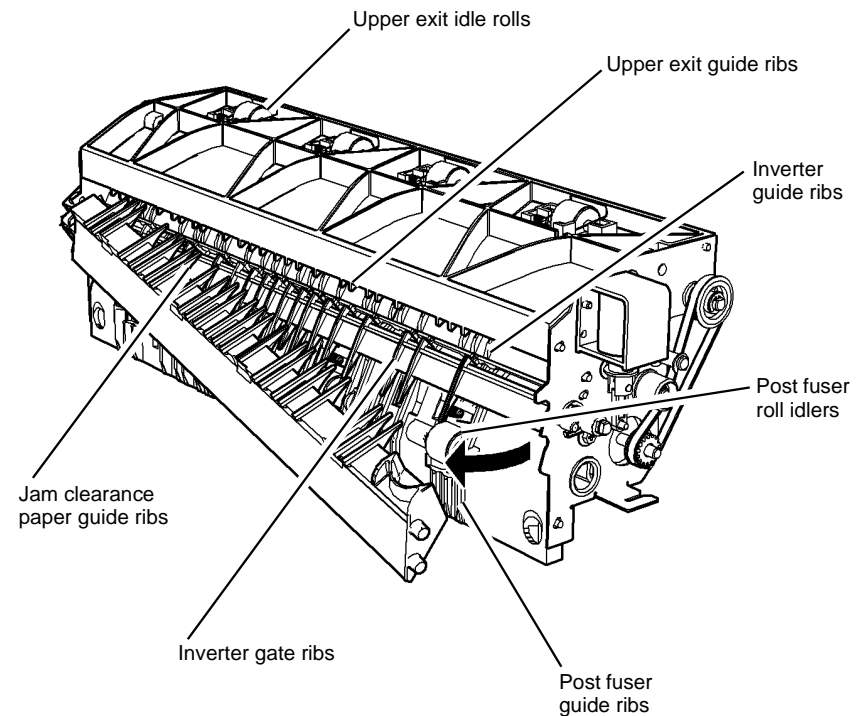
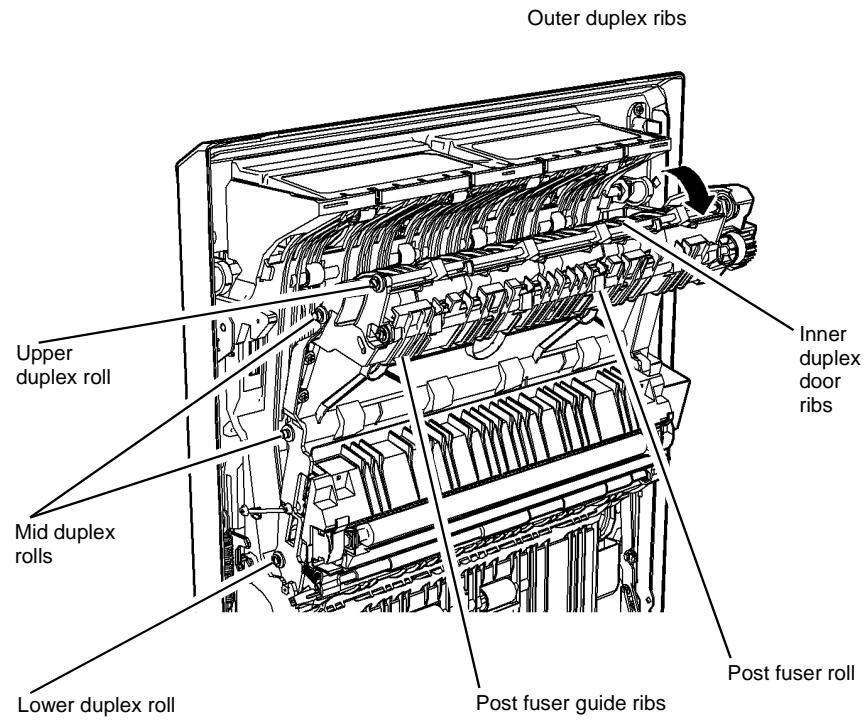


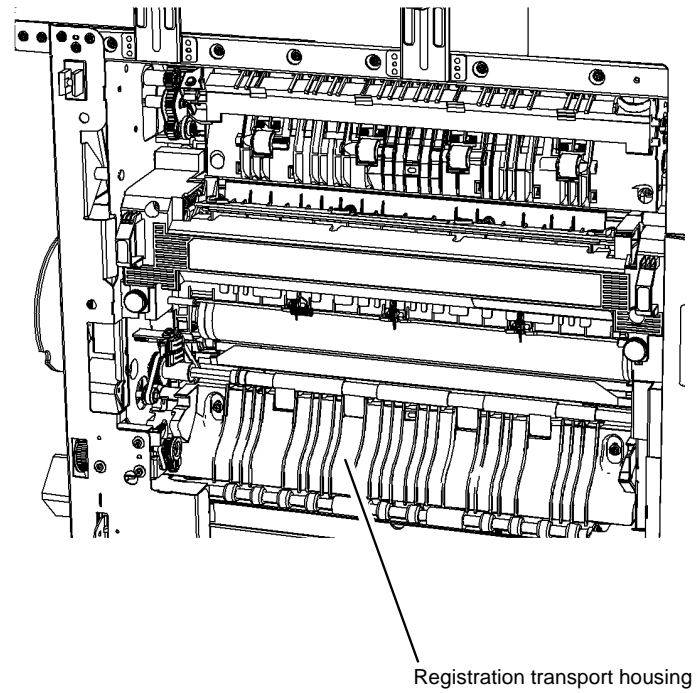
Figure 1 Inverter ribs and rolls

W-1-1161-A



**Figure 2 Duplex paper guides**

**W-1-1162-A**



**Figure 3 Registration transport**

**W-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



#### 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 country setting, NVM location 200-043, is correct. Refer to the [Fax NVM Document](#).

### 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 Document](#). 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



#### 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 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 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 [GP 5](#).

## Image Quality Options

**Original Type** - a choice of 5 options:

- Photo and text.
- Text.
- Photo.
- Map.
- Newspaper/Magazine.

**How Original was Produced** - a choice of 5 options:

- Printed.
- Photocopied.
- Photograph.
- Ink Jet.
- Solid Ink.

### Image Options

- Lighten/Darken - a choice of 7 steps from lightest to darkest.
- Sharpness - a choice of 5 steps from softest to sharpest.

### Image Enhancement

- Image Enhancement, a choice of Off or Auto Suppression.
- Contrast:
  - Manual Contrast - a choice of 5 levels from lowest to highest.
  - 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



### 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. 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. 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.
5. Perform the [LED Print Head Checkout](#).

**NOTE:** *If the customer is using the print driver's 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.*

### Procedure

Select [dC612](#) Print Test Patterns. Make 3 prints of internal test pattern 21 (ITP 11 Error Dif-fused 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](#).

Check [dC131](#) NVM location 501-349, TcSnrReading. **The value is 291 +/- 10.**

**Y N**  
**The value is less than 1023.**

A B



Y N

Perform the steps that follow:

1. Perform **dC301** Copier NVM Initialisation. Reset Copy Controller/System NVM.
2. To stabilise the toner concentration controls, make 200 copies of internal test pattern 12 (ITP 19 Field test Pattern (A4)). Refer to **dC612** Print Test Patterns.
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 specification or the customer's requirements.**

Y N

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. Then perform **Final Actions** within this procedure.

Perform **Final Actions** within this procedure.

Perform the **393-360-00** to **393-364-00** Toner Concentration Sensor Failure RAP.

Perform the steps that follow:

1. Enter **dC131** NVM location 501-300, LPH\_Exposure\_Fixed:
  - Increase the value by increments of 10 to darken the image.
  - Decrease the value by increments of 10 to lighten the image.
2. 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 specification or the customer's requirements.**

Y N

Perform the steps that follow:

1. Enter **dC131** NVM location 501-299, DevBiasDC\_Fixed. Change the value in small increments up to a maximum change of +/- 40 units.

**NOTE:** Do not change the NVM location 501-299, DevBiasDC\_Fixed beyond a total of +/- 40 units, otherwise developer bead carry out may occur.

2. 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 specification or the customer's 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.

Perform **Final Actions** within this procedure.

### LED Print Head Checkout

- If toner contamination is evident on the LED print head, perform **ADJ 60.4** LED Print Head Cleaning Procedure.
- The LED print head may be too bright. Perform **dC304** LED Print Head Validation.
- 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.
- 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.

### 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 5.2](#) 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 5.3](#) 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 5.2](#) 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 ribbon cable from the [Side 2 CCD PWB](#), PJ451 to the to the [Scanner PWB](#), PJ413. Refer to [WD 16](#).
  - The ribbon cable from the [Side 2 CCD PWB](#), PJ452 to the to the [SPDH PWB](#), PJ458. 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.

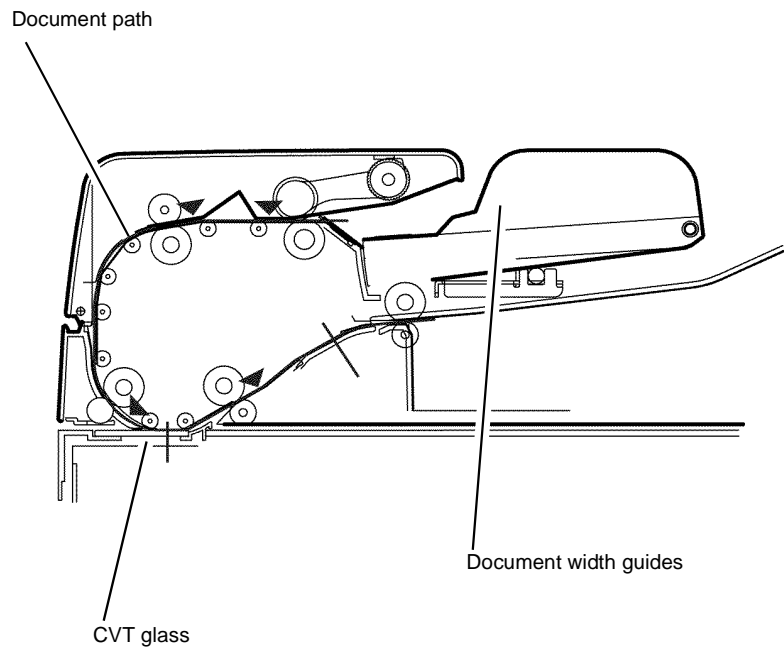
## SPDH Checkout

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 5.4](#) 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 5.2](#) 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 5.2](#) SPDH Height Adjustment. Make new files from the SPDH after each adjustment. If the fault persists, re-adjust the height of the SPDH as necessary.



W-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.

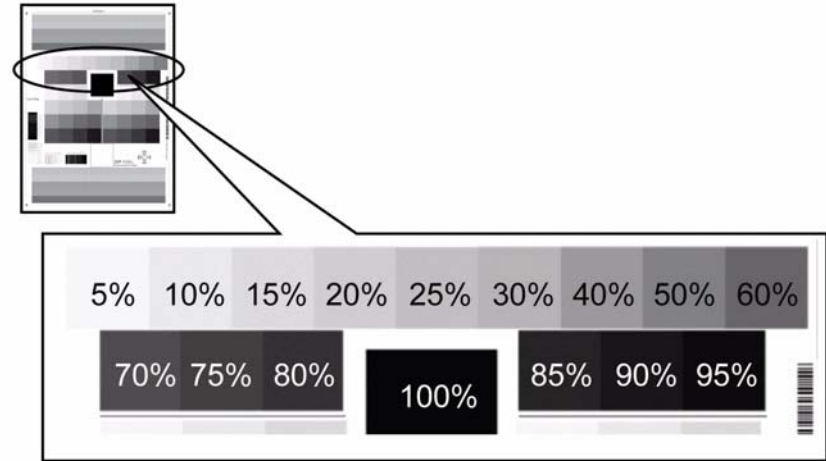
## Copy

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.

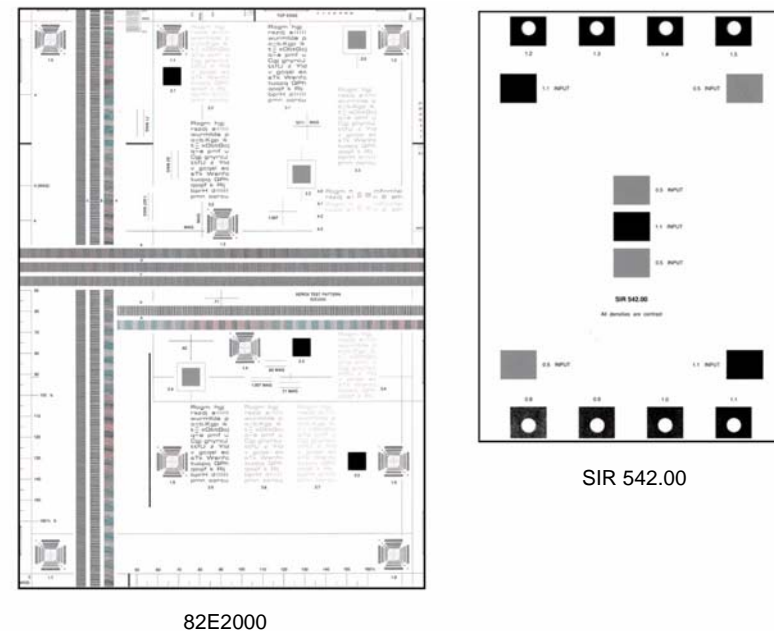
## Corrective Action

- 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.



W-1-1232-A

Figure 1 Internal test pattern 21



W-1-1235-A

Figure 2 Test patterns

## IQS 2 Background

### Documents

Test patterns: 82E2000 (A3 and 11X17) 82E2010 (A4) 82E2020 (8.5X11) and visual scale, 82P448 for reference.

### Specification

#### Copy

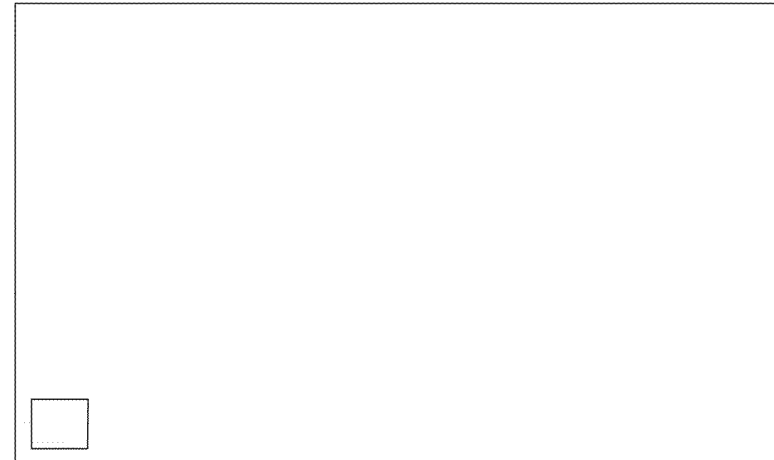
Compare the copies of the test pattern, [Figure 1](#), made from the document glass, with the visual scale, 82P448. The background of the copies must be lighter than the reference area B.

#### Print

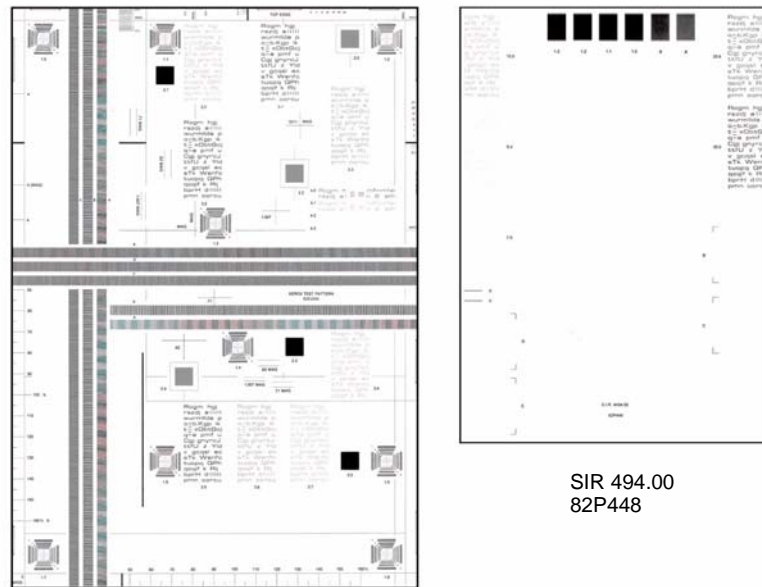
Compare a print of the internal test pattern 1 (ITP 1 0% coverage), [Figure 2](#), with the visual scale, 82P448. The background of the print must be lighter than the reference area B.

### Corrective Action

If the background specification is not met, perform the [IQ3](#) Xerographic RAP.



W-1-1237-A



82E2000

SIR 494.00  
82P448

W-1-1236-A

Figure 1 Test pattern

Figure 2 Internal test pattern 1

# IQS 3 Fusing

## Documents

Test Patterns: 82E2000 (A3 and 11X17) 82E2010 (A4) 82E2020 (8.5X11).

## Procedure

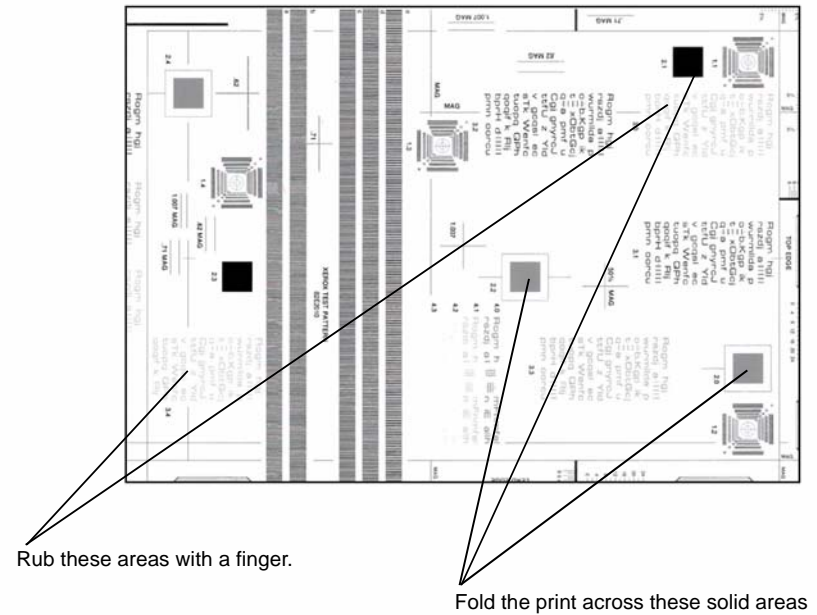
Make 5 copies of the test pattern, [Figure 1](#). Check the fusing by folding one of the copies through the centre of a solid area. Use a finger to apply medium pressure along the fold to crease the paper. Unfold the copy. Use a finger to lightly rub the area of the fold and adjacent areas.

## 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.



W-1-1238-A

Figure 1 Test pattern

## 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](#).

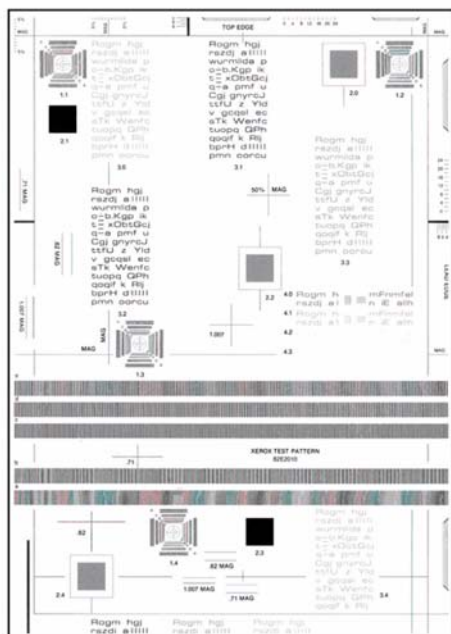


Figure 1 Test pattern

## 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

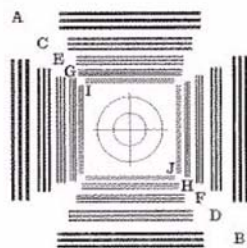
### Skew Measurement

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](#).



W-1-1239-A



## 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

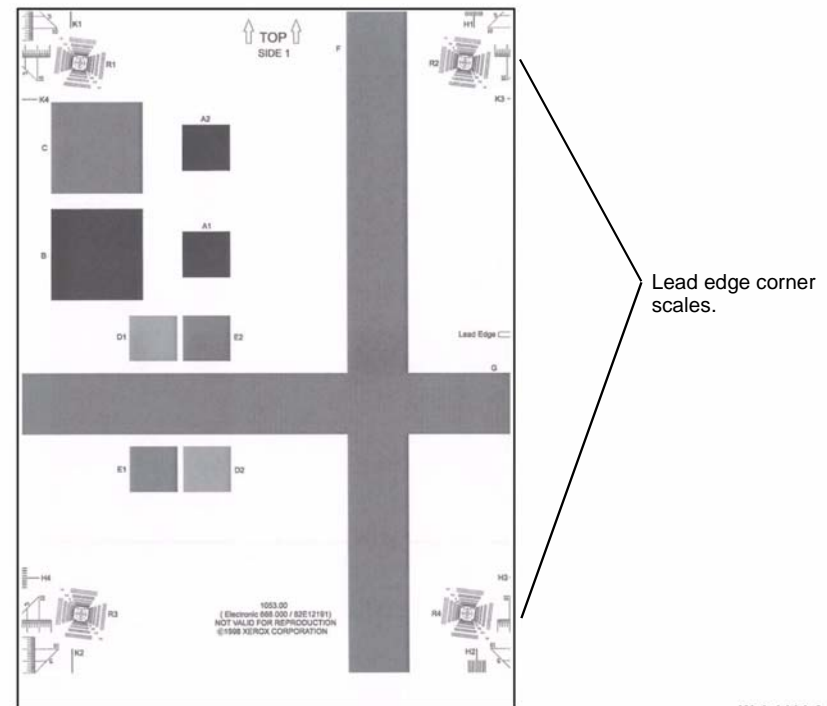
To check for skew, perform the following:

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.



W-1-1414-A

**Figure 1 Print skew measurement (simplex)**

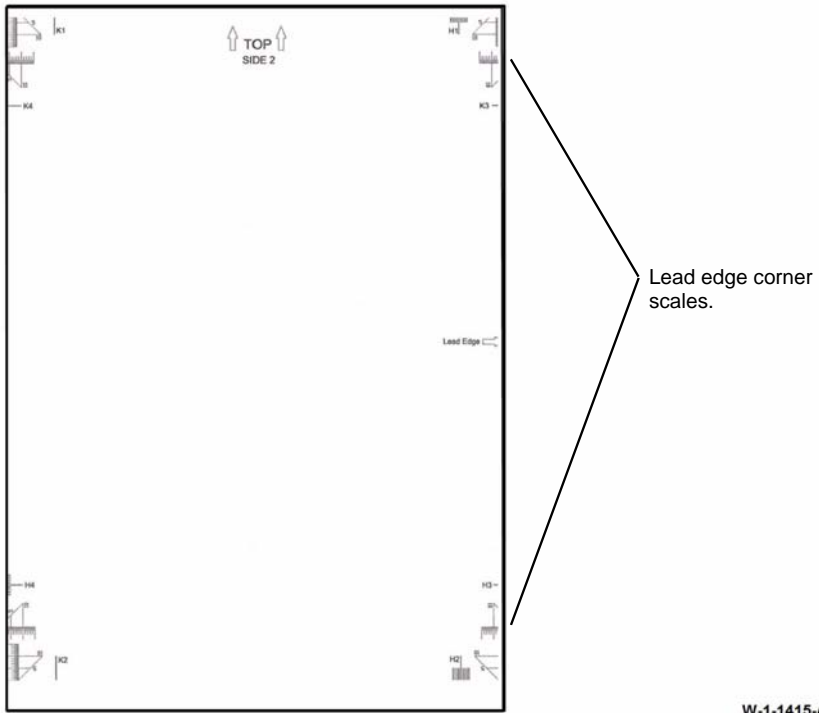


Figure 2 Print skew measurement (duplex)

W-1-1415-A

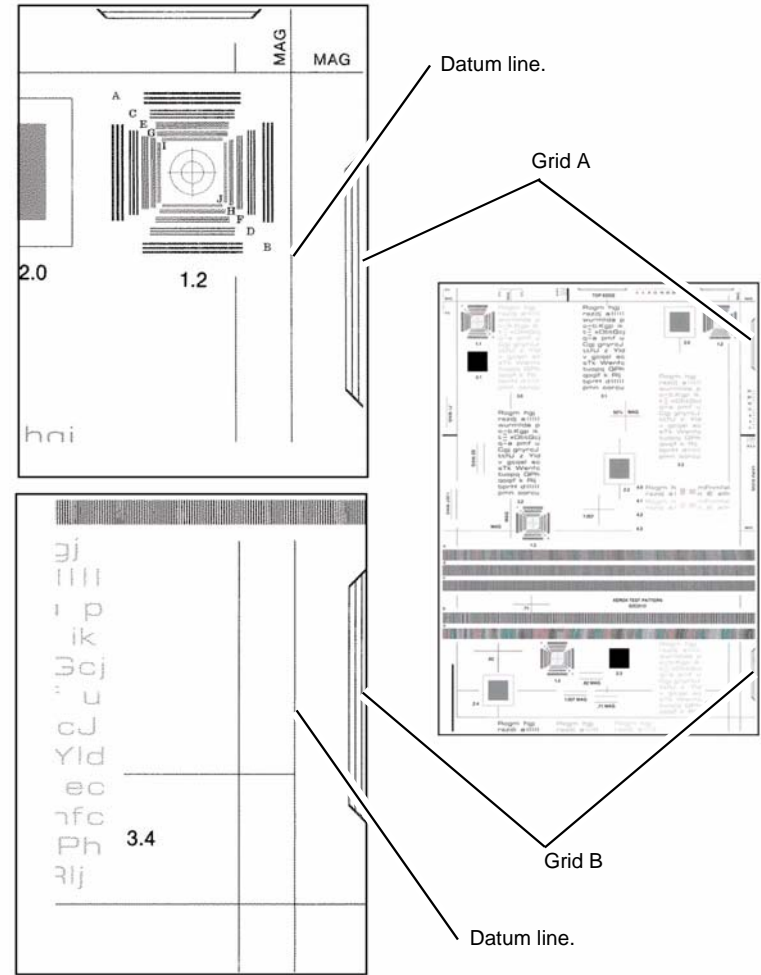


Figure 3 Copy and scan skew measurement

W-1-1240-A

## 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 5.4](#) SPDH Cleaning. 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.

## 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.

#### Corrective Action

Perform [ADJ 12.3-110](#) Hole Punch Position (2K LCSS), or [ADJ 12.3-150](#) Hole Punch Position (LVF).

# 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.

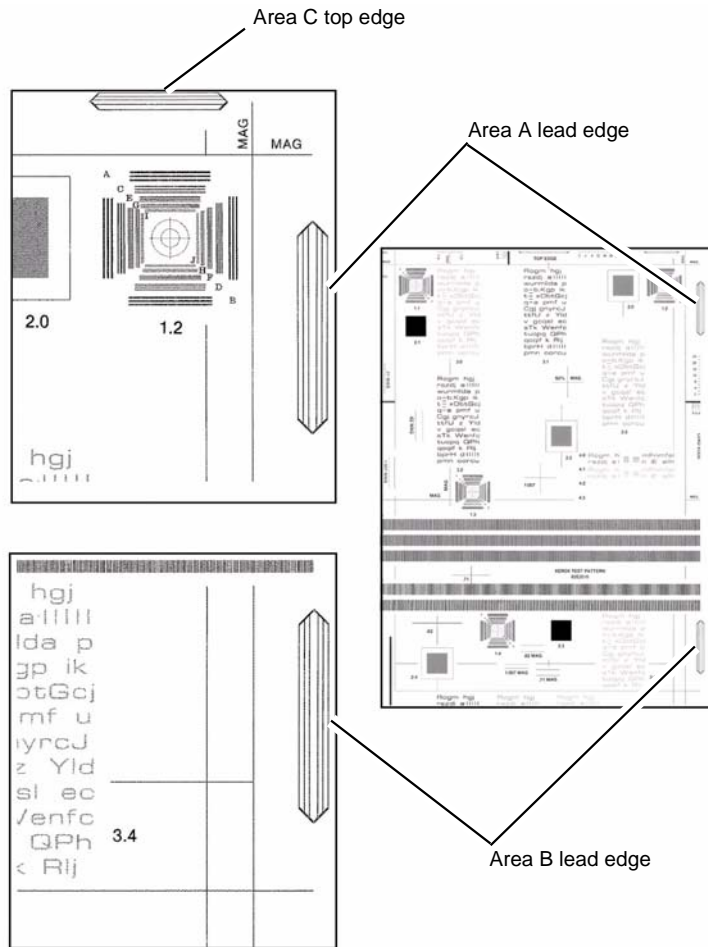


Figure 1 Registration measurement

W-1-1241-A

## IQS 8 Magnification

### 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)

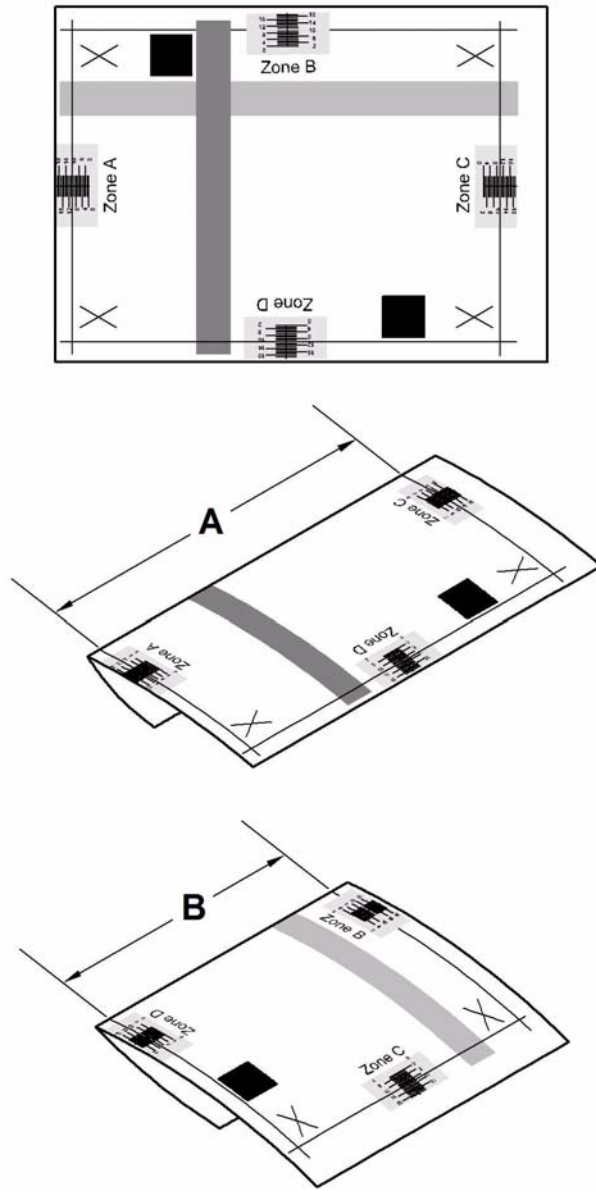
### Magnification measurement

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.

**NOTE:** There are no cross process direction adjustments.



W-1-1242-A

Figure 1 Magnification check

# 4 Repairs/Adjustments

## REPs 1 - Standby Power

REP 1.1 LVPS Module Removal.....	4-5
REP 1.2 Wiring Harness .....	4-7
REP 1.3 Molex SL Connectors.....	4-8
REP 1.4 Male Hirose DF1B Connectors .....	4-10
REP 1.5 AMP EI Connectors .....	4-12
REP 1.6 Hirose DF11 Connectors .....	4-14
REP 1.7 AMP CT Connectors .....	4-15
REP 1.8 Front Door Interlock Removal .....	4-16
REP 1.9 Left Door Interlock Removal .....	4-17
REP 1.10 HVPS Removal.....	4-17
REP 1.11 Molex Mini-Fit Junior Connectors .....	4-19

## REPs 2 - User Interface

REP 2.1 User Interface Assembly.....	4-21
REP 2.2 UI Touch Screen .....	4-22
REP 2.3 UI Control PWB.....	4-22

## REPs 3 - Machine Run Control

REP 3.1 IOT PWB.....	4-25
REP 3.2 Hard Disk Drive .....	4-25
REP 3.3 Single Board Controller PWB.....	4-26
REP 3.4 SD Card .....	4-27
REP 3.5 Foreign Device Interface PWB and Ribbon Cable.....	4-27
REP 3.6 Single Board Controller Module .....	4-29

## REPs 5 - SPDH

REP 5.1 Top Cover Assembly.....	4-31
REP 5.2 Feed Roll, Nudger Roll and Feed Assembly.....	4-32
REP 5.3 Retard Roll and Separation Assembly .....	4-33
REP 5.4 Input Tray Assembly .....	4-34
REP 5.5 Takeaway Roll Assembly.....	4-37
REP 5.6 Lower Pre Scan Roller Assembly .....	4-38
REP 5.7 Exit Roll Assembly .....	4-39
REP 5.8 Stack Height Sensor, Takeaway Sensor and Feed Sensor.....	4-41
REP 5.9 Length Sensors.....	4-42
REP 5.10 SPDH Reg Sensor.....	4-43
REP 5.11 Calibration Home Position Sensor.....	4-44
REP 5.12 Feed Motor and Belt .....	4-45
REP 5.13 Read Motor .....	4-46
REP 5.14 Feed Clutch.....	4-48
REP 5.15 Takeaway Clutch .....	4-50
REP 5.16 Input Tray Sensors and Doc Present Sensor Actuator .....	4-52
REP 5.17 Pre Scan Roll Assembly .....	4-55
REP 5.18 Mid Scan Roll Assembly .....	4-58
REP 5.19 SPDH Removal.....	4-60
REP 5.20 Motor Cooling Fan .....	4-62
REP 5.21 LED Cooling Fan.....	4-63

REP 5.22 Side 2 Scan Power and Data Ribbon Cables .....	4-63
REP 5.23 SPDH Read Assembly.....	4-67
REP 5.24 Tray Elevator Motor .....	4-70
REP 5.25 SPDH Read Assembly Drives.....	4-71

## REPs 10 - Print Transport and Fusing

REP 10.1 Inverter Assembly .....	4-81
REP 10.2 Exit Drive Assembly.....	4-83
REP 10.3 Inverter Motor.....	4-83
REP 10.4 Offset Motor .....	4-84
REP 10.5 Exit Roll and Offset Shuttle .....	4-84
REP 10.6 Horizontal Transport Assembly.....	4-85
REP 10.7 Horizontal Transport Motor .....	4-87

## REPs 12-110 - LCSS

REP 12.1-110 2K LCSS Covers.....	4-89
REP 12.2-110 Input Drive Belt and Transport Motor 1.....	4-90
REP 12.3-110 Intermediate Paper Drive Belt.....	4-91
REP 12.4-110 Paper Output Drive Belt and Transport Motor 2 .....	4-92
REP 12.5-110 Bin 1 Drive Belts .....	4-93
REP 12.6-110 Tamper Assembly.....	4-96
REP 12.7-110 Hole Punch Unit, Motor and Sensors .....	4-97
REP 12.8-110 Stapler Traverse Assembly.....	4-99
REP 12.9-110 Staple Head Unit.....	4-101
REP 12.10-110 Ejector Assembly and Sensors.....	4-102
REP 12.11-110 Bin 1 Upper Level Sensor.....	4-103
REP 12.12-110 Paddle Shaft Assembly.....	4-104
REP 12.13-110 2K LCSS Un-Docking .....	4-107
REP 12.14-110 2K LCSS PWB.....	4-108
REP 12.15-110 Entry Guide Cover .....	4-109
REP 12.16-110 Docking Latch Assembly .....	4-110
REP 12.17-110 Ejector Belt .....	4-112
REP 12.18-110 Paddles.....	4-113
REP 12.19-110 Lower Right Paper Guide .....	4-113
REP 12.20-110 Paper Guide and Top Exit Sensor .....	4-117

## REPs 12-150 - LVF BM

REP 12.1-150 LVF BM Covers .....	4-119
REP 12.2-150 Input Drive Belt, Compiler Entrance Drive Belt 1 and Transport Motor 1 and Gearbox Assembly .....	4-120
REP 12.3-150 Intermediate Paper Drive Belt.....	4-121
REP 12.4-150 Paper Output Drive Belt and Transport Motor 2 .....	4-122
REP 12.5-150 Bin 1 Drive Belts and Stacker Tray Drive and Motor Assembly.....	4-123
REP 12.6-150 Tamper Assembly and Sensors.....	4-126
REP 12.7-150 Hole Punch Unit, Motor and Sensors .....	4-128
REP 12.8-150 Stapler Traverse Assembly and Sensors .....	4-130
REP 12.9-150 Staple Head Unit.....	4-133
REP 12.10-150 Ejector Assembly, Support Finger and Sensors.....	4-134

REP 12.11-150 Bin 1 Upper Level Sensor.....	4-138
REP 12.12-150 Paddle Shaft Assembly and Paddle Motor Assembly .....	4-140
REP 12.13-150 LVF BM Un-Docking.....	4-143
REP 12.14-150 LVF PWB.....	4-144
REP 12.15-150 Entry Guide Cover Assembly .....	4-144
REP 12.16-150 Docking Latch Assembly .....	4-145
REP 12.17-150 Ejector Belt .....	4-147
REP 12.18-150 BM Back Stop Motor.....	4-148
REP 12.19-150 Back Stop Assembly.....	4-149
REP 12.20-150 BM Guide Home Sensor and BM Back Stop Mid Home Sensor.....	4-153
REP 12.21-150 Crease Blade Gearbox Assembly, Motor and Sensors.....	4-154
REP 12.22-150 Crease Blade Assembly and Guides.....	4-156
REP 12.23-150 Crease Blade Cranks, Bearings, Gear and Handle.....	4-158
REP 12.24-150 Crease Rolls and Associated Components .....	4-161
REP 12.25-150 Crease Roll Motor and Gearbox Assembly .....	4-166
REP 12.26-150 Crease Roll Gear Kit.....	4-167
REP 12.27-150 BM Exit Roll, Belt, Pulley, Bush and Paddle.....	4-167
REP 12.28-150 BM Exit Upper Guide Assembly and Exit Sensor.....	4-169
REP 12.29-150 BM Bail Arm Assembly, Spring, Roller and Bin 2 90% Full Sensor.....	4-170
REP 12.30-150 BM Compiler Guide Assembly, Flapper and Flapper Motor.....	4-172
REP 12.31-150 BM Upper Entrance Guide and Finisher Entry Sensor.....	4-175
REP 12.32-150 BM Lower Guide, BM Entry Sensor and BM Entrance Guide Assembly .....	4-176
REP 12.33-150 Booklet Diverter Gate .....	4-177
REP 12.34-150 BM 1st Feed Roll Assembly, Compiler Entrance Drive Belt 1 and 2 .....	4-178
REP 12.35-150 BM 2nd Feed Roll Assembly .....	4-179
REP 12.36-150 LVF BM PWB .....	4-181
REP 12.37-150 BM Staple Cartridge Assembly.....	4-181
REP 12.38-150 BM Stapler Assembly and Booklet Tamper Assembly .....	4-182
REP 12.39-150 BM Staple Cartridge LED .....	4-184
REP 12.40-150 BM Tamper 1 Home Sensor.....	4-185
REP 12.41-150 Booklet Tamper Motor.....	4-186
REP 12.42-150 Booklet Tamper Arms.....	4-188
REP 12.43-150 BM Paper Present Sensor.....	4-189
REP 12.44-150 Bin 2 Support.....	4-190
REP 12.45-150 Lower Right Cover and Bin 1 Lower Limit Switch.....	4-191
REP 12.46-150 Paper Guide and Top Tray Exit Sensor.....	4-192
REP 12.47-150 Lower Right Paper Guide .....	4-193
REP 12.48-150 BM Staple Head and Sensors .....	4-197

### REPs 20 - Fax

REP 20.1 Fax PWB.....	4-201
-----------------------	-------

### REPs 28 - Covers

REP 28.1 Covers .....	4-203
REP 28.2 Rear Cover .....	4-205

### REPs 40 - Main Drives

REP 40.1 Main Drive Module.....	4-207
REP 40.2 Registration Motor .....	4-208

### REPs 60 - Imaging

REP 60.1 Scanner Rear Cover and Faraday Shield.....	4-209
REP 60.2 Scanner Module.....	4-210
REP 60.3 Top Cover Assembly .....	4-213
REP 60.4 Scanner PWB .....	4-214
REP 60.5 Scan Carriage Assembly .....	4-217
REP 60.6 Side 2 Scan Assembly.....	4-219
REP 60.7 Scan Carriage Power Ribbon Cable.....	4-220
REP 60.8 Scan Carriage Data Ribbon Cable .....	4-223
REP 60.9 Actuator Support Assembly .....	4-227
REP 60.10 Scan Carriage Motor Assembly .....	4-228
REP 60.11 Scan Carriage Drive Belt .....	4-229
REP 60.12 Scan Carriage Idler Pulleys .....	4-231
REP 60.13 Document Size Sensor 1 and Document Size Sensor 2 .....	4-232
REP 60.14 Scanner Cooling Fan .....	4-233
REP 60.15 LED Print Head Module.....	4-234

### REPs 70 - Paper Supply

REP 70.1 Tray 1 and Tray 2 Removal .....	4-237
REP 70.2 Bypass Tray Assembly .....	4-238
REP 70.3 Tray 1 and Tray 2 Paper Guides .....	4-239
REP 70.4 Tray 1 and Tray 2 Paper Size Sensing PWBs.....	4-242
REP 70.5 Tray 3 Removal .....	4-242
REP 70.6 Tray 3 Elevator Motor .....	4-244
REP 70.7 Bypass Tray Width Sensor Removal.....	4-244
REP 70.8 Tray 3 and Tray 4 Elevator Cables .....	4-247
REP 70.9 Tray 3 and Tray 4 Stack Height Sensor.....	4-250
REP 70.10 Tray 3 and Tray 4 Home Sensor .....	4-251
REP 70.11 Tray 3 and Tray 4 Elevate Damper Assembly .....	4-252
REP 70.12 Tray 1 and Tray 2 Lift Gear Assembly.....	4-253
REP 70.13 Tray 4 Control PWB.....	4-254
REP 70.14 Tray 4 Removal .....	4-255
REP 70.15 Tray 4 Elevator Motor .....	4-256
REP 70.16 Tray 3 Empty Sensor .....	4-257
REP 70.17 Tray 4 Empty Sensor .....	4-258
REP 70.18 Bypass Tray Harness .....	4-259

### REPs 80 - Paper Transport

REP 80.1 Tray 1 and Tray 2 Paper Feed Assembly.....	4-263
REP 80.2 Tray 1 and Tray 2 TAR Sensors and Lower Left Door Paper Guide .....	4-264
REP 80.3 Registration Nip Roll and Registration Transfer Assembly.....	4-266
REP 80.4 Registration Transport Assembly, Registration Roll and Registration Sensor .....	4-267
REP 80.5 Duplex Transport Assembly.....	4-271
REP 80.6 Bypass Tray Drive Belt .....	4-272
REP 80.7 Left Door Assembly .....	4-273
REP 80.8 TAR/Bypass Tray Motor and Transport Roll Drive Belt .....	4-276
REP 80.9 Duplex Sensor and Duplex Outer Guide Assembly .....	4-277
REP 80.10 Tray 1 and Tray 2 Transport Rolls and Bearings.....	4-278
REP 80.11 Left Door Latch Assembly.....	4-279
REP 80.12 Duplex Motor Assembly.....	4-280
REP 80.13 Left Door Cover .....	4-281
REP 80.14 Tray 4 Feed Sensor .....	4-282



REP 80.15 Bypass Tray Feed Roll Assembly .....	4-283
REP 80.16 Bypass Tray Retard Roll Assembly .....	4-285
REP 80.17 Tray 3 and Tray 4 Feed Assembly Feed Rolls.....	4-287
REP 80.18 Tray 1 and Tray 2 Feed Rolls .....	4-293
REP 80.19 Tray 1 and Tray 2 Retard Roll Friction Clutch.....	4-294
REP 80.20 Tray 3 Paper Feed Assembly .....	4-295
REP 80.21 Tray 4 Paper Feed Assembly .....	4-297
REP 80.22 HCF Transport Motor .....	4-299
REP 80.23 Tray 4 Transport Gear Pulley.....	4-300
REP 80.24 Tray 4 Transport Assembly.....	4-301
REP 80.25 Tray 4 Exit Sensor .....	4-301
REP 80.26 Tray 4 Takeaway Roll Assembly.....	4-302
REP 80.27 HCF Transport Roll and Idler Roll.....	4-303
REP 80.28 Tray 3 Paper Guide.....	4-305
REP 80.29 Tray 4 Paper Guide.....	4-306
REP 80.30 Tray 3 Feed Sensor .....	4-308
REP 80.31 Tray 4 Transport Clutch Drive Assembly .....	4-309

### REPs 90 - Xerographics

REP 90.1 Toner Dispense Module.....	4-311
REP 90.2 Latch Housing Assembly .....	4-313
REP 90.3 HVPS Tray Assembly .....	4-313
REP 90.4 Environmental Sensors Assembly .....	4-317

### ADJs 5 - SPDH

ADJ 5.1 SPDH Drive Belts .....	4-319
ADJ 5.2 SPDH Height .....	4-319
ADJ 5.3 SPDH Skew.....	4-323
ADJ 5.4 SPDH Cleaning Procedure.....	4-326

### ADJs 12-110 - LCSS

ADJ 12.1-110 2K LCSS Bin 1 Level.....	4-327
ADJ 12.2-110 Machine to 2K LCSS Alignment.....	4-327
ADJ 12.3-110 Hole Punch Position .....	4-328
ADJ 12.4-110 Motor Drive Belt Tensioning.....	4-329

### ADJs 12-150 - LVF BM

ADJ 12.1-150 LVF BM Bin 1 Level.....	4-331
ADJ 12.2-150 Machine to LVF BM Alignment.....	4-331
ADJ 12.3-150 Hole Punch Position .....	4-332
ADJ 12.4-150 Motor Drive Belt Tensioning.....	4-333
ADJ 12.5-150 Booklet Crease Position .....	4-334
ADJ 12.6-150 Booklet Staple Position .....	4-335
ADJ 12.7-150 Booklet Stapler Anvil Position - Front.....	4-335
ADJ 12.8-150 Booklet Stapler Anvil Position - Rear .....	4-336
ADJ 12.9-150 Booklet Skew.....	4-336

### ADJs 40 - Machine Lubrication

ADJ 40.1 Machine Lubrication .....	4-339
------------------------------------	-------

### ADJs 60 - Imaging

ADJ 60.1 Scanner Cleaning Procedure .....	4-345
ADJ 60.2 Side 2 Scan Assembly Cleaning Procedure .....	4-345
ADJ 60.3 IIT Registration, Magnification and Calibration.....	4-347
ADJ 60.4 LED Print Head Cleaning Procedure.....	4-348

### ADJs 70 - Paper Trays

ADJ 70.1 Tray 3 and Tray 4 Paper Tray Guide Setting.....	4-351
--	-------

### ADJs 80 - Paper Feed and Registration

ADJ 80.1 Tray 3 and Tray 4 Nudger Roll Pressure.....	4-355
ADJ 80.2 Simplex and Duplex Buckle Timing .....	4-356
ADJ 80.3 Tray 3 and Tray 4 Retard Roll Pressure.....	4-357

### ADJs 90 - Xerographics

ADJ 90.1 Xerographics Cleaning .....	4-359
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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

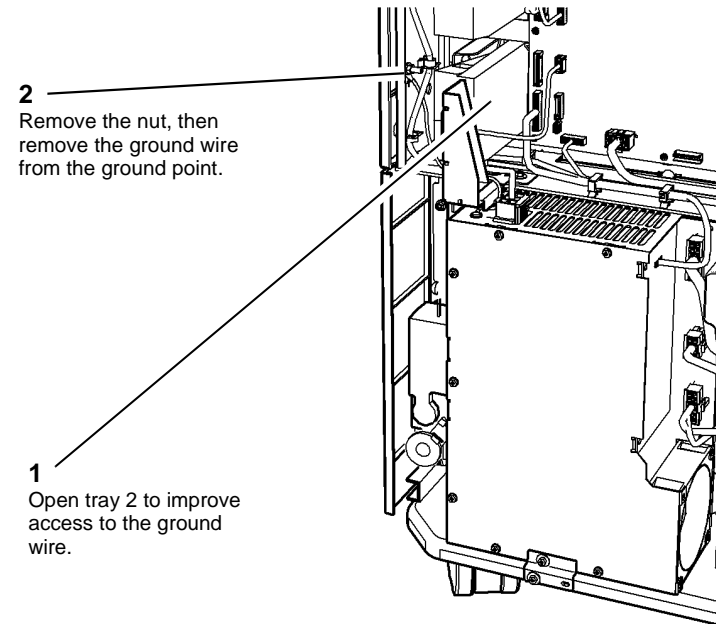


#### CAUTION

*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](#).



W-1-1040-A

Figure 2 Main frame ground point

6. Disconnect the wiring to the LVPS, [Figure 3](#).

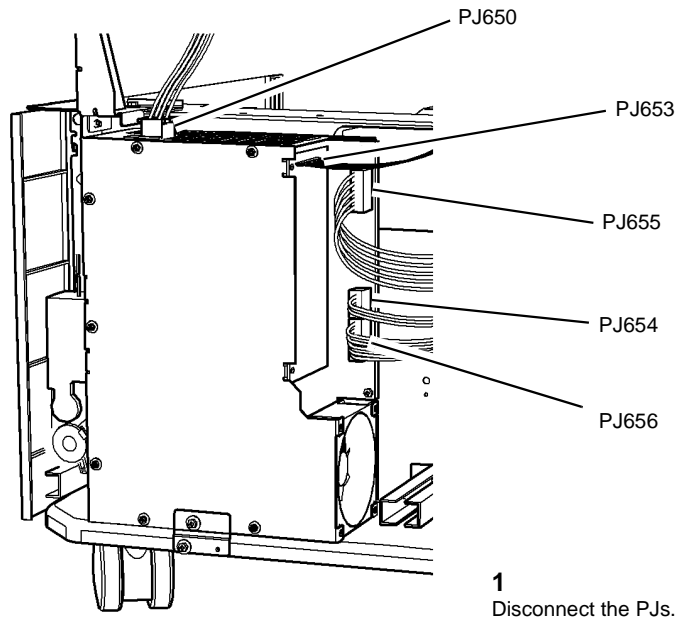


Figure 3 Wiring disconnection

W-1-1041-A

7. Remove the LVPS module, [Figure 4](#).

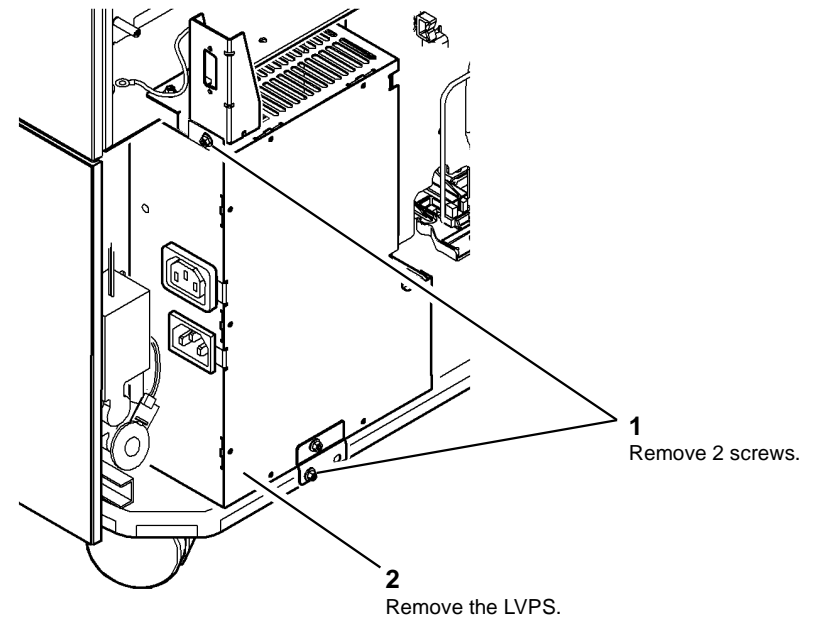


Figure 4 LVPS module removal

W-1-1042-A

## 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](#).

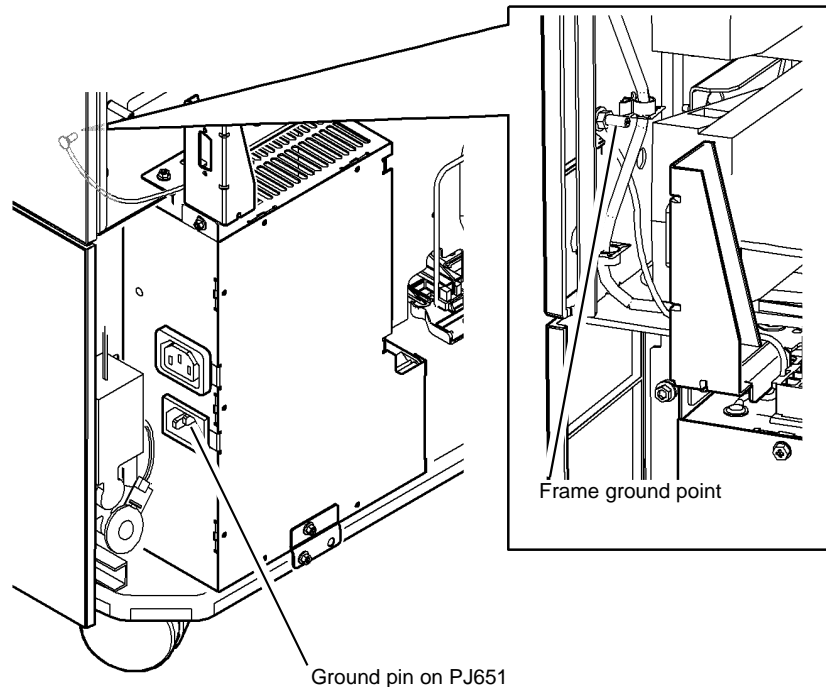


Figure 5 Ground check

W-1-1043-A

## 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:
  - Control to status PWB ribbon cable, [PL 2.10 Item 8](#).
  - Control to keyboard PWB ribbon cable, [PL 2.10 Item 10](#).
  - 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 17](#).
  - 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.

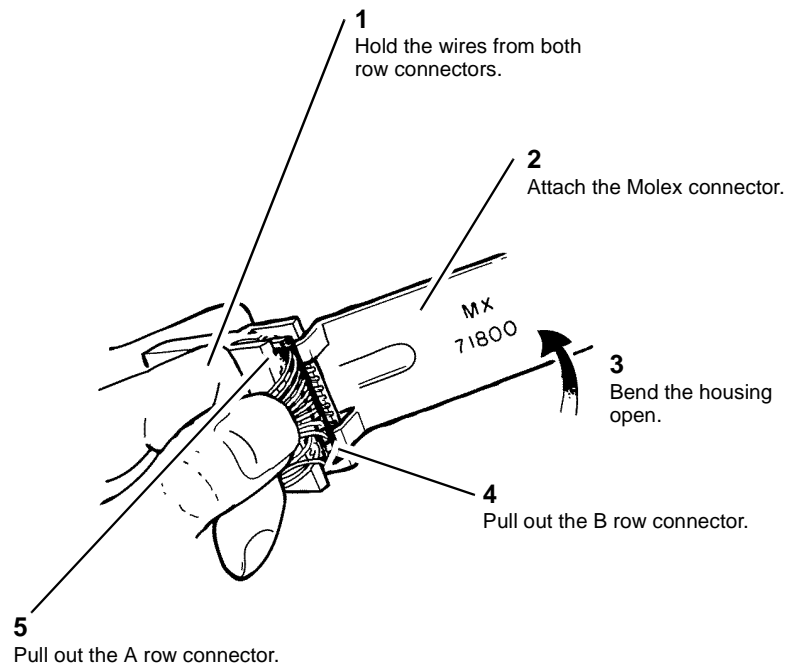


Figure 1 Disassembling the connector

W-1-1381-A

2. Remove the terminal from the connector housing using the Molex extractor tool, Figure 2.

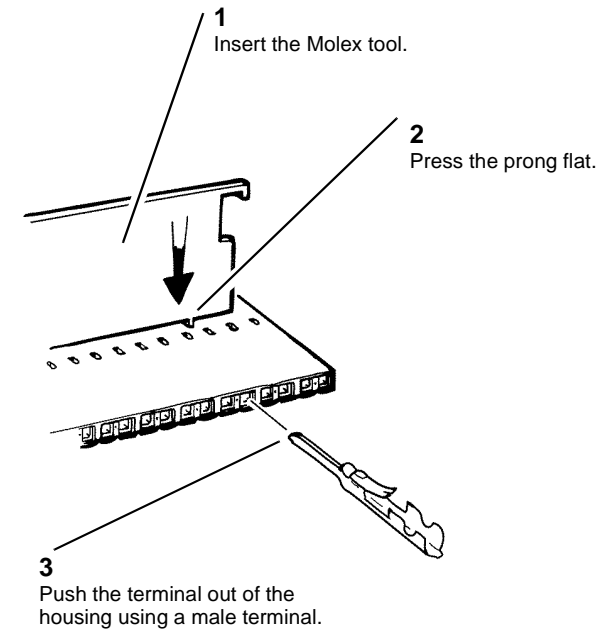


Figure 2 Removing the terminal

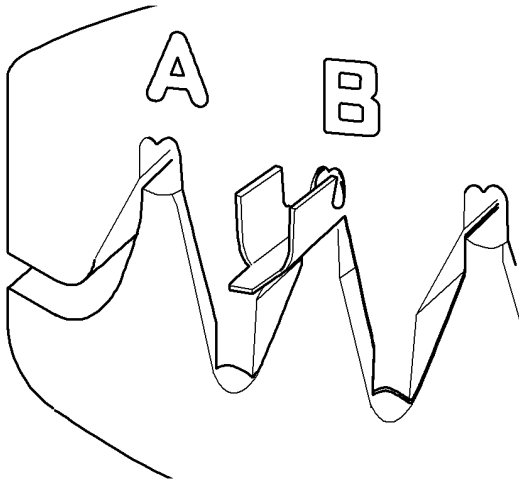
W-1-1382-A

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.

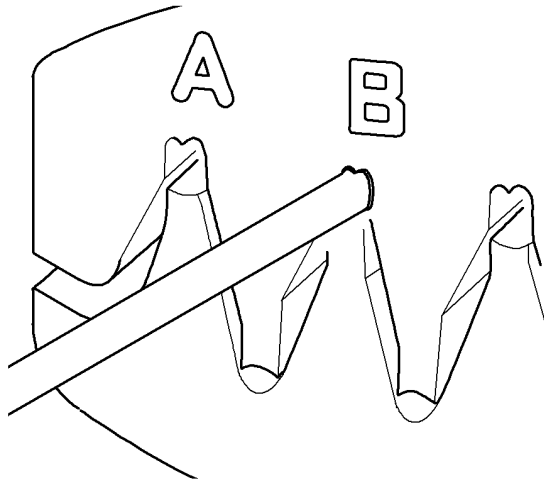
2. Insert a male or female terminal into the appropriate position of the crimp tool, then close the tool just enough to hold the terminal, [Figure 3](#).



**Figure 3 Crimping the terminal**

W-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](#).

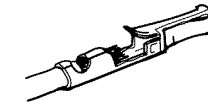


**Figure 4 Crimping the insulation grip**

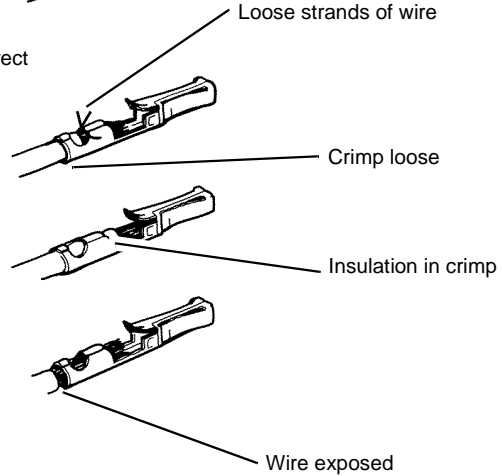
W-1-1384-A

5. Check that the crimp is correctly made, [Figure 5](#).

Correct



Incorrect



**Figure 5 Inspecting the finished crimp**

W-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.

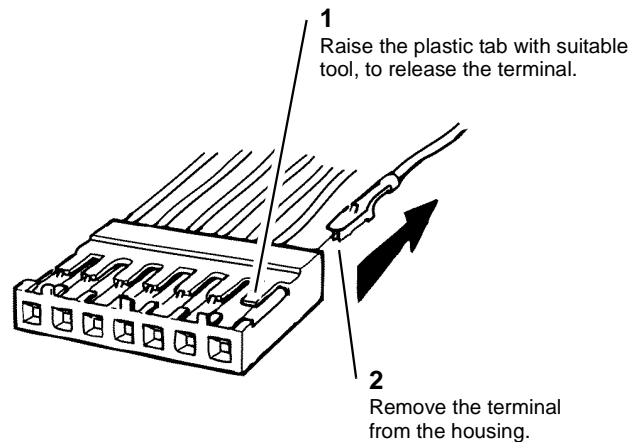
## REP 1.4 Male Hirose DF1B Connectors

### Removal

  
**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 damaged terminal from the housing, Figure 1.



W-1-1386-A

Figure 1 Remove the terminal

2. Cut off the damaged terminal, then strip 3mm of insulation from the end of the wire.

### Replacement

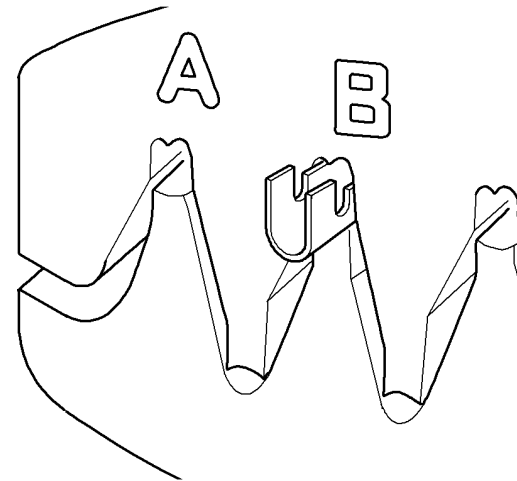
  
**CAUTION**

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.



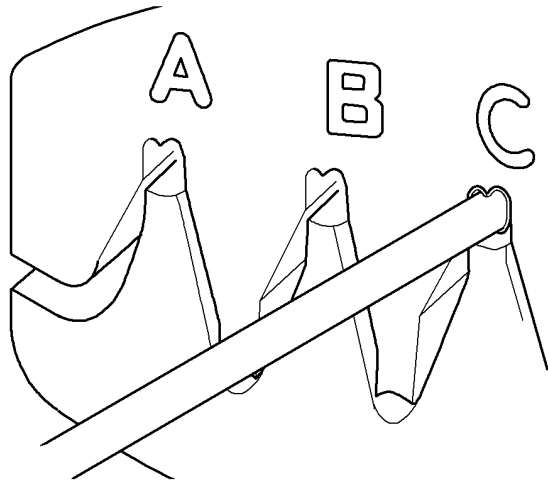
W-1-1387-A

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.



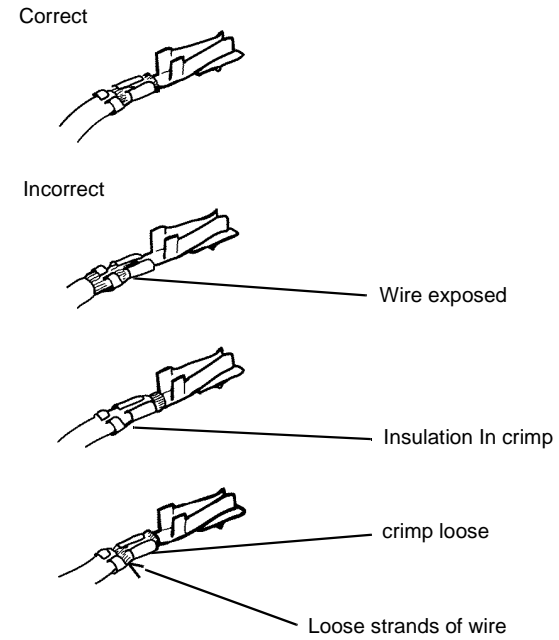
4. Insert the crimped terminal into the appropriate position of the crimp tool, then close the crimp tool to firmly fasten the insulation of the wire in the cable grip of the terminal, [Figure 3](#).



**Figure 3 Crimping the insulation grip**

W-1-1388-A

5. Check that the crimp is correctly made, [Figure 4](#).



**Figure 4 Inspecting the finished crimp**

W-1-1389-A

6. Insert the replacement terminal into the connector housing.

# REP 1.5 AMP EI Connectors

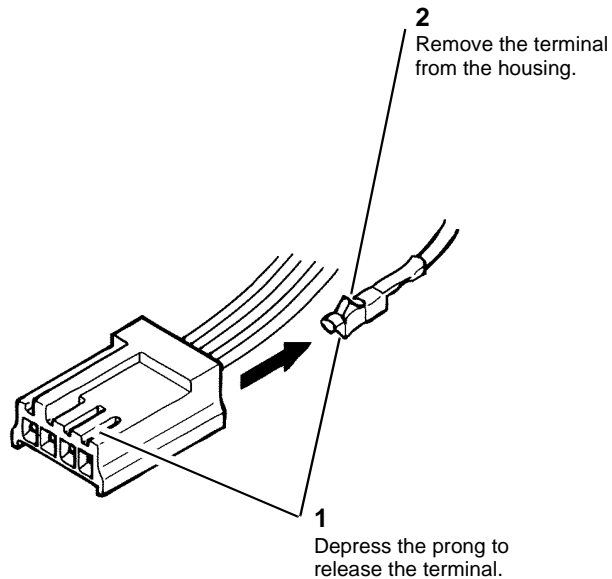
## Removal



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.

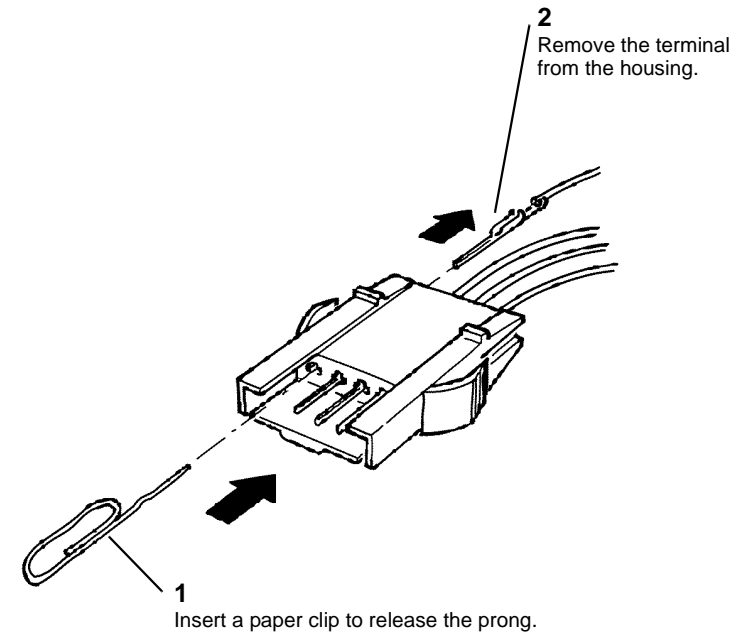
**NOTE:** The male housings contain socket terminals, and the female housings contain pin terminals.

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.



W-1-1390-A

Figure 1 Terminal removal; male housing



W-1-1391-A

Figure 2 Terminal removal; female housing

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](#).

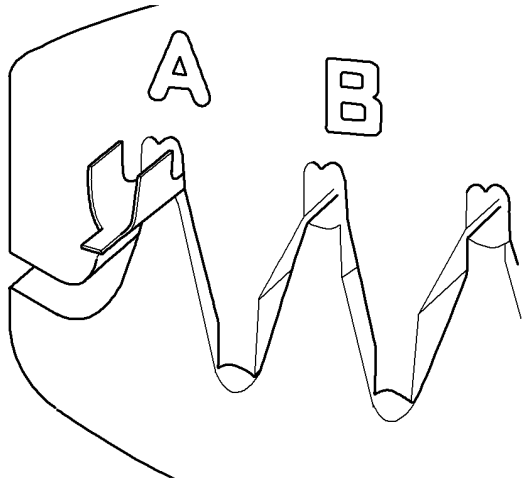


Figure 3 Crimping the terminal

W-1-1392-A

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](#).

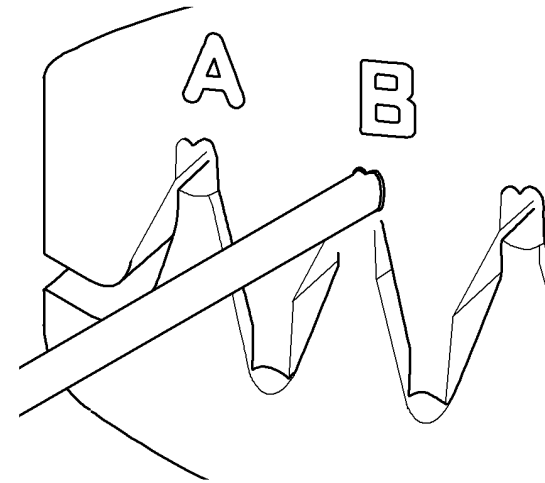
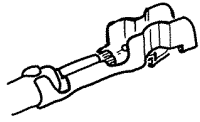


Figure 4 Crimping the insulated grip

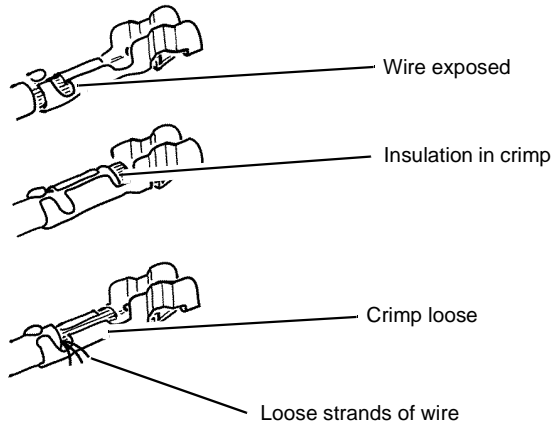
W-1-1393-A

5. Check that the crimp is correctly made, [Figure 5](#).

Correct



Incorrect



**Figure 5 Inspect the finished crimp**

W-1-1394-A

6. Insert the replacement terminal into the connector housing.

## REP 1.6 Hirose DF11 Connectors

### Removal

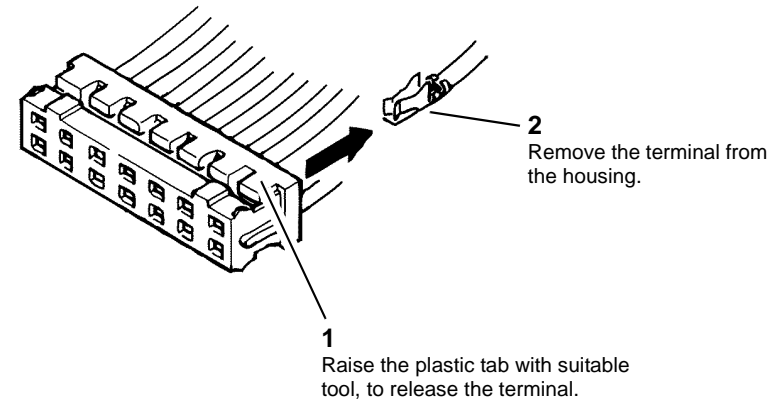


#### WARNING

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](#).



**Figure 1 Terminal removed**

W-1-1395-A

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



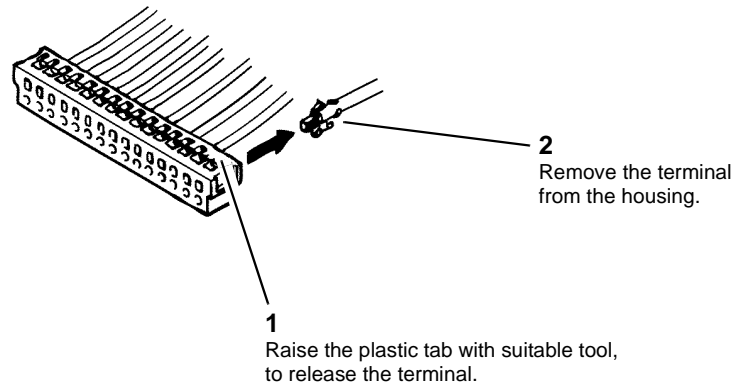
Switch off the electricity to the machine, GP 14. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



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.



W-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

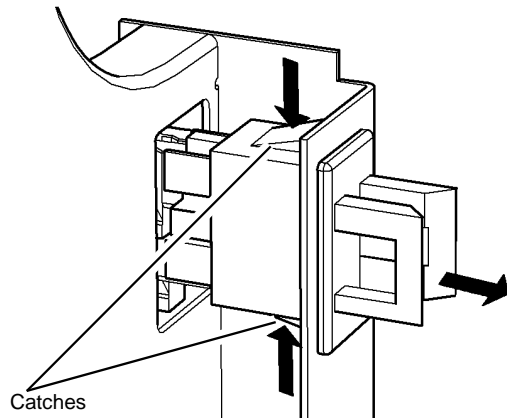
Parts List on [PL 1.12](#)

### 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](#).

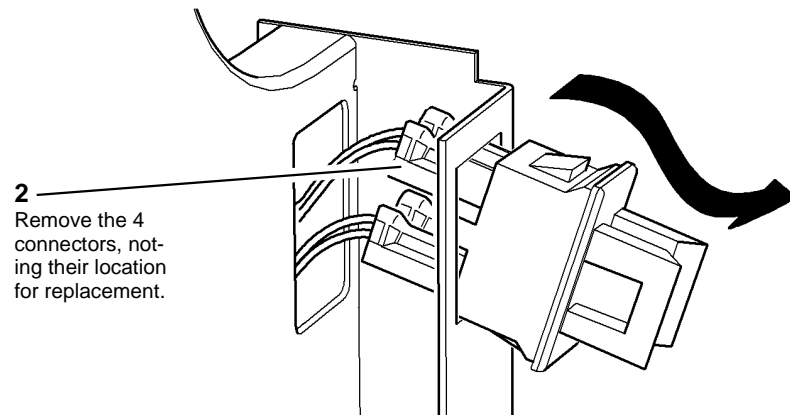


- 1 Squeeze the catches in whilst pulling the switch out of the frame.

Figure 1 Switch release

W-1-1067-A

4. Remove the front door interlock switch, [Figure 2](#).



- 2 Remove the 4 connectors, noting their location for replacement.

Figure 2 Switch removal

W-1-1068-A

### Replacement

The replacement is the reverse of the removal procedure.

## REP 1.9 Left Door Interlock Removal

Parts List on [PL 1.12](#)

### Removal

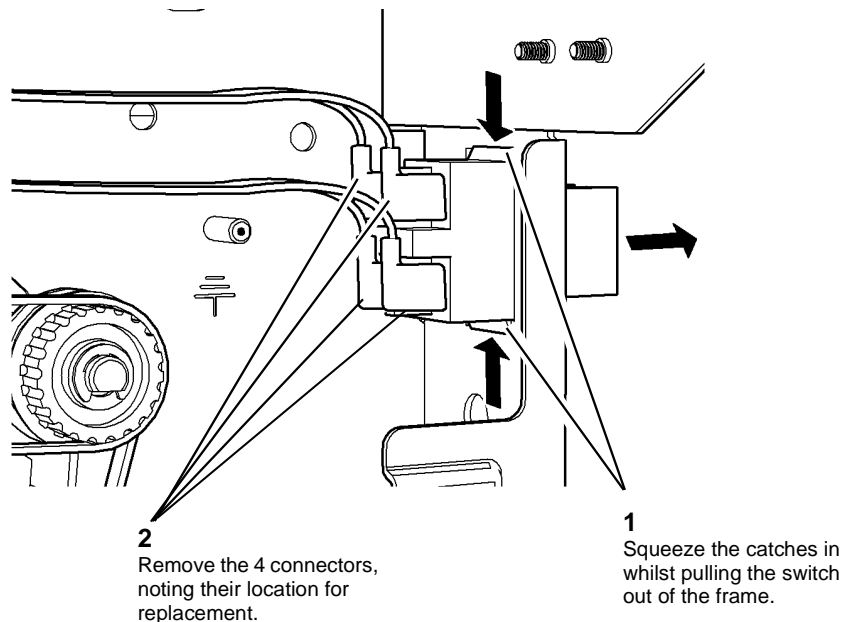


#### WARNING

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](#).
2. Open the left door.
3. 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.



W-1-1248-A

Figure 1 Switch removal

### Replacement

1. The replacement is the reverse of the removal procedure.
2. 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](#).

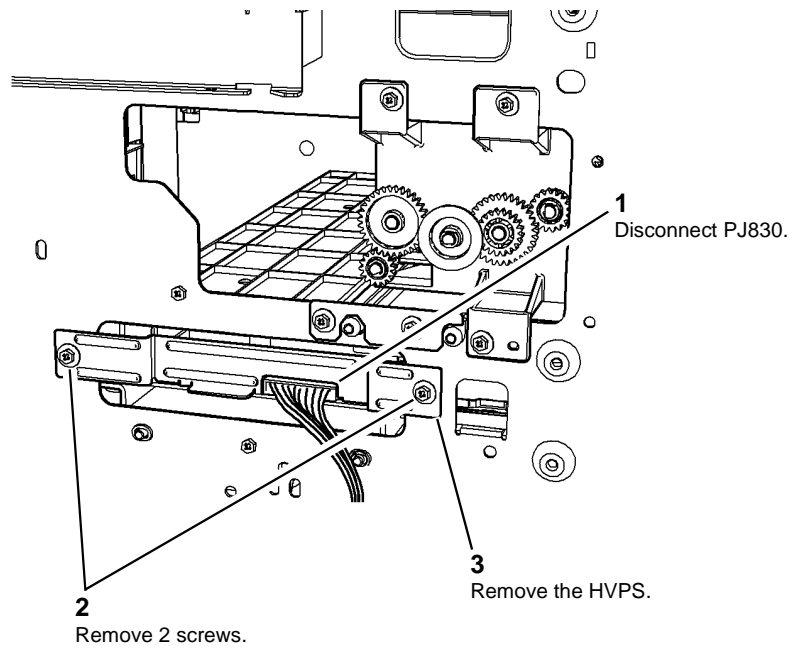


Figure 2 HVPS removal

W-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](#).

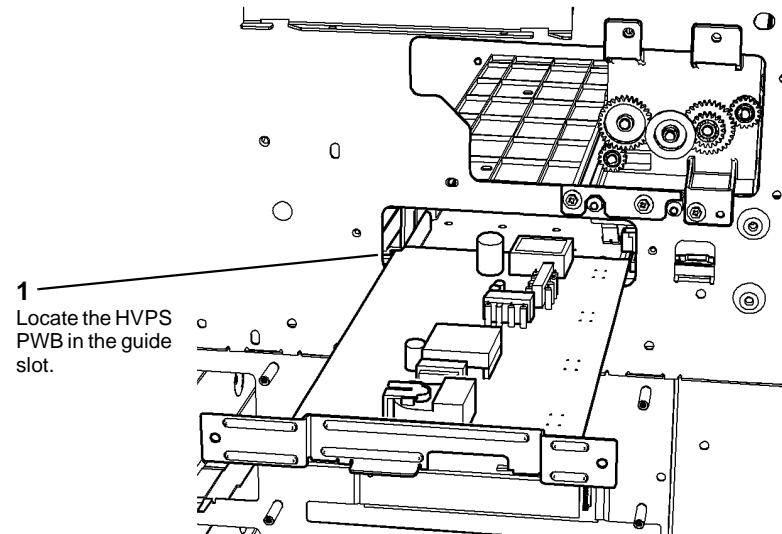


Figure 3 HVPS replacement

W-1-1255-A



## REP 1.11 Molex Mini-Fit Junior Connectors

### Removal



#### WARNING

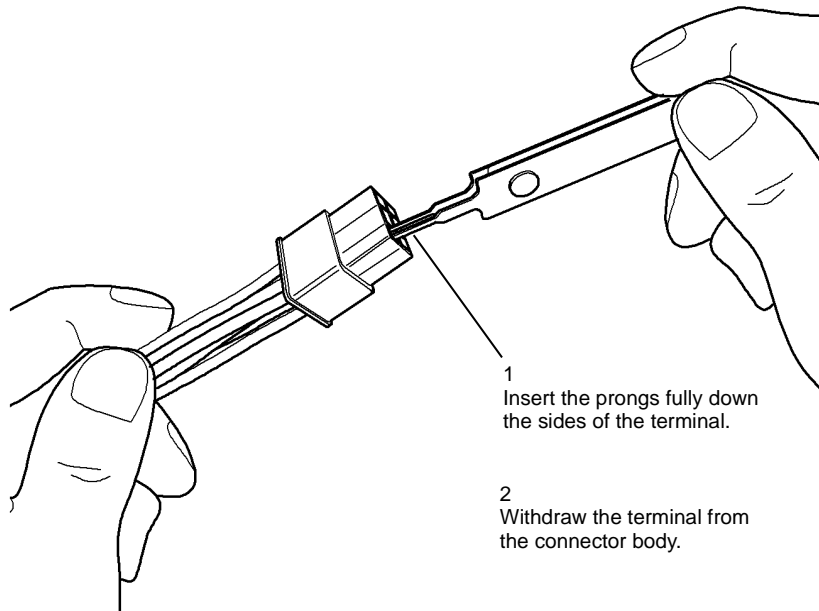
Switch off the electricity to the machine, GP 14. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



#### 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.



1  
Insert the prongs fully down  
the sides of the terminal.

2  
Withdraw the terminal from  
the connector body.

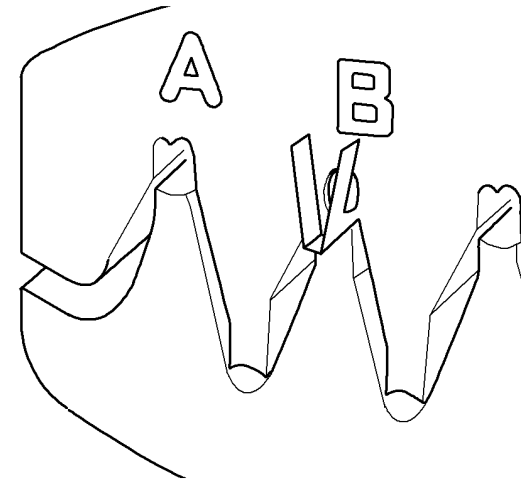
W-1-1397-A

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.

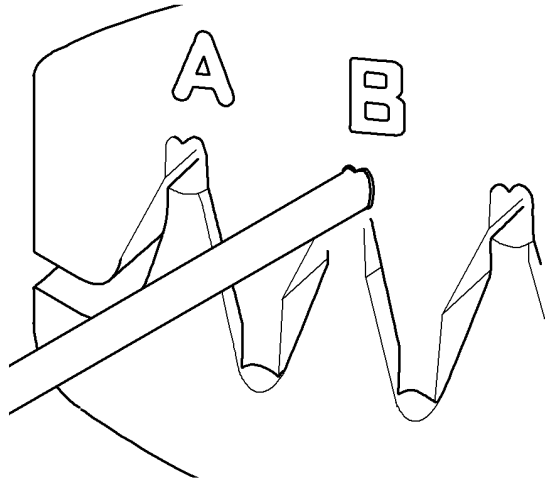


W-1-1398-A

Figure 2 Crimping the terminal

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 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](#).

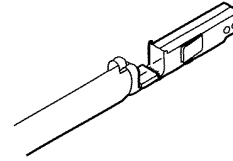


**Figure 3 Crimping the insulation grip**

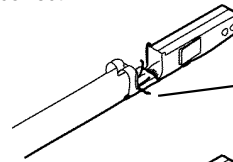
W-1-1399-A

5. Check that the crimp is correctly made, [Figure 4](#).

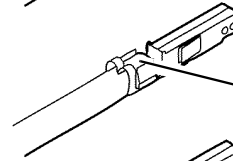
Correct



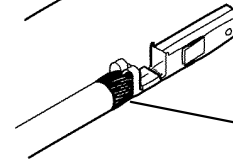
Incorrect



Loose strands of wire



Insulation in crimp



Wire exposed

**Figure 4 Inspecting the finished crimp**

W-1-1400-A

6. Insert the replacement terminal into the connector housing.

## REP 2.1 User Interface Assembly

Parts List on [PL 2.10](#)

### 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

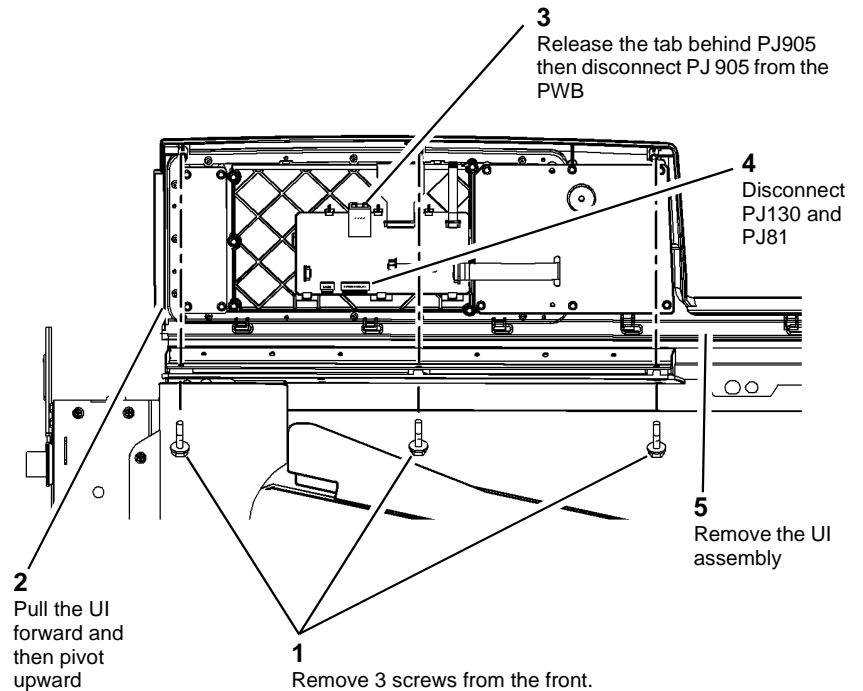


#### CAUTION

Ensure that E.S.D. procedures are observed during the removal and installation of the user interface assembly.

1. Open the front door assembly, [PL 28.11 Item 1](#).
2. Remove the left frame cover [REP 28.1](#).

3. Remove the UI assembly, [Figure 2](#).



W-1-0181-A

Figure 2 UI assembly removal

### Replacement

1. The replacement is the reverse of the removal procedure. Refer to [GP 6](#) before the screws are installed.
2. If prompted, reload the software, [GP 4](#). The software will automatically upgrade or downgrade when the machine is switched on, [GP 14](#).

## REP 2.2 UI Touch Screen

Parts List on [PL 2.10](#)

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.



Figure 1 ESD Symbol



*Ensure that E.S.D. procedures are observed during the removal and installation of the user interface touch screen PWB.*

1. Remove the UI control PWB, [REP 2.3](#).
2. Remove the UI screen clamp, [PL 2.10 Item 2](#).
3. Remove the UI touch screen, [PL 2.10 Item 4](#).

### Replacement

The replacement is the reverse of the removal procedure. Refer to [GP 6](#) before the screws are installed.

## REP 2.3 UI Control PWB

Parts List on [PL 2.10](#)

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.



Figure 1 ESD Symbol



*Ensure that E.S.D. procedures are observed during the removal and installation of the user interface control PWB.*

1. Remove the UI assembly, [REP 2.1](#)
2. Place the UI assembly on a flat surface.

**CAUTION**

*The cable clamps are very fragile and only need to be moved slightly to release the ribbon cables.*

3. Disconnect PJ907, PJ908, PJ909 and PJ943 by pulling the clamp away from each connector. Disconnect PJ945 by lifting the clamp. Refer to [Figure 2](#).

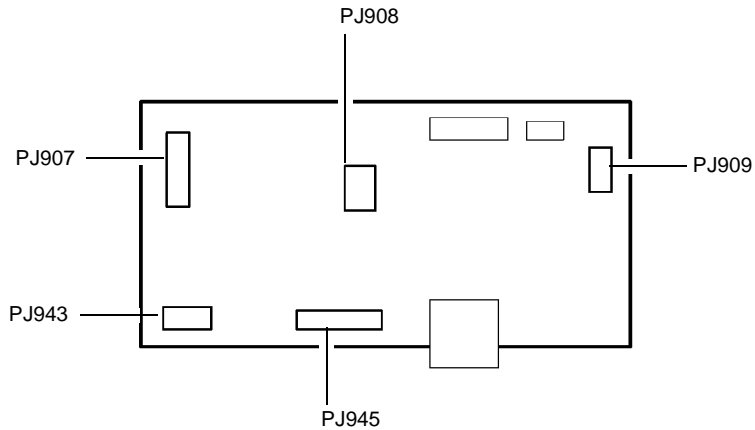
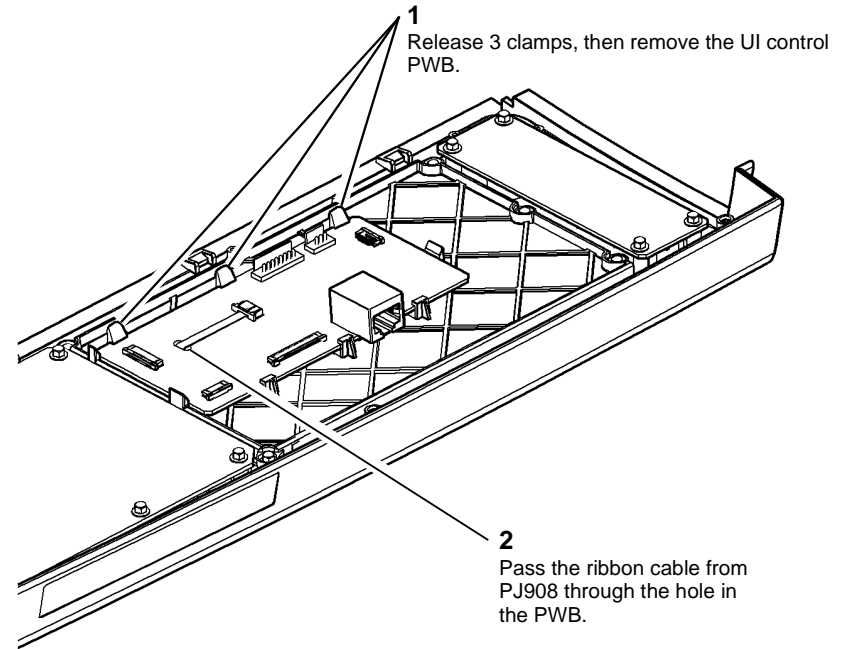


Figure 2 UI control PWB

W-1-0182-A

4. Remove the UI control PWB, [Figure 3](#).



W-1-0183-A

Figure 3 UI control PWB removal

### Replacement

1. The replacement is the reverse of the removal procedure. Refer to [GP 6](#) before the screws are installed.
2. Ensure the ribbon cable to PJ908 is routed through the hole in the PWB.
3. The ribbon cable to PJ907 is positioned over the cable clamp, all other ribbon cables are positioned under the cable clamps.



## 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:** PJ's 758, 778 and 780 are not connected. PJ775 will only be connected if tray 4 is installed.

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



#### 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 hard disk drive.



#### 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. 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



#### 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 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.

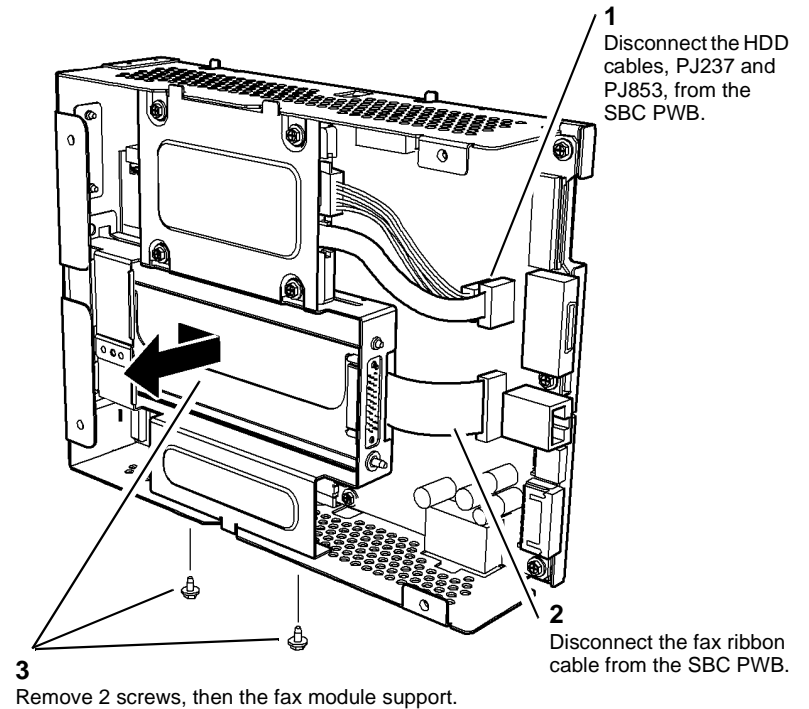


Figure 2 Fax module support removal

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, [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.



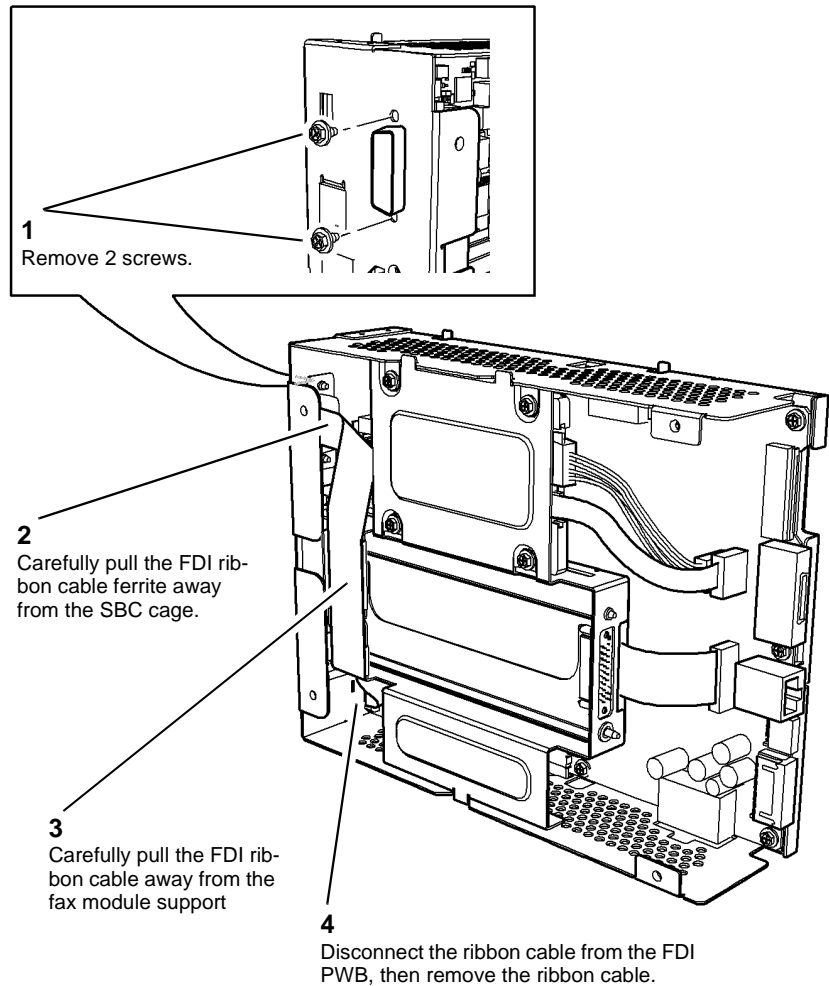
Figure 1 ESD Symbol



*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](#).

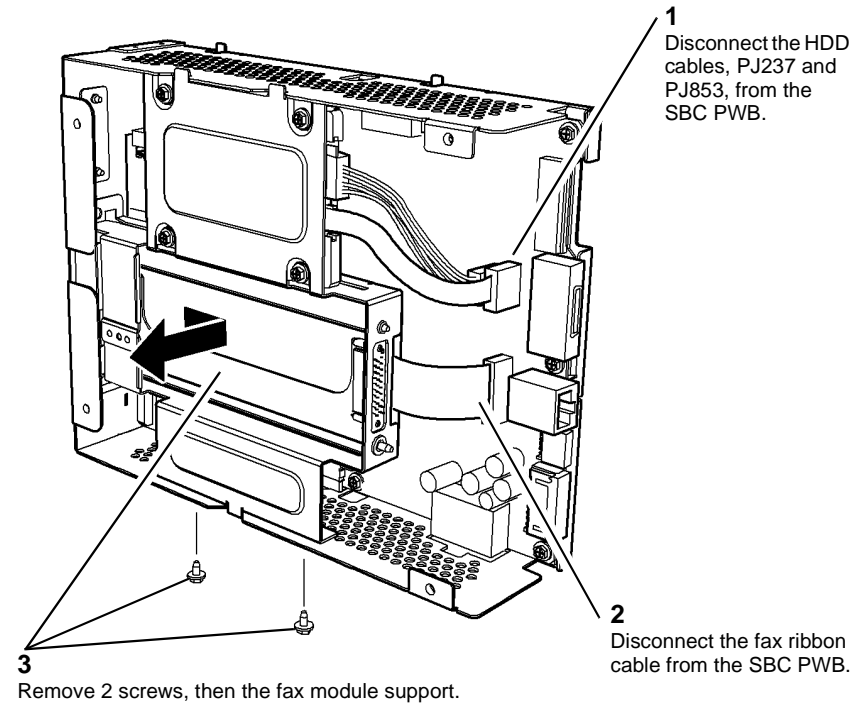
- Remove the FDI ribbon cable from the SBC cage, [Figure 2](#).



W-1-1225-A

Figure 2 FDI ribbon cable

- Remove the fax module support, [Figure 3](#).



W-1-1226-A

Figure 3 Fax module support removal

- Remove the FDI PWB, [PL 3.22 Item 18](#).

### Replacement

- Replacement is the reverse of the removal procedure.
- Reload the software, [GP 4](#).
- 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.

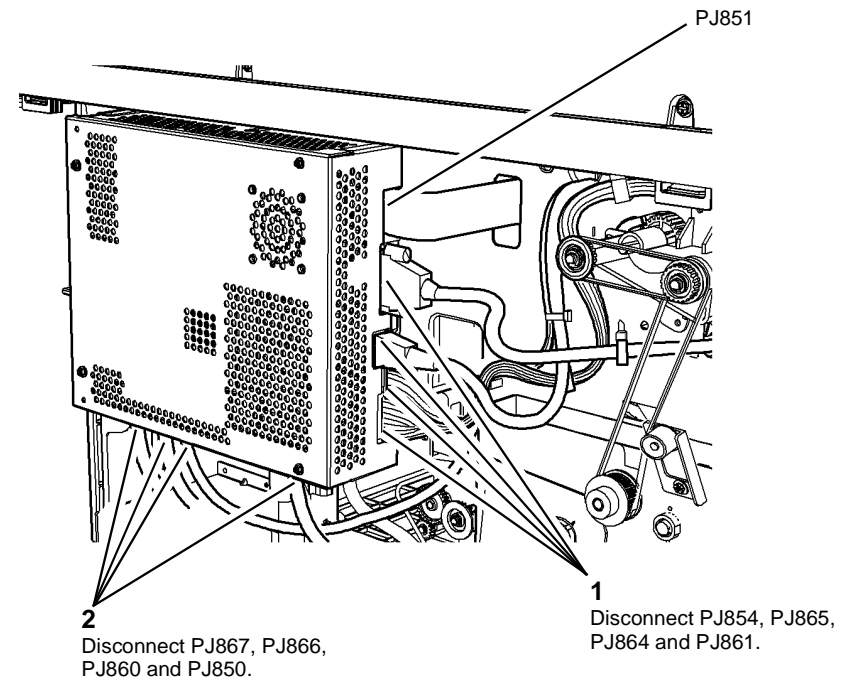
1. Remove the rear cover, [REP 28.2](#).
2. Remove the SIM card, [PL 3.22 Item 5](#) from the SBC PWB.



#### CAUTION

Do not disconnect the ribbon cable, [PJ851](#), at this time.

3. Prepare to remove the SBC module, [Figure 2](#).



W-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.

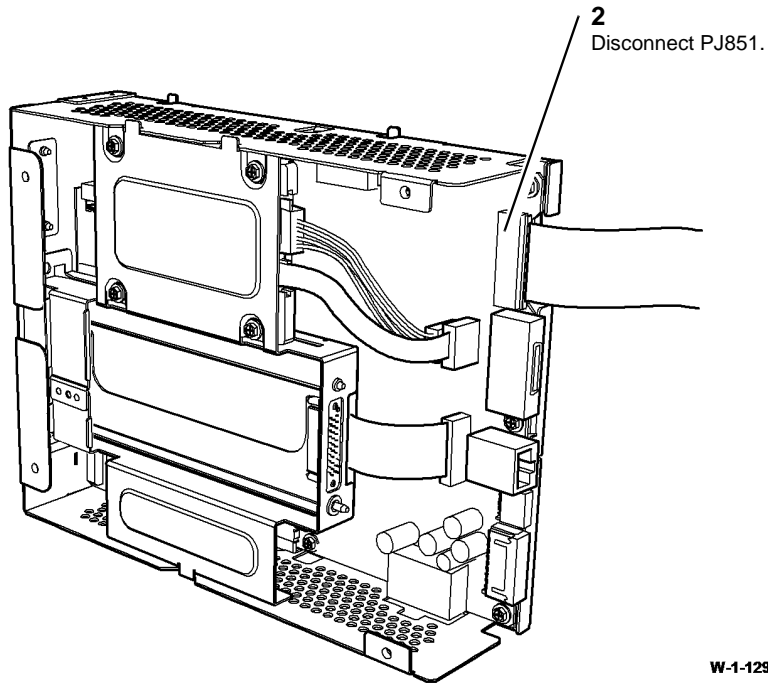


Figure 3 Disconnect PJ851

W-1-1292-A

6. Remove the SBC PWB module, Figure 4.

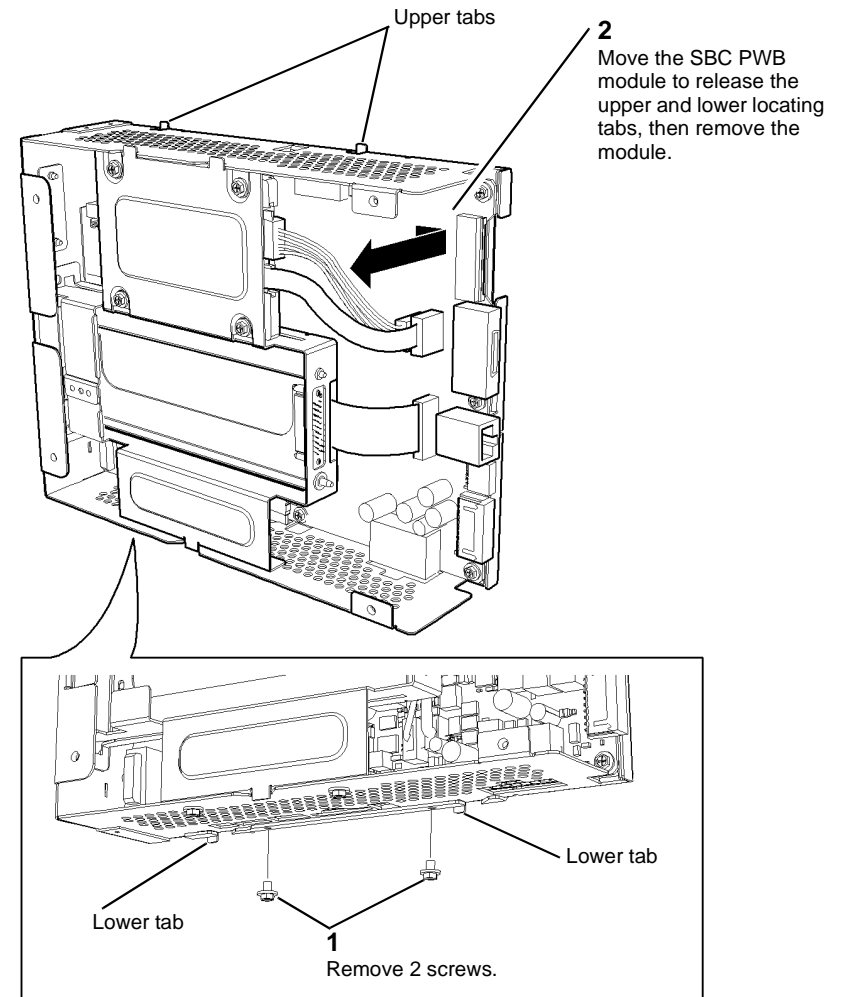


Figure 4 Removal

W-1-1293-A

### 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. 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 rear cover, [PL 5.10 Item 1](#).
3. Prepare to remove the top cover assembly, [Figure 1](#).

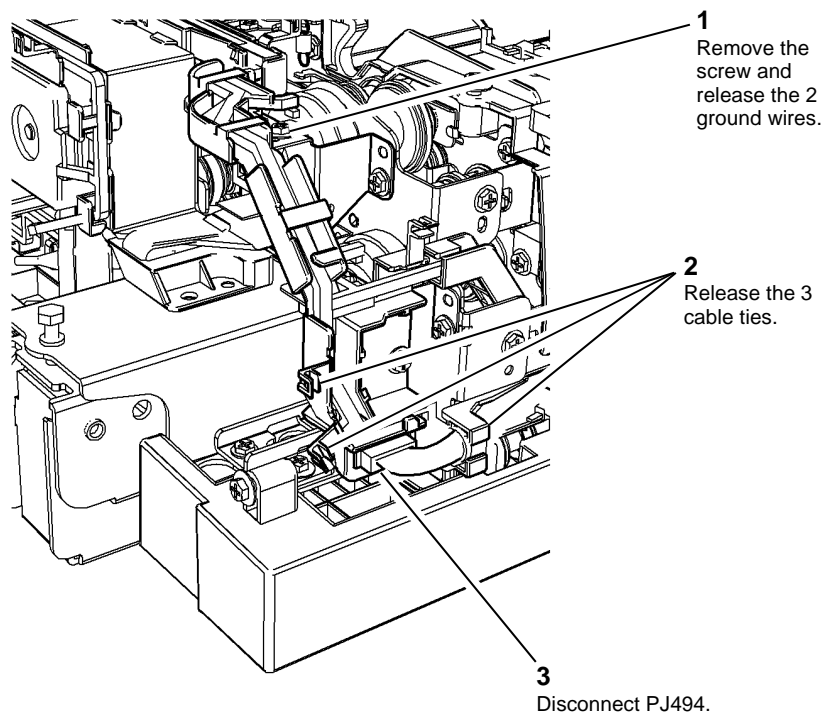


Figure 1 Preparation

W-1-0184-A

4. Release the front hinge, [Figure 2](#).

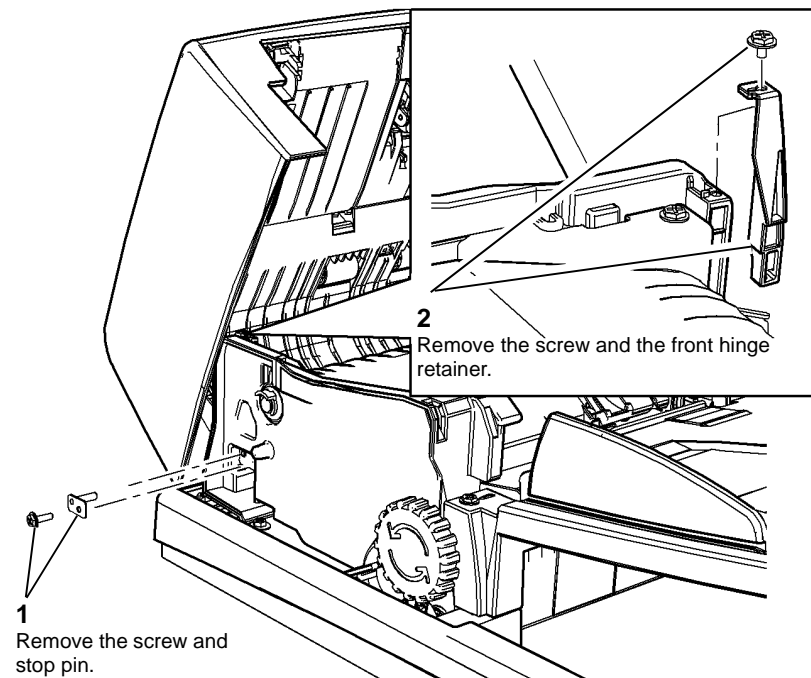
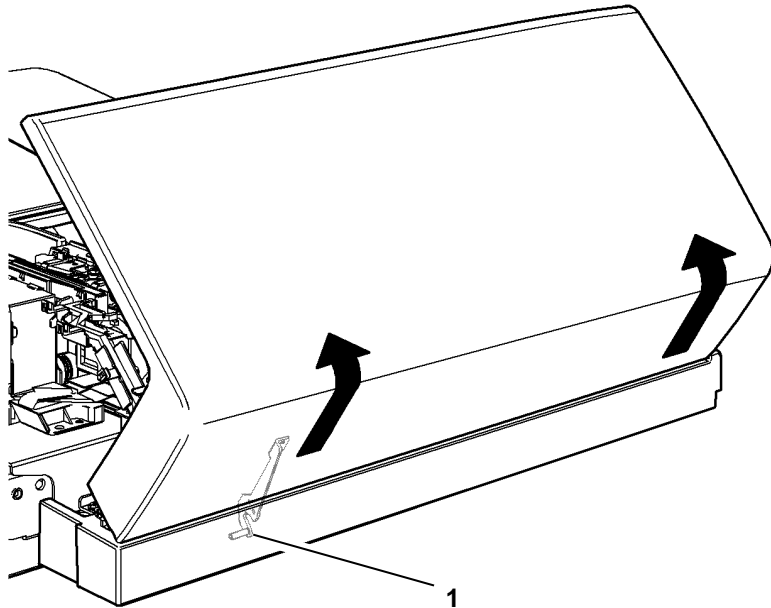


Figure 2 Front hinge release

W-1-0185-A

- Remove the top cover assembly, [Figure 3](#).



- Turn the top cover assembly to release the rear hinge.

W-1-0186-A

Figure 3 Top cover assembly

### 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.
- Perform [ADJ 5.3](#) SPDH Skew.

## REP 5.2 Feed Roll, Nudger Roll and Feed Assembly

### Parts List on [PL 5.20](#)

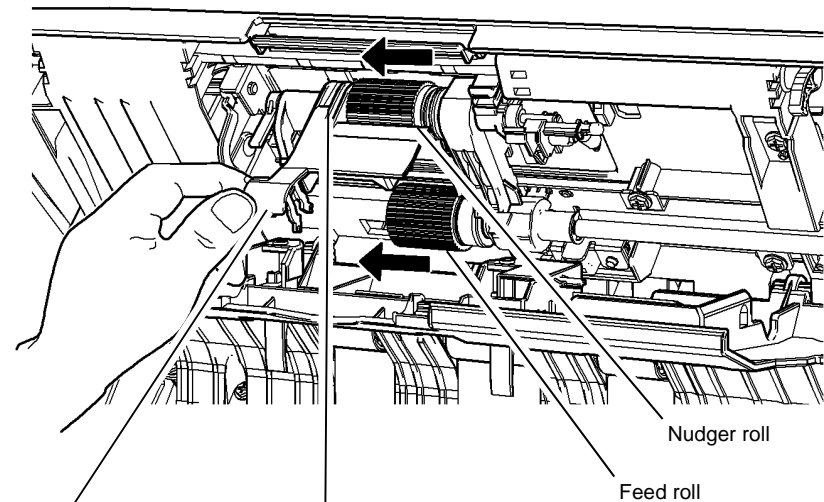
### Removal



**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 15.
- Pull open the lower cover [PL 5.20](#) Item 13.
- Remove the feed and nudger rolls, [Figure 1](#).



- Unclip the bottom fixing of the roll housing.
- Unclip the top fixing of the roll housing then remove the housing.
- Slide off the nudger roll and feed roll.

W-1-0187-A

Figure 1 Feed and Nudger roll removal

- Remove the top cover assembly, [REP 5.1](#).

- Remove the feed assembly, [Figure 2](#).

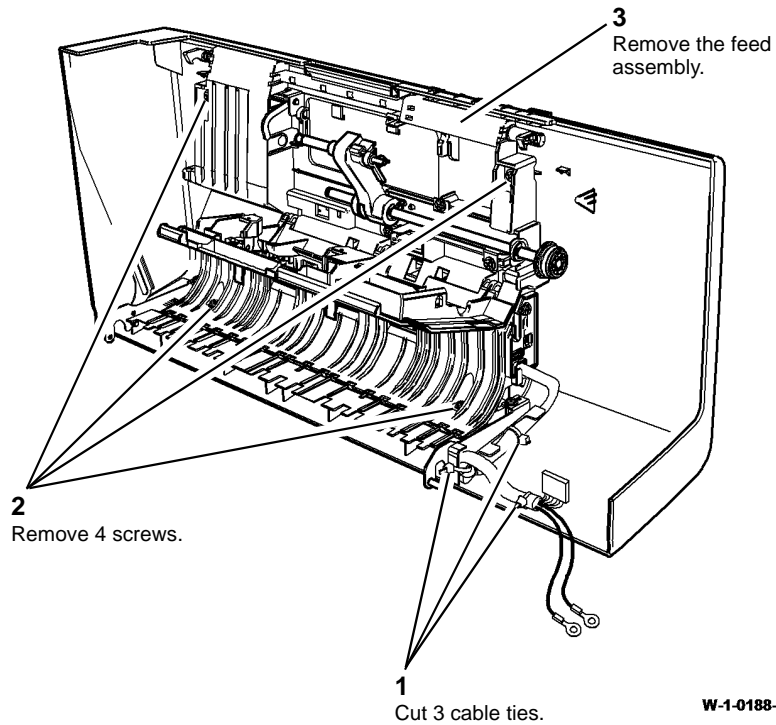


Figure 2 Feed assembly removal

W-1-0188-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.

- 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](#).
- 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.

- Open the SPDH top cover assembly, [PL 5.20 Item 15](#).
- Pull open the retard roll cover, [PL 5.25 Item 2](#).
- Remove the retard roll, [Figure 1](#).

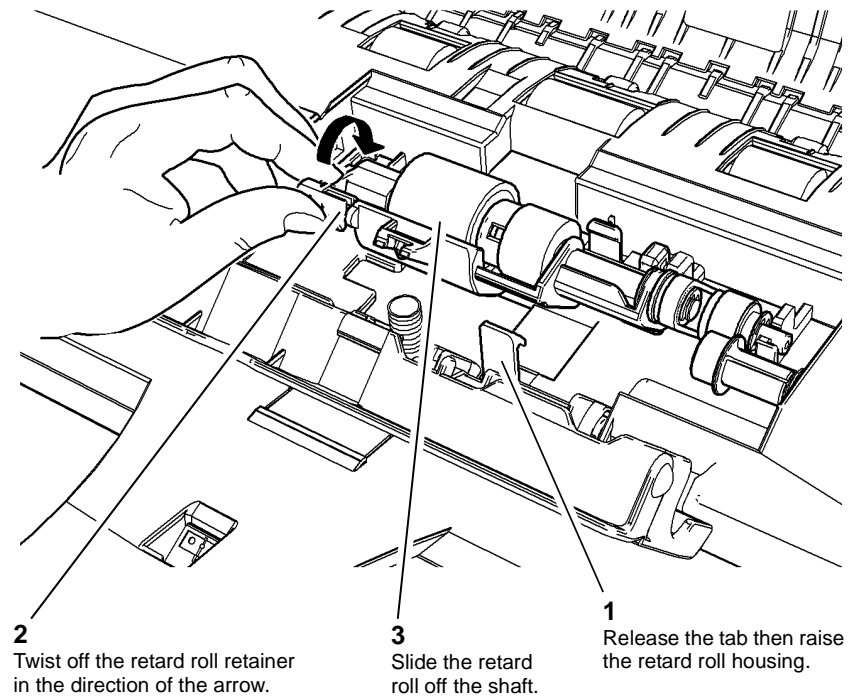


Figure 1 Retard roll removal

W-1-0189-A

4. Remove the separation assembly, [Figure 2](#).

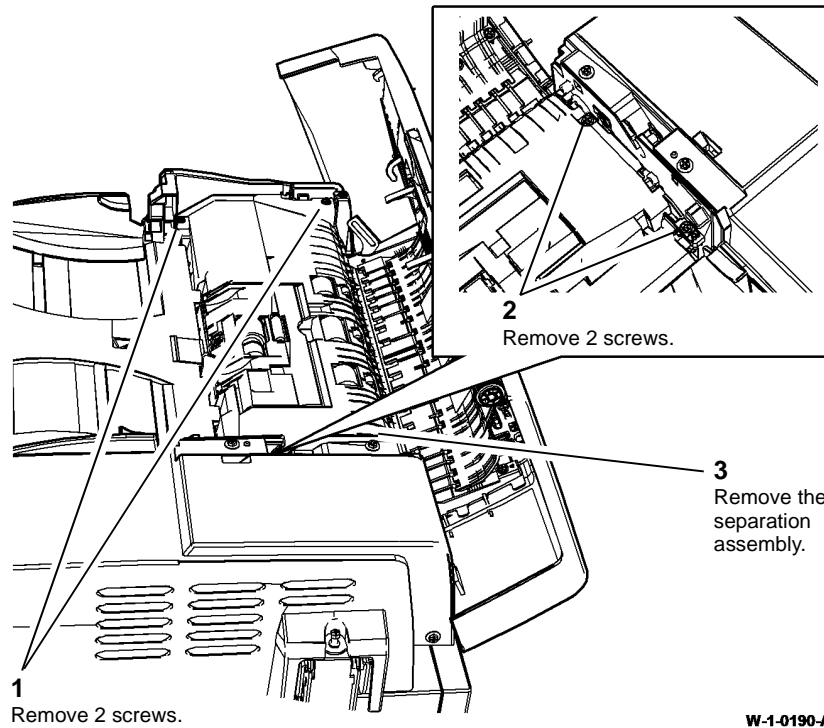


Figure 2 Separation assembly removal

## 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.

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 Assembly

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.



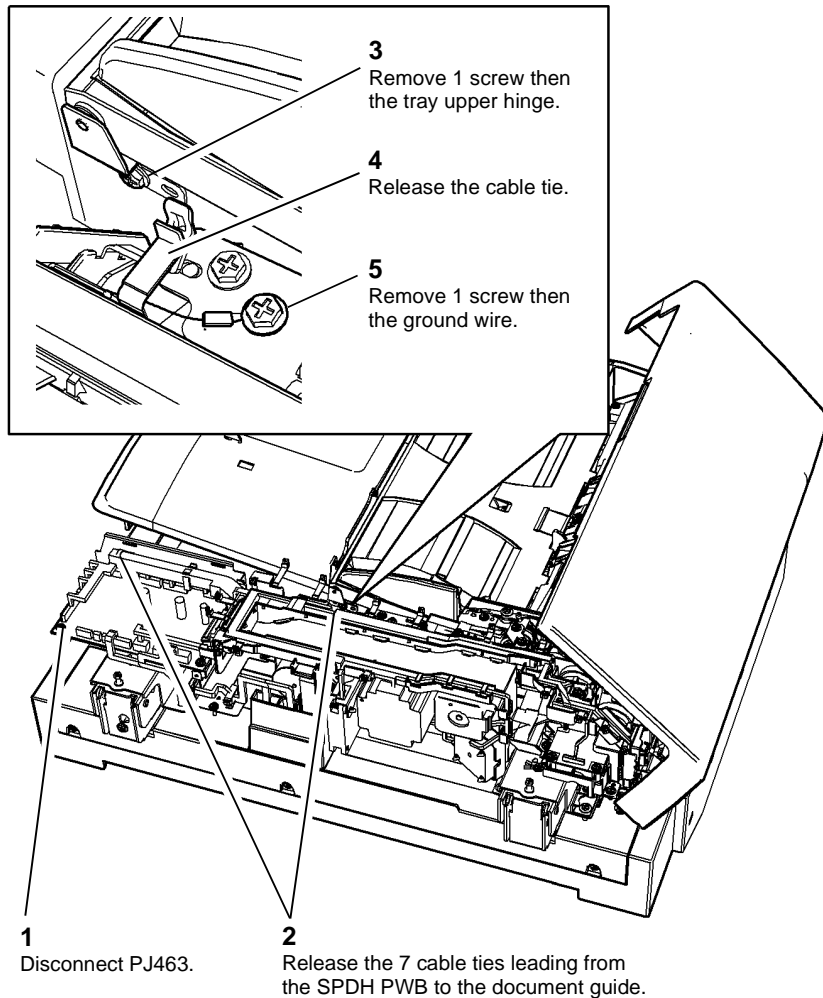
### WARNING

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

1. Remove 5 screws then remove the rear cover, [PL 5.10 Item 1](#).

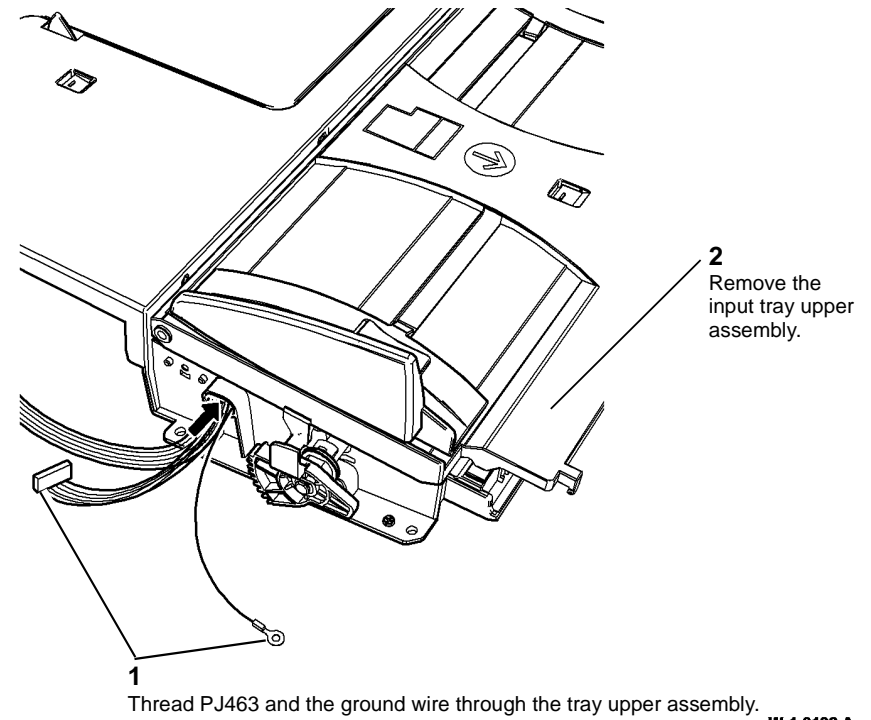


2. Prepare to remove the input tray upper assembly, **Figure 1**.



**Figure 1 Preparation**

3. Remove the input tray upper assembly, **Figure 2**.



**Figure 2 Upper assembly removal**

4. Prepare to remove the input tray lower assembly, [Figure 3](#).

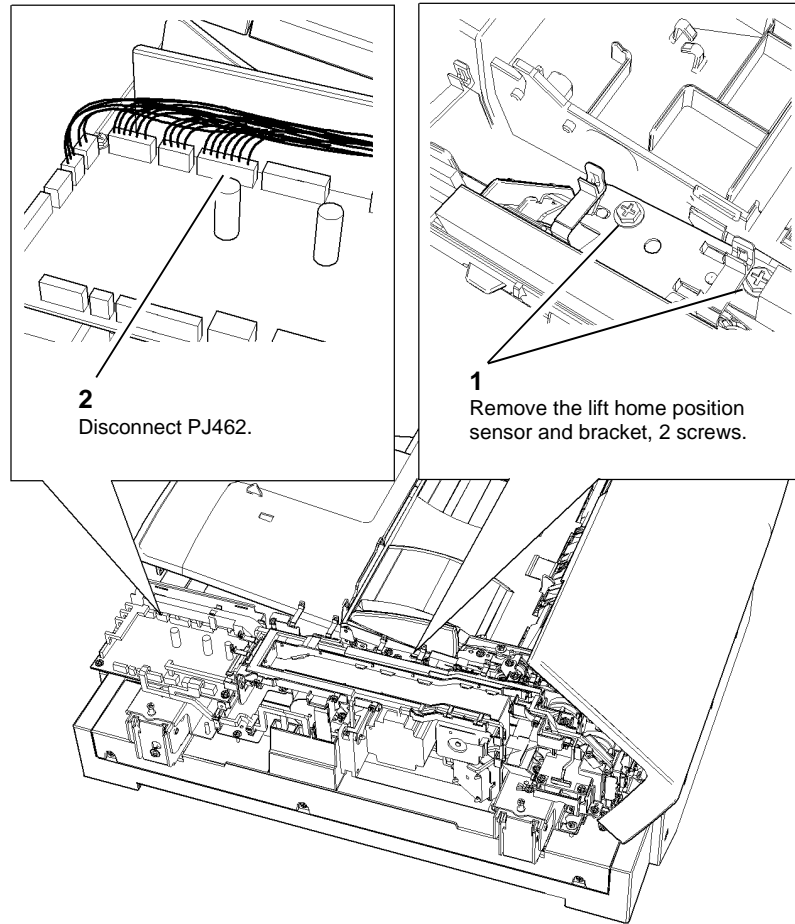


Figure 3 Preparation

W-1-0193-A

5. Remove the input tray lower assembly, [Figure 4](#).

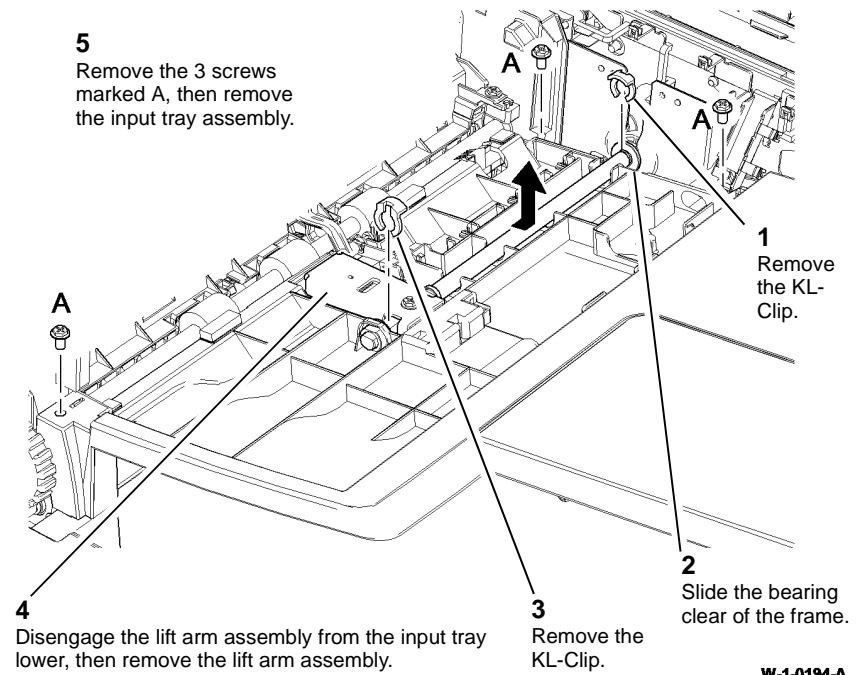


Figure 4 Input tray lower removal

W-1-0194-A

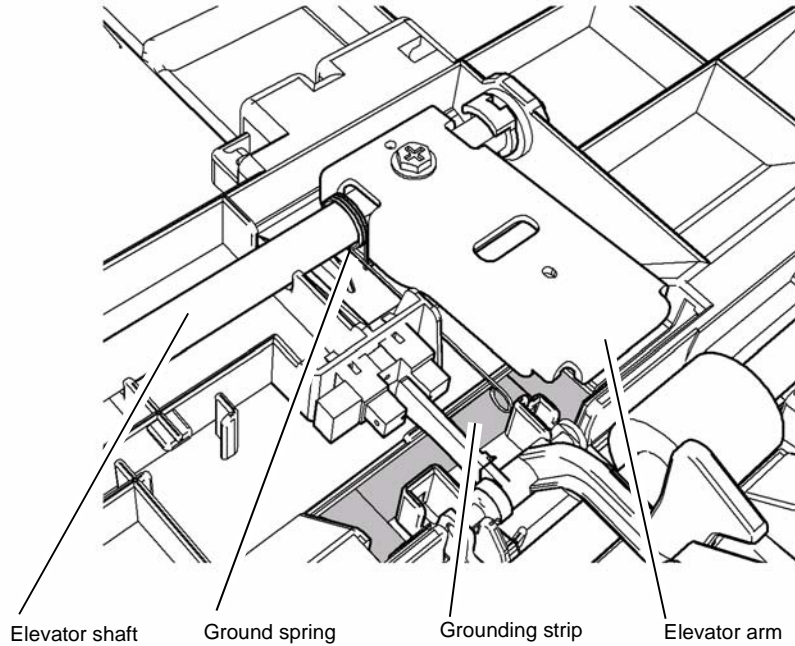
## Replacement



### 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.
2. Ensure that the ground spring is correctly positioned on the elevator shaft and under the elevator arm, [Figure 5](#).



W-1-0195-A

**Figure 5** Ground spring position

3. 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.

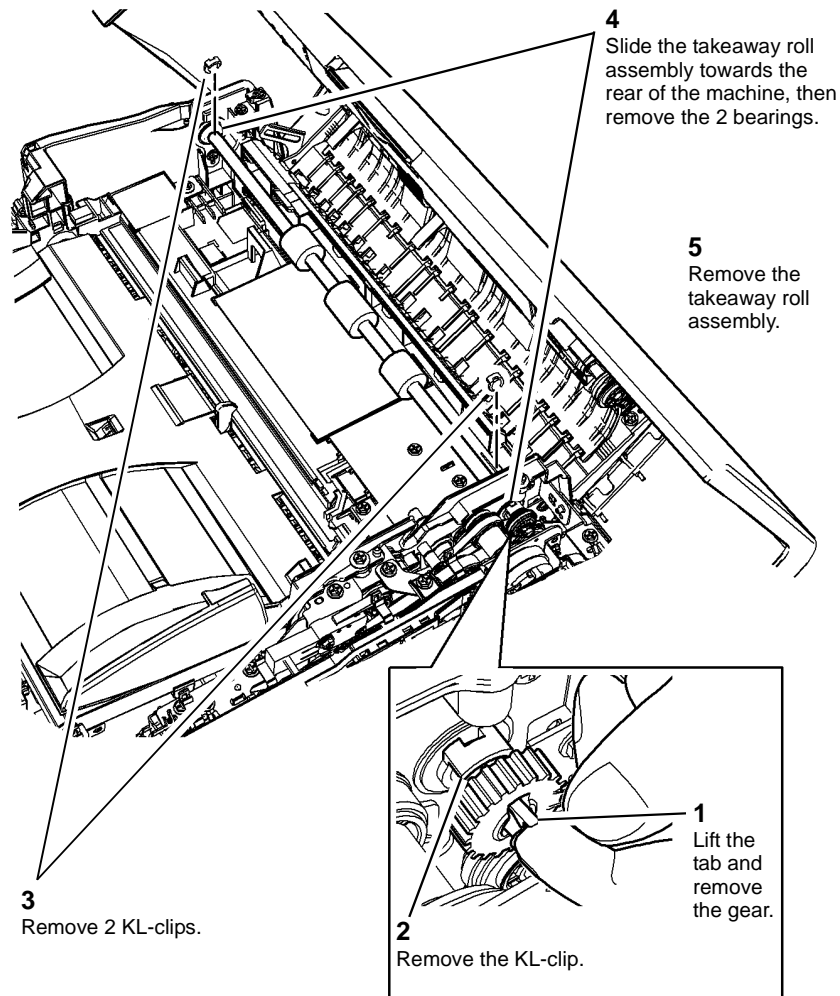


### CAUTION

*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 rear cover, [PL 5.10](#) Item 1.

3. Remove the takeaway roll assembly, [Figure 1](#).



W-1-0196-A

Figure 1 Takeaway roll removal

## Replacement

The replacement is the reverse of the removal procedure.

## REP 5.6 Lower Pre Scan Roller Assembly

Parts List on [PL 5.17](#)

### 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.

### Removal



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. Remove the lower pre scan roller assembly, [Figure 1](#).

## REP 5.7 Exit Roll Assembly

Parts List on [PL 5.17](#)

### Removal

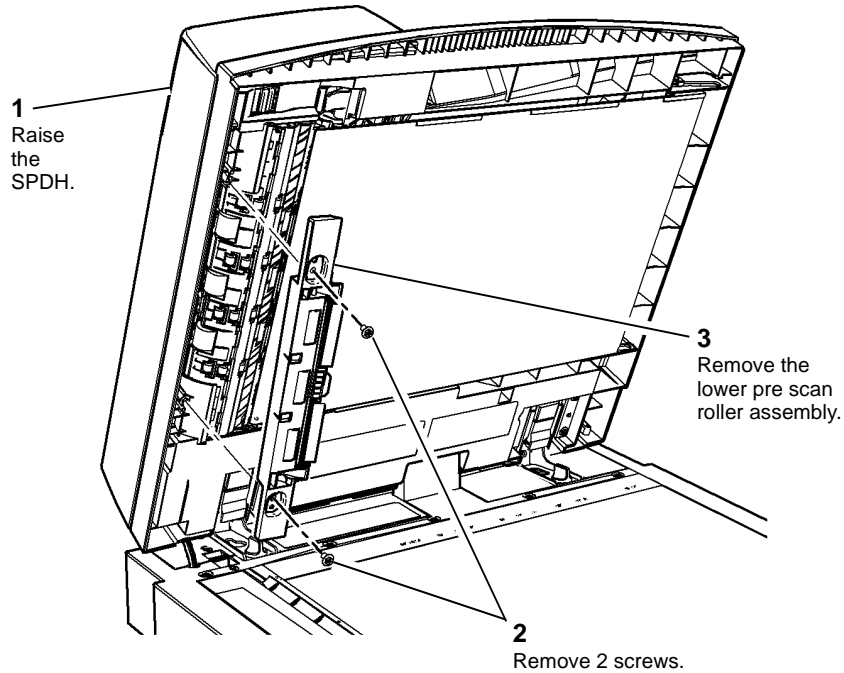


Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



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

1. Remove the SPDH read assembly outer frame, by performing [REP 5.25](#) up to step 2.
2. Remove the front components, [Figure 1](#).

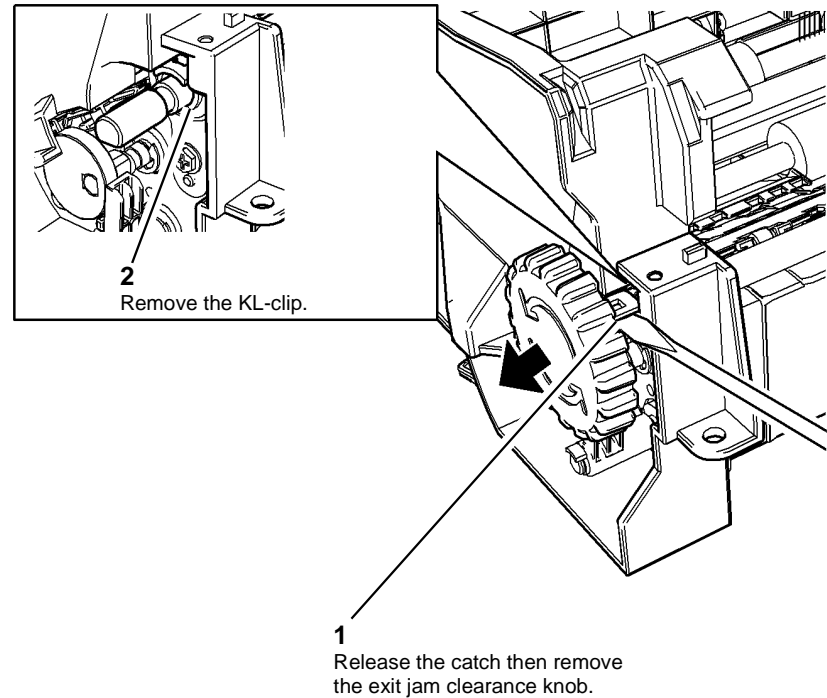


W-1-0197-A

Figure 1 Lower Pre scan roller assembly

### Replacement

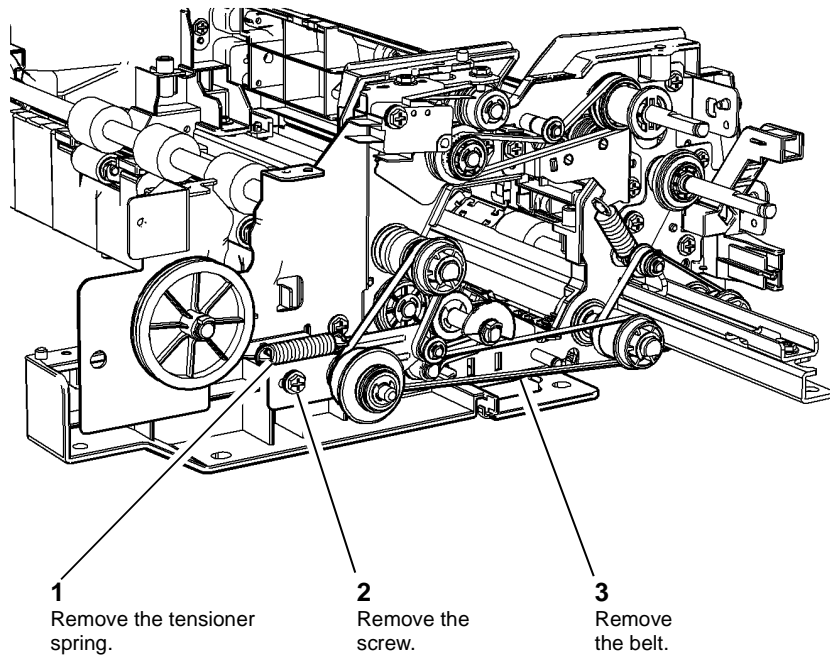
The replacement is the reverse of the removal procedure.



W-1-0198-A

Figure 1 Front components removal

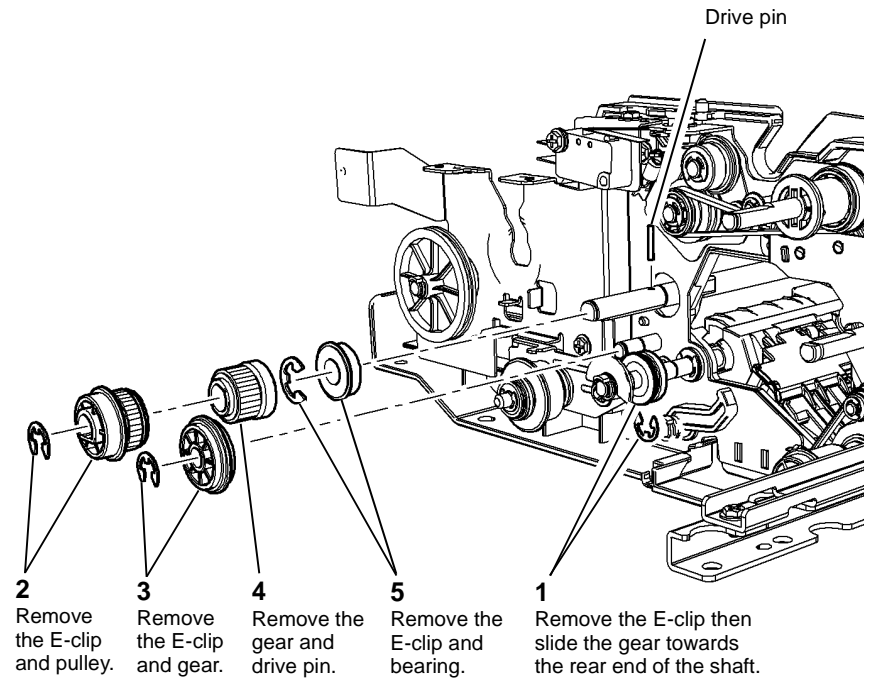
3. Prepare to remove the exit roll assembly, [Figure 2](#).



W-1-0199-A

Figure 2 Preparation

4. Remove the rear components, [Figure 3](#).



W-1-0200-A

Figure 3 Rear components removal

5. Remove the exit roll assembly, [Figure 4](#).

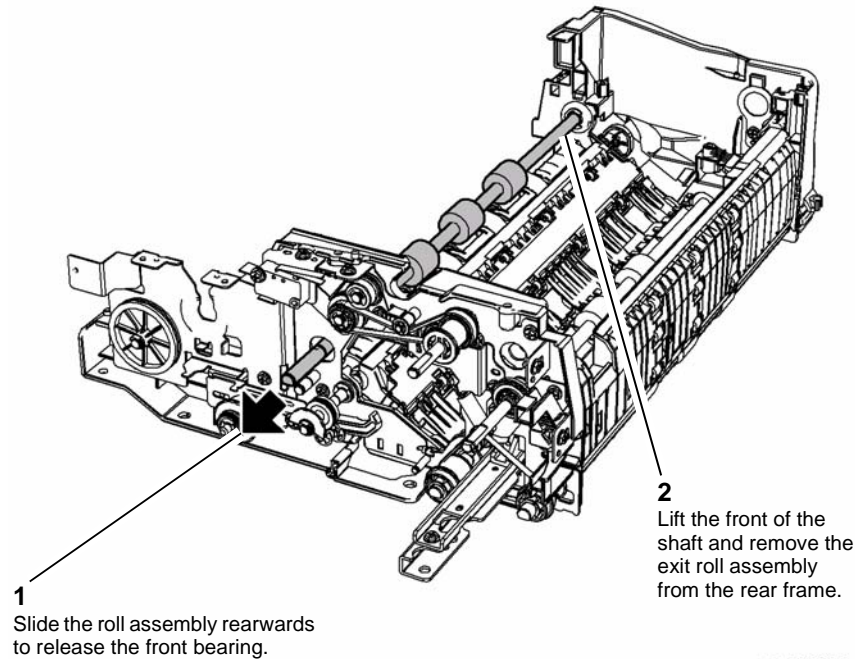


Figure 4 Exit roll assembly removal

W-1-0201-A

### Replacement

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 1](#).
2. Remove the feed assembly frame, [Figure 1](#).

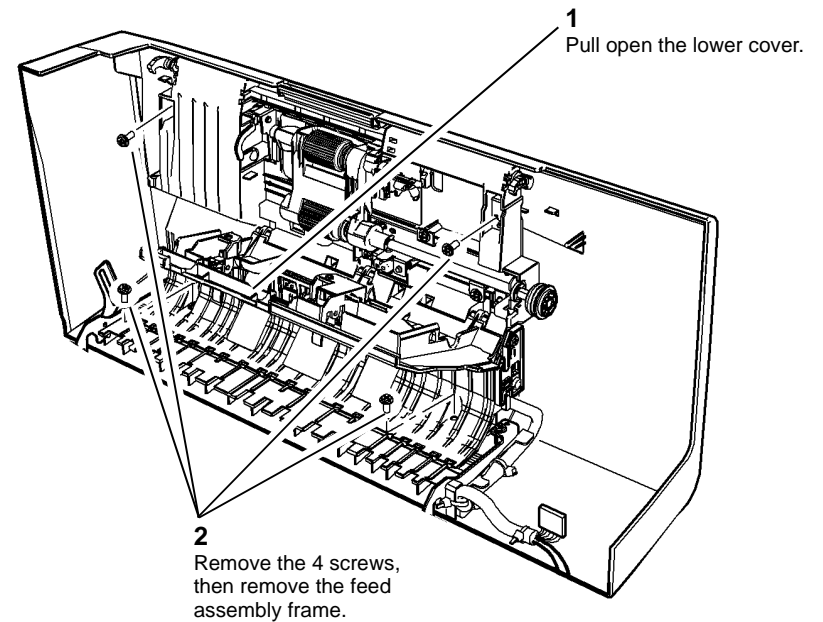


Figure 1 Frame removal

W-1-0202-A

- Remove the appropriate sensor, [Figure 2](#).

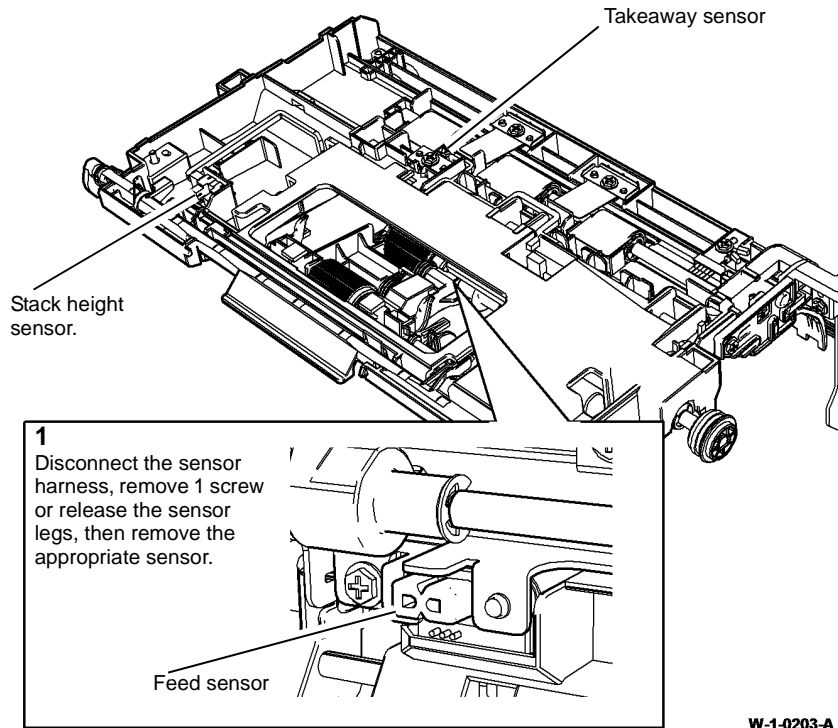


Figure 2 Sensor removal

### 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.
- Ensure the feed assembly frame is located correctly within the top cover before tightening the 4 screws.

## REP 5.9 Length Sensors

Parts List on [PL 5.30](#)

### Removal

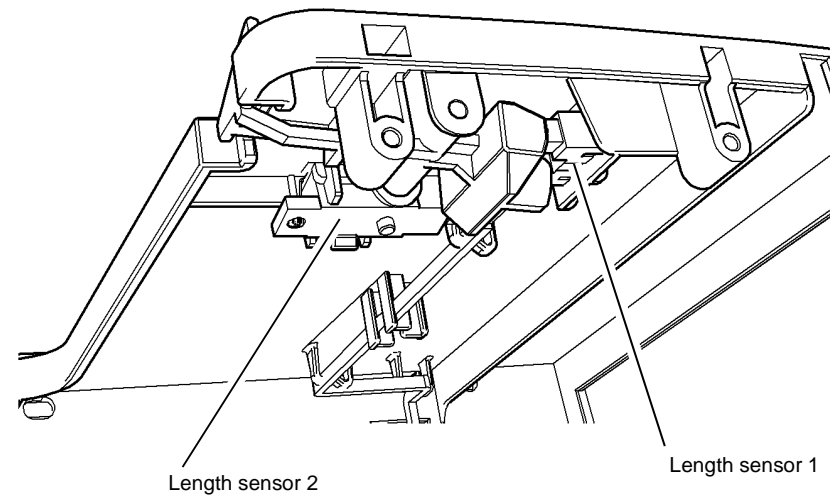


**Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.**

- Remove the input tray lower cover, 2 screws, [PL 5.30 Item 4](#).
- Remove the appropriate length sensor, [Figure 1](#).

**1**

Disconnect the PJ, then remove the appropriate sensor.



NOTE: Removal of the sensor flag will improve access to length sensor 1.

W-1-0204-A

Figure 1 Length sensors 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.



## REP 5.10 SPDH Reg 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.

1. Remove the side 2 scan assembly, [REP 60.6](#).
2. Prepare to remove the SPDH reg sensor, [Figure 1](#).

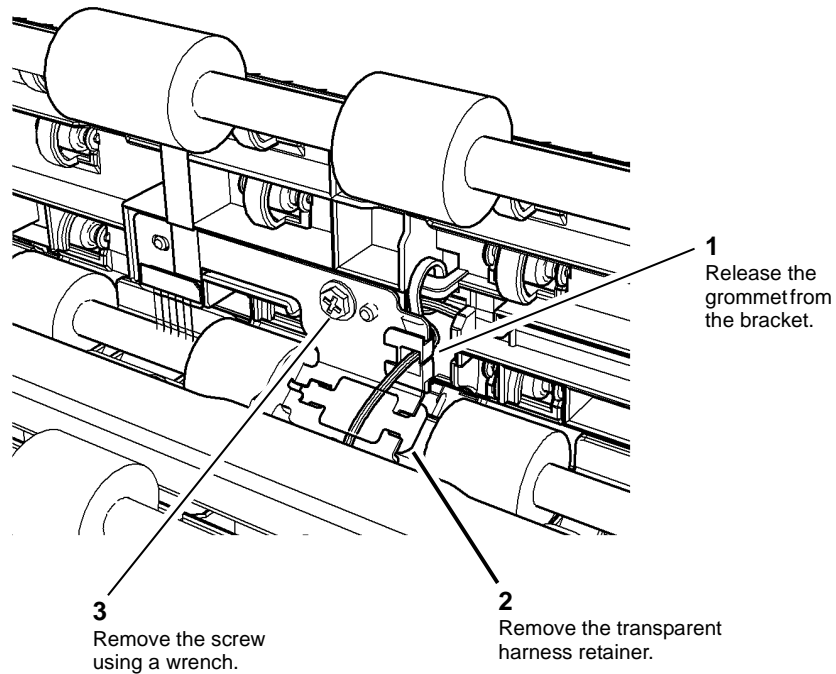
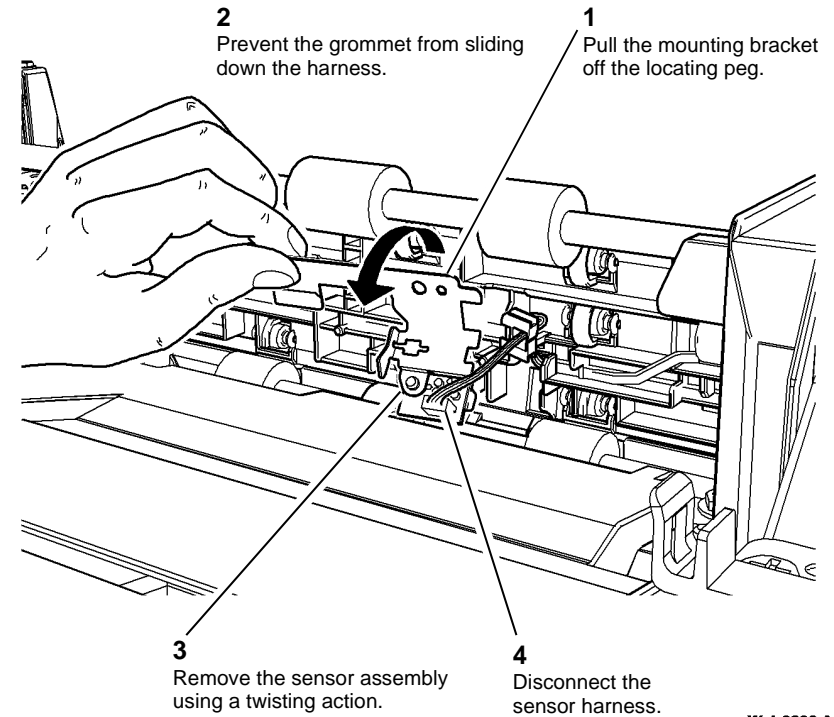


Figure 1 Preparation

W-1-0205-A

3. Remove the SPDH reg sensor and bracket assembly, [Figure 2](#).



W-1-0206-A

Figure 2 Sensor assembly removal

4. Remove the sensor from the bracket, [Figure 3](#).

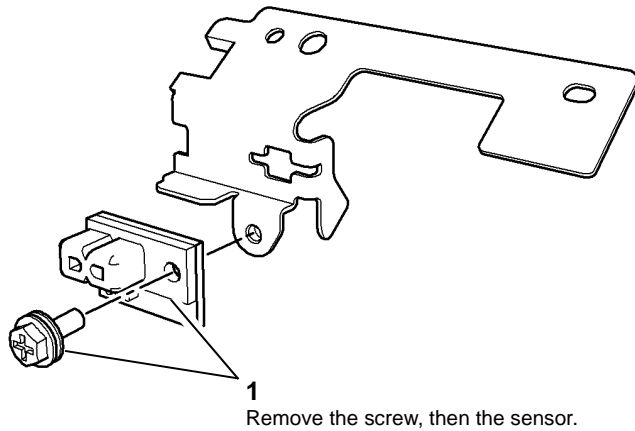


Figure 3 Sensor removal

W-1-0207-A

### Replacement

The replacement is the reverse of the removal procedure.

## REP 5.11 Calibration Home Position 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.

1. Remove the LED cooling fan, [REP 5.21](#).
2. 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.
3. Remove the calibration home position sensor, [Figure 1](#).

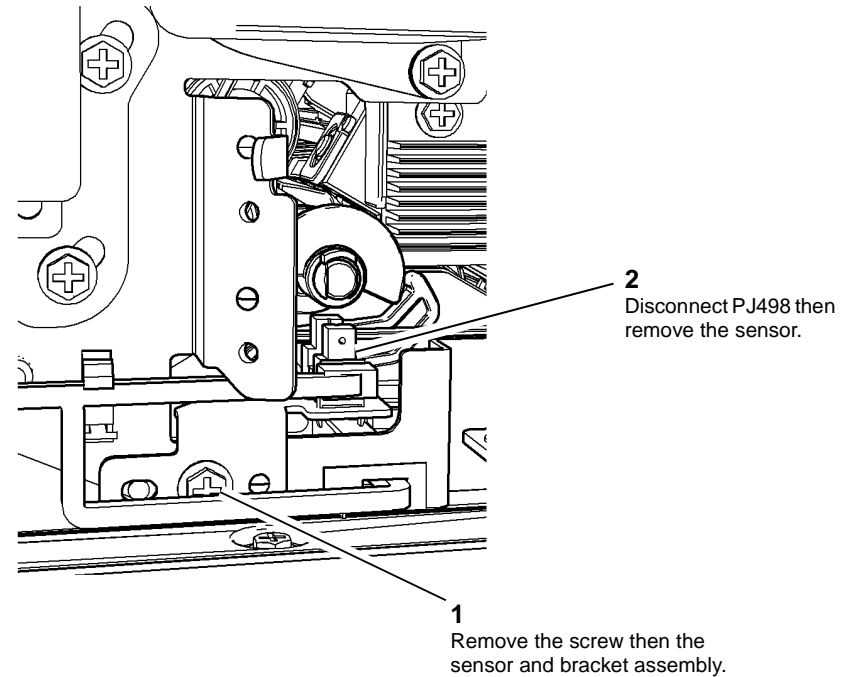


Figure 1 Sensor removal

W-1-0208-A

### Replacement

The replacement is the reverse of the removal procedure.

## 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

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.



#### CAUTION

Be careful when self tapping screws are installed into plastic components, refer to [GP 6](#).

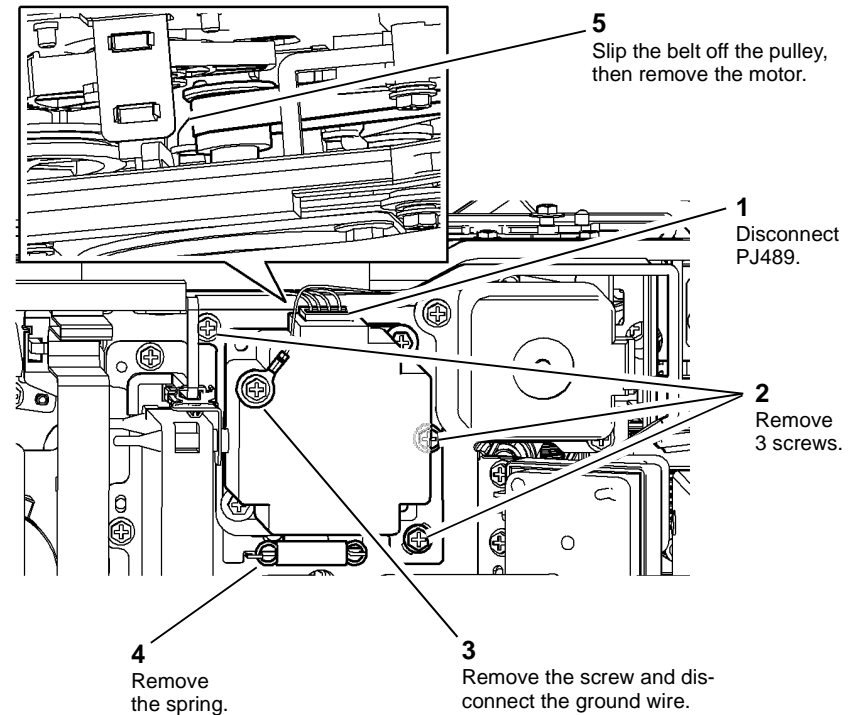


#### CAUTION

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 5 screws then the rear cover, [PL 5.10](#) Item 1.

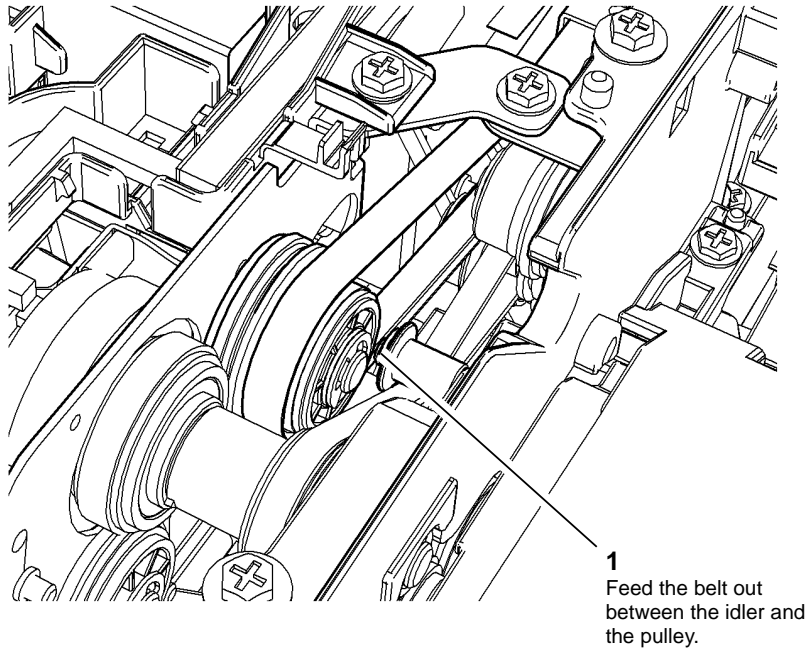
2. Remove the feed motor, [Figure 1](#).



W-1-0209-A

Figure 1 Feed motor removal

3. Remove the feed motor belt, [Figure 2](#).



W-1-0210-A

Figure 2 Feed motor belt removal

## Replacement

**NOTE:** Temporary removal of the top cover interlock switch, [PL 5.10 Item 13](#) with mounting bracket, [PL 5.10 Item 14](#) and the lift home position sensor, [PL 5.18 Item 9](#) with sensor bracket, [PL 5.18 Item 10](#), will provide improved access during the installation of the motor drive belt.

The replacement is the reverse of the removal procedure.

1. Position the motor in the loop of the drive belt.
2. Insert, but do not tighten the 3 screws.
3. Attach the spring to correctly tension the drive belt, then tighten the 3 screws.

## REP 5.13 Read Motor

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**

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

  
**CAUTION**

Be careful when self tapping screws are installed into plastic components, refer to [GP 6](#).

  
**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 5 screws then the rear cover, [PL 5.10 Item 1](#).

2. Remove the read motor, [Figure 1](#).

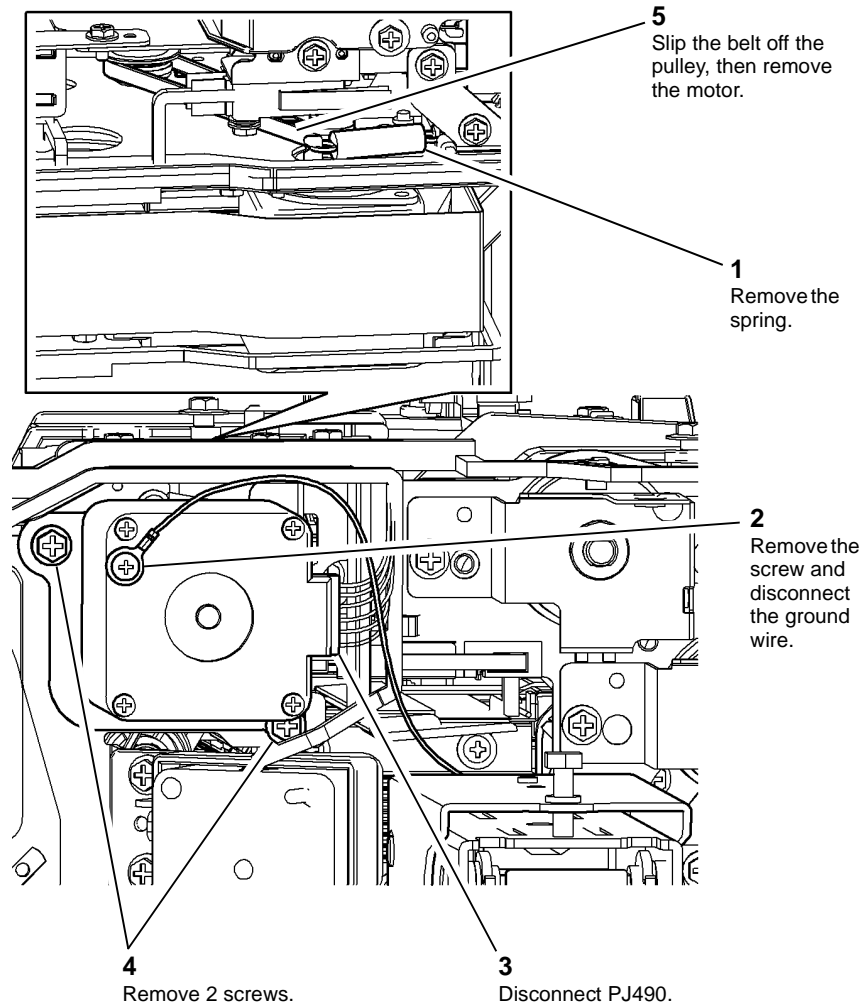


Figure 1 Read motor removal

W-1-0211-A

## Replacement

**NOTE:** Temporary removal of the top cover interlock switch, [PL 5.10 Item 13](#) with mounting bracket, [PL 5.10 Item 14](#) and the lift home position sensor, [PL 5.18 Item 9](#) with sensor bracket, [PL 5.18 Item 10](#), will provide improved access during the installation of the motor and tension spring.

1. Position the motor in the loop of the drive belt.
2. Insert but do not tighten the 2 screws.
3. Attach the spring to correctly tension the drive belt, then tighten the 2 screws.
4. The remainder of the replacement is the reverse of the removal procedure.

## REP 5.14 Feed 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 15](#).
2. Remove 5 screws then the rear cover, [PL 5.10 Item 1](#).

3. Prepare to remove the feed clutch, [Figure 1](#).

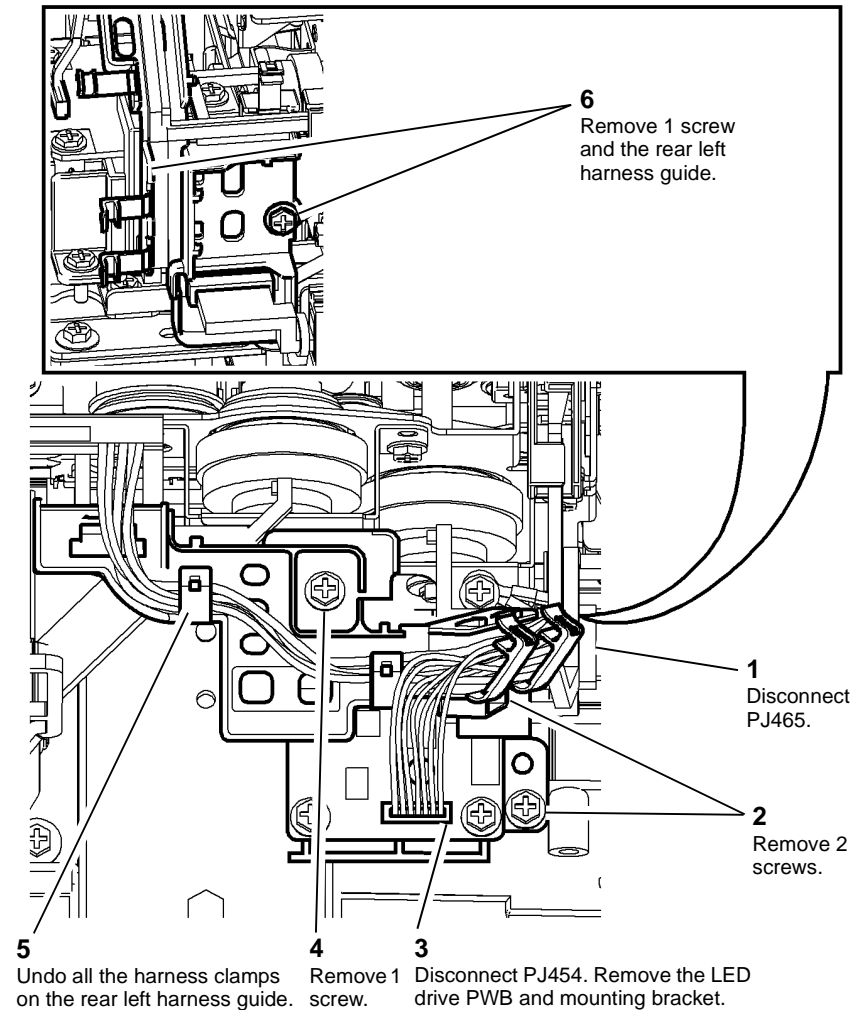
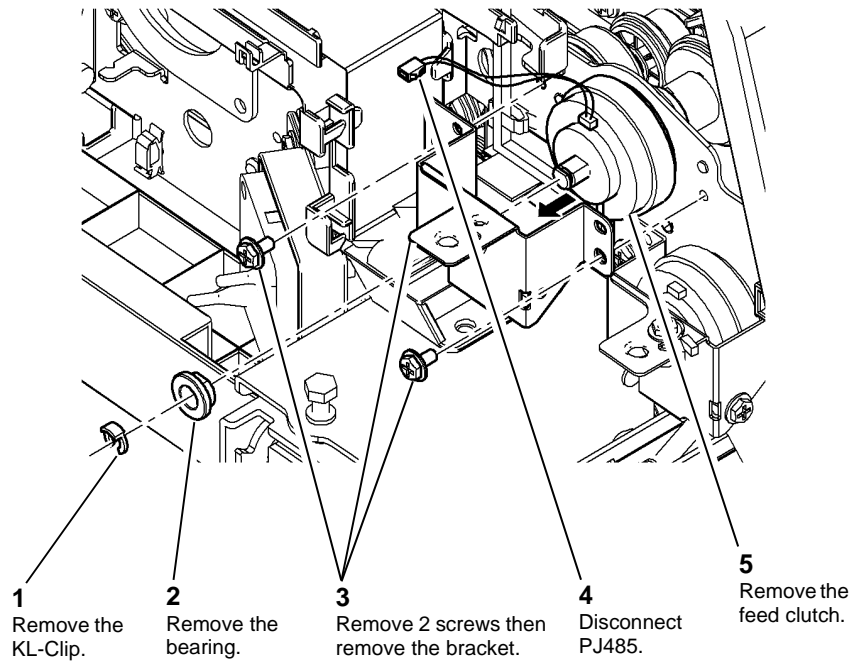


Figure 1 Preparation

4. Remove the feed clutch, [Figure 2](#).

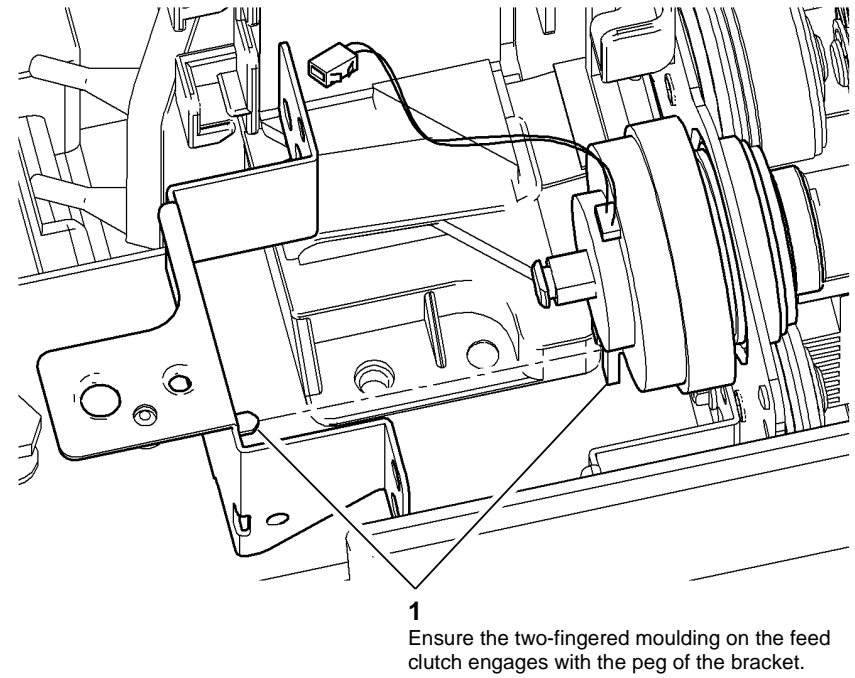


**Figure 2 Feed clutch removal**

W-1-0213-A

## Replacement

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**

W-1-0214-A

## REP 5.15 Takeaway Clutch

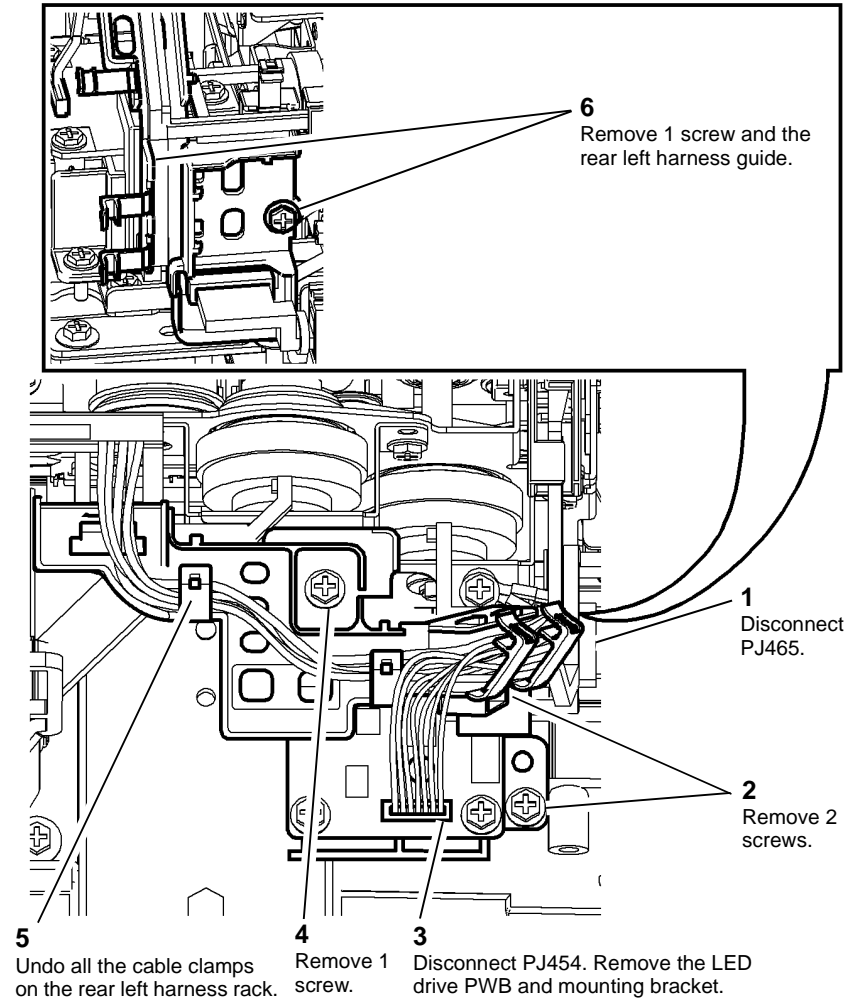
Parts List on [PL 5.18](#)

### 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.

1. Open the SPDH top cover assembly, [PL 5.20 Item 15](#).
2. Remove 5 screws then the rear cover, [PL 5.10 Item 1](#).
3. Prepare to remove the takeaway clutch, [Figure 1](#).

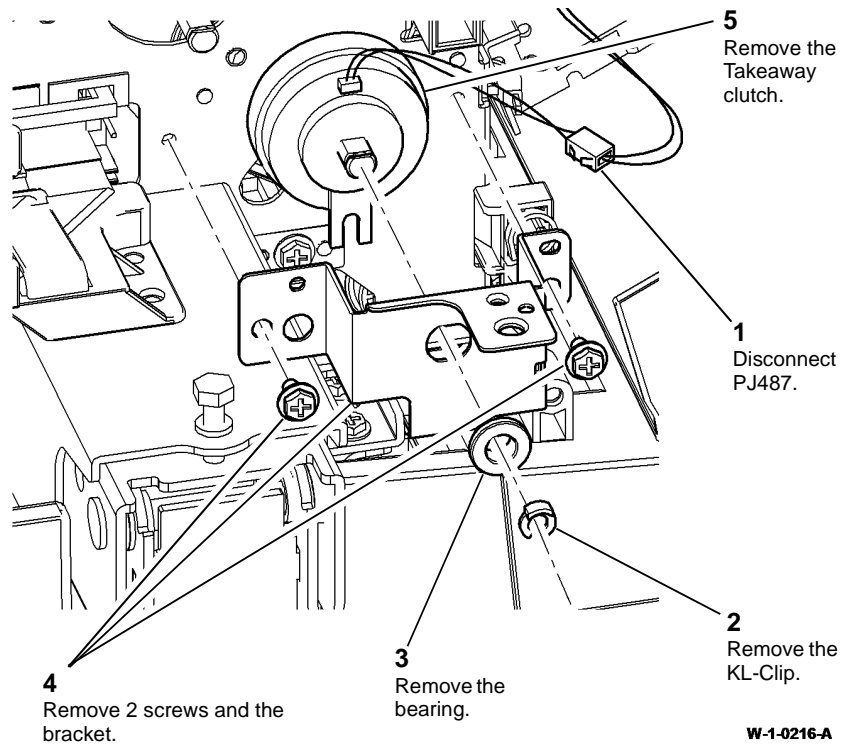


W-1-0215-A

Figure 1 Preparation



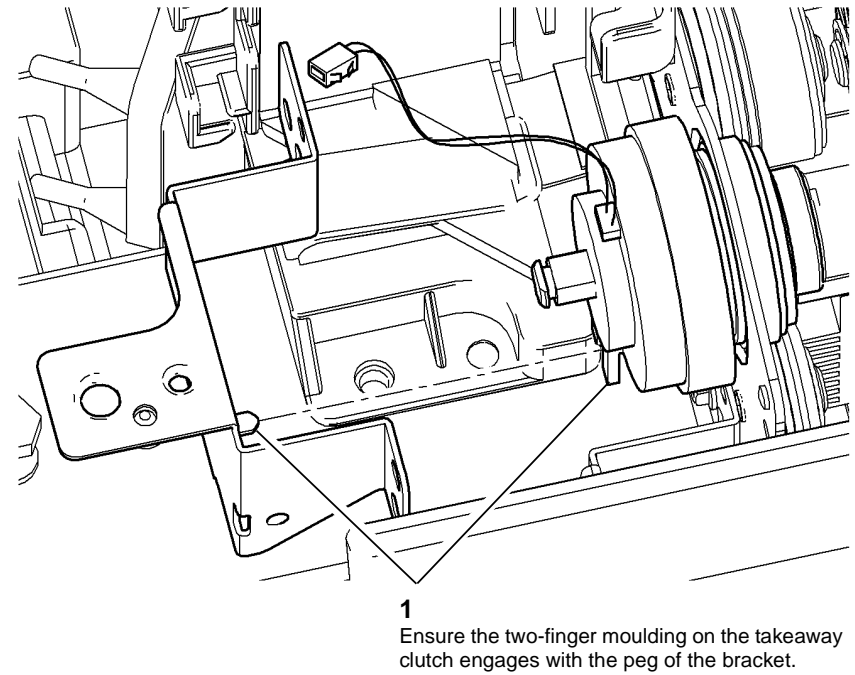
4. Remove the Takeaway clutch, [Figure 2](#).



**Figure 2 Takeaway clutch removal**

## Replacement

1. The replacement is the reverse of the removal procedure.
2. Ensure the takeaway clutch engages correctly with the bracket, [Figure 3](#).



**Figure 3 Clutch locator**

# REP 5.16 Input Tray Sensors and Doc Present Sensor Actuator

Parts List on [PL 5.30](#)

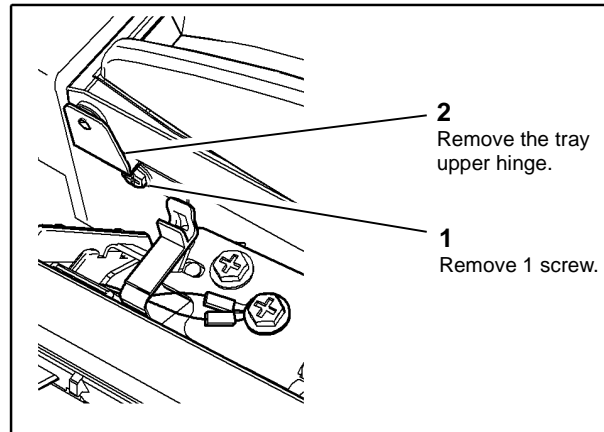
## Removal



### 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 5 screws then the rear cover, [PL 5.10 Item 1](#).
2. Remove the tray upper hinge, [Figure 1](#).



3. Lift up the tray upper assembly, taking care not to damage the sensor harnesses.

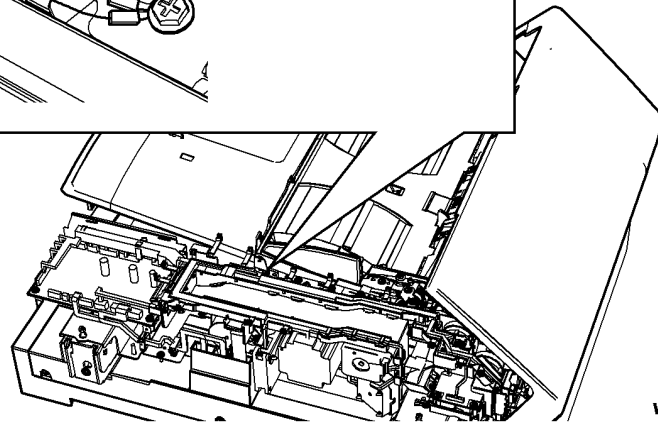


Figure 1 Hinge removal

W-1-0218-A

3. Release the sensor mounting plate, [Figure 2](#).

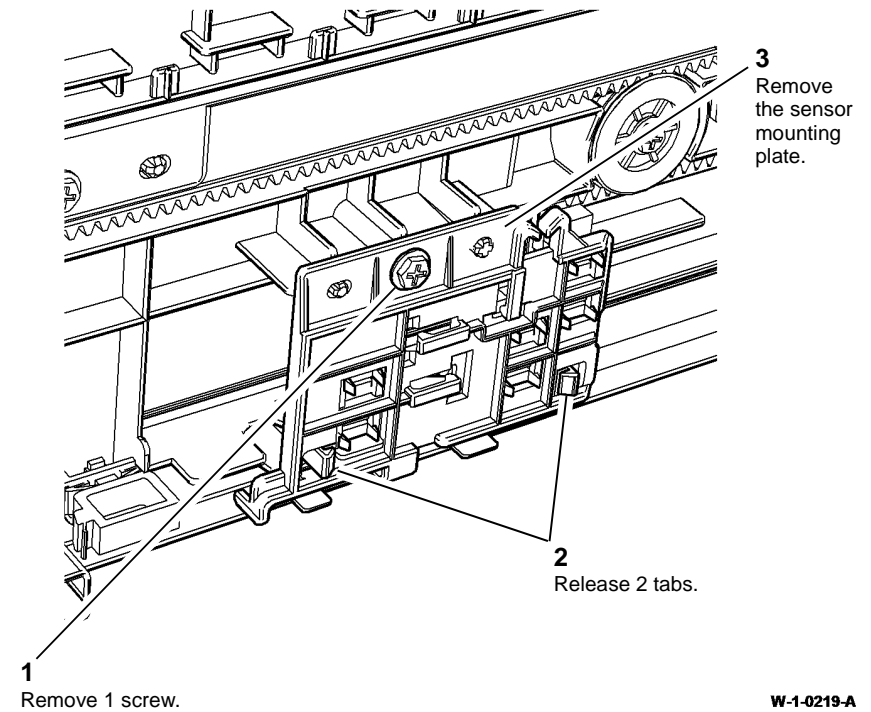
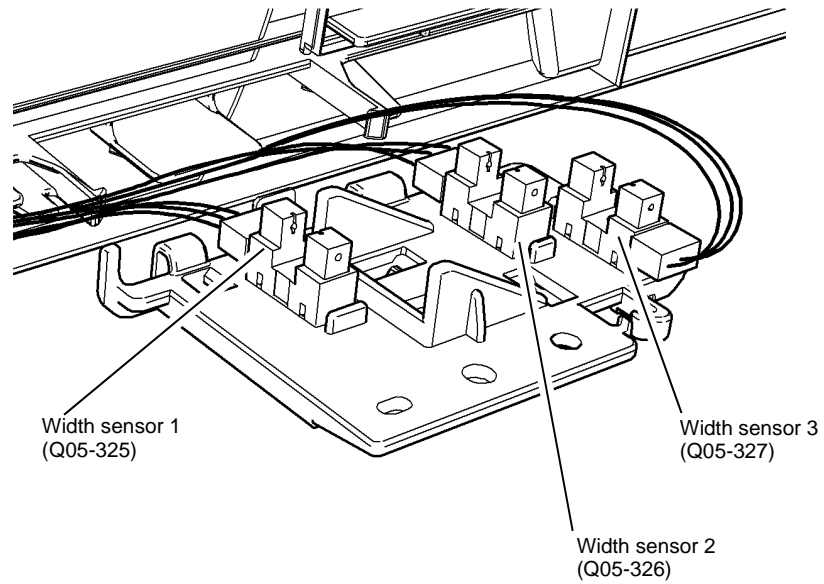


Figure 2 Mounting plate release

W-1-0219-A

4. Remove the document width sensors, [Figure 3](#).

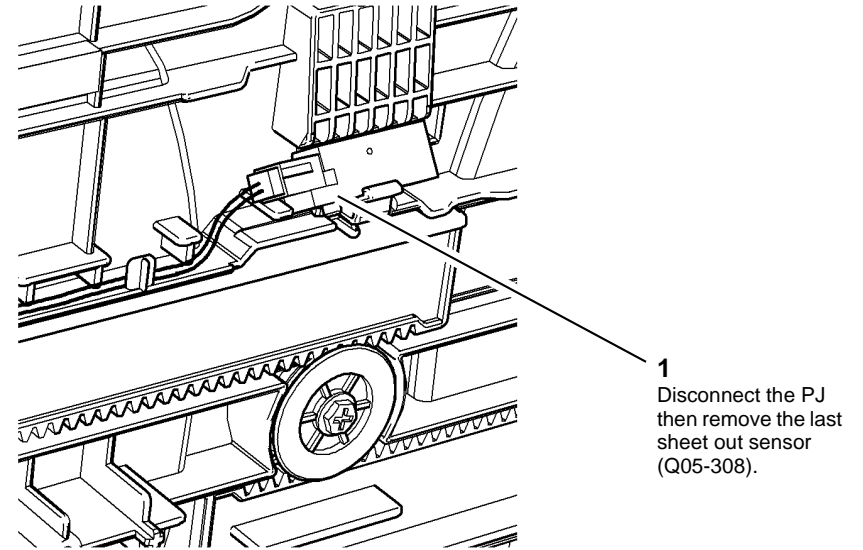


**1**  
Disconnect the appropriate PJ then remove the appropriate width sensor.

W-1-0220-A

Figure 3 Width sensors removal

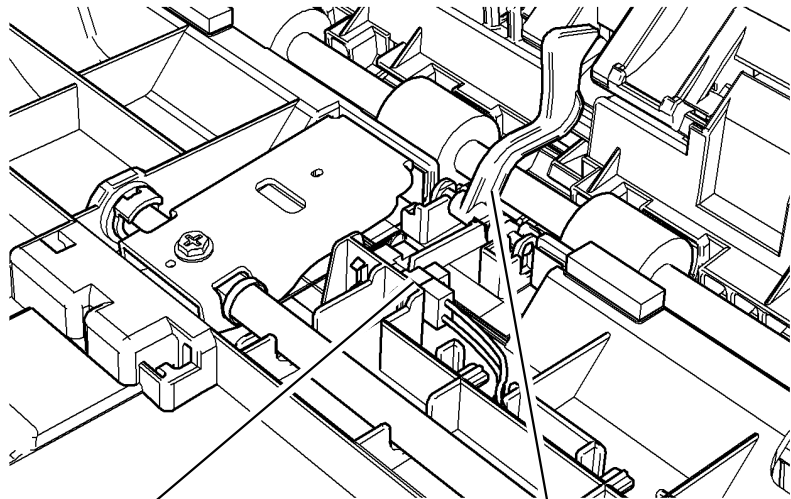
5. Remove the last sheet out sensor, [Figure 4](#).



W-1-0221-A

Figure 4 Last sheet out sensor removal

6. Remove the doc present sensor, [Figure 5](#).



1  
Disconnect the PJ then remove  
the doc present sensor (Q05-309).

2  
If required, remove the doc  
present sensor actuator.

W-1-0222-A

Figure 5 Doc present sensor removal

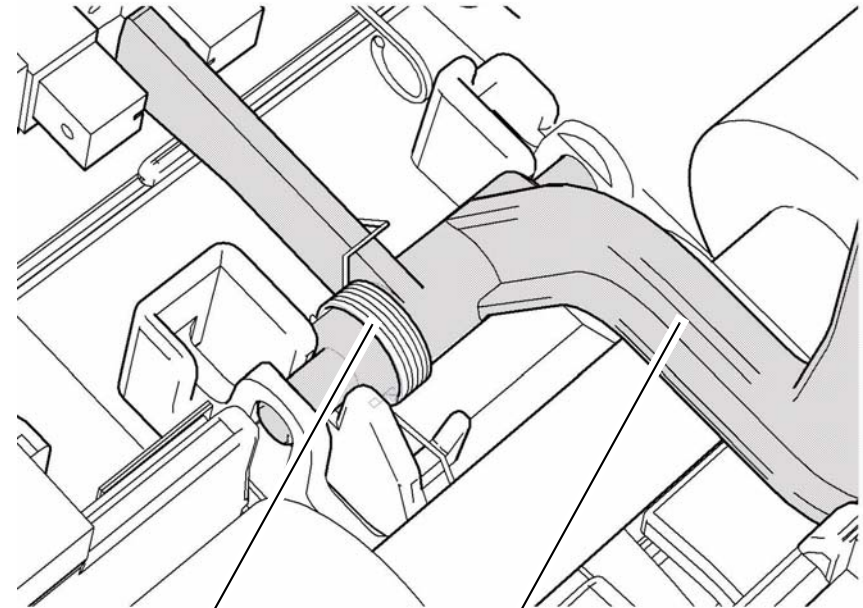
## Replacement



### 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 actuator spring is positioned correctly, [Figure 6](#).



Actuator spring

Doc present sensor actuator

W-1-1405-A

Figure 6 Spring position

## REP 5.17 Pre Scan Roll Assembly

Parts List on [PL 5.17](#)

### Removal

  
**WARNING**

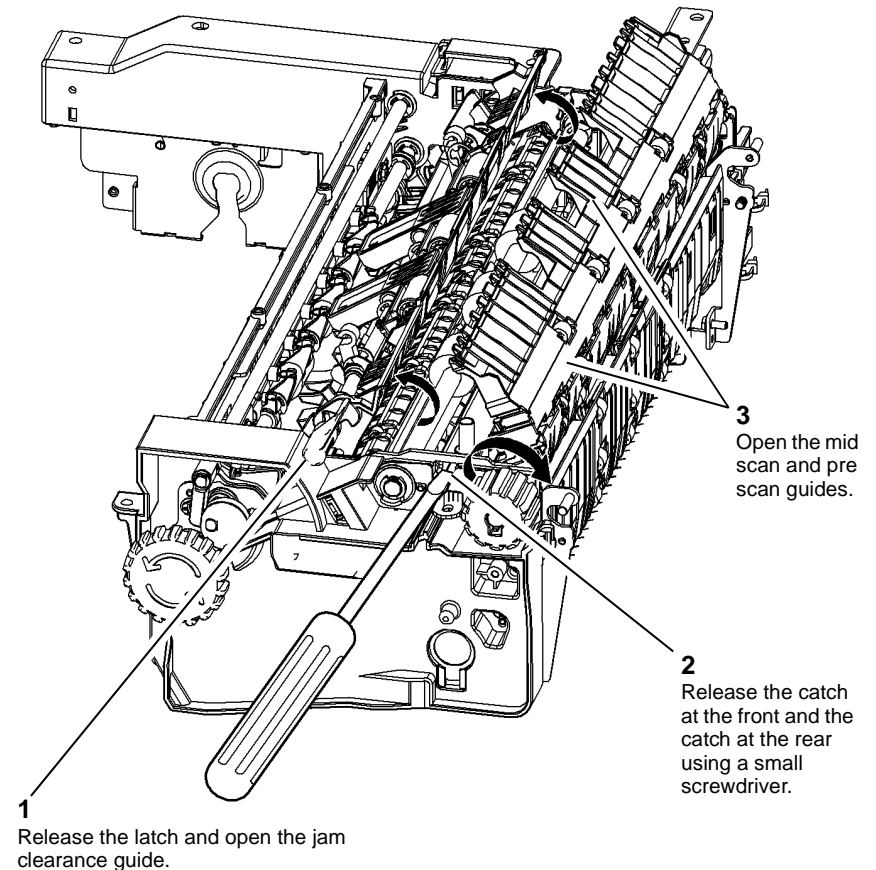
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the SPDH read assembly outer frame, by performing [REP 5.25](#) up to step 2.
2. Place the SPDH read assembly upside down on a work surface.

  
**CAUTION**

The mid scan and pre scan document guides are spring loaded, take care to not lose the springs when the guides are opened.

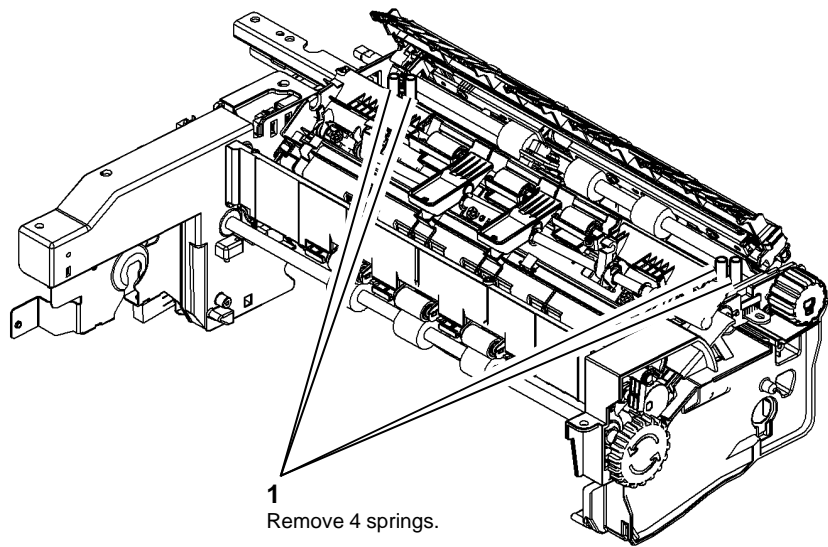
3. Prepare to remove the mid scan document guide, [Figure 1](#).



W-1-0223-A

Figure 1 Preparation

4. Remove 4 springs, [Figure 2](#).

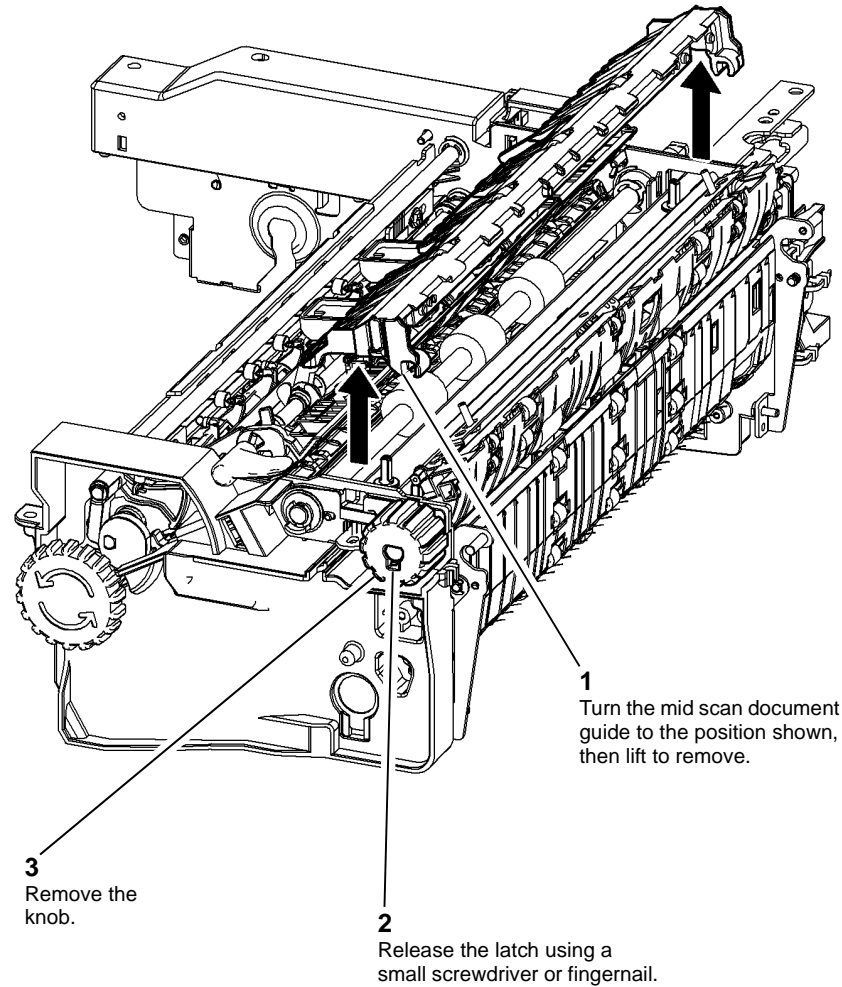


1  
Remove 4 springs.

**Figure 2 Springs removal**

W-1-0224-A

5. Remove the mid scan document guide and pre scan clearance knob, [Figure 3](#).



1  
Turn the mid scan document guide to the position shown, then lift to remove.

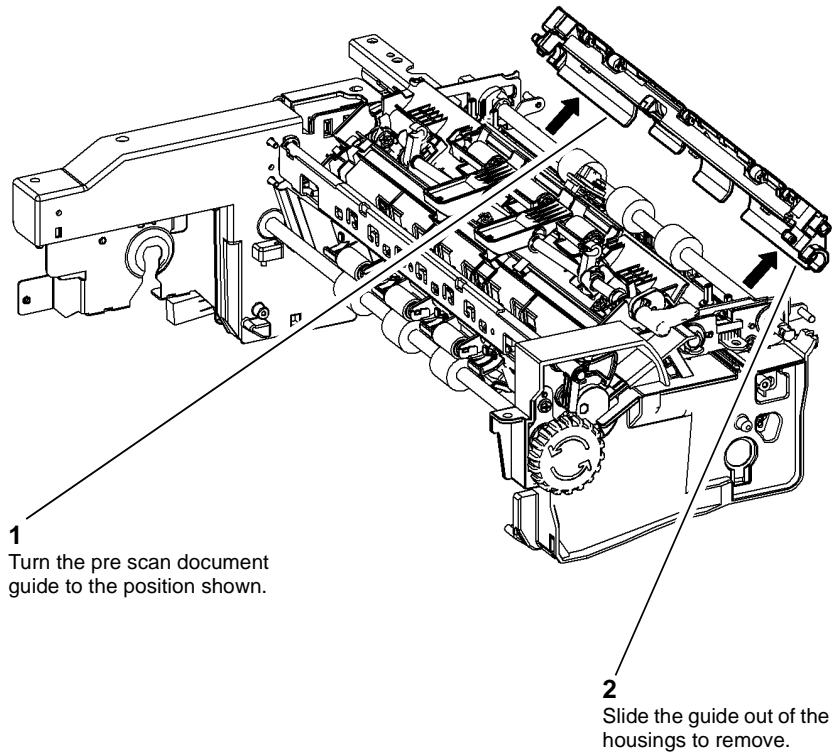
3  
Remove the knob.

2  
Release the latch using a small screwdriver or fingernail.

W-1-0225-A

**Figure 3 Guide and knob removal**

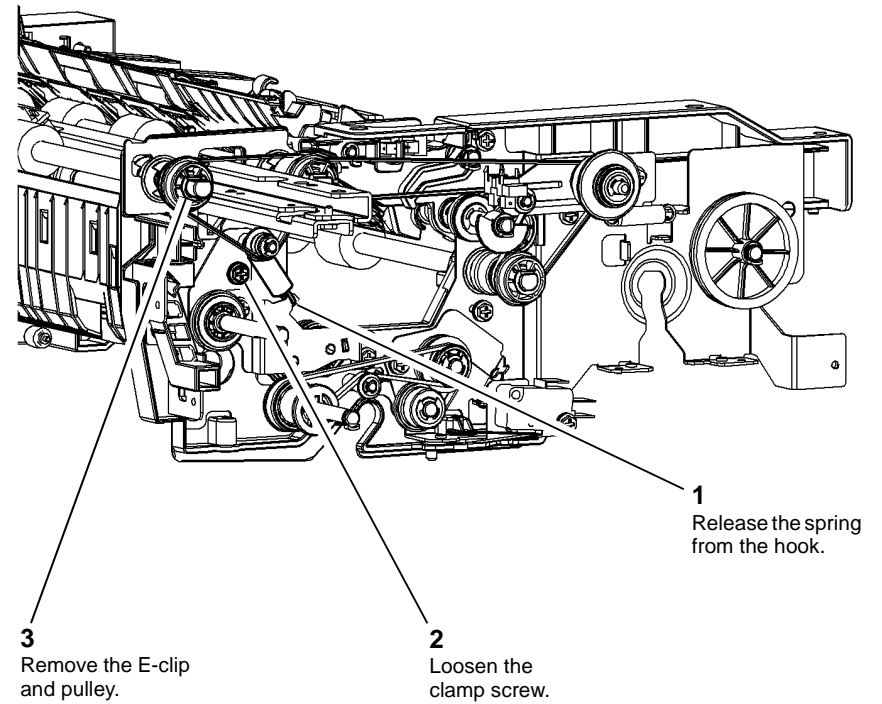
6. Remove the pre scan document guide, [Figure 4](#).



W-1-0226-A

Figure 4 Pre scan guide removal

7. Prepare to remove the pre scan roll assembly, [Figure 5](#).



W-1-0227-A

Figure 5 Preparation

8. Remove the pre scan roll assembly, [Figure 6](#).

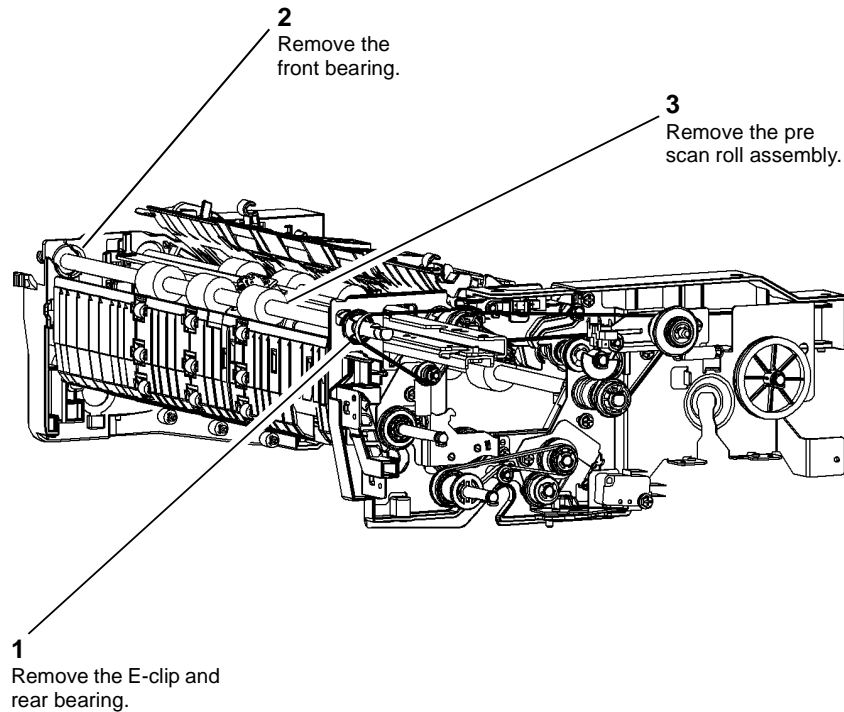


Figure 6 Pre scan roll removal

W-1-0228-A

### Replacement

1. The replacement is the reverse of the removal procedure.
2. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

## REP 5.18 Mid Scan Roll Assembly

Parts List on [PL 5.17](#)

### 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 SPDH read assembly outer frame, by performing [REP 5.25](#) up to step 2.
2. Place the SPDH read assembly upside down on a work surface.

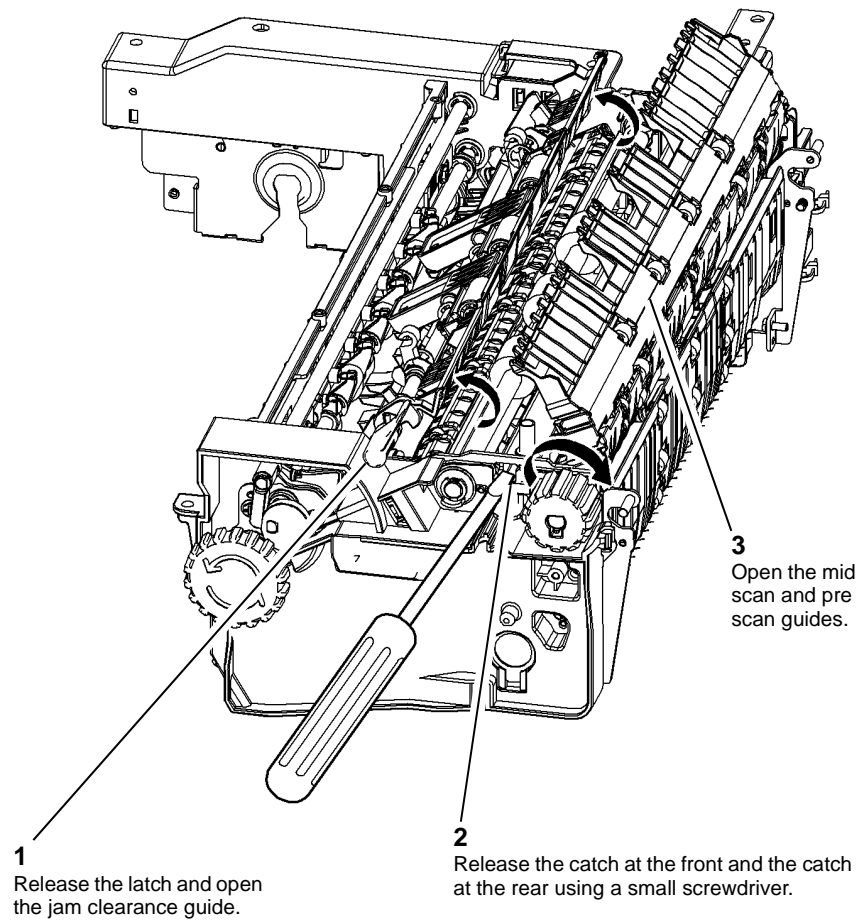


The mid scan and pre scan document guides are spring loaded, take care not to lose the springs when the guides are opened.

3. Open the mid scan document guide and pre scan document guide, [Figure 1](#).

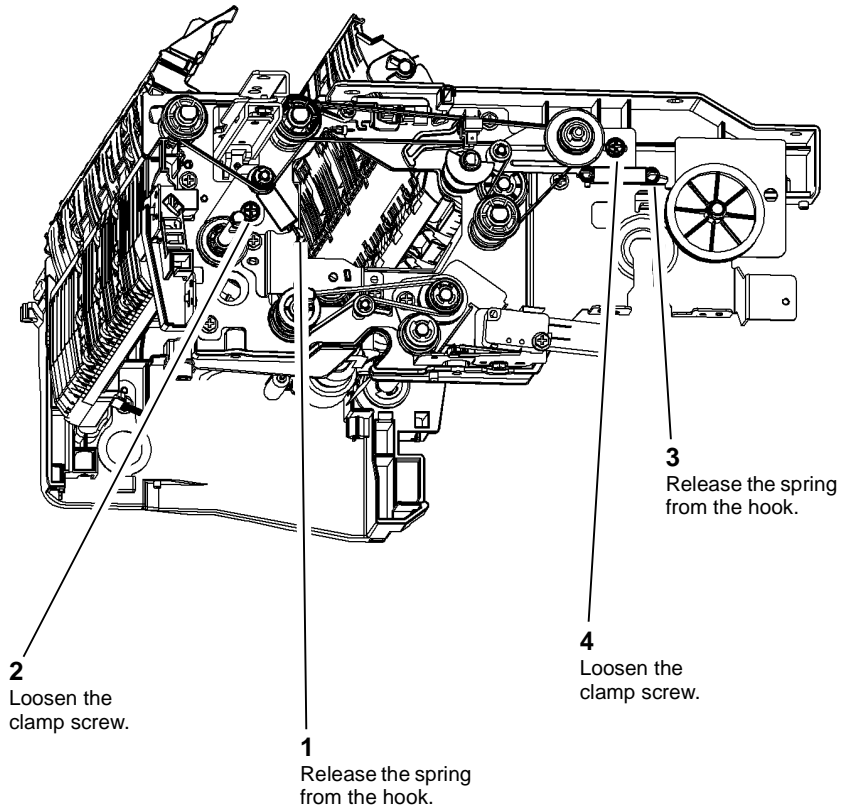


4. Release the belt tension in the 2 drive belts, [Figure 2](#).



W-1-0229-A

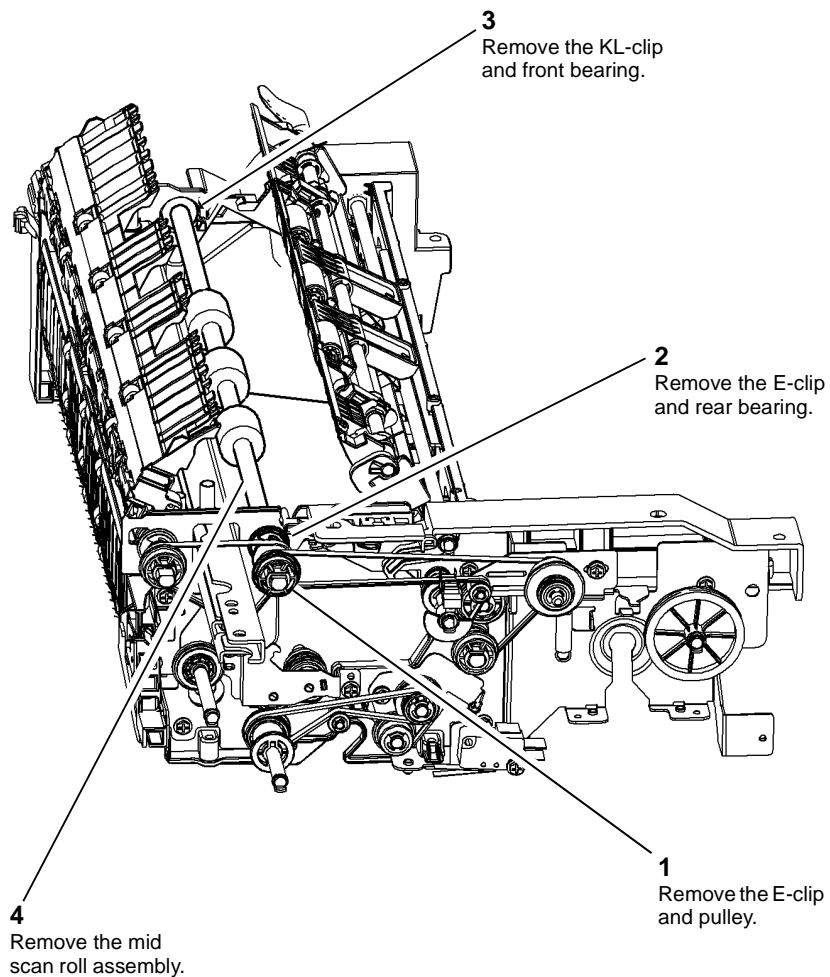
Figure 1 Guides opening



W-1-0230-A

Figure 2 Belt tensions release

5. Remove the mid scan roll assembly, [Figure 3](#).



W-1-0231-A

Figure 3 Mid scan roll removal

## Replacement

1. The replacement is the reverse of the removal procedure.
2. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

## REP 5.19 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. Disconnect the communication and power cables, [Figure 1](#).

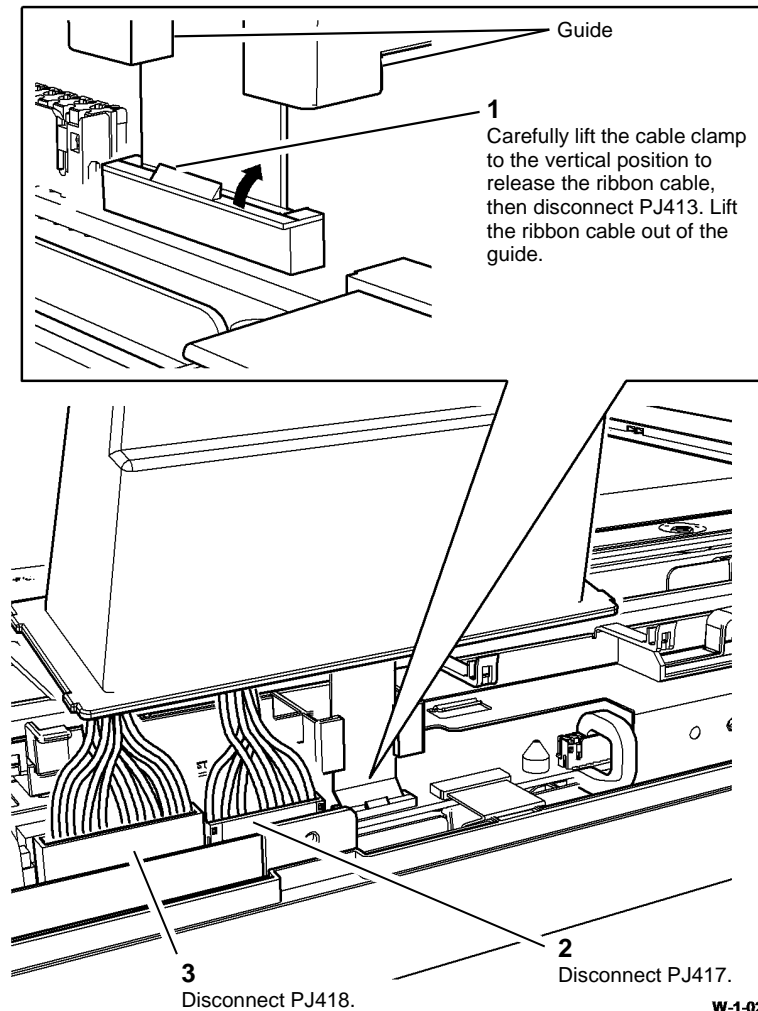


Figure 1 SPDH to Scanner Connections

W-1-0233-A



Use safe handling procedures when removing the module, [GP 16](#). The module is heavy.

**NOTE:** The SPDH weight is 11.5Kg (25.4lb).

3. Remove the SPDH from the rear of the machine, [Figure 2](#).

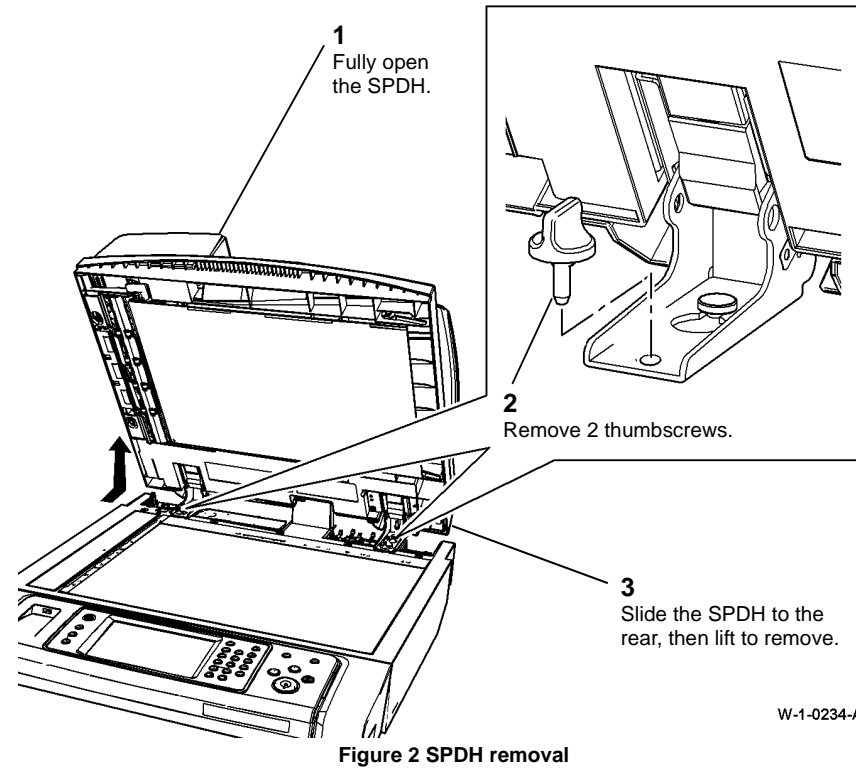
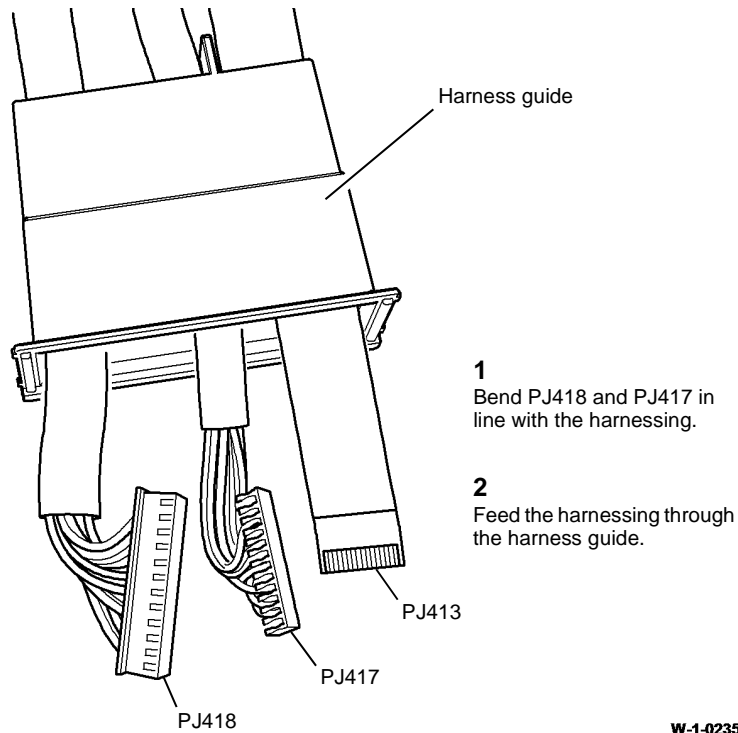


Figure 2 SPDH removal

W-1-0234-A

- If necessary remove the SPDH harness guide, [Figure 3](#).



**Figure 3** Harness guide 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 5.2](#) SPDH Height.
  - [ADJ 5.3](#) SPDH Skew.
- Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

W-1-0235-A

## REP 5.20 Motor Cooling Fan

Parts List on [PL 5.18](#)

### Removal

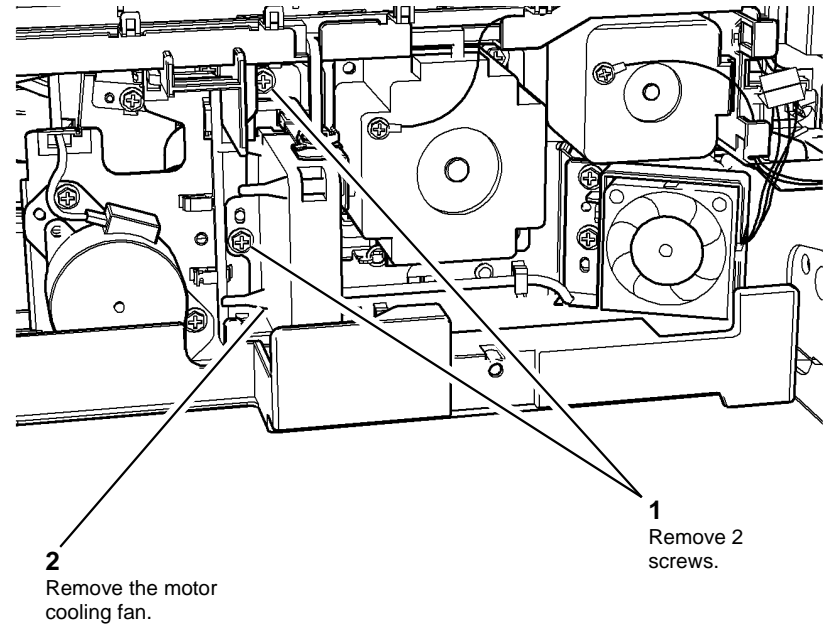


Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



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

- Remove 5 screws then the rear cover, [PL 5.10](#) Item 1.
- Disconnect PJ470 on the [SPDH PWB](#).
- Release the 5 cable ties leading to the motor cooling fan from the SPDH PWB.
- Remove the motor cooling fan, [Figure 1](#).



**Figure 1** Motor cooling fan removal

W-1-0236-A

### Replacement

The replacement is the reverse of the removal procedure.

## REP 5.21 LED Cooling Fan

Parts List on [PL 5.18](#)

### Removal

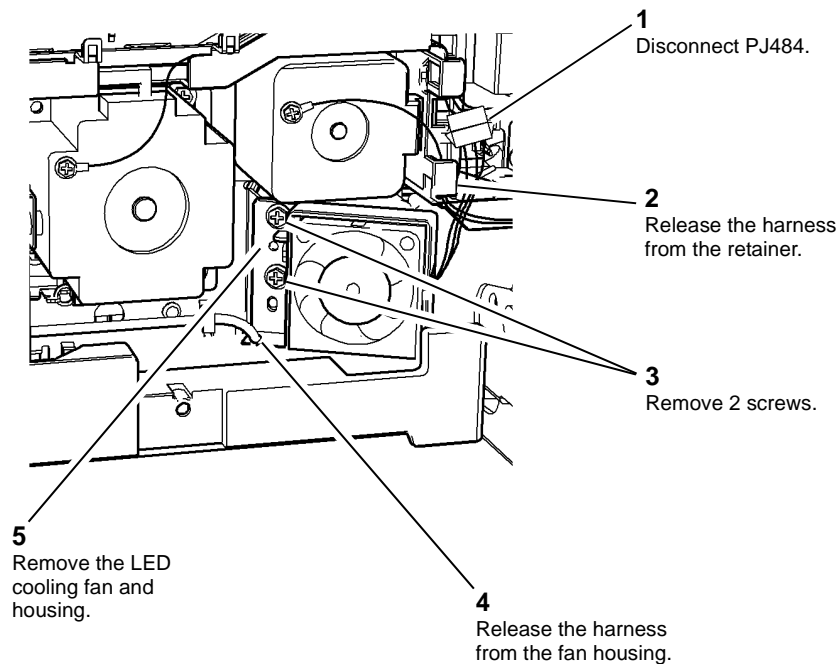
  
**WARNING**

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**

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

1. Remove 5 screws then the rear cover, [PL 5.10 Item 1](#).
2. Remove the LED cooling fan, [Figure 1](#).



W-1-0237-A

Figure 1 LED Cooling fan removal

### Replacement

The replacement is the reverse of the removal procedure.

## REP 5.22 Side 2 Scan Power and Data Ribbon Cables

Parts List on [PL 5.10](#)

### 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**

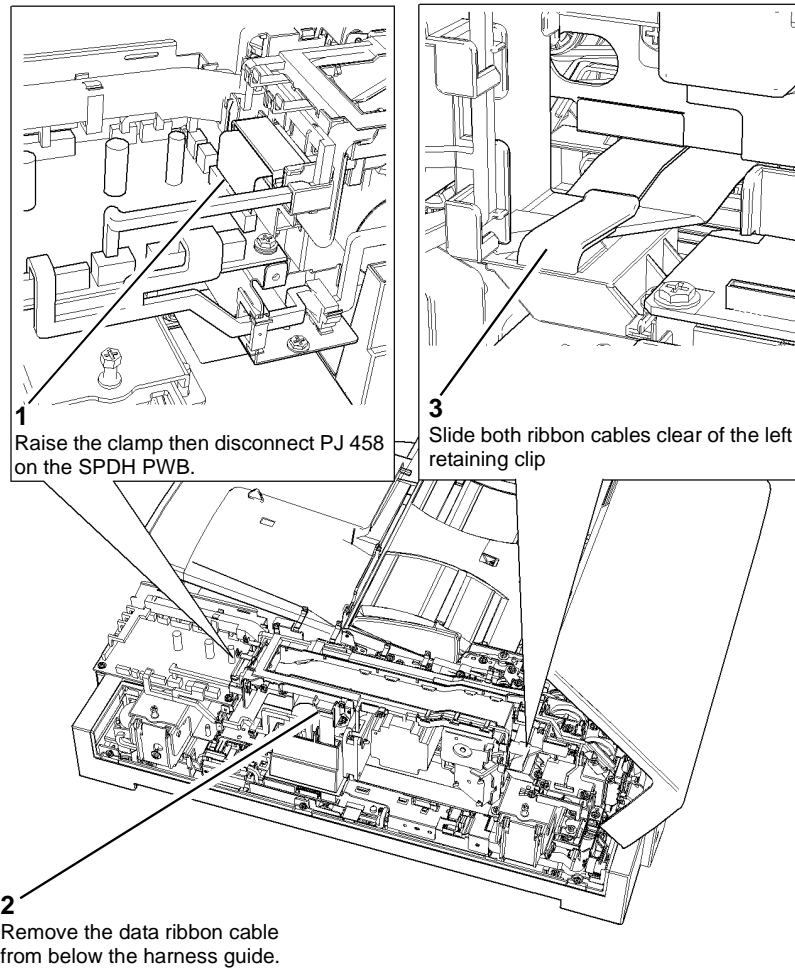
Do not remove the SPDH while the SPDH is lowered. In the lowered position the counterbalance springs are compressed and can cause injury when released.

  
**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 5.19](#). Disconnect PJ413 only, by following step 1 in figure 1.
3. Remove 5 screws, then remove the rear cover, [PL 5.10 Item 1](#).
4. Refer to [REP 5.3](#). Remove separation assembly. Do not remove the retard roll.
5. Refer to [REP 60.6](#). Disconnect the ribbon cables from PJ451 and PJ452. Do not disconnect PJ456. Do not remove the side 2 scanner

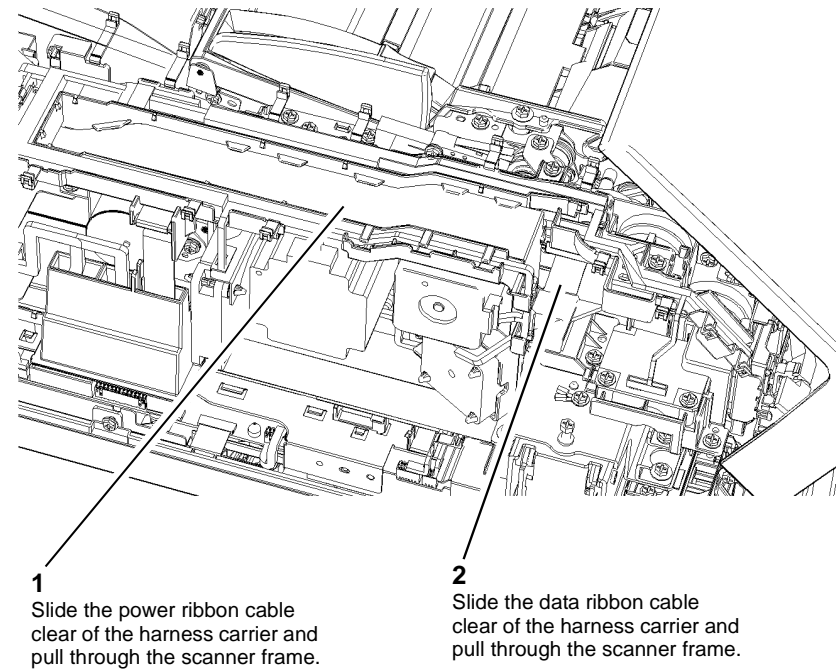
6. Prepare to remove the side 2 scan assembly data ribbon cable and power ribbon cable, **Figure 1**.



**Figure 1 Preparation**

W-1-0238-A

7. Remove the side 2 scan assembly data ribbon cable and power ribbon cable, **Figure 2**.



**Figure 2 Ribbon cable removal**

W-1-0239-A

## Replacement

1. New ribbon cable are supplied pre-folded, refer to [Figure 3](#).

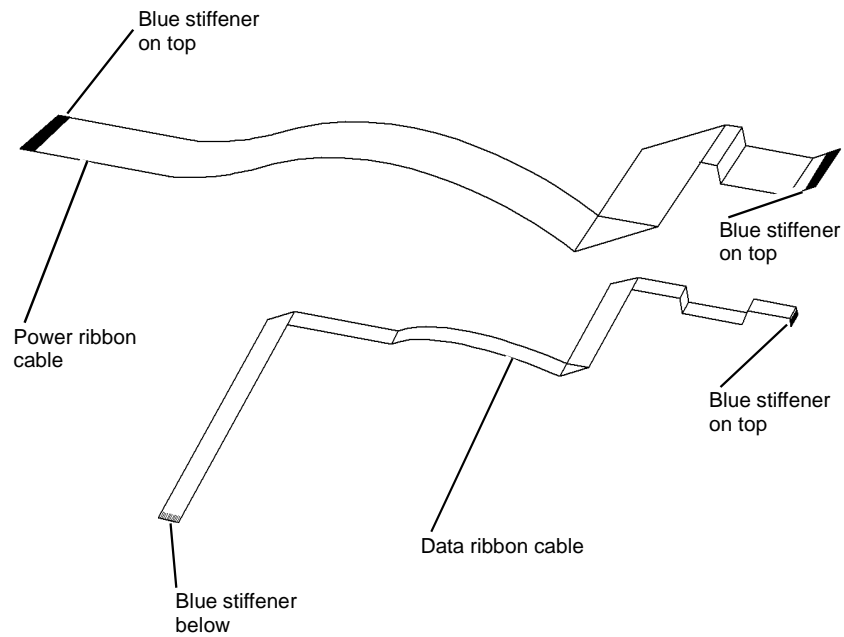


Figure 3 Ribbon cable folds

W-1-0240-A

2. Install the data ribbon cable on the harness carrier, [Figure 4](#), [Figure 5](#) and [Figure 6](#).

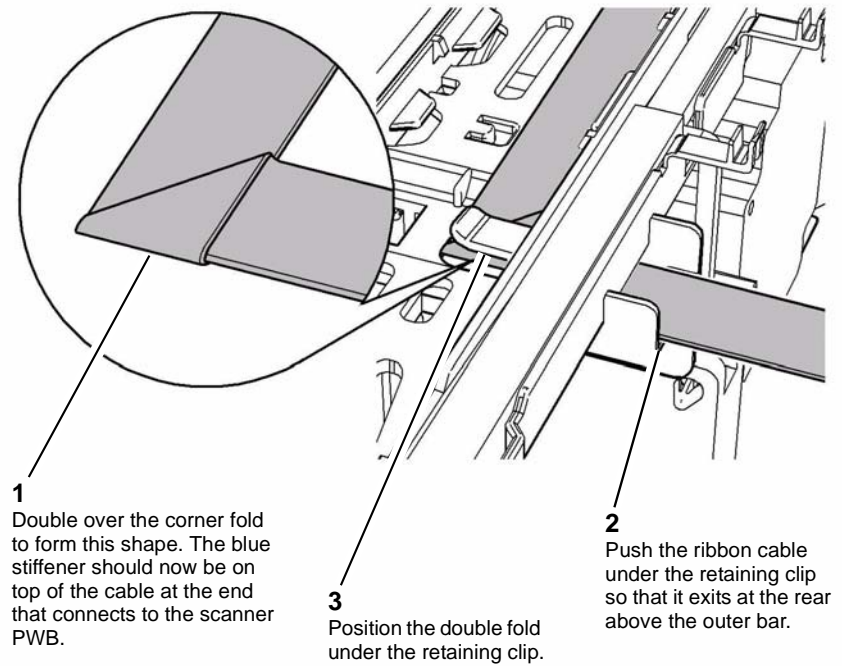
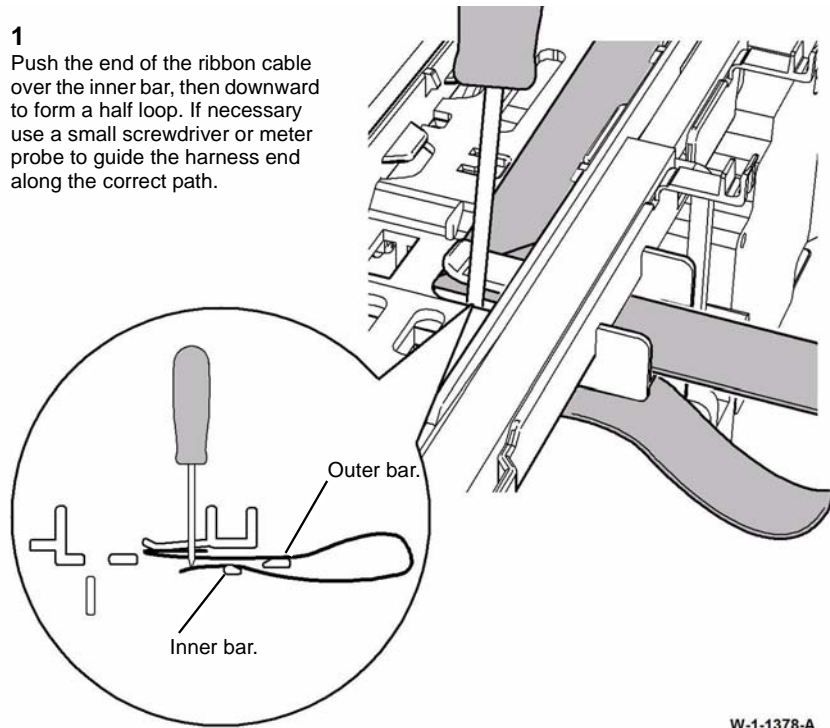


Figure 4 Data cable install 1 of 3

W-1-1377-A

- 1 Push the end of the ribbon cable over the inner bar, then downward to form a half loop. If necessary use a small screwdriver or meter probe to guide the harness end along the correct path.



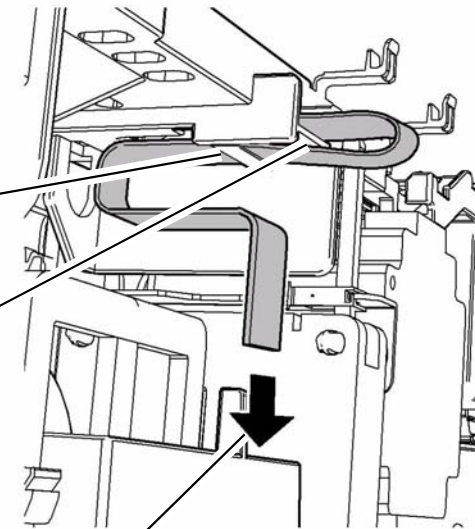
W-1-1378-A

Figure 5 Data cable install 2 of 3

- 1 Pull all of the cable slack past the inner bar.

- 2 Form a close loop around the outer bar.

- 3 Push the end of the ribbon cable down through the harness guide.



W-1-1379-A

Figure 6 Data cable install 3 of 3

3. Position the second corner fold over the left retaining clip (shown in [Figure 1](#)) to check the length of the data ribbon cable along the harness carrier. If the data ribbon cable appears to be too long, form a Z fold in the cable where it lies over the harness carrier.
4. Thread the power ribbon cable along the harness carrier from the left end towards the SPDH PWB, so that is on top of the data ribbon cable. The blue stiffener at the SPDH PWB end of the cable should be on top of the cable.
5. Pass the side 2 scanner end of the power ribbon cable through the SPDH frame to lay on top of the side 2 scanner.

**NOTE:** To ease the passage of the harness through the frame, position a 150mm (6 inch) rule through the frame first, then slide the ribbon cable along the rule.

6. Pass the side 2 scanner end of the data ribbon cable through the SPDH frame to lay on top of the power ribbon cable. Place the corner fold of the data ribbon cable inside the corner fold of the power ribbon cable. Slide both ribbon cables under the left retaining clip (shown in [Figure 1](#)).
7. Connect the power ribbon cable to the side 2 scanner PJ451 by pushing the ribbon cable into the connector. The blue stiffener at the scanner end of the cable should be on top of the cable.
8. Connect the data ribbon cable to the side 2 scanner PJ452:



- a. Ensure the cable clamp is facing to the left (open).
  - b. Place the ribbon cable fully into the connector. The blue stiffener at the scanner end of the cable should be on the same side as the cable clamp.
  - c. Close the cable clamp by folding it up against the cable.
9. The remainder of the replacement is the reverse of the removal procedure.

## REP 5.23 SPDH Read Assembly

Parts List on [PL 5.19](#)

### 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.



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.



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

1. Remove the document pad, [PL 5.10 Item 3](#), by removing 2 K-L clips from the right side of the pad, then un-clip the 2 fasteners at the left side.
2. Remove the read assembly lower fasteners, [Figure 1](#).

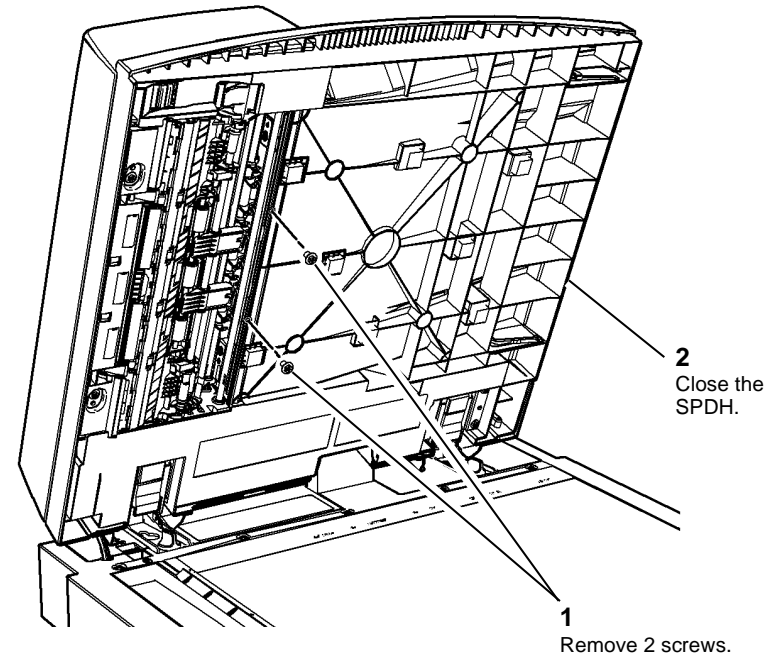
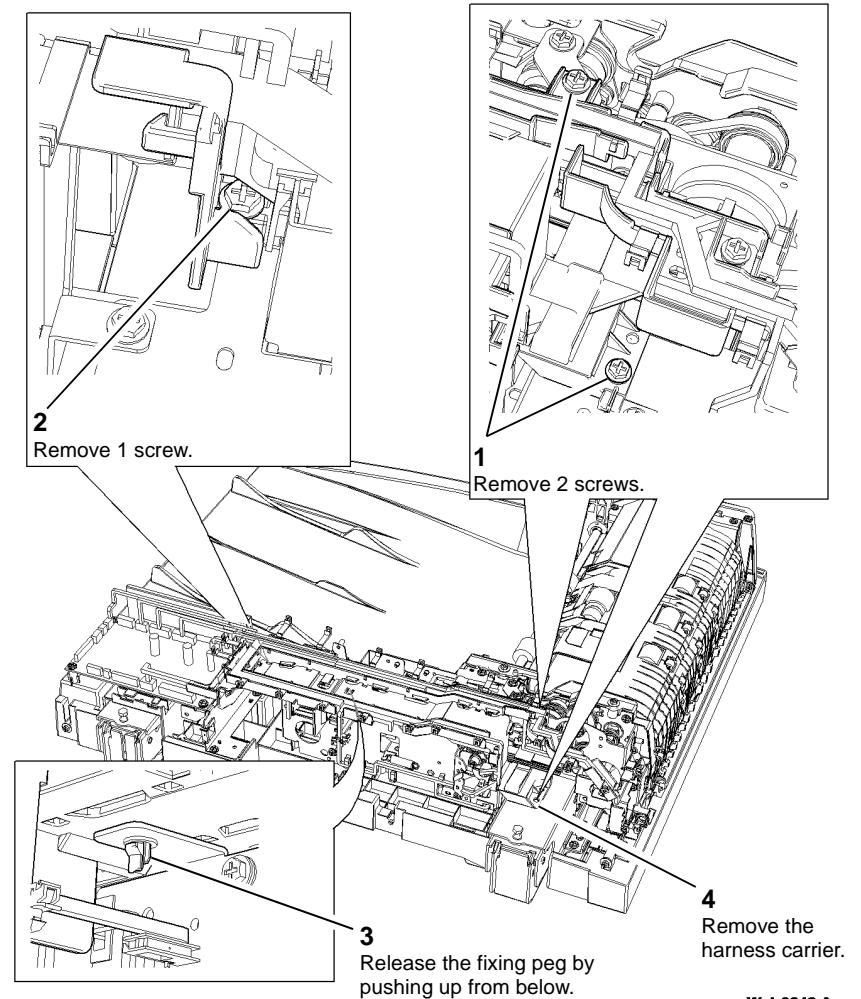


Figure 1 Lower fasteners removal

3. Remove the SPDH, [REP 5.19](#).
4. Remove the input tray assembly, [REP 5.4](#).
5. Remove the top cover assembly, [REP 5.1](#).
6. Remove the tray elevator motor, [REP 5.24](#).
7. Remove the motor cooling fan, [REP 5.20](#).
8. Remove the feed motor, [REP 5.12](#).
9. Remove the LED cooling fan, [REP 5.21](#).
10. Remove the read motor, [REP 5.13](#).
11. Remove the feed clutch, [REP 5.14](#).
12. Remove the takeaway clutch, [REP 5.15](#).
13. Remove the SPDH ribbon harnesses, [REP 5.22](#).
14. With the exception of PJ459 and PJ460, disconnect all the remaining PJs on the [SPDH PWB](#).
15. Disconnect the top cover interlock switch, [PL 5.10 Item 13](#).
16. Remove the calibration home position sensor and bracket, [REP 5.11](#).
17. Release from the harness carrier any remaining harnesses that are still attached to components.

18. Remove the harness carrier, [Figure 2](#).



W-1-0242-A

Figure 2 Harness carrier removal

19. Remove the SPDH read assembly, [Figure 3](#).

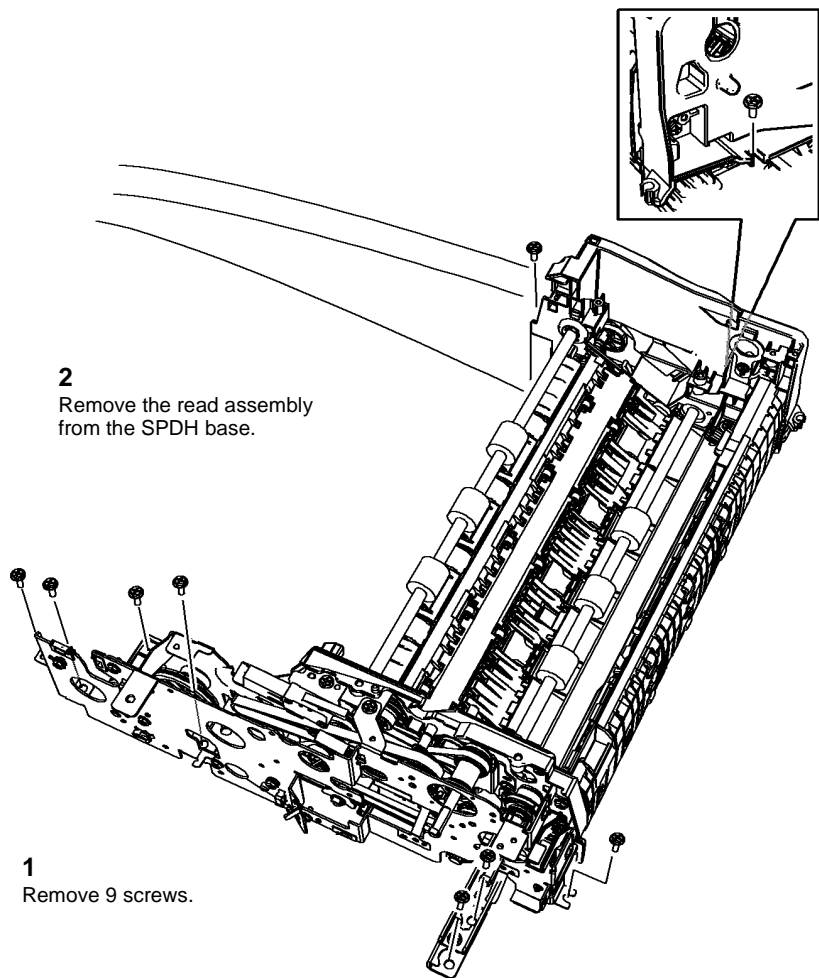
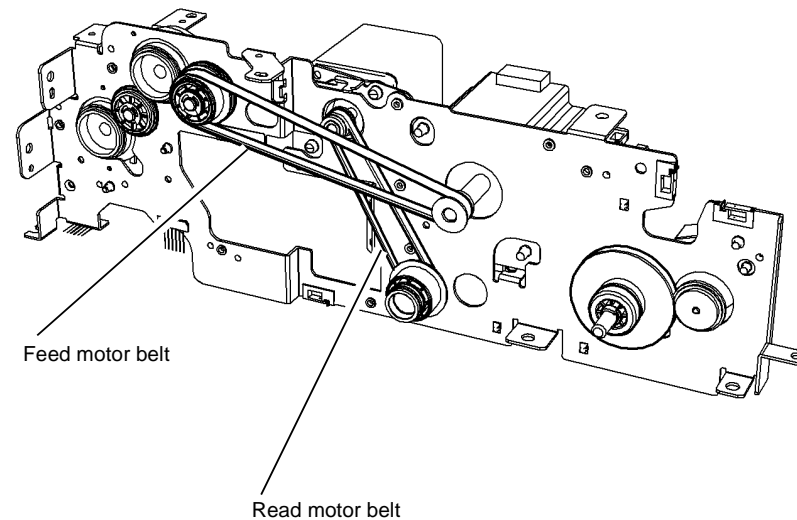


Figure 3 SPDH read assembly removal

W-1-0243-A

## Replacement

1. Replacement is the reverse of the removal procedure.
2. When installing the feed motor and read motor, refer to [Figure 4](#) for the drive belt routing.



W-1-0244-A

Figure 4 Drive belt routing

3. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

## REP 5.24 Tray Elevator Motor

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.



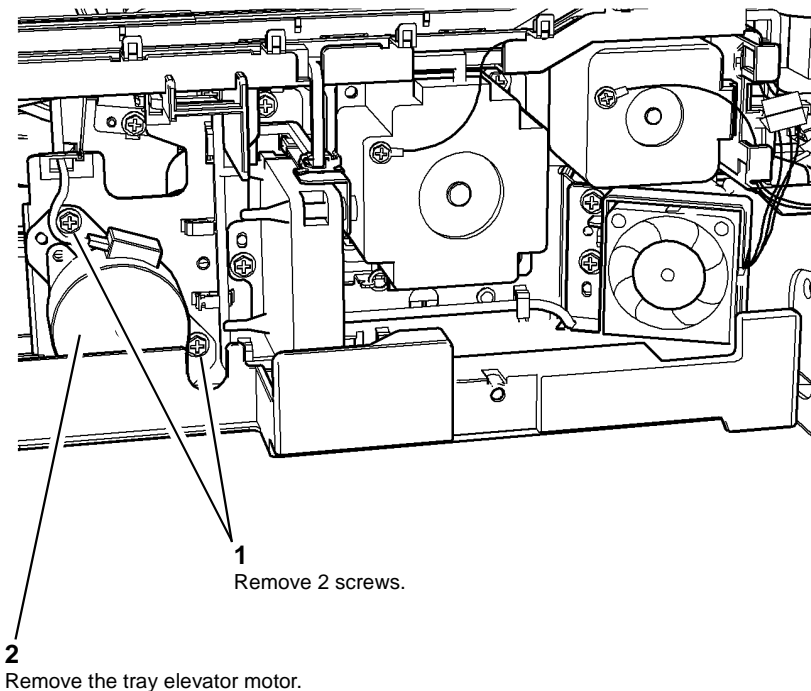
#### WARNING

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

**NOTE:** It is not necessary to remove the SPDH from the scanner to remove the SPDH harness guide.

1. Remove the SPDH harness guide, [PL 5.10 Item 15](#) to allow access to the tray elevator motor, refer to [REP 5.19](#).
2. Disconnect PJ469 on the [SPDH PWB](#).
3. Release the 3 cable ties leading to the tray elevator motor from the [SPDH PWB](#).

4. Remove the tray elevator motor, [Figure 1](#).



W-1-0245-A

Figure 1 Motor removal

### Replacement

The replacement is the reverse of the removal procedure.

## REP 5.25 SPDH Read Assembly Drives

Parts List on [PL 5.19](#)

### Removal

This procedure deals with all of the components within the SPDH drive kit, [PL 5.19 Item 23](#).

1. Remove the SPDH read assembly, [REP 5.23](#).
2. Remove the outer frame, [Figure 1](#).

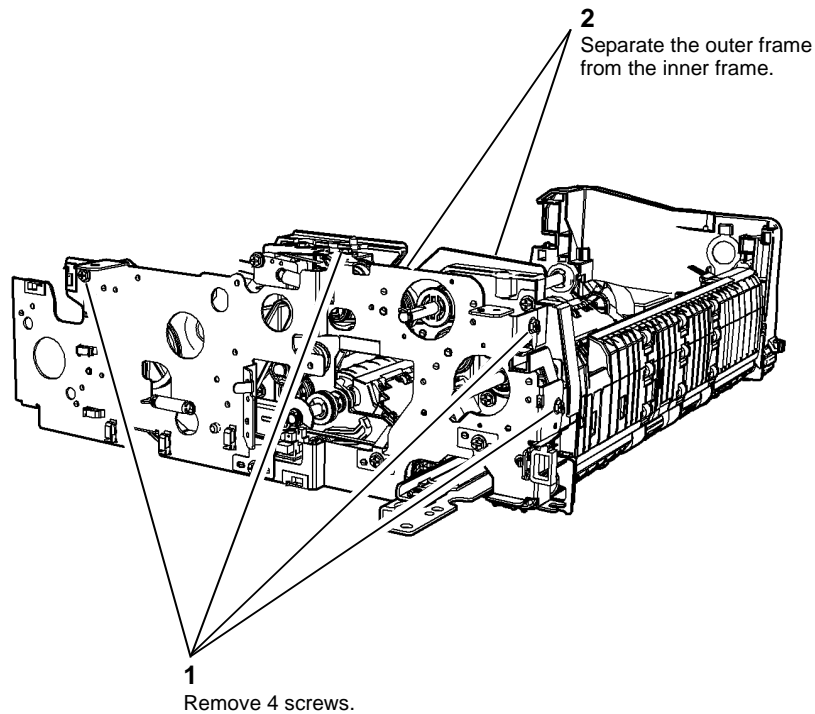


Figure 1 Outer frame removal

3. Remove the mid scan drive belt, [PL 5.19 Item 21](#) and the pre scan roll drive belt, [PL 5.19 Item 20](#), [Figure 2](#).

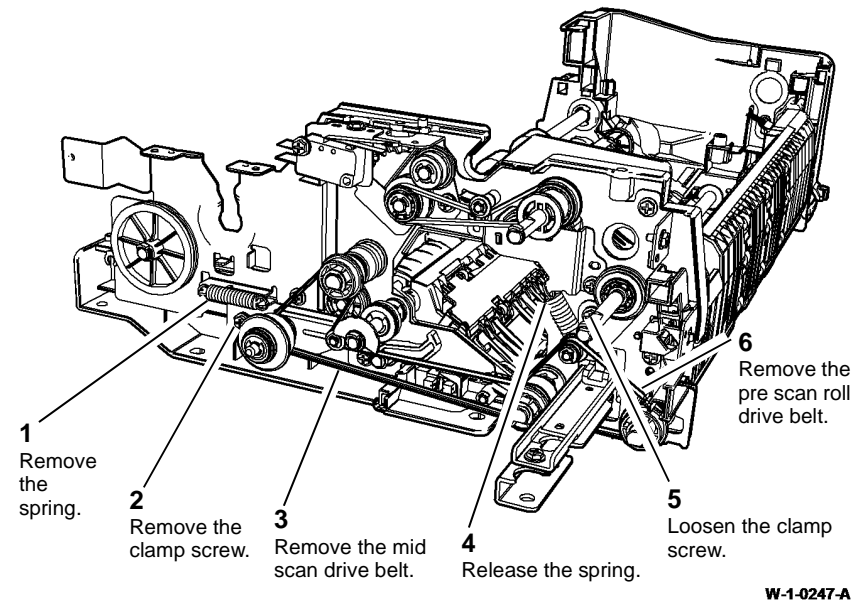
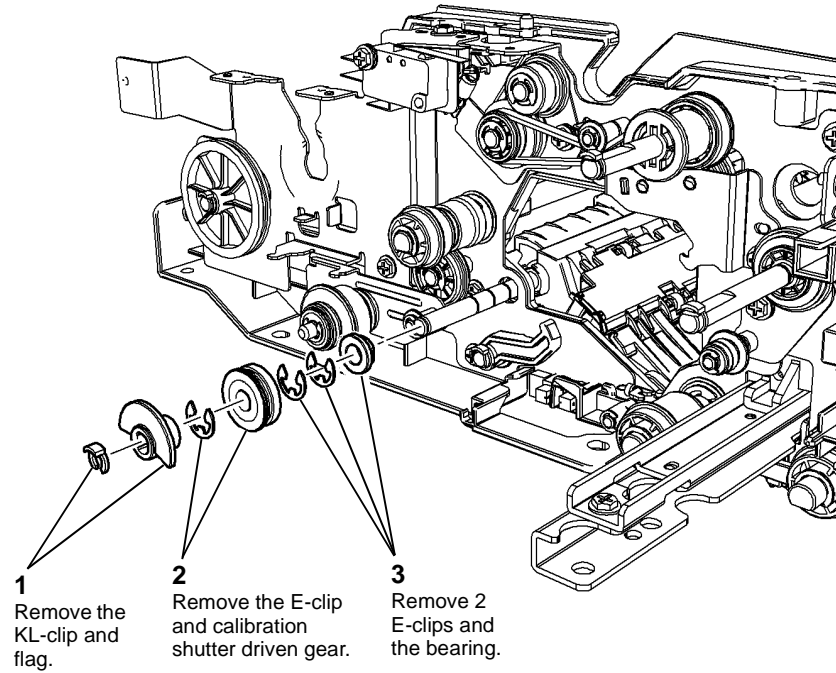


Figure 2 Drive belts removal

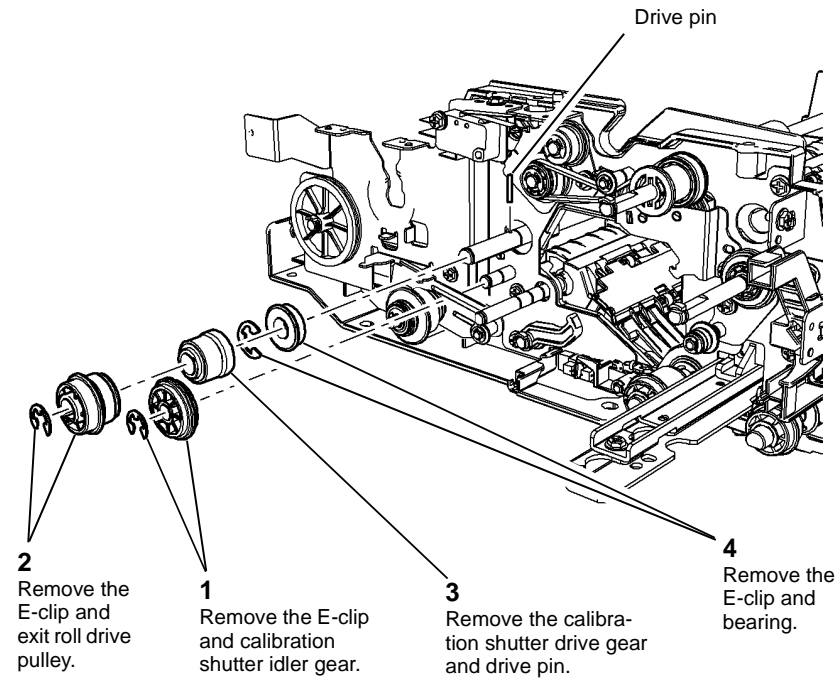
4. Remove the calibration shutter driven gear PL 5.19 Item 8 and the bearing, Figure 3.



W-1-0248-A

Figure 3 Shutter components removal

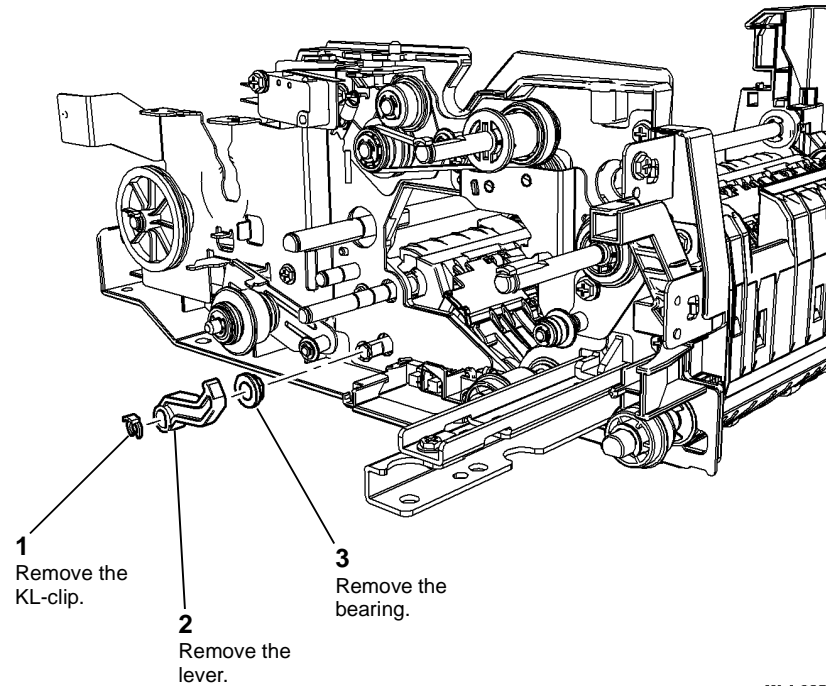
5. Remove the calibration shutter idler gear, PL 5.19 Item 7, the exit roll drive pulley, PL 5.19 Item 12 and the calibration shutter drive gear, PL 5.19 Item 10, Figure 4.



W-1-0249-A

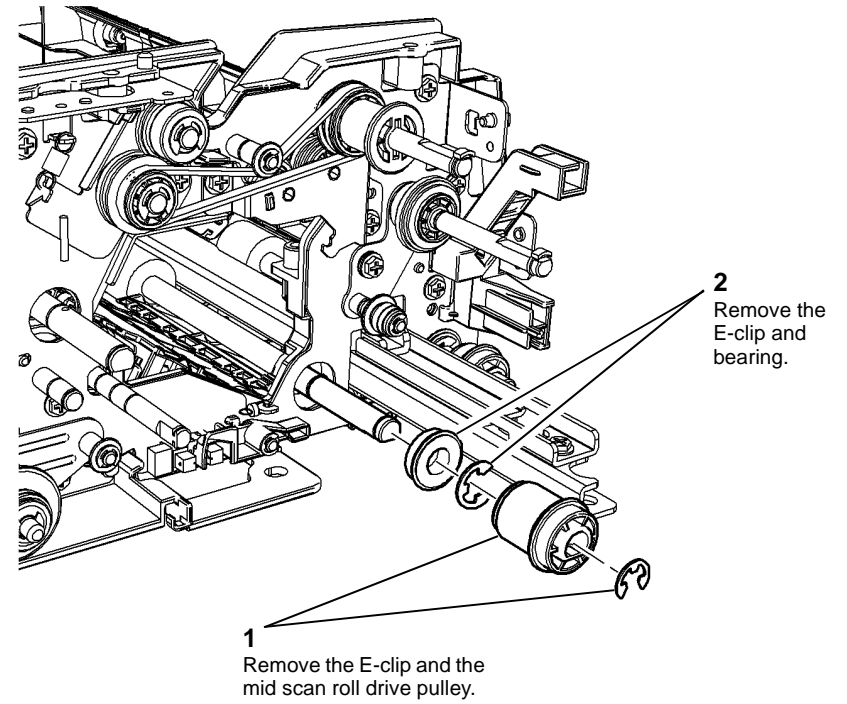
Figure 4 Exit roll components removal

6. Remove the calibration shutter lever and bearing, [Figure 5](#).



**Figure 5 Shutter lever removal**

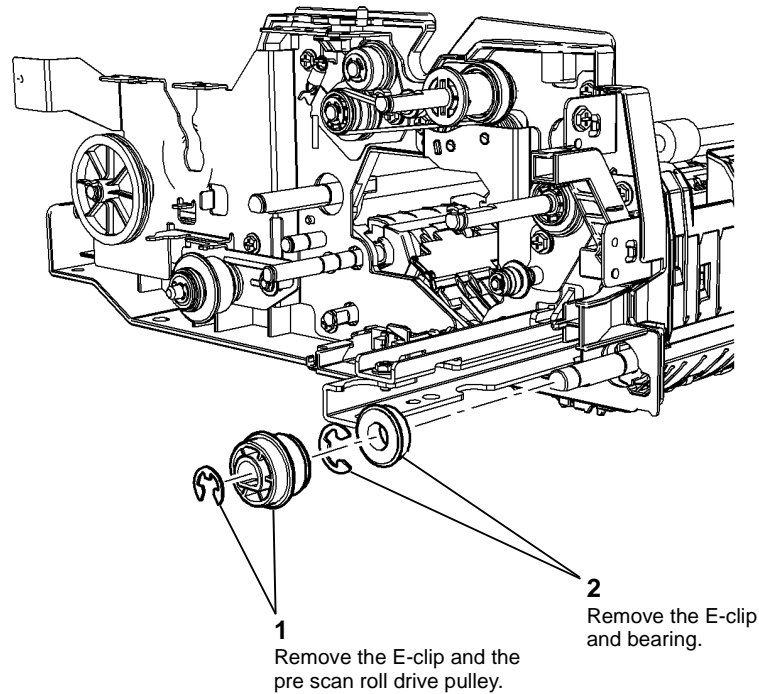
8. Remove the mid scan roll drive pulley, [PL 5.19 Item 13](#) and bearing, [Figure 6](#).



**Figure 6 Mid scan pulley removal**

7. Remove the top cover interlock switch and bracket (1 screw), [PL 5.10 Item 13](#) and [PL 5.10 Item 14](#).

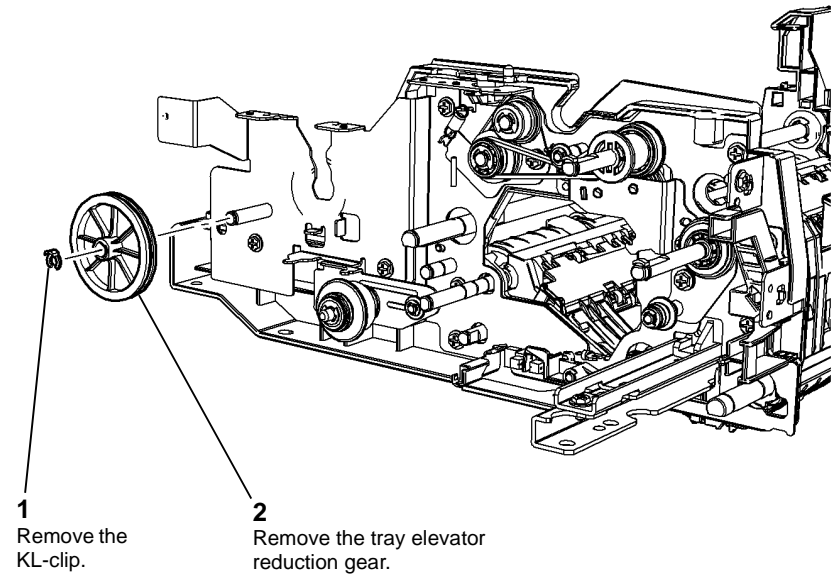
9. Remove the pre scan roll drive pulley, PL 5.19 Item 12 and bearing, Figure 7.



W-1-0252-A

Figure 7 Pre scan roll pulley removal

10. Remove the tray elevator reduction gear, Figure 8.



W-1-0253-A

Figure 8 Reduction gear removal



11. Remove the read motor intermediate pulley, PL 5.19 Item 15 and the belt tensioner, Figure 9.

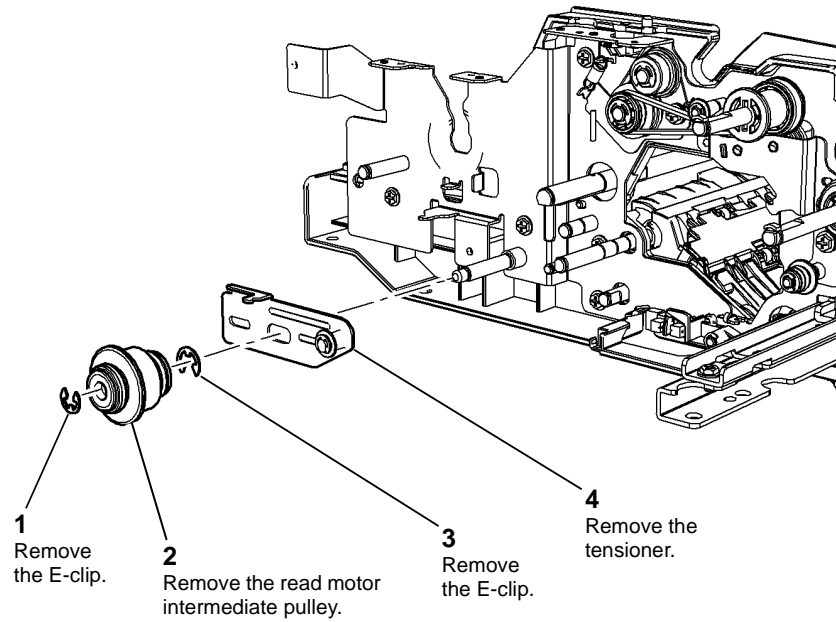


Figure 9 Intermediate pulley removal

12. Remove the pre scan belt idler pulley, PL 5.19 Item 14, Figure 10.

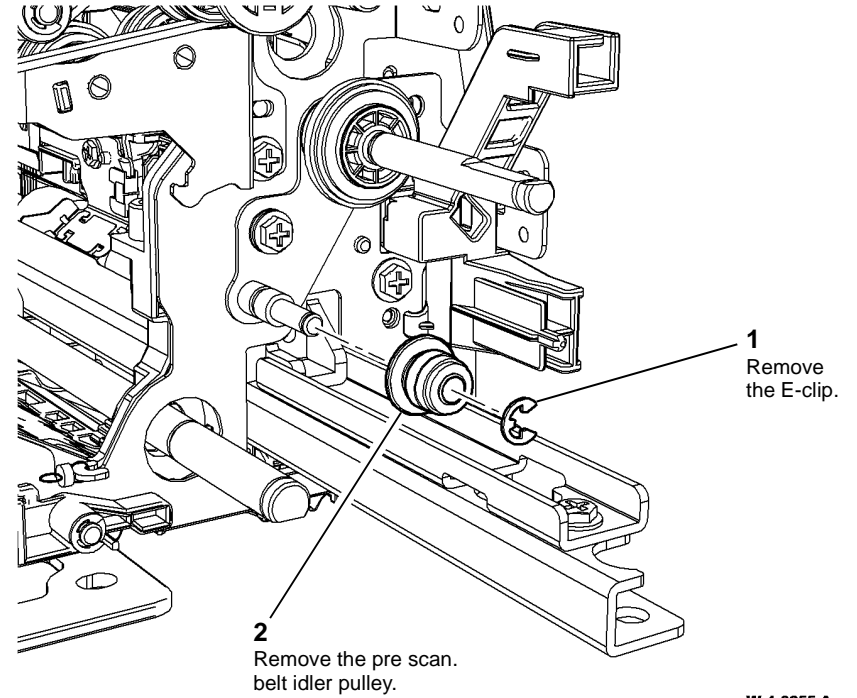
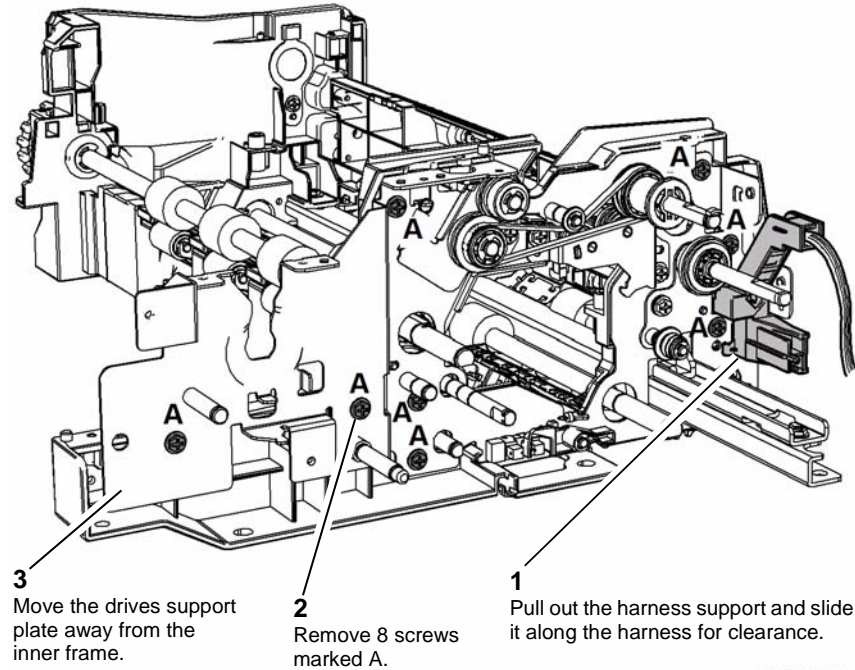


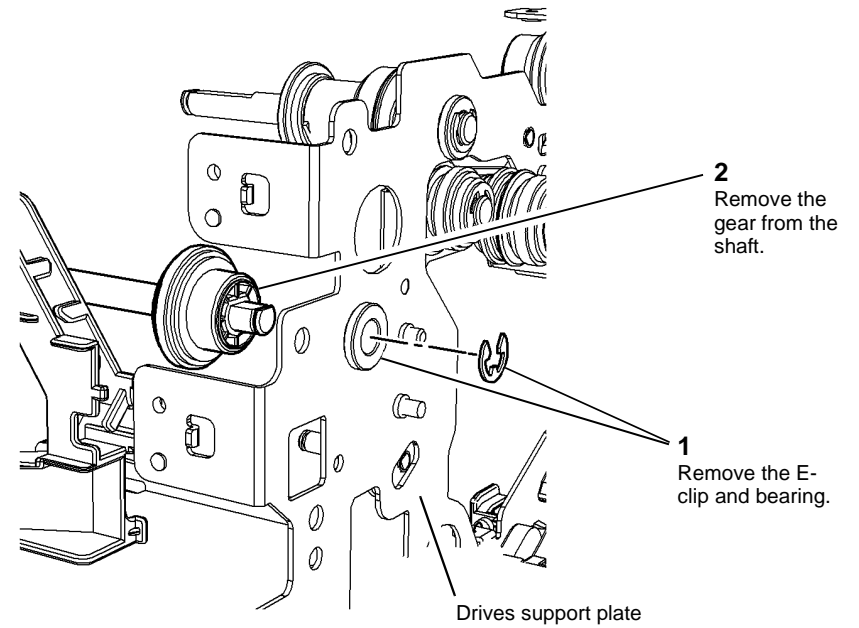
Figure 10 Idler pulley removal

13. Remove the drives support plate, [Figure 11](#).



**Figure 11 Support plate removal**

14. Remove the takeaway roll drive gear, [PL 5.19 Item 6](#), from the front face of the drives support plate, [Figure 12](#).



**Figure 12 Drive gear removal**

15. Remove the retard/feed drive gear/pulley, PL 5.19 Item 22 and feed assembly drive belt, PL 5.19 Item 18, Figure 13.

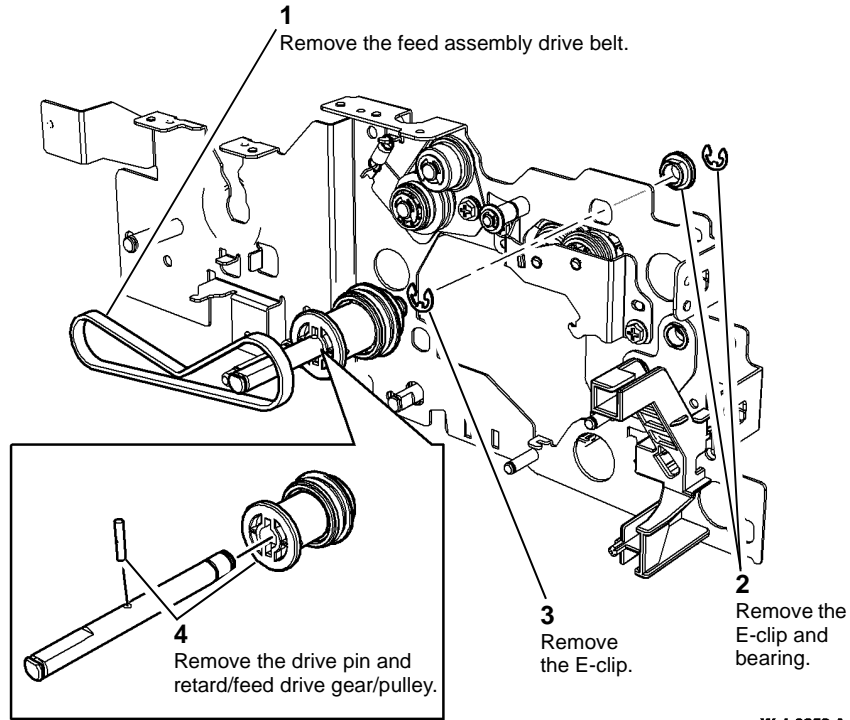


Figure 13 Gear and belt removal

16. Remove the feed assembly drive idler gear, PL 5.19 Item 5 and the feed assembly drive gear/pulley, PL 5.19 Item 11, Figure 14.

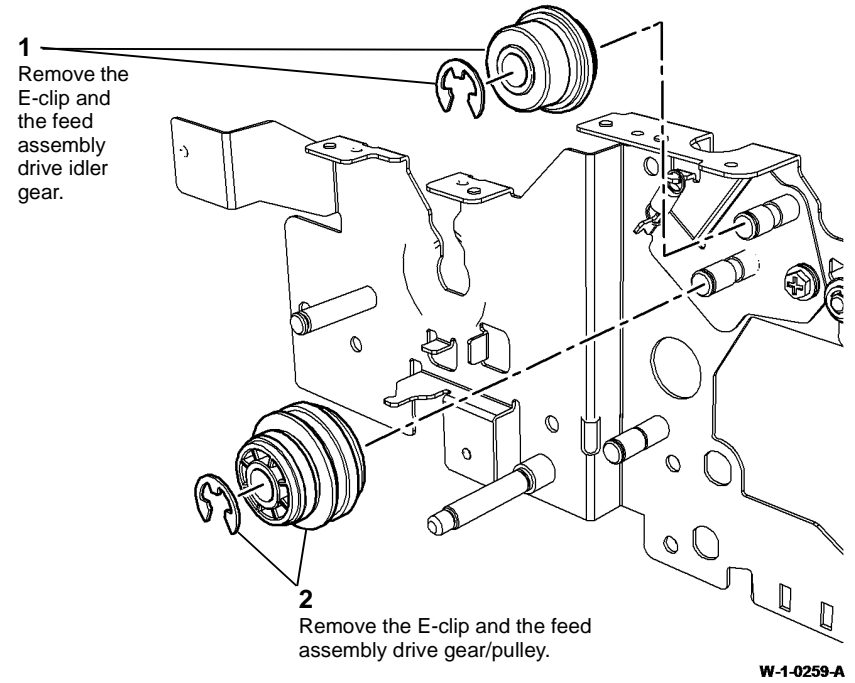


Figure 14 Drive and idler gears removal

17. Remove the retard roll intermediate drive gear, PL 5.19 Item 1, the retard roll driven gear, PL 5.19 Item 2 and the retard roll drive gear, PL 5.19 Item 3, Figure 15.

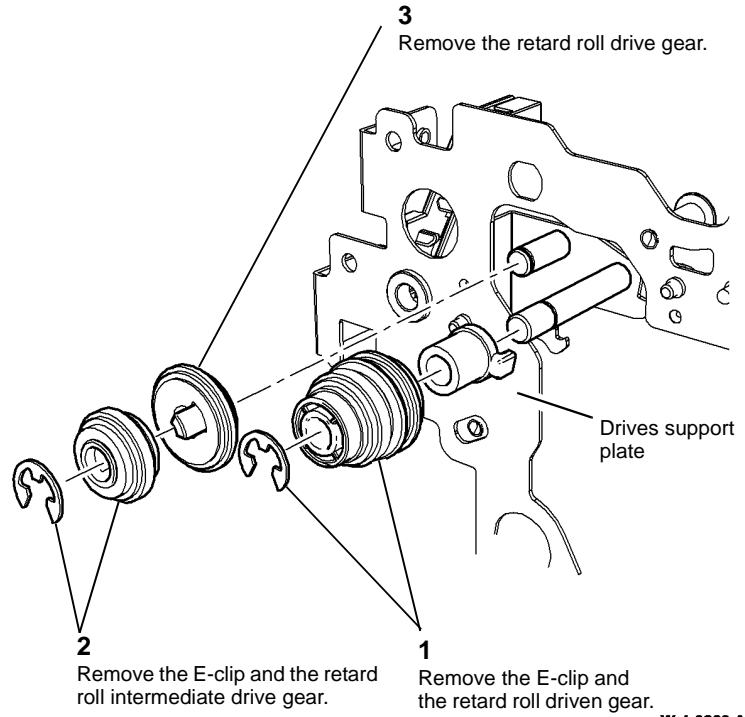


Figure 15 Retard drive removal

18. Remove the tray elevator reduction gear, PL 5.19 Item 9, from the front face of the outer frame, Figure 16.

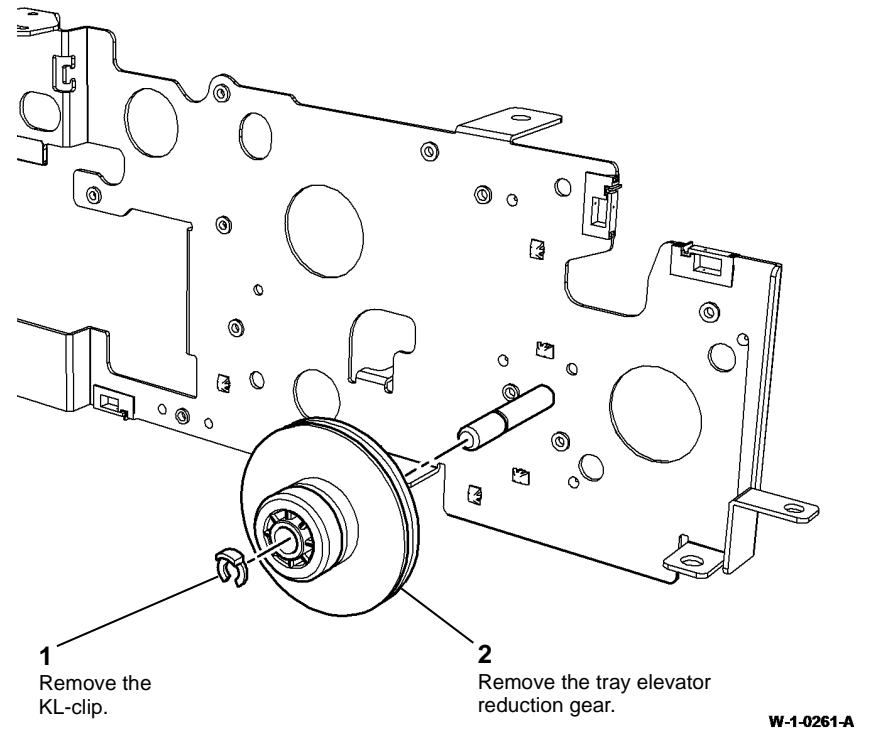
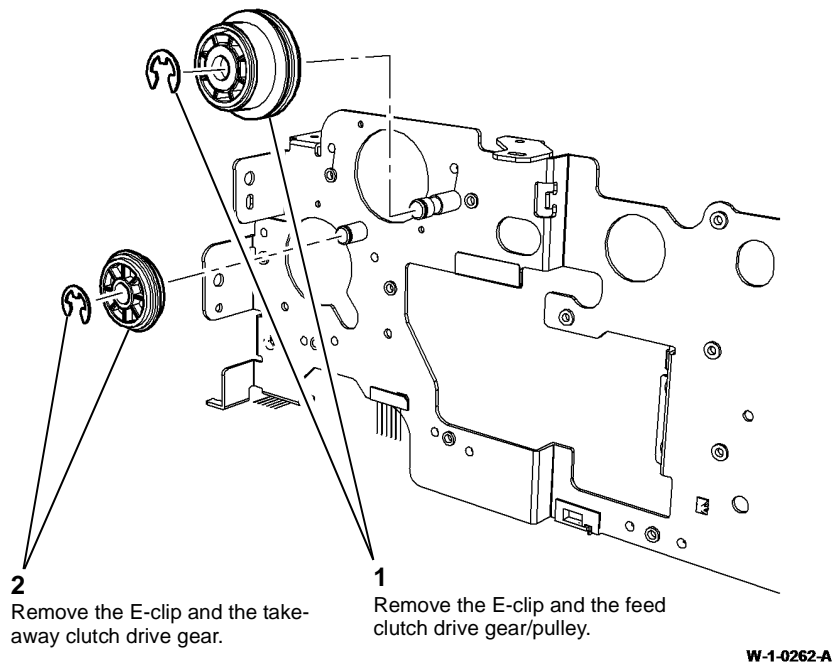


Figure 16 Reduction gear removal

19. Remove the feed clutch drive gear/pulley, [PL 5.19 Item 4](#) and the takeaway clutch drive gear, [PL 5.19 Item 7](#), from the front face of the outer frame, [Figure 17](#).



**Figure 17 Gears removal**

### Replacement

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 10.12](#), [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](#).

