

You should be using Electronic Documentation (EDOC) to support this product.

This pdf version of the Service Manual was made available at product launch until the EDOC was ready to be delivered but will not be updated/supported in the future.

We strongly recommend you transition to EDOC at your earliest opportunity.

- You must first have Portable Work Station (PWS) software loaded, which enables the use of Searchlite/Eureka and EDOC. The Windows 7 and Windows 10 versions of PWS are available in GSN library [16162](#).
- Once PWS software has been installed, you can request EDOC for products that you are trained on by accessing this [link](#) (login required). The form will look like the example below. Scroll down to find and select your product, or type the product into the **Other training** field, which is farther down on the page.

The screenshot shows the Xerox Training Order Form interface. At the top, there is a navigation bar with the Xerox logo, the title 'Training Order Form', and links for 'Help', 'Contact Us', 'Resources', and 'Hi'. Below this is a blue header with 'ASP Product Training' and 'E-learning/LivePlay'. The main content area is titled 'Select Training' and contains several sections of text: 'IMPORTANT:', 'The Annual Training and Documentation Fee includes one legacy product training kit per company per model. Any additional training kits will be charged at \$75.00 per kit.', 'NARS Authorized Service Providers can use CompTIA Printing and Documentation Imaging (PDI+) certification as a substitute for Printing, Laser Basics and Multifunction Basics. If you are PDI+ certified and haven't done so already, send a copy of your PDI+ certificate along with your name and TCN to [Partner Escalations](#).', 'Xerox will calculate any applicable sales tax and shipping charges.', and 'Can't find your what you're looking for? Some product training is offered as E-learning/LivePlay, available 24/7 via [Learning@Xerox](#). Choose the E-learning/LivePlay link on the menu above to see a full list of current online training offerings.'

The 'Training kits' section is a table with columns for 'Title' and 'Qty'. It lists several products with their respective quantities set to 0:

Title	Qty
Phaser 3100 MFP	0
Phaser 3150	0
Phaser 3200 MFP & PE220 & Differences	0
Phaser 3300 MFP	0
Phaser 3450	0
Phaser 3500	0
~+ 3600	

Below the training kits, there is a 'Fax kits' section with one item: 'Fax 101 Basic Kit - Cost: \$50 each' with a quantity of 0.

The 'Other training' field is a text input box, highlighted with a red rectangle. Below it, a note states: 'This text box is for entering customized training, legacy products, or training NOT listed above.'

At the bottom, there are sections for 'Prerequisite CD-ROMs' (with a note to visit [Learning@Xerox](#)) and 'Onsite training available to selected Resellers only' (with a note: 'Please note: As of September 30th, 2010, EIV 401 is a prerequisite for all products with fax capabilities. You may order an instructor facilitated course without completing this specific course').



VersaLink[®] C8000/C9000 Printer

Service Manual



Xerox® VersaLink® C9000 Family

Service Documentation

VersaLink C9000 Family Service Manual

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About This Manual

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

Organization

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

Section 1 Service Call Procedures

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

Section 2 Status Indicator Repair Analysis Procedures

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

Section 3 Image Quality

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

Section 4 Repairs and 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 and 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 the PJ locations, wiring diagrams and block schematic diagrams (BSDs).

Section 8 Product Technical Overview

This section contains technical details of the machine.

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 machine variants, the appropriate variant name will be quoted. For example, C8000 or C9000. Any artwork will also be variant-specific.

C8000 includes the following model variants:

- Xerox® VersaLink® C8000DT Color Printer - 45 ppm
- Xerox® VersaLink® C8000DX Color Printer- 45 ppm with TTM

C9000 includes the following model variants:

- Xerox® VersaLink® C9000DT Color Printer - 55 ppm
- Xerox® VersaLink® C9000DX Color Printer - 55 ppm with TTM
- Xerox® VersaLink® C9000GX Color Printer - 55 ppm with 2TM

NOTE: This manual services all configurations of the machine except for the BR Finisher. Ignore references to options not installed on the machine. For servicing the BR Finisher, refer to the separate BR Finisher EDOC.

Warnings, Cautions And Notes

WARNING

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.

CAUTION

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.

Use of the Block Schematic Diagrams

Block schematic diagrams (BSDs) are included in Section 7 (Wiring Data). The BSDs show the functional relationship of the electrical circuitry to any mechanical, or non-mechanical, inputs or outputs throughout the machine. Inputs and outputs such as motor drive, mechanical linkages, operator actions, and air flow are shown. The BSDs will provide an overall view of how the entire subsystem works.

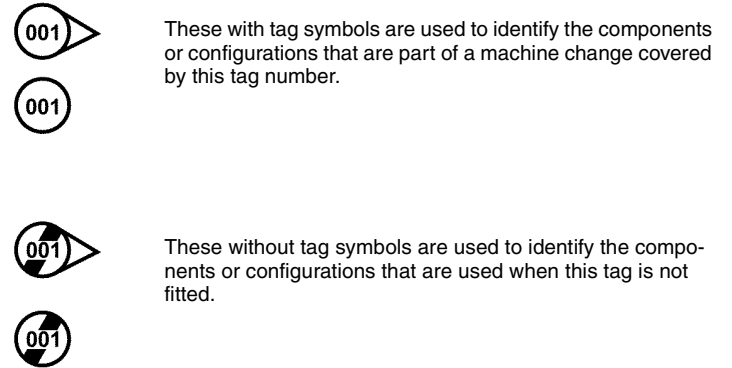
It should be noted that the BSDs do not contain an input power block referring to Chain 1. It will be necessary to refer to the [Wiring Diagrams](#) in order to trace a wire back to its source.

Change History

This is the launch version of the service manual.

Mod/Tag Identification

Figure 1 shows the Mod/Tag identification symbols.



F-1-0628-A

Figure 1 Mod/Tag identification symbols

Voltages Resistances and Tolerances

For AC power specifications, refer to [GP 17](#) 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
0V	0.00 to 0.10V
+3.3V standby	+3.23V to +3.43V
+3.3V	+3.23V to +3.43V
+5V and +5V standby	+4.75V to +5.25V
+12V	+11.4V to +12.6V
+24V	+23.28V to +25.73V

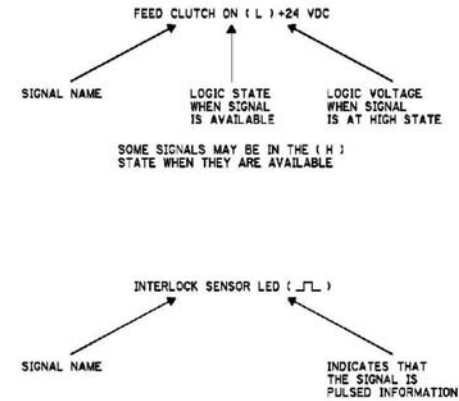
Non-standard voltage levels will be quoted on the relevant wiring diagram or BSD. All other voltage levels are plus or minus 10%.

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 the BSDs.



TF-1-0629-A

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.

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

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.

Part Replacement

Only use genuine Xerox approved spare parts or components to maintain compliance with legislation and safety certification. Also refer to [GP 21](#) Restriction of Hazardous Substances (RoHS).

Disassembly Precautions

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

Reassembly Precautions

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

General Procedures

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

Health and Safety Incident reporting

I. Summary

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

II. Scope

Xerox Corporation and subsidiaries worldwide.

III. Objective

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

IV. Definitions

Incident:

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

V. Requirements

Initial Report:

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

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

Responsibilities for resolution:

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

- d. Define actions to correct confirmed incidents.

VI. Appendices

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

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

Translation of Warnings

WARNING

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

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

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

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

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

WARNING

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

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

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

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

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

WARNING

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

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

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

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

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

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP XX. 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 XX. 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 XX. Scollegare il cavo di ali-

mentazione. 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 XX. 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 XX. Desconecte el cable de alimentación. La energía eléctrica puede producir lesiones o incluso la muerte. Las piezas sueltas pueden producir lesiones.

WARNING

Switch off the electricity to the machine. Refer to GP 10. Disconnect the power 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 10. Déconnectez le cordon d'alimentation de l'alimentation du client lorsque vous réalisez des tâches qui ne nécessitent pas d'électricité. L'électricité peut être à l'origine de blessures, voire d'un accident mortel. Les pièces amovibles peuvent être à l'origine de blessures.

AVVERTENZA: Spegner la macchina. Vedere GP 10. 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 10. 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 10. 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

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 electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10. 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 10**. 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 10**. 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 XX. Desconecte el cable de alimentación. La energía eléctrica puede producir lesiones o incluso la muerte. Las piezas sueltas pueden producir lesiones.

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 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 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.

DANGER : Ne vous servez pas de l'interrupteur comme d'un dispositif de déconnexion. L'interrupteur n'est pas un dispositif de déconnexion. Débranchez le câble d'alimentation de la prise électrique pour isoler l'appareil.

AVVERTENZA: L'interruttore di alimentazione non è un dispositivo di disconnessione di sicurezza e pertanto non va utilizzato come tale. Per isolare la macchina, scollegare il cavo di alimentazione dalla presa elettrica.

VORSICHT: Zur Unterbrechung der Gerätestromzufuhr nicht den Betriebsschalter verwenden, sondern das Netzkabel aus der Steckdose ziehen, an die das Gerät angeschlossen ist. Nur dann ist der Drucker vollständig vom Stromnetz getrennt.

AVISO: No utilice el botón de encendido/apagado como dispositivo de desconexión de seguridad. El botón de encendido/apagado no es un dispositivo de desconexión. Desconecte el cable de alimentación de la fuente de energía para aislar el equipo.

mentazione. 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 10**. 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 XX. Desconecte el cable de alimentación. La energía eléctrica puede producir lesiones o incluso la muerte. Las piezas sueltas pueden producir lesiones.

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 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 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.

DANGER : Ne vous servez pas de l'interrupteur comme d'un dispositif de déconnexion. L'interrupteur n'est pas un dispositif de déconnexion. Débranchez le câble d'alimentation de la prise électrique pour isoler l'appareil.

AVVERTENZA: L'interruttore di alimentazione non è un dispositivo di disconnessione di sicurezza e pertanto non va utilizzato come tale. Per isolare la macchina, scollegare il cavo di alimentazione dalla presa elettrica.

VORSICHT: Zur Unterbrechung der Gerätestromzufuhr nicht den Betriebsschalter verwenden, sondern das Netzkabel aus der Steckdose ziehen, an die das Gerät angeschlossen ist. Nur dann ist der Drucker vollständig vom Stromnetz getrennt.

AVISO: No utilice el botón de encendido/apagado como dispositivo de desconexión de seguridad. El botón de encendido/apagado no es un dispositivo de desconexión. Desconecte el cable de alimentación de la fuente de energía para aislar el equipo.

1 Service Call Procedures

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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

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

WARNING

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 [GP 2](#) Fault Codes and History Files.
2. Switch off, then switch on the machine, [GP 10](#).
3. Ask the operator to describe or demonstrate the problem.
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. The paper is loaded correctly.
 - c. All paper trays are closed.
 - d. All doors are closed.
6. Check the machine service log book for previous actions that are related to this call.
7. Go to [SCP 2](#) Call Actions.

SCP 2 Call Actions

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

Procedure

1. If this is the first service call to this machine, if possible, perform the actions that follow:
 - a. 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.
 - b. Check that all the machine settings are entered correctly.
 - c. Mark off the hardware options, software options or Tags installed on the Tag matrix cards.
 - d. Enter the machine information and the customer information in the service log book.
2. Review the print samples.
3. Ensure the user access settings are correct. If necessary refer to the user documentation.
4. If necessary, perform [GP 13](#) 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.*

5. Before switching off the machine or clearing the memory, check for a customer job in the memory.
6. Check and record the total impressions usage counter.
7. 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

CAUTION

Do not expose the drum cartridges, PL 90.20 to light for more than 30 minutes. If necessary, remove the drum cartridges, then place in a black bag.

Fault Codes

If a fault code is displayed, go to the relevant RAP. Also refer to [Unresolved Faults](#).

NOTE: This service manual does not cover faults in the BR Finisher, for faults in the BR Finisher, refer to the separate BR Finisher service manual EDOC.

Image Quality Defects

If the image quality is defective, go to the [IQ1](#) Image Quality Entry RAP.

Unresolved Faults

If a fault cannot be resolved using the appropriate RAP, and only if instructed by 2nd level support, obtain a device log. Refer to [GP 19](#) Obtaining Audit and Device Logs. Escalate the problem to 2nd level support.

Other Problems

- For suspected power distribution faults, refer to the following:
 - [01A](#) AC Power RAP.
 - [01B](#) +5VDC Power Fault RAP.
 - [01C](#) +24VDC Power Fault RAP.
 - [Wiring Diagrams](#)
- For unresolved faults that occur during start up of the device, perform the [OF1](#) POST Error RAP.
- If the customer requires a billing plan or region change, go to [GP 27](#) Billing Plan/Region Conversion Process.
- If the customer requires a billing impression mode change, go to [GP 28](#) Billing Impression Mode Change Process.

Additional Information

If necessary, refer to the general procedures and information that follow:

- [GP 1](#) Diagnostics Entry.
- [GP 2](#) Fault Codes and History Files.
- [GP 3](#) Device Information.
- [GP 4](#) Machine Software.
- [GP 5](#) Miscellaneous Checks.
- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.
- [GP 8](#) How to Check a Solenoid or Clutch.
- [GP 9](#) How to Check a Switch.
- [GP 10](#) How to Switch Off the Machine or Switch On the Machine.

- [GP 12](#) Machine Lubrication.
- [GP 13](#) Network Clone Procedure.
- [GP 14](#) Printing Reports.
- [GP 15](#) Paper and Media Size Specifications.
- [GP 16](#) Installation Space Requirements.
- [GP 17](#) Electrical Power Requirements.
- [GP 18](#) Environmental Data.
- [GP 19](#) Obtaining Audit and Device Logs.
- [GP 20](#) First Print Out Time and Power On Time.
- [GP 21](#) Restriction of Hazardous Substances (RoHS).
- [GP 22](#) Special Boot Modes.
- [GP 23](#) Customer Administration Tools.
- [GP 24](#) How to Set the Date and Time.
- [GP 25](#) Ethernet Crossover Cable Setup.
- [GP 27](#) Billing Plan/Region Conversion Process.
- [GP 28](#) Billing Impression Mode Change Process.
- [GP 29](#) System Administrator Password Reset.
- [GP 31](#) Print Orientation Definitions.
- [GP 32](#) How to Open and Close the Video Contact Chassis Unit.
- [GP 33](#) How To Obtain A Nananana log.
- [GP 34](#) Print Spooling.
- [GP 36](#) How to Manually Configure an IP Address.
- [GP 40](#) Glossary of Terms, Acronyms and Abbreviations.

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 10. 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:

- [Service Checks](#)
- [Installation of New Parts](#)
- [HFSI](#)
- [How to Clean the Machine](#)
- [Drum Cartridge Handling](#)

Service Checks

Perform the actions in [Table 1](#) at the indicated service interval.

Table 1 Service actions

Servicing Items	Service Details	Service Interval
IQ check	Check the overall print quality using a test chart. Check for uneven density, blank areas, drum scratches, heat roll scratches, etc. in A3 halftone.	Every visit
Clean the machine interior	Check and clean the paper transport roller (including the bypass tray). Clean any toner residue in the paper transport path. Clean any contamination and paper dust from the jam sensors.	300K feeds
	Clean the operating parts around the toner cartridges, PL 90.05 and drum cartridges, PL 90.20 .	Every visit
	Use the cleaning tool, stored in the front door, to clean the print head assemblies, PL 60.05 .	
Safety Check	Ensure that the power cords are not cracked and no wires are exposed. Ensure that an extension cord with insufficient length or power cord outside the specification, such as an off-the-shelf power strip, is being used. Ensure that a single socket does not have multiple power plugs plugged into it.	Every visit

Installation of New Parts

The design life of the major components is shown in [Table 2](#).

Table 2 Design life

Part	Life	PL Ref.
Fuser	480K prints or when IOT power on time exceeds 18000K seconds.	PL 10.05 Item 2
IBT unit	480K prints	PL 90.30 Item 1
2nd BTR unit	360K prints	PL 80.65 Item 2
Drum cartridges (K) 45ppm/55ppm	213/190 KPV	PL 90.20
Drum cartridges (Y,M,C) 45ppm/55ppm	240/224 KPV	PL 90.20
Developer Units (Y, M,C,K)	1500K Prints	PL 90.30 Item 1
Tray 1 feed, nudger and retard rolls	300K feeds	PL 25.10 Item 5
Bypass tray feed and nudger rolls and retard pad	100K feeds	PL 80.120 Item 6
Tray 2 feed, nudger and retard rolls	300K feeds	PL 25.10 Item 5
Tray 3 feed, nudger and retard rolls	300K feeds	PL 25.10 Item 5
Tray 4 feed, nudger and retard rolls	300K feeds	PL 25.10 Item 5

HFSI

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

How to Clean the Machine

Use a dry lint free cloth or a lint free cloth moistened with water for all cleaning unless directed otherwise. Wipe with a dry lint free cloth if a moistened cloth is used.

1. Feed Components (Rolls and Pads)

Use a dry lint free cloth or a lint free cloth moistened with water. Wipe with a dry lint free cloth if a moistened cloth is used.

2. Toner Dispense Units

Vacuum the toner dispense units.

3. Jam Sensors

Clean the sensors with a dry cotton swab.

4. Finisher

Check the paper path for debris or damage. Clean the finisher with a dry lint free cloth.

Drum Cartridge Handling

- The drum cartridges must be protected from light shock and mechanical damage.
- Do not expose the photoreceptor drum to bright lights for extended periods.
- Whenever the drum cartridge is removed, place the drum cartridge in the black plastic bag supplied with the machine. Store the drum cartridge in a safe place on a clean flat surface, to avoid damage to the photoreceptor drum surface.
- Place the drum 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, perform [GP 13 Network Clone Procedure](#).
NOTE: *The clone file will need to be taken whenever the system software is changed.*
3. Perform the relevant maintenance procedures. Refer to [SCP 4 Subsystem Maintenance](#).
4. Ensure that the machine has the latest available software loaded.
5. Operate the machine in all modes. Make the copies and prints from all trays.
6. Make prints from all trays. Check the registration quality. To reset the registration, perform [dC126 System Registration Adjustment](#).
7. Make a proof print of a customer document.
8. If some of the customer's selections were changed, return the selections to the customer settings.
9. Mark off the hardware options, software options or Tags installed on the Tag matrix cards.
10. 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.
11. Log the usage counters.
12. If necessary, provide the customer with training.
13. Remove and destroy all copies of test patterns.
14. Ensure the machine and service area are clean.

SCP 6 Machine Features

Configuration Options

The Xerox® VersaLink® C8000 and C9000 Printer are available as a basic machine with tray 1. It is also available in various configurations using the options that follow:

NOTE: *Also refer to [Machine Configurations](#) in the Product Technical Overview.*

General

For the space requirements, environment range and the print out time. Refer to:

- [GP 16](#) Installation Space Requirements.
- [GP 18](#) Environmental Data.
- [GP 20](#) First Print Out Time and Power On / Off Time.

Paper Supply and Paper Handling Options

- One 520 sheet paper tray (trays 1 and 2).
- 100 sheet bypass tray.
- Two tray module (2TM) (trays 3 and 4).
- Tandem tray module (TTM) (trays 3 and 4).
- 2000 sheet high capacity feeder (HCF).
- Envelope tray.
- Exit 2 tray.

Output Options

- Catch Tray.
- Office finisher LX with horizontal transport, hole punch and optional booklet maker.
- BR finisher with horizontal transport, hole punch and booklet maker.

Accessories and Kits

- Common access card.
- Foreign device interface kit.
- Hard disk drive (Productivity Kit) for C8000 printer (standard with C9000 printers).
- Wireless print 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:

- Xerox® VersaLink® C8000/C9000 desktop, [Figure 1](#).
- Xerox® VersaLink® C8000/C9000 with 2TM and office finisher LX, [Figure 2](#).
- Xerox® VersaLink® C8000 with HCF, TTM and office finisher LX with booklet maker, [Figure 3](#).

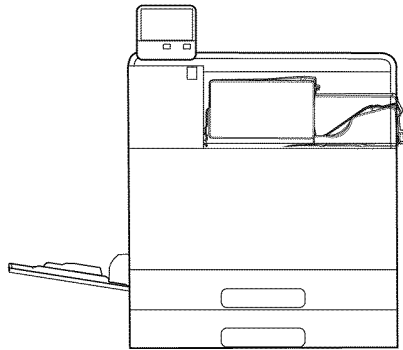
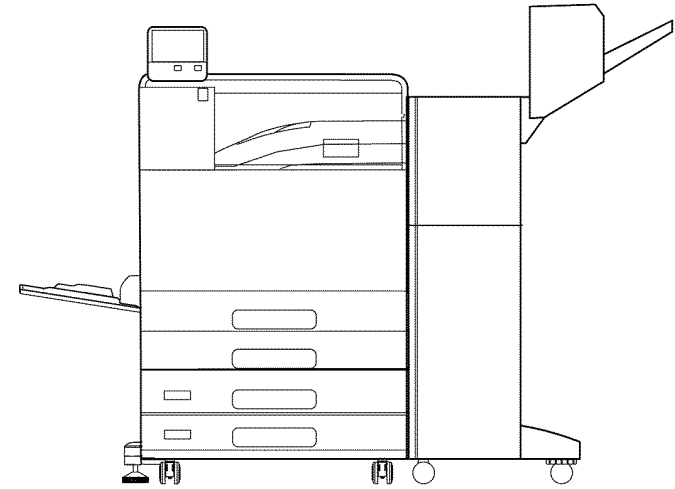


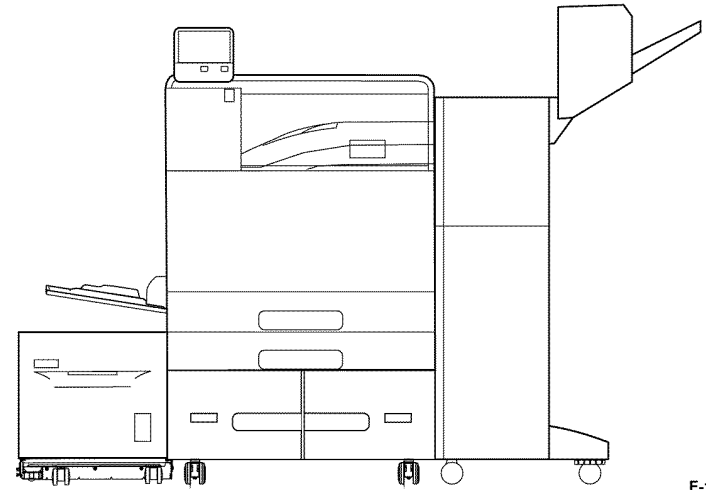
Figure 1 Desktop printer

F-1-0631-A



F-1-0632-A

Figure 2 With 2TM, LX finisher and booklet maker



F-1-0633-A

Figure 3 With HCF, TTM and LX finisher with booklet maker

2 Status Indicator RAPs

Chain 001

01A AC Power RAP	2-11
01B +5VDC Power Fault RAP	2-11
01C +24VDC Power Fault RAP	2-12

Chain 002

002-500 UI Error RAP	2-13
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Chain 010

010-327 Fusing On Time Fail RAP	2-15
010-330 Fusing Unit Motor Fail RAP	2-15
010-341 Fusing Unit Illegal Fail RAP	2-16
010-371 Heat Belt STS Center Disconnection Fail RAP	2-17
010-372, 010-374 Heat Belt STS Center Over Temperature Fail RAP	2-17
010-373 Heat Belt STS Rear Disconnection Fail RAP	2-18
010-375 Heat Belt STS Center Warm Up Time Fail RAP	2-18
010-376 Heat Belt STS Rear Warm Up Time Fail RAP	2-19
010-378 Heat Belt Rotation Fail RAP	2-19
010-379 Fusing Unit Hot Not Ready Return Time Fail RAP	2-20
010-380 Fusing P/Roll Latch Motor Fail RAP	2-20
010-382 Fusing Unit Thermostat Fail RAP	2-21
010-613 Fusing Motor Current Warning RAP	2-21
010-616 Fusing Unit Thermosensitivity Runaway Hot Not Ready Warning RAP	2-22
010-617 Fusing Paper Quality Operation Mistake Warning RAP	2-22
010-618 Fusing Unit E2PROM Write Limit Info RAP	2-23
010-619 Fusing Unit E2PROM I2C Master Communication Info RAP	2-23
010-620 Fusing Unit E2PROM Data Mismatch Info RAP	2-24
010-621 Fusing Unit E2PROM Not In Position Info RAP	2-24
010-622 Fusing Unit E2PROM Data Broken Info RAP	2-25
010-623 Fusing Heavy Paper Quality Operation Mistake Warning RAP	2-25
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Chain 012 - Finisher LX

Note: Business Ready (BR) Finisher fault codes are listed in the Business Ready (BR) Finisher Service Manual part number 705P01378.

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012-210 NVM Fail RAP	2-32
012-211B Stacker Tray Fail RAP	2-32
012-212 Stacker Tray Upper Limit Failure RAP	2-33
012-213 Stacker Tray Lower Limit Failure RAP	2-34
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012-224, 263 Rear Tamper Home Sensor Fail RAP	2-36
012-231 Punch Home Sensor Fail RAP	2-37
012-243, 265 Booklet Folder Home Sensor Fail RAP	2-38

012-249 Booklet Front Stapler Fail RAP	2-39
012-260, 282 Eject Clamp Home Sensor Fail RAP	2-39
012-268 Booklet Rear Stapler Fail RAP	2-40
012-269 Booklet PWB Communications Fail RAP	2-41
012-283, 284 Set Clamp Home Sensor Fail RAP	2-41
012-291 Stapler Fail RAP	2-42
012-295, 296 Stapler Move Position Sensor Fail RAP	2-43
012-300 The Finisher Top Cover Is Open RAP	2-44
012-302 The Front Door Is Open RAP	2-44
012-303 The Finisher Transport Cover F Is Open RAP	2-45
012-334 Download Fail RAP	2-45
012-901 Jam In The Device RAP	2-46
012-903 Compiler Exit Sensor On RAP	2-46
012-905 Jam In Finisher RAP	2-47
012-935 Jam In The Device RAP	2-47

Chain 013

013-210, 211 Booklet Staple Move Home Sensor Fail RAP	2-49
013-212, 213 Booklet Stapler Move Position Sensor Fail RAP	2-50
013-220 Folder Detect Fail RAP	2-51
013-300 Folder Door Open RAP	2-51
013-306 Booklet Safety Switches Open RAP	2-52
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016-211, 016-212 SW Option Fail Memory Low RAP	2-53
016-217 SW Option Fail (Controller ROM) RAP	2-54
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016-322 JBA Account Full RAP	2-58
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016-324 Scheduled Image Overwrite RAP	2-59
016-325 Using Personal Certificate RAP	2-59
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016-327, 016-328 Connection Fail RAP	2-60
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016-352 Internal Network Initialize Fail RAP	2-62
016-353, 016-354 IOT-Controller Communication Fail RAP	2-62
016-355, 016-356 Controller ASIC Fail RAP	2-63
016-357 Controller EP Communication Fail RAP	2-63
016-358 Controller Parallel Card Fail RAP	2-64

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016-404, 016-431 802.1x Inside Failure RAP	2-69	016-553 Attestation Agent Error 553 RAP	2-95
016-405 Certificate DB File Error RAP	2-70	016-554 Attestation Agent Error 554 RAP	2-96
016-406 802.1x Client Certificate Failure RAP	2-70	016-555 Attestation Agent Error 555 RAP	2-96
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01A AC Power RAP

BSD-ON:[BSD 1.1 Main Power On \(100 VAC\)](#)

BSD-ON:[BSD 1.2 Main Power On \(220-240 VAC\)](#)

Use this procedure 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 10](#). 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.

Switch off the main power switch, [GP 10](#). Check the voltage between [P/J10](#) pin 1 and [P/J11](#) pin 1 on the GFI breaker. The voltage measured is within electrical power requirements, [GP 17](#).

Y N

Disconnect the power cord from the outlet. Check the AC mains (line) voltage at the customer's power outlet. The voltage measured is within electrical power requirements, [GP 17](#).

Y N

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 power cord for open circuit and poor contact. The main power cord is good.

Y N

Install a new power cord.

Install a new GFI breaker, [PL 1.10 Item 1](#).

Switch on the main power switch, [GP 10](#). Check the voltage on [P/J4](#) between pin 1 and pin 3 on the AC drive PWB. The AC power supply is within specification, [GP 17](#).

Y N

Switch off the power, then unplug the power cord from the outlet. Check the wiring:

- Between the GFI breaker [P/J10](#) pin 1 and the main power switch [P/J12](#) pin 1.
- Between the GFI breaker [P/J12](#) pin 1) and the main power switch [P/J14](#) pin 1.
- Between the main power switch [P/J13](#) pin 1 and the AC drive PWB [P/J4](#) pin 3.
- Between the main power switch [P/J15](#) pin 1 and the AC drive PWB [P/J4](#) pin 1.

Install new components as necessary:

- Main power switch, [PL 1.20 Item 1](#).
- AC drive PWB, [PL 1.15 Item 1](#).

Check the AC circuit to each component. Refer to [Wiring Diagrams](#).

01B +5VDC Power Fault RAP

BSD-ON:[BSD 1.1 Main Power On \(100 VAC\)](#)

BSD-ON:[BSD 1.2 Main Power On \(220-240 VAC\)](#)

BSD-ON:[BSD 1.5 DC Power Generation +5V](#)

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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.

Check the voltage between the LVPS [P/J501](#) pin 1 and ground. +5VDC is measured.

Y N

Check the voltage between [P/J1](#) pin 1 and [P/J501](#) pin 4 on the LVPS. The AC power supply is within specification, [GP 17](#).

Y N

Perform the [01A AC Power RAP](#).

Switch off the machine, [GP 10](#). Disconnect [P/J501](#) from the LVPS. Wait 15 seconds, then switch on the machine, [GP 10](#). Check the voltage between the LVPS [P/J501](#) pin 1 and ground. +5VDC is measured.

Y N

Install a new LVPS, [PL 1.15 Item 3](#).

Check the +5VDC circuit for a short circuit to frame. Refer to Chapter 7 Wiring Data.

Check the wiring of the suspect component for an open circuit or poor contact. Refer to Chapter 7 Wiring Data.

01C +24VDC Power Fault RAP

BSD-ON:BSD 1.1 Main Power On (100 VAC)

BSD-ON:BSD 1.2 Main Power On (220-240 VAC)

BSD-ON:BSD 1.6 DC Power Generation +24V (1 of 2)

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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.

Check the voltage between the LVPS P/J501 pin 1 and ground. +24VDC is measured.

Y N

Check the voltage between P/J1 pin 1 and pin 4 on the LVPS. The AC power supply is within specification, GP 17.

Y N

Perform the 01A AC Power RAP.

Switch off the machine, GP 10. Disconnect P/J501 from the LVPS. Wait 15 seconds, then switch on the machine, GP 10. Check the voltage between the LVPS P/J501 pin 1 and ground. +24VDC is measured.

Y N

Install a new LVPS, PL 1.15 Item 3.

Check the +24VDC circuit for a short circuit to frame. Refer to Chapter 7 Wiring Data.

Check the wiring of the suspect component for an open circuit or poor contact. Refer to Chapter 7 Wiring Data.

002-500 UI Error RAP

BSD-ON:BSD 2.1 User Interface

002-500 A user interface error has occurred.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure the wiring between on the UI console assembly, PL 2.05 Item 1 and the controller PWB assembly, PL 3.05 Item 1 is securely connected, no short or open circuits, and no damage exists. Repair any damage to wiring or connectors as necessary.
3. Reload the software, GP 4.
4. If the fault persists, install a new components as necessary:
 - UI console assembly, PL 2.05 Item 1.
 - Controller PWB assembly, PL 3.05 Item 1.

010-327 Fusing On Time Fail RAP

BSD-ON:BSD 10.3 Fusing Heat (1 of 2)

010-327 The fuser heater coil has been on continuously for longer than the setting time.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that the fuser and fuser heater coil are installed correctly.
3. Ensure that the power supply voltage is within specification, refer to GP 17 Electrical Power Requirements.
4. Check the wiring and connectors between the fuser heater coil P634 and the fuser heater power supply P60/J61 for an open circuit, short circuit or poor contact. Also check the wiring and connectors between P/J530 on the fuser heater power supply and P/J441 on the motor drive Pourboire an open circuit, short circuit or poor contact.
5. If the fault persists, install new components as necessary:
 - Fuser heater coil, PL 10.05 Item 15.
 - Motor drive PWB, PL 1.10 Item 2.
 - Controller PWB assembly, PL 3.05 Item 1.

010-330 Fusing Unit Motor Fail RAP

BSD-ON:BSD 10.1 Fusing Unit Drive

010-330 The fusing unit drive motor revolution failure was detected.

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Procedure

Refer to the procedures that follow as necessary:

- GP 6 How to Check a Motor.
- GP 8 How to Check a Solenoid or Clutch.

Remove the Fuser from the machine. Manually rotate the drive gear of the fuser and check for any abnormal loading (gear not able to rotate, etc.). **Can the gear be rotated without heavy loading?**

Y N

Install a new fuser, PL 10.05 Item 14.

Reinstall the fuser, switch off, then switch on the machine, GP 10. Check if the exit roll 1 rotates as the machine turns on. **Exit roll 1 rotates.**

Y N

Enter dC330 code 010-002. Run the fuser unit drive motor, PL 40.05 Item 19. **The motor runs.**

Y N

Check the connections of P/J201 and P/J211 on the fuser unit drive motor and P/J426 and P/J427 on the motor drive PWB. **The connections are good.**

Y N

Secure the connections.

Check for an open or short circuit between P/J201 / P/J426 and P/J426 / P/J427. **The wiring is good.**

Y N

Repair the wiring or connectors.

Measure the voltage between the fuser P/J194 pin 1 (+) and ground (-). Run the fuser unit drive motor. **The voltage is approximately +5VDC.**

Y N

Check the +5VDC circuit. Refer to Chapter 7 Wiring Data.

Measure the voltage between the fuser P/J427 pin A3 (+) and ground (-). Run the fuser unit drive motor. **The voltage changes.**

Y N

Install a new fusing unit drive motor, PL 40.05 Item 19.

Visually inspect the retract motor assembly gears, PL 10.05 Item 1 and the helical gear, PL 40.05 Item 4 for wear and damage. **There is wear or damage.**

Y N

Enter dC330 code 094-008 (retract) 094-009 (contact) to actuate the 1st BTR contact/retract clutch. **Does the clutch operate correctly?**

A B

Y N

Perform SCP 5 Final actions.

NOTE: During the 1st BTR contact/retract operation, check whether the fusing unit drive motor is also rotating. If it is not rotating, check the 1st BTR contact/retract gear for blockage and damage.

Install new components as necessary in the following order. Check operation after installing each part before installing the next part.

1. Fuser, PL 10.05 Item 14.
2. Fuser drive assembly, PL 40.05 Item 16.
3. Motor drive PWB, PL 1.10 Item 2.

Install a new retract motor assembly, PL 10.05 Item 1.

Install a new helical gear, PL 40.05 Item 4.

Enter dC330 code 094-008 (retract) 094-009 (contact) to actuate the 1st BTR contact/retract clutch. **Does the clutch operate correctly?**

Y N

Perform SCP 5 Final actions.

NOTE: During the 1st BTR contact/retract operation, check whether the fusing unit drive motor is also rotating. If it is not rotating, check the 1st BTR contact/retract gear for blockage and damage.

Install new components as necessary in the following order. Check operation after installing each part before installing the next part.

1. Fuser, PL 10.05 Item 14.
2. Fuser drive assembly, PL 40.05 Item 16.
3. Motor drive PWB, PL 1.10 Item 2.

010-341 Fusing Unit Illegal Fail RAP

BSD-ON:BSD 10.6 Fuser Detection

010-341 A incorrect type of fusing unit was installed.

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Procedure

1. Switch off the machination switch on the machine,GP 10. If the fault still exists, switch off the machine.
2. Install a new fuser, PL 10.05 Item 14. Switch on the machine,GP 10.

010-371 Heat Belt STS Center Disconnection Fail RAP

BSD-ON:BSD 10.4 Fusing Heat (2 of 2)

010-371 The open circuit AD value of the IH center thermistor was detected 3 times in a row.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Switch off, then switch on the machine, GP 10. If the fault still exists, continue with the procedure.
2. Switch off the main power switch, PL 1.20 Item 1.
3. Check the connection between the motor drive PWB P/J420 and the drawer connector DJ600/J600 for open circuit, short circuit, or poor contact.
4. Install new components as necessary in the following order. Check operation after installing each part before installing the next part.
 - a. Fuser, PL 10.05 Item 14.
 - b. Motor drive PWB, PL 1.10 Item 2.

010-372, 010-374 Heat Belt STS Center Over Temperature Fail RAP

BSD-ON:BSD 10.4 Fusing Heat (2 of 2)

010-372 The AD value of the IH center thermistor was detected to be higher than the defined value 4 times in a row.

010-374 The AD value of the IH rear thermistor was detected to be higher than the defined value 4 times in a row.

NOTE: To clear this fault first remove the cause, then change the value of NVM [744-001] (Error Detection History) to '0'. Switch off, then switch on the machine, GP 10. The following list provides the part associated to the NVM code value:

- 0: Normal
- 1: High temperature error (IH Center Thermistor - Run in progress)
- 2: High temperature error (IH Rear Thermistor - Run in progress)
- 3: High temperature error (IH Center Thermistor - other than Run in progress)
- 4: High temperature error (IH Rear Thermistor - other than Run in progress)
- 5: Coil loading error
- 6: Heating error (IH Center Thermistor)
- 7: Heating error (IH Rear Thermistor)
- 8: High temperature error detection due to out of control thermosensitivity monitor
- 9: IH Center Thermistor Warm up Time (No Temperature Rise) Fail
- 10: IH Rear Thermistor Warmup Time (No Temperature Rise) Fail
- 11: IH Power Supply Part Failure

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Check the fuser, PL 10.05 Item 14 for proper installation, correct as necessary.
2. Check the fuser belt for paper jam, clear all paper as necessary.
3. Enter dC140, code 010-200 to monitor the IH center thermistor temperature. A monitor AD value ≤ 100 is a fail, install a new fuser, PL 10.05 Item 14.
4. Check the fuser heater coil wiring for damage, broken connector, or open circuit. Repair as necessary.
5. If the fault persists, install new components as necessary in the following order. Check for fault cleared after installing each part before installing the next part:
 - a. Fuser, PL 10.05 Item 14.
 - b. Motor drive PWB, PL 1.10 Item 2.

010-373 Heat Belt STS Rear Disconnection Fail RAP

BSD-ON:BSD 10.4 Fusing Heat (2 of 2)

010-373 The open circuit AD value of the IH rear thermistor was detected 3 times in a row.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Switch off, then switch on the machine, GP 10. If the fault still exists, continue with the procedure.
2. Switch off the main power switch, PL 1.20 Item 1.
3. Check the connection between the motor drive PWB P/J420 and the drawer connector DJ600/J600 for open circuit, short circuit, or poor contact.
4. If the fault persists, install new components as necessary in the following order. Check for fault cleared after installing each part before installing the next part:
 - a. Fuser, PL 10.05 Item 14.
 - b. Motor drive PWB, PL 1.10 Item 2.

010-375 Heat Belt STS Center Warm Up Time Fail RAP

BSD-ON:BSD 10.4 Fusing Heat (2 of 2)

010-375 The temperature of IH center thermistor does not reach the specified temperature or higher within the specified time.

010-376 The temperature of IH rear thermistor does not reach the specified temperature or higher within the specified time.

NOTE: This fail may occur when the temperature in the installation environment is low (10 degree Celsius or lower) or when the voltage is low (-10% of rated voltage or lower).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the items that follow:

1. The IH rear thermistor for debris, contamination and clogging due to foreign substances.
2. The heat belt for wound up, stuck paper.
3. The IH rear thermistor dC140 code 010-201 for operation failure. Monitor AD value: 100 or lower (temperature monitor value: 250 degree Celsius or higher) is a fail, install a new fuser, PL 10.05 Item 14.
4. The heat belt for damage.
5. If the fault persists, install new components as necessary in the following order. Check for fault cleared after installing each part before installing the next part:
 - a. Fuser, PL 10.05 Item 14.
 - b. Motor drive PWB, PL 1.10 Item 2.

010-376 Heat Belt STS Rear Warm Up Time Fail RAP

BSD-ON:BSD 10.5 Fusing

010-376 The temperature of IH rear thermistor does not reach the specified temperature or higher within the specified time.

NOTE: This fail may occur when the temperature in the installation environment is low (10 degree Celsius or lower).

- 0: Normal
- 1: High temperature error (IH Center Thermistor - Run in progress)
- 2: High temperature error (IH Rear Thermistor - Run in progress)
- 3: High temperature error (IH Center Thermistor - other than Run in progress)
- 4: High temperature error (IH Rear Thermistor - other than Run in progress)
- 5: Coil loading error
- 6: Heating error (IH Center Thermistor)
- 7: Heating error (IH Rear Thermistor)
- 8: High temperature error detection due to out of control thermosensitivity monitor
- 9: IH Center Thermistor Warmup Time (No Temperature Rise) Fail
- 10: IH Rear Thermistor Warmup Time (No Temperature Rise) Fail
- 11: IH Power Supply Part Failure

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the items that follow:

1. The IH rear thermistor for debris, contamination and clogging due to foreign substances.
2. The heat belt for wound up, stuck paper.
3. The IH rear thermistor dC140 code 010-201 for operation failure. Monitor AD value: 100 or lower (Temperature Monitor Value: 250 degree Celsius or higher) is a fail, install a new fuser, PL 10.05 Item 14.
4. The heat belt for damage.
5. If the fault persists, install new components as necessary in the following order. Check for fault cleared after installing each part before installing the next part:
 - a. Fuser, PL 10.05 Item 14.
 - b. Motor drive PWB, PL 1.10 Item 2.

010-378 Heat Belt Rotation Fail RAP

BSD-ON:BSD 10.5 Fusing

010-378 After the fuser unit drive motor ON, the fuser unit belt speed sensor output does not change within the specified time.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter dC330 code 010-004 to run the fuser unit drive motor. The fuser unit drive motor, belt, and pressure roll rotate.

Y N

Switch off the machine, GP 10, check the connections of P/J201 and P/J211 on the fuser unit drive motor and P/J426 and P/J427 on the motor drive PWB.
If the fault persists, install the following parts in sequence:

NOTE: Check the machine for cleared fault before installing the next part.

- Fuser unit drive assembly, PL 40.05 Item 16.
- Motor drive PWB, PL 1.10 Item 2.

An open circuit in the fusing unit belt speed sensor may have occurred. Switch off the machine, GP 10, to perform the checks that follow:

- The drawer connector DJ600/J600 and DP600/P600 between the machine and the fuser for broken/bent pins, burn damage, foreign substances, etc.
- The connection between the motor drive PWB P/J426 and the drawer connector DJ600/J600 for open circuit, short circuit, and poor contact.

If the fault persists, install a new fuser, PL 10.05 Item 14.

010-379 Fusing Unit Hot Not Ready Return Time Fail RAP

BSD-ON:BSD 10.5 Fusing

010-379 The time taken to recover from High Temperature Not Ready state has exceeded the specified time.

Procedure

Perform the [010-327](#) Fusing On Time Fail RAP.

010-380 Fusing P/Roll Latch Motor Fail RAP

BSD-ON:BSD 10.5 Fusing

010-380 When the pressure roll contact or retract operation was performed, the pressure roll latch sensor detected a latch position error of the pressure roll.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Enter [dC330](#), code 010-009/010 (latch on/off) to run the roll latch motor, [PL 10.05 Item 5](#).
2. Check the connection between the motor drive PWB [P/J420](#) and the drawer connector [DJ600/J600](#) for open circuit, short circuit, or poor contact.
3. Check the connection between the drawer connector [DJ600/J600](#) and [DP600/P600](#) between the machine and the fuser for broken/bent pins, burn damage, foreign substances etc.
4. Check the helical gear, [PL 40.05 Item 4](#) for wear and damage, install a new helical gear as required.
5. If the fault persists, install new components as necessary in the following order. Check for fault cleared after installing each part before installing the next part:
 - a. Fuser, [PL 10.05 Item 14](#).
 - b. Motor drive PWB, [PL 1.10 Item 2](#).

010-382 Fusing Unit Thermostat Fail RAP

BSD-ON:BSB 10.4 Fusing Heat (2 of 2)

010-382 The fuser heater coil thermostat has failed.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Switch off, then switch on the machine, GP 10.
2. If the fault remains, switch off the machine, GP 10. Check the thermostat for an open circuit.
3. Check the connection between the motor drive PWB P/J437 Pins 4 and 6 and the fuser heater coil for an open circuit, short circuit, or poor contact.
4. If the fault persists, install a new fuser heater coil, PL 10.05 Item 15.

010-613 Fusing Motor Current Warning RAP

BSD-ON:BSD 10.5 Fusing

010-613 The current value that is applied to the Fusing Motor has continuously exceeded the Threshold for more than the specified time.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Enter dC135, code 945-850 to verify the HFSI counter value is less than 450,000.
2. Enter dC330, code 010-203 to activate the fuser unit belt speed sensor, part of the fuser, PL 10.05 Item 14.
3. Enter dC330, code 010-002 to run the fuser unit drive motor, PL 40.05 Item 16.
4. Check the helical gear, PL 40.05 Item 5, for excessive wear and damage. Install a new helical gear as necessary.
5. If the fault persists, install new components as needed:
 - a. Fuser, PL 10.05 Item 14.
 - b. Motor drive PWB, PL 1.10 Item 2.

010-616 Fusing Unit Thermosensitivity Runaway Hot Not Ready Warning RAP

BSD-ON:[BSD 10.3 Fusing Heat \(1 of 2\)](#)

BSD-ON:[BSD 10.4 Fusing Heat \(2 of 2\)](#)

010-616 High temperature error detection due to out of control thermosensitivity monitor was detected for specified times (from half of the setting times to the setting times - 1).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Switch off, then switch on the machine, [GP 10](#).
2. If the fault persists, install new components as needed:
 - Fuser heater coil, [PL 10.05 Item 15](#)
 - Fuser, [PL 10.05 Item 14](#)

NOTE: After installation of a new part, check the value of NVM [744-001] (Error Detection History). When the value is set to [5] (Coil loading error), clear it to [0]. Switch off, then switch on the machine, [GP 10](#).

010-617 Fusing Paper Quality Operation Mistake Warning RAP

010-617 The paper type is different than expected by the UI settings.

Procedure

Check the tray setting and change it to a correct paper setting or verify the correct paper type is in the tray for the job.

010-618 Fusing Unit E2PROM Write Limit Info RAP

BSD-ON:[BSD 10.6 Fuser Detection](#)

010-618 The upper limit of write guarantee to the Fusing Unit E2PROM has been exceeded.

Procedure

No action required.

010-619 Fusing Unit E2PROM I2C Master Communication Info RAP

BSD-ON:[BSD 10.6 Fuser Detection](#)

010-619 The I2C Master has a communication error, or the communication control ASIC has a fault.

Procedure

1. Switch off, then switch on the machine, [GP 10](#).

NOTE: *If this resolves the problem, it is highly probable that the operation failure had occurred due to external electrical noise or abnormal electrical noise caused by electrical discharge in the machine. Check for any electrical noise source around the machine and check for any abnormal electrical discharge, etc.*

2. Check the fuser is fully engaged into the drawer connector. Switch off the machine, then perform the steps that follow:
 - Check the controller PWB assembly and back plane PWB are fully engaged into [J335](#).
 - Check the motor drive ribbon cable between the halftone PWB [P/J511](#) and the motor drive PWB [P/J410](#) for open circuit and poor contact.
 - Check the connection between the motor drive PWB [P/J420](#) and the drawer connector [DJ600/J600](#) for open circuit, short circuit, and poor contact.
 - The connection between the drawer connector [DJ600/J600](#) and the fuser [DP600/P600](#) for open circuit, short circuit, and poor contact.
3. If the fault persists, install new components as necessary in the following order. Check for fault cleared after installing each part before installing the next part:
 - a. Fuser, [PL 10.05 Item 14](#).
 - b. Motor drive PWB, [PL 1.10 Item 2](#).

010-620 Fusing Unit E2PROM Data Mismatch Info RAP

BSD-ON:[BSD 10.6 Fuser Detection](#)

010-620 Incorrect authentication area data was detected in the fuser.

Procedure

1. Remove and install the fuser to verify correct installation.
2. If the fault persists, install a new fuser, [PL 10.05 Item 14](#).

010-621 Fusing Unit E2PROM Not In Position Info RAP

BSD-ON:[BSD 10.6 Fuser Detection](#)

The fuser is not installed correctly or a communication error has occurred.

Procedure

1. Remove and install the fuser to verify correct installation.
2. If the fault persists, install a new fuser, [PL 10.05 Item 14](#).

010-622 Fusing Unit E2PROM Data Broken Info RAP

BSD-ON: [BSD 10.6 Fuser Detection](#)

010-622 The system detected that the data written to the Fusing Unit E2PROM and the data read from the Fusing Unit E2PROM do not match.

Procedure

Perform the [010-620](#) Fusing Unit E2PROM Data Mismatch Info RAP.

010-623 Fusing Heavy Paper Quality Operation Mistake Warning RAP

010-623 The paper type (plain or lightweight) is different from the UI settings (heavyweight).

Procedure

Check the tray settings in the UI and change as needed to the correct paper setting for the job.

010-625 IH Driver Load Abnormality Detection Warning RAP

BSD-ON:TBD

010-625 Communications with the IT Power Supply output of 1.5kVA or higher were made for several times within a given cycle. (Status code 0x0 is received)

Procedure

1. Switch off, then switch on the machine, [GP 10](#).
2. If the fault persists, install a new fuser heater coil, [PL 10.05 Item 15](#) and fuser, [PL 10.05 Item 14](#).

NOTE: After replacement, check the value of NVM [744-001] (Error Detection History). When the value is set to [5] (Coil loading error), clear it to [0].

Note: Business Ready (BR) Finisher fault codes are listed in the Business Ready (BR) Finisher Service Manual part number 705P01378.

012-111, 112, 126, 131 Jam In The Device RAP

BSD-ON: [BSD 13.5 Office Finisher LX Horizontal Transport](#)

012-111 The horizontal transport entrance sensor did not deactuate within the specified time.

012-112 After the fuser exit sensor was actuated, the horizontal transport entrance sensor did not deactuate within the specified time.

012-126 After the horizontal transport entrance sensor was actuated, the horizontal transport entrance sensor did not deactuate within the specified time.

012-131 After the fuser exit sensor was actuated, the horizontal transport entrance sensor did not deactuate within the specified time.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the horizontal transport drive rolls, [PL 13.08](#) and nip rolls, [PL 13.07](#) for wear or contamination. Check for obstructions or damage in the paper path. **The paper path is good.**

Y N

Clean or install new components as necessary.

Enter [dC330](#) code 012-190. Actuate the horizontal transport entrance sensor, [PL 13.08 Item 6](#). **The display changes.**

Y N

Check the wiring between [J8861](#) pin 2 and [J8897](#) pin 6 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the voltage between [J8897](#) pins 4 and 5 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N

Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [J8897](#) pin 6 on the finisher PWB and ground. Actuate the horizontal transport entrance sensor. **The voltage changes.**

Y N

Install a new horizontal transport entrance sensor, [PL 13.08 Item 6](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

Switch off the machine, [GP 10](#). Open the horizontal transport top cover. Check the horizontal transport interlock sensor. Switch on the machine, [GP 10](#). **The horizontal transport belt is driven.**

Y N
Check the wiring between [P/J8862](#) on the horizontal transport motor and [J8987](#) on the finisher PWB for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N
Reconnect or repair as necessary.

Measure the resistance of the horizontal transport motor between [P/J8862](#) pins 1, 2, 5 and 6. **The resistance is approximately 20 Ohms.**

Y N
Install a new horizontal transport motor, [PL 13.08 Item 13](#).

Install a new finisher PWB, [PL 13.45 Item 2](#). If the fault persists, install a new horizontal transport motor, [PL 13.08 Item 13](#).

Check the horizontal transport entrance sensor and horizontal transport Motor circuits for an intermittent condition. If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

012-132 Jam In The Device RAP

BSD-ON: [BSD 13.7 Office Finisher LX Transportation](#)

012-132 A paper jam occurred at the entrance of the horizontal transfer.

Initial Actions

Perform the checks that follow:

- Ensure that paper is being fed correctly from the horizontal transport to the finisher.
- Check that the alignment of the finisher to the printer is correct.
- Inspect and clean if necessary, the horizontal transport rollers, [PL 13.08](#) and the hole punch assembly, [PL 13.06 Item 10](#).
- If necessary, install a new horizontal transport assembly, [PL 13.05 Item 1](#).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter [dC330](#) code 012-100. Actuate the finisher transport entrance sensor, [PL 13.35 Item 10](#). **The display changes.**

Y N
Check the wiring between [P/J8988](#) pin 2 and [P/J8868](#) pin 2 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N
Reconnect or repair as necessary.

Measure the voltage between [P/J8988](#) pins 1 and 3 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N
Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [P/J8988](#) pin 2 on the finisher PWB and ground. Actuate the finisher entrance sensor. **The voltage changes.**

Y N
Install a new finisher transport entrance sensor, [PL 13.35 Item 10](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

Enter [dC330](#) code 012-038. **The transport motor runs.**

Y N
Check the wiring between [P/J8879](#) on the transport motor and [P/J8988](#) on the finisher PWB for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N
Reconnect or repair as necessary.

Measure the resistance of the transport motor between [P/J8879](#) pins 1, 2, 5 and 6. **The resistance is approximately 20 Ohms.**

Y N
Install a new transport motor, [PL 13.08 Item 13](#).

A B
Install a new finisher PWB, [PL 13.45 Item 2](#). If the fault persists, install a new transport motor, [PL 13.08 Item 13](#).

Check the components that follow:

- The entrance roller, paddle shaft and eject belt, [PL 13.29](#) for wear, damage or contamination.
- The finisher entrance sensor and transport motor circuits for an intermittent condition.

If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

012-151, 152 Compiler Exit Sensor Jam RAP

BSD-ON: [BSD 13.7 Office Finisher LX Transportation](#)

012-151 A paper jam occurred at the compiler exit sensor.

012-152 A paper jam occurred at the compiler 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 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- **(012-152 Only)** Ensure that the chute assembly, [PL 13.35 Item 16](#) is installed correctly.
- Switch off, then switch on the machine, [GP 10](#).

Procedure

Enter [dC330](#) code 012-150. Actuate the compiler exit sensor, [PL 13.35 Item 10](#). **The display changes.**

Y N

Check the wiring between [P/J8988](#) pin 5 and [P/J8869](#) pin 2 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the voltage between [P/J8988](#) pins 4 and 6 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N

Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [P/J8988](#) pin 5 on the finisher PWB and ground. Actuate the compiler exit sensor. **The voltage changes.**

Y N

Install a new compiler exit sensor, [PL 13.35 Item 10](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

Enter [dC330](#) 012-038. **The transport motor runs.**

Y N

Check the wiring between [P/J8879](#) on the transport motor and [P/J8863](#) on the finisher PWB for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the resistance of the transport motor between [P/J8879](#) pin 1, 2, 5 and 6. **The resistance is approximately 20 Ohms.**

Y N

Install a new transport motor, [PL 13.08 Item 13](#).

A B
Install a new finisher PWB, [PL 13.45 Item 2](#). If the fault persists, install a new transport motor, [PL 13.08 Item 13](#).

Check the components that follow:

- The exit roller, paddle shaft and eject belt for wear, damage or contamination, [PL 13.29](#).
- The compiler exit sensor and transport motor circuits for an intermittent condition.

If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

012-161 Jam In The Finisher RAP

BSD-ON:[BSD 13.10 Office Finisher LX Tamping and Offset \(2 of 2\)](#)

BSD-ON: [BSD 13.13 Office Finisher LX Eject Control \(1 of 2\)](#)

012-161 A paper jam occurred at the compiler tray exit.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter [dC330](#) 012-151. Actuate the compiler tray no paper sensor, [PL 13.28 Item 9](#). **The display changes.**

Y N

Check the wiring between [P/J8984A/B](#) pin 2 and [P/J8880](#) pin 2 on the finisher PWB for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the voltage between [P/J8984A/B](#) pins 1 and 3 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N

Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [P/J8984A/B](#) pin 2 on the finisher PWB and ground. Actuate the compiler tray no paper sensor. **The voltage changes.**

Y N

Install a new compiler tray no paper sensor, [PL 13.28 Item 9](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

Enter [dC330](#) code 012-055. **The eject motor runs.**

Y N

Check the wiring between [P/J8878](#) on the eject motor and [P/J8983](#) on the finisher PWB for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the resistance of the eject motor between [P/J8878](#) pins 1, 3, 4 and 6. **The resistance is approximately 20 Ohms.**

Y N

Install a new eject motor assembly, [PL 13.27 Item 3](#).

Install a new eject motor assembly, [PL 13.27 Item 3](#). If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

Check the components that follow:

- The exit roller, entrance roller, paddle shaft and eject belt for wear, damage or contamination, [PL 13.29](#).

- The compiler tray no paper sensor and eject motor circuits for an intermittent condition. If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

012-189 Finisher Jam RAP

012-198 A paper jam occurred within the finisher paper path.

Procedure

Clear the paper jam and repeat the job. If the paper jam is repeated, check the finisher paper path and remove any paper fragments or other debris,

012-210 NVM Fail RAP

BSD-ON: [BSD 3.3 PWB Communications \(Controller to Finisher\)](#)

012-210 The NVM has failed.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Check the wiring between the finisher and the IOT.
2. Perform [OF2](#) Special Boot Modes RAP, 03. NVRAM INIT MODE to initialize the NVM and reset the system memory.
3. If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

012-211B Stacker Tray Fail RAP

BSD-ON: [BSD 13.15 Office Finisher LX Stacker Tray Control](#)

012-211 After the stacker tray starts lifting, the tray height sensor 1 is not turned on within the 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 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check for obstructions under the tray.
- Check the operation of the stack height sensor 1 (Q12-264), [PL 13.27 Item 16](#) actuator.
- Check the tray raise/lower mechanism for damage or contamination.

Procedure

Enter [dC330](#) code 012-264. Actuate the stack height sensor 1, [PL 13.27 Item 16](#). **The display changes.**

Y N

Check the wiring between [P/J8873](#) pin 2 and [P/J8988](#) pin 17 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the voltage between [P/J8988](#) pins 16 and 18 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N

Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [P/J8988](#) pin 17 on the finisher PWB and ground. Actuate the stacker height sensor 1. **The voltage changes.**

Y N

Install a new stack height sensor 1, [PL 13.27 Item 16](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

Enter [dC330](#) code 012-263. Manually rotate the encoder, [PL 13.15 Item 19](#) to actuate the stacker encoder sensor. **The display changes.**

Y N

Check the wiring between [J8875](#) pin 2 and [P/J8898](#) pin 23 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the voltage between [P/J8898](#) pins 22 and 24 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N

Install a new finisher PWB, [PL 13.45 Item 2](#).

A B
Measure the voltage between [P/J8898](#) pin 23 on the finisher PWB and ground. Manually rotate the encoder, [PL 13.15 Item 19](#) to actuate the stacker encoder sensor. **The voltage changes.**
Y N
Install a new stacker encoder sensor, [PL 13.15 Item 32](#).
Install a new finisher PWB, [PL 13.45 Item 2](#).

Enter [dC330](#) code 012-060 and 012-061 alternatively to run the stacker elevator motor, [PL 13.15 Item 29](#). **The stacker motor runs.**

Y N
Measure the voltage between [P/J8898](#) pin 12 and ground. **The voltage is approximately +24 VDC.**

Y N
Check the +24VDC circuit. Refer to Chapter 7 Wiring Data.

Check the wiring between [P/J8898](#) pins 11 and 12 and the stacker motor for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N
Reconnect or repair as necessary.

Install a new stacker elevator motor, [PL 13.15 Item 29](#). If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

012-212 Stacker Tray Upper Limit Failure RAP

BSD-ON: [BSD 13.15 Office Finisher LX Stacker Tray Control](#)

012-212 The stacker has continued to elevate after the defined period of time has passed since stacker no paper sensor is on during stacker elevation.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check for obstructions under the tray.
- Check the operation of the stack height sensor, [PL 13.27](#) actuators.
- Check the tray raise/lower mechanism for damage or contamination.

Procedure

Enter [dC330](#) code 012-264. Actuate stack height sensor 1. **The display changes.**

Y N
Check the wiring between [P/J8873](#) pin 2 and [P/J8988](#) pin 17 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N
Reconnect or repair as necessary.

Measure the voltage between [P/J8988](#) pins 16 and 18 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N
Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [P/J8988](#) pin 17 on the finisher PWB and ground. Actuate the stacker height sensor 1. **The voltage changes.**

Y N
Install a new stack height sensor 1, [PL 13.27 Item 16](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

Enter [dC330](#) code 012-265. Actuate the stack height sensor 2. **The display changes.**

Y N
Check the wiring between [J8874](#) pin 2 and [P/J8988](#) pin 20 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N
Reconnect or repair as necessary.

Measure the voltage between [P/J8988](#) pins 19 and 21 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N
Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [P/J8988](#) pin 20 on the finisher PWB and ground. Actuate the stack height sensor 2. **The voltage changes.**

A

Y N

Install a new stack height sensor 2, [PL 13.27 Item 16](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

Enter [dC330](#) code 012-263. Manually rotate the encoder, [PL 13.15 Item 19](#) to actuate the stacker encoder sensor, [PL 13.15 Item 32](#). **The display changes.**

Y N

Check the wiring between [J8875](#) pin 2 and [P/J8988](#) pin 23 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the voltage between [P/J8988](#) pins 22 and 24 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N

Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [P/J8988](#) pin 23 on the finisher PWB and ground. Manually rotate the encoder, [PL 13.15 Item 19](#) to actuate the stacker encoder sensor. **The voltage changes.**

Y N

Install a new stacker encoder sensor, [PL 13.15 Item 32](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

Enter [dC330](#) code 012-262. Actuate the stacker paper sensor, [PL 13.15 Item 32](#). **The display changes.**

Y N

Check the wiring between [J8872](#) pin 2 and [P/J8988](#) pin 14 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the voltage between [P/J8988](#) pins 13 and 15 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N

Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [P/J8988](#) pin 14 on the finisher PWB and ground. Actuate the stacker paper sensor **The voltage changes.**

Y N

Install a new stacker paper sensor, [PL 13.15 Item 32](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

012-213 Stacker Tray Lower Limit Failure RAP

BSD-ON: [BSD 13.15 Office Finisher LX Stacker Tray Control](#)

012-213 Stacker descended lower than normal levels, below low limit height.

Initial Actions

- Check for obstructions under the tray.
- Check the operation of the stack height sensor, [PL 13.27](#) actuators.
- Check the tray raise/lower mechanism for damage or contamination.

Procedure

Enter [dC330](#) code 012-264. Actuate the stack height sensor 1. **The display changes.**

Y N

Check the wiring between [J8873](#) pin 2 and [P/J8988](#) pin 17 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the voltage between [P/J8988](#) pins 16 and 18 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N

Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [P/J8988](#) pin 17 on the finisher PWB and ground. Actuate the stacker height sensor 1. **The voltage changes.**

Y N

Install a new stack height sensor 1, [PL 13.27 Item 16](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

Enter [dC330](#) code 012-265. Actuate the stack height sensor 2. **The display changes.**

Y N

Check the wiring between [J8874](#) pin 2 and [P/J8988](#) pin 20 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the voltage between [P/J8988](#) pins 19 and 21 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N

Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [P/J8988](#) pin 20 on the finisher PWB and ground. Actuate the stack height sensor 2. **The voltage changes.**

Y N

Install a new stack height sensor 2, [PL 13.27 Item 16](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

A

Enter dC330 code 012-263. Manually rotate the encoder, PL 13.15 Item 19 to actuate the stacker encoder sensor. **The display changes.**

Y N

Check the wiring between J8875 pin 2 and P/J8898 pin 23 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the voltage between P/J8988 pins 22 and 24 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N

Install a new finisher PWB, PL 13.45 Item 2.

Measure the voltage between P/J8988 pin 23 on the finisher PWB and ground. Manually rotate the encoder, PL 13.15 Item 19 to actuate the stacker encoder sensor. **The voltage changes.**

Y N

Install a new stacker encoder sensor, PL 13.15 Item 32.

Install a new finisher PWB, PL 13.45 Item 2.

Enter dC330 code 012-262. Actuate the stacker paper sensor, PL 13.15 Item 32. **The display changes.**

Y N

Check the wiring between J8872 pin 2 and P/J8988 pin 14 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the voltage between P/J8988 pins 13 and 15 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N

Install a new finisher PWB, PL 13.45 Item 2.

Measure the voltage between P/J8988 pin 14 on the finisher PWB and ground. Actuate the stacker paper sensor **The voltage changes.**

Y N

Install a new stacker paper sensor, PL 13.15 Item 32.

Install a new finisher PWB, PL 13.45 Item 2.

Install a new finisher PWB, PL 13.45 Item 2.

012-221, 223 Front Tamper Home Sensor Fail RAP

BSD-ON: BSD 13.9 Office Finisher LX Tamping and Offset (1 of 2)

BSD-ON: BSD 13.10 Office Finisher LX Tamping and Offset (2 of 2)

012-221 The front tamper home sensor is not turned on within the specified time.

012-223 The front tamper home sensor is not turned off within the specified time.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Manually operate the tamper mechanism. **The tamper mechanism moves smoothly.**

Y N

Install a new components as necessary, PL 13.28.

Enter dC330 code 012-220 front tamper home sensor. Manually operate the tamper mechanism to actuate the front tamper home sensor. **The display changes.**

Y N

Check the wiring between J8881 pin 2 and P/J8884 pin 5 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the voltage between P/J8884 pins 6 and 4 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N

Install a new finisher PWB, PL 13.45 Item 2.

Measure the voltage between P/J8884 pin 5 on the finisher PWB and ground. Manually operate the tamper mechanism to actuate the front tamper home sensor. **The voltage changes.**

Y N

Install a new front tamper home sensor, PL 13.28 Item 8.

Install a new finisher PWB, PL 13.45 Item 2.

Enter dC330 012-020 and 012-023 alternately to run the front tamper motor, PL 13.28 Item 6. **The front tamper motor runs.**

Y N

Measure the voltage between P/J8884 pin 19 on the finisher PWB and ground. **The voltage is approximately +24VDC.**

Y N

Measure the voltage between P/J8884 pin 4 on the finisher PWB and ground. **The voltage is approximately +24VDC.**

Y N

Check the +24VDC circuit. Refer to Chapter 7 Wiring Data. If the fault persists, install a new finisher PWB, PL 13.45 Item 2.

A B C

A B C

Install a new finisher PWB, [PL 13.45 Item 2](#).

Check the wiring between [J8984A/B](#) pins 18 to 22 on the finisher PWB and the front tamper motor [J8884](#) for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Install a new front tamper motor, [PL 13.28 Item 6](#). If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

012-224, 263 Rear Tamper Home Sensor Fail RAP

BSD-ON: [BSD 13.9 Office Finisher LX Tamping and Offset \(1 of 2\)](#)

BSD-ON: [BSD 13.10 Office Finisher LX Tamping and Offset \(2 of 2\)](#)

012-224 The rear tamper home sensor is not turned off within the specified time.

012-263 The rear tamper home sensor is not turned on within the specified time.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Manually operate the tamper mechanism. **The tamper mechanism moves smoothly.**

Y N

Install a new components as necessary, [PL 13.28](#).

Enter [dC330](#) code 012-221. Manually operate the tamper mechanism to actuate the rear tamper home sensor. **The display changes.**

Y N

Check the wiring between [J8882](#) pin 2 and [P/J8884](#) pin 8 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the voltage between [P/J8884](#) pins 9 and 7 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N

Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [P/J8884](#) pin 8 on the finisher PWB and ground. Manually operate the tamper mechanism to actuate the rear tamper home sensor. **The voltage changes.**

Y N

Install a new rear tamper home sensor, [PL 13.28 Item 8](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

Enter [dC330](#) 012-026 and 012-029. alternately to run the rear tamper motor, [PL 13.28 Item 6](#) each direct ii on. **The rear tamper motor runs.**

Y N

Measure the voltage between [P/J8884](#) pin 14 on the finisher PWB and ground. **The voltage is approximately +24VDC.**

Y N

Measure the voltage between [P/J8883](#) pin 4 on the finisher PWB and ground. **The voltage is approximately +24VDC.**

Y N

Check the +24VDC circuit. Refer to Chapter 7 Wiring Data. If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

A B C

A B C

Install a new finisher PWB, [PL 13.45 Item 2](#).

Check the wiring between [P/J8984A/B](#) pins 13 to 17 on the finisher PWB, and the rear tamper motor [P/J8883](#) for an open or short circuit, or a loose or damaged connector.

The wiring is good.

Y N

Reconnect or repair as necessary.

Install a new rear tamper motor, [PL 13.28 Item 6](#). If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

012-231 Punch Home Sensor Fail RAP

BSD-ON: [BSD 13.6 Office Finisher LX Punch](#)

012-231 The punch home sensor did not turn on within the specified time after the punch motor started running.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the punch home actuator for deformation.
- Check the punch home sensor, [PL 13.09 Item 5](#) for proper installation.

Procedure

Enter [dC330](#) code 12-074 and 12-078 alternately to run the punch motor, [PL 13.09 Item 1](#).

The punch motor runs.

Y N

Check the wiring to the punch motor. Install new components as necessary:

- Punch motor, [PL 13.09 Item 1](#).
- Finisher PWB, [PL 13.45 Item 2](#).

Enter [dC330](#) code 12-271. Use a piece of paper to actuate the punch home sensor. **The display changes.**

Y N

Check the wiring to the punch motor. Install new components as necessary:

- Punch home sensor, [PL 13.09 Item 5](#).
- Finisher PWB, [PL 13.45 Item 2](#).

If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

012-243, 265 Booklet Folder Home Sensor Fail RAP

BSD-ON: [BSD 13.8 Office Finisher LX Folding](#)

012-243 Folder home sensor is not actuated after the lapse of 500ms from motor on while folder knife is returning to home.

012-265 When the booklet home moves from home position, the folder home sensor did not turn off within the 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 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the folder home sensor, [PL 13.40 Item 16](#) for improper installation.
- Check the knife drive mechanism, [PL 13.40](#) for a foreign substance.

Procedure

Enter [dC330](#) code 013-022 and 013-023 alternately to run the folder knife motor, [PL 13.40 Item 15](#). **The fold knife motor runs.**

Y N

Check the wiring between [P/J8905](#) on the folder knife motor and [J8890](#) on the finisher PWB and between [J8894](#) on the booklet PWB and [J8895](#) on the finisher PWB for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Install a new booklet folder knife motor, [PL 13.40 Item 15](#). If the fault persists, install a new booklet PWB, [PL 13.70 Item 4](#).

Enter [dC330](#) code 013-101. Actuate the folder home sensor. **The display changes.**

Y N

Check the wiring between [J8904](#) pin 2 and [J8890](#) pin 2 on the finisher PWB for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the voltage between [J8890](#) pins 3 and 1 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N

Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [J8890](#) pin 2 on the finisher PWB and ground. Actuate the folder home sensor. **The voltage changes.**

Y N

Install a new folder home sensor, [PL 13.40 Item 16](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

A

If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

012-249 Booklet Front Stapler Fail RAP

BSD-ON: [BSD 13.17 Office Finisher LX Booklet Staple Control \(1 of 2 - Front\)](#)

012-249 The booklet front staple home switch is not on (does not return to home position) within the specified time after the booklet front staple motor starts to reverse.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the booklet front stapler for jammed staples or an incorrectly installed staple cartridge.

Procedure

Enter [dC330](#) code 12-024 then 12-025 to cycle the front booklet stapler. **The front booklet stapler cycles normally.**

Y N
Measure the voltage between [P/J8995](#) pin 5 on the booklet PWB and ground. **The voltage is approximately +5VDC.**

Y N
Check the circuit from the booklet PWB to the booklet stapler cover switch. Repair the wiring or install new components as necessary, [PL 13.70](#).

Perform the steps that follow:

- Switch off the machine, [GP 10](#).
- Check the wiring between [P/J8995](#) on the booklet PWB and [P/J8994](#) on the front booklet stapler for a loose or damaged connector, or an open or short circuit.
- If the wiring is good, install a new front booklet stapler assembly, [PL 13.60 Item 13](#).
- If the fault persists, install a new booklet PWB, [PL 13.70 Item 4](#).

Perform the steps that follow:

- Switch off the machine, [GP 10](#).
- Check the wiring between [P/J8995](#) pin 5 on the booklet PWB and [J8894](#) pin 3 on the front booklet stapler for a loose or damaged connector, or an open or short circuit.
- If the wiring is good, install a new front booklet stapler assembly, [PL 13.60 Item 13](#).
- If the fault persists, install a new booklet PWB, [PL 13.70 Item 4](#).

012-260, 282 Eject Clamp Home Sensor Fail RAP

BSD-ON: [BSD 13.13 Office Finisher LX Eject Control \(1 of 2\)](#)

012-260 After the eject clamp started ascending, the eject clamp home sensor did not turn on within 500ms.

012-282 After the eject clamp started descending, the eject clamp home sensor did not turn off within 200ms.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Manually operate the eject mechanism. Check for binding, a dirty sensor, or damage.
- Check the actuator for the eject clamp home sensor, [PL 13.27 Item 16](#) for damage

Procedure

Enter [dC330](#) code 012-250. Actuate the eject clamp home sensor, [PL 13.27 Item 16](#). **The display changes.**

Y N
Check the wiring between [J8870](#) pin 2 on the eject clamp home sensor and [P/J8988](#) pin 8 on the finisher PWB for an open or short circuit, or loose or damaged connectors. **The wiring is good.**

Y N
Reconnect or repair as necessary.

Measure the voltage between [P/J8988](#) pins 9 and 7 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N
Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [P/J8988](#) pin 8 on the finisher PWB and ground. Actuate the eject clamp home sensor. **The voltage changes.**

Y N
Install a new eject clamp home sensor, [PL 13.27 Item 16](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

Enter [dC330](#) code 012-052 and 012-053 alternately. **The eject motor runs.**

Y N
Check the wiring between [P/J8878](#) pins 1 to 6 on the eject motor and [P/J8983](#) pins 5 to 8 on the finisher PWB for an open or short circuit, or loose or damaged connectors. **The wiring is good.**

Y N
Reconnect or repair as necessary.

Measure the resistance of the eject motor between each pin of [P/J8878](#) pins 1, 3, 4 and 6. **The resistance is approximately 2 Ohm.**

A

Y N

Install a new eject motor, [PL 13.27 Item 4](#).

Install a new finisher PWB, [PL 13.45 Item 2](#). If the fault persists, install a new eject motor, [PL 13.27 Item 4](#).

Check for an intermittent circuit or intermittent mechanical problem. If the check is good, install a new finisher PWB, [PL 13.45 Item 2](#).

012-268 Booklet Rear Stapler Fail RAP

BSD-ON: [BSD 13.4 Office Finisher LX Booklet Interlock Switching](#)

BSD-ON: [BSD 13.18 Office Finisher LX Booklet Staple Control \(2 of 2 - Rear\)](#)

012-268 The booklet rear staple home switch is not on (does not return to home position) within the specified time after the booklet rear staple motor starts to reverse.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the booklet rear stapler for jammed staples or an incorrectly installed staple cartridge.

Procedure

Enter [dC330](#) code 12-026 then 12-027 to cycle the front booklet stapler. **The rear booklet stapler cycles normally**

Y N

Measure the voltage of [P/J8995](#) on the booklet PWB between pin 8 and ground, pin 9 and ground, pin 10 and ground, and pin 11 and ground. **The voltage is approximately +24VDC on each pin.**

Y N

Check the circuit from the booklet PWB to the booklet stapler cover switch. Repair the wiring or install new components as necessary, [PL 13.70](#).

Perform the steps that follow:

- Switch off the machine, [GP 10](#).
- Check the wiring between [P/J8995](#) on the booklet PWB and [J8895](#) on the rear booklet stapler for a loose or damaged connector, or an open or short circuit.
- If the wiring is good, install a new rear booklet stapler assembly, [PL 13.65 Item 13](#).
- If the fault persists, install a new booklet PWB, [PL 13.70 Item 4](#).

Perform the steps that follow:

- Switch off the machine, [GP 10](#).
- Check the wiring between [P/J8995](#) pin 12 on the booklet PWB and [J8895](#) pin 3 on the rear booklet stapler for a loose or damaged connector, or an open or short circuit.
- If the wiring is good, install a new rear booklet stapler assembly, [PL 13.65 Item 13](#).
- If the fault persists, install a new booklet PWB, [PL 13.70 Item 4](#).

012-269 Booklet PWB Communications Fail RAP

BSD-ON: [BSD 3.3 PWB Communications \(Controller to Finisher\)](#)

012-269 Communications between the finisher PWB and the booklet PWB 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 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the connectors at the finisher PWB and the booklet PWB are connected or seated correctly
- Check the wiring between the finisher PWB and the booklet PWB for damage.

Procedure

Switch off, then on switch on the machine, [GP 10](#). Enter [dC330](#) code 013-161 to detect the booklet maker. **The fault is resolved.**

Y N
| Reload the software, [GP 4](#). **The fault is resolved.**
Y N
| | Install a new finisher PWB, [PL 13.45 Item 2](#). If the fault persists, install a new booklet PWB, [PL 13.70 Item 4](#).
| Perform [SCP 5](#) Final Actions.

Perform [SCP 5](#) Final Actions.

012-283, 284 Set Clamp Home Sensor Fail RAP

BSD-ON: [BSD 13.13 Office Finisher LX Eject Control \(1 of 2\)](#)

BSD-ON: [BSD 13.14 Office Finisher LX Eject Control \(2 of 2\)](#)

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Manually operate the eject mechanism. Check for binding, a dirty sensor, or damage.
- Check the actuator for the set clamp home sensor, [PL 13.27 Item 16](#) for damage

Procedure

Enter [dC330](#) code 012-251. Actuate the set clamp home sensor. **The display changes.**

Y N
| Check the wiring between [J8871](#) pin 2 on the set clamp home sensor and [P/J8988](#) pin 11 on the finisher PWB for an open or short circuit, or loose or damaged connectors. **The wiring is good.**
Y N
| | Reconnect or repair as necessary.
| Measure the voltage between [P/J8988](#) pins 12 and 10 on the finisher PWB. **The voltage is approximately +5VDC.**
Y N
| | Install a new finisher PWB, [PL 13.45 Item 2](#).
| Measure the voltage between the [P/J8988](#) pin 11 on the finisher PWB and ground. Actuate the eject clamp home sensor. **The voltage changes.**
Y N
| | Install a new eject clamp home sensor, [PL 13.27 Item 16](#).
| Install a new finisher PWB, [PL 13.45 Item 2](#).

Enter [dC330](#) code 012-052 then 012-053 alternately. **The eject motor, [PL 13.27 Item 4](#) runs.**

Y N
| Check the wiring between [P/J8878](#) pins 1 to 6 on the eject motor and [P/J8983](#) pins 5 to 8 on the finisher PWB for an open or short circuit, or loose or damaged connectors. **The wiring is good.**
Y N
| | Reconnect or repair as necessary.
| Measure the resistance of the eject motor between each pin of [P/J8878](#)-1, 3, 4 and 6. **The resistance is approximately 2 Ohm.**
Y N
| | Install a new eject motor, [PL 13.27 Item 4](#).
| Install a new finisher PWB, [PL 13.45 Item 2](#). If the fault persists, install a new eject motor, [PL 13.27 Item 4](#).

A

Enter dC330 code 012-050. **The set clamp clutch energizes.**

Y N

Check the wiring between P/J8878 pins 1 and 2 on the set clamp clutch and P/J8988 pins 3 and 4 on the finisher PWB for an open or short circuit, or loose or damaged connectors.

The wiring is good.

Y N

Reconnect or repair as necessary.

Measure the voltage between the Finisher PWB P/J8988 pin 4 (+) and ground (-). **The voltage is approximately +24VDC.**

Y N

Install a new set clamp clutch, PL 13.27 Item 12. If the fault persists, install a new finisher PWB, PL 13.45 Item 2.

Install a new finisher PWB, PL 13.45 Item 2.

Install a new finisher PWB, PL 13.45 Item 2.

012-291 Stapler Fail RAP

BSD-ON:BSD 13.12 Office Finisher LX Staple Control

BSD-ON:BSD 13.11 Office Finisher LX Staple Positioning

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the stapler for jammed staples or an incorrectly installed staple cartridge.

Procedure

Enter dC330 code 012-046 then 012-047. Actuate the stapler unit, PL 13.20 Item 16. **The stapler cycles.**

Y N

Check the wiring between J8887 pins 1 to 4 on the stapler assembly and P/J8981A/B pins 9 to 12 on the finisher PWB for an open or short circuit, or loose or damaged connectors. If the wires are good, install a new stapler assembly, PL 13.20 Item 4. If the fault persists, install a new finisher PWB, PL 13.45 Item 2.

Enter dC330 code 012-244 to check the staple home sensor, part of PL 13.20 Item 4. **The value is L.**

Y N

Measure the voltage between J8886 pins 1 to 5 on the stapler assembly. **The voltage is approximately +5VDC.**

Y N

Check the wiring from P/J8981A/B pins 4 and 8 to J8886 pins 5 and 1 for an open circuit. If the wires are good, install a new finisher PWB, PL 13.45 Item 2.

Check the wiring from P/J8981A/B pin 4 to J8886 pin 5 for an open circuit. If the wiring is good, install a new stapler assembly, PL 13.20 Item 4.

Check for an intermittent connection. If the check is good, install a new stapler assembly, PL 13.20 Item 4. If the fault persists, install a new finisher PWB, PL 13.45 Item 2.

012-295, 296 Stapler Move Position Sensor Fail RAP

BSD-ON: [BSD 13.11 Office Finisher LX Staple Positioning](#)

012-295 occurs when:

- After the stapler started moving to the staple position, the stapler move position sensor did not turn on within 2 seconds.
- After the stapler completed moving to the staple position, the stapler move position sensor did not turn on.

012-296 occurs when:

- After the stapler started moving to the staple position and the staple move sensor turned off, the staple move sensor did not turn off within 500ms.
- After the staple position had been fixed, the staple move sensor turned off.
- After the staple move sensor actuated when paper passed through the dual staple 1 position while moving to the rear staple position, the staple move sensor did not deactivate within 500ms.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the stapler, base frame and rail, [PL 13.20](#) for freedom of movement.

Procedure

Enter [dC330](#) code 012-241. Manually move the stapler from the home position to the staple position and back to actuate the stapler move position sensor, [PL 13.20 Item 8](#). **The display changes.**

Y N

Check the wiring between [J8885](#) pin 2 on the stapler move position sensor and [P/J8981A/B](#) pin 2 on the finisher PWB for an open or short circuit, or loose or damaged connectors.

The wiring is good.

Y N

Reconnect or repair as necessary.

Measure the voltage between [P/J8981A/B](#) pins 3 and 1 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N

Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [P/J8981A/B](#) pin 2 on the finisher PWB and ground. Manually move the stapler from the home position to the staple position and back. **The voltage changes.**

Y N

Install a new stapler move position sensor, [PL 13.20 Item 8](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

Enter [dC330](#) code 012-045 and 012-042 alternately. **The stapler move motor runs.**

Y N

Check the wiring between [P/J8981A/B](#) pins 13 to 16 on the finisher PWB and [P/J8888](#) on the stapler move motor for an open or short circuit, or loose or damaged connectors. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Install a new staple move motor, [PL 13.20 Item 20](#). If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

Check for an intermittent connection. If the check is good, install a new stapler assembly, [PL 13.20 Item 4](#). If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

012-300 The Finisher Top Cover Is Open RAP

BSD-ON: [BSD 13.3 Office Finisher LX Interlock Switching](#)

012-300 Eject cover switch open was detected.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Ensure that the eject cover, [PL 13.25 Item 1](#) is closed.
- Check the eject cover switch, [PL 13.27 Item 19](#) for improper installation.
- Check eject cover switch connectors for connection failure.
- Check the switch actuator for damage.

Procedure

Enter [dC330](#) code 012-300. Actuate the eject cover switch. **The display changes**

Y N
|
Check the wiring between [J8889](#) pin 1 and 2 for an open or short circuit, or loose or damaged connectors. **The wiring is good.**

Y N
|
Install a new eject cover switch, [PL 13.27 Item 19](#).

Check the wiring between [J8889](#) on the eject cover switch and [J8982](#) on the finisher for an open or short circuit, or loose or damaged connectors. If the check is good, install a new finisher PWB, [PL 13.45 Item 2](#). **The wiring is good.**

Y N
|
Reconnect or repair as necessary.

Install a new finisher PWB, [PL 13.45 Item 2](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

012-302 The Front Door Is Open RAP

BSD-ON: [BSD 13.3 Office Finisher LX Interlock Switching](#)

012-302 The finisher front door interlock switch has detected the door 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 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- Check the installation of the front door interlock switch, [PL 13.45 Item 19](#).
- Check that the front cover can be opened and closed.

Procedure

Enter [dC330](#) code 012-302. Open then close the finisher front cover to actuate the front door interlock switch. **The display changes.**

Y N
|
Cheat the front door interlock switch. **The display changes.**

Y N
|
Check the wiring between [J8982](#) pin 3 and [J8891](#) pin 2B, and from [J8891](#) pin 2A to [J8982](#) pin 2 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N
|
Reconnect or repair as necessary.

Remove the cheater. Measure the voltage between [J8891](#) pin 2A on the front door interlock switch and ground. **The voltage is approximately +5VDC.**

Y N
|
Check the wiring from [J8891](#) pin 2A to [J8982](#) pin 3 for an open or short circuit, or a loose or damaged connector. If the wires are good, install a new finisher PWB, [PL 13.45 Item 2](#).

Cheat the interlock switch. **The voltage drops to 0VDC.**

Y N
|
Install a new front door interlock switch, [PL 13.45 Item 19](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

Check the actuator for damage or misalignment

Check the interlock circuit for an intermittent condition. If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

012-303 The Finisher Transport Cover F Is Open RAP

BSD-ON: [BSD 13.5 Office Finisher LX Horizontal Transport](#)

012-303 The finisher horizontal transport 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 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the installation of the horizontal transport open sensor, [PL 13.08 Item 3](#).
- Check that the finisher horizontal transport cover can be opened and closed

Procedure

Enter [dC330](#) code 012-303. Actuate the horizontal transport open sensor. **The display changes.**

Y N
|
Check the wiring between [J8880](#) pin 2 and [J8987](#) pin 2 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**
Y N
|
Reconnect or repair as necessary.

Measure the voltage between [J8987](#) pins 3 and 1 on the finisher PWB. **The voltage is approximately +5VDC.**
Y N
|
Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [J8987](#) pin 2 on the finisher PWB and ground. Actuate the horizontal transport open sensor. **The voltage changes.**
Y N
|
Install a new horizontal transport open sensor, [PL 13.08 Item 3](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

012-334 Download Fail RAP

BSD-ON: [BSD 3.3 PWB Communications \(Controller to Finisher\)](#)

012-334 An abnormal end during downloading has occurred. The machine can start only in the download mode when the power is on.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Check the wiring between the finisher and the IOT.
2. Reload the software, [GP 4](#)
3. If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

012-901 Jam In The Device RAP

BSD-ON: [BSD 13.5 Office Finisher LX Horizontal Transport](#)

012-901 Paper remains on the horizontal transport entrance 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 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check for obstructions in the paper path
- Check that the finisher is docked correctly to ensure proper transport gate operation.

Procedure

Enter [dC330](#) code 012-190. Actuate the horizontal transport entry sensor, [PL 13.08 Item 6](#). The display changes.

Y N
Check the wiring between [J8860](#) pin 2 at the horizontal transport entry sensor connector and [P/J8867](#) pin 2 at the finisher PWB for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N
Reconnect or repair as necessary.

Measure the voltage between [J8860](#) pins 3 and 1 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N
Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [P/J8867](#) pin 2 on the finisher PWB and ground. Actuate the finisher entrance sensor. **The voltage changes.**

Y N
Install a new horizontal transport entry sensor, [PL 13.08 Item 6](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

012-903 Compiler Exit Sensor On RAP

BSD-ON: [BSD 13.7 Office Finisher LX Transportation](#)

012-903 The compiler exit sensor remains in the actuated condition.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the paper path for jammed pieces paper.
- Clean the compiler exit sensor, [PL 13.35 Item 10](#).

Procedure

Enter [dC330](#) code 012-150. Actuate the compiler exit sensor. **The display changes.**

Y N
Check the wiring between [J8869](#) pin 2 and [P/J8988](#) pin 5 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N
Reconnect or repair as necessary.

Measure the voltage between [P/J8988](#) pins 6 and 4 on the finisher PWB. **The voltage is approximately +5VDC.**

Y N
Install a new finisher PWB, [PL 13.45 Item 2](#).

Measure the voltage between [P/J8988](#) pin 5 on the finisher PWB and ground. Actuate the compiler exit sensor. **The voltage changes.**

Y N
Install a new compiler exit sensor, [PL 13.35 Item 10](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

012-905 Jam In Finisher RAP

BSD-ON: [BSD 13.10 Office Finisher LX Tamping and Offset \(2 of 2\)](#)

012-905 Paper remains on the compiler tray no paper 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 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the paper path for jammed pieces paper.
- Clean the compiler tray no paper sensor, [PL 13.28 Item 9](#).

Procedure

Enter [dC330](#) code 012-151. Actuate the compiler tray no paper sensor. **The display changes.**

Y N
Check the wiring between [J8880](#) pin 2 and [J8984A/B](#) pin 2 on the finisher PWB for an open or short circuit, or a loose or damaged connector. **The wiring is good.**
Y N
Reconnect or repair as necessary.
Measure the voltage between [J8984A/B](#) pins 3 and 1 on the finisher PWB. **The voltage is approximately +5VDC.**
Y N
Install a new finisher PWB, [PL 13.45 Item 2](#).
Measure the voltage between [J8984A/B](#) pin 2 on the finisher PWB and ground. Actuate the compiler tray no paper sensor. **The voltage changes.**
Y N
Install a new compiler tray no paper sensor, [PL 13.28 Item 9](#).
Install a new finisher PWB, [PL 13.45 Item 2](#).