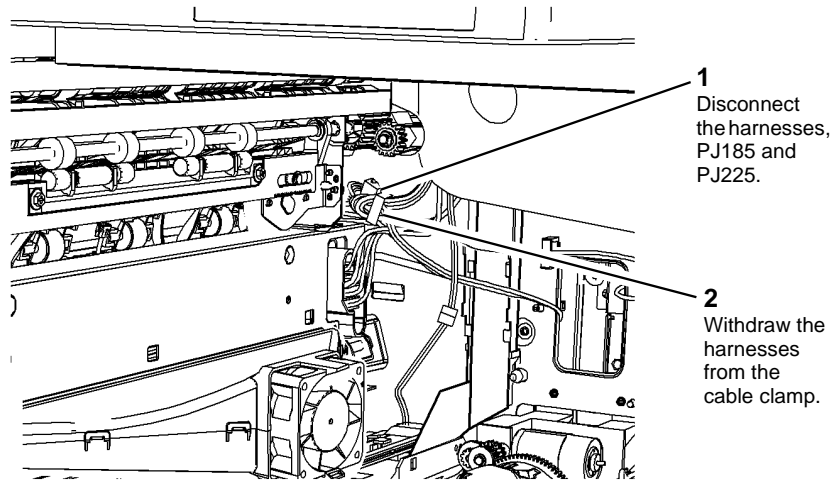


Figure 1 Harness disconnection

W-1-1149-A

6. Remove the inverter locator, [Figure 2](#).

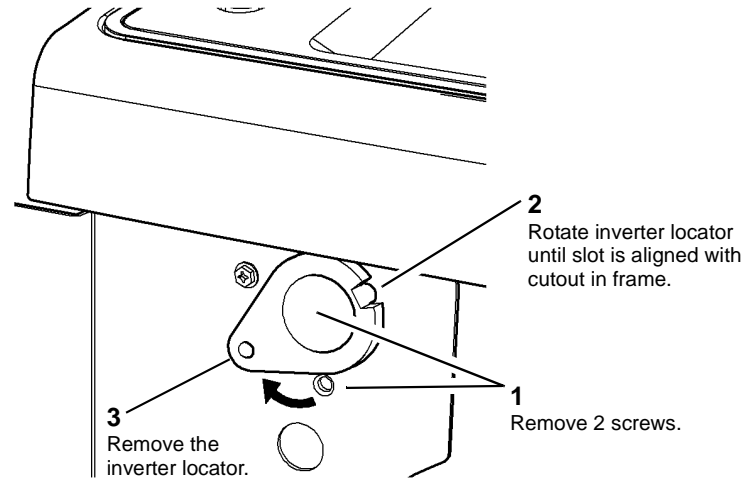


Figure 2 Inverter locator removal

W-1-1024-A

7. Remove the exit drive assembly, [REP 10.2](#).
8. Prepare to remove the inverter assembly, [Figure 3](#).

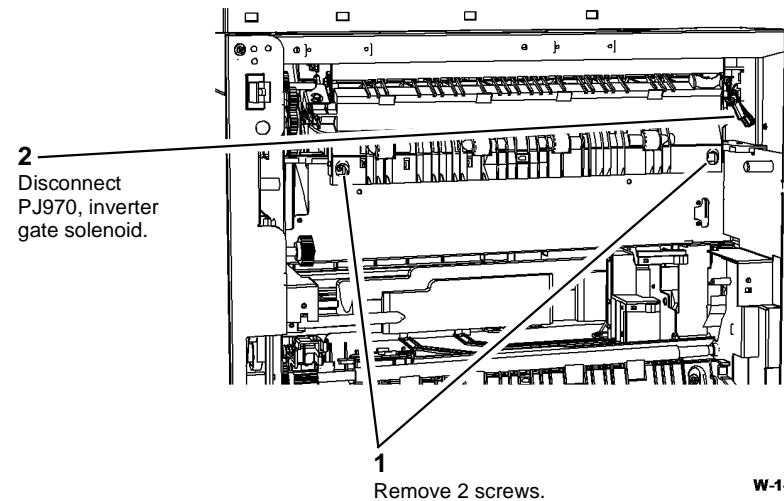
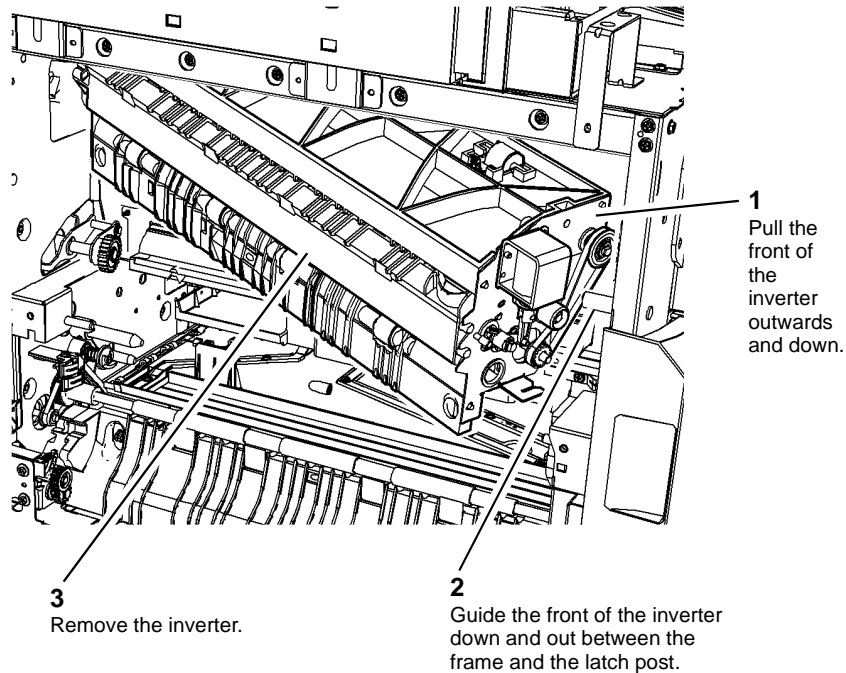


Figure 3 Inverter removal

W-1-1025-A

- Remove the inverter assembly, [Figure 4](#).



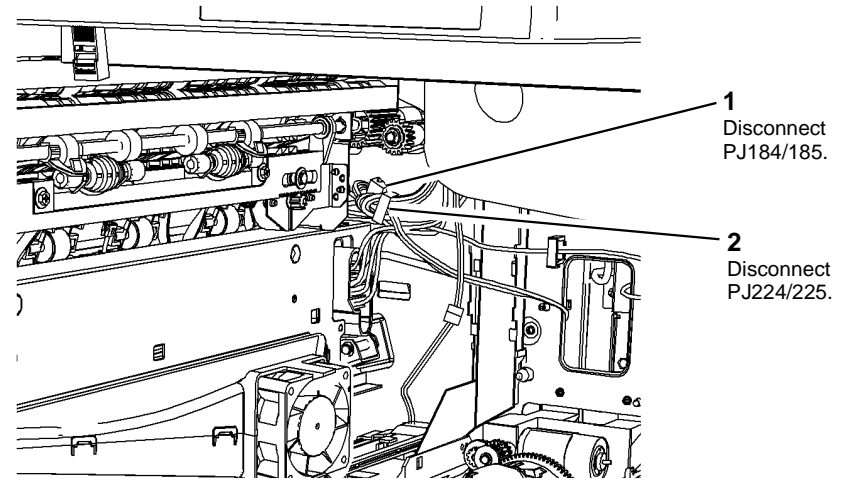
**Figure 4 Inverter removal**

W-1-1026-A

### 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](#).

- Disconnect the harnesses to the inverter, [Figure 5](#).



W-1-1027-A

**Figure 5 Harness disconnection**

- Remove the centre exit cover, [REP 28.1](#).
- Remove the inverter locator. Refer to [Figure 2](#).
- Remove the exit drive assembly, [REP 10.2](#).
- Prepare to remove the inverter assembly. Refer to [Figure 3](#).
- Remove the inverter assembly. Refer to [Figure 4](#).

### Replacement

- The replacement is the reverse of the removal procedure.
- Ensure that the inverter harnesses are not trapped between the inverter and the machine frame.
- Tighten the 2 inverter screws, [Figure 3](#), only after the inverter locator, [Figure 2](#), is installed.
- Ensure that the inverter harness connectors, PJ185 and PJ225 do not interfere with the drive gears. Refer to [Figure 1](#).
- 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](#).

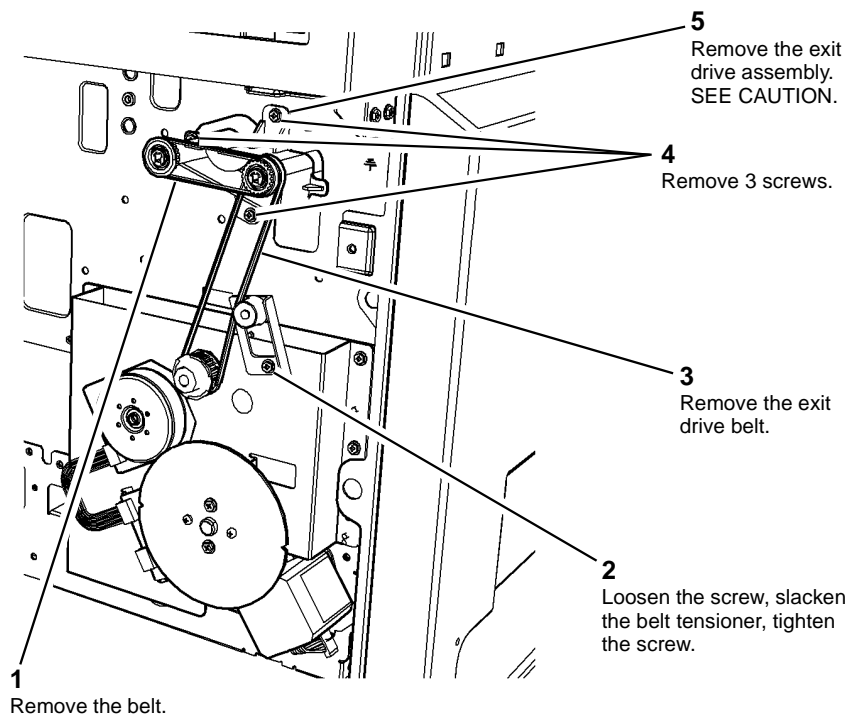


Figure 1 Exit drive assembly removal

### Replacement

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 CAUTION.

## REP 10.3 Inverter Motor

Parts List on [PL 10.11](#), [PL 10.12](#)

### 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](#).

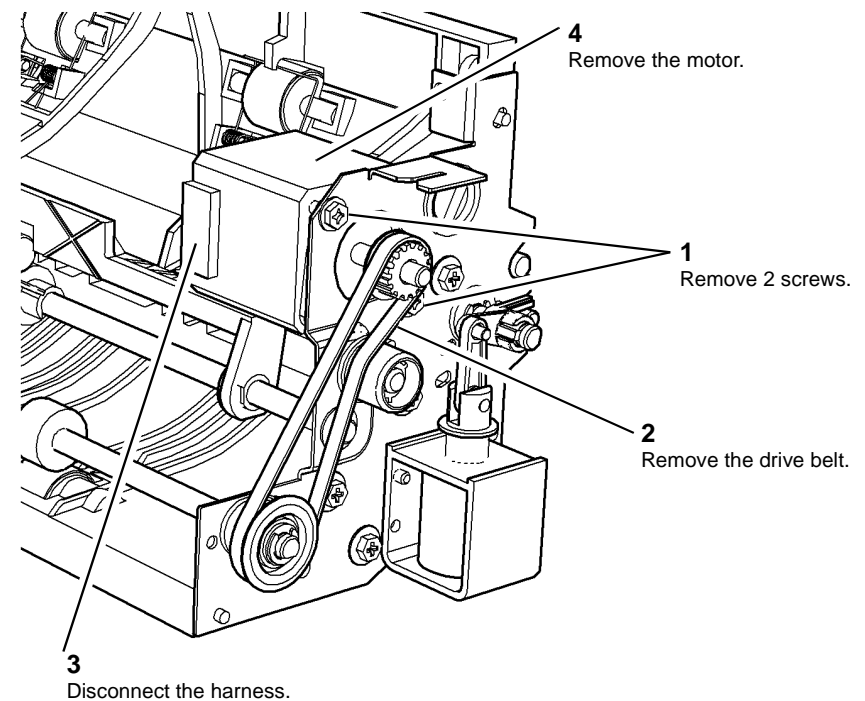


Figure 1 Inverter motor removal

W-1-1030-A

### Replacement

The replacement is the reverse of the removal procedure.

## REP 10.4 Offset Motor

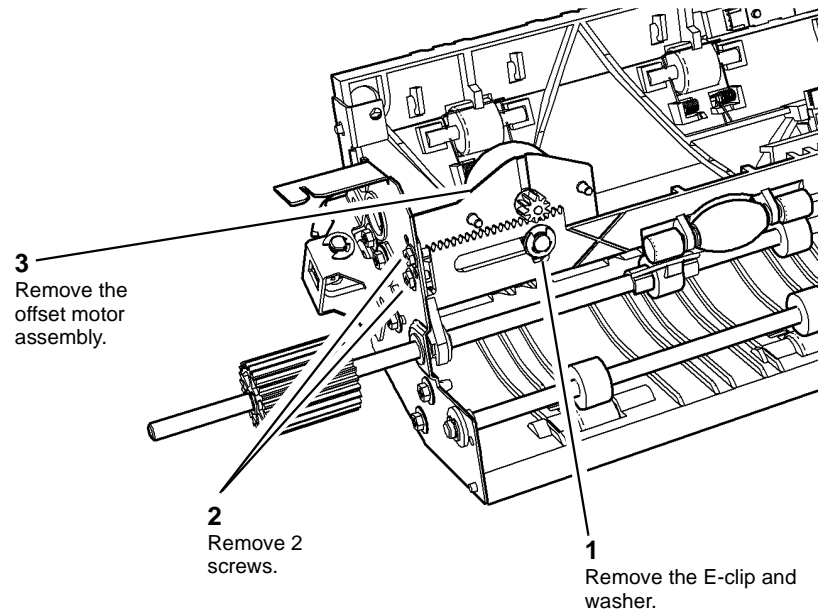
Parts List on [PL 10.11](#)

### 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 offset motor assembly, [Figure 1](#).



W-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

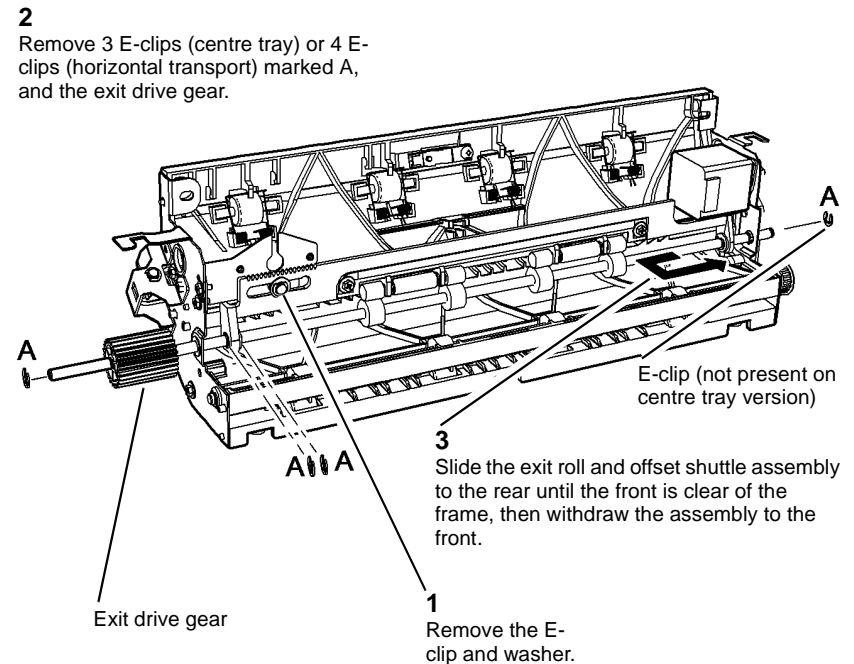
Parts List on [PL 10.11](#)

### 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](#).



W-1-1032-A

Figure 1 Shaft and shuttle removal

### Replacement

The replacement 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.



#### 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.

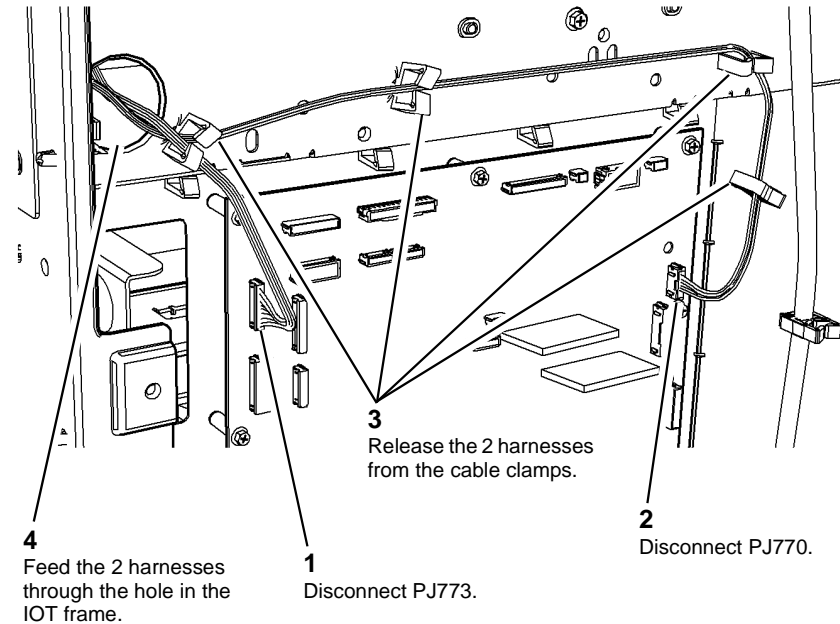


#### WARNING

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

1. Un-dock the finisher. Refer to:
  - [REP 12.13-110](#) LCSS Un-Docking.
  - [REP 12.13-150](#) LVF BM Un-Docking.
2. Remove the rear cover, [REP 28.2](#).

3. Disconnect the harnesses to the horizontal transport assembly, [Figure 1](#).



W-1-1356-A

Figure 1 Harness disconnection

4. Remove the upper right cover, [PL 28.10](#) Item 3.
5. Open the left door.
6. Remove the fuser module, [PL 10.8](#) Item 1.
7. Remove the centre exit cover, [REP 28.1](#).

8. Prepare to remove the horizontal transport assembly, [Figure 2](#).

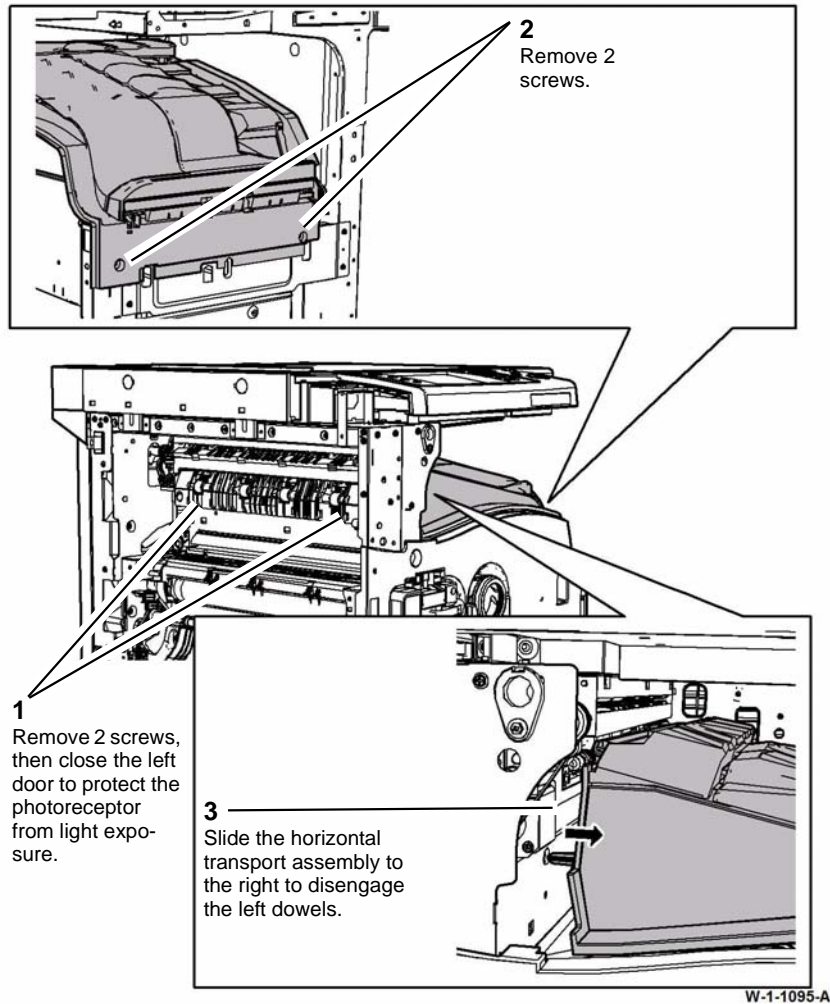


Figure 2 Horizontal transport preparation

9. Remove the horizontal transport assembly, [Figure 3](#).

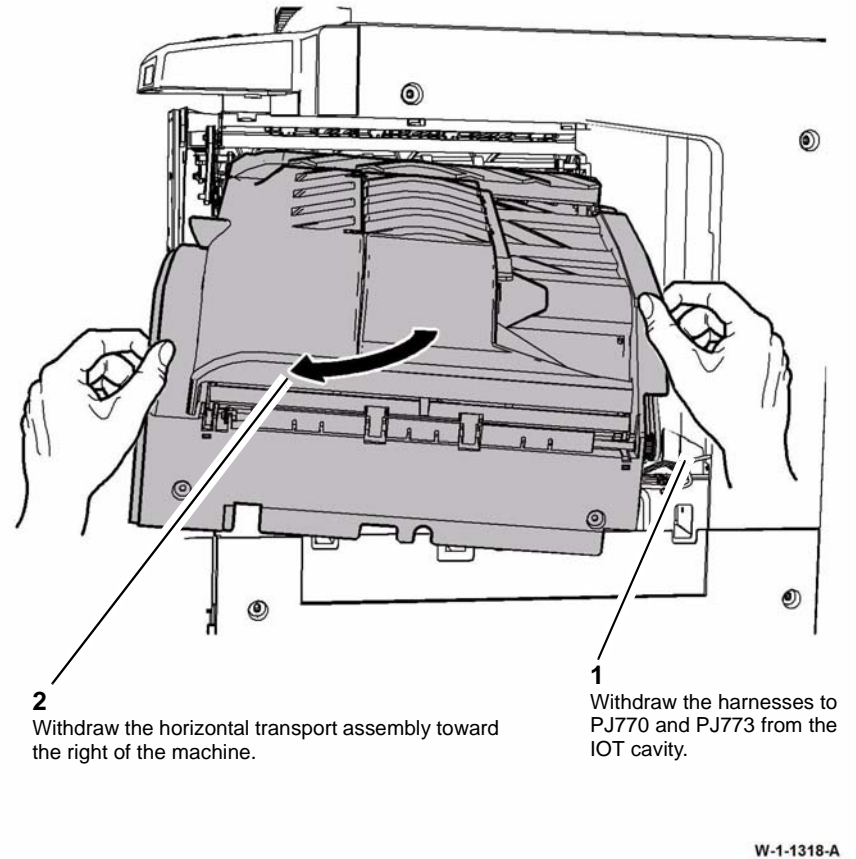


Figure 3 Horizontal transport removal

## Replacement

1. The replacement is the reverse of the removal procedure.
2. Ensure that the dowels on the horizontal transport assembly align with the holes in the frame, [Figure 4](#).

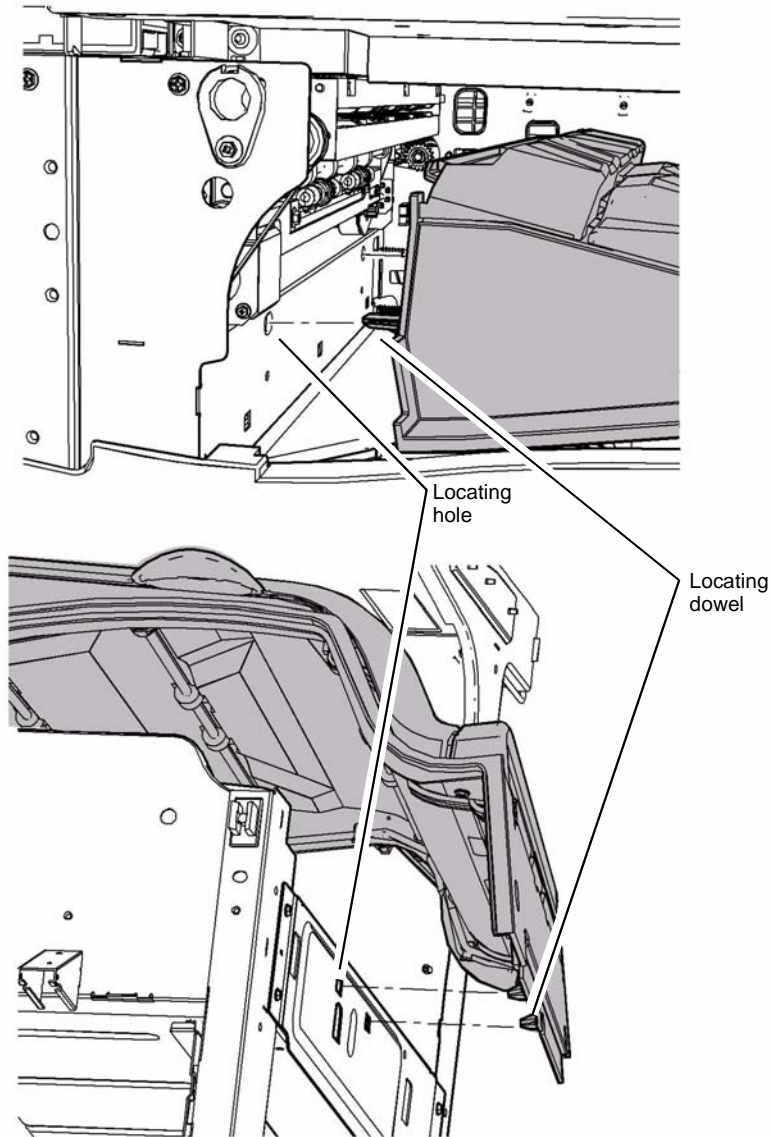


Figure 4 Transport replacement

## REP 10.7 Horizontal Transport Motor

Parts List on [PL 10.16](#)

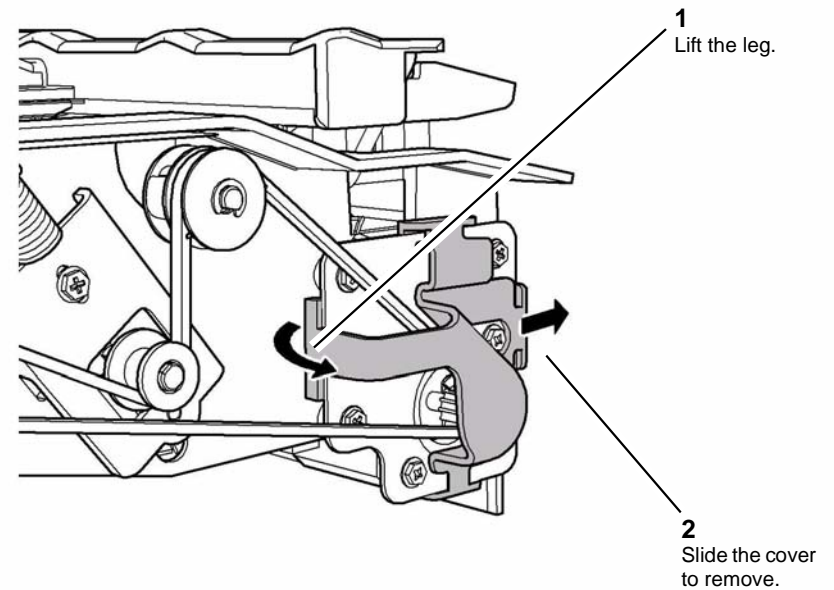
### Removal



### 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.

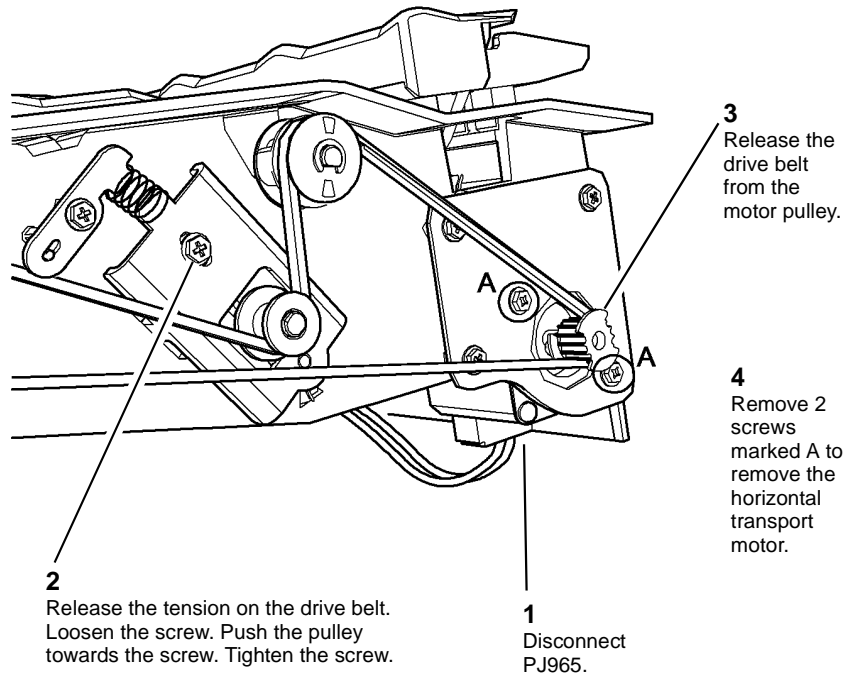
1. Remove the horizontal transport assembly, [REP 10.6](#).
2. Remove the pulley cover, [Figure 1](#).



W-1-1406-B

Figure 1 Pulley cover removal

3. Remove the horizontal transport motor, [Figure 2](#).



W-1-1096-A

**Figure 2 Motor removal**

## Replacement

1. The replacement is the reverse of the removal procedure.

## REP 12.1-110 2K LCSS Covers

Parts List on [PL 12.10](#)

### 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.

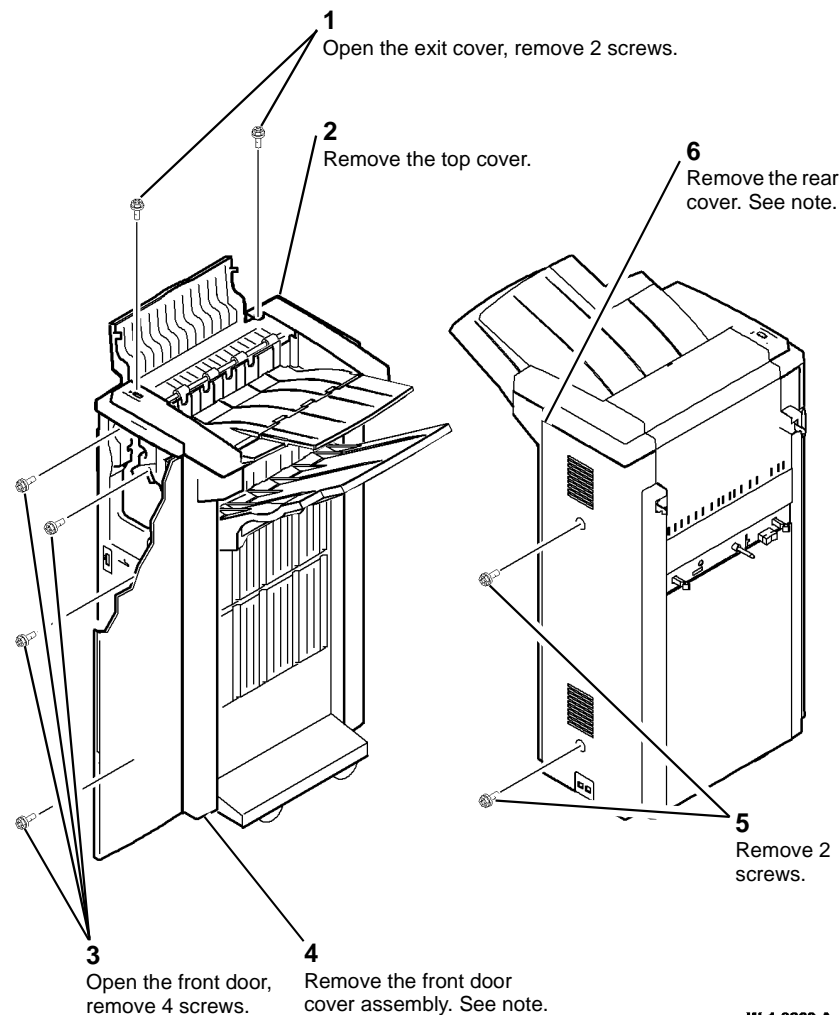


Take care during this procedure. Sharp edges may be present that can cause injury.

**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](#).



W-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



**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 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 12.4-110](#).
5. Tighten the motor screws and re-connect the harness.
6. Install the 2K LCSS top cover and rear cover, [REP 12.1-110](#).

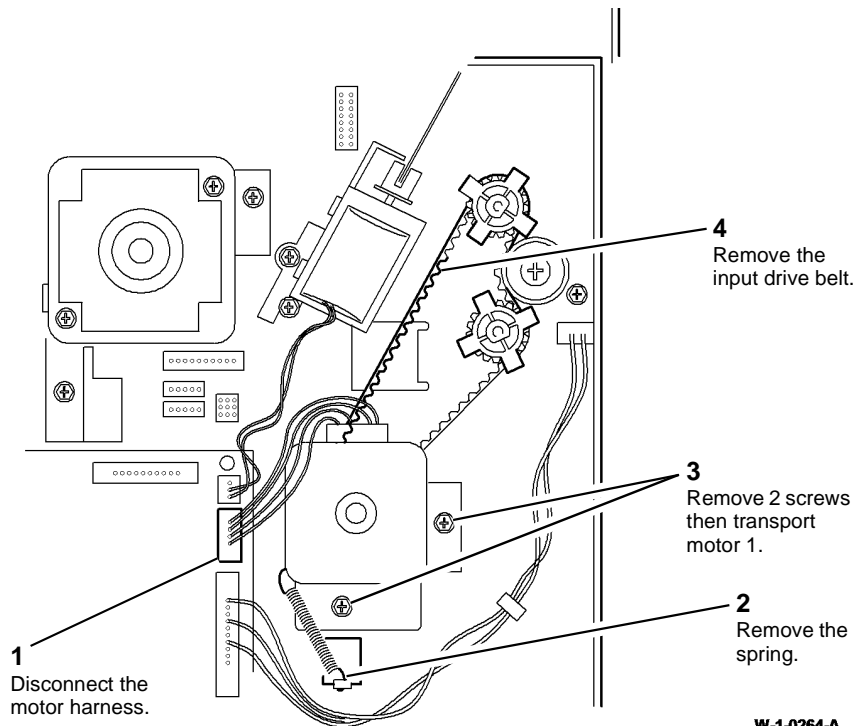


Figure 1 Component removal



## 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

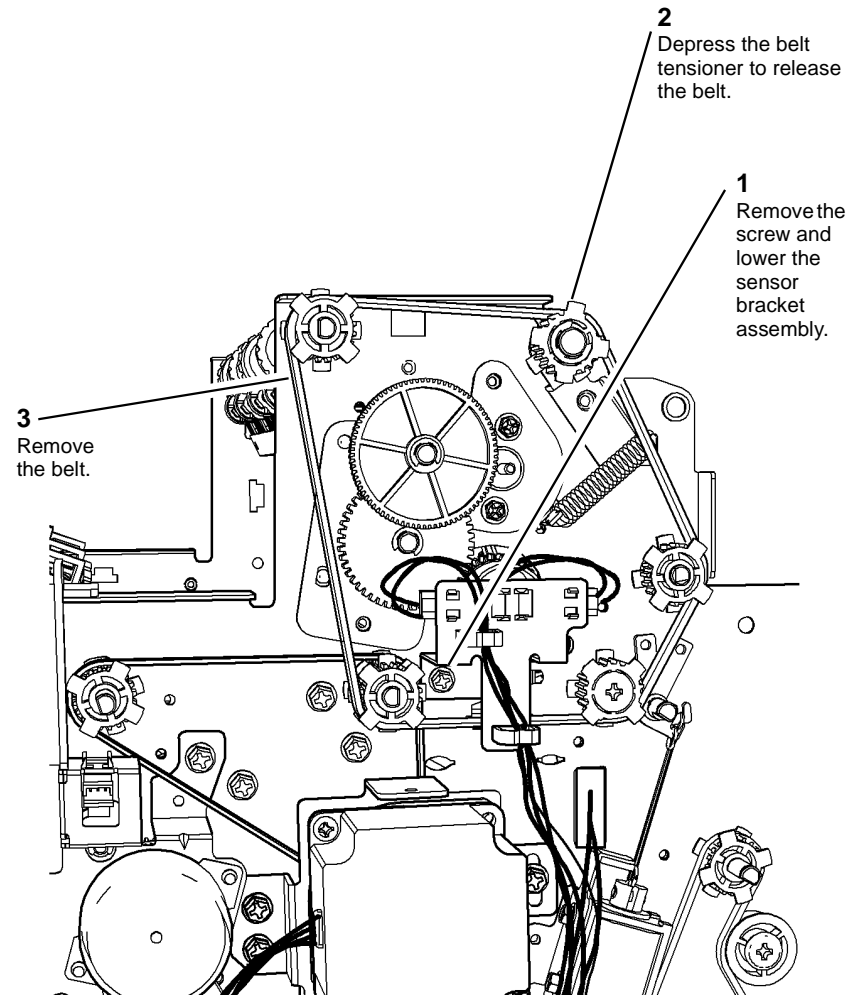
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



#### 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](#).



W-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. Reverse the removal procedure to install the remainder of the components.

## 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](#).

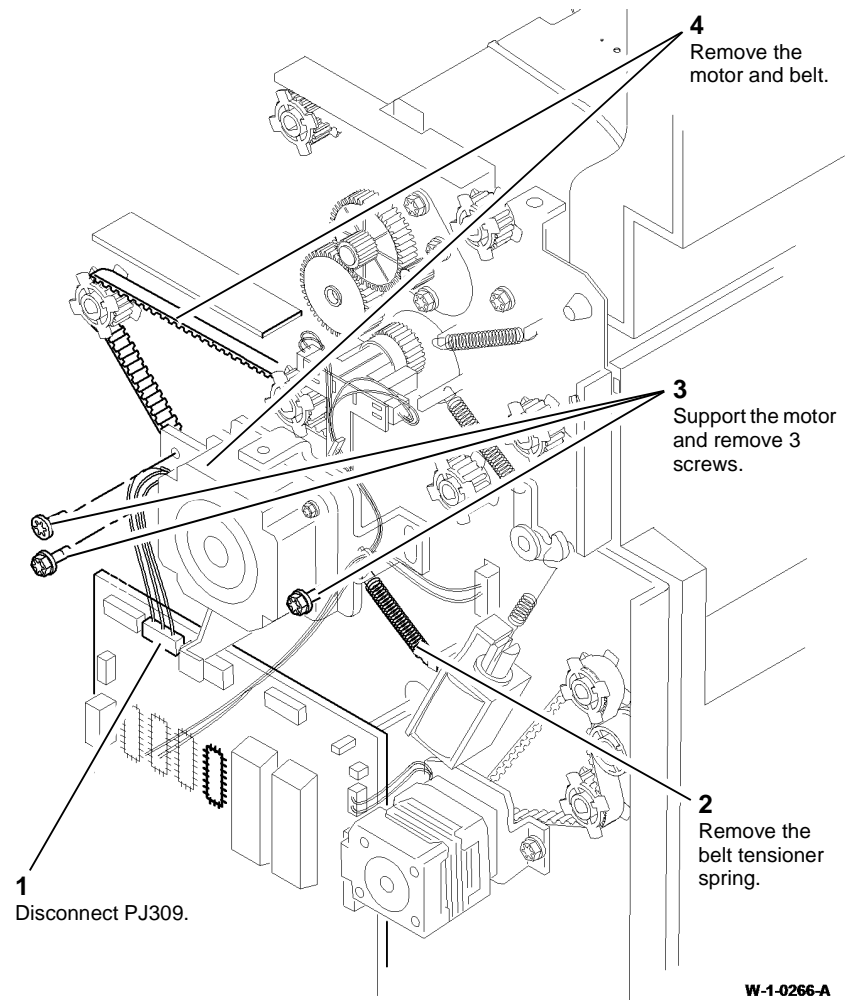


Figure 1 Component removal

### 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 12.4-110](#). 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](#).

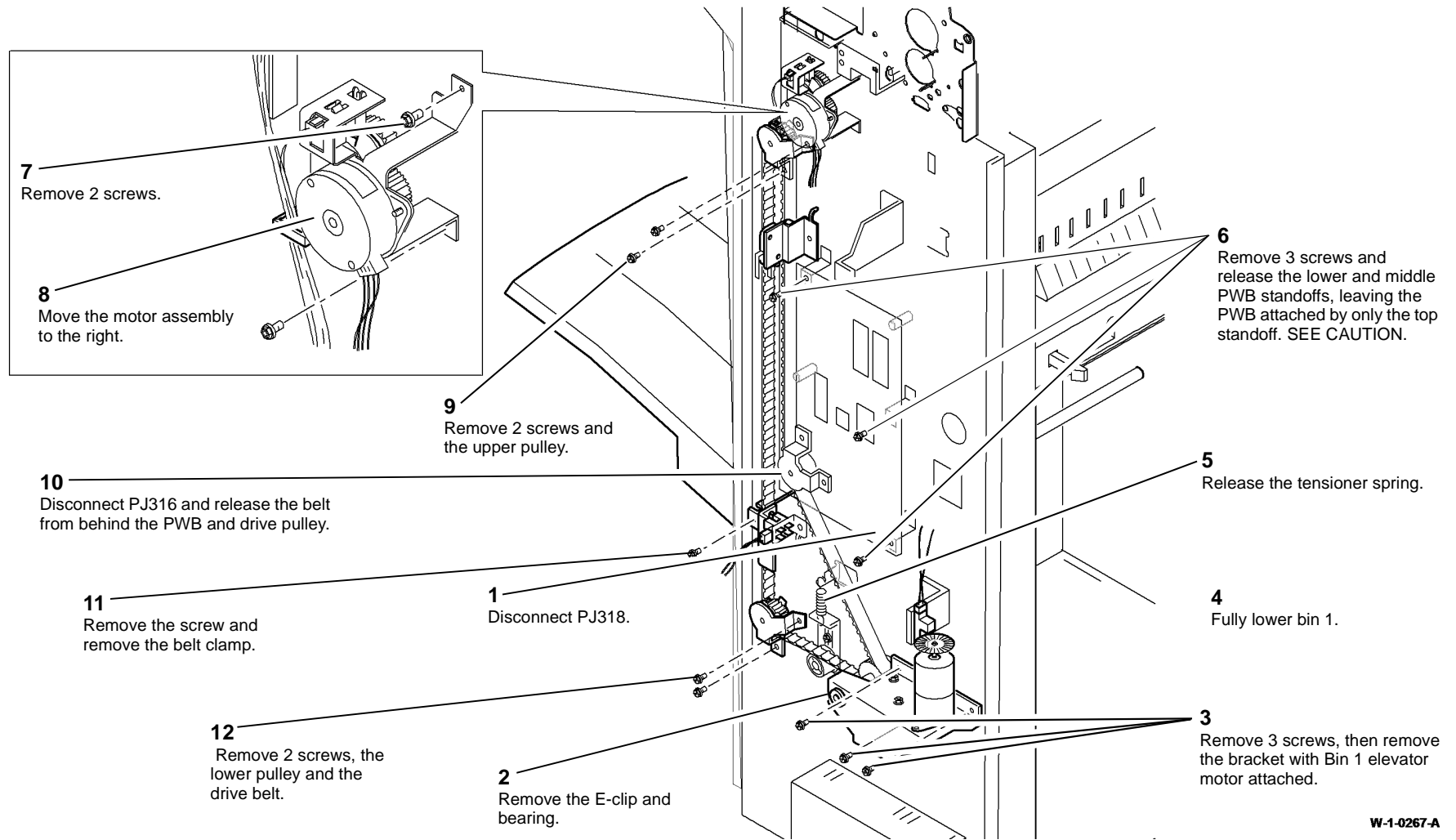


#### CAUTION

*Ensure that ESD procedures are observed during step 6 of [Figure 1](#).*

2. Remove the bin 1 drive belt (rear) [Figure 1](#).

**NOTE:** Keep all of the rear components removed as a set. The set of rear frame components are different from the front frame set.



**Figure 1** Rear belt removal

W-1-0267-A

3. Remove the bin 1 drive belt (front) [Figure 2](#).

**NOTE:** Keep all of the front components removed as a set. The set of front frame components are different from the rear frame set.

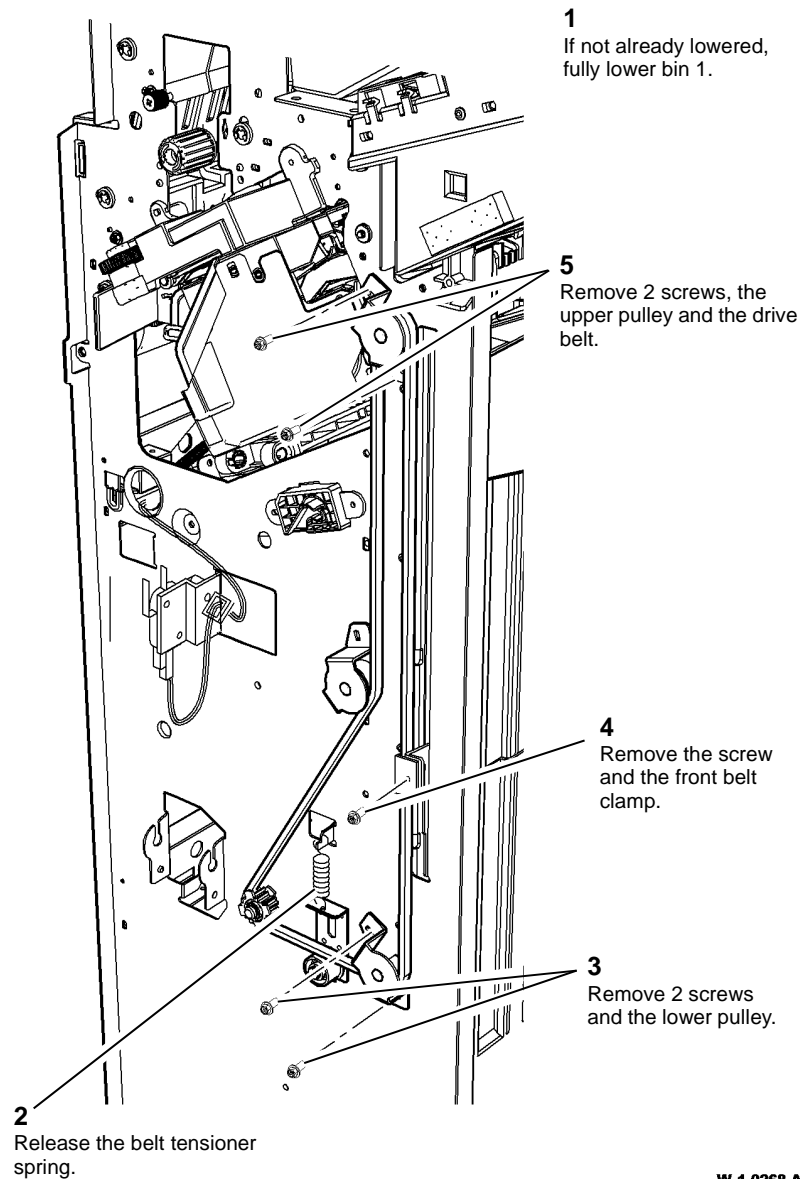


Figure 2 Front belt removal

W-1-0268-A

## 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.

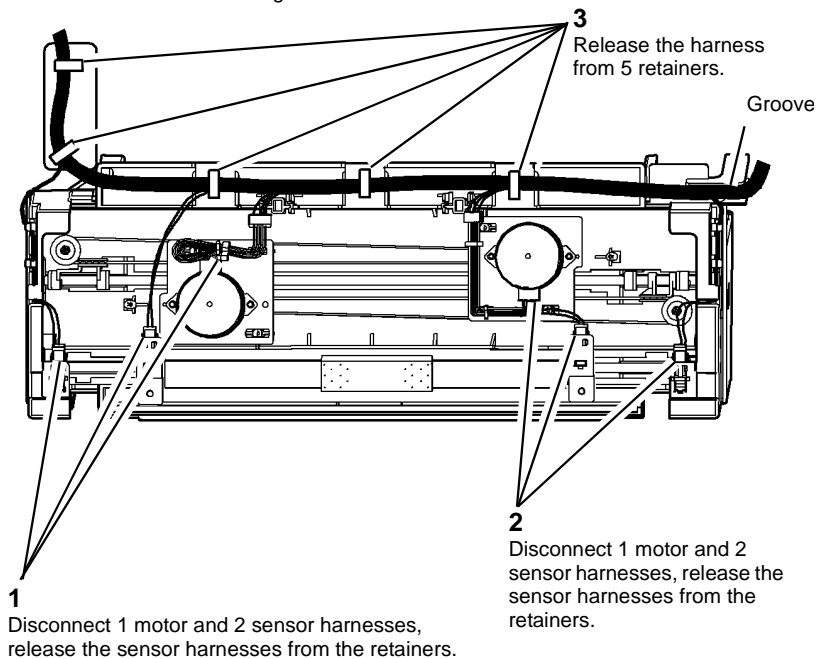


Figure 1 Preparation

W-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](#).

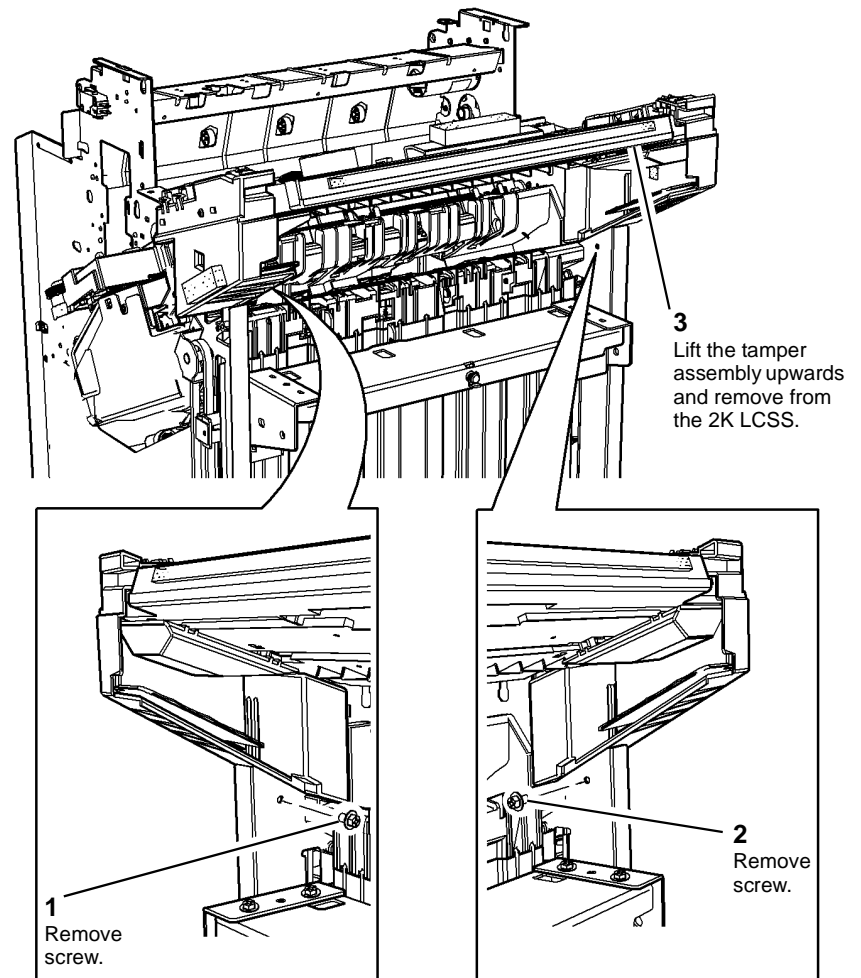


Figure 2 Tamper assembly removal

W-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.

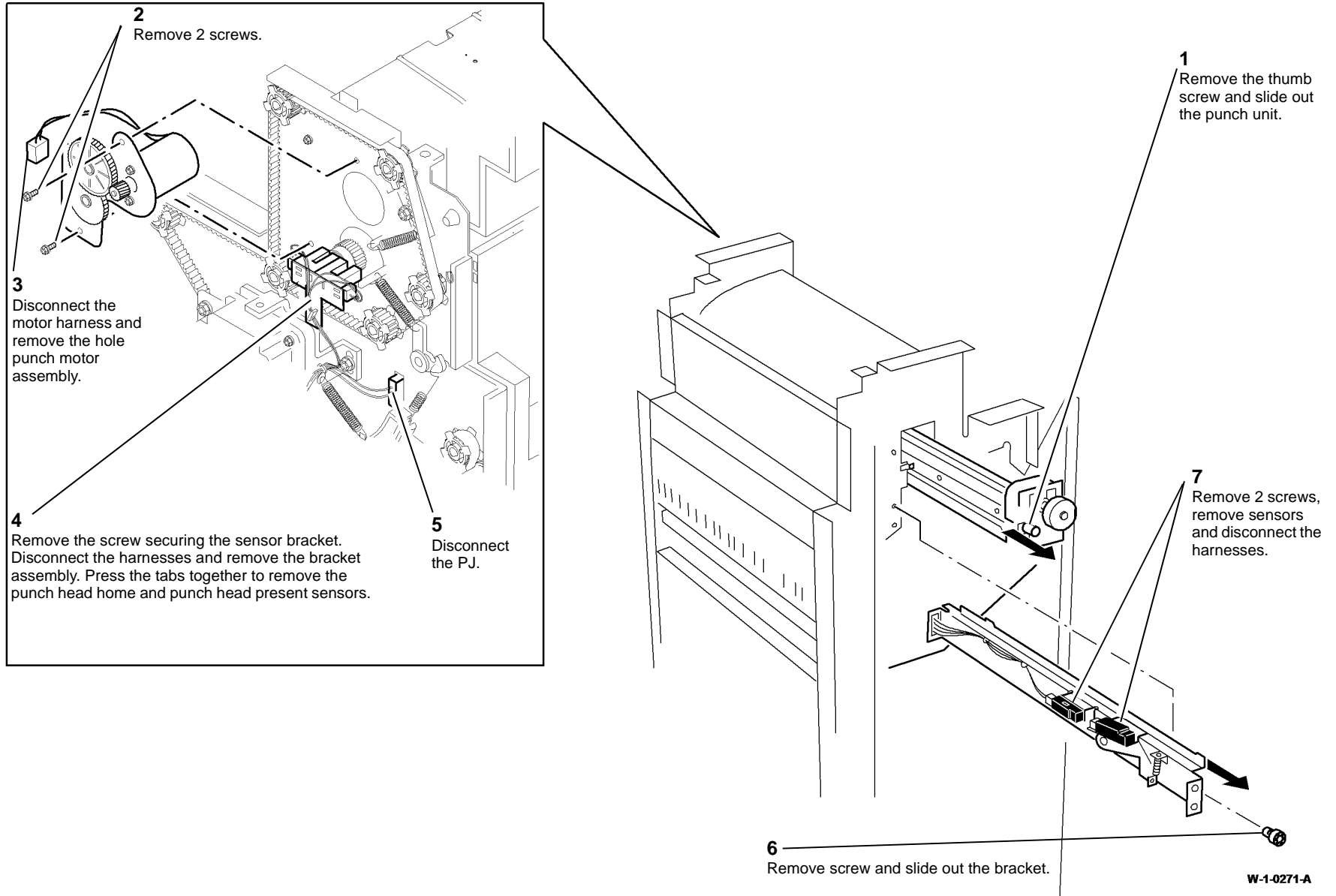


#### WARNING

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.
2. If necessary, perform [ADJ 12.3-110](#) Hole Punch Position.

## 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

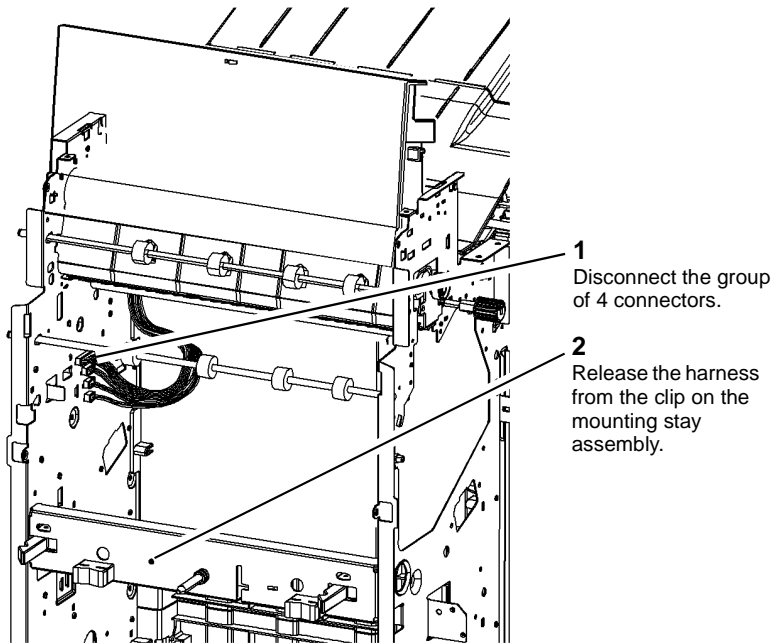
Take care during this procedure. Sharp edges may be present that can cause injury.



#### 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](#).



- 1 Disconnect the group of 4 connectors.
- 2 Release the harness from the clip on the mounting stay assembly.

W-1-0272-A

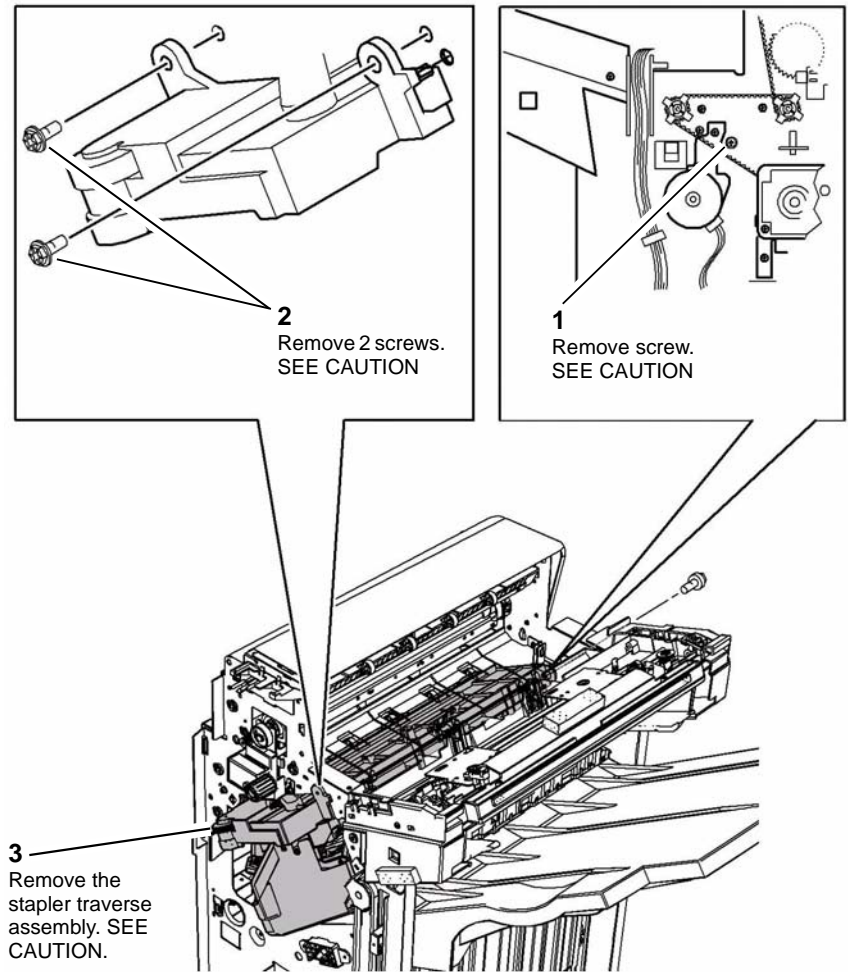
Figure 1 Harness disconnection



**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.



- 1 Remove screw. SEE CAUTION
- 2 Remove 2 screws. SEE CAUTION
- 3 Remove the stapler traverse assembly. SEE CAUTION.

W-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

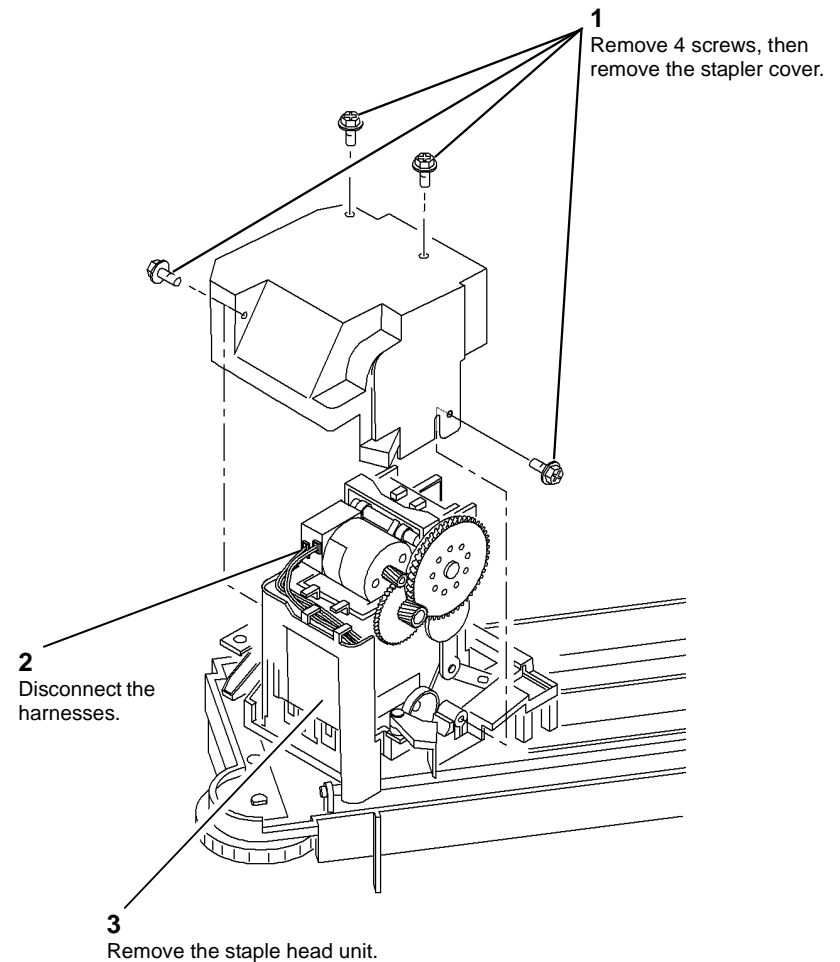


Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



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](#).



W-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.

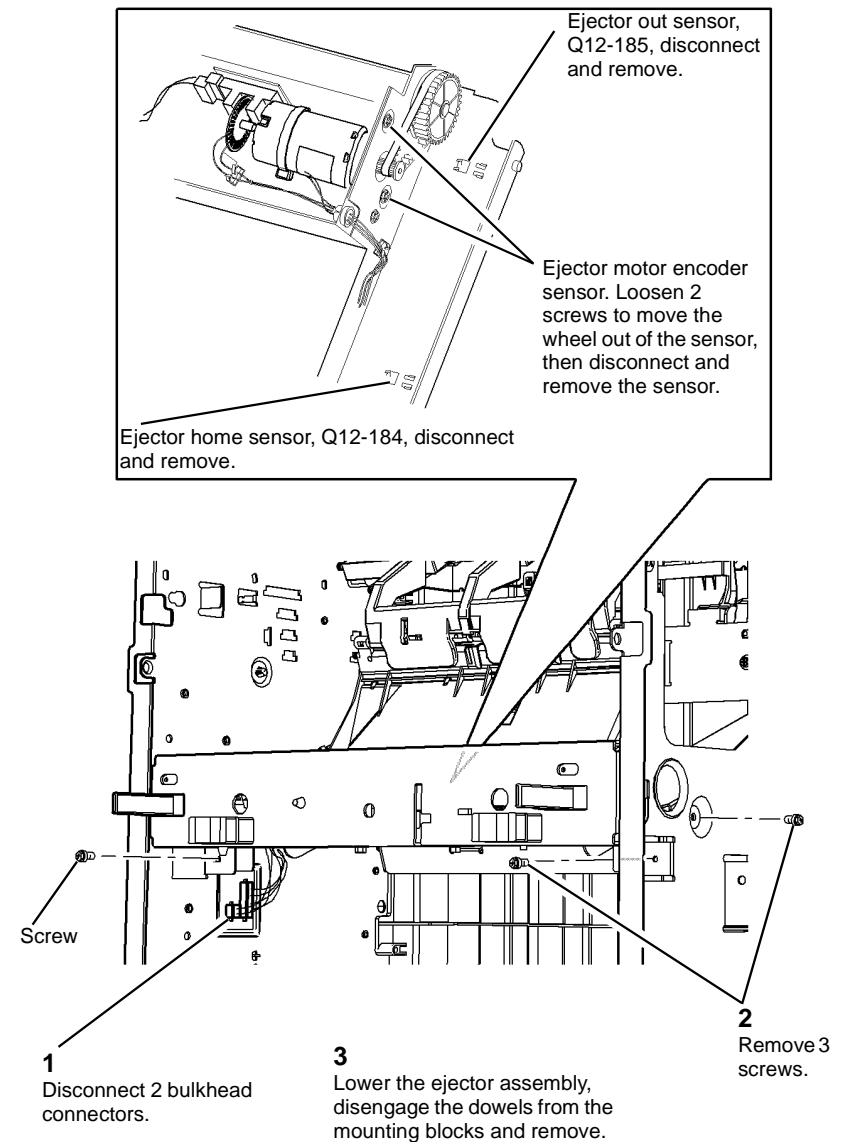


#### WARNING

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.



W-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](#).

- Remove the bin 1 upper level sensor, [Figure 1](#).

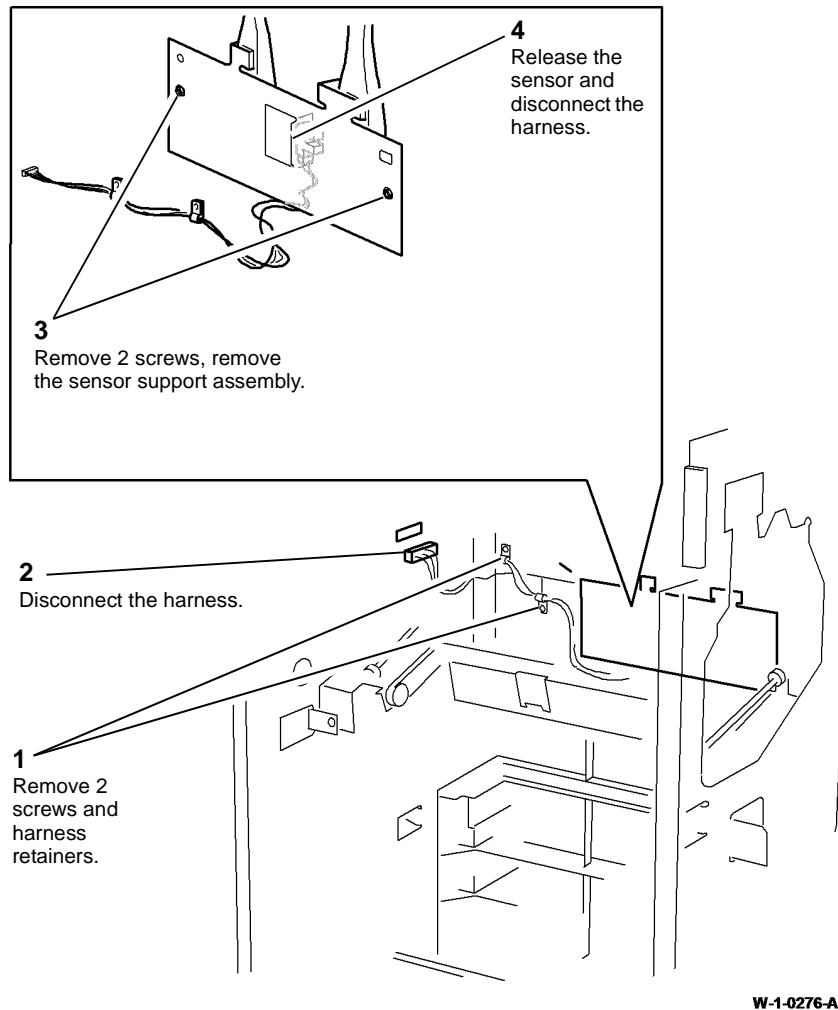


Figure 1 Removal

## Replacement

The replacement is the reverse of the removal procedure.

## REP 12.12-110 Paddle Shaft Assembly

Parts List on [PL 12.25](#).

### Removal



**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 tamper assembly, [REP 12.6-110](#).
- Remove bin 1, [PL 12.10 Item 10](#).
- Remove the paddle motor assembly, [Figure 1](#).

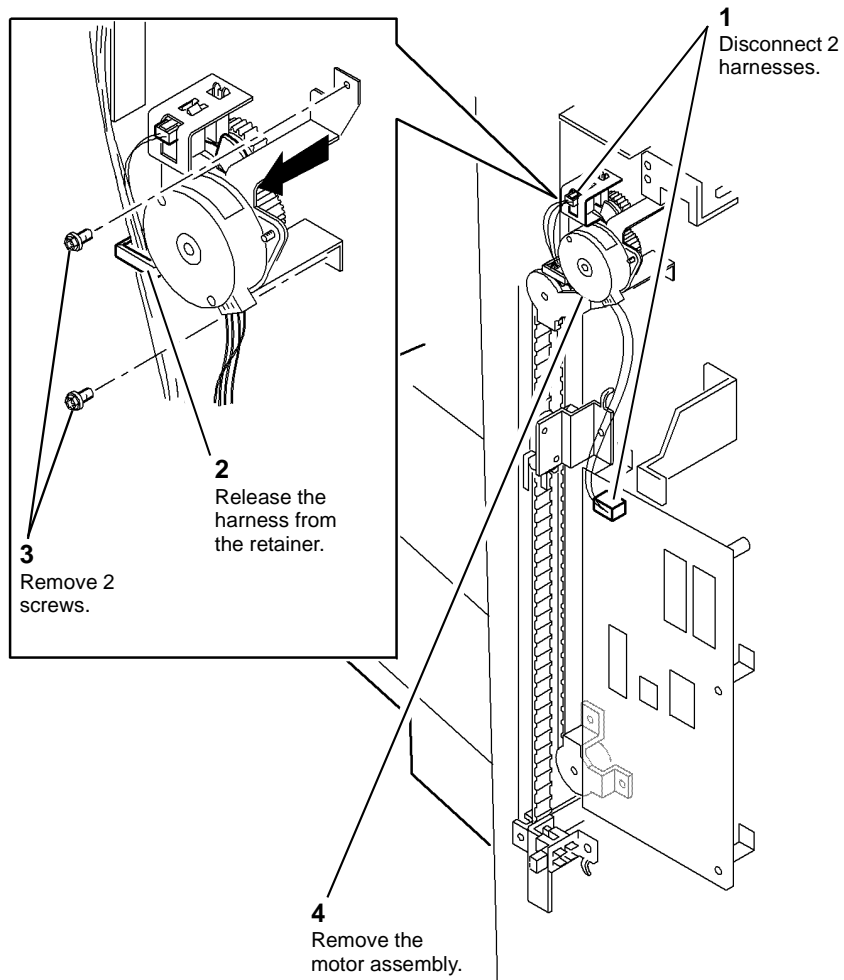


Figure 1 Paddle motor removal

W-1-0277-A

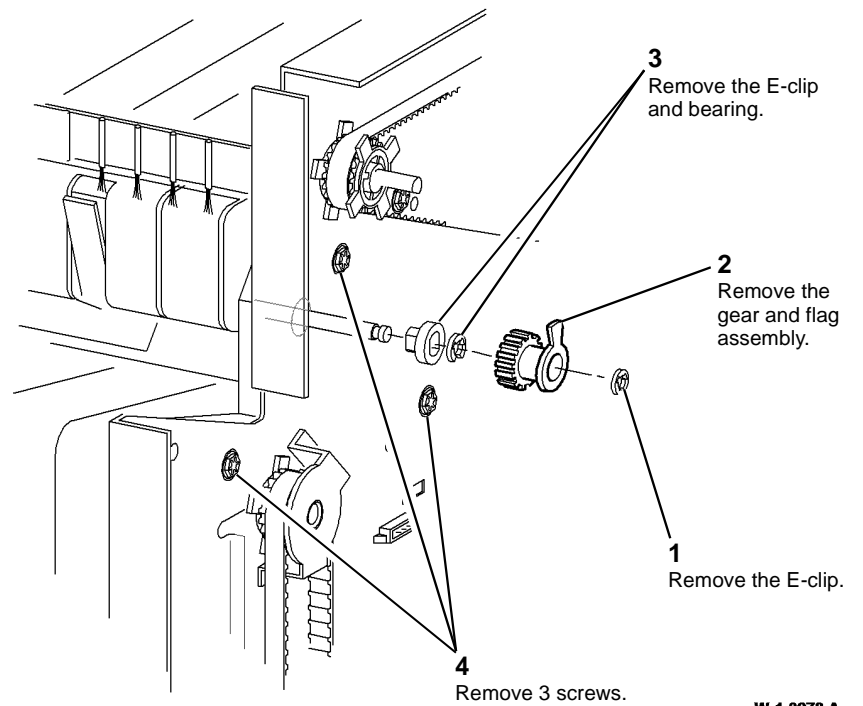
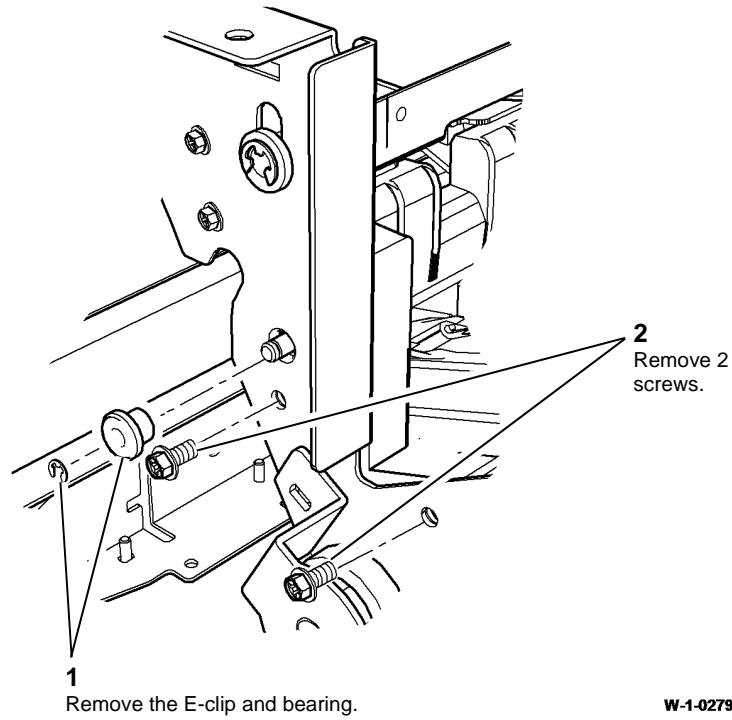


Figure 2 Rear preparation

W-1-0278-A

4. Prepare to remove the rear components, [Figure 2](#).

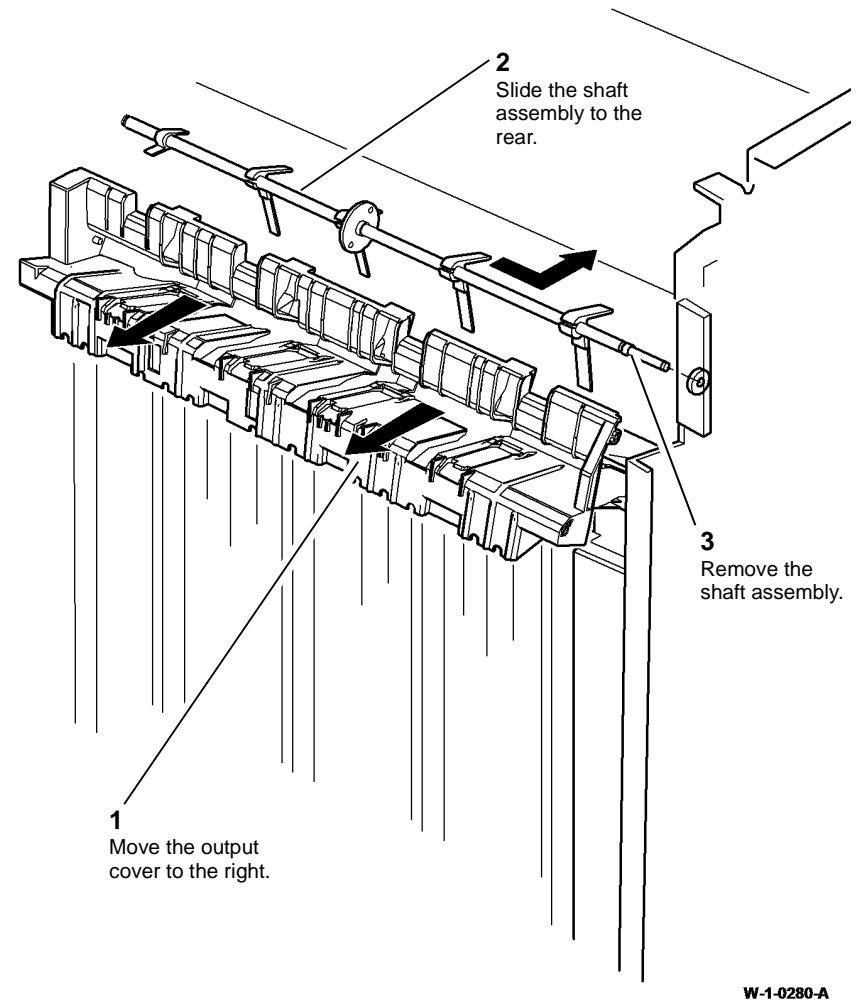
5. Prepare to remove the front components, [Figure 3](#).



**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](#).

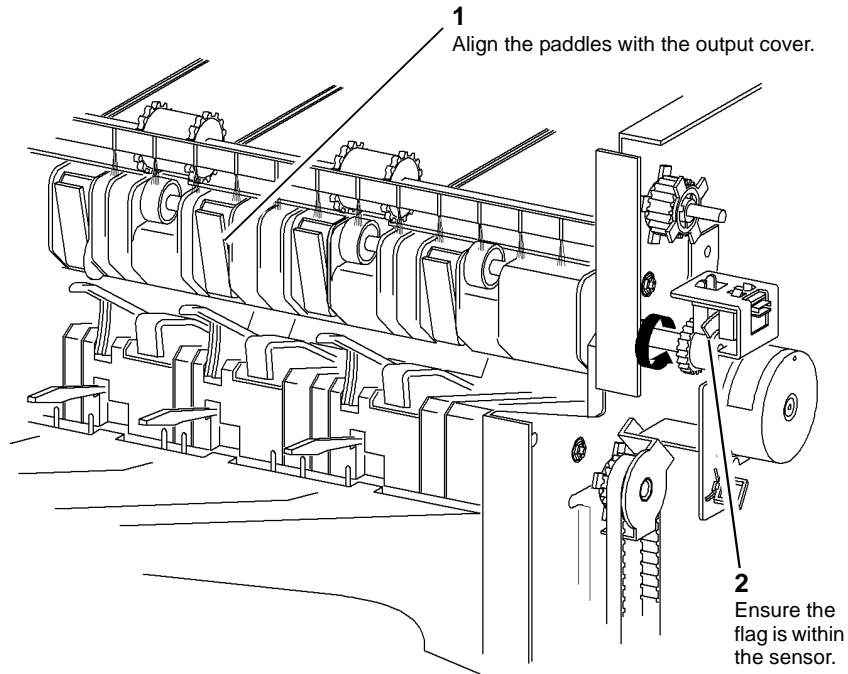


**Figure 4 Paddle shaft removal**



## 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](#).



W-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



**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. 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](#).

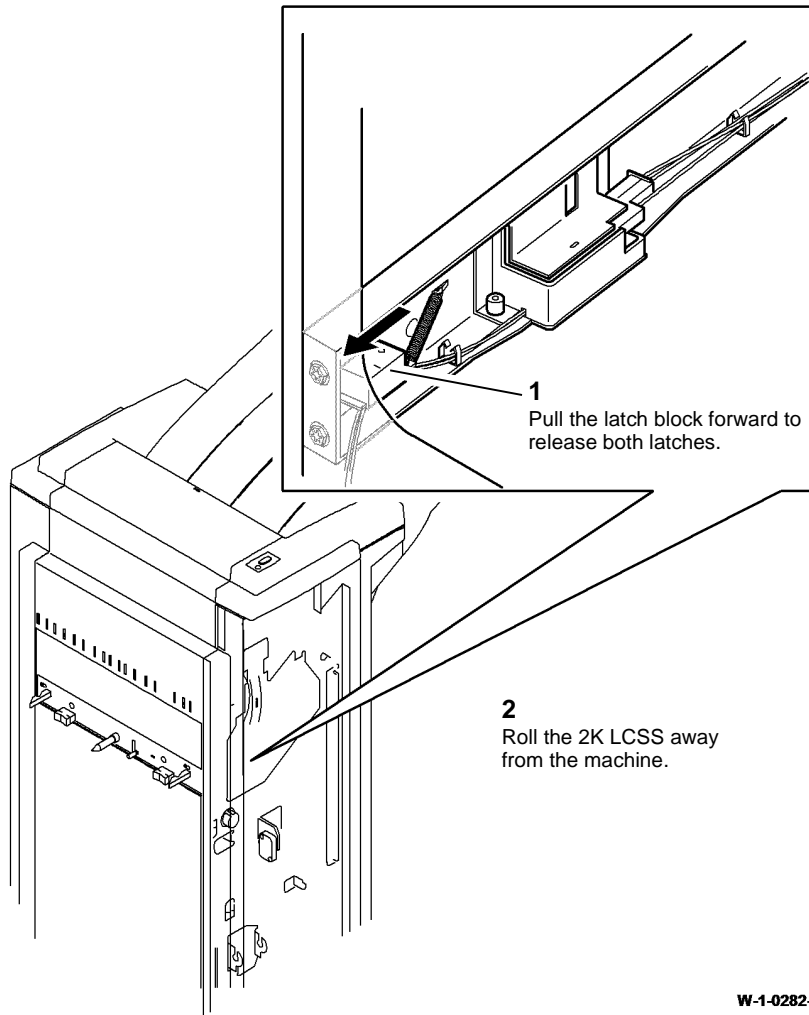


Figure 1 Docking latch assembly

## 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

Do not install a new 2K LCSS PWB until the cause of the damage to the old 2K LCSS PWB has been determined. Perform the [312G-110 2K LCSS PWB Damage RAP](#).



#### 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.

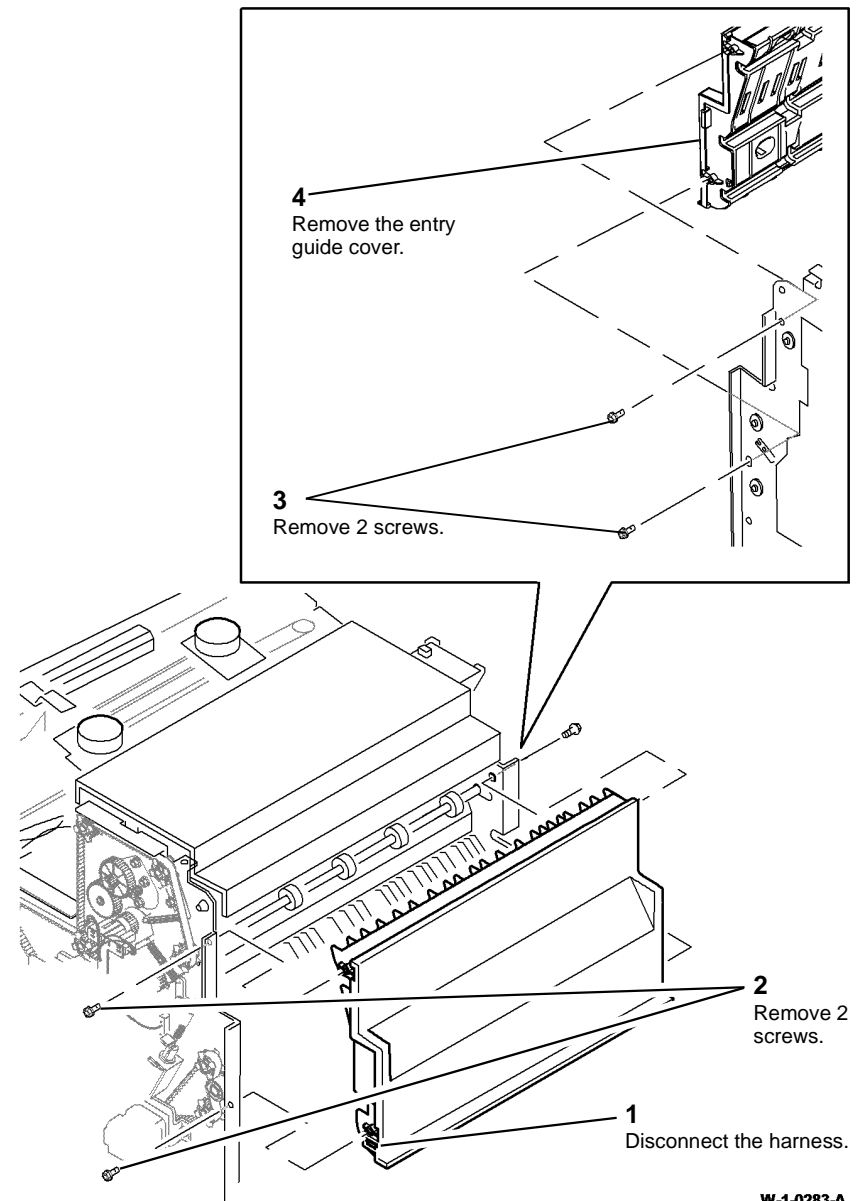


#### WARNING

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](#).



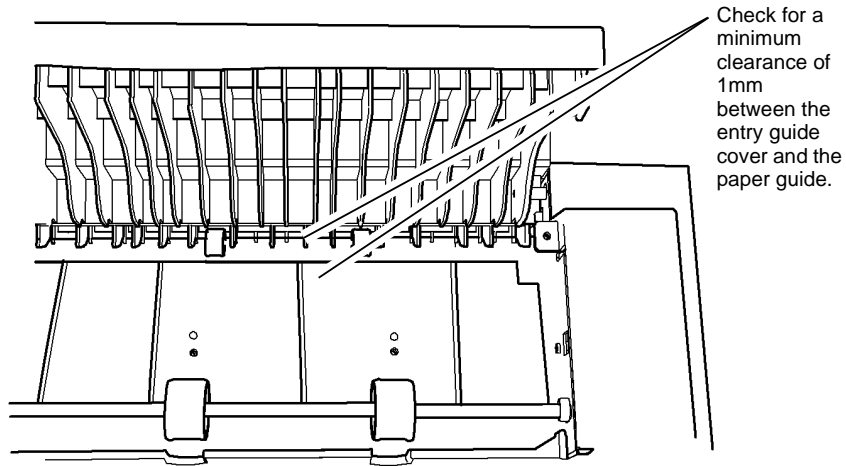
W-1-0283-A

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.



W-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](#).

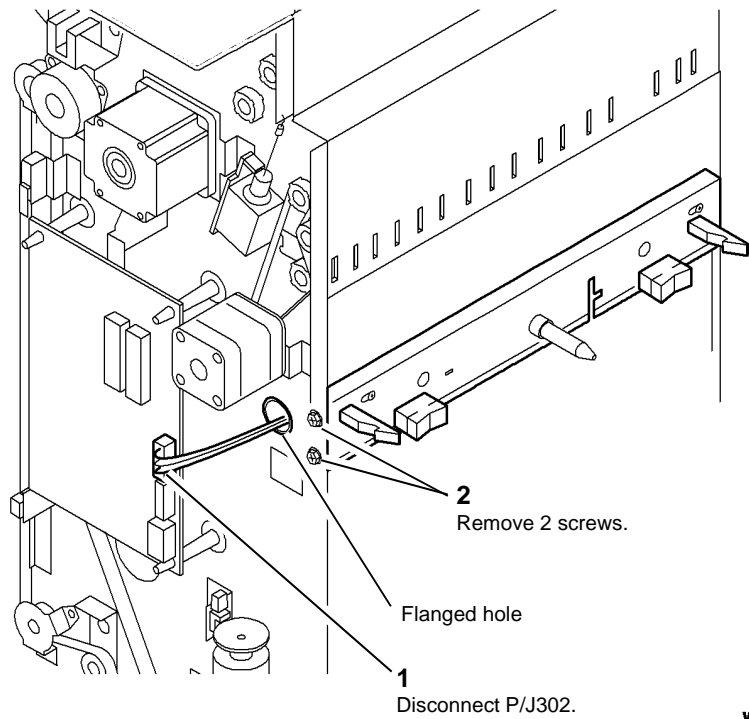


Figure 1 Preparation

4. Remove the docking latch assembly, [Figure 2](#).

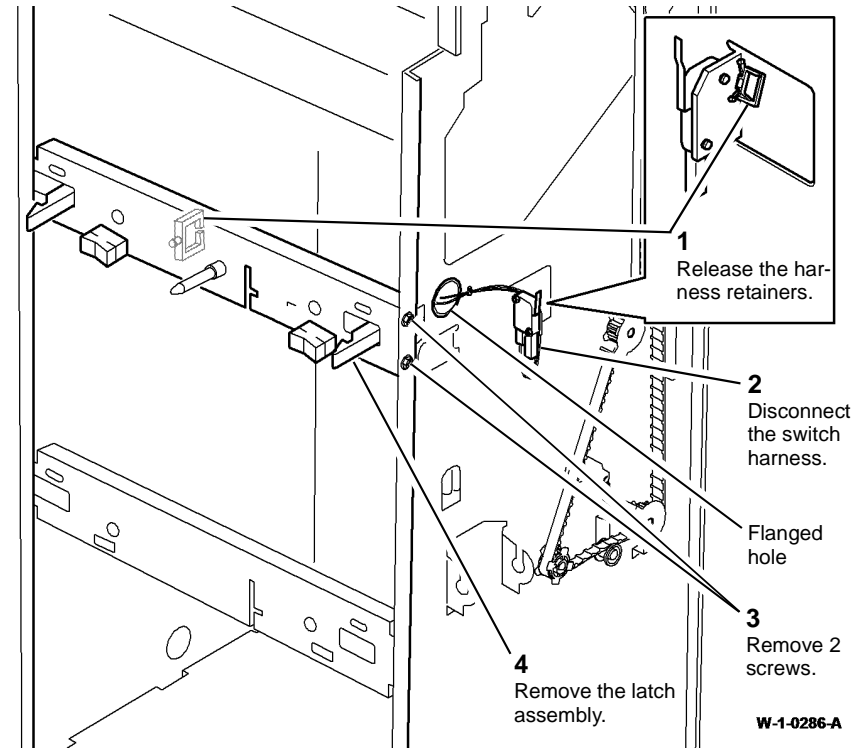


Figure 2 Latch assembly removal.

## 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

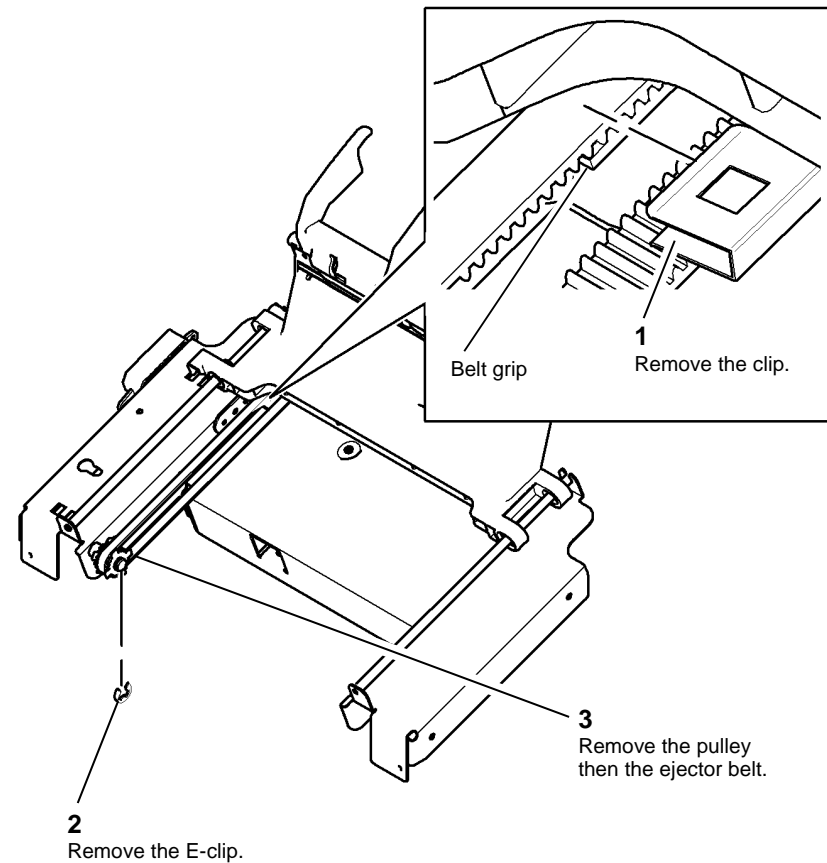


Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



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

1. Remove the ejector assembly, refer to [REP 12.10-110](#).
2. Remove the ejector belt, [Figure 1](#).



W-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](#).

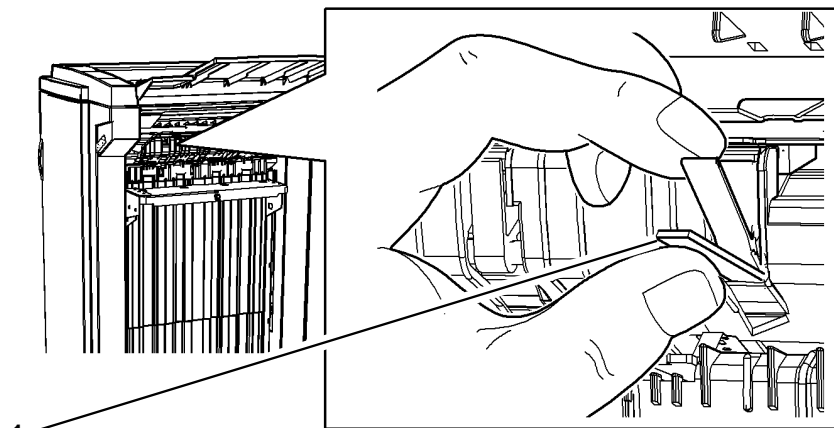
1. Remove bin 1, [PL 12.10 Item 10](#).
2. Remove the top cover and the rear cover, [REP 12.1-110](#).
3. Rotate the paddle shaft assembly by rotating the gear on the rear of the paddle shaft assembly until the 2 rubber blades are visible, and the shorter blade is horizontal.



#### 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

W-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

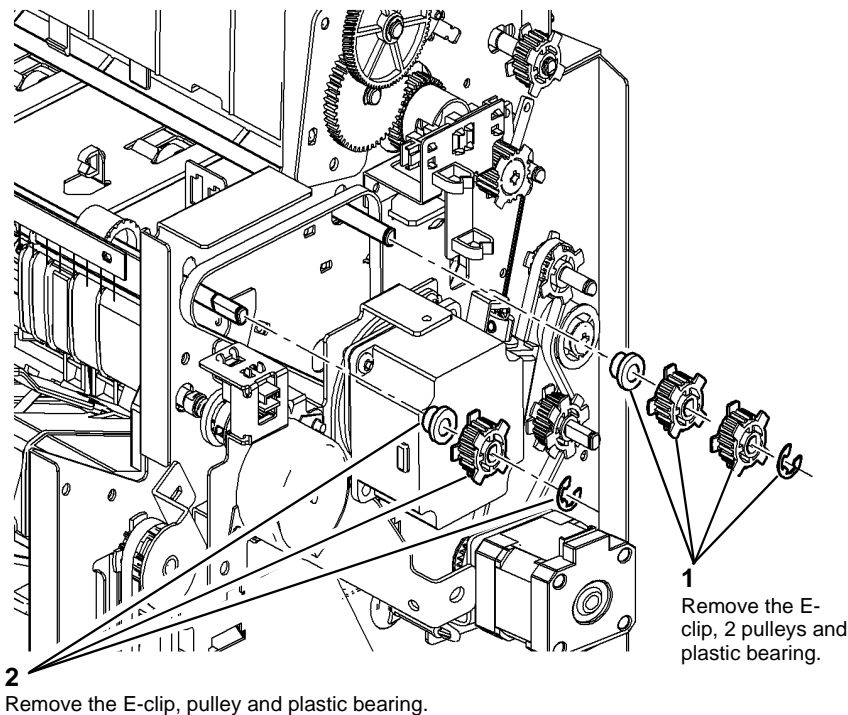
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



#### 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](#).



1 Remove the E-clip, 2 pulleys and plastic bearing.

2 Remove the E-clip, pulley and plastic bearing.

W-1-0885-A

Figure 1 Preparation

6. Remove the ejector drive shaft, [Figure 2](#).

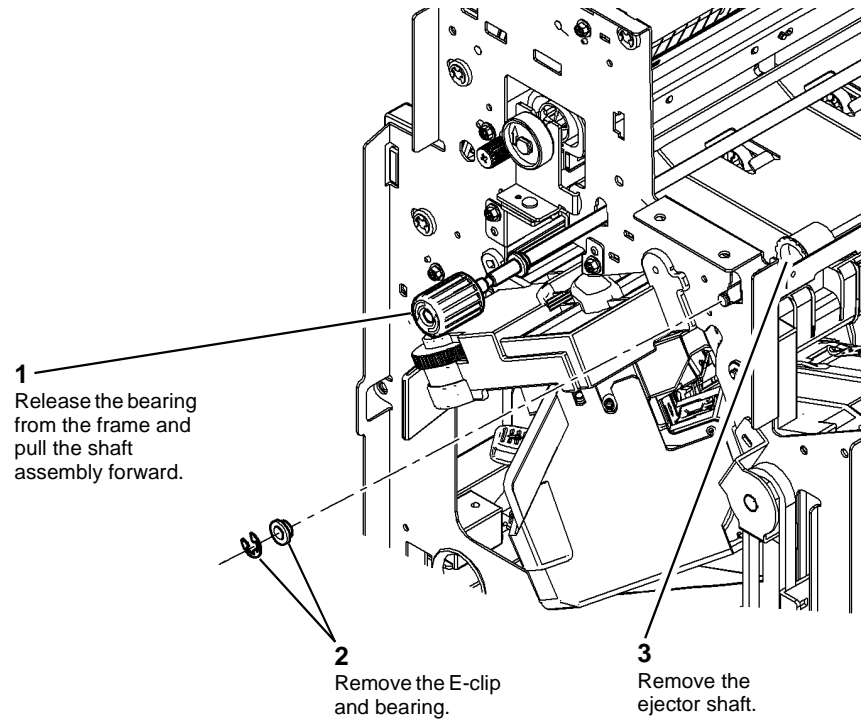


Figure 2 Ejector shaft removal

7. Remove the drive shaft, [Figure 3](#).

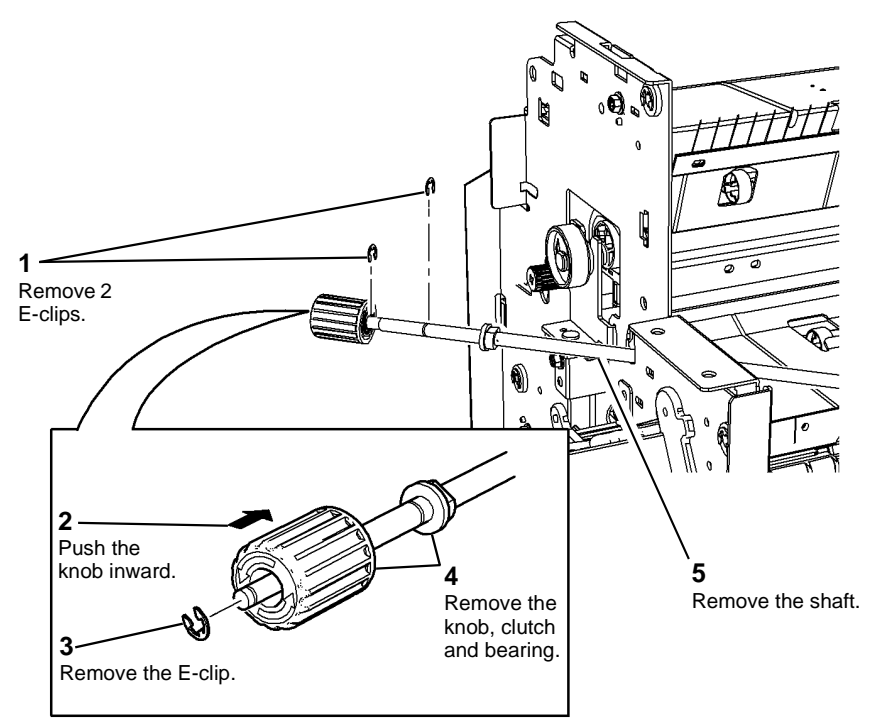
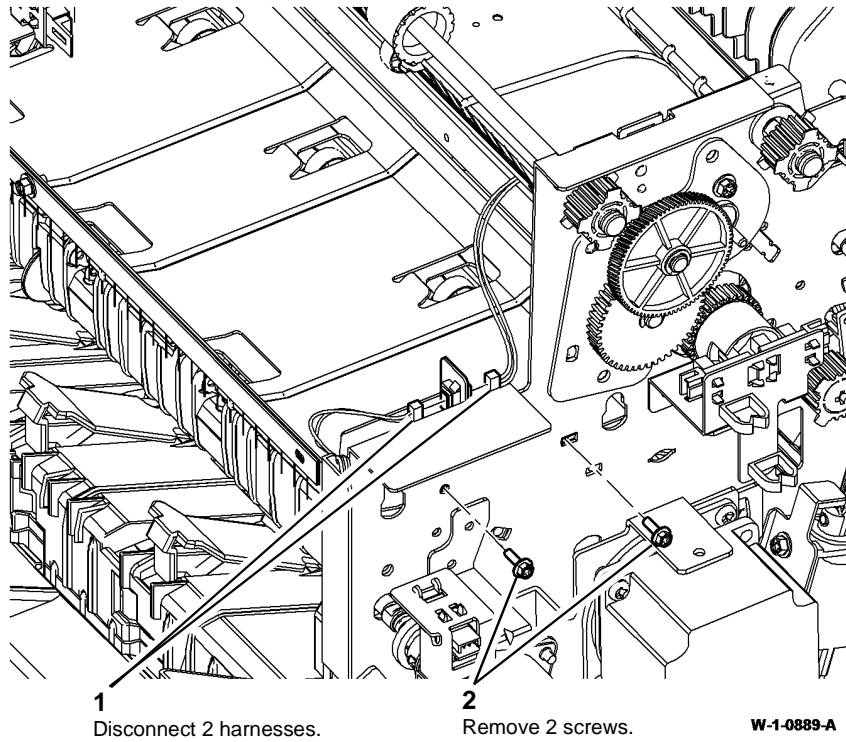


Figure 3 Drive shaft removal

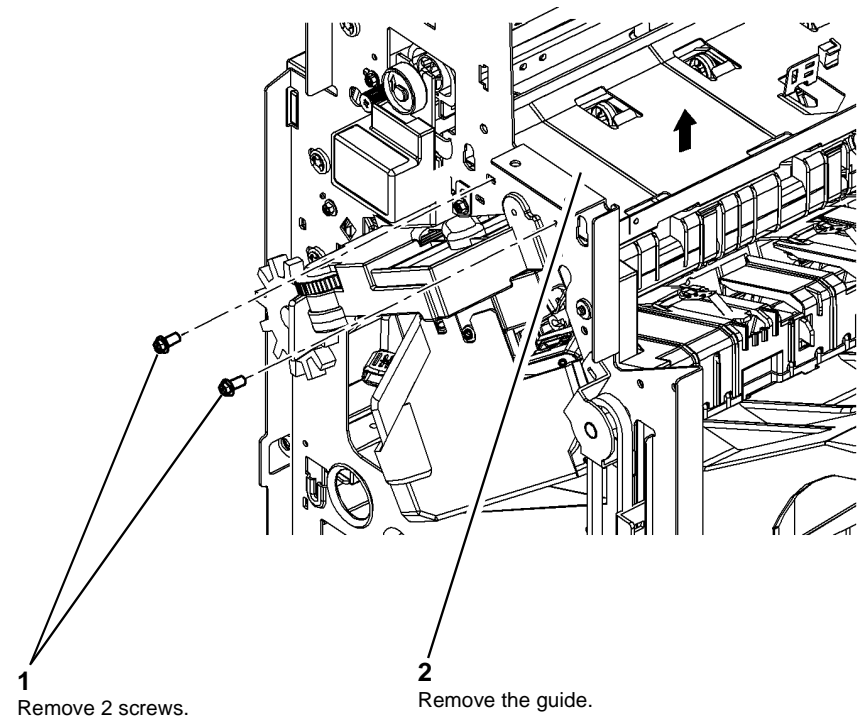


8. Prepare to remove the upper right paper guide, [Figure 4](#).



**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](#).

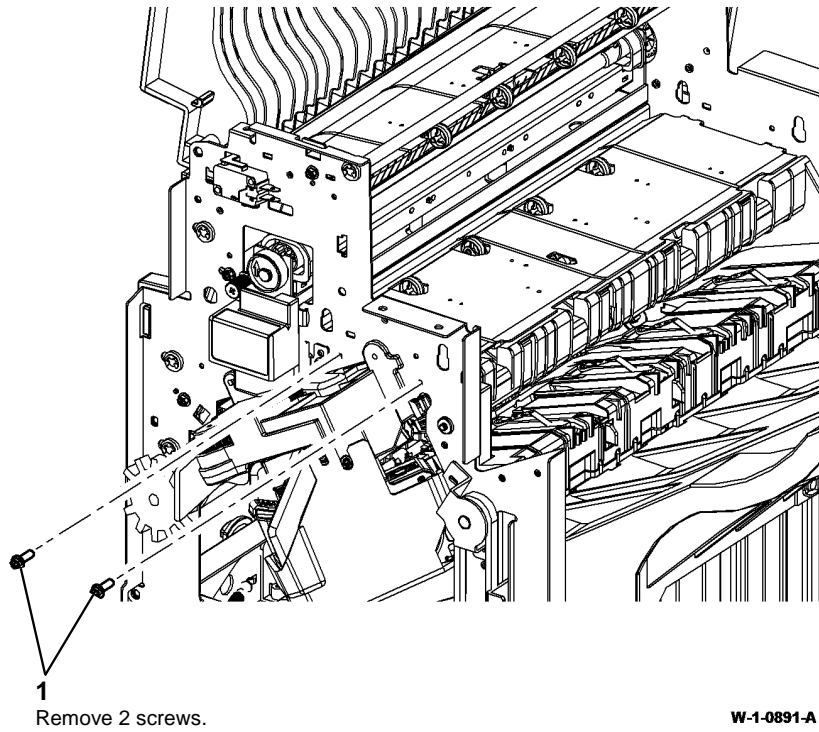


Figure 6 Preparation

11. Remove the lower right paper guide, [Figure 7](#).

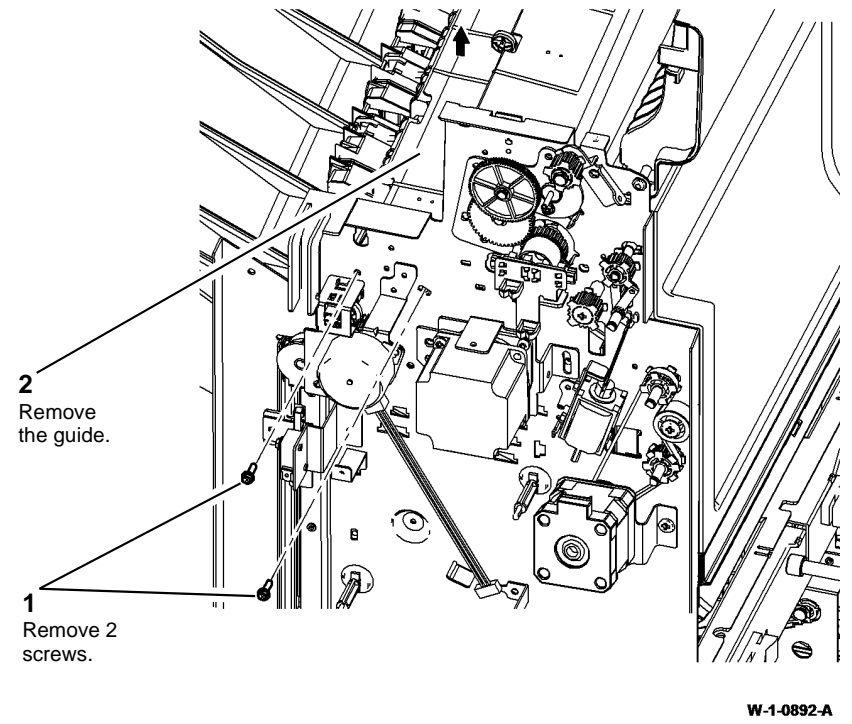


Figure 7 Lower right guide removal

## 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](#).

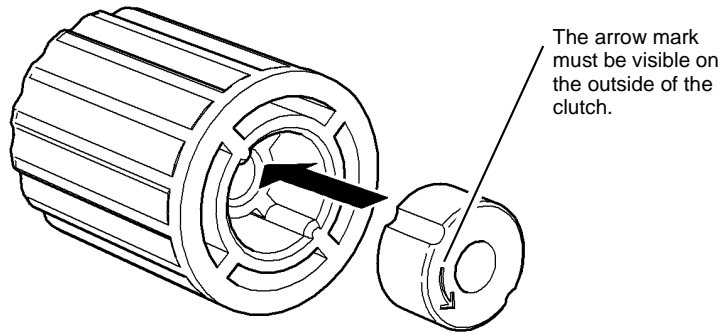


Figure 8 Clutch orientation

W-1-1289-A

## REP 12.20-110 Paper Guide and Top Exit Sensor

### Parts List on [PL 12.60](#)

### Removal



#### WARNING

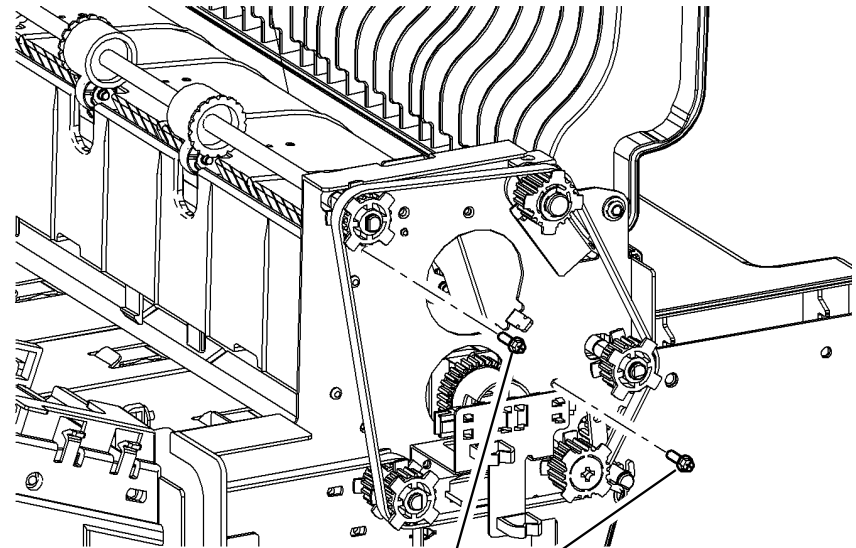
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



#### WARNING

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

1. Remove the 2K LCSS 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.

W-1-0887-A

Figure 1 Preparation

4. Remove the paper guide and top tray exit sensor, Q12-107, [Figure 2](#).

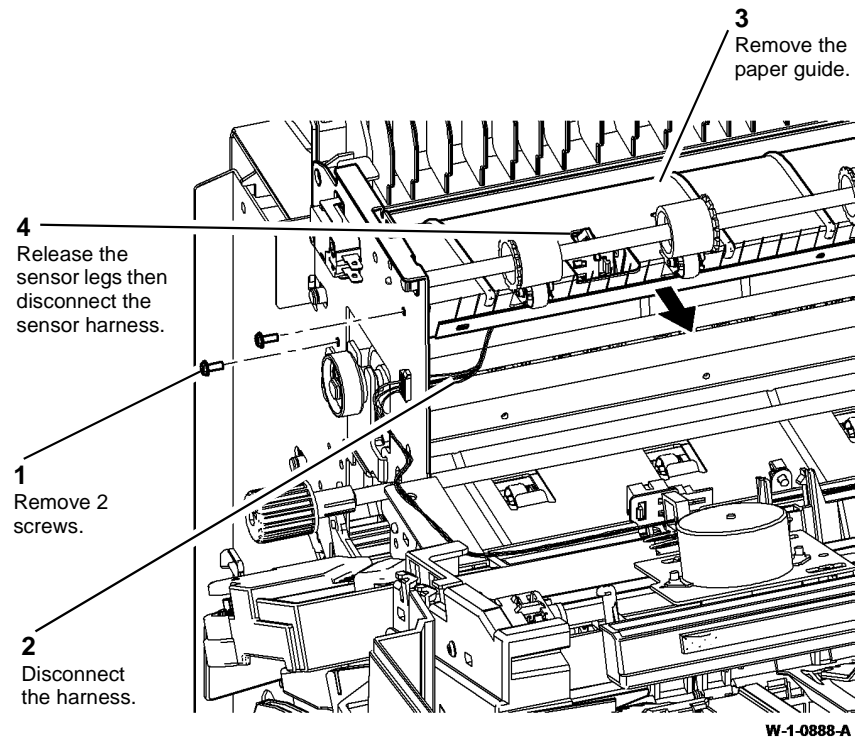


Figure 2 Guide and sensor removal

## 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.

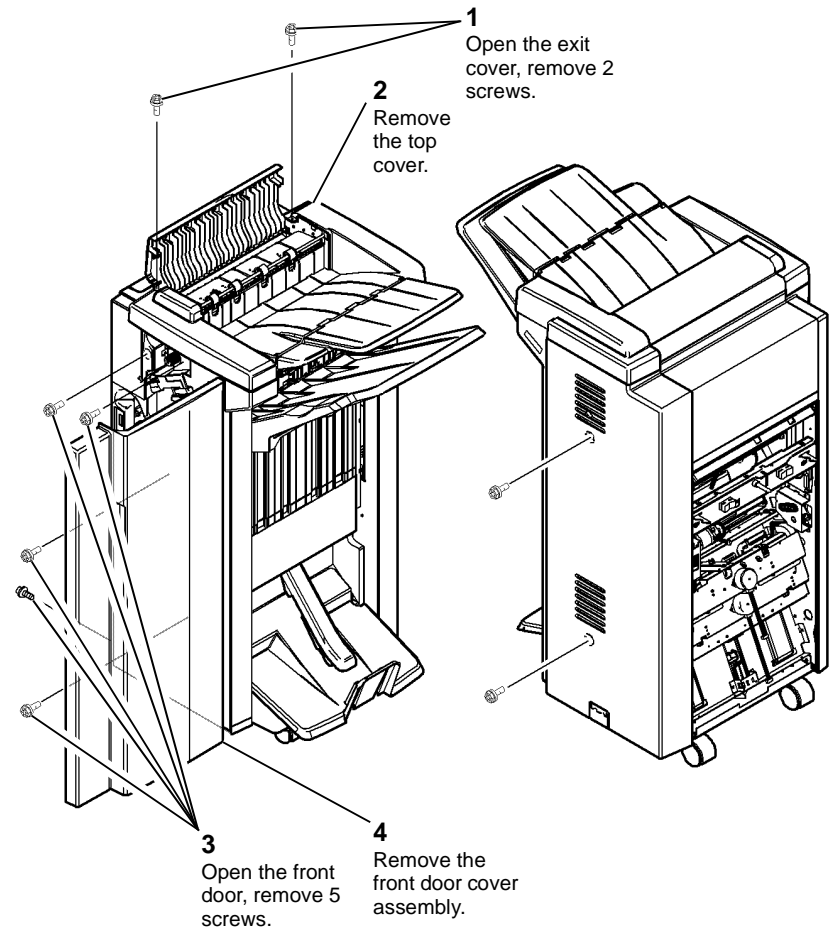


Take care during this procedure. Sharp edges may be present that can cause injury.

**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](#).



W-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](#).

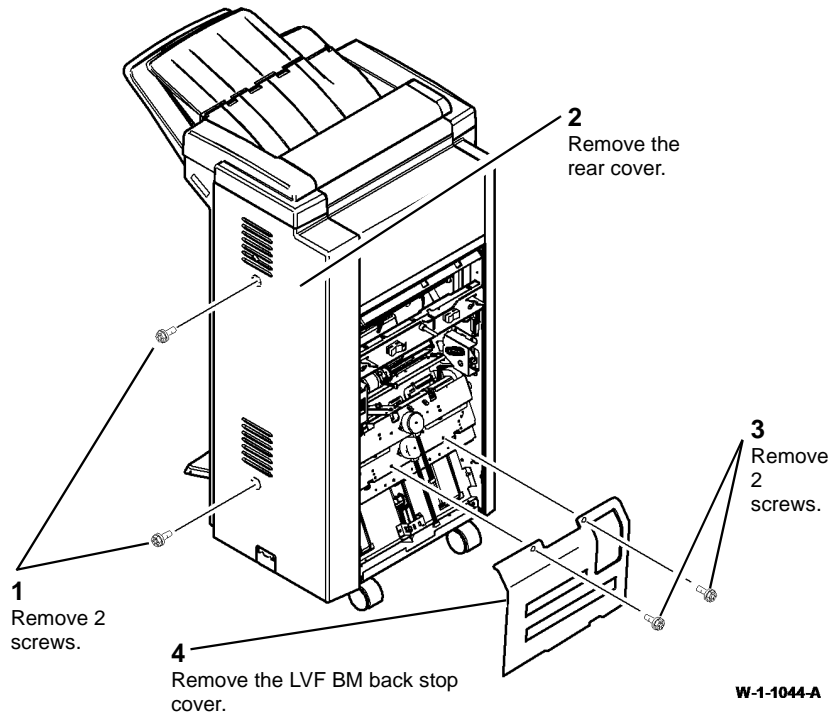
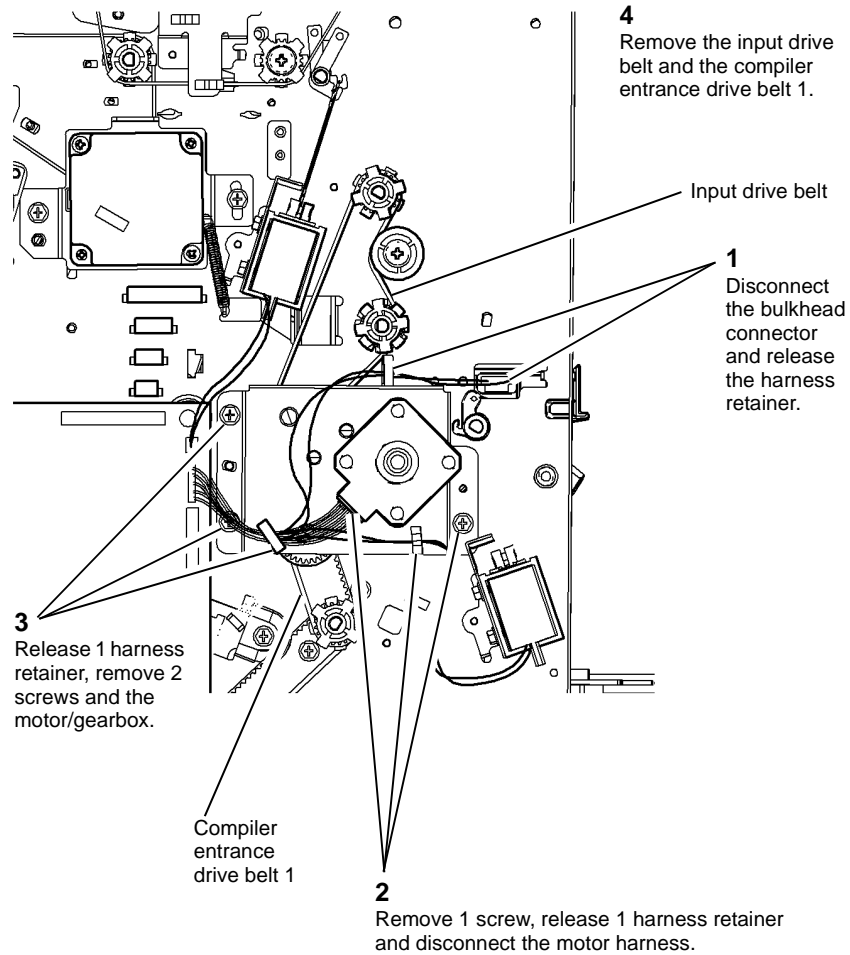


Figure 2 Covers removal 2 of 2

### Replacement

The replacement is the reverse of the removal procedure.

2. Remove the motor and drive belt, [Figure 1](#).



W-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**

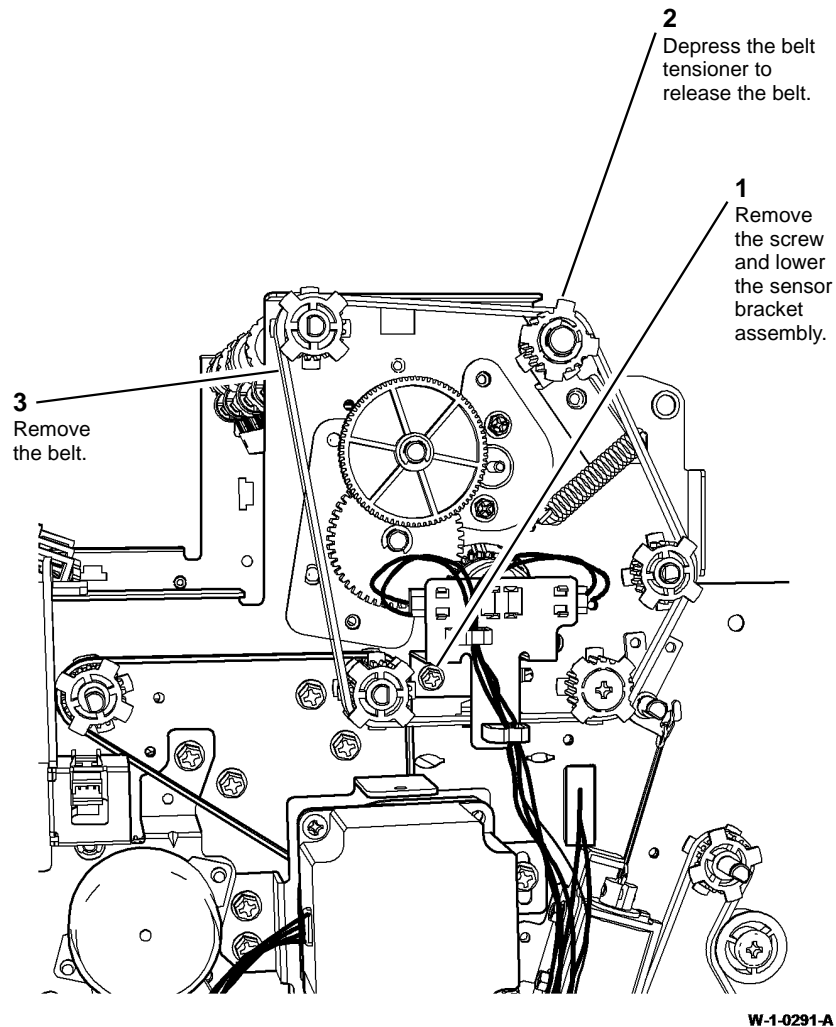
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

  
**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](#).



W-1-0291-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. 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



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 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](#).



## REP 12.5-150 Bin 1 Drive Belts and Stacker Tray Drive and Motor Assembly

Parts List on [PL 12.340](#)

### 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 LVF BM front door cover assembly and rear cover, [REP 12.1-150](#).
2. Remove the bin 1 drive belt (rear), [Figure 1](#).

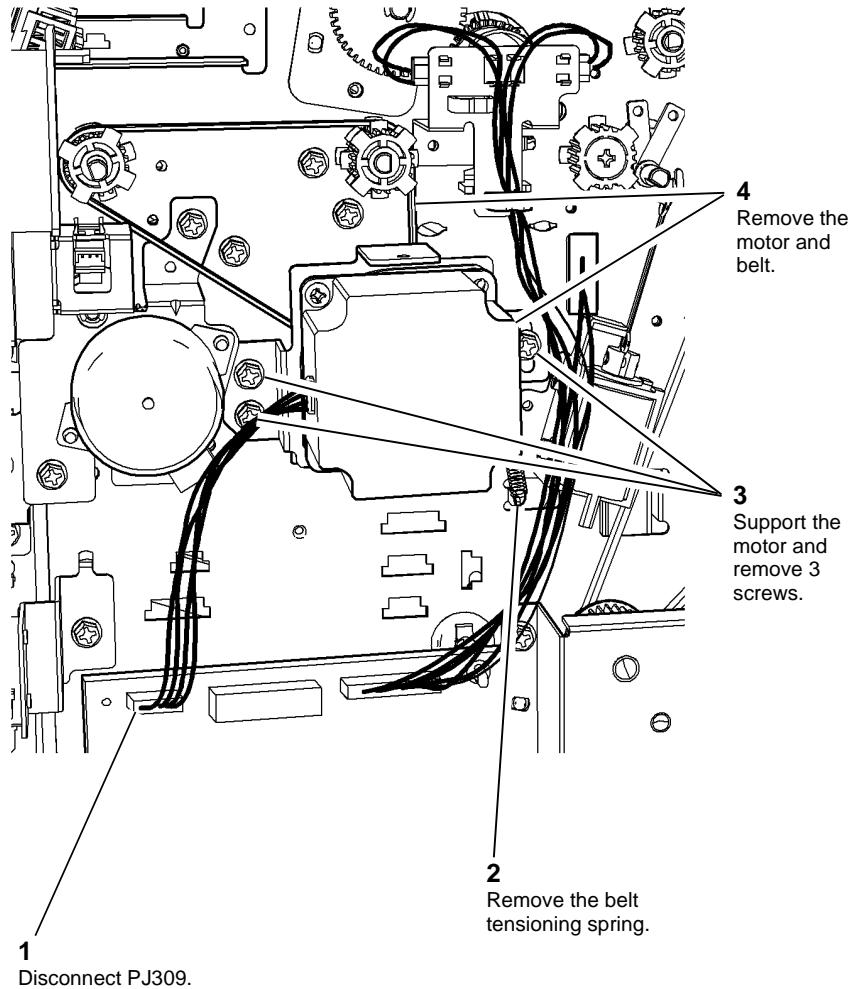


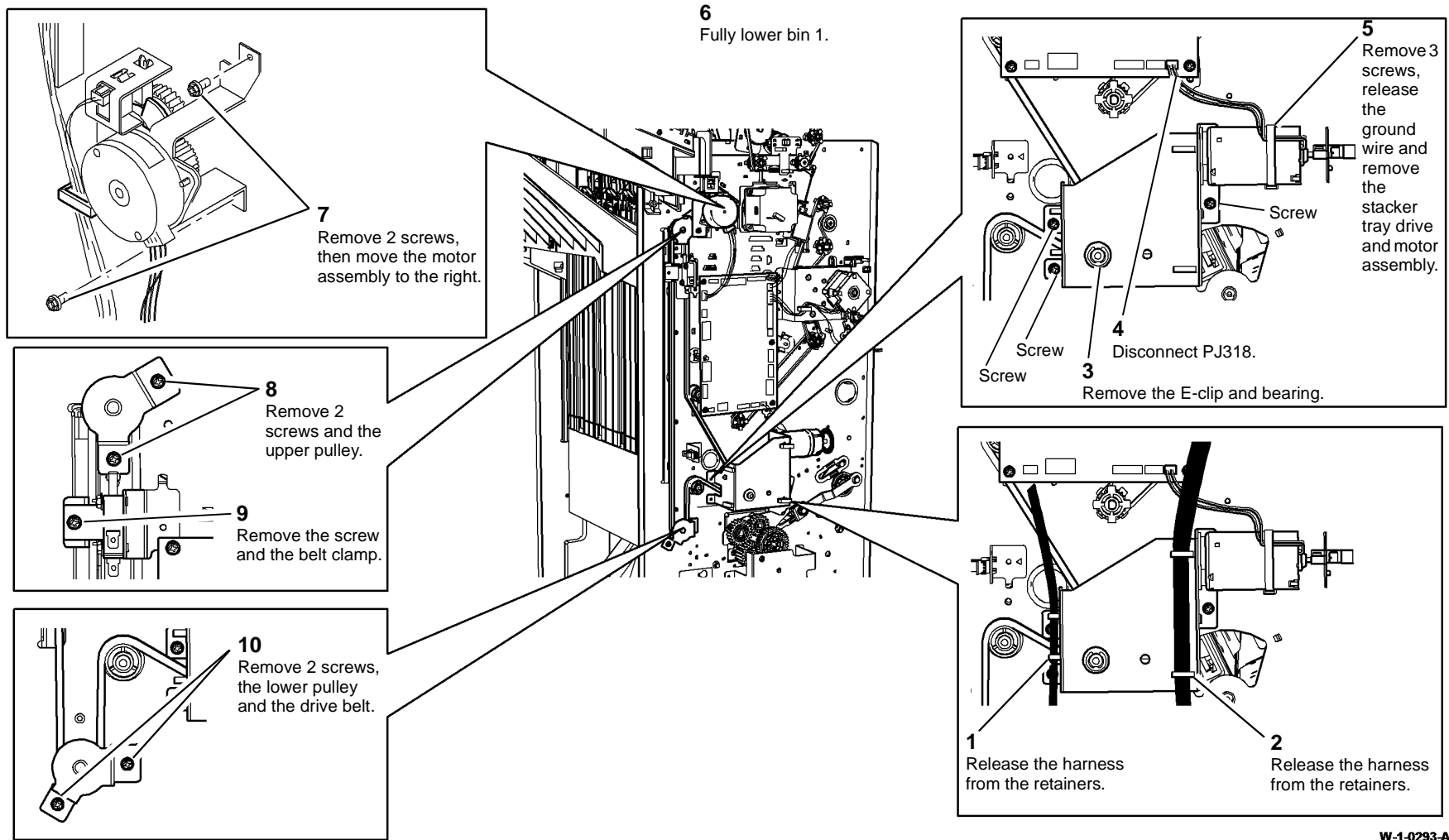
Figure 1 Removing the drive belt

W-1-0292-A

### 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 12.4-110](#). Tighten the screws.
6. Install the intermediate drive belt, [REP 12.3-150](#).
7. Install the LVF BM rear cover, [REP 12.1-150](#).

**NOTE:** Keep all of the components removed as a set. The set of rear frame components are different from the front frame set.



W-1-0293-A

Figure 1 Bin 1 drive belt (rear)

3. Remove the bin 1 drive belt (front) [Figure 2](#).

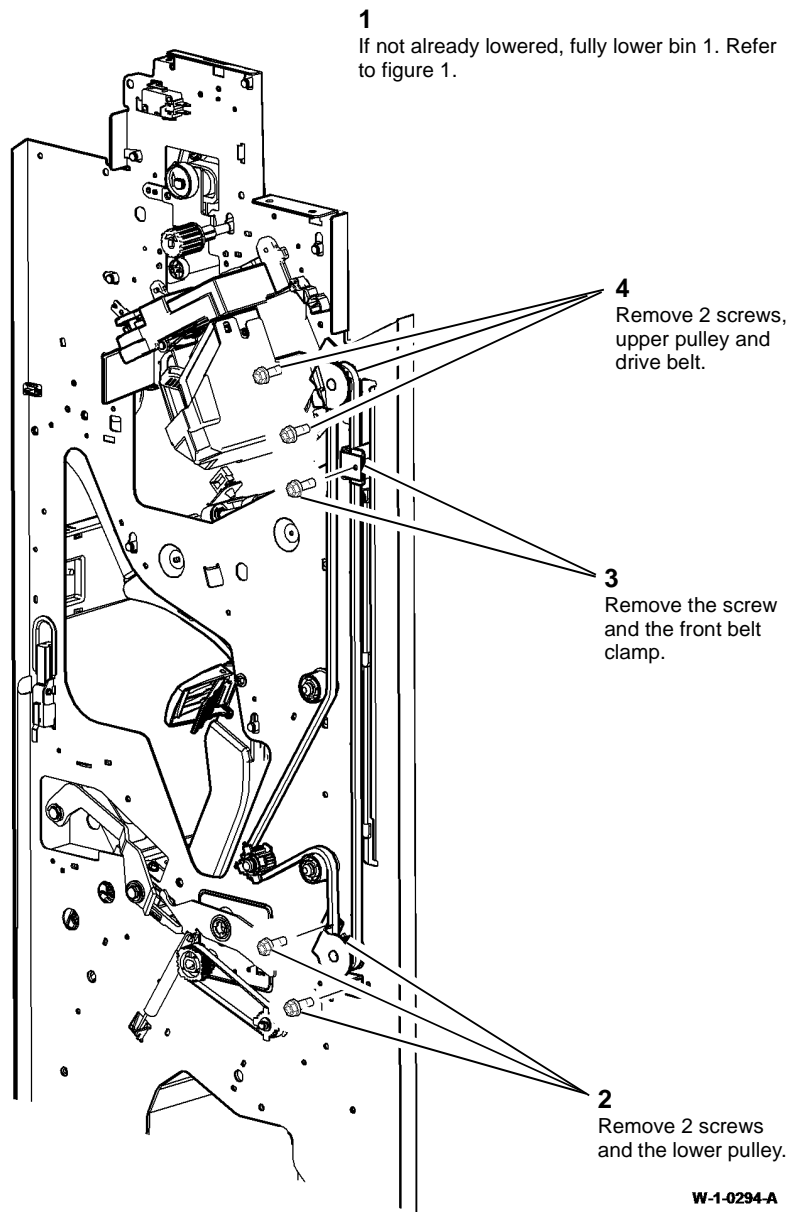


Figure 2 Bin 1 drive belt (front)

W-1-0294-A

## 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

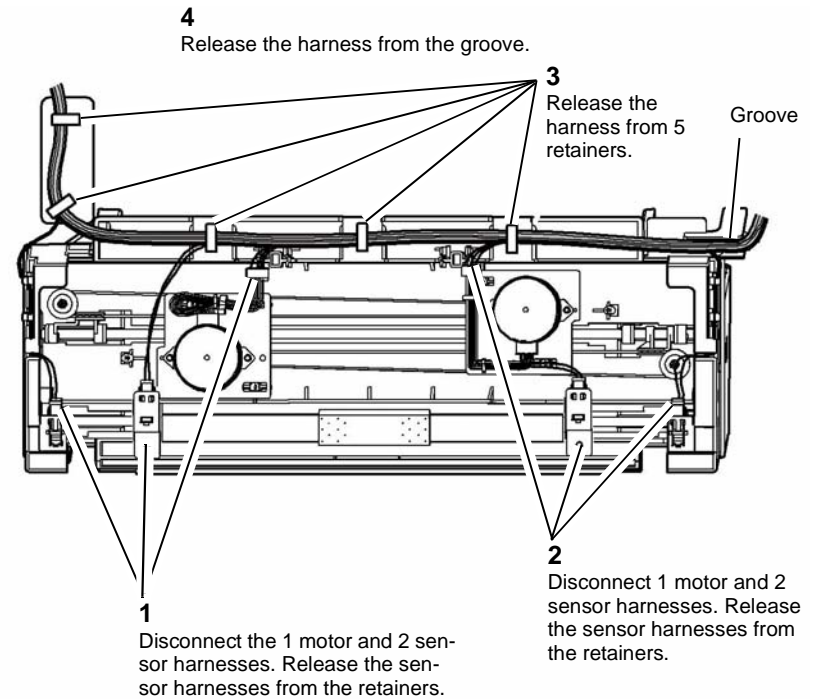
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



#### WARNING

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

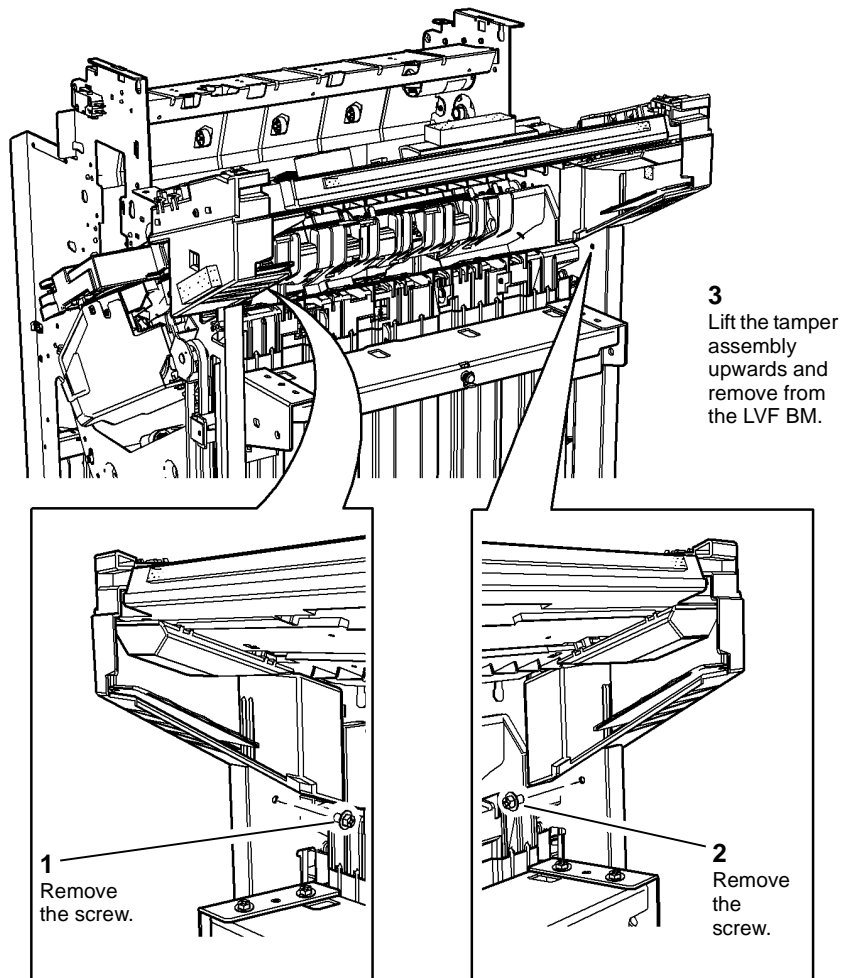
1. Remove the LVF BM covers [REP 12.1-150](#).
2. Remove bin 1 (1 K-L clip).
3. Prepare to remove the tamper assembly [Figure 1](#).



W-1-0295-A

Figure 1 Preparation

4. Remove the tamper assembly, [Figure 2](#).



W-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

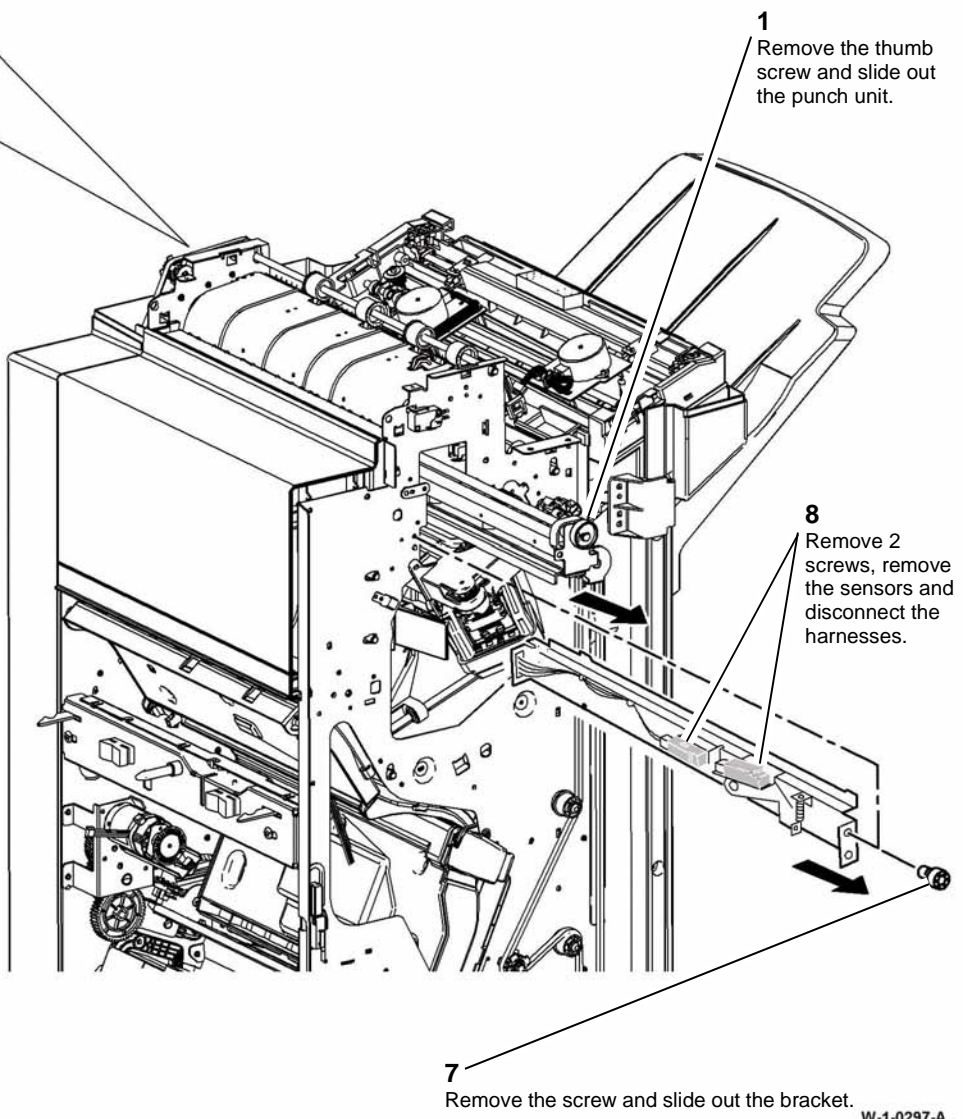
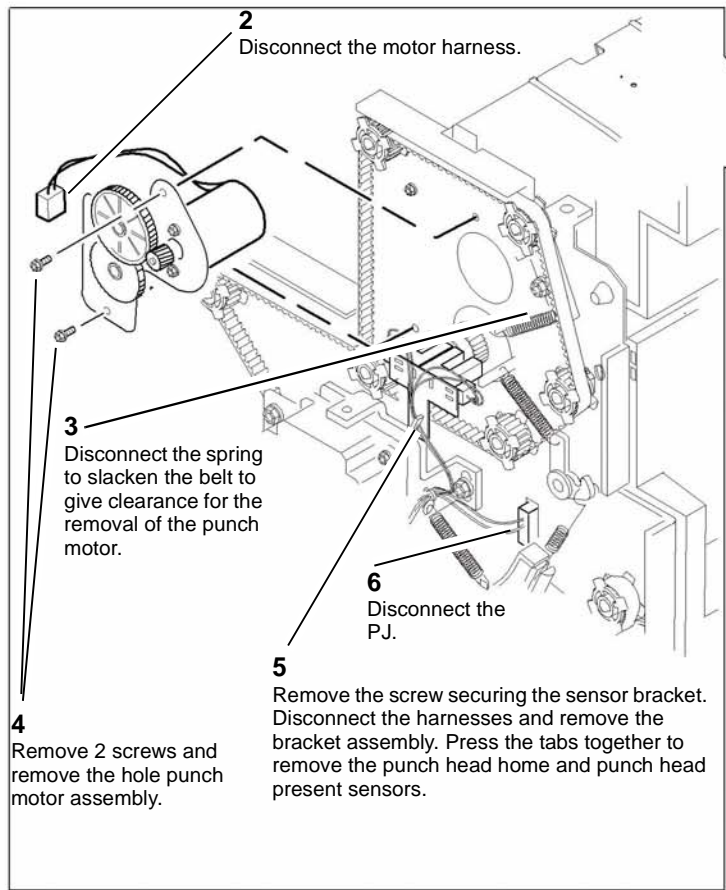
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



#### 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](#).



W-1-0297-A

Figure 1 Removal

## Replacement

1. The replacement is the reverse of the removal procedure.
2. If necessary, perform [ADJ 12.3-150](#) Hole Punch Position.

**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

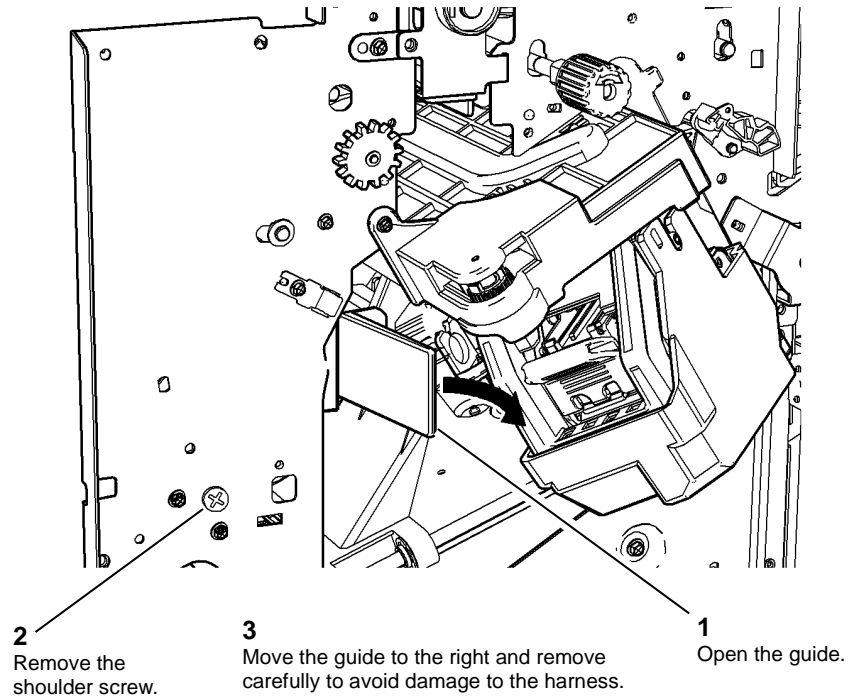
Take care not to topple the LVF BM. The LVF BM is unstable when un-docked from the machine. Do not show the customer how to un-dock the LVF BM.

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](#).

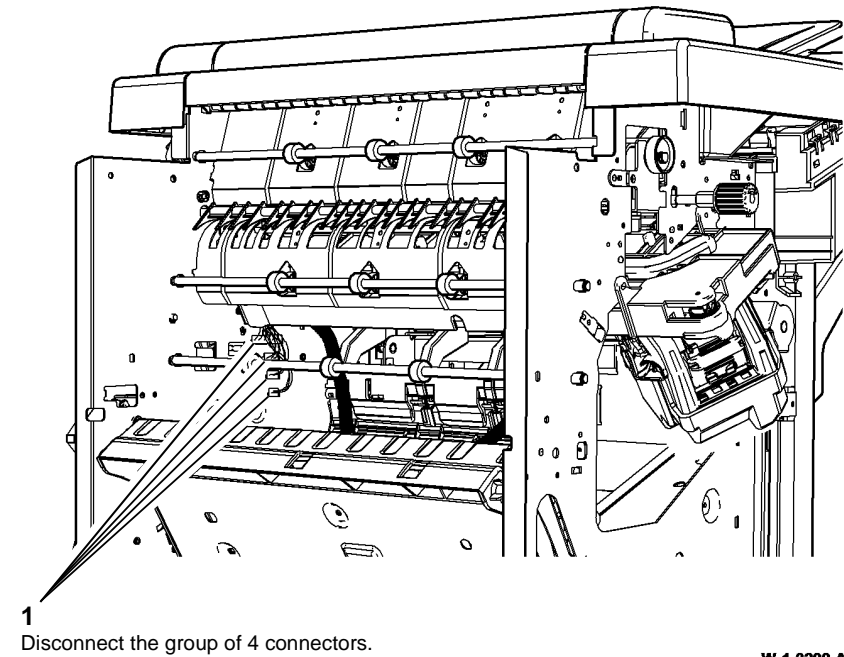


4. Remove the paper entry guide assembly, [Figure 1](#).

6. Disconnect the harness, [Figure 2](#).



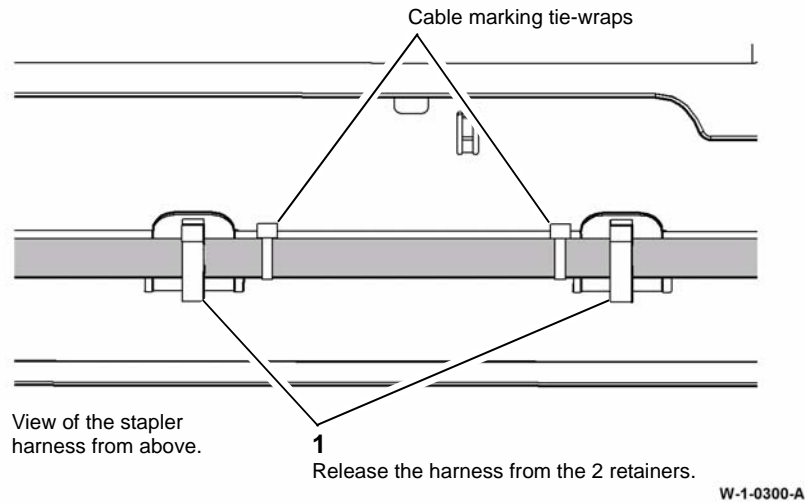
**Figure 1 Paper entry guide removal**



**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](#).



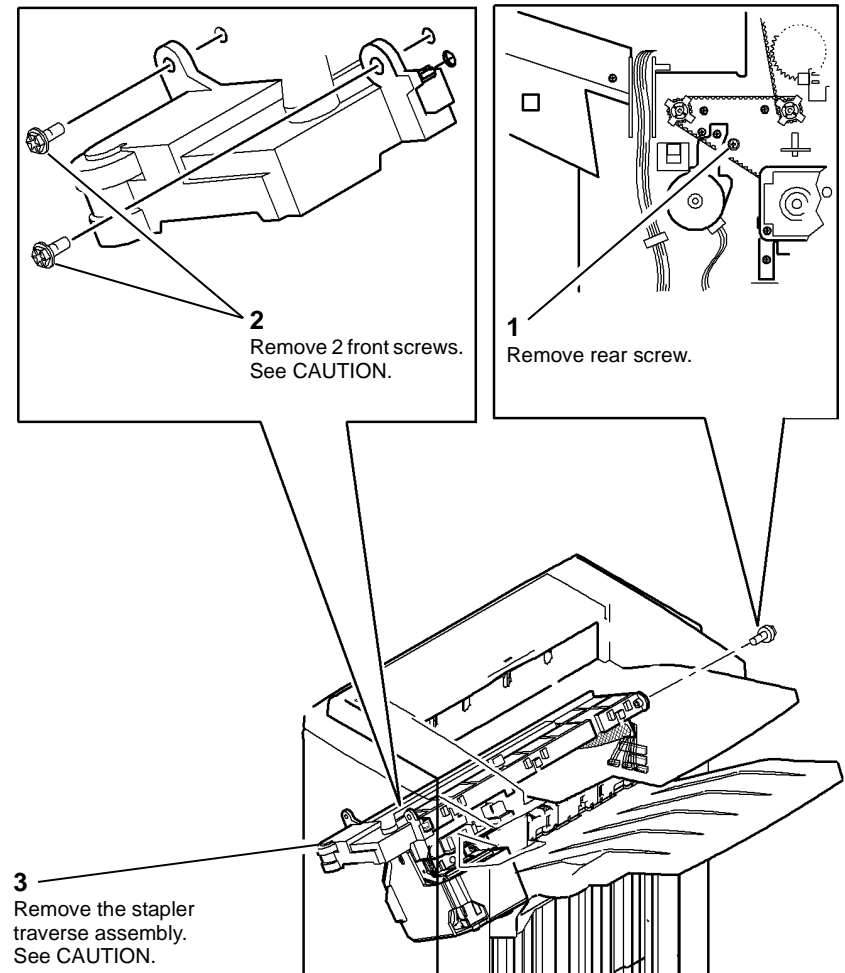
**Figure 3** Harness release



**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.

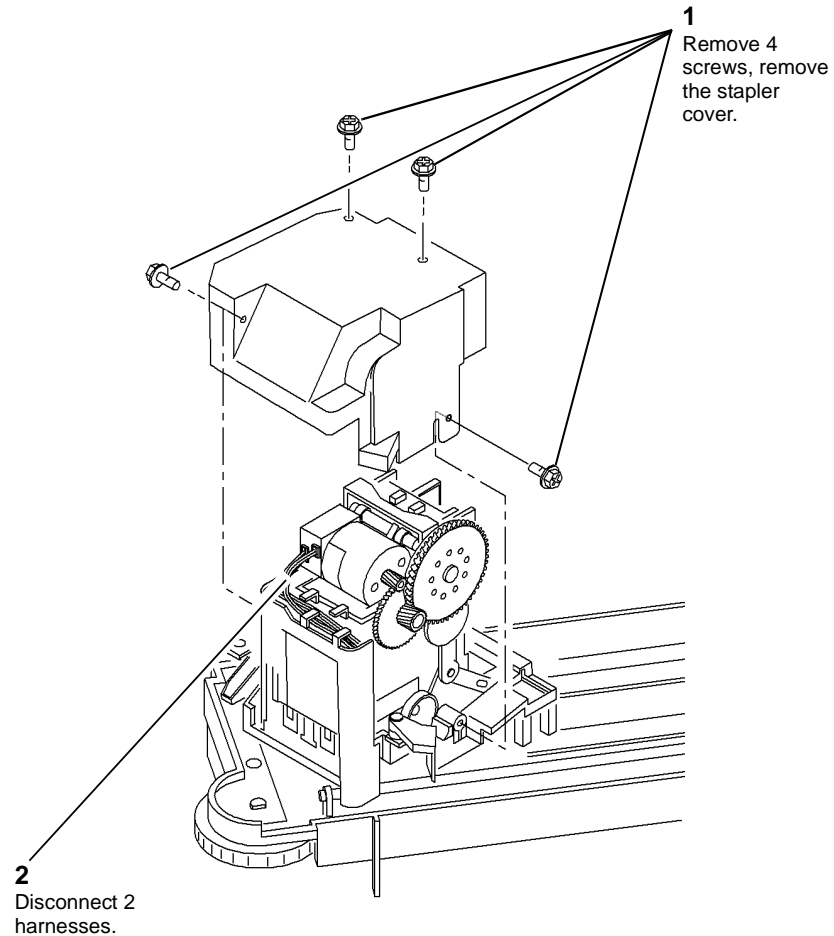


#### WARNING

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.

- Remove the staple head unit from the stapling unit, [Figure 1](#).



W-1-0302-A

Figure 1 Staple head unit removal

### Replacement

- Refer to [GP 6](#) before re-fitting screws into plastic components.
- 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.



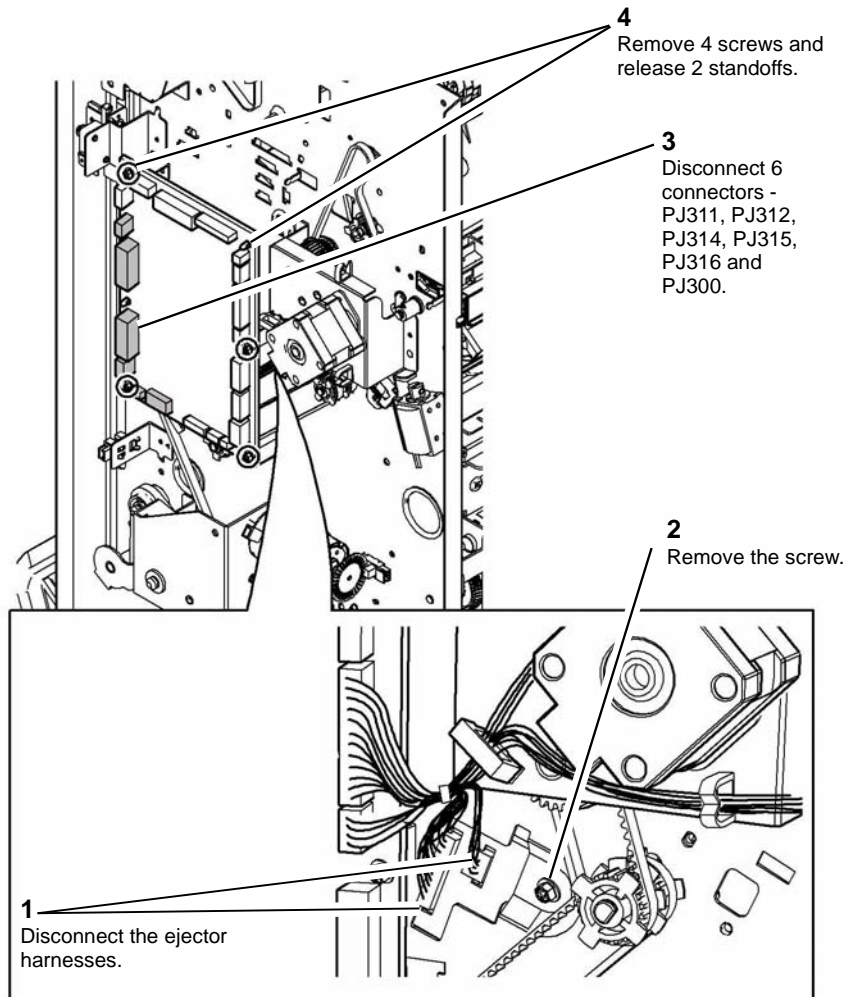
Figure 1 ESD Symbol



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

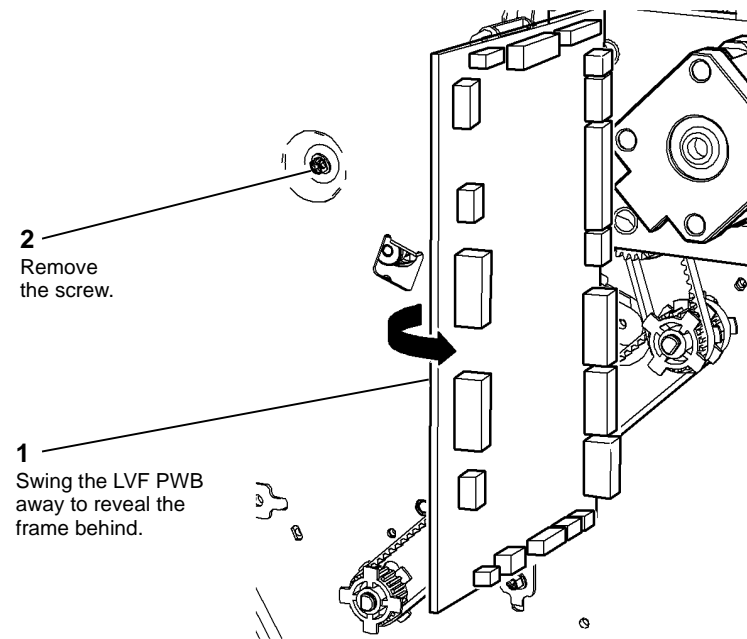
- Remove the stapler traverse assembly, [REP 12.8-150](#).
- Remove and empty the chad bin, [PL 12.330 Item 4](#).
- If necessary, manually move the ejector to the left position.

4. Prepare to remove the ejector assembly, [Figure 2](#) and [Figure 3](#).



W-1-0303-A

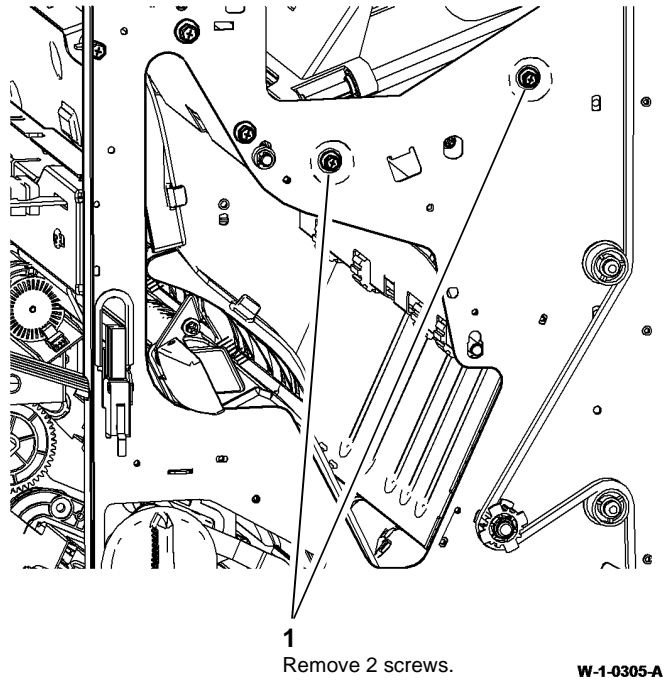
Figure 2 Preparation 1



W-1-0304-A

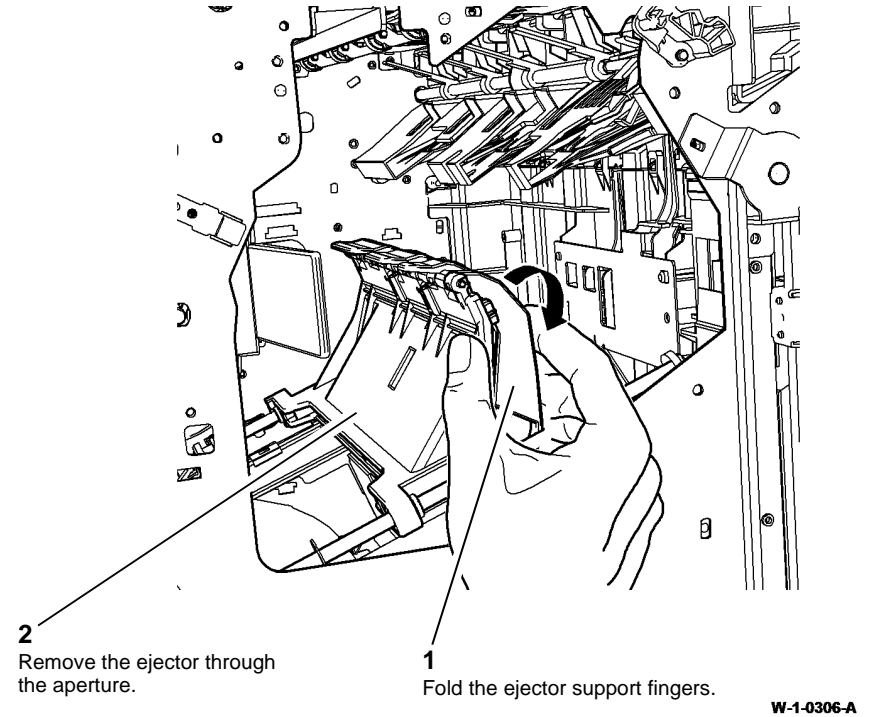
Figure 3 Preparation 2

5. Remove the front fixings, [Figure 4](#).



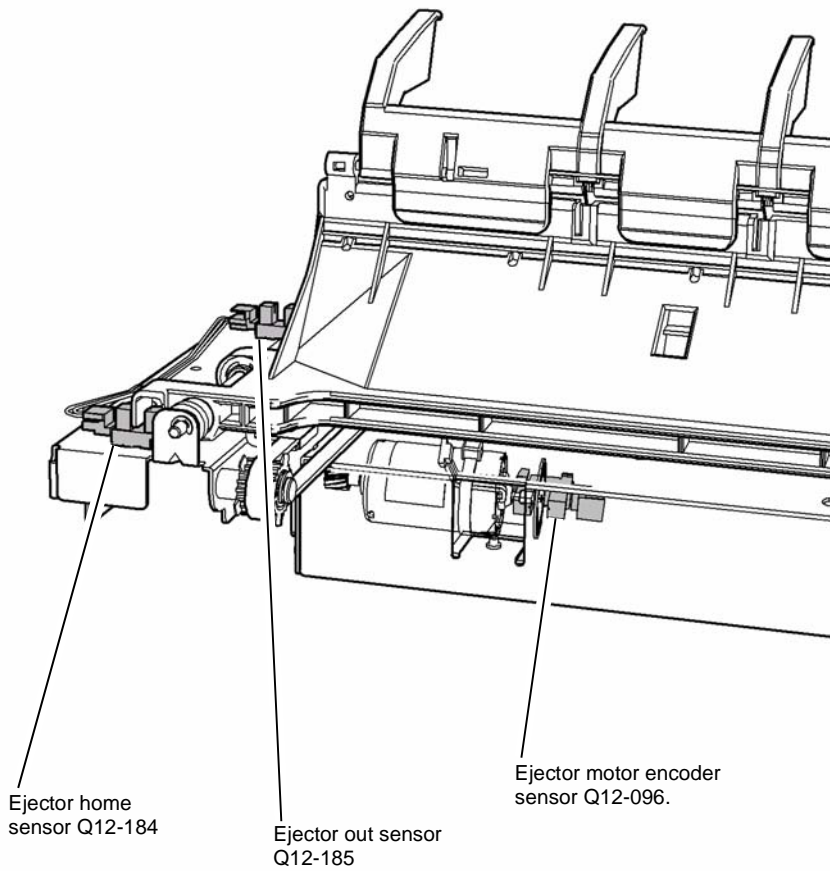
**Figure 4 Front fixings removal**

6. Remove the ejector assembly, [Figure 5](#).



**Figure 5 Ejector assembly removal**

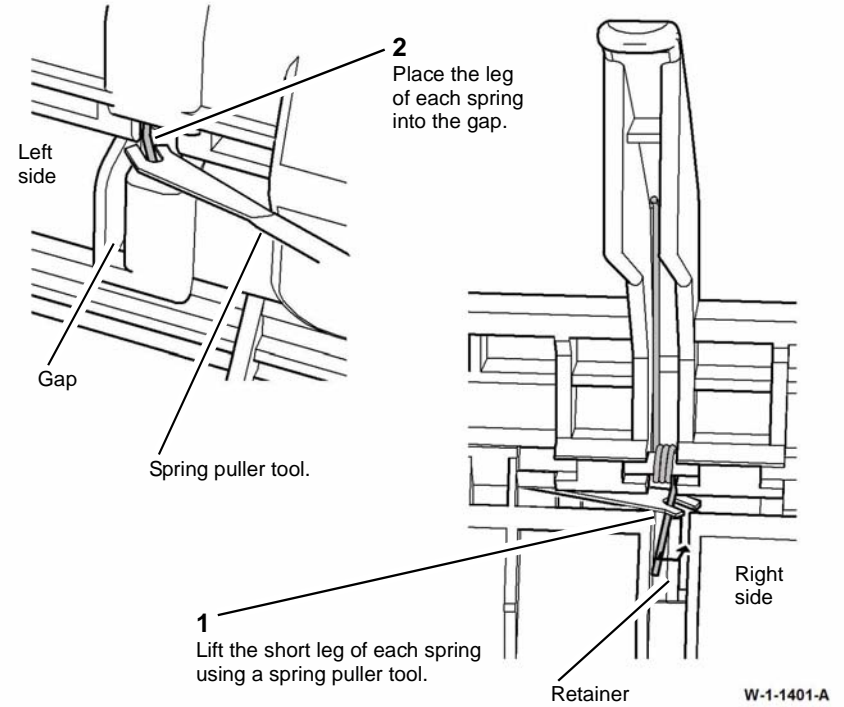
7. If required, remove the appropriate sensor, [Figure 6](#).



**Figure 6 Sensor removal**

W-1-0307-A

8. If required, prepare to remove the support finger, [Figure 7](#).



**Figure 7 Preparation**

W-1-1401-A

9. Remove the support finger, [Figure 8](#).

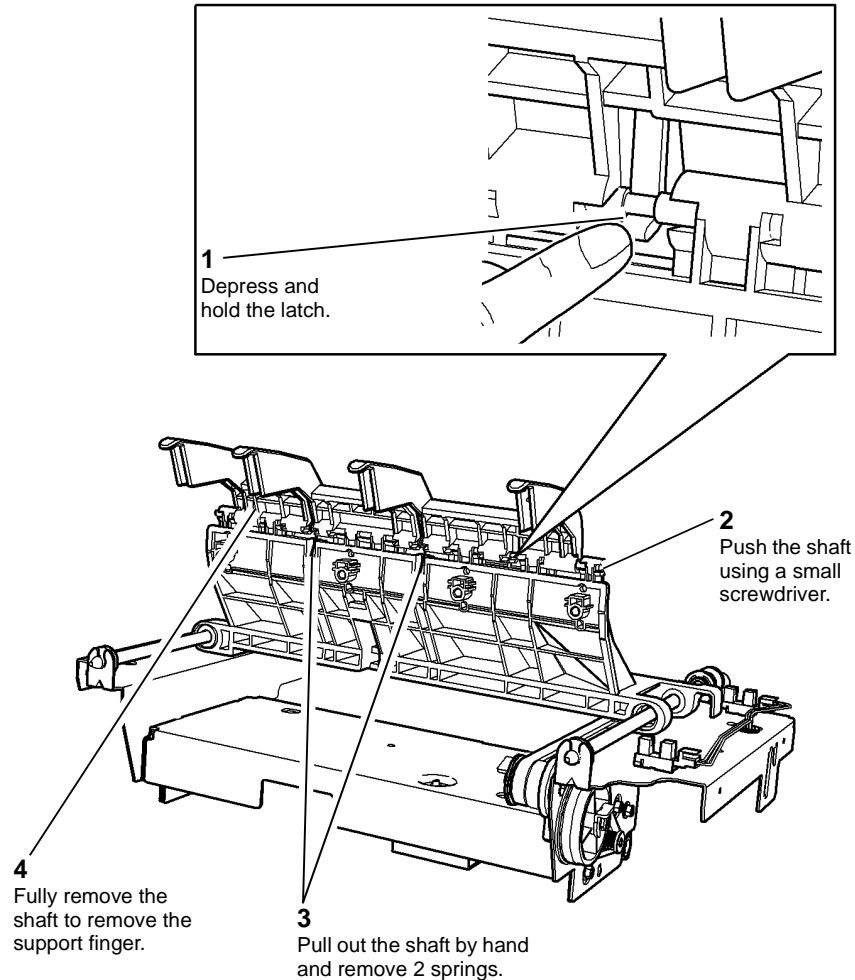


Figure 8 Support finger removal

## 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](#).

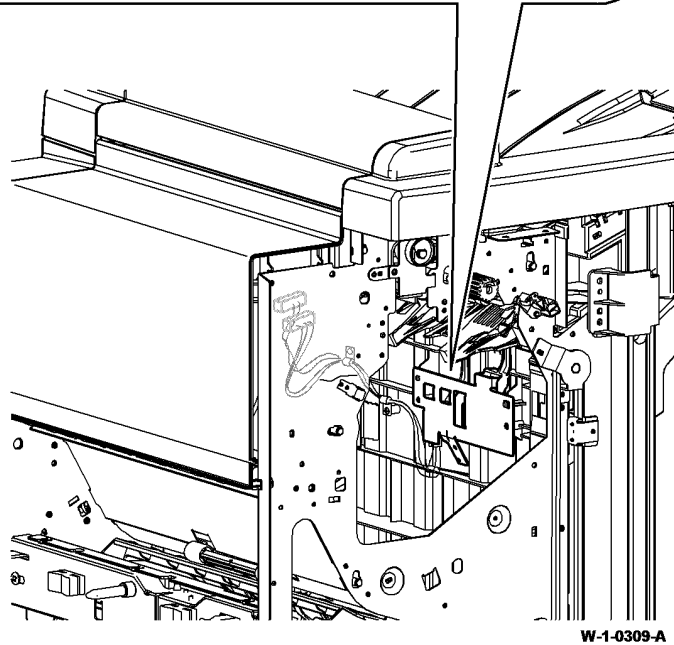
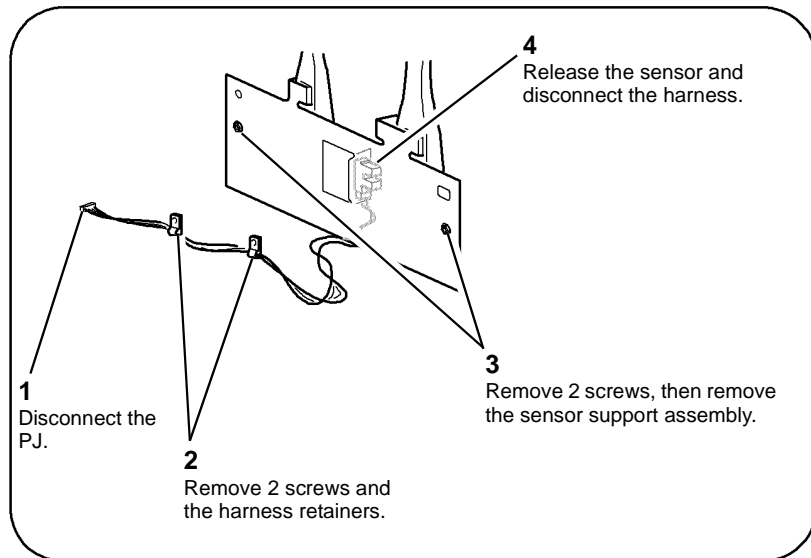


Figure 1 Bin 1 level sensors removal

## 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.

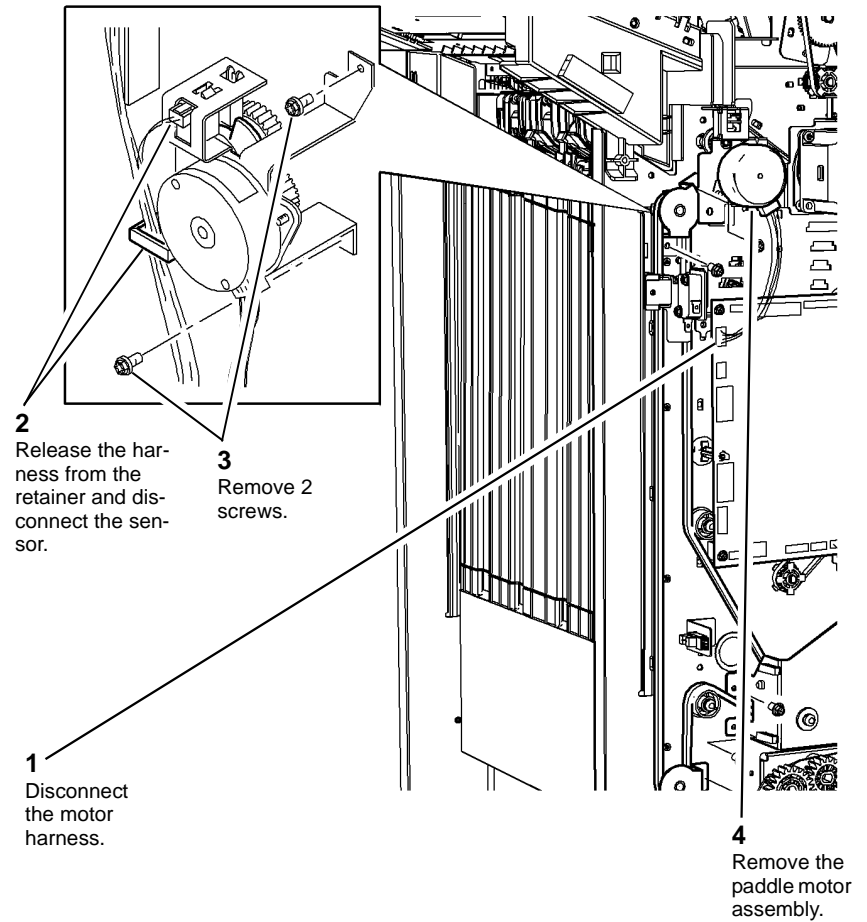


#### WARNING

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](#).

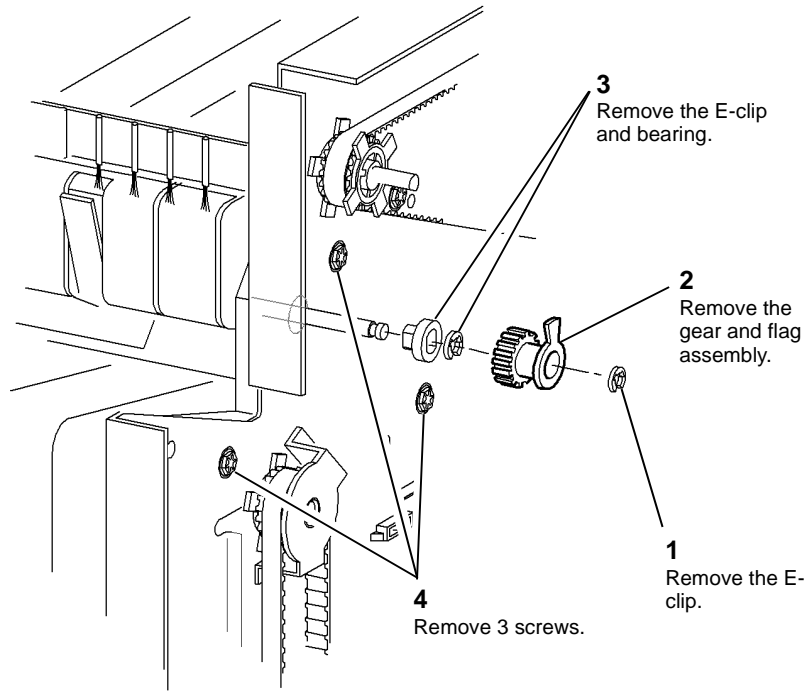
3. Remove the paddle motor assembly, [Figure 1](#).



W-1-0310-A

Figure 1 Paddle motor assembly

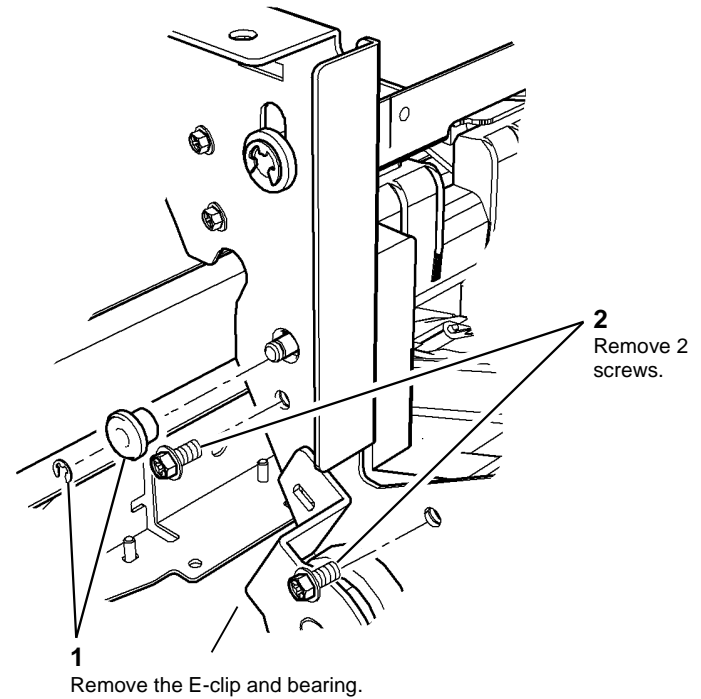
4. Prepare to remove the rear components, [Figure 2](#).



W-1-0311-A

Figure 2 Rear preparation

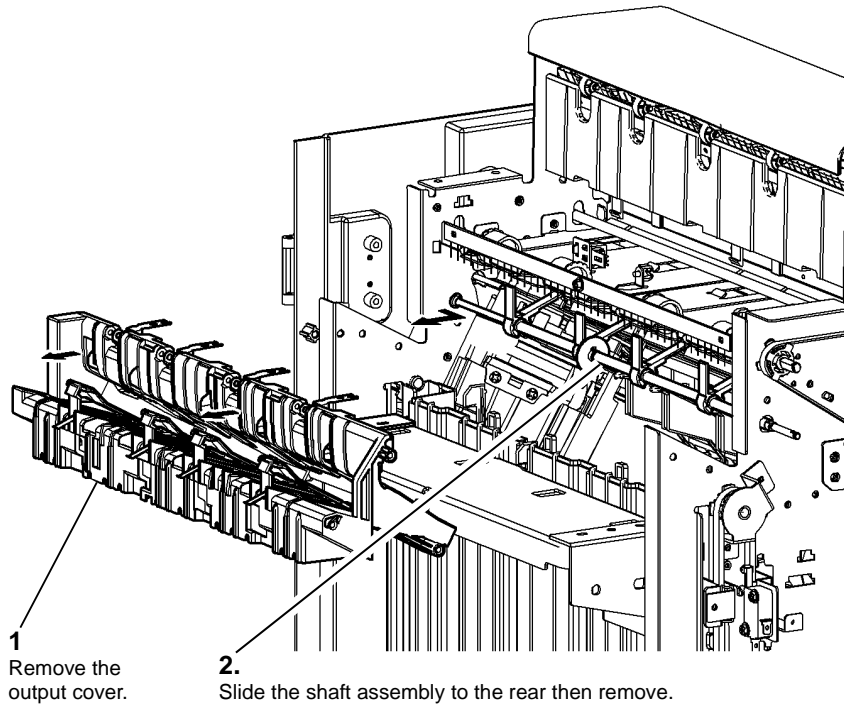
5. Prepare to remove the front components, [Figure 3](#).



W-1-0312-A

Figure 3 Front preparation

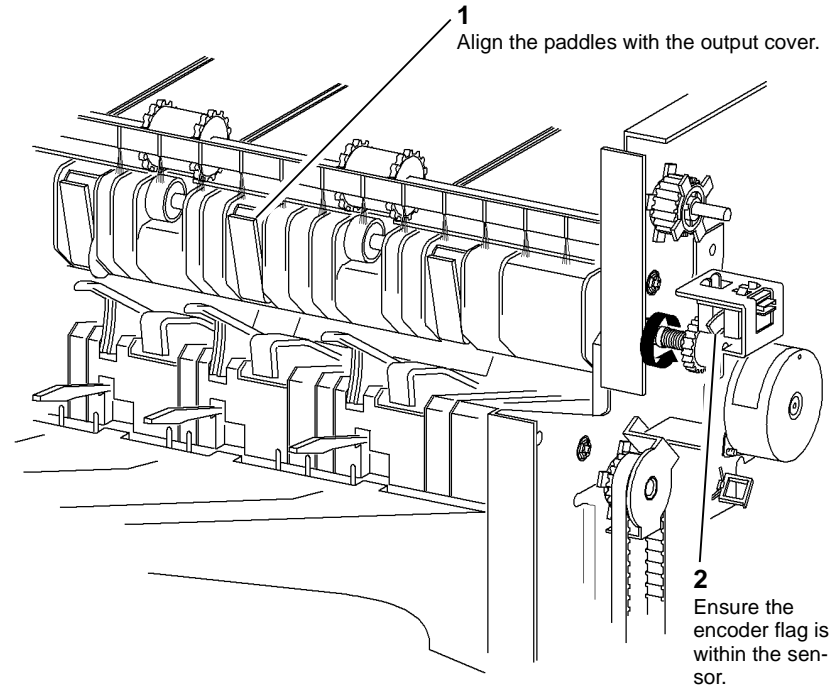
- Remove the paddle shaft assembly, [Figure 4](#).



**Figure 4 Paddle shaft removal**

W-1-0313-A

- Ensure that the paddles and flag are correctly aligned [Figure 5](#).



**Figure 5 Paddle alignment**

W-1-0314-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.
- 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

  
**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**

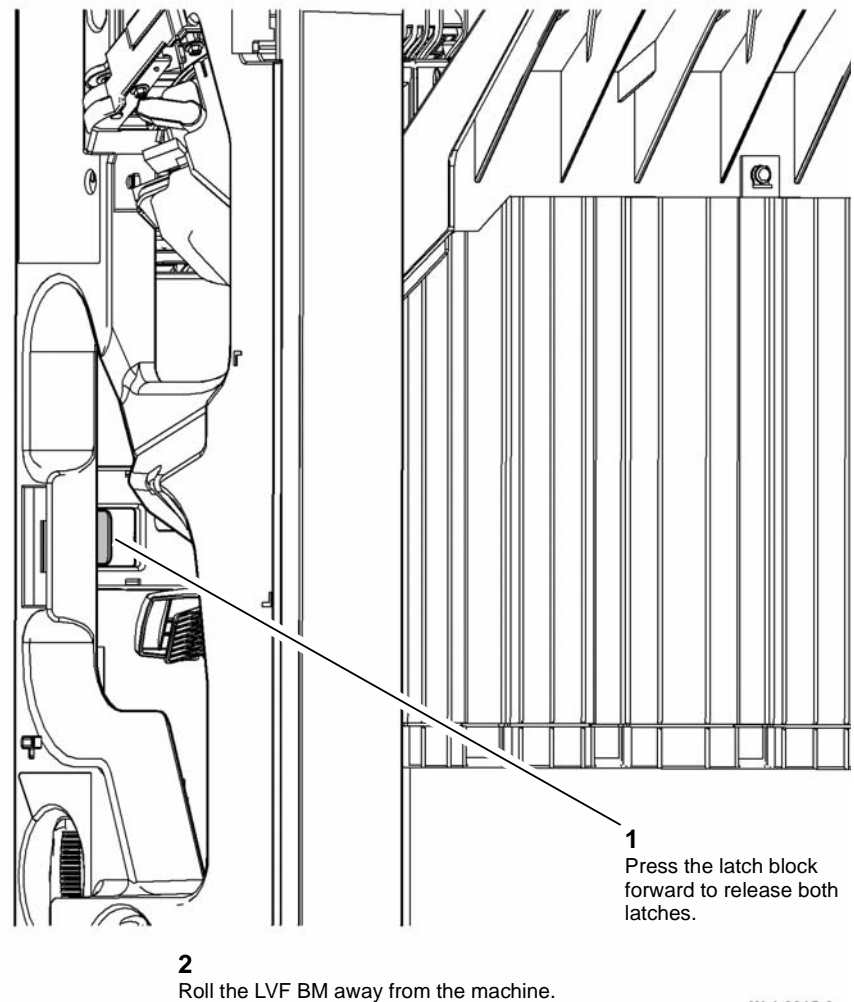
Take care during this procedure. Sharp edges may be present that can cause injury.

  
**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. 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](#).



W-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](#).

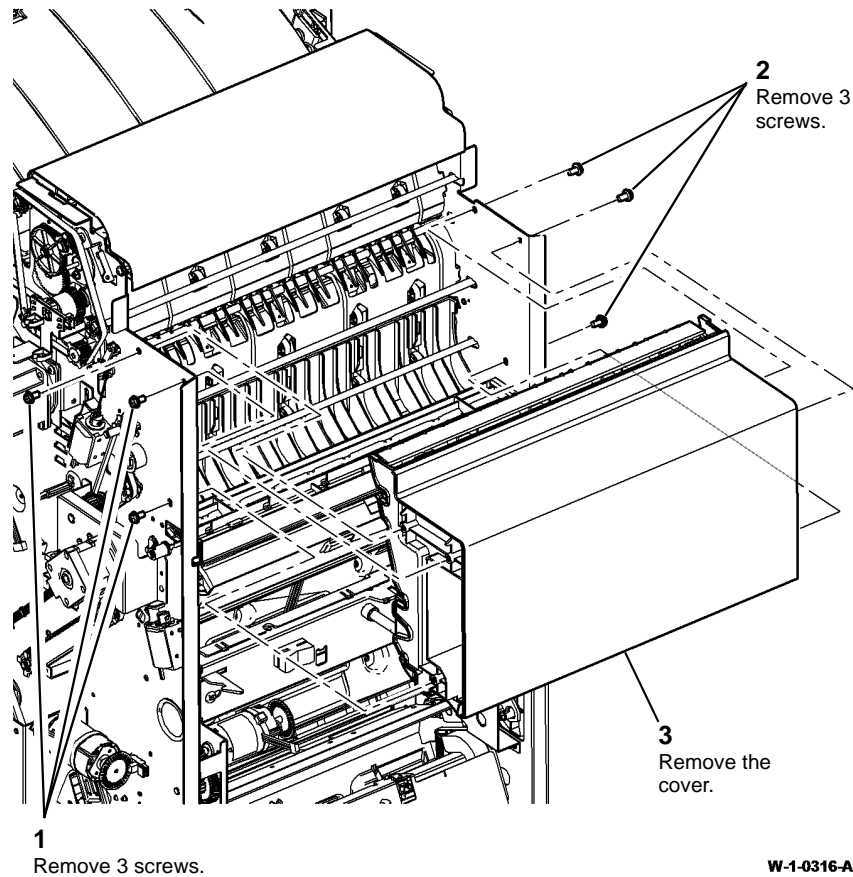


Figure 1 Entry guide cover removal

## 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**

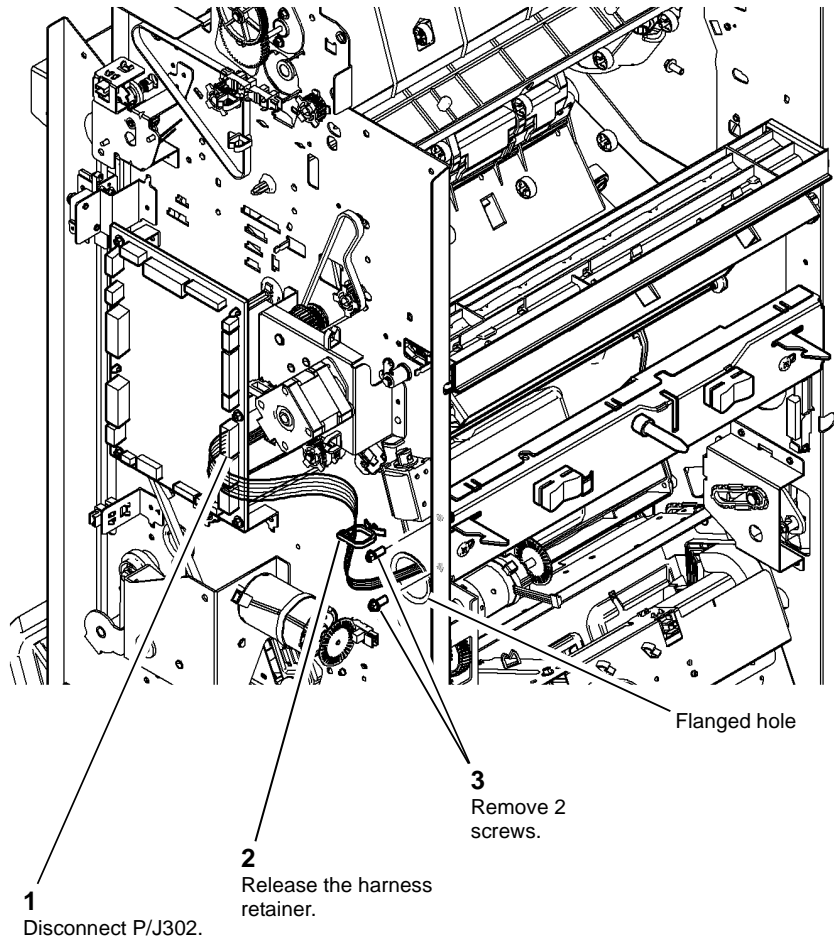
Take care during this procedure. Sharp edges may be present that can cause injury.

  
**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](#).

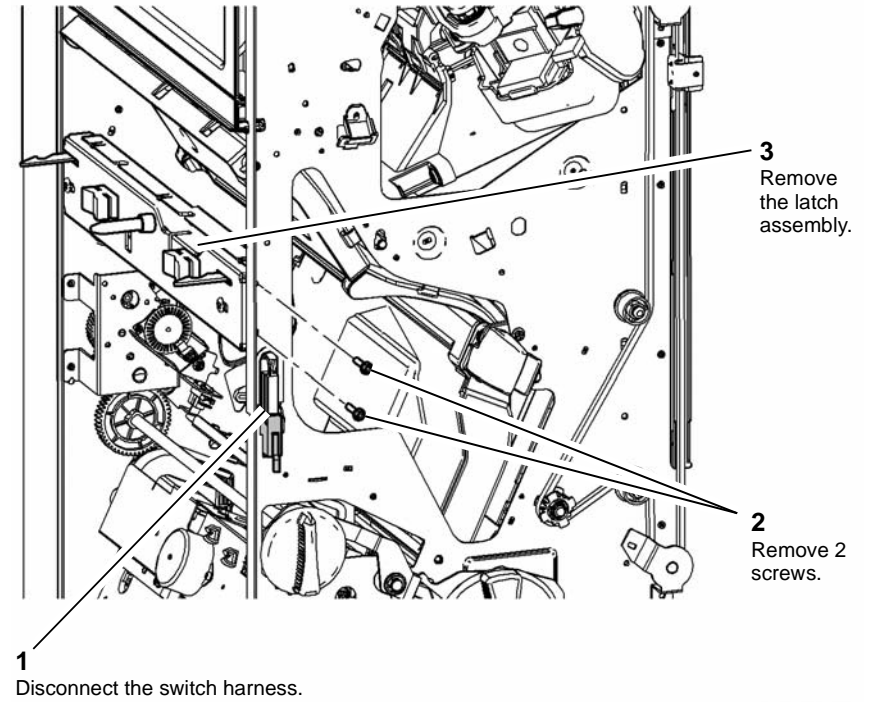
3. Prepare to remove the docking latch assembly, **Figure 1**.



W-1-0317-A

**Figure 1 Prepare to remove the latch**

4. Remove the docking latch assembly, **Figure 2**.



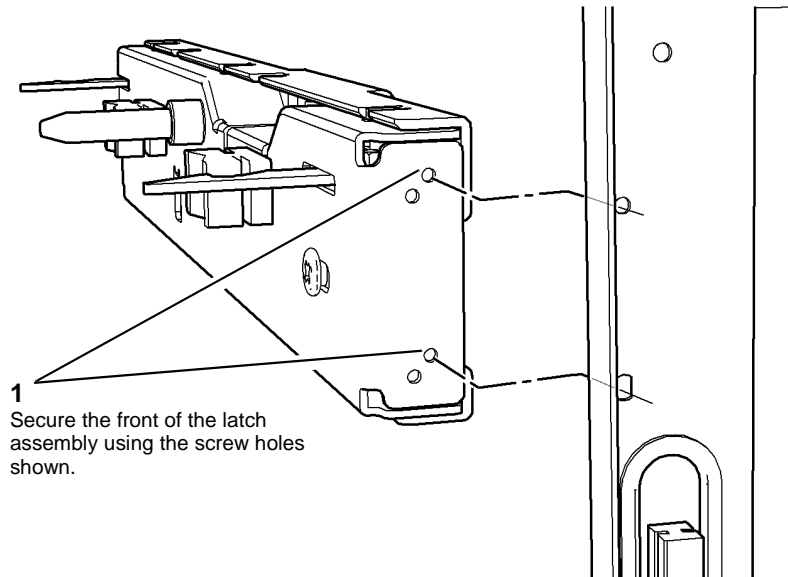
W-1-0318-A

**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](#).



W-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](#).

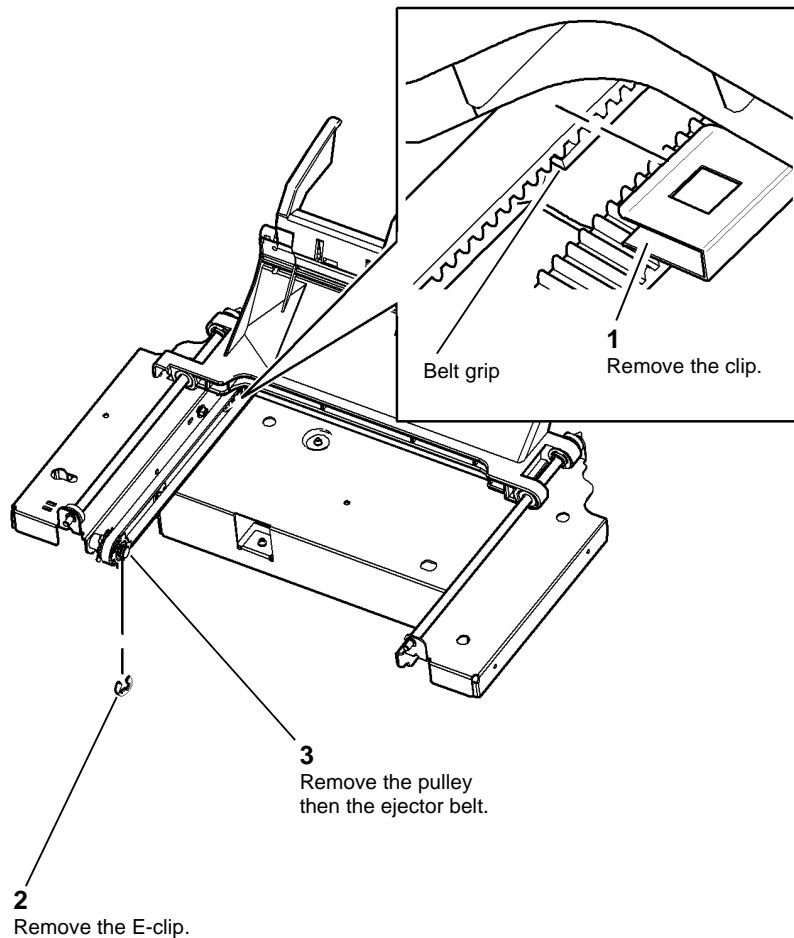


Figure 1 Remove the ejector belt

W-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](#).

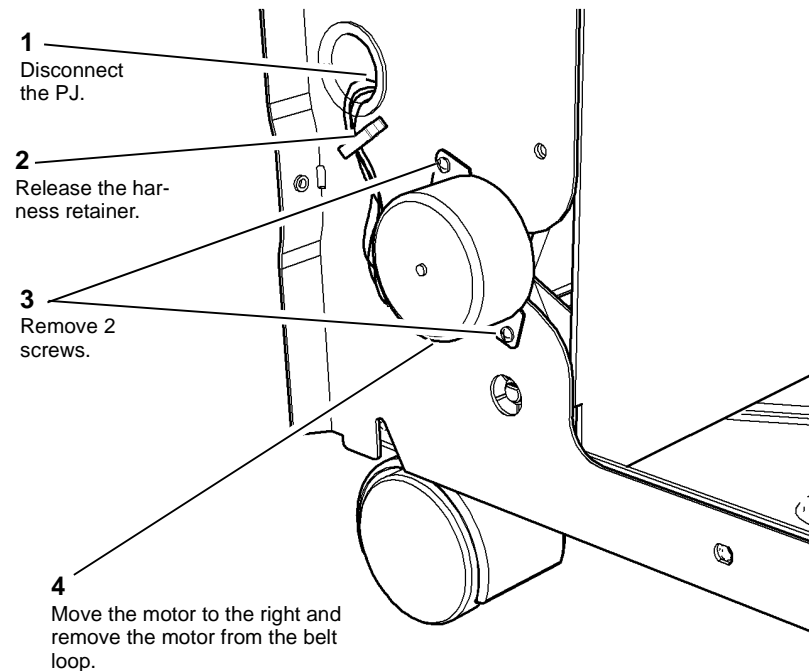
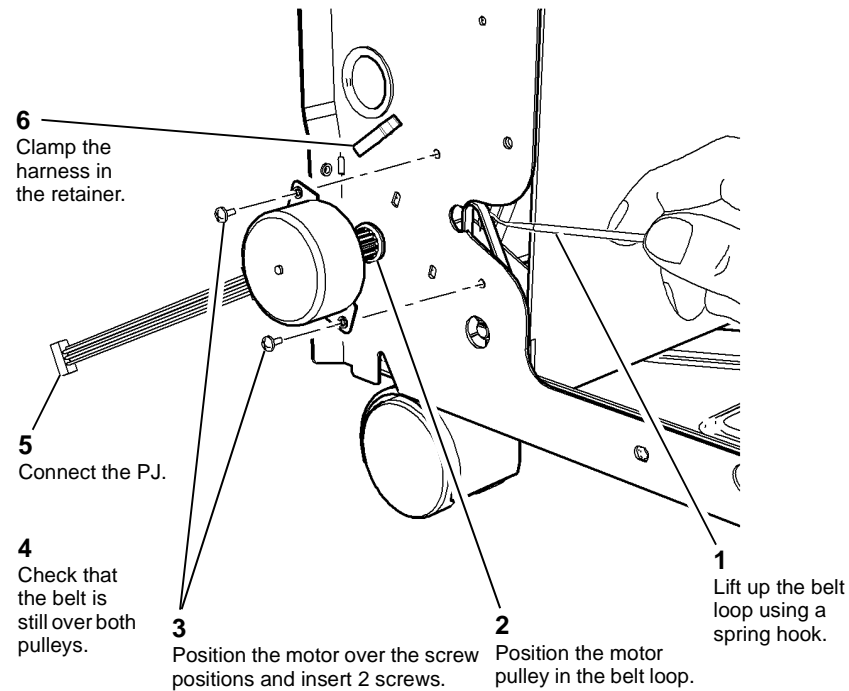


Figure 1 Back stop motor removal

W-1-0320-A

## Replacement

1. Install the back stop motor, [Figure 2](#).



W-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

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](#).

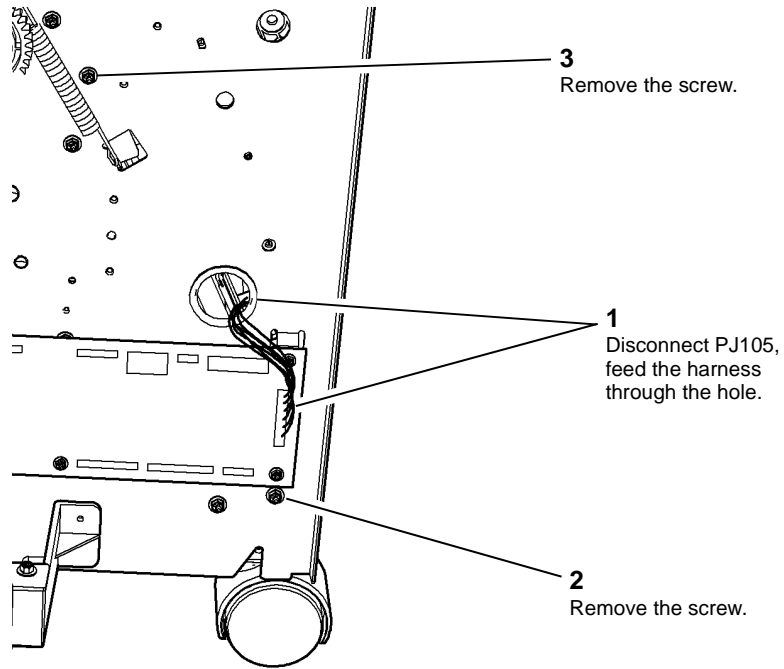


Figure 1 Preparation

W-1-0322-A

7. Remove the left guide assembly, [Figure 2](#).

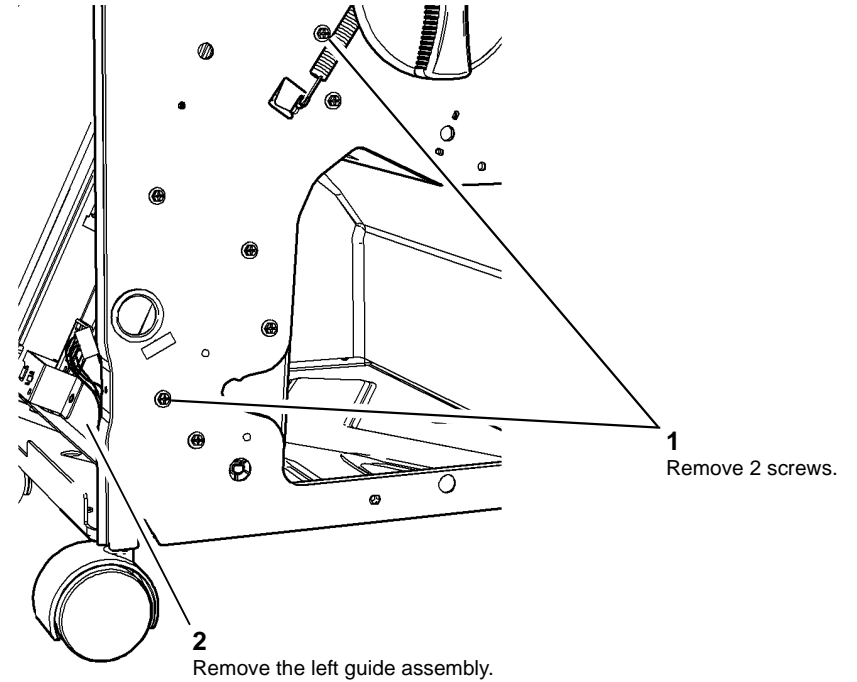


Figure 2 Left guide assembly removal

W-1-0323-A

8. Prepare to remove the right guide assembly, [Figure 3](#).

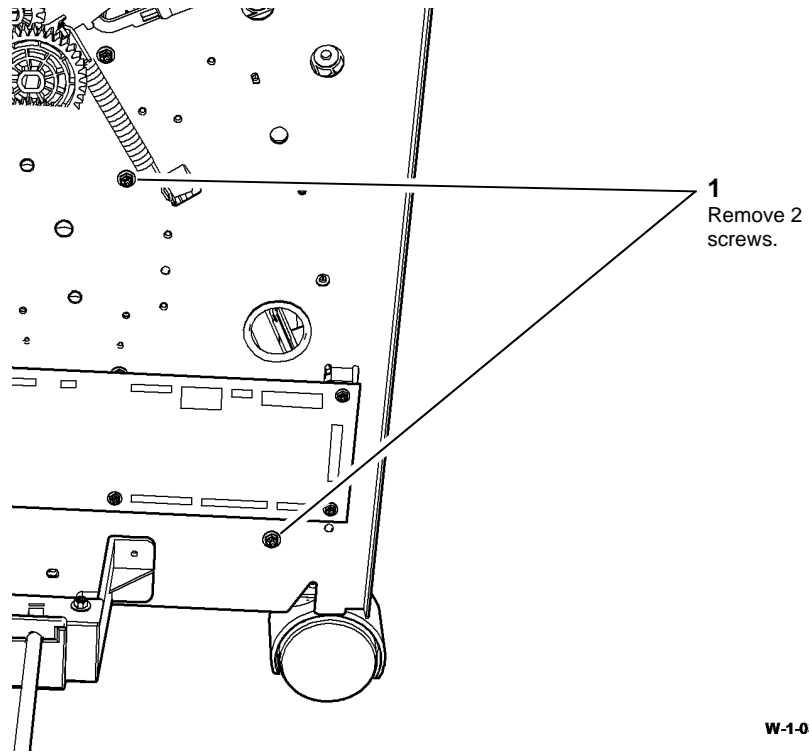


Figure 3 Preparation

9. Remove the right guide assembly, [Figure 4](#).

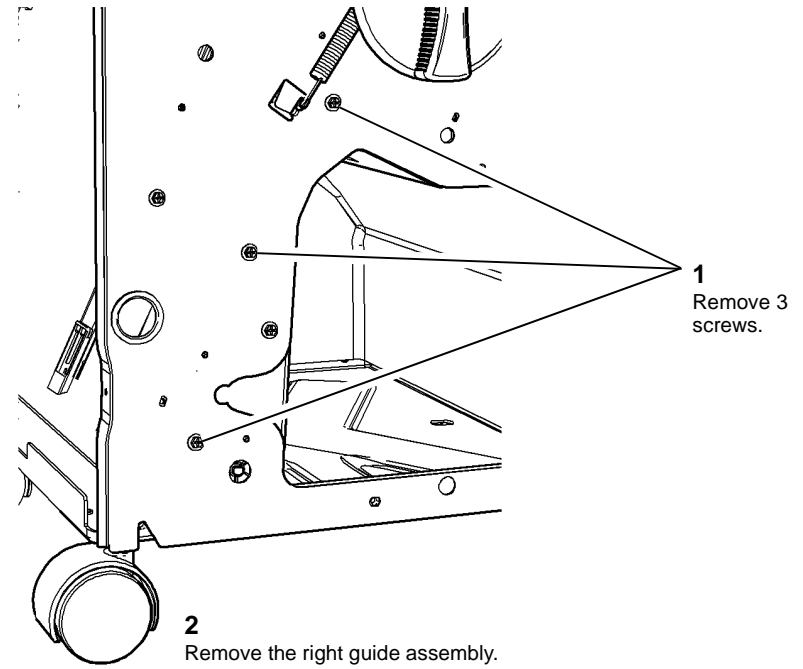
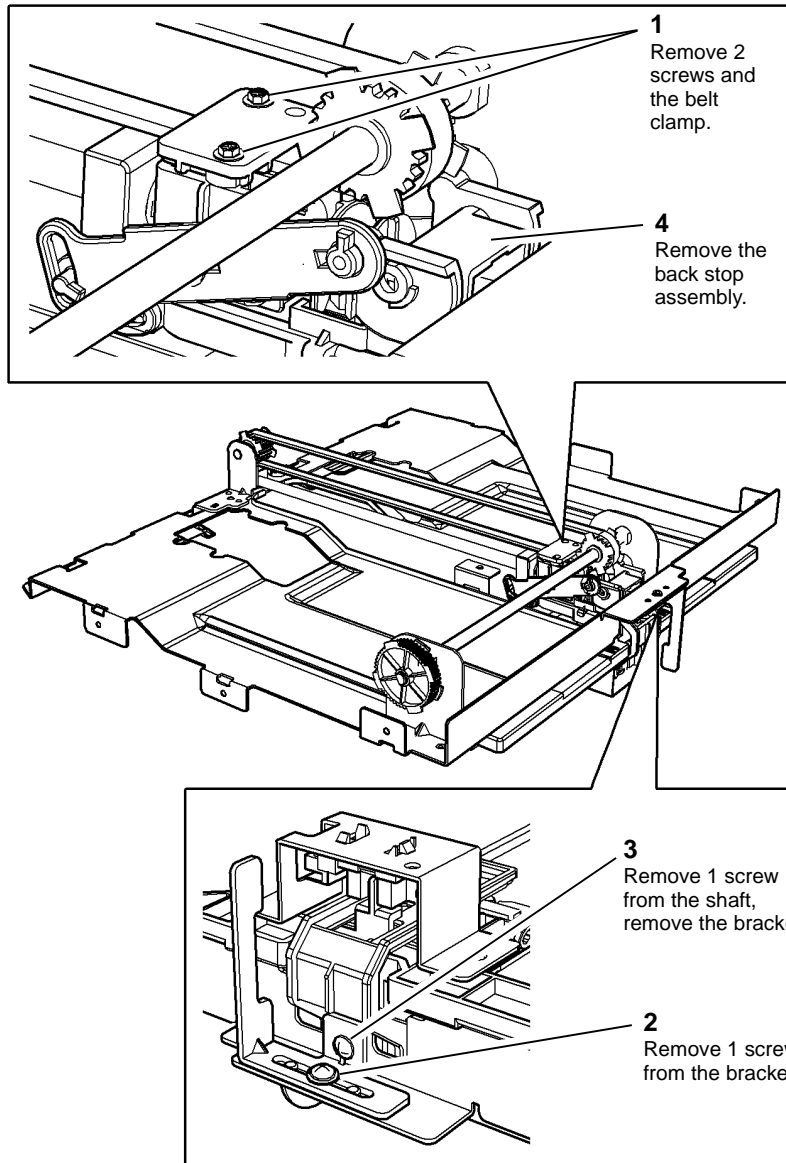


Figure 4 Right guide assembly removal

10. Remove the back stop assembly, [Figure 5](#).

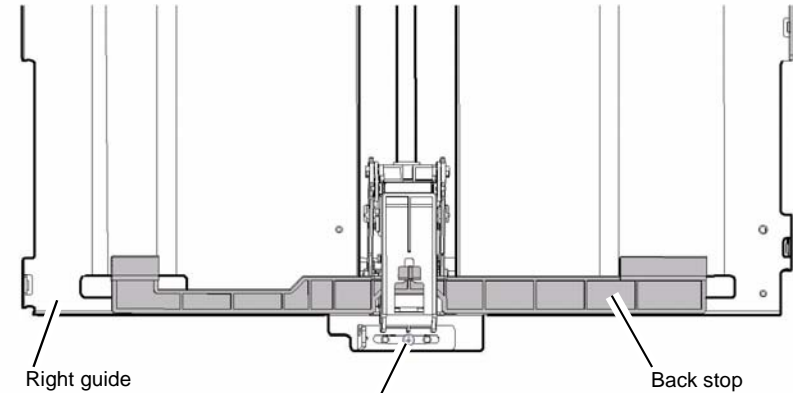


W-1-0326-A

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.

W-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

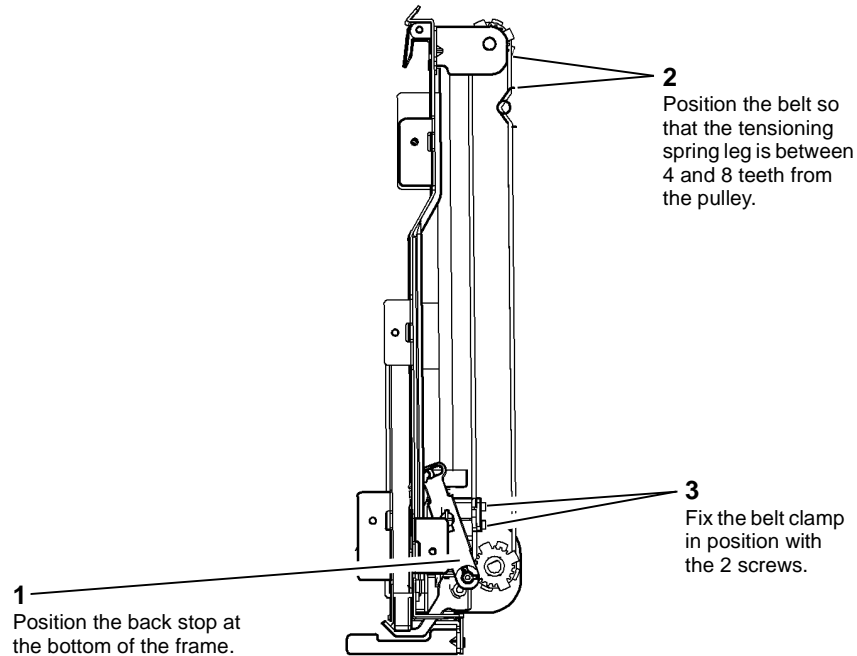


Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



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

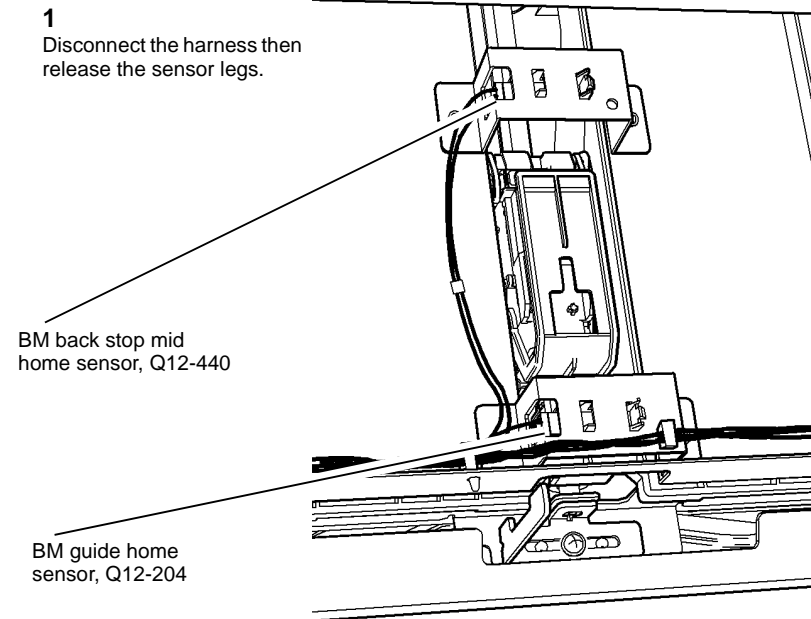
1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM back stop cover, [REP 12.1-150](#).
3. Remove the sensors, [Figure 1](#).



W-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. Perform [ADJ 12.9-150 Booklet Skew](#).
6. Perform [ADJ 12.5-150 Booklet Crease Position](#).



W-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.



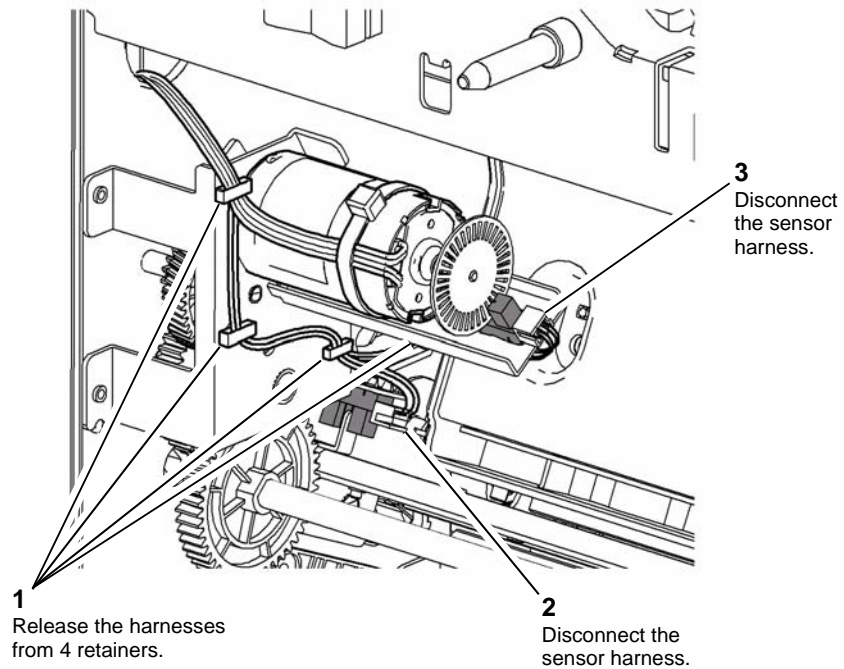
### WARNING

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](#).



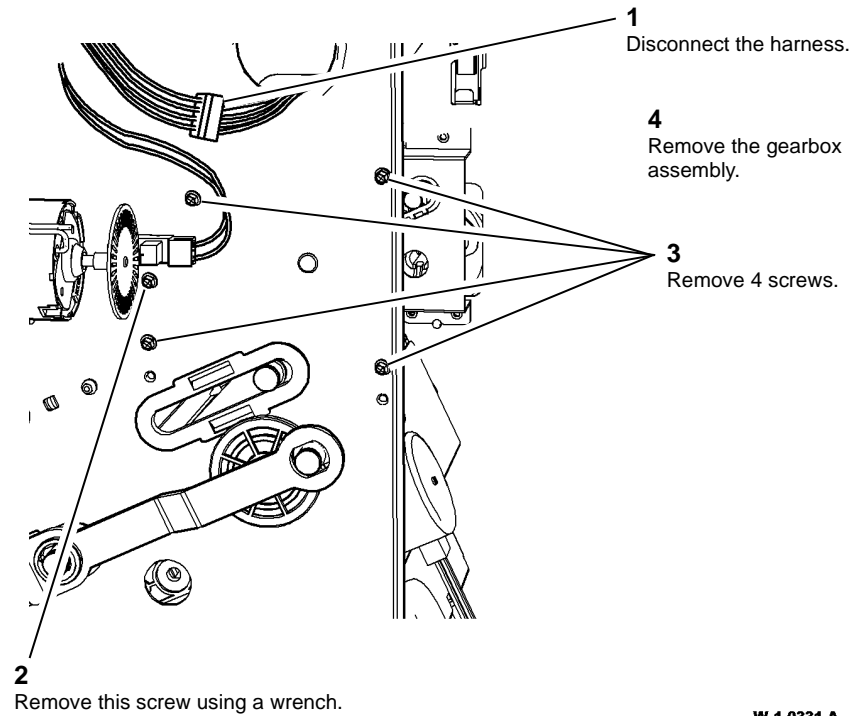
3. Prepare to remove the crease blade motor and gearbox, [Figure 1](#).



**Figure 1 Preparation**

W-1-0330-A

4. Remove the crease blade gearbox assembly, [Figure 2](#).



**Figure 2 Gearbox assembly removal**

W-1-0331-A

5. Remove the crease blade motor, MOT12-252 by removing the 2 mounting screws.
6. Remove the crease blade home sensor, Q12-214 by releasing the sensor legs.
7. 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.

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 crease blade cranks, bearings, drive gear and handle, [REP 12.23-150](#).

5. Prepare to remove the crease blade assembly, [Figure 1](#).

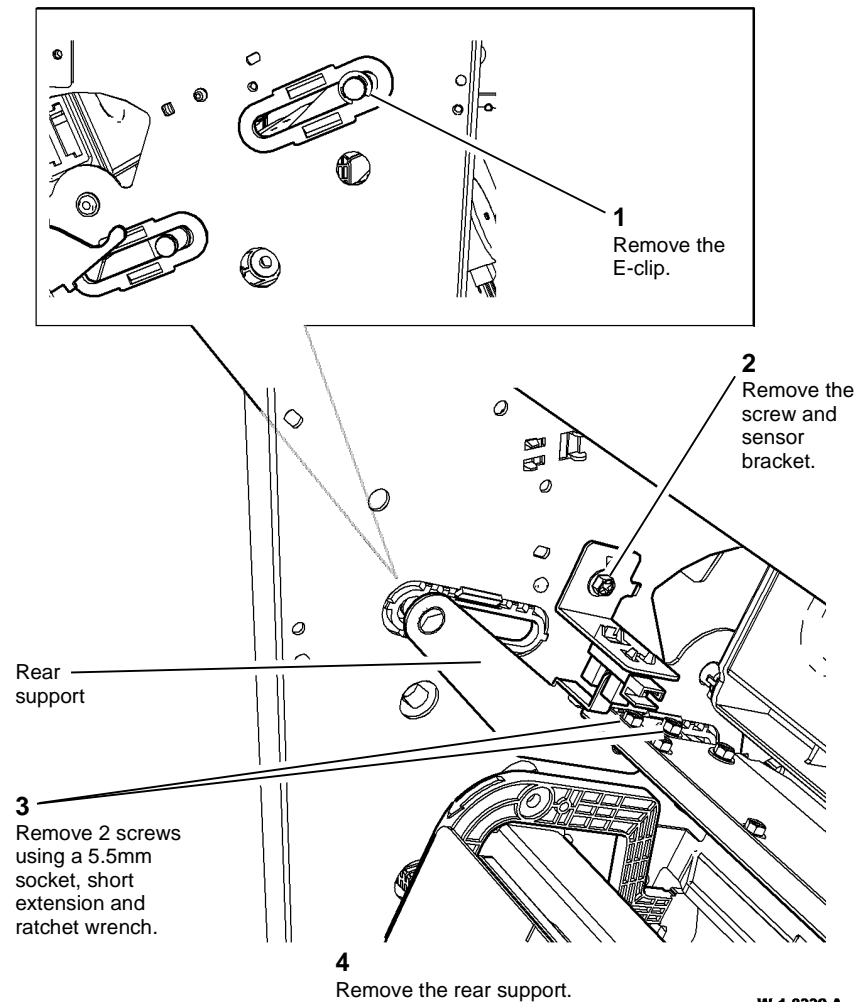
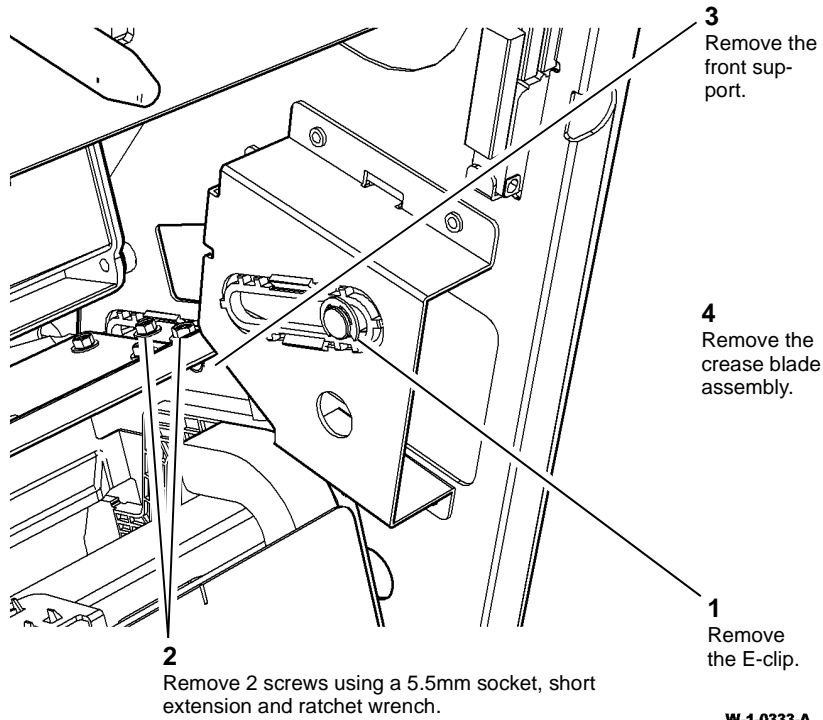


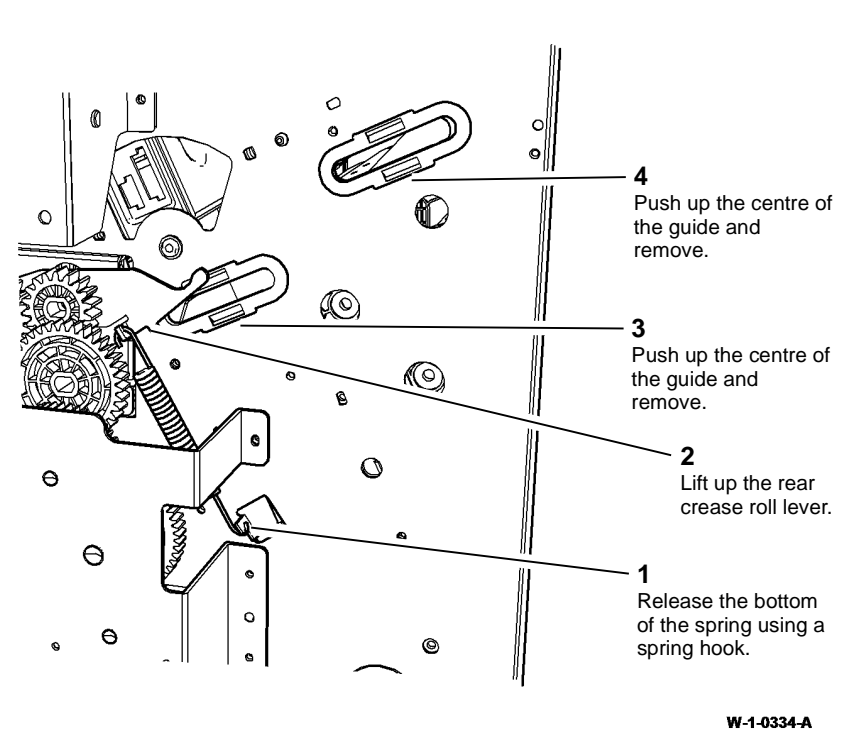
Figure 1 Preparation

6. Remove the crease blade assembly, [Figure 2](#).



**Figure 2 Crease blade assembly removal**

7. Remove the rear crease blade guides, [Figure 3](#).



**Figure 3 Rear guides removal**

8. Remove the front crease blade guides, [Figure 4](#).

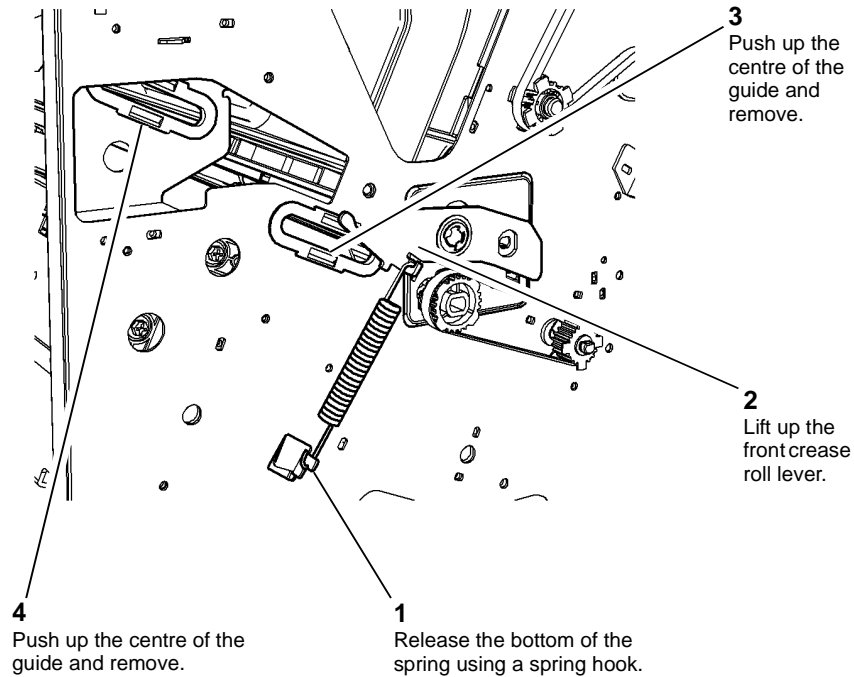


Figure 4 Front guides removal

### Replacement

1. The replacement is the reverse of the removal procedure.
2. Perform [ADJ 12.5-150](#) 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.



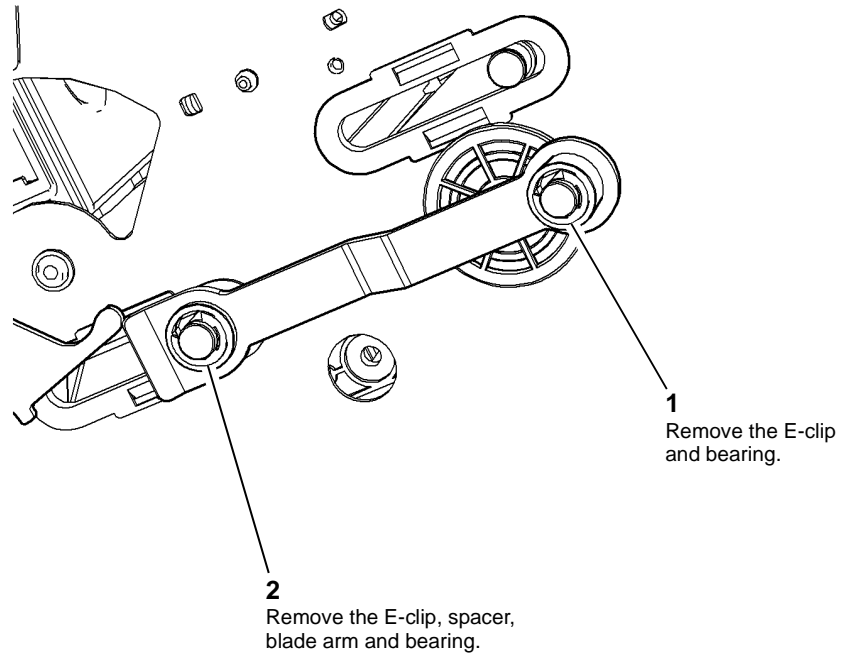
**WARNING**

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](#).

W-1-0335-A

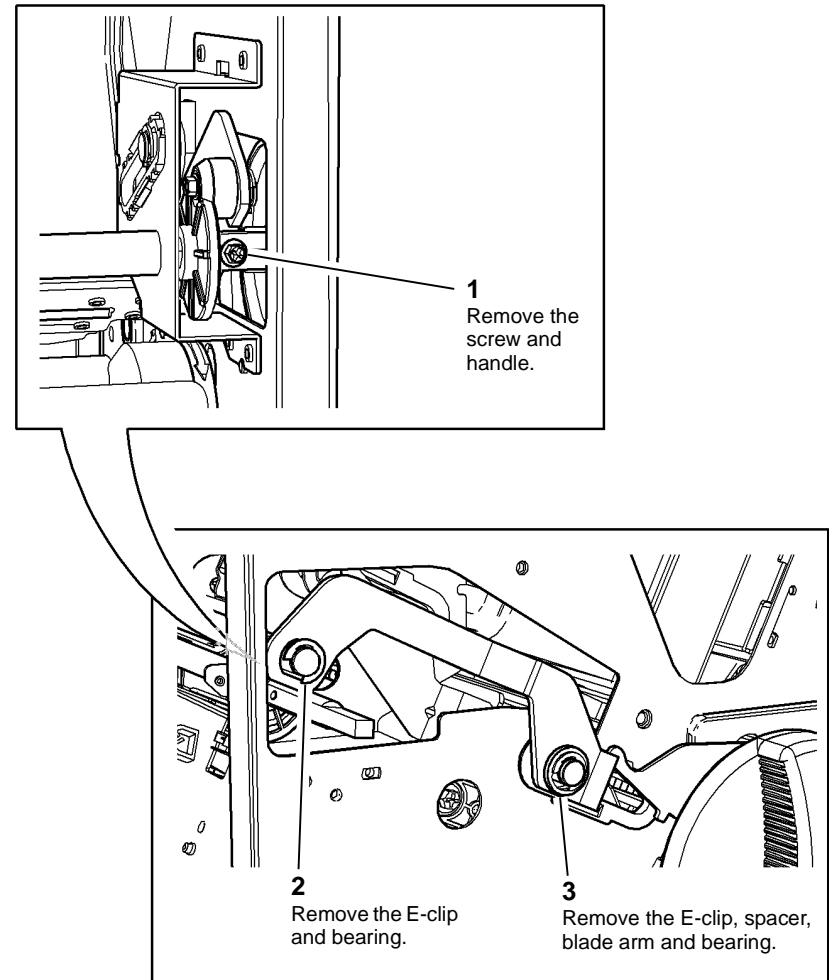
4. Remove the rear blade arm, **Figure 1**.



**Figure 1 Rear blade arm removal**

W-1-0336-A

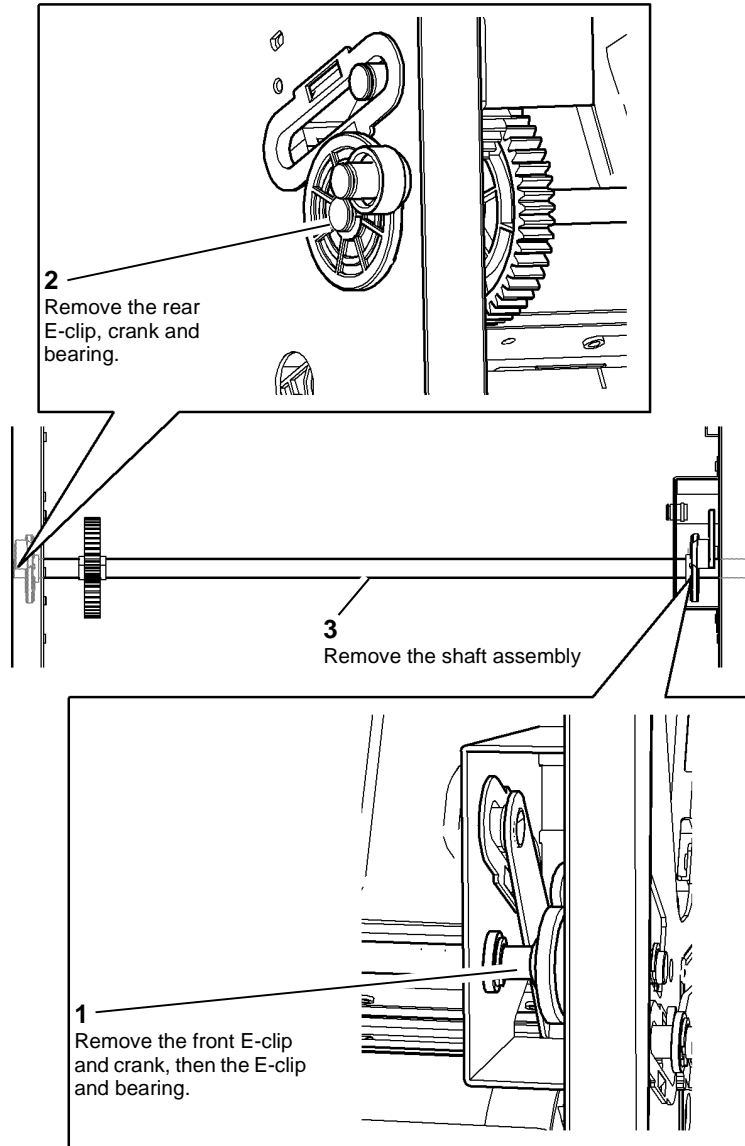
5. Remove the front blade arm, **Figure 2**.



**Figure 2 Front blade arm removal**

W-1-0337-A

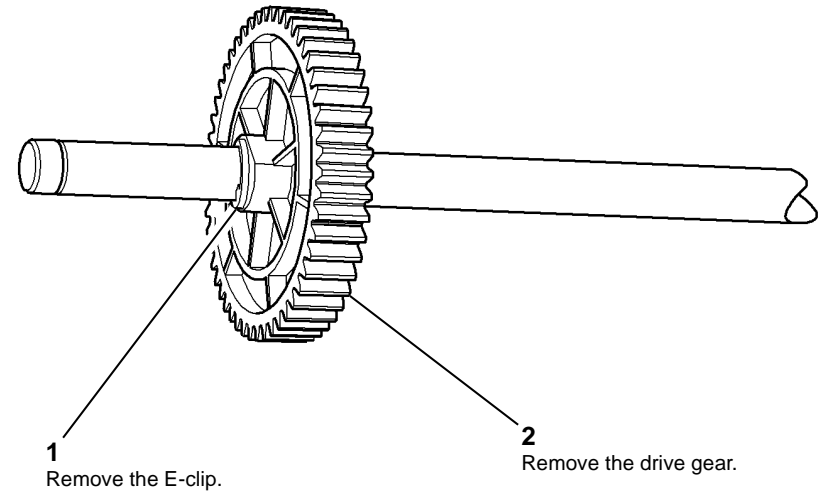
6. Remove the crease blade shaft assembly, [Figure 3](#).



**Figure 3 Crease blade shaft removal**

W-1-0338-A

7. Remove the crease blade drive gear, [Figure 4](#).



**Figure 4 Drive gear removal**

W-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.

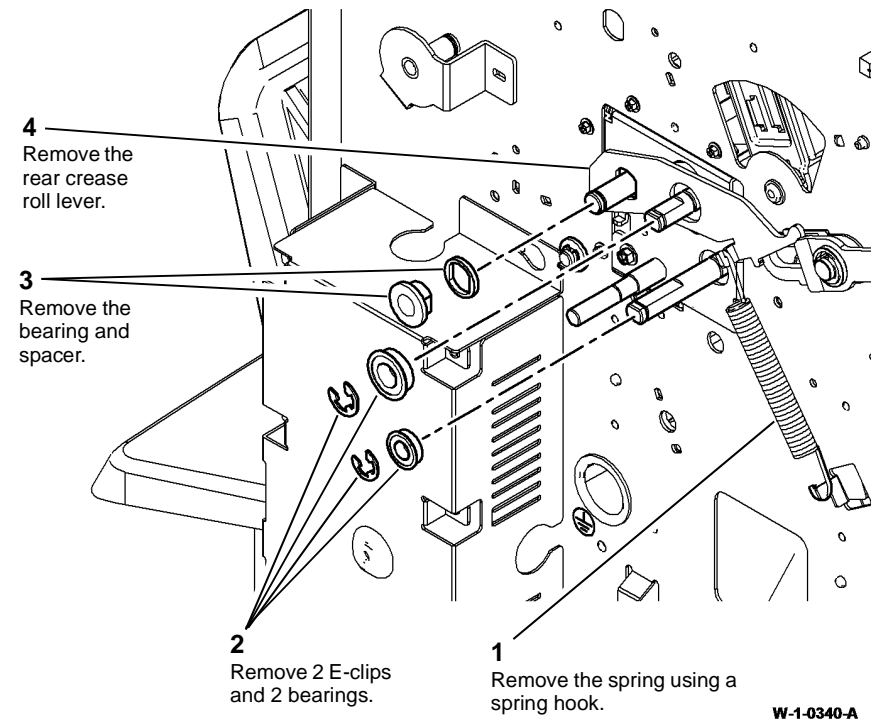
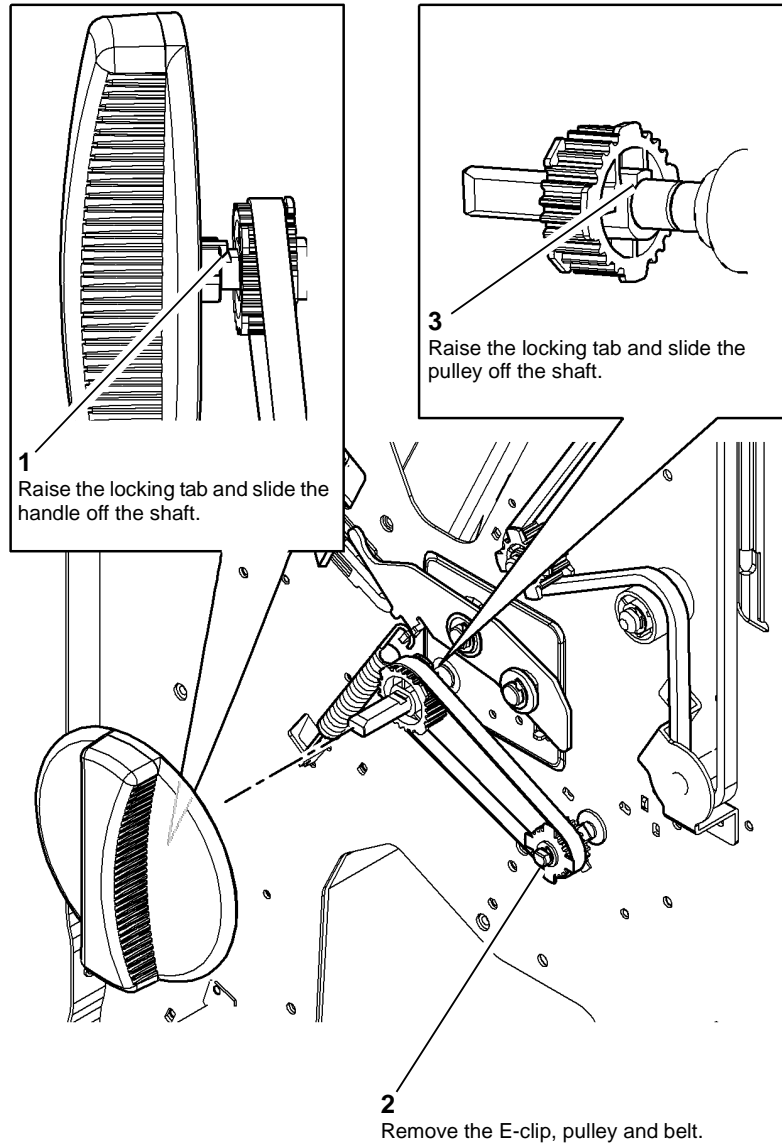


Figure 1 Rear lever removal

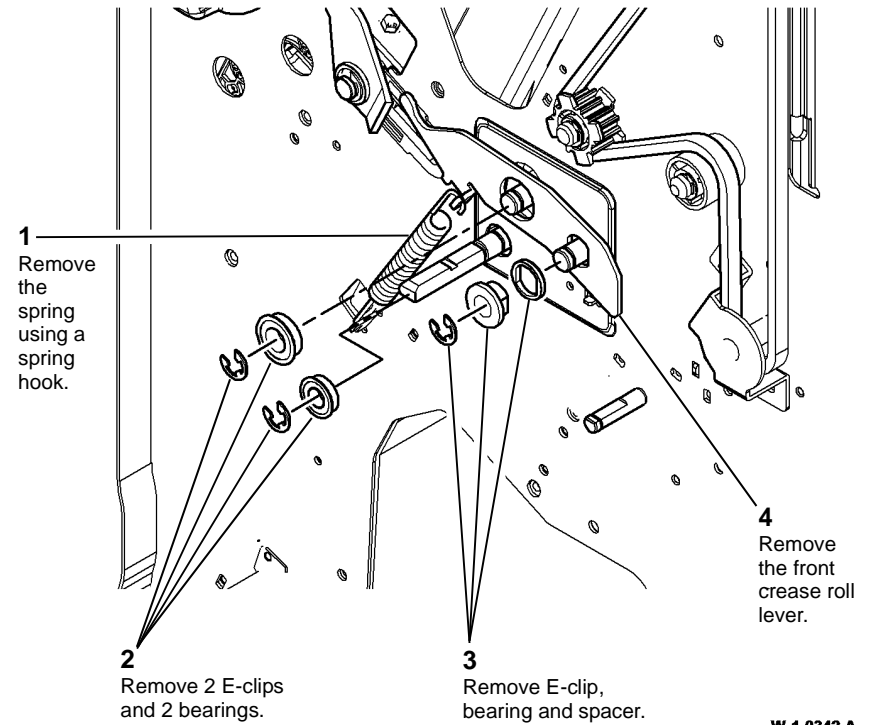
- Remove the exit roll belt components, [Figure 2](#).



**Figure 2** Exit roll belt removal

W-1-0341-A

- Remove the front crease roll lever, [Figure 3](#).



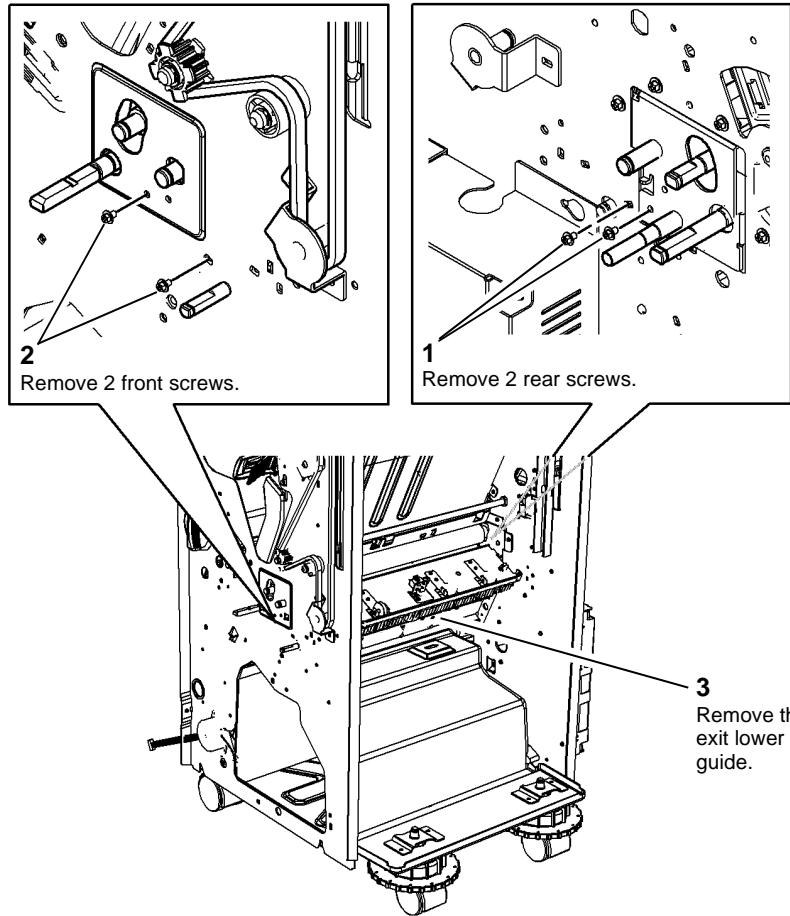
**Figure 3** Front lever removal

W-1-0342-A

- Remove the bin 2 support, [REP 12.44-150](#).
- Remove the lower right cover, [REP 12.45-150](#).
- Remove the bail arm support bracket and bail arm. Refer to [REP 12.29-150](#).
- Remove the exit upper guide assembly, [REP 12.28-150](#).



12. Remove the exit lower guide, [Figure 4](#).

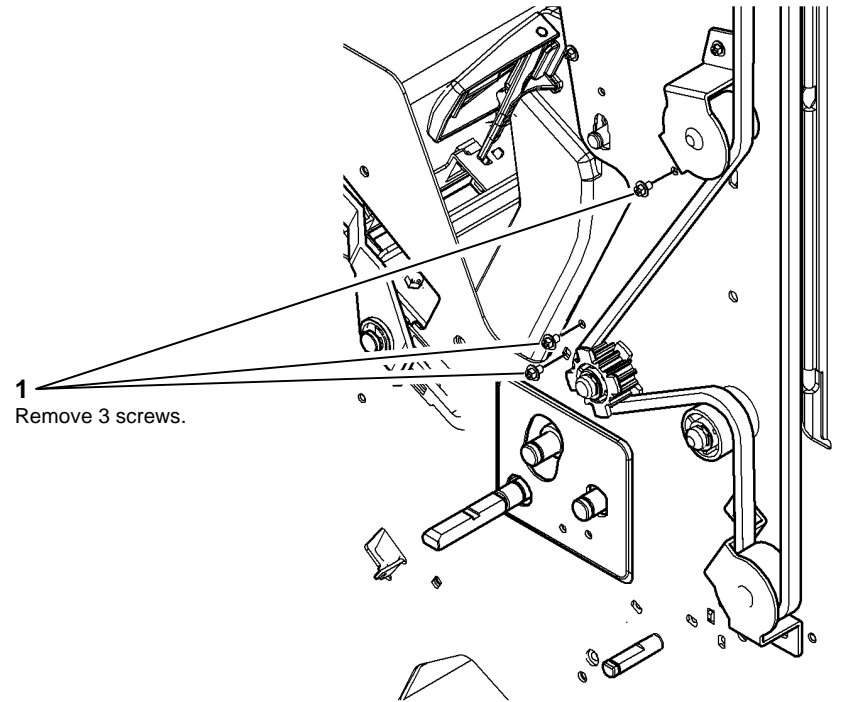


W-1-0343-A

Figure 4 Exit lower guide removal

13. Remove the stacker tray drive and motor assembly. Refer to [REP 12.5-150](#).

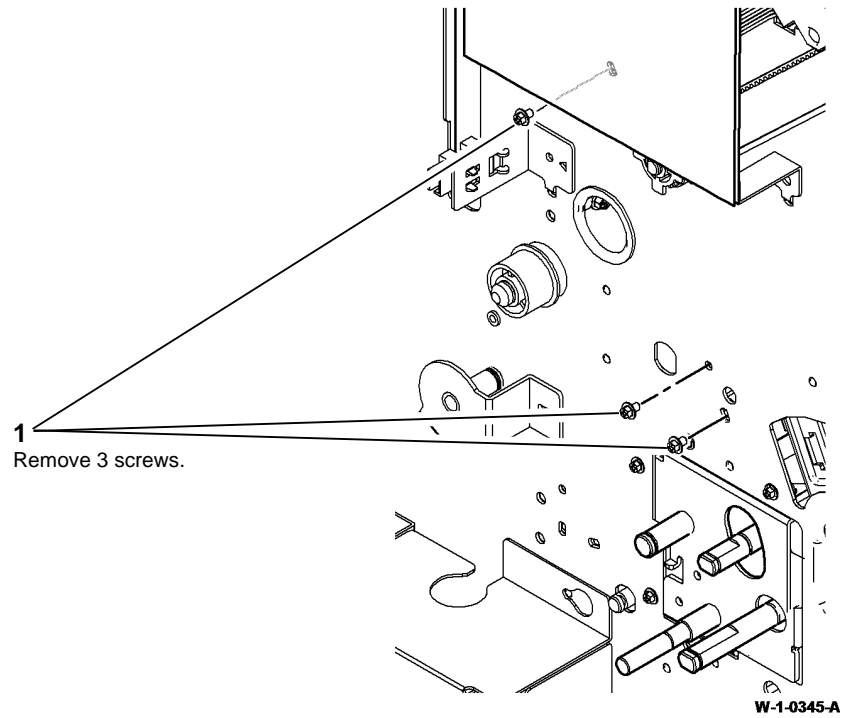
14. Prepare to release the booklet compiler tray, [Figure 5](#).



W-1-0344-A

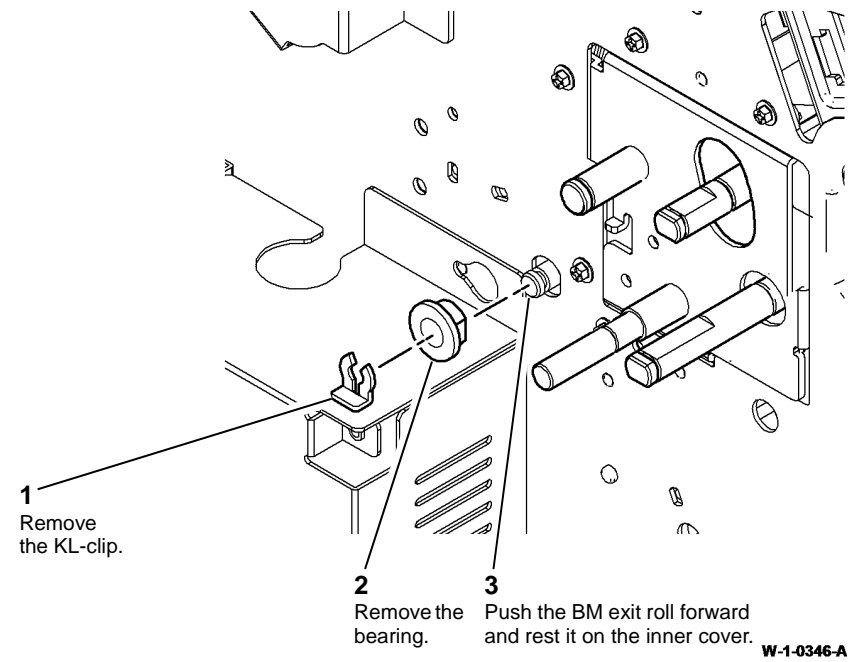
Figure 5 Preparation

15. Release the booklet compiler tray, [Figure 6](#).



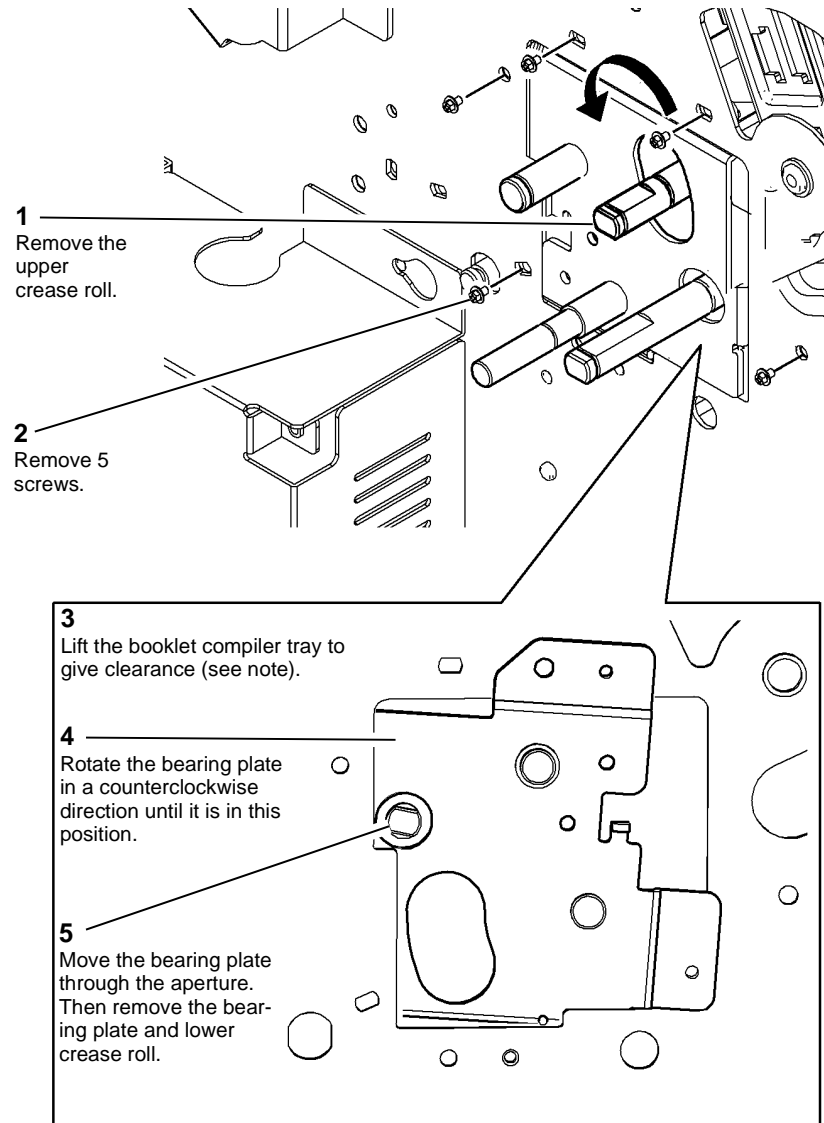
**Figure 6 Tray release**

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](#).



**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](#).

W-1-0347-A

Figure 8 Crease rolls removal

## 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](#).

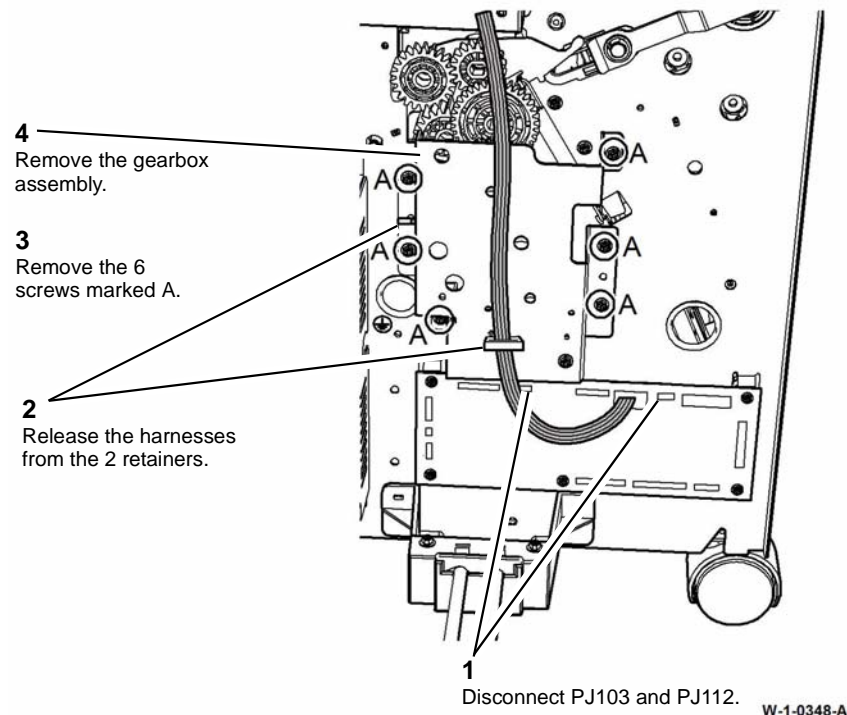


Figure 1 Gearbox removal

3. Remove the crease roll motor and sensor, [Figure 2](#).

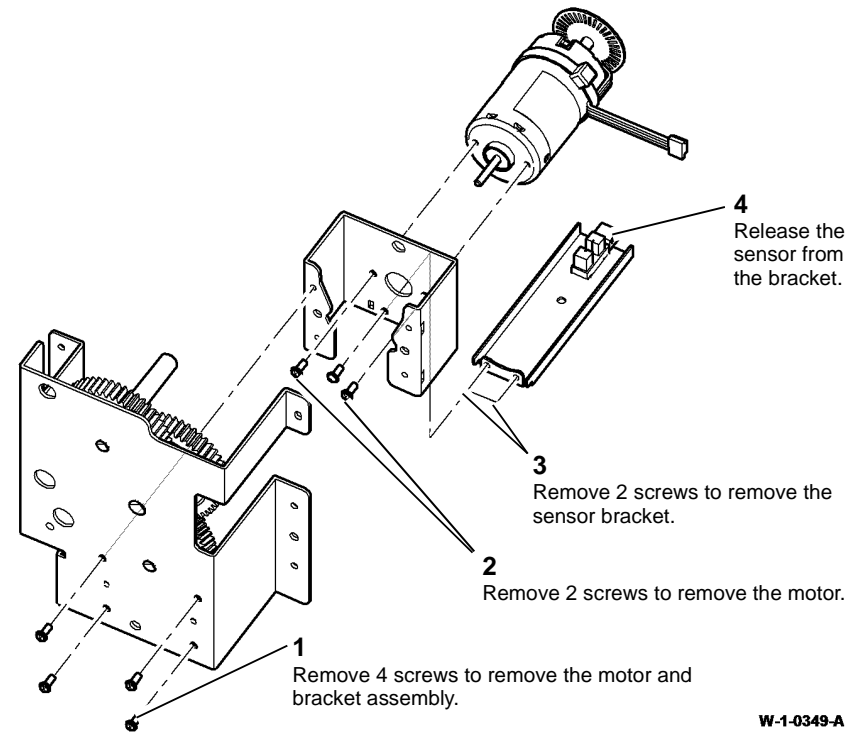


Figure 2 Crease roll motor removal

### 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



#### 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, [REP 12.25-150](#).
2. Remove the crease roll gears, [Figure 1](#).

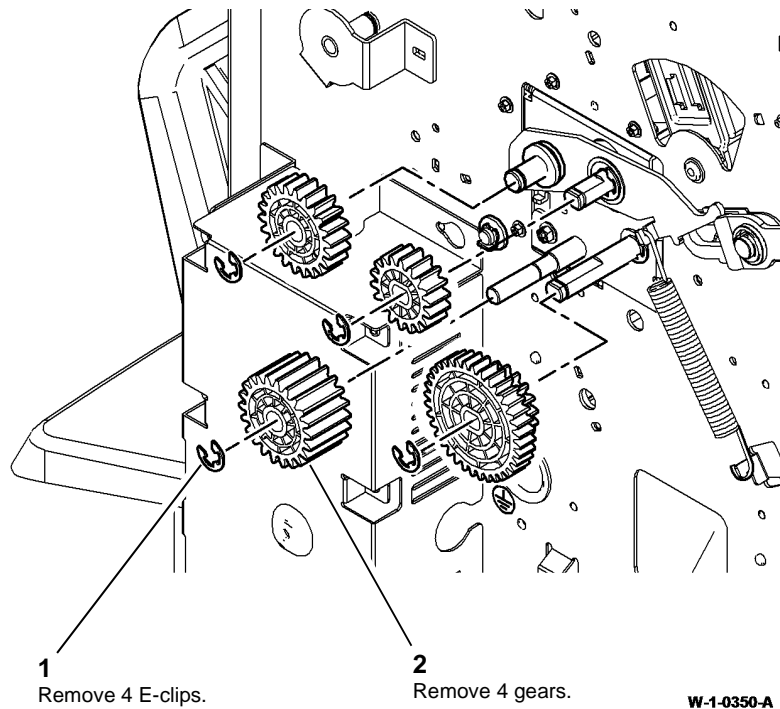


Figure 1 Gears removal

### Replacement

1. Ensure the gears are located in their correct positions. Refer to [Figure 1](#).
2. 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](#).

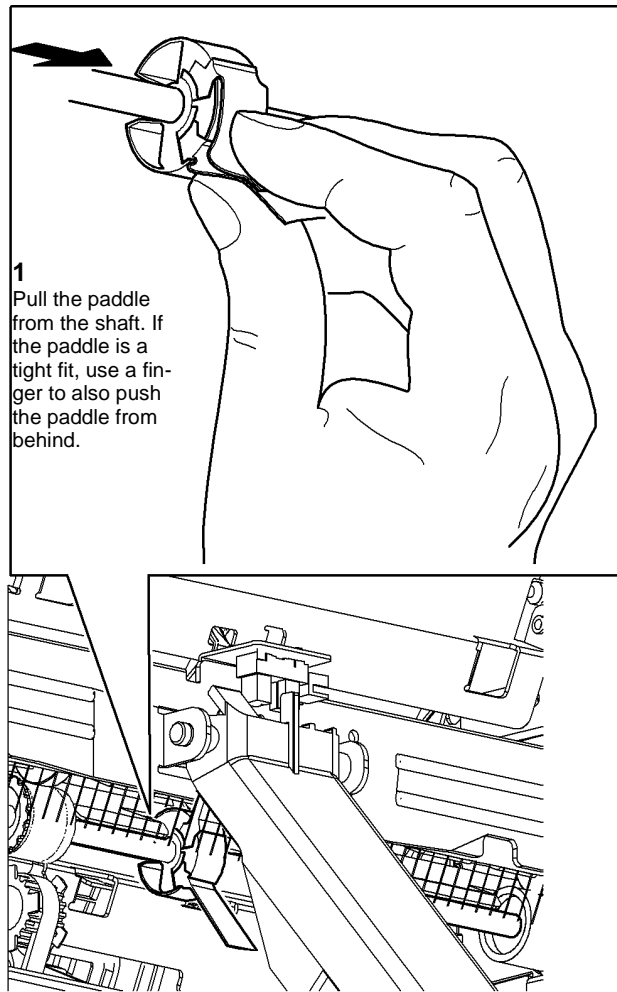


Figure 1 Exit roll paddle removal

W-1-0351-A

4. Remove the belt pulley and bush, [Figure 2](#).

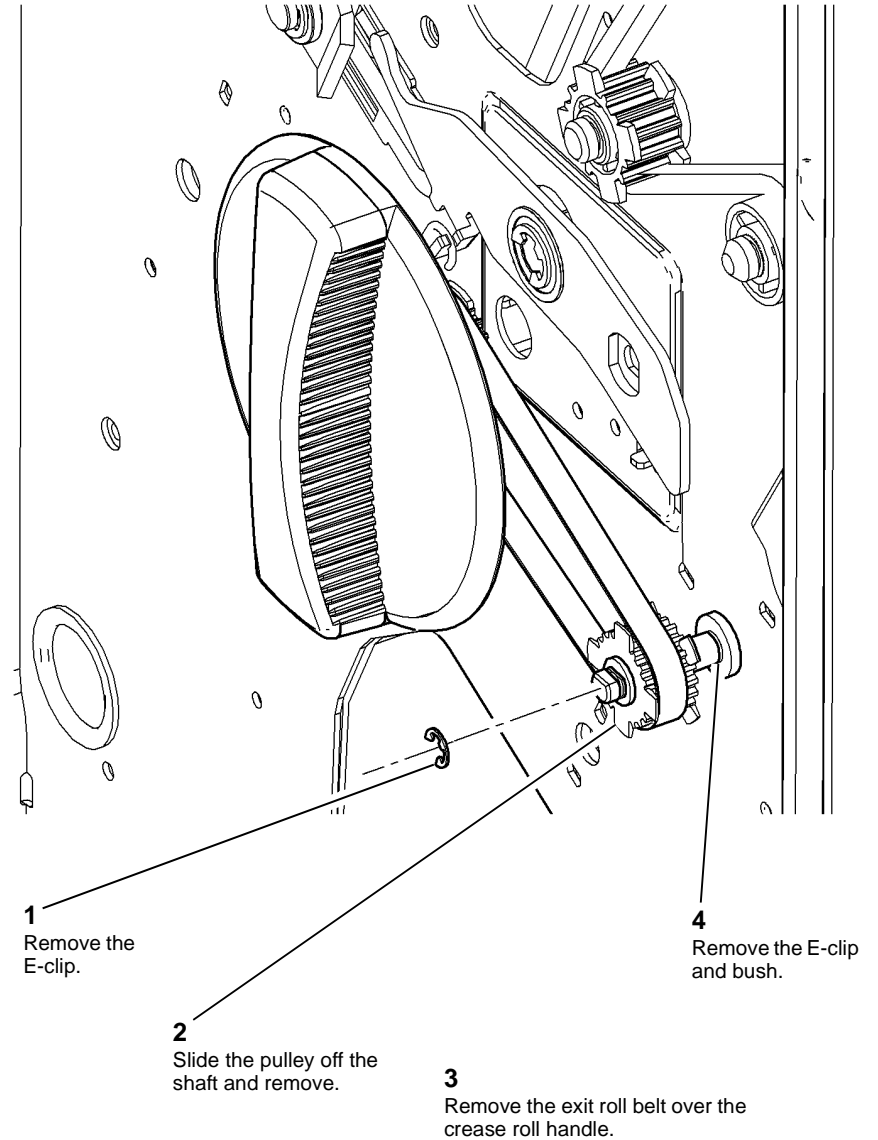


Figure 2 Belt pulley and bush removal

W-1-0352-A

- Remove the BM exit roll, [Figure 3](#).

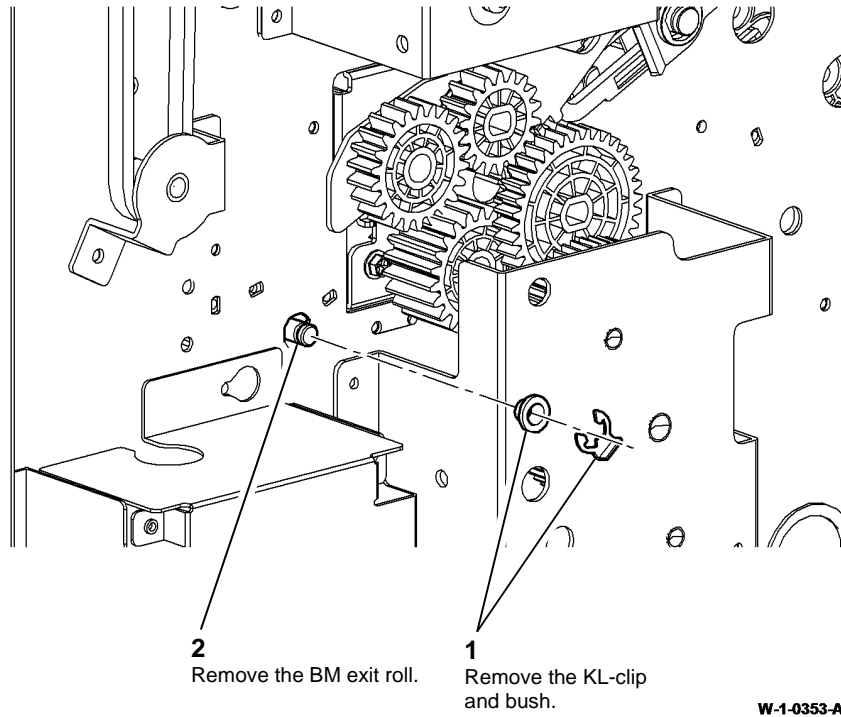


Figure 3 BM exit roll removal

W-1-0353-A

### 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.

- Remove the lower right cover, [REP 12.45-150](#).
- Remove the BM exit sensor, [Figure 1](#).

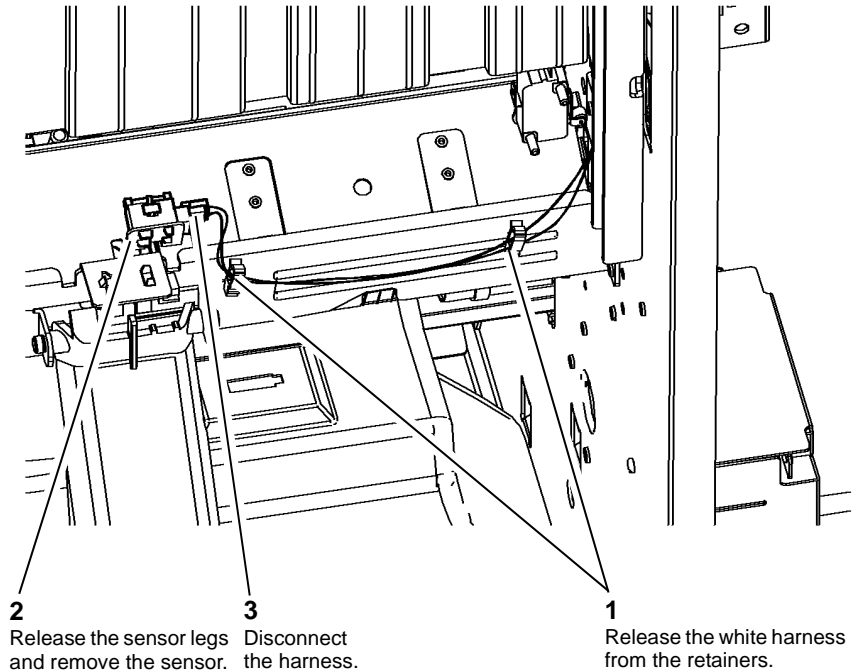


Figure 1 BM exit sensor removal

W-1-0354-A

- Remove the BM exit upper guide assembly, [Figure 2](#).

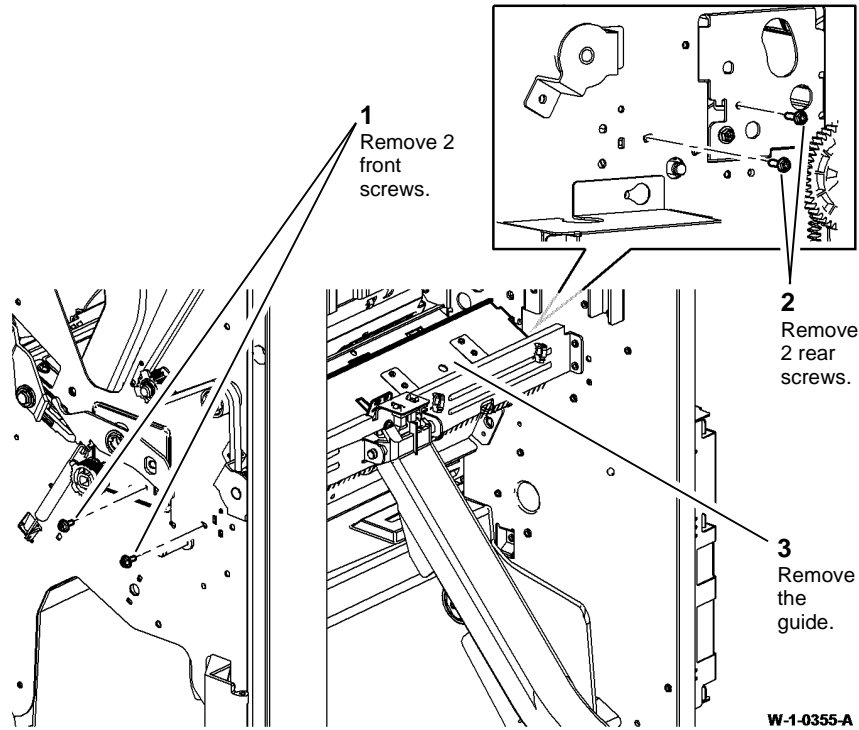


Figure 2 Upper guide removal

### 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.

- Remove the lower right cover, [REP 12.45-150](#).
- Remove the bin 2 90% full sensor, [Figure 1](#).

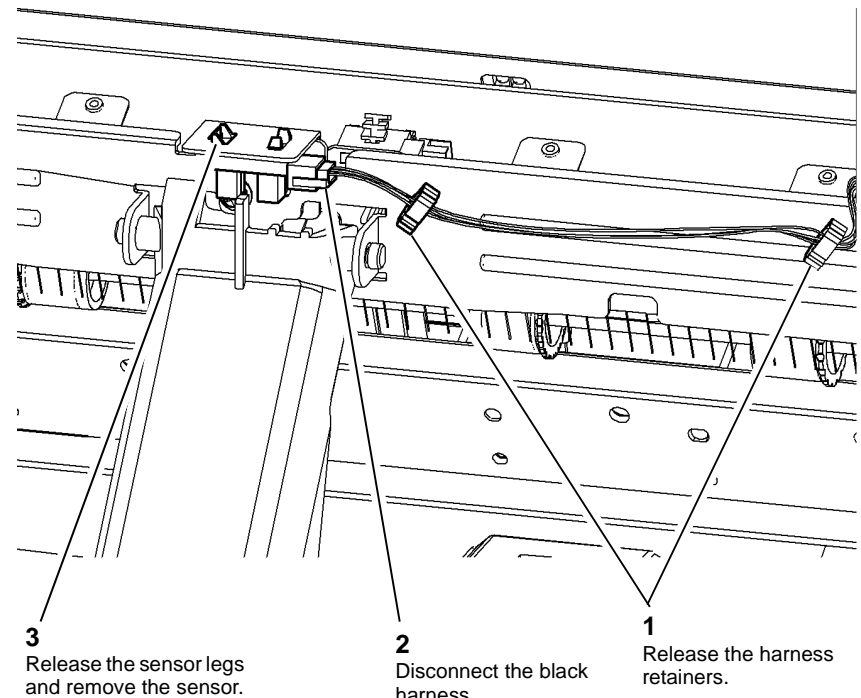
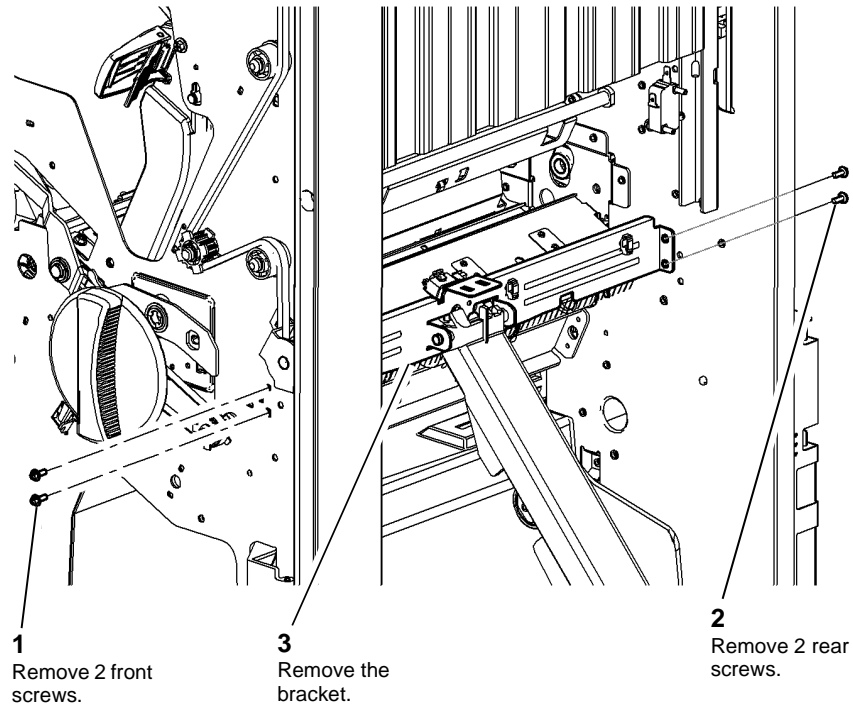


Figure 1 Sensor removal



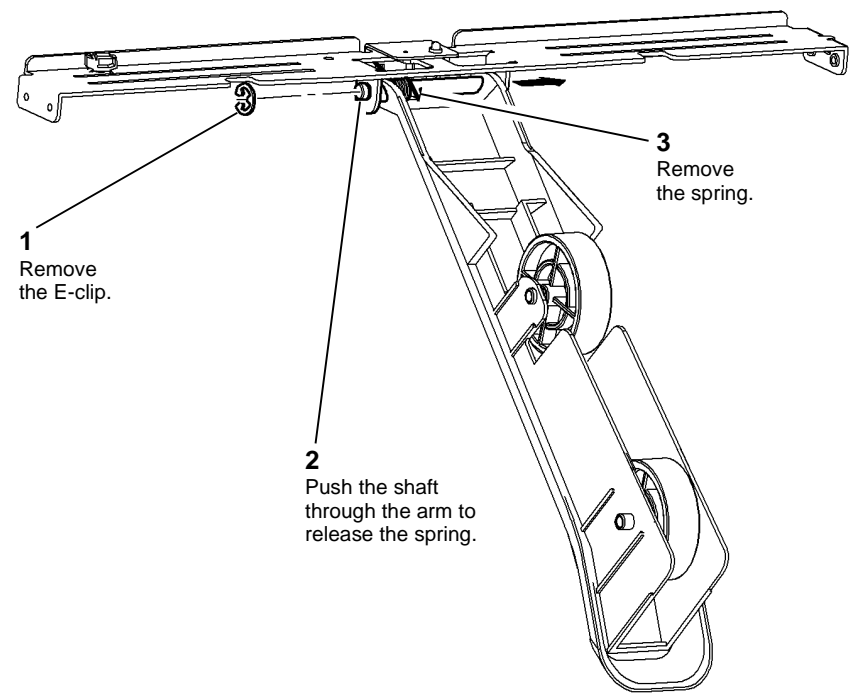
3. Remove the bail arm support bracket and bail arm, [Figure 2](#).



W-1-0357-A

Figure 2 Support bracket removal

4. Remove the bail arm spring, [Figure 3](#).



W-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](#).

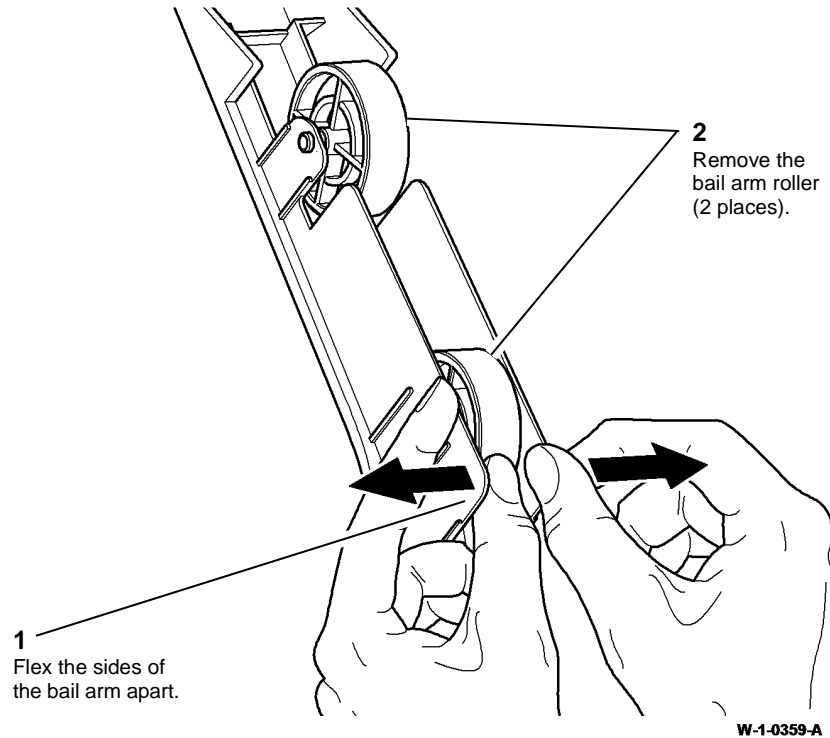


Figure 4 Bail arm roller removal

### 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](#).

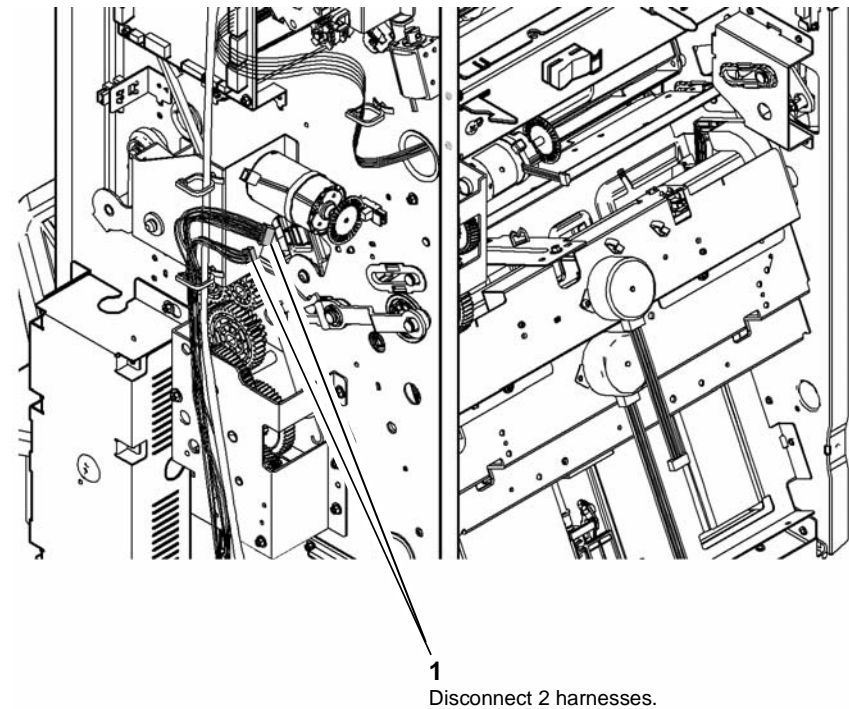


Figure 1 Disconnecting harnesses

4. Remove the BM compiler guide assembly, [Figure 2](#).

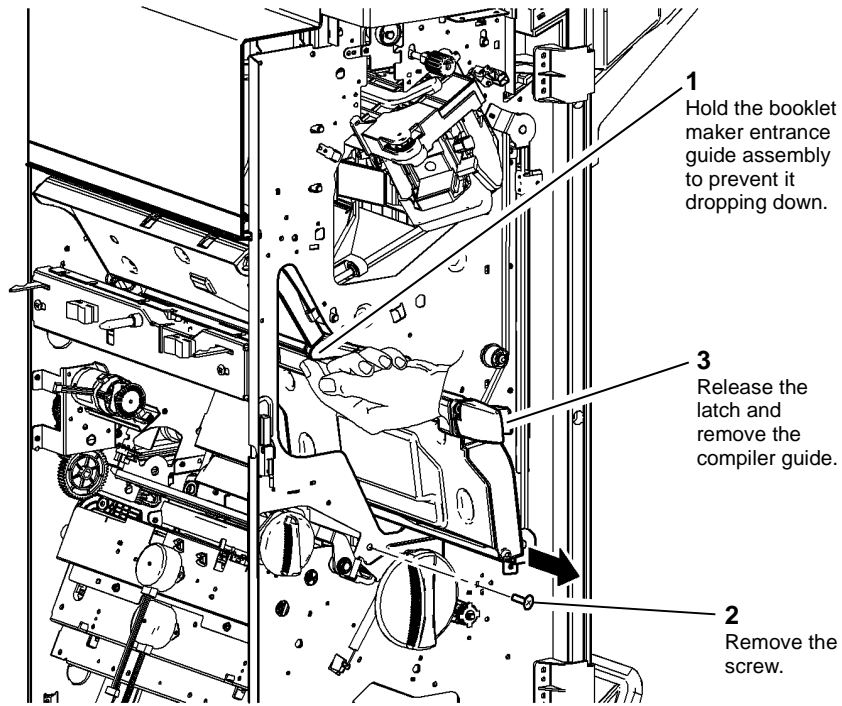
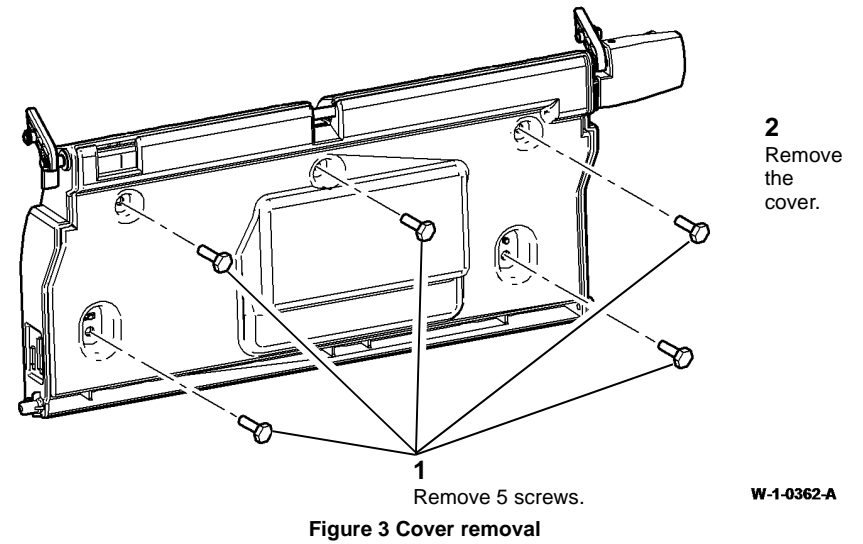


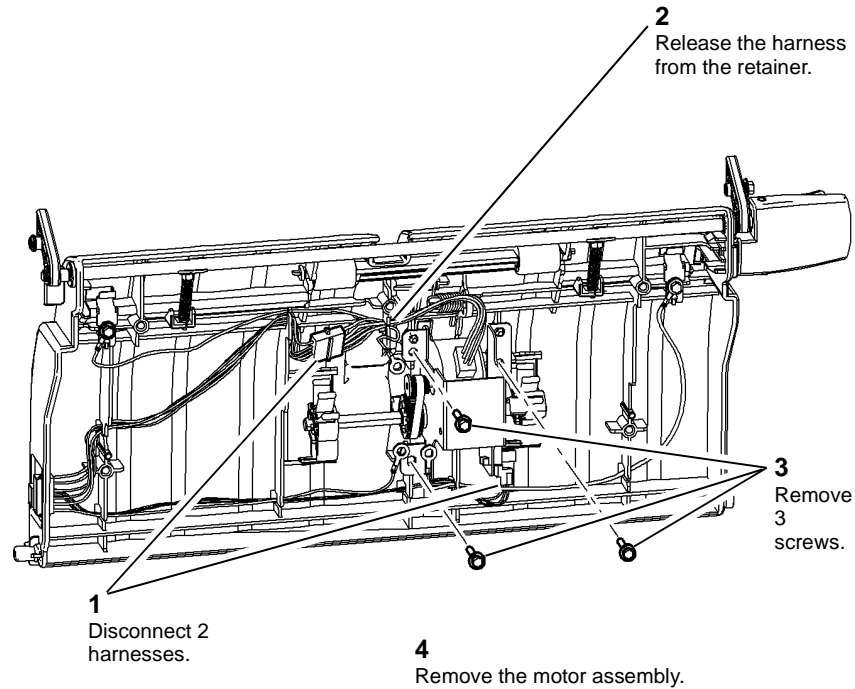
Figure 2 Compiler guide removal

W-1-0361-A

5. Remove the BM compiler guide assembly cover, [Figure 3](#).



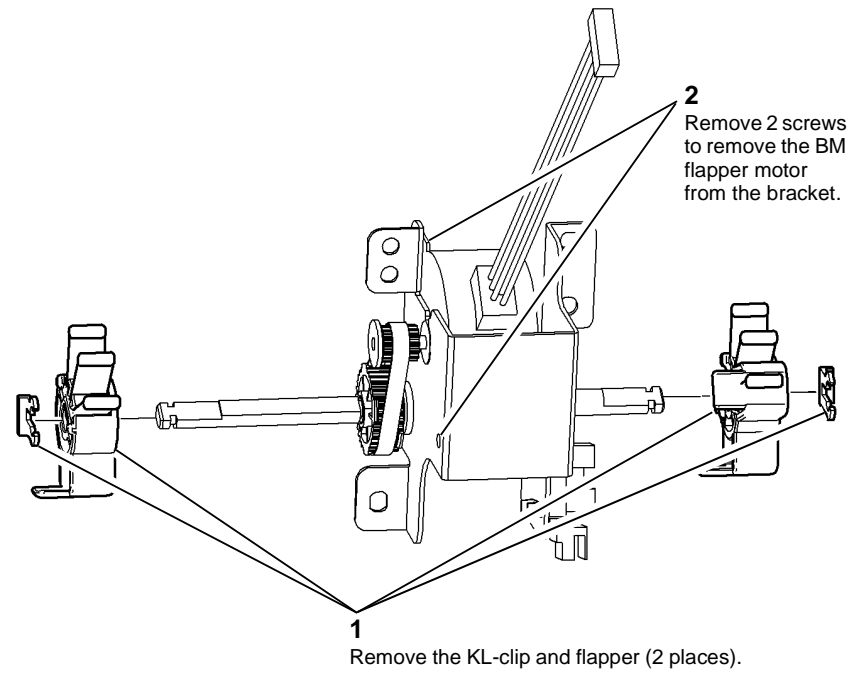
6. Remove the BM flapper motor assembly, [Figure 4](#).



**Figure 4 Motor assembly removal**

W-1-0363-A

7. Remove the BM compiler flappers, [Figure 5](#).



**Figure 5 BM compiler flapper removal**

W-1-0364-A

### Replacement

1. Refer to [GP 6](#) before refitting the screws.
2. 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.

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, [Figure 1](#).

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.

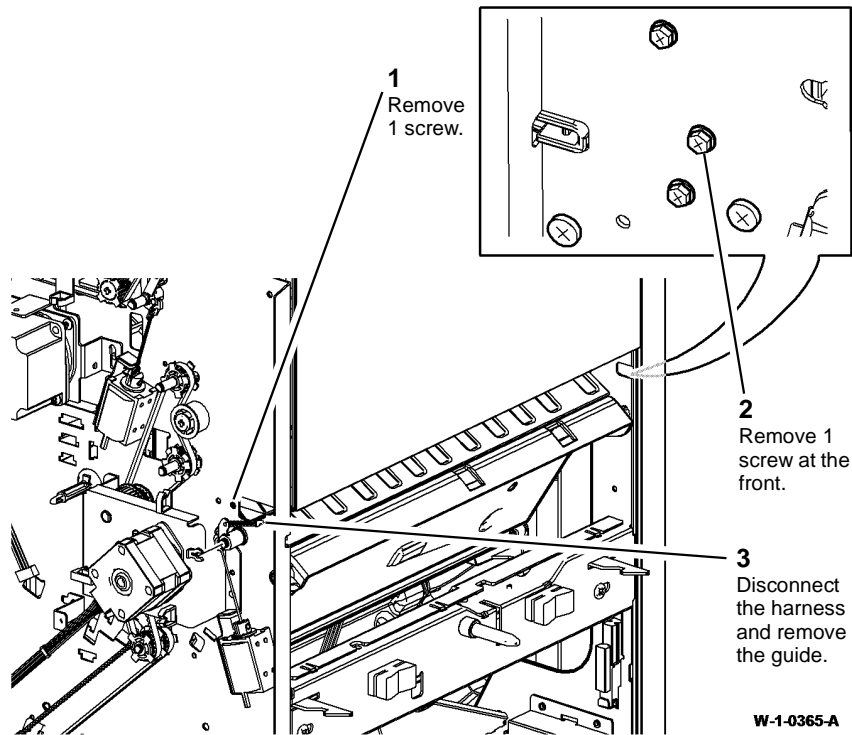


Figure 1 Upper entrance guide removal

# REP 12.32-150 BM Lower Guide, BM Entry Sensor and BM Entrance Guide Assembly

Parts List on [PL 12.385](#)

## Removal



### WARNING

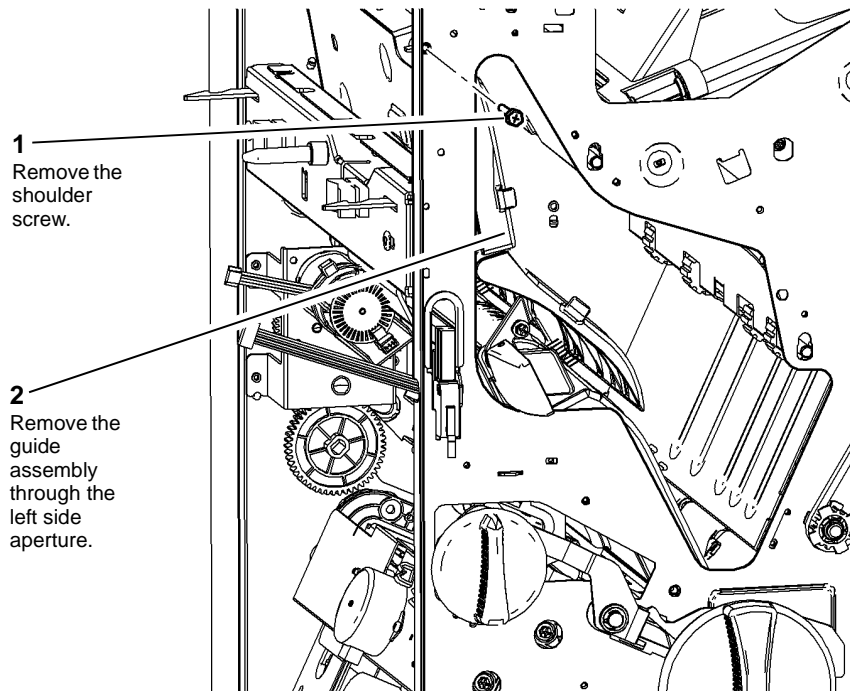
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



### WARNING

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

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](#).



W-1-0366-A

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](#).

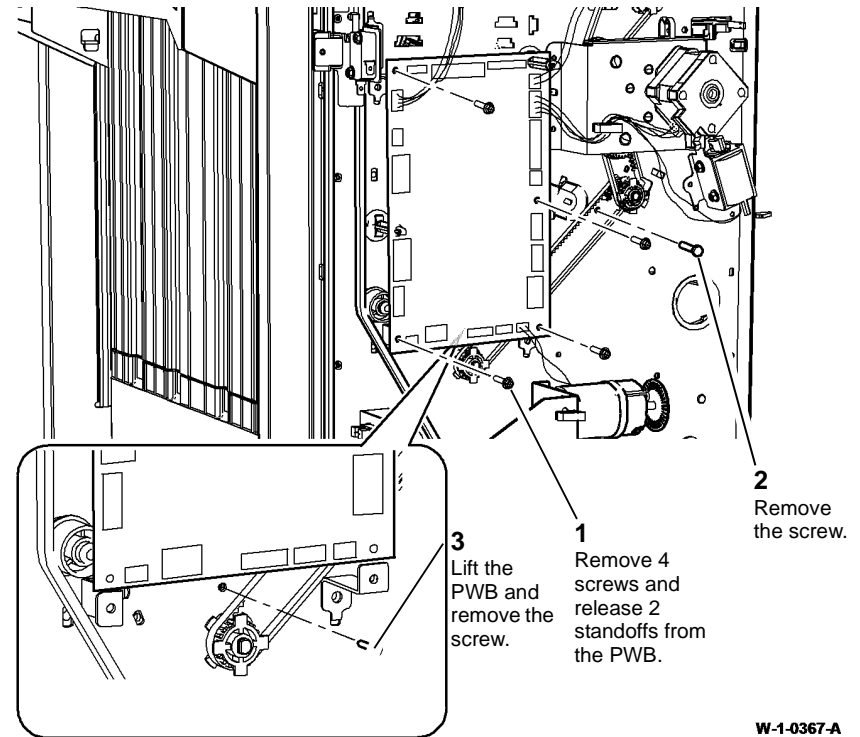


Figure 2 Preparation

W-1-0367-A

- Remove the BM lower guide, [Figure 3](#).

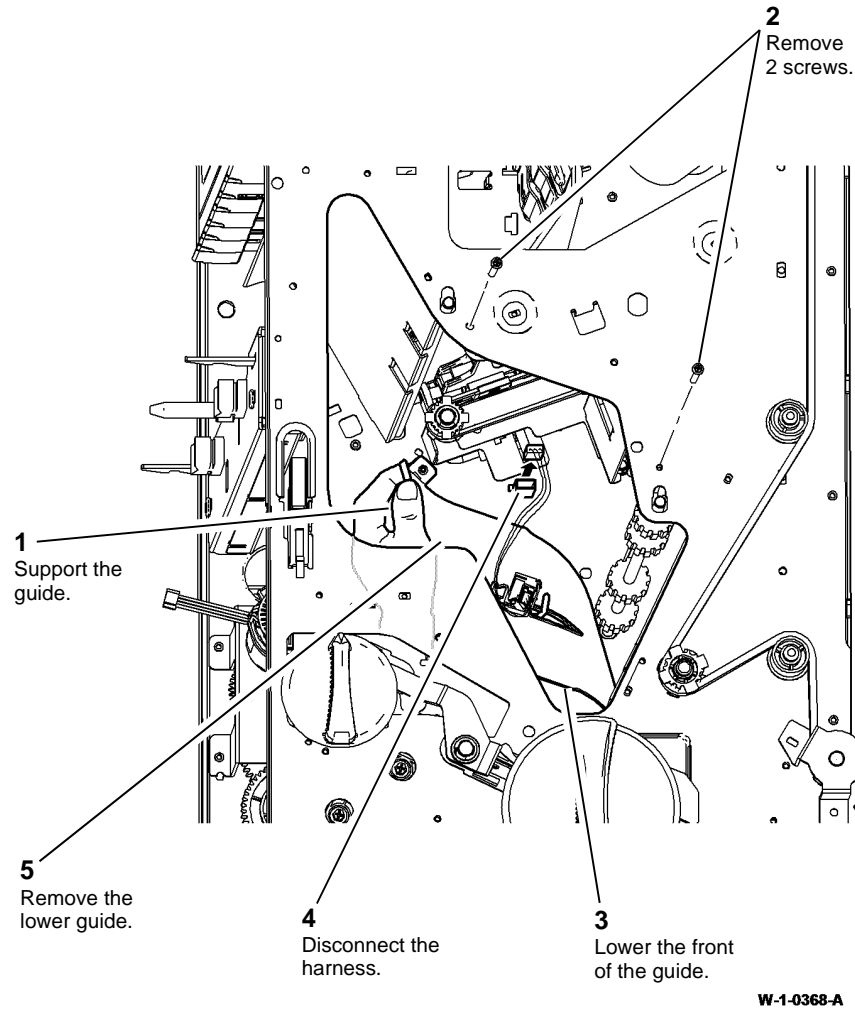


Figure 3 BM lower guide removal

- Remove the BM entry sensor, Q12-089 by disconnecting the harness and then releasing the sensor legs from the guide.

### Replacement

- Refer to [GP 6](#) before refitting the screws.
- 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.

- 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, [REP 12.31-150](#).
- Remove the booklet diverter gate, [Figure 1](#).

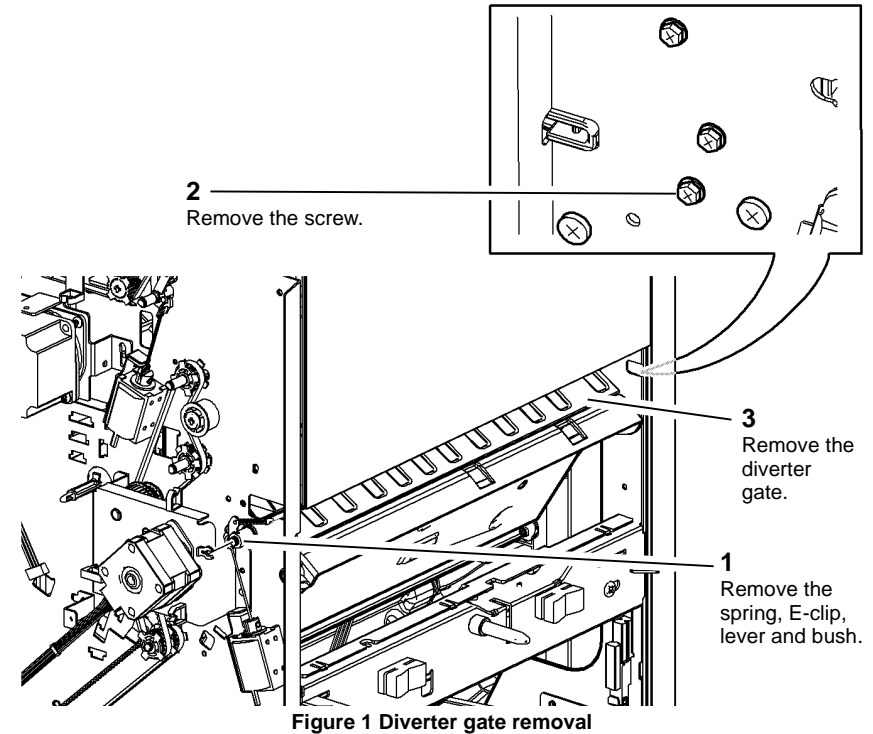


Figure 1 Diverter gate removal

### 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.

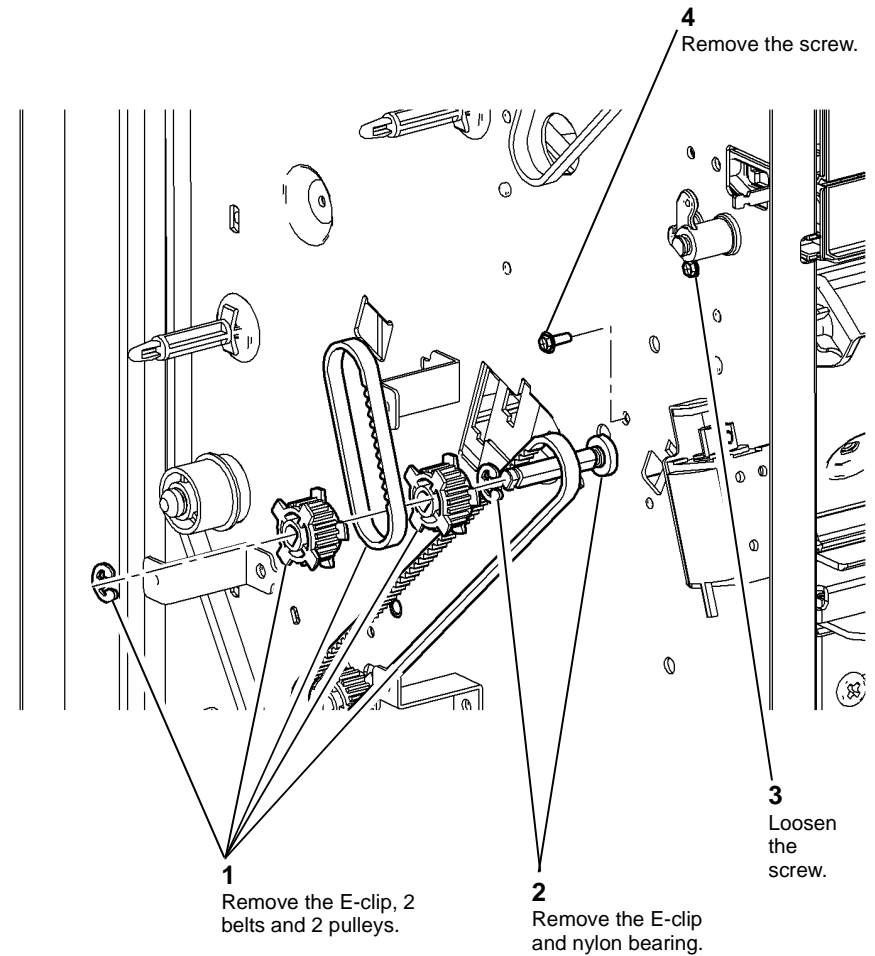


#### WARNING

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](#).



W-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](#).

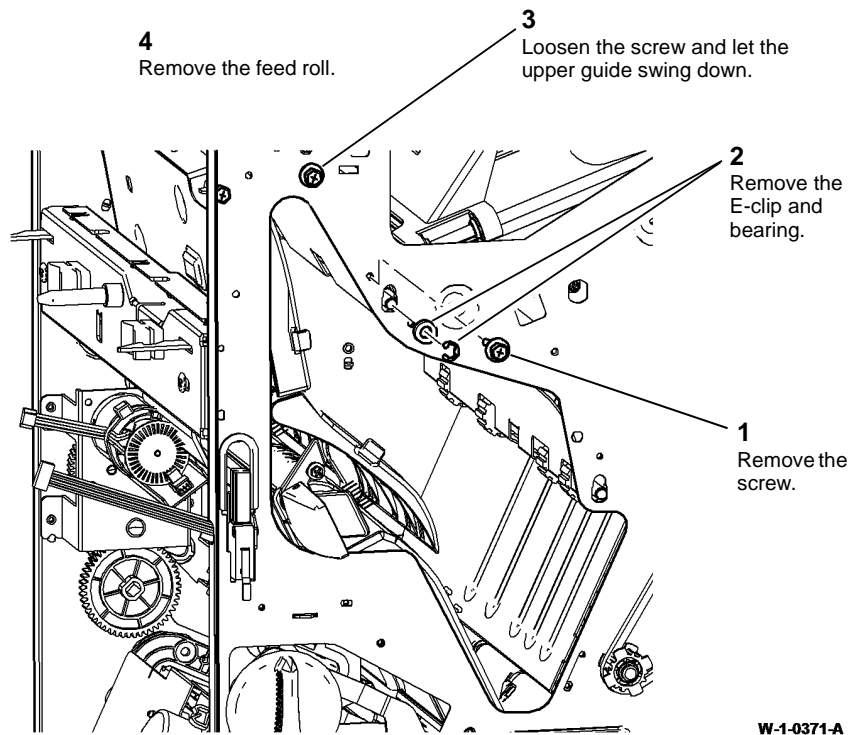


Figure 2 1st feed roll removal

### 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.

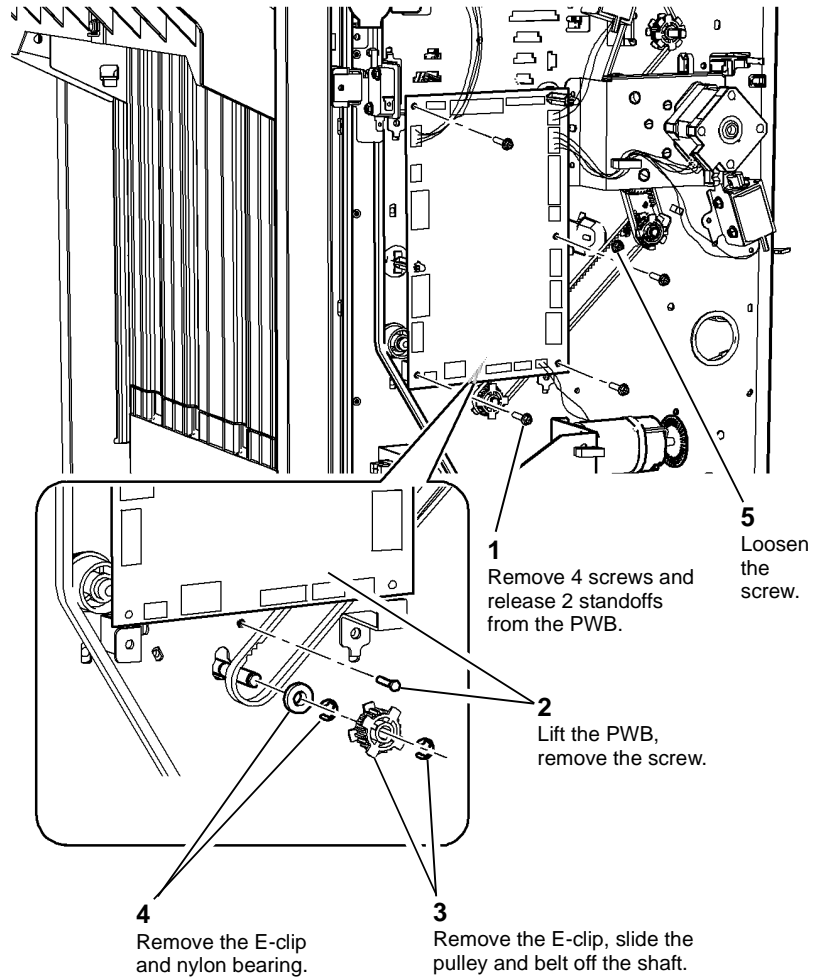


Take care during this procedure. Sharp edges may be present that can cause injury.

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](#).

W-1-0371-A

- Remove the rear components, [Figure 1](#).



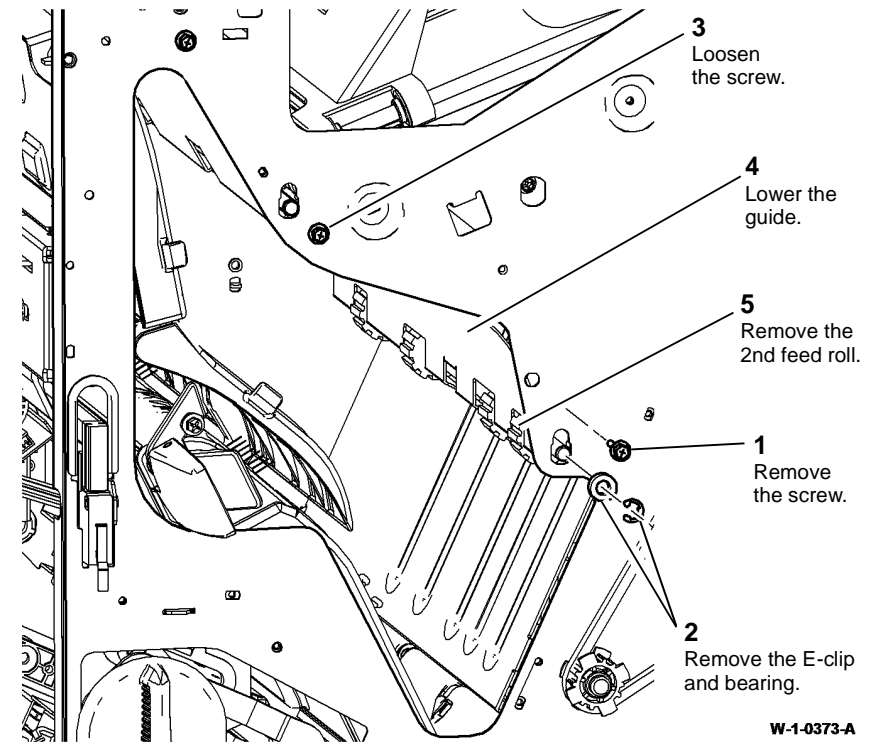
**Figure 1 Rear components removal**

W-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**

W-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

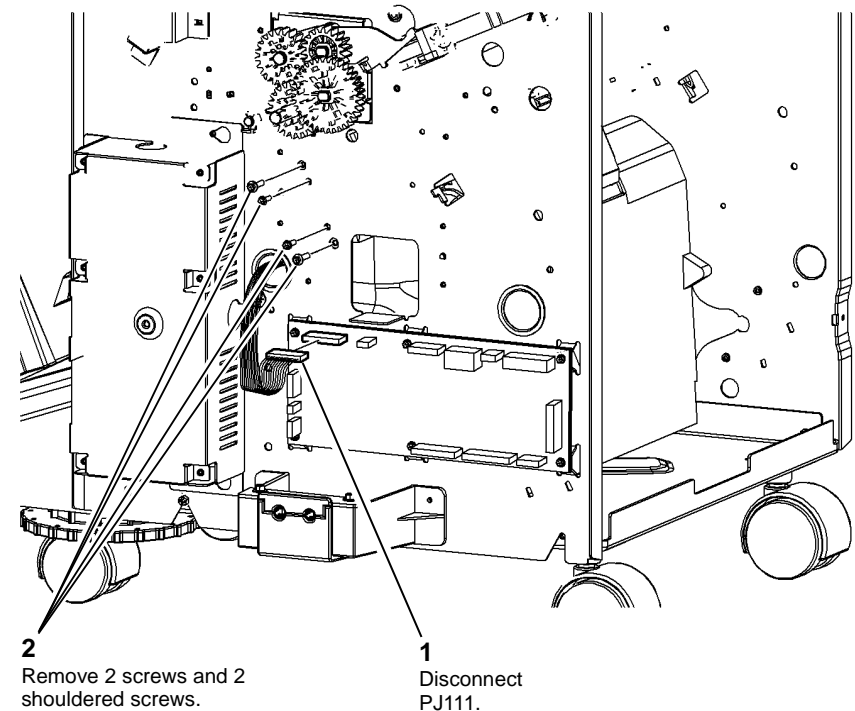
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



#### WARNING

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

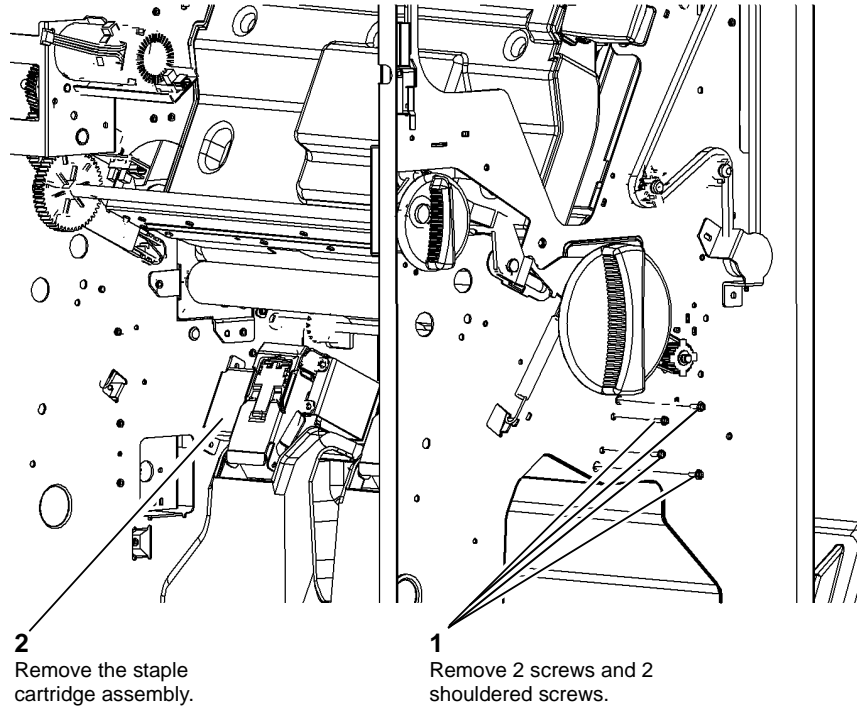
1. Remove the right guide assembly. Refer to [REP 12.19-150](#).
2. Prepare to remove the BM staple cartridge assembly, [Figure 1](#).



W-1-0374-A

Figure 1 Preparation

3. Remove the BM staple cartridge assembly, [Figure 2](#).



W-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](#).

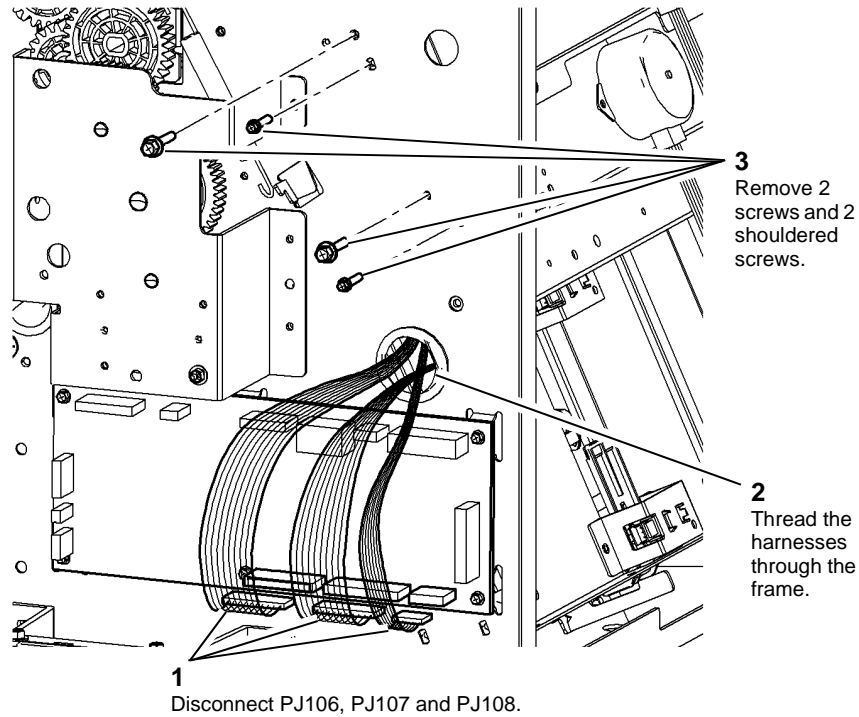


Figure 1 Preparation

4. Remove the BM stapler assembly and booklet tamper assembly, [Figure 2](#).

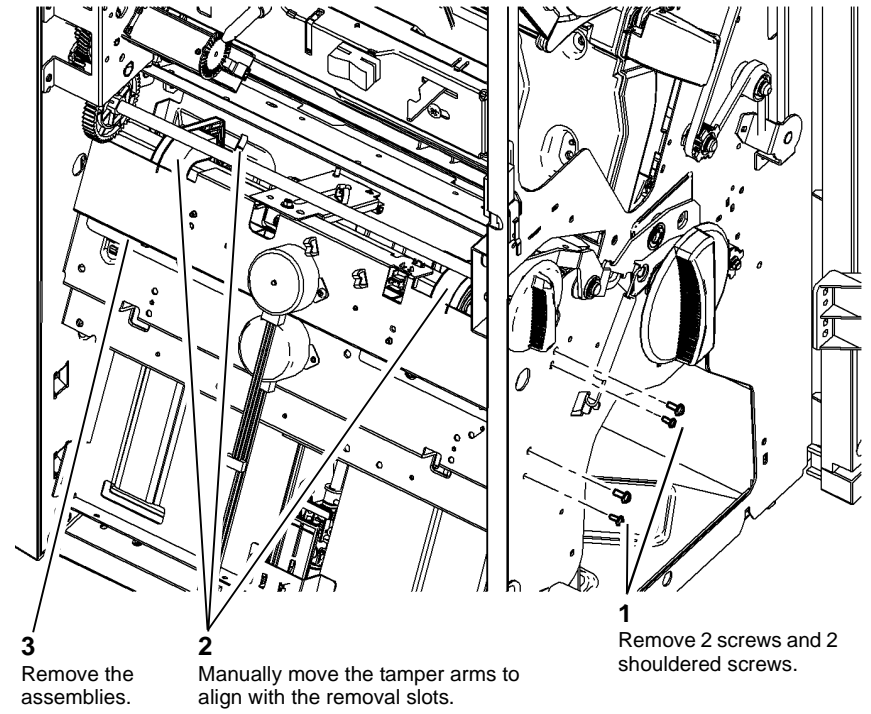


Figure 2 Assemblies removal

5. Separate the BM stapler assembly from the booklet tamper assembly, [Figure 3](#).

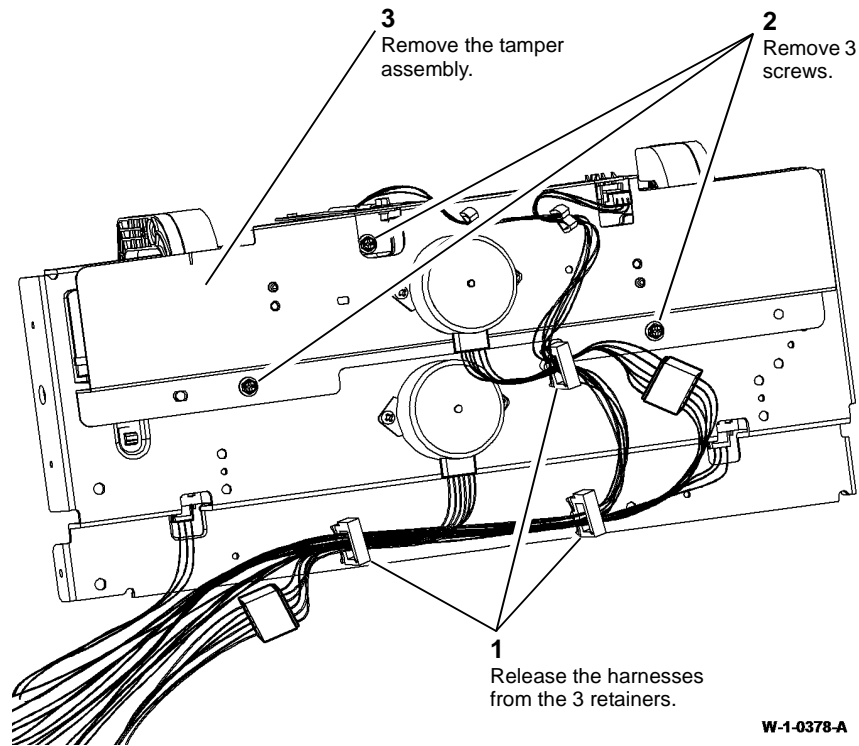


Figure 3 Stapler assembly removal

### Replacement

1. The replacement is the reverse of the removal procedure.
2. 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.
3. Perform [ADJ 12.6-150](#) Booklet Staple Position.

## REP 12.39-150 BM Staple Cartridge LED

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 bin 2 support, [REP 12.44-150](#).
2. Remove the BM staple cartridge LED, [Figure 1](#).

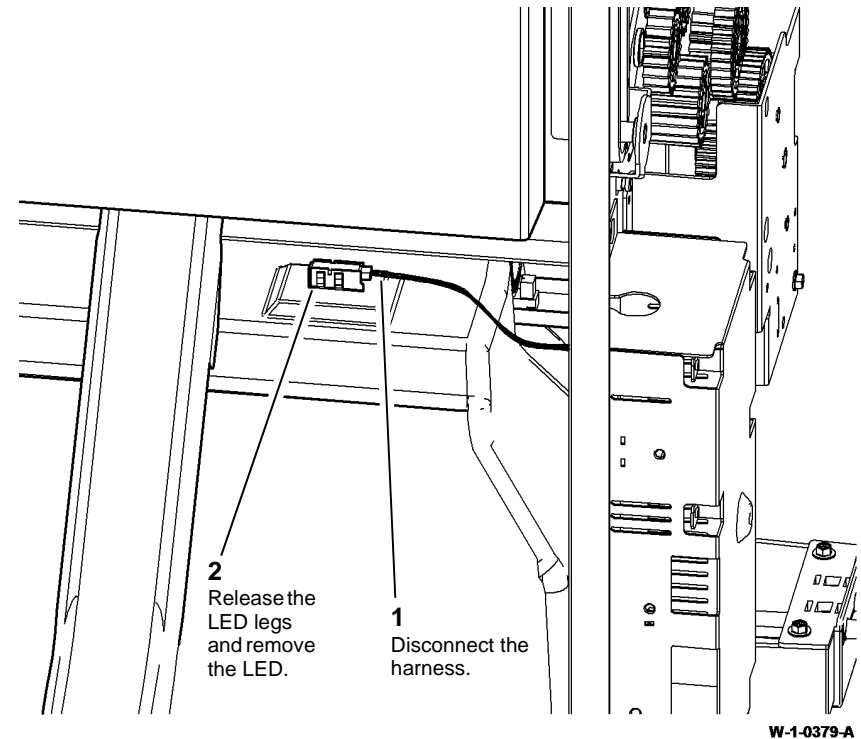


Figure 1 Staple cartridge LED removal

### 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.

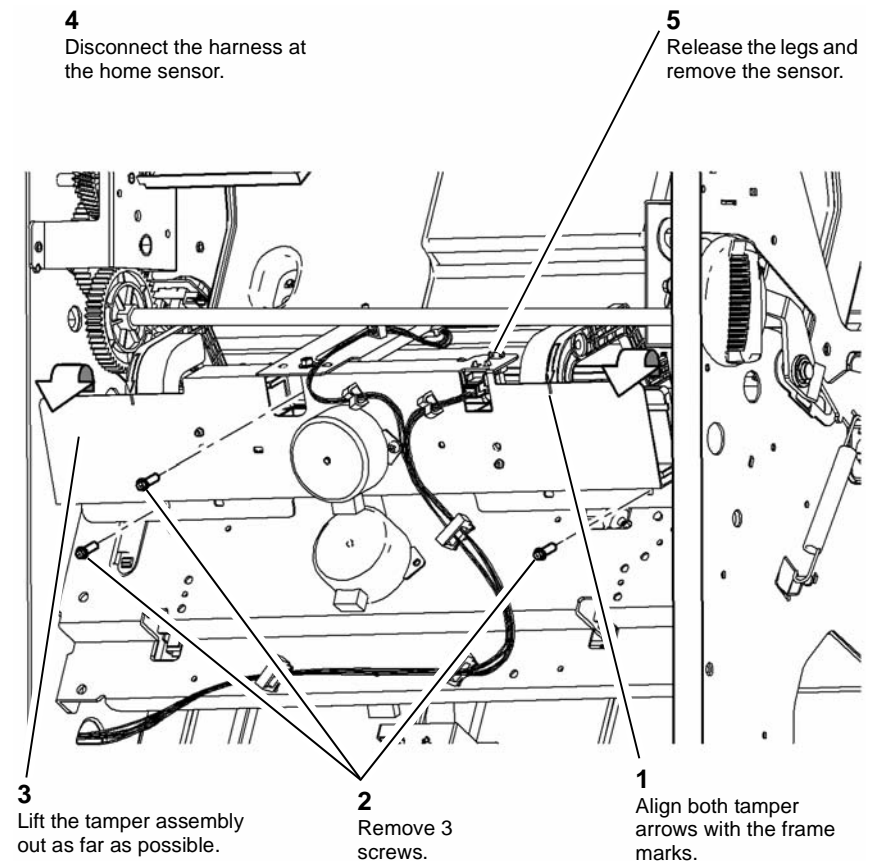


#### WARNING

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](#).



W-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](#).

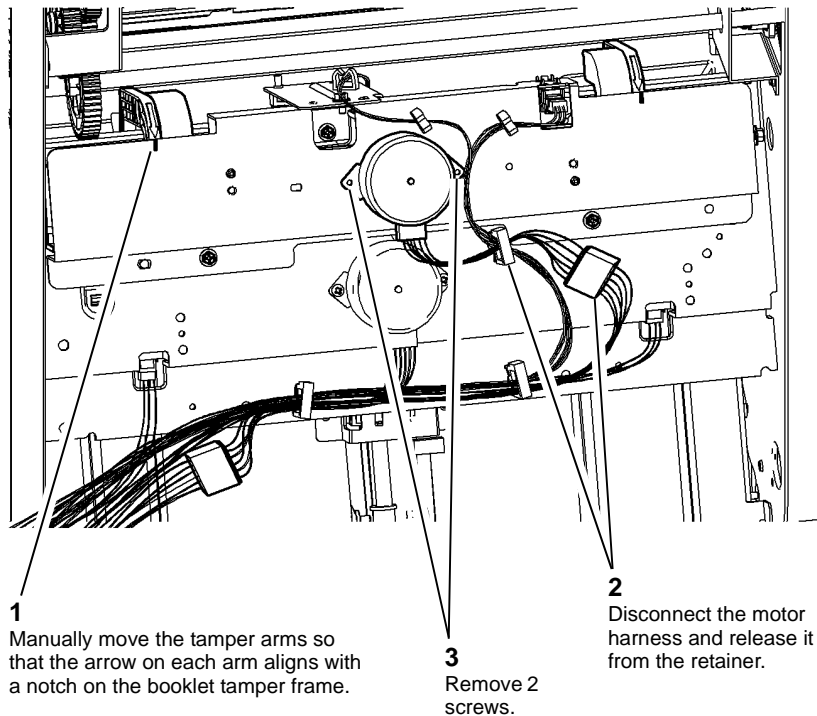
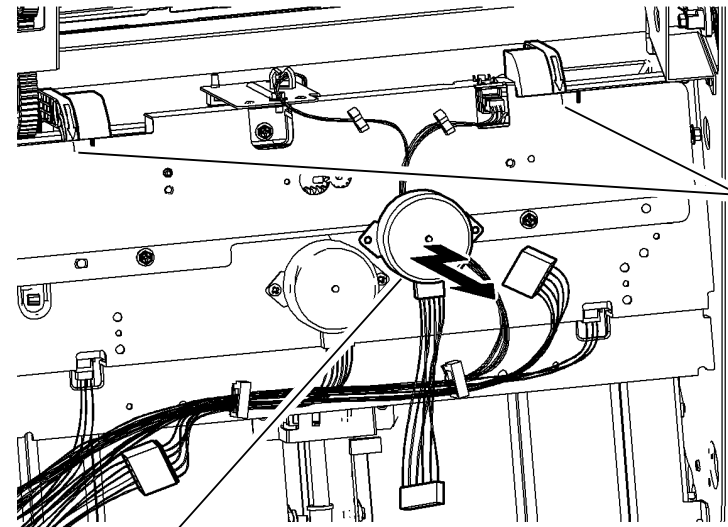


Figure 1 Preparation

W-1-0381-A

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.

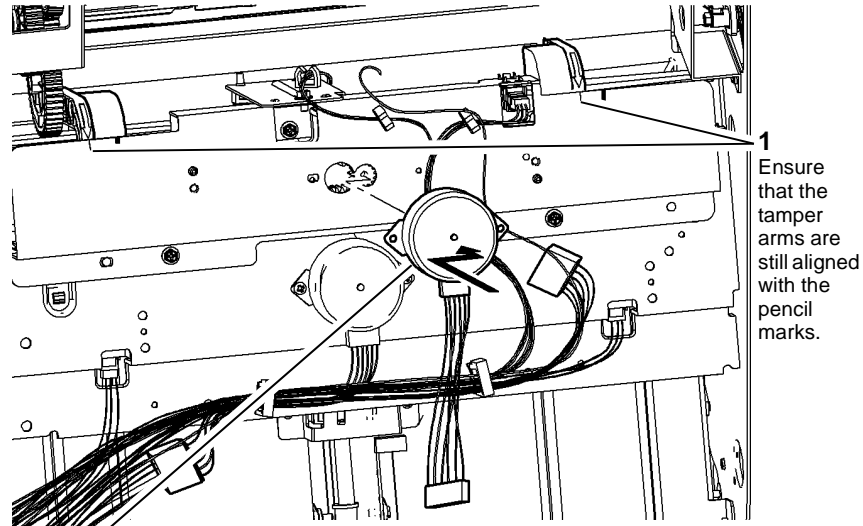
Figure 2 Tamper motor removal

W-1-0382-A



## Replacement

1. Prepare to install the booklet tamper motor, [Figure 3](#).

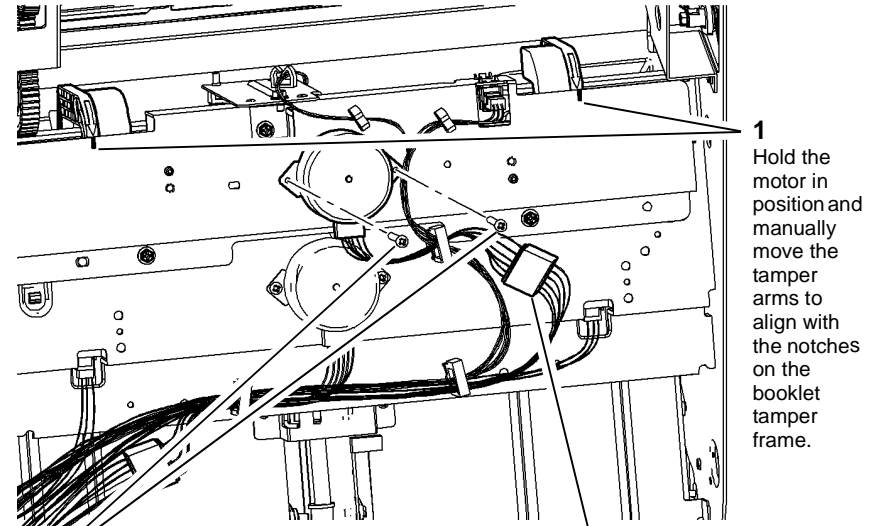


2. Carefully insert the motor to engage the motor pinion with the 2 tamper racks. When the motor is engaged, slide it to the front approximately 12mm (0.5 inch) to align with the screw holes. Push the motor in by approximately 1mm (0.04 inch) to locate it fully.

**Figure 3 Preparation**

W-1-0383-A

2. Install the booklet tamper motor, [Figure 4](#).



2. If the arrows on both tamper arms align correctly with the notches, insert and tighten the 2 motor screws. If the arrows on both tamper arms do not align correctly with the notches, remove the motor and re-start at figure 3 step 1.
3. Connect the motor harness and clamp it in the retainer.

**Figure 4 Tamper motor installation**

W-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.

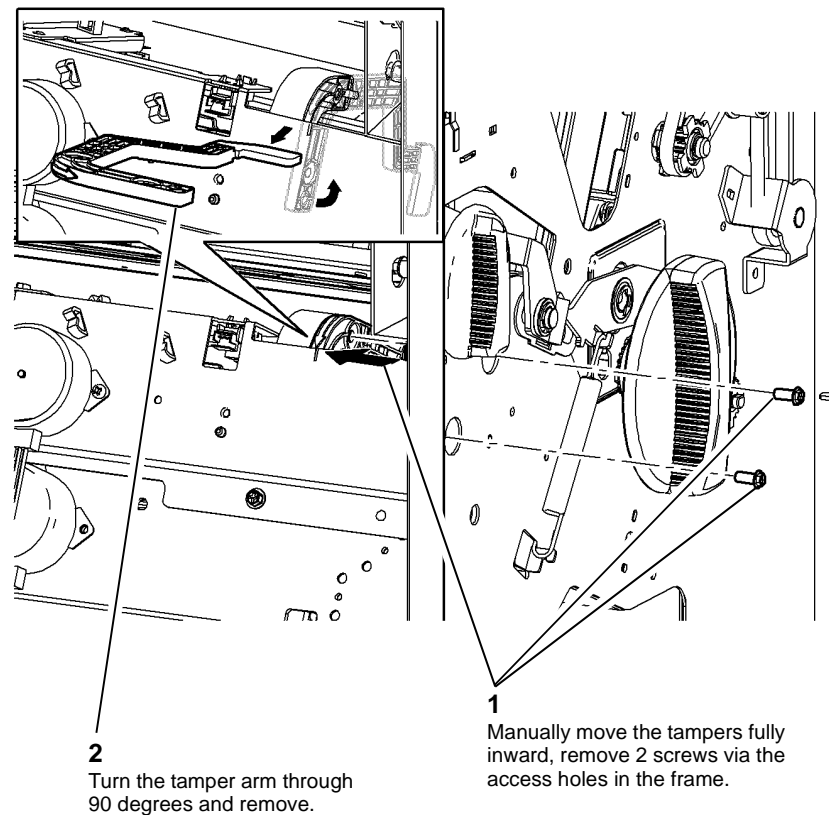


#### WARNING

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](#).

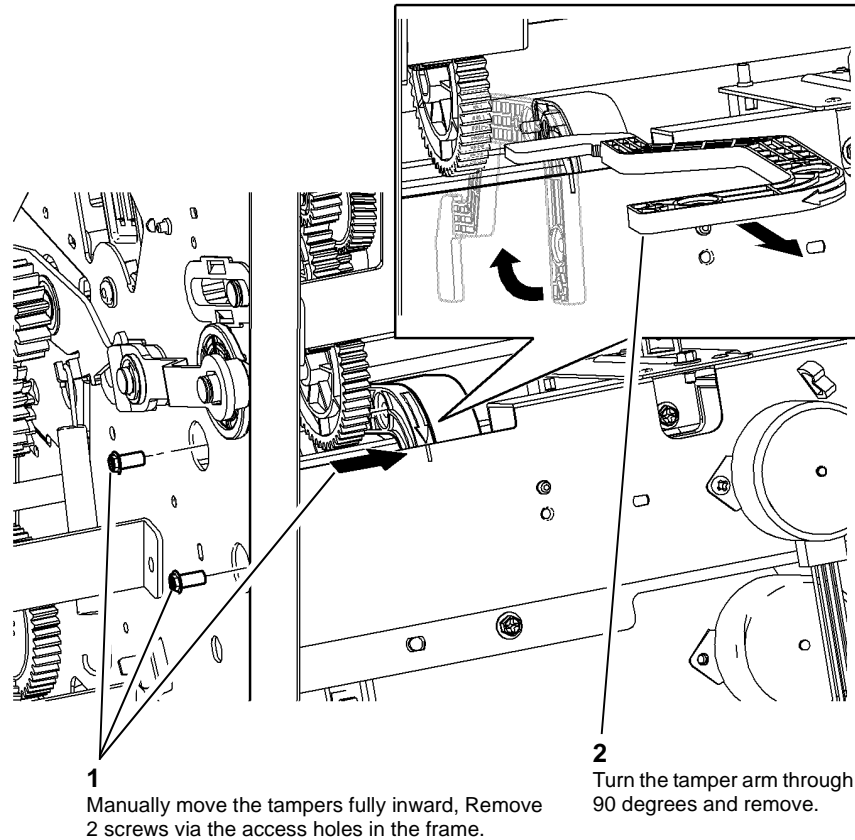
3. Remove the front booklet tamper arm, [Figure 1](#).



W-1-0385-A

Figure 1 Front tamper arm removal

- 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.

W-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

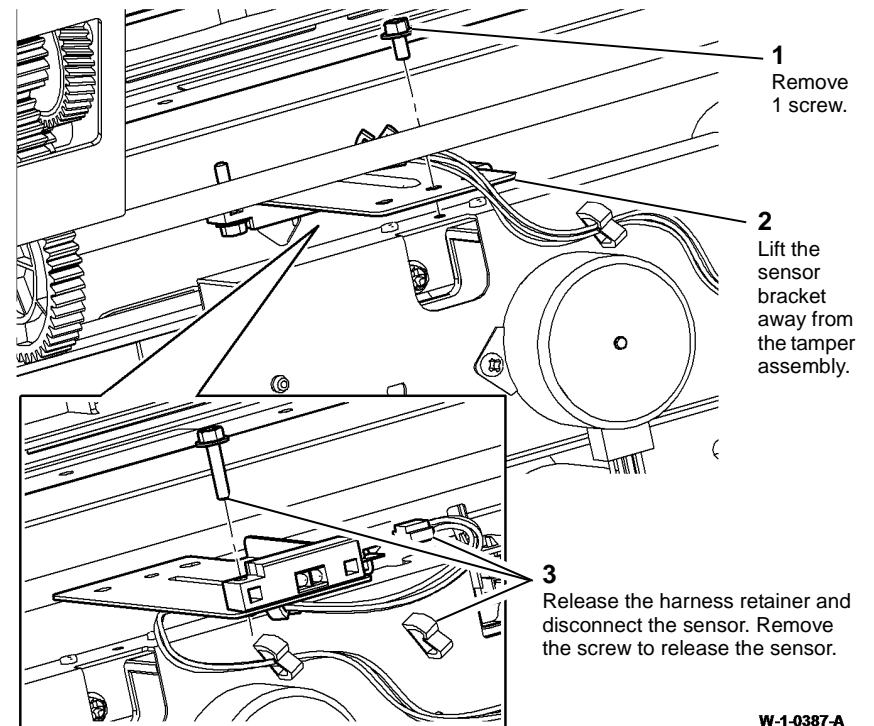


Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



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.

W-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

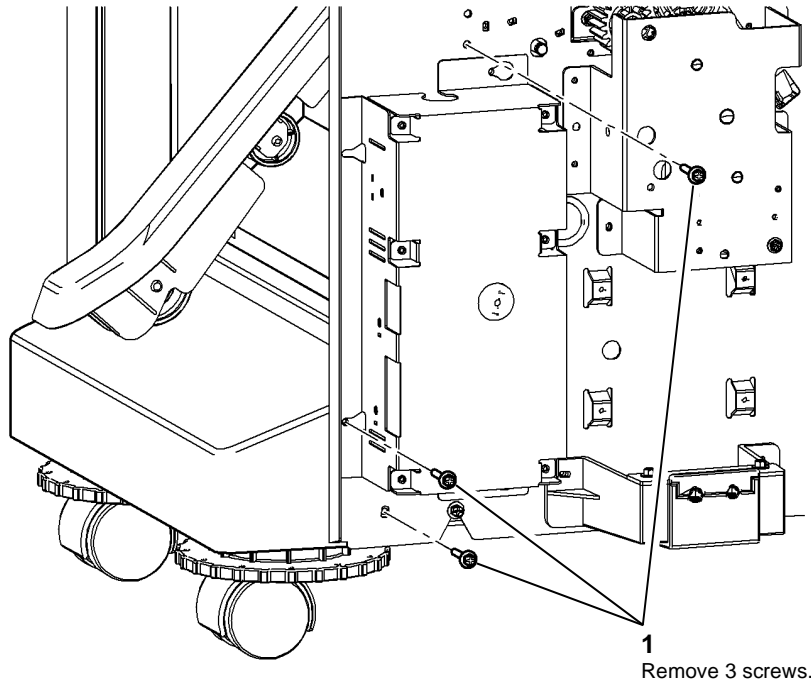


Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



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

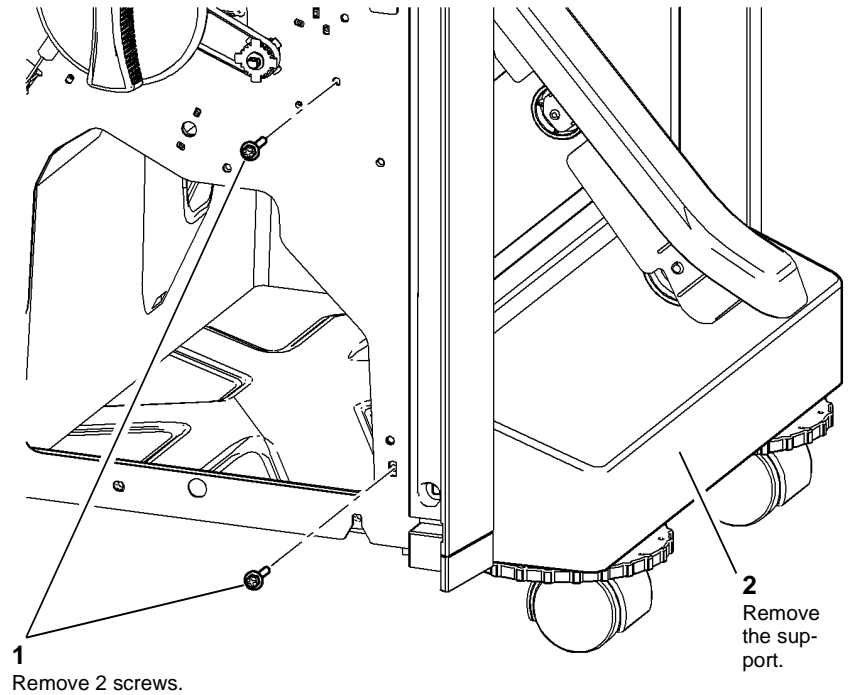
1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM front door cover assembly and rear cover, [REP 12.1-150](#).
3. Remove bin 2, [PL 12.320 Item 18](#).
4. Prepare to remove the bin 2 support, [Figure 1](#).



W-1-0388-A

Figure 1 Preparation

5. Remove the bin 2 support, [Figure 2](#).



W-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](#).

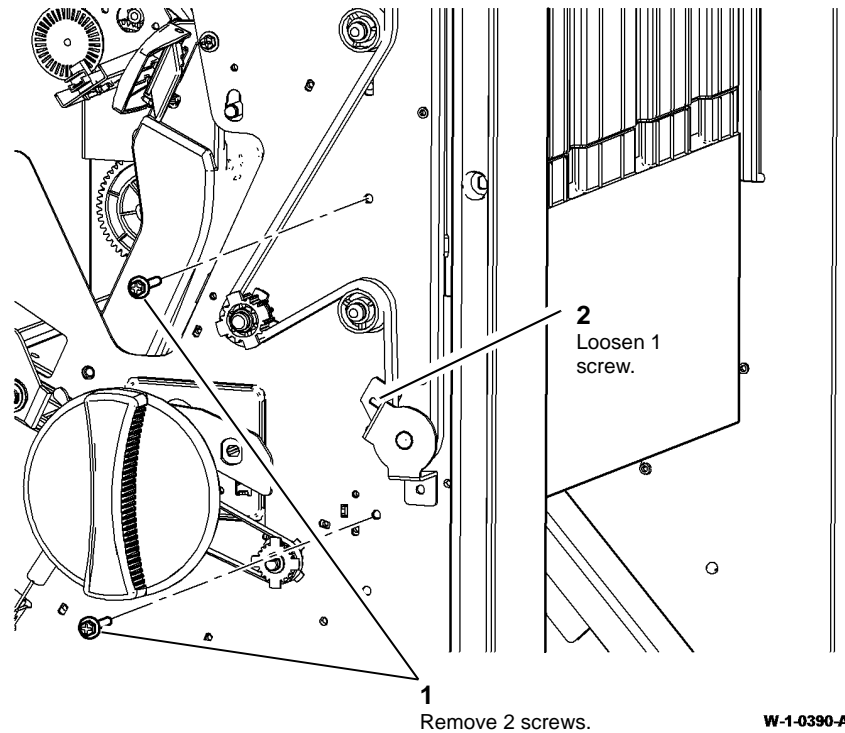


Figure 1 Preparation

3. Remove the lower right cover and bin 1 lower limit switch, [Figure 2](#).

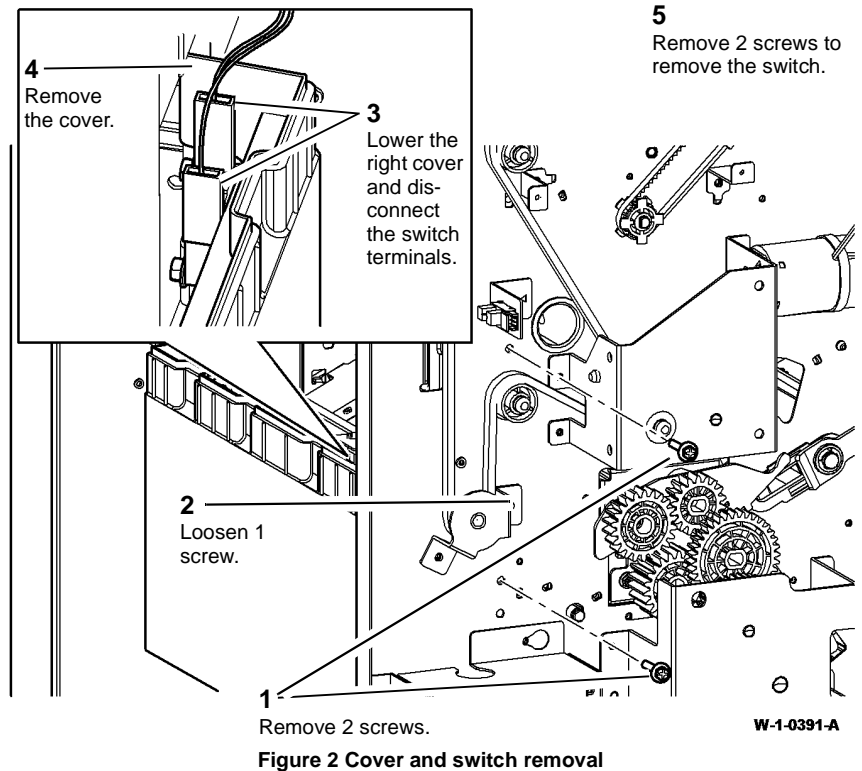


Figure 2 Cover and switch removal

### 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

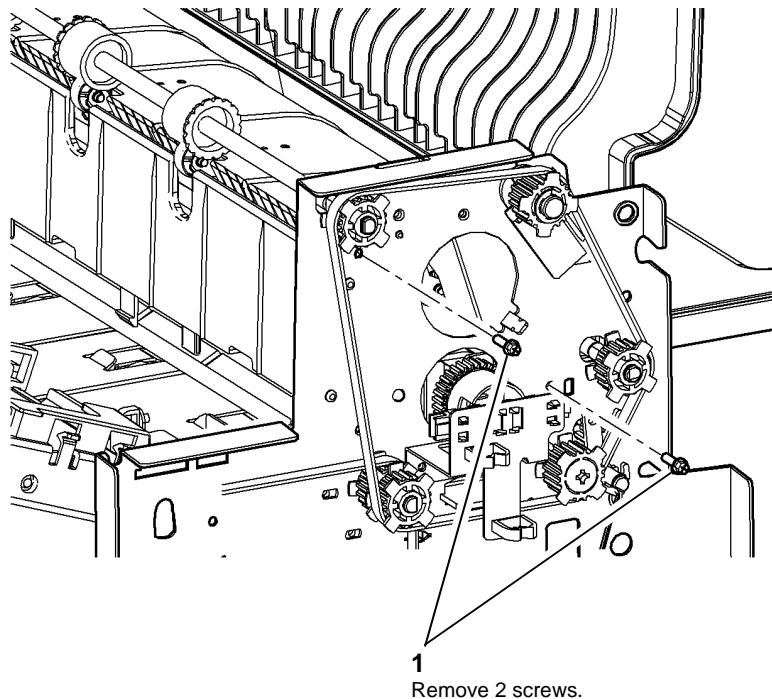
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



#### WARNING

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

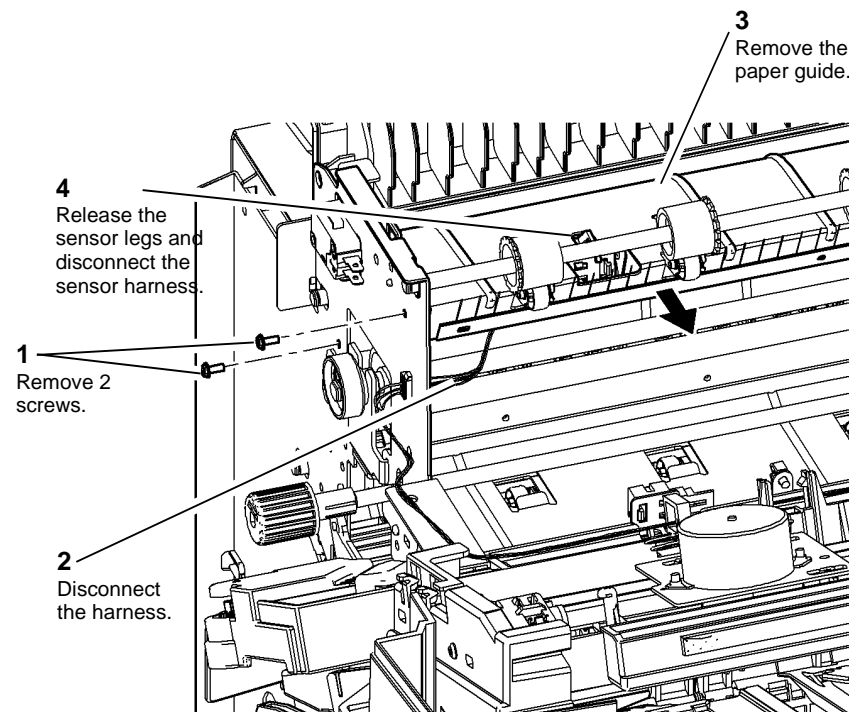
1. Un-dock the LVF BM, [REP 12.13-150](#).
2. Remove the LVF BM front door cover assembly, rear cover and top cover, [REP 12.1-150](#).
3. Remove the hole punch motor assembly, [REP 12.7-150](#).
4. Prepare to remove the paper guide [Figure 1](#).



W-1-0392-A

Figure 1 Preparation

5. Remove the paper guide and top tray exit sensor, Q12-107, [Figure 2](#).



W-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](#).

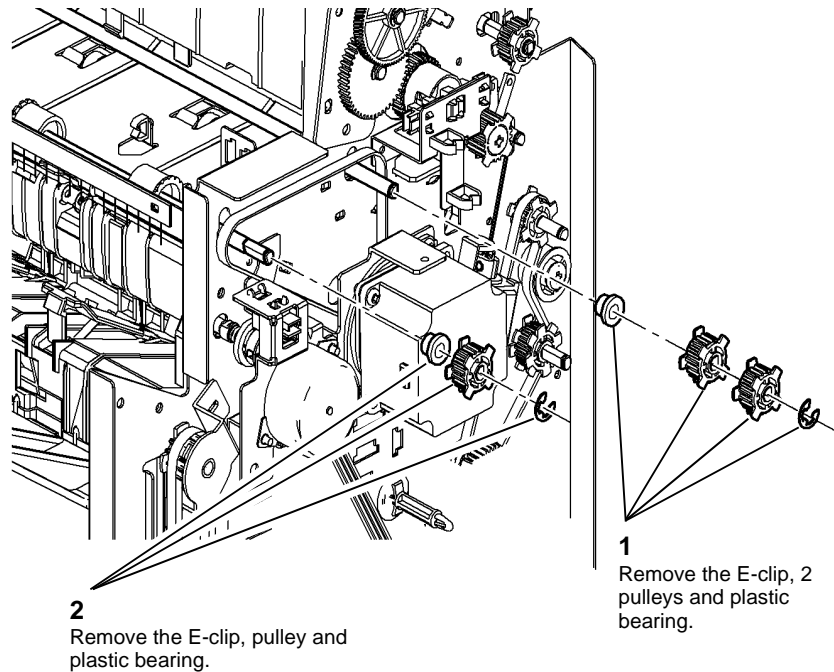


Figure 1 Preparation

W-1-0394-A

6. Remove the ejector drive shaft, [Figure 2](#).

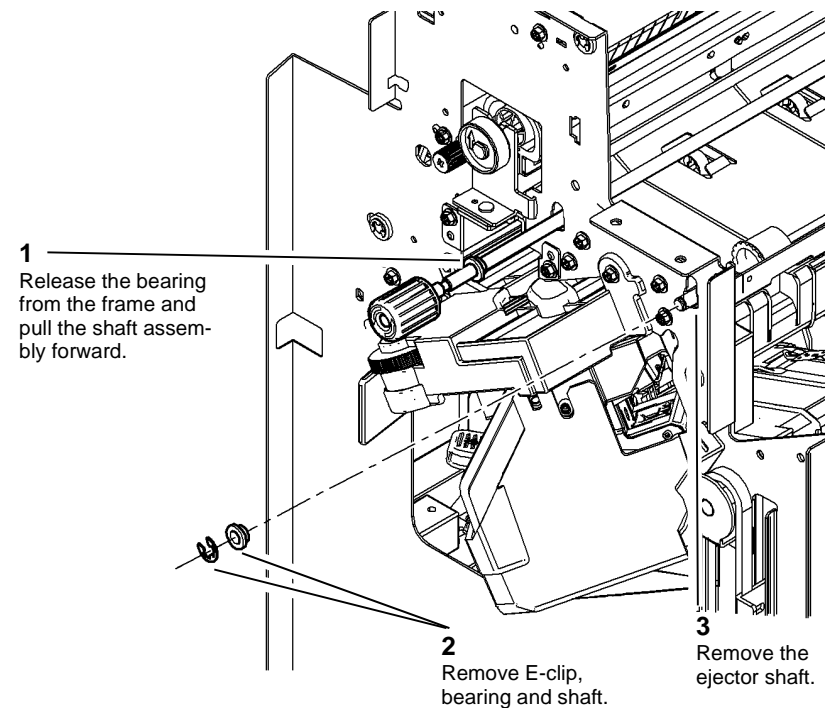
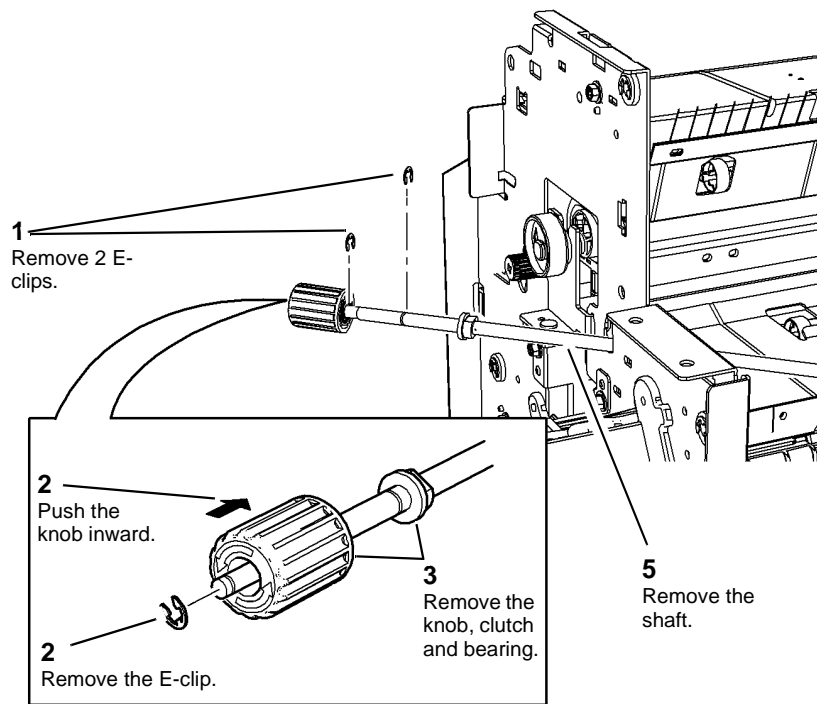


Figure 2 Ejector shaft removal

W-1-0395-A

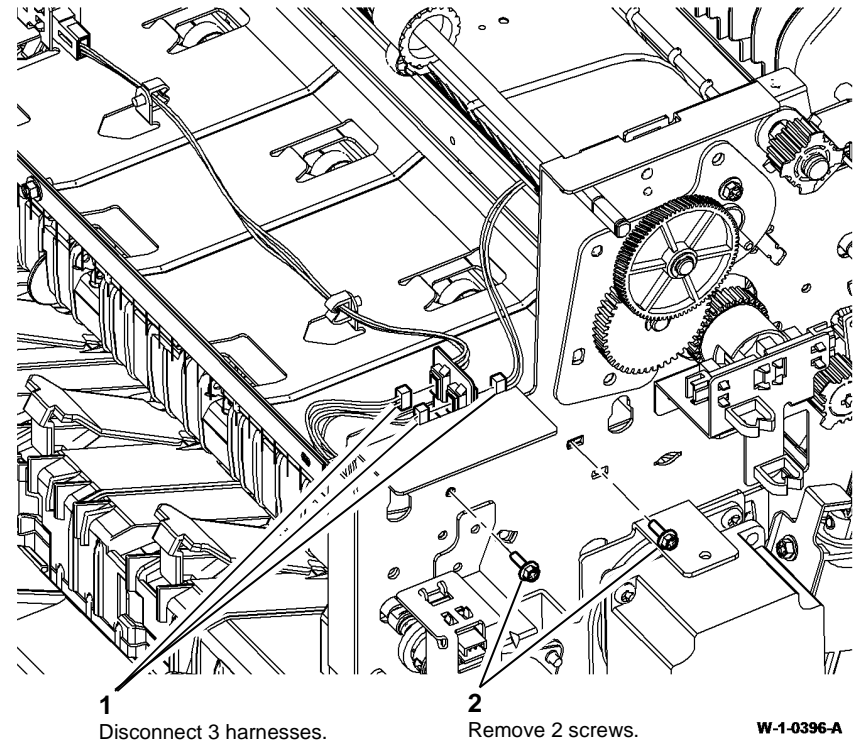
7. Remove the drive shaft, [Figure 3](#).



**Figure 3 Drive shaft removal**

W-1-1286-A

8. Prepare to remove the upper right paper guide, [Figure 4](#).

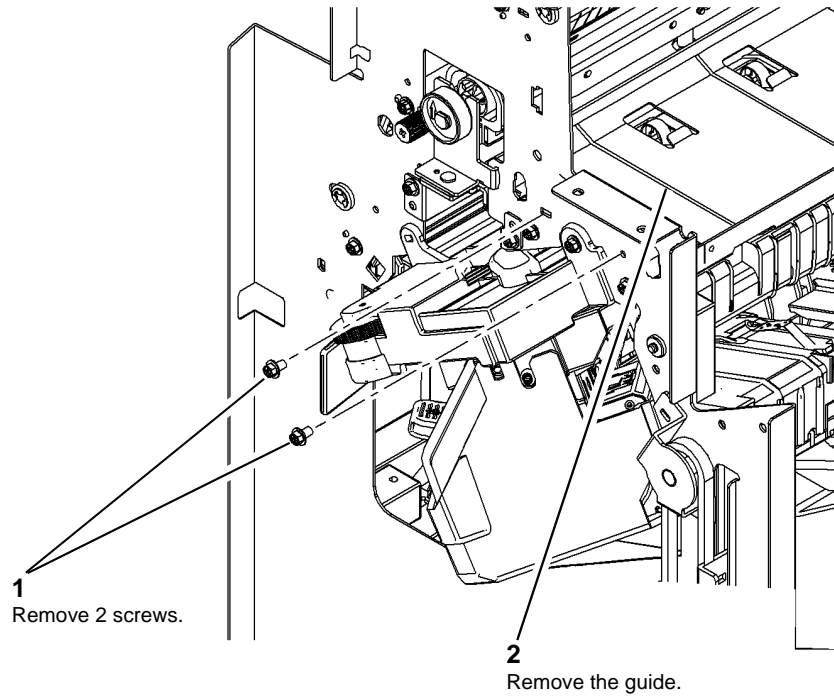


**Figure 4 Preparation**

W-1-0396-A



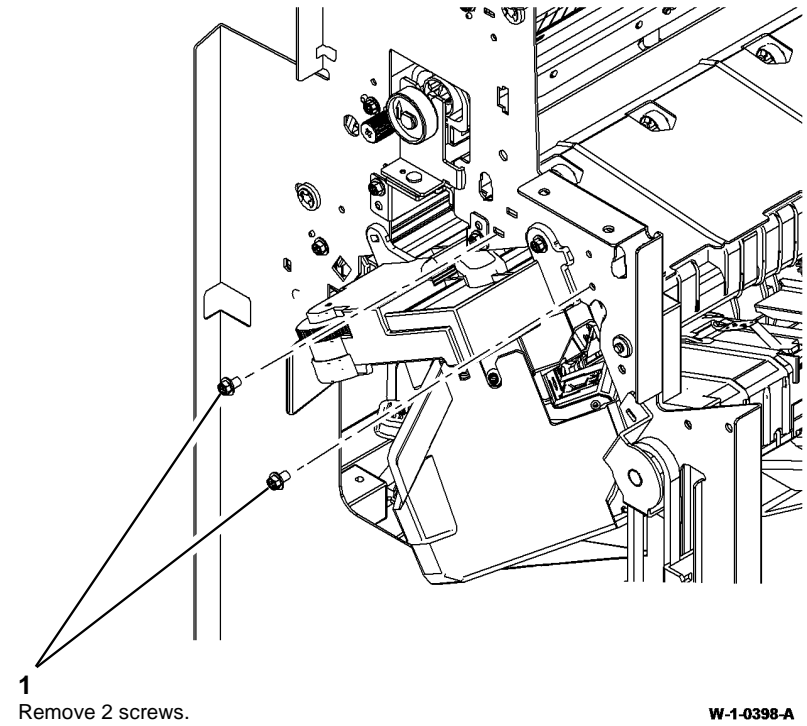
9. Remove the upper right paper guide, [Figure 5](#).



W-1-0397-A

Figure 5 Upper right guide removal

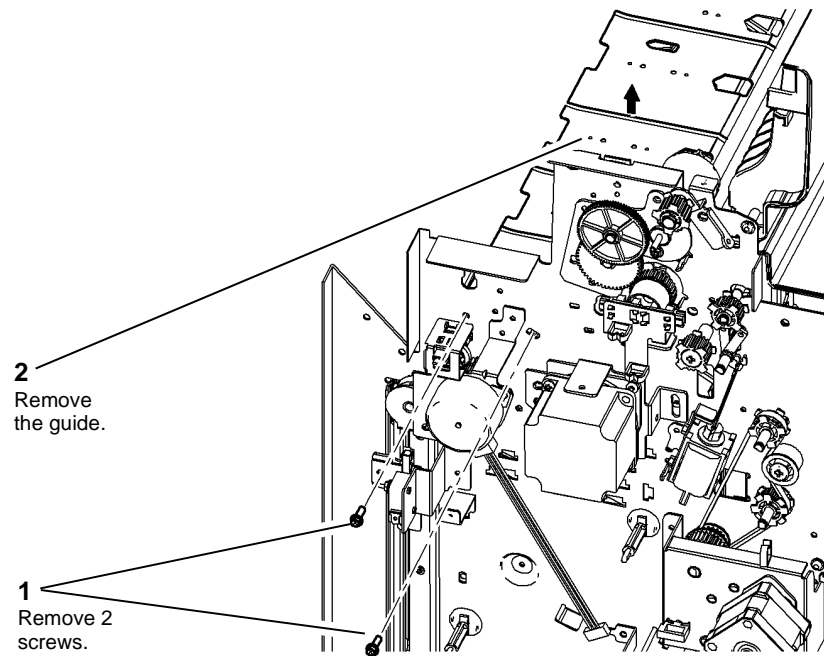
10. Prepare to remove the lower right paper guide, [Figure 6](#).



W-1-0398-A

Figure 6 Preparation

11. Remove the lower right paper guide, [Figure 7](#).

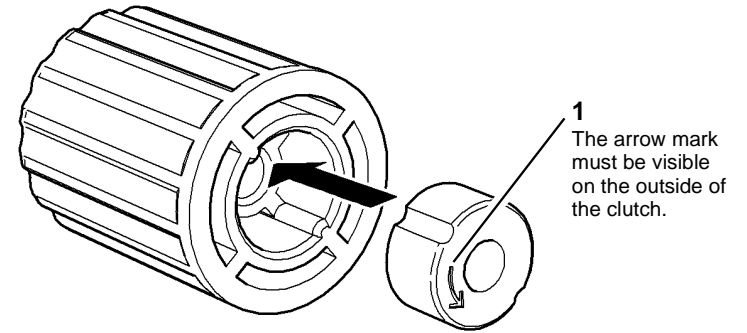


**Figure 7 Lower right guide removal**

W-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**

W-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

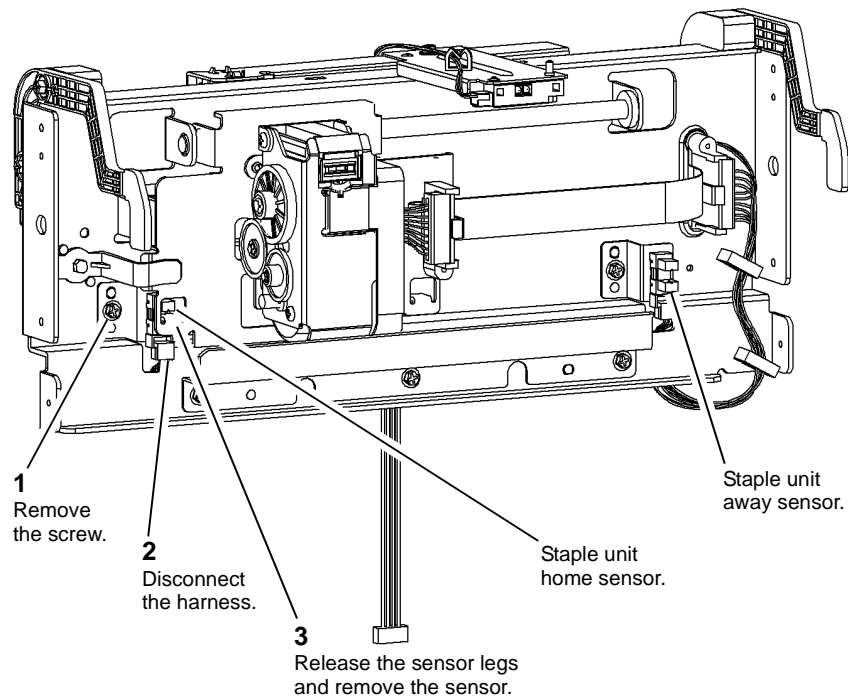
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



#### WARNING

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

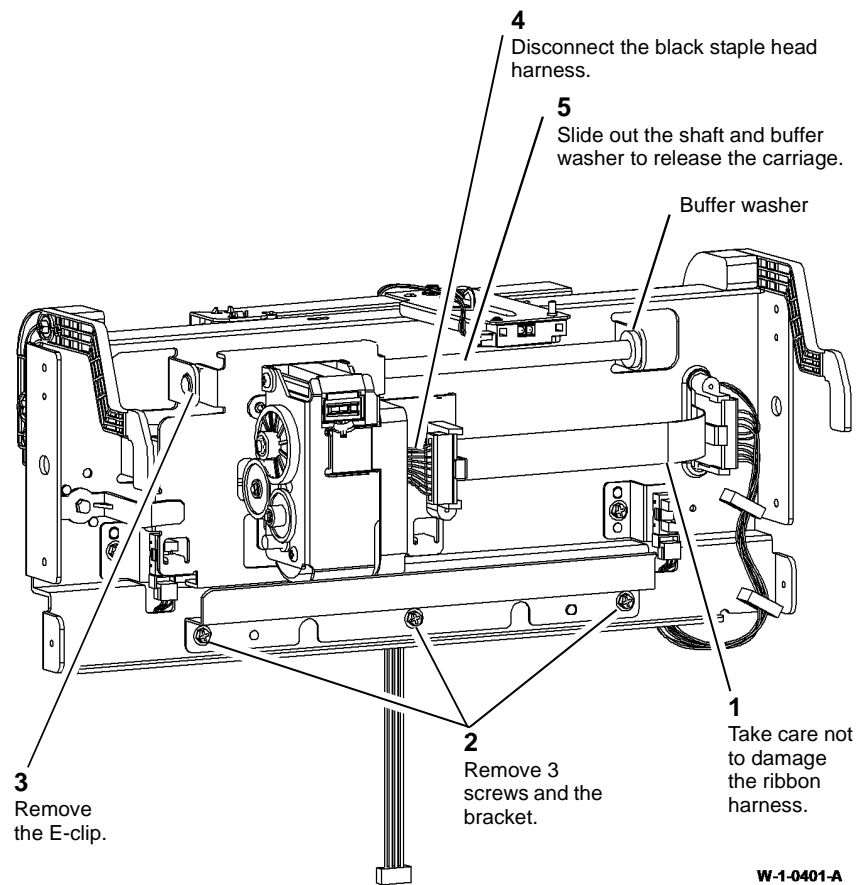
1. Remove the BM stapler assembly and booklet tamper assembly, [REP 12.38-150](#).
2. If required, remove the BM staple unit home sensor, Q12-438 or staple unit away sensor, Q12-439, [Figure 1](#).



W-1-0400-A

Figure 1 Sensor removal

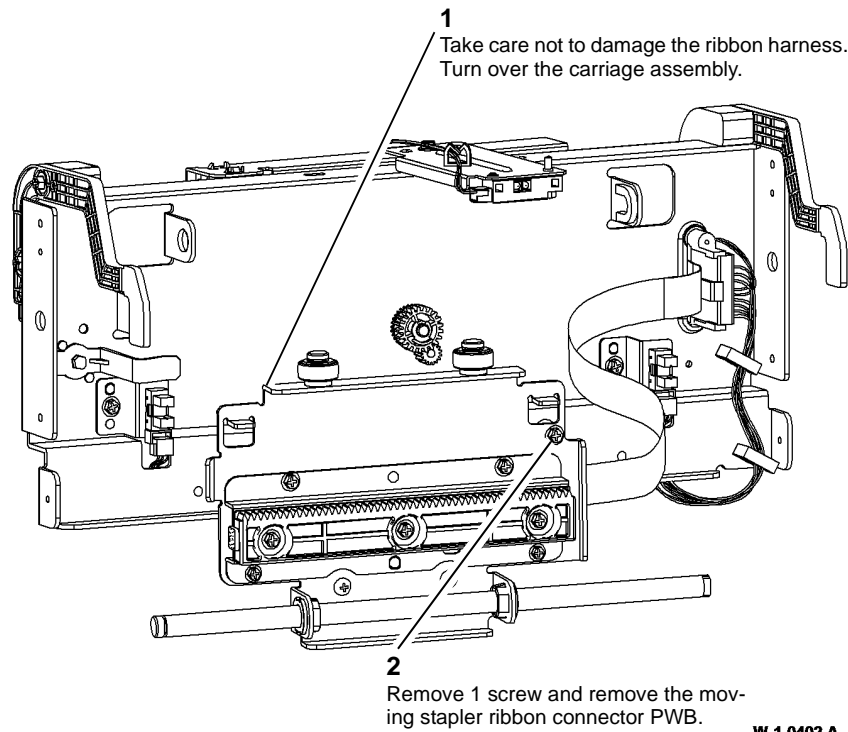
3. Prepare to remove the stapler carriage assembly, [Figure 2](#).



W-1-0401-A

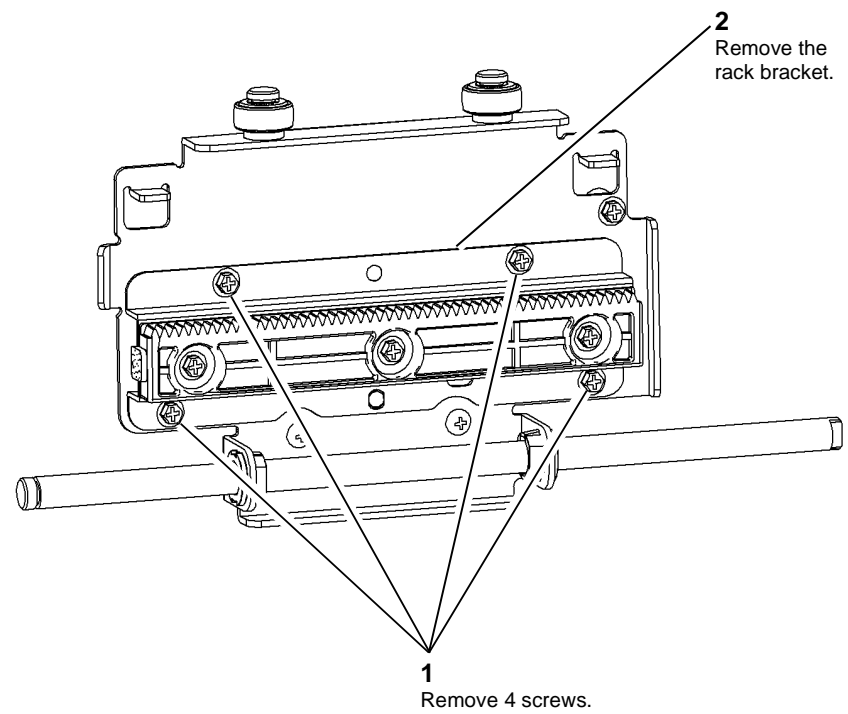
Figure 2 Preparation

4. Remove the stapler carriage assembly, [Figure 3](#).



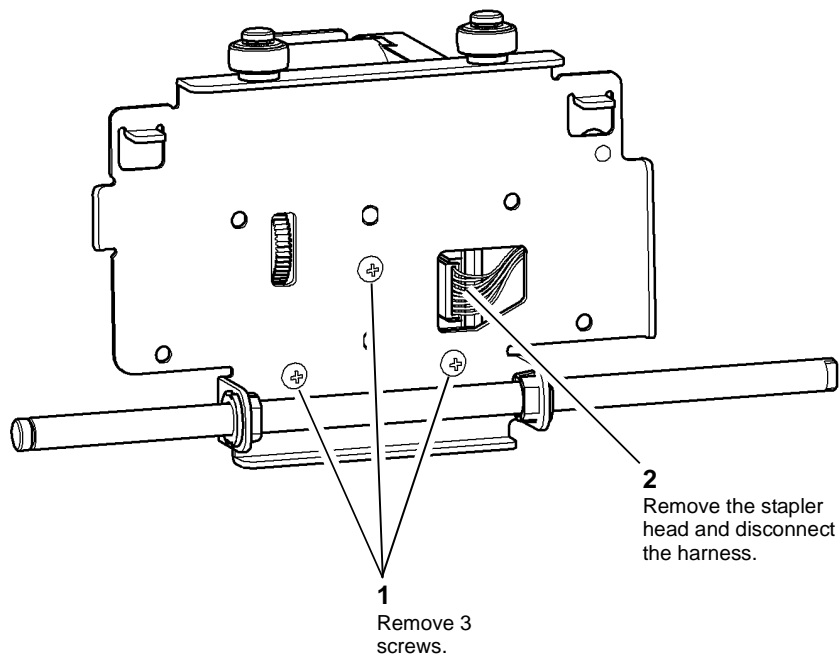
**Figure 3 Carriage removal**

5. Remove the rack bracket, [Figure 4](#).



**Figure 4 Rack bracket removal**

6. Remove the BM stapler head assembly, [Figure 5](#).



W-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 12.7-150](#) Booklet Stapler Anvil Position - Front
  - [ADJ 12.8-150](#) Booklet Stapler Anvil Position - Rear.



## REP 20.1 Fax PWB

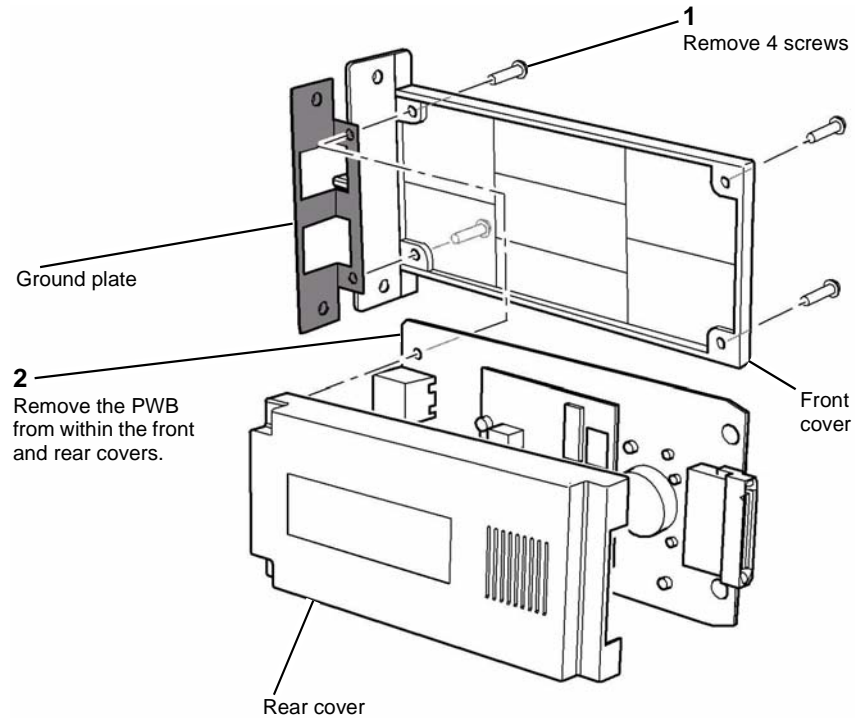
Parts List on [PL 20.05](#)

### 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.



W-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.

Perform the relevant procedure:

- [Backplate](#).
- [Left Frame Cover and Centre Exit Cover](#).
- [Centre Output Tray](#).

#### Backplate

Perform the steps that follow:

1. Remove the upper right cover, [PL 28.10 Item 3](#).
2. Remove the horizontal transport, [REP 10.6](#).
3. Remove the backplate, [PL 10.15 Item 12](#).

#### Left Frame Cover and Centre Exit Cover

Perform the steps that follow:

1. Open the front door.
2. Open the left door.
3. Raise the SPDH, [PL 5.10 Item 9](#).

4. Prepare to remove the left frame cover, [Figure 1](#).

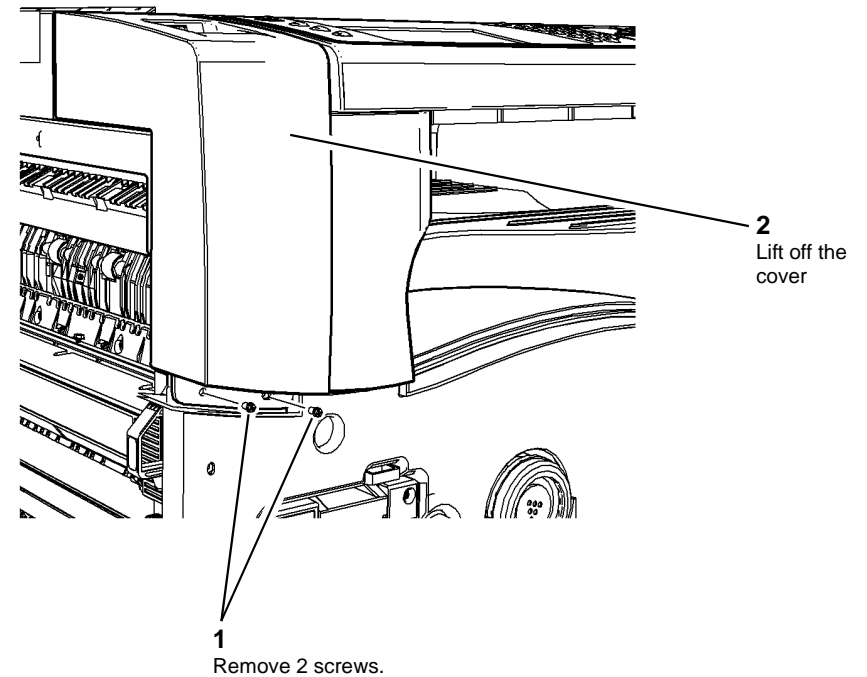
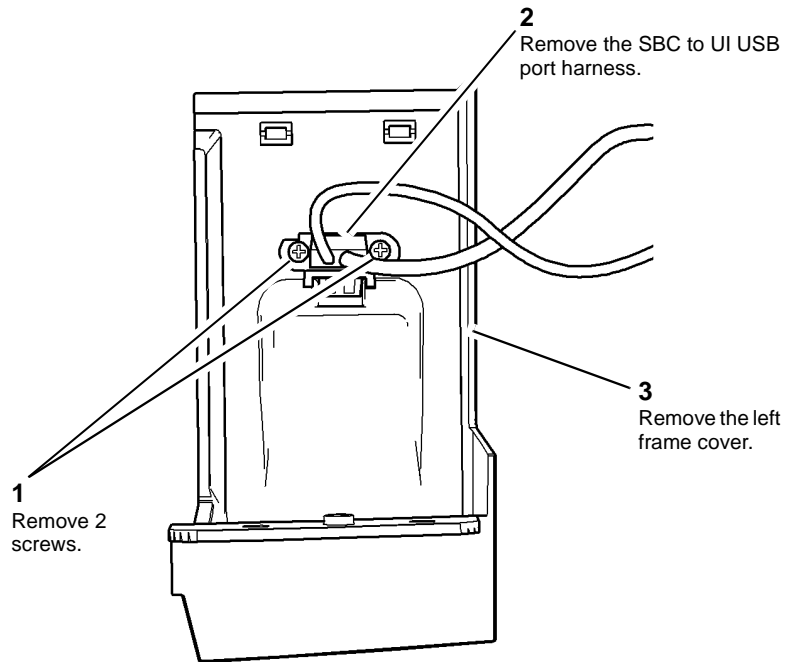


Figure 1 Preparation

W-1-1153-A

- Remove the left frame cover, [Figure 2](#).



**Figure 2 Left frame cover removal**

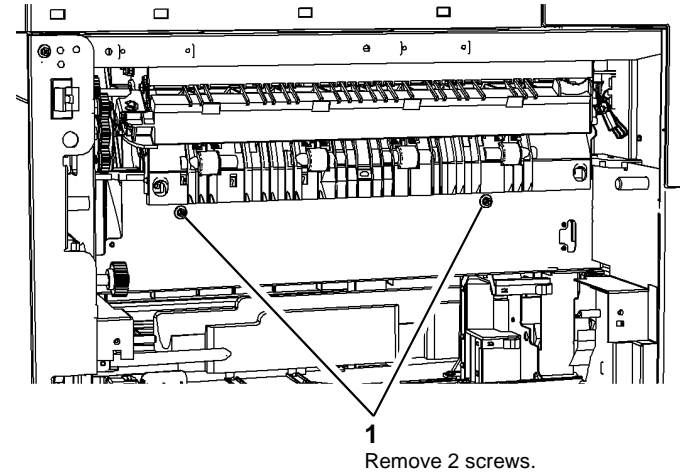
W-1-1154-A

- Remove the centre exit cover, [PL 28.10 Item 8](#) (2 screws), to the right of the machine.

### Centre Output Tray

Perform the steps that follow:

- Open the front door.
- Open the left door.
- Remove the fuser module, [PL 10.8 Item 1](#).
- Prepare to remove the centre output tray, [Figure 3](#).



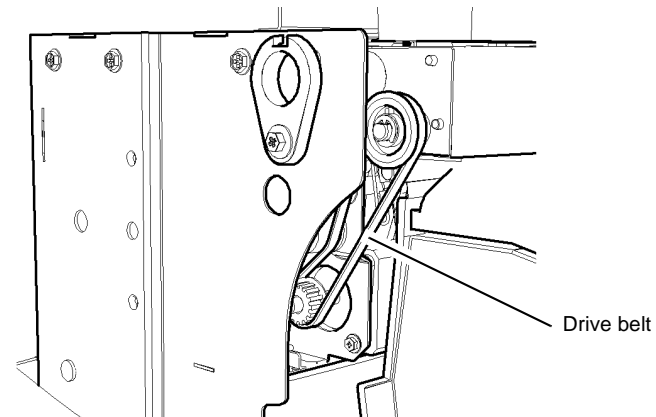
**Figure 3 Preparation**

W-1-1155-A

- Remove the upper right cover, [PL 28.10 Item 3](#).
- Remove the centre output tray, [PL 28.10 Item 9](#).

### Replacement

- Replacement is the reverse of the removal procedure.
- When reinstalling the centre output tray, ensure that:
  - the bail arm assembly, [PL 10.11 Item 25](#), is correctly located above, and clear of the centre output tray.
  - the diverter output guides, [PL 10.10 Item 3](#) are correctly located.
- When reinstalling the centre exit cover, take care not to disengage the drive belt, [Figure 4](#).



**Figure 4 Drive belt**

W-1-1337-A

## REP 28.2 Rear Cover

Parts List on [PL 28.10](#)

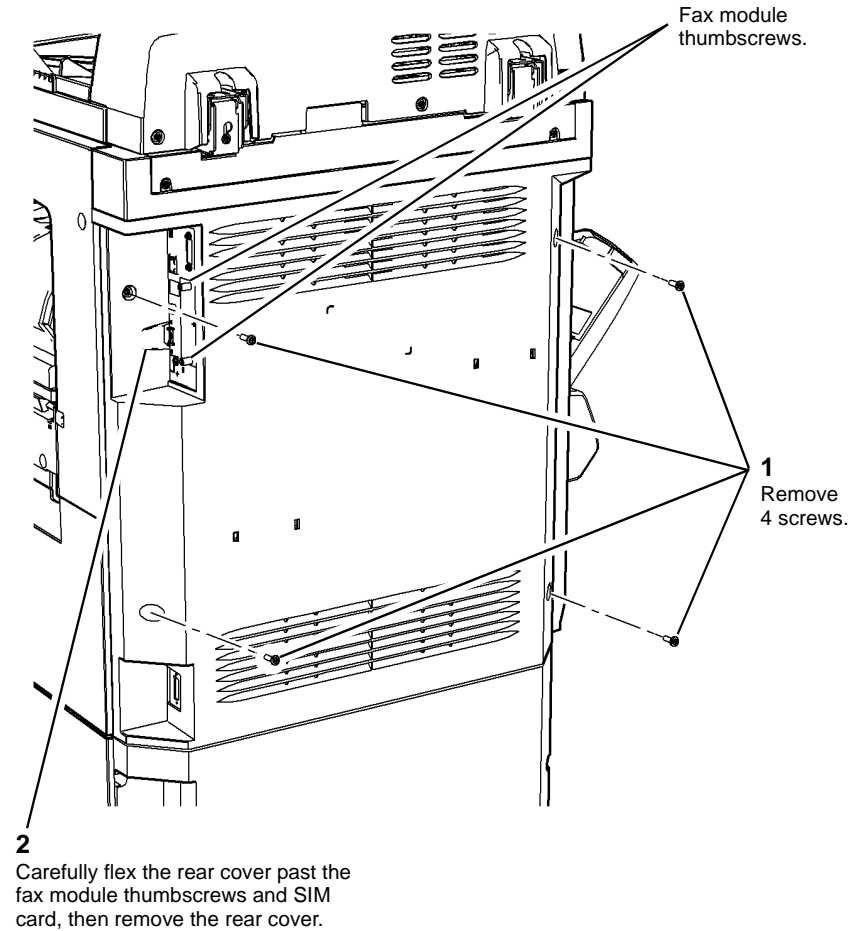
### Removal



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.

Perform the steps that follow:

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.
2. Remove the rear cover, [Figure 1](#).

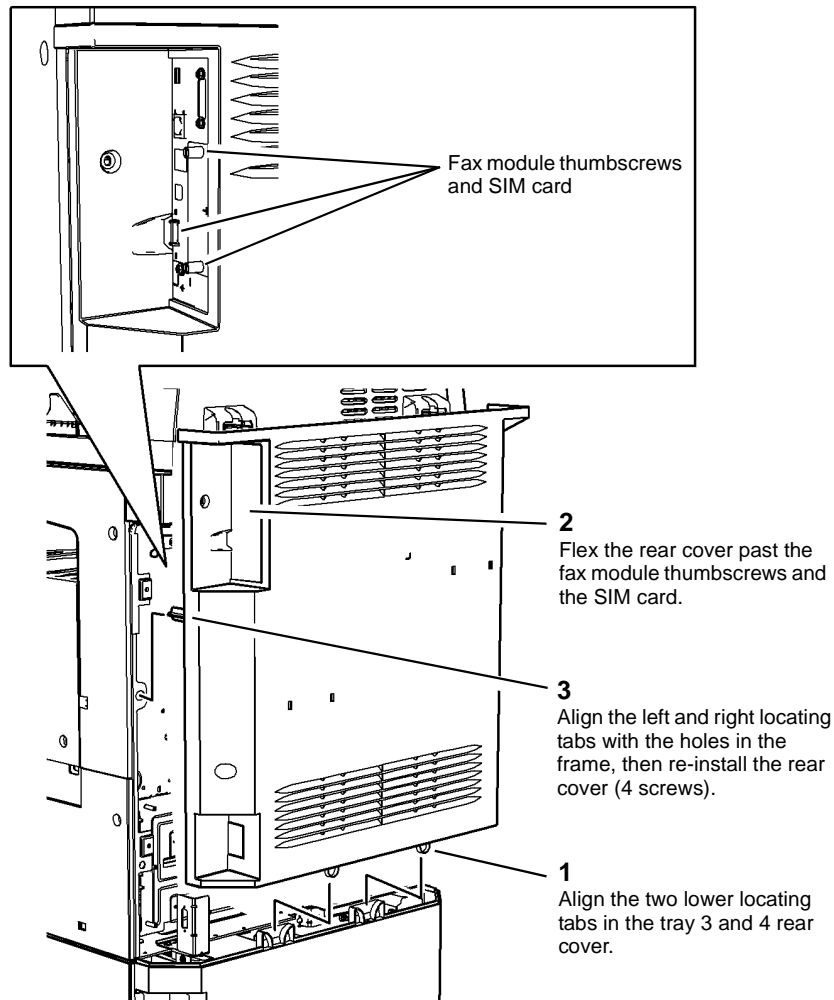


W-1-1316-A

Figure 1 Removal

## Replacement

1. Re-install the rear cover, [Figure 2](#).



**Figure 2 Replacement**

W-1-1317-A

2. Re-connect the components that follow, as necessary:
  - Network cable.
  - Wireless network adaptor, [PL 3.22 Item 20](#).
  - Telephone cable.
  - FDI harness.
  - Finisher communication harness.

# 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](#).

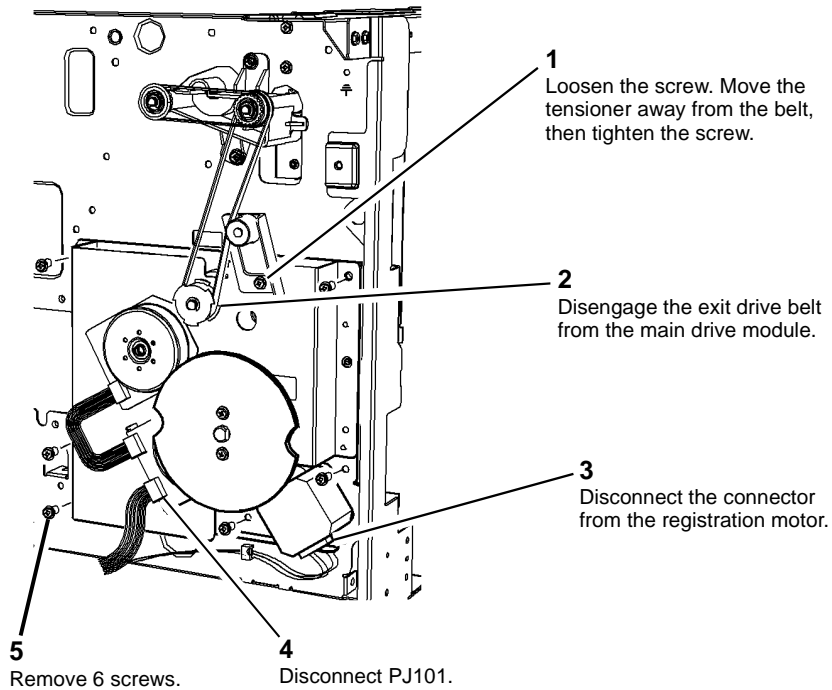


Figure 1 Preparation

W-1-1017-A

  
**CAUTION**

Take care not to damage harnesses when removing the main drive module.

5. Remove the main drive module. Refer to [Figure 2](#).

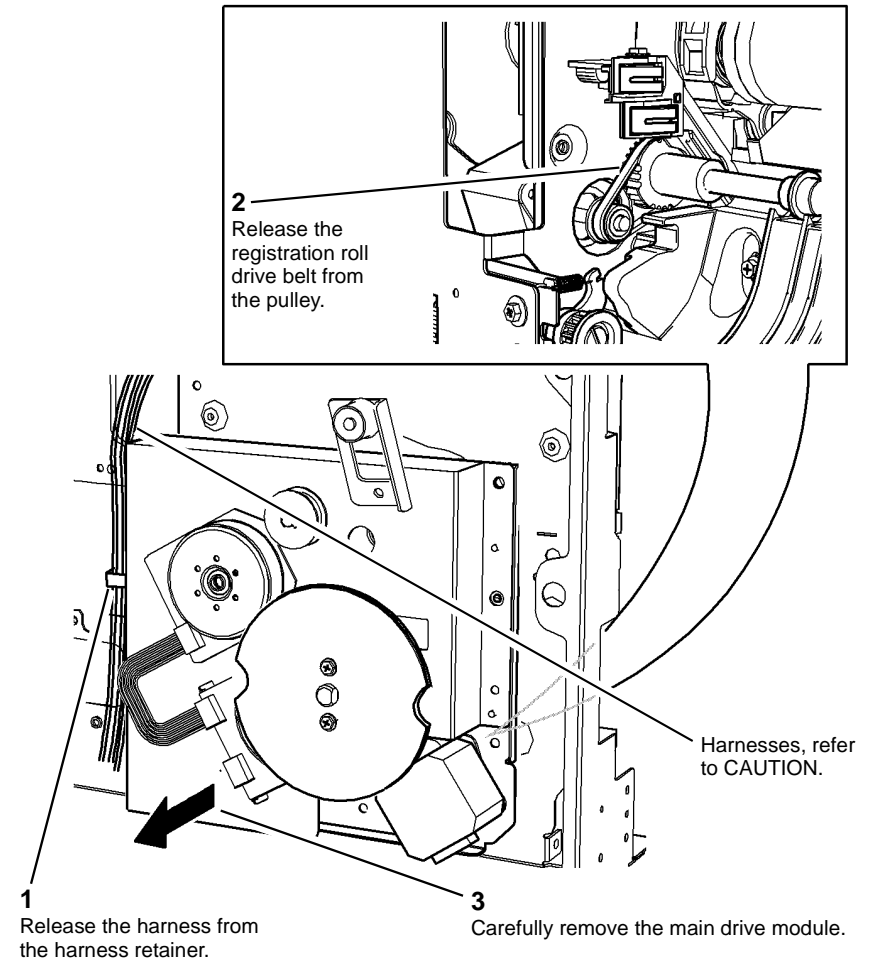


Figure 2 Removal

W-1-1018-A

## Replacement

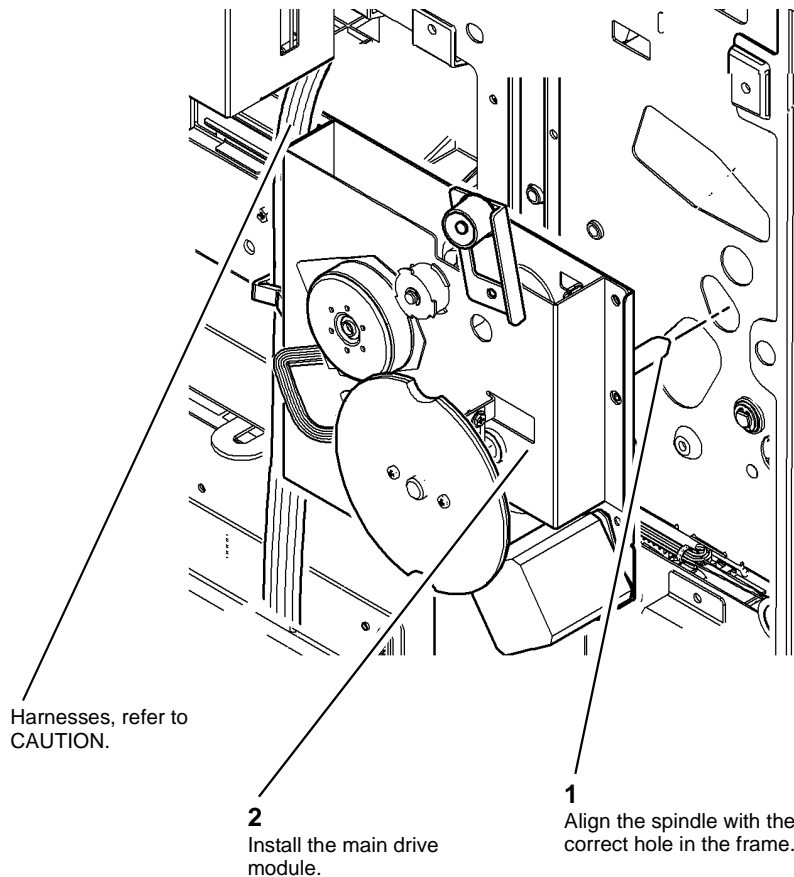


**CAUTION**

*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**

W-1-1019-A

3. The remainder of the replacement is the reverse of the removal procedure.
4. Re-fit the registration roll drive belt to the pulley.

## 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](#).

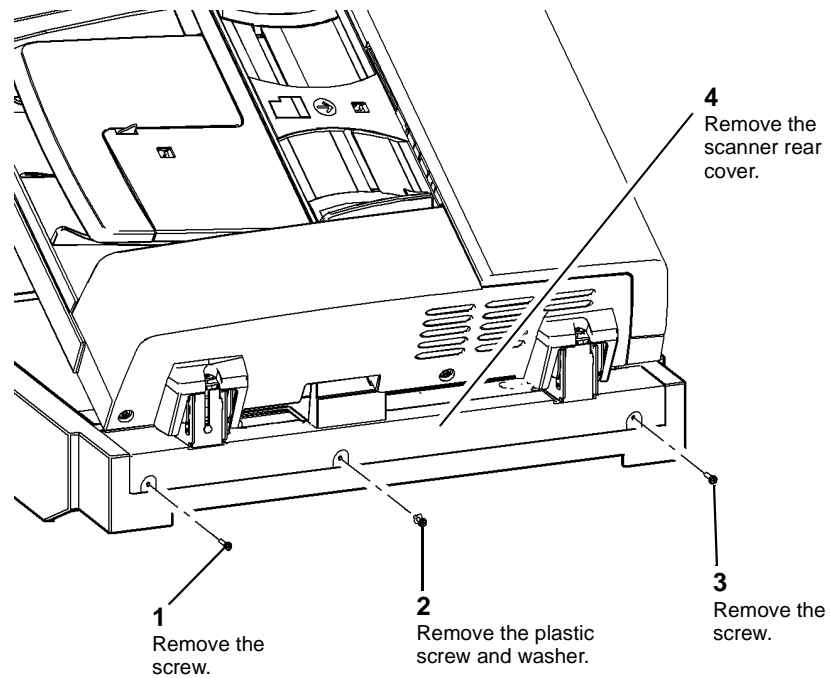


Figure 1 Scanner rear cover

3. Remove the Faraday shield, [Figure 2](#).

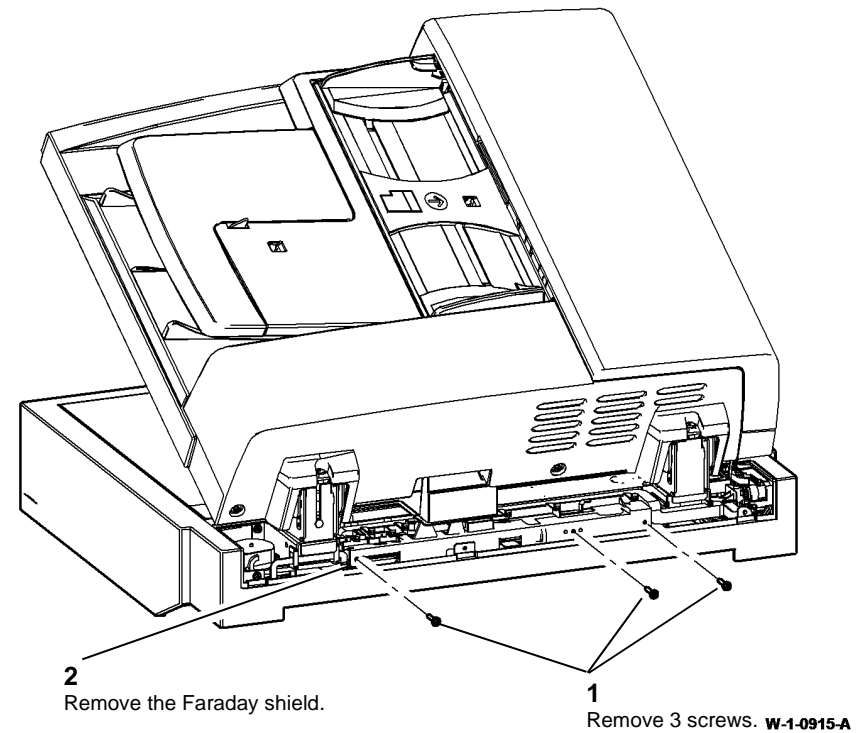


Figure 2 Faraday shield removal

## Replacement

1. The replacement is the reverse of the removal procedure.
2. Ensure the Faraday shield is positioned under the 4 hooks formed in the scanner PWB cover, [PL 60.20 Item 6](#).

  
**CAUTION**

*Do not overtighten the plastic screw as it is fragile,*

3. In order to control ESD, ensure the scanner rear cover central fixing screw and washer are of the plastic type, [Figure 1](#).

## 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**

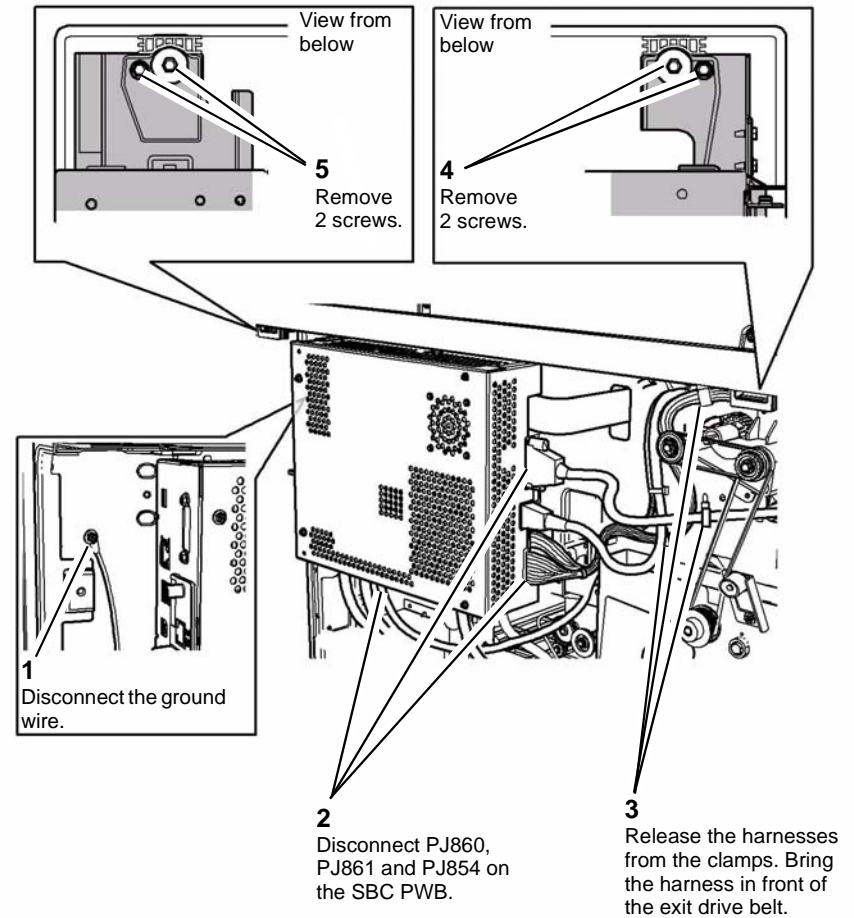
Take care during this procedure. Sharp edges may be present that can cause injury.

  
**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](#).
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 5.19](#).
5. Remove the upper right cover, [PL 28.10 Item 3](#).
6. Remove the rear cover, [REP 28.2](#).
7. Remove the 2 securing screws from the left frame cover, [PL 28.10 Item 6](#). Allow the cover to hang from the harness.

8. Prepare to remove the scanner module, [Figure 1](#).



W-1-1033-A

Figure 1 Scanner removal preparation



9. Lock the scan carriage.

**!**  
**CAUTION**

*Take care not to damage the scanner harnesses when removing the scanner.*

10. Remove the scanner module, Figure 2.

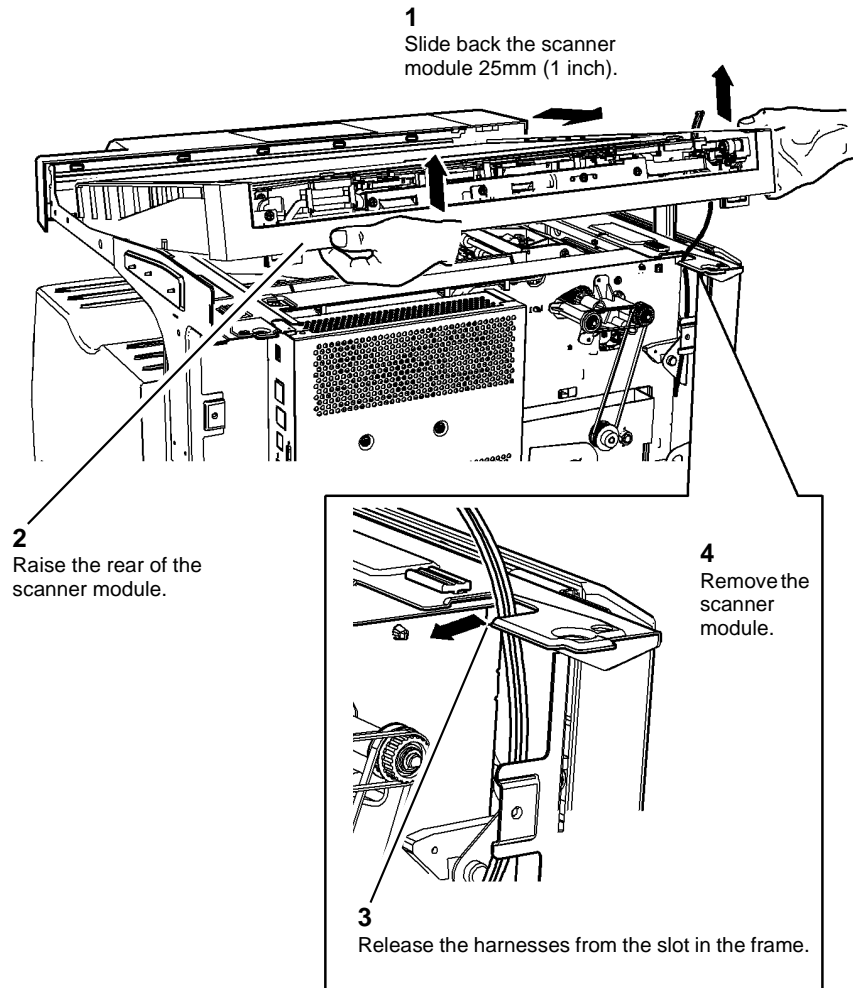
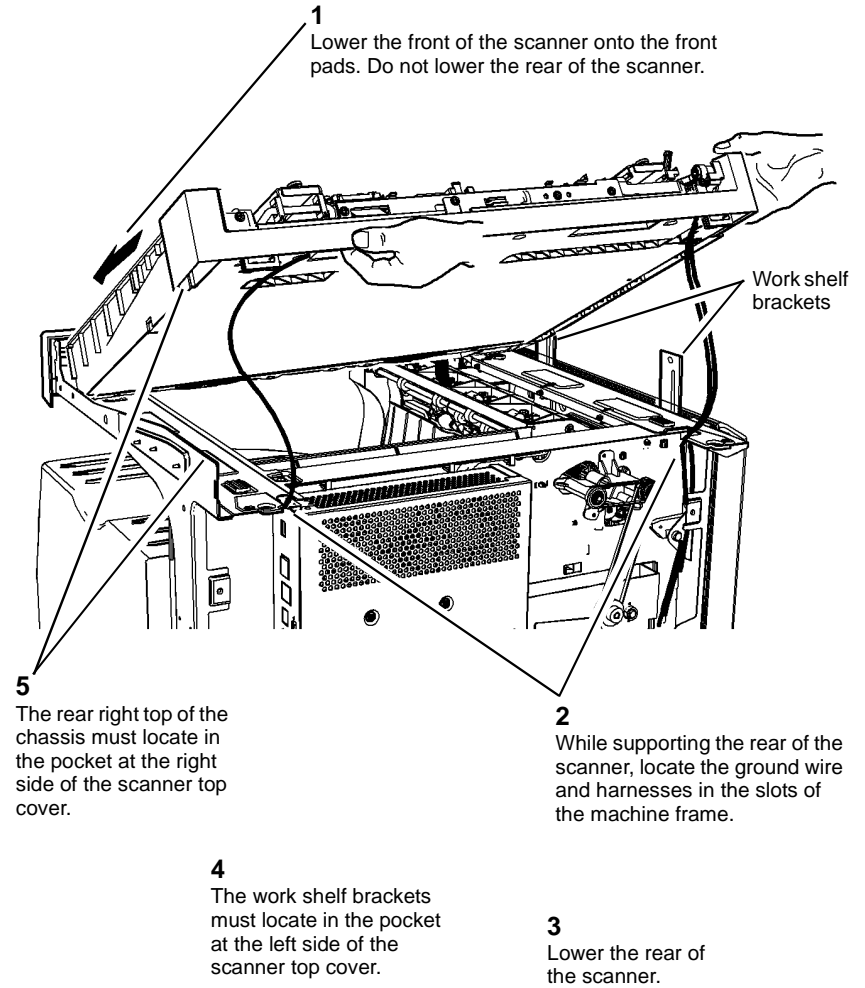


Figure 2 Scanner removal

## Replacement

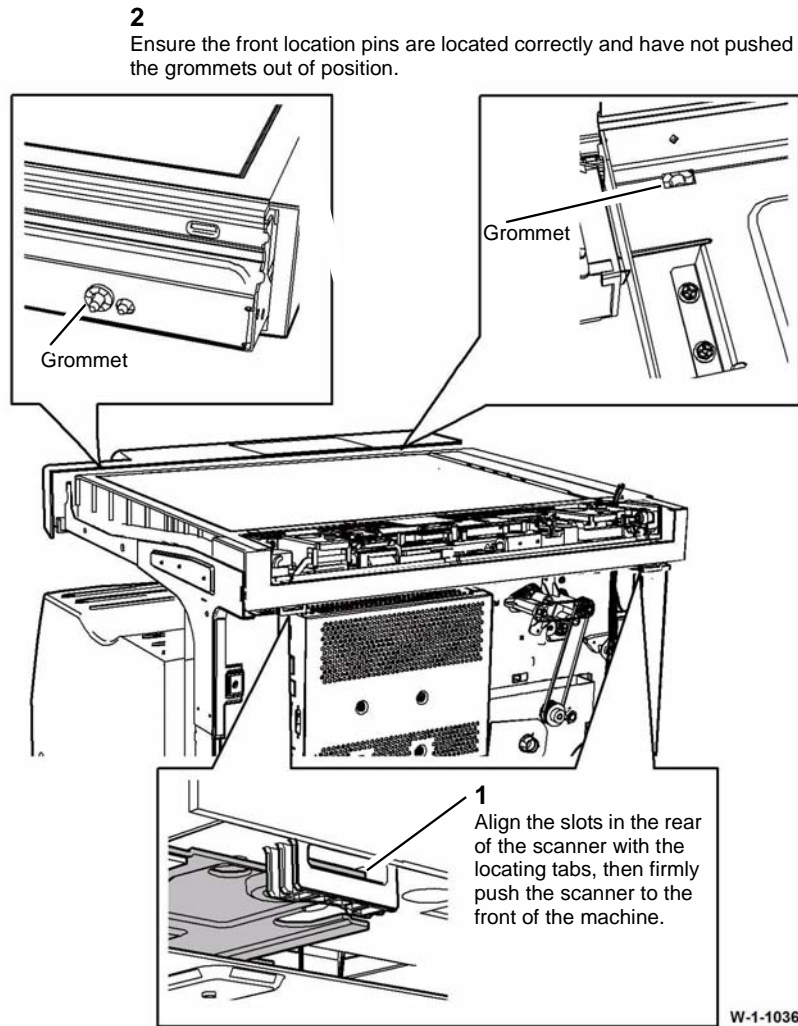
1. Holding the scanner as shown, replace the scanner, Figure 3.



W-1-1035-A

Figure 3 Scanner replacement

- Secure the scanner. Refer to [Figure 4](#).



**Figure 4 Scanner replacement**

- Ensure the shouldered screws are inserted into the blue grommets. Refer to [Figure 1](#).
- Ensure the scan carriage is unlocked. Refer to [Figure 2](#).
- Ensure the ground wire is connected correctly. Refer to [Figure 1](#).
- Re-connect the harnesses to the SBC PWB. Ensure that the harnesses are positioned and secured correctly, refer to [Figure 1](#).
- Re-attach the left frame cover to the machine.
- The remainder of the replacement procedure is the reverse of the removal procedure.
- Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.
- 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

**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.

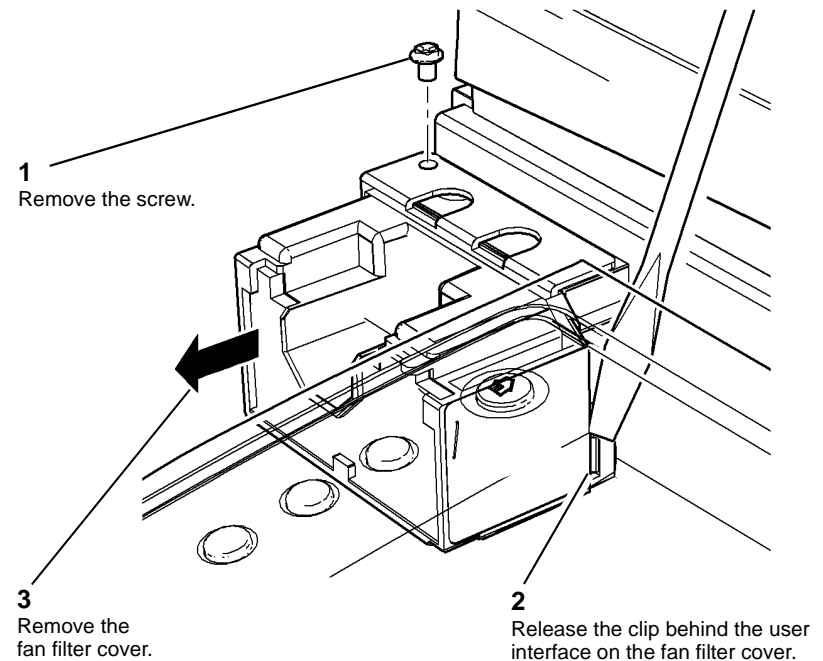


#### WARNING

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

1. Remove the SPDH, REP 5.19.
2. Remove the left frame cover, REP 28.1.
3. Remove the left frame cover support bracket, (2 screws).
4. Remove the upper right cover, PL 28.10 Item 3.
5. Remove the 4 screws securing the scanner. Refer to REP 60.2.
6. Slide the scanner back approximately 25mm (1 inch) to allow access to the 7 fixing screws on the front of the top cover assembly, Figure 2.

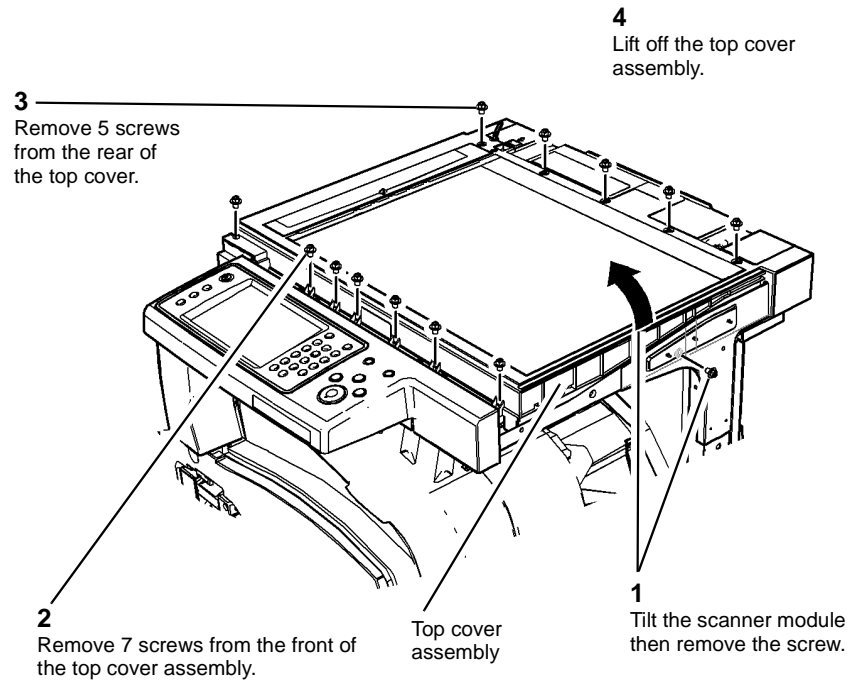
7. Remove the fan filter cover, Figure 1.



W-1-1245-A

Figure 1 Fan filter cover assembly

8. Remove the top cover assembly, [Figure 2](#).



W-1-0920-A

Figure 2 Top cover assembly

### Replacement

1. The replacement is the reverse of the removal procedure.
2. Perform [ADJ 60.1](#) scanner cleaning procedure.
3. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

## REP 60.4 Scanner PWB

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.

  
**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.

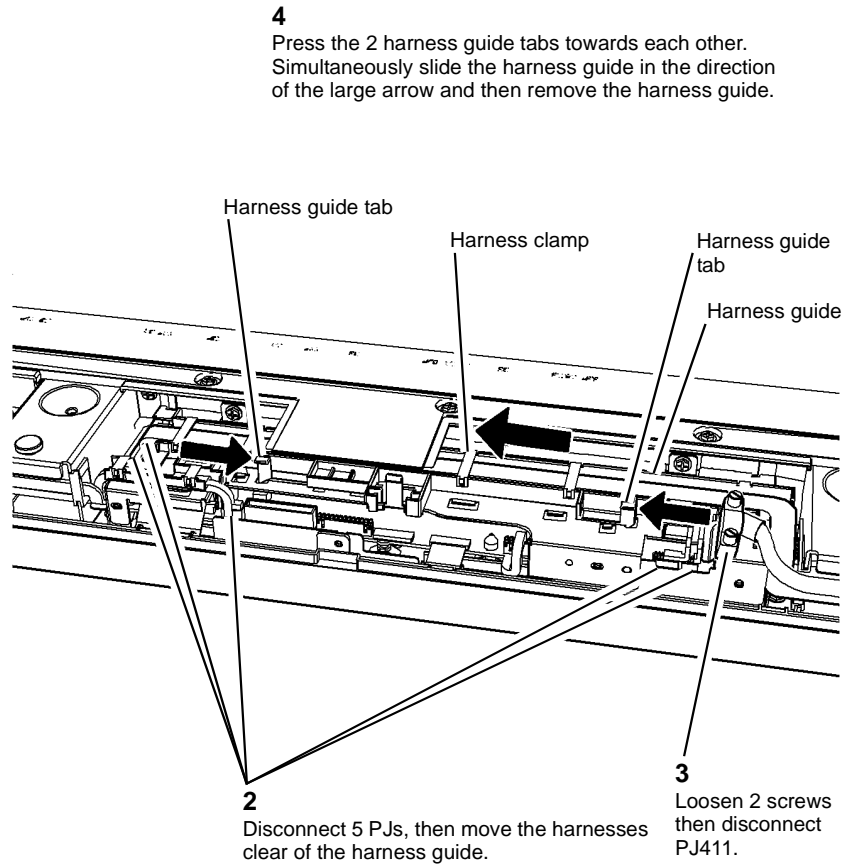


  
**CAUTION**

Ensure that E.S.D. procedures are observed during the removal and installation of the scanner PWB.

1. Remove the SPDH. [REP 5.19](#).

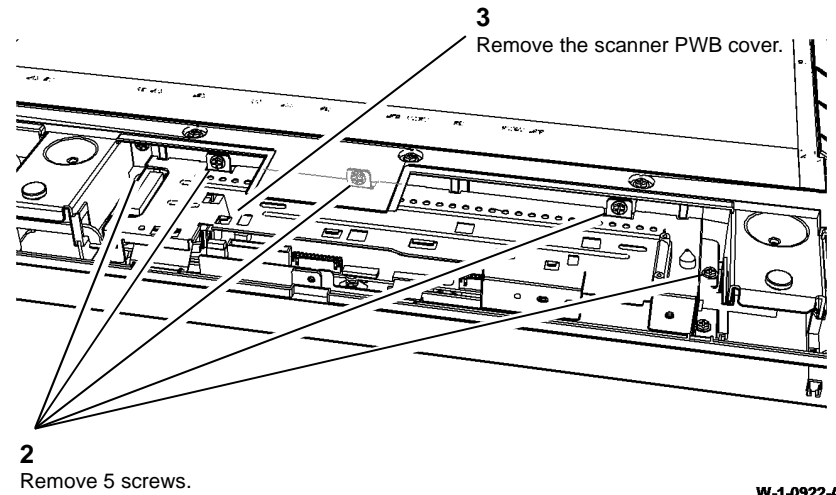
2. Remove the harness guide, [Figure 1](#).



**Figure 1 Scanner harness guide**

W-1-0921-A

3. Remove the scanner PWB cover, [Figure 2](#).



**Figure 2 Scanner PWB cover**

W-1-0922-A

4. Remove the scanner PWB, [Figure 3](#).

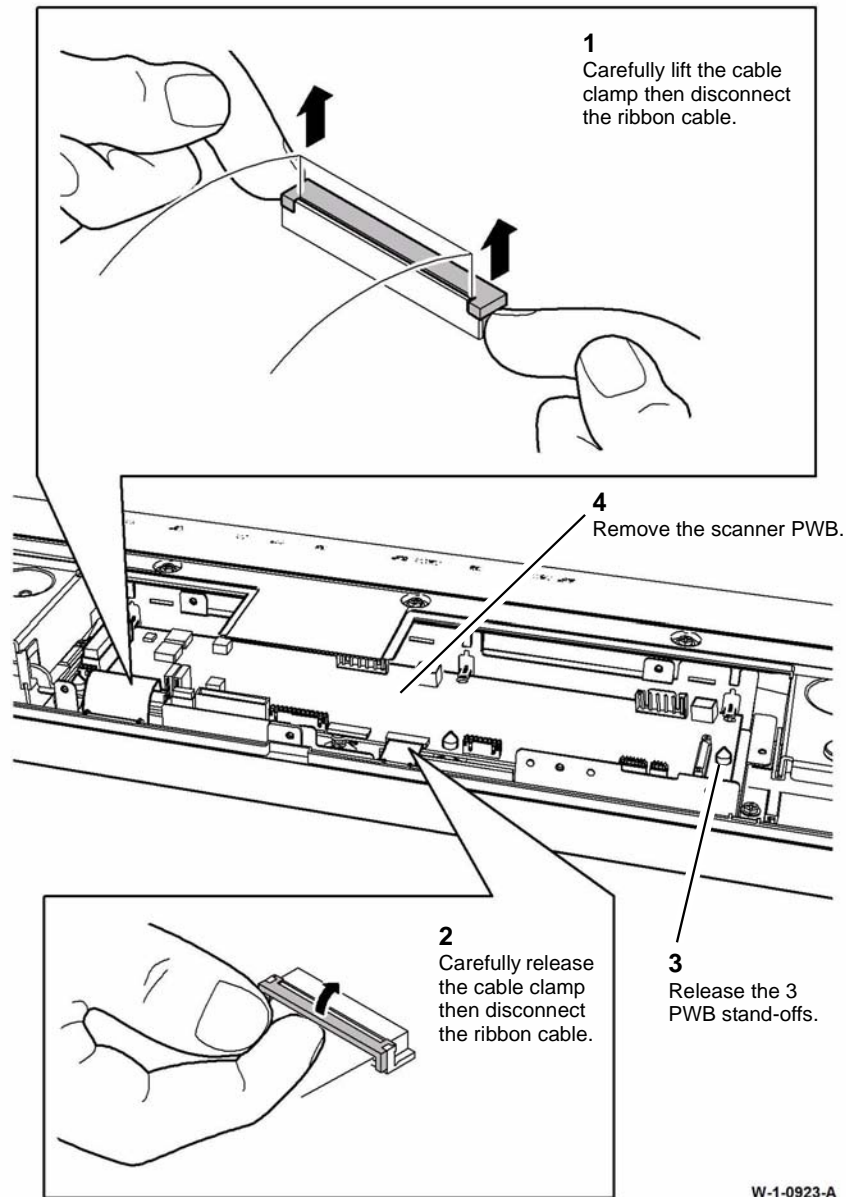


Figure 3 Scanner PWB

## Replacement

1. The replacement is the reverse of the removal procedure.
2. Ensure the scanner PWB engages with the 3 PWB locators on the rear of the scanner PWB support, [Figure 4](#).

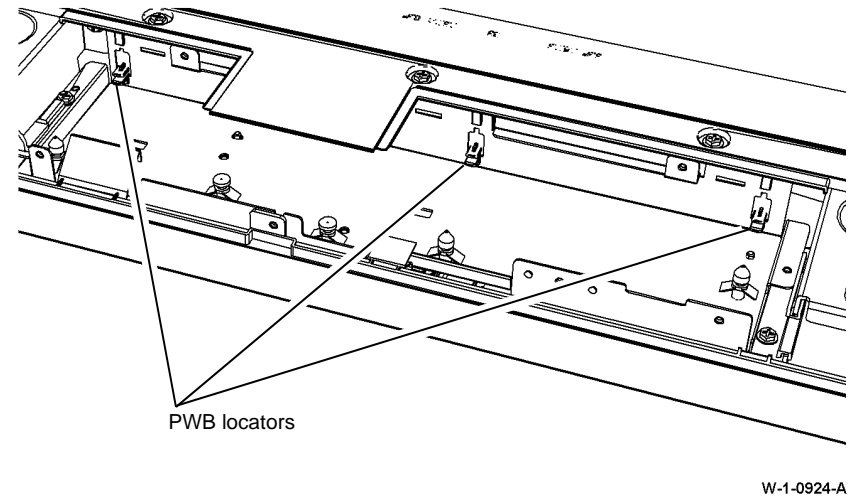


Figure 4 Scanner PWB locators

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

**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.

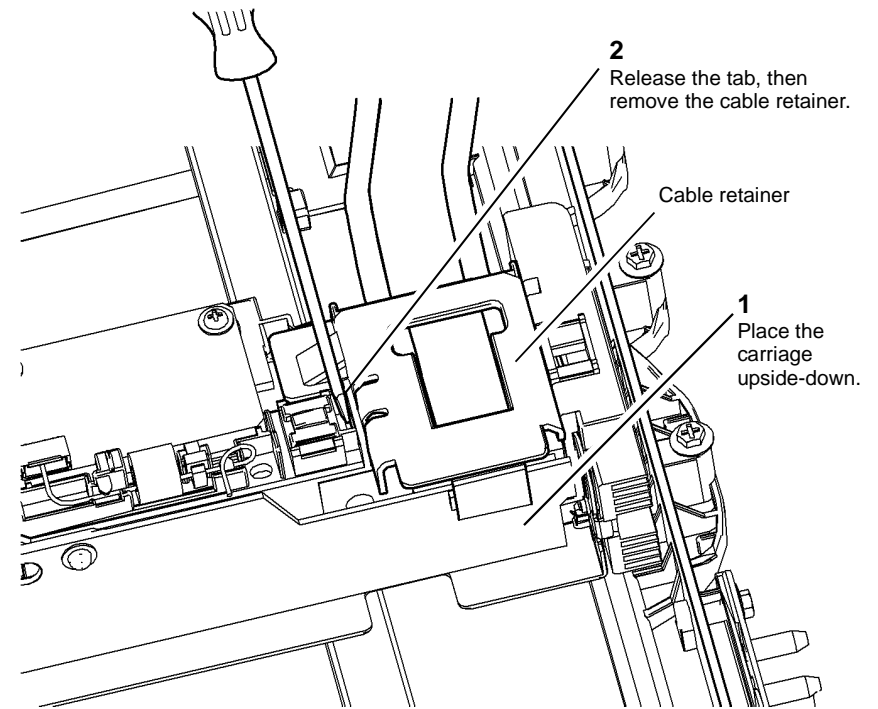


#### WARNING

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

1. Remove the top cover assembly, [REP 60.3](#).
2. Remove the scan carriage drive belt, [REP 60.11](#).

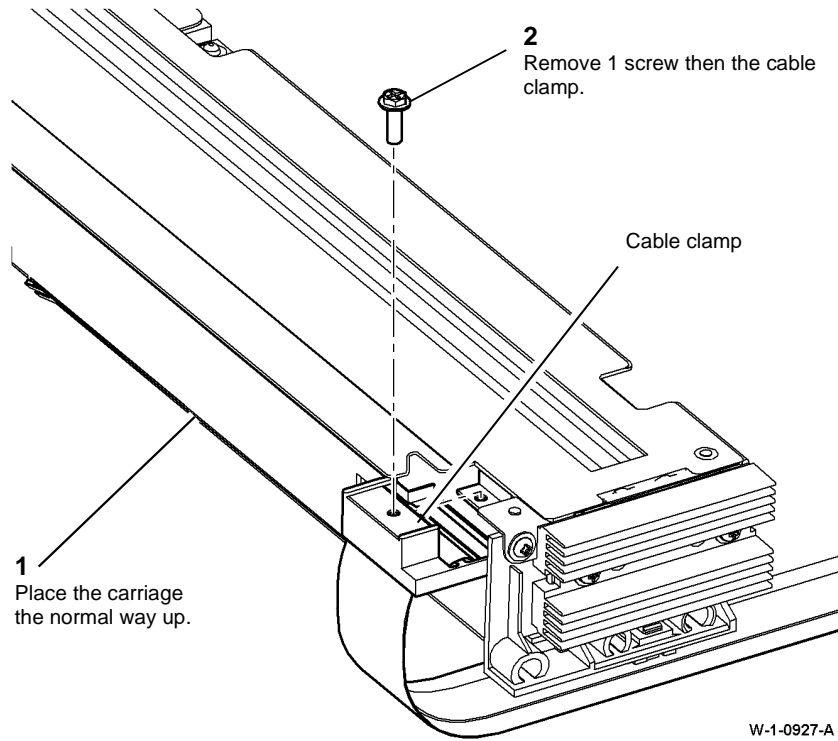
3. Remove the ribbon cable retainer, [Figure 1](#).



W-1-0925-A

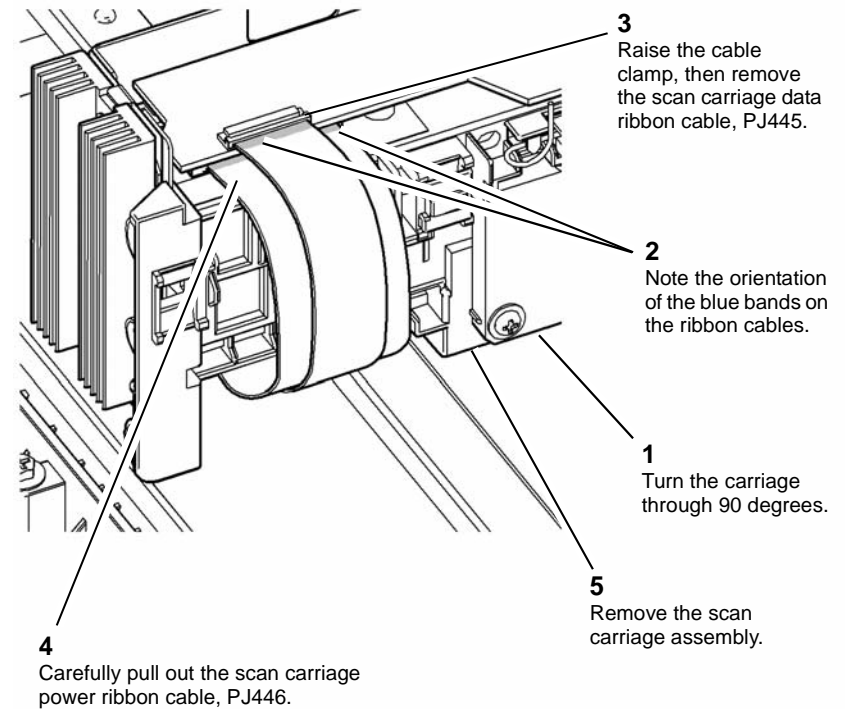
Figure 1 Cable retainer removal

4. Remove the cable clamp, [Figure 2](#).



**Figure 2** Cable clamp removal

5. Remove the scan carriage, [Figure 3](#).



**Figure 3** Scan carriage removal

### Replacement

1. The replacement is the reverse of the removal procedure.
2. When re-connecting the ribbon cables, the blue band printed on the cables must be orientated as shown in [Figure 3](#).
3. Perform [ADJ 60.1](#) Scanner Cleaning Procedure.
4. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.



## REP 60.6 Side 2 Scan Assembly

### Parts List on PL 60.30

#### 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. 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 takeaway roll assembly, REP 5.5.
2. Prepare to remove the side 2 scan assembly, Figure 1.

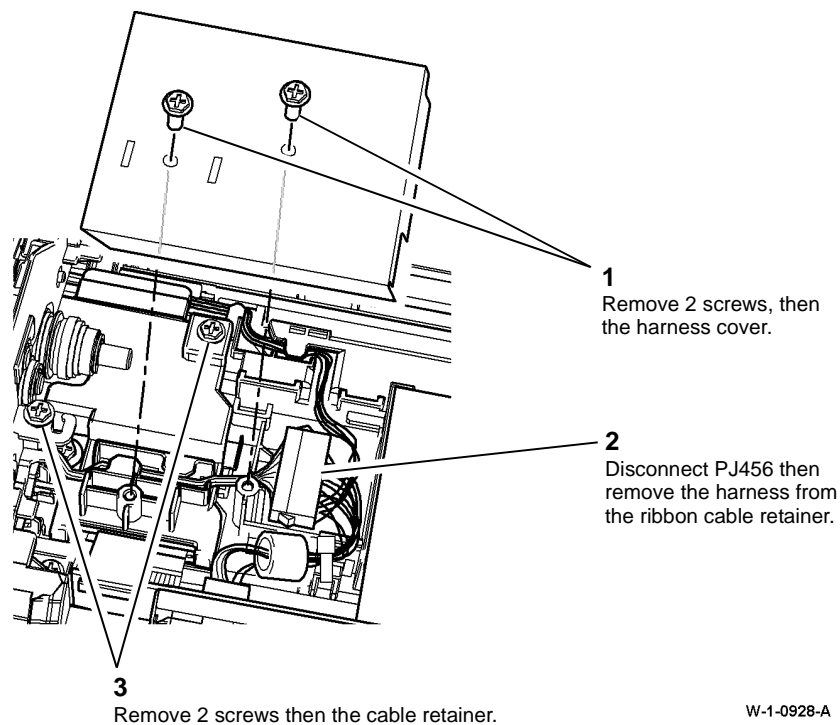
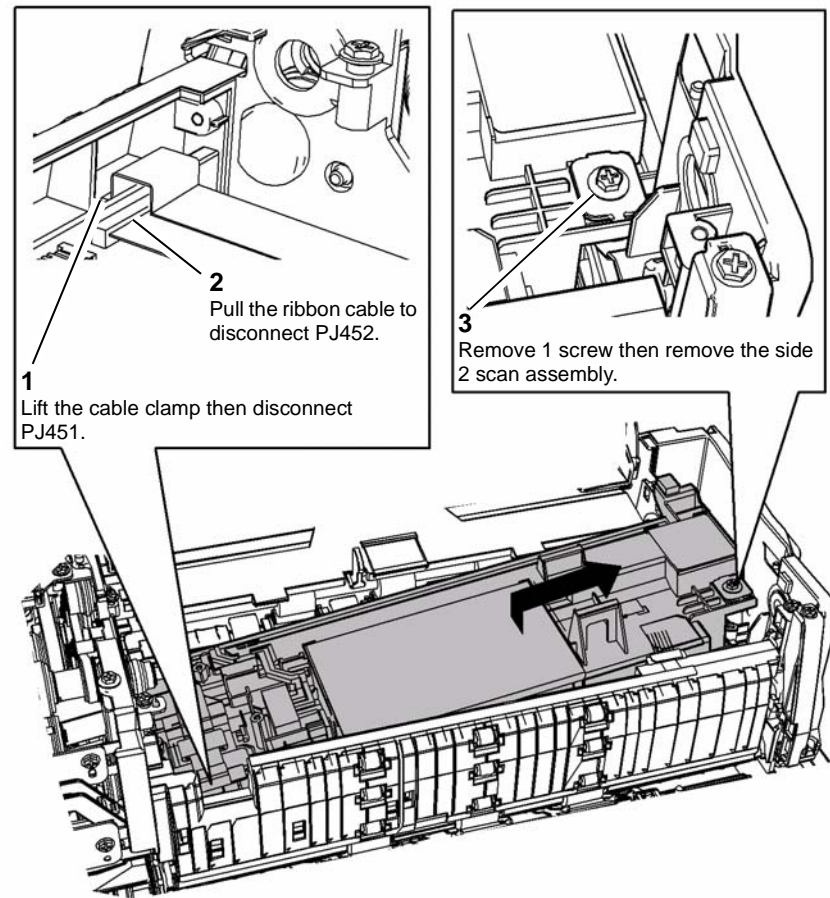


Figure 1 Scan assembly harnesses

W-1-0928-A

3. Remove the side 2 scan assembly, Figure 2.



W-1-0929-A

Figure 2 Side 2 scan assembly

#### Replacement



#### CAUTION

Take care not to trap the stack sensor actuator, PL 5.30 Item 6 beneath the side 2 scan assembly during re-assembly.

1. The replacement is the reverse of the removal procedure.
2. Perform ADJ 60.2 Side 2 Scan Assembly Cleaning Procedure.
3. Perform ADJ 60.3 IIT Registration, Magnification and Calibration.

## REP 60.7 Scan Carriage Power Ribbon Cable

Parts List on [PL 60.20](#)

### 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. 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.

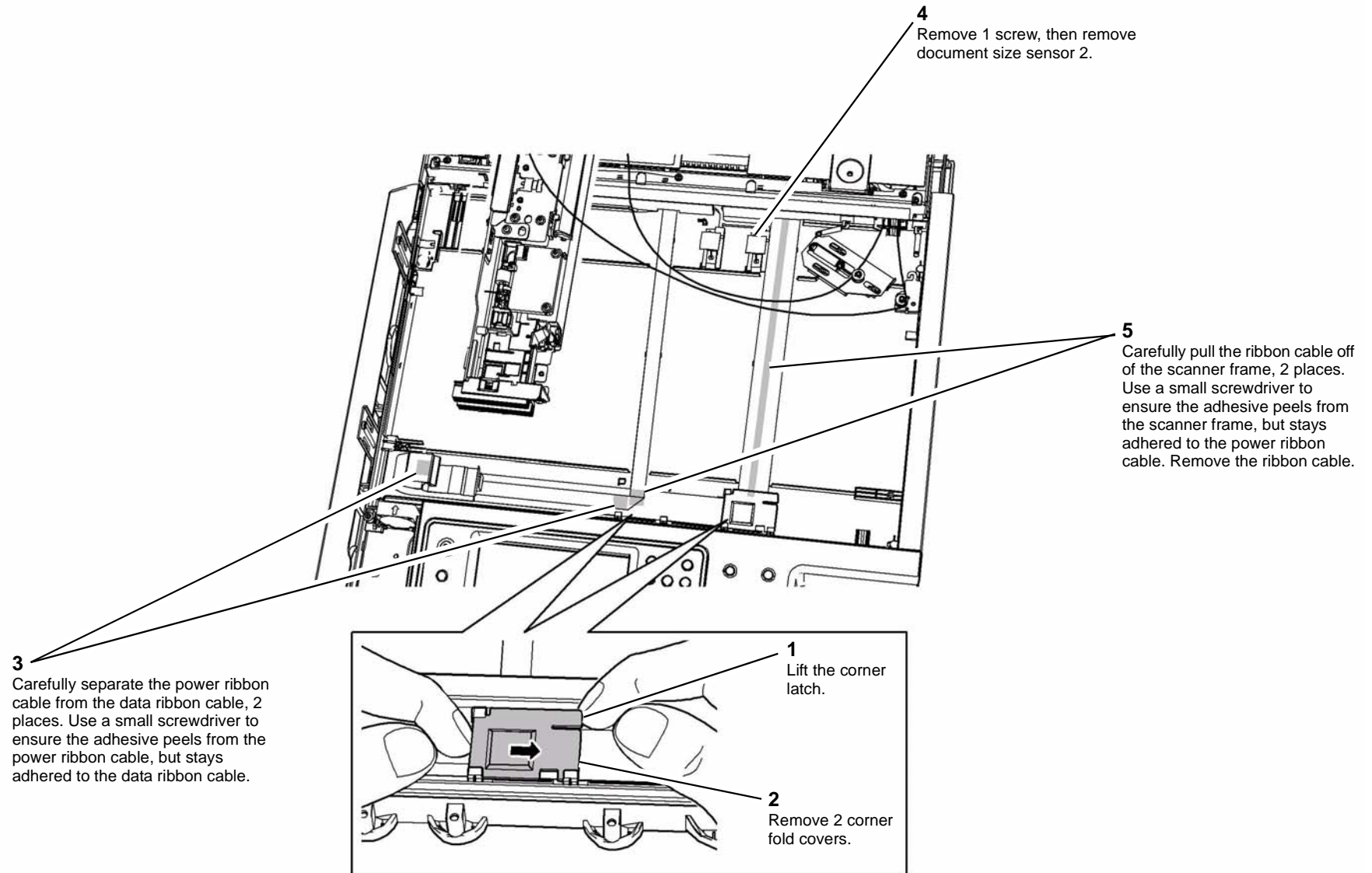
1. Remove the top cover assembly, [REP 60.3](#).
2. Disconnect the ribbon cable from the scanner PWB, refer to [REP 60.4](#).
3. Disconnect the ribbon cable from the scan carriage assembly. Refer to [REP 60.5](#).

**NOTE:** It is not necessary to detach the scan carriage drive belt from the scan carriage.

Place the scan carriage upside down resting on the rear frame and scanner base, so that it is stable.

4. Remove the scan carriage support rail from the front of the scanner base, by removing 1 screw from the right end and 2 screws from the left end.

5. Remove the ribbon cable, [Figure 1](#).



W-1-0930-A

Figure 1 Ribbon cable removal

6. Clean the adhesive residue from the scanner frame using film remover, [PL 26.10 Item 4](#).

2. Align the ribbon cable, [Figure 3](#).

## Replacement

1. A new pre-folded ribbon cable is supplied with double sided tape attached. [Figure 2](#) shows the positions of the double sided tape.

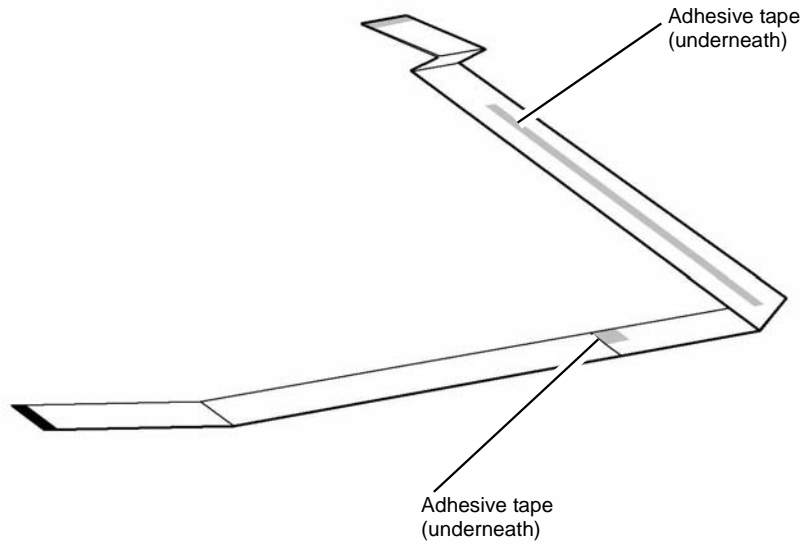
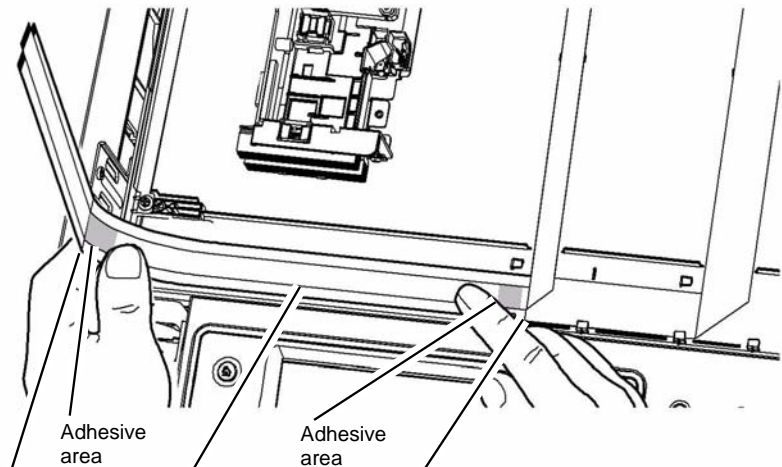


Figure 2 Ribbon cable adhesive

W-1-0931-A



**1**  
The folds must align here

**2**  
The data ribbon cable must align centrally on the power ribbon cable

**3**  
The left edge of the data ribbon cable must align with the line on the power ribbon cable

**4**  
Press down on the two adhesive areas to hold the ribbon cables together.

Figure 3 Ribbon cable alignment

W-1-1375-A

3. Install the ribbon cable, [Figure 4](#).

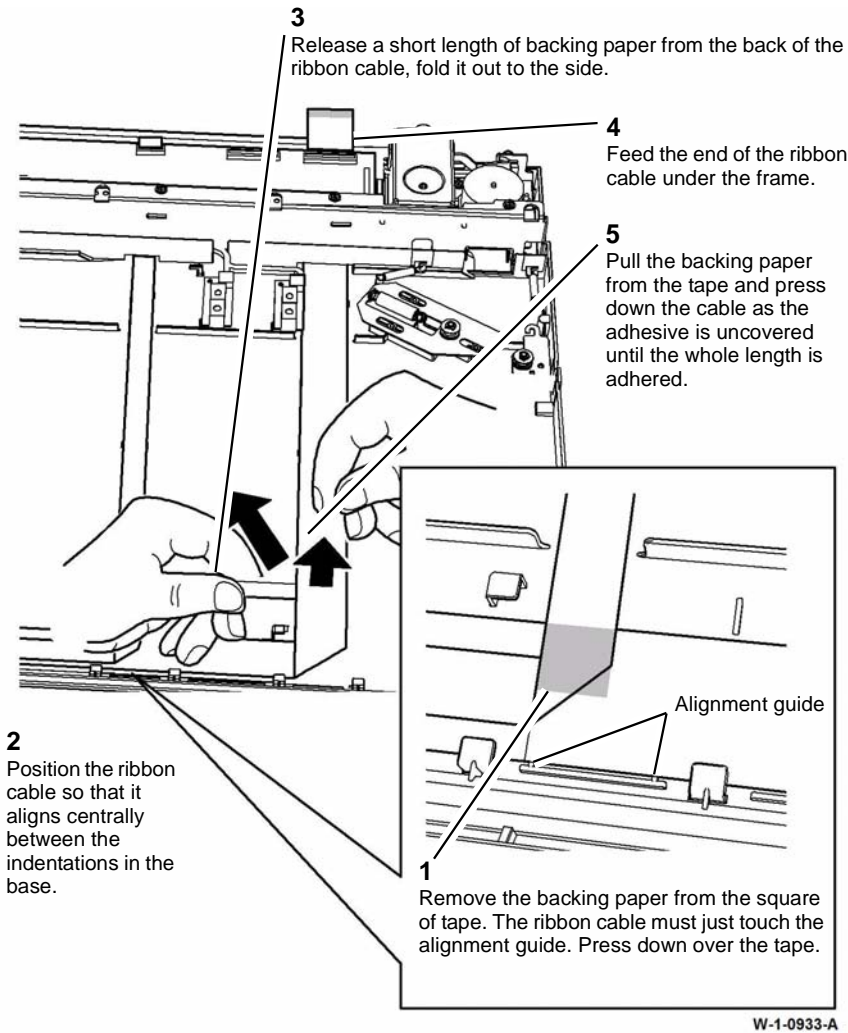


Figure 4 Ribbon cable placement

4. The remainder of the replacement procedure is the reverse of the removal procedure.  
**NOTE:** Add folds to the ends of the new ribbon cable to copy the shape of the old ribbon cable. This will aid in the ease of connection to the ribbon cable connectors.
5. Perform [ADJ 60.1](#) Scanner Cleaning Procedure.
6. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

## REP 60.8 Scan Carriage Data Ribbon Cable

Parts List on [PL 60.20](#)

### 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.

1. Remove the top cover assembly, [REP 60.3](#).
2. Remove the scanner PWB, [REP 60.4](#).
3. Remove the scanner PWB support, [Figure 1](#).

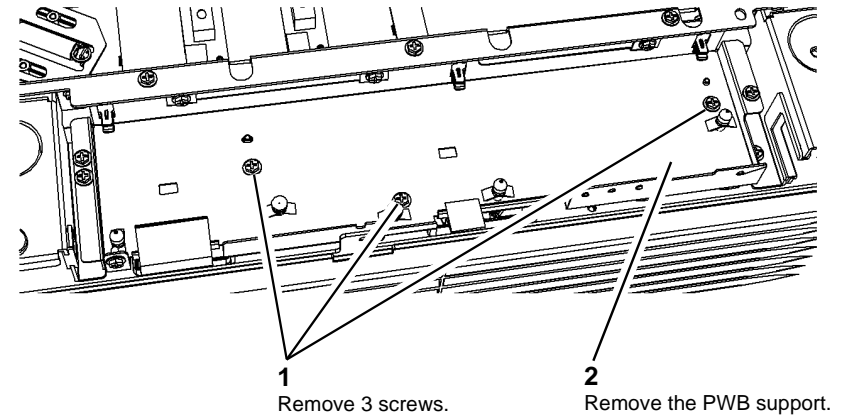


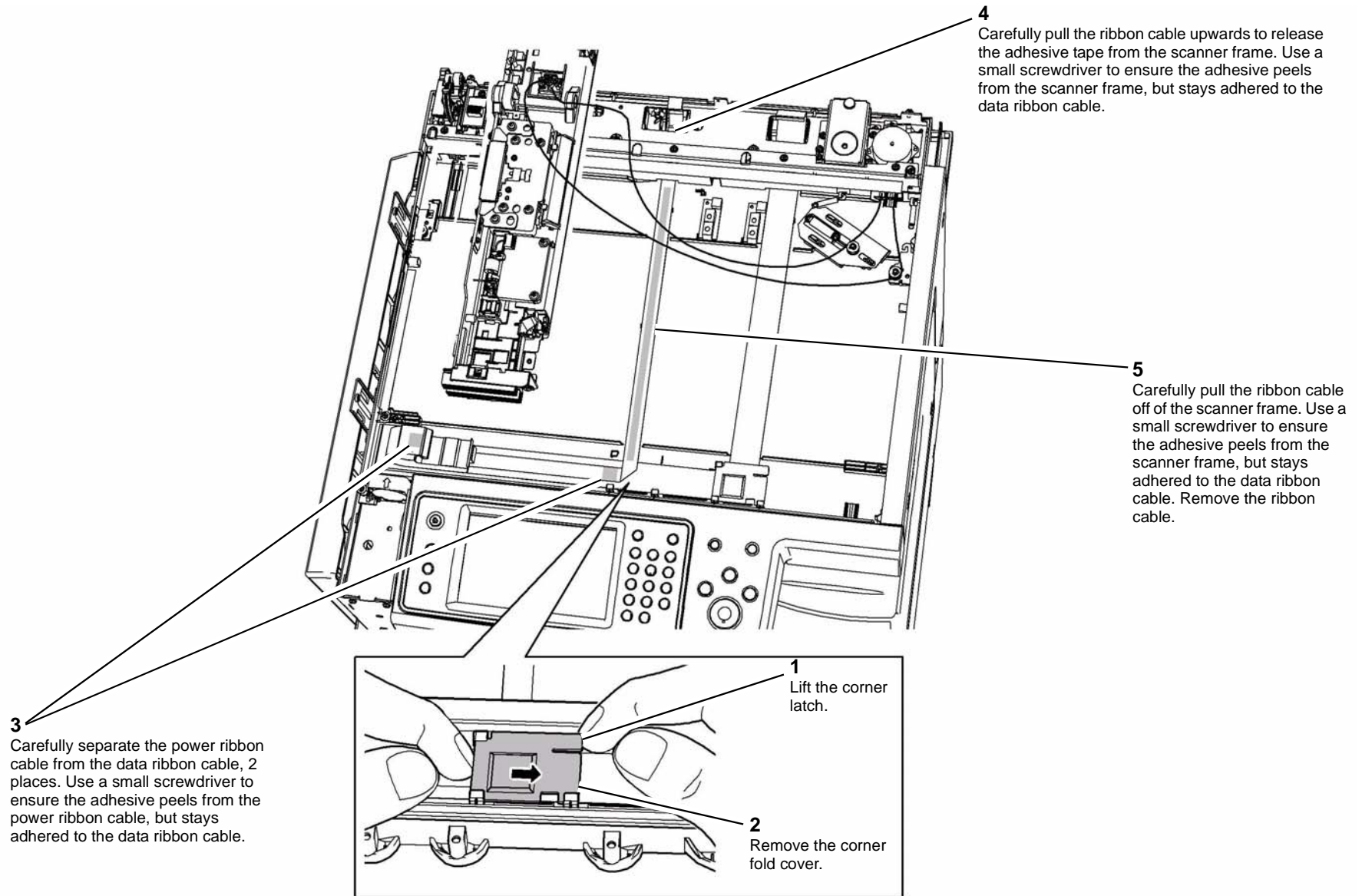
Figure 1 PWB support removal

4. Disconnect the ribbon cable 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.

Place the scan carriage upside down resting on the rear frame and scanner base, so that it is stable.

5. Remove the scan carriage support rail from the front of the scanner base, by removing 1 screw from the right end and 2 screws from the left end.
6. Remove the ribbon cable, [Figure 2](#).



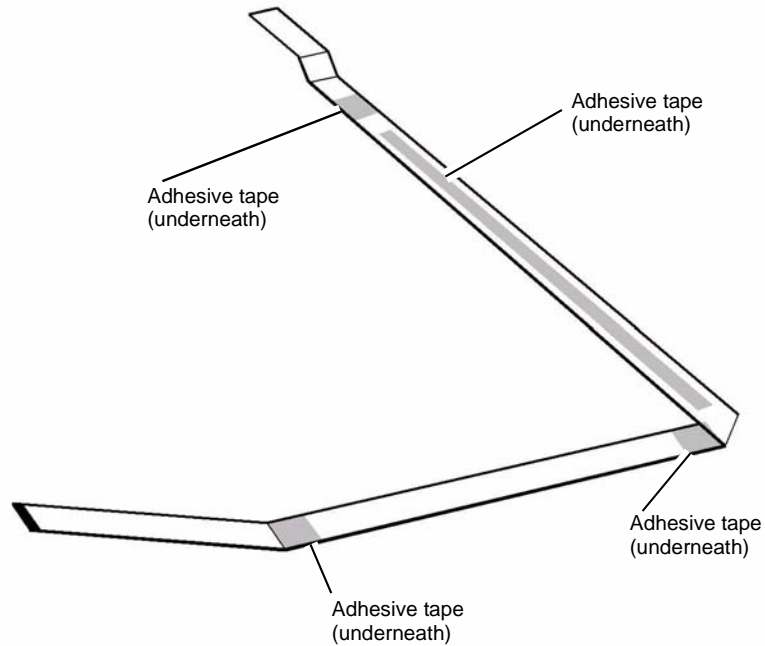
W-1-0934-A

Figure 2 Ribbon cable removal

7. Clean the adhesive residue from the scanner frame using film remover, [PL 26.10 Item 4](#).
2. Align the ribbon cable, [Figure 4](#).

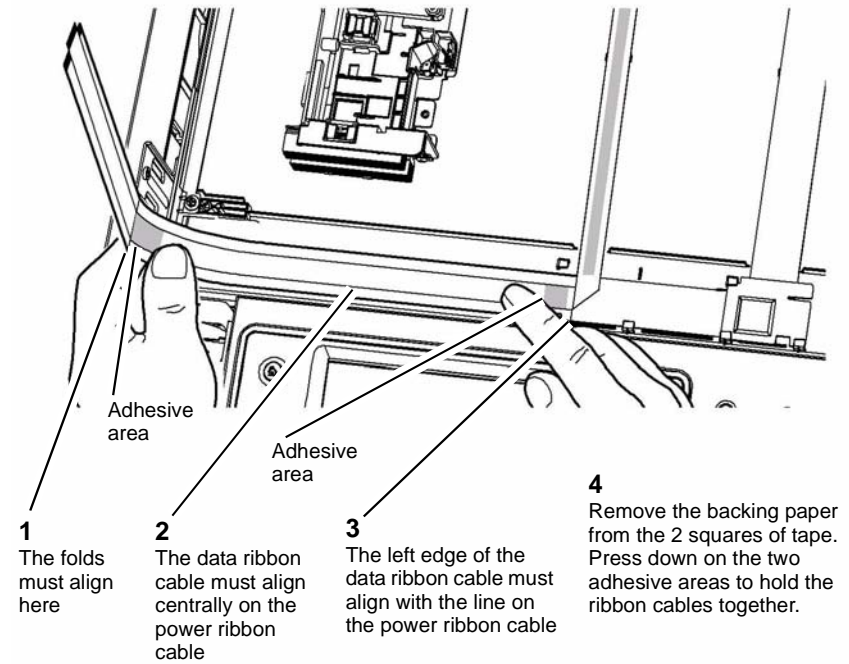
## Replacement

1. A new pre-folded ribbon cable is supplied with double sided tape attached. [Figure 3](#) shows the positions of the double sided tape.



**Figure 3 Ribbon cable adhesive**

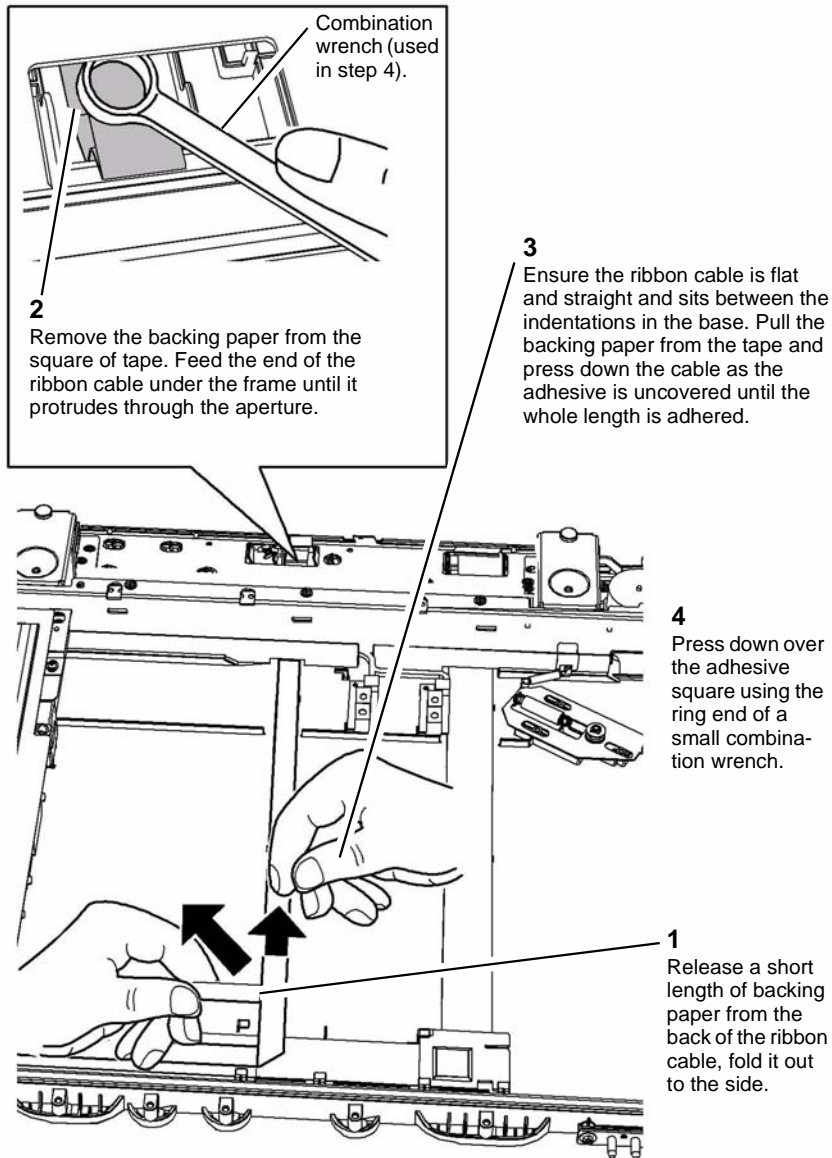
W-1-0935-A



**Figure 4 Ribbon cable alignment**

W-1-0936-A

3. Install the ribbon cable, [Figure 5](#).



W-1-0937-A

Figure 5 Ribbon cable placement

4. The remainder of the replacement procedure is the reverse of the removal procedure.

**NOTE:** Add folds to the ends of the new ribbon cable to copy the shape of the old ribbon cable. This will aid in the ease of connection to the ribbon cable connectors.

5. Perform [ADJ 60.1](#) Scanner Cleaning Procedure.
6. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.



## REP 60.9 Actuator Support 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.



#### WARNING

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

1. Remove the SPDH. [REP 5.19](#).
2. Disconnect the actuator support harnesses, [Figure 1](#).

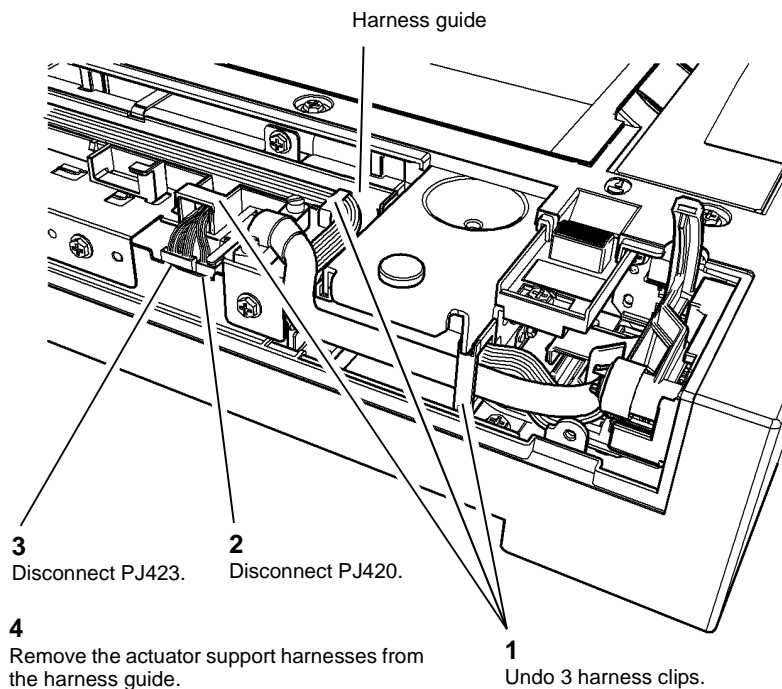


Figure 1 Harness connections

W-1-0938-A

3. Remove the actuator support assembly, [Figure 2](#).

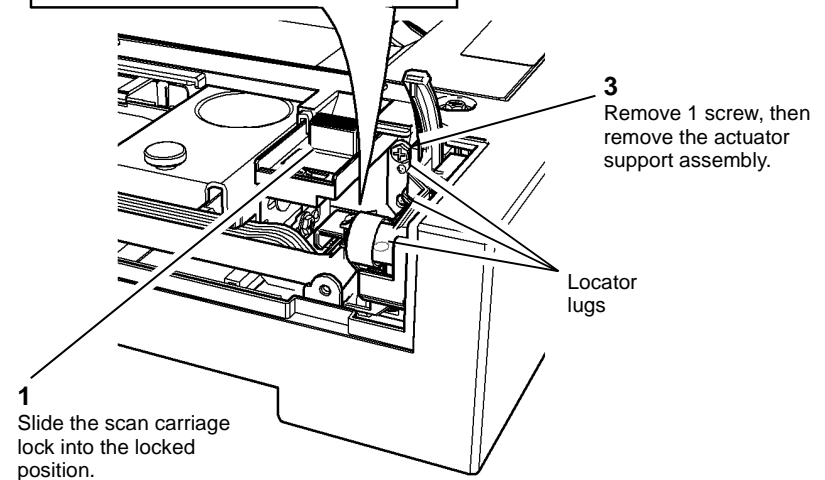
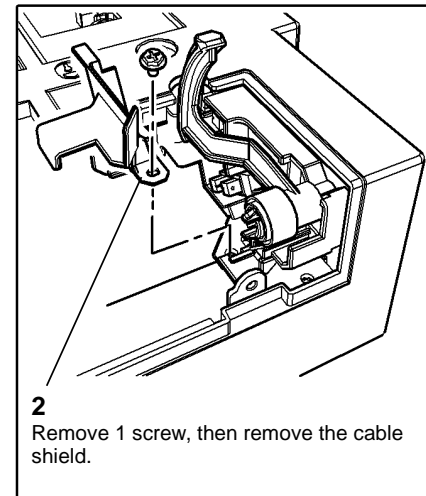
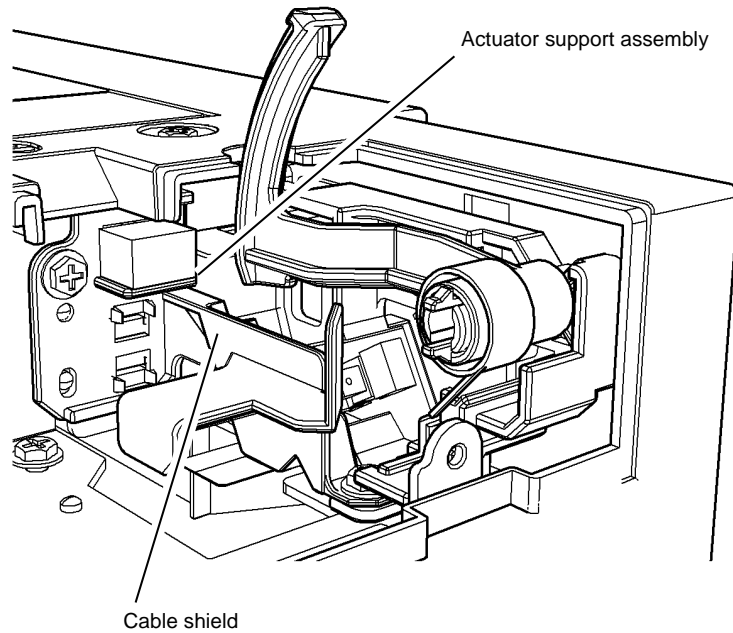


Figure 2 Actuator support assembly

W-1-0939-A

## Replacement

1. The replacement is the reverse of the removal procedure.
2. When replacing the actuator support assembly, ensure that the 3 locator lugs of the scanner frame are located into the actuator support assembly before tightening the screw.
3. When replacing the cable shield, ensure the tip of the cable shield is positioned under the actuator support assembly, [Figure 3](#).



NOTE: The scanner lock has been removed from this illustration for clarity.

W-1-0940-A

Figure 3 Replacing the cable shield

4. Press down the SPDH angle sensor actuator to ensure that it does not catch on the cable shield, [PL 60.20 Item 12](#).

## REP 60.10 Scan Carriage Motor Assembly

Parts List on [PL 60.20](#)

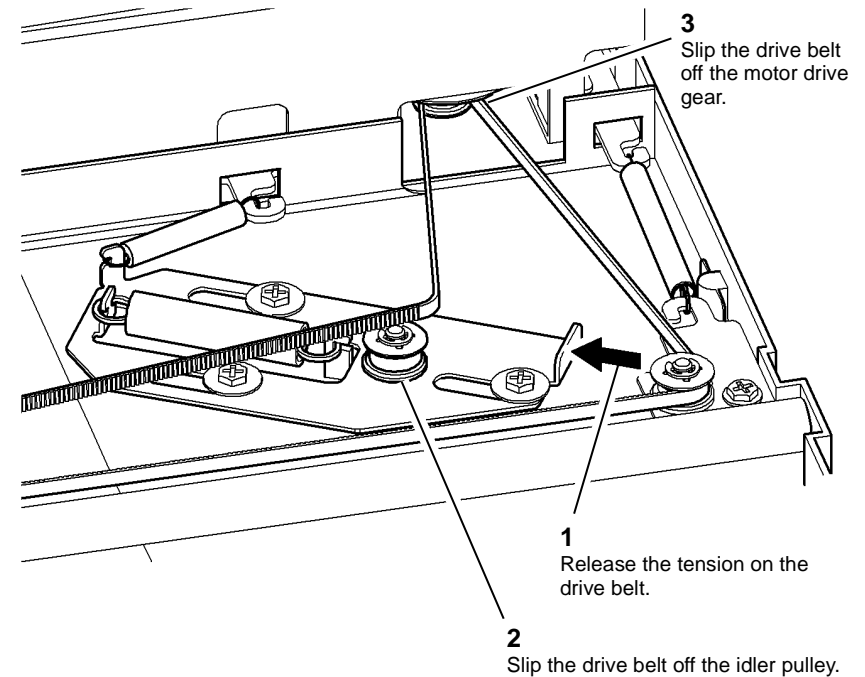
### Removal

**NOTE:** A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.



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](#).



W-1-0941-A

Figure 1 Release the drive belt

- Remove the scan carriage motor, [Figure 2](#).

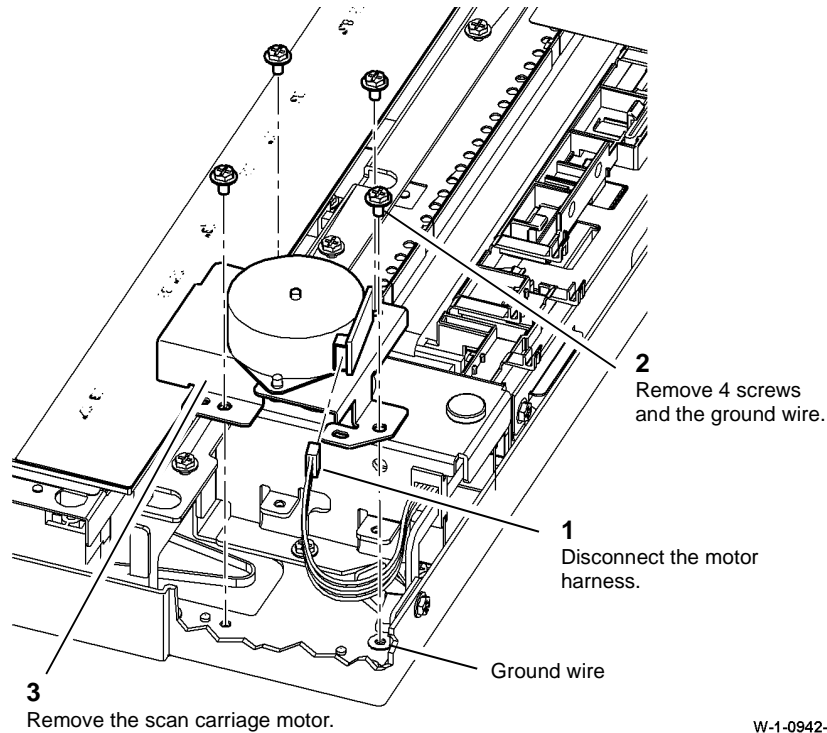


Figure 2 Scan carriage motor

W-1-0942-A

### Replacement

- The replacement is the reverse of the removal procedure.
- Perform [ADJ 60.1](#) Scanner Cleaning Procedure.
- Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

## REP 60.11 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](#).
- Remove the scan carriage drive belt from the scan carriage motor assembly, [Figure 1](#).

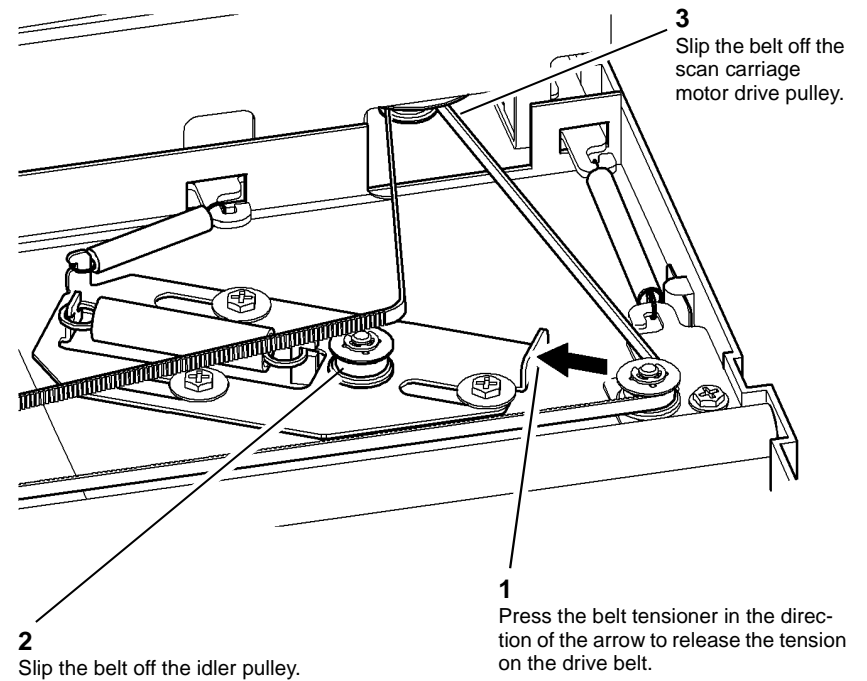
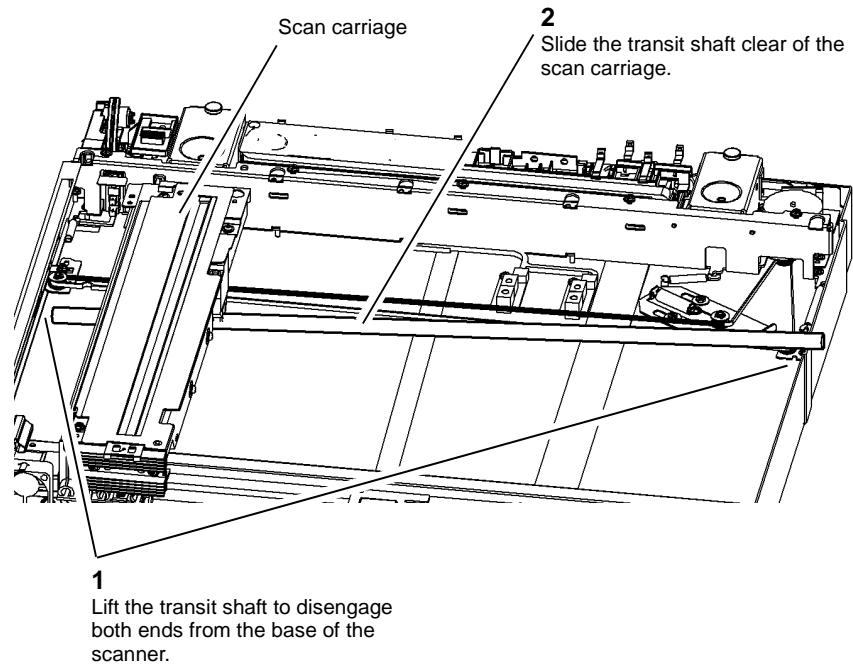


Figure 1 Release the drive belt

W-1-0943-A

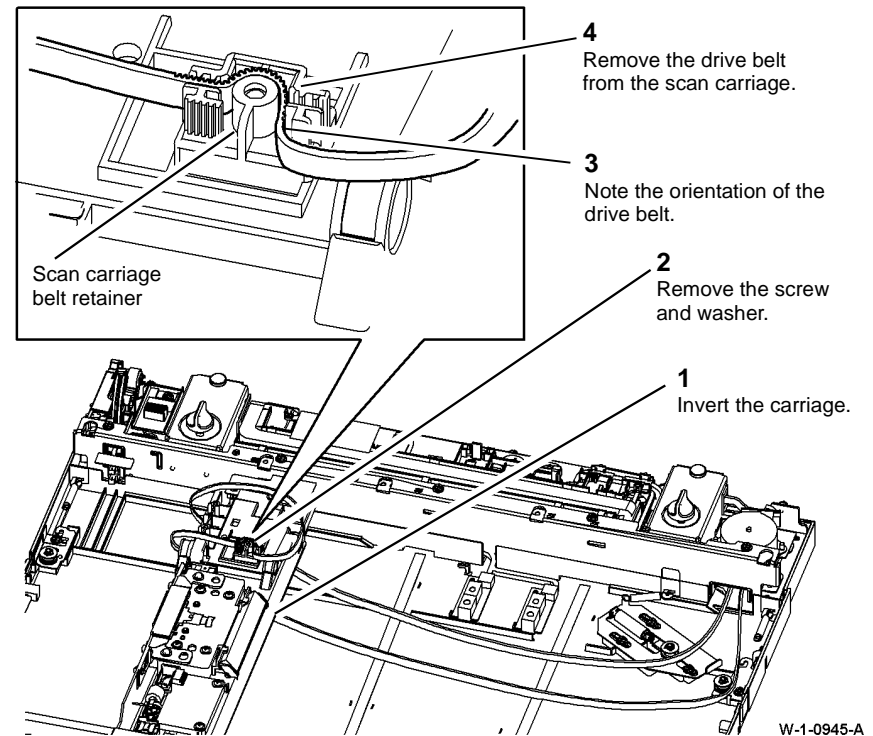
3. Remove scan carriage transit shaft, [Figure 2](#).



W-1-0944-A

Figure 2 Release the transit shaft

4. Detach the scan carriage drive belt, [Figure 3](#).



W-1-0945-A

Figure 3 Drive belt retaining screw

## Replacement

1. The replacement is the reverse of the removal procedure.
2. Ensure the scan carriage drive belt is installed correctly in the scan carriage belt retainer, [Figure 3](#).
3. Ensure the scan carriage drive belt is installed correctly on all 3 idler pulleys and the scan carriage motor drive gear.
4. Perform [ADJ 60.1](#) Scanner Cleaning Procedure.
5. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

## REP 60.12 Scan Carriage Idler Pulleys

Parts List on [PL 60.20](#)

### Removal

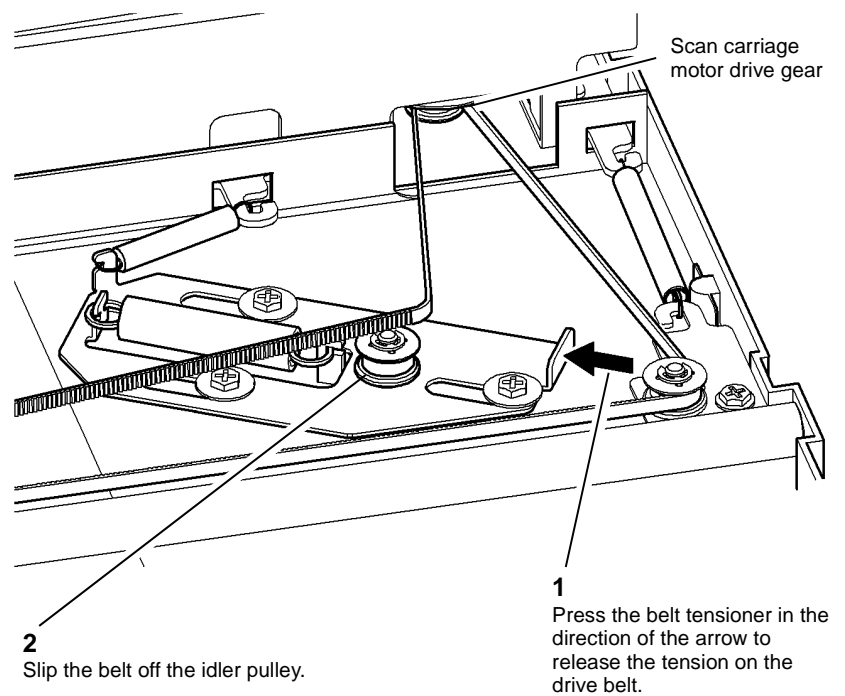


Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



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

1. Remove the scanner top cover, [REP 60.3](#).
2. Remove the scan carriage drive belt from the idler pulley of the belt tensioner, [Figure 1](#).

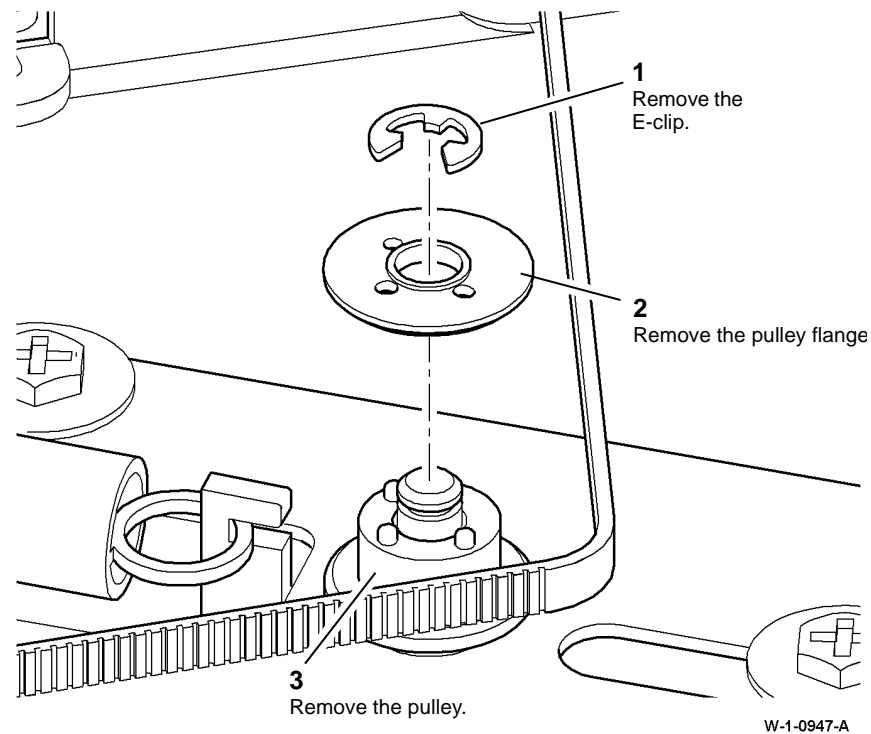


W-1-0946-A

Figure 1 Release the drive belt

3. Remove the scan idler pulley, [Figure 2](#).

**NOTE:** [Figure 2](#) shows the idler pulley of the belt tensioner. However, the removal procedure for all 3 idler pulleys is identical.

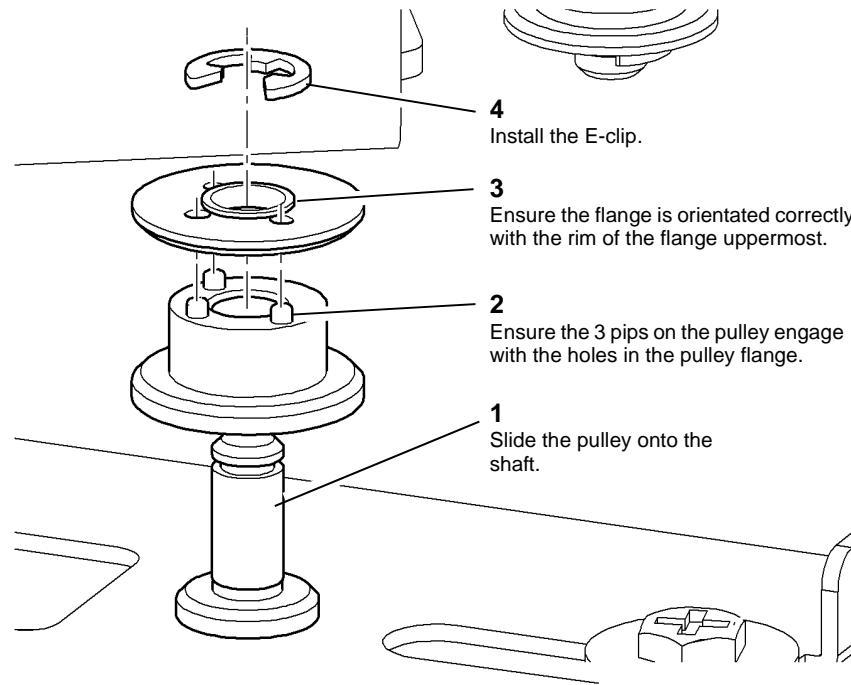


W-1-0947-A

Figure 2 Scan idler pulley removal

## Replacement

1. The replacement is the reverse of the removal procedure.
2. Ensure the scan idler pulleys are installed correctly, [Figure 3](#).



W-1-0948-A

**Figure 3** Idler pulley replacement

3. Ensure the scan carriage drive belt is installed correctly on all 3 idler pulleys and the scan carriage motor drive gear.
4. Perform [ADJ 60.1](#) Scanner Cleaning Procedure.
5. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

## REP 60.13 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.

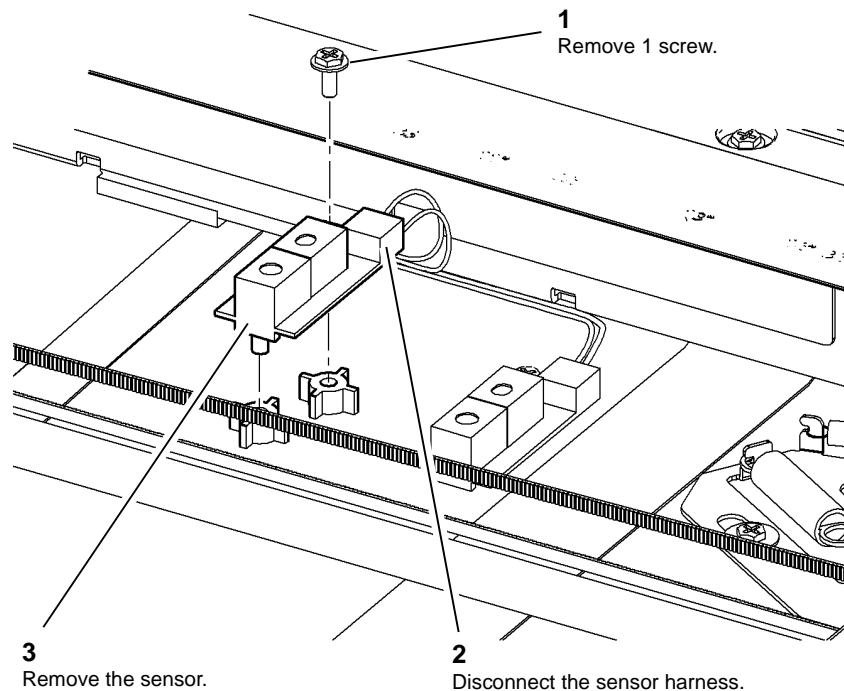
  
**WARNING**

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

1. 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.



W-1-0949-A

Figure 1 Document size sensor removal

### Replacement

- The replacement is the reverse of the removal procedure.
- Perform [ADJ 60.1](#) Scanner Cleaning Procedure.
- Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

## REP 60.14 Scanner Cooling Fan

Parts List on [PL 60.15](#)

### Removal

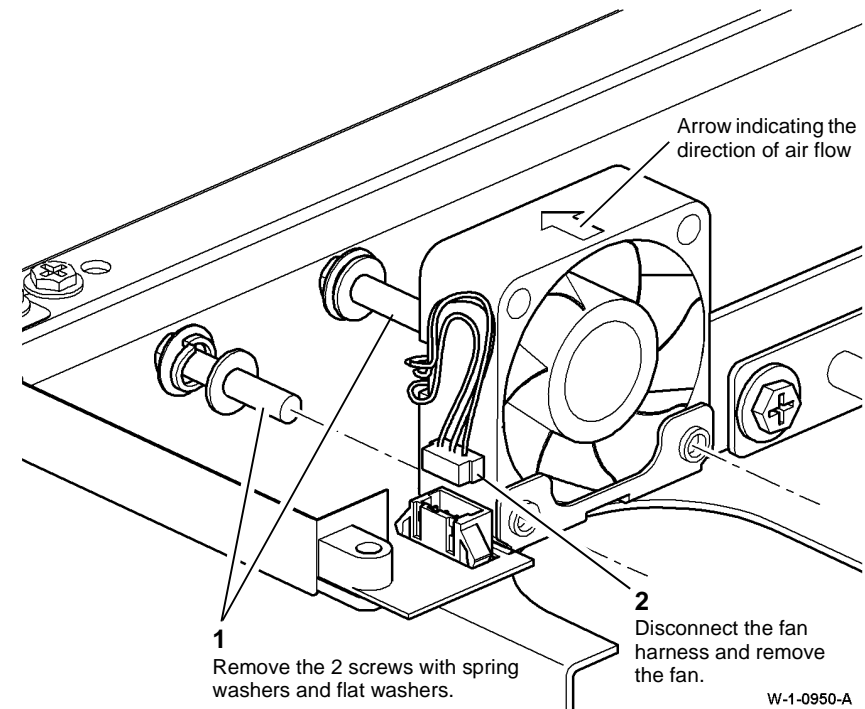


Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



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

- Remove the top cover assembly, [REP 60.3](#).
- Remove the cooling fan, [Figure 1](#).



W-1-0950-A

Figure 1 Cooling fan removal

## Replacement

1. The replacement is the reverse of the removal procedure.
2. Ensure the fan is oriented correctly. The arrow on the fan housing indicates the direction of air flow, and must be pointing into the scanner housing, [Figure 1](#).
3. Perform [ADJ 60.1](#) Scanner Cleaning Procedure.
4. Perform [ADJ 60.3](#) IIT Registration, Magnification and Calibration.

## REP 60.15 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.*



### 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.



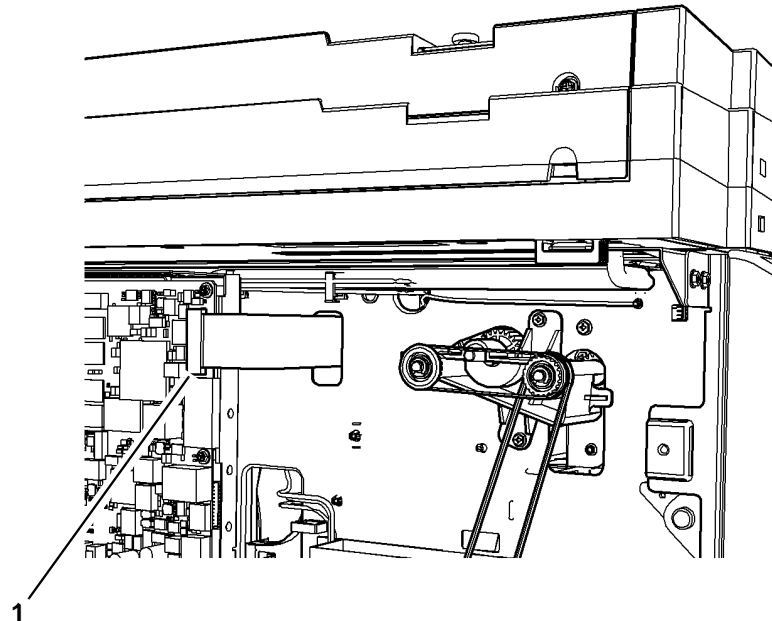
### WARNING

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

1. Remove the rear cover, [REP 28.2](#).
2. Remove the SBC cover, [PL 3.22 Item 9](#).



3. Disconnect the LED print head module ribbon cable, [Figure 1](#).



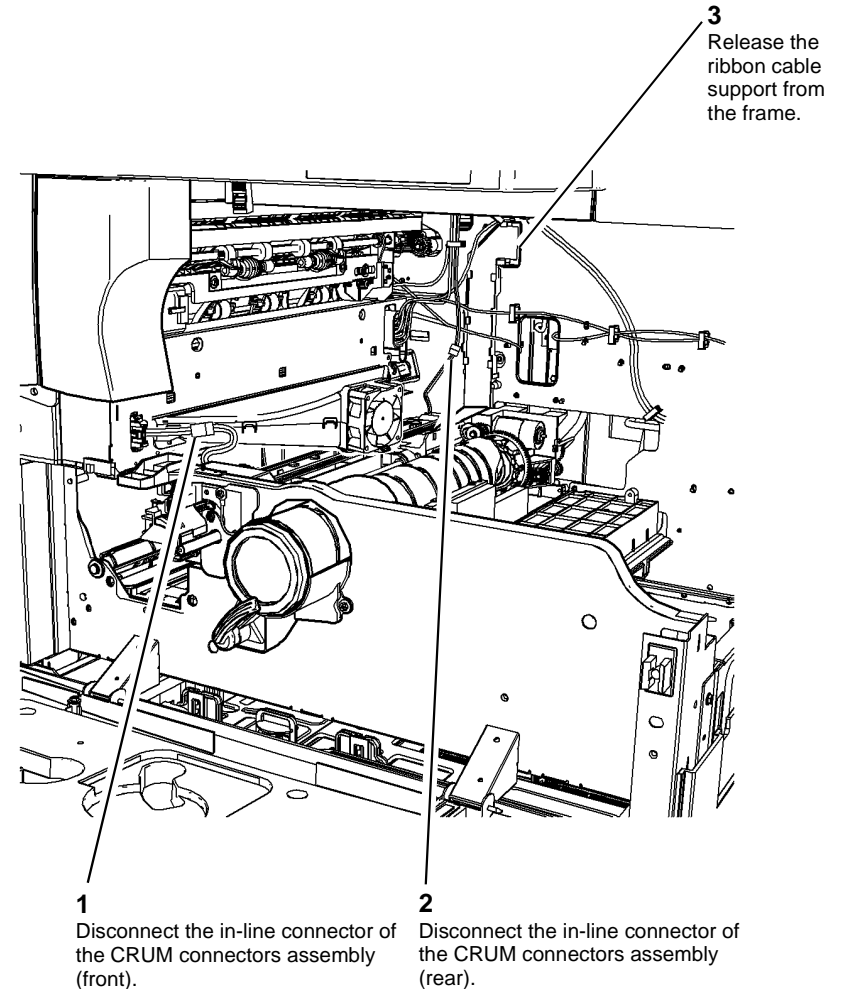
1. Disconnect the LPH ribbon cable from PJ851 on the SBC PWB.

W-1-1037-A

**Figure 1** Ribbon cable

4. Remove the print cartridge, [PL 90.17 Item 9](#), then place in a black bag.
5. Remove the relevant component:
  - Horizontal transport assembly, [REP 10.6](#).
  - Centre output tray, [REP 28.1](#).
6. If the machine had a horizontal transport installed, remove the backplate, [PL 10.15 Item 12](#).
7. Remove the latch, [PL 60.35 Item 2](#).
8. Remove the inner front cover, [PL 28.10 Item 10](#).

9. 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.

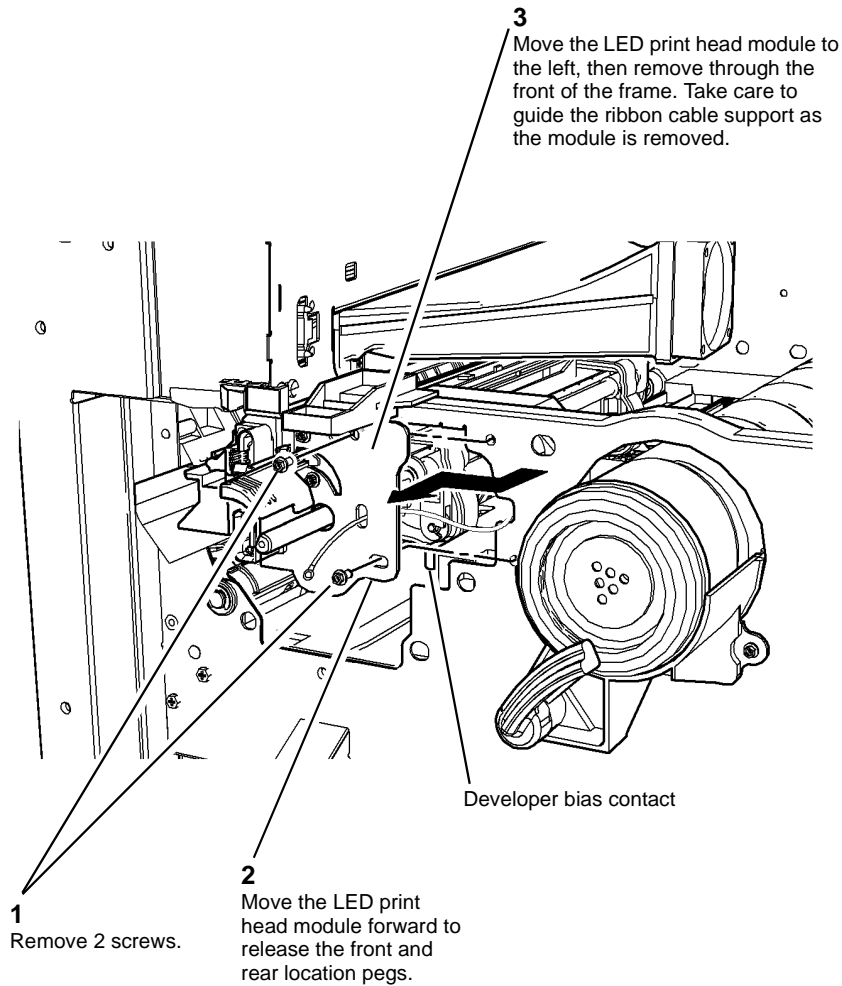
W-1-1244-A

**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.*

10. Remove the LED print head module, [Figure 3](#).



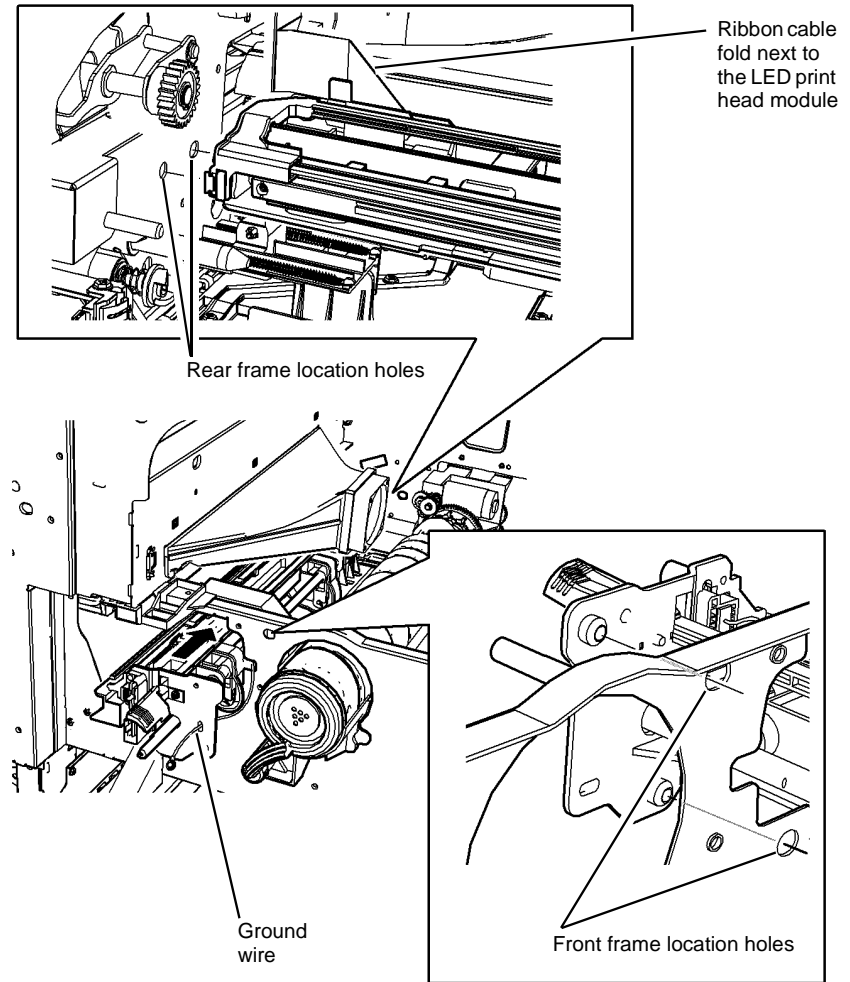
**Figure 3 LPH removal**

11. Push the SBC PWB end of the ribbon cable through the slot in the ribbon cable support to release the ferrite.
12. Remove the ferrite from the ribbon cable.
13. Un-fold the uppermost corner fold in the ribbon cable.
14. Slide the ribbon cable out of the support.

### 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**.



W-1-1039-A

**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.

## REP 70.1 Tray 1 and Tray 2 Removal

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.



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.

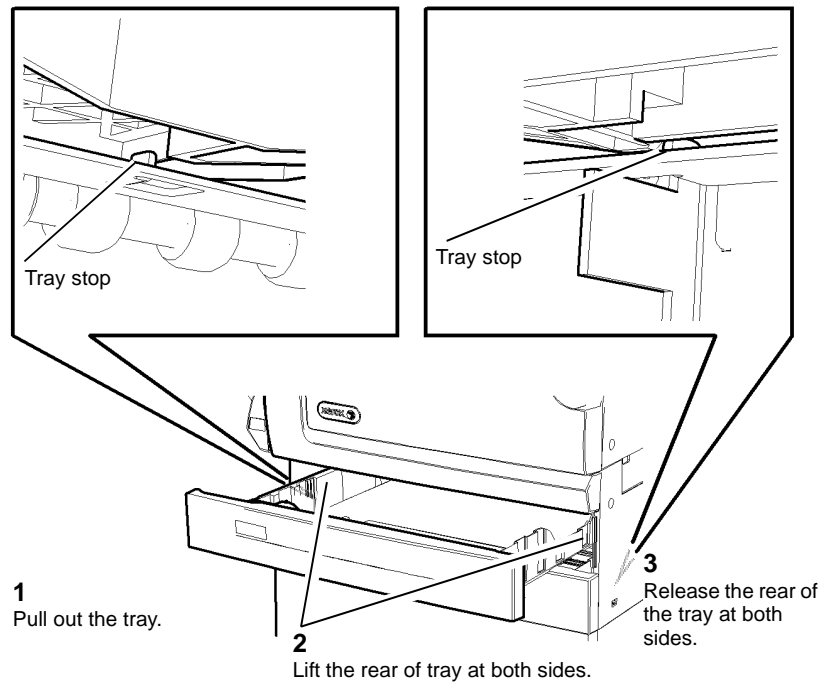


Figure 1 Tray 1 and tray 2 removal

### 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**

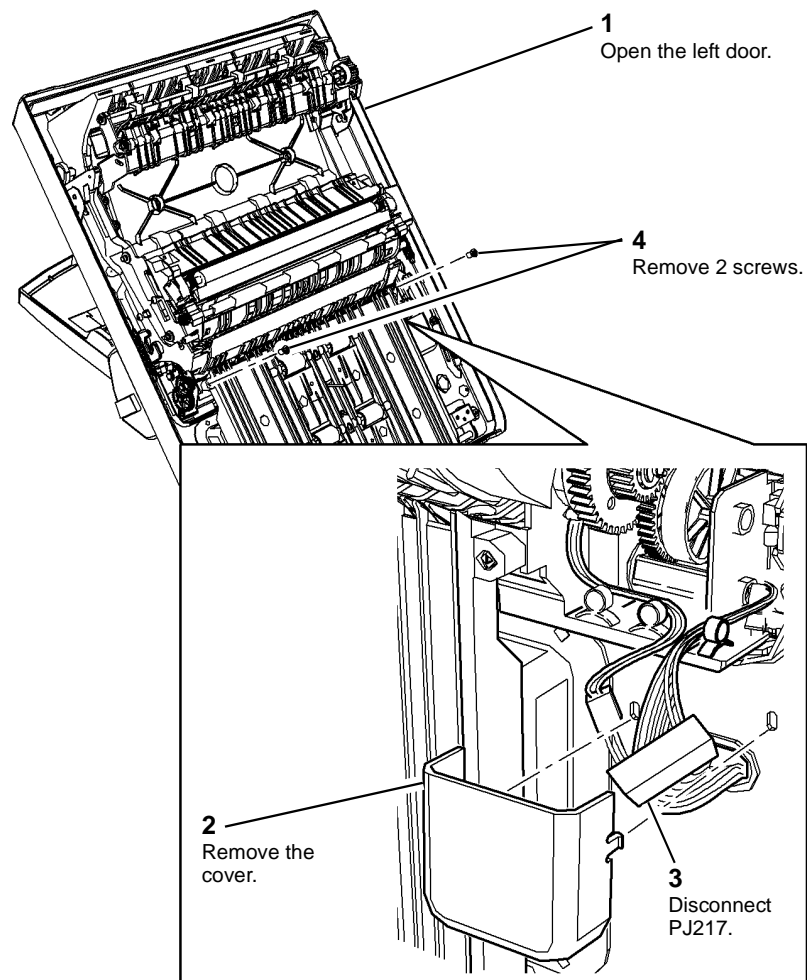
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

  
**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](#).



W-1-1330-A

Figure 1 Preparation

3. Remove the bypass tray assembly, [Figure 2](#).

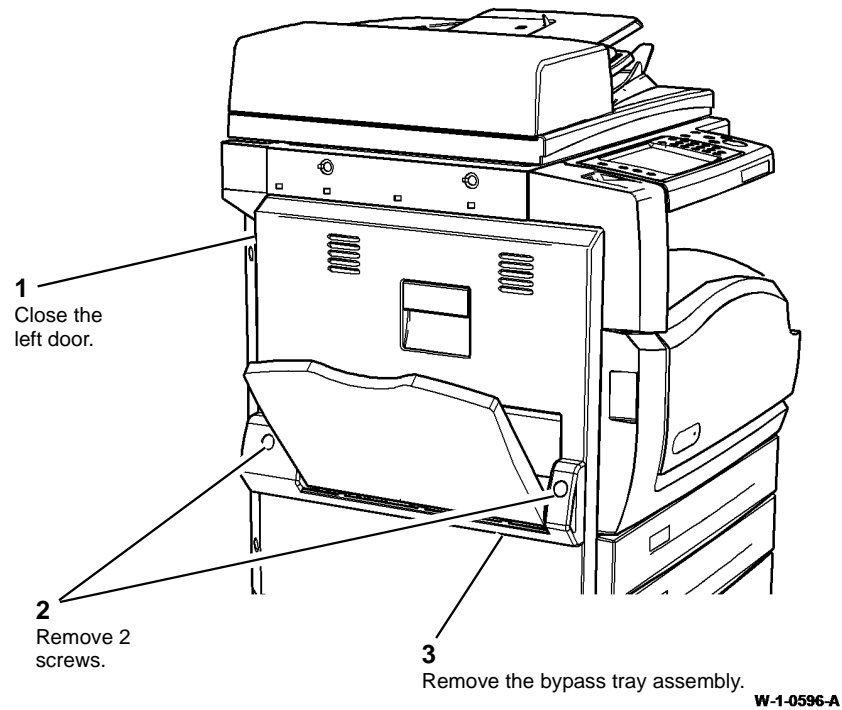


Figure 2 Bypass tray removal

### 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](#).

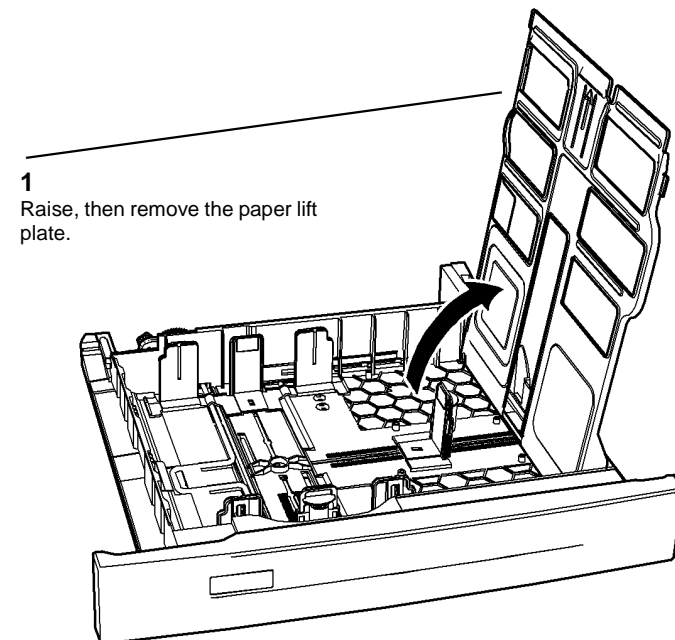
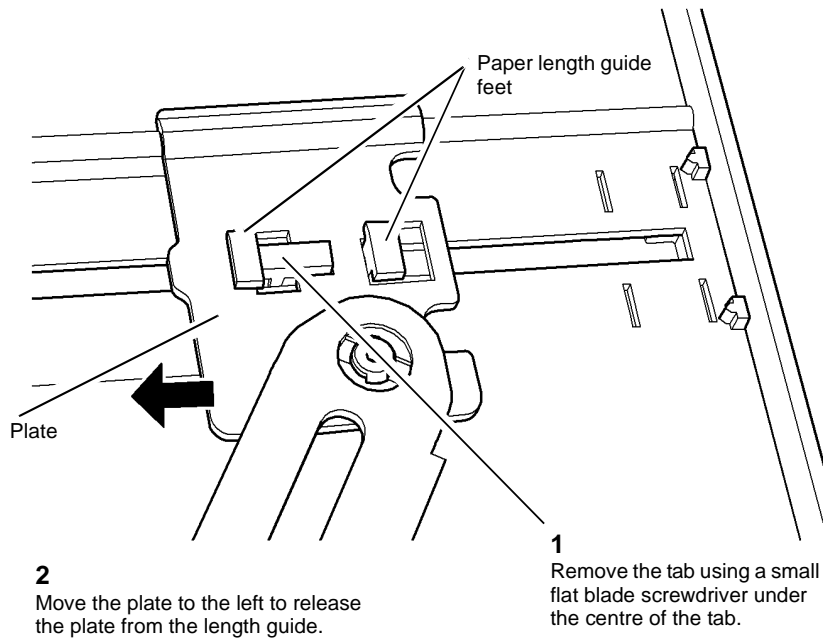


Figure 1 Paper lift plate removal

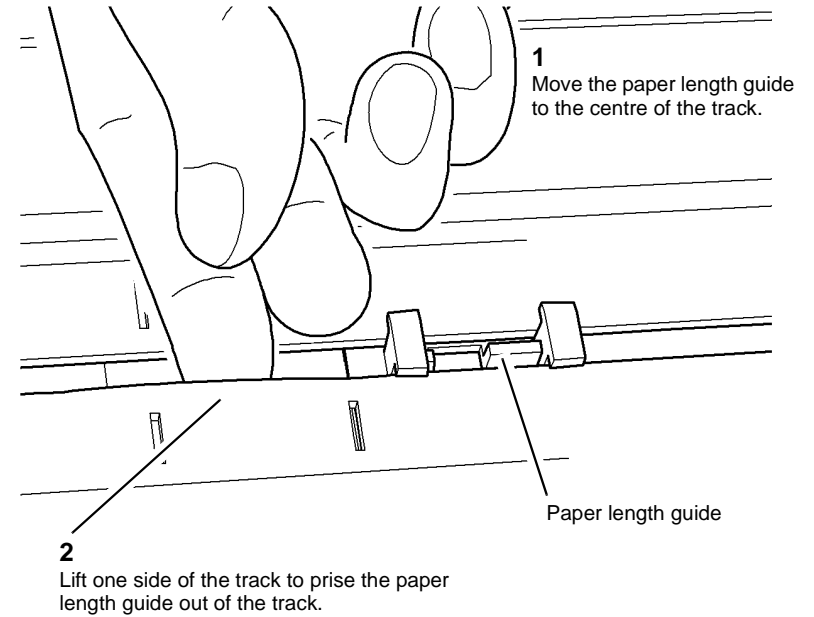
4. Prepare to remove the paper length guide, [Figure 2](#).



W-1-1135-A

Figure 2 Preparation

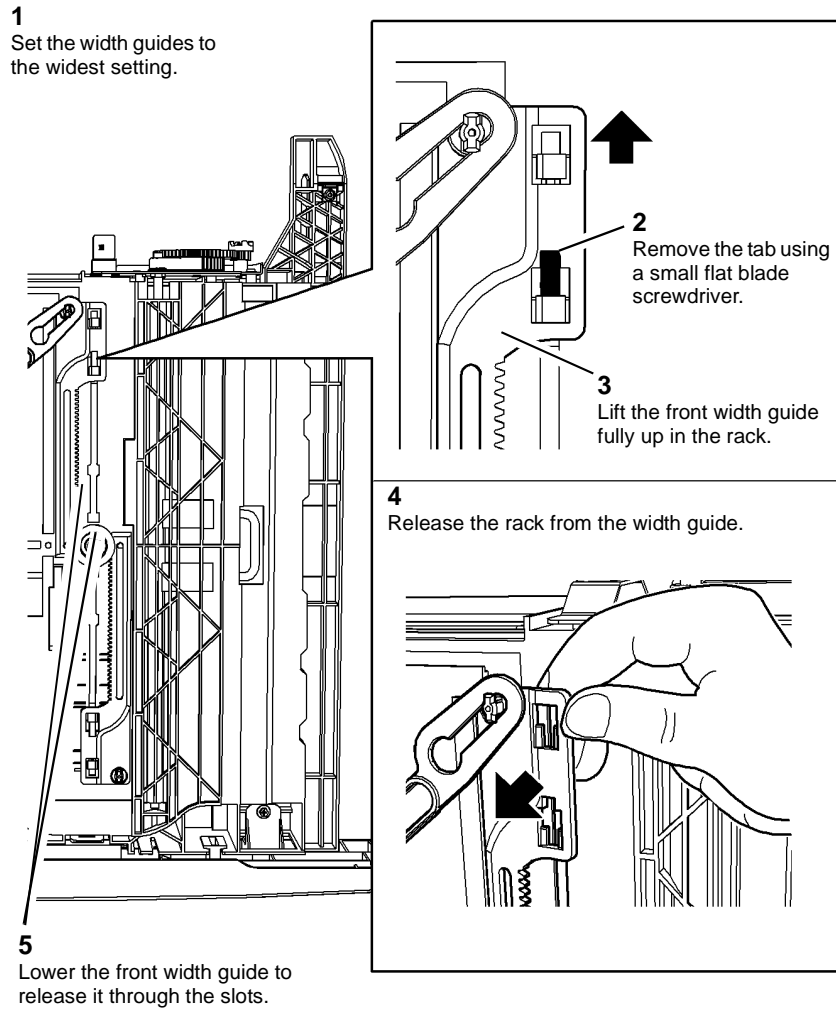
5. Remove the paper length guide, [Figure 3](#).



W-1-1136-A

Figure 3 Paper length guide removal

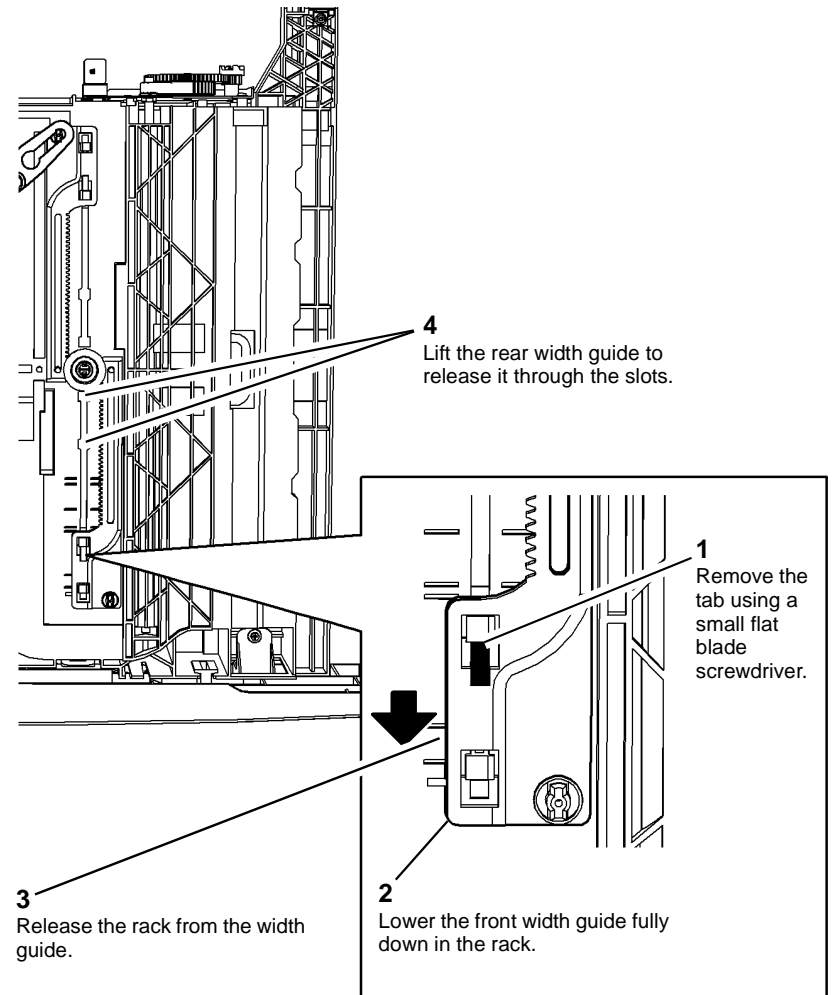
6. Remove the front paper width guide, [Figure 4](#).



W-1-1137-A

Figure 4 Front width guide removal

7. Remove the rear paper width guide, [Figure 5](#).



W-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



#### 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 and tray 2, [REP 70.1](#).
2. Remove the relevant tray size sensing PWB, [Figure 1](#).

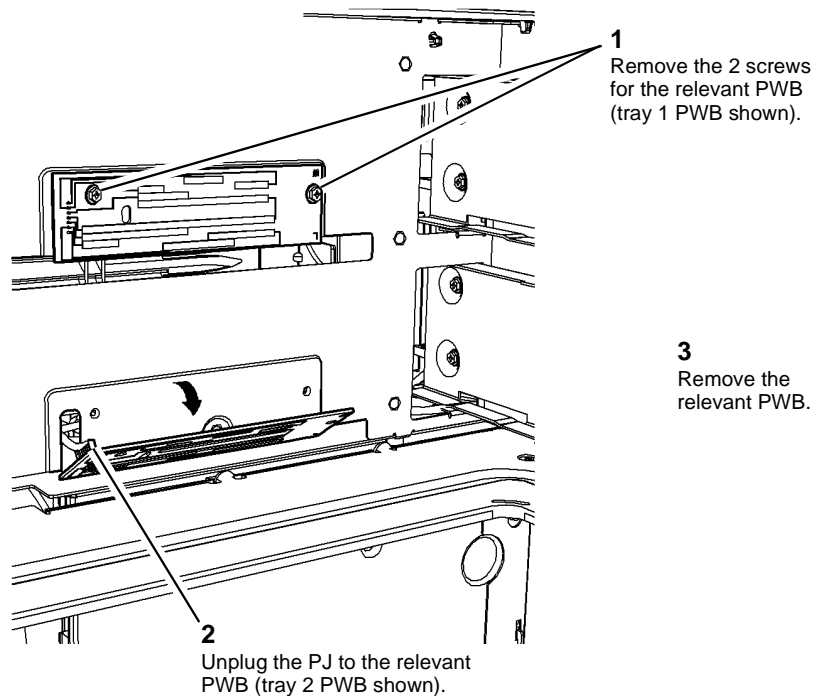


Figure 1 PWB removal

### 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.*



#### 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 paper from tray 3.
2. Remove the tray 3 and tray 4 front covers, [Figure 1](#).

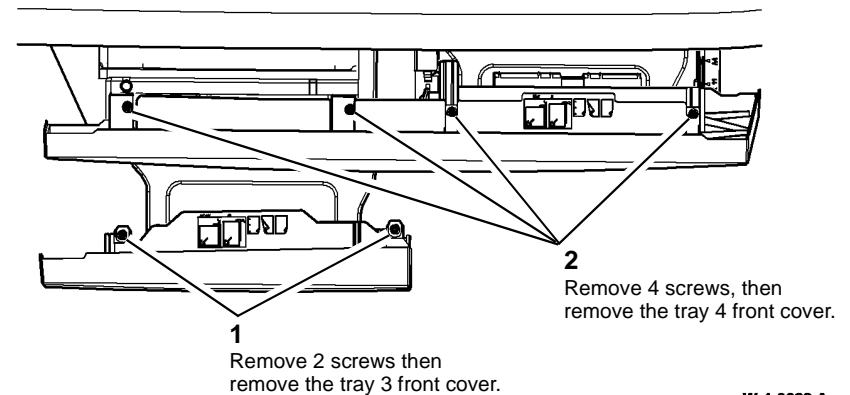
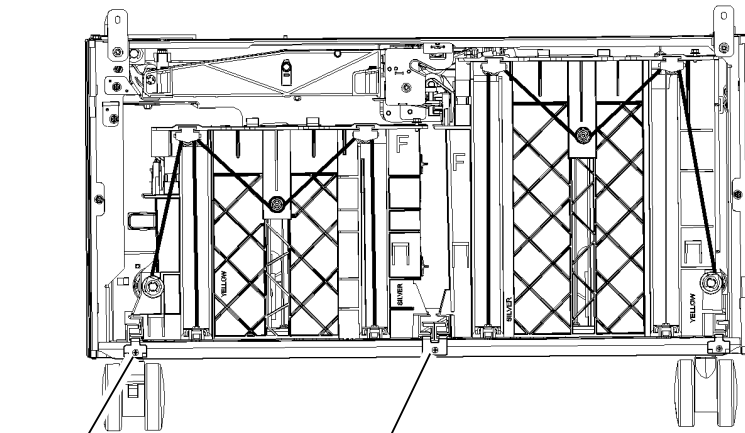


Figure 1 Tray front covers removal



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**

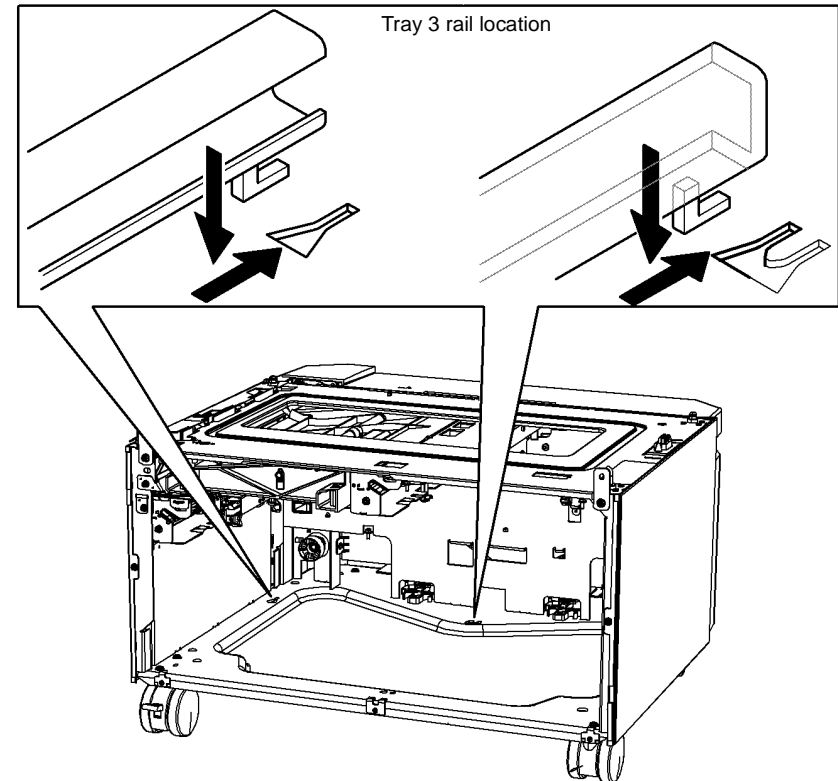
W-1-0629-A

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](#).

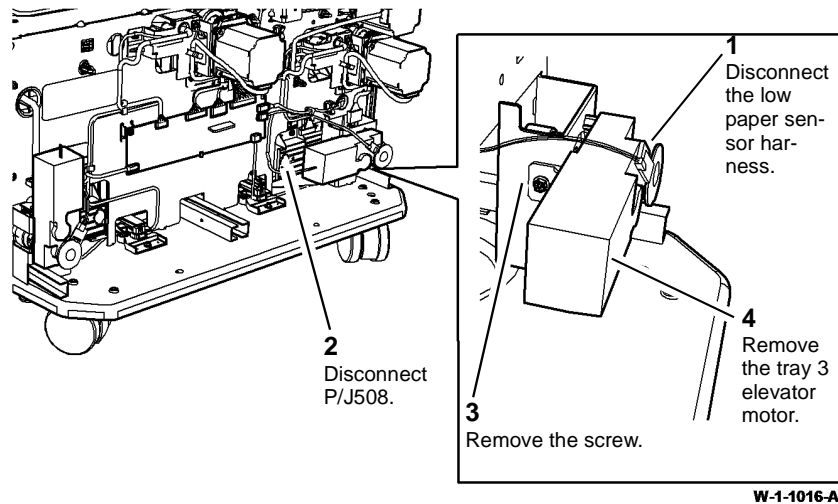


Figure 1 Elevator motor removal

### 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](#).

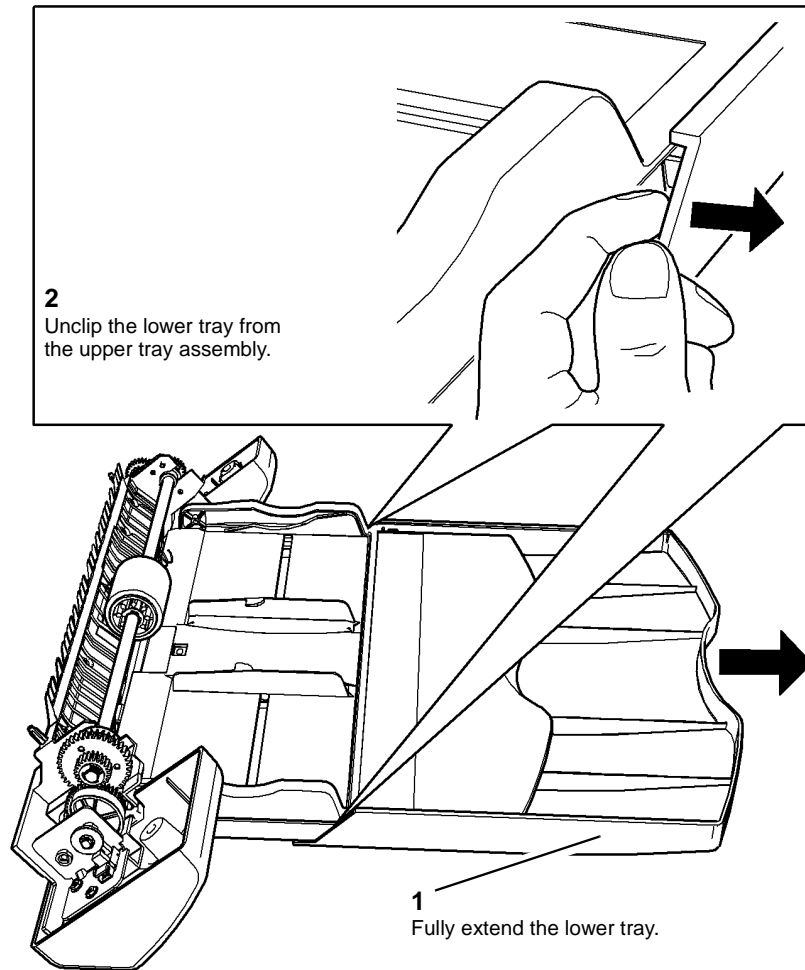


Figure 1 Lower tray removal

W-1-1119-A

3. Remove the width sensor cover, [Figure 2](#).

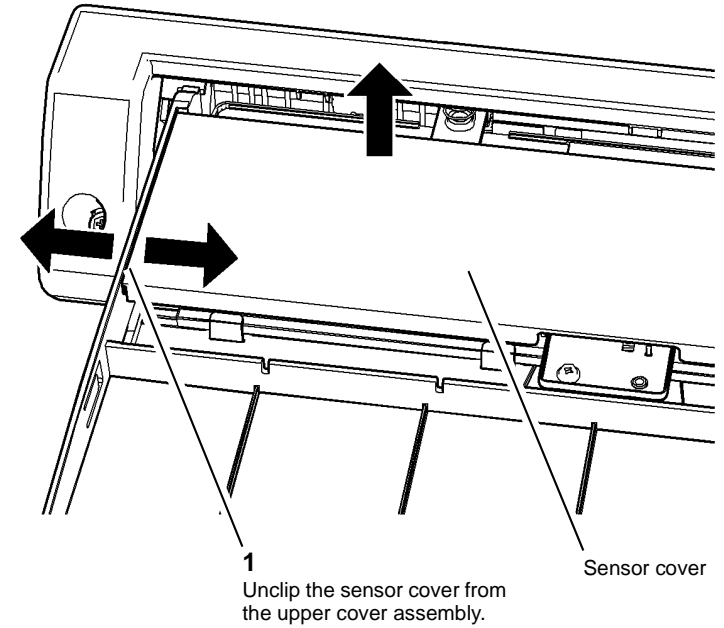
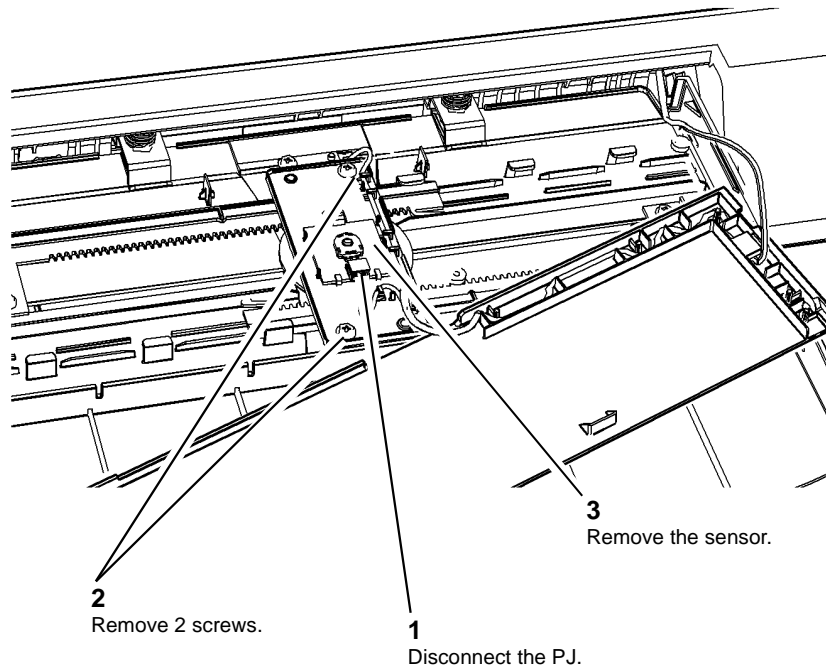


Figure 2 Width sensor cover removal

W-1-1120-A

4. Remove the width sensor, [Figure 3](#).

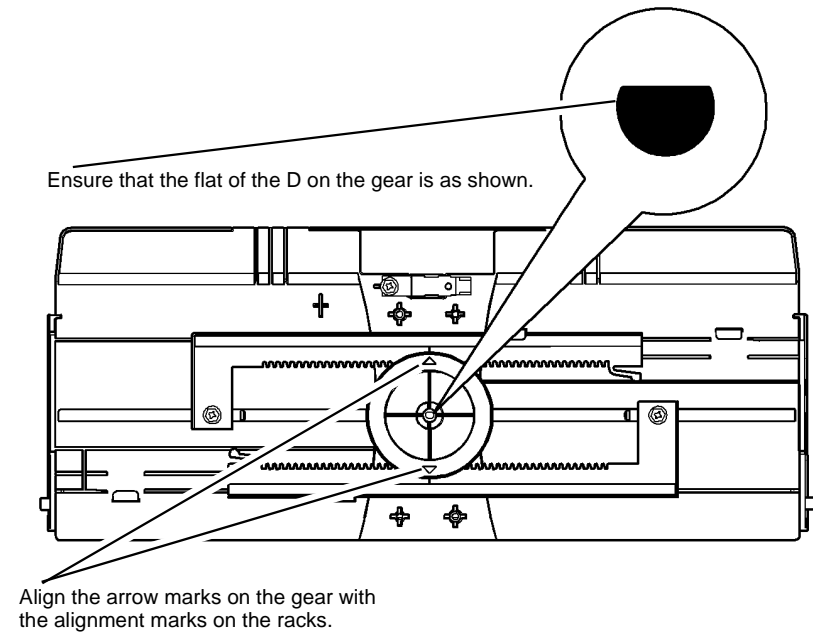


**Figure 3** Width sensor removal

W-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](#).



**Figure 4** Correct alignment

W-1-1122-A

## 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

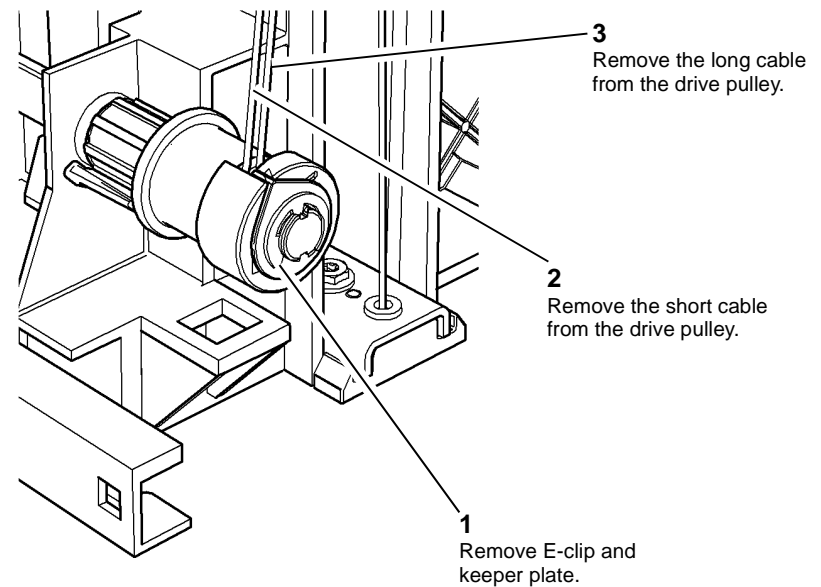
Do not replace the individual elevator cables. The rear cable and 2 front cables must be replaced as a set of 3, as supplied with the tray 3 or tray 4 elevator cable kit.

**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 70.14](#).

2. Release the cables from the appropriate front drive pulley, [Figure 1](#).

This illustration shows tray 3 front.



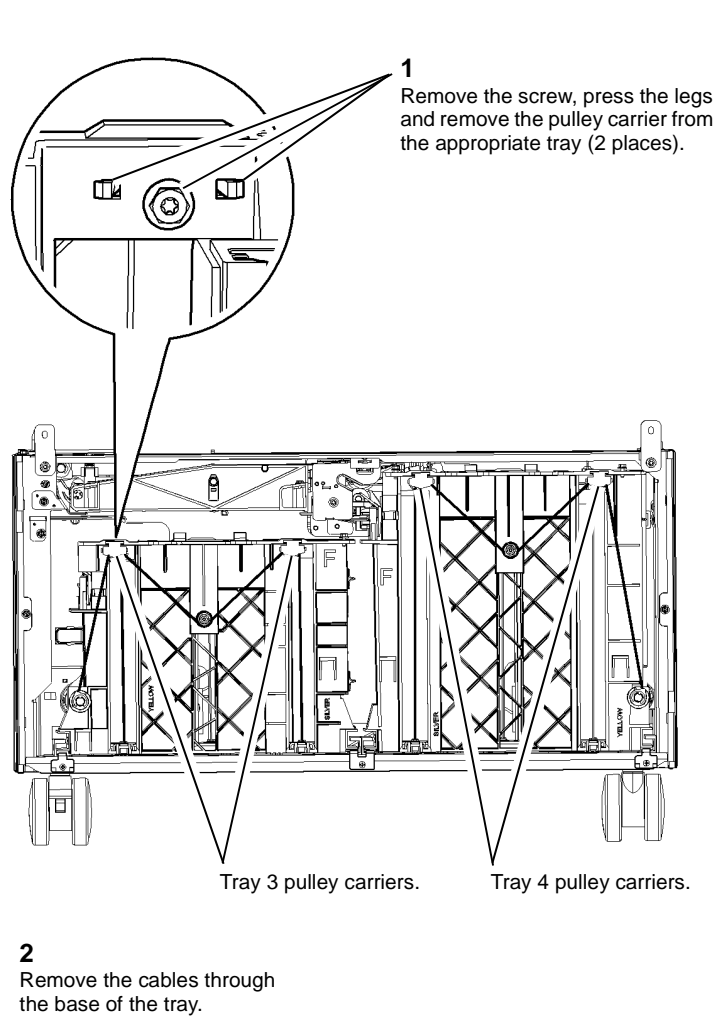
W-1-0632-A

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](#).

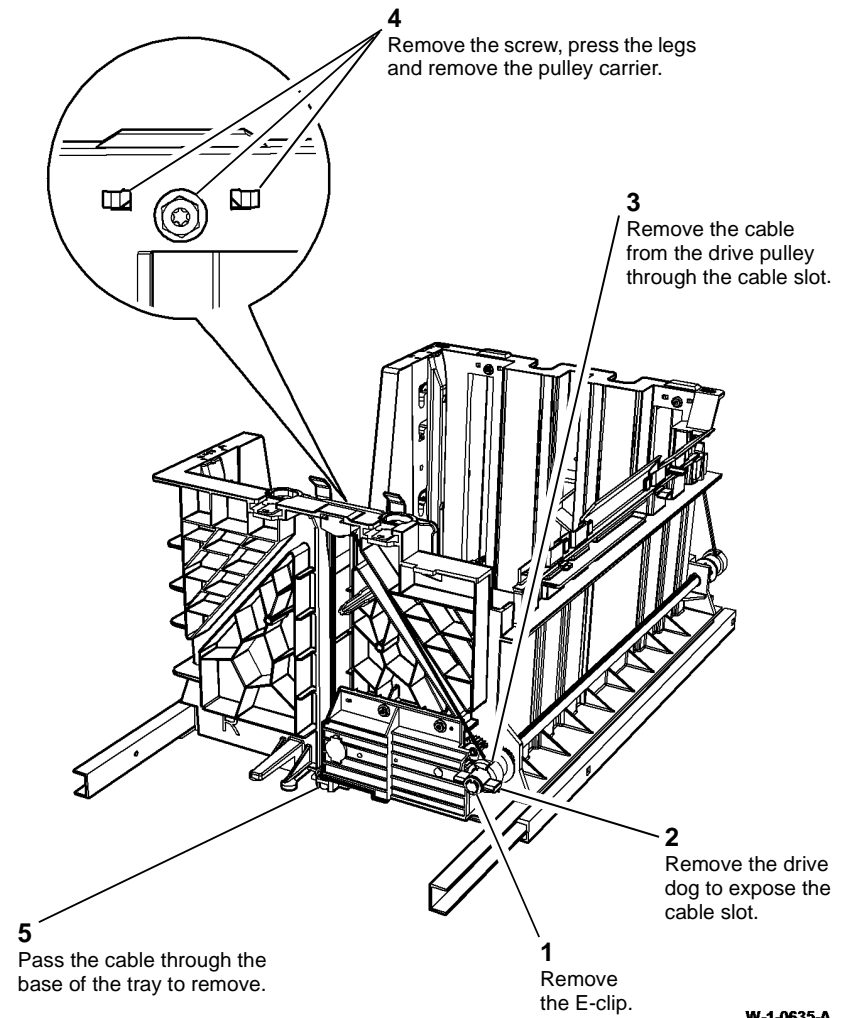
**NOTE:** The short cable is located over the outer pulley and the long cable is located over the inner pulley.



W-1-0633-A

**Figure 2 Front cables removal**

- Remove the appropriate rear elevator cable:
  - Tray 3, [Figure 3](#).
  - Tray 4, [Figure 4](#).



W-1-0635-A

**Figure 3 Tray 3 rear cable removal**

- Release the appropriate rear paper tray guide, refer to [ADJ 70.1](#).

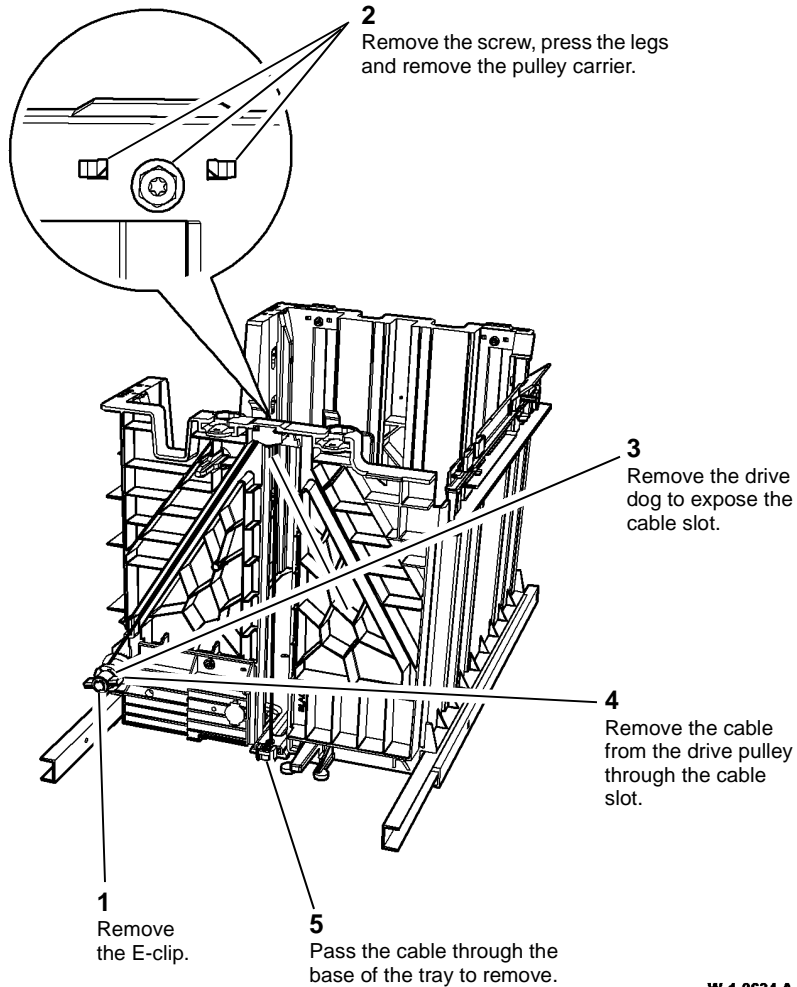
## Replacement



### 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 with 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.



W-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



#### 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.

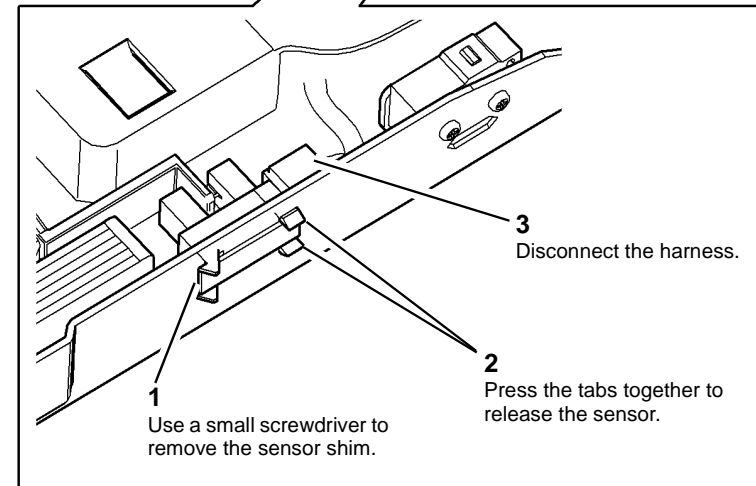
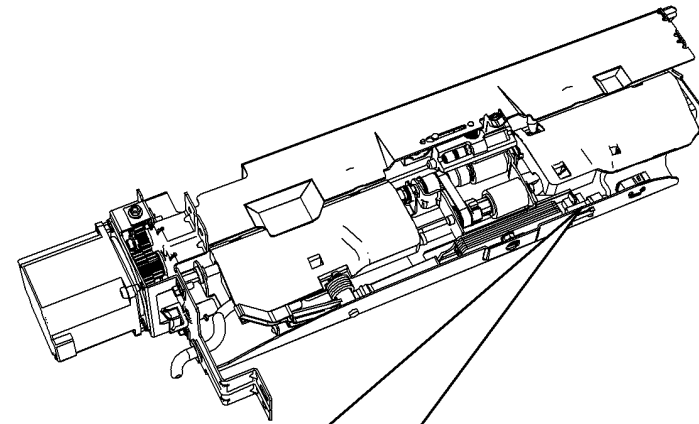


#### WARNING

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

1. Remove the required paper 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](#).



W-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



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 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](#).

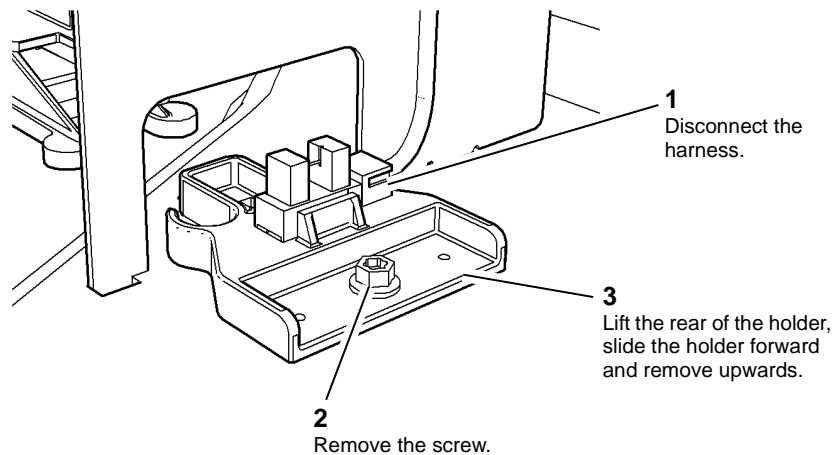
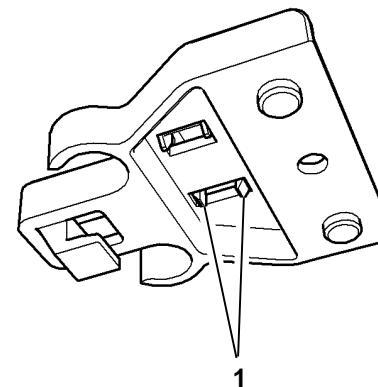


Figure 1 Tray home switch and holder

W-1-0637-A

5. Remove the tray home sensor, [Figure 2](#).



1 Press the tabs to release the sensor.

W-1-0638-A

Figure 2 Sensor removal

## Replacement

Replacement is the reverse of the removal procedure. Correctly locate the sensor holder, [Figure 3](#).

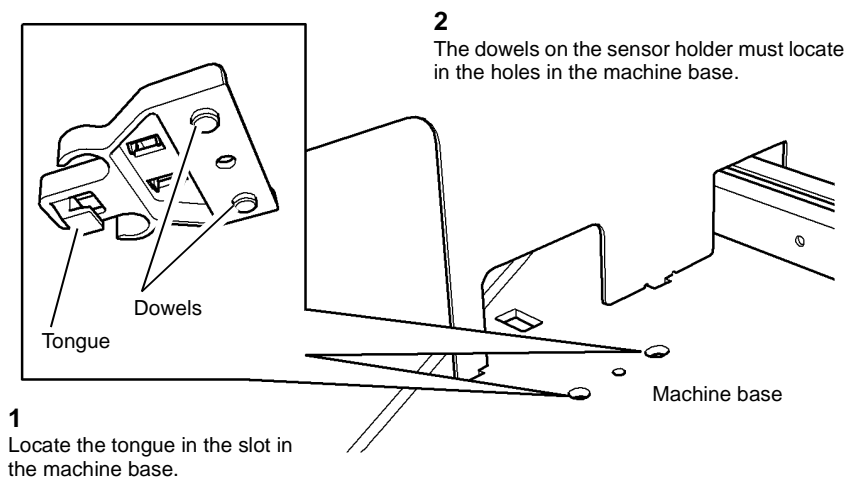


Figure 3 Holder location

W-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

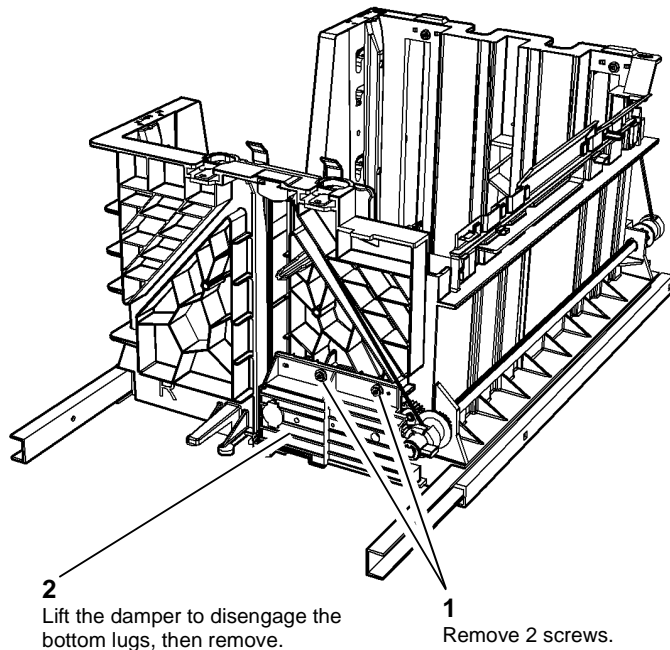
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



#### 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 70.14](#).
2. Remove the damper from tray 3, [Figure 1](#).



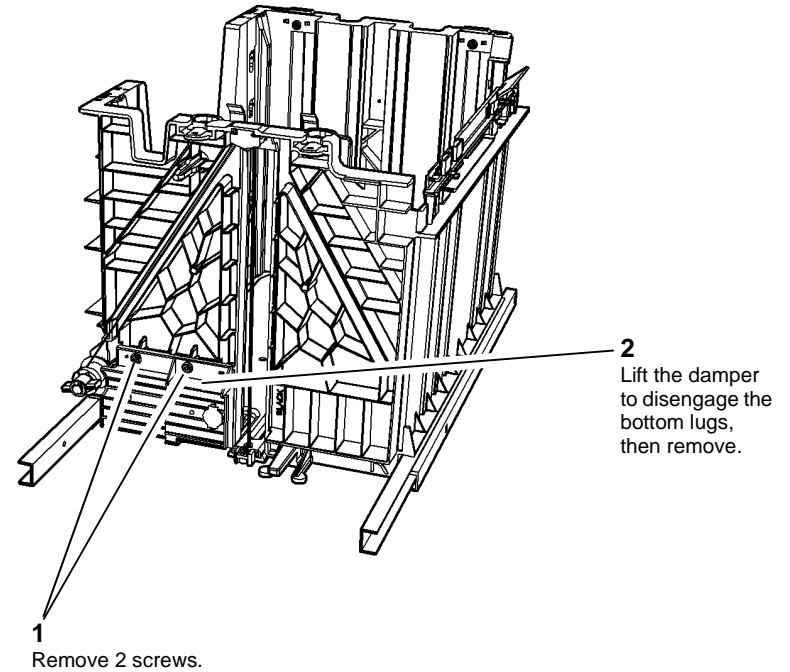
2 Lift the damper to disengage the bottom lugs, then remove.

1 Remove 2 screws.

W-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.

W-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.



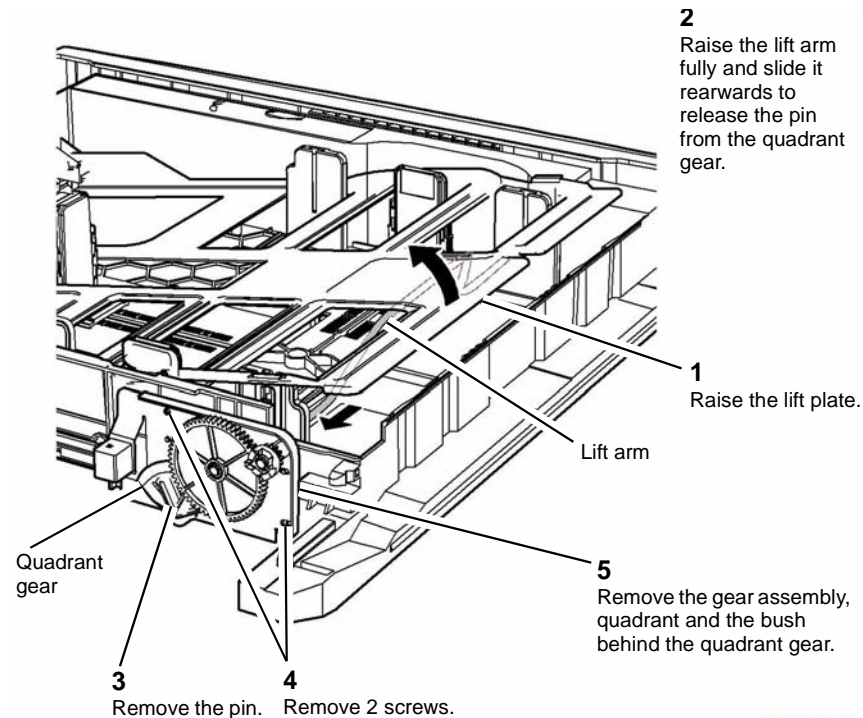
#### WARNING

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](#).



W-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 Control PWB

Parts List on [PL 70.21](#)

### Removal

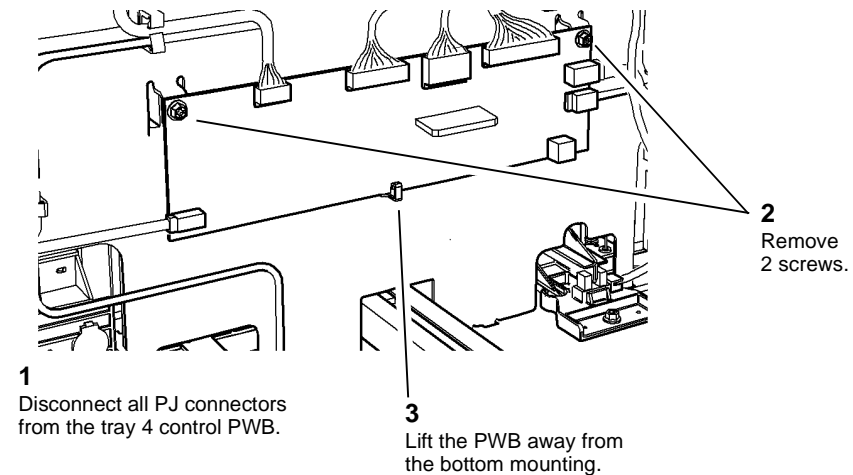


Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



*Ensure that E.S.D. procedures are observed during this procedure.*

1. Remove the lower rear cover, [PL 70.26](#) Item 1.
2. Remove the LVPS, [REP 1.1](#).
3. Remove the tray 4 control PWB, [Figure 1](#).



W-1-0640-A

Figure 1 HCF control PWB removal

### Replacement

1. Replacement is the reverse of the removal procedure.
2. Perform [dC604](#) Registration Setup Procedure.

## REP 70.14 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](#).

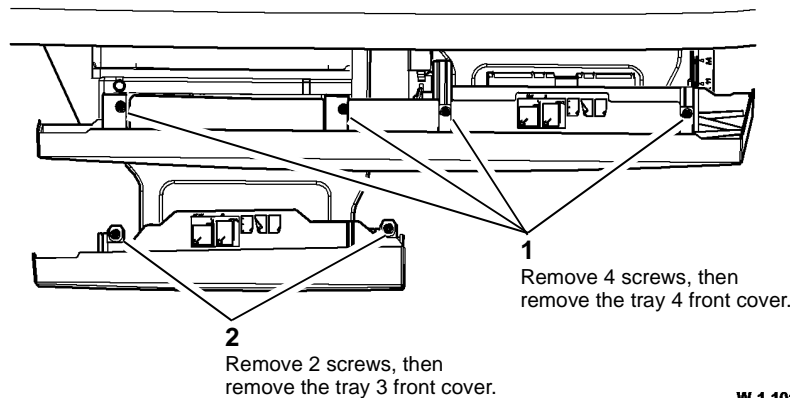


Figure 1 Front covers removal

3. Remove the stops, [Figure 2](#).

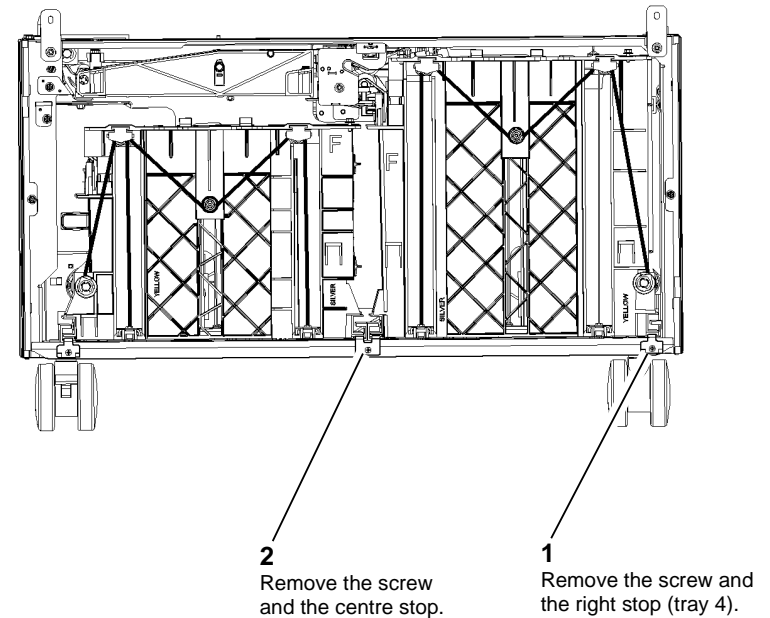


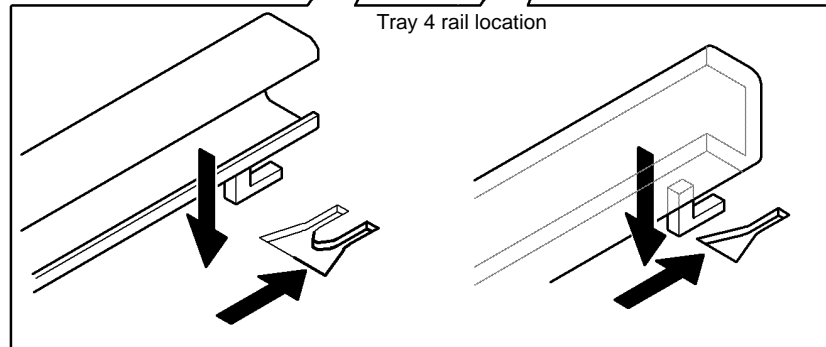
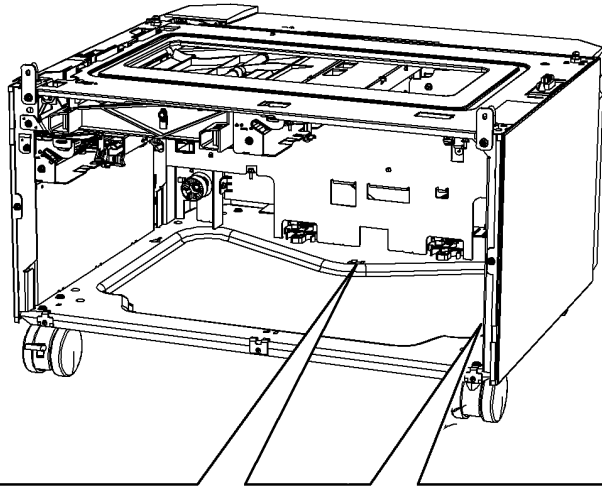
Figure 2 Tray 4 rail stops

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](#).



W-1-1013-A

Figure 3 Location of the tray rails

## REP 70.15 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](#).

4. Remove the tray 4 elevator motor, [Figure 1](#).

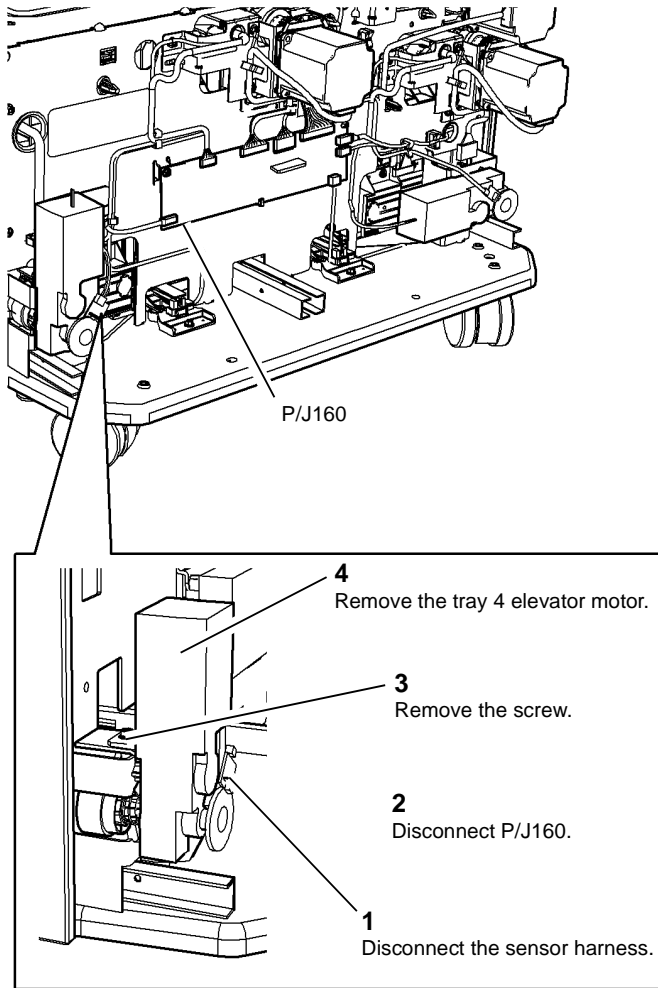


Figure 1 Elevator motor removal

### Replacement

The replacement is the reverse of the removal procedure.