If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

012-935 Jam In The Device RAP

BSD-ON: [BSD 13.7 Office Finisher LX Transportation](#)

012-935 Paper remains at the finisher entrance 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 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check for obstructions in the paper path
- Check that the finisher is docked correctly to ensure proper transport gate operation.

Procedure

Enter [dC330](#) code 012-100. Actuate the finisher entry sensor, [PL 13.35 Item 10](#). **The display changes.**

Y N
Check the wiring between [J8868](#) pin 2 at the finisher entry sensor connector and [P/J8888](#) pin 2 at the finisher PWB for an open or short circuit, or a loose or damaged connector. **The wiring is good.**
Y N
Reconnect or repair as necessary.
Measure the voltage between [J8868](#) pins 3 and 1 on the finisher PWB. **The voltage is approximately +5VDC.**
Y N
Install a new finisher PWB, [PL 13.45 Item 2](#).
Measure the voltage between [P/J8888](#) pin 2 on the finisher PWB and ground. Actuate the finisher entrance sensor. **The voltage changes.**
Y N
Install a new horizontal transport entry sensor, [PL 13.35 Item 10](#).
Install a new finisher PWB, [PL 13.45 Item 2](#).
Install a new finisher PWB, [PL 13.45 Item 2](#).

013-210, 211 Booklet Staple Move Home Sensor Fail RAP

BSD-ON: [BSD 13.16 Office Finisher LX Booklet Staple Positioning](#)

013-210 The booklet staple move home sensor does not actuate within designated time period.

013-211 The booklet staple move home sensor does not deactivate within designated time period.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- Ensure the staple head is free from obstructions.
- Check [dC122](#) Shutdown History for 013-306 or 013-307 faults. If either fault is listed, first perform the relevant procedure:
 - [013-306](#) Booklet Safety Switches Open RAP.
 - [013-307](#) Booklet Left Cover Open RAP.

Procedure

Enter [dC330](#) code 013-144. Move the booklet staplers to actuate the booklet staple move home sensor (Q13-144), [PL 13.55 Item 13](#). **The display changes.**

Y N
Check the wiring between [J8897](#) pin 2 and [P/J8891](#) pin 2 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N
Reconnect or repair as necessary.

Measure the voltage between [P/J8891](#) pins 3 and 1 on the booklet PWB. **The voltage is approximately +5VDC.**

Y N
Install a new booklet PWB, [PL 13.70 Item 4](#).

Measure the voltage between [P/J8891](#) pin 2 on the booklet PWB and ground. Move the booklet staplers to actuate the booklet staple move home sensor. **The voltage changes.**

Y N
Install a new booklet staple move home sensor, [PL 13.55 Item 13](#).

Install a new booklet PWB, [PL 13.70 Item 4](#).

Enter [dC330](#) code 013-028 and 013-029 alternately. **The stapler move motor runs.**

Y N
Check the wiring between [P/J8892](#) pins 1 to 6 on the booklet PWB and [P/J9806](#) on the stapler move motor for an open or short circuit, or loose or damaged connectors. **The wiring is good.**

Y N
Reconnect or repair as necessary.

A B
Monitor the voltage at [P/J8894](#) pin 3. Enter [dC330](#) code 013-028 and 013-029 alternately. **An AC clock pulse is detected.**

Y N
Check the wiring between [P/J8994](#) pin 3 and [P/J8985](#) pin 4. If the wiring is good, install a new finisher PWB, [PL 13.45 Item 2](#).

Install a new booklet stapler move motor assembly, [PL 13.55 Item 4](#). If the fault persists, install a new booklet PWB, [PL 13.70 Item 4](#).

Check the wiring for an intermittent fault.

013-212, 213 Booklet Stapler Move Position Sensor Fail RAP

BSD-ON: [BSD 13.11 Office Finisher LX Staple Positioning](#)

013-212 Booklet stapler move position sensor does not actuate within designated time period.

013-213 Booklet stapler move position sensor does not deactivate within designated time period.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- Ensure the staple head is free from obstructions.
- Check [dC122](#) Shutdown History for 013-306 or 013-307 faults. If either fault is listed, first perform the relevant procedure:
 - [013-306](#) Booklet Safety Switches Open RAP.
 - [013-307](#) Booklet Left Cover Open RAP.

Procedure

Enter [dC330](#) code 013-143. Move the booklet stapler to actuate the booklet stapler move position sensor (Q13-143), [PL 13.55 Item 13](#). **The display changes.**

Y N

Check the wiring between [J8898](#) pin 2 and [P/J8991](#) pin 5 and between [P/J8994](#) pin 5 and [P/J8995](#) pin 5 for an open or short circuit, or a loose or damaged connector. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Measure the voltage between [P/J8991](#) pins 4 and 6 on the booklet PWB. **The voltage is approximately +5VDC.**

Y N

Install a new booklet PWB, [PL 13.70 Item 4](#).

Measure the voltage between [P/J8991](#) pin 5 on the booklet PWB and ground. Actuate the booklet staple move position sensor. **The voltage changes.**

Y N

Install a new booklet staple move position sensor, [PL 13.55 Item 13](#).

Measure the voltage between [P/J8995](#) pin 5 on the finisher PWB and ground. Actuate the booklet staple move position sensor. **The voltage changes.**

Y N

Install a new booklet PWB, [PL 13.70 Item 4](#). If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

Install a new finisher PWB, [PL 13.45 Item 2](#).

A

Enter [dC330](#) code 013-028 and 013-029 alternately. **The stapler move motor runs.**

Y N

Check the wiring between [P/J8992](#) pins 1 to 6 on the booklet PWB and [P/J8906](#) on the booklet stapler move motor for an open or short circuit, or loose or damaged connectors. **The wiring is good.**

Y N

Reconnect or repair as necessary.

Monitor the voltage at [P/J8994](#) pin 3. Enter [dC330](#) code 013-028 and 013-029 alternately. **An AC clock pulse is detected.**

Y N

Check the wiring between [P/J8994](#) pin 3 and [P/J8985](#) pin 4. If the wiring is good, install a new finisher PWB, [PL 13.45 Item 2](#).

Install a new booklet stapler move motor assembly, [PL 13.55 Item 4](#). If the fault persists, install a new booklet PWB, [PL 13.70 Item 4](#).

Check the wiring for an intermittent fault.

013-220 Folder Detect Fail RAP

BSD-ON:BSD 13.8 Office Finisher LX Folding

013-220 Control logic cannot detect the folder assembly.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter dC330 code 013-160 to detect the folder. The displayed state is Low.

Y N

Measure the voltage at P/J8990 pin 4. Less than +1VDC is measured.

Y N

Check the wiring between P/J8903 pins 4 and 5. Also ensure that P/J8903 is securely fastened.

Install a new finisher PWB, PL 13.45 Item 2.

Check the wiring for an intermittent fault.

013-300 Folder Door Open RAP

BSD-ON:BSD 13.3 Office Finisher LX Interlock Switching

013-300 Folder door safety switch is open.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Measure the voltage between J8982 pin 4 on the finisher PWB and ground. +24VDC is measured.

Y N

Install a new finisher PWB, PL 13.45 Item 2.

Make sure the eject cover is closed. Measure the voltage between J8982 pin 8 and pin 7 on the finisher PWB and ground. +24VDC is measured on both pins.

Y N

Install a new finisher PWB, PL 13.45 Item 2.

Check the circuit to P/J8981A/B and from P/J8981A/B at the front door interlock switch, PL 13.45 Item 19. The circuit is good.

Y N

Measure the voltage between J8982 pin 2 on the finisher PWB and ground. +5VDC is measured.

Y N

Install a new finisher PWB, PL 13.45 Item 2.

Install a new front door interlock switch, PL 13.45 Item 19.

Install a new front door interlock switch, PL 13.45 Item 19.

013-306 Booklet Safety Switches Open RAP

BSD-ON:BSD 13.3 Office Finisher LX Interlock Switching

013-306 Control logic senses that one or more booklet safety switch 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 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check dC122 Shutdown History for a 013-307 fault. If the fault is listed, perform the 013-307 Booklet Left Cover Open RAP.

Procedure

Measure the voltage between P/J8993 pin 3 on the booklet PWB and ground. +24VDC is measured.

Y N

Measure the voltage between P/J8993 pin 6 on the booklet PWB and ground. +24VDC is measured.

Y N

Perform the 013-307 Booklet Left Cover Open RAP.

Check the circuit through the booklet stapler safety switch assembly, PL 13.70 Item 2.

Install a new booklet PWB, PL 13.70 Item 4.

013-307 Booklet Maker Door Is Open RAP

BSD-ON:BSD 13.4 Office Finisher LX Booklet Interlock Switching

013-307 Control logic senses that the booklet left 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 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Ensure the left cover, PL 13.50 Item 8 is closed.

Procedure

Measure the voltage between P/J8993 pin 5 on the booklet PWB and ground. +24VDC is measured.

Y N

Check the circuit from J8899 to and from J8899 on the booklet stapler cover switch, PL 13.70 Item 10.

Install a new booklet PWB, PL 13.70 Item 4.

016-210, 506, 777, 780, 798 HDD Error RAP

BSD-ON: [BSD 3.7 ESS \(Controller\)](#)

016-210 One of the SW option functions cannot be executed due to a HDD error or HDD not installed.

016-506 The log image storage area on the disk is full, a job cannot be continued.

016-777 An error other than disk full was detected when opening/reading/writing file for compression conversion/image processing operation.

016-780 An error other than HDD full was detected when opening/writing file for operation.

016-798 A HDD unavailable error was returned when the decomposer called the S-image library.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. Check the wiring between the controller PWB assembly, [PL 3.05 Item 1](#) and the hard disk.
3. Initialize the hard disk. Refer to [dC355](#) Hard Disk Diagnostics.
4. Install a new hard disk, [PL 3.05 Item 9](#).

016-211, 016-212 SW Option Fail Memory Low RAP

016-211 Insufficient system memory was detected.

016-212 Insufficient Page Memory was detected.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 10](#).
2. Refer the customer to the User Guide to check memory usage.

016-217 SW Option Fail (Controller ROM) RAP

016-217 Controller ROM does not support printer kit.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, GP 10.
2. Reload the software, GP 4.

016-232 MRC HW Initialize Error RAP

016-232 MRC HW initialize error. an error has occurred during high compression board initialization.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Reload the software, GP 4.
3. Install a new controller PWB assembly, PL 3.05 Item 1.

016-233 SW Option Fail (USB Host Not Installed) RAP

016-233 Any one of the SW optional functions cannot be used because the USB host has a failure or is not installed.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10](#).
2. Reload the software, [GP 4](#).
3. Install a new controller PWB assembly, [PL 3.05 Item 1](#).

016-234, 016-235 XCP Error RAP

016-234 Lack of memory causes the XCP to stop.

016-235 Another internal error causes the XCP function to stop.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10](#).
2. Initialize the hard disk. Refer to [dC355](#) Hard Disk Diagnostics.

016-242 System GMT Clock Fail RAP

016-242 System GMT clock fail.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Reload the software, GP 4.
3. Install a new controller PWB assembly, PL 3.05 Item 1.

016-244 Self-Signed Certificate Auto Update Fail RAP

016-244 Self-signed certificate auto update failure.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.

016-245, 016-246 Invalid Accessory Mode RAP

016-245 Invalid accessory in auth and account mode.

016-246 Invalid accessory kind in auth and account mode.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Disconnect the invalid accessory.

016-310 SSMM Job Log Full RAP

016-310 A job log file was not retrieved from the external application (AWAS) and the number of files stored exceeded the specified value (280).

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, GP 10.
2. Obtain the job log file from the external application (AWAS) via SSMI:
 - a. Switch off, then switch on the machine, GP 10.
 - b. Perform GP 19, How to Obtain Log Files, and contact Support with the appropriate log files for further assistance.

016-322 JBA Account Full RAP

016-322 The cumulated accounting data reached the specified value (15,000).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Advise the customer to perform a manual retrieval of machine data from their accounting server.
3. Initialize the hard disk. Refer to dC355 Hard Disk Diagnostics. Advise the customer to push the user accounts to the machine from their accounting server.
4. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
5. Reload the software, GP 4.
6. Perform the OF2 Special Boot Modes RAP.
7. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

016-323 B-Formatter Fatal Error RAP

016-323 Fatal error has occurred in the B-formatter task.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.
4. Perform the OF2 Special Boot Modes RAP.

016-324 Scheduled Image Overwrite RAP

016-324 Scheduled image overwrite.

Procedure

For information only, no service action necessary. Wait until the Scheduled Image Overwrite to complete.

016-325 Using Personal Certificate RAP

016-325 The IC card personal certificate is set in the certificate for signing.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, **GP 10**.
2. Enter **dC131**. Set NVM value 790-389 to 0.

016-326, 016-607 UI Cable Connection Fail RAP

BSD-ON:BSD 3.2 PWB Communications (Controller to UI PWB)

016-326 The controller has detected a failure at its cable connection with the UI.

016-607 Cont-UI Cable Connection Fail

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Check the wiring between the controller PWB assembly, PL 3.05 Item 1 and the UI console assembly, PL 2.05 Item 1.
2. Install new components as necessary:
 - Controller PWB assembly, PL 3.05 Item 1.
 - UI console assembly, PL 2.05 Item 1.

016-327, 016-328 Connection Fail RAP

016-327 Backplane connection fail.

016-328 The controller has detected a failure at its cable connection with the motor drive PWB.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.

016-330, 331, 332 Cont System Memory Fail RAP

016-330 Cont system memory diagnostic fail 1.

016-331 Cont system memory diagnostic fail 2.

016-332 Cont system memory diagnostic fail 3.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.
4. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

016-335 to 016-351 Controller Fail RAP

016-335 Cont program ROM diagnostic fail 1.

016-336 Cont program ROM diagnostic fail 2.

016-337 Cont program ROM diagnostic fail 3.

016-338 Cont font ROM diagnostic fail 1.

016-339 Cont font ROM diagnostic fail 2.

016-340 Cont font ROM diagnostic fail 3.

016-341 Cont font ROM diagnostic fail 4.

016-342 Cont RTC diagnostic fail.

016-343 Long boot diag timer fail.

016-345 Cont NVM diagnostic fail.

016-347 Cont page memory diagnostic fail 1.

016-348 Cont page memory fail 2.

016-349 Cont MAC address data fail.

016-350 Cont SEEP-ROM diagnostic fail 1.

016-351 Cont SEEP-ROM diagnostic fail 2.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.
4. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

016-352 Internal Network Initialize Fail RAP

016-352 Internal network initialization error.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, GP 10.
2. Reload the software, GP 4.

016-353, 016-354 IOT-Controller Communication Fail RAP

016-353 Communication cannot be established between the IOT and the ESS.

016-354 Communication cannot be established between the IIT and the controller.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the motor drive PWB, PL 1.10 Item 2 and the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
3. Reload the software, GP 4.
4. If the fault persists, install a new components as necessary:
 - Controller PWB assembly, PL 3.05 Item 1.
 - Motor drive PWB, PL 1.10 Item 2.

016-355, 016-356 Controller ASIC Fail RAP

016-355 Cont IO ASIC diagnostic fail.

016-356 Cont video ASIC diagnostic fail.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.
4. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

016-357 Controller EP Communication Fail RAP

016-357 Controller to EP-controller communication fail.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.
4. Perform the OF2 Special Boot Modes RAP.
5. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

016-358 Controller Parallel Card Fail RAP

016-358 Controller parallel port diagnostic fail.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Reload the software, GP 4.
3. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

016-359, 016-361 Controller USB Fail RAP

016-359 Cont USB HUB diagnostic fail.

016-361 Cont USB 3.0 device diagnostic fail.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Install a new controller PWB assembly, PL 3.05 Item 1.

016-360, 016-362 Controller UI Fail RAP

016-360 Cont UI diagnostic fail 1.

016-362 Cont UI diagnostic fail 2.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Check the wiring between the controller PWB assembly, PL 3.05 Item 1 and the UI console assembly, PL 2.05 Item 1.
3. Install new components as necessary:
 - controller PWB assembly, PL 3.05 Item 1.
 - UI console assembly, PL 2.05 Item 1.

016-363 Controller LyraCard Fail RAP

016-363 Cont JPEG card diagnosed as having a failure.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.
4. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

016-364, 016-365 Controller USB 2.0 Fail RAP

016-364 Cont USB 2.0 host diagnostic fail.

016-365 Cont USB 2.0 device diagnostic fail.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.
4. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

016-366, 016-367 Controller HDD Fail RAP

BSD-ON:BSD 3.7 ESS (Controller)

016-366 Cont HDD diagnostic fail 1.

016-367 Cont HDD diagnostic fail 2.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Check the wiring between the controller PWB assembly, PL 3.05 Item 1 and the hard disk.
3. Reload the software, GP 4.
4. Install new components as necessary:
 - Controller PWB assembly, PL 3.05 Item 1.
 - Hard disk, PL 3.05 Item 9.

016-368, 369, 370 Controller Diagnostic Fail RAP

016-368 Cont torino diagnostic fail.

016-369 Cont S2X board diagnostic fail.

016-370 Cont rendering engine diagnosed as having a failure.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10](#).
2. Ensure that all connectors on the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, [GP 4](#).
4. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

016-383 Controller OS Communication Fail RAP

016-383 Communication failure between linux and VX works

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10](#).
2. Ensure that all connectors on the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, [GP 4](#).
4. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

016-400, 402, 427, 429 802.1x Authentication Failure RAP

016-400 802.1x Authentication error (incorrect user name or password). The user name or password that has been set in the machine is incorrect. The settings are different from those in the authentication device switch that is physically connected to the machine via the network.

016-402 802.1x authentication time-out (there was no response signal from the authentication device). The authentication was timed-out because there was no response signal from the authentication device switch that is physically connected to the machine via the network.

016-427 802.1x authentication failure (network 2).

016-429 802.1x authentication failure by timing out (network 2).

Procedure

Advise the customer to:

1. Enter the correct user name or password for 802.1x authentication from the machine panel.
2. Check the switch settings and network connections of the authentication device switch that is physically connected to the machine via the network and connect it correctly.
3. Check the settings in the Authentication Device switch that is physically connected to the machine via the network.

016-401 802.1x EAP Type Not Supported RAP

016-401 802.1x Authentication method mismatch (the authentication server does not support the authentication method of the machine). A fail signal, which indicates that the authentication method set in the machine cannot be processed, was received from the authentication device switch that is physically connected to the machine via the network.

Procedure

Advise the customer to:

1. Set the authentication method of the machine to be the same as the one set in the authentication server.
2. Check the 802.1x authentication method from the UI.

016-403, 016-430 802.1x Certificate Failure RAP

016-403 802.1x authentication certificate mismatch. The root server certificate for the authentication server is not stored in the machine or it is mismatched.

016-430 The route certificate of the server certificate (for network 2) of the authentication server is not stored in the machine or it does not match.

Procedure

Advise the customer to:

1. Store the root server certificate for the authentication server in the machine.
2. If the root certificate of the server certificate cannot be obtained, disable the 802.1x setting item 'Verify Server Certificate' in the device.

016-404, 016-431 802.1x Inside Failure RAP

016-404 An internal error has occurred in the 802.1x supplicant function of the machine. An incorrect protocol signal was received from the authentication server.

016-431 An internal error has occurred in the 802.1x supplicant function of the machine. An incorrect protocol signal was received from the authentication server in network 2.

Procedure

1. Advise the customer to repeat the operation.
2. If the problem persists, Switch off, then switch on the machine [GP 10](#).
3. Obtain the log file using the log tool [GP 19](#).

016-405 Certificate DB File Error RAP

016-405 Certificate database file is wrong.

Procedure

Advise the customer to start 'initialize certificate' under Maintenance.

016-406 802.1x Client Certificate Failure RAP

016-406 An error in setting up client certificate for 802.1x authentication. Although 'EAP-TLS' is selected as the authentication method for 802.1x authentication, SSL client certificate is not set up or deleted.

Procedure

Advise the customer to:

1. Store SSL client certificate in this machine and set it up as SSL client certificate.
2. If SSL client certificate cannot be set up, select an authentication method other than 'EAP-TLS'.

016-407 to 016-412 XCP Error RAP

016-407 The package management function has detected security exception.

016-408 The package management function has detected the damaged JAR file.

016-409 The package management function has detected a version mismatch.

016-410 The package management function has detected the invalid definition file.

016-411 The package management function has detected an unsupported class file version.

016-412 The package management function has detected the plug-in has caused an error that is included in a miscellaneous group of errors.

Procedure

Advise the customer to modify the plug-in, then re-install.

016-417 Invalid Network Settings RAP

016-417 An invalid or improper network setting has prevented communication.

Procedure

On machines with both ethernet and Wi-Fi adapters, ensure that the IP addresses are not identical. This is considered a duplicate IP even if, for example, the ethernet cable is not connected but has the same static IP as the Wi-Fi adapter.

016-421 Input Tray Removed RAP

016-421 The paper tray is removed.

Procedure

Ensure all paper trays are fully inserted.

016-422, 016-423 Offline RAP

016-422 Diag Offline

016-423 Offline

Procedure

Perform the steps that follow:

1. If a remote access session in progress, wait for it to end.
2. If the fault persists, switch off, then switch on the machine, [GP 10](#).
3. Obtain the log file using the log tool [GP 19](#) and contact support for further Instruction.

016-424, 016-425 Power Mode RAP

016-424 Low power mode.

016-425 Sleep mode.

Procedure

Perform the steps that follow:

1. Cancel the power save mode.
2. If the fault persists, switch off, then switch on the machine, [GP 10](#).
3. Obtain the log file using the log tool [GP 19](#) and contact support for further instruction.

016-426 Remote Services Error RAP

016-426 Could not connect to SMart eSolutions server.

Procedure

Switch off, then switch on the machine, [GP 10](#).

Perform the steps that follow:

- Before you can use SMart eSolutions, register the printer for SMart eSolutions.
- The machine must be connected to a network.
- The machine must be configured to use the HTTP proxy server if required.
- Ensure that the printer recognizes the DNS server.
- If the network is blocking outside communications in a secure environment, disable the remote services upload.

016-428 802.1x EAP Type Not Supported (Network 2) RAP

016-428 802.1x Authentication method mismatch (authentication server does not support the authentication method of this device: network 2)

Procedure

Advise the customer to:

1. Set the authentication method of network 2 of this machine to the same authentication method as the one set in the authentication server.
2. Check the 802.1x authenticating method on the UI.

016-432 802.1x Client Certificate Failure (Network 2) RAP

016-432 802.1x setting error of the client certificate of the authentication (network 2).

Procedure

Advise the customer to:

1. Store the client certificate to this machine SSL and set as SSL client certificate.
2. If the setting of SSL client certificate cannot be made, select other than (EAP-TLS) as the authentication method.

016-433 Supplies Activation Code Not Inputting Detection RAP

016-433 The number in this message has occurred.

Procedure

Advise the customer to:

1. Follow the instructions on the local user interface to resolve the problem.

016-434 USB Dongle Temporary Mode Detected RAP

016-433 The number in this message has occurred.

Procedure

Advise the customer to:

1. Follow the instructions on the local user interface to resolve the problem.

016-435 Contract State Changing Detection RAP

016-435 The number in this message has occurred.

Procedure

Advise the customer to:

1. Follow the instructions on the local user interface to resolve the problem.

016-450 SMB Host Name Duplicated RAP

016-450 A PC of the same host name exists on the network.

Procedure

Advise the customer to:

1. Check whether the device host name setting of the same host name is the same as another device. If the setting is duplicated, change the host name of the device or duplicate device.
2. If a duplicated setting is not confirmed, change the device host name.

016-453, 016-454 Dynamic DNS - IPv6 NG RAP

016-453 Failed to update of the IPv6 address and host name to the DNS server.

016-454 Dynamic DNS - dynamic update failed.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Check that DNS server address is set correctly in the device.
 - b. Check with the System Administrator whether the DNS server settings that allow dynamic DNS using IPv6 address have been set.
2. If the fault persists, perform the **016A** Network Error RAP.

016-455, 016-456 SNTP Time Out RAP

016-455 There is no response from the SNTP server within the specified time (60sec).

016-456 A standard time synchronized source message and an asynchronous message was received from the SNTP server.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Check the time on the machine, if the time on the machine is incorrect, manually set the time.
 - b. Check that the SNTP server address is set correctly in the device.
2. If the fault persists, perform the **016A** Network Error RAP.

016-461 Under Non-transmitted Image Log Stagnation RAP

016-461 Creation of a new job is being restricted because image logs yet to be transferred are piled up and delayed.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Check the image log management server status and the network status, and clear any cause that may impede the transfer of image logs to the image log server.
 - b. Check the transfer settings and transfer all logs that are yet to be transferred. Or, change the transfer guarantee level to 'Low'.

NOTE: *Setting the transfer guarantee level to 'Low' may cause the image logs to get deleted in sequence even before they are transferred.*

2. If the fault persists, reload the software, [GP 4](#).

016-500, 016-501 ROM Write Error (During DLD Method) RAP

016-500 An error has occurred during the process of writing data to the cont-ROM.

016-501 An error has occurred during the process of writing data to the S2X-ROM.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Reload the software, [GP 4](#).
2. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

016-502 ROM Write Error (During PjL Method) RAP

016-502 An error was detected when writing data to one of the ROMs in the machine.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Ensure that all connectors on the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules are securely connected.
2. Reload the software, [GP 4](#).
3. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

016-503 SMTP Server Fail for Redirector RAP

016-503 The SMTP server name could not be resolved (though the machine tried to connect to the server).

Procedure

1. Advise the customer to specify the correct SMTP server name or specify the IP address.
2. Verify that the DNS settings are configured properly on the Machine. If needed, use the same DNS settings from the Customer's PC.
3. If the fault persists, perform the [016A Network Error RAP](#).

016-507, 016-508 Image Log Send Fail RAP

016-507 A log image transfer fails, making it impossible to continue a target job which will consist of created images.

016-508 A log image transfer fails, making it impossible to continue an image transfer job.

Procedure

Perform the steps that follow:

1. Advise the customer to check the state of the destination image log control server and that of the network. Clear any factor preventing image logs from being transferred to the image log control server.
2. Initialize the hard disk. Refer to [dC355](#) Hard Disk Diagnostics.
3. If the fault persists, install a new hard disk, [PL 3.05 Item 9](#).

016-509, 016-510 Image Log No Send Rule RAP

016-509 Because rules for log image transfer are not registered, a job cannot be continued.

016-510 Rules for log image transfer are not registered.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to register rules for transfer from the destination image log control server to the device.
2. Check the wiring between the controller PWB assembly, [PL 3.05 Item 1](#) and the hard disk.
3. Initialize the hard disk. Refer to [dC355](#) Hard Disk Diagnostics.
4. Install a new hard disk, [PL 3.05 Item 9](#).

016-511, 016-512 Image Log Invalid Send Rule RAP

016-511 Rules for log image transfer are illegal, causing a job to be discontinued.

016-512 Rules for log image transfer are illegal.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to overwrite rules for transfer from the destination image log control server to the device.
2. Check the wiring between the controller PWB assembly, [PL 3.05 Item 1](#) and the hard disk.
3. Initialize the hard disk. Refer to [dC355](#) Hard Disk Diagnostics.
4. Install a new hard disk, [PL 3.05 Item 9](#).

016-513 SMTP Server Reception Error RAP

016-513 Error when receiving response from the SMTP server (after connecting to the server).

Procedure

Perform the steps that follow:

1. Advise the customer to wait 5 minutes before resubmitting the job.
2. Check that SMTP send port number is correct.

016-514 XPS Error RAP

016-514 During XPS Bridge processing, invalid schema, parameter error, damage to XPS file, or an error internal to XPS decomposer occurred.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Ensure that all connectors on the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules are securely connected.
2. Reload the software, [GP 4](#).
3. If the fault persists, perform the [016A Network Error RAP](#).

016-515 XPS Short of Memory

016-515 During XPS Bridge processing, a lack of memory was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to check the print mode. If print mode is set to High Resolution, change it to Standard. If print mode is set to Standard, change it to High Speed.
2. Ensure that all connectors on the controller PWB assembly, [PL 3.05 Item 1](#) and hard disk, [PL 3.05 Item 9](#) are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, [GP 4](#).
4. If the fault persists, perform the [016A Network Error RAP](#).

016-516 XPS Print Ticket Description Error RAP

016-516 XPS Print Ticket description error.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to check whether the application that sends a print job and the print instructions has a problem.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 and hard disk, PL 3.05 Item 9 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.

016-517 PS Booklet Illegal Color Mode Change RAP

016-517 PS documents to be printed into a booklet have black and white and color areas.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to resubmit the job with corrected parameters. Rewrite the Post-Script file so that the page device and process color model cannot be changed in the process.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 and hard disk, PL 3.05 Item 9 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.

016-518 PS Booklet Conflict WM RAP

016-518 PS booklet and watermarks were specified at the same time.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. PS booklet and watermark/UUID cannot be specified at the same time. Advise the customer to cancel either one.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 and hard disk, PL 3.05 Item 9 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.

016-519 Device DV Limit Reached RAP

016-519 Number of printable sides limit full.

Procedure

Ask the System Administrator to increase the limit of printable sides.

016-520 MRC HW Job Error RAP

016-520 An error has occurred during the usage of high compression board.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to repeat the operation or change the output file format/color mode.
2. Ensure that all connectors on the controller PWB assembly, **PL 3.05 Item 1** and hard disk, **PL 3.05 Item 9** are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, **GP 4**.

016-522 LDAP SSL Error 112 RAP

016-522 LDAP-SSL authentication error 112 has occurred (the client certificate cannot be obtained).

Procedure

Advise the customer to install the SSL client certificate into the device as the LDAP server will request it.

016-523 LDAP SSL Error 113 RAP

016-523 LDAP-SSL authentication error 112 has occurred (the client certificate cannot be obtained).

Procedure

The device cannot trust the SSL certificate of the LDAP server. Advise the customer to register the root certificate of the LDAP server SSL certificate in the device.

016-524, 016-525 LDAP SSL Error 114 and 115 RAP

016-524 LDAP-SSL authentication error 114 has occurred (the server certificate is close to expiring).

016-525 LDAP-SSL authentication error 115 has occurred (the server certificate has expired).

Procedure

Advise the customer to change the LDAP server SSL certificate to one that is valid.

016-526 LDAP SSL Error 116 RAP

016-526 LDAP-SSL authentication error 116 has occurred (the server name and the certificate does not match)

Procedure

Advise the customer to ensure that the address of the LDAP server set in the device matches the address of the LDAP server defined in the SSL certificate.

016-527 LDAP SSL Error 117 RAP

016-526 LDAP-SSL authentication error 116 has occurred (the server name and the certificate does not match)

Procedure

For information only, an internal error has occurred in the program.

016-529 Remote Download Server Timeout RAP

016-529 There was no response within the specified time (45 sec) when connecting to the remote download server.

Procedure

Check the network connection. Advise the customer to check that the remote download server is correctly configured and operating on the network.

Perform the checks that follow:

- Before you can use SMart eSolutions, register the printer for SMart eSolutions.
- The machine must be connected to a network.
- The machine must be configured to use the HTTP proxy server if required.
- Ensure that the printer recognizes the DNS server.
- If the network is blocking outside communications in a secure environment, disable remote services upload

016-533 Kerberos Attestation Protocol Error 37 RAP

016-533 A Kerberos server Attestation protocol error has occurred.

Procedure

Advise the customer to:

1. The clock difference between the device and the Kerberos server has exceeded the clock skew limit of the Kerberos server. Check that the clocks of the device and Kerberos server are set correctly.
2. Check that the daylight saving time and time zone settings for the device and the Kerberos server are the same.

016-530 Kerberos Attestation Protocol Error 06 RAP

016-530 A Kerberos server Attestation protocol error has occurred.

Procedure

Advise the customer to check that the realm name and server address in the Kerberos settings of the device are set correctly.

016-531 Kerberos Attestation Protocol Error 07 RAP

016-531 A Kerberos server Attestation protocol error has occurred.

Procedure

Advise the customer to check that the realm name and server address in the Kerberos settings of the device are set correctly.

016-532 Kerberos Attestation Protocol Error 24 RAP

016-532 A Kerberos server Attestation protocol error has occurred.

Procedure

Advise the customer to check that the realm name and server address in the Kerberos settings of the device are set correctly.

016-534 Kerberos Attestation Protocol Error 41 and 42 RAP

016-534 A Kerberos server Attestation protocol error has occurred.

Procedure

Advise the customer to check that the realm name and server address in the Kerberos settings of the device are set correctly.

016-535 Remote Download File Access Error RAP

016-535 There are no FW update files in the remote download server.

Procedure

Advise the customer to check the remote download server for the FW update file.

016-536 Host Name Solution Error in Remote Download RAP

016-536 Remote download server name resolution error.

Procedure

Advise the customer to check the connection to the DNS and whether the remote download server name has been registered in the DNS.

016-537 Remote Download Server Connection Error RAP

016-537 Remote download server connection error.

Procedure

Advise the customer to check the network connection setting (port) of the remote download server.

Perform the checks that follow:

- Before you can use SMart eSolutions, register the printer for SMart eSolutions.
- The machine must be connected to a network.
- The machine must be configured to use the HTTP proxy server if required.
- Ensure that the printer recognizes the DNS server.
- If the network is blocking outside communications in a secure environment, disable remote services upload

016-538 Remote Download File Write Error RAP

BSD-ON:[BSD 3.7 ESS \(Controller\)](#)

016-538 Remote download file write to HDD error.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. Check the wiring between the controller PWB, [PL 3.05 Item 1](#) and the hard disk.
3. Initialize the hard disk. Refer to [dC355](#) Hard Disk Diagnostics.
4. Install a new hard disk, [PL 3.05 Item 9](#).

016-539 Kerberos Attestation Other Protocol Error RAP

016-539 A Kerberos Server Attestation protocol error has occurred.

Procedure

For information only, an internal error has occurred in the program.

016-543 Attestation Agent Error 543 RAP

016-543 The specified realm/domain has disappeared from the ApeosWare authentication agent (the domain was manually deleted at the ApeosWare authentication agent after obtaining the realm name list from the device).

Procedure

Advise the customer to:

1. Update the realm list, using the Update Realm button on the device, or add the domain to the ApeosWare authentication agent. To update the device realm information, perform the steps that follow:
 - a. Press the Authentication Agent button on the Authentication window of the device.
 - b. The Authentication Agent window appears. Press the Update button.

016-545 Attestation Agent Error 545 RAP

016-545 A Clock skew error has occurred in attestation. The time of ApeosWare Authentication Agent and ActiveDirectory is out of sync with the upper limit of the Kerberos ClockSkew set in the ActiveDirectory.

Procedure

Advise the customer to match the time of the PC where the ApeosWare Authentication agent is installed with the time of the PC where the ActiveDirectory is. Furthermore, if the Windows Time Service in the PC where the ApeosWare Authentication Agent is installed is stopped, start it.

016-546, 558, 569 Attestation Agent Errors RAP

016-546 A general user has attempted to obtain other user's information.

016-558 The machine has received an unknown error from the ApeosWare Authentication Agent.

016-569 Attestation agent errors other than listed previously.

Procedure

Switch off, then switch on the machine, [GP 10](#).

016-548 Attestation Agent Error 548 RAP

016-548 The information of the machine that is performing the authentication operation is not in the database.

Procedure

Advise the customer to register the device in the ApeosWare Authentication Agent.

016-553 Attestation Agent Error 553 RAP

016-553 The version information written in the SOAP header cannot be understood. The ApeosWare Authentication Agent does not support the version of the device interface.

Procedure

The version of the ApeosWare Authentication Agent needs to be upgraded. Advise the customer to check that the machine is a product that is supported by the upgraded version of the ApeosWare Authentication Agent.

016-554 Attestation Agent Error 554 RAP

016-554 The existence check for the specified user in the event of an authentication error has failed.

Procedure

Advise the customer to correctly set the domain user reference login name or the reference password of the ApeosWare Authentication Agent domain.

016-555 Attestation Agent Error 555 RAP

016-555 The ApeosWare Authentication Agent cannot connect to the database or the Active Directory.

Procedure

Advise the customer to check that the ApeosWare Authentication Agent can connect to the database or the active directory.

016-556 Attestation Agent Error 556 RAP

016-556 Error has occurred in the database that the ApeosWare Authentication Agent is connected to due to overloading.

Procedure

Advise the customer to wait 5 minutes before authenticating again as the service is overloaded.

016-557 Attestation Agent Error 557 RAP

016-557 An internal error has occurred in the ApeosWare Authentication Agent.

Procedure

Advise the customer to check the ApeosWare Authentication Agent.

016-559 Remote Download Parameter Error RAP

016-559 When performing the remote download, an invalid value is set in the required system data.

Procedure

Advise the customer to check that all system data that must be set to perform the remote download are correct.

Perform the checks that follow:

- Before you can use SMart eSolutions, register the printer for SMart eSolutions.
- The machine must be connected to a network.
- The machine must be configured to use the HTTP proxy server if required.
- Ensure that the printer recognizes the DNS server.
- If the network is blocking outside communications in a secure environment, disable remote services upload

016-560 Attestation Agent Error 560 RAP

016-560 A communication error has occurred between the ApeosWare Authentication Agent and the machine.

Procedure

Advise the customer to:

1. Check that the network cable is connected and check the settings of the authentication agent function.
2. If DNS address of the server is set as the server name/IP address of the ApeosWare Authentication Agent in the printer function settings list, check that DNS is enabled.

016-562 Detected User Duplication RAP

016-562 Two or more entries with the same IC card information were found in the temporary user DB of Active Directory or Authentication Agent.

Procedure

Advise the customer to make corrections so that the temporary user entries of the Active Directory or Authentication Agent do not have the same IC card information.

016-564 Remote Download Server Authentication Failed RAP

016-564 When accessing the remote download server, an authentication error notification was issued from the server.

Procedure

Advise the customer to check that the correct user name and password was specified when accessing the remote download server.

016-565 Backup Restore Error RAP

016-565 Backup/restore error.

Procedure

Perform the steps that follow:

1. For USB backup, check that the USB memory is correctly installed. If the fault persists, use a PC to check the USB memory for a 'backup' directory. If it is not there, create it.
2. When performing restore or deletion of backup files from the USB backup file, check that the USB memory is correctly installed.

016-566 Backup Restore Condition Error RAP

016-566 NVM backup/restore condition error.

Procedure

Advise the customer to:

1. During backup, save the FW download file into the 'dwdl' directory in the USB memory, connect it the machine, then perform the backup.
2. During restore, use the same IOT and IIT ROM versions as those during backup. When performing restore using a USB backup file, also use the same HDD configuration.
3. If there is no HDD, use the same ESS ROM versions as well. If the same configuration cannot be attained, delete the backup file from the panel.
4. If the problem occurred at an attempt to restore a backed-up file from an external place, check that the ESS/IIT/IOT ROM version is still the same as the version used when the backed-up file was created. Furthermore, check the device is the same as the one that generated the backed-up file.

016-567 Backup Capacity Full RAP

016-567 NVM data to back up is over the capacity of the destination to save it.

Procedure

Perform the steps that follow:

1. Before performing the HDD backup, delete existing backup files through to increase the capacity.
2. Before performing USB backup, delete the backup files in the USB memory, or use a PC to delete unnecessary files on the USB memory to increase the capacity.

016-568 Backup Restore Failed RAP

016-568 NVM data could not be backed up or restored.

Procedure

Perform the steps that follow:

1. Format the hard disk. Refer to [dC355](#) Hard Disk Diagnostics.
2. Before performing the restore using the HDD backup file, delete backup files.
3. For USB backup, check that the USB memory is correctly installed. If the fault persists, use a PC to format the USB Memory.
4. When performing restore using USB backup files, check that the USB memory is correctly installed. If the fault persists, delete the backup files.
5. If the problem still persists, use a PC to format the USB memory.

016-570 Job Ticket Out of Memory RAP

016-570 XPIF memory is low.

Procedure

Increase memory size for job ticket on UI Panel. Switch off, then switch on the machine, GP 10.
Run the job.

016-571 Job Ticket Wrong Parameters RAP

016-571 XPIF parameter mismatch.

Procedure

Advise the customer to check for a mismatch between parameters specified by the job ticket.
Correct the parameters, then resend the job.

016-572 Job Ticket Media Error RAP

016-572 XPIF media conversion error.

Procedure

Advise the customer to check that the device that receives data can print it onto paper whose properties (size/type/weight/color/punched) are specified by job ticket.

016-573 Job Ticket Parse Error RAP

016-573 XPIF Interpret error.

Procedure

Advise the customer to ensure the that software is correctly installed on client that generates job ticket; operational requirements are met; and software version matches device version.

016-598, 016-599 Email Message Size RAP

016-598 Email message size is over spec.

016-599 Email message size is over spec.

Procedure

Advise the customer to:

1. Reduce a resolution send parameter (image-to-send quality) then resend the job.
2. Reduce a magnification send parameter, then resend the job.
3. Increase the maximum message size (10MB recommended default).

016-600 KO Authentication Locked RAP

016-600 The number of incorrect Key Operator log in attempts reached the limit.

Procedure

If required, refer to [GP 19](#) to reset password to 1111 (default) if the System Administrator ID is unavailable.

NOTE: Default is 5 events. NVM value 700-563 can be set between 1 to 10 events.

With this feature enabled, the machine denies access when an incorrect System Administrator ID is entered the selected number of times.

016-601 Illegal Access Detection RAP

016-601 The number of incorrect authentication log in attempts reached the limit.

Procedure

If required, refer to [GP 19](#) to reset password to 1111 (default) if the System Administrator ID is unavailable.

NOTE: Default is 10 users. NVM value 700-564 can be set between 1 to 600 users.

016-604 Debug Log Created RAP

016-604 Debug log auto creation by system.

Procedure

Switch off, then switch on the machine, [GP 10](#).

016-606, 016-608 Controller Connection Fail RAP

016-606 Cont-BP cable connection fail.

016-608 Cont-Drive PWB cable connection fail.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10](#).
2. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
3. Reload the software, [GP 4](#).
4. If the fault persists, install a new components as necessary:
 - Controller PWB assembly, [PL 3.05 Item 1](#).
 - Motor drive PWB, [PL 1.10 Item 2](#).

016-609, 016-610 PCI Option Fail RAP

016-609 PCI option no support device fail.

016-610 PCI EX option no support device fail.

Procedure

Remove unknown PCI or PCIEX option.

016-611 SD Card Connection Fail RAP

016-611 SD card connection fail.

Procedure

Ensure the SD card, [PL 3.05 Item 2](#) is correctly installed.

016-612 Log Image Creation Failure RAP

016-612 Creation of log image has failed.

Procedure

For information only, no service action necessary.

016-700 Password Below Minimum RAP

016-700 The number of digits used for the password for security and authentication prints is less than the minimum.

Procedure

Advise the customer to increase the number of password digits for the print job.

016-701 Out of ART EX Memory RAP

016-701 Insufficient memory was detected while using the ART EX.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Increase the allocated memory of the ART EX.
 - b. Lower the print mode.
 - c. Lower the resolution.
 - d. Set Page Print mode to Enabled.
 - e. Execute Image Compression in the Graphics tab of the printer driver.
2. If the fault persists, reload the software, [GP 4](#).

016-702 Out of Page Buffer RAP

016-702 Unable to compress any page due to insufficient print page buffer.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Set Print Mode to High Speed and reduce the print resolution. Retry the operation.
 - b. Increase the memory to increase the page buffer.
 - c. Retry the operation in Print Page Mode.
2. If the fault persists, reload the software, [GP 4](#).

016-703 Email To Invalid Box RAP

016-703 When receiving Email, an invalid (not setup) mailbox number is selected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to:
 - a. Check whether the selected mailbox is set up correctly.
 - b. Have email sent to a valid mailbox.
2. Reload the software, [GP 4](#).
3. Check the wiring between the controller PWB assembly, [PL 3.05 Item 1](#) and the hard disk.
4. Initialize the hard disk. Refer to [dC355 Hard Disk Diagnostics](#).
5. Install a new hard disk, [PL 3.05 Item 9](#).

016-704 Mailbox Full RAP

016-704 The system detected that a mailbox was full (it exceeded the maximum number of documents per box) and aborted a job.

Procedure

Perform the steps that follow:

1. Advise the customer to delete unnecessary documents, then repeat the operation.
2. If the fault persists, reload the software, [GP 4](#).

016-705 Secure Print Fail RAP

016-705 Unable to perform secure print/mailbox print/pay for print storing from the printer driver.

Procedure

Perform the steps that follow:

1. Advise the customer to check that the required optional software is installed and enabled. Also check that the correct print driver is being used.
2. If the fault persists, perform the steps that follow:
 - a. Reload the software, [GP 4](#).
 - b. Check the wiring between the controller PWB assembly, [PL 3.05 Item 1](#) and the hard disk.
 - c. Initialize the hard disk. Refer to [dC355 Hard Disk Diagnostics](#).
 - d. Install new components as necessary:
 - Hard disk, [PL 3.05 Item 9](#).
 - controller PWB assembly, [PL 3.05 Item 1](#).

016-706 Maximum User Number Exceeded RAP

016-706 The system detected that a job exceeded the maximum number of users for secure and sample prints and aborted the job.

Procedure

Perform the steps that follow:

1. Advise the customer to delete unnecessary documents or users, then repeat the operation.
2. If the fault persists, reload the software, [GP 4](#).

016-707 Sample Print Fail RAP

016-707 When receiving email an invalid (not setup) mailbox number is selected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to:
 - a. Remove the conditions that disable sample print.
 - b. If the fault occurred at installation, check whether the operations for Sample Print are correct.
2. Ensure that all connectors on the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, [GP 4](#).
4. Check the wiring between the controller PWB assembly, [PL 3.05 Item 1](#) and the hard disk.
5. Initialize the hard disk. Refer to [dC355 Hard Disk Diagnostics](#).
6. Install a new hard disk, [PL 3.05 Item 9](#).
7. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

016-708 Annotation/Watermark HDD Full RAP

016-708 When an annotation or watermark image was to be stored in the HDD, full status was detected and the job was aborted.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to:
 - a. Cancel annotation or watermark, then repeat the operation.
 - b. Reduce the number of document pages. In Mixed Size mode, only a single size is available.
 - c. For printing Stored Document, delete unnecessary documents from the hard disk, then repeat the operation.
2. Ensure that all connectors on the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, [GP 4](#).
4. Check the wiring between the controller PWB assembly, [PL 3.05 Item 1](#) and the hard disk.
5. Initialize the hard disk. Refer to [dC355](#) Hard Disk Diagnostics.
6. Install a new hard disk, [PL 3.05 Item 9](#).
7. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

016-709 ART EX Command Error RAP

016-709 An ART EX command error occurred during PLW processing.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to:
 - a. Switch off parallel bi-directional communication in the printer driver.
 - b. Set a longer time for Auto Output Time.
 - c. Change the PC BIOS settings.
 - d. Use a shorter, genuine, parallel cable.
2. Ensure that all connectors on the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, [GP 4](#).
4. Check the wiring between the controller PWB assembly, [PL 3.05 Item 1](#) and the hard disk.
5. Initialize the hard disk. Refer to [dC355](#) Hard Disk Diagnostics.
6. Install a new hard disk, [PL 3.05 Item 9](#).
7. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

016-710 Delayed Print Fail RAP

016-710 Process conditions for delay print were not met.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to:
 - a. If secure print, proof print or knowledge storage print is specified, disable them.
 - b. Reduce the delay print jobs waiting to 100 jobs or less.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.
4. Check the wiring between the controller PWB assembly, PL 3.05 Item 1 and the hard disk.
5. Initialize the hard disk. Refer to dC355 Hard Disk Diagnostics.
6. Install a new hard disk, PL 3.05 Item 9.
7. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

016-713 Security Box Password Error RAP

016-713 Password check error was detected during data storage in a mailbox.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to set a correct password and try again.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.
4. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

016-714 Security Box Not Enabled RAP

016-714 The mailbox specified for the job 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 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to open the appropriate mailbox and then try again.
2. Ensure that all connectors on the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, [GP 4](#).
4. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

016-715 ESCP Form Invalid Password RAP

016-715 Unable to access the ESCP form because ESCP form password did not match

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to input the correct password to use ESCP form.
2. Ensure that all connectors on the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, [GP 4](#).
4. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

016-716 TIFF Data Overflow RAP

016-716 The system detected that the files to be spooled in TIFF exceeded the disk capacity.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Ensure that all connectors on the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules are securely connected.
2. Reload the software, [GP 4](#).
3. Check the wiring between the controller PWB assembly, [PL 3.05 Item 1](#) and the hard disk.
4. Initialize the hard disk. Refer to [dC355](#) Hard Disk Diagnostics.
5. Install a new hard disk, [PL 3.05 Item 9](#).
6. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

016-718 Out of PCL6 Memory RAP

016-718 Insufficient PCL6 decomposer memory.

Procedure

Perform the steps that follow:

1. Advise the customer to decrease the resolution to reduce the PLW memory.
2. If the fault persists, reload the software, [GP 4](#).

016-719 Out of PCL Memory RAP

016-719 An insufficient memory was detected while using the PCL.

Procedure

Perform the steps that follow:

1. Advise the customer to increase the PCL memory size. Increasing the memory for the whole system will increase the memory to be allocated to the Decomposer in some measure.
2. If the fault persists, reload the software, [GP 4](#).

016-720 PCL Command Error RAP

016-720 A PCL command error occurred during PCL processing.

Procedure

Perform the steps that follow:

1. Advise the customer to cancel the job then execute the command again.
2. If the fault persists, reload the software, [GP 4](#).

016-721 to 016-724 Settings Error RAP

016-721 Paper types cannot be determined because all the settings for custom paper priority are set to disabled.

016-722 Staple position that is not supported by this machine or a paper size that is not supported by the Finisher was specified.

016-723 Punch position that is not supported by this machine or the paper size that is not supported by the Finisher was specified.

016-724 Job canceled due to invalid combination of staple and punch positions.

Procedure

Perform the steps that follow:

1. Advise the customer to correct the settings, then execute the command again.
2. If the fault persists, reload the software, [GP 4](#).

016-726 PDL Auto Switch Fail RAP

016-726 Print language auto judgment fail.

Procedure

Perform the steps that follow:

1. Advise the customer to fix, then select the decomposer from the UI or with a command.
2. If the fault persists, reload the software, [GP 4](#).

016-727 Unstorable Document RAP

016-727 The 0 page condition is detected in the print job mailbox storage.

Procedure

Perform the steps that follow:

1. Advise the customer to switch off paper saving, then print the job again.
2. If the fault persists, reload the software, [GP 4](#).

016-728 Unsupported TIFF Data RAP

016-728 Unsupported TIFF data.

Procedure

For information only, no service action necessary. Refer the customer to the User Guide.

016-729 TIFF Data Size RAP

016-720 The files to be spooled in the TIFF exceeded the disk capacity.

Procedure

Perform the steps that follow:

1. Advise the customer to refer to the User Guide to correct the valid range.
2. If the fault persists, reload the software, [GP 4](#).

016-731, 016-732 Invalid Data RAP

016-731 The TIFF data is broken or discontinued halfway.

016-732 The decomposer detected that the form specified is not registered.

Procedure

Perform the steps that follow:

1. Advise the customer to resend the data or form data.
2. If the fault persists, reload the software, [GP 4](#).

016-733 Destination Address Resolution Error RAP

016-733 A failure to resolve a P2P address problem (before connection to the server).

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Check if the destination address has been entered correctly.
 - b. Set a correct DNS server address.
2. Reload the software, [GP 4](#).
3. If the fault persists, perform the [016A](#) Network Error RAP.

016-735 Updating Job Template RAP

016-735 The system attempted to output the job template list while the job template was being updated.

Procedure

Perform the steps that follow:

1. Advise the customer to perform the operation again after the Job Template update completes.
2. If the fault persists, reload the software, [GP 4](#).

016-738, 739, 740 Booklet Size RAP

016-738 Invalid paper size for PS booklet print.

016-739 The combination of the specified document/paper sizes is incorrect.

016-740 The specified tray is invalid.

Procedure

Perform the steps that follow:

1. Advise the customer to specify the correct settings that allow booklet printing.
2. If the fault persists, reload the software, **GP 4**.

016-741 Download Mode Fail RAP

016-741 Not able to change into download mode.

Procedure

Perform the steps that follow:

1. Advise the customer to cancel the download prohibited mode then check that the jobs have completed before retrying the operation.
2. Enter **dC131**. Set NVM value 700-420 to 0, the retry the operation.

016-742 Download Data Product ID Mismatch RAP

016-742 A mismatch in the product ID of download data was detected.

Procedure

Advise the customer to obtain the download data again, then retry the job.

016-743 Device Model/Panel Type Error RAP

016-743 The supported model in the download data does not match the device model.

Procedure

Advise the customer to source a download file that has the same model with the device VerUP then retry the job.

016-744 Download Data CheckSum Error RAP

016-744 CheckSum error of download data.

Procedure

Perform the steps that follow:

1. Ensure that the cable connected to the device is secured correctly, then retry the job.

016-745 Download Data XPJL Fatal Error RAP

016-744 XPJL fatal error during download.

Procedure

Switch off, then switch on the machine, GP 10.

016-746, 016-751 Unsupported PDF File RAP

016-746 PDF error due to unsupported function sent.

016-751 Syntax error, usage of undefined command, parameter error, damaged PDF file, internal error of the PDF decomposer has occurred during PDF bridge process.

Procedure

Perform the steps that follow:

1. Advise the customer to print via the driver from Acrobat Reader.
2. Reload the software, [GP 4](#).
3. If the fault persists, perform the [016A Network Error RAP](#).

016-747 Drawing Annotation Memory RAP

016-747 When drawing an annotation image with the copy repeat function specified, there would be insufficient memory.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Increase the annotation image size.
 - b. Reduce the number of repeat images for the repeat function.
2. If the fault persists, reload the software, [GP 4](#).

016-748, 774, 775, 778, 981 HD Full RAP

016-748 HDD full when mailbox is accessed.

016-774 Disk full was detected when opening/writing file for compression type conversion.

016-775 Disk full was detected when opening/writing file for image processing operation.

016-778 HDD full was detected when opening/writing file for operation.

016-981 When accessing it, the HD is detected being full.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Split the job into pages in order to prevent the full state. Reduce the resolution if possible.
 - b. Delete documents that are no longer needed, such as; mailbox documents, secure print documents and delayed print documents.
 - c. Retrieve each page from the EWS.
2. Initialize the hard disk. Refer to [dC355](#) Hard Disk Diagnostics.
3. Install a new hard disk, [PL 3.10 Item 2](#).
4. If the fault persists, reload the software, [GP 4](#).

016-749 JCL Syntax Error RAP

016-749 The PjL/XPjL detected a print language that cannot be printed.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Use the printer driver of the machine to print.
 - b. Not use ContentsBridge to print a PDF file.
 - c. Request the other party to resend the internet document using a print language that can be printed by the machine.
2. If the fault persists, reload the software, [GP 4](#).

016-750 Print Job Ticket Description Error RAP

016-750 When the customer uses applications such as 'ContentsBridge2005', etc. to send PDF directly, the machine received the print job ticket that was sent together with the PDF. However, the print job ticket data has text that is not supported in this machine or print instruction that is not supported by the machine.

Procedure

Perform the steps that follow:

1. Advise the customer to refer to the user Guide.
2. If the fault persists, reload the software, [GP 4](#).

016-752 PDF Short of Memory RAP

016-752 Insufficient memory was detected during PDF bridge processing.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Change the print mode. When the print mode is set to High Quality, change the setting to Normal. When the print mode is set to Standard, change the setting to High Speed.
 - b. Print using a driver from Acrobat Reader.
2. If the fault persists, reload the software, [GP 4](#).

016-753 PDF Password Mismatched RAP

016-753 When processing a PDF file that is protected by a password, the password in the UI panel settings and the password specified using XPJL (set in the contents bridge utility) do not match.

Procedure

Perform the steps that follow:

1. Advise the customer to specify the correct password using the UI or the contents bridge.
2. If the fault persists, reload the software, [GP 4](#).

016-755 PDF Print Prohibited RAP

016-755 The system processed a PDF file prohibited for printing.

Procedure

Perform the steps that follow:

1. Advise the customer to use Acrobat to clear the print prohibition setting then print the PDF file.
2. If the fault persists, reload the software, [GP 4](#).

016-756 Auditron Prohibited Service RAP

016-756 Illegal User Detected

Procedure

Perform the steps that follow:

1. Advise the customer to request the Account Administrator for access to use the service.
2. If the fault persists, reload the software, [GP 4](#).

016-757 Auditron Invalid User RAP

016-756 The account has not been registered.

Procedure

Perform the steps that follow:

1. Advise the customer to set the correct account, then redo.
2. If the fault persists, reload the software, [GP 4](#).

016-758 Auditron Disabled Function RAP

016-758 An illegal account was detected.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Set the new function that is allowed for that account then try again.
 - b. Request the Account Administrator to add the rights.
2. If the fault persists, reload the software, [GP 4](#).

016-759 Auditron Limit Reached RAP

016-759 The number of registered users reached the limit.

Procedure

Perform the steps that follow:

1. Advise the customer to request the Account Administrator to set the number of copies, etc.
2. If the fault persists, reload the software, [GP 4](#).

016-760 PS Decompose Failure RAP

016-760 An error occurred in decompose processing.

Procedure

Perform the steps that follow:

1. Advise the customer to resend the job.
2. If the fault persists, reload the software, [GP 4](#).

016-761 FIFO Empty RAP

016-761 Image enlargement error (FIFO empty).

Procedure

Perform the steps that follow:

1. Advise the customer to print in the high speed mode. If the fault persists, use print guaranteed mode.
2. If the fault persists, reload the software, [GP 4](#).

016-762 Print Language Not Installed RAP

016-762 The system requested functions (print language, print utility, etc.) that are not installed.

Procedure

Perform the steps that follow:

1. Advise the customer to correct then select the decomposer from the UI or with a command.
2. If the fault persists, reload the software, [GP 4](#).

016-781 Server Connect Error RAP

016-781 SMTP server not found.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Correctly set the subnet mask and gateway.
 - b. From the destination server, ping the machine.
 - c. Check whether characters other than ASCII are set for the host name of the device. Set the host name of the device to ASCII characters.
2. If the fault persists, perform the [016A](#) Network Error RAP.

016-788 Retrieve to Browser Failed RAP

016-788 SMTP server not found.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, GP 10.
2. Advise the customer to:
 - a. Reload the browser page then perform retrieval operation again.
 - b. Re-activate the browser, then perform retrieval operation again.
 - c. Improve the connection status to a network.
 - d. Check whether there are problems such as duplicated IP addresses.
3. If the fault persists, perform the 016A Network Error RAP.

016-790 Email Fragment Over RAP

016-790 Email fragment quantity is over spec.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Reduce resolution (image to send quality), then resend the job.
 - b. Reduce magnification, then resend the job.
 - c. Increase the maximum fragment quantity.
2. If the fault persists, perform the 016A Network Error RAP.

016-792 Specified Job Not Found RAP

016-792 An error was detected in the Image conversion library.

Procedure

Perform the steps that follow:

1. Advise the customer to repeat the operation.
2. If the fault persists, reload the software, [GP 4](#).

016-794 Media Not Inserted RAP

016-794 Media not inserted.

Procedure

Perform the steps that follow:

1. Advise the customer to check that the media is inserted.
2. If the fault persists, reload the software, [GP 4](#).

016-795 Media Reader Format Error RAP

016-795 The MediaLib detected this error while performing the operation that requires access to media.

Procedure

Perform the steps that follow:

1. Advise the customer to check the media content from the PC. Check the file format/directory in the media and the selected mode (Digital Camera Print/Document Print), then reset the settings.
2. If the fault persists, reload the software, [GP 4](#).

016-796 Document Insert Operation Error RAP

016-796 The MediaLib detected this error while performing the operation that requires access to Media.

Procedure

Perform the steps that follow:

1. Advise the customer to verify the media is connected the PC. Check whether the print file attribute data is displayed on the PC, then reset the settings.
2. If the fault persists, reload the software, [GP 4](#).

016-797 Image File Read Error RAP

016-797 The MediaLib detected this error while performing the operation that requires access to media.

Procedure

Perform the steps that follow:

1. Advise the customer to verify the media is connected to the PC. Check whether the print file images are displayed on the PC, then reset the settings.
2. If the fault persists, reload the software, [GP 4](#).

016-799 PLW Print Instruction Fail RAP

016-799 The specified print parameter is abnormal.

Procedure

Perform the steps that follow:

1. Advise the customer to repeat the operation.
2. Reload the software, [GP 4](#).
3. If the fault persists, perform the [016A](#) Network Error RAP.

016-910, 016-911 Required Resource Not Ready RAP

016-910 The paper and staples requested by the selected print parameters are not installed.

016-911 The paper and staples requested by the print specification are not loaded or different sizes and/or types of paper switching are requested from the same tray.

Procedure

Perform the steps that follow:

1. Advise the customer to correctly load paper or install the staples.
2. If the fault persists, reload the software, [GP 4](#).

016-917, 016-918, 016-919 Y/M/C Toner Cartridge Empty RAP

016-917 The yellow toner cartridge is empty.

016-918 The magenta toner cartridge is empty.

016-918 The cyan toner cartridge is empty.

Procedure

Perform the [024-923, 924, 925](#) Y/M/C Toner Cartridge Empty RAP.

016-920 Destination Error RAP

016-920 The paper specified for printing can not be detected.

Procedure

Perform the steps that follow:

1. Advise the customer to correctly set the paper settings.
2. Reload the software, [GP 4](#).

016-981, 982 HDD Access Error 2 RAP

BSD-ON:[BSD 3.7 ESS \(Controller\)](#)

016-981 HDD was determined to be full due to secure print, delayed print or sample print was specified when the HDD capacity is low.

016-982 HDD was determined to be full due to collate, stored or interrupted jobs.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Process or delete the jobs (documents) stored in the same HDD partition, then repeat the operation.
 - b. If step A does not resolve the problem, expand the HDD partition size of the relevant service.
2. Reload the software, [GP 4](#).
3. Check the wiring between the controller PWB assembly, [PL 3.05 Item 1](#) and the hard disk.
4. Initialize the hard disk. Refer to [dC355 Hard Disk Diagnostics](#).
5. Install a new hard disk, [PL 3.05 Item 9](#).

016A Network Error RAP

Use this RAP when the customer reports network failures. e.g. cannot connect to the SMTP server or NTP Error

Initial Actions

Consult with your manager before troubleshooting the customer's network, as the policy varies according to region. Also consult with the customer's IT personnel or System Administrator.

Procedure

NOTE: Network errors can be complex to diagnose and resolve. Actions are limited to checking for fundamental faults and to collect system information, before contacting 2nd level support.

NOTE: If it is possible to log in to the Embedded Web Server by entering the IP address of the machine, then the network controller on the controller PWB assembly is good.

Check that the date and time are set correctly on the machine, refer to [GP 24](#) How to Set the Date and Time. **The time and date are correct.**

Y N
| Set the time and date parameters correctly.

Check the LED link lights at the controller PWB assembly ethernet connection. **The LEDs illuminate.**

Y N
| If possible, perform the following to try and eliminate the problem of a faulty network port:

- Check the connections at the network port and controller PWB assembly are good.
- Connect the machine to another network port.
- Advise the customer to provide a new network port to the controller PWB assembly cable.
- Check the operation of a known good machine to the network port.

If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#). **The LEDs illuminate.**

Y N
| Contact 2nd level support.

Perform the [Final Actions](#).

Perform the [Final Actions](#).

Final Actions

Perform the steps that follow:

1. Attempt to ping the machine:
 - a. Print a configuration report to obtain the IP address of the machine, [GP 14](#).
 - b. From an internet connected PC or laptop, select **Start** and in the Search box above the Start button, type **CMD**, then press **Enter** to open a command window.

NOTE: If the Windows key is enabled (the key located in the lower left corner with the Microsoft logo), hold the Windows key down, press R and release both keys to open the Run window.

- c. In the Command window (where the blinking cursor is) type ping. Press the space bar once, then enter the IP address of the machine. Press **Enter**.
 - d. If the ping command is successful, the machine will reply four times. This should not take more than two or three seconds.
 - e. If the ping command times out, or responds with 'host unreachable', check the IP address that was entered. If the IP address is correct, contact 2nd level support.
2. Contact 2nd level support if needed.

017-500 Job Limit Illegal Response RAP

017-500 Invalid response from job limit server.

Procedure

Advise the customer to:

1. Check the job parameter settings, then re-run the job.
2. Check the response packet from the job limit server.

017-501 Multiple Permission Restrictions RAP

017-501 A print rights violation has occurred.

Procedure

Advise the customer to change the user privileges.

017-503 Password Over Maximum RAP

017-503 Password has exceeded maximum number of digits.

Procedure

Advise the customer to lower the number of password digits.

017-504, 017-505 Job Limit RAP

017-504 An error occurred when communicating with JobLimit server.

017-505 An error occurred when communicating with JobLimit server.

Procedure

Advise the customer to check the network status and the operating status of JobLimit server.

017-506 Job Limit Rejected RAP

017-506 The job was canceled because the JobLimitServer sent Reject.

Procedure

Advise the customer to contact the System Administrator.

017-507 Job History Full RAP

017-507 The job was cancelled because the job history is full.

Procedure

Advise the customer to clear the job history and repeat the job.

017-713 Start TLS Unsupported Fail RAP

017-713 Start TLS unsupported fail.

Procedure

Advise the customer to change the SSL operation mode setting to other than STARTTLS mode.

017-714 SMTP Over SSL Fail RAP

017-714 SSL communication failure with SMTP server.

Procedure

Perform the steps that follow:

1. Advise the customer to check if this occurred in TLS Mode, it may be due to an incorrect port number. Check the Port Number settings of the SMTP Server.
2. If the fault persists, reload the software, [GP 4](#).

017-715 SSL Certificate Fail RAP

017-715 An SSL Server Authentication Error has occurred because there is something wrong in the Server Certificate Data.

Procedure

Advise the customer to register the root certificate of the SMTP server SSL certificate in the machine.

017-716, 717, 718 SSL Certificate (SMTP) Fail RAP

017-716 The validity period of the server certificate has not started.

017-717 The validity period of the server certificate has expired.

017-718 The server name does not match the server address of the server certificate.

Procedure

Advise the customer to:

1. Check that the SMTP server clock and machine clock are correct.
2. Check the validity period of the SMTP server certificate.
3. Check that the server name that are registered in the SMTP server certificate and the server address are correct.
4. If the clocks are correct, change the SMTP server SSL certificate to one that is valid.

NOTE: This problem can also be fixed by switching off the machines SSL Server Verification setting. This will render the machine unable to guarantee the authenticity of the SMTP server that it is connecting to.

017-719 SMTP Over SSL Internal Fail RAP

017-719 Internal software error has occurred during SMTP over SSL process.

Procedure

Perform the steps that follow:

1. Advise the customer to repeat the operation.
2. If the fault persists, reload the software, [GP 4](#).

017-720, 017-721 PJI Command Fail RAP

017-720 Contract type value is incorrect.

017-721 Geographic region value is incorrect.

Procedure

Advise the customer to correct the contract type or geographic region value specified by PJI command, then try again.

017-722 Total Impressions Over Fail RAP

017-722 The total impressions of billing meter in the data for PjL diag is 9,999,900 or more.

Procedure

Advise the customer to perform the operation when the value of total impressions is between 0 and 9,999,900.

017-723 DocuWorks Unsupported Character Fail RAP

017-723 When the DocuWorks decomposer is working, it detected some text that cannot be output is in use.

Procedure

Perform the steps that follow:

1. Advise the customer to print from the DocuWorks viewer using the print driver (ART-EX, PCL, etc.).
2. If the fault persists, reload the software, [GP 4](#).

017-725 Forced Annotation Syntax Fail RAP

017-725 Syntax error in Forced Annotation instructions is detected.

Procedure

Perform the steps that follow:

1. Advise the customer to check the driver settings.
2. If the fault persists, reload the software, [GP 4](#).

017-729 Temporary Error in PDL Transfer RAP

017-729 Temporary inability to send due to maximum jobs exceeded at the destination machine, or spool area of print data full, etc.

Procedure

Advise the customer to:

1. Set the spooling of the print data at the destination machine to hard disk.
2. Change spooling setting to Spool to Hard Disk.

017-730 Network Error in PDL Transfer RAP

017-730 Network occurred during PDL data transfer.

Procedure

Advise the customer to:

1. Check the connection of the network cable.
2. Check the destination machine is powered on.
3. Check that the IPP port of the destination machine is enabled.

017-732 Offline Error in PDL Transfer RAP

017-732 Unable to send because destination printer is offline.

Procedure

Advise the customer to disable the offline status of the destination machine.

017-733 Internal Error in PDL Transfer RAP

017-733 Unable to send because destination printer is offline.

Procedure

Advise the customer to repeat the operation.

017-734 IPP Data Error RAP

017-734 Syntax error, usage of undefined command, parameter error, damage of the file, or internal error of the decomposer has occurred during the decomposer process of a direct print job that used IPP in its network protocol.

Procedure

Perform the steps that follow:

1. Advise the customer to print by using a different print method (printer driver or utility other than print from IPP) that is supported by the machine.
2. If the fault persists, reload the software, [GP 4](#).

017-735 Unauthorized Auditron User RAP

017-735 Unauthorized user is detected.

Procedure

Perform the steps that follow:

1. Advise the customer to get permission to use the machine from the account administrator.
2. If the fault persists, reload the software, [GP 4](#).

017-737 Custom Transfer Out of Memory RAP

017-737 A HDD unavailable error was returned when the decomposer called the S-image library.

Procedure

Perform the steps that follow:

1. Advise the customer to deactivate or delete all unnecessary plug-ins.
2. Switch off, then switch on the machine, [GP 10](#).
3. Initialise the hard disk. Refer to [dC355](#) Image Disk Diagnostics.

017-738, 017-746 HDD Internal Fail RAP

017-738 The system detected that the JVM has stopped due to internal error.

017-746 Custom transfer plug-in local disk malfunction.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 10](#).
2. Initialise the hard disk. Refer to [dC355](#) Image Disk Diagnostics.

017-739, 017-740 Transfer Service Not Available RAP

017-739 Custom transfer XCP not activated error.

017-740 Custom transfer plug-in not activated error.

Procedure

Advise the customer to:

1. Enable the embedded plug-in feature.
2. Input the software key for the customization kit.

017-741 Custom Transfer Invalid Plug-In RAP

017-741 The instruction that was specified by the instruction set to the plug-in and the feature provided by the plug-in (API) are mismatched when the custom transfer job is in progress.

Procedure

Advise the customer to:

1. Upgrade the embedded plug-in feature (install the latest version).
2. Check the contents of the instruction set that is being used. If the instruction set was generated by a custom service, revise the custom service contents.

017-742, 743, 744 Custom Transfer Plug-In Connection RAP

017-742 Custom transfer plug-in server connection error.

017-743 Custom transfer plug-in authentication error.

017-744 Custom transfer plug-in server access error.

Procedure

Advise the customer to:

1. Check whether the transfer destination server, etc. and the machine are able to communicate via the network.
2. Check whether it is possible to log in to the transfer destination server, etc. by using the specified user name and password.
3. Check whether it is possible to log in to the transfer destination server, etc. by using the specified user name and password.

017-745 Custom Transfer Plug-in Disk Full RAP

017-745 Insufficient hard disk area for processing was detected.

Procedure

Perform the steps that follow:

1. Advise the customer to take any one of the actions that follow:
 - a. Lower the resolution, then re-send.
 - b. Reduce the size, then re-send.
 - c. Reduce the page count, then re-send the job in several batches.
 - d. Change the output color to black & white, then re-send.

017-747 Custom Transfer Plug-In Connection Timeout RAP

017-747 Custom transfer plug-in communication timed out error.

Procedure

Advise the customer to:

1. Wait a while, then re-run the job.
2. If the situation does not improve, consult with the Network Administrator.

017-748 Custom Transfer Plug-In Invalid machine RAP

017-748 Custom transfer plug-in invalid machine settings data error.

Procedure

Advise the customer to check the machine settings required for file transfer.

017-749 Custom Transfer Plug-In XML Fail RAP

017-749 When extracting the custom transfer parameter from XML file, the obtaining of the parameter has failed, the parameter format is inconsistent, or the parameter value cannot be processed due to wrong grammar.

Procedure

Advise the customer to check the contents of the instruction set that is being used. If the instruction set was generated by a custom service, revise the custom service contents.

017-750 Custom Transfer Plug-In Internal Fail RAP

017-750 An internal logic error was detected in the custom transfer plug-in.

Procedure

Perform the steps that follow:

1. Advise the customer to revise the custom transfer plug-in and then reinstall it.
2. Switch off, then switch on the machine, [GP 10](#).

017-751 Custom Transfer Plug-In Other Fail RAP

017-751 An error specific to the custom transfer plug-in was detected.

Procedure

Advise the customer to refer to the error details in the job undelivered transmission report, then take appropriate action.

017-755 Software Download Via Network Fail RAP

017-755 A software download via the network was performed when the software download via network set as prohibited.

Procedure

Perform the steps that follow:

1. Either set the software download via network to allowed or perform the software download using a USB.
2. If the fault persists, reload the software, [GP 4](#).

017-759 Download Data Inspection Error RAP

017-759 Electronic signature verification error of download data.

Procedure

Advise the customer to re-obtain the download data then perform the operation again.

017-773 Netlog Task Error RAP

017-773 Detected fatal error during Netlog operation.

Procedure

Advise the customer to check the setting related to the Netlog function.

017-774 Message Lost Error RAP

017-774 Message discard error.

Procedure

For information only, no service action necessary.

017-775 Network API Error RAP

017-775 Sending message was discarded due to sending API error.

Procedure

Advise the customer to check if there is any issues on the network route to the Syslog server.

017-776, 017-777 Syslog Server Error RAP

017-776 The sending message was discarded because the server sent an invalid response or did not respond.

017-777 The sending queue became full and discarded the message sending request.

Procedure

Advise the customer to check the status of the Syslog server, address value of the Syslog that is set to the machine, whether there is an issue in the network route between the machine and the Syslog server, or a network cable failure.

017-778 Queue Error RAP

017-778 The sending queue became full due to no IP address being set or assigned, and discarded the message sending.

Procedure

Advise the customer to check if the IP address of the machine is set.

017-779 Link Error RAP

017-779 Detected unplugged network cable on the machine side.

Procedure

Check the connection state of the network cable.

017-780 Held Job Timeout RAP

017-780 Auto delete due to the timeout of held Job that has been overtaken.

Procedure

Perform the steps that follow:

1. Advise the customer to disable the auto delete setting or change the timer setting (1-7200 minutes) to an appropriate value.
2. Switch off, then switch on the machine, [GP 10](#).

017-782, 784, 785, 786 Custom Image Processing Plug-In RAP

017-782 Detected mismatch of the version of image processing module.

017-784 Custom image processing XML error.

017-785 Detected an error that is custom image processing plug-in specific.

017-786 Image processing error of custom image processing plug-in.

Procedure

Perform the steps that follow:

1. Advise the customer to reinstall after correcting the custom image processing plug-in.
2. Switch off, then switch on the machine, [GP 10](#).

017-783 Custom Image Processing Memory RAP

017-783 The operation was unable to continue due to the memory shortage of the image processing module that is executed in the controller.

Procedure

Perform the steps that follow:

1. Advise the customer to take any one of the actions that follow:
 - a. Lower the resolution.
 - b. Change the output color to black & white.
2. Switch off, then switch on the machine, [GP 10](#).

017-787 Google Cloud Print Data Error RAP

017-787 Syntax error, undefined command, parameter error, file corruption, decomposer internal error occurred when the decomposer is processing at the Google Cloud Print processing path.

Procedure

Perform the steps that follow:

1. Advise the customer to use a different print method supported by the machine (print driver, utility other than Google Cloud Print).
2. If the fault persists, reload the software, [GP 4](#).

017-789 Job Limit Estimation Logic Fail RAP

017-789 During job limit estimate acquisition, a logic error was detected in the ComIDvm_GetEstimation.

Procedure

Advise the customer to check the job settings, then re-run the job.

017-790 to 017-799 Print Permission RAP

017-790 Color print made in a time zone that is prohibited.

017-791 Print made in a time zone that is prohibited.

017-792 Printing performed despite being prohibited.

017-793 Color printing performed despite being prohibited.

017-794 Print made from a prohibited application.

017-795 Color print made from a prohibited application.

017-796 Single sided print made from a prohibited application.

017-797 Print made from a paper tray that is prohibited.

017-798 Job type print made that is prohibited.

017-799 Single sided print made despite being prohibited.

Procedure

Advise the customer to set the permissions as required.

018-400 IPSEC Configuration Mismatch RAP

018-400 IPSEC error (setting mismatch).

Procedure

Advise the customer to clear the IPSEC setting mismatch and re-enable the IPSEC.

NOTE: *Mismatched IPSEC settings occur when the password is not set because the authentication method is set to pre-shared key, or when IPSEC certificate is not set because the authentication method is set to digital signature.*

018-405 User Account Disabled RAP

018-405 User account disabled error.

Procedure

Perform the steps that follow:

1. Advise the customer that there is a check mark at Account Invalid for the relevant user in the active directory of the LDAP authentication destination server. The server has been set to prohibit access from the relevant user.
2. Advise the customer to consult with the Server Administrator.

018-406 Setting Status of IP Address (IPv4) RAP

018-406 Setting state of the same IP address (IPv4).

Procedure

Perform the steps that follow:

1. Advise the customer to change the setting to a different IP address.
2. If the fault persists, perform the [OF5 NET/USB System Fail RAP](#).

018-407 Setting Status of IP Address (IPv6) RAP

018-407 Setting state of the same IP address (IPv6).

Procedure

Advise the customer to change the setting to a different IP address. Either that or allow the same IP address setting.

018-408 Duplicate IPv4 Address RAP

018-408 The same IP address machine as the IPv4 address of this machine exists on the network in the network environment where the Ether 2 side is connected.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Change the IPv4 address of this machine or the IPv4 address of the network upper apparatus.
 - b. For manual address setting, ensure that the IP address specified by the client is not used in other places.
 - c. Check the respective server setting environments with the client.
2. If the fault persists, perform the **016A** Network Error RAP.

018-409, 412, 413 Duplicate IPv6 Address 1 RAP

018-409 The same IP address machine as the IPv6 of this machine exists on the network in the network environment where the Ether 2 is connected.

018-412 The same IP address machine as the state-less auto setting address 2 of this machine exists on the network in the network environment where Ether 2 is connected.

018-413 The same IP address machine as the IPv6 state-less auto setting address 3 of this machine exists on the network in the network environment where the Ether 2 is connected.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Change the IPv6 address of the network upper apparatus that is duplicated to resolve the IP address duplication.
 - b. Check if the IP address that was set in state-less address auto setting is not used in other places.
2. If the fault persists, perform the **016A** Network Error RAP.

018-410, 018-411 Dynamic DNS Update Failure RAP

018-410 For Ethernet 2, failed to update the IPv4 address and host name to the DNS server.

018-411 For Ethernet 2, failed to update the IPv6 address and host name to the DNS server.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Check if the DNS server address is correctly set to the machine.
 - b. Check if the DNS server is set so that the dynamic DNS can be operated.
2. If the fault persists, perform the [016A](#) Network Error RAP.

018-414 Duplicate IPv6 Address 2 RAP

018-414 The IPv6 manual setting address that was set in this machine in a network environment connected to Ether 2 is invalid.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Change the IPv6 manual setting address of this machine to the IPv6 address that can be used in the machine address.
 - b. Check if the IPv6 address that was automatically set as manual address is a valid address.
2. If the fault persists, perform the [016A](#) Network Error RAP.

018-415 Duplicate IPv6 Address 3 RAP

018-415 The same IP address machine as the IPv6 manual setting address of this machine exists on the network in the network environment where the Ether 2 is connected.

Procedure

Advise the customer to change the IPv6 manual setting address of this machine or the IPv6 address of the network upper apparatus.

018-416 Duplicate IPv6 Address 4 RAP

018-416 The same IP address machine as the IPv6 link local address of this machine exists on the network in the network environment where Ether 2 is connected.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Change the IPv6 address of the network upper apparatus that is duplicated to resolve the IP address duplication.
 - b. Check if the IPv6 address that was automatically set as link local address is not used in other places.
2. If the fault persists, perform the [016A Network Error RAP](#).

018-424 to 018-426 WLAN WPA Enterprise Certificate Failure RAP

018-424 The WLAN WPA enterprise certificate is empty.

018-425 The WLAN WPA enterprise certificate is unavailable.

018-426 The WLAN WPA enterprise certificate has failed.

Procedure

Advise the customer to request their network administrator to configure the WPA-Enterprise and validate the server certificate.

018-427 Duplicate IP Address Range WiFi and WiFi Direct RAP

018-427 The machine has detected that it is connected to two (or possible more) networks that share the same IP address range.

Procedure

Advise the customer to request their network administrator to change the IP address of one (or more) networks the machine is connected to, to something different.

018-428 WLAN Module Connection Failure RAP

018-428 There is a connection failure between the WIFI module and the ESS PWBA.

Procedure

Perform the steps that follow:

1. Switch off the machine, GP 10. Remove, then install the WIFI module. Switch on the machine, GP 10.
2. If the fault persists install a new controller (ESS) PWB, PL 3.05 Item 1.

018-429 to 018-436 Duplicate IP Address IPv4 (WiFi) RAP

018-429 There is an IP address conflict with another system on the network (WIFI).

018-430 There is an IP address conflict with another system on the network (WIFI direct).

018-431 There is an IP address conflict with another system on the network (WIFI).

018-432 There is an IP address conflict with another system on the network (WIFI).

018-433 There is an IP address conflict with another system on the network (WIFI).

018-434 There is an IP address conflict with another system on the network (WIFI).

018-435 There is an IP address conflict with another system on the network (WIFI).

018-436 There is an IP address conflict with another system on the network (WIFI).

Procedure

Advise the customer to request their network administrator to change the IP address of the systems the machine is connected to, to something different.

018-439 WiFi Direct Setting Conflict RAP

018-439 When activating the Wi-Fi Direct, the conflict setting for Wi-Fi Network Type Ad-hoc is detected.

Procedure

Advise the customer to request their network administrator to change the setting for the Wi-Fi network type to Infrastructure.

018-440 WiFi Direct Setting IPv6 Conflict RAP

018-440 When activating the Wi-Fi Direct of this machine, the setting for the IPv6 mode is detected in the conflict configuration information related to the IP protocol stack.

Procedure

Advise the customer to request their network administrator to change the setting for the configuration information related to the IP protocol stack to Dual or the IPv4 mode.

018-441 WiFi Direct Setting 5GHz Conflict RAP

018-441 When activating the Wi-Fi Direct of this machine, the setting for the 5GHz mode is detected in the conflict Wi-Fi Band.

Procedure

Advise the customer to request their network administrator to change the setting for the Wi-Fi band of this machine to Auto or the 2.4GHz mode.

018-500, 501, 503, 504, 506, 507, 508 CA Server Error RAP

018-500 The SSL server that is necessary for CA could not start because there was no server certificate or private key at an attempt to start the machine.

018-501 The machine could not connect to the CA server when trying to do CA authentication. The machine has failed in communication.

018-503 The machine received a message from the CA server and was waiting for a JRM/UI judgment, but received no response in time.

018-504 During communication between the machine and the CA server for authentication, a mismatch in Session ID between both has occurred.

018-506 During communication between the machine and the CA server, a mismatch in Field ID between both has occurred.

018-507 The CA authentication server requested an entry of user info, and the server determined that the entered info was different.

018-508 In process of CA authentication, the machine has received a server exception message from the CA authentication server.

Procedure

Advise the customer to:

1. Make the IOT and the controller the same in agreement info.
2. Set up the server certificate, or set the CA function to off.
3. Check the address of the CA server, or recheck the connection to the network.
4. Retry the authentication operation.
5. Enter the correct user name and password.
6. Check the status of the CA server. Reboot it if necessary.

018-565 Proxy Name Solution Error in HTTP RAP

018-565 Failed to resolve proxy name error in HTTP.

Procedure

Advise the customer to:

1. Check whether the proxy server name that is set in the machine has been registered in the DNS.
2. Check whether it is connected to the DNS server.
3. Check whether the DNS server address is set.

018-595 Detected User Duplication RAP

018-595 Duplicate IDs were detected at ICCG external authentication (LDAP protocol).

Procedure

Advise the customer to make corrections so that the user entries in the database of the LDAP server do not have the same IC card information.

018-596, 018-700 Network Error RAP

018-596 An undefined protocol error, and other errors with LDAP protocol.

018-700 Network stack is not initialized fail.

Procedure

Advise the customer to wait for a while, then perform the same operation again.

018-701 to 018-705 LDAP Protocol Errors 01 to 05 RAP

018-701 LDAP protocol error 01 at address book operation (operation error).

018-702 LDAP protocol error 02 at address book operation (operation error).

018-703 LDAP protocol error 03 at address book operation.

018-704 LDAP protocol error 04 at address book operation (too many search results to be processed).

018-705 LDAP protocol error 05 at Address Book operation (comparison request result is false)

Procedure

Verify that print jobs are printing or print a configuration report and verify that network setup settings are indicated. **The printer is operational or the configuration report indicates valid network settings.**

Y N

Check for damage with the network connection. If there is no damage then there is a problem with the network. Inform the customer that the network requires service.

There is a problem with the LDAP setups on the machine or with the remote LDAP server. Advise the customer to verify the machine LDAP setups. If the check is good, there may be a problem with the remote LDAP server.

018-706 LDAP Protocol Error 06 RAP

018-706 LDAP protocol error 06 at address book operation (comparison request result is true).

Procedure

Perform the steps that follow:

1. For a single occurrence, take no action.
2. If the fault persists, switch off, then switch on the machine, [GP 10](#).

018-707, 018-708 LDAP Protocol Errors 07 and 08 RAP

018-707 LDAP protocol error 07 at address book operation (the specified authentication method is not supported).

018-708 LDAP protocol error 08 at address book operation (strong authentication is required)

Procedure

Verify that print jobs are printing or print a configuration report and verify that network setup settings are indicated. **The printer is operational or the configuration report indicates valid network settings.**

Y N

Check for damage with the network connection. If there is no damage then there is a problem with the network. Inform the customer that the network requires service.

There is a problem with the LDAP setups on the machine or with the remote LDAP server. Advise the customer to verify the machine LDAP setups. If the check is good, there may be a problem with the remote LDAP server.

018-709 Active Communication is Unavailable Now Fail RAP

018-709 Active communication is unavailable now fail.

Procedure

1. In case of IPv4 environment, advise the customer to:
 - a. Check whether the address that is being used as the IPv4 address of the machine is undefined, or whether it has become the Auto IP address.
 - b. Check if the network has been connected correctly.
 - c. Check with the network administrator on whether the DHCP server address has been exhausted.
2. In case of IPv6 environment, advise the customer to:
 - a. Check whether the address that is being used as the IPv6 address of the machine has been allocated with a global address that uses the network address distributed by the IPv6 router.
 - b. Check if the network has been connected correctly.
 - c. Check with the network administrator on whether the IPv6 router has been configured correctly.

018-710 to 018-714 LDAP Protocol Errors 10 to 14 RAP

018-710 LDAP protocol error 10 at address book operation (not registered in search range).

018-711 LDAP protocol error 11 at address book operation (admin limit is exceeded).

018-712 LDAP protocol error 12 at address book operation (extended function cannot be used).

018-713 LDAP protocol error 13 at address book operation (secrecy is required).

018-714 LDAP protocol error 14 at Address Book operation (SASL bind in progress).

Procedure

Verify that print jobs are printing or print a configuration report and verify that network setup settings are indicated. **The printer is operational or the configuration report indicates valid network settings.**

Y N

Check for damage with the network connection. If there is no damage then there is a problem with the network. Inform the customer that the network requires service.

There is a problem with the LDAP setups on the machine or with the remote LDAP server. Advise the customer to verify the machine LDAP setups. If the check is good, there may be a problem with the remote LDAP server.

018-715 Kerberos Attestation Protocol Error 73 RAP

018-715 Kerberos Attestation protocol error 73

Procedure

Advise the customer that:

1. If the error occurred in the case of smart card authentication, algorithm not supported by the machine is specified by KDC.
2. In the case of password authentication, KDC does not support any of the machine's algorithms.
3. KDC settings should be reviewed. Also, in the case of machines supporting FIPS, disabling FIPS mode may correct the problem.

018-716 to 018-721 LDAP Protocol Errors 16 to 21 RAP

018-716 LDAP protocol error 16 at address book operation (the requested attribute does not exist).

018-717 LDAP protocol error 17 at address book operation (the specified attribute is not defined)

018-718 LDAP protocol error 18 at address book operation (unsuitable combination).

018-719 LDAP protocol error 19 at address book operation (limit violation).

018-720 LDAP protocol error 20 at address book operation (the specified attribute already exists)

018-721 The server returned RFC2251 standard result message 21 (syntax error of the specified attribute value) in response to the address book inquiry.

Procedure

Verify that print jobs are printing or print a configuration report and verify that network setup settings are indicated. **The printer is operational or the configuration report indicates valid network settings.**

Y N

Check for damage with the network connection. If there is no damage then there is a problem with the network. Inform the customer that the network requires service.

There is a problem with the LDAP setups on the machine or with the remote LDAP server. Advise the customer to verify the machine LDAP setups. If the check is good, there may be a problem with the remote LDAP server.

018-722 GCP Network Fail RAP

018-722 GCP network connection error.

Procedure

Perform the steps that follow:

1. Advise the customer to confirm the network connection status, network settings status with the system administrator.
2. If the fault persists, reload the software, [GP 4](#).

018-723, 018-740 GCP Certification Fail RAP

018-723 GCP certificate connection error.

018-740 Connection error of certificate has occurred during communication through XMPP protocol with Google server.

Procedure

Perform the steps that follow:

1. Advise the customer to confirm with the network administrator the correct root CA certificate is present, certificate authentication settings are correct.
2. If the fault persists, reload the software, [GP 4](#).

018-724 GCP SSL Connection Fail RAP

018-724 GCP SSL connection error.

Procedure

Perform the steps that follow:

1. Advise the customer to confirm with the network administrator the network (SSL Communication) connection status, SSL settings status.
2. If the fault persists, reload the software, [GP 4](#).