## REP 70.16 Tray 3 Empty Sensor

Parts List on [PL 80.32](#)

### Removal

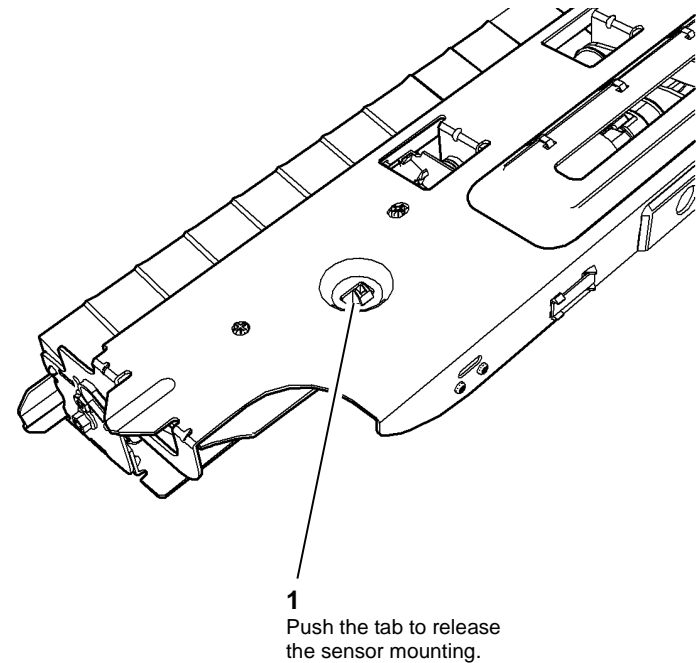


Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



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

1. Remove the tray 3 paper feed assembly, [REP 80.20](#).
2. Release the sensor mounting, [Figure 1](#).



W-1-0631-A

W-1-0737-A

Figure 1 Sensor mounting release

3. Remove the tray 3 empty sensor, [Figure 2](#).

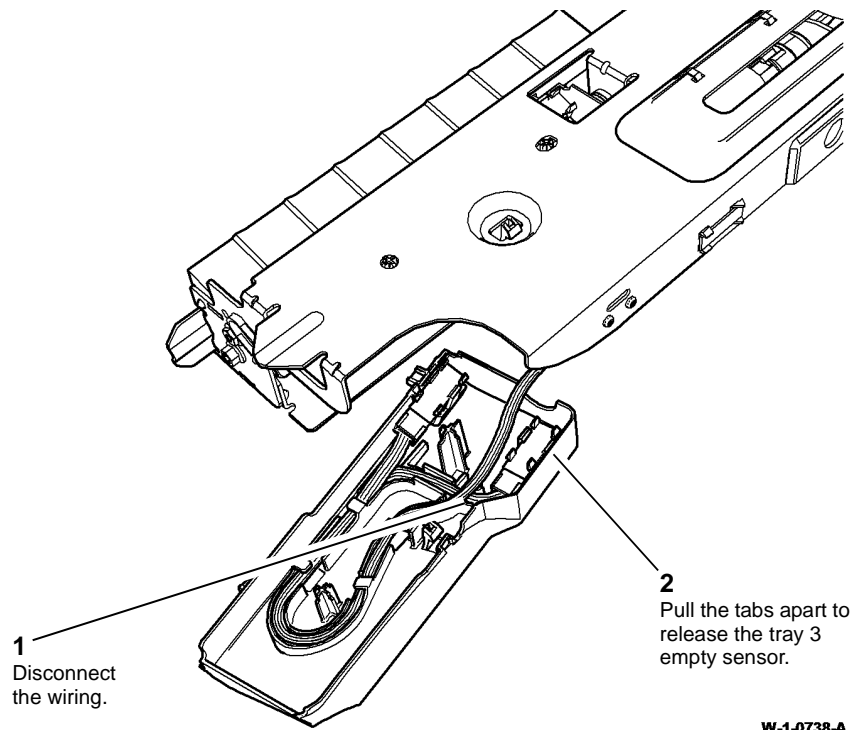


Figure 2 Sensor removal

W-1-0738-A

### Replacement

Replacement is the reverse of the removal procedure.

## REP 70.17 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](#).

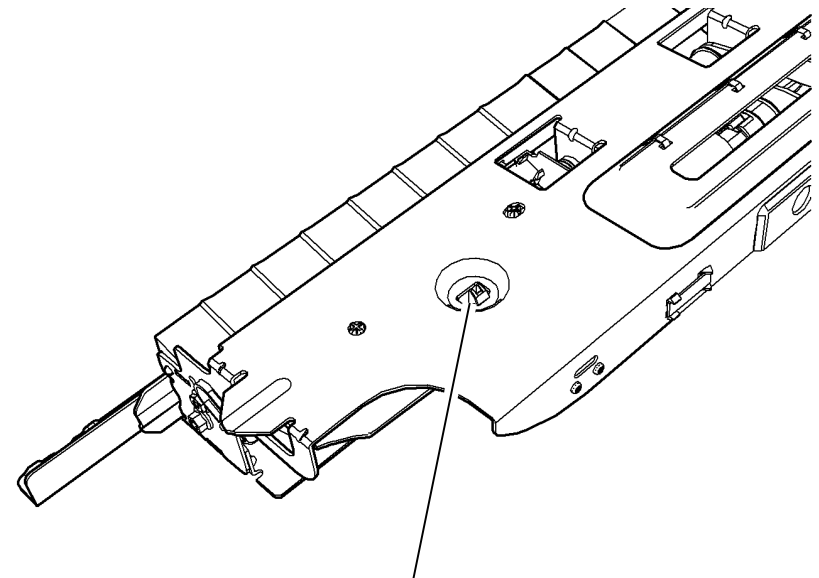


Figure 1 Sensor mounting release

W-1-0732-A



3. Remove the tray 4 empty sensor, [Figure 2](#).

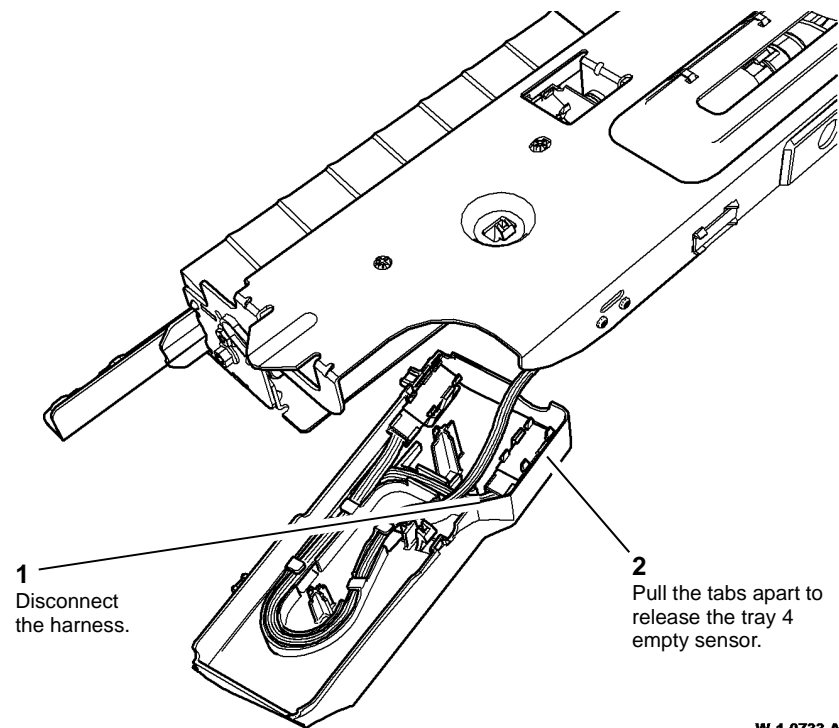


Figure 2 Sensor removal

W-1-0733-A

## Replacement

Replacement is the reverse of the removal procedure.

## REP 70.18 Bypass Tray Harness

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**

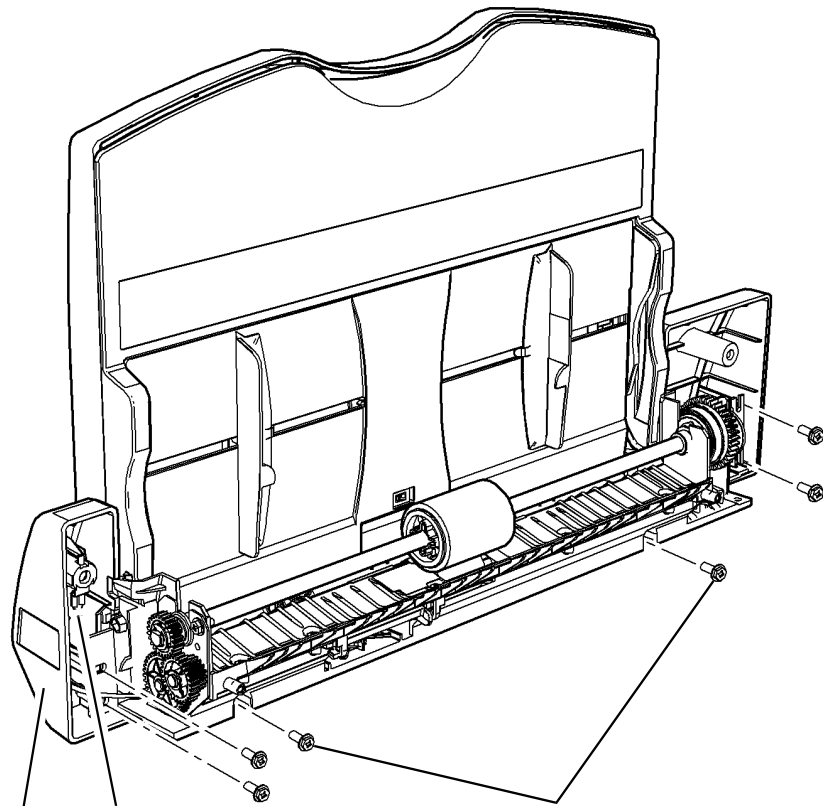
Take care during this procedure. Sharp edges may be present that can cause injury.

1. Remove the bypass tray assembly, [REP 70.2](#).

**CAUTION**

Take care not to damage the wiring harness between the tray assembly and the feeder frame.

2. Remove the feedhead cover, Figure 1.



2 Disconnect the earth wire.

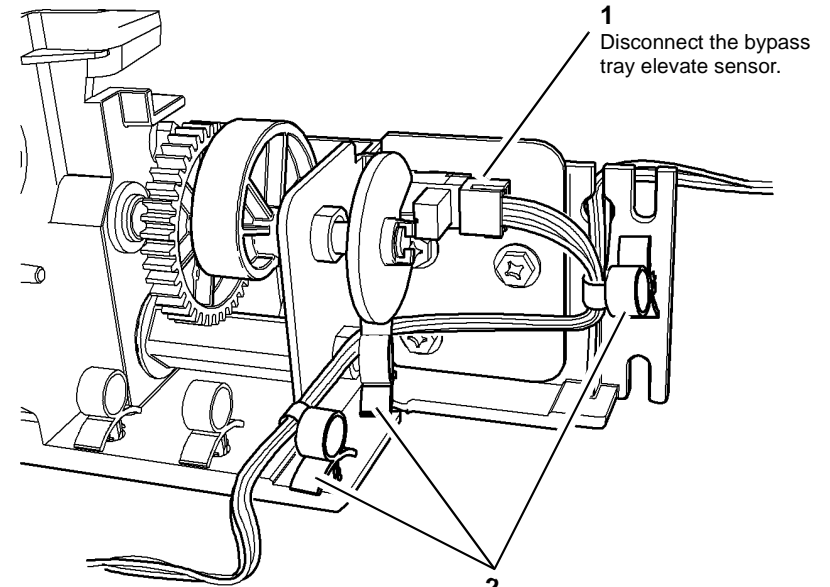
1 Remove 6 screws.

3 Remove the feedhead cover.

W-1-1417-A

Figure 1 Cover removal

3. Release the bypass tray harness, Figure 2.



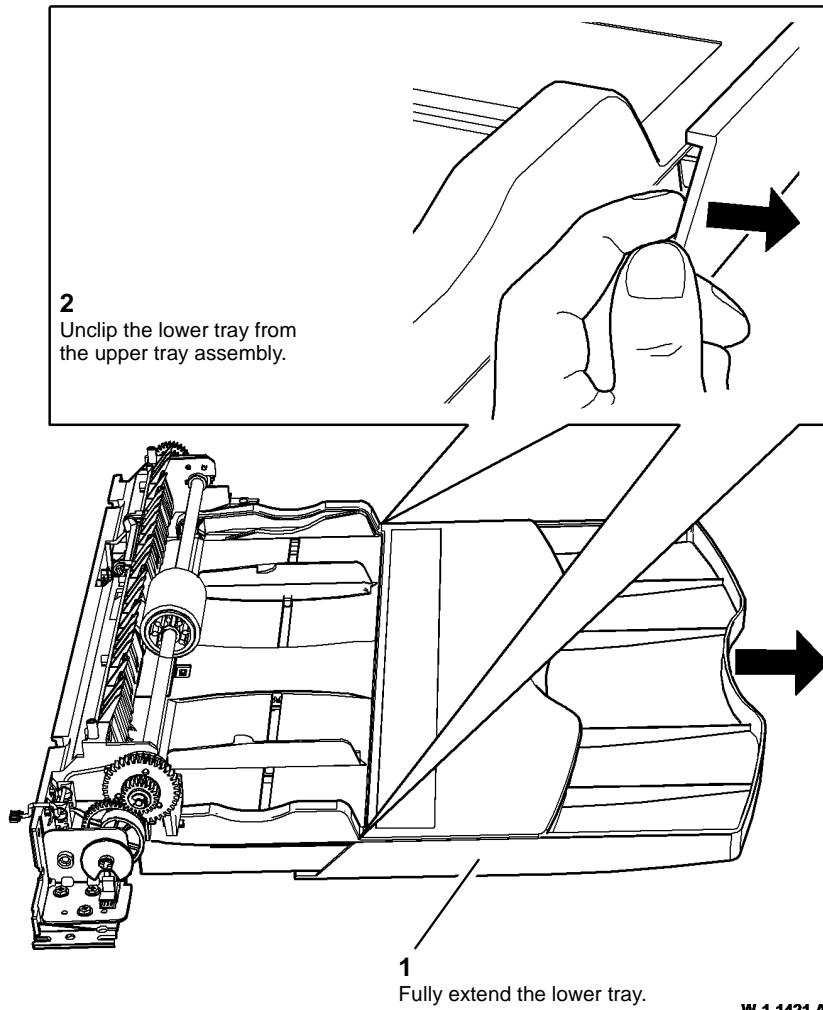
1 Disconnect the bypass tray elevate sensor.

2 Remove the 3 cable ties with the harness from the feeder frame.

W-1-1420-A

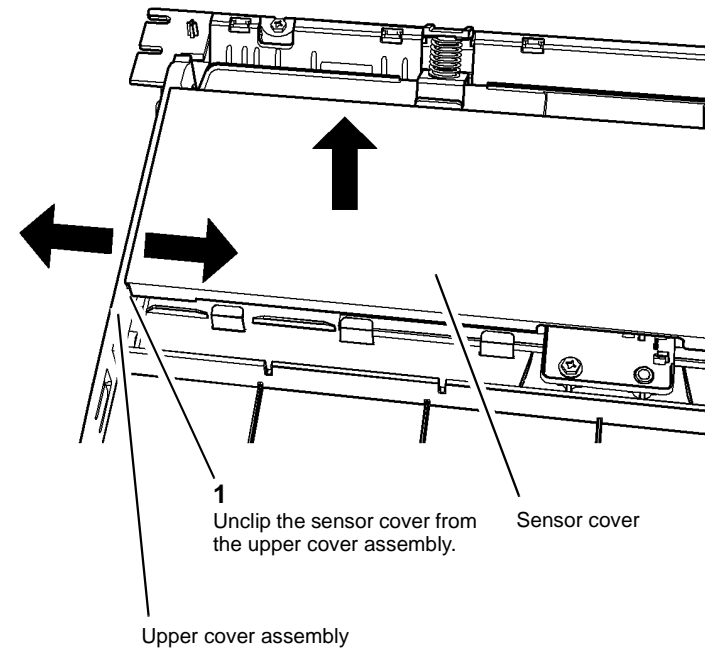
Figure 2 Sensor and cable ties

4. Remove the lower tray, **Figure 3**.



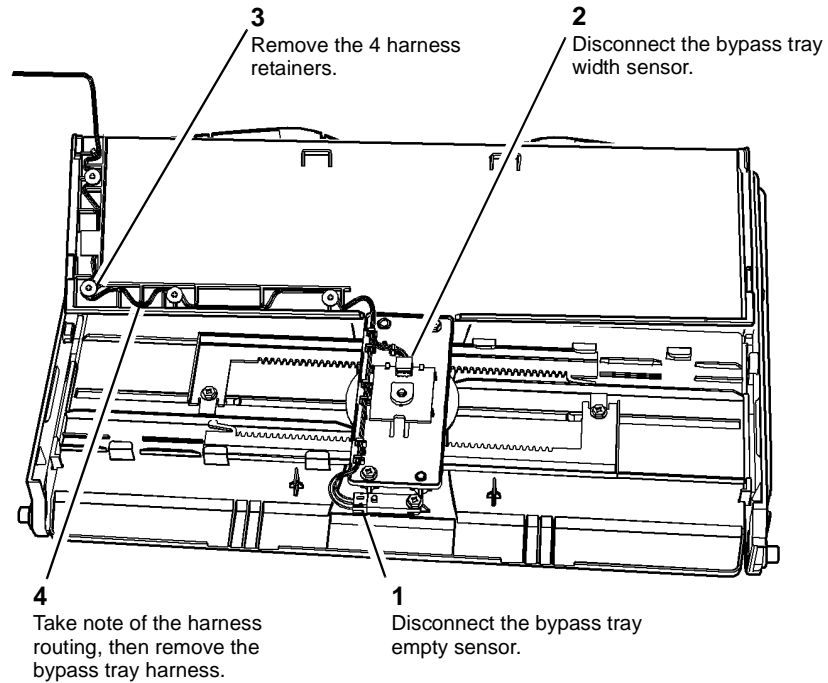
**Figure 3 Lower tray removal**

5. Release the sensor cover, **Figure 4**.



**Figure 4 Unclip the sensor cover**

6. Disconnect the sensors and release the bypass tray harness, [Figure 5](#).



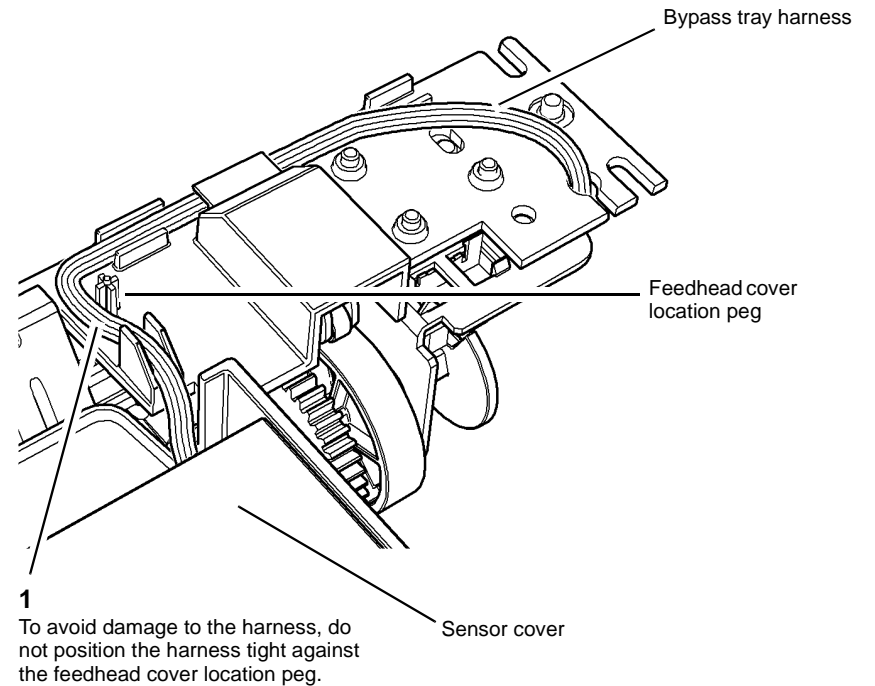
W-1-1419-A

Figure 5 Harness routing

## Replacement

Replacement is the reverse of the removal procedure.

- Ensure the bypass tray harness does not get crushed when the feedhead cover is position on the location peg, [Figure 6](#).



W-1-1418-A

Figure 6 Harness routing on the feeder frame

## REP 80.1 Tray 1 and Tray 2 Paper Feed Assembly

Parts List on [PL 80.26](#)

### Removal

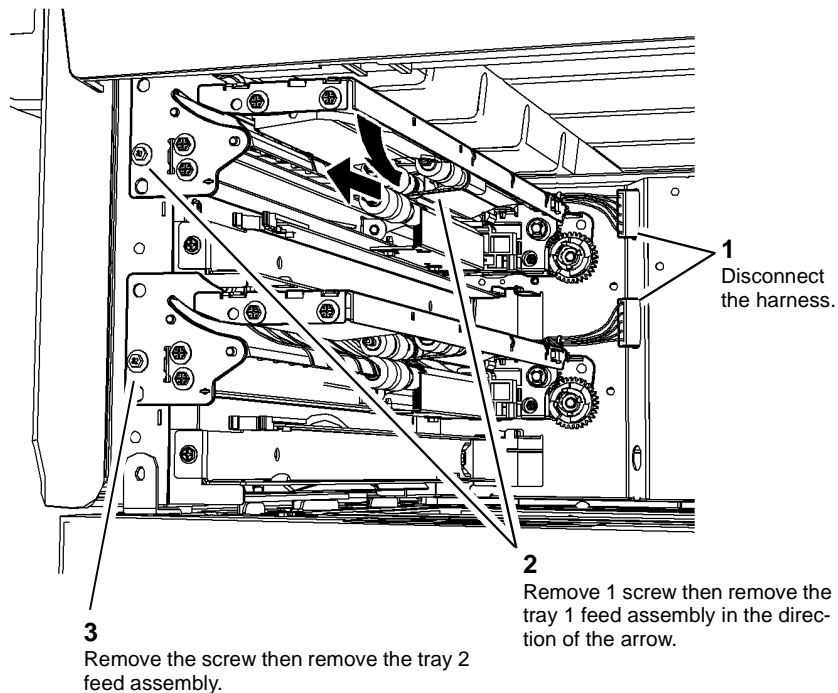


Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



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](#).



W-1-0643-A

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](#).

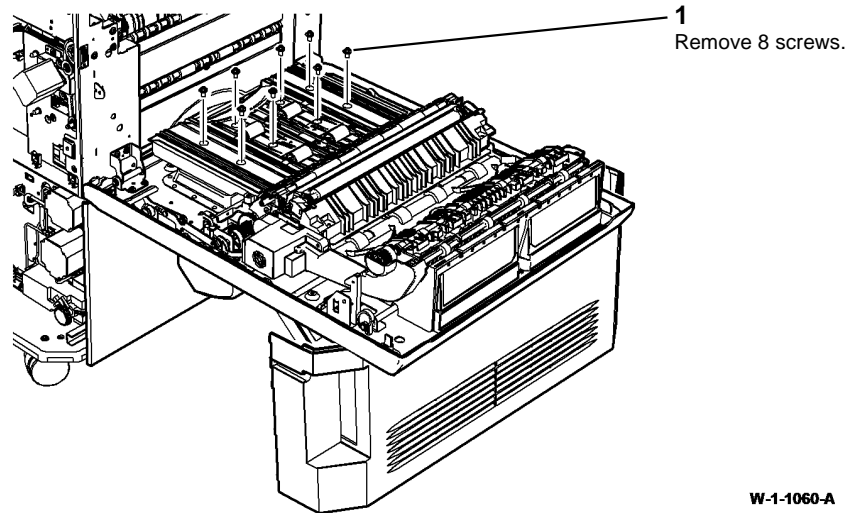


Figure 1 Preparation

W-1-1060-A

3. Release the TAR 1 and TAR 2 sensor harness cable ties (2 places) [Figure 2](#).

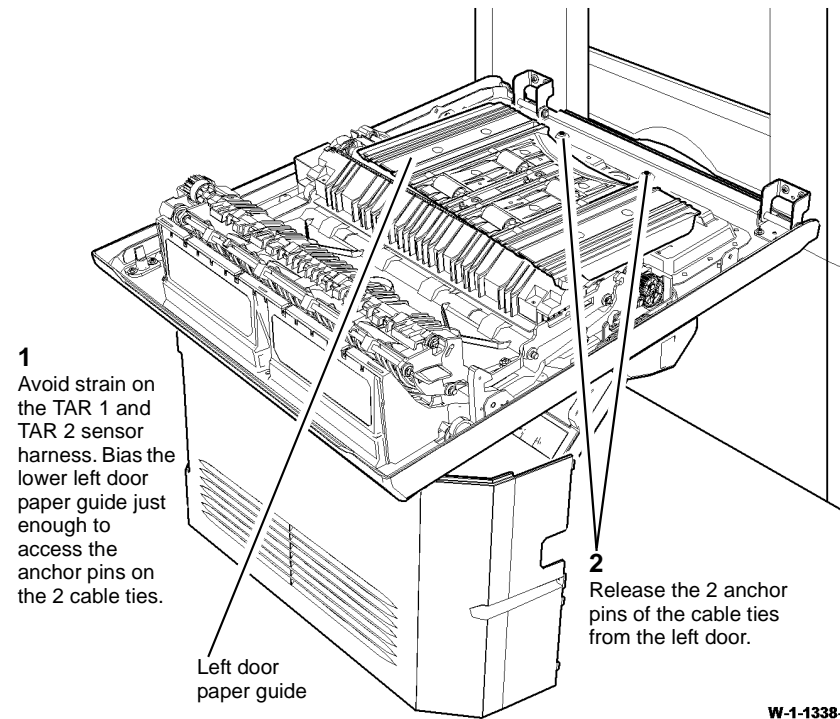
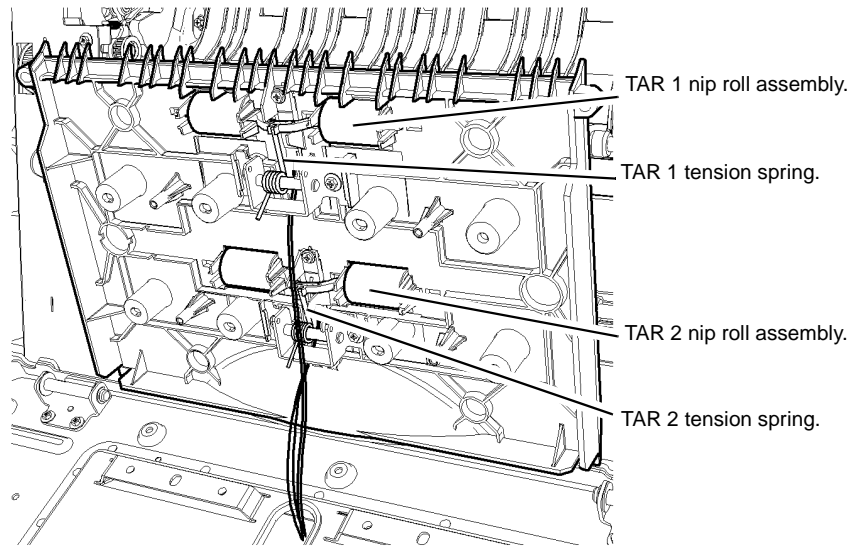


Figure 2 TAR 1 and TAR 2 sensor harness fixings

W-1-1338-A

4. Prepare to disconnect the TAR 1 or TAR 2 sensors, [Figure 3](#).

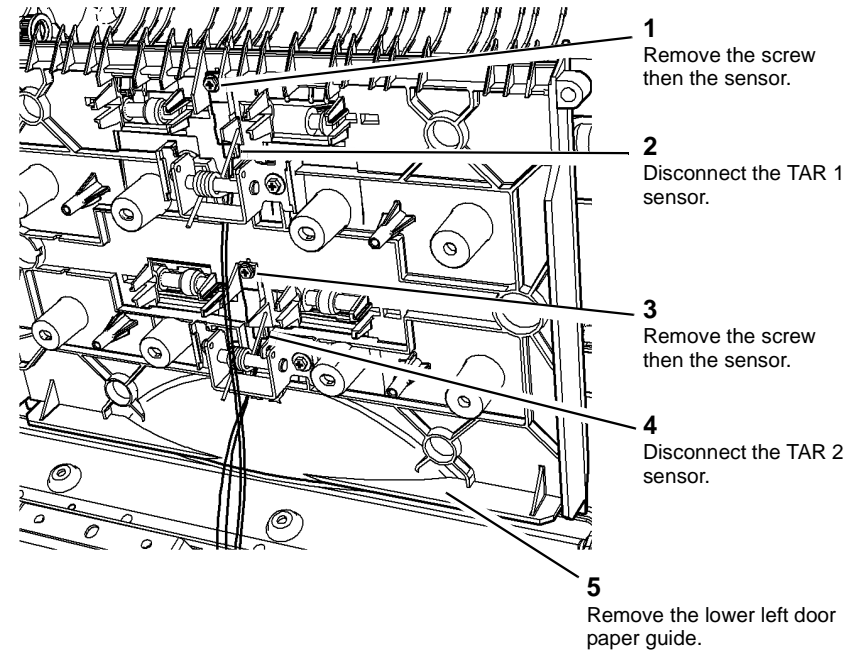


- 1 Release the appropriate tension spring.
- 2 Remove the appropriate nip roll assembly.

W-1-1339-A

Figure 3 Lower left door nip rolls

5. Remove the lower left door paper guide, [Figure 4](#).



- 1 Remove the screw then the sensor.
- 2 Disconnect the TAR 1 sensor.
- 3 Remove the screw then the sensor.
- 4 Disconnect the TAR 2 sensor.
- 5 Remove the lower left door paper guide.

W-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](#).

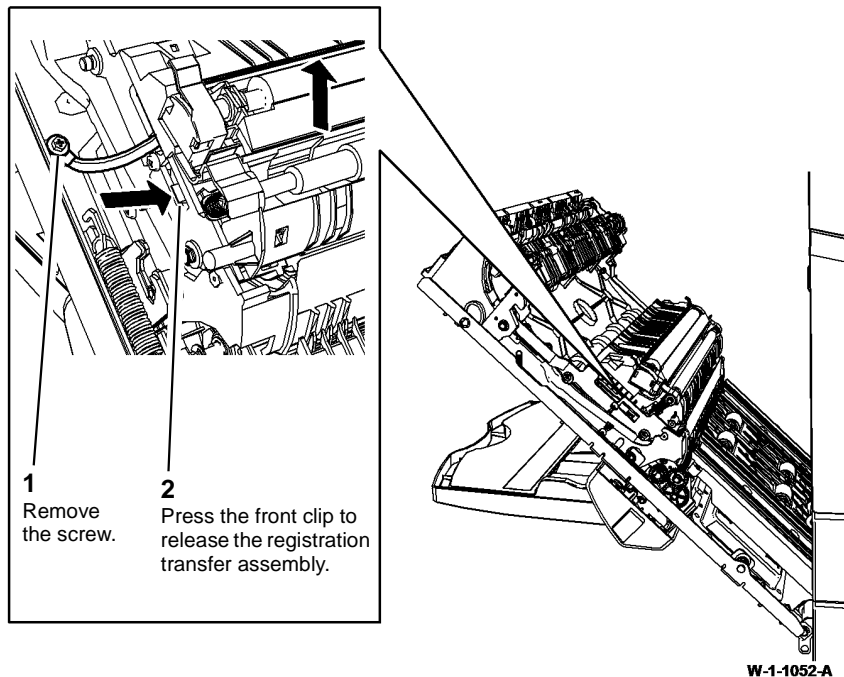
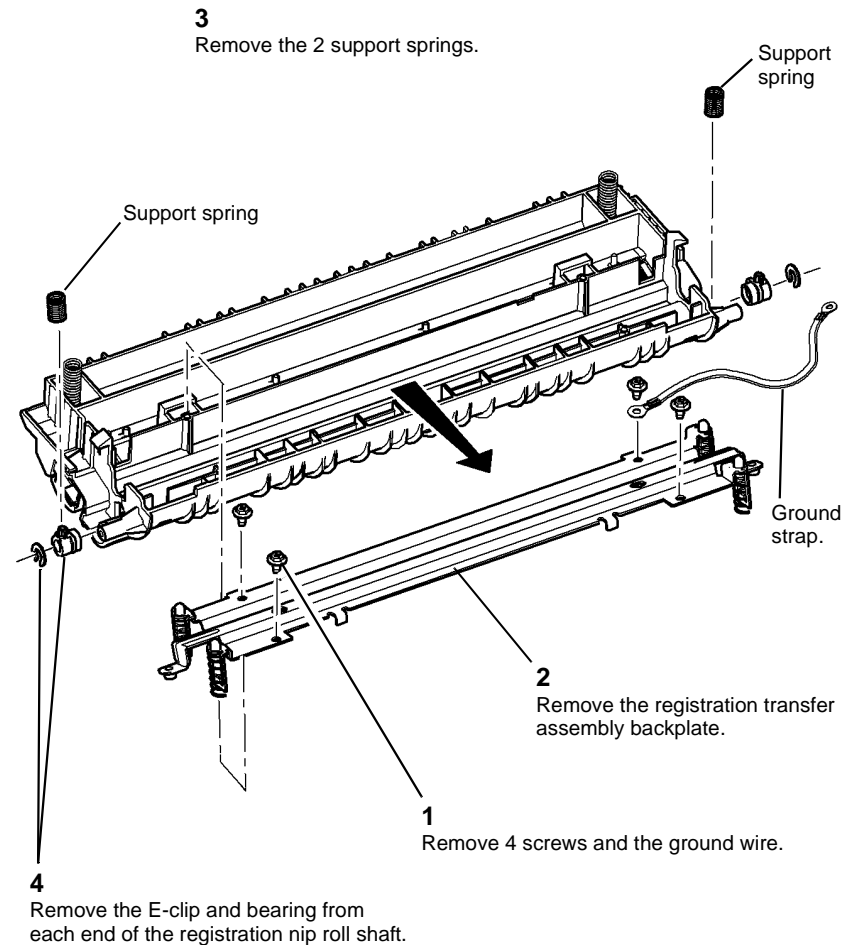


Figure 1 Registration transfer assembly removal

4. Prepare to remove the registration nip roll, [Figure 2](#).

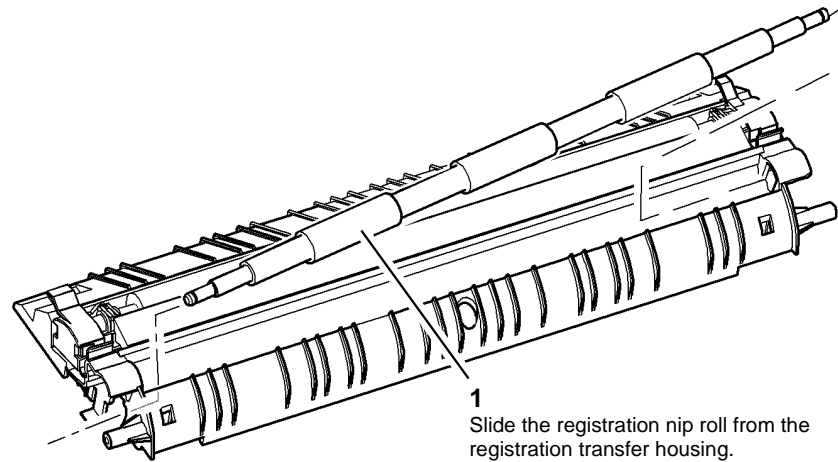


W-1-1053-A

Figure 2 Registration backplate assembly



5. Remove the registration nip roll, [Figure 3](#).



W-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.

## 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**

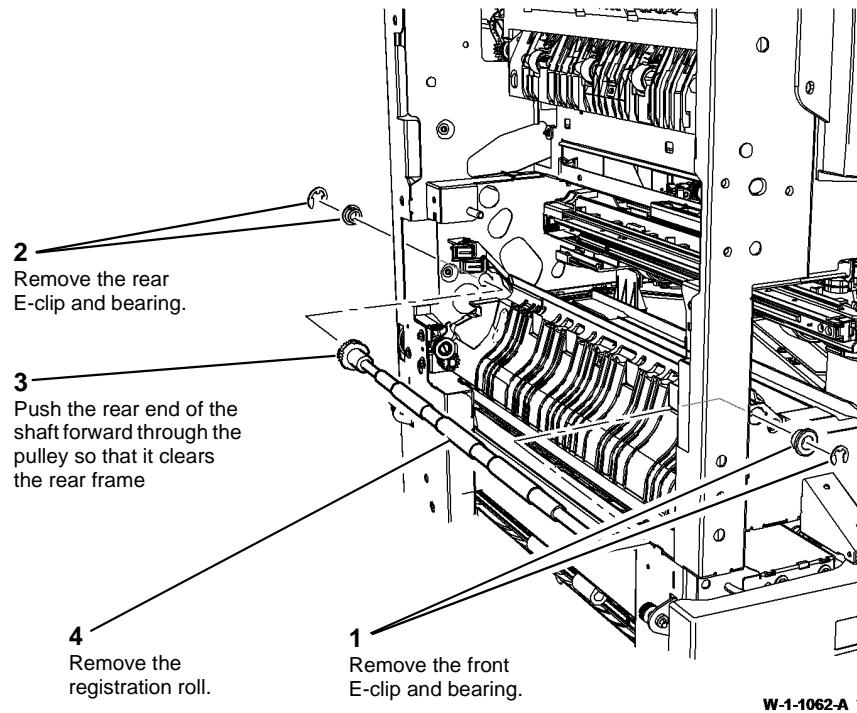
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

  
**WARNING**

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

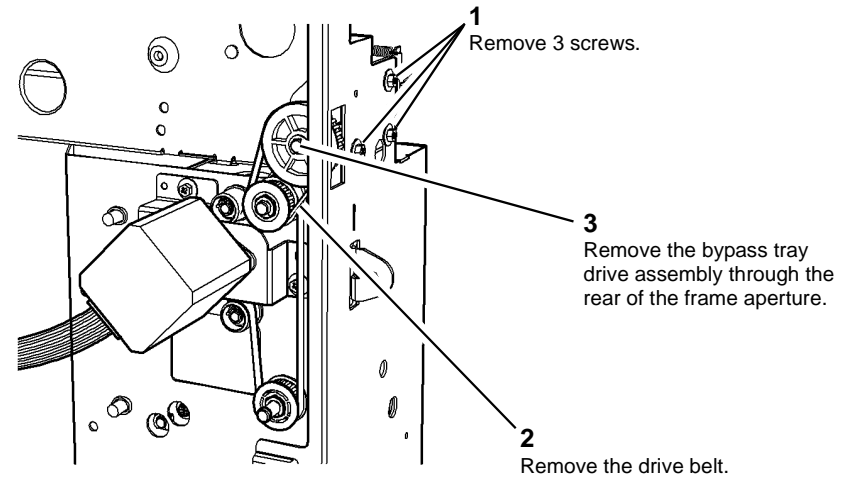
1. Open the left door, [PL 80.10](#) Item 1.
2. Cam-off the LED print head into the retracted position.
3. Remove the print cartridge, [PL 90.17](#) Item 9. Place the print cartridge in a lightproof bag.
4. Remove the latch, [PL 60.35](#) Item 2.
5. Remove the inner front cover, [PL 28.10](#) Item 10.
6. Remove the main drive module, [REP 40.1](#).

7. Remove the registration roll, **Figure 1**.



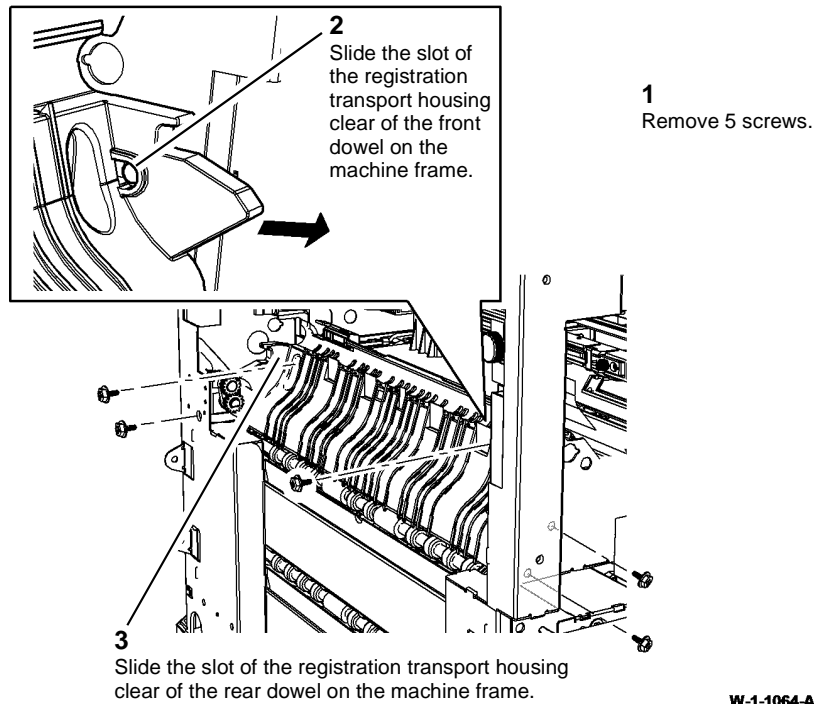
**Figure 1 Registration roll removal**

8. Remove the bypass tray drive assembly, **Figure 2**.



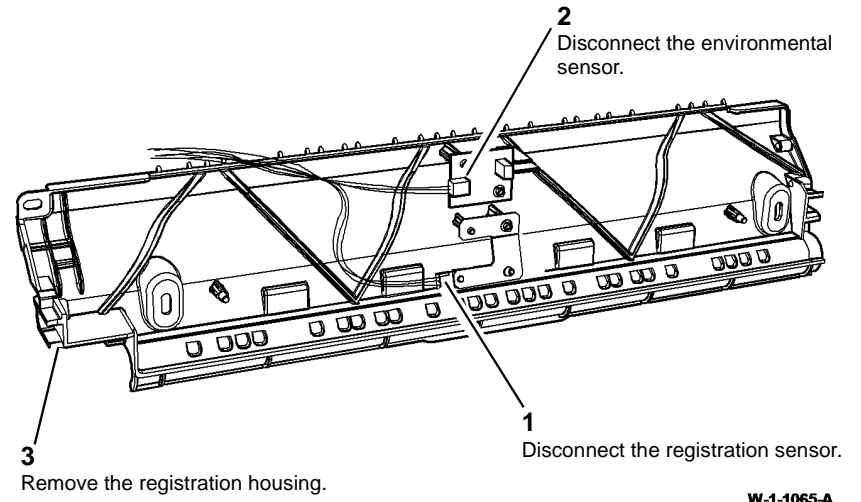
**Figure 2 Bypass tray drive assembly removal**

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



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.

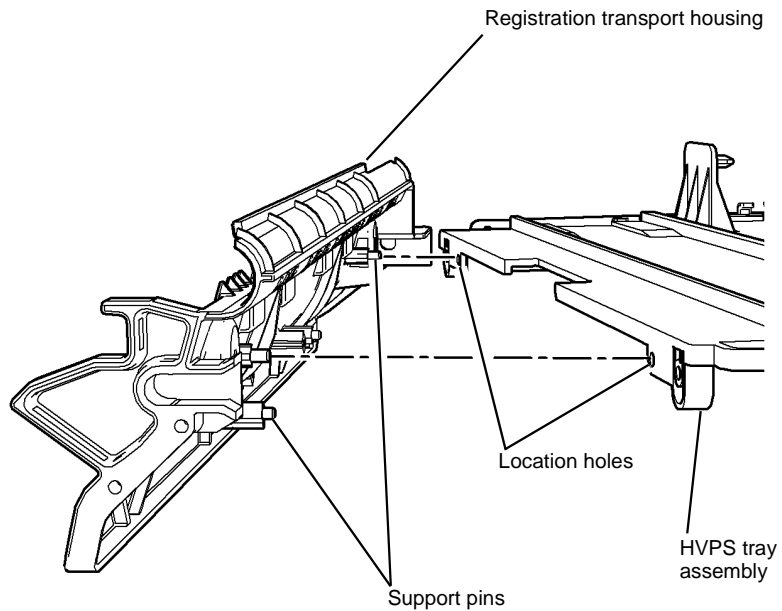


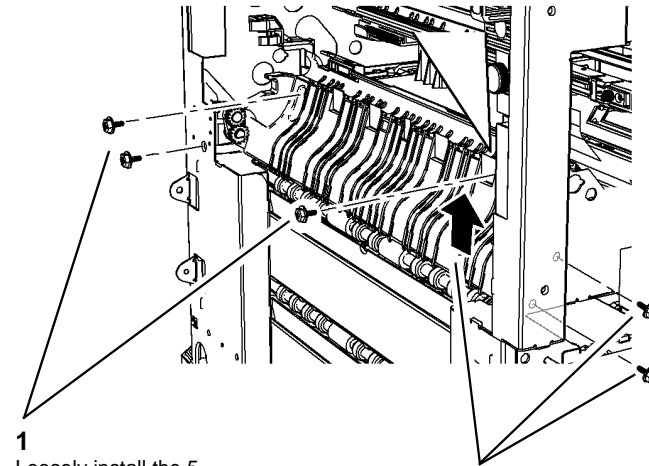
Figure 5 Housing replacement

W-1-1294-A



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.

W-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](#)

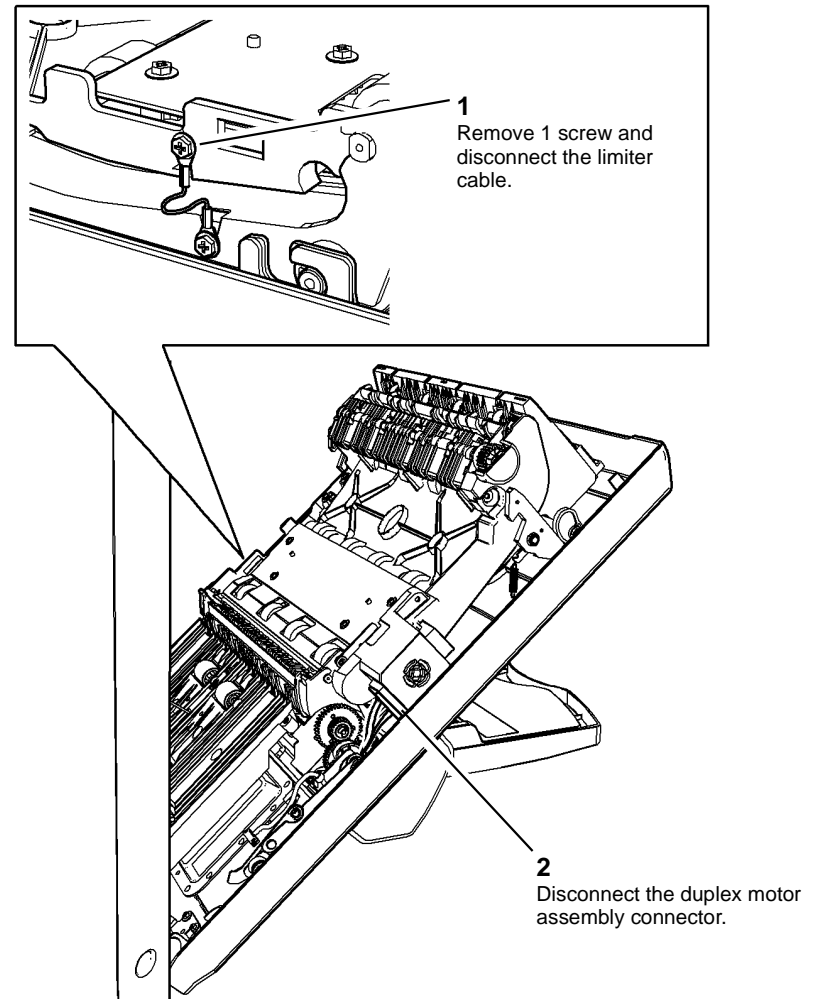
### Removal



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](#).

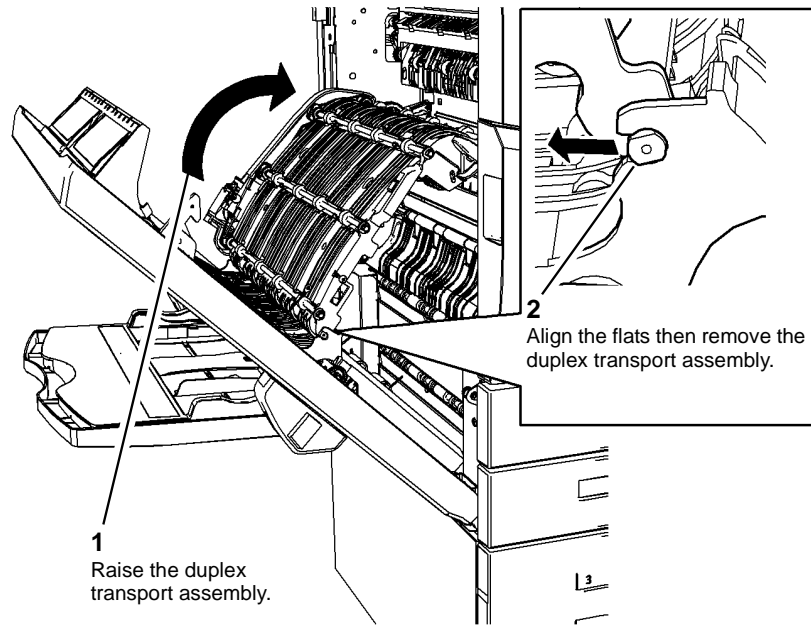


W-1-1055-A

Figure 1 Preparation

5. Remove the fuser module, [PL 10.8 Item 1](#).

6. Remove the duplex transport assembly, [Figure 2](#).



W-1-1056-A

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**

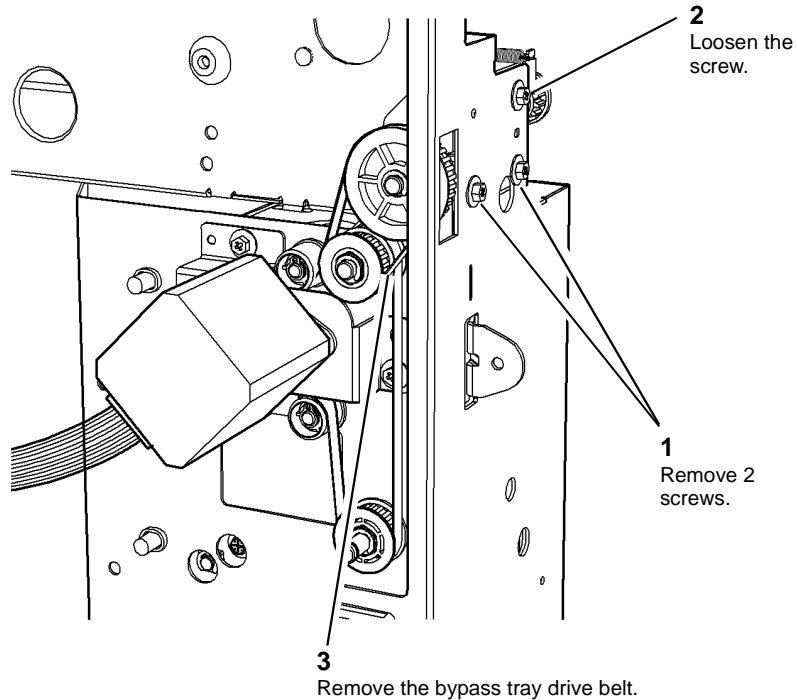
Take care during this procedure. Sharp edges may be present that can cause injury.

  
**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.

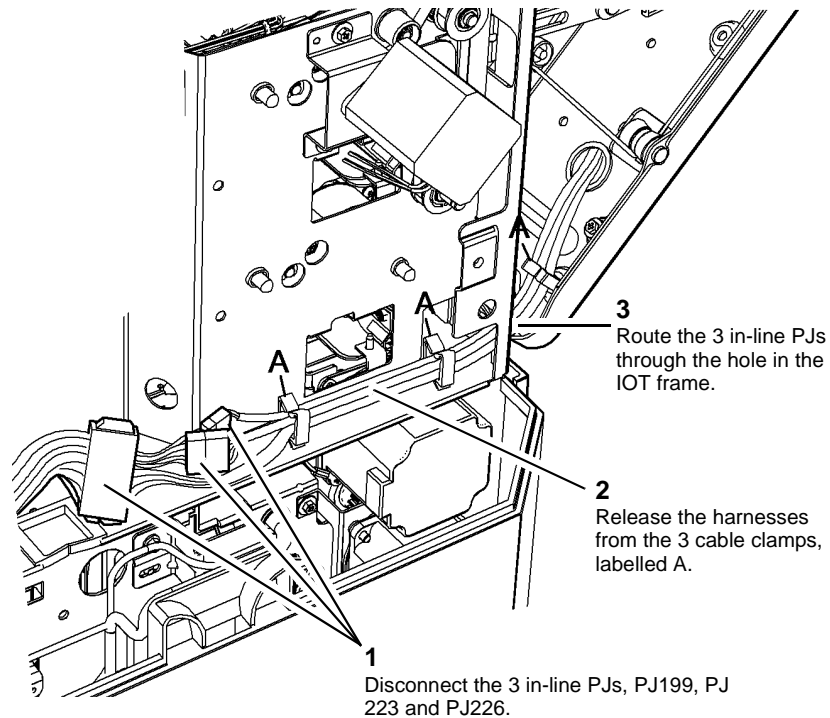
  
**CAUTION**

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.

W-1-1050-A

4. Disconnect the harnesses between the IOT and the left door assembly, [Figure 1](#).



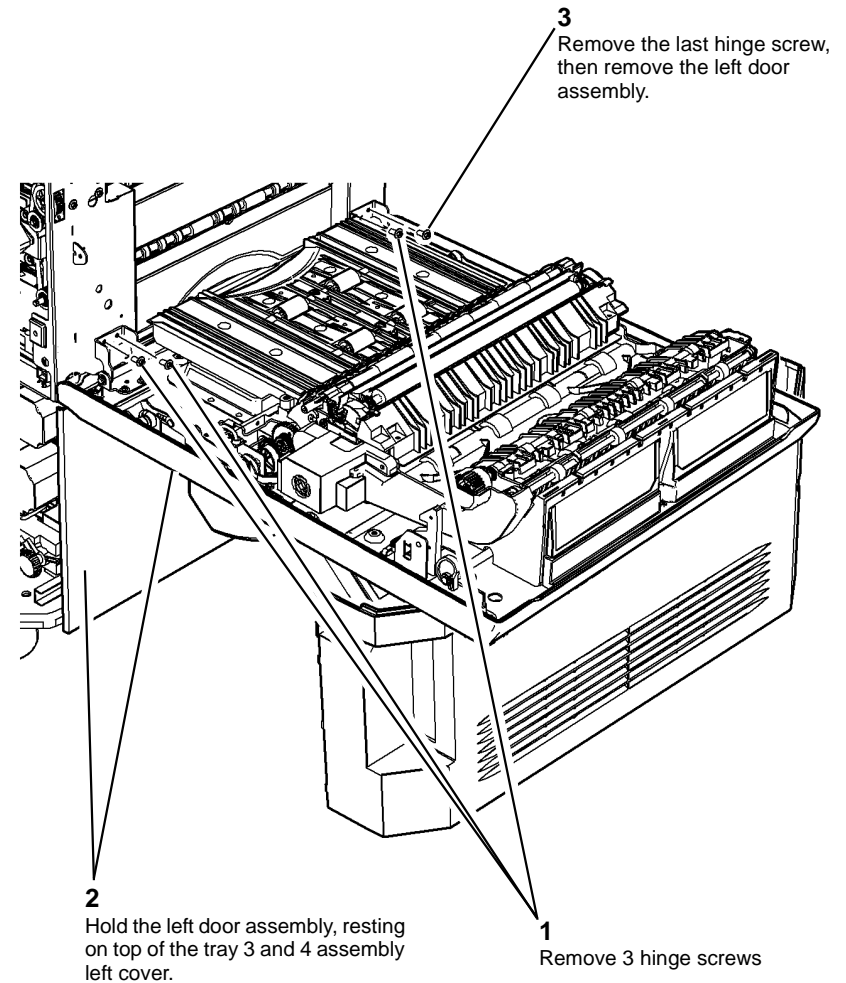
W-1-1342-A

**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](#).



W-1-1372-A

**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.

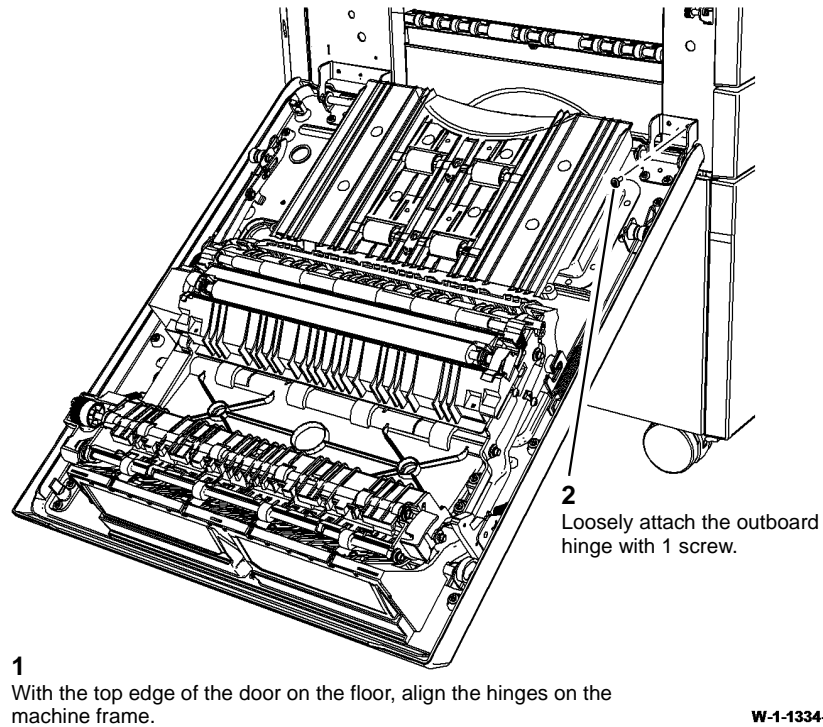


Figure 3 Temporary alignment

W-1-1334-A

2. Install the left door assembly, Figure 4.

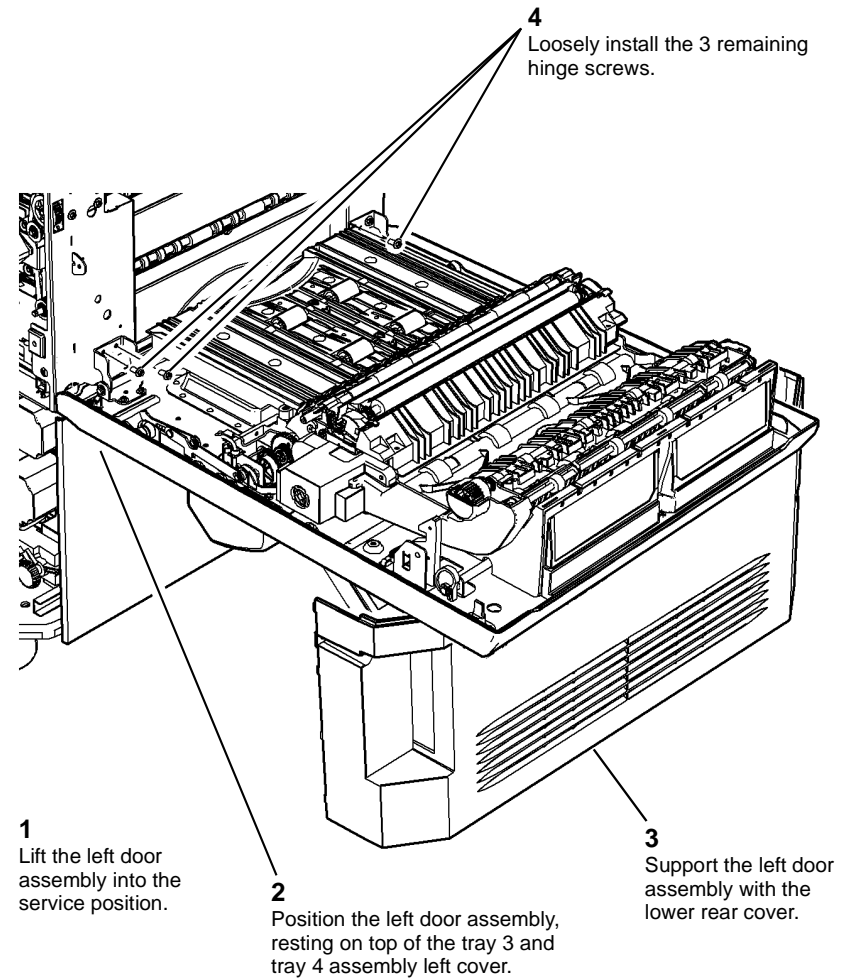
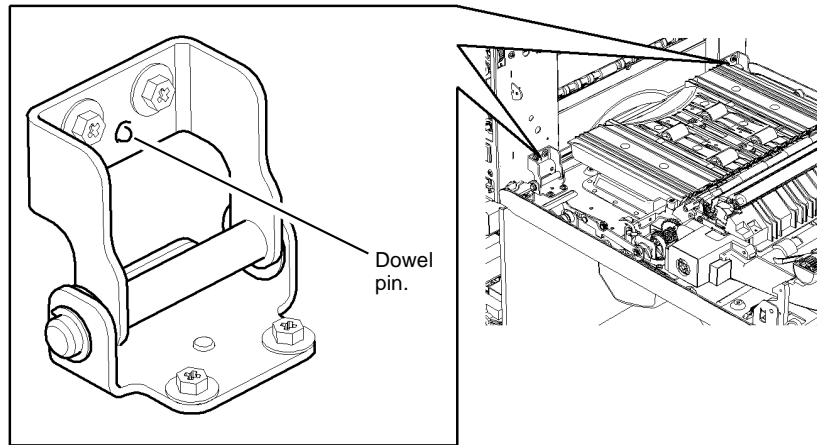


Figure 4 Left door assembly Installation

W-1-1373-A

3. Ensure that the location holes of the left door assembly hinges locate correctly with small dowel pins on the IOT frame, [Figure 5](#). Then Fully tighten the 4 hinge screws, refer to [Figure 3](#) and [Figure 4](#).



W-1-1374-A

**Figure 5 Hinge location**

4. If a new left door assembly is installed return the old left door assembly with the front and rear damper spring tensioner tools attached.
5. The remainder of the replacement is the reverse of the removal procedure.
6. Perform the [dC604](#) Registration Setup procedure.

## REP 80.8 TAR/Bypass Tray Motor and Transport Roll Drive Belt

Parts List on [PL 80.25](#)

### Removal

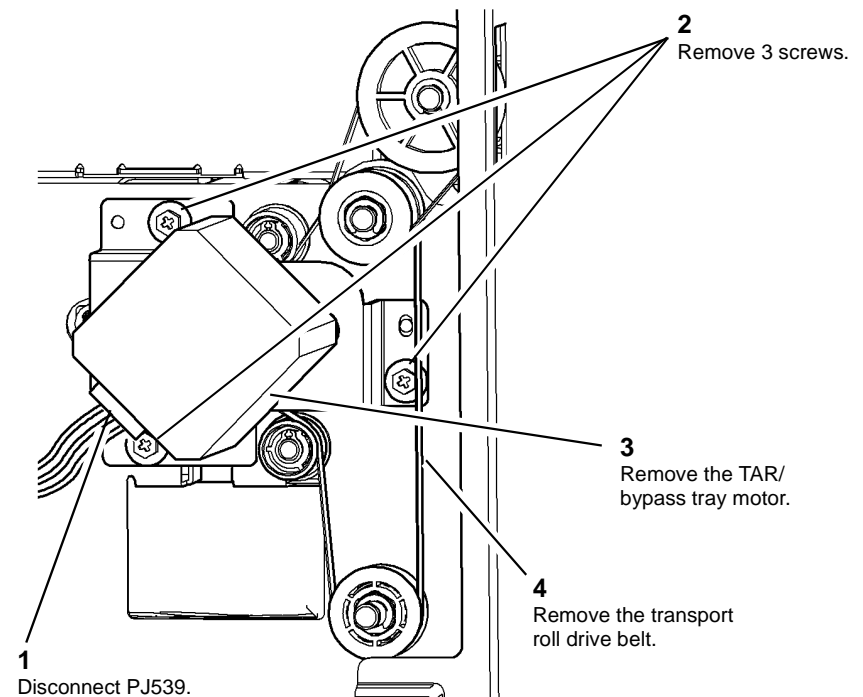
**WARNING**

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.

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**

### 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](#).

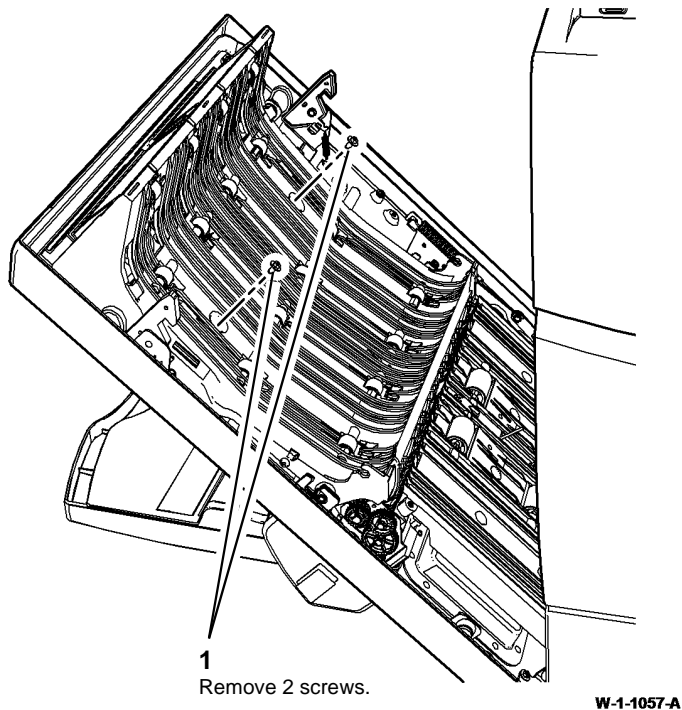


Figure 1 Preparation

6. Remove the duplex outer guide assembly, [Figure 2](#).

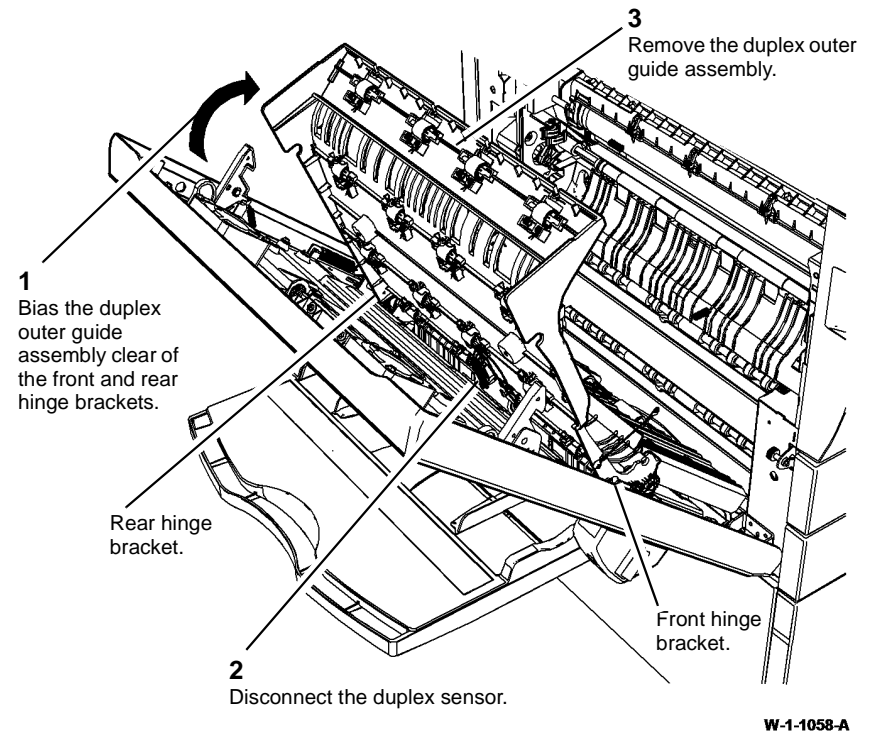


Figure 2 Removal

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



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.



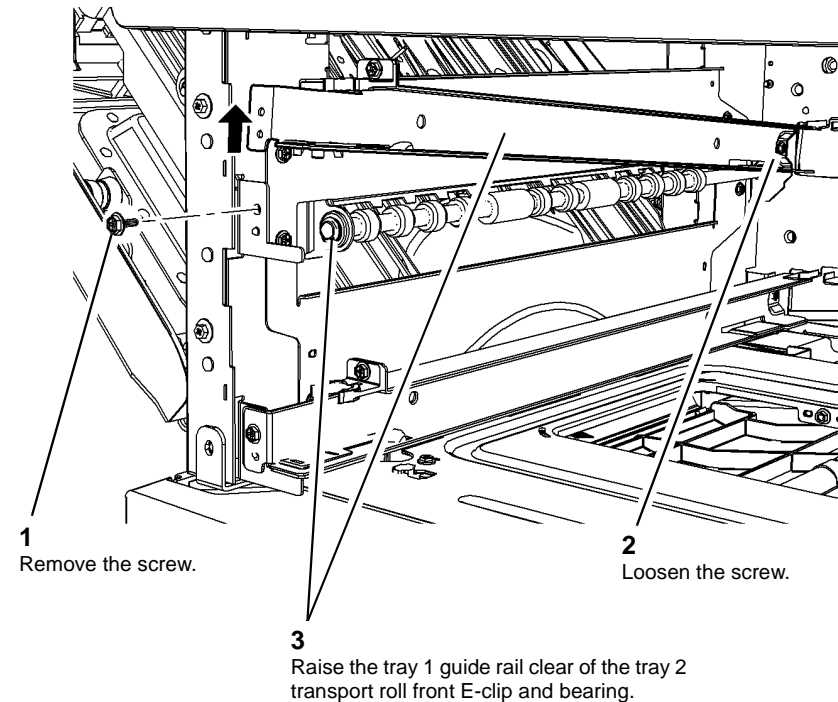
Take care during this procedure. Sharp edges may be present that can cause injury.

**NOTE:** The removal procedure is the same for 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.



W-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.

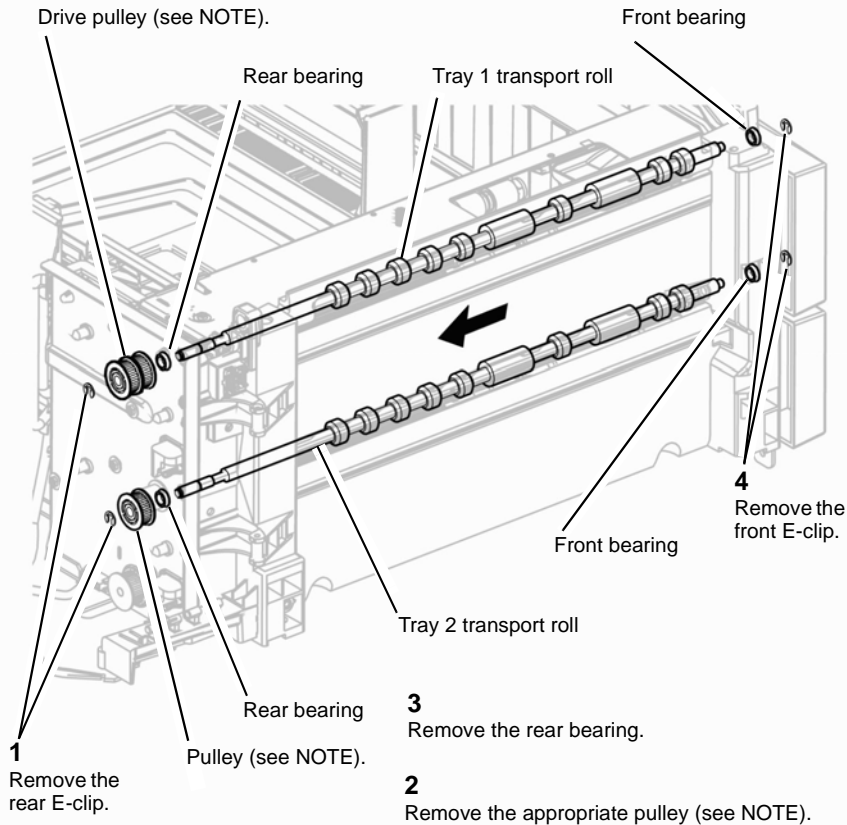


Figure 2 Transport roll removal

W-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.

## 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](#).

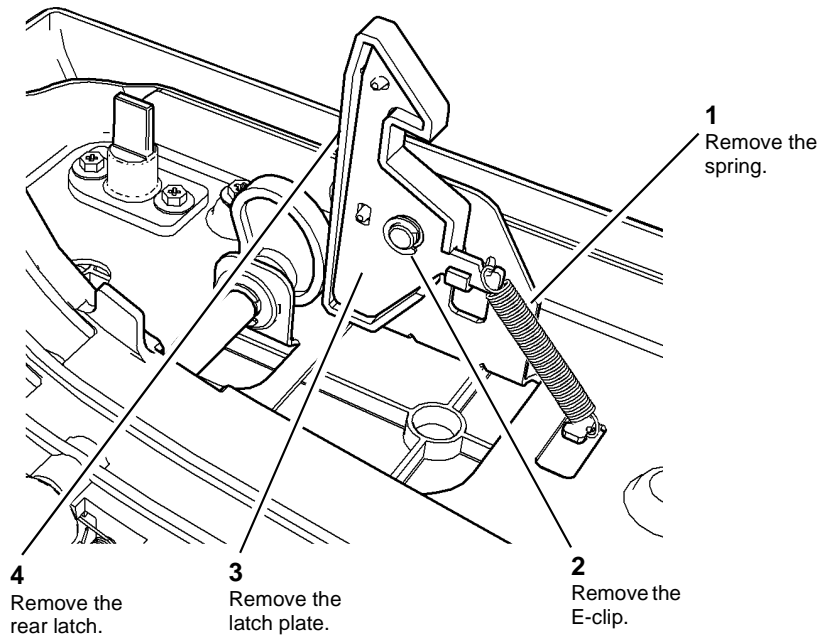


Figure 1 Removal

W-1-1059-A

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](#).

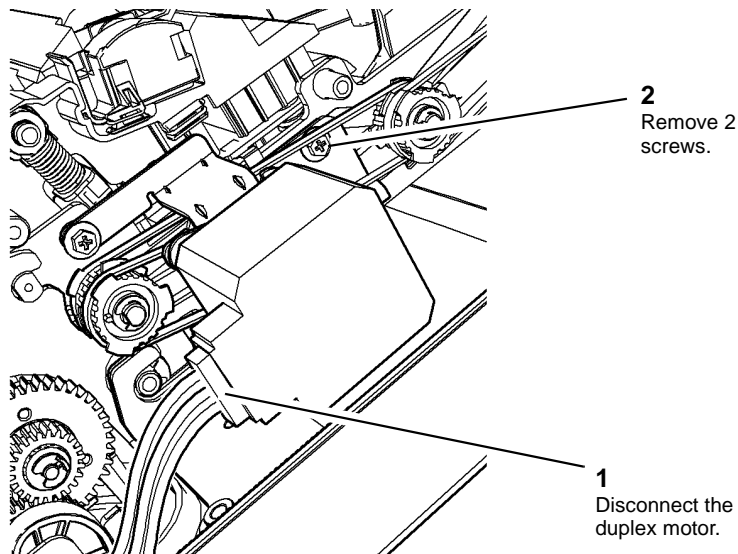


Figure 1 Preparation

W-1-1332-A

5. Remove the duplex motor assembly, [Figure 2](#).

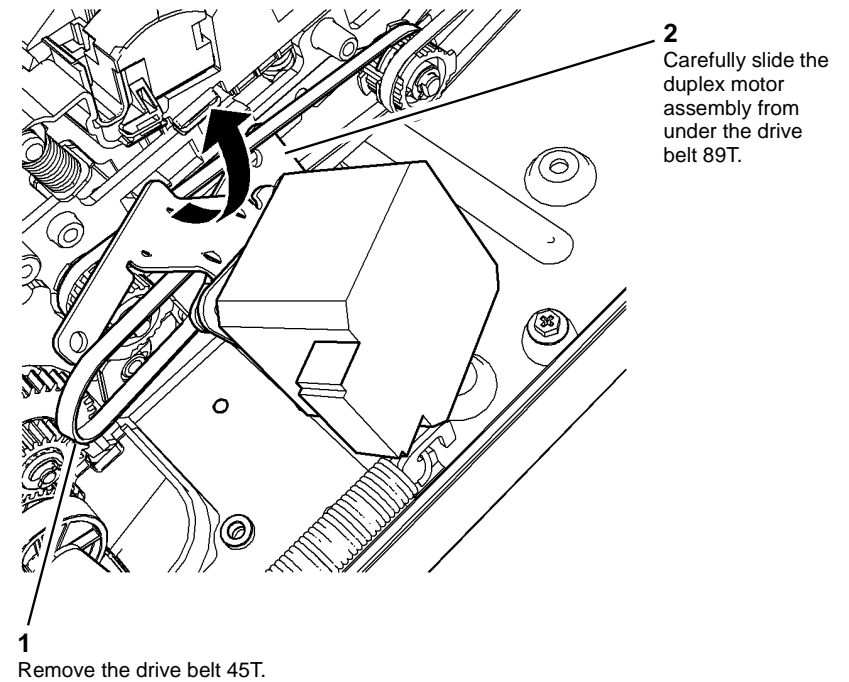


Figure 2 Remove the assembly

W-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



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](#).

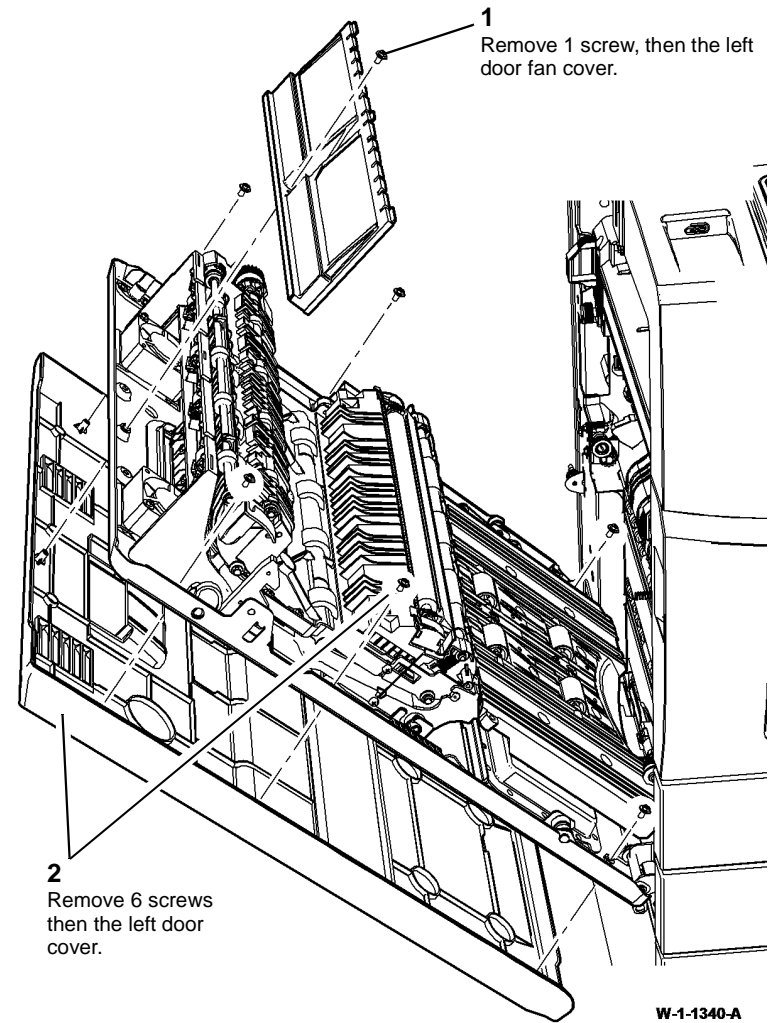


Figure 1 Cover removal

### 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

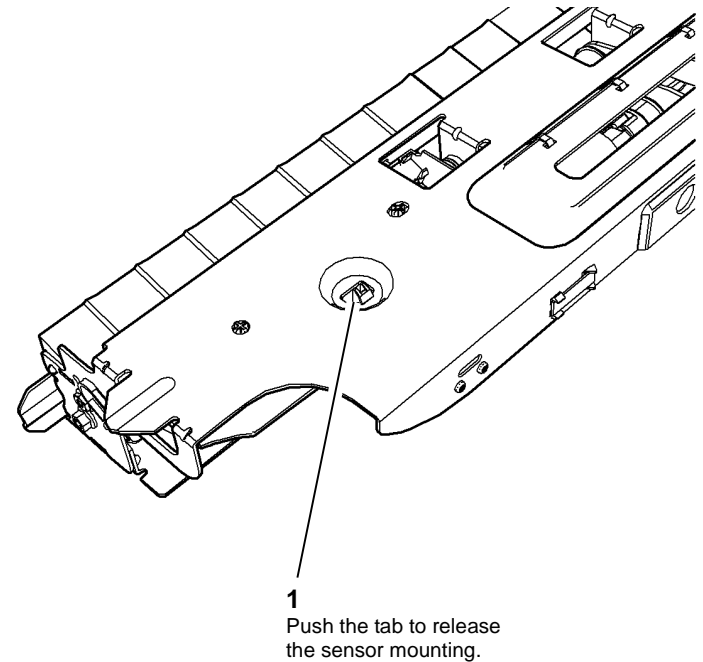


Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



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](#).



W-1-0739-A

Figure 1 Sensor mounting release



3. Remove the tray 4 feed sensor, [Figure 2](#).

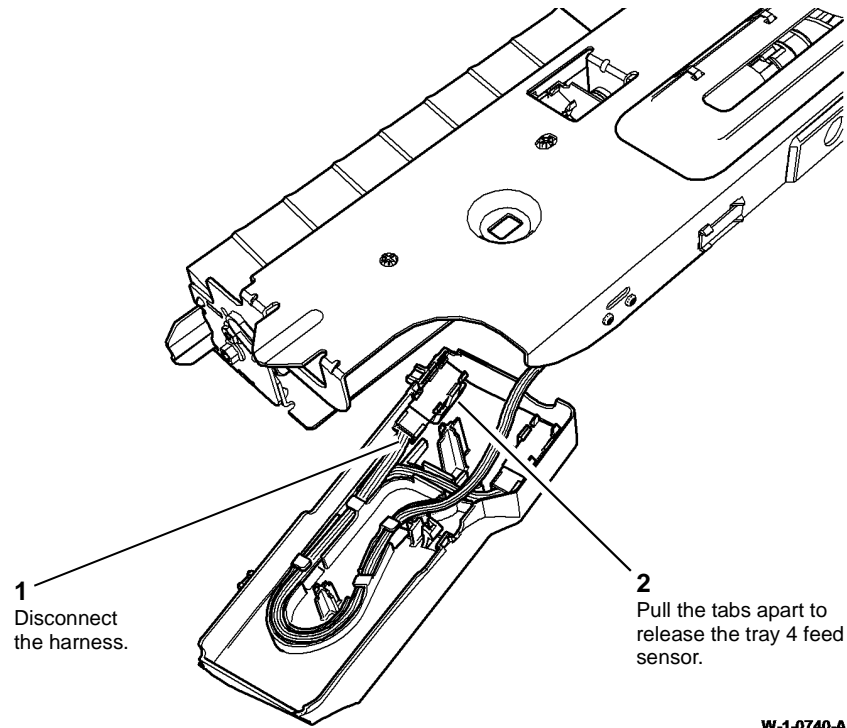


Figure 2 Sensor removal

W-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](#).

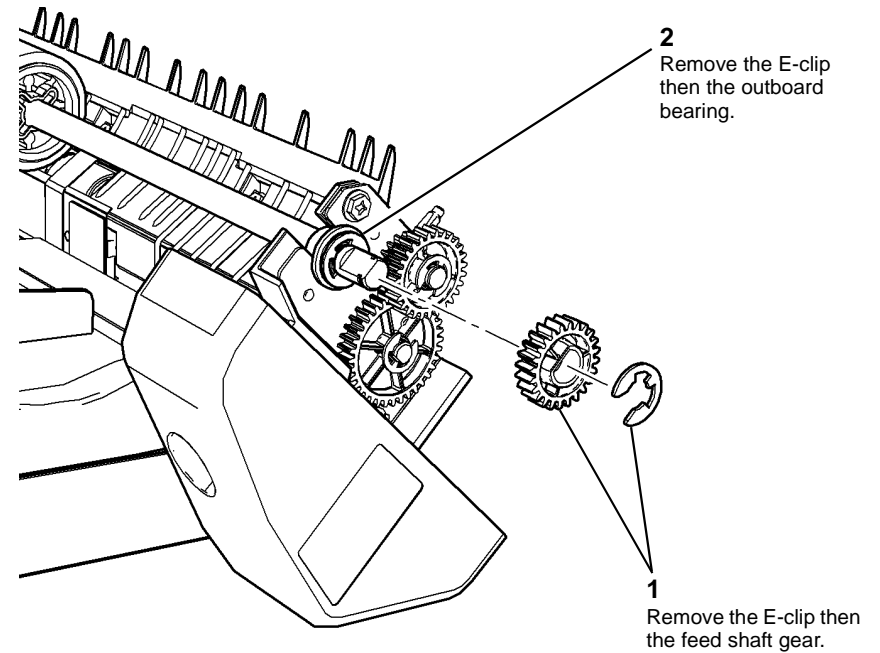
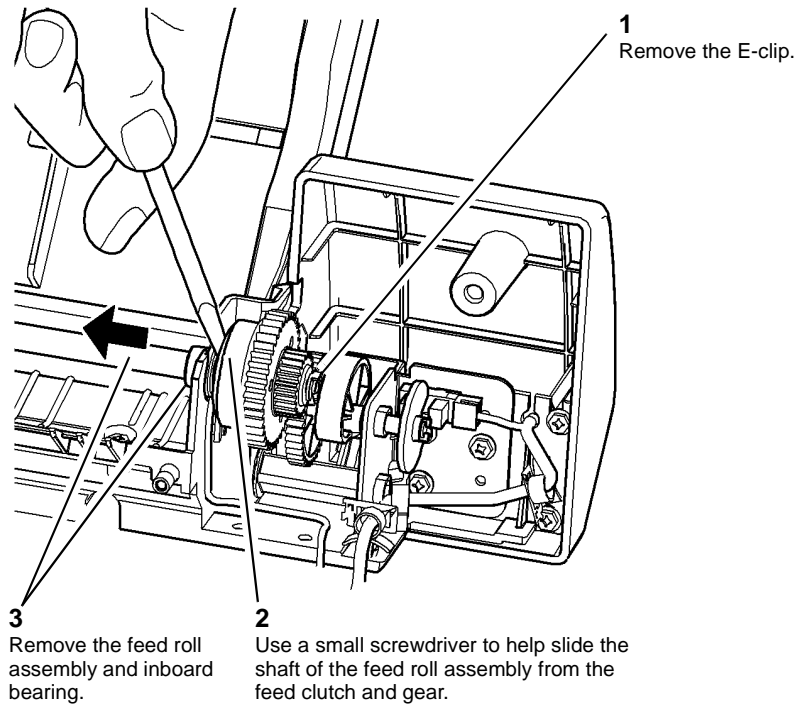


Figure 1 Feed roll front fixings

W-1-1260-A

3. Remove the feed clutch and feed roll assembly, [Figure 2](#).

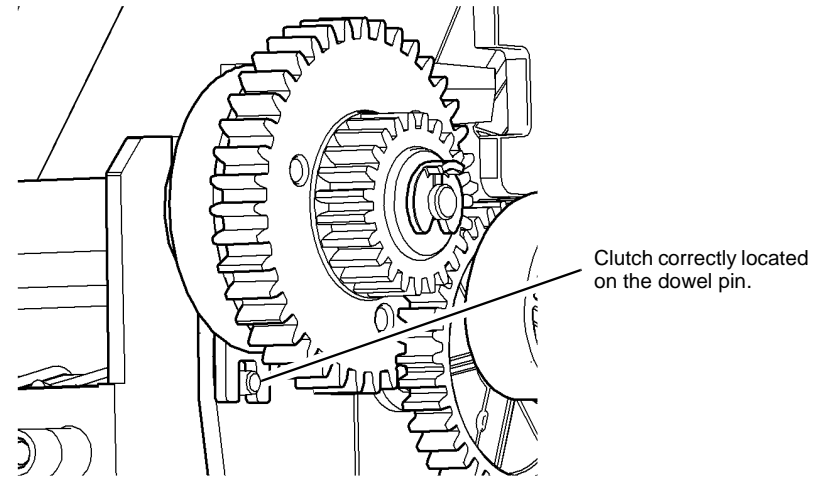


**Figure 2 Feed roll and clutch assemblies**

W-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](#).



**Figure 3 Dowel pin**

W-1-1352-A

3. If a new feed roll is installed, reset the tray 5 feed roll HFSI count. Refer to [dC135 CRU/HFSI Status](#).

# 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**

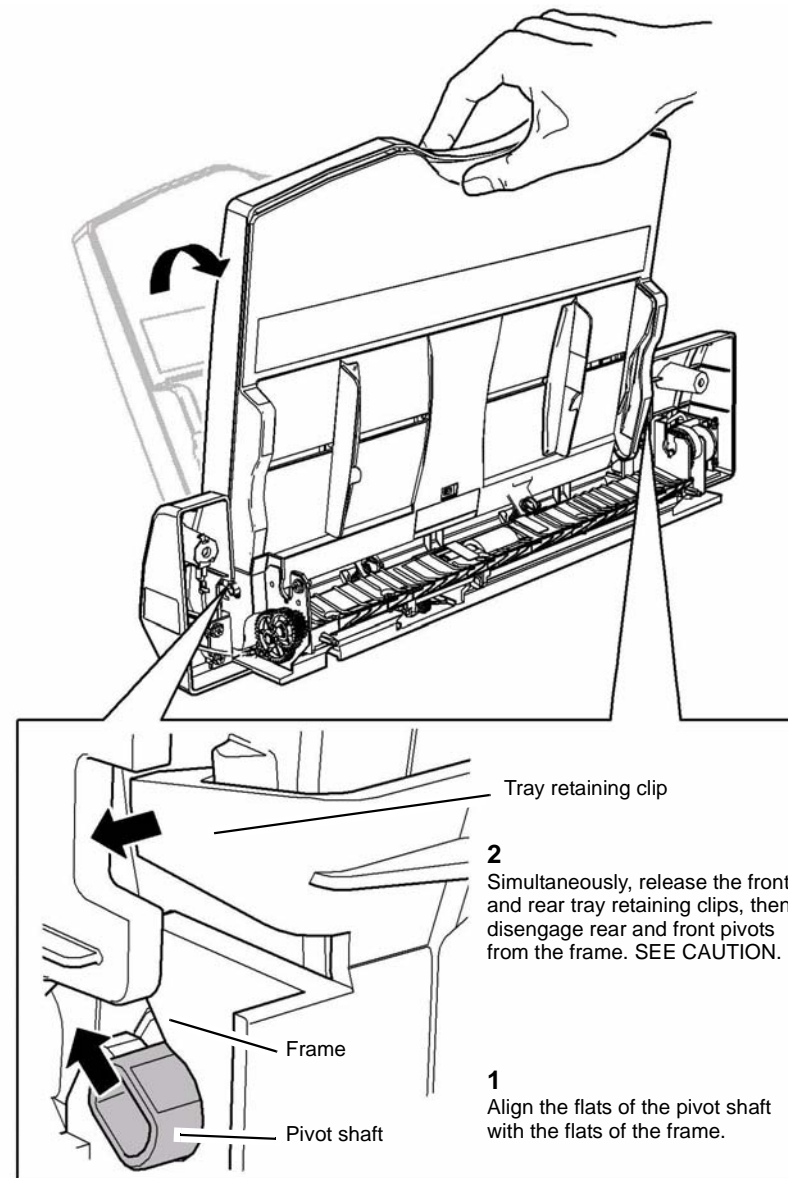
Take care during this procedure. Sharp edges may be present that can cause injury.

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.

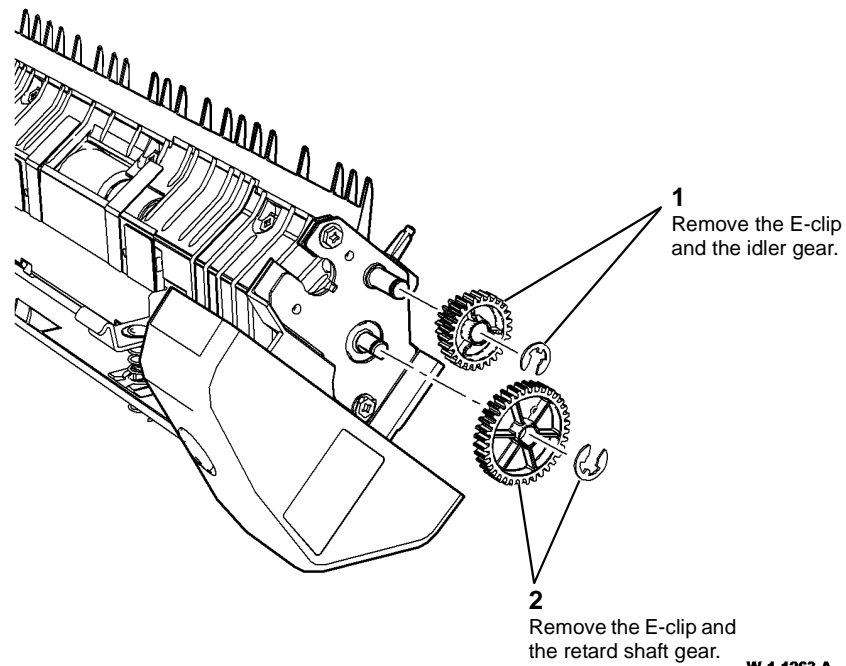
2. Release the tray assembly, [Figure 1](#).



W-1-1262-B

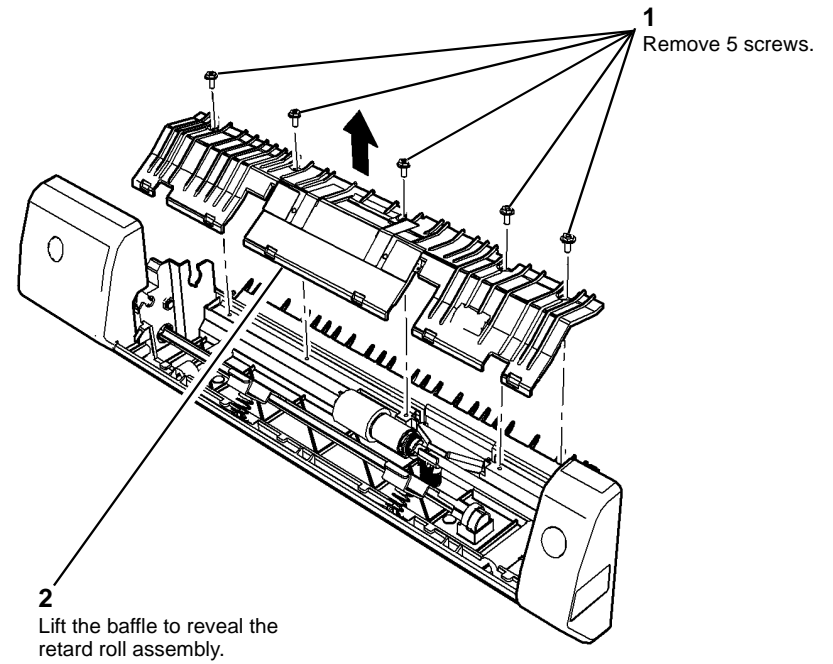
Figure 1 Bypass tray release

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](#).

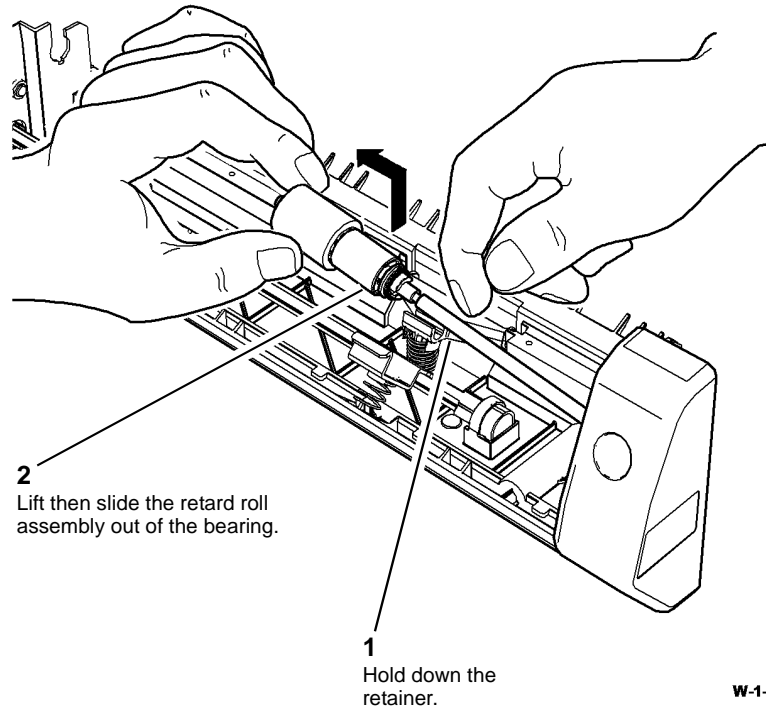


Figure 4 Retard roll removal

## 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**

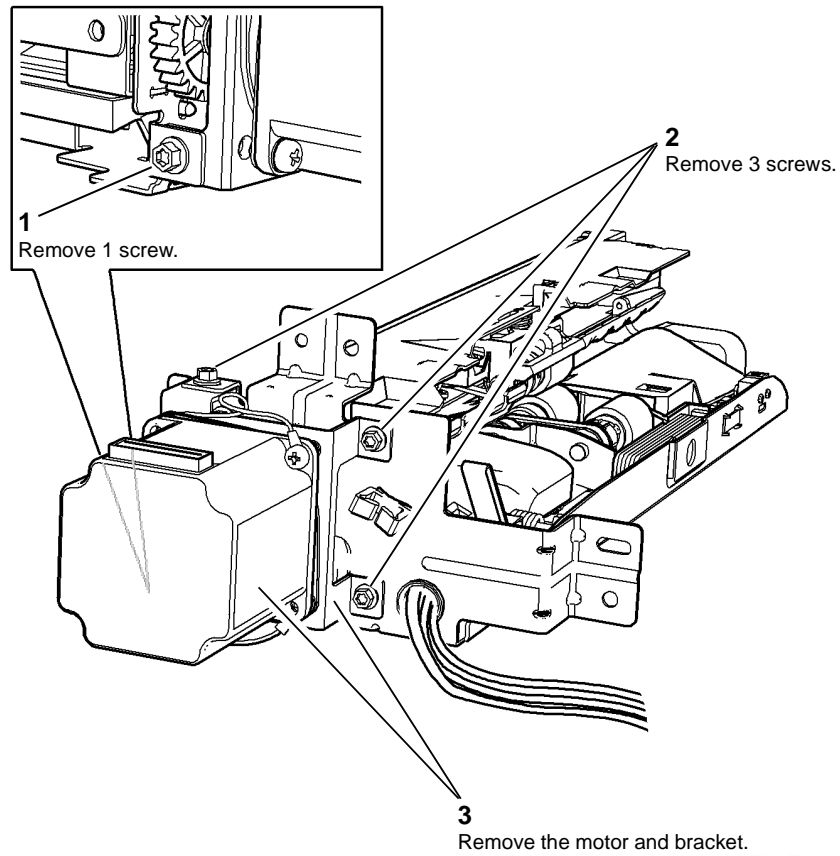
Take care during this procedure. Sharp edges may be present that can cause injury.

**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.

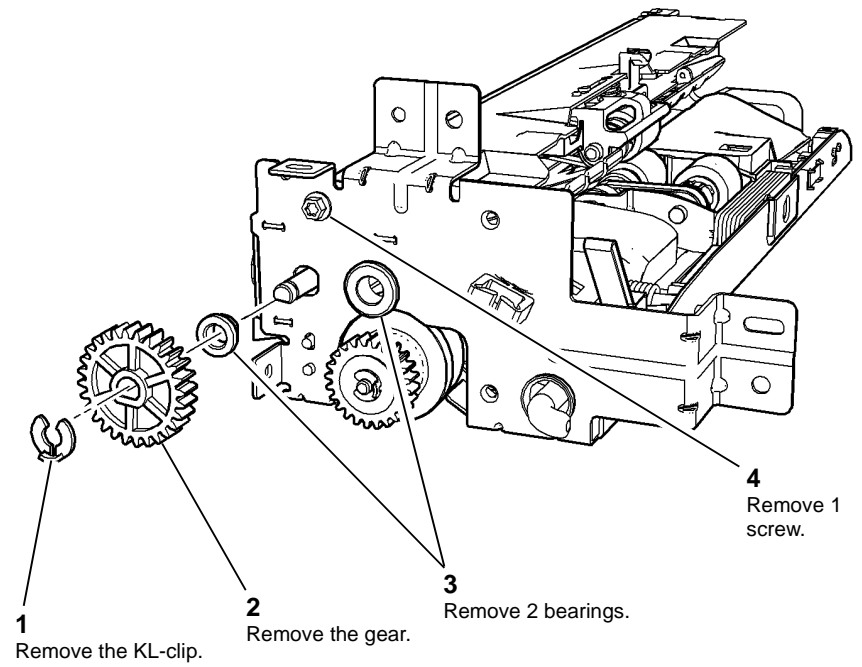
1. Remove the relevant paper feed assembly:
  - Tray 3 paper feed assembly, [REP 80.20](#).
  - Tray 4 paper feed assembly, [REP 80.21](#).
2. Turn the paper feed assembly upside down and place on a flat work surface.

3. Remove the feed motor with the bracket, [Figure 1](#).



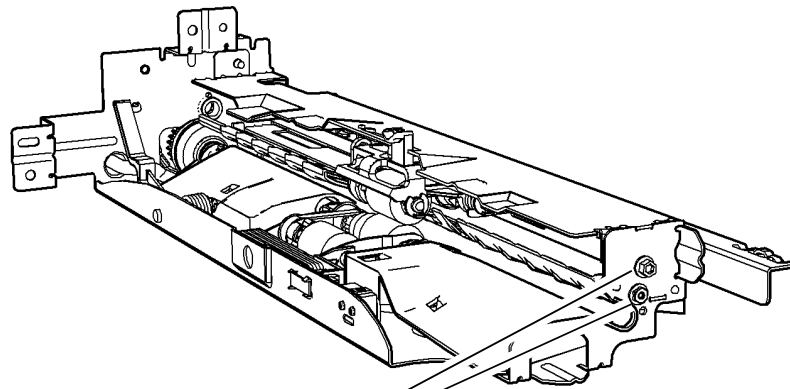
**Figure 1 Motor and bracket removal**

4. Release the rear fixings, [Figure 2](#).



**Figure 2 Rear fixings**

5. Release the front fixings, [Figure 3](#).

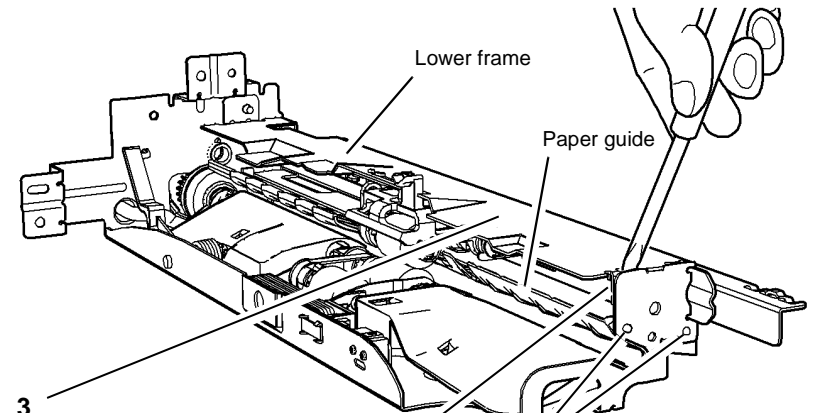


1  
Remove 2 screws.

**Figure 3 Front fixings**

W-1-0743-A

6. Separate the upper and lower frames, [Figure 4](#).



3  
Remove the lower frame  
and paper guide.

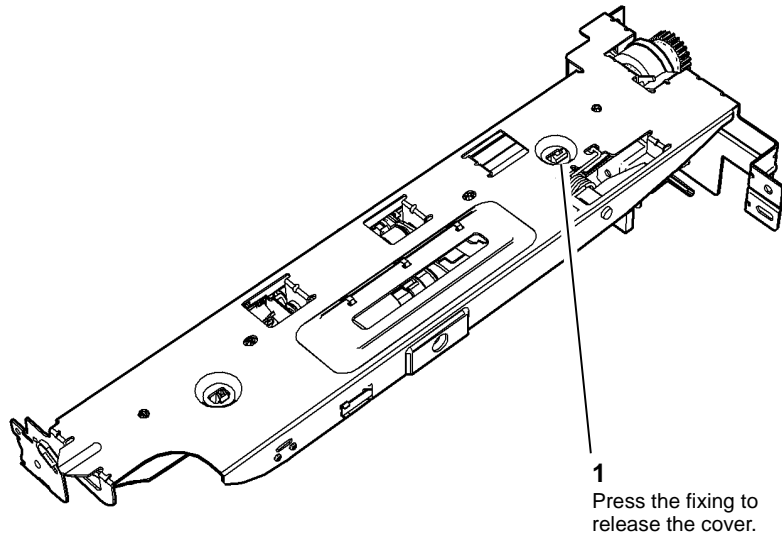
2  
Ensure the plastic pins of the paper  
guide are disengaged from the  
holes in the lower frame.

1  
Use a small flat bladed screwdriver to separate the  
upper and lower frames.

**Figure 4 Frame separation**

W-1-0744-A

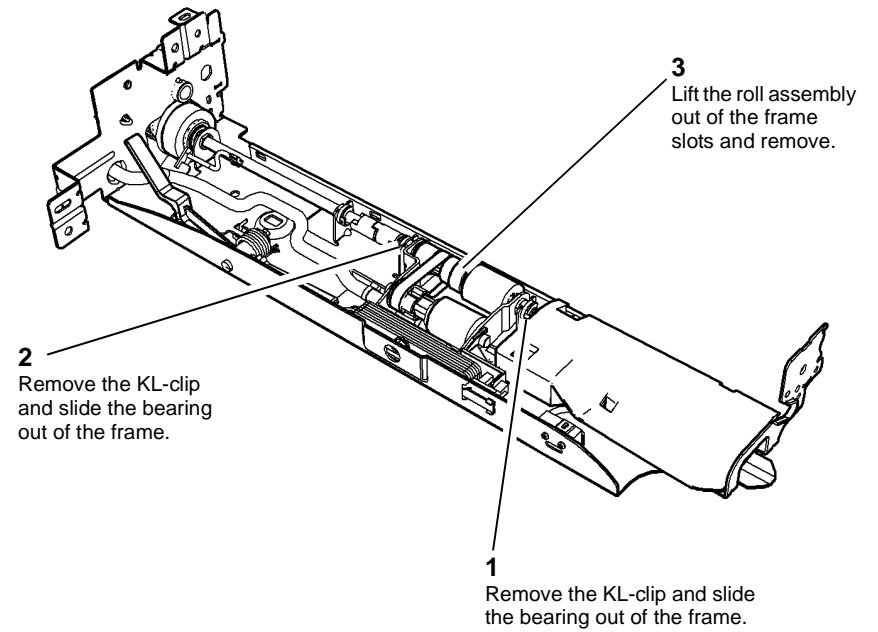
7. Remove the plastic cover, [Figure 5](#).



W-1-0745-A

Figure 5 Cover removal

8. Remove the nudger roll and feed roll assembly, [Figure 6](#).

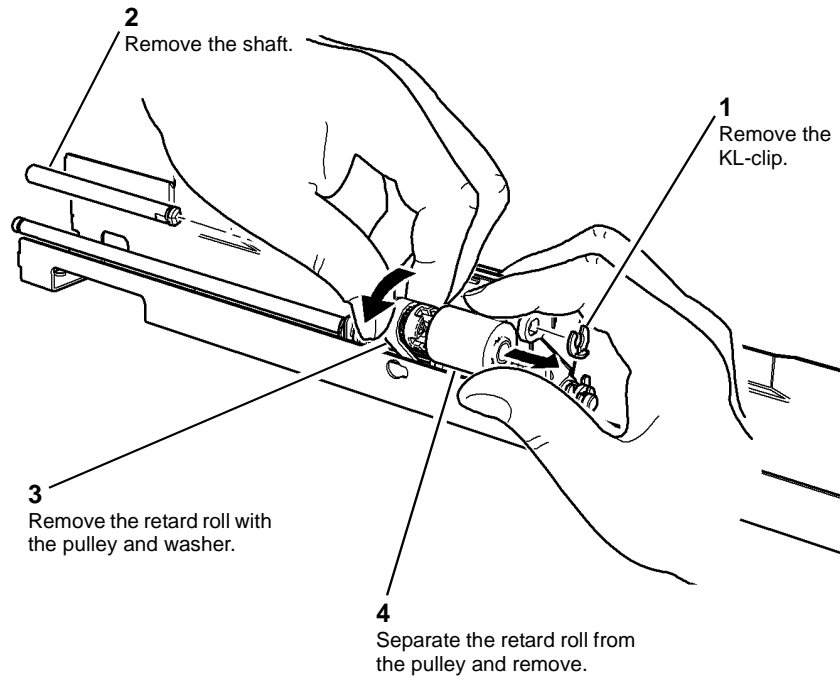


W-1-0746-A

Figure 6 Nudger and feed roll removal



9. Remove the retard roller, [Figure 7](#).

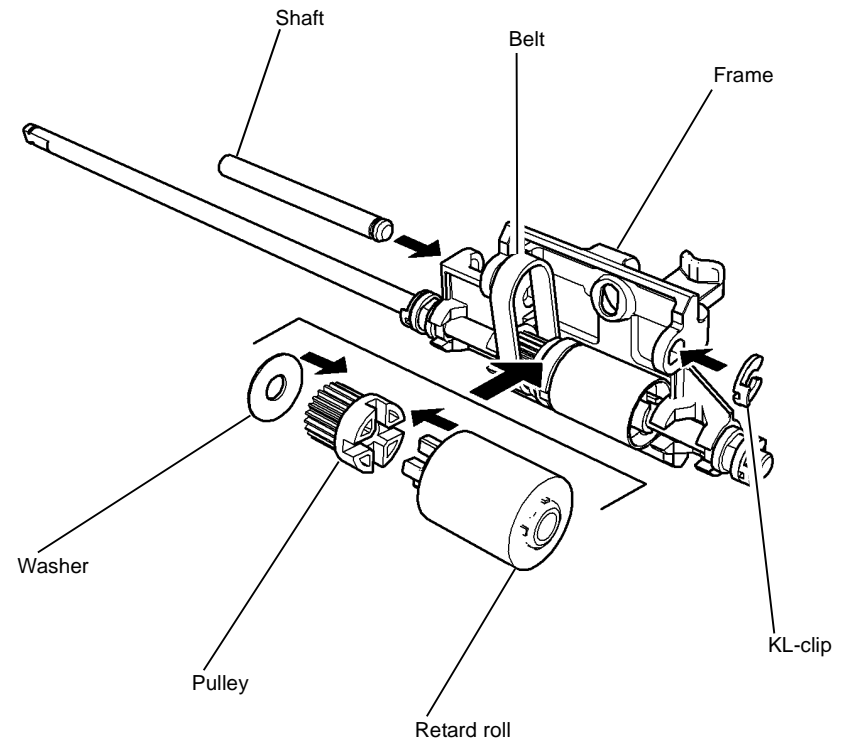


**Figure 7 Retard roll removal**

W-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.

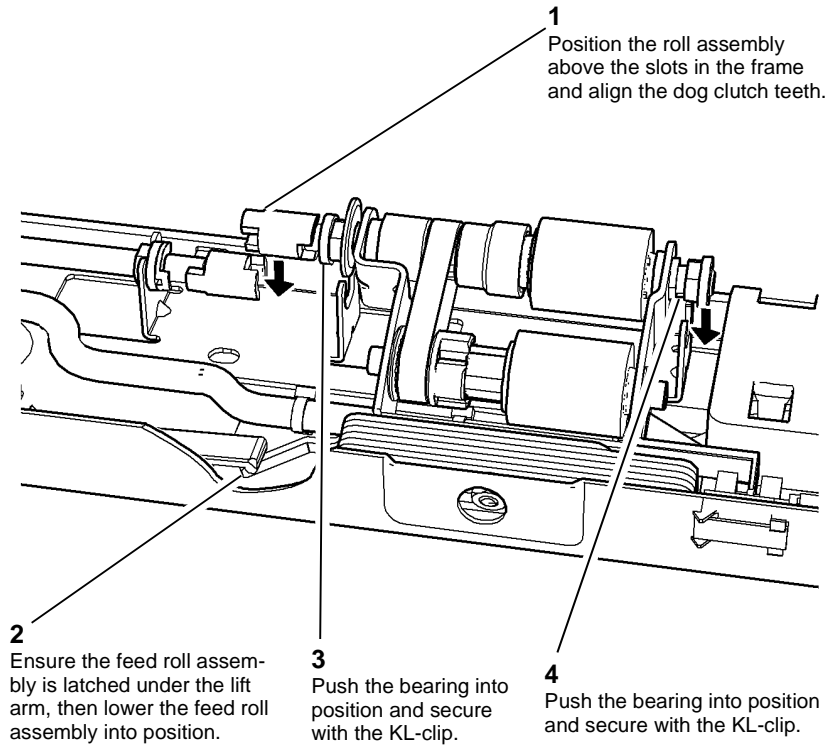


W-1-0748-A

**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](#).

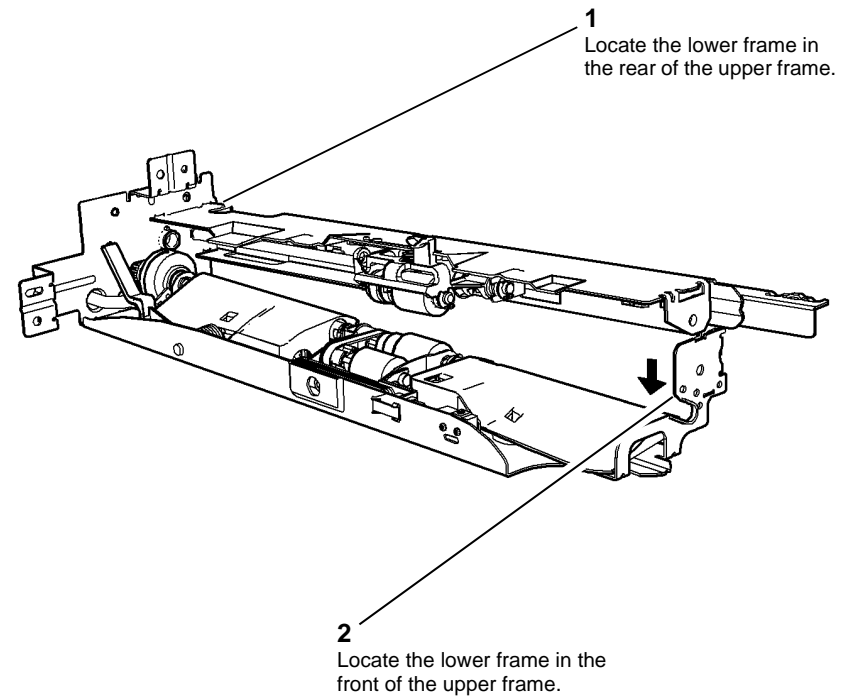


**Figure 9 Nudger and feed roll install**

W-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](#).



**Figure 10 Frame assembly**

W-1-0750-A

7. Assemble the paper guide to the lower frame.
8. Refer to:
  - [REP 80.28](#) Tray 3 paper guide.
  - or
  - [REP 80.29](#) Tray 4 paper guide.
9. Align and secure the upper and lower frames, [Figure 11](#).

## REP 80.18 Tray 1 and Tray 2 Feed Rolls

Parts List on [PL 80.26](#)

### Removal

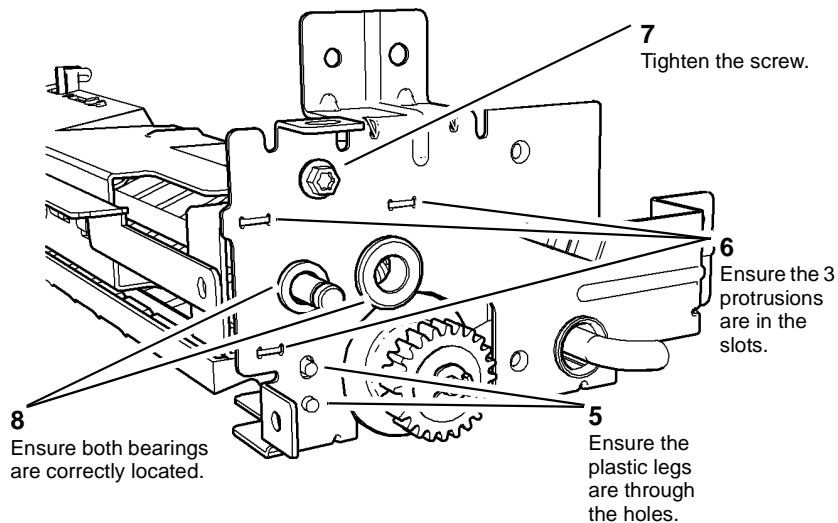
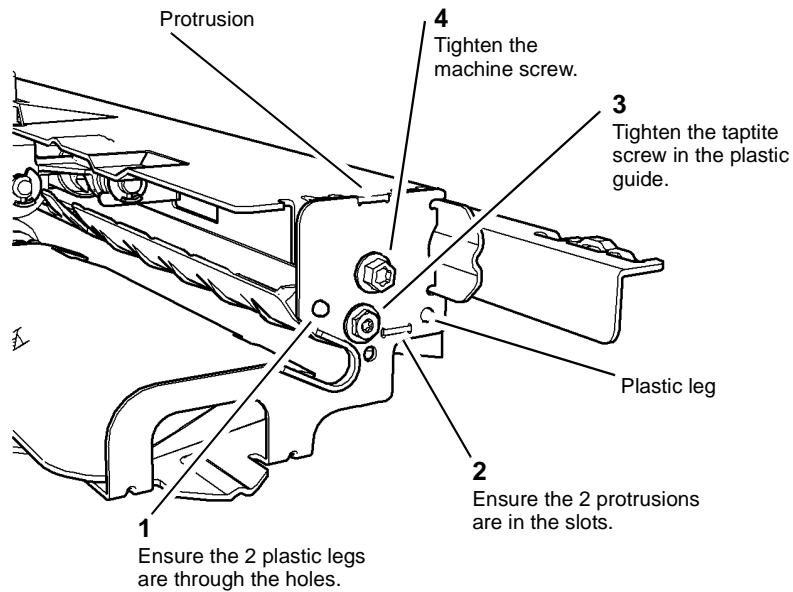
  
**WARNING**

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](#).



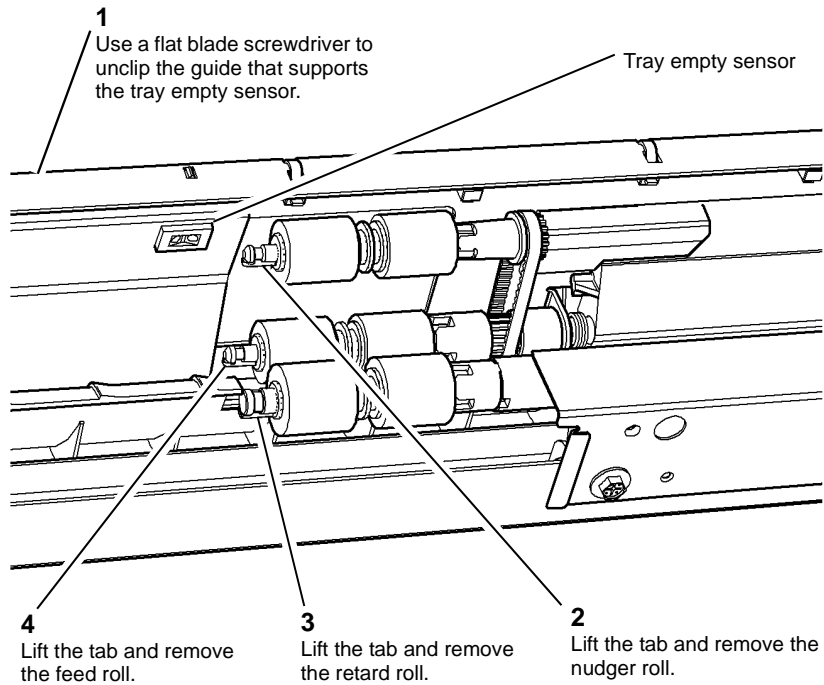
W-1-0751-A

Figure 11 Final assembly

10. Install the remainder of the removed components, [Figure 2](#) and [Figure 1](#).
11. Install the feeder assembly into the machine. Check the feeding performance of the HCF.
12. Reset the HFSI count. Refer to [dC135 CRU/HFSI Status](#)

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.



W-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



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 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](#).

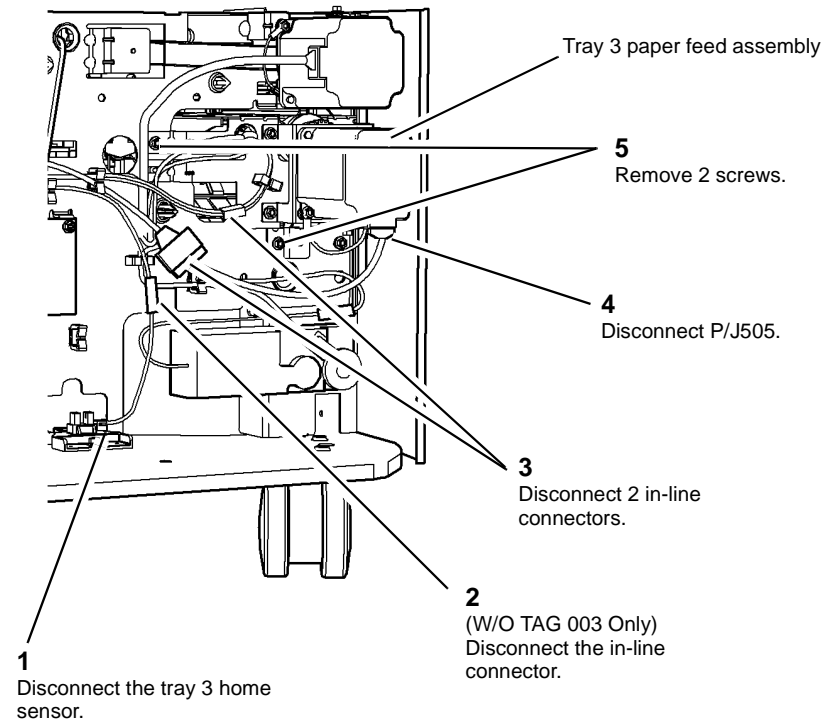
3. Remove the tray 3 paper feed assembly, [Figure 1](#).

7

Carefully slide out the tray 3 paper feed assembly, ensuring that harnesses are not damaged.

6

Ensure the harnesses of the tray 3 paper feed assembly are released from their cable ties.



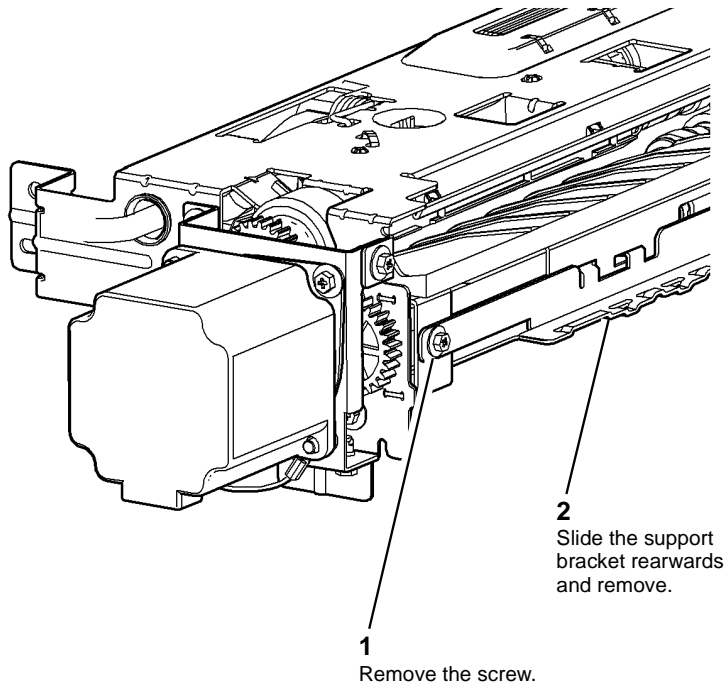
W-1-0716-A

Figure 1 Feed assembly removal

## 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](#).

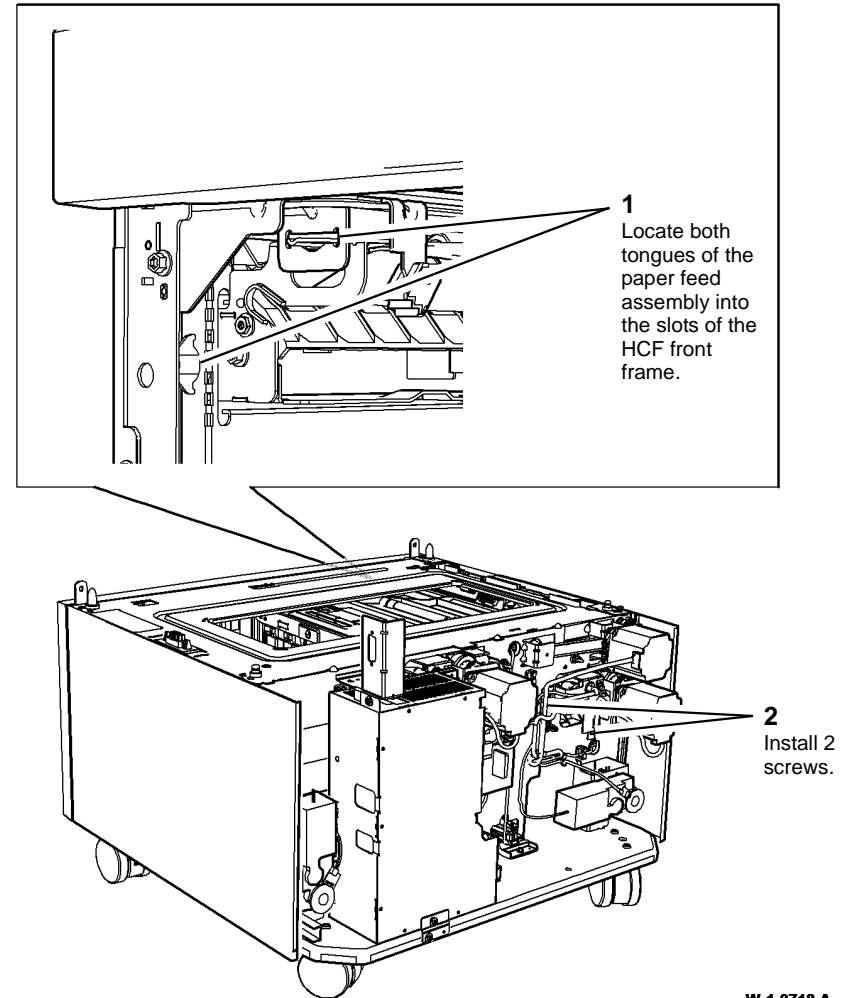


W-1-0717-A

**Figure 2 Support bracket removal**

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](#).



W-1-0718-A

**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.

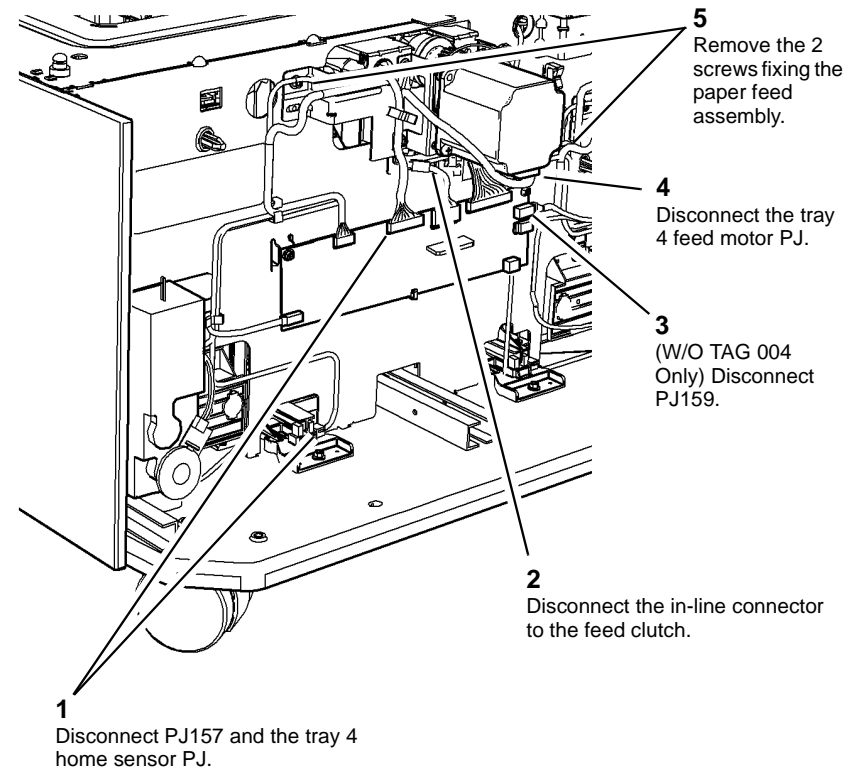
**NOTE:** Removal and replacement videos of this procedure are available on the EDOC. The videos are accessible from the Library menu on the Service Interface.

1. Remove the LVPS module, [REP 1.1](#).
2. Pull out tray 4.

3. Remove the tray 4 paper feed assembly, [Figure 1](#).

7. Carefully remove the paper feed assembly, from the rear of the machine.

6. Ensure the harnesses of the tray 4 paper feed assembly are released from their cable ties.

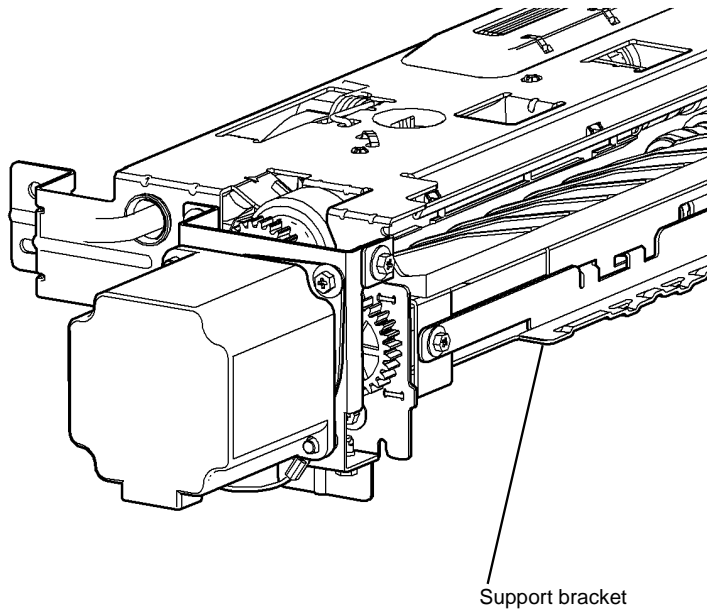


W-1-1298-A

Figure 1 Feed assembly removal

## Replacement

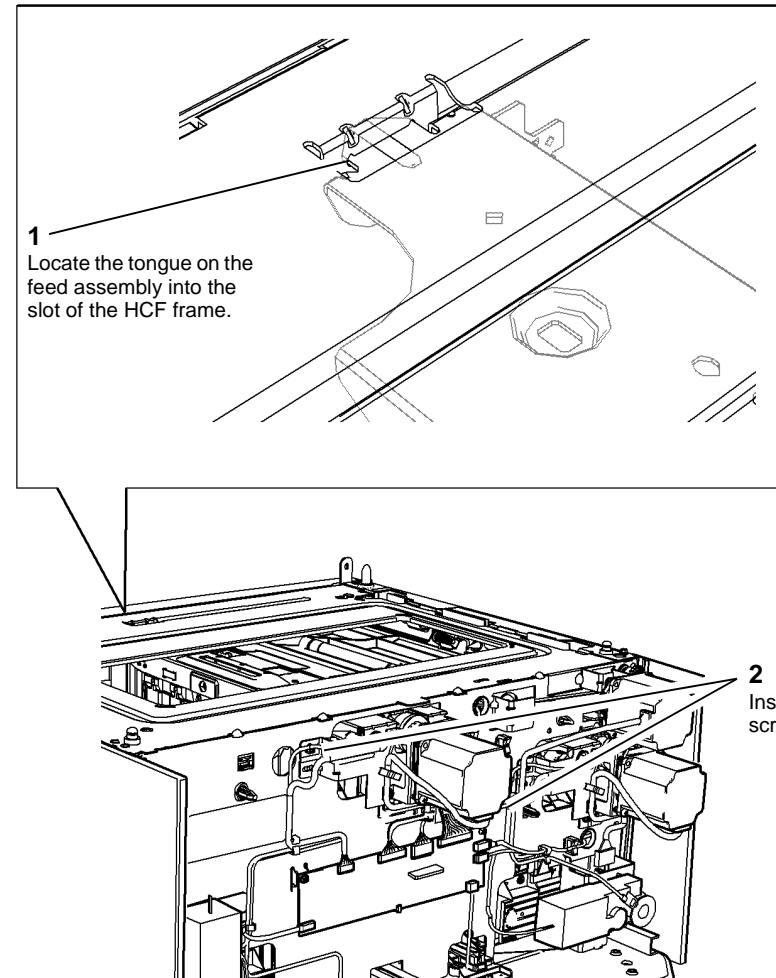
1. Ensure the support bracket is present on the tray 4 paper feed assembly, [Figure 2](#).



W-1-0714-A

Figure 2 Support bracket

2. Install the paper feed assembly, [Figure 3](#).



W-1-0715-A

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 5 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.

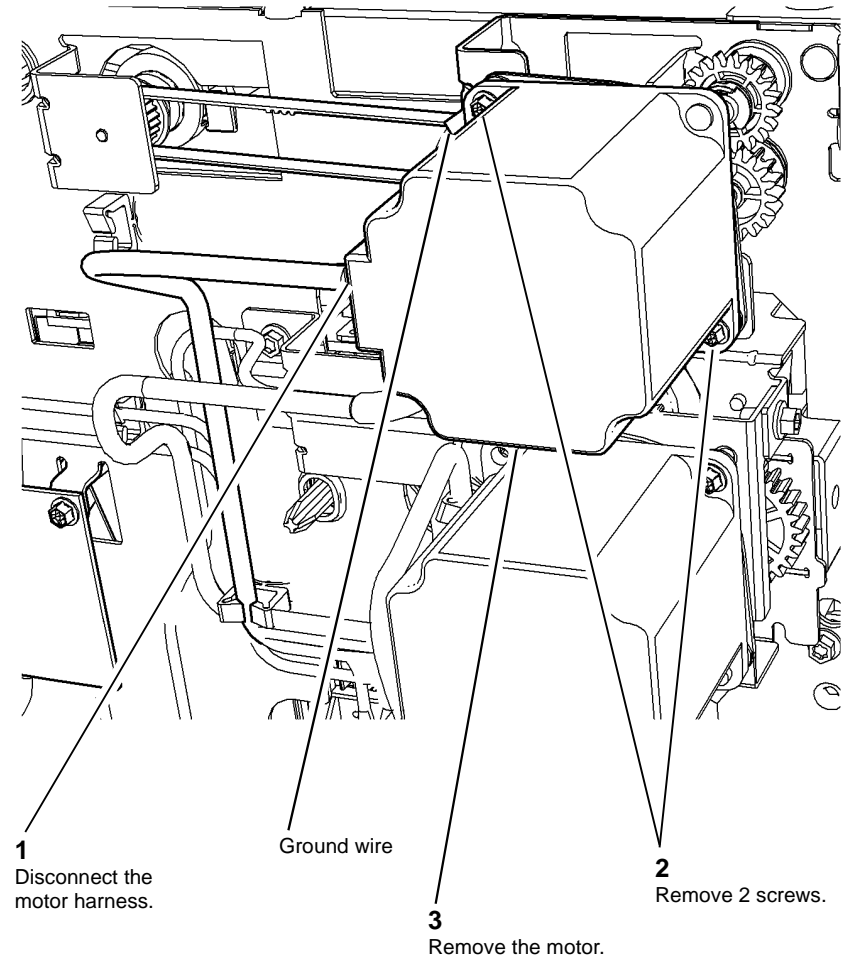


#### WARNING

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

1. Remove lower rear cover, [PL 70.26](#) Item 1.

2. Remove the HCF transport motor, [Figure 1](#).



W-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](#).

## REP 80.23 Tray 4 Transport Gear Pulley

Parts List on [PL 80.36](#)

### Removal



#### WARNING

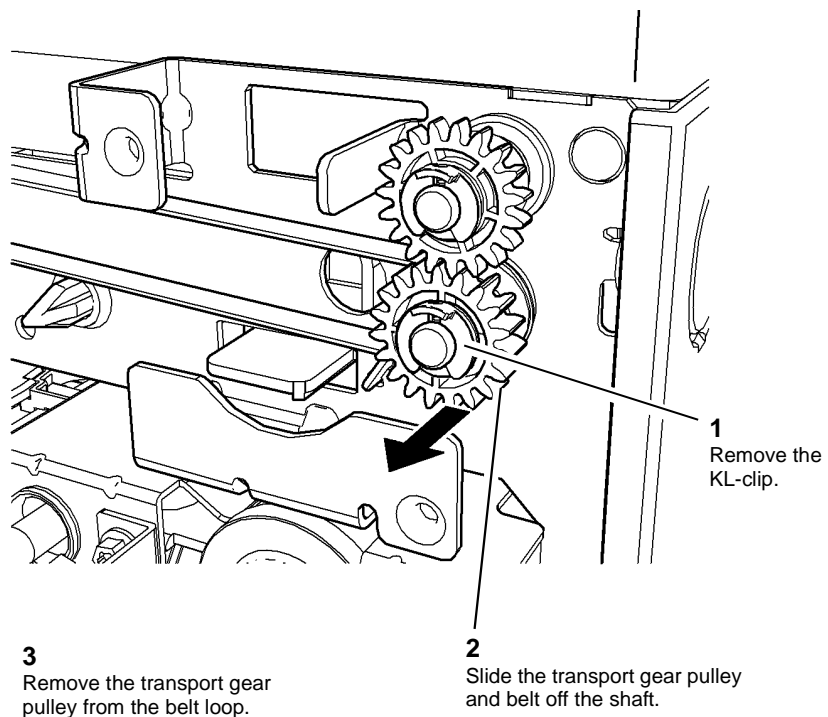
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



#### 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](#).

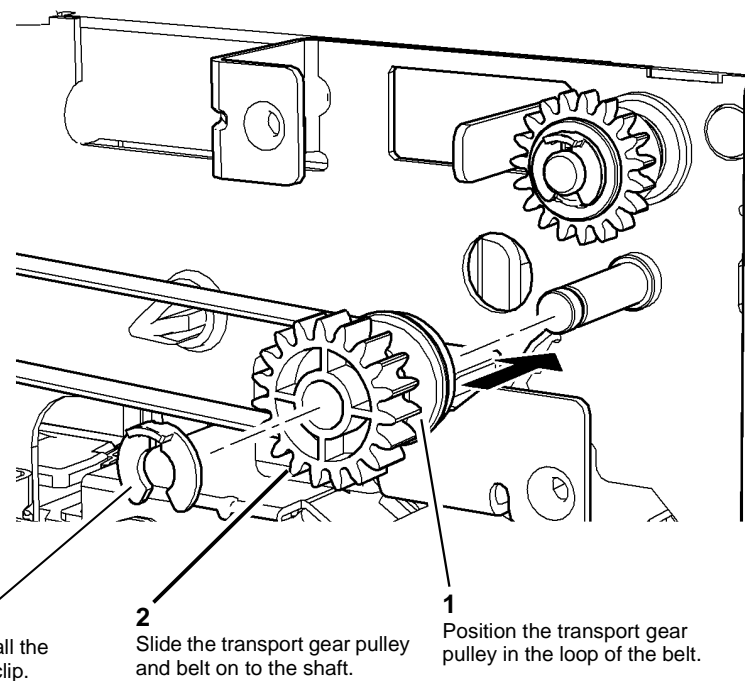


W-1-0720-A

Figure 1 Transport gear removal

### Replacement

1. Install the transport gear pulley, [Figure 2](#).



W-1-0721-A

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

  
**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, [Figure 1](#).

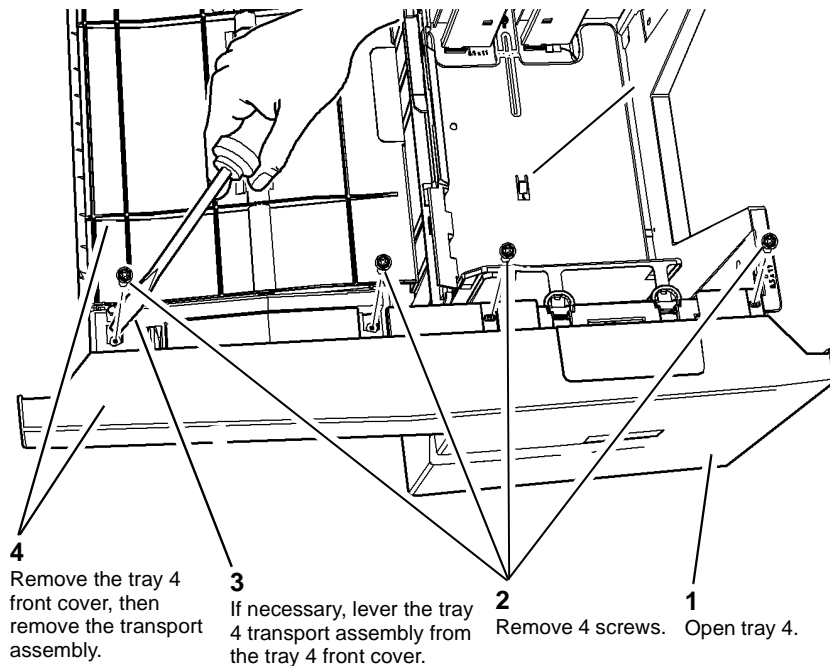


Figure 1 Transport assembly removal

W-1-0722-A

### 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 70.14](#).
3. Remove the tray 4 exit sensor, [Figure 1](#).

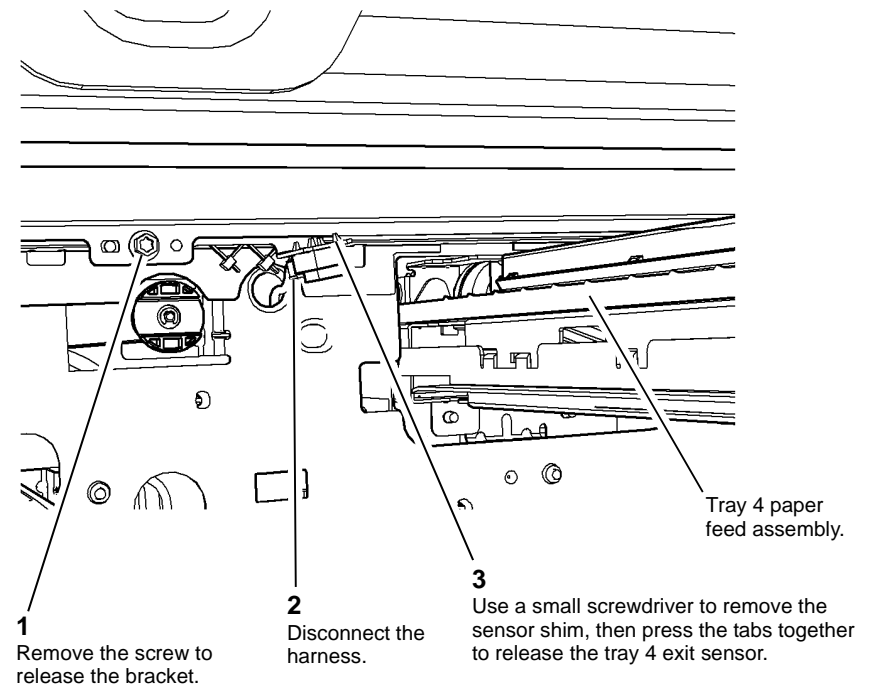


Figure 1 Tray 4 exit sensor removal

W-1-0723-A

### 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

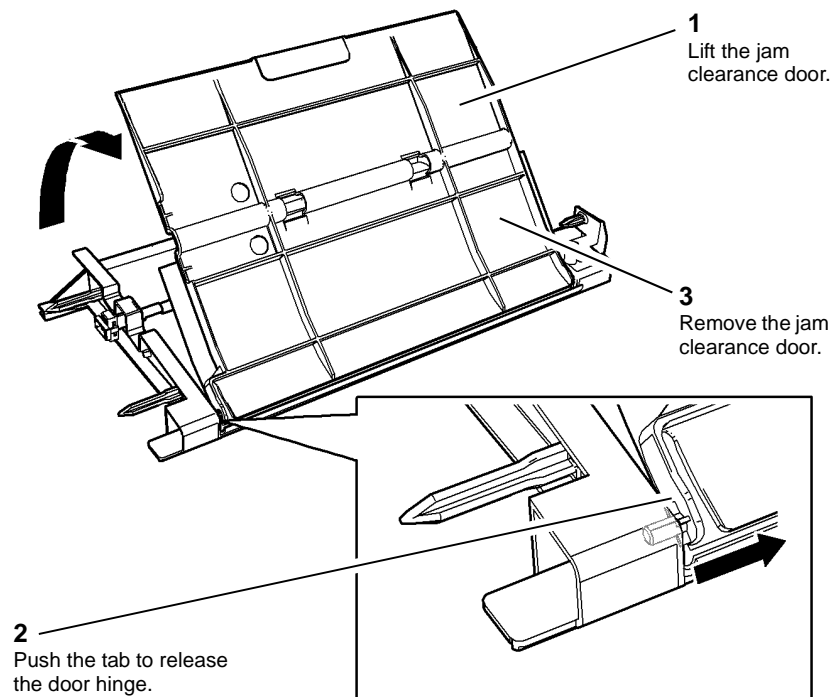
Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



### WARNING

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

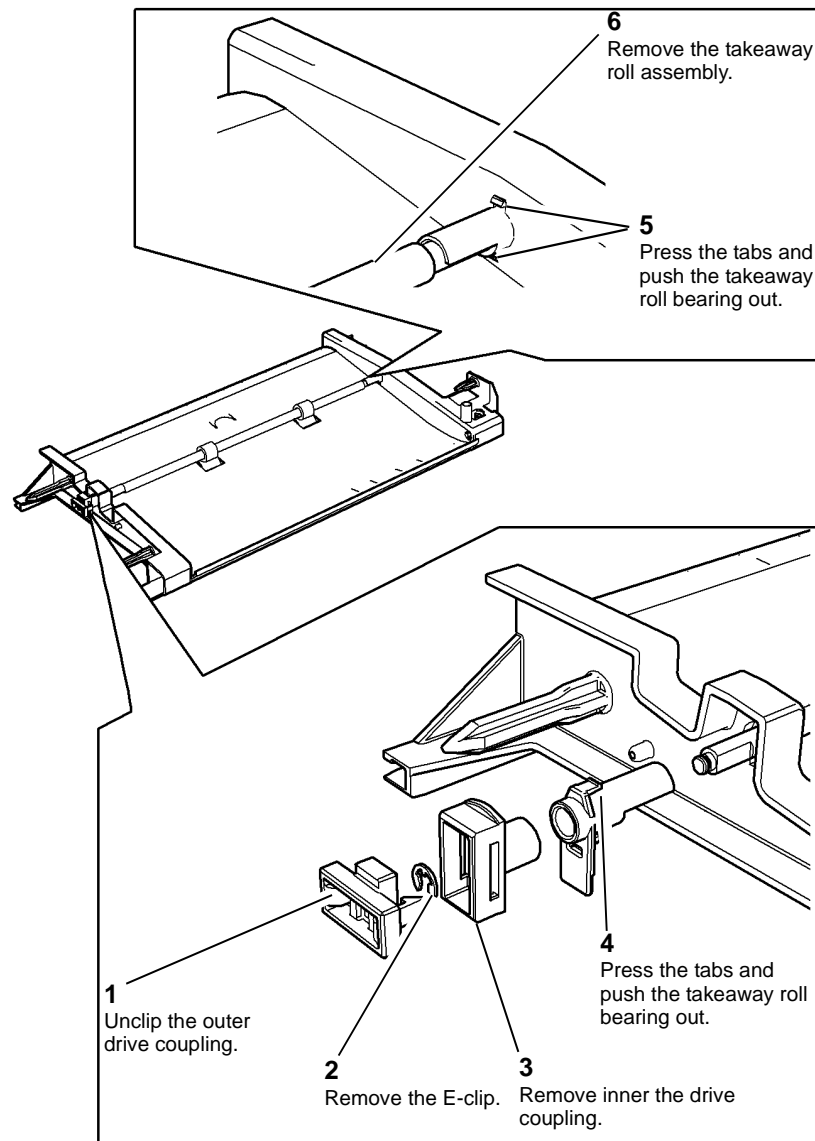
1. Remove the tray 4 transport assembly, [REP 80.24](#).
2. Remove the jam clearance door, [Figure 1](#).



W-1-0724-A

Figure 1 Jam clearance door removal

3. Remove the takeaway roll assembly, [Figure 2](#).



W-1-0725-A

Figure 2 Takeaway roll removal

- If necessary, remove the tray 4 transport brace, [Figure 3](#), and the idler roll assembly, [Figure 4](#).

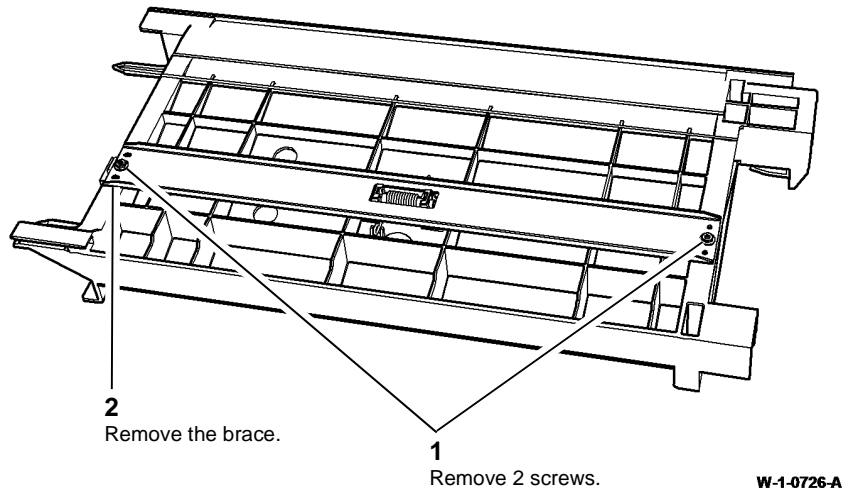


Figure 3 Brace removal

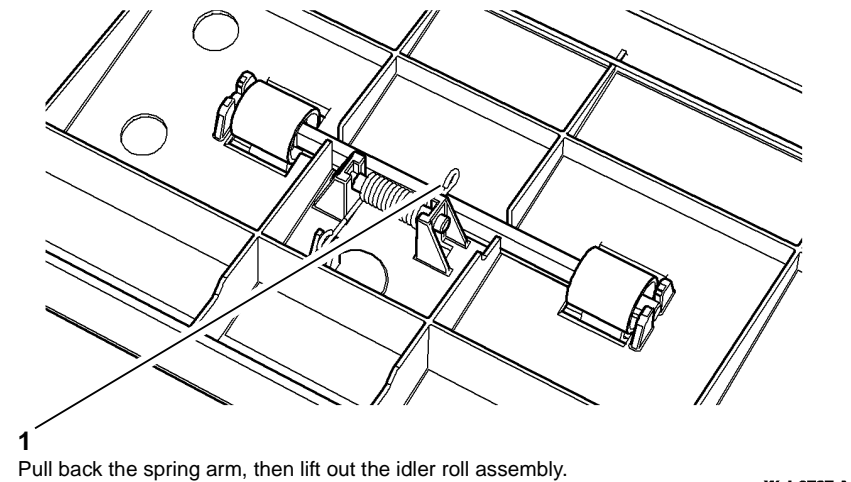


Figure 4 Idler rolls removal

## 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.

- Remove the lower left cover, [PL 70.26 Item 7](#).
- Remove the tray 3 assembly, [REP 70.5](#).
- Remove the tray 4 transport assembly, [REP 80.24](#).
- Remove the idler roll assembly, [Figure 1](#).

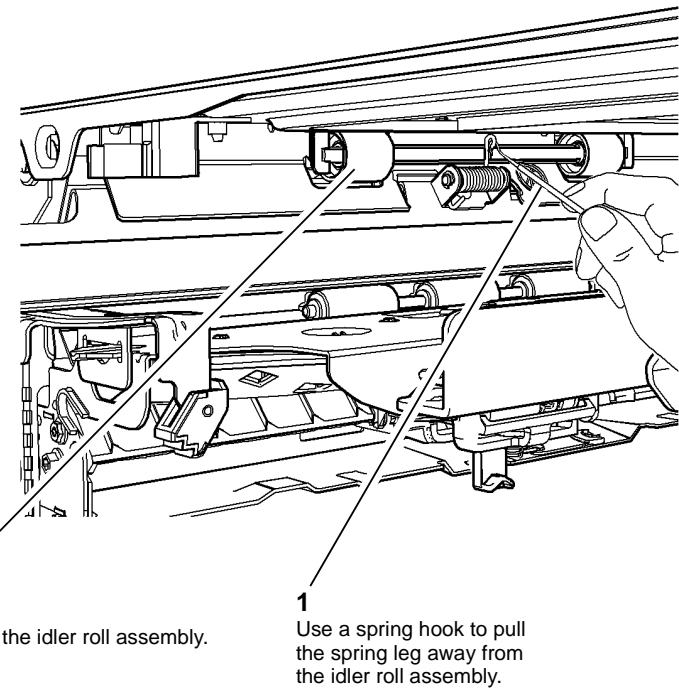
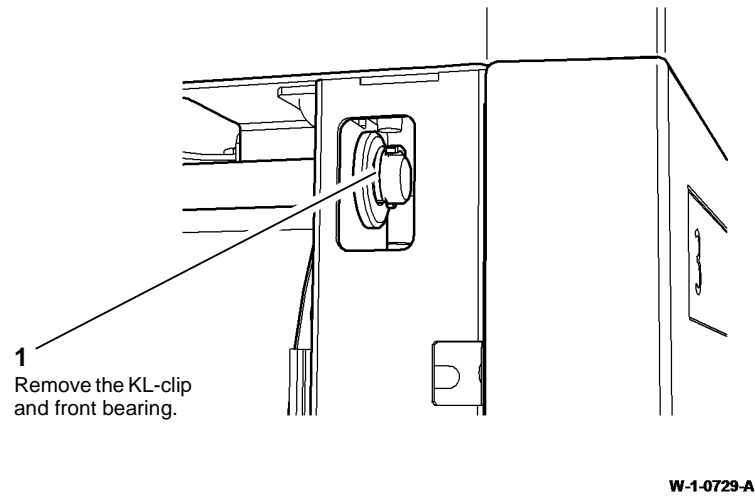


Figure 1 Idler shaft removal

5. Remove the HCF transport motor, [REP 80.22](#).
6. Prepare to remove the HCF transport roll, [Figure 2](#).

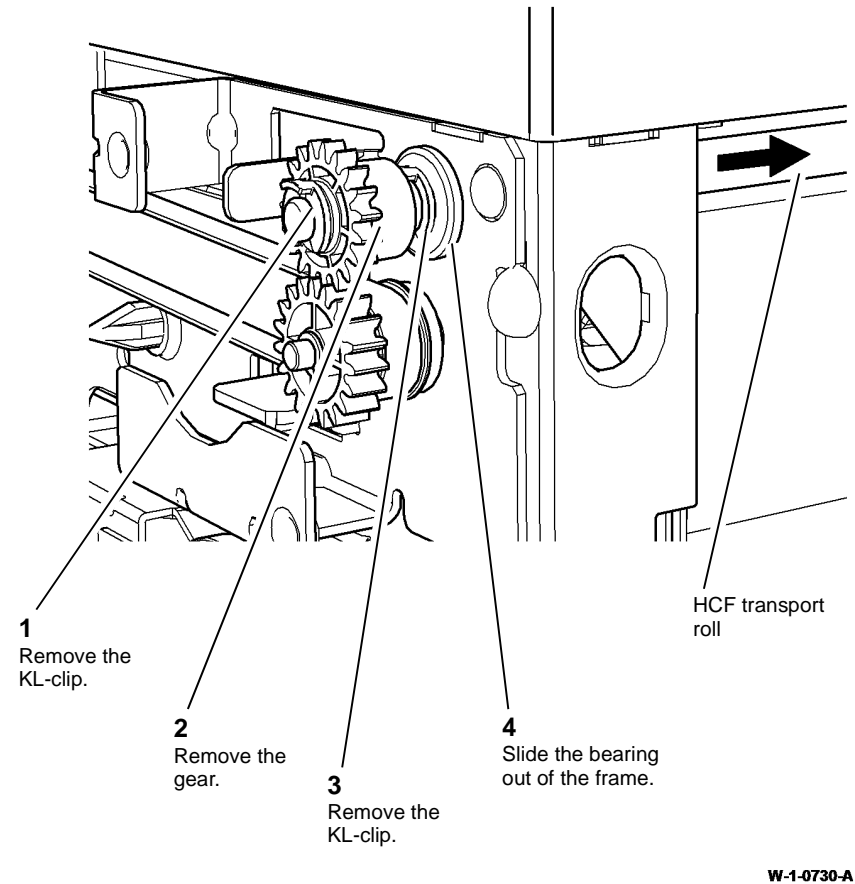


**Figure 2 Preparation**

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](#)

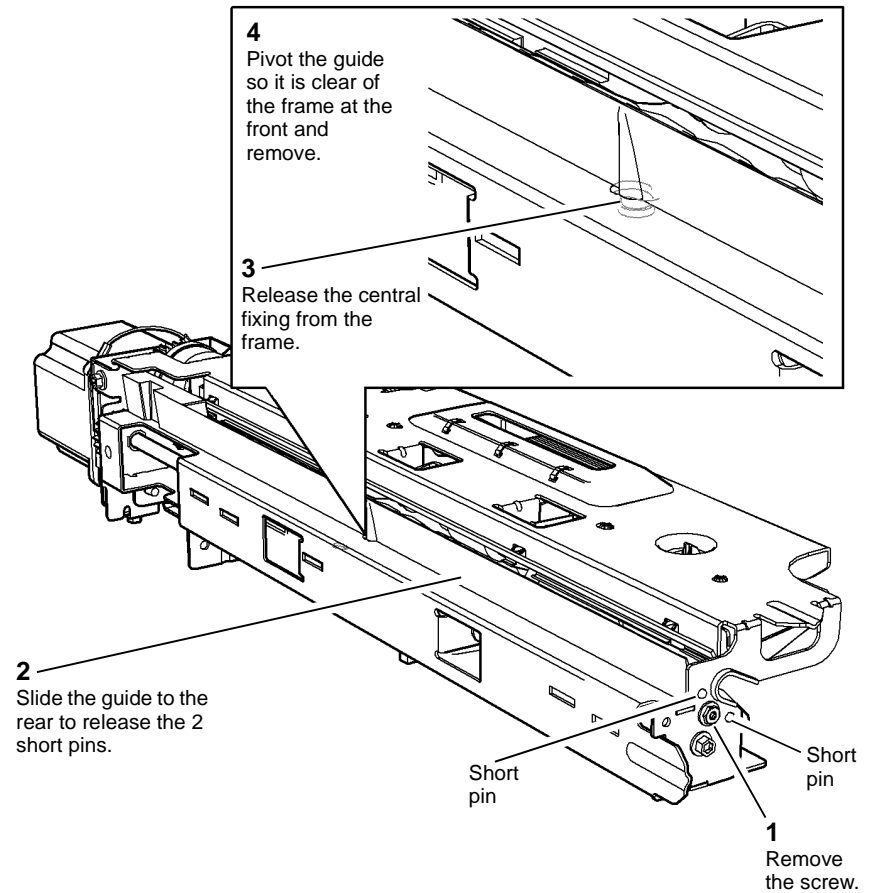
### Removal



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](#).



W-1-0754-A

Figure 1 Paper guide removal

## Replacement

1. Install the tray 3 paper guide, [Figure 2](#).

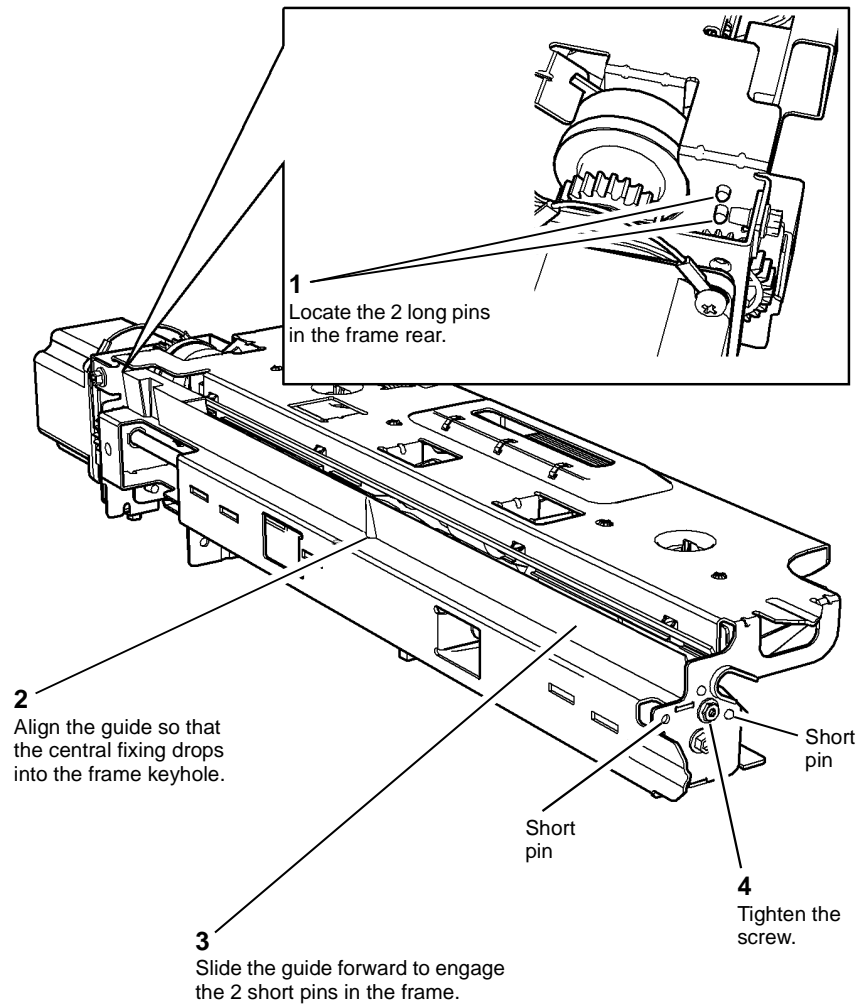


Figure 2 Paper guide replacement

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



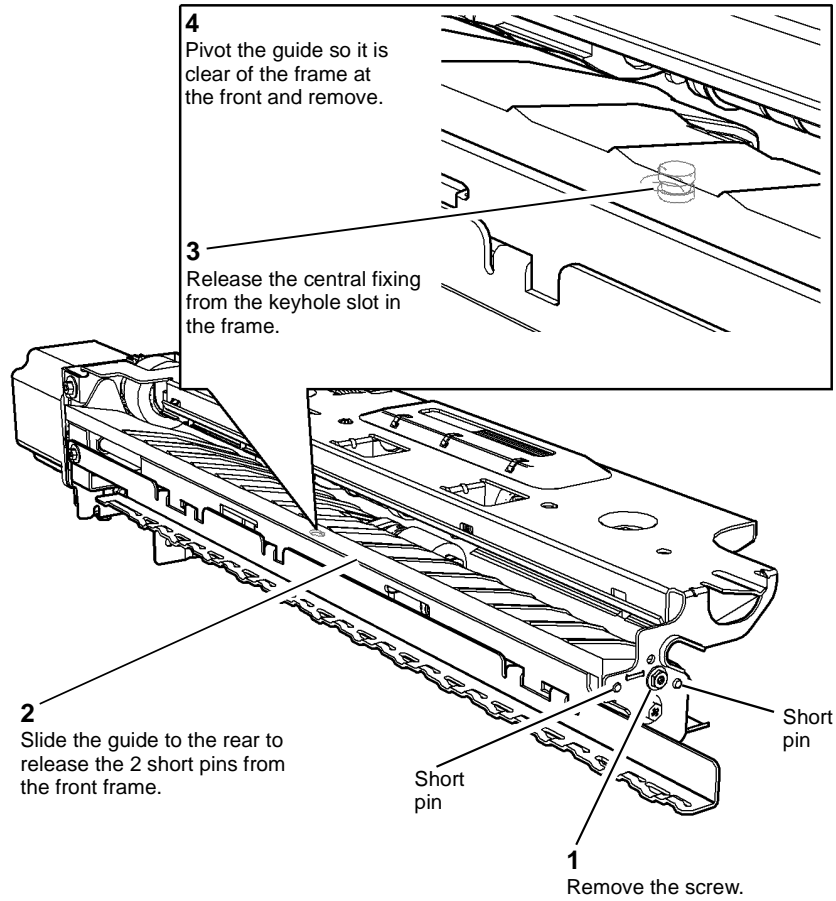
### WARNING

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](#).



- Remove the tray 4 paper guide, [Figure 1](#).

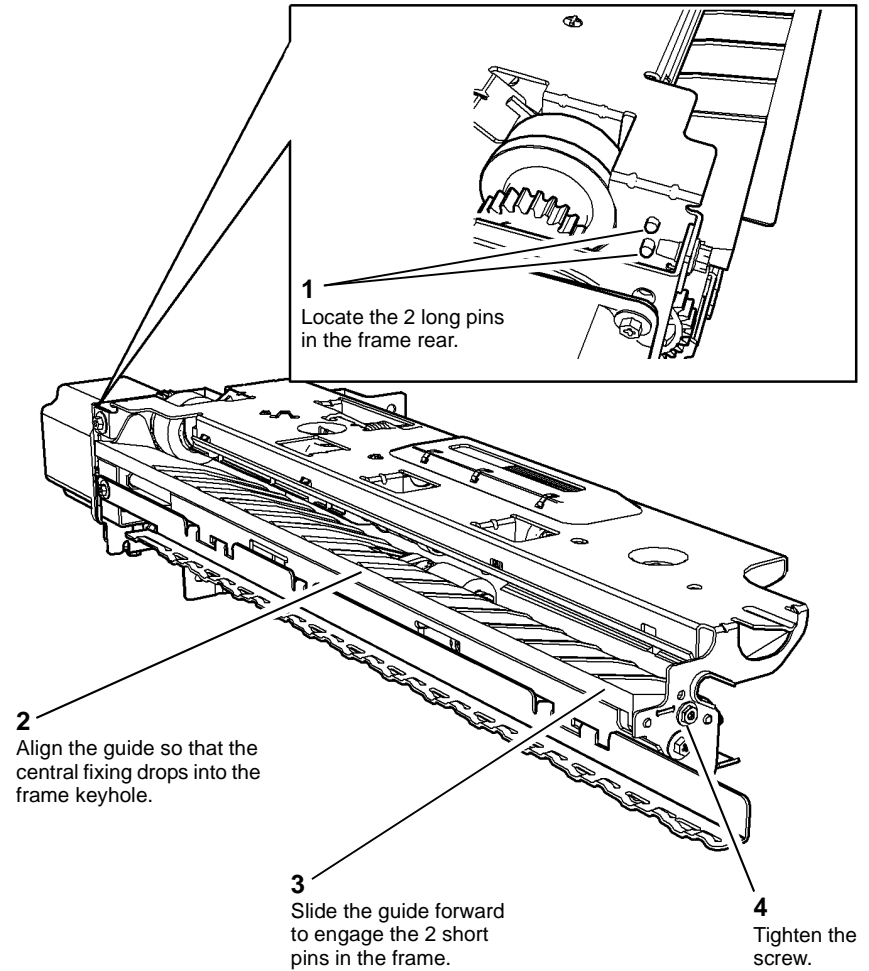


W-1-0752-A

Figure 1 Paper guide removal

## Replacement

- Install the tray 4 paper guide, [Figure 2](#).



W-1-0753-A

Figure 2 Paper guide replacement

- 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

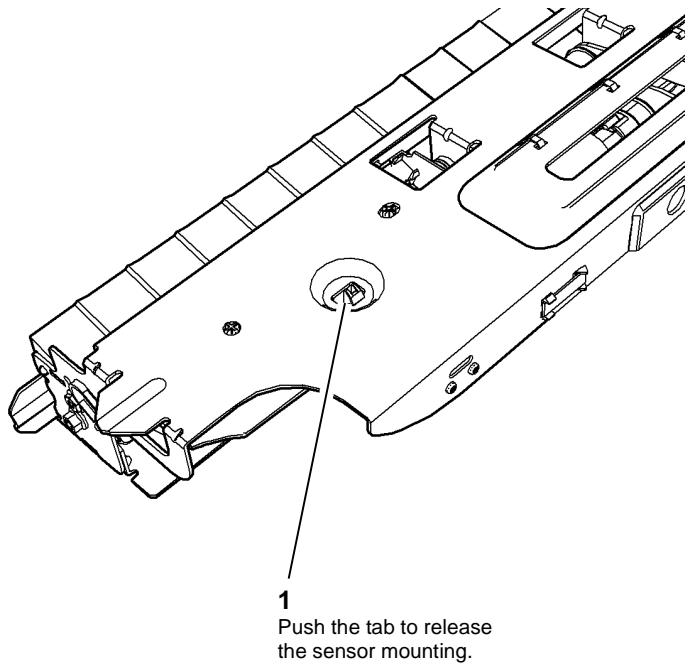


Switch off the electricity to the machine, [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



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

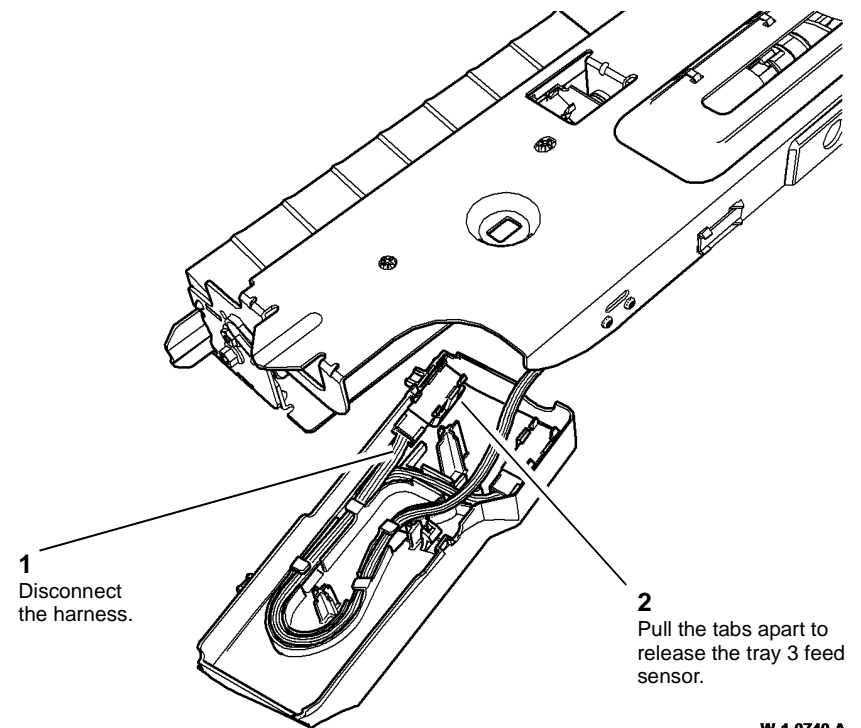
1. Remove the tray 3 paper feed assembly, [REP 80.20](#).
2. Release the sensor mounting, [Figure 1](#).



W-1-0739-A

Figure 1 Sensor mounting release

3. Remove the tray 3 feed sensor, [Figure 2](#).



W-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



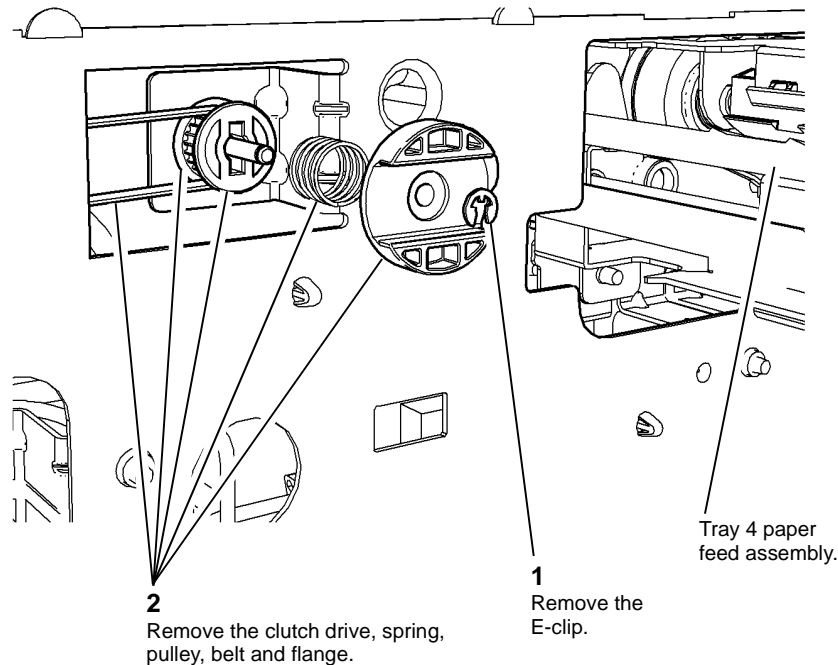
#### WARNING

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](#).

### 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.



W-1-0756-A

Figure 1 Clutch drive removal



## 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.



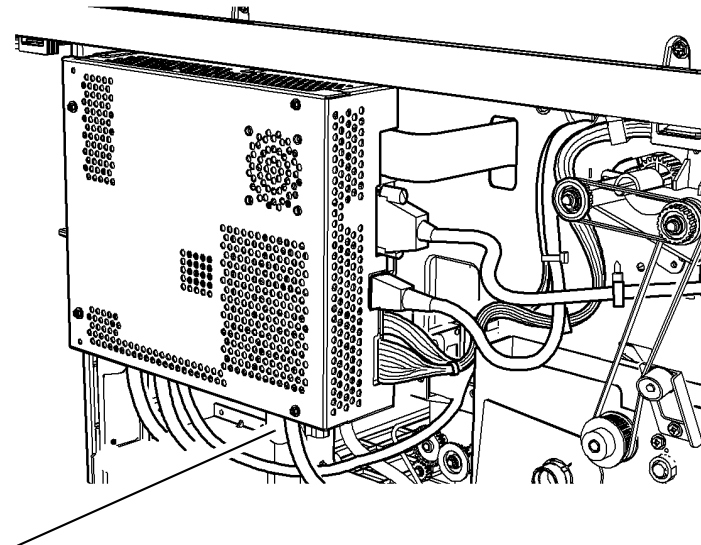
Switch off the electricity to the machine. Refer to [GP 14](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



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 in a lightproof bag.
3. Remove the rear cover, [REP 28.2](#).
4. Remove the relevant component:
  - Centre output tray, [REP 28.1](#).
  - Horizontal transport, [REP 10.6](#).

5. Disconnect PJ850 from the [SBC PWB](#), [Figure 1](#).



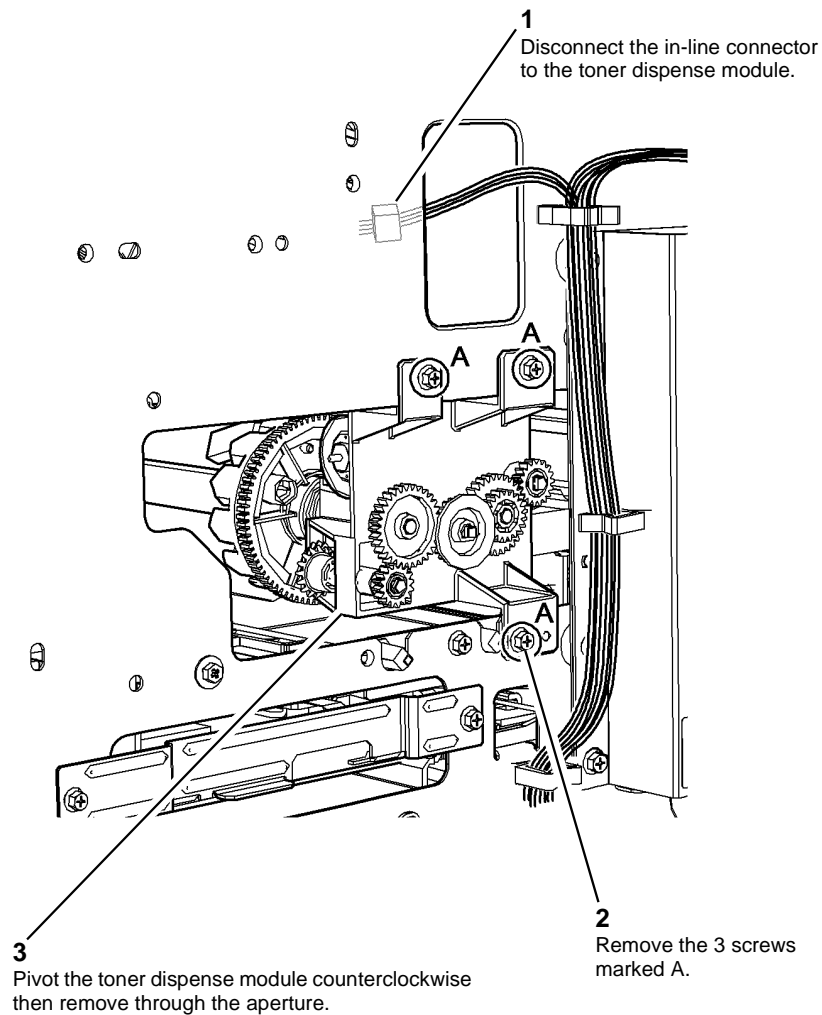
**1**  
Disconnect PJ850.

W-1-1315-A

Figure 1 PJ850 disconnection

- Remove the toner dispense module, [Figure 2](#).

**NOTE:** For clarity, the SBC module is not shown in [Figure 2](#).

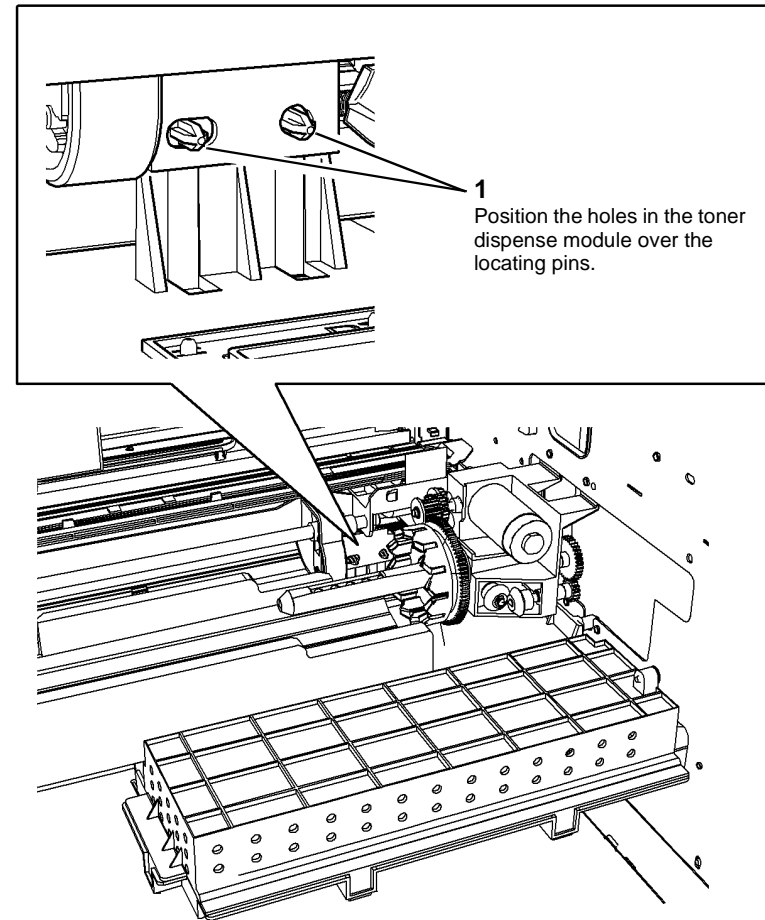


**Figure 2 Module removal**

W-1-1112-A

## 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**

W-1-1113-A

- 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.

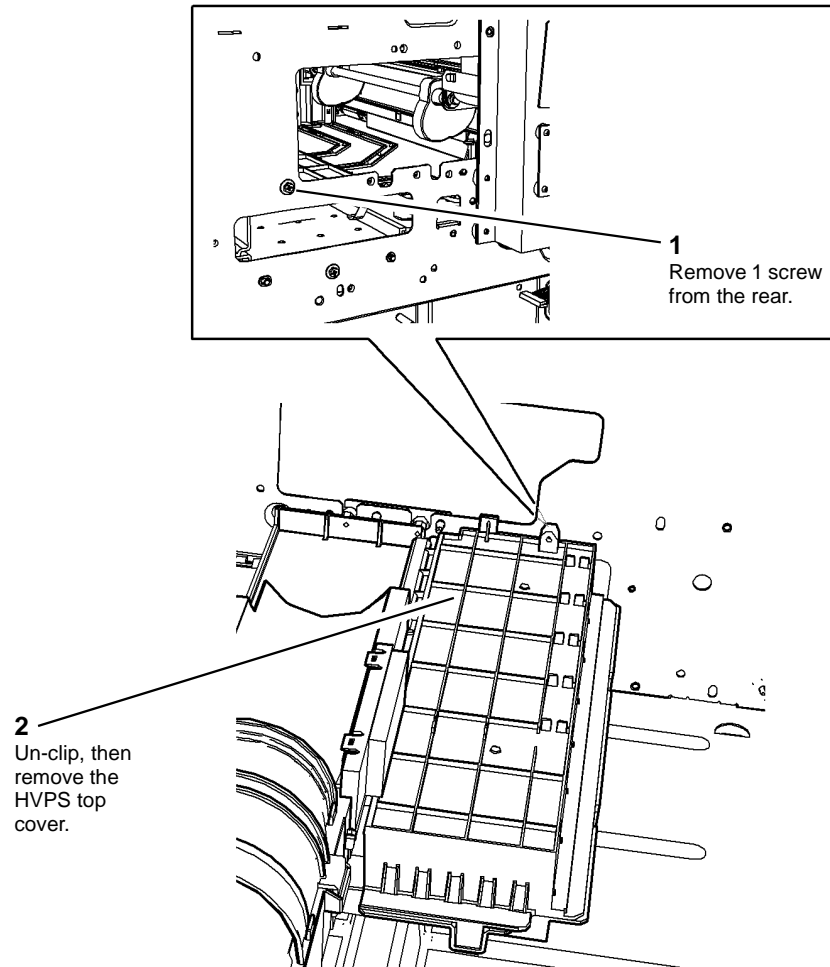


*Take care not to damage the HVPS contacts and when removing or installing the HVPS cover assembly and HVPS tray assembly.*

1. Remove the LED print head module, [REP 60.15](#).
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.

*NOTE: The toner cartridge PWB is not present on W/TAG 013 machines.*

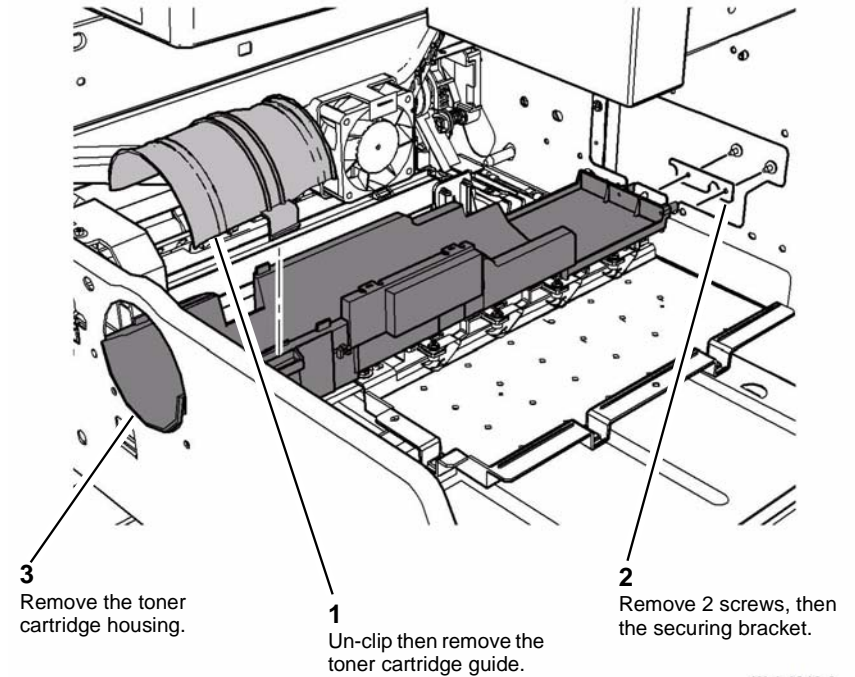
7. Remove the HVPS top cover, [Figure 1](#).



W-1-1107-A

Figure 1 HVPS top cover removal

8. Remove the toner cartridge housing, [Figure 2](#).

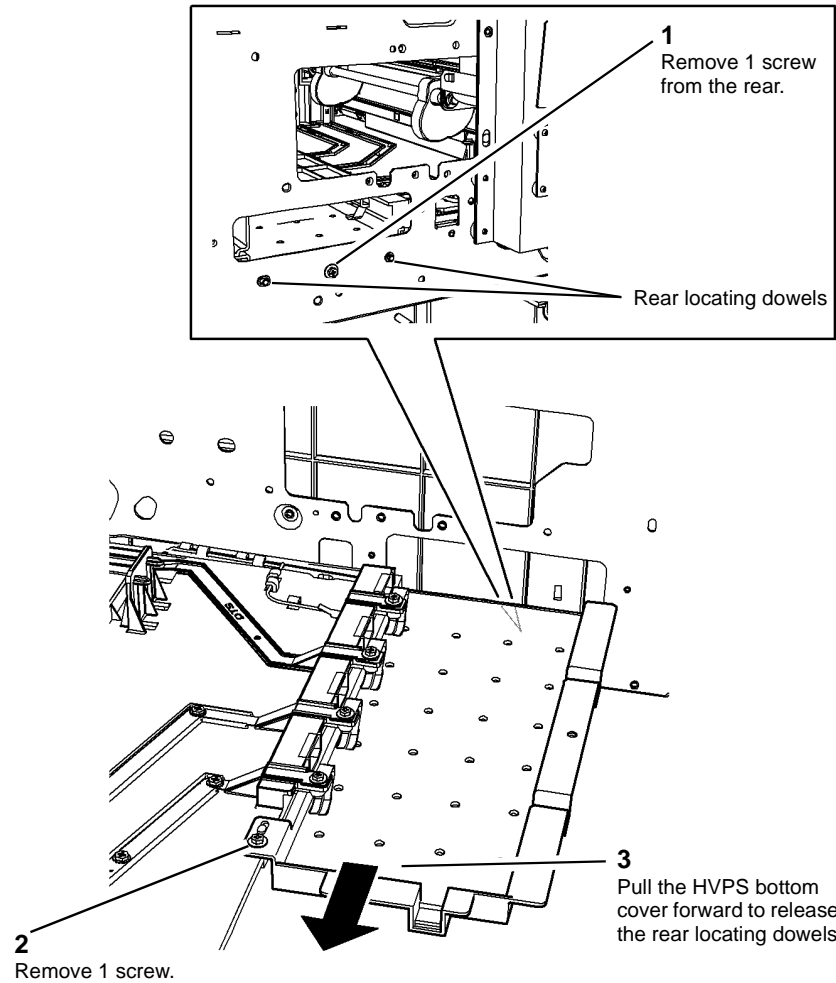


W-1-1246-A

Figure 2 Toner cartridge removal



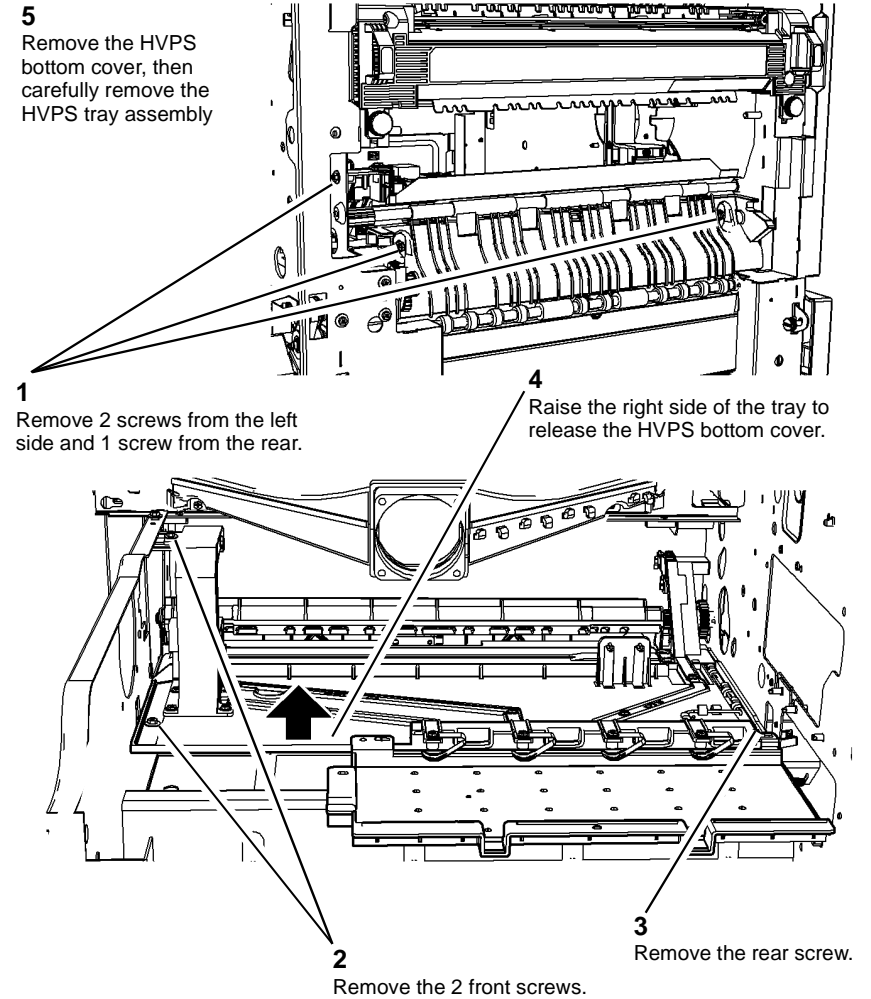
9. Prepare to remove the HVPS tray assembly, **Figure 3**.



W-1-1247-A

**Figure 3** Preparation

10. Remove HVPS bottom cover and the HVPS tray assembly, **Figure 4**.



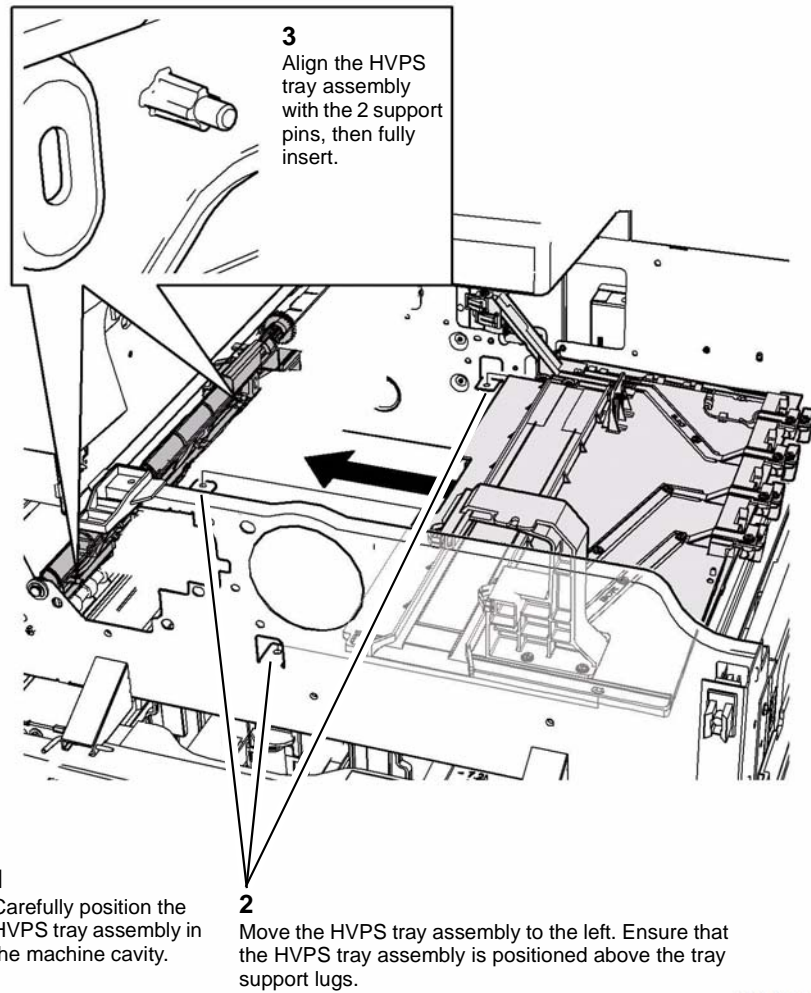
W-1-1108-A

**Figure 4** Removal

## Replacement

1. Install the HVPS tray assembly, [Figure 5](#).

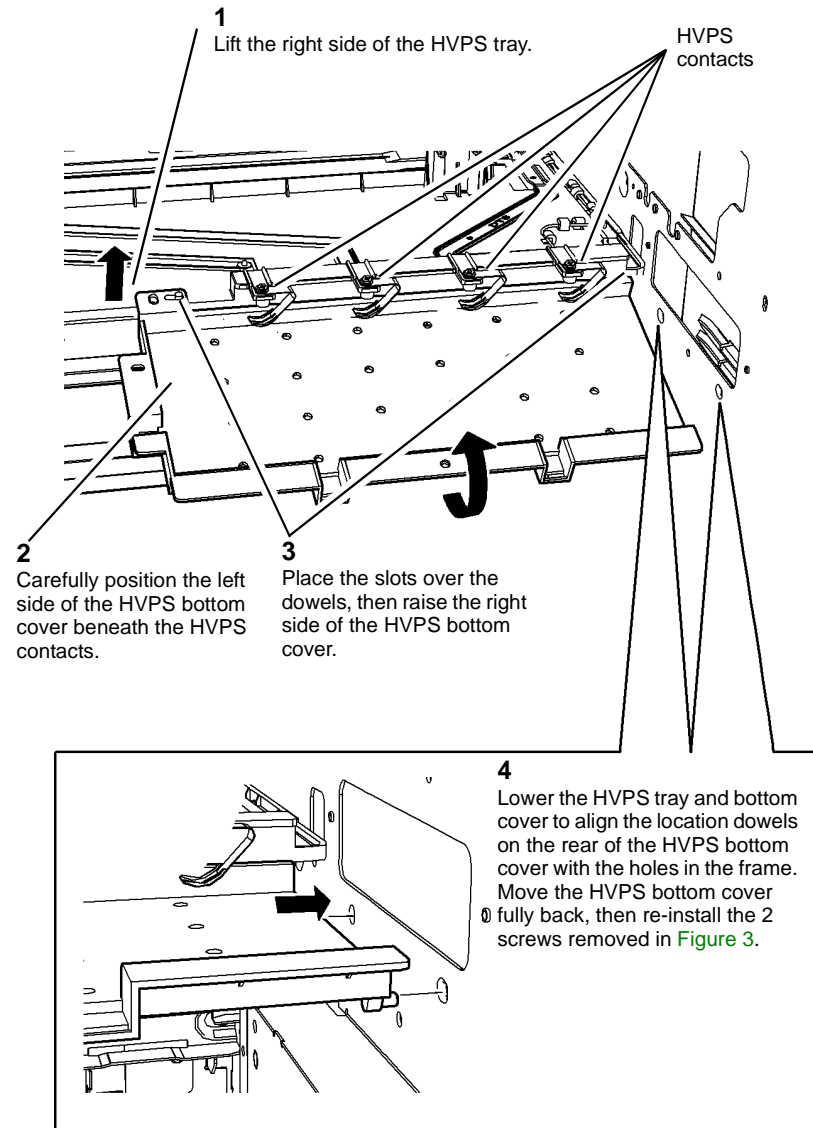
**NOTE:** For clarity, the print cartridge fan duct is not shown in [Figure 5](#).



W-1-1110-A

**Figure 5 HVPS tray assembly installation**

2. Install the HVPS bottom cover, [Figure 6](#).



**Figure 6 Bottom cover install**

**!**  
**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 4](#).
4. Reverse the removal procedure to install the remaining components.

## REP 90.4 Environmental Sensors Assembly

Parts List on [PL 80.17](#)

### 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 registration transport assembly, [REP 80.4](#).
2. Remove the environmental sensors PWB, [Figure 1](#).

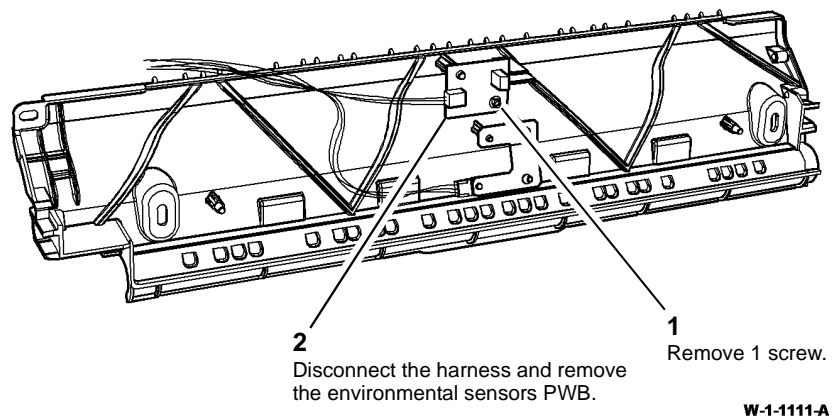


Figure 1 Removal

### Replacement

1. The replacement is the reverse of the removal procedure.



## ADJ 5.1 SPDH Drive Belts

### Purpose

To correctly set the tension of all the drive belts in the SPDH.

### 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.



Before this adjustment is performed, ensure all components removed in the repair procedure are installed correctly.

**NOTE:** All drive belts in the SPDH are tensioned by springs. Although all the belt drives are different to each other, the process of adjusting the belt tension is the same.

1. Loosen the screws that hold the motor or tensioning plate to the frame.
2. Allow the spring to tension the drive belt.
3. Tighten the screws.

## ADJ 5.2 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.

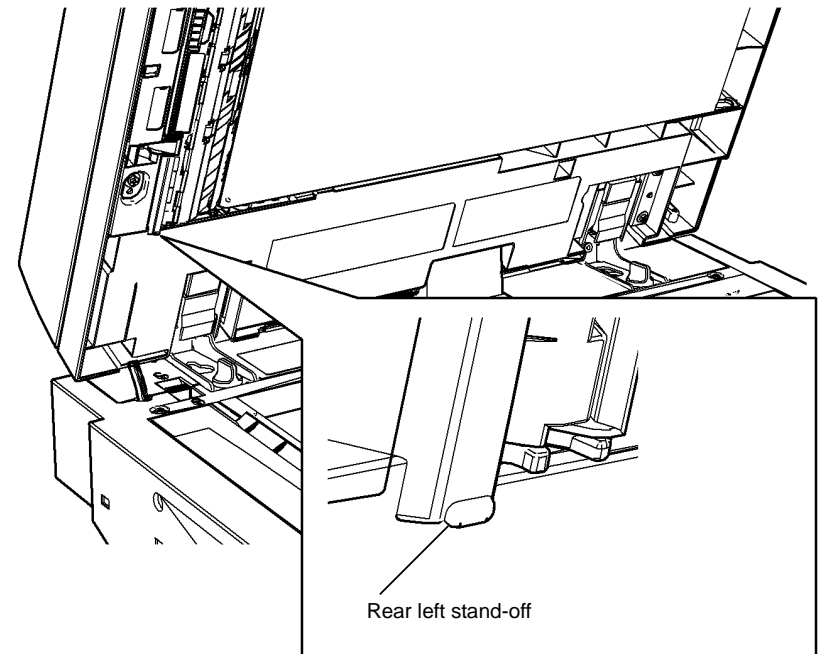
### Important

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.

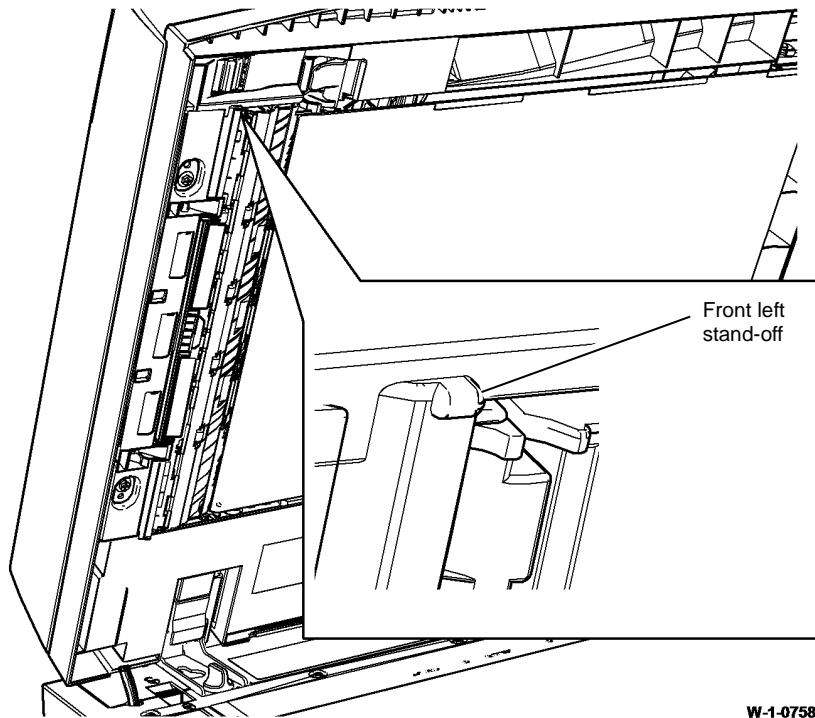
### Left Side Check

1. Check the gap between the rear left stand-off, [Figure 1](#), and the CVT glass. Also check the gap between the front left stand-off, [Figure 2](#), and the CVT glass.



W-1-0757-A

Figure 1 Rear left stand-off location

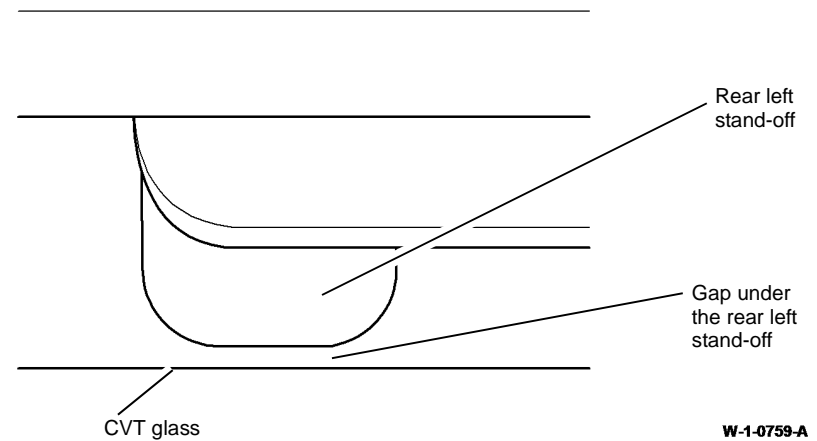


**Figure 2 Front left stand-off location**

W-1-0758-A

2. Switch the machine on, GP 14.
3. Lift the SPDH then lower it back down so that the scanner module lamp illuminates. View the rear left stand-off gap, Figure 3, in the space between the SPDH and the scanner module. The rear left stand-off must just touch the CVT glass.

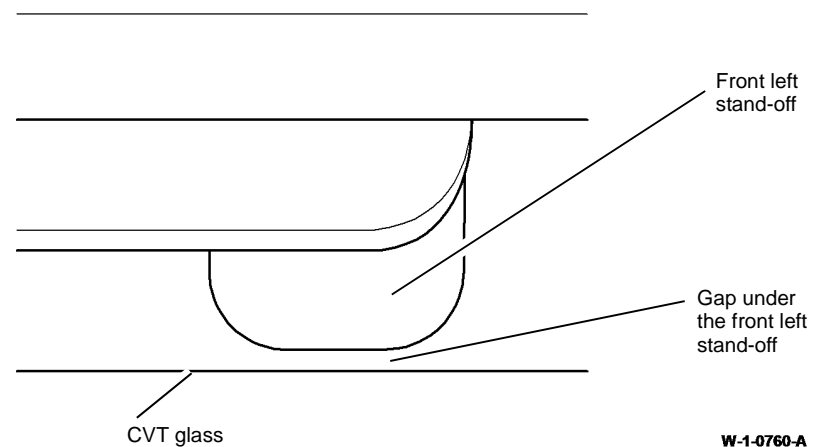
**NOTE:** Opening and closing the SPDH will only illuminate the scanner module lamp for approximately 6 seconds. If a longer duration of illumination is required, enter dC330 code 062-002 to illuminate the scanner module lamp.



W-1-0759-A

**Figure 3 Rear left stand-off gap**

4. View the front left stand-off gap, Figure 4, in the space between the SPDH and the scanner module. The front left stand-off must just touch the CVT glass.



W-1-0760-A

**Figure 4 Front left stand-off gap**

5. If the front left stand-off, or rear left stand-off do not touch the CVT glass, 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.

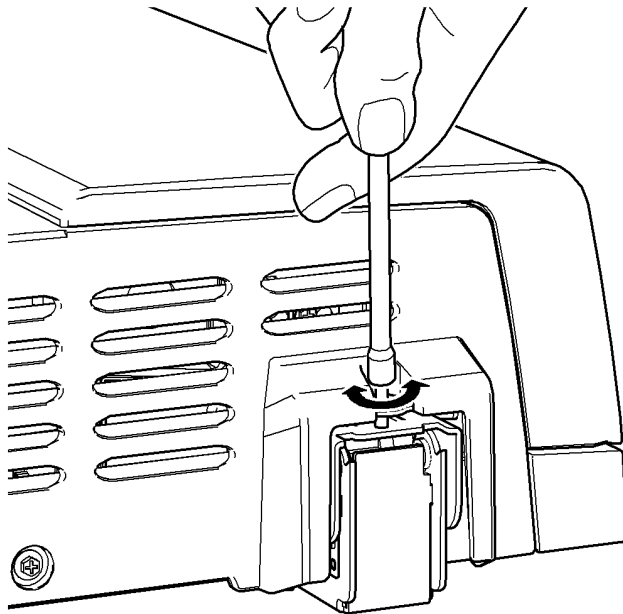
**NOTE:** Adjusting the height of the left side of the SPDH can effect the height of the right side of the SPDH and vise versa. Ensure that the height of all 3 stand-offs is checked at the end of the procedure.

2. Adjust the left counterbalance, [Figure 5](#).

**NOTE:** It should only be necessary to adjust the height by approximately 1 turn of the adjustment screw. Observe the front left stand-off and rear left stand-off whilst adjusting the screw. Stop when they are both in contact with the CVT glass.

**NOTE:** If the rear of the SPDH is lowered too far then it will start to lift the front off the CVT glass.

**NOTE:** If the front of the SPDH is lowered too far then it will start to lift the rear off the CVT glass.



Turn the screw clockwise to raise the rear and lower the front of the SPDH.

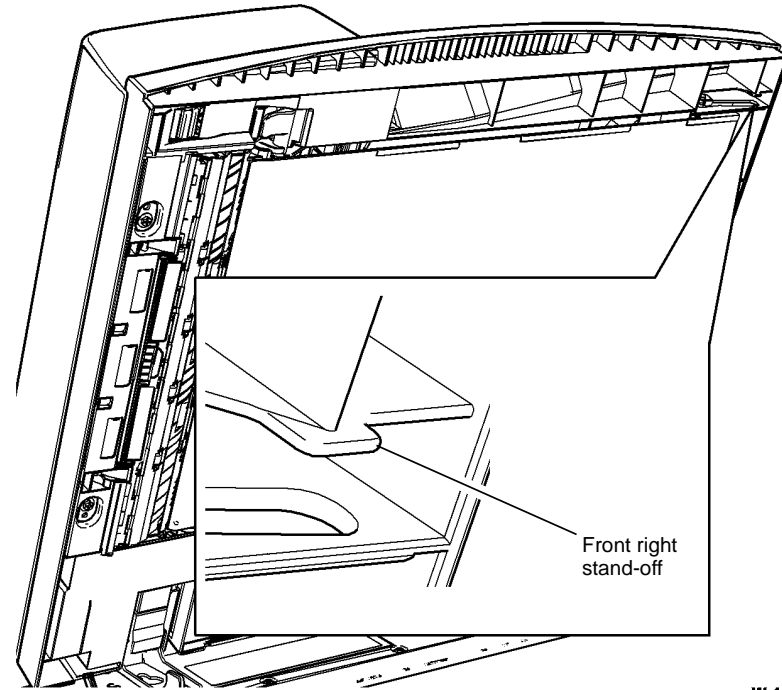
Turn the screw counterclockwise to lower the rear and raise the front of the SPDH.

W-1-0761-A

Figure 5 Left side adjustment

### Right Side Check

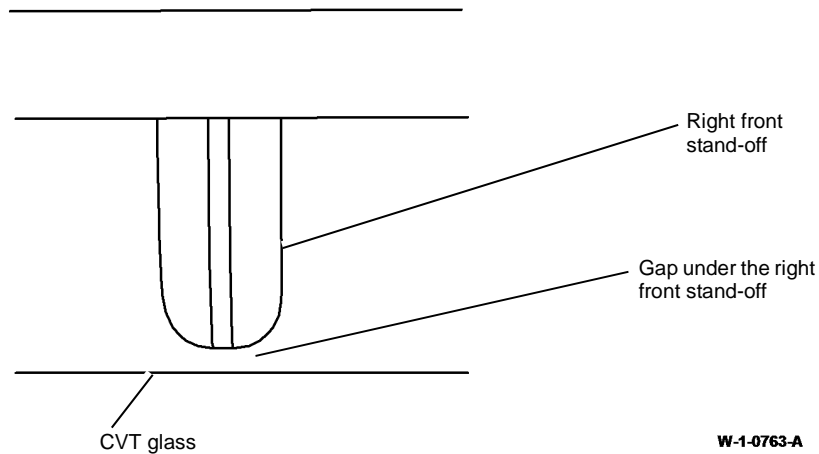
1. Check the gap between the front right stand-off, [Figure 6](#), and the document glass.



W-1-0762-A

Figure 6 Front right stand-off location

- View the front right stand-off gap, [Figure 7](#), in the space between the SPDH and the scanner module. The front right stand-off must just touch the document glass.



**Figure 7 Front right stand-off gap**

- If the front right stand-off does not touch the CVT glass, perform the [Right Side Adjustment](#).

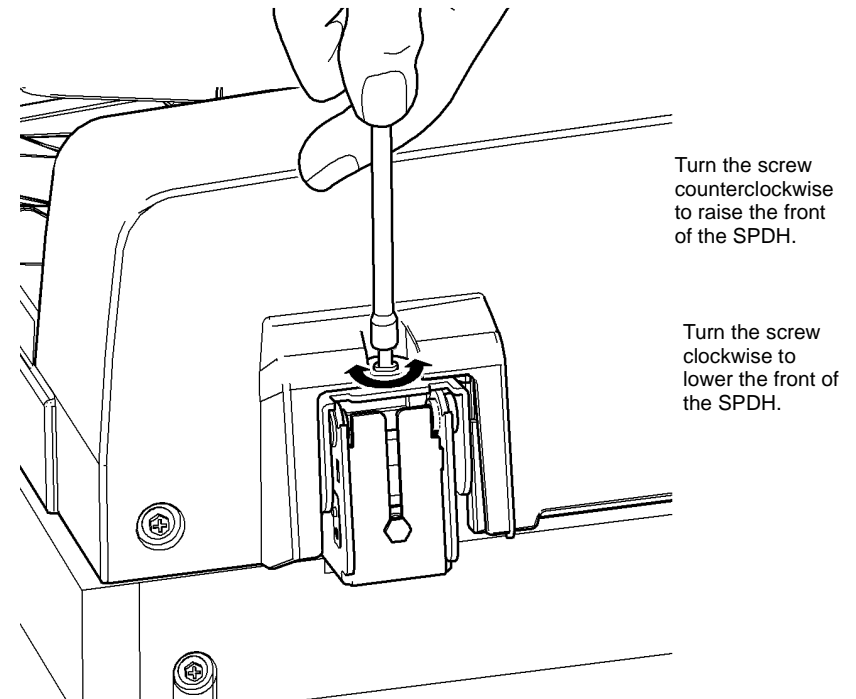
### Right Side Adjustment

- 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 all 3 stand-offs is checked at the end of the procedure.

- [Figure 8](#), 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 document glass.



**Figure 8 Right side adjustment**

- Check the height of all 3 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 5.3 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 5.4 SPDH Cleaning Procedure](#).
2. Check that the document width guides are adjusted correctly.
3. Ensure that the SPDH is set to the correct height. Go to [ADJ 5.2 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). 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. From the rear of the SPDH locate the skew adjusting screw, [Figure 1](#).

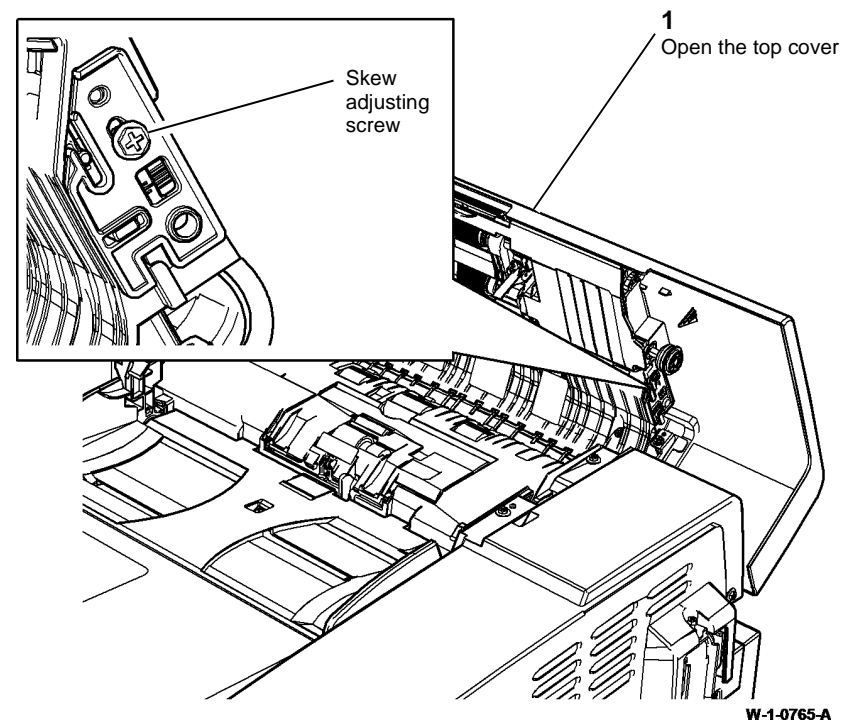


Figure 1 Adjusting screw location

2. If the SPDH did not need adjustment during build, the adjustment screw will be in the fixed location hole. If necessary move the screw to the adjustable slot position, [Figure 2](#).

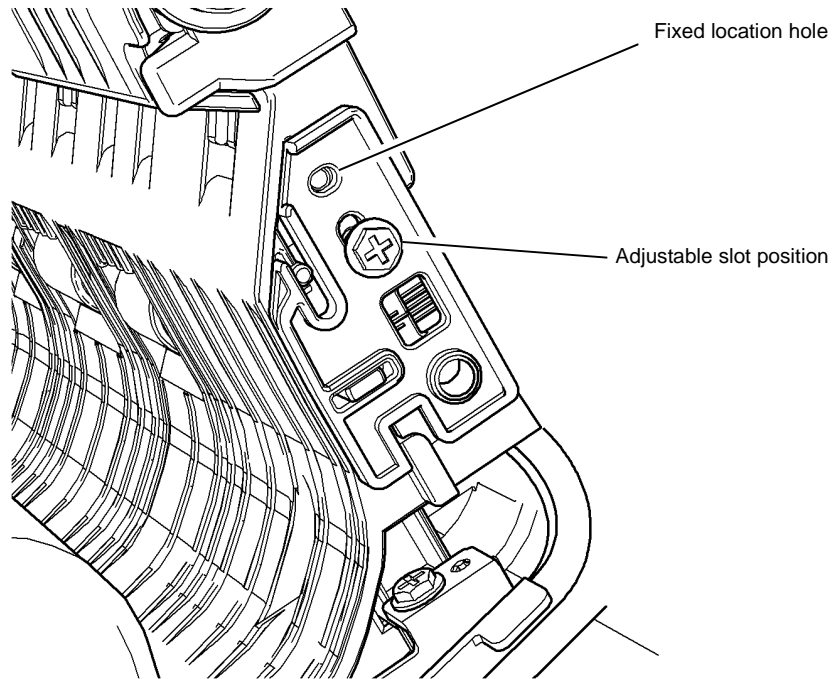


Figure 2 Adjusting screw position

W-1-0766-A

3. Adjust the side 2 skew, [Figure 3](#).

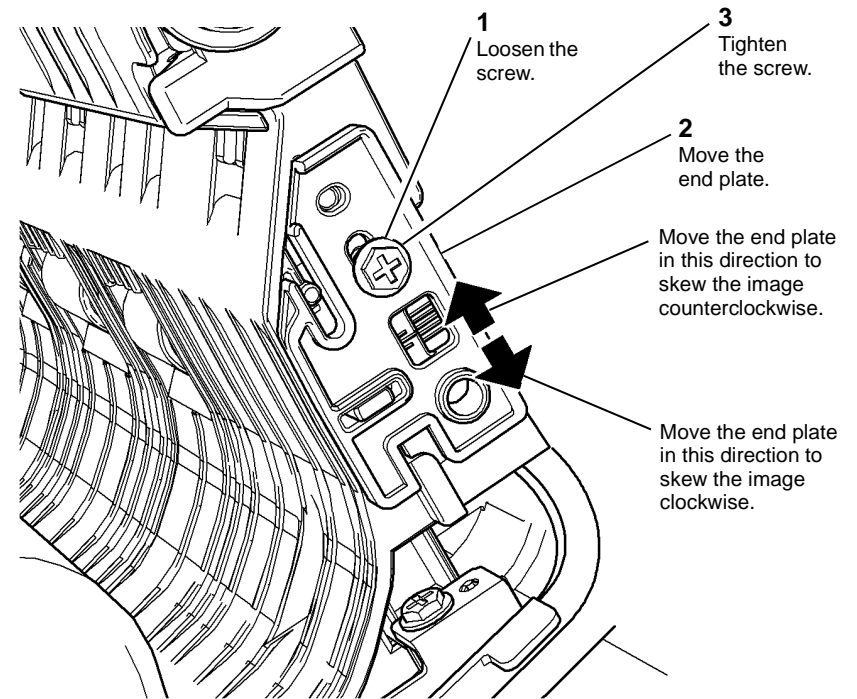
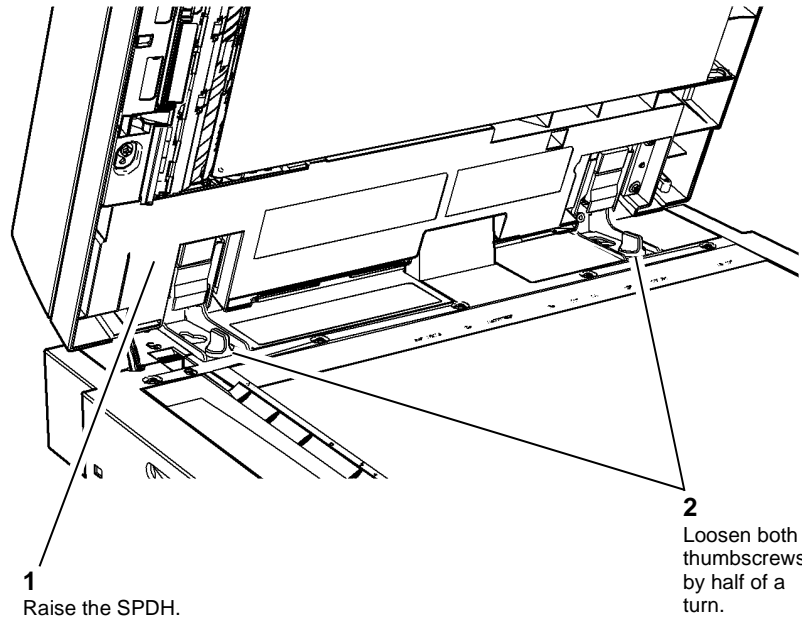


Figure 3 Side 2 skew adjustment

W-1-0767-A

## Side 1 Skew Adjustment

1. Prepare to adjust the side 1 skew, [Figure 4](#).

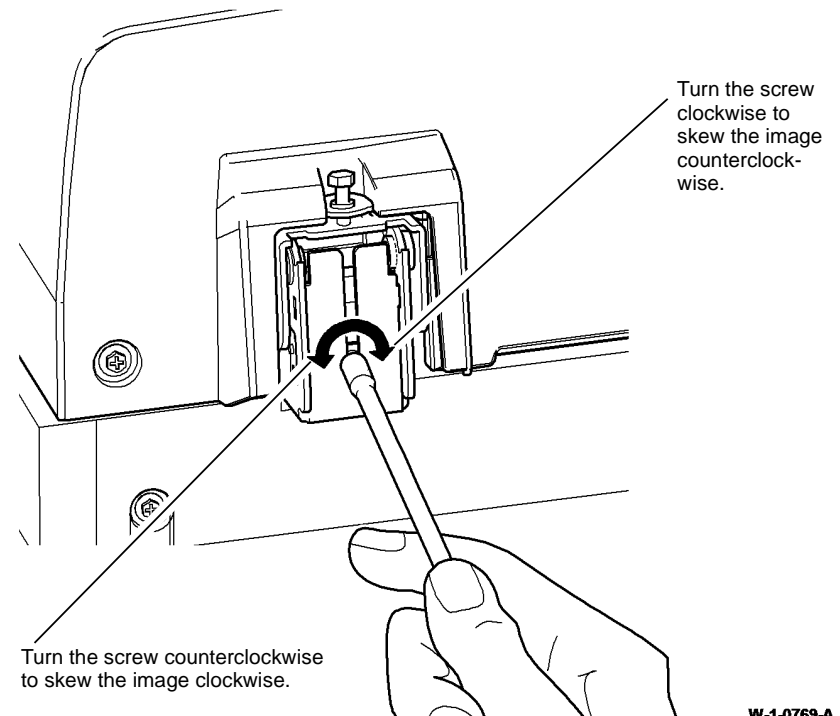


W-1-0768-A

Figure 4 Preparation

2. Adjust the side 1 skew, [Figure 5](#).

**NOTE:** Approximately 3 turns of the adjustment screw will move the skew by 1mm.



W-1-0769-A

Figure 5 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 5.4 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



**Ensure that the electricity to the machine is switched off while performing tasks 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 microfiber 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 microfiber 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 microfiber 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 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 3 idler rolls with a microfiber wiper, [PL 26.10 Item 13](#), and water.
8. Rotate the pre scan jam clearance knob, [PL 5.17 Item 11](#). Clean the pre scan roll assembly, [PL 5.17 Item 4](#), and the lower document path idlers with a microfiber wiper, [PL 5.10 Item 13](#) and water.
9. Clean the document pad, [PL 5.10 Item 3](#), with a microfiber wiper, [PL 26.10 Item 13](#), and water.
10. Lower the SPDH assembly.



*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 microfiber 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



Ensure that the electricity to the machine is switched off while performing tasks 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



Ensure that the electricity to the machine is switched off while performing tasks 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](#).

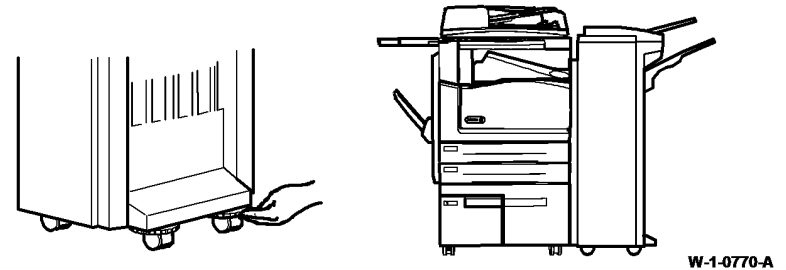


Figure 1 Machine to 2K LCSS alignment

## ADJ 12.3-110 Hole Punch Position

Parts List on [PL 12.20](#)

### Purpose

To optimize the position of the hole punch.

### Check

**NOTE:** A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.

1. Ask the customer which trays are used to feed paper from for hole punching.
2. Load the indicated trays with A4 (8.5x11 inch) paper.
3. Make a set of 5 punched copies or prints from each of the indicated trays. Mark the top edge (towards the front of the machine) of each set to indicate the tray from which it was fed.
4. Evaluate the average hole positions in each set, referring to [Figure 1](#). The distances shown should be equal at the top and bottom of the sheet. If the distances are different by more than 1mm (0.040 inches), perform the adjustment.

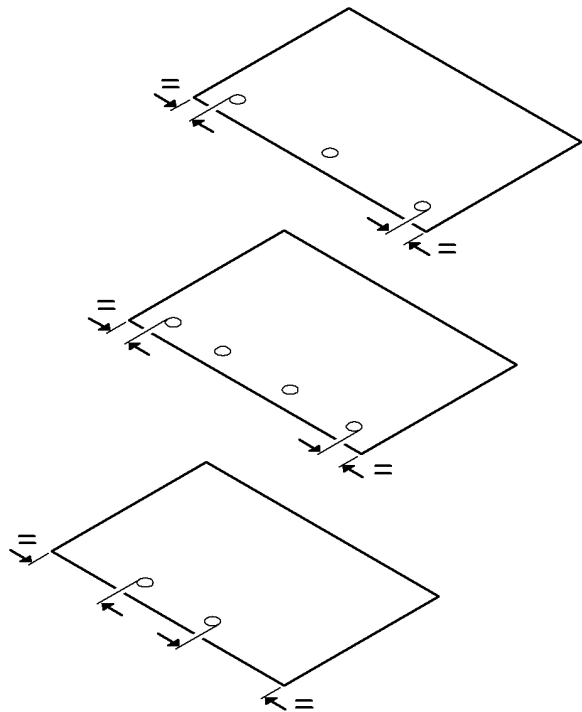


Figure 1 Hole positions

W-1-0771-A

### 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 the chad bin and unscrew the thumb screw retaining the hole punch assembly.
2. Pull out the hole punch assembly a short distance to access the spacer, if installed. Refer to [Figure 2](#). The settings that follow can be made:

**NOTE:** If the spacer cannot be found, suitable washers up to a total thickness of 2mm (0.080 inches) may be used.

- With no spacer installed, the holes are punched closest to the bottom of the sheet.
- With the spacer installed unfolded, the holes are punched 1mm (0.040 inches) closer to the top of the sheet.
- With the spacer installed folded, the holes are punched 2mm (0.080 inches) closer to the top of the sheet.

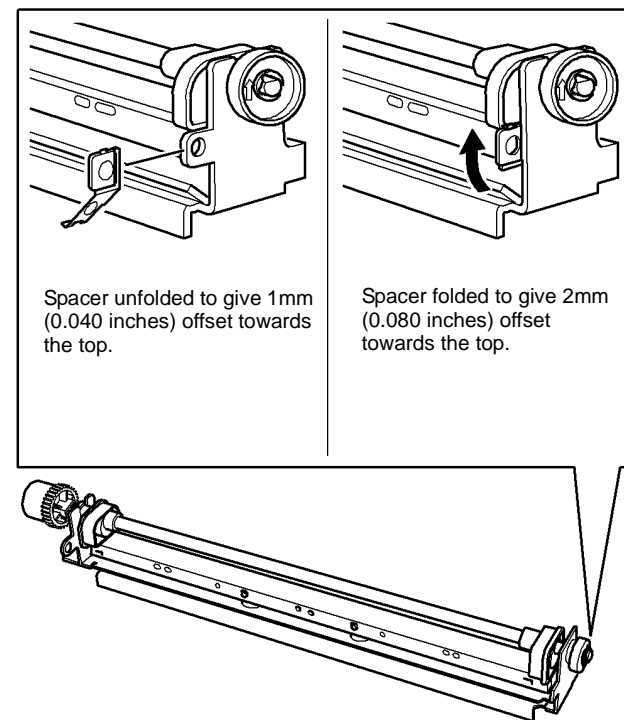


Figure 2 Hole punch spacer

w-1-0772-A

3. Evaluate the movement needed and re-position the hole punch assembly. If the spacer is removed, tape it next to the Mod/Tag label on the 2K LCSS frame for future use.
4. Make sets from each of the indicated trays once more. Check that the hole alignment is now optimized, Make further adjustment if necessary.
5. If necessary, re-load the paper trays as they were before the adjustment was performed.

## ADJ 12.4-110 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.

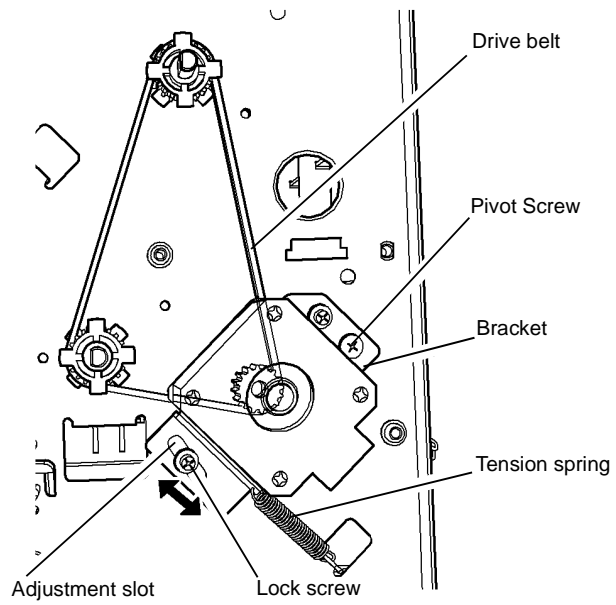
#### Adjustment



**Ensure that the electricity to the machine is switched off while performing tasks 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 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 spring tensioning arrangement

W-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.

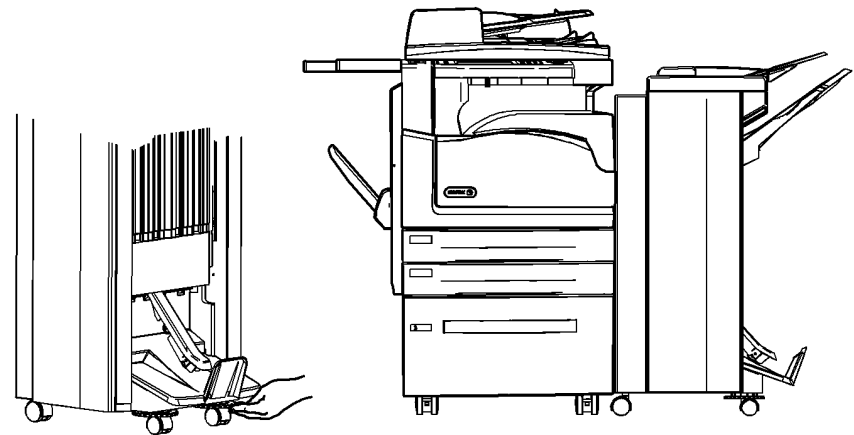
### Adjustment



#### 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.



W-1-0774-A

Figure 1 Machine to LVF BM alignment

# ADJ 12.3-150 Hole Punch Position

Parts List on [PL 12.330](#)

## Purpose

To optimize the position of the hole punch.

## Check

**NOTE:** A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.

1. Ask the customer which trays are used to feed from for hole punching.
2. Load the indicated trays with A4 (8.5x11 inch) paper.
3. Make a set of 5 punched copies or prints from each of the indicated trays. Mark the top edge (towards the front of the machine) of each set to indicate the tray from which it was fed.
4. Evaluate the average hole positions in each set, referring to [Figure 1](#). The distances shown should be equal at the top and bottom of the sheet. If the distances are different by more than 1mm (0.040 inches), perform the adjustment.

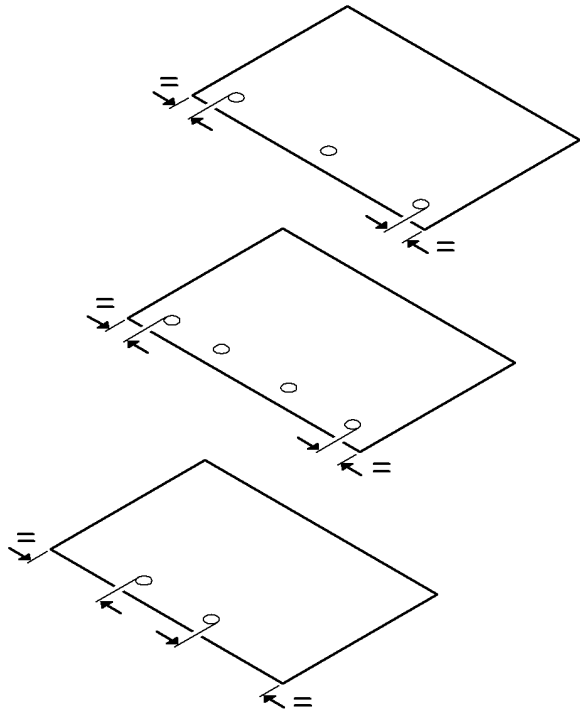


Figure 1 Hole positions

W-1-0775-A

## 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 the chad bin and unscrew the thumb screw retaining the hole punch assembly.
2. Pull out the hole punch assembly a short distance to access the spacer, if installed. Refer to [Figure 2](#). The settings that follow can be made:

**NOTE:** If the spacer cannot be found, suitable washers up to a total thickness of 2mm (0.080 inches) may be used.

- With no spacer installed the holes are punched closest to the bottom of the sheet.
- With the spacer installed unfolded the holes are punched 1mm (0.040 inches) closer to the top of the sheet.
- With the spacer installed folded the holes are punched 2mm (0.080 inches) closer to the top of the sheet.

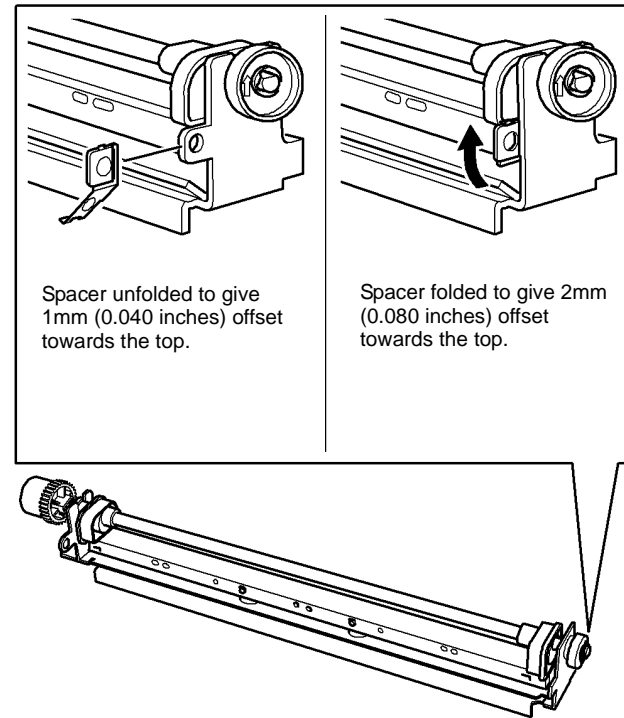


Figure 2 Hole punch spacer

W-1-0776-A

3. Evaluate the movement needed and re-position the hole punch assembly. If the spacer is removed, tape it next to the TAG label on the LVF BM frame for future use.
4. Make sets from each of the indicated trays once more and ensure that the hole alignment is now optimized. Make further adjustment if necessary.
5. If necessary, re-load the paper trays as they were before the adjustment was performed.

## ADJ 12.4-150 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.

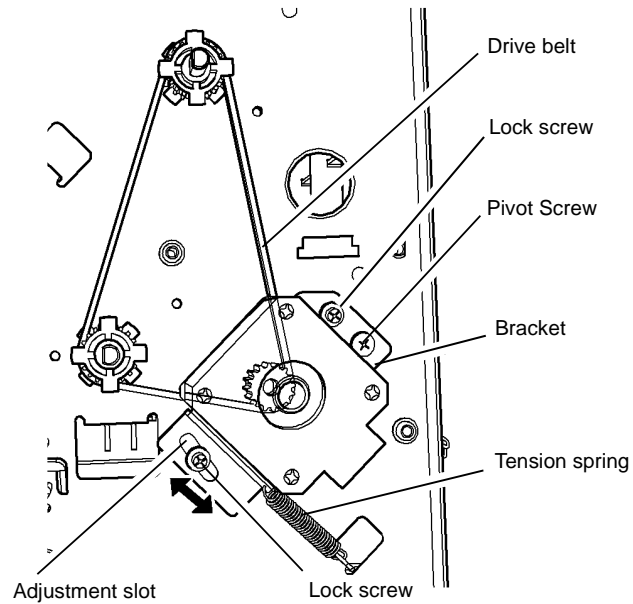
### Adjustment



**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 spring tensioning arrangement.

W-1-0777-A

Figure 1 Drive belt tensioning

## ADJ 12.5-150 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 12.6-150 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 12.7-150 Booklet Stapler Anvil Position - Front**, or **ADJ 12.8-150 Booklet Stapler Anvil Position - Rear** as necessary.

## ADJ 12.7-150 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 12.8-150 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.

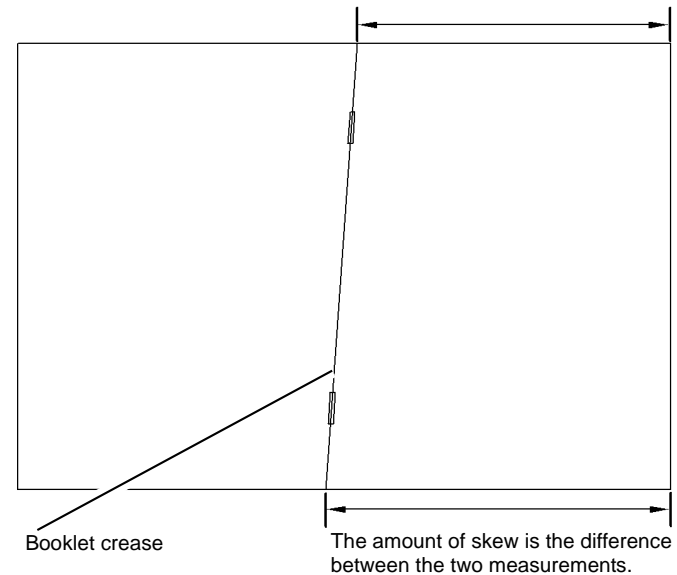
## ADJ 12.9-150 Booklet Skew

### 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 mis-alignment of the open side edges of the booklet, **Figure 1**.



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**Figure 1 Booklet skew**

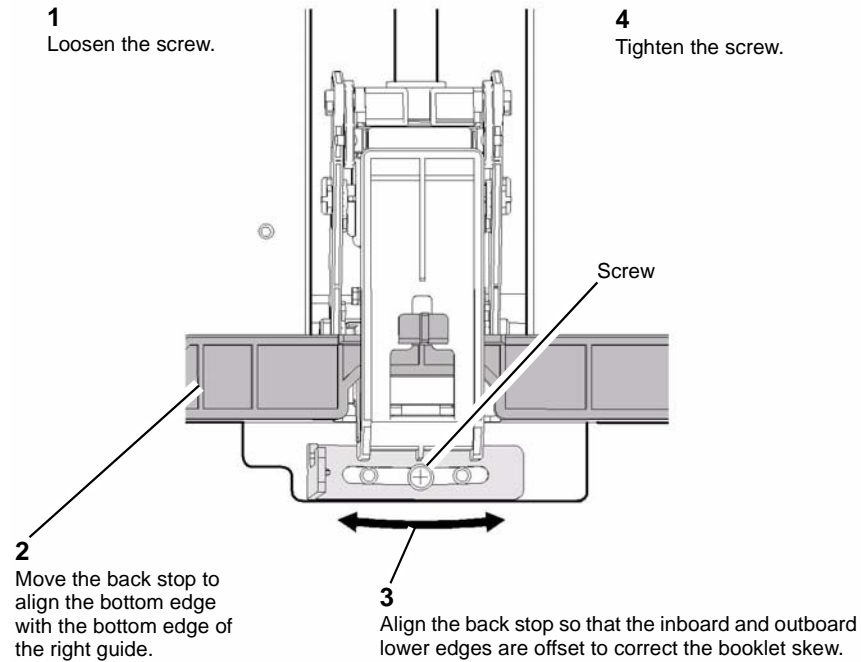
3. If the booklet has skew greater than given in **Table 1**, perform the adjustment.

**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
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.



W-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.





## 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.



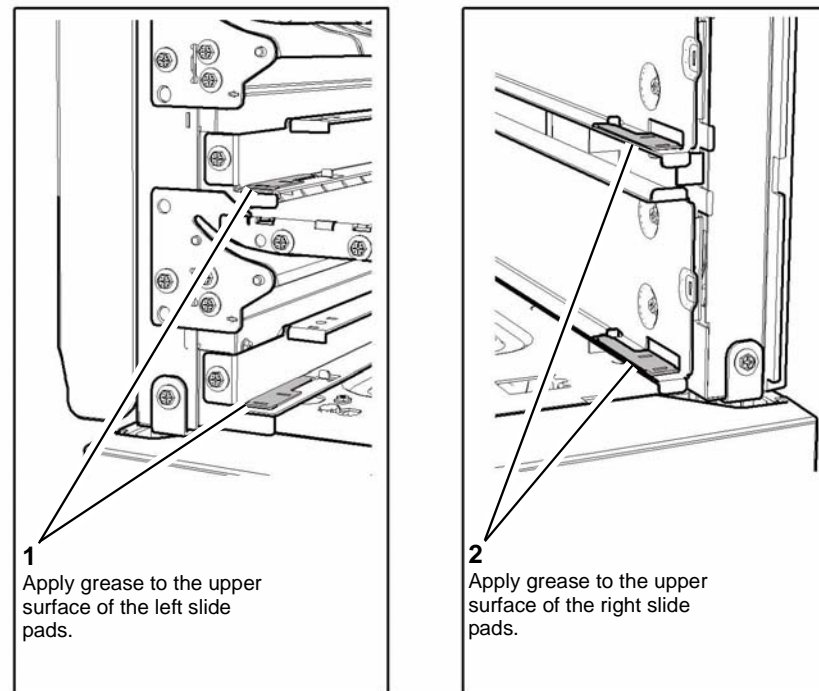
**Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.**

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.](#)
- [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 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](#)

### 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](#).



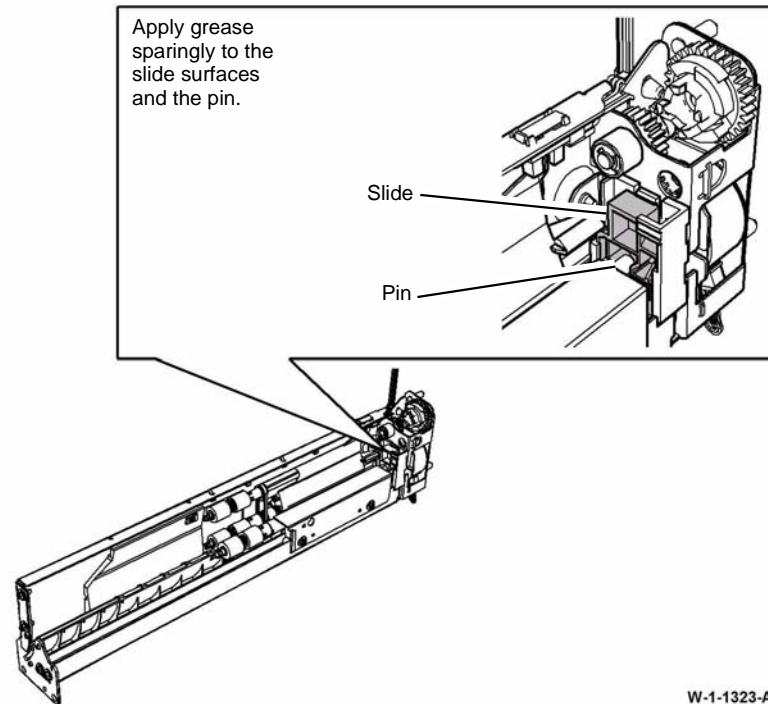
W-1-1207-A

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](#).



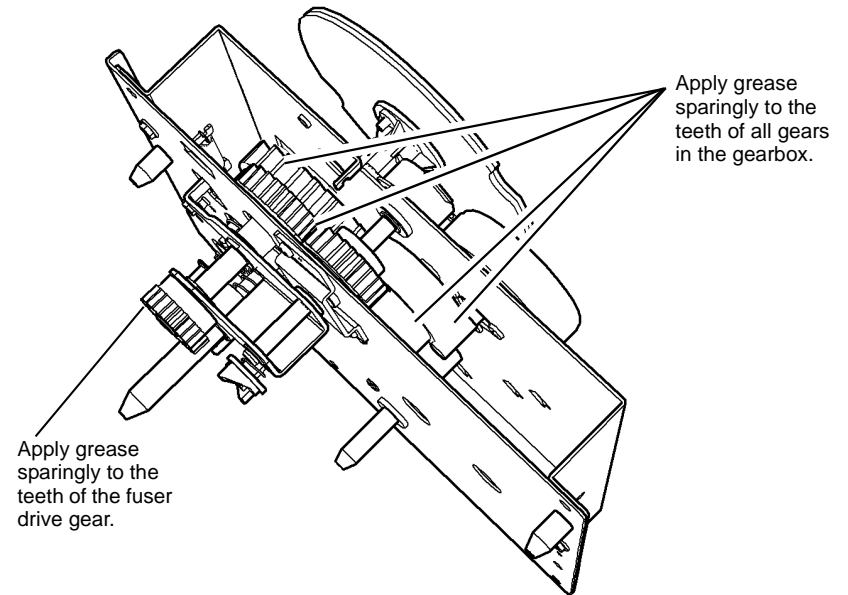
**Figure 2 Actuator lubrication**

W-1-1323-A

4. Install tray 1 and tray 2 paper feed assemblies, [REP 80.1](#).
5. Install tray 1 and 2, [REP 70.1](#).

## 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 3](#).



**Figure 3 Main drive module**

W-1-1324-A

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 4](#).

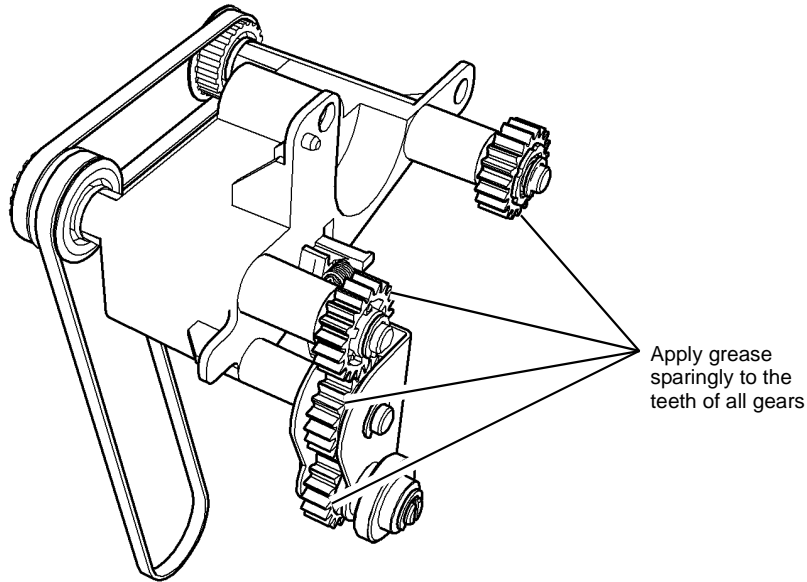


Figure 4 Exit drive assembly

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## Left Door Link Assembly

1. Open the left door.
2. [Figure 5](#), check that the link assembly is adequately lubricated, if necessary apply plastislip grease, [PL 26.10 Item 8](#).

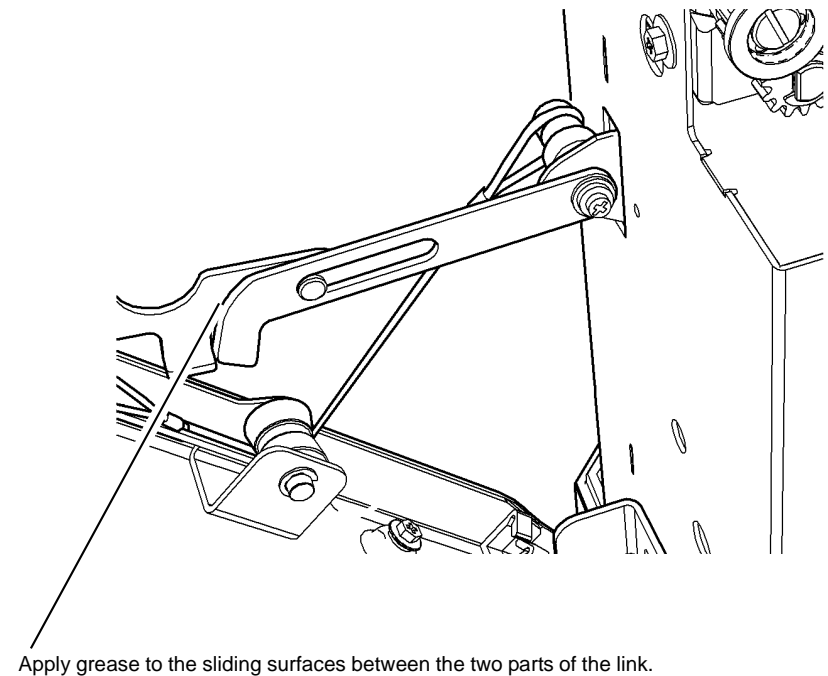


Figure 5 Door link lubrication

W-1-1411-A

3. Install the exit drive assembly, [REP 10.2](#).

## Horizontal Transport Assembly

1. Remove the horizontal transport, [REP 10.6](#).
2. Remove the horizontal transport top cover, [PL 10.15 Item 11](#).
3. Remove the four horizontal transport idler rolls, [PL 10.15 Item 9](#).
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

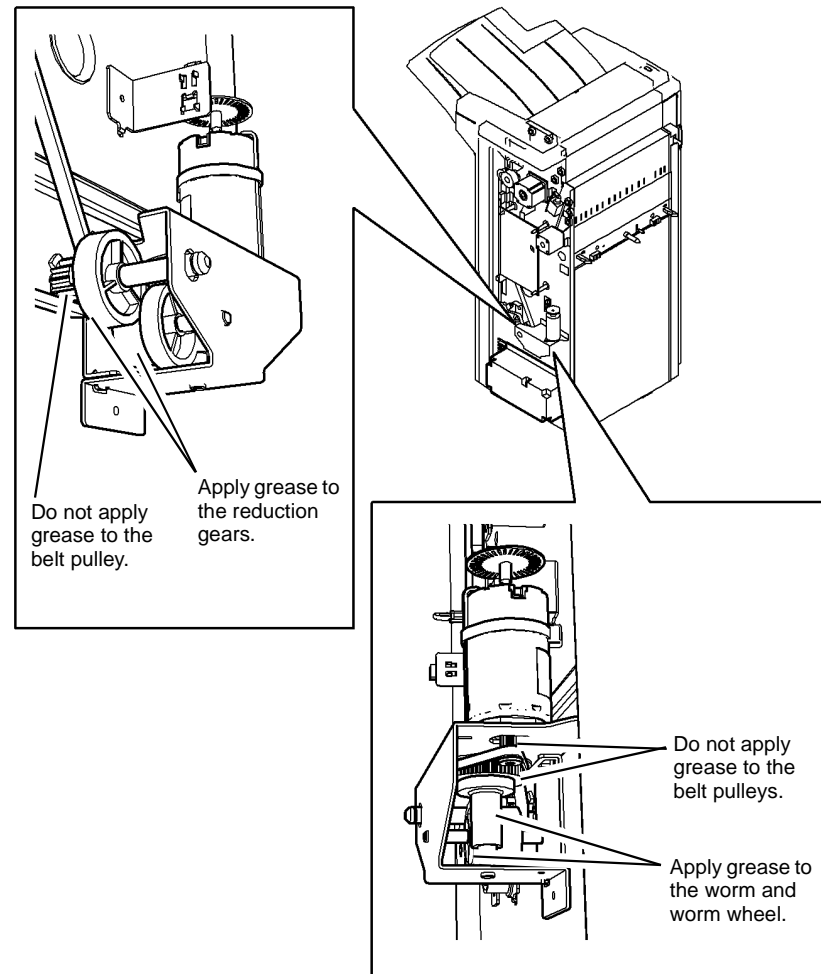
1. Remove the 2K LCSS top cover, front door cover assembly and rear cover, [REP 12.1-110](#).
2. If necessary, remove the LCSS PWB, [PL 12.75 Item 1](#).
3. Remove and inspect the relevant pulley or idler assembly:
  - Bin 1 drive belt idler, [PL 12.30 Item 15](#) (2 places).
  - Bin 1 drive belt pulley, [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 6](#).



W-1-1319-A

Figure 6 Worm and gears

## 2K LCSS Ejector Shafts and Slide Bearings

1. Remove the ejector assembly, [REP 12.10-150](#).
2. Check the ejector shafts are adequately lubricated and the slide bearings move freely along the ejector shafts, [PL 12.50 Item 10](#), [PL 12.50 Item 11](#) and [PL 12.50 Item 12](#).
  - If the slide bearings are worn replace the ejector assembly.



### CAUTION

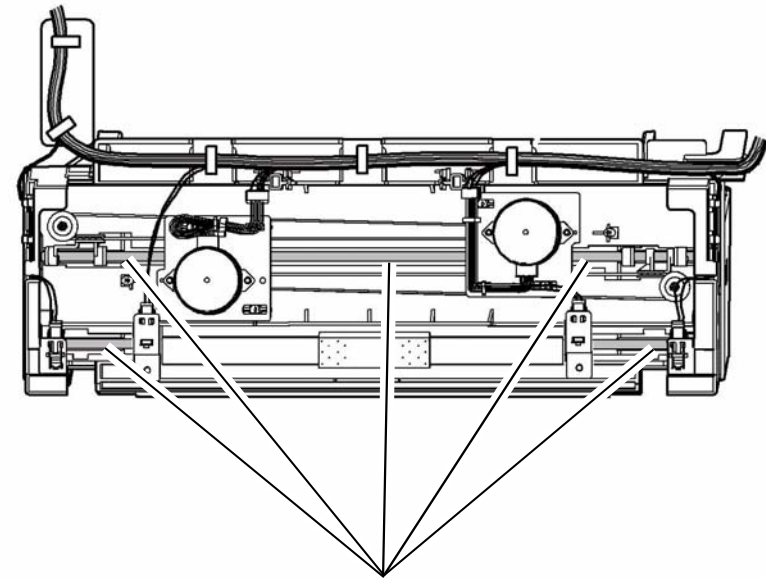
*Do not mix the residual lubrication on the ejector shafts and slide bearings. Contamination of the manufacturer's lubricant with another will decrease durability and high temperature resistance. Clean the ejector shafts and slide bearings free from existing residual lubricant or contaminate before applying Molykote Silicone Dry Lubricant [PL 26.10 Item 12](#) or Moovit oil [PL 26.10 Item 23](#) and leave slightly wet.*

3. If the assembly requires lubrication, perform the steps that follow:
  - a. Clean both ejector shafts and the 4 slide bearings with film remover, [PL 26.10 Item 4](#).
  - b. Apply the recommended lubricant to the ejector shafts, then manually move the ejector base along the ejector shafts to distribute the lubricant, [PL 12.50 Item 2](#).
4. 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 7](#).

**NOTE:** The lubrication procedure is the same for the 2K LCSS and LVF BM.



Apply grease sparingly to the shafts.

W-1-1321-A

Figure 7 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 8](#).

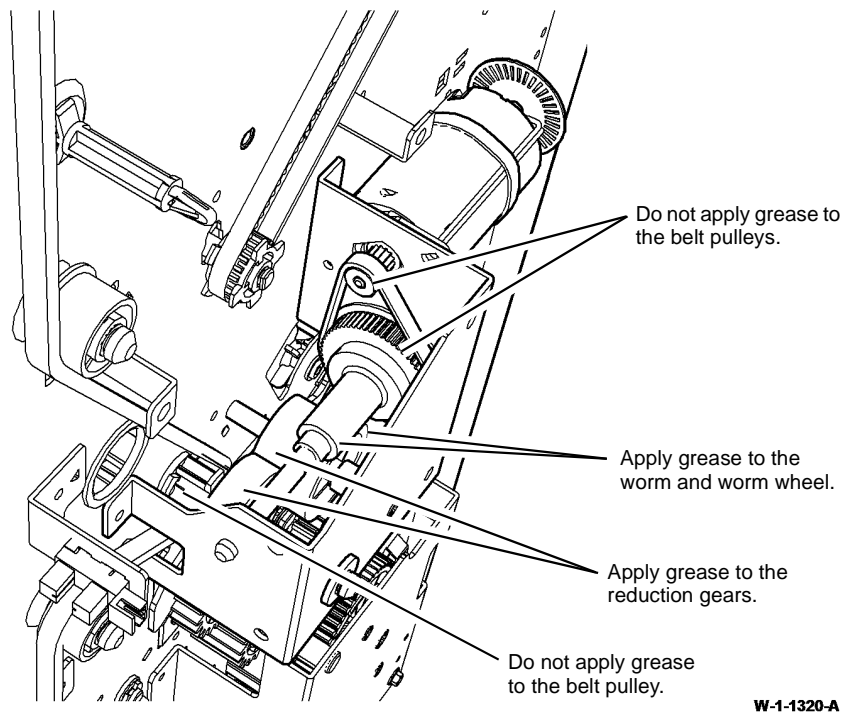


Figure 8 Worm and gears

## 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](#).

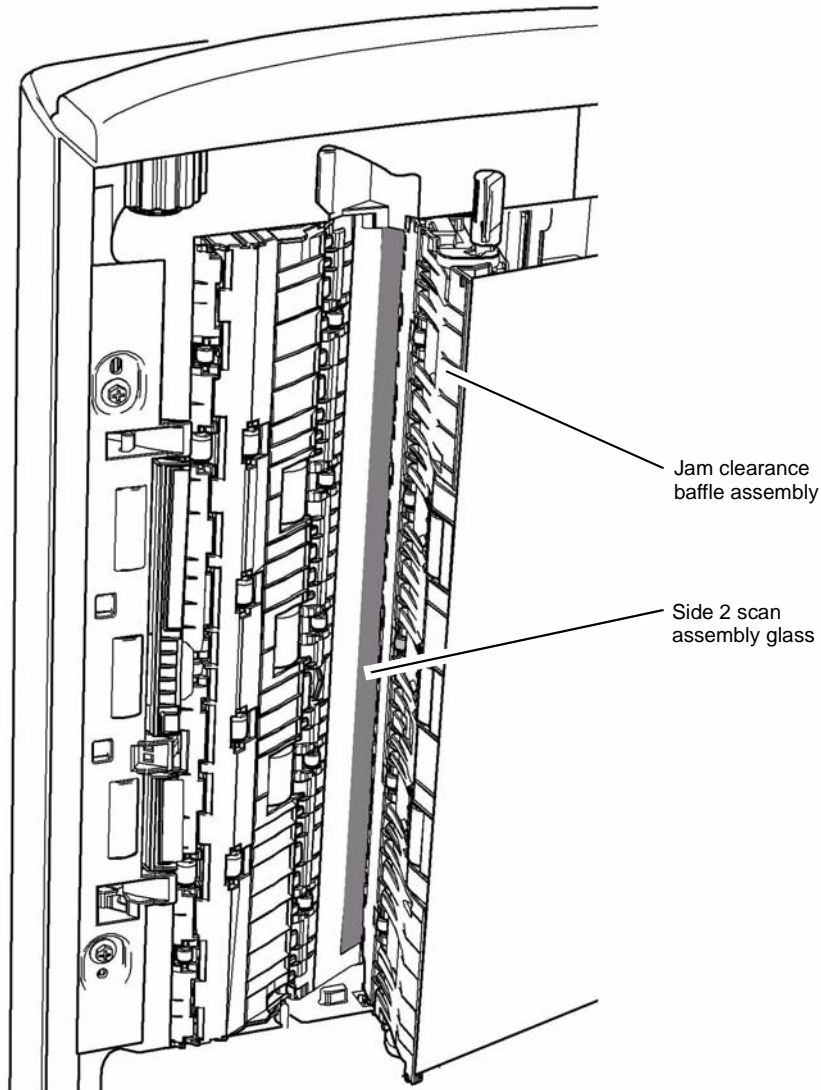


Figure 1 Component location

W-1-1203-A

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](#).

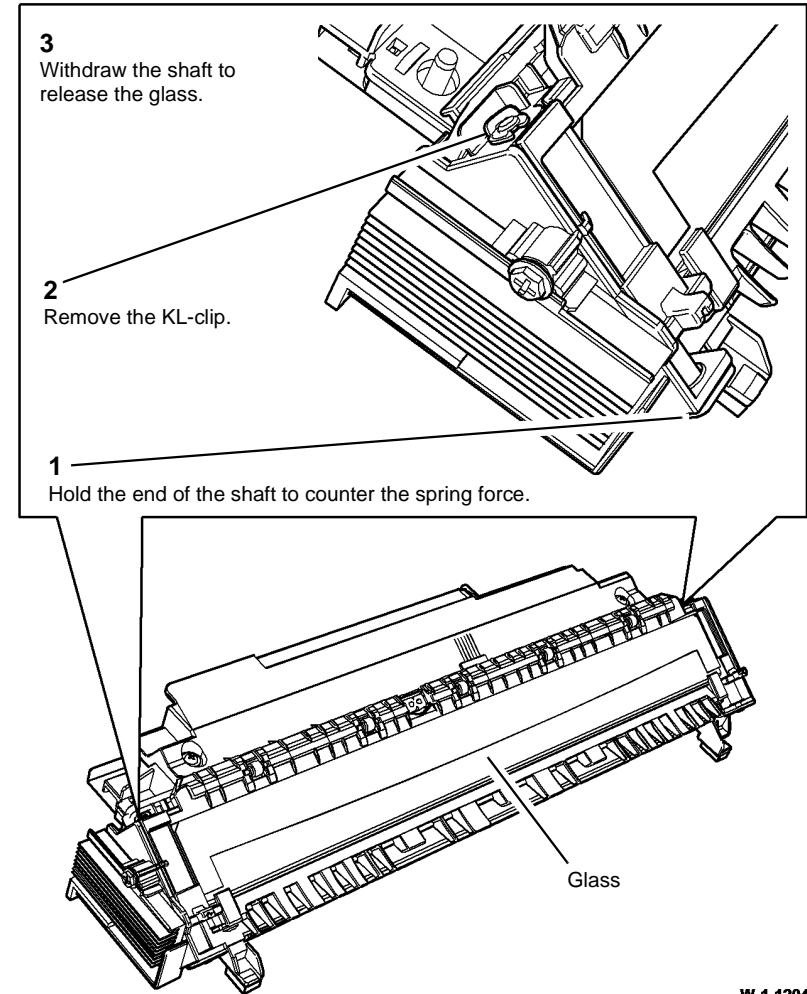
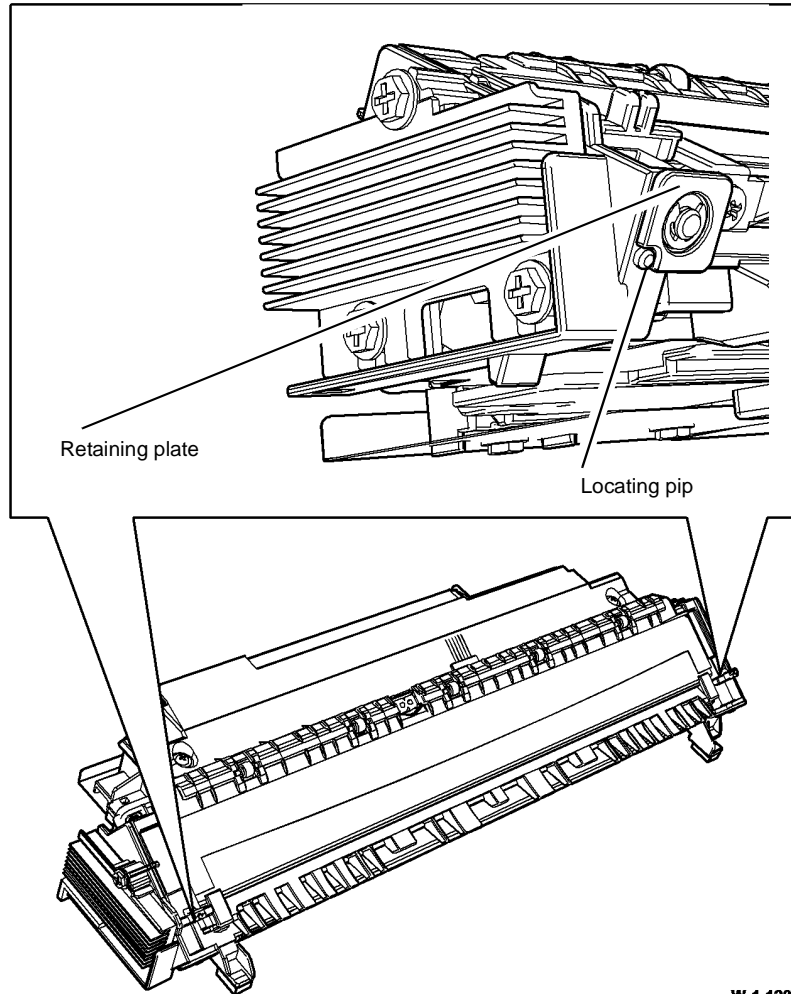


Figure 2 Side 2 scan glass assembly removal

W-1-1204-A



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](#).



**Figure 3 Replacement of the side 2 scan assembly glass**

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**

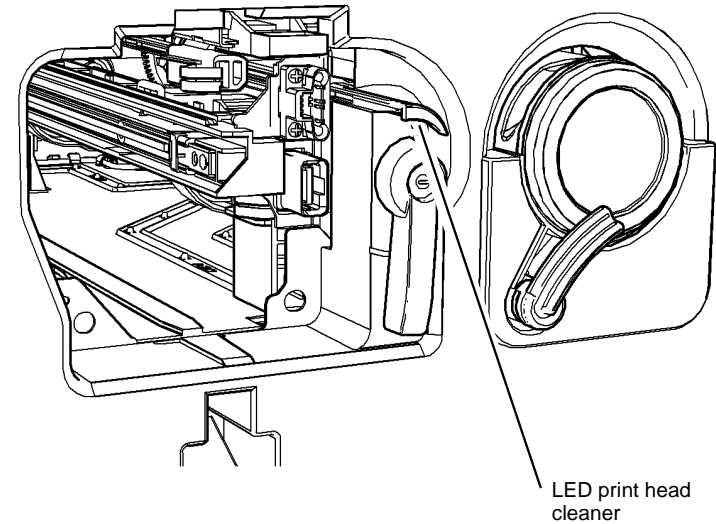
Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

  
**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](#).



W-1-1218-A

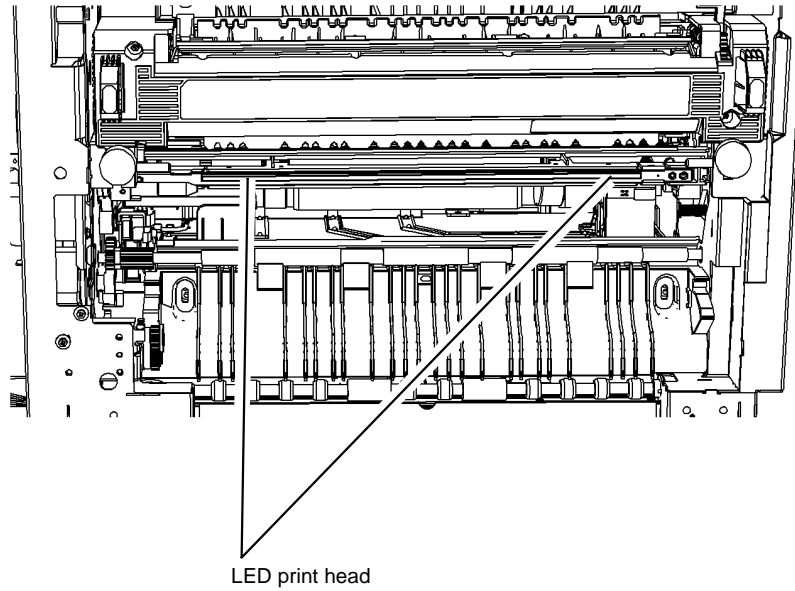
**Figure 1 Component location**

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.



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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

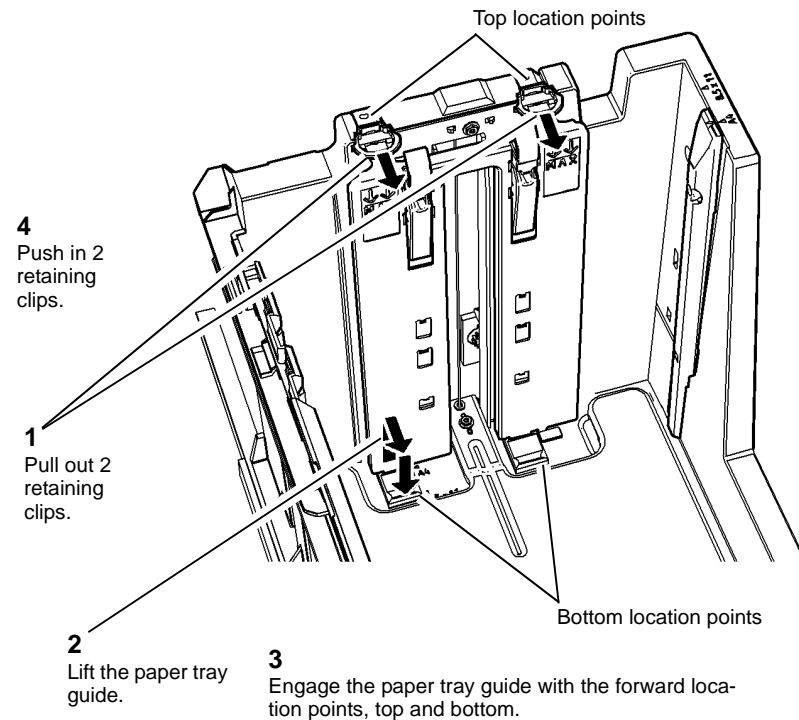
To adjust the paper tray guides in tray 3 and tray 4 for A4 or 8.5 x 11 inch paper.

### Adjustment



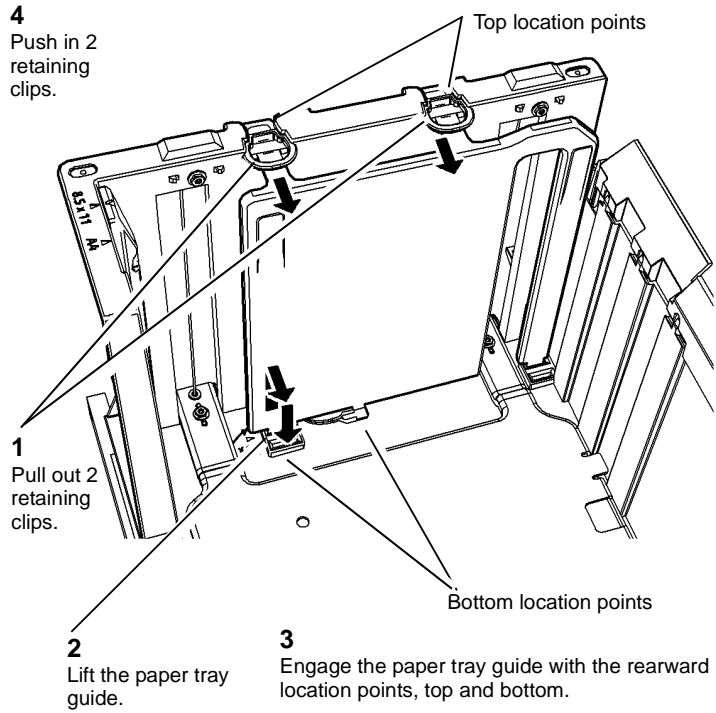
Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 14](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Pull out the tray to be adjusted. Remove the paper from the tray.
2. 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.



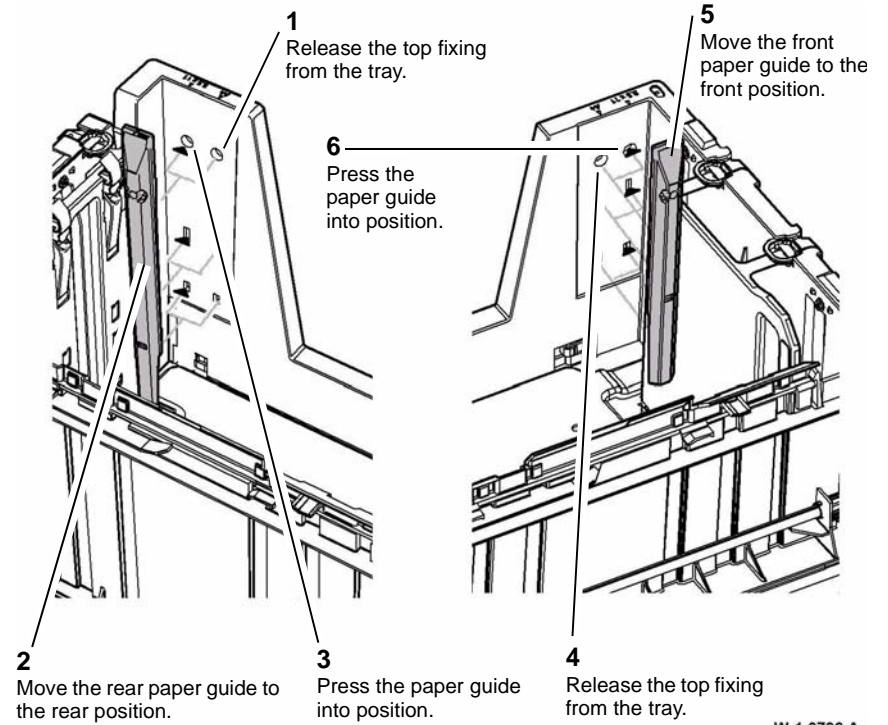
W-1-0795-A

Figure 1 Rear paper tray guide re-position



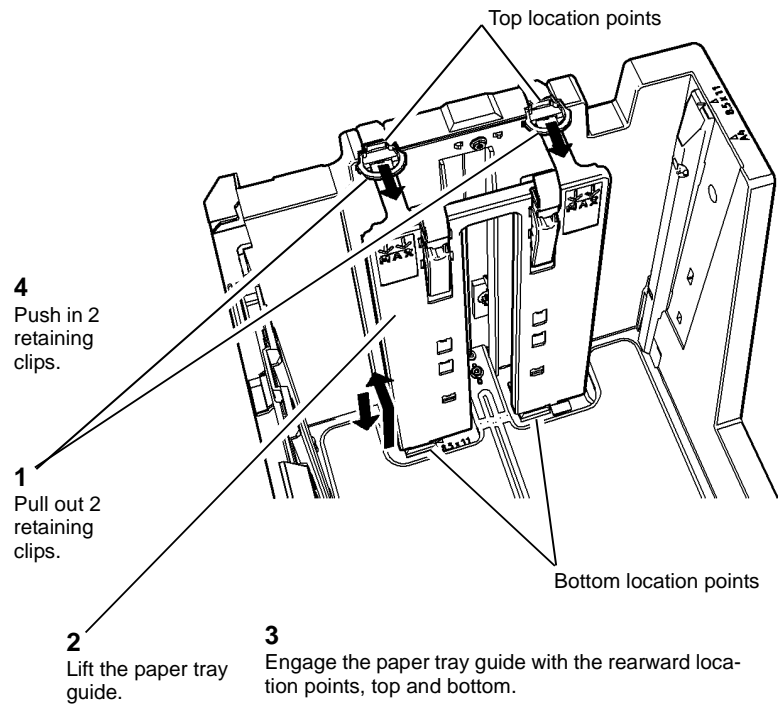
**Figure 2 Front paper tray guide re-position**

W-1-1011-A



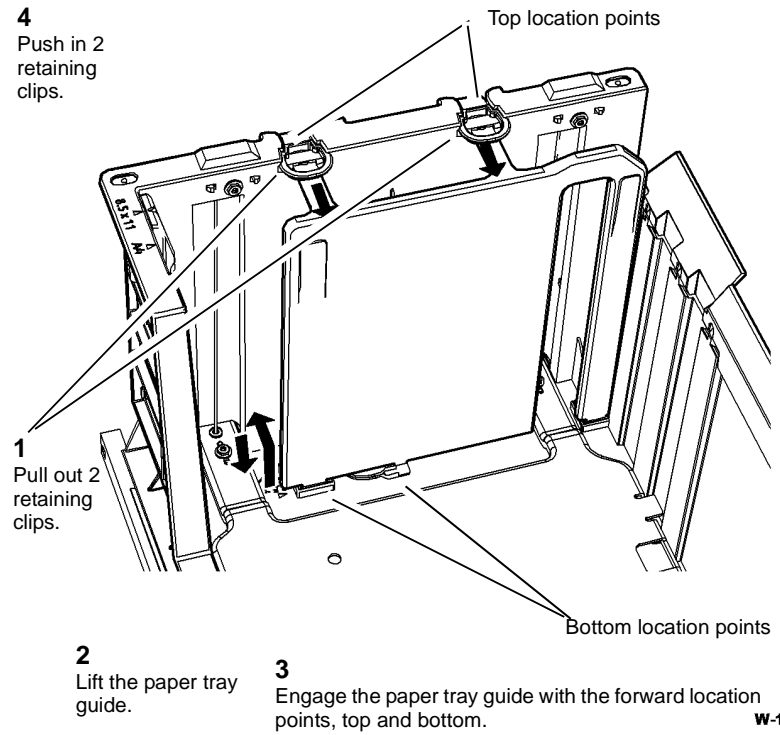
**Figure 3 Paper guides re-position**

W-1-0796-A



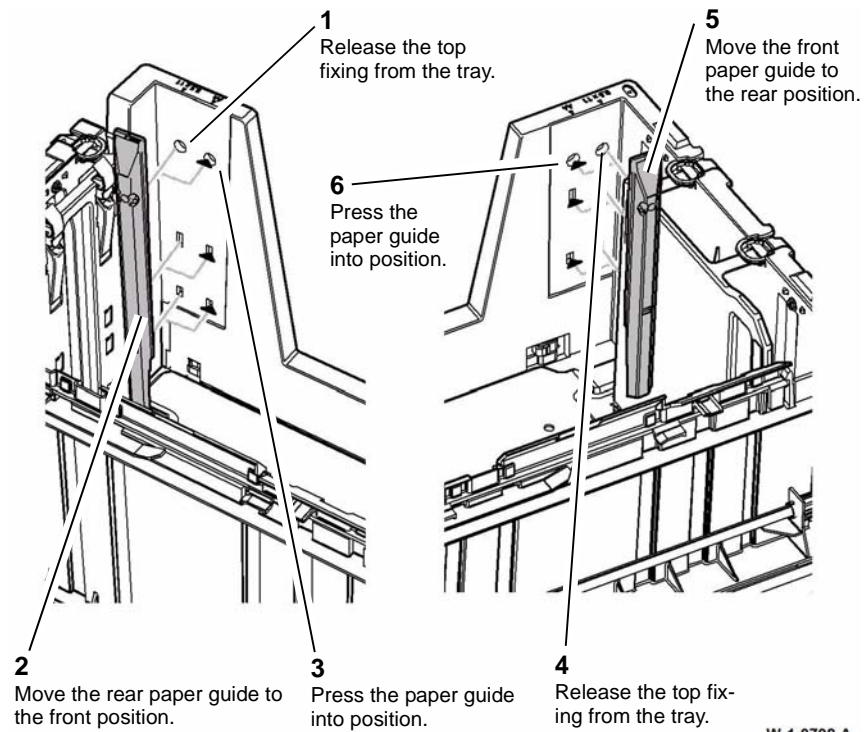
W-1-0797-A

Figure 4 Rear paper tray guide re-position



W-1-1012-A

Figure 5 Front paper tray guide re-position



**Figure 6 Paper guides re-position**



## 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](#).

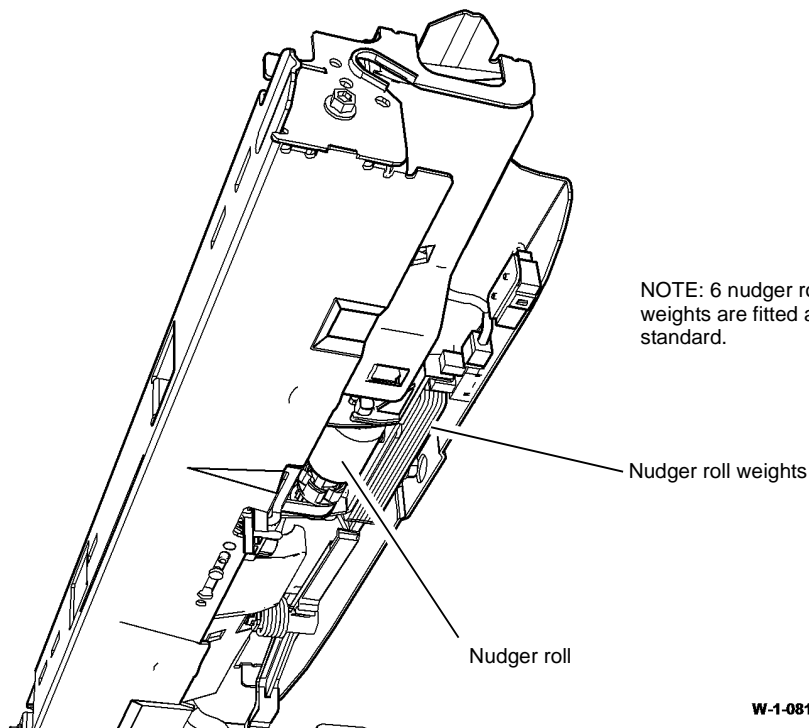


Figure 1 Weights position

### Adjustment

1. [Figure 2](#) shows the location of the spare nudger roll weights.

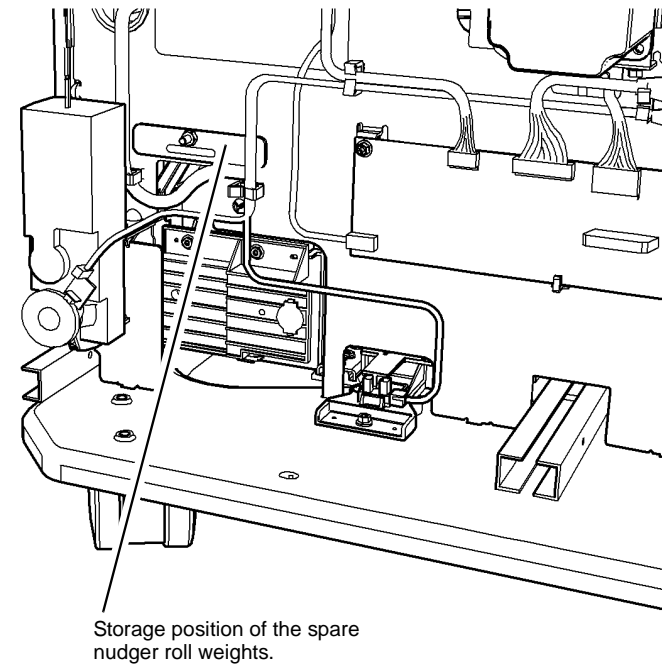
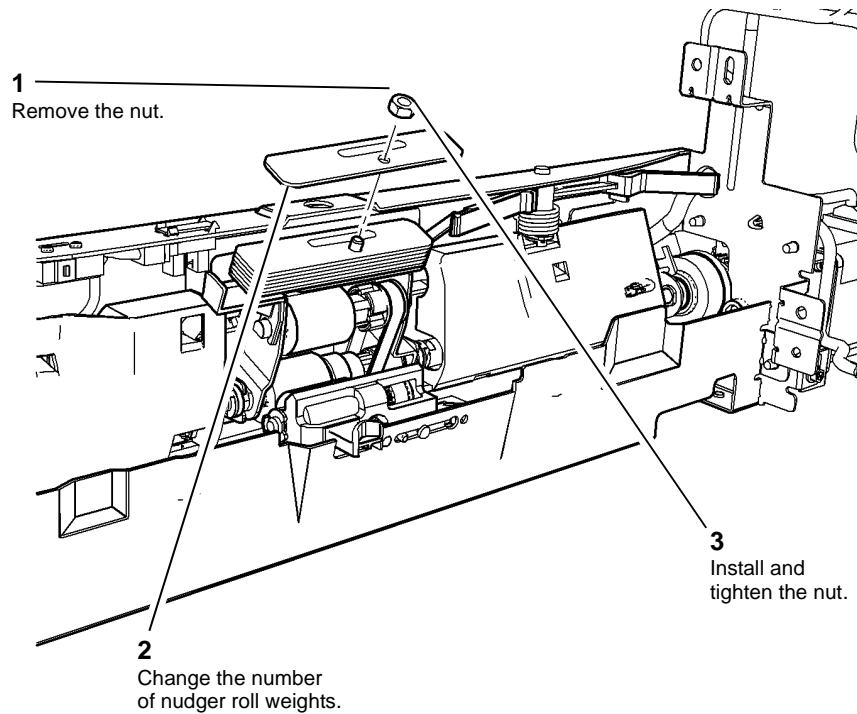


Figure 2 Weights location

2. Remove the LVPS module to access the nudger roll weights, [REP 1.1](#).

- Change the number of nudger roll weights to adjust the downward pressure of the nudger roll, [Figure 3](#).



W-1-0819-A

Figure 3 Spring seat adjustment

- Install the LVPS module, [REP 1.1](#).
- 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	160	0 to 500
>216mm & ≤365mm	500-021	SimplexBuckleStepsS2	160	0 to 500
>365mm	500-022	SimplexBuckleStepsS3	160	0 to 500

#### Adjustment

- Adjust the 3 simplex buckle timing NVM values in increments of 10 in accordance with [Table 1](#).
- 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.
- If necessary, repeat steps 1 and 2.
- Record the new values in the machine log book.
- Check the duplex buckle timing.

### Duplex Buckle Timing

#### Check

Check the duplex skew measurement, [IQS 5](#).

Table 2 Simplex

Sheet Size	NVM Code	MVM Name	Default Value	Adjustment Range
≤216mm	500-024	DuplexBuckleStepsD1	78	0 to 1000
>216mm & ≤365mm	500-025	DuplexBuckleStepsD2	78	0 to 1000
>365mm	500-026	DuplexBuckleStepsD3	78	0 to 1000

#### Adjustment

- Adjust the 3 duplex buckle timing NVM value in increments of 10 in accordance with [Table 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.
- If necessary, repeat steps 1 and 2.
- Record the new values in the machine log book.
- 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:** Reducing the nip pressure will make the retard action less aggressive and may lessen the occurrence of misfeeds. Increasing the nip pressure will make the retard action more aggressive and may lessen the occurrence of multi-feeds.

### 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](#).

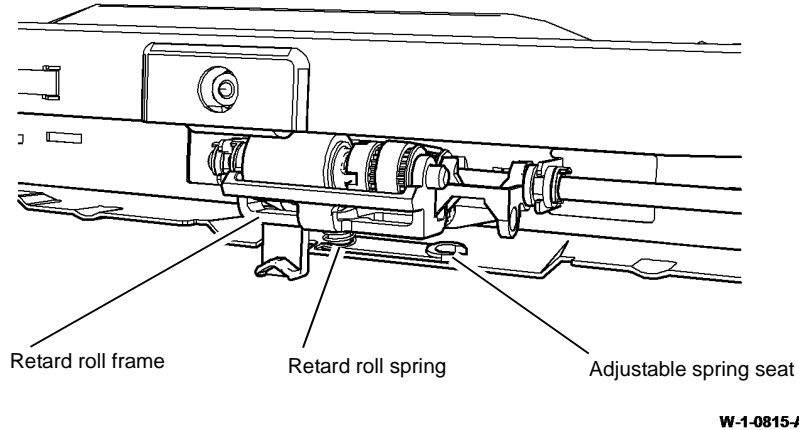
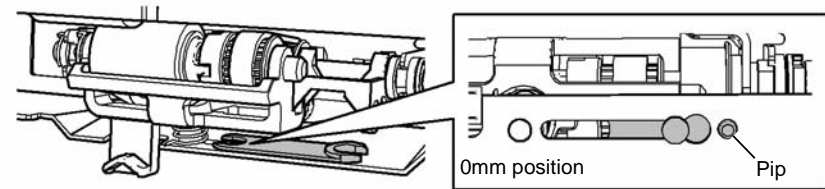


Figure 1 Spring seat position

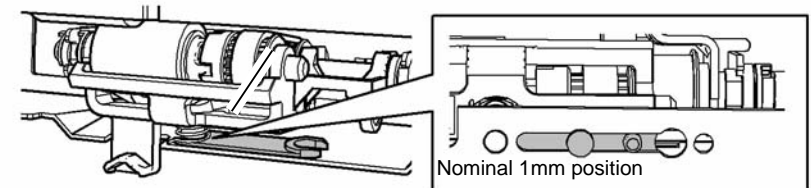
### Adjustment

**NOTE:** The feeders have the spring seat set in the nominal (1mm) position during manufacture, [Figure 2](#).

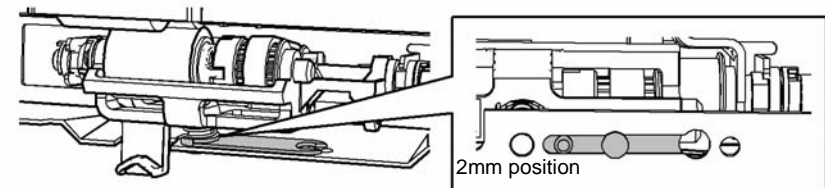
1. Change the position of the spring seat to adjust the nip pressure of the retard roll, [Figure 2](#):
  - Change the spring seat to the 2mm position to increase the retard roll pressure.
  - Change the spring seat to the 0mm position to decrease the retard roll pressure.



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.

W-1-0816-A

Figure 2 Spring seat adjustment

2. Install the paper feed assembly. Check the paper feeding performance.



# 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, then place in a black bag.
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.

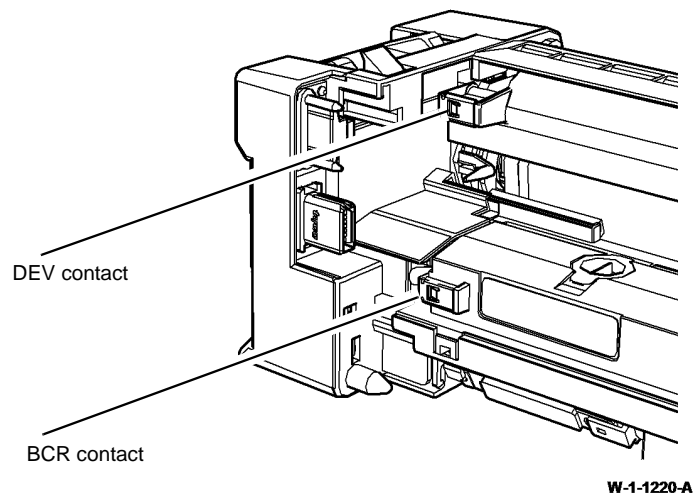


Figure 1 DEV and BCR contacts

3. 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.

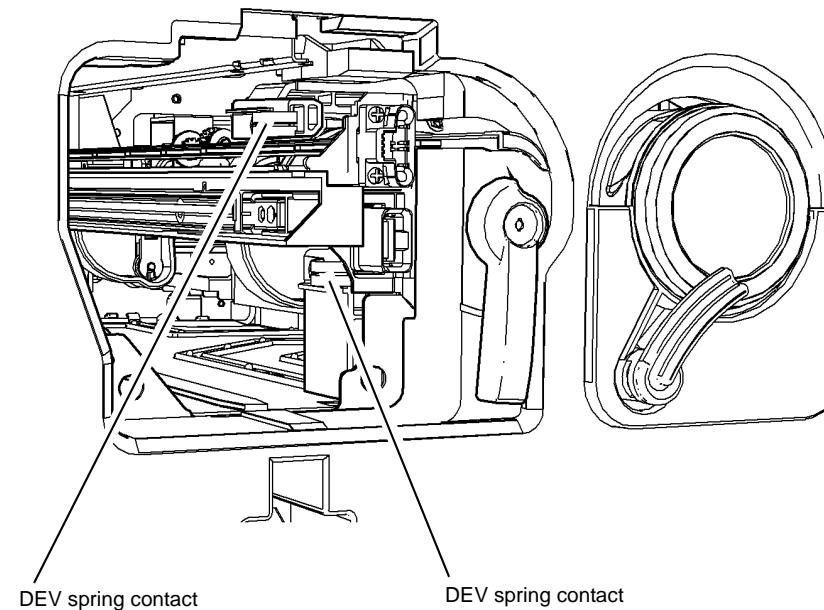


Figure 2 DEV and BCR spring contacts

4. Clean the LED print head, ADJ 60.4.
5. Remove the toner cartridge, PL 90.17 Item 2.
6. Remove the relevant component:
  - Centre output tray, REP 28.1.
  - Horizontal transport, REP 10.6.
7. Open the left door.
8. 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.

9. 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](#).

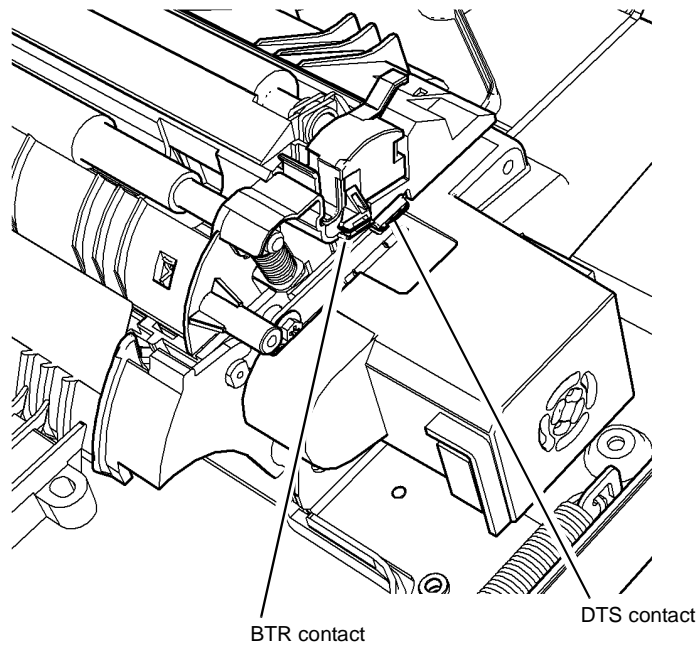


Figure 3 DTS and BTR contacts

W-1-1222-A

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 spring contacts, [Figure 4](#).

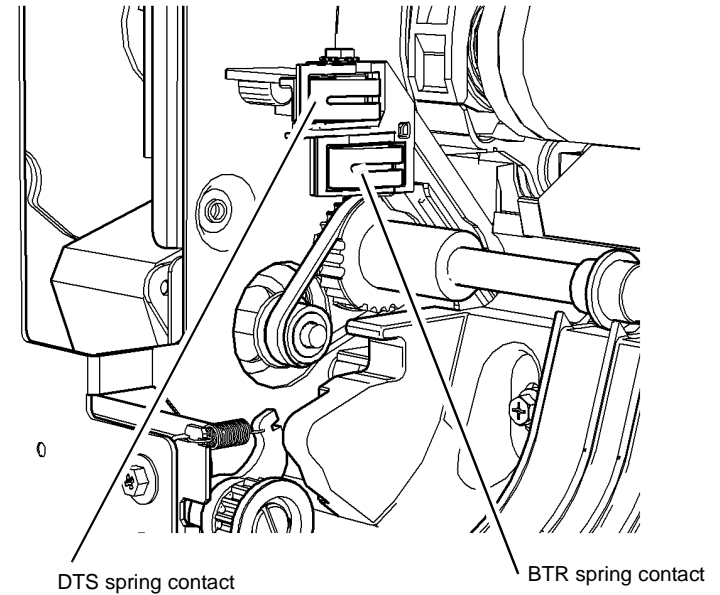


Figure 4 DTS and BTR spring contacts

W-1-1223-A

11. Remove the HVPS, [REP 1.10](#).
12. Use a toner vacuum cleaner to carefully clean the inside of the HVPS cover.
13. 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](#).

14. To clean the bias transfer roll, [PL 80.15 Item 3](#), perform the steps that follow:
  - a. Switch on the machine, [GP 14](#). Make 20 blank copies.
  - b. If contamination persists, use a toner vacuum cleaner to very carefully clean the bias transfer roll.

# 5 Parts Lists

## PL 1 - Standby Power

PL 1.10 Power and Control Assembly.....	5-3
PL 1.12 Interlock Switches.....	5-4
PL 1.15 Main Power Cables.....	5-5

## PL 2 - User Interface

PL 2.10 User Interface .....	5-6
------------------------------	-----

## PL 3 - Machine Run Control

PL 3.22 Single Board Controller PWB Module.....	5-7
---	-----

## PL 5 - SPDH

PL 5.10 SPDH (Complete), Covers, SPDH PWB.....	5-8
PL 5.17 SPDH Transport Assembly.....	5-9
PL 5.18 SPDH Drive Assembly.....	5-10
PL 5.19 SPDH Read Assembly.....	5-11
PL 5.20 SPDH Top Cover Assembly.....	5-12
PL 5.25 SPDH Separation Assembly.....	5-13
PL 5.30 Input Tray Assembly.....	5-14

## PL 10 - Copy Transportation and Fusing

PL 10.8 Fuser Module.....	5-15
PL 10.10 Inverter Assembly (1 of 4).....	5-16
PL 10.11 Inverter Assembly (Centre Output Tray) (2 of 4).....	5-17
PL 10.12 Inverter Assembly (Horizontal Transport) (3 of 4).....	5-18
PL 10.13 Inverter Assembly (4 of 4).....	5-19
PL 10.14 Exit Drive Assembly.....	5-20
PL 10.15 Horizontal Transport Assembly (1 of 2).....	5-21
PL 10.16 Horizontal Transport Assembly (2 of 2).....	5-22

## PL 12 - 2K LCSS

PL 12.10 2K LCSS Covers.....	5-23
PL 12.15 2K LCSS Docking Latch.....	5-24
PL 12.20 2K LCSS Hole Punch Unit.....	5-25
PL 12.25 2K LCSS Paddle Shaft Assembly.....	5-26
PL 12.30 2K LCSS Bin 1 Control Components (1 of 2).....	5-27
PL 12.35 2K LCSS Bin 1 Control Components (2 of 2).....	5-28
PL 12.40 2K LCSS Paper Entry Transport.....	5-29
PL 12.45 2K LCSS Tamper Assembly.....	5-30
PL 12.50 2K LCSS Ejector Assembly.....	5-31
PL 12.55 2K LCSS Staple Head Unit/Traverse Assembly.....	5-32
PL 12.60 2K LCSS Bin 0 Entry.....	5-33
PL 12.65 2K LCSS Bin 1 Entry.....	5-34
PL 12.70 2K LCSS Entry Guide Cover/Jam Clearance Guide.....	5-35
PL 12.75 2K LCSS Electrical.....	5-36

## PL 12 - LVF Booklet Maker

PL 12.320 LVF BM - Covers.....	5-37
PL 12.325 LVF BM Docking Latch.....	5-38

PL 12.330 LVF BM Hole Punch Unit.....	5-39
PL 12.335 LVF BM Paddle Shaft Assembly.....	5-40
PL 12.340 LVF BM Bin 1 Control Components (1 of 2).....	5-41
PL 12.345 LVF BM Bin 1 Control Components (2 of 2).....	5-42
PL 12.350 LVF BM Paper Entry Transport.....	5-43
PL 12.355 LVF BM Tamper Assembly.....	5-44
PL 12.360 LVF BM Ejector Assembly.....	5-45
PL 12.365 LVF BM Staple Head Unit/Traverse Assembly.....	5-46
PL 12.370 LVF BM Bin 0 Entry.....	5-47
PL 12.375 LVF BM Bin 1 Entry.....	5-48
PL 12.380 LVF BM Booklet Tamper Assembly.....	5-49
PL 12.385 LVF BM Compiler Entrance Guides.....	5-50
PL 12.390 LVF BM Compiler Guide Assembly.....	5-51
PL 12.395 LVF BM Booklet Stapler Assembly.....	5-52
PL 12.400 LVF BM Back Stop Assembly.....	5-53
PL 12.405 LVF BM Crease Blade Assembly.....	5-54
PL 12.410 LVF BM Crease Roll Assembly (1 of 3).....	5-55
PL 12.415 LVF BM Crease Roll Assembly (2 of 3).....	5-56
PL 12.420 LVF BM Crease Roll Assembly (3 of 3).....	5-57
PL 12.425 LVF BM Electrical.....	5-58

## PL 17 - Secure Access

PL 17.00 Secure Access Additions.....	5-59
---------------------------------------	------

## PL 20 - Fax

PL 20.05 Fax Module.....	5-60
--------------------------	------

## PL 25 - Accessories

PL 25.10 Convenience Stapler.....	5-61
-----------------------------------	------

## PL 26 - Consumables and Tools

PL 26.10 Consumables and Tools (1 of 2).....	5-62
PL 26.11 Consumables and Tools (2 of 2).....	5-63

## PL 28 - Covers

PL 28.10 Main Covers.....	5-64
PL 28.11 Front Door Assembly.....	5-65
PL 28.15 Covers.....	5-66

## PL 31 - Maintenance/Installation/Removal Kits

PL 31.11 Maintenance/Installation/Removal Kits (1 of 3).....	5-67
PL 31.12 Maintenance/Installation/Removal Kits (2 of 3).....	5-68
PL 31.14 Maintenance/Installation/Removal Kits (3 of 3).....	5-69
PL 31.35 Line 1 Fax Kits.....	5-70
PL 31.40 Line 2 Fax Kits.....	5-71

## PL 40 - Main Drive Assembly

PL 40.15 Main Drive Module.....	5-72
---------------------------------	------

**PL 60 - Imaging**

PL 60.15 Scanner Module, CVT/Document Glass .....	5-73
PL 60.20 Scanner Electrical Components .....	5-74
PL 60.25 Scan Carriage Assembly .....	5-75
PL 60.30 Side 2 Scan Assembly .....	5-76
PL 60.35 LED Print Head Module .....	5-77

**PL 70 - Paper Supply**

PL 70.10 Tray 1 and 2 Assembly .....	5-78
PL 70.18 Tray 3 Assembly .....	5-79
PL 70.19 Tray 4 Assembly .....	5-80
PL 70.21 Elevator Motor and Control PWB.....	5-81
PL 70.26 Tray 3 and 4 Assembly Covers.....	5-82
PL 70.35 Bypass Tray Assembly .....	5-83

**PL 80 - Paper Transport**

PL 80.10 Left Door Assembly (1 of 2) .....	5-84
PL 80.11 Left Door Assembly (2 of 2) .....	5-85
PL 80.15 Registration Transfer Assembly.....	5-86
PL 80.17 Registration Transport .....	5-87
PL 80.22 Duplex Transport Assembly.....	5-88
PL 80.25 Tray 1 and 2 Paper Feed Assembly (1 of 2).....	5-89
PL 80.26 Tray 1 and 2 Paper Feed Assembly (2 of 2).....	5-90
PL 80.32 Tray 3 Paper Feed Assembly .....	5-91
PL 80.33 Tray 4 Paper Feed Assembly .....	5-92
PL 80.36 Tray 4 Transport Assembly.....	5-93

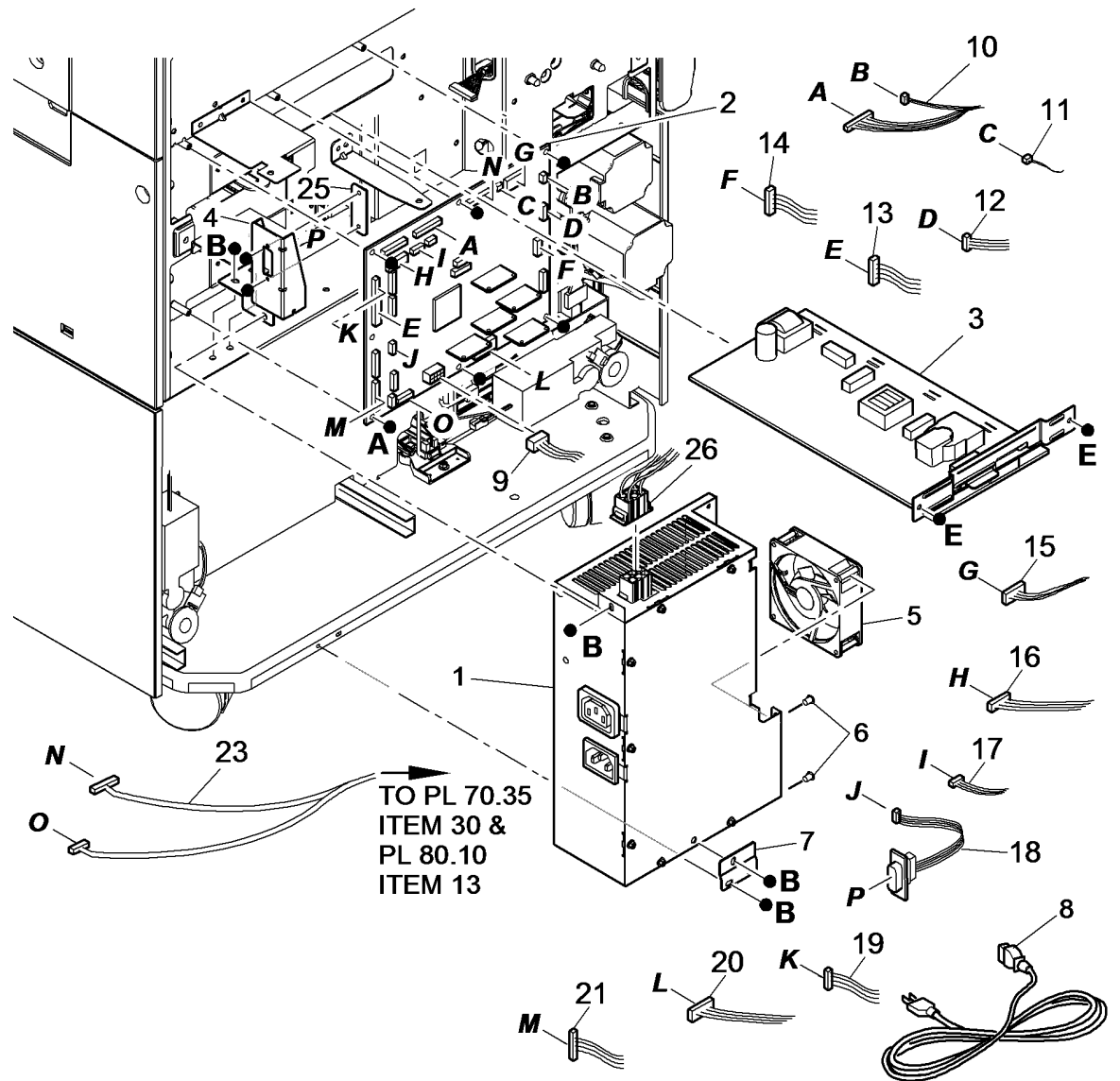
**PL 90 - Xerographics**

PL 90.10 High Voltage Power Distribution Assembly .....	5-94
PL 90.15 Print Cartridge Cooling .....	5-95
PL 90.17 Toner/Print Cartridges .....	5-96
Common Hardware .....	5-97



## PL 1.10 Power and Control Assembly

Item	Part	Description
1	105K37664	LVPS module (REP 1.1)
2	960K85568	IOT PWB (REP 3.1)
3	105K37653	HVPS (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 (Not Spared)
10	-	IOT PWB to HVPS harness (Not Spared)
11	-	IOT PWB to Toner cartridge motor harness (Not Spared)
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) (Not Spared) (See NOTE 1)
19	-	IOT PWB to Horizontal transport harness (Not Spared)
20	-	IOT PWB to Tray 4 PWB harness (Not Spared)
21	-	IOT PWB to HCF sensor harness (Not Spared)
22	-	Not used
23	-	IOT PWB to Left door harness (Not Spared)
24	-	Not used
25	-	Blanking plate (Not Spared) (See NOTE 2)
26	-	LVPS to Fuser module AC power harness (Not Spared)

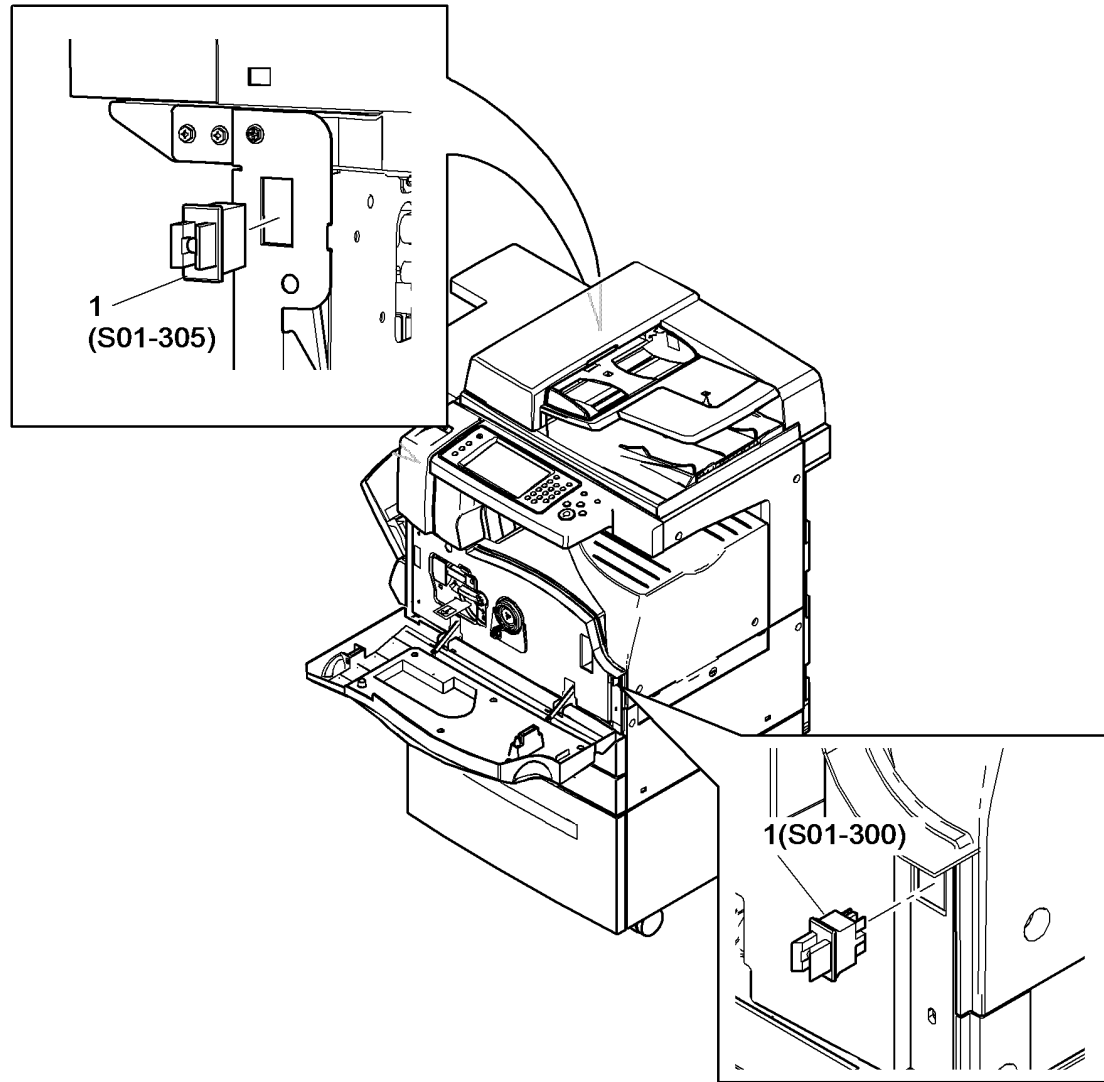


**NOTE:** 1. Only used when a Finisher is installed.

**NOTE:** 2. Only used when a Centre tray is installed.

## PL 1.12 Interlock Switches

Item	Part	Description
1	110E21780	Front door interlock switch (S01-300) (REP 1.8)/ Left door interlock switch (S01-305) (REP 1.9)



W-8-0014-A

## PL 1.15 Main Power Cables

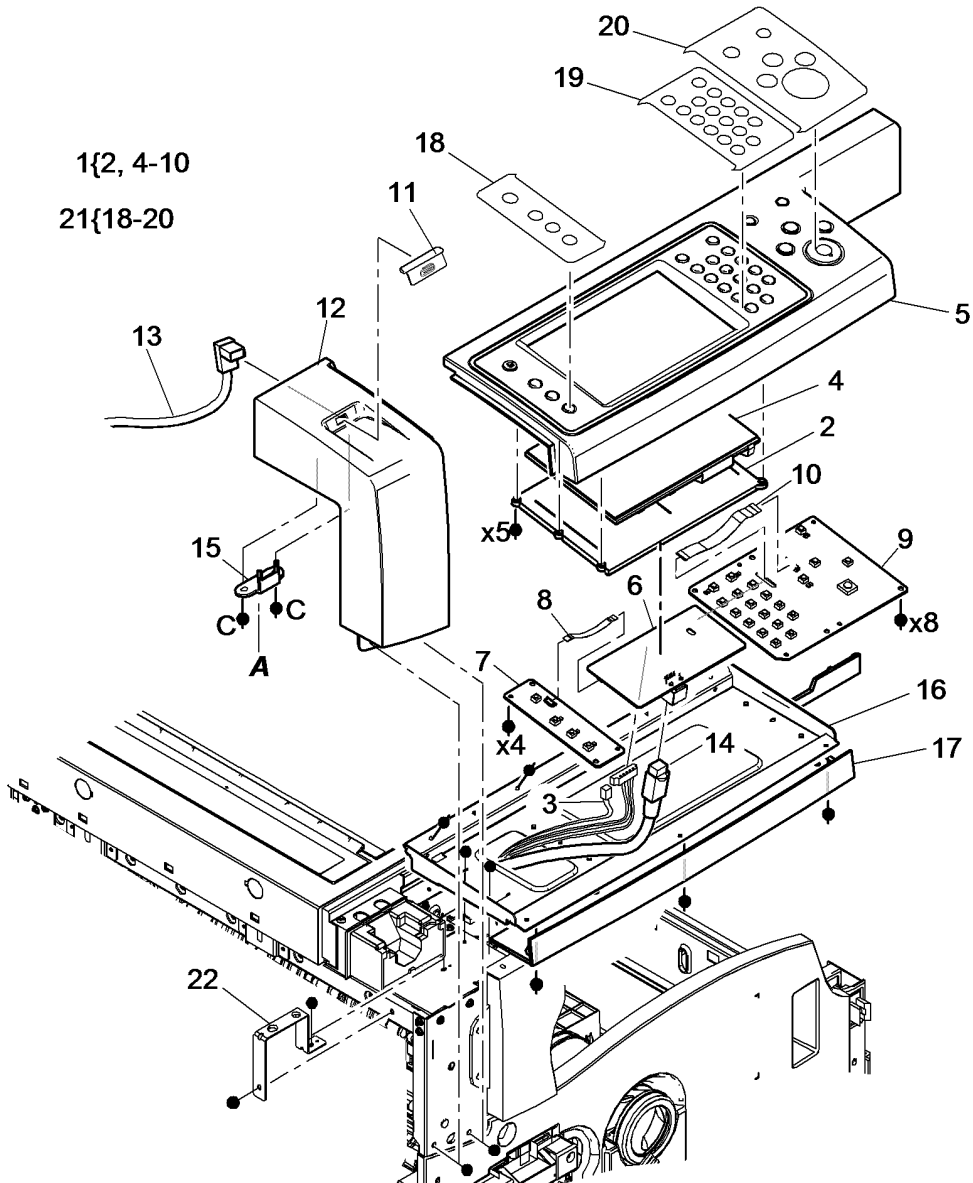
Item	Part	Description
1	–	Main power cord (see below for variants)
–	152S06414	United Kingdom (45-55 ppm)
–	–	USSG/XCL (P/O PL 31.14 Item 9)
–	152S06413	XE
–	152S06415	Denmark (45-55 ppm)
–	–	South Africa (Not Spared)
–	152S06416	Switzerland (45-55 ppm)
–	152S06402	Argentina (45-55 ppm)

**NO EXPLODED  
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## PL 2.10 User Interface

Item	Part	Description
1	-	UI assembly (Not Spared) (USSG/XCL) (REP 2.1)
-	-	UI assembly (Not Spared) (XE) (REP 2.1)
2	-	UI screen clamp (P/O PL 2.10 Item 1)
3	-	SBC PWB to UI Control PWB power/comms harness (Not Spared)
4	123K08651	UI touch screen (REP 2.2)
5	-	UI housing (P/O PL 2.10 Item 1)
6	960K79681	UI Control PWB (REP 2.3)
7	960K72651	UI Status PWB
8	952K26981	Control to status PWB ribbon cable
9	960K79690	UI Keyboard PWB
10	952K26990	Control to keyboard PWB ribbon cable
11	-	USB socket cover (Not Spared)
12	-	Left frame cover (REF: PL 28.10 Item 6)
13	-	SBC PWB to UI USB port harness (Not Spared)
14	-	SBC PWB to UI Control PWB data cable (Not Spared)
15	-	Clamp (Not Spared)
16	-	UI support (Not Spared)
17	-	Lower cover (Not Spared)
18	-	Left overlay label (P/O PL 2.10 Item 21)
19	-	Middle overlay label (P/O PL 2.10 Item 21)
20	-	Right overlay label (P/O PL 2.10 Item 21)
21	-	Overlay label kit (REF: PL 31.12 Item 7)
22	-	Left frame cover support (Not Spared)

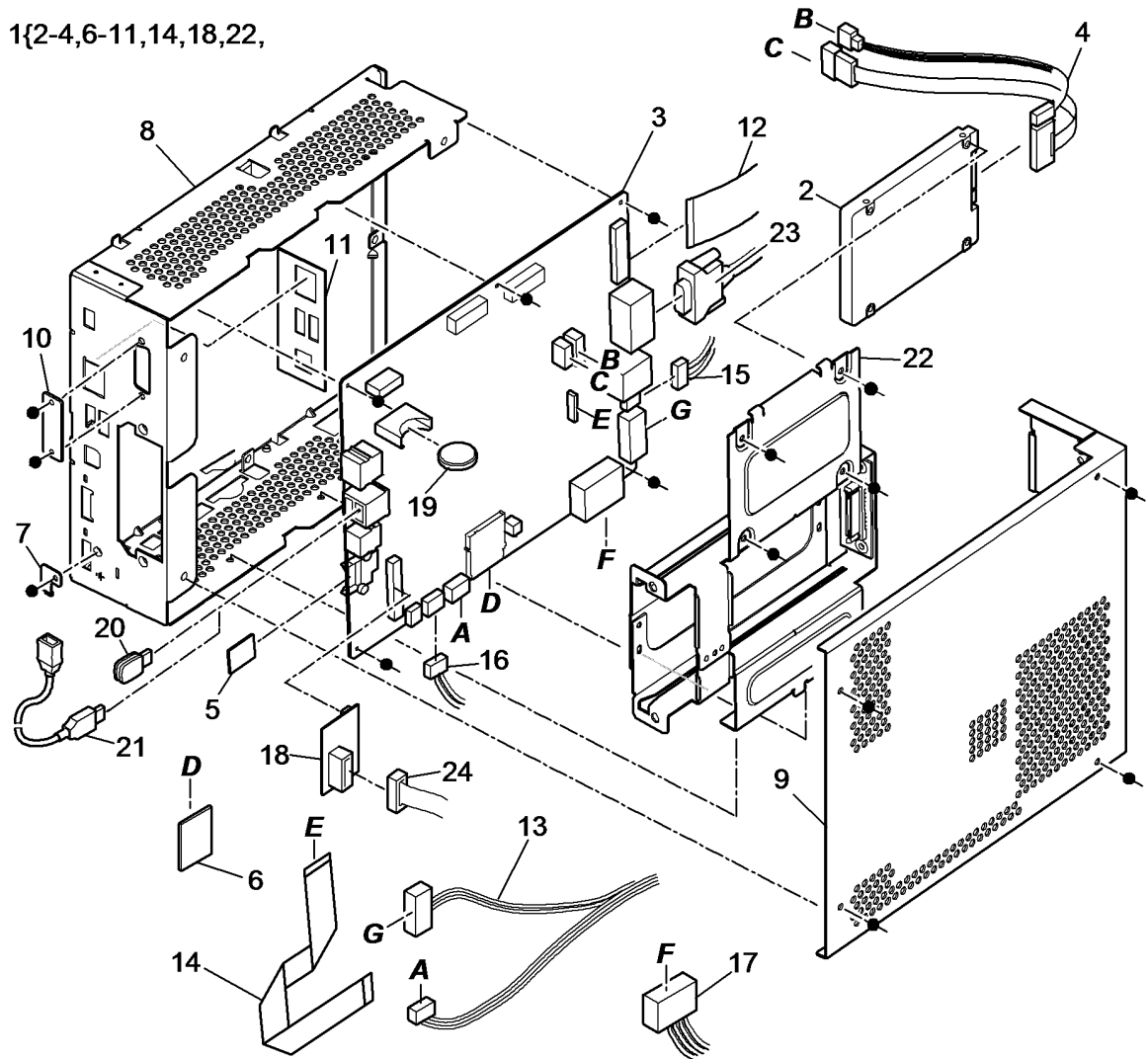


W-8-0003-A

## PL 3.22 Single Board Controller PWB Module

Item	Part	Description
1	–	Single board controller module (Not Spared) (REP 3.6)
2	121E28130	Hard disk drive (250Gb) (See NOTE 2) (REP 3.2)
3	960K85504	SBC PWB (REP 3.3)
4	–	HDD cable (Not Spared)
5	–	SIM card (P/O PL 31.14 Item 2)
6	237E27475	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 (Not Spared)
15	–	SBC PWB to UI control PWB power/comms harness (Not Spared)
16	–	SBC PWB to IOT PWB harness (Not Spared)
17	–	SBC PWB to LVPS harness (Not Spared)
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 22)
24	–	Foreign device interface ribbon cable (P/O PL 31.12 Item 11) (REP 3.5)

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W-8-0006-A

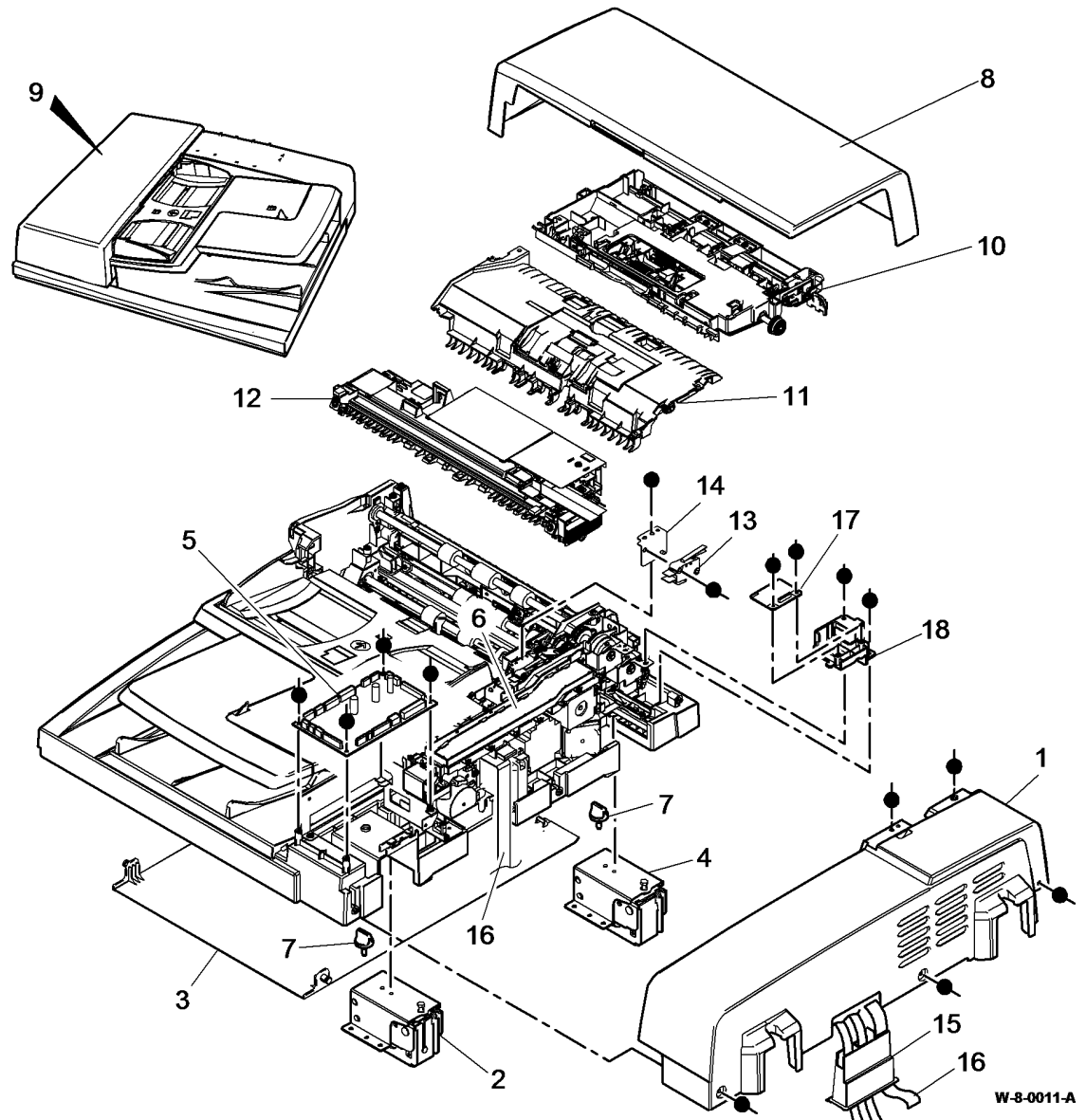
**NOTE:** 1. Also supplied as part of PL 31.12 Item 11.

**NOTE:** 2. Refer to GP 41.

## PL 5.10 SPDH (Complete), Covers, SPDH PWB

Item	Part	Description
1	848K83770	Rear cover
2	-	Right counterbalance (Not Spared) (ADJ 5.2, ADJ 5.3)
3	090K02600	Document pad (REP 5.23)
4	-	Left counterbalance (Not Spared) (ADJ 5.2, ADJ 5.3)
5	960K72570	SPDH PWB
6	117E43830	Side 2 scan assembly power ribbon cable (REP 5.22)
7	826E66710	Thumbscrew
8	-	Top cover (REF: PL 5.20)
9	084K42693	SPDH (complete) (REF: PL 5.19)
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	110E21490	Top cover interlock switch (S05- 305)
14	-	Mounting bracket (P/O PL 5.10 Item 13)
15	-	Harness guide (REF: PL 60.15)
16	117E43800	Side 2 scan assembly data ribbon cable (REP 5.22)
17	960K79450	Side 2 LED drive PWB
18	-	Side 2 LED drive PWB support (P/ O PL 5.10 Item 9)

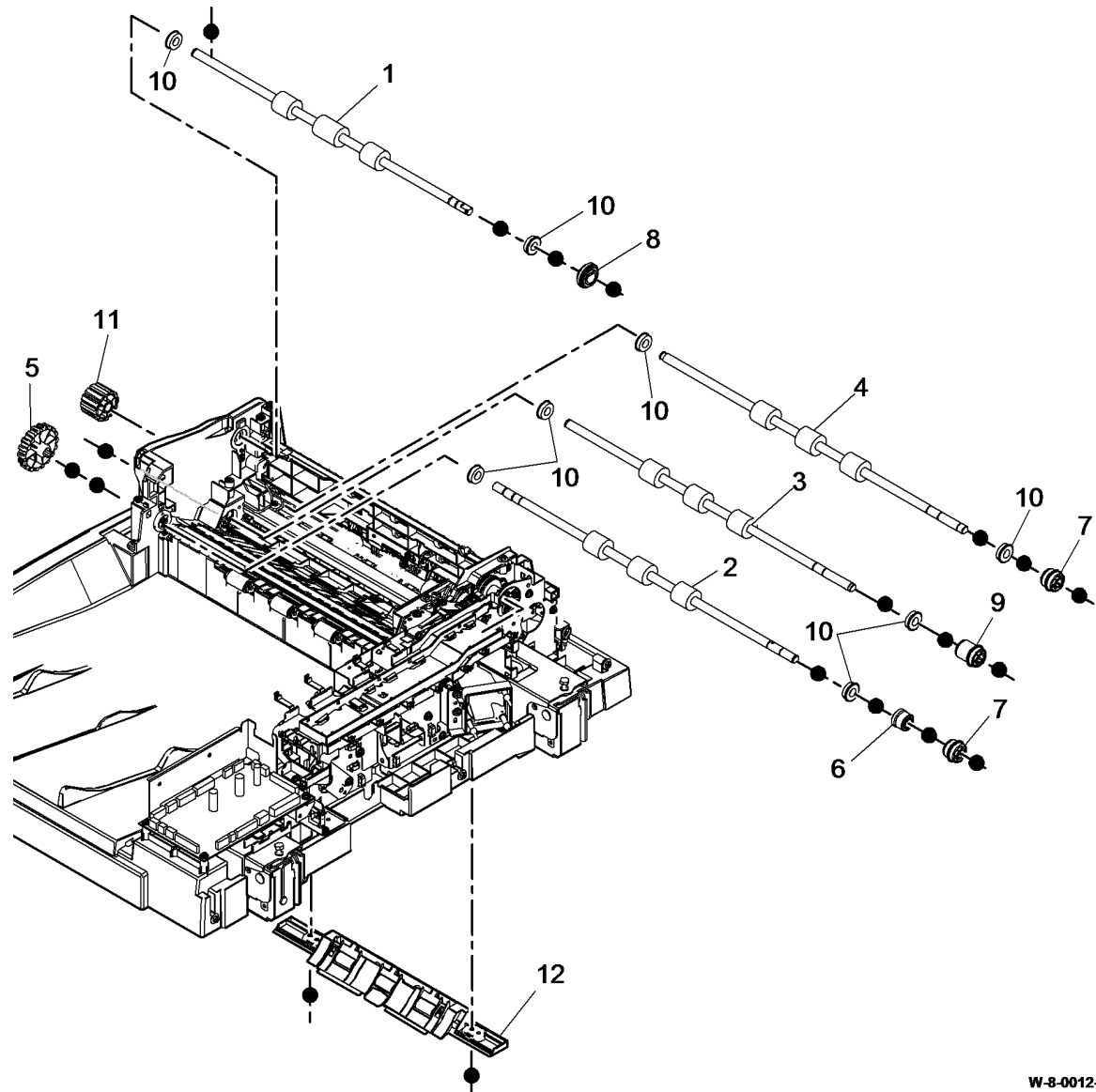
**NOTE:** To clean the SPDH, refer to ADJ 5.4.



W-8-0011-A

## PL 5.17 SPDH Transport Assembly

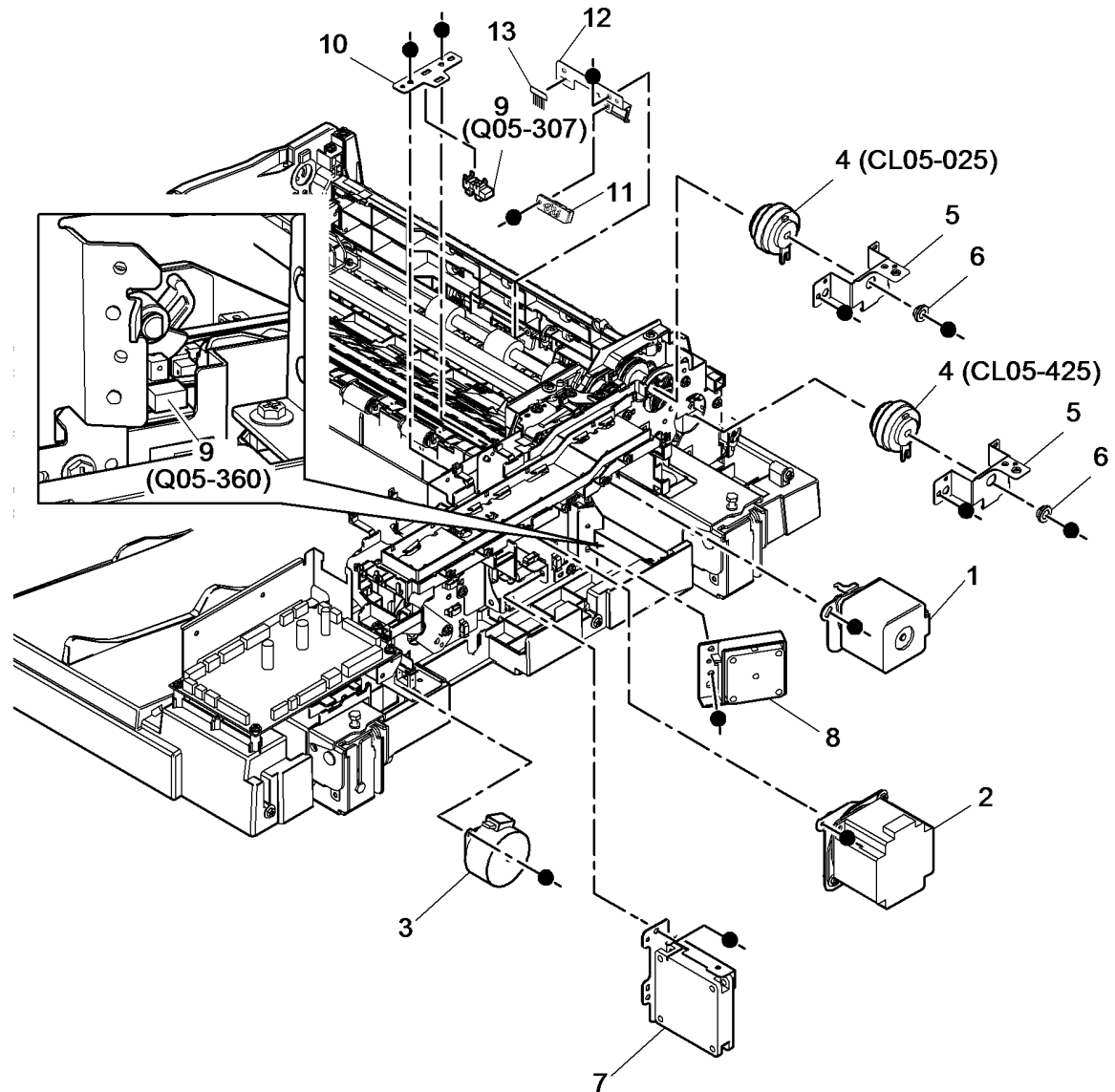
Item	Part	Description
1	059K84040	Takeaway roll assembly (REP 5.5)
2	059K84070	Exit roll assembly (REP 5.7)
3	059K84050	Mid scan roll assembly (REP 5.18)
4	059K84060	Pre scan roll assembly (REP 5.17)
5	–	Exit jam clearance knob (P/O PL 5.19 Item 24) (REP 5.7)
6	–	Idler gear (P/O PL 5.19 Item 24)
7	–	Drive gear (P/O PL 5.19 Item 24)
8	–	Gear (P/O PL 5.19 Item 24)
9	–	Pre scan pulley (P/O PL 5.19 Item 24)
10	–	Bearing (P/O PL 5.19 Item 24)
11	–	Pre scan jam clearance knob (P/O PL 5.19 Item 24)
12	059K84880	Lower pre scan roll assembly (REP 5.6)



W-8-0012-A

## PL 5.18 SPDH Drive Assembly

Item	Part	Description
1	127K69270	Read motor (MOT05-030) (REP 5.13)
2	127K69260	Feed motor (MOT05-020) (REP 5.12)
3	127K69250	Tray elevator motor (MOT05-390) (REP 5.24)
4	005E35810	Feed clutch (CL05-025)(REP 5.14)/ Takeaway clutch (CL05-425)(REP 5.15)
5	-	Bracket (Not Spared)
6	-	Bearing (Not Spared)
7	127E17510	Motor cooling fan (MOT05-380) (REP 5.20)
8	127E17520	LED cooling fan (MOT05-370) (REP 5.21)
9	130E19040	Lift home position sensor (Q05-307)(REP 5.4)/Calibration home position sensor (Q05-360) (REP 5.11)
10	-	Sensor bracket (Not Spared)
11	130E19060	Reg sensor (Q05-340) (REP 5.10)
12	-	Mounting bracket (Not Spared)
13	-	Static eliminator (Not Spared)

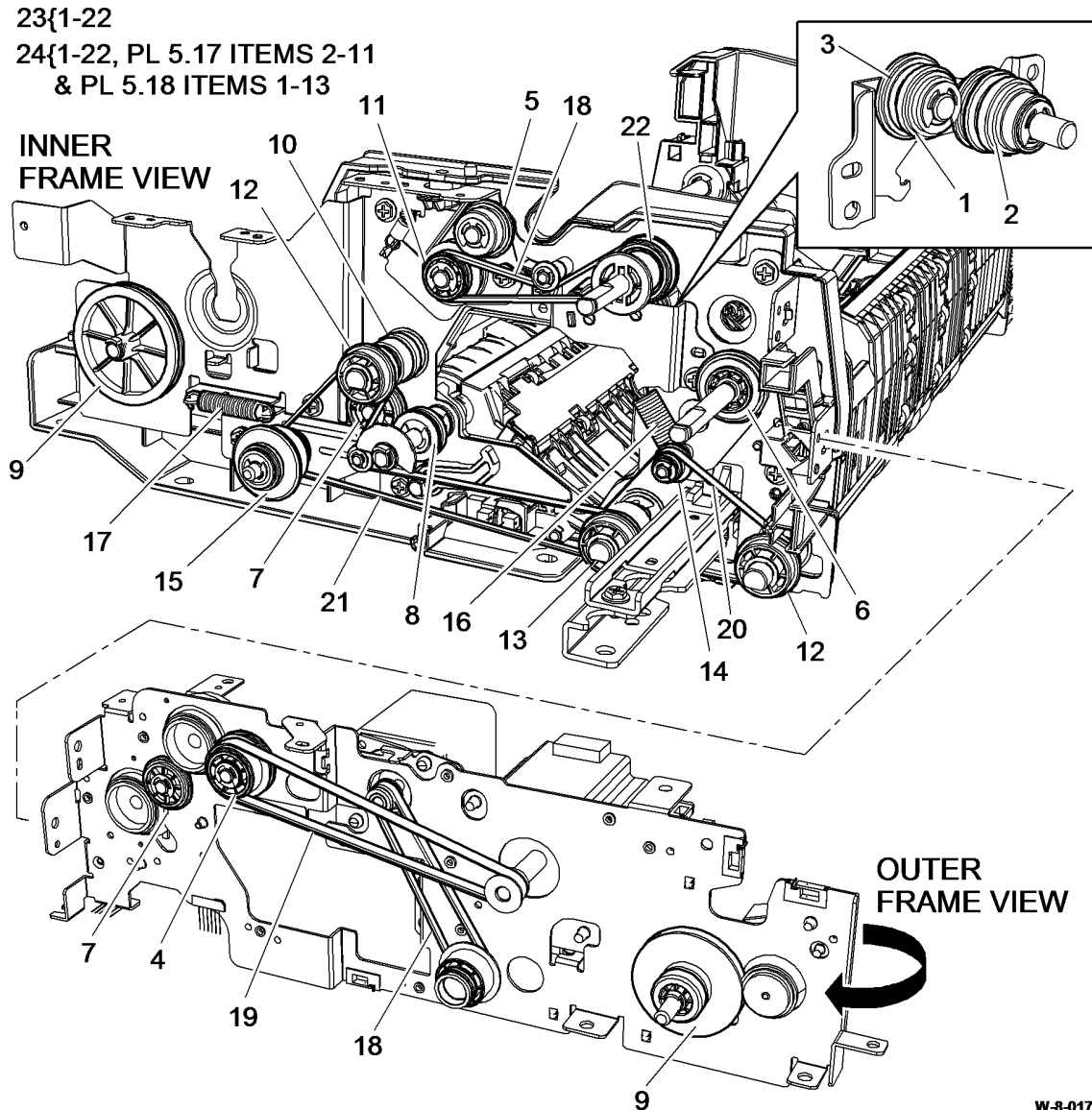


W-8-0151-A



## PL 5.19 SPDH Read Assembly

Item	Part	Description
1	-	Retard roll intermediate drive gear (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	-	Feed assembly drive idler gear (P/O PL 5.19 Item 23)
6	-	Takeaway roll drive gear (P/O PL 5.19 Item 23)
7	-	Calibration shutter idler gear/TAR clutch drive gear (P/O PL 5.19 Item 23)
8	-	Calibration shutter driven gear (P/O PL 5.19 Item 23)
9	-	Tray elevator reduction gear (P/O PL 5.19 Item 23)
10	-	Calibration shutter drive gear (P/O PL 5.19 Item 23)
11	-	Feed assembly drive gear /pulley (P/O PL 5.19 Item 23)
12	-	Exit roll /pre-scan roll drive pulley (P/O PL 5.19 Item 23)
13	-	Mid scan roll drive pulley (P/O PL 5.19 Item 23)
14	-	Pre scan belt idler pulley (P/O PL 5.19 Item 23)
15	-	Read motor intermediate pulley (P/O PL 5.19 Item 23)
16	-	Read motor belt tension spring (P/O PL 5.19 Item 23)
17	-	Mid scan drive belt tension spring (P/O PL 5.19 Item 23)
18	-	Read motor belt / feed assembly drive belt (P/O PL 5.19 Item 23)
19	-	Feed motor belt (P/O PL 5.19 Item 23) (REP 5.12)
20	-	Pre-scan roll drive belt (P/O PL 5.19 Item 23)
21	-	Mid scan drive belt (P/O PL 5.19 Item 23)
22	-	Retard/ feed drive gear/pulley (P/O PL 5.19 Item 23)
23	007K20560	SPDH drive kit (REP 5.25, ADJ 5.1)
24	059K84860	Read assembly (REP 5.23)

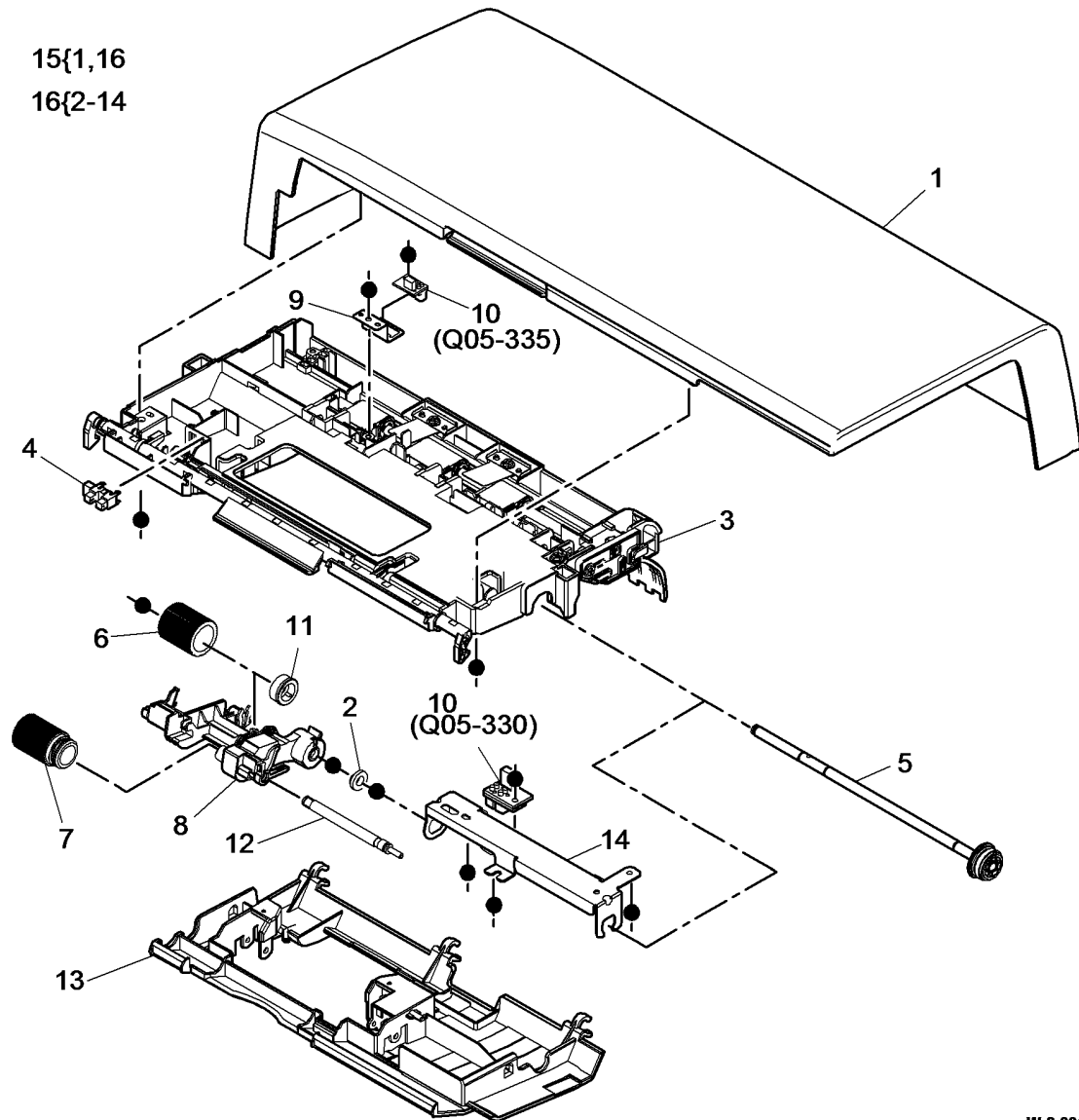


## PL 5.20 SPDH Top Cover Assembly

Item	Part	Description
1	-	Top cover (P/O PL 5.20 Item 15) (REP 5.1)
2	-	Bushing (P/O PL 5.20 Item 15)
3	-	Feed assembly frame (P/O PL 5.20 Item 15) (REP 5.2)
4	130E19040	Stack height sensor (Q05-310) (REP 5.8)
5	-	Shaft (P/O PL 5.20 Item 15)
6	-	Feed roll (P/O PL 31.11 Item 7) (See NOTE 2) (REP 5.2)
7	-	Nudger roll (P/O PL 31.11 Item 7) (See NOTE 2) (REP 5.2)
8	-	Roll housing (P/O PL 5.20 Item 15)
9	-	TAR sensor bracket (P/O PL 5.20 Item 15) (REP 5.8)
10	130E19090	Feed sensor (Q05-330)/ Takeaway sensor(Q05-335) (REP 5.8)
11	-	Spacer (P/O PL 5.20 Item 15)
12	-	Shaft (P/O PL 5.20 Item 15)
13	-	Lower cover (P/O PL 5.20 Item 15)
14	-	Mounting bracket (P/O PL 5.20 Item 15)
15	059K84850	Top cover assembly (REP 5.1)
16	-	Feed assembly (P/O PL 5.20 Item 15) (REP 5.2)

**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.

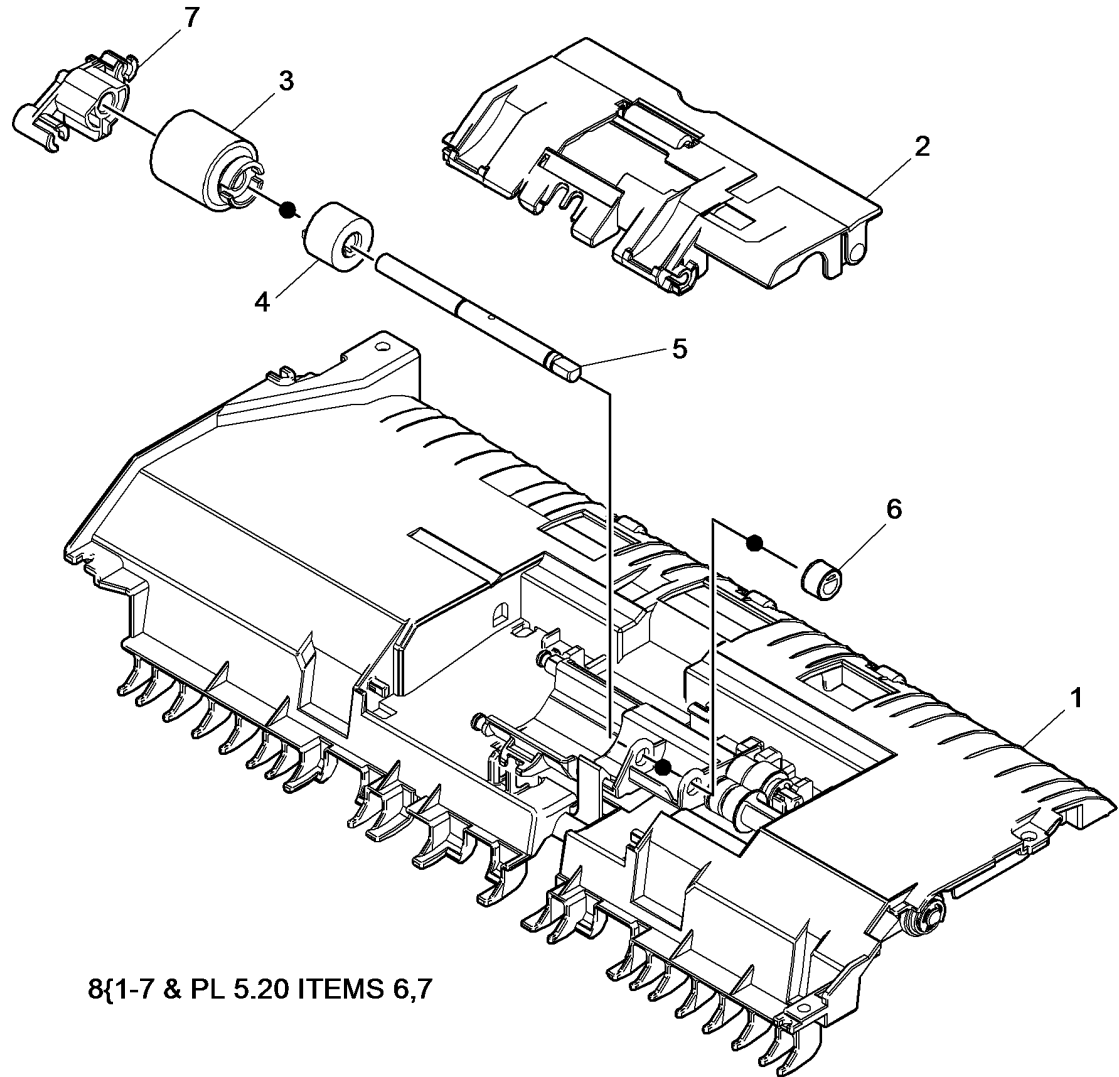


W-8-0013-A

## PL 5.25 SPDH Separation Assembly

Item	Part	Description
1	-	Separation frame (P/O PL 5.25 Item 8)
2	-	Retard roll cover (P/O PL 5.25 Item 8)
3	-	Retard roll (P/O PL 31.11 Item 7) (See NOTE) (REP 5.3)
4	-	Coupling (P/O PL 5.25 Item 8)
5	-	Shaft (P/O PL 5.25 Item 8)
6	-	Cap (P/O PL 5.25 Item 8)
7	-	Retard roll retainer (P/O PL 5.25 Item 8) (REP 5.3)
8	014K11320	Separation assembly (REP 5.3)

**NOTE:** HFSI. To reset the HFSI count, refer to dC135.

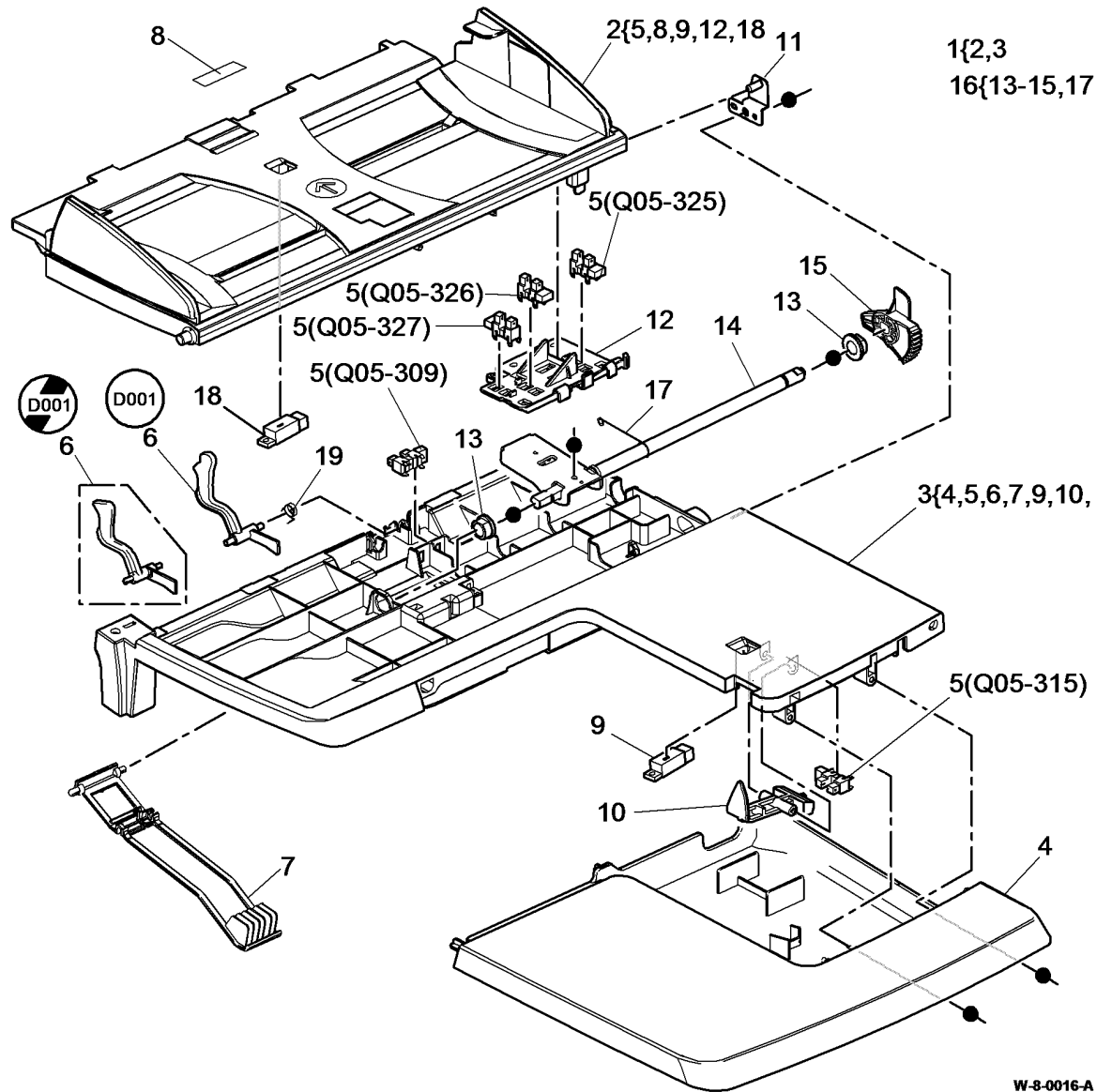


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W-8-0150-A

# PL 5.30 Input Tray Assembly

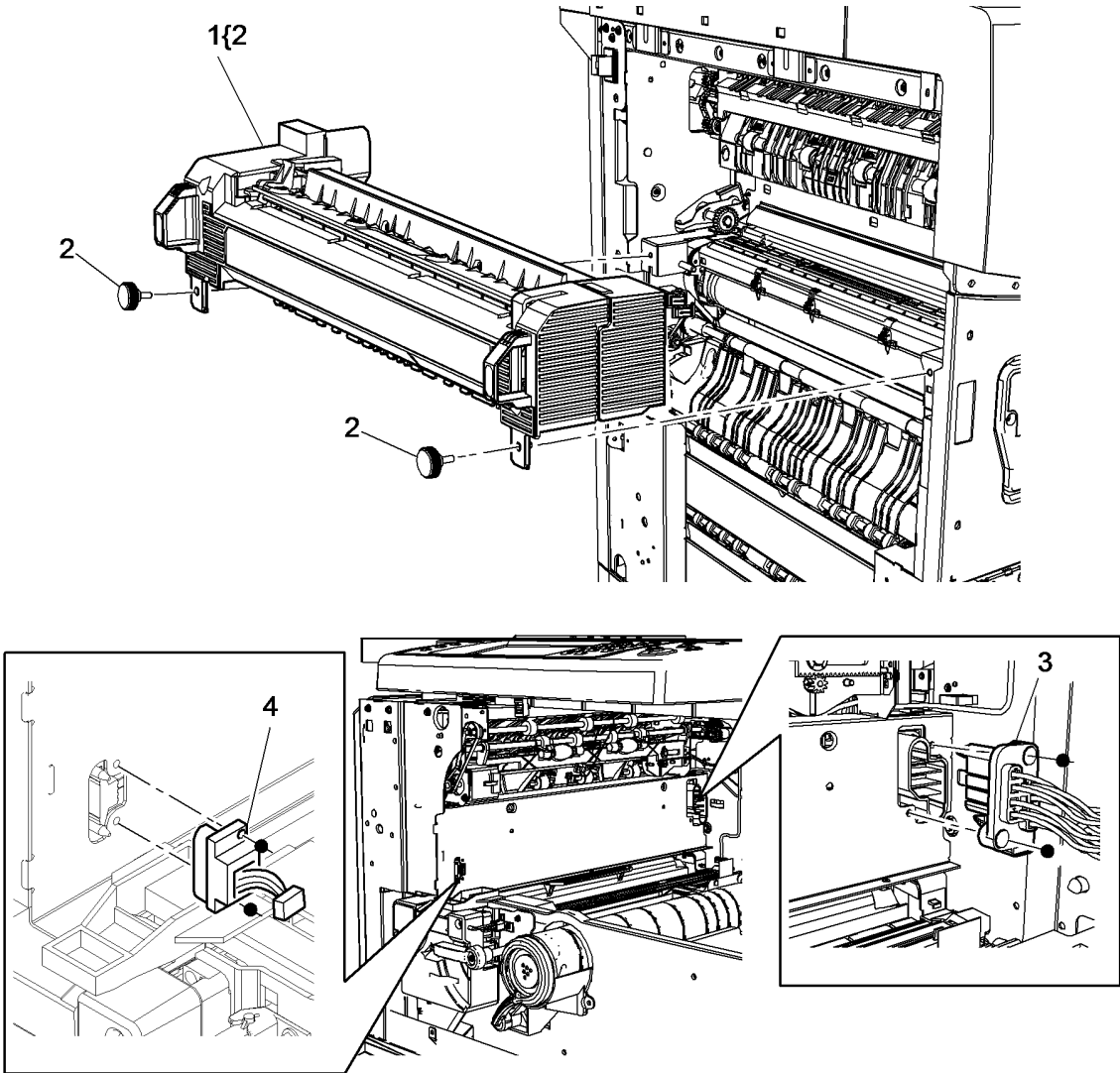
Item	Part	Description
1	-	Input tray assembly (complete) (REP 5.4)
2	050K74650	Tray upper assembly (REP 5.4)
3	607K03220	Tray lower assembly (REP 5.4)
4	-	Tray lower cover (P/O PL 5.30 Item 3)
5	130E19040	Length sensor 1 (Q05-315)(REP 5.9)/Doc present sensor (Q05-309)(REP 5.16)/Width sensor 1 (Q05-325)(REP 5.16)/Width sensor 2(Q05-326)(REP 5.16)/Width sensor 3(Q05-327)(REP 5.16)
6	-	Doc present sensor actuator (P/O PL 31.14 Item 10) (W/TAG D-001) (REP 5.16)
-	-	Doc present sensor actuator (P/O PL 5.30 Item 3) (W/O TAG D-001)
7	-	Restack arm (P/O PL 5.30 Item 1)
8	059K84030	Retard pad
9	130E19080	Length sensor 2 (Q05-320) (REP 5.9)
10	-	Length sensor 1 actuator (P/O PL 5.30 Item 3)
11	-	Tray upper hinge (Not Spared) (REP 5.4)
12	-	Sensor mounting plate (P/O PL 5.30 Item 2)
13	-	Bearing (P/O PL 5.30 Item 16)
14	-	Shaft assembly (P/O PL 5.30 Item 16) (REP 5.4)
15	-	Cam (P/O PL 5.30 Item 16)
16	-	Lift shaft assembly (P/O PL 5.30 Item 3)
17	-	Ground spring (P/O PL 5.30 Item 16)
18	130E19330	Last sheet out sensor (Q05-308) (REP 5.16)
19	-	Actuator spring (P/O PL 31.14 Item 10)



W-8-0016-A

## PL 10.8 Fuser Module

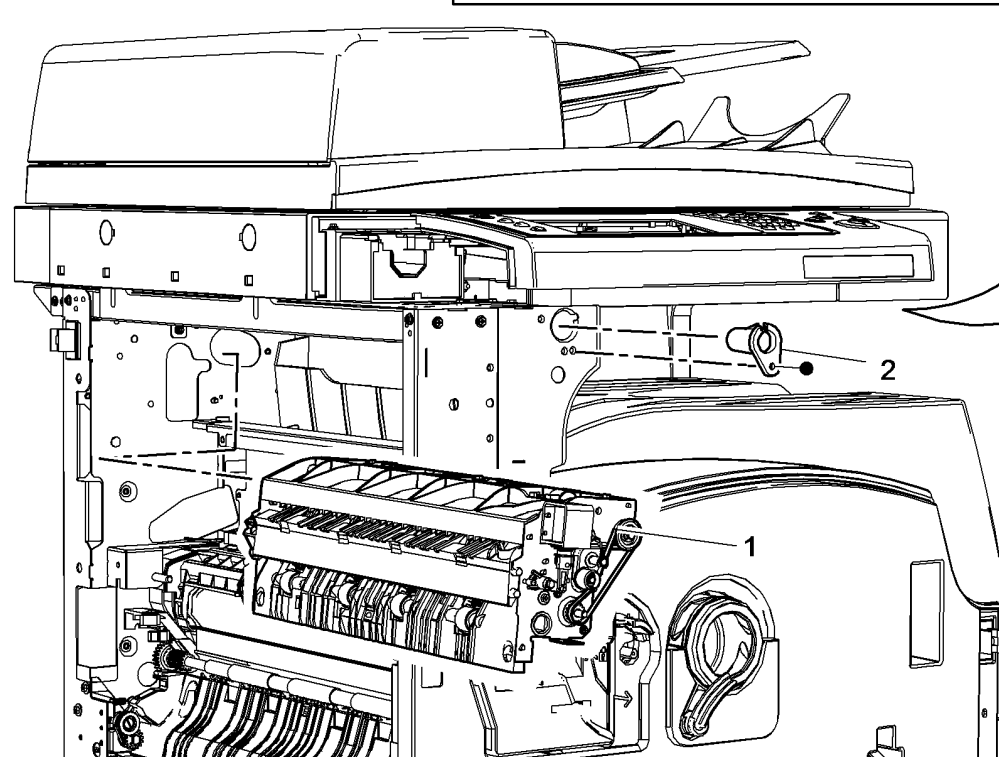
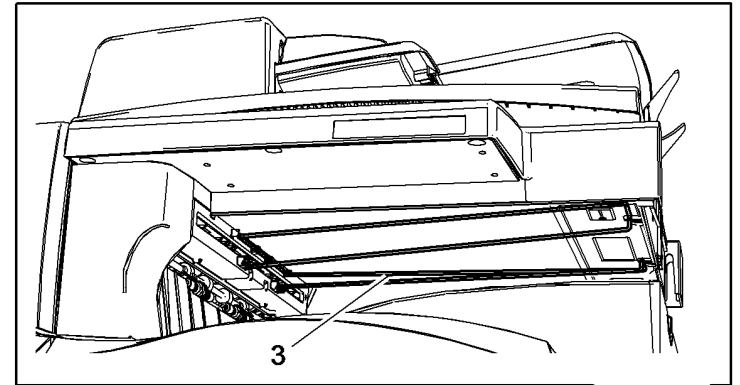
Item	Part	Description
1	109R00848	Fuser module (50Hz)
-	109R00847	Fuser module (60Hz)
2	-	Thumbscrew (P/O PL 10.8 Item 1)
3	-	Fuser connector (Not Spared)
4	-	Fuser CRUM (Not Spared)



W-8-0008-A

## PL 10.10 Inverter Assembly (1 of 4)

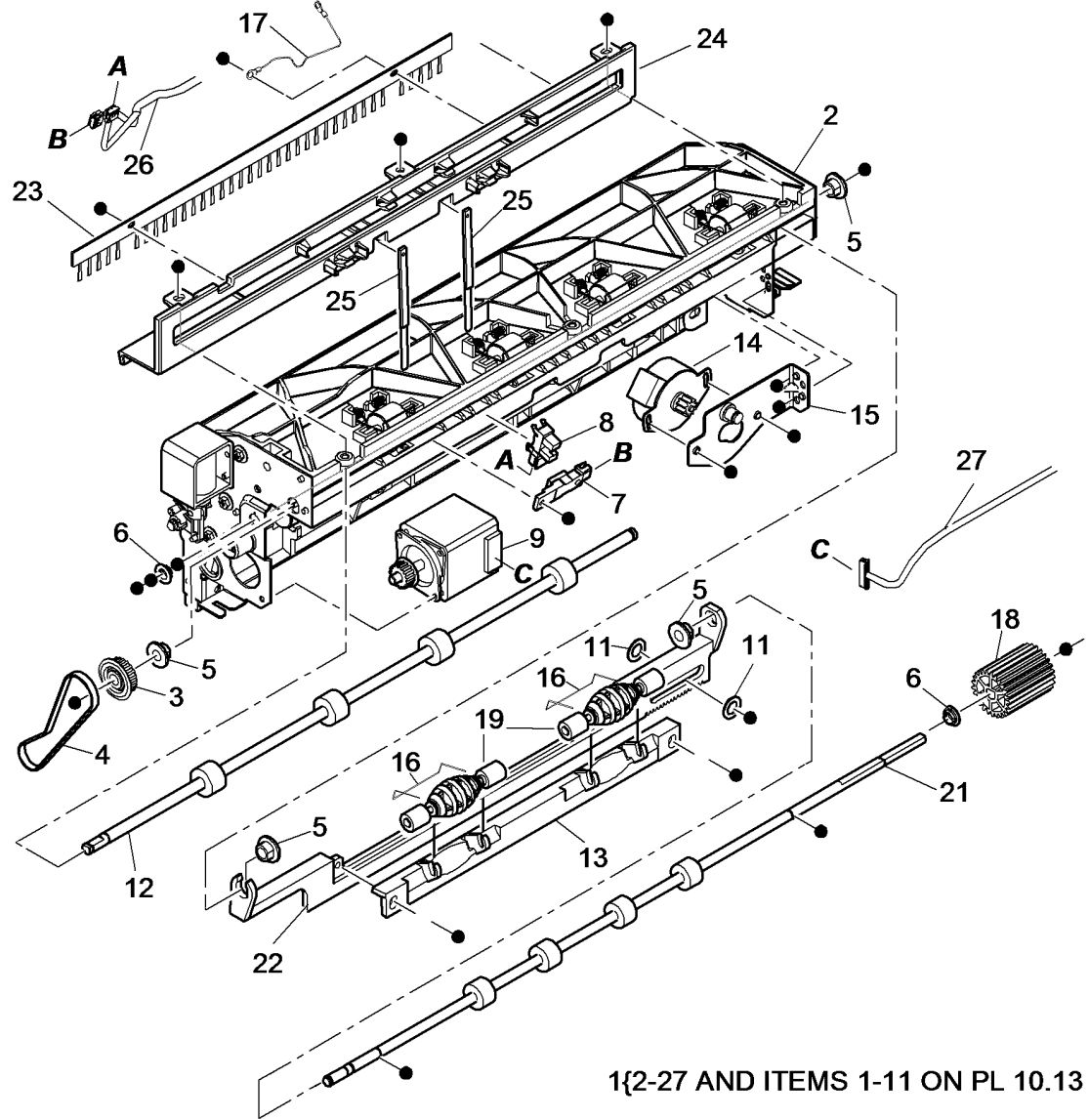
Item	Part	Description
1	-	Inverter assembly (Centre output tray) (REF: PL 10.11, PL 10.13) (REP 10.1)
-	-	Inverter assembly (Horizontal transport) (REF: PL 10.12, PL 10.13) (REP 10.1)
2	-	Inverter locator (Not Spared) (REP 10.1)
3	-	Diverter output guide (Centre output tray) (Not Spared)



W-8-0048-A

# PL 10.11 Inverter Assembly (Centre Output Tray) (2 of 4)

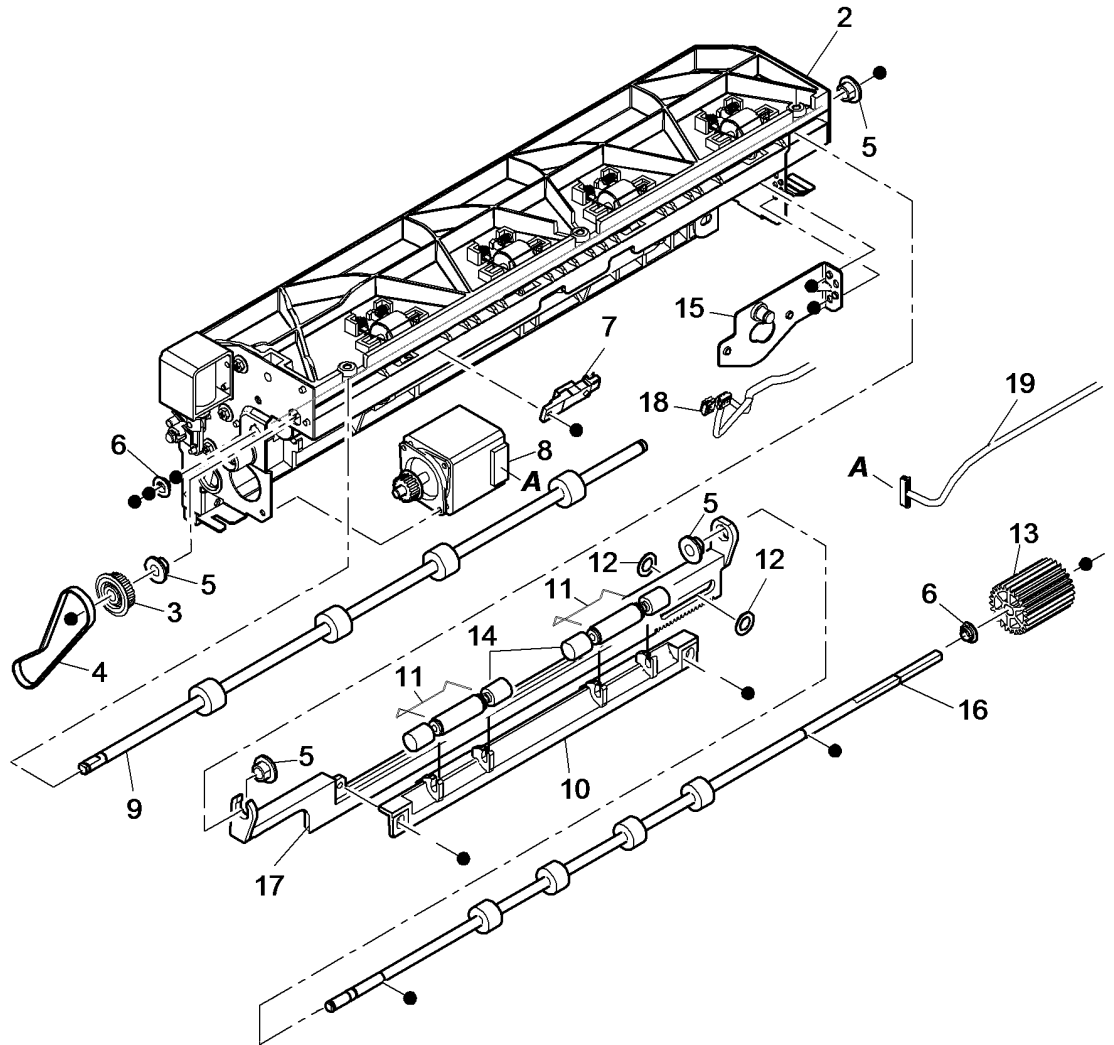
Item	Part	Description
1	112K01218	Inverter assembly (REP 10.1)
2	-	Exit guide housing (P/O PL 10.11 Item 1)
3	-	Pulley (21T) (P/O PL 10.11 Item 1)
4	-	Drive belt (P/O PL 10.11 Item 1)
5	-	Bearing (P/O PL 10.11 Item 1) (REP 10.5)
6	-	Shaft bearing (P/O PL 10.11 Item 1) (REP 10.5)
7	-	Post fuser sensor (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	-	Corrugator roll support (P/O PL 10.11 Item 1)
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	-	Exit roll (P/O PL 10.11 Item 1) (REP 10.5)
22	-	Shuttle (P/O PL 10.11 Item 1) (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 (P/O PL 10.11 Item 1)
26	-	Sensor harness (Not spared)
27	-	Inverter motor harness (Not Spared)



W-8-0055-A

## PL 10.12 Inverter Assembly (Horizontal Transport) (3 of 4)

Item	Part	Description
1	112K01229	Inverter assembly (REP 10.1)
2	-	Exit guide housing (P/O PL 10.12 Item 1)
3	-	Pulley (21T) (P/O PL 10.12 Item 1)
4	-	Drive belt (P/O PL 10.12 Item 1)
5	-	Bearing (P/O PL 10.12 Item 1) (REP 10.5)
6	-	Shaft bearing (P/O PL 10.12 Item 1) (REP 10.5)
7	-	Post fuser sensor (Q10-120) (P/O PL 10.12 Item 1)
8	-	Inverter motor (MOT10-030) (P/O PL 10.12 Item 1) (REP 10.3)
9	-	Drive roll (P/O PL 10.12 Item 1)
10	-	Nip roll support (P/O PL 10.12 Item 1) (See NOTE)
11	-	Nip spring (P/O PL 10.12 Item 1) (See NOTE)
12	-	Locking washer (P/O PL 10.12 Item 1)
13	-	Exit drive gear (P/O PL 10.12 Item 1) (REP 10.5)
14	-	Nip roll (P/O PL 10.12 Item 1) (See NOTE) (REP 10.5)
15	-	Motor bracket (P/O PL 10.12 Item 1)
16	-	Exit roll (P/O PL 10.12 Item 1) (REP 10.5)
17	-	Shuttle (P/O PL 10.12 Item 1) (REP 10.5)
18	-	Inverter sensor harness (Not Spared)
19	-	Inverter motor harness (Not Spared)



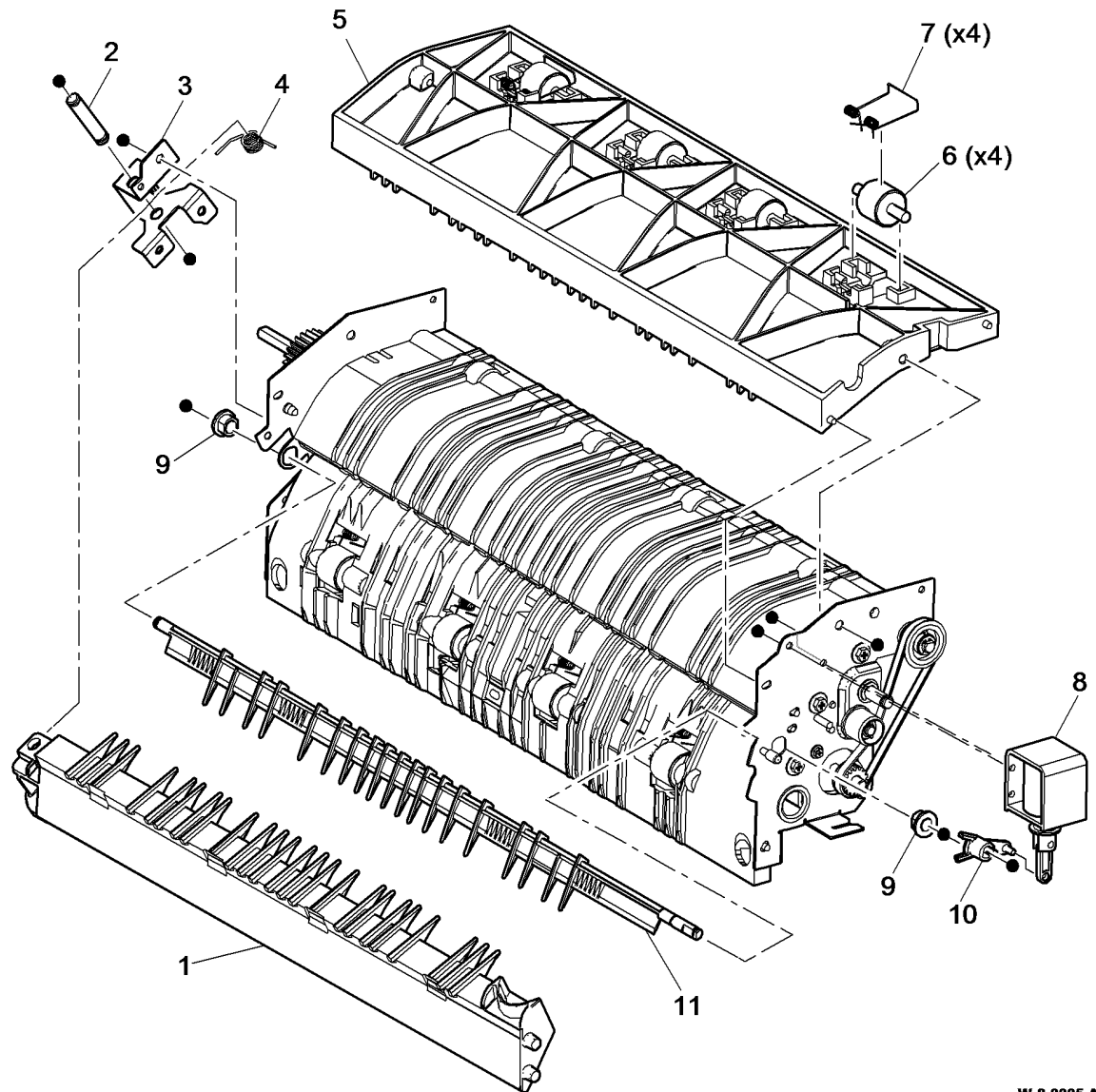
1{2-19 AND ITEMS 1-11 ON PL 10.13

W-8-0046-A



## PL 10.13 Inverter Assembly (4 of 4)

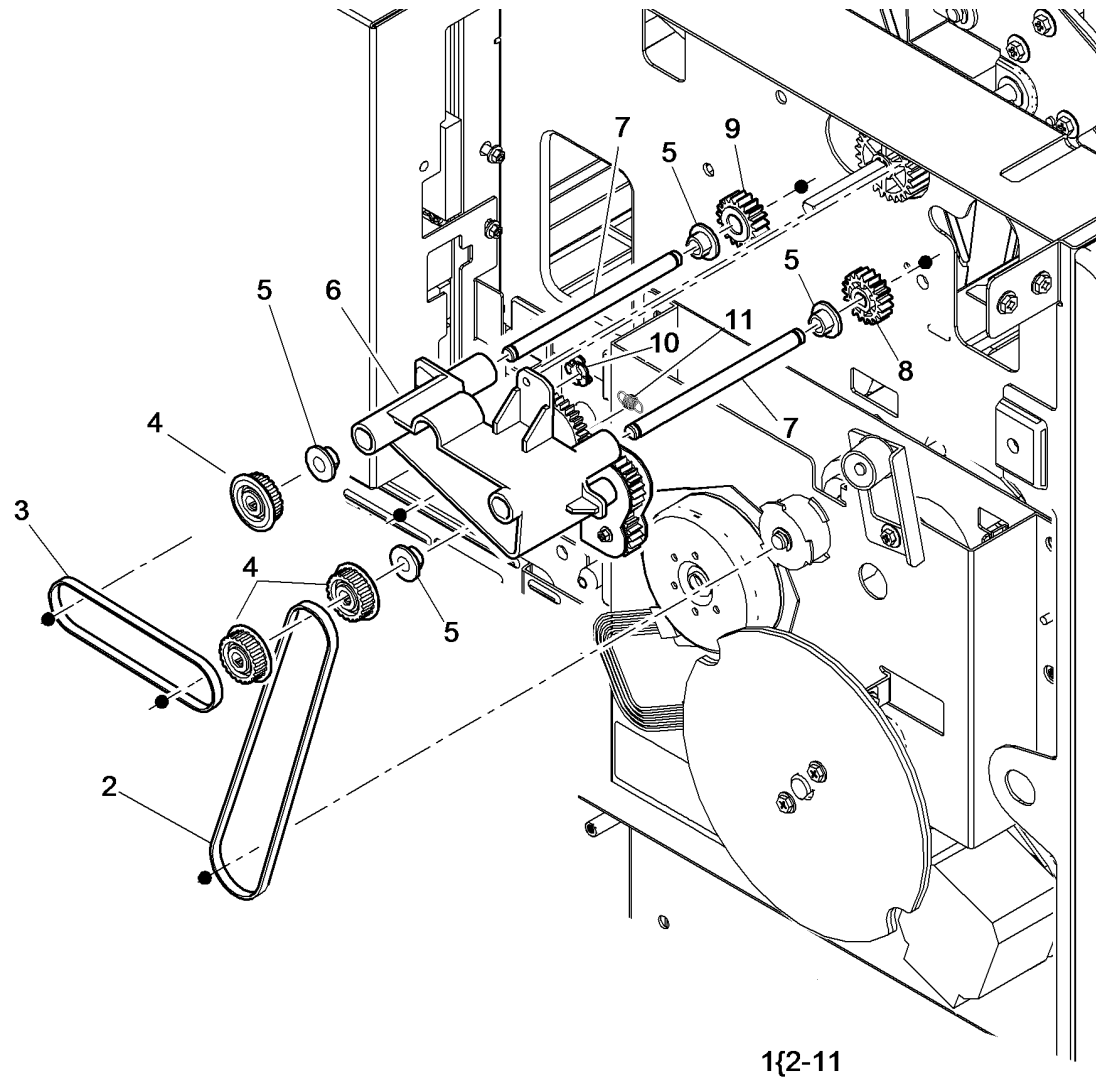
Item	Part	Description
1	-	Jam clearance paper guide (P/O PL 10.11 Item 1, PL 10.12 Item 1)
2	-	Hinge pin (P/O PL 10.11 Item 1, PL 10.12 Item 1)
3	-	Hinge pin bracket (P/O PL 10.11 Item 1, PL 10.12 Item 1)
4	-	Spring (P/O PL 10.11 Item 1, PL 10.12 Item 1)
5	-	Upper exit guide (P/O PL 10.11 Item 1, PL 10.12 Item 1)
6	-	Idle roll (P/O PL 10.11 Item 1, PL 10.12 Item 1)
7	-	Spring (P/O PL 10.11 Item 1, PL 10.12 Item 1)
8	-	Inverter gate solenoid (SOL10-045) (P/O PL 10.11 Item 1, PL 10.12 Item 1)
9	-	Bearing (P/O PL 10.11 Item 1, PL 10.12 Item 1) (REP 10.5)
10	-	Pivot arm (P/O PL 10.11 Item 1, PL 10.12 Item 1)
11	-	Inverter gate (P/O PL 10.11 Item 1, PL 10.12 Item 1)



W-8-0005-A

## 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)

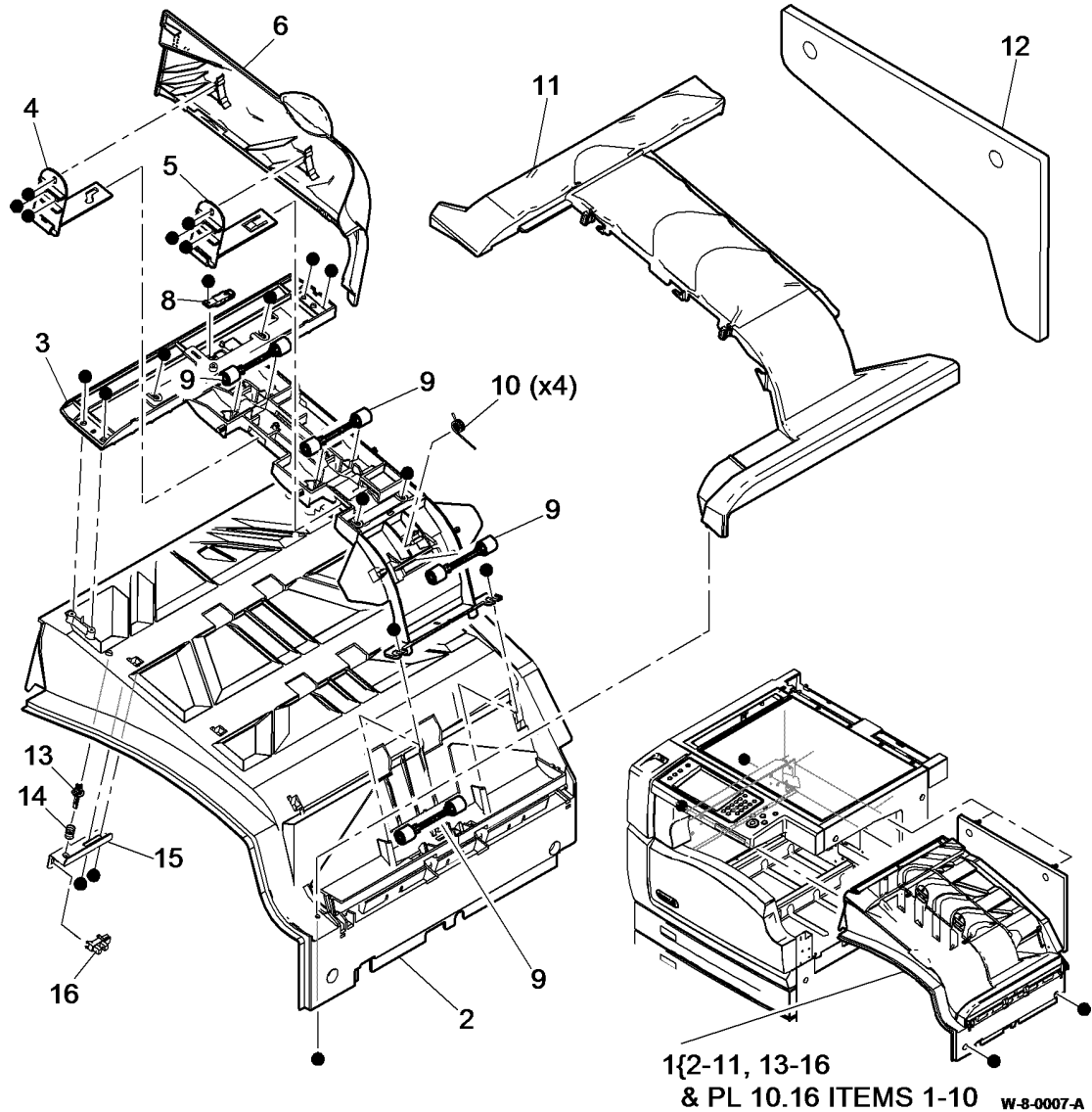


W-8-0004-A

## PL 10.15 Horizontal Transport Assembly (1 of 2)

Item	Part	Description
1	859K03115	Horizontal transport assembly (See NOTE) (REP 10.6)
2	-	Lower transport assembly (P/O PL 10.15 Item 1)
3	-	Baffle assembly (P/O PL 10.15 Item 1)
4	-	Left hinge (P/O PL 10.15 Item 1)
5	-	Right hinge (P/O PL 10.15 Item 1)
6	-	Jam clearance cover (P/O PL 10.15 Item 1)
7	-	Not used
8	-	Horizontal transport entry sensor (Q10-041) (P/O PL 10.15 Item 1)
9	-	Idler roll (P/O PL 10.15 Item 1)
10	-	Spring (P/O PL 10.15 Item 1)
11	-	Top cover (P/O PL 10.15 Item 1)
12	-	Backplate (P/O PL 31.14 Item 5) (REP 28.1)
13	-	Interlock actuator (P/O PL 10.15 Item 1)
14	-	Actuator spring (P/O PL 10.15 Item 1)
15	-	Sensor bracket (P/O PL 10.15 Item 1)
16	130E18220	Horizontal transport interlock sensor (Q10-042)

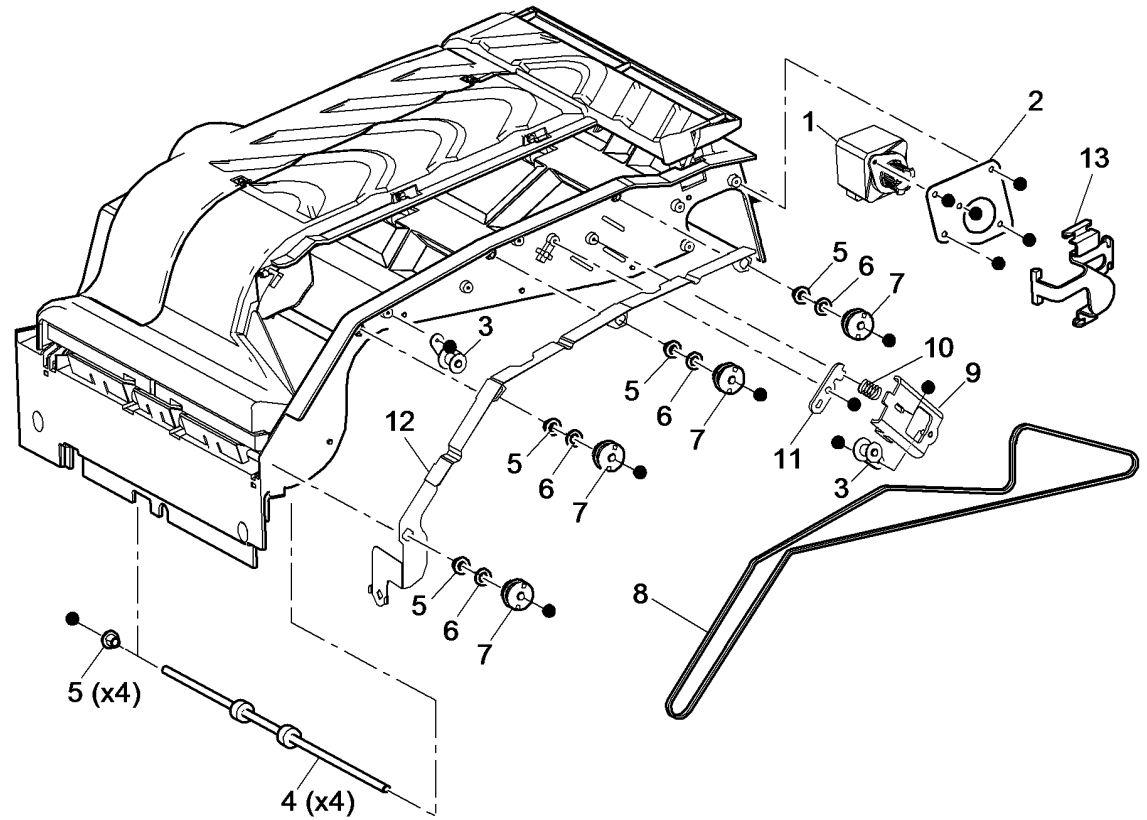
**NOTE:** Also supplied as part of PL 31.14 Item 5.



1{2-11, 13-16  
& PL 10.16 ITEMS 1-10 W-8-0007-A

## PL 10.16 Horizontal Transport Assembly (2 of 2)

Item	Part	Description
1	927K01100	Horizontal transport motor (MOT10-040) (REP 10.7)
2	–	Motor support bracket (P/O PL 10.15 Item 1)
3	–	Idler (P/O PL 10.15 Item 1)
4	–	Horizontal transport roll (P/O PL 10.15 Item 1)
5	–	Bearing (P/O PL 10.15 Item 1)
6	–	Washer (P/O PL 10.15 Item 1)
7	–	Pulley (P/O PL 10.15 Item 1)
8	–	Horizontal transport drive belt (P/O PL 10.15 Item 1)
9	–	Belt tensioner bracket (P/O PL 10.15 Item 1)
10	–	Tension spring (P/O PL 10.15 Item 1)
11	–	Spring anchor (P/O PL 10.15 Item 1)
12	–	Ground strip (P/O PL 10.15 Item 1)
13	–	Pulley cover (P/O PL 10.15 Item 1) (REP 10.7)

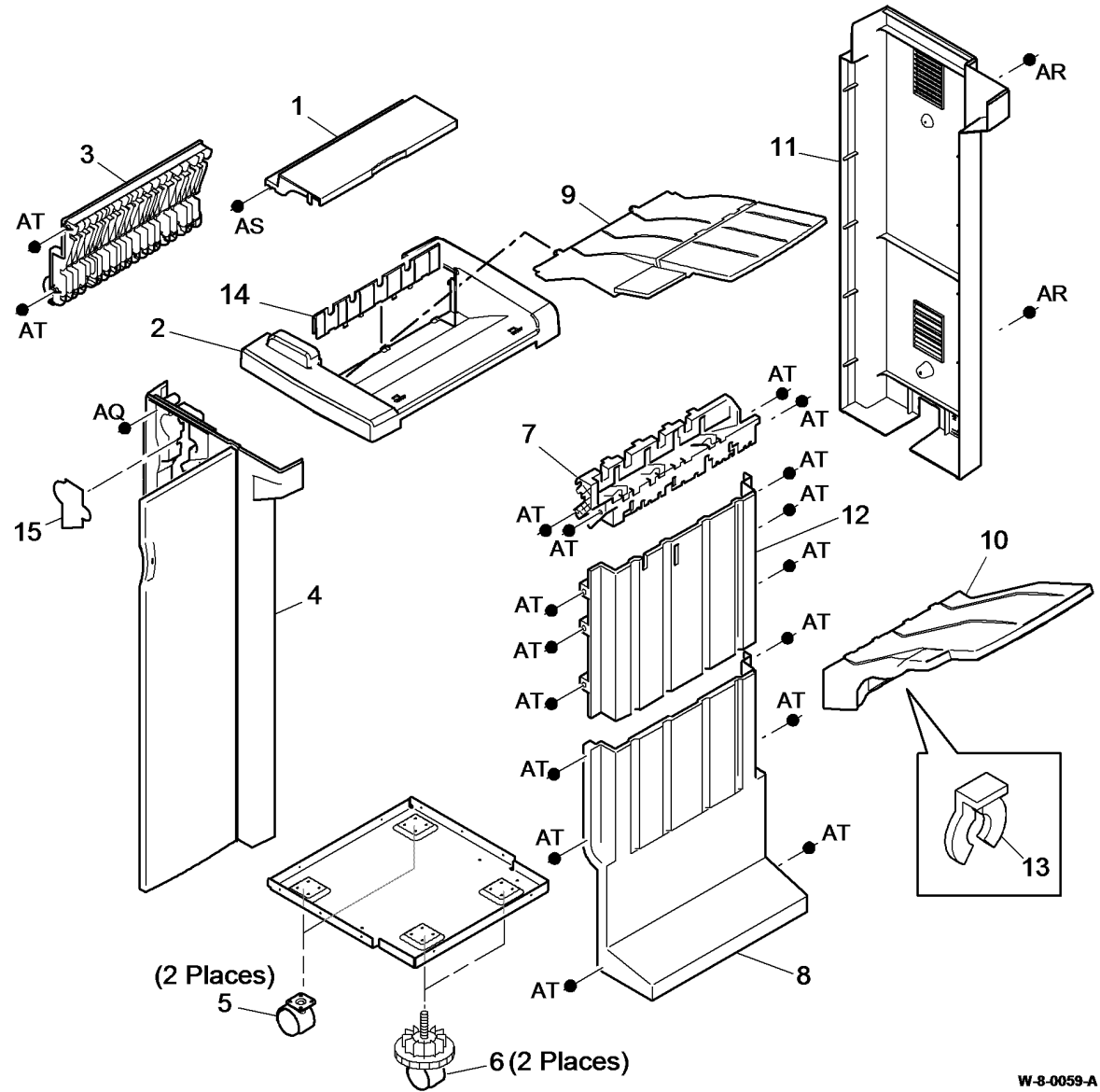


W-8-0045-B

## PL 12.10 2K LCSS Covers

Item	Part	Description
1	–	Exit cover (Not Spared)
2	848E97181	Top cover (REP 12.1-110)
3	848K31330	Entry guide cover (REP 12.15-110)
4	848K98090	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	848K95900	Rear cover (REP 12.1-110)
12	–	Upper right cover (Not Spared)
13	019K13380	Bin 1 alignment clip
14	–	Top centre cover (Not Spared)
15	–	Hole punch assembly cover (Not Spared)

**NOTE:** Refer to ADJ 12.2-110 to align the LCSS to the machine.

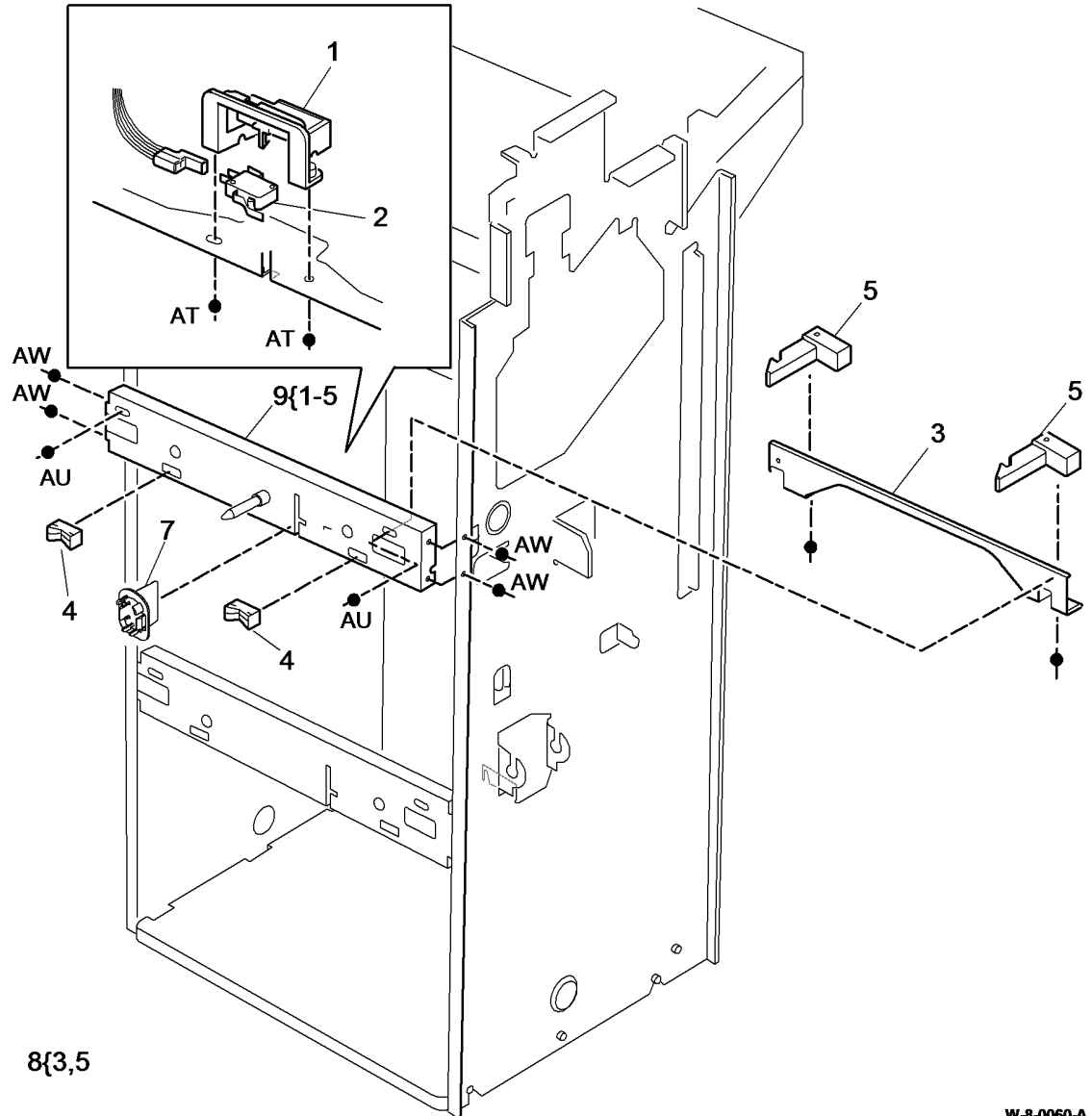


W-8-0059-A

## PL 12.15 2K LCSS Docking Latch

Item	Part	Description
1	-	Sensor cover (P/O PL 12.15 Item 9)
2	110K13980	Docking interlock switch (S12-177) (See NOTE)
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	120K03450	Docking actuator (See NOTE)
8	003K20930	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.

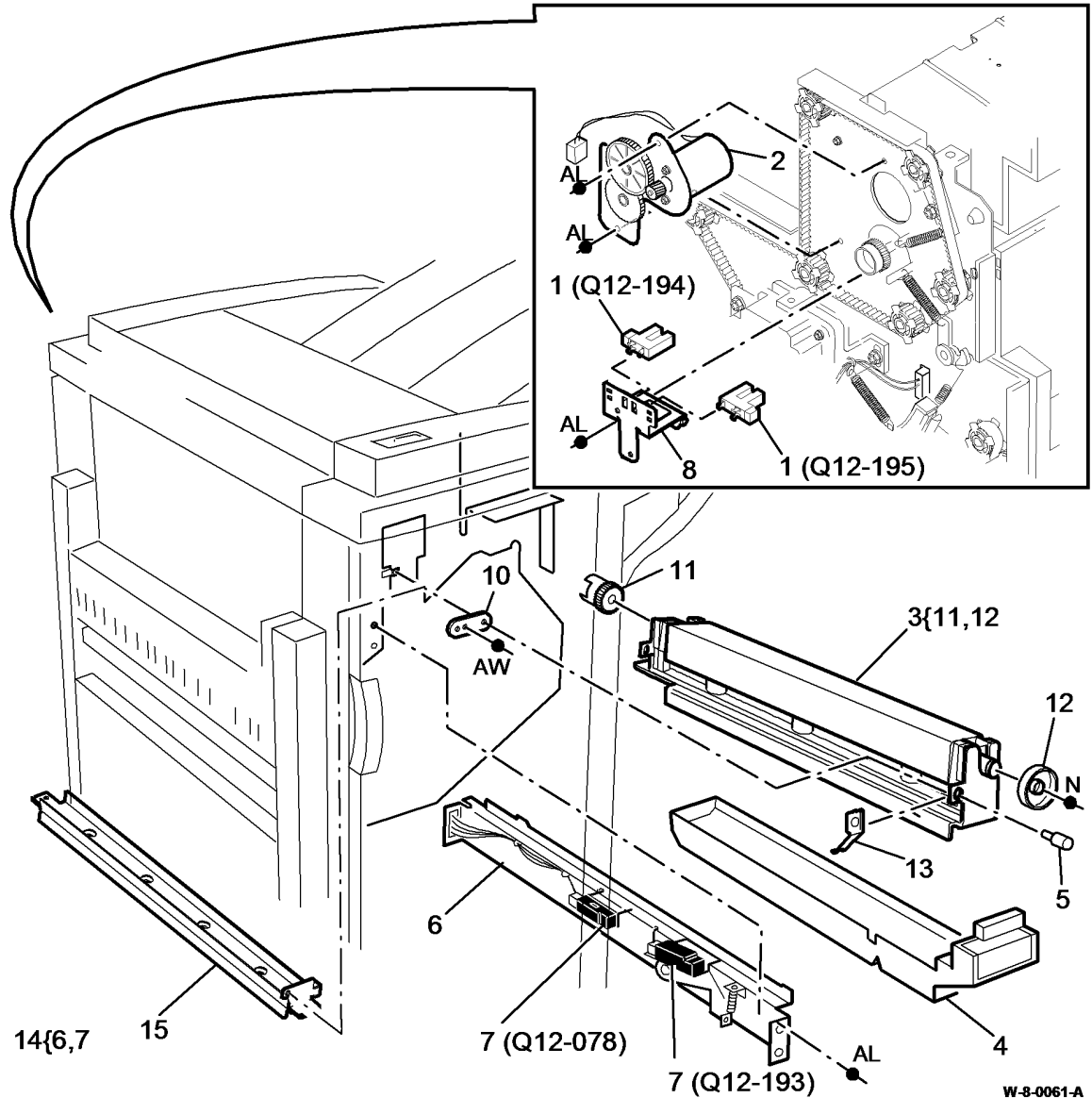


W-8-0060-A

# 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, ADJ 12.3-110)
-	180K01330	2 Hole (XE)
-	-	4 Hole (Sweden) (P/O PL 31.11 Item 2)
-	-	4 Hole (XE) (P/O PL 31.11 Item 2)
-	180K01500	3 Hole
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	-	Punch spacer (Not Spared)
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.

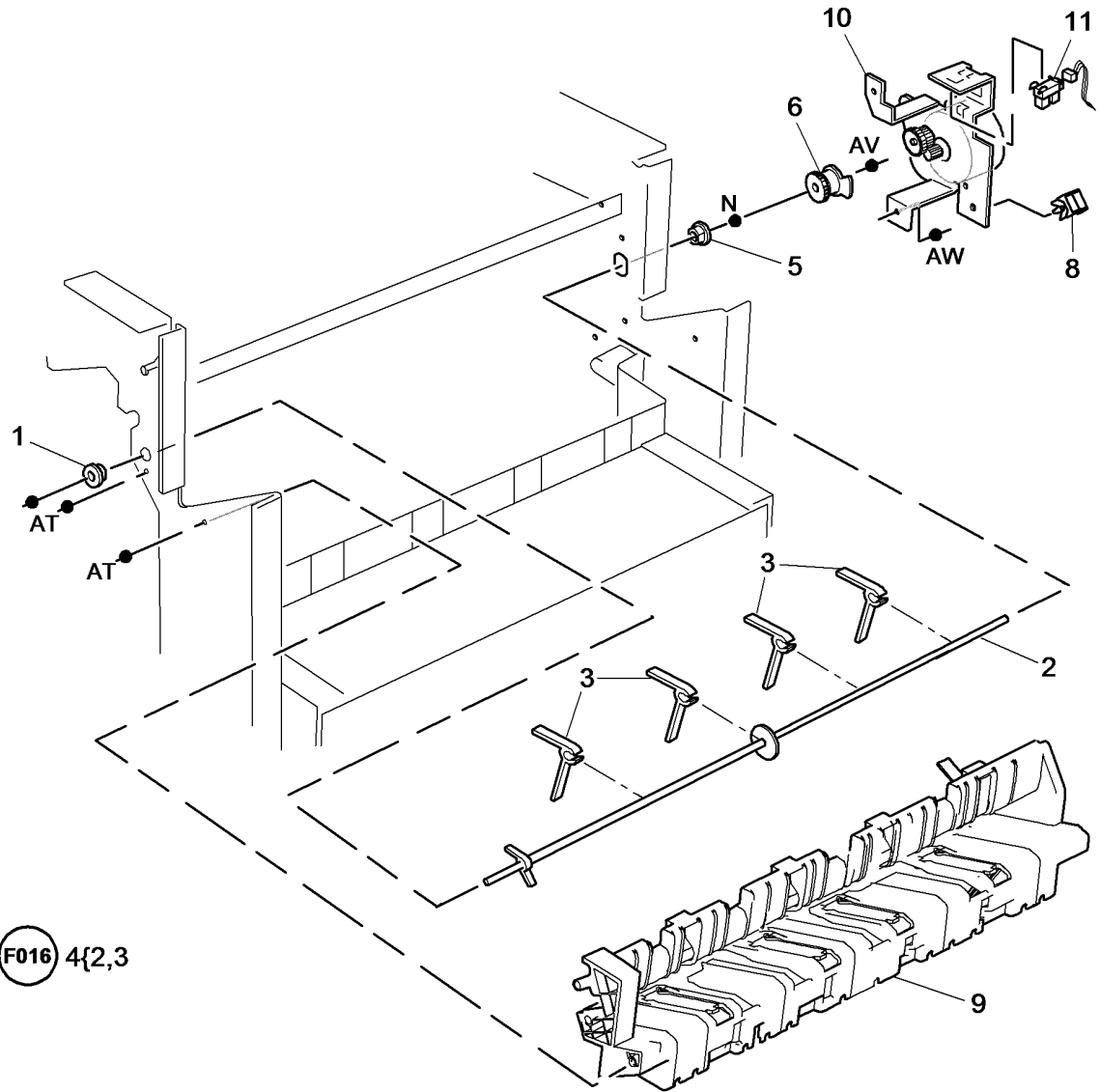


W-8-0061-A

# 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)
4	-	Paddle shaft assembly (REF: PL 31.12 Item 2) (W/TAG F-016) (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.



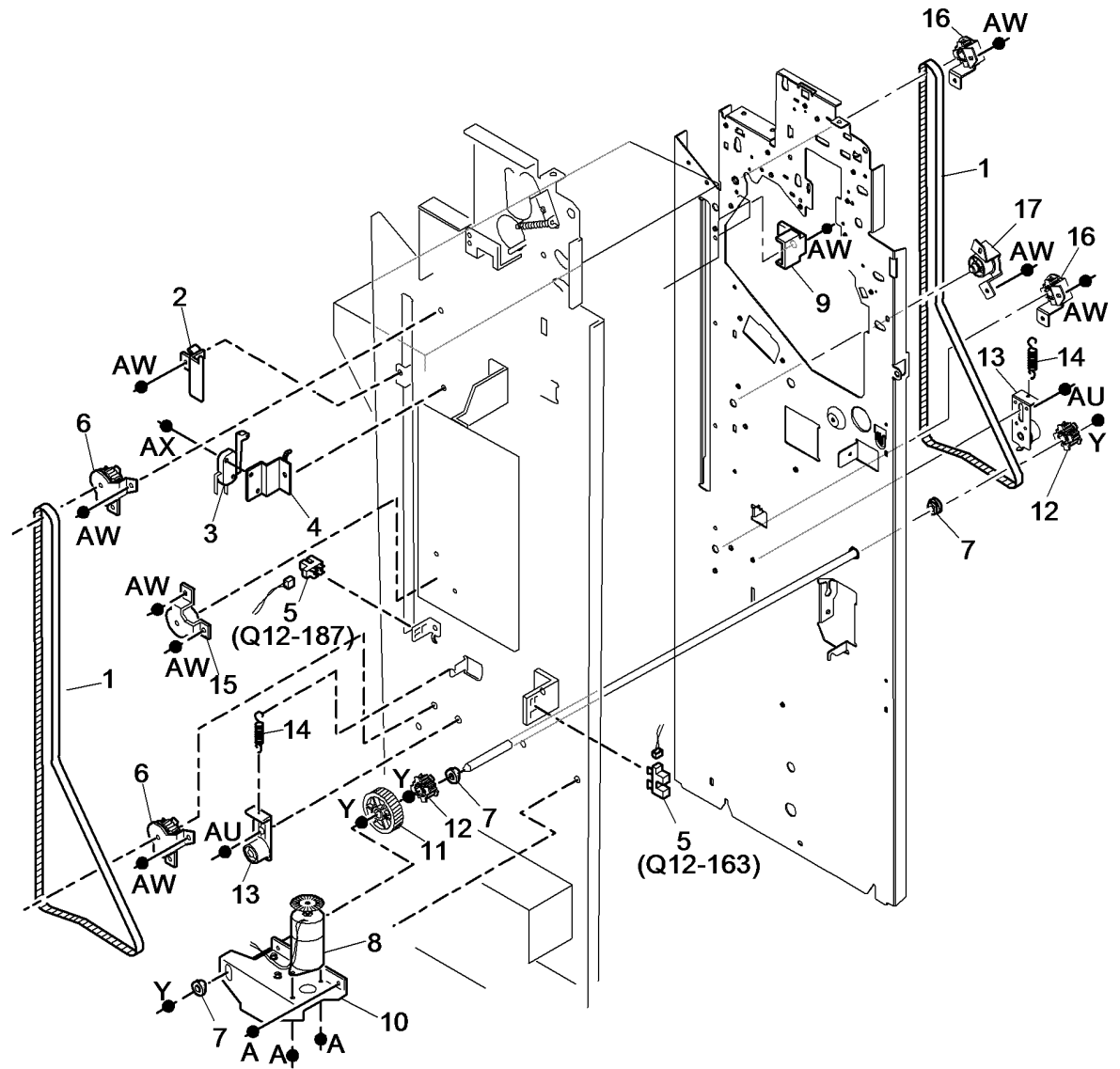
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# PL 12.30 2K LCSS Bin 1 Control Components (1 of 2)

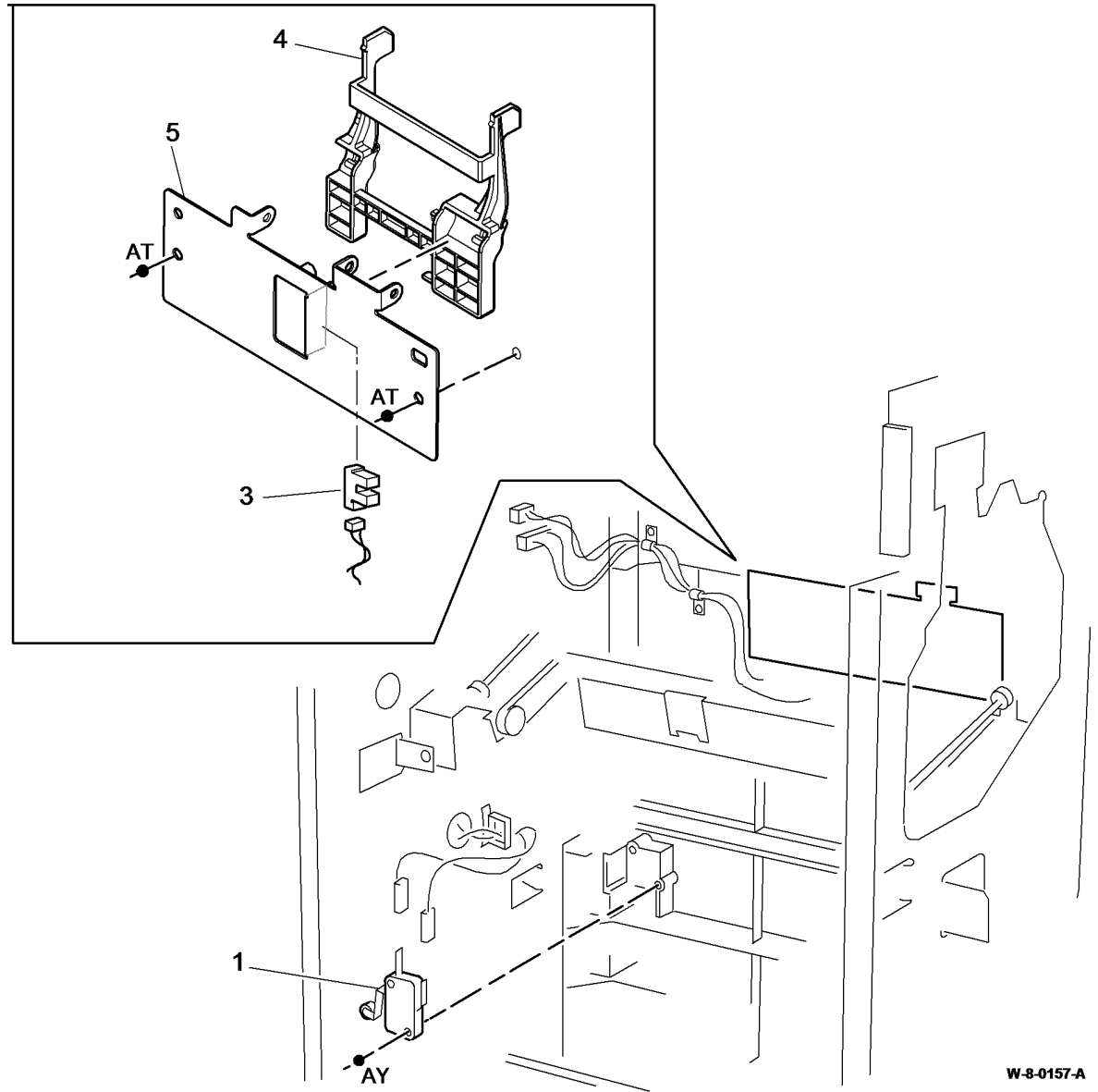
Item	Part	Description
1	023E24320	Bin 1 drive belt (REP 12.5-110)
2	-	Rear belt clamp (Not Spared) (ADJ 12.1-110)
3	110E20180	Bin 1 upper limit switch (S12-190)
4	-	Sensor bracket (Not Spared)
5	130E10360	Bin 1 90% full sensor (Q12-187)/ Bin 1 motor encoder sensor (Q12-163)
6	-	Rear pulley (Not Spared) (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)



W-8-0156-A

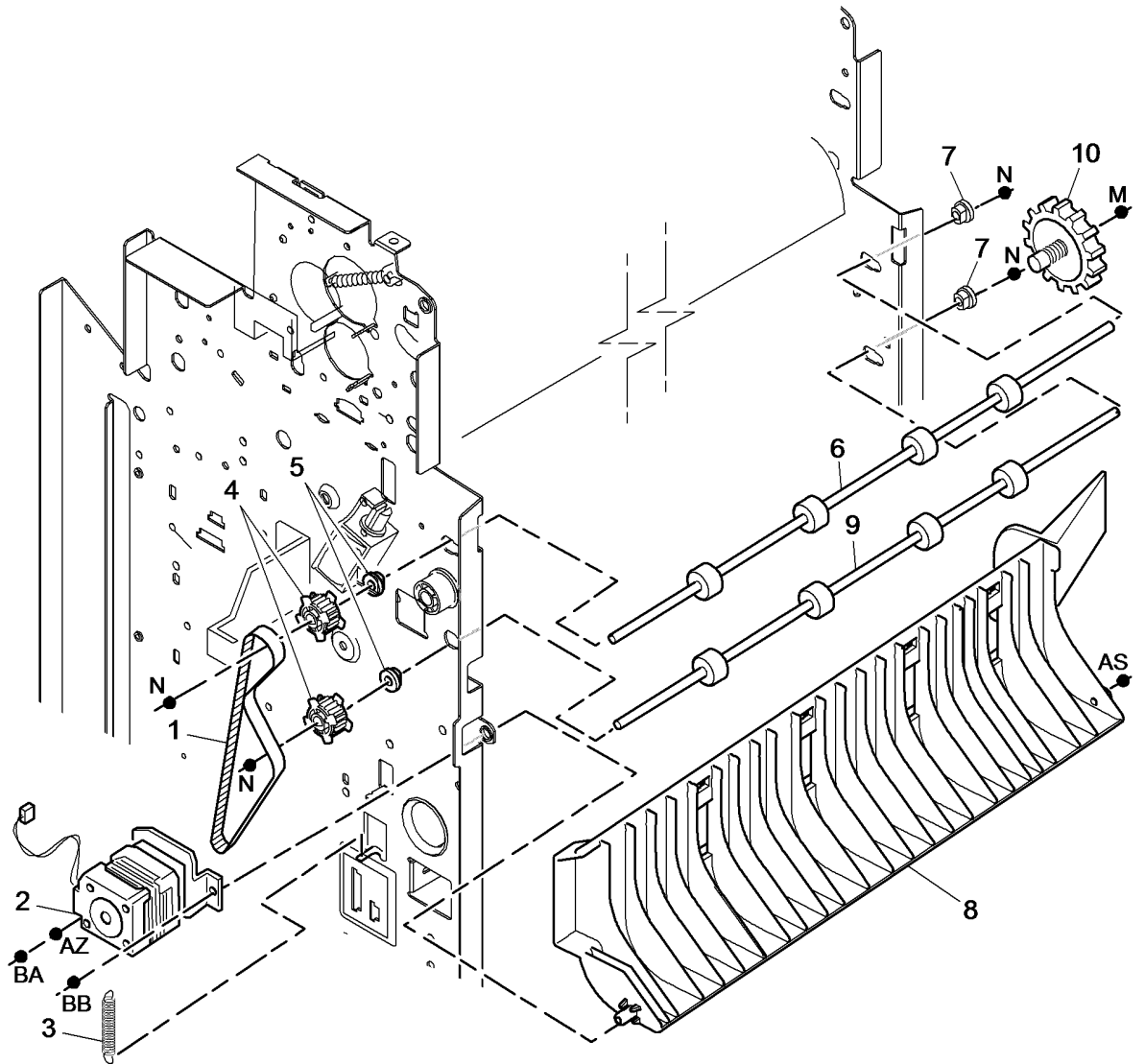
# PL 12.35 2K LCSS Bin 1 Control Components (2 of 2)

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 12.4-110)
3	-	Spring (Not Spared)
4	-	Pulley (Not Spared)
5	013E37460	Dry 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

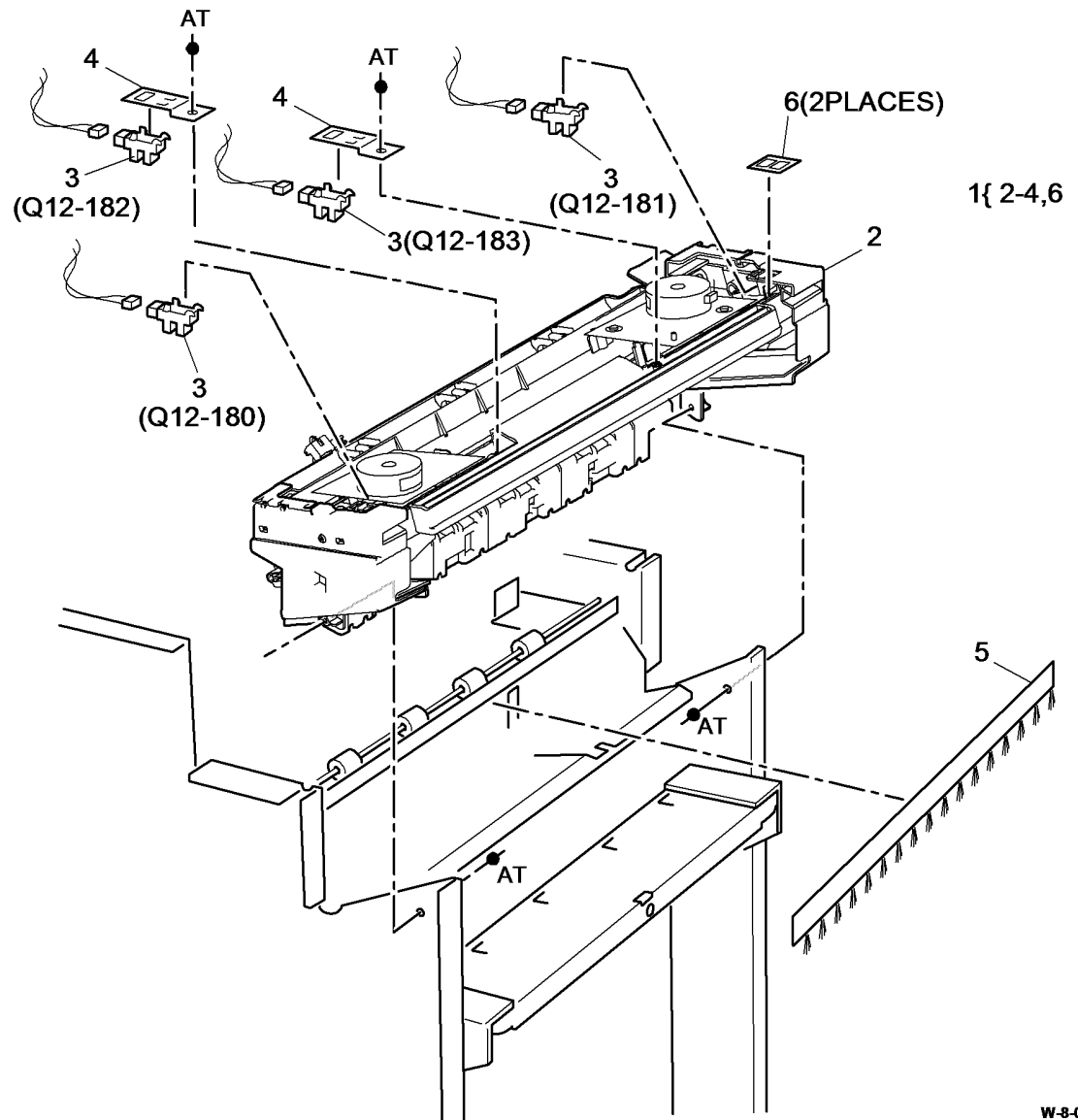


W-8-0065-A

## PL 12.45 2K LCSS Tamper Assembly

Item	Part	Description
1	049K12121	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) (See NOTE)
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)

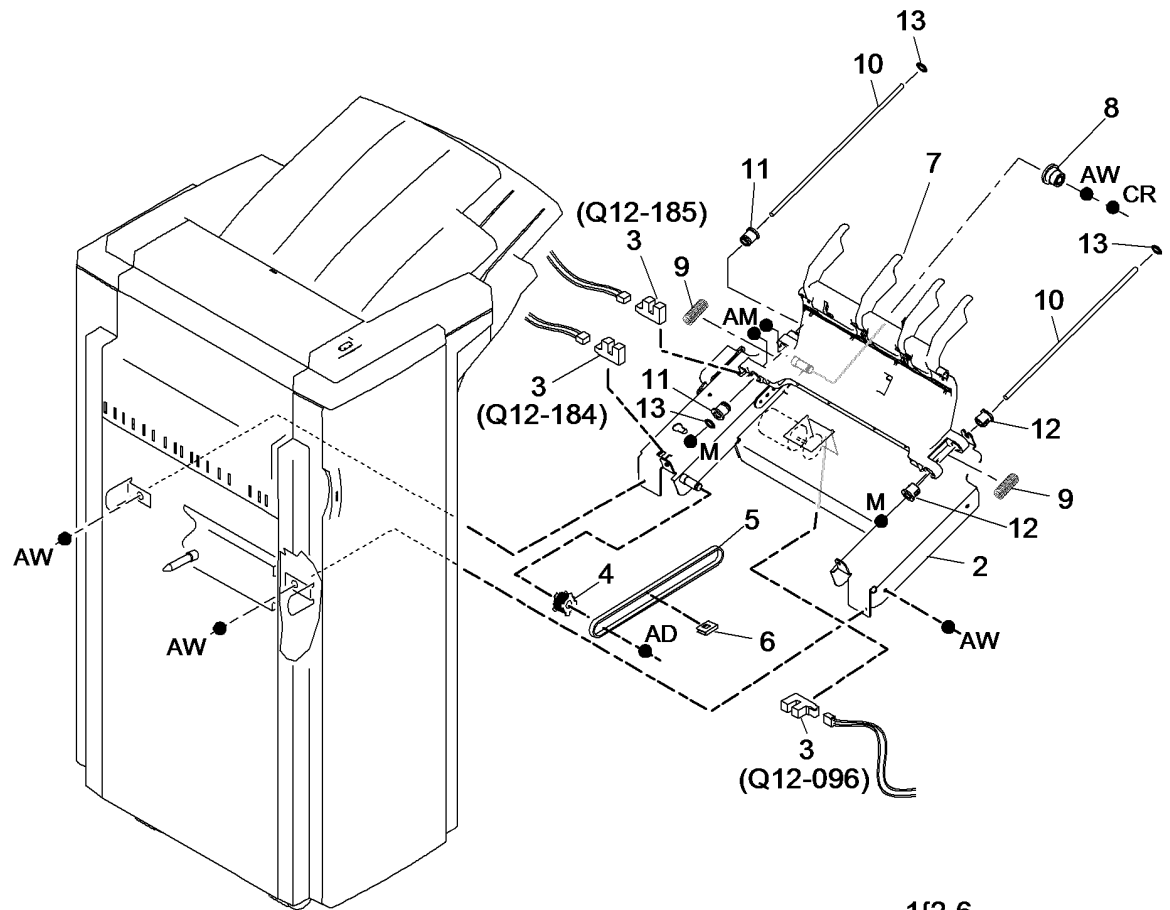
**NOTE:** The front tamper home sensor (Q12-180) and rear tamper home sensor (Q12-181) are bonded onto the tamper unit and are not replaceable. Failure of either of these sensors will require the replacement of the tamper assembly.



W-8-0066-A

# PL 12.50 2K LCSS Ejector Assembly

Item	Part	Description
1	054K43582	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	-	Ejector belt (Not Spared) (REP 12.17-110)
6	-	Clip (P/O PL 12.50 Item 1)
7	-	Support finger set (Qty. 4) (Not Spared)
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	-	LCSS bearing assembly kit (Not Spared)



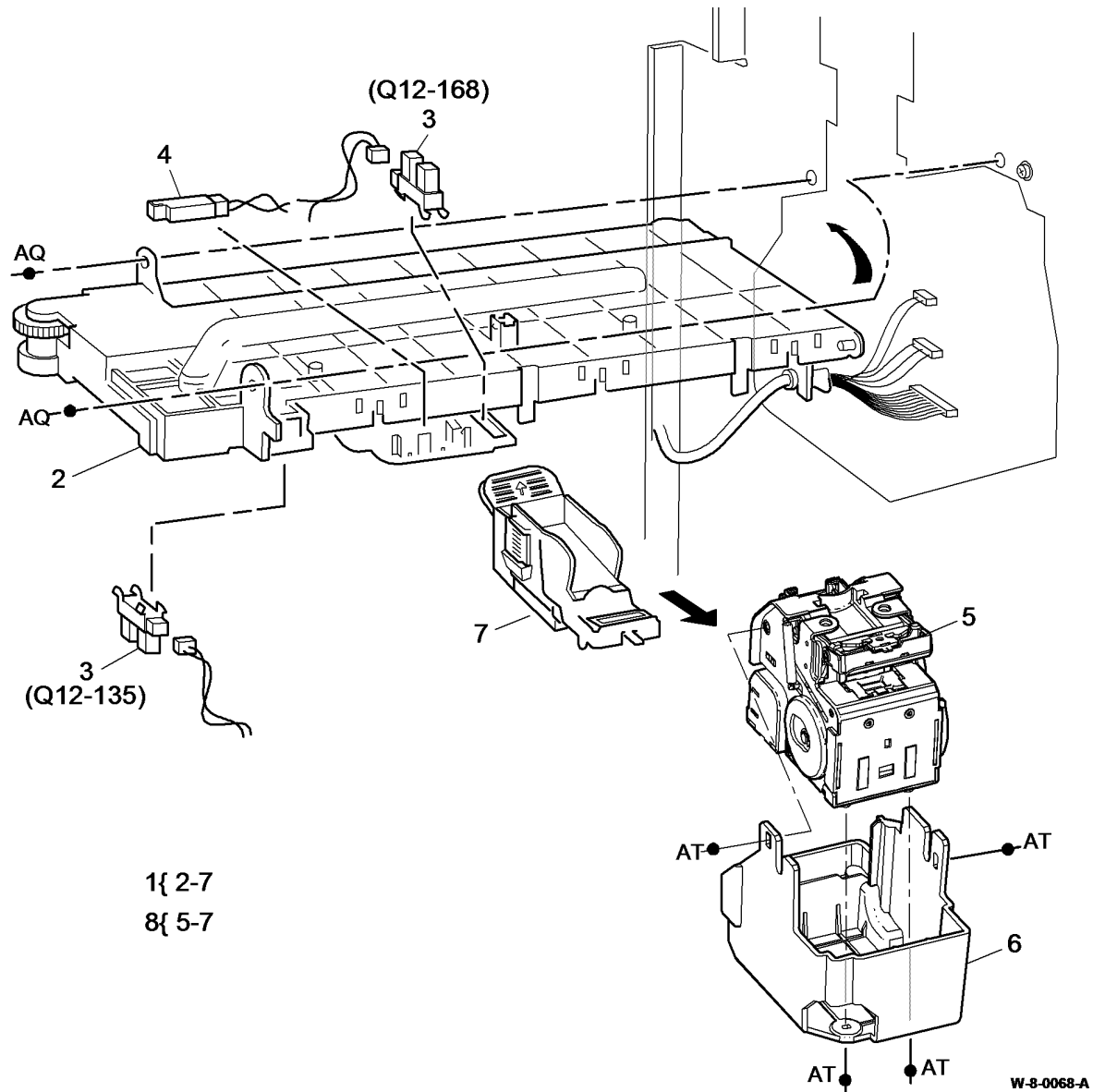
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# PL 12.55 2K LCSS Staple Head Unit/ Traverse Assembly

Item	Part	Description
1	014K11541	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	029K04690	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) (NOTE)
8	-	Staple head assembly (P/O PL 12.55 Item 1)

**NOTE:** To replace staples only, order PL 26.11 Item 4.

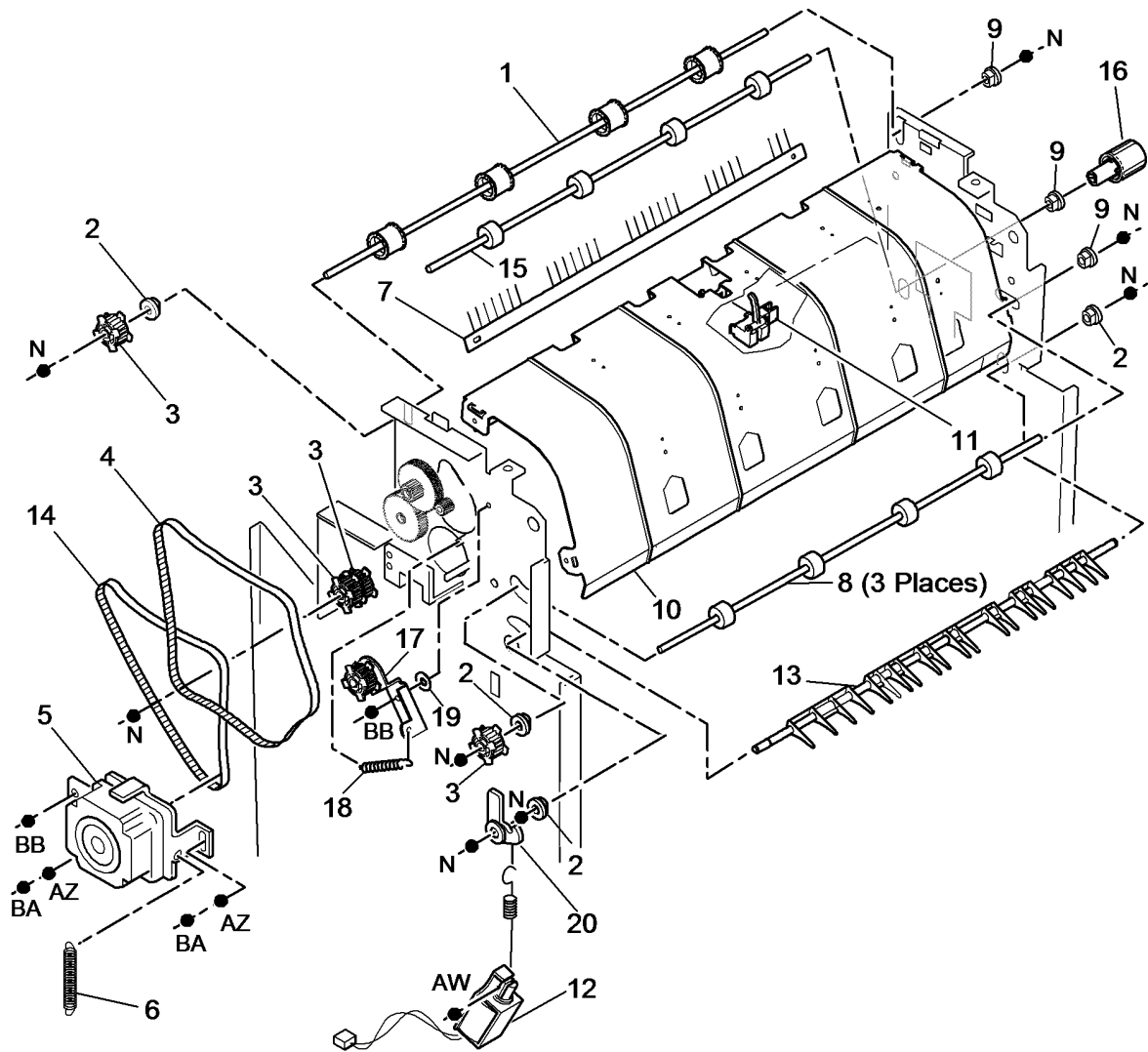


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# PL 12.60 2K LCSS Bin 0 Entry

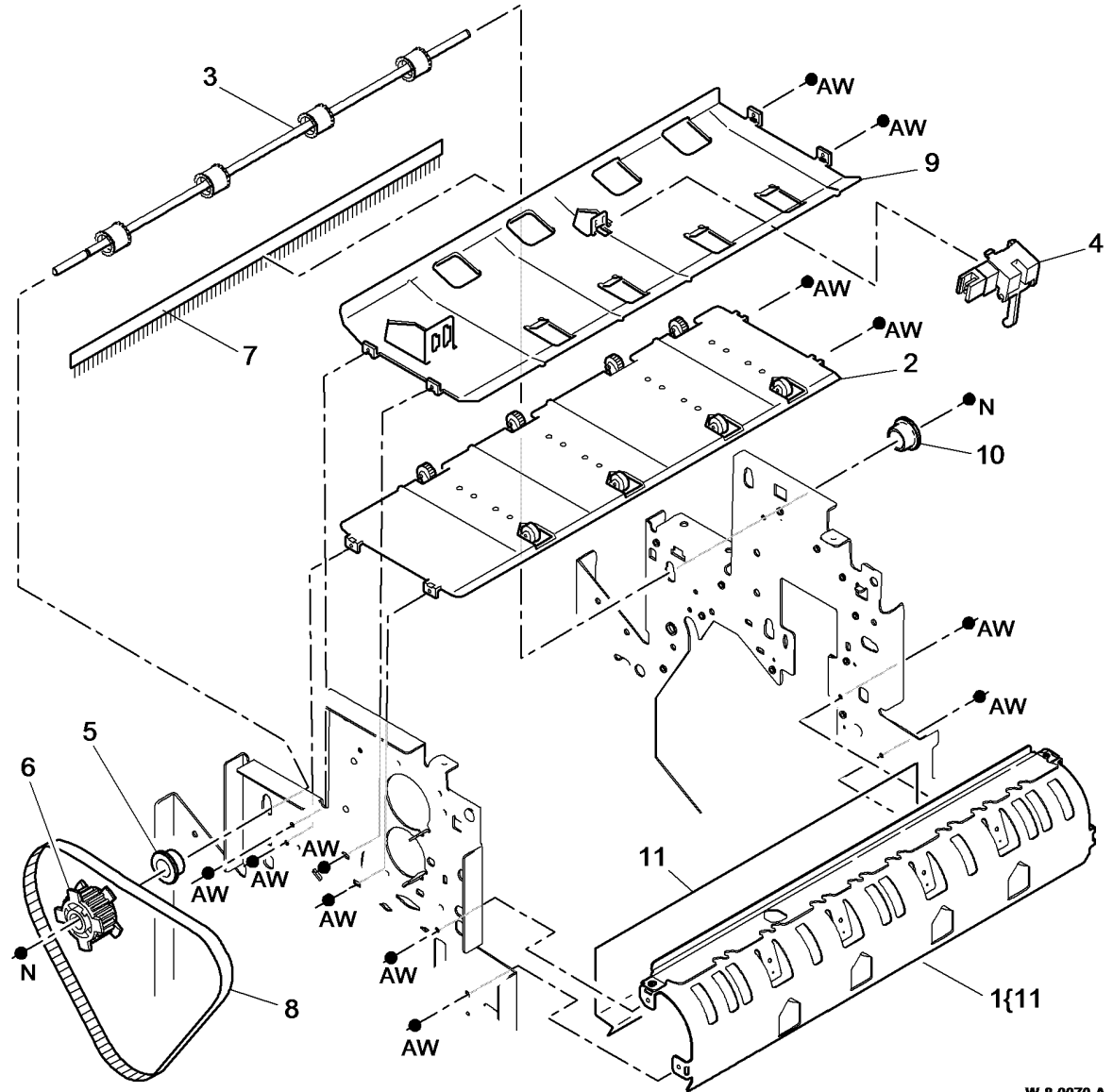
Item	Part	Description
1	006K32810	Top tray exit shaft
2	013E25790	Nylon bearing
3	-	Pulley (Not Spared)
4	023E24330	Intermediate paper drive belt (REP 12.3-110)
5	127K55870	Transport motor 2 (MOT12-224) (REP 12.4-110, ADJ 12.4-110)
6	-	Spring (Not Spared)
7	115E13440	Static eliminator
8	-	Feed roll shaft (short) (Not Spared)
9	013E37460	Bearing
10	-	Paper guide (Not Spared) (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	006K32840	Drive shaft assembly
16	006K33960	Jam clearance knob
17	-	Belt tensioner (Not Spared)
18	-	Spring (Not Spared)
19	-	Washer (Not Spared)
20	-	Actuator (Not Spared)



W-8-0069-A

# PL 12.65 2K LCSS Bin 1 Entry

Item	Part	Description
1	-	Left paper guide (Not Spared)
2	-	Lower right paper guide (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)

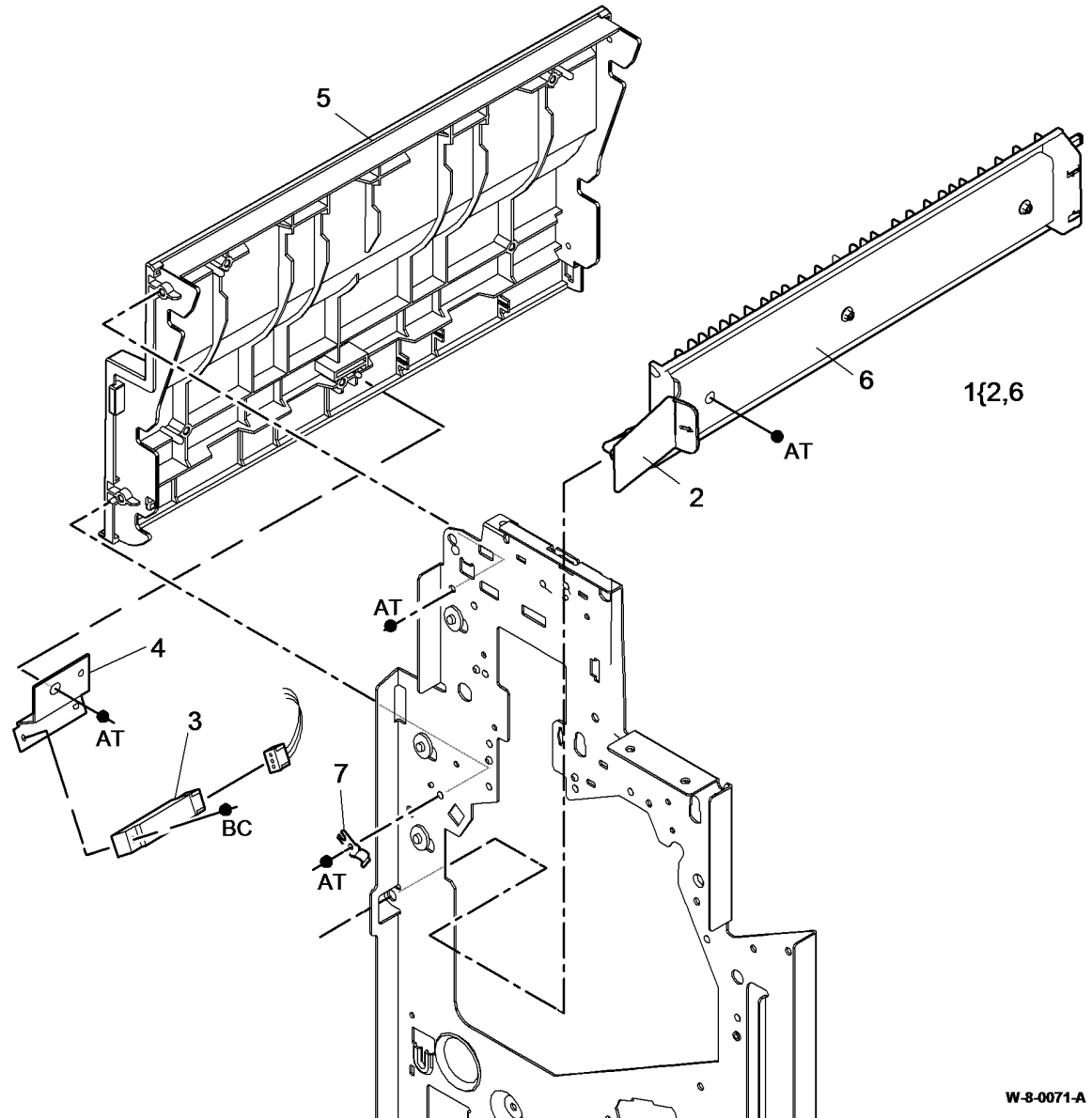


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# PL 12.70 2K LCSS Entry Guide Cover/ Jam Clearance Guide

Item	Part	Description
1	032K09671	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



W-8-0071-A

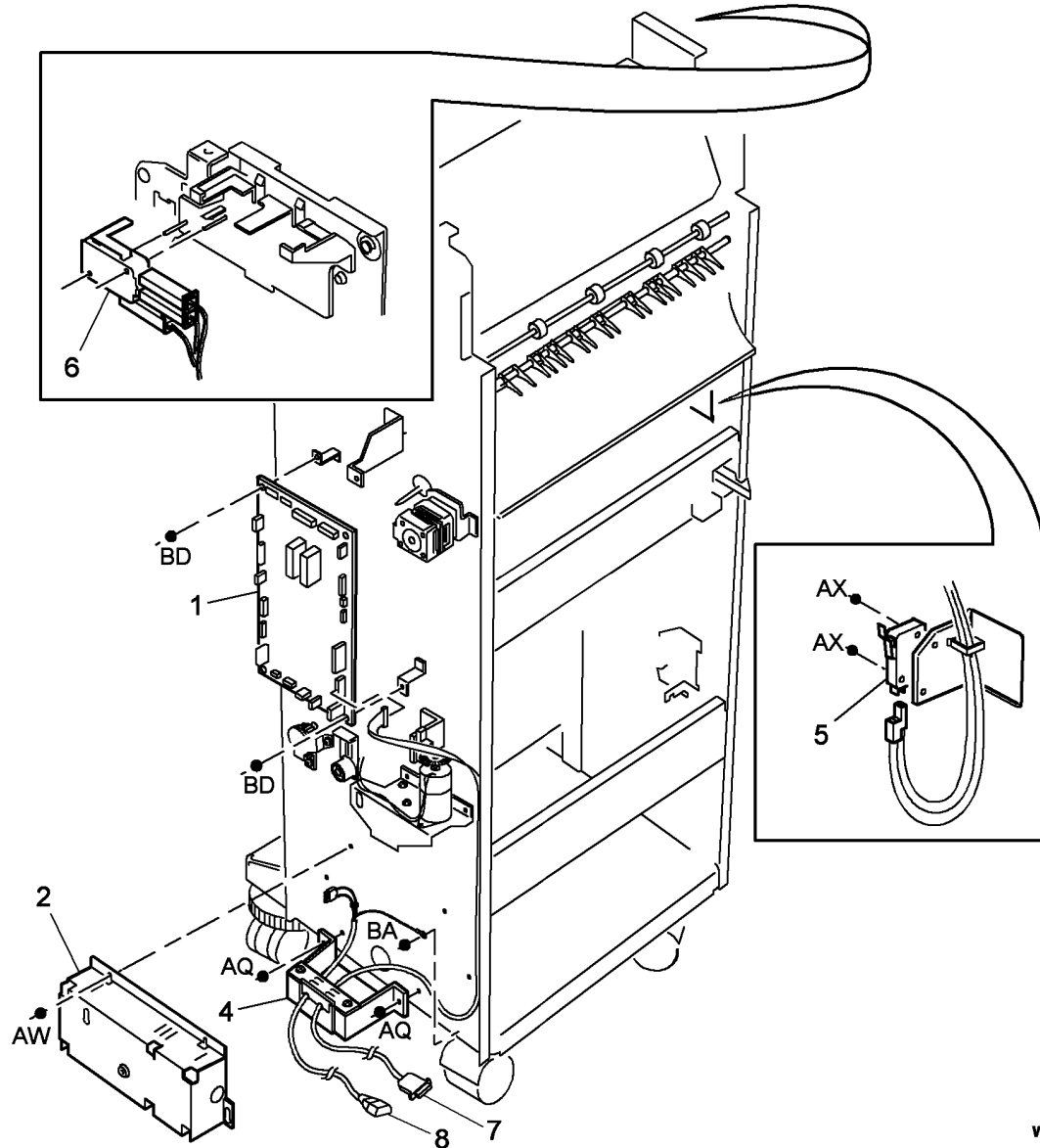
## PL 12.75 2K LCSS Electrical

Item	Part	Description
1	960K88040	LCSS PWB (CAUTION) (REP 12.14-110)
2	105K35842	Power supply module
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)



### CAUTION

*Do not install a new LCSS PWB until the cause of the damage to the old LCSS PWB has been determined. Go to the 312G-110 LCSS PWB Damage RAP.*

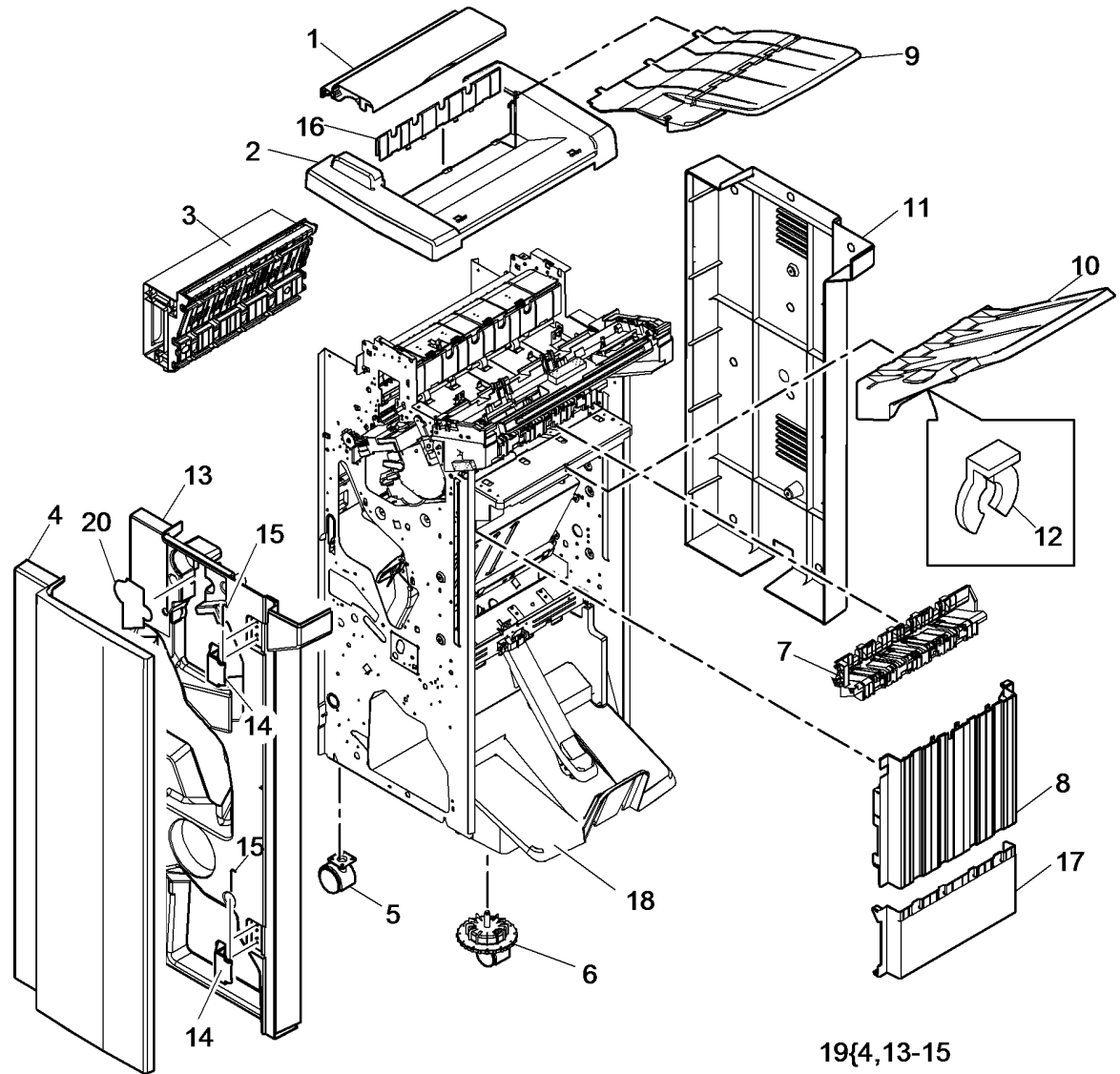


W-8-0072-A

## PL 12.320 LVF BM - Covers

Item	Part	Description
1	–	Exit cover (Not Spared)
2	848E97181	Top cover (REP 12.1-150)
3	–	Entry guide cover assembly (Not Spared) (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	848K98040	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	–	Top centre cover (Not Spared)
17	–	Lower right cover (REP 12.45-150)
18	–	Bin 2 (Not Spared)
19	–	Front door cover assembly (Not Spared) (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.

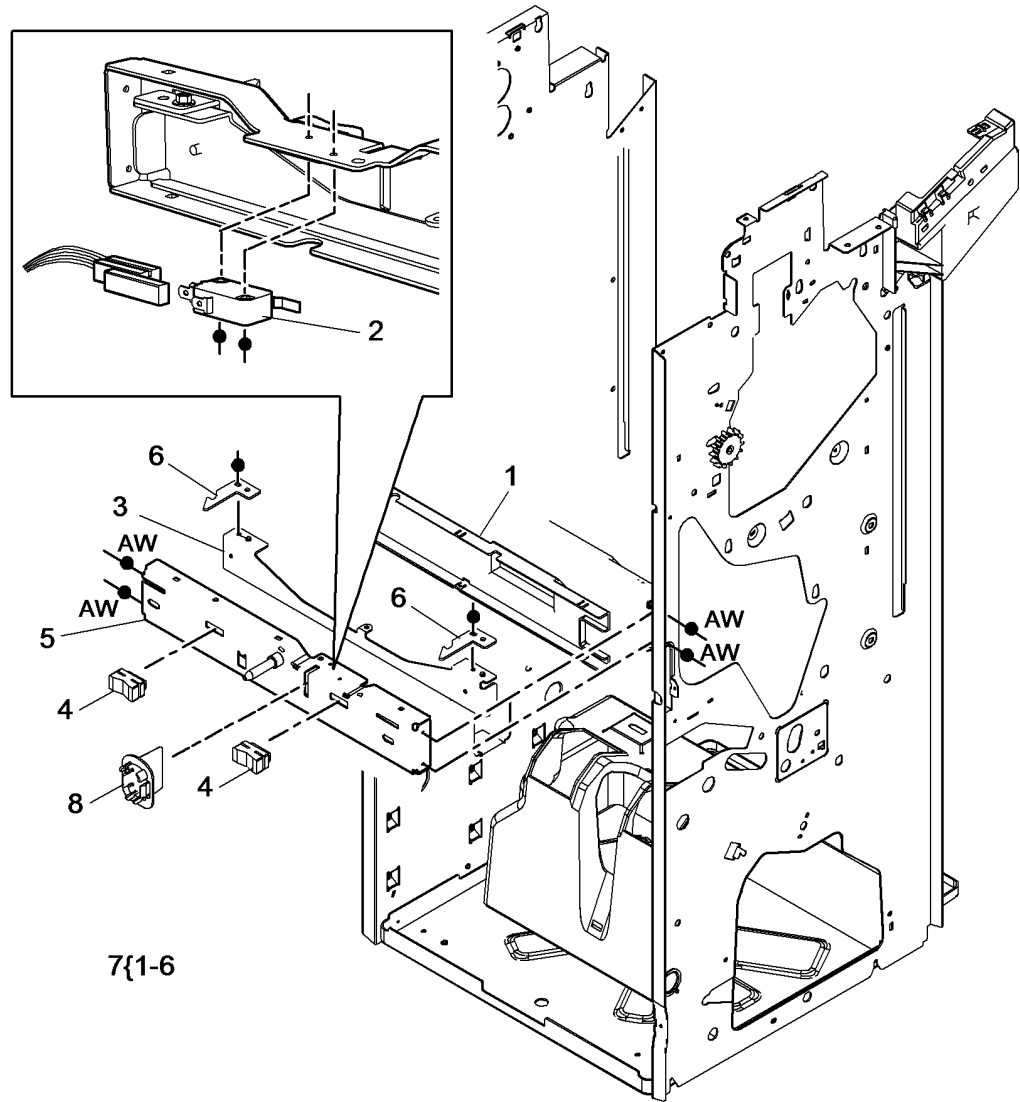


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W-8-0146-A

# PL 12.325 LVF BM Docking Latch

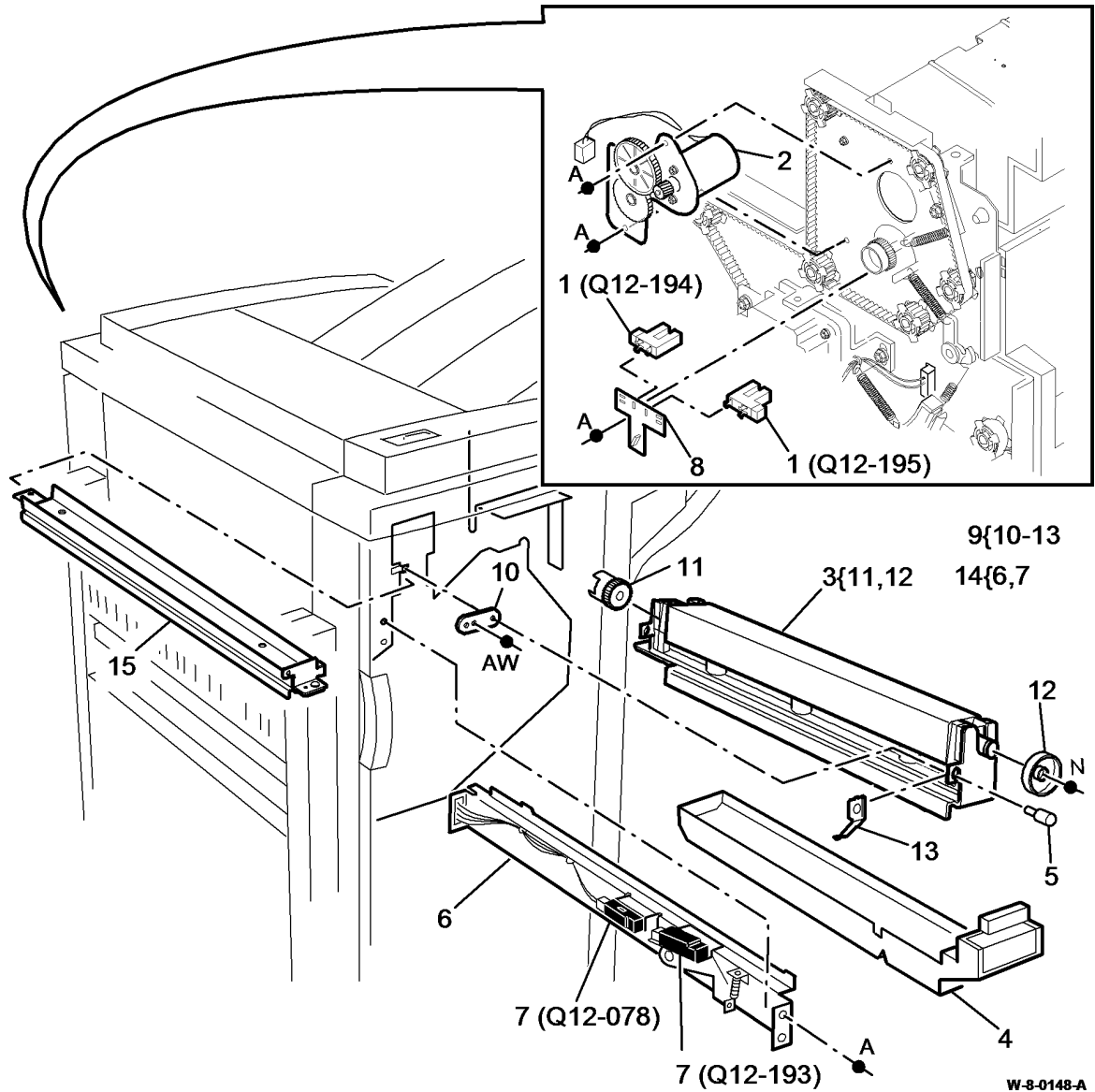
Item	Part	Description
1	-	Docking latch cover (Not Spared)
2	110K13980	Docking interlock switch (S12-177)
3	-	Link bracket assembly (P/O PL 12.325 Item 7)
4	-	Stopper (P/O PL 12.325 Item 7)
5	-	Docking latch (P/O PL 12.325 Item 7)
6	-	Latch hook (P/O PL 12.325 Item 7)
7	017K04761	Docking latch assembly (REP 12.16-150)
8	120K03450	Docking actuator



W-8-0147-A

# PL 12.330 LVF BM Hole Punch Unit

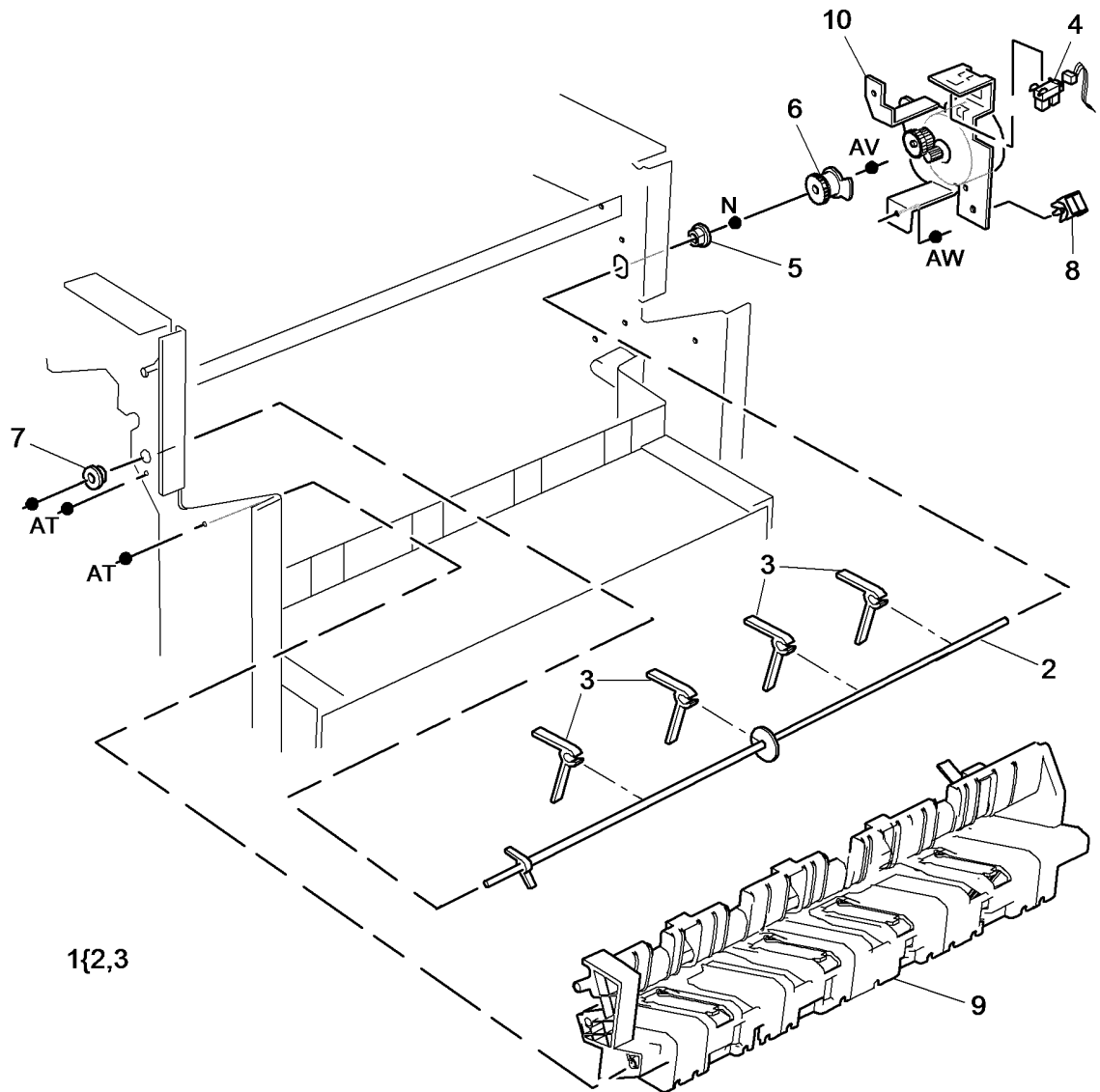
Item	Part	Description
1	130E10360	Punch head home sensor (Q12-194), Punch head present sensor (Q12-195) (REP 12.7-150)
2	127K55900	Punch head motor assembly (MOT12-224) (REP 12.7-150)
3	-	Hole punch unit (see below for variants) (REP 12.7-150, ADJ 12.3-150)
-	-	2 Hole (P/O PL 31.11 Item 2) (XE)
-	-	2 Hole legal (P/O PL 31.11 Item 2)
-	-	3 Hole (P/O PL 31.11 Item 2) (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	-	Hole punch repair kit (REF: PL 31.12 Item 12) (ADJ 12.3-150)
10	-	Bracket (Not Spared)
11	-	Punch drive gear (P/O PL 12.330 Item 9) (W/TAG F-006)
12	-	Punch cam (P/O PL 12.330 Item 3) (W/O TAG F-014)
13	-	Punch spacer (P/O PL 12.330 Item 9) (W/TAG F-006)
14	-	Punch sensor assembly (Not Spared) (W/O TAG F-008)
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) (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)

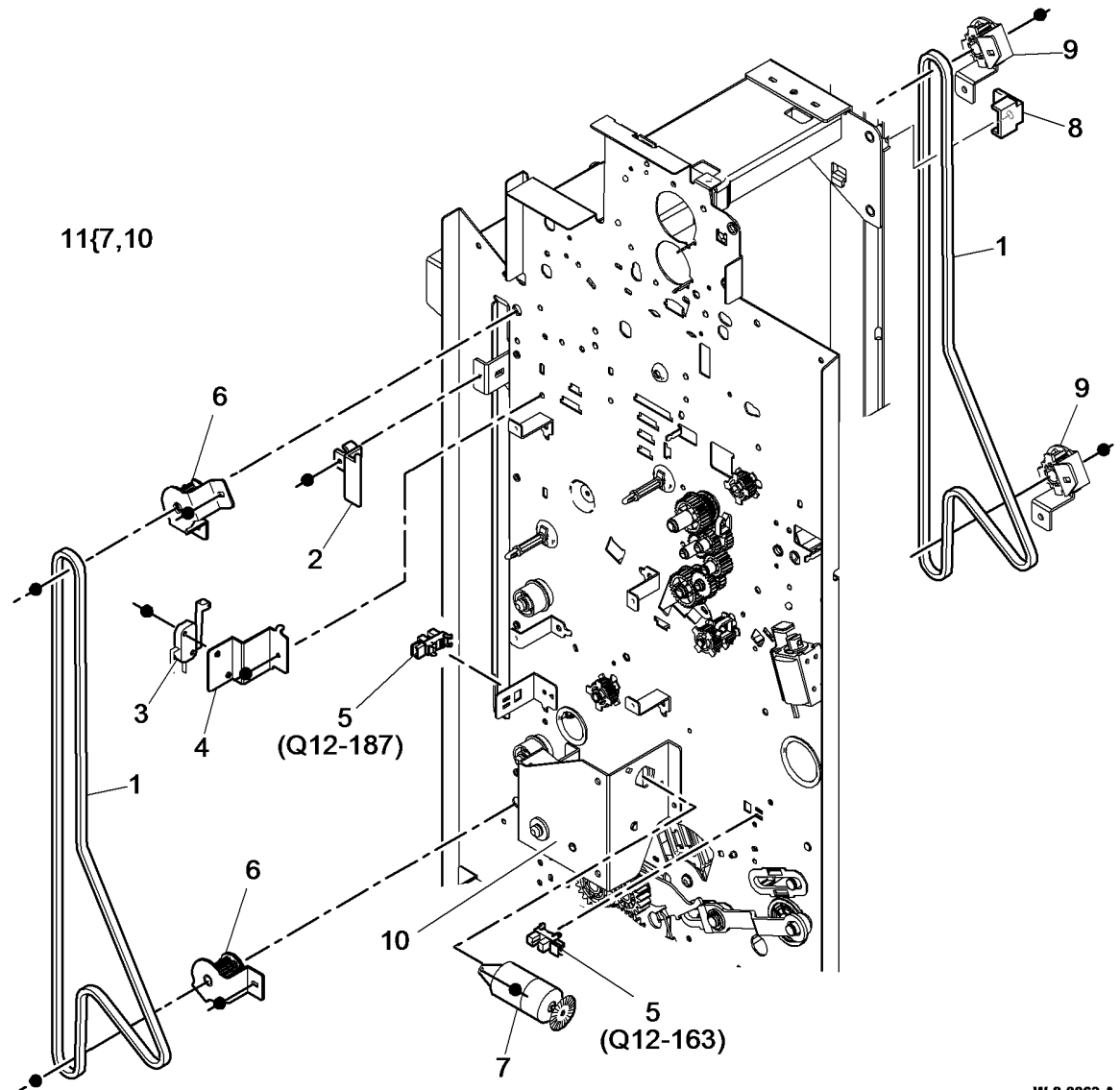
**NOTE:** Paddles are also supplied (4 off) as a kit PL 31.12 Item 5.



W-8-0155-A

# PL 12.340 LVF BM Bin 1 Control Components (1 of 2)

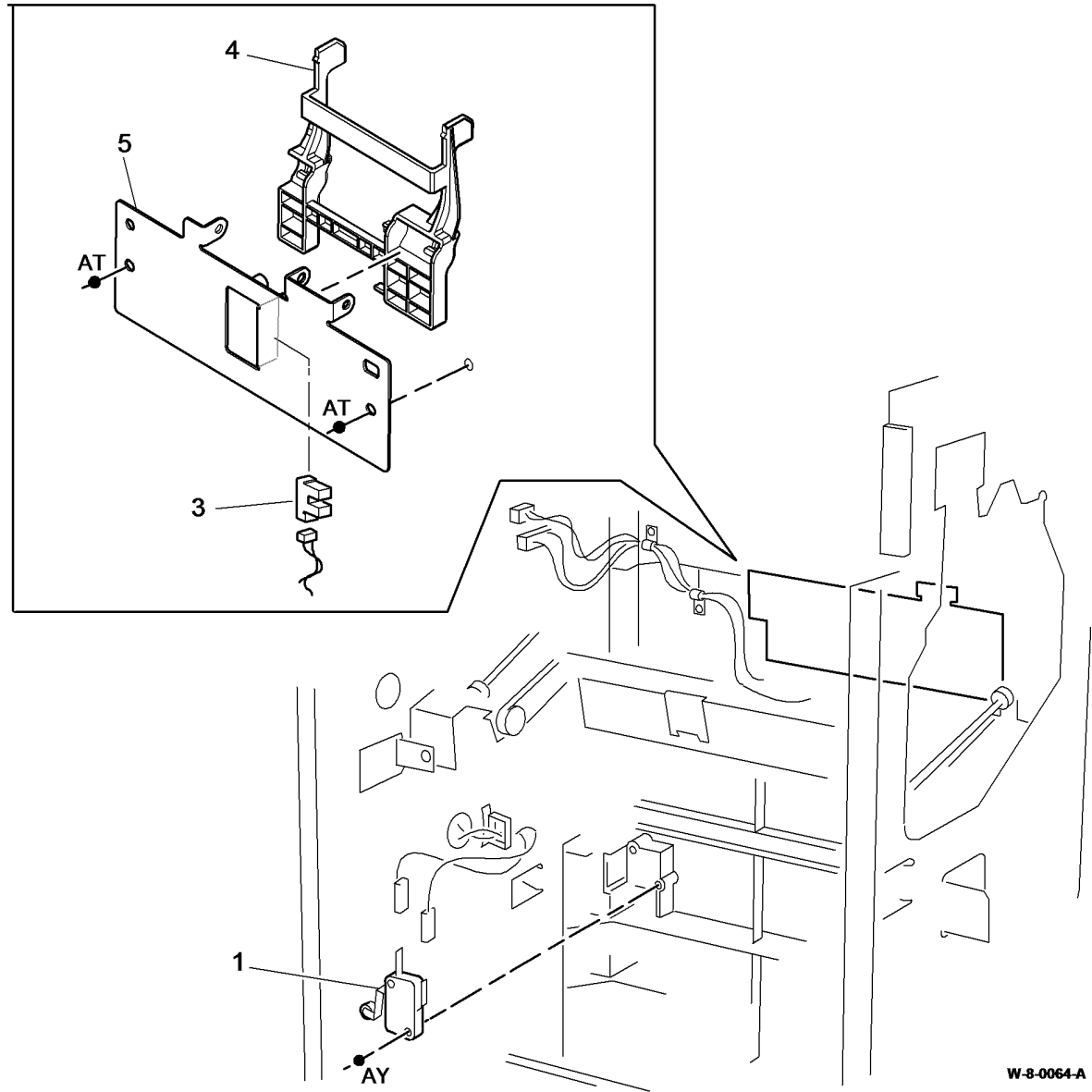
Item	Part	Description
1	023E24320	Bin 1 drive belt (REP 12.5-150)
2	-	Rear belt clamp (Not Spared) (ADJ 12.1-150)
3	110E20180	Bin 1 upper limit switch (S12-190)
4	-	Sensor bracket (Not Spared)
5	130E10360	Bin 1 90% full sensor (Q12-187)/ Bin 1 motor encoder sensor (Q12-163)
6	-	Rear pulley (Not Spared) (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)



W-8-0063-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)

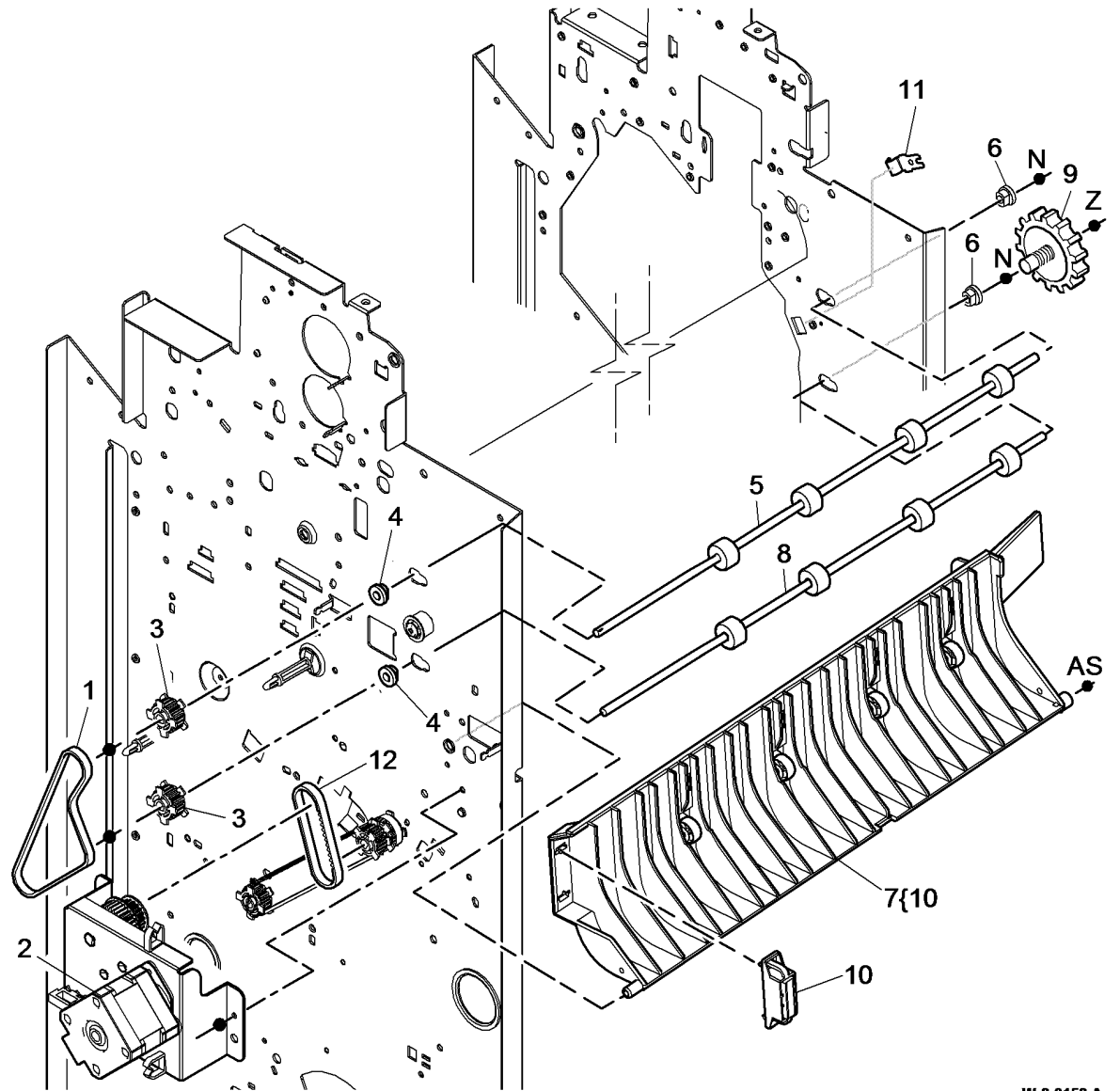


W-8-0064-A



# PL 12.350 LVF BM Paper Entry Transport

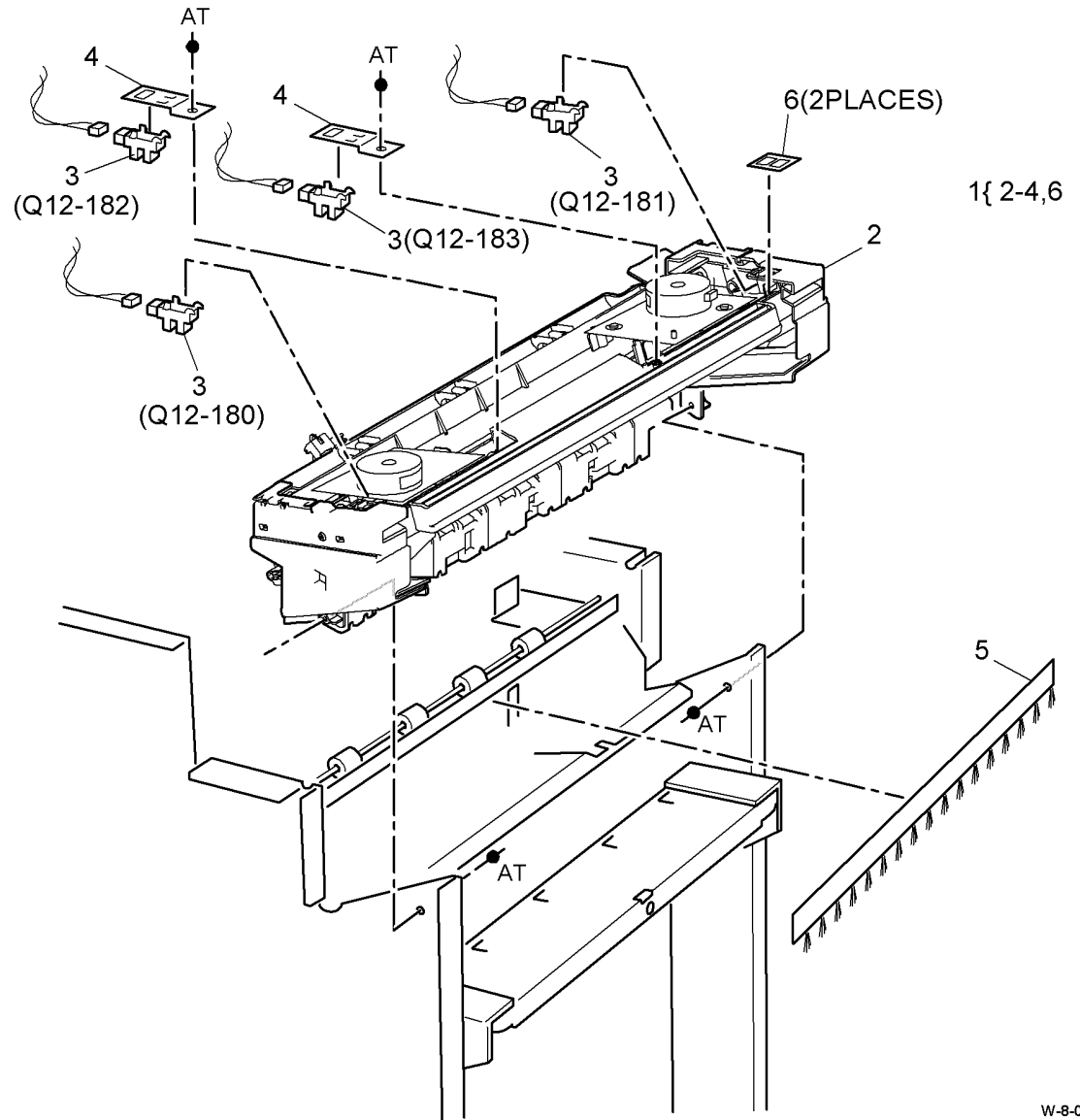
Item	Part	Description
1	023E24340	Input drive belt (REP 12.2-150)
2	-	Transport motor 1 and gearbox assembly (MOT12-223) (Not Spared) (REP 12.2-150)
3	-	Pulley (Not Spared)
4	013E25790	Nylon bearing
5	-	Upper feed roll assembly (Not Spared)
6	013E37460	Bearing
7	-	Paper entry guide assembly (Not Spared)
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)



W-8-0158-A

# PL 12.355 LVF BM Tamper Assembly

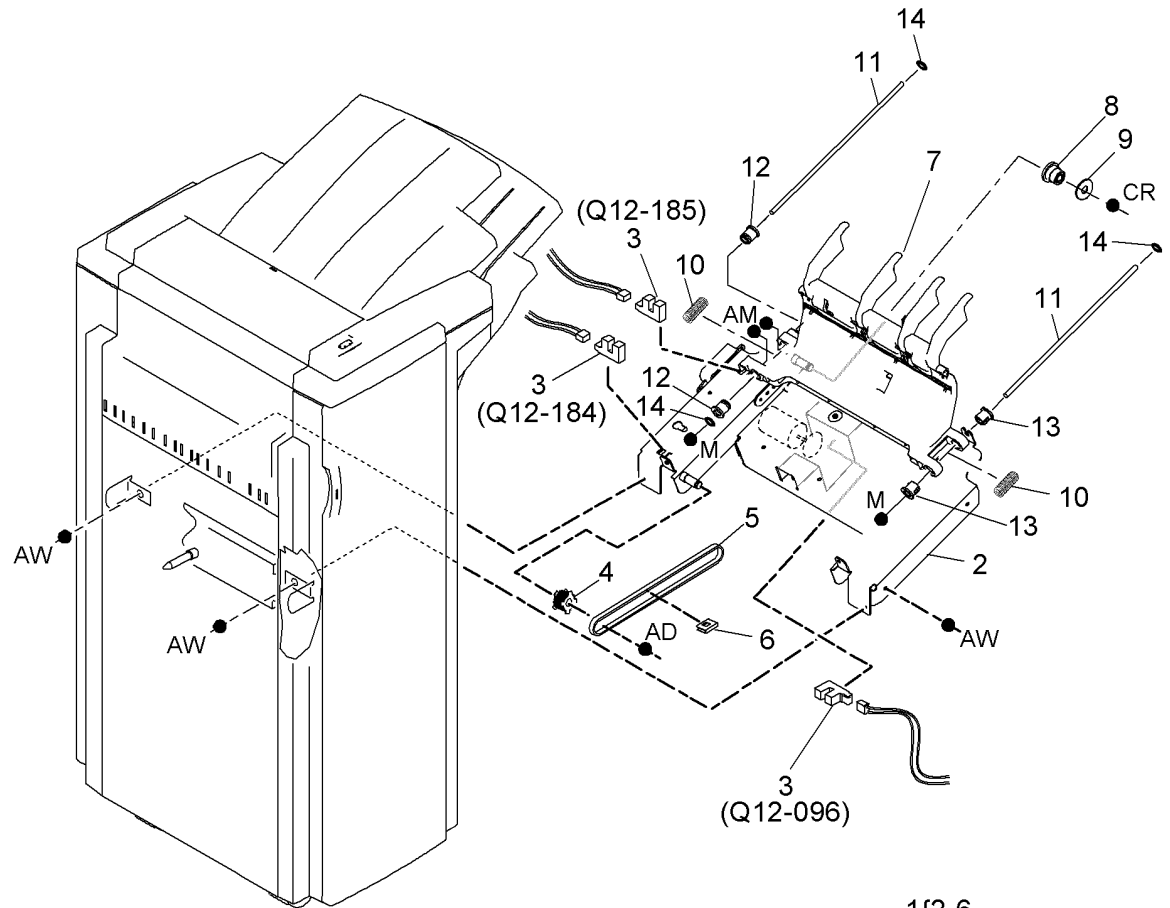
Item	Part	Description
1	049K12121	Tamper assembly (REP 12.6-150)
2	-	Tamper unit (P/O PL 12.355 Item 1)
3	130E10360	Front tamper home sensor (Q12-180), Front tamper away sensor (Q12-182), Rear tamper home sensor (Q12-181), Rear tamper away sensor (Q12-183) (REP 12.6-150)
4	-	Sensor bracket (P/O PL 12.355 Item 1)
5	-	Static eliminator (stacker)
6	-	Sensor retainer (Not Spared)



W-8-0159-A

# PL 12.360 LVF BM Ejector Assembly

Item	Part	Description
1	054K54272	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	-	Ejector belt (P/O PL 12.360 Item 1) (REP 12.17-150)
6	-	Clip (P/O PL 12.360 Item 1)
7	-	Support finger (Not Spared) (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	-	Bearing assembly kit (Not Spared)



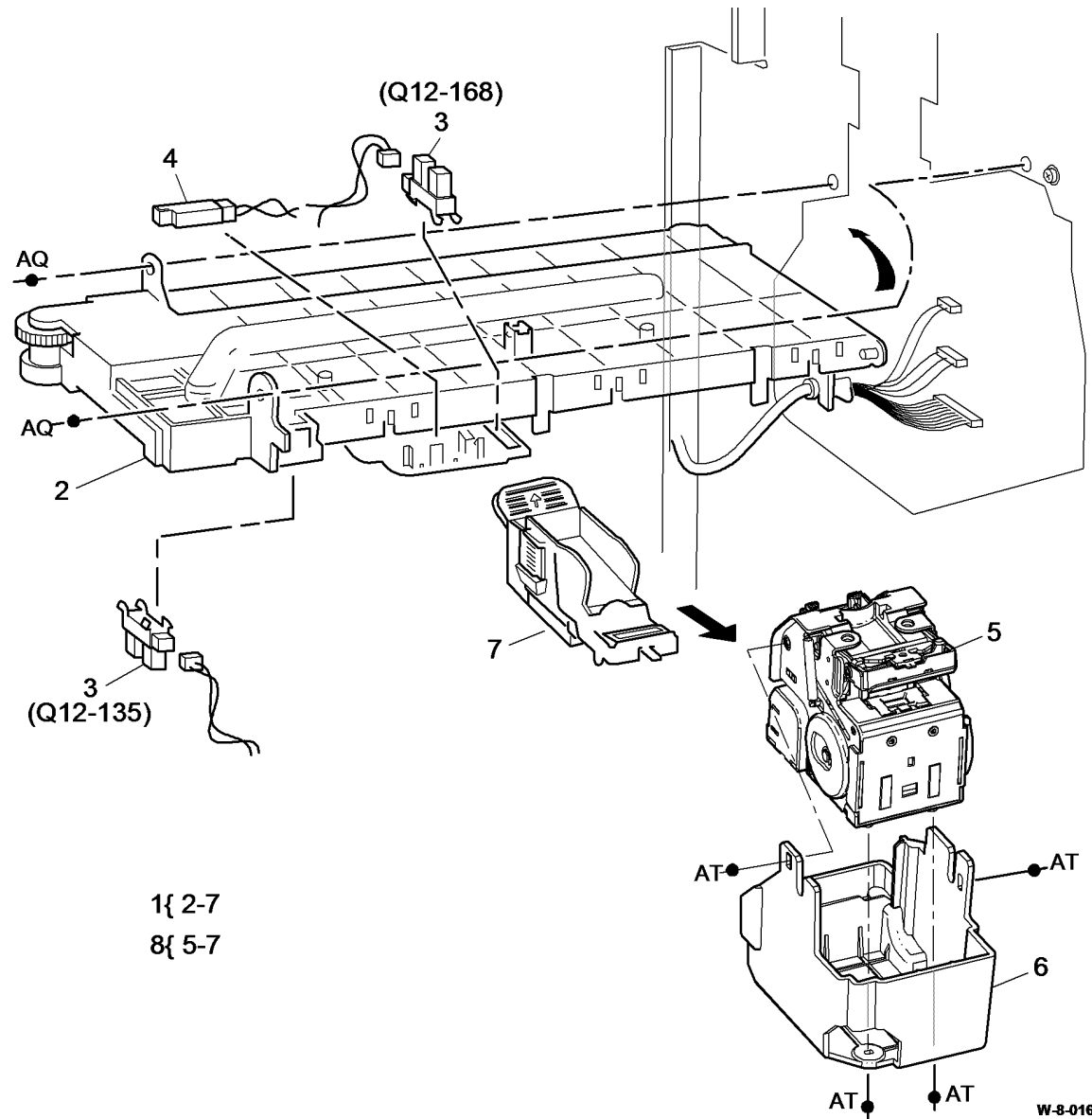
1{2-6  
15{12-14

W-8-0160-A

# PL 12.365 LVF BM Staple Head Unit/ Traverse Assembly

Item	Part	Description
1	014K11541	Stapler traverse assembly (REP 12.8-150)
2	-	Head traverse unit (P/O PL 12.365 Item 1)
3	130E10360	Staple 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	029K04690	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) (NOTE)
8	-	Staple head assembly (P/O PL 12.365 Item 1)

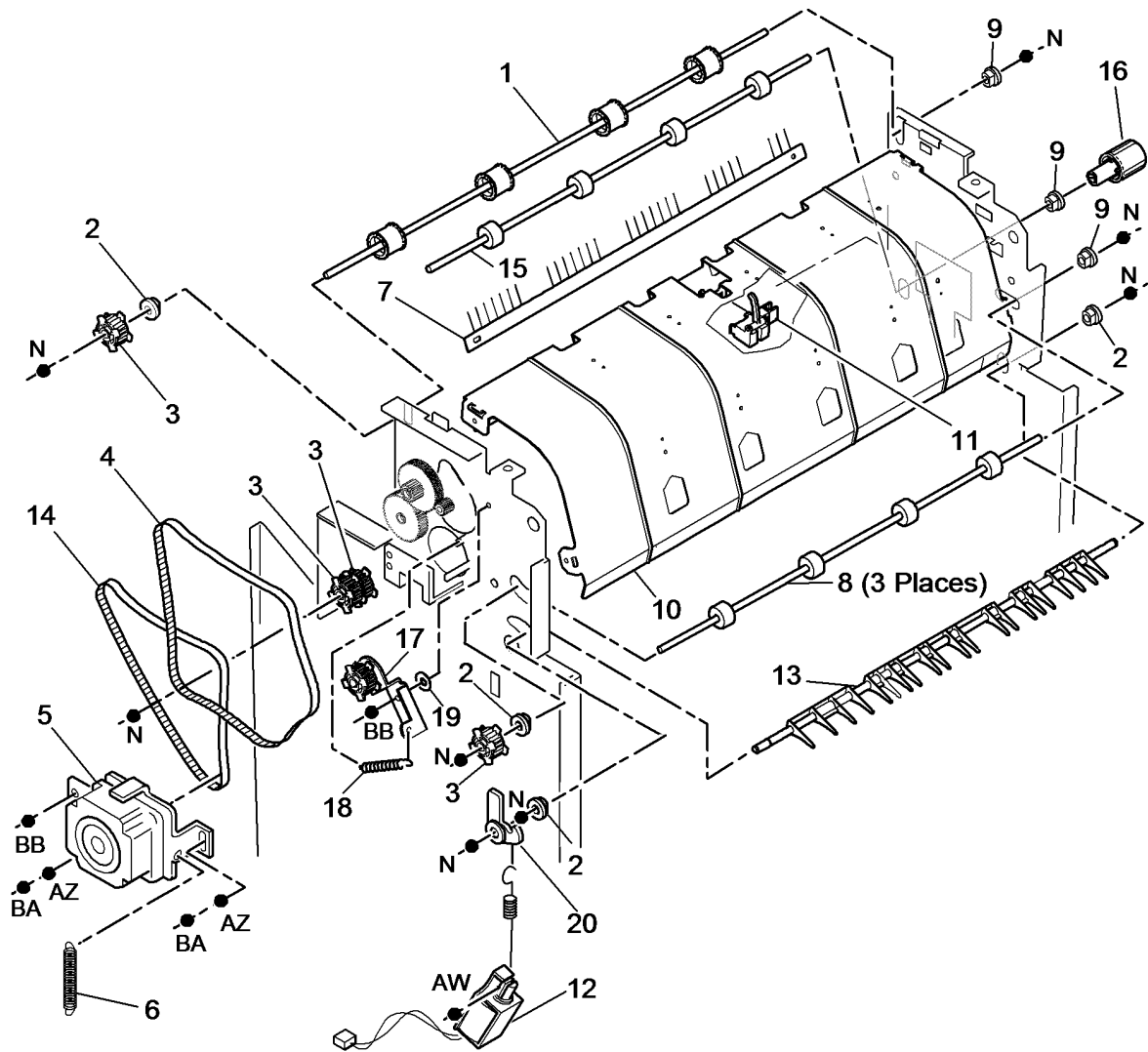
**NOTE:** To replace staples only, order PL 26.11 Item 4.



1{ 2-7  
8{ 5-7

# PL 12.370 LVF BM Bin 0 Entry

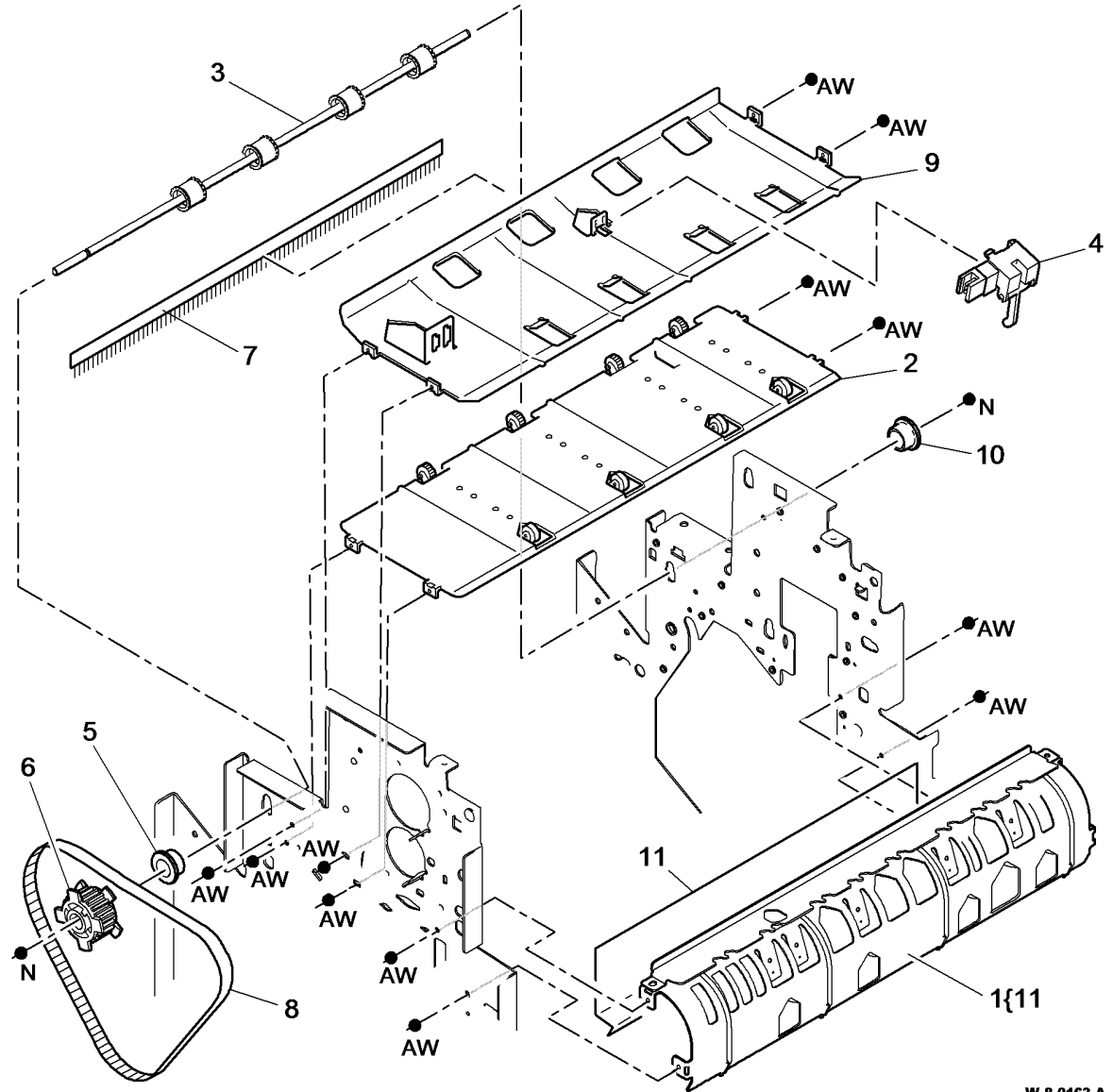
Item	Part	Description
1	006K32810	Top tray exit shaft
2	013E25790	Nylon bearing
3	-	Pulley (Not Spared)
4	023E24330	Intermediate paper drive belt (REP 12.3-150)
5	127K55870	Transport motor 2 (MOT12-224) (REP 12.4-150, ADJ 12.4-150)
6	-	Spring (Not Spared)
7	115E13440	Static eliminator
8	-	Feed roll shaft (short) (Not Spared)
9	013E37460	Bearing
10	-	Paper guide (Not Spared) (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	006K32840	Drive shaft assembly (REP 12.47-150)
16	006K33960	Jam clearance knob (REP 12.47-150)
17	-	Belt tensioner (Not Spared) (ADJ 40.1)
18	-	Spring (Not Spared)
19	-	Washer (Not Spared)
20	-	Actuator (Not Spared)



W-8-0162-A

## PL 12.375 LVF BM Bin 1 Entry

Item	Part	Description
1	-	Left paper guide (Not Spared)
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)

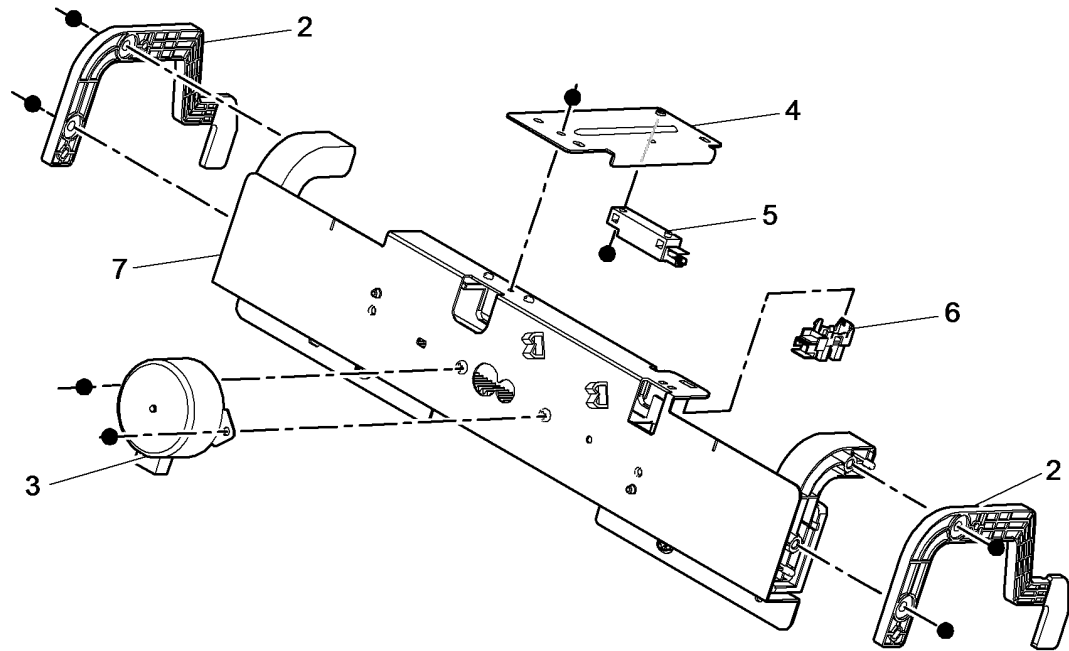


W-8-0163-A

# 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)

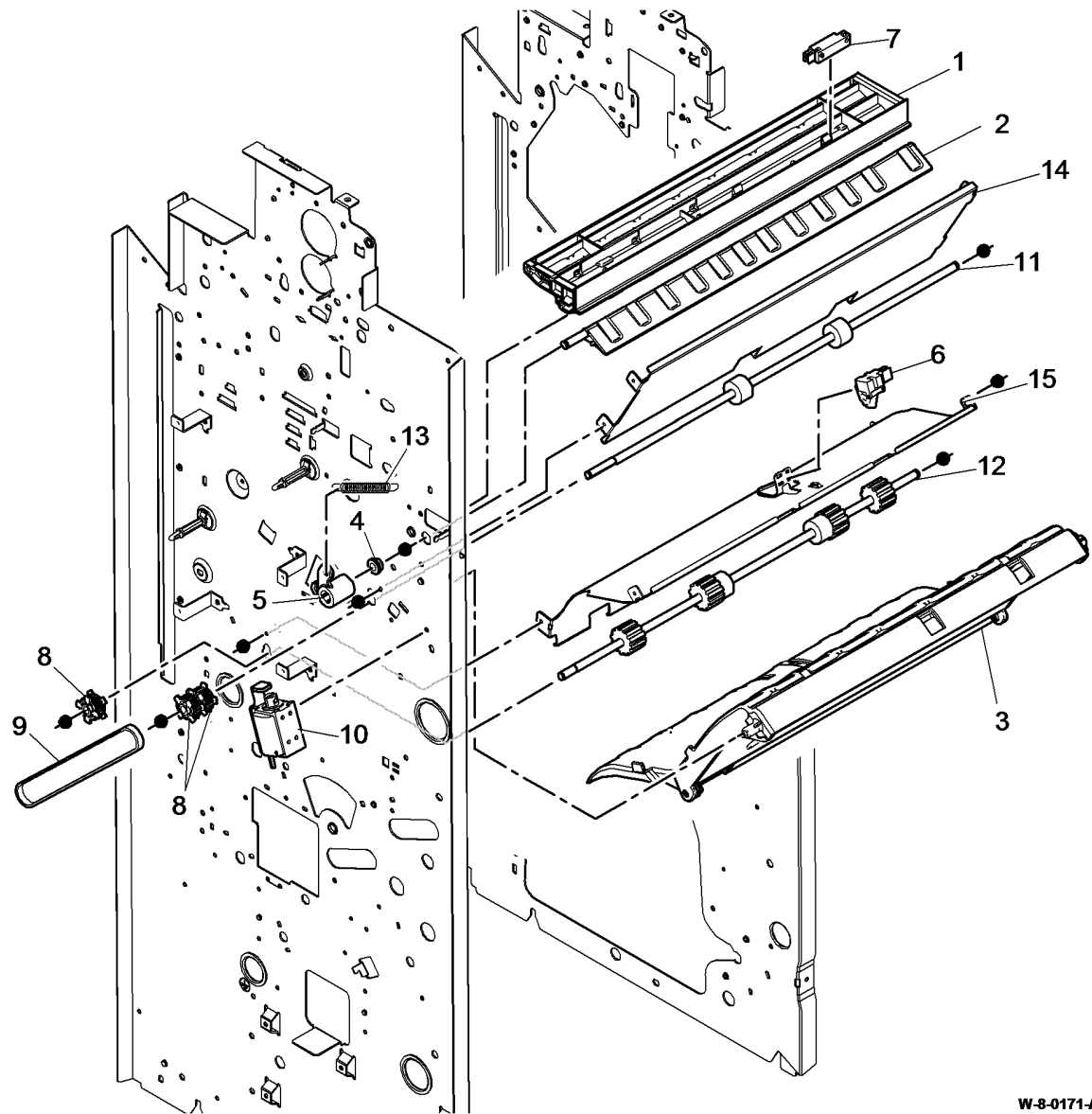
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W-8-0172-A

## PL 12.385 LVF BM Compiler Entrance Guides

Item	Part	Description
1	-	Upper entrance guide (Not Spared) (REP 12.31-150)
2	050E29410	Booklet diverter gate (REP 12.33-150)
3	032K10350	BM entrance guide assembly (REP 12.32-150)
4	-	Bush (Not Spared)
5	-	Lever (Not Spared)
6	130E10360	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)

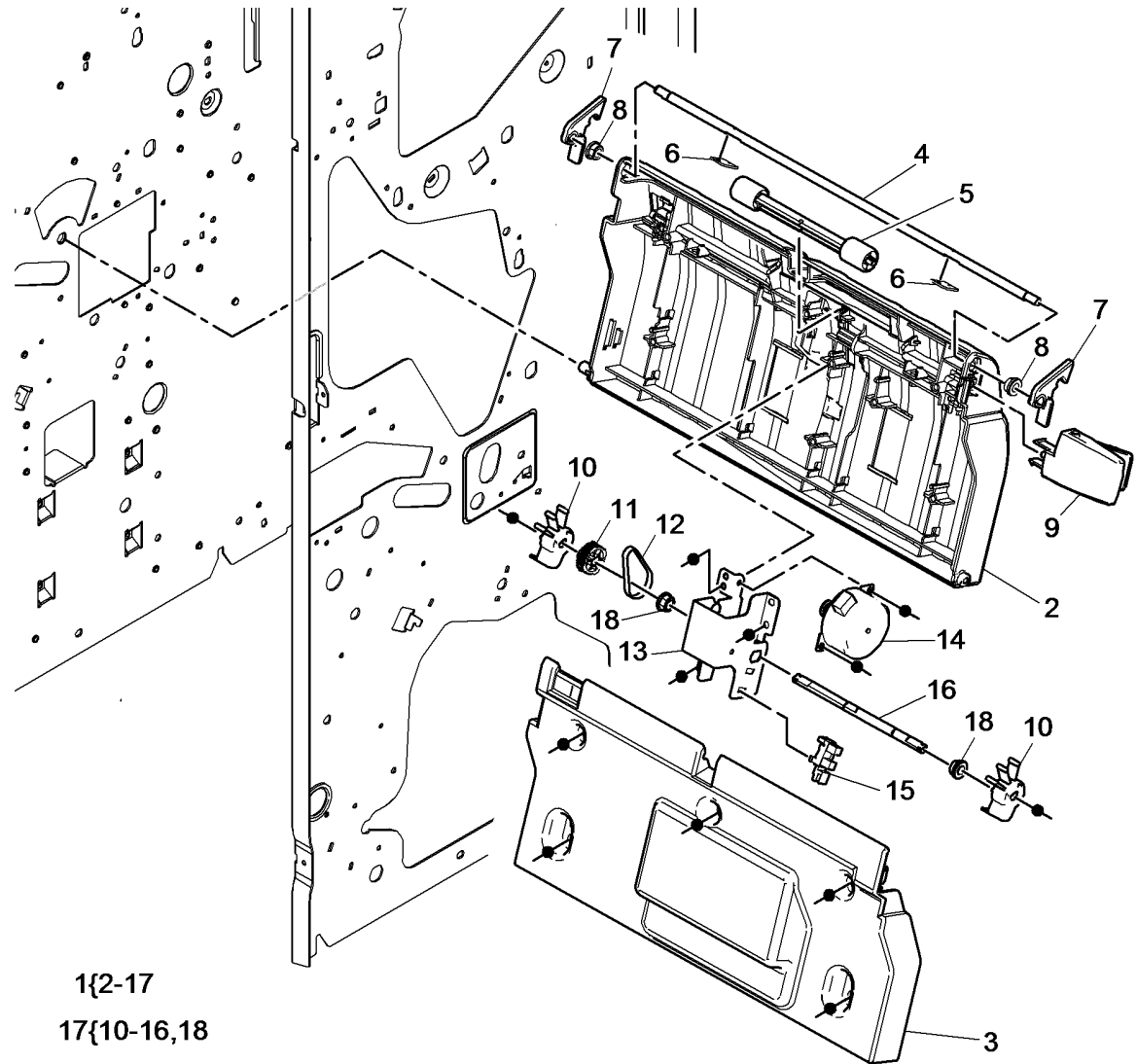


W-8-0171-A



# PL 12.390 LVF BM Compiler Guide Assembly

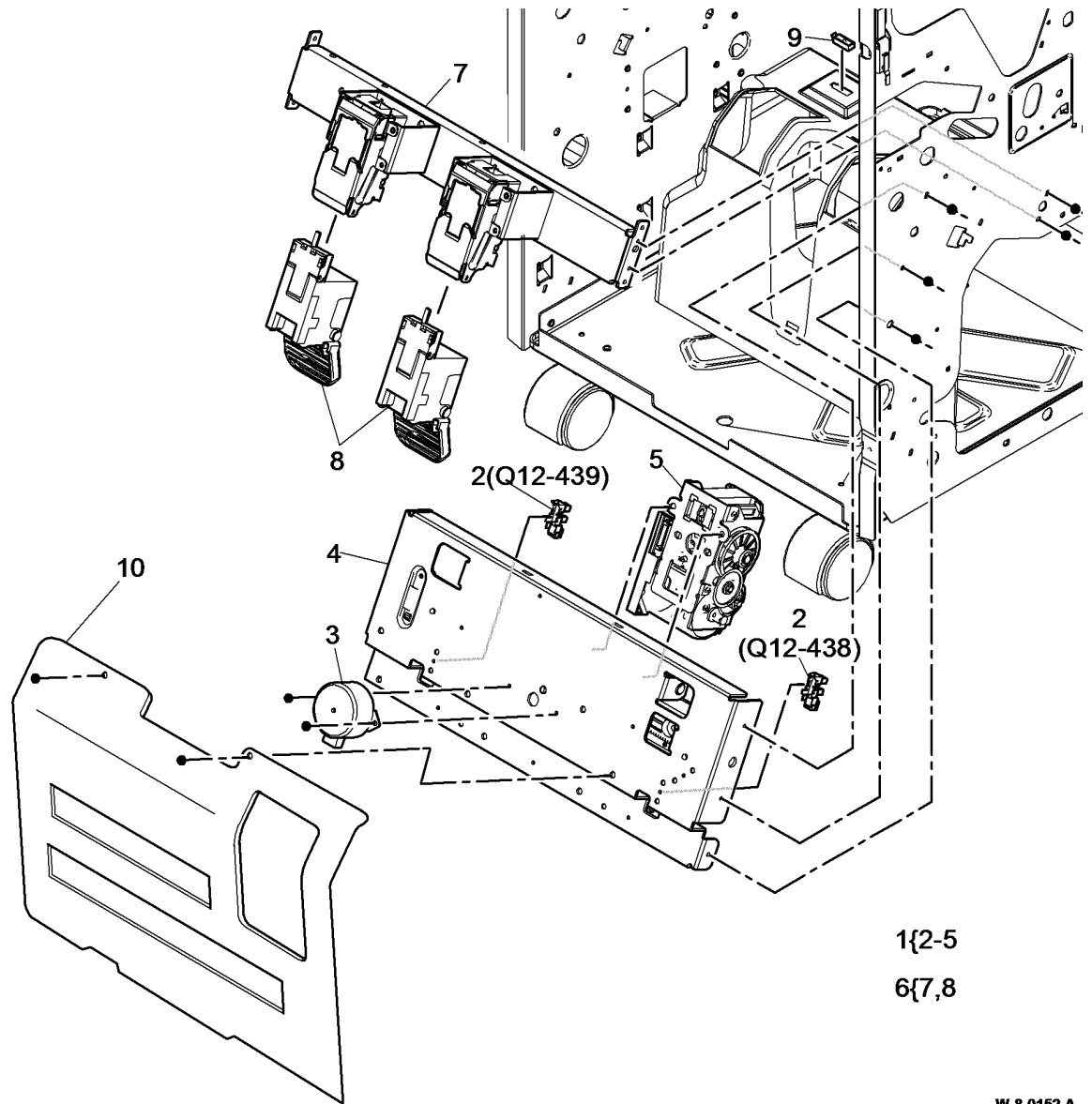
Item	Part	Description
1	-	BM compiler guide assembly (Not Spared) (REP 12.30-150)
2	-	Base (P/O PL 12.390 Item 1)
3	-	Cover (P/O PL 12.390 Item 1)
4	-	Shaft (P/O PL 12.390 Item 1)
5	-	Idler roll assembly (P/O PL 12.390 Item 1)
6	-	Static eliminator (P/O PL 12.390 Item 1)
7	-	Latch (P/O PL 12.390 Item 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)



W-8-0173-A

# PL 12.395 LVF BM Booklet Stapler Assembly

Item	Part	Description
1	029K04811	BM stapler assembly (REP 12.38-150)
2	130E10360	Staple unit home sensor (Q12-438)/ Staple unit 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	077E00080	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)

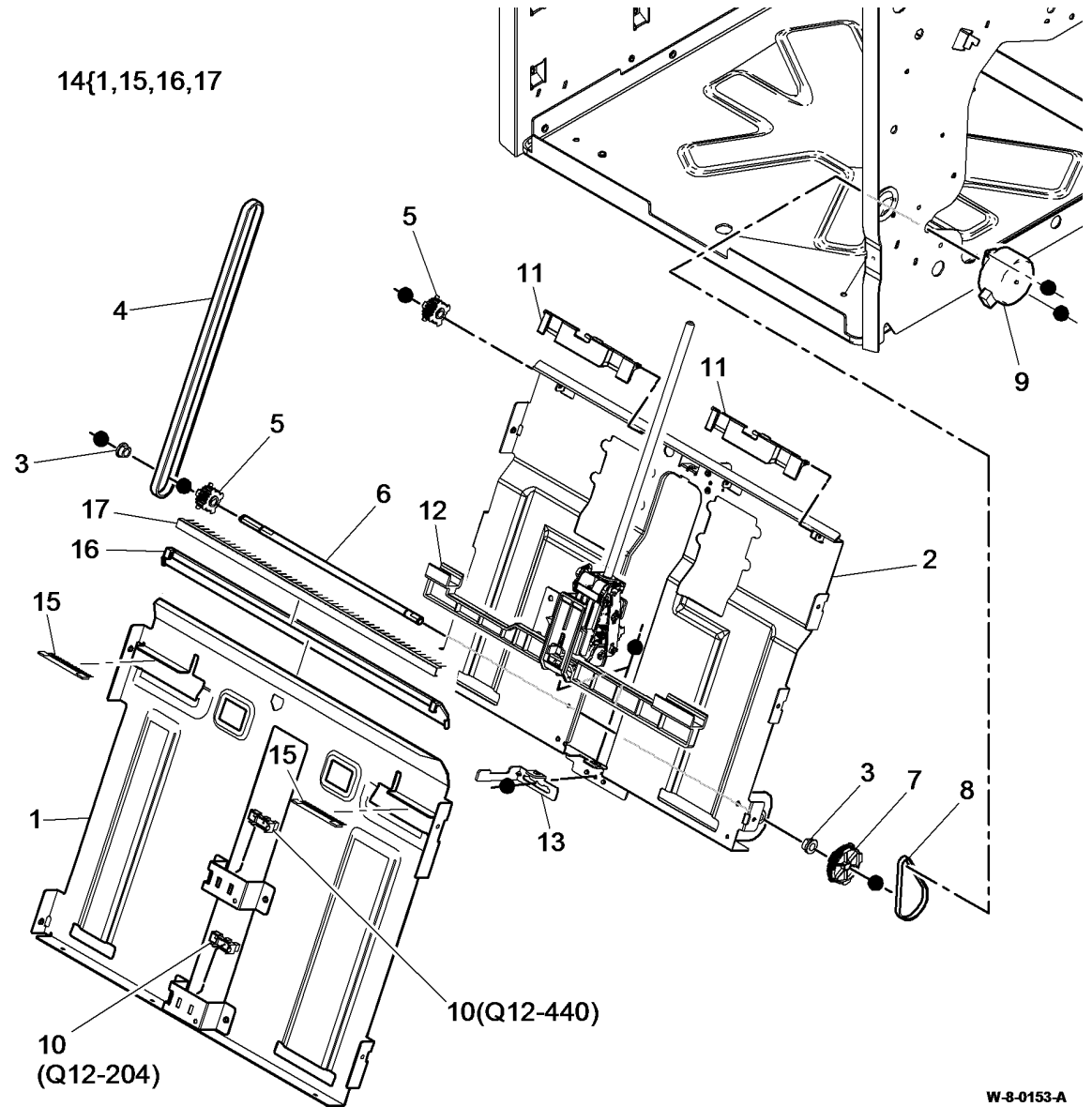


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W-8-0152-A

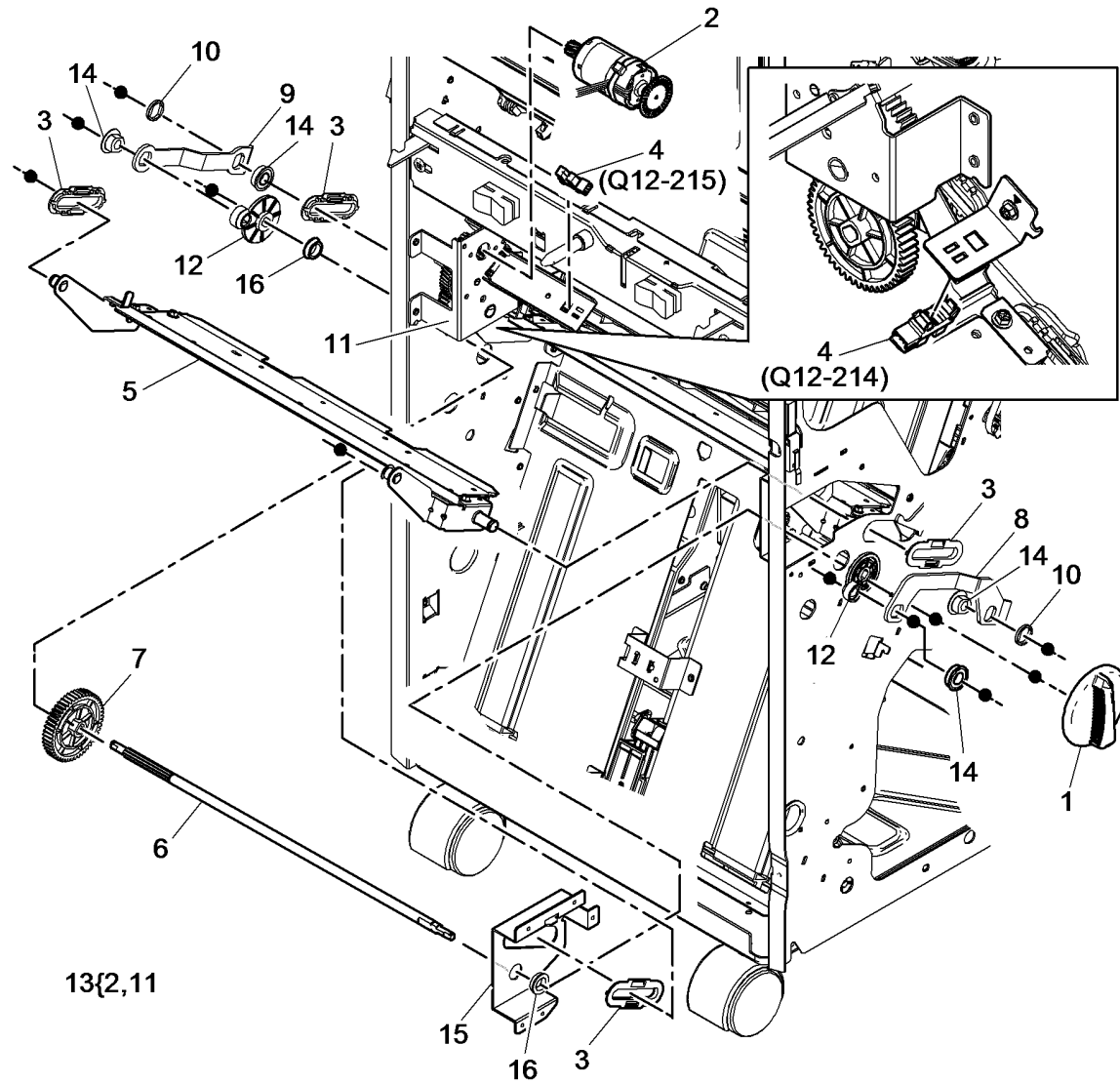
# PL 12.400 LVF BM Back Stop Assembly

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	-	Back stop left guide assembly (P/O PL 12.400 Item 12)
15	-	Static eliminator (P/O PL 12.400 Item 14)
16	-	Sub plate (P/O PL 12.400 Item 14)
17	-	Static eliminator (P/O PL 12.400 Item 14)



# PL 12.405 LVF BM Crease Blade Assembly

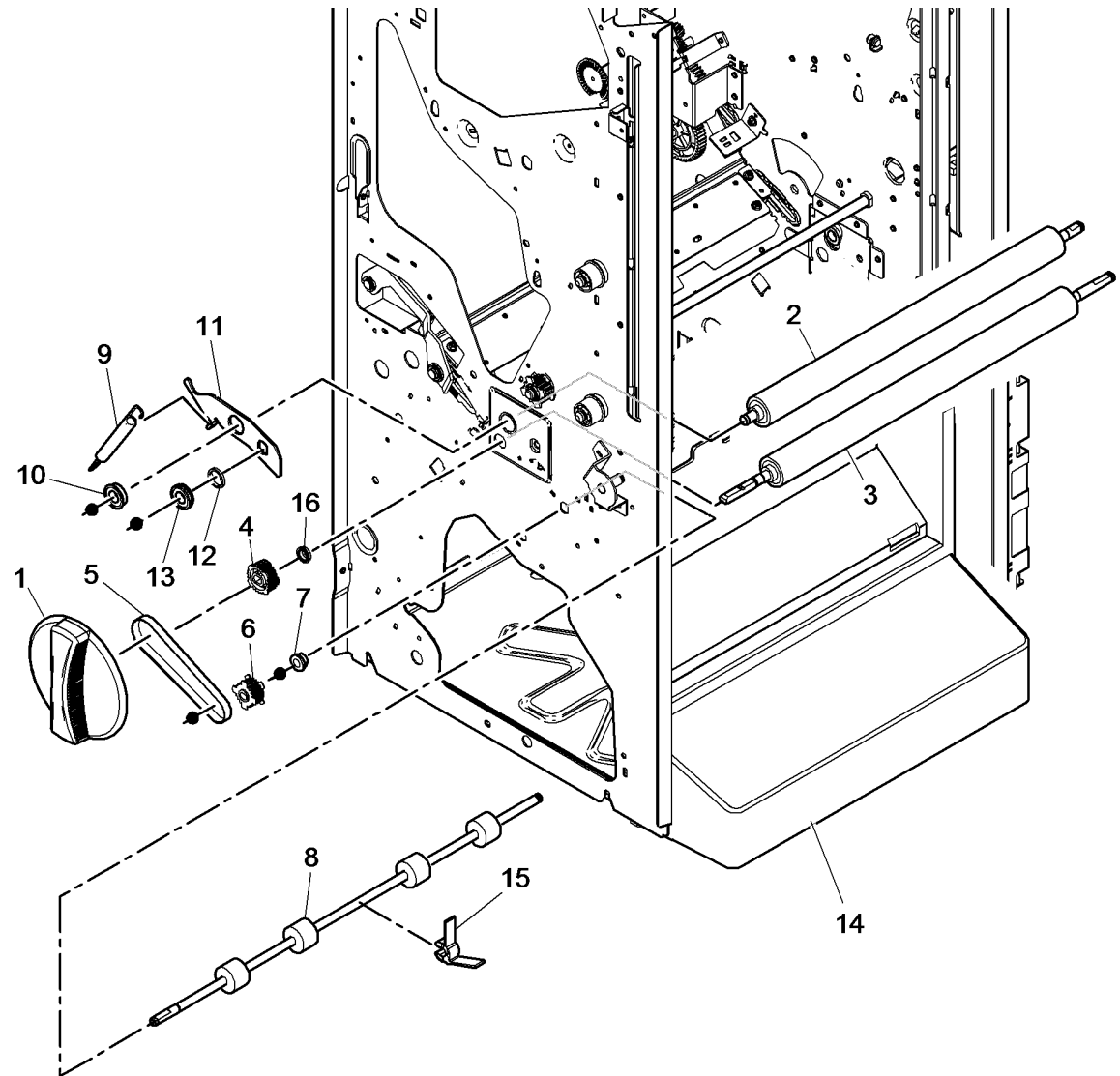
Item	Part	Description
1	803E20900	Crease blade handle (REP 12.23-150)
2	127E17650	BM Crease blade motor (MOT12-252) (REP 12.21-150)
3	011E30810	Crease blade guide (REP 12.22-150)
4	130E10360	BM Crease blade home sensor (Q12-214)/BM Crease blade motor encoder sensor (Q12-215) (REP 12.21-150)
5	037K01490	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	-	Crease blade bearing (Not Spared) (REP 12.23-150)
15	-	Bracket (Not Spared)
16	013E43930	Crease blade shaft bearing



W-8-0167-A

## PL 12.410 LVF BM Crease Roll Assembly (1 of 3)

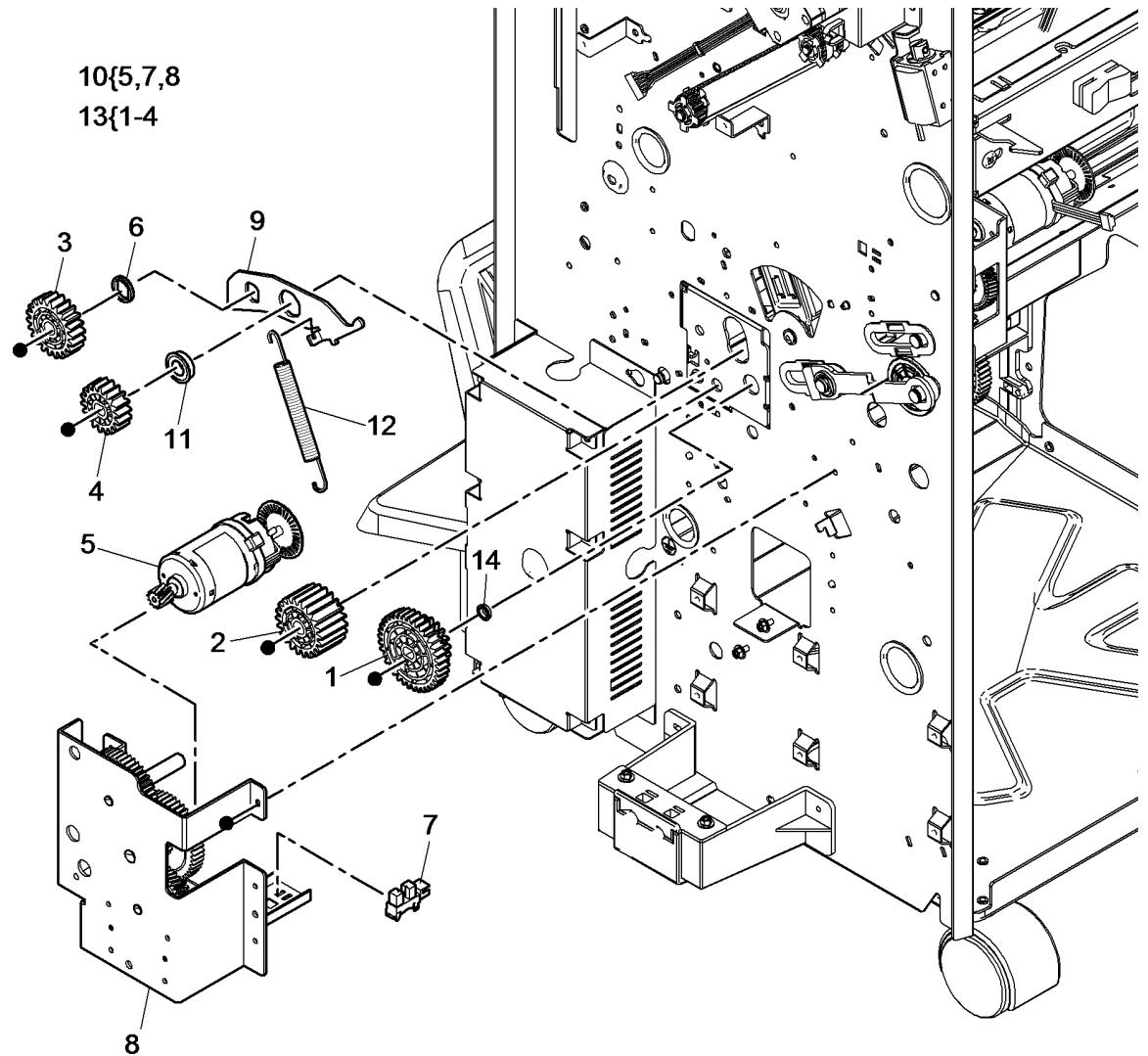
Item	Part	Description
1	803E20910	Crease roll handle (REP 12.24-150)
2	059E11860	Upper crease roll (REP 12.24-150)
3	059E11870	Lower crease roll (REP 12.24-150)
4	020E55510	Crease roll handle pulley (REP 12.24-150)
5	023E32470	Exit roll belt (REP 12.27-150)
6	020E55520	Exit roll pulley (REP 12.27-150)
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



W-8-0168-A

## PL 12.415 LVF BM Crease Roll Assembly (2 of 3)

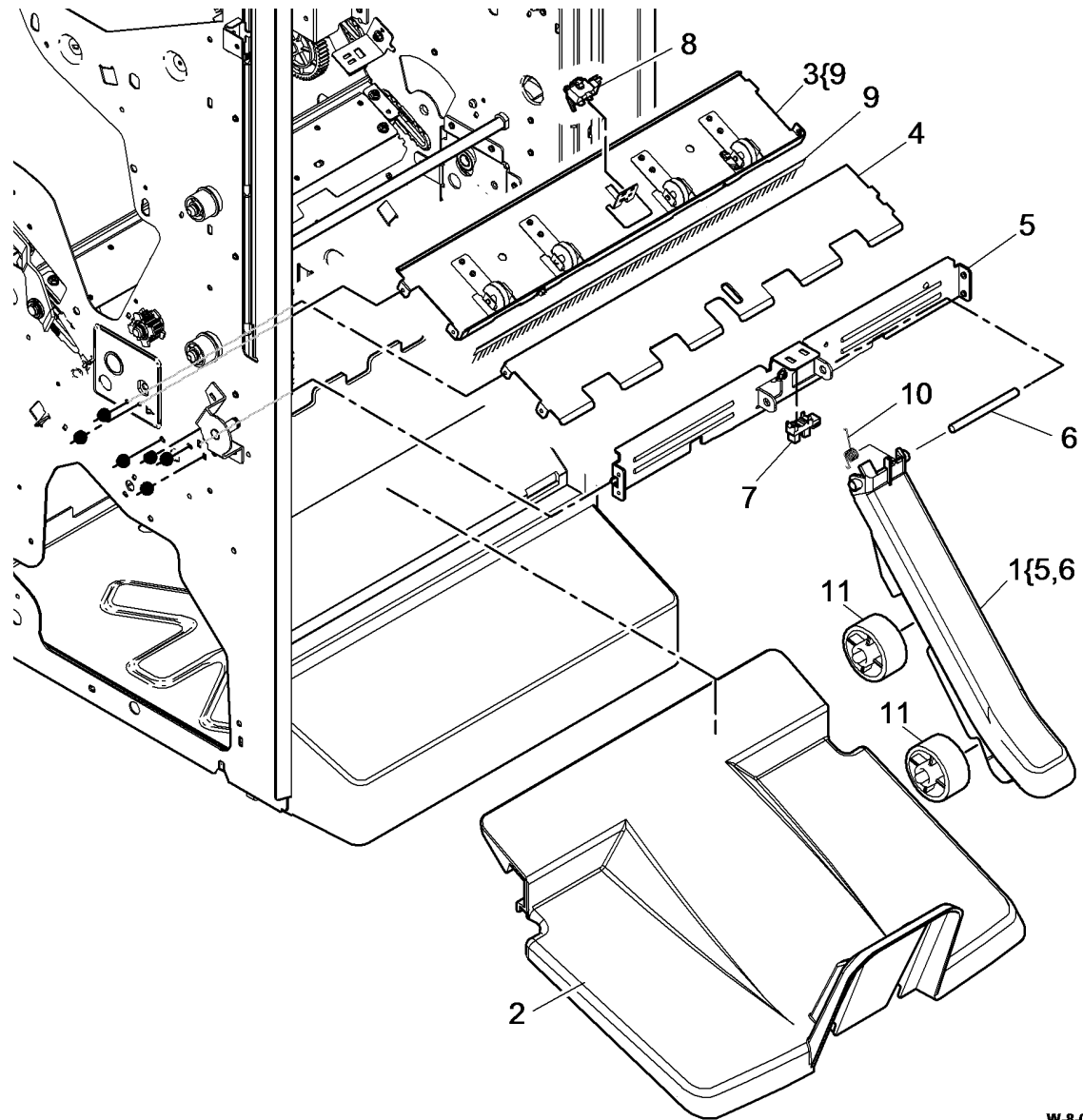
Item	Part	Description
1	-	Crease roll gear 1 (P/O PL 12.415 Item 13) (REP 12.26-150)
2	-	Crease roll gear 2 (P/O PL 12.415 Item 13) (REP 12.26-150)
3	-	Crease roll gear 3 (P/O PL 12.415 Item 13) (REP 12.26-150)
4	-	Crease roll gear 4 (P/O PL 12.415 Item 13) (REP 12.26-150)
5	-	BM Crease roll motor (MOT12-253) (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



W-8-0169-A

## PL 12.420 LVF BM Crease Roll Assembly (3 of 3)

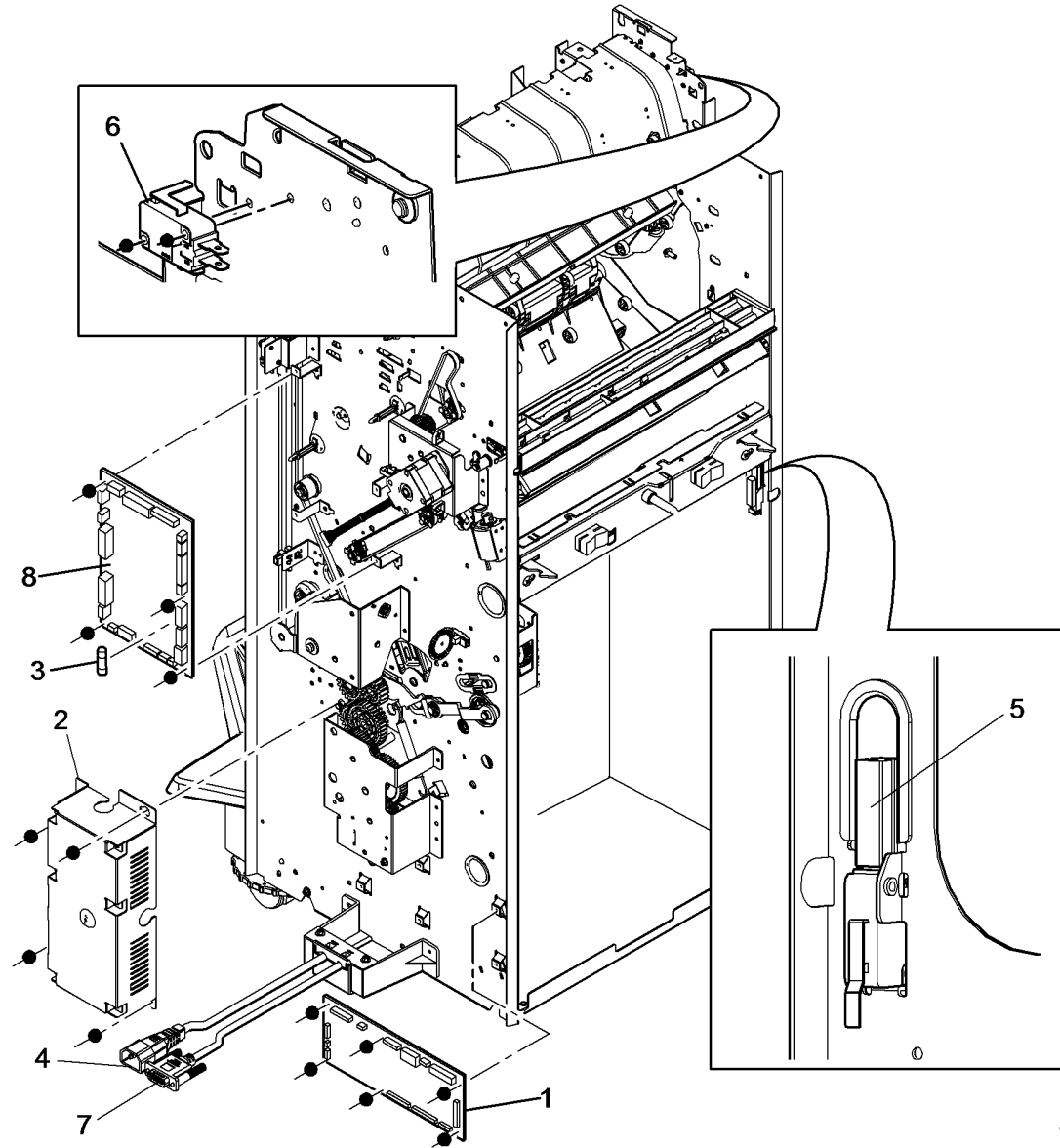
Item	Part	Description
1	031K09230	Bail arm assembly (REP 12.29-150)
2	050E29400	Bin 2
3	032K10330	Exit upper guide assembly (REP 12.28-150)
4	-	Exit lower guide (Not Spared)
5	-	Bail arm support bracket (P/O PL 12.420 Item 1)
6	-	Bail arm pin (P/O PL 12.420 Item 1)
7	130E10360	Bin 2 90% full sensor (Q12-206) (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)



W-8-0170-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	960K83170	LVF PWB (REP 12.14-150)



W-8-0149-A



## PL 17.00 Secure Access Additions

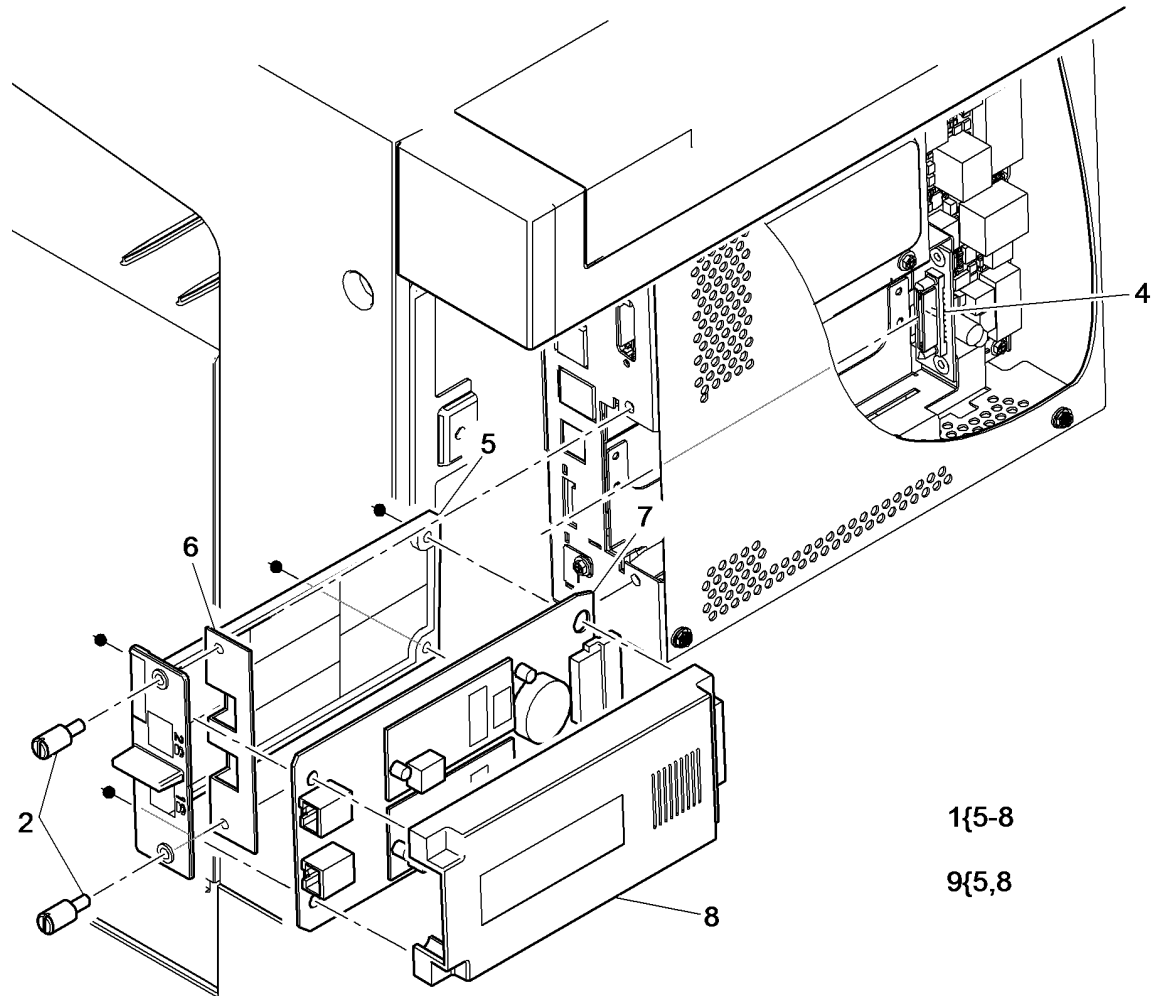
Item	Part	Description
1	–	Secure access controller (Not Spared)
2	–	Xerox secure access power supply (Not Spared)
3	–	Xerox secure access card reader (HID) (Not Spared)
4	–	Xerox secure access card reader (MAGSTRIPE) (Not Spared)
5	–	Xerox secure access card reader (MIFARE) (Not Spared)
6	–	Xerox secure 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**

W-8-0118-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)
-	-	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	960K65960	Fax PWB (1 line) (REP 20.1)
-	960K65970	Fax PWB (2 line) (REP 20.1)
8	-	Rear cover (P/O PL 20.05 Item 9) (REP 20.1)
9	848E74310	Covers assembly



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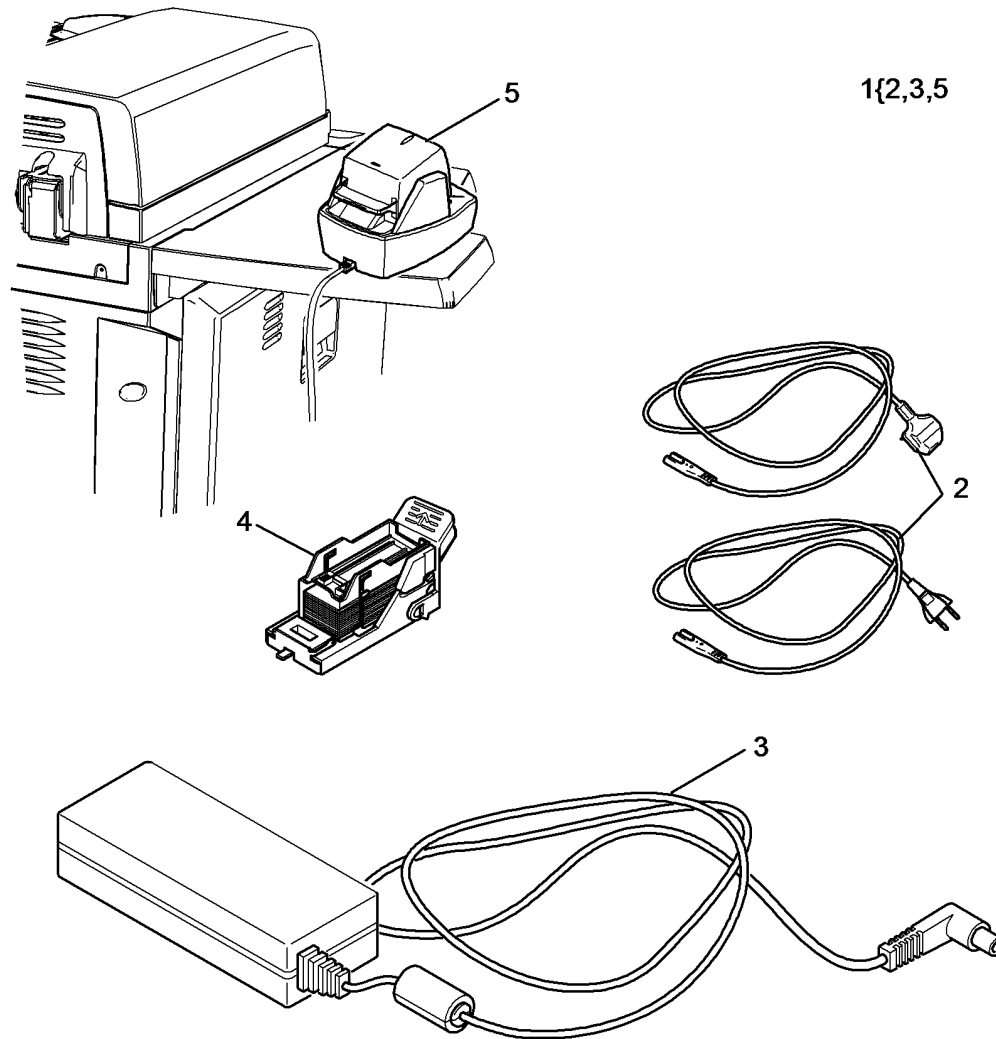
W-8-0119-A

## PL 25.10 Convenience Stapler

Item	Part	Description
1	-	Convenience stapler kit (REF: PL 31.11 Item 5) (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) (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.



W-8-0120-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

W-8-0121-A

## PL 26.11 Consumables and Tools (2 of 2)

Item	Part	Description
1	600T91940	Air duster
2	–	Staple cartridge (LVF BM)
–	029K04820	1 cartridge (2000 staples)
–	108R01158	4 cartridges (4 x 2000 staples)
3	006R01604	Toner cartridge (x2) pack (Metered)
–	006R01605	Toner cartridge (x2) (XE) SOLD
–	006R01606	Toner cartridge (x2) DMO SOLD
4	008R12941	Staple cartridge refill (staples only - 3 x 5000)
5	–	Handset tool (Not Spared)
6	600T02458	Left door damper spring tools

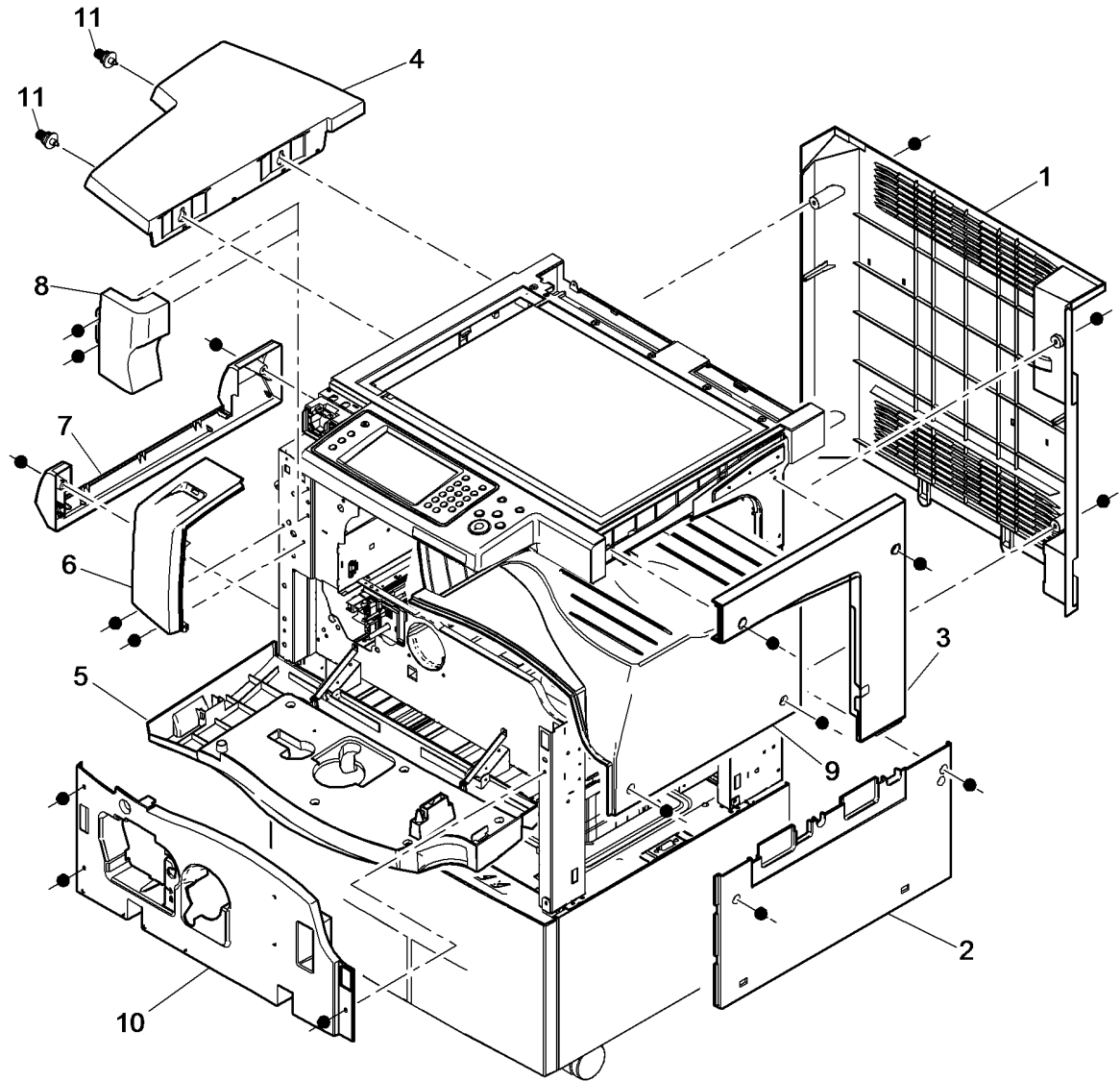
**NO EXPLODED  
VIEW PROVIDED**

W-8-0122-A

## PL 28.10 Main Covers

Item	Part	Description
1	-	Rear cover (Not Spared) (REP 28.2)
2	-	Right cover (Not Spared)
3	-	Upper right cover (Not Spared) (REP 28.1)
4	497K13840	Work shelf
5	-	Front door assembly (REF: PL 28.11)
6	-	Left frame cover (Not Spared) (REP 28.1)
7	-	Bypass tray feedhead cover (P/O PL 70.35 Item 1)
8	-	Centre exit cover (Not Spared) (REP 28.1)
9	-	Centre output tray (Not Spared) (REP 28.1)
10	-	Inner front cover (Not Spared)
11	-	Thumbscrew (P/O PL 28.10 Item 4)

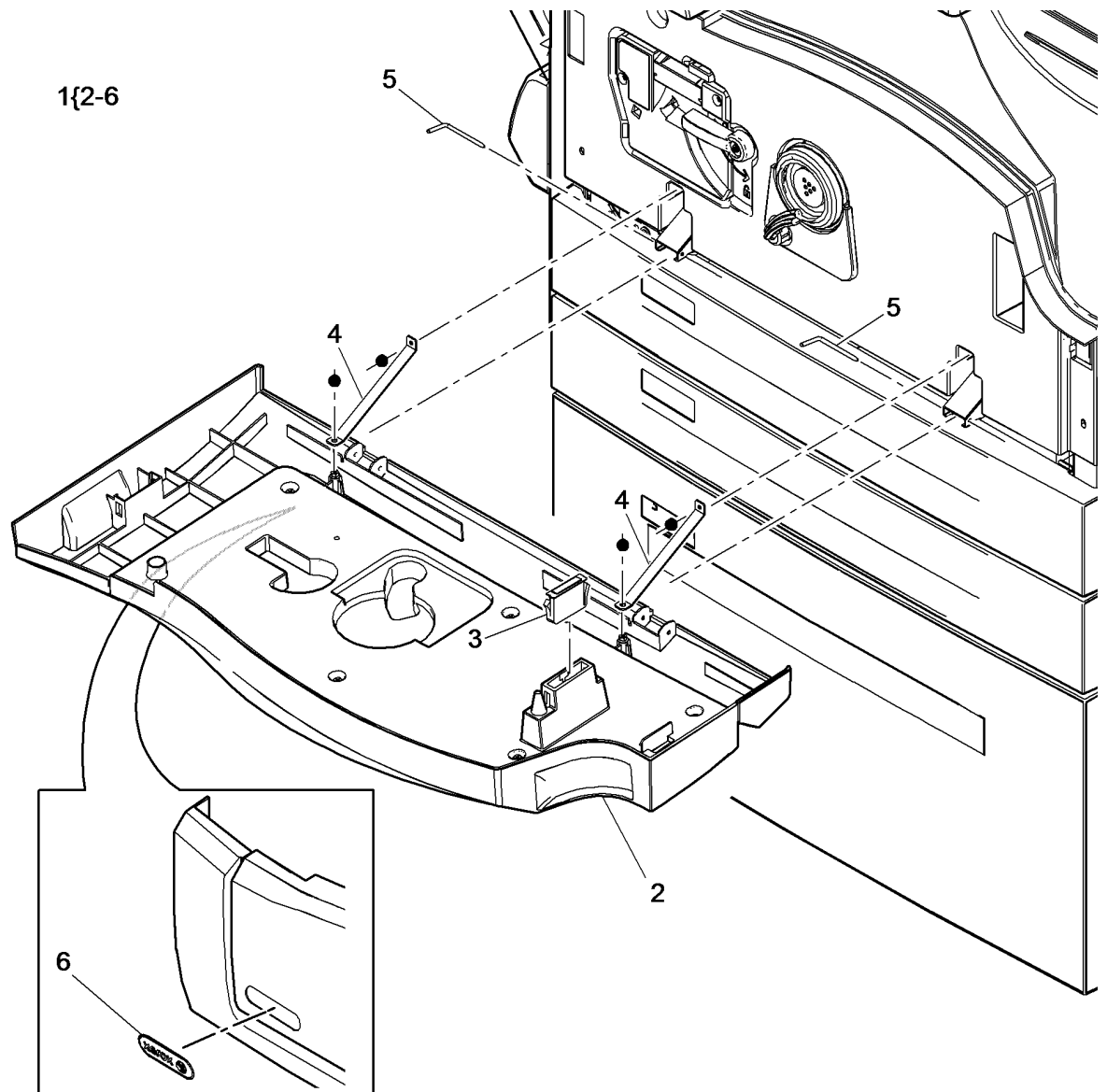
**NOTE:** Do not order 497/8K parts. 497/8K parts are customer install kits and are shown for reference only.