018-725 Kerberos Attestation Protocol Error 22 RAP

018-725 Duplicate IDs were detected at ICCG external authentication (LDAP protocol).

Procedure

Advise the customer that the user Kerberos password set on the Kerbeors server has expired, it is necessary to ask the server administrator to extend the expiration date of it.

018-726 Kerberos Attestation Protocol Error 70 RAP

018-726 Duplicate IDs were detected at ICCG external authentication (LDAP protocol).

Procedure

Advise the customer to check if a higher CA certificate in the user SmartCard is registered with the machine. If not, register it with the machine.

018-727 Kerberos Attestation Protocol Error 71 RAP

018-727 The certificate in the user SmartCard is incorrect (rejected by the Kerberos server).

Procedure

Advise the customer to check if the certificate in the user SmartCard is valid. If it has become invalid or expired, renew it, or if the Kerberos server prohibits the use of the certificate, it is necessary to ask the server administrator to authorise the server permit it.

018-728 Kerberos Attestation Protocol Error 72 RAP

018-728 The Kerberos server KDC certificate is incorrect (the root CA certificate is not registered with the machine; the KDC certificate has expired; or the KDC certificate address is different from that written on the certificate.)

Procedure

Advise the customer to:

1. Check if the root CA certificate of KDC certificate is registered with the machine. If not, register the root CA certificate.
2. If the KDC certificate has expired, renew the Kerberos server KDC certificate
3. Check that the Kerberos server address set on the machine is the same as that written on the Kerberos server KDC certificate. If they are different, change the Kerberos server address set on the machine, or check the Kerberos server KDC certificate. In this case, there is a possibility of a wrong setting or Kerberos server impersonation.

018-729, 730, 738, 739, 743, 744, 745, 746 GCP Network Fail RAP

018-729 GCP connection timeout error.

018-730 GCP other network error.

018-738 Network-related error has occurred during communication through XMPP protocol with Google server.

018-739 Network-related internal error has occurred during communication through XMPP protocol with Google server.

018-743 A network related (proxy connection) error has occurred when communicating with Google server via HTTP.

018-744 A network related (DNS name resolution) error has occurred when communicating with Google server via HTTP.

018-745 A network related (proxy connection) error has occurred when communicating with Google server via XMPP protocol.

018-746 A network related (DNS name resolution) error has occurred when communicating with Google server via XMPP protocol.

Procedure

Perform the steps that follow:

1. Advise the customer to check the network connection status, settings status as the network might be congested.
2. If the fault persists, reload the software, [GP 4](#).

018-731 GCP HDD Limit Fail RAP

018-731 Job is aborted because there is not enough capacity in the HDD.

Procedure

Perform the steps that follow:

1. Advise the customer to check the HDD available capacity, and free up space. Print again after executing all print jobs which are being spooled.
2. If the fault persists, reload the software, [GP 4](#).

018-732 to 018-736 LDAP Protocol Errors 32 to 36 RAP

018-732 LDAP protocol error 32 at address book operation (applicable object does not exist).

018-733 LDAP protocol error 33 at address book operation (wrong alias).

018-734 LDAP protocol error 34 at address book operation (wrong DN format, wrong password).

018-735 LDAP protocol error 35 at address book operation (object is terminated).

018-736 LDAP protocol error 36 at address book operation (cannot refer to alias).

Procedure

Verify that print jobs are printing or print a configuration report and verify that network setup settings are indicated. **The printer is operational or the configuration report indicates valid network settings.**

Y N

Check for damage with the network connection. If there is no damage then there is a problem with the network. Inform the customer that the network requires service.

There is a problem with the LDAP setups on the machine or with the remote LDAP server. Advise the customer to verify the machine LDAP setups. If the check is good, there may be a problem with the remote LDAP server.

018-737, 018-741 GCP Other Fail RAP

018-737 Other internal error has occurred during GCP module processing.

018-741 Other internal error has occurred during GCP module (XMPP library) processing.

Procedure

Perform the steps that follow:

1. Advise the customer to check the settings.
2. If the fault persists, reload the software, [GP 4](#).

018-748, 018-750 to 018-754 LDAP Protocol Errors 48, 50 to 36 RAP

018-748 LDAP protocol error 48 at address book operation (authentication denied).

018-750 LDAP protocol error 49 at address book operation (the specified authentication certificate is invalid, login name is invalid).

018-751 LDAP protocol error 51 at address book operation (busy).

018-752 LDAP protocol error 52 at address book operation (cannot be processed).

018-753 LDAP protocol error 53 at address book operation (execution denied).

018-754 LDAP protocol error 54 at address book operation (loop detected).

Procedure

Verify that print jobs are printing or print a configuration report and verify that network setup settings are indicated. **The printer is operational or the configuration report indicates valid network settings.**

Y N

Check for damage with the network connection. If there is no damage then there is a problem with the network. Inform the customer that the network requires service.

There is a problem with the LDAP setups on the machine or with the remote LDAP server. Advise the customer to verify the machine LDAP setups. If the check is good, there may be a problem with the remote LDAP server.

018-749 LDAP Protocol Error 49 RAP

018-749 There is a LDAP (Lightweight Directory Access Protocol) error (Designated authentication certificate is invalid/Login name is invalid).

Procedure

Verify that print jobs are printing or print a configuration report and verify that network setup settings are indicated. **The printer is operational or the configuration report indicates valid network settings.**

Y N

Check for damage with the network connection. If there is no damage then there is a problem with the network. Tell the customer that the network requires service.

There is a problem with the LDAP setups on the machine or with the remote LDAP server.

Ask the customer to re-verify user name and password to be used for authentication to cancel incorrect search login name. Check with the network administrator to verify authentication setting of server side when the status is not improved.

Verify the machine LDAP setups. If the check is OK, there may be a problem with the remote LDAP server.

018-764 to 018-769, 771 LDAP Protocol Errors 64 to 69 and 71 RAP

018-764 LDAP protocol error 64 at address book operation (naming violation).

018-765 LDAP protocol error 65 at address book operation (object class specification error).

018-766 LDAP protocol error 66 at address book operation (entries other than termination cannot be executed).

018-767 LDAP protocol error 67 at Address Book operation (cannot be executed at RDN).

018-768 LDAP protocol error 68 at address book operation (the specified entry already exists).

018-769 LDAP protocol error 69 at address book operation (object class cannot be changed).

018-771 LDAP protocol error 71 at address book operation (influence on multiple DSA).

Procedure

Verify that print jobs are printing or print a configuration report and verify that network setup settings are indicated. **The printer is operational or the configuration report indicates valid network settings.**

Y N

Check for damage with the network connection. If there is no damage then there is a problem with the network. Inform the customer that the network requires service.

There is a problem with the LDAP setups on the machine or with the remote LDAP server. Advise the customer to verify the machine LDAP setups. If the check is good, there may be a problem with the remote LDAP server.

018-770 LDAP Protocol Error 70 RAP

018-770 LDAP protocol error 70 at Address Book operation (search target is too large).

Procedure

Verify that print jobs are printing or print a configuration report and verify that network setup settings are indicated. **The printer is operational or the configuration report indicates valid network settings.**

Y N

Check for damage with the network connection. If there is no damage then there is a problem with the network. Tell the customer that the network requires service.

Ask the customer to retry search with narrower search target by changing search condition/ search start position in Address Book internal data. If the check is OK, there may be a problem with the remote LDAP server.

018-780 to 018-784 LDAP Protocol Errors 80 and 82 to 84 RAP

018-780 LDAP protocol error 80 at address book operation (an unknown error has occurred).

018-782 LDAP protocol error 82 at address book operation (program error or SASL authentication error).

018-783 LDAP protocol error 83 at address book operation (outgoing message encoding error).

018-784 LDAP protocol error 84 at address book operation (incoming message decoding error).

Procedure

Verify that print jobs are printing or print a configuration report and verify that network setup settings are indicated. **The printer is operational or the configuration report indicates valid network settings.**

Y N

Check for damage with the network connection. If there is no damage then there is a problem with the network. Inform the customer that the network requires service.

There is a problem with the LDAP setups on the machine or with the remote LDAP server. Advise the customer to verify the machine LDAP setups. If the check is good, there may be a problem with the remote LDAP server.

018-781 LDAP Protocol Error 81 RAP

018-781 LDAP protocol error 81 at address book operation (cannot connect to server).

Procedure

Advise the customer to:

1. Check if the network cable is connected.
2. If it is connected, check the start up state of the target request server.
3. Check whether the shared name that is set at the main unit is only specified by a period.
4. Check that the server name is correct.

018-785 LDAP Protocol Error 85 RAP

018-785 LDAP protocol error 85 at address book operation (search timeout).

Procedure

Verify that print jobs are printing or print a configuration report and verify that network setup settings are indicated. **The printer is operational or the configuration report indicates valid network settings.**

Y N

Check for damage with the network connection. If there is no damage then there is a problem with the network. Tell the customer that the network requires service.

Ask the customer to retry search with narrower search target by changing search condition/ search start position in Address Book internal data. Ask the customer to verify the machine LDAP setups. If the check is OK, there may be a problem with the remote LDAP server.

018-786 to 018-797 LDAP Protocol Errors 86 to 97 RAP

018-786 LDAP protocol error 86 at address book operation (an unknown authentication method has been specified).

018-787 LDAP protocol error 87 at address book operation (mistake in definition of search filter).

018-788 LDAP protocol error 88 at address book operation (instruction canceled).

018-789 LDAP protocol error 89 at address book operation (an incorrect parameter was passed).

018-790 LDAP protocol error 90 at address book operation (insufficient memory).

018-791 LDAP protocol error 91 at address book operation (server connection prohibited).

018-792 LDAP protocol error 92 at address book operation (unsupported function).

018-793 LDAP protocol error 93 at address book operation (result is not returned).

018-794 LDAP protocol error 94 at address book operation (result no longer exist).

018-795 LDAP protocol error 95 at address book operation (result still exist).

018-796 LDAP protocol error 96 at address book operation (client loop detected).

018-797 LDAP protocol error 97 at address book operation (maximum hop number for reference is exceeded).

Procedure

Verify that print jobs are printing or print a configuration report and verify that network setup settings are indicated. **The printer is operational or the configuration report indicates valid network settings.**

Y N

Check for damage with the network connection. If there is no damage then there is a problem with the network. Inform the customer that the network requires service.

There is a problem with the LDAP setups on the machine or with the remote LDAP server. Advise the customer to verify the machine LDAP setups. If the check is good, there may be a problem with the remote LDAP server.

021-210, 211, 212 USB IC Card Reader Error RAP

021-210 USB IC card reader connection status error.

021-211 The USB IC card reader is broken.

021-212 USB IC card reader activation failure.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Check the wiring between the card reader and the machine.
3. Enter dC131. Ensure NVM value 700-885 is set correctly:
 - Internal IC card reader: 0
 - IC card reader (HID support): 1
4. If the fault persists, advise the customer that the card reader is faulty.

021-213 Controller Price Table Error RAP

021-213 An error in setting up EPA controller unit price table.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to save the unit price table to a file. Then set a value between 1 and 9999999 at the location(s) where a value out of the range is set. Then save the file containing the corrected unit price table.
2. To not use the new type of subtraction system (M/C Unit-Price Table system), enter dC131. Set the value of NVM 850-027 to 0.
3. To use the new type of subtraction system, enter dC131. Set every available unit price (NVM values 855-xxx) to a value between 1 and 9999999. Switch off, then switch on the machine, GP 10.

NOTE: Obtain consent from the customer as to the values to set the prices to.

4. Perform the OF2 Special Boot Modes RAP.

021-214 USB IC Card Reader Encryption Setting RAP

021-214 Failure in the USB IC card reader encryption settings.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, GP 10.
2. Advise the customer that the encryption settings of the connected USB IC card reader are wrong. Connect an USB IC card reader that has never been used before, or one that has had its encryption settings initialized as factory default settings to the machine. Switch off, then switch on the machine, GP 10.

021-215 Invalid Accessory Type Setting RAP

021-215 Invalid accessory type setting.

Procedure

Perform the steps that follow:

1. Enter dC131. Set NVM value 850-007 to the appropriate one for the connected accessory. Switch off, then switch on the machine, GP 10.
2. Or replace the connected accessory with the appropriate one for the setting. Switch off, then switch on the machine, GP 10.

021-360 EP Accessory Fail RAP

021-360 An error occurred in the connection to the EP accessory. The accessory that should be installed is not found.

Procedure

Perform the [016-357](#) Controller EP Communication Fail RAP.

021-361 EP Accessory Type Configuration Error RAP

021-361 EP accessory type setting error.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Enter [dC131](#). Ensure NVM value 850-007 is set correctly.
2. If the fault persists, perform the [016-357](#) Controller EP Communication Fail RAP.

021-401 USB IC Card Reader Connection Error RAP

021-401 USB IC card reader connection status is incorrect.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Advise the customer to disconnect the USB IC card reader that caused this error to occur from the USB connector.

021-501 Invalid URL Detected RAP

021-501 The server URL is grammatically incorrect.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, GP 10.
2. Advise the customer to check the URL of the EP server.

021-502, 503, 504 Couldn't Resolve Proxy Name RAP

021-502 Proxy server address resolution error.

021-503 Server address resolution error.

021-504 Server connection error.

Procedure

Advise the customer to:

1. Check the connection of the LAN cable.
2. Check the DNS server address settings.
3. Check the default gateway settings.
4. Check the subnet mask settings.

021-505, 021-506 SSL Error RAP

021-505 An error has occurred during SSL/TLS handshake.

021-506 The SSL certificate of the server is invalid.

Procedure

Switch off, then switch on the machine, [GP 10](#).

021-507 Unauthorized Proxy Access RAP

021-507 Authentication of the proxy server has failed.

Procedure

Advise the customer to:

1. Check the EP proxy server authentication user.
2. Check the EP proxy server authentication password.
3. If the problem persists after checking the settings, there may be a network failure or the proxy server settings may have changed/failed.

021-508, 520, 521 Host/Proxy Connection Timed Out RAP

021-508 Communication timeout has occurred.

021-520 CA communication error.

021-521 CA communication timeout.

Procedure

Advise the customer to:

1. Check the connection of the LAN cable.
2. Check the default gateway settings.
3. Check the subnet mask settings.

021-509, 515, 516, 522 Invalid Message Detected RAP

021-509 The server detected an invalid message.

021-515 Invalid product code.

021-516 Invalid serial number.

021-522 Certificate library error.

Procedure

Switch off, then switch on the machine, [GP 10](#).

021-510, 021-511 SOAP Fault RAP

021-510 Recall status mismatch (EP system).

021-511 Installation status mismatch (EP system)

Procedure

For information only. No service action required.

021-512, 513, 514, 517, 518, 519 Installation Conflict RAP

021-512 EP-SV installation conflict (EP system).

021-513 EP-DX installation conflict (EP system).

021-514 TRESS installation conflict (EP system).

021-517 Communication failure (EP center)

021-518 An internal error has occurred in the server.

021-519 High load status detected (EP center).

Procedure

Advise the customer to check with the EP Center for the EP contract status, registration status and system operation status.

021-523 Internal Error RAP

021-523 Software failure where processing can still continue was detected.

Procedure

Perform the steps that follow:

1. If the SOAP port has stopped, advise the customer to restart it.
2. If the fault persists, switch off, then switch on the machine, [GP 10](#).

021-524 to 012-527 Communications Error RAP

021-524 Installation status mismatch.

021-525 Recall status mismatch.

021-526 Communication library error.

021-527 Invalid communication message (edge server).

Procedure

Switch off, then switch on the machine, [GP 10](#).

021-528, 021-529 Communication Settings RAP

021-528 Communication setting error.

021-529 The latest version is detected (software update).

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 10](#).
2. If the fault persists, advise the customer to check with the EP Center for the EP contract status, registration status and system operation status.

021-530, 012-531 Update Server Error RAP

021-530 An error internal to the server (software update).

021-531 A large load on the server is detected (software update).

Procedure

Advise the customer to:

1. Wait a while, then perform the same operation again.
2. If the fault persists, advise the customer to check with the EP Center for the EP contract status, registration status and system operation status.

021-532 to 021-535 Unsupported ROM Set RAP

021-532 An unsupported set of ROM versions is detected.

021-533 The user cannot do an update.

021-534 An unsupported submodule is detected.

021-535 An unsupported accessory is detected.

Procedure

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

021-700 Accessory Failure RAP

021-700 EP accessory - service canceled by USB accessory failure or disconnect.

Procedure

Perform the steps that follow:

1. Check the fault history, **dC122** for fault 021-210, 021-211 or 021-212. If any of the faults is listed, perform the relevant RAP.
2. If none of the faults are listed, reload the software, **GP 4**.

021-701 Accessory Preparing RAP

021-701 EP accessory - service canceled by USB accessory preparing.

Procedure

Perform the steps that follow:

1. Advise the customer to wait for a minimum of 3 minutes for the USB accessory to start, then re-run the job
2. If the fault persists, reload the software, **GP 4**.

021-732, 943, 945 EP Accessory Error RAP

021-732 EP accessory - service canceled by disable.

021-943 EP accessory - print service paused by disable.

021-945 EP accessory - service paused by disable.

Procedure

Perform the steps that follow:

1. Advise the customer to insert a Xerox card, copy card or cash into the accessory, and ensure that there are sufficient fees or card value.
2. If the fault persists, reload the software, [GP 4](#).

021-733, 944, 946 EP Accessory Color Error RAP

021-733 EP accessory service canceled by color mode restriction.

021-944 EP accessory - print service paused by color mode restriction.

021-946 EP accessory - service paused by color mode restriction.

Procedure

Perform the steps that follow:

1. Advise the customer to operate the color restriction key SW to allow color. Or, replace the card with another card that does not reach its upper limit in color mode.
2. If the fault persists, reload the software, [GP 4](#).

021-948, 949 Subtractive Accessory Disable (Scan) RAP

021-948 The remaining rate subtractive accessory has is insufficient (print service paused by subtractive accessory disable).

021-949 The remaining rate subtractive accessory has is insufficient (service paused by subtractive accessory disable).

Procedure

Advise the customer that in the case of dispenser, to insert a card that has a remaining rate enough to continue the job. In the case of coin kit, to add a necessary amount of money to continue the job.

023-500 UI ROM Download Fail RAP

023-500 Panel ROM data write processing error detection.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Reload the software, **GP 4**.
2. If the fault persists, install a new UI console assembly, **PL 2.05 Item 1**.

023-600, 023-601 UI Key Error RAP

023-600 A hard key on the panel has been found to be held down for one or more consecutive minutes.

023-601 The touch panel has been found to be held down for one or more consecutive minutes.

Procedure

For information only, no service action necessary.

024-322, 323 SEEPROM Refurbish Fail RAP

BSD-ON: [BSD 3.1 PWB Communications \(Controller to Motor Drive PWB\)](#)

024-322 A backup data read error was detected.

024-323 When restore was requested, it was detected that the backup data did 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 10](#). 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 10](#).
2. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.10 Item 1](#) are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
3. Reload the software, [GP 4](#).
4. Perform the [OF2 Special Boot Modes RAP](#).
5. If the fault persists, install new components as necessary:
 - Motor drive PWB, [PL 1.10 Item 2](#).
 - Controller PWB assembly, [PL 3.05 Item 1](#).

024-324 IOT NVM Backup Restore Fail 6 RAP

BSD-ON: [BSD 3.1 PWB Communications \(Controller to Motor Drive PWB\)](#)

024-324 IOT NVM backup restore fail 6.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).

024-340 to 024-360 IOT-ESS Communication Fail 1 RAP

BSD-ON: [BSD 3.1 PWB Communications \(Controller to Motor Drive PWB\)](#)

024-340 Motor drive PWB sending error detected by controller (invalid parameter was used).

024-341 Motor drive PWB sending error detected by controller (sequence number error).

024-342 Motor drive PWB sending error detected by controller (packet number error).

024-343 Motor drive PWB sending error detected by controller (message length error).

024-345 Motor drive PWB sending error detected by controller (check code error).

024-346 Motor drive PWB sending error detected by controller (parity error detected by the IOT).

024-347 Motor drive PWB sending error detected by controller (framing error detected by the IOT).

024-348 Motor drive PWB sending error detected by controller (overflow error detected by the IOT).

024-349 Motor drive PWB sending error detected by controller (receive abort detected by the IOT after the header had been recognized).

024-350 Motor drive PWB receiving error detected by controller (sequence number of the received message packet is incorrect).

024-351 Motor drive PWB receiving error detected by controller (packet number error).

024-352 Motor drive PWB receiving error detected by controller (message length error).

024-353 Motor drive PWB receiving error detected by controller (check code error).

024-354 Motor drive PWB receiving error detected by controller (parity error detected by the UART).

024-355 Motor drive PWB receiving error detected by controller (framing error detected by the UART).

024-356 Motor drive PWB receiving overflow error detected by controller (overflow error detected by the UART).

024-357 Motor drive PWB receiving error detected by controller (receiving abort detected after the header had been recognized).

024-358 Print sequence error detected by controller (paper feed and paper output that are not applicable to the number detected.)

024-359 Motor drive PWB transmission receiving error detected by controller (invalid parameter used).

024-360 Initialization error between IOT and ESS.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
3. Reload the software, [GP 4](#).
4. Perform the [OF2 Special Boot Modes RAP](#).
5. If the fault persists, install new components as necessary:
 - Motor drive PWB, [PL 1.10 Item 2](#).
 - Controller PWB assembly, [PL 3.05 Item 1](#).

024-361 Invalid IOT Paper Size RAP

BSD-ON: [BSD 3.1 PWB Communications \(Controller to Motor Drive PWB\)](#)

024-361 Invalid IOT paper size group information.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
3. Initialize the user NVM, refer to [dC301 NVM Initialization](#).
4. Reload the software, [GP 4](#).
5. If the fault persists, install new components as necessary:
 - Motor drive PWB, [PL 1.10 Item 2](#).
 - Controller PWB assembly, [PL 3.05 Item 1](#).

024-362, 363 Page Sync Illegal Start or Stop RAP

BSD-ON: [BSD 3.1 PWB Communications \(Controller to Motor Drive PWB\)](#)

024-362 Page-sync occurred before video output preparation completes.

024-363 Page-sync completion error during video output.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
3. Reload the software, [GP 4](#).
4. Perform the [OF2 Special Boot Modes RAP](#).
5. If the fault persists, install new components as necessary:
 - Motor drive PWB, [PL 1.10 Item 2](#).
 - controller PWB assembly, [PL 3.05 Item 1](#).

024-364 DMA Transfer Fail RAP

024-364 DMA transfer error. Reduction/enlargement was not completed even though the specified data was entered.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10](#).
2. Ensure the connectors on the hard disk are securely connected.
3. Remove, then re-install the SD card, [PL 3.05 Item 8](#). If necessary, install a new SD card.
4. Format the hard disk drive, refer to [dC355 Image Disk Diagnostics](#).
5. Reload the software, [GP 4](#).
6. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

024-365 Overflow on Loop Back Write RAP

024-365 Loop back write overflow.

Procedure

This fault is currently not displayed. No service action necessary.

024-366 JBIG Library Other Fail RAP

024-366 Other errors in JBIG Lib.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

024-367 Decompress Other Fail RAP

BSD-ON:[BSD 3.7 ESS \(Controller\)](#)

024-367 Incorrect line synchronization was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. Ensure the connectors on the hard disk are securely connected.
3. Format the hard disk drive, refer to [dC355](#) Hard Disk Diagnostics.
4. Reload the software, [GP 4](#).
5. Perform the [OF2](#) Special Boot Modes RAP.
6. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

024-368 PCI Error RAP

BSD-ON:BSD 3.7 ESS (Controller)

024-368 PCI access error occurred due to a faulty PCI bus.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure the connectors on the hard disk are securely connected.
3. Format the hard disk drive, refer to dC355 Hard Disk Diagnostics.
4. Reload the software, GP 4.
5. Perform the OF2 Special Boot Modes RAP.
6. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

024-370 Marker Code Detection Fail RAP

BSD-ON:BSD 3.1 PWB Communications (Controller to Motor Drive PWB)

024-370 Marker code detection error. During enlarge, when the file was enlarged only by the specified size, the end code (FF02) cannot be found in the compressed data.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Change the Print mode (Normal/High Quality/High Resolution). Inform the customer of any print mode setting changes.
3. Remove, then re-install the SD card, PL 3.05 Item 8. If necessary, install a new SD card.
4. Ensure that all connectors on the motor drive PWB, PL 1.10 Item 2 and the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
5. Reload the software, GP 4.
6. Perform the OF2 Special Boot Modes RAP.
7. If the fault persists, install new components as necessary:
 - SD card, PL 3.05 Item 8.
 - Motor drive PWB, PL 1.10 Item 2.
 - Controller PWB assembly, PL 3.05 Item 1.

024-371, 372, 373, 375 IOT-ESS Communication Fail 2 RAP

BSD-ON:BSD 3.1 PWB Communications (Controller to Motor Drive PWB)

024-371 Communication between the ESS and IOT has not been established.

024-372 Sending error detected by the controller (incorrect parameter instruction).

024-373 DLL communication failure recovery error detected by the controller.

024-375 DLL receiving error detected by the controller (incorrect parameter instruction).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the motor drive PWB, PL 1.10 Item 2 and the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
3. Reload the software, GP 4.
4. Perform the OF2 Special Boot Modes RAP.
5. If the fault persists, install new components as necessary:
 - Motor drive PWB, PL 3.05 Item 1.
 - Controller PWB assembly, PL 3.10 Item 1.

024-376 IOT-ESS Communication Fail 3 RAP

BSD-ON:BSD 3.1 PWB Communications (Controller to Motor Drive PWB)

024-376 Motor drive PWB image signal truncation detected by the controller.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the motor drive PWB, PL 1.10 Item 2 and the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
3. Check the FFC ribbon cable between the controller PWB assembly and the LPH assembly, PL 60.05 Item 1, PL 60.05 Item 2, PL 60.05 Item 3, and PL 60.05 Item 4.
4. Reload the software, GP 4.
5. Perform the OF2 Special Boot Modes RAP.
6. If the fault persists, install new components as necessary:
 - Motor drive PWB, PL 1.10 Item 2.
 - Controller PWB assembly, PL 3.05 Item 1.

024-600 to 024-614 Counter Repair RAP

024-600 The billing master counter is automatically repaired.

024-601 The billing backup counter 1 is automatically repaired.

024-602 The billing backup counter 2 is automatically repaired.

024-603 The SW key master counter is automatically repaired.

024-604 The SW key backup counter 1 is automatically repaired.

024-605 The SW key backup counter 2 is automatically repaired.

024-606 Billing meter type is automatically repaired (ESS SEEP repaired).

024-607 Billing meter type is automatically repaired (ESS NVM repaired).

024-608 Billing meter type is automatically repaired (IOT NVM repaired).

024-609 Billing count type is automatically repaired (ESS SEEP repaired).

024-610 Billing count type is automatically repaired (ESS NVM repaired).

024-611 Billing count type is automatically repaired (IOT NVM repaired).

024-612 Modal break point is automatically repaired (ESS SEEP repaired).

024-613 Modal break point is automatically repaired (ESS NVM repaired).

024-614 Modal break point is automatically repaired (IOT NVM repaired).

Procedure

For information only, no service action necessary.

024-615 IOT Unsupported Drum Shut Off RAP

024-615 IOT unsupported drum shut off.

Procedure

For information only, no service action necessary.

024-616, 617, 618, 619, 620, 621 Serial/Product Number Restore RAP

024-616 Serial number master was restored automatically.

024-617 Serial number backup 1 was restored automatically.

024-618 Serial number backup 2 was restored automatically.

024-619 Product number master was restored automatically.

024-620 Product number backup 1 was restored automatically.

024-621 Product number backup 2 was restored automatically.

Procedure

For information only, no service action necessary.

024-700 Memory Shortage or No Hard Disk RAP

BSD-ON:BSD 3.7 ESS (Controller)

024-700 A job that could not be printed due to insufficient system memory or hard disk not installed was received.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 SD card, [PL 3.05 Item 8](#). If necessary, install a new SD card.
2. Ensure that the connectors from the hard disk drive, [PL 3.10 Item 2](#) to the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected.
3. If the fault persists, install a new hard disk drive, [PL 3.10 Item 2](#).

024-701 Invalid Instruction of Face Inversion RAP

024-701 Job cancellation due to invalid invert instruction.

Procedure

Advise the customer to use paper that is in specification. Refer to [GP 15 Paper and Media Size Specifications](#).

024-702 Paper Jam RAP

024-702 Job cancellation due to paper jam.

Procedure

Clear the paper jam.

024-703, 742, 775 Booklet Sheets Count Over RAP

024-703 Number of booklet sheets exceeded fail has occurred during printing.

024-742 The number of sheets per set exceeds a specific allowable number for a booklet.

024-775 A job that exceeds booklet paper quantity is cancelled.

Procedure

Perform the steps that follow:

1. Advise the customer to use paper of a lighter weight so as not to exceed the maximum output limit or use less pages.
2. If the fault persists, reload the software, [GP 4](#).

024-707 Duplex Inversion Prohibited (Duplex) RAP

024-707 A duplex print instruction was received for duplex/invert prohibited paper.

Procedure

Perform the steps that follow:

1. Advise the customer to use paper that is in specification or to print simplex. Refer to [GP 15](#) Paper and Media Size Specifications.
2. If the fault persists, reload the software, [GP 4](#).

024-708 Duplex Inversion Prohibited (Face Down) RAP

024-708 A face down output instruction was received for duplex/invert prohibited paper.

Procedure

Perform the steps that follow:

1. Advise the customer to use paper that is in specification or to print face up. Refer to [GP 15](#) Paper and Media Size Specifications.
2. If the fault persists, reload the software, [GP 4](#).

024-746, 747 Print Request Failure RAP

024-746 There are parameters that are incompatible with the specified paper type.

024-747 The specified combination of parameters (stored file size, paper size, paper tray, duplex command, output tray) cannot be executed or continued.

Procedure

Advise the customer to use the correct print parameters.

024-748 Bates Numbering Digit Exceeded RAP

024-748 The number of bates numbering digits is exceeded.

Procedure

Perform the steps that follow:

1. Advise the customer to reduce the number of documents to less than the user-specified number or reduce the number of numbering digits.
2. If the fault persists, reload the software, [GP 4](#).

024-910, 945, 959 Tray 1 Fault RAP

024-910 Check Tray Settings for Tray 1.

024-945 Check Tray 1.

024-959 Check Tray Settings for Tray 1.

Procedure

Perform the [071-212](#) Tray 1 Paper Size Sensor Fault RAP.

024-911, 947, 960 Tray 2 Size Mismatch RAP

024-911 Check Tray Settings for Tray 2.

024-947 Check Tray 2.

024-960 Check Tray Settings for Tray 2.

Procedure

Perform the [072-212](#) Tray 2 Paper Size Sensor Fault RAP.

024-912, 948, 961 Tray 3 Size Mismatch RAP

024-912 Check Tray Settings for Tray 3.

024-948 Check Tray 3.

024-961 Check Tray Settings for Tray 3.

Procedure

Perform the [073-212](#) Tray 3 Paper Size Sensor Fault RAP.

024-913, 949, 962 Tray 4 Size Mismatch RAP

024-913 Check Tray Settings for Tray 4.

024-949 Check Tray 4.

024-962 Check Tray Settings for Tray 4.

Procedure

Perform the [074-212](#) Tray 4 Paper Size Sensor Fault RAP.

024-916, 980, 981 Full Stack RAP

024-916 One of the conditions that follow was met during mix full position detection:

- When the paper size of the next job (either in feed direction or width direction) is larger than the uppermost paper size loaded for the previous job.
- When changed to staple mode, the uppermost paper size loaded for the previous job is less than 279.4mm (11 inches).
- When uppermost paper size loaded for the previous job is 'unknown'

024-980 Finisher stacker tray full stack.

024-981 Finisher top tray paper full.

Procedure

Perform the [012-211B](#) Stacker Tray Fail Entry RAP.

024-917 Stacker Tray Staple Set Over Count

BSD-ON:[BSD 13.15 Office Finisher LX Stacker Tray Control](#)

024-136 The staple set count exceeded 50 sets on the stacker tray during the staple set eject operation.

Procedure

Perform the [012-212](#) Stacker Tray Upper Limit Failure RAP.

024-920 Face Down Tray 1 Full RAP

024-920 The paper output to the face down tray 1 is full.

BSD-Reference: [BSD 10.7 Exit 1 Paper Transport](#)

Initial Actions

Perform the checks that follow:

- Check the exit 1 bail arm assembly, [PL 10.25 Item 1](#), is correctly installed and un-broken.
- Check that the flag on the bail arm is correctly positioned in the exit 1 OCT full stack sensor, [PL 10.10 Item 14](#).
- Check that the exit 1 OCT full stack sensor, [PL 10.10 Item 14](#) is correctly mounted

If necessary, install new parts.

Procedure

Enter [dC330](#) code 077-124, exit 1 OCT full stack sensor. Actuate the sensor. **The display changes.**

Y N

Refer to the items that follow:

- [GP 7](#) How to Check a Sensor.
- [BSD 10.7 Exit 1 Paper Transport](#).

If necessary install new parts:

- Exit 1 OCT full stack sensor, [PL 10.10 Item 14](#).
- Motor drive PWB, [PL 1.10 Item 2](#).

Perform [SCP 5](#) Final Actions.

024-922 Face Down Tray 2 Full RAP

024-922 The paper output to the face down tray 2 is full.

BSD-Reference: [BSD 10.10 Exit 2 Paper Transport \(2 of 2\)](#)

Initial Actions

Perform the checks that follow:

- Check the exit 1 bail arm assembly, [PL 10.25 Item 21](#), is correctly installed and un-broken.
- Check that the flag on the bail arm is correctly positioned in the exit 2 sensor, [PL 10.25 Item 15](#).
- Check that the exit 1 OCT full stack sensor, [PL 10.10 Item 14](#) is correctly mounted

If necessary, install new parts.

Procedure

Enter [dC330](#) code 077-124, exit 2 sensor. Actuate the sensor. **The display changes.**

Y N

Refer to the items that follow:

- [GP 7](#) How to Check a Sensor.
- [BSD 10.7 Exit 1 Paper Transport](#).

If necessary install new parts:

- Exit 1 OCT full stack sensor, [PL 10.25 Item 15](#).
- Motor drive PWB, [PL 1.10 Item 2](#).

Perform [SCP 5](#) Final Actions.

024-923, 924, 925 Y/M/C Toner Cartridge Empty RAP

024-923 The yellow toner cartridge is empty.

024-924 The magenta toner cartridge is empty.

024-925 The cyan toner cartridge is empty.

Procedure

Install new components as necessary:

- Yellow toner cartridge, [PL 90.05 Item 10](#).
- Magenta toner cartridge, [PL 90.05 Item 11](#).
- Cyan toner cartridge, [PL 90.05 Item 12](#).

024-926, 963, 990 Puncher Waste Bin Not Set RAP

BSD-ON:BSD 13.6 Office Finisher LX Punch

024-926 The puncher waste bin is not installed correctly or there is a failure in the punch box set sensor or related circuitry.

024-963 The amount of waste has become equal to or over the number that makes the punch dust box full.

024-990 Punch dust full.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Empty the punch box, PL 13.06 Item 11.
- Check for any debris or obstructions in the path of the punch waste bin or the punch box set sensor.

Procedure

Enter dC330, code 012-275, punch box set sensor. Remove, then reinstall the punch waste bin. **The display changes.**

Y N

Check the punch box set sensor, refer to GP 7 How to Check a Sensor. Install new components as necessary:

- Punch box set sensor, PL 13.09 Item 5.
- Finisher PWB, PL 13.45 Item 2.

Reload the software, GP 4. If the fault persists, install a new finisher PWB, PL 13.45 Item 2.

024-928 Scratch Sheet Compile Entry RAP

024-928 Abnormal paper (scratch sheet), which is notified from the IOT via the sheet integrity command, was output to the finisher.

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Ensure that the eject cover assembly, PL 13.25 Item 1 is closed.

Procedure

Check the specification of the paper, refer to GP 15 Paper and Media Size Specifications. **The paper is within specification.**

Y N

Load new paper that is in specification.

Check the condition of the paper. **The paper is in good condition.**

Y N

Load new paper that is in specification.

Check all connectors on the finisher PWB. **The connectors are connected correctly.**

Y N

Connect the connectors.

Switch off, then switch on the machine, GP 10. Open, then close the eject cover. If the fault persists, install a new finisher PWB, PL 13.45 Item 2.

024-933, 940, 941 Drum Cartridge End of Life RAP

024-933 The yellow drum cartridge has reached end of life.

024-940 The magenta drum cartridge has reached end of life.

024-941 The cyan drum cartridge has reached end of life.

Procedure

Install new components as necessary:

- Yellow drum assembly, [PL 90.15 Item 5](#).
- Magenta drum assembly, [PL 90.15 Item 4](#).
- Cyan drum assembly, [PL 90.15 Item 3](#).

024-934 Paper Type Mismatch RAP

024-934 The fed paper is different from that specified in the controller (plain paper and heavy-weight cannot be recognized).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Load the specified media.
2. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
3. Reload the software, [GP 4](#).

024-943, 978, 984, 989 Booklet Staple RAP

024-943 Both front and rear booklet staples are running low, or a staple cartridge was removed.

024-978 Ready signal remains not ready when the specified time has passed since booklet staple operation has begun.

024-984 Booklet low front staple.

024-989 Booklet low rear staple.

Procedure

Perform the [012-268 Booklet Rear Stapler Fail RAP](#).

024-946 Tray 1 Missing RAP

BSD-ON:[BSD 70.1 Tray 1 Paper Size Sensing](#)

024-946 Check tray 1.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Check tray 1 is fully seated in the IOT tray slot.
2. Remove tray 1, then check underneath the tray for obstruction, damage to the link mechanism, or damage to the tray 1 size sensor.
3. Check the actuator at the rear of tray 1. If necessary, install a known to be good or new tray assembly, [PL 70.10 Item 1](#) to eliminate tray 1 is the cause of the fault.
4. Install tray 1, then enter [dC140 Analog Monitor](#), code 071-200. Check the tray 1 size sensor, [PL 70.05 Item 6](#) for proper operation.
5. Check the wiring between the tray 1 size sensor and [P/J417](#) on the motor drive PWB.
6. Reload the software, [GP 4](#).
7. If the fault persists, install new components as necessary:
 - Tray 1 size sensor, [PL 70.05 Item 3](#).
 - Motor drive PWB, [PL 1.10 Item 2](#).

024-950 Tray 1 Is Out Of Paper RAP

BSD-ON:[BSD 70.8 Tray 1 Paper Stacking](#)

024-950 Tray 1 is out of paper.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 10](#).

Procedure

Enter [dC330](#), code 071-101, tray 1 no paper sensor. Manually actuate the tray 1 no paper sensor, [PL 80.10 Item 6](#). The display changes.

Y N

Check the tray 1 no paper sensor. Refer to [GP 7](#) How to Check a Sensor.

Perform the [071-210](#) Tray 1 Lift Fail RAP. Check the tray 1 feed/lift motor. If the fault persists, install new components as necessary:

- Tray 1 no paper sensor, [PL 80.10 Item 1](#).
- Motor drive PWB, [PL 1.10 Item 2](#).

024-951 Tray 2 Is Out Of Paper RAP

BSD-ON:[BSD 70.9 Tray 2 Paper Stacking](#)

024-951 Tray 2 is out of paper.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 10](#).

Procedure

Enter [dC330](#), code 072-101, tray 2 no paper sensor. Manually actuate the tray 2 no paper sensor, [PL 80.15 Item 7](#). The display changes.

Y N

Check the tray 2 no paper sensor. Refer to [GP 7](#) How to Check a Sensor.

Perform the [072-210](#) Tray 2 Lift Fail RAP. Check the tray 2 feed/lift motor. If the fault persists, install new components as necessary:

- Tray 2 no paper sensor [PL 80.15 Item 7](#).

024-952 Tray 3 Out Of Paper RAP

BSD-ON:BSD 70.10 Tray 3 Paper Stacking (2TM/TTM)

024-952 Tray 3 is out of paper.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 10.

Procedure

Enter dC330, code 073-101, tray 3 no paper sensor. Manually actuate the tray 3 no paper sensor, PL 80.35 Item 5 2TM or PL 80.50 Item 6 TTM. The display changes.

Y N

Check the tray 3 no paper sensor. Refer to GP 7 How to Check a Sensor.

Perform the 073-210 Tray 3 Lift Fail RAP. Check the tray 3 feed/lift motor. If the fault persists, install new components as necessary:

- Tray 3 no paper sensor, PL 80.35 Item 5 2TM or PL 80.50 Item 6 TTM.

024-953 Tray 4 Out Of Paper RAP

BSD-ON:BSD 70.11 Tray 4 Paper Stacking (2TM)

BSD-ON:BSD 70.12 Tray 4 Paper Stacking (TTM)

024-953 Tray 4 is out of paper.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 10.

Procedure

Enter dC330, code 074-101, tray 4 no paper sensor. Manually actuate the tray 4 no paper sensor, PL 80.35 Item 5 2TM or PL 80.50 Item 6 TTM. The display changes.

Y N

Check the tray 4 no paper sensor. Refer to GP 7 How to Check a Sensor.

Perform the 074-210 Tray 4 Lift Fail RAP. Check the tray 4 feed/lift motor. If the fault persists, install new components as necessary:

- Tray 4 no paper sensor, PL 80.35 Item 5 2TM or PL 80.50 Item 6 TTM.

024-954 Bypass Tray Is Out Of Paper RAP

BSD-ON:[BSD 70.13 Bypass Tray Paper Sensing and Stacking](#)

024-954 The bypass tray is out of paper.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 10](#).

Procedure

Enter [dC330](#), code 075-100, bypass tray no paper sensor. Manually actuate the bypass tray no paper sensor, [PL 70.55 Item 5](#). The display changes.

Y N

Check the bypass tray no paper sensor, refer to [GP 7](#) How to Check a Sensor.

Install new components as necessary:

- Bypass tray no paper sensor, [PL 70.55 Item 5](#).
- Motor drive PWB, [PL 1.10 Item 2](#).

024-955 Tray 6 Is Out Of Paper RAP

BSD-ON:[BSD 70.17 HCF Paper Stacking](#)

024-955 Tray 6 is out of paper.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 10](#).

Procedure

Enter [dC330](#), code 078-200, HCF no paper sensor. Manually actuate the HCF paper sensor, [PL 70.95 Item 13](#). The display changes.

Y N

Check the HCF paper sensor. Refer to [GP 7](#) How to Check a Sensor.

Perform the [078-250](#) HCF Lift Fault RAP. Check the HCF feed/lift motor. If the fault persists, install new components as necessary:

- HCF no paper sensor, [PL 70.95 Item 13](#).
- HCF PWB, [PL 70.95 Item 9](#).

024-958 Bypass Tray Paper Size Mismatch RAP

BSD-ON: [BSD70.7 Bypass Tray Paper Size Sensing](#)

024-958 Bypass tray paper size mismatch.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, [GP 10](#).

Procedure

Enter [dC330](#), code 075-100, bypass tray paper size sensor. Manually actuate the bypass tray paper size sensor, [PL 70.55 Item 1](#). The display changes.

Y N

Check the bypass tray paper size sensor, refer to:

- [GP 7](#) How to Check a Sensor.
- [BSD70.7 Bypass Tray Paper Size Sensing](#).
-

Install new components as necessary:

- Bypass tray paper size sensor, [PL 70.55 Item 1](#).
- Motor drive PWB, [PL 1.10 Item 2](#).

Perform [SCP 5](#) Final actions.

024-965, 966 ATS/APS RAP

024-965 The paper specified for printing is not loaded in the tray.

024-966 The paper specified for printing cannot be detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Reload the relevant paper tray.
2. If the fault persists, perform the steps that follow:
 - a. Switch off, then switch on the machine, [GP 10](#).
 - b. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
 - c. Reload the software, [GP 4](#).

024-967 Mixed Width Paper RAP

024-967 Mixed width was detected with settings only available for stapling the same paper width.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Cancel the stapling job. Refer the customer to the user documentation.
2. If the fault persists, perform the steps that follow:
 - a. Switch off, then switch on the machine, GP 10.
 - b. Ensure that all connectors on the motor drive PWB, PL 1.10 Item 2 and the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
 - c. Reload the software, GP 4.

024-968 Stapler/Punch Concurrency RAP

BSD-ON:BSD 13.6 Office Finisher LX Punch

024-968 Staple position and punch position are the same.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check if the specified paper is loaded in the tray.
- Switch off, then switch on the machine, GP 10.

Procedure

Cancel staple mode and punch mode. **The fault persists.**

Y N
|
Correct the settings.

Check the connectors on the finisher PWB. **The connectors are securely connected.**

Y N
|
Connect the connectors securely.

Check the connection of the harness between the machine and the finisher. **The harness is securely connected.**

Y N
|
Connect the harness securely.

Perform the steps that follow:

1. Ensure that all connectors on the motor drive PWB, PL 1.10 Item 2 and the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
2. Reload the software, GP 4.
3. If the fault persists, install a new finisher PWB, PL 13.45 Item 2.

024-969 Different Width Mix Punch RAP

BSD-ON: [BSD 13.6 Office Finisher LX Punch](#)

024-969 Mixed punch paper of different widths was detected while printing in punch 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 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check if the specified paper is loaded in the tray.
- Switch off, then switch on the machine, [GP 10](#).

Procedure

Cancel punch mode. **The fault persists.**

Y **N**
|
Correct the settings.

Check the connectors on the finisher PWB. **The connectors are securely connected.**

Y **N**
|
Connect the connectors securely.

Check the connection of the harness between the machine and the finisher. **The harness is securely connected.**

Y **N**
|
Connect the harness securely.

Perform the steps that follow:

1. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
2. Reload the software, [GP 4](#).
3. If the fault persists, install a new finisher PWB, [PL 13.45 Item 2](#).

024-976, 977, 979 Finisher Staple Error RAP

024-976 After the staple motor started forward rotation, the staple home sensor did not turn on within 450ms, and after the staple motor started reverse rotation, the stapler head home sensor turned on within 200ms.

024-977 Stapler feed ready fail.

024-977 Staple near empty or staple feed failure was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Install a new staple cartridge as necessary, [PL 13.20 Item 15](#).
2. If the fault persists, perform the [012-249 Booklet Front Stapler Fail RAP](#)

024-982 Stacker Tray Lower Safety RAP

024-982 Finisher stacker tray lower safety.

Procedure

Perform the **012-213** Stacker Tray Lower Limit Failure RAP.

024-983 Booklet Tray Full RAP

024-983 The paper output to the booklet tray is full.

Procedure

Advise the customer to remove the finished booklets from the booklet tray.

024-985 Bypass Tray Obstructed RAP

024-985 Bypass tray stopped due to an obstruction.

Procedure

Advise the customer to ensure the correct paper size or type is loaded in the bypass tray in the correct orientation. Resubmit the job.

024-986 Confirmation of Printing All

024-986 Confirmation of Printing All

Procedure

For information only, no service action necessary.

025-596, 025-597 HDD Diagnostics RAP

025-596 An NG occurred when HDD fail forecast of diagnostics was executed.

025-597 An error occurred when HDD initialization of diagnostics was executed.

Procedure

Perform the [016-210](#), [506](#), [777](#), [780](#), [798](#) HDD Error RAP.

026-400 USB Host Connection Number Exceeded RAP

026-400 The number of machines that are connected to the USB Host Port of this machine has exceeded the maximum permissible number of connections.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 10](#).
2. Advise the customer to disconnect some of the machines that are connected to this USB host port and ensure that the number of connected machines are below the maximum permissible number of connections.

026-402 Changed IOT Speed RAP

026-402 The IOT has started the print at a low speed.

Procedure

For information only, no service action necessary.

026-403 Stop printing and wait for toner cooling RAP

026-403 When IOT sends notification that cooling related to the toner is required when the IOT internal temperature is high.

Procedure

Inform the customer to give the machine time to cool down before proceeding.

026-700 LDAP Protocol Error RAP

026-700 It was detected that the error response returned from the server does not exist in the LDAP protocol definitions.

Procedure

Perform the steps that follow:

1. Advise the customer that this fault is caused when the server uses an undefined LDAP protocol that is not supported by the machine. Correct any mistakes in server settings or client operation.
2. If the fault persists, reload the software, [GP 4](#).

026-701 Address Book Request Overflow RAP

026-701 The software in the machine was subjected to a large amount of simultaneous address queries from multiple machine panel and Web UI input machines. The processing capacity of the JRM directory service has been exceeded.

Procedure

Perform the steps that follow:

1. Advise the customer that when performing simultaneous queries on the address book in the machine from multiple machine panel and Web UI input machines, lower the query interval.
2. If the fault persists, reload the software, [GP 4](#).

026-702 Address Book Directory Service Overflow RAP

026-702 The JRM directory service, which is an internal software of the machine, has simultaneously received two or more requests for the same operation.

Procedure

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

026-703 Abort With Logout RAP

026-703 At installation of additional document, authentication is already cancelled.

Procedure

Advise the customer to make it impossible for authentication to be cancelled at additional document loading.

026-704 DocuWorks Error RAP

026-704 In process of operating DocuWorks decomposer, there has occurred; a syntax error, use of an undefined command, a parameter error, damage to DocuWorks file, or an internal error of DocuWorks decomposer.

Procedure

Advise the customer to print from DocuWorks viewer by use of printer driver (ART-EX, PCL, etc.).

026-705 DocuWorks Short of Memory RAP

026-705 In process of operating DocuWorks decomposer, lack of memory has been detected.

Procedure

Advise the customer to:

1. Change print mode from High Resolution to Standard or from Standard to High Speed.
2. Print from DocuWorks viewer by use of printer driver (ART-EX, PCL, etc.).

026-706, 026-707 DocuWorks Error RAP

026-706 DocuWorks decomposer has processed a DocuWorks document printing of which is prohibited.

026-707 In the processing of a security-protected DocuWorks file, either of the password set on the UI panel and the XPJL specified password (set in ContentsBridge utility) does not match.

Procedure

Advise the customer to:

1. Enter the correct password.
2. Enter Full Access Password, etc. from DocuWorks viewer then disable printing prohibited. Print using printer driver (ART-EX, PCL, etc.).

026-712 HTTP Out Job Overlap Error RAP

026-712 The high compression/OCR processing module has detected that a job that specifies high compression/OCR processing and is to be taken out using HTTP has started while another job to be sent via the network is undergoing high compression/OCR processing.

Procedure

For information only, no service action necessary. Advise the customer that as a job specifying high compression/OCR processing is in progress, wait until the job is complete before running another job.

026-718 PS Print Instruction Fail RAP

026-718 An erroneous combination of print parameters selected (finishing, paper size, paper tray, Duplex instructions, output tray) prevents the machine from running the job.

Procedure

Perform the steps that follow:

1. Advise the customer to correctly set finishing, paper size, paper tray, duplex instructions, and output tray options, then re-run the job.
2. If the fault persists, reload the software, [GP 4](#).

026-724, 026-725 Remote Download File Error RAP

026-724 The size of the remote download file reported from the EP center is different from that of the actual downloaded file.

026-725 The checksum of the remote download file reported from the EP center does not match that of the downloaded file.

Procedure

Advise the customer that it is necessary to check the size of the file registered with the EP center and the size stored in the SW repository.

026-726 Inconsistent Options RAP

026-726 The machine configuration info included in XPJL does not match the actual configuration.

Procedure

Advise the customer to set up the machine configuration info on the printer driver screen so that it can match the actual configuration.

026-730 Tray Paper Size Not Detected RAP

026-730 The paper size of the paper tray selected is unknown.

Procedure

Ensure the paper guides in the selected tray are set correctly.

026-731 to 026-733 PJJ Fail RAP

026-731 The PIN number that is specified by PJJ command is different from the number that is calculated from the machine's serial number.

026-732 The print count that is specified by PJJ command has exceeded the machine's total impression meter value by +100.

026-733 The password that is specified by PJJ command is different from the one that is set in the machine.

Procedure

Advise the customer to correct the PIN number, print count or password that is specified by PJJ Command, then try again.

026-734 PJL Diag Mode RAP

026-734 Unable to transition to the PJL Diag Mode.

Procedure

Advise the customer to:

1. Ensure that the job has completed, then try again.
2. After completing a panel operation, wait at least 1 minute before starting the download operation.

027-442, 443, 444 Duplicate IP Address 1 RAP

027-442 IPv6 - stateless auto setting IP address 1 is duplicated.

027-443 IPv6 - stateless auto setting IP address 2 is duplicated.

027-444 IPv6 - stateless auto setting IP address 3 is duplicated.

Procedure

Perform the steps that follow:

1. Advise the customer to either change the IPv6 Stateless Auto Setting Address 1, 2 or 3 of this machine or the IPv6 address of the other machine on the network.
2. If the fault persists, perform the 016A Network Error RAP.

027-445 Illegal IP Address RAP

027-445 IPv6 - manually set IP address is invalid.

Procedure

Perform the steps that follow:

1. Advise the customer to change the IPv6 (Manual Setting Address) of this machine to the IPv6 address that can be used as the self-machine address.
2. If the fault persists, perform the 016A Network Error RAP.

027-446 Duplicate IP Address 2 RAP

027-446 IPv6 - automatically set IP address is duplicated.

Procedure

Perform the steps that follow:

1. Advise the customer to change the IPv6 (Manual Setting Address) of this machine to the IPv6 address that can be used as the self-machine address.
2. If the fault persists, perform the 016A Network Error RAP.

027-447 Duplicate IP Address 3 RAP

027-447 IPv6 - link local IP address is duplicated.

Procedure

Perform the steps that follow:

1. Advise the customer to change the IPv6 Link Local Address of this machine or the IPv6 address of the other machine on the network.
2. If the fault persists, perform the 016A Network Error RAP.

027-452 Duplicate IP Address 4 RAP

027-452 A PC with the same IP address exists on the network.

Procedure

Perform the steps that follow:

1. Advise the customer to change the duplicated IP address of the PC.
2. If the fault persists, perform the [016A Network Error RAP](#).

027-500 SMTP Server Fail for Mail IO RAP

027-500 SMTP server address resolution fail for mail IO.

Procedure

Advise the customer to:

1. Check with the System Administrator that the mail server has been launched and the environment is already used for other purposes (such as for PC).
2. Check that a correct SMTP server address is reflected in the machine setting list:
 - a. When the SMTP server address is specified using IP address, set a correct IP address.
 - b. When the SMTP server address is specified using FQDN, check that the FQDN name is correct. Also check that a correct DNS server address is set for the machine, and set a correct IP address.

027-566 SMB Protocol Error 4-026 RAP

027-566 SMB protocol error (4-026), the library has not been initialized.

Procedure

Advise the customer to check if the SMB client has been started.

027-569 SMB (TCP/IP) Not Started RAP

027-569 SMB (TCP/IP) is not started

Procedure

Advise the customer to check that SMB (TCP/IP) is enabled.

027-584 SMB Protocol Error 4-044 RAP

027-584 SMB protocol error (4-044), authentication server common security mode is operating.

Procedure

Advise the customer to set the authentication server to Windows other than Win95/Win98/Me.

027-600 External Print Check Mode Error RAP

027-600 External print check mode error.

Procedure

Switch off, then switch on the machine, GP 10.

027-700 Mail Address Domain Error RAP

027-700 The domain of the destination mail address is designated as a prohibited domain.

Procedure

Advise the customer to check that the domain of the destination mail address is not designated as a prohibited domain.

027-701 Disconnected Network Cable RAP

027-701 In external authentication, the disconnected cable is detected.

Procedure

Ensure the network cable is connected correctly.

027-702 to 027-709 Certificate for Addresses Error RAP

027-702 No certificate for the destination exists (before connection to the server).

027-703 The certificate for the destination expired (before connection to the server).

027-704 The certificate for the destination is not reliable (before connection to the server).

027-705 The certificate for the destination existed on a list of revoked certificates (before connection to the server).

027-706 No machine certificate exists (before connection to the server).

027-707 The machine certificate expired (before connection to the server).

027-708 The machine certificate is not reliable (before connection to the server).

027-709 The certificate for the destination existed on a list of revoked certificates (before connection to the server).

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Store the correct certificate for the destination in the machine. Check the items that follow:
 - i. That the term for which the certificate is valid.
 - ii. The machines time is correct.
 - b. Check the certification path for the destination certificate and import the necessary CA certificate.
 - c. Store in this machine a destination certificate that is not on the list of revoked certificates.
 - d. Check that the mail address written on the machine certificate is the same as that set up on the machine.
2. If the fault persists, reload the software, [GP 4](#).

027-710 to 027-715 S/MIME Mail Error RAP

027-710 The mail I/O received S/MIME mail even though S/MIME was disabled.

027-711 SMIME mail certificate retrieval error.

027-712 Invalid S/MIME mail certificate error.

027-713 Receive S/MIME mail tampered error.

027-714 S/MIME mail sender impersonation error.

027-715 S/MIME mail certificate not supported.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Enable S/MIME setting in the machine.
 - b. Register the sender certificate in the machine or change the mailer options so that the S/MIME signature mails from the sender will be sent with the certificate.
 - c. Check that the signature bearer of the CA certificate is registered in the machine.
 - d. Check that the mail address written on the machine certificate is the same as that set up on the machine.
2. Advise the customer that the sender needs to send a mail that is signed with a valid certificate because the sender certificate has expired.
3. Advise the customer that the machine may be blocking the attacks.
4. Reload the software, [GP 4](#).
5. If the fault persists, perform the [016A Network Error RAP](#).

027-716 Unsigned Mail Receipt Was Rejected RAP

027-716 Prohibited unsigned mail was detected. All the S/MIME unsigned mails (including standard mails and S/MIME encrypted mails) are discarded.

Procedure

Perform the steps that follow:

1. Reload the software, GP 4.
2. If the fault persists, perform the 016A Network Error RAP.

027-717 No MX Record at DNS RAP

027-717 An enquiry was sent to the DNS server for the MX record, but it cannot be obtained.

Procedure

Advise the customer to:

1. Check with the DNS server administrator on the existence of DNS/MX record.
2. Check that the DNS server settings of the machine are set correctly.

027-720, 027-721 Extension Server Error RAP

027-720 Server for application interface cannot be found during web service interface.

027-721 Application interface destination during web service interface - not found.

Procedure

Perform the steps that follow:

1. Advise the customer to check that the DNS server address is set correctly. Check that the PC running the application interface is registered in DNS.
2. Reload the software, [GP 4](#).
3. If the fault persists, perform the [016A Network Error RAP](#).

027-723 Extension Server Authentication Fail RAP

027-723 Application interface during web service interface - authentication failure.

Procedure

Perform the steps that follow:

1. Advise the customer to check the user name and password to be entered for creating a job flow.
2. If the fault persists, reload the software, [GP 4](#).

027-724, 725, 726 Extension Server Access Fail RAP

027-724 Application interface during web service interface - access failure.

027-725 Application interface during web service interface - job operation failure.

027-726 Application interface during web service interface - unknown job status.

Procedure

Perform the steps that follow:

1. Advise the customer to check that the application interface is working correctly.
2. If the fault persists, reload the software, [GP 4](#).

027-727 Extension Server Parameters RAP

027-727 Application interface during web service - invalid parameter.

Procedure

Perform the steps that follow:

1. Advise the customer to check the parameters for creating a job flow.
2. If the fault persists, reload the software, [GP 4](#).

027-728 Extension Server File Exceeded RAP

027-728 The number of files requested to be sent exceeded the maximum number of files that can be sent during Web service interface (this occurs when a single-page document is being stored).

Procedure

Perform the steps that follow:

1. Advise the customer to set a job so that the maximum number of files that can be sent will not be exceeded.
2. If the fault persists, reload the software, [GP 4](#).

027-735 machine SSL Configuration Error RAP

027-735 When SSL transfer was instructed, the SSL setting of the machine is disabled.

Procedure

Advise the customer to enable the SSL settings of the machine or specify HTTP as the transfer protocol.

027-736 machine Certificate Error RAP

027-736 When server certificate validation is instructed, the server certificate validation of the machine is disabled.

Procedure

Advise the customer to enable the server certificate validation settings of the machine or disable the server certificate validation setting during transfer.

027-752 Required User Entry Not Entered RAP

027-752 With the required user entry not entered, the instruction to start the job was given.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Not link the box to the instruction that requires user entry.
 - b. Set preset values for the items in the instruction requiring user entry.
2. If the fault persists, reload the software, [GP 4](#).

027-753 Job Flow Service Request Disabled RAP

027-753 Job is executed by instruction when the service is disabled.

Procedure

Perform the steps that follow:

1. Advise the customer to enable the service.
2. If the fault persists, reload the software, [GP 4](#).

027-754 Job Flow Service File Signature Mismatch RAP

027-754 File signature settings mismatch in instruction.

Procedure

Perform the steps that follow:

1. Advise the customer to check the system data setting of the XDW/PDF signature and the signature setting that is specified in the instruction. If the system data setting is different from the setting in the instruction, either change the instruction or change the system data.
2. If the fault persists, reload the software, [GP 4](#).

027-757 Extension Server SSL Fail RAP

027-757 Web application linkage during service linkage SSL access failed.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Check the server/network connection.
 - b. Check the communication route that can be reached.
 - c. Ping the DNS server.
 - d. Check if the CA certificate of the connection destination server is imported to the machine by using the browser.
 - e. Check if the machine does not go through the proxy that SSL has the function to check the communication details SSL.
 - f. Specify the machine as out of the SSL proxy target.
 - g. Check if the server supports the relevant encryption method.
 - h. Set the client certificate to the machine.
 - i. Import the client certificate to the machine and set to use as the client certificate.
 - j. Check the daylight saving time difference to see if the date/time of the machine is correct.
2. If the fault persists, reload the software, [GP 4](#).

027-758 System Credential Setting Error RAP

027-758 Login credential setting error at remote authentication LDAP.

Procedure

Advise the customer to:

1. Check whether the login name and password have been set correctly.
2. Consult with the Network Administrator to check the authentication settings at the LDAP Server.

027-759 Reference Server Connection Error RAP

027-759 Reference server connection fail at remote authentication LDAP.

Procedure

Advise the customer to:

1. Check whether the machines network settings are set correctly.
2. Consult with the network administrator to check the connection status from the machine to the reference server.

027-760 XJT Command Fail RAP

027-760 Incorrect command from XDOD client.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Check if the parameter setting specified in XDOD client is out of system specifications.
 - b. Check the XDOD client and controller versions.
2. If the fault persists, reload the software, [GP 4](#).

027-761 Web Print Timeout RAP

027-761 Although a web print job was received, the machine did not start printing on time.

Procedure

Advise the customer to:

1. If on-demand print for multiple documents was instructed using the external access function, reduce the number of documents then retry it.
2. Either extend the print on demand print duration or set it to 0.

027-762 Illegal Web Print Job Ticket RAP

027-762 Although a web print job was received, the attached job execution ticket is incorrect.

Procedure

Advise the customer to repeat the print instruction.

027-763 Auditron Cannot Verify User RAP

027-763 The machine cannot check user info with the external accounting server.

Procedure

Advise the customer to:

1. Check if the external accounting server is working correctly.
2. Connect the cable correctly.
3. Set up the machine so that it can correctly communicate with the external accounting server.

027-770 PDL Error RAP

027-770 The DFE detected a failure in PDL during job processing.

Procedure

Perform the steps that follow:

1. Advise the customer to change the job conditions then try again.
2. If the fault persists, reload the software, [GP 4](#).

027-771 DFE Disk Full RAP

027-771 The remaining HDD capacity in the DFE became less than 500Mb when printing from DFE.

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Change the job parameters, then try again.
 - b. Delete unnecessary files from the HDD in the DFE.
2. If the fault persists, reload the software, [GP 4](#).

027-772, 774, 776 SMTP Server Error RAP

027-772 The SMTP server refused the HELO command (after connection to the server).

027-774 Unavailable letters were specified as a destination address (after connection to the server).

027-776 The SMTP server refused the EHLO command (after connection to the server).

Procedure

Advise the customer to use only ASCII letters for the machine host name and destination address.

027-775 Too Many SMTP Addresses RAP

027-775 The SMTP server refused the EHLO command (after connection to the server).

Procedure

Advise the customer to reduce the number of mail addresses.

027-777 SMTP Server Non Support RAP

027-777 The SMTP server does not support SMTP-AUTH (after connection to the server).

Procedure

Advise the customer to send mail without setting SMTP-AUTH.

027-778 No Mode Specified by SMTP-AUTH RAP

027-778 The mode specified by SMTP-AUTH was not found (after connection to the server).

Procedure

Advise the customer to contact the network administrator to check what SMTP authentication method the server uses.

027-779 Authentication Failure by SMTP-AUTH RAP

027-779 Authentication fail (after connecting to the server).

Procedure

Advise the customer to check if the authentication information (user name/password) has been set correctly.

027-796 Email Not Printed RAP

027-796 Email print control through user settings.

Procedure

Perform the steps that follow:

1. Advise the customer to correct the settings, then repeat the operation.
2. If the fault persists, reload the software, [GP 4](#).

027-797 Invalid Output Destination RAP

027-797 Incorrect output destination of received mail.

Procedure

Perform the steps that follow:

1. Advise the customer to specify the output destination that can be processed by the machine, then repeat the operation.
2. If the fault persists, reload the software, [GP 4](#).

027-798 JFS Target Document Not Found RAP

027-798 The execution target document in the instruction set does not exist.

Procedure

Perform the steps that follow:

1. Advise the customer to select another document, then repeat the operation.
2. If the fault persists, reload the software, [GP 4](#).

028-987 Tray Size Mismatch RAP

028-987 ATS/APS no destination, tray can not detect paper size.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Reload the relevant paper tray.
2. Set the specified paper on the specified tray.
3. If the fault persists, perform the steps that follow:
 - a. Switch off, then switch on the machine, GP 10.
 - b. Ensure that all connectors on the motor drive PWB, PL 1.10 Item 2 and the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
 - c. Reload the software, GP 4.

029-704, 711 Invalid PACFile RAP

029-704 In WiFi mode, the contents of the proxy configuration file (PACFile) acquired by the proxy auto-detection function (WPAD) has detected that it is a fraud.

029-711 In Ethernet 1 mode, the contents of the proxy configuration file (PACFile) acquired by the proxy auto-detection function (WPAD) has detected that it is a fraud.

Procedure

Advise the customer to check the proxy configuration file that is stored in the HTTP server, it may be an invalid format, such as JavaScript or too large (greater than 64KB).

029-705, 706, 709, 712, 713, 716 PACFile Communications RAP

029-705 In WiFi mode, communication time-out at the time of the proxy configuration file (PACFile) acquisition occurs in a proxy auto-detection function (WPAD).

029-706 In WiFi mode, the proxy configuration file (PACFile) the time of acquisition in a proxy auto-detection function (WPAD), connection error has occurred.

029-709 In WiFi mode, communication time-out of the storage destination URL of the PACFile proxy auto-detection function (WPAD).

029-712 In Ethernet 1 mode, communication time-out at the time of the proxy configuration file (PACFile) acquisition occurs in a proxy auto-detection function (WPAD).

029-713 In Ethernet 1 mode, the proxy configuration file (PACFile) the time of acquisition in a proxy auto-detection function (WPAD), connection error has occurred.

029-716 In Ethernet 1 mode, communication time-out of the storage destination URL of the PACFile proxy auto-detection function (WPAD).

Procedure

Advise the customer to:

1. Check the connection of the network cable.
2. Check the default gateway configuration.
3. Verify the subnet mask setting.
4. Check the DNS server address setting.

029-707, 029-708, 714, 715 PACFile Not Found RAP

029-707 In WiFi mode, failed to find the proxy settings file (PACFile) in the proxy automatic detection function (WPAD).

029-708 In WiFi mode, incorrect format of the storage destination URL of PACFile acquired by the proxy auto- detection function (WPAD).

029-714 In Ethernet 1 mode, failed to find the proxy settings file (PACFile) in the proxy automatic detection function (WPAD).

029-715 In Ethernet 1 mode, incorrect format of the storage destination URL of PACFile acquired by the proxy auto- detection function (WPAD).

Procedure

Advise the customer to:

1. Check the URL setting of PACFile storage destination server.
2. Check the URL information PACFile set in the DHCP server is correct (if the proxy server acquisition method is WPAD).
3. If the URL is correct, check that the PACFile to the HTTP server has been registered.

029-710, 0129-717 PACFile URL Not Found RAP

029-710 In WiFi mode, failed to locate the storage destination URL of PACFile the proxy auto-detection function (WPAD).

029-717 In Ethernet 1 mode, failed to locate the storage destination URL of PACFile the proxy auto-detection function (WPAD).

Procedure

Advise the customer to check whether the URL information of the PACFile in the DHCP server is correctly registered.

029-718 EIP Print Network Timeout RAP

029-718 Timeout error has occurred during HTTP communication with server.

Procedure

Advise the customer to confirm the network connection status or after a while, repeat the operation.

029-719 EIP Print Error With Remote Server RAP

029-719 An error on the server side has occurred, during HTTP communication with server.

Procedure

A corresponding document does not exist or the server cannot be accessed. Advise the customer to confirm the server setting.

029-720 EIP Print Error With Server Permission RAP

029-720 A rejection error on the server side has occurred during HTTP communication with server.

Procedure

The file server cannot be accessed. Advise the customer to confirm the proxy server setting, the user name, the password, and the user setting for access again.

029-721, 029-722 EIP Print Fail RAP

029-721 Network-related (proxy connection) error has occurred during HTTP communication with server.

029-722 Communication failed because network-related error has occurred during HTTP communication with server.

Procedure

Advise the customer to confirm the server setting and connection status.

029-723 EIP Print SSL Connection Fail RAP

029-723 An SSL communication error has occurred during HTTP communication with server.

Procedure

An error related to SSL has occurred. The server cannot be accessed. Advise the customer to confirm the access authentication and the SSL setting.

029-724, 029-727 EIP Print Other Network Fail RAP

029-724 Other network-related error has occurred during HTTP communication with server.

029-727 Other error has occurred during the process of the EIP Print module.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 10](#).
2. If the fault persists, advise the customer to contact the System Administrator.

029-725 EIP Print Network DNS Resolve Fail RAP

029-725 A network-related (DNS name resolution) error has occurred during HTTP communication with server.

Procedure

The file server cannot be accessed. Advise the customer to confirm the DNS server setting or the file server setting again.

029-726 EIP Print Software Error RAP

029-726 A problem has occurred in the software processing and it is unable to continue with the subsequent processes.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 10](#).
2. If the fault persists, advise the customer to contact the System Administrator.

041-310 IM Logic Fail RAP

BSD-ON:BSD 3.1 PWB Communications (Controller to Motor Drive PWB)

041-310 IM software control error detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Reload the software, GP 4.
3. If the fault persists, install new components as necessary:
 - Motor drive PWB, PL 1.10 Item 2.

041-316 IH Driver IF Fail RAP

BSD-ON:BSD 10.3 Fusing Heat (1 of 2)

041-316 Interface error between the motor drive PWB and the fuser heater power supply was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Switch off the machine, then check the connection between the fuser heater power supply P/J530 and the motor drive PWB P/J441 for open circuit, short circuit, and poor contact.
3. If the fault persists, install new components as necessary:
 - Fuser heater power supply, PL 1.05 Item 3.

041-317 MCU IH IF Fail RAP

BSD-ON:[BSD 10.3 Fusing Heat \(1 of 2\)](#)

041-317 Interface error between the motor drive PWB and the fuser heater power supply was detected (at the MCU).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. Switch off the machine, then check the connection between the fuser heater power supply [P/J530](#) and the motor drive PWB [P/J441](#) for open circuit, short circuit, and poor contact.
3. If the fault persists, install new components as necessary:
 - Motor drive PWB, [PL 1.10 Item 2](#).

041-340, 341 Motor Drive PWB NVM (EEPROM) Fail RAP

BSD-ON:[BSD 3.1 PWB Communications \(Controller to Motor Drive PWB\)](#)

041-340 NVM (EEPROM) data abnormality.

041-341 NVM (EEPROM) access error.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Fault code 041-340 Only. Enter [dC131](#). Check that the NVM values that follow are set to 0:

- 740-016 Range Over Chain No
- 740-017 Range Over Link No
- 740-018 Range Over Chain Link
- 740-019 Range Over Value
- 740-020 Write in Progress Range Over Chain No
- 740-021 Write in Progress Range Over Link No

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 10](#).
2. Reload the software, [GP 4](#).
3. [dC301](#) NVM Initialization.
4. If the fault persists, install new components as necessary:
 - Halftone PWB, [PL 3.15 Item 4](#).
 - Controller PWB assembly, [PL 3.05 Item 1](#).

041-344 Motor Drive PWB F1 Fuse Fail RAP

BSD-ON:[BSD 1.9 Fuse Check](#)

BSD-ON:[BSD 1.7 DC Power Generation +24V \(2 of 2\)](#)

BSD-ON:[BSD 10.5 Fusing](#)

BSD-ON:[BSD 40.4 Toner Cartridge Cooling](#)

041-344 F1 fuse on the motor drive PWB has blown.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off the machine, then remove the rear lower cover. Measure the resistance of the motor drive PWB. **Is the resistance 5 Ohm or higher.**

Y N
Check the connection between the LVPS_CP1U [P/J510-1](#) and the motor drive PWB/[J401-1](#) for open circuit, short circuit, and poor contact.

Disconnect the following connectors from the motor drive PWB and measure the resistance between each connector terminal and the GND.

- [P/J262-1](#) fusing unit exhaust fan
- [P/J267-1](#) toner cartridge cooling fan
- [P/J272-1](#) toner cartridge exhaust fan

Is the resistance 5 Ohm or higher for all.

Y N
Perform the steps that follow:

- The connections that are in earth fault (at 5 Ohm or lower) for short circuits.
- The target components for internal short circuits.

Install a new motor drive PWB, [PL 1.10 Item 2](#).

041-345 Motor Drive PWB F2 Fuse Fail RAP

BSD-ON:[BSD 1.9 Fuse Check](#)

BSD-ON:[BSD 90.17 1st BTR Contact/retract](#)

BSD-ON:[BSD 60.3 Color Registration](#)

BSD-ON:[BSD 40.3 Marking Air Flow](#)

041-345 F2 fuse on the motor drive PWB has blown.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off the machine, then remove the Rear Lower Cover. Measure the resistance of the Motor Drive PWB [F2](#). **Is the resistance 5 Ohm or higher.**

Y N
Check the connection between the LVPS_CP1U [P/J510-2](#) and the Motor Drive PWB/[J401-2](#) for open circuit, short circuit, and poor contact.

Disconnect the following connectors from the Motor Drive PWB and measure the resistance between each connector terminal and the GND.

- [P/J240-B13](#) 1st BTR contact/retract clutch
- [P/J610-6](#) ADC shutter solenoid
- [P/J265-1](#) marking fan

Is the resistance 5 Ohm or higher for all.

Y N
Perform the steps that follow:

- The connections that are in earth fault (at 5 Ohm or lower) for short circuits.
- The target components for internal short circuits.

Install a new motor drive PWB, [PL 1.10 Item 2](#).

041-346 Motor Drive PWB F3 Fuse Fail RAP

BSD-ON:[BSD 1.9 Fuse Check](#)

BSD-ON:[BSD 1.6 DC Power Generation +24V \(1 of 2\)](#)

BSD-ON:[BSD 1.7 DC Power Generation +24V \(2 of 2\)](#)

BSD-ON:[BSD 40.3 Marking Air Flow](#)

BSD-ON:[BSD 1.10 LVPS Cooling](#)

BSD-ON:[BSD 10.8 Duplex Paper Transport](#)

BSD-ON:[BSD 10.4 Fusing Heat \(2 of 2\)](#)

BSD-ON:[BSD 10.7 Exit 1 Paper Transport](#)

041-346 F3 fuse on the motor drive PWB has blown.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off the machine, then remove the rear lower cover. Measure the resistance of the motor drive PWB [F3](#). Is the resistance 5 Ohm or higher.

Y N

Check the connection between the LVPS_CP1U [P/J510-2](#) and the motor drive PWB [P/J401-1](#) for open circuit, short circuit, and poor contact.

Disconnect the following connectors from the motor drive PWB and measure the resistance between each connector terminal and the GND.

- [P/J408-7](#) front left marking fan
- [P/J408-10](#) rear add fan
- [P/J444-1](#) LVPS fan
- [P/J408-4](#) IHPS intake fan
- [P/J423-1](#) front right marking fan
- [P/J434-A7](#) exit 1 gate solenoid

Is the resistance 5 Ohm or higher for all.

Y N

Perform the steps that follow:

- The connections that are in earth fault (at 5 Ohm or lower) for short circuits.
- The target components for internal short circuits.

Install a new motor drive PWB, [PL 1.10 Item 2](#).

041-350 Motor Drive PWB F7 Fuse Fail RAP

BSD-ON:[BSD 1.9 Fuse Check](#)

BSD-ON:[BSD 1.7 DC Power Generation +24V \(2 of 2\)](#)

BSD-ON:[BSD 10.7 Exit 1 Paper Transport](#)

BSD-ON:[BSD 10.9 Exit 2 Paper Transport \(1 of 2\)](#)

BSD-ON:[BSD 80.9 Registration](#)

041-350 F7 fuse on the motor drive PWB has blown.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off the machine, then remove the rear lower cover. Measure the resistance of the motor drive PWB [F7](#). Is the resistance 5 Ohm or higher.

Y N

Check the connection between the LVPS_CP1U [P/J510-5](#) and the motor drive PWB/[J401-3](#) for open circuit, short circuit, and poor contact.

Disconnect the following connectors from the motor drive PWB and measure the resistance between each connector terminal and the GND.

- [P/J422-7/8](#) exit 1 OCT motor
- [P/J434-A3/A4](#) exit 2 OCT motor
- [P/J431-A9](#) registration heater

Is the resistance 5 Ohm or higher for all.

Y N

Perform the steps that follow:

- The connections that are in earth fault (at 5 Ohm or lower) for short circuits.
- The target components for internal short circuits.

Install a new motor drive PWB, [PL 1.10 Item 2](#).

041-352 Motor Drive PWB F5 Fuse Fail RAP

BSD-ON:[BSD 1.9 Fuse Check](#)

BSD-ON:[BSD 1.7 DC Power Generation +24V \(2 of 2\)](#)

BSD-ON:[BSD 10.8 Duplex Paper Transport](#)

041-352 F5 fuse on the motor drive PWB has blown.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off the machine, then remove the rear lower cover. Measure the resistance of the motor drive PWB [F5](#). Is the resistance 5 Ohm or higher.

Y N

Check the connection between the LVPS_CP1U [P/J510-2](#) and the motor drive PWB/[J401-2](#) for open circuit, short circuit, and poor contact.

Disconnect the connector [P/J422](#) from the motor drive PWB and measure the resistance between [P/J422-1/2/3/4](#) and the GND. Is the resistance 5 Ohm or higher for all.

Y N

Perform the steps that follow:

- The connection between the motor drive PWB [P/J422-1/2/3/4](#) and the P/Roll latch motor [P/J225-6/5/2/1](#) for short circuit.
- The P/Roll latch motor for internal short circuit.

Install a new motor drive PWB, [PL 1.10 Item 2](#).

041-353 Motor Drive PWB F8 Fuse Fail RAP

BSD-ON:[BSD 1.9 Fuse Check](#)

BSD-ON:[BSD 1.7 DC Power Generation +24V \(2 of 2\)](#)

BSD-ON:[BSD 10.8 Duplex Paper Transport](#)

BSD-ON:[BSD 80.5 2TM Paper Transport](#)

BSD-ON:[BSD 80.6 TTM Paper Transport](#)

BSD-ON:[BSD 70.10 Tray 3 Paper Stacking \(2TM/TTM\)](#)

BSD-ON:[BSD 70.11 Tray 4 Paper Stacking \(2TM\)](#)

BSD-ON:[BSD 70.12 Tray 4 Paper Stacking \(TTM\)](#)

041-353 F8 fuse on the motor drive PWB has blown.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off the machine, then remove the rear lower cover. Measure the resistance of the motor drive PWB [F8](#). Is the resistance 5 Ohm or higher.

Y N

Check the connection between the LVPS_CP1U [P/J510-2](#) and the motor drive PWB [P/J401-2](#) for open circuit, short circuit, and poor contact.

Disconnect the following connectors from the motor drive PWB and measure the resistance between each connector terminal and the GND.

- [P452-14](#) 2TM/TTM take away motor
- [P452-1/2/3/4](#) 2TM/TTM tray 3 feed/lift motor
- [P452-5/6/7/8](#) 2TM/TTM tray 4 feed/lift motor

Is the resistance 5 Ohm or higher for all.

Y N

Perform the steps that follow:

- The connections that are in earth fault (at 5 Ohm or lower) for short circuits.
- The target components for internal short circuits.

Install a new motor drive PWB, [PL 1.10 Item 2](#).

041-354 Motor Drive PWB F9 Fuse Fail RAP

BSD-ON:[BSD 1.9 Fuse Check](#)

BSD-ON:[BSD 1.7 DC Power Generation +24V \(2 of 2\)](#)

BSD-ON:[BSD 10.8 Duplex Paper Transport](#)

BSD-ON:[BSD 3.3 PWB Communications \(Controller to Finisher\)](#)

041-354 F9 fuse on the motor drive PWB has blown.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off the machine, then remove the rear lower cover. Measure the resistance of the motor drive PWB [F9](#). Is the resistance 5 Ohm or higher.

Y **N**
Check the connection between the LVPS_CP1U [P/J510-1](#) and the motor drive PWB [P/J401-1](#) for open circuit, short circuit, and poor contact.

Disconnect the connector [P490](#) from the motor drive PWB and measure the resistance between [P490-11](#) and the GND. Is the resistance 5 Ohm or higher.

Y **N**
Perform the steps that follow:

- Check the wiring between the motor drive PWB [P490-11](#) and the finisher A2 [J8989-1](#) for short circuit.

Install a new motor drive PWB, [PL 1.10 Item 2](#).

041-355 Motor Drive PWB F10 Fuse Fail RAP

BSD-ON:[BSD 1.9 Fuse Check](#)

BSD-ON:[BSD 1.7 DC Power Generation +24V \(2 of 2\)](#)

BSD-ON:[BSD 10.8 Duplex Paper Transport](#)

BSD-ON:[BSD 3.4 PWB Communications \(Controller to HCF\)](#)

041-355 F10 fuse on the motor drive PWB has blown.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off the machine, then remove the rear lower cover. Measure the resistance of the motor drive PWB [F10](#). Is the resistance 5 Ohm or higher.

Y **N**
Check the connection between the LVPS_CP1U [P/J510-1](#) and the motor drive PWB [P/J401-1](#) for open circuit, short circuit, and poor contact.

Disconnect the connector [P/J492](#) from the motor drive PWB and measure the resistance between [P/J492-1](#) and the GND. Is the resistance 5 Ohm or higher.

Y **N**
Perform the steps that follow:

- The connection between the motor drive PWB [P/J492-1](#) and the HCF PWB [P/JF04-1](#) for short circuit.

Install a new motor drive PWB, [PL 1.10 Item 2](#).

041-356 Motor Drive PWB F11 Fuse Fail RAP

BSD-ON:[BSD 1.9 Fuse Check](#)

BSD-ON:[BSD 1.5 DC Power Generation +5V](#)

BSD-ON:[BSD 60.3 Color Registration](#)

041-356 F11 fuse on the motor drive PWB has blown.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off the machine, then remove the rear lower cover. Measure the resistance of the motor drive PWB [F11](#). **Is the resistance 5 Ohm or higher.**

Y N

Check the connection between the LVPS_CP1U [P/J509-2](#) and the motor drive PWB [P/J400-1](#) for open circuit, short circuit, and poor contact.

Disconnect the following connectors from the motor drive PWB and measure the resistance between each connector terminal and the GND.

- [P/J416-12](#) ADC sensor
- [P/J433-6](#) rear MOB sensor
- [P/J433-12](#) front MOB sensor

Is the resistance 5 Ohm or higher for all.

Y N

Perform the steps that follow:

- Check the connections that are in earth fault (at 5 Ohm or lower) for short circuits.
- Check the target components for internal short circuits.

Install a new motor drive PWB, [PL 1.10 Item 2](#).

041-358 Motor Drive PWB F13 Fuse Fail RAP

BSD-ON:[BSD 1.9 Fuse Check](#)

BSD-ON:[BSD 1.7 DC Power Generation +24V \(2 of 2\)](#)

BSD-ON:[BSD 10.4 Fusing Heat \(2 of 2\)](#)

041-358 F13 fuse on the motor drive PWB has blown.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off the machine, then remove the rear lower cover. Measure the resistance of the motor drive PWB [F13](#). **Is the resistance 5 Ohm or higher.**

Y N

Check the connection between the LVPS_CP1U [P/J510-1](#) and the motor drive PWB [P/J401-1](#) for open circuit, short circuit, and poor contact.

Disconnect the connector [P/J437](#) from the motor drive PWB and measure the resistance between [P/J437-4](#) and the GND. **Is the resistance 5 Ohm or higher.**

Y N

Perform the steps that follow:

- The connection between the motor drive PWB [P/J437-4](#) and the thermostat [P/J196-1](#) for short circuit.

Install a new motor drive PWB, [PL 1.10 Item 2](#).

041-368 MCU-SW Firmware Mismatch Fail RAP

BSD-ON:BSD 3.1 PWB Communications (Controller to Motor Drive PWB)

041-368 IM software control error detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Reload the software, GP 4.
3. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

041-369 MD Type Mismatch

BSD-ON:BSD 3.1 PWB Communications (Controller to Motor Drive PWB)

041-369 The IOT software configuration and the motor drive PWB configuration do not match.

Procedure

1. Switch off, then switch on the machine, GP 10.
2. If the problem persists, install a new motor drive PWB, PL 1.10 Item 2.

041-388 Logic Fail RAP

BSD-ON:BSD 3.1 PWB Communications (Controller to Motor Drive PWB)

041-388 When fatal abnormality was detected in marking control.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Reload the software, GP 4.
3. If the fault persists, install new components as necessary:
 - Motor drive PWB, PL 1.10 Item 2.
 - Controller PWB assembly, PL 3.05 Item 1.

041-391 Finisher Module Logic Fail RAP

BSD-ON:BSD 3.3 PWB Communications (Controller to Finisher)

041-391 A fatal error was detected in the finisher module.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Perform the steps that follow:
 - Check the wiring between the motor drive PWB, P490 and the finisher PWB for an open circuit, short circuit, or poor contact.
 - Check the wiring between the motor drive PWB at P/J405, and the halftone PWB, P550/481 for an open circuit, short circuit, or poor contact.
 - Check the connections between the controller PWB and the back plane PWB P335, and between the back plane PWB and the halftone PWB P/J451, for poor contact, damage, and foreign substances.
 - Measure the input voltage at P/J590 on the finisher PWB. Verify voltage is within the electrical specifications found in GP 17 Electrical Power Requirements.
3. If the fault persists, install new components in order as necessary:
 - Motor drive PWB, PL 1.10 Item 2.
 - Controller PWB assembly, PL 3.05 Item 1.
 - Halftone PWB, PL 3.15 Item 4.

041-603, 604 Environment Sensors Fail RAP

BSD-ON:BSD 60.4 Temperature and Humidity Sensing

041-603 The value of the temperature sensor exceeds the upper limit.

041-604 The value of the humidity sensor exceeds the upper limit.

NOTE: The control for temperature or humidity cannot be performed when fault 041-603 or 041-604 occurs, image density error (too dark, too light) might occur due to changes in the temperature or humidity.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform dC937 Procon ON/OFF Print to turn Procon ON, check the result of test pattern printed. **The test pattern printed correctly.**

Y N

Switch off the machine, GP 10, and check the connection between the temp and humidity sensor (MOB/ADC assembly) P/J151 and the motor drive PWB P/J416 for open circuit, short circuit, and poor contact.

If the fault persists, install new components as necessary:

- MOB/ADC assembly, PL 90.30 Item 4.

NOTE: After replacement of the MOB/ADC Sensor Assembly, go to the Diag mode and perform dC675 Registration Control Setup Cycle, then dC937 Procon ON Print in sequence.

- Motor drive PWB, PL 1.10 Item 2.

Run dC937 Procon ON/OFF Print continuously several number of times. **Does the fault occur.**

Y N

Perform SCP 5 Final Actions.

Install the following parts in sequence. Check if the fault still occurs after replacement of each part. Install the original part back into the machine if the new part makes no change.

- MOB/ADC assembly, PL 90.30 Item 4.

NOTE: After replacement of the MOB/ADC Sensor Assembly, go to the Diag mode and perform dC675 Registration Control Setup Cycle, then dC937 Procon ON Print in sequence.

- Motor drive PWB, PL 1.10 Item 2.

042-324, 385 K_IBT Drive Motor Fail RAP

BSD-ON:BSD 90.1 K Drum/Developer and IBT Drive Control

024-324 Drum/developer (K)/IBT motor revolution failure was detected.

042-385 Drum/developer (K)/IBT motor revolution failure at startup was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Remove the drum cartridge (K), PL 90.15 Item 2, and the developer housing assembly (K), PL 90.05 Item 12. Manually close the front cover interlock switch and the front cover open interlock switch to make the machine operable.

Switch on the machine. Enter dC330 code 042-003 to run the drum/developer (K)/IBT motor, PL 40.05 Item 14. **The drum/developer (K)/IBT motor rotates.**

Y N

Switch off the machine. Install the drum cartridge (K) and the developer housing assembly (K), and remove the IBT belt unit, Enter dC330 code 042-003 to run the drum/developer (K)/IBT motor, PL 40.05 Item 14. **The drum/developer (K)/IBT motor rotates.**

Y N

Switch off the machine, GP 10. Check the wiring for open circuits, short circuits, and poor contacts.

- Between the motor drive PWB, P/J427, and the Drum/developer (K)/IBT motor, P/J212.
- Between the motor drive PWB, P/J426, and the Drum/developer (K)/IBT motor, P/J202.

If the fault persists, install new components as necessary:

- Main drive assembly, PL 40.05 Item 7.
- Motor drive PWB, PL 1.10 Item 2.

Check the IBT belt assembly, PL 90.30 Item 1, for loading and loading due to blockage at the IBT waste toner collector auger section.

Switch off the machine, GP 10. Install the drum cartridge (K), PL 90.15 Item 2, and the developer housing assembly (K), PL 90.05 Item 12, and remove the IBT belt assembly, PL 90.30 Item 1, enter dC330 code 042-003 to run the drum/developer (K)/IBT motor, PL 40.05 Item 14. **The drum/developer (K)/IBT motor rotates.**

Y N

Check the drum cartridge (K), PL 90.15 Item 2, and the developer housing assembly (K), PL 90.05 Item 12 for loading.