W-8-0031-A

## PL 28.11 Front Door Assembly

Item	Part	Description
1	-	Front door assembly (Not Spared)
2	-	Front cover assembly (P/O PL 28.11 Item 1)
3	-	Magnet (P/O PL 28.11 Item 1)
4	-	Front door strap (P/O PL 28.11 Item 1)
5	-	Door hinge pin (P/O PL 28.11 Item 1)
6	-	Logo badge (P/O PL 28.11 Item 1)



## 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)

**NO EXPLODED  
VIEW PROVIDED**

W-8-0123-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)
–	498K14050	2 hole punch kit (XE)
–	498K14080	2 hole punch kit (legal) (XE)
–	498K14070	4 hole punch kit
–	498K14090	4 hole punch kit (Sweden)
–	497K14960	3 hole punch kit
3	–	Bin 1 tray kit (improved stacking) (Not Spared)
4	497K13850	Paper tray security kit
5	498K08260	Convenience stapler kit (XE)
–	498K08250	Convenience stapler kit (USSG/XCL)
6	007K20550	Scanner drive kit
7	–	SPDH feed roll kit (Not Spared)
8	604K83690	HCF transport roll kit

**NOTE:** Do not order 497/8K parts. 497/8K parts are customer install kits and are shown for reference only.

**NO EXPLODED  
VIEW PROVIDED**

W-8-0124-A

## 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	607K03210	SPDH last sheet out sensor filter kit (W/TAG D-002)
4	–	2K LCSS front door cover assembly kit
5	604K73050	Paddle spares kit
6	607K04330	Feed head assembly spares kit (W/TAG 003 & TAG 004)
7	650K34150	Overlay label kit (French/Canadian)
–	650K34310	Overlay label kit (USSG/XCL)
–	650K34300	Overlay label kit (XE)
8	604K96681	Tray 4 transport shaft kit
9	497K14681	Envelope tray kit
10	497K11500	Wireless network adapter kit
11	497K14650	Foreign device interface kit
12	–	Hole punch field repair kit (Not Spared) (W/TAG F-006)
13	498K17546	CAC enablement kit
14	–	LCSS diverter gate assembly spares kit
15	604K83641	Feed/Nudger/Retard roll spares kit
16	604K84020	Stack height sensor and shim kit

**NOTE:** 1. Do not order 497/8K parts. 497/8K parts are customer install kits and are shown for reference only.

**NO EXPLODED  
VIEW PROVIDED**

W-8-0126-A

## PL 31.14 Maintenance/Installation/ Removal Kits (3 of 3)

Item	Part	Description
1	–	Initialisation kits (see below for variants)
–	–	45 ppm (Page pack enabled) (XE) (Not Spared)
–	–	55ppm (Page pack enabled)(DMO) (Not Spared)
–	–	45 ppm (Speed only SIM) (XE) (Not Spared)
–	–	55 ppm (Speed only SIM)(XE) (Not Spared)
–	–	45 ppm (Speed only SIM) (USSG/XCL) (Not Spared)
–	–	55 ppm (Speed only SIM) (USSG/XCL) (Not Spared)
2	–	SIM kit (see below for variants)
–	604K96570	45 ppm (Page pack enabled) (XE)
–	604K96580	55 ppm (Page pack enabled) (XE)
3	–	Not used
4	604K84190	FAR HCF bowl curl kit
5	497K13821	Horizontal transport kit
6	–	Tray 3 front cover kit (Not Spared)
7	600T02458	Left door damper spring tool kit (See NOTE 2)
8	–	Tray 4 front cover kit (Not Spared)
9	497K11350	Power cord kit (USSG/XCL)
10	607K03160	Doc present sensor actuator kit (W/TAG D-001)

**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.

**NO EXPLODED  
VIEW PROVIDED**

W-8-0128-A

## PL 31.35 Line 1 Fax Kits

Item	Part	Description
1	–	Line 1 Fax kits (see below for variants) (See NOTE)
–	497K06250	XE and South Africa
–	497K06230	USSG/XCL
–	497K06060	United Kingdom, Spain, Greece, Ireland, Portugal
–	497K06090	Austria, Germany, Switzerland, Italy
–	497K11280	Brazilian
–	497K06070	Netherlands, Belgium, France
–	497K06080	Sweden, Norway, Finland, Denmark

**NOTE:** Do not order 497/8K parts. 497/8K parts are customer install kits and are shown for reference only

**NO EXPLODED  
VIEW PROVIDED**

W-8-0133-A

## PL 31.40 Line 2 Fax Kits

Item	Part	Description
1	–	Line 2 Fax kits (see below for variants) (See NOTE)
–	497K06260	XE and South Africa
–	497K06240	USSG/XCL
–	497K06100	United Kingdom, Spain, Greece, Ireland, Portugal
–	497K06130	Austria, Germany, Switzerland, Italy
–	497K11290	Brazilian
–	497K06110	Netherlands, Belgium, France
–	497K06120	Sweden, Norway, Finland, Denmark

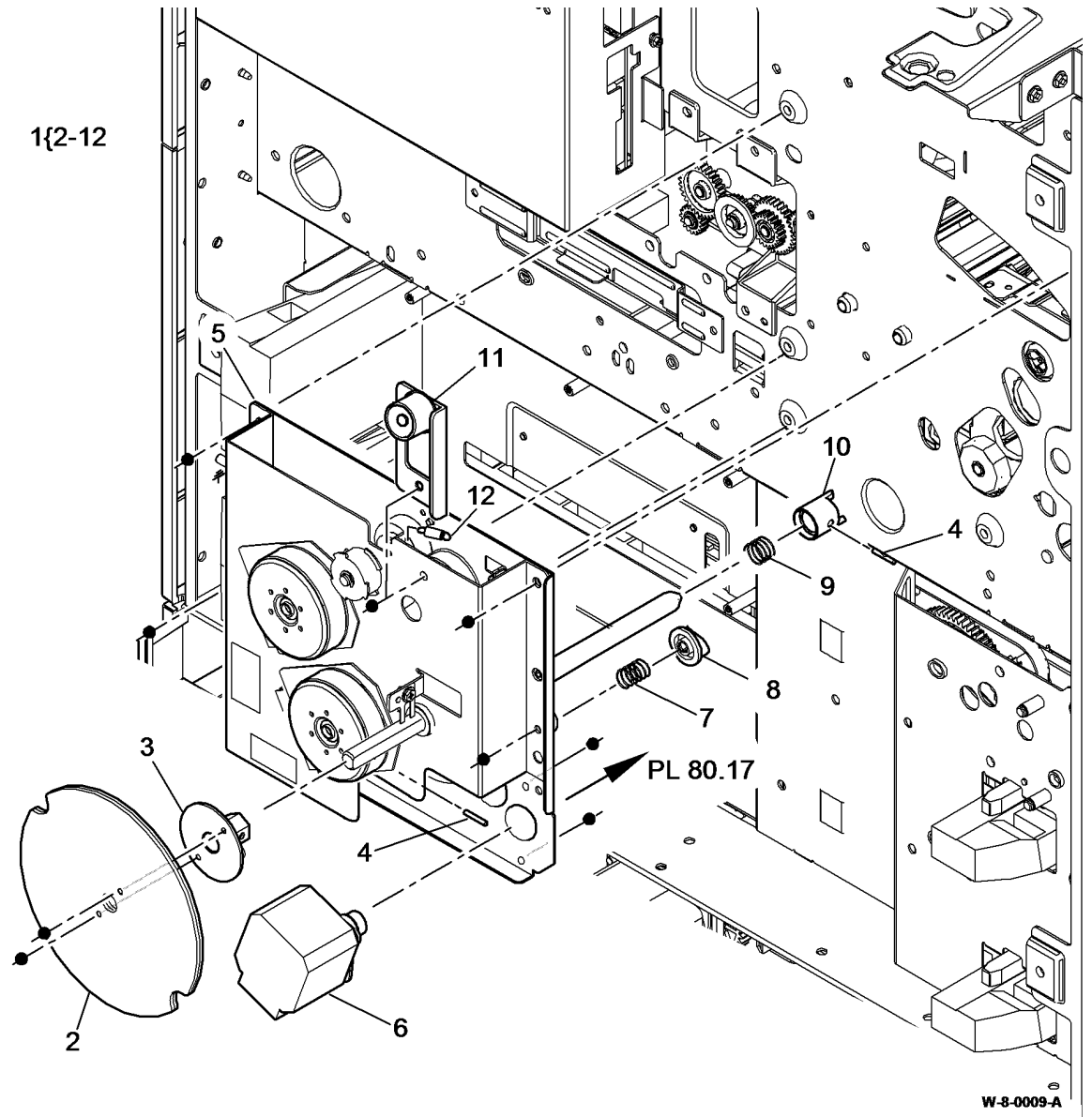
**NOTE:** Do not order 497/8K parts. 497/8K parts are customer install kits and are shown for reference only

**NO EXPLODED  
VIEW PROVIDED**

W-8-0134-A

## PL 40.15 Main Drive Module

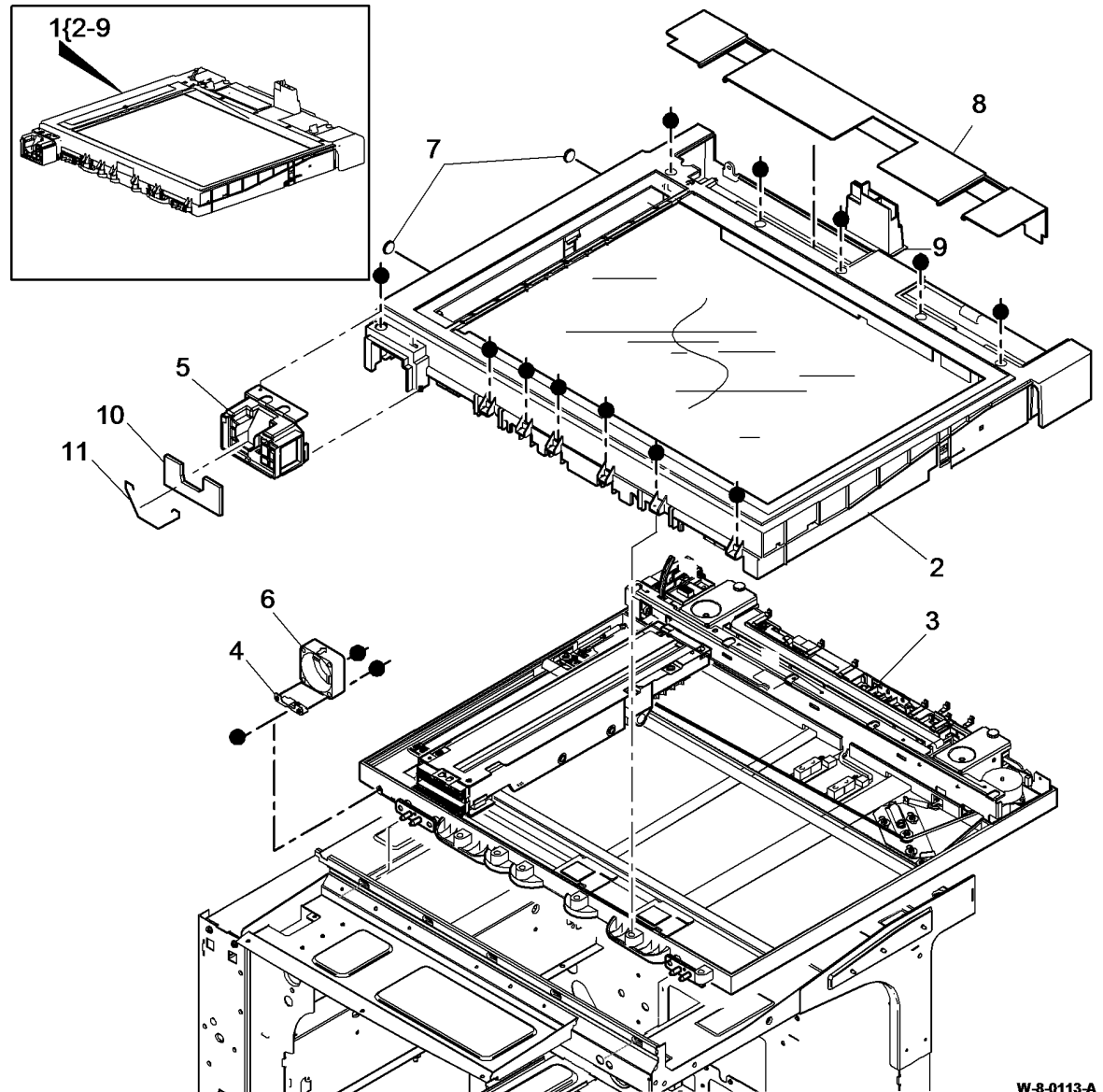
Item	Part	Description
1	007K20787	Main drive module (REP 40.1, ADJ 40.1)
2	-	Flywheel (P/O PL 40.15 Item 1)
3	-	Flywheel clamp (P/O PL 40.15 Item 1)
4	-	Dowel pin (P/O PL 40.15 Item 1)
5	-	Main drive unit (P/O PL 40.15 Item 1)
6	127E17792	Registration motor (REP 40.2)
7	-	Spring (P/O PL 40.15 Item 1)
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	062K28621	Scanner module (REP 60.2)
2	-	Top cover assembly (P/O PL 60.15 Item 1) (REP 60.3)
3	-	Base (P/O PL 60.15 Item 1)
4	-	Fan bracket (Not Spared) (REP 60.14)
5	-	Fan filter cover (P/O PL 60.15 Item 1)
6	127K69240	Cooling fan (MOT62-029) (REP 60.14)
7	-	Top cover plug (P/O PL 60.15 Item 1)
8	848K83750	Rear cover (REP 60.1)
9	-	SPDH harness guide (P/O PL 60.15 Item 1) (REP 5.19)
10	-	Fan filter (Not Spared)
11	-	Wire retainer (Not Spared)

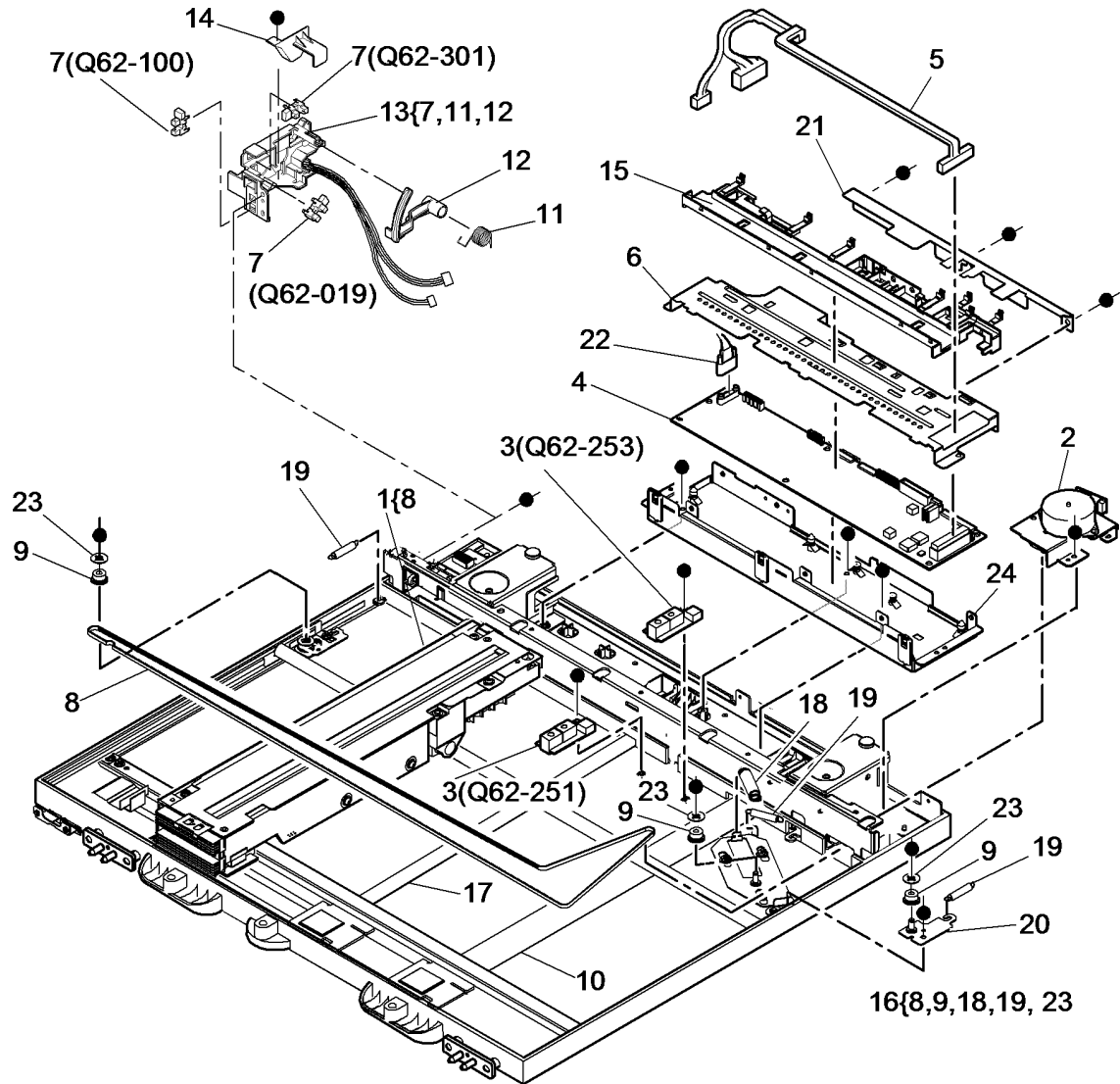
**NOTE:** Refer to ADJ 60.1 for the scanner cleaning procedure.



W-8-0113-A

# PL 60.20 Scanner Electrical Components

Item	Part	Description
1	-	Scan carriage assembly (REF: PL 60.25 Item 1) (REP 60.5)
2	127K69280	Scan carriage motor assembly (MOT62-031) (REP 60.10)
3	130E19050	Document size sensor 1 (Q62-251), Document size sensor 2 (Q62-253) (REP 60.13)
4	960K85690	Scanner PWB (REP 60.4)
5	-	SBC PWB/Scanner PWB comms/power harness (Not Spared)
6	-	Scanner PWB cover (Not Spared) (REP 60.4)
7	130E19040	Carriage home sensor (Q62-100)/DH angle sensor(Q62-301)(REP 60.9)/DH platen down sensor (Q62-019)
8	-	Scan carriage drive belt (P/O PL 60.20 Item 16) (REP 60.11)
9	-	Scan carriage idler pulley (P/O PL 60.20 Item 16) (REP 60.12)
10	117E43811	Scan carriage power ribbon cable (REP 60.7)
11	-	Actuator spring (P/O PL 60.20 Item 13)
12	-	SPDH angle sensor actuator (P/O PL 60.20 Item 13) (REP 60.9)
13	120K03740	Actuator support (REP 60.9)
14	-	Cable shield (Not Spared) (REP 60.9)
15	-	Harness guide (Not Spared) (REP 60.4)
16	-	Scanner drive kit (REF: PL 31.11 Item 6)
17	117E43821	Scan carriage data ribbon cable (REP 60.8)
18	-	Tension spring (P/O PL 60.20 Item 16)
19	-	Ground spring (P/O PL 60.20 Item 16)
20	-	Mounting plate (Not Spared)
21	-	Faraday shield (Not Spared) (REP 60.1)
22	-	SBC PWB/Scanner PWB data cable (Not Spared)
23	-	Pulley flange (P/O PL 60.20 Item 16)
24	-	Scanner PWB support (Not Spared)



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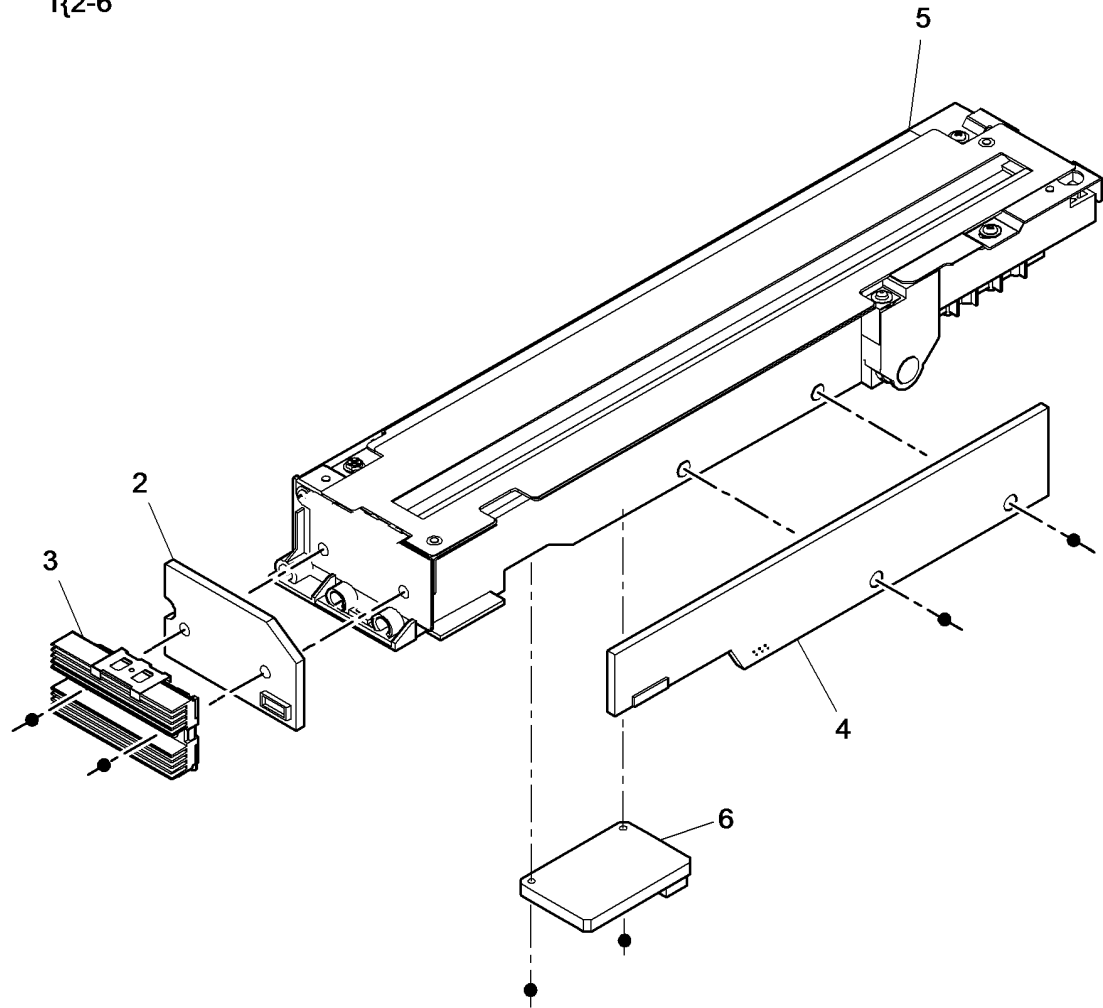
**NOTE:** Refer to ADJ 60.1 for the scanner cleaning procedure.



## PL 60.25 Scan Carriage Assembly

Item	Part	Description
1	041K06840	Scan carriage assembly (REP 60.5)
2	-	Scanner LED lamp PWB (P/O PL 60.25 Item 1)
3	-	LED lamp assembly (P/O PL 60.25 Item 1)
4	-	Scanner CCD PWB (P/O PL 60.25 Item 1)
5	-	Scan carriage unit (P/O PL 60.25 Item 1)
6	-	Scanner LED drive PWB (P/O PL 60.25 Item 1)

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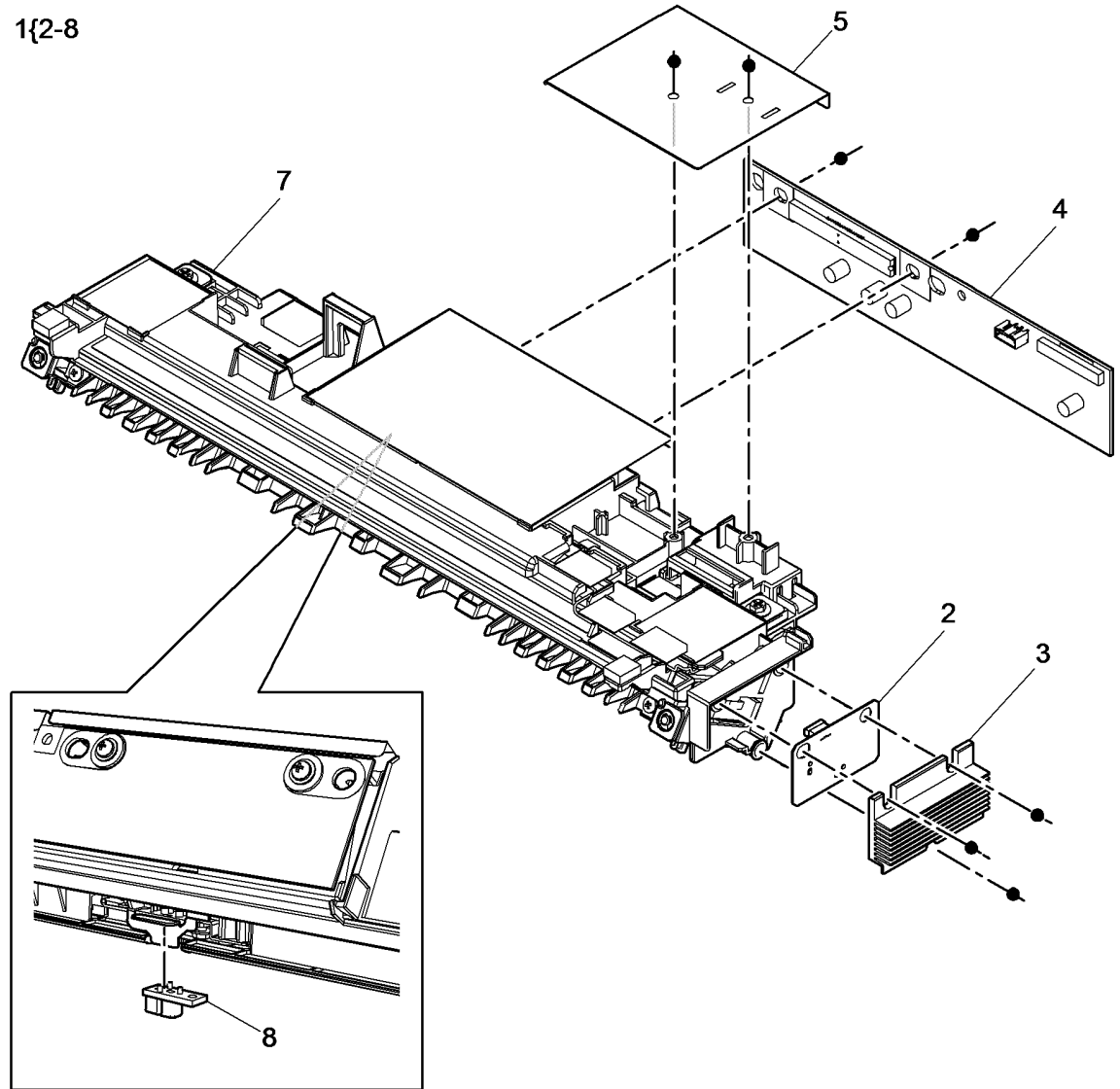


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## PL 60.30 Side 2 Scan Assembly

Item	Part	Description
1	041K06850	Side 2 scan assembly (REP 60.6)
2	-	Side 2 LED lamp PWB (P/O PL 60.30 Item 1)
3	-	Side 2 LED lamp assembly (P/O PL 60.30 Item 1)
4	-	Side 2 CCD PWB (P/O PL 60.30 Item 1)
5	-	Harness cover (P/O PL 60.30 Item 1)
6	-	Not used
7	-	Scan carriage unit (P/O PL 60.30 Item 1)
8	130E19060	Side 2 reg sensor (Q05-343)

**NOTE:** Refer to ADJ 60.2 for the side 2 scan assembly cleaning procedure.

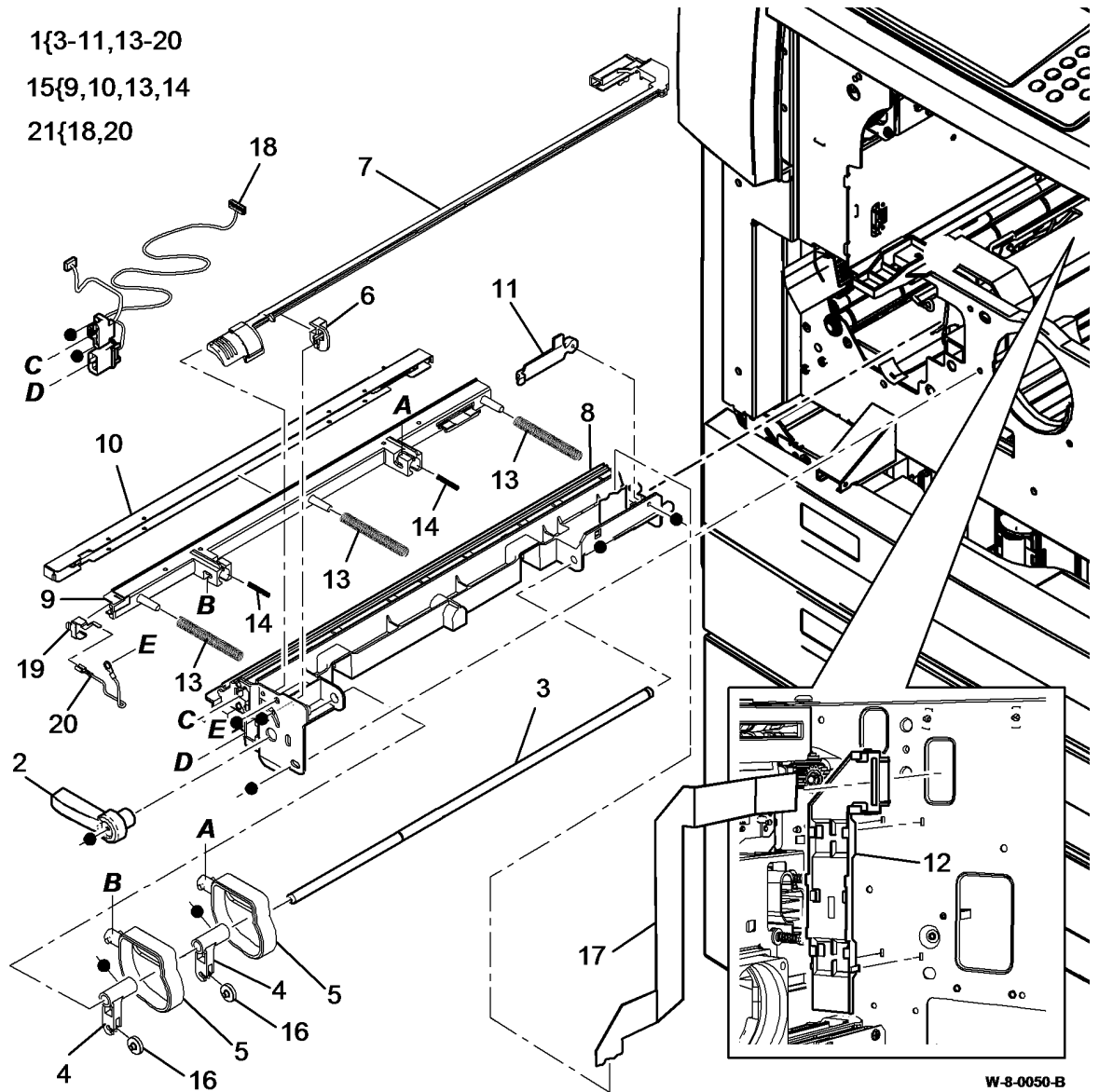


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# PL 60.35 LED Print Head Module

Item	Part	Description
1	008K02577	LED print head module (REP 60.15)
2	-	Latch (Not Spared)
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 60.15)
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 60.15)
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

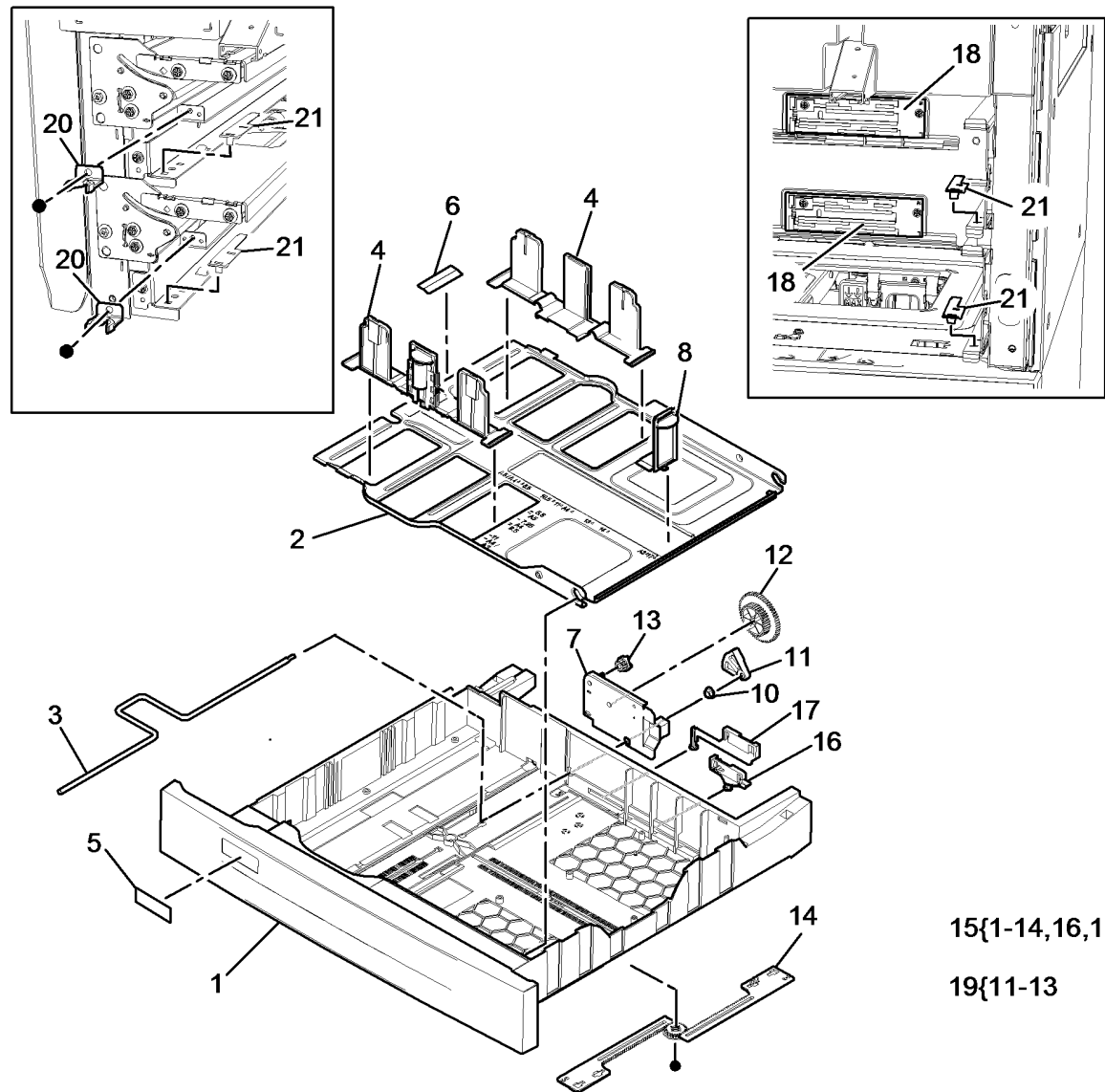
**NOTE:** Refer to ADJ 60.4 for cleaning the LED print head.



W-8-0050-B

## 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	-	Not used
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	050K77215	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	-	Lift gear kit (Not Spared)
20	819E15872	Tray clip
21	819E20350	Slide pad



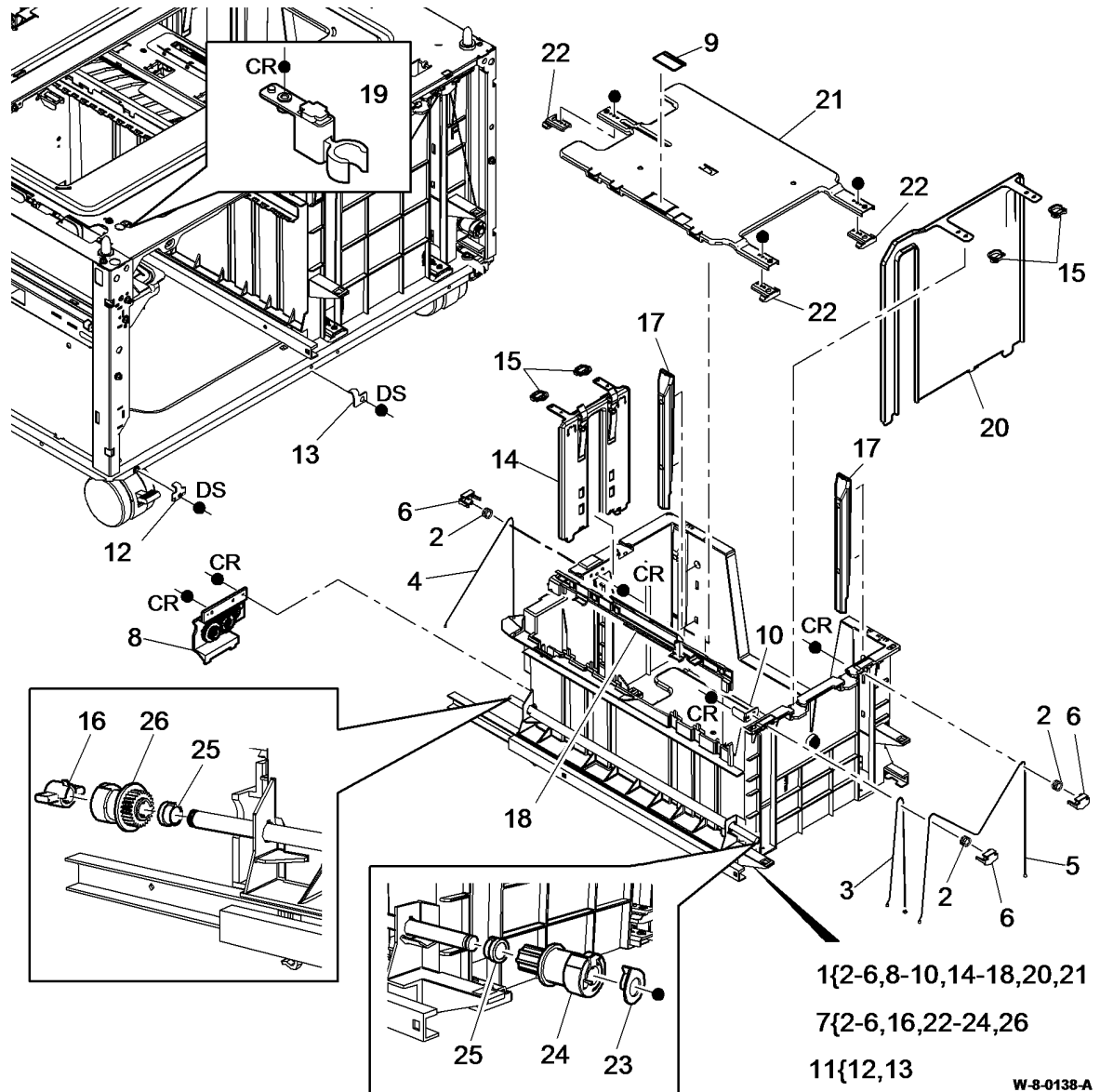
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W-8-0019-A

# PL 70.18 Tray 3 Assembly

Item	Part	Description
1	-	Tray 3 assembly (Not Spared) (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	019E74532	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	-	Front clip (Not Spared)
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)

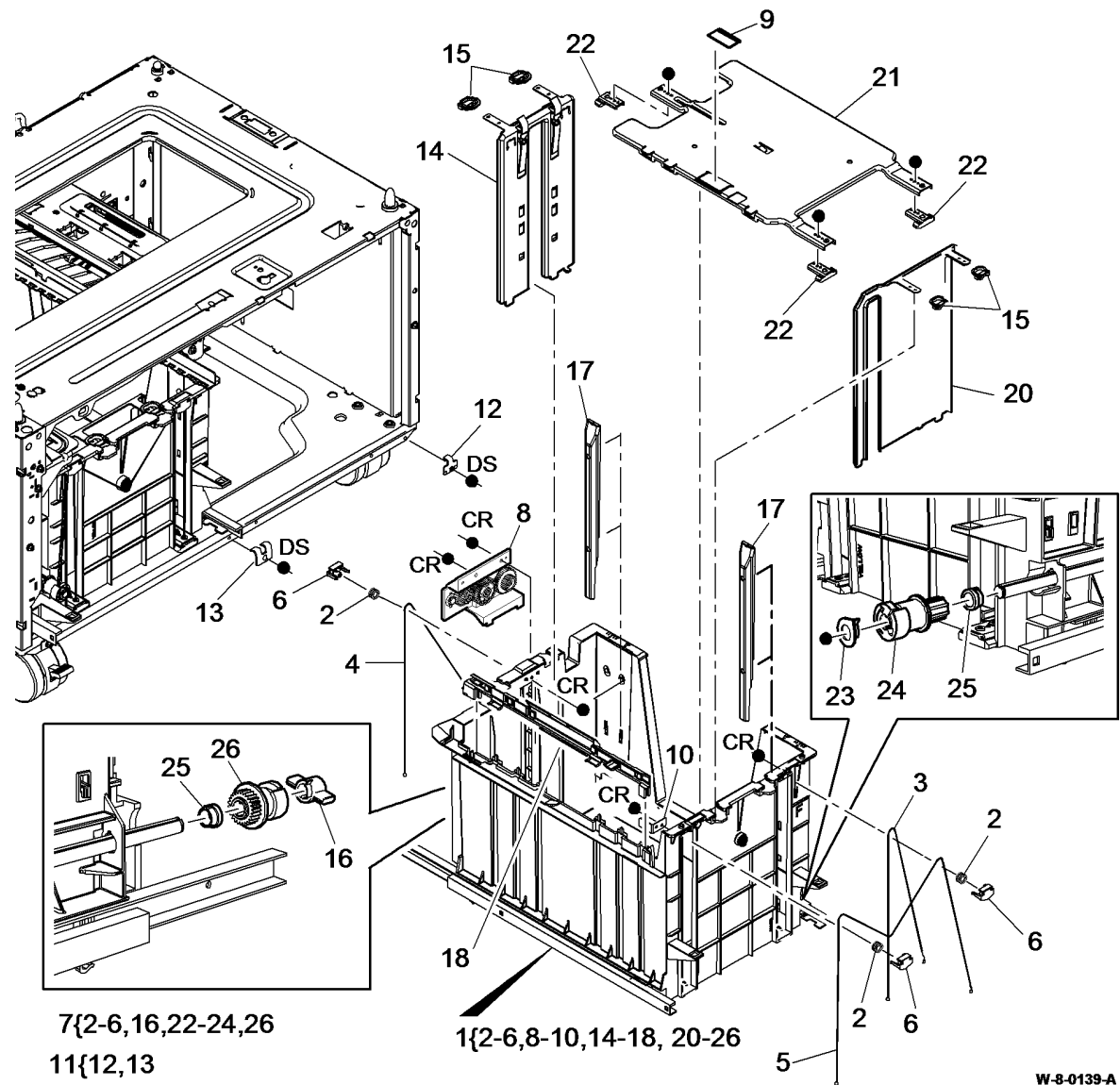


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# PL 70.19 Tray 4 Assembly

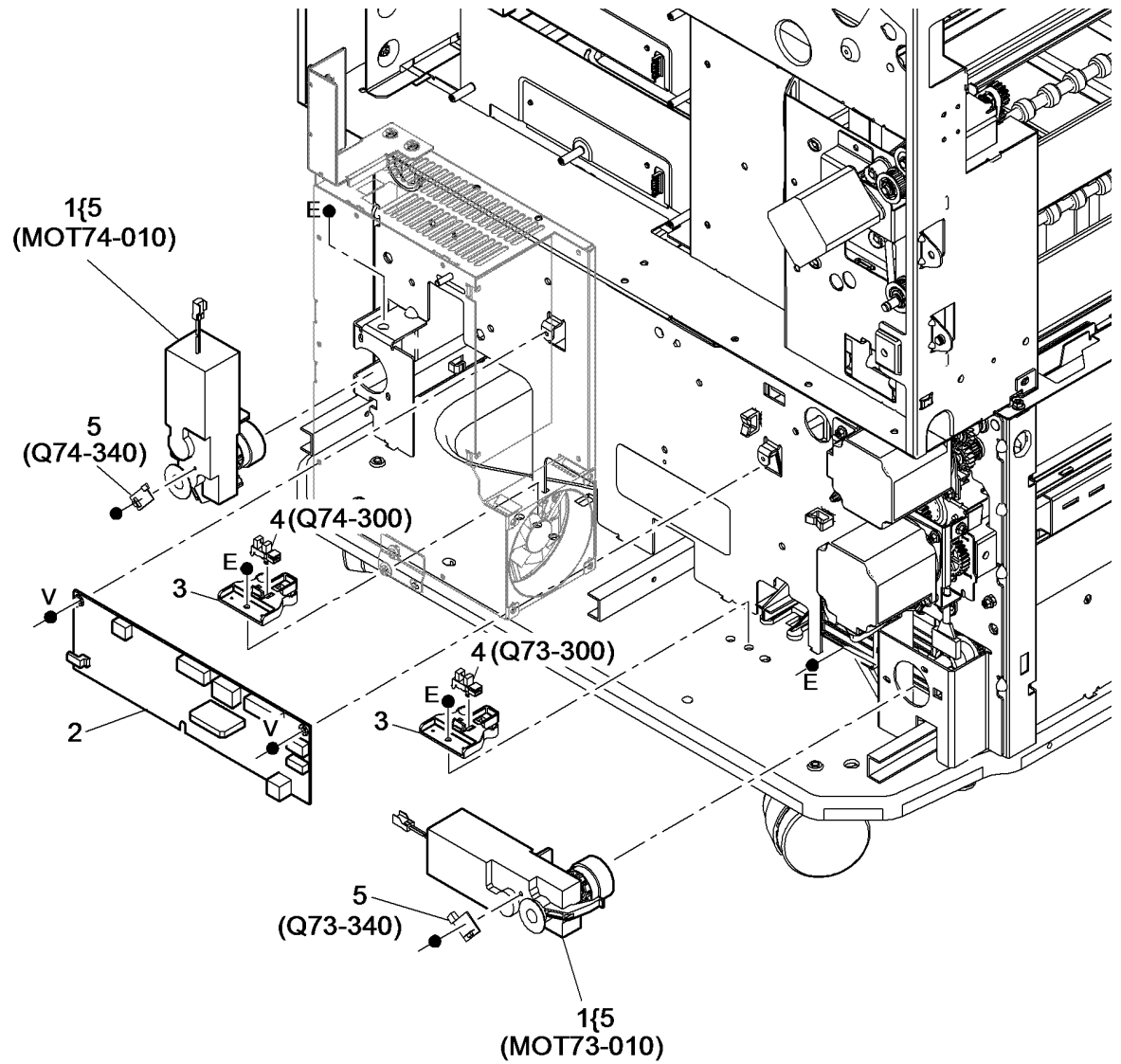
Item	Part	Description
1	-	Tray 4 assembly (Not Spared) (REP 70.14)
2	-	Tray hoist pulley (P/O PL 70.19 Item 7)
3	-	Front short elevator cable (P/O PL 70.19 Item 7)
4	-	Rear elevator cable (P/O PL 70.19 Item 7)
5	-	Front long elevator cable (P/O PL 70.19 Item 7)
6	-	Pulley carrier (P/O PL 70.19 Item 7)
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	019E74532	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)



W-8-0139-A

# PL 70.21 Elevator Motor and Control PWB

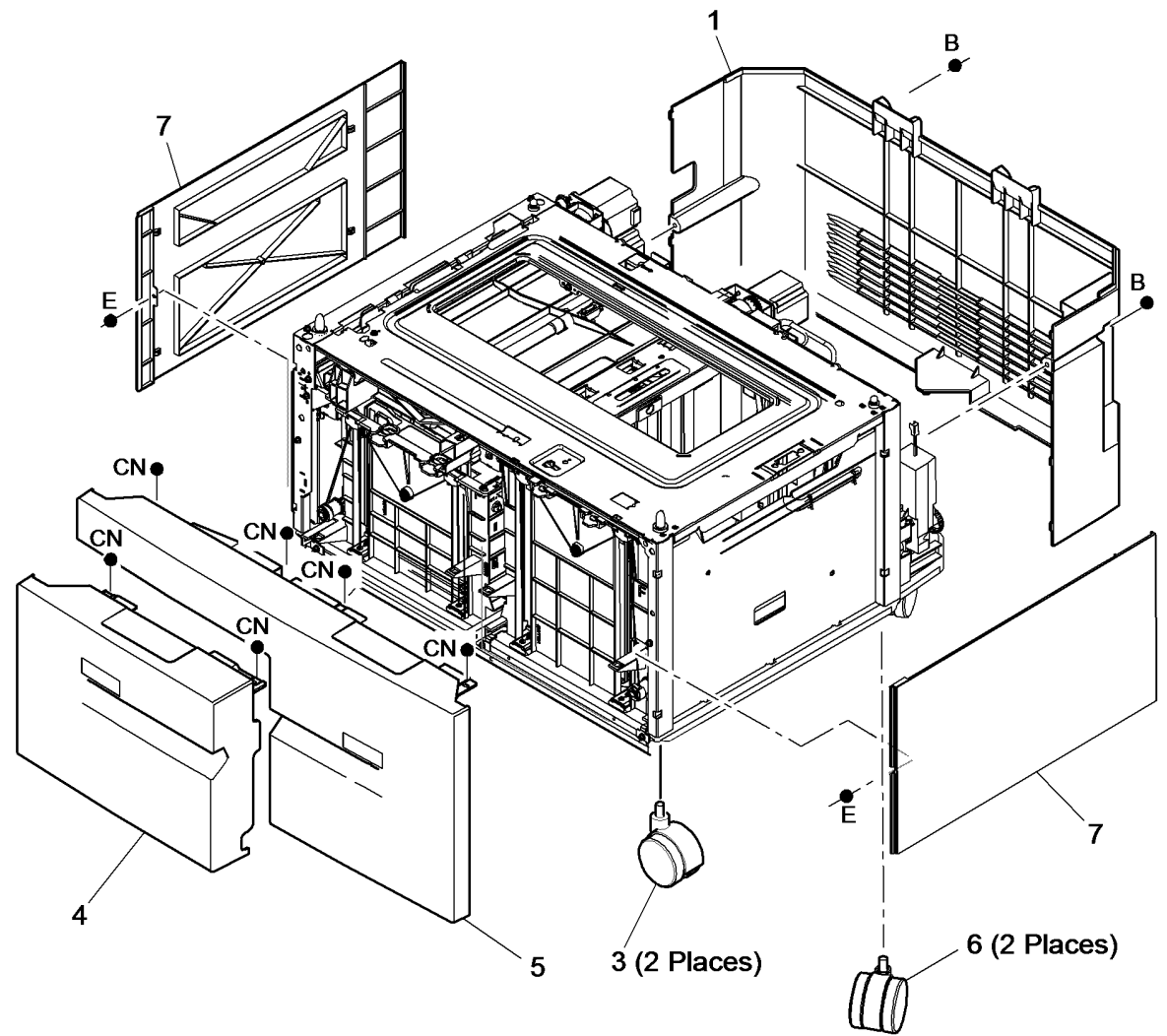
Item	Part	Description
1	127K78350	Tray 3 elevator motor (MOT73-010) (REP 70.6)/ Tray 4 elevator motor (MOT74-010)(REP 70.15)
2	960K80832	Tray 4 control PWB (REP 70.13)
3	819E21570	Sensor holder
4	130E18220	Tray 3 home sensor (Q73-300)/ Tray 4 home sensor (Q74-300) (REP 70.10)
5	-	Tray 3 level encoder sensor (Q73-340)/ Tray 4 level encoder sensor (Q74-340) (P/O PL 70.21 Item 1)



W-8-0140-A

# PL 70.26 Tray 3 and 4 Assembly Covers

Item	Part	Description
1	-	Lower rear cover (Not Spared)
2	-	Not used
3	059K77240	Castor (locking)
4	-	Tray 3 front cover (P/O PL 31.14 Item 6) (REP 70.5)
5	-	Tray 4 front cover (P/O PL 31.14 Item 8) (REP 70.14)
6	-	Castor (Not Spared)
7	-	Lower left/right cover (Not Spared)

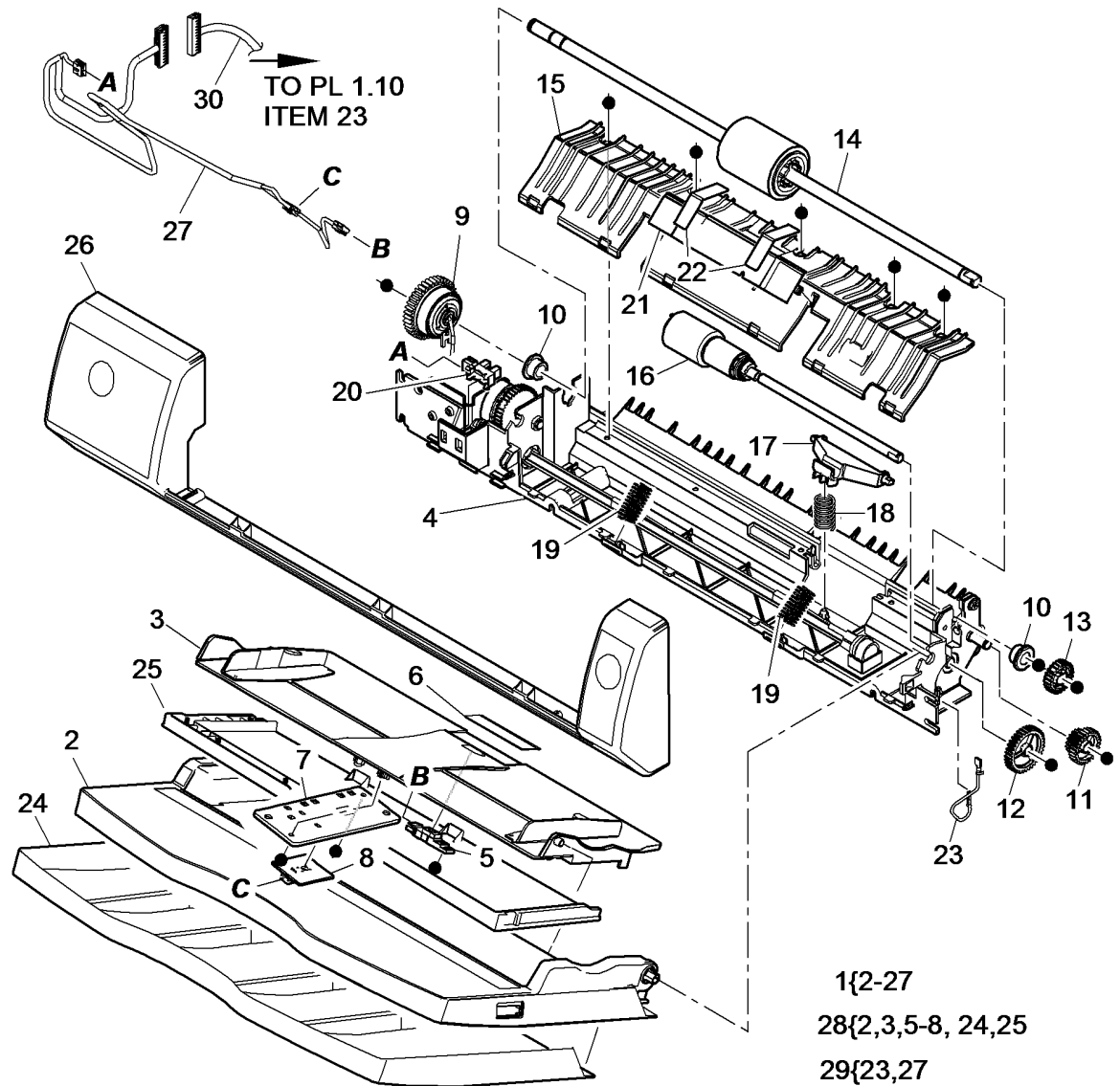


W-8-0144-A



# PL 70.35 Bypass Tray Assembly

Item	Part	Description
1	050K77402	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 (Q75-601) (P/O PL 70.35 Item 28) (REP 70.7)
9	007K20755	Bypass tray clutch (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	006K34443	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	130E18220	Bypass tray elevate sensor (Q75-040)
21	-	Paper guide (P/O PL 70.35 Item 1)
22	-	Mylar (P/O PL 70.35 Item 1)
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 29) (REP 70.18)
28	050K77186	Bypass elevate tray assembly
29	952K37733	Bypass tray harness set
30	-	IOT PWB to Bypass tray intermediate harness (Not Spared)

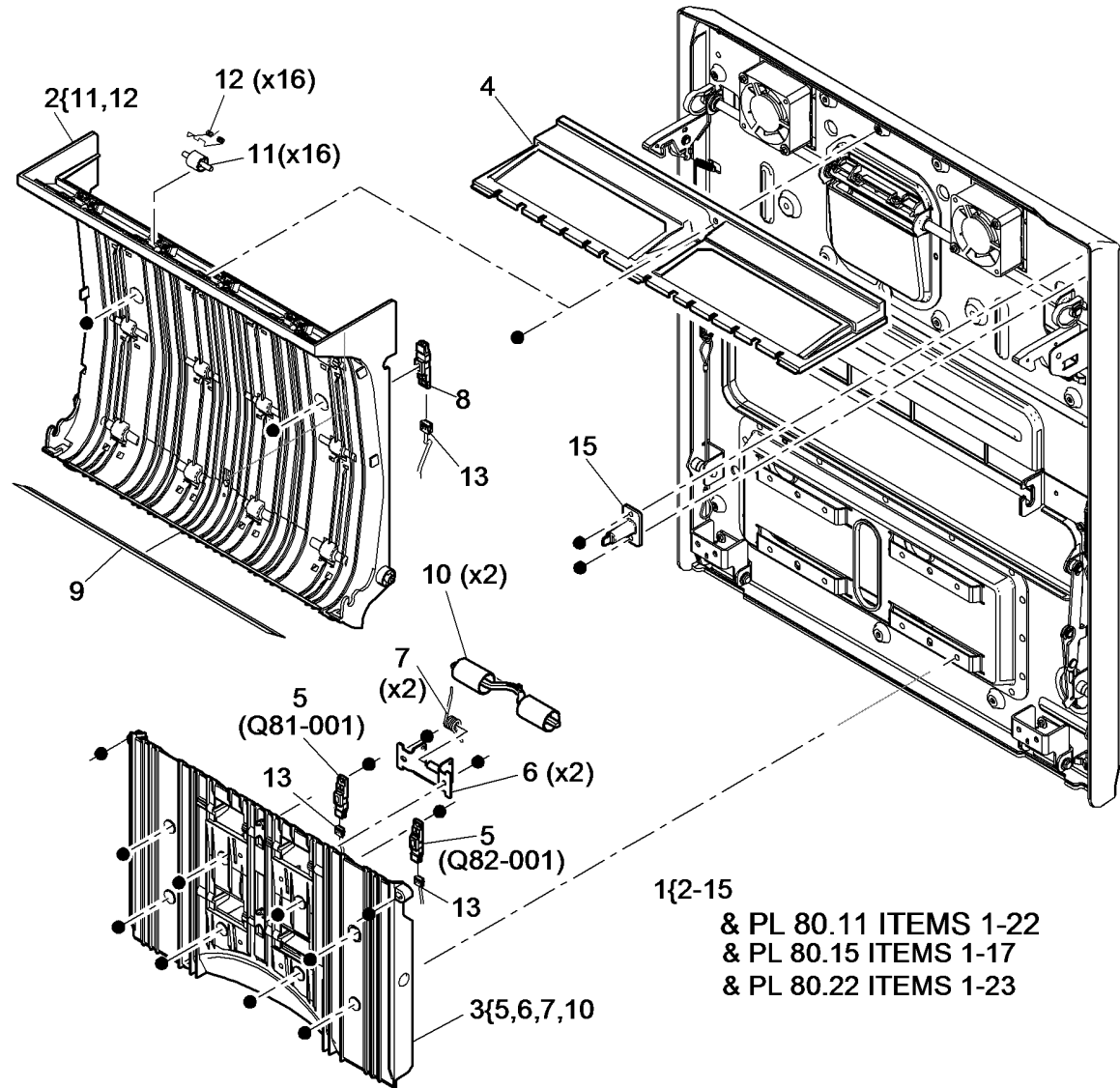


W-8-0034-B

**NOTE:** HFSI. To reset the HFSI count, refer to dC135.

## PL 80.10 Left Door Assembly (1 of 2)

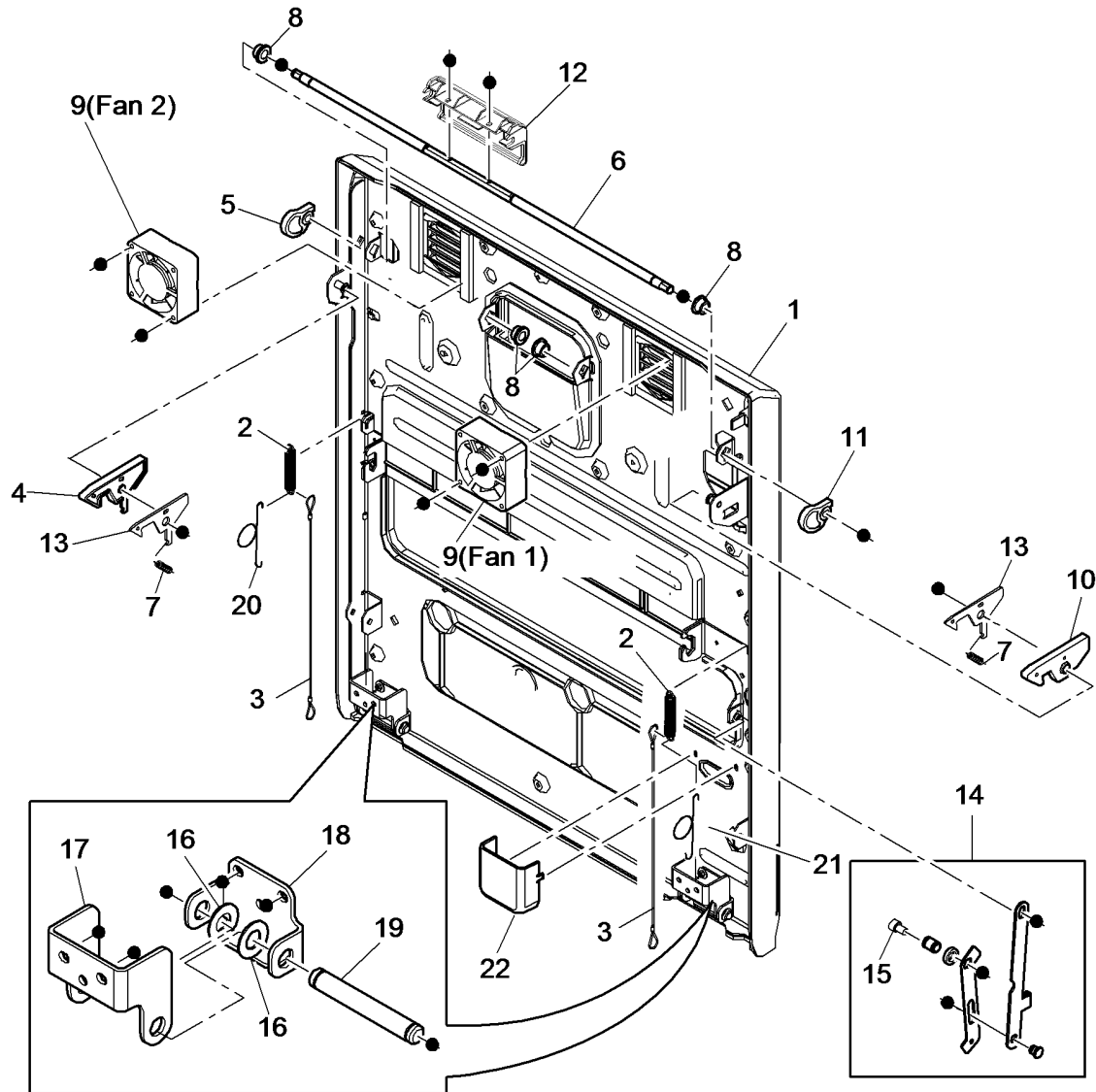
Item	Part	Description
1	948K10173	Left door assembly (REP 80.7)
2	038K24003	Duplex outer guide assembly (REP 80.9)
3	038K24012	Lower left door paper guide (REP 80.2)
4	-	Left door fan cover (P/O PL 80.10 Item 1)
5	-	Tray 1 TAR sensor (Q81-001)/ Tray 2 TAR sensor (Q82-001) (P/O PL 80.10 Item 3) (REP 80.2)
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 1)
14	-	Not used
15	-	Left door interlock actuator (P/O PL 80.10 Item 1)



W-8-0176-A

## 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 80.10 Item 1)
3	-	Damper cable (P/O PL 80.10 Item 1)
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	-	Left door fan 1 / Left door fan 2 (MOT80-015) (P/O PL 80.10 Item 1)
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	-	Door latch plate (P/O PL 80.10 Item 1) (REP 80.11)
14	-	Door link assembly (P/O PL 80.10 Item 1)
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 26.11 Item 6) (See NOTE)
21	-	Rear damper spring tensioner tool (P/O PL 26.11 Item 6) (See NOTE)
22	-	Connector cover (P/O PL 80.10 Item 1)

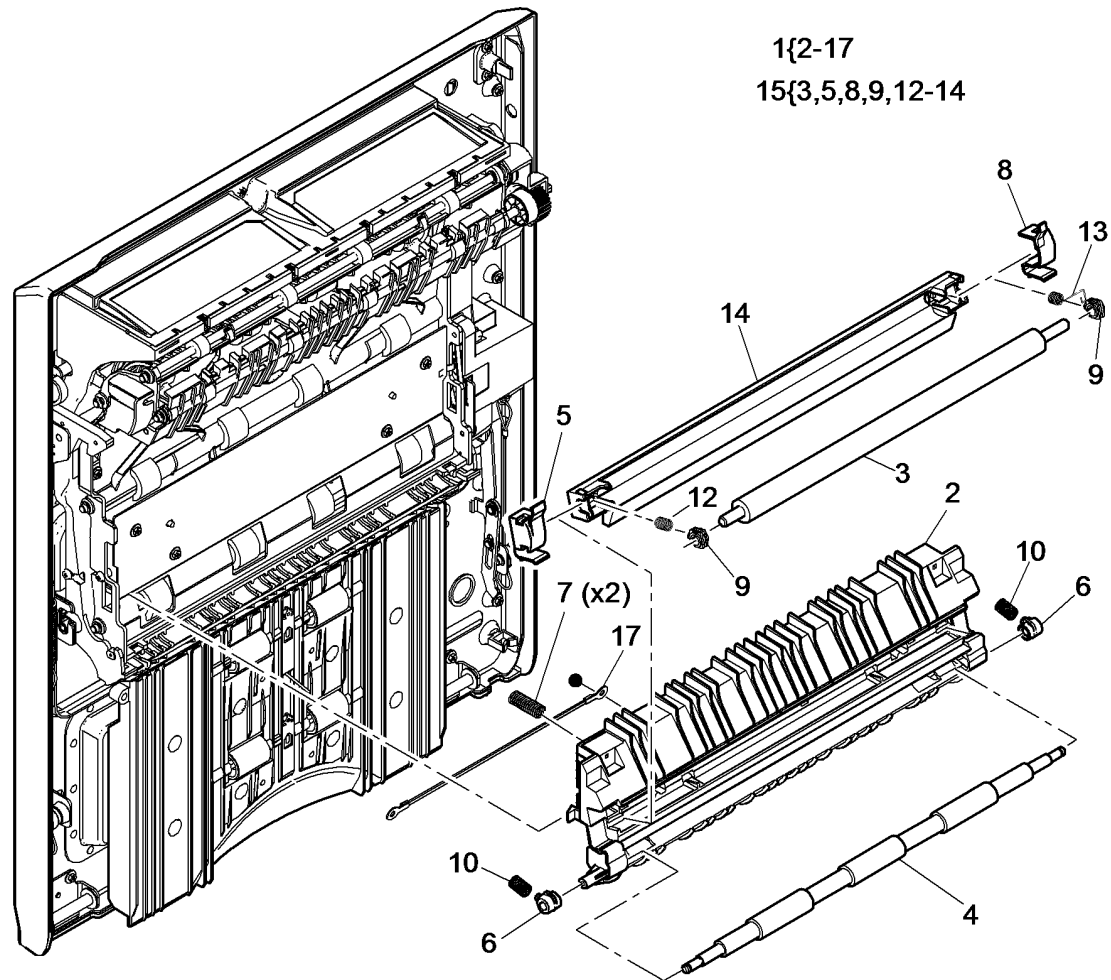


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**NOTE:** Refer to GP 37 for correct use of these tools when removing left door assembly.

# PL 80.15 Registration Transfer Assembly

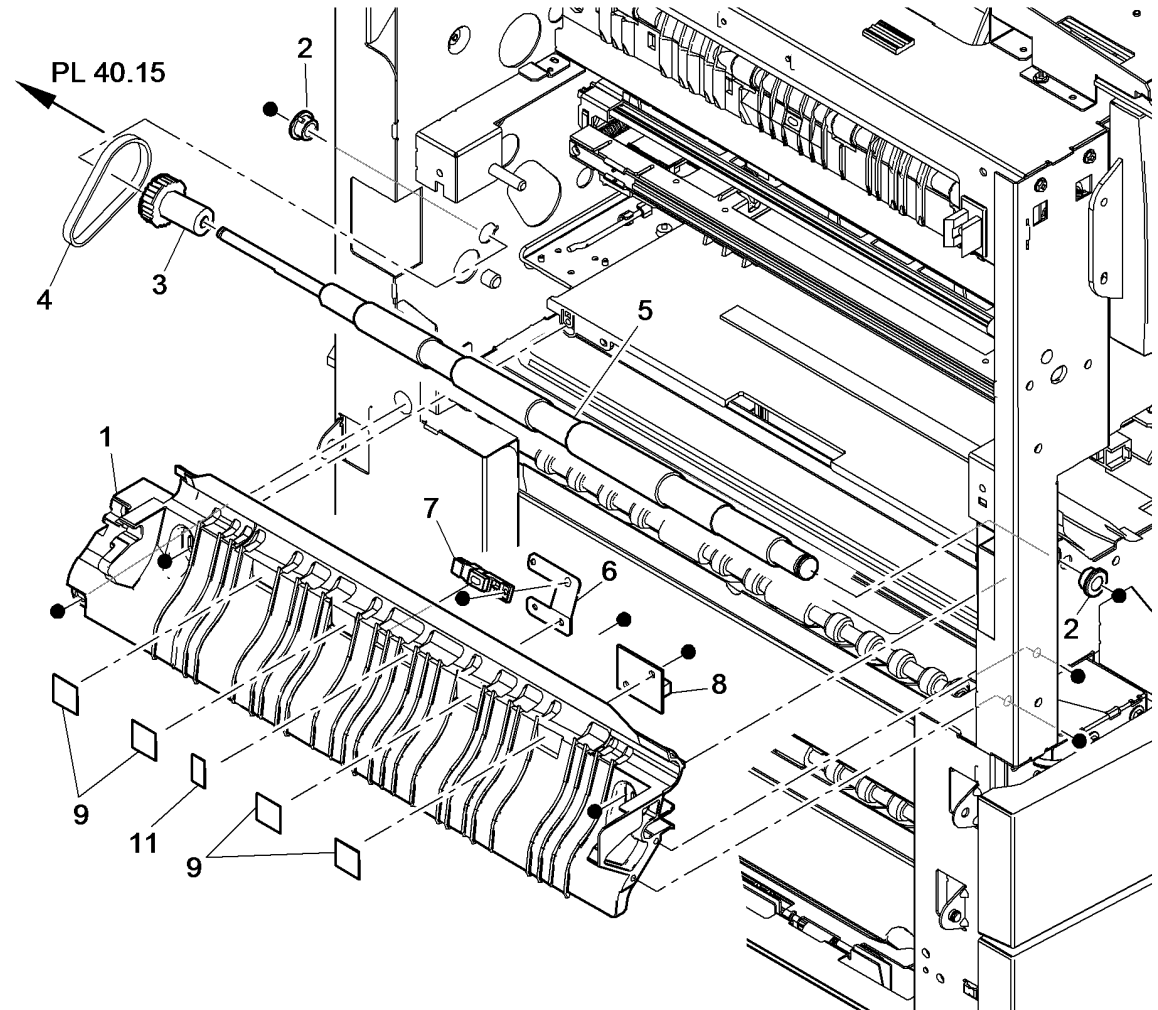
Item	Part	Description
1	038K24353	Registration transfer assembly (REP 80.3)
2	-	Registration transfer housing (P/O PL 80.15 Item 1)
3	-	Bias transfer roll (P/O PL 80.15 Item 15)
4	-	Registration nip roll (P/O PL 80.15 Item 1) (REP 80.3)
5	-	Front retaining clip (P/O PL 80.15 Item 15)
6	-	Registration 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)



W-8-0033-A

## 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	-	Environmental sensors PWB (P/O PL 80.17 Item 10) (REP 90.4)
9	-	Mylar (P/O PL 80.17 Item 10)
10	859K05393	Registration transport assembly (REP 80.4)
11	-	Mylar (P/O PL 80.17 Item 10)

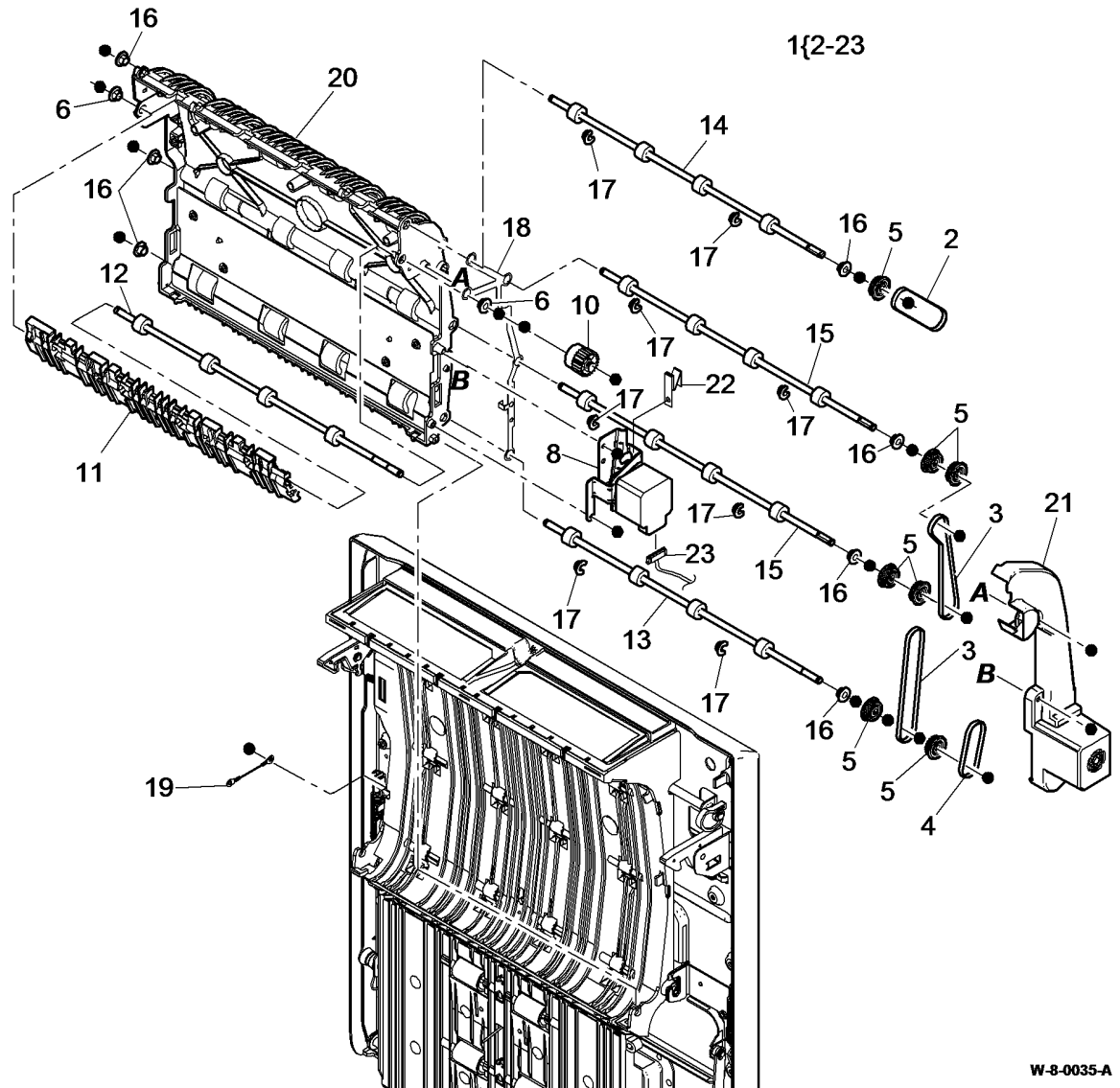


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W-8-0175-A

# PL 80.22 Duplex Transport Assembly

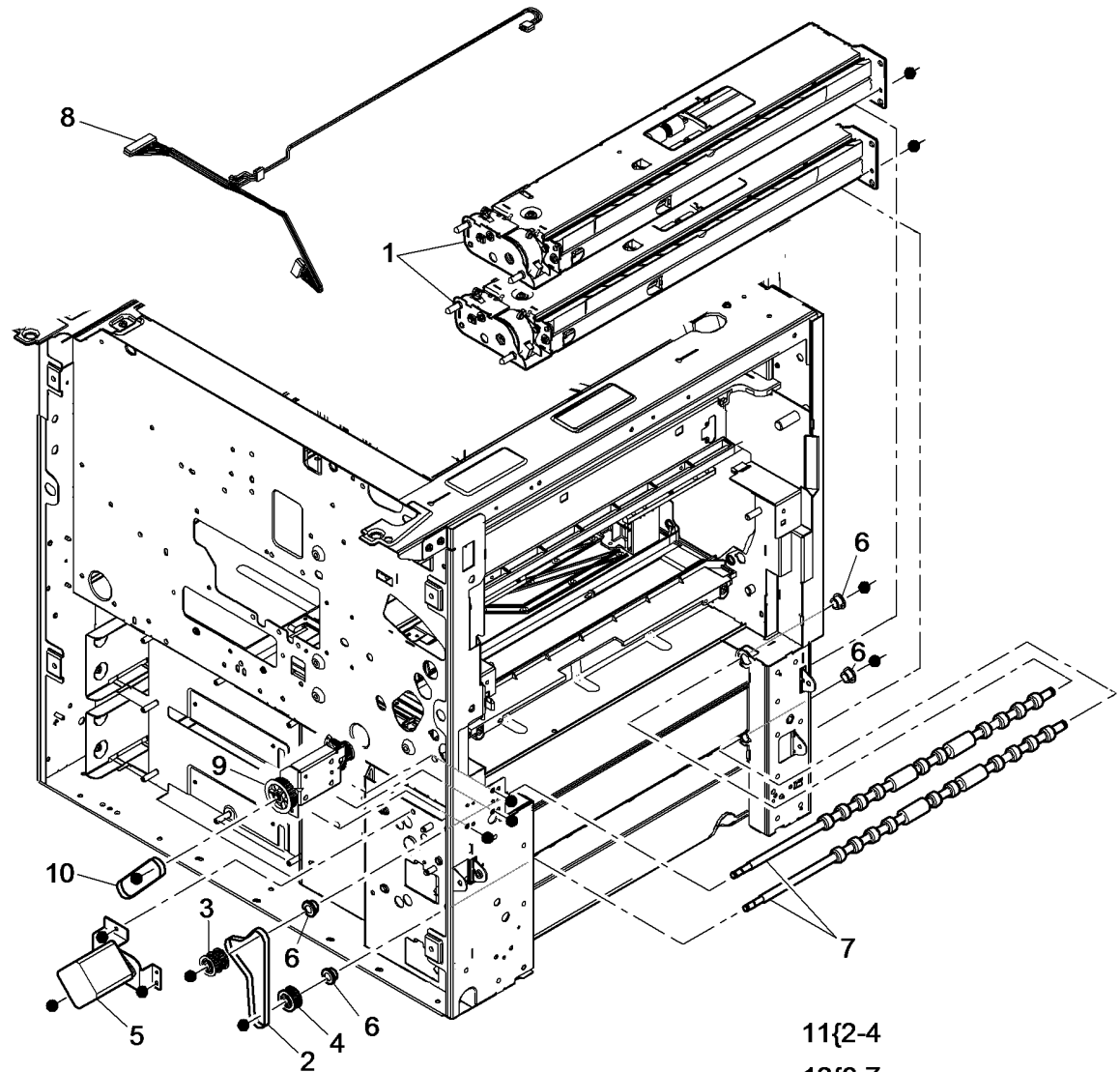
Item	Part	Description
1	948K07765	Duplex transport assembly (REP 80.5)
2	-	Drive belt (65T) (P/O PL 80.22 Item 1)
3	-	Drive belt (89T) (P/O PL 80.22 Item 1)
4	-	Drive belt (40T) (P/O PL 80.22 Item 1)
5	-	Pulley (21T) (P/O PL 80.22 Item 1)
6	-	Post fuser roll bearing (P/O PL 80.22 Item 1)
7	-	Not used
8	927K01230	Duplex motor assembly (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 (Not Spared)



W-8-0035-A

# 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 (REP 80.10)
4	-	Pulley (P/O PL 80.25 Item 11) (REP 80.10)
5	007K21820	TAR/Bypass tray motor (MOT80-006) (REP 80.8)
6	-	Transport roll bearing (P/O PL 80.25 Item 12) (REP 80.10)
7	807E54880	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	-	Transport drive belt kit (Not Spared)
12	-	Transport roll assembly (Not Spared)



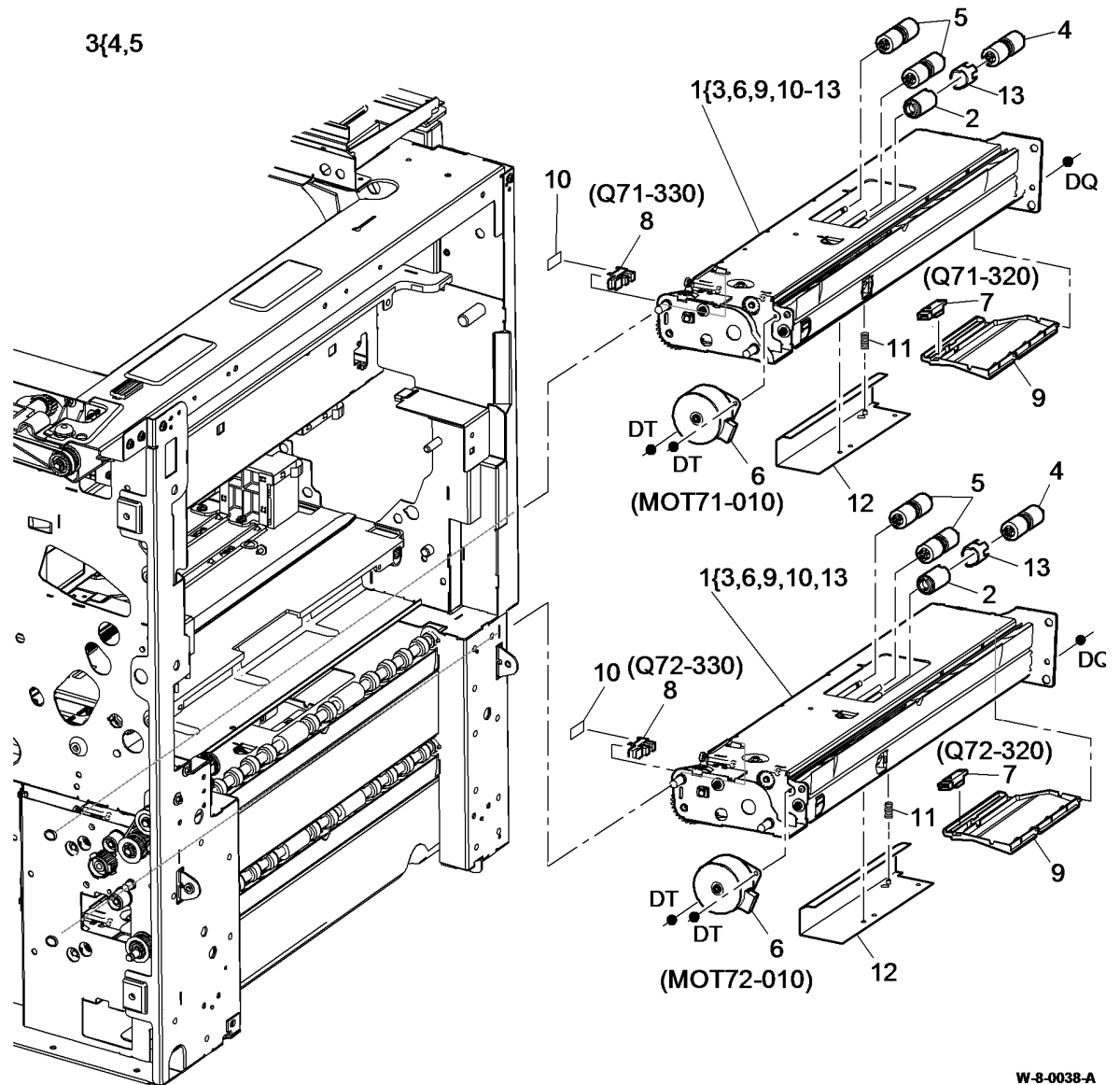
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W-8-0037-A

# PL 80.26 Tray 1 and 2 Paper Feed Assembly (2 of 2)

Item	Part	Description
1	859K04212	Tray 1 or Tray 2 paper feed assembly (REP 80.1, ADJ 40.1)
2	005K12242	Friction clutch (REP 80.19)
3	059K69800	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.

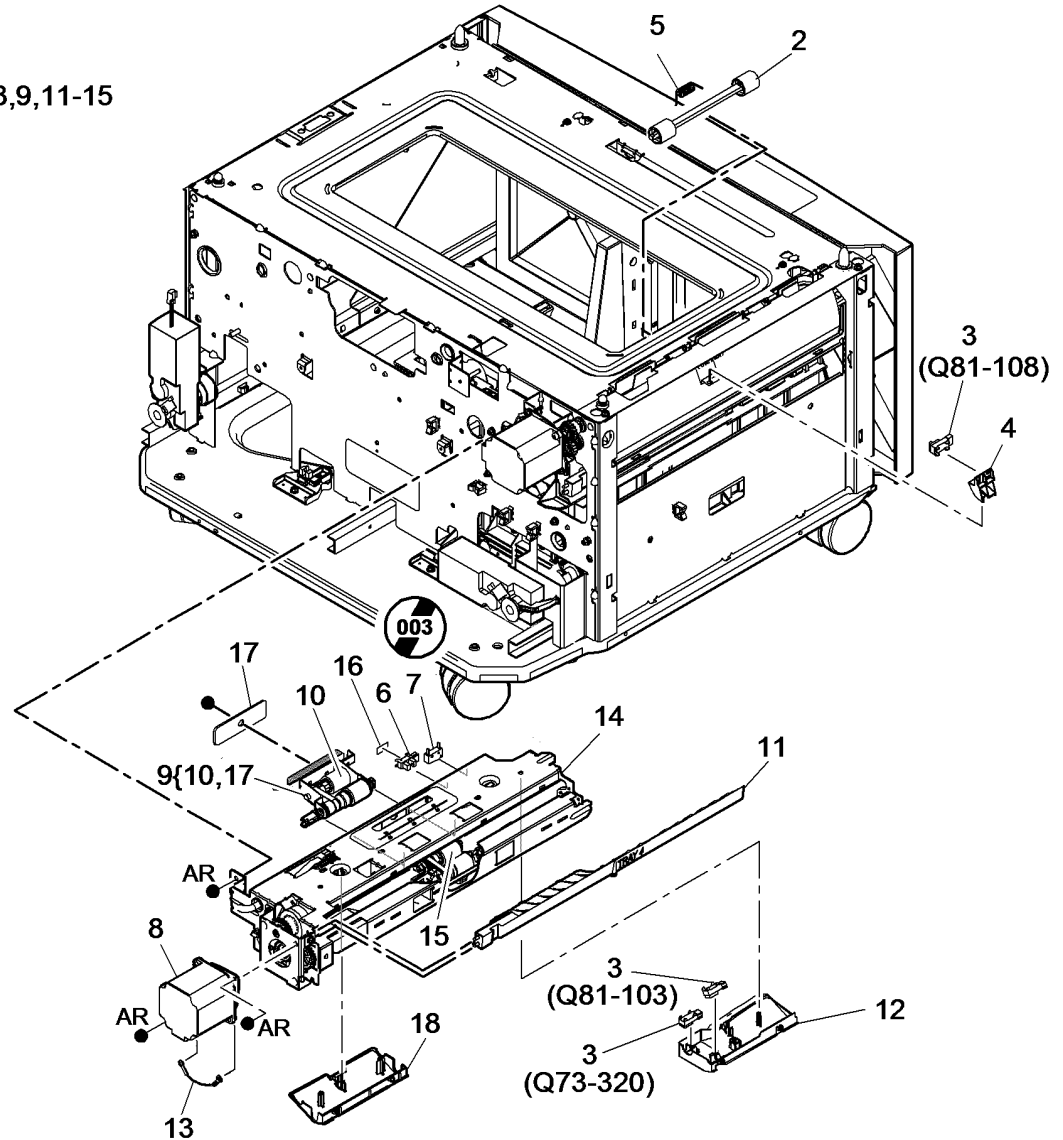




## PL 80.32 Tray 3 Paper Feed Assembly

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)
-	-	Idler roll assembly (plastic shaft) (Not Spared)
3	130E11610	Tray 3 empty sensor (Q73-320)(REP 70.16) / 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	110E21540	Tray 3 over elevate switch (W/O TAG 003)
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)

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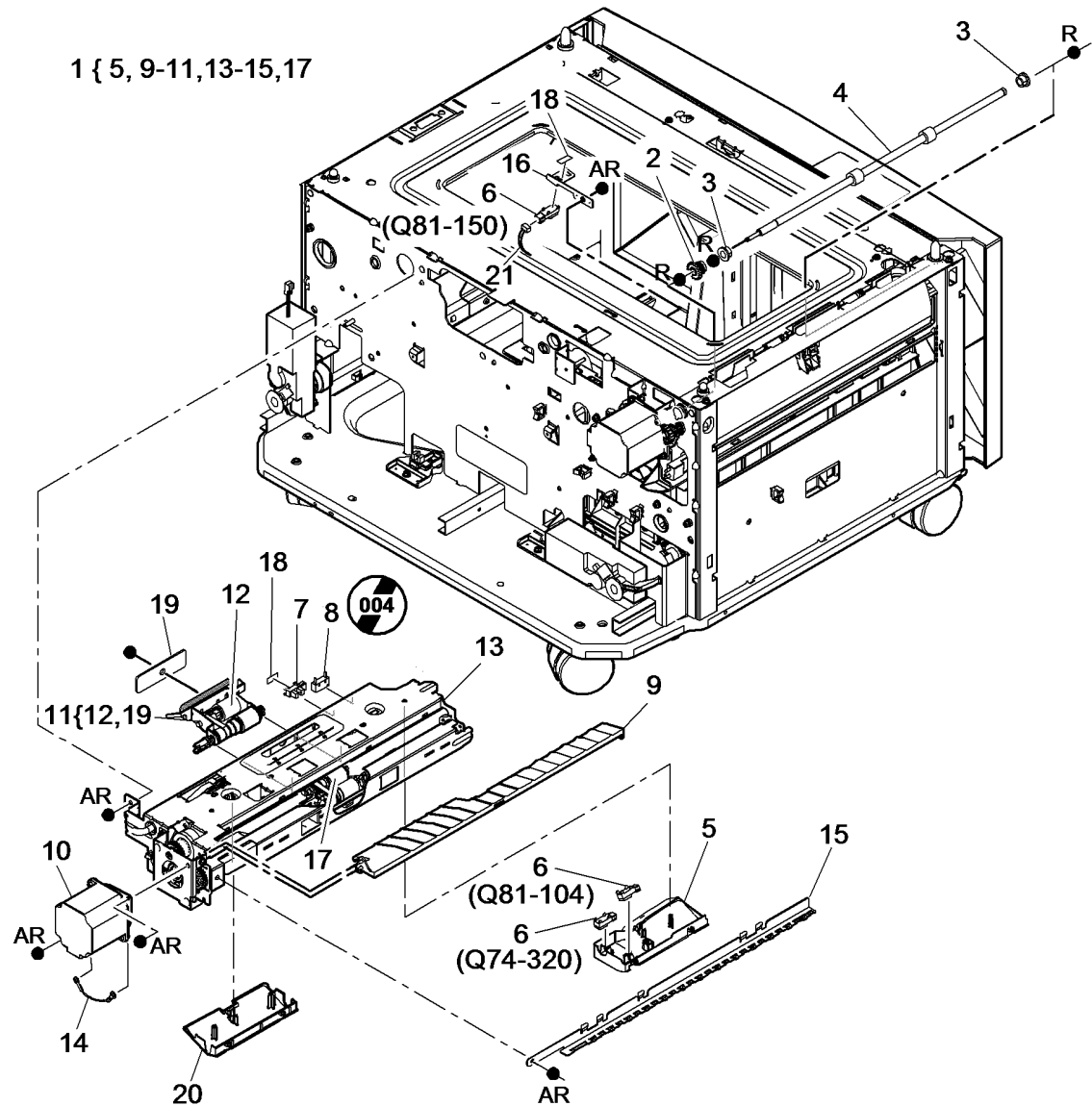


**NOTE:** HFSI. To reset the HFSI count, refer to dC135.

W-8-0142-B

# 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 70.17)/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	110E21540	Tray 4 over elevate switch (W/ OTAG 004 )
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 (P/O PL 31.14 Item 3) (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	-	Tray 4 exit sensor harness (P/O PL 31.14 Item 3)



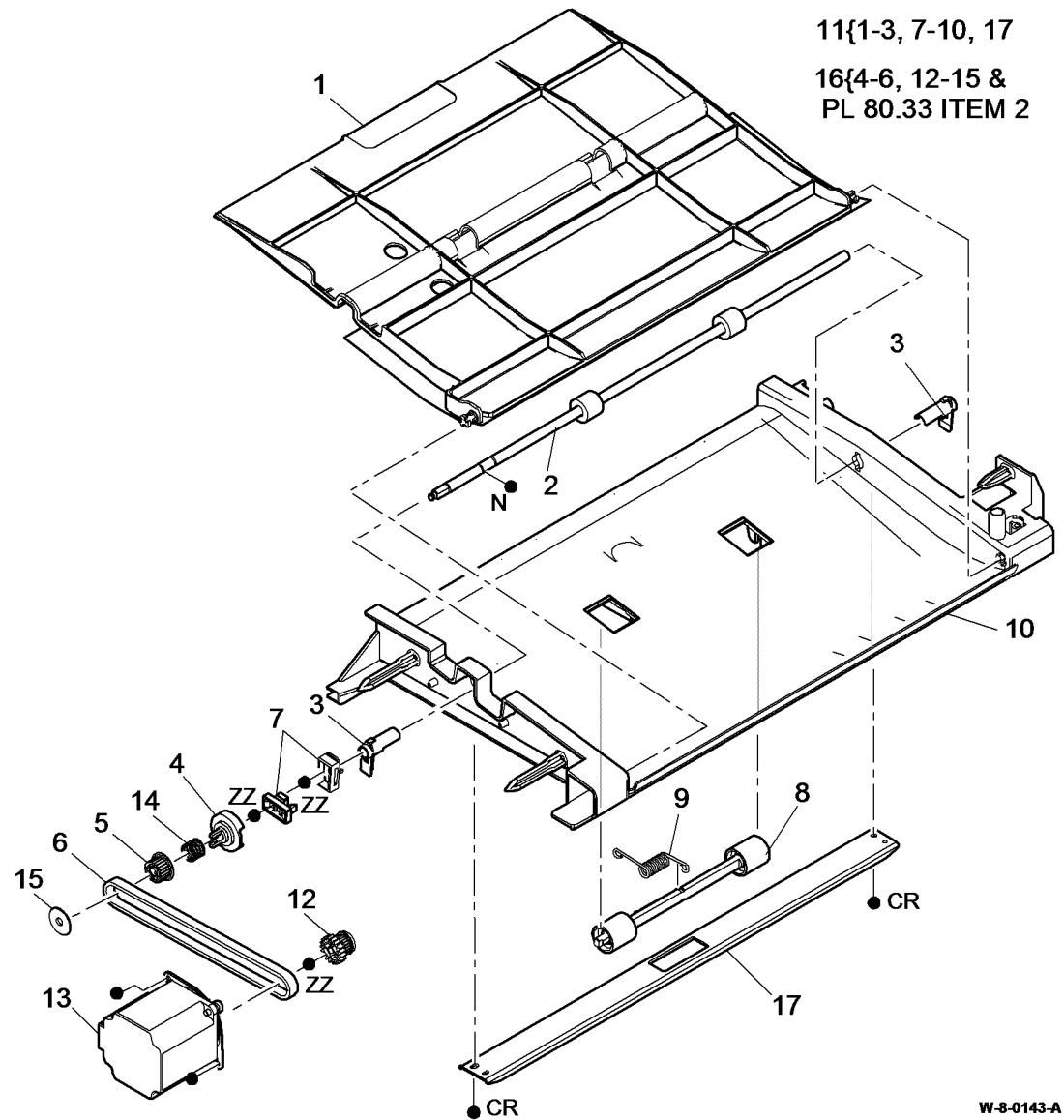
W-8-0141-B

**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)
-	-	Idler roll assembly (plastic shaft) (Not Spared) (REP 80.26)
9	-	Spring (P/O PL 80.36 Item 11)
10	-	Base (P/O PL 80.36 Item 11)
11	038K24380	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)

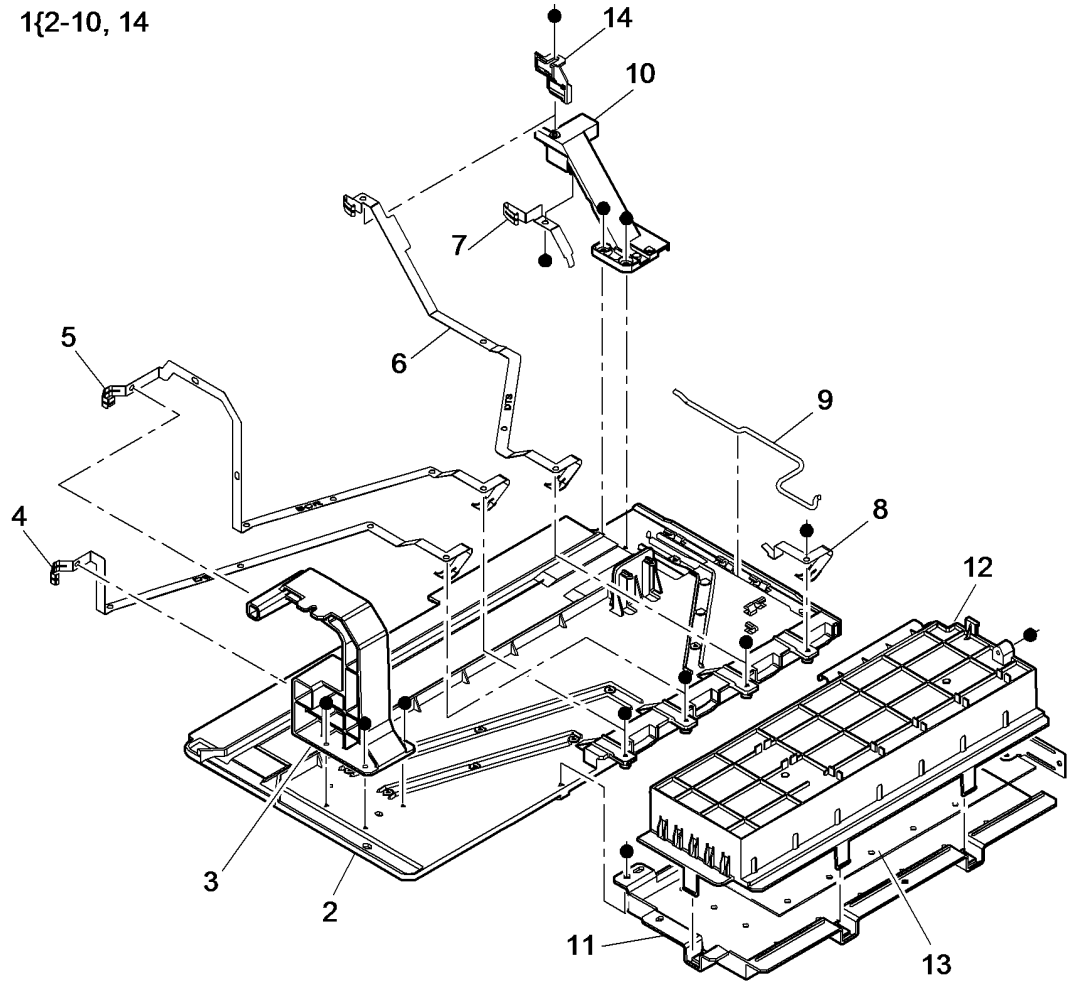


W-8-0143-A

# PL 90.10 High Voltage Power Distribution Assembly

Item	Part	Description
1	859K01026	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)

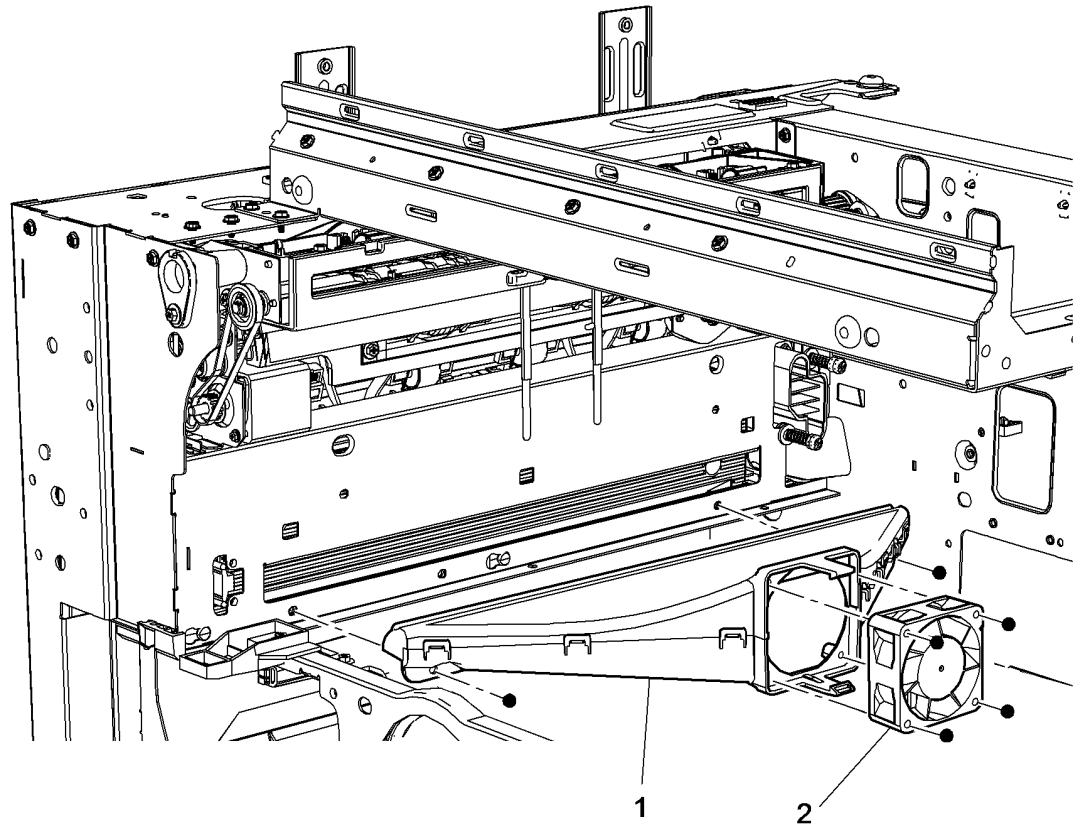
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W-8-0036-A

## PL 90.15 Print Cartridge Cooling

Item	Part	Description
1	-	Print cartridge fan duct (Not Spared)
2	-	Print cartridge fan (Not Spared)

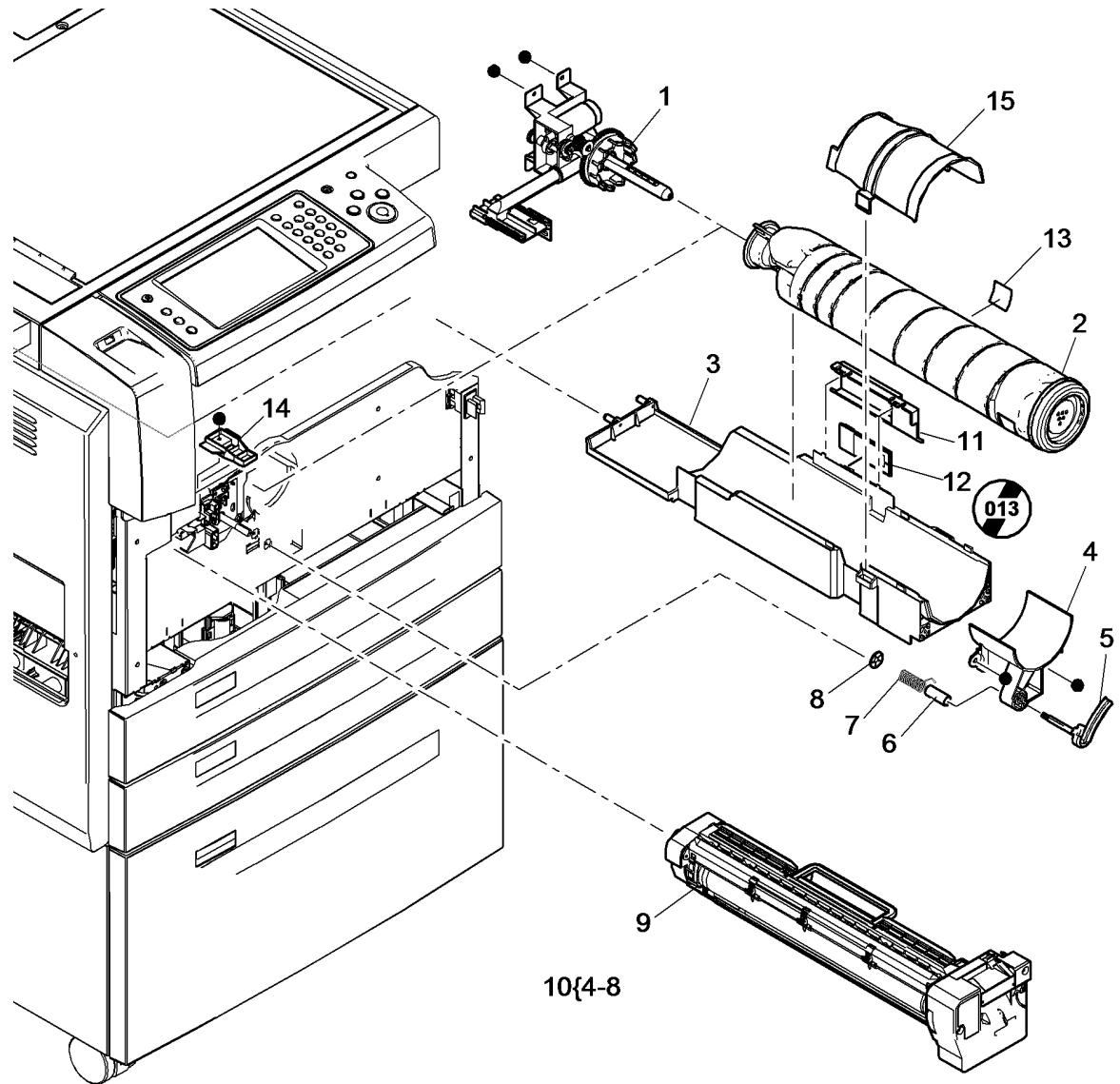


W-8-0017-A

## PL 90.17 Toner/Print Cartridges

Item	Part	Description
1	094K05505	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	013R00669	Print cartridge
10	848K94673	Latch housing assembly (REP 90.2)
11	-	Cover (Not Spared)
12	960K25380	Toner cartridge PWB (W/O TAG 013)
13	-	Toner cartridge CRUM (Not Spared)
14	869E05954	Latch bracket
15	-	Toner cartridge guide (Not Spared)

**NOTE:** Refer to ADJ 90.1 for xerographics cleaning.



W-8-0047-B

## 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



# 6 General Procedures/Information

**GP 1 to GP 9**

GP 1 Service Mode ..... 6-3

GP 2 Fault Codes and History Files ..... 6-4

GP 3 Service Information ..... 6-5

GP 4 Machine Software ..... 6-6

GP 5 Portable Work Station and Tools ..... 6-16

GP 6 Screw Usage ..... 6-17

GP 7 Miscellaneous Checks ..... 6-18

GP 8 Special Tools and Consumables ..... 6-19

GP 9 Machine SIM Card Matrix ..... 6-20

**GP 10 to GP 19**

GP 10 How to Check a Motor ..... 6-21

GP 11 How to Check a Sensor ..... 6-23

GP 12 How to Check a Solenoid or Clutch ..... 6-24

GP 13 How to Check a Switch ..... 6-25

GP 14 How to Switch Off the Machine or Switch On the Machine ..... 6-26

GP 15 Remote Diagnostics ..... 6-27

GP 16 How to Safely Lift or Move Heavy Modules ..... 6-29

GP 17 How to Re-Enter Optional Feature Installation Keys ..... 6-29

GP 18 Machine Lubrication ..... 6-30

GP 19 Network Clone Procedure ..... 6-30

**GP 20 to GP 29**

GP 20 Paper and Media Size Specifications ..... 6-33

GP 21 Installation Space Requirements ..... 6-47

GP 22 Electrical Power Requirements ..... 6-48

GP 23 Environmental Data ..... 6-50

GP 24 Customer Administration Tools ..... 6-50

GP 25 First Copy/Print Out Time and Power On/Off Time ..... 6-52

GP 26 Restriction of Hazardous Substances (RoHS) ..... 6-53

GP 27 Machine Configuration Control and Recovery ..... 6-53

GP 28 USB Connection Mode ..... 6-55

GP 29 Embedded Customer Documentation ..... 6-55

**GP 30 to GP 39**

GP 30 Tray 4 Control PWB Test Points ..... 6-57

GP 31 How to Set the Date and Time ..... 6-59

GP 32 How to Enable HTTP ..... 6-59

GP 33 How to Configure the PWS to Ping a Device ..... 6-60

GP 34 How to Set the IP Address of the PWS ..... 6-61

GP 35 How to Change Ethernet Speed ..... 6-63

GP 36 How to Disable the Firewall of the PWS ..... 6-63

GP 37 Left Door Assembly Service position ..... 6-65

GP 38 How to Check an Adaptive Sensor ..... 6-69

GP 39 Consumables Compatibility Information ..... 6-70

**GP 40 to 42**

GP 40 Glossary of Terms, Acronyms and Abbreviations ..... 6-71

GP 41 Reporting Usage Counter Resets ..... 6-75

GP 42 How to Disable the Toner Cartridge CRUM RFID Reader ..... 6-76

**Diagnostic Codes dC104 to dC131**

dC104 Usage Counters ..... 6-77

dC108 Software Version ..... 6-77

dC120 Fault Counters ..... 6-78

dC122 Fault History ..... 6-78

dC131 NVM Read/Write ..... 6-79

**Diagnostic Codes dC132 to dC140**

dC132 Serial Number ..... 6-177

dC134 Market Region ..... 6-177

dC135 CRU/HFSI Status ..... 6-178

dC136 Service Plan ..... 6-179

dC137 PagePack ..... 6-179

dC140 Analog Monitor ..... 6-180

**Diagnostic Codes dC301 to dC945**

dC301 NVM Initialization ..... 6-181

dC304 LED Print Head Validation ..... 6-183

dC312 Network Echo Test ..... 6-183

dC330 Component Control ..... 6-184

dC361 NVM Save and Restore ..... 6-194

dC604 Registration Setup Procedure ..... 6-195

dC608 Document Feeder Registration ..... 6-197

dC609 Document Glass Registration ..... 6-197

dC610 CCD Lamp Profile Adjustment ..... 6-198

dC612 Print Test Pattern ..... 6-198

dC945 IIT Calibration ..... 6-199

**Change Tags**

Tags ..... 6-201

Processor Tags ..... 6-202

SPDH Tags ..... 6-203

Scanner Tags ..... 6-203

2K LCSS Tags ..... 6-204

LVF BM Tags ..... 6-206

Fax Tags ..... 6-207



## GP 1 Service Mode

### Purpose

This procedure describes how to enter and exit service mode and the available service routines.

**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 0 (zero) button for 7 seconds, then simultaneously press the Start button, then release both the buttons.
3. Enter the passcode, 6789. Press the Enter button on the UI.

**NOTE:** Five incorrect entries cause the entry screen to lock for 3 minutes.

4. Select the relevant tab:
  - Service Info Tab.
  - Diagnostics Tab.
  - Adjustments Tab.
  - Maintenance Tab.
  - Call Closeout Tab.

### Service Info Tab

The service info routines are used to track faults that have occurred in the machine. Refer to Table 1.

Table 1 Service Info Tab

Routine	Description
dC104	Usage Counters
dC108	Software Version
dC120	Fault Counters
dC122	Fault History
dC135	CRU / HSFI Status

### Diagnostics Tab

The diagnostic routines are 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
dC312	Network Echo Test
dC330	Component Control
dC612	Print Test Pattern

### Adjustments Tab

Adjustment routines are 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	Registration Setup
dC608	Document Feeder Registration
dC609	Document Glass Registration
dC610	CCD Lamp Profile Adjustment
dC945	IIT Calibration

### Maintenance Tab

Refer to Table 4.

Table 4 Maintenance Tab

Routine	Description
dC120	Fault Counters
dC122	Fault History
dC132	Serial Number
dC134	Market Region
dC135	CRU / HSFI Status
dC136	Service Plan
dC137	PagePack

### Call Closeout Tab

**NOTE:** Do not exit service mode until the machine has recovered from all diagnostic routines.

1. Select the Call Closeout tab to exit service mode.
2. If necessary, select Reset Counters.
3. Select Exit and Reboot.

## 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 0 (zero) button for 5 seconds, then simultaneously press the Start button.
2. Enter the passcode 2732. press the Enter button on the UI.

**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/logout button is pressed again. When finished with tools, always log out of Administrator mode by pressing the Login/Logout button and confirming logout.

## 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 WorkCentre 5945/5955 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
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 fault code and status code suffix numbers**

Suffix No.	Finisher Identifier
110	2K LCSS
150	LVF BM

**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.  
Website: [www.xerox.com](http://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.

Malaysia built machines:

- X75: 45-55ppm, SPDH, 4 trays, centre output tray, (50Hz).
- A0M: 45-55ppm, SPDH, 4 trays, horizontal transport, (50Hz).
- X76: 45-55ppm, SPDH, 4 trays, centre output tray, (60Hz).
- A2M: 45-55ppm, SPDH, 4 trays, horizontal transport, (60Hz).

Singapore built machine:

- A2MN: 45-55ppm, SPDH, 4 trays, horizontal transport, (60Hz).

### 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](#).

## GP 4 Machine Software

### Purpose

To provide machine software information and explain the software loading procedures.

### Description

Software sets are compilations of the various software modules, and together with a software compatibility database (SCD) are bundled into a DLM file.

Refer to the items that follow for additional information about machine software:

- [Modules](#).
- [Software Compatibility Database \(SCD\)](#).
- [Common Upgrade Behaviour](#).
- [Software Loading Procedures](#).
- [Normal Software Loading Procedure](#).
- [AltBoot Software Loading Procedure](#).
- [Forced AltBoot Software Loading Procedure](#).

### Modules

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 is used to describe the machine system software.

The SCD comprises of the system software version in the format `WorkCentre_5945-5955_system-sw#(AAa)(PPS)(TTY)(DDD)(RR)#.dlm` and a list of software versions for the different modules.

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 Machine Details and on the Service Info screen in service mode.

The primary function of an SCD is to ensure that all software on the machine is compatible.

### Common Upgrade Behaviour

A software upgrade is requested if a new hardware module is installed which has an earlier or later software version.

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 SCD with the software in the hardware modules. If necessary, a software upgrade or downgrade is instigated by the SBC PWB module.

**NOTE:** If a component is installed that has a later version of software than the software set on the SBC PWB module, at machine startup the software on the new component is downgraded.

The SCD is updated on successful completion of the upgrade.

### Software Loading Procedures

Loading of machine software can be initiated either:

- locally from a PWS or USB flash drive.
- remotely via a network connection.

There are various methods of loading the machine software for the Workcentre 5945/5955 machines. Refer to [Table 1](#) to select the appropriate procedure.

**Table 1 Software loading procedures**

Software Upgrade Procedure Type	Software Upgrade Application
<a href="#">Software Loading Via the Customer's Network</a>	Use on a good working machine.
<a href="#">Software Loading From the PWS</a>	Use on a good working machine.
<a href="#">Software Loading From a USB Flash Drive</a>	Use to only upgrade software on a good working machine. See above Note.
<a href="#">PWS AltBoot Procedure</a>	Use as directed on a faulty machine.
<a href="#">USB AltBoot Procedure</a>	Use as directed on a faulty machine.
<a href="#">USB Forced AltBoot Procedure</a>	Use as directed on a faulty machine.
<a href="#">PWS Forced AltBoot Procedure</a>	Use as directed on a faulty machine.

### Software Loading Progress

During the software loading procedure, a progress screen is displayed on the UI, [Figure 10](#). The display has features that follow:

- A progress bar is assigned to each of the hardware modules.
- For the upgrade of each hardware module to be successful, the green box with a white tick must be displayed. During the upgrade, one of the conditions that follow is displayed:
  - Green progress bar, an upgrade is in progress.
  - Green box with a white tick, an upgrade has completed.
  - Red progress bar, a module has failed to be upgraded.

### Normal Software Loading Procedure

Use this procedure to load software onto a good, working machine.

#### Initial Requirements

- 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.

**NOTE:** The procedure will take approximately 35 minutes.

- If the software loading procedure fails, enter [dC122](#) Fault History. Check for chain 95 fault codes. Perform the relevant RAPs.

#### Procedure

There are 3 methods to load software. Perform the relevant procedure:

- [Software Loading Via the Customer's Network](#).
- [Software Loading From the PWS](#).
- [Software Loading From a USB Flash Drive](#).

#### Software Loading Via the Customer's Network

The software is loaded via the customer's network. As the software loading instructions are subject to change, a 'read me' file is available at the same location as the software. Refer to the 'read me' file for the software loading procedure.

The progress of the software loading procedure is displayed on the UI. For more information, refer to [Software Loading Progress](#).

If the machine does not start the software loading procedure, check the items that follow:

- The relevant cabling to the machine.
- The functionality of the PC being used to perform the procedure.

#### Software Loading From the PWS

Perform the steps that follow:

1. Print a configuration report.
2. 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.
3. Switch on the machine, [GP 14](#).
4. Disconnect the ethernet cable from the machine.
5. 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.

6. 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.
7. 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.

8. In the machine's web page, click on the Properties tab.
9. Login as the Administrator, i.e. Login: Admin. Password: 1111 (default).
10. Open the General Setup folder, then the Machine Software folder.
11. Select Manual Upgrade.

**NOTE:** If necessary, enable manual software upgrades.

12. Click on the browse button in the middle of the screen.
13. Browse to the correct location of the DLM file, then click on open.
14. Click on the Install Software button.
15. 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](#).
16. When the upgrade has completed, [Figure 11](#), the machine will reboot automatically.

**NOTE:** When the machine reboots, the connection to the machine's web page is lost.

17. 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.
18. Compare the configuration reports. Ensure that the configuration report generated after the upgrade shows the same machine configuration as before the upgrade.
19. If the proxy server setting on the PWS was changed, return the setting to the original value.
20. Connect the customer's network cable to the machine. Switch off, then switch on the machine, [GP 14](#).

#### Software Loading From a USB Flash Drive

**NOTE:** The [Software Loading From a USB Flash Drive](#) procedure can only be used to upgrade machine software to a higher version. The procedure will fail and generate a fault code if an attempt is made to install machine software of the same version. If it is necessary to reload machine software of the same version via a USB flash drive, the [AltBoot Software Loading Procedure](#) must be used.

Perform the steps that follow:

1. Create a top level folder on the USB flash drive named upgrade (this is not case sensitive).
2. Copy the WorkCentre\_5945-5955\_system-sw#aaappsttyddrr#.dlm file from the system software CD into the upgrade folder of the USB flash drive.

**NOTE:** Ensure there is only 1 file in the upgrade folder.

**NOTE:** Ensure the Windows "safely remove hardware device" process is followed, before removing the USB drive.

3. 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.
4. Check the release notes and the current software loaded on the machine. Ensure that the upgrade can be applied.
5. Check that the USB ports are enabled. Perform the [USB Port Security Setting Check](#).
6. Connect the USB flash drive into any of the USB ports.

**NOTE:** It is not necessary to switch off the machine to perform a software upgrade.

Occasionally the USB flash drive will be incompatible with the machine. Replace the USB flash drive with a Xerox approved model. Restart the process.

7. The Software Upgrade start screen is displayed, [Figure 9](#).
8. The upgrade will begin and the progress screen will open, [Figure 10](#).
9. The system upgrade process should complete after approximately 5 minutes, [Figure 11](#), and the machine will come to a ready state.
10. If the system upgrade process fails, perform an AltBoot. Refer to [AltBoot Software Loading Procedure](#).
11. The machine will reboot several times before returning to a ready state. The machine may also display the Upgrade Progress screen, [Figure 10](#). If the power on failure screen is displayed, switch off, then switch on the machine, [GP 14](#).
12. After the software has upgraded, a software upgrade report will be printed.

#### AltBoot Software Loading Procedure

Use this procedure to load software onto a faulty machine. Only use this procedure if directed.

If the software loading procedure fails, enter [dC122](#) Fault History. Check for chain 95 fault codes. Perform the relevant RAPs.



#### 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 behaviour 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.

There are 2 methods of performing an AltBoot. Perform the relevant procedure:

- [USB AltBoot Procedure](#).
- [PWS AltBoot Procedure](#).



## USB AltBoot Procedure

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 WorkCentre\_5945-5955\_system-sw#aaappsttyddrr#.dlm file from the system software CD 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 Software Upgrade start screen will display on the UI, Figure 9.

**NOTE:** If the Upgrade Failed screen, Figure 13, 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.

8. After approximately 3 minutes, the upgrade will begin and the Progress screen will open, Figure 10.

**NOTE:** If the Progress screen is not displayed after 5 minutes, restart the process.

9. The AltBoot process should complete after approximately 5 minutes and the AltBoot Complete screen will open, Figure 12. Follow the on screen instructions.
10. If the AltBoot process fails, the AltBoot Failed screen will open, Figure 13. Follow the on-screen instructions. Restart the procedure and refer to Troubleshooting as necessary.
11. The UI displays the Data Encryption/Decryption progress screen, Figure 14.

**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.

12. 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.
13. Check that the software set has been installed. Refer to the printed software upgrade report or by pressing the Machine Status button.
14. Perform a NVM restore. Refer to dC361 NVM Save and Restore.
15. Switch off, then switch on the machine, GP 14.

## PWS AltBoot Procedure

Hardware requirements:

- Data cable, PL 26.10 Item 24.

- Ethernet crossover cable, PL 26.10 Item 6.

Software requirements:

- sirius.Uimage - Linux kernel file.
- sirius\_ramdisk.uboot - Linux root file system file.
- The DLM file to be loaded.

Perform the steps that follow:

1. Print a configuration report.
2. If possible, perform an NVM save. Refer to dC361 NVM Save and Restore.
3. Switch off the machine, GP 14. Disconnect the ethernet cable from the machine.
4. Prepare the PWS:
  - a. Disable the wireless network.
  - 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.

**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.

7. Start the PWS AltBoot tool.
8. Browse to, and highlight the folder that contains the upgrade files, Figure 2. Select OK.
9. If a **Connection Failed** window appears, 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 drop down 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 ulm-  
age 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 was received from 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 action 5, 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 Software Upgrade start  
screen will display on the UI, [Figure 9](#).

**NOTE:** If the Upgrade Failed screen, [Figure 13](#) 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](#).

18. After approximately 2 minutes, the upgrade will begin and the progress screen will open,  
[Figure 10](#).

**NOTE:** If the upgrade process screen is not displayed after 5 minutes, restart the pro-  
cess.

19. The AltBoot process should complete after approximately 5 minutes, and the AltBoot  
complete screen will open, [Figure 12](#). Ignore the instruction to remove the USB flash  
drive, press 0 to continue.
20. If the AltBoot process fails, the AltBoot failed screen will open, [Figure 13](#). Follow the on-  
screen instructions. Restart the procedure. Refer to [Troubleshooting](#) as necessary.
21. The UI displays the Data Encryption/Decryption progress screen, [Figure 14](#).

**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.

22. 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](#).
23. Disconnect the data cable and the special crossover ethernet cable from the PWS and  
the machine.
24. Connect the ethernet cable to the machine.
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](#).

## Forced AltBoot Software Loading 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.*

There are 2 methods of performing a Forced AltBoot. Perform the relevant procedure:

- [USB Forced AltBoot Procedure](#).
- [PWS Forced AltBoot Procedure](#).

### USB Forced AltBoot Procedure

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 (file size = 0 KB) in GSN library 13086.
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](#).
10. Follow the instructions on the UI until the software loading is complete.
11. 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](#).

12. Check that the software set has been installed. Refer to the printed software upgrade  
report or by pressing the machine status button.
13. If the NVM was saved at the beginning of this procedure, perform an NVM restore. Refer  
to [dC361 NVM Save and Restore](#).
14. Switch off, then switch on the machine, [GP 14](#).

15. If the Forced AltBoot process fails, restart the procedure. Refer to [Troubleshooting](#) if necessary.

### PWS Forced AltBoot Procedure

Hardware requirements:

- Data cable, [PL 26.10 Item 24](#).
- Ethernet crossover cable, [PL 26.10 Item 6](#).

Software requirements:

- sirius.Uimage - Linux kernel file.
- sirius\_ramdisk.uboot - Linux root file system file.
- The DLM file to be loaded.

Perform the steps that follow:

1. Print a configuration report.
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. Disable the wireless network.
  - 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](#).

**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.
7. Start the PWS AltBoot tool.
8. Browse to and highlight the folder that contains the upgrade files, [Figure 2](#). Select OK.
9. If a **Connection Failed** window appears, 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 ulm- 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 was received from 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 action 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 Software Upgrade start screen will display on the UI, [Figure 9](#).

**NOTE:** If the Upgrade Failed screen, [Figure 13](#) 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](#).
  18. After approximately 3 minutes, the upgrade will begin and the progress screen will open, [Figure 10](#).

**NOTE:** If the progress screen is not displayed after 5 minutes, restart the process.
  19. The Forced AltBoot process should complete after approximately 35 minutes and the Alt-Boot Complete screen will open, [Figure 12](#). Ignore the instruction to remove the USB flash drive, press 0 to continue.
  20. If the Forced AltBoot process fails, the AltBoot Failed screen will open, [Figure 13](#). Follow the on-screen instructions. Restart the procedure. Refer to [Troubleshooting](#) as necessary.
  21. The UI displays the Data Encryption/Decryption progress screen, [Figure 14](#).

**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 Forced AltBoot process may need to be re-run if power is removed at this step.
  22. The machine will reboot several times before returning to a ready state. If a power on failure screen appears, switch off, then switch on the machine, [GP 14](#).
  23. Disconnect the data cable and the special crossover ethernet cable from the PWS and the machine.
  24. Connect the ethernet cable to the machine.
  25. 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](#).

26. Check that the software set has been installed. Refer to the printed software upgrade report or by pressing the machine status button.
27. If the NVM was saved at the beginning of this procedure, perform an NVM restore. Refer to [dC361 NVM Save and Restore](#).
28. Switch off, then switch on the machine, [GP 14](#).

### 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**

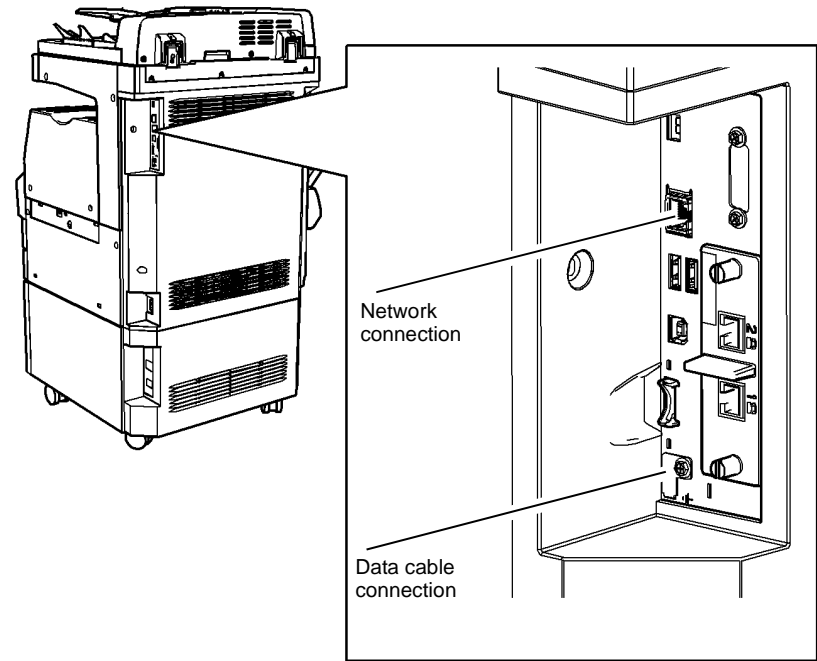
Module	SCD Module Versions	Go to
SBC PWB	0, 1, 2, 8, 9, 11, 140, 214, 216, 217, 226	<a href="#">395-000-00 to 395-009-00</a> SBC Software Upgrade Errors 1 RAP
IOT PWB	40, 41, 42	<a href="#">395-040-00 to 395-042-00</a> IOT Software Upgrade Errors RAP
UI PWB	19	<a href="#">395-011-00</a> UI Software Upgrade Errors RAP
Fax	38	<a href="#">395-038-00</a> Fax Software Upgrade Errors RAP
Scanner PWB	155, 163, 164, 169, 227	<a href="#">395-155-00 to 395-169-00</a> Scanner Software Upgrade Errors 1 RAP
SPDH PWB	228, 229	<a href="#">395-228-00, 395-229-00</a> SPDH Software Upgrade Errors RAP
2K LCSS PWB	60	<a href="#">395-060-00</a> 2K LCSS Software Upgrade Errors RAP
LVF PWB	222	<a href="#">395-222-00</a> LVF Software Upgrade Errors RAP
LVF BM PWB	224	<a href="#">395-224-00</a> LVF BM Software Upgrade Errors RAP

### 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 recognised, update the software from the PWS.



**Figure 1 Data cable connection**

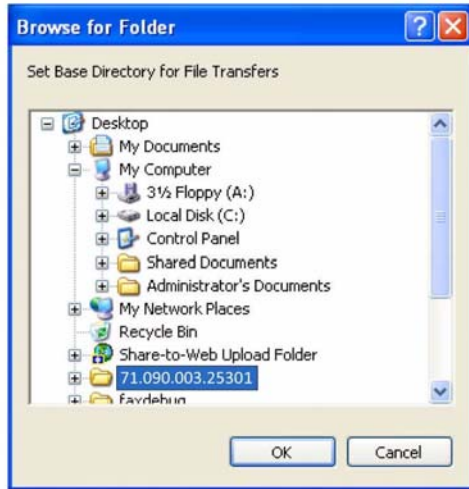


Figure 2 Browse for folder

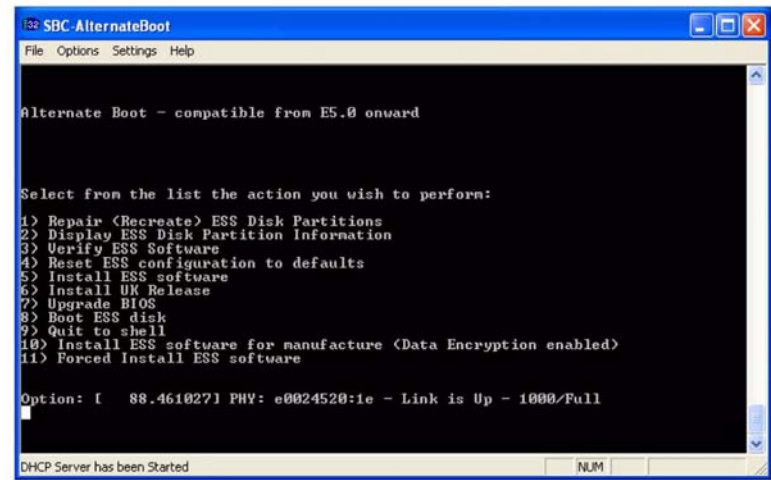


Figure 4 Action menu

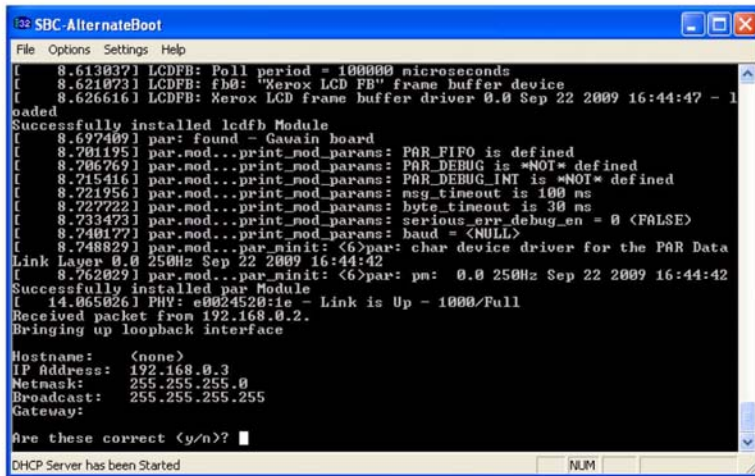


Figure 3 Settings menu

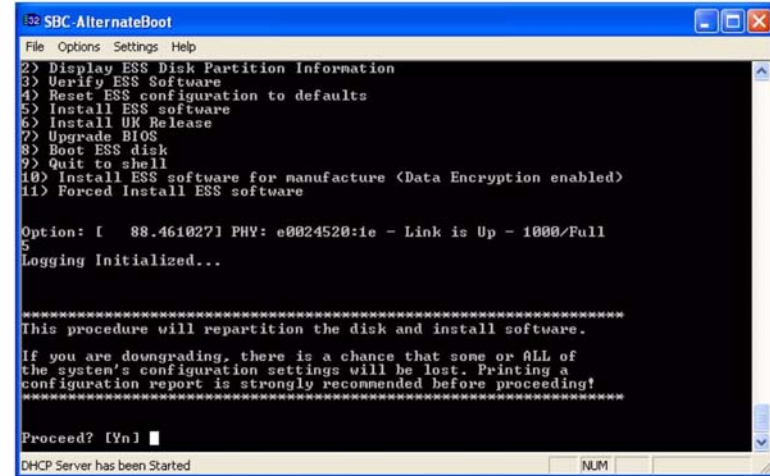
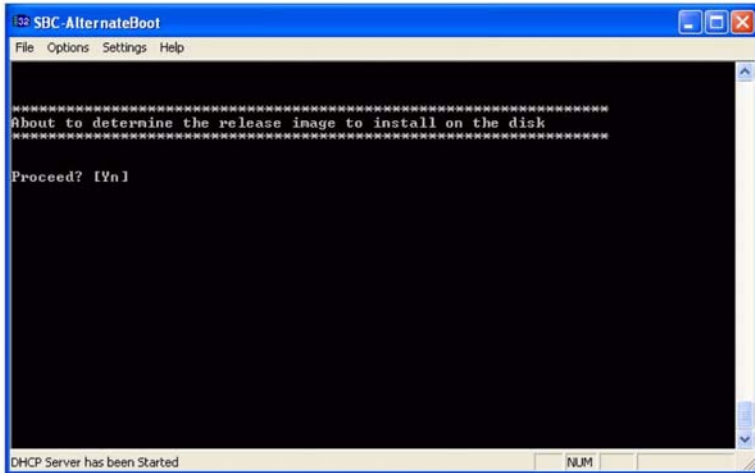
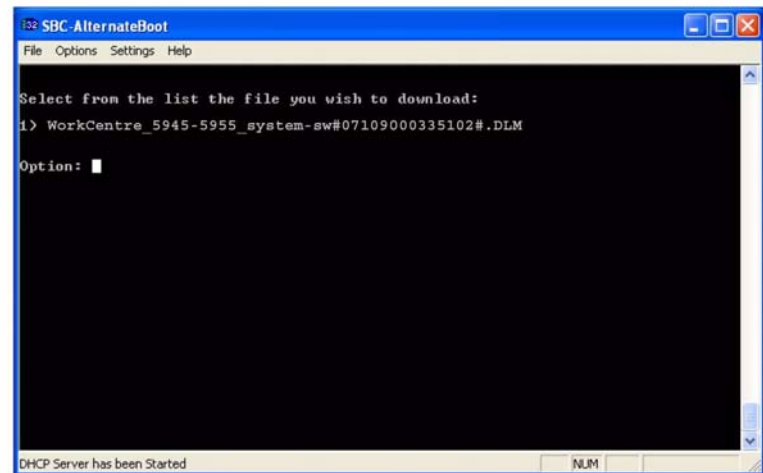


Figure 5 Install confirmation window



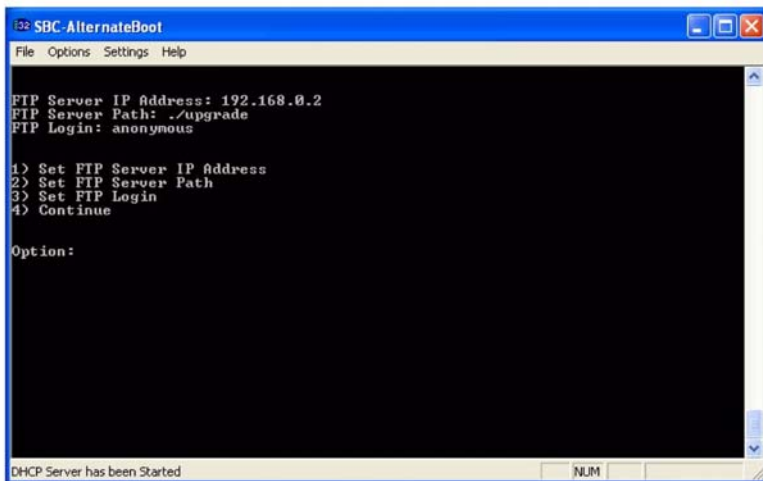
W-1-1361-A

Figure 6 Release image install window



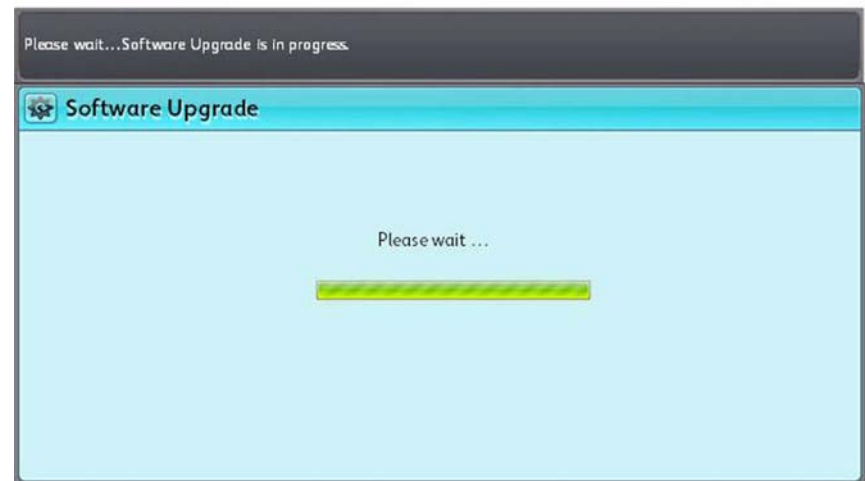
W-1-1363-A

Figure 8 DLM list



W-1-1362-A

Figure 7 Option menu



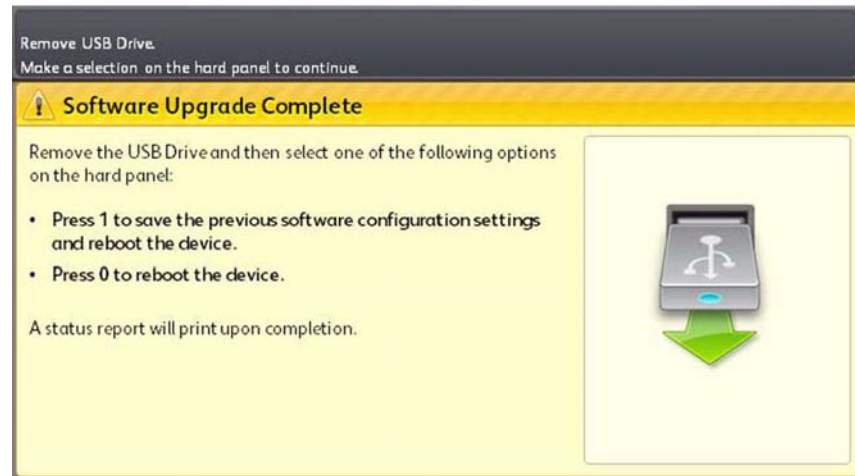
W-1-1364-A

Figure 9 Software upgrade



W-1-1365-A

Figure 10 Start of upgrade



W-1-1367-A

Figure 12 AltBoot upgrade complete



W-1-1366-A

Figure 11 DLM upgrade complete



W-1-1368-A

Figure 13 Upgrade failed



W-1-1369-A

Figure 14 Encryption progress

## GP 5 Portable Work Station and Tools

### Purpose

To describe the PWS diagnostic tools that are available for use with the WorkCentre 5945/5955 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](#).



## 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

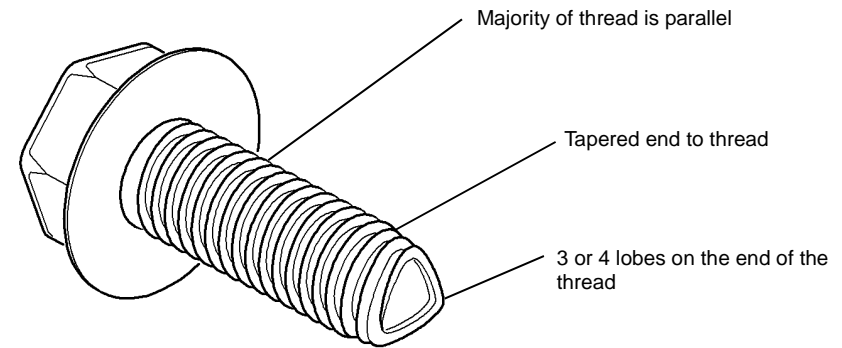
Some new components are supplied with fastening holes that do not have the screw thread pre-cut. It is the insertion of the first screw into the hole that forms the thread.



**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](#).



**W-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 the SIM cards.

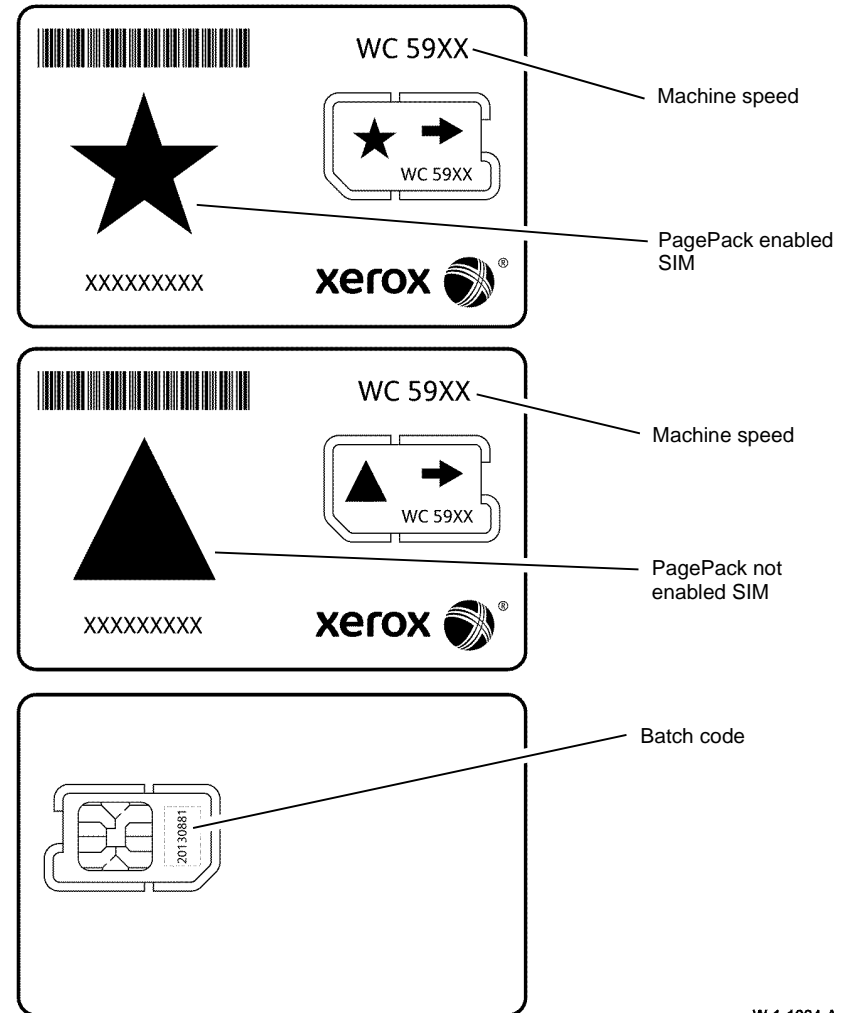
### Procedure

Install a SIM card, [PL 3.22 Item 5](#), that is compatible with the speed of machine and the PagePack requirement:

- PagePack enabled SIMs are indicated by a star.
- PagePack not enabled SIMs are indicated by a triangle.

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 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.
- On the reverse of each SIM card is printed the batch code.



W-1-1224-A

Figure 1 SIM card matrix

## 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. 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.
4. 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 6**. Disconnect PJH. Check the motor on pulses on the harness when the component control code for the motor is entered.
- Go to **Flag 6**. Disconnect PJJ. 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 5**. Disconnect PJF. Check the +24V supply and the motor on pulses when the component control code for the motor is entered.
- Go to **Flag 4**. Disconnect PJD. Check the +24V, +5V and 0V supplies.
- Go to **Flag 4**. Check the clock pulses.
- Go to **Flag 4**. Check that the signal on PJD pin 13 changes 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.
- 301E +5V distribution RAP.
- 301B 0V Distribution RAP.
- REP 1.2 Wiring Harness Repairs.

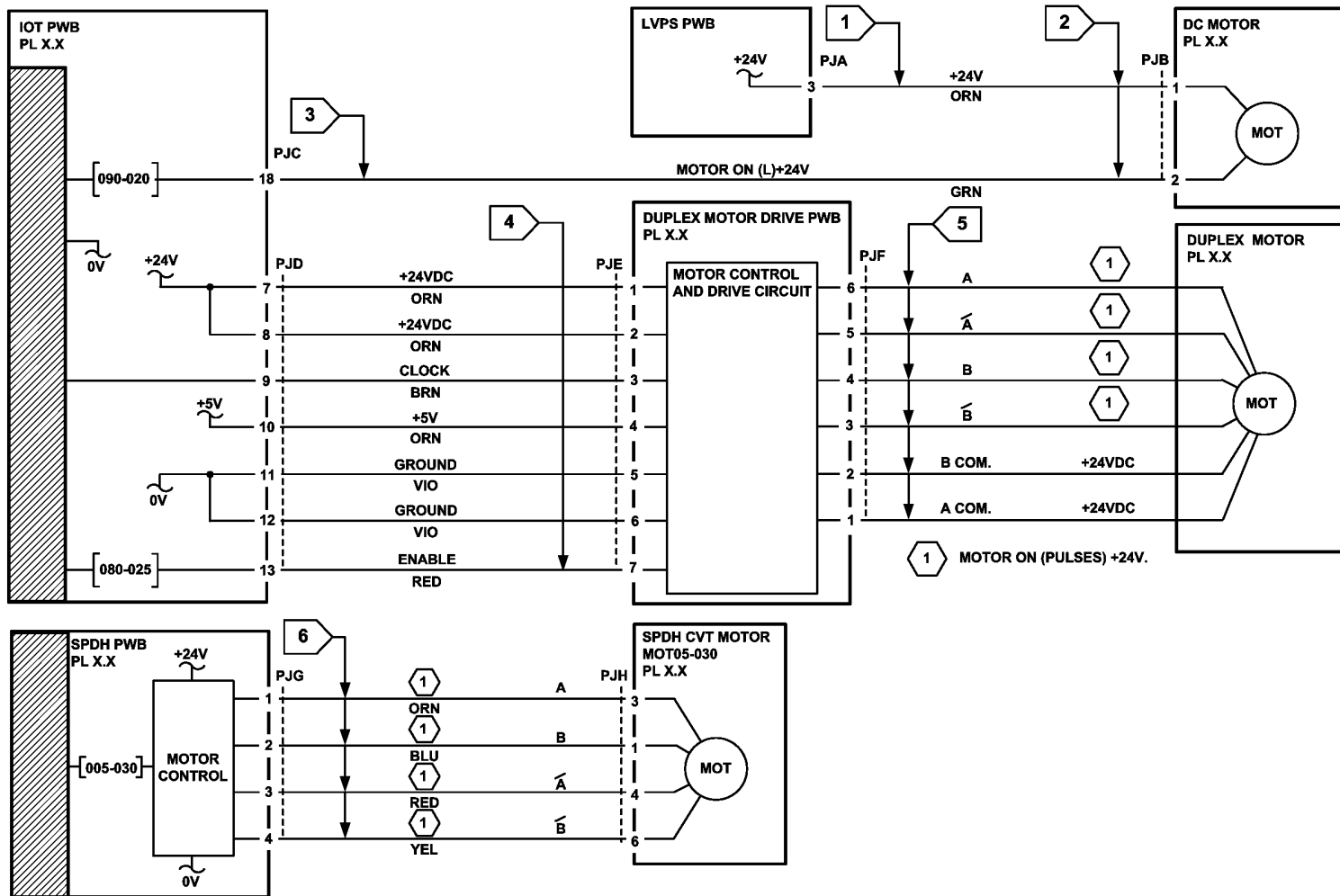


Figure 1 Circuit diagram

TW-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.

To check the operation of adaptive reflective sensors, refer to GP 38.

**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



**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. 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.

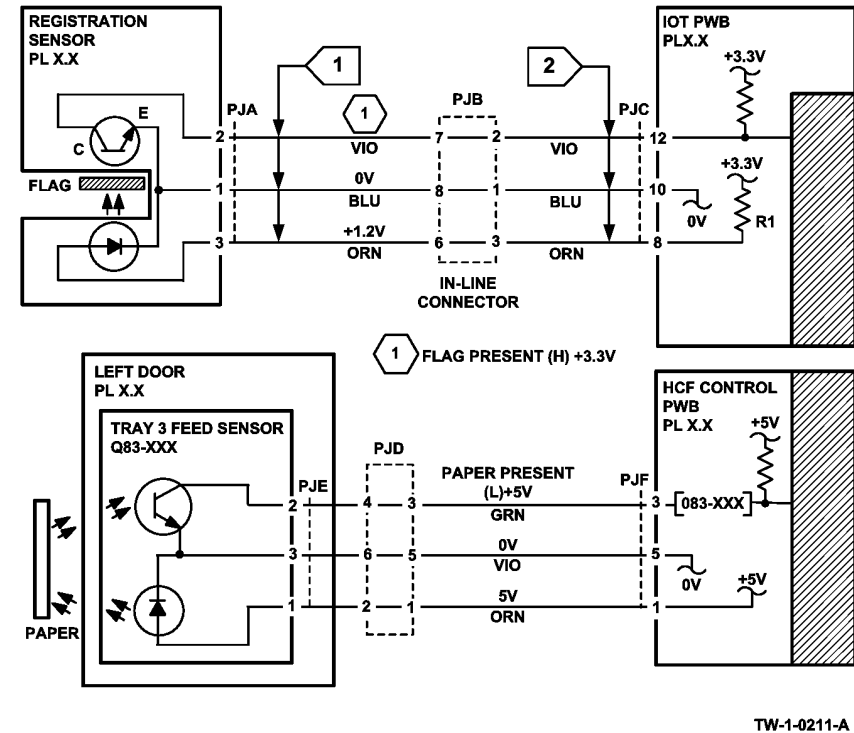


Figure 1 Circuit diagram

## 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

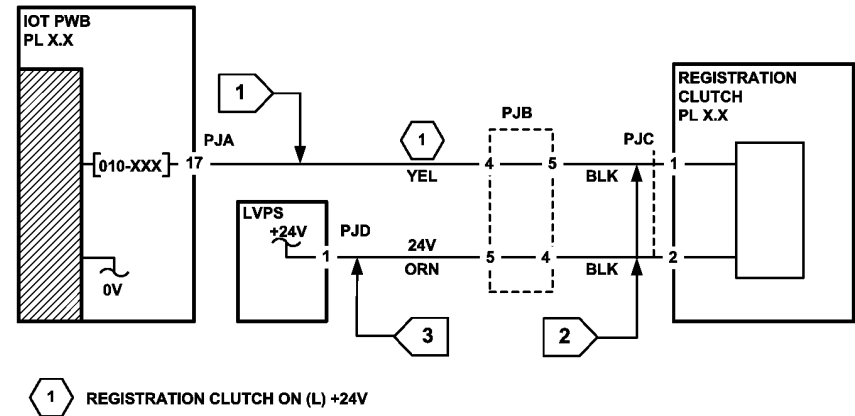
**NOTE:** The voltages, PJ numbers, pin numbers and PWB names shown are an example only. Go to the circuit diagram in the RAP for the correct information.

**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**. 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.



TW-1-0212-A

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



**Ensure that the electricity to the machine is switched off while performing tasks 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.

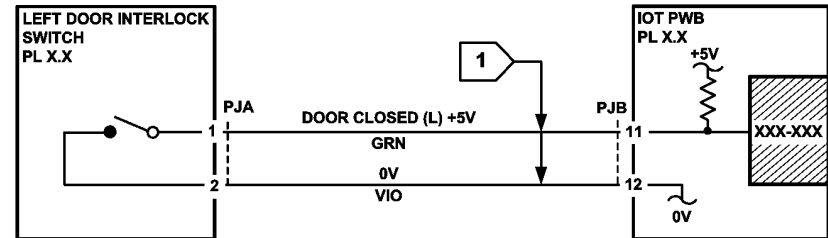


Figure 1 Circuit diagram

TW-1-0213-A

# 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.

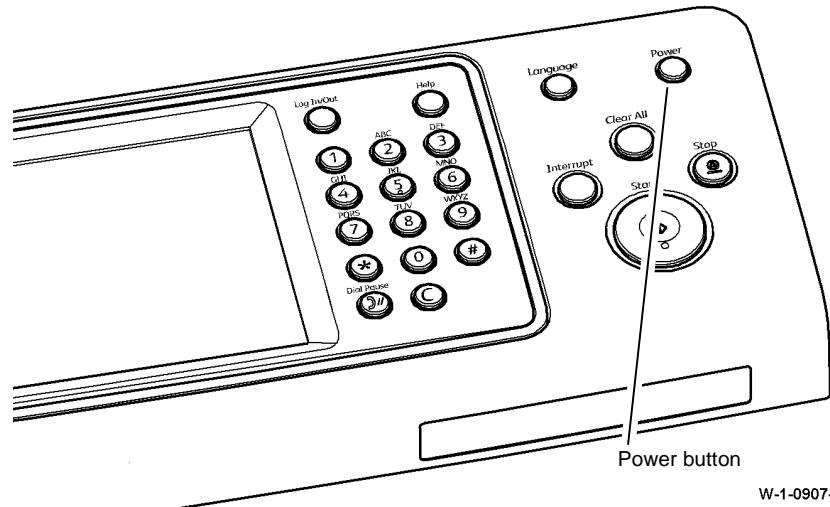


Figure 1 Power button

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 the [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. Ensure that remote diagnostic login is enabled. 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, then Edit.
  - d. In the Login window, enter the user name 'admin' (case sensitive) and the password '1111' (default setting). Click on Login.
  - e. In the Enablement window, select Enable, then For Admin and Diagnostic Users Only. Click on Save.

**NOTE:** Remote UI is disabled by default.

- f. To prevent a local user overriding remote selections, in the Access window, select Block Local Control Panel (user can only observe).
- g. Select Logout, [Figure 1](#). In the Logout window, click on Logout.

**NOTE:** The message 'Remote session is active' is displayed to inform local users that the machine is being accessed remotely.



**Figure 1 Logout / Login**

W-1-1202-A

3. Access remote diagnostics. Perform the steps that follow:
  - a. Select Login, [Figure 1](#).
  - b. In the Login window, enter the user name 'diag' (case sensitive) and the password '3424'. Select Login.
  - c. Select Remote Control Panel.
  - d. To prevent a local user overriding remote selections, in the Access window, select Block Local Control Panel (user can only observe). Click on Open Remote Control Panel.
  - e. The remote UI will now open and a Service Diagnostics button is available on the remote UI, [Figure 2](#).



**Service Diagnostics button**

W-1-0908-A

**Figure 2 Service Diagnostics button**

- f. Click on Service Diagnostics. In the Login window, enter the passcode '6789'. Select Enter.
- g. The machine will enter diagnostics (service mode). All diagnostic functions are available. Refer to [GP 1 Service Mode](#).
- h. 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.
- i. Close the remote UI window.
- j. Select Logout, [Figure 1](#). In the Logout window, click on Logout.

## 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 WorkCentre 5945/5955.*

### Procedure

Perform the steps that follow:

1. Obtain the valid feature installation key(s) by either:
  - a. Asking the customer.
  - b. Logging in to the SWAP, [www.xeroxlicensing.xerox.com/fik](http://www.xeroxlicensing.xerox.com/fik). From the Welcome screen, select Find an existing key. Enter the machine serial number in the window. Select Next.
  - c. Contacting the Licensing Admin Centre (USSG/XCL) or the Xerox sales representative (XE/DMO).
2. Enter the feature installation key(s). Perform the steps that follow:
  - a. Press the Machine Status button.
  - b. Select the Tools tab.
  - 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. Click on Status.
3. Select Welcome.
4. Click on I Have A Cloning File.
5. Enter the Administrator user ID and password. Refer to [GP 24](#) Customer Administration Tools.
6. Scroll down to the Install Clone File area. Click on Browse to locate the relevant clone file.
7. Click on 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. Click on Properties, then General Setup, then Cloning.
3. Scroll down to the Install Clone File area. Click on Browse to locate the relevant clone file.
4. 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](#) 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 9](#) Input document material definitions.
- [Table 10](#) Input document quality definitions.
- [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	Duplex	Defects
A4	60	LEF	Plain paper	2	2	2	2	Duplex show through
A4	60	SEF	Plain paper	2	X	2	2	Duplex show through
A4	61 - 120	LEF	Plain paper	3	3	3	3	None
A4	61 - 120	SEF	Plain paper	3	X	3	3	None
A4	121 - 200	LEF	Plain paper	2	2	2	2	None
A4	121 - 200	SEF	Plain paper	2	X	2	2	None
A4	201 - 216	LEF/SEF	Plain paper	X	X	2	X	None
A4	-	LEF/SEF	Labels	X	X	2	X	None
A4	-	LEF/SEF	Plain transparency	X	X	2	X	None
A4	-	LEF	White strip transparency	X	X	2	X	None
A4	-	SEF	White strip transparency	X	X	X	X	Out of specification
A4	-	LEF	Paper backed transparency	X	X	2	X	None
A4	-	SEF	Paper backed transparency	X	X	X	X	Out of specification
A4	-	LEF	Transparency removable white stripe	X	X	2	X	None
A4	-	SEF	Transparency removable white stripe	X	X	X	X	Out of spec

**Table 2 European papers**

Paper Size	Paper Weight (gsm)	Feed Direction	Paper Type	Tray 1/2	Tray 3/4	Bypass	Duplex	Defects
A4	-	LEF/SEF	Carbonless	X	X	2	X	None
Oversize A4	-	LEF	Tabs	2	X	2	X	Productivity reduction including jams and dog-ears with tabs other than Modulus 5 when used in the LVF BM.
Oversize A4	-	LEF	Covers	2	X	2	X	Productivity reduction
A3	60	SEF	Plain paper	2	X	2	1	Curl
A3	61 - 120	SEF	Plain paper	3	X	3	3	None
A3	121 - 160	SEF	Plain paper	2	X	2	2	None
A3	161 - 200	SEF	Plain paper	2	X	2	1	Mis-registration and skew
A5	60	LEF	Plain paper	2	X	2	1	Curl
A5	60	SEF	Plain paper	X	X	2	1	Curl
A5	61 - 120	LEF	Plain paper	3	X	3	3	None
A5	61 - 120	SEF	Plain paper	X	X	3	3	None
A5	121 - 200	LEF	Plain paper	2	X	2	2	None
A5	121 - 200	SEF	Plain paper	X	X	2	1	Mis-registration and skew
A6	60	LEF	Plain paper	X	X	X	X	Out of specification
A6	60	SEF	Plain paper	X	X	2	X	
A6	61 - 120	LEF	Plain paper	X	X	X	X	Out of specification
A6	61 - 120	SEF	Plain paper	X	X	3	X	
A6	121 - 200	LEF	Plain paper	X	X	X	X	Out of specification
A6	121 - 200	SEF	Plain paper	X	X	1	X	
A4	60	LEF/SEF	Nekosa	1	1	1	1	Jams
A4	200	LEF/SEF	Premier TCF	2	2	2	2	Poor fix
All	All	LEF/SEF	Envelopes (see NOTE 1)	2	X	2	X	Wrinkle
All	100	LEF/SEF	Conqueror finely ridged laid	2	2	2	2	Poor fix
All	80	LEF/SEF	Recycled	1	1	1	1	Excessive curl
Any	Any	LEF/SEF	Jobs with covers	1	N/A	1	1	Rear cover of stapled sets of more than 35 sheets plus 2 covers, may be mis-registered in the 2K LCSS and LVF BM
All	200	LEF/SEF	Colortech (coated paper)	2	2	2	2	Stapling more than 10 sheets not recommended

**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	Duplex	Defects
8.5 x 11	16	LEF	Plain paper	2	2	2	2	Duplex show through
8.5 x 11	16	SEF	Plain paper	2	X	2	2	Duplex show through
8.5 x 11	20 - 32	LEF	Plain paper	3	3	3	3	None
8.5 x 11	20 - 32	SEF	Plain paper	3	X	3	3	None
8.5 x 11	34 - 53	LEF	Plain paper	2	2	2	2	None
8.5 x 11	34 - 53	SEF	Plain paper	2	X	2	2	None

Table 3 American papers

Paper Size (inches)	Paper Weight US Bond (lb.)	Feed Direction	Paper Type	Tray 1/2	Tray 3/4	Bypass	Duplex	Defects
8.5 x 11	57	LEF/SEF	Plain paper	X	X	2	X	None
8.5 x 11	-	LEF /SEF	Labels	X	X	2	X	None
8.5 x 11	-	LEF/SEF	Plain transparency	X	X	2	X	None
8.5 x 11	-	LEF	White strip transparency	X	X	2	X	None
8.5 x 11	-	SEF	White strip transparency	X	X	X	X	Out of specification
8.5 x 11	-	LEF	Paper backed transparency	X	X	2	X	None
8.5 x 11	-	SEF	Paper backed transparency	X	X	X	X	Out of specification
8.5 x 11	-	LEF	Transparency removable white stripe	X	X	2	X	None
8.5 x 11	-	SEF	Transparency removable white stripe	X	X	X	X	Out of specification
8.5 x 11	-	LEF/SEF	Carbonless	X	X	2	X	None
Oversize 8.5 x 11	-	LEF	Tabs	2	X	2	X	Productivity reduction including jams and dog-ears with tabs other than Modulus 3 and 5 when used in the LVF BM.
Oversize 8.5 x 11	-	LEF	Covers	2	X	2	X	Productivity reduction
11 x 17	16	SEF	Plain paper	2	X	2	1	Curl
11 x 17	20 - 32	SEF	Plain paper	3	X	3	3	None
11 x 17	34 - 53	SEF	Plain paper	2	X	2	1	Mis-registration and skew
8.5 x 14	16	SEF	Plain paper	2	X	2	1	Curl
8.5 x 14	20 - 32	SEF	Plain paper	3	X	3	3	None
8.5 x 14	34 - 53	SEF	Plain paper	2	X	2	1	Mis-registration and skew
8.5 x 5.5	16	LEF	Plain paper	2	X	2	1	Not tested
8.5 x 5.5	16	SEF	Plain paper	X	X	2	1	Not tested
8.5 x 5.5	20 - 32	LEF	Plain paper	3	X	3	3	Not tested
8.5 x 5.5	20 - 32	SEF	Plain paper	X	X	3	3	Not tested
8.5 x 5.5	34 - 53	LEF	Plain paper	2	X	2	2	Not tested
8.5 x 5.5	34 - 53	SEF	Plain paper	X	X	2	1	Not tested
5.5 x 4.25	16	LEF	Plain paper	X	X	X	X	Out of specification
5.5 x 4.25	16	SEF	Plain paper	X	X	2	X	Out of specification
5.5 x 4.25	20 - 32	LEF	Plain paper	X	X	X	X	Out of specification
5.5 x 4.25	20 - 32	SEF	Plain paper	X	X	3	X	Out of specification
5.5 x 4.25	34 - 53	LEF	Plain paper	X	X	X	X	Out of specification
5.5 x 4.25	34 - 53	SEF	Plain paper	X	X	1	X	Out of specification
All	All	LEF/SEF	Envelopes (see NOTE 1)	2	X	2	X	Wrinkle
11 x 17	32	SEF	Domtar (10% recycled)	1	X	1	1	Bad stacking due to curl
Any	Any	LEF/SEF	Jobs with covers	1	1	1	1	Rear cover of stapled sets of more than 35 sheets plus 2 covers, may be mis-registered in the 2K LCSS and LVF BM

**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
-	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	Bypass tray	Tray 3 and 4	USSG/XCL	Eur/Asia	Latin	USSG/XCL	Eur/Asia	Latin	
Letter	8.5 x 11	216 x 279	SEF	Y	Y	N	Y	Y	Y	Y	Y	Y	-
Letter	8.5 x 11	216 x 279	LEF	Y	Y	Y*	Y	Y	Y	Y	Y	Y	*Fixed size depending on purchased option
Ledger (tabloid)	11 x 17	279 x 432	SEF	Y	Y	N	Y	Y	Y	Y	Y	Y	-

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	Bypass tray	Tray 3 and 4	USSG/ XCL	Eur/ Asia	Latin	USSG/ XCL	Eur/ Asia	Latin	
Invoice (statement)	8.5 x 5.5	216 x 140	SEF	Y	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	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	Y	N	N	N	N	Y	U	U	-
Postcard	4.25 x 5.5	108 x 140	LEF	N	N	N	N	N	N	U	U	U	Cannot be fed in IOT
Legal	8.5 x 14	216 x 356	SEF	Y	Y	N	Y	Y	Y	Y	U	U	
ISO A4	8.26 x 11.69	210 x 297	SEF	Y	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	Y	Y	Y	Y	Y	Y	-
ISO A3	11.69 x 16.54	297 x 420	SEF	Y	Y	N	Y	Y	Y	Y	Y	Y	-
ISO A5	5.83 x 8.27	148 x 210	SEF	Y	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	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	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	U	U	U	-
Foolscap or Euroletter	8.5 x 13	216 x 330	SEF	Y	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	Y	N	Y	Y	Y	Y	Y	Y	-
JIS B5	7.17 x 10.12	182 x 257	LEF	Y	N	N	Y	Y	Y	Y	Y	Y	-
JIS B4	10.12 x 14.33	257 x 364	SEF	Y	Y	N	U*	U*	U*	Y	Y	Y	*Detected as ISO B4
JIS B6	5.08 x 7.17	128 x 182	SEF	N	Y	N	N	N	N	Y	Y	Y	-
JIS B6	5.08 x 7.17	128 x 182	LEF	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	Y	N	Y	Y	Y	U	U	U	
ISO B5	6.93 x 9.84	176 x 250	LEF	N	Y	N	Y	Y	Y	U	U	U	
ISO B4	9.84 x 13.9	250 x 353	SEF	Y	Y	N	Y	Y	Y	Y	Y	Y	
SB4	9.9 x 14.09	252 x 358	SEF	Y	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B4
Postcard-Lakes	4.5 x 6	114 x 152	SEF	N	Y	N	N	N	N	U	U	U	-
Postcard-Lakes	4.5 x 6	114 x 152	LEF	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	Y	N	N	N	N	U	U	U	-
Postcard	5 x 7	127 x 178	LEF	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	Y	N	U	U	U	U	U	U	-
5.5 x 7 inch	5.5 x 7	140 x 178	LEF	N	Y	N	U	U	U	U	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	Bypass tray	Tray 3 and 4	USSG/ XCL	Eur/ Asia	Latin	USSG/ XCL	Eur/ Asia	Latin	
Oufuku-Hagaki Post-card	5.83 x 7.87	148 x 200	SEF	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 Post-card	5.83 x 7.87	148 x 200	LEF	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	SEF	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	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	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	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B5
Foolscap Quarto	6.5 x 8.25	165 x 206	SEF	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	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	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B5
Crown Quarto	7.25 x 9.5	184 x 241	LEF	Y	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B5
Executive	7.25 x 10.5	184 x 267	SEF	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	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	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	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
Quarto	8 x 10	203 x 254	SEF	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
Quarto	8 x 10	203 x 254	LEF	Y	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8 x 10.5	203 x 267	SEF	N	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8 x 10.5	203 x 267	LEF	Y	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	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8.26 x 10	210 x 254	SEF	Y	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8.26 x 10	210 x 254	LEF	Y	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8.26 x 10.63	210 x 270	SEF	Y	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8.26 x 10.63	210 x 270	LEF	Y	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8.26 x 13	210 x 330	SEF	Y	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	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	Bypass tray	Tray 3 and 4	USSG/ XCL	Eur/ Asia	Latin	USSG/ XCL	Eur/ Asia	Latin	
Demi Quarto	8.46 x 10.7	215 x 273	SEF	Y	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	Y	N	U*	U*	U*	U	U	U	*Detected as 8.5 x 11
-	8.46 x 10.83	215 x 275	SEF	Y	Y	N	U*	U*	U*	U	U	U	*Detected as ISO A4 or 8.5 x 13 depending on NVM 1 setting
-	8.46 x 10.83	215 x 275	LEF	Y	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#	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	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	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	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	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	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B4
SB4	9.92 x 14.09	252 x 258	LEF	Y	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B4
Accounting	10 x 14	254 x 356	SEF	Y	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B4
-	10 x 15	254 x 381	SEF	Y	Y	N	U*	U*	U*	U	U	U	*Detected as ISO B4
8K Taiwan	10.51 x 15.28	267 x 388	SEF	Y	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

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 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
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



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 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
-	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
Foolsap 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

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 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
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
Foolsap 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
Foolsap Quarto	6.5 x 8.25	165 x 206	SEF	Y	Y	N	Y	Y	N	N	N
Foolsap 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

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)
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
-	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 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	

**Table 8 Output stock performance**

Stock Type	Trays 1 and 2	Bypass	Trays 3 and 4	Duplex	Offset	Stack	Staple	Hole Punch	Booklet Maker	Notes
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.
Card stock, 200 gsm to 216 gsm	N	Y	N	Y	N	Y	Y(1)	Y	Y(2)	(2) One cover may be included within the quoted sheet capacity consistent with paper weight of the body of the booklet.
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 9 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 10 Input document quality definitions**

<b>Defect</b>	<b>Acceptable</b>	<b>Marginal</b>	<b>Unacceptable</b>	<b>Notes</b>
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 11](#) and [Table 12](#) for the envelope sizes that can be fed from tray 2 if the optional envelope kit is installed.

**Table 11 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 12 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 13](#) and [Table 14](#) for the envelope sizes that can be fed from the bypass tray.

**Table 13 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 14 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.

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.



**WARNING**

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



**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.**

### 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).

### Machine Dimensions and Installation Space Requirements

Table 1 shows the dimensions of the WorkCentre 5945/5955 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.

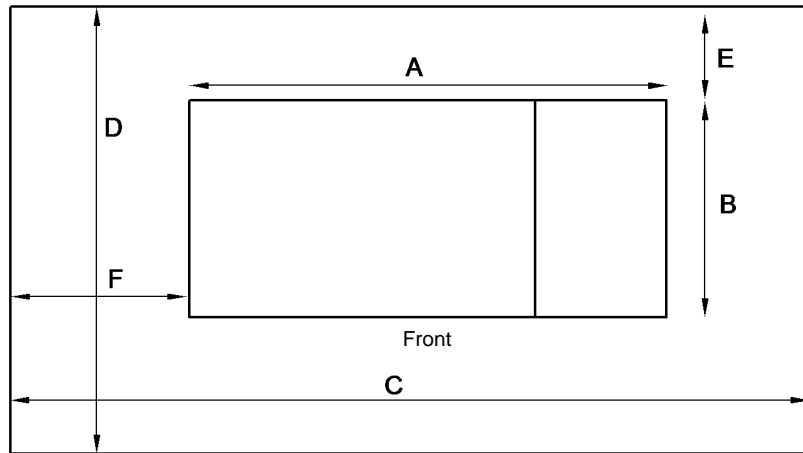
A gap of 100mm (4 inches) is required at the rear for airflow to fans. This is also sufficient for the SPDH when raised. A gap of 440mm (17 inches) is required to the left of the machine to allow the left door to open.

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	850 / 33.5	665 / 26.2	2043 / 80.4	3043 / 119.8	1665 / 65.5	2665 / 105	100 / 4	1000 / 39.4	440 / 17
Basic machine with 2K LCSS	1470 / 57.8	665 / 26.2	2663 / 104.8	3663 / 144.2	1665 / 65.5	2665 / 105	100 / 4	1000 / 39.4	440 / 17
Basic machine with LVF BM	1530 / 60.2	665 / 26.2	2723 / 107.2	3723 / 146.6	1665 / 65.5	2665 / 105	100 / 4	1000 / 39.4	440 / 17



W-1-1172-A

Figure 1 Installation plan

## GP 22 Electrical Power Requirements

### Power Requirements

Refer to [Table 1](#) and [Table 2](#).

Table 1 Electrical power requirements

Nominal Voltage	Average Current	Comments
110VAC (60Hz) Plus 6% minus 10%	Less than or equal to 15A RMS.	Specific XLA markets only.
127VAC (60Hz) Plus 6% minus 10%	Less than or equal to 15A RMS.	Mandatory for Saudi Arabia only.
127VAC (60Hz) Plus 6% minus 10%	Less than or equal to 15A 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.	Run mode, USA and Canada.
120VAC (60Hz) Plus 6% minus 10%	Less than or equal to 15A RMS.	Warm up, All 60Hz markets including USA and Canada.
220VAC (50Hz) Plus 6% minus 10%	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.	Europe and other 50Hz markets.
240VAC (50Hz) Plus 6% minus 10%	Less than or equal to 10A RMS.	Europe and other 50Hz markets.

### Power Save Modes

There are 2 power save modes which are entered after pre-set timers have expired, [Low Power Mode](#) and [Sleep Mode](#). Both of these power modes are initially set to factory default time values but are customer adjustable.

Entry into low power and sleep modes is controlled by 1 of 2 supported power save settings, [Job Activated](#) and [Intelligent Ready](#). The default is Intelligent Ready but this is selectable by the customer.

#### Low Power Mode

This state is identified by the UI power button LED being pulsed on/off every 2 seconds with the LCD backlight off. Recovery from this mode to standby/ready is from either pressing the UI power button or an incoming fax or print job. The machine does not wake from low power mode upon insertion of a USB drive.

#### Sleep Mode

This mode is identified by the UI power button LED being continuously lit with the LCD backlight off. 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 low power mode upon insertion of a USB drive.



**Job Activated**

Automatically enters low power mode after a period of inactivity exceeds a timer value. The timer value is preset but is adjustable by the customer in the range 1 to 120 minutes. Automatically enters sleep mode after a period of inactivity exceeds a timer value whilst in low power mode. The timer value is preset but is adjustable by the customer in the range 1 to 120 minutes.

**Intelligent Ready**

Automatically enters low power mode after a period of inactivity exceeds a timer value. The default value for the timer is preset but it is adjusted automatically by the system based on customer usage. Automatically enters sleep mode after a period of inactivity exceeds a timer value whilst in low power mode. The default value for the timer is preset but it is adjusted automatically by the system based on a customer usage.

**Table 2 Default settings**

Speed	Standby to Low Power Mode (mins.)	Low Power Mode to Sleep Mode (mins.)
45 ppm	1	1
55 ppm	1	1

**Power consumption**

Refer to [Table 3](#) for power the consumption in all modes.

**Table 3 Power consumption in all modes**

Configuration	Run (Watt)	Standby (Watt)	Low Power (Watt)	Sleep (Watt)	Plug-in/Off Mode (Watt)	EPA Typical Energy Consumption Value (Kwh/week)
45ppm	1150	290	Less than 125	Less than 9	Less than or equal to 0.9	5.7
55ppm	1250	290	Less than 125	Less than 9	Less than or equal to 0.9	6.7
Additional power for 2K LCSS	80	10	0	0	0	N/A
Additional power for LVF BM	80	10	0	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 of noise that can be generated by the basic machine.
- **Table 2** contains the maximum value in decibels of noise that can be generated by the machine in other configurations.

**Table 1 Maximum noise limits, basic machine**

PPM	Standby (dBA)	Run Continuous (dBA)	Run Impulse (dBA)
45	35	56	59
55	35	56	61

**Table 2 Maximum noise limits, all configurations**

PPM	Standby (dBA)	Run continuous (dBA)	Run Impulse (dBA)
45	35	59	63
55	35	59	63

- 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, press the **Login/Logout** (key symbol) button on the control panel.
3. The Authentication Required 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 **Machine Status** button.
6. Select the **Tools** tab, the tools pathway 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 Measurement...
  - Timers...
  - Input...
  - Output...
  - Supplies...
  - Device Software Upgrade...
  - Quick Setup Home...
  - Display Brightness...
  - Configuration/Information Pages...
  - Reset UI to Factory Settings...
  - Interrupt Printing Enablement...
- Service Settings:
  - Service Registration...
  - Device Address Book...
  - Copy Service...
  - ID Card Copy Service...
  - Embedded Fax Settings... (if installed).
  - Job Sheets...
  - Weblet Settings...
  - Service Plan...

- Network Settings:
  - Online/Offline...
  - Network Connectivity...
  - TCP/IP Settings...
  - Advanced Settings...
  - Network Logs...
  - USB Settings...
  - Display Network Settings...
- Accounting Settings:
  - Accounting Mode...
  - Copy Activity Report...
- Security Settings:
  - USB Port Security...
  - Audit Log...
  - Authorization...
  - Image Overwrite Security...
  - Change Admin Password...
  - IPsec...
  - Valid Recipients...
  - Display Network Settings...
- Troubleshooting:
  - Resets...
  - Network...
  - Fax... (if installed).

## Call Closeout

Perform the steps that follow:

1. Select Admin in the top right 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.
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 **Machine Status** button.
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

The first copy out time (FCOT) is the duration from the start copy request to the delivery of the first copy in the centre output tray. Values in Table 1 are based on a standard job where the original is copied at 100% from the document glass or SPDH onto A4 LEF paper fed from the bypass tray.

The first print out time (FPOT) is the duration from the print job request to the delivery of the print in the centre catch tray. FPOT values in Table 1 are based on a 1 byte ASCII text file sent using TCP/IP and LPR, from a Pentium II 128Mb NT 4.0 PC with 100Mb Ethernet.

Table 1 Machine timing

Description	Response Time	Notes
FCOT from the document glass	3.4 seconds	A4 sheet, bypass tray to right side exit, no invert
FCOT from the SPDH	7.3 seconds	A4 sheet, bypass tray to right side exit, no invert
FPOT	7.0 seconds	A4 sheet, bypass tray to right side exit, no invert
Recovery from low power mode	Less than or equal to 10 seconds	From low power mode to ready to copy, print or fax
Recovery from sleep mode	Less than or equal to 28 seconds	From sleep mode to ready to print or copy
Power on time to ready to copy	Less than or equal to 3 minutes and 50 seconds	Ready to copy is indicated by the message "Ready to Scan" being displayed on the user interface
Power on time to ready to print	Less than or equal to 3 minutes and 50 seconds	Print is indicated by the message "Machine Online" being displayed on the user interface
Power on time to ready to fax	Less than or equal to 3 minutes and 42 seconds	Fax ready is indicated by the presence of the Fax icon being displayed on the user interface
Power off time, multi functional machine	Less than or equal to 36 seconds	-
Quick restart to ready to copy time	Less than or equal to 4 minutes and 31 seconds	From re-start option confirmed, to ready to copy
Quick restart to ready to print time	Less than or equal to 4 minutes and 31 seconds	From re-start option confirmed, to ready to print
Quick restart to ready to fax time	Less than or equal to 4 minutes and 23 seconds	From re-start option confirmed, to ready to fax
Recovery from sleep mode time	Less than or equal to 28 seconds	-

## 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](http://www.Xerox.com). However, Xerox has mandated that all WorkCentre 5945/5955 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 WorkCentre 5945/5955 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 WorkCentre 5945/5955 Spare Parts List. Do not use spare parts from other similar machines, even if the parts look identical. All WorkCentre 5945/5955 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-serialised 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 <a href="#">Manual Recovery</a> 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 <a href="#">Manual Recovery</a> .
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 Practises

- 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 Customer Administration Tools, [GP 24](#).
2. Press the **Machine Status** button.
3. Select **Tools**.
4. Select **Network Settings**.
5. Select **USB Settings**.
6. Select **Software Tools**.
7. Select **Save**.
8. 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. Press the **Machine Status** button.
2. Select **Machine Information**.
3. Select **Information Pages**.
4. Select **Quick Use Guide**, then select **Print**.





## GP 30 Tray 4 Control PWB Test Points

### Purpose

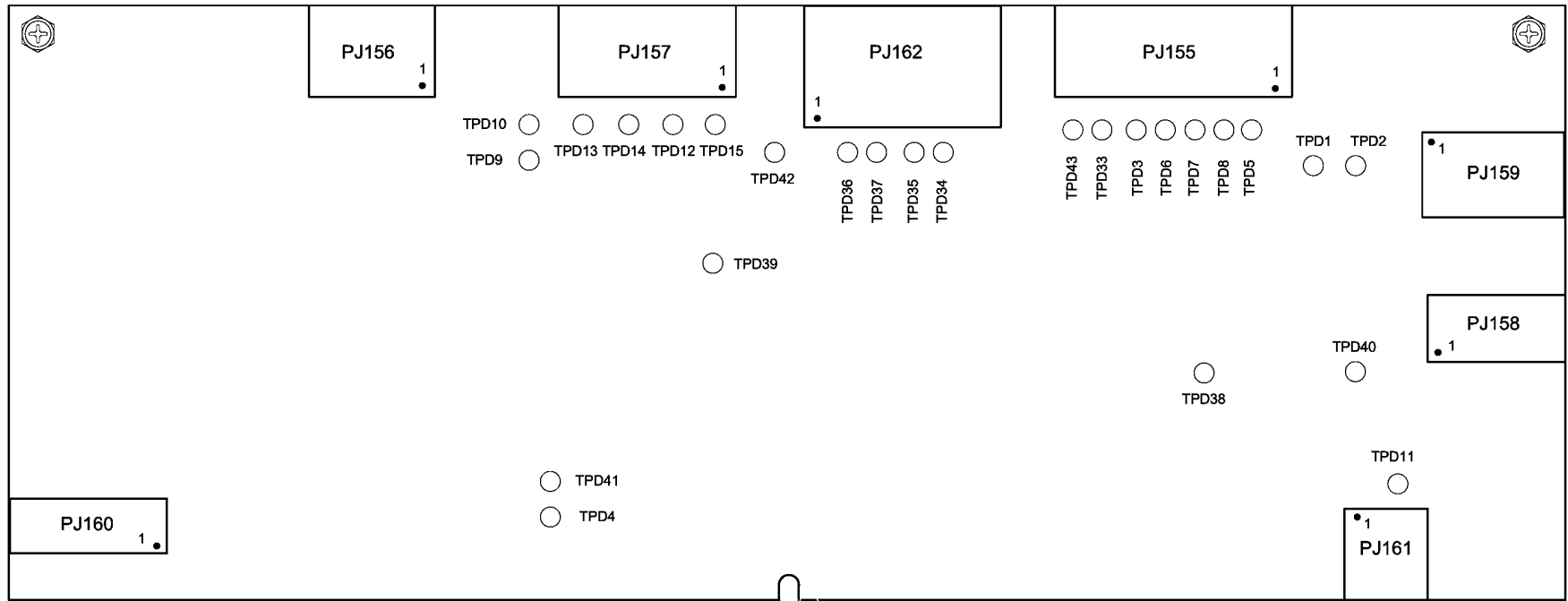
To describe the functions of the test points located on the tray 4 PWB.

### Description

Refer to [Table 1](#) for a description of the test points available on the tray 4 control PWB. Refer to [Figure 1](#) to locate the test points on the tray 4 control PWB.

**Table 1 Tray 4 PWB Test Points**

Test Point	PJ	Pin	Component	Measure
TPD1	N/A	N/A	Do not use	N/A
TPD2	159	1	Tray 4 over elevate switch Tray 4 elevate motor, MOT74-010, return	Limit reached (H) +24V Motor on (L) +24V
TPD3	155	11	Tray 4 elevate motor, MOT74-010, enable	Elevate enabled (H) +5V
TPD4	159 160	3 1	Tray 4 over elevate switch supply Tray 4 elevate motor, MOT74-010, supply	+24V
TPD5	155	7	Tray 4 feed motor, MOT81-040, hold	N/A
TPD6	155	10	Tray 4 feed motor, MOT81-040, enable	Feed enabled (L) +5V
TPD7	155	9	Tray 4 feed motor, MOT81-040, clock	N/A
TPD8	155	8	Tray 4 feed clutch, CL81-043, enable	Clutch energised (H) +5V
TPD9	156	4	Tray 4 level encoder sensor, Q74-340, supply	+5V
TPD10	156	6	Tray 4 level encoder sensor, Q74-340	Pulses (L) +3.3V
TPD11	161	2	Tray 4 exit sensor, Q81-150	Paper present (L) +3.3V
TPD12	157	5	Tray 4 feed sensor, Q81-104	Paper sensed (L) +3.3V
TPD13	157	11	Tray 4 home sensor, Q74-300	Tray home (L) +3.3V
TPD14	157	8	Tray 4 empty sensor, Q74-320	Tray empty (H) +3.3V
TPD15	157	2	Tray 4 stack height sensor, Q74-330	Stack up (H) +3.3V
TPD33	155	12 13	+5V supply to tray 4 control PWB	+5V
TPD34	162	6	Tray 4 feed motor, MOT81-040, A+	Pulses (L)
TPD35	162	5	Tray 4 feed motor, MOT81-040, A-	Pulses (L)
TPD36	162	4	Tray 4 feed motor, MOT81-040, B+	Pulses (L)
TPD37	162	3	Tray 4 feed motor, MOT81-040, B-	Pulses (L)
TPD38	158	1	Power ground	Ground
TPD39	N/A	N/A	Do not use	N/A
TPD40	158	2	24V from LVPS	+24V
TPD41	160 162	2 1	Tray 4 feed clutch, CL81-043, 24V supply Tray 4 elevate motor, MOT74-010, 24V supply	+24V
TPD42	162	1	Tray 4 feed clutch, CL81-043, enable	Energised (L) +24V
TPD43	N/A	N/A	Tray 4 control PWB ground	Ground



TW-1-0325-A

Figure 1 Tray 4 control PWB test points

## 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. Press the **Machine Status** button.
3. Select the **Tools** tab.
4. Select **Device Settings**.
5. Select the **General** folder.
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. Press the **Machine Status** button.
3. Select the **Tools** tab.
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

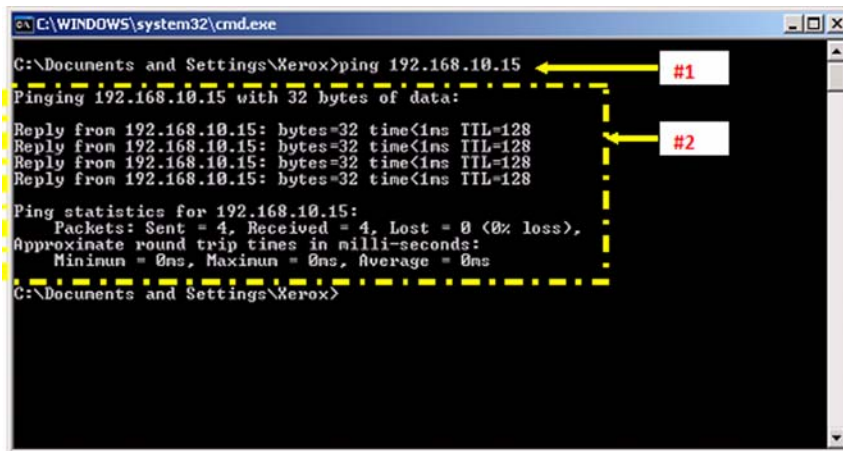
### Purpose

To configure the PWS to ping a device on a network.

### Procedure

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. Open a command window. For Windows 7, go to [Step 4](#). For Windows XP, go to [Step 5](#).
4. **Opening a command window in Windows 7 Only.** 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.
5. **Opening a command window in Windows XP Only.** perform the steps that follow:
  - a. Click on Start, then Run.
  - b. In the Run dialog box, type cmd.
  - c. Select return. A command window will open.
6. In the command window, type 'ping' and the address of the device. Refer to number 1 in [Figure 1](#).
7. If the ping command is successful, a reply from the device will be received. Refer to number 2 in [Figure 1](#).

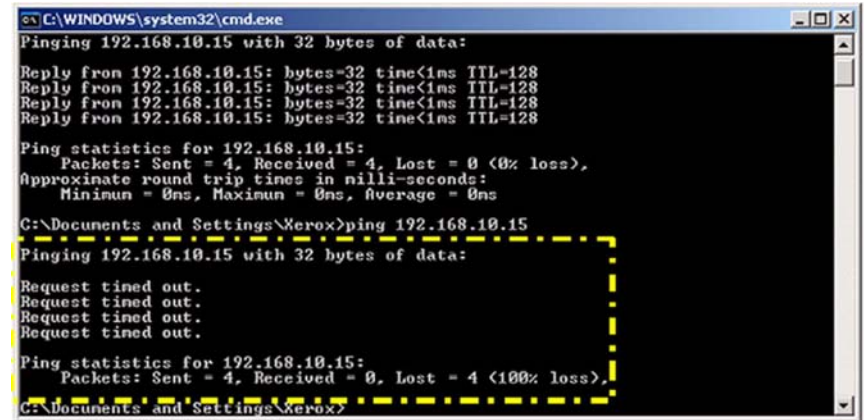


```
C:\WINDOWS\system32\cmd.exe
C:\Documents and Settings\Xerox>ping 192.168.10.15
Pinging 192.168.10.15 with 32 bytes of data:
Reply from 192.168.10.15: bytes=32 time<1ms TTL=128
Reply from 192.168.10.15: bytes=32 time<1ms TTL=128
Reply from 192.168.10.15: bytes=32 time<1ms TTL=128
Reply from 192.168.10.15: 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>
```