Switch off the machine. Check the wiring between the drum/developer (K)/IBT motor, P/J212/P/J202, and the motor drive PWB, P/J427/P/J426 for open circuit, short circuit, and poor contact.

If the fault persists, install a new motor drive PWB, PL 1.10 Item 2.

042-344 IOT Fan Fail RAP

BSD-ON:[BSD 10.5 Fusing](#)

BSD-ON:[BSD 1.10 LVPS Cooling](#)

BSD-ON:[BSD 40.4 Toner Cartridge Cooling](#)

BSD-ON:[BSD 40.3 Marking Air Flow](#)

BSD-ON:[BSD 10.4 Fusing Heat \(2 of 2\)](#)

Abnormality was detected in the IOT fan.

042-344 Toner cartridge exhaust fan fail.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedure that follows as necessary:

- [GP 6](#) How to Check a Motor.

Enter [dC330](#) and the following code to run the fan causing the fault:

- 042-060 fusing unit exhaust fan
- 042-056 toner cartridge exhaust fan
- 042-053 LVPS fan
- 042-051 marking fan
- 042-054 front right marking fan
- 042-055 toner cartridge cooling fan
- 042-062 front left marking fan
- 042-070 IHPS intake fan

The fan runs.

Y N

Check the +24V power supply to the failed fan. **The power supply is good.**

Y N

Check the power supply circuit to the failed fan.

Check the items that follow:

- The connection between the failed fan below and the [Motor Drive PWB](#):
 - fusing unit exhaust fan, [PL 40.15 Item 2](#) ([P/J192](#) to [P/J420](#)).
 - LVPS fan, [PL 40.15 Item 4](#) ([P/J264](#) to [P/J444](#)).
 - toner cartridge exhaust fan, [PL 40.15 Item 9](#) ([P/J272](#) to [P/J442](#)).
 - marking fan, [PL 40.10 Item 15](#) ([P/J270](#) to [P/J442](#)).
 - front/right marking fan, [PL 40.10 Item 9](#) ([P/J261](#) to [P/J442](#)).
 - front/left marking fan, [PL 40.10 Item 13](#) ([P/J265](#) to [P/J442](#)).
 - toner cartridge cooling fan, [PL 40.10 Item 12](#) ([P/J267](#) to [P/J408](#)).

A

- IHPS intake fan, [PL 40.15 Item 8](#) ([P/J263](#) to [P/J408](#)).

for open circuit, short circuit or poor contact.

- Check for excessive load and resistance to rotation of the failed fan.

Install new components as necessary:

- Fuser unit exhaust fan assembly, [PL 40.15 Item 2](#).
- Toner cartridge exhaust fan, [PL 40.15 Item 9](#).
- LVPS fan, [PL 40.15 Item 4](#).
- Marking fan, [PL 40.10 Item 15](#).
- Front right marking fan, [PL 40.10 Item 9](#).
- Toner cartridge cooling fan assembly, [PL 40.10 Item 12](#).
- Front left marking fan assembly, [PL 40.10 Item 13](#).
- IHPS intake fan, [PL 40.15 Item 8](#).
- Motor drive PWB, [PL 1.10 Item 2](#).

Install new components as necessary:

- Motor drive PWB, [PL 1.10 Item 2](#).
- Controller PWB assembly, [PL 3.05 Item 1](#).

043-322, 349, 351, 352, 354, 356 IOT Fan Fail RAP

BSD-ON:BSD 10.5 Fusing

BSD-ON:BSD 1.10 LVPS Cooling

BSD-ON:BSD 40.4 Toner Cartridge Cooling

BSD-ON:BSD 40.3 Marking Air Flow

BSD-ON:BSD 10.4 Fusing Heat (2 of 2)

Abnormality was detected in the IOT fan.

043-322 LVPS fan fail.

043-349 Marking fan fault.

043-351 Front/right marking fan fail.

043-352 Toner cartridge cooling fan fail.

043-354 Front/left marking fan fail.

043-356 IHPS intake fan fail.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedure that follows as necessary:

- **GP 6** How to Check a Motor.

Enter **dC330** and the following code to run the fan causing the fault:

- 042-060 fusing unit exhaust fan
- 042-056 toner cartridge exhaust fan
- 042-053 LVPS fan
- 042-051 marking fan
- 042-054 front right marking fan
- 042-055 toner cartridge cooling fan
- 042-062 front left marking fan
- 042-070 IHPS intake fan

The fan runs.

Y N

Check the +24V power supply to the failed fan. **The power supply is good.**

Y N

Check the power supply circuit to the failed fan.

Check the items that follow:

A

- The connection between the failed fan below and the **Motor Drive PWB**:
 - fusing unit exhaust fan, **PL 40.15 Item 2** (P/J192 to P/J420).
 - LVPS fan, **PL 40.15 Item 4** (P/J264 to P/J444).
 - toner cartridge exhaust fan, **PL 40.15 Item 9** (P/J272 to P/J442).
 - marking fan, **PL 40.10 Item 15** (P/J270 to P/J442).
 - front/right marking fan, **PL 40.10 Item 9** (P/J261 to P/J442).
 - front/left marking fan, **PL 40.10 Item 13** (P/J265 to P/J442).
 - toner cartridge cooling fan, **PL 40.10 Item 12** (P/J267 to P/J408).
 - IHPS intake fan, **PL 40.15 Item 8** (P/J263 to P/J408).

for open circuit, short circuit or poor contact.

- Check for excessive load and resistance to rotation of the failed fan.

Install new components as necessary:

- Fuser unit exhaust fan assembly, **PL 40.15 Item 2**.
- Toner cartridge exhaust fan, **PL 40.15 Item 9**.
- LVPS fan, **PL 40.15 Item 4**.
- Marking fan, **PL 40.10 Item 15**.
- Front right marking fan, **PL 40.10 Item 9**.
- Toner cartridge cooling fan assembly, **PL 40.10 Item 12**.
- Front left marking fan assembly, **PL 40.10 Item 13**.
- IHPS intake fan, **PL 40.15 Item 8**.
- Motor drive PWB, **PL 1.10 Item 2**.

Install new components as necessary:

- Motor drive PWB, **PL 1.10 Item 2**.
- Controller PWB assembly, **PL 3.05 Item 1**.

042-641 NOHAD Temp Humid Sensor Fail RAP

BSD-ON: [BSD 10.5 Fusing](#)

042-341 NOHAD temperature/humidity sensor error was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedure that follows as necessary:

1. Check the NOHAD temp humidity sensor, [PL 40.10 Item 5](#) for foreign material, blockage, or damage.
2. Check the wiring between the NOHAD temp humidity sensor [P/J115](#) and the motor drive PWB [P/J435](#) for open circuit, short circuit, or poor contact.

If the fault persists, install new components as necessary:

- NOHAD temp humidity sensor, [PL 40.10 Item 5](#).
- Motor drive PWB, [PL 1.10 Item 2](#).

043-345, 346 YMC Motor Fail RAP

BSD-ON: [BSD 90.2 YMC Drum and Developer Drive Control](#)

043-345 A drum/developer YMC motor failure was detected.

043-346 A drum/developer YMC motor failure at startup was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Remove the drum cartridge (YMC) and the developer housing assembly (YMC). Close the front cover interlock switch and the front cover open interlock switch to make the machine operable.

Switch on the machine. Enter [dC330](#) code 042-008 to run the drum/developer YMC motor.

Does the drum/developer YMC motor rotate.

Y N

Switch off the machine. Check the following connections for open circuits, short circuits, and poor contacts.

- The motor drive PWB [P/J427](#) and the drum/developer (C, M, Y) motor [P/J213](#).
- The motor drive PWB [P/J426](#) and the drum/developer (C, M, Y) motor [P/J203](#).

If the fault persists, install new components as necessary:

- Main drive assembly, [PL 40.05 Item 7](#).
- Motor drive PWB, [PL 1.10 Item 2](#).

Switch off the machine. Install the drum cartridge (Y,M,C) and the developer housing assembly (Y,M,C).

Switch on the machine. Enter [dC330](#) code 042-008 to run the drum/developer YMC motor.

Does the drum/developer YMC motor rotate.

Y N

Check the drum cartridge (Y,M,C) and the developer housing assembly (Y,M,C) for loading.

Switch off the machine. Check the wiring between the motor drive PWB [P/J426](#) and the drum/developer (C, M, Y) motor [P/J203](#) for open circuit, short circuit, and poor contact.

If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

044-312, 313, 314, 389 Timeout Error RAP

044-312 IM software control error was detected (MK).

044-313 M software control error was detected (PH).

044-314 Pitch skip that has been repeated for the specified time or more was detected.

044-389 Detected abnormal output of the device during power up, cycle up, or switching to marking standby.

Procedure

1. Switch off, then switch on the machine, [GP 10](#).
2. Reload the software, [GP 4](#).

044-329 Shut Down Fail RAP

044-329 Shut down fail detected

Procedure

Switch off, then switch on the machine, [GP 10](#).

045-310 Image Ready RAP

045-310 Controller image preparation failure detected.

Procedure

1. Switch off, then switch on the machine, [GP 10](#).
2. Reload the software, [GP 4](#).
3. Install a new controller PWB assembly, [PL 3.05 Item 1](#).

045-311 Controller Communication Fail RAP

BSD-ON:[BSD 3.1 PWB Communications \(Controller to Motor Drive PWB\)](#)

045-311 Communication failure between controller PWB assembly and motor drive PWB was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. Switch off the machine. Check the connections between:
 - controller PWB assembly [P335](#) to the back plane PWB.
 - back plane PWB [P/J451](#) to halftone PWB.
 - halftone PWB [P/J551](#) to motor drive PWB [P/J410](#).
3. Install a new controller PWB assembly, [PL 3.05 Item 1](#).

045-368, 369 SBM Fail RAP

BSD-ON:BSD 1.5 DC Power Generation +5V

BSD-ON:BSD 3.1 PWB Communications (Controller to Motor Drive PWB)

045-368 Unable to establish communication at the serial bus between the controller PWB and the motor drive PWB.

045-369 A communication error of Viento has occurred at the serial bus between the controller PWB and the motor drive PWB.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Switch off, then switch on the machine, GP 10.
2. Check the voltage (+5VDC) between the motor drive PWB P/J400-1(+) and GND.
3. Check the motor drive ribbon cable is fully seated between the halftone PWB P551/J480 and the motor drive PWB P/J410 for open circuit and poor contact.
4. Check the controller PWB assembly P335 and halftone PWB J335 at the socket of the back plane PWB for poor contact, damage, and foreign substances.
5. If the fault persists, install new components as necessary:
 - Motor drive ribbon cable, PL 3.10 Item 3.
 - Controller PWB assembly, PL 3.05 Item 1.
 - Motor drive PWB, PL 1.10 Item 2.
 - Halftone PWB, PL 3.15 Item 4.

045-370, 371 LPH DL RAP

BSD-ON:BSD 60.1 LPH Y and M

BSD-ON:BSD 60.2 LPH C and K

045-370 ASIC register error during IBY initial DL confirmation. Fail has occurred simultaneously in LPHs of all colors. Possibility of common parts (board power connector, etc) error.

045-371 ASIC register error during IBY initial DL confirmation. Fail has occurred simultaneously in multiple LPHs (2 or 3 colors). Possibility of common parts (board power connector, etc) error.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Enter dC131 code 749-115 to determine which LPHs have failed. An NVM value of 1 in the bits listed below indicates a failure in the LPH of that color:
 - Bit 0: Yellow LPH.
 - Bit 1: Magenta LPH.
 - Bit 2: Cyan LPH.
 - Bit 3: Black LPH.
3. Check the LPH for debris or contamination.
4. Check the FFC cable, PL 60.05 between the LPH and the halftone PWB, PL 3.15 Item 4 or open circuit, short circuit or damage.
5. Check the power supply to the LPH, Refer to 01B +5VDC Power Fault RAP.
6. If the fault persists, install new components as necessary:
 - LPH, PL 60.05 Item 1.
 - FFC cable assembly kit, PL 60.05 Item 9.
 - Halftone PWB, PL 3.15 Item 4.
 - Controller PWB assembly, PL 3.05 Item 1.

045-377 SBM Slave Communication Fail RAP

BSD-ON:BSD 3.1 PWB Communications (Controller to Motor Drive PWB)

045-377 A communication error has occurred at the serial bus between the controller PWB and the motor drive PWB.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Switch off, then switch on the machine, GP 10.
2. Check the motor drive ribbon cable is fully seated between the halftone PWB P551/J480 and the motor drive PWB P/J410 for open circuit and poor contact.
3. Check the controller PWB assembly P335 and halftone PWB J335 at the socket of the back plane PWB for poor contact, damage, and foreign substances.
4. If the fault persists, install new components as necessary:
 - Motor drive ribbon cable, PL 3.10 Item 3.
 - Halftone PWB, PL 3.15 Item 4.
 - Motor drive PWB, PL 1.10 Item 2.
 - Controller PWB assembly, PL 3.05 Item 1.

045-382, 398 Drive PWB NVM (EEPROM) Verify Fail RAP

BSD-ON:BSD 3.1 PWB Communications (Controller to Motor Drive PWB)

045-382 NVM (EEPROM) write verify error.

041-398 NVM (EEPROM) read verify error.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Reload the software, GP 4.
3. Install new components as necessary:
 - Motor drive PWB, PL 1.10 Item 2.
 - Controller PWB assembly, PL 3.05 Item 1.

047-211 Exit 1 OCT Home Fail

BSD-ON:[BSD 10.7 Exit 1 Paper Transport](#)

047-211 The exit 1 OCT home position sensor did not turn ON within the specified time after the exit 1 OCT motor turned on.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch on the machine. Enter **dC330** code 077-109 to activate the exit 1 OCT home position sensor. **Does the exit 1 OCT home position sensor activate.**

Y N

- Switch off the machine, then check the wiring of the exit 1 OCT home position sensor for open circuit, contamination, and improper installation.
- Install a new, exit 1 sensor guide assembly, [PL 10.10 Item 12](#).

Switch on the machine. Enter **dC330** code 077-042 (front) 077-043 (rear). Run the exit 1 OCT motor to verify operation. **Does the exit 1 OCT motor rotate.**

Y N

Switch off the machine, then check the exit 1 OCT motor for gear blockage or damaged gear.

Install a new motor drive PWB, [PL 1.10 Item 2](#).

Install a new motor drive PWB, [PL 1.10 Item 2](#).

047-212 Exit 2 OCT Home Fail

BSD-ON:[BSD 10.9 Exit 2 Paper Transport \(1 of 2\)](#)

The Exit 2 OCT Home Position Sensor did not turn ON within the specified time after the Exit 2 OCT Motor On.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch on the machine. Enter **dC330** code 077-110 to activate the exit 2 OCT home position sensor. **Does the exit 2 OCT home position sensor activate.**

Y N

- Switch off the machine, then check the wiring of the exit 2 transport assembly for open circuit, contamination, and improper installation.
- Install a new, exit 2 transport assembly, [PL 10.15 Item 2](#).

Switch on the machine. Enter **dC330** code 077-047 (front) 077-048 (rear). Run the exit 2 OCT motor to verify operation. **Does the exit 2 OCT motor rotate.**

Y N

Switch off the machine, then check the exit 2 transport assembly for gear blockage or damaged gear.

Install a new motor drive PWB, [PL 1.10 Item 2](#).

Install a new motor drive PWB, [PL 1.10 Item 2](#).

047-213, 216 Finisher Communication RAP

BSD-ON:BSD 3.3 PWB Communications (Controller to Finisher)

047-213 The connected finisher is of an incorrect type.

047-216 Reply from the finisher was determined as a communication error.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Check the connection between, the motor drive PWB P490, and the finisher PWB J8989, for open circuit, short circuit or poor contact.
3. Install new components as necessary:
 - Finisher PWB, PL 13.45 Item 2.
 - Motor drive PWB, PL 1.10 Item 3.

047-217 HCF Communication RAP

BSD-ON:BSD 3.4 PWB Communications (Controller to HCF)

047-217 Reply from the HCF was determined as a communication error.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Check the connection between the motor drive PWB, PL 1.10 Item 3 and the HCF PWB, PL 70.95 Item 9 for open circuit, short circuit or poor contact.
3. Install new components as necessary:
 - HCF PWB, PL 70.95 Item 9.
 - Drive PWB, PL 1.10 Item 3.

047-320 All Destination Tray Broken RAP

047-320 All trays connected to the IOT have become unusable.

Procedure

Check the fault history, [dC122](#) for any tray faults. Perform the relevant procedures.

058-322, 323 Heat Belt STS Abnormal Temperature Rise Fail RAP

BSD-ON: [BSD 10.4 Fusing Heat \(2 of 2\)](#)

058-322 The temperature of the IH center thermistor rises faster than the specified speed.

058-323 The temperature of the IH rear thermistor rises faster than the specified speed.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

Do not touch the fuser while it is hot.

1. Switch off, then switch on the machine, [GP 10](#).
2. If the fault persists, install a new fuser, [PL 10.10 Item 14](#).

NOTE: After replacement of the fuser, check the value of NVM [744-001] (Error Detection History). When the value is set to [6] (Heating error (IH Center Thermistor), clear it to [0].

058-324 Fusing Unit Non-Wearing Fail RAP

058-324 The fuser is not installed (at interlock close).

Procedure

Install the fuser into the machine.

058-325 Fusing Unit Wind Around Belt Fail RAP

058-325 Wound up, stuck paper was detected at the fuser belt.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 10**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

Do not touch the fuser while it is hot.

1. Remove the paper.
2. Switch off, then switch on the machine, **GP 10**.
3. If the fault persists, install a new fuser, **PL 10.05 Item 14**.

058-327 Plug Drawn Fail RAP

058-327 Power cord disconnected was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 10**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Securely connect the power cord.

058-328 Fusing Unit E2PROM I2C Master Communication Fail RAP

BSD-ON:[BSD 10.6 Fuser Detection](#)

058-328 The communication control ASIC with the fuser E2PROM had a fault.

Procedure

Refer to [010-619](#) Fusing Unit E2PROM I2C Master Communication Info RAP.

058-329 Fusing Unit E2PROM Data Mismatch RAP

BSD-ON:[BSD 10.6 Fuser Detection](#)

058-329 Incorrect authentication area data was detected in fuser E2PROM.

Procedure

Refer to [010-620](#) Fusing Unit E2PROM Data Mismatch Info RAP.

058-330 Fusing Unit E2PROM Not In Position RAP

BSD-ON:[BSD 10.6 Fuser Detection](#)

058-330 The fuser E2PROM is not installed at the predefined position (E2PROM disconnected), or a communication error with the E2PROM has occurred.

Procedure

Refer to [010-621](#) Fusing Unit E2PROM Not In Position Info RAP.

058-331 Fusing Unit E2PROM Data Broken RAP

BSD-ON:[BSD 10.6 Fuser Detection](#)

058-331 The system detected that the data written to the fuser E2PROM and the data read from the fuser E2PROM do not match.

Procedure

Refer to [010-620](#) Fusing Unit E2PROM Data Mismatch Info RAP.

058-332 IH Driver Load Abnormality Detection Fail RAP

BSD-ON:[BSD 10.3 Fusing Heat \(1 of 2\)](#)

058-332 Power output from IH driver to IH fuser exceeded 1.5KVA during a certain period (status code:0x0).

Procedure

Refer to [010-625](#) IH Driver Load Abnormality Detection Warning RAP.

058-333 Heat Belt STS Center Warm Up Time (No Temperature Rise) Fail Rap

BSD-ON:[BSD 10.4 Fusing Heat \(2 of 2\)](#)

058-333 The temperature of IH center thermistor does not reach the warm up time fail detection temperature or higher within the specified time.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

Do not touch the fuser while it is hot.

1. Switch off, then switch on the machine, [GP 10](#).
2. If the fault persists, install new components as necessary:
 - Fuser heater coil, [PL 10.05 Item 15](#).
 - Fuser, [PL 10.05 Item 14](#).

NOTE: After replacement, check the value of NVM [744-001] (Error Detection History). When the value is [10] (IH Rear Thermistor Warmup Time (No Temperature Rise) Fail), change value to [0].

058-334 Heat Belt STS Rear Warm Up Time (No Temperature Rise) Fail RAP

BSD-ON: [BSD 10.4 Fusing Heat \(2 of 2\)](#)

058-334 The temperature of IH rear thermistor does not reach the warm up time fail detection temperature or higher within the specified time.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

Do not touch the fuser while it is hot.

1. Switch off, then switch on the machine, [GP 10](#).
2. If the fault persists, install new components as necessary:
 - Fuser heater coil, [PL 10.05 Item 15](#).
 - Fuser, [PL 10.05 Item 14](#).

NOTE: After replacement, check the value of NVM [744-001] (Error Detection History). When the value is to [10] (IH Rear Thermistor Warmup Time (No Temperature Rise) Fail), change value to [0].

058-335 Fusing Paper Quality Operation Mistake Fail RAP

058-335 Paper whose paper type (plain or lightweight) is different from the setting (Heavy-weight) has passed.

Procedure

Check the UI and set to the correct paper tray or add the correct paper for the paper size required for the print job.

058-337 Fusing Paper Quality Operation Mistake Fail RAP

058-337 Paper whose paper type is different from the setting has passed.

Procedure

Check the UI and set to the correct paper tray or add the correct paper for the paper size required for the print job.

060-341 to 060-356 System Fail RAP

BSD-ON:[BSD 60.1 LPH Y and M](#)

BSD-ON:[BSD 60.2 LPH C and K](#)

060-341 Large pixel count error between the video output and yellow LPH. Image abnormality may occur.

060-342 Large pixel count error between the video output and magenta LPH. Image abnormality may occur.

060-343 Large pixel count error between the video output and cyan LPH. Image abnormality may occur.

060-344 Large pixel count error between the video output and black LPH. Image abnormality may occur.

060-345 Communication error between ESS and yellow LPH. Possibly caused by an external noise.

060-346 Communication error between ESS and magenta LPH. Possibly caused by an external noise.

060-347 Communication error between ESS and cyan LPH. Possibly caused by an external noise.

060-348 Communication error between ESS and black LPH. Possibly caused by an external noise.

060-349 Yellow LPH reset due to a noise was detected. Possibly caused by an external noise.

060-350 Magenta LPH reset due to a noise was detected. Possibly caused by an external noise.

060-351 Cyan LPH reset due to a noise was detected. Possibly caused by an external noise.

060-352 Black LPH reset due to a noise was detected. Possibly caused by an external noise.

060-353 Large pixel count error between the video output and yellow LPH. Image abnormality may occur.

060-354 Large pixel count error between the video output and magenta LPH. Image abnormality may occur.

060-355 Large pixel count error between the video output and cyan LPH. Image abnormality may occur.

060-356 Large pixel count error between the video output and black LPH. Image abnormality may occur.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Switch off, then switch on the machine, [GP 10](#).
2. Check the FFC ribbon cable connectors on each LPH and on the halftone PWB for an open circuit, short circuit, or loose connection.
3. Check the connection of the controller PWB at the back plane PWB [J335](#) and the halftone PWB at the back plane PWB [J451](#) for an open circuit, short circuit, or loose connection.
4. If the fault persists, install new components as necessary:
 - The failed LPH, [PL 60.05](#).
 - FFC cable assembly kit, [PL 60.05 Item 9](#).
 - Halftone PWB, [PL 3.15 Item 4](#).
 - Controller PWB assembly, [PL 3.05 Item 1](#).

060-357, 358, 359, 360 CONTIF Error Fail RAP

BSD-ON: [BSD 60.1 LPH Y and M](#)

BSD-ON: [BSD 60.2 LPH C and K](#)

060-357 CONTIF Error Fail #1.

060-358 CONTIF Error Fail #2.

060-359 CONTIF Error Fail #3.

060-360 CONTIF Error Fail #4.

- Irregular output of Video Data from the Controller was detected.
- The output timing of the Valid signal from the Controller is abnormal.

Procedure

Enter [dC131](#) NVM/Read/Write to verify the correct NVM value for the following:

- NVM [757-003] (CONTIF ERROR FLAG #1)
- NVM [757-004] (CONTIF ERROR FLAG #2)
- NVM [757-005] (CONTIF ERROR FLAG #3)
- NVM [757-006] (CONTIF ERROR FLAG #4)

Is the value 4 or higher.

Y N

Switch off the machine, [GP 10](#). Check the connector on each side of the back plane PWB where the controller PWB assembly [J335](#) and halftone PWB [J451](#) connect for poor contact, damage, and foreign substances. If no problem is found, switch off, then switch on the machine, [GP 10](#) several times to attempt resetting the fault. **Does the fault persist.**

Y N

Install a new, controller PWB assembly, [PL 3.05 Item 1](#).

The fault persists, install new components as necessary:

- Controller PWB assembly, [PL 3.05 Item 1](#).
- Halftone PWB, [PL 3.15 Item 4](#).
- Back plane PWB, [PL 3.15 Item 2](#).

Update the software [GP 4](#).

060-361 SPI Error

BSD-ON: [BSD 60.1 LPH Y and M](#)

BSD-ON: [BSD 60.2 LPH C and K](#)

060-361 A connection failure, external electrical noise, or failed controller PWB assembly.

- Broken access in units of bytes was detected during CS negate.
- As a result of a Read/Write command, the data area not in units of 16 bits was detected.

Procedure

Switch off the machine, [GP 10](#). Check the connector on each side of the back plane PWB where the controller PWB assembly [J335](#) and halftone PWB [J451](#) connect for poor contact, damage, and foreign substances. If no problem is found, switch off, then switch on the machine, [GP 10](#) several times to attempt resetting the fault. **Does the 061-310 (Video ASIC Fail) occur.**

Y N

Check for any noise source around the machine or any abnormal electrical discharge in the machine.

The fault persists, install new components as necessary:

- Controller PWB assembly, [PL 3.05 Item 1](#).
- Halftone PWB, [PL 3.15 Item 4](#).
- Back plane PWB, [PL 3.15 Item 2](#).

Update the software [GP 4](#).

061-310 Video ASIC Fail

BSD-ON:BSD 60.1 LPH Y and M

BSD-ON:BSD 60.2 LPH C and K

061-310 Unable to Read/Write to the Video ASIC.

Procedure

1. Switch off, then switch on the machine, GP 10.
2. Switch off the machine, GP 10. Check the connector on each side of the back plane PWB where the controller PWB assembly J335 and halftone PWB J451 connect for poor contact, damage, and foreign substances.
3. If the fault persists, install a new halftone PWB, PL 3.15 Item 4.

061-354, 355, 356, 357, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 390, 391, 392, 393 LPH System Fail RAP

BSD-ON:BSD 60.1 LPH Y and M

BSD-ON:BSD 60.2 LPH C and K

061-354 ASIC register error in IBY initial DL check. It may be an error in the yellow LPH (ASIC or memory). It may also be an ASIC malfunction due to poor power supply or a communication error due to poor connection with the ESS.

061-355 ASIC register error in IBY initial DL check. It may be an error in the magenta LPH (ASIC or memory). It may also be an ASIC malfunction due to poor power supply or a communication error due to poor connection with the ESS.

061-356 ASIC register error in IBY initial DL check. It may be an error in the cyan LPH (ASIC or memory). It may also be an ASIC malfunction due to poor power supply or a communication error due to poor connection with the ESS.

061-357 ASIC register error in IBY initial DL check. It may be an error in the black LPH (ASIC or memory). It may also be an ASIC malfunction due to poor power supply or a communication error due to poor connection with the ESS.

061-362 Communication error between ESS and yellow LPH (data read error from LPH). It may occur due to external noise, poor connection of FFC, poor power supply, etc.

061-363 Communication error between ESS and magenta LPH (data read error from LPH). It may occur due to external noise, poor connection of FFC, poor power supply, etc.

061-364 Communication error between ESS and cyan LPH (data read error from LPH). It may occur due to external noise, poor connection of FFC, poor power supply, etc.

061-365 Communication error between ESS and black LPH (data read error from LPH). It may occur due to external noise, poor connection of FFC, poor power supply, etc.

061-366 Communication error between ESS and yellow LPH (data write error to LPH). It may occur due to an external noise, poor connection of FFC, poor power supply, etc.

061-367 Communication error between ESS and magenta LPH (data write error to LPH). It may occur due to an external noise, poor connection of FFC, poor power supply, etc.

061-368 Communication error between ESS and cyan LPH (data write error to LPH). It may occur due to an external noise, poor connection of FFC, poor power supply, etc.

061-369 Communication error between ESS and black LPH (data write error to LPH). It may occur due to an external noise, poor connection of FFC, poor power supply, etc.

061-370 Communication error between ESS and yellow LPH (error in the communication IC or cable). It may occur due to an external noise, poor connection of FFC, poor power supply, etc.

061-371 Communication error between ESS and magenta LPH (error in the communication IC or cable). It may occur due to an external noise, poor connection of FFC, poor power supply, etc.

061-372 Communication error between ESS and cyan LPH (error in the communication IC or cable). It may occur due to an external noise, poor connection of FFC, poor power supply, etc.

061-373 Communication error between ESS and black LPH (error in the communication IC or cable). It may occur due to an external noise, poor connection of FFC, poor power supply, etc.

061-391 Large pixel count error between the video output and magenta LPH. Image abnormality may occur.

061-392 Large pixel count error between the video output and cyan LPH. Image abnormality may occur.

061-393 Large pixel count error between the video output and black LPH. Image abnormality may occur.

Procedure

Perform the [060-341 to 060-356 LPH Fault RAP](#).

061-358, 359, 360, 361 LPH Configuration RAP

BSD-ON:[BSD 60.1 LPH Y and M](#)

BSD-ON:[BSD 60.2 LPH C and K](#)

061-358 The model number of the installed yellow LPH does not match. It may also be a memory error in the LPH.

061-359 The model number of the installed magenta LPH does not match. It may also be a memory error in the LPH.

061-360 The model number of the installed cyan LPH does not match. It may also be a memory error in the LPH.

061-361 The model number of the installed black LPH does not match. It may also be a memory error in the LPH.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Switch off, then switch on the machine, [GP 10](#).
2. Verify the correct LPH for the machine is installed and is installed correctly. Install the correct LPH or correctly install the LPH in the machine.
3. Check each FFC cable at the halftone PWB for poor connection, damage, or excessive wear.
4. If the fault persists, install new components as necessary:
 - LPH assembly (K), [PL 60.05 Item 1](#).
 - LPH assembly (C), [PL 60.05 Item 2](#).
 - LPH assembly (M), [PL 60.05 Item 3](#).
 - LPH assembly (Y), [PL 60.05 Item 4](#).

071-100 Jam In Tray 1 RAP

BSD-ON:BSD 70.8 Tray 1 Paper Stacking

BSD-ON:BSD 80.3 Tray 1 and Bypass Tray Paper Transport

071-100 Paper does not actuate the tray 1 feed out sensor within the specified time after tray 1 feed start.

Initial Actions

- Check the condition of the paper in tray 1. Refer to [GP 15 Paper and Media Size Specifications](#).
- Check that the tray 1 paper guides are set correctly.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Check for obstructions in the paper path.
2. Check the tray 1 feed roll, nudger roll and retard roll, [PL 80.10](#) for foreign substances or wear. Clean or install new components as necessary.
3. Check the registration roll and takeaway roll 2, [PL 80.90 Item 7](#) for foreign substances or wear. Clean or install new components as necessary.
4. Enter [dC330](#), code 071-105. Check the tray 1 pre-feed sensor, [PL 80.10 Item 4](#).
5. Enter [dC330](#), code 071-002. Check the tray 1 feed/lift up motor, [PL 80.10 Item 9](#).
6. Check the drive gears, [PL 80.10 Item 10](#) for wear or damage. Install new components as necessary.
7. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

071-105 Jam In The Device RAP

BSD-ON:BSD 70.8 Tray 1 Paper Stacking

BSD-ON:BSD 80.9 Registration

071-105 The registration sensor did not actuate within the specified time after the registration clutch initialized during paper feed from tray 1.

Initial Actions

Check the condition of the paper in tray 1. Refer to [GP 15 Paper and Media Size Specifications](#)

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Check for obstructions in the paper path.
2. Enter [dC330](#), code 077-103. Check the registration sensor, [PL 80.80 Item 1](#).
3. Enter [dC330](#), code 077-050. Check the takeaway motor, [PL 80.10 Item 4](#).
4. Enter [dC330](#), code 071-001. Check the tray 1 feed/lift up motor, [PL 40.10 Item 10](#).
5. Check the tray 1 feed roll, nudger roll and retard roll, [PL 80.10](#) for foreign substances or wear. Clean or install new components as necessary.
6. Check the helical gear, [PL 40.05 Item 4](#) for wear or damage.
7. Check the tray1 feed out chute, [PL 80.05 Item 3](#) and feedhead chute assembly, [PL 80.05 Item 4](#) for proper installation.
8. Check the drive assembly, [PL 40.10 Item 1](#) for wear or damage.
9. If the fault persists, install new components as necessary:
 - Motor drive PWB, [PL 1.10 Item 2](#).
 - Controller PWB assembly, [PL 3.05 Item 1](#).

071-210 Tray 1 Lift Up Fail RAP

BSD-ON:[BSD 70.8 Tray 1 Paper Stacking](#)

071-210 Tray 1 lift NG has occurred three consecutive times.

Initial Actions

- Check for obstructions behind the tray.
- Ensure that the tray is loaded correctly.
- Ensure the tray is pushed fully home.
- Check the drive system between the bottom plate and the tray 1 feed/lift motor for operation failure.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Enter [dC330](#), code 071-102. Check the tray 1 level sensor, [PL 80.10 Item 6](#).
2. Enter [dC330](#), code 071-002. Check the tray 1 feed/lift up motor, [PL 80.10 Item 4](#).
3. Check the drive gears, [PL 80.10](#) for wear or damage.
4. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

071-212 Tray 1 Paper Size Sensor Fault RAP

BSD-ON:[BSD 70.1 Tray 1 Paper Size Sensing](#)

071-212 Abnormal output AD value from tray 1 paper size sensor was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Load the correct paper in tray 1.
2. Ensure that the customer is programming the job correctly.
3. Remove tray 1. Check underneath the tray for damage to the link mechanism. Also check the actuator at the rear of tray 1. If necessary, install a new tray assembly, [PL 70.10 Item 1](#).
4. Enter [dC140](#) Analog Monitor, code 071-200. Check the tray 1 size sensor, [PL 70.05 Item 6](#).
5. Check the wiring between the tray 1 size sensor and [P/J417](#) on the motor drive PWB.
6. Reload the software, [GP 4](#).
7. If the fault persists, install new components as necessary:
 - Tray 1 size sensor, [PL 70.05 Item 3](#).
 - Motor drive PWB, [PL 1.10 Item 2](#).

072-100 Tray2 Pre-Feed Sensor 1 On Jam RAP

BSD-ON:BSD 80.1 Tray 1 and 2 Paper Pre-feeding

072-100 The tray 2 pre-feed sensor did not turn on within the specified time after the paper feed from tray 2 has started.

Initial Actions

- Check for obstructions behind the tray.
- Ensure that the tray is loaded correctly.
- Ensure the tray is pushed fully home.
- Check the drive system between the bottom plate and the tray 2 feed/lift motor for operation failure.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- GP 6 How to Check a Motor.
- GP 7 How to Check a Sensor.

Perform the steps that follow:

1. Enter dC330 code 072-105 to check the tray 2 pre-feed sensor, PL 80.15 Item 4 for operation failure.
2. Enter dC330 code 072-001(Feed) tray 2 feed/lift motor, PL 80.15 Item 8 for operation failure.
3. Check the tray 2 feed roll, nudger roll and retard roll, PL 80.15 for foreign substances or wear. Clean or install new components as necessary.
4. Check the drive gears PL 80.15 for wear and damage. Clean or install new components as necessary.
5. Check the pad, PL 70.15 Item 14 for an proper installation and correct if necessary.
6. If the fault persists, install a new motor drive PWB, PL 1.10 Item 2.

072-105 Registration Sensor Jam (Tray 2) RAP

BSD-ON:BSD 80.9 Registration

072-105 The registration sensor did not actuate within the specified time after the registration clutch initialized during paper feed from tray 2.

Initial Actions

Check the condition of the paper in tray 2. Refer to GP 15 Paper and Media Size Specifications

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- GP 6 How to Check a Motor.
- GP 7 How to Check a Sensor.

Perform the steps that follow:

1. Check for obstructions in the paper path.
2. Check the tray 2 feed roll, nudger roll and retard roll, PL 80.15 for foreign substances or wear. Clean or install new components as necessary.
3. Enter dC330, code 077-104. Actuate the registration sensor, PL 80.80 Item 2.
4. Enter dC330, code 077-050. Run takeaway motor 1, PL 80.95 Item 5.
5. Enter dC330, code 077-051. Run the takeaway motor 2, PL 80.95 Item 17.
6. Enter dC330, code 072-001. Run the tray 2 feed/lift motor, PL 80.15 Item 8.
7. Check the gear, PL 80.10 Item 10 for wear or damage. Install a new gear as necessary.
8. Check the drive assembly, PL 40.10 Item 1 for wear or damage.
9. Check the registration transport assembly, PL 80.90 Item 1 for improper installation.
10. If the fault persists, install a new motor drive PWB, PL 1.10 Item 2.

072-210 Tray2 Lift UP Fail RAP

BSD-ON:[BSD 70.9 Tray 2 Paper Stacking](#)

071-210 Tray 2 lift NG has occurred three consecutive times.

Initial Actions

- Check for obstructions behind the tray.
- Ensure that the tray is loaded correctly.
- Ensure the tray is pushed fully home.
- Check the drive system between the bottom plate and the tray 2 feed/lift motor for operation failure.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Enter [dC330](#), code 072-102. Check the tray 2 no paper sensor/tray 2 level sensor, [PL 80.15 Item 7](#).
2. Enter [dC330](#), code 072-002. Check the tray 2 feed/lift motor, [PL 80.15 Item 8](#).
3. Check the gear, [PL 80.15 Item 9](#) for wear or damage. Install a new gear as necessary.
4. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

072-212 Tray 2 Paper Size Sensor Fault RAP

BSD-ON:[BSD 70.2 Tray 2 Paper Size Sensing](#)

072-212 Abnormal output AD value from tray 2 paper size sensor was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Load the correct paper in tray 2.
2. Ensure that the customer is programming the job correctly.
3. Remove tray 2. Check underneath the tray for damage to the link mechanism. Also check the actuator at the rear of tray 2. If necessary, install a new tray assembly, [PL 70.05 Item 2](#).
4. Enter [dC140](#) Analog Monitor, code 072-200. Check the tray 2 paper size sensor:
5. Check the wiring between the tray 2 paper size sensor P/J175 and the motor drive PWB [P/J417](#) for open circuit, short circuit, or poor contact.
6. Reload the software, [GP 4](#).
7. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

073-100 Jam In Tray 3 (2TM/TTM)

BSD-ON:[BSD 80.2 Tray 3 and 4 Paper Pre-feeding](#)

073-100 The tray 3 pre-feed sensor did not turn on within the specified time after the paper feed from tray 3 has started.

Initial Actions

- Check for obstructions behind the tray.
- Ensure that the tray is loaded correctly.
- Ensure the tray is pushed fully home.
- Check the drive system between the bottom plate and the tray 3 feed/lift motor for operation failure.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Enter [dC330](#) code 073-103 to actuate the tray 3 pre-feed sensor:
 - [2TM PL 80.35 Item 10.](#)
 - [TTM PL 80.50 Item 2.](#)
2. Enter [dC330](#) code 073-001 (Feed). Run the tray 3 feed/lift motor:
 - [2TM PL 80.35 Item 11.](#)
 - [TTM PL 80.50 Item 9.](#)
3. Check the tray 3 feed roll, nudger roll and retard roll for foreign substances or wear. Clean or install new components as necessary:
 - [2TM PL 80.35.](#)
 - [TTM PL 80.50.](#)
4. Check the gear for wear and damage. Clean or install new components as necessary:
 - [2TM PL 80.35 Item 12.](#)
 - [TTM PL 80.50 Item 10.](#)
5. Check the pads for an proper installation and correct if necessary:
 - [2TM PL 70.25.](#)
 - [TTM PL 70.40 Item 5.](#)
6. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2.](#)

073-101, 900 Jam In The Device RAP

BSD-ON:[BSD 70.10 Tray 3 Paper Stacking \(2TM/TTM\)](#)

BSD-ON:[BSD 70.14 IOT and 2TM Paper Path and Drive Transmission](#)

BSD-ON:[BSD 70.15 IOT and TTM Paper Path and Drive Transmission](#)

BSD-ON:[BSD 80.5 2TM Paper Transport](#)

BSD-ON:[BSD 80.6 TTM Paper Transport](#)

BSD-ON:[BSD 80.8 HCF Paper Transportation](#)

073-101 Paper does not actuate the tray 3 feed out sensor within the specified time after tray 3 feed start.

073-900 The tray 3 feed out sensor detected remaining paper.

Initial Actions

Check the condition of the paper in tray 3. Refer to [GP 15](#) Paper and Media Size Specifications

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Check for obstructions in the paper path.
2. Check the tray 3 feed roll, nudger roll and retard roll, [PL 80.25](#) for foreign substances or wear. Clean or install new components as necessary.
 - [2TM PL 80.30.](#)
 - [TTM PL 80.50.](#)
3. Check the takeaway roll assembly for foreign substances or wear. Clean or install new components as necessary.
 - [2TM PL 80.25 Item 1.](#)
 - [TTM PL 80.40 Item 10.](#)
4. Enter [dC330](#), code 073-103. Actuate the tray 3 feed out sensor, [PL 80.25 Item 4.](#)
5. Enter [dC330](#), code 073-001. Run the tray 3 feed/lift motor:
 - [2TM PL 80.35 Item 11.](#)
 - [TTM PL 80.50 Item 9.](#)
6. Enter [dC330](#), code 077-033. Run the takeaway motor:
 - [2TM PL 80.30 Item 1.](#)
 - [TTM PL 80.45 Item 3.](#)

7. Check the gear for wear or damage. Install a new gear as necessary:
 - 2TM [PL 80.35 Item 12](#).
 - TTM [PL 80.50 Item 10](#).
8. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

073-105 Jam In The Device RAP

BSD-ON:[BSD 80.9 Registration](#)

073-105 The registration sensor did not actuate within the specified time after the registration clutch initialized during paper feed from tray 3.

Initial Actions

Check the condition of the paper in tray 3. Refer to [GP 15 Paper and Media Size Specifications](#)

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Check for obstructions in the paper path.
2. Check the tray 3 feed roll, nudger roll and retard roll, [PL 80.35](#) for foreign substances or wear. Clean or install new components as necessary.
3. Enter [dC330](#), code 077-104. Actuate the registration sensor, [PL 80.80 Item 2](#).
4. Enter [dC330](#), code 077-050. Run the takeaway motor 1, [PL 80.95 Item 5](#).
5. Enter [dC330](#), code 077-051. Run the takeaway motor 2, [PL 80.95 Item 17](#).
6. Enter [dC330](#), code 072-001. Run the tray 3 feed/lift motor:
 - [2TM PL 80.35 Item 11](#).
 - [TTM PL 80.50 Item 9](#).
7. Check the tray 3 gear for wear or damage, install a new gear as necessary:
 - [2TM PL 80.35 Item 12](#).
 - [TTM PL 80.50 Item 10](#).
8. Check the drive assembly, [PL 40.10 Item 1](#) for wear or damage.
9. Check the registration transport assembly, [PL 80.90 Item 1](#) for improper installation.
10. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

073-108 Tray 3 Bypass Feed Out Sensor Jam RAP

BSD-ON:BSD 80.3 Tray 1 and Bypass Tray Paper Transport

073-108 Paper does not actuate the bypass feed out sensor within the specified time after tray 3 feed start.

Initial Actions

Check the condition of the paper in tray 3. Refer to [GP 15](#) Paper and Media Size Specifications

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Check the left hand door is fully closed and latched.
2. Check for obstructions in the paper path.
3. Check the following components for foreign substances or wear. Clean or install new components as necessary.
 - 2TM takeaway roll assembly, [PL 80.25 Item 1](#).
 - TTM takeaway roll assembly, [PL 80.40 Item 10](#).
 - 2TM feed roll, nudger roll and retard roll, [PL 80.35](#).
 - TTM feed roll, nudger roll and retard roll, [PL 80.50](#).
 - Bypass tray roll, [PL 80.120 Item 6](#).
4. Enter [dC330](#), code 077-104. Actuate the bypass tray feed out sensor, [PL 80.115 Item 1](#).
5. Enter [dC330](#), code 077-050. Run takeaway motor 1, [PL 80.95 Item 5](#).
6. Enter [dC330](#), code 077-051. Run the takeaway motor 2, [PL 80.95 Item 17](#).
7. Enter [dC330](#), code 077-035. Run the takeaway motor:
 - 2TM [PL 80.30 Item 1](#).
 - TTM [PL 80.45 Item 3](#).
8. Enter [dC330](#), code 072-001. Run the tray 3 feed/lift motor:
 - 2TM [PL 80.35 Item 11](#).
 - TTM [PL 80.50 Item 9](#).
9. Check the tray 3 gear for wear or damage, install a new gear as necessary:
 - 2TM [PL 80.35 Item 12](#).
 - TTM [PL 80.50 Item 10](#).
10. Check the registration transport assembly, [PL 80.90 Item 1](#) for improper installation.
11. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

073-210 Tray 3 Lift Up Fail RAP

BSD-ON:BSD 70.10 Tray 3 Paper Stacking (2TM/TTM)

073-210 Tray 3 lift NG has occurred three consecutive times.

Initial Actions

- Check for obstructions behind the tray.
- Ensure that the tray is loaded correctly.
- Ensure the tray is pushed fully home.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Enter [dC330](#), code 073-102. Actuate the tray 3 no paper sensor:
 - 2TM [PL 80.35 Item 5](#).
 - TTM [PL 80.50 Item 6](#).
2. Enter [dC330](#), code 073-002. Run the tray 3 feed/lift up motor:
 - 2TM [PL 80.35 Item 11](#).
 - TTM [PL 80.50 Item 9](#).
3. Enter [dC330](#), code 042-003. Run the main drive assembly [PL 40.05 Item 7](#).
4. Check the gear for wear or damage, install a new gear as necessary:
 - 2TM [PL 80.35 Item 12](#).
 - TTM [PL 80.50 Item 10](#).
5. **(2TM Only)** Check the drive system between the bottom plate and the tray 3 feed/lift motor for operation failure. Install new components as necessary, [PL 70.25](#).
6. **(TTM Only)** Check the drive system between the bottom plate and the tray 3 feed/lift motor for operation failure. Also check the bottom plate lift mechanism. Install new components as necessary, [PL 70.40](#).
7. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

073-212 Tray 3 Sensor Broken Fail RAP

BSD-ON:[BSD 70.10 Tray 3 Paper Stacking \(2TM/TTM\)](#)

073-212 Abnormal output AD value from tray 3 paper size sensor was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Ask the customer to verify the correct paper is in tray 3.
2. Ensure that the customer is programming the job correctly.
3. Remove tray 3. Check underneath the tray for damage to the link mechanism. Also check the actuator at the rear of tray 3. If necessary, install a new tray assembly:
 - [2TM PL 70.20 Item 1](#).
 - [TTM PL 70.35 Item 1](#).
4. Enter [dC140](#) Analog Monitor, code 073-200. Check the tray 3 paper size sensor:
 - [2TM PL 70.20 Item 12](#).
 - [TTM PL 70.35 Item 22](#).
5. Check the wiring between the tray 3 paper size sensor, [P/J102](#) and [P/J453](#) on the motor drive PWB.
6. Reload the software, [GP 4](#).
7. If the fault persists, install new components as necessary:
 - Tray 3 paper size sensor:
 - [2TM PL 70.20 Item 12](#).
 - [TTM PL 70.35 Item 22](#).
 - Motor drive PWB, [PL 1.10 Item 2](#).

074-100 Jam In Tray 4 (2TM/TTM)

BSD-ON:[BSD 80.2 Tray 3 and 4 Paper Pre-feeding](#)

074-100 The tray 4 pre-feed sensor did not turn on within the specified time after the paper feed from tray 4 has started.

Initial Actions

- Check for obstructions behind the tray.
- Ensure that the tray is loaded correctly.
- Ensure the tray is pushed fully home.
- Check the drive system between the bottom plate and the tray 4 feed/lift motor for operation failure.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Enter [dC330](#) code 073-103. Actuate the tray 4 pre-feed sensor:
 - [2TM PL 80.35 Item 10](#).
 - [TTM PL 80.50 Item 2](#).
2. Enter [dC330](#) code 073-001 (Feed). Run the tray 4 feed/lift motor:
 - [2TM PL 80.35 Item 11](#).
 - [TTM PL 80.50 Item 9](#).
3. Check the tray 4 feed roll, nudger roll and retard roll for foreign substances or wear. Clean or install new components as necessary:
 - [2TM PL 80.35](#).
 - [TTM PL 80.50](#).
4. Check the gear for wear and damage. Clean or install new components as necessary:
 - [2TM PL 80.35 Item 12](#).
 - [TTM PL 80.50 Item 10](#).
5. Check the pads for an proper installation and correct if necessary:
 - [2TM PL 70.25](#).
 - [TTM PL 70.40 Item 5](#).
6. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

074-101, 103, 900 Jam In The Device RAP

BSD-ON:BSD 70.11 Tray 4 Paper Stacking (2TM)

BSD-ON:BSD 70.12 Tray 4 Paper Stacking (TTM)

BSD-ON:BSD 80.5 2TM Paper Transport

BSD-ON:BSD 80.6 TTM Paper Transport

074-101 Paper does not actuate the tray 4 feed out sensor within the specified time after tray 2 feed start.

074-103 The tray 4 feed out sensor detected remaining paper.

074-900 The tray 4 feed out sensor detected remaining paper.

Initial Actions

Check the condition of the paper in tray 4. Refer to [GP 15](#) Paper and Media Size Specifications

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Check for obstructions in the paper path.
2. Check the tray 4 feed roll, nudger roll and retard roll, clean or install new components as necessary:
 - [2TM PL 80.35](#).
 - [TTM PL 80.50](#).
3. Check the tray 4 takeaway roll for foreign substances or wear, clean or install new components as necessary:
 - [2TM PL 80.25](#).
 - [TTM PL 80.30](#).
4. Enter [dC330](#), code 073-103. Actuate the tray 4 feed out sensor:
 - [2TM PL 80.25 Item 7](#).
 - [TTM PL 80.60 Item 3](#).
5. Enter [dC330](#), code 073-001. Run the tray 4 feed/lift motor, [PL 80.50 Item 9](#).
 - [2TM PL 80.35 Item 11](#).
 - [TTM PL 80.55 Item 9](#).
6. Enter [dC330](#), code 077-033. Run the takeaway motor, [PL 80.45 Item 3](#).
 - [2TM PL 80.30 Item 1](#).
 - [TTM PL 80.45 Item 3](#).

7. Check the tray 4 gear for wear or damage, install a new gear as necessary:
 - [2TM PL 80.35 Item 12](#).
 - [TTM PL 80.55 Item 10](#).
8. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

074-105 Jam In The Device RAP

BSD-ON:BSD 80.9 Registration

074-105 The registration sensor did not actuate within the specified time after the registration clutch initialized during paper feed from tray 4.

Initial Actions

Check the condition of the paper in tray 3. Refer to [GP 15 Paper and Media Size Specifications](#)

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Check for obstructions in the paper path.
2. Check the tray 4 feed roll, nudger roll and retard roll, [PL 80.35](#) for foreign substances or wear. Clean or install new components as necessary.
3. Enter [dC330](#), code 077-104. Actuate the registration sensor, [PL 80.80 Item 2](#).
4. Enter [dC330](#), code 077-050. Run takeaway motor 1, [PL 80.95 Item 5](#).
5. Enter [dC330](#), code 077-051. Run the takeaway motor 2, [PL 80.95 Item 17](#).
6. Enter [dC330](#), code 072-001. Run the tray 4 feed/lift motor:
 - [2TM PL 80.35 Item 11](#).
 - [TTM PL 80.55 Item 9](#).
7. Check the tray 4 gear for wear or damage, install a new gear as necessary:
 - [2TM PL 80.35 Item 12](#).
 - [TTM PL 80.55 Item 10](#).
8. Check the main drive assembly, [PL 40.05 Item 7](#) for wear or damage.
9. Check the registration transport assembly, [PL 80.90 Item 1](#) for improper installation.
10. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

074-107 MSI Feed Out Sensor On Jam RAP

BSD-ON:BSD 80.3 Tray 1 and Bypass Tray Paper Transport

074-107 Paper does not actuate the bypass feed out sensor within the specified time after tray 4 feed start.

Initial Actions

Check the condition of the paper in tray 4. Refer to [GP 15 Paper and Media Size Specifications](#)

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Check the left hand door is fully closed and latched.
2. Check for obstructions in the paper path.
3. Check the following components for foreign substances or wear. Clean or install new components as necessary.
 - [2TM takeaway roll assembly, PL 80.25 Item 1](#).
 - [TTM takeaway roll assembly, PL 80.40 Item 10](#).
 - [2TM feed roll, nudger roll and retard roll, PL 80.35](#).
 - [TTM feed roll, nudger roll and retard roll, PL 80.50](#).
 - [Bypass tray roll, PL 80.120 Item 6](#).
4. Enter [dC330](#), code 077-104. Actuate the bypass tray feed out sensor, [PL 80.115 Item 1](#).
5. Enter [dC330](#), code 077-050. Run takeaway motor 1, [PL 80.95 Item 5](#).
6. Enter [dC330](#), code 077-051. Run the takeaway motor 2, [PL 80.95 Item 17](#).
7. Enter [dC330](#), code 077-035. Run the takeaway motor:
 - [2TM PL 80.30 Item 1](#).
 - [TTM PL 80.45 Item 3](#).
8. Enter [dC330](#) code 073-001 (Feed). Run the tray 4 feed/lift motor:
 - [2TM PL 80.35 Item 11](#).
 - [TTM PL 80.55 Item 9](#).
9. Check the tray 4 gear for wear or damage, install a new gear as necessary:
 - [2TM PL 80.35 Item 12](#).
 - [TTM PL 80.55 Item 10](#).
10. Check the registration transport assembly, [PL 80.90 Item 1](#) for improper installation.
11. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

074-210 Tray 4 Lift Up Fail RAP

BSD-ON:[BSD 70.11 Tray 4 Paper Stacking \(2TM\)](#)

BSD-ON:[BSD 70.12 Tray 4 Paper Stacking \(TTM\)](#)

074-210 Tray 4 lift NG has occurred three consecutive times.

Initial Actions

- Check for obstructions behind the tray.
- Ensure that the tray is loaded correctly.
- Ensure the tray is pushed fully home.
- Check the drive system between the bottom plate and the tray 4 feed/lift motor for operation failure.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Enter [dC330](#), code 074-102. Actuate the tray 4 level sensor:
 - [2TM PL 80.35 Item 5](#).
 - [TTM PL 80.55 Item 6](#).
2. Enter [dC330](#), code 074-002. Run the tray 4 feed/lift up motor:
 - [2TM PL 80.35 Item 11](#).
 - [TTM PL 80.50 Item 9](#).
3. Enter [dC330](#), code 042-003. Run the main drive assembly [PL 40.05 Item 7](#).
4. Check the gear for wear or damage, install a new gear as necessary:
 - [2TM PL 80.35 Item 12](#).
 - [TTM PL 80.50 Item 10](#).
5. **(2TM Only)** Check the drive system between the bottom plate and the tray 4 feed/lift motor for operation failure. Install new components as necessary, [PL 70.25](#).
6. **(TTM Only)** Check the drive system between the bottom plate and the tray 4 feed/lift motor for operation failure. Also check the bottom plate lift mechanism. Install new components as necessary, [PL 70.40](#).
7. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

074-212 Tray 4 Sensor Broken Fail RAP

BSD-ON:[BSD 70.5 Tray 4 Paper Size Sensing \(2TM\)](#)

BSD-ON:[BSD 70.6 Tray 4 Paper Size Sensing \(TTM\)](#)

074-212 Abnormal output AD value from tray 4 paper size sensor was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Load the correct paper in tray 4.
2. Ensure that the customer is programming the job correctly.
3. Remove tray 4. Check underneath the tray for damage to the link mechanism. Also check the actuator at the rear of tray 4. If necessary, install a new tray assembly:
 - [2TM PL 70.20 Item 1](#).
 - [TTM PL 70.35 Item 2](#).
4. Enter [dC140](#) Analog Monitor, code 074-200. Actuate the tray 4 paper size sensor:
 - [2TM PL 70.20 Item 12](#).
 - [TTM PL 70.35 Item 22](#).
5. Enter [dC330](#) code 074-104. Actuate the tray 4 paper size sensor **(2TM only)**.
6. Check the wiring between the tray 4 paper size sensor, [P/J103](#) and [P/J453](#) on the motor drive PWB.
7. Reload the software, [GP 4](#).
8. If the fault persists, install new components as necessary:
 - Tray 4 paper size sensor:
 - [2TM PL 70.20 Item 12](#).
 - [TTM PL 70.35 Item 22](#).
 - Motor drive PWB, [PL 1.10 Item 2](#).

075-100 Jam In The Bypass Tray RAP

BSD-ON:[BSD 80.3 Tray 1 and Bypass Tray Paper Transport](#)

075-100 The bypass tray feed out sensor does not turn on within the specified time after the paper feed from bypass tray has started.

Initial Actions

Check the condition of the paper in the bypass tray. Refer to [GP 15 Paper and Media Size Specifications](#)

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Check for obstructions in the paper path.
2. Check the bypass tray feed roll, nudger roll and retard roll, [PL 80.120](#). Clean or install new components as necessary
3. Check the tray 4 takeaway roll for foreign substances or wear, clean or install new components as necessary:
 - [2TM PL 80.25](#).
 - [TTM PL 80.30](#).
4. Enter [dC330](#), code 077-104. Actuate the bypass tray feed out sensor, [PL 80.115 Item 1](#).
5. Enter [dC330](#), code 075-003 (Feed). Run the bypass tray feed/lift motor, [PL 80.120 Item 1](#).
6. Check the bypass tray feedhead assembly gears for wear or damage, install a new bypass tray feedhead assembly, [PL 80.120 Item 10](#).
7. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

075-135 Registration Sensor Jam (Bypass Tray) RAP

BSD-ON:[BSD 80.3 Tray 1 and Bypass Tray Paper Transport](#)

BSD-ON:[BSD 80.9 Registration](#)

075-135 The registration sensor does not turn on within the specified time after the registration motor turns on once the paper feed from the bypass tray has started.

Initial Actions

- Check the condition of the paper in the bypass tray. Refer to [GP 15 Paper and Media Size Specifications](#)
- Check that the paper guides are set correctly.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Check the left door is fully closed and latched.
2. Check for obstructions in the paper path.
3. Check the bypass tray feed roll, nudger roll and retard roll, [PL 80.120](#). Clean or install new components as necessary
4. Check the registration roll and takeaway roll 1, [PL 80.55](#) for foreign substances or wear. Clean or install new components as necessary.
5. Enter [dC330](#), code 077-104. Actuate the bypass tray feed out sensor, [PL 80.115 Item 1](#).
6. Enter [dC330](#), code 075-003 (Feed). Run the bypass tray feed/lift motor, [PL 80.120 Item 1](#).
7. Check the bypass tray feedhead assembly gears for wear or damage, install a new bypass tray feedhead assembly, [PL 80.120 Item 10](#).
8. Check the registration transport assembly, [PL 80.90 Item 1](#) for improper installation.
9. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

075-212 Bypass Tray Nudger Up Down Fail

BSD-ON:BSD 70.13 Bypass Tray Paper Sensing and Stacking

075-212 After the bypass tray nudger up or down operation has started, the bypass tray nudger position sensor output does not change within the specified time.

Procedure

Perform the steps that follow:

1. Enter **dC330**, code 075-102 to actuate the bypass tray nudger position sensor, **PL 80.120 Item 2**.
2. Enter **dC330**, code 075-004 (Up/Down) to run the bypass tray feed/lift motor, **PL 80.120 Item 1**.
3. Check the bypass tray nudger roll, **PL 80.120 Item 8** up/down mechanism for mechanical loading, the springs for deformation, snags, and etc. Install a new bypass tray roll kit if necessary, **PL 80.120 Item 6**.
4. If the fault persists, install a new motor drive PWB, **PL 1.10 Item 2**.

076-300 Transport Path Interlock Open Rap

BSD-ON:BSD 80.6 TTM Paper Transport

076-300 A transport path drawer open was detected at the TTM.

Initial Actions

Check that the TTM transport path drawer, tray 3 and tray 4 are fully closed.

Procedure

Enter **dC330** code 077-307. Actuate the transport path interlock by opening tray 3, tray 4 and the transport path drawer. **The display changes.**

Y N

Check the wiring between the motor drive PWB **P/J451**, relay connector **P/J624**, and the drawer connector **DP618** and **DJ618** for broken/bent pins and poor contact. repair as necessary. **The wiring and connectors are good.**

Y N

Repair the wiring and connectors.

Check the transport path drawer connector of the TTM for damage, wear, or misalignment of the drawer rails. **The alignment of the drawer connector is good.**

Y N

Repair or install new components.

Install a new motor drive PWB, **PL 1.10 Item 2**.

Perform **SCP 5** Final actions.

077-103, 104, 106, 109 Jam In The Device RAP

BSD-ON:BSD 10.1 Fusing Unit Drive

BSD-ON:BSD 10.5 Fusing

BSD-ON:BSD 10.7 Exit 1 Paper Transport

BSD-ON:BSD 10.9 Exit 2 Paper Transport (1 of 2)

077-103 The fusing unit exit sensor did not actuate within the specified time after the fusing unit exit sensor turned on.

077-104 The trail edge of the paper turned off the fuser exit sensor earlier than the specified time.

077-106 The fusing unit exit sensor did not actuate within the specified time after the fusing unit exit sensor turned off.

077-109 The fuser exit sensor did not actuate within the specified time after the registration clutch energized.

Initial Actions

- Check for obstructions in the paper path.
- Ensure that the tray is loaded correctly, [GP 15](#) Paper and Media Size Specifications.
- Ensure the tray is pushed fully home.

NOTE: If fault code 077-109 occurs multiple times when feeding the media that follows:

- Xerox bold coated satin or gloss digital printing paper 210 gsm / 80 lb cover.
- Xerox bold coated satin or gloss digital printing paper heavyweight 280 gsm / 100 lb cover.
- Xerox bold coated satin or gloss digital printing paper heavyweight 300 gsm / 110 lb cover.

When a high area coverage image job is printed in duplex mode on moisture content paper in A-zone environment. Change the output destination to exit 1 (center tray lower).

Procedure

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.
- [GP 8](#) How to Check a Solenoid or Clutch.

Perform the steps that follow:

1. Check for paper jammed in the fuser.
2. Check the margin at the lead edge. If the margin is narrow, perform the following:
 - Enter [dC126](#), System Registration Adjustment to adjust the lead edge margin.
 - Check for multi-sheet feeding from the paper tray.
 - Reload the paper in the tray.
3. Check the toner density. If the toner density is dark perform [dC991](#), Toner Density Adjustment.

4. Enter [dC330](#), code 077-101 to actuate exit sensor 1, part of the fuser, [PL 10.05 Item 14](#) for proper operation.
5. Enter [dC330](#), code 010-004 to run the fuser unit drive motor, [PL 40.05 Item 19](#) for proper operation.
6. Enter [dC330](#), code 077-060/061 (CW/CCW) to run the exit 2 drive motor, [PL 10.25 Item 5](#) for proper operation.
7. Enter [dC330](#), code 077-003 to energize the exit 1 gate solenoid, [PL 10.25 Item 11](#) for proper operation.
8. Check the fuser drive assembly, [PL 40.05 Item 16](#) for wear and damage, if damaged install a new fuser drive assembly, [PL 40.05 Item 16](#).
9. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

077-105 Exit Sensor 2 Off Jam RAP

BSD-ON:[BSD 10.9 Exit 2 Paper Transport \(1 of 2\)](#)

BSD-ON:[BSD 10.10 Exit 2 Paper Transport \(2 of 2\)](#)

077-105 The trail of the paper was late from the exit 2 tray sensor.

Initial Actions

Ensure the correct paper is loaded in the tray, [GP 15](#) Paper and Media Size Specifications.

NOTE: If feeding any of the media that follows:

- Xerox vitality coated printing paper - gloss, 210 gsm / 80 lb cover.
- Xerox vitality coated printing paper - gloss, 280 gsm / 100 lb cover.
- Xerox bold super gloss cover, 210 gsm / 10 pt.
- Xerox bold super gloss cover, 250 gsm / 12 pt.
- Xerox colotech+ gloss coated, 170 to 280gsm.
- Xerox colotech+ supergloss, 135 to 250gsm.

Jams may occur when a high area coverage image job is printed on coated media with output destination of exit 2. If jam occurs, change the output destination to exit 1 (center tray lower).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Check for obstructions in the paper path.
2. Enter [dC330](#), code 077-113 to actuate the exit 2 tray sensor, [PL 10.25 Item 15](#).
3. Enter [dC330](#), code 077-110 to actuate the exit 2 OCT home position sensor, [PL 10.25 Item 14](#).
4. Enter [dC330](#), code 077-045/046(CW/CCW) to run the exit 2 OCT motor, [PL 10.25 Item 18](#).
5. Enter [dC330](#), code 077-060/061(CW/CCW) to run the exit 2 drive motor, [PL 10.25 Item 5](#).
6. Check the exit 2 gears for wear or damage:
 - Exit 2 drive bracket assembly, [PL 10.25 Item 3](#).
 - Gear, [PL 10.25 Item 10](#).
 - Offset gear, [PL 10.25 Item 16](#).
7. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

077-110 POB Sensor On Jam

BSD-ON:[BSD 90.19 Image Transfer to Paper](#)

BSD-ON:[BSD 80.9 Registration](#)

077-110 The POB Jam Sensor does not turn on within the specified time after the registration motor turns on.

Initial Actions

- Check for obstructions in the paper path.
- Ensure the correct paper is loaded in the tray, [GP 15](#) Paper and Media Size Specifications.
- Ensure the tray is pushed fully home.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Enter [dC330](#), code 077-110 to actuate the POB jam sensor, [PL 80.80 Item 9](#).
2. Enter [dC330](#), code 077-055 to run the registration motor, [PL 80.95 Item 4](#).
3. Check the 2nd BTR roll assembly, [PL 80.65 Item 2](#) for paper jam, contamination, wear, and revolution failure.
4. Check the IBT belt assembly, [PL 90.30 Item 1](#) for paper jam.
5. Check the pinch roller [PL 80.80 Item 19](#), for contamination, wear, and transportation failure due to deterioration.
6. Check all registration driver assembly gears, [PL 80.95](#) for wear and damage. Install new components as necessary.
7. Check the registration transport assembly, [PL 80.90](#) for proper installation. Correct as necessary.
8. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

077-130 Jam In The Device RAP

BSD-ON: [BSD 80.9 Registration](#)

BSD-ON: [BSD 10.8 Duplex Paper Transport](#)

077-130 The registration sensor did not turn on within the specified time after the registration motor turned on during paper feed from the duplex path.

Initial Actions

Check the condition of the paper in all trays. Refer to [GP 15 Paper and Media Size Specifications](#)

NOTE: If jams occur when feeding any of the media that follows:

- Xerox bold digital printing paper, 270 gsm / 100 lb cover
- Xerox bold super gloss cover, 250 gsm / 12 pt.
- Xerox bold coated satin or gloss digital printing paper, 300 gsm / 110 lb cover.
- Xerox colotech+ gloss coated, 170 to 280gsm.

If necessary advise the customer to use a lighter media.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.
- [GP 8](#) How to Check a Solenoid or Clutch.

Perform the steps that follow:

1. Check for obstructions in the paper path.
2. Check the mid and lower duplex roll assemblies, [PL 80.75](#), and pinch roller, [PL 80.80 Item 19](#) for foreign substances or wear.
3. Enter [dC330](#), code 077-103. Check the registration sensor, [PL 80.80 Item 2](#).
4. Enter [dC330](#), code 042-055. Check the registration motor, [PL 80.95 Item 4](#).
5. Check the registration drive gear, [PL 80.90 Item 8](#) wear or damage.
6. Check the main drive assembly, [PL 40.05 Item 1](#) for wear or damage.
7. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

077-211 Tray Module Mismatch RAP

BSD-ON: [BSD 3.1 PWB Communications \(Controller to Motor Drive PWB\)](#)

077-211 A tray module mismatch has occurred.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Check the correct tray module (2TM/TTM) is installed. Install the correct tray module desired.
2. Check the connections between the tray module and the machine.
3. Switch off, then switch on the machine, [GP 10](#).
4. If the fault persists, enter [dC131](#) to ensure the tray module type is correctly set in NVM value 742-205:
 - 2TM = 4
 - TTM = 5

077-300 The Device Front Door Is Open RAP

BSD-ON: [BSD 1.8 Interlock Switching](#)

077-300 Front cover was opened during run.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedure that follows as necessary:

- [GP 9](#) How to Check a Switch

Perform the steps that follow:

1. Check the actuator on the front cover for damage. If necessary, install a new front cover assembly, [PL 28.05 Item 8](#).
2. Enter [dC330](#) code 077-303. Check the front cover interlock switch, [PL 28.05 Item 11](#).
3. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

077-301 The Device Left-Side Door A is Open RAP

BSD-ON: [BSD 1.8 Interlock Switching](#)

077-301 Left cover assembly was opened during run.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to [GP 9](#) How to Check a Switch, as necessary.

Perform the steps that follow:

1. Check the actuator on the L/H cover for damage. If necessary, install a new left cover, [PL 80.65 Item 1](#).
2. Enter [dC330](#) code 077-300. Check the left cover interlock switch assembly, [PL 80.65 Item 9](#).
3. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

077-305 The Device Left-Side Door B is Open RAP

BSD-ON: [BSD 1.8 Interlock Switching](#)

077-301 Tray module left cover was opened during run.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to [GP 9](#) How to Check a Switch, as necessary.

Perform the steps that follow:

1. Check the actuator on the tray module left cover for damage. If necessary, install a new tray module left cover assembly:
 - (2TM), [PL 80.20 Item 1](#).
 - (TTM), [PL 70.35 Item 16](#).
2. Enter [dC330](#), code 077-306. As necessary, perform the steps that follow:
 - Check the 2TM interlock switch, [PL 80.20 Item 8](#).
 - Check the TTM interlock switch assembly, [PL 80.40 Item 1](#).
3. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

077-314 Paper Handling Module Logic Fail RAP

BSD-ON: [BSD 3.1 PWB Communications \(Controller to Motor Drive PWB\)](#)

077-314 A tray module fatal error was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. Switch off the machine, then check the following items:
 - The connection at [P/J335](#) between the controller PWB and the back plane PWB, and [P/J451](#) between the back plane PWB and the halftone PWB for poor contact, damage, and foreign substances
 - The motor drive ribbon cable, [PL 3.10 Item 3](#), between the halftone PWB [P551/J480](#) and the motor drive PWB [P/J410](#) for open circuit, short circuit, and poor contact.
3. If the fault persists, install new components in the following order as necessary:

NOTE: After each individual component installation, switch on the machine to verify the fault is cleared before installing the next component.

 - a. Motor drive PWB, [PL 1.10 Item 2](#).
 - b. Controller PWB assembly, [PL 3.05 Item 1](#).
 - c. Halftone PWB, [PL 3.15 Item 4](#).
 - d. Back plane PWB, [PL 3.15 Item 2](#).

077-900, 902, 912 IOT Static Jam RAP

BSD-ON:[BSD 80.9 Registration](#)

077-900 The registration sensor detected remaining paper.

077-902 The exit 2 sensor detected remaining paper.

077-912 The bypass tray feed out sensor detected remaining paper.

Initial Actions

- Remove all jammed paper in the paper path.
- Check the condition of the paper in all trays. Refer to [GP 15](#) Paper and Media Size Specifications
- Ensure that all the trays are loaded correctly.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Check the takeaway roll and takeaway roll 2, [PL 80.90](#) for foreign substances or wear. Clean or install new components as necessary.
2. Enter [dC330](#), code 077-103 to actuate the registration sensor, [PL 80.80 Item 2](#).
3. Check the main drive assembly, [PL 40.05 Item 7](#) for wear or damage.
4. Check the registration transport assembly, [PL 80.55 Item 1](#) for wear or damage.
5. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

077-901 IOT Static Jam RAP

BSD-ON:[BSD 10.1 Fusing Unit Drive](#)

BSD-ON:[BSD 10.5 Fusing](#)

BSD-ON:[BSD 10.7 Exit 1 Paper Transport](#)

BSD-ON:[BSD 10.9 Exit 2 Paper Transport \(1 of 2\)](#)

077-901 The fuser exit sensor detected remaining paper in the paper path.

Initial Actions

- Check for obstructions in the paper path.
- Ensure that the tray is loaded correctly, [GP 15](#) Paper and Media Size Specifications.
- Ensure the tray is pushed fully home.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Remove the fuser. Remove any foreign material or paper wound around the heat roll.
2. Enter [dC330](#), code 077-101 to actuate exit sensor 1, part of the fuser, [PL 10.05 Item 14](#) for proper operation.
3. Enter [dC330](#), code 010-004 to run the fuser unit drive motor, [PL 40.05 Item 19](#).
4. Enter [dC330](#), code 077-060/061(CW/CCW) to run the exit 2 drive motor, [PL 10.25 Item 5](#).
5. Enter [dC330](#), code 077-003 to energize the exit 1 gate solenoid, [PL 10.25 Item 11](#) for proper operation.
6. Check the fuser drive assembly, [PL 40.05 Item 16](#) for wear and damage, if damaged install a new fuser drive assembly, [PL 40.05 Item 16](#).
7. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

077-967, 968 Paper Mismatch RAP

077-967 The paper loaded is different from the specified paper type.

077-968 The paper loaded is different from the specified paper type.

Procedure

Switch off, then switch on the machine, [GP 10](#). **The fault persists.**

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

Load the specified paper, then resubmit the job.

078-102 Registration Sensor Jam (HCF) RAP

BSD-ON:[BSD 80.9 Registration](#)

BSD-ON:[BSD 80.9 Registration](#)

078-102 Paper fed from the HCF did not actuate the registration sensor within the 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 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the condition of the paper in the HCF. Refer to [GP 15](#) Paper and Media Size Specifications.
- Check for obstructions in the paper path.

Procedure

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Enter [dC330](#), code 077-104. Manually actuate the registration sensor, [PL 80.80 Item 2](#). **The display changes.**

Y N
Check the registration sensor, [PL 80.80 Item 2](#).

Enter [dC330](#) code 078-093 to run the HCF takeaway motor. **The motor runs.**

Y N
Check the wiring between the HCF takeaway motor (JF57) and the HCF PWB (JF06). **The wiring is good.**

Y N
Repair as necessary.

Check that the resistance through the HCF takeaway motor is approximately 0.8 ohms between:

- JF57 pin 3 to pins 1 and 2.
- JF57 pin 4 to pins 5 and 6.

The resistances are good.

Y N
Install a new HCF takeaway motor, [PL 70.95 Item 7](#).

Check the voltage between JF06 pins 9 and 10 and ground. **+24V is measured.**

Y N
Check the +24VDC circuit.

Install a new HCF takeaway motor, [PL 70.95 Item 7](#). If the fault persists, install a new HCF PWB, [PL 70.95 Item 7](#).

A

Check the items that follow:

- Check the HCF feed roll, nudger roll, [PL 80.105](#) and retard roll, [PL 80.110 Item 1](#) for foreign substances or wear. Clean or install new components as necessary.
- Check the HCF pinch roller, [PL 70.90 Item 12](#) and HCF takeaway roll, [PL 70.90 Item 18](#) for foreign substances or wear. Clean or install new components as necessary.
- HCF and IOT for a poor docking
- Drive gears, [PL 80.100](#).

If the fault persists, install a new HCF PWB, [PL 70.95 Item 9](#).

078-104, 901 HCF Feed Out Sensor Fault RAP

BSD-ON:[BSD 80.8 HCF Paper Transportation](#)

078-104 Paper fed from the HCF did not actuate the HCF feed out sensor within the specified time.

078-104 The HCF feed out sensor detected paper.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the condition of the paper in the HCF. Refer to [GP 15](#) Paper and Media Size Specifications.
- Check for obstructions in the paper path.

Procedure

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Enter [dC330](#) code 078-101. Manually actuate the HCF feed out sensor, [PL 70.90 Item 25](#). **The display changes.**

Y N

Check the HCF feed out sensor.

Enter [dC330](#) code 078-093 to run the HCF takeaway motor [PL 70.95 Item 7](#). **The motor runs.**

Y N

Check the wiring between the HCF takeaway motor (JF57) and the HCF PWB (JF06).

The wiring is good.

Y N

Repair as necessary.

Check that the resistance through the HCF takeaway motor is approximately 0.8 ohms between:

- JF57 pin 3 to pins 1 and 2.
- JF57 pin 4 to pins 5 and 6.

The resistances are good.

Y N

Install a new HCF takeaway motor, [PL 70.95 Item 7](#).

Check the voltage between JF06 pins 9 and 10 and ground. **+24V is measured.**

Y N

Check the +24VDC circuit.

Install a new HCF takeaway motor, [PL 70.95 Item 7](#). If the fault persists, install a new HCF PWB, [PL 70.95 Item 9](#)

078-105 Registration Sensor On Jam (HCF) RAP

BSD-ON: [BSD 80.8 HCF Paper Transportation](#)

BSD-ON: [BSD 80.9 Registration](#)

078-105 The registration sensor did not turn on within the specified time after the registration motor turned on during paper feed from the HCF.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the condition of the paper in the HCF. Refer to [GP 15](#) Paper and Media Size Specifications.
- Check for obstructions in the paper path.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Check for obstructions in the paper path.
2. Check the feed roll, nudge roll and retard roll, [PL 80.35](#) for foreign substances or wear. Clean or install new components as necessary.
3. Enter [dC330](#), code 077-104. Actuate the registration sensor, [PL 80.80 Item 2](#).
4. Enter [dC330](#), code 077-050. Run takeaway motor 1, [PL 80.95 Item 5](#).
5. Enter [dC330](#), code 077-051. Run the takeaway motor 2, [PL 80.95 Item 17](#).
6. Enter [dC330](#), code 078-003. Run the HCF feed lift motor, [PL 80.100 Item 23](#).

Check the items that follow:

- HCF and IOT for a poor docking
- Check the HCF feed roll, nudge roll, [PL 80.105](#) and retard roll, [PL 80.110 Item 1](#) for foreign substances or wear. Clean or install new components as necessary.
- Check the HCF pinch roller, [PL 70.90 Item 12](#) and HCF takeaway roll, [PL 70.90 Item 18](#) for foreign substances or wear. Clean or install new components as necessary.
- Drive gears, [PL 80.100](#).
- Check the main drive assembly, [PL 40.05 Item 7](#) for wear or damage.
- Check the registration transport assembly, [PL 80.90 Item 1](#) for improper installation.

If the fault persists, install a new HCF PWB, [PL 70.95 Item 9](#).

078-118 HCF Bypass Tray Feed Out Sensor On Jam (HCF) RAP

BSD-ON: [BSD 80.3 Tray 1 and Bypass Tray Paper Transport](#)

BSD-ON: [BSD 80.8 HCF Paper Transportation](#)

BSD-ON: [BSD 80.9 Registration](#)

078-105 The registration sensor did not turn on within the specified time after the registration motor turned on during paper feed from the HCF.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the condition of the paper in the HCF. Refer to [GP 15](#) Paper and Media Size Specifications.
- Check for obstructions in the paper path.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Perform the steps that follow:

1. Check for obstructions in the paper path.
2. Check the feed roll, nudge roll and retard roll, [PL 80.35](#) for foreign substances or wear. Clean or install new components as necessary.
3. Enter [dC330](#), code 077-104. Actuate the bypass tray feed out sensor, [PL 80.115 Item 1](#).
4. Enter [dC330](#), code 077-050. Run takeaway motor 1, [PL 80.95 Item 5](#).
5. Enter [dC330](#), code 077-051. Run the takeaway motor 2, [PL 80.95 Item 17](#).
6. Enter [dC330](#), code 078-003. Run the HCF feed lift motor, [PL 80.100 Item 23](#).

Check the items that follow:

- HCF and IOT for a poor docking
- Check the HCF feed roll, nudge roll, [PL 80.105](#) and retard roll, [PL 80.110 Item 1](#) for foreign substances or wear. Clean or install new components as necessary.
- Check the HCF pinch roller, [PL 70.90 Item 12](#) and HCF takeaway roll, [PL 70.90 Item 18](#) for foreign substances or wear. Clean or install new components as necessary.
- Drive gears, [PL 80.100](#).
- Check the registration transport assembly, [PL 80.90 Item 1](#) for improper installation.

If the fault persists, install a new HCF PWB, [PL 70.95 Item 9](#).

078-216, 219 HCF Communication Failure RAP

078-216 Cannot read from and/or write to the NVM in the HCF.

078-219 HCF soft download fail.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. Check wires and connectors between the HCF and the IOT.
3. Reload the software, [GP 4](#).
4. If the fault persists, install a new HCF PWB, [PL 70.95 Item 9](#).

078-250 HCF Lift Fault RAP

BSD-ON: [BSD 7.15 HCF Paper Stacking](#)

078-250 HCF tray lift failure. The tray 6 level sensor is not actuated within the 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 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check the condition of the paper in the HCF. Refer to [GP 15](#) Paper and Media Size Specifications.
- Check for obstructions in the paper tray.

Procedure

Refer to the procedures that follow as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Open, then close the HCF tray, [PL 70.75 Item 5](#). **The HCF feed lift motor runs.**

Y N

Check the wiring between the HCF feed lift motor (JF58) and the HCF PWB (JF06). **The wiring is good.**

Y N

Repair as necessary.

Check that the resistance through the HCF feed lift motor, [PL 80.100 Item 23](#) is approximately 0.8 ohms between:

- JF58 pin 3 to pins 1 and 2.
- JF58 pin 4 to pins 5 and 6.

The resistances are good.

Y N

Install a new HCF feed lift motor, [PL 80.100 Item 23](#).

Check the voltage between JF06 pins 3 and 4 and ground. **+24V is measured.**

Y N

Check the +24VDC circuit.

Install a new HCF feed lift motor, [PL 80.100 Item 23](#). If the fault persists, install a new HCF PWB, [PL 70.95 Item 9](#).

Check the installation of the HCF level sensor, [PL 80.105 Item 19](#) and the operation of the actuator. **The sensor and actuator are good.**

Y N

Correctly install the HCF level sensor, or install new components as necessary, [PL 80.105 Item 19](#).

Enter [dC330](#) code 078-201. Manually actuate the HCF level sensor, [PL 80.105 Item 19](#). **The display changes.**

Y N

Check the HCF level sensor connection and for damage. If damaged, install a new HCF level sensor, [PL 80.105 Item 19](#).

Check the mechanical components of the lift mechanism for dirty or damaged gears, broken or out of place cables, [PL 80.100](#). If the fault persists, install a new HCF PWB, [PL 70.95 Item 9](#).

078-300 HCF Transport Cover Interlock Open RAP

BSD-ON: [1.12 DC Power Distribution - HCF](#)

078-300 The HCF top cover interlock is open.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to [GP 9](#) How to Check a Switch, as necessary.

Enter [dC330](#) code 078-300. Open then close the top cover, [PL 70.90 Item 7](#) to actuate the HCF top cover interlock switch. **The display changes.**

Y N

Measure the voltage between [P/JF05](#) pin 2 on the HCF PWB and ground. **+24V is measured.**

Y N

Measure the voltage between [P/JF05](#) pin 1 on the HCF PWB and ground. **+24V is measured.**

Y N

Measure the voltage between [P/JF04](#) pin 1 and 2 on the HCF PWB and ground. **+24VDC is measured.**

Y N

Check the +24VDC circuit.

Install a new HCF PWB, [PL 70.95 Item 9](#).

Check the items that follow: wiring:

- [P/JF05](#) pin 1 on the HCF PWB and [FS001](#) on the HCF top cover interlock switch.
- [P/JF05](#) pin 2 on the HCF PWB and [FS002](#) on the HCF top cover interlock switch.

If the wiring is good, install a new HCF top cover interlock switch, [PL 70.90 Item 26](#).

Install a new HCF PWB, [PL 70.95 Item 9](#).

The fault could be caused by misalignment of the HCF top cover interlock switch. Ensure the switch and HCF top cover are correctly installed. Check if the actuator is damaged, install new components as necessary, [PL 70.55](#).

If the fault persists, install a new components as necessary:

- HCF PWB, [PL 70.95 Item 9](#).
- Motor drive PWB, [PL 1.10 Item 2](#).

078-301 HCF1 Slide Out Switch Open RAP

BSD-ON: [1.12 DC Power Distribution - HCF](#)

078-301 HCF1 slide out switch open indicating the HCF and the IOT are undocked.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

- Check that the HCF and the IOT are correctly docked.
- Switch off, then switch on the machine, [GP 10](#).

Procedure

Refer to the procedure that follows as necessary:

- [GP 9](#) How to Check a Switch.

Enter [dC330](#) code 078-301. Dock then undock the HCF to actuate the HCF1 slide out switch.

The display changes.

Y N
Undock the HCF. Actuate the HCF1 slide out switch, [PL 70.95 Item 8](#). The display changes.
Y N
Measure the voltage between [P/JF08](#) pin 2 on the HCF PWB and ground. The voltage drops to less than +1VDC when the switch is actuated
Y N
Check the wiring between:

- [P/JF08](#) pin 1 on the HCF PWB and [FS003](#) on the HCF1 slide out switch.
- [P/JF08](#) pin 2 on the HCF PWB and [FS004](#) on the HCF1 slide out switch.

If the wiring is good, install a new HCF1 slide out switch, [PL 70.95 Item 8](#).
Install a new HCF PWB, [PL 70.95 Item 9](#).
Check the alignment of the HCF docking base and the IOT.

The fault may be intermittent. Check HCF1 slide out switch wiring. If the fault persists, install new components as necessary:

- HCF1 slide out switch, [PL 70.95 Item 8](#).
- HCF PWB, [PL 70.95 Item 9](#).

Chain 089 Entry RAP

When multiple Chain 89 fault codes are indicated in the active fault list ([dC125](#)) fixing higher priority faults can result in automatically fixing other, lower priority faults. Fix faults in the order indicated in [Table 1](#).

Chain 89 Fault Priority

Table 1 Chain 89 RAP Priority

Priority	Fault Code	Fault
1 (high)	089-313, 314, 316, 317	IReCTErrorFail
2	089-674, 675, 676	MOBLEDFail
3	089-677, 678, 679	MOBThreshHoldFail
4	089-623, 673, 629	VsoutStabilityFail
5	089-616	RCDataOverflowFail
6	089-604, 606, 607, 609, 610, 612, 613, 615	RCSampleBlockFail-B
7	089-601, 089-603	SampleBlockFail-A1
8	089-600	RCSampleLateralFail-A1
9 (low)	089-617	RCDataOverRangeFail

089-313, 314, 316, 317 IReCT Error Fail RAP

BSD-ON:[BSD 60.1 LPH Y and M](#)

BSD-ON:[BSD 60.2 LPH C and K](#)

089-313 IReCT Error Fail #1

089-314 IReCT Error Fail #2

089-316 IReCT Error Fail #3

089-317 IReCT Error Fail #4

- Detected insufficient input data (UnderRun) on the controller regarding the output data to LPH.
- IReCT settings error has occurred.

Procedure

1. Switch off, then switch on the machine, [GP 10](#).
2. Switch off the machine, then check the connection of the back plane PWB between the controller PWB assembly [P335](#) and the halftone PWB [J451](#) for loose connection, poor contact, or an obstruction.
3. Perform [dC675](#), Registration Control Setup Cycle.
4. If the fault persists, contact your Xerox Support Center.

089-600 RC Sample Lateral Fail-A1 RAP

BSD-ON: [BSD 60.3 Color Registration](#)

089-600 An error with the Cyan fast scan position that is used as a reference during A1 (fine adjustment pattern) and C patch detection.

Initial Actions

Enter [dC125](#), if multiple chain 89 faults are indicated, refer to [Chain 089 Entry RAP](#) to determine the highest priority fault.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the installation and condition of the IBT belt assembly, [PL 90.30 Item 1](#). **The IBT belt assembly is good.**

Y N

Install the IBT belt assembly correctly.

Perform the steps that follow:

1. Install a new IBT belt assembly, [PL 90.30 Item 1](#)
2. Enter [dC135](#) code 954-820 to reset the HFSI value for the BTR unit.

The fault persists.

Y N

Perform [SCP 5](#) Final Actions.

Perform the steps that follow:

1. If the fault persists install a new motor drive PWB, [PL 1.10 Item 2](#).
2. Enter [dC675](#), perform the Registration Control Setup Cycle.

089-601, 089-603 RC Sample Block Fail-A1 RAP

BSD-ON: [BSD 60.3 Color Registration](#)

089-601 During the A1 (fine adjustment pattern) and C patch detection, the patch at the MOB ADC sensor In did not satisfy the defined number of valid sample blocks.

089-603 During the A1 (fine adjustment pattern) and C patch detection, the patch at the MOB ADC sensor Out did not satisfy the defined number of valid sample blocks.

Initial Actions

Enter [dC125](#), if multiple chain 89 faults are indicated, refer to [Chain 089 Entry RAP](#) to determine the highest priority fault.

Procedure

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to [GP 7](#) How to Check a sensor, as necessary:

Check the applicable MOB ADC sensor for contamination, open circuits, short circuits or damage, if necessary install a new MOB ADC sensor assembly, [PL 90.30 Item 1](#). **The fault persists.**

Y N

Perform [SCP 5](#) Final Actions.

Perform the steps that follow:

1. Install a new MOB ADC sensor assembly, [PL 90.30 Item 1](#).
2. Enter [dC675](#), perform the Registration Control Setup Cycle.

089-604, 606, 607, 609, 610, 612, 613, 615 RC Sample Block Fail-B RAP

BSD-ON: [BSD 60.3 Color Registration](#).

089-604 During the yellow B (rough adjustment pattern) patch detection, the patch at the MOB ADC In sensor did not satisfy the defined number of valid sample blocks.

089-606 During the yellow B (rough adjustment pattern) patch detection, the patch at the MOB ADC Out sensor did not satisfy the defined number of valid sample blocks.

089-607 During the magenta B (rough adjustment pattern) patch detection, the patch at the MOB ADC In sensor did not satisfy the defined number of valid sample blocks.

089-609 During the magenta B (rough adjustment pattern) patch detection, the patch at the MOB ADC Out sensor did not satisfy the defined number of valid sample blocks.

089-610 During the cyan B (rough adjustment pattern) patch detection, the patch at the MOB ADC In sensor did not satisfy the defined number of valid sample blocks.

089-612 During the cyan B (rough adjustment pattern) patch detection, the patch at the MOB ADC Out sensor did not satisfy the defined number of valid sample blocks.

089-613 During the black B (rough adjustment pattern) patch detection, the patch at the MOB ADC In sensor did not satisfy the defined number of valid sample blocks.

089-615 During the black B (rough adjustment pattern) patch detection, the patch at the MOB ADC Out sensor did not satisfy the defined number of valid sample blocks.

Initial Actions

Enter [dC125](#), if multiple chain 89 faults are indicated, refer to [Chain 089 Entry RAP](#) to determine the highest priority fault.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedure that follows as necessary:

- [GP 7](#) How to Check a Sensor.

Check the wiring between the motor drive PWB and the applicable MOB ADC sensor for open circuits, short circuits or damage. **The connection is good.**

Y N

Reconnect or repair the wiring between the motor drive PWB and the MOB ADC sensor.

Check the magnet roll at the applicable MOB ADC sensor position for contamination, damage or distortion. **The magnet roll is good.**

Y N

Install a new MOB ADC sensor assembly, [PL 90.30 Item 1](#).

A

Check the IBT belt, [PL 90.35](#), at the applicable MOB ADC sensor position for damage and distortion. **The IBT belt is good.**

Y N

Install a new IBT belt assembly, [PL 90.30 Item 1](#). Enter [dC135](#) code 954-820 to reset the HFSI value for the BTR unit.

Check the Drum Cartridge, [PL 90.15](#), for damage and deformation. **The drum cartridge is good.**

Y N

Install a new drum cartridge:

- [PL 90.15 Item 2 \(K\)](#)
- [PL 90.15 Item 3 \(C\)](#)
- [PL 90.15 Item 4 \(M\)](#)
- [PL 90.15 Item 5 \(Y\)](#)

Install a new MOB ADC sensor assembly, [PL 90.30 Item 1](#). If the fault persists install a new motor drive PWB, [PL 1.10 Item 2](#). Enter [dC675](#), perform the Registration Control Setup Cycle.

089-616 RC Data Overflow Fail RAP

BSD-ON:BSD 60.3 Color Registration

089-616 The correction setting value of the calculation result has exceeded the allowed range.

Initial Actions

Enter **dC125**, if multiple chain 89 faults are indicated, refer to **Chain 089 Entry RAP** to determine the highest priority fault.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter **dC675**, perform the Registration Control Setup Cycle and compare the correction amount with the value in **Table 1**.

Table 1 Registration control adjustment ranges

Correction item	Adjustment Range	
	Minimum	Maximum
Fast Scan Margin	-4720	+4720
Slow Scan Margin	-4720	+4720
Skew	-1650	+1650

Fast Scan Margin or Slow Scan Margin have reached the minimum or maximum adjustment value.

Y N

Check the position of the drum cartridge of each color. **The drum cartridge positions are good.**

Y N

Correctly position all drum cartridges.

Install a new drum cartridge as necessary:

- **PL 90.15 Item 2 (K).**
- **PL 90.15 Item 3 (C).**
- **PL 90.15 Item 4 (M).**
- **PL 90.15 Item 5 (Y).**

If the fault persists, install a new LPH assembly as necessary:

- **PL 60.05 Item 1 (K).**
- **PL 60.05 Item 2 (C).**
- **PL 60.05 Item 3 (M).**
- **PL 60.05 Item 4 (Y).**

A

Check if **Fast Scan Margin** or **Slow Scan Margin** have reached the minimum or maximum adjustment value. **Slow Scan Margin has reached the minimum or maximum adjustment value.**

Y N

Raise/lower each LPH (Y, M, C, K) 2 to 3 times to check the LPH lift up/down mechanism. If no problem is found, install a new LPH assembly as necessary:

- **PL 60.05 Item 1 (K).**
- **PL 60.05 Item 2 (C).**
- **PL 60.05 Item 3 (M).**
- **PL 60.05 Item 4 (Y).**

Install a new motor drive PWB, **PL 1.10 Item 2**. Enter **dC675**, perform the Registration Control Setup Cycle.

089-617 RC Data Over Range RAP

BSD-ON:[BSD 60.3 Color Registration](#)

089-617 The result from adding the offset value to the correction value has exceeded the offset range.

Initial Actions

Enter [dC125](#), if multiple chain 89 faults are indicated, refer to [Chain 089 Entry RAP](#) to determine the highest priority fault.

Procedure

Enter [dC131](#), check the NVM values that follow:

- 759-319 (Lead Registration Offset).
- 759-321 (Side 1 Registration Offset).
- 759-322 (Side 2 Registration Offset).

089-623, 673, 629 Vsout Stability Fail RAP

BSD-ON:[BSD 60.3 Color Registration](#)

089-623 The amount of reflected light was not stabilized during front MOB sensor, [PL 90.30 Item 1](#) LED brightness correction.

089-673 The amount of reflected light was not stabilized during ADC sensor, [PL 90.30 Item 11](#) LED brightness correction.

089-629 The amount of reflected light was not stabilized during rear MOB sensor, [PL 90.30 Item 12](#) LED brightness correction.

Initial Actions

Enter [dC125](#), if multiple chain 89 faults are indicated, refer to [Chain 089 Entry RAP](#) to determine the highest priority fault.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to [GP 7](#) How to Check a Sensor, as necessary.

Check the wiring between:

- The motor drive PWB [P/J443](#) and the applicable MOB sensor [P/J609](#) (front and rear).
- The motor drive PWB [P/J416](#) and ADC sensor [P/J608](#).

for open circuits, short circuits or damage. **The connection is good.**

Y N

Reconnect or repair the wiring between the motor drive PWB and the MOB ADC sensor assembly.

Check the IBT belt, [PL 90.35](#), at the applicable MOB ADC sensor position for damage and distortion. **The IBT belt is good.**

Y N

Install a new IBT belt assembly, [PL 90.30 Item 1](#). Enter [dC135](#) code 954-820 to reset the HFSI value for the BTR unit.

Check the detection area of the applicable MOB ADC sensor for obstruction or contamination. **The MOB ADC sensor is good.**

Y N

Clean the detection area of the MOB ADC sensor.

Install a new MOB ADC sensor assembly, [PL 90.30 Item 4](#). **The fault persists.**

Y N

Perform [SCP 5](#) Final Actions.

Install a new IBT belt assembly, [PL 90.30 Item 1](#). After installing a new IBT belt assembly, enter [dC135](#) code 954-820 to reset the HFSI value for the BTR unit. **The fault persists.**

Y N

Perform [SCP 5](#) Final Actions.

A

If the fault persists, install a new motor drive PWB [PL 1.10 Item 2](#). Enter [dC675](#), perform the Registration Control Setup Cycle.

089-674, 675, 676 MOB LED Fail RAP

BSD-ON:[BSD 60.3 Color Registration](#)

089-674 The LED light amount setting value does not converge in gain correction of the front MOB sensor, [PL 90.30 Item 10](#) LED Brightness Correction.

089-675 An error occurs in the output voltage value of the IBT belt sensor during ADC sensor, [PL 90.30 Item 11](#) LED Brightness Correction.

089-676 The LED light amount setting value does not converge in gain correction of the rear MOB sensor, [PL 90.30 Item 12](#) LED Brightness Correction.

Initial Actions

Enter [dC125](#), if multiple chain 89 faults are indicated, refer to [Chain 089 Entry RAP](#) to determine the highest priority fault.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedure that follows as necessary:

- [GP 7](#) How to Check a Sensor.

Check the wiring between the motor drive PWB and the applicable MOB ADC sensor for open circuits, short circuits or damage. **The connection is good.**

Y N

Reconnect or repair the wiring between the motor drive PWB and the MOB ADC sensor.

Check the IBT belt, [PL 90.35](#), at the applicable MOB ADC sensor position for damage and distortion. **The IBT belt is good.**

Y N

Install a new IBT belt assembly, [PL 90.30 Item 1](#). Enter [dC135](#) code 954-820 to reset the HFSI value for the BTR unit.

Check the detection area of the applicable MOB ADC sensor for obstruction or contamination. **The MOB ADC sensor is good.**

Y N

Clean the detection area of the MOB ADC sensor.

Install a new MOB ADC sensor assembly, [PL 90.30 Item 4](#). **The fault persists.**

Y N

Perform [SCP 5](#) Final Actions.

Install a new IBT belt assembly, [PL 90.30 Item 1](#). After installing a new IBT belt assembly, enter [dC135](#) code 954-820 to reset the HFSI value for the BTR unit. **The fault persists.**

Y N

Perform [SCP 5](#) Final Actions.

A

If the fault persists, install a new motor drive PWB [PL 1.10 Item 2](#). Enter [dC675](#), perform the Registration Control Setup Cycle.

089-677, 678, 679 MOB Threshold Fail RAP

BSD-ON:[BSD 60.3 Color Registration](#)

089-677 An error occurs in the output voltage value of the IBT belt sensor during front MOB sensor, [PL 90.30 Item 10](#) LED Brightness Correction.

089-678 An error occurs in the output voltage value of the IBT belt sensor during ADC sensor, [PL 90.30 Item 11](#) LED Brightness Correction.

089-679 An error occurs in the output voltage value of the IBT belt sensor during rear MOB sensor, [PL 90.30 Item 12](#) LED Brightness Correction.

Initial Actions

Enter [dC125](#), if multiple chain 89 faults are indicated, refer to [Chain 089 Entry RAP](#) to determine the highest priority fault.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Refer to the procedure that follows as necessary:

- [GP 7](#) How to Check a sensor.

Check the wiring between the motor drive PWB and the applicable MOB ADC sensor for open circuits, short circuits or damage. **The connection is good.**

Y N

Reconnect or repair the wiring between the motor drive PWB and the MOB ADC sensor.

Check the IBT belt, [PL 90.35](#), at the applicable MOB ADC sensor position for damage and distortion. **The IBT belt is good.**

Y N

Install a new IBT belt assembly, [PL 90.30 Item 1](#). Enter [dC135](#) code 954-820 to reset the HFSI value for the BTR unit.

Check the detection area of the applicable MOB ADC sensor for obstruction or contamination. **The MOB ADC sensor is good.**

Y N

Clean the detection area of the MOB ADC sensor.

Install a new MOB ADC sensor assembly, [PL 90.30 Item 4](#). **The fault persists.**

Y N

Perform [SCP 5](#) Final Actions.

Install a new IBT belt assembly, [PL 90.30 Item 1](#). After installing a new IBT belt assembly, enter [dC135](#) code 954-820 to reset the HFSI value for the BTR unit. **The fault persists.**

Y N

Perform [SCP 5](#) Final Actions.

A

If the fault persists, install a new motor drive PWB [PL 1.10 Item 2](#). Enter [dC675](#), perform the Registration Control Setup Cycle.

091-328, 329, 330, 331 Drum CRUM Communication Error RAP

BSD-ON:[BSD 90.3 Drum Life Control \(Y, M\)](#)

BSD-ON:[BSD 90.4 Drum Life Control \(C, K\)](#)

091-328 Black Drum cartridge CRUM authentication IC communication error.

091-329 Yellow Drum cartridge CRUM authentication IC communication error.

091-330 Magenta Drum cartridge CRUM authentication IC communication error.

091-331 Cyan Drum cartridge CRUM authentication IC communication error.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Remove the drum cartridge causing the fault.
2. Check the drum cartridge CRUM and connector for damage and contamination.
3. Install the drum cartridge back into the machine.
4. Switch off, then switch on the machine, [GP 10](#).
5. Remove the drum cartridge causing the fault, then install a new drum cartridge. If the fault persists, check the wiring of the drum causing the fault between:
 - Drum cartridge CRUM (K), [P/J123](#) and the motor drive PWB, [P/J418](#).
 - Drum cartridge CRUM (C), [P/J122](#) and the motor drive PWB, [P/J418](#).
 - Drum cartridge CRUM (M), [P/J121](#) and the motor drive PWB, [P/J418](#).
 - Drum cartridge CRUM (Y), [P/J120](#) and the motor drive PWB, [P/J418](#).
6. If the fault persists, install new components as necessary:
 - Drum cartridge, [PL 90.15 Item 2 \(K\)](#).
 - Drum cartridge, [PL 90.15 Item 3 \(C\)](#).
 - Drum cartridge, [PL 90.15 Item 4 \(M\)](#).
 - Drum cartridge, [PL 90.15 Item 5 \(Y\)](#).
 - Motor drive PWB, [PL 1.10 Item 2](#).
 - Controller PWB assembly, [PL 3.05 Item 1](#).

091-400, 405, 910, 911 Waste Toner Cartridge RAP

BSD-ON:[BSD 90.20 Waste Toner Disposal](#)

091-400 Waste cartridge is nearly full.

091-405 Waste cartridge is pre nearly full.

091-910 Waste cartridge is not positioned.

091-911 Waste cartridge is full.

Procedure

Check the waste cartridge, [PL 90.15 Item 6](#). **The waste cartridge is full or nearly full.**

Y N

Enter [dC330](#) code 091-201, waste toner cartridge full sensor, [PL 90.20 Item 6](#). Actuate the sensor. **The display changes.**

Y N

Check the waste toner cartridge full sensor, refer to:

- [GP 7](#) How to check a sensor.
- [BSD 90.20 Waste Toner Disposal](#).

If necessary, install new parts:

- Waste toner cartridge full sensor, [PL 90.20 Item 6](#).
- Motor Drive PWB, [PL 1.10 Item 2](#).

Enter [dC330](#) code 091-200, waste toner cartridge position sensor, [PL 90.20 Item 7](#). Actuate the sensor. **The display changes.**

Y N

Check the waste toner cartridge full sensor, refer to:

- [GP 7](#) How to check a sensor.
- [BSD 90.20 Waste Toner Disposal](#).

If necessary, install new parts:

- Waste toner cartridge position sensor, [PL 90.20 Item 7](#).
- Motor Drive PWB, [PL 1.10 Item 2](#).

Check that the waste cartridge seats correctly in the machine and is not distorted or damaged, If necessary install a new waste cartridge, [PL 90.15 Item 6](#).

Correctly dispose of the used waste cartridge, then install a new waste cartridge, [PL 90.15 Item 6](#).

091-401, 411, 421, 431, 406, 416, 426, 436 Drum Cartridge Near End of Life RAP

091-401 Black drum cartridge is near end of life.

091-411 Yellow drum cartridge is near end of life.

091-421 Magenta drum cartridge is near end of life.

091-431 Cyan drum cartridge is near end of life.

091-406 Black drum cartridge is near end of life.

091-416 Yellow drum cartridge is near end of life.

091-426 Magenta drum cartridge is near end of life.

091-436 Cyan drum cartridge is near end of life.

Procedure

Information only. No service action necessary. Advise the customer that the drum cartridge is near end of life.

091-402, 424, 480, 481, 482, 913 Drum Cartridge Life Over RAP

091-402 Drum cartridge K life over.

091-424 Drum cartridge K life end.

091-480 Drum cartridge Y life over.

091-481 Drum cartridge M life over.

091-482 Drum cartridge C life over.

091-913 Drum cartridge K near life end.

Procedure

Install new components as necessary:

- Drum cartridge, [PL 90.15 Item 2](#) (K).
- Drum cartridge, [PL 90.15 Item 3](#) (C).
- Drum cartridge, [PL 90.15 Item 4](#) (M).
- Drum cartridge, [PL 90.15 Item 5](#) (Y).

091-916, 943, 944, 945 Drum CRUM Data Mismatch RAP

BSD-ON:[BSD 90.3 Drum Life Control \(Y, M\)](#)

BSD-ON:[BSD 90.4 Drum Life Control \(C, K\)](#)

091-916 Invalid authentication area data of black drum cartridge CRUM detected.

091-943 Invalid authentication area data of yellow drum cartridge CRUM detected.

091-944 Invalid authentication area data of magenta drum cartridge CRUM detected.

091-945 Invalid authentication area data of cyan drum cartridge CRUM detected.

Procedure

Perform the steps that follow:

1. Remove the drum cartridge causing the fault.
2. Check the drum cartridge CRUM and connector for damage and contamination.
3. Install the drum cartridge back into the machine.
4. Switch off, then switch on the machine, [GP 10](#).
5. If the fault persists, install a genuine Xerox drum cartridge:
 - Drum cartridge, [PL 90.15 Item 2 \(K\)](#).
 - Drum cartridge, [PL 90.15 Item 3 \(C\)](#).
 - Drum cartridge, [PL 90.15 Item 4 \(M\)](#).
 - Drum cartridge, [PL 90.15 Item 5 \(Y\)](#).

091-921, 927, 928, 929 Check the (Y/M/C/K) Drum Cartridge R1 Position RAP

BSD-ON:[BSD 90.3 Drum Life Control \(Y, M\)](#)

BSD-ON:[BSD 90.4 Drum Life Control \(C, K\)](#)

091-921 Check the Black Drum Cartridge R1 Position.

091-927 Check the Yellow Drum Cartridge R1 Position.

091-928 Check the Magenta Drum Cartridge R1 Position.

091-929 Check the Cyan Drum Cartridge R1 Position.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Remove the drum cartridge causing the fault.
2. Check the drum cartridge CRUM and connector for damage and contamination.
3. Install the drum cartridge back into the machine.
4. Switch off, then switch on the machine, [GP 10](#).
5. Remove the drum cartridge causing the fault, then install a new drum cartridge. If the fault persists, check the wiring of the drum causing the fault between:
 - Drum cartridge CRUM (K), [P/J123](#) and the motor drive PWB, [P/J418](#).
 - Drum cartridge CRUM (C), [P/J122](#) and the motor drive PWB, [P/J418](#).
 - Drum cartridge CRUM (M), [P/J121](#) and the motor drive PWB, [P/J418](#).
 - Drum cartridge CRUM (Y), [P/J120](#) and the motor drive PWB, [P/J418](#).
6. If the fault persists, install new components as necessary:
 - Drum cartridge, [PL 90.15 Item 2 \(K\)](#).
 - Drum cartridge, [PL 90.15 Item 3 \(C\)](#).
 - Drum cartridge, [PL 90.15 Item 4 \(M\)](#).
 - Drum cartridge, [PL 90.15 Item 5 \(Y\)](#).
 - Motor drive PWB, [PL 1.10 Item 2](#).
 - Controller PWB assembly, [PL 3.05 Item 1](#).

092-312, 313, 314, 315 ATC System Fail RAP

BSD-ON:BSD 90.13 Development Y

BSD-ON:BSD 90.14 Development M

BSD-ON:BSD 90.15 Development C

BSD-ON:BSD 90.16 Development K

092-312 The ATC sensor output that detects the Toner density in the (Y) Developer Housing Assembly is continuously abnormal. This occurs when the number of continuous occurrence of ATC Average Fail or ATC Amplitude Fail of the (Y) color has reached or exceeded the threshold value.

092-313 The ATC sensor output that detects the Toner density in the (M) Developer Housing Assembly is continuously abnormal. This occurs when the number of continuous occurrence of ATC Average Fail or ATC Amplitude Fail of the (M) color has reached or exceeded the threshold value.

092-314 The ATC sensor output that detects the Toner density in the (C) Developer Housing Assembly is continuously abnormal. This occurs when the number of continuous occurrence of ATC Average Fail or ATC Amplitude Fail of the (C) color has reached or exceeded the threshold value.

092-315 The ATC sensor output that detects the Toner density in the (K) Developer Housing Assembly is continuously abnormal. This occurs when the number of continuous occurrence of ATC Average Fail or ATC Amplitude Fail of the (K) color has reached or exceeded the threshold value.

Initial Actions

- Switch off, then switch on the machine, [GP 10](#).
- The fail is normally cleared by [GP 10](#) allowing resuming of print jobs; however, when the fail occurrence count has reached the specified value, it can no longer be cleared by [GP 10](#). To release, clear the following NVM value of the applicable color to '0'. Furthermore, if the machine is not returned to normal status, this fail will occur again during the operation.

Enter [dC131](#), NVM Read/Write, then enter the following codes to view the NVM values and change value to (0) for the applicable color:

- ATC System Fail
 - (Y) 745-131
 - (M) 745-132
 - (C) 745-133
 - (K) 745-134
- ATC System Fail Continuous Count
 - (Y) 745-147
 - (M) 745-148
 - (C) 745-149
 - (K) 745-150

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: When this fault occurs, toner density control, by the ATC sensor, is not performed and ICDC (pixels) based toner supply control is performed instead. If the fault remains for a long time, an image density error (too dark or too light) may occur.

Enter [dC125](#). Check for the below faults and perform the applicable procedures as necessary:

- [092-657](#), [658](#), [659](#), [660](#) ATC Amplitude Fail RAP
- [092-665](#), [666](#), [667](#), [668](#) ATC Average Fail RAP

NOTE: After the repair, clear the NVM value listed under [Effect] to '0'.

092-649, 650, 651 ADC Shutter/Sensor Fail RAP

BSD-ON: [BSD 60.3 Color Registration](#)

092-649 ADC Shutter Open Fail.

092-651 ADC Shutter Close Fail.

092-651 ADC sensor Fail.

Initial Actions

An ADC sensor malfunction, abnormality in electrical system, or abnormality in transfer belt reflection output has occurred.

1. Enter Diagnostics [GP 1](#), then [dC125](#) Active Faults, to view the fault history.
2. Check for the following faults and perform the RAP associated:
 - [041-345](#) Motor Drive PWB F2 Fuse Fail RAP
 - [041-356](#) Motor Drive PWB F11 Fuse Fail RAP

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

To prevent light-induced fatigue, cover the Drum with a black sheet when removing the Drum Cartridge. In addition, do not touch the Drum surface.

Refer to the procedure that follows as necessary:

- [GP 7](#) How to Check a Sensor.

Perform [dC937](#), Procon On/Off Print. **All results are OK.**

Y N
Enter [dC131](#) NVM Read / Write to check the following NVM values.

- 752-062 ADC_Vdark
- 752-063 ADC_Vclose
- 752-064 ADC_Diffusion Vcln
- 752-065 ADC_Mirror Vcln

All the values are 10 or higher.

Y N
Check the wiring between the motor drive PWB [P/J416](#) and the ADC sensor (MOB/ADC sensor Assembly) [P/J153](#) for open circuit, short circuit, and poor contact. If the fault persists, install new components as necessary:

- MOB/ADC sensor assembly, [PL 90.30 Item 4](#).

NOTE: After replacement of the MOB/ADC sensor assembly, enter *Diagnostics*, then perform [dC675](#) Registration Control Setup Cycle, then [dC937](#) Procon On/Off Print in sequence.

- Motor drive PWB, [PL 1.10 Item 2](#).

Enter [dC330](#), code 092-003 (Shutter Open) and [dC330](#), code 092-004 (Shutter Close) alternately. **During shutter open/close, operation noise of the shutter can be heard.**

Y N
Measure the voltage between the motor drive PWB [P/J416](#) pin6 (+24VDC) and ground. **The voltage is +24VDC.**

Y N
Perform [041-345](#) Motor Drive PWB F2 Fuse Fail RAP.

Measure voltage of the following:

- Enter [dC330](#), code 092-003 (Shutter On), between the motor drive PWB [P/J416](#) pin7 (+24VDC) and GND(-) [P/J416](#) pin8.
- Enter [dC330](#), code 092-004 (Shutter Close), between the motor drive PWB [P/J416](#) pin5 (+24VDC) and GND(-) [P/J416](#) pin8.

The voltages are +24VDC for all.

Y N
Switch off the machine, [GP 10](#). Disconnect the motor drive PWB [P/J416](#) and measure the resistances between [P/J416](#) pin5 and pin6 and between [P/J416](#) pin6 and pin7. **The resistance between pin-5 and pin-6 is approximately 24 Ohm and the resistance between pin-6 and pin-7 approximately 8 Ohm.**

Y N
Switch off the machine, [GP 10](#). Check the wiring between the motor drive PWB [P/J416](#) and the shutter solenoid, [PL 90.30 Item 13](#), [P/J152](#), for open circuit, short circuit, and poor contact. If no problem is found, install a new MOB/ADC sensor assembly, [PL 90.30 Item 4](#).

NOTE: After replacement of the MOB/ADC sensor assembly, enter *Diagnostics*, then perform [dC675](#) Registration Control Setup Cycle, then [dC937](#) Procon On/Off Print in sequence.

Switch off the machine, [GP 10](#). Check the wiring between the motor drive PWB [P/J416](#) and the ADC sensor (MOB/ADC sensor assembly) [P/J153](#) for open circuit, short circuit, and poor contact. If the fault persists, install new components as necessary:

- MOB/ADC sensor Assembly, [PL 90.30 Item 4](#).

NOTE: After replacement of the MOB/ADC sensor assembly, enter *Diagnostics*, then perform [dC675](#) Registration Control Setup Cycle, then [dC937](#) Procon On/Off Print in sequence.

- Motor drive PWB, [PL 1.10 Item 2](#).

Install a new motor drive PWB, [PL 1.10 Item 2](#)

Enter [dC131](#) NVM Read / Write to check the following NVM values.

- 752-062 ADC_Vdark
- 752-063 ADC_Vclose

Both NVM values are within range of 0 to 50.

Y N

Switch off the machine, [GP 10](#). Check the wiring between the motor drive PWB [P/J416](#) and the ADC sensor (MOB/ADC sensor assembly) [P/J153](#) for open circuit, short circuit, and poor contact.

If the fault persists, install new components as necessary:

- MOB/ADC sensor assembly, [PL 90.30 Item 4](#).

NOTE: After replacement of the MOB/ADC sensor assembly, enter *Diagnostics*, then perform [dC675 Registration Control Setup Cycle](#), then [dC937 Procon On/Off Print](#) in sequence.

- Motor drive PWB, [PL 1.10 Item 2](#).

Pull out the IBT belt unit. **The IBT belt is free of contamination, foreign substances, or damage.**

Y N

Install a new IBT belt, [PL 90.35 Item 9](#).

NOTE: After replacement of the IBT belt, enter *Diagnostics*, then perform [dC675 Registration Control Setup Cycle](#), then [dC937 Procon On/Off Print](#), in sequence.

Remove the MOB ADC assembly and check the detection surface of the ADC sensor for contamination. If it is contaminated, clean it.

If the problem persists, install a new MOB/ADC sensor assembly, [PL 90.30 Item 4](#).

NOTE: After replacement of the MOB/ADC sensor assembly, enter *Diagnostics*, then perform [dC675 Registration Control Setup Cycle](#), then [dC937 Procon On/Off Print](#) in sequence.

Run [dC937 Procon On/Off Print](#) continuously, several number of times. **The fault persists.**

Y N

No action necessary.

Install a new parts in sequence as necessary:

1. MOB/ADC sensor assembly, [PL 90.30 Item 4](#).
2. Motor drive PWB, [PL 1.10 Item 2](#).
3. IBT belt, [PL 90.35 Item 9](#).
4. LVPS, [PL 1.15 Item 3](#).

NOTE: After replacement of the MOB/ADC sensor assembly, enter *Diagnostics*, then perform [dC675 Registration Control Setup Cycle](#), then [dC937 Procon On/Off Print](#) in sequence.

092-657, 658, 659, 660 ATC Amplitude Fail RAP

BSD-ON:[BSD 90.13 Development Y](#)

BSD-ON:[BSD 90.14 Development M](#)

BSD-ON:[BSD 90.15 Development C](#)

BSD-ON:[BSD 90.16 Development K](#)

092-657 Toner density in the developer unit as detected by the yellow ATC sensor abnormal. This fault occurs when the difference between the maximum and minimum values in the ATC sensor measurement set is lower than the threshold value.

092-658 Toner density in the developer unit as detected by the magenta ATC sensor abnormal. This fault occurs when the difference between the maximum and minimum values in the ATC sensor measurement set is lower than the threshold value.

092-659 Toner density in the developer unit as detected by the cyan ATC sensor abnormal. This fault occurs when the difference between the maximum and minimum values in the ATC sensor measurement set is lower than the threshold value.

092-660 Toner density in the developer unit as detected by the black ATC sensor abnormal. This fault occurs when the difference between the maximum and minimum values in the ATC sensor measurement set is lower than the threshold value.

Initial Actions

- Perform RAP [IQ1](#) to check for a blank page image quality defect.
- Enter *Diagnostics*, [GP 1](#), [dC125 Active Faults](#). Check for the below faults and perform the applicable procedures as necessary:
 - [043-345, 346](#) YMC Motor Fail RAP
 - [042-324, 385](#) K_IBT Drive Motor Fail RAP

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: To prevent light-induced fatigue, cover the Drum with a black sheet when removing the Drum Cartridge. In addition, do not touch the Drum surface.

Refer to the procedure that follows as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Enter *Diagnostics*, [GP 1](#). Perform [dC937 Procon On/Off Print](#), check the result of ATC Amplitude Fail. **All the results are good.**

Y N

Check the Measured ATC Amplitude value of the applicable color. **The value is 20 or higher.**

A

Y N

The ATC sensor may be malfunctioning. Switch off the machine, [GP 10](#). Check the wiring of the applicable color for open circuits, short circuits, and poor contacts.

- Between the ATC sensor (Y) [P/J127](#) and the motor drive PWB [P/J418](#)
- Between the ATC sensor (M) [P/J126](#) and the motor drive PWB [P/J424](#)
- Between the ATC sensor (C) [P/J125](#) and the motor drive PWB [P/J424](#)
- Between the ATC sensor (K) [P/J124](#) and the motor drive PWB [P/J424](#)

If the fault persists, install new components as necessary:

- Developer housing kit, [PL 90.05 Item 4](#).

NOTE: After replacing the Developer Housing Assembly, perform [dC950 ATC Sensor Setup](#), then [dC949 Default Developer ATC Setup](#) for the applicable color.

- Motor drive PWB [PL 1.10 Item 2](#).

Check the density of the image that was output by Procon ON Print.

NOTE: If any of the symptoms indicated in Initial Actions has appeared or the same symptom reappeared, perform the procedures in Initial Actions required before continuing.

Is the density normal.

Y N

Switch off the machine, [GP 10](#). Remove the developer housing assembly, [PL 90.05](#). Rotate the drive gear in the developer housing assembly manually and check whether the auger is rotating. **The auger in the developer housing assembly rotates.**

Y N

Install a new developer housing kit, [PL 90.05 Item 4](#).

NOTE: After replacing the Developer Housing Assembly, perform [dC950 ATC Sensor Setup](#), then [dC949 Default Developer ATC Setup](#) for the applicable color.

Reinstall the developer housing assembly and run the developer motor of the applicable color.

- [dC330](#), code 042-008 (Deve YMC Motor)
- [dC330](#), code 042-003 (Drum_K/Deve_K/IBT Motor)

The developer motor rotates.

Y N

Perform the RAP that applies:

- [043-345, 346](#) YMC Motor Fail RAP
- [042-324, 385](#) K_IBT Drive Motor Fail RAP

The ATC sensor may be malfunctioning. Switch off the machine, [GP 10](#). Check the following wiring for open circuits, short circuits, and poor contacts.

- Between the ATC sensor (Y) [P/J127](#) and the motor drive PWB [P/J418](#)
- Between the ATC sensor (M) [P/J126](#) and the motor drive PWB [P/J424](#)
- Between the ATC sensor (C) [P/J125](#) and the motor drive PWB [P/J424](#)
- Between the ATC sensor (K) [P/J124](#) and the motor drive PWB [P/J424](#)

If the fault persists, install new components as necessary:

A B

- Developer housing kit, [PL 90.05 Item 4](#).

NOTE: After replacing the Developer Housing Assembly, perform [dC950 ATC Sensor Setup](#), then [dC949 Default Developer ATC Setup](#) for the applicable color.

- Motor drive PWB [PL 1.10 Item 2](#).

Install a new developer housing kit, [PL 90.05 Item 4](#).

NOTE: After replacing the Developer Housing Assembly, perform [dC950 ATC Sensor Setup](#), then [dC949 Default Developer ATC Setup](#) for the applicable color.

If the problem persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

Enter Diagnostics, [GP 1](#). Perform [dC937 Procon On/Off Print](#) continuously several numbers of times. **Fail occurs.**

Y N

No further action is required as this could have been due to a temporary change in Toner density.

Install new components as necessary:

- Developer housing kit, [PL 90.05 Item 4](#).
- Motor drive PWB, [PL 1.10 Item 2](#).

NOTE: If the Developer Housing Assembly was replaced, perform [dC950 ATC Sensor Setup](#), then [dC949 Default Developer ATC Setup](#) for the applicable color.

A B

092-665, 666, 667, 668 ATC Average Fail RAP

BSD-ON: [BSD 90.13 Development Y](#)

BSD-ON: [BSD 90.14 Development M](#)

BSD-ON: [BSD 90.15 Development C](#)

BSD-ON: [BSD 90.16 Development K](#)

092-665 Toner density in the developer unit as detected by the yellow ATC sensor abnormal. This fault occurs when the average value of the ATC sensor measurement values is not between the upper and lower limit values.

092-666 Toner density in the developer unit as detected by the magenta ATC sensor abnormal. This fault occurs when the average value of the ATC sensor measurement values is not between the upper and lower limit values.

092-667 Toner density in the developer unit as detected by the cyan ATC sensor abnormal. This fault occurs when the average value of the ATC sensor measurement values is not between the upper and lower limit values.

092-668 Toner density in the developer unit as detected by the black ATC sensor abnormal. This fault occurs when the average value of the ATC sensor measurement values is not between the upper and lower limit values.

Initial Actions

- Perform RAP [IQ1](#) to check for a blank page image quality defect.
- Enter [dC125](#). Check for the below faults and perform the applicable procedures as necessary:
 - [092-657, 658, 659, 660](#) ATC Amplitude Fail Y/M/C/K RAP
 - [024-923, 924, 925](#) Toner Cartridge Y/M/C Empty RAP
 - [093-912](#) Toner Cartridge K Empty RAP
 - [043-345, 346](#) YMC Motor Fail RAP
 - [042-324, 385](#) K_IBT Drive Motor Fail RAP

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: To prevent light-induced fatigue, cover the Drum with a black sheet when removing the Drum. In addition, do not touch the Drum surface.

Refer to the procedure that follows as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Enter Diagnostics, [GP 1](#). Perform [dC937](#) Procon On/Off Print, check the result of ATC Amplitude Fail. **All the results are good.**

Y N

Check the Measured ATC Amplitude value of the applicable color. **The value is 20 or higher.**

Y N

The ATC sensor may be malfunctioning. Switch off the machine, [GP 10](#). Check the wiring of the applicable color for open circuits, short circuits, and poor contacts.

- Between the ATC sensor (Y) [P/J127](#) and the Motor Drive PWB [P/J418](#)
- Between the ATC sensor (M) [P/J126](#) and the Motor Drive PWB [P/J424](#)
- Between the ATC sensor (C) [P/J125](#) and the Motor Drive PWB [P/J424](#)
- Between the ATC sensor (K) [P/J124](#) and the Motor Drive PWB [P/J424](#)

The wiring is good.

Y N

Repair the wiring.

The fault persists.

Y N

Perform [SCP 5](#) Final Actions.

Install new components as necessary:

- Developer housing kit, [PL 90.05 Item 4](#).

NOTE: After replacing the Developer Housing Assembly, perform [dC950](#) ATC Sensor Setup, then [dC949](#) Default Developer ATC Setup for the applicable color.

- Motor drive PWB [PL 1.10 Item 2](#).

Check the density of the image that was output by Procon ON Print.

NOTE: If any of the symptoms indicated in Initial Actions has appeared or the same symptoms recur, perform the procedures required before continuing.

The density is normal.

Y N

The toner density may be abnormal. **The value of measured ATC average on the procon on print display screen is 1000 or higher (toner density is light).**

Y N

Install a new developer housing kit, [PL 90.05 Item 4](#).

NOTE: After replacing the Developer Housing Assembly, perform [dC950](#) ATC Sensor Setup, then [dC949](#) Default Developer ATC Setup for the applicable color.

The toner density was detected to be abnormally light. Perform the following:

1. Check the faulty toner cartridge for toner, if there is no toner in the cartridge, install a new toner cartridge, [PL 90.10](#).
2. Enter [dC330](#), code 093-009/010/011/012 (Y/M/C/K) to run the toner dispense motor of the applicable color. If the problem persists, install a new toner dispense motor assembly, [PL 90.10 Item 1](#).
3. Check the toner dispense path between the toner cartridge and the developer housing assembly for occurrence of toner blockage.

A B

After removing the cause for the density error, perform **dC991** Tone Up/Down to recover the toner density. Adjust the ATC Average Value within [+/-15] of the ATC Target Value. **The fail has stopped occurring.**

Y N

The ATC sensor may be malfunctioning. Switch off the machine, **GP 10**, then check the wiring of the applicable color for open circuits, short circuits, and poor contacts.

- Between the ATC sensor (Y) **P/J127** and the Motor Drive PWB **P/J418**
- Between the ATC sensor (M) **P/J126** and the Motor Drive PWB **P/J424**
- Between the ATC sensor (C) **P/J125** and the Motor Drive PWB **P/J424**
- Between the ATC sensor (K) **P/J125** and the Motor Drive PWB **P/J424**

The fault persists.

Y N

Perform **SCP 5** Final Actions.

Install new components as necessary:

- Developer housing kit, **PL 90.05 Item 4**.

NOTE: After replacing the Developer Housing Assembly, perform **dC950** ATC Sensor Setup, then **dC949** Default Developer ATC Setup for the applicable color.

- Motor drive PWB, **PL 1.10 Item 2**.

Perform **SCP 5** Final Actions.

Install a new developer housing kit, **PL 90.05 Item 4**.

NOTE: After replacing the Developer Housing Assembly, perform **dC950** ATC Sensor Setup, then **dC949** Default Developer ATC Setup for the applicable color.

The fault persists.

Y N

Perform **SCP 5** Final Actions.

Install a new motor drive PWB, **PL 1.10 Item 2**.

Enter Diagnostics, **GP 1**. Perform **dC937** Procon On/Off Print continuously several numbers of times. **A fail occurs.**

Y N

Perform **SCP 5** Final Actions.

Install new components as necessary in sequence. Perform **dC937** Procon On/Off Print continuously several numbers of times after each part installation to verify the fault recurs or not. End component installation when the fault ends:

1. Toner cartridge, **PL 90.10**.
2. Developer housing kit, **PL 90.05 Item 4**.
3. Dispenser assembly, **PL 90.10**.
4. Motor drive PWB, **PL 1.10 Item 2**.
5. Developer bias HVPS PWB, **PL 1.15 Item 4**.
6. BCR HVPS PWB, **PL 1.20 Item 4**.

NOTE: After replacing the Developer Housing Assembly, perform **dC950** ATC Sensor Setup, then **dC949** Default Developer ATC Setup for the applicable color.

092-670, 671, 672, 673 ADC Patch Fail RAP

BSD-ON:BSD 60.3 Color Registration

092-670 The density of the yellow (Y) ADC patch is out of specification range or the ADC sensor is malfunctioning.

092-671 The density of the magenta (M) ADC patch is out of specification range or the ADC sensor is malfunctioning.

092-672 The density of the cyan (C) ADC patch is out of specification range or the ADC sensor is malfunctioning.

092-673 The density of the black (K) ADC patch is out of specification range or the ADC sensor is malfunctioning.

Initial Actions

- Perform RAP [IQ1](#) to check for out of specification density color image quality defect.
- Enter [dC122](#), Shutdown History. Check for the below faults and perform the applicable procedures as necessary:
 - [024-933, 940, 941](#) Drum Cartridge Y/M/C Life End RAP
 - [091-402, 424, 480, 481, 482, 913](#) Drum Cartridge Life End RAP
 - [043-345, 346](#) YMC Motor Fail RAP
 - [042-324, 385](#) K_IBT Motor Fail RAP
 - [060-341 to 060-356](#) LPH System Fail RAP
 - [060-357, 358, 359, 360](#) CONTIF Error Fail RAP
 - [061-354, 355, 356, 357, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 390, 391, 392, 393](#) LPH System Fail RAP
 - [061-358, 359, 360, 361](#) LPH Configuration RAP
 - [Chain 089](#) Entry RAP
 - [092-312, 313, 314, 315](#) ATC System Fail Y/M/C/K RAP
 - [092-657, 658, 659, 660](#) ATC Amplitude Fail Y/M/C/K RAP
 - [092-665, 666, 667, 668](#) ATC Average Fail Y/M/C/K RAP
 - [093-400, 423, 424, 425](#) Toner Cartridge Y/M/C/K Near Empty RAP
 - [094-318](#) 1st BTR Position Fail RAP
 - [094-418, 420, 421, 422](#) IBT / 2nd BTR Roll End RAP

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: To prevent light-induced fatigue, cover the drum with a black sheet when removing the drum cartridge. In addition, do not touch the drum surface.

Refer to the procedure that follows as necessary:

- [GP 6](#) How to Check a Motor.

- [GP 7](#) How to Check a Sensor.

Enter Diagnostics, [GP 1](#). Perform [dC937](#) Procon On/Off Print, check the result of ATC Amplitude and ATC Average Fail. **All the results are OK.**

Y N

Go to the appropriate procedure:

- [092-657, 658, 659, 660](#) ATC Amplitude Fail Y/M/C/K RAP.
- [092-665, 666, 667, 668](#) ATC Average Fail Y/M/C/K RAP.

Check the result of ADC Patch Fail. **All the results are OK.**

Y N

Check the following output images:

1. Has the overall image density of the image output by ProCon ON/OFF Print become lighter?
2. Use Test Pattern to output the Full Halftone Image (Pattern No. 9) for the applicable color. Does the output image contain blank areas or has become extremely light at the FS direction center section (ADC patch position)?

The image density is normal?

Y N

Perform the following:

1. Perform all [Initial Actions](#) procedures required in [dC122](#), Shutdown History.
 2. Check the toner cartridge has toner. If the toner cartridge is empty, install a new toner cartridge, [PL 90.10](#).
 3. Check the drum assembly for contamination, foreign matter, or damage. If contaminated or damaged, install a new drum assembly, [PL 90.15](#).
 4. Check the amount of toner in the developer housing. Rotate the gear in clockwise. If the tone is low at feed entrance, center section on the developer housing assembly mag roll, or the toner remains low after rotating the gear. Install a new developer housing kit, [PL 90.05 Item 4](#).
 5. Enter [dC330](#), code 093-009/010/011/012 (Y/M/C/K). Run the toner dispense motor for each color. If excessive or abnormal noise, damage, or forced rotation exists. Install a new toner dispense motor assembly, [PL 90.10 Item 1](#).
 6. Check the LPH assembly for contamination. If it is contaminated, clean the LPH assembly. If the LPH assembly is damaged, install a new LPH assembly, [PL 60.05](#).
 7. Check the wiring between:
 - The BCR HVPS PWB and the drum cartridge.
 - The developer bias HVPS PWB and the magnet roll of the drum cartridge.
 - The BTR HVPS PWB and the 1st and 2nd BTR roll.for open circuits, short circuits, and poor contacts.
- If the fault persists, install new components as necessary:
- BCR HVPS PWB, [PL 1.20 Item 4](#).
 - developer bias HVPS PWB, [PL 1.15 Item 4](#).
 - BTR HVPS PWB, [PL 1.05 Item 1](#).

If the ADC Patch is light, check the IBT belt and the 1st BTR center section, the ADC patch position, for contamination, foreign substances, damage, and etc. **The IBT belt and 1st BTR are good.**

A

Y N

Install a new:

- IBT belt assembly, [PL 90.30 Item 1](#).

NOTE: After replacing the Developer Housing Assembly, perform [dC950 ATC Sensor Setup](#), then [dC949 Default Developer ATC Setup](#) for the applicable color.

- IBT belt cleaner assembly, [PL 90.30 Item 2](#).

Check the ADC sensor for any abnormality. Switch off the machine, [GP 10](#). Perform the steps that follow:

1. Check the MOB/ADC sensor assembly, [PL 90.30 Item 4](#), for improper installation, contamination, foreign substances at the detection section, and snagged shutter.
2. Check the wiring between the below components below for open circuit, short circuit, and poor contact.
 - The motor drive PWB and the MOB/ADC sensor assembly [P/J609](#).
 - The motor drive PWB and the MOB/ADC sensor assembly [P/J608](#).
 - The motor drive PWB and the MOB/ADC sensor assembly [P/J610](#).
3. If the fault persists, install new components as necessary:
 - MOB/ADC sensor assembly, [PL 90.30 Item 4](#).

NOTE: After replacing the Developer Housing Assembly, perform [dC950 ATC Sensor Setup](#), then [dC949 Default Developer ATC Setup](#) for the applicable color.

- Motor drive PWB, [PL 1.10 Item 2](#).

Run [dC937 Procon On/Off Print](#) continuously several number of times. **Does the Fail occur.**

Y N

Perform [SCP 5 Final Actions](#).

Install new components as necessary, in sequence. Perform [dC937 Procon On/Off Print](#) continuously several numbers of times after each part installation to verify the fault recurs or not.

End component installation when the fault ends:

1. MOB/ADC sensor assembly, [PL 90.30 Item 4](#).
2. IBT belt assembly, [PL 90.30 Item 1](#).
3. IBT belt cleaner assembly, [PL 90.30 Item 2](#).
4. Toner cartridge, [PL 90.10](#).
5. Drum assembly, [PL 90.15](#).
6. LPH assembly, [PL 60.05](#).
7. Developer housing kit, [PL 90.05 Item 4](#).
8. BCR HVPS PWB, [PL 1.20 Item 4](#).
9. Developer bias HVPS PWB, [PL 1.15 Item 4](#).
10. BTR HVPS PWB, [PL 1.05 Item 1](#).
11. Dispenser assembly, [PL 90.10](#).
12. FFC cable assembly kit, [PL 60.05 Item 9](#).
13. Motor drive PWB, [PL 1.10 Item 2](#).

NOTE: After replacing the Developer Housing Assembly, perform [dC950 ATC Sensor Setup](#), then [dC949 Default Developer ATC Setup](#) for the applicable color.

092-675, 676, 677, 678 ADC MiniSetup Fail RAP

BSD-ON:BSD 60.3 Color Registration

092-675 The yellow ADC tone patch is abnormally light or a fault in the ADC sensor was detected.

092-676 The magenta ADC tone patch is abnormally light or a fault in the ADC sensor was detected.

092-677 The cyan ADC tone patch is abnormally light or a fault in the ADC sensor was detected.

092-678 The black ADC tone patch is abnormally light or a fault in the ADC sensor was detected.

Initial Action

- Perform RAP [IQ1](#) to check for a low density color or white vertical streaks image quality defect.
- Enter [dC122](#), Shutdown History. Check for the faults listed below and perform the applicable procedures as necessary:
 - [024-933](#), [940](#), [941](#) Drum Cartridge Y/M/C Life End RAP
 - [091-402](#), [424](#), [480](#), [481](#), [482](#), [913](#) Drum Cartridge Life End RAP
 - [043-345](#), [346](#) YMC Motor Fail RAP
 - [042-324](#), [385](#) K_IBT Motor Fail RAP
 - [060-341](#) to [060-356](#) LPH System Fail RAP
 - [060-357](#), [358](#), [359](#), [360](#) CONTIF Error Fail RAP
 - [061-354](#), [355](#), [356](#), [357](#), [362](#), [363](#), [364](#), [365](#), [366](#), [367](#), [368](#), [369](#), [370](#), [371](#), [372](#), [373](#), [390](#), [391](#), [392](#), [393](#) LPH System Fail RAP
 - [061-358](#), [359](#), [360](#), [361](#) LPH Configuration RAP
 - [Chain 089 Entry RAP](#)
 - [092-312](#), [313](#), [314](#), [315](#) ATC System Fail Y/M/C/K RAP
 - [092-657](#), [658](#), [659](#), [660](#) ATC Amplitude Fail Y/M/C/K RAP
 - [092-665](#), [666](#), [667](#), [668](#) ATC Average Fail Y/M/C/K RAP
 - [093-400](#), [423](#), [424](#), [425](#) Toner Cartridge Y/M/C/K Near Empty RAP
 - [094-318](#) 1st BTR Position Fail RAP
 - [094-418](#), [420](#), [421](#), [422](#) IBT / 2nd BTR Roll End RAP

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: To prevent light-induced fatigue, cover the drum with a black sheet when removing the drum cartridge. In addition, do not touch the drum surface.

Refer to the procedure that follows as necessary:

- [GP 6](#) How to Check a Motor.
- [GP 7](#) How to Check a Sensor.

Enter Diagnostics, [GP 1](#). Perform [dC937](#) Procon On/Off Print, check the result of ATC Average Fail, ATC Amplitude Fail, Temperature Fail, and Humidity Fail. **All the results are OK.**

Y N

Go to the appropriate FIP

- [092-657](#), [658](#), [659](#), [660](#) ATC Amplitude Fail Y/M/C/K RAP
- [092-665](#), [666](#), [667](#), [668](#) ATC Average Fail Y/M/C/K RAP

Check the value of ADC Measurement Min2 of the applicable color. **Is the value lower than '50'.**

Y N

The density of the print is normal.

Y N

Perform the following:

1. Perform all [Initial Action](#) procedures required in [dC122](#), Shutdown History.
2. Check the toner cartridge has toner. If the toner cartridge is empty, install a new toner cartridge, [PL 90.10](#).
3. Check the drum assembly for contamination, foreign matter, or damage. If contaminated or damaged, install a new drum assembly, [PL 90.15](#).
4. Check the amount of toner in the developer housing. Rotate the gear in clockwise. If the tone is low at feed entrance, center section on the developer housing assembly mag roll, or the toner remains low after rotating the gear. Install a new developer housing kit, [PL 90.05 Item 4](#).
5. Enter [dC330](#), code 093-009/010/011/012 (Y/M/C/K). Run the toner dispense motor for each color. If excessive or abnormal noise, damage, or forced rotation exists. Install a new toner dispense motor assembly, [PL 90.10 Item 1](#).
6. Check the LPH assembly for contamination. If it is contaminated, clean the LPH assembly. If the LPH assembly is damaged, install a new LPH assembly, [PL 60.05](#).
7. Check the wiring between the components below for open circuits, short circuits, and poor contacts.
 - The BCR HVPS PWB and the drum cartridge of the relevant color.
 - The developer bias HVPS PWB and the magnet roll of the relevant color.
 - The BTR HVPS PWB and the 1st BTR roll of the relevant color.for open circuits, short circuits, and poor contacts.

If the fault persists, install new components as necessary:

- BCR HVPS PWB, [PL 1.20 Item 4](#).

- Developer bias HVPS PWB, [PL 1.15 Item 4](#).
- BTR HVPS PWB, [PL 1.05 Item 1](#).

Enter [dC612](#), then print out Pattern No. 9 of the relevant color. **Uneven density has occurred in the in process direction.**

Y N

1. Check the MOB/ADC sensor assembly, [PL 90.30 Item 4](#), for improper installation, contamination, foreign substances at the detection section, and snagged shutter.
2. Check the wiring between the below components below for open circuit, short circuit, and poor contact.
 - The motor drive PWB and the MOB/ADC sensor assembly [P/J609](#).
 - The motor drive PWB and the MOB/ADC sensor assembly [P/J608](#).
 - The motor drive PWB and the MOB/ADC sensor assembly [P/J610](#).
3. If the fault persists, install new components as necessary:
 - MOB/ADC sensor assembly, [PL 90.30 Item 4](#).

NOTE: After replacing the Developer Housing Assembly, perform [dC950 ATC Sensor Setup](#), then [dC949 Default Developer ATC Setup](#) for the applicable color.

- Motor drive PWB, [PL 1.10 Item 2](#).

Uneven density is the cause. Perform [IQ1](#), Image Quality Entry RAP, followed by [IQ3](#), White Streaks, Spots or Uneven Density (38mm/1.5 inches) in the Cross Process Direction RAP:

1. Check the IBT belt for contamination, foreign substances, or damage. If the any issues exist, install a new IBT belt assembly, [PL 90.30 Item 1](#).

NOTE: After replacement of the IBT Belt, go to the Diag mode and perform [dC675 Registration Control Setup Cycle](#), then [dC937 Procon On/Off Print in sequence](#).

2. Check the drum cartridge of the relevant color for contamination, foreign matter, scratches on the drum. If any issues exist, install a new drum cartridge, [PL 90.15](#).
3. Check the wiring for between the components below for open circuit, short circuit, or and poor contact:
 - The BCR HVPS PWB and the drum cartridge of the relevant color.
 - The developer bias HVPS PWB and the magnet roll of the relevant color.
 - The BTR HVPS PWB and the 1st BTR roll of the relevant color.

If the fault persists, install new components as necessary:

- BCR HVPS PWB, [PL 1.20 Item 4](#).
- Developer bias HVPS PWB, [PL 1.15 Item 4](#).
- BTR HVPS PWB, [PL 1.05 Item 1](#).

4. Check the LPH assembly, [PL 60.05](#), of the relevant color for contamination. If it is contaminated, first clean the LPH assembly. If the fault persists, install a new LPH assembly, [PL 60.05](#).

Perform [SCP 5](#) Final Actions.

093-335, 336, 337, 338 Toner CRUM Authentication IC Is Not Available RAP

BSD-ON:[BSD 90.5 Toner Cartridge Life Control \(Y, M\)](#)

BSD-ON:[BSD 90.6 Toner Cartridge Life Control \(C, K\)](#)

093-335 Toner CRUM (K) authentication IC is not available.

093-336 Toner CRUM (Y) authentication IC is not available.

093-337 Toner CRUM (M) authentication IC is not available.

093-338 Toner CRUM (C) authentication IC is not available.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Switch off, then switch on the machine, [GP 10](#).
2. Remove, then reinstall the relevant toner cartridge.
3. Check the toner cartridge CRUM connector for damage and contamination. Use a dry cloth to wipe the joining terminal between the toner cartridge CRUM PWB and the connector assembly.
4. Check the wiring between the motor drive PWB, [P/J412](#), and the relevant CRUM connector:
 - [P/J117](#) Yellow.
 - [P/J118](#) Magenta.
 - [P/J119](#) Cyan.
 - [P/J634](#) Black.

for an open circuit, short circuit or poor contact.

5. If the fault persists, install an new:
 - Toner cartridge, [PL 90.10](#).
 - Motor drive PWB, [PL 1.10 Item 2](#).

093-400, 423, 424, 425 Toner Cartridge Near Empty RAP

093-400 Toner Cartridge K Near Empty.

093-423 Toner Cartridge Y Near Empty.

093-424 Toner Cartridge M Near Empty.

093-425 Toner Cartridge C Near Empty.

Procedure

Information only, no service action necessary, advise the customer relevant the toner cartridge is almost empty.

093-401, 402, 403, 916 Check the (Y/M/C/K) Toner Cartridge Position RAP

BSD-ON:[BSD 90.5 Toner Cartridge Life Control \(Y, M\)](#)

BSD-ON:[BSD 90.6 Toner Cartridge Life Control \(C, K\)](#)

093-401 Check the yellow toner cartridge (Y) position.

093-402 Check the magenta toner cartridge (M) position.

093-402 Check the cyan toner cartridge (C) position.

093-916 Check the black toner cartridge (K) position.

The Toner Cartridge CRUM is not in the proper position (loose CRUM).

Procedure

Perform the steps that follow:

1. Remove the relevant toner cartridge, check the toner cartridge CRUM for proper installation in the connector of the toner cartridge. Check the toner cartridge, CRUM connector of the toner cartridge, and the toner CRUM connector assembly for damage or foreign objects.
2. Reinstall the toner cartridge, switch off, then switch on the machine, [GP 10](#).

If the fault persists, install new components as necessary:

- Toner cartridge, [PL 90.10](#).
- Toner CRUM connector assembly, [PL 90.10 Item 3](#).

093-406, 407, 408, 409 Toner Cartridge Pre Near Empty RAP

093-406 Toner Cartridge K Pre Near Empty.

093-407 Toner Cartridge Y Pre Near Empty

093-408 Toner Cartridge M Pre Near Empty

093-409 Toner Cartridge C Pre Near Empty

Procedure

Information only, no service action necessary, advise the customer the relevant toner cartridge is almost empty.

093-912 Toner Cartridge (K) Empty RAP

093-912 The black toner cartridge is empty.

Procedure

Install a new (K) toner cartridge, [PL 90.10 Item 30](#).

093-926, 960, 961, 962 Toner CRUM Data Mismatch RAP

BSD-ON:BSD 90.5 Toner Cartridge Life Control (Y, M)

BSD-ON:BSD 90.6 Toner Cartridge Life Control (C, K)

093-926 Invalid authentication area data of black toner cartridge CRUM detected.

093-960 Invalid authentication area data of yellow toner cartridge CRUM detected.

093-961 Invalid authentication area data of magenta toner cartridge CRUM detected.

093-962 Invalid authentication area data of cyan toner cartridge CRUM detected.

Procedure

Perform the steps that follow:

1. Remove the toner cartridge. Check the toner cartage is a genuine Xerox part. Reinstall the toner cartridge.
2. If the fault persists, install a new genuine Xerox toner cartridge, [PL 90.10](#).

094-318 1st BTR Position Fail

BSD-ON:BSD 90.17 1st BTR Contact/retract

094-318 Contact or retract operation does not finish after specified time has passed from the start of 1st BTR contact/retract operation.

Procedure

Perform the steps that follow:

1. Check the BTR contact/retract sensor, [PL 40.05 Item 11](#) for improper installation.
2. Enter [dC330](#), code 094-200 to activate the BTR contact/retract sensor to verify proper operation.
3. Enter [dC330](#), code 094-008/009 (retract/contact). Activate the sensor in both modes to verify proper operation.

NOTE: During BTR contact/retract operation, check the fusing unit drive motor for rotation. If it is not rotating, check the BTR contact/retract clutch assembly and helical gear for blockage and damage.

4. Check the IBT belt assembly for mechanical loading or damage.

If the fault persists, install new components as necessary:

- BTR contact/retract sensor, [PL 40.05 Item 11](#).
- Motor drive PWB, [PL 1.10 Item 2](#).

094-417, 419 IBT / 2nd BTR Near End of Life RAP

BSD-ON:[BSD 3.1 PWB Communications \(Controller to Motor Drive PWB\)](#)

094-417 IBT is near end of life.

094-419 2nd BTR unit is near end of life.

Procedure

Information only, no service action necessary, advise the customer that the IBT belt assembly or 2nd BTR unit is almost at end of life.

094-418, 420, 421, 422 IBT / 2nd BTR Roll End RAP

BSD-ON:[BSD 90.17 1st BTR Contact/retract](#)

094-418 IBT cleaner unit near end warning.

094-420 IBT unit end warning.

094-421 IBT cleaner unit end warning.

094-422 2nd BTR unit end warning.

Procedure

Install new components as necessary:

- IBT belt assembly, [PL 90.30 Item 1](#).
- IBT belt cleaner assembly, [PL 90.30 Item 2](#).
- 2nd roll assembly, [PL 80.65 Item 17](#).

099-364 Fuser Temperature Fault RAP

BSD-ON:[BSD 10.4 Fusing Heat \(2 of 2\)](#)

099-364 The recovery time from low temperature not ready state has become longer than the setting time.

Procedure

Perform the following procedures as necessary:

1. Switch off, then switch on the machine, [GP 10](#).
2. Switch off the machine, [GP 10](#).
3. Check the wiring between the motor drive PWB, [P/J437](#) and fuser heater coil, [P/J196](#) for open circuit, short circuit, or damage.
4. Check the fuser drawer connector, [DP600/P600](#), and the chassis drawer connector, [DJ600/J600](#) for damage or obstruction.
5. Install new components as necessary:
 - Fuser heater coil, [PL 10.05 Item 15](#).
 - Fuser, [PL 10.05 Item 14](#).

099-373 Wind Around P/Roll Fail

BSD-ON:[BSD 10.5 Fusing](#)

099-373 Wound up, stuck paper was detected at the fuser pressure roll.

Procedure

1. Clear the paper from the fuser roll.
2. Switch off, then switch on the machine, [GP 10](#).
3. If the fault persists, install a new fuser, [PL 10.05 Item 14](#).

099-395 Fusing Motor Current Fail

BSD-ON:[BSD 10.1 Fusing Unit Drive](#)

099-395 The current value that is applied to the fuser motor has continuously exceeded the threshold for more than the specified time.

Procedure

Refer to [010-613](#) Fusing Motor Current Warning RAP

102-311 to 102-319 USB Dongle Errors RAP

102-311 USB dongle access failed during the initial installation by the USB dongle.

102-312 It was detected that MAC address of another M/C was recorded in the dongle during the initial installation by the USB dongle.

102-313 An illegal IOT speed setting key was detected during the initial installation by the USB dongle.

102-314 Setting the IOT speed setting key failed during the initial installation by the USB dongle.

102-315 Setting the SW Key failed during the initial installation by the USB dongle.

102-316 Setting the supply setting failed during the initial installation by the USB dongle.

102-317 Setting the page pack failed during the initial installation by the USB dongle.

102-318 Setting the country code failed during the initial installation by the USB dongle.

102-319 The NVM rewriting list process failed during the initial installation by the USB dongle.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Advise the customer to:

1. Follow the instructions on the local user interface to resolve the problem.

102-356 EWS Soft Fail RAP

102-356 Fatal error related to EWS.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10](#).
2. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
3. Initialise the hard disk, refer to [dC355 Hard Disk Diagnostics](#).
4. Reload the software, [GP 4](#).
5. Perform the [OF2 Special Boot Modes RAP, 06. HDD INITIALIZE MODE](#) to attempt restoring the HDD to default.
6. If the fault persists, install a new controller PWB assembly, [PL 3.10 Item 2](#).

112-700 Punch Dust Near Full RAP

112-700 The punch debris box is almost full.

Procedure

Advise the customer to empty the punch debris box.

116-210, 211 Media Reader Error RAP

116-210 Fatal error of reader.

116-211 Connection cable disconnected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Change the USB device to verify the current USB device is functioning.
3. If the fault persists, refer to OF3, System or Sub System Fail RAP.

116-212, 220, 310, 311 ESS Error RAP

116-212 MediaLib internal logic error has occurred.

116-220 The downloader software that processes downloads within the ESS failed to initialize during transition into download mode.

116-310 An error was detected when the ESS font ROM DIMM #2 was checked.

116-311 A fail is detected during a check of ESS font ROM DIMM #3.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. If the fault persists, refer to OF3, System or Sub System Fail RAP.

116-312, 313 HDD Encrypt Key Fail RAP

116-312 An error in the encryption key was detected on booting.

116-313 An encryption setting error was detected on booting.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Perform [OF4](#) Hard Disk System Fail RAP.
2. When the system has recovered, advise the customer to set the correct HDD encryption key.

116-314 Ethernet Address Fail RAP

116-314 An Ethernet error was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to verify all network settings are correct for the customer network, the Ethernet cable is correctly connected on both ends, or the WiFi dongle is correctly installed.
2. Switch off, then switch on the machine, [GP 10](#).
3. Verify the DIMM, [PL 3.05 Item 7](#) and SD card, [PL 3.05 Item 8](#) are fully seated and properly installed on the controller PWB assembly, [PL 3.05 Item 1](#).
4. If the fault persists, refer to [OF5](#), NET/USB System Fail.

116-319 Controller and UI Configuration RAP

BSD-ON: [BSD 2.1 Control Panel](#)

116-319 A mismatch between the installed ROM and UI.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. Ensure that all connectors between the UI assembly, [PL 2.05 Item 1](#) and the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected, no short circuit, open circuit, or damage exists. Repair as necessary.
3. Upgrade the software, [GP 4](#).
4. If the fault persists, install new components as necessary:
 - UI assembly, [PL 2.05 Item 1](#).
 - Controller PWB assembly, [PL 3.05 Item 1](#).

116-320, 345 Process Error RAP

116-320 Fatal error of the STREAMZ. A problem has occurred in the software processing and it is unable to continue with the subsequent processes.

116-345 Token Ring Control IC Access error.

Procedure

Switch off, then switch on the machine, [GP 10](#).

116-321, 322, 323, 328, 329, 338 Software Error RAP

116-321 Due to an error in software processing, subsequent processes cannot be performed.

116-322 Due to an error in software processing, subsequent processes cannot be performed.

116-323 During a read/write check at power on, OS/DD detects an error with the ESS-NVRAM board.

116-328 A failure was detected in the level 2 cache built in the CPU.

116-329 A system call error related to the serial I/F was detected.

116-338 Overall JBA fatal error. Due to an error in software processing, subsequent processes cannot be performed.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10](#).
2. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 4](#) and the controller PWB assembly, [PL 3.10 Item 6](#) are securely connected, no short circuit, open circuit, or damage exists. Repair as necessary.
3. Upgrade the software, [GP 4](#).
4. Perform the [OF2 Special Boot Modes RAP](#).
5. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

116-324 Exception Fail RAP

116-324 A fatal software exception error has occurred in the controller PWB CPU.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Print a Configuration Report, then check the version of Controller ROM. If the version is not the latest available perform [GP 4](#), Machine Software.
2. Corrective actions when the fault occurred at power on.
 - a. From power saver mode, note the result, then perform Steps 1 to 7 in [OF3 System or Sub System Fail RAP](#).
 - b. Switch off the machine, [GP 10](#), then remove and install the DIMM, [PL 3.05 Item 7](#).
 - c. Perform [OF4](#), Hard Disk System Fail RAP as it pertains to the fault.

NOTE: Check with the customer whether important data is stored in the hard disk. If possible, copy all customer data from the hard disk to a thumb drive using the USB port on the front of the machine.

- d. If important data is stored in the hard disk, and the data cannot be copied, install a new HDD, [PL 3.05 Item 9](#).
 - e. Switch on the machine, [GP 10](#). If the fault persists, install the original HDD back into the machine, then install a new controller PWB assembly, [PL 3.05 Item 1](#).
 - f. Perform [GP 33](#), How To Capture A Nananana.log from The WebUI, then contact Support for instructions.
3. Corrective actions when the fault occurred at other than power ON.
 - a. Ask the customer the steps for reproducing an error:
 - Check the job settings from the UI.
 - Check if print spool is turned on in the WebUI. Refer to [GP 34 Print Spool](#), turn Spool off while working through this fault procedure.
 - Obtain the PRN file if available.
 - Collect other information as much as possible to reproduce the error.
 - b. Print a Configuration Report, Error History Report, Job History Report, and Shutdown Report.
 - Ask the customer for the printer driver (manufacturer, version) installed in the computer.
 - c. Perform Steps 1 to 7 in [OF3 System or Sub System Fail RAP](#).
 - Perform [GP 33](#), How To Capture A Nananana.log from The WebUI, then contact Support for instructions.
 - Switch off the machine, [GP 10](#). Remove and reinstall the DIMM, [PL 3.05 Item 7](#) on the controller PWB assembly.
 - d. If the fault persists, gather all logs and reports, contact Support for further instruction.

116-325 ESS Fan Fail RAP

BSD-ON: [BSD 3.7 ESS \(Controller\)](#)

116-325 An error occurred in the rotation of the ESS fan.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. Check the wiring between [P313](#) on the back plane PWB, [PL 3.15 Item 2](#) and [P/J273](#) of the ESS fan, [PL 3.15 Item 7](#) for an open or short circuit, or a loose or damaged connector.
3. If the fault persists, install new components as necessary:
 - ESS fan, [PL 3.15 Item 7](#).
 - Back plane PWB, [PL 3.15 Item 2](#).

116-330, 331, 336, 337, 339 HDD File System Fail RAP

116-330 HDD check at power on detected that an error has occurred or the HDD was not formatted.

116-331 A log related error was detected.

116-336 An error was detected when the HDD was accessed.

116-337 Overall SNTP fatal error. Due to an error in software processing, subsequent processes cannot be performed.

116-339 When the JBA is started up, the HDD is not installed.

Procedure

Perform the [016-210](#), [506](#), [777](#), [780](#), [798](#) HDD Error RAP.

116-334 ESS NVRAM Data Compare Fail

116-334 ESS NVRAM data compare fail.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Enter Diagnostics, dC125 Active Faults. If a 124-3XX fault code is displayed, perform the relevant RAP.
3. Ensure that all connectors on the motor drive PWB, PL 1.10 Item 2 and the controller PWB assembly, PL 3.05 Item 1 are securely connected, no short circuit, open circuit, or damage exists. Repair as necessary.
4. Upgrade the software, GP 4.
5. Perform the OF2 Special Boot Modes RAP.
6. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

116-340 Not Enough Memory RAP

116-340 Insufficient memory was detected during initialization. A PS option requiring an additional memory was installed but memory was not added.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 10.

116-341, 342, 393, 394 ROM Version Incorrect RAP

116-341 Versions of the multiple ROM DIMMs installed are incorrect.

116-342 Fatal error related to the SNMP agent.

116-393 AAA manager fatal error.

116-394 Abnormal authentication mode and accounting mode settings detected during AAA manager boot sequence.

Procedure

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

116-343, 346, 357, 359 ESS PWB Error RAP

116-343 An error was detected in the IC in the controller PWB assembly.

116-346 A response such as system function recall error was detected.

116-357 PS Fatal System Error

116-359 Fatal error in PLW.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected, no short circuit, open circuit, or damage exists. Repair as necessary.
3. Upgrade the software, [GP 4](#).
4. Perform the [OF2 Special Boot Modes RAP](#).
5. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

116-348, 349, 358, 360, 374 Redirecter Fail RAP

116-348 Various fatal errors detected in the redirecter.

116-349 An error occurred when calling the Pflite function using the SIF.

116-358 Fatal error related to salutation.

116-360 Fatal error related to SMB.

116-374 Fatal error of auto SW.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to verify the printer network settings are correct for the customer network.
2. Switch off, then switch on the machine, GP 10.
3. Ensure that all connectors on the motor drive PWB, PL 1.10 Item 2 and the controller PWB assembly, PL 3.05 Item 1 are securely connected, no short circuit, open circuit, or damage exists. Repair as necessary.
4. Upgrade the software, GP 4.
5. Perform the OF2 Special Boot Modes RAP.
6. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

116-353, 354, 356, 361, 362 HDD Fail RAP

116-353 The HDD was not booted due to a physical HDD failure detected on booting.

116-354 The M/C was not started up due to a product code error detected in the HDD on booting.

116-356 The M/C was not started up due to an insufficient HDD capacity error detected during HDD formatting.

116-361 Fatal error of SPL HDD.

116-362 SSDP Software Fail.

Procedure

Perform the 016-210, 506, 777, 780, 798 HDD Error RAP.

116-355, 363, 367, 370, 373, 376 Fatal Error RAP

116-355 Fatal error related to the SNMP Agent.

116-363 BMLinkS/print service software failure.

116-367 Overall fatal error of Parallel.

116-370 Fatal error of XJCL.

116-373 Fatal error related to dynamic DNS.

116-376 Port 9100 software fail.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to verify the printer network settings are correct for the customer network.
2. Switch off, then switch on the machine, GP 10.
3. Ensure that all connectors on the motor drive PWB, PL 1.10 Item 2 and the controller PWB assembly, PL 3.05 Item 1 are securely connected, no short circuit, open circuit, or damage exists. Repair as necessary.
4. Upgrade the software, GP 4.
5. Perform the OF2 Special Boot Modes RAP.
6. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

116-364, 365, 366, 368, 371, 372, 375, 377 Timer Fail RAP

116-364 An error in the timer was detected.

116-365 Fatal error of the SPL.

116-366 Print utility operational failure, report generator operational failure.

116-368 Fatal error of DumpPrint.

116-371 PCL decomposer software failure.

116-372 Fatal error of P-formatter.

116-375 A response such as system function recall error was detected.

116-377 Video DMA failure was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the motor drive PWB, PL 1.10 Item 2 and the controller PWB assembly, PL 3.05 Item 1 are securely connected, no short circuit, open circuit, or damage exists. Repair as necessary.
3. Upgrade the software, GP 4.
4. Perform the OF2 Special Boot Modes RAP.
5. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

116-378, 379, 395 MCR/MCC Soft Fail RAP

116-378 Fatal error related to MCR. Due to an error in software processing, subsequent processes cannot be performed.

116-369 Fatal error related to MCC. Due to an error in software processing, subsequent processes cannot be performed.

116-395 Fatal error related to USB.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to check that the TCP/IP ports are correctly configured.
2. Switch off, then switch on the machine, [GP 10](#).
3. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected, no short circuit, open circuit, or damage exists. Repair as necessary.
4. Upgrade the software, [GP 4](#).
5. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

116-380 ESS Font ROM DIMM #1 Check Fail RAP

116-380 ESS Font ROM DIMM #1 check failure.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10](#).
2. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected, no short circuit, open circuit, or damage exists. Repair as necessary.
3. Upgrade the software, [GP 4](#).
4. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

116-381 ABL Version Fail RAP

116-381 ABL did not match the ABL version information on the NVM, or corrupted data was detected.

Procedure

NOTE: Inform the customer that this will clear all address information.

Initialize the NVM, refer to **dC301** NVM Initialization.

116-382 ABL Initialize Fail RAP

116-382 ABL has failed to access the NVM or HDD.

Procedure

Perform the steps that follow:

1. Enter **dC131**. Set NVM value 790-664 to 0.
2. Upgrade the software, **GP 4**.
3. If the fault persists, perform the **016-210, 506, 777, 780, 798** HDD Error RAP.

116-383 PIT Lib Failure RAP

116-383 Board Fault/non-installation, or HDD access error.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 10](#).
2. Check [dC125](#) Faults. If a new fault is listed, perform the relevant RAP.
3. If the fault persists, perform the [016-210](#), [506](#), [777](#), [780](#), [798](#) HDD Error RAP.

116-384, 385, 387, 389 DCS/IDC Software Fail RAP

116-384 DCS-related fatal error. Due to an error in software processing, subsequent processes cannot be performed.

116-385 Fatal error related to IDC. Due to an error in software processing, subsequent processes cannot be performed.

116-387 A fatal error has occurred during the usage of high compression board.

116-389 The necessary additional RAM was not installed.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected, no short circuit, open circuit, or damage exists. Repair as necessary.
3. Upgrade the software, [GP 4](#).
4. Perform the [OF2](#) Special Boot Modes RAP.
5. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

116-388 No HDD RAP

116-388 The system detected that the HDD was not installed, even though the system configuration (with finisher) requires a HDD.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. If the fault persists, perform the 016-210, 506, 777, 780, 798 HDD Error RAP.

116-390 ROM and NVM Version Mismatch RAP

116-390 Incompatible versions of the standard ROM and NVM were detected.

Procedure

Perform the steps that follow:

1. Initialize the NVM, refer to dC301 NVM Initialization.

NOTE: Inform the customer that this will clear all address information.

2. Upgrade the software, GP 4.

116-391 Illegal Code RAP

116-391 Country code/territory code/paper size group setting error detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. If the fault persists, enter dC131. Ensure NVM values 700-165, 700-338 and 700-402 are correct. Change the values as necessary.

116-392 Machine Code Check Fail RAP

116-392 Machine code check fail.

Procedure

For information only. No service action necessary.

116-393, 394 AAA Manager Fail RAP

116-393 AAA manager fatal error.

116-394 AAA manager detect illegal signal authorization & account.

Procedure

Perform the steps that follow:

1. Upgrade the software, [GP 4](#).
2. Perform [GP 33](#), How To Capture A Nananana.log From The WebUI. Contact Support with the nananalog for further instruction.

116-395 USB Soft Fail

116-395 A USB related fatal error has occurred.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 4](#).
2. Perform [OF5](#) NET/USB System Fail RAP.
3. Perform [OF9](#) Network Job Fail RAP.
4. If the fault persists, perform [GP 33](#), How To Capture A Nananana.log From The WebUI. Contact Support with the nananalog for further instruction.

116-396 FIPS140 Self Test Fail RAP

116-396 At start, the FIPS140 encryption module self-test has detected a failure. Self test error due to illegal ROM (FW).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10**.
2. Upgrade the software, **GP 4**.

116-397 Illegal Setting Area Coverage Threshold RAP

116-397 The plain total color judge threshold setting is incorrect.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10**.
2. Enter **dC131**. Ensure the value of 720-061 is higher than 720-060. Adjust the values as necessary.

116-399 Initialization RAP

116-399 The machine remains in initializing state even after 10 minutes has passed since it has started up (not including the startup after power save).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10](#).
2. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected, no short circuit, open circuit, or damage exists. Repair as necessary.
3. Upgrade the software, [GP 4](#).
4. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

116-701, 710 Out of Memory Duplex Fail RAP

116-701 One page data was printed on multiple pages during two sided print.

116-710 HP-GL spool file overflow.

Procedure

Advise the customer that the optional hard disk is required.

116-702 Print with Substitute Font RAP

116-702 Printing performed with substitute font.

Procedure

Advise the customer that additional fonts are required.

116-703 Postscript Language RAP

116-703 There is a problem in the PostScript data and an error occurred in PostScript grammar interpretation or language interpretation.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 10](#).
2. Upgrade the software, [GP 4](#).

116-704 Media Reader RAP

116-704 The MediaLib detected this error while performing the operation that requires access to media.

Procedure

Ensure that all paper trays are loaded with the correct media.

116-705, 706, 707, 708, 709, 716, 717 Media Reader Format RAP

116-705 The MediaLib detected this error while performing the operation that requires access to media.

116-706 The MediaLib detected this error while performing the operation that requires access to media.

116-707 The MediaLib detected this error while performing the operation that requires access to media.

116-708 The MediaLib detected this error while performing the operation that requires access to media.

116-709 The MediaLib detected this error while performing the operation that requires access to media.

116-716 The MediaLib detected this error while performing the operation that requires access to media.

116-717 The MediaLib detected this error while performing the operation that requires access to media.

Procedure

Perform the steps that follow:

1. Advise the customer to check the contents in the media for errors from the computer:
 - a. Check the file format/directory and selected mode (digital camera print/document print).
 - b. Check whether the printed file attribute information is displayed.
 - c. Check whether the print file images are displayed.
 - d. Check whether the printed file attribute information is displayed.
 - e. If the fault persists, inform the customer that the media may be defective.
2. If the fault persists, inform the customer that the media may be defective.

116-713, 751 HDD Full RAP

116-713 Collate operation was split when HDD full occurred in print service.

116-751 When a Booklet job is writing into the HDD, the job is aborted because the HDD became full

Procedure

Perform the steps that follow:

1. Advise the customer to:
 - a. Delete the stored documents to clear HDD full condition.
 - b. Split the job so that HDD full does not occur.
2. If the fault persists, perform the [016-210](#), [506](#), [777](#), [780](#), [798](#) HDD Error RAP.

116-714 HP-GL/2 Command Error RAP

116-714 HP-GL/2 command error occurred.

Procedure

Perform the steps that follow:

1. Upgrade the software, [GP 4](#).
2. Perform the [016-210](#), [506](#), [777](#), [780](#), [798](#) HDD Error RAP.

116-719 XPIF Parameter Cancelled RAP

116-719 Cancellation of the parameter(s) disabled by XPIF.

Procedure

Some of the parameters are disabled by XPIF so the machine cannot execute them. Advise the customer to cancel the disabled parameter(s).

116-720 PCL Memory Low Page Simplified RAP

116-720 PCL memory low, page simplified.

Procedure

Advise the customer to:

1. Deactivate the unnecessary ports.
2. Adjust buffer memory sizes.
3. If the fault persists, the optional hard disk is required.

116-721, 722, 723, 724, 726, 727, 728 Color Print Permissions RAP

116-721 Color printing is prohibited in this time zone. Output changed to monochrome.

017-722 Color printing prohibited. Output changed to monochrome.

017-723 Color print attempted from a prohibited application. Output changed to monochrome.

017-724 Single sided print attempted from a prohibited application. Output changed to duplex.

017-726 Color, single sided print attempted. Output changed to monochrome, duplex.

017-727 Single sided print attempted. Output changed to duplex.

017-728 Prohibited print attempted. Output changed to acceptable output.

Procedure

Advise the customer to set the permissions as required.

116-725 HDD Image Log Full RAP

116-725 The log image storage area on the disk is full.

Procedure

Advise the customer to:

1. Rerun the job.
2. If the situation persists despite re-attempts, delete unnecessary documents saved in the machine.

116-738 Size/Orientation Mismatch RAP

017-738 Form overlay is impossible because the size/orientation of the form's drawing is different from that of the paper.

Procedure

Advise the customer to select paper that has the same size and orientation as the registered form.

116-739, 741, 742, 743 Out of Disk Area RAP

017-739 The form/logo data cannot be registered due to insufficient ram or hard disk space.

017-741 The form data cannot be registered due to the restriction on the no. of forms.

017-742 The logo data cannot be registered due to the restriction on the no. of logos.

017-743 The received data (form/logo) exceeded the registered buffer size.

Procedure

Advise the customer to delete the unnecessary forms/logos. Otherwise, if not already installed, inform the customer that the optional hard disk is required.

116-740 Arithmetic Error RAP

017-740 The value calculated in the interpreter exceeded the limit.

Procedure

Advise the customer to upgrade the driver.

116-746 Selected Form Not Registered RAP

017-746 The specified form is not registered.

Procedure

Advise the customer to use a registered form or register the required form.

116-747, 748 Invalid Page Data RAP

017-747 After subtracting the paper margin from the valid coordinate area, the result of the calculation will be negative.

017-748 Drawing data does not exist in the page data.

Procedure

Advise the customer to repeat the operation.

116-749 PostScript Font Error RAP

017-749 Job was aborted because the specified font is not found.

Procedure

Advise the customer to add the necessary font, or specify a substitute font.

116-750 Banner Sheet Cancelled RAP

017-750 Banner sheet was cancelled.

Procedure

Advise the customer to set the banner sheet feed tray status to normal or change the banner sheet feed tray.

116-751 Booklet Aborted by HDD Fail

116-751 Booklet processing has stopped due to HDD full.

Procedure

Perform the steps that follow:

1. Delete the stored documents to clear the fault.
2. Split the job into several smaller jobs.
3. If the fault persists, perform **OF4** HDD System Fail RAP.

116-752 Print Job Ticket RAP

116-752 The machine received a print job ticket sent together with a PDF but the job ticket data includes printing instructions that are not supported by the machine.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to re-run the print job. If the fault persists, print the job on a machine known to support the printing instructions for the job ticket data requirements.
2. Ensure that all connectors on the motor drive PWB, **PL 1.10 Item 2** and the controller PWB assembly, **PL 3.05 Item 1** are securely connected, no short circuit, open circuit, or damage exists. Repair as necessary.
3. Upgrade the software, **GP 4**.

116-771, 772, 773, 774, 775, 776, 777, 778, 780 Invalid JBIG Parameter RAP

116-771 An incorrect JBIG parameter DL was automatically corrected.

116-772 An incorrect JBIG parameter D was detected and automatically corrected.

116-773 An incorrect JBIG parameter P was detected and automatically corrected.

116-774 An incorrect JBIG parameter YD was detected and automatically corrected.

116-775 An incorrect JBIG parameter L0 was detected and automatically corrected.

116-776 An incorrect JBIG parameter MX was detected and automatically corrected.

116-777 An incorrect JBIG parameter MY was detected and automatically corrected.

116-778 An incorrect JBIG parameter VLENGTH was detected and automatically corrected.

116-780 The system detected an error in the document attached to the E-mail to XXX

Procedure

For information only. No service action necessary.

116-790 Stapling Canceled RAP

017-750 Either all or one of the staple requests is canceled during print.

Procedure

Advise the customer not to cancel stapling during a job.

117-310 WSD Scan S/W Fail RAP

117-310 A problem occurred in the processing of WSD scan service software, causing the processing to discontinue.

Procedure

WARNING

Ensure the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure the wiring between the motor drive PWB, PL 1.10 Item 2 and the controller PWB assembly, PL 3.05 Item 1, has no open or short circuits and is not damaged. Repair any damaged wiring or plug/jacks as necessary.
3. Reload the software, GP 4.
4. Perform the OF2 Special Boot Modes RAP.
5. If the fault persists, install a new controller PWB assembly, PL 3.10 Item 6.

117-311 Incorrect Installation of Security Enhancing Kit RAP

117-311 The security enhancing kit is installed in the incorrect slot.

Procedure

Install the security enhancing kit in the correct slot.

117-312 Machine Self Test Error RAP

117-312 In an OS self program determination test, it was detected the checksum value and the mini OS/program were different.

Procedure

WARNING

Ensure the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Reload the software, GP 4.
2. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

117-313, 314 Geographic Region Change Fail RAP

117-313 The geographic region change command from the PJJ can not be implemented.

117-314 The contract type change command from the PJJ can not be implemented.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, GP 10.
2. Ensure the wiring between the motor drive PWB, PL 1.10 Item 2 and the controller PWB assembly, PL 3.05 Item 1. has no open or short circuits and is not damaged. Repair any damaged wiring or plug/jacks as necessary.
3. Reload the software, GP 4.
4. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

117-315 Contract Type/Geographic Region Changed RAP

117-315 The geographic region and contract type change command from the PJL was implemented.

Procedure

Advise the customer to install the correct CRUs for the changed geographic region and contract type.

117-316 Contract Manager Software Fail RAP

117-316 When the contract manager is running, it can no longer perform task control due to software malfunction.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 10](#).
2. If the fault persists, reload the software, [GP 4](#).

117-317, 318 Contract Manager PPP RAP

117-317 The contract manager detected the PPP contract has ended.

117-318 The contract manager detected the DC command write that was performed at the end of a PPP contract has failed.

Procedure

Advise the customer to wait for the machine to reboot.

117-319 SD Card Program or Font Data Access RAP

117-319 SD card program or font data access fail.

Procedure

WARNING

Ensure the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10](#).
2. Ensure the SD card, [PL 3.05 Item 8](#) is fully seated and locked into the SD card slot, and the SD card clip, [PL 3.05 Item 2](#) is properly installed.

NOTE: Ensure the write protection switch, to the left of the SD card, is not enabled. If the installation of the SD card and the write protection switch setting are good, advise the customer to rewrite the program and font data into the SD Card.

3. Ensure the wiring between the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#), has no open or short circuits and is not damaged. Repair any damaged wiring or plug/jacks as necessary.
4. Reload the software, [GP 4](#).
5. Perform the [OF2 Special Boot Modes RAP](#).
6. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

117-320, 321, 322, 323, 324, 327, 329, 338 SD Card Fail RAP

117-320 When starting, the SD card hardware error was detected by SysCheckSD.

117-321 When starting, the installed SD card was detected to be unsupported by SysCheckSD.

117-322 When starting, SD encryption error was detected by SysCheckSD.

117-323 When starting, SD card file system access error was detected by SysCheckSD.

117-324 When the OS is starting up, the system detected the SD card is meant for another product and an error is issued.

117-327 Hardware fault processing of NVRAM area/access on the SD card.

117-329 When starting up, the SD card was detected to be not connected by the OS or SysCheckSD.

117-338 Fault in the connection with SD card is detected by the controller.

Procedure

WARNING

Ensure the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Ensure the SD card, [PL 3.05 Item 8](#) is fully seated and locked into the SD card slot, and the SD card clip, [PL 3.05 Item 2](#) is properly installed.
2. Switch off, then switch on the machine, [GP 10](#).
3. Ensure the wiring between the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#), has no open or short circuits and is not damaged. Repair any damaged wiring or plug/jacks as necessary.
4. Reload the software, [GP 4](#).
5. Perform the [OF2 Special Boot Modes RAP](#).
6. If the fault persists, install a new components as necessary:
 - SD card, [PL 3.05 Item 8](#).
 - Controller PWB assembly, [PL 3.05 Item 1](#).

117-325, 326 Access Fail RAP

117-325 Failed to obtain RTC timer value due to hardware problem in the contract function.

117-326 Software fault processing of NVRAM area/access.

Procedure

Switch off, then switch on the machine, [GP 10](#).

117-330 XBDS Soft Fail RAP

117-330 An Ethernet error was detected.

Procedure

WARNING

Ensure the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Advise the customer to ensure network settings of the machine are correctly configured for the customer network.
3. Ensure the wiring between the motor drive PWB, PL 1.10 Item 2 and the controller PWB assembly, PL 3.05 Item 1, has no open or short circuits and is not damaged. Repair any damaged wiring or plug/jacks as necessary.
4. Reload the software, GP 4.
5. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

117-331, 355 Uninitialized HDD RAP

117-331 An uninitialized HDD that was used for another machine was recognized.

117-355 HDD not found on device using HDD.

Procedure

Perform the 016-210, 506, 777, 780, 798 HDD Error RAP.

117-332, 335 Uninitialized Used NVM RAP

117-332 An uninitialized NVM that was used for another machine was recognized.

117-335 Invalid NVM detection.

Procedure

Initialize the NVM, perform **dC301** NVM Initialization.

117-333 Uninitialized Used SD Card RAP

117-333 An uninitialized SD card that was used for another device was detected.

Procedure

Perform the steps that follow:

1. Initialize the NVM, perform **dC301** NVM Initialization.
2. Initialize the HDD. Perform **OF2** Special Boot Modes RAP.

117-336, 337 PCI(EX) Option No Support Device Fail RAP

117-336 An unknown PCI option was detected.

117-337 An unknown PCIEX option was detected.

Procedure

Perform the steps that follow:

1. Ensure the PCI(EX) option is supported.
2. Check the PCI(EX) option is correctly installed, if supported.
3. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

117-339 NVM Backup Fail RAP

117-339 NVM backup is not carried out fail.

Procedure

Initialize the HDD. Perform the [OF2 Special Boot Modes RAP](#).

117-340, 342 Other HDD Fail RAP

117-340 A hard disk that was formatted by another machine was detected.

117-342 A hard disk that was formatted by another machine was detected.

Procedure

WARNING

Ensure the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 10**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Install a new hard disk, **PL 3.05 Item 9**.
2. Switch off, then switch on the machine, **GP 10**.
3. Ensure the wiring between the motor drive PWB, **PL 1.10 Item 2** and the controller PWB assembly, **PL 3.05 Item 1**, has no open or short circuits and is not damaged. Repair any damaged wiring or plug/jacks as necessary.
4. Reload the software, **GP 4**.
5. Perform the **OF2** Special Boot Modes RAP.
6. If the fault persists, install a new components as necessary:
 - HDD, **PL 3.05 Item 9**.
 - Controller PWB assembly, **PL 3.05 Item 1**.