W-1-0874-A

Figure 1 Successful ping command

8. 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>
```

W-1-0875-A

Figure 2 Unsuccessful ping command

## GP 34 How to Set the IP Address of the PWS

### Purpose

To set the IP address of the PWS.

### Procedure

Go to the relevant procedure:

- [Windows 7.](#)
- [Windows XP.](#)

### 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.

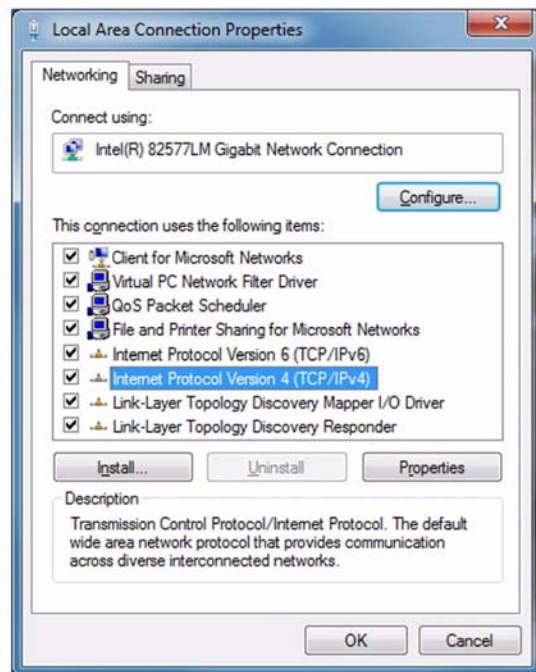
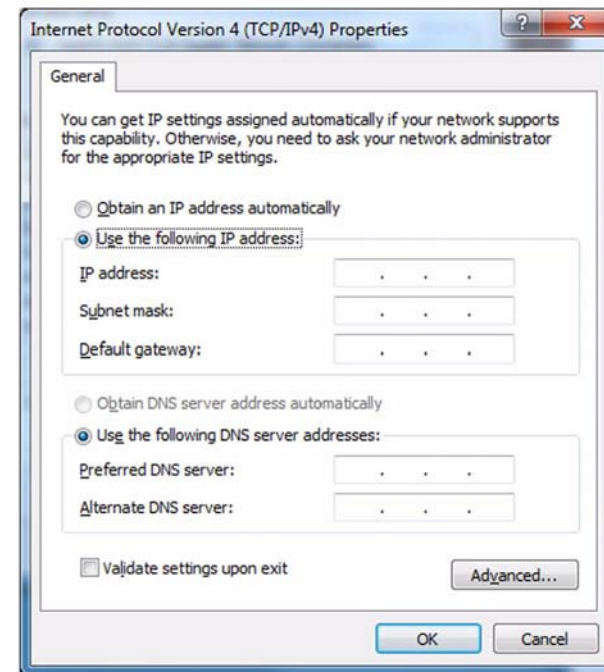


Figure 1 Properties window

W-1-0876-A

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](#).



W-1-0877-A

Figure 2 Properties window

7. Click on OK to close the properties dialog box, then OK to close the second properties dialog box.
8. Close the Local Area Connection Status dialog box.

## Windows XP

Perform the steps that follow:

1. Open Start / Control Panel / Network Settings.
2. Right-click on Local Area Connection icon. Select Properties. The Local Area Connection Properties window will open.
3. Highlight Internet Protocol (TCP/IP). Select Properties, refer to [Figure 3](#). The Internet Protocol (TCP/IP) Properties window will open.

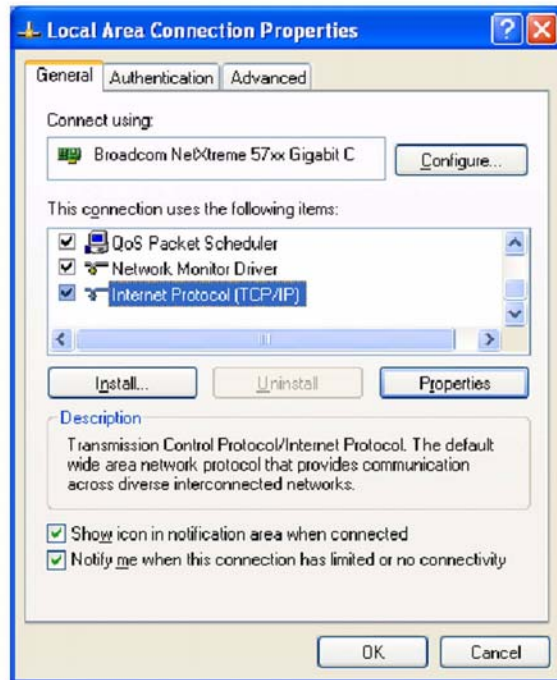


Figure 3 Properties window

W-1-0878-A

4. Select Use the following IP address. Enter the IP address and subnet mask, [Figure 4](#).

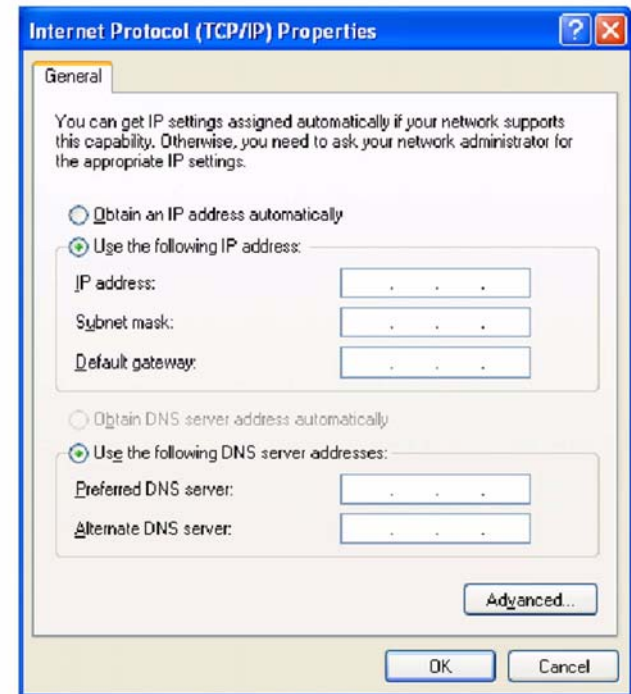


Figure 4 Properties window

W-1-0879-A

5. Select OK to close the Internet Protocol (TCP/IP) Properties window.
6. Select OK to close the Local Area Connection Properties window.

## 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](#).
- [Windows XP](#).

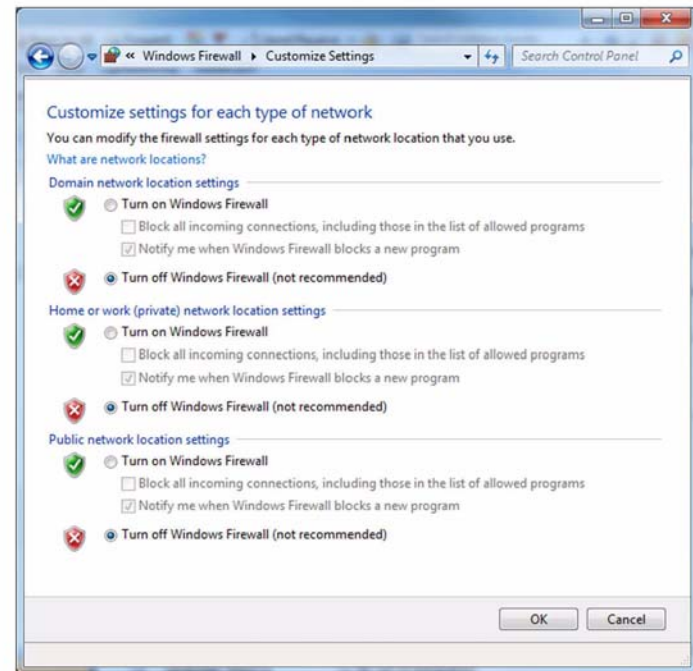
### Purpose

To disable the firewall of the PWS.

### Windows 7

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](#).



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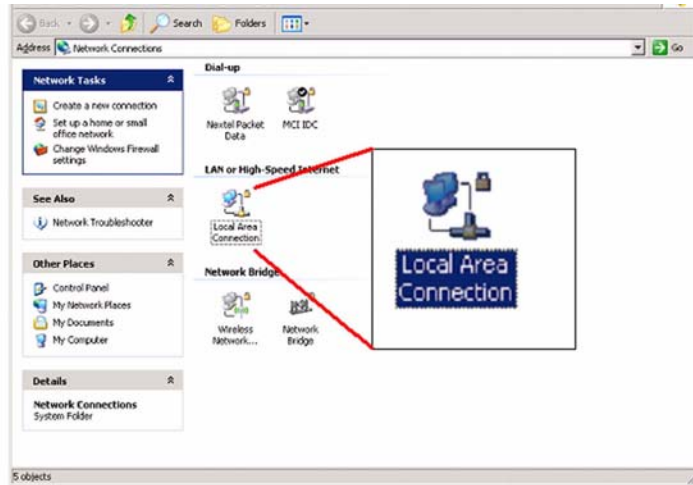
Figure 1 Settings buttons

4. Select OK.

## Windows XP

Perform the steps that follow:

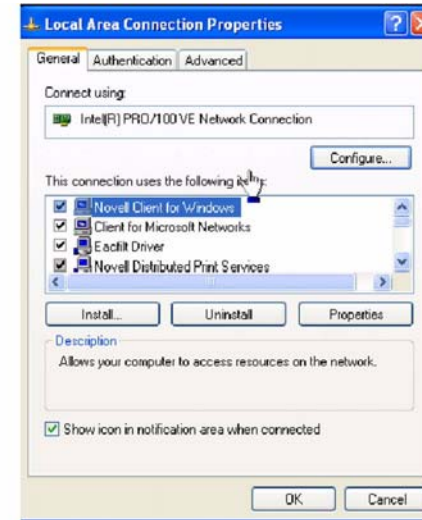
1. On the PWS, right-click on the My Network Places desktop icon or select Start / My Network Places. Select Properties from the menu. The Network and Dial-up Connections window will open.
2. Check if the firewall is enabled or disabled. If the Local Area Connection icon has a padlock symbol, the firewall is enabled, [Figure 2](#). If the firewall is enabled, continue with this procedure.



W-1-0881-A

Figure 2 Padlock symbol

3. Right-click on Local Area Connection icon, then select Properties. The Local Area Connection Properties window will open, [Figure 3](#).



W-1-0882-A

Figure 3 Properties window

4. Select the Advanced tab, then the Settings button, [Figure 4](#). If available, uncheck Protect my computer and network by limiting or preventing access to the computer from the Internet. Select OK. The Windows Firewall window will open.



W-1-0883-A

Figure 4 Settings button



5. Select the Off (not recommended) radio button to disable the windows firewall, [Figure 5](#).

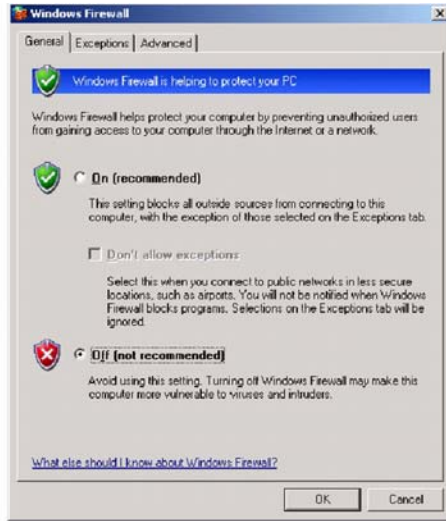


Figure 5 Settings button

6. Close all open windows.  
7. Disable any other Firewall software or utilities that may be running.

## GP 37 Left Door Assembly Service position

### Purpose

To position the left door assembly into the service safety position.

### Procedure



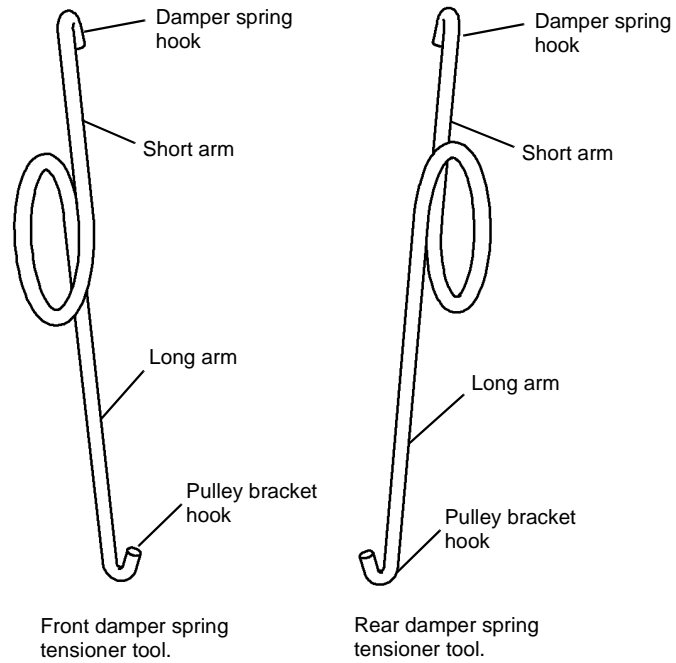
#### CAUTION

*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.

W-1-0884-A

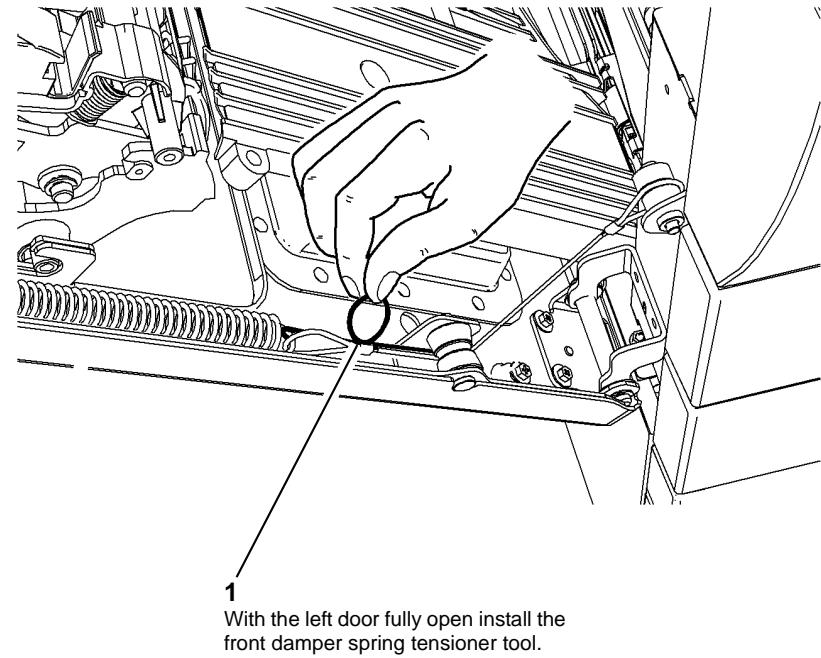
6. Identify the front and rear spring tensioner tools, [Figure 1](#).



**Figure 1 Tool identification**

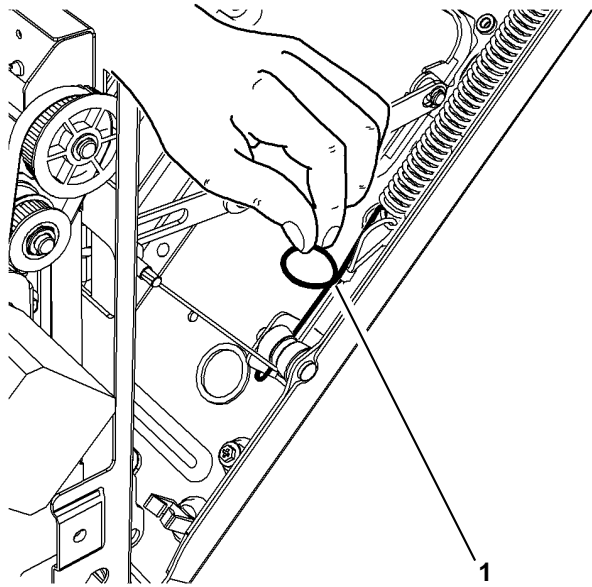
W-1-1371-A

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](#).



**Figure 2 Front damper spring tensioner tool**

W-1-1335-A

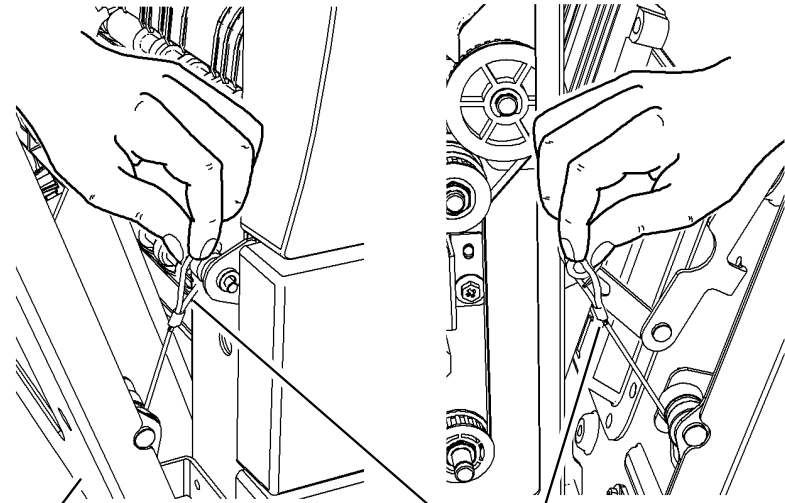


1  
With the left door fully open install the rear damper spring tensioner tool.

W-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.

W-1-1341-A

Figure 4 Release the damper cables

9. 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.

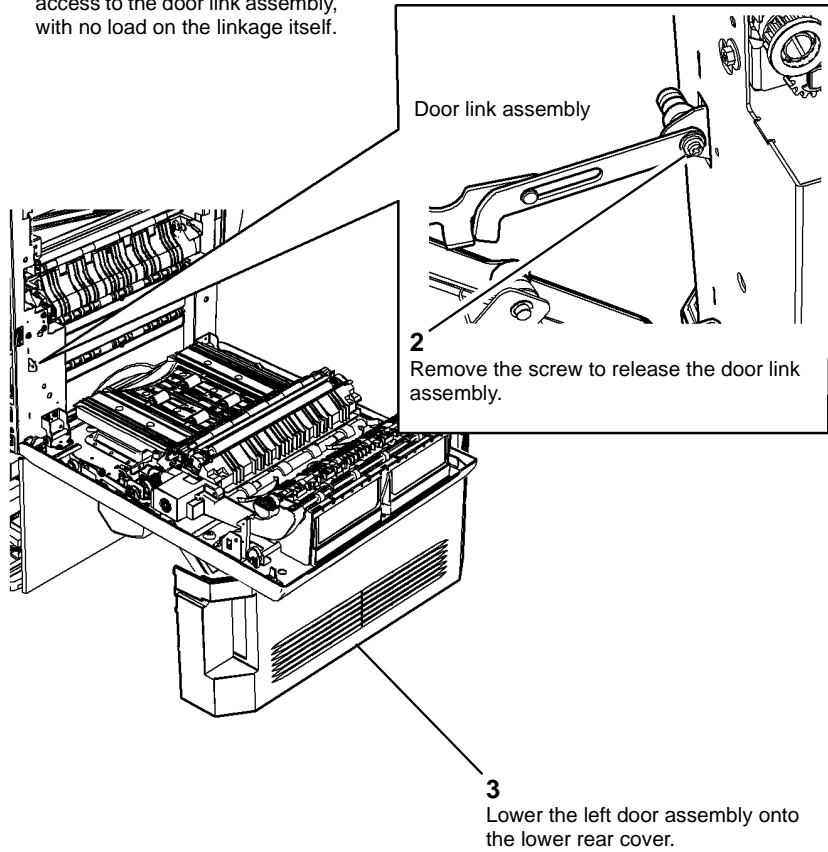


Figure 5 Left door service position

W-1-1343-A

## Replacement

1. The replacement is the reverse of the removal procedure.
2. Ensure the front and rear damper cables are located in the grooves of their pulleys, [Figure 6](#).

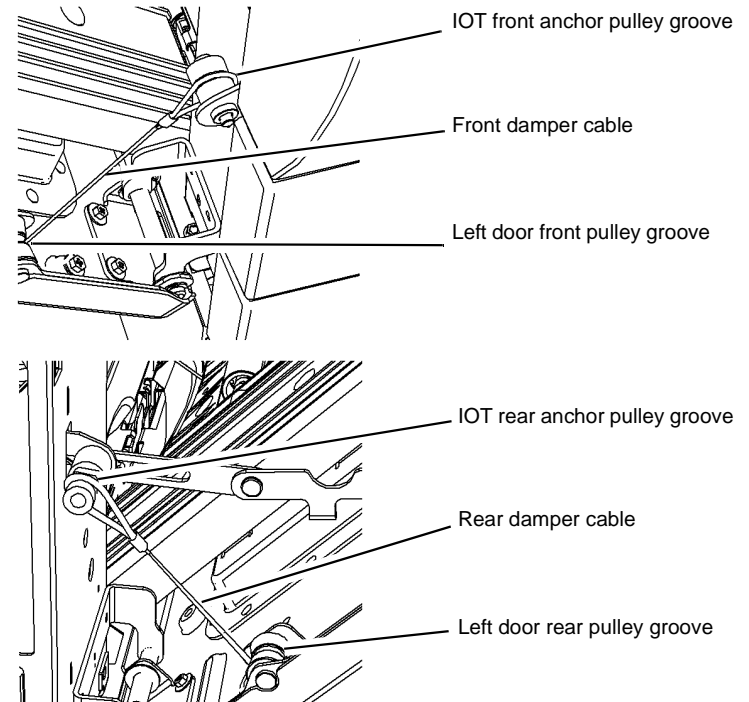


Figure 6 Pulley grooves

W-1-1344-A

# GP 38 How to Check an Adaptive Sensor

## Purpose

Use this procedure to check the operation of adaptive reflective sensors.

To check the operation of all other sensors, refer to [GP 11](#) How to Check a Sensor.

**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. Check that the mirror surface is clean. Also ensure that there is not an obstruction between the sensor and the mirror.
4. Check that the paper path is clear.

## Sensor Action

Refer to [Figure 1](#). When light from the LED is reflected back to the photo-sensitive transistor, the sensing line, PJA, pin 2, is high. When light from the LED is blocked by a sheet of paper, no light is reflected back to the photo-sensitive transistor, and the sensing line is low.

During initialisation the sensor drive voltage, PJC, pin 3, is adjusted to provide a sensing line output in the range of +1.3V to +1.6V when no paper is detected.

## 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

- Go to [Flag 1](#). Check for:
  - +3.3V at PJC, pin 1.
  - +2.15V at PJC, pin 3.
  - +1.3V to +1.6V at PJC, pin 2 when no paper is present.
- Disconnect PJA and PJC. Check the harness for continuity between PJA and PJC.

References:

- [301D](#) +3.3V Distribution RAP.
- [REP 1.2](#) Wiring Harness Repairs.

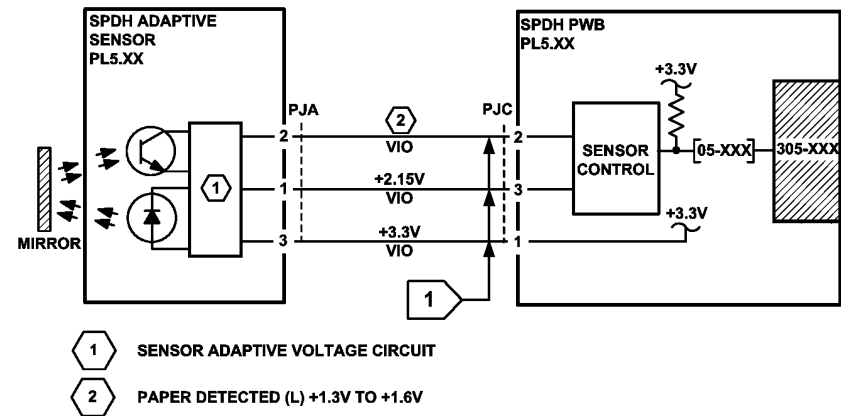


Figure 1 Circuit diagram

TW-1-0291-A

## GP 39 Consumables Compatibility Information

### Purpose

To identify the different types of consumables and their compatibility.

### Consumable Types

Refer to [Table 1](#) for the different consumable types.

**Table 1 Consumable types**

Consumable	Configuration	Service Plan	Region
Print cartridge	1	Sold	Worldwide
Print cartridge	2	Metered	Worldwide
Toner cartridge	1	Sold	USSG and XE

**Table 1 Consumable types**

Consumable	Configuration	Service Plan	Region
Toner cartridge	2	Metered	Worldwide
Toner cartridge	3	Sold	DMO
Fuser (110V)	1	Sold	Worldwide
Fuser (220V)	2	Sold	Worldwide

**NOTE:** Currently, the configuration of all new print cartridges is sold.

### Consumable Compatibility

Refer to [Table 2](#) for the combination of consumables and machine settings that are compatible. Installing a combination of consumables not shown in [Table 2](#) will result in a fault.

**Table 2 Compatibility**

Machine Settings		Print Cartridge		Toner Cartridge		Fuser	
Market Region	Service Plan	Configuration	Parameters	Configuration	Parameters	Configuration	Parameters
USSG	Sold	1	Sold, Worldwide	1	Sold, USSG and XE	1	110V, Sold, Worldwide
XE	Sold	1	Sold, Worldwide	1	Sold, USSG and XE	2	230V, Sold, Worldwide
DMO	Sold	1	Sold, Worldwide	3	Sold, DMO	2	230V, Sold, Worldwide
USSG	Metered	1	Sold, Worldwide	1	Sold, USSG and XE	1	110V, Sold, Worldwide
XE	Metered	1	Sold, Worldwide	1	Sold, USSG and XE	2	230V, Sold, Worldwide

## 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	Behaviour 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
CentreWare	CentreWare internet services is the embedded HTTP server application that is available on network enabled machines. It enables access to printing, faxing and scanning over the internet.
CIPS	Common Image Path Software
CIS	Contact Image Sensor
CL	Copy Lighter. A copy density setting
CQ	Copy Quality

**Table 1 Abbreviations**

Term	Description
CRC	Cyclic Redundancy Check
CRU	Customer Replaceable Unit
CRUM	Customer Replaceable Unit Monitor
CSE	Customer Service Engineer
CVT	Constant Velocity Transport
CWIS	CentreWare Internet Services (also known as Web UI)
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.

**Table 1 Abbreviations**

Term	Description
EOM	End Of Message
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
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 analysed 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	millimetre
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**

<b>Term</b>	<b>Description</b>
USSG	United States Solutions Group
V.17 / V.29 / V.34	Modem standards
VOIP	Voice Over Internet Protocol
WC	WorkCentre
WEB UI	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. Locate the Feature Installation Key Generator Tool in GSN library 13086.
2. Open the tool. From the Options menu, select the third option.
3. Enter the machine details as required. The Feature Installation Key will be generated.
4. On the machine user interface, select Tools / Device Settings / General / Feature Installation.
5. Enter the Feature Installation Key.
6. Switch off the machine, [GP 14](#).
7. Remove the relevant component:
  - Horizontal transport assembly, [REP 10.6](#).
  - Centre output tray, [REP 28.1](#).
8. Un-clip the toner cartridge PWB cover, [PL 90.17 Item 11](#).
9. Disconnect the harness from the toner cartridge PWB, [PL 90.17 Item 12](#). Remove the toner cartridge PWB.
10. Disconnect PJ782 from the [IOT PWB](#).

**NOTE:** The toner cartridge PWB harness should remain in the machine for possible future use.

11. Re-install the toner cartridge PWB cover.
12. Re-install either the horizontal transport assembly or the centre output tray.
13. Locate the processor module Mod/Tag plate. Strike off [TAG 013](#).
14. Switch on the machine, [GP 14](#).

## 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:

- NVM Tables for the Finisher, IIT, CCS and IOT, refer to [NVM Read/Write Tables](#).

**NOTE:** The Edoc CD must be in the CD drive to use the link below.

- For the fax NVM tables, [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.

## NVM Read/Write Tables

1. Refer to the tables that follow for NVM parameters:
  - IOT NVM ID 500-001 to 500-903, [Table 1](#).
  - IOT NVM ID 501-160 to 501-365, [Table 2](#).
  - IOT NVM ID 502-292 to 502-399, [Table 3](#).
  - IOT NVM ID 503-001 to 503-124, [Table 4](#).
  - IOT NVM ID 504-001 to 504-125, [Table 5](#).
  - IOT NVM ID 505-001 to 505-031, [Table 6](#).
  - IOT NVM ID 506-001 to 506-023, [Table 7](#).
  - IOT NVM ID 507-001 to 507-004, [Table 8](#).
  - IOT NVM ID 510-001 to 512-002, [Table 9](#).
  - IOT NVM ID 520-320 to 520-339, [Table 10](#).
  - CCS NVM ID 600-001 to 600-151, [Table 11](#).
  - CCS NVM ID 602-001 to 603-039, [Table 12](#).
  - CCS NVM ID 604-001 to 604-220, [Table 13](#).
  - CCS NVM ID 604-241 to 604-999, [Table 14](#).
  - CCS NVM ID 605-001 to 605-036, [Table 15](#).
  - CCS NVM ID 606-001 to 606-269, [Table 16](#).
  - CCS NVM ID 606-272 to 606-886, [Table 17](#).
  - CCS NVM ID 608-411 to 608-996, [Table 18](#).
  - CCS NVM ID 609-001 to 609-457, [Table 19](#).
  - CCS NVM ID 610-001 to 611-001, [Table 20](#).
  - CCS NVM ID 612-001 to 612-005, [Table 21](#).
  - CCS NVM ID 616-001 to 616-340, [Table 22](#).
  - CCS NVM ID 617-002 to 617-003, [Table 23](#).
  - CCS NVM ID 620-001 to 620-033, [Table 24](#).
  - CCS NVM ID 620-101 to 620-199, [Table 25](#).
  - CCS NVM ID 620-200 to 620-299, [Table 26](#).
  - CCS NVM ID 620-300 to 620-399, [Table 27](#).
  - CCS NVM ID 620-400 to 620-499, [Table 28](#).
  - CCS NVM ID 620-500 to 620-587, [Table 29](#).
  - CCS NVM ID 621-001 to 641-002, [Table 30](#).

- CCS NVM ID 648-001 to 648-022, [Table 31](#).
- CCS NVM ID 649-001 to 649-014, [Table 32](#).
- CCS NVM ID 652-001 to 652-079, [Table 33](#).
- CCS NVM ID 656-001 to 656-005, [Table 34](#).
- CCS NVM ID 658-001 to 658-159, [Table 35](#).
- CCS NVM ID 665-001 to 665-003, [Table 36](#).
- CCS NVM ID 671-001 to 671-018, [Table 37](#).
- CCS NVM ID 672-001 to 672-017, [Table 38](#).
- CCS NVM ID 673-001 to 673-023, [Table 39](#).
- CCS NVM ID 674-001 to 674-004, [Table 40](#).
- Finisher NVM ID 712-100 to 712-103, [Table 41](#).
- IIT NVM ID 801-001 to 801-214, [Table 42](#).
- IIT NVM ID 803-001 to 803-149, [Table 43](#).
- IIT NVM ID 805-001 to 805-032, [Table 44](#).

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-001	PitchTickSimpleMode1_P1	Simplex Pitch Mode 1, paper sizes <216mm	Range = 400 to 5000ms	45ppm = 1220 55ppm = 1090
500-002	PitchTickSimpleMode2_P1	Simplex Pitch Mode 2, paper sizes >216mm <365mm	Range = 400 to 5000ms	45ppm = 1670 55ppm = 1670
500-003	PitchTickSimpleMode3_P1	Simplex Pitch Mode 3, paper sizes >365mm	Range = 400 to 5000ms	45ppm = 1930 55ppm = 1930
500-004	PitchTickDuplexMode1_P1	Duplex Pitch Mode 1, paper sizes <216mm	Range = 400 to 5000ms	45ppm = 1090 55ppm = 1090
500-005	PitchTickDuplexMode2_P1	Duplex Pitch Mode 2, paper sizes >216mm <365mm	Range = 400 to 5000ms	45ppm = 1670 55ppm = 1670
500-006	PitchTickDuplexMode3_P1	Duplex Pitch Mode 3, paper sizes >365mm	Range = 400 to 10000ms	45ppm = 1930 55ppm = 1930
500-007	PitchMaxPaperSizemS1	Max paper Size Pitch Mode1 Simplex	Range = 100 to 700mm	45ppm = 216 55ppm = 216
500-008	PitchMaxPaperSizemS2	Max Paper Size Pitch Mode2 Simplex	Range = 100 to 700mm	45ppm = 366 55ppm = 366
500-009	PitchMaxPaperSizemS3	Max paper Size Pitch Mode3 Simplex	Range = 100 to 700mm	45ppm = 433 55ppm = 433

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-010	PitchMaxPaperSizemD1	Max paper Size Pitch Mode1 Duplex	Range = 100 to 700mm	45ppm = 216 55ppm = 216
500-011	PitchMaxPaperSizemD2	Max Paper Size Pitch Mode2 Duplex	Range = 100 to 700mm	45ppm = 366 55ppm = 366
500-012	PitchMaxPaperSizemD3	Max paper Size Pitch Mode3 Duplex	Range = 100 to 700mm	45ppm = 433 55ppm = 433
500-013	TAR1ToRegDistance	Distance from TAR1 to Reg For speed calculation	Range = 0 to 300mm	45ppm = 104 55ppm = 104
500-014	DeliverTimeSSLToReg_P1	Time to deliver SSL to registration for scheduling	Range = 0 to 1000ms	45ppm = 255 55ppm = 255
500-015	DeliverRegToTransferTime_P1	Time to deliver reg to transfer, image to sheet alignment	Range = 0 to 1000ms	45ppm = 163 55ppm = 163
500-016	TimePageSyncToTransfer_P1	Time page sync to transfer, image to sheet alignment	Range = 0 to 1000ms	45ppm = 229 55ppm = 229
500-017	TEatRegToRegMotorOFFSteps	Steps form TE at Reg Sensor to Registration Motor off	Range = 0 to 3000	45ppm = 450 55ppm = 450
500-018	FirstpageSyncDelayTime_P1	Delay for first page sync to ensure sheet is not late	Range = 0 to 5000ms	45ppm = 600 55ppm = 600
500-019	TAR1CatchUpIDGDistance	Used in algorithm for TAR motor speed IDG control	Range = 0 to 300mm	45ppm = 25 55ppm = 25
500-020	SimplexBuckleStepsS1	Deskew Buckle steps at Registration Simplex Mode1	Range = 0 to 500	45ppm = 90 55ppm = 90
500-021	SimplexBuckleStepsS2	Deskew Buckle steps at Registration Simplex Mode2	Range = 0 to 500	45ppm = 90 55ppm = 90
500-022	SimplexBuckleStepsS3	Deskew Buckle steps at Registration Simplex Mode3	Range = 0 to 500	45ppm = 90 55ppm = 90
500-023	SimplexStageLocationSteps	Number of steps from TAR1 Sensor to SSL, sheet held here if early.	Range = 0 to 1000	45ppm = 234 55ppm = 234
500-024	DuplexBuckleStepsD1	Deskew Buckle steps at Registration Duplex Steps of the duplex motor Mode1	Range = 0 to 1000	45ppm = 143 55ppm = 143
500-025	DuplexBuckleStepsD2	Deskew Buckle steps at Registration Duplex Steps of the duplex motor Mode2	Range = 0 to 1000	45ppm = 143 55ppm = 143
500-026	DuplexBuckleStepsD3	Deskew Buckle steps at Registration Duplex Steps of the duplex motor Mode3	Range = 0 to 1000	45ppm = 143 55ppm = 143
500-027	DuplexStageDelayConstantD1_P1	Delay to release from DSL. Duplex Mode1	Range = 0 to 1000ms	45ppm = 260 55ppm = 260
500-028	DuplexStageDelayConstantD2_P1	Delay to release from DSL. Duplex Mode2	Range = 0 to 1000ms	45ppm = 260 55ppm = 260



**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-029	DuplexStageDelayConstantD3_P1	Delay to release from DSL. Duplex Mode3	Range = 0 to 1000ms	45ppm = 260 55ppm = 260
500-030	InvMotFwdToInvertMotorOffSteps	Invert Motor Steps from TE PFS to stop past invert Duplex gate.	Range = 400 to 3000	45ppm = 512 55ppm = 512
500-031	SheetLateRescheduleTime_P1	If the sheet is too late at the reg sensor then the image can be rescheduled.	Range = 0 to 1000ms	45ppm = 50 55ppm = 50
500-032	DuplexStageLocationSteps	Number of steps from Duplex Sensor to DSL, sheet held here if early.	Range = 0 to 3000	45ppm = 392 55ppm = 392
500-033	InvertSolONDelayTime	Time from LE at the Post Fuser Sensor to engage the Invert Solenoid for a duplex sheet.	Range = 0 to 300ms	45ppm = 30 55ppm = 30
500-034	InvertSolOFFDelayTime	Time from the TE at the Post Fuser Sensor to disengage the Invert Solenoid for a Duplex Sheet	Range = 0 to 300ms	45ppm = 95 55ppm = 95
500-035	InvertDelayToDuplexTimeD1	Minimum delay before the inverter motor changes direction. Duplex Mode 1	Range = 0 to 1000ms	45ppm = 15 55ppm = 15
500-036	RegProcessSpeed_P1	Registration Roll Process speed	Range = 1000 to 5500mm/s	45ppm = 2590 55ppm = 2590
500-037	RegRollDiameter	Reg Roll Diameter (scaled)	Range = 1000 to 3000mm	45ppm = 1300 55ppm = 1300
500-038	RegRollRatio	Reg Drive Ratio (scaled)	Range = 0 to 20000	45ppm = 5000 55ppm = 5000
500-039	RegRollBaseSpeed	Reg Roll Base Speed	Range = 0 to 3000mm/s	45ppm = 500 55ppm = 500
500-040	RegRollFinalSpeed	Reg Roll final speed used for ramp table creation.	Range = 0 to 50000mm/s	45ppm = 2700 55ppm = 2700
500-041	RegRollAccRate	Reg Roll acceleration rate	Range = 10000 to 50000mm/s	45ppm = 15696 55ppm = 15696

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-042	TAR1ProcessSpeed_P1	TAR1/2 Roll Process Speed (scaled)	Range = 100 to 5000mm/s	45ppm = 2590 55ppm = 2590
500-043	TAR1RollDiameter	TAR 1/2 Roll Diameter (scaled)	Range = 1000 to 3000mm	45ppm = 1510 55ppm = 1510
500-044	TAR1Ratio	TAR 1/2 Drive Ratio (scaled)	Range = 0 to 20000	45ppm = 10000 55ppm = 10000
500-045	TAR1RollBaseSpeed	TAR 1/2 Base Speed (Scaled)	Range = 0 to 3000mm/s	45ppm = 950 55ppm = 950
500-046	TARRampTableFinalSpeed	TAR1/2 final speed used for ramp table calculation (Scaled)	Range = 0 to 8000mm/s	45ppm = 3800 55ppm = 3800
500-047	TAR1RollAccRate	TAR 1/2 Acceleration rate.	Range = 10000 to 50000mm/s	45ppm = 15696 55ppm = 15696
500-048	DuplexProcessSpeed_P1	Duplex Roll Process Speed (scaled)	Range = 100 to 5000mm/s	45ppm = 2600 55ppm = 2600
500-049	DuplexRollDiameter	Duplex Roll Diameter (Scaled)	Range = 1000 to 3000mm	45ppm = 1600 55ppm = 1600
500-050	DuplexRatio	Duplex Drive Ratio (Scaled)	Range = 0 to 20000	45ppm = 6667 55ppm = 6667
500-051	DuplexRollBaseSpeed	Duplex Base Speed (Scaled)	Range = 0 to 3000mm/s	45ppm = 730 55ppm = 730
500-052	DuplexDeliverMaxSpeed	Duplex final speed used for ramp table calculation (Scaled)	Range = 0 to 20000mm/s	45ppm = 5000 55ppm = 5000
500-053	DuplexRollAccRate	Duplex Acceleration Rate	Range = 10000 to 50000mm/s	45ppm = 15696 55ppm = 15696

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-054	DuplexHighSpeedD1_P1	Duplex High Speed Duplex Mode 1(Scaled)	Range = 1000 to 10000mm/s	45ppm = 4000 55ppm = 4000
500-055	DuplexHighSpeedD2_P1	Duplex High Speed Duplex Mode 2(Scaled)	Range = 1000 to 10000mm/s	45ppm = 2570 55ppm = 2570
500-056	DuplexHighSpeedD3_P1	Duplex High Speed Duplex Mode 3(Scaled)	Range = 1000 to 10000mm/s	45ppm = 2570 55ppm = 2570
500-057	InvertProcessSpeed_P1	Invert Roll Process Speed (Scaled)	Range = 1000 to 5000mm/s	45ppm = 2554 55ppm = 2554
500-058	InvertRollDiameter	Invert Roll Diameter (Scaled)	Range = 1000 to 3000mm	45ppm = 1600 55ppm = 1600
500-059	InvertRatio	Invert Drive Ratio (Scaled)	Range = 0 to 20000	45ppm = 7143 55ppm = 7143
500-060	InvertRollBaseSpeed	Invert Base Speed	Range = 0 to 3000	45ppm = 1100 55ppm = 1110
500-061	InvertDeliverMaxSpeed	Invert final speed used for ramp table calculation (Scaled)	Range = 0 to 20000mm/s	45ppm = 5000 55ppm = 5000
500-062	InvertRollAccRate	Invert Acceleration Rate	Range = 10000 to 50000mm/s	45ppm = 15696 55ppm = 15696
500-063	InvertHighSpeed1_P1	Invert High Speed Duplex Mode 1 (Scaled)	Range = 1000 to 10000mm/s	45ppm = 4000 55ppm = 4000
500-064	InvertHighSpeed2_P1	Invert High Speed Duplex Mode 2 (Scaled)	Range = 1000 to 10000mm/s	45ppm = 2570 55ppm = 2570
500-065	InvertHighSpeed3_P1	Invert High Speed Duplex Mode 3 (Scaled)	Range = 1000 to 10000mm/s	45ppm = 2570 55ppm = 2570

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-066	ArmRegistrationSensorLE_P1	Arm Reg Sensor for LE Delay from SSL release to arm reg sensor for LE event	Range = 0 to 500ms	45ppm = 50 55ppm = 50
500-067	ArmRegistrationSensorTE_P1	Arm Reg Sensor for TE, Delay from TE at TAR1 Sensor. Steps of the Reg Motor	Range = 0 to 5000	45ppm = 350 55ppm = 350
500-068	ArmPostFuserSensorLE_P1	Arm PFS for LE Delay from Sheet release from Reg Rolls to arm the PFS for the LE event	Range = 0 to 3000ms	45ppm = 662 55ppm = 662
500-069	ArmPostFuserSensorTE_P1	Delay from LE event at PFS to arm the PFS for the TE Event. Timer = paper-Sizems - NVM	Range = 0 to 500ms	45ppm = 20 55ppm = 20
500-070	ArmDuplexSensorLE_P1	Arm duplex sensor for LE Delay from Sheet reverse event to arm duplex sensor for the LE event. Steps of the Duplex Motor	Range = 0 to 5000	45ppm = 1655 55ppm = 1655
500-071	ArmDuplexSensorLE_D2_P1	Arm duplex sensor for LE Delay from Sheet reverse event to arm duplex sensor for the LE event. Mode2 Duplex	Range = 0 to 3000ms	45ppm = 1140 55ppm = 1140
500-072	ArmDuplexSensorLE_D3_P1	Arm duplex sensor for LE Delay from Sheet reverse event to arm duplex sensor for the LE event. Mode3 Duplex	Range = 0 to 3000ms	45ppm = 1140 55ppm = 1140
500-073	ArmDuplexSensorTE_P1	Arm Duplex Sensor for TE Delay from duplex sheet release from Reg to arm the duplex sensor for the TE event. Number of steps.	Range = 0 to 3000	45ppm = 666 55ppm = 666
500-074	ArmTAR1SensorLEFromT1Time	Arm Tar 1 Sensor for LE Delay when Feeding from Tray 1. Time from Feed start.	Range = 0 to 500ms	45ppm = 20 55ppm = 20
500-075	ArmTAR1SensorLEFromT2Steps	Arm TAR 1 Sensor for LE when the sheet is travelling from Tray2. Steps of the TAR motor timed from TAR2	Range = 0 to 3000ms	45ppm = 280 55ppm = 280
500-076	ArmTAR1SensorTEFromRegSteps	Arm TAR 1 Sensor for TE timed from Release from reg rolls. Number of steps.	Range = 0 to 3000	45ppm = 463 55ppm = 463

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-077	ArmTAR2SensorLEFromT2Time	Arm Tar 2 Sensor for LE when Feeding from Tray 2. Time from Feed start.	Range = 0 to 500ms	45ppm = 20 55ppm = 20
500-078	ArmTAR2SensorLEFromHCFTime	Arm TAR 2 Sensor for LE when the sheet is travelling from the HCF. Arm delay from the HCF sheet released from the HCF wait point.	Range = 0 to 500ms	45ppm = 135 55ppm = 135
500-079	ArmTAR2SensorTEFromLET1Steps	Arm TAR 2 Sensor for TE steps of TAR motor from LE TAR 1 event. Paper size steps - NVM Steps	Range = 0 to 3000	45ppm = 407 55ppm = 407
500-080	RegMotor-StepsRev	Number of steps per rev of the Reg motor nominally 200. If doubled the half stepping is enabled	Range = 0 to 1000	45ppm = 400 55ppm = 400
500-081	TAR1MotorStepsRev	Number of steps per rev of the TAR motor nominally 200. If doubled the half stepping is enabled	Range = 0 to 1000	45ppm = 200 55ppm = 200
500-082	TAR1MSISpeed_P1	MSI speed Driven by the T1 and T2 TAR motor, the speed shown is the speed of the TAR roll see Eng Plan for actual MSI Speed (scaled)	Range = 100 to 5000mm/s	45ppm = 2600 55ppm = 2600
500-083	Feed1_2MotorStepsRev	Number of steps per rev of the feed motor nominally 48. If doubled the half stepping is enabled	Range = 0 to 1000	45ppm = 48 55ppm = 48
500-084	Feed1_2ProcessSpeed_P1	Feed 1/2 Roll Process Speed (Scaled)	Range = 1000 to 5500mm/s	45ppm = 3730 55ppm = 3730
500-085	Feed1_2RollDiameter	Feed 1/2 Roll Diameter (scaled)	Range = 0 to 20000mm	45ppm = 1500 55ppm = 1500
500-086	Feed1_2Ratio	Feed 1/2 Drive Ratio (scaled)	Range = 0 to 100000	45ppm = 5625 55ppm = 5625
500-087	Feed1_2RollBaseSpeed	Feed 1/2 Base Speed	Range = 0 to 5000mm/s	45ppm = 500 55ppm = 500

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-088	Feed1_2DeliverMaxSpeed	Feed1/2 final speed used for ramp table calculation	Range = 0 to 20000mm/s	45ppm = 6000 55ppm = 6000
500-089	Feed1_2RollAccRate	Feed 1/2 Acceleration rate.	Range = 10000 to 50000mm/s	45ppm = 15696 55ppm = 15696
500-090	ElevateSpeedT1T2	Elevate speed T1 and T2, the speed shown is the speed of the feed roll see Eng Plan for actual elevate rate	Range = 100 to 6000mm/s	45ppm = 1250 55ppm = 1250
500-091	ElevateMaxT1T2Steps	Number of steps during elevate of the feed motor before a fault is called.	Range = 10 to 3000	45ppm = 500 55ppm = 500
500-092	BumpUpT1T2Steps	Number of steps to move during Bump Up.	Range = 0 to 600	45ppm = 3 55ppm = 3
500-093	BumpUpT1T2Speed	BumpUp speed T1 and T2, the speed shown is the speed of the feed roll see Eng Plan for actual elevate rate	Range = 100 to 6000mm/s	45ppm = 1250 55ppm = 1250
500-094	BumpUpMaxT1T2Count	Number of consecutive bump ups before a fault is called.	Range = 0 to 300	45ppm = 6 55ppm = 6
500-095	Tray1FeedMotOffSteps	The number of Tray1 feed motor steps to move from the TAR1 sensor S4 to the feed motor stop	Range = 0 to 1000	45ppm = 80 55ppm = 80
500-096	Tray2FeedMotOffSteps	The number of Tray2 feed motor steps to move from the TAR2 sensor S5 to the feed motor stop	Range = 0 to 1000	45ppm = 80 55ppm = 80
500-097	DuplexMotor-StepsRev	Number of steps per rev of the Duplex motor nominally 200. If doubled the half stepping is enabled	Range = 0 to 1000	45ppm = 200 55ppm = 200
500-098	InvertMotor-StepsRev	Number of steps per rev of the Invert motor nominally 200. If doubled the half stepping is enabled	Range = 0 to 1000	45ppm = 200 55ppm = 200
500-099	TAR2HighSpeed	TAR 1/2 High speed for transport from TAR2 to TAR1 (Scaled)	Range = 1000 to 8000mm/s	45ppm = 2800 55ppm = 3000

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-100	TARMotorCycle-OutTime	TAR motor cycle out delay from TE at TAR1 if no other prefeeds have been sent to the trays	Range = 0 to 1000ms	45ppm = 400 55ppm = 400
500-101	LELateToTAR2FromT2Time	max time from start of tray 2 feed to LE at TAR 2 Sensor to indicated if a sheet is late	Range = 0 to 5000ms	45ppm = 600 55ppm = 600
500-102	Tray1_2FeedRetries	Number of Tray 1 and 2 feeder retrys before a fault is called	Range = 0 to 10	45ppm = 3 55ppm = 3
500-103	LELateToReg-SensorSteps	LE Late to Reg Sensor from the simplex stage location	Range = 50 to 2000	45ppm = 275 55ppm = 275
500-104	SheetReadyLateTime_P1	Minimum time between SheetReady Received by the scheduler and the PageSync time. If the time is greater then a skipped pitch is required.	Range = 0 to 5000ms	45ppm = 415 55ppm = 361
500-105	T2HiSpeedDelaySteps	Steps to wait after the tray2 sensor is made before the TAR1/2 motor can be accelerated to High Speed.	Range = 0 to 5000	45ppm = 25 55ppm = 25
500-106	LELateToTAR1FromTAR2Steps	Max steps from the LE at TAR2 sensor to the LE at TAR1 Sensor to indicate if a sheet is late	Range = 0 to 10000	45ppm = 565 55ppm = 565
500-107	LELateToTAR1FromT1Time	Max time from start of tray 1 feed to LE at TAR 1 Sensor to indicate if a sheet is late	Range = 0 to 5000ms	45ppm = 600 55ppm = 600
500-108	TELateTAR1FromRegSteps	TE late to the TAR1 Sensor (S4) following the sheet released from the registration rolls. The actual fault is paper size - value. Steps of the TAR Motor	Range = 0 to 20000	45ppm = 349 55ppm = 349
500-109	TELateRegSensorFromTETAR1Steps	TE late to the Reg Sensor (S1) following the sheet TE event at TAR1 (S4) steps of the reg motor, Simplex	Range = 0 to 20000	45ppm = 197 55ppm = 197
500-110	LELatePost-FuserFromReg-Time	LE late to Post Fuser Sensor from Registration roll release	Range = 300 to 2000ms	45ppm = 920 55ppm = 920
500-111	TELatePost-FuserFromLE-Time	TE Late to Post Fuser sensor from LE at Post Fuser Sensor. Paper sizems + NVM	Range = 0 to 1000ms	45ppm = 140 55ppm = 140

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-112	SheetDeliveredCentreTrayTime_P1	Time from TE at Post Fuser Sensor to declare that a sheet has been delivered to the centre output tray.	Range = 0 to 2000ms	45ppm = 400 55ppm = 400
500-113	InvertDelayToDuplexTimeD2	Minimum delay before the inverter motor changes direction. Duplex Mode 2	Range = 0 to 1000ms	45ppm = 200 55ppm = 200
500-114	InvertDelayToDuplexTimeD3	Minimum delay before the inverter motor changes direction. Duplex Mode 3	Range = 0 to 1000ms	45ppm = 400 55ppm = 400
500-115	InvertMotorHiSpeedDelaySteps	Steps of the Invert Motor from the TE at the post fuser sensor to the Invert going to high speed in the forward direction	Range = 0 to 1000	45ppm = 104 55ppm = 104
500-116	LEPFSToInvMotorFwdTime	Time from the LE at post fuser sensor to the invert motor going to process speed forward	Range = 0 to 2000ms	45ppm = 350 55ppm = 350
500-117	InvMotorOffReverseSteps	Steps from Invert motor restart reverse into the duplex path that the motor is turned OFF. The actual value is Paper Size Steps - NVM	Range = 0 to 1000	45ppm = 115 55ppm = 115
500-118	TEDuplexS3ToDuplexClearSteps	Steps of the Duplex Motor from the TE at duplex sensor S3 that the duplex path is clear and the duplex motor can be stopped.	Range = 0 to 5000	45ppm = 1200 55ppm = 1200
500-119	Tray1VariableDelaySteps	Delay to wait steps from TAR1 Sensor to the TAR 1/2 motor going to variable speed	Range = 0 to 500	45ppm = 20 55ppm = 20
500-120	LELateToDuplexS3FromInvertSteps	LE late to the duplex sensor, timed from the Restart into duplex Invert Motor Reverse. Steps of the Duplex Motor	Range = 0 to 6000	45ppm = 2324 55ppm = 2324
500-121	TELateToS3FromRegReleaseSteps	TE late to the duplex sensor S3, timed from the release of the LE at the registration rolls. Steps of the duplex motor. Paper SizeSteps - NVMsteps	Range = 0 to 5000	45ppm = 515 55ppm = 515

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-122	LELateToReg-SensorDuplex-Steps	LE late to the registration sensor when sheets are delivered from the duplex path. Steps of the duplex motor	Range = 0 to 5000	45ppm = 335 55ppm = 335
500-123	MSISimplexBuckleStepsS1	MSI Deskew Buckle steps at Registration Simplex Mode1	Range = 0 to 500	45ppm = 146 55ppm = 146
500-124	MSISimplexBuckleStepsS2	MSI Deskew Buckle steps at Registration Simplex Mode2	Range = 0 to 500	45ppm = 146 55ppm = 146
500-125	MSISimplexBuckleStepsS3	MSI Deskew Buckle steps at Registration Simplex Mode3	Range = 0 to 500	45ppm = 146 55ppm = 146
500-126	TELateRegSensorFromTEDuplexS3Steps	TE late to the Reg Sensor (S1) following the sheet TE event at Duplex (S3) steps of the reg motor, Duplex	Range = 0 to 6000	45ppm = 2590 55ppm = 2590
500-127	MSISimplePitchTickAdditionTime	MSI Pitch, Addition to MSI Simplex Pitch all modes	Range = 0 to 6000	45ppm = 1930 55ppm = 1930
500-128	MSIAcquireDelay	Delay to acquire the sheet from the MSI - ms	Range = 0 to 2000	45ppm = 0 55ppm = 0
500-129	MSIRegReleaseSteps	The maximum number of steps the TAR Motor will run to release the sheet into the registration rolls - steps	Range = 0 to 4000	45ppm = 971 55ppm = 971
500-130	StepperSpeed-ScaleFactor	Scale Factor to be used for all stepper motor speeds	Range = 1 to 1000	45ppm = 10 55ppm = 10
500-131	RollDiameter-ScaleFactor	Scale Factor to be used for all Roll Diameters	Range = 1 to 1000	45ppm = 100 55ppm = 100
500-132	StepperRatioScaleFactor	Scale Factor to be used for all Stepper ratios	Range = 0 to 10000	45ppm = 10000 55ppm = 10000
500-133	FeedCL3AcqEnableDelTime	Delay before feed clutch enabled to acquire a sheet	Range = 0 to 500ms	45ppm = 50 55ppm = 50
500-134	HCFWaitPoint3Steps	Tray3 Number of HCF Motor Steps from HCF Exit sensor to the HCF Wait Point	Range = 0 to 2000	45ppm = 60 55ppm = 60
500-135	T3ExSenToClutchOffSteps	Tray3 number of steps of the feed motor from the LE at HCF Exit Sensor to tray 4 clutch off	Range = 0 to 1000	45ppm = 522 55ppm = 522

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-136	NotUsed136	Not used	Range = 0 to 214748647	45ppm = 0 55ppm = 0
500-137	T3WaitPointReleaseTime	Minimum Delay time from Release sheet PFM (sheet ahead) to sheet being released from HCF Wait Point	Range = 0 to 500	45ppm = 40 55ppm = 40
500-138	FeedMotorVelocity	Nominal feed motor velocity (Scaled)	Range = 0 to 10000mm/s	45ppm = 5250 55ppm = 5250
500-139	HCFMotorNom-Speed	Nominal HCF Transport Motor Velocity (scaled)	Range = 0 to 10000mm/s	45ppm = 5250 55ppm = 5250
500-140	T3SheetReadyTime	Delay before sheet ready is sent tray 3 only	Range = 0 to 500	45ppm = 20 55ppm = 20
500-141	ClutchToFeedDelayTime	Time from the Clutch enable to starting the Feed Motor	Range = 0 to 500ms	45ppm = 10 55ppm = 10
500-142	FeedMotorRetardSpeed	Speed that the feed motor runs when the clutch is disabled (retard roll geared to run half this speed) (Scaled)	Range = 0 to 6000mm/s	45ppm = 3730 55ppm = 3730
500-143	LElateToFeed3Time	Max time Tray3 Clutch enable to LE at Tray 3 Feed sensor	Range = 0 to 3000ms	45ppm = 500 55ppm = 500
500-144	LElateToTAR3Time	Max time Tray3 Clutch enable to LE at Tray3 TAR sensor	Range = 0 to 6000ms	45ppm = 600 55ppm = 600
500-145	PurgeEnable	HCF(Far) Purge Enable - moved sheets to the left hand door for easier clearance	Range = 0 to 1	45ppm = 1 55ppm = 1
500-146	HCFRetries	HCF(FAR) Number of feed retry attempts	Range = 0 to 10	45ppm = 5 55ppm = 5
500-147	HCFFeedMotorStepsPerRev	Number of steps per rev of the feed motor nominally 200. If doubled then half stepping is enabled	Range = 0 to 1000	45ppm = 200 55ppm = 200
500-148	HCFFeedRollDiameter	HCF Feed Roll Diameter (scaled)	Range = 1000 to 5000mm	45ppm = 2000 55ppm = 2000
500-149	HCFFeedRollRatio	Feed Roll Ratio to motor (Scaled)	Range = 0 to 10000	45ppm = 8300 55ppm = 8300

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-150	HCFFeedBaseSpeed	HCF Feed Roll Base Speed (Scaled)	Range = 0 to 3000mm/s	45ppm = 1390 55ppm = 1390
500-151	HCFFeedFinalSpeed	HCF Feed Roll final speed used for ramp table calculation (scaled)	Range = 0 to 10000mm/s	45ppm = 6000 55ppm = 6000
500-152	HCFFeedAccRate	HCF Feed Roll Acceleration rate.	Range = 0 to 50000mm/s	45ppm = 21582 55ppm = 21582
500-153	HCFTARMotorStepsPerRev	Number of steps per rev of the TAR motor nominally 200. If doubled then half stepping is enabled	Range = 0 to 1000	45ppm = 200 55ppm = 200
500-154	HCFTARRollDiameter	HCF TAR Roll Diameter (scaled)	Range = 1000 to 5000mm	45ppm = 1500 55ppm = 1500
500-155	HCFTARRollRatio	TAR Roll Ratio to motor (Scaled)	Range = 0 to 100000	45ppm = 14737 55ppm = 14737
500-156	HCFTARBaseSpeed	HCF TAR Roll Base Speed (Scaled)	Range = 0 to 3000mm/s	45ppm = 1390 55ppm = 1390
500-157	HCFTARFinalSpeed	HCF TAR Roll final speed used for ramp table calculation (scaled)	Range = 0 to 10000mm/s	45ppm = 6000 55ppm = 6000
500-158	HCFTARAccRate	HCF TAR Roll Acceleration rate.	Range = 0 to 50000mm/s	45ppm = 21582 55ppm = 21582
500-159	HCFToT2RetryTime	Time to stop feeding when releasing a sheet from the HCF wait point to tray 2 and then retry.	Range = 0 to 1000ms	45ppm = 230 55ppm = 230
500-160	ArmRegistrationSensorLEDuplex_P1	Arm Reg Sensor for LE Duplex, Delay from DSL release to arm reg sensor for LE event	Range = 0 to 200	45ppm = 26 55ppm = 26

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-161	ArmRegistrationSensorTEDuplex_P1	Arm Reg Sensor for TE Duplex, Delay from TE Duplex Sensor. Steps of the Reg Motor	Range = 0 to 5000	45ppm = 1784 55ppm = 0
500-162	LElateToregSensorMSISteps	LE Late to Reg Sensor from the MSI	Range = 1000 to 6000	45ppm = 2024 55ppm = 2024
500-163	OffsetMotorSpeed	Speed that the Exit offset motor is to run. No ramp used go directly to speed.	Range = 0 to 5000	45ppm = 2880 55ppm = 2880
500-164	OffsetToCentreSteps	Used to move the offset from the flag to the centre location during initialise and offset.	Range = 0 to 100	45ppm = 2 55ppm = 2
500-165	OffsetDistanceSteps	Number of steps to offset the sheet.	Range = 0 to 200	45ppm = 48 55ppm = 48
500-166	OffsetTEDelayTime	Delay from the TE at post fuser sensor to start the offset	Range = 0 to 1000ms	45ppm = 50 55ppm = 50
500-167	OffsetHomeDelayTime	Delay from the TE at post fuser sensor to start the offset move to home.	Range = 0 to 1000ms	45ppm = 450 55ppm = 450
500-168	OffsetFaultSteps	Max number of steps to declare a offset failure if offset sensor event has not been detected	Range = 0 to 500	45ppm = 120 55ppm = 120
500-169	Finisher Transport Process Speed	FinXportProcessSpeed	Range = 0 to 3000mm/s	45ppm = 2620 55ppm = 2620
500-170	FinXportRollBaseSpeed	Finisher Transport Motor Base Speed (scaled)	Range = 0 to 3000mm/s	45ppm = 800 55ppm = 800
500-171	FinXportDeliverMaxSpeed	Finisher Transport Motor Max Speed (scaled)	Range = 0 to 5000mm/s	45ppm = 2700 55ppm = 2700
500-172	FinXportRollAccRate	Finisher Transport Motor Acceleration Rate	Range = 0 to 30000mm/s	45ppm = 15696 55ppm = 15696
500-173	FinXportRollDiameter	Finisher Transport Drive Roll Diameters (scaled)	Range = 1000 to 2500	45ppm = 1600 55ppm = 1600

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-174	Finisher Transport Motor to Roll Drive ratio (scaled)	FinXportRatio	Range = 0 to 100000	45ppm = 6667 55ppm = 6667
500-175	FinXportMotor-StepsRev	Number of steps per rev of the feed motor nominally 200. If doubled then half stepping is enabled	Range = 0 to 600	45ppm = 200 55ppm = 200
500-176	LELateToFinXportSensorTime	Time from LE at Post Fuser Sensor to the LE at the Finisher Transport Sensor to detect if a sheet is late.	Range = 0 to 5000ms	45ppm = 640 55ppm = 640
500-177	TELateToFinXportSensorTime	Time from the LE at the Finisher Transport Sensor to the TE at the finisher transport sensor to detect if a sheet is late.	Range = 0 to 1000ms	45ppm = 140 55ppm = 140
500-178	TAR1MSIHomeSpeed_P1	MSI High Speed for return to cam home after release from registration	Range = 100 to 5000mm/s	45ppm = 2831 55ppm = 2831
500-179	ArmFinXportSensorLEFromLEPostFSTime	Arm the finisher transport sensor to detect the LE from the LE at the Post Fuser Sensor	Range = 0 to 5000ms	45ppm = 445 55ppm = 445
500-180	ArmFinXportSensorTEFromLEFinXpoTime	Arm the finisher transport sensor to detect the TE from the LE at the Finisher Transport Sensor = Paper-Size - NVM	Range = 0 to 3000ms	45ppm = 20 55ppm = 20
500-181	T2HiSpeedDelay2Steps	Steps to wait after the TAR1 Sensor goes clear before the TAR1/2 motor can be accelerated to high speed	Range = 0 to 5000	45ppm = 15 55ppm = 15
500-182	TELateToTAR2FromLETAR1Steps	TE late to TAR2 Sensor from the LE at TAR1 event. Steps of the TAR motor	Range = 0 to 6000	45ppm = 281 55ppm = 281
500-183	MSICamHomeSteps	Number of steps of the MSI TAR motor to run after the MSI Cam home sensor is made to ensure that the MSI tray is in the correct home location	Range = 0 to 1000	45ppm = 49 55ppm = 49
500-184	NvmHCFLHEncodeCount	HCF LH tray Current media level	Range = 0 to 100	45ppm = 0 55ppm = 0
500-185	NvmHCFRHEncodeCount	HCF RH tray Current media level	Range = 0 to 100	45ppm = 0 55ppm = 0

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-186	NvmHCFRHTray-Present	Specifies to whether HCF RH tray is fitted or not in the device. This can be set in manufacturing.	0 = Not fitted 1 = Fitted	45ppm = 1 55ppm = 1
500-187	NvmTrayOpenTimeThreshold	Tray Open time	Range = 0 to 10000ms	45ppm = 5000 55ppm = 5000
500-188	NvmHCFLHMaxEncodeCount	Maximum number of encoder events that can be received while elevating HCFLH Tray	Range = 1 to 100	45ppm = 65 55ppm = 65
500-189	NvmHCFRHMaxEncodeCount	Maximum number of encoder events that can be received while elevating HCFRH Tray.	Range = 1 to 100	45ppm = 95 55ppm = 95
500-190	LElateToFeed4Time	Max time Tray 4 Clutch enable to LE at Tray 4 Feed sensor	Range = 0 to 3000ms	45ppm = 500 55ppm = 500
500-191	LElateToTAR4Time	Max time Tray 4 Clutch enable to LE at Tray 4 TAR sensor	Range = 0 to 6000ms	45ppm = 290 55ppm = 290
500-192	Tray4LELateToHCFExitTime	Max time from Tray 4 feed motor start, when the sheet is at the Horizontal wait point to the LE at the HCF exit Sensor	Range = 0 to 6000ms	45ppm = 550 55ppm = 550
500-193	T4FeedWPSteps	Number of steps past the Tray 4 TAR sensor to start ramping down the feed motor	Range = 0 to 1000	45ppm = 0 55ppm = 0
500-194	T4TARSensorToClutchOffSteps	Number of steps from the LE at TAR sensor to the clutch disable	Range = 0 to 2000	45ppm = 260 55ppm = 260
500-195	DelayTAR3SensorClearSteps	Step delay from TE at TAR3 sensor to allow the sheet TE to be clear of TAR 3 nip before the TAR motor can change speed	Range = 0 to 500	45ppm = 23 55ppm = 23
500-196	Feed4AcqDelTime	Tray 4 delay to start sheet acquire from the tray	Range = 0 to 2000ms	45ppm = 164 55ppm = 164
500-197	HCFHiSpeed	HCF motor high speed to enable catch up and productivity	Range = 0 to 10000mm/s	45ppm = 5250 55ppm = 5250

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-198	HCFWaitPoint4Steps	Number of steps from TAR 4 sensor to the HCF wait point	Range = 0 to 2000	45ppm = 60 55ppm = 60
500-199	T4WaitPointReleaseTime	Minimum Delay time from Release sheet PFM (sheet ahead) to sheet being released from HCF Wait Point	Range = 0 to 500ms	45ppm = 40 55ppm = 40
500-200	LELateToFinisherFromFinXportTime	Time from the LE at FinXport sensor to the LE arriving at the finisher to declare that the sheet is late	Range = 0 to 10000ms	45ppm = 2280 55ppm = 2280
500-201	MSICamFlagLogicDirection	Cam home Sensor Logic Level, enables either a flag or gap actuator	Range = 0 to 1	45ppm = 0 55ppm = 0
500-202	MSISmallSheetRegReleaseSteps	The maximum number of steps the TAR Motor will run to release the sheet into the registration rolls, sheets less than 210mm in the process direction	Range = 0 to 4000	45ppm = 81 55ppm = 81
500-203	OffsetMotorStepsRev	Number of steps/rev of the offset motor	Range = 0 to 200	45ppm = 96 55ppm = 96
500-204	OffsetGearPCDDiameter	Diameter of the offset motor drive gear PCD (scaled)	Range = 0 to 5000mm	45ppm = 800 55ppm = 800
500-205	OffsetRatio	Offset Drive Ratio (Scaled)	Range = 0 to 30000	45ppm = 10000 55ppm = 10000
500-206	OffsetBaseSpeed	Offset Base Speed (scaled)	Range = 0 to 6000mm/s	45ppm = 2000 55ppm = 2000
500-207	OffsetMaxSpeed	Offset Final Speed for ramp Table Calc (scaled)	Range = 0 to 6000mm/s	45ppm = 3500 55ppm = 3500
500-208	OffsetRollAccRate	Offset Motor Acceleration Rate	Range = 0 to 30000mm/s	45ppm = 15696 55ppm = 15696
500-209	Tray1MediaLevelSteps	Tray 1 media level steps	Range = 0 to 400	45ppm = 0 55ppm = 0
500-210	Tray2MediaLevelSteps	Tray 2 media level steps	Range = 0 to 400	45ppm = 0 55ppm = 0

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-211	MaxMediaLevelElevateSteps	Maximum number of encoder events that can be received while elevating PFM Trays (T1 / T2).	Range = 0 to 400	45ppm = 350 55ppm = 350
500-212	MaxHCFBumpAttempts	Number of consecutive bump ups before a fault is called.	Range = 1 to 5	45ppm = 2 55ppm = 2
500-213	HCFElevationTimeout	Max threshold (from commencement of elevation) for tray 3 stack height sensor to change state. If not Tray 3 elevate fault shall be raised	Range = 1000 to 100000ms	45ppm = 40000 55ppm = 40000
500-214	HCFBumpTimeout	Threshold to declare bump-up failure fault	Range = 1 to 10000ms	45ppm = 1000 55ppm = 1000
500-215	MSIWidthSensorOffsetmm	MSI width guide offset in mm. Nominally set to 100=no offset. Reducing NVM decreases actual reading.	Range = 0 to 300mm	45ppm = 100 55ppm = 100
500-216	T1ElevateSlackSteps	Offset required for calculating accurate tray level - T1	Range = 0 to 350	45ppm = 120 55ppm = 120
500-217	T2ElevateSlackSteps	Offset required for calculating accurate tray level - T2	Range = 0 to 350	45ppm = 120 55ppm = 120
500-218	HCFLEHCElevateSlackSteps	Offset required for calculating accurate tray level - T3	Range = 0 to 65	45ppm = 10 55ppm = 10
500-219	HCFRHEHCElevateSlackSteps	Offset required for calculating accurate tray level - T4	Range = 0 to 95	45ppm = 10 55ppm = 10
500-220	PfmTraySizeSensingEnable	PFM Tray Size Sensing Enable/Disable	0 = Disabled 1 = Enabled	45ppm = 1 55ppm = 1
500-221	TAR1MaxVariableSpeed	TAR1/2 maximum variable speed that the TAR motor can use when sheet is late and catch up is required.	Range = 0 to 8000mm/s	45ppm = 2800 55ppm = 3300
500-222	MSISpeed_P1	MSI Process Speed	Range = 100 to 5000mm/s	45ppm = 2600 55ppm = 2600
500-223	MSIRollDiameter	MSI Roll Diameter (scaled)	Range = 1000 to 6000mm	45ppm = 3600 55ppm = 3600
500-224	MSIRatio	MSI Drive Ratio (scaled)	Range = 0 to 20000	45ppm = 2376 55ppm = 2376



**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-225	MSIRollBaseSpeed	MSI Base Speed (scaled)	Range = 0 to 3000mm/s	45ppm = 600 55ppm = 600
500-226	MSIDeliverMaxSpeed	MSI Final Speed used for ramp table calculation (scaled)	Range = 0 to 6000mm/s	45ppm = 4000 55ppm = 4000
500-227	MSIRollAccRate	MSI acceleration rate	Range = 10000 to 50000mm/s	45ppm = 15696 55ppm = 15696
500-228	MSIMotorStepsPerRev	Steps per Rev of the MSI motor.	Range = 0 to 1000	45ppm = 200 55ppm = 200
500-229	FuserExitMotorShutdown	Fuser Exit Motor Turned OFF during shutdown. Timed from receiving the shutdown request.	Range = 0 to 5000ms	45ppm = 155 55ppm = 155
500-230	FinXportMotorCycleOut	Finisher Transport Motor Turned OFF during cycle out. Timed from the TE of last sheet exiting the transfer nip.	Range = 0 to 10000ms	45ppm = 4000 55ppm = 4000
500-231	FinXportMotorShutdown	Finisher Transport Motor Turned OFF during shutdown.	Range = 0 to 10000ms	45ppm = 155 55ppm = 155
500-232	HCFTarMotorPurgeTime1	Purge timing	Range = 0 to 2000ms	45ppm = 200 55ppm = 200
500-233	HCFTarMotorPurgeTime2	Purge timing	Range = 0 to 3000ms	45ppm = 400 55ppm = 400
500-234	HCFTarMotorPurgeTime3	Purge timing	Range = 0 to 4000ms	45ppm = 1000 55ppm = 1000
500-235	FeedDeliverTime	Purge timing	Range = 0 to 1000ms	45ppm = 100 55ppm = 100
500-236	FeedNipClearTime	Purge timing	Range = 100 to 4000ms	45ppm = 2500 55ppm = 2500
500-237	StraySheetMotorForwardTime	Purge timing	Range = 100 to 5000ms	45ppm = 1000 55ppm = 1000
500-238	StraySheetMotorReverseTime	Purge timing	Range = 100 to 5000ms	45ppm = 1000 55ppm = 1000

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-239	SSDFinXportInitialTime	Stray Sheet Detection, Horizontal Transport initial run time	Range = 0 to 6000ms	45ppm = 2000 55ppm = 2000
500-240	SSDFinXportAdditionalTime	Stray Sheet Detection, Horizontal Transport additional run time	Range = 0 to 6000ms	45ppm = 2000 55ppm = 2000
500-241	SSDPowerOnDelay	Stray Sheet Detection, Power On Delay	Range = 0 to 100000ms	45ppm = 60000 55ppm = 60000
500-242	MSICamHomeTimeout	MSI Cam Home Timeout check	Range = 0 to 10000ms	45ppm = 2000 55ppm = 2000
500-243	MSIDelayToInitialiseTime	MSI Time delay from paper present clear to initialising the elevate tray if required.	Range = 0 to 10000ms	45ppm = 1000 55ppm = 1000
500-244	MSIDelayToEmptyCheckTime	Delay to check paper present sensor in the MSI is clear.	Range = 0 to 2000ms	45ppm = 470 55ppm = 470
500-245	MSIPaperPresentClearTime	The time that the paper present needs to remain clear to ensure that the MSI is really clear.	Range = 0 to 1000ms	45ppm = 100 55ppm = 100
500-246	OffsetEnable	Determines whether offsetting is enabled or not	0 = Disabled 1 = Enabled	45ppm = 1 55ppm = 1
500-247	DoorSettleTime	Delay to ensure door has closed completely	Range = 0 to 5000ms	45ppm = 2000 55ppm = 2000
500-248	DuplexDeliverRegToTransferTime_P1	Time to deliver reg to transfer.	Range = 0 to 1000ms	45ppm = 163 55ppm = 163
500-249	MSIDeliverFromMSIToReg	Used to calculate the start time of the MSI feed	Range = 0 to 5000ms	45ppm = 1350 55ppm = 1350
500-250	XeroReadyTimeMSI	Time for the 1st sheet transfer time from sheet ready	Range = 0 to 5000ms	45ppm = 1400 55ppm = 1400

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-251	XeroReady-TimeMSIAfter-Shutdown	Time for the 1st sheet transfer time from sheet ready following a shutdown	Range = 0 to 5000ms	45ppm = 2900 55ppm = 2900
500-252	MSIArmRegistrationSensorLE	Arm Reg Sensor for LE. Delay from MSI Sheet start to feed to sensor armed	Range = 0 to 2000ms	45ppm = 162 55ppm = 162
500-253	MSIArmRegSensorTE	Arm Reg Sensor for TE, Delay from Registration motor start	Range = 0 to 2000ms	45ppm = 392 55ppm = 392
500-254	MSIArmRegSensorTEMSITransparencies	Arm Reg Sensor for TE, Delay from Registration motor start for transparencies	Range = 0 to 2000ms	45ppm = 295 55ppm = 295
500-255	MSIRegReleaseMinSteps	The minimum number of steps the TAR Motor will run to release the sheet into the registration rolls	Range = 0 to 4000	45ppm = 148 55ppm = 148
500-256	PitchTickSimpleMode4_P1	Simplex Pitch Mode 4	Range = 0 to 10000ms	45ppm = 6000 55ppm = 6000
500-257	PitchTickDuplexMode4_P1	Duplex Pitch Mode 4	Range = 0 to 10000ms	45ppm = 6000 55ppm = 6000
500-258	MSISimplePitchTickAdditionM4Time	MSI Pitch Addition to MSI Simplex Pitch Mode 4	Range = 0 to 6000ms	45ppm = 6000 55ppm = 6000
500-259	PitchMaxPaperSizemS4	Max paper Size Pitch Mode 4 Simplex	Range = 100 to 700mm	45ppm = 216 55ppm = 216
500-260	PitchMaxPaperSizemD4	Max paper Size Pitch Mode 4 Duplex	Range = 100 to 700mm	45ppm = 216 55ppm = 216
500-261	SimplexBuckleStepsS4	Deskew Buckle steps at Registration Simplex Mode 4	Range = 0 to 500	45ppm = 80 55ppm = 80
500-262	MSISimplexBuckleStepsS4	MSI Deskew Buckle steps at Registration Simplex Mode 4	Range = 0 to 500	45ppm = 146 55ppm = 146
500-263	DuplexBuckleStepsD4	Deskew Buckle steps at Registration Duplex Steps of the duplex motor Mode 4	Range = 0 to 1000	45ppm = 143 55ppm = 143
500-264	DuplexStageDelayConstantD4_P1	Delay to release from DSL.	Range = 0 to 1000ms	45ppm = 260 55ppm = 260

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-265	InvertDelayToDuplexTimeD4	Minimum delay before the inverter motor changes direction.	Range = 0 to 1000ms	45ppm = 400 55ppm = 400
500-266	DuplexHighSpeedD4_P1	Duplex High Speed Duplex Mode 4 (Scaled)	Range = 1000 to 10000mm/s	45ppm = 2570 55ppm = 2570
500-267	InvertHighSpeed4_P1	Invert High Speed Duplex Mode 4 (Scaled)	Range = 1000 to 10000mm/s	45ppm = 2570 55ppm = 2570
500-268	FuserMotorClockFreq	Fuser motor clock frequency	Range = 0 to 10000Hz	45ppm = 0 55ppm = 0
500-269	PRMotorClockFreq	PR motor clock frequency	Range = 0 to 10000Hz	45ppm = 0 55ppm = 0
500-270	SheetReadyLateTime_M2	Minimum time between Sheet Ready Received by the scheduler and the PageSync time.	Range = 0 to 5000ms	45ppm = 361 55ppm = 361
500-271	SheetReadyLateTime_M3	Minimum time between Sheet Ready Received by the scheduler and the PageSync time.	Range = 0 to 5000ms	45ppm = 361 55ppm = 361
500-272	SheetReadyLateTime_M4	Minimum time between Sheet Ready Received by the scheduler and the PageSync time.	Range = 0 to 5000ms	45ppm = 361 55ppm = 361
500-273	TAR2HighSpeed_M2	TAR 1/2 High speed for transport from TAR2 to TAR1 Mode2 (Scaled).	Range = 1000 to 8000mm/s	45ppm = 3000 55ppm = 3000
500-274	TAR2HighSpeed_M3	TAR 1/2 High speed for transport from TAR2 to TAR1 Mode3 (Scaled)	Range = 1000 to 8000mm/s	45ppm = 3000 55ppm = 3000
500-275	TAR2HighSpeed_M4	TAR 1/2 High speed for transport from TAR2 to TAR1 Mode4 (Scaled).	Range = 1000 to 8000mm/s	45ppm = 3000 55ppm = 3000
500-276	TAR1MaxVariableSpeed_M2	TAR1/2 maximum variable speed that the TAR motor can use when sheet is late and catch up is required.	Range = 0 to 8000mm/s	45ppm = 3300 55ppm = 3300
500-277	TAR1MaxVariableSpeed_M3	TAR1/2 maximum variable speed that the TAR motor can use when sheet is late and catch up is required.	Range = 0 to 8000mm/s	45ppm = 3300 55ppm = 3300

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-278	TAR1MaxVariableSpeed_M4	TAR1/2 maximum variable speed that the TAR motor can use when sheet is late and catch up is required.	Range = 0 to 8000mm/s	45ppm = 3300 55ppm = 3300
500-279	MsiWidthDetectionTolerance	MSI Size Sensing Tolerance. 0.1mm per unit.	Range = 0 to 1000	45ppm = 150 55ppm = 150
500-280	EnableDownStreamDelivery	Enable Down Stream Delivery.	Range = 0 to 1000	45ppm = 0 55ppm = 0
500-281	MSIPaperTESteps	Number of steps to run to TE at the MSI feed roll.	Range = 0 to 4000	45ppm = 890 55ppm = 890
500-282	MSIDelayClutchToMotorTime	Delay from clutch engaged to MSI TAR motor start	Range = 0 to 500ms	45ppm = 30 55ppm = 30
500-283	EnableMsiWithClutch	Enable clutch control on MSI	0 = Disabled 1 = Enabled	45ppm = 1 55ppm = 1
500-284	MSISimpPitchTickM5Time	MSI Simplex Pitch for mode 5	Range = 0 to 6000ms	45ppm = 1930 55ppm = 1930
500-397	PitchTickSimplexM5_P1	Simplex Pitch Mode 5, Transparencies <216mm in the process direction.	Range = 400 to 5000ms	45ppm = 1220 55ppm = 1090
500-398	PitchTickDuplexM5_P1	Duplex Pitch Mode 5, Transparencies <216mm in the process direction.	Range = 400 to 5000ms	45ppm = 1090 55ppm = 1090
500-399	MSISimpPitchAddM5	MSI Pitch, Addition to Simplex Pitch Mode5	Range = 0 to 6000ms	45ppm = 705 55ppm = 840
500-400	PitchMaxPaperSizeSimplexM5	Max paper/Transparency Size Pitch Mode 5 Simplex	Range = 100 to 700mm	45ppm = 216 55ppm = 216
500-401	PitchMaxPaperSizeDuplexM5	Max paper/Transparency Size Pitch Mode 5 Duplex	Range = 100 to 700mm	45ppm = 216 55ppm = 216
500-402	SheetReadyLateTimeM5	Minimum time between SheetReady Received by the scheduler and the PageSync time.	Range = 0 to 5000ms	45ppm = 415 55ppm = 361
500-403	SimplexBuckleStepsS5	Deskew Buckle steps at Registration Simplex Transparency Mode5	Range = 0 to 500	45ppm = 80 55ppm = 80
500-404	MSISimplexBuckleStepsS5	MSI Deskew Buckle steps Transparency at Registration Simplex Mode5	Range = 0 to 500	45ppm = 113 55ppm = 113

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-405	DupBuckleStepsD5	Deskew Buckle steps Transparency at Registration Duplex Steps of the duplex motor Mode5	Range = 0 to 1000	45ppm = 143 55ppm = 143
500-406	DupStageDelayConSD5_P1	Delay to release from DSL. Transparency Duplex Mode5	Range = 0 to 1000ms	45ppm = 260 55ppm = 260
500-407	InvertDelayToDuplexTimeD5	Minimum delay before the inverter motor changes direction Transparency. Duplex Mode 5	Range = 0 to 1000ms	45ppm = 15 55ppm = 15
500-408	TAR1MaxVariableSpeedM5	TAR1/2 maximum variable speed that the TAR motor can use when sheet is late and catch up is required. Mode5	Range = 0 to 8000mm/s	45ppm = 3300 55ppm = 3300
500-409	DuplexHighSpeedD5_P1	Duplex High Speed Duplex Transparency Mode 5 (Scaled)	Range = 1000 to 10000mm/s	45ppm = 4000 55ppm = 4000
500-410	InvertHighSpeedD5_P1	Invert High Speed Duplex Transparency Mode 5 (Scaled)	Range = 1000 to 10000mm/s	45ppm = 4000 55ppm = 4000
500-411	SheetExitMsgDelay	Delay to sending 'Sheet Exit' to finisher.	Range = 0 to 4000ms	45ppm = 1800 55ppm = 1800
500-412	RegApproachSpeed	Speed the Reg motor runs when the sheet is being delivered from reg to transfer.	Range = 1000 to 5500mm/s	45ppm = 2590 55ppm = 2590
500-413	RegBuckleSpeed	Speed the Reg motor runs when the buckle is being created at transfer.	Range = 1000 to 5500mm/s	45ppm = 2590 55ppm = 2590
500-414	TARApproachSpeed	Speed the TAR motor runs when the sheet is being delivered from reg to transfer.	Range = 100 to 5000mm/s	45ppm = 2590 55ppm = 2590
500-415	TARBuckleSpeed	Speed the TAR Motor runs when the buckle is being created at transfer.	Range = 100 to 5000mm/s	45ppm = 2590 55ppm = 2590

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-416	MSIApproach-Speed	Speed the MSI motor runs when the sheet is being delivered from reg to transfer.	Range = 100 to 5000mm/s	45ppm = 2831 55ppm = 2831
500-417	MSIBuckleSpeed	Speed the MSI motor runs when the buckle is being created at transfer.	Range = 100 to 5000mm/s	45ppm = 2831 55ppm = 2831
500-418	DuplexApproach-Speed	Speed the Duplex motor runs when the sheet is being delivered from reg to transfer.	Range = 100 to 5000mm/s	45ppm = 2600 55ppm = 2600
500-419	DuplexBuckleSpeed	Speed the Duplex motor runs when the buckle is being created at transfer.	Range = 100 to 5000mm/s	45ppm = 2600 55ppm = 2600
500-420	TransferApproachTime	Time to run Approach speed, from Reg Release, before going to Transfer Buckle Speed	Range = 0 to 3000mm/s	45ppm = 175 55ppm = 175
500-421	TransferBuckleTime	Time to run buckle speed, from reg release.	Range = 0 to 3000mm/s	45ppm = 525 55ppm = 525
500-422	InterlockSettleTime	De-bounce of door interlocks	Range = 0 to 2000ms	45ppm = 500 55ppm = 500
500-423	SheetReadyLateTime_MSI	Minimum time between SheetReady Received by the scheduler and the PageSync time.	Range = 0 to 5000ms	45ppm = 800 55ppm = 800
500-424	TAR2HighSpeed_M5	TAR 1/2 High speed for transport from TAR 2 to TAR1 Mode 5 (Scaled), Transparencies <216mm in the process direction.	Range = 1000 to 8000mm/s	45ppm = 3000 55ppm = 3000
500-425	TAR2HighSpeed_M6	TAR 1/2 High speed for transport from TAR2 to TAR1 Mode 6 (Scaled), Envelopes	Range = 1000 to 8000mm/s	45ppm = 2570 55ppm = 2570
500-426	MSISimpPitchTickM6Time	MSI Simplex Pitch for mode 6. Envelopes	Range = 0 to 10000ms	45ppm = 6000 55ppm = 6000
500-427	PitchTickSimpleMode6_P1	Simplex Pitch Mode 6. Envelopes	Range = 400 to 10000ms	45ppm = 6000 55ppm = 6000

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-428	PitchTickDuplexMode6_P1	Duplex Pitch Mode 6. Envelopes	Range = 400 to 10000ms	45ppm = 6000 55ppm = 6000
500-429	PitchMaxPaperSizeSimplexS6	Max paper/Transparency Size Pitch Mode 6 Simplex Envelopes	Range = 100 to 700mm	45ppm = 433 55ppm = 433
500-430	PitchMaxPaperSizeDuplexD6	Max paper/Transparency Size Pitch Mode 6 Duplex Envelopes	Range = 100 to 700mm	45ppm = 433 55ppm = 433
500-431	SheetReadyLateTime_M6	Minimum time between SheetReady Received by the scheduler and the PageSync time.	Range = 0 to 5000ms	45ppm = 361 55ppm = 361
500-432	SimplexBuckleStepsS6	Deskew Buckle steps at Registration Simplex Mode 6 Envelopes	Range = 0 to 500 Steps	45ppm = 80 55ppm = 80
500-433	MSISimplexBuckleStepsS6	MSI Deskew Buckle steps Envelopes at Registration Simplex Mode 6	Range = 0 to 500 Steps	45ppm = 113 55ppm = 113
500-434	DuplexBuckleStepsD6	Deskew Buckle steps Transparency at Registration Duplex Steps of the duplex motor Mode 6, Envelopes	Range = 0 to 1000 Steps	45ppm = 143 55ppm = 143
500-435	DuplexStageDelayConstantD6_P1	Delay to release from DSL. Transparency Duplex Mode 6, Envelopes	Range = 0 to 1000ms	45ppm = 260 55ppm = 260
500-436	InvertDelayToDuplexTimeD6	Minimum delay before the inverter motor changes direction Transparency. Duplex Mode 6, Envelopes	Range = 0 to 1000ms	45ppm = 400 55ppm = 400
500-437	TAR1MaxVariableSpeed_M6	TAR1/2 maximum variable speed that the TAR motor can use when sheet is late and catch up is required. Mode 6, Envelopes	Range = 0 to 8000mm/s	45ppm = 2570 55ppm = 2570
500-438	DuplexHighSpeedD6_P1	Duplex High Speed Duplex Transparency Mode 6 (Scaled), Envelopes	Range = 1000 to 10000mm/s	45ppm = 2570 55ppm = 2570
500-439	InvertHighSpeed6_P1	Invert High Speed Duplex Transparency Mode 6 (Scaled), Envelopes	Range = 1000 to 10000mm/s	45ppm = 2570 55ppm = 2570

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-440	XeroCycleOutDelayM1	Delay from last sheet TE at BTR transfer to Xerographic cycle out starts. Mode 1 Sheets < 216	Range = 0 to 10000ms	45ppm = 0 55ppm = 0
500-441	XeroCycleOutDelayM2	Delay from last sheet TE at BTR transfer to Xerographic cycle out starts. Mode 2 Standard Media 216 to 365	Range = 0 to 10000ms	45ppm = 0 55ppm = 0
500-442	XeroCycleOutDelayM3	Delay from last sheet TE at BTR transfer to Xerographic cycle out starts. Mode 3 Standard Media > 365	Range = 0 to 10000ms	45ppm = 0 55ppm = 0
500-443	XeroCycleOutDelayM4	Delay from last sheet TE at BTR transfer to Xerographic cycle out starts. Mode 4 Narrow sheets < 150	Range = 0 to 10000ms	45ppm = 0 55ppm = 0
500-444	XeroCycleOutDelayM5	Delay from last sheet TE at BTR transfer to Xerographic cycle out starts. Mode 5 Transparencies	Range = 0 to 10000ms	45ppm = 0 55ppm = 0
500-445	XeroCycleOutDelayM6	Delay from last sheet TE at BTR transfer to Xerographic cycle out starts. Mode 6 Envelopes	Range = 0 to 10000ms	45ppm = 1000 55ppm = 1000
500-446	OffsetCentreTray-InitDelay	Delay before attempting to find home position after an initialisation request	Range = 0 to 5000ms	45ppm = 500 55ppm = 500
500-447	OffsetFaultTime	Max time offset motor can run before a fault is declared	Range = 0 to 500ms	45ppm = 150 55ppm = 150
500-448	HCFT3ExitToExitNipTime	When the HCF needs to purge Tray 3 this is the time to turn the feed on to ensure the LE is in the HCF exit nips.	Range = 0 to 1000ms	45ppm = 60 55ppm = 60
500-449	FeedNipClearTime2	When the HCF is in purge mode this is the time that the retard will run when the feed sensor goes clear to ensure the sheet is out of the feed nip	Range = 0 to 4000ms	45ppm = 400 55ppm = 400
500-450	HCFT3ExitToExitRetardTime	When the HCF needs to purge Tray 3 this is the time, following a feed assist	Range = 0 to 1000ms	45ppm = 30 55ppm = 30
500-451	MSIPaperTE_2_Steps	The number of steps to run to TE at the MSI Feed Roll.	Range = 0 to 4000 Steps	45ppm = 680 55ppm = 680

**Table 1 IOT NVM ID 500-001 to 500-903**

NVM ID	NVM Name	NVM Description	Settings	Default
500-452	MSIFeedSequence	Used to switch between MSI control types.	0 = Feed roll continues until the TE of the sheet leaves the MSI. 1 = Feed roll off when cam home.	45ppm = 0 55ppm = 0
500-453	EnablePaperlessTracking	Enable paperless tracking	0 = Normal operation. 1 = Paperless mode.	45ppm = 0 55ppm = 0
500-902	MSISimpPitchTickAdditionM2Time	MSI Pitch, Addition to MSI Simplex Pitch Mode 2	Range = 0 to 6000	45ppm = 2510 55ppm = 2510
500-903	MSISimpPitchTickAdditionM3Time	MSI Pitch, Addition to MSI Simplex Pitch Mode 3	Range = 0 to 6000	45ppm = 2770 55ppm = 2770

**Table 2 IOT NVM ID 501-160 to 501-365**

NVM ID	NVM Name	NVM Description	Settings	Default
501-160	BCR_DC_ON_CycleIn_P1	Bias Charge Roll DC turned on Cycle In	Range = 0 to 5000ms	45ppm = 160 55ppm = 160
501-161	BCR_AC_ON_CycleIn_P1	Bias Charge Roll AC turned on Cycle In.	Range = 0 to 5000ms	45ppm = 160 55ppm = 160
501-162	XeroReadyTime_P1	Minimum time from Xerographics start cycle in to Xerographics ready	Range = 0 to 5000ms	45ppm = 930 55ppm = 930
501-163	DevBiasDC_ON_CycleIn_P1	Dev Bias DC turned on Cycle In.	Range = 0 to 5000ms	45ppm = 295 55ppm = 295
501-164	BTRReverseBiasCycleIn_P1	BTR Reverse Bias turned on Cycle In.	Range = 0 to 5000ms	45ppm = 50 55ppm = 50
501-165	DevBiasAC_ON_CycleIn	Dev Bias AC turned on Cycle In.	Range = 0 to 5000ms	45ppm = 395 55ppm = 395
501-166	DevBiasAC_OFF	Dev Bias AC turned OFF Cycle out.	Range = 0 to 5000ms	45ppm = 530 55ppm = 530
501-167	BTRFwdBiasRun_P1	BTR Forward Bias turned during Run.	Range = 0 to 5000ms	45ppm = 224 55ppm = 224
501-168	BTRRevBiasRun_P1	BTR Forward to Reverse Bias during Run	Range = -5000 to 5000ms	45ppm = -4 55ppm = -4
501-169	BTRBiasOFFCycleOut_P1	BTR Bias turned Off cycle out.	Range = 0 to 5000ms	45ppm = 1101 55ppm = 1101

Table 2 IOT NVM ID 501-160 to 501-365

NVM ID	NVM Name	NVM Description	Settings	Default
501-170	DevBiasDC_OFF_P1	Dev Bias DC turned OFF Cycle out.	Range = 0 to 5000ms	45ppm = 630 55ppm = 630
501-171	CartridgeMotCycle_P1	Cartridge motor turned on cycle in.	Range = 0 to 5000ms	45ppm = 0 55ppm = 0
501-172	CartridgeMotCycleOut_P1	Cartridge Motor turned off cycle out.	Range = 0 to 5000ms	45ppm = 1386 55ppm = 1386
501-173	FuserExitMotorCycleOut_P1	Fuser Exit Motor Turned OFF Cycle out.	Range = 0 to 5000ms	45ppm = 1163 55ppm = 1163
501-174	TcDispTotal	TcDispTotal	Range = -32768 to 32767ms	45ppm = 0 55ppm = 0
501-175	TcSnrFailCount	TcSnrFailCount	Range = 0 to 65535	45ppm = 0 55ppm = 0
501-176	TcLowCount	TcLowCount	Range = 0 to 65535	45ppm = 0 55ppm = 0
501-177	TcHighCount	TcHighCount	Range = 0 to 65535	45ppm = 0 55ppm = 0
501-178	TcLowCydnCount	TcLowCydnCount	Range = 0 to 255	45ppm = 0 55ppm = 0
501-179	TcHighCydnCount	TcHighCydnCount	Range = 0 to 255	45ppm = 0 55ppm = 0
501-183	PxlCumTnrAge	PxlCumTnrAge	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
501-184	DispCumTnrAge	DispCumTnrAge	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
501-185	TcPrevTnrAge	TcPrevTnrAge	Range = 0 to 255	45ppm = 82 55ppm = 82
501-186	Pxl	Pixel count from Mutara FPGA	Range = 0 to 2784	45ppm = 174 55ppm = 174
501-187	TcDispSw	TcDispSw	Range = 0 to 6	45ppm = 1 55ppm = 1
501-188	TcDispMaxOnTime	TcDispMaxOnTime	Range = 0 to 1000000000ms	45ppm = 500 55ppm = 500
501-189	TcDispMinOffTime	TcDispMinOffTime	Range = 0 to 1000000000ms	45ppm = 10 55ppm = 10
501-190	TcDispKaw	TcDispKaw	Range = -1000000000 to 1000000000	45ppm = 1000 55ppm = 1000
501-191	TcDispTotalLI	TcDispTotalLI	Range = -1000000000 to 1000000000ms	45ppm = -3000 55ppm = -3000

Table 2 IOT NVM ID 501-160 to 501-365

NVM ID	NVM Name	NVM Description	Settings	Default
501-192	TcDispTotalUI	TcDispTotalUI	Range = -1000000000 to 1000000000ms	45ppm = 3000 55ppm = 3000
501-194	TcSnrRdIntvPS	TcSnrRdIntvPS	Range = 0 to 1000000000ms	45ppm = 10 55ppm = 10
501-195	TcOfftPS	TcOfftPS	Range = -1000000000 to 1000000000	45ppm = 0 55ppm = 0
501-196	PxlTnrIndSw	PxlTnrIndSw	Range = 0 to 1000000000	45ppm = 0 55ppm = 0
501-199	NotUsed199	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
501-200	NotUsed200	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
501-201	NotUsed201	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
501-202	NotUsed202	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
501-203	TcSnrDispPeriod	TcSnrDispPeriod	Range = 0 to 1000000000ms	45ppm = 5000 55ppm = 5000
501-204	TcSnrRiseTime	TcSnrRiseTime	Range = 0 to 65535ms	45ppm = 1500 55ppm = 1500
501-205	TcSnrPoNoRdTime	TcSnrPoNoRdTime	Range = 0 to 65535ms	45ppm = 1500 55ppm = 1500
501-206	TcSnrTarget	TcSnrTarget	Range = 0 to 1023	45ppm = 291 55ppm = 291
501-207	TcDeadCountMax	TcDeadCountMax	Range = 0 to 255	45ppm = 3 55ppm = 3
501-208	TcDeadCycleThreshold	TcDeadCycleThreshold	Range = 0 to 255	45ppm = 6 55ppm = 6
501-209	TcAggressiveGainThreshold	TcAggressiveGainThreshold	Range = 0 to 1023	45ppm = 3 55ppm = 3
501-210	TcKi	TcKi	Range = 0 to 65535	45ppm = 150 55ppm = 150
501-211	TcSnrCPuckCal	TcSnrCPuckCal	Range = 0 to 65535	45ppm = 30 55ppm = 30
501-212	TcAggressiveKp	TcAggressiveKp	Range = 0 to 65535	45ppm = 200 55ppm = 200

Table 2 IOT NVM ID 501-160 to 501-365

NVM ID	NVM Name	NVM Description	Settings	Default
501-213	TcAggressiveKi	TcAggressiveKi	Range = 0 to 65535	45ppm = 60 55ppm = 60
501-214	TcDispenseUpperLimit	TcDispenseUpperLimit	Range = -32768 to 32768ms	45ppm = 2000 55ppm = 2000
501-215	TcDispenseLowerLimit	TcDispenseLowerLimit	Range = -32768 to 32768ms	45ppm = -2000 55ppm = -2000
501-216	TcSnrRdNum	TcSnrRdNum	Range = 0 to 255	45ppm = 100 55ppm = 100
501-217	TcSnrRngMin	TcSnrRngMin	Range = 0 to 1023	45ppm = 20 55ppm = 20
501-218	TcNgCountMax	TcNgCountMax	Range = 0 to 255	45ppm = 5 55ppm = 5
501-219	TcDiscardRdNum	TcDiscardRdNum	Range = 0 to 255	45ppm = 5 55ppm = 5
501-220	TcUseRdNum	TcUseRdNum	Range = 0 to 255	45ppm = 10 55ppm = 10
501-221	TcSnrLI	TcSnrLI	Range = 0 to 1023	45ppm = 100 55ppm = 100
501-222	TcSnrUI	TcSnrUI	Range = 0 to 1023	45ppm = 1000 55ppm = 1000
501-223	TcFailCydEn	TcFailCydEn	0 = Disabled, 1 = Enabled	45ppm = 1 55ppm = 1
501-224	NoGoodMax	NoGoodMax	Range = 0 to 100	45ppm = 5 55ppm = 5
501-225	TcLowCdOffset	TcLowCdOffset	Range = -100000 to 100000	45ppm = 0 55ppm = 0
501-226	TcHighCdOffset	TcHighCdOffset	Range = -100000 to 100000	45ppm = 0 55ppm = 0
501-227	UpperLimitatLowTc	UpperLimitatLowTc	Range = -100000 to 100000	45ppm = 390 55ppm = 390
501-228	LowerLimitatHighTc	LowerLimitatHighTc	Range = -100000 to 100000	45ppm = 255 55ppm = 255
501-229	TcLowCdEnabled	TcLowCdEnabled	0 = Disabled, 1 = Enabled	45ppm = 1 55ppm = 1
501-230	TcHighCdEnabled	TcHighCdEnabled	0 = Disabled, 1 = Enabled	45ppm = 1 55ppm = 1
501-231	IodTimePageEndToSensorOn	IodTimePageEndToSensorOn	Range = 0 to 1000ms	45ppm = 138 55ppm = 138
501-232	IodSnrSettleTime	IodSnrSettleTime	Range = 0 to 1000ms	45ppm = 200 55ppm = 200

Table 2 IOT NVM ID 501-160 to 501-365

NVM ID	NVM Name	NVM Description	Settings	Default
501-233	IodSnrRdNum	IodSnrRdNum	Range = 0 to 100	45ppm = 18 55ppm = 18
501-234	IodNgCountMax	IodNgCountMax	Range = 0 to 100	45ppm = 20 55ppm = 20
501-235	IodDiscardRdNum	IodDiscardRdNum	Range = 0 to 100	45ppm = 2 55ppm = 2
501-236	IodUseRdNum	IodUseRdNum	Range = 0 to 100	45ppm = 10 55ppm = 10
501-237	IodSnrLI	IodSnrLI	Range = 0 to 1000	45ppm = 50 55ppm = 50
501-238	IodSnrUI	IodSnrUI	Range = 0 to 2000	45ppm = 1000 55ppm = 1000
501-239	IodSnrRdIntv	IodSnrRdIntv	Range = 0 to 100ms	45ppm = 5 55ppm = 5
501-240	IodSnrFailCount	IodSnrFailCount	Range = 0 to 10000	45ppm = 0 55ppm = 0
501-242	IodRoutineEnable	IodRoutineEnable	Range = 0 to 1	45ppm = 0 55ppm = 0
501-243	IodPatchesToAverage	IodPatchesToAverage	Range = 0 to 10	45ppm = 5 55ppm = 5
501-244	IodFilteredReading	IodFilteredReading	Range = 0 to 2000	45ppm = 0 55ppm = 0
501-245	IodTimePageSyncToSensor	IodTimePageSyncToSensor	Range = 0 to 1000ms	45ppm = 118 55ppm = 118
501-246	Power_BcrAC_Current	Power_BcrAC_Current	Range = 1000 to 3000	45ppm = 1820 55ppm = 1820
501-247	Power_BcrAC_Freq	Power_BcrAC_Freq	Range = 1000 to 3000Hz	45ppm = 1510 55ppm = 1510
501-248	Power_BcrDC	Power_BcrDC	Range = 200 to 1000V	45ppm = 670 55ppm = 670
501-249	Power_DevBiasDC	Power_DevBiasDC	Range = 300 to 700V	45ppm = 552 55ppm = 552
501-250	Power_DevBiasAC	Power_DevBiasAC	Range = 400 to 1100V	45ppm = 500 55ppm = 500
501-251	Power_DevBiasAC_Freq	Power_DevBiasAC_Freq	Range = 5000 to 15000V	45ppm = 8300 55ppm = 8300
501-252	Power_BtrCurrent	Power_BtrCurrent	Range = 50 to 500uA	45ppm = 240 55ppm = 240

Table 2 IOT NVM ID 501-160 to 501-365

NVM ID	NVM Name	NVM Description	Settings	Default
501-253	Power_BtrCurrentLE	Power_BtrCurrentLE	Range = 50 to 500uA	45ppm = 240 55ppm = 240
501-254	Power_BtrCurrentTE	Power_BtrCurrentTE	Range = 50 to 500uA	45ppm = 180 55ppm = 180
501-255	BtrLeadEdgeTime	BtrLeadEdgeTime	Range = 0 to 1000ms	45ppm = 100 55ppm = 100
501-256	BtrTrailEdgeTime	BtrTrailEdgeTime	Range = 0 to 1000ms	45ppm = 60 55ppm = 60
501-257	TcSnrCalAdjEn	TcSnrCalAdjEn	0 = Enabled, 1 = Disabled	45ppm = 1 55ppm = 1
501-258	TcSnrAPuckCal	TcSnrAPuckCal	Range = 0 to 100000000	45ppm = 464 55ppm = 464
501-259	TcSnrBPuckCal	TcSnrBPuckCal	Range = 0 to 100000000	45ppm = 368 55ppm = 368
501-260	TcSnrCPuckCal	TcSnrCPuckCal	Range = 0 to 100000000	45ppm = 271 55ppm = 271
501-261	NotUsed261	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
501-262	TcSnrAPuckNom	TcSnrAPuckNom	Range = 0 to 100000000	45ppm = 464 55ppm = 464
501-263	TcSnrBPuckNom	TcSnrBPuckNom	Range = 0 to 100000000	45ppm = 368 55ppm = 368
501-264	TcSnrCPuckNom	TcSnrCPuckNom	Range = 0 to 100000000	45ppm = 271 55ppm = 271
501-265	TcAPuckCalBitIncmt	TcAPuckCalBitIncmt	Range = 0 to 100000000	45ppm = 232 55ppm = 232
501-266	TcBPuckCalBitIncmt	TcBPuckCalBitIncmt	Range = 0 to 100000000	45ppm = 155 55ppm = 155
501-267	TcCPuckCalBitIncmt	TcCPuckCalBitIncmt	Range = 0 to 100000000	45ppm = 232 55ppm = 232
501-269	BTRFwdBiasCycOut_P1	Time from cycle out initiated (Print Bias complete last sheet) to the BTR going to Forward Bias cycle out.	Range = 0 to 5000ms	45ppm = 367 55ppm = 367
501-270	BTRFwdBiasOffCycOut_P1	Time from cycle out initiated (Print Bias complete last sheet) to the BTR going to Reverse Bias cycle out.	Range = 0 to 5000ms	45ppm = 734 55ppm = 734
501-271	BCRDCOFF_P1	Time from cycle out initiated (Print Bias complete last sheet) BCR DC turned OFF	Range = 0 to 5000ms	45ppm = 476 55ppm = 476
501-272	BCRACOFF_P1	Time from cycle out initiated (Print Bias complete last sheet) BCR AC turned OFF	Range = 0 to 5000ms	45ppm = 1386 55ppm = 1386

Table 2 IOT NVM ID 501-160 to 501-365

NVM ID	NVM Name	NVM Description	Settings	Default
501-273	CartridgeONPulse_P1	Time from cycle out initiated (Print Bias complete last sheet) Start pulse of cartridge motor.	Range = 0 to 5000ms	45ppm = 1994 55ppm = 1994
501-274	CartridgeOffPulse_P1	Time from cycle out initiated (Print Bias complete last sheet) Complete Pulse of cartridge motor.	Range = 0 to 5000ms	45ppm = 2044 55ppm = 2044
501-275	EnvSnrSettleTime	Environmental sensor settle time (for RH readings)	Range = 0 to 300 seconds	45ppm = 60 55ppm = 60
501-276	TmpSnrRdIntv	Temperature Sensor sampling interval	Range = 0 to 30000ms	45ppm = 1000 55ppm = 1000
501-277	TmpSnrRdNum	Temperature Sensor no. of samples averaged	Range = 0 to 100	45ppm = 5 55ppm = 5
501-278	RhSnrRdIntv	Humidity Sensor sampling interval	Range = 0 to 30000ms	45ppm = 1000 55ppm = 1000
501-279	RhSnrRdNum	Humidity Sensor no. of samples averaged	Range = 0 to 100	45ppm = 5 55ppm = 5
501-280	RhAverage	Current averaged Relative Humidity reading	Range = 0 to 100%RH	45ppm = 30 55ppm = 30
501-281	TmpAverage	Current averaged Temperature reading	Range = 0 to 100 Deg. C	45ppm = 20 55ppm = 20
501-282	TmpSnrLI	Temperature Sensor Lower Limit	Range = 0 to 100 Deg. C	45ppm = 5 55ppm = 5
501-283	TmpSnrUI	Temperature Sensor Upper Limit	Range = 0 to 100 Deg. C	45ppm = 50 55ppm = 50
501-284	RhSnrLI	Humidity Sensor Lower Limit	Range = 0 to 100%RH	45ppm = 1 55ppm = 1
501-285	RhSnrUI	Humidity Sensor Upper Limit	Range = 0 to 100%RH	45ppm = 95 55ppm = 95
501-286	NgTmpSnrFailCountMax	No. of temperature sensor readings out of limits threshold	Range = 0 to 100	45ppm = 5 55ppm = 5
501-287	NgRhSnrFailCountMax	No. of humidity sensor readings out of limits threshold	Range = 0 to 100	45ppm = 5 55ppm = 5
501-288	TmpSnrFailCount	Temperature sensor fault count	Range = 0 to 10000	45ppm = 0 55ppm = 0
501-289	RhSnrFailCount	Humidity sensor fault count	Range = 0 to 10000	45ppm = 0 55ppm = 0
501-290	TmpSnrAvgIntv	Temperature sensor averaging interval	Range = 0 to 600 seconds	45ppm = 10 55ppm = 10



Table 2 IOT NVM ID 501-160 to 501-365

NVM ID	NVM Name	NVM Description	Settings	Default
501-291	RhSnrAvgIntv	Humidity sensor averaging interval	Range = 0 to 600 seconds	45ppm = 10 55ppm = 10
501-292	PhotoDevUnitAge	Spare	Range = 0 to 1000000000	45ppm = 200000 55ppm = 200000
501-293	LPH_Exposure	LPH_Exposure	Range = 150 to 600	45ppm = 379 55ppm = 379
501-294	Power_BtrCurrentClean	Power_BtrCurrentClean	Range = 50 to 500uA	45ppm = 180 55ppm = 180
501-295	DensityCtrlMode	Density control mode	0 = Fixed, 1 = Tier 1	45ppm = 1 55ppm = 1
501-296	TCCtrlMode	Toner Concentration control mode	0 = Fixed, 1 = Tier 1	45ppm = 1 55ppm = 1
501-297	Power_BcrAC_Fixed	Power_BcrAC_Fixed	Range = 1000 to 3000uA	45ppm = 1820 55ppm = 1820
501-298	Power_BcrDC_Fixed	Power_BcrDC_Fixed	Range = 200 to 1000V	45ppm = 670 55ppm = 670
501-299	Power_DevBiasDC_Fixed	Power_DevBiasDC_Fixed	Range = 300 to 700V	45ppm = 552 55ppm = 552
501-300	LPH_Exposure_Fixed	LPH_Exposure_Fixed	Range = 150 to 600	45ppm = 379 55ppm = 379
501-301	TcSnrTarget_Fixed	TcSnrTarget_Fixed	Range = 0 to 1023	45ppm = 291 55ppm = 291
501-302	TransferCtrlMode	Transfer control mode	0 = Fixed, 1 = Tier 1	45ppm = 1 55ppm = 1
501-303	Power_BtrCurrent_Fixed	Power_BtrCurrent_Fixed	Range = 50 to 500uA	45ppm = 240 55ppm = 240
501-311	TcEmptyDetectCntMax	TcEmptyDetectCntMax	Range = 0 to 1000	45ppm = 5 55ppm = 5
501-312	TcEmptySw	Switch between pixel and TC control for the empty bottle calculations.	0 = Empty declaration from pixel count, 1 = Empty declaration from TC	45ppm = 0 55ppm = 0
501-313	Power_BtrCurrentLE_Fixed	Power_BtrCurrentLE_Fixed	Range = 50 to 500uA	45ppm = 240 55ppm = 240
501-314	Power_BtrCurrentTE_Fixed	Power_BtrCurrentTE_Fixed	Range = 50 to 500uA	45ppm = 180 55ppm = 180
501-315	Power_BtrCurrentClean_Fixed	Power_BtrCurrentClean_Fixed	Range = 50 to 500uA	45ppm = 180 55ppm = 180
501-316	ACGain	Area Coverage Gain	Range = 0 to 200	45ppm = 100 55ppm = 100

Table 2 IOT NVM ID 501-160 to 501-365

NVM ID	NVM Name	NVM Description	Settings	Default
501-317	ACDecayCoeff	Area Coverage Decay coefficient	Range = 0 to 2000	45ppm = 120 55ppm = 120
501-318	ACMaxPixelsToCoverDrum	Area Coverage Max Pixels to cover drum	Range = 0 to 20000	45ppm = 1648 55ppm = 1648
501-319	ACRollingValue	Area Coverage rolling value	Range = 0 to 200000	45ppm = 5000 55ppm = 5000
501-320	ACAccDrumCycles	Accumulated Drum Cycles Per Image samples	Range = 0 to 5000	45ppm = 0 55ppm = 0
501-321	ACAccCycledInPixels	Accumulated AC Pixel Count Per Image samples in Pixels	Range = 0 to 1000000	45ppm = 0 55ppm = 0
501-322	DrumCycleCounterSaveFreq	Area Coverage Drum Cycle counter save frequency	Range = 1 to 10000	45ppm = 100 55ppm = 100
501-323	TcSnrReadPeriod	Area Coverage Toner Concentration sensor read period	Range = 0 to 60000	45ppm = 2500 55ppm = 2500
501-324	AcAcclImages	Area Coverage accumulated images	Range = 0 to 2000	45ppm = 0 55ppm = 0
501-325	AclImageSamples	Area Coverage images sampled	Range = 1 to 2000	45ppm = 30 55ppm = 30
501-326	ACRollingValueMaxLimit	Max limited value of Area Coverage calculated from the algorithm	Range = 0 to 200000	45ppm = 100000 55ppm = 100000
501-327	ACRollingValueMinLimit	Min limited value of Area Coverage calculated from the algorithm	Range = 0 to 200000	45ppm = 0 55ppm = 0
501-328	NvmXferBigSub	Xerographic LUT cross-process width upper threshold XferBigSub	Range = 160 to 420	45ppm = 216 55ppm = 216
501-329	NvmXferSmallSub	Xerographic LUT cross-process width lower threshold XferSmallSub	Range = 100 to 160	45ppm = 140 55ppm = 140
501-330	NvmXferLowRh	Xerographic LUT transfer lower humidity threshold XferLowRh (approx 20%)	Range = 0 to 100	45ppm = 14 55ppm = 14
501-331	NvmXferHighRH	Xerographic LUT transfer upper humidity threshold XferHighRh (approx 75%)	Range = 0 to 100	45ppm = 54 55ppm = 54

Table 2 IOT NVM ID 501-160 to 501-365

NVM ID	NVM Name	NVM Description	Settings	Default
501-332	HighAcPxlWindowTime	Time period to gather the pixel information over to calculate the TotalMovingPxIAcc	Range = 1 to 100000ms	45ppm = 10000 55ppm = 10000
501-333	HighAcTotalMovingPxIAcc	The accumulated pixel count over HighAcPxlWindowTime.	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
501-334	HighAcTcPxlTh	The threshold for accumulated pixels over the time HighAcPxlWindowTime which will cause entry to HighAcRecovery	Range = 1392 to 2147483647	45ppm = 3480 55ppm = 3480
501-335	HighAcTcPxlThCntMax	The number of consecutive readings before entry and exit from High AC recovery mode.	Range = 0 to 100	45ppm = 5 55ppm = 5
501-336	HighAcModeTimeout	Timeout for High AC mode. Timer started when dead cycling begins	Range = 0 to 300000ms	45ppm = 90000 55ppm = 90000
501-337	DTS_Enable	Determines whether DTS is enabled or not	Range = 0 to 1	45ppm = 1 55ppm = 1
501-338	HighAcLastTcDispSw	Stores previous TC dispense mode at entry to high AC mode	Range = 0 to 6	45ppm = 1 55ppm = 1
501-339	BtrCycleInCleanStart	Following a jam, on cycle in 1 cycle of the BTR is required for cleaning. This is the time delay to start the clean cycle.	Range = 0 to 5000ms	45ppm = 1400 55ppm = 1400
501-340	BtrCleanDuration	Following a jam, on cycle in 1 cycle of the BTR is required for cleaning. This is the duration of the clean cycle minus the start time.	Range = 0 to 5000ms	45ppm = 1900 55ppm = 1900
501-341	XeroShutdownTimeBtr	On a shutdown, time to turn off the BTR	Range = 0 to 5000ms	45ppm = 0 55ppm = 0
501-342	XeroShutdownTimeCartMtr	On a shutdown, time to turn off the Cartridge Motor	Range = 0 to 5000ms	45ppm = 155 55ppm = 155
501-343	XeroShutdownTimeBcrDC	On a shutdown, time to turn off the BCR DC	Range = 0 to 5000ms	45ppm = 0 55ppm = 0
501-344	XeroShutdownTimeBcrAC	On a shutdown, time to turn off the BCR AC	Range = 0 to 5000ms	45ppm = 0 55ppm = 0

Table 2 IOT NVM ID 501-160 to 501-365

NVM ID	NVM Name	NVM Description	Settings	Default
501-345	BtrCycleInCleanFlag	Following a shutdown on cycle in 1 cycle of the BTR is required for cleaning. This NVM determines whether the cleaning cycle should be run or not.	Range = 0 to 1	45ppm = 0 55ppm = 0
501-346	XeroReadyTimeAfterShutdown_P1	Minimum time from Xerographics start cycle in to the first transfer time following a shutdown condition	Range = 0 to 5000ms	45ppm = 2900 55ppm = 2900
501-347	XeroShutdownTimeDevBiasDC	On a shutdown, time to turn off the Dev Bias DC	Range = 0 to 5000ms	45ppm = 155 55ppm = 155
501-348	XeroShutdownTimeDevBiasAC	On a shutdown, time to turn off the Dev Bias AC	Range = 0 to 5000ms	45ppm = 155 55ppm = 155
501-349	TcSnrReading	Filtered TC sensor reading (TcSnrRead)	Range = 0 to 1023	45ppm = 291 55ppm = 291
501-350	BCR_DC_ON_Clean_CycleIn	Prevents sheets being grabbed from user when loading sheets	Range = 0 to 5000ms	45ppm = 10 55ppm = 10
501-351	BCR_AC_ON_Clean_CycleIn	BCR_AC_ON_Clean_CycleIn	Range = 0 to 5000ms	45ppm = 10 55ppm = 10
501-352	DevBiasDC_ON_Clean_CycleIn	DevBiasDC_ON_Clean_CycleIn	Range = 0 to 5000ms	45ppm = 0 55ppm = 0
501-353	DevBiasAC_ON_Clean_CycleIn	DevBiasAC_ON_Clean_CycleIn	Range = 0 to 5000ms	45ppm = 395 55ppm = 395
501-354	PcReplacedXeroDelayFlag	Following a change of print cartridge this flag is set to delay xerographic ready time to allow the developer longer time to stabilise after carrier/toner is first released.	0 = No change of print cartridge detected, 1 = Print cartridge has been changed	45ppm = 0 55ppm = 0
501-355	PcReplacedXeroReadyTime_P1	Following a change of print cartridge this is the minimum time from Xerographics start cycle in to Xerographics ready.	Range = 0 to 100000ms	45ppm = 15000 55ppm = 15000
501-356	Power_BcrAC_Duty	Duty cycle of the BCR AC waveform	Range = 0 to 100	45ppm = 50 55ppm = 50
501-357	Power_DevBiasAC_Duty	Duty cycle of the Dev Bias AC waveform	Range = 0 to 100	45ppm = 50 55ppm = 50
501-358	TnrBelowEmptyTh	Toner remaining hard stop threshold for instant end of life declaration	Range = -100 to 0	45ppm = -50 55ppm = -50

**Table 2 IOT NVM ID 501-160 to 501-365**

NVM ID	NVM Name	NVM Description	Settings	Default
501-359	SystemLockout-Fault	A system lockout fault requiring a service call has occurred. The Index of the IOT fault code is stored so that at power on the IOT can immediately re-raise the fault to prohibit marking.	0 = No lockout fault, N = IOT fault code index number	45ppm = 0 55ppm = 0
501-361	TcDispOLMaxOn-Time	TC Dispense Open Loop Max OnTime	Range = 0 to 1000000000ms	45ppm = 500 55ppm = 500
501-362	TcDispOLMinOff-Time	TC Dispense Open Loop Min OnTime	Range = 0 to 1000000000ms	45ppm = 10 55ppm = 10
501-363	PCOverTempUpperLimit	Print cartridge over temperature upper threshold.	Range = 0 to 100 Deg. C	45ppm = 47 55ppm = 47
501-364	PCOverTempLowerLimit	Print cartridge over temperature lower threshold.	Range = 0 to 100 Deg. C	45ppm = 43 55ppm = 43
501-365	PCCoolingTimeout	Timeout for Print Cartridge Cooling mode.	Range = 0 to 600000ms	45ppm = 120000 55ppm = 120000
501-366	TcStartEmptyDetectCnt	Toner cartridge start empty detect count	Range = 0 to 1000	45ppm = 0 55ppm = 0
501-367	TcNearEmptyDetectCnt	Toner cartridge near empty detect count	Range = 0 to 1000	45ppm = 0 55ppm = 0
501-368	TcEmptyDetectCnt	Toner cartridge empty detect count	Range = 0 to 1000	45ppm = 0 55ppm = 0

**Table 3 IOT NVM ID 502-292 to 502-399**

NVM ID	NVM Name	NVM Description	Settings	Default
502-292	NvmFsrStandbyTemp	NvmFsrStandbyTemp	Range = 0 to 2100	45ppm = 600 55ppm = 600
502-293	NvmFsrRunTemp	NvmFsrRunTemp	Range = 100 to 2100	45ppm = 1950 55ppm = 1950
502-294	NvmFsrMaxTargetTemp	NvmFsrMaxTargetTemp	Range = 1600 to 2600	45ppm = 2400 55ppm = 2400
502-295	NvmFsrRange	NvmFsrRange	Range = 50 to 500	45ppm = 200 55ppm = 200
502-296	NvmFsrMaxPowerCapped	NvmFsrMaxPowerCapped	Range = 1 to 21	45ppm = 21 55ppm = 21

**Table 3 IOT NVM ID 502-292 to 502-399**

NVM ID	NVM Name	NVM Description	Settings	Default
502-297	NvmFsrKpMarking	NvmFsrKpMarking	Range = 0 to 1500	45ppm = 1300 55ppm = 1300
502-298	NvmFsrKiMarking	NvmFsrKiMarking	Range = 0 to 100	45ppm = 10 55ppm = 10
502-299	NvmFsrKdMarking	NvmFsrKdMarking	Range = 0 to 100	45ppm = 40 55ppm = 40
502-300	NvmFsrKp2Marking	NvmFsrKp2Marking	Range = 0 to 1500	45ppm = 1300 55ppm = 1300
502-301	NvmFsrKi2Marking	NvmFsrKi2Marking	Range = 0 to 100	45ppm = 10 55ppm = 10
502-302	NvmFsrKd2Marking	NvmFsrKd2Marking	Range = 0 to 100	45ppm = 40 55ppm = 40
502-303	NvmFsrNVMNull249	NvmFsrNVMNull249	Range = 0 to 100	45ppm = 0 55ppm = 0
502-304	NvmFsrICalc1Offset	NvmFsrICalc1Offset	Range = 0 to 80	45ppm = 20 55ppm = 20
502-305	NvmFsrICalc2Offset	NvmFsrICalc2Offset	Range = 0 to 80	45ppm = 20 55ppm = 20
502-306	NvmFsrICalc3Offset	NvmFsrICalc3Offset	Range = 0 to 80	45ppm = 20 55ppm = 20
502-307	NvmFsrCrumVoltage	NvmFsrCrumVoltage	Range = 0 to 100	45ppm = 40 55ppm = 40
502-308	NvmFsrDCalc2Offset	NvmFsrDCalc2Offset	Range = 0 to 100	45ppm = 40 55ppm = 40
502-309	NvmFsrDCalc3Offset	NvmFsrDCalc3Offset	Range = 0 to 100	45ppm = 40 55ppm = 40
502-310	NvmFsrPowerCalc1Offset	NvmFsrPowerCalc1Offset	Range = 0 to 100	45ppm = 0 55ppm = 0
502-311	NvmFsrPowerCalc2Offset	NvmFsrPowerCalc2Offset	Range = 0 to 100	45ppm = 0 55ppm = 0
502-312	NvmFsrPowerCalc3Offset	NvmFsrPowerCalc3Offset	Range = 0 to 100	45ppm = 0 55ppm = 0
502-313	NvmFsrDeltaBreach	NvmFsrDeltaBreach	Range = 0 to 500	45ppm = 250 55ppm = 250
502-314	NvmFsrNVMNull260	NvmFsrNVMNull260	Range = 0 to 100	45ppm = 0 55ppm = 0
502-315	NvmFsrWarmup-Timer	Fuser Warmup Check Time	Range = 10000 to 50000ms	45ppm = 40000 55ppm = 40000

**Table 3 IOT NVM ID 502-292 to 502-399**

NVM ID	NVM Name	NVM Description	Settings	Default
502-316	NvmFsrStandby-Timer	NvmFsrStandbyTimer	Range = 20000 to 900000	45ppm = 900000 55ppm = 900000
502-317	NvmFsrAutoRecoveryTimer	NvmFsrAutoRecoveryTimer	Range = 1000 to 5000	45ppm = 3000 55ppm = 3000
502-318	NvmFsrLampPidUpperLimit	NvmFsrLampPidUpperLimit	Range = 100000 to 1000000	45ppm = 1000000 55ppm = 1000000
502-319	NvmCdiConsoleOut	NvmCdiConsoleOut	Range = 0 to 10	45ppm = 0 55ppm = 0
502-340	NvmFsrKp3Marking	NvmFsrKp3Marking	Range = 0 to 1500	45ppm = 1000 55ppm = 1000
502-341	NvmFsrKi3Marking	Lamp3 Proportional Kp coefficient	Range = 0 to 20	45ppm = 10 55ppm = 10
502-342	NvmFsrKd3Marking	Lamp3 Differential Kd coefficient	Range = 0 to 100	45ppm = 20 55ppm = 20
502-343	NvmFsrRoller-RunOnTimeNotUsed	Period of time that the fuser rollers keep rotating after the fuser has been asked to stop. (Reduces temp overshoot at cycle out)	Range = 0 to 5000ms	45ppm = 1000 55ppm = 1000
502-344	NotUsed447	Not Used 447	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
502-345	HeavyWeightMediaTempOffset	Fuser target temperature offset applied when Heavy-weight media is fed.	Range = 0 to 15 Deg C	45ppm = 10 55ppm = 10
502-346	NvmDelayBeforeLampsOff	Time delay when fuser lamp power should be removed after the last sheet in the queue has been fed.	Range = 0 to 3000ms	45ppm = 500 55ppm = 500
502-347	NvmSecondFuserLampTurnOn-Delay	Time delay for turning on the second lamp when 2 fuser lamps are turned on at the same time	Range = 0 to 2550ms	45ppm = 0 55ppm = 0
502-348	NvmFuserLamp1MinPowerCap	Minimum power cap for fuser lamp 1	Range = 0 to 12	45ppm = 0 55ppm = 0
502-349	NvmFuserLamp2MinPowerCap	Minimum power cap for fuser lamp 2	Range = 0 to 12	45ppm = 0 55ppm = 0
502-350	NvmFuserLamp3MinPowerCap	Minimum power cap for fuser lamp 3	Range = 0 to 12	45ppm = 0 55ppm = 0

**Table 3 IOT NVM ID 502-292 to 502-399**

NVM ID	NVM Name	NVM Description	Settings	Default
502-351	NvmLVPSUFram-eRate	IOT to LVPSU Frame transmission rate	Range = 50 to 100ms	45ppm = 100 55ppm = 100
502-352	NvmFuserThermistorCheckTime	Fuser thermistor power on temp rise check - Time	Range = 0 to 15 seconds	45ppm = 10 55ppm = 10
502-353	NvmFuserThermistorCheckDegrees	Fuser thermistor power on temp rise check - Temp	Range = 0 to 50 Deg. C	45ppm = 10 55ppm = 10
502-354	FuserSheetReleaseTemperature	During fuser warming up to run temperature, this is the temperature that the initial sheet will be released from the wait point	Range = 0 to 50 Deg. C x 10	45ppm = 10 55ppm = 10
502-355	FuserPowerCappingEnable	Fuser lamp power capping	0 = Disable, 1 = Enable	45ppm = 1 55ppm = 1
502-356	LVPSUVoltageEnumStandby110v	Default LVPS Voltage Enum used when LVPS does not return a voltage Enum for standby	Range = 0 to 255	45ppm = 136 55ppm = 136
502-357	LVPSUVoltageEnumRun110v	Default LVPS Voltage Enum used when LVPS does not return a voltage Enum	Range = 0 to 255	45ppm = 130 55ppm = 130
502-358	LVPSUVoltageEnumStandby230v	Default LVPS Voltage Enum used when LVPS does not return a voltage Enum	Range = 0 to 255	45ppm = 51 55ppm = 51
502-359	LVPSUVoltageEnumRun230v	Default LVPS Voltage Enum used when LVPS does not return a voltage Enum	Range = 0 to 255	45ppm = 48 55ppm = 48
502-360	SystemStandbyVA	LVPS System Standby VA Limit	Range = 0 to 500	45ppm = 125 55ppm = 125
502-361	SystemRunVA	LVPS System Run VA Limit	Range = 0 to 1000	45ppm = 410 55ppm = 410
502-362	Lamp1MaxLimitVA	Fuser Lamp1 Max VA Limit	Range = 0 to 1500	45ppm = 951 55ppm = 951
502-363	Lamp2MaxLimitVA	Fuser Lamp2 Max VA Limit	Range = 0 to 1500	45ppm = 755 55ppm = 755
502-364	Lamp1MinLimitVA	Fuser Lamp1 Min VA Limit	Range = 0 to 500	45ppm = 245 55ppm = 245
502-365	Lamp2MinLimitVA	Fuser Lamp2 Min VA Limit	Range = 0 to 500	45ppm = 195 55ppm = 195
502-366	PowerLevelPercentagePL20	LVPS Power Level to Percentage conversion PL20	Range = 0 to 100	45ppm = 100 55ppm = 100
502-367	PowerLevelPercentagePL19	LVPS Power Level to Percentage conversion PL19	Range = 0 to 100	45ppm = 95 55ppm = 95
502-368	PowerLevelPercentagePL18	LVPS Power Level to Percentage conversion PL18	Range = 0 to 100	45ppm = 92 55ppm = 92

**Table 3 IOT NVM ID 502-292 to 502-399**

NVM ID	NVM Name	NVM Description	Settings	Default
502-369	PowerLevelPercentagePL17	LVPS Power Level to Percentage conversion PL17	Range = 0 to 100	45ppm = 87 55ppm = 87
502-370	PowerLevelPercentagePL16	LVPS Power Level to Percentage conversion PL16	Range = 0 to 100	45ppm = 83 55ppm = 83
502-371	PowerLevelPercentagePL15	LVPS Power Level to Percentage conversion PL15	Range = 0 to 100	45ppm = 80 55ppm = 80
502-372	PowerLevelPercentagePL14	LVPS Power Level to Percentage conversion PL14	Range = 0 to 100	45ppm = 75 55ppm = 75
502-373	PowerLevelPercentagePL13	LVPS Power Level to Percentage conversion PL13	Range = 0 to 100	45ppm = 68 55ppm = 68
502-374	PowerLevelPercentagePL12	LVPS Power Level to Percentage conversion PL12	Range = 0 to 100	45ppm = 66 55ppm = 66
502-375	PowerLevelPercentagePL11	LVPS Power Level to Percentage conversion PL11	Range = 0 to 100	45ppm = 62 55ppm = 62
502-376	PowerLevelPercentagePL10	LVPS Power Level to Percentage conversion PL10	Range = 0 to 100	45ppm = 57 55ppm = 57
502-377	PowerLevelPercentagePL9	LVPS Power Level to Percentage conversion PL9	Range = 0 to 100	45ppm = 53 55ppm = 53
502-378	PowerLevelPercentagePL8	LVPS Power Level to Percentage conversion PL8	Range = 0 to 100	45ppm = 50 55ppm = 50
502-379	PowerLevelPercentagePL7	LVPS Power Level to Percentage conversion PL7	Range = 0 to 100	45ppm = 46 55ppm = 46
502-380	PowerLevelPercentagePL6	LVPS Power Level to Percentage conversion PL6	Range = 0 to 100	45ppm = 43 55ppm = 43
502-381	PowerLevelPercentagePL5	LVPS Power Level to Percentage conversion PL5	Range = 0 to 100	45ppm = 37 55ppm = 37
502-382	PowerLevelPercentagePL4	LVPS Power Level to Percentage conversion PL4	Range = 0 to 100	45ppm = 32 55ppm = 32
502-383	PowerLevelPercentagePL3	LVPS Power Level to Percentage conversion PL3	Range = 0 to 100	45ppm = 30 55ppm = 30
502-384	PowerLevelPercentagePL2	LVPS Power Level to Percentage conversion PL2	Range = 0 to 100	45ppm = 30 55ppm = 30
502-385	PowerLevelPercentagePL1	LVPS Power Level to Percentage conversion PL1	Range = 0 to 100	45ppm = 30 55ppm = 30
502-386	NvmDelayBeforeLampsOffDuplex	Time delay when fuser lamp power should be removed after the last duplex sheet in the queue has been fed.	Range = 0 to 3000ms	45ppm = 2000 55ppm = 2000
502-387	NvmMaxPi-CappedValue	The maximum capped value for the integral term for the PID lamp temperature control	Range = 0 to 30	45ppm = 20 55ppm = 20
502-388	NvmFsrStandbyTempCorruptionCheck	NVM Fuser Standby Temp Corruption Check	Range = 0 to 2100	45ppm = 600 55ppm = 600

**Table 3 IOT NVM ID 502-292 to 502-399**

NVM ID	NVM Name	NVM Description	Settings	Default
502-389	NvmFsrRunTempCorruptionCheck	NVM Fuser Run Temp Corruption Check	Range = 100 to 2100	45ppm = 1950 55ppm = 1950
502-390	NvmFsrMaxTargetTempCorruptionCheck	NVM Fuser Max Target Temp Corruption Check	Range = 1600 to 2600	45ppm = 2400 55ppm = 2400
502-391	FsrThrottlingEnable	Enables/Disables productivity reduction to maintain fuser temperature when line power is insufficient to keep fuser at fusing temperature.	Range = 0 to 1	45ppm = 1 55ppm = 1
502-392	FsrLampPrioritySwitchPeriod	During lamp power capping, when the required lamp powers for lamps 1 and 2 are equal the lamps are alternately powered based on this time period.	Range = 0 to 1500ms	45ppm = 500 55ppm = 500
502-393	FsrSemiReadyModeEnable	Fuser semi ready mode enable	0 = Disabled, 1 = Enabled	45ppm = 1 55ppm = 1
502-394	TranspTempffset	Fuser target temperature offset applied when Transparency media is fed.	Range = -20 to 20 Deg. C	45ppm = -10 55ppm = -10
502-395	EnvTempOffset	Fuser target temperature offset applied when Envelope media is fed.	Range = -20 to 20 Deg. C	45ppm = 0 55ppm = 0
502-396	LabelTempOffset	Fuser target temperature offset applied when Labels media is fed.	Range = -20 to 20 Deg. C	45ppm = 15 55ppm = 15
502-397	NvmFsrDuplexRunTemp	NvmFsrDuplexRunTemp	Range = 100 to 2100 Deg. C x 10	45ppm = 1900 55ppm = 1900
502-398	FsrDuplexRunTempCorruptionCheck	NvmFsrDuplexRunTempCorruptionCheck	Range = 100 to 2100 Deg. C x 10	45ppm = 1900 55ppm = 1900
502-399	FsrSemiReadyHoldUpTime	NvmFsrSemiReadyHoldUpTime	Range = 100 to 2100 seconds	45ppm = 1900 55ppm = 1900

Table 4 IOT NVM ID 503-001 to 503-123

NVM ID	NVM Name	NVM Description	Settings	Default
503-001	NvmFsrCrumSN Chars1to3	Pseudo CRUM Machine Serial Number - Bytes 1, 2 & 3 (Read only)	Range = 0 to 2147483647	45ppm = 808464432 55ppm = 808464432
503-002	NvmFsrCrumSN Chars4to6	Pseudo CRUM Machine Serial Number - Bytes 4, 5 & 6 (Read only)	Range = 0 to 2147483647	45ppm = 808464432 55ppm = 808464432
503-003	NvmFsrCrumSN Chars7to9	Pseudo CRUM Machine Serial Number - Bytes 7, 8 & 9 (Read only)	Range = 0 to 2147483647	45ppm = 808464432 55ppm = 808464432
503-004	NvmFsrCrum-CRU TotalPrintCount	Pseudo CRUM CRU Total Print Count (Read only)	Range = 0 to 1000000	45ppm = 0 55ppm = 0
503-005	NvmFsrCrum-MaxPrintCount	Pseudo CRUM Max Print Count (Read only)	Range = 0 to 1000000	45ppm = 250000 55ppm = 250000
503-006	NvmNotUSed389	Not Used 389	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-007	NvmFsrCrum-Model	Pseudo CRUM Model (Read only)	Range = 0 to 255	45ppm = 255 55ppm = 255
503-008	NvmFsrCrum-CompatibilityID	Pseudo CRUM Compatibility ID (Read only)	Range = 0 to 65535	45ppm = 65281 55ppm = 65281
503-009	NvmFsrCrumServiceOffering	Pseudo CRUM Service Offering (Read only)	Range = 0 to 255	45ppm = 16 55ppm = 16
503-010	NvmFsr-CrumEOLStatus	Pseudo CRUM EOL Status (Read only)	Range = 0 to 255	45ppm = 255 55ppm = 255
503-011	NvmFsrCrumCurrentLife	Pseudo CRUM Current Life (EOL/Resuse) (Read only)	Range = 0 to 255	45ppm = 255 55ppm = 255
503-012	NvmFsrCrumOp-CodeID	Pseudo CRUM OpCo ID (Read only)	Range = 0 to 255	45ppm = 32 55ppm = 32
503-013	NvmFsrCrumVoltage	Pseudo CRUM Voltage (Read only)	Range = 0 to 255	45ppm = 2 55ppm = 2
503-014	NvmFsrCrumPSC	Pseudo CRUM Print Security Count - PSC for the current life (Read only)	Range = 0 to 2147483647	45ppm = 2147483647 55ppm = 2147483647

Table 4 IOT NVM ID 503-001 to 503-123

NVM ID	NVM Name	NVM Description	Settings	Default
503-015	NvmFsr-CrumEOLReuse	Pseudo CRUM EOL_Resure (Read only)	Range = 0 to 2147483647	45ppm = 2147483647 55ppm = 2147483647
503-016	NvmFsrCrumSpare399	Pseudo CRUM SPARE	Range = 0 to 2147483647	45ppm = 2147483647 55ppm = 2147483647
503-017	NvmFsrCrumSpare400	Pseudo CRUM SPARE	Range = 0 to 2147483647	45ppm = 2147483647 55ppm = 2147483647
503-018	NvmFsrCrumSpare401	Pseudo CRUM SPARE	Range = 0 to 2147483647	45ppm = 2147483647 55ppm = 2147483647
503-019	NvmFsrCrumSpare402	Pseudo CRUM SPARE	Range = 0 to 2147483647	45ppm = 2147483647 55ppm = 2147483647
503-020	NvmFsrCrumSN Chars10to12	Pseudo CRUM Machine Serial Number - Bytes 10, 11 & 12 (Read only)	Range = 0 to 2147483647	45ppm = 808464432 55ppm = 808464432
503-023	NvmFsrCrum-CRU SerialNum	CRU Serial Number - Fuser	Range = 0 to 2147483647	45ppm = 808464432 55ppm = 808464432
503-101	NvmFsrActualCrumSNChars1to3	Actual CRUM Machine Serial Number - Bytes 1, 2 & 3	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-102	NvmFsrActualCrumSNChars4to6	Actual CRUM Machine Serial Number - Bytes 4, 5 & 6	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-103	NvmFsrActualCrumSNChars7to9	Actual CRUM Machine Serial Number - Bytes 7, 8 & 9	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-104	NvmFsrActual-CrumCRU TotalPrintCt	Actual CRUM CRU Total Print Count	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-105	NvmFsrActual-CrumMaxPrintCount	Actual CRUM Max Print Count	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-106	NvmFsrActual-CrumLastUsed-Date	Actual CRUM Last Used Date	Range = 0 to 2147483647	45ppm = 0 55ppm = 0

**Table 4 IOT NVM ID 503-001 to 503-123**

NVM ID	NVM Name	NVM Description	Settings	Default
503-107	NvmFsrActual-CrumSuperCompatID	Actual CRUM Super Compatibility ID	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-108	NvmFsrActual-CrumCompatibilityID	Actual CRUM Compatibility ID	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-109	NvmFsrActual-CrumServiceOffering	Actual CRUM Service Offering	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-110	NvmFsrActual-CrumEOLStatus	Actual CRUM EOL Status	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-111	NvmFsrActual-CrumCurrentLife	Actual CRUM Current Life (EOL/Resuse)	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-112	NvmFsrActual-CrumOpCodeID	Actual CRUM OpCo ID	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-113	NvmFsrActual-CrumVoltage	Actual CRUM Voltage	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-114	NvmFsrActualCrumPSC1	Actual CRUM Print Security Count 1	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-115	NvmFsrActualCrumPSC2	Actual CRUM Print Security Count 2	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-116	NvmFsrActualCrumPSC3	Actual CRUM Print Security Count 3	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-117	NvmFsrActualCrumPSC4	Actual CRUM Print Security Count 4	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-118	NvmFsrActualCrumPSC5	Actual CRUM Print Security Count 5	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-119	NvmFsrActualCrumPSC6	Actual CRUM Print Security Count 6	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-120	NvmFsrActualCrumSNChars10to12	Actual CRUM Machine Serial Number - Bytes 10, 11 & 12	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
503-123	NvmFsrActual-CrumCRUSerial-Num	CRU Serial Number - Fuser	Range = 0 to 2147483647	45ppm = 0 55ppm = 0

**Table 5 IOT NVM ID 504-001 to 504-125**

NVM ID	NVM Name	NVM Description	Settings	Default
504-001	NvmPcCrumSNChars1to3	Pseudo CRUM Machine Serial Number - Bytes 1, 2 & 3 (Read only).	Range = 0 to 2147483647	45ppm = 808464432 55ppm = 808464432

**Table 5 IOT NVM ID 504-001 to 504-125**

NVM ID	NVM Name	NVM Description	Settings	Default
504-002	NvmPcCrumSNChars4to6	Pseudo CRUM Machine Serial Number - Bytes 4, 5 & 6 (Read only).	Range = 0 to 2147483647	45ppm = 808464432 55ppm = 808464432
504-003	NvmPcCrumSNChars7to9	Pseudo CRUM Machine Serial Number - Bytes 7, 8 & 9 (Read only).	Range = 0 to 2147483647	45ppm = 808464432 55ppm = 808464432
504-004	NvmPcCrum-CRUTotalPrint-Count	Pseudo CRUM CRU Total Print Count (Read only).	Range = 0 to 1000000	45ppm = 0 55ppm = 0
504-005	NvmPcCrumMax-PrintCount	Pseudo CRUM Max Print Count (Read only).	Range = 0 to 1000000	45ppm = 250000 55ppm = 250000
504-006	PhotoDevUnitAge	Pseudo CRUM PRCycle Count (Print cartridge age) (Read only)	Range = 0 to 1000000	45ppm = 0 55ppm = 0
504-007	NvmPcCrumMax-PRCycleCount	Pseudo CRUM Max PR Cycle Count (Read only).	Range = 0 to 1000000	45ppm = 400000 55ppm = 400000
504-008	NotUsed410	Not Used 410	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-009	PcCrumSuper-CompatibilityID	Pseudo CRUM Super Compatibility ID (Read only).	Range = 0 to 65535	45ppm = 255 55ppm = 255
504-010	PcCrumCompatibilityID	Pseudo CRUM Compatibility ID (Read only).	Range = 0 to 65535	45ppm = 65281 55ppm = 65281
504-011	PcCrumService-Offering	Pseudo CRUM Service Offering (Read only).	Range = 0 to 255	45ppm = 64 55ppm = 64
504-012	PcCrumEOLStatus	Pseudo CRUM EOL Status (Read only).	Range = 0 to 255	45ppm = 255 55ppm = 255
504-013	PcCrumCurrentLife	Pseudo CRUM Current Life (EOL/Resuse) (Read only).	Range = 0 to 255	45ppm = 255 55ppm = 255
504-014	PcCrumOpCodeID	Pseudo CRUM OpCo ID (Read only).	Range = 0 to 1000	45ppm = 32 55ppm = 32
504-015	PcCrumSpare417	Pseudo CRUM SPAR (Read only).	Range = 0 to 2147483647	45ppm = 2147483647 55ppm = 2147483647
504-016	PcCrumPSC	Pseudo CRUM Print Security Count - PSC for the current life (Read only).	Range = 0 to 2147483647	45ppm = 2147483647 55ppm = 2147483647

Table 5 IOT NVM ID 504-001 to 504-125

NVM ID	NVM Name	NVM Description	Settings	Default
504-017	PcCrumEOL-Reuse	Pseudo CRUM EOL_Resure (Read only)	Range = 0 to 2147483647	45ppm = 2147483647 55ppm = 2147483647
504-018	PcCrumSpare420	Pseudo CRUM SPARE	Range = 0 to 2147483647	45ppm = 2147483647 55ppm = 2147483647
504-019	PcCrumSpare421	Pseudo CRUM SPARE	Range = 0 to 2147483647	45ppm = 2147483647 55ppm = 2147483647
504-020	PcCrumSpare422	Pseudo CRUM SPARE	Range = 0 to 2147483647	45ppm = 2147483647 55ppm = 2147483647
504-021	PcCrumSpare423	Pseudo CRUM SPARE	Range = 0 to 2147483647	45ppm = 2147483647 55ppm = 2147483647
504-022	PcCrumSNChars 10to12	Pseudo CRUM Machine Serial Number - Bytes 10, 11 & 12 (Read only).	Range = 0 to 2147483647	45ppm = 808464432 55ppm = 808464432
504-023	PcCrumCRUSerialNum	CRU Serial Number - Print Cartridge (Read only).	Range = 0 to 2147483647	45ppm = 808464432 55ppm = 808464432
504-024	ExpOffsetCRU	Pseudo CRU - Print Cartridge exposure offset (Read only)	Range = 0 to 255	45ppm = 127 55ppm = 127
504-025	TcNonCruPuck-CalNumber	TcNonCruPuckCalNumber (Read only)	Range = 11 to 99	45ppm = 55 55ppm = 55
504-101	NotUsed443	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-102	NotUsed444	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-103	NotUsed445	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-104	NotUsed446	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-105	NotUsed447	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-106	NotUsed448	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0

Table 5 IOT NVM ID 504-001 to 504-125

NVM ID	NVM Name	NVM Description	Settings	Default
504-107	NotUsed449	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-108	NotUsed450	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-109	NotUsed451	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-110	NotUsed452	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-111	NotUsed453	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-112	NotUsed454	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-113	NotUsed455	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-114	NotUsed456	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-115	NotUsed457	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-116	NotUsed458	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-117	NotUsed459	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-118	NotUsed460	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-119	NotUsed461	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-120	NotUsed462	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-121	NotUsed463	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-122	NotUsed471	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-123	NotUsed483	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
504-124	ThirdPartyExpOffsetCRU	3rd Party (No CRUM) - Print Cartridge exposure offset set to mid-range value	Range = 0 to 255	45ppm = 127 55ppm = 127
504-125	ThirdPartyTcNonCruPuckCalNumber	3rd Party (No CRUM) Print cartridge TC sensor calibration value for use in xerographic control algorithms.	Range = 11 to 99	45ppm = 55 55ppm = 55
504-130	PCExtendedLifeState	Print Cartridge Extended Life state (PC CRU Snooze) (Read only)	0 = Disabled 1 = Primed 2 = Enabled	45ppm = 0 55ppm = 0



**Table 5 IOT NVM ID 504-001 to 504-125**

NVM ID	NVM Name	NVM Description	Settings	Default
504-131	PCExtendedLife-PrintCount	Print Cartridge Extended Life Print counter (PC CRU Snooze) (Read only)	Range 0 to 10000	45ppm = 0 55ppm = 0

**Table 6 IOT NVM ID 505-001 to 505-031**

NVM ID	NVM Name	NVM Description	Settings	Default
505-001	SPARE509	Pseudo CRUM spare (Read only).	Range = 0 to 255	45ppm = 128 55ppm = 128
505-002	TCoffsetCRU	Pseudo CRU - Toner Bottle CRU TC offset (Read only).	Range = 0 to 255	45ppm = 127 55ppm = 127
505-003	PxlCumBottle-Empty	PxlCumBottleEmpty (Read only).	Range = 0 to 1000000	45ppm = 0 55ppm = 0
505-004	PxlCum	Accumulated Pixels (Read only)	Range = 0 to 1000000	45ppm = 0 55ppm = 0
505-005	DispCum	Accumulated Dispense Time (Read only)	Range = 0 to 1000000	45ppm = 0 55ppm = 0
505-006	TcPxlCoeff	Nominal Image Pixel to Dispense Time Conversion Coefficient (Read only).	Range = 0 to 1000	45ppm = 166 55ppm = 166
505-007	PxlCumTnrIndCoeff	Image Pixel to Toner Mass Conversion Coefficient (Read only).	Range = 0 to 1000	45ppm = 1551 55ppm = 1551
505-008	DispCumTnrIndCoeff	Dispense Time to Toner Mass Conversion Coefficient (Read only).	Range = 0 to 1000mg/s	45ppm = 1300 55ppm = 1300
505-009	TnrEmptyFlag	Xerographics Toner Bottle State indicator (Read only).	0 = Empty 1 = Nearly Empty 2 = Low 3 = Full	45ppm = 0 55ppm = 0
505-010	PxlCumBottle-EmptyTh	Bottle Empty Pixel Count Threshold (Read only).	Range = 0 to 20000	45ppm = 4700 55ppm = 4700
505-011	MassInBottle	Initial toner Mass In Bottle (Read only).	Range = 0 to 700000mg	45ppm = 460000 55ppm = 460000
505-012	TnrInBottleTh	Bottle Empty Detection Start Threshold (Read only).	Range = 0 to 100%	45ppm = 35 55ppm = 35
505-013	TcEmptyStartTh	Bottle Empty TC Error Threshold 1 (ADC count) (Read only).	Range = 0 to 1000	45ppm = 6 55ppm = 6

**Table 6 IOT NVM ID 505-001 to 505-031**

NVM ID	NVM Name	NVM Description	Settings	Default
505-014	TcNearEmptyTh	Bottle Empty TC Error Threshold 2 (ADC count) (Read only).	Range = 0 to 1000	45ppm = 12 55ppm = 12
505-015	TcEmptyTh	Bottle Empty TC Error Threshold 3 (ADC count) (Read only)	Range = 0 to 1000	45ppm = 18 55ppm = 18
505-016	NvmTonerBottle-CRUSerialNumber	Pseudo CRU - Toner Bottle CRU Serial Number (Read only).	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
505-017	TonerBottle-CRUMEOLFlag	Validation: Toner Bottle End of Life (EOL) Flag (Read only).	0 = In Life 1 = End of life	45ppm = 1 55ppm = 1
505-018	TonerBottleCRU-CompatibilityID	Validation: Toner Bottle - Compatibility ID (Read only).	Range = 0 to 65535	45ppm = 65281 55ppm = 65281
505-019	TonerBottle-CRUServiceOp-Code	Validation: Toner Bottle - Service Op Code (Read only).	Range = 0 to 255	45ppm = 64 55ppm = 64
505-020	TonerBottleCRU-Region	Validation: Toner Bottle - Region compatibility (Read only).	Range = 0 to 255	45ppm = 64 55ppm = 64
505-021	TnrInBottle	Remaining toner in bottle as a percentage (Read only).	Range = -100 to 100	45ppm = 100 55ppm = 100
505-022	TonerBottlePrints-Made	Toner Bottle - Prints made (Read only).	Range = 0 to 50000	45ppm = 0 55ppm = 0
505-023	TonerBottleLastUsedDate	Toner Bottle - Last Used Date (Read only).	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
505-024	NotUsed600	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
505-025	NotUsed601	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
505-026	NotUsed602	Not used	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
505-027	ServicePlan-LearningMode-Flag	Service Plan Learning Mode Flag	0 = Disabled 1 = Enabled	45ppm = 0 55ppm = 0
505-028	NvmLearningModeInhibitFlag	Learning Mode Inhibit Flag, will stop the machine service plan from automatically changing to a service plan compatible with the toner op code plan (Read only).	0 = Disabled 1 = Enabled	45ppm = 0 55ppm = 0

**Table 6 IOT NVM ID 505-001 to 505-031**

NVM ID	NVM Name	NVM Description	Settings	Default
505-029	TcPxlOotCoeff	Modified coefficient to be used when toner bottle is nearly empty (Read only).	Range = 0 to 1000	45ppm = 310 55ppm = 310
505-030	MaxDispTime-Hardstop	Toner Bottle - Max Accumulated Dispense Time (Hardstop) (Read only).	Range = 0 to 1000000000	45ppm = 9000000 55ppm = 9000000
505-031	ThirdPartyTCoff-setCRU	3rd Party (NO CRUM) - Toner Bottle CRU TC offset.	Range = 0 to 255	45ppm = 127 55ppm = 127

**Table 7 IOT NVM ID 506-001 to 506-023**

NVM ID	NVM Name	NVM Description	Settings	Default
506-001	NvmDelayBefore-FansOff	Time delay when the LHD fuser fans are turned OFF after Cycle-Out	Range = 0 to 255000	45ppm = 60000 55ppm = 60000
506-002	LSDFanOnAccumulatorCapping	Fan accumulator capping NVM.	Range = 0 to 200	45ppm = 40 55ppm = 40
506-003	LSDFanOn-Threshold	The max fan accumulated count.	Range = 0 to 200	45ppm = 20 55ppm = 20
506-004	FanDriveConfiguration	Sets the fan control configuration.	0 = Left door fans and PC fan 1 = Left door fans only	45ppm = 0 55ppm = 0
506-005	PcFanMaxLimit1	Sets the max print cartridge fan run on time at end of printing when temp less than 35 degrees.	Range = 0 to 255	45ppm = 144 55ppm = 150
506-006	PcFanMaxLimit2	Sets the max print cartridge fan run on time at end of printing when temp >35<40 degrees.	Range = 0 to 255	45ppm = 144 55ppm = 150
506-007	PcFanMaxLimit3	Sets the max print cartridge fan run on time at end of printing when temp >40 degrees.	Range = 0 to 255	45ppm = 144 55ppm = 150
506-008	PcFanOnThreshold1	Sets the print cartridge fan on threshold when temp <35 degrees.	Range = 0 to 150	45ppm = 1 55ppm = 1
506-009	PcFanOnThreshold2	Sets the print cartridge fan on threshold when temp >35<40 degrees.	Range = 0 to 100	45ppm = 44 55ppm = 50

**Table 7 IOT NVM ID 506-001 to 506-023**

NVM ID	NVM Name	NVM Description	Settings	Default
506-010	PcFanOnThreshoId3	Sets the print cartridge fan on threshold when temp <40 degrees.	Range = 0 to 50	45ppm = 44 55ppm = 50
506-011	FanCheckTime	Left Door Fuser fans. Defines fan time from sheet count	Range = 1000 to 100000	45ppm = 3000 55ppm = 3000
506-012	PcFanTempLimit1	PC Fan Temp limit 1.	Range = 10 to 80 Deg. C	45ppm = 60 55ppm = 60
506-013	PcFanTempLimit2	PC Fan Temp limit 2.	Range = 10 to 80 Deg. C	45ppm = 65 55ppm = 65
506-014	PcFanTempLimit3	PC Fan Idle temp limit: Temp limit when PC fan comes on in idle.	Range = 10 to 80 Deg. C	45ppm = 43 55ppm = 43
506-015	PcFanOnDuring-PrintEnable	Print cartridge cooling fan on during print enablement flag - low productivity cooling.	0 = Disabled 1 = Enabled	45ppm = 1 55ppm = 1
506-020	PcFanMaxLimit4	Print cartridge cooling fan accumulator (B) max limit.	Range = 0 to 2000	45ppm = 800 55ppm = 800
506-021	PcFanOnThreshoId4	Print cartridge cooling fan accumulator (B) threshold limit.	Range = 0 to 2000	45ppm = 640 55ppm = 640
506-022	PcFanOnDuring-HighPrintEnable	Print cartridge cooling fan on during print enablement flag - high productivity cooling.	0 = Disabled 1 = Enabled	45ppm = 1 55ppm = 1
506-023	PcFanOnHigh-PrintMediaProcLength	Accumulator B - Process length of media where PC fan can be turned on during printing	Range = 0 to 1000mm	45ppm = 360 55ppm = 360

**Table 8 IOT NVM ID 507-001 to 507-004**

NVM ID	NVM Name	NVM Description	Settings	Default
507-001	I2CbusPowerResetEnable	I2C bus power is cycled when an I2C communications bus lockup occurs	0 = Enabled 1 = Disabled	45ppm = 1 55ppm = 1
507-002	I2CbusSystemRestartEnable	Status is raised causing a system restart when I2C bus power is cycled did not restore I2C communications.	0 = Enabled 1 = Disabled	45ppm = 1 55ppm = 1

**Table 8 IOT NVM ID 507-001 to 507-004**

NVM ID	NVM Name	NVM Description	Settings	Default
507-003	I2CBusPowerOffPeriod	Period which I2C bus power is removed when communications lockup detected.	Range = 0 to 1000ms	45ppm = 300 55ppm = 300
507-004	I2CBusCommsPostOffPeriod	Period after I2C bus power removal before I2C communications can be attempted	Range = 0 to 1000ms	45ppm = 100 55ppm = 100

**Table 9 IOT NVM ID 510-001 to 512-002**

NVM ID	NVM Name	NVM Description	Settings	Default
510-001	PrintRate	Number of prints per minute	0 = A class 40ppm 1 = A class 45ppm 2 = A class 50ppm 3 = A class 55ppm 4 = Unknown speed 5 = Unknown speed 6 = Unknown speed 7 = Unknown speed 8 = Unknown speed 9 = Unknown speed 255 = No run speed (install)	45ppm = 255 55ppm = 255
510-008	SerialIDPart1	Serial Number Primary (Read only).	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
510-009	SerialIDPart2	Serial Number Secondary (Read only).	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
510-010	SerialIDPart3	Serial Number Secondary (Read only).	Range = 0 to 2147483647	45ppm = 0 55ppm = 0
510-053	ServicePlanMirror	Service plan - CCS NVM mirrored value (Read only). Refer to CCS 606-269	0 = Sold 1 = Non Sold 2 = Third Party 3 = Xerox managed supplies 4 = Page pack 5 = DMO sold	45ppm = 0 55ppm = 0

**Table 9 IOT NVM ID 510-001 to 512-002**

NVM ID	NVM Name	NVM Description	Settings	Default
510-054	MarketRegionMirror	Market Region - CCS NVM mirrored value (Read only). Refer to CCS 616-001	0 = US 1 = XCL (Canada) 2 = FX (Fuji Xerox Japan) 3 = FXAPO (Fuji Xerox Asian Pacific) 4 = ACO (Latin) 5 = RX (Europe) 6 = MR DMO East 7 = MR DMO West	45ppm = 0 55ppm = 0
510-900	FSRPCCRUMEnablement	Fuser & Print Cartridge CRUM operational code (Read only).	0 = Disabled 1 = Enabled	45ppm = 1 55ppm = 1
510-901	TonerBottleCRUMEnablement	Toner CRUM operational code (Read only).	0 = Disabled 1 = Enabled	45ppm = 1 55ppm = 1
512-001	NvmBTRPrintCount	Bias Transfer Roller Print Counter	Range = 0 to 5000000	45ppm = 0 55ppm = 0
512-002	NvmBTRMaxLife	Bias Transfer Roller Max Print Life	Range = 0 to 1000000	45ppm = 500000 55ppm = 500000

**Table 10 IOT NVM ID 520-320 to 520-339**

NVM ID	NVM Name	NVM Description	Settings	Default
520-320	NvmDebugApps	NvmDebugApps	Range = 0 to 15	45ppm = 7 55ppm = 7
520-321	NvmDebugTool	NvmDebugTool	Range = 0 to 15	45ppm = 7 55ppm = 7
520-322	NvmDebugFeed	NvmDebugFeed	Range = 0 to 15	45ppm = 7 55ppm = 7
520-323	NvmDebugPpath	NvmDebugPpath	Range = 0 to 15	45ppm = 7 55ppm = 7
520-324	NvmDebugMisc	NvmDebugMisc	Range = 0 to 15	45ppm = 7 55ppm = 7
520-325	NvmDebugFuse	NvmDebugFuse	Range = 0 to 15	45ppm = 7 55ppm = 7
520-326	NvmDebugFin	NvmDebugFin	Range = 0 to 15	45ppm = 7 55ppm = 7
520-327	NvmDebugXero	NvmDebugXero	Range = 0 to 15	45ppm = 7 55ppm = 7
520-328	NvmDebuNvm	NvmDebuNvm	Range = 0 to 15	45ppm = 7 55ppm = 7

**Table 10 IOT NVM ID 520-320 to 520-339**

NVM ID	NVM Name	NVM Description	Settings	Default
520-329	NvmDebugComm	NvmDebugComm	Range = 0 to 15	45ppm = 7 55ppm = 7
520-330	NvmDebugDiag	NvmDebugDiag	Range = 0 to 15	45ppm = 7 55ppm = 7
520-331	NvmDebugSched	NvmDebugSched	Range = 0 to 15	45ppm = 7 55ppm = 7
520-332	NvmDebugDctl	NvmDebugDctl	Range = 0 to 15	45ppm = 7 55ppm = 7
520-333	NvmDebugSnsr	NvmDebugSnsr	Range = 0 to 15	45ppm = 7 55ppm = 7
520-334	NvmDebugMotr	NvmDebugMotr	Range = 0 to 15	45ppm = 7 55ppm = 7
520-335	NvmDebugSheet	NvmDebugSheet	Range = 0 to 15	45ppm = 7 55ppm = 7
520-336	NvmDebugToner	NvmDebugToner	Range = 0 to 15	45ppm = 7 55ppm = 7
520-337	NvmDebugPro-Con	NvmDebugProCon	Range = 0 to 15	45ppm = 7 55ppm = 7
520-338	NvmDebugCrum	NvmDebugCrum	Range = 0 to 15	45ppm = 7 55ppm = 7
520-339	NvmDebug-FuserRT	Displays log for fuser power level and power capping	0 = No log 1 = Error 2 = Warning 4 = Info Log 8 = User Log	45ppm = 0 55ppm = 0

**Table 11 CCS NVM ID 600-001 to 600-151**

NVM ID	NVM Name	NVM Description	Settings	Default
600-011	Blocks Needed	Blocks Needed	Range = 8 to 20	8
600-012	Frame Size	Frame Size	Range = 923 to 923	923
600-013	Percent of Frame Size	Percent of frame size	Range = 1 to 99	70
600-014	Making mode when EPC full	Making mode when EPC full	Range = 0 to 3	0
600-015	Ram Size Mismatch FaultFC	Fault counter 319-750-00	Range = 0 to 255	0
600-016	Disk Mode Mismatch FaultFC	Fault counter 319-754-00	Range = 0 to 255	0
600-017	Out Memory Fault - StrNC docFC	Fault counter 319-401-00.	Range = 0 to 255	0
600-018	Compressor DVMA Timeout Fault	Fault counter 319-402-00	Range = 0 to 255	0
600-019	Memory on Target	Amount of EPC memory	Range = 0 to 65535	512
600-020	AHA End of Record Fault	Fault counter 322-300-00	Range = 0 to 255	0
600-021	Disk spin up delay time	Time before image disk receives power (sec)	Range = 0 to 30	10
600-022	Platinum Board Full Concurrency	Platinum board full concurrency	Range = 0 to 1	1
600-023	Image disk partition size	Image disk partition size	Range = 0 to 30	4
600-024	Image Disk Dirty	Image Disk Dirty	Range = 0 to 1	0
600-025	IJO Enabled	IJO Enabled	Range = 0 to 1	1
600-026	Disk Dirty at power up	Disk Dirty at power up	Range = 0 to 1	0
600-027	Maximum network read attempts	Value of maximum network read attempts	Range = 1 to 255	3
600-028	KDrumPixelCount	K Drum Pixel Count	Range = 0 to 4294967295	0
600-029	CDrumPixelCount	C Drum Pixel Count	Range = 0 to 4294967295	0
600-030	MDrumPixelCount	M Drum Pixel Count	Range = 0 to 4294967295	0
600-031	YDrumPixelCount	Y Drum Pixel Count	Range = 0 to 4294967295	0
600-032	vramLevel1RecThreshhold	vram Level1 Rec Threshold	Range = 0 to 4294967295	471859200
600-033	vramLevel1TripThreshhold	vram Level 1 Trip Threshold	Range = 0 to 4294967295	419430400
600-034	vramLevel2RecThreshhold	vram Level 2 Rec Threshold	Range = 0 to 4294967295	367001600

**Table 11 CCS NVM ID 600-001 to 600-151**

NVM ID	NVM Name	NVM Description	Settings	Default
600-001	Compression Mode	Compression Mode	Range = 0 to 1	0
600-002	Reserved Blocks	Reserved blocks	Range = 0 to 5	0
600-003	Megs of Memory	Megs of memory	Range = 0 to 65535	16
600-004	EPC memory low percent	EPC memory low percent	Range = 1 to 99	38
600-005	Disk Mode	Disk Mode	Range = 0 to 1	1
600-006	Memory Out Bound	Memory Out Bound	Range = 0 to 6	6
600-007	EPC memory full percent	EPC memory full percent	Range = 1 to 99	12
600-008	Use Partial Blocks	Use Partial Blocks	Range = 0 to 1	1
600-009	BlockSize in K	Block size in K	Range = 200 to 200	200
600-010	Initial Blocks	initial blocks	Range = 12 to 24	12

Table 11 CCS NVM ID 600-001 to 600-151

NVM ID	NVM Name	NVM Description	Settings	Default
600-035	vramLevel2TripThreshold	vram Level 2 Trip Threshold	Range = 0 to 4294967295	314572800
600-036	vramLevel3RecThreshold	vram Level 3 Rec Threshold	Range = 0 to 4294967295	256901120
600-037	vramLevel3TripThreshold	vram Level 3 Trip Threshold	Range = 0 to 4294967295	209715200
600-038	vramLevel4RecThreshold	vram Level 4 Rec Threshold	Range = 0 to 4294967295	175112192
600-039	vramLevel4TripThreshold	vram Level 4 Trip Threshold	Range = 0 to 4294967295	140509184
600-040	vramLevel5RecThreshold	vram Level 5 Rec Threshold	Range = 0 to 4294967295	105906176
600-041	vramLevel5TripThreshold	vram Level 5 Trip Threshold	Range = 0 to 4294967295	70254592
600-042	vramLevel6RecThreshold	vram Level 6 Rec Threshold	Range = 0 to 4294967295	35651584
600-043	vramLevel6TripThreshold	vram Level 6 Trip Threshold	Range = 0 to 4294967295	1048576
600-044	cacheAllImagesToDisk	CacheAllImagesToDisk	Range = 0 to 1	0
600-045	Total Black Pixel Count Low	Total black pixel count low (Read only)	Range = 0 to 4294967295	0
600-046	Total Black Pixel Count Up	Total black pixel count up (Read only)	Range = 0 to 4294967295	0
600-053	Total Black Run Mode AC INT	Total Black Run Mode AC INT (Read only)	Range = 0 to 4294967295	0
600-058	Toner Coverage Plane1-1	Toner Coverage Plane1-1 (Read only)	Range = 0 to 4294967295	0
600-059	Toner Coverage Plane1-2	Toner Coverage Plane1-2 (Read only)	Range = 0 to 4294967295	0
600-060	Toner Coverage Plane1-3	Toner Coverage Plane1-3 (Read only)	Range = 0 to 4294967295	0
600-061	Toner Coverage Plane1-4	Toner Coverage Plane1-4 (Read only)	Range = 0 to 4294967295	0
600-062	Toner Coverage Plane1-5	Toner Coverage Plane1-5 (Read only)	Range = 0 to 4294967295	0
600-063	Toner Coverage Plane1-6	Toner Coverage Plane1-6 (Read only)	Range = 0 to 4294967295	0
600-064	Toner Coverage Plane1-7	Toner Coverage Plane1-7 (Read only)	Range = 0 to 4294967295	0
600-065	Toner Coverage Plane1-8	Toner Coverage Plane1-8 (Read only)	Range = 0 to 4294967295	0
600-066	Toner Coverage Plane1-9	Toner Coverage Plane1-9 (Read only)	Range = 0 to 4294967295	0

Table 11 CCS NVM ID 600-001 to 600-151

NVM ID	NVM Name	NVM Description	Settings	Default
600-067	Toner Coverage Plane1-10	Toner Coverage Plane1-10 (Read only)	Range = 0 to 4294967295	0
600-068	Toner Coverage Plane1-11	Toner Coverage Plane1-11 (Read only)	Range = 0 to 4294967295	0
600-069	Toner Coverage Plane1-12	Toner Coverage Plane1-12 (Read only)	Range = 0 to 4294967295	0
600-070	Toner Coverage Plane1-13	Toner Coverage Plane1-13 (Read only)	Range = 0 to 4294967295	0
600-071	Toner Coverage Plane1-14	Toner Coverage Plane1-14 (Read only)	Range = 0 to 4294967295	0
600-072	Toner Coverage Plane1-15	Toner Coverage Plane1-15 (Read only)	Range = 0 to 4294967295	0
600-073	Toner Coverage Plane1-16	Toner Coverage Plane1-16 (Read only)	Range = 0 to 4294967295	0
600-074	Toner Coverage Plane1-17	Toner Coverage Plane1-17 (Read only)	Range = 0 to 4294967295	0
600-075	Toner Coverage Plane1-18	Toner Coverage Plane1-18 (Read only)	Range = 0 to 4294967295	0
600-076	Toner Coverage Plane1-19	Toner Coverage Plane1-19 (Read only)	Range = 0 to 4294967295	0
600-134	Total Black Marked Images	Total Black Marked Images (Read only)	Range = 0 to 4294967295	0
600-139	Total Black Run Mode AC FP	Total Black Run Mode AC FP (Read only)	Range = 0 to 4294967295	0
600-143	Total Black Color Mode AC FP	Total Black Color Mode AC FP (Read only)	Range = 0 to 4294967295	0
600-145	10 to 11% Black Area Coverage	Total number of impressions between 10 - 11% Black page coverage. Image area coverage Plane 1-20. (Read only)	Range = 0 to 4294967295	0
600-147	11 to 12% Black Area Coverage	Total number of impressions between 11 - 12% Black page coverage. Image area coverage Plane 1-21. (Read only)	Range = 0 to 4294967295	0
600-149	13 to 16% Black Area Coverage	Total number of impressions between 13 - 16% Black page coverage. Image area coverage Plane 1-22. (Read only)	Range = 0 to 4294967295	0
600-151	17 to 20% Black Area Coverage	Total number of impressions between 17 - 20% Black page coverage. Image area coverage Plane 1-23. (Read only)	Range = 0 to 4294967295	0

Table 12 CCS NVM ID 602-001 to 603-039

NVM ID	NVM Name	NVM Description	Settings	Default
602-001	DiagJobIDGenerator		Range = 1 to 999	1
603-001	ARPSPaper-SizeInterval	Interval of APS recognition of standard size (mm)	Range = 1 to 65535	5
603-002	APSStandardSizeRequired	Determines whether APS requires input to be a standard size.	0 = False (Off) 1 = True (On)	0
603-003	CopySimplexOutputStart	Number of images inputted before simplex copy job is released for marking	Range = 0 to 65535	1
603-004	CopyDuplexOutputStart	Number of images inputted before duplex copy job is released for marking	Range = 0 to 65535	4
603-005	CopyJobPriority	The priority set by SA of copy job (used for job contention)	Range = 0 to 65535	3
603-006	NextCopyJobID	Value of next copy jobs ID (Read only)	Range = 1 to 999	1
603-008	COPYMarkedImagesDisplayable	Determines whether copy marked images counter is displayable.	0 = False 1 = True	1
603-010	COPYSheetsDisplayable	Determines whether copy sheets counter is displayable	0 = False 1 = True	0
603-012	COPYDuplex-SheetsDisplayable	Determines whether copy duplex sheets counter is displayable	0 = False 1 = True	0
603-014	COPY-LargeSheetsDisplayable	Determines whether copy 11x17 inch and A3 sheets counter is displayable	0 = False 1 = True	0
603-024	crashRecovery-Enabled	Determines whether copy job recovery is enabled	0 = False 1 = True	1
603-025	ABSPrescanAllowed	Disable and enable ABS prescan	0 = False 1 = True	0
603-036	COPYMarkedColorImagesDisplay	Determines whether copy image counter is displayable	0 = False 1 = True	1
603-039	COPYLargeColorSheetsDisplayable	Determines whether large copy sheets counter is displayable	0 = False 1 = True	0

Table 13 CCS NVM ID 604-001 to 604-220

NVM ID	NVM Name	NVM Description	Settings	Default
604-001	Feeder Module Type	Defines the feeder module types	0 = Invalid Module 55 = SMH 57 = HCF 58 = HCF with covers 60 = PFP (tray 6) 62 = Envelope Feeder 221 = Standard PFP (bypass tray) 223 = Large Kit PFP A4 LEF / A3 SEF 224 = Short edge kit A4 SEF 225 = Short edge kit Letter SEF / Legal SEF Range = 0 to 255	0
604-002	Finisher Module Type	Defines the finisher module type that has been detected by the system (Read only)	65 = OCT 100 = No finisher 110 = 2K LCSS 120 = 1K LCSS 171 = HVF 172 = HVF BM 173 = HVF inserter 174 = HVF BM Inserter 175 = HVF Tri-folder 176 = HVF Tri-folder Inserter 239 = LVF BM Range = 65 to 255	100
604-004	MSDefaultColor	Defines the default color	0 = White 1 = Green 2 = Buff 3 = Yellow 4 = Golden rod 5 = Blue 6 = Pink 7 = Transparent 8 = Ivory 9 = Gray 10 = Red 11 = Orange Range = 0 to 20	0

Table 13 CCS NVM ID 604-001 to 604-220

NVM ID	NVM Name	NVM Description	Settings	Default
604-006	MSDefaultType	Defines default type	0 = Standard 1 = Drilled (pre-punched) 2 = Envelopes 4 = Transparency 5 = Letter head 6 = Labels 7 = Recycled Range = 0 to 60	0
604-008	MSDefaultWeight	Defines medium weight (not used) (gsm)	Range = 56 to 203	75
604-010	PEAutoResume	Resume time out settings in seconds	Range = 0 to 120 (0 = Disabled)	30
604-017	PrintModuleInfo	Debug switch settings	0 = Off 1 = On	0
604-021	Total Images Displayable	Enable display of total images	0 = Off 1 = On	1
604-070	MSDefaultFinisherAR	Default finisher auto resume settings	Range = 0 to 120 (0 = Disabled)	30
604-084	MSFaceUpEnabled	Enable face up setting	0 = Off (normal delivery) 1 = Deliver face up	0
604-112	MSDefaultTrayTrain	-	Range 0 to 2	0
604-113	MSDefaultTrayStack	-	Range 0 to 1	0
604-114	MSDefaultTrayId	-	Range 0 to 4	0
604-115	Propose Count No Finisher	-	Range 2 to 16	12
604-116	LastJobIDToRecover	Last job ID to recover	Range 0 to 65535	0
604-118	LastImage-IDToRecover	Last image ID to recover	Range 0 to 65535	0
604-119	IOTCommFault-Count	IOT Comm Fault Count	Range 0 to 3	0
604-120	PrintPagesCompleted	Print Pages Completed (Read only)	Range 0 to 65535	0
604-121	SetsCompleted	Last set Completed (Read only)	Range 0 to 65535	0
604-122	LastService-IDToRecover	Last service ID to recover (Read only)	Range 0 to 65535	0
604-123	QtyToRecover	Quantity to recover	Range 0 to 65535	0
604-125	MSDefaultDecurler	Default decurler level settings	0 = Low decurler 1 = Normal decurler 2 = High decurler	1

Table 13 CCS NVM ID 604-001 to 604-220

NVM ID	NVM Name	NVM Description	Settings	Default
604-127	MSOffsetEnabledPolicy	Enable offset policy	0 = Off 1 = On Range 0 to 1	0
604-128	SerNumSet	Serial number set	Range 0 to 1	0
604-129	MSOutOfStaplesPolicy	Out of staples policy setting	0 = Hold 1 = Stapling defeated	1
604-131	Last sheet to recover	Last sheet to recover	Range 0 to 65535	0
604-132	ProdCfgNvm	ProdCfgNvm	Range 0 to 255	255
604-133	TotalQuantity-Made	Total quantity requested for the current job (Read only)	Range 0 to 65535	0
604-134	ModuleHas-BeenSetUp	Module has been set up	Range 0 to 1	0
604-137	Propose Count MCSS Finisher	Propose Count MCSS Finisher	Range 2 to 16	12
604-138	IOT Diag Enter TO SEC	IOT Diag Enter TO SEC	Range = 0 to 1800	30
604-139	IOT Diag Exit TO SEC	IOT Diag Exit TO SEC	Range = 0 to 1800	30
604-140	IOT Diag Test Pattern TO SEC	IOT Diag Test Pattern TO SEC	Range = 0 to 1800	0
604-141	IOT Diag Device Status TO SEC	IOT Diag Device Status TO SEC	Range = 0 to 1800	0
604-142	IOT Diag Analog Monitor TO SEC	IOT Diag Analog Monitor TO SEC	Range = 0 to 1800	0
604-143	IOT Diag In Out Manual TO SEC	IOT Diag In Out Manual TO SEC	Range = 0 to 1800	0
604-144	IOT Diag PP Timing TO SEC	IOT Diag PP Timing TO SEC	Range = 0 to 1800	0
604-145	IOT Diag MSI Side Guide TO SEC	IOT Diag MSI side guide TO SEC	Range = 0 to 1800	0
604-146	IOT Diag Sys Regi TO SEC	IOT Diag Sys Regi TO SEC	Range = 0 to 1800	0
604-147	IOT Diag Reg Setup TO SEC	IOT Diag Reg Setup TO SEC	Range = 0 to 1800	0
604-148	IOT Diag Reg Check TO SEC	IOT Diag Reg Check TO SEC	Range = 0 to 1800	0
604-149	IOT Diag Reg Sens Check TO SEC	IOT Diag Reg Sens Check TO SEC	Range = 0 to 1800	0
604-150	IOT ATC Sensor Setup TO SEC	IOT ATC Sensor Setup TO SEC	Range = 0 to 1800	0

Table 13 CCS NVM ID 604-001 to 604-220

NVM ID	NVM Name	NVM Description	Settings	Default
604-151	IOT Diag Belt Edge Learn TO SEC	IOT Diag Belt Edge Learn TO SEC	Range = 0 to 1800	0
604-152	IOT TRC Adjust TO SEC	IOT TRC Adjust TO SEC	Range = 0 to 1800	0
604-153	IOT Diag Tone Up Down TO SEC	IOT Diag Tone Up Down TO SEC	Range = 0 to 1800	0
604-154	IOT Diag No Paper Run TO SEC	IOT Diag No Paper Run TO SEC	Range = 0 to 1800	0
604-155	IOT Diag ProCon On Off TO SEC	IOT Diag ProCon ON Off TO SEC	Range = 0 to 1800	0
604-156	IOT Diag Binary Cal TO SEC	IOT Diag Binary Cal TO SEC	Range = 0 to 1800	0
604-157	IOT Diag Fold Position TO SEC	IOT Diag Fold Position TO SEC	Range = 0 to 1800	0
604-158	IOT Diag CTRACS TO SEC	IOT Diag CTRACS TO SEC	Range = 0 to 1800	0
604-159	IOT Diag Comp Ctrl TO SEC	IOT Diag Comp Ctrl TO SEC	Range = 0 to 1800	0
604-160	CCMCannotCommunicateWith-IOTFC	Fault counter 303-316: CCM Cannot Communicate With IOT FC	Range = 0 to 255	0
604-170	HxportEntSnrOn-JamFault-CountFC	Fault counter 312-112: Horizontal transport Ent Snr On Jam Fault Count	Range = 0 to 255	0
604-171	BookletInSnrOn-JamFault-CountFC	Fault counter 312-113: Booklet In Snr On Jam Fault Count	Range = 0 to 255	0
604-172	BookletInSnrOff-JamFault-CountFC	Fault counter 312-114: Booklet In Snr Off Jam Fault Count	Range = 0 to 255	0
604-173	BookletFolder-RollExitSnrOn-JamFC	Fault counter 312-115: Booklet Folder Roll Exit Snr On Jam Fault Count	Range = 0 to 255	0
604-174	GateSnrOnJam-FaultCountFC	Fault counter 312-125: Gate Snr On Jam Fault Count	Range = 0 to 255	0
604-175	XportEntSnrOn-JamFault-CountFC	Fault counter 312-132: Xport Ent Snr On Jam Fault Count	Range = 0 to 255	0
604-176	BufferPathSnrOn-JamFault-CountFC	Fault counter 312-142: Buffer Path Snr On Jam Fault Count	Range = 0 to 255	0

Table 13 CCS NVM ID 604-001 to 604-220

NVM ID	NVM Name	NVM Description	Settings	Default
604-177	CompileExitSnrOffJamFC	Fault counter 312-151: Compile Exit Snr Off Jam Fault Count	Range = 0 to 255	0
604-178	CompileExitSnrOnJamFault-CountFC	Fault counter 312-152: Compile Exit Snr On Jam Fault Count	Range = 0 to 255	0
604-179	SetEjectJam-FaultCountFC	Fault counter 312-161: Set Eject Jam Fault Count	Range = 0 to 255	0
604-180	HxportExitSnrOn-JamFault-CountFC	Fault counter 312-162: Horizontal Transport Exit Snr On Jam Fault Count	Range = 0 to 255	0
604-181	TopTrayExitSnrOnJamFault-CountFC	Fault counter 312-171: Top Tray Exit Snr On Jam Fault Count	Range = 0 to 255	0
604-182	TopTrayExitSnrOffJamFault-CountFC	Fault counter 312-172: Top Tray Exit Snr Off Jam Fault Count	Range = 0 to 255	0
604-183	BookletFolder-RollExitSnrOff-JamFC	Fault counter 312-180: Booklet Folder Roll Exit Snr Off Jam Fault Count	Range = 0 to 255	0
604-184	StackerTrayFail-FaultCountFC	Fault counter 312-211: Stacker Tray Fail Fault Count	Range = 0 to 255	0
604-185	StackerUpperLimitFailFC	Fault counter 312-212: Stacker Upper Limit Fail Fault Count	Range = 0 to 255	0
604-186	StackerLowerLimitFailFC	Fault counter 312-213: Stacker Lower Limit Fail Fault Count	Range = 0 to 255	0
604-187	FrontTamper-HomeSnrOn-FailFC	Fault counter 312-221: Front Tamper Home Snr On Fail Fault Count	Range = 0 to 255	0
604-188	FrontTamper-HomeSnrOff-FailFC	Fault counter 312-223: Front Tamper Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-189	RearTamper-HomeSnrOff-FailFC	Fault counter 312-224: Rear Tamper Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-190	BookletTamperF-HomeSnrOn-FailFC	Fault counter 312-225: Booklet Tamper F Home Snr On Fail Fault Count	Range = 0 to 255	0
604-191	BookletTamperF-HomeSnrOff-FailFC	Fault counter 312-226: Booklet Tamper F Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-192	BookletEndGuideHomeSnrOff-FailFC	Fault counter 312-227: Booklet End Guide Home Snr Off Fail Fault Count	Range = 0 to 255	0



**Table 13 CCS NVM ID 604-001 to 604-220**

NVM ID	NVM Name	NVM Description	Settings	Default
604-193	BookletEndGuideHomeSnrOn-FailFC	Fault counter 312-228: Booklet End Guide Home Snr On Fail Fault Count	Range = 0 to 255	0
604-194	BookletTamperRHomeSnrOn-FailFC	Fault counter 312-229: Booklet Tamper R Home Snr On Fail Fault Count	Range = 0 to 255	0
604-195	BookletTamperRHomeSnrOff-FailFC	Fault counter 312-230: Booklet Tamper R Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-196	BookletKnifeHomeSnrOn-FailFC	Fault counter 312-243: Booklet Knife Home Snr On Fail Fault Count	Range = 0 to 255	0
604-197	BookletStaplerFailCountFC	Fault counter 312-246: Booklet Stapler Fail Count	Range = 0 to 255	0
604-198	SideRegiSnrOff-FailFaultCountFC	Fault counter 312-247: Side Regi Snr Off Fail Fault Count	Range = 0 to 255	0
604-199	EjectClampHomeSnrOn-FailFC	Fault counter 312-260: Eject Clamp Home Snr On Fail Fault Count	Range = 0 to 255	0
604-200	BookletKnifeFoldingSnrFailFC	Fault counter 312-261: Booklet Knife Folding Snr Fail Fault Count	Range = 0 to 255	0
604-201	RearTsmperHomeSnrOn-FailFC	Fault counter 312-263: Rear Tamper Home Snr On Fail Fault Count	Range = 0 to 255	0
604-202	BookletDrawerBrokenFailFC	Fault counter 312-264: Booklet Drawer Broken Fail Fault Count	Range = 0 to 255	0
604-203	BookletKnifeHomeSnrOff-FailFC	Fault counter 312-265: Booklet Knife Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-204	BookletCompilerNoPaperSnrFailFC	Fault counter 312-266: Booklet Compiler No Paper Snr Fail Fault Count	Range = 0 to 255	0
604-205	TopOffsetHomeSnrOnFail-CountFC	Fault counter 312-270: Top Offset Home Snr On Fail Fault Count	Range = 0 to 255	0
604-206	TopOffsetHomeSnrOffFail-CountFC	Fault counter 312-271: Top Offset Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-207	EjectClampHomeSnrOff-FailFC	Fault counter 312-282: Eject Clamp Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-208	SetClampHomeSnrOnFailFC	Fault counter 312-283: Set Clamp Home Snr On Fail Fault Count	Range = 0 to 255	0

**Table 13 CCS NVM ID 604-001 to 604-220**

NVM ID	NVM Name	NVM Description	Settings	Default
604-209	SetClampHomeSnrOffFC	Fault counter 312-284: Set Clamp Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-210	StapleFail-CountFC	Fault counter 312-291: Staple Fail Fault Count	Range = 0 to 255	0
604-211	StaplerMovePositionSnrOnFailFC	Fault counter 312-295: Stapler Move Position Snr On Fail Fault Count	Range = 0 to 255	0
604-212	StaplerMovePositionSnrOffFailFC	Fault counter 312-296: Stapler Move Position Snr Off Fail Fault Count	Range = 0 to 255	0
604-213	PunchHomeSnrOnFailFault-CountFC	Fault counter 312-320: Punch Home Snr On Fail Fault Count	Range = 0 to 255	0
604-214	PunchHomeSnrOffFailFault-CountFC	Fault counter 312-321: Punch Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-215	PuncherMoveHomeSnrOff-FailFC	Fault counter 312-322: Puncher Move Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-216	PuncherMoveHomeSnrOn-FailFC	Fault counter 312-323: Puncher Move Home Snr On Fail Fault Count	Range = 0 to 255	0
604-217	DeculerHomeSnrOffFailFC	Fault counter 312-330: Decurler Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-218	DecurlerHomeSnrOnFailFC	Fault counter 312-332: Decurler Home Snr On Fail Fault Count	Range = 0 to 255	0
604-219	FinisherDownLoadFailCountFC	Fault counter 312-334: Finisher Down Load Fail Fault Count	Range = 0 to 255	0
604-220	BookletSubCpuCommFailFC	Fault counter 312-335: Booklet Sub Cpu Comm Fail Fault Count	Range = 0 to 255	0

**Table 14 CCS NVM ID 604-241 to 604-999**

NVM ID	NVM Name	NVM Description	Settings	Default
604-241	OctOffsetFail-CountFC	Fault counter 312-701: OCT Offset Fail Fault Count	Range = 0 to 255	0
604-361	DFinDeculerInSnrOnJamFC	Fault counter 312-100: DFin Deculer In Snr On Jam Fault Count	Range = 0 to 255	0

Table 14 CCS NVM ID 604-241 to 604-999

NVM ID	NVM Name	NVM Description	Settings	Default
604-362	DFinDeculerOut-SnrOnJamFC	Fault counter 312-101: DFin Deculer Out Snr On Jam Fault Count	Range = 0 to 255	0
604-363	DFinPunchOut-SnrOnJamFC	Fault counter 312-102: DFin Punch Out Snr On Jam Fault Count	Range = 0 to 255	0
604-364	DFinPunchOut-SnrOffJamFC	Fault counter 312-103: DFin Punch Out Snr Off Jam Fault Count	Range = 0 to 255	0
604-365	DFinInterpose-FeedOutSnrOn-JamFC	Fault counter 312-104: DFin Interpose Feed Out Snr On Jam Fault Count	Range = 0 to 255	0
604-366	DFinFolderPathSnr3OffJamFC	Fault counter 312-108: DFin Folder Path Snr 3 Off Jam Fault Count	Range = 0 to 255	0
604-367	DFinInterposer-FeedOutSnrOff-JamFC	Fault counter 312-109: DFin Interposer Feed Out Snr Off Jam Fault Count	Range = 0 to 255	0
604-368	DFinFolderExitSnrOnJamFC	Fault counter 312-117: DFin Folder Exit Snr On Jam Fault Count	Range = 0 to 255	0
604-369	DFinFolderPathSnr2OnJamFC	Fault counter 312-118: DFin Folder Path Snr 2 On Jam Fault Count	Range = 0 to 255	0
604-370	DFinFolderPathSnr3OnJamFC	Fault counter 312-119: DFin Folder Path Snr 3 On Jam Fault Count	Range = 0 to 255	0
604-371	DFinFolderPathSnr4OnJamFC	Fault counter 312-120: DFin Folder Path Snr 4 On Jam Fault Count	Range = 0 to 255	0
604-372	DFinBufferPath-SnrOffJamFC	Fault counter 312-141: DFin Buffer Path Snr Off Jam Fault Count	Range = 0 to 255	0
604-373	DFinEjectSnrOn-JamFC	Fault counter 312-159: DFin Eject Snr On Jam Fault Count	Range = 0 to 255	0
604-374	DFinEjectSnrOff-JamFC	Fault counter 312-160: DFin Eject Snr Off Jam Fault Count	Range = 0 to 255	0
604-375	DFinEndWall-HomeSnrOff-FailFC	Fault counter 312-214: DFin End Wall Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-376	DFinEndWall-IOpenSnrOn-FailFC	Fault counter 312-215: DFin End Wall Open Snr On Fail Fault Count	Range = 0 to 255	0
604-377	DFinEndWall-HomeSnrOn-FailFC	Fault counter 312-216: DFin End Wall Home Snr On Fail Fault Count	Range = 0 to 255	0

Table 14 CCS NVM ID 604-241 to 604-999

NVM ID	NVM Name	NVM Description	Settings	Default
604-378	DFinEndWall-IOpenSnrOff-FailFC	Fault counter 312-217: DFin End Wall Open Snr Off Fail Fault Count	Range = 0 to 255	0
604-379	DFinShelfHome-SnrOnFailFC	Fault counter 312-218: DFin Shelf Home Snr On Fail Fault Count	Range = 0 to 255	0
604-380	DFinShelfHome-SnrOffFailFC	Fault counter 312-219: DFin Shelf Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-381	DFinStapleMove-HomeSnrOff-FailFC	Fault counter 312-235: DFin Staple Move Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-382	DFinStapleMove-HomeSnrOn-FailFC	Fault counter 312-236: DFin Staple Move Home Snr On Fail Fault Count	Range = 0 to 255	0
604-383	DFinStapleCenterPositionSnrOnFailFC	Fault counter 312-237: DFin Staple Center Position Snr On Fail Fault Count	Range = 0 to 255	0
604-384	DFinStapleCenterPositionSnrOffFailFC	Fault counter 312-238: DFin Staple Center Position Snr Off Fail Fault Count	Range = 0 to 255	0
604-385	DFinSubPaddle-HomeSnrOn-FailFC	Fault counter 312-239: DFin Sub Paddle Home Snr On Fail Fault Count	Range = 0 to 255	0
604-386	DFinSubPaddle-HomeSnrOff-FailFC	Fault counter 312-240: DFin Sub Paddle Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-387	DFinBooklet-KnifeFoldingSnr-FailFC	Fault counter 312-241: DFin Booklet Knife Folding Snr Fail Fault Count	Range = 0 to 255	0
604-388	DFinCompileStackTrayOffsetFailFC	Fault counter 312-248: DFin Compile Stacker Tray Offset Fail Fault Count	Range = 0 to 255	0
604-389	DFinEndGuideMot1StartFailFC	Fault counter 312-250: DFin End Guide Mot 1 Start Fail Fault Count	Range = 0 to 255	0
604-390	DFinEndGuideMot2StartFailFC	Fault counter 312-251: DFin End Guide Mot 2 Start Fail Fault Count	Range = 0 to 255	0
604-391	DFinEndGuideMot1HomeFailFC	Fault counter 312-252: DFin End Guide Mot 1 Home Fail Fault Count	Range = 0 to 255	0
604-392	DFinEndGuideMot2HomeFailFC	Fault counter 312-253: DFin End Guide Mot 2 Home Fail Fault Count	Range = 0 to 255	0

Table 14 CCS NVM ID 604-241 to 604-999

NVM ID	NVM Name	NVM Description	Settings	Default
604-393	DFinEnvelope-FolderTrayBrokenFC	Fault counter 312-254: DFin Envelope Folder Tray Broken Fault Count	Range = 0 to 255	0
604-394	DFinInterposerTrayUpFailFC	Fault counter 312-255: DFin Interposer Tray Up Fail Fault Count	Range = 0 to 255	0
604-395	DFinSideRegi-HomeSnrOff-FailFC	Fault counter 312-324: DFin Side Regi Home Snr Off Fail Fault Count	Range = 0 to 255	0
604-396	DFinSideRegi-HomeSnrOn-FailFC	Fault counter 312-325: DFin Side Regi Home Snr On Fail Fault Count	Range = 0 to 255	0
604-415	MSDefaultPrintBin	Number of bins	Range = 0 to 5	4
604-416	MSDefaultCopyBin	Number of bins	Range = 0 to 5	1
604-417	MSDefaultFaxBin	Number of bins	Range = 0 to 5	0
604-418	MSDefault-OtherBin	Number of bins	Range = 0 to 5	4
604-419	MSAutoHoldEnable	Enable auto hold settings	0 = Off 1 = On	1
604-420	InterruptingJobID-ToRecover	Interrupt job to recover number of jobs (Read only)	Range = 0 to 65535	0
604-421	Not displayed	Interrupt document to recover number of documents	Range = 0 to 65535	0
604-422	InterruptImage-IDToRecover	Interrupt image to recover number of images	Range = 0 to 65535	0
604-423	InterruptPagesCompleted	Interrupt pages completed (Read only)	Range = 0 to 65535	0
604-424	Interrupting-SetsCompleted	Interrupt set to recover number of sets. (Read only)	Range = 0 to 65535	0
604-425	InterruptingLast-ServiceID	Interrupt service to recover number of services. (Read only)	Range = 0 to 65535	0
604-426	QtyToRecover;	Interrupt quantity to recover	Range = 0 to 65535	0
604-427	lastSheetToRecover	Interrupt last sheet to recover	Range = 0 to 65535	0
604-428	MSMediaSize-ConvPolicy	Media Size Conversion Policy Settings	0 = Off 1 = On	1
604-429	LastFinishing-CapIDToRecover	Used to ensure sheets are delivered to the correct tray after crash recovery. (Read only)	Range = 0 to 65535	0

Table 14 CCS NVM ID 604-241 to 604-999

NVM ID	NVM Name	NVM Description	Settings	Default
604-430	LastIntFinishing-CapIDToRecover	Used to ensure sheets are delivered to the correct tray after crash recovery. (Read only)	Range = 0 to 65535	0
604-431	InterruptingQuantityMade	Interrupting quantity made. (Read only)	Range = 0 to 65535	0
604-432	MSInvertDuplex	-	Range = 0 to 1	0
604-433	MSMirrorInvert-Duplex	-	Range = 0 to 1	0
604-434	Total Color Images Displayable	-	Range = 0 to 1	0
604-435	Total BW and Color Images Displayable	Total BW and Color Images Displayable	Range = 0 to 1	0
604-437	Not displayed	MarkedBWCOLORImages	Range = 0 to 16777215	0
604-442	MSMediaSize-Group	Media Order Group	1 = MSGXc 2 = MSGXe 3 = MSGFx 4 = MSGFxp 5 = MSGGco 6 = MSGDmoEast 7 = MSGDmoWest	1
604-443	MSMediaSizeConvPolicy85x14	Media size conversion policy 8.5 x 14 inch to larger size	0 = Off 1 = On	1
604-833	PaddleHomeFC	Fault counter 312-024: Paddle Home Fault	Range = 0 to 255	0
604-834	PaddleMoveFC	Fault counter 312-025: Paddle Move Fault	Range = 0 to 255	0
604-835	PunchMotor-MoveFC	Fault counter 312-043: Hole Punch Motor Move Fault	Range = 0 to 255	0
604-836	PunchHead-HomeFC	Fault counter 312-044: Hole Punch Head Home Fault	Range = 0 to 255	0
604-837	PunchHead-MoveFC	Fault counter 312-045: Hole Punch Head Move Fault	Range = 0 to 255	0
604-838	PunchMotor-HomeFC	Fault counter 312-046: Hole Punch Motor Home Fault	Range = 0 to 255	0
604-839	PunchUnit-MoveFC	Fault counter 312-047: Punch Unit Move Fault	Range = 0 to 255	0
604-840	InsertBotPltHomeFC	Fault counter 312-056: Inserter Bottom Plate Home Fault	Range = 0 to 255	0
604-841	InsertBotPltLiftFC	Fault counter 312-057: Inserter Bottom Plate Lift Fault	Range = 0 to 255	0
604-842	CreaseBladeMoveFC	Fault counter 312-061: Crease Blade Move Fault.	Range = 0 to 255	0

Table 14 CCS NVM ID 604-241 to 604-999

NVM ID	NVM Name	NVM Description	Settings	Default
604-843	CreaseRollMotor-FailFC	Fault counter 312-062: Crease Roll Motor Failed	Range = 0 to 255	0
604-844	BMStapler-MoveFC	Fault counter 312-063: Booklet Maker Stapler Move Fault	Range = 0 to 255	0
604-845	BackStopMotor-MoveFC	Fault counter 312-065: Back Stop Motor Move Fault	Range = 0 to 255	0
604-846	TampermoveFC	Fault counter 312-066: Tamper Move Fault	Range = 0 to 255	0
604-847	PaperPushMotor-StalledFC	Fault counter 312-083: Paper Pusher Motor Stalled	Range = 0 to 255	0
604-848	EntSnsOfJamFC	Fault counter 312-126: Entrance Sensor OFF Jam	Range = 0 to 255	0
604-849	PunchSnrOn-JamFC	Fault counter 312-127: Punch Sensor ON Jam	Range = 0 to 255	0
604-850	BuffPointSnsOn-JamFC	Fault counter 312-157: Buffer Point Sensor ON Jam	Range = 0 to 255	0
604-851	BuffPointSnsOff-JamFC	Fault counter 312-158: Buffer Point Sensor OFF Jam	Range = 0 to 255	0
604-852	BookletCompExit-SenOffJamFC	Fault counter 312-166: Booklet Compiler Exit Sensor OFF Jam	Range = 0 to 255	0
604-853	BMExitSnrOn-JamFC	Fault counter 312-181: Booklet Maker Exit Sensor ON Jam	Range = 0 to 255	0
604-854	BMExitSnrOff-JamFC	Fault counter 312-182: Booklet Maker Exit Sensor OFF Jam	Range = 0 to 255	0
604-855	BMUnexpected-SheetFC	Fault counter 312-183: Booklet Maker Unexpected Sheet	Range = 0 to 255	0
604-856	BMStraySheetFC	Fault counter 312-184: Booklet Maker Stray Sheet	Range = 0 to 255	0
604-857	TrifoldExitSnrOn-JFC	Fault counter 312-185: Trifold Exit Sensor ON Jam	Range = 0 to 255	0
604-858	TrifoldExitSnrOffJFC	Fault counter 312-186: Trifold Exit Sensor OFF Jam	Range = 0 to 255	0
604-859	TrifoldAssistSnrOnJFC	Fault counter 312-187: Trifold Assist Sensor ON Jam	Range = 0 to 255	0
604-860	LELateBBEntrySnrFC	Fault counter 312-190: Sheet late to BB entry sensor	Range = 0 to 255	0
604-861	LELatetolnserter-TabStandbySFC	Fault counter 312-191: Lead edge late to Inserter Tab Standby Sensor	Range = 0 to 255	0
604-862	TELatefromBBentrySFC	Fault counter 312-192: Sheet late from BB entry sensor	Range = 0 to 255	0
604-863	TELateInserterTabSnrFC	Fault counter 312-193: Trail edge late from Inserter Tab Standby Sensor	Range = 0 to 255	0

Table 14 CCS NVM ID 604-241 to 604-999

NVM ID	NVM Name	NVM Description	Settings	Default
604-864	Leadedgelateto-InserterPick-UpSFC	Fault counter 312-194: Lead edge late to Inserter Pick Up Sensor	Range = 0 to 255	0
604-865	TELatefromInserterPickUpSFC	Fault counter 312-196: Trail edge late from Inserter Tray Pick Up Sensor	Range = 0 to 255	0
604-866	FinStraySheetFC	Fault counter 312-198: Stray sheet is detected after jam clearance	Range = 0 to 255	0
604-867	Unexpected-SheetatFinEntFC	Fault counter 312-199: Unexpected Sheet at Finisher Entry	Range = 0 to 255	0
604-868	OffsetUnitInitFC	Fault counter 312-273: Offset Unit Init Fault	Range = 0 to 255	0
604-869	OffsetUnitHomeFC	Fault counter 312-274: Offset Unit Home Fault	Range = 0 to 255	0
604-870	OffsetUnitHomeMvFC	Fault counter 312-275: Offset Unit Home Move Fault	Range = 0 to 255	0
604-871	OffsetUnitAwayHomeFC	Fault counter 312-276: Offset Unit Away Home Fault	Range = 0 to 255	0
604-872	OffsetUnitAwayHomeMvFC	Fault counter 312-277: Offset Unit Away Home Move Fault	Range = 0 to 255	0
604-873	NipSplitFC	Fault counter 312-288: Nip Split Failure	Range = 0 to 255	0
604-874	NipHomeFC	Fault counter 312-289: Nip Home Failure	Range = 0 to 255	0
604-875	FinUndockedDuringRFC	Fault counter 312-310: Finisher Undocked During Run	Range = 0 to 255	0
604-876	TopCoverOpenInRFC	Fault counter 312-312: Top Cover Open in Run	Range = 0 to 255	0
604-877	FinDoorOpenInRFC	Fault counter 312-313: Finisher Door Open In Run	Range = 0 to 255	0
604-878	InserterTopCoverOpenInRFC	Fault counter 312-316: Inserter Top Cover Open In Run	Range = 0 to 255	0
604-879	TrifoldCoverOpenInRFC	Fault counter 312-317: Trifold Cover Open In Run	Range = 0 to 255	0
604-880	TrifoldFDoorOpenInRFC	Fault counter 312-318: Trifold Front Door Open In Run	Range = 0 to 255	0
604-881	InserterHandDoorOpenInRFC	Fault counter 312-319: Inserter Hand Door Open In run	Range = 0 to 255	0
604-882	CompHomeFC	Fault counter 312-340: Compiler Home Fault	Range = 0 to 255	0
604-883	CompOutFC	Fault counter 312-341: Compiler Out Fault	Range = 0 to 255	0
604-884	CompMvFC	Fault counter 312-342: Compiler Move Fault	Range = 0 to 255	0

**Table 14 CCS NVM ID 604-241 to 604-999**

NVM ID	NVM Name	NVM Description	Settings	Default
604-885	StapleMvFC	Fault counter 312-371: Stapler Move Fault	Range = 0 to 255	0
604-886	StapleHomeFC	Fault counter 312-372: Stapler Home Fault	Range = 0 to 255	0
604-887	StapleMiddle-HomeFC	Fault counter 312-373: Stapler Middle Home Fault	Range = 0 to 255	0
604-888	StapleMiddleMvFC	Fault counter 312-374: Stapler Middle Move Fault	Range = 0 to 255	0
604-889	Staple-JawHomeFC	Fault counter 312-375: Stapler Jaw Home Fault	Range = 0 to 255	0
604-890	StapleJawMvFC	Fault counter 312-376: Stapler Jaw Move Fault	Range = 0 to 255	0
604-891	StaplePrimingFC	Fault counter 312-377: Stapler Priming Fault	Range = 0 to 255	0
604-892	LCSSStapleIndexFC	Fault counter 312-378: LCSS Stapler index Fault	Range = 0 to 255	0
604-893	PunchUnitSideEdge-DetectFC	Fault counter 312-380: Punch Unit Side Edge Detect Fault	Range = 0 to 255	0
604-894	BackStopHomeFC	Fault counter 312-383: Back Stop Home Fault.	Range = 0 to 255	0
604-895	TampHomeFC	Fault counter 312-384: Tamper Home Fault	Range = 0 to 255	0
604-896	FTampMvFC	Fault counter 312-392: Front Tamper Move Fault	Range = 0 to 255	0
604-897	FTampHomeFC	Fault counter 312-393: Front Tamper Home Fault	Range = 0 to 255	0
604-898	FTampAway-FromHomeFC	Fault counter 312-394: Front Tamper Away From Home Fault	Range = 0 to 255	0
604-899	FTampAway-FromHomeMvFC	Fault counter 312-395: Front Tamper Away From Home Move Fault	Range = 0 to 255	0
604-900	RTampMvFC	Fault counter 312-396: Rear Tamper Move Fault	Range = 0 to 255	0
604-901	RTampHomeFC	Fault counter 312-397: Rear Tamper Home Fault	Range = 0 to 255	0
604-902	RTampAway-FromHomeMvFC	Fault counter 312-398: Rear Tamper Away From Home Move Fault	Range = 0 to 255	0
604-903	RTampAway-FromHomeFC	Fault counter 312-399: Rear Tamper Away From Home Fault	Range = 0 to 255	0
604-904	BMStapleHead2MvFC	Fault counter 312-403: Booklet Staple Head 2 Move Fault	Range = 0 to 255	0

**Table 14 CCS NVM ID 604-241 to 604-999**

NVM ID	NVM Name	NVM Description	Settings	Default
604-905	BMStaple-HomeFC	Fault counter 312-411: Booklet Stapler Home Fault	Range = 0 to 255	0
604-906	BMStapleHead2HomeFC	Fault counter 312-413: Booklet Staple Head 2 Home Fault	Range = 0 to 255	0
604-907	BMStapleNotHomeForInFC	Fault counter 312-414: Booklet Stapler Not Home For Init	Range = 0 to 255	0
604-908	RollGateHomeFC	Fault counter 312-415: Roll Gate Home Fault	Range = 0 to 255	0
604-909	CreaseBlade-HomeFC	Fault counter 312-416: Crease Blade Home Fault	Range = 0 to 255	0
604-910	BMFlapper-HomeFC	Fault counter 312-417: Booklet Maker Flapper Home Fault	Range = 0 to 255	0
604-911	BMFlappermvFC	Fault counter 312-418: Booklet Maker Flapper Move Fault	Range = 0 to 255	0
604-912	BMTamp2HomeFC	Fault counter 312-419: Booklet Maker Tamper 2 Home Fault	Range = 0 to 255	0
604-913	BMTamp2MvFC	Fault counter 312-420: Booklet Maker Tamper 2 Move Fault	Range = 0 to 255	0
604-914	PapPush-HomeFC	Fault counter 312-440: Paper Pusher Home Fault	Range = 0 to 255	0
604-915	PapPushHomeMvFC	Fault counter 312-441: Paper Pusher Home Move Fault	Range = 0 to 255	0
604-916	PapPushAway-HomeFC	Fault counter 312-442: Paper Pusher Away Home Fault	Range = 0 to 255	0
604-917	PapPushAway-HomeMvFC	Fault counter 312-443: Paper Pusher Away Home Move Fault	Range = 0 to 255	0
604-918	EjectModMotor-StallFC	Fault counter 312-450: Ejector Module Motor Stall	Range = 0 to 255	0
604-919	EjectPlateMotor-StallFC	Fault counter 312-451: Ejector Plate Motor Stall	Range = 0 to 255	0
604-920	EjectPlate-HomeFC	Fault counter 312-452: Ejector Plate Home Fault	Range = 0 to 255	0
604-921	EjectPlateMvFC	Fault counter 312-453: Ejector Plate Move Fault	Range = 0 to 255	0
604-922	LwrPaddHomeFC	Fault counter 312-454: Lower Paddle Home Fault	Range = 0 to 255	0
604-923	LwrPaddMvFC	Fault counter 312-455: Lower Paddle Move Fault	Range = 0 to 255	0
604-924	EjectMod-HomeFC	Fault counter 312-456: Ejector Module Home Fault	Range = 0 to 255	0
604-925	EjectModHomeMvFC	Fault counter 312-457: Ejector Module Home Move Fault	Range = 0 to 255	0
604-926	EjectModOut-PosFC	Fault counter 312-458: Ejector Module Out Position Fault	Range = 0 to 255	0

**Table 14 CCS NVM ID 604-241 to 604-999**

NVM ID	NVM Name	NVM Description	Settings	Default
604-927	EjectModOut-PosMvFC	Fault counter 312-459: Ejector Module Out Position Move Fault	Range = 0 to 255	0
604-928	StackBin1MotorStallFC	Fault counter 312-460: Stacker Bin 1 Motor Stall	Range = 0 to 255	0
604-929	StackBin1LevelFC	Fault counter 312-461: Stacker Bin 1 Level Fault	Range = 0 to 255	0
604-930	StackBin1ElevatorFC	Fault counter 312-462: Stacker Bin 1 Elevator Failure	Range = 0 to 255	0
604-931	BMPwrNotPresentFC	Fault counter 312-463: Booklet Maker Power Not Present Fault	Range = 0 to 255	0
604-932	BMPwrFC	Fault counter 312-464: Booklet Maker Power Fault	Range = 0 to 255	0
604-933	PaddUpPrPosFC	Fault counter 312-465: Paddle Upper Position Fault	Range = 0 to 255	0
604-934	PaddUpPrPosMvFC	Fault counter 312-466: Paddle Upper Position Move Fault	Range = 0 to 255	0
604-935	PaddLwrPosFC	Fault counter 312-467: Paddle Lower Position Fault	Range = 0 to 255	0
604-936	PaddLwrPosMvFC	Fault counter 312-468: Paddle Lower Position Move Fault	Range = 0 to 255	0
604-937	CurlSupprHomeFC	Fault counter 312-469: Curl Suppressor Home Fault	Range = 0 to 255	0
604-938	CurlSupprMvFC	Fault counter 312-470: Curl Suppressor Move Fault	Range = 0 to 255	0
604-939	CurlSupprAway-PosFC	Fault counter 312-471: Curl Suppressor Away Position Fault	Range = 0 to 255	0
604-940	CurlSupprAway-PosMvFC	Fault counter 312-472: Curl Suppressor Away Position Move Fault	Range = 0 to 255	0
604-941	PressMotorInitFC	Fault counter 312-473: Pressing Motor Init Fault	Range = 0 to 255	0
604-942	PressMotorInitMvFC	Fault counter 312-474: Pressing Motor Init Move Fault	Range = 0 to 255	0
604-943	PressMotor-HomeFC	Fault counter 312-475: Pressing Motor Home Fault	Range = 0 to 255	0
604-944	PressMotor-HomeMvFC	Fault counter 312-476: Pressing Motor Home Move Fault	Range = 0 to 255	0
604-946	PressMtrOut-PosMvFC	Fault counter 312-478: Pressing Motor Out Position Move Fault	Range = 0 to 255	0
604-947	InsSht-TooShortFC	Fault counter 312-479: Insert Sheet Too Short	Range = 0 to 255	0

**Table 14 CCS NVM ID 604-241 to 604-999**

NVM ID	NVM Name	NVM Description	Settings	Default
604-979	HolePunchConfiguration	Finisher Hole Punch Configuration	Range = 0 to 3	0
604-980	ImeFinComms-FailFC	Fault counter 312-762-00: Cannot communicate with finisher.	Range = 0 to 255	0
604-981	ImeFinMissingFC	Fault counter 312-764-00: Finisher is not present.	Range = 0 to 255	0
604-982	Total Large Marked Images Disp	Enable Display of Large Marked Images Counter	0 = No Display 1 = Displayed	1
604-983	Total Large Blk Marked Imgs Disp	Enable Display of Large Black Marked Images Counter	0 = No Display 1 = Displayed	1
604-995	FINISHERCDI-COMMSFAILFC	Fault counter 312-492-00: CDI communications failure with finisher.	Range = 0 to 255	0
604-996	FINISHERFAIL-CYCLEUPFC	Fault counter 312-493-00: Finisher failure to Cycle Up in time	Range = 0 to 255	0
604-997	FINISHERFAIL-PREPTIMEFC	Fault counter 312-494-00: Finisher failure to return prep time	Range = 0 to 3	0
604-998	DfFnlinkLate-ToEntry	Fault counter 312-100-00: Finisher Late to Entry Sensor	Range = 0 to 255	0
604-999	DfFnlinkLateIme-Exit	Fault counter 312-102-00: Late IME Exit	Range = 0 to 255	0

**Table 15 CCS NVM ID 605-001 to 605-036**

NVM ID	NVM Name	NVM Description	Settings	Default
605-001	NextPrintJobID	Value of next MFPrint job's id. (Read only)	Range = 0 to 999	1
605-002	PrintCrashRecoveryEnable	Enable Print Job Recovery Settings	0 = No Recovery 1 = Recovered	1
605-003	MFPrintCompletedJob Log Location	This holds the crash recovery print job information on the antenna side.	Range = 0 to 12	0
605-006	MFPRINT-MarkedImages-Displayable	Enable Option to export marked image counter information to clients	0 = No export 1 = Exported	1
605-008	MFPRINTSheets-Displayable	Enable Option to export marked image counter information to clients	0 = No export 1 = Exported	0
605-010	MFPRINTDuplex-SheetsDisplayable	Enable Option to export Duplexed counter information to clients	0 = No export 1 = Exported	0

**Table 15 CCS NVM ID 605-001 to 605-036**

NVM ID	NVM Name	NVM Description	Settings	Default
605-012	MFPRINT-LargeSheetsDisplayable	Enable Option to export Large Sheet counter information to clients	0 = No export 1 = Exported	0
605-013	disturbance time	Maximum time allowed for ESS to resync before deleting orphaned print jobs	Range 0 to 240	12
605-020	MFPSuccessfulImageRecServerFaxDisplay	Counter	Range 0 to 1	0
605-021	MFPSuccessfulFaxImagesRecDisplay	Enable Option to export Large Success Ifax images counter information to clients	0 = No export 1 = Exported	0
605-036	BlackReprintImagesDisp	Black reprint image counter displayable	Range = 0 to 1	0

**Table 16 CCS NVM ID 606-001 to 606-269**

NVM ID	NVM Name	NVM Description	Settings	Default
606-001	Tray 1 Media Type	Tray 1 Media Type	0 = Standard 1 = Drilled 3 = Envelope 4 = Transparency 5 = Letterhead 6 = Labels 7 = Recycled 9 = Other Type 12 = Bond 13 = Pre-Printed 14 = Card Stock 15 = Custom 1 16 = Custom 2 17 = Custom 3 19 = Custom 4 20 = Custom 5 21 = Custom 6 22 = Custom 7 18 = Unspecified 23 = System Default 37 = Precut Tabs 38 = Covers 39 = Tabs 40 = Paper Backed Transparency 41 = Thin 42 = Light Card Stock 43 = Light Glossy 44 = Heavy Glossy 45 = Light Card Stock Side 2 46 = Light Glossy Side 2 47 = Heavy Glossy Side 2 48 = Card Stock Side 2 49 = Heavy Labels 50 = Heavy Labels 51 = Heavy Precut Tabs 52 = Heavy Card Stock 53 = Heavy Card Stock Side 2 54 = Extra Heavy Glossy 55 = Extra Heavy Glossy Side 2 56 = Extra Heavy Labels 57 = Used Standard 58 = Rough Stock 59 = Photo 60 = Postcard	0

Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-002	Tray 1 Media Color	Tray 1 Media Color	0 = White 1 = Green 2 = Buff 3 = Yellow 4 = Goldenrod 5 = Blue 6 = Pink 7 = Transparent 8 = Ivory 9 = Gray 10 = Red 11 = Orange 12 = Other Color 13 = Custom 1 14 = Custom 2 15 = Custom 3 16 = Unspecified 17 = Custom 4 18 = Custom 5 19 = Custom 6 20 = Custom 7 21 = System Default	0
606-003	Tray 1 Media Weight	Tray 1 Media Weight	Range = 60 to 216	75
606-004	Tray 1 Direct Select	Tray 1 Direct Select	0 = TS Direct Only 1 = TS Direct and Auto	1
606-005	Tray 1 Priority	Tray 1 Priority	Range = 0 to 99	30
606-006	Tray 1 Width	Tray 1 Width in mm	Range = 182 to 432	216
606-007	Tray 1 Length	Tray 1 Length in mm	Range = 210 to 297	279
606-008	Tray 1 Percent Full	Tray 1 Percent Full	Range = 0 to 100	0
606-009	Tray 1 User Type	Tray 1 User Type	0 = TA Fixed 1 = TA AdjustableAll 2 = TA Adjustable Size Only	1
606-010	Tray 1 Modulus	Tray 1 Modulus	Range = 0 to 100	0
606-011	Tray 1 Modulus Position	Tray 1 Modulus Position	Range = 1 to 100	1

Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-021	Tray 2 Media Type	Tray 2 Media Type	0 = Standard 1 = Drilled 3 = Envelope 4 = Transparency 5 = Letterhead 6 = Labels 7 = Recycled 9 = Other Type 12 = Bond 13 = Pre Printed 14 = Card Stock 15 = Custom 1 16 = Custom 2 17 = Custom 3 18 = Unspecified 19 = Custom 4 20 = Custom 5 21 = Custom 6 22 = Custom 7 23 = System Default 37 = Precut Tabs 38 = Covers 39 = Tabs 40 = Paper Backed Transparency 41 = Thin 42 = Light Card Stock 43 = Light Glossy 44 = Heavy Glossy 45 = Light Card Stock Side 2 46 = Light Glossy Side 2 47 = Heavy Glossy Side 2 48 = Card Stock Side 2 49 = Thin Side 2 50 = Heavy Labels 51 = Heavy Precut Tabs 52 = Heavy Card Stock 53 = Heavy Card Stock Side 2 54 = Extra Heavy Glossy 55 = Extra Heavy Glossy Side 2 56 = Extra Heavy Labels 57 = Used Standard 58 = Rough Stock 59 = Photo 60 = Postcard	0



Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-022	Tray 2 Media Color	Tray 2 Media Color	0 = White 1 = Green 2 = Buff 3 = Yellow 4 = Goldenrod 5 = Blue 6 = Pink 7 = Transparent 8 = Ivory 9 = Gray 10 = Red 11 = Orange 12 = Other/Color 13 = Custom 1 14 = Custom 2 15 = Custom 3 16 = Unspecified 17 = Custom 4 18 = Custom 5 19 = Custom 6 20 = Custom 7 21 = System Default	0
606-023	Tray 2 Media Weight	Tray 2 Media Weight	Range = 60 to 216	75
606-024	Tray 2 Direct Select	Tray 2 Direct Select	0 = Direct Only 1 = Direct And Auto	1
606-025	Tray 2 Priority	Tray 2 Priority	Range = 0 to 99	50
606-026	Tray 2 Width	Tray 2 Width in mm	Range = 98 to 432	216
606-027	Tray 2 Length	Tray 2 Length in mm	Range = 140 to 297	279
606-028	Tray 2 Percent Full	Tray 2 Percent Full	Range = 0 to 100	0
606-029	Tray 2 User Type	Tray 2 User Type	0 = Fixed 1 = Adjustable All 2 = Adjustable Size Only	1
606-030	Tray 2 Modulus	Tray 2 Modulus	Range = 0 to 100	0
606-031	Tray 2 Modulus Position	Tray 2 Modulus Position	Range = 1 to 100	1

Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-032	Tray 2 Usage: Standard/Envelope	Tray 2 Usage: Standard Tray / Envelope Tray	0 = Special Materials 1 = High Capacity 2 = Basic Tray 3 = Interposer 4 = Envelope	2

Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-041	Tray 3 Media Type	Tray 3 Media Type	0 = Standard 1 = Drilled 3 = Envelope 4 = Transparency 5 = Letterhead 6 = Labels 7 = Recycled 9 = Other Type 12 = Bond 13 = Pre Printed 14 = Card Stock 15 = Custom 1 16 = Custom 2 17 = Custom 3 18 = Unspecified 19 = Custom 4 20 = Custom 5 21 = Custom 6 22 = Custom 7 23 = System Default 37 = Precut Tabs 38 = Covers 39 = Tabs 40 = Paper Backed Transparency 41 = Thin 42 = Light Card Stock 43 = Light Glossy 44 = Heavy Glossy 45 = Light Card Stock Side 2 46 = Light Glossy Side 2 47 = Heavy Glossy Side 2 48 = Card Stock Side 2 49 = Thin Side 2 50 = Heavy Labels 51 = Heavy Precut Tabs 52 = Heavy Card Stock 53 = Heavy Card Stock Side 2 54 = Extra Heavy Glossy 55 = Extra Heavy Glossy Side 2 56 = Extra Heavy Labels 57 = Used Standard 58 = Rough Stock 59 = Photo 60 = Postcard	0

Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-042	Tray 3 Media Color	Tray 3 Media Color	0 = White 1 = Green 2 = Buff 3 = Yellow 4 = Goldenrod 5 = Blue 6 = Pink 7 = Transparent 8 = Ivory 9 = Gray 10 = Red 11 = Orange 12 = Other Color 13 = Custom 1 14 = Custom 2 15 = Custom 3 16 = Unspecified 17 = Custom 4 18 = Custom 5 19 = Custom 6 20 = Custom 7 21 = System Default	0
606-043	Tray 3 Media Weight	Tray 3 Media Weight	Range = 60 to 216	75
606-044	Tray 3 Direct Select	Tray 3 Direct Select	0 = Direct Only 1 = Direct And Auto	1
606-045	Tray 3 Priority	Tray 3 Priority	Range = 1 to 99	15
606-046	Tray 3 Width	Tray 3 Width in mm A4 = 210 8.5 x 11 = 216	Range = 210 to 216	USSG = 216 XE = 210
606-047	Tray 3 Length	Tray 3 Length in mm (Read only) A4 = 297 8.5 x 11 = 279	Range = 279 to 297	USSG = 279 XE = 297
606-048	Tray 3 Percent Full	Tray 3 Percent Full	Range = 0 to 100	0
606-049	Tray 3 User Type	Tray 3 User Type (fixed size)	0 = Fixed 1 = Not fixed	0
606-050	Tray 3 Modulus	Tray 3 Modulus	Range = 0 to 100	0
606-051	Tray 3 Modulus Position	Tray 3 Modulus Position	Range = 1 to 100	1

Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-061	Tray 4 Media Type	Tray 4 Media Type	0 = Standard 1 = Drilled 3 = Envelope 4 = Transparency 5 = Letterhead 6 = Labels 7 = Recycled 9 = Other Type 12 = Bond 13 = Pre Printed 14 = Card Stock 15 = Custom 1 16 = Custom 2 17 = Custom 3 18 = Unspecified 19 = Custom 4 20 = Custom 5 21 = Custom 6 22 = Custom 7 23 = System Default 37 = Precut Tabs 38 = Covers 39 = Tabs 40 = Paper Backed Transparency 41 = Thin 42 = Light Card Stock 43 = Light Glossy 44 = Heavy Glossy 45 = Light Card Stock Side 2 46 = Light Glossy Side 2 47 = Heavy Glossy Side 2 48 = Card Stock Side 2 49 = Thin Side 2 50 = Heavy Labels 51 = Heavy Precut Tabs 52 = Heavy Card Stock 53 = Heavy Card Stock Side 2 54 = Extra Heavy Glossy 55 = Extra Heavy Glossy Side 2 56 = Extra Heavy Labels 57 = Used Standard 58 = Rough Stock 59 = Photo 60 = Postcard	0

Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-062	Tray 4 Media Color	Tray 4 Media Color	0 = White 1 = Green 2 = Buff 3 = Yellow 4 = Goldenrod 5 = Blue 6 = Pink 7 = Transparent 8 = Ivory 9 = Gray 10 = Red 11 = Orange 12 = Other Color 13 = Custom 1 14 = Custom 2 15 = Custom 3 16 = Unspecified 17 = Custom 4 18 = Custom 5 19 = Custom 6 20 = Custom 7 21 = System Default	0
606-063	Tray 4 Media Weight	Tray 4 Media Weight	Range = 60 to 216	75
606-064	Tray 4 Direct Select	Tray 4 Direct Select	0 = Direct Only 1 = Direct And Auto	1
606-065	Tray 4 Priority	Tray 4 Priority	Range = 1 to 99	20
606-066	Tray 4 Width	Tray 4 Width in mm	Range = 210 to 216	216
606-067	Tray 4 Length	Tray 4 Length in mm	Range = 279 to 297	279
606-068	Tray 4 Percent Full	Tray 4 Percent Full	Range = 0 to 100	0
606-069	Tray 4 User Type	Tray 4 User Type	1 = Adjustable All Range = 0 to 1	1
606-070	Tray 4 Modulus	Tray 4 Modulus	Range = 0 to 100	0
606-071	Tray 4 Modulus Position	Tray 4 Modulus Position	Range = 1 to 100	1

Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-081	Tray 5 Media Type	Bypass Tray Media Type	0 = Standard 1 = Drilled 3 = Envelope 4 = Transparency 5 = Letterhead 6 = Labels 7 = Recycled 9 = Other Type 12 = Bond 13 = Pre Printed 14 = Card Stock 15 = Custom 1 16 = Custom 2 17 = Custom 3 18 = Unspecified 19 = Custom 4 20 = Custom 5 21 = Custom 6 22 = Custom 7 23 = System Default 37 = Precut Tabs 38 = Covers 39 = Tabs 40 = Paper Backed Transparency 41 = Thin 42 = Light Card Stock 43 = Light Glossy 44 = Heavy Glossy 45 = Light Card Stock Side 2 46 = Light Glossy Side 2 47 = Heavy Glossy Side 2 48 = Card Stock Side 2 49 = Thin Side 2 50 = Heavy Labels 51 = Heavy Precut Tabs 52 = Heavy Card Stock 53 = Heavy Card Stock Side 2 54 = Extra Heavy Glossy 55 = Extra Heavy Glossy Side 2 56 = Extra Heavy Labels 57 = Used Standard 58 = Rough Stock 59 = Photo 60 = Postcard	0

Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-082	Tray 5 Media Color	Bypass Tray Media Color	0 = White 1 = Green 2 = Buff 3 = Yellow 4 = Goldenrod 5 = Blue 6 = Pink 7 = Transparent 8 = Ivory 9 = Gray 10 = Red 11 = Orange 12 = Other Color 13 = Custom 1 14 = Custom 2 15 = Custom 3 16 = Unspecified 17 = Custom 4 18 = Custom 5 19 = Custom 6 20 = Custom 7 21 = System Default	0
606-083	Tray 5 Media Weight	Bypass Tray Media Weight	Range = 60 to 216	75
606-084	Tray 5 Direct Select	Bypass Tray Direct Select	0 = Direct Only 1 = Direct And Auto	1
606-085	Tray 5 Priority	Bypass Tray Priority	Range = 1 to 99	99
606-086	Tray 5 Width	Bypass Tray Width in mm	Range = 98 to 432	216
606-087	Tray 5 Length	Bypass Tray Length in mm	Range = 104 to 297	279
606-088	Tray 5 Percent Full	Bypass Tray Percent Full	Range = 0 to 100	0
606-089	Tray 5 User Type	Bypass Tray User Type	0 = Fixed 1 = Adjustable All 2 = Adjustable Size Only	1
606-090	Tray 5 Modulus	Bypass Tray Modulus	Range = 0 to 100	0
606-091	Tray 5 Modulus Position	Bypass Tray Modulus Position	Range = 1 to 100	1

Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-101	Tray 6 Media Type	Tray 6 Media Type	0 = Standard 1 = Drilled 3 = Envelope 4 = Transparency 5 = Letterhead 6 = Labels 7 = Recycled 9 = Other Type 12 = Bond 13 = Pre Printed 14 = Card Stock 15 = Custom 1 16 = Custom 2 17 = Custom 3 18 = Unspecified 19 = Custom 4 20 = Custom 5 21 = Custom 6 22 = Custom 7 23 = System Default 37 = Precut Tabs 38 = Covers 39 = Tabs 40 = Paper Backed Transparency 41 = Thin 42 = Light Card Stock 43 = Light Glossy 44 = Heavy Glossy 45 = Light Card Stock Side 2 46 = Light Glossy Side 2 47 = Heavy Glossy Side 2 48 = Card Stock Side 2 49 = Thin Side 2 50 = Heavy Labels 51 = Heavy Precut Tabs 52 = Heavy Card Stock 53 = Heavy Card Stock Side 2 54 = Extra Heavy Glossy 55 = Extra Heavy Glossy Side 2 56 = Extra Heavy Labels 57 = Used Standard 58 = Rough Stock 59 = Photo 60 = Postcard	0

Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-102	Tray 6 Media Color	Tray 6 Media Color	0 = White 1 = Green 2 = Buff 3 = Yellow 4 = Goldenrod 5 = Blue 6 = Pink 7 = Transparent 8 = Ivory 9 = Gray 10 = Red 11 = Orange 12 = Other Color 13 = Custom 1 14 = Custom 2 15 = Custom 3 16 = Unspecified 17 = Custom 4 18 = Custom 5 19 = Custom 6 20 = Custom 7 21 = System Default	0
606-103	Tray 6 Media Weight	Tray 6 Media Weight	Range = 60 to 216	75
606-104	Tray 6 Direct Select	Tray 6 Direct Select	0 = Direct Only 1 = Direct And Auto	1
606-105	Tray 6 Priority	Tray 6 Priority	Range = 1 to 99	5
606-106	Tray 6 Width	Tray 6 Width in mm	Range = 210 to 216	216
606-107	Tray 6 Length	Tray 6 Length in mm	Range = 279 to 297	279
606-108	Tray 6 Percent Full	Tray 6 Percent Full	Range = 0 to 100	0
606-109	Tray 6 User Type	Tray 6 User Type	0 = Fixed 1 = Adjustable All 2 = Adjustable Size Only	0
606-110	Tray 6 Modulus	Tray 6 Modulus	Range = 0 to 100	0
606-111	Tray 6 Modulus Position	Tray 6 Modulus Position	Range = 1 to 100	1

Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-121	Tray 7 Media Type	Tray 7 Media Type	0 = Standard 1 = Drilled 3 = Envelope 4 = Transparency 5 = Letterhead 6 = Labels 7 = Recycled 9 = Other Type 12 = Bond 13 = Pre Printed 14 = Card Stock 15 = Custom 1 16 = Custom 2 17 = Custom 3 18 = Unspecified 19 = Custom 4 20 = Custom 5 21 = Custom 6 22 = Custom 7 23 = System Default 37 = Precut Tabs 38 = Covers 39 = Tabs 40 = Paper Backed Transparency 41 = Thin 42 = Light Card Stock 43 = Light Glossy 44 = Heavy Glossy 45 = Light Card Stock Side 2 46 = Light Glossy Side 2 47 = Heavy Glossy Side 2 48 = Card Stock Side 2 49 = Thin Side 2 50 = Heavy Labels 51 = Heavy Precut Tabs 52 = Heavy Card Stock 53 = Heavy Card Stock Side 2 54 = Extra Heavy Glossy 55 = Extra Heavy Glossy Side 2 56 = Extra Heavy Labels 57 = Used Standard 58 = Rough Stock 59 = Photo 60 = Postcard	0

Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-122	Tray 7 Media Color	Tray 7 Media Color	0 = White 1 = Green 2 = Buff 3 = Yellow 4 = Goldenrod 5 = Blue 6 = Pink 7 = Transparent 8 = Ivory 9 = Gray 10 = Red 11 = Orange 12 = Other Color 13 = Custom 1 14 = Custom 2 15 = Custom 3 16 = Unspecified 17 = Custom 4 18 = Custom 5 19 = Custom 6 20 = Custom 7 21 = System Default	0
606-123	Tray 7 Media Weight	Tray 7 Media Weight	Range 60 to 216	75
606-124	Tray 7 Direct Select	Tray 7 Direct Select	0 = Direct Only 1 = Direct And Auto	1
606-125	Tray 7 Priority	Tray 7 Priority	Range = 0 to 99	10
606-126	Tray 7 Width	Tray 7 Width in mm	Range = 210 to 432	216
606-127	Tray 7 Length	Tray 7 Length in mm	Range = 210 to 297	279
606-128	Tray 7 Percent Full	Tray 7 Percent Full	Range = 0 to 100	0
606-129	Tray 7 User Type	Tray 7 User Type	0 = Fixed 1 = Adjustable All 2 = Adjustable Size Only	1
606-130	Tray 7 Modulus	Tray 7 Modulus	Range = 0 to 100	0
606-131	Tray 7 Modulus Position	Tray 7 Modulus Position	Range = 1 to 100	1

Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-141	Tray 8 Media Type	Tray 8 Media Type	0 = Standard 1 = Drilled 3 = Envelope 4 = Transparency 5 = Letterhead 6 = Labels 7 = Recycled 9 = Other Type 12 = Bond 13 = Pre Printed 14 = Card Stock 15 = Custom 1 16 = Custom 2 17 = Custom 3 18 = Unspecified 19 = Custom 4 20 = Custom 5 21 = Custom 6 22 = Custom 7 23 = System Default 37 = Precut Tabs 38 = Covers 39 = Tabs 40 = Paper Backed Transparency 41 = Thin 42 = Light Card Stock 43 = Light Glossy 44 = Heavy Glossy 45 = Light Card Stock Side 2 46 = Light Glossy Side 2 47 = Heavy Glossy Side 2 48 = Card Stock Side 2 49 = Thin Side 2 50 = Heavy Labels 51 = Heavy Precut Tabs 52 = Heavy Card Stock 53 = Heavy Card Stock Side 2 54 = Extra Heavy Glossy 55 = Extra Heavy Glossy Side 2 56 = Extra Heavy Labels 57 = Used Standard 58 = Rough Stock 59 = Photo 60 = Postcard	0

Table 16 CCS NVM ID 606-001 to 606-269

NVM ID	NVM Name	NVM Description	Settings	Default
606-142	Tray 8 Media Color	Tray 8 Media Color	0 = White 1 = Green 2 = Buff 3 = Yellow 4 = Goldenrod 5 = Blue 6 = Pink 7 = Transparent 8 = Ivory 9 = Gray 10 = Red 11 = Orange 12 = Other Color 13 = Custom 1 14 = Custom 2 15 = Custom 3 16 = Unspecified 17 = Custom 4 18 = Custom 5 19 = Custom 6 20 = Custom 7 21 = System Default	0
606-143	Tray 8 Media Weight	Tray 8 Media Weight	Range = 60 to 216	75
606-144	Tray 8 Direct Select	Tray 8 Direct Select	0 = Direct Only 1 = Direct And Auto	1
606-145	Tray 8 Priority	Tray 8 Priority	Range = 1 to 99	5
606-146	Tray 8 Width	Tray 8 Width in mm	Range = 210 to 420	210
606-147	Tray 8 Length	Tray 8 Length in mm	Range = 297 to 297	297
606-148	Tray 8 Percent Full	Tray 9 Percent Full	Range = 0 to 100	0
606-149	Tray 8 User Type	Tray 8 User Type	0 = Fixed 1 = Adjustable All 2 = Adjustable Size Only	1
606-150	Tray 8 Modulus	Tray 8 Modulus	Range = 0 to 100	0
606-151	Tray 8 Modulus Position	Tray 8 Modulus Position	Range = 1 to 100	1

**Table 16 CCS NVM ID 606-001 to 606-269**

NVM ID	NVM Name	NVM Description	Settings	Default
606-152	Print Engine Lifetime Jams	Print Engine Lifetime Jams (Read only)	Range = 0 to 4294967295	0
606-269	Service Plan	Service Plan (Read only)	0 = XE/NA Sold 1 = Default (has been set by SIM) 2 = Not used 3 = Metered 4 = XE PagePack 5 = DMO sold.	3

**Table 17 CCS NVM ID 606-272 to 606-886**

NVM ID	NVM Name	NVM Description	Settings	Default
606-272	TB Configuration	Billing Configuration. This counter supports tier billing	0 = Traditional 1 = 2 tier 2 = 3 tier	0
606-392	PrePunchMediaEraseValue	Default sheet edge erase value for pre-punched, pre-cut tab stock in mm.	Range = 0 to 255	0
606-393	Tray 1 Jams	Tray 1 Jams - Usage Counter (Read only)	Range = 0 to 4294967295	0
606-394	Tray 2 Jams	Tray 2 Jams - Usage Counter (Read only)	Range = 0 to 4294967295	0
606-395	Tray 3 Jams	Tray 3 Jams - Usage Counter (Read only)	Range = 0 to 4294967295	0
606-396	Tray 4 Jams	Tray 4 Jams - Usage Counter (Read only)	Range = 0 to 4294967295	0
606-397	Tray 5 Jams	Bypass Tray Jams - Usage Counter (Read only)	Range = 0 to 4294967295	0
606-398	Tray 6 Jams	Tray 6 Jams - Usage Counter (Read only)	Range = 0 to 4294967295	0
606-399	Tray 7 Jams	Tray 7 Jams - Usage Counter (Read only)	Range = 0 to 4294967295	0
606-401	IOT comm faults counter	IOT comm faults counter (Read only)	Range = 0 to 4294967295	0
606-402	Finisher comm faults counter	Finisher comm faults counter (Read only)	Range = 0 to 4294967295	0
606-403	Protocol comm faults counter	Protocol comm faults counter (Read only)	Range = 0 to 4294967295	0
606-404	Paper trays currently installed	Paper trays currently installed (Read only)	Range = 0 to 4294967295	0

**Table 17 CCS NVM ID 606-272 to 606-886**

NVM ID	NVM Name	NVM Description	Settings	Default
606-405	Output jams	Output jams (Read only)	Range = 0 to 4294967295	0
606-406	Compile jams	Compile jams (Read only)	Range = 0 to 4294967295	0
606-407	Staple errors	Staple errors (Read only)	Range = 0 to 4294967295	0
606-408	Booklet maker errors	Booklet maker errors (Read only)	Range = 0 to 4294967295	0
606-409	Registration Jams	Registration Jams (Read only)	Range = 0 to 4294967295	0
606-410	Installed Maint Kit Impressions	Total number of sheets that have been successfully delivered to output destination since the current kit was installed. (Read only)	Range = 0 to 4294967295	0
606-467	Actual K Pix In BW Mode Low	Actual Black Pixels Marked-Black & White Low (1K) (Read only)	Range = 0 to 4294967295	0
606-482	DADHRollFeeds	SPDH Feed Roll Number of feeds	Range = 0 to 4294967295	0
606-483	PPIRollFeeds	PPI Feed Roll Number of feeds	Range = 0 to 4294967295	0
606-484	Tray1RollFeeds	Tray1 Feed Roll - Number of feeds	Range = 0 to 4294967295	0
606-485	Tray2RollFeeds	Tray2 Feed Roll - Number of feeds	Range = 0 to 4294967295	0
606-486	Tray3RollFeeds	Tray3 Feed Roll - Number of feeds	Range = 0 to 4294967295	0
606-487	MSIRollFeeds	MSI Feed Roll number of feeds	Range = 0 to 4294967295	0
606-488	InsertRollReplacements	Insert Feed Roll - Number of replacements	Range = 0 to 4294967295	0
606-489	FuserUsage	Fuser assembly number of sheets	Range = 0 to 4294967295	0
606-492	DADHRollReplacements	SPDH Feed Roll number of replacements	Range = 1 to 65535	1
606-493	InsertRollReplacements	Insert Feed Roll - Number of replacements	Range = 1 to 65535	1
606-494	3TMtray1RollReplacements	Tray1 Feed Roll number of replacements	Range = 1 to 65535	1
606-495	3TMtray2RollReplacements	Tray2 Feed Roll number of replacements	Range = 1 to 65535	1
606-496	3TMtray3RollReplacements	Tray3 Feed Roll number of feeds	Range = 1 to 65535	1



Table 17 CCS NVM ID 606-272 to 606-886

NVM ID	NVM Name	NVM Description	Settings	Default
606-497	Tray5FeedRollsRepCount	Bypass tray feed roll number of replacements	Range = 1 to 65535	1
606-498	Tray6FeedRollsRepCoun	Tray 6 Feed Roll number of replacements	Range = 1 to 65535	1
606-516	SPDHRollLife	SPDH Feed Roll Life Expectancy	Range = 0 to 4294967295	170000
606-517	Tray7FeedRollsExpLife	Tray 7 (PPI) Feed Rolls Life Expectancy	Range = 0 to 4294967295	100000
606-518	Tray1FeedRollsExpLife	Tray 1 Feed Rolls life expectancy	Range = 0 to 4294967295	750000
606-519	Tray2FeedRollsExpLife	Tray 2 Feed Rolls life expectancy	Range = 0 to 4294967295	750000
606-520	Tray3FeedRollsExpLife	Tray 3 Feed Rolls Life Expectancy	Range = 0 to 4294967295	400000
606-521	Tray5FeedRollsExpLife	Bypass Tray Feed Rolls life expectancy	Range = 0 to 4294967295	100000
606-522	Tray6FeedRollsExpLife	Tray 6 (PPF) Feed Rolls life expectancy	Range = 0 to 4294967295	100000
606-523	FuserLife	Fuser Life Expectancy	Range = 0 to 4294967295	0
606-537	Last Auto Maintenance Update	Last Auto Maintenance Update (Read only)	Range = 0 to 4294967295	0
606-539	InhibitMarkOnTabsPolicy	Inhibit Mark On Tabs Policy	0 = Off 1 = On	1
606-572	FinisherFlashROMFailFC	Fault counter 312-098: Finisher Flash ROM Fail	Range = 0 to 255	0
606-573	OffsetUnitHomeMvFC	Fault counter 312-275: Offset Unit Home Move Fault	Range = 0 to 255	0
606-572	OffsetUnitAwayHomeFC	Fault counter 312-276: Offset Unit Away Home Fault	Range = 0 to 255	0
606-573	FinisherCommErrorFC	Fault counter 312-099: Finisher Comm Error	Range = 0 to 255	0
606-578	FinisherElevationDriveFailFC	Fault counter 312-480: Finisher Elevation Drive Fail	Range = 0 to 255	0
606-579	FinisherPaperPressDriveFailFC	Fault counter 312-481: Finisher Paper Press Drive Fail	Range = 0 to 255	0
606-580	FinisherAlignPlateDriveFailFC	Fault counter 312-482: Finisher Align Plate Drive Fail	Range = 0 to 255	0
606-581	FinisherEjectRollerContactFailFC	Fault counter 312-483: Finisher Eject Roller Contact Fail	Range = 0 to 255	0
606-582	FinisherStorageBeltContactFailFC	Fault counter 312-484: Finisher Storage Belt Contact Fail	Range = 0 to 255	0
606-583	FinisherBundleEjectMotorFailFC	Fault counter 312-485: Finisher Bundle Eject Motor Fail	Range = 0 to 255	0

Table 17 CCS NVM ID 606-272 to 606-886

NVM ID	NVM Name	NVM Description	Settings	Default
606-604	JamFinisherTransportAreaFC	Fault counter 312-487: JamFinisherTransportAreaFC	Range = 0 to 255	0
606-605	JamFinisherUpperOutputTrayFC	Fault counter 312-488: JamFinisherUpperOutputTrayFC	Range = 0 to 255	0
606-606	JamFinisherStackerOutputTrayFC	Fault counter 312-489: JamFinisherStackerOutputTrayFC	Range = 0 to 255	0
606-607	StaplerJamFC	Fault counter 312-491: Stapler-JamFC	Range = 0 to 255	0
606-710	Average AC Black. Int.	Average Area Coverage for Black channel in black mode for life of machine. (Read only)	Range = 0 to 4294967295	0
606-714	Avg AC Black in Color Int.	Average Area Coverage for Black channel in color mode for life of machine. (Read only)	Range = 0 to 4294967295	0
606-757	ATSWithFinishingEnable	Folding job with Tray selected switches to another tray when selected tray runs out of media.	1 = Enabled 0 = Disabled	0
606-787	Table Version	Default is the version number of the Excel table used to create the NVM	Range = 0 to 65535	1515
606-801	PapPusher-SwitchFC	Fault counter 312-444: Paper Pusher Switch Fault	Range = 0 to 255	0
606-806	Default Staple Position	Default Staple position	1 = Moves to front 2 = Remains at rear	2
606-820	TonerGramsStd	Number of Grams of toner in a Standard size cartridge	Range = 0 to 65535	137
606-821	TonerGramsHi-Cap	Number of Grams of toner in a High Capacity cartridge	Range = 0 to 65535	266
606-857	BlackNeutral(1)Countdown	Number of Black neutral ink sticks allowed (1)	Range = 0 to 4	4
606-874	EjectHomeSensorONFail	Fault counter 312-259-00: Eject Home Sensor On Fail	Range = 0 to 255	0
606-875	EjectHomeSensorOFFFail	Fault counter 312-280-00: Eject Home Sensor Off Fail	Range = 0 to 255	0
606-876	StackerTrayStapleSetOverCount	Fault counter 312-917-00: Stacker Tray Staple Set Over Counter	Range = 0 to 255	0
606-877	ScratchSheet-Compile	Fault counter 312-928-00: Scratch Sheet Compile	Range = 0 to 255	0
606-878	StapleNG	Fault counter 312-976-00: Staple NG	Range = 0 to 255	0
606-879	StaplerFeedReadyFail	Fault counter 312-977-00: Stapler Feed Ready Fail	Range = 0 to 255	0
606-880	StackerLower-SafetyWarning	Fault counter 312-982-00: Stacker Lower Safety Warning	Range = 0 to 255	0

**Table 17 CCS NVM ID 606-272 to 606-886**

NVM ID	NVM Name	NVM Description	Settings	Default
606-881	BookletSubCPU-CommFail	Fault counter 312-269-00: Booklet Sub CPU Comm Fail	Range = 0 to 255	0
606-882	H_XportEntSnrOFFJam	Fault counter 312-111-00: Horizontal Transport Entry Sensor Off Jam	Range = 0 to 255	0
606-883	BookletFrontStaplerFail	Fault counter 312-249-00: Booklet Front Stapler Fail	Range = 0 to 255	0
606-884	BookletRearStaplerFail	Fault counter 312-268-00: Booklet Rear Stapler Fail	Range = 0 to 255	0
606-885	BookletStapleMovePosi_SnrONFail	Fault counter 312-212-00: Booklet Staple Move Position Sensor On Fail	Range = 0 to 255	0
606-886	BookletStapleMovePosi_SnrOFFFail	Fault counter 312-213-00: Booklet Staple Move Position Sensor OFF Fail	Range = 0 to 255	0

**Table 18 CCS NVM ID 608-411 to 608-996**

NVM ID	NVM Name	NVM Description	Settings	Default
608-411	Stapler End Home Failure	Fault counter 312-370-00: Stapler End Home Failure	Range = 0 to 255	0
608-412	Stapler Return End Home Failure	Fault Counter 312-369-00: Stapler Return End Home Failure	Range = 0 to 255	0
608-413	Punch - side edge2 detect fail	Fault counter 312-368-00: Punch Unit paper side edge 2 detecting failure	Range = 0 to 255	0
608-414	Punch - side edge3 detect fail	Fault counter 312-367-00: Punch Unit paper side edge 3 detecting failure	Range = 0 to 255	0
608-728	DrumConservationMode	Drum Conservation Mode	Range = 0 to 1	1
608-931	ImeIncompatibleFinisherFC	Fault counter 312-765-00: Incompatible Finisher Detected	Range = 0 to 255	0
608-933	PaperDetectSensorNotMade	Fault counter 312-195: Paper Detect Sensor not Made Jam	Range = 0 to 255	0
608-934	LELateEntrySensor	Fault counter 312-125: Finisher Entry Sensor not Made Jam	Range = 0 to 255	0
608-935	TELateEntrySensor	Fault counter 312-101: Finisher Entry Sensor not Cleared Jam	Range = 0 to 255	0

**Table 18 CCS NVM ID 608-411 to 608-996**

NVM ID	NVM Name	NVM Description	Settings	Default
608-936	StapleDoorOpenIR	Fault counter 312-336: Rear Staple Door Opened in Run	Range = 0 to 255	0
608-937	EjectorClampMotorStall	Fault counter 312-283: Ejector Clamp Motor Stall Failure	Range = 0 to 255	0
608-938	EjectorClampReturnHome	Fault counter 312-284: Ejector Clamp Return Home Failure	Range = 0 to 255	0
608-939	LEEntrySensorTriggered	Fault counter 312-950: Preparation Time Violation on Finisher Entry Sensor	Range = 0 to 255	0
608-951	Top Edge Reg Tray 1 Simplex	Tray 1 Top Edge Reg Simp	Range = 0 to 472	236
608-952	Top Edge Reg Tray 2 Simplex	Tray 2 Top Edge Reg Simp	Range = 0 to 472	236
608-953	Top Edge Reg Tray 3 Simplex	Tray 3 Top Edge Reg Simp	Range = 0 to 472	236
608-954	Top Edge Reg Tray 4 Simplex	Tray 4 Top Edge Reg Simp	Range = 0 to 472	236
608-955	Top Edge Reg Tray 5 Simplex	Bypass Tray Top Edge Reg Simp	Range = 0 to 472	236
608-956	Top Edge Reg Tray 6 Simplex	Tray 6 (PFP) Top Edge Reg Simp	Range = 0 to 472	236
608-957	Top Edge Reg Tray 1 Duplex	Tray 1 Top Edge Reg Dup	Range = 0 to 472	236
608-958	Tray 2 Top Edge Reg Dup	Top Edge Reg Tray 2 Duplex	Range = 0 to 472	236
608-959	Top Edge Reg Tray 3 Duplex	Tray 3 Top Edge Reg Dup	Range = 0 to 472	236
608-960	Top Edge Reg Tray 4 Duplex	Tray 4 Top Edge Reg Dup	Range = 0 to 472	236
608-961	Top Edge Reg Tray 5 Duplex	Bypass Tray Top Edge Reg Dup	Range = 0 to 472	236
608-962	Top Edge Reg Tray 6 Duplex	Tray 6 (PFP) Top Edge Reg Dup	Range = 0 to 472	236
608-963	IOT LE Reg Simp	IOT Lead Edge Reg Simp	Range = 0 to 236	0
608-964	IOT LE Reg Dup	IOT Lead Edge Reg Dup	Range = 0 to 236	0
608-966	BillingImpressionsMode	Billing Impressions Mode (Read only)	Range = 0 to 65535	0
608-976	Fault Counter 11-484-00	Fault Counter 311-484-00	Range = 0 to 255	0
608-977	Fault Counter 11-486-00	Fault Counter 311-486-00	Range = 0 to 255	0
608-978	Fault Counter 11-488-00	Fault Counter 311-488-00	Range = 0 to 255	0
608-979	Fault Counter 11-490-00	Fault Counter 311-490-00	Range = 0 to 255	0

**Table 18 CCS NVM ID 608-411 to 608-996**

NVM ID	NVM Name	NVM Description	Settings	Default
608-980	Fault Counter 11-492-00	Fault Counter 311-492-00	Range = 0 to 255	0
608-994	Custom Media feature enablement	Custom display names for custom media types - feature enablement	Range = 0 to 1	0
608-996	CMT List Initialized	Custom display names - Custom media type List initialized flag (Read only)	Range = 0 to 1	1

**Table 19 CCS NVM ID 609-001 to 609-457**

NVM ID	NVM Name	NVM Description	Settings	Default
609-001	FrontCoverOpenInRunFC	Fault counter 301-300-00: Front Cover Open In Run Fault	Range = 0 to 255	0
609-002	SideCoverOpenInRunFC	Fault counter 301-305-00: Side Cover Open In Run Fault	Range = 0 to 255	0
609-003	LELateToPostFuserSnsrSimpFC	Fault counter 310-101-00: Lead Edge Late To Post Fuser Sensor Simp Fault	Range = 0 to 255	0
609-004	LELateToPostFuserSnsrDup1FC	Fault counter 310-102-00: Lead Edge Late To Post Fuser Sensor Dup 1 Fault	Range = 0 to 255	0
609-005	LELateToPostFuserSnsrDup2FC	Fault counter 310-103-00: Lead Edge Late To Post Fuser Sensor Dup 2 Fault	Range = 0 to 255	0
609-006	TELateFmPostFuseSnsrSimpNonInvFC	Fault counter 310-107-00: Trail Edge Late From Post Fuser Sensor Simp Non Inv Fault	Range = 0 to 255	0
609-007	TELateFmPostFuserSnsrSimpInvFC	Fault counter 310-108-00: Trail Edge Late From Post Fuser Sensor Simp Inv Fault	Range = 0 to 255	0
609-008	TELateFmPostFuserSnsrDup1FC	Fault counter 310-109-00: Trail Edge Late From Post Fuser Sensor Dup 1 Fault	Range = 0 to 255	0
609-009	TELateFmPostFuserSnsrDup2FC	Fault counter 310-110-00: Trail Edge Late From Post Fuser Sensor Dup 2 Fault	Range = 0 to 255	0
609-010	LELateToIotExitSnsrInvFC	Fault counter 310-120-00: Lead Edge Late To IOT Exit Sensor Inv Fault	Range = 0 to 255	0
609-011	LELateToIotExitSnsrNonInvFC	Fault counter 310-121-00: Lead Edge Late To IOT Exit Sensor Non Inv Fault	Range = 0 to 255	0

**Table 19 CCS NVM ID 609-001 to 609-457**

NVM ID	NVM Name	NVM Description	Settings	Default
609-012	TELateFmIotExitSnsrFC	Fault counter 310-126-00: Trail Edge Late From IOT Exit Sensor Fault	Range = 0 to 255	0
609-013	LELateToTopExitSnsrFC	Fault counter 310-130-00: Lead Edge Late To Top Exit Sensor Fault	Range = 0 to 255	0
609-014	TELateFmTopExitSnsrFC	Fault counter 310-131-00: Trail Edge Late From Top Exit Sensor Fault	Range = 0 to 255	0
609-015	LELateToInvertSnsrSimpFC	Fault counter 310-132-00: Lead Edge Late To Invert Sensor Simp Fault	Range = 0 to 255	0
609-016	LELateToInvertSnsrDup1FC	Fault counter 310-133-00: Lead Edge Late To Invert Sensor Dup 1 Fault	Range = 0 to 255	0
609-017	LELateToInvertSnsrDup2FC	Fault counter 310-134-00: Lead Edge Late To Invert Sensor Dup 2 Fault	Range = 0 to 255	0
609-018	TELateFmInvertSnsrSimpNonInvFC	Fault counter 310-135-00: Trail Edge Late From Invert Sensor Simp Non Inv Fault	Range = 0 to 255	0
609-019	TELateFmInvertSnsrSimpInvFC	Fault counter 310-136-00: Trail Edge Late From Invert Sensor Simp Inv Fault	Range = 0 to 255	0
609-020	TELateFmInvertSnsrDup1FC	Fault counter 310-137-00: Trail Edge Late From Invert Sensor Dup 1 Fault	Range = 0 to 255	0
609-021	TELateFmInvertSnsrDup2FC	Fault counter 310-138-00: Trail Edge Late From Invert Sensor Dup 2 Fault	Range = 0 to 255	0
609-022	FuserThermFCFC	Fault counter 310-315-00: Fuser Therm Fault	Range = 0 to 255	0
609-023	FuserCtrlFailFC	Fault counter 310-320-00: Fuser Control Failure Fault	Range = 0 to 255	0
609-024	FuserCtrlFailStandbyOverTempFC	Fault counter 310-321-00: Fuser Control Failure Standby Over Temp Fault	Range = 0 to 255	0
609-025	FuserCtrlFailStandbyUnderTempFC	Fault counter 310-322-00: Fuser Control Failure Standby Under Temp Fault	Range = 0 to 255	0
609-026	FuserCtrlFailRunOverTempFC	Fault counter 310-323-00: Fuser Control Failure Run Over Temp Fault	Range = 0 to 255	0
609-027	FuserCtrlFailRunUnderTempFC	Fault counter 310-324-00: Fuser Control Failure Run Under Temp Fault	Range = 0 to 255	0

**Table 19 CCS NVM ID 609-001 to 609-457**

NVM ID	NVM Name	NVM Description	Settings	Default
609-028	FuserNotBeingC- trilledFC	Fault counter 310-325-00: Fuser Not Being Controlled Fault	Range = 0 to 255	0
609-029	FuserWarmup- FailFC	Fault counter 310-330-00: Fuser Warmup Failure Fault	Range = 0 to 255	0
609-030	FuserAOverTem- peratureFC	Fault counter 310-340-00: Fuser A Over Temperature Fault	Range = 0 to 255	0
609-031	FuserOverTemp- OrShortCir- cuitFC	Fault counter 310-350-00: Fuser Over Temp Or Short Cir- cuit Fault	Range = 0 to 255	0
609-032	FuserBOverTem- peratureFC	Fault counter 310-360-00: Fuser B Over Temperature Fault	Range = 0 to 255	0
609-033	FuserCOverTem- peratureFC	Fault counter 310-365-00: Fuser C Over Temperature Fault	Range = 0 to 255	0
609-034	FuserPower- SaveCtrlFailFC	Fault counter 310-370-00: Fuser PowerSave Control Fail- ure Fault	Range = 0 to 255	0
609-035	FuserTempGradi- entTooHighFC	Fault counter 310-380-00: Fuser Temp Gradient Too High Fault	Range = 0 to 255	0
609-036	FruAuthorisation- FailFC	Fault counter 310-399-00: Fru- Authorisation Failure Fault	Range = 0 to 255	0
609-037	SFuserCtrlFail- StandbyOver- TempFC	Fault counter 310-821-00: Fuser Control Failure Standby Over Temp Fault	Range = 0 to 255	0
609-038	SFuserCtrlFail- StandbyUnder- TempFC	Fault counter 310-822-00: Fuser Control Failure Standby Under Temp Fault	Range = 0 to 255	0
609-039	PfmComms- FailFC	Fault counter 341-350-00: Pfm Comms Failure Fault	Range = 0 to 255	0
609-040	PfmFeedBuffer- OverflowFC	Fault counter 341-351-00: PfmFeedBufferOverflowFault	Range = 0 to 255	0
609-041	Pfml2CFrameFail FC	Fault counter 341-354-00: Pfm l2C Frame Failure Fault	Range = 0 to 255	0
609-042	FinisherComms- FailFC	Fault counter 341-359-00: Hcf Comms Failure Fault	Range = 0 to 255	0
609-043	FinToBmComms- FailFC	Fault counter 341-360-00: Fin- isher Comms Failure Fault	Range = 0 to 255	0
609-044	PfpCommsFailFC	Fault counter 341-363-00: Fin To Bm Comms Failure Fault	Range = 0 to 255	0
609-045	FruCommsFailFC	Fault counter 341-366-00: Pfp Comms Failure Fault	Range = 0 to 255	0

**Table 19 CCS NVM ID 609-001 to 609-457**

NVM ID	NVM Name	NVM Description	Settings	Default
609-046	XruCommsFailFC	Fault counter 341-371-00: Fru Comms Failure Fault	Range = 0 to 255	0
609-047	IOTCycledInWith- outPrintingFC	Fault counter 341-372-00: Xru Comms Failure Fault	Range = 0 to 255	0
609-048	LaserOnWithout- PrTurningFC	Fault counter 341-395-00: IOT Cycled In Without Printing Fault	Range = 0 to 255	0
609-049	MainMtrNotBe- ingCtrlledFC	Fault counter 341-396-00: Laser On Without Pr Turning Fault	Range = 0 to 255	0
609-050	HcfCommsFailFC	Fault counter 341-397-00: Main Motor Not Being Con- trolled Fault	Range = 0 to 255	0
609-051	PrintCmdLateToP ageSyncSplx3FC	Fault counter 341-423-00: Print Command Late To Page Sync Simplex 3 Fault	Range = 0 to 255	0
609-052	Fail24VFC	Fault counter 341-480-00: Fail- ure 24V Fault	Range = 0 to 255	0
609-053	IgnorestatFC	Fault counter 341-805-00: Ignore stat Fault	Range = 0 to 255	0
609-054	OutOfTmrsFC	Fault counter 341-852-00: Out Of Timers Fault	Range = 0 to 255	0
609-055	IOTRelativeHu- miditySnsrFC	Fault counter 342-365-00: IOT Relative Humidity Sensor Fault	Range = 0 to 255	0
609-056	IOTAmbientTem- peratureSnsrFC	Fault counter 342-375-00: IOT Ambient Temperature Sensor Fault	Range = 0 to 255	0
609-057	HighVoltagePow- erSupplyFailFC	Fault counter 346-060-00: High Voltage Power Supply Failure Fault	Range = 0 to 255	0
609-058	RosMtrFailFC	Fault counter 361-020-00: Ros Motor Failure Fault	Range = 0 to 255	0
609-059	RosSystem- FailFC	Fault counter 361-340-00: Ros System Failure Fault	Range = 0 to 255	0
609-060	RosLaserNotBe- ingCtrlledFC	Fault counter 361-350-00: Ros Laser Not Being Controlled Fault	Range = 0 to 255	0
609-061	XruAuthorisation- FailFC	Fault counter 392-399-00: Xru Authorisation Failure Fault	Range = 0 to 255	0
609-062	ReplenisherLev- elSnsrFailFC	Fault counter 393-310-00: Replenisher Level Sensor Fail- ure Fault	Range = 0 to 255	0
609-063	TonerConcSnsr- FailFC	Fault counter 393-360-00: Toner Concentration Sensor- Failure Fault	Range = 0 to 255	0

**Table 19 CCS NVM ID 609-001 to 609-457**

NVM ID	NVM Name	NVM Description	Settings	Default
609-064	TonerConcCtrl-FailLowFC	Fault counter 393-361-00: Toner Concentration Control-Failure Low Fault	Range = 0 to 255	0
609-065	TonerConcCtrl-FailHighFC	Fault counter 393-362-00: Toner Concentration Control Failure High Fault	Range = 0 to 255	0
609-066	TonerConcIsolatedCtrlFailLowFC	Fault counter 393-363-00: Toner Concentration Isolated Control Fail Low Fault	Range = 0 to 255	0
609-067	WasteTonerBottleMissingFC	Fault counter 393-380-00: Waste Toner Bottle Missing Fault	Range = 0 to 255	0
609-068	TonerCartridge-EmptyFC	Fault counter 393-390-00: Toner Cartridge Empty Fault	Range = 0 to 255	0
609-069	ScorotronCleaningFailedFC	Fault counter 394-341-00: Scorotron Cleaning Failed Fault	Range = 0 to 255	0
609-070	ScorotronCleaningWarningFC	Fault counter 394-342-00: Scorotron Cleaning Warning Fault	Range = 0 to 255	0
609-071	TransferDetack-CleaningFailedFC	Fault counter 394-345-00: Transfer Detack Cleaning Failed Fault	Range = 0 to 255	0
609-072	TransferDetack-CleaningWarningFC	Fault counter 394-346-00: Transfer Detack Cleaning Warning Fault	Range = 0 to 255	0
609-073	Photoreceptor-EraseLamp-FailFC	Fault counter 394-350-00: Photoreceptor Erase Lamp Failure Fault	Range = 0 to 255	0
609-074	IOTDeveloper-TemperatureSnrFC	Fault counter 394-370-00: IOTDeveloper Temperature Sensor Fault	Range = 0 to 255	0
609-075	LELateToPfm-WaitPointSnrFC	Fault counter 381-100-00: Lead Edge Late To Pfm Wait Point Sensor Fault	Range = 0 to 255	0
609-076	LELateToTray1FeedSnrFC	Fault counter 381-101-00: Lead Edge Late To Tray 1 Feed Sensor Fault	Range = 0 to 255	0
609-077	LELateToTray2FeedSnrFC	Fault counter 381-102-00: Lead Edge Late To Tray 2 Feed Sensor Fault	Range = 0 to 255	0
609-078	LELateToTray3FeedSnrFC	Fault counter 381-103-00: Lead Edge Late To Tray 3 Feed Sensor Fault	Range = 0 to 255	0

**Table 19 CCS NVM ID 609-001 to 609-457**

NVM ID	NVM Name	NVM Description	Settings	Default
609-079	LELateToTray4FeedSnrFC	Fault counter 381-104-00: Lead Edge Late To Tray 4 Feed Sensor Fault	Range = 0 to 255	0
609-080	LELateToTray1SnrFmTray2FC	Fault counter 381-106-00: Lead Edge Late To Tray 1 Sensor From Tray 2 Fault	Range = 0 to 255	0
609-081	LELateToTray4SnrFmTray3FC	Fault counter 381-107-00: Lead Edge Late To Tray 4 Sensor From Tray 3 Fault	Range = 0 to 255	0
609-082	LELateToTray2SnrFmTray4FC	Fault counter 381-108-00: Lead Edge Late To Tray 2 Sensor From Tray 4 Fault	Range = 0 to 255	0
609-083	TELateFmTray1FeedSnrFC	Fault counter 381-111-00: Trail Edge Late From Tray 1 Feed Sensor Fault	Range = 0 to 255	0
609-084	TELateFmTray2FeedSnrFC	Fault counter 381-112-00: Trail Edge Late From Tray 2 Feed Sensor Fault	Range = 0 to 255	0
609-085	TELateFmTray3FeedSnrFC	Fault counter 381-113-00: Trail Edge Late From Tray 3 Feed Sensor Fault	Range = 0 to 255	0
609-086	TELateFmTray4FeedSnrFC	Fault counter 381-114-00: Trail Edge Late From Tray 4 Feed Sensor Fault	Range = 0 to 255	0
609-087	Tray1HoistFailFC	Fault counter 371-100-00: Tray 1 Hoist Failure Fault	Range = 0 to 255	0
609-088	Tray1OpenWhileFeedingFC	Fault counter 371-500-00: Tray 1 Open While Feeding Fault	Range = 0 to 255	0
609-089	Tray2HoistFailFC	Fault counter 372-100-00: Tray 2 Hoist Failure Fault	Range = 0 to 255	0
609-090	Tray2OpenWhileFeedingFC	Fault counter 372-500-00: Tray 2 Open While Feeding Fault	Range = 0 to 255	0
609-091	Tray3HoistFailFC	Fault counter 373-100-00: Tray 3 Hoist Failure Fault	Range = 0 to 255	0
609-092	Tray3OpenWhileFeedingFC	Fault counter 373-500-00: Tray 3 Open While Feeding Fault	Range = 0 to 255	0
609-093	Tray4HoistFailFC	Fault counter 374-100-00: Tray 4 Hoist Failure Fault	Range = 0 to 255	0
609-094	Tray4OpenWhileFeedingFC	Fault counter 374-500-00: Tray 4 Open While Feeding Fault	Range = 0 to 255	0
609-095	PfpTrayHoist-FailFC	Fault counter 375-100-00: Pfp Tray Hoist Failure Fault	Range = 0 to 255	0
609-096	PfpTrayLower-FailFC	Fault counter 375-101-00: Pfp Tray Lower Failure Fault	Range = 0 to 255	0
609-097	PfpOpenWhile-FeedingFC	Fault counter 375-500-00: Pfp Open While Feeding Fault	Range = 0 to 255	0

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-098	PfpUndockedIn-RunFC	Fault counter 375-510-00: Pfp Undocked In Run Fault	Range = 0 to 255	0
609-099	LELateToPfpWait-PointSnsrFC	Fault counter 381-115-00: Lead Edge Late To Pfp Wait Point Sensor Fault	Range = 0 to 255	0
609-100	LELateToPfp-FeedSnsrFC	Fault counter 381-117-00: Lead Edge Late To Pfp Feed Sensor Fault	Range = 0 to 255	0
609-101	LELateToRegSnsrFmPfmFC	Fault counter 381-150-00: Lead Edge Late To Registration Sensor From Pfm Fault	Range = 0 to 255	0
609-102	TELateToRegSnsrAfterClutch-OnFC	Fault counter 381-151-00: Trail Edge Late To Reg Sensor After Clutch On Fault	Range = 0 to 255	0
609-103	LELateToRegSnsrFmMsiFC	Fault counter 381-155-00: Lead Edge Late To Registration Sensor From Msi Fault	Range = 0 to 255	0
609-104	StrayShtFmMsi-AtRegSnsrFC	Fault counter 381-156-00: Stray Sheet From Msi At Reg Sensor Fault	Range = 0 to 255	0
609-105	UnexpTmoutFor-ShtTypeFC	Fault counter 381-171-00: Unexpected Timeout For Sheet Type Fault	Range = 0 to 255	0
609-106	ppmissingPreReleasedShtFC	Fault counter 381-174-00: pp missing Pre Released Sheet Fault	Range = 0 to 255	0
609-107	UnableToFeedNextShtFC	Fault counter 381-180-00: Unable To Feed Next Sheet Fault	Range = 0 to 255	0
609-108	LELateToDplxSnsrFC	Fault counter 383-160-00: Lead Edge Late To Duplex Sensor Fault	Range = 0 to 255	0
609-109	TELateToDplxSnsrAfterClutch-OnFC	Fault counter 383-161-00: Trail Edge Late To Duplex Sensor After Clutch On Fault	Range = 0 to 255	0
609-110	PpUnexpTmout-ForShtTypeSimpInvFC	Fault counter 383-181-00: Pp Unexpected Timeout For Sheet Type Simp Inv Fault	Range = 0 to 255	0
609-111	PpUnexpTmout-ForShtTypeDplxFC	Fault counter 383-182-00: Pp Unexpected Timeout For Sheet Type Duplex Fault	Range = 0 to 255	0
609-112	StrayShtDetect-PostJamClearFC	Fault counter 383-190-00: StraySheetDetectedPostJam-ClearanceFault	Range = 0 to 255	0
609-113	TopCoverOpenIn-RunFC	Fault counter 301-310-00: Top Cover Open In Run Fault	Range = 0 to 255	0

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-114	FinTamp1FrontMoveFailFC	Fault counter 311-005-00: Fin Tamper 1 Front Move Failure Fault	Range = 0 to 255	0
609-115	FinTamp1RearMoveFailFC	Fault counter 311-006-00: Fin Tamper 1 Rear Move Failure Fault	Range = 0 to 255	0
609-116	FinTamp2FrontMoveFailFC	Fault counter 311-007-00: Fin Tamper 2 Front Move Failure Fault	Range = 0 to 255	0
609-117	FinTamp2RearMoveFailFC	Fault counter 311-008-00: Fin Tamper 2 Rear Move Failure-Fault	Range = 0 to 255	0
609-118	FinCompilerCarriageHomeFailFC	Fault counter 311-012-00: Fin Compiler Carriage Home Failure Fault	Range = 0 to 255	0
609-119	FinCompilerCarriageMoveFailFC	Fault counter 311-014-00: Fin Compiler Carriage Move Failure Fault	Range = 0 to 255	0
609-120	FinPaddleRoll-HomeFailFC	Fault counter 311-024-00: Fin Paddle Roll Home Failure Fault	Range = 0 to 255	0
609-121	FinPaddleRollCycleFailFC	Fault counter 311-025-00: Fin Paddle Roll Cycle Failure Fault	Range = 0 to 255	0
609-122	FinPaddleRoller-NotHomeFailFC	Fault counter 311-026-00: Fin Paddle Roller Not Home Failure Fault	Range = 0 to 255	0
609-123	FinBin1MoveFailFC	Fault counter 311-030-00: Fin Bin 1 Move Failure Fault	Range = 0 to 255	0
609-124	FinBin1OffsetMoveFailFC	Fault counter 311-031-00: Fin Bin 1 Offset Move Failure Fault	Range = 0 to 255	0
609-125	FinBin2MoveFailFC	Fault counter 311-036-00: Fin Bin 2 Move Failure Fault	Range = 0 to 255	0
609-126	FinBin2OffsetMoveFailFC	Fault counter 311-040-00: Fin Bin 2 Offset Move Failure Fault	Range = 0 to 255	0
609-127	FinPunchHead-CycleFailFC	Fault counter 311-043-00: Fin Punch Head Cycle Failure Fault	Range = 0 to 255	0
609-128	FinPunchHead-RtrnHomeFailFC	Fault counter 311-044-00: Fin Punch Head Return Home Failure Fault	Range = 0 to 255	0
609-129	FinPunchHead-StuckHome-FailFC	Fault counter 311-045-00: Fin Punch Head Stuck Home Failure Fault	Range = 0 to 255	0
609-130	FinPunchUnitHomeFlagFailFC	Fault counter 311-046-00: Fin Punch Unit Home Flag Failure Fault	Range = 0 to 255	0

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-131	FinPunchUnitHomeFailFC	Fault counter 311-047-00: Fin Punch Unit Home Failure Fault	Range = 0 to 255	0
609-132	FinStapleHead1CycleFailFC	Fault counter 311-050-00: Fin Staple Head 1 Cycle Failure Fault	Range = 0 to 255	0
609-133	FinStapleUnit1MoveFailFC	Fault counter 311-053-00: Fin Staple Unit 1 Move Failure Fault	Range = 0 to 255	0
609-134	FinPPIBottomPlateHomeFailFC	Fault counter 311-056-00: Fin PPI Bottom Plate Home Failure Fault	Range = 0 to 255	0
609-135	FinPPIBottomPlateLiftFailFC	Fault counter 311-057-00: Fin PPI Bottom Plate Lift Failure Fault	Range = 0 to 255	0
609-136	FinBBCreaseBladeMoveFailFC	Fault counter 311-061-00: Fin BB Crease Blade Move Failure Fault	Range = 0 to 255	0
609-137	FinBBCreaseRollFailFC	Fault counter 311-062-00: Fin BB Crease Roll Failure Fault	Range = 0 to 255	0
609-138	FinBBStapleHead1MoveFailFC	Fault counter 311-063-00: Fin BB Staple Head 1 Move Failure Fault	Range = 0 to 255	0
609-139	FinBBBackStopStartFailFC	Fault counter 311-065-00: Fin BB Back Stop Start Failure Fault	Range = 0 to 255	0
609-140	FinBBTamp1MoveFailFC	Fault counter 311-066-00: Fin BB Tamper 1 Move Failure Fault	Range = 0 to 255	0
609-141	FinBBTapeFeedMoveFCFC	Fault counter 311-072-00: Fin BB Tape Feed Move Fault	Range = 0 to 255	0
609-142	FinBBCoolingFanFCFC	Fault counter 311-073-00: Fin BB Cooling Fan Fault	Range = 0 to 255	0
609-143	FinBBHeaterUnderTemperatureFC	Fault counter 311-077-00: Fin BB Heater Under Temperature Fault	Range = 0 to 255	0
609-144	FinBBHeaterOverTemperatureFC	Fault counter 311-078-00: Fin BB Heater Over Temperature Fault	Range = 0 to 255	0
609-145	FinPaperPusherMtrStalledFC	Fault counter 311-083-00: Fin Paper Pusher Motor Stalled Fault	Range = 0 to 255	0
609-146	LELateToFinEntrySnrFC	Fault counter 311-100-00: Lead Edge Late To Fin Entry Sensor Fault	Range = 0 to 255	0

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-147	FinTELateFmEntranceSnrFC	Fault counter 311-101-00: Fin TE Late From Entrance Sensor Fault	Range = 0 to 255	0
609-148	LELateToFinPunchSnrFC	Fault counter 311-110-00: Lead Edge Late To Fin Punch Sensor Fault	Range = 0 to 255	0
609-149	LELateToFinCompilerEntrySnrFC	Fault counter 311-120-00: Lead Edge Late To Fin Compiler Entry Sensor Fault	Range = 0 to 255	0
609-150	TELateFmFinCompilerEntrySnrFC	Fault counter 311-122-00: Trail Edge Late From Fin Compiler Entry Sensor Fault	Range = 0 to 255	0
609-151	LELateToFinTopExitSnrFC	Fault counter 311-130-00: Lead Edge Late To Fin Top Exit Sensor Fault	Range = 0 to 255	0
609-152	TELateFmFinTopExitSnrFC	Fault counter 311-132-00: Trail Edge Late From Fin Top Exit Sensor Fault	Range = 0 to 255	0
609-153	LELateToFin2ndTopExitSnrFC	Fault counter 311-140-00: Lead Edge Late To Fin 2nd Top Exit Sensor Fault	Range = 0 to 255	0
609-154	TELateFmFin2ndTopExitSnrFC	Fault counter 311-142-00: Trail Edge Late From Fin 2nd Top Exit Sensor Fault	Range = 0 to 255	0
609-155	LELateToFin3rdTopExitSnrFC	Fault counter 311-150-00: Lead Edge Late To Fin 3rd Top Exit Sensor Fault	Range = 0 to 255	0
609-156	TELateFmFin3rdTopExitSnrFC	Fault counter 311-152-00: Trail Edge Late From Fin 3rd Top Exit Sensor Fault	Range = 0 to 255	0
609-157	FinLELateToBufferPosSnrFC	Fault counter 311-157-00: Fin LE Late To Buffer Position Sensor Fault	Range = 0 to 255	0
609-158	FinLELateToExitHVFinToBMSnrFC	Fault counter 311-158-00: Fin LE Late To Exit HVF Into BM Sensor Fault	Range = 0 to 255	0
609-159	LELateToBBEntrySnrFC	Fault counter 311-160-00: Lead Edge Late To BB Entry Sensor Fault	Range = 0 to 255	0
609-160	FinTELateFmBufferPosSnrFC	Fault counter 311-161-00: Fin TE Late From Buffer Position Sensor Fault	Range = 0 to 255	0
609-161	TELateFmBBEntrySnrFC	Fault counter 311-162-00: Trail Edge Late From BB Entry Sensor Fault	Range = 0 to 255	0

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-162	Fin-TELateFmExitH-VFIntoBMSnsrFC	Fault counter 311-163-00: Fin TE Late From Exit HVF Into BM Sensor Fault	Range = 0 to 255	0
609-163	FinTELateFm-BufferPathSnrFC	Fault counter 311-164-00: Fin TE Late From Buffer Path Sensor Fault	Range = 0 to 255	0
609-164	FinLELateTo-BufferPathSnrFC	Fault counter 311-165-00: Fin LE Late To Buffer Path Sensor Fault	Range = 0 to 255	0
609-165	LELateToBBCompilerExitSnrFC	Fault counter 311-170-00: Lead Edge Late To BB Compiler Exit Sensor Fault	Range = 0 to 255	0
609-166	TELateFmB-BCompilerSnrFC	Fault counter 311-172-00: Trail Edge Late From BB Compiler Sensor Fault	Range = 0 to 255	0
609-167	FinOffsetUnitInit-FailFC	Fault counter 311-173-00: Fin Offset Unit Initialization Failure Fault	Range = 0 to 255	0
609-168	FinOffsetUnitR-trnHomeFailFC	Fault counter 311-174-00: Fin Offset Unit Return Home Failure Fault	Range = 0 to 255	0
609-169	FinOffsetUnitHomeFailFC	Fault counter 311-175-00: Fin Offset Unit Home Failure Fault	Range = 0 to 255	0
609-170	FinOffsetUnitRtrnAwayHome-FailFC	Fault counter 311-176-00: Fin Offset Unit Return Away Home Failure Fault	Range = 0 to 255	0
609-171	FinOffsetUnit-AwayHome-FailFC	Fault counter 311-177-00: Fin Offset Unit Away Home Failure Fault	Range = 0 to 255	0
609-172	LELateToBBExitSnrFC	Fault counter 311-180-00: Lead Edge Late To BB Exit Sensor Fault	Range = 0 to 255	0
609-173	TELateFmBBExitSnrFC	Fault counter 311-182-00: Trail Edge Late From BB Exit Sensor Fault	Range = 0 to 255	0
609-174	FinBMUnexpSht-DetectFC	Fault counter 311-183-00: Fin BM Unexpected Sheet Detected Fault	Range = 0 to 255	0
609-175	FinBMStryShtDetectPostJam-ClearFC	Fault counter 311-184-00: Fin BM Stray Sheet Detected Post Jam Clearance Fault	Range = 0 to 255	0
609-176	FinLELateToTFExitSnrFC	Fault counter 311-185-00: Fin LE Late To TF Exit Sensor Fault	Range = 0 to 255	0

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-177	FinTELateFmTFExitSnrFC	Fault counter 311-186-00: Fin TE Late From TF Exit Sensor Fault	Range = 0 to 255	0
609-178	FinLELateToTFAssistSnrFC	Fault counter 311-187-00: Fin LE Late To TF Assist Sensor Fault	Range = 0 to 255	0
609-179	FinNipSplitFailFC	Fault counter 311-188-00: Fin Nip Split Failure Fault	Range = 0 to 255	0
609-180	FinNipHome-FailFC	Fault counter 311-189-00: Fin Nip Home Failure Fault	Range = 0 to 255	0
609-181	FinLELateToPPI-TabStandbySnrFC	Fault counter 311-191-00: Fin LE Late To P PI Tab Standby Sensor Fault	Range = 0 to 255	0
609-182	FinTELateFmPPI-TabStandbySnrFC	Fault counter 311-193-00: Fin TE Late From PPI Tab Standby Sensor Fault	Range = 0 to 255	0
609-183	FinLELateToPPI-PickupSnrFC	Fault counter 311-194-00: Fin LE Late To PPI Pickup Sensor Fault	Range = 0 to 255	0
609-184	FinTELateFmPPI-TrayPickupSnrFC	Fault counter 311-196-00: Fin TE Late From PPI Tray Pickup Sensor Fault	Range = 0 to 255	0
609-185	FinStrayShtDetectPostJam-ClearFC	Fault counter 311-198-00: Fin Stray Sheet Detected Post Jam Clearance Fault	Range = 0 to 255	0
609-186	UnexpShtDetectFC	Fault counter 311-199-00: Unexpected Sheet Detected Fault	Range = 0 to 255	0
609-187	FinUnDockedIntlckInRunFC	Fault counter 311-300-00: Fin UnDocked Interlock In Run Fault	Range = 0 to 255	0
609-188	FinEntryGateIntlckOpenInRunFC	Fault counter 311-301-00: Fin Entry Gate Interlock Open In Run Fault	Range = 0 to 255	0
609-189	FinTopCoverIntlckOpenInRunFC	Fault counter 311-302-00: Fin Top Cover Interlock Open In Run Fault	Range = 0 to 255	0
609-190	FinFrontDoorIntlckOpenInRunFC	Fault counter 311-303-00: Fin Front Door Interlock Open In Run Fault	Range = 0 to 255	0
609-191	FinTopGateIntlckOpenInRunFC	Fault counter 311-304-00: Fin Top Gate Interlock Open In Run Fault	Range = 0 to 255	0
609-192	FinBotExit-GateIntlckOpenInRunFC	Fault counter 311-305-00: Fin Bottom Exit Gate Interlock Open In Run Fault	Range = 0 to 255	0



Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-193	FinPPITopCover-IntlckOpenIn-RunFC	Fault counter 311-306-00: Fin PPI Top Cover Interlock Open In Run Fault	Range = 0 to 255	0
609-194	FinTrifoldTopCoverOpenInRunFC	Fault counter 311-307-00: Fin Trifold Top Cover Open In Run Fault	Range = 0 to 255	0
609-195	FinTrifoldFrontDoorOpenIn-RunFC	Fault counter 311-308-00: Fin Trifold Front Door Open In Run Fault	Range = 0 to 255	0
609-196	FinInsLeftHandDoorOpenIn-RunFC	Fault counter 311-309-00: Fin Inserter LeftHand Door Open In Run Fault	Range = 0 to 255	0
609-197	FinTamp1FrontHomeFailFC	Fault counter 311-310-00: Fin Tamper 1 Front Home Failure Fault	Range = 0 to 255	0
609-198	FinTamp1RearHomeFailFC	Fault counter 311-311-00: Fin Tamper 1 Rear Home Failure Fault	Range = 0 to 255	0
609-199	FinTamp2FrontHomeFailFC	Fault counter 311-312-00: Fin Tamper 2 Front Home Failure Fault	Range = 0 to 255	0
609-200	FinTamp2RearHomeFailFC	Fault counter 311-313-00: Fin Tamper 2 Rear Home Failure Fault	Range = 0 to 255	0
609-201	FinComplCarriageTravelFailUpFC	Fault counter 311-315-00: Fin Compiler Carriage Over Travel Failure Up Fault	Range = 0 to 255	0
609-202	FinComplCarriageTravelFailLowFC	Fault counter 311-316-00: Fin Compiler Carriage Over Travel Failure Low Fault	Range = 0 to 255	0
609-203	FinRearTampAwayHomeSnsr-FailFC	Fault counter 311-319-00: Fin Rear Tamper Away Home Sensor Failure Fault	Range = 0 to 255	0
609-204	FinCompilerEjectorHomeFailFC	Fault counter 311-320-00: Fin Compiler Ejector Home Failure Fault	Range = 0 to 255	0
609-205	FinCompilerEjectorCycleFailFC	Fault counter 311-322-00: Fin Compiler Ejector Cycle Failure Fault	Range = 0 to 255	0
609-206	FinBin1OverTravelFailUpperFC	Fault counter 311-334-00: Fin Bin 1 Over Travel Failure Upper Fault	Range = 0 to 255	0
609-207	FinBin1OverTravelFailLowerFC	Fault counter 311-335-00: Fin Bin 1 Over Travel Failure Lower Fault	Range = 0 to 255	0

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-208	FinBin1HomeFailFC	Fault counter 311-336-00: Fin Bin 1 Home Failure Fault	Range = 0 to 255	0
609-209	FinBin1OffsetHomeFailFC	Fault counter 311-337-00: Fin Bin 1 Offset Home Failure Fault	Range = 0 to 255	0
609-210	FinBin2OverTravelFailUpperFC	Fault counter 311-344-00: Fin Bin 2 Over Travel Failure Upper Fault	Range = 0 to 255	0
609-211	FinBin2OverTravelFailLowerFC	Fault counter 311-345-00: Fin Bin 2 Over Travel Failure Lower Fault	Range = 0 to 255	0
609-212	FinBin2HomeFailFC	Fault counter 311-346-00: Fin Bin 2 Home Failure Fault	Range = 0 to 255	0
609-213	FinBin2OffsetHomeFailFC	Fault counter 311-347-00: Fin Bin 2 Offset Home Failure Fault	Range = 0 to 255	0
609-214	FinPunchHeadHomeFailFC	Fault counter 311-350-00: Fin Punch Head Home Failure Fault	Range = 0 to 255	0
609-215	FinStapleHead1HomeFailFC	Fault counter 311-360-00: Fin Staple Head 1 Home Failure Fault	Range = 0 to 255	0
609-216	FinStapleHead1NotPrimedFC	Fault counter 311-364-00: Fin Staple Head 1 Not Primed Fault	Range = 0 to 255	0
609-217	FinStapleUnit1HomeFailFC	Fault counter 311-370-00: Fin Staple Unit 1 Home Failure Fault	Range = 0 to 255	0
609-218	FinStaplerHomeFailFC	Fault counter 311-371-00: Fin Stapler Home Failure Fault	Range = 0 to 255	0
609-219	FinStaplerReturnHomeFailFC	Fault counter 311-372-00: Fin Stapler Return Home Failure Fault	Range = 0 to 255	0
609-220	FinStaplerMiddleHomeFailFC	Fault counter 311-373-00: Fin Stapler Middle Home Failure Fault	Range = 0 to 255	0
609-221	FinStaplerStuckMiddleHomeFailFC	Fault counter 311-374-00: Fin Stapler Stuck Middle Home Failure Fault	Range = 0 to 255	0
609-222	FinStaplerJawHomeFailFC	Fault counter 311-375-00: Fin Stapler Jaw Home Failure Fault	Range = 0 to 255	0
609-223	FinStaplerJawStuckHomeFailFC	Fault counter 311-376-00: Fin Stapler Jaw Stuck Home Failure Fault	Range = 0 to 255	0

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-224	FinStaplerPrimingFailFC	Fault counter 311-377-00: Fin Stapler Priming Failure Fault	Range = 0 to 255	0
609-225	FinPunchPaperSideEdgeDetectFailFC	Fault counter 311-380-00: Fin Punch Unit Paper Side Edge Detecting Failure Fault	Range = 0 to 255	0
609-226	FinBBBackStopHomeFailFC	Fault counter 311-383-00: Fin BB Back Stop Home Failure Fault	Range = 0 to 255	0
609-227	FinBBTamp1HomeFailFC	Fault counter 311-384-00: Fin BB Tamper 1 Home Failure Fault	Range = 0 to 255	0
609-228	FinBBFlapperHomeFailFC	Fault counter 311-391-00: Fin BB Flapper Home Failure Fault	Range = 0 to 255	0
609-229	FinFrontTampTrayHomeFailFC	Fault counter 311-392-00: Fin Front Tamper Tray Home Failure Fault	Range = 0 to 255	0
609-230	FinFrontTampTrayRtrnHomeFailFC	Fault counter 311-393-00: Fin Front Tamper Tray Return Home Failure Fault	Range = 0 to 255	0
609-231	FinFrontTampTrayAwayHomeFailFC	Fault counter 311-394-00: Fin Front Tamper Tray Away Home Failure Fault	Range = 0 to 255	0
609-232	FinFrontTampStuckAwayHomeFailFC	Fault counter 311-395-00: Fin Front Tamper Tray Stuck Away Home Failure Fault	Range = 0 to 255	0
609-233	FinRearTampTrayHomeFailFC	Fault counter 311-396-00: Fin Rear Tamper Tray Home Failure Fault	Range = 0 to 255	0
609-234	FinRearTampTrayRtrnHomeFailFC	Fault counter 311-397-00: Fin Rear Tamper Tray Return Home Failure Fault	Range = 0 to 255	0
609-235	FinRearTampTrayAwayHomeFailFC	Fault counter 311-398-00: Fin Rear Tamper Tray Away Home Failure Fault	Range = 0 to 255	0
609-236	FinRearTampRtrnAwayHomeFailFC	Fault counter 311-399-00: Fin Rear Tamper Tray Return Away Home Failure Fault	Range = 0 to 255	0
609-237	FinBBStapleHead2MoveFailFC	Fault counter 311-403-00: Fin BB Staple Head 2 Move Failure Fault	Range = 0 to 255	0
609-238	FinBBStapleHead1HomeFailFC	Fault counter 311-411-00: Fin BB Staple Head 1 Home Failure Fault	Range = 0 to 255	0

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-239	FinBBStapleHead2HomeFailFC	Fault counter 311-413-00: Fin BB Staple Head 2 Home Failure Fault	Range = 0 to 255	0
609-240	FinBMStaplerModuleHomeFailFC	Fault counter 311-414-00: Fin BM Stapler Module Home Failure Fault	Range = 0 to 255	0
609-241	FinBBCreaseRollGateHomeFailFC	Fault counter 311-415-00: Fin BB Crease Roll Gate Home Failure Fault	Range = 0 to 255	0
609-242	FinBBCreaseBladeHomeFailFC	Fault counter 311-416-00: Fin BB Crease Blade Home Failure Fault	Range = 0 to 255	0
609-243	FinBMFlapperHomeFailFC	Fault counter 311-417-00: Fin BM Flapper Home Failure Fault	Range = 0 to 255	0
609-244	FinBMFlapperMoveFailFC	Fault counter 311-418-00: Fin BM Flapper Move Failure Fault	Range = 0 to 255	0
609-245	FinBMTamp2HomeFailFC	Fault counter 311-419-00: Fin BM Tamper 2 Home Failure Fault	Range = 0 to 255	0
609-246	FinBMTamp2MoveFailFC	Fault counter 311-420-00: Fin BM Tamper 2 Move Failure Fault	Range = 0 to 255	0
609-247	FinKickerCycleFailFC	Fault counter 311-430-00: Fin Kicker Cycle Failure Fault	Range = 0 to 255	0
609-248	FinPaperPusherRtrnHomeFailFC	Fault counter 311-440-00: Fin Paper Pusher Return Home Failure Fault	Range = 0 to 255	0
609-249	FinPaperPusherHomeFailFC	Fault counter 311-441-00: Fin Paper Pusher Home Failure Fault	Range = 0 to 255	0
609-250	FinPaperPusherRtrnAwayHomeFailFC	Fault counter 311-442-00: Fin Paper Pusher Return Away Home Failure Fault	Range = 0 to 255	0
609-251	FinPaperPusherAwayHomeFailFC	Fault counter 311-443-00: Fin Paper Pusher Away Home Failure Fault	Range = 0 to 255	0
609-252	FinEjectorModuleMtrStallFC	Fault counter 311-450-00: Fin Ejector Module Motor Stall Fault	Range = 0 to 255	0
609-253	FinEjectorPlateMtrStallFailFC	Fault counter 311-451-00: Fin Ejector Plate Motor Stall Failure Fault	Range = 0 to 255	0
609-254	FinEjectorPlateRtrnHomeFailFC	Fault counter 311-452-00: Fin Ejector Plate Return Home Failure Fault	Range = 0 to 255	0

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-255	FinEjectorPlate-HomeFailFC	Fault counter 311-453-00: Fin Ejector Plate Home Failure Fault	Range = 0 to 255	0
609-256	FinLowerPaddleRtnHome-FailFC	Fault counter 311-454-00: Fin Lower Paddle Return Home Failure Fault	Range = 0 to 255	0
609-257	FinLowerPaddle-HomeFailFC	Fault counter 311-455-00: Fin Lower Paddle Home Failure Fault	Range = 0 to 255	0
609-258	FinEjectorModuleRtnHome-FailFC	Fault counter 311-456-00: Fin Ejector Module Return Home Failure Fault	Range = 0 to 255	0
609-259	FinEjectorModuleHomeFailFC	Fault counter 311-457-00: Fin Ejector Module Home Failure Fault	Range = 0 to 255	0
609-260	FinEjectorModuleRtnOutFailFC	Fault counter 311-458-00: Fin Ejector Module Return Out Failure Fault	Range = 0 to 255	0
609-261	FinEjectorModuleOutFailFC	Fault counter 311-459-00: Fin Ejector Module Out Failure Fault	Range = 0 to 255	0
609-262	FinStacker-MtrStallFailFC	Fault counter 311-460-00: Fin Stacker Motor Stall Failure Fault	Range = 0 to 255	0
609-263	FinStackerBinHomeFailFC	Fault counter 311-461-00: Fin Stacker Bin Home Failure Fault	Range = 0 to 255	0
609-264	FinStackerBin-MoveFailFC	Fault counter 311-462-00: Fin Stacker Bin Move Failure Fault	Range = 0 to 255	0
609-265	FinBM24vUnavailableAtInputFC	Fault counter 311-463-00: Fin BM 24v Unavailable At Input Fault	Range = 0 to 255	0
609-266	FinBM24vInternalFailFC	Fault counter 311-464-00: Fin BM 24v Internal Failure Fault	Range = 0 to 255	0
609-267	FinPaddleUnitRtnUpperFailFC	Fault counter 311-465-00: Fin Paddle Unit Return Upper Failure Fault	Range = 0 to 255	0
609-268	FinPaddleUnitNotUpperFailFC	Fault counter 311-466-00: Fin Paddle Unit Not Upper Failure Fault	Range = 0 to 255	0
609-269	FinPaddleUnitRtnLowerFailFC	Fault counter 311-467-00: Fin Paddle Unit Return Lower Failure Fault	Range = 0 to 255	0
609-270	FinPaddleUnit-NotLowerFailFC	Fault counter 311-468-00: Fin Paddle Unit Not Lower Failure Fault	Range = 0 to 255	0

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-271	FinCurlSuppressorRtnHome-FailFC	Fault counter 311-469-00: Fin Curl Suppressor Return Home Failure Fault	Range = 0 to 255	0
609-272	FinCurlSuppressorHomeFailFC	Fault counter 311-470-00: Fin Curl Suppressor Home Failure Fault	Range = 0 to 255	0
609-273	FinCurlSuppressorRtnAway-FailFC	Fault counter 311-471-00: Fin Curl Suppressor Return Away Failure Fault	Range = 0 to 255	0
609-274	FinCurlSuppressorAwayFailFC	Fault counter 311-472-00: Fin Curl Suppressor Away Failure Fault	Range = 0 to 255	0
609-275	FinPressSupport-MtrRtnInitFailFC	Fault counter 311-473-00: Fin Pressing Support Motor Return Init Failure Fault	Range = 0 to 255	0
609-276	FinPressSupport-MtrInitFailFC	Fault counter 311-474-00: Fin Pressing Support Motor Init Failure Fault	Range = 0 to 255	0
609-277	FinPressSupport-MtrRtnHome-FailFC	Fault counter 311-475-00: Fin Pressing Support Motor Return Home Failure Fault	Range = 0 to 255	0
609-278	FinPressSupport-MtrHomeFailFC	Fault counter 311-476-00: Fin Pressing Support Motor Home Failure Fault	Range = 0 to 255	0
609-279	FinPressSupport-MtrRtnOutFailFC	Fault counter 311-477-00: Fin Pressing Support Motor Return Out Failure Fault	Range = 0 to 255	0
609-280	FinPressSupport-MtrOutFailFC	Fault counter 311-478-00: Fin Pressing Support Motor Out Failure Fault	Range = 0 to 255	0
609-281	FinShortShtFed-FmInserterFC	Fault counter 311-479-00: Fin Short Sheet Fed From Inserter Fault	Range = 0 to 255	0
609-282	OctNotInIndex-PosFC	Fault counter 311-701-00: Oct Not In Index Position Fault	Range = 0 to 255	0
609-283	Tray 9 Media Type	Tray 9 Media Type	Range = 0 to 102	0
609-284	Tray 9 Media Color	Tray 9 Media Color	Range = 0 to 34	0
609-285	Tray 9 Media Weight	Tray 9 Media Weight	Range = 60 to 216	75
609-286	Tray 9 Direct Select	Tray 9 Direct Select	Range = 0 to 1	1
609-287	Tray 9 Priority	Tray 9 Priority	Range = 1 to 99	5
609-288	Tray 9 Width	Tray 9 Width	Range = 216 to 432	216
609-289	Tray 9 Length	Tray 9 Length	Range = 279 to 279	279

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-290	Tray 9 Percent Full	Tray 9 Percent Full	Range = 0 to 100	0
609-291	Tray 9 User Type	Tray 9 User Type	Range = 1 to 1	1
609-292	Tray 9 Modulus	Tray 9 Modulus	Range = 0 to 100	0
609-293	Tray 9 Modulus Position	Tray 9 Modulus Position	Range = 1 to 100	1
609-294	Tray 10 Media Type	Tray 10 Media Type	Range = 0 to 102	0
609-295	Tray 10 Media Color	Tray 10 Media Color	Range = 0 to 34	0
609-296	Tray 10 Media Weight	Tray 10 Media Weight	Range = 60 to 216	75
609-297	Tray 10 Direct Select	Tray 10 Direct Select	Range = 0 to 1	1
609-298	Tray 10 Priority	Tray 10 Priority	Range = 1 to 99	5
609-299	Tray 10 Width	Tray 10 Width	Range = 297 to 297	297
609-300	Tray 10 Length	Tray 10 Length	Range = 210 to 210	210
609-301	Tray 10 Percent Full	Tray 10 Percent Full	Range = 0 to 100	0
609-302	Tray 10 User Type	Tray 10 User Type	Range = 0 to 0	0
609-303	Tray 10 Modulus	Tray 10 Modulus	Range = 0 to 100	0
609-304	Tray 10 Modulus Position	Tray 10 Modulus Position	Range = 1 to 100	1
609-305	Tray 11 Media Type	Tray 11 Media Type	Range = 0 to 102	0
609-306	Tray 11 Media Color	Tray 11 Media Color	Range = 0 to 34	0
609-307	Tray 11 Media Weight	Tray 11 Media Weight	Range = 60 to 216	75
609-308	Tray 11 Direct Select	Tray 11 Direct Select	Range = 0 to 1	1
609-309	Tray 11 Priority	Tray 11 Priority	Range = 1 to 99	5
609-310	Tray 11 Width	Tray 11 Width	Range = 279 to 356	279
609-311	Tray 11 Length	Tray 11 Length	Range = 216 to 216	216
609-312	Tray 11 Percent Full	Tray 11 Percent Full	Range = 0 to 100	0
609-313	Tray 11 User Type	Tray 11 User Type	Range = 1 to 1	1
609-314	Tray 11 Modulus	Tray 11 Modulus	Range = 0 to 100	0
609-315	Tray 11 Modulus Position	Tray 11 Modulus Position	Range = 1 to 100	1

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-316	PFP Kit Type installed in PFP	PFP Kit Type installed in PFP	0 = Standard (A4 & Letter LEF) 1 = Kit A (A3 SEF & A4 LEF) 2 = Kit A (11x17 SEF & 8.5x11 LEF) 3 = Kit B (A4, SEF) 4 = Kit B (Letter, Legal SEF)	0
609-317	Reset Fault Trigger	Number of reset faults before actually resetting the system	0 = reset with every reset fault n = number of reset faults before system reset	3
609-318	Tray4FeedRollsLifeCount	Tray 4 Feed Rolls life counter	Range = 0 to 4294967295	0
609-319	Tray4FeedRollsExpLife	Tray 4 Feed Rolls life expectancy	Range = 0 to 4294967295	400000
609-320	Tray4FeedRollsInstDate	Tray 4 Feed Rolls install date	Range = 0 to 4294967295	0
609-321	Tray4FeedRollsRepCount	Tray 4 Feed Rolls replacement counter	Range = 1 to 65535	1
609-322	Tray1TransportRollsLifeCount	Tray 1 Transport Rolls life counter	Range = 0 to 4294967295	0
609-323	Tray1TransportRollsExpLife	Tray 1 Transport Rolls life expectancy	Range = 0 to 4294967295	600000
609-325	Tray1TransportRollsRepCount	Tray 1 Transport Rolls replacement counter	Range = 1 to 65535	1
609-326	Tray2TransportRollsLifeCount	Tray 2 Transport Rolls life counter	Range = 0 to 4294967295	0
609-327	Tray2TransportRollsExpLife	Tray 2 Transport Rolls life expectancy	Range = 0 to 4294967295	600000
609-329	Tray2TransportRollsRepCount	Tray 2 Transport Rolls replacement counter	Range = 1 to 65535	1
609-330	Tray3/4TransportRollsLifeCount	Tray 3/4 Transport Rolls life counter	Range = 0 to 4294967295	0
609-331	Tray3/4TransportRollsExpLife	Tray 3/4 Transport Rolls life expectancy	Range = 0 to 4294967295	600000
609-333	Tray3/4TransportRollsRepCount	Tray 3/4 Transport Rolls replacement counter	Range = 1 to 65535	1
609-334	SplitDriveRollsLifeCount	Split Drive Rolls life counter	Range = 0 to 4294967295	0

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-335	SplitDriveRollsExpLife	Split Drive Rolls life expectancy	Range = 0 to 4294967295	600000
609-337	SplitDriveRollsRepCount	Split Drive Rolls replacement counter	Range = 1 to 65535	1
609-338	DuplexSensorRollsLifeCount	Duplex Sensor Rolls life counter	Range = 0 to 4294967295	0
609-339	DuplexSensorRollsExpLife	Duplex Sensor Rolls life expectancy	Range = 0 to 4294967295	600000
609-341	DuplexSensorRollsRepCount	Duplex Sensor Rolls replacement counter	Range = 1 to 65535	1
609-342	BiasFoamLifeCount	Bias Foam life counter	Range = 0 to 4294967295	0
609-343	BiasFoamExpLife	Bias Foam life expectancy	Range = 0 to 4294967295	500000
609-345	BiasFoamRepCount	Bias Foam replacement counter	Range = 1 to 65535	1
609-346	DeveloperDriveGearLifeCount	Developer Drive Gear life counter	Range = 0 to 4294967295	0
609-346	DeveloperDriveGearExpLife	Developer Drive Gear life expectancy	Range = 0 to 4294967295	600000
609-347	DeveloperDriveGearExpLife	Developer Drive Gear life expectancy	Range = 0 to 4294967295	600000
609-349	DeveloperDriveGearRepCount	Developer Drive Gear replacement counter	Range = 1 to 65535	1
609-350	PostFuserRollsLifeCount	Post Fuser Rolls life counter	Range = 0 to 4294967295	0
609-351	PostFuserRollsExpLife	Post Fuser Rolls life expectancy	Range = 0 to 4294967295	600000
609-353	PostFuserRollsRepCount	Post Fuser Rolls replacement counter	Range = 1 to 65535	1
609-354	HVFPaddleLifeCount	HVF Paddle life counter	Range = 0 to 4294967295	0
609-355	HVFPaddleExpLife	HVF Paddle life expectancy	Range = 0 to 4294967295	200000
609-357	HVFPaddleRepCount	HVF Paddle replacement counter	Range = 1 to 65535	1
609-358	BMLELateToBMDetectSensor	Fault counter 311-494-00: BMLELateToBMDetectSensor	Range = 0 to 255	3
609-359	BMTLateFromBMDetectSensor	Fault counter 311-496-00: BMTLateFromBMDetectSensor	Range = 0 to 255	3
609-375	BMSTAPLEHEAD1PRIMINGFAULT	Fault counter 312-352-00: BM Staplehead 1 Priming Fault	Range = 0 to 255	0

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-376	BMSTAPLEHEAD2PRIMINGFAULT	Fault counter 312-353-00: BM Staplehead 2 Priming Fault	Range = 0 to 255	0
609-377	LEDPRINT-HEADDATAINTEGRITYFAILURE	Fault counter 361-100-00: LED Print head Data Integrity Failure	Range = 0 to 255	0
609-378	OFFSETCENTRETRAYMOTORFAILURE	Fault counter 310-702-00: Offset centre output tray Motor Failure	Range = 0 to 255	0
609-379	TCNOTINRANGEFAULT	Fault counter 393-364-00: TC Not In Range Fault	Range = 0 to 255	0
609-380	LELATETOHorizontalTransport	Fault counter 310-170-00: LE Late To Horizontal Transport	Range = 0 to 255	0
609-381	TELATEFROMHorizontalTransport	Fault counter 310-171-00: TE Late From Horizontal Transport	Range = 0 to 255	0
609-382	HORIZONTALTRANSPORTOPENINRUN	Fault counter 310-338-00: Horizontal Transport Open In Run	Range = 0 to 255	0
609-383	LELATETOREGSENSORSIMPLEX	Fault counter 381-151-00: LE Late To Reg Sensor Simplex	Range = 0 to 255	0
609-384	TELATETOREGSENSORSIMPLEX	Fault counter 381-152-00: TE Late To Reg Sensor Simplex	Range = 0 to 255	0
609-385	LELATETOPOSTFUSERSENSORSIMPLEX	Fault counter 310-153-00: LE Late To Post Fuser Sensor Simplex	Range = 0 to 255	0
609-386	TELATETOPOSTFUSERSENSORSIMPLEX	Fault counter 310-154-00: TE Late To Post Fuser Sensor Simplex	Range = 0 to 255	0
609-387	LELATETODUPLEXSENSOR	Fault counter 383-155-00: LE Late To Duplex Sensor	Range = 0 to 255	0
609-388	TELATETODUPLEXSENSOR	Fault counter 383-156-00: TE Late To Duplex Sensor	Range = 0 to 255	0
609-389	LELATETOFEEDHCF LH	Fault counter 381-136-00: LE Late To Feed HCF LH	Range = 0 to 255	0
609-390	TELATETOFEEDHCF LH	Fault counter 381-137-00: TE Late To Feed HCF LH	Range = 0 to 255	0
609-391	LELATETOHCFFEXITFROMTRAY3	Fault counter 381-159-00: LE Late To HCF Exit From Tray 3	Range = 0 to 255	0

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-392	TELATETO-FEEDERRHTAR-SENSOR	Fault counter 381-160-00: TE Late To Feeder RH TAR Sensor	Range = 0 to 255	0
609-393	LELATETO-FEEDHCFRH	Fault counter 381-146-00: LE Late To Feed HCF RH	Range = 0 to 255	0
609-394	TELATETO-FEEDHCFRH	Fault counter 381-147-00: TE Late To Feed HCF RH	Range = 0 to 255	0
609-395	LELATETOTAR1 SENSORFROMTRAY1	Fault counter 381-106-00: LE Late To TAR 1 Sensor From Tray 1	Range = 0 to 255	0
609-396	LELATETOTAR2 SENSORFROMTRAY2	Fault counter 381-126-00: LE Late To TAR 2 Sensor From Tray 2	Range = 0 to 255	0
609-397	TELATETOTAR1 SENSORFROMTRAY1	Fault counter 381-107-00: TE Late To TAR 1 Sensor From Tray 1	Range = 0 to 255	0
609-398	TELATETOTAR2 SENSORFROMTRAY2	Fault counter 381-127-00: TE Late To TAR 2 Sensor From Tray 2	Range = 0 to 255	0
609-399	FRUMISSINGORCOMMSFAILUREFAULT	Fault counter 310-400-00: FRU Missing or Comms Failure Fault	Range = 0 to 255	0
609-400	PCMISSINGORCOMMSFAILUREFAULT	Fault counter 392-400-00: PC Missing or Comms Failure Fault	Range = 0 to 255	0
609-401	LELATETO-POSTFUSERSENSORDUPLLEX	Fault counter 310-163-00: LE Late To Post Fuser Sensor Duplex	Range = 0 to 255	0
609-402	TELATETO-POSTFUSERSENSORDUPLLEX	Fault counter 310-164-00: TE Late To Post Fuser Sensor Duplex	Range = 0 to 255	0
609-403	TRAY1BUMPUPFAILURE	Fault counter 371-217-00: Tray1 Bump Up Failure	Range = 0 to 255	0
609-404	LELATETOREGSENSORDUPLLEX	Fault counter 381-161-00: LE Late To Registration Sensor Duplex	Range = 0 to 255	0
609-405	TELATETOREGSENSORDUPLLEX	Fault counter 381-162-00: TE Late To Registration Sensor Duplex	Range = 0 to 255	0
609-406	LELATETO-HCFTRANSPORT	Fault counter 381-167-00: LE Late To HCF Transport	Range = 0 to 255	0

Table 19 CCS NVM ID 609-001 to 609-457

NVM ID	NVM Name	NVM Description	Settings	Default
609-407	TELATETO-HCFTRANSPORT	Fault counter 381-168-00: TE Late To HCF Transport	Range = 0 to 255	0
609-408	FUSERINCOMPATIBLEFAULT	Fault counter 310-399-00: Fuser Incompatible Fault	Range = 0 to 255	0
609-409	FUSERTEMPERATUREREADINGFAILURE	Fault counter 310-340-00: Fuser Temperature Reading Failure	Range = 0 to 255	0
609-410	LELATETOREGSENSORFROMTRAY5	Fault counter 381-155-00: LE Late To REG Sensor From Tray 5	Range = 0 to 255	0
609-411	TONEBOTTLERMISSINGFAULT	Fault counter 393-401-00: Toner Cartridge Missing Fault	Range = 0 to 255	0
609-412	TONERCARTRIDGEINCOMPATIBLEFAULT	Fault counter 393-399-00: Toner Cartridge Incompatible Fault	Range = 0 to 255	0
609-413	HIGHACMODERECOVERYFAULT	Fault counter 393-365-00: High AC Mode Recovery Fault	Range = 0 to 255	0
609-414	LELATETOREGFROMTRAY1	Fault counter 381-190-00: LE Late To Registration From Tray 1	Range = 0 to 255	0
609-415	LELATETOREGFROMTRAY2	Fault counter 381-191-00: LE Late To Registration From Tray 2	Range = 0 to 255	0
609-416	LELATETOREGFROMTRAY3	Fault counter 381-192-00: LE Late To Registration From Tray 3	Range = 0 to 255	0
609-417	LELATETOREGFROMTRAY4	Fault counter 381-193-00: LE Late To Registration From Tray 4	Range = 0 to 255	0
609-418	LELATETOTAR1FROMTRAY2	Fault counter 381-194-00: LE Late To TAR 1 From Tray 2	Range = 0 to 255	0
609-419	LELATETOTAR1FROMTRAY3	Fault counter 381-195-00: LE Late To TAR 1 From Tray 3	Range = 0 to 255	0
609-420	LELATETOTAR1FROMTRAY4	Fault counter 381-196-00: LE Late To TAR 1 From Tray 4	Range = 0 to 255	0
609-421	LELATETOTAR2FROMTRAY3	Fault counter 381-197-00: LE Late To TAR 2 From Tray 3	Range = 0 to 255	0
609-422	LELATETOTAR2FROMTRAY4	Fault counter 381-198-00: LE Late To TAR 2 From Tray 4	Range = 0 to 255	0
609-423	LELATETOHCFOXITFROMTRAY4	Fault counter 381-199-00: LE Late To HCF Exit From Tray 4	Range = 0 to 255	0
609-424	UNEXPECTED-SHEETATREG	Fault counter 381-200-00: Unexpected Sheet At Registration	Range = 0 to 255	0

**Table 19 CCS NVM ID 609-001 to 609-457**

NVM ID	NVM Name	NVM Description	Settings	Default
609-425	UNEXPECTED-SHEETATPOST-FUSER	Fault counter 381-201-00: Unexpected Sheet At Post Fuser	Range = 0 to 255	0
609-426	UNEXPECTED-SHEETATDU-PLEX	Fault counter 383-157-00: Unexpected Sheet At Duplex	Range = 0 to 255	0
609-427	UNEXPECTED-SHEETATFINX-PORT	Fault counter 310-172-00: Unexpected Sheet At Horizontal Transport	Range = 0 to 255	0
609-428	TRAY5(MSI)HOISTFAILURE	Fault counter 375-100-00: Bypass Tray Hoist Failure	Range = 0 to 255	0
609-429	FINISHERCOMMSRE-SETAFTERACRASH	Fault counter 312-800-00: Finisher Comms Reset After a Crash	Range = 0 to 255	0
609-455	LSDOpenTime-BeforeBeep	Defines the period of time before beeping occurs when left door is open.	Range = 0 to 255 seconds	120
609-456	IMAGEBORDER-ENABLE	Enables/Disables 3mm border on print	0 = Disable border 1 = Enable boarder	1
609-457	PcCoolingEventFC	Fault Counter 91-379: PC cooling event	Range = 0 to 255	0

**Table 20 CCS NVM ID 610-001 to 611-001**

NVM ID	NVM Name	NVM Description	Settings	Default
610-001	Copy ABS Detect Window FS Start	Background detection window fast scan start, defined in tenth of percentage point of document fast scan dimension. Values from 0 to 1000 (e.g. 1% is 10, 10% is 100, 100% is 1000).	Range = 0 to 1000	75
610-002	Copy ABS Detect Window FS Size	Background detection window fast scan dimension, defined in tenth of percentage point of document fast scan dimension. Values from 0 to 1000 (e.g. 1% is 10, 10% is 100, 100% is 1000).	Range = 0 to 1000	850
610-003	Copy ABS Level Platen	Auto Background Suppression level for platen	Range = 0 to 4	2
610-004	Copy ABS Level DADH	Auto Background Suppression level for SPDH	Range = 0 to 4	2
610-005	Copy Auto Contrast Level Platen	Auto Contrast level for platen	Range = 0 to 4	2

**Table 20 CCS NVM ID 610-001 to 611-001**

NVM ID	NVM Name	NVM Description	Settings	Default
610-006	Copy Auto Contrast Level DADH	Auto Contrast level for SPDH	Range = 0 to 4	2
610-007	Copy Auto Color Detect FS Start	Auto Color detection window fast scan start, defined in tenth of percentage point of document fast scan dimension. Values from 0 to 1000 (e.g. 1% is 10, 10% is 100, 100% is 1000).	Range = 0 to 1000	16
610-008	Copy Auto Color Detect SS Start	Auto Color detection window slow scan start, defined in tenth of percentage point of document slow scan dimension. Values from 0 to 1000 (e.g. 1% is 10, 10% is 100, 100% is 1000).	Range = 0 to 1000	16
610-009	Copy Auto Color Level Pixel Plat	Auto Color Detection Level for platen at pixel level. Defines a value that dictates how chromatic a pixel has to be in order to be considered color	Range = 0 to 4	2
610-010	Copy Auto Color Level Page Plat	Auto Color Detection Level for platen at page level. Defines a value that dictates how chromatic a pixel has to be in order to be considered color	Range = 0 to 4	2
610-011	Copy Auto Color Level Pixel DADH	Auto Color Detection Level for SPDH at pixel level. Defines a value that dictates how many color pixels have to be on a page so that the document is considered color	Range = 0 to 4	2
610-012	Copy Auto Color Level Page DADH	Auto Color Detection Level for SPDH at page level. Defines a value that dictates how many color pixels have to be on a page so that the document is considered color	Range = 0 to 4	2
610-013	K only (only black ink for B&W)	Dictates if black & white copies are printed in K-only or composite black	Range = 0 to 1	0
610-014	Copy Photo/Text Segmentat'n Ctrl	Photo/Text Segmentation Threshold will control the Galileo segmentation. When it changes, the part of the input that will be considered text will vary as well as the part that will be considered photo.	Range = 0 to 4	2

**Table 20 CCS NVM ID 610-001 to 611-001**

NVM ID	NVM Name	NVM Description	Settings	Default
610-015	Copy White Reference	Defines the type of paper used	Range = 0 to 127	0
610-016	Copy Im Path Type (bit depth)	Defines the binary versus contone image path/printing	Range = 1 to 16	8
610-017	Scan ABS Detect Window FS Start	Background detection window fast scan start, defined in tenth of percentage point of document fast scan dimension. Values from 0 to 1000 (e.g. 1% is 10, 10% is 100, 100% is 1000).	Range = 0 to 1000	75
610-018	Scan ABS Detect Window FS Size	Background detection window fast scan dimension, defined in tenth of percentage point of document fast scan dimension. Values from 0 to 1000 (e.g. 1% is 10, 10% is 100, 100% is 1000).	Range = 0 to 1000	850
610-019	Scan ABS Level Platen	Auto Background Suppression level for platen	Range = 0 to 4	2
610-020	Scan ABS Level DADH	Auto Background Suppression level for SPDH	Range = 0 to 4	2
610-021	Scan Auto Contrast Level Platen	Auto Contrast level for platen	Range = 0 to 4	2
610-022	Scan Auto Contrast Level DADH	Auto Contrast level for SPDH	Range = 0 to 4	2
610-023	Scan Auto Color Detect FS Start	Auto Color detection window fast scan start, defined in tenth of percentage point of document fast scan dimension. Values from 0 to 1000 (e.g. 1% is 10, 10% is 100, 100% is 1000).	Range = 0 to 1000	16
610-024	Scan Auto Color Detect SS Start	Auto Color detection window slow scan start, defined in tenth of percentage point of document slow scan dimension. Values from 0 to 1000 (e.g. 1% is 10, 10% is 100, 100% is 1000).	Range = 0 to 1000	16
610-025	Scan Auto Color Level Pixel Plat	Auto Color Detection Level for platen at pixel level. Defines a value that dictates how chromatic a pixel has to be in order to be considered color	Range = 0 to 4	2

**Table 20 CCS NVM ID 610-001 to 611-001**

NVM ID	NVM Name	NVM Description	Settings	Default
610-026	Scan Auto Color Level Page Plat	Auto Color Detection Level for platen at page level. Defines a value that dictates how many color pixels have to be on a page so that the document is considered color	Range = 0 to 4	2
610-027	Scan Auto Color Level Pixel DADH	Auto Color Detection Level for SPDH at pixel level. Defines a value that dictates how chromatic a pixel has to be in order to be considered color	Range = 0 to 4	2
610-028	Scan Auto Color Level Page DADH	Auto Color Detection Level for SPDH at page level. Defines a value that dictates how many color pixels have to be on a page so that the document is considered color	Range = 0 to 4	2
610-029	Scan Photo/Text Segmentat'n Ctrl	Photo/Text Segmentation Threshold will control the Galileo segmentation. When it changes, the part of the input that will be considered text will vary as well as the part that will be considered	Range = 0 to 4	2
610-030	Scan White Reference	Defines the type of paper used	Range = 0 to 127	0
610-031	Fax ABS Detect Window FS Start	Background detection window fast scan start, defined in tenth of percentage point of document fast scan dimension. Values from 0 to 1000 (e.g. 1% is 10, 10% is 100, 100% is 1000).	Range = 0 to 1000	75
610-032	Fax ABS Detect Window FS Size	Background detection window fast scan dimension, defined in tenth of percentage point of document fast scan dimension. Values from 0 to 1000 (e.g. 1% is 10, 10% is 100, 100% is 1000).	Range = 0 to 1000	850
610-033	Fax ABS Level Platen	Auto Background Suppression level for platen	Range = 0 to 4	2
610-034	Fax ABS Level DADH	Auto Background Suppression level for SPDH	Range = 0 to 4	2
610-035	Auto Contrast level for platen	Fax Auto Contrast Level Platen	Range = 0 to 4	2
610-036	Fax Auto Contrast Level DADH	Auto Contrast level for SPDH	Range = 0 to 4	2



**Table 20 CCS NVM ID 610-001 to 611-001**

NVM ID	NVM Name	NVM Description	Settings	Default
610-037	Fax Photo/Text Segment'n Control	Photo/Text Segmentation Threshold will control the Galileo segmentation. When it changes, the part of the input that will be considered text will vary as well as the part that will be considered	Range = 0 to 4	2
610-038	Fax White Reference	Defines the type of paper used	Range = 0 to 127	0
610-047	Print ImagePath Type (bit depth)	Defines the binary versus contone image path/printing	Range = 1 to 16	8
610-052	Toner Saver Mode	Toner Saver Mode	0 = Standard 1 = ECO	1
611-001	DisplayCustom-TypesFirst	Always Display Custom Types First option setting	Range = 0 to 1	0

**Table 21 CCS NVM ID 612-001 to 612-005**

NVM ID	NVM Name	NVM Description	Settings	Default
612-001	Queue To NC Print TimeoutFC	Fault counter 322-330-02: Queue To ESS Print Timeout	Range = 0 to 255	0
612-002	Queue To S2F Timeout	Fault counter 322-330-03: Queue To S2F Timeout	Range = 0 to 255	0
612-003	Queue To Fax-Send Timeout	Fault counter 322-330-04: Queue To Fax Send Timeout	Range = 0 to 255	0
612-004	Queue To DCCopy Timeout	Fault counter 322-330-05: Queue To DC Copy Timeout	Range = 0 to 255	0
612-005	Queue To S2Distr Timeout	Fault counter 322-330-06: Queue To S2 Distribution Timeout	Range = 0 to 255	0

**Table 22 CCS NVM ID 616-001 to 616-340**

NVM ID	NVM Name	NVM Description	Settings	Default
616-001	Market region	Defines the market region. 0 = US (North America) 1 = XCL (Canada) 2 = FX (Fuji Xerox Japan) 3 = FXAPO (Fuji Xerox Asian Pacific) 4 = ACO (Latin) 5 = RX (Europe) 6 = MRDmo East 7 = MRDmo West (Read only)  <i>NOTE: Do not use, refer to dC134.</i>	Range = 0 to 7  <i>NOTE: Do not use, refer to dC134.</i>	0
616-002	Power Saver Enabled	Enable Power Saver feature	0 = Disabled 1 = Enabled	1
616-003	Product Configuration	32 = A1 class 32ppm 38 = A2 class 35/38ppm 36 = B1 class 35ppm 40 = B2 class 40ppm 45 = B3 class 45ppm 55 = B4 class 55ppm 65 = C1 class 65ppm 75 = C2 class 75ppm 85 = C3 class 85ppm 255 = Unknown speed (Read only)	Range = 0 to 255	255
616-004	System Configuration	Defines System Configuration (type of system)	Range = 0 to 8	1
616-005	DST Start	Defines start day of daylight savings time	Range = 0 to 366	0
616-006	DST End	Defines end day of daylight savings time	Range = 0 to 366	0
616-007	Time Display Format	Defines time display format	0 = 12 hour format 1 = 24 hour format	0
616-008	Power off enabled	Determines whether power saver's power off option is enabled. 0 = False, 1 = True	Range = 0 to 1	1
616-009	Power off timeout enabled	Determines whether power saver's power off option using timers is enabled.	0 = False 1 = True	1
616-010	powersaver idle-time	Defines time in "normal" mode where system has been idle to enabled transition into power saver.	Range = 0 to 225	0

Table 22 CCS NVM ID 616-001 to 616-340

NVM ID	NVM Name	NVM Description	Settings	Default
616-011	Power saver in mode time	Defines time in "mode 1" before transitioning to "mode 3" for appropriate configurations.	Range = 0 to 255	60
616-012	Power saver power off time	Defines time in "lowest" power saver mode before powering off.	Range = 0 to 255	45
616-013	Date Display Format	Defines date display format	0 = mm/dd/yy 1 = dd/mm/yy 3 = yy/mm/dd	0
616-014	System install phase	Defines system's current installation phase.	0 = Manufacturing 2 = Pre-Install 4 = Complete	2
616-016	Power up reason	Defines reason for previous power off.	Range = 0 to 6	1
616-017	Contention Algorithm	Defines the order algorithm for queues/ contention: FIFO versus priority	Range = 0 to 1	1
616-018	Extra Time	Amount of additional time after power up before system can enter power saver.	Range = 0 to 5	5
616-019	System mode	Defines system's overall mode	Range = 0 to 12	0
616-020	Auto configuration enabled	Determines if the system runs through auto configuration, detect at power on.	0 = False 1 = True	1
616-021	Line voltage	Defines system line voltage	0=Unknown 1 = 100V 2 = 115V 3 = 230V	2
616-022	Line frequency	Defines system line frequency	0 = 50Hz 1 = 60Hz	1
616-024	Serial number enabled	Determines whether serial number has been set.	0 = False 1 = True	1
616-025	Promotion time	Defines time interval for increasing job's priority based on time in system.	Range = 15 to 1440	120
616-026	Auto promotion enabled	Determines whether to increase job priority longer job is in system.	0 = False 1 = True	1
616-027	Previous market region	Defines previous market region	0=USCO 1 = XCL 2 = FX 3 = FXAPO 4 = ACO 5 = RX	0

Table 22 CCS NVM ID 616-001 to 616-340

NVM ID	NVM Name	NVM Description	Settings	Default
616-028	ModeChangeClientId	Defines client who did the most recent system mode change.	Range = 0 to 9994	16
616-029	Latest EOD event	Defines last day that an end of day was reached.	Range = 0 to 4294967295	0
616-030	Previous product config	Defines previous product configuration (All Products)	Range = 0 to 255	106
616-031	Previous line frequency	Defines previous line frequency	0 = 50Hz 1 = 60Hz	1
616-032	Previous line voltage	Defines previous line voltage	0 = Unknown 1 = 100V 2 = 115V 3 = 230V	2
616-033	NVM copyright years	List of system's copyright years.	Range = 0 to 4294967295	0
616-034	Desired install client	Defines current client of system installation.	Range = 0 to 255	0
616-035	RemoteIntrusive-DiagEnabled	Determines whether remote intrusive diagnostics is enabled. 0 = False, 1 = True	Range = 0 to 1	1
616-036	Value added reseller	Defines installation's value added reseller.	Range = 0 to 255	255
616-037	GMT Offset	Used by platforms to insure system clocks are set to correct time zones.	Range = -43200 to 50400	0
616-038	NC OnlineNvm	Determines whether ESS is On (Off) line.	0 = False 1 = True	1
616-039	Job Hold Time	Max time a job can be held before it is deleted by the system	Range = 0 to 7200	4320
616-040	Job Hold Timer enabled	SA/KO setting to enable/disable hold job timer	Range = 0 to 1	1
616-041	ScanToFileinstalled count	Counter used for secure install and remove operations of the optional features	Range = 0 to 65535	0
616-042	LanFaxinstalled count	Counter used for secure install and remove operations of the optional features	Range = 0 to 65535	0
616-043	JBAinstalled count	Counter used for secure install and remove operations of the optional features	Range = 0 to 65535	0
616-044	ScanToFileenabled	Specifies whether scan to file is enabled on the machine.	Range = 0 to 1	0
616-045	LanFaxenabled	Specifies whether LAN Fax is enabled on the machine.	Range = 0 to 1	0

Table 22 CCS NVM ID 616-001 to 616-340

NVM ID	NVM Name	NVM Description	Settings	Default
616-046	JBAenabled	Specifies whether JBA is allowed to be turned Enabled on the machine.	Range = 0 to 1	0
616-047	NC TTY enabled	Used by PWS to determine if ESS terminal window is enabled	Range = 0 to 1	0
616-048	NC Config - Type	-	Range = 0 to 99	42
616-049	NC Config - Option	-	Range = 0 to 99	42
616-050	NC Config - Storage	-	Range = 0 to 99	42
616-051	NC Config - Software Options	-	Range = 0 to 99	42
616-052	Product Identifier	Product Identifier	204 = 40 205 = 45 206 = 50 210 = 55 1000 = Unknown (not set)	1000
616-053	HeapLimits F:MaxImages T:MaxJobs	Heap Limits F:max images T:max jobs	Range = 0 to 1	0
616-054	InternetFaxin- stalled count	-	Range = 0 to 65535	0
616-055	ScanToEmailin- stalled count	-	Range = 0 to 65535	0
616-056	InternetFaxen- abled	-	Range = 0 to 1	0
616-057	ScanToEmailena- bled	-	Range = 0 to 1	0
616-058	Software Upgrade Status	-	Range = 0 to 7	0
616-059	DeclassifySystem OperationStatus	Declassify system - operation status	Range = 0 to 5	0
616-060	Declassify system - retry count	-	Range = 0 to 255	0
616-061	Declassify system - client id	-	Range = 0 to 255	0
616-062	DeclassifySys- temPlatformMask	Declassify system - platform mask	Range = 0 to 65535	0
616-065	Declassify sys- tem-pattern length	Declassify system - pattern list length	Range = 0 to 255	0
616-066	Declassify system # repetitions	Declassify system - number of repetitions	Range = 0 to 255	0

Table 22 CCS NVM ID 616-001 to 616-340

NVM ID	NVM Name	NVM Description	Settings	Default
616-067	Declassify system - # of retries	Declassify system - number of retries	Range = 0 to 255	0
616-068	Declassify system - Timeout	Declassify system - number of retries	Range = 0 to 4294967295	0
616-069	DiskOverwritein- stalled count	-	Range = 0 to 65535	0
616-070	DiskOverwriteen- abled	-	Range = 0 to 1	0
616-071	ScanToFilehsw available	-	Range = 0 to 1	1
616-072	ScanToFilein- stalled	-	Range = 0 to 1	1
616-073	LanFaxhsw available	-	Range = 0 to 1	1
616-074	LanFaxinstalled	-	Range = 0 to 1	1
616-075	JBAhsw avail- able	-	Range = 0 to 1	1
616-076	JBAinstalled	-	Range = 0 to 1	1
616-077	ScanToEmailh- sw available	-	Range = 0 to 1	1
616-078	ScanToEmailin- stalled	-	Range = 0 to 1	1
616-079	InternetFaxhsw available	-	Range = 0 to 1	1
616-080	InternetFaxin- stalled	-	Range = 0 to 1	1
616-081	DiskOverwriteh- sw available	-	Range = 0 to 1	1
616-082	DiskOverwritein- stalled	-	Range = 0 to 1	1
616-083	JobOverwriteh- sw available	-	Range = 0 to 1	1
616-084	JobOverwritein- stalled	-	Range = 0 to 1	1
616-085	JobOverwritein- stalled count	-	Range = 0 to 65535	0
616-086	JobOverwriteen- abled	-	Range = 0 to 1	1
616-087	EmbeddedFaxh- sw available	-	Range = 0 to 1	1
616-088	EmbeddedFaxin- stalled	-	Range = 0 to 1	0
616-089	EmbeddedFaxin- stalled count	-	Range = 0 to 65535	0

Table 22 CCS NVM ID 616-001 to 616-340

NVM ID	NVM Name	NVM Description	Settings	Default
616-090	EmbeddedFax-enabled	-	Range = 0 to 1	0
616-091	Heavy Weight Fuser Enabled	-	Range = 0 to 1	1
616-092	Software upgrade monitor enabled	Auto upgrade enable	Range = 0 to 1	0
616-094	Geographic region	Geographic region	0 = Unspecified 1 = Western 2 = Eastern 3 = Not Applicable 4 = FX 5 = SDH A setting of 3 indicates the CRUs are not to be differentiated by region, but by service plan	0
616-095	Zone1Page1Byte0	SIM data mirror	Range = 0 to 255	0
616-096	Zone1Page1Byte1	SIM data mirror	Range = 0 to 255	0
616-097	Zone1Page1Byte2	SIM data mirror	Range = 0 to 255	0
616-098	Zone1Page1Byte3	SIM data mirror	Range = 0 to 255	0
616-099	Zone1Page1Byte4	SIM data mirror	Range = 0 to 255	0
616-100	Zone1Page1Byte5	SIM data mirror	Range = 0 to 255	0
616-101	Zone1Page1Byte6	SIM data mirror	Range = 0 to 255	0
616-102	Zone1Page2Byte0	SIM data mirror	Range = 0 to 255	0
616-103	Zone1Page2Byte1	SIM data mirror	Range = 0 to 255	0
616-104	Zone1Page2Byte2	SIM data mirror	Range = 0 to 255	0
616-105	Zone1Page2Byte3	SIM data mirror	Range = 0 to 255	0
616-106	Zone1Page2Byte4	SIM data mirror	Range = 0 to 255	0
616-107	Zone1Page2Byte5	SIM data mirror	Range = 0 to 255	0
616-108	Zone1Page2Byte6	SIM data mirror	Range = 0 to 255	0

Table 22 CCS NVM ID 616-001 to 616-340

NVM ID	NVM Name	NVM Description	Settings	Default
616-109	Zone1Page3Byte0	SIM data mirror	Range = 0 to 255	0
616-110	Zone1Page3Byte1	SIM data mirror	Range = 0 to 255	0
616-111	Zone1Page3Byte2	SIM data mirror	Range = 0 to 255	0
616-112	Zone1Page3Byte3	SIM data mirror	Range = 0 to 255	0
616-113	Zone1Page3Byte4	SIM data mirror	Range = 0 to 255	0
616-114	Zone1Page3Byte5	SIM data mirror	Range = 0 to 255	0
616-115	Zone1Page3Byte6	SIM data mirror	Range = 0 to 255	0
616-116	SWUP NVM Save Switch	SWUP NVM Save Switch	Range = 0 to 255	0
616-117	Delete settings	Delete settings	Range = 0 to 1	0
616-118	NC OnlineValid-Nvm	NC Online Valid Nvm	Range = 0 to 1	0
616-120	SearchPDFhsw available	Search PDF hsw available	Range = 0 to 1	1
616-121	SearchPDFIn-stalled	Search PDF installed	Range = 0 to 1	1
616-122	SearchPDFIn-stalled count	Search PDF installed count	Range = 0 to 65535	0
616-123	SearchPDFFen-abled	Search PDF enabled	Range = 0 to 1	0
616-124	Cpsrhsw avail-able	Cpsrhsw available	Range = 0 to 1	1
616-125	Cpsrinstalled	Cpsr installed	Range = 0 to 1	1
616-126	Cpsrinstalled count	Cpsr installed count	Range = 0 to 65535	0
616-127	Cpsrenabled	Cpsr enabled	Range = 0 to 1	0
616-143	Fast Resume status	Fast Resume status	0 = Disabled 1 = Enabled	0
616-144	Power Manage-ment mode	Power Management mode	0 = Intelligent ready 1 = Job active 2 = Scheduled	0
616-145	Scheduled wake time - Sunday	Power Management Sched-uled wake time - Sunday	Range = 0 to 23 (hourly increments)	9
616-146	Scheduled wake time - Monday	Power Management Sched-uled wake time - Monday	Range = 0 to 23 (hourly increments)	9
616-147	Scheduled wake time - Tuesday	Power Management Sched-uled wake time - Tuesday	Range = 0 to 23 (hourly increments)	9

Table 22 CCS NVM ID 616-001 to 616-340

NVM ID	NVM Name	NVM Description	Settings	Default
616-148	Scheduled wake time - Wednesday	Power Management Scheduled wake time - Wednesday	Range = 0 to 23 (hourly increments)	9
616-149	Scheduled wake time - Thursday	Power Management Scheduled wake time - Thursday	Range = 0 to 23 (hourly increments)	9
616-150	Scheduled wake time - Friday	Power Management Scheduled wake time - Friday	Range = 0 to 23 (hourly increments)	9
616-151	Scheduled wake time - Saturday	Power Management Scheduled wake time - Saturday	Range = 0 to 23 (hourly increments)	9
616-152	Scheduled pwr saver time Sunday	Power Management Scheduled power saver time - Sunday	Range = 0 to 23 (hourly increments)	17
616-153	Scheduled pwr saver time Monday	Power Management Scheduled power saver time - Monday	Range = 0 to 23 (hourly increments)	17
616-154	Scheduled pwr saver time Tuesday	Power Management Scheduled power saver time - Tuesday	Range = 0 to 23 (hourly increments)	17
616-155	Scheduled pwr saver time Wed.	Power Management Scheduled power saver time - Wednesday	Range = 0 to 23 (hourly increments)	17
616-156	Scheduled pwr saver time Thurs.	Power Management Scheduled power saver time - Thursday	Range = 0 to 23 (hourly increments)	17
616-157	Scheduled pwr saver time Friday	Power Management Scheduled power saver time - Friday	Range = 0 to 23 (hourly increments)	17
616-158	Scheduled pwr saver time Sat.	Power Management Scheduled power saver time - Saturday	Range = 0 to 23 (hourly increments)	17
616-159	Schedule type - Sunday	Power Management daily Schedule type - Sunday	0 = Job activated 1 = Specified time	0
616-160	Schedule type - Monday	Power Management daily Schedule type - Monday	0 = Job activated 1 = Specified time	0
616-161	Schedule type - Tuesday	Power Management daily Schedule type - Tuesday	0 = Job activated 1 = Specified time	0
616-162	Schedule type - Wednesday	Power Management daily Schedule type - Wednesday	0 = Job activated 1 = Specified time	0
616-163	Schedule type - Thursday	Power Management daily Schedule type - Thursday	0 = Job activated 1 = Specified time	0
616-164	Schedule type - Friday	Power Management daily Schedule type - Friday	0 = Job activated 1 = Specified time	0
616-165	Schedule type - Saturday	Power Management daily Schedule type - Saturday	0 = Job activated 1 = Specified time	0
616-199	AIF Activation Counter	AIF Activation Counter (Read only)	Range = 0 to 4294967295	0

Table 22 CCS NVM ID 616-001 to 616-340

NVM ID	NVM Name	NVM Description	Settings	Default
616-200	Num-TimesPagePack-PinlockedFC	Fault counter 322-330: Number of times PagePack pin has been locked out	Range = 0 to 255	0
616-202	Current language (as set on UI)	Current language (as set on UI). (Read only)	Range = 0 to 255	4
616-203	Disk Encryption - hsw available	Indicates if the appropriate hardware is available	Range = 0 to 1	1
616-204	Disk Encryption - Installed	Indicates if Disk Encryption option is installed	Range = 0 to 1	1
616-205	Disk Encryption Installed Count	Disk Encryption Installed Count	Range = 0 to 65535	0
616-206	Disk Encryption Enabled/Disabled	Disk Encryption Enabled/Disabled	0 = Disabled 1 = Enabled	1
616-212	Fast Resume popup enabled	Fast Resume popup message enabled status	0 = Fast Resume feature not previously enabled 1 = Fast Resume feature has been previously enabled	0
616-213	FullODIOTimeout	Defines system manager full ODIO timeout	Range = 0 to 255	90
616-214	StandardODIOTimeout	Defines system manager standard ODIO timeout	Range = 0 to 255	30
616-216	Auto-Reset Count	Automatic System Reset Count	Range = 0 to 2	0
616-229	Display Snooze Message	Determines whether the status is set for displaying the UI message.	0 = Not in snooze mode 1 = In snooze mode	0
616-230	RefurbModeNVM	Indicates that the machine has been refurbished.	0 = Not refurbished 1 = Refurbished	0
616-232	powersaver fast resume idletime	The idle time in minutes before the machine will enter Low power with Fast resume set	Range = 1 to 225	60
616-233	powersaver fast resume in mode1	The idle time in minutes the machine will remain in Low power before entering Sleep with Fast Resume set	Range = 0 to 225	120
616-234	UI system Timeout value	UI system Timeout value	Range = 15 to 3600	45

Table 22 CCS NVM ID 616-001 to 616-340

NVM ID	NVM Name	NVM Description	Settings	Default
616-235	RegDiff	Regional Differentiator value (Read only)	1 = NA_Classic 2 = NA_Enterprise 3 = XE_Classic 4 = XE_Enterprise 5 = DMO_Classic 6 = DMO_Enterprise 7 = Metered 8 = FX_Classic 9 = FX_Enterprise 10 = SR_Classic 11 = SR_Enterprise 12 = WW_Classic 13 = WW_Enterprise 14 = NA_XE_Classic 15 = NA_XE_Enterprise 63 = Factory	1
616-237	POSU Enable During Install Mode	Enable POSU while system in Customer Install Mode.	0 = Do not allow 1 = Allow	0
616-238	UI System Timeout Warning Enabled	UI System Timeout Warning	0 = Disable 1 = Enable	1
616-246	CheckVanillaRun-Result	Check vanilla routine has been executed on machine (Read only)	0 = Unknown 1 = Pass 2 = Fail	0
616-250	NumberOfSuccessfulUpgrades	Counter recording the total number of successful upgrades of the machine (Read only)	Range = 0 to 65535	0
616-251	NumberOfFailedUpgrades	Counter recording the total number of failed upgrades of the machine (Read only)	Range = 0 to 65535	0
616-252	CCSFailedRetries	Counter recording the number of failed CCS power on upgrade reboots of the machine (Read only)	Range = 0 to 65535	0
616-255	Fault Counter 95-000-00	Fault Counter 395-000-00: DC Boot Code Error	Range = 0 to 255	0
616-256	Fault Counter 95-001-00	Fault Counter 395-001-00: DC SW Up Code Error	Range = 0 to 255	0
616-257	Fault Counter 95-002-00	Fault Counter 395-002-00: DC App Error	Range = 0 to 255	0
616-258	Fault Counter 95-003-00	Fault Counter 395-003-00: DC OS Error	Range = 0 to 255	0
616-259	Fault Counter 95-005-00	Fault Counter 395-004-00: DC CIPS Error	Range = 0 to 255	0

Table 22 CCS NVM ID 616-001 to 616-340

NVM ID	NVM Name	NVM Description	Settings	Default
616-260	Fault Counter 95-005-00	Fault Counter 395-005-00: SUI App Error	Range = 0 to 255	0
616-261	Fault Counter 95-006-00	Fault Counter 395-006-00: SUI H8 Error	Range = 0 to 255	0
616-262	Fault Counter 95-007-00	Fault Counter 395-007-00: DADH Application Error	Range = 0 to 255	0
616-263	Fault Counter 95-008-00	Fault Counter 395-008-00: EXT MEM Error	Range = 0 to 255	0
616-264	Fault Counter 95-009-00	Fault Counter 395-009-00: DADH Kernel Error	Range = 0 to 255	0
616-265	Fault Counter 95-010-00	Fault Counter 395-010-00: Fax App Error	Range = 0 to 255	0
616-266	Fault Counter 95-011-00	Fault Counter 395-011-00: Fax FPGA Error	Range = 0 to 255	0
616-267	Fault Counter 95-012-00	Fault Counter 395-012-00: Fax Boot Error	Range = 0 to 255	0
616-268	Fault Counter 95-013-00	Fault Counter 395-013-00: Embed Fax Error	Range = 0 to 255	0
616-269	Fault Counter 95-014-00	Fault Counter 395-014-00: IOT Boot Strap Error	Range = 0 to 255	0
616-270	Fault Counter 95-015-00	Fault Counter 395-015-00: IOT Boot Load Error	Range = 0 to 255	0
616-271	Fault Counter 95-016-00	Fault Counter 395-016-00: IOT App Error	Range = 0 to 255	0
616-272	Fault Counter 95-017-00	Fault Counter 395-017-00: 1K LCSS App Error	Range = 0 to 255	0
616-273	Fault Counter 95-018-00	Fault Counter 395-018-00: 2K LCSS App Error	Range = 0 to 255	0
616-274	Fault Counter 95-019-00	Fault Counter 395-019-00: 2K LCSS Boot Error	Range = 0 to 255	0
616-275	Fault Counter 95-020-00	Fault Counter 395-020-00: 3K LCSS App Error	Range = 0 to 255	0
616-276	Fault Counter 95-021-00	Fault Counter 395-021-00: HCSS BO HCSS App Error	Range = 0 to 255	0
616-277	Fault Counter 95-022-00	Fault Counter 395-022-00: HCSS BO App Error	Range = 0 to 255	0
616-278	Fault Counter 95-023-00	Fault Counter 395-023-00: DC NC App Error	Range = 0 to 255	0
616-279	Fault Counter 95-024-00	Fault Counter 395-024-00: DC NC OS Error	Range = 0 to 255	0
616-280	Fault Counter 95-025-00	Fault Counter 395-025-00: IIT App Error	Range = 0 to 255	0
616-281	Fault Counter 95-026-00	Fault Counter 395-026-00: Embed Fax FPGA Error	Range = 0 to 255	0

Table 22 CCS NVM ID 616-001 to 616-340

NVM ID	NVM Name	NVM Description	Settings	Default
616-282	Fault Counter 95-027-00	Fault Counter 395-027-00: IIT Kernel Error	Range = 0 to 255	0
616-283	Fault Counter 95-028-00	Fault Counter 395-028-00: Scanner Error	Range = 0 to 255	0
616-284	Fault Counter 95-029-00	Fault Counter 395-029-00: HCF FW Mod Error	Range = 0 to 255	0
616-285	Fault Counter 95-030-00	Fault Counter 395-030-00: PFM FW Mod Error	Range = 0 to 255	0
616-286	Fault Counter 95-031-00	Fault Counter 395-031-00: PFP FW Mod Error	Range = 0 to 255	0
616-287	Fault Counter 95-032-00	Fault Counter 395-032-00: HVF App Error	Range = 0 to 255	0
616-288	Fault Counter 95-033-00	Fault Counter 395-033-00: HVF BM App Error	Range = 0 to 255	0
616-289	Fault Counter 95-034-00	Fault Counter 395-034-00: HVF BC Error	Range = 0 to 255	0
616-290	Fault Counter 95-035-00	Fault Counter 395-035-00: HVF BM BC Error	Range = 0 to 255	0
616-291	Fault Counter 95-036-00	Fault Counter 395-036-00: PFP BL Error	Range = 0 to 255	0
616-292	Fault Counter 95-037-00	Fault Counter 395-037-00: CFI NAPP Error	Range = 0 to 255	0
616-293	Fault Counter 95-038-00	Fault Counter 395-038-00: DFI NAPP Error	Range = 0 to 255	0
616-294	Fault Counter 95-039-00	Fault Counter 395-039-00: KM FIN App Error	Range = 0 to 255	0
616-295	Fault Counter 95-040-00	Fault Counter 395-040-00: AFI NAPP Error	Range = 0 to 255	0
616-296	Fault Counter 95-041-00	Fault Counter 395-041-00: SBF IN App Error	Range = 0 to 255	0
616-297	Fault Counter 95-042-00	Fault Counter 395-042-00: PFM Tray 3 App Error	Range = 0 to 255	0
616-298	Fault Counter 95-043-00	Fault Counter 395-043-00: PFM Tray 4 App Error	Range = 0 to 255	0
616-299	Fault Counter 95-044-00	Fault Counter 395-044-00: PFM Tray 5 App Error	Range = 0 to 255	0
616-300	Fault Counter 95-045-00	Fault Counter 395-045-00: DC IOT Proxy Error	Range = 0 to 255	0
616-301	Fault Counter 95-046-00	Fault Counter 395-046-00: DCI IT Proxy Error	Range = 0 to 255	0
616-302	Fault Counter 95-047-00	Fault Counter 395-047-00: DC ACD Error	Range = 0 to 255	0
616-303	Fault Counter 95-048-00	Fault Counter 395-048-00: DC Glue Error	Range = 0 to 255	0

Table 22 CCS NVM ID 616-001 to 616-340

NVM ID	NVM Name	NVM Description	Settings	Default
616-304	Fault Counter 95-049-00	Fault Counter 395-049-00: DC PWS Proxy Error	Range = 0 to 255	0
616-305	Fault Counter 95-050-00	Fault Counter 395-050-00: SS Boot Code Error	Range = 0 to 255	0
616-306	Fault Counter 95-051-00	Fault Counter 395-051-00: SS App Error	Range = 0 to 255	0
616-307	Fault Counter 95-052-00	Fault Counter 395-052-00: LVF Boot Error	Range = 0 to 255	0
616-308	Fault Counter 95-053-00	Fault Counter 395-053-00: LVF App Error	Range = 0 to 255	0
616-309	Fault Counter 95-054-00	Fault Counter 395-054-00: LVF BM Boot Error	Range = 0 to 255	0
616-310	Fault Counter 95-055-00	Fault Counter 395-055-00: LVF BM App Error	Range = 0 to 255	0
616-311	Fault Counter 95-056-00	Fault Counter 395-056-00: DC Nomad Proxy Error	Range = 0 to 255	0
616-312	Fault Counter 95-057-00	Fault Counter 395-057-00: DC URD Error	Range = 0 to 255	0
616-313	Fault Counter 95-058-00	Fault Counter 395-058-00: DC SCD Error	Range = 0 to 255	0
616-314	Fault Counter 95-059-00	Fault Counter 395-059-00: DADH QT 100 Error	Range = 0 to 255	0
616-315	Fault Counter 95-060-00	Fault Counter 395-060-00: DADH 100 Error	Range = 0 to 255	0
616-316	Fault Counter 95-061-00	Fault Counter 395-061-00: DADH QT Error	Range = 0 to 255	0
616-317	Fault Counter 95-062-00	Fault Counter 395-062-00: IOT Duplex Module Error	Range = 0 to 255	0
616-318	Fault Counter 95-063-00	Fault Counter 395-063-00: IOT LC Module Error	Range = 0 to 255	0
616-319	Fault Counter 95-064-00	Fault Counter 395-064-00: IIT A4 Scan Module Error	Range = 0 to 255	0
616-320	Fault Counter 95-065-00	Fault Counter 395-065-00: IIT CCD Module Error	Range = 0 to 255	0
616-321	Fault Counter 95-066-00	Fault Counter 395-066-00: IIT FW ATES Module Error	Range = 0 to 255	0
616-322	Fault Counter 95-067-00	Fault Counter 395-067-00: SW Upgrade Incompat Prod Error	Range = 0 to 255	0
616-323	Fault Counter 95-068-00	Fault Counter 395-068-00: SW Upgrade Incompat HW Error	Range = 0 to 255	0
616-324	Fault Counter 95-069-00	Fault Counter 395-069-00: SW Up Incompat FW Error	Range = 0 to 255	0
616-325	Fault Counter 95-070-00	Fault Counter 395-070-00: SW Up DLM Downgrade Error	Range = 0 to 255	0

**Table 22 CCS NVM ID 616-001 to 616-340**

NVM ID	NVM Name	NVM Description	Settings	Default
616-326	Fault Counter 95-071-00	Fault Counter 395-071-00: SW Up DLM Sidegrade Error	Range = 0 to 255	0
616-327	Fault Counter 95-072-00	Fault Counter 395-072-00: SW UP Plat Sync Error	Range = 0 to 255	0
616-328	Machine Class	Machine Class	0 = Unknown (Not set) 1 = A 2 = B 3 = C	2
616-329	Sequence Number	PagePack Sequence Number. Incremented each time a PagePack contract is renewed (Read only)	Range = 0 to 127	0
616-331	DefaultRegDiff	Default Regional Differentiator value: This is what region the machine will be set to upon expiration of PagePack plan. (Read only)	1 = NA_Classic 2 = NA_Enterprise 3 = XE_Classic 4 = XE_Enterprise 5 = DMO_Classic 6 = DMO_Enterprise 7 = Metered 8 = FX_Classic 9 = FX_Enterprise 10 = SR_Classic 11 = SR_Enterprise 12 = WW_Classic 13 = WW_Enterprise 14 = NA_XE_Classic 15 = NA_XE_Enterprise	15
616-335	HideCompleted-JobLogTab	Hide Completed Job Log Tab on UI	0 = Hide 1 = Show	1
616-337	Tray 2 Usage:Standard/Envelope	Tray 2 Usage: Standard Tray / Envelope Tray	0 = Standard tray 1 = Envelope tray	0
616-339	power saver grace period	For Blue Angel when the energy saver is set to 0 minutes the system will take a grace period before it falls into the energy saver mode.	Range = 15 to 60 seconds	45
616-340	ClearFaxNumber-Policy	Policy for clearing embeded fax phone numbers immediately after sending	0 = Do not clear 1 = Clear	1

**Table 23 CCS NVM ID 617-002 to 617-003**

NVM ID	NVM Name	NVM Description	Settings	Default
617-002	Faults displayed on TTY	-	Range = 0 to 1	1
617-003	Display faults	-	Range = 0 to 1	1

**Table 24 CCS NVM ID 620-001 to 620-033**

NVM ID	NVM Name	NVM Description	Settings	Default
620-001	IISS Version No Upper Level	-	Range = 0 to 65535	0
620-002	PrescanType	-	Range = 0 to 1	0
620-003	PhotoTextSeparationLevel	-	Range = 0 to 4	2
620-004	photoReproLevel	-	Range = 0 to 2	1
620-005	bwSeparationLevel	-	Range = 0 to 4	2
620-006	RED chromat-icValueLow	-	Range = 0 to 65535	0
620-007	RED chromat-icValueHigh	-	Range = 0 to 65535	25700
620-008	RED aChromat-icValueLow	-	Range = 0 to 65535	0
620-009	RED aChromat-icValueHigh	-	Range = 0 to 65535	0
620-010	GRN chromat-icValueLow	-	Range = 0 to 65535	25600
620-011	GRN chromat-icValueHigh	-	Range = 0 to 65535	25600
620-012	GRN aChromat-icValueLow	-	Range = 0 to 65535	0
620-013	GRN aChromat-icValueHigh	-	Range = 0 to 65535	0
620-014	BLU chromat-icValueLow	-	Range = 0 to 65535	25600
620-015	BLU chromat-icValueHigh	-	Range = 0 to 65535	63
620-016	BLU aChromat-icValueLow	-	Range = 0 to 65535	0
620-017	BLU aChromat-icValueHigh	-	Range = 0 to 65535	0
620-018	YEL chromat-icValueLow	-	Range = 0 to 65535	0



**Table 24 CCS NVM ID 620-001 to 620-033**

NVM ID	NVM Name	NVM Description	Settings	Default
620-019	YEL chromat-icValueHigh	-	Range = 0 to 65535	25600
620-020	YEL aChromat-icValueLow	-	Range = 0 to 65535	0
620-021	YEL aChromat-icValueHigh	-	Range = 0 to 65535	0
620-022	MAG chromat-icValueLow	-	Range = 0 to 65535	0
620-023	MAG chromat-icValueHigh	-	Range = 0 to 65535	100
620-024	MAG aChromat-icValueLow	-	Range = 0 to 65535	0
620-025	MAG aChromat-icValueHigh	-	Range = 0 to 65535	0
620-026	CYA chromat-icValueLow	-	Range = 0 to 65535	25600
620-027	CYA chromat-icValueHigh	-	Range = 0 to 65535	0
620-028	CYA aChromat-icValueLow	-	Range = 0 to 65535	0
620-029	CYA aChromat-icValueHigh	-	Range = 0 to 65535	0
620-030	BLA chromat-icValueLow	-	Range = 0 to 65535	100
620-031	BLA chromat-icValueHigh	-	Range = 0 to 65535	0
620-032	BLA aChromat-icValueLow	-	Range = 0 to 65535	0
620-033	BLA aChromat-icValueHigh	-	Range = 0 to 65535	0

**Table 25 CCS NVM ID 620-101 to 620-199**

NVM ID	NVM Name	NVM Description	Settings	Default
620-099	62-310 counter	Fault counter 362-310	Range = 0 to 255	0
620-101	Market Informa-tion	-	Range = 0 to 3	0
620-102	IISS Major Ver-sion	-	Range = 0 to 65535	0
620-103	IISS Minor Ver-sion	-	Range = 0 to 65535	0
620-104	IISS Revision Version	-	Range = 0 to 65535	0

**Table 25 CCS NVM ID 620-101 to 620-199**

NVM ID	NVM Name	NVM Description	Settings	Default
620-105	IISS Patch Ver-sion	-	Range = 0 to 65535	0
620-106	ADF Major Ver-sion	-	Range = 0 to 65535	0
620-107	ADF Minor Ver-sion	-	Range = 0 to 65535	0
620-108	ADF Revision Version	-	Range = 0 to 65535	0
620-109	ADF Patch Ver-sion	-	Range = 0 to 65535	0
620-110	IPL Version	-	Range = 0 to 65535	0
620-111	IIT fail bypass	-	Range = 0 to 1	0
620-112	Fan control mode	-	Range = 0 to 1	0
620-113	the number of APS sensors	-	Range = 0 to 1	1
620-114	Lamp Fan fal bypass	-	Range = 0 to 1	0
620-115	Lamp Fan Low rotation ON time	-	Range = 0 to 60	15
620-116	Lamp Fan Off time	-	Range = 0 to 60	0
620-117	FL timer set	-	Range = 0 to 1	0
620-118	Lamp On interval	-	Range = 0 to 60	30
620-119	Lamp On time	-	Range = 0 to 60	1
620-120	IIT failure parts diagnosis	-	Range = 0 to 65535	0
620-121	Platen SS Regis-tration Adjust	Platen SS Registration Adjust-ment	Range = 16 to 184	100
620-122	Platen SS Magni-fication Adjust	Platen SS Magnification Adjustment	Range = 44 to 56	50
620-123	Platen glass type		Range = 0 to 2	2
620-124	REGI corr value-FS dir on Platen	REGI correction value in FS direction on Platen	Range = 0 to 240	120
620-125	CVT FS Off S1:S1-1 (139.7-148)	CVT FS Offset Side 1: Side 1-1 (139.7 to 148)	Range = 0 to 240	120
620-126	CVT FS Off S2:S2-1 (139.7-148)	CVT FS Offset Side 2: Side 2-1 (139.7 to 148)	Range = 0 to 240	120
620-127	CVT FS Off S1:S1-2 (182-194)	CVT FS Offset Side 1: Side 1-2 (182 to 194)	Range = 0 to 240	120
620-128	CVT FS Off S2:S2-2 (182-194)	CVT FS Offset Side 2: Side 2-2 (182 to 194)	Range = 0 to 240	120

Table 25 CCS NVM ID 620-101 to 620-199

NVM ID	NVM Name	NVM Description	Settings	Default
620-129	CVT FS Off S1:S1-3 (203.2)	CVT FS Offset Side 1: Side 1-3 (203.2)	Range = 0 to 240	120
620-130	CVT FS Off S2:S2-3 (203.2)	CVT FS Offset Side 2: Side 2-3 (203.2)	Range = 0 to 240	120
620-131	CVT FS Off S1:S1-4 (210)	CVT FS Offset Side 1: Side 1-4 (210)	Range = 0 to 240	120
620-132	CVT FS Off S2:S2-4 (210)	CVT FS Offset Side 2: Side 2-4 (210)	Range = 0 to 240	120
620-133	CVT FS Off S1:S1-5 (214.9-215.9)	CVT FS Offset Side 1: Side 1-5 (214.9 to 215.9)	Range = 0 to 240	120
620-134	CVT FS Off S2:S2-5 (214.9-215.9)	CVT FS Offset Side 2: Side 2-5 (214.9 to 215.9)	Range = 0 to 240	120
620-135	CVT FS Off S1:S1-6 (254-257)	CVT FS Offset Side 1: Side 1-6 (254 to 257)	Range = 0 to 240	120
620-136	CVT FS Off S2:S2-6 (254-257)	CVT FS Offset Side 2: Side 2-6 (254 to 257)	Range = 0 to 240	120
620-137	CVT FS Off S1:S1-7 (266.7-267)	CVT FS Offset Side 1: Side 1-7 (266.7 to 267)	Range = 0 to 240	120
620-138	CVT FS Off S2:S2-7 (266.7-267)	CVT FS Offset Side 2: Side 2-7 (266.7 to 267)	Range = 0 to 240	120
620-139	CVT FS Off S1:S1-8 (279.4)	CVT FS Offset Side 1: Side 1-8 (279.4)	Range = 0 to 240	120
620-140	CVT FS Off S2:S2-8 (279.4)	CVT FS Offset Side 2: Side 2-8 (279.4)	Range = 0 to 240	120
620-141	CVT FS Off S1:S1-9 (297)	CVT FS Offset Side 1: Side 1-9 (297)	Range = 0 to 240	120
620-142	CVT FS Off S2:S2-9 (297)	CVT FS Offset Side 2: Side 2-9 (297)	Range = 0 to 240	120
620-143	CVT FS Off S1:S3-1 (139.7-148)	CVT FS Offset Side 1: Side 3-1 (139.7 to 148)	Range = 0 to 240	120
620-144	CVT FS Off S2:S4-1 (139.7-148)	CVT FS Offset Side 2: Side 4-1 (139.7 to 148)	Range = 0 to 240	120
620-145	CVT FS Off S1:S3-2 (182-194)	CVT FS Offset Side 1: Side 3-2 (182 to 194)	Range = 0 to 240	120
620-146	CVT FS Off S2:S4-2 (182-194)	CVT FS Offset Side 2: Side 4-2 (182 to 194)	Range = 0 to 240	120

Table 25 CCS NVM ID 620-101 to 620-199

NVM ID	NVM Name	NVM Description	Settings	Default
620-147	CVT FS Off S1:S3-3 (203.2)	CVT FS Offset Side 1: Side 3-3 (203.2)	Range = 0 to 240	120
620-148	CVT FS Off S2:S4-3 (203.2)	CVT FS Offset Side 2: Side 4-3 (203.2)	Range = 0 to 240	120
620-149	CVT FS Off S1:S3-4 (210)	CVT FS Offset Side 1: Side 3-4 (210)	Range = 0 to 240	120
620-150	CVT FS Off S2:S4-4 (210)	CVT FS Offset Side 2: Side 4-4 (210)	Range = 0 to 240	120
620-151	CVT FS Off S1:S3-5 (214.9-215.9)	CVT FS Offset Side 1: Side 3-5 (214.9 to 215.9)	Range = 0 to 240	120
620-152	CVT FS Off S2:S4-5 (214.9-215.9)	CVT FS Offset Side 2: Side 4-5 (214.9 to 215.9)	Range = 0 to 240	120
620-153	CVT FS Off S1:S3-6 (254-257)	CVT FS Offset Side 1: Side 3-6 (254 to 257)	Range = 0 to 240	120
620-154	CVT FS Off S2:S4-6 (254-257)	CVT FS Offset Side 2: Side 4-6 (254 to 257)	Range = 0 to 240	120
620-155	CVT FS Off S1:S3-7 (266.7-267)	CVT FS Offset Side 1: Side 3-7 (266.7 to 267)	Range = 0 to 240	120
620-156	CVT FS Off S2:S4-7 (266.7-267)	CVT FS Offset Side 2: Side 4-7 (266.7 to 267)	Range = 0 to 240	120
620-157	CVT FS Off S1:S3-8 (279.4)	CVT FS Offset Side 1: Side 3-8 (279.4)	Range = 0 to 240	120
620-158	CVT FS Off S2:S4-8 (279.4)	CVT FS Offset Side 2: Side 4-8 (279.4)	Range = 0 to 240	120
620-159	CVT FS Off S1:S3-9 (297)	CVT FS Offset Side 1: Side 3-9 (297)	Range = 0 to 240	120
620-160	CVT FS Off S2:S4-9 (297)	CVT FS Offset Side 2: Side 4-9 (297)	Range = 0 to 240	120
620-161	W-Ref adjustment factor Red	-	Range = 70 to 255	140
620-162	W-Ref adjustment factor Green	-	Range = 70 to 255	140
620-163	W-Ref adjustment factor Blue	-	Range = 70 to 255	140
620-164	W-Ref adjustment factor BW-X	-	Range = 70 to 255	140
620-165	W-Ref adjustment factor BW-Y	-	Range = 70 to 255	140
620-166	W-Ref adj factor Red (sheet)	W-Ref adjustment factor Red (each sheet)	Range = 0 to 127	63

**Table 25 CCS NVM ID 620-101 to 620-199**

NVM ID	NVM Name	NVM Description	Settings	Default
620-167	W-Ref adj factor Green (sheet)	W-Ref adjustment factor Green (each sheet)	Range = 0 to 127	63
620-168	W-Ref adj factor Blue (sheet)	W-Ref adjustment factor Blue (each sheet)	Range = 0 to 127	63
620-169	W-Ref adj factor BW (sheet)	W-Ref adjustment factor BW (each sheet)	Range = 0 to 127	63
620-170	IIT paper code	-	Range = 0 to 8	0
620-171	Optical axis adjustment: front	-	Range = 0 to 1980	990
620-172	Optical axis adjustment: rear	-	Range = 0 to 1980	990
620-173	CVT FS Offset Side 1: Side1	-	Range = 0 to 240	120
620-174	CVT FS Offset Side 2: Side2	-	Range = 0 to 240	120
620-175	CVT FS Offset Side 1: Side3	-	Range = 0 to 240	120
620-176	CVT FS Offset Side 2: Side4	-	Range = 0 to 240	120
620-177	BW/Color auto recognition level	-	Range = 0 to 1	0
620-178	Black line adj level (for COLOR)	Black line adjustment level (for Color)	Range = 0 to 15	8
620-179	Black line adj level (for BW)	Black line adjustment level (for BW)	Range = 0 to 15	8
620-180	Black line adjustment test mode	-	Range = 0 to 7	0
620-181	BW adjustment table	-	Range = 0 to 7	0
620-182	HOSEI_SCAN (for detection)	-	Range = 0 to 6	3
620-183	HOSEI_SCAN (for image)	-	Range = 0 to 6	3
620-184	CCD Calib Y scan Red	-	Range = 0 to 1023	0
620-185	CCD Calib Y scanned: Green	-	Range = 0 to 1023	0
620-186	CCD Calib Y scanned: Blue	-	Range = 0 to 1023	0
620-187	CCD Calib M scanned: Red	-	Range = 0 to 1023	0
620-188	CCD Calib M scanned: Green	-	Range = 0 to 1023	0
620-189	CCD Calib M scanned: Blue	-	Range = 0 to 1023	0

**Table 25 CCS NVM ID 620-101 to 620-199**

NVM ID	NVM Name	NVM Description	Settings	Default
620-190	CCD Calib C scanned: Red	-	Range = 0 to 1023	0
620-191	CCD Calib C scanned: Green	-	Range = 0 to 1023	0
620-192	CCD Calib C scanned: Blue	-	Range = 0 to 1023	0
620-193	CCD Calib PK scanned: Red	-	Range = 0 to 1023	0
620-194	CCD Calib PK scanned: Green	-	Range = 0 to 1023	0
620-195	CCD Calib PK scanned: Blue	-	Range = 0 to 1023	0
620-196	Switching A6/postcard detect	Switching A6 document / postcard detection	Range = 0 to 2	0
620-197	A4S/8.5in det. border switch 2	A4S/8.5in detection border switching 2	Range = 0 to 6	3
620-198	B5/8W10 detection switch	-	Range = 0 to 3	0
620-199	Switch 8.5W13/8.5W14 detections	-	Range = 0 to 3	0

**Table 26 CCS NVM ID 620-200 to 620-299**

NVM ID	NVM Name	NVM Description	Settings	Default
620-200	Select special-doc-detect table	Select special document detection table	Range = 0 to 2	0
620-201	Switch docu size detect tables	Switch document size detection tables	Range = 1 to 5	2
620-202	Switch A3/11W17 detections	-	Range = 0 to 3	0
620-203	Switch A4/8.5W11 detections	-	Range = 0 to 3	0
620-204	Document size detection.	-	Range = 0 to 1	0
620-205	GCO/TFX sizes switching	-	Range = 0 to 1	1
620-206	B4/8-kai FS threshold setting	-	Range = 0 to 6	3
620-207	8-kai/11W17SEF FS threshold	8-kai/11W17SEF FS threshold setting	Range = 0 to 6	3
620-208	Switch B6/5W7 detections	-	Range = 0 to 2	0

Table 26 CCS NVM ID 620-200 to 620-299

NVM ID	NVM Name	NVM Description	Settings	Default
620-209	Lamp check NG counts	-	Range = 0 to 65535	0
620-210	Data taken at lamp check NG.	-	Range = 0 to 1023	0
620-211	AOC flow endings with error	The number of AOC flow endings with error	Range = 0 to 255	0
620-212	BW Copy BGR-AE adjustment level	-	Range = 0 to 4095	0
620-213	Color copy BGR-AE adjust level	Color copy BGR-AE adjustment level	Range = 0 to 4095	0
620-214	TP_BW_Copy BGR-AE-Level Speed	BW Copy BGR-AE adjustment speed prioritized	Range = 0 to 4095	0
620-215	TX_CL_Copy BGR-AE-Level Speed	Color copy BGR AE adjustment speed prioritized AE (Text)	Range = 0 to 4095	0
620-216	TP_BW_Contone BGR-AE-Level Speed	BW contone scan BGR AE adjustment level for speed prioritized AE (Text photo)	Range = 0 to 4095	0
620-217	TP_CL_Contone BGR-AE-Level Speed	Color contone scan BGR AE adjustment level for speed prioritized AE (Text photo)	Range = 0 to 4095	0
620-218	ABS; FS non-detected area 1	Background suppression; FS non-detected area 1	Range = 0 to 65535	255
620-219	ABS; FS non-detected area 2	Background suppression; FS non-detected area 2	Range = 0 to 65535	255
620-220	ABS; FS non-detected area 3	Background suppression; FS non-detected area 3	Range = 0 to 65535	255
620-221	ABS; FS non-detected area 4	Background suppression; FS non-detected area 4	Range = 0 to 65535	255
620-222	ABS; SS fixed position	Background suppression; SS fixed position	Range = 0 to 65535	60
620-223	ABS; SS end position (for HAE)	Background suppression; SS end position (for HAE)	Range = 0 to 65535	240
620-224	ABS; SS end position (for MAE)	Background suppression; SS end position (for MAE)	Range = 0 to 65535	240
620-225	ABS; SS end position (for NAE)	Background suppression; SS end position (for NAE)	Range = 0 to 65535	240
620-226	LIM control for BW COPY	-	Range = 0 to 1	1
620-227	LIM control for color COPY	-	Range = 0 to 1	1
620-228	BW_Copy Variation Control(1-bit)	LIM control for Faxand binary scan	Range = 0 to 1	1

Table 26 CCS NVM ID 620-200 to 620-299

NVM ID	NVM Name	NVM Description	Settings	Default
620-229	LIM control for condone scan	-	Range = 0 to 1	1
620-230	ABS threshold (HAE)	Background suppression threshold (HAE)	Range = 0 to 255	127
620-231	ABS threshold (NAE1)	Background suppression threshold (NAE1)	Range = 0 to 255	33
620-232	ABS threshold (NAE2)	Background suppression threshold (NAE2)	Range = 0 to 255	204
620-233	ABS threshold (NAE3)	Background suppression threshold (NAE3)	Range = 0 to 65535	8
620-234	ABS threshold (NAE4)	Background suppression threshold (NAE4)	Range = 0 to 65535	4
620-235	AE control of FS size detection	-	Range = 0 to 1	0
620-236	Not displayed	Minimum FS detection size for AE	Range = 0 to 65535	500
620-237	AE param SS mag corr TopLimit 1	AE parameter SS magnification correction upper limit 1	Range = 0 to 4000	4000
620-238	AE param SS mag corr TopLimit 2	AE parameter SS magnification correction upper limit 2	Range = 0 to 4000	4000
620-239	AE param SS mag corr TopLimit 3	AE parameter SS magnification correction upper limit 3	Range = 0 to 4000	4000
620-240	AE param SS mag corr TopLimit 4	AE parameter SS magnification correction upper limit 4	Range = 0 to 4000	4000
620-241	TX_BW_Fax Offset Lvl AE	Fax binary scan: background suppression Offset level; text mode (normal pencil)	Range = 0 to 8191	0
620-242	TP_BW_Copy_Fax Removal Lvl AE	Level for BW Copy Fax and binary scan: Text/photo mode (print photographic paper copy)	Range = 0 to 4095	0
620-243	TP_BW_Copy_Fax Offset Lvl AE	Offset level for BW Copy Fax and binary scan: Text/photo mode (print photographic paper copy)	Range = 0 to 4095	273
620-244	TX_BW_Copy_Fax Removal Lvl AE	Level for BW Copy Fax and binary scan: text mode (normal pencil)	Range = 0 to 4095	0
620-245	TX_BW_Copy_Fax Offset Lvl AE	Offset level for BW Copy Fax and binary scan: text mode (normal pencil)	Range = 0 to 4095	273

**Table 26 CCS NVM ID 620-200 to 620-299**

NVM ID	NVM Name	NVM Description	Settings	Default
620-246	TPL_BW_Copy_Fax Removal Lvl AE	Level for BW Copy Fax and binary scan: text/photo mode (pale-color document)	Range = 0 to 4095	0
620-247	TPL_BW_Copy_Fax Offset Lvl AE	Offset level for BW Copy Fax and binary scan: text/photo mode (pale-color document)	Range = 0 to 4095	273
620-248	TRP_BW_Copy_Fax Removal Lvl AE	Level for BW Copy Fax and binary scan: text mode (tracing paper)	Range = 0 to 4095	0
620-249	TRP_BW_Copy_Fax Offset Lvl AE	Offset level for BW Copy Fax and binary scan: text mode (tracing paper)	Range = 0 to 4095	273
620-250	TP_CL_Copy Removal Lvl AE	level for Color Copy: text/photo mode (print photographic paper copy inkjet highlighter)	Range = 0 to 4095	0
620-251	TP_CL_Copy Offset Lvl AE	Offset level for Color Copy text/photo mode (print photographic paper copy inkjet highlighter)	Range = 0 to 4095	0
620-252	TX_CL_Copy Removal Lvl AE	Level for Color Copy: text (normal)	Range = 0 to 4095	0
620-253	TX_CL_Copy Offset Lvl AE	Offset level for Color Copy text (normal)	Range = 0 to 4095	0
620-254	TP_BW_Contone Removal Lvl AE	Level for BW Contone Scan (text photo)	Range = 0 to 4095	819
620-255	TP_BW_Contone Offset Lvl AE	Offsetlevel for BW Contone Scan: (text photo)	Range = 0 to 4095	0
620-256	notTP_BW_Contone Removal Lvl AE	Level for BW Contone Scan (other than text photo)	Range = 0 to 4095	819
620-257	notTP_BW_Contone Offset Lvl AE	Offset level for BW Contone Scan: (other than text photo)	Range = 0 to 4095	0
620-258	TP_CL_Contone Removal Lvl AE	Level for Color Contone Scan (text photo)	Range = 0 to 4095	0
620-259	TP_CL_Contone Offset Lvl AE	Offset level for Color Contone Scan: (text photo)	Range = 0 to 4095	0
620-260	notTP_CL_Contone Removal Lvl AE	Level for Color Contone Scan (other than text photo)	Range = 0 to 4095	0
620-261	notTP_CL_Contone Offset Lvl AE	Offset level for Color Contone Scan (other than text photo)	Range = 0 to 4095	0
620-262	2F-AE LowLimit Multiplied Value	Two face AE control parameter: lower limit of multiplier coefficient	Range = 0 to 255	0

**Table 26 CCS NVM ID 620-200 to 620-299**

NVM ID	NVM Name	NVM Description	Settings	Default
620-263	2F-AE TopLimit Multiplied Value	Two face AE control parameter: upper limit of multiplier coefficient	Range = 0 to 255	255
620-264	Offset for 2F AE Control	Two face AE control parameter: comparison margin OFST	Range = 0 to 255	8
620-265	Threshold for 2F AE Control	Two face AE control parameter: background level threshold LEVEL_N	Range = 0 to 255	16
620-266	Mode Control of 2F AE	Two face AE control parameter: forced selection	Range = 0 to 3	0
620-267	Two color copy control	-	Range = 0 to 1	0
620-268	Tracing paper mode setting	-	Range = 0 to 1	0
620-269	Def. ColorBal adj Y: low den.	Default color balance adjustment level Y: low density	Range = 0 to 8	4
620-270	Def. ColorBal adj Y: med den.	Default color balance adjustment level Y: medium density	Range = 0 to 8	4
620-271	Def. ColorBal adj Y: hi den.	Default color balance adjustment level Y: high density	Range = 0 to 8	4
620-272	Def. ColorBal adj M: low den.	Default color balance adjustment level M: low density	Range = 0 to 8	4
620-273	Def. ColorBal adj M: med den.	Default color balance adjustment level M: medium density	Range = 0 to 8	4
620-274	Def. ColorBal adj M: hi den.	Default color balance adjustment level M: high density	Range = 0 to 8	4
620-275	Def. ColorBal adj C: low den.	Default color balance adjustment level C: low density	Range = 0 to 8	4
620-276	Def. ColorBal adj C: med den.	Default color balance adjustment level C: medium density	Range = 0 to 8	4
620-277	Def. ColorBal adj C: hi den.	Default color balance adjustment level C: high density	Range = 0 to 8	4
620-278	Def. ColorBal adj K: low den	Default color balance adjustment level K: low density	Range = 0 to 8	4
620-279	Def. ColorBal adj K: med den	Default color balance adjustment level K: medium density	Range = 0 to 8	4
620-280	Def. ColorBal adj K: hi den	Default color balance adjustment level K: high density	Range = 0 to 8	4
620-281	FS mag corr (PLATEN/BELT DADF)	FS magnification correction	Range = 0 to 100	50
620-282	FS mag corr (CVT)	FS magnification correction	Range = 0 to 100	50

**Table 26 CCS NVM ID 620-200 to 620-299**

NVM ID	NVM Name	NVM Description	Settings	Default
620-283	IPS Through Bypass setting 1(A)	-	Range = 0 to 65535	0
620-284	IPS through (bypass) setting 2	-	Range = 0 to 65535	0
620-285	BW COPY: text; normal dens adj	BW Copy: text; normal density adjustment	Range = 0 to 256	128
620-286	BW COPY: text; Darker3 dens adj	BW Copy: text; Darker 3 density adjustment	Range = 0 to 256	128
620-287	Scan/FAX: text; normal dens adj	Scan/Fax: text; normal density adjustment	Range = 0 to 256	128
620-288	Scan/FAX: text; Darker3 dens adj	Scan/Fax: text; Darker 3 density adjustment	Range = 0 to 256	128
620-289	PLTN RAE SS Not Detect Area	Speed prioritized background suppression; SS non-detection area for Platen M/C	Range = 0 to 65535	0
620-290	DADF-P-Job RAE SSNotDetect Area	Speed prioritized background suppression; SS non-detection area for platen job on SPDH M/C	Range = 0 to 65535	0
620-291	DADF-D-Job RAE SSNotDetect Area	Speed prioritized background suppression; SS non-detection area for SPDH job on SPDH M/C	Range = 0 to 65535	0
620-292	Hue angle B start	-	Range = 0 to 360	270
620-293	Hue angle B end	-	Range = 0 to 360	320
620-294	Hue angle G start	-	Range = 0 to 360	110
620-295	Hue angle G end	-	Range = 0 to 360	200
620-296	Hue angle R start	-	Range = 0 to 360	350
620-297	Hue angle R end	-	Range = 0 to 360	60
620-298	Hue angle Y start	-	Range = 0 to 360	60
620-299	Hue angle Y end	-	Range = 0 to 360	120

**Table 27 CCS NVM ID 620-300 to 620-399**

NVM ID	NVM Name	NVM Description	Settings	Default
620-300	Hue angle M start	-	Range = 0 to 360	320
620-301	Hue angle M end	-	Range = 0 to 360	360
620-302	Hue angle C start	-	Range = 0 to 360	190
620-303	Hue angle C end	-	Range = 0 to 360	280
620-304	IISS-DADF communication Fail	-	Range = 0 to 65535	0

**Table 27 CCS NVM ID 620-300 to 620-399**

NVM ID	NVM Name	NVM Description	Settings	Default
620-306	IISS-Controller comm Fai	IISS Controller Communication Fail	Range = 0 to 65535	0
620-308	DADF EEPROM Fail	-	Range = 0 to 65535	0
620-310	IPS Fan Fail	-	Range = 0 to 65535	0
620-312	CRG Position Fail	-	Range = 0 to 65535	0
620-314	IISS LOGIC Fail	-	Range = 0 to 65535	0
620-316	Lamp Illumination Fail	-	Range = 0 to 65535	0
620-318	CRG Over Run Fail	-	Range = 0 to 65535	0
620-320	Lamp Fan Fail	-	Range = 0 to 65535	0
620-322	CCD Fan Fail	-	Range = 0 to 65535	0
620-324	AGC Fail	-	Range = 0 to 65535	0
620-326	AOC Fail	-	Range = 0 to 65535	0
620-328	IPS PWBA Fail	-	Range = 0 to 65535	0
620-330	IISS-EXT communication Fail	-	Range = 0 to 65535	0
620-332	Extension EEPROM Fail	-	Range = 0 to 65535	0
620-334	IPS-EXT Connection Fail	-	Range = 0 to 65535	0
620-336	IPS-YATA Connection Fail	-	Range = 0 to 65535	0
620-338	EXT-YATA Connection Fail	-	Range = 0 to 65535	0
620-340	YATA PWBA Fail	-	Range = 0 to 65535	0
620-342	IPS PWBA Memory Fail	-	Range = 0 to 65535	0
620-344	IIT Hot Line Fail	-	Range = 0 to 65535	0
620-346	Scan Count replace life (upper)	Scan Count replacement life (upper)	Range = 0 to 65535	91
620-347	Scan Count replace life (lower)	Scan Count replacement life (lower)	Range = 0 to 65535	36224
620-348	Lamp-On time replace life (max)	Lamp-On time Count replacement life (upper)	Range = 0 to 65535	109
620-349	Lamp-On time replace life (min)	Lamp-On time Count replacement life (lower)	Range = 0 to 65535	56576
620-350	Lamp-On Count replace life (max)	Lamp-On Count Replacement life (upper)	Range = 0 to 65535	91
620-351	Lamp-On Count replace life (min)	Lamp-On Count Replacement life (lower)	Range = 0 to 65535	36224

Table 27 CCS NVM ID 620-300 to 620-399

NVM ID	NVM Name	NVM Description	Settings	Default
620-352	Fax doc Size detect DADF	Fax Document Size Detection for SPDH	Range = 0 to 1	0
620-353	JAM bypass	-	Range = 0 to 1	0
620-354	8.5 W11 LEF threshold	-	Range = 1993 to 2193	2093
620-355	B5SEF / 8 W10 SEF switching	-	Range = 0 to 1	0
620-356	11x15 SEF/8-kai switch (AP Mkt)	11 W15 SEF / 8-kai switching in AP market	Range = 0 to 1	0
620-357	FS MAX value	-	Range = 1297 to 3070	2970
620-358	FS MIN value	-	Range = 1297 to 3070	2970
620-359	SS MAX value	-	Range = 1297 to 4418	2100
620-360	SS MIN value	-	Range = 1297 to 4418	2100
620-361	Document Size	-	Range = 3 to 20	8
620-362	Specify document feed direction	-	Range = 0 to 1	0
620-363	DADF Doc Size Detection Table	Select SPDH document size detection table custom registration	Range = 0 to 1	0
620-364	S Size Side2 Lead Regi Adjust	S-size document Side2 Lead Regi correction value	Range = 217 to 283	250
620-365	M Size Side2 Lead Regi Adjust	M-size document Side2 Lead Regi correction value	Range = 217 to 283	250
620-366	L Size Side2 Lead Regi Adjust	L-size document Side2 Lead Regi correction value	Range = 217 to 283	250
620-367	Size Mismatch Set(Simp)	Size mismatch Jam detection setting (applicable to only Simplex Mode)	Range = 1 to 2	1
620-368	Alternate Size switching 1	-	Range = 1 to 2	1
620-369	Alternate Size switching 2	-	Range = 1 to 2	1
620-370	Alternate Size switching 3	-	Range = 0 to 2	0
620-371	Alternate Size switching 4	-	Range = 0 to 2	0
620-372	Alternate Size switching 5	-	Range = 0 to 2	0
620-373	Alternate Size switching 6	-	Range = 0 to 3	0

Table 27 CCS NVM ID 620-300 to 620-399

NVM ID	NVM Name	NVM Description	Settings	Default
620-374	Alternate Size switching 7	-	Range = 0 to 3	0
620-375	Alternate Size switching 8	-	Range = 0 to 4	0
620-376	Alternate Size switching 9	-	Range = 0 to 2	0
620-377	Alternate Size switching 10	-	Range = 0 to 2	0
620-378	Alternate Size switching 11	-	Range = 0 to 3	0
620-379	Size-Mix Mode Assumed Size	Size Mix Mode temporary size direction	Range = 0 to 1	1
620-380	Fax job Mix Size Standard mode	-	Range = 0 to 1	0
620-381	DADF DPM selection	-	Range = 0 to 65535	80
620-382	Magnification correction control	-	Range = 0 to 1	0
620-383	Color BW judgment level	-	Range = 0 to 4	2
620-384	textmode Photo/Text RecogLvl	YATAGRS text mode Photo and Text Recognition level	Range = 0 to 4	2
620-385	BW copy (text photo) AE adj lvl	BW copy (text photo) AE adjustment level	Range = 0 to 4095	0
620-386	CL copy (text photo) AE adj lvl	Color copy (text photo) AE adjustment level	Range = 0 to 4095	0
620-387	BW Copy text AE adjustment level	BW Copy (text) AE adjustment level	Range = 0 to 4095	0
620-388	CL Copy (text) AE adj lvl	Color Copy (text) AE adjustment level	Range = 0 to 4095	0
620-389	BW CopyFor B AE adjust level	BW Copy for B AE adjustment level	Range = 0 to 4095	0
620-390	BW Copy G and R AE adj lvl	BW Copy for G and R AE adjustment level	Range = 0 to 4095	0
620-391	CL Copy B AE adj lvl	Color Copy for B AE adjustment level	Range = 0 to 4095	0
620-392	CL Copy G and R AE adj lvl	Color Copy for G and R AE adjustment level	Range = 0 to 4095	0
620-393	BW Copy (text) B AE adj lvl	BW Copy (text) for B AE adjustment level	Range = 0 to 4095	0
620-394	BW Copy (text) G & R AE adj lvl	BW Copy (text) for G and R AE adjustment level	Range = 0 to 4095	0
620-395	CL Copy (text) B AE adj lvl	Color Copy (text) for B AE adjustment level	Range = 0 to 4095	0

**Table 27 CCS NVM ID 620-300 to 620-399**

NVM ID	NVM Name	NVM Description	Settings	Default
620-396	CL Copy (text) G & R AE adj lvl	Color Copy (text) for G and R AE adjustment level	Range = 0 to 4095	0
620-397	EXT. Tail Reg. adj (55.0 mm/sec)	EXT. Tail Reg. adjustment (55.0 mm/sec)	Range = 0 to 244	122
620-398	EXT. Tail Reg. adj (73.3 mm/sec)	EXT. Tail Reg. adjustment (73.3 mm/sec)	Range = 0 to 244	122
620-399	EXT. Tail Reg. adj (82.5 mm/sec)	EXT. Tail Reg. adjustment (82.5 mm/sec)	Range = 0 to 244	122

**Table 28 CCS NVM ID 620-400 to 620-496**

NVM ID	NVM Name	NVM Description	Settings	Default
620-400	EXT. Tail Reg. adj (110.0 mm/sec)	EXT. Tail Reg. adjustment (110.0 mm/sec)	Range = 0 to 244	122
620-401	EXT. Tail Reg. adj (146.7 mm/sec)	EXT. Tail Reg. adjustment (146.7 mm/sec)	Range = 0 to 244	122
620-402	EXT. Tail Reg. adj (165.0 mm/sec)	EXT. Tail Reg. adjustment (165.0 mm/sec)	Range = 0 to 244	122
620-403	EXT. Tail Reg. adj (293.3 mm/sec)	EXT. Tail Reg. adjustment (293.3 mm/sec)	Range = 0 to 244	122
620-404	EXT. Tail Reg. adj (220 mm/sec)	EXT. Tail Reg. adjustment (220 mm/sec)	Range = 0 to 244	122
620-405	EXT. Tail Reg. adj (330 mm/sec)	EXT. Tail Reg. adjustment (330 mm/sec)	Range = 0 to 244	122
620-406	EXT. Tail Reg. adj (440 mm/sec)	EXT. Tail Reg. adjustment (440 mm/sec)	Range = 0 to 244	122
620-407	EXT. LE. adj (55.0 mm/sec)	EXT. Lead Edge. adjustment (55.0 mm/sec)	Range = 0 to 244	122
620-408	EXT. LE. adj (73.3 mm/sec)	EXT. Lead Edge. adjustment (73.3 mm/sec)	Range = 0 to 244	122
620-409	EXT. LE. adj (82.5 mm/sec)	EXT. Lead Edge. adjustment (82.5 mm/sec)	Range = 0 to 244	122
620-410	EXT. LE. adj (110.0 mm/sec)	EXT. Lead Edge. adjustment (110.0 mm/sec)	Range = 0 to 244	122
620-411	EXT. LE. adj (146.7 mm/sec)	EXT. Lead Edge. adjustment (146.7 mm/sec)	Range = 0 to 244	122
620-412	EXT. LE. adj (165.0 mm/sec)	EXT. Lead Edge. adjustment (165.0 mm/sec)	Range = 0 to 244	122
620-413	EXT. LE. adj (293.3 mm/sec)	EXT. Lead Edge. adjustment (293.3 mm/sec)	Range = 0 to 244	122
620-414	EXT. LE. adj (220 mm/sec)	EXT. Lead Edge. adjustment (220 mm/sec)	Range = 0 to 244	122
620-415	EXT. LE. adj (330 mm/sec)	EXT. Lead Edge. adjustment (330 mm/sec)	Range = 0 to 244	122

**Table 28 CCS NVM ID 620-400 to 620-496**

NVM ID	NVM Name	NVM Description	Settings	Default
620-416	EXT. LE. adj (440 mm/sec)	EXT. Lead Edge. adjustment (440 mm/sec)	Range = 0 to 244	122
620-417	CVT FS Offset 1p Duplex Side2-1	-	Range = 0 to 240	120
620-418	CVT FS Offset 1p Duplex Side2-2	-	Range = 0 to 240	120
620-419	CVT FS Offset 1p Duplex Side2-3	-	Range = 0 to 240	120
620-420	CVT FS Offset 1p Duplex Side2-4	-	Range = 0 to 240	120
620-421	CVT FS Offset 1p Duplex Side2-5	-	Range = 0 to 240	120
620-422	CVT FS Offset 1p Duplex Side2-6	-	Range = 0 to 240	120
620-423	CVT FS Offset 1p Duplex Side2-7	-	Range = 0 to 240	120
620-424	CVT FS Offset 1p Duplex Side2-8	-	Range = 0 to 240	120
620-425	CVT FS Offset 1p Duplex Side2-9	-	Range = 0 to 240	120
620-426	1p Duplex Center Regi position	-	Range = 0 to 7196	3598
620-427	CIS black level Avg # lines	CIS black level average number of lines	Range = 0 to 3	3
620-428	Target black level auto adjust	Target for black level auto adjust	Range = 0 to 255	16
620-429	Target white level auto adjust	Target for white level auto adjust	Range = 0 to 1023	820
620-430	Digital Offset Level	-	Range = 0 to 1023	512
620-431	Black Level Correction Value	-	Range = 0 to 255	128
620-432	White Level Correction Value	-	Range = 0 to 255	255
620-433	DIPS white level; Avg # lines	DIPS white level; the average number of lines	Range = 0 to 4	4
620-434	white stability adj start point	White stability adjustment start point	Range = 0 to 4095	10
620-435	white stability adj Avg area	White stability adjustment average area	Range = 0 to 255	217
620-436	white stability adj Ref value	White stability adjustment Reference value	Range = 0 to 1023	962
620-437	W-Ref density correction factor	-	Range = 100 to 255	158



Table 28 CCS NVM ID 620-400 to 620-496

NVM ID	NVM Name	NVM Description	Settings	Default
620-438	Fine adj hilit WhiteStability	Fine adjustment factor for highlight at white stability adjustment	Range = 80 to 120	100
620-439	W-Ref den. corr factor set value	W-Ref density correction factor set value	Range = 0 to 255	255
620-440	EXT. Lead Reg. adj (460 mm/sec)	Ext. Lead Reg. adjustment (460 mm/sec)	Range = 0 to 244	122
620-441	EXT. Tail Edge. adj (460 mm/sec)	Ext. Tail Edge. adjustment (460 mm/sec)	Range = 0 to 244	122
620-442	Switching main / sub	-	Range = 0 to 1	1
620-443	Ship Garbage detection Thresh	Shading correction dust detection threshold at shipment	Range = 0 to 5000	500
620-444	EXT Fail bypass	-	Range = 0 to 1	0
620-445	Daimajin Fail bypass	-	Range = 0 to 1	0
620-446	Data on WhiteStability adj fail	Data obtained at white stability adjustment failure	Range = 0 to 1023	1023
620-447	Pre ASIC Through setting 1	-	Range = 0 to 8191	448
620-448	BW-PG density	-	Range = 0 to 255	128
620-449	FS non-detection area 1	-	Range = 0 to 65535	255
620-450	FS non-detection area 3	-	Range = 0 to 65535	255
620-451	SS fixed position	-	Range = 0 to 65535	60
620-452	LIM control for BW COPY	-	Range = 0 to 1	1
620-453	LIM control FAX and binary scan	LIM control for FAX and binary scan	Range = 0 to 1	1
620-454	LIM control for contone scan	-	Range = 0 to 1	1
620-455	AE FS size detection control	-	Range = 0 to 1	0
620-457	TopLimit SS mag corr AE param1	Upper Limit of SS Magnification correction AE Parameter1	Range = 0 to 4000	4000
620-458	ship Thresh of Garbage Detect	Shading correction dust detection threshold in market	Range = 0 to 5000	2000
620-459	Adjusting all Lead Regi at once	-	Range = 0 to 244	122
620-460	Adjusting all Taile Edge at once	-	Range = 0 to 244	122
620-461	Adjusting all FS offset at once	-	Range = 0 to 240	120

Table 28 CCS NVM ID 620-400 to 620-496

NVM ID	NVM Name	NVM Description	Settings	Default
620-462	TP_BW_Copy_F ax Removal lvl AE	Level for BW Copy Fax and binary scan: (print photographic paper copy)	Range = 0 to 4095	0
620-463	TP_BW_Copy_F ax Offset lvl AE	Offset level for BW Copy Fax and binary scan: (print photographic paper copy)	Range = 0 to 4095	273
620-464	TX_BW_Copy_F ax Removal lvl AE	Level for BW Copy Fax and binary scan: (normal pencil)	Range = 0 to 4095	0
620-465	TX_BW_Copy_F ax Offset lvl AE	Offset level for BW Copy Fax and binary scan: (normal pencil)	Range = 0 to 4095	273
620-466	TPL_BW_Copy_F ax Removal lvl AE	Level for BW Copy Fax and binary scan: (pale-color document)	Range = 0 to 4095	0
620-467	TPL_BW_Copy_F ax Offset lvl AE	Offset level for BW Copy Fax and binary scan: (pale-color document)	Range = 0 to 4095	273
620-468	TRP_BW_Copy_F ax Removal lvl AE	Level for BW Copy Fax and binary scan: (tracing paper)	Range = 0 to 4095	0
620-469	TRP_BW_Copy_F ax Offset lvl AE	Offset level for BW Copy Fax and binary scan: (tracing paper)	Range = 0 to 4095	273
620-470	level BW Cont. Scan (TP)	Level for BW Contone Scan (text photo)	Range = 0 to 4095	0
620-471	Off level BW Cont. Scan (TP)	Offset level for BW Contone Scan: (text photo)	Range = 0 to 4095	0
620-472	level BW Cont. Scan (not TP)	Level for BW Contone Scan (other than text photo)	Range = 0 to 4095	0
620-473	Off level BW Cont. Scan (not TP)	Offset level for BW Contone Scan: (other than text photo)	Range = 0 to 4095	0
620-474	EXT Major Version	-	Range = 0 to 65535	0
620-475	EXT Minor Version	-	Range = 0 to 65535	0
620-476	EXT Revision Version	-	Range = 0 to 65535	0
620-477	EXT Patch Version	-	Range = 0 to 65535	0
620-478	Def. ColorBal adj K: low den(2)	Default color balance adjustment level K: low density	Range = 0 to 8	4
620-479	Def. ColorBal adj K: med den(2)	Default color balance adjustment level K: medium density	Range = 0 to 8	4

**Table 28 CCS NVM ID 620-400 to 620-496**

NVM ID	NVM Name	NVM Description	Settings	Default
620-480	Def. ColorBal adj K: hi den(2)	Default color balance adjustment level K: high density	Range = 0 to 8	4
620-481	Photo and Text Recognition level	-	Range = 0 to 4	2
620-482	FS mag Adjust (at CVT scan)	FS Magnification Adjustment (at CVT scan)	Range = 0 to 100	50
620-483	IPS Through Bypass setting 1(B)	-	Range = 0 to 511	0
620-484	BW COPY; text; normal den. adj	BW Copy; text; normal density adjustment	Range = 0 to 256	128
620-485	BWCOPYText-Darker 3 Density-Adjust	BW Copy; text; darker 3 density adjustment	Range = 0 to 256	128
620-486	Scan/FAX; text normal den. adj	Scan/Fax; text normal density adjustment	Range = 0 to 256	128
620-487	Scan/FAX; text darker3 den. adj	Scan/Fax; text darker 3 density adjustment	Range = 0 to 256	128
620-488	SS non-detection band	-	Range = 0 to 65535	0
620-489	SS end position (noise removal)	SS end position (for noise removal)	Range = 0 to 65535	240
620-490	param SS mag corr TopLimit	Parameter SS Magnification correction Upper Limit	Range = 0 to 4000	4000
620-491	dust detect threshold in market	Shading correction dust detection threshold in market	Range = 0 to 5000	500
620-492	ShadingData blackline remove	Selection of Shading data for removing black line	Range = 0 to 1	1
620-493	White Reference ValueAtShipment	White reference value at shipment	Range = 0 to 1000	636
620-494	White-corr multiplier coeff	White correction multiplier coefficient	Range = 0 to 1	0
620-495	Paper dust detection threshold	-	Range = 0 to 10000	150
620-496	VALID starting position	-	Range = 0 to 1000	288

**Table 29 CCS NVM ID 620-500 to 620-587**

NVM ID	NVM Name	NVM Description	Settings	Default
620-522	DADH OpenDuringRunFC	05-300 Fault Counter: SPDH open during run	Range = 0 to 255	0

**Table 29 CCS NVM ID 620-500 to 620-587**

NVM ID	NVM Name	NVM Description	Settings	Default
620-523	DADHLHCovInt-lockOpenDuringRunFC	05-307 Fault Counter: SPDH LH cover interlock opened during run	Range = 0 to 255	0
620-524	DADH Source Doc Too Short FC	05-310 Fault Counter: SPDH Source Doc Too Short For SPDH	Range = 0 to 255	0
620-525	LE late to post feed sensorS5 FC	05-330 Fault Counter: LE late to post feed sensor S5 (mis-feed)	Range = 0 to 255	0
620-526	TE late to post feed sensorS5 FC	05-331 Fault Counter: TE late to post feed sensor S5 (multi-feed)	Range = 0 to 255	0
620-527	LE late to TAR sensor S6 FC	05-335 Fault Counter: LE late to TAR sensor S6	Range = 0 to 255	0
620-528	LE late to Reg. Sensor S7 FC	05-340 Fault Counter: LE late to Reg. Sensor S7	Range = 0 to 255	0
620-529	LE late to Exit sensor S8 FC	05-345 Fault Counter: LE late to Exit sensor S8 (FWD)	Range = 0 to 255	0
620-530	TE late to Exit sensor S8 FC	05-346 Fault Counter: TE late to Exit sensor S8 (FWD)	Range = 0 to 255	0
620-531	LE late to CVT sensor S10 FWD FC	05-350 Fault Counter: LE late to CVT sensor S10 (FWD)	Range = 0 to 255	0
620-532	LE late to CVT sensor S10 REV FC	05-352 Fault Counter: LE late to CVT sensor S10 (REV)	Range = 0 to 255	0
620-533	IIT comm faults	IIT comm faults: Used to count a collection of IIT Comms faults that may occur (Read only)	Range = 0 to 4294967295	0
620-535	Tot. Scanner Jams since power on	Total number of Scanner Jams since activation.	Range = 0 to 65535	0
620-548	KernelCheckSumErrorFC	Fault counter 305-250-00: Kernel Checksum Error	Range = 0 to 255	0
620-549	ApplicationCheckSumErrorFC	Fault counter 305-251-00: Application checksum error	Range = 0 to 255	0
620-550	StepperControllerCommsErrorFC	Fault counter 305-252-00: Stepper Controller Comms Error	Range = 0 to 255	0
620-551	IIT-DADHcommsErrorFC	Fault counter 305-253-00: IIT-SPDH Comms Error	Range = 0 to 255	0
620-552	CommsSequenceErrorFC	Fault counter 305-254-00: Comms Sequence Error	Range = 0 to 255	0

**Table 29 CCS NVM ID 620-500 to 620-587**

NVM ID	NVM Name	NVM Description	Settings	Default
620-553	DADHhotlineErrorFC	Fault counter 305-259-00: SPDH Hotline Error	Range = 0 to 255	0
620-554	DADHnotInStandbyFC	Fault counter 305-260-00: SPDH not in standby	Range = 0 to 255	0
620-556	Num of jobs scanned at 150 x 150	150 x 150 Scanned Lifetime Documents (Read only)	Range = 0 to 4294967295	0
620-586	Dust Detection Threshold	IIT Dust Detection Threshold	Range = 0 to 65535	0
620-587	Dust Detection Level	IIT Dust Detection Level	Range = 0 to 65535	0

**Table 30 CCS NVM ID 621-001 to 641-002**

NVM ID	NVM Name	NVM Description	Settings	Default
621-001	NUP Layout Pattern	-	Range = 0 to 1	0
621-002	Rotation enabled for RE	Determines whether rotation is enabled for reduction/ enlargement.	0 = False 1 = True	1
621-003	Rotation enabled for APS	Determines whether rotation is enabled for APS.	0 = False 1 = True	1
621-004	Signature Layout Changeable	-	Range = 0 to 1	0
621-005	Use New Messaging	-	Range = 0 to 1	1
621-006	Rotation Debug	-	Range = 0 to 1	1
621-009	Previous Market Region	Defines previous market region	0 = USCO 1 = XCL 2 = FX 3 = FXAPO 4 = ACO 5 = RX	0
621-010	Lakes Legacy Scan	-	Range = 0 to 1	1
625-001		NextScanJobID (Read only)	Range = 1 to 199	1
633-001	spuiNeedsToInitNvm	SP UI Needs To Init Nvm	Range = 0 to 1	1
641-001	Internal Image-PrintJobPriority	Internal image print job priority	Range = 1 to 65535	1
641-002	NextTestPattern-JobID	Value of next test pattern job's id (Read only)	Range = 1 to 999	1

**Table 31 CCS NVM ID 648-001 to 648-022**

NVM ID	NVM Name	NVM Description	Settings	Default
648-001	rs422 Configured	Determines whether RS422 is configured.	0=False 1=True	0
648-002	accessory Card Configured	Determines whether accessory card is configured.	0=False 1=True	1
648-003	foreign interface Configured	Determines whether foreign interface is configured.	0=False 1=True	0
648-004	rdt Modem Configured	Determines whether RDT Modem is configured.	0=False 1=True	0
648-005	RS422 (EPSV) Config Mismatch	Fault counter for RS422 configuration mismatch.	Range = 0 to 255	0
648-006	Accessory Card Config Mismatch	Fault counter for accessory card configuration mismatch.	Range = 0 to 255	0
648-007	RDT Config Mismatch Fault	Fault counter for RDT configuration mismatch.	Range = 0 to 255	0
648-008	NC Comm Lost Fault	Fault counter for ESS communication lost fault.	Range = 0 to 255	0
648-009	DC Crash Detected Fault	Fault counter for detection of DC crash on power up.	Range = 0 to 255	0
648-010	UI Comm Lost Fault	Fault counter for UI communication lost fault.	Range = 0 to 255	0
648-011	Power Loss Detected Fault	Fault counter for power loss detected fault.	Range = 0 to 255	0
648-012	DC Platform Install Phase	Defines DC platform's current install phase.	Range = 0 to 4	4
648-013	UI Comms failureFC	Fault counter 303-346-00: UI communication failure.	Range = 0 to 255	0
648-014	NC Comm Dead Fault	Fault counter 303-332-00: ESS communication is down fault.	Range = 0 to 255	0
648-015	DCPMF.SPMGR.PWS	Defines current state of communication to the PWS.	Range = 0 to 10	0
648-016	Machine Phone Number Setup	Defines whether machine phone number has been set up.	0=False 1=True	0
648-017	DC Platform Post Upgrade Phase		Range = 0 to 1	0
648-018	DCPlatformPostUpgradeRetry Cnt	DC Platform Post Upgrade Retry Count	Range = 0 to 255	0
648-021	Controller comm faults	Controller comm faults: Used to count a collection of Controller Comms faults that may occur (Read only)	Range = 0 to 4294967295	0

**Table 31 CCS NVM ID 648-001 to 648-022**

NVM ID	NVM Name	NVM Description	Settings	Default
648-022	UI comm faults	UI comm faults: Used to count a collection of UI Comms faults that may occur (Read only)	Range = 0 to 4294967295	0

**Table 32 CCS NVM ID 649-001 to 649-014**

NVM ID	NVM Name	NVM Description	Settings	Default
649-001	LargePaperCount	Determines whether double count is enabled	0=False 1=True	0
649-002	CancelJobTimer-Value	This specifies the amount of time FI will wait (seconds) before deleting a job when authentication has been removed.	Range = 0 to 900	60
649-003	PreCountDuration	-	Range = 0 to 200	100
649-004	CountDuration	-	Range = 0 to 200	100
649-005	PostCountDuration	-	Range = 0 to 200	100
649-006	ExitDuration	-	Range = 0 to 200	100
649-007	EnableOnInternalCredits	-	Range = 0 to 1	0
649-008	DeviceType	-	Range = 0 to 4	0
649-009	PremiumSelect	-	Range = 0 to 5	0
649-010	CopyRestricted	-	Range = 0 to 1	1
649-011	PrintRestricted	-	Range = 0 to 1	0
649-012	s2fRestricted	-	Range = 0 to 1	0
649-013	EFaxSendRestricted	-	Range = 0 to 1	0
649-014	EFaxReceiveRestricted	-	Range = 0 to 1	0

**Table 33 CCS NVM ID 652-001 to 652-079**

NVM ID	NVM Name	NVM Description	Settings	Default
652-001	User Accounts	User Accounts (Read only)	Range = 0 to 65535	2001
652-002	General Accounts	General Accounts (Read only)	Range = 0 to 65535	501
652-003	Not displayed	Auditron Accounts	Range = 0 to 0	0
652-004	submitPolicy	Submit Policy	Range = 0 to 2	0
652-005	jobMgmtPolicy	Job Mgmt Policy	Range = 0 to 2	1
652-006	authPolicy	Copy Authentication Policy (none, internal, external, EPSV or JBA)	Range = 0 to 8	0

**Table 33 CCS NVM ID 652-001 to 652-079**

NVM ID	NVM Name	NVM Description	Settings	Default
652-007	acctPolicy	Copy Accounting Policy (none, internal, external, EPSV, or JBA)	Range = 0 to 8	0
652-008	invalidAccount-Policy	Invalid Account Policy	Range = 0 to 2	1
652-009	nullAccountPolicy	Null Account Policy	Range = 0 to 2	1
652-010	PrintAuthenticat-ionPolicy	Print Authentication Policy (none, internal, external, EPSV or JBA)	Range = 0 to 8	0
652-011	PrintAccounting-Policy	Print Accounting Policy (none, internal, external, EPSV or JBA)	Range = 0 to 8	0
652-012	InvalidAccount-Policy	Invalid Account Policy	Range = 0 to 2	1
652-013	NullAccountPolicy	Null Account Policy	Range = 0 to 2	1
652-014	ScanToFileAu-thenticationPolicy	Scan to File Authentication Policy (none, internal, external, EPSV or JBA)	Range = 0 to 8	0
652-015	ScanToFileAc-countingPolicy	Scan to File Accounting Policy (none, internal, external, EPSV or JBA)	Range = 0 to 8	0
652-016	ScanToFileIn-ValidPinPolicy	Scan To File Invalid Pin Policy	Range = 0 to 2	1
652-017	ScanTo-FileNullPinPolicy	Scan To File Null Pin Policy	Range = 0 to 2	1
652-018	Auditron - Set Hour	Auditron - Set Hour	Range = 0 to 23	0
652-019	Auditron - Set Minute	Auditron - Set Minute	Range = 0 to 59	0
652-020	Auditron - Set Second	Auditron - Set Second	Range = 0 to 59	0
652-021	Auditron - Set Month	Auditron - Set Month	Range = 0 to 12	1
652-022	Auditron - Set Day	Auditron - Set Day	Range = 0 to 31	1
652-023	Auditron - Set Year	Auditron - Set Year	Range = 70 to 135	70
652-024	Auditron - Wall Clock	Auditron - Wall Clock	Range = 0 to 4294967295	0
652-025	Fax Send Authent-icity Policy	Fax Send Authentication Pol-icy (none, internal, external, EPSV or JBA)	Range = 0 to 8	0
652-026	Fax Send Accounting Policy	Fax Send Accounting Policy (none, internal, external, EPSV or JBA)	Range = 0 to 8	0

**Table 33 CCS NVM ID 652-001 to 652-079**

NVM ID	NVM Name	NVM Description	Settings	Default
652-027	Fax Send Invalid Pin Policy	Fax Send Invalid Pin Policy	Range = 0 to 2	1
652-028	Fax Send Null Pin Policy	Fax Send Null Pin Policy	Range = 0 to 2	1
652-029	Fax Receive Authenticity Policy	Fax Receive Authentication Policy (none, internal, external, EPSV or JBA)	Range = 0 to 8	0
652-030	Fax Receive Accounting Policy	Fax Receive Accounting Policy (none, internal, external, EPSV or JBA)	Range = 0 to 8	0
652-031	Fax Receive Invalid Pin Policy	Fax Receive Invalid Pin Policy	Range = 0 to 2	1
652-032	Fax Receive Null Pin Policy	Fax Receive Null Pin Policy	Range = 0 to 2	1
652-033	CopyActivity	Copy Activity	Range = 0 to 4294967295	0
652-038	HolePunchCount	Hole Punch Count	Range = 0 to 4294967295	0
652-039	StapleCount	Staple Count	Range = 0 to 4294967295	0
652-040	CustomerName	Customer Name	Range = 0 to 4294967295	0
652-041	Monolmpression-Count	Mono Impression Count	Range = 0 to 4294967295	0
652-042	ColourImpres-sionCount	Colour Impression Count	Range = 0 to 1	0
652-043	CopyActivityPen	Copy Activity Pen	Range = 0 to 4	0
652-046	CopyActivityJobIDGenerator	Copy Activity Job ID Generator	Range = 2 to 65535	256
652-049	PermService-SOAValues	Perm Service SOA Values	Range = 0 to 255	1
652-050	PermCreateJob	Perm Create Job	Range = 0 to 255	7
652-051	PermCancelJob	Perm Cancel Job	Range = 0 to 255	23
652-052	PermInterruptJob	Perm Interrupt Job	Range = 0 to 255	3
652-053	PermPauseJob	Perm Pause Job	Range = 0 to 255	3
652-054	PermQueryJob	Perm Query Job	Range = 0 to 255	7
652-055	PermResumeJob	Perm Resume Job	Range = 0 to 255	3
652-056	PermSubmitJob	Perm Submit Job	Range = 0 to 255	7
652-057	PermJobLOAValues	Perm Job LOA Values	Range = 0 to 255	7
652-058	PermJobSOAValues	Perm Job SOA Values	Range = 0 to 255	3
652-059	PermCreateDoc-ument	Perm Create Document	Range = 0 to 255	7

**Table 33 CCS NVM ID 652-001 to 652-079**

NVM ID	NVM Name	NVM Description	Settings	Default
652-060	PermDeleteDocu-ment	Perm Delete Document	Range = 0 to 255	18
652-061	PermDocument-LOAValues	Perm Document LOA Values	Range = 0 to 255	7
652-062	PermDocument-SOAValues	Perm Document SOA Values	Range = 0 to 255	3
652-063	PermProofJob	Perm Proof Job	Range = 0 to 255	7
652-064	PermProofDocu-ment	Perm Proof Document	Range = 0 to 255	7
652-065	PermPromoteJob	Perm Promote Job	Range = 0 to 255	5
652-066	PermHoldJob	Perm Hold Job		3
652-067	PermReleaseJob	Perm Release Job	Range = 0 to 255	35
652-069	Tiered level 1 copy accounting	Tiered level 1 copy	Range = 0 to 1	0
652-070	Tiered level 1 print	Tiered level 1 print accounting	Range = 0 to 1	0
652-071	JBA display restricted	JBA display restricted	Range = 0 to 1	1
652-076	JBA display fields 0	JBA display fields 0	Range = 0 to 1	1
652-077	JBA display fields 1	JBA display fields 1	Range = 0 to 1	1
652-078	JBA display masks 0	JBA Display masks 0	Range = 0 to 1	0
652-079	JBA diplay masks 1	JBA Display masks 1	Range = 0 to 1	0

**Table 34 CCS NVM ID 656-001 to 656-005**

NVM ID	NVM Name	NVM Description	Settings	Default
656-001	Image Disk READ Failure.	Fault counter 319-300-00: Image disk read failure	Range = 0 to 255	0
656-002	Image Disk WRITE Failure.	Fault counter 319-301-00: Image disk write failure	Range = 0 to 255	0
656-003	Image Disk BAD DATA ERROR.	Fault counter 319-302-00: Image disk bad data error	Range = 0 to 255	0
656-004	ImageDiskUna-bleToFormatError.	Fault counter 319-303-00: Image disk unable to format	Range = 0 to 255	0
656-005	Image Disk NoDiskCapacity-Error	Fault counter 319-310-00: Image disk capacity not given at power on	Range = 0 to 255	0

Table 35 CCS NVM ID 658-001 to 658-159

NVM ID	NVM Name	NVM Description	Settings	Default
658-001	TonerEmptyDspLoc	Toner empty display location	Range = 0 to 3	0
658-002	FdRollLife	-	Range = 0 to 200	150
658-003	PDRNNotify	-	Range = 0 to 16	0
658-004	SupplyInfoFlag	Supply Info Flag	0 = UI 1 = Network 2 = Both 3 = Neither	0
658-005	CruMgrDebugPrint	CRU manager debug printouts	0 = False 1 = True	0
658-006	PDRNNotifyProc	PDRN Notify Proc	0 = False 1 = True	0
658-007	FuserReorderMsgTrig	Reorder message displayed (days before End of Life)	Range = 1 to 25	3
658-008	XeroReorderMsgTrig	Reorder message displayed (days before End of Life)	Range = 1 to 25	3
658-009	FuserReorderDspLoc	-	Range = 0 to 3	0
658-010	XeroReorderDspLoc	-	Range = 0 to 3	0
658-011	FuserRepIDspLoc	-	Range = 0 to 3	0
658-012	XeroRepIDspLoc	-	Range = 0 to 3	0
658-013	ColorantReorderMsgTrig XC Market	Stores remaining threshold value to trigger low supplies warning.	Range = 0 to 65535	7
658-014	DADHRollReorderMsgTrig XC Market	Reorder Threshold value for SPDH roller (if CRU) - (US Market Region Setting)	Range = 0 to 65535	10
658-016	ColorantReorderMsgTrig XE Market	Stores remaining threshold value to trigger low supplies warning.	Range = 0 to 65535	3
658-017	DADHRollReorderMsgTrig XE Market	Reorder Threshold value for SPDH roller - (European Market Region Setting)	Range = 0 to 65535	6
658-019	ImageUnitReorderMsgTrig	Reorder Threshold value for Imaging Units	Range = 0 to 65535	5
658-020	FuserReorderMsgTrigger	Reorder Threshold value for Fuser	Range = 0 to 65535	5
658-021	XferRollerReorderMsgTrig	Reorder Threshold value for Transfer Roller	Range = 0 to 65535	5
658-022	XferBeltReorderMsgTrig	Reorder Threshold value for Transfer Belt	Range = 0 to 65535	5

Table 35 CCS NVM ID 658-001 to 658-159

NVM ID	NVM Name	NVM Description	Settings	Default
658-023	DayCounter	Counts the number of days in which a threshold number of impressions have occurred.	Range = 0 to 255	0
658-024	DayUsage	Stores the number of impressions made every day.	Range = 0 to 4294967295	0
658-025	adpvThreshold	Minimum number of impressions to consider the day to be a usage day.	Range = 0 to 65535	20
658-026	ImpressionSnapshot	Total impressions to determine daily usage	Range = 0 to 4294967295	0
658-027	adpv	Average daily volume	Range = 0 to 10000	500
658-028	PagesBlackCRU	Pages per Black Colorant	Range = 0 to 4294967295	26800
658-030	Last ADPV Calc Date	Last ADPV Calc Date	Range = 0 to 4294967295	0
658-031	ReorderMsgTrigPercent	Reorder Threshold value (Percent %) for toner	Range = 0 to 65535	5
658-032	ScanFeedDayCounter	Counts the number of days in which a threshold number of SPDH feeds have occurred.	Range = 0 to 255	0
658-033	ScanFeedDayUsage	Stores the number of scan feeds made every day being counted.	Range = 0 to 4294967295	0
658-034	adsfvThreshold	Minimum number of SPDH feeds to consider the day to be a usage day.	Range = 0 to 65535	5
658-035	DADFFeedsSnapshot	Captured at the end of each day, to be used for comparison to total SPDH feeds to determine daily usage.	Range = 0 to 4294967295	0
658-036	adsfv	Average daily scan feed volume.	Range = 0 to 4294967295	100
658-037	Last ADSFV Calc Date	Last ADSFV Calc Date captured when ADSFV is calculated (Read only).	Range = 0 to 4294967295	0
658-038	ScanFeedUsageCalcDuration	This determines how often the ADSFV calculation is refreshed.	Range = 1 to 255	10
658-039	MarkUsageCalcDuration	This determines how often the ADPV calculation is refreshed.	Range = 1 to 255	5
658-040	ScanFeedUsageCalcFrequency	This determines how often ADSFV is calculated.	1 = Calculate daily	1
658-041	MarkUsageCalcFrequency	This determines how often ADPV is calculated.	1 = Calculate daily	1
658-042	LowInkMsgTrigPercent	Low Ink threshold value (Percent %) for Ink warning.	Range = 0 to 255	10

Table 35 CCS NVM ID 658-001 to 658-159

NVM ID	NVM Name	NVM Description	Settings	Default
658-043	day1MarkVolume	ADPV Day 1: Number of impressions made in day 1 of the adpv duration.	Range = 0 to 10000	1000
658-044	day2MarkVolume	ADPV Day 2: Number of impressions made in day 2 of the adpv duration.	Range = 0 to 10000	1000
658-045	day3MarkVolume	ADPV Day 3: Number of impressions made in day 3 of the adpv duration.	Range = 0 to 10000	1000
658-046	day4MarkVolume	ADPV Day 4: Number of impressions made in day 4 of the adpv duration.	Range = 0 to 10000	1000
658-047	day5MarkVolume	ADPV Day 5: Number of impressions made in day 5 of the adpv duration.	Range = 0 to 10000	1000
658-048	day6MarkVolume	ADPV Day 6: Number of impressions made in day 6 of the adpv duration .	Range = 0 to 10000	1000
658-049	day7MarkVolume	ADPV Day 7: Number of impressions made in day 7 of the adpv duration.	Range = 0 to 10000	1000
658-050	day8MarkVolume	ADPV Day 8: Number of impressions made in day 8 of the adpv duration.	Range = 0 to 10000	1000
658-051	day9MarkVolume	ADPV Day 9: Number of impressions made in day 9 of the adpv duration.	Range = 0 to 10000	1000
658-052	day10MarkVolume	ADPV Day 10: Number of impressions made in day 10 of the adpv duration.	Range = 0 to 10000	1000
658-053	day1ScanFeedVolume	ADSFV Day 1: Number of impressions made in day 1 of the adsfv duration.	Range = 0 to 10000	100
658-054	day2ScanFeedVolume	ADSFV Day 2: Number of impressions made in day 2 of the adsfv duration.	Range = 0 to 10000	100
658-055	day3ScanFeedVolume	ADSFV Day 3: Number of impressions made in day 3 of the adsfv duration.	Range = 0 to 10000	100
658-056	day4ScanFeedVolume	ADSFV Day 4: Number of impressions made in day 4 of the adsfv duration.	Range = 0 to 10000	100
658-057	day5ScanFeedVolume	ADSFV Day 5: Number of impressions made in day 5 of the adsfv duration.	Range = 0 to 10000	100

Table 35 CCS NVM ID 658-001 to 658-159

NVM ID	NVM Name	NVM Description	Settings	Default
658-058	day6ScanFeedVolume	ADSFV Day 6: Number of impressions made in day 6 of the adsfv duration.	Range = 0 to 10000	100
658-059	day7ScanFeedVolume	ADSFV Day 7: Number of impressions made in day 7 of the adsfv duration.	Range = 0 to 10000	100
658-060	day8ScanFeedVolume	ADSFV Day 8: Number of impressions made in day 8 of the adsfv duration.	Range = 0 to 10000	100
658-061	day9ScanFeedVolume	ADSFV Day 9: Number of impressions made in day 9 of the adsfv duration.	Range = 0 to 10000	100
658-062	day10ScanFeedVolume	ADSFV Day 10: Number of impressions made in day 10 of the adsfv duration.	Range = 0 to 10000	100
658-063	Not displayed	Current K Toner Cartridge Total Area Coverage	Range = 0 to 0	0
658-077	DrumReorderMsgTrig XC Market	Reorder Threshold value (Days) for Drum Cartridges (US Market Region)	Range = 0 to 65535	10
658-078	DrumReorderMsgTrig XE Market	Reorder Threshold value (Days) for Drum Cartridges (European Market Region Setting)	Range = 0 to 65535	6
658-086	FuserReorderMsgTrig XC Market	Reorder threshold value (days) for Fuser Unit (US Market Region Setting)	Range = 0 to 65535	0
658-087	FuserReorderMsgTrig XE Market	Reorder threshold value (days) for Fuser Unit (European Market Region Setting)	Range = 0 to 65535	0
658-088	XeroReorderMsgTrig XC Market	Reorder threshold value (days) for Xerographic Unit (US Market Region Setting)	Range = 0 to 65535	7
658-089	XeroReorderMsgTrig XE Market	Reorder threshold value (days) for Xerographic Unit (European Market Region Setting)	Range = 0 to 65535	3
658-090	TonerKReorderMsgSuppressed	Toner reorder latch	Range = 0 to 1	0
658-091	TonerKReorderMsgSuppressed	Toner reorder message suppression on local UI	Range = 0 to 1	0
658-092	TonerAveragePercentPerDay	Toner CRU Average Daily Dispense percent (Toner Average-PercentPerDay)	Range = 0 to 100	2

**Table 35 CCS NVM ID 658-001 to 658-159**

NVM ID	NVM Name	NVM Description	Settings	Default
658-093	TonerKFilterConstant	Toner CRU Filter Constant Defines the level of adjustment for each cycle	Range = 0 to 65535	20
658-094	TonerKDailyDispenseLowLimit	Toner CRU Daily Dispense Time Lower Limit in ms.	Range = 0 to 4294967295	0
658-095	TonerKDailyDispenseHiLimit	Toner CRU Daily Dispense Time Upper Limit in ms.	Range = 0 to 4294967295	150000
658-096	TonerKLastCumDispenseTime	Toner CRU Previous Cumulative Dispense Time	Range = 0 to 4294967295	0
658-097	TonerKLastCumDispenseTime-Date	Toner CRU date/time of last Cumulative Dispense Time calculation (wall clock)	Range = 0 to 4294967295	0
658-098	AutoCleaning-Interval	Charge Scorotron Auto Cleaning interval. Frequency in k sheets for when an Auto Scorotron cleaning request is displayed.	Range = 2 to 50	20
658-099	NumImagesDelivered	Number of images delivered	Range = 0 to 4294967295	0
658-100	FuserKReorderMsgLatched	FRU CRU reorder latch	Range = 0 to 1	0
658-101	FuserKReorderMsgSuppressed	FRU CRU reorder message suppression on local UI	Range = 0 to 1	0
658-108	FuserKAvDailyWebCount	FRU CRU Average Daily Web Count	Range = 0 to 4294967295	1000
658-109	FuserKFilterConstant	FRU CRU Web Count Filter Constant Defines the level of adjustment for each cycle	Range = 0 to 65535	20
658-110	FuserKDailyWebLowLimit	FRU CRU Web Count Daily Usage Lower Limit	Range = 0 to 4294967295	20
658-111	FuserKDailyWebHiLimit	FRU CRU Web Count Daily Usage Upper Limit	Range = 0 to 4294967295	150000
658-112	FuserKLastWebCount	FRU CRU Previous Cumulative Web Count	Range = 0 to 4294967295	0
658-113	TonerLastAPPD-Date	Toner CRU date/time of when toner AveragePercentPerDay last calculated	Range = 0 to 4294967295	0
658-114	XruReorderMsgLatched	XRU CRU reorder latch	Range = 0 to 1	0
658-115	XruReorderMsg-Suppressed	XRU CRU reorder message suppression on local UI	Range = 0 to 1	0
658-122	XruAvDailyCycleCount	XRU CRU Average Daily Cycle Count	Range = 0 to 4294967295	2000
658-123	XruCycleFilter-Constant	XRU CRU Daily Cycle Count Lower Limit	Range = 0 to 65535	20

**Table 35 CCS NVM ID 658-001 to 658-159**

NVM ID	NVM Name	NVM Description	Settings	Default
658-124	XruDailyCycleLowLimit	XRU CRU Daily Cycle Count Lower Limit	Range = 0 to 4294967295	20
658-125	XruDailyCycle-HiLimit	XRU CRU Daily Cycle Count Upper Limit	Range = 0 to 4294967295	250000
658-126	XruLastCycleCount	XRU CRU Last Cumulative Usage Count	Range = 0 to 4294967295	0
658-127	XruLastCycleCountDate	XRU CRU date/time of saving Last Cumulative Cycle Count (wall clock)	Range = 0 to 4294967295	0
658-150	WasteReorderMsgLatched	Waste Toner CRU reorder latch	Range = 0 to 1	0
658-151	WasteReorderAcknowledge	Waste Toner CRU reorder acknowledged	Range = 0 to 1	0
658-152	TonerCRULastDispenseTime	Toner CRU Last Cumulative Dispense Time for replacement	Range = 0 to 4294967295	700
658-153	Toner-CRUCDTRE-plamcentThreshold	Toner CRU Cumulative Dispense Time replacement threshold	Range = 0 to 4294967295	6000
658-158	BTRreorderTrigUS	Reorder Threshold value for Bias Transfer Roller (US Market region)	Range = 0 to 20	0
658-159	BTRreorder-TrigEUR	Reorder Threshold value for Bias Transfer Roller (European Market region)	Range = 0 to 20	0
658-165	I2cCRUMBusErrorFaultCountFC	Fault Counter 41-001	Range = 0 to 255	0

**Table 36 CCS NVM ID 665-001 to 665-003**

NVM ID	NVM Name	NVM Description	Settings	Default
665-001	Out Of Resource Policy	Specify what JBA should do when it runs out of space.	Range = 0 to 1	0
665-002	Comm Failed Policy	Specify what JBA should do if it can't communicate with the ESS.	Range = 0 to 2	0
665-003	EAS Validation Enable	Specify if JBA should Authorize logins and submit jobs with the ESS.	Range = 0 to 1	1



**Table 37 CCS NVM ID 671-001 to 671-018**

NVM ID	NVM Name	NVM Description	Settings	Default
671-001	EFaxSendJobPriority	EFax Send Job Priority	Range = 0 to 4294967295	700
671-004	EMBFAX-SENDTransmitImagesDisplay	EMB Fax Send Transmit Images Displayable	Range = 0 to 1	1
671-011	SendShortJobRecoveryWaitTime	Send Short Job Recovery Wait Time	Range = 1 to 255	5
671-012	SendJobRecoverySendRespTimeout	Send Job Recovery Send Response Timeout	Range = 1 to 255	120
671-013	SendJobRecoveryWaitTime	Send Job Recovery Wait Time	Range = 1 to 255	120
671-014	SendJobRecoveryImageRespTimeout	Send Job Recovery Image Response Timeout	Range = 1 to 255	120
671-015	SendJobRecoveryComplQUpdateTimeout	Send Job Recovery Completed Q Update Timeout	Range = 1 to 255	120
671-016	SendJobRecoveryCreateJobTimeout	Send Job Recovery Create Job Timeout	Range = 1 to 255	3
671-017	SendLowFaxMemoryWaitTime	Send Low Fax Memory Wait Time	Range = 1 to 255	20
671-018	SendJobRecoveryRetryCounter	Send Job Recovery Retry Counter	Range = 1 to 255	3

**Table 38 CCS NVM ID 672-001 to 672-017**

NVM ID	NVM Name	NVM Description	Settings	Default
672-001	EFaxReceiveJobPriority	EFax Receive Job Priority	Range = 1 to 4294967295	3
672-004	EMBFAXRE-CEIVESheetsDisplayable	EMB Fax Receive Sheets Displayable	Range = 0 to 1	0
672-005	Not displayed	EMB Fax Receive Duplex Sheets	Range = 0 to 16777215	0
672-006	EFaxRecPlexSheetsDisplayable	EMB Fax Receive Duplex Sheets Displayable	Range = 0 to 1	0
672-007	Not displayed	EMB Fax Receive Large Sheets	Range = 0 to 16777215	0

**Table 38 CCS NVM ID 672-001 to 672-017**

NVM ID	NVM Name	NVM Description	Settings	Default
672-008	EMBFAXRE-CEIVE-LargeSheetsDisplay	EMB Fax Receive Large Sheets Displayable	Range = 0 to 1	0
672-013	Emb Fax Rec Marked Images Disp	EMB Fax Receive Marked Images Displayable	Range = 0 to 1	1
672-014	NextImageTimeOut	Next Image TimeOut	Range = 100 to 1000	300
672-016	EFPrintCompletedJob Log Location	EF Print Completed Job Log Location	Range = 0 to 70	0
672-017	EF Card Disturbance Timeout	EF Card Disturbance Timeout	Range = 1 to 255	12

**Table 39 CCS NVM ID 673-001 to 673-023**

NVM ID	NVM Name	NVM Description	Settings	Default
673-001	Postpone fax install	Postpone fax install	Range = 0 to 1	0
673-002	EmbeddedFaxBasic Previous State	Indication of whether the Fax Card was detected at previous powerup.	0 = Not present 1 = Present and configured 2 = Present but not yet configured	0
673-003	EmbeddedFaxExtendedPrevious State Not displayed	Embedded Fax Extended Previous State	Range = 0 to 2	0
673-005	Basic FAX Not Detected Fault	Fault counter 303-401-00: Basic fax not detected	Range = 0 to 255	0
673-006	Fax Phonebook Download Fault	Fault counter 320-701-00: Fax phonebook download failed	Range = 0 to 255	0
673-007	Extended FAX Not Detected Fault	Fault counter 303-403-00: Extended fax not detected	Range = 0 to 255	0
673-008	Fax Unexpected Reset Fault	Fault counter 320-302-00: Unexpected reset	Range = 0 to 255	0
673-009	Fax BasicCardUnrecoverable Fault	Fault counter 320-303-00: Fax Basic Card Unrecoverable Fault	Range = 0 to 255	0
673-010	Fax Sys Low Mem Unrecoverable Fault	Fault counter 320-305-00: Fax System Low Memory Unrecoverable Fault	Range = 0 to 255	0

**Table 39 CCS NVM ID 673-001 to 673-023**

NVM ID	NVM Name	NVM Description	Settings	Default
673-011	Fax Not Cleared By Reset Fault	Fault counter 320-320-00: Fax card not cleared by rese	Range = 0 to 255	0
673-012	Fax Basic Card Failed Fault	Fault counter 320-341-00: Basic fax card failed	Range = 0 to 255	0
673-013	Fax Extended Card Failed Fault	Fault counter 320-327-00: Extended fax card failed	Range = 0 to 255	0
673-014	Fax NV Device Not Present Fault	Fault counter 320-322-00: Fax NVM Not Present	Range = 0 to 255	0
673-015	Fax System Low Mem Recover Fault	Fax System Low Memory Recoverable Fault	Range = 0 to 255	0
673-016	Fax Out Of File Memory Fault	Fault counter 320-324-00: Fax Out of File Memory Fault	Range = 0 to 255	0
673-017	Fax File Integrity Fault	Fault counter 320-342-00: Fax - Error access file on NV	Range = 0 to 255	0
673-018	Fax Network Line 1 Fault	Fault counter 320-331-00: Fax - No Comms via PSTN Line 1	Range = 0 to 255	0
673-019	Fax Network Line 2 Fault	Fault counter 320-332-00: Fax - No Comms via PSTN Line 2	Range = 0 to 255	0
673-020	Fax Port 1 Fault	Fault counter 320-339-00: Fax Port 1 fault	Range = 0 to 255	0
673-021	Fax Port 2 Fault	Fault counter 320-340-00: Fax Port 2 fault	Range = 0 to 255	0
673-023	Fax comm faults	Used to count a collection of Fax Comms faults that may occur (Read only)	Range = 0 to 4294967295	0

**Table 40 CCS NVM ID 674-001 to 674-004**

NVM ID	NVM Name	NVM Description	Settings	Default
674-001	LastXferImageServiceId	Efax recovery last image service ID (Read only)	Range = 0 to 65535	0
674-002	LastXferImageJobId	Efax recovery last image job ID (Read only)	Range = 0 to 65535	0
674-003	LastXferImageDocId	Efax recovery last image doc ID (Read only)	Range = 0 to 65535	0
674-004	LastXferImageImageId	Efax recovery last image image ID (Read only)	Range = 0 to 65535	0

**Table 41 Finisher NVM ID 712-100 to 712-103**

NVM ID	NVM Name	NVM Description	Settings	Default
712-100	BMStaplePos	Used to adjust the LVF BM staple position relative to the center of the sheet(s)	0.1mm/step Range = 0 to 400	200
712-101	BMFoldPos	Used to adjust the LVF BM fold position relative to the center of the sheet(s)	0.1mm/step Range = 0 to 400	200
712-102	BMLateralAnvil-PosFront	Used to adjust the LVF BM staple head anvil cross process position relative to the staple head	0.2666mm/step Range = 0 to 20	10
712-103	BMLateralAnvil-PosRear	Used to adjust the LVF BM staple head anvil cross process position relative to the staple head	0.2666mm/step Range = 0 to 20	10

**Table 42 IIT NVM ID 801-001 to 801-214**

NVM ID	NVM Name	NVM Description	Settings	Default
801-001	DADH Centre Reg Side 1	SPDH centre registration side 1	Pixels Range = 3609 to 3965	3787
801-002	DADH LE Reg Side 1	SPDH lead edge registration side 1	Scan Lines Range = 0 to 150	0
801-003	Platen Top Edge Reg	Platen top edge registration	Pixels Range = 0 to 500	278
801-004	Platen Lead Edge Reg	Platen LE registration	Scan Lines Range = 0 to 150	0
801-005	Cal Strip Posn	Calibration strip position (0.1 mm)	0.1 mm increments Range = 0 to 2715	252
801-006	Test A Posn	Test A position	0.1 mm increments Range = 0 to 4923	1000
801-007	Test B Posn	Test B position	0.1 mm increments Range = 0 to 4923	1500
801-008	Test C Posn	Test C position	0.1 mm increments Range = 0 to 4923	2000
801-010	AGC Enable Side 1	AGC enable side 1	1 = Enable 0 = Disable Range = 0 to 1	1
801-011	DarkSetPoint Side 1	Dark set point side 1	Grey Level in whole number Range = 0 to 50	0
801-012	Scanner CVT position	Scan CVT position	0.1 mm increments Range 0 to 32	12

Table 42 IIT NVM ID 801-001 to 801-214

NVM ID	NVM Name	NVM Description	Settings	Default
801-013	Scanner Doc Size Pos	Doc size position	0.1 mm increments Range = 0 to 2715	417
801-014	Scan LE Hotline	Scan LE hot line	0.1 mm increments Range = 0 to 327	307
801-015	Mono Set Point Side 1	Mono set point side 1	Grey Level in whole number Range = 170 to 255	224
801-016	Red Set Point Side 1	Red set point side 1	Grey Level in whole number Range = 170 to 255	223
801-017	Green Set Point Side 1	Green set point side 1	Grey Level in whole number Range = 170 to 255	224
801-018	Blue Set Point Side 1	Blue set point side 1	Grey Level in whole number Range = 170 to 255	230
801-020	CvtWhiteRef-Mono Side 1	CVT White Ref Mono Side 1	0 corresponds to 50% compensation, 150 corresponds to no compensation and 300 corresponds to 200% compensation. Range = 128 to 512	296
801-021	CvtWhiteRefRed Side 1	CVT White Ref Red Side 1	0 corresponds to 50% compensation, 150 corresponds to no compensation and 300 corresponds to 200% compensation. Range = 128 to 512	304

Table 42 IIT NVM ID 801-001 to 801-214

NVM ID	NVM Name	NVM Description	Settings	Default
801-022	CvtWhiteRef-Green Side 1	CVT White Ref Green Side 1	0 corresponds to 50% compensation, 150 corresponds to no compensation and 300 corresponds to 200% compensation. Range = 128 to 512	301
801-023	CvtWhiteRefBlue Side 1	CVT White Ref Blue Side 1	0 corresponds to 50% compensation, 150 corresponds to no compensation and 300 corresponds to 200% compensation. Range = 128 to 512	290
801-027	DADH / Platen Configuration	SPDH / platen configuration	0 = SPDH / Platen present 1 = Platen only Range = 0 to 1	0
801-046	PlatenMechMag	Platen Mech Mag	Range = 0 to 1	0
801-047	CVT Mech Mag	CVT Mech Mag side 1	Range = 0 to 1	0
801-058	Service Plan mirror	Service plan - CCS NVM mirrored value. (Read only). Refer to CCS 606-269	0 = Sold 1 = Non Sold 2 = Third Party 3 = XeroxManagedSupplies 4 = PagePack 5 = DMO Sold	3
801-059	Market Region mirror	Market Region - CCS NVM mirrored value. (Read only). Refer to CCS 616-001	0 = US 1 = XCL(Canada) 2 = FX (Fuji Xerox Japan) 3 = FXAPO (Fuji Xerox Asian Pacific) 4 = ACO(Latin) 5 = RX(Europe) 6 = MRDmoEast 7 = MRDmoWest	0
801-061	Machine Speed mirror	Machine Speed - CCS NVM mirrored value. (Read only). Refer to CCS 616-003	Machine speed (Nominal ppm, not actual) Range = 0 to 255	255

Table 42 IIT NVM ID 801-001 to 801-214

NVM ID	NVM Name	NVM Description	Settings	Default
801-062	Serial Number mirror 1_2	Machine Serial number - CCS NVM mirrored value. (Read only). Refer to CCS 616-023	Range = 0 to 65535	12336
801-063	Serial Number mirror 3_4	Machine Serial number - CCS NVM mirrored value. (Read only). Refer to CCS 616-023	Range = 0 to 65535	12336
801-064	Serial Number mirror 5_6	Machine Serial number - CCS NVM mirrored value. (Read only). Refer to CCS 616-023	Range = 0 to 65535	12336
801-065	Serial Number mirror 7_8	Machine Serial number - CCS NVM mirrored value. (Read only). Refer to CCS 616-023	Range = 0 to 65535	12336
801-066	Serial Number mirror 9_10	Machine Serial number - CCS NVM mirrored value. (Read only). Refer to CCS 616-023	Range = 0 to 65535	12336
801-067	Platen speed Adjustment 0.1%	Platen speed Adjustment 0.1%	Range = 900 to 1100	1000
801-068	Mag Compensation Side 1	Mag Compensation 0.01% steps	Range = 0 to 200	100
801-069	Mag Compensation Side 2	Mag Compensation 0.01% steps	Range = 0 to 200	100
801-070	Overscan for DADH	Overscan for SPDH in all directions	Range = 0 to 4	0
801-071	PWM % light multiplier Side 1	55 Pwm Light Multiplier for increasing / decreasing the pwm % 2 decimal place	Range = 0 to 255	150
801-073	Autolnit_IIT_S1_Version	The version of the side 1 NVM that will cause an side 1 NVM initialisation if different from the version held in the current SW set	Increment to cause an IIT NVM initialisation after SW upgrade. Range = 0 to 65535	25
801-074	Calibration Control Side 1	Bit mask that controls when calibration is performed on side 1	Range = 0 to 65535	0
801-079	AgcStartPixel Side 1	AGC Start Pixel Side 1	Indicates the start pixel number. Range = 10 to 100	10
801-080	ScannerPaper-Code	Scanner Paper Code	Range = 1 to 10	5

Table 42 IIT NVM ID 801-001 to 801-214

NVM ID	NVM Name	NVM Description	Settings	Default
801-081	PlatenWhiteRefRed	Platen White Ref Red	Range = 128 to 512	260
801-082	PlatenWhiteRefGreen	Platen White Ref Green	Range = 128 to 512	262
801-083	PlatenWhiteRefBlue	Platen White Ref Blue	Range = 128 to 512	260
801-084	PlatenWhiteRefMono	Platen White Ref Mono	Range = 128 to 512	262
801-093	FpgaGainSide1Register1	FPGA Gain Side 1 Register 1	Range = 70 to 170	100
801-094	FpgaGainSide1Register2	FPGA Gain Side 1 Register 2	Range = 70 to 170	100
801-095	FpgaGainSide1Register3	FPGA Gain Side 1 Register 3	Range = 70 to 170	100
801-096	FpgaGainSide1Register4	FPGA Gain Side 1 Register 4	Range = 70 to 170	100
801-097	FpgaGainSide1Register5	FPGA Gain Side 1 Register 5	Range = 70 to 170	100
801-098	FpgaGainSide1Register6	FPGA Gain Side 1 Register 6	Range = 70 to 170	100
801-099	FpgaGainSide1Register7	FPGA Gain Side 1 Register 7	Range = 70 to 170	100
801-100	FpgaGainSide1Register8	FPGA Gain Side 1 Register 8	Range = 70 to 170	100
801-101	FpgaGainSide1Register9	FPGA Gain Side 1 Register 9	Range = 70 to 170	100
801-102	FpgaGainSide1Register10	FPGA Gain Side 1 Register 10	Range = 70 to 170	100
801-103	FpgaGainSide1Register11	FPGA Gain Side 1 Register 11	Range = 70 to 170	100
801-104	FpgaGainSide1Register12	FPGA Gain Side 1 Register 12	Range = 70 to 170	100
801-105	FpgaGainSide1Register13	FPGA Gain Side 1 Register 13	Range = 70 to 170	100
801-106	FpgaGainSide1Register14	FPGA Gain Side 1 Register 14	Range = 70 to 170	100
801-107	FpgaGainSide1Register15	FPGA Gain Side 1 Register 15	Range = 70 to 170	100
801-108	FpgaGainSide1Register16	FPGA Gain Side 1 Register 16	Range = 70 to 170	100
801-109	FpgaGainSide1Register17	FPGA Gain Side 1 Register 17	Range = 70 to 170	100
801-110	FpgaGainSide1Register18	FPGA Gain Side 1 Register 18	Range = 70 to 170	100

**Table 42 IIT NVM ID 801-001 to 801-214**

NVM ID	NVM Name	NVM Description	Settings	Default
801-111	FpgaGainSide1Register19	FPGA Gain Side 1 Register 19	Range = 70 to 170	100
801-112	FpgaGainSide1Register20	FPGA Gain Side 1 Register 20	Range = 70 to 170	100
801-113	WhiteRefTarget-PlatRed	White Ref Target Plat Red	Range = 0 to 255	238
801-114	WhiteRefTarget-PlatGreen	White Ref Target Plat Green	Range = 0 to 255	238
801-115	WhiteRefTarget-PlatBlue	White Ref Target Plat Blue	Range = 0 to 255	238
801-116	WhiteRefTarget-PlatMono	White Ref Target Plat Mono	Range = 0 to 255	238
801-117	WhiteRefTargetCvtRed Side 1	White Ref Target CVT Red Side 1	Range = 0 to 255	238
801-118	WhiteRefTargetCvtGreen Side 1	White Ref Target CVT Green Side 1	Range = 0 to 255	238
801-119	WhiteRefTargetCvtBlue Side 1	WhiteRef Target CVT Blue Side 1	Range = 0 to 255	238
801-120	WhiteRefTargetCvtMono Side 1	White Ref Target CVT Mono Side 1	Range = 0 to 255	238
801-121	Mag Adjust Control	Mag Adjust Control	Range = 0 to 6	0
801-137	LED cal correction factor Side 1	LED cal correction factor Side 1	Range = 0 to 4	3
801-138	dc2006 BEcoefficient 0 Side 1	dc2006 BEcoefficient 0 Side 1	Range = 0 to 2047	512
801-139	dc2006 BEcoefficient 0 Side 1	dc2006 BEcoefficient 1 Side 1	Range = 0 to 2047	0
801-140	dc2006 BEcoefficient 0 Side 1	dc2006 BEcoefficient 2 Side 1	Range = 0 to 2047	0
801-141	dc2006 BEcoefficient 0 Side 1	dc2006 BEcoefficient 3 Side 1	Range = 0 to 2047	0
801-142	dc2006 BEcoefficient 0 Side 1	dc2006 BEcoefficient 4 Side 1	Range = 0 to 2047	512
801-143	dc2006 BEcoefficient 0 Side 1	dc2006 BEcoefficient 5 Side 1	Range = 0 to 2047	0
801-144	dc2006 BEcoefficient 0 Side 1	dc2006 BEcoefficient 6 Side 1	Range = 0 to 2047	0
801-145	dc2006 BEcoefficient 0 Side 1	dc2006 BEcoefficient 7 Side 1	Range = 0 to 2047	0
801-146	dc2006 BEcoefficient 0 Side 1	dc2006 BEcoefficient 8 Side 1	Range = 0 to 2047	512

**Table 42 IIT NVM ID 801-001 to 801-214**

NVM ID	NVM Name	NVM Description	Settings	Default
801-149	No of Platen Cal Fail Retries	Number of Platen Cal Fail Retries	Range = 0 to 5	2
801-208	Detect Paper Size 2	Detect Paper Size 2	0 = A5 1 = 8.5 x 5.5 2 = Auto Media Size Group Set	2
801-211	Test Pattern Doc Count	Test Pattern Doc Count	Range = 0 to 65535	0
801-213	TotalS1Nvm	Total number of S1 and S2 NVMs for this build	Range = 0 to 65535	69
801-214	IITTableVersion	IIT NVM Table version used to generate the code (read only)	Range = 0 to 65535	1063

**Table 43 IIT NVM ID 803-001 to 803-213**

NVM ID	NVM Name	NVM Description	Settings	Default
803-001	DADH Centre Reg Side 2	SPDH centre registration side 2	Pixels Range = 3543 to 3899	3721
803-002	DADH LE Reg Side 2	SPDH lead edge registration side 2	Scan Lines Range = 0 to 150	0
803-010	AGC Enable Side 2	AGC enable side 2	1 = Enable 0 = Disable Range = 0 to 1	1
803-011	DarkSetPoint Side 2	Dark set point side 2	Grey Level in whole number Range = 0 to 50	0
803-015	Mono Set Point Side 2	Mono set point side 2	Grey Level in whole number Range = 170 to 255	224
803-016	Red Set Point Side 2	Red set point side 2	Grey Level in whole number Range = 170 to 255	223
803-017	Green Set Point Side 2	Green set point side 2	Grey Level in whole number Range = 170 to 255	224
803-018	Blue Set Point Side 2	Blue set point side 2	Grey Level in whole number Range = 170 to 255	230

Table 43 IIT NVM ID 803-001 to 803-213

NVM ID	NVM Name	NVM Description	Settings	Default
803-020	CvtWhiteRef-Mono Side 2	CVT White Ref Mono Side 2	0 corresponds to 50% compensation, 150 corresponds to no compensation and 300 corresponds to 200% compensation. Range = 128 to 512	294
803-021	CvtWhiteRefRed Side 2	CVT White Ref Red Side 2	0 corresponds to 50% compensation, 150 corresponds to no compensation and 300 corresponds to 200% compensation. Range = 128 to 512	295
803-022	CvtWhiteRef-Green Side 2	CVT White Ref Green Side 2	0 corresponds to 50% compensation, 150 corresponds to no compensation and 300 corresponds to 200% compensation. Range = 128 to 512	295
803-023	CvtWhiteRefBlue Side 2	CVT White Ref Blue Side 2	0 corresponds to 50% compensation, 150 corresponds to no compensation and 300 corresponds to 200% compensation. Range = 128 to 512	286
803-027	DocHandlerConfiguration	SPDH / Platen configuration	Range = 0 to 1	0
803-047	CVT Mech Mag Side 2	CVT Mech Mag Side 2	Range = 0 to 1	0
803-071	PWM % light multiplier Side 2	55 Pwm Light Multiplier for increasing / decreasing the pwm % 2 decimal place	Range = 0 to 255	150

Table 43 IIT NVM ID 803-001 to 803-213

NVM ID	NVM Name	NVM Description	Settings	Default
803-073	Autolnit_IIT_S1_Version	The version of the side 2 NVM that will cause a side 2 NVM initialisation if different from the version held in the current SW set	Increment to cause an IIT NVM initialisation after SW upgrade. Range = 0 to 65535	16
803-074	Calibration Control Side 2	Bit mask that controls when calibration is performed on side 2	Range = 0 to 65535	0
803-075	Mag Compensation 300 Side 2	Mag Compensation 0.01% steps Side 2	Side 2 Mag Compensation 0.01% (0 = -1% 200 = +1%) Range = 0 to 200	100
803-076	Mag Compensation 560 Side 2	Mag Compensation 0.01% steps Side 2	Side 2 Mag Compensation 0.01% (0 = -1% 200 = +1%) Range = 0 to 200	100
803-077	Mag Compensation 150 Side 2	Mag Compensation 0.01% steps Side 2	Side 2 Mag Compensation 0.01% (0 = -1% 200 = +1%) Range = 0 to 200	100
803-078	Mag Compensation 280 Side 2	Mag Compensation 0.01% steps Side 2	Side 2 Mag Compensation 0.01% (0 = -1% 200 = +1%) Range = 0 to 200	100
803-079	AgcStartPixel Side 2	AGC Start Pixel Side 2	Indicates the start pixel number. Range = 10 to 200	10
803-113	FpgaGainSide1Register1	FPGA Gain Side 2 Register 1	Range = 70 to 170	100
803-114	FpgaGainSide1Register2	FPGA Gain Side 2 Register 2	Range = 70 to 170	100
803-115	FpgaGainSide1Register3	FPGA Gain Side 2 Register 3	Range = 70 to 170	100
803-116	FpgaGainSide1Register4	FPGA Gain Side 2 Register 4	Range = 70 to 170	100
803-117	FpgaGainSide1Register5	FPGA Gain Side 2 Register 5	Range = 70 to 170	100
803-118	FpgaGainSide1Register6	FPGA Gain Side 2 Register 6	Range = 70 to 170	100
803-119	FpgaGainSide1Register7	FPGA Gain Side 2 Register 7	Range = 70 to 170	100
803-120	FpgaGainSide1Register8	FPGA Gain Side 2 Register 8	Range = 70 to 170	100
803-121	FpgaGainSide1Register9	FPGA Gain Side 2 Register 9	Range = 70 to 170	100

**Table 43 IIT NVM ID 803-001 to 803-213**

NVM ID	NVM Name	NVM Description	Settings	Default
803-122	FpgaGainSide1Register10	FPGA Gain Side 2 Register 10	Range = 70 to 170	100
803-123	FpgaGainSide1Register11	FPGA Gain Side 2 Register 11	Range = 70 to 170	100
803-124	FpgaGainSide1Register12	FPGA Gain Side 2 Register 12	Range = 70 to 170	100
803-125	FpgaGainSide1Register13	FPGA Gain Side 2 Register 13	Range = 70 to 170	100
803-126	FpgaGainSide1Register14	FPGA Gain Side 2 Register 14	Range = 70 to 170	100
803-127	FpgaGainSide1Register15	FPGA Gain Side 2 Register 15	Range = 70 to 170	100
803-128	FpgaGainSide1Register16	FPGA Gain Side 2 Register 16	Range = 70 to 170	100
803-129	FpgaGainSide1Register17	FPGA Gain Side 2 Register 17	Range = 70 to 170	100
803-130	FpgaGainSide1Register18	FPGA Gain Side 2 Register 18	Range = 70 to 170	100
803-131	FpgaGainSide1Register19	FPGA Gain Side 2 Register 19	Range = 70 to 170	100
803-132	FpgaGainSide1Register20	FPGA Gain Side 2 Register 20	Range = 70 to 170	100
803-133	WhiteRefTargetCvtRed Side 2	White Ref Target CVT Red Side 2	Range = 0 to 255	238
803-134	WhiteRefTargetCvtGreen Side 2	White Ref Target CVT Green Side 2	Range = 0 to 255	238
803-135	WhiteRefTargetCvtBlue Side 2	WhiteRef Target CVT Blue Side 2	Range = 0 to 255	238
803-136	WhiteRefTargetCvtMono Side 2	White Ref Target CVT Mono Side 2	Range = 0 to 255	238
803-137	LED cal correction factor Side 2	DC945 LED cal correction factor side 2	Range = 0 to 4	3
803-138	dc2006 BEcoefficient 0 Side 2	dc2006 BEcoefficient 0 Side 2	Range = 0 to 2047	512
803-139	dc2006 BEcoefficient 0 Side 2	dc2006 BEcoefficient 1 Side 2	Range = 0 to 2047	0
803-140	dc2006 BEcoefficient 0 Side 2	dc2006 BEcoefficient 2 Side 2	Range = 0 to 2047	0
803-141	dc2006 BEcoefficient 0 Side 2	dc2006 BEcoefficient 3 Side 2	Range = 0 to 2047	0
803-142	dc2006 BEcoefficient 0 Side 2	dc2006 BEcoefficient 4 Side 2	Range = 0 to 2047	512
803-143	dc2006 BEcoefficient 0 Side 2	dc2006 BEcoefficient 5 Side 2	Range = 0 to 2047	0

**Table 43 IIT NVM ID 803-001 to 803-213**

NVM ID	NVM Name	NVM Description	Settings	Default
803-144	dc2006 BEcoefficient 0 Side 2	dc2006 BEcoefficient 6 Side 2	Range = 0 to 2047	0
803-145	dc2006 BEcoefficient 0 Side 2	dc2006 BEcoefficient 7 Side 2	Range = 0 to 2047	0
803-146	dc2006 BEcoefficient 0 Side 2	dc2006 BEcoefficient 8 Side 2	Range = 0 to 2047	512
803-149	No of Platen Cal Fail Retries	Number of Platen Cal Fail Retries	Range = 0 to 5	2
803-213	TotalS2Nvm	Total number of S1 and S2 NVMs for this build	Range = 0 to 65535	35

**Table 44 IIT NVM ID 805-001 to 805-032**

NVM ID	NVM Name	NVM Description	Settings	Default
805-001	Page Counter	Page count error tracking	Range = 0 to 65535	0
805-002	Jam Error Count	Jam error count tracking	Range = 0 to 65535	0
805-003	Pick Error Count	Pick error count tracking	Range = 0 to 65535	0
805-004	Lead Edge Side 1 Colour 600	Lead edge registration side 1 colour 600	Range = -50 to 50	0
805-005	Lead Edge Side 1 Mono 600	Lead edge registration side 1 mono 600	Range = -50 to 50	0
805-006	Lead Edge Side 1 Colour 1200	Lead edge registration side 1 colour 1200	Range = -50 to 50	0
805-007	Lead Edge Side 1 Mono 1200	Lead edge registration side 1 mono 1200	Range = -50 to 50	0
805-008	Lead Edge Side 2 Colour 600	Lead edge registration side 2 colour 600	Range = -50 to 50	0
805-009	Lead Edge Side 2 Mono 600	Lead edge registration side 2 mono 600	Range = -50 to 50	0
805-010	Lead Edge Side 2 Colour 1200	Lead edge registration side 2 colour 1200	Range = -50 to 50	0
805-011	Lead Edge Side 2 Mono 1200	Lead edge registration side 2 mono 1200	Range = -50 to 50	0
805-012	Cal strip Speed Adjust	Calibration strip speed adjustment	Range = 0 to 3660	200
805-018	Speed Adjust Colour 600	Adjusts sheet speed over the scan head	Range = -30 to 30	0
805-019	Speed Adjust Mono 600	Adjusts sheet speed over the scan head	Range = -30 to 30	0
805-020	Speed Adjust Colour 1200	Adjusts sheet speed over the scan head	Range = -30 to 30	0

**Table 44 IIT NVM ID 805-001 to 805-032**

<b>NVM ID</b>	<b>NVM Name</b>	<b>NVM Description</b>	<b>Settings</b>	<b>Default</b>
805-021	Speed Adjust Mono 1200	Adjusts sheet speed over the scan head	Range = -30 to 30	0
805-022	Scaling Data Position	Calibration Strip Hotline Position	Range = -50 to 50	-21
805-023	Motor Speed Side 1 Colour 600	Side 1 feed motor Speed.	Range = -30 to 30	0
805-024	Motor Speed Side 1 Mono 600	Side 1 feed motor Speed.	Range = -30 to 30	0
805-025	Motor Speed Side 2 Colour 600	Side 2 feed motor Speed.	Range = -30 to 30	0
805-026	Motor Speed Side 2 Mono 600	Side 2 feed motor Speed.	Range = -30 to 30	0
805-027	Registration Loop	Size of De-skew buckle	Range = 0 to 200	60
805-028	Timing Sensor Adjustment	Sensor Light Level (Read only)	Range = 0 to 255	255
805-029	TRA Sensor	Sensor Light Level (Read only)	Range = 0 to 255	255
805-030	PreScan Sensor	Sensor Light Level (Read only)	Range = 0 to 255	255
805-031	Mid Scanner	Sensor Light Level (Read only)	Range = 0 to 255	255
805-032	Hardware Configuration	Hardware Configuration	Range = 0 to 255	0



## 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](#).

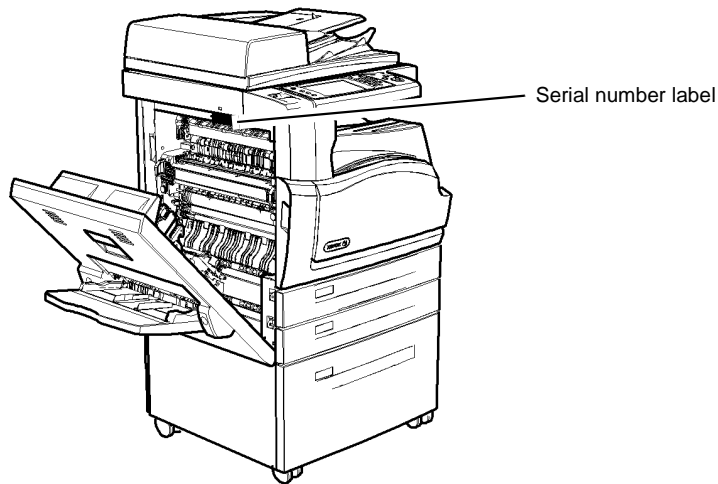


Figure 1 Label location

W-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
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.

### Procedure

1. Enter service mode, [GP 1](#).
2. Select the Maintenance tab.
3. Select dC136 Service Plan.  
The service plan information is displayed.
4. Enter the authorization code to change the service plan.

**NOTE:** The service plan can be changed from and to any service plan.

5. Select Close to exit routine.
6. Select Call Closeout.
7. 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.

### Procedure

1. Enter service mode, [GP 1](#).
2. Select the Maintenance tab.
3. Select dC137 PagePack.  
The PagePack screen is displayed.

**NOTE:** The PagePack function is enabled in all XE installations. Depending on the customer's full service maintenance agreement, the PagePack function needs to be enabled when a USSG/XCL machine is installed in an XE region.

4. Select Disabled or Enabled.
5. Enter the PagePack passcode, a 4 digit authorization code. The authorization code can be found in the customer's machine installation pack.
6. Select Save.
7. Select Call Closeout to exit service mode.
8. Select Exit and Reboot.

# 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 NVM Save and Restore, [dC361](#).
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 NVM Save and Restore, [dC361](#).
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 [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 NVM Save and Restore, [dC361](#).
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 Xero		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 checksums 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.

## 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](#).

Go to the appropriate procedure:

- [Input Components](#).
- [Output Components](#).

### 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.

## 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.
6. Select Close to exit dc330 Component Control.
7. Select Call Closeout to exit service mode.
8. Select Exit and Reboot.



## 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
012-077	Entry sensor	2K LCSS and LVF BM entry sensor (Q12-077).	On = Made
012-078	Punch sensor 1	2K LCSS and LVF BM punch position sensor (Q12-078).	On = Made
012-089	BM entry sensor	LVF BM entry sensor (Q12-089) detects paper entry to the booklet maker.	High = paper present, low = no paper
012-096	Ejector motor encoder sensor	2K LCSS and LVF BM ejector module motor encoder sensor (Q12-096) detects the timing for ejector module motor.	High = made, low = not detected
012-106	Compiler exit sensor	2K LCSS and LVF BM compiler exit sensor (Q12-106).	On/Off
012-107	Top tray exit sensor	2K LCSS and LVF BM top tray exit sensor (Q12-107).	On/Off
012-133	Low staple sensor	2K LCSS and LVF BM low staple sensor (Q12-133).	On/Off
012-134	Self priming sensor	2K LCSS and LVF BM self priming sensor (Q12-134).	On/Off
012-135	Staple home sensor	2K LCSS and LVF BM staple 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 and LVF BM bin 1 motor encoder sensor (Q12-162) detects the timing for stacker unit motor.	High = made, low = not detected
012-168	Stapler index sensor	2K LCSS and LVF BM stapler unit is in index position (Q12-168).	On = made
012-170	BM paper present sensor	LVF BM paper present sensor (Q12-170).	On = made
012-177	Docking interlock	2K LCSS and LVF BM docking interlock switch (S12-176).	High = docked, low = undocked
012-180	Front tamper home sensor	2K LCSS and LVF 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 and LVF 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 and LVF BM front tamper away sensor (Q12-182), detects if front tamper is away.	High = home, low = not home
012-183	Rear tamper away sensor	2K LCSS and LVF 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 and LVF 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 and LVF 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 and LVF 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 and LVF 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 and 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 and LVF BM bin 1 upper limit switch (S12-190) detects the upper limit of bin 1 movement.	High = bin detected, low = bin not detected

**Table 5 Input codes 012**

Code	Displayed Name	Description	General
012-191	Bin1 lower limit switch	2K LCSS and LVF 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 and LVF 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 and LVF 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
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 and LVF BM top cover interlock switch (S12-197) detects if the finisher top cover is open.	High = closed
012-204	BM guide home sensor	LVF 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 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 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 flapper home sensor (Q12-207).	High = home
012-213	BM exit sensor	LVF BM exit sensor (Q12-213) detects booklets exiting the booklet maker.	High = detected, low = not detected
012-214	BM crease blade home	LVF 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 crease blade motor encoder sensor (Q12-215) generates motor speed pulses.	High = bar in encoder wheel, low = gap in encoder wheel

**Table 5 Input codes 012**

Code	Displayed Name	Description	General
012-216	BM crease roll motor encoder	LVF BM crease roll motor encoder sensor (Q12-216) generates motor speed pulses.	High = bar in encoder wheel, low = gap in encoder wheel
012-303	Front door interlock	2K LCSS and LVF BM front door interlock (Q12-303) detects if the finisher front door is open.	High = closed, low = open
012-317	Stapler cartridge sensor	2K LCSS and LVF BM stapler cartridge sensor (Q12-317).	On = made, Off = clear
012-318	Stapler jaw home sensor	2K LCSS and LVF BM stapler jaw home sensor (Q12-318).	On = made, Off = clear
012-363	SH1 cartridge sensor	2K LCSS and LVF BM SH1 cartridge sensor (Q12-363).	On = made, Off = clear
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
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

**Table 6 Input codes 061 to 062**

Code	Displayed Name	Description	General
062-034	Platen Scan Cooling Fan Input	Detects when the scanner cooling fan 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

**Table 7 Input codes 071 to 076**

Code	Displayed Name	Description	General
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
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

**Table 11 Output codes 010**

Code	Displayed Name	Description	General
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	Stapling Unit 1 increment backward.	On/off. 110 seconds timeout
012-059	Elevator Motor Up	Runs the 2K LCSS and LVF BM bin 1 elevate motor (MOT12-241) by increments up.	On/off. 500 mseconds timeout
012-060	Elevator Motor Down	Runs the 2K LCSS and LVF BM bin 1 elevate motor (MOT12-241) by increments down.	On/off. 500 mseconds timeout
012-223	Transport Motor 1	Runs the 2K LCSS and LVF BM transport Motor 1 (MOT12-223).	On/off. 90 seconds timeout
012-224	Transport Motor 2	Runs the 2K LCSS and LVF BM transport motor 2 (MOT12-224).	On/off. 90 seconds timeout
012-225	Exit Diverter Solenoid	Energises the 2K LCSS and LVF BM exit diverter gate solenoid (SOL12-225).	On/off. 5 seconds timeout
012-226	Front Tamper Motor Home	Runs the 2K LCSS and LVF BM front tamper motor (MOT12-227) to the home position.	On/off. 5 seconds timeout
012-227	Rear Tamper Motor Home	Runs the 2K LCSS and LVF BM rear tamper motor (MOT12-228) to home position.	On/off. 5 seconds timeout
012-228	Front Tamper Motor Move	Runs the 2K LCSS and LVF BM front tamper motor (MOT11-003) move inbound.	On/off. 5 seconds timeout
012-229	Rear Tamper Motor Move	Runs the 2K LCSS and LVF BM rear tamper motor (MOT11-004) 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

**Table 12 Output codes 012**



Code	Displayed Name	Description	General
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 and LVF BM ejector motor (MOT12-234) cycle routine until timeout or stop.   <b>CAUTION</b> <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
012-238	Paddle Roll Motor Run	Runs the 2K LCSS and LVF BM paddle roll motor (MOT12-237) until timeout or stop.	On/off. 15 seconds timeout
012-241	Bin 1 Elevator Motor Home	Runs the 2K LCSS and LVF BM 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 and LVF BM bin 1 elevate motor (MOT12-242) to cycle bins up/down until timeout or stop.   <b>CAUTION</b> <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

Table 12 Output codes 012




Code	Displayed Name	Description	General
012-244	Punch Head Run	Runs the 2K LCSS and LVF BM hole punch motor (MOT12-244) continuously.   <b>CAUTION</b> <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
012-247	Staple Head 1 Motor	Runs the 2K LCSS and LVF BM staple head 1 motor (MOT12-247).   <b>CAUTION</b> <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 and LVF BM stapling unit 1 motor (MOT12-249) increment forward.   <b>CAUTION</b> <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

Table 12 Output codes 012


Code	Displayed Name	Description	General
012-250	SU1 Motor Cycle	Runs the 2K LCSS and HVF stapling unit 1 motor (MOT12-250) cycle routine.   <b>CAUTION</b> <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
012-252	BM Crease Blade Motor	Runs the LVF BM crease blade motor (MOT12-252) cycle routine.	On/off. 90 seconds timeout
012-253	Crease Roll Motor	Runs the LVF BM crease roll motor (MOT12-253).	On/off. 6 seconds timeout
012-255	BM Backstop Motor	Runs the LVF 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 tamper motor (MOT12-256).	On/off. 90 seconds timeout
012-258	BM Diverter Solenoid	Energizes the LVF BM diverter gate solenoid (SOL12-258).	On/off. 5 seconds timeout
012-271	BM Flapper Motor	Runs the LVF BM flapper motor (MOT12-271).	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

**Table 13 Output codes 020**

Code	Displayed Name	Description	General
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
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

**Table 13 Output codes 020**

Code	Displayed Name	Description	General
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
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

**Table 13 Output codes 020**

Code	Displayed Name	Description	General
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
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

**Table 13 Output codes 020**

Code	Displayed Name	Description	General
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
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



**Table 14 Output codes 061 to 066**

Code	Displayed Name	Description	General
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 timeout
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 timeout

**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.	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

**Table 16 Output codes 080 to 083**

Code	Displayed Name	Description	General
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
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). <i>NOTE: The bypass tray clutch will also energize when component control code 081-033 is entered.</i>	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.

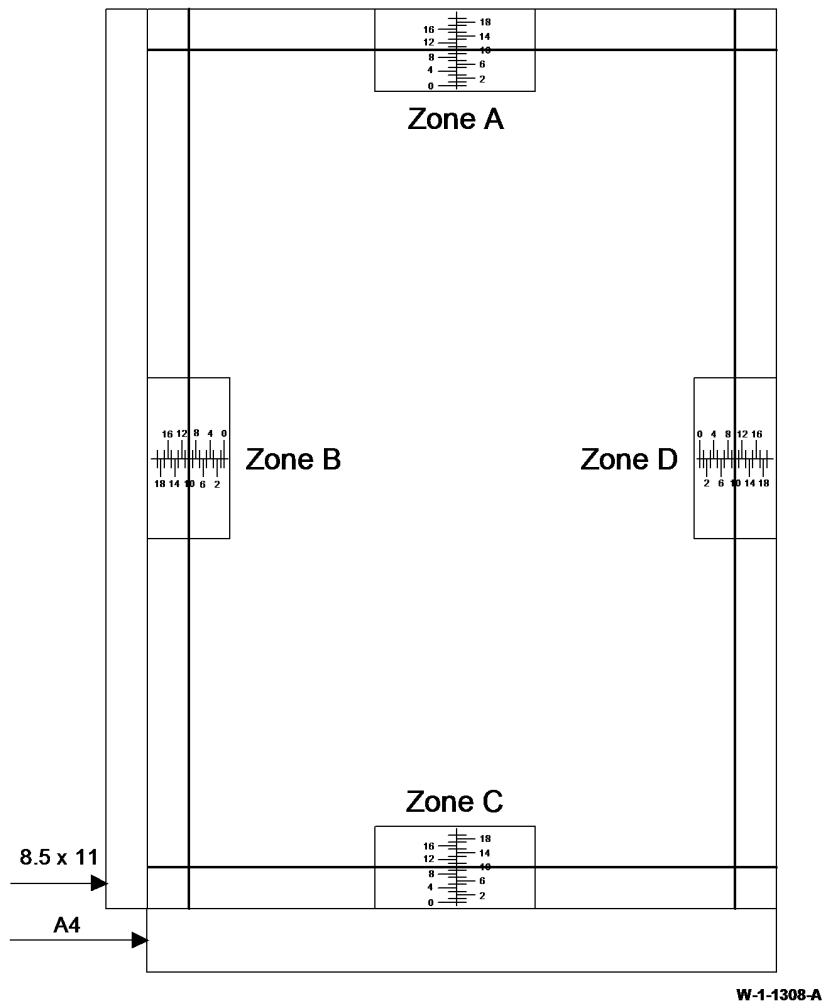


Figure 1 Registration test pattern

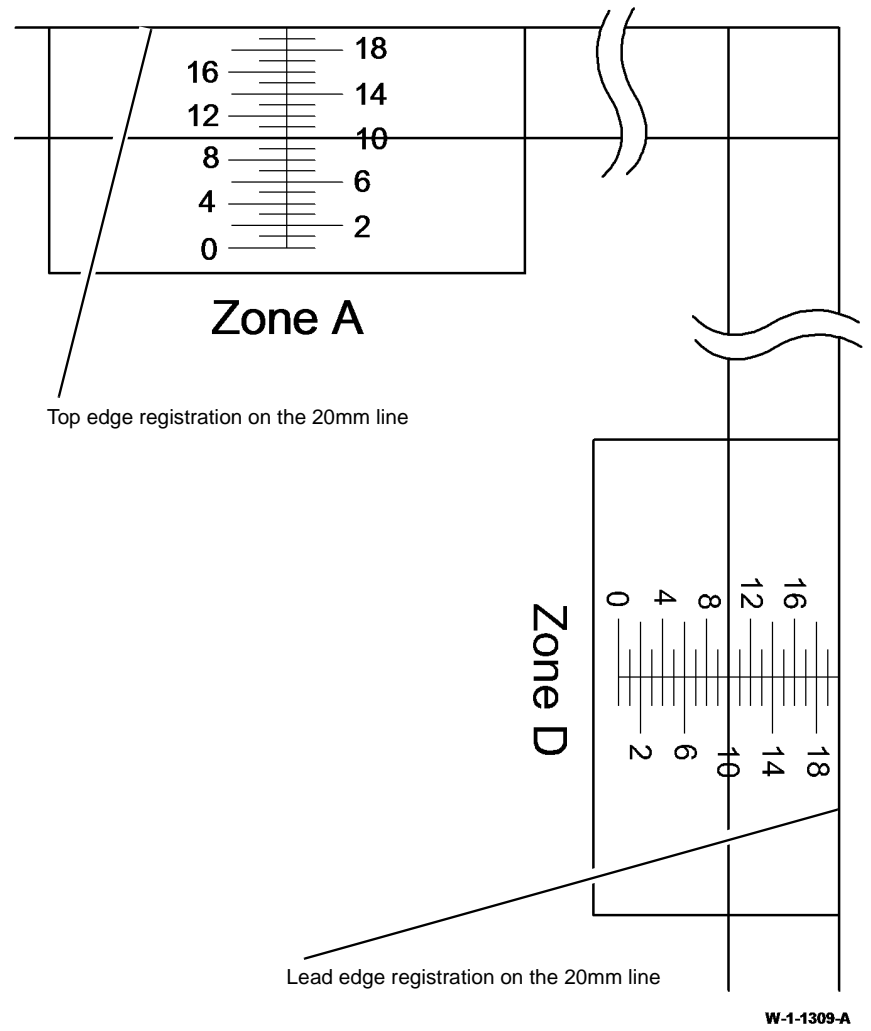


Figure 2 IOT registration

## 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 3 blank sheets 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. <a href="#">dC604</a> Image Output Terminal Registration
2. <a href="#">dC609</a> Document Glass Registration
4. <a href="#">dC610</a> CCD Lamp Profile Adjustment
5. <a href="#">dC608</a> Document Feeder Registration
6. <a href="#">dC945</a> 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 other than keeping the SPDH open during the operation.

### 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. <a href="#">dC604</a> Image Output Terminal Registration
2. <a href="#">dC609</a> Document Glass Registration
4. <a href="#">dC610</a> CCD Lamp Profile Adjustment
5. <a href="#">dC608</a> Document Feeder Registration
6. <a href="#">dC945</a> 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. <a href="#">dC604</a> Image Output Terminal Registration
2. <a href="#">dC609</a> Document Glass Registration
4. <a href="#">dC610</a> CCD Lamp Profile Adjustment
5. <a href="#">dC608</a> Document Feeder Registration
6. <a href="#">dC945</a> 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.
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 [WD16](#). 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 [WD13](#) and [WD16](#). Also check the wiring and connectors between the SPDH PWB and the scanner PWB, refer to [WD13](#). 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. <a href="#">dC604</a> Image Output Terminal Registration
2. <a href="#">dC609</a> Document Glass Registration
4. <a href="#">dC610</a> CCD Lamp Profile Adjustment
5. <a href="#">dC608</a> Document Feeder Registration
6. <a href="#">dC945</a> 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. Select Platen.
9. Follow the on screen instructions.
10. Select Close to exit the routine.
11. Select Call Closeout to exit service mode.

12. Select Exit and Reboot.

**Table 2 Approved paper types**

Approved Paper Types for dC945	Approved Paper Size	ScannerPaperCode NVM Location 801-80 Value Setting
J_ Paper 22lb, 82gsm	A3 or 11 x 17 inch	1
ColorXpressions 24lb, 90gsm	A3 or 11 x 17 inch	5
ColorTechPlus 24lb, 90gsm	A3 or 11 x 17 inch	6
Xerox 4200 20lb, 75gsm	A3 or 11 x 17 inch	7
Xerox Business 21lb, 80gsm	A3 or 11 x 17 inch	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.
- **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](#).

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: 001

CLASS: 4

NAME: Horizontal Transport Kit

PURPOSE: To convert a centre output tray configured machine for use with a 2K LCSS or LVF BM finishing device. After conversion, the offset sensor, [PL 10.11 Item 8](#), and offset motor, [PL 10.11 Item 14](#), are not used, but remain in place. Also refer to [TAG 002](#).

KIT NUMBER: 497K13821

PARTS LIST ON: [PL 31.14 Item 5](#)

### TAG: 002

CLASS: 4

NAME: Horizontal Transport Shuttle Fastening

PURPOSE: To indicate that a screw fastens the horizontal transport offset shuttle in machines converted to centre output tray configuration. Also refer to [TAG 001](#).

KIT NUMBER: 497K13821

PARTS LIST ON: [PL 10.11](#)

### TAG: 003

CLASS: 3

NAME: Tray 3 Paper Feed Assembly Spares Kit

PURPOSE: To install a new paper feed assembly that does not have a tray over elevate switch. An over elevate switch bypass harness is also installed.

PARTS LIST ON: [PL 31.12 Item 6](#).

### TAG: 004

CLASS: 3

NAME: Tray 4 Paper Feed Assembly Spares Kit

PURPOSE: To install a new paper feed assembly that does not have a tray over elevate switch. An over elevate switch bypass harness is also installed.

PARTS LIST ON: [PL 31.12 Item 6](#).

### 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](#)

## SPDH Tags

**TAG: D-001**

**CLASS:** 4

**NAME:** Doc present sensor actuator

**PURPOSE:** Design of actuator revised to cope better with curled originals.

**PARTS LIST ON:** [PL 5.30 Item 6](#)

## Scanner Tags

**TAG: S-00X**

**TAG: D-002**

**CLASS:** 5

**NAME:** Last sheet out sensor

**PURPOSE:** Sensor with reduced sensitivity to overhead lighting.

**PARTS LIST ON:** [PL 5.30 Item 18](#)

**TAG: D-003**

**CLASS:** 5

**NAME:** Removal of earth wire to length sensor 2

**PURPOSE:** To reduce the SPDH sensitivity to ESD.

**PARTS LIST ON:** [PL 5.30 Item 9.](#)

## 2K LCSS Tags

### **TAG: F-001**

**CLASS:** 5  
**NAME:** New 2K LCSS graphic labels  
**PURPOSE:** New jam clearance instructions.  
**KIT NUMBER:** None  
**PARTS LIST ON:** None

### **TAG: F-002**

**CLASS:** 5  
**NAME:** 2K LCSS tamper arms and exit sensor timing  
**PURPOSE:** To improve stacking performance.  
**KIT NUMBER:**  
**PARTS LIST ON:** [PL 12.45](#)

### **TAG: F-003**

**CLASS:** 5  
**NAME:** 2K LCSS entry guide cover change  
**PURPOSE:** To improve performance.  
**KIT NUMBER:**  
**PARTS LIST ON:** [PL 12.70 Item 5](#)

### **TAG: F-004**

**CLASS:** 5  
**NAME:** 2K LCSS noise reduction kit  
**PURPOSE:** Reduction of operational noises.  
**KIT NUMBER:**  
**PARTS LIST ON:**

### **TAG: F-005**

**CLASS:** 5  
**NAME:** 2K LCSS elevator motor encoder sensor.  
**PURPOSE:** A new sensor with an improved response time.  
**KIT NUMBER:**  
**PARTS LIST ON:** [PL 12.30 Item 11](#)

### **TAG: F-006**

**CLASS:** 4  
**NAME:** 2K LCSS hole punch field repair kit.  
**PURPOSE:** To implement an adjustment for the 2K LCSS hole punch, for machines with TAG F014 installed, in order to return the 2K LCSS to manufactured specification. All machines with an 2K LCSS hole punch are manufactured with TAG F006.  
**KIT NUMBER:**  
**PARTS LIST ON:** [PL 12.20](#)

### **TAG: F-007**

**CLASS:** 5  
**NAME:** 2K LCSS rear frame cutout modified.  
**PURPOSE:** Change to the cutout in the rear frame to accommodate all configurations of hole punches  
**KIT NUMBER:** -  
**PARTS LIST ON:** -

**TAG: F-008****CLASS:** 4**NAME:** 2K LCSS legal 2 hole enable kit.**PURPOSE:** For use on machines with TAG F007 installed. TAG F008 moves the position of the punch sensor 1, Q12-078. All types of hole punch (2 hole, 3 hole, 4 hole, Swedish and legal SEF) are compatible with TAG F008.**KIT NUMBER:****PARTS LIST ON:** [PL 12.20](#)**TAG: F-009****CLASS:** 4**NAME:** Sharp edges removed from area 5 (safety)**PURPOSE:** To make safe the customer interaction area around the hole punch.**KIT NUMBER:** -**PARTS LIST ON:** -**TAG: F-010****CLASS:** 4**NAME:** 20 ohm tamper motor**PURPOSE:** To eliminate the tamper motor from stalling.**KIT NUMBER:** -**PARTS LIST ON:** [PL 12.45](#)**TAG: F-011****CLASS:** 4**NAME:** Re-routed harness**PURPOSE:** To improve the routing of the staple harness by using a longer harness.**KIT NUMBER:** -**PARTS LIST ON:** -**TAG: F-013****CLASS:** 4**NAME:** 2K LCSS bin 1 kit**PURPOSE:** Modified angle to the output tray to reduce problem with paper curl.**KIT NUMBER:** -**PARTS LIST ON:** [PL 12.10](#)**TAG: F-014****CLASS:** 4**NAME:** 2K LCSS Hole punch field repair kit**PURPOSE:** To implement an adjustment for the 2K LCSS hole punch in the outboard direction.**KIT NUMBER:** -**PARTS LIST ON:** [PL 12.20](#)**TAG: F-015****CLASS:** 2**NAME:** 2K LCSS Control PWB kit**PURPOSE:** To enable the erase part of the software load.**KIT NUMBER:** -**PARTS LIST ON:** [PL 12.75](#)**TAG: F-016****CLASS:** 3**NAME:** 2K LCSS Paddle assembly**PURPOSE:** New paddle wheel shaft assembly featuring increased grip paddles that are now a clip in fitting.**KIT NUMBER:** -**PARTS LIST ON:** [PL 12.25](#)

**TAG: F-017**

**CLASS:** 3

**NAME:** Shaft Diverter Assembly Spares Kit

**PURPOSE:** Cost saving replacement shaft diverter assembly with 3 KL-clip fixings

**KIT NUMBER:** -

**PARTS LIST ON:** [PL 12.60](#)

**LVF BM Tags**

**TAG: B-000**

**Fax Tags**

**TAG: X-000**





### Plug Jack Locations

PJ Locations..... 7-3

### Wiring Diagrams

Wiring Diagrams..... 7-25



## PJ Locations

### PJ Location Tables

To locate a PJ, go to the appropriate table.

- HVPS Contacts, [Table 1](#).
- PJ1 to PJ81, [Table 2](#).
- PJ100 to PJ251, [Table 3](#).
- PJ300 to PJ318, [Table 4](#).
- PJ400 to PJ450, [Table 5](#).
- PJ451 to PJ494, [Table 6](#).
- PJ507 to PJ977, [Table 7](#).

### 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. Fax connector PWB, [Figure 2](#).
3. Finisher communications connector, [Figure 3](#).
4. Foreign device interface PWB, [Figure 4](#).
5. Fuser module, [Figure 5](#).
6. HVPS, [Figure 6](#).
7. In-line connectors PJ177/178 and PJ179/180, [Figure 7](#).
8. In-line connectors PJ184/185, PJ187/188, PJ224/225 and PJ512, [Figure 8](#).
9. In-line connectors PJ198/199, PJ217/218, PJ222/223, PJ226/227 and PJ595, [Figure 9](#).
10. In-line connectors PJ250/251, PJ507, PJ508 and PJ514, [Figure 10](#).
11. In-line connector PJ456/492, [Figure 11](#).
12. In-line connectors PJ483/484, PJ485/486, PJ487/488 and PJ493/494, [Figure 12](#).
13. In-line connector PJ620/622 and PJ621/623, [Figure 13](#).
14. In-line connector PJ740/741, [Figure 14](#).
15. IOT PWB, [Figure 15](#).
16. LED print head module, [Figure 16](#).
17. LVF PWB, [Figure 17](#).
18. LVF BM PWB, [Figure 18](#).
19. LVPS, [Figure 19](#).
20. Main drive module, [Figure 20](#).
21. Print cartridge, [Figure 21](#).
22. SBC PWB, [Figure 22](#).
23. Scanner PWB, [Figure 23](#).
24. Scanner CCD PWB, [Figure 24](#).
25. Scanner LED Drive PWB, [Figure 25](#).

26. Scanner LED Lamp PWB, [Figure 26](#).
27. Side 2 CCD PWB, [Figure 27](#).
28. SPDH LED drive PWB, [Figure 28](#).
29. SPDH LED lamp PWB, [Figure 29](#).
30. SPDH PWB, [Figure 30](#).
31. Tray 1 paper size sensing PWB, [Figure 31](#).
32. Tray 2 paper size sensing PWB, [Figure 32](#).
33. Tray 4 control PWB, [Figure 33](#).
34. UI control PWB, [Figure 34](#).
35. UI keyboard PWB, [Figure 35](#).
36. UI Status PWB, [Figure 36](#).

Table 1 HVPS contacts

PJ Number	Figure No.	PJ Location	Wiring Diagram
BTR	<a href="#">Figure 6</a>	HVPS	<a href="#">WD 10</a>
DTS	<a href="#">Figure 6</a>	HVPS	<a href="#">WD 10</a>
DB	<a href="#">Figure 6</a>	HVPS	<a href="#">WD 10</a>
BCR	<a href="#">Figure 6</a>	HVPS	<a href="#">WD 10</a>

Table 2 PJ1 to PJ81

PJ Number	Figure No.	PJ location	Wiring Diagram
1	<a href="#">Figure 2</a>	Fax connector PWB	<a href="#">WD 4</a>
1	<a href="#">Figure 19</a>	LVPS	<a href="#">WD 1</a>
2	<a href="#">Figure 2</a>	Fax connector PWB	<a href="#">WD 4</a>
16	<a href="#">Figure 4</a>	Foreign device interface PWB	<a href="#">WD 4</a>
81	<a href="#">Figure 34</a>	UI control PWB	<a href="#">WD 4</a>

Table 3 PJ100 to PJ251

PJ Number	Figure No.	PJ Location	Wiring Diagram
100	<a href="#">Figure 4</a>	Foreign device interface PWB	<a href="#">WD 4</a>
100	<a href="#">Figure 5</a>	Fuser module	<a href="#">WD 9</a>
101	<a href="#">Figure 18</a>	LVF BM PWB	<a href="#">WD 27</a>
101	<a href="#">Figure 20</a>	Main drive module	<a href="#">WD 7</a>
102	<a href="#">Figure 18</a>	LVF BM PWB	<a href="#">WD 27</a>
102	<a href="#">Figure 20</a>	Main drive module	<a href="#">WD 7</a>
103	<a href="#">Figure 18</a>	LVF BM PWB	<a href="#">WD 27</a>
104	<a href="#">Figure 18</a>	LVF BM PWB	<a href="#">WD 27</a>
105	<a href="#">Figure 18</a>	LVF BM PWB	<a href="#">WD 28</a>
106	<a href="#">Figure 18</a>	LVF BM PWB	<a href="#">WD 28</a>

**Table 3 PJ100 to PJ251**

PJ Number	Figure No.	PJ Location	Wiring Diagram
107	Figure 18	LVF BM PWB	WD 28
108	Figure 18	LVF BM PWB	WD 28
109	Figure 18	LVF BM PWB	WD 28
110	Figure 18	LVF BM PWB	WD 29
111	Figure 18	LVF BM PWB	WD 29
112	Figure 18	LVF BM PWB	WD 29
113	Figure 18	LVF BM PWB	WD 29
130	Figure 34	UI control PWB	WD 4
141	Figure 5	Fuser module	WD 9
155	Figure 33	Tray 4 control PWB	WD 18
156	Figure 33	Tray 4 control PWB	WD 18
157	Figure 33	Tray 4 control PWB	WD 18
158	Figure 33	Tray 4 control PWB	WD 18
159	Figure 33	Tray 4 control PWB	WD 18
160	Figure 33	Tray 4 Control PWB	WD 18
161	Figure 33	Tray 4 control PWB	WD 18
162	Figure 33	Tray 4 control PWB	WD 18
177	Figure 7	In-line connector IOT PWB side	WD 5, WD 6
178	Figure 7	In-line connector component side	WD 5, WD 6
179	Figure 7	In-line connector component side	WD 5, WD 6
180	Figure 7	In-line connector IOT PWB side	WD 5, WD 6
184	Figure 8	In-line connector IOT PWB side	WD 7
185	Figure 8	In-line connector component side	WD 7
187	Figure 8	In-line connector cartridge side	WD 9
188	Figure 8	In-line connector IOT PWB side	WD 9
198	Figure 9	In-line connector IOT PWB side	WD 5, WD 7
199	Figure 9	In-line connector IOT sensor side	WD 5, WD 7
217	Figure 9	In-line connector IOT PWB side	WD 5, WD 7
218	Figure 9	In-line connector sensor side	WD 5, WD 7
222	Figure 9	In-line connector IOT PWB side	WD 8
223	Figure 9	In-line connector motor side	WD 8
224	Figure 8	In-line connector IOT PWB side	WD 8
225	Figure 8	In-line connector motor side	WD 8
226	Figure 9	In-line connector component side	WD 5, WD 7
227	Figure 9	In-line connector IOT PWB side	WD 5, WD 7
250	Figure 10	In-line connector IOT PWB	WD 6
251	Figure 10	In-line connector component side	WD 6

**Table 4 PJ300 to PJ318**

PJ Number	Figure No.	PJ Location	Wiring Diagram
300	Figure 1	2K LCSS PWB	WD 19
300	Figure 17	LVF PWB	WD 23
301	Figure 1	2K LCSS PWB	WD 19
301	Figure 17	LVF PWB	WD 23
302	Figure 1	2K LCSS PWB	WD 19
302	Figure 17	LVF PWB	WD 23
303	Figure 1	2K LCSS PWB	WD 19
303	Figure 17	LVF PWB	WD 23
304	Figure 1	2K LCSS PWB	WD 19
304	Figure 17	LVF PWB	WD 23
305	Figure 1	2K LCSS PWB	WD 19
305	Figure 17	LVF PWB	WD 23
306	Figure 1	2K LCSS PWB	WD 20
306	Figure 17	LVF PWB	WD 24
307	Figure 1	2K LCSS PWB	WD 20
307	Figure 17	LVF PWB	WD 24
308	Figure 1	2K LCSS PWB	WD 20
308	Figure 17	LVF PWB	WD 24
309	Figure 1	2K LCSS PWB	WD 21
309	Figure 17	LVF PWB	WD 25
310	Figure 1	2K LCSS PWB	WD 21
310	Figure 17	LVF PWB	WD 25
311	Figure 1	2K LCSS PWB	WD 21
311	Figure 17	LVF PWB	WD 25
312	Figure 1	2K LCSS PWB	WD 21
312	Figure 17	LVF PWB	WD 25
313	Figure 1	2K LCSS PWB	WD 22
314	Figure 1	2K LCSS PWB	WD 22
314	Figure 17	LVF PWB	WD 26
315	Figure 1	2K LCSS PWB	WD 22
315	Figure 17	LVF PWB	WD 26
316	Figure 1	2K LCSS PWB	WD 22
316	Figure 17	LVF PWB	WD 26
317	Figure 1	2K LCSS PWB	WD 22
318	Figure 1	2K LCSS PWB	WD 22
318	Figure 17	LVF PWB	WD 26

**Table 5 PJ400 to PJ450**

PJ Number	Figure No.	PJ Location	Wiring Diagram
400	Figure 17	LVF PWB	WD 26
401	Figure 17	LVF PWB	WD 26
402	Figure 17	LVF PWB	WD 26
410	Figure 23	Scanner PWB	WD 16
411	Figure 23	Scanner PWB	WD 16
412	Figure 23	Scanner PWB	WD 16
413	Figure 23	Scanner PWB	WD 16
414	Figure 23	Scanner PWB	WD 16
415	Figure 23	Scanner PWB	WD 16
416	Figure 23	Scanner PWB	WD 16
417	Figure 23	Scanner PWB	WD 16
418	Figure 23	Scanner PWB	WD 16
419	Figure 23	Scanner PWB	WD 16
420	Figure 23	Scanner PWB	WD 17
421	Figure 23	Scanner PWB	WD 17
422	Figure 23	Scanner PWB	WD 17
423	Figure 23	Scanner PWB	WD 17
424	Figure 23	Scanner PWB	WD 17
425	Figure 23	Scanner PWB	WD 17
426	Figure 23	Scanner PWB	WD 17
427	Figure 23	Scanner PWB	WD 17
428	Figure 23	Scanner PWB	WD 17
429	Figure 23	Scanner PWB	WD 17
430	Figure 23	Scanner PWB	WD 17
431	Figure 23	Scanner PWB	WD 17
432	Figure 23	Scanner PWB	WD 17
433	Figure 23	Scanner PWB	WD 17
445	Figure 24	Scanner CCD PWB	WD 16
446	Figure 24	Scanner CCD PWB	WD 16
447	Figure 24	Scanner CCD PWB	WD 16
448	Figure 25	Scanner LED drive PWB	WD 16
449	Figure 25	Scanner LED drive PWB	WD 16
450	Figure 26	Scanner LED lamp PWB	WD 16

**Table 6 PJ451 to PJ494**

PJ Number	Figure No.	PJ Location	Wiring Diagram
451	Figure 27	Side 2 CCD PWB	WD 16

**Table 6 PJ451 to PJ494**

PJ Number	Figure No.	PJ Location	Wiring Diagram
452	Figure 27	Side 2 CCD PWB	WD 13
453	Figure 27	Side 2 CCD PWB	WD 13
454	Figure 28	Side 2 LED drive PWB	WD 14
455	Figure 29	Side 2 LED lamp PWB	WD 15
456	Figure 11	In-line connector side 2 PWB	WD 13, WD 14
458	Figure 30	SPDH PWB	WD 13
459	Figure 30	SPDH PWB	WD 13
460	Figure 30	SPDH PWB	WD 13
461	Figure 30	SPDH PWB	WD 13
462	Figure 30	SPDH PWB	WD 13
463	Figure 30	SPDH PWB	WD 13
464	Figure 30	SPDH PWB	WD 14
465	Figure 30	SPDH PWB	WD 14
466	Figure 30	SPDH PWB	WD 14
467	Figure 30	SPDH PWB	WD 14
468	Figure 30	SPDH PWB	WD 14
469	Figure 30	SPDH PWB	WD 15
470	Figure 30	SPDH PWB	WD 15
471	Figure 30	SPDH PWB	WD 15
472	Figure 30	SPDH PWB	WD 15
473	Figure 30	SPDH PWB	WD 15
474	Figure 30	SPDH PWB	WD 15
475	Figure 30	SPDH PWB	WD 15
483	Figure 12	In-line connector SPDH PWB side	WD 15
484	Figure 12	In-line connector fan side	WD 15
485	Figure 12	In-line connector SPDH PWB side	WD 15
486	Figure 12	In-line connector clutch side	WD 15
487	Figure 12	In-line connector SPDH PWB	WD 15
488	Figure 12	In-line connector clutch side	WD 15
492	Figure 11	In-line connector side 2 PWB	WD 13, WD 14
493	Figure 12	In-line connector SPDH PWB side	WD 14
494	Figure 12	In-line connector sensor side	WD 14

**Table 7 PJ507 to PJ977**

PJ Number	Figure No.	PJ Location	Wiring Diagram
507	Figure 10	In-line connector tray 3 feed clutch	WD 7
508	Figure 10	In-line connector tray 3 elevator motor	WD 7
510	Figure 21	Print cartridge	WD 9
511	Figure 16	LED print head module	WD 2

Table 7 PJ507 to PJ977

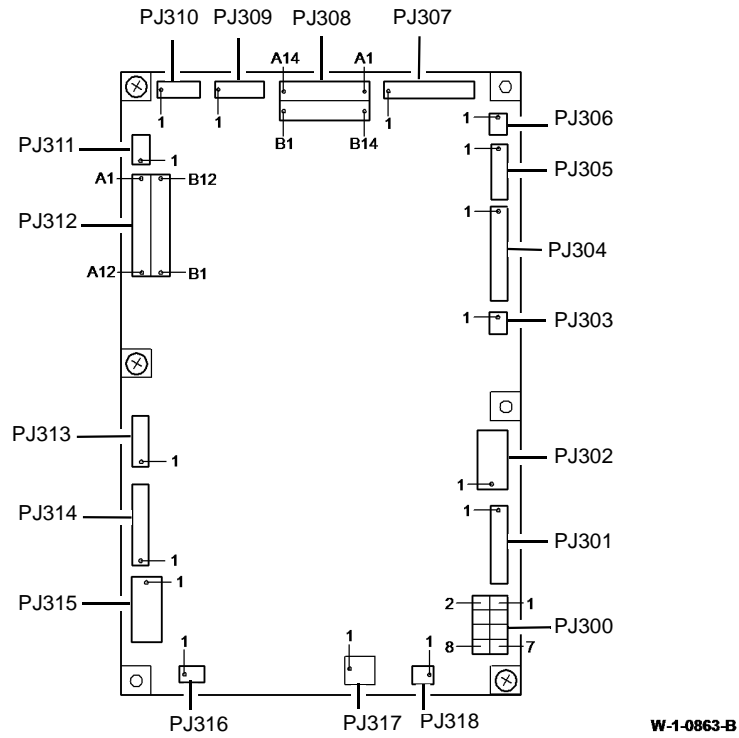
PJ Number	Figure No.	PJ Location	Wiring Diagram
512	Figure 8	In-line connector	WD 9
513	Figure 21	Print cartridge	WD 9
514	Figure 10	In-line connector tray 3 over elevate switch	WD 7
537	Figure 31	Tray 1 paper size sensing PWB	WD 5
544	Figure 32	Tray 2 paper size sensing PWB	WD 5
595	Figure 9	In-line connector bypass tray clutch	WD 7
620	Figure 13	In-line connector IOT PWB side	WD 9
621	Figure 13	In-line connector LVPS side	WD 1
622	Figure 13	In-line connector fuser side	WD 9
623	Figure 13	In-line connector main drive module side	WD 1
650	Figure 19	LVPS	WD 9
651	Figure 19	LVPS	WD 1
652	Figure 19	LVPS	WD 1
653	Figure 19	LVPS	WD 9
654	Figure 19	LVPS	WD 1
655	Figure 19	LVPS	WD 2
656	Figure 19	LVPS	WD 1
740	Figure 14	In-line connector print cartridge side	WD 9
741	Figure 14	In-line connector fuser side	WD 9
750	Figure 15	IOT PWB	WD 5
751	Figure 15	IOT PWB	WD 5
752	Figure 15	IOT PWB	WD 6
754	Figure 15	IOT PWB	WD 6
755	Figure 15	IOT PWB	WD 6
756	Figure 15	IOT PWB	WD 7
757	Figure 15	IOT PWB	WD 7
759	Figure 15	IOT PWB	WD 7
761	Figure 15	IOT PWB	WD 7
762	Figure 15	IOT PWB	WD 8
763	Figure 15	IOT PWB	WD 8
764	Figure 15	IOT PWB	WD 9
766	Figure 15	IOT PWB	WD 9
767	Figure 15	IOT PWB	WD 9
768	Figure 15	IOT PWB	WD 10
769	Figure 15	IOT PWB	WD 10
770	Figure 15	IOT PWB	WD 10
772	Figure 15	IOT PWB	WD 10
773	Figure 15	IOT PWB	WD 11
775	Figure 15	IOT PWB	WD 11

Table 7 PJ507 to PJ977

PJ Number	Figure No.	PJ Location	Wiring Diagram
776	Figure 15	IOT PWB	WD 12
782	Figure 15	IOT PWB	WD 12
783	Figure 15	IOT PWB	WD 12
830	Figure 6	HVPS	WD 10
850	Figure 22	SBC PWB	WD 2
851	Figure 22	SBC PWB	WD 2
852	Figure 22	SBC PWB	WD 2
853	Figure 22	SBC PWB	WD 2
854	Figure 22	SBC PWB	WD 3
860	Figure 22	SBC PWB	WD 3
861	Figure 22	SBC PWB	WD 3
864	Figure 22	SBC PWB	WD 4
865	Figure 22	SBC PWB	WD 4
866	Figure 22	SBC PWB	WD 4
867	Figure 22	SBC PWB	WD 4
880	Figure 22	SBC PWB	WD 4
881	Figure 22	SBC PWB	WD 4
882	Figure 22	SBC PWB	WD 4
889	Figure 22	SBC PWB	WD 4
905	Figure 34	UI control PWB	WD 4
907	Figure 34	UI control PWB	WD 4
907	Figure 36	UI status PWB	WD 4
908	Figure 34	UI control PWB	WD 4
909	Figure 34	UI control PWB	WD 4
910	Figure 35	UI keyboard PWB	WD 4
910	-	UI touch screen	WD 4
943	Figure 34	UI control PWB	WD 4
945	Figure 34	UI control PWB	WD 4
966	Figure 3	Finisher communications connector	WD 19, WD 23
973	Figure 20	Main drive module	WD 7
977	Figure 20	Main drive module	WD 8

**2K LCSS PWB**

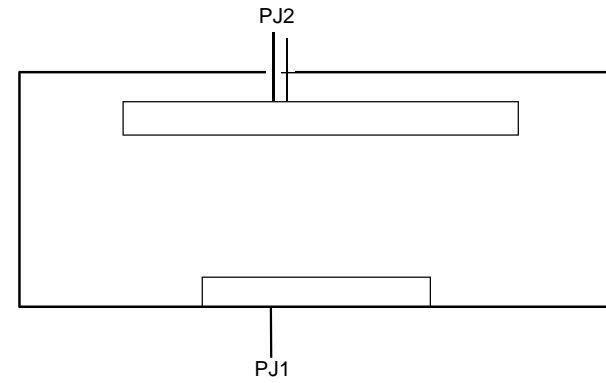
Location: PL 12.75 Item 1



**Figure 1 2K LCSS PWB**

**Fax Connector PWB**

Location: PL 20.05 Item 2

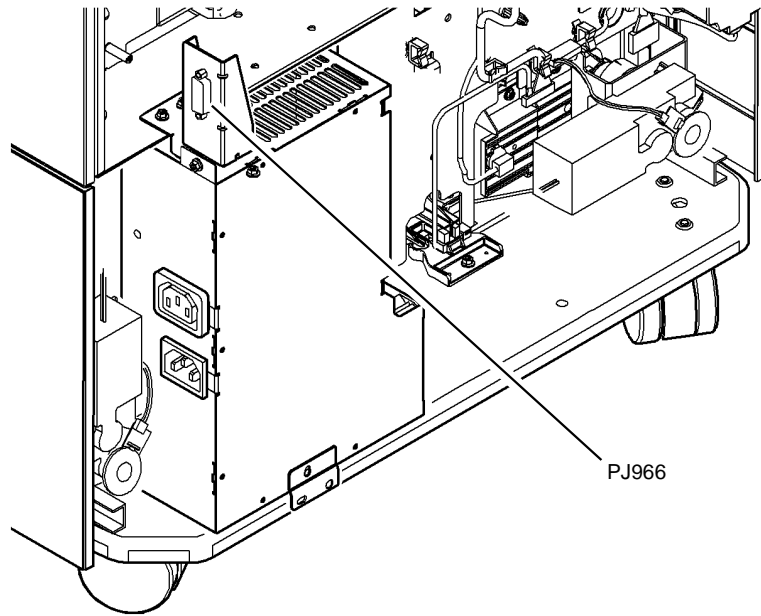


**Figure 2 Fax connector PWB**

W-10898-A

**Finisher Communications Connector PJ966**

Location: [PL 1.10](#)

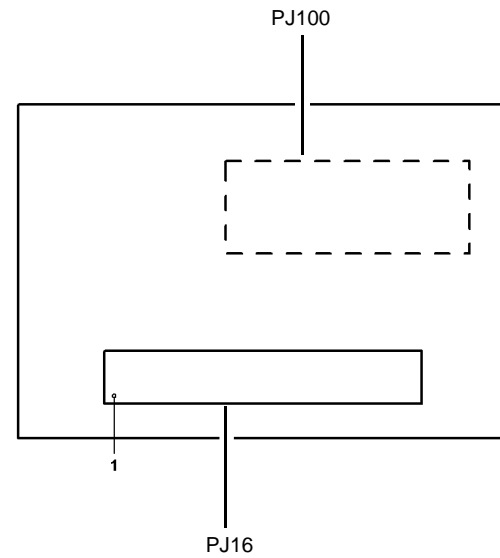


W-1-1306-A

**Figure 3 Finisher connector**

**Foreign Device Interface PWB**

Location: [PL 3.22 Item 18](#)



W-1-0897-A

**Figure 4 Foreign device interface PWB**



### Fuser Module

Location: [PL 10.10 Item 1](#)

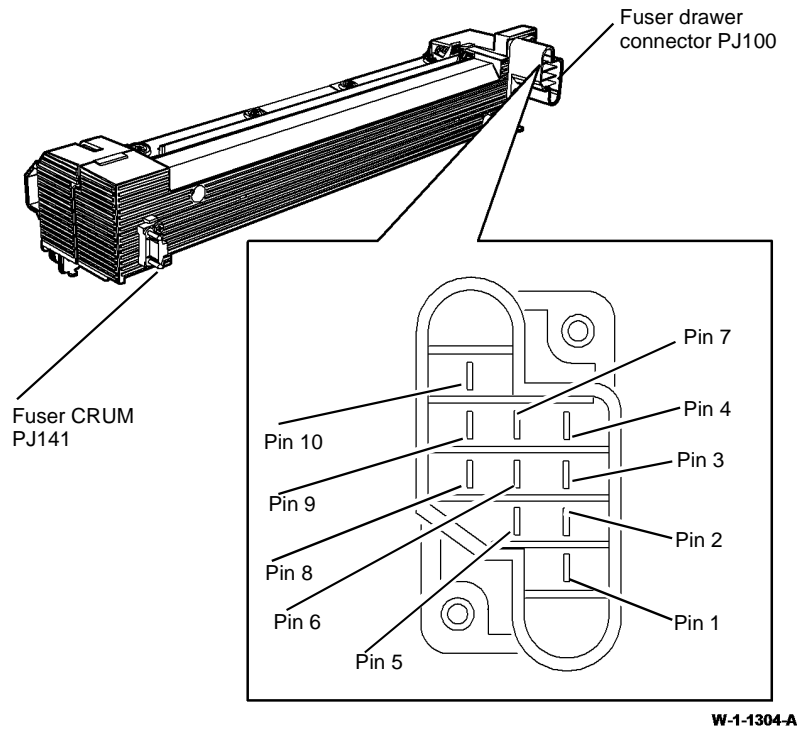


Figure 5 Fuser module

### HVPS

Location: [PL 1.10 Item 5](#)

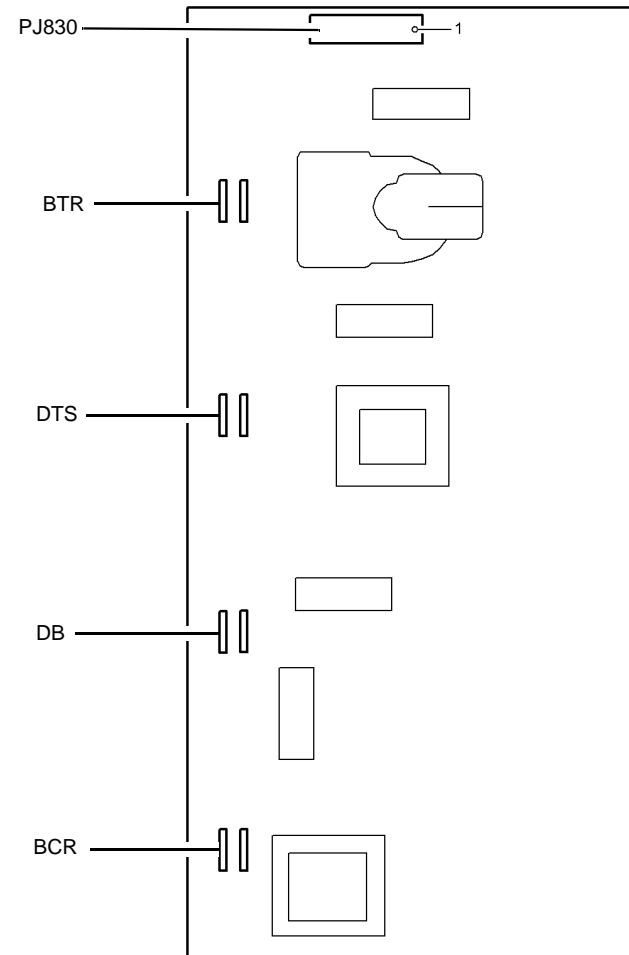
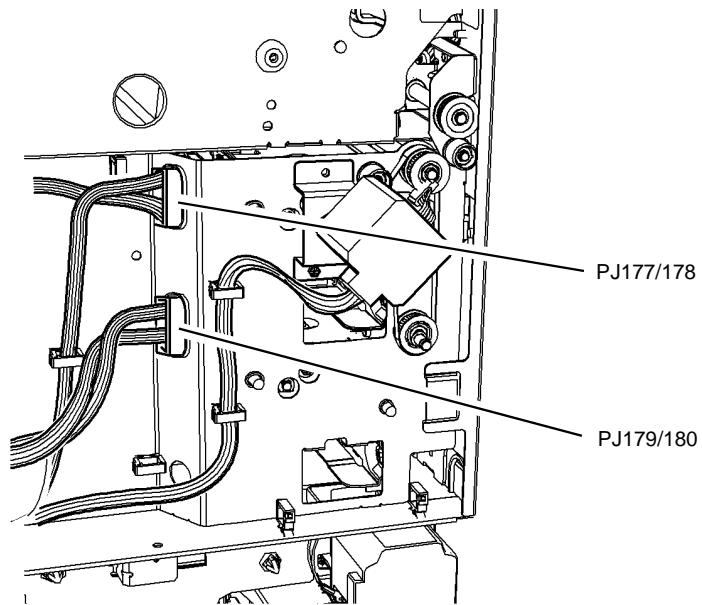


Figure 6 HVPS

W-1-0893-A

**In-line Connectors PJ177/178 and PJ179/180**

Location: [PL 80.26](#)

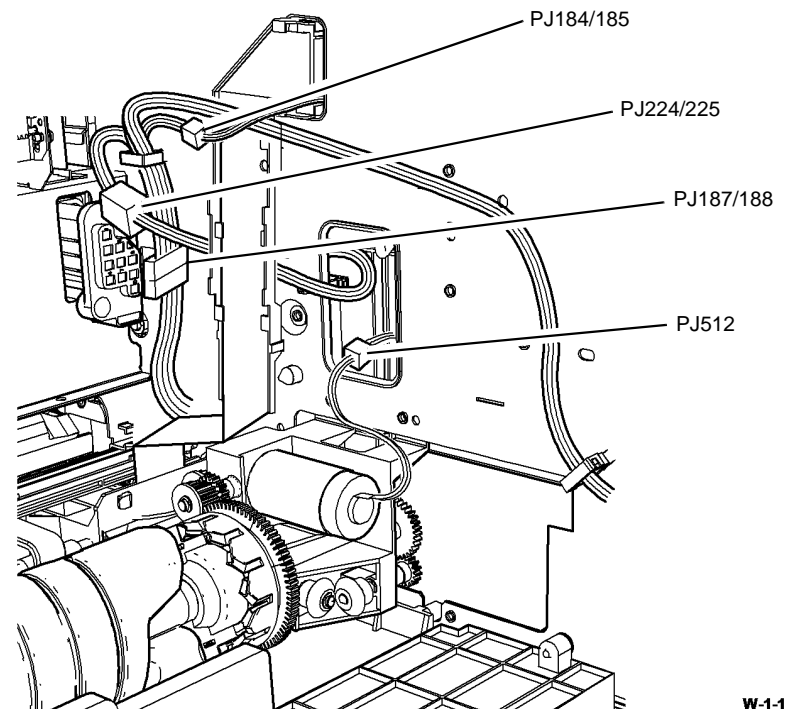


W-1-1166-A

**Figure 7 In-line connectors**

**In-line Connectors PJ184/185, 187/188, PJ224/225 and PJ512**

Location: [PL 10.11](#), [PL 10.12](#) and [PL 90.17](#)



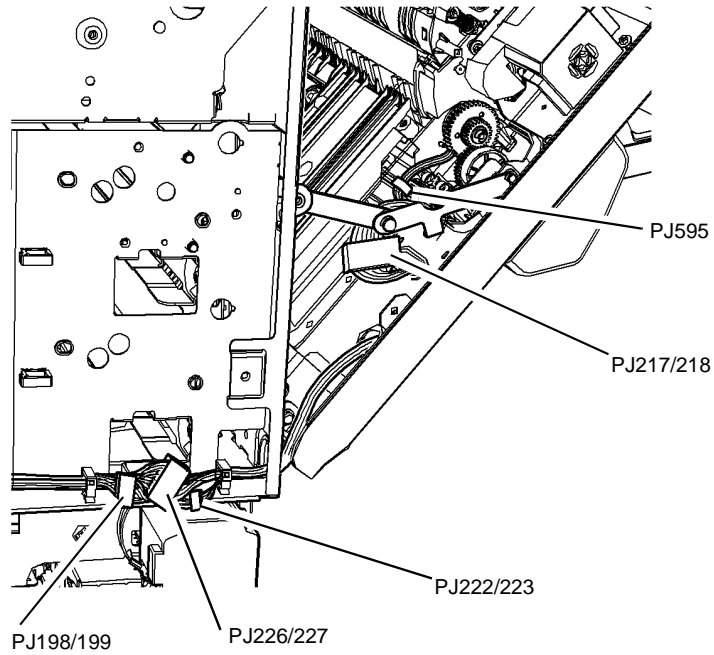
W-1-1170-A

**Figure 8 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 9](#).

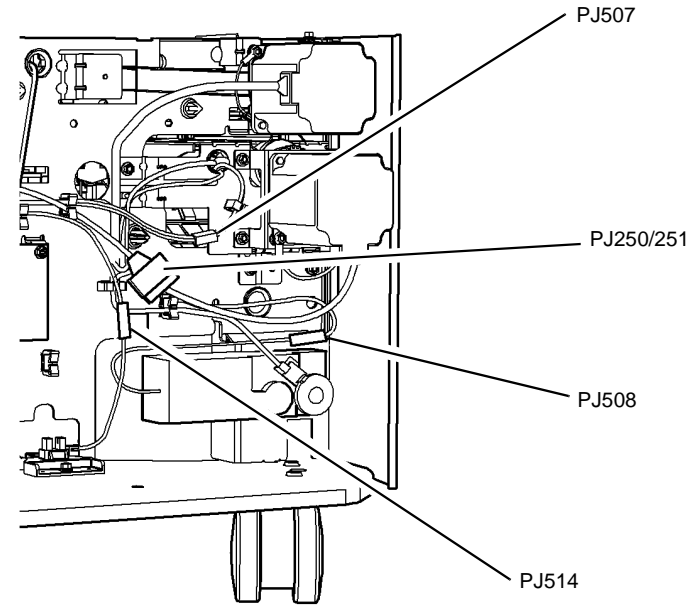


W-1-1165-A

**Figure 9 In-line connectors**

**In-line Connectors PJ250/251, PJ507, PJ508 and PJ514**

Location: [PL 70.21](#)

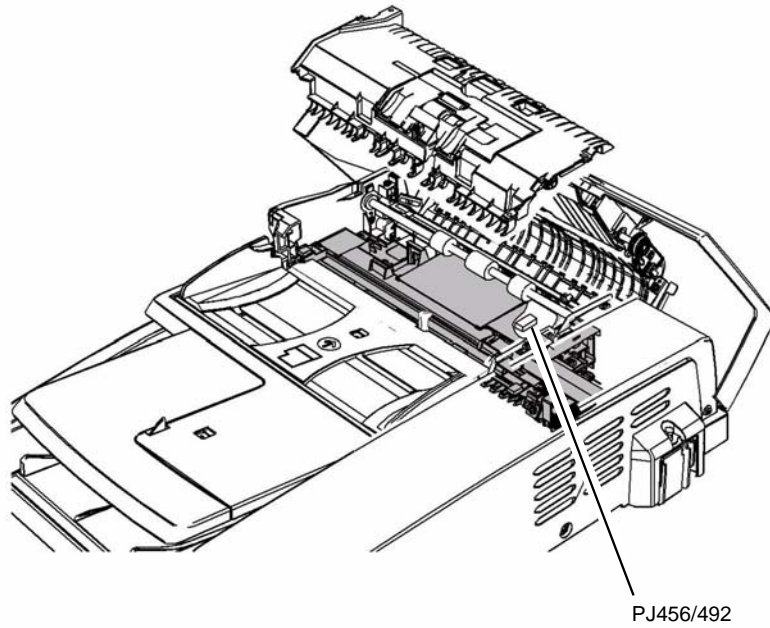


W-1-1302-A

**Figure 10 In-line connectors**

**In-line Connector PJ456/492**

Location: [PL 60.30](#)

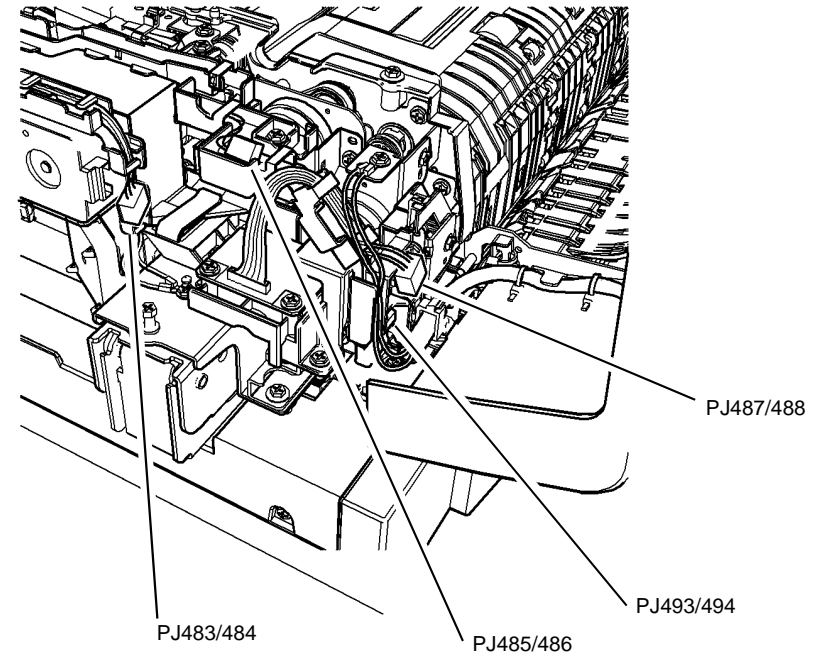


W-1-1303-A

**Figure 11 In-line connector**

**In-line Connectors PJ483/484, PJ485/486, PJ487/488 and PJ493/494**

Location: [PL 5.18](#)

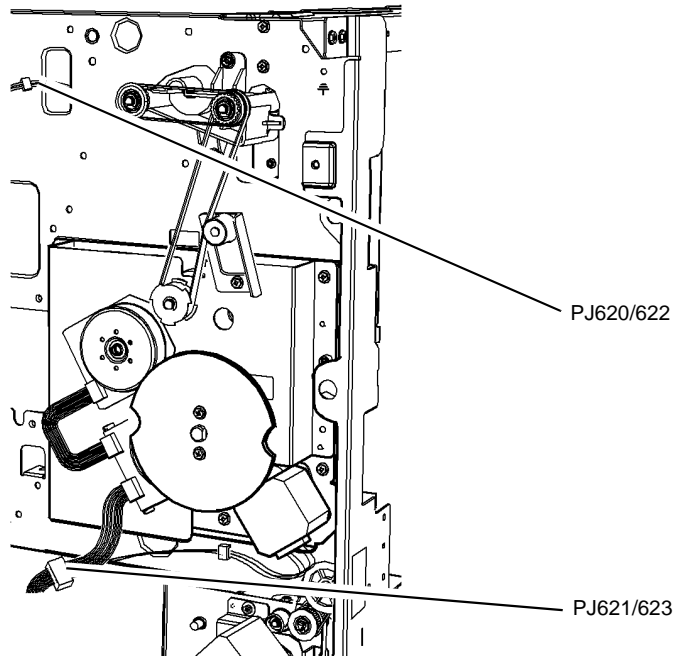


W-1-1167-A

**Figure 12 In-line connector**

**In-line Connectors PJ620/622 and PJ621/623**

Location: [PL 40.15](#)

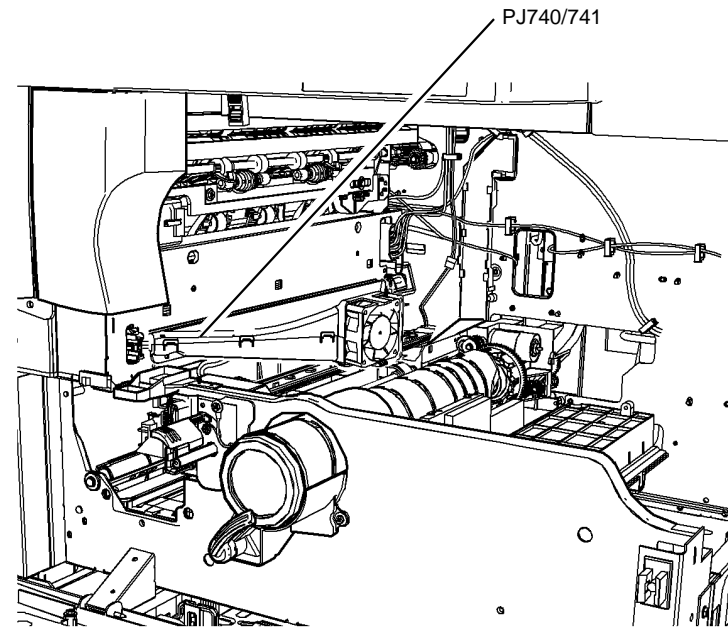


W-1-1380-A

**Figure 13 In-line connector**

**In-line Connector PJ740/741**

Location: [PL 60.35](#)

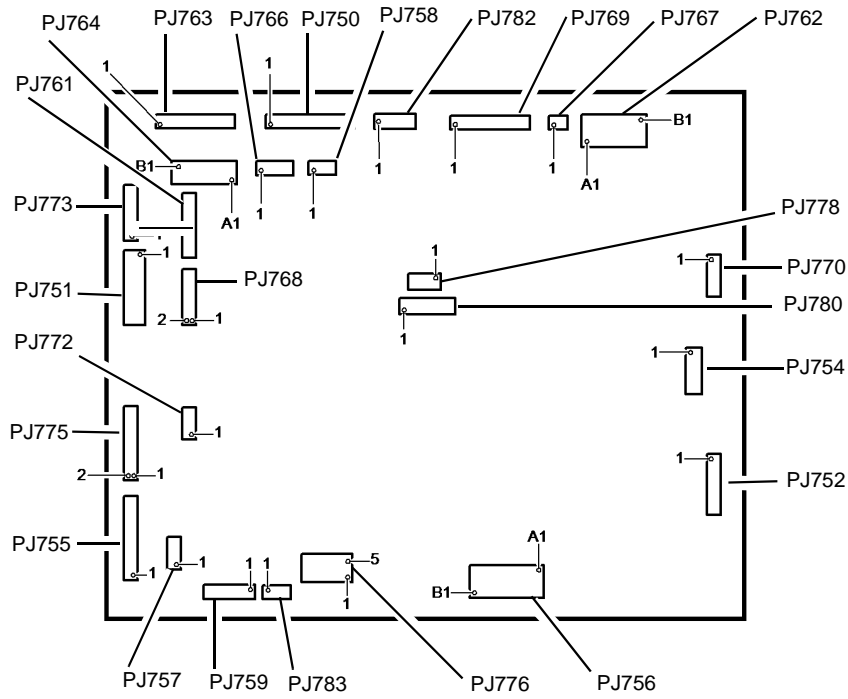


W-1-1312-A

**Figure 14 In-line connector**

**IOT PWB**

Location: [PL 1.10 Item 2](#)

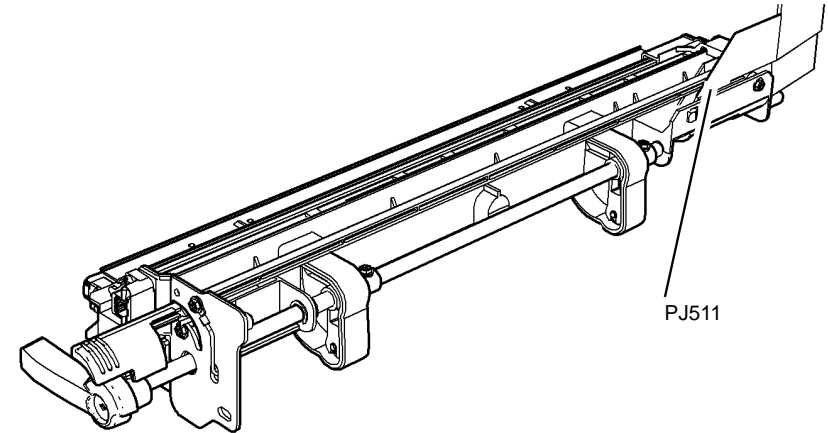


W-1-0861-A

Figure 15 IOT PWB

**LED Print Head Module**

Location: [PL 60.35 Item 1](#)

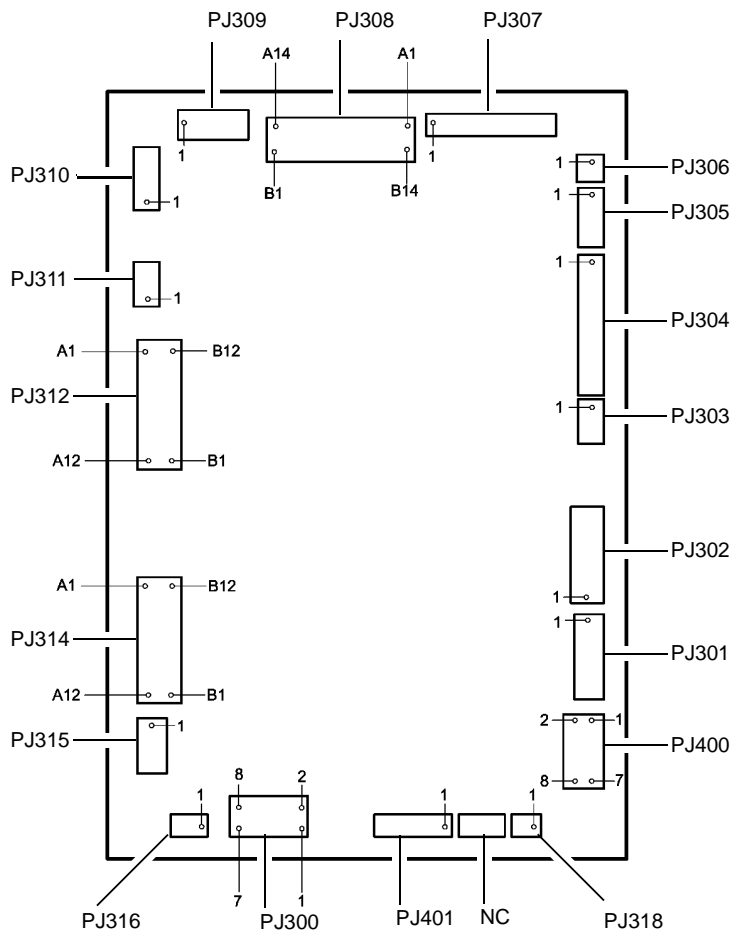


W-1-0953-A

Figure 16 LED print head module

**LVF PWB**

Location: PL 12.425 Item 8

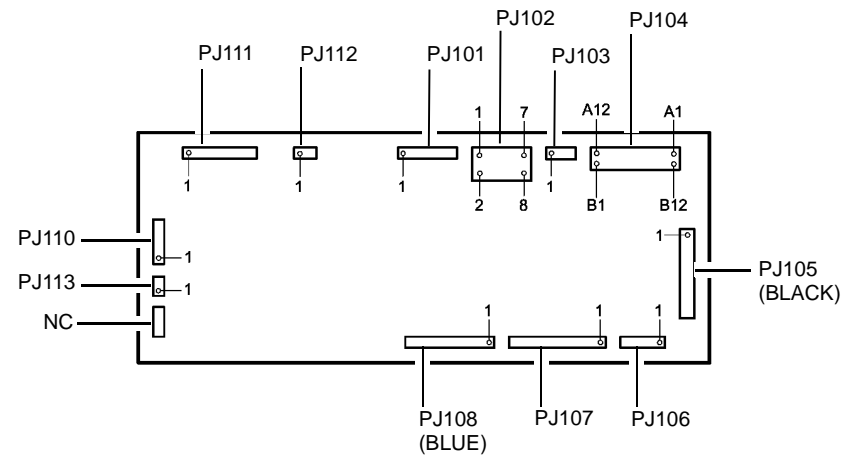


W-1-0870-A

Figure 17 LVF PWB

**LVF BM PWB**

Location: PL 12.425 Item 1

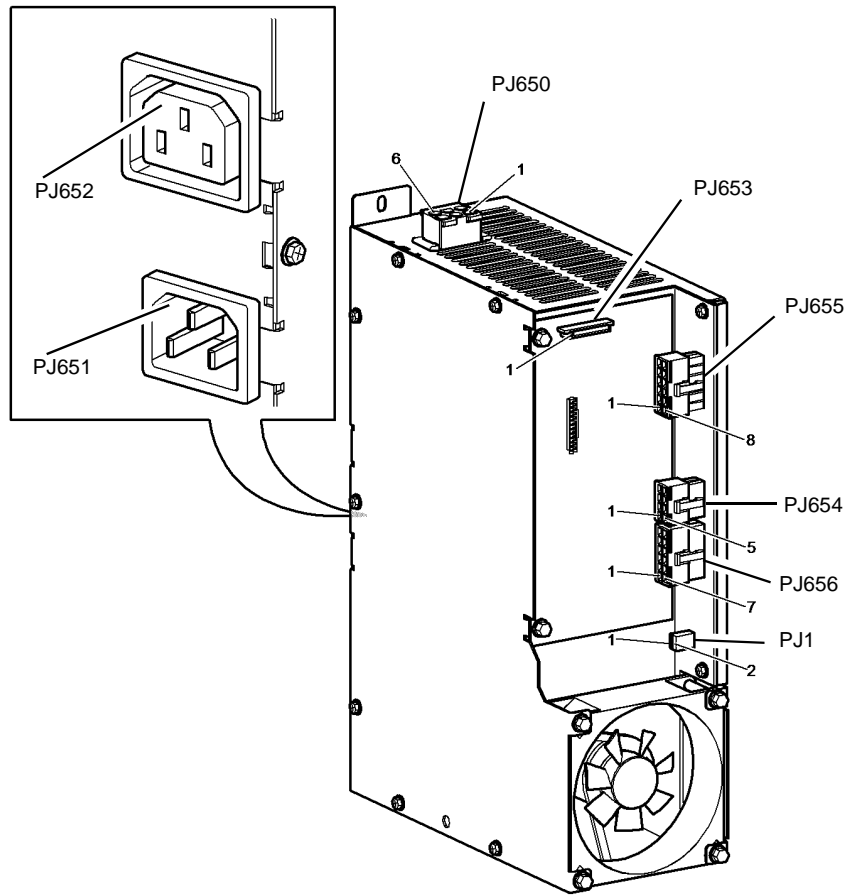


W-1-0852-A

Figure 18 LVF BM PWB

**LVPS**

Location: PL 1.10 Item 3

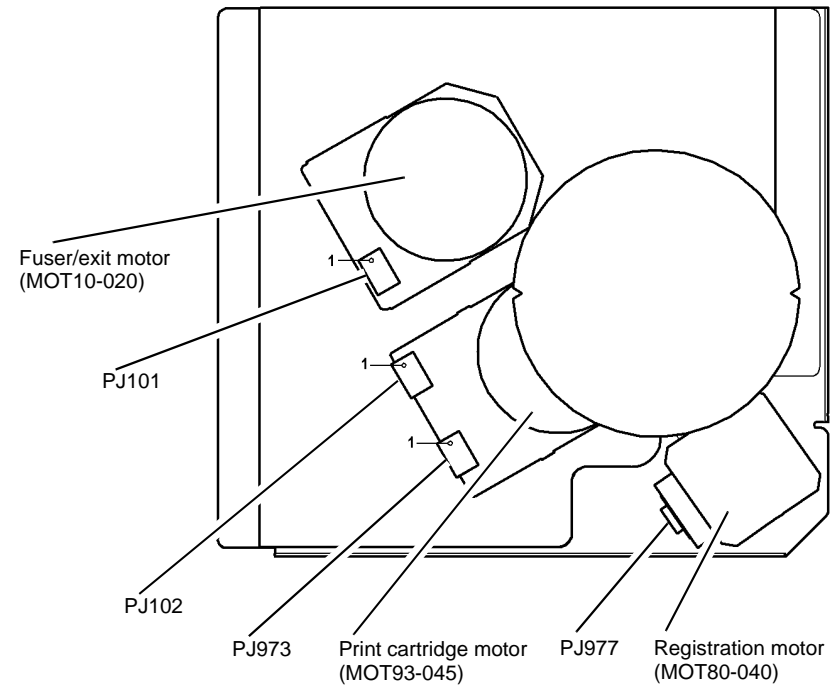


W-1-0862-A

Figure 19 LVPS

**Main Drive Module**

Location: PL 40.15 Item 1



W-1-0958-A

Figure 20 Main drive module



### Print Cartridge

Location: [PL 90.17 Item 9](#)

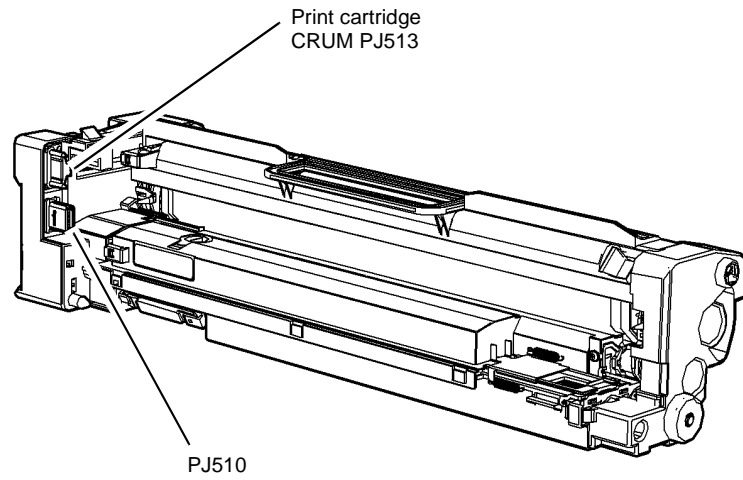


Figure 21 Print cartridge

W-1-1305-A

### SBC PWB

Location: [PL 3.22 Item 3](#)

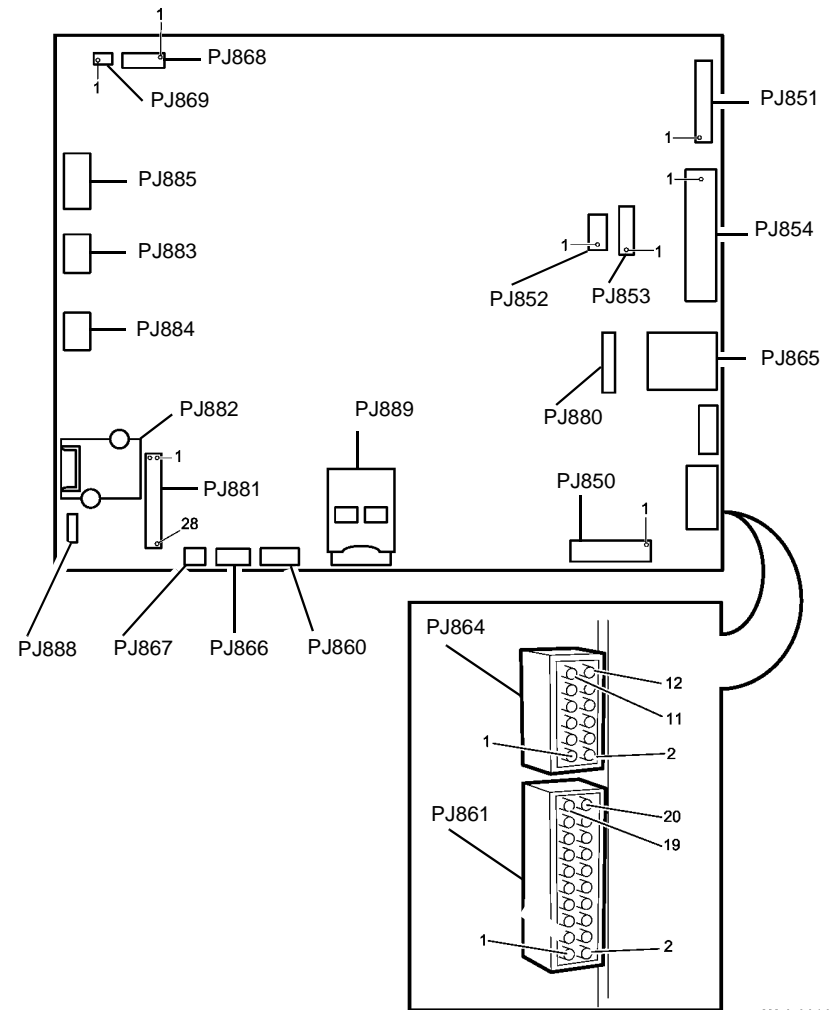


Figure 22 SBC PWB

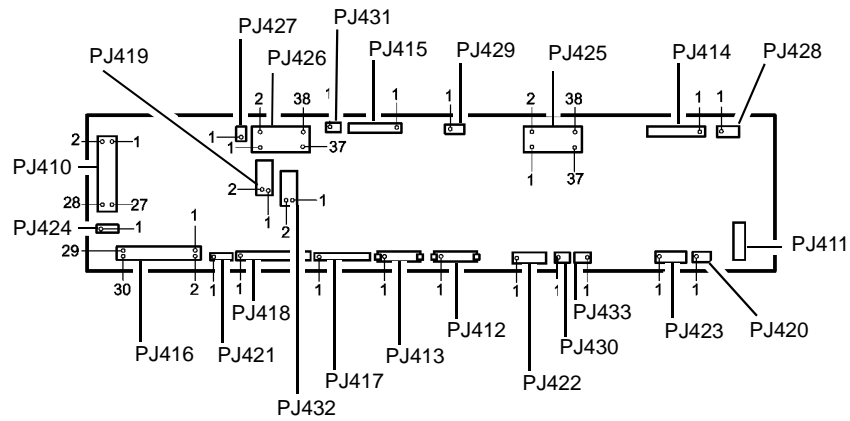
W-1-0868-A

**Scanner PWB**

Location: PL 60.20 Item 4

**Scanner CCD PWB**

Location: PL 60.25 Item 4



W-1-0860-A

**Figure 23 Scanner PWB**



W-1-0858-A

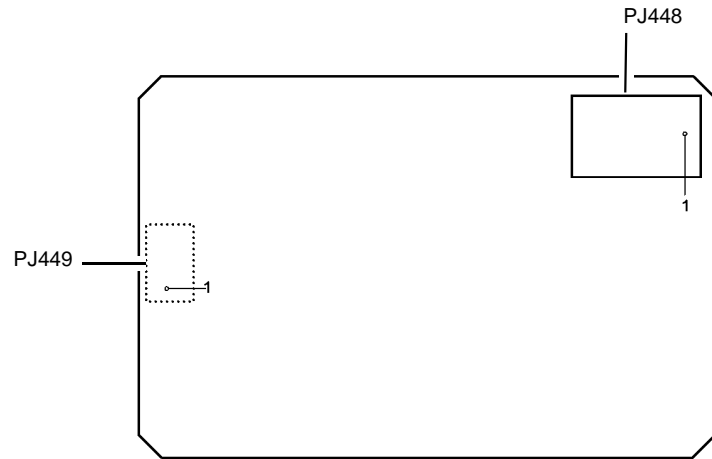
**Figure 24 Scanner CCD PWB**

**Scanner LED Drive PWB**

Location: PL 60.25 Item 6

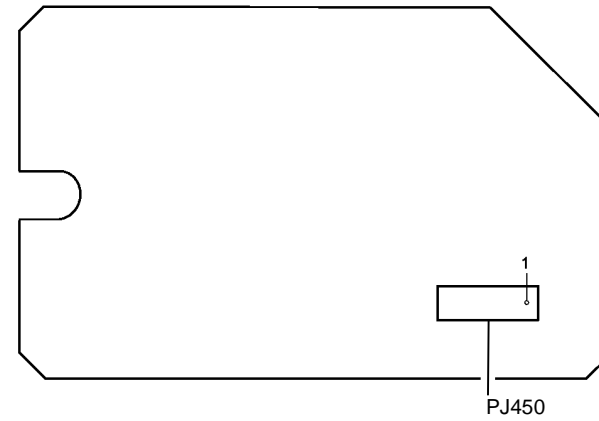
**Scanner LED Lamp PWB**

Location: PL 60.25 Item 2



W-1-0872-A

**Figure 25 Scanner LED drive PWB**

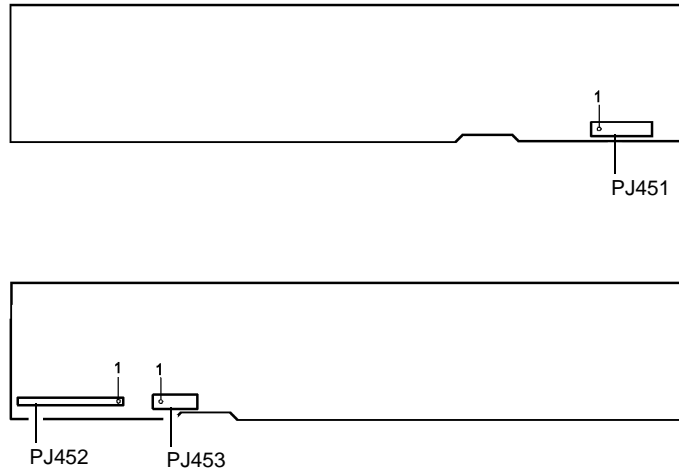


W-1-0859-A

**Figure 26 Scanner LED lamp PWB**

**Side 2 CCD PWB**

Location: PL 60.30 Item 4

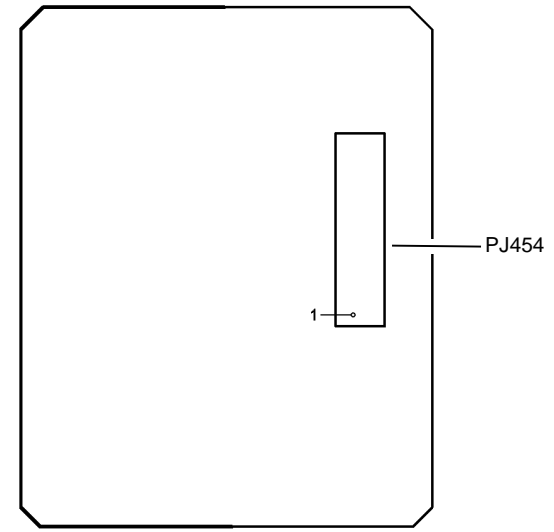


W-1-0855-A

**Figure 27 Side 2 CCD PWB**

**Side 2 LED Drive PWB**

Location: PL 60.30

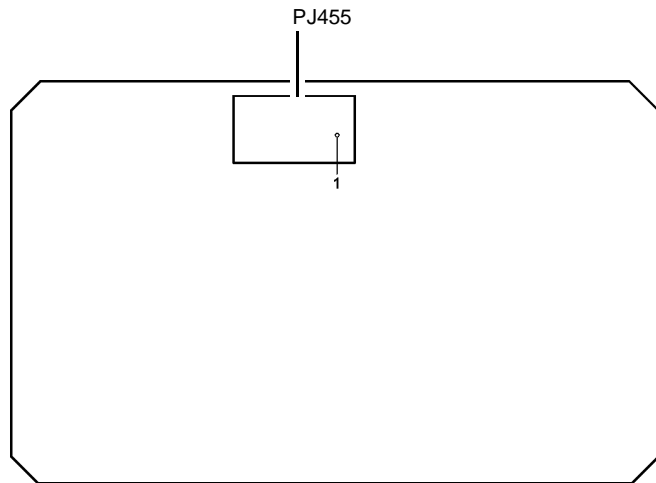


W-1-0856-A

**Figure 28 Side 2 LED drive PWB**

**Side 2 LED Lamp PWB**

Location: PL 60.30 Item 2

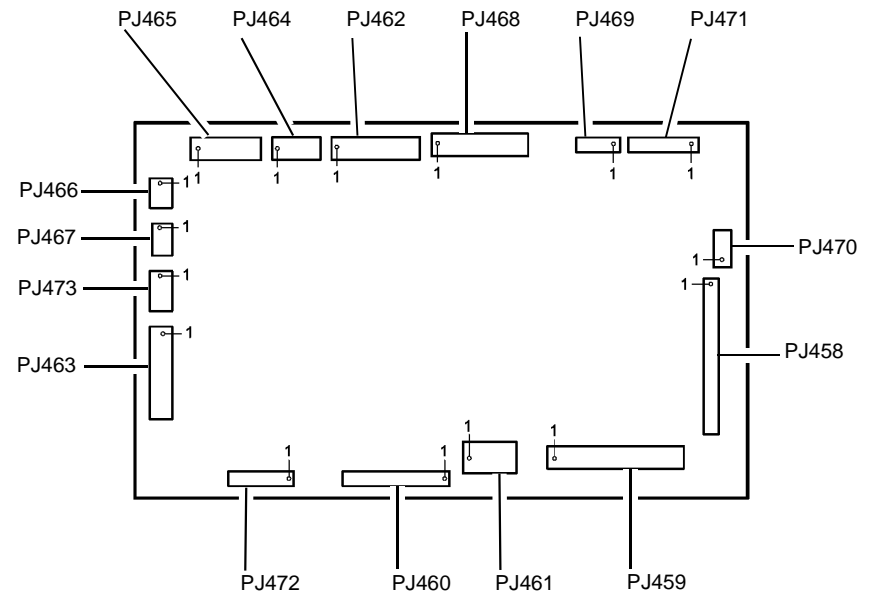


W-1-0857-A

**Figure 29 Side 2 LED lamp PWB**

**SPDH PWB**

Location: PL 5.10 Item 5

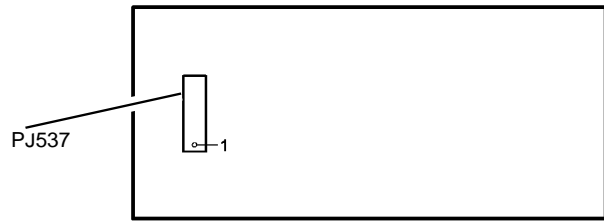


W-1-0853-A

**Figure 30 SPDH PWB**

**Tray 1 Paper Size Sensing PWB**

Location: PL 70.10 Item 18

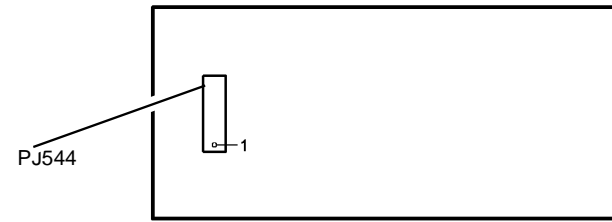


**Figure 31 Tray 1 paper size sensing PWB**

W-1-1072-A

**Tray 2 Paper Size Sensing PWB**

Location: PL 70.10 Item 18

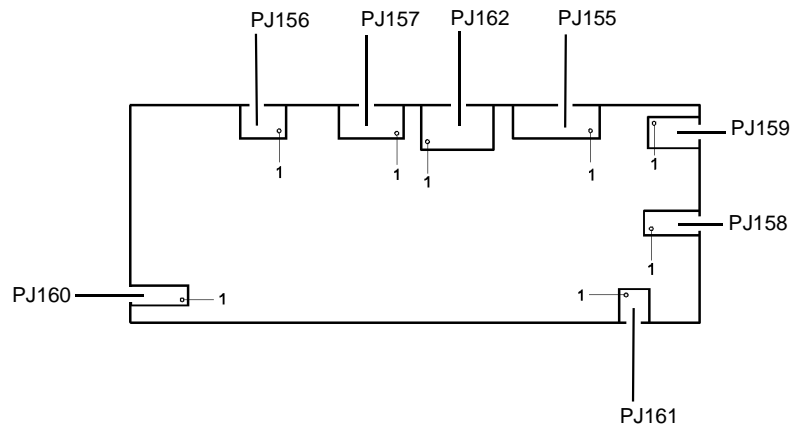


**Figure 32 Tray 2 paper size sensing PWB**

W-1-1073-A

**Tray 4 Control PWB**

Location: PL 70.21 Item 2

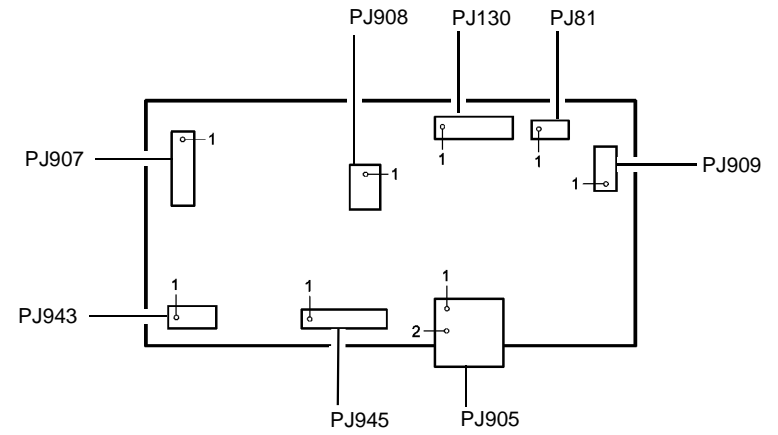


W-1-0957-A

**Figure 33 Tray 4 Control PWB**

**UI Control PWB**

Location: PL 2.10 Item 6

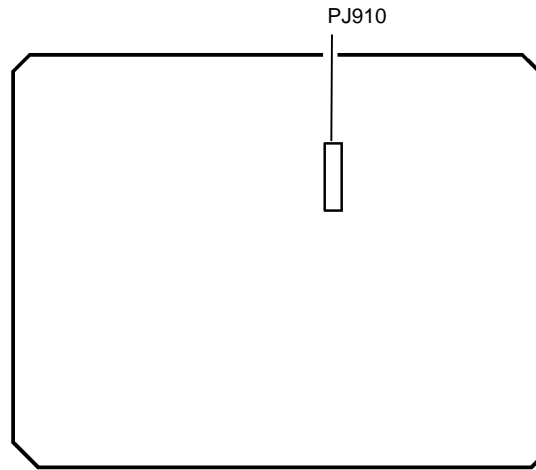


W-1-0865-A

**Figure 34 UI control PWB**

**UI Keyboard PWB**

Location: [PL 2.10 Item 9](#)

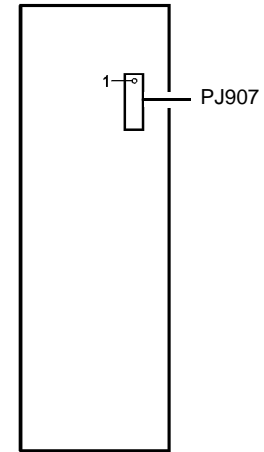


W-1-0854-A

**Figure 35 UI keyboard PWB**

**UI Status PWB**

Location: [PL 2.10 Item 7](#)



W-1-0869-A

**Figure 36 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:

IOT PWB, bypass tray, TAR sensors, tray 1 and 2 sensors, [WD 5](#).

IOT PWB, tray 1 and 2 feed motors, tray 3 sensors, [WD 6](#).

IOT PWB, tray 3 motors, main drive module, [WD 7](#).

IOT PWB, invert motor, duplex motor, registration motor, [WD 8](#).

IOT PWB, LVPS, fuser, print cartridge, [WD 9](#).

IOT PWB, HVPS, SBC PWB, [WD 10](#).

IOT PWB, horizontal transport, tray 4 control PWB, [WD 11](#).

IOT PWB, LVPS, HVPS, [WD 12](#).

2K LCSS PWB, [WD 19](#), [WD 20](#), [WD 21](#), [WD 22](#).

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](#), [WD 17](#).

SPDH PWB, side 2 CCD PWB, scanner PWB, [WD 13](#).

SPDH PWB, [WD 15](#).

SPDH PWB, side 2 CCD PWB, side 2 LED drive PWB, side 2 LED lamp, [WD 14](#).

Tray 4 Control PWB, [WD 18](#).

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.

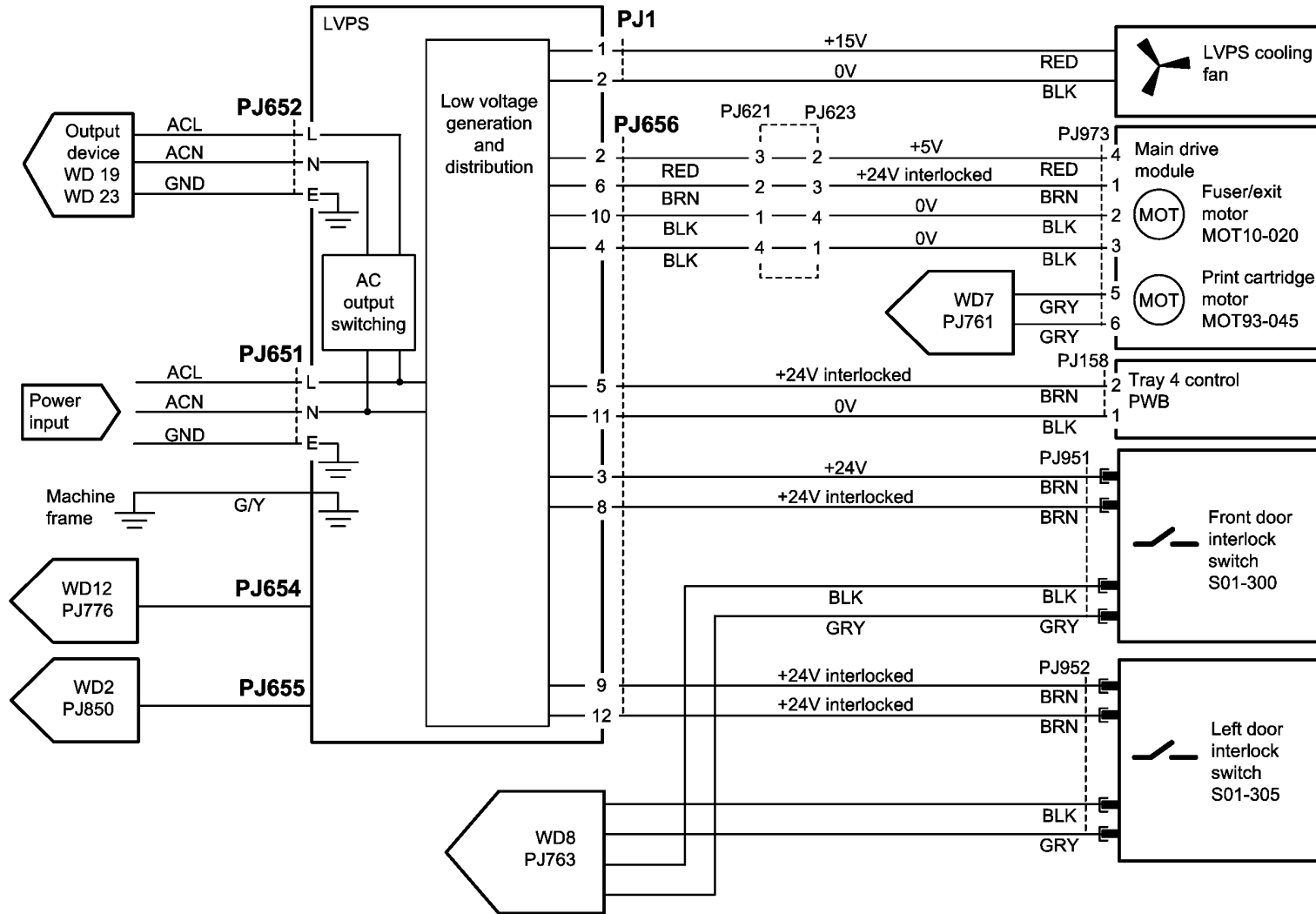
## How to Use Wiring Diagrams

**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.

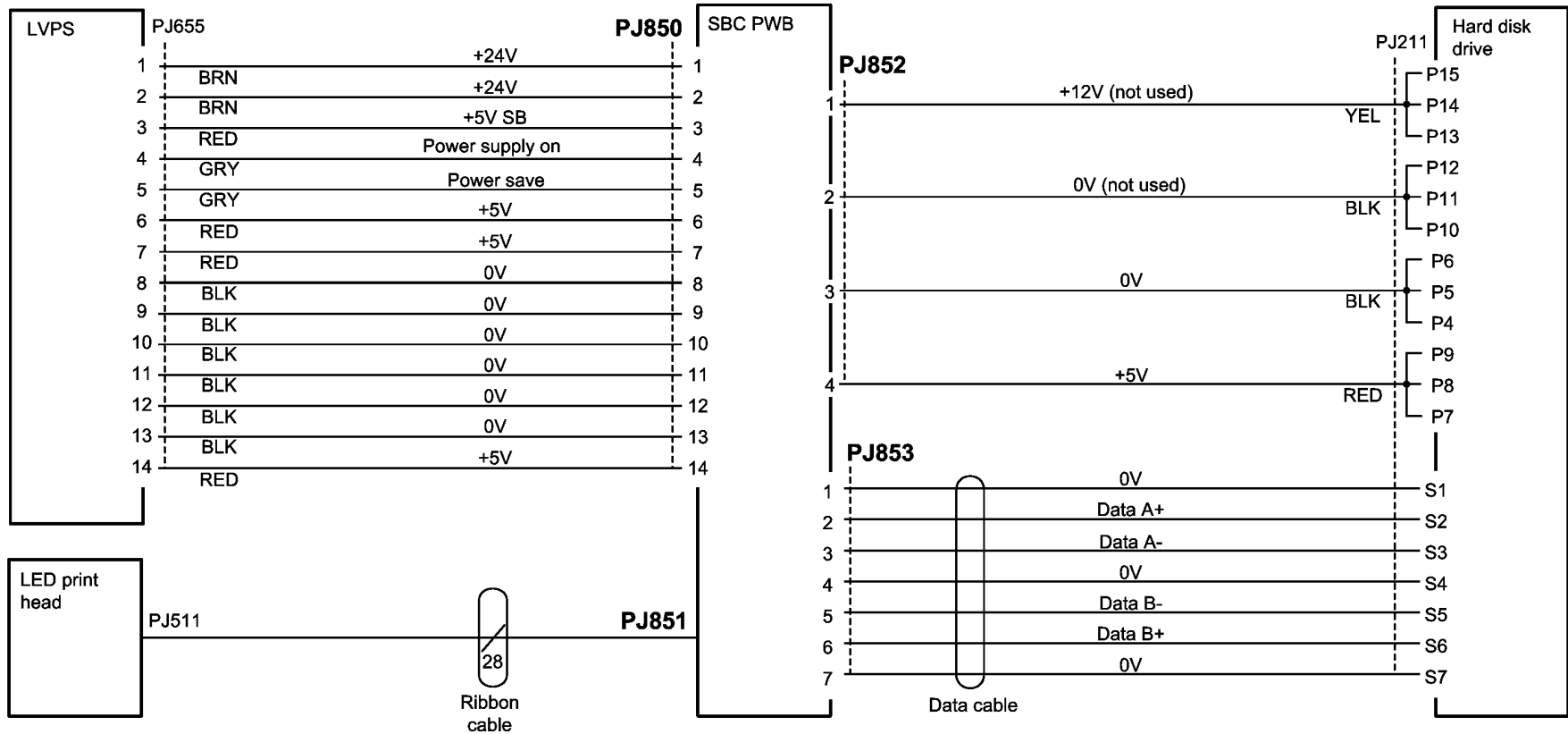
# Wiring Diagram 1



TW-1-0177-A

Figure 1 Wiring Diagram 1

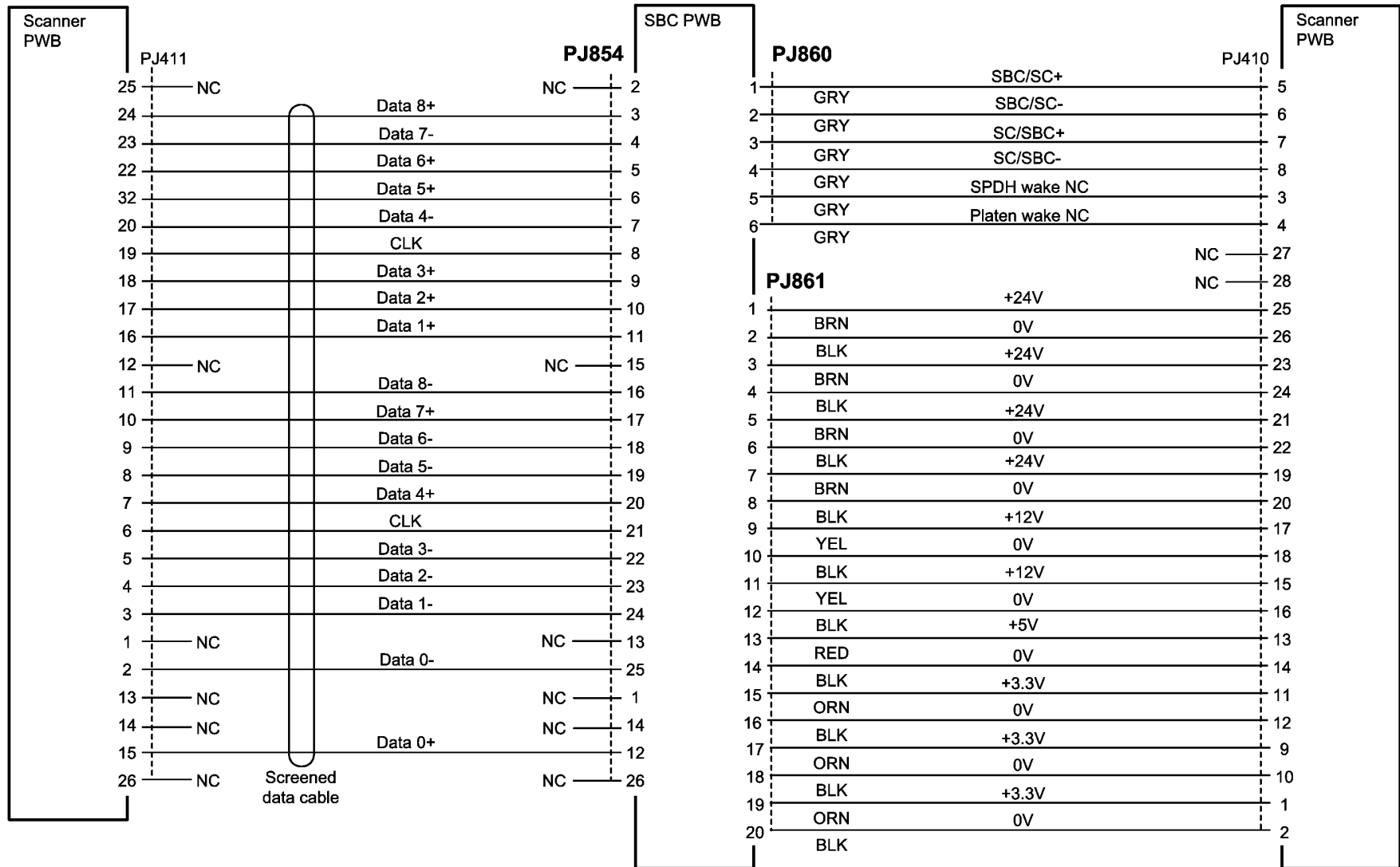
# Wiring Diagram 2



TW-1-0173-A

Figure 2 Wiring Diagram 2

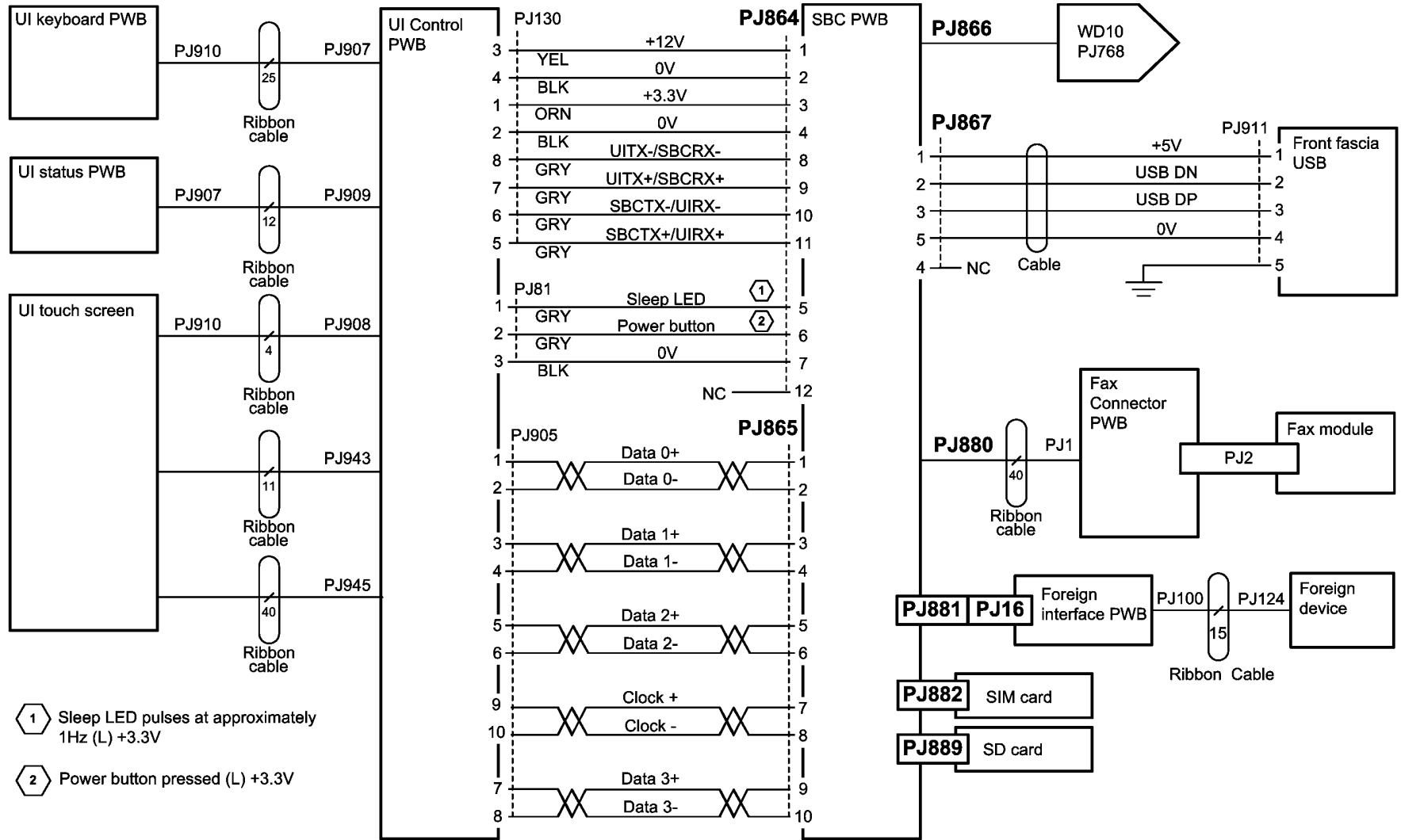
# Wiring Diagram 3



TW-1-0174-A

Figure 3 Wiring Diagram 3

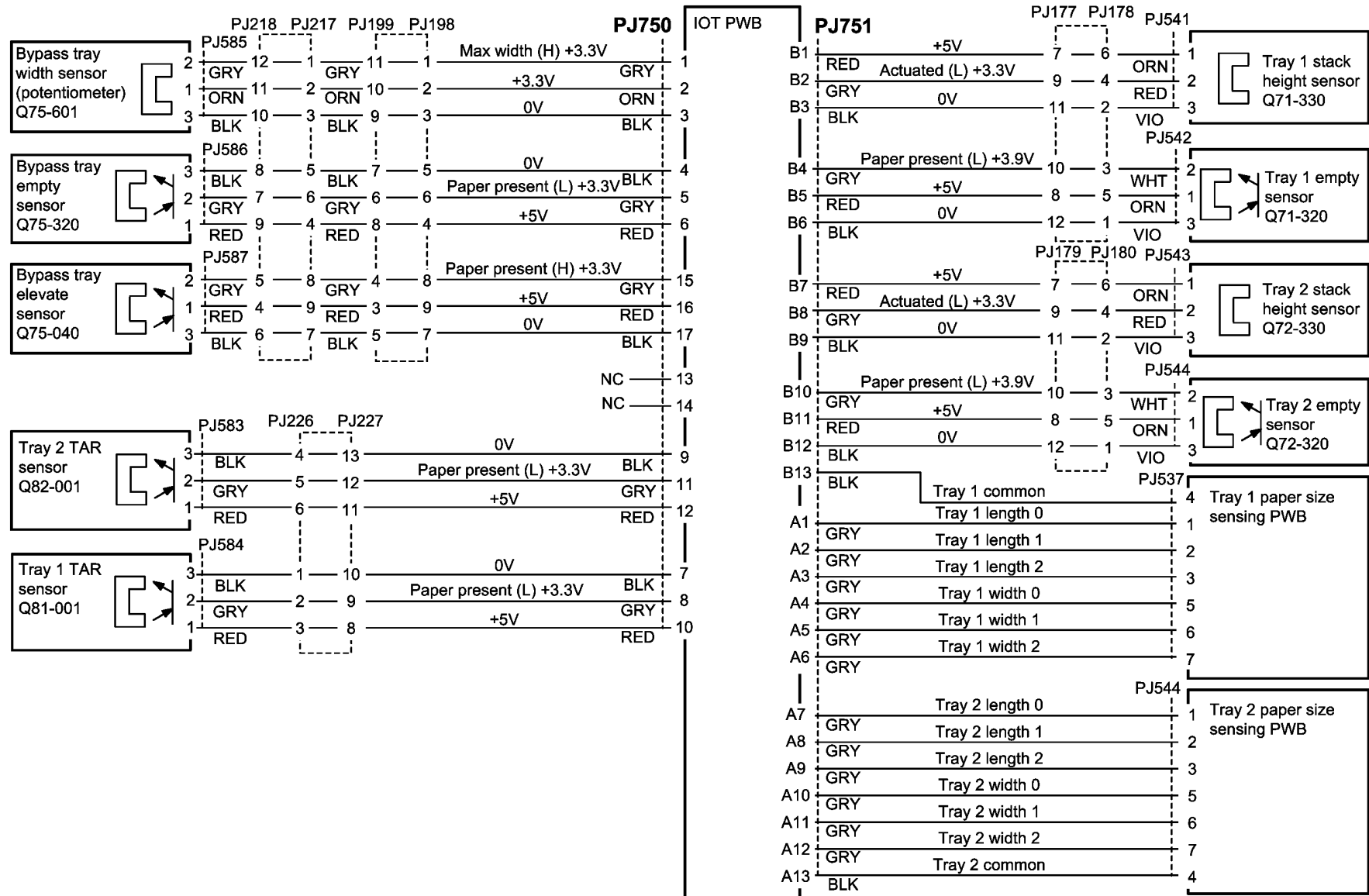
# Wiring Diagram 4



TW-1-0175-B

Figure 4 Wiring Diagram 4

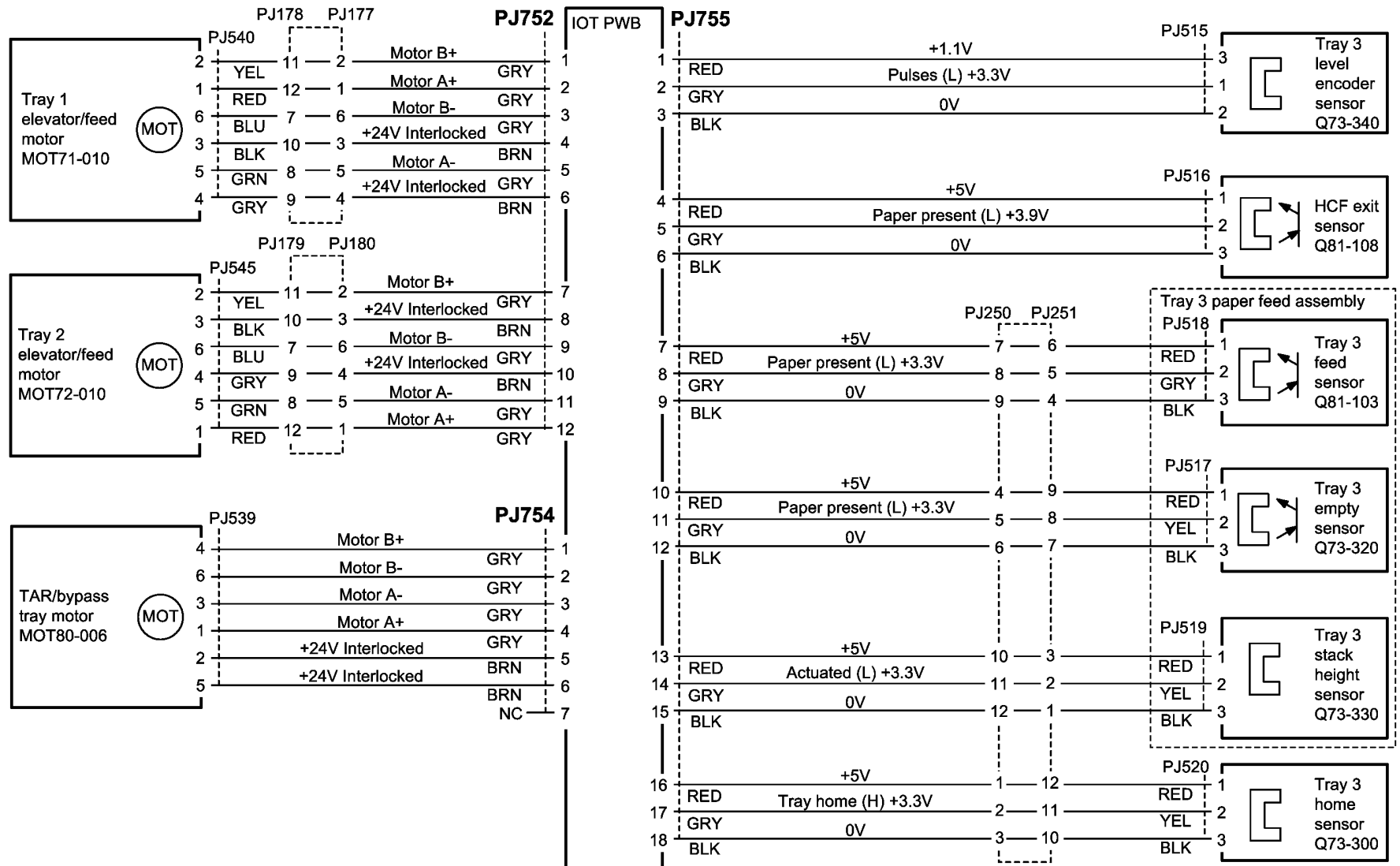
# Wiring Diagram 5



TW-1-0165-A

Figure 5 Wiring Diagram 5

# Wiring Diagram 6



TW-1-0166-A

Figure 6 Wiring Diagram 6

# Wiring Diagram 7

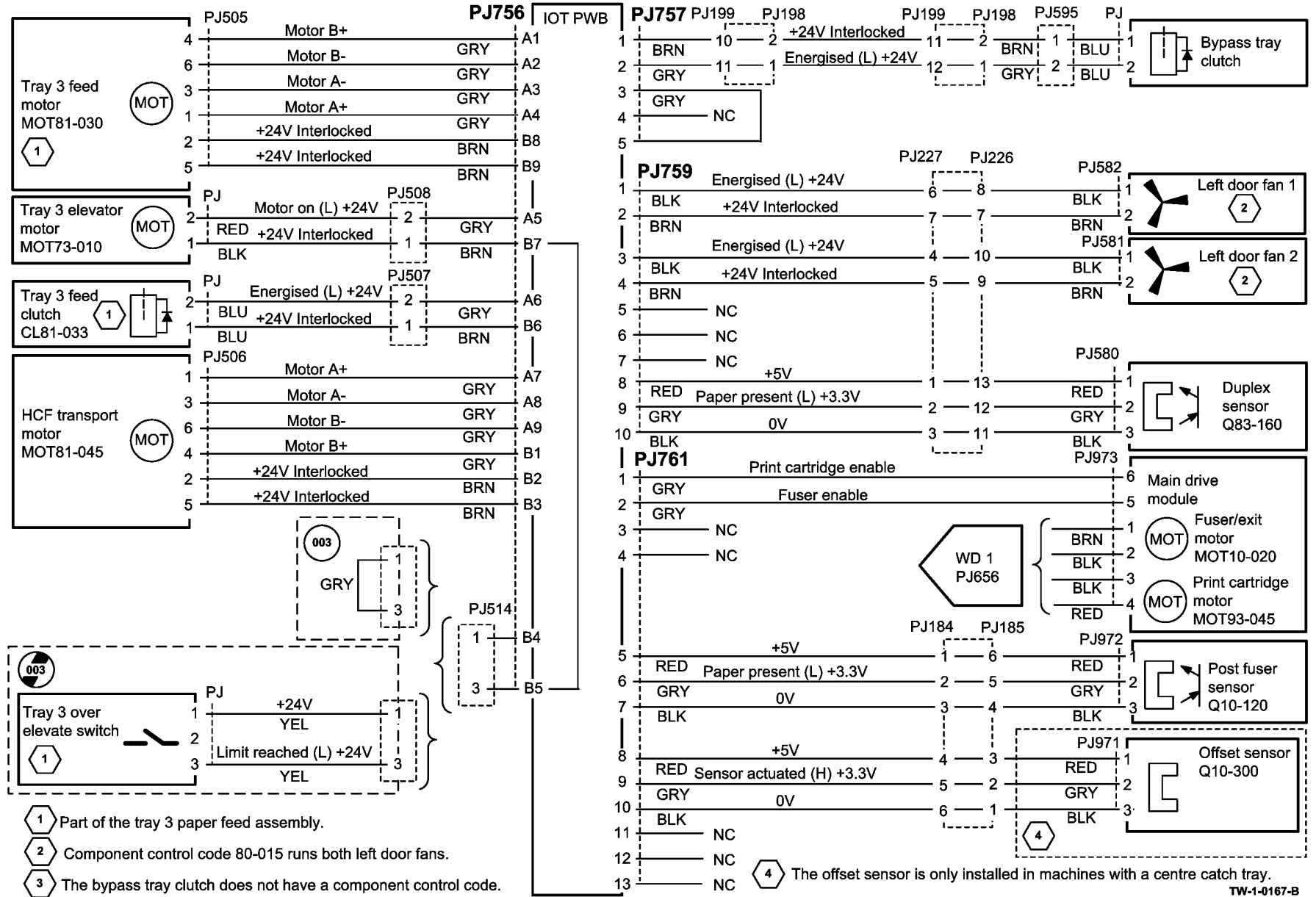
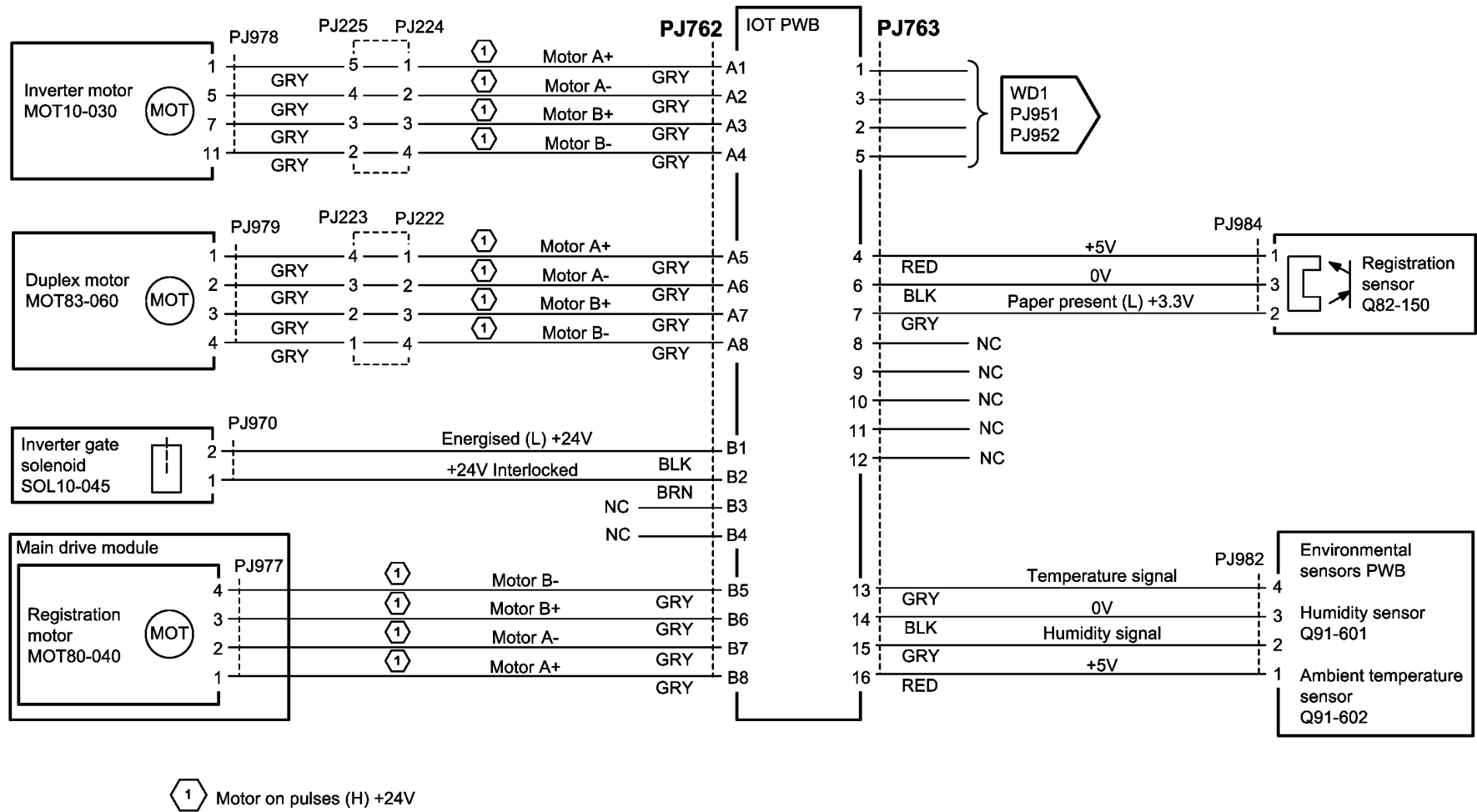


Figure 7 Wiring Diagram 7



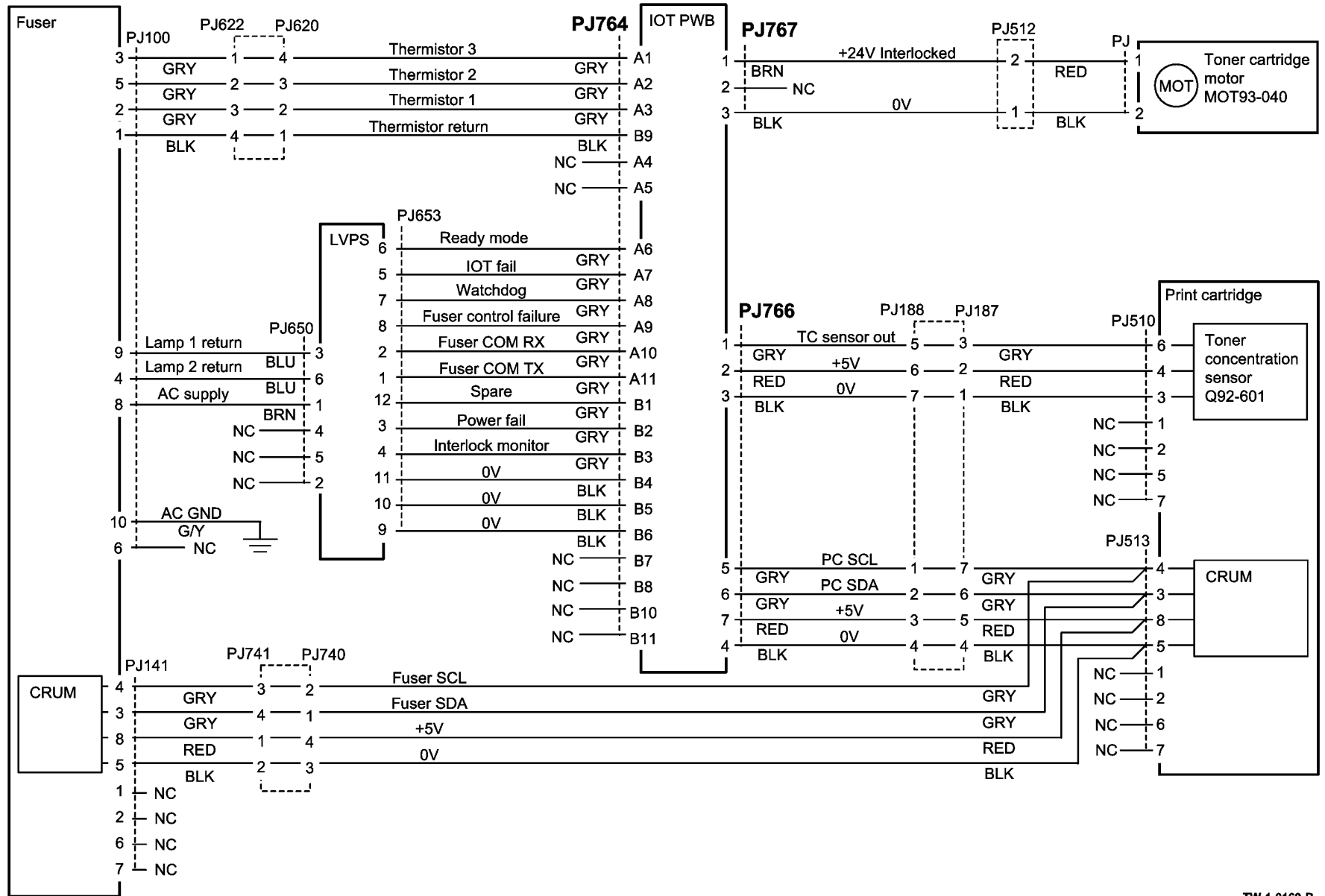
# Wiring Diagram 8



TW-1-0168-A

Figure 8 Wiring Diagram 8

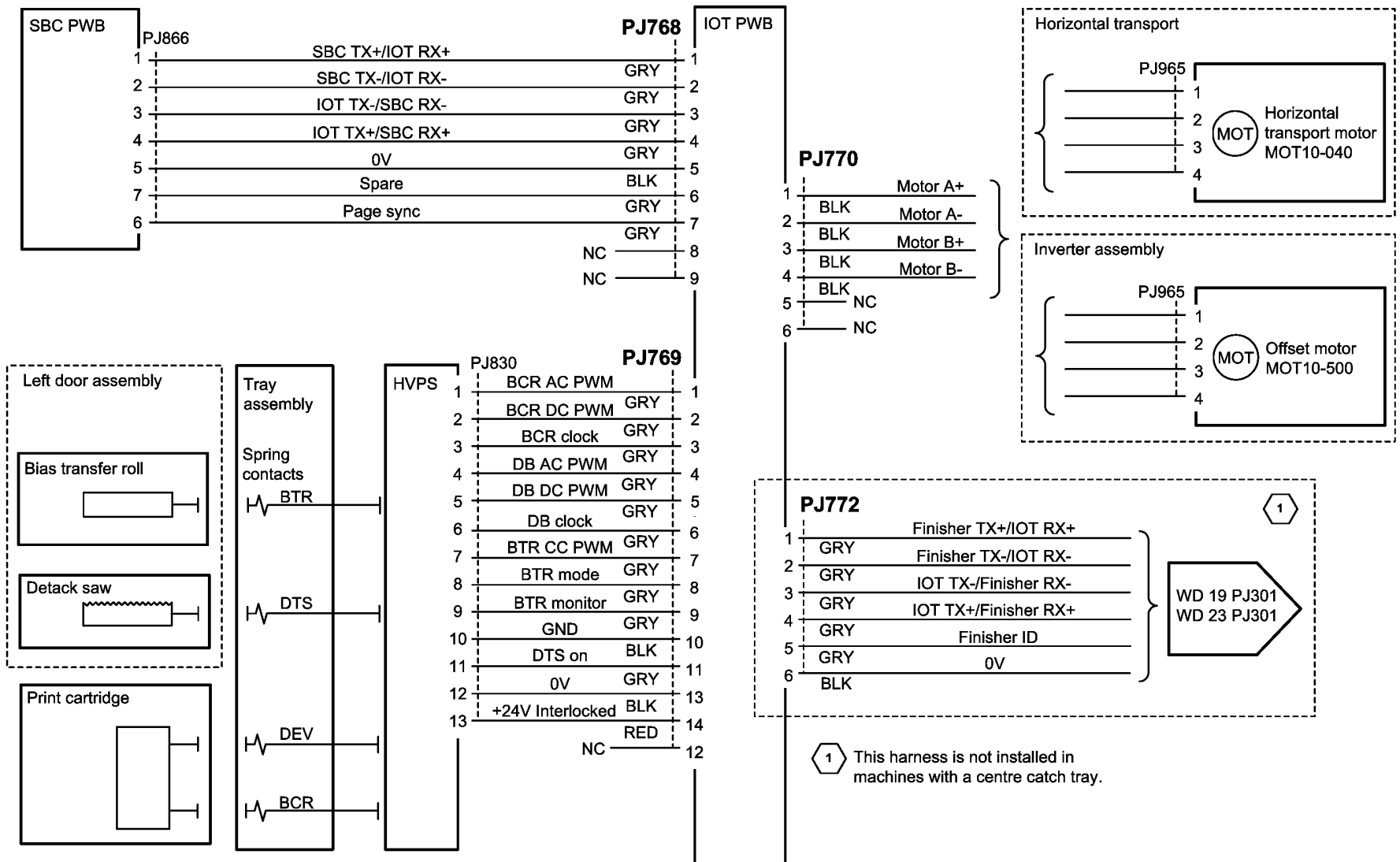
# Wiring Diagram 9



TW-1-0169-B

Figure 9 Wiring Diagram 9

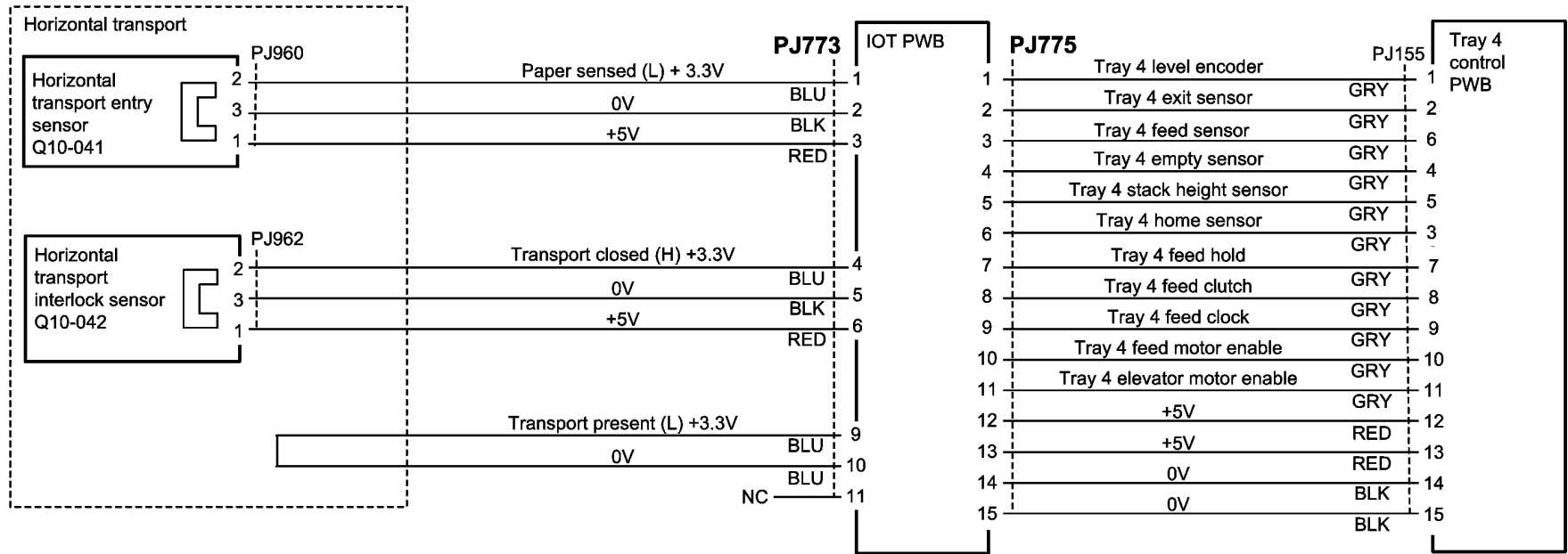
# Wiring Diagram 10



TW-1-0170-A

Figure 10 Wiring Diagram 10

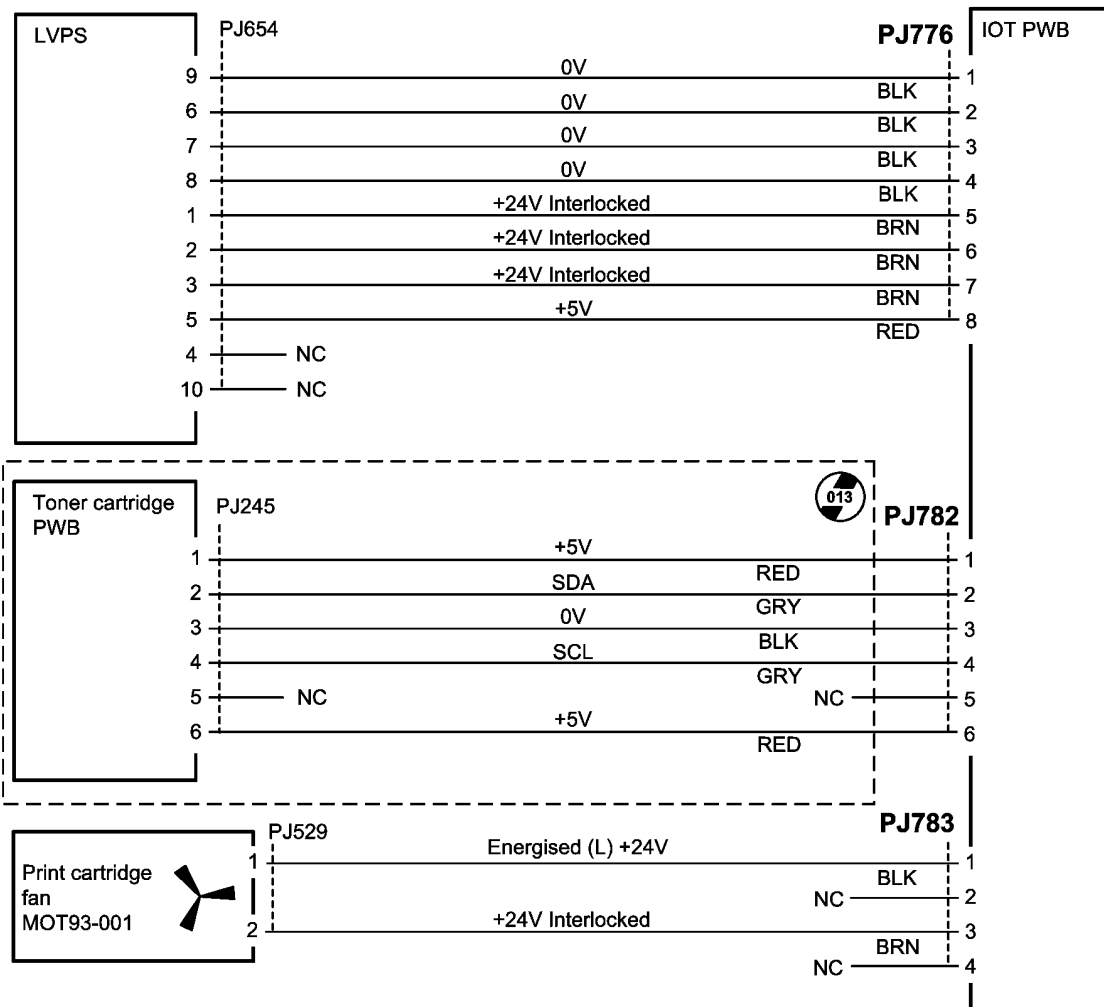
# Wiring Diagram 11



TW-1-0171-A

Figure 11 Wiring Diagram 11

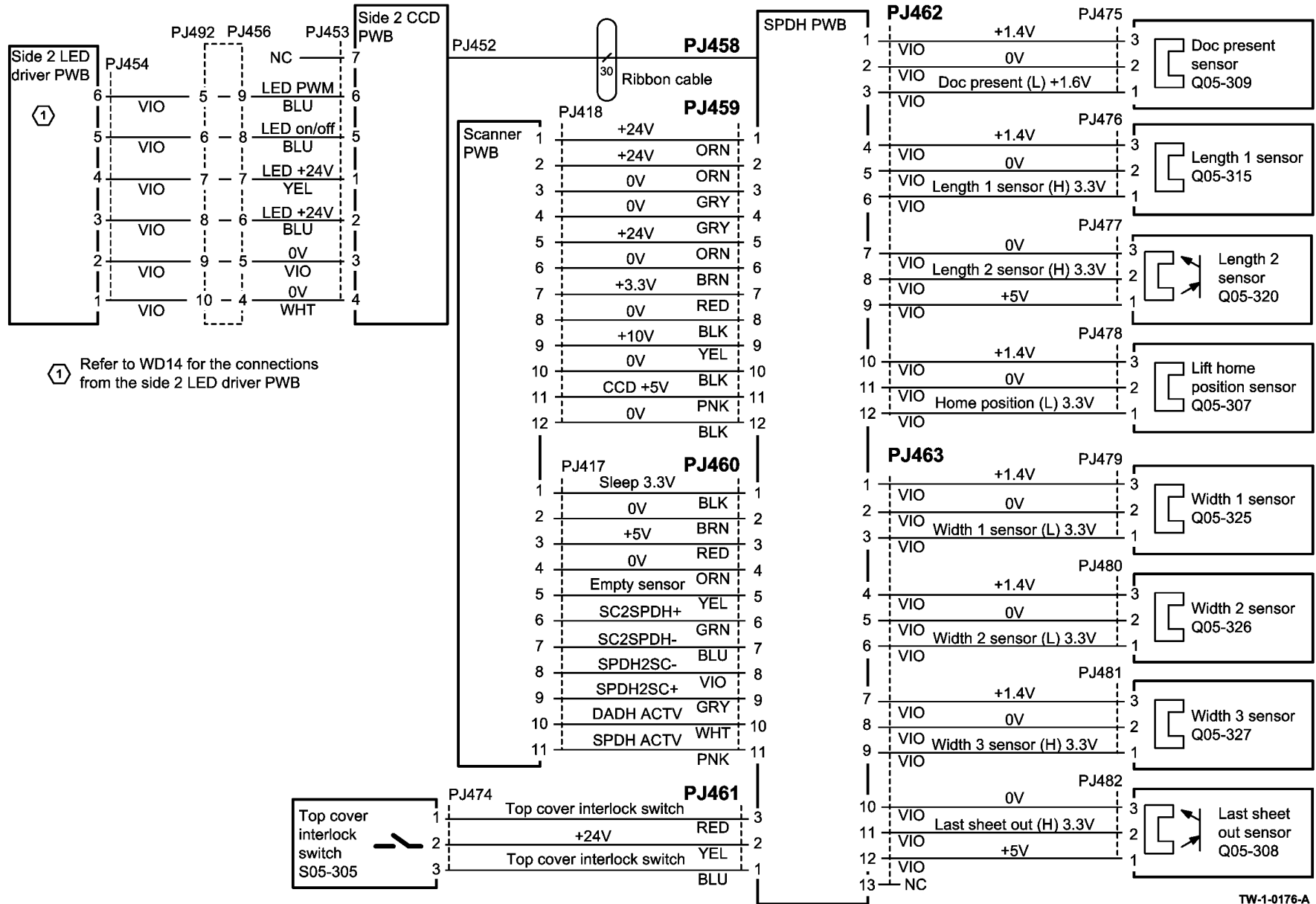
# Wiring Diagram 12



TW-1-0172-B

Figure 12 Wiring Diagram 12

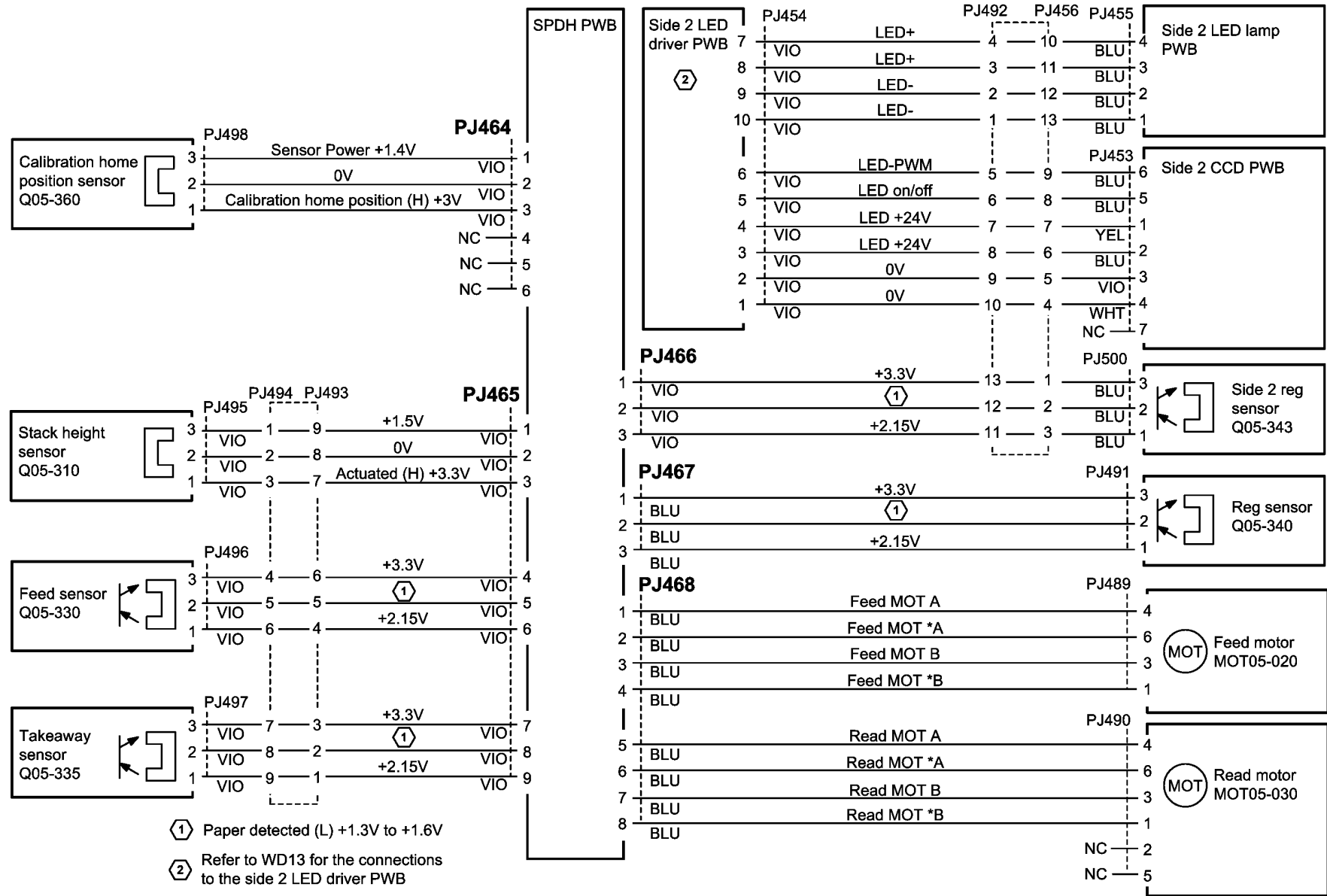
# Wiring Diagram 13



TW-1-0176-A

Figure 13 Wiring Diagram 13

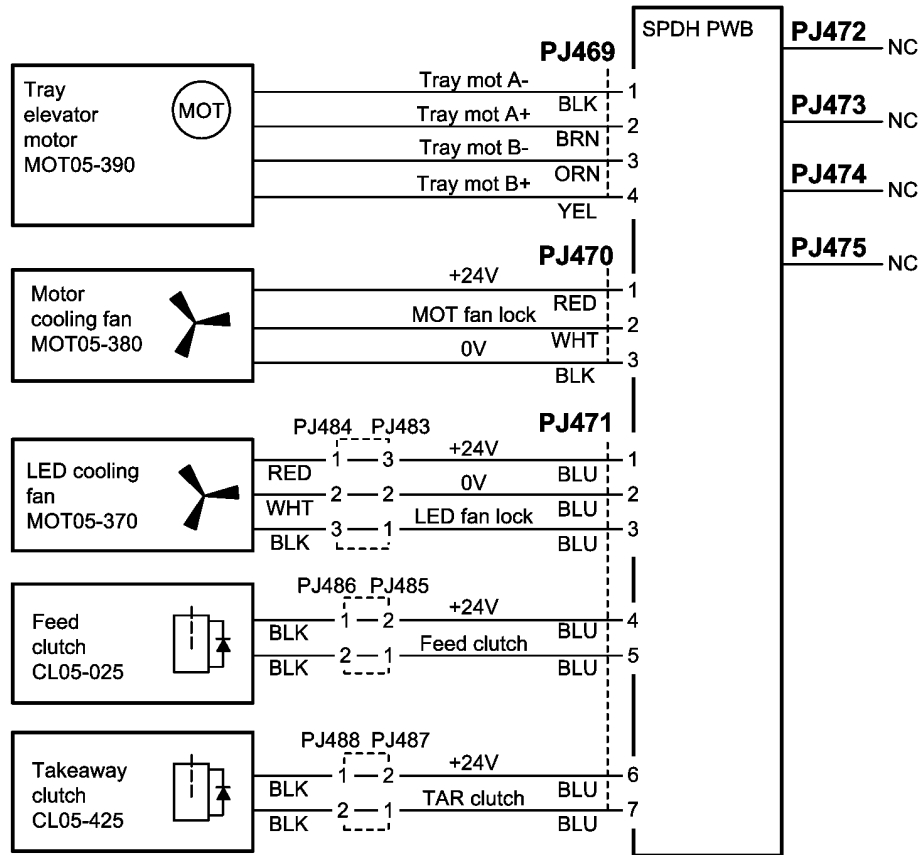
# Wiring Diagram 14



TW-1-0184-A

Figure 14 Wiring Diagram 14

# Wiring Diagram 15

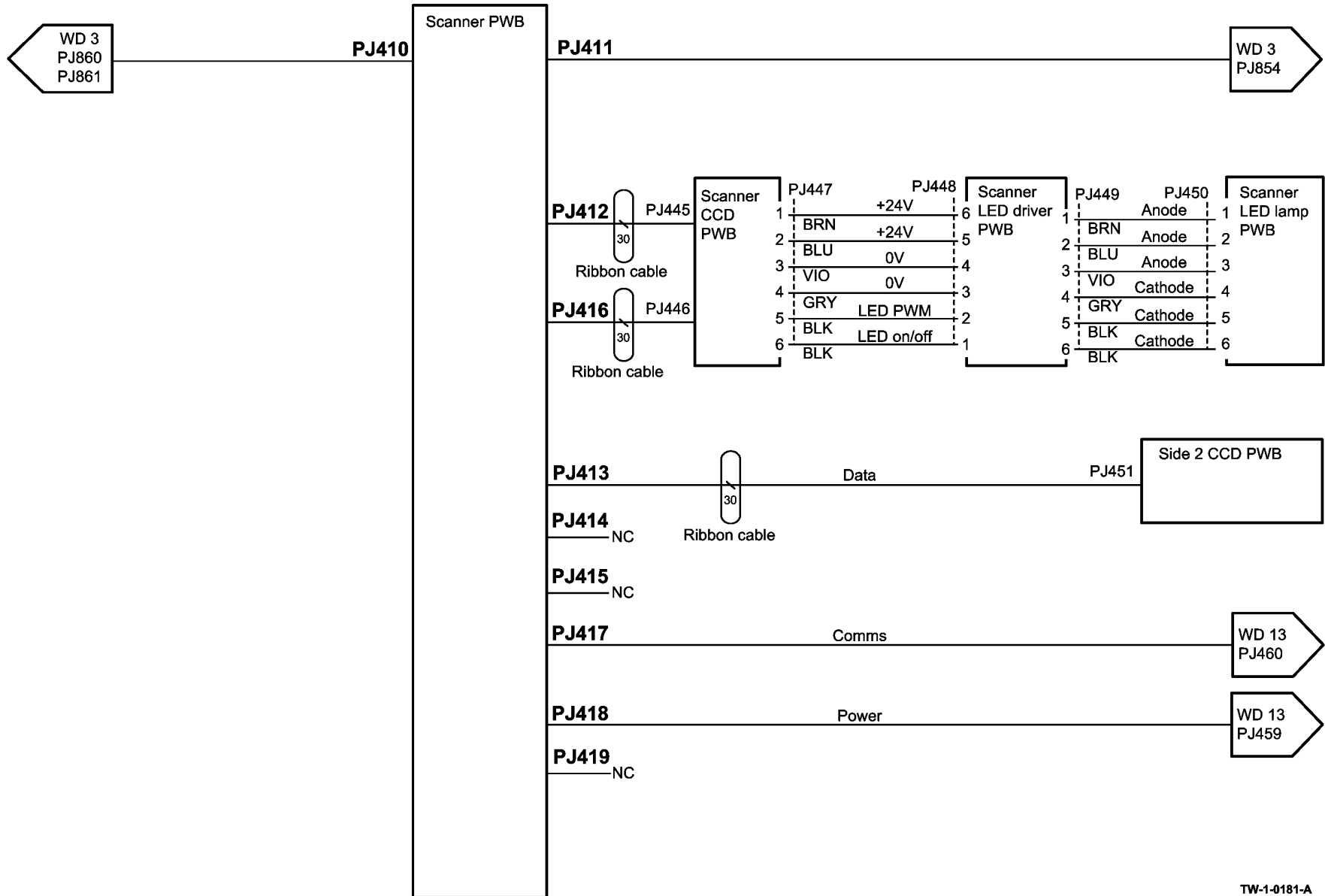


TW-1-0183-A

Figure 15 Wiring Diagram 15



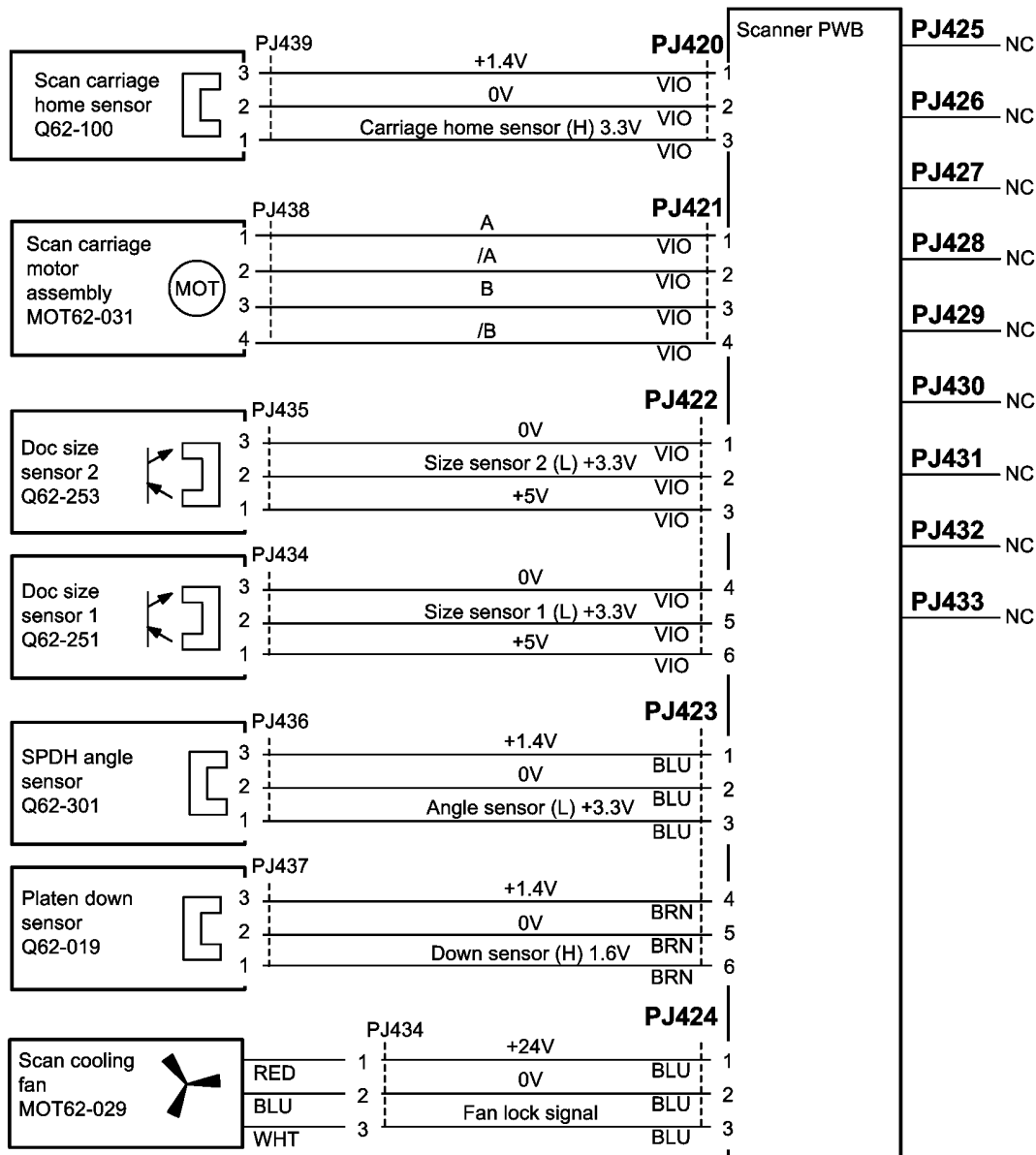
# Wiring Diagram 16



TW-1-0181-A

Figure 16 Wiring Diagram 16

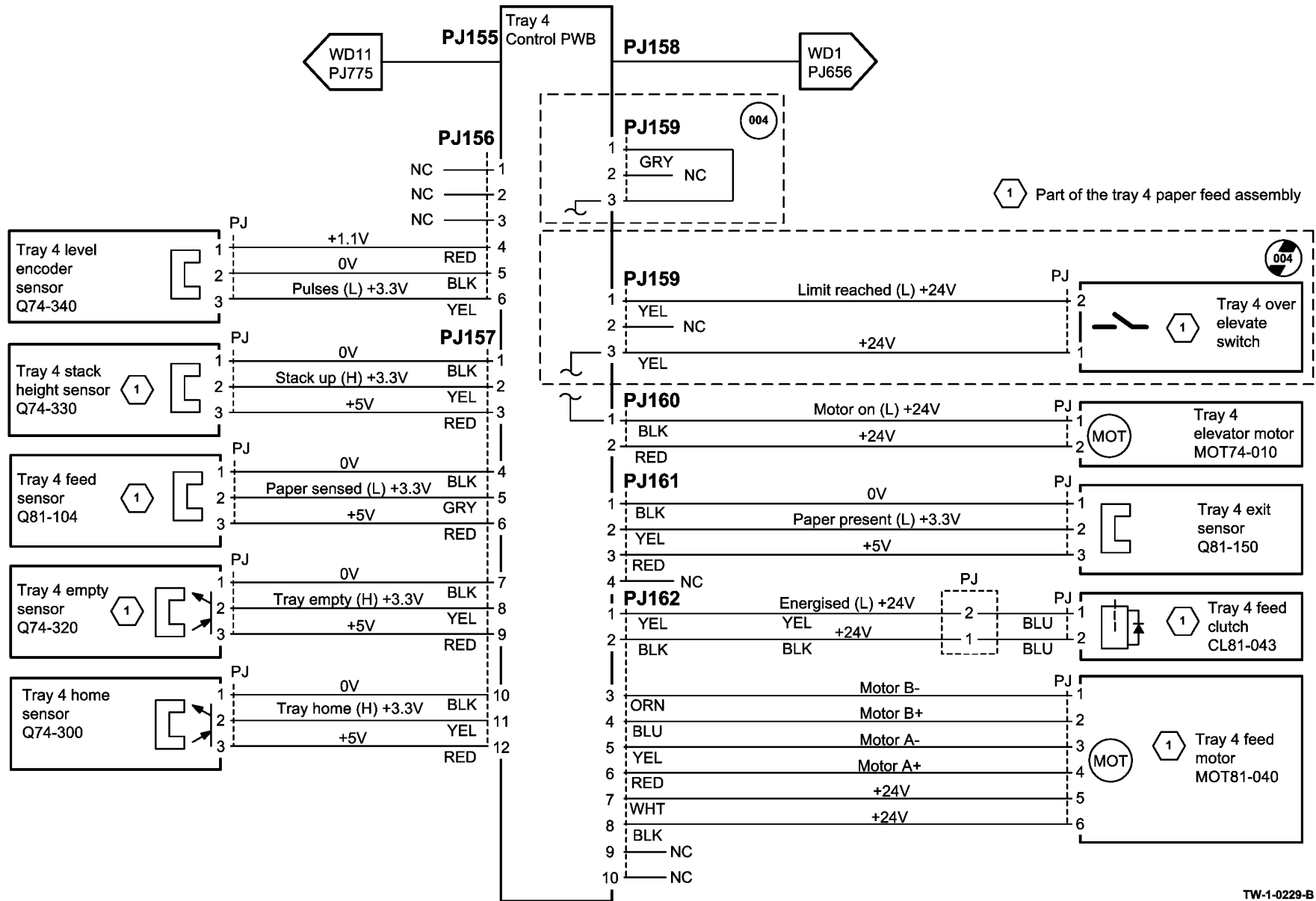
# Wiring Diagram 17



TW-1-0182-A

Figure 17 Wiring Diagram 17

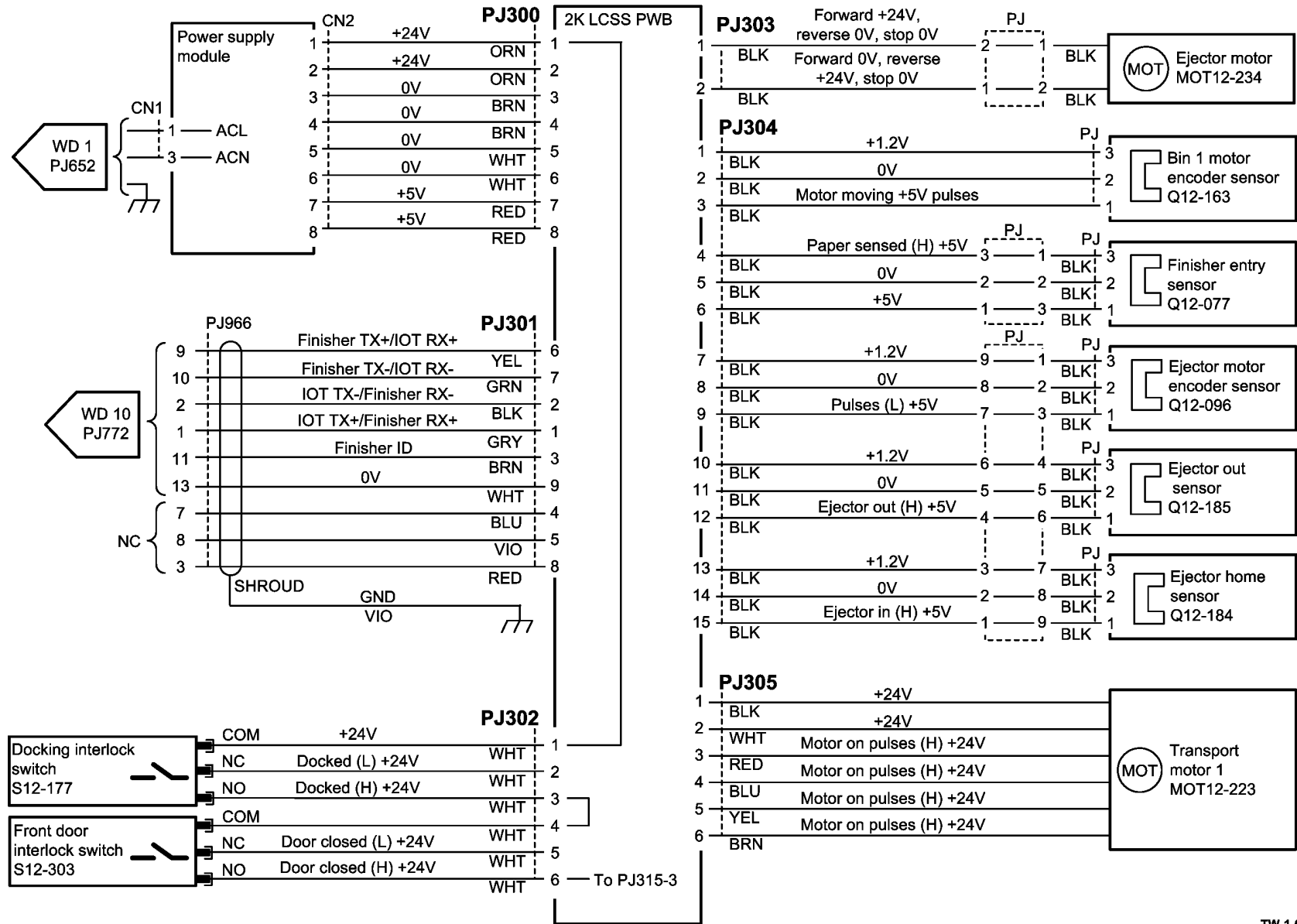
# Wiring Diagram 18



TW-1-0229-B

Figure 18 Wiring Diagram 18

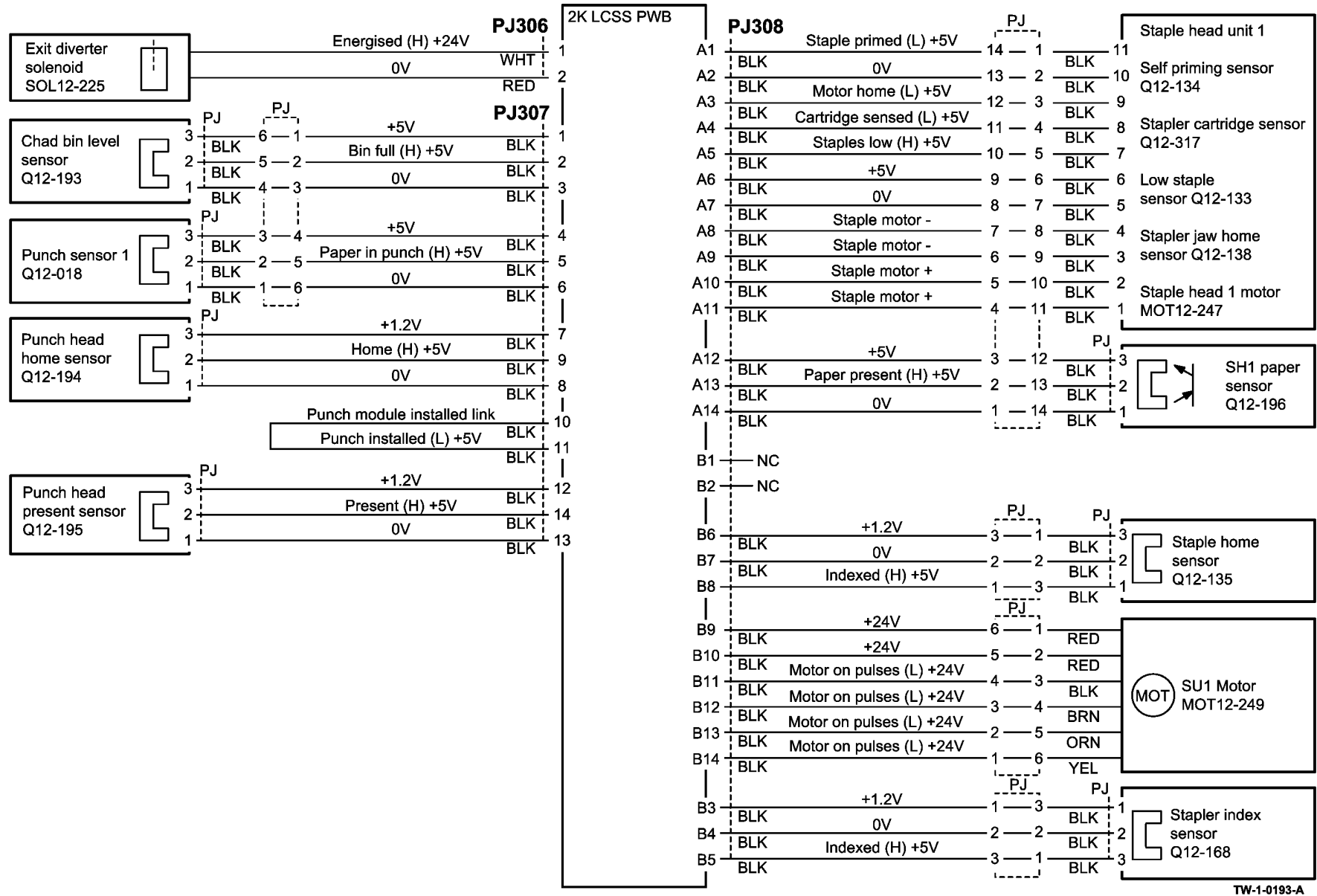
# Wiring Diagram 19



TW-1-0192-A

Figure 19 Wiring Diagram 19

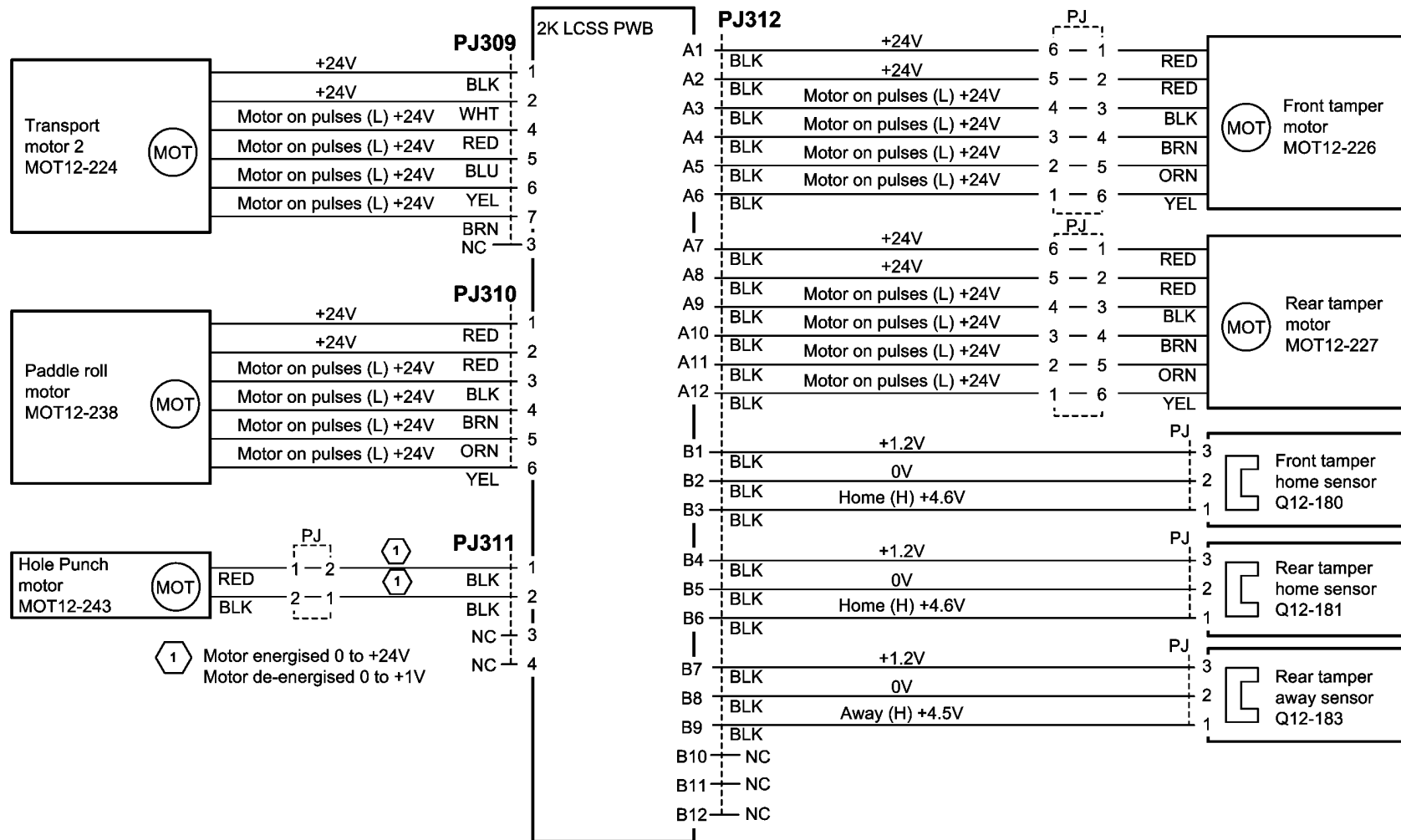
# Wiring Diagram 20



TW-1-0193-A

Figure 20 Wiring Diagram 20

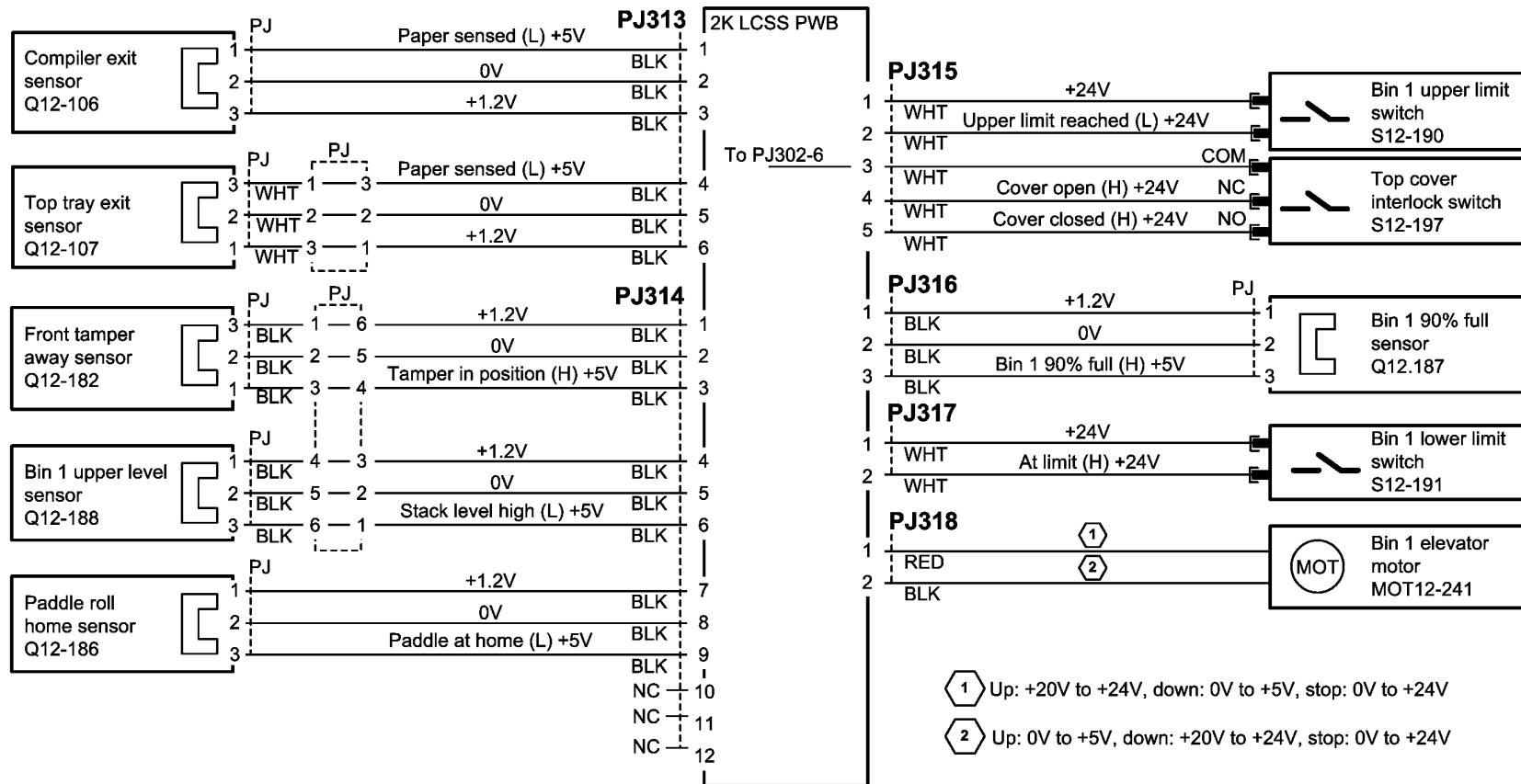
# Wiring Diagram 21



TW-1-0194-A

Figure 21 Wiring Diagram 21

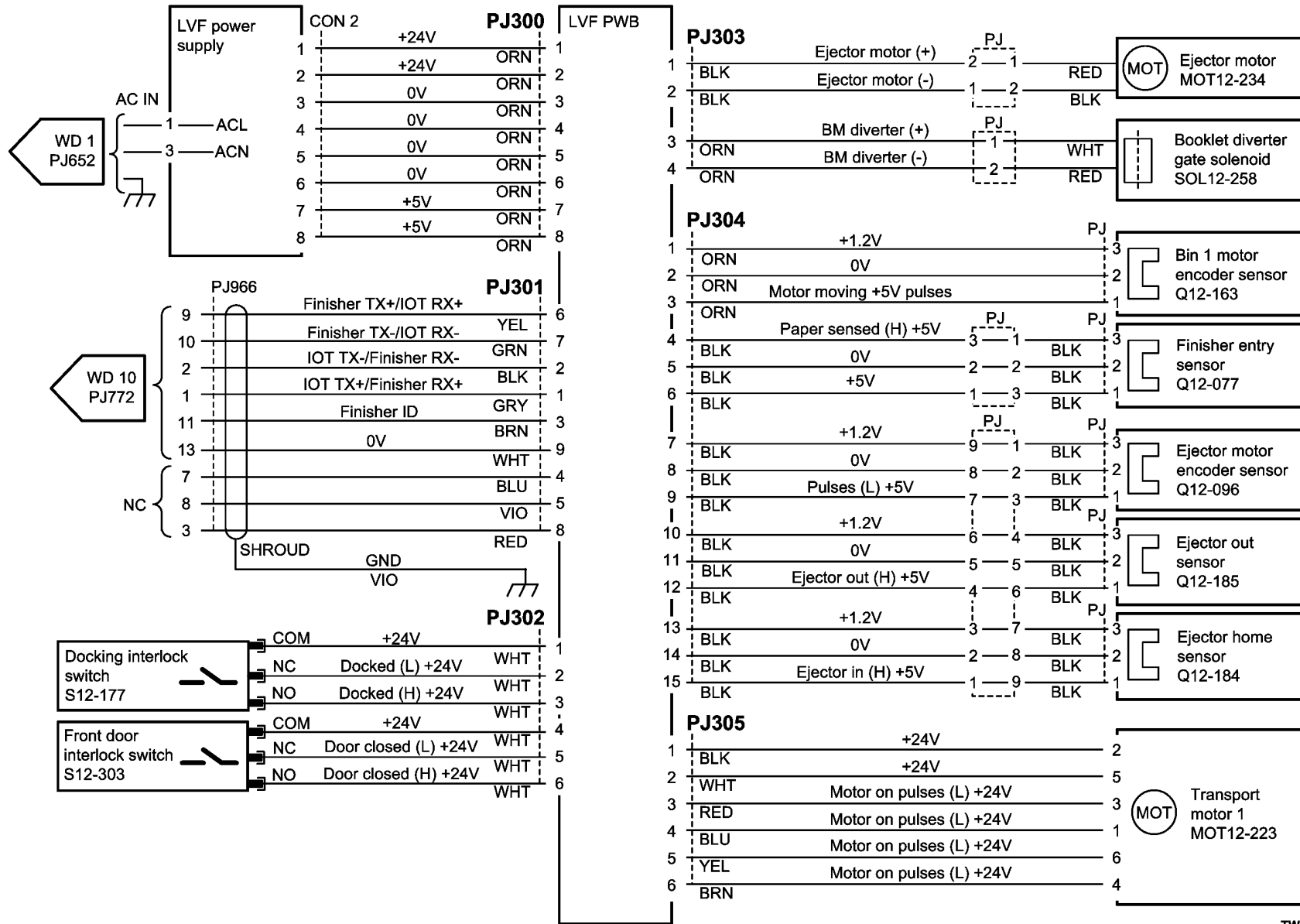
# Wiring Diagram 22



TW-1-0195-A

Figure 22 Wiring Diagram 22

# Wiring Diagram 23

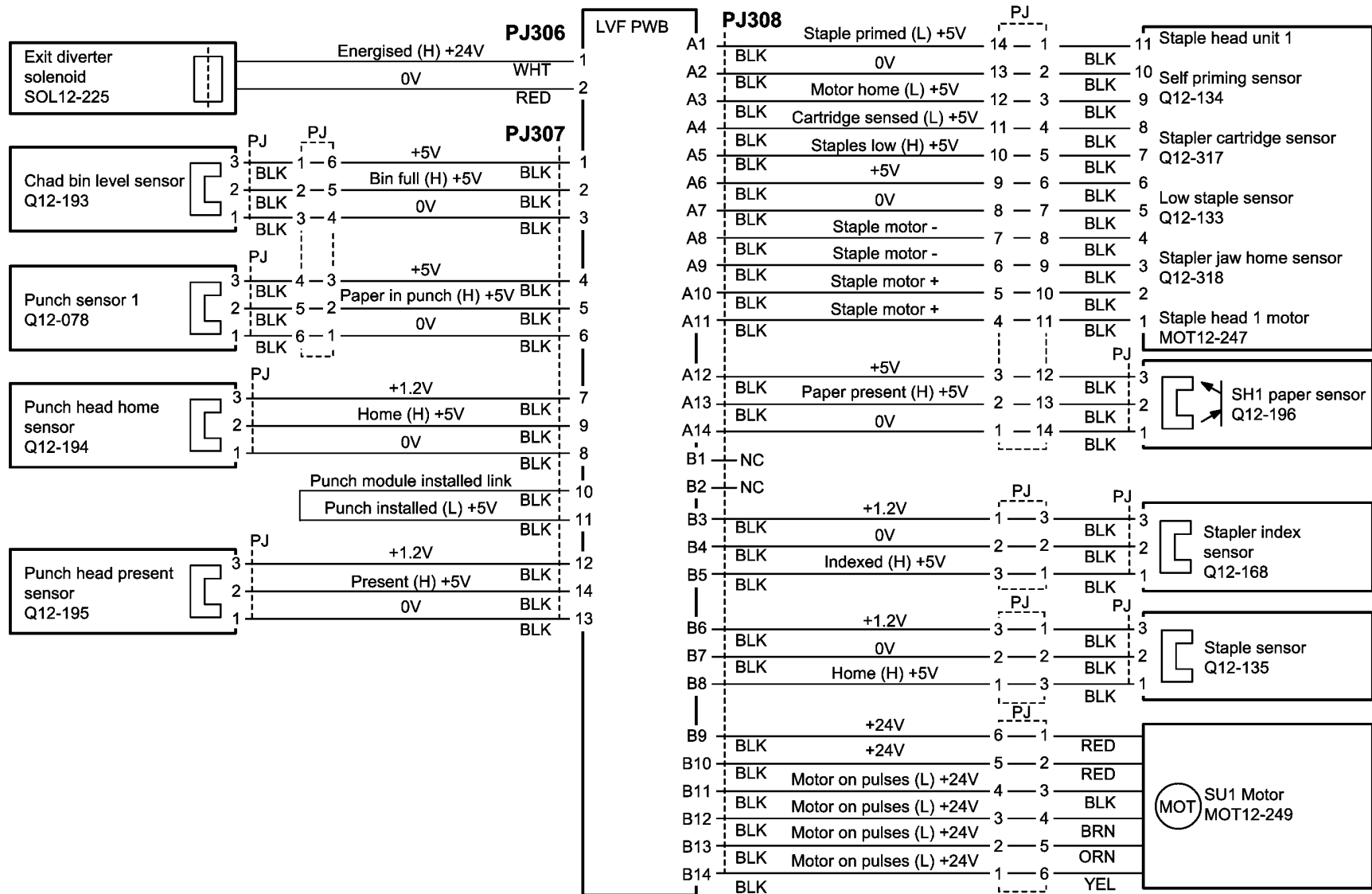


TW-1-0185-A

Figure 23 Wiring Diagram 23



# Wiring Diagram 24



TW-1-0186-A

Figure 24 Wiring Diagram 24

# Wiring Diagram 25

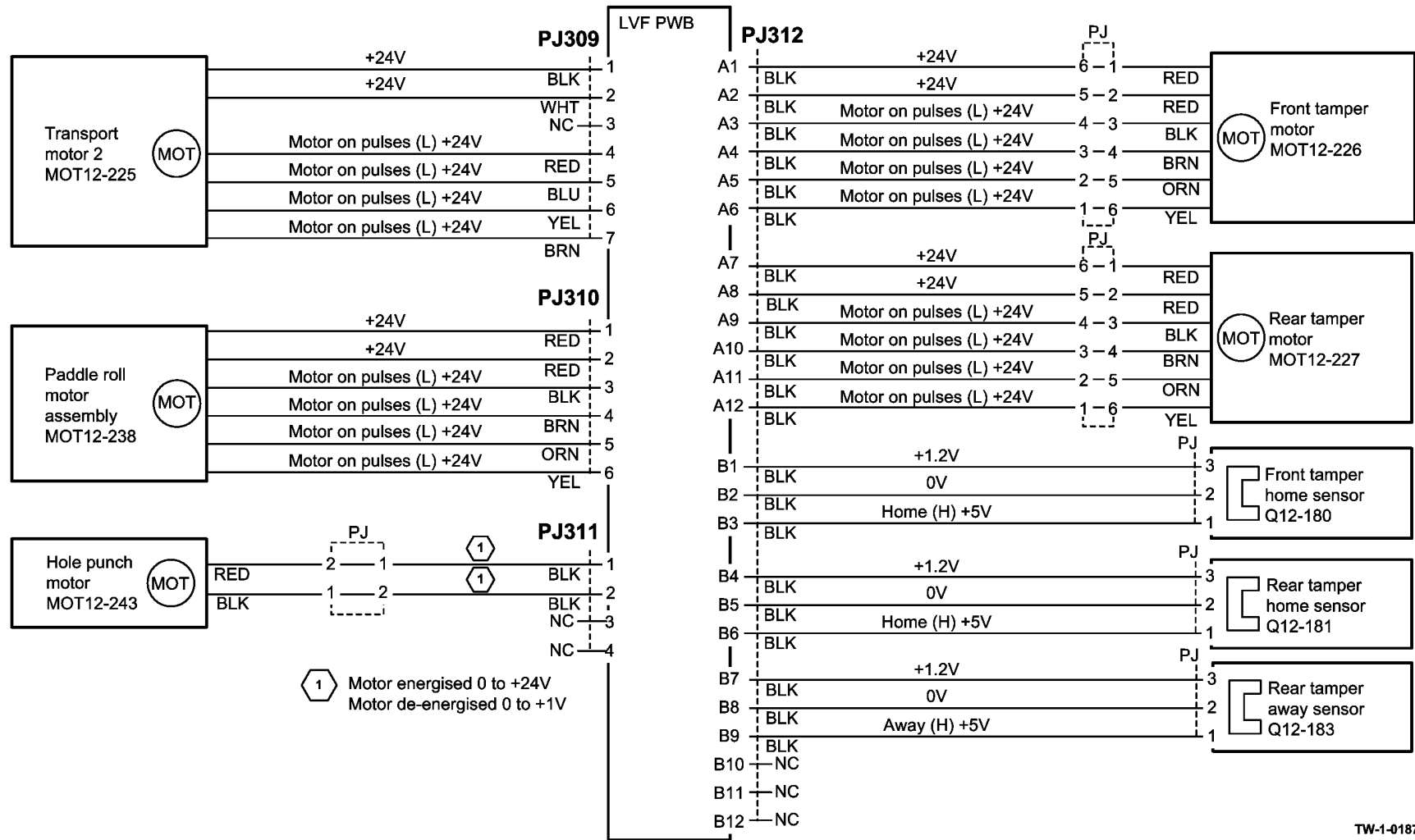
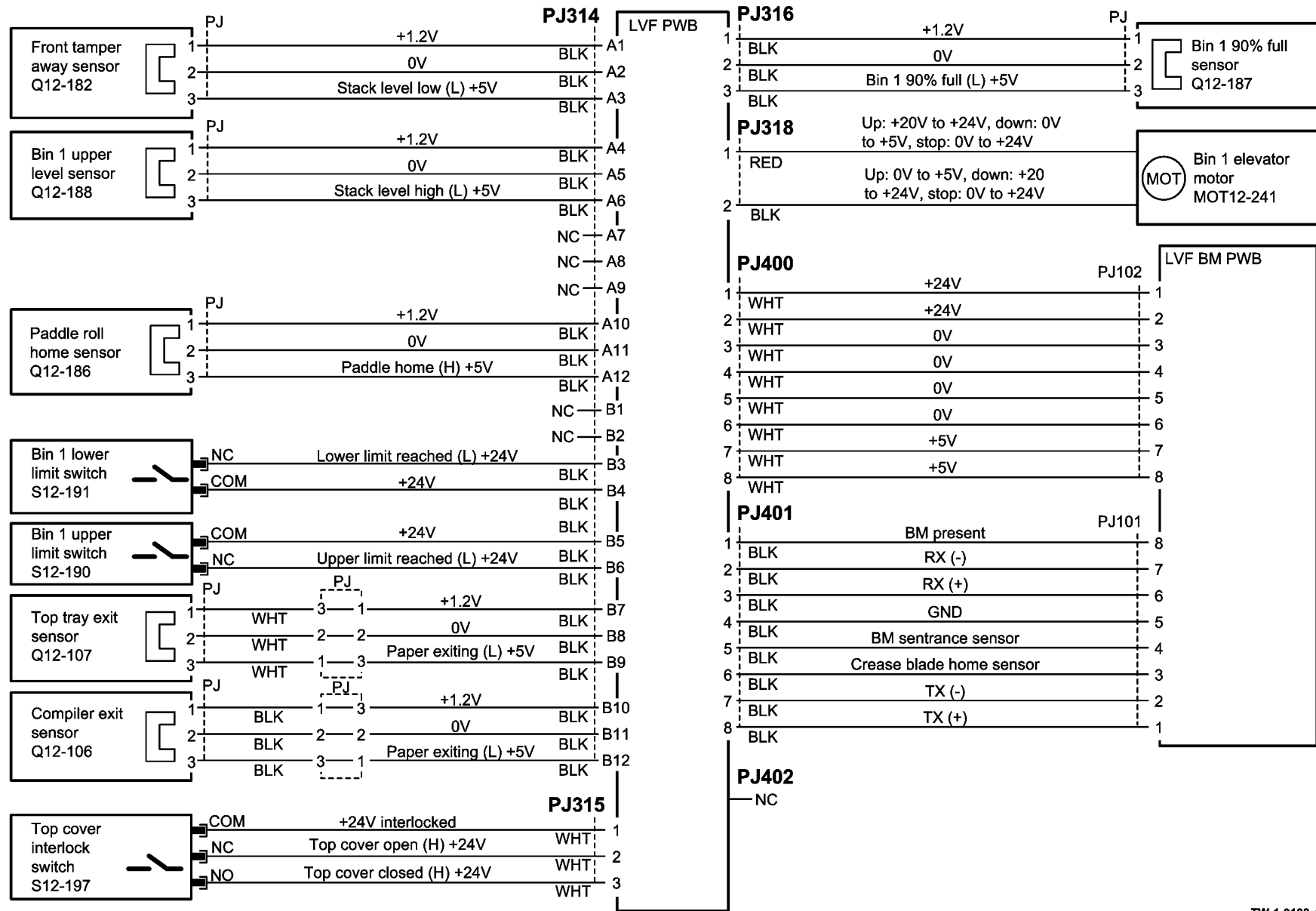


Figure 25 Wiring Diagram 25

TW-1-0187-A

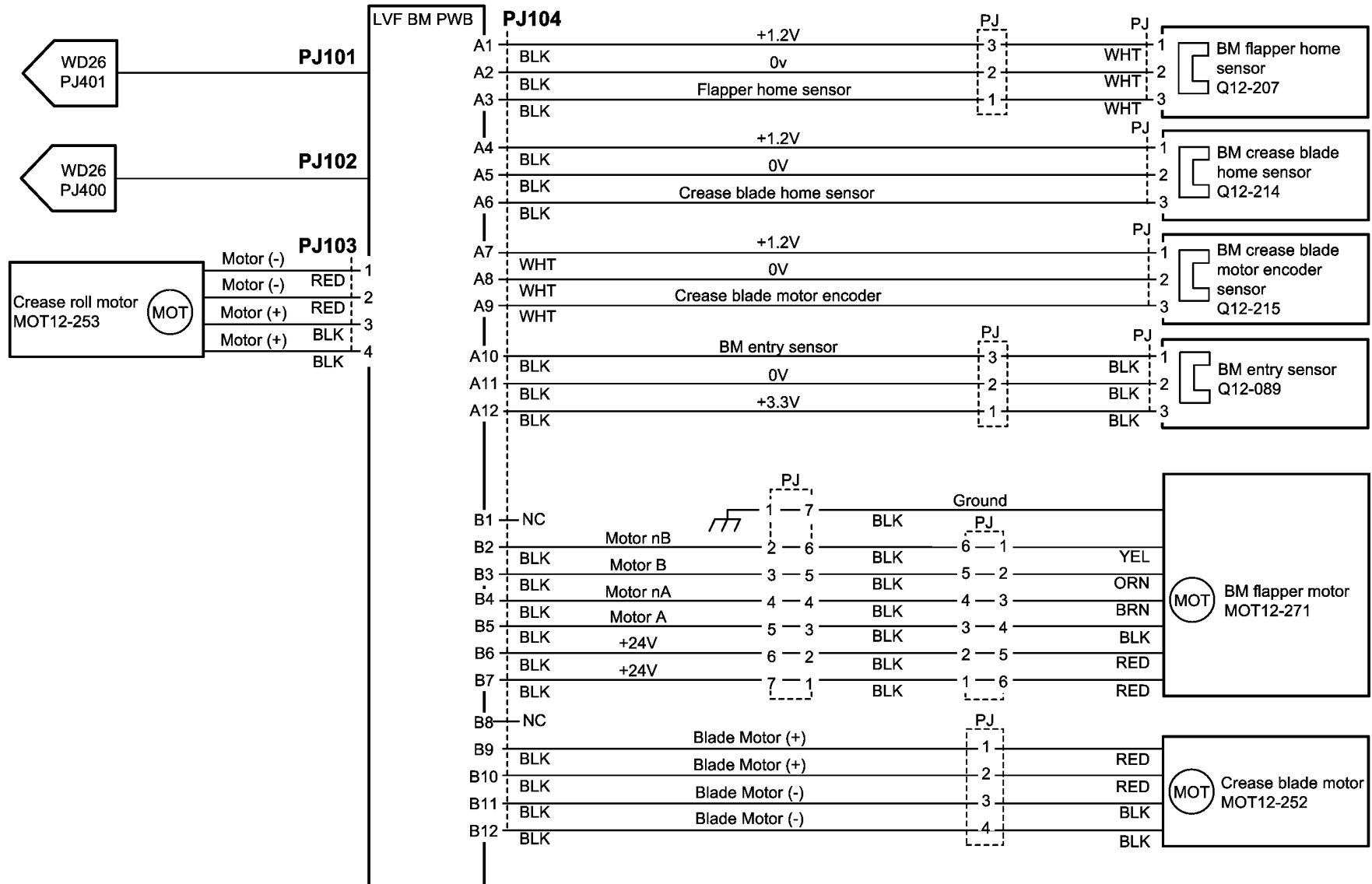
# Wiring Diagram 26



TW-1-0188-A

Figure 26 Wiring Diagram 26

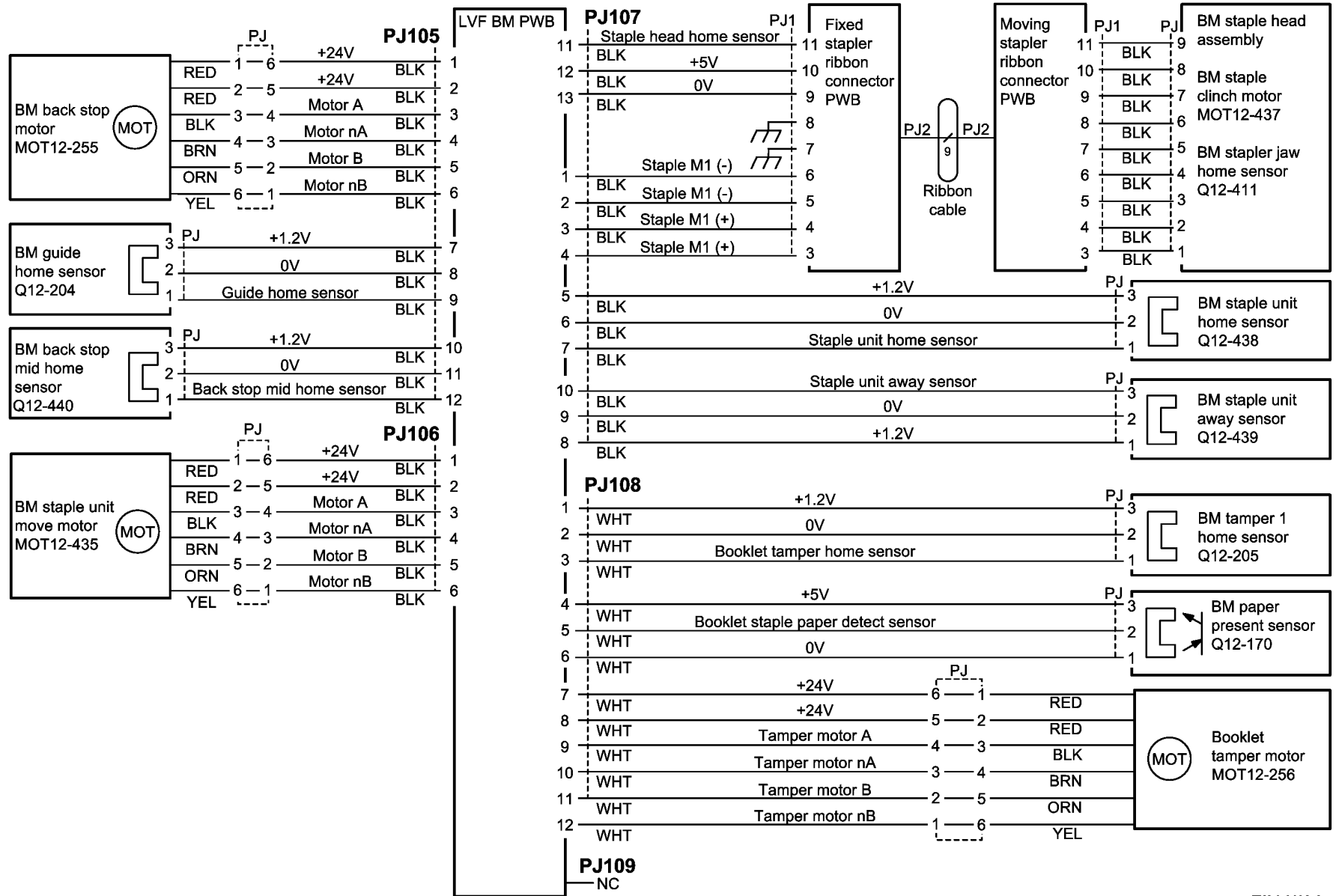
# Wiring Diagram 27



TW-1-0189-A

Figure 27 Wiring Diagram 27

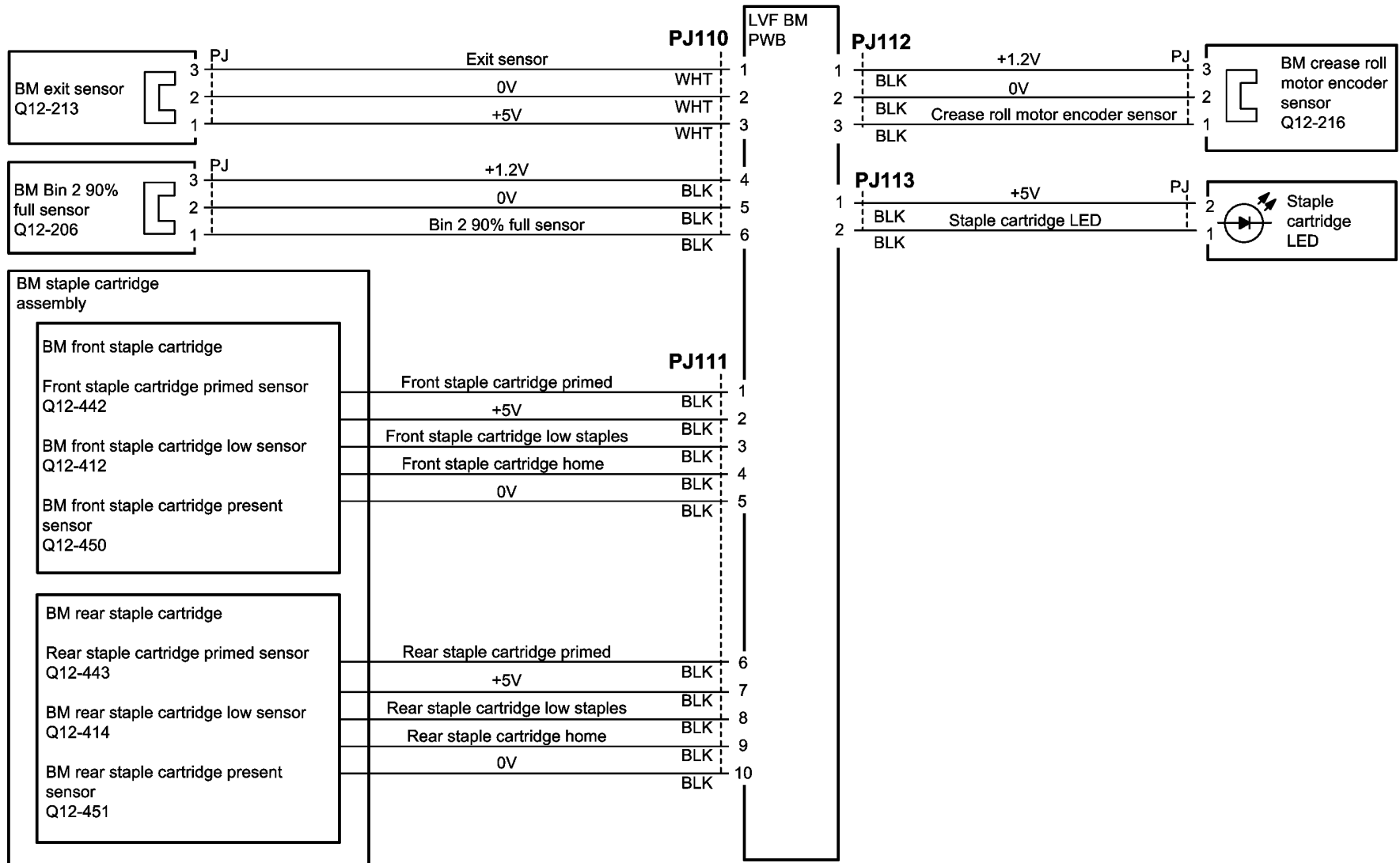
# Wiring Diagram 28



TW-1-0190-A

Figure 28 Wiring Diagram 28

# Wiring Diagram 29



TW-1-0191-A

Figure 29 Wiring Diagram 29

ACC 1 Foreign Device Checkout ..... 8-3





## ACC 1 Foreign Device Checkout Procedure

- Perform the 303E Foreign Device PWB Fault RAP.



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(When filled in)



## EHS 700 - Health & Safety Incident Report Form for Incidents Involving a Xerox Product

EH&S Office Use ONLY EH&S Incident Reference Number:	
*Date Of Incident (mm / dd / yy):	
<b>Product Description</b>	
*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:	
* <u>Description</u>	<u>Part Number</u>
*Location of product and affected part(s):	
<b>Customer Identification</b>	
*Customer Name:	*Name of Customer Contact Person:
*Address:	E-mail:
	*Telephone:
	Fax:
<b>Customer Service Engineer Identification</b>	
*Name (required for Xerox serviced equipment):	Employee:
	E-mail:
Location:	*Phone (required for Xerox serviced equipment):
<b>Individual Providing Notification</b>	
*Name:	*Telephone Number:
*Organization:	E-Mail:
Mailing Address:	*Date Report Submitted:

\* Required information is preceded by asterisk, **title shown in red**, turquoise wash background

**CONFIDENTIAL**  
*(when filled in)*

**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 fire department, ambulance, etc. respond?**

No  Yes

Identify: (i.e., source, names of individuals)

Apparent cause of incident (identify part that is suspect 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:

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**e-mail:** [ehs-europe@xerox.com](mailto:ehs-europe@xerox.com) or fax: +44 (0) 1707 35 3914 [Intelnet 8\*668 3914]

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**e-mail:** [usa.xerox.ehs@xerox.com](mailto:usa.xerox.ehs@xerox.com) or fax 585-216-8817 [ Intelnet 8\*219-8817 ]

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