117-343 Log Sending Parameter Fail RAP

117-343 An incorrect setting of the log transfer function was detected:

1. When the image log function is disabled and the auto transfer function is enabled, transfer in job units is set.
2. When the job log auto transfer function is disabled (no hard disk), the auto transfer function of the log is set to enabled.

Procedure

WARNING

Ensure the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 10**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Advise the customer to change the settings of the log transfer function:
 - For detection condition 1, change the operation method for Log Auto Transfer to anything other than Transfer in Job Units.
 - For detection condition 2, check whether a hard disk is installed or change the Auto Transfer function of the log to disable it.
2. Reload the software, **GP 4**.
3. Perform the **OF3** System or Sub System Fail RAP.
4. If the fault persists, install a new controller PWB assembly, **PL 3.05 Item 1**.

117-344 Invalid User Job Type Fail RAP

117-344 The applicable user job cannot be executed at the system level.

Procedure

Advise the customer to check if public print it is set to be stored as charge print.

117-345 SSMM Batch Setting Duration Fail RAP

117-345 During the batch setting of LoDeM, a reboot occurred due to a change in system data.

Procedure

WARNING

Ensure the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. For a single occurrence, take no action.
2. Install a new hard disk, PL 3.05 Item 9.
3. Switch off, then switch on the machine, GP 10.
4. Ensure the wiring between the motor drive PWB, PL 1.10 Item 2 and the controller PWB assembly, PL 3.05 Item 1. has no open or short circuits and is not damaged. Repair any damaged wiring or plug/jacks as necessary.
5. Reload the software, GP 4.
6. Perform the OF2 Special Boot Modes RAP.
7. Install a new controller PWB assembly, PL 3.05 Item 1.

117-347, 349, 350 Service Fail RAP

117-347 When the SEEP extension billing counter have been used and billing count cannot be performed as new extension counter cannot be obtained.

117-349 Detects this fail when enters a state where it is unable to continue operating as GRS.

117-350 A problem has occurred in the AirPrint scan service software processing and it is unable to continue with the subsequent processes.

Procedure

WARNING

Ensure the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. For a single occurrence, take no action.
2. Install a new hard disk, [PL 3.05 Item 9](#).
3. Switch off, then switch on the machine, [GP 10](#).
4. Ensure the wiring between the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#). has no open or short circuits and is not damaged. Repair any damaged wiring or plug/jacks as necessary.
5. Reload the software, [GP 4](#).
6. Perform the [OF2 Special Boot Modes RAP](#).
7. Install a new controller PWB assembly, [PL 3.05 Item 1](#).

117-348 Uninitialized Used SD Card RAP

117-348 An un-initialized SD card that had been used in another machine was recognized.

Procedure

WARNING

Ensure the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10](#).
2. Initialize the NVM, perform [dC301 NVM Initialization](#).
3. Ensure the wiring between the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#). has no open or short circuits and is not damaged. Repair any damaged wiring or plug/jacks as necessary.
4. Reload the software, [GP 4](#).
5. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

117-354, 356, 358 Job Limit System Fail RAP

117-354 Before Job execution, an error occurs in Coml_SsmilsJoblimit.

117-356 During Job estimate acquisition, an error occurs.

117-358 Fatal error of JAL relationship in software processing.

Procedure

Switch off, then switch on the machine, [GP 10](#).

117-357 TPM Fail RAP

117-357 A Trusted Platform Module has failed.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 10](#).
2. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

117-360 Date Limit Exceeding Fail RAP

117-360 Date limit exceeded.

Procedure

Advise the customer to set the correct time and date.

117-362, 363 USB Dongle Fail RAP

117-362 During the initial installation by USB dongle, it fails to set the TSC contract mode.

117-363 During the initial installation by USB dongle, it fails to set the count-up mode.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, GP 10.
2. Ensure the correct USB WiFi dongle is installed.

117-364 Key Fail RAP

117-364 TPM encryption key data corrupted.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 10](#), 2 times if necessary.
2. If the fault persists perform [OF2 Special Boot Modes RAP](#).
3. Switch off, then switch on the machine, [GP 10](#).

117-365 WiFi Diagnostics Test Failure RAP

117-365 Error during WiFi diagnostics test.

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 10](#).
2. Check the connection of the WiFi dongle.
3. If the fault persists install a new WiFi dongle, [PL 3.05 Item 3](#).

118-310, 311 Internal Fail RAP

118-310 IPSEC internal error, occurred during initialization of the IPSEC.

118-311 CSB soft fatal error, occurred during software processing.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure the wiring between the motor drive PWB, PL 1.10 Item 1 and the controller PWB assembly, PL 3.05 Item 1 is secure, no short or open circuits, and no damage exists. Repair and damage to wire or connectors.
3. Reload the software, GP 4.
4. Perform the OF5 NET/USB System Fail RAP.
5. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

121-310, 327 EPSV-Accessory Communication Fail RAP

121-310 Transmission has failed between the EP-SV and the accessories.

121-327 EPSV accessory not in service fail.

Procedure

Perform the steps that follow:

1. Disconnect the foreign device and verify that the printer is working correctly without it.
2. Check the foreign device interface wiring and connections on the printer are good.
3. Re-connect the foreign device, if the fault still persists, inform the customer that the foreign device is at fault and needs servicing or re-configuring by the device manufacturer or service center.

121-311, 312, 313 IC Card Auditron Password Fail RAP

121-311 IC card auditron config fail 01.

121-312 IC card auditron config fail 02.

121-313 IC card auditron config fail 03.

Procedure

Perform the steps that follow:

1. Disconnect the foreign device and verify that the printer is working correctly without it.
2. Check the foreign device interface wiring and connections on the printer are good.
3. Re-connect the foreign device, if the fault still persists, inform the customer that the foreign device is at fault and needs servicing or re-configuring by the device manufacturer or service center.

121-314 Customize User Prompts Fail RAP

121-314 Customize user prompts fail.

Procedure

Perform the steps that follow:

1. Disconnect the foreign device and verify that the printer is working correctly without it.
2. Check the foreign device interface wiring and connections on the printer are good.
3. Re-connect the foreign device, if the fault still persists, inform the customer that the foreign device is at fault and needs servicing or re-configuring by the device manufacturer or service center.

121-316 Accessory Conflict RAP

117-316 Prohibited combination of EP accessory connection and secure access authentication.

Procedure

Perform the steps that follow:

1. Disconnect the foreign device and verify that the printer is working correctly without it.
2. Check the foreign device interface wiring and connections on the printer are good.
3. Re-connect the foreign device, if the fault still persists, inform the customer that the foreign device is at fault and needs servicing or re-configuring by the device manufacturer or service center.

121-317 Continuous Job Setting Mismatch RAP

117-317 Prohibited combination of EP accessory connection and secure access authentication.

Procedure

Perform the steps that follow:

1. Disconnect the foreign device and verify that the printer is working correctly without it.
2. Check the foreign device interface wiring and connections on the printer are good.
3. Re-connect the foreign device, if the fault still persists, inform the customer that the foreign device is at fault and needs servicing or re-configuring by the device manufacturer or service center.

121-318 Auth/Account Settings Not Supported RAP

117-318 Auth/account settings not supported.

Procedure

Perform the steps that follow:

1. Disconnect the foreign device and verify that the printer is working correctly without it.
2. Check the foreign device interface wiring and connections on the printer are good.
3. Re-connect the foreign device, if the fault still persists, inform the customer that the foreign device is at fault and needs servicing or re-configuring by the device manufacturer or service center.

121-322 Controller Price Table Error RAP

121-322 EPA - controller unit price table settings error.

Procedure

Perform the steps that follow:

1. Disconnect the foreign device and verify that the printer is working correctly without it.
2. Check the foreign device interface wiring and connections on the printer are good.
3. Re-connect the foreign device, if the fault still persists, inform the customer that the foreign device is at fault and needs servicing or re-configuring by the device manufacturer or service center.

121-323 Web EP Software Fail RAP

121-323 Fatal error related to Web EP.

Procedure

Perform the steps that follow:

1. Disconnect the foreign device and verify that the printer is working correctly without it.
2. Check the foreign device interface wiring and connections on the printer are good.
3. Re-connect the foreign device, if the fault still persists, inform the customer that the foreign device is at fault and needs servicing or re-configuring by the device manufacturer or service center.

121-325 ICCR and Panel Setting Confliction RAP

121-325 ICCR and panel auth setting confliction.

Procedure

Perform the steps that follow:

1. Disconnect the foreign device and verify that the printer is working correctly without it.
2. Check the foreign device interface wiring and connections on the printer are good.
3. Re-connect the foreign device, if the fault still persists, inform the customer that the foreign device is at fault and needs servicing or re-configuring by the device manufacturer or service center.

121-328, 329, 330, 331, 332, 341, 342, 343 EP Communication Fail RAP

117-328 Cannot detect the connection of related products or there is no response from the transmission path, or protocol error.

117-329 A communications error was detected during transmission of the message change answer.

117-330 The disconnect boot of related products in the product is not the correct specification.

117-331 Related products settings contradiction.

117-332 The wake command from this machine to related products has elapsed.

117-341 Undefined accessory information was detected in the wake up answer message.

117-342 fatal error of related products in the job disable message.

117-343 fatal error of related products in the accessory status message.

Procedure

Perform the steps that follow:

1. Disconnect the foreign device and verify that the printer is working correctly without it.
2. Check the foreign device interface wiring and connections on the printer are good.
3. Re-connect the foreign device, if the fault still persists, inform the customer that the foreign device is at fault and needs servicing or re-configuring by the device manufacturer or service center.

121-339 Price Table Error RAP

117-339 EPA unit price table error.

Procedure

Perform the steps that follow:

1. Disconnect the foreign device and verify that the printer is working correctly without it.
2. Check the foreign device interface wiring and connections on the printer are good.
3. Re-connect the foreign device, if the fault still persists, inform the customer that the foreign device is at fault and needs servicing or re-configuring by the device manufacturer or service center.

121-340 EP Accessory MisMatch RAP

117-340 The combination of accessories that are installed does not match the specifications.

Procedure

Perform the steps that follow:

1. Disconnect the foreign device and verify that the printer is working correctly without it.
2. Check the foreign device interface wiring and connections on the printer are good.
3. Re-connect the foreign device, if the fault still persists, inform the customer that the foreign device is at fault and needs servicing or re-configuring by the device manufacturer or service center.

123-310 to 123-353 UI Error 1 RAP

123-310 The data sent from the UI to the controller exceeded the upper limit for the processing capability.

123-311 The data received from the controller exceeded the upper limit for the processing capability in the UI.

123-312 The data received from the controller has exceeded the upper limit of the processing capability in the UI.

123-325 The specified UI internal object could not be created due to a setting/specification error. UI-SW failure in the ESS PWB.

123-326 The memory in the GUAM exceeded the upper limit.

123-333 The H/W connection in the UI is faulty or the internal connection could not be correctly detected.

123-343 UI-SW failure in the ESS PWB.

123-344 UI-SW failure in the ESS PWB.

123-350 MCW panel one-touch key fail.

123-352 An error internal to the con-panel (an abnormal value in EEPROM for Sys) has been detected.

123-343 UI-SW failure in the ESS PWB.

123-344 UI-SW failure in the ESS PWB.

123-350 MCW panel one-touch key fail.

123-353 The control panel has detected that the UI cable is disconnected.

Procedure

Perform [OF6](#) UI Fail RAP.

123-354 to 123-381 UI Error 2 RAP

123-354 The control panel has detected a drop in +24V power voltage.

123-355 The control panel has detected a drop in +5V power voltage.

123-357 The control panel has detected that writing in the EEPROM has failed.

123-358 The control panel has detected that writing in the EEPROM for logging failed.

123-362 UI-SW failure in the ESS PWB.

123-368 There is insufficient memory or the connection failed.

123-369 UI-SW failure in the ESS PWB.

123-371 The parameter sent from the controller was incorrect.

123-374 The job ID parameter sent from the controller was incorrect.

123-377 UI-SW failure in the ESS PWB.

123-379 UI-SW failure in the ESS PWB.

123-380 UI-SW failure in the ESS PWB.

123-381 UI-SW failure in the ESS PWB.

Procedure

Perform [OF6](#) UI Fail RAP.

123-382 to 123-399 UI Error 3 RAP

123-382 UI-SW failure in the ESS PWB.

123-383 UI-SW failure in the ESS PWB.

123-384 UI-SW failure in the ESS PWB.

123-389 UI-SW failure in the ESS PWB.

123-390 UI-SW failure in the ESS PWB.

123-392 UI-SW failure in the ESS PWB.

123-393 UI-SW failure in the ESS PWB.

123-395 UI-SW failure in the ESS PWB.

123-396 UI-SW failure in the ESS PWB.

123-397 UI-SW failure in the ESS PWB.

123-398 UI-SW failure in the ESS PWB.

123-399 UI-SW failure in the ESS PWB.

Procedure

Perform [OF6](#) UI Fail RAP.

124-310, 311, 314, 316, 318, 322, 324, 344, 380 DC132 Error RAP

124-310 Product number not specified.

124-311 Serial number not specified.

124-314 Stored data mismatch.

124-316 Stored data mismatch.

124-318 Stored data mismatch.

124-322 Stored data mismatch.

124-324 All billing counter mismatch.

124-344 All the billing meter types kept at multiple locations are different.

124-380 The CRUM destinations stored in three positions match, but their values are not set (0).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure the wiring between the motor drive PWB, PL 1.10 Item 2 and controller PWB assembly, PL 3.05 Item 1 is securely connected, no short or open circuits, and no damage exists. Repair any damage to wiring or connectors as necessary.
3. If the fault persists, install a new components as necessary:
 - Motor drive PWB, PL 1.10 Item 2.
 - Controller PWB assembly, PL 3.05 Item 1.

124-312, 357 DC132 Error 12 RAP

124-312 Stored data mismatch. The product number did not match.

124-357 Product number 1 point mismatch.

124-313 Stored data mismatch. The serial numbers do not match.

124-356 Serial number 1 point mismatch.

124-315 Stored data mismatch. Internal control error was detected.

124-317 Stored data mismatch. Internal control error was detected.

124-355 At least one set of territory information at the 3 locations is different.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 10. The fault persists.

Y N

Perform SCP 5 Final Actions.

Enter dC132 Device ID and Billing Data and compare all numbers. All three product numbers are different.

Y N

1. Install a new motor drive PWB, PL 1.10 Item 2 and controller PWB assembly, PL 3.05 Item 1.
2. Perform dC132. Follow the directions to ensure the three product numbers match.

Perform dC132. Follow the directions to ensure the three product numbers match.

124-313, 356 DC132 Error 10 RAP

124-313 Stored data mismatch. The serial numbers do not match.

124-356 Serial number 1 point mismatch.

124-315 Stored data mismatch. Internal control error was detected.

124-317 Stored data mismatch. Internal control error was detected.

124-355 At least one set of territory information at the 3 locations is different.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 10. The fault persists.

Y N
| Perform SCP 5 Final Actions.

Enter dC132 Device ID and Billing Data. All three serial numbers are different.

Y N
| Install a new motor drive PWB, PL 1.10 Item 2 and controller PWB assembly, PL 3.05 Item 1.

Perform dC132. Make all three serial numbers match.

124-315, 317, 355 DC132 Error 02, 04 and 14 RAP

124-315 Stored data mismatch. Internal control error was detected.

124-317 Stored data mismatch. Internal control error was detected.

124-355 At least one set of territory information at the 3 locations is different.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 10. The fault persists.

Y N
| Perform SCP 5 Final Actions.

Enter dC131. Compare NVM values 700-600, 700-601 and 700-602. All three values are different.

Y N
| Install a new motor drive PWB, PL 1.10 Item 2 and controller PWB assembly, PL 3.05 Item 1.

Perform dC132. Make all three values match.

124-319 DC132 Error 08 RAP

124-319 Stored data mismatch. Internal control error was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 10. **The fault persists.**

Y N
Perform SCP 5 Final Actions.

Enter dC131. Compare NVM values 700-606, 700-607 and 700-608. **All three values are different.**

Y N
Install a new motor drive PWB, PL 1.10 Item 2 and controller PWB assembly, PL 3.05 Item 1.

Perform dC132. Make all three values match.

124-320 SEEPROM Fail RAP

124-320 Write error occurred in the SEEPROM on the controller PWB assembly.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.
4. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

124-321 Backup SRAM Fail RAP

124-321 Write error occurred in the NVM on the controller PWB assembly.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.
4. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

124-323 DC132 06 RAP

124-323 Internal control error was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 10. **The fault persists.**

Y N

Perform SCP 5 Final Actions.

Enter dC131. Compare NVM values 700-603, 700-604 and 700-605. **All three values are different.**

Y N

Install a new motor drive PWB, PL 1.10 Item 2 or controller PWB assembly, PL 3.05 Item 1 as necessary.

Install a new motor drive PWB, PL 1.10 Item 2, then a new controller PWB assembly, PL 3.05 Item 1.

124-325 Billing Restoration Fail RAP

124-325 Billing counter mismatch (1 position).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 10. The fault persists.

Y N
Perform SCP 5 Final Actions.

Enter dC132 Device ID and Billing Data. All three product numbers are different.

Y N
Install a new motor drive PWB, PL 1.10 Item 2 or controller PWB assembly, PL 3.05 Item 1 as necessary.

Install a new motor drive PWB, PL 1.10 Item 2, then a new controller PWB assembly, PL 3.05 Item 1.

124-326 IOT Speed Not Registered RAP

124-326 IOT Speed not registered.

Procedure

Advise the customer to follow the instructions on the UI in order to enter the SW key for changing IOT speed.

124-327 IOT Speed Change Fail RAP

124-327 A SW error was detected during the procedure for changing IOT speed.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.
4. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

124-328 Punch Unit User Initial Set Up RAP

124-328 Punch unit user initial installation screen displayed.

Procedure

Have the customer select the punch unit according to the instruction on the UI.

124-331 to 124-339 ESS ROM DIMM RAP

124-331 The system detected that the ESS ROM DIMM #1 was not installed.

124-333 An error was detected in the Panther.

124-334 An error was detected in the standard built-in font ROM.

124-335 The installation of the font ROM was not detected.

124-337 An error was detected in the ESS built-in standard RAM.

124-338 The system detected that a duplicate font ROM was installed.

124-339 The system detected that the ROM DIMM for another model was installed.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10](#).
2. Ensure that all connectors on the motor drive PWB, [PL 1.10 Item 2](#) and the controller PWB assembly, [PL 3.05 Item 1](#) are securely connected. Ensure all surface mounted modules on both PWBs are securely connected.
3. Reload the software, [GP 4](#).
4. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#).

124-340, 360, 390 CRUM Market Fail All RAP

124-340 The CRUM destinations stored in three positions match but their values are not set (0).

124-360 The CRUM enable/disable settings stored in three positions match but their values are not set (0).

124-390 The CRUM OEM destinations stored in three positions match but their values are not set (0).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10](#).
2. If the fault persists, install a new motor drive PWB, [PL 1.10 Item 2](#).

124-341, 351, 361, 381, 391 CRUM Market Fail RAP

124-341 One of CRUM destinations is different from the others (IOT).

124-351 One of CRUM OEM destinations is different from the others (IOT).

124-361 One of CRUM Enable/Disable settings is different from the others (IOT).

124-381 One of CRUM destinations is different from the others (IOT).

124-391 One of CRUM OEM destinations is different from the others (IOT).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Enter dC132 Device ID and Billing Data. Make all three values match.
3. If the fault persists, install a new motor drive PWB, PL 1.10 Item 2.

124-342, 343, 352, 353, 362, 363, 382, 383, 392, 393 CRUM Market Fail SYS 1 RAP

124-342 One of CRUM destinations is different from the others (SYS 1).

124-343 One of CRUM destinations is different from the others (SYS 2).

124-352 One of CRUM OEM destinations is different from the others (SYS 1).

124-353 One of CRUM OEM destinations is different from the others (SYS 2).

124-362 One of CRUM enable/disable settings is different from the others (SYS 1).

124-363 One of CRUM enable/disable settings is different from the others (SYS 2).

124-382 One of CRUM destinations is different from the others (SYS 1).

124-383 One of CRUM destinations is different from the others (SYS 2).

124-392 One of CRUM OEM destinations is different from the others (SYS 1).

124-393 One of CRUM OEM destinations is different from the others (SYS 2).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 10. **The fault persists.**

Y N
| Perform SCP 5 Final Actions.

Enter dC132 Device ID and Billing Data. Make all three product numbers match. **The fault persists.**

Y N
| Perform SCP 5 Final Actions.

Reinstall the SD card, PL 3.05 Item 8. **The fault persists.**

Y N
| Perform SCP 5 Final Actions.

Install a new SD card, PL 3.05 Item 8. **The fault persists.**

Y N
| Perform SCP 5 Final Actions.

Install a new controller PWB assembly, PL 3.05 Item 1.

124-345 Billing Meter Type Restoration Fail RAP

124-345 Billing meter type fail (one mismatches the others but cannot be automatically repaired.)

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 10. **The fault persists.**

Y **N**
| Perform SCP 5 Final Actions.

Enter dC131. Compare NVM values 720-002 and 720-062. **Both values are different.**

Y **N**
| Install a new motor drive PWB, PL 1.10 Item 2.

Install a new controller PWB assembly, PL 3.05 Item 1.

124-346, 348, 354 Information Mismatch RAP

124-346 Billing count type fail (all the three are different from each other).

124-348 Modal break point fail (all the three are different from each other).

124-354 Territory info fail (contents corrupted, the controller PWB was replaced).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. If the fault persists, install a new components as necessary:
 - Controller PWB assembly, PL 3.05 Item 1.
 - Motor drive PWB, PL 1.10 Item 2.

124-347 Billing Count Type Restoration Fail RAP

124-347 Billing count type fail (one mismatches the others but cannot be automatically repaired.)

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 10. **The fault persists.**

Y N
| Perform SCP 5 Final Actions.

Enter dC131. Compare NVM values 720-052 and 720-063. **Both values are different.**

Y N
| Install a new motor drive PWB, PL 1.10 Item 2.

Install a new controller PWB assembly, PL 3.05 Item 1.

124-349 Modal Break Point Restoration Fail RAP

124-349 Modal break point fail (one mismatches the others but cannot be automatically repaired.)

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Switch off, then switch on the machine, GP 10. **The fault persists.**

Y N
| Perform SCP 5 Final Actions.

Enter dC131. Compare NVM values 720-057 and 720-064. **Both values are different.**

Y N
| Install a new motor drive PWB, PL 1.10 Item 2.

Install a new controller PWB assembly, PL 3.05 Item 1.

124-350 CRUM OEM Fail RAP

124-350 All three CRUM OEM destinations are not set (0 or different values are set).

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Enter dC132 Device ID and Billing Data. Make all three product numbers match.
3. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
4. Reload the software, GP 4.
5. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

124-372, 373, 374 IOT Soft Fail RAP

124-372 IOT controller software failure.

124-373 IOT manager software failure.

124-374 IOT IM device driver software failure.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. Ensure that all connectors on the controller PWB assembly, PL 3.05 Item 1 are securely connected. Ensure all surface mounted modules are securely connected.
3. Reload the software, GP 4.
4. Perform the OF2 Special Boot Modes RAP.
5. If the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.

124-701, 702, 710 Output Tray Change RAP

124-701 The machine changed output tray from side tray to another and continued printing.

124-702 The machine changed output tray from stacker to another and continued printing.

124-710 The machine changed output tray from sorter to another and continued printing.

Procedure

Advise the customer to use the correct paper type and size for the job.

124-705, 124-706 Canceled Instructions RAP

124-705 Punching instruction was canceled and printing continued.

124-706 Folding instruction was canceled and printing continued.

Procedure

Check **dC120** Fault History for associated faults. Perform the relevant RAP.

124-708 Changed to Sub Tray RAP

124-708 The machine changed output tray from the selected tray to sub tray and continued printing.

Procedure

Perform the steps that follow:

1. Ensure that the customer is using the correct paper type and size for the job.
2. Check dC120 Fault History for faults 012-231, 012-232, 012-233 or 012-234. If any of the faults is listed, perform the relevant RAP.

124-709 Stapler Sheets Counts Over Warning RAP

124-709 The number of stapler sheets exceeded and printing continued.

Procedure

For information only. No service actions necessary.

125-311 PSW Controller Unexpected Fail RAP

125-311 PSW controller software failure.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. If the fault persists, perform OF3 System or Sub System Fail RAP.

127-310, 311, 312, 313, 314, 315, 315, 342 ESS Error RAP

127-310 A fatal error occurred in ESR task.

127-311 Fatal error related to ExtPRTc.

127-312 DFE detected a video link error.

127-313 ESS detected a video link error.

127-314 ESS detected a video link error.

127-315 A problem has occurred with software processing, causing the processing to stop.

127-342 A response such as system function recall error was detected.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to **GP 10**. 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 10**.
2. If the fault persists, perform **OF3** System or Sub System Fail RAP.

127-320 DFE Critical Fail RAP

127-320 An error occurred in the connection to the DFE. Or the DFE needs to treat the device as System Fail.

Procedure

Advise the customer to:

1. Take the corrective actions based on the fault code displayed in the DFE monitor, then reboot the system. If the fault persists check the following:
 - Device settings.
 - Connection to the DFE.
 - DFE hardware.

127-337 Job Template HDD Write Error RAP

127-337 An error occurred when the job template was stored on the HDD.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. If the fault persists, perform the following procedures in order:
 - a. OF4 HDD System Fail RAP.
 - b. OF3 System or Sub System Fail RAP.

127-353, 354, 396, 398, 399 Fatal Error RAP

127-353 Fatal error related to LPD.

127-354 Fatal error of FTP server was detected.

127-396 Fatal error related to mail IO.

127-398 Fatal error related to IPP.

127-399 Fatal error related to JME.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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 10.
2. If the fault persists, perform OF5 NET/USB System Fail RAP.

127-700 SIP Registration Fail RAP

127-700 An error has occurred in registering device info with the SIP registration server.

Procedure

Have the customer:

1. Check what the SIP registration server is set to on the device.
2. Check that the SIP registration server is available.

132-312 UI Display Port Link Error RAP

BSD-ON:BSD 3.2 PWB Communications (Controller to UI PWB)

132-312 An communication error occurred between the UI, [PL 2.05 Item 1](#) and the controller PWB assembly, [PL 3.05 Item 1](#).

Procedure

Perform the steps that follow:

1. Switch off, then switch on the machine, [GP 10](#).
2. Check the mini display cable from the controller PWB assembly [P/J352](#) and the UI. Ensure the connections are fully seated, no short or open circuits, and no damage exists. Repair any damage as necessary.
3. If the fault persists, install new components as necessary:
 - Controller PWB assembly, [PL 3.05 Item 1](#).
 - UI console assembly, [PL 2.05 Item 1](#).

500-030 DC612 Print No Good By IOT Wait State RAP

500-030 The machine changed state during dC612.

Procedure

Allow the machine to return from the wait state, then re-run the routine.

500-033, 500-035 Diagnostic Documents RAP

500-033 The document is not loaded or the documents are not enough when a diagnostics routine is performed.

500-035 The document size is different when a Diagnostic routine is performed.

Procedure

Load the required number and size of documents, then re-run the routine.

500-990 DC612 Print No Good By Any Reason RAP

500-990 Printing could not start due to unknown reason in dC612 test pattern print, or it was aborted.

Procedure

Re-run the routine.

OF1 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 controller PWB assembly, [PL 3.05 Item 1](#).
- The fault is communicated via an eight LED display on the controller PWB assembly, [PL 3.05 Item 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.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 10](#).
2. If the system power up sequence has failed, check the code on the eight LED display. Refer to:
 - [BSD 3.10 ESS Status LED \(1 of 5\)](#)
 - [BSD 3.11 ESS Status LED \(2 of 5\)](#)
 - [BSD 3.12 ESS Status LED \(3 of 5\)](#)
 - [BSD 3.13 ESS Status LED \(4 of 5\)](#)
 - [BSD 3.12 ESS \(Controller\) Status LED \(5 of 5\)](#)

If the eight LED display indicates a related fault code, perform the relevant RAP. If a related fault code is not listed, Perform the [OF2 Special Boot Modes RAP](#). If the fault persists, install a new controller PWB assembly, [PL 3.10 Item 6](#).

OF2 Special Boot Modes RAP

Use this RAP to solve boot up errors. If directed here from another procedure, always return to that procedure.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Enter special boot mode, [GP 22](#).
2. Perform the special boot modes in the order that follows:
 - a. LONGDIAG MODE.
 - b. 01. JOB LOG CLEAR MODE.
 - c. 06. HDD INITIALIZE MODE.
 - d. 04. HDD FORMAT MODE.
 - e. 03. NVRAM INIT MODE.

OF3 System or Sub System Fail RAP

BSD-ON:BSD 3.5 PWB Communications (Controller to Halftone/Back plane)

BSD-ON:BSD 3.7 ESS (Controller)

The following describes the common procedures at System Fail or Sub System Fail, regardless of whether the power is turned on or during Job processing.

Initial Actions

Collect the detailed procedures below from the customer when a trouble occurred.

1. What job was performed when the problem occurred.
2. Check the job settings from the UI.
3. Check if print spool is turned on in the WebUI. Refer to [GP 34](#) Print Spool, turn spool off while working through this fault procedure.
4. Collect all related information to reproduce the error.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. If the error was displayed during a service call, perform [GP 33](#) How To Capture A Nananana.log From The WebUI, to obtain the nananana.log for Support.

***NOTE:** It may not be possible to obtain a device log if the device executed a reboot after an error occurred. To enable the device log collection enter `dC131` then set the NVM chain-link code 700-530 value to 0. Repeat the device log procedure then reset the NVM chain-link code 700-530 value back to 1.*
2. Perform [GP 22](#), Special Boot Modes, LONG DIAG MODE.
3. Perform [GP 14](#), Printing Reports, print a Configuration Report. Check the Controller ROM version, if not the latest version perform [GP 4](#), Machine Software.
4. Switch off, then switch on the machine [GP 10](#). If the power cannot be switched off, go to Step 5.
 - If the fault persists after switching off, then switching on the machine, [GP 10](#), perform [GP 33](#) How To Capture A Nananana.log From The WebUI to obtain the nananana.log for Support
 - If switching on the machine starts the system, perform [GP 14](#), Printing Reports, to obtain a Startup and Configuration Report for Support.
 - If unable to reproduce the fault, use the button on the UI to transition the device out of power saver mode or initiate a Job to bring the machine out of power save mode and check if the fault persists. Capture the above reports for Support.
5. Disconnect the power cord from the machine. Remove and reinstall the DIMM, [PL 3.05 Item 7](#), reconnect the power cord, then switch on the machine, [GP 10](#), perform the same operation causing the fault.

NOTE: Always switch off the machine, [GP 10](#), and disconnect the power cord from the machine before attempting to remove the DIMM module, or any other electrical component.

If the fault persists, perform [GP 33](#) How To Capture A Nananana.log From The WebUI to obtain the nananana.log for Support.

6. Switch off the machine, [GP 10](#), check the connection of the controller PWB assembly, [PL 3.05 Item 1](#), back plane PWB, [PL 3.15 Item 2](#), and halftone PWB [PL 3.15 Item 4](#). Check all wiring for poor connections and damage. Correct any issues, then switch on the machine. Perform the same operation causing the fault. Perform [GP 33](#) for Support.
7. Switch off the machine, [GP 10](#). Install a new DIMM, [PL 3.05 Item 7](#). Switch on the machine, then perform the same operation causing the fault. Perform [GP 33](#) for Support.
8. If the fault persists, install a new controller PWB assembly, [PL 3.05 Item 1](#). Perform the same operation causing the fault. Perform [GP 33](#) for Support.
9. If the fault persists after installing a new controller PWB assembly, reinstall the original controller PWB assembly, gather all reports and logs, then contact Support for instructions.

OF4 HDD System Fail RAP

BSD-ON:BSD 3.7 ESS (Controller)

Always read the following three basic notes regarding the hard disk in this machine model before servicing.

1. [Hard Disk Data](#)
2. [Hard Disk Initialization](#)
3. [Hard Disk Formatting](#)

After reading the basic notes, proceed with the service operations.

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Procedure

Perform the steps that follow, in accordance with the system fail fault:

Hard Disk Data

Description by hard disk partition.

Table 1 Hard disk data

Partition No.	Volume	Purpose of Use/Type	Stored Data
1	ide0a	Resource	Font, Form/Logo, Job
2	ide0b	Print	EPC Print Temporary Data
3	ide0c	Folder	Extended Folder, Report, Secure Print, Sample Set, Delayed Print
4	ide0d	PDL	PDL, MailIO Temporary, Spool Area
8	ide0h	Management Information	Management Information (PFlite User Document Store) Job recovery Data, Job Flow, Job Log, Failure Log, Audit Log, Device Certificate

Hard Disk Initialization

Enter [GP 22](#) Special Boot Modes, HDD INITIALIZE MODE.

HDD initialization specifies the logical formatting of the HDD partition. Initializing the HDD deletes all data on the hard disk.

Table 2 Hard Disk Initialization Method

Partition No.	Data Clear Method			
	Diag	KO Tools	Special Booting	Machine Power OFF/ON
1	Yes	Yes	Yes	No
2	Yes	No	Yes	Yes
3	Yes	No	Yes	No
4	Yes	No	Yes	No
5	Yes	No	Yes	Yes
6	Yes	No	Yes	No
7	Yes	No	Yes	No
8	Yes	No	Yes	No

Hard Disk Formatting

Forced formatting of the hard disk in Special Boot Modes, [GP 22](#), 04. HDD FORMATMODE format's the partition to factory setting.

- Formatting will delete all customer saved data on the hard disk.
- Hard disk failures may be recovered by formatting.

Procedure

1. Disconnect, then reconnect the hard disk, [P/J302](#) and [P/J310](#).
2. Perform steps 1 through 7 of [OF3](#) System or Sub System Fail RAP.
3. Enter [dC131](#) NVM Read/Write, change the NVM (700-530) from 0 to 1.
4. Reinstall the software, [GP 4](#).
5. Enter [GP 22](#), Special Boot Modes, perform the routines below in order:
 - a. 06. HDD INITIALIZE MODE
 - b. 04. HDD FORMAT MODE
6. If the fault persists, install a new components as necessary. Perform the operation causing the fault before installing the next component. Stop what the fault is no longer produced.
 - a. HDD, [PL 3.05](#) Item 9.
 - b. Controller PWB assembly, [PL 3.05](#) Item 1.
7. If the system is not restored after installing a new controller PWB assembly, reinstall the original controller PWB assembly, prepare the logs and the obtained reports, then contact Support for instructions.

OF5 NET/USB System Fail RAP

BSD-ON:BSD 3.7 ESS (Controller)

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

1. Print a Configuration Report, then verify the Controller ROM is the latest version. Upgrade the software, GP 4, Machine Software if not the latest version.
2. Perform GP 33 How To Capture A Nananana.log From The WebUI to obtain the nananana.log to provide to Support.
3. Enter dC131, NVM Read/Write, code 700-530. Change the value from 1 to 0 to disable the Automatic Startup Boot Operation At System Fail. Perform the operation causing the fault. If the fault persists, print the Configuration Report for later.
4. Verify the ethernet cable connected at J340 on the controller PWB assembly, PL 3.05 Item 1 is fully engaged and locked. Visually verify the connectivity light is on and illuminated green.
5. On a computer connected to the same network as the machine, ping the IP address listed in the Configuration Report to verify connectivity of the machine on the network.
6. Verify the all active connections on the machine used below are functioning as required.
 - SNTP
 - NetWare
 - Salutation IO
 - Port 9100
 - USB
 - lpd
 - MailIO
 - IPP

Correct any issues and perform the same operation causing the fault. If the fault persists, perform GP 33 How To Capture A Nananana.log From The WebUI to obtain the nananana.log to provide to Support.
7. Switch off the machine, GP 10. Remove and install the DIMM module, PL 3.05 Item 9. Switch on the machine, GP 10. Perform the same operation causing the fault. If the fault persists, install a new DIMM, PL 3.05 Item 9.
8. After replacing the DIMM, if the fault persists, install a new controller PWB assembly, PL 3.05 Item 1.
9. Enter dC131, NVM Read/Write, code 700-530. Change the value from 0 to 1. Print and save the Configuration Report.
10. Repeat the operation causing the fault. If the fault persists, reinstall the original controller PWB assembly, then contact Support for instruction. Perform GP 33 How To Capture A Nananana.log From The WebUI to obtain the nananana.log for Support.

OF6 UI Fail RAP

BSD-ON:BSD 3.2 PWB Communications (Controller to UI PWB)

Procedure

Perform the steps that follow:

1. Verify the UI cable at the UI is correctly installed.
2. Check the wiring between the UI and the controller PWB assembly P352 for loose connection, open or short circuit, and damage. Correct or repair as necessary.
3. If the LED on the UI is flashing, use the information described in Table 1 to identify the fault location.

Table 1 UI Self Diagnostic Function

No.	Target Diagnostic Item	Operation Mode		What's this?
		No	Yes	
1	Communication	No	Yes	<ul style="list-style-type: none"> • Display Fail Code (123-333) (Same as existing) • [Interrupt] [Log In / Out] LED blinks (repeats 2 times)
2	Read EEPROM for Sys	No	Yes	<ul style="list-style-type: none"> • Display Fail Code (123-352) • [Interrupt] [Log In / Out] LED blinks (repeats 3 times)
3	UI Cable Partial Connection	No	Yes	<ul style="list-style-type: none"> • Display Fail Code (123-353) • Write Control Panel internal error log • [Interrupt] [Log In / Out] LED blinks (repeats 4 times)
4	24V Supply Line Voltage Level Monitoring	No	Yes	<ul style="list-style-type: none"> • Can be differentiated from UI Cable Partial Connection • Display Fail Code (123-354) • [Interrupt] [Log In / Out] LED flashes (repeats 5 times)
5	5V Supply Line Voltage Level Monitoring	No	Yes	<ul style="list-style-type: none"> • Can be differentiated from UI Cable Partial Connection • Display Fail Code (123-355)
7	Hard Key Pressed Continuously	No	Yes	<ul style="list-style-type: none"> • Save 023-600 in Controller log • Write Control Panel internal error log
8	Operation Panel (GOT)	Yes	Yes	<ul style="list-style-type: none"> • Skipping the Origin Point Correction brings you to the Touch Check screen • Pressing continuously saves 023-601 in Controller log • Write Control Panel internal error log

Table 1 UI Self Diagnostic Function

No.	Target Diagnostic Item	Operation Mode		What's this?
		No	Yes	
9	Write EEPROM for Sys	No	Yes	<ul style="list-style-type: none"> • Display Fail Code (123-357) • Write Control Panel internal error log • [Interrupt] [Log In / Out] LED blinks (repeats 7 times)
	Write EEPROM for Log	No	Yes	<ul style="list-style-type: none"> • Display Fail Code (123-358) • [Interrupt] [Log In / Out] LED blinks (repeats 7 times)
10	LED ON/OFF ([Interrupt]/[Log In / Out])	No	Yes	<ul style="list-style-type: none"> • Both are ON during reset -> both simultaneously turns OFF at cancellation of reset (except for hot-line).
11	LCD/M (Screen Display/Back-light)	No	Yes	<ul style="list-style-type: none"> • As this can be differentiated from poor connection, the malfunction can be found automatically

4. If the fault persists, perform the procedures in [OF3 System Sub System Fail RAP](#).
5. If the fault persists, install new components below in order. After each component installation, check for the fault. Stop when the fault no longer shows.
 - a. Controller PWB assembly, [PL 3.05 Item 1](#).
 - b. UI console assembly, [PL 2.05 Item 1](#).
 - c. Back plane PWB, [PL 3.15 Item 2](#).
6. If the fault persists, install the original parts and contact Support for instructions preparing the logs as required to be sent to Support.

OF7 Common Job Fail RAP

Procedure

Perform the steps that follow:

1. Print a Configuration Report and Startup Report, refer to [GP 14](#), Printing Reports.
2. Verify and collect for Support, the customer procedures for reproducing the fault, verify UI setting are correct for the Job type, then rerun the print Job causing the fault.
 - Check the exact occurrence timing during job execution.
 - Check the job settings from the UI.
 - Check if print spool is turned on in the WebUI. Refer to [GP 34 Print Spool](#), turn spool off while working through this fault procedure.
 - Collect other information as much as possible to reproduce the error.
3. Check the Configuration Report for the Controller ROM version. Perform [GP 4](#), Machine Software if not the latest version.
4. Perform [GP 33 How To Capture A Nananana.log From The WebUI](#) to obtain the nananana.log for Support.
5. Collect all logs and reports, then contact Support for further instruction.

OF8 Hard Disk Job Fail RAP

Procedure

Perform the steps that follow:

1. Perform the procedures in [OF7](#) Common Job Fail.
2. Perform the procedures in [OF4](#) Hard Disk System Fail.
3. If the fault persists, perform [GP 33](#) How To Capture A Nananana.log From The WebUI to obtain the nananana.log, the contact Support for further instructions.

OF9 Network Job Fail RAP

Procedure

Perform the steps that follow:

1. Print a configuration report to find the TCP/IP address of the machine. Use the PING command from a computer on the customer network to test communication of the machine on the network.
2. Check the version of controller ROM on the configuration report. Upgrade the software, [GP 4](#), Machine Software, if the controller ROM version is not the latest.
3. Verify and collect for Support, the customer procedures for reproducing the fault, verify UI setting are correct for the Job type, then rerun the print Job causing the fault.
 - Check the exact occurrence timing during job execution.
 - Check the job settings from the UI.
 - Check if print spool is turned on in the WebUI. Refer to [GP 34](#) Print Spool, turn spool off while working through this fault procedure.
 - Collect other information as much as possible to reproduce the error.
4. If the fault persists, perform [GP 33](#) How To Capture A Nananana.log From The WebUI to obtain the nananana.log, the contact Support for further instructions.

OF10 Unrepeatable Error RAP

Initial Actions

Collect the detailed procedures below from the customer when a trouble occurred.

1. What job was performed when the problem occurred.
2. Check the job settings from the UI.
3. Check if print spool is turned on in the WebUI. Refer to [GP 34](#) Print Spool, turn spool off while working through this fault procedure.

No Problem Occurred during Service Call.

Procedure

Perform the steps that follow:

1. Perform [GP 33](#) How To Capture A Nananana.log From The WebUI to obtain the nananana.log.
2. Perform [GP 19](#), Obtaining Audit and Device Logs, immediately after the error has occurred. Do not switch off or restart the machine before obtaining logs.
3. Switch off, then switch on the machine, [GP 10](#). On the Home screen of the UI; touch Device, About, scroll to the bottom, touch Reports, then print the Configuration and Startup reports.
4. Perform [GP 22](#), Special Boot Mode. Select LONG DIAG MODE.
5. Perform [GP 33](#) How To Capture A Nananana.log From The WebUI to obtain the nananana.log, then contact Support for further instructions.

OF11 Unable to Start After Power On RAP

BSD-ON:BSD 3.10 ESS (Controller) Status LED (3 of 5)

Initial Actions

Collect the detailed procedures below from the customer when a trouble occurred.

1. What job was performed when the problem occurred.
2. Check the job settings from the UI.
3. Check if print spool is turned on in the WebUI. Refer to [GP 34](#) Print Spool, turn spool off while working through this fault procedure.
4. Collect all related information to reproduce the error.

A problem had occurred or can be reproduced

Procedure

Perform the steps that follow:

1. Verify the main power LED of the UI is on.
2. Perform [GP 22](#), Special Boot Modes. Select LONG DIAG MODE.
3. If the fault can be reproduced, leave it alone for 10 minutes and wait for fault 116-399 Initialization, to occur. After 10 minutes have passed, perform [GP 33](#) How To Capture A Nananana.log From The WebUI to obtain the nananana.log.
4. Check the status of ESS STATUS LED on the controller PWB assembly, [PL 3.05 Item 1](#). Refer to [BSD 3.10 ESS \(Controller\) Status LED \(3 of 5\)](#).
5. Check the Configuration Report for the Controller ROM version. If not the latest version, perform [GP 4](#), Machine Software to upgrade.
6. Check the connection of the controller PWB assembly, [PL 3.05 Item 1](#) to the back plane PWB, [PL 3.15 Item 2](#). Correct obstructions or poor connection, then perform the same operation causing the fault.
7. Remove and reinstall the DIMM, [PL 3.05 Item 7](#), then perform the same operation Causing the fault.
8. Disconnect and reconnect the HDD connectors, [P/J302](#) and [P310](#), then perform the same operation causing the fault.
9. Remove the HDD, the switch on the machine, [GP 10](#). Perform [GP 33](#) How To Capture A Nananana.log From The WebUI to obtain the nananana.log.
10. Install new components as necessary:
 - a. DIMM, [PL 3.05 Item 7](#).
 - b. HDD, [PL 3.05 Item 9](#).
 - c. Controller PWB assembly, [PL 3.05 Item 1](#).
11. If the fault persists after installing a new controller PWB assembly, contact the Support for further instructions. Prepare the logs and the obtained reports as required for Support.

OF12 Unable to Return From Power Save Mode RAP

BSD-ON:BSD 3.10 ESS (Controller) Status LED (3 of 5).

Initial Actions

Collect the detailed procedures below from the customer when a trouble occurred.

1. What job was performed when the problem occurred.
2. Check the job settings from the UI.
3. Check if print spool is turned on in the WebUI. Refer to [GP 34 Print Spool](#), turn spool off while working through this fault procedure.
4. Collect all related information to reproduce the error.

NOTE: This RAP is only for occurrences where during a service call, the machine is unable to return from power save mode. In all other cases where the machine does not start normally after switching off, then switching on the machine, GP 10, follow the procedure for that fault or error.

Procedure

Perform the steps that follow:

1. Verify the main power LED of the UI is on.
2. Perform [GP 22](#), Special Boot Modes. Select LONG DIAG MODE.
3. If the fault can be reproduced, leave it alone for 10 minutes and wait for fault 116-399 Initialization, to occur. After 10 minutes have passed, perform [GP 33 How To Capture A Nananana.log From The WebUI](#) to obtain the nananana.log.
4. Check the status of ESS STATUS LED on the controller PWB assembly, [PL 3.05 Item 1](#). Refer to [BSD 3.10 ESS \(Controller\) Status LED \(3 of 5\)](#).
5. Check the Configuration Report for the Controller ROM version. If not the latest version, perform [GP 4](#), Machine Software.
6. Check the connection of the controller PWB assembly, [PL 3.05 Item 1](#) to the back plane PWB, [PL 3.15 Item 2](#). Correct obstructions or poor connection, then perform the same operation causing the fault.
7. Remove and reinstall the DIMM, [PL 3.05 Item 7](#), then perform the same operation causing the fault.
8. Disconnect and reconnect the HDD connectors, [P/J302](#) and [P310](#), then perform the same operation causing the fault.
9. Remove the HDD, the switch on the machine, [GP 10](#). Perform [GP 33 How To Capture A Nananana.log From The WebUI](#) to obtain the nananana.log.
10. Install new components as necessary:
 - a. DIMM, [PL 3.05 Item 7](#).
 - b. HDD, [PL 3.05 Item 9](#).
 - c. Controller PWB assembly, [PL 3.05 Item 1](#).
11. If the fault persists after installing a new controller PWB assembly, prepare the logs and the obtained reports as required, then contact Support for further instructions.

OF13 Stuck in Printing Fail RAP

BSD-ON:BSD 3.10 ESS (Controller) Status LED (3 of 5).

Initial Actions

Collect the detailed procedures below from the customer when a trouble occurred.

1. What job was performed when the problem occurred.
 2. Check the job settings from the UI.
 3. Check if print spool is turned on in the WebUI. Refer to [GP 34 Print Spool](#), turn spool off while working through this fault procedure.
 4. Collect all related information to reproduce the error.
- During a service call, the error, Stuck in Copying or Printing, occurred or can be reproduced.

Procedure

Perform the steps that follow:

1. If the problem occurs during the service call, perform [GP 33 How To Capture A Nananana.log From The WebUI](#) to obtain the nananana.log, then contact Support for further instructions. Else, continue with the procedure.
2. Open and close the front cover, [PL 28.05 Item 8](#), verify the UI message changes.
3. Perform [GP 22](#), Special Boot Modes. Select LONG DIAG MODE.
4. If the fault can be reproduced, leave it alone for 10 minutes and wait for fault 116-399 Initialization, to occur. After 10 minutes have passed, perform [GP 33 How To Capture A Nananana.log From The WebUI](#) to obtain the nananana.log.
5. Check the status of ESS STATUS LED on the controller PWB assembly, [PL 3.05 Item 1](#). Refer to [BSD 3.10 ESS \(Controller\) Status LED \(3 of 5\)](#).
6. Check the Configuration Report for the Controller ROM version. If not the latest version, perform [GP 4](#), Machine Software.
7. Remove and reinstall the DIMM, [PL 3.05 Item 7](#), then perform the same operation causing the fault.
8. Disconnect and reconnect the HDD connectors, [P/J302](#) and [P310](#), then perform the same operation causing the fault.
9. Remove the HDD, the switch on the machine, [GP 10](#). If the machine starts despite displaying an fault, perform [GP 33 How To Capture A Nananana.log From The WebUI](#) to obtain the nananana.log.
10. Install new components as necessary:
 - a. DIMM, [PL 3.05 Item 7](#).
 - b. HDD, [PL 3.05 Item 9](#).
 - c. Controller PWB assembly, [PL 3.05 Item 1](#).
11. If the fault persists after installing a new controller PWB assembly, contact the Support for further instructions. Prepare the logs and the obtained reports as required for Support.

3 Image Quality RAPs

IQ1 Image Quality Entry RAP 3-3
IQ2 IOT IQ Defects RAP 3-7
IQ3 White Streaks, Spots or Uneven Density (38mm/1.5 inches) in the Cross Process Direction RAP 3-10
IQ4 Color Line of Photoreceptor Pitch (94mm/3.7 inches) in the Cross Process Direction RAP 3-10
IQ5 Dark Lines RAP 3-11
IQ6 Toner Droplet Contamination RAP 3-11
IQ7 Smear 3-12
IQ8 Rough Black RAP 3-12
IQ9 Toner Contamination at Lead or Trail Edge RAP 3-13
IQ10 Multi Color Transfer Failure RAP 3-13
IQ11 Micro White Spots (Side 2) RAP 3-14
IQ12 Color Streaks RAP 3-15
IQ13 Caterpillar Mark (Transfer) RAP 3-15
IQ14 Heat Haze/Mock Heat Haze RAP 3-16
IQ15 Kiss Marks RAP 3-18
IQ16 Circular Stamping Marks RAP 3-18
IQ17 Reverse Dark Lines RAP 3-19
IQ18 In Process 3mm Pitch Line RAP 3-20
IQ19 Scalelike Defect (Transfer) RAP 3-20
IQ20 Cross Process Ghosting RAP 3-21
IQ21 Residual Image Ghosting RAP 3-21
IQ22 DC Charging Ghosting RAP 3-22
IQ23 Background RAP 3-23
IQ24 Deletions RAP 3-23
IQ25 IOT Skew RAP 3-24
IQ26 Print Damage RAP 3-24
IQ27 Unfused Print/Toner Offset RAP 3-25
IQ30 Solid Color in Prints RAP 3-25
IQ31 Missing Color from Image RAP 3-26
IQ32 Repeated Defects RAP 3-27

Image Quality Specifications

IQS 1 Fusing 3-29
IQS 2 Skew 3-29
IQS 3 Print Defects 3-30
IQS 4 MAX Setup 3-31
IQS 5 Thin Line Emphasis Mode Adjustment 3-33

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 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.
- 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 15](#).
- Check that paper tray guides are set to the correct paper size.
- Use the cleaning assembly, [PL 28.05 Item 4](#), stored in the front cover, [PL 28.05 Item 5](#), to clean each of the 4 LPH assemblies, [PL 60.05](#).
- Ensure that the image adjustment mode selections are those used by the customer.
- Check the original documents for defects.
- If image density has degraded, perform [ADJ 90.1](#) Marking Refresh.
- Perform [ADJ 90.2](#) Color Calibration - Automatic.

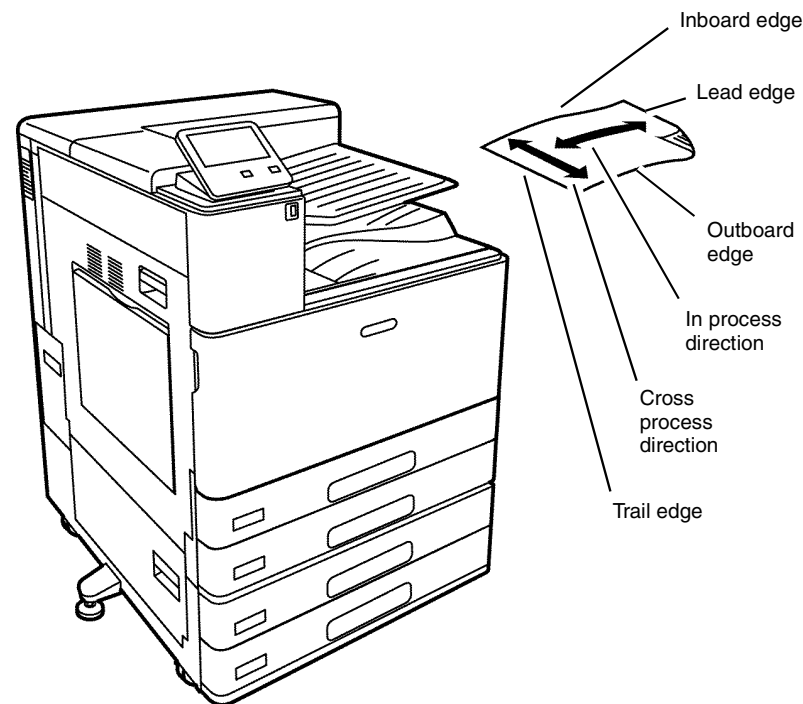
Procedure

Enter [dC612](#) Print Test Patterns. Select a suitable test pattern (pattern 51 Total Chart recommended). Select simplex. Select quantity 3. Select Start Test. **The printed image of the second print is good, with reference to IQS 1 Color Reproduction.**

Y N
Produce the customer job that displays the customer's IQ defect. **The image quality fault persists.**
Y N
Perform [SCP 5](#) Final actions.
Enter [dC612](#) Print Test Patterns. Select the required internal test pattern, refer to [Table 1](#). 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.**

A
Y N
Perform the [IQ26](#) Print Damage RAP.

No specific image quality defect has been identified. If necessary, modify the print quality to meet the customer requirements.



F-1-0634-A

Figure 1 Print definitions

IQ1 Internal Test Patterns

[Table 1](#) 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.

If the settings for a test pattern are wrong, the message appears: 'Invalid parameter. Please re-enter'. and the Print Test Pattern cannot be performed. In this case, change the settings to ensure that they match the requirements listed in [Table 1](#), and repeat the test print.

Test patterns 1-11 are IOT patterns. Test patterns 51 and above are controller patterns. Ensure that the correct screen settings are made for either IOT or controller.

The Paper Supply setting shows both which tray is selected, and the paper size for that tray. For best results, select a tray to match listed paper size.

For Cin%, leave setting a 0% unless a range is specified. Where a range is specified, the lower the number entered, the lighter the test patten print will be.

Table 1 Internal test patterns

Internal Test Pattern Number	Name	Intended Use	Paper Supply Paper Size	Paper Supply Paper Tray	Output Color	Cin%	Screen	1-Sided/ 2-Sided
1	Grid	Used for isolating problems (cannot be used for registration adjustment)	Not Fixed	1-4, Bypass	Any		150 Dot, 200 Dot, 200 Line, 300 Dot, 600 Dot	Any Default is 1-sided
2	A1 Patch Pattern	For visual checking of Registration Control A1 Patch	Not Fixed	1-4, Bypass	Full Color		150 Dot, 200 Dot, 200 Line, 300 Dot, 600 Dot	Any Default is 1-sided
3	B Patch Pattern	For visual checking of Registration Control B Patch	Not Fixed	1-4, Bypass	Full Color		150 Dot, 200 Dot, 200 Line, 300 Dot, 600 Dot	Any Default is 1-sided
4	C Patch Pattern	For visual checking of Registration Control C Patch	Not Fixed	1-4, Bypass	Full Color		150 Dot, 200 Dot, 200 Line, 300 Dot, 600 Dot	Any Default is 1-sided
5	Full Halftone	For defect detection/shipment inspection (discharge carbon fiber)	A3	1-4, Bypass	Any	1% to 100%	150 Dot, 200 Dot, 200 Line, 300 Dot, 600 Dot	Any Default is 1-sided
6	Procon Patch Y Color	Process Control, Gradation, Defect detection (Y color)	A3	1-4, Bypass	Yellow		150 Dot, 200 Dot, 200 Line, 300 Dot, 600 Dot	1-sided
7	Procon Patch M Color	Process Control, Gradation, Defect detection (M color)	A3	1-4, Bypass	Magenta		150 Dot, 200 Dot, 200 Line, 300 Dot, 600 Dot	1-sided
8	Procon Patch C Color	Process Control, Gradation, Defect detection (C color)	A3	1-4, Bypass	Cyan		150 Dot, 200 Dot, 200 Line, 300 Dot, 600 Dot	1-sided
9	Procon Patch K Color	Process Control, Gradation, Defect detection (K color)	A3	1-4, Bypass	Black (Color)		150 Dot, 200 Dot, 200 Line, 300 Dot, 600 Dot	1-sided
10	LPH Chart LM	For LPH line detection	A3	1-4, Bypass	Full Color		150 Dot, 200 Dot, 200 Line, 300 Dot, 600 Dot	1-sided
11	LPH Chart IBY	For LPH line detection and for identifying causes of Video data failure	A3	1-4, Bypass	Full Color		150 Dot, 200 Dot, 200 Line, 300 Dot, 600 Dot	1-sided
51	Total Chart	For detection. For adjustment in the market/determining problems. This chart is the same as TCMC. Resolution is 600 dpi	A3	1-4, Bypass	Full Color Black (Mono)		Standard Fineness Special Usage	Any Default is 1-sided
52	Binary C-TRACS Check PG (Print)	For Gradation Correction. Gradation pattern for gradation correction for Print	A4	1-4, Bypass	Full Color		Standard Fineness Special Usage	1-sided
53	Binary Procon PG	For gradation, defect detection	A4	1-4, Bypass	Full Color		Standard Fineness Special Usage	1-sided
54	Multi-value C-TRACS Check PG (Print)	For Gradation Correction. Gradation pattern for gradation correction for Print	A4	1-4, Bypass	Full Color		Standard Fineness Special Usage	1-sided
55	Multi-value Procon PG	For gradation, defect detection	A4	1-4, Bypass	Full Color		Standard Fineness Special Usage	1-sided

Table 1 Internal test patterns

Internal Test Pattern Number	Name	Intended Use	Paper Supply Paper Size	Paper Supply Paper Tray	Output Color	Cin%	Screen	1-Sided/ 2-Sided
56	SDTP123600 (Black Grid)	For shipment inspection	A3	1-4, Bypass	Full Color Black (Mono)		Standard Fineness Special Usage	Any Default is 1-sided
57	Full Halftone	For defect detection	A3	1-4, Bypass	Any	1% to 100%	Standard Fineness Special Usage	Any Default is 1-sided
58	Ladder Pattern	For defect detection/banding	A3	1-4, Bypass	Full Color Black (Mono)		Standard Fineness Special Usage	Any Default is 1-sided
59	Drum Pitch Halftone	For defect detection/shipment inspection. This chart is the same as CKGM 50%	A3	1-4, Bypass	Full Color		Standard Fineness Special Usage	Any Default is 1-sided
60	Production Banding Chart	For shipment inspection	A3	1-4, Bypass	Full Color		Standard Fineness Special Usage	Any Default is 1-sided
61	HT60M Ladder	For defect detection/banding (magenta)	A3	1-4, Bypass	Magenta		Standard Fineness Special Usage	Any Default is 1-sided
62	HT60C Ladder	For defect detection/banding (cyan)	A3	1-4, Bypass	Cyan		Standard Fineness Special Usage	Any Default is 1-sided
63	HT60K Ladder	For defect detection/banding (black (K))	A3	1-4, Bypass	Black (Mono) Black (Color)		Standard Fineness Special Usage	Any Default is 1-sided
64	MQ-ALL	For evaluating pixel position	A3	1-4, Bypass	Full Color		Standard Fineness Special Usage	Any Default is 1-sided
65	SIQA_IN_OUT Adjustment (Primary Color) Chart	For gradation correction	A3	1-4, Bypass	Full Color Black (Mono)		Standard Fineness Special Usage	Any Default is 1-sided
66	SIQA_IN_OUT Adjustment (Secondary/Process Color) Chart	For gradation correction	A3	1-4, Bypass	Full Color Black (Mono)		Standard Fineness Special Usage	Any Default is 1-sided
68	LPH Line Chart	For line defect detection. This chart is the same as CKGM 60%	A3	1-4, Bypass	Full Color Black (Mono)		Standard Fineness Special Usage	Any Default is 1-sided
71	No Paper Run	For specifying the DC710 No Paper Run function	A4	Tray 1 only	Full Color Black (Mono)			1-sided
72	SDTP957A3S600		A3	1-4, Bypass	Full Color Black (Mono)		Standard Fineness Special Usage	Any Default is 1-sided

Table 1 Internal test patterns

Internal Test Pattern Number	Name	Intended Use	Paper Supply Paper Size	Paper Supply Paper Tray	Output Color	Cin%	Screen	1-Sided/ 2-Sided
92	DC940 (Procon On/Off Print#3)	Print mode that uses the current Procon Data with the Procon (Process Control)	A3	1-4, Bypass	Full Color		Standard Fineness Special Usage	1-sided
102	Process Control PG/Binary		Not Fixed	1-4, Bypass	Full Color		Diffusion	
104	Auto Gradation Correction/Binary	For Document Creation		1-4, Bypass	Full Color		Diffusion	
106	Calibration/Binary	For Gradation check	Not Fixed	1-4, Bypass	Full Color		Diffusion	1-sided
108	Highlight PG/Binary		Not Fixed	1-4, Bypass	Full Color		Diffusion	1-sided
113	Pre IPS/FS Increment RGB		Not Fixed	1-4, Bypass	Full Color		Diffusion	1-sided
117	Pre IPS/SS Increment RGB		Not Fixed	1-4, Bypass	Full Color		Diffusion	1-sided
122	Pre IPS/Shading Data Color		Not Fixed	1-4, Bypass	Full Color		Diffusion	1-sided
124	Pre IPS/YMCK Vertical Streak		Not Fixed	1-4, Bypass	Full Color		Diffusion	1-sided
125	Pre IPS/8 Shades Patch		Not Fixed	1-4, Bypass	Full Color		Diffusion	1-sided
126	Pre IPS/Solid		Not Fixed	1-4, Bypass	Full Color		Diffusion	1-sided
127	Post IPS/Grid/4C		Not Fixed	1-4, Bypass	Full Color		Diffusion	1-sided
128	Post IPS/Grid/BW		Not Fixed	1-4, Bypass	Black (Color)		Diffusion	1-sided
129	Post IPS/FSRE/Grid		Not Fixed	1-4, Bypass	Full Color		Diffusion	1-sided
130	Post IPS/FSRE/Slanting Grid		Not Fixed	1-4, Bypass	Full Color		Diffusion	1-sided
168	ED 24 Shades Patch FC1		Not Fixed	1-4, Bypass	Full Color		Diffusion	1-sided
169	ED 24 Shades Patch FC2		Not Fixed	1-4, Bypass	Full Color		Diffusion	1-sided
170	ED 24 Shades Patch BW		Not Fixed	1-4, Bypass	Black (Mono)		Diffusion	1-sided

IQ2 IOT IQ Defects RAP

Use this RAP to resolve image quality defects produced in the IOT.

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 10**. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Ensure **IQ1** Image Quality Entry RAP is performed before starting this RAP.

Procedure

Refer to **Table 1**, then perform the appropriate action.

Table 1 IQ defects

Image Quality Defect	Subsystem	Symptom	Action
2.5mm (0.1 inch) diagonal streaks	Xerographics	Diagonal streaks may occur due to BCR (bias charge roll) flow coating unevenness.	Install a new relevant drum cartridge, PL 90.20 .
3mm pitch line	Transfer	Lines occur at the rib pitch interval of holder DTS.	Perform the IQ18 In Process 3mm Pitch Line RAP.
Background	Xerographics	The whole page or part of the page is contaminated by toner. The contamination appears as very light grayish color.	Perform the IQ23 Background RAP.
Banding (print head assembly periodical line)	LED printhead assembly	Narrow banding in the process direction, approximately 10.7mm (0.4 inch) apart, for any of the four colors.	Install a new relevant LPH assembly, PL 60.05 .
BCR pitch 38mm (1.5 inches) density unevenness	Xerographics	Charging failure occurs in weak contact parts which lowers the surface potential and the density of the half-tone image darkens with a BCR pitch (38mm/1.5 inches).	Perform the IQ3 White Streaks, Spots or Unevenness in BCR Pitch Axial Direction RAP.
Caterpillar mark	Transfer	Removal of electricity with diselectrification material is performed in the charged state after the paper discharges the secondary transfer part. If the adhesion of the toner to the paper is weak and the amount of electricity removal is big, the toner image scatters and a round shaped pattern appears continuously in the vertical direction.	Perform the IQ13 Caterpillar Mark (Transfer) RAP.
Circular stamping marks	Transfer	When paper is peeled off by the secondary transfer, the toner which is not fused on the sheet is scattered in a semicircular arc.	Perform the IQ16 Circular Stamping Marks RAP.
Color streaks	Transfer	Presence of paper dust in between the intermediate transfer belt and the cleaner blade causes poor cleaning.	Perform the IQ12 Color Streaks RAP.
Cross ghost	Transfer	Streaks in the cross process direction that occurs after 94.5mm (3.7 inches) in high image density images of upstream engine (Y color, M color)	Perform the IQ20 Cross Process Ghosting RAP.
Dark lines	Xerographics	Fine lines in the cross process direction due to abnormal electric discharge between BCR and the photo receptor.	Perform the IQ5 Dark Lines RAP.
DC charging ghosting	Xerographics	As DC charging has weak charging capability compared to AC charging, ghosting may worsen with the environment or paper. Also see residual image (ghosting).	Perform the IQ22 DC Charging Ghosting RAP.
Deletions	Xerographics	Part of the image is missing.	Perform the IQ24 Deletions RAP.
Heat haze/mock heat haze	Transfer	A scattering of toner around solid patches.	Perform the IQ14 Heat Haze/ Mock Heat Haze RAP.
Kiss marks	Transfer	As system resistance of the primary transfer is high, the charge voltage of the primary transfer to the toner on the Photoreceptor is increased, causing kiss-shaped discharge marks.	Perform the IQ15 Kiss Marks RAP.
Line color of photo receptor pitch (94.5mm)	Xerographics	Vibrations during the drum transportation may cause scrapes and friction in the BCR and the photoreceptor, resulting in leftover electrostatic memory on the photoreceptor, which generates thin white streaks in the cross process direction on the highlight portion at the photoreceptor pitch.	Perform the IQ4 Color Line of Photoreceptor Pitch in the Cross Process Direction RAP.

Table 1 IQ defects

Image Quality Defect	Subsystem	Symptom	Action
Line or spots appear at regular intervals on prints	Other	Fault or dirt on one of the IBT belt, fusing, or exit components.	Perform the IQ32 Repeated Defects RAP.
Micro white spots (Side 2)	Transfer	When the resistance in the secondary transfer section is high, e.g. in the early mornings (low humidity environment), the transfer latitude between multi color and mono color is narrow and the setting voltage favors multi color. In other words, the voltage is a little high for mono color, and this causes the Transfer NIP discharge phenomenon that creates the white spots.	Perform the IQ11 Micro White Spots (Side 2) RAP.
Missing color from image	Other	Paper is missing one color completely.	Perform the IQ31 Missing Color from Image RAP.
Multi color transfer failure	Transfer	Paper that has had its side 1 fused has a reduced percentage of moisture content, which increases its electric resistance. As the resistance in the secondary transfer increases by lower humidity or over time, the required electrical field may not be attained, especially in the early mornings (low humidity environment). This setting controls the micro white spots within the limit.	Perform the IQ10 Multi Color Transfer Failure RAP.
Print damage	Other	The prints have nicks, tears, creases, folds, curled edges or wrinkles.	Perform the IQ26 Print Damage RAP
Poor resolution	LED printhead assembly	Images appear out of focus	Remove, clean and re-seat the LED printhead assemblies (4).
Residual image (ghosting)	Xerographics	Ghost images appear on the paper. Parts of the previous page or current page may appear as ghost images on the paper. Also see DC charging ghosting.	Perform the IQ21 Residual Image (Ghosting) RAP.
Reverse dark lines	Transfer	Phenomenon of part of the solid patch of K-color having partial dark lines (multiple) at the FS direction. Toner charge amount before secondary transfer is insufficient causing transfer failure.	Perform the IQ17 Reverse Dark Lines RAP.
Rough black	Transfer	On paper that is not flat or has poor hue, the toner may not have been transferred properly due to the irregular paper surface, creating a rough transferred image.	Perform the IQ8 Rough Black RAP.
Scalelike defect	Transfer	Removal of electricity with diselectrification material is performed in the charged state after the paper discharges the secondary transfer part. If the adhesion of the toner to the paper is weak and the amount of electricity removal is big, the toner image scatters and semicircle shaped pattern appears.	Perform the IQ19 Scalelike Defect (Transfer) RAP.
Skew	Xerographics	Printed images are not parallel to the edges of the paper.	Perform the IQ25 IOT Skew RAP.
Smear	Transfer	When the lead edge of paper reaches the secondary transfer, it immediately increases the secondary transfer section load and causes the IBT drive roll speed to change (decrease in speed). This change in speed changes the difference in relative speed between the photoreceptor and the IBT belt surface in the K-color primary transfer section, hence creating a smear (distorted image).	Perform the IQ7 Smear RAP.
Solid color in prints	Other	Paper is printed solidly on one of the colors	Perform the IQ30 Solid Color in Prints RAP.
Toner contamination at lead/tail edge	Transfer	Lead Edge: Paper lead edge contacts the belt when it is transported from registration to transfer. Tail Edge: The tail edge of the paper that loops between the transfer-fusing sections, at the release of the secondary transfer NIP, moves opposite to the feed direction and contacts the 2nd BTR surface, or bounds up and contacts the belt	Perform the IQ9 Toner Contamination at Lead or Trail Edge RAP.
Toner droplet contamination	Developer	A contamination consisting of random spatters of toner in sizes of a few millimeters.	Perform the IQ6 Toner Droplet Contamination RAP.
Transfer wrinkle	PH, transfer	Paper wrinkles occur between registration-transfer and transfer voids occur.	Check the paper in the Tray for moisture. Use fresh paper.
Unfused image	Fusing	Printed images are not correctly fused onto the paper. When rubbed, the image comes off easily.	Perform the IQ27 Unfused Print/Toner Offset RAP.

Table 1 IQ defects

Image Quality Defect	Subsystem	Symptom	Action
White streaks, spots or unevenness in BCR (38mm/1.5 inches) pitch axial direction	Xerographics	If the BCR is deformed at the BCR and photoreceptor NIP sections, the trace may appear as thin white streaks in the cross process direction on the highlight portion at the charging roll pitch.	Perform the IQ3 White Streaks, Spots or Unevenness in BCR Pitch Axial Direction RAP.
White spots in BCR (bias charge roll) pitch 38mm (1.5 inches) apart in axial direction.	Xerographics	If the substances contained in the cleaner roll get stuck to the BCR at the BCR and cleaner roll NIP sections, the resistance on the BCR gets reduced and may cause the appearance of white streaks in the cross process direction.	Perform the IQ3 White Streaks, Spots or Unevenness in BCR Pitch Axial Direction RAP.

IQ3 White Streaks, Spots or Uneven Density (38mm/1.5 inches) in the Cross Process Direction RAP

Perform this RAP if the prints have white streaks, spots or unevenness in the cross process direction at 38mm (1.5 inches) intervals.

In the BCR (bias charge roll) and photoreceptor nip sections, when BCR deformation remains, thin white streaks in the cross process direction at the BCR pitch occur. These streaks may occur after storage in low temperature/humidity environment.

If the substances contained in the cleaner roll get stuck to the BCR at the BCR and cleaner roll NIP sections, intermittent white spots may occur at the BCR pitch. These spots may occur when the machine has been resting for a long time or in the early mornings.

Unevenness from charging failure occurs in weak contact parts which lowers the surface potential and the density of the half-tone image darkens with a BCR pitch.

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 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Enter **dC612** Print Test Pattern. Print test patterns 6 to 9. Check which color has the image quality defect.
2. If the defect appears in a color, make 30 full color prints of an internal test pattern. If the defect appears only in black, make 30 black and white prints of an internal test pattern.
3. If the image quality defect remains, install a new drum cartridge of the relevant color, **PL 90.20**.

IQ4 Color Line of Photoreceptor Pitch (94mm/3.7 inches) in the Cross Process Direction RAP

Perform this RAP if the prints have a color line in the cross process direction at 94mm (3.7 inches) intervals.

From the vibration in the drum cartridge or moving unit, a frictional charge is created by the position of BCR, cleaner blade that touches the photo receptor and creates a dark line of photo receptor pitch (approximately 94mm/3.7 inches).

This problem may occur after installation of a new drum cartridge.

Ensure **IQ1** Image Quality Entry RAP is performed before starting this RAP.

Procedure

WARNING

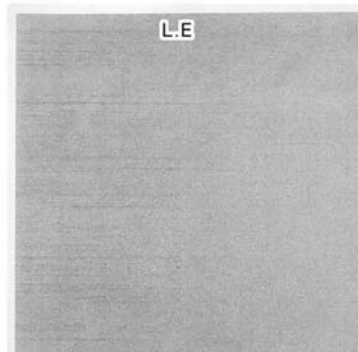
Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Enter **dC612** Print Test Pattern. Print test pattern 5. Check that lines with 94mm (3.7 inches) pitch appear in the cross process direction.
2. If the defect appears in a color, make 30 full color prints of an internal test pattern. If the defect appears only in black, make 30 black and white prints of an internal test pattern.
3. If the image quality defect remains, install a new drum cartridge of the relevant color, **PL 90.20**.

IQ5 Dark Lines RAP

Perform this RAP if dark lines appear in the cross process direction on half-tone images. This is a unique phenomenon of a charged DC by BCR. Refer to [Figure 1](#).

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.



F-1-0635-A

Figure 1 Example

Cause

Uneven DC charge of the BCR.

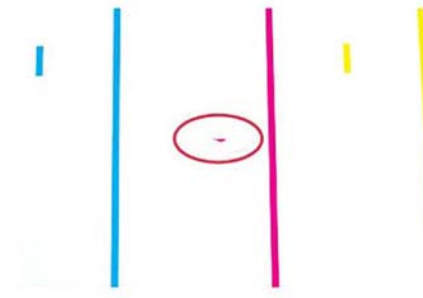
Procedure

1. Enter [dC612](#) Print Test Pattern. Print test pattern 5.
2. If thin, dark lines appear randomly, enter [dC131](#). Set the value of NVM location 740-205 to 1 (on).

IQ6 Toner Droplet Contamination RAP

Perform this RAP if the prints have contamination consisting of random spatters of toner in sizes of a few millimeters. Refer to [Figure 1](#).

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.



F-1-0636-A

Figure 1 Example

Cause

When the developer unit cover is badly contaminated. The cover is likely to be contaminated when there are rapid changes in humidity or a certain amount of low and high density images are copied repeatedly.

Procedure

1. Check if there is extreme contamination of developer unit or drum cartridge on any of the four colors. If contamination is present, clean as necessary.
2. If the image quality defect remains after cleaning, install new components as necessary:
 - Relevant developer unit, [PL 90.05](#).
 - Relevant drum cartridge, [PL 90.20](#).

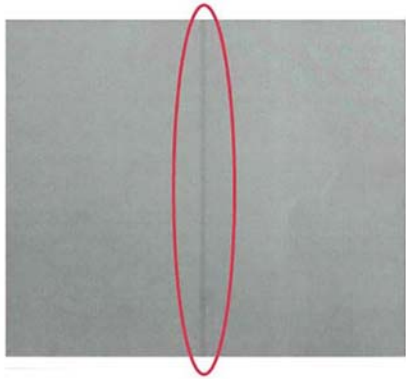
IQ7 Smear

Perform this RAP when prints have a line in the in the cross process direction 125mm (4.9 inches) away from the lead edge, primarily on heavyweight paper. Refer to [Figure 1](#).

When the lead edge of paper reaches the secondary transfer, it immediately increases the secondary transfer section load and causes the IBT drive roll speed to change (decrease in speed).

This change in speed changes the difference in relative speed between the photoreceptor and the IBT belt surface in the K-color primary transfer section, hence creating a smear (distorted image). This occurs in the BW mode for heavyweight paper

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.



F-1-0637-A

Figure 1 Example

Procedure

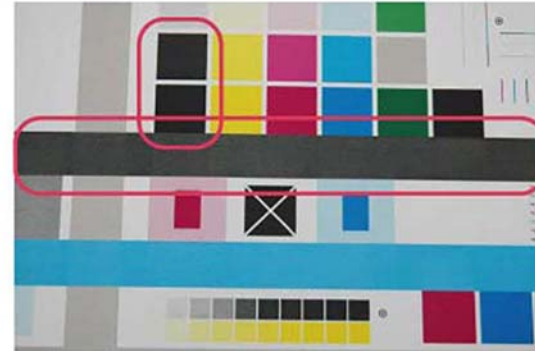
1. Enter [dC612](#) Print Test Pattern. Print test pattern 5. If the print has a line in the in the cross process direction 125mm (4.9 inches) away from the lead edge, enter [dC131](#). Set the NVM values that follow:
 - 740-033 (Plain Paper B Smear Countermeasure SW) to 1.
 - 740-034 (Plain Paper E Smear Countermeasure SW) to 1.
 - 740-035 (Plain Paper G Smear Countermeasure SW) to 1.
 - 740-036 (Heavyweight 1S Smear Countermeasure SW) to 1.
 - 740-037 (Heavyweight 2S Smear Countermeasure SW) to 1.

NOTE: The above NVM changes causes the IOT to operate in the FC mode, regardless of the color mode setting (color priority, BW priority, ACS) in the controller, when performing monochrome printing for the above paper types.

IQ8 Rough Black RAP

Perform this RAP if blacks appear poor. When apparent on paper that is not flat or has poor hue, the toner may not have been transferred properly due to the irregular paper surface, creating a rough transferred image. This occurs in modes other than transparencies Refer to [Figure 1](#).

Ensure [IQ1](#)Image Quality Entry RAP is performed before starting this RAP.



F-1-0638-A

Figure 1 Example

Initial Actions

Advise the customer to change the paper or use paper with a better hue.

Procedure

1. Perform [dC1215](#) Transfer Voltage Adjustment.
 - a. While the nominal value is 0, perform variable output (between -5 and 10, low to high voltage) for secondary voltage, and register the optimal value.
 - b. Nominal variable range: 10%/1 step. If necessary, enter [dC131](#). Adjust NVM value 746-034 as necessary.

IQ9 Toner Contamination at Lead or Trail Edge RAP

Perform this RAP if the prints have toner contamination on either the lead or trail edge. Refer to [Figure 1](#).

Toner contamination suddenly appears on the 2nd BTR or IBT belt:

- Lead Edge: Paper lead edge contacts the belt when it is transported from registration to Transfer.
- Trail Edge: The tail edge of paper that loops between the transfer-fusing sections, at the release of the secondary transfer nip, moves opposite to the feed direction and contacts the BTR surface, or bounds up and contacts the belt

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.



F-1-0639-A

Figure 1 Example

Initial Actions

Make a 1 sided print to check on which side (transfer side or side 2) the contamination occurs.

Procedure

1. Enter [dC131](#). Set the NVM values that follow:
 - 744-108 (126mm/s Plain ABC) to -40.
 - 744-109 (126mm/s Plain DEFG) to -40.
 - 744-110 (126mm/s Plain S) to 0.
 - 744-111 (126mm/s Heavyweight 1, Label 1 BW) to -20.
 - 744-112 (126mm/s Coated 1 BW) from -20 to 0.
 - 744-113 (63mm/s Heavyweight 1, Label FC) to -20.
 - 744-114 (63mm/s Coated 1 FC) to 0.
 - 744-115 (63mm/s Heavyweight 2, Label 2, Envelope) to 0.
 - 744-116 (63mm/s Coated 2) to 0.

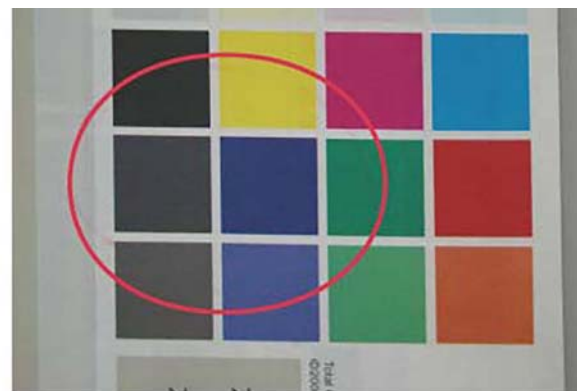
NOTE: If the fusing unit heat roll speed is changed, paper wrinkle, wetting or caterpillar marks may occur.

IQ10 Multi Color Transfer Failure RAP

Paper that has had side 1 fused has a reduced percentage of moisture content, which increases its electric resistance. Refer to [Figure 1](#).

Since the resistance in the secondary transfer section also increases by lower humidity or over time, the required electrical field may not be attained, especially in the early mornings (low humidity environment).

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.



F-1-0640-A

Figure 1 Example

Cause

Due to the characteristics of the EA-ECO toner, high Rsys (in the early morning low temperature and low humidity environment) requires a transfer voltage for the areas where multiple transfers and MWS cannot be used at the same time.

Because the machine is adjusted for multiple transfer priority by default, micro white spots may be visible from side 1.

Initial Actions

1. Verify that the hue on side 2 becomes lighter when printing a high density image in a low temperature and low humidity environment.
2. Change the secondary transfer voltage setting up or down, then compare the hue to the paper with defective image.

Procedure

1. Increase the secondary transfer voltage by decreasing the single color density or by changing the permissible range for MWS.
2. Perform [dC1215](#) Transfer Voltage Adjustment.
 - a. While the nominal value is 0, perform variable output (between -5 and 10, low to high voltage) for secondary voltage, and register the optimal value.

- b. Nominal variable range: 10%/1 step. If necessary, enter dC131. Adjust NVM value 746-034 as necessary.

IQ11 Micro White Spots (Side 2) RAP

Perform this RAP if side 2 has small white spots. In the early morning of a low humidity environment, the resistance of the secondary transfer is high. Refer to Figure 1.

Ensure IQ1 Image Quality Entry RAP is performed before starting this RAP.

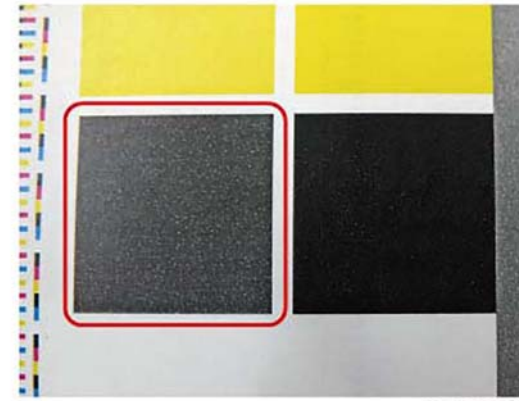


Figure 1 Example

Cause

Occurs on side 2 in a low humidity environment. Occurs due to the discharge of transfer nip as the multi-color and monochrome transfer latitude is narrow, and the set voltage of multiple colors causes excessive voltage for monochrome.

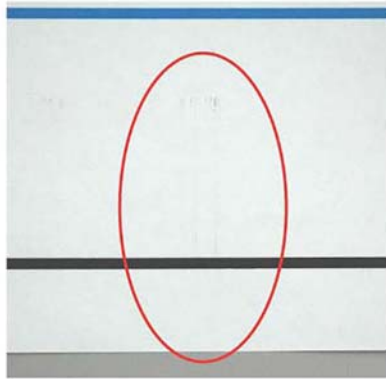
Procedure

1. Use the NVM to decrease the secondary transfer voltage as a trade-off with the multi color.
2. Perform dC1215 Transfer Voltage Adjustment.
 - a. While the nominal value is "0", perform variable output (between -5 and 10, low to high voltage) for secondary voltage, and register the optimal value.
 - b. Nominal variable range: 10%/1 step. If necessary, enter dC131. Adjust NVM value 746-034 as necessary.

IQ12 Color Streaks RAP

At Cin50% and Cin30%, the lines in the process direction have reversed black and white colors. Width is approximately 1mm. Refer to [Figure 1](#).

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.



F-1-0642-A

Figure 1 Example

Cause

This can occur when paper that is prone to flaking is used at high relative humidity.

Initial Actions

1. Remove the IBT belt cleaner assembly [PL 90.30 Item 2](#) to check if foreign substances exist at the tip of the blade.
2. If the side that is opposite to the intermediate transfer belt has toner scrapes or if the color streaks disappear after the tip of the blade is cleaned, it can be identified as this problem.

Procedure

1. Enter [dC131](#). Change the NVM to change the frequency and amount of intermediate transfer belt reverse rotation.

NOTE: Default is the reverse rotation starts at job end after 70 prints.

- a. Reverse rotation switch: NVM 746-130:
 - 0: Reverse at job end
 - 1: Reverse during job
 - 2: Do not perform reverse rotation
- b. Lowering the value of reverse rotation frequency, change NVM: 746-131, 746-132 (Reverse Rotation Execution pv at Job End or Job Split) increases the frequency of reverse rotation.

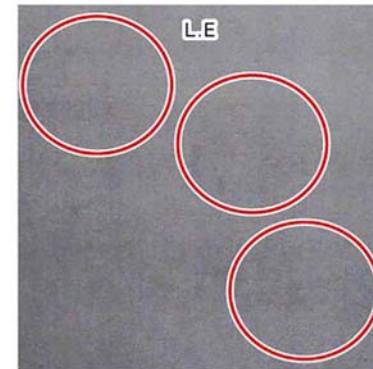
NOTE: Nominal 7000 (= 70 prints).

IQ13 Caterpillar Mark (Transfer) RAP

Removal of electricity with dielectric material is performed in the charged state after the paper discharges the secondary transfer part. Refer to [Figure 1](#).

If the adhesion of the toner to the paper is weak and the amount of electricity removal is big, the toner scatters and a round shaped pattern appears continuously in the vertical direction.

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.



F-1-0643-A

Figure 1 Example

Cause

This is caused by low electric charge in the toner,

Initial Actions

1. Take a sample from a half-tone image with uniformed entire surface and check by comparing with image sample.
2. Judge if this phenomenon is solved or improved by raising the secondary transfer voltage.

Procedure

1. Perform [dC1215](#) Transfer Voltage Adjustment.
 - a. While the nominal value is "0", perform variable output (between -5 and 10, low to high voltage) for secondary voltage, and register the optimal value.
 - b. Nominal variable range: 10%/1 step. If necessary, enter [dC131](#). Adjust NVM value 746-034 as necessary.

IQ14 Heat Haze/Mock Heat Haze RAP

The heat haze/mock heat haze is generated in various places and in different ways. This can be affected by transfer of the paper path at the transfer exit. Refer to [Figure 1](#).

Mock heat haze occurrence differs according to the sampling chart.

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.

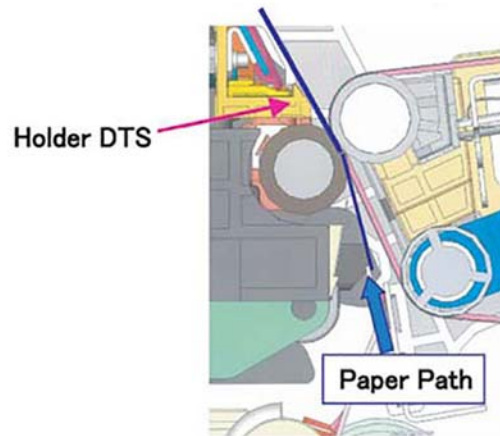


Figure 1 Paper path

F-1-0644-A

Figure 2, Heat haze example.

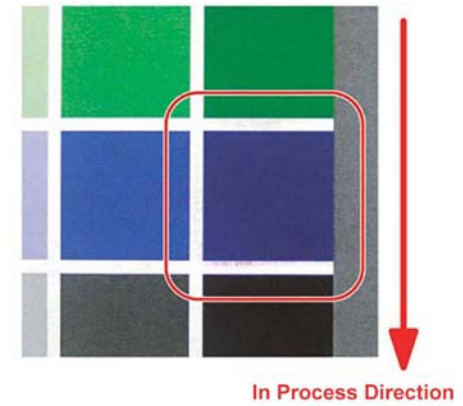


Figure 2 Heat haze example

F-1-0645-A

Figure 3, Mock heat haze (line/text image).

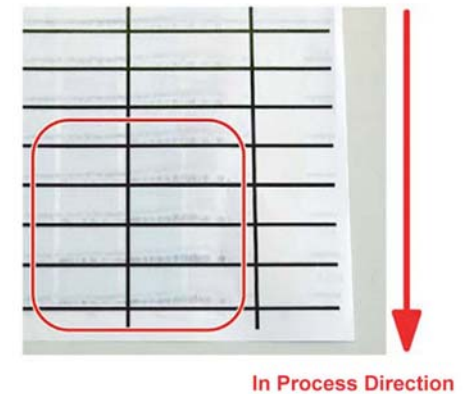
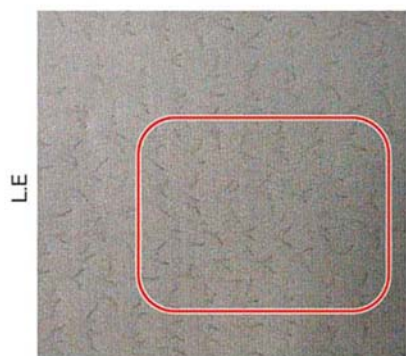


Figure 3 Mock heat haze example: line/text

F-1-0646-A

Figure 4, Mock heat haze (halftone image).



F-1-0647-A

Figure 4 Mock head haze example: halftone

Cause

The heat haze occurs at the place where paper is peeled off from the IBT belt. The toner scatters in small clouds all around the solid patch. Refer to Figure 2.

The mock heat haze (line/text image) occurs when the transported paper rubs against the holder DTS (chute at the transfer exit), which charges it electrically and causes the toner to scatter at the lead and tail edges of the solid section. Refer to Figure 3.

Also, for mock heat haze (halftone images), the paper is charged strongly at the negative side so that a positive corona discharge occurs between the holder DTS and the paper grounded to it, and along the portion where it occurs, toner is scattered, and branch-like (pulsating-like) discharge patterns can be seen. Refer to Figure 4.

Initial Actions

1. Obtain the chart for secondary transfer offset mode to check whether the defect occurs for single K color or multi colors and whether it changes at the secondary transfer voltage.

Also, when the secondary transfer voltage is increased, see if branch-like patterns change by sampling 2 sided halftone images in single K color (45%).

Procedure

1. When a heat haze or mock heat haze occurs during installation, print 25 sheets of a test chart on A3.
2. Increase the secondary voltage.

Increase the secondary transfer voltage based on the result of 1. Perform dC1215 Transfer Voltage Adjustment.

 - a. While the nominal value is "0", perform variable output (between -5 and 10, low to high voltage) for secondary voltage, and register the optimal value.
 - b. Nominal variable range: 10%/1 step. If necessary, enter dC131. Adjust NVM value 746-034 as necessary.

3. Increase the primary transfer current value

NOTE: If this adjustment is made, ghosting (see IQ22) may worsen.

Print and check a test pattern. If the level is bad and unacceptable, check if (1), (2) is performed, decrease the scope of change.

- a. For mock heat haze, enter dC131. Set the NVM values that follow:
 - 746-008 (Primary Transfer Output Mock Heat Haze Correction Run Environment) to 1.
 - 746-009 (Primary Transfer Output Mock Heat Haze Area Coverage Threshold Value) to 1.
 - 746-010 (Primary Transfer Output Mock Heat Haze Correction Coefficient (63mm/s)) to 120.
 - 746-011 (Primary Transfer Output Mock Heat Haze Correction Coefficient (126mm/s)) to 120.
 - 746-012 (Primary Transfer Output Mock Heat Haze Correction Coefficient (175mm/s)) to 120.If the result is insufficient, proceed to b.
- b. Increase the primary transfer output control.
 - If the defect only occurs in black. Enter dC131. Increase the value of NVM 747-605 (the Primary Transfer Output Adjustment Value (BW mode K)) to 130.
 - If the default occurs with multiple colors. Enter dC131. Increase NVM values 747-606 (Y), 747-607 (M), 747-608 (C), and 747-609 (K) to 130.

CAUTION

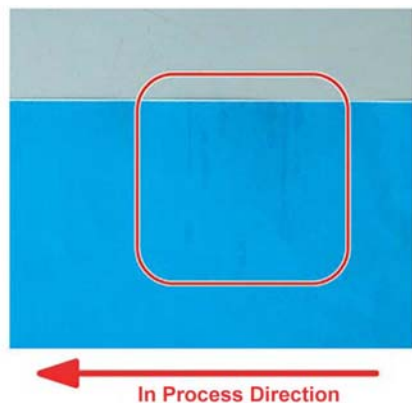
Occurrence of both heat haze and mock heat haze are easily influenced by the paper orientation. As final step, print an image which has solid portions located at various positions to check for them.

Especially for the secondary voltage offset chart, only one patch in the area is useful because the secondary transfer voltage changes between lead and trail edges.

IQ15 Kiss Marks RAP

As system resistance of the primary transfer is high, the charge voltage of the primary transfer to the toner on the Photoreceptor is increased, causing kiss-shaped discharge marks. Refer to Figure 1.

Ensure IQ1 Image Quality Entry RAP is performed before starting this RAP.



F-1-0648-A

Figure 1 Example

Cause

- Occurs if cloud toner enters the IBT unit, 1st BTR, IBT belt is contaminated.

Initial Actions

- Sample whole, uniform halftone images of each color, and check the color (engine) in which it occurs and the position of the in process direction (front side, rear side, etc.).

Procedure

- Clean the contamination of 1st BTR of the relevant color (empty wipe is recommended). See NOTE.
- Decrease the primary transfer output control.
 - If the defect only occurs in black, enter **dC131**. Decrease the value of NVM 747-605 (the Primary Transfer Output Adjustment Value (BW mode K)) to 90.
 - If the default occurs with multiple colors, enter **dC131**. Decrease NVM values 747-606 (Y), 747-607 (M), 747-608 (C) and 747-609 (K) to 90.

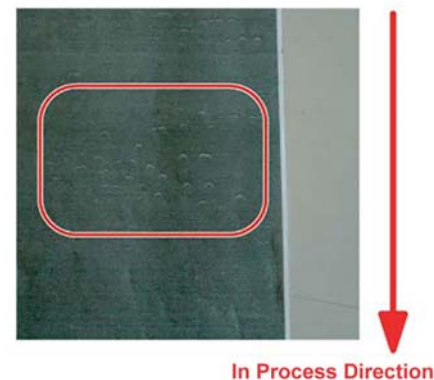
NOTE: When using a drum cleaner for tough toner which is stuck, allow it to dry completely before attaching the IBT belt.

NOTE: Decreasing the primary transfer current value tends to cause white spots.

IQ16 Circular Stamping Marks RAP

Perform this RAP when the prints have a semicircular arc pattern. Refer to Figure 1.

Ensure IQ1 Image Quality Entry RAP is performed before starting this RAP.



F-1-0649-A

Figure 1 Example

Cause

Occurs if the charge of the toner is too low. Also, it tends to occur when the charge elimination of paper is insufficient.

Initial Actions

Take a sample from a half-tone image with uniformed entire surface and check by comparing with image sample.

Procedure

Enter **dC612** Print Test Pattern. Print test pattern 5. If semicircular arc patterns are visible, perform the steps that follow:

- Perform **dC1215** Transfer Voltage Adjustment.
 - While the nominal value is "0", perform variable output (between -5 and 10, low to high voltage) for secondary voltage, and register the optimal value.
 - Nominal variable range: 10%/1 step. If necessary, enter **dC131**. Adjust NVM value 746-034 as necessary.
- If the image quality defect persists, perform the steps that follow:
 - If the defect only occurs in black, enter **dC131**. Increase the NVM value 747-605 (Increase the Primary Transfer Output Adjustment Value (BW mode K)) to 130.
 - If the default occurs with multiple colors, enter **dC131**. Increase the NVM values that follow to 130:
 - 747-606
 - 747-607

- 747-608
- 747-609

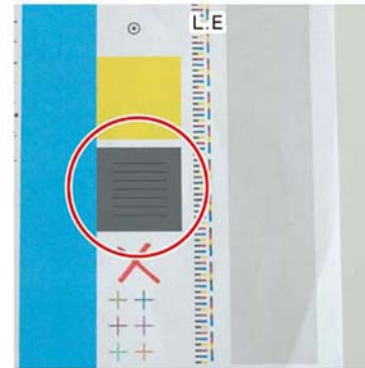
NOTE: Increasing the primary transfer current value can cause ghosting. If the fusing unit heat roll speed is changed, paper wrinkle, wetting or caterpillar marks may occur.

IQ17 Reverse Dark Lines RAP

Perform this RAP if part of the K color solid patch and a phenomenon that partly becomes a thick line (multiple) in the cross process direction

Transfer defect occurred due to lack of electric charge in the toner before the secondary transfer.

Ensure IQ1 Image Quality Entry RAP is performed before starting this RAP.



F-1-0650-A

Figure 1 Example

Cause

Occurs when the developer ability drops.

Initial Actions

Enter dC612 Print Test Patterns. Select a suitable test pattern (pattern 51 Total Chart recommended). Check by comparing with image sample, Figure 1.

Procedure

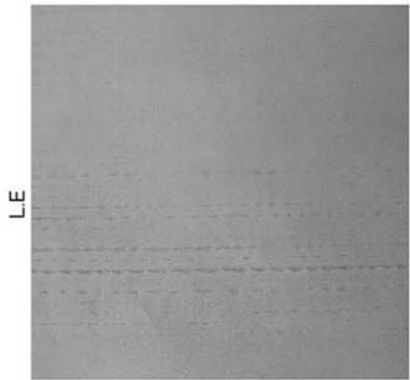
1. Perform dC1215 Transfer Voltage Adjustment.
 - a. While the nominal value is "0", perform variable output (between -5 and 10, low to high voltage) for secondary voltage, and register the optimal value.
 - b. Nominal variable range: 10%/1 step. If necessary, enter dC131. Adjust NVM value 746-034 as necessary.
2. Increase the primary transfer output control.
 - If the defect only occurs in black, enter dC131. Increase the value of NVM 747-605 (the Primary Transfer Output Adjustment Value (BW mode K)) to 130.
 - If the default occurs with multiple colors, enter dC131. Increase NVM values 747-606 (Y), 747-607 (M), 747-608 (C) and 747-609 (K) to 130.

IQ18 In Process 3mm Pitch Line RAP

Use this RAP if the prints have 3mm (0.12 inch) pitched lines in the process direction. Refer to [Figure 1](#).

The paper loop amount between the secondary transfer and fusing unit is large, and the rib of the holder DTS is friction-charged by being strongly rubbed against, and toner is attracted by static, causing streaks to be generated at intervals of the rib pitch.

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.



F-1-0651-A

Figure 1 Example

Cause

Rib of holder DTS increases the contact area by wear, and friction charge amount increases causing streaks.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

1. Clean the ribs of the 2nd BTR roll assembly, [PL 80.65 Item 2](#).
2. If necessary, install a new 2nd BTR roll assembly, [PL 80.65 Item 2](#).

IQ19 Scalelike Defect (Transfer) RAP

Use this RAP if the prints have a scalelike defect. Refer to [Figure 1](#).

Removal of electricity with diselectrification material is performed in the charged state after the paper discharges the secondary transfer part.

If the adhesion of the toner to the paper is weak and the amount of electricity removal is big, the toner image scatters and semicircle shaped patterns appear.

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.



F-1-0652-A

Figure 1 Example

Cause

This is caused by low electric charge in the toner. The stress conditions are:

- Plain paper (lightweight paper)
- Mid humidity - high temperature environment
- New toner cartridge
- Job first thing in the morning (less than 10 prints)

Procedure

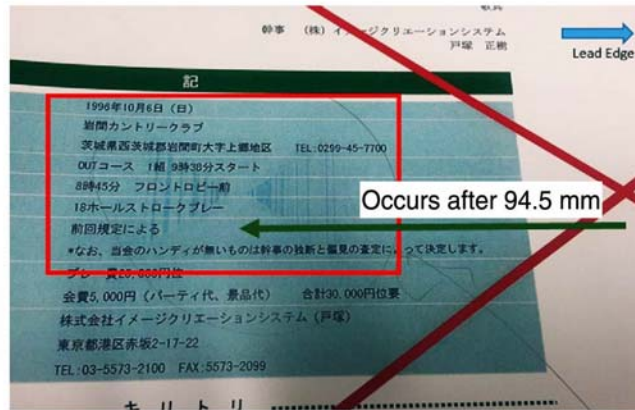
1. Make 12 prints.
2. Advise the customer change the paper (paper with high basis weight), or change the feed direction.
3. If the image quality defect remains. Perform [dC1215](#) Transfer Voltage Adjustment.
 - a. While the nominal value is "0", perform variable output (between -5 and 10, low to high voltage) for secondary voltage, and register the optimal value.
 - b. Nominal variable range: 10%/1 step. If necessary, enter [dC131](#). Adjust NVM value 746-034 as necessary.

IQ20 Cross Process Ghosting RAP

Ghost images in the cross process direction that occur after 94.5mm (3.7 inches) in high image density images of upstream engine (Y color and M color). Refer to [Figure 1](#).

This occurs in C color and K color and more likely to happen at half speed rather than full speed.

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.



F-1-0653-A

Figure 1 Example

Cause

Uneven charging due to localized poor electric discharge.

Procedure

1. Enter [dC131](#). Perform the steps that follow:
 - For cross process ghosting that occurs at half speed, change NVM value 740-205 (White Streaks Countermeasure Switch) to 1 (on).
 - For cross process ghosting that occurs at full speed, increase the NVM values 747-608 and 747-609 to 130.

IQ21 Residual Image Ghosting RAP

Parts of the previous page or current page may appear as ghost images on the paper.

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 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Remove, then reinstall the drum cartridges, [PL 90.20](#). Switch off, then switch on the machine, [GP 10](#). Make a print. **The image quality defect persists.**

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

Install a new drum cartridge of the relevant color, [PL 90.20](#). Switch off, then switch on the machine, [GP 10](#). Make a print. **The image quality defect persists.**

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

Remove the fuser, [PL 10.05 Item 2](#). Check for contamination on the surface of the heat roll. **The surface of the heat roll is clean.**

Y N
If possible, remove the contamination. If necessary, install a new fuser, [PL 10.05 Item 2](#).

Install new components as necessary:

- Drive PWB, [PL 1.10 Item 4](#).
- ESS PWB, [PL 3.10 Item 6](#).

IQ22 DC Charging Ghosting RAP

As DC charging has weak charging capability compared to AC charging, ghosting may worsen with the environment or paper. Refer to [Figure 1](#).

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.

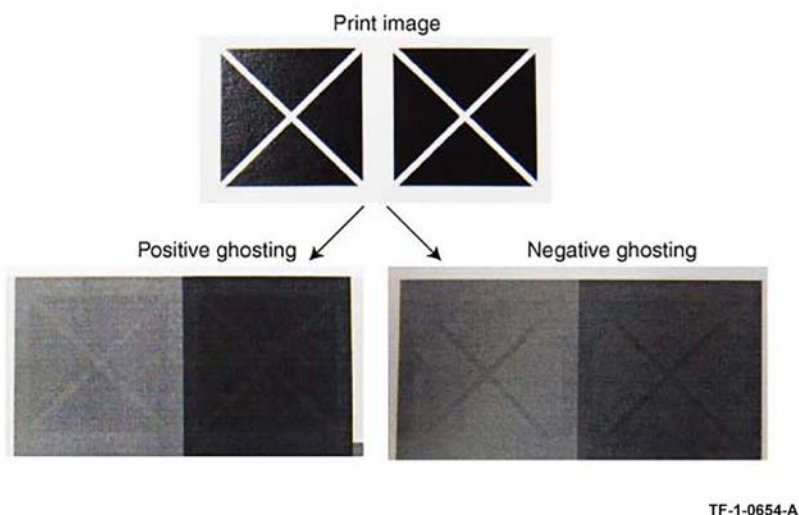


Figure 1 Example

Positive ghosting: The print appears darker after halftone of one rotation (94.5mm/3.7 inches) of the photoreceptor.

Negative ghosting: The unprinted blank spaces (white spaces of image gaps) appear darker at halftone after one rotation (94.5mm/3.7 inches) of the photoreceptor.

Procedure

1. Enter [dC612](#) Print Test Pattern. Print a suitable test pattern. Identify if the ghosting is positive or negative.
2. Refer to [Figure 2](#). Enter [dC131](#). Perform the steps that follow:
 - For positive ghosting, reduce the value of NVM 998-175.
 - For negative ghosting, increase the value NVM 998-175.

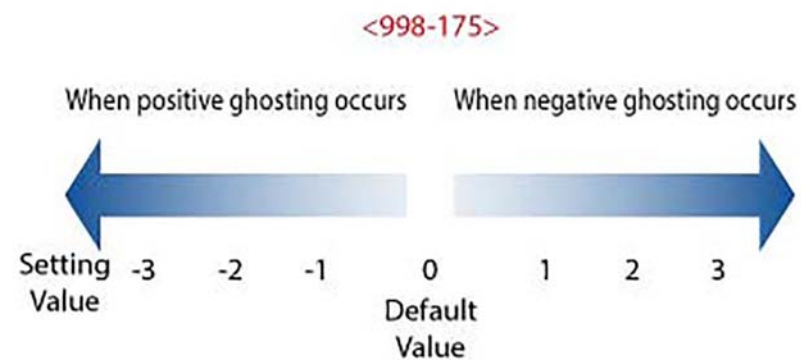


Figure 2 NVM 998-175 setting

IQ23 Background RAP

The page has uniform darkening across all the non print areas.

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 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Remove, then reinstall the drum cartridges, **PL 90.20**. Switch off, then switch on the machine, **GP 10**. Make a print. **The image quality defect persists.**

Y N
Perform **SCP 5** Final Actions.

Install a new drum cartridge of the relevant color, **PL 90.20**. Switch off, then switch on the machine, **GP 10**. Make a print. **The image quality defect persists.**

Y N
Perform **SCP 5** Final Actions.

Check the surface of the 2nd BTR for contamination or distortion. **The surface of the BTR is good.**

Y N
Clean the 2nd BTR. If necessary, install a new 2nd BTR roll assembly, **PL 80.65 Item 2**.

Remove, then reinstall the BTR HVPS. Switch off, then switch on the machine, **GP 10**. Make a print. **The image quality defect persists.**

Y N
Perform **SCP 5** Final Actions.

Install new components as necessary:

- Drive PWB, **PL 1.10 Item 4**.
- BTR HVPS, **PL 1.05 Item 1**.
- ESS PWB, **PL 3.10 Item 6**.

IQ24 Deletions RAP

Part of the image is missing.

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 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Perform the steps that follow:

- If the deletions are small and align with the stripper fingers in the drum cartridges, clean the stripper fingers. If necessary, install a new drum cartridge of the relevant color, **PL 90.20**.
- If the deletions are small and align with the stripper fingers in the fuser, clean the stripper fingers. If necessary, install a new fuser, **PL 10.05 Item 1**.

Procedure

Check the paper type, refer to **GP 15**. **Paper used is within specifications.**

Y N
Use paper within specifications.

Use a new ream of paper. **The image quality defect persists.**

Y N
Perform **SCP 5** Final Actions.

Remove, then reinstall the drum cartridge of the relevant color, **PL 90.20**. Switch off, then switch on the machine, **GP 10**. Make a print. **The image quality defect persists.**

Y N
Perform **SCP 5** Final Actions.

Install a new drum cartridge of the relevant color, **PL 90.20**. Switch off, then switch on the machine, **GP 10**. Make a print. **The image quality defect persists.**

Y N
Perform **SCP 5** Final Actions.

Check the surface of the 2nd BTR for distortion. **The surface of the BTR is good.**

Y N
Install a new 2nd BTR roll assembly, **PL 80.65 Item 2**.

Install new components as necessary:

- Drive PWB, **PL 1.10 Item 4**.
- ESS PWB, **PL 3.10 Item 6**.

IQ25 IOT Skew RAP

Printed images are not parallel to the edges of the paper.

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 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter **dC612**. Select the a relevant internal test pattern. 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.

- Check the nip and drive rolls in the exit 2 transport assembly, **PL 10.25** for wear, damage and contamination.
- Check the exit 2 drive transport ribs, **PL 10.15** for wear, damage and contamination.
- Check the drive and idler rolls in the duplex L/H assembly, **PL 80.50** for wear, damage and contamination.
- Check the duplex cover chute ribs, **PL 80.50 Item 6** 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 LPH assembly, **PL 60.05**.

Make 5 prints from each tray and the bypass tray to identify the source of skew:

- 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.
- 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 15** Paper and Media Size Specifications.
- Check that the paper size guides are set correctly.
- Check that the bypass tray width guides are set correctly.
- Check the bypass tray lower feeder assembly, **PL 70.35 Item 2** for contamination, wear or damage
- Check the registration chute, **PL 80.55 Item 2** for wear, damage or contamination. If necessary clean the housing or install a new registration chute.
- Check the paper path for obstructions. Refer to the **IQ26** Print Damage RAP.

IQ26 Print Damage RAP

The prints have nicks, tears, creases, folds, curled edges or wrinkles.

Ensure **IQ1** Image Quality Entry RAP is performed before starting this RAP.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Enter **dC612**. Select a relevant internal test pattern. 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 15**.

Check the paper path, for the problems that follow:

- Obstructions.
- Damaged guides and rolls. 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 paper feed is introducing skew to the paper, perform the **IQ25** IOT Skew RAP.
- If the paper does not correctly strip from the drum cartridges, ensure the contacts on the HV housing assembly, **PL 90.20 Item 9** and the contact housing assembly, **PL 90.20 Item 10** are good.
- 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 10.05 Item 2**.
- Check that the drum cartridge stripper fingers are clean. If possible remove any contamination. If the stripper fingers are missing, damaged or worn, install a new drum cartridge of the relevant color, **PL 90.20**.
- Check the registration transport assembly, **PL 80.55 Item 1** for damage or wear.
- Check the LH cover assembly, **PL 80.45 Item 1** and inner duplex chute, **PL 80.45 Item 3** for damage or wear.

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, refer to **GP 15**.

IQ27 Unfused Print/Toner Offset RAP

Printed images are not correctly fused onto the paper. When rubbed, the image comes off easily.

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 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

Check the paper type, refer to **GP 15**. **Paper used is within specifications.**

Y N
| Use paper within specifications.

Use paper stored under room conditions. **The image quality defect persists.**

Y N
| Perform **SCP 5** Final Actions.

Check the paper settings for the tray being used. **The settings are correct.**

Y N
| Correct the tray settings.

Check the fuser rolls for contamination. **The rolls are clean.**

Y N
| Clean the fuser rolls. If necessary, install a new fuser, **PL 10.05 Item 2**.

Check the power supply voltage. **The voltage is within the specified range.**

Y N
| Connect a power supply with voltage within the specified range.

Enter **dC140**, codes 010-200, 010-201, 010-202 and 010-203. Check the fusing temperature.

Normal fusing temperatures are detected.

Y N
| Adjust the fusing temperatures as necessary.

Install a new fuser, **PL 10.05 Item 2**.

IQ30 Solid Color in Prints RAP

Paper is printed completely in one of the four colors.

Ensure **IQ1** Image Quality Entry RAP is performed before starting this RAP.

BSD-Reference: **BSD 60.1 LPH Y and M**

BSD-Reference: **BSD 60.2 LPH C and K**

BSD-Reference: **BSD 90.9 Charging and Exposure Y**

BSD-Reference: **BSD 90.10 Charging and Exposure M**

BSD-Reference: **BSD 90.11 Charging and Exposure C**

BSD-Reference: **BSD 90.12 Charging and Exposure K**

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

For the relevant color.

Remove, then reinstall the drum cartridge, **PL 90.20**. Switch off, then switch on the machine, **GP 10**. Make a print. **The image quality defect persists.**

Y N
| Perform **SCP 5** Final Actions.

Install a new drum cartridge, **PL 90.20**. Switch off, then switch on the machine, **GP 10**. Make a print. **The image quality defect persists.**

Y N
| Perform **SCP 5** Final Actions.

Check the wiring and connectors between **P/J513** on the BCR HVPS and **P/J414** on the motor drive PWB. **The wiring and connectors are good.**

Y N
| Correct the connections or repair the wiring as necessary.

Check the ribbon cable and connectors for the relevant color:

- Between the (Y) print head assembly and **P554** on the halftone PWB.
- Between the (M) print head assembly and **P555** on the halftone PWB.
- Between the (C) print head assembly and **P556** on the halftone PWB.
- Between the (K) print head assembly and **P557** on the halftone PWB.

The ribbon cable and connectors are good.

Y N
| Correct the connections. If necessary, install a new FFC cable for the relevant color, **PL 31.05 Item 1**.

A

Check the connections to the components that follow, install new components as necessary:

- BCR HVPS, [PL 1.05 Item 1](#).
- LPH assembly (for the relevant color), [PL 60.05](#).
- Motor drive PWB, [PL 1.10 Item 2](#).
- Controller PWB, [PL 3.05 Item 1](#).

IQ31 Missing Color from Image RAP

Paper has no visible print from one of the four colors.

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.

BSD-Reference: [BSD 60.1 LPH Y and M](#)

BSD-Reference: [BSD 60.2 LPH C and K](#)

BSD-Reference: [BSD 90.9 Charging and Exposure Y](#)

BSD-Reference: [BSD 90.10 Charging and Exposure M](#)

BSD-Reference: [BSD 90.11 Charging and Exposure C](#)

BSD-Reference: [BSD 90.12 Charging and Exposure K](#)

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

For the relevant color.

Check the installation of the LPH assembly, [PL 60.05](#). **The print head assembly is installed correctly.**

Y N

Correctly install the print head assembly.

Check the drum ground contact point, positioned on the front underside of the drum cartridge for contamination or distortion. **The drum ground contact point is good.**

Y N

Clean the drum ground contact point. Correct any distortion.

Remove, then reinstall the drum cartridge, [PL 90.15](#).

Switch off, then switch on the machine, [GP 10](#). Make a print. **The image quality defect persists.**

Y N

Perform [SCP 5](#) Final Actions.

Install a new drum cartridge, [PL 90.15](#). Switch off, then switch on the machine, [GP 10](#). Make a print. **The image quality defect persists.**

Y N

Perform [SCP 5](#) Final Actions.

Print a page that is entirely of the missing color. During the print cycle, switch off the power after the paper has been fed out of the tray (stop the transfer in mid-progress). Check the surface of the IBT belt. **There is a considerable amount of toner on the surface of the IBT belt.**

Y N

Check the ribbon cable and connectors between the relevant print head assembly and the ESS PWB. **The ribbon cable and connectors are good.**

Y N

Correct the connections. If necessary, install a new FFC cable for the relevant color, [PL 31.05 Item 1](#).

Check the connections to the components that follow, install new components as necessary:

- BCR HVPS, [PL 1.20 Item 4](#).
- LPH assembly (for the relevant color), [PL 60.05](#).
- Motor drive PWB, [PL 1.10 Item 2](#).
- Controller PWB, [PL3.05/1](#).

Check the connections to the components that follow, install new components as necessary:

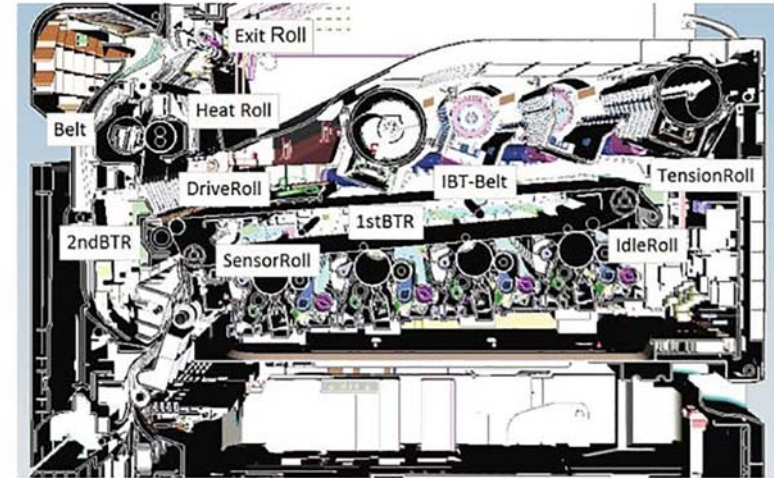
- 2nd BTR roll assembly, [PL 80.65 Item 2](#).
- BTR HVPS, [PL 1.05 Item 1](#).
- Motor drive PWB, [PL 1.10 Item 2](#).

IQ32 Repeated Defects RAP

Use this RAP to identify the cause of repeated defects.

Repeated defects can be caused by a variety of issues in the print engine. Refer to [Figure 1](#).

Ensure [IQ1](#) Image Quality Entry RAP is performed before starting this RAP.



TF-1-0656-A

Figure 1 Print engine

Initial Actions

Refer to [Table 1](#). Observe any lines or defects to see if space between them match any values in the table.

Table 1 Defect periods

Sub System	Device	Print Period (mm)	Print Period (inches)	Part List Reference
Exit	Exit Roll	47.1	1.85	PL 10.25 Item 2
	Pinch Roll	31.4	1.24	PL 10.25 Item 2
	Drive Roll	41.0	1.61	PL 10.25 Item 2

Table 1 Defect periods

Sub System	Device	Print Period (mm)	Print Period (inches)	Part List Reference
Fusing	Heat Roll (part of the fuser unit)	82.5	3.25	PL 10.05 Item 14
	Belt (part of the fuser unit)	95.1	3.74	PL 10.05 Item 14
Transfer	2nd-BTR Roll	56.5	2.22	PL 80.65 Item 2
IBT	IBT-Belt	795.0	31.3	PL 90.30 Item 1
	Tension Roll	70.9	2.79	Part of IBT belt Assy PL 90.30 Item 1
	Idle Roll	31.7	1.25	Part of IBT belt Assy PL 90.30 Item 1
	1st-BTR Roll	19.1	0.75	Part of IBT belt Assy PL 90.30 Item 1
	Sensor Roll	56.8	2.24	Part of IBT belt Assy PL 90.30 Item 1
Developer	Developer Unit	28.7	1.13	PL 90.05
Xerographics	Drum Cartridge	94.5	3.72	PL 90.15
	BCR	38.0	1.5	Part of drum cartridge PL 90.15
	BCR Cleaner	29.3	1.15	Part of drum cartridge PL 90.15

Procedure

Clean or install new components as necessary.

NOTE: Some of the items cannot be cleaned or replaced as they are contained within a larger part. For example the idle roll, 1st BTR roll and sensor roll are contained within the IBT unit belt assembly.

IQS 1 Fusing

Procedure

Make 5 prints of an internal test pattern that has solid areas. Check the fusing by folding one of the prints 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 [IQ27](#) Un fused Print/Toner Offset RAP.

IQS 2 Skew

Documents

Internal test pattern 28

Procedure

NOTE: For a description of the print/copy orientation definitions, refer to [GP 31](#) Print/Copy Orientation Definitions.

Print Skew

Specification

Refer to [Table 1](#).

Table 1 Print skew measurement

Source of Paper	Maximum Allowable Skew
Trays 1, 2, 3 and 4	1mm
Bypass tray	2.2mm

Skew Measurement

To check for skew, perform the steps that follow:

1. Enter [dC612](#). Make a simplex print of internal test pattern 28.
2. Determine the amount of skew. Measure the distance from a printed line to the lead edge of the paper at the inboard and outboard edges.
3. If skew is not within specification on either side, perform the [IQ25](#) IOT Skew RAP.

IQS 3 Print Defects

The machine should produce prints free of defects. Any defects not explicitly covered by this specification should be considered as a fault.

Dark Spots

Dark spots are toner deposits in the background area of a print. The specification is for the total image area. To assess for dark spots use the [dC612](#) internal test pattern 55.

- 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 [IQ2](#) IOT IQ Defects RAP.

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 123.

- 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 Defects RAP.

Paper Wrinkle

Paper wrinkles which result in the loss of information are unacceptable at any level. In any mode, 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 15](#) 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 18](#) 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.
 - Wrinkles occurring after transfer tend to be creased into the paper and can be caused in the fuser.

IQS 4 MAX Setup

Purpose

To maintain a high image quality that meets the demands of the customer resulting in good customer satisfaction.

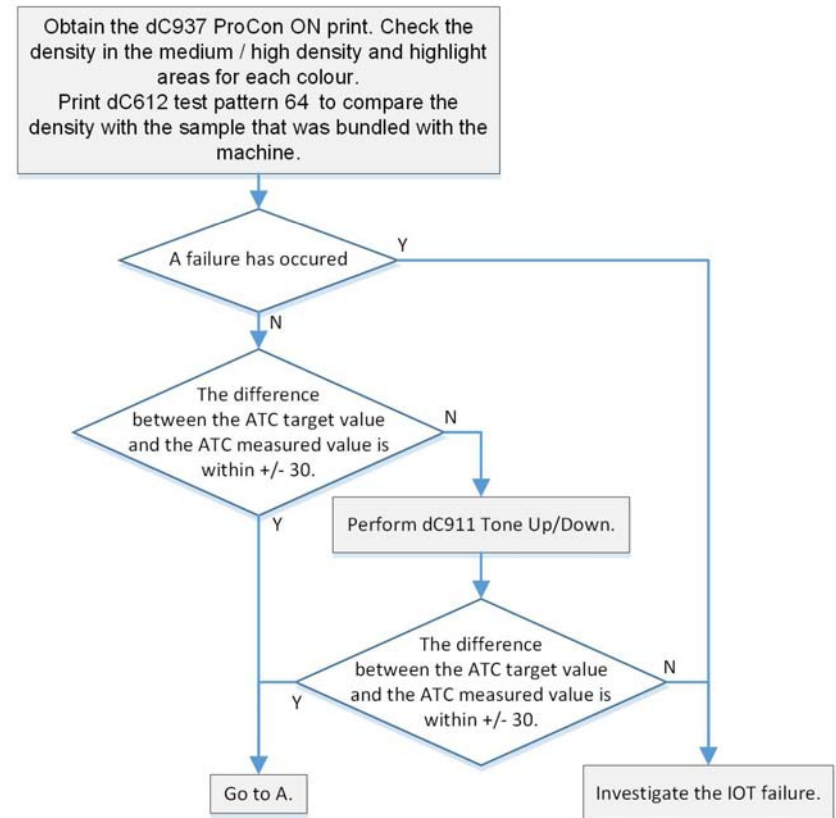
Overview

This adjustment procedure uses the sub-procedures that follow:

- **ADJ 90.2:** Color Calibration - Automatic. This procedure automatically adjusts the color calibration.
- **dC612:** Print Test Pattern. This procedure allows selection and printing of internal test patterns.
- **dC924:** TRC Manual Adjust. This function adjusts the IOT gradation with the ADC Gradation Correction LUT and to darken or lighten the L, M, and H of each color Y, M, C and K.
- **dC937:** Procon ON/OFF Print. This function identifies the IOT density reproduction problem. Perform the Procon Setup to output the built-in PG and indicate whether there is a control related parameter failure. There are two modes for Procon Control: [Procon "On" Print] mode for Process Control ON and [Procon "Off" Print] mode for Process Control OFF. These modes are used to identify whether the trouble is caused by the Process Control or the IOT.
- **dC950:** ATC sensor setup. To acquire the sensitivity correction values [Correction Coefficient] and [Correction Offset] for adjusting the ATC sensor output from the bar code numbers which display the sensitivity attribute in every ATC sensor. Only implement colors which a new developer assembly or ATC sensor have been installed.
- **dC991:** Tone Up/Down. This function changes the toner density and adjusts the IOT density. Input and set the number of sheets for tone up or down and perform the Tone Up / Down.

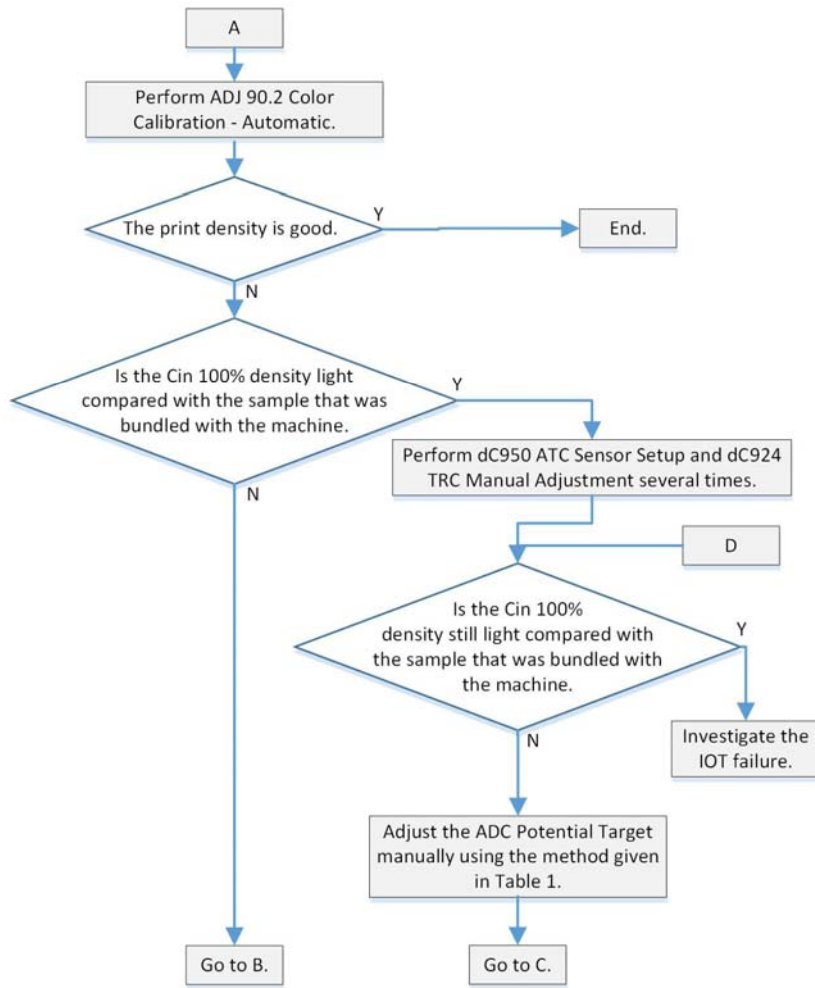
Procedure

During a service call, when a problem with the image quality has been determined or when there is a request from the customer regarding image quality, perform the adjustment according to the following flow, [Figure 1](#), [Figure 2](#) and [Figure 3](#).



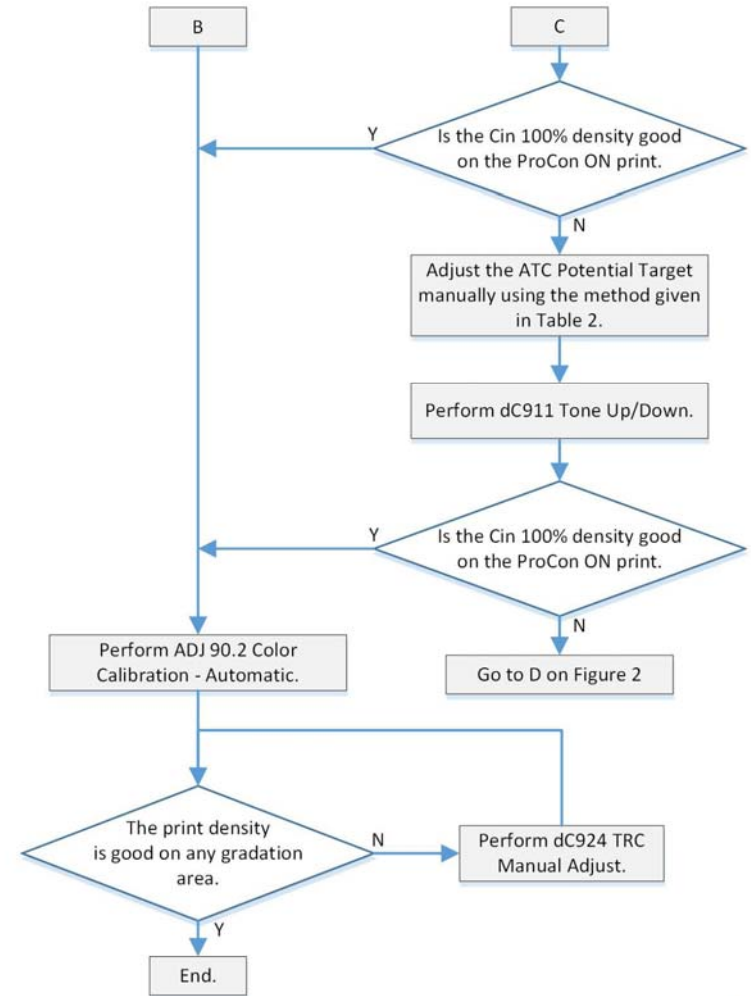
TF-1-0692-A

Figure 1 IQ call flow (1 of 3)



TF-1-0693-A

Figure 2 IQ call flow (2 of 3)



TF-1-0694-A

Figure 3 IQ call flow (3 of 3)

IQS 5 Thin Line Emphasis Mode Adjustment

Purpose

For correcting the poor reproducibility of 600dpi/1200dpi thin lines.

Thin lines, especially slanted ones, tend to break up, when this happens, use this procedure to correct the problem.

NOTE: This adjustment might cause defects to appear in images when in use:

- Interference in the form of banding in ladder images.
- LPH streaks appearing in high temperature environments.
- HT concentration increases.

Because of these reasons, keep the adjustment amount as low as possible.

Procedure

Adjust the NVMs that follow:

1. 749-247 1200 Only Fine Line Correction - 0: OFF (also perform correction for 600dpi), 15: ON (only perform correction for 1200dpi)
2. 749-246 Thin Line Correction Switch - 0: Thin Line Correction OFF, 1: Thin Line Correction ON. The default value is 0.
3. Change the value of 749-938 NOUDDLUT_ratio Fixed Value ON to 0. 0: Calculated value, 1: Fixed Value
4. Adjust the thin line correction amount, [Table 1](#).

Table 1 Thin Line Correction Amount Adjustment

NVM Address	Description	Default Value	Adjustment Range
749-251	Thin line correction amount Y color	0	0 to 255
749-251	Thin line correction amount M color	0	0 to 255
749-251	Thin line correction amount C color	0	0 to 255
749-251	Thin line correction amount YK color	0	0 to 255

NOTE: The larger the value, the more emphasis the thin line gets (amount of exposure is increased).

The amount of exposure increases +10% at 120, +20% at 220. The smaller value has fewer defects so 120 is recommended.

Table 1 NVM of ADC Goal Manual Correction Target

Chain Link Number	Parameter Name	Adjustment Range
753-194	Delta RADC_potential_target manual correction amount [Y]	-30 to +30. When concentration is up, use a negative value. When concentration is down, use a positive value.
753-195	Delta RADC_potential_target manual correction amount [M]	
753-196	Delta RADC_potential_target manual correction amount [C]	
753-197	Delta RADC_potential_target manual correction amount [K]	

Table 2 NVM of ATC Goal Manual Correction Target

Chain Link Number	Parameter Name	Adjustment Range
754-509	ATC target manual correction amount [Y]	-30 to +30. When concentration is up, use a negative value. When concentration is down, use a positive value.
754-510	ATC target manual correction amount [M]	
754-511	ATC target manual correction amount [C]	
754-512	ATC target manual correction amount [K]	

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REP 1.1 BTR HVPS PWB

Parts List on [PL 1.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

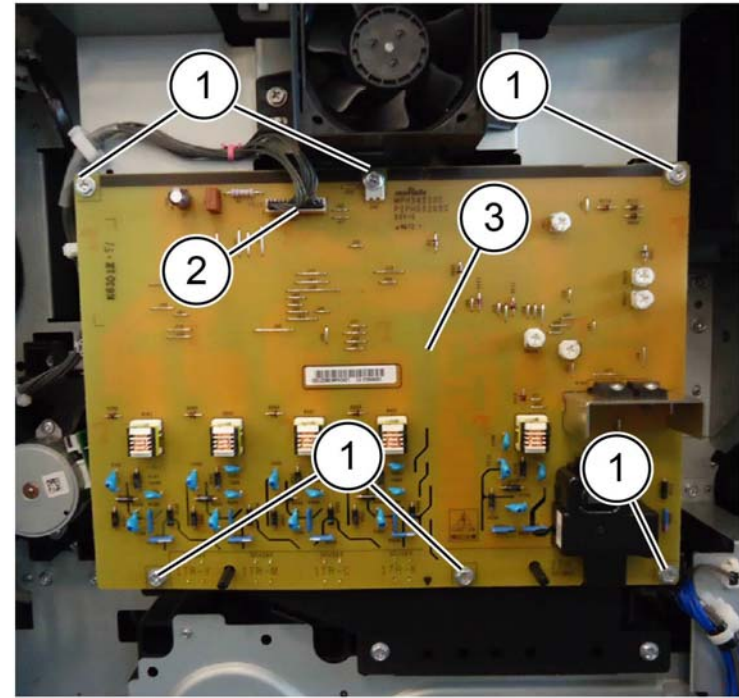


Figure 1 ESD symbol

CAUTION

Observe ESD procedures during this procedure.

1. Open the video contact chassis assembly, [PL 3.10 Item 2](#), [GP 32](#).
2. Remove the HVPS, [Figure 2](#):
 - a. Remove five screws (1).
 - b. Disconnect the connector (2).
 - c. Remove the HVPS (3).



F-1-0092-A

Figure 2 HVPS removal

Replacement

The replacement is the reverse of the removal procedure.

REP 1.2 Fuser Heater Power Supply

Parts List on [PL 1.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

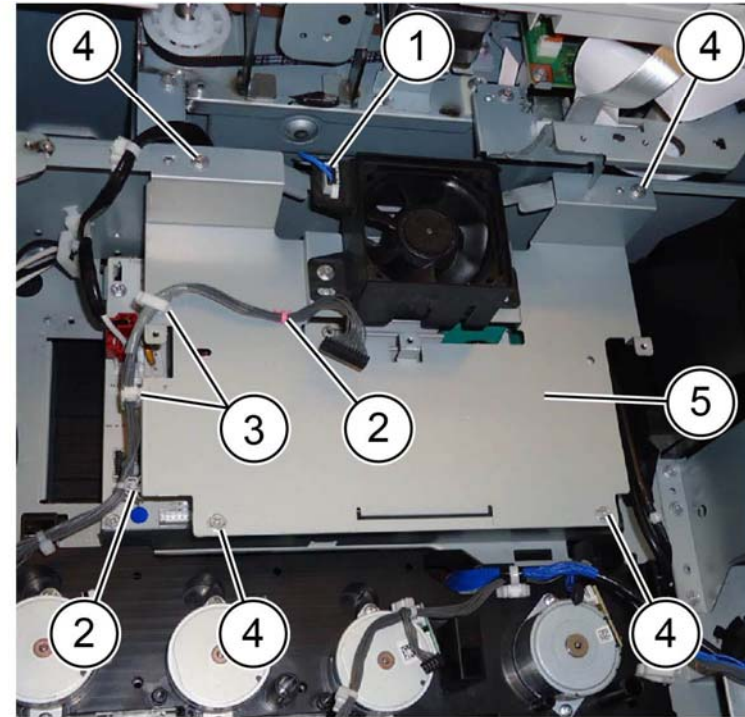


Figure 1 ESD symbol

CAUTION

Observe ESD procedures during this procedure.

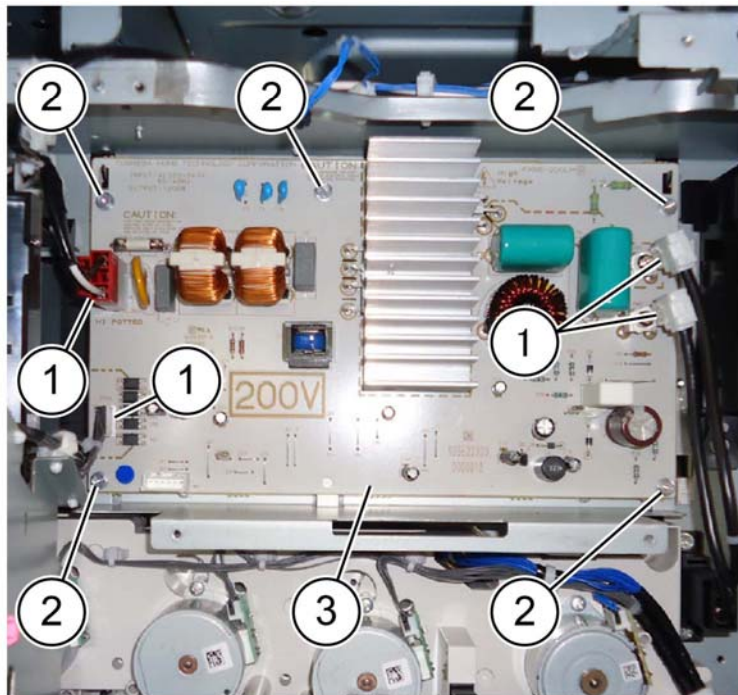
1. Open the video contact chassis assembly, [PL 3.10 Item 2](#), [GP 32](#).
2. Remove the BTR HVPS PWB, [REP 1.1](#).
3. Remove the bracket: [Figure 2](#).
 - a. Disconnect the connector (1).
 - b. Remove two cable ties (2).
 - c. Open two clamps (3), then move the harness out of the way.
 - d. Remove four screws (4).
 - e. Remove the bracket (5).



F-1-0093-A

Figure 2 Bracket removal

4. Remove the fuser heater power supply: [Figure 3](#).
 - a. Disconnect four connectors (1).
 - b. Remove five screws (2).
 - c. Remove the fuser heater power supply (3).



F-1-0161-A

Figure 3 Power supply removal

Replacement

The replacement is the reverse of the removal procedure.

REP 1.3 GFI Chassis Assembly

Parts List on [PL 1.10](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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

Observe ESD procedures during this procedure.

1. Remove the controller cover assembly, [PL 3.10 Item 1](#).
2. Remove the MCU cover, [PL 28.15 Item 10](#).
3. Remove the lower rear cover, [PL 28.15 Item 8](#).

4. Remove the items that follow, [Figure 2](#):
 - a. Remove three screws (1).
 - b. Disconnect four connectors (2).
 - c. Lift the GFI chassis assembly (3) off the frame hook then remove.

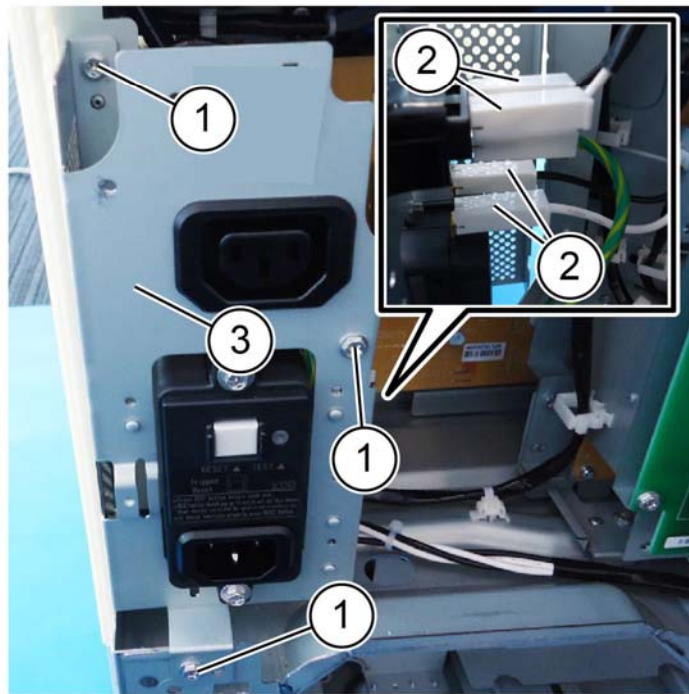


Figure 2 GFI chassis assembly removal

F-1-0162-A

Replacement

The replacement is the reverse of the removal procedure.

REP 1.4 Motor Drive PWB

Parts List on [PL 1.10](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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

Observe ESD procedures during this procedure.

CAUTION

When installing a new drive PWB and a new ESS PWB at the same time, first install the new ESS PWB, then switch on the machine, [GP 10](#). If the new ESS PWB installation is successful, switch off the machine, then install the new drive PWB.

1. Remove the controller cover assembly, [PL 3.10 Item 1](#).
2. Remove the MCU cover, [PL 28.15 Item 10](#).
3. Remove the lower rear cover, [PL 28.15 Item 8](#).

4. Remove the motor drive PWB, [Figure 2](#):
 - a. Disconnect all connectors (1).
 - b. Remove eight screws (2).
 - c. Remove the motor drive PWB (3).

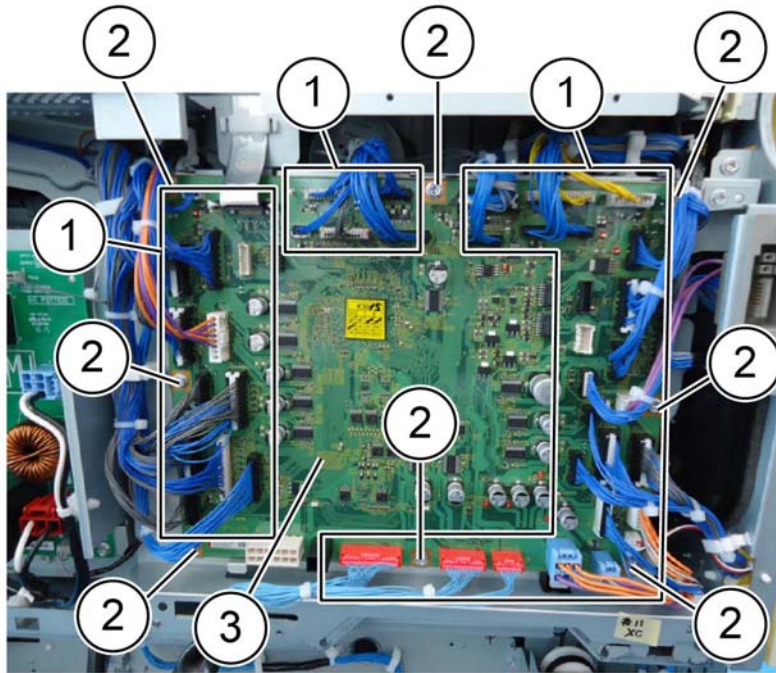


Figure 2 Drive PWB removal

F-1-0094-A

Replacement

The replacement is the reverse of the removal procedure.

REP 1.5 AC Drive PWB

Parts List on [PL 1.15](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



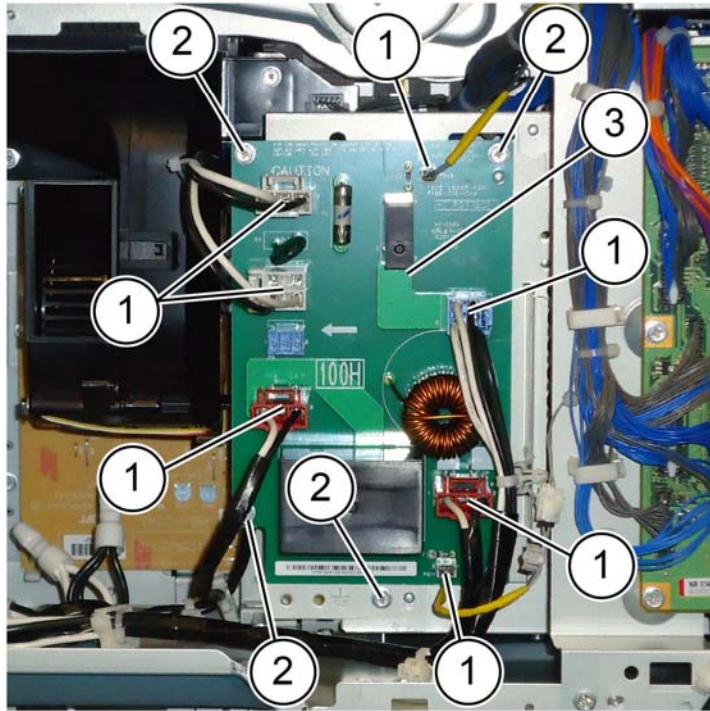
Figure 1 ESD symbol

CAUTION

Observe ESD procedures during this procedure.

1. Remove the controller cover assembly, [PL 3.10 Item 1](#).
2. Remove the MCU cover, [PL 28.15 Item 10](#).
3. Remove the lower rear cover, [PL 28.15 Item 8](#).

4. Remove the AC drive PWB: [Figure 2](#).
 - a. Disconnect seven connectors (1).
 - b. Remove four screws (2).
 - c. Remove the AC drive PWB (3).



F-1-0095-A

Figure 2 AC drive PWB removal

Replacement

The replacement is the reverse of the removal procedure.

REP 1.6 LVPS

Parts List on [PL 1.15](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



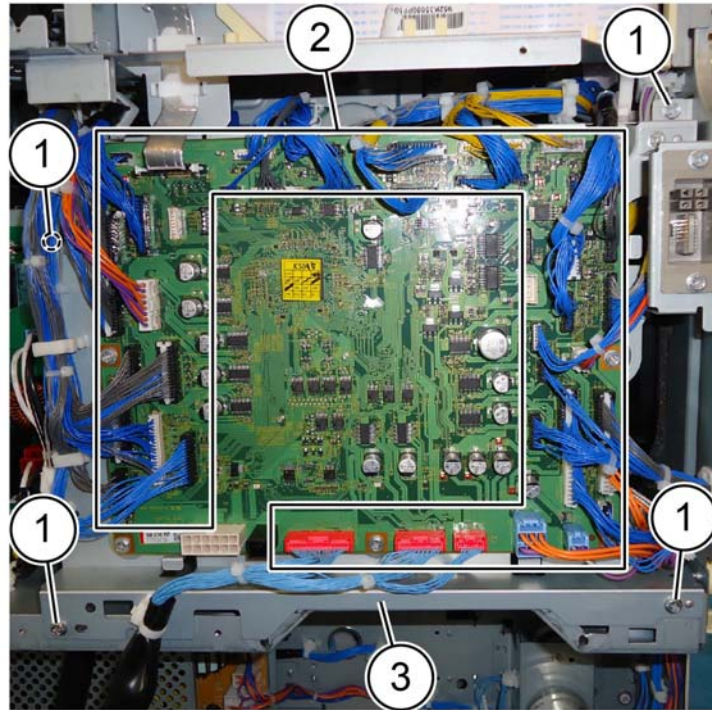
Figure 1 ESD symbol

CAUTION

Observe ESD procedures during this procedure.

1. Remove the controller cover assembly, [PL 3.10 Item 1](#).
2. Remove the MCU cover, [PL 28.15 Item 10](#).
3. Remove the lower rear cover, [PL 28.15 Item 8](#).

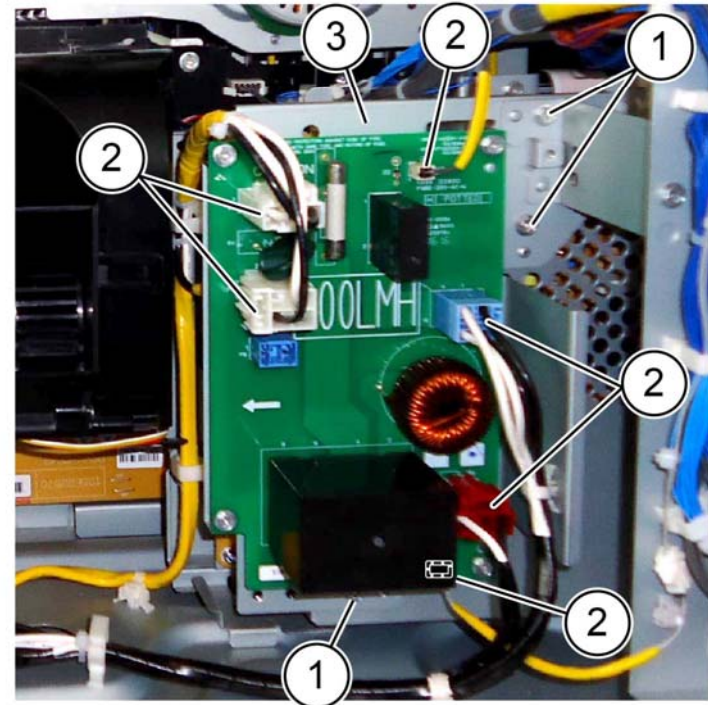
4. Remove the motor drive chassis assembly, [Figure 2](#):
 - a. Remove four screws (1).
 - b. Disconnect all connectors (2).
 - c. Remove the motor drive chassis assembly (3).



F-1-0096-A

Figure 2 Motor drive chassis assembly removal

5. Remove the AC Bracket, [Figure 3](#).
 - a. Remove three screws (1).
 - b. Disconnect six connectors (2).
 - c. Remove the AC bracket (3).



F-1-0097-A

Figure 3 AC bracket removal

6. Disconnect the LVPS harnesses, [Figure 4](#).
 - a. Disconnect three connectors (1).
 - b. Remove two wire ties (2).
 - c. Release the harness from two clamps, then move the harness away from the LVPS (3).

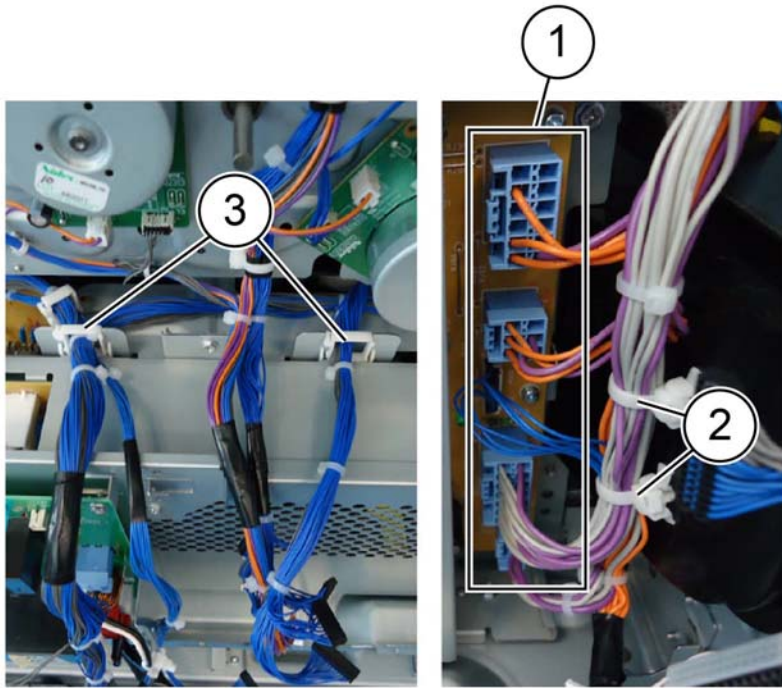


Figure 4 Disconnect the harness

F-1-0098-A

7. Remove the LVPS, [Figure 5](#).
 - a. Remove four screws (4).
 - b. Disconnect the connector (5).
 - c. Remove the LVPS (6).

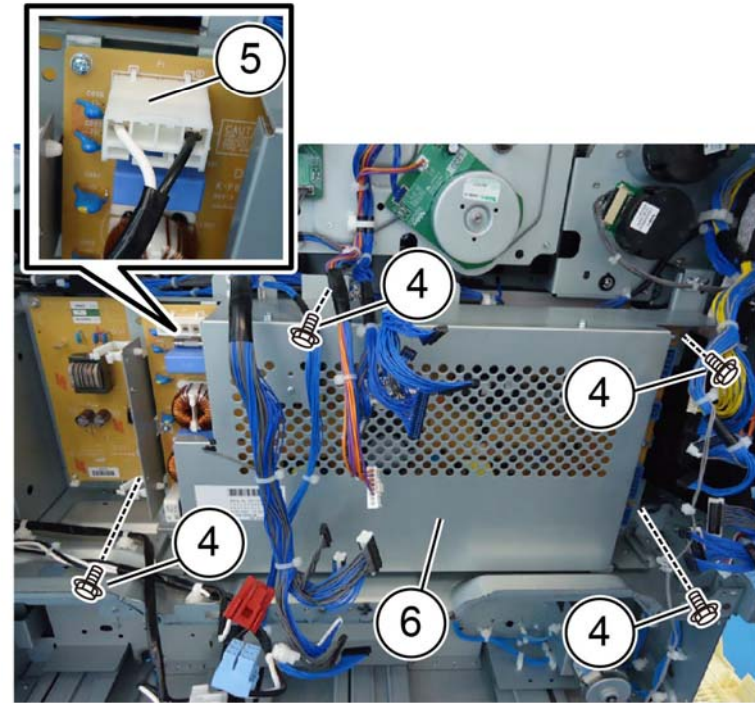


Figure 5 LVPS removal

F-1-0099-A

Replacement

The replacement is the reverse of the removal procedure.

REP 1.7 Developer Bias HVPS PWB

Parts List on [PL 1.15](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

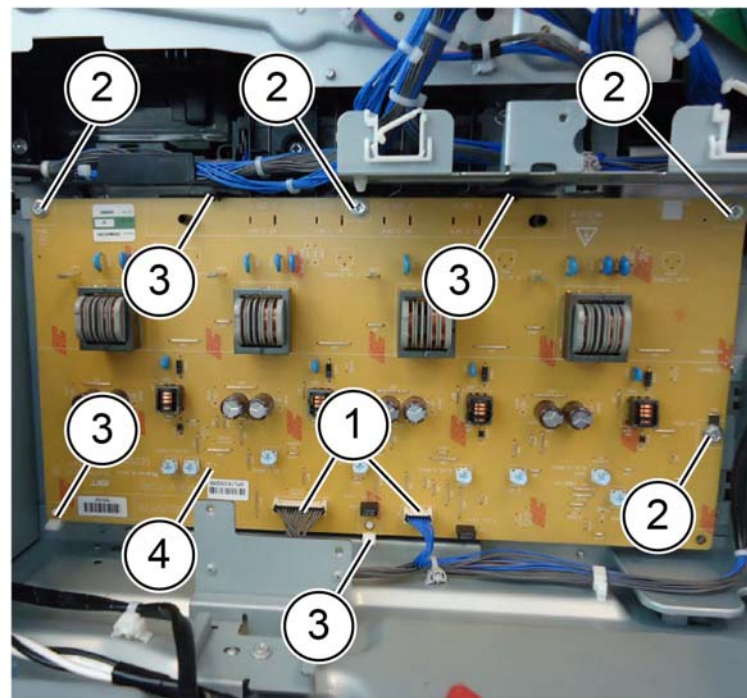


Figure 1 ESD symbol

CAUTION

Observe ESD procedures during this procedure.

1. Remove the LVPS, [REP 1.6](#).
2. Remove the AC drive PWB, [REP 1.5](#).
3. Remove HVPS developer bias, [Figure 2](#):
 - a. Disconnect two connectors (1).
 - b. Remove four screws (2).
 - c. Release two hooks at the top, lean the HVPS developer bias forward to clear the hooks (3).
 - d. Lift then remove the HVPS developer bias PWB (4).



F-1-0100-A

Figure 2 HVPS developer bias removal

Replacement

The replacement is the reverse of the removal procedure.

REP 1.8 Main Power Switch

Parts List on [PL 1.20](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



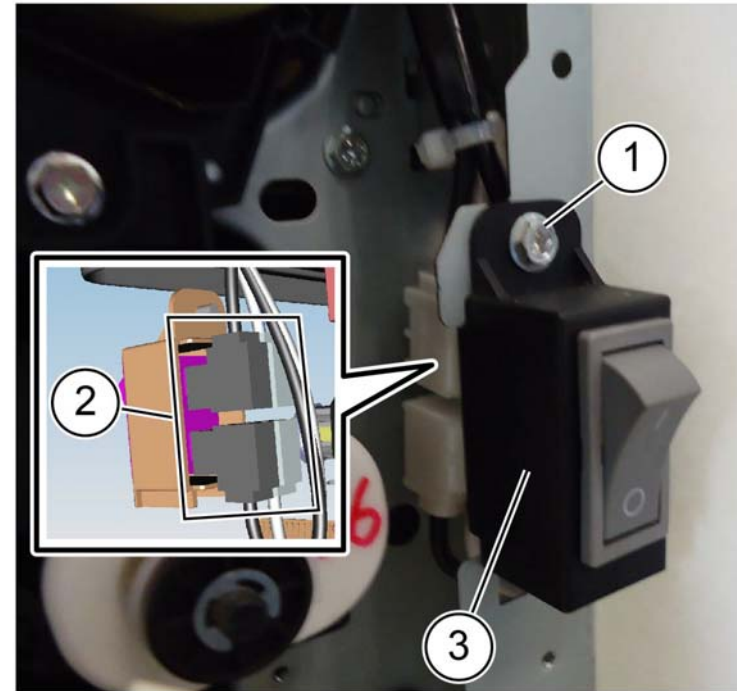
Figure 1 ESD symbol

CAUTION

Observe ESD procedures during this procedure.

1. Remove the components that follow:
 - Front cover assembly, [PL 28.05 Item 8](#).
 - Waste cartridge, [PL 90.15 Item 6](#).
 - Waste toner transport assembly, [PL 90.15 Item 1](#).
 - Inner cover assembly, [PL 28.05 Item 1](#).
 - Inner lower cover, [PL 28.05 Item 2](#).
 - Inner hinge cover assembly, [PL 28.05 Item 4](#).
 - Inner right cap cover, [PL 28.05 Item 3](#).
 - Inner right cover, [PL 28.05 Item 6](#).

2. Remove the main power switch, [Figure 2](#):
 - a. Remove the screw (1).
 - b. Disconnect the main power switch from the connector (2).
 - c. Remove the main power switch (3).



F-1-0101-A

Figure 2 Main power switch removal

Replacement

The replacement is the reverse of the removal procedure.

REP 1.9 BCR HVPS PWB

Parts List on [PL 1.20](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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

Observe ESD procedures during this procedure.

1. Remove the upper right front cover, [PL 28.15 Item 1](#).
2. Remove the BCR HVPS cover, [PL 1.20 Item 2](#).
3. Remove the BCR HVPS, [Figure 2](#):
 - a. Remove the connector (1).
 - b. Remove four screws (2).
 - c. Remove the BCR HVPS (3).

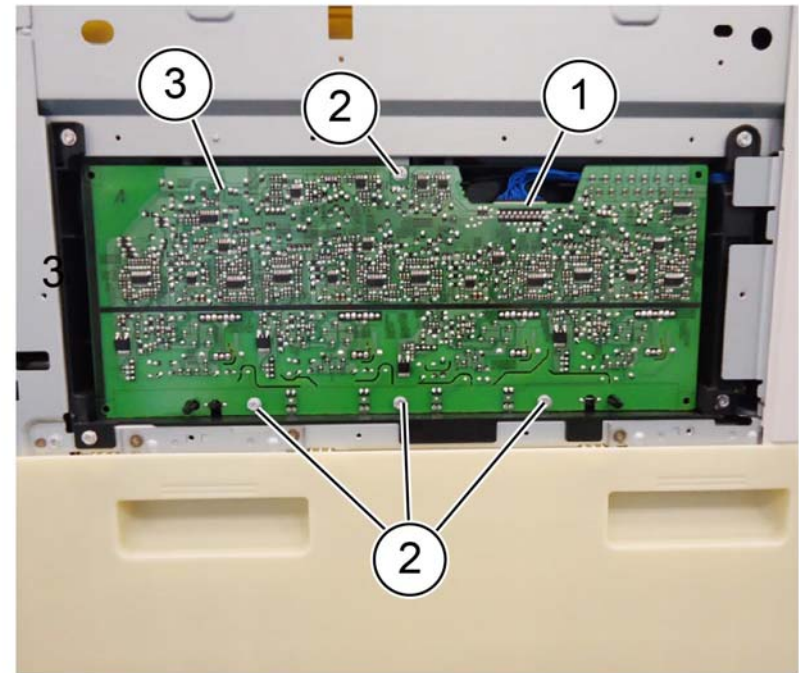


Figure 2 BCR HVPS removal

F-1-0102-A

Replacement

The replacement is the reverse of the removal procedure.

REP 2.1 UI Assembly

Parts List on [PL 2.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 UI top cover (1), [PL 2.05 Item 3, Figure 1](#).

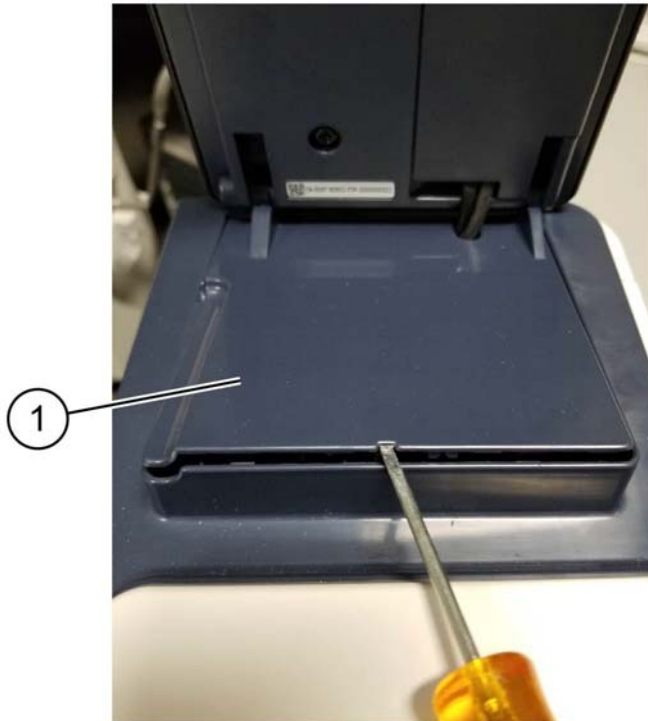


Figure 1 UI top cover removal

F-1-0695-A

2. Remove the cable cover (2), [Figure 2](#).



Figure 2 Cable cover removal

F-1-0406-A

3. Disconnect the UI and speaker connectors (3), [Figure 3](#).

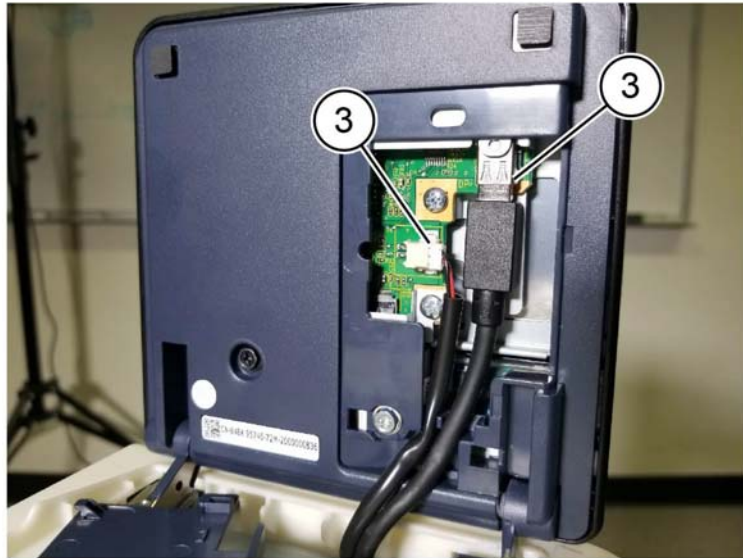


Figure 3 UI and speaker connections

F-1-0407-A

4. Remove two screws (4), then remove the UI console assembly, [Figure 4](#).

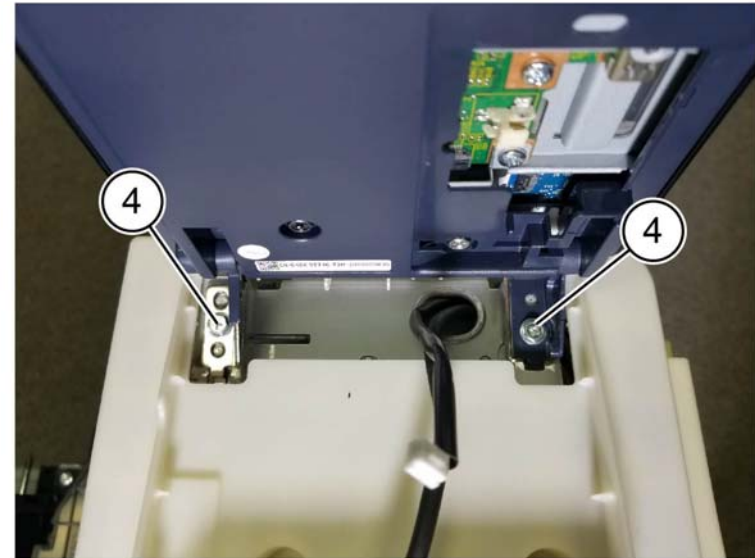


Figure 4 UI console assembly removal

F-1-0408-A

Replacement

1. The replacement is the reverse of the removal procedure.

REP 3.1 Controller PWB Assembly

Parts List on [PL 3.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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

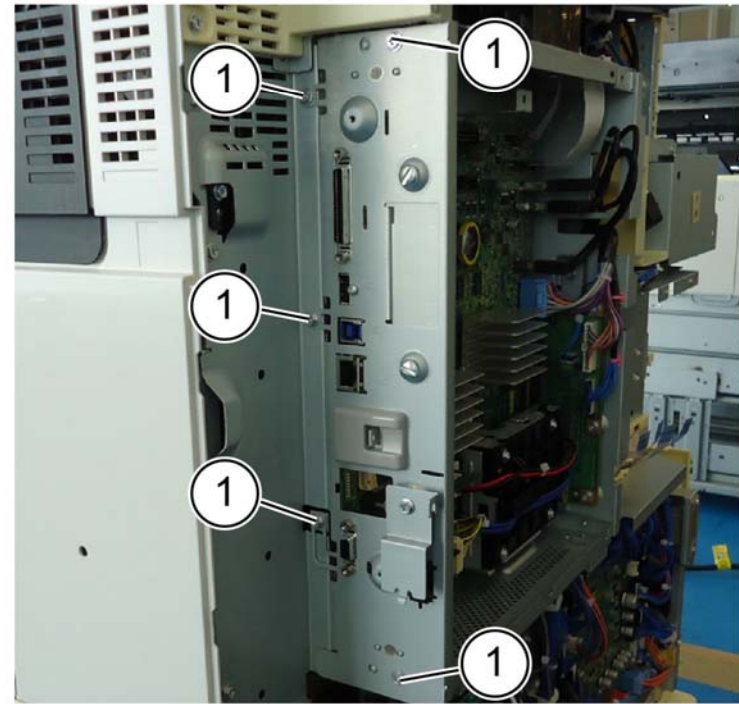
CAUTION

Observe ESD procedures during this procedure.

CAUTION

When installing a new controller PWB and new halftone PWB or a new back plane PWB in the same procedure, first install the new controller PWB, then switch on the machine, [GP 10](#). If the new controller PWB installation is successful, switch off the machine, then install the new halftone or back plane PWB.

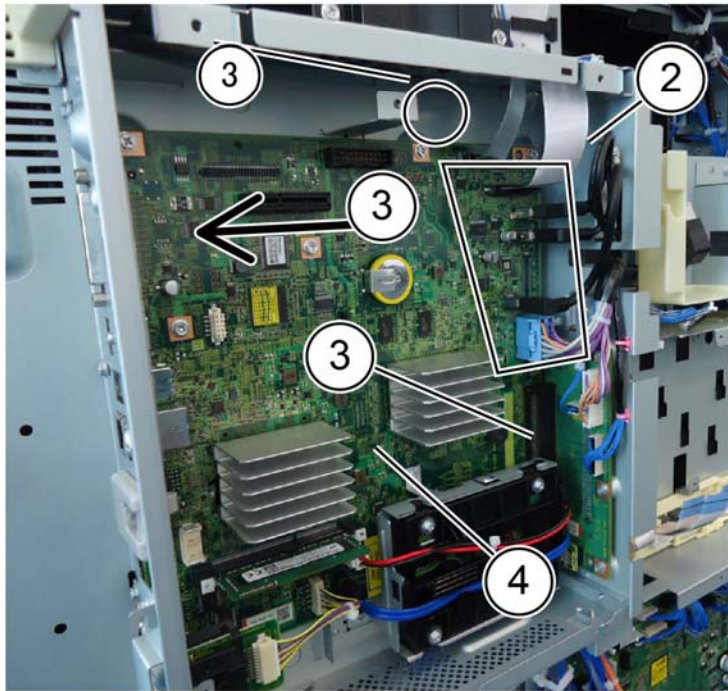
1. Remove the ESS rear cover, [PL 28.15 Item 4](#).
2. Remove the controller cover assembly kit, [PL 3.10 Item 1](#).
3. Disconnect all external connectors from the controller PWB assembly, [PL 3.05 Item 1](#).
4. Remove five screws (1), [Figure 2](#).



F-1-0103-A

Figure 2 Screw removal

5. Remove the controller PWB assembly, [Figure 3](#):
 - a. Disconnect six connectors (2).
 - b. Slide the case left in the direction of the arrow, disengage the stopper, then disconnect the controller PWB from the back plane PWB (3).
 - c. Remove the controller PWB assembly (4).



F-1-0104-A

Figure 3 Controller PWB assembly removal

Replacement

1. The replacement is the reverse of the removal procedure.

NOTE: When replacing the controller PWB assembly, remove the SD card, [PL 3.05 Item 8](#) from the old controller PWB assembly and install it onto the new one.

REP 3.2 SD Memory Card

Parts List on [PL 3.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



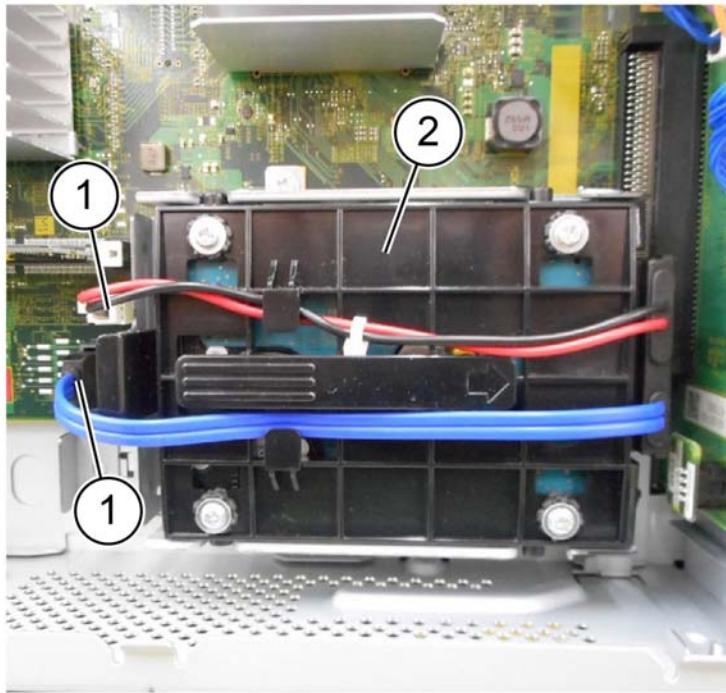
Figure 1 ESD symbol

CAUTION

Observe ESD procedures during this procedure.

1. Remove the controller cover assembly, [PL 3.10 Item 1](#).

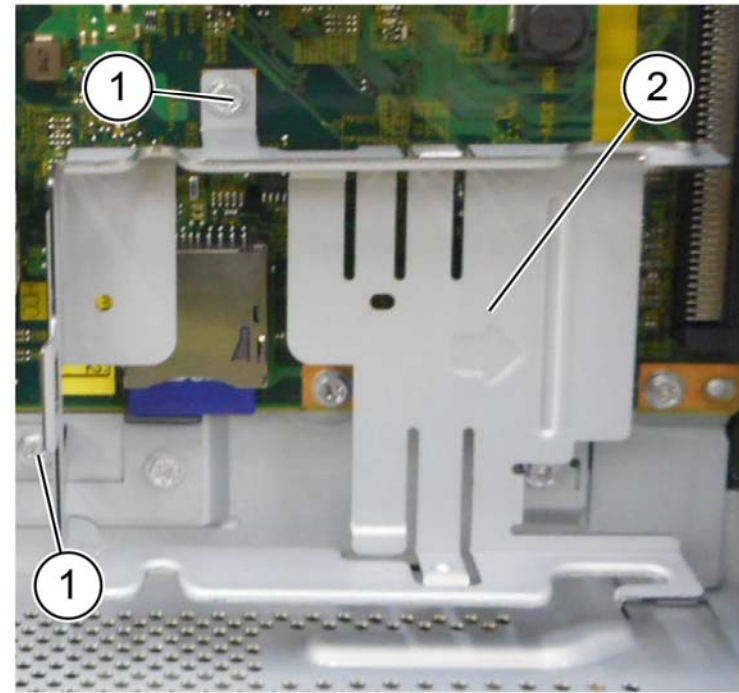
2. Remove the HDD, [Figure 2](#):
 - a. Disconnect two connectors (1).
 - b. Release the hook and remove the HDD, [PL 3.05 Item 9](#) (2).



F-1-0105-A

Figure 2 HDD removal

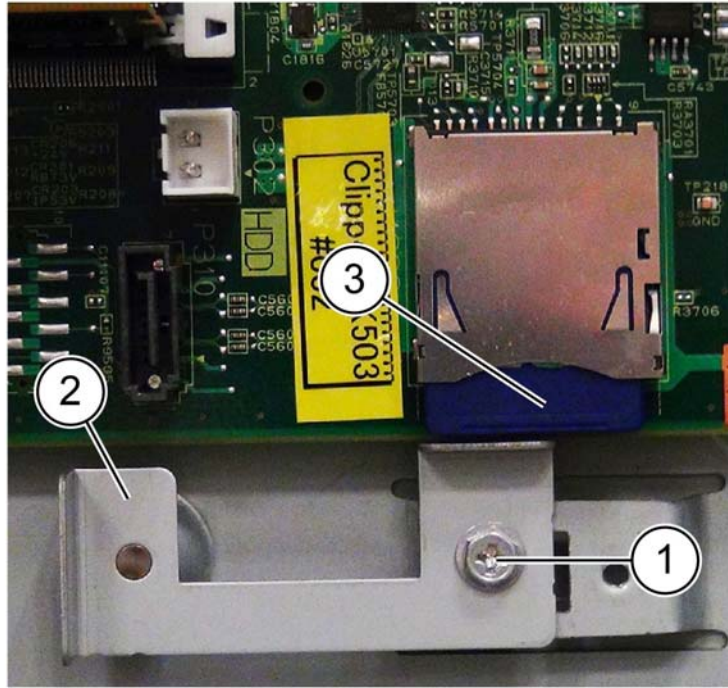
3. Remove the HDD bracket, [Figure 3](#):
 - a. Remove two screws (1).
 - b. Remove the HDD bracket (2).



F-1-0106-A

Figure 3 HDD bracket removal

4. Remove the SD memory card, [Figure 4](#):
 - a. Remove the screw (1).
 - b. Remove the SD card clip (2).
 - c. Remove the SD memory card (3).



F-1-0107-A

Figure 4 SD card removal

Replacement

1. The replacement is the reverse of the removal procedure.

REP 3.3 Back Plane PWB

Parts List on [PL 3.15](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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

Observe ESD procedures during this procedure.

CAUTION

When installing a new back plane PWB and new controller PWB in the same procedure, first install the new controller PWB, then switch on the machine, [GP 10](#). If the new controller PWB installation is successful, switch off the machine, then install the new back plane PWB.

1. Remove the controller PWB assembly, [REP 3.1](#).

2. Remove the back plane PWB, **Figure 2**:
 - a. Disconnect three connectors (1).
 - b. Remove five screws (2).
 - c. Remove the SEEP ROM (3).
 - d. Remove the back plane PWB (4).

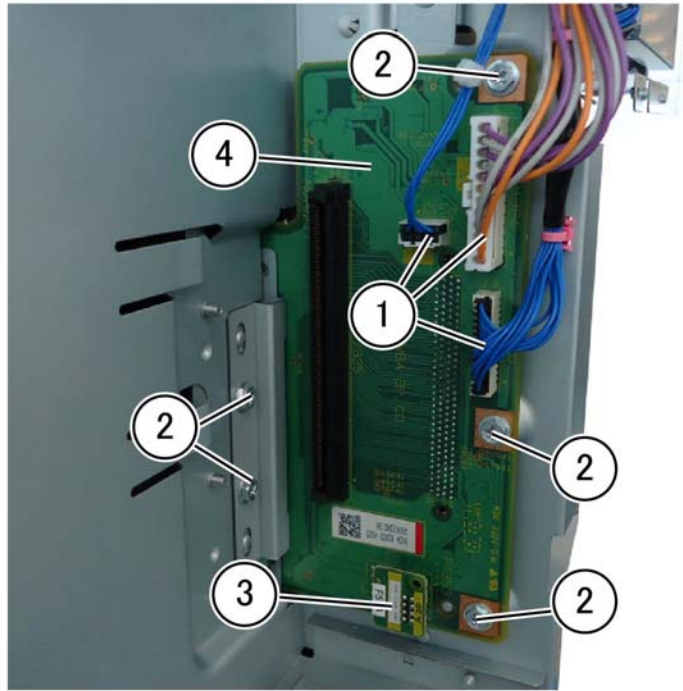


Figure 2 Back plane PWB removal

F-1-0163-A

Replacement

1. The replacement is the reverse of the removal procedure.

REP 3.4 Halftone PWB

Parts List on **PL 3.15**

Removal

WARNING

Switch off the electricity to the machine. Refer to **GP 10**. Disconnect the power 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

Observe ESD procedures during this procedure.

CAUTION

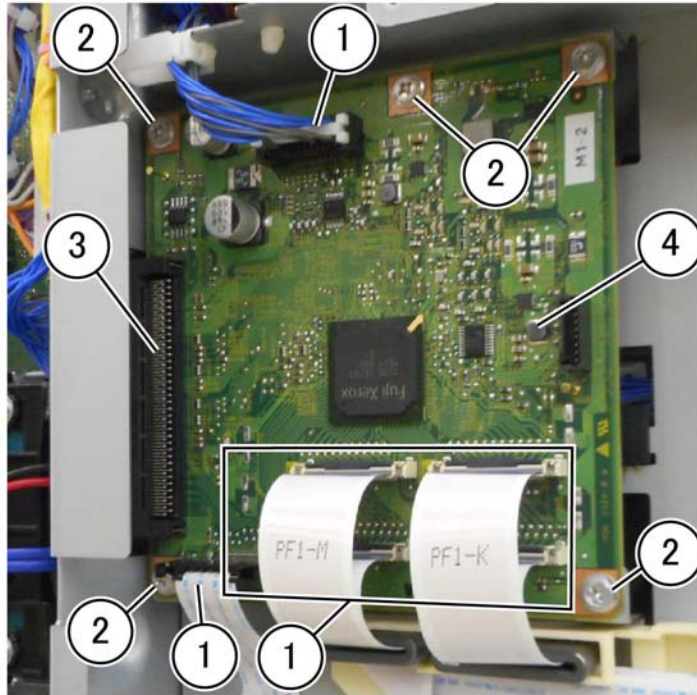
When installing a new halftone PWB and new controller PWB at the same time, first install the new controller PWB, then switch on the machine, **GP 10**. If the new controller PWB installation is successful, switch off the machine, then install the new halftone PWB.

CAUTION

Perform **dC363**, Backup NVM Values before replacing the halftone PWB.

1. Remove the controller cover assembly, **PL 3.10 Item 1**.
2. Remove the DFE cover, **PL 3.10 Item 5**.

3. Remove the halftone PWB, [Figure 2](#):
 - a. Disconnect six connectors (1).
 - b. Remove five screws (2).
 - c. Disconnect the back plane PWB (3).
 - d. Remove the halftone PWB, [PL 3.15 Item 4](#) (4).



F-1-0164-A

Figure 2 Halftone PWB removal

Replacement

1. The replacement is the reverse of the removal procedure.

NOTE: After installing a new halftone PWB, perform [dC362 Restore NVM Values](#) to restore NVM values backed up at the beginning of the procedure.

REP 10.1 Retract Motor Assembly

Parts List on [PL 10.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 video contact chassis, [GP 32](#).
2. Remove the retract motor assembly, [PL 10.05 Item 1, Figure 1](#):
 - a. Disconnect the connector (1).
 - b. Remove three screws (2).
 - c. Remove the retract motor assembly (3).

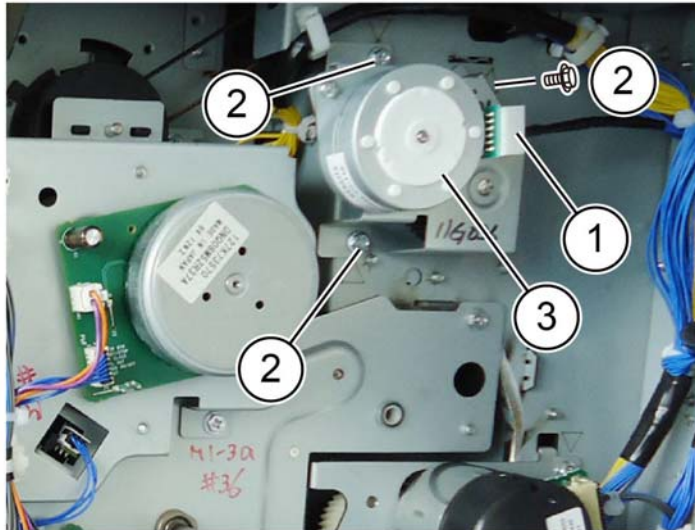


Figure 1 Retract motor assembly removal

F-1-0165-A

Replacement

1. The replacement is the reverse of the removal procedure.

CAUTION

When replacing the retract motor assembly verify the gears are replaced on the shaft in the correct manner, [Figure 2](#).

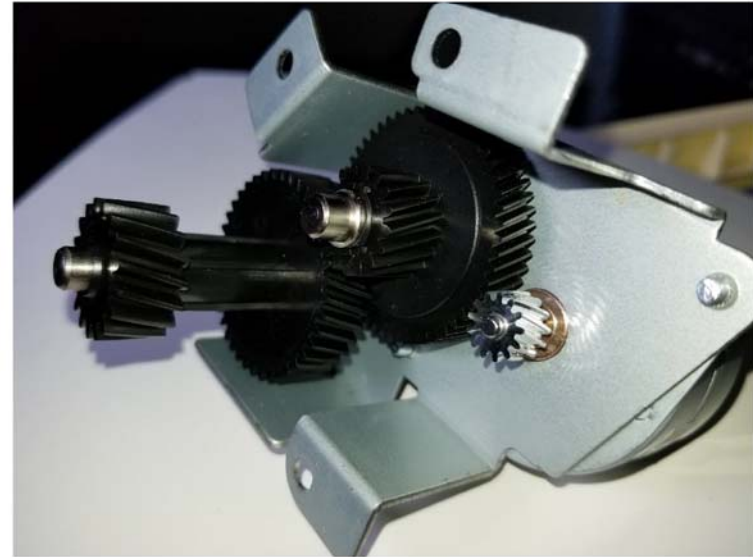


Figure 2 Proper gear alignment

F-1-0409-A

REP 10.2 Fuser

Parts List on [PL 10.05](#)

Removal

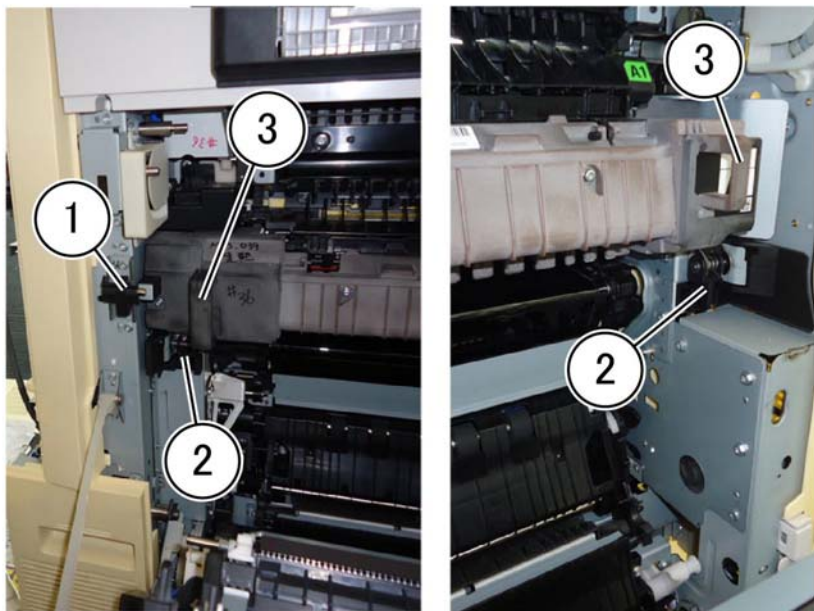
WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

Do not touch the fuser while it is hot.

1. Open the left cover assembly, [PL 80.75 Item 21](#).
2. Remove the fuser, [PL 10.05 Item 14, Figure 1](#):
 - a. Lift the lock (1) at the rear of the fuser up and slide left to unlock the fuser.
 - b. Push two locks (2) to the inside to release the fuser.
 - c. Remove the fuser (3).



F-1-0166-A

Figure 1 Fuser removal

Replacement

1. The replacement is the reverse of the removal procedure.

REP 10.3 Fuser Heater Coil

Parts List on [PL 10.05](#)

Removal

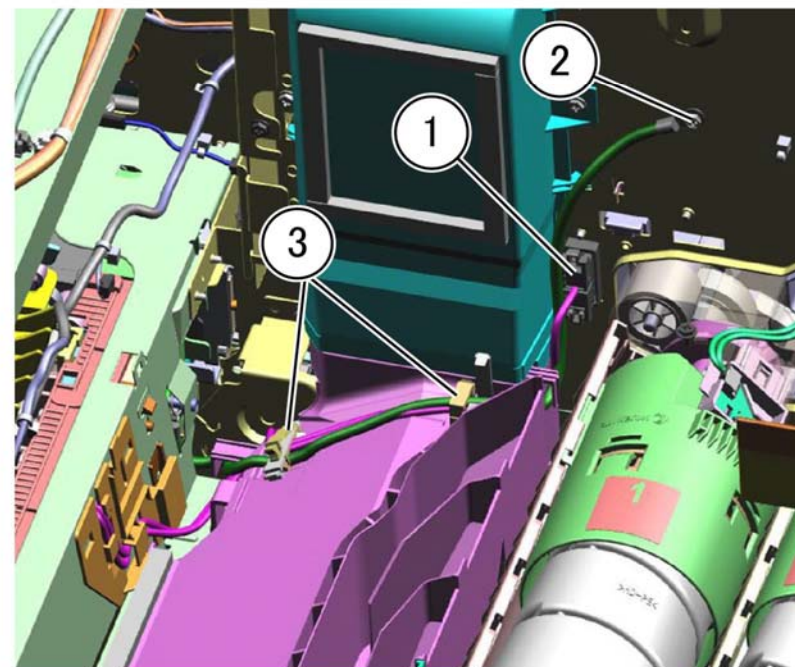
WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

Do not touch the fuser while it is hot.

1. Open the left cover assembly, [PL 80.75 Item 21](#).
2. Remove the fuser, [REP 10.2](#).
3. Remove the top rear cover, [PL 28.10 Item 10](#).
4. Disconnect the fuser heater coil wiring, [Figure 1](#):
 - a. Disconnect the connector (1).
 - b. Remove the screw on the ground wire (2).
 - c. Remove the harness from the guide (3).

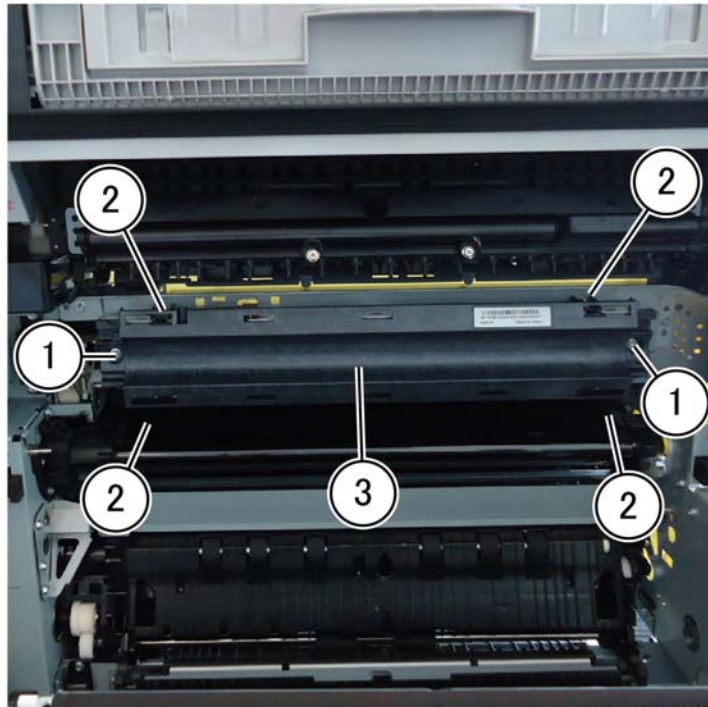


F-1-0167-A

Figure 1 Disconnect wiring

5. Remove the fuser heater coil, [Figure 2](#):
 - a. Remove two screws (1).
 - b. Release four hooks (2).
 - c. Remove the fuser heater coil (3).

NOTE: While removing the fuser heater coil, carefully thread the fuser heater coil harness through the frame to not damage the harness insulation.



F-1-0168-A

Figure 2 Coil assembly removal

Replacement

1. The replacement is the reverse of the removal procedure.

REP 10.4 Exit 1 Transport Assembly

Parts List on [PL 10.10](#)

Removal

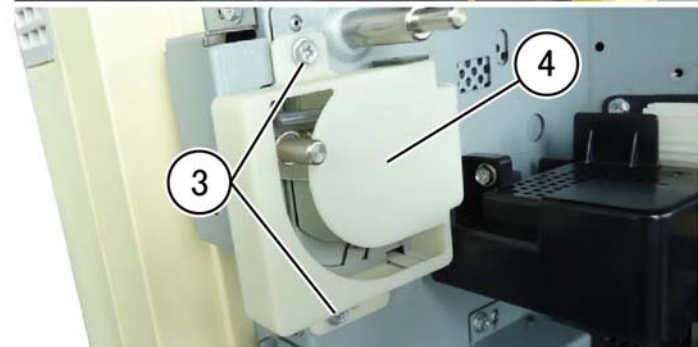
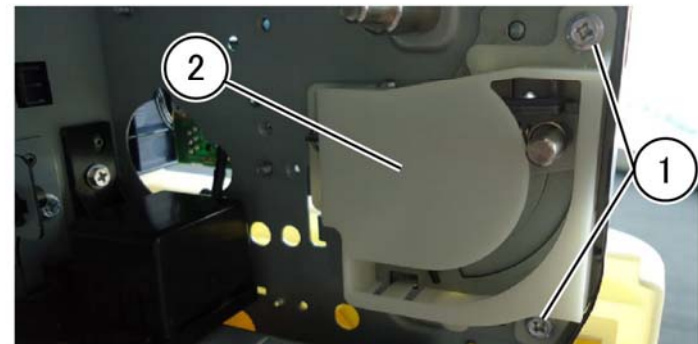
WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

Do not touch the fuser while it is hot.

1. Remove the controller cover assembly, [PL 3.10 Item 1](#).
2. Remove the right upper cover, [PL 28.10 Item 11](#).
3. Remove the exit 2 transport assembly, [REP 10.8](#).
4. Remove the front toggle lever assembly and rear toggle lever assembly, [Figure 1](#):
 - a. Remove two screws (1).
 - b. Remove the front toggle lever assembly (2).
 - c. Remove two screws (3).
 - d. Remove the rear toggle lever assembly (4)



F-1-0170-A

Figure 1 Rear toggle lever assembly removal

5. Remove the motor cover and remove the harness, **Figure 2**:
 - a. Remove the screw (1).
 - b. Remove the motor cover (2).
 - c. Disconnect two connectors (3).
 - d. Remove the harness from exit 1 transport. assembly (4).

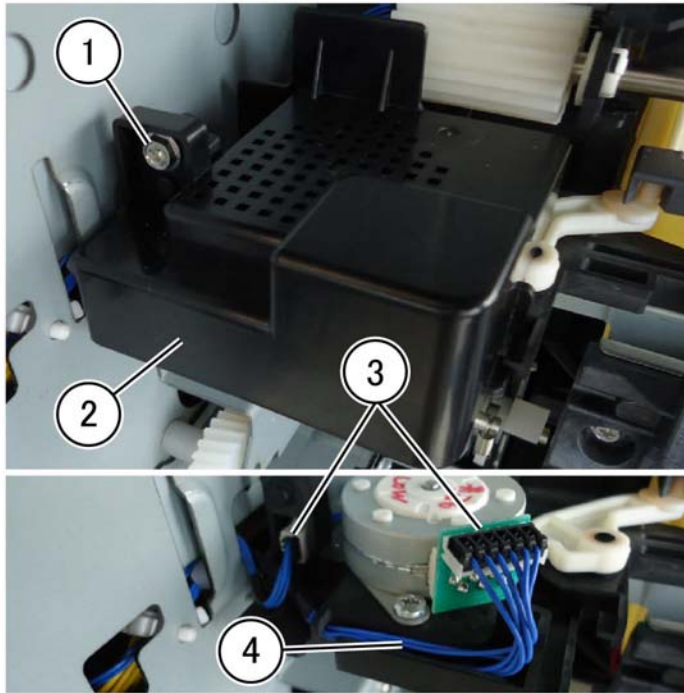


Figure 2 Harness removal

F-1-0171-A

6. Remove the bracket and front guide, **Figure 3**:
 - a. Remove the sensor cover (1).
 - b. Disconnect the connector (2).
 - c. Remove two screws (3).
 - d. Remove the bracket (4).
 - e. Remove the front guide (5).

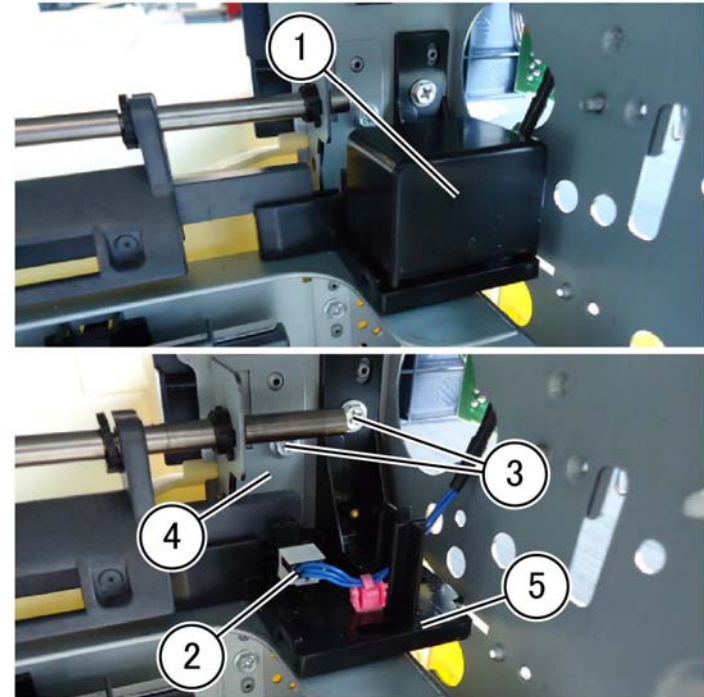
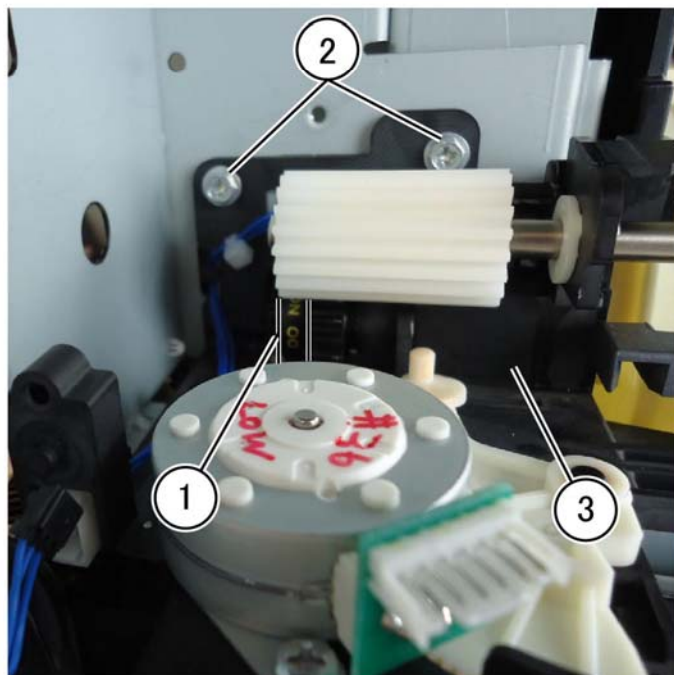


Figure 3 Front guide removal

F-1-0172-A

7. Remove the exit 1 transport assembly, [Figure 4](#):
 - a. Remove the belt (1).
 - b. Remove two screws (2).
 - c. Remove the exit 1 transport assembly (3).



F-1-0173-A

Figure 4 Exit 1 transport assembly removal

Replacement

1. The replacement is the reverse of the removal procedure.

REP 10.5 Exit 1 OCT Motor

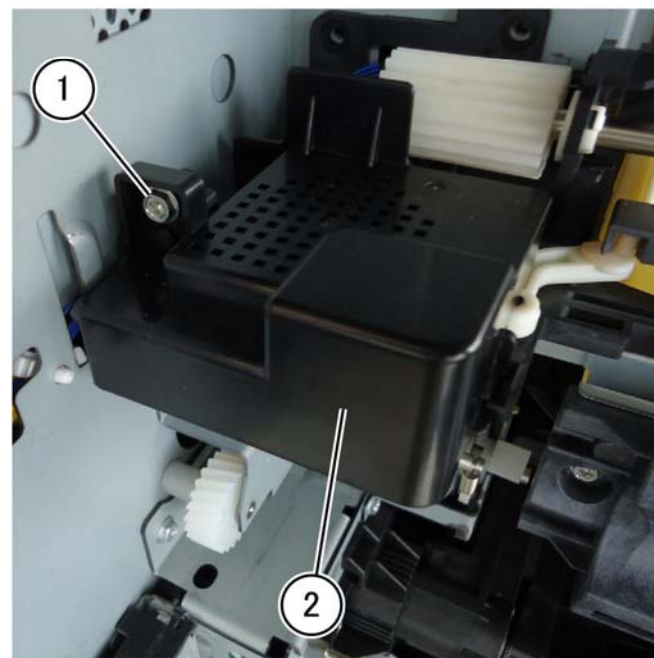
Parts List on [PL 10.10](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

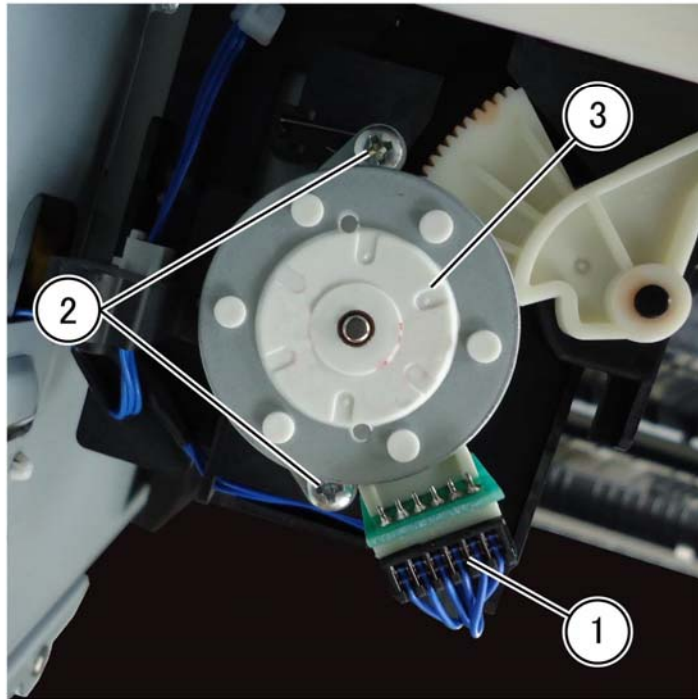
1. Remove the exit 2 transport assembly, refer to [REP 10.8](#).
2. Remove the motor cover, [Figure 1](#):
 - a. Remove the screw (1).
 - b. Remove the motor cover (2).



F-1-0175-A

Figure 1 Motor cover removal

3. Remove the exit 1 oct motor, [Figure 2](#):
 - a. Disconnect the connector (1).
 - b. Remove two screws (2).
 - c. Remove the exit 1 oct motor (3).



F-1-0176-A

Figure 2 Exit 1 OTC removal

Replacement

1. The replacement is the reverse of the removal procedure.

REP 10.6 Exit 1 OCT Home Position Sensor

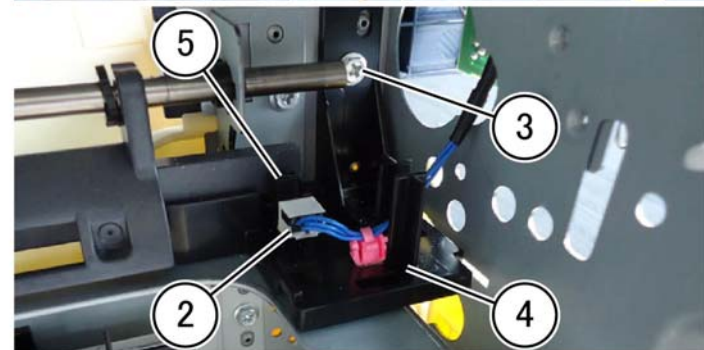
Parts List on [PL 10.10](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 exit 2 transport assembly, refer to [REP 10.8](#).
2. Remove the exit 1 OCT home position sensor, [Figure 1](#):
 - a. Remove the sensor cover (1).
 - b. Disconnect the connector (2).
 - c. Remove the screw (3).
 - d. Remove the front guide (4).
 - e. Remove the exit 1 oct home position sensor (5).



F-1-0178-A

Figure 1 Exit 1 OCT home position sensor removal

Replacement

1. The replacement is the reverse of the removal procedure.

REP 10.7 Exit 1 Drive Gear

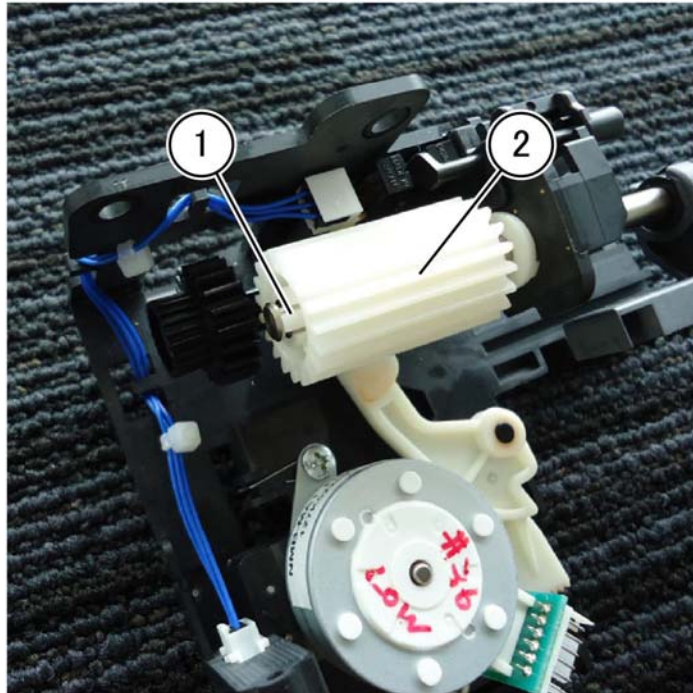
Parts List on [PL 10.10](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 exit 2 transport assembly, refer to [REP 10.8](#).
2. Remove the gear, [Figure 1](#):
 - a. Release the latch (1).
 - b. Remove exit 1 drive gear, [PL 10.10 Item 10](#).



F-1-0179-A

Figure 1 Exit 1 drive gear removal

Replacement

1. The replacement is the reverse of the removal procedure.

REP 10.8 Exit 2 Transport Assembly

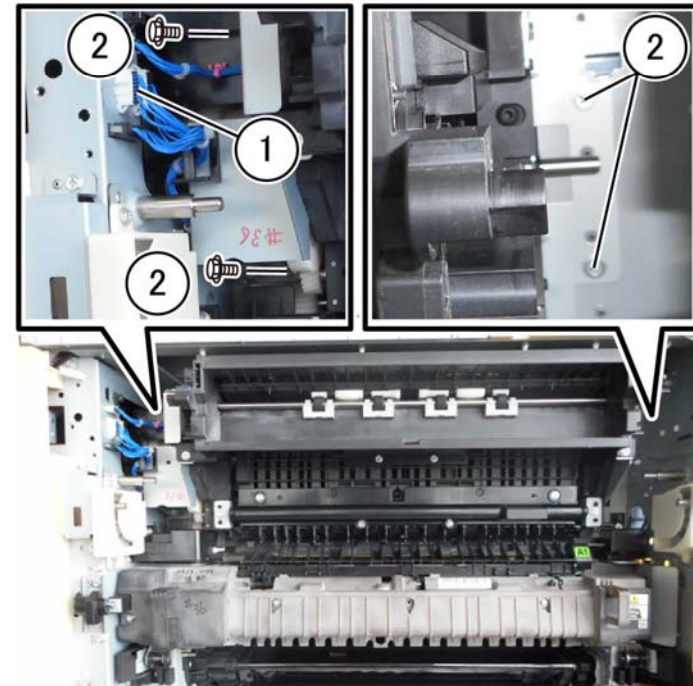
Parts List on [PL 10.15](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 cover assembly, [PL 80.70](#).
2. Remove the two screws and remove the left top cover, [PL 10.15 Item 1](#).
3. Remove the exit 2 transport assembly, [PL 10.15 Item 2, Figure 1](#):
 - a. Disconnect four connectors (1).
 - b. Remove four screws (2).
 - c. Remove the exit 2 transport assembly.



F-1-0180-A

Figure 1 Exit 2 transport assembly removal

Replacement

1. The replacement is the reverse of the removal procedure.

REP 10.9 Exit 2 Drive Assembly

Parts List on [PL 10.25](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 exit 2 transport assembly, [REP 10.8](#).
2. Remove the harness guide: [Figure 1](#).
 - a. Remove the clamp (1).
 - b. Remove the screw (2).
 - c. Remove the harness guide (3).

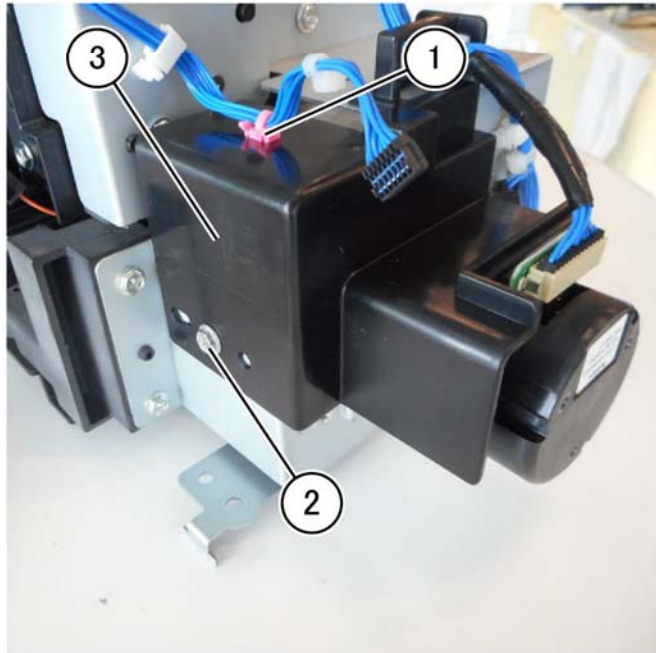


Figure 1 Harness guide removal

F-1-0220-A

3. Remove the exit 2 drive assembly: [Figure 2](#).
 - a. Remove two clamps (1).
 - b. Disconnect the connector (2) and release the harness clamps from the case.
 - c. Remove four screws (3).
 - d. Remove the exit 2 drive assembly, [PL 10.25 Item 2](#) (4).

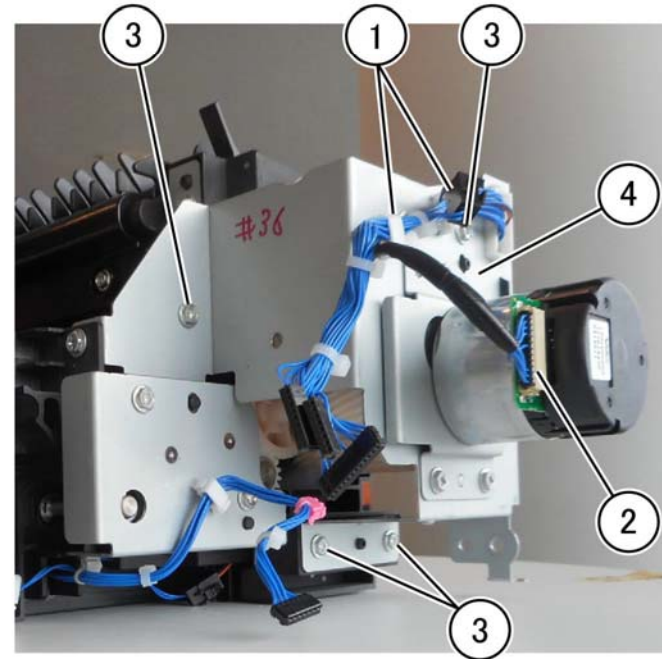


Figure 2 Exit 2 drive assembly

F-1-0221-A

Replacement

1. The replacement is the reverse of the removal procedure.

REP 10.10 Exit 1 Gate Solenoid

Parts List on [PL 10.25](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 exit 2 transport assembly, [REP 10.8](#).
2. Remove the exit 2 guide assembly: [Figure 1](#).
 - a. Remove five screws (1).
 - b. Remove the guard exit and the exit guide assembly (2).

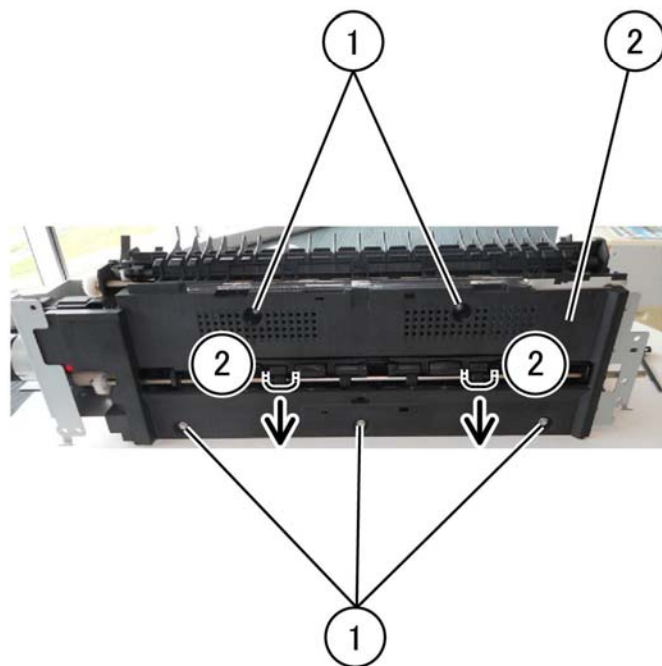


Figure 1 Exit 2 guide assembly

F-1-0222-A

3. Remove the exit 2 drive assembly, [REP 10.9](#).

4. Remove the exit 1 gate solenoid: [Figure 2](#).
 - a. Remove two screws (1).
 - b. Disconnect the connector (2).
 - c. Remove the exit 1 gate solenoid, [PL 10.25 Item 11](#) (3).

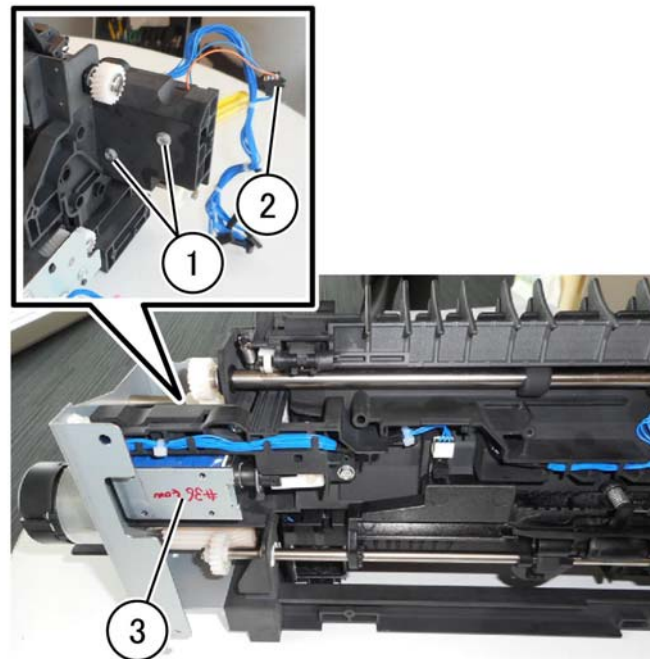


Figure 2 Exit 2 gate solenoid

F-1-0223-A

Replacement

1. The replacement is the reverse of the removal procedure.
2. Install with the leading edge in the groove, [Figure 3](#).

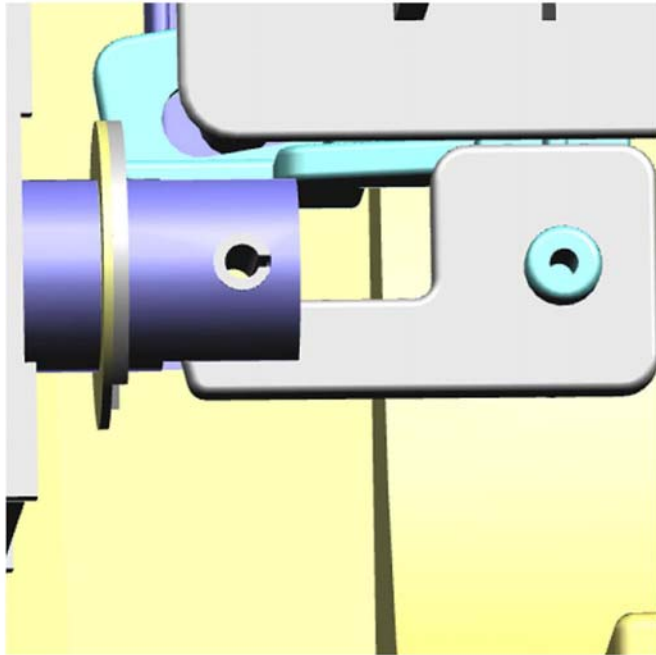


Figure 3 Leading edge in groove

F-1-0224-A

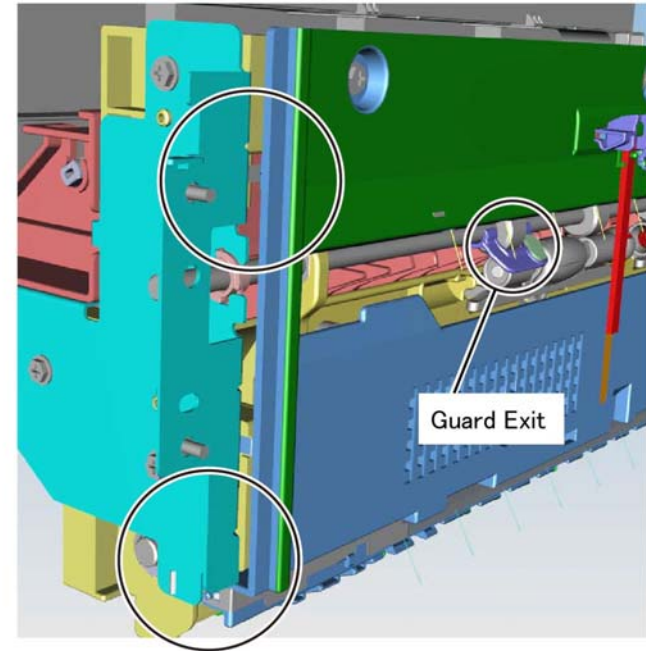


Figure 4 Exit 2 guide and guard exit reassembly

F-1-0225-A

3. Install the exit 2 guide assembly aligned with the bracket, [Figure 4](#).
4. Install the guard exit in the direction shown, [Figure 4](#).

REP 10.11 Exit 2 OCT Home Position Sensor

Parts List on [PL 10.25](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 exit 2 transport assembly, [REP 10.8](#).
2. Remove the exit 2 guide assembly, [PL 10.25 Item 6, Figure 1](#):
 - a. Remove five screws (1).
 - b. Remove the guard exit and the exit guide assembly (2).

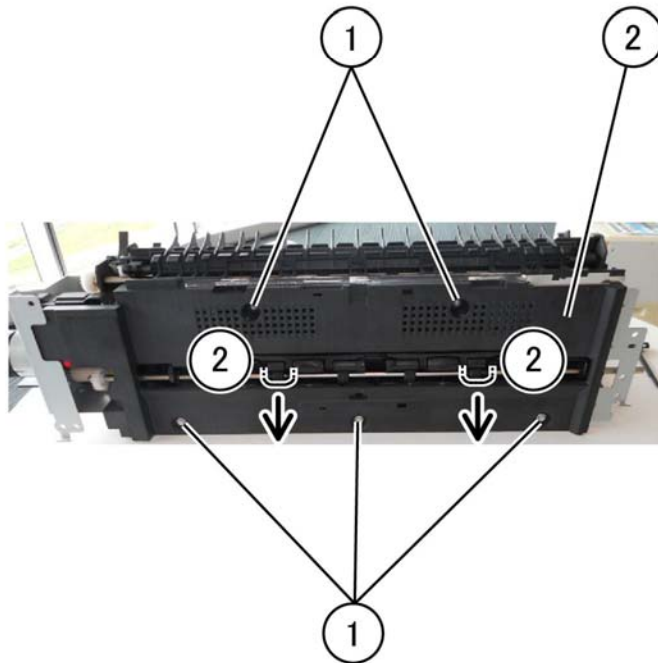


Figure 1 Exit guide assembly removal

F-1-0227-A

3. Remove the exit 2 OCT home position sensor, [PL 10.25 Item 14, Figure 2](#):
 - a. Position the exit 2 chute assembly face down. (1).
 - b. Disconnect the harness (2).
 - c. Release the sensor from the hook. (3).
 - d. Remove the 2 OCT home position sensor (4).

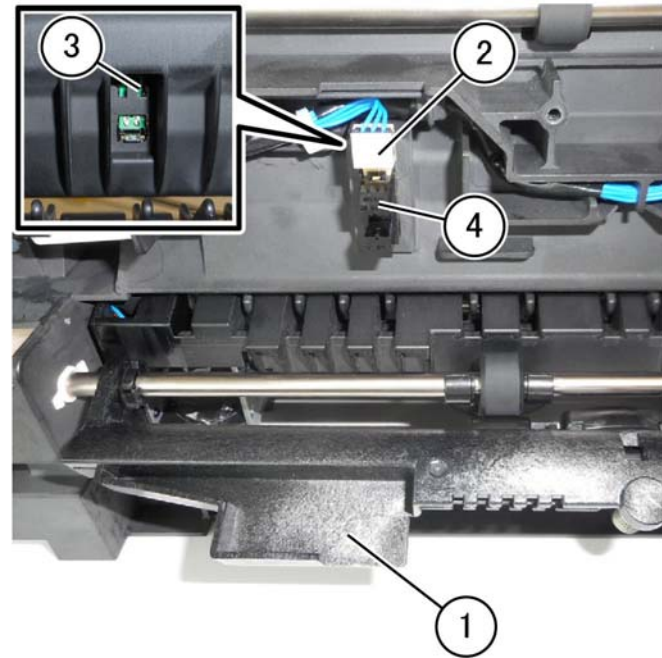


Figure 2 Exit 2 OCT home position sensor removal

F-1-0226-A

Replacement

1. Install the exit 2 guide assembly aligned with the bracket, [Figure 3](#).
2. Install the guard exit in the direction shown, [Figure 3](#).

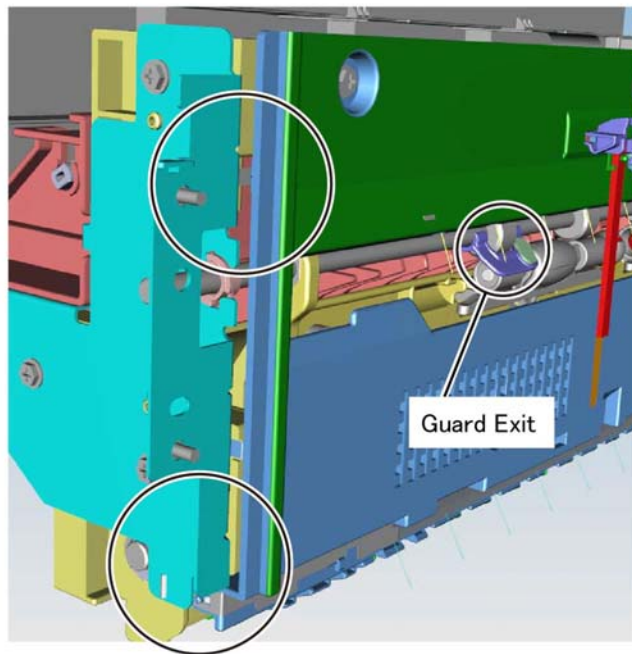


Figure 3 Exit 2 guide reassembly

F-1-0228-A

3. The remainder of the replacement is the reverse of the removal procedure.

REP 10.12 Offset Gear

Parts List on [PL 10.25](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 exit 2 transport assembly, [REP 10.8](#) and then remove the exit 2 guide assembly, [PL 10.25 Item 6](#), [REP 10.11](#).
2. Remove the offset gear, [PL 10.25 Item 16](#), [Figure 1](#).

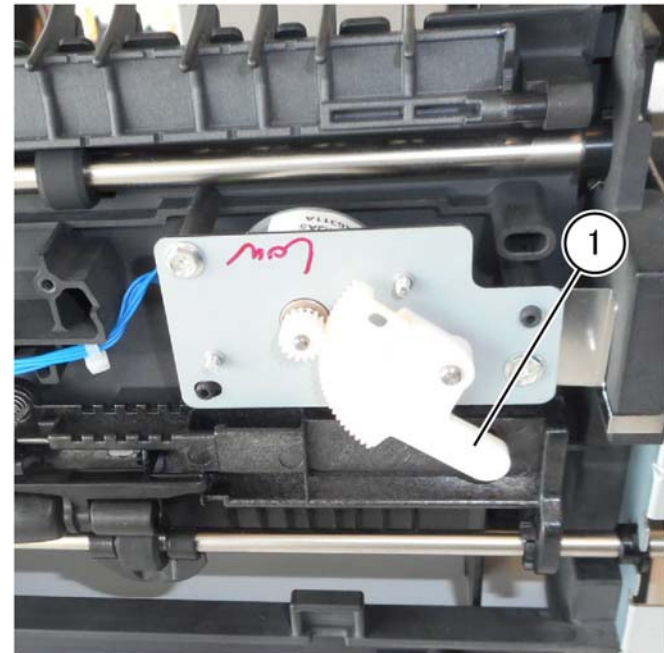
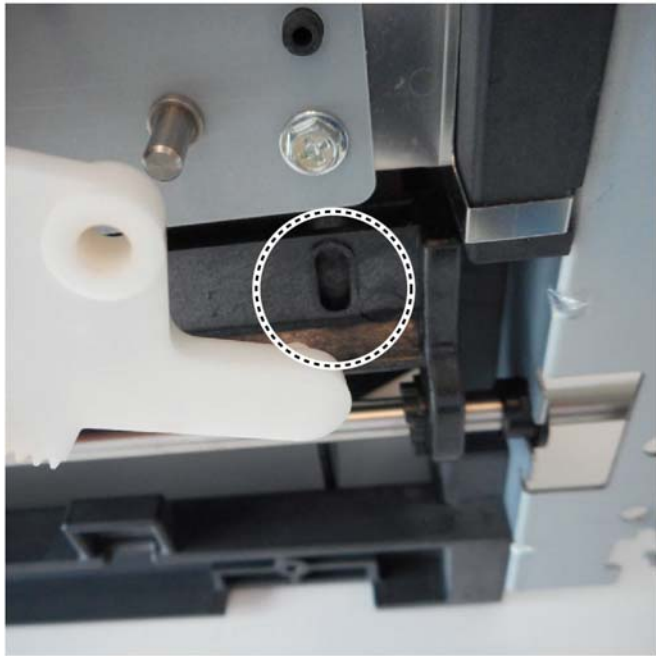


Figure 1 Offset gear removal

F-1-0229-A

Replacement

1. Install the offset gear with the peg in the recess of the gear arm, [Figure 2](#).



F-1-0231-A

Figure 2 offset gear leading edge in groove

2. Observe the procedure for the replacement of the exit 2 guide assembly in [REP 10.11](#).
3. The remainder of the replacement is the reverse of the removal procedure.

REP 13.1 Horizontal Transport Assembly

Parts List on [PL 13.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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. Undock the finisher, [REP 13.5](#).
2. Remove the horizontal transport assembly, [Figure 1](#):
 - a. Disconnect the harness (1).
 - b. Remove two screws (2).
 - c. Remove the docking plate (3).
 - d. Remove the horizontal transport (4).

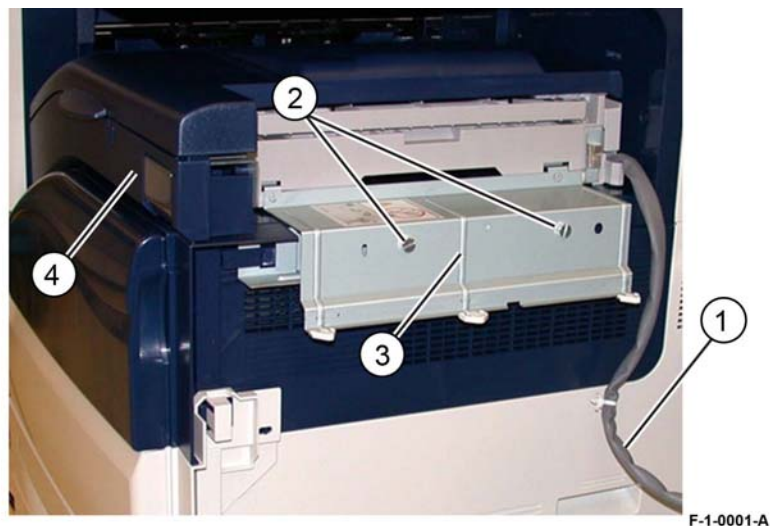


Figure 1 Horizontal transport removal

Replacement

The replacement is the reverse of the removal procedure.

REP 13.2 Hole Punch Assembly

Parts List on [PL 13.06](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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: For clarity, the horizontal transport is shown removed from the machine in [Figure 1](#).

1. Hold open the horizontal transport top cover.
2. Open the horizontal transport front cover.
3. Remove the hole punch assembly, [Figure 1](#):
 - a. Release the cable clamp (1).
 - b. Remove the connector cover (2), then disconnect the connector.
 - c. Remove the thumbscrew (3).
 - d. Remove the hole punch assembly (4).

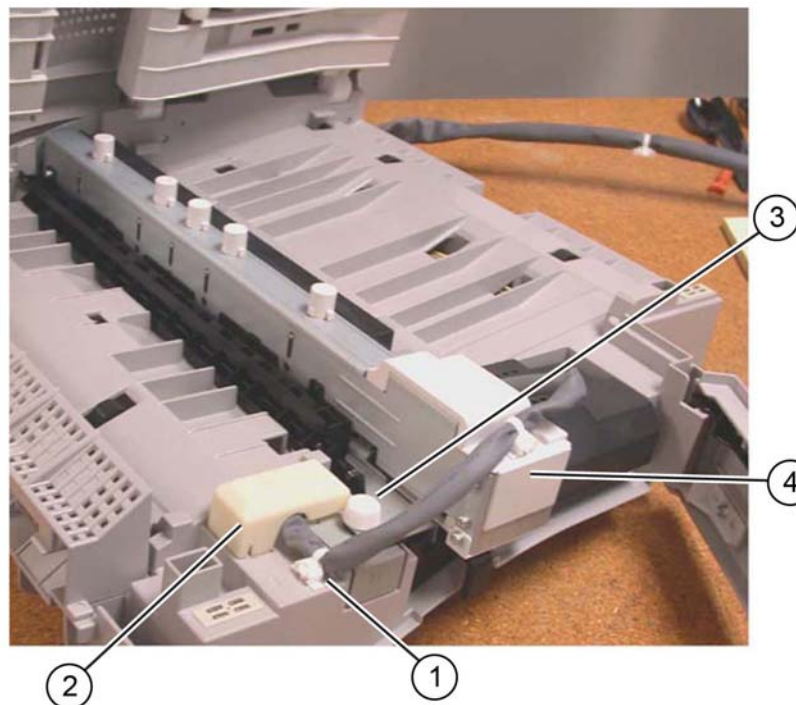


Figure 1 Hole punch assembly removal

Replacement

1. Insert the hole punch assembly rear locating pin into the horizontal transport frame.
2. The remainder of the replacement is the reverse of the removal procedure.
3. Perform [ADJ 13.1](#) Finisher LX Hole Punch Position.

REP 13.3 Horizontal Transport Belt

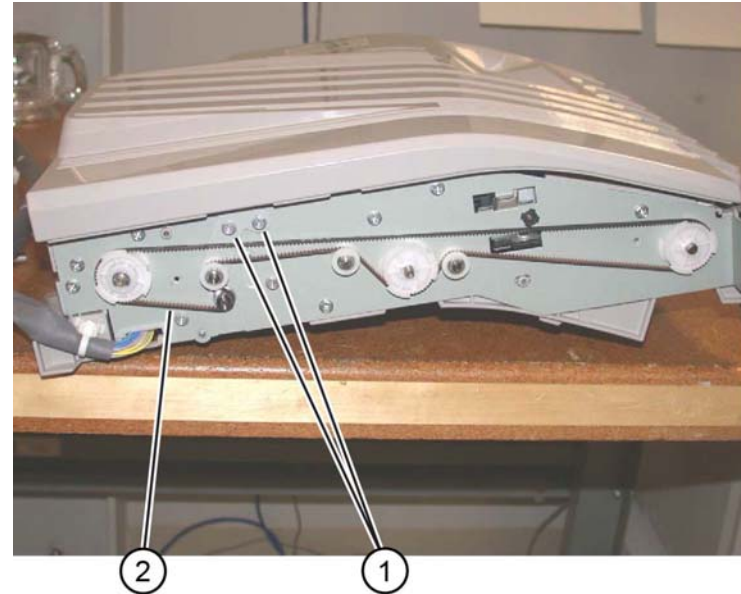
Parts List on [PL 13.08](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 13.1](#).
2. Remove the horizontal transport rear cover, [PL 13.06](#) Item 9.
3. Remove the horizontal transport belt, [PL 13.08](#) Item 22, [Figure 1](#):
 - a. Loosen two screws to release the belt tension (1).
 - b. Remove the belt (2).



F-1-0003-A

Figure 1 Belt removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.4 Horizontal Transport Motor

Parts List on [PL 13.08](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 13.1](#).
2. Remove the horizontal transport rear cover, [PL 13.06 Item 9](#).
3. Place the horizontal transport top down on a work surface.
4. Remove the horizontal transport motor, [PL 13.08 Item 13, Figure 1](#):
 - a. Remove the screw, then the shield (1).
 - b. Disconnect the connector (2).
 - c. Loosen two screws to release the belt tension (3).
 - d. Remove two screws (4), then remove the horizontal transport motor.

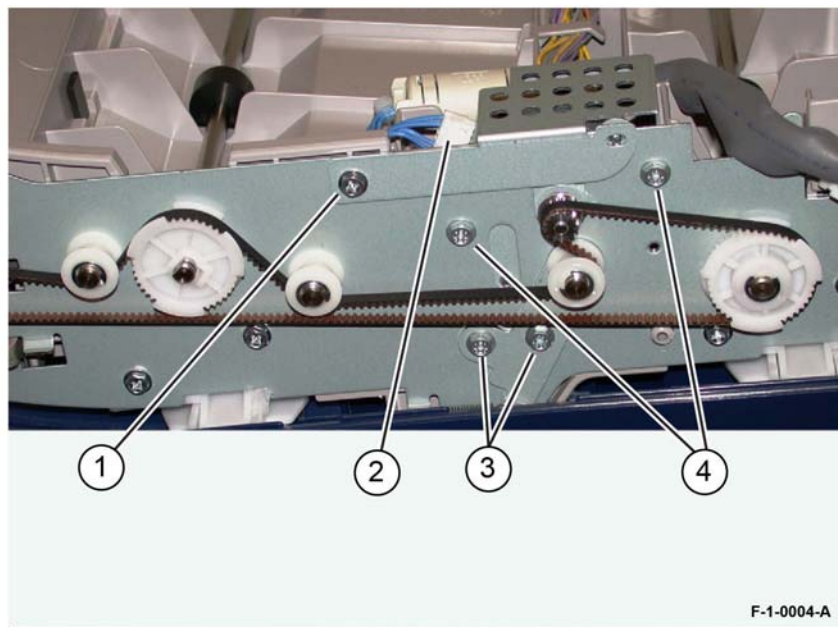


Figure 1 Motor removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.5 Finisher LX Undocking

Parts List on [PL 13.05](#)

Removal

WARNING

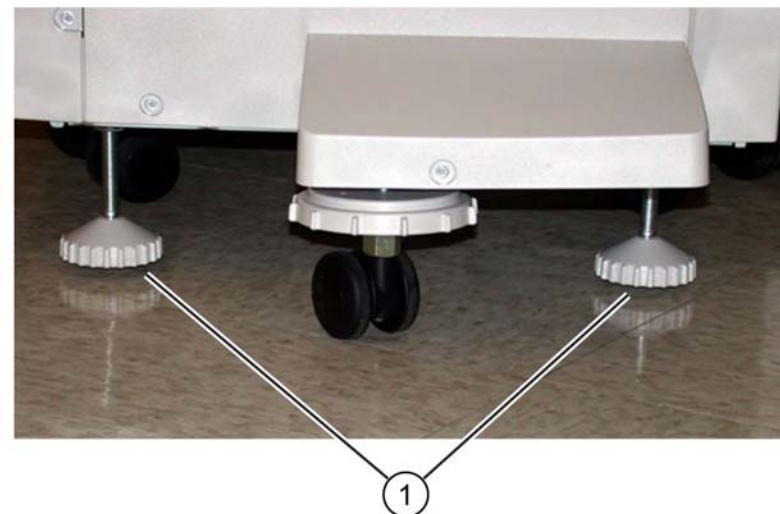
Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Disconnect the finisher power cord, the horizontal transport connector and the finisher connector from the IOT.

CAUTION

Take care not to topple the finisher. The finisher is unstable when un-docked from the machine.

2. Raise the feet (1) to free the finisher, [Figure 1](#).

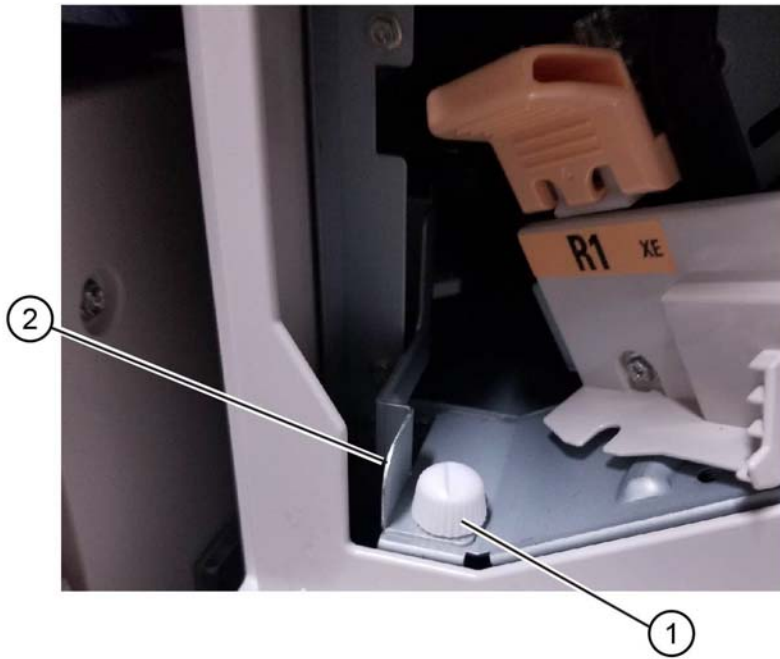


F-1-0005-A

Figure 1 Finisher feet

3. Open the finisher front door.

4. Undock the finisher, [Figure 2](#):
 - a. Remove the thumb screw (1).
 - b. Pull the docking plate lever (2) forwards to detach the finisher.



F-1-0705-A

Figure 2 Finisher undocking

Replacement

1. Align the machine docking bracket with the cut outs in the finisher docking bracket.
2. Mate the finisher to the machine until it latches.
3. Check that the finisher is firmly latched to the machine.
4. Perform the remainder of the replacement procedure in reverse of the removal procedure.

REP 13.6 Front Cover

Parts List on [PL 13.10](#)

Removal

WARNING

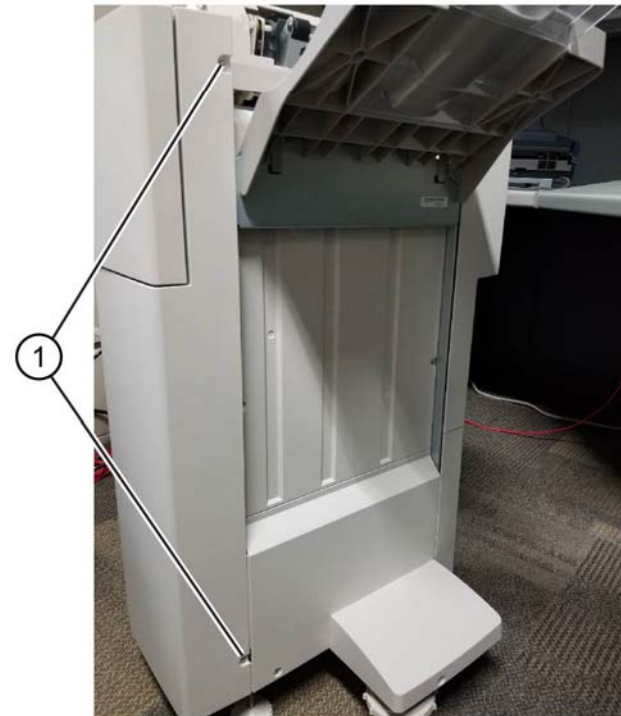
Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Undock the finisher, [REP 13.5](#).

CAUTION

Take care not drop the booklet maker thumb screw into the finisher.

2. Remove the booklet maker, [REP 13.31](#).
3. Open the finisher front door, [PL 13.10 Item 5](#).
4. Start to remove the front cover, remove one screw (1), [Figure 1](#).



F-1-0706-A

Figure 1 Preparation 1 of 3

5. Continue to remove the front cover, remove two screws (2), [Figure 2](#).

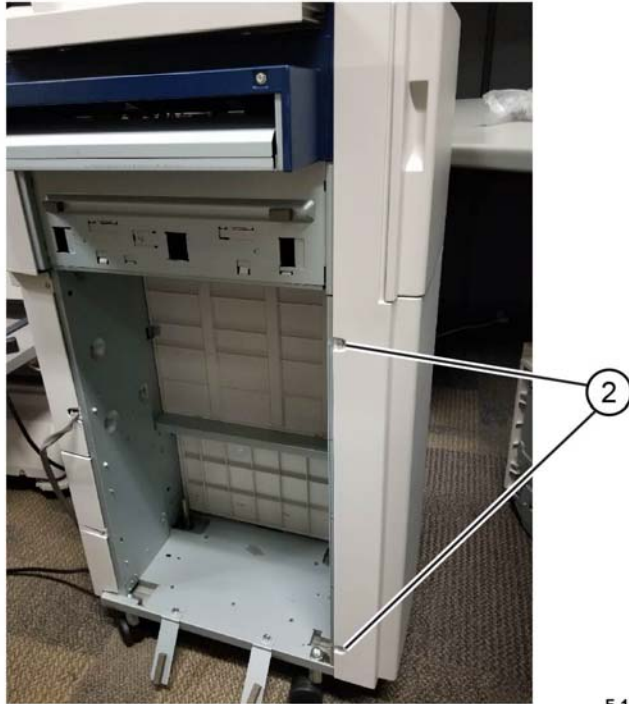


Figure 2 Cover removal 2 of 3

F-1-0707-A

6. Remove the front cover, [Figure 3](#):
- Remove one screw (3).
 - Remove the front cover.

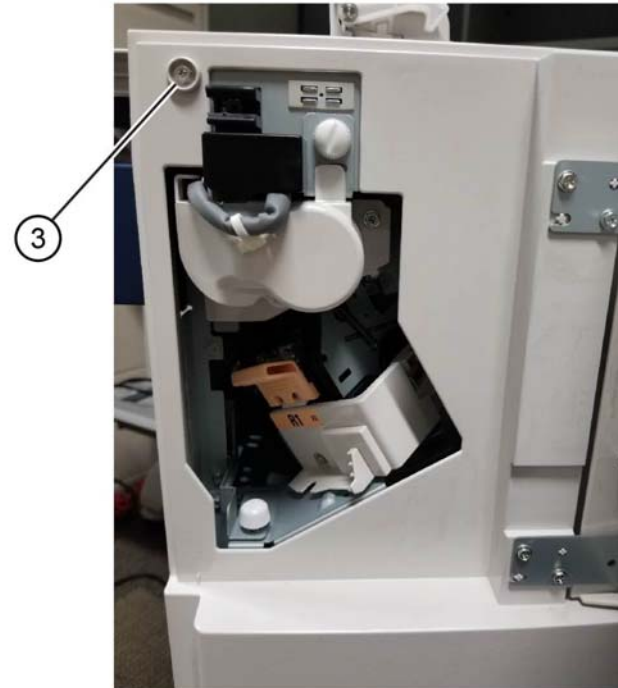


Figure 3 Cover removal 3 of 3

F-1-0708-A

Replacement

The replacement is the reverse of the removal procedure.

REP 13.7 Rear Upper Cover

Parts List on [PL 13.10](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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. Undock the finisher, [REP 13.5](#).
2. Remove the booklet maker, [REP 13.31](#).
3. Start to remove the cover, remove one screw (1), [Figure 1](#).

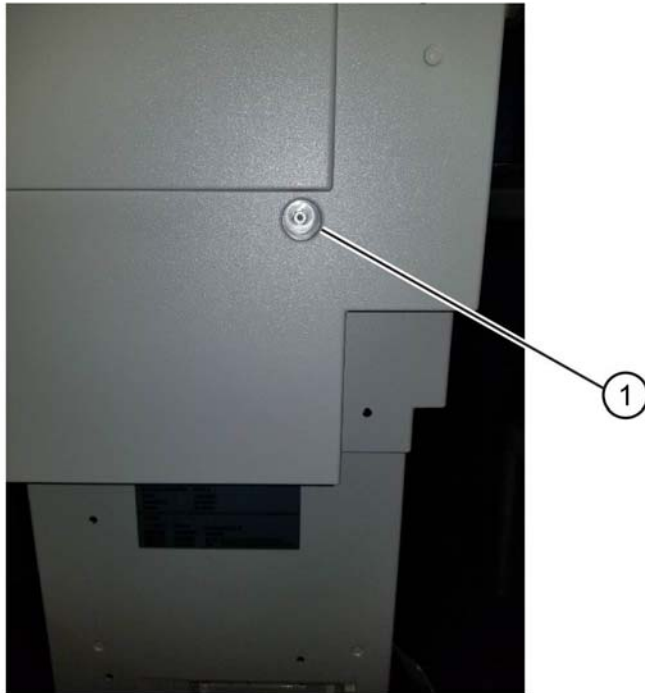


Figure 1 Cover removal 1 of 4

F-1-0709-A

4. Continue to remove the cover, remove one screw (2), [Figure 2](#).

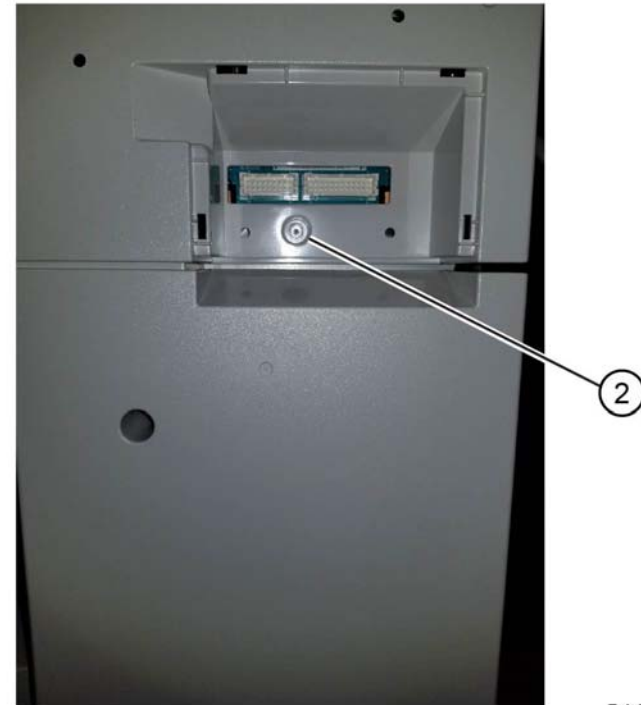
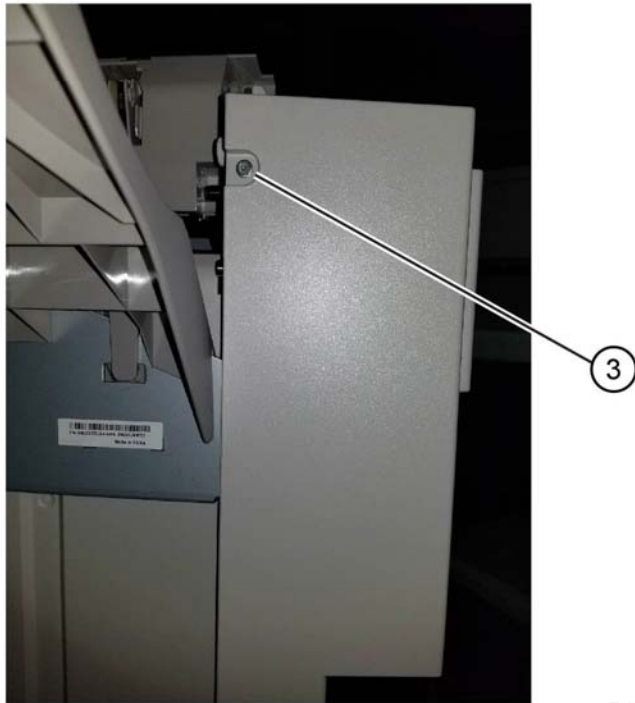


Figure 2 Cover removal 2 of 4

F-1-0710-A

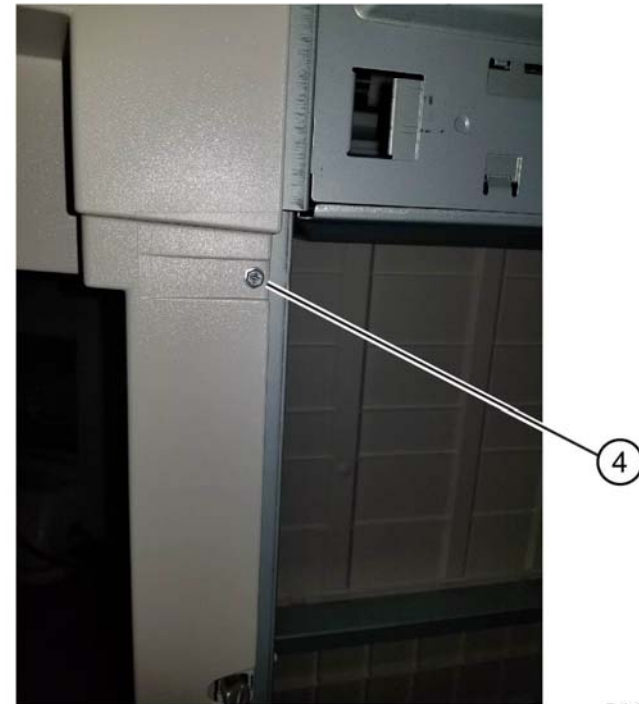
5. Continue to remove the cover, remove one screw (3), [Figure 3](#).



F-10711-A

Figure 3 Cover removal 3 of 4

6. Remove the rear upper cover, [Figure 4](#):
- Remove one screw (4).
 - Remove the cover.



F-1-0712-A

Figure 4 Cover removal 4 of 4

Replacement

The replacement is the reverse of the removal procedure.

REP 13.8 Rear Lower Cover

Parts List on [PL 13.10](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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. Undock the finisher, [REP 13.5](#).
2. Prepare to remove the cover, remove two screws (1), [Figure 1](#).

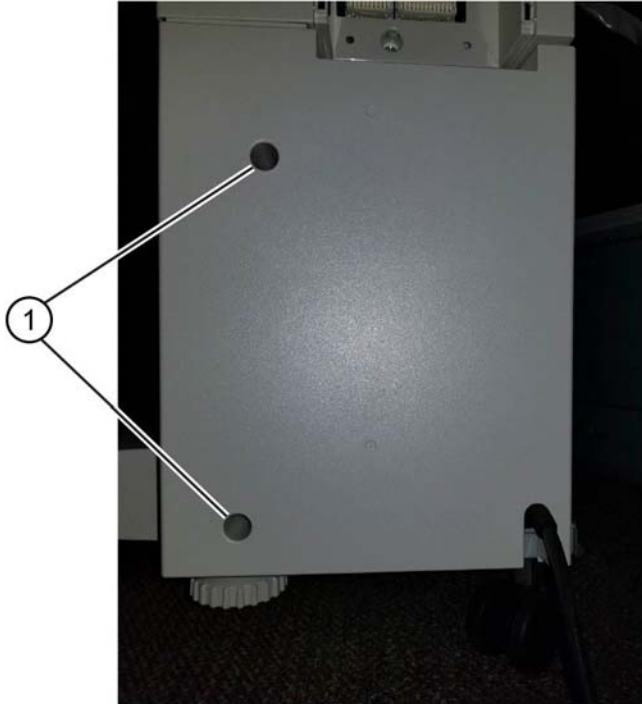


Figure 1 Preparation

F-1-0713-A

3. Remove the rear lower cover, [Figure 2](#):
 - a. Remove one screw (2).
 - b. Remove the cover.



Figure 2 Cover removal

F-1-0714-A

Replacement

The replacement is the reverse of the removal procedure.

REP 13.9 Top Right Cover

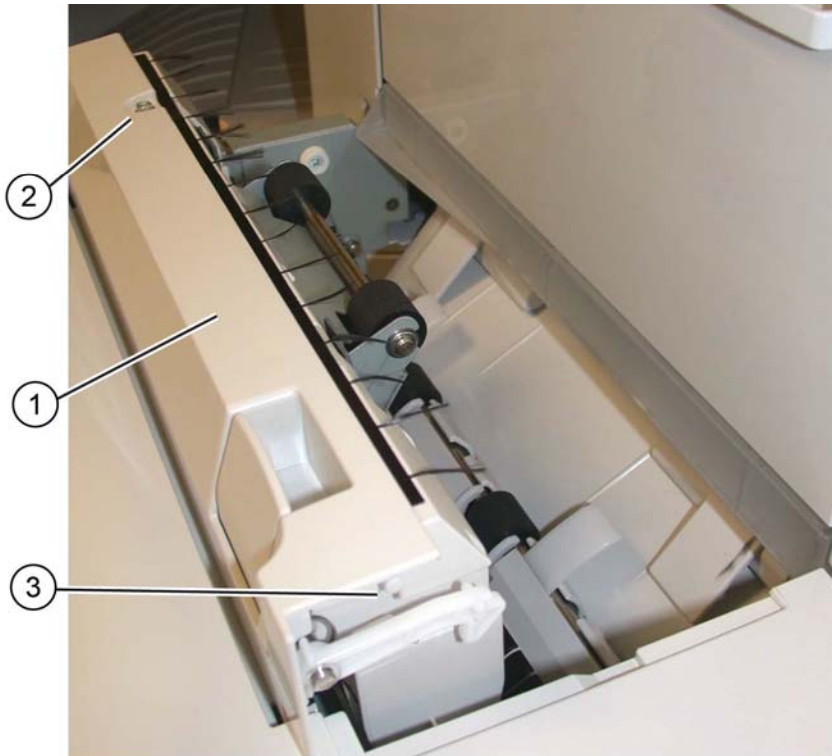
Parts List on [PL 13.26](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 right cover, [PL 13.26 Item 1](#), [Figure 1](#):
 - a. Unlatch the eject cover (1), then move it to the left.
 - b. Remove the retaining screw (2).
 - c. Push the latch (3) through the hole in the cover.
 - d. Remove the cover by moving it to the left.



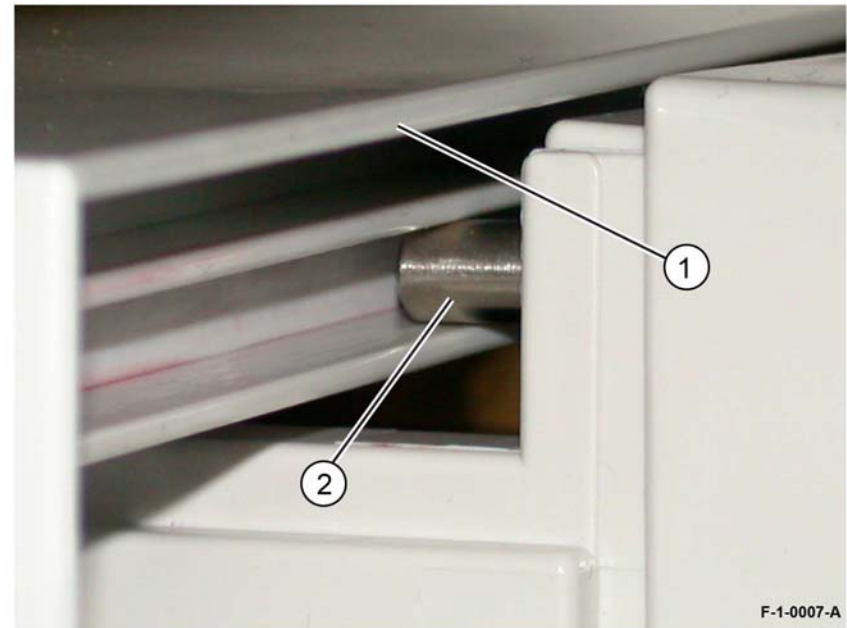
F-1-0006-A

Figure 1 Eject cover removal

Replacement

1. Align the top right cover (1) with the pins (2) on both sides, then slide it to the right, [Figure 2](#).

NOTE: The left side of the cover will be captured by the pins and cannot be lifted up.

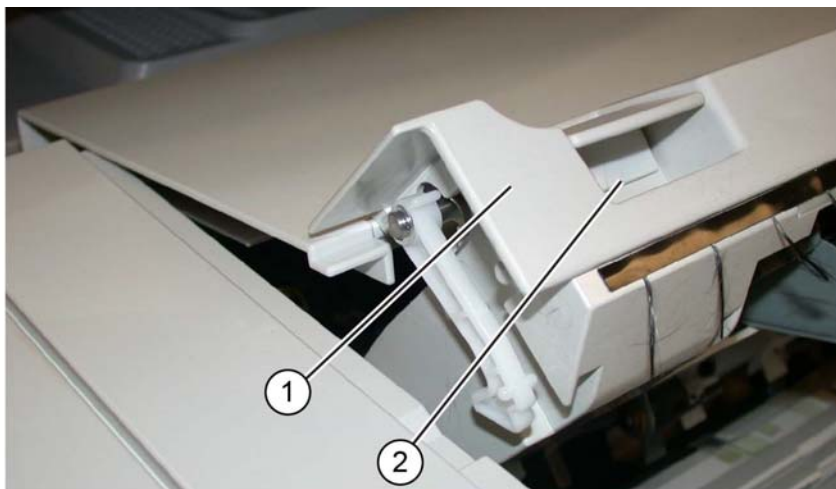


F-1-0007-A

Figure 2 Eject cover alignment

2. Position the top right cover (1) so that the latch (2) is inserted in the hole, [Figure 3](#).

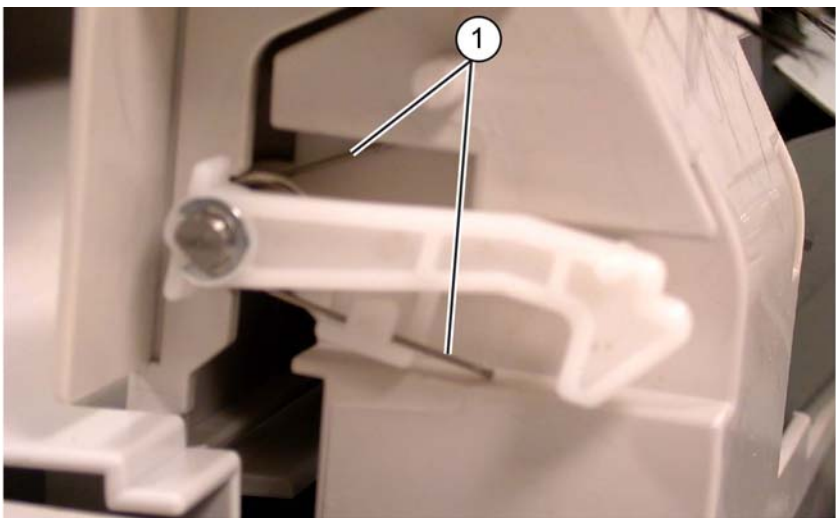
NOTE: The Latch must be outside the hole.



F-1-0008-A

Figure 3 Inserting the Latch

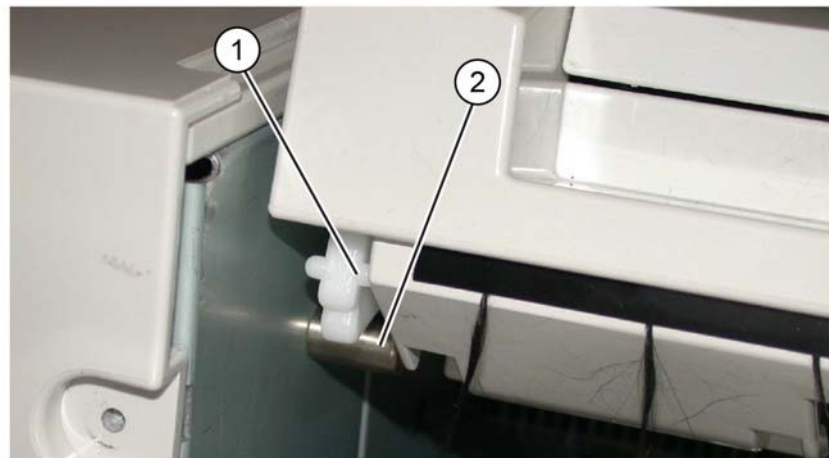
3. Position the latch spring (1) as shown, [Figure 4](#).



F-1-0009-A

Figure 4 Latch spring position

4. Position the latch hook (1) and latch pin (2) as shown, [Figure 5](#).



F-1-0010-A

Figure 5 Hook and pin positioning

5. Install the retaining screw (1), Figure 6.



F-1-0011-A

Figure 6 Retaining screw

REP 13.10 Foot Cover

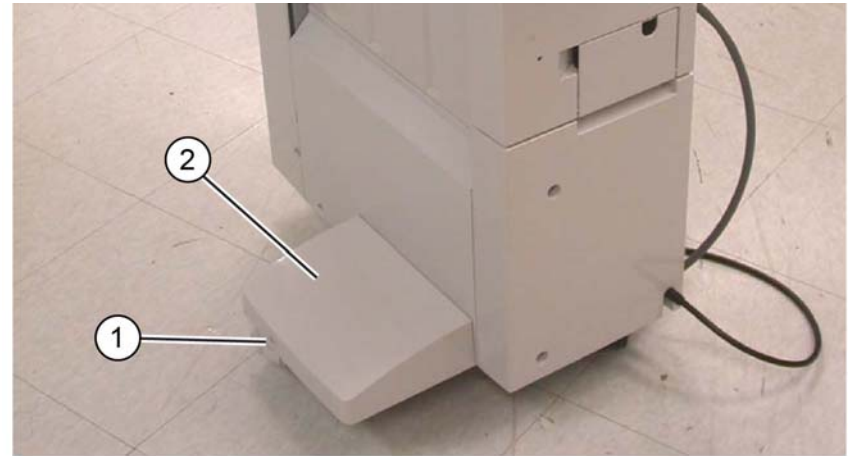
Parts List on [PL 13.10](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 screw (1), then the foot cover (2), Figure 1.



F-1-0012-A

Figure 1 Foot cover removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.11 Stacker Lower Cover

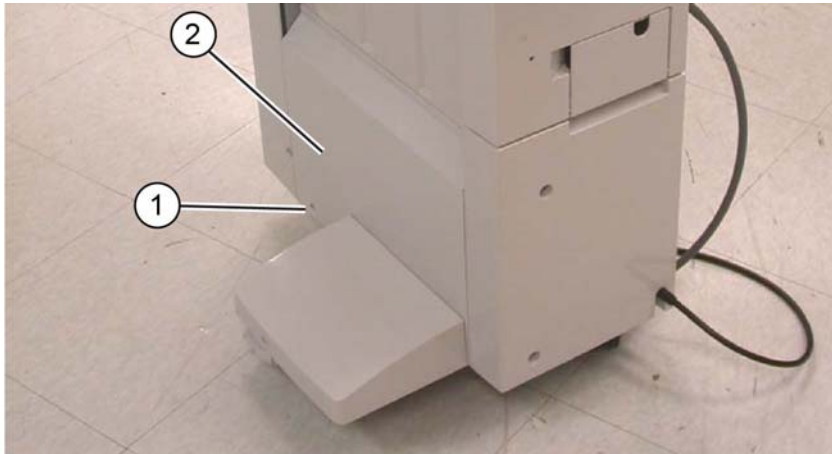
Parts List on [PL 13.10](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 foot cover, [REP 13.10](#).
2. Remove the two screws (1), then the stacker lower cover (2), [Figure 1](#).



F-1-0013-A

Figure 1 Stacker lower cover removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.12 Stacker Upper Cover

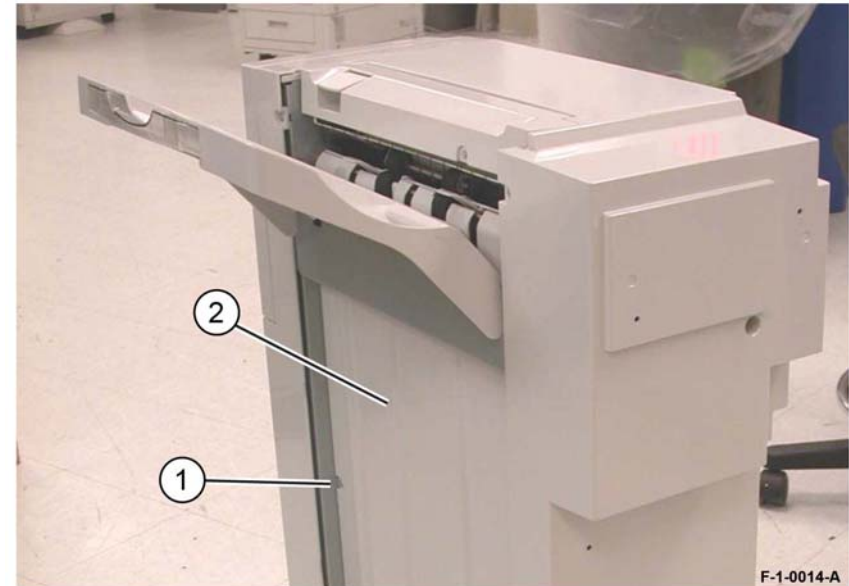
Parts List on [PL 13.15](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 stacker tray, [REP 13.20](#).
2. Remove the stacker lower cover, [REP 13.11](#).
3. Remove six screws (1), then the stacker upper cover (2), [PL 13.15 Item 33, Figure 1](#).



F-1-0014-A

Figure 1 Stacker upper cover removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.13 Stack Height Sensors 1 and 2

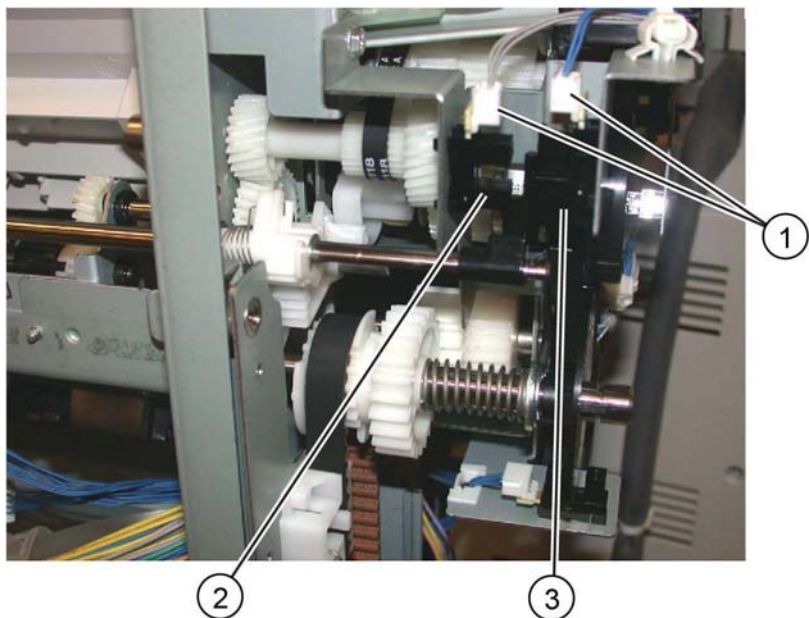
Parts List on [PL 13.27](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 upper cover, [REP 13.7](#).
2. Remove the relevant stack height sensor, [PL 13.27 Item 16, Figure 1](#):
 - a. Disconnect the relevant connector (1).
 - b. Remove either stack height sensor 1 (2) or stack height sensor 2 (3).



F-1-0015-A

Figure 1 Sensor removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.14 Sub Paddle Solenoid Assembly

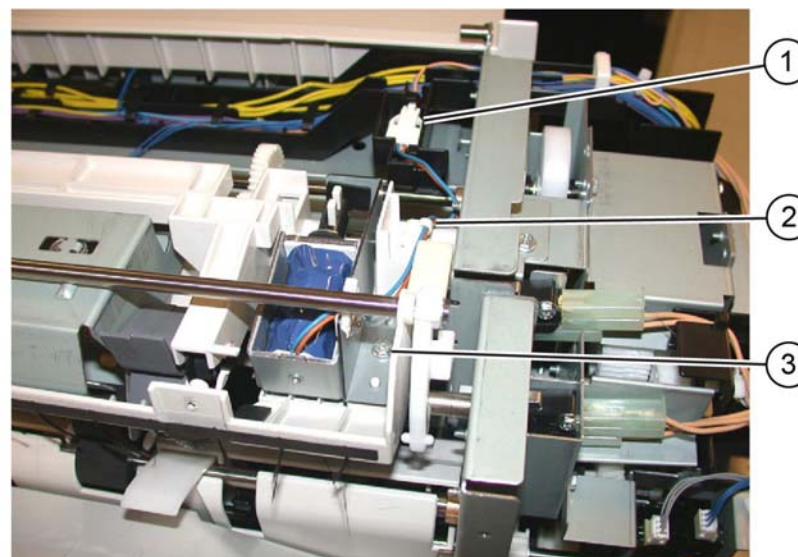
Parts List on [PL 13.26](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 right cover, [REP 13.9](#).
2. Remove the sub paddle solenoid assembly, [PL 13.26 Item 8, Figure 1](#):
 - a. Disconnect the connector (1).
 - b. Release the harness from the clamps (2).
 - c. Remove the screw (3), then the sub paddle solenoid assembly.



F-1-0016-A

Figure 1 Solenoid assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.15 Stapler Move Motor Assembly

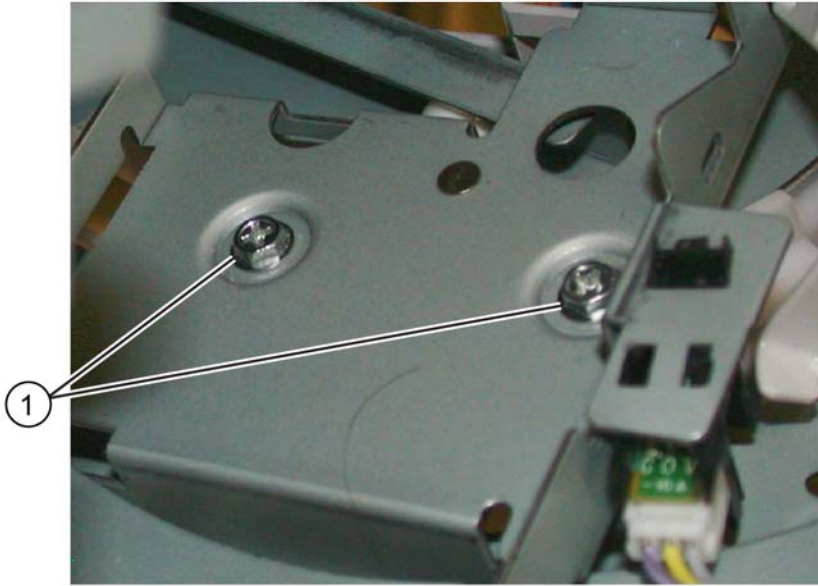
Parts List on [PL 13.20](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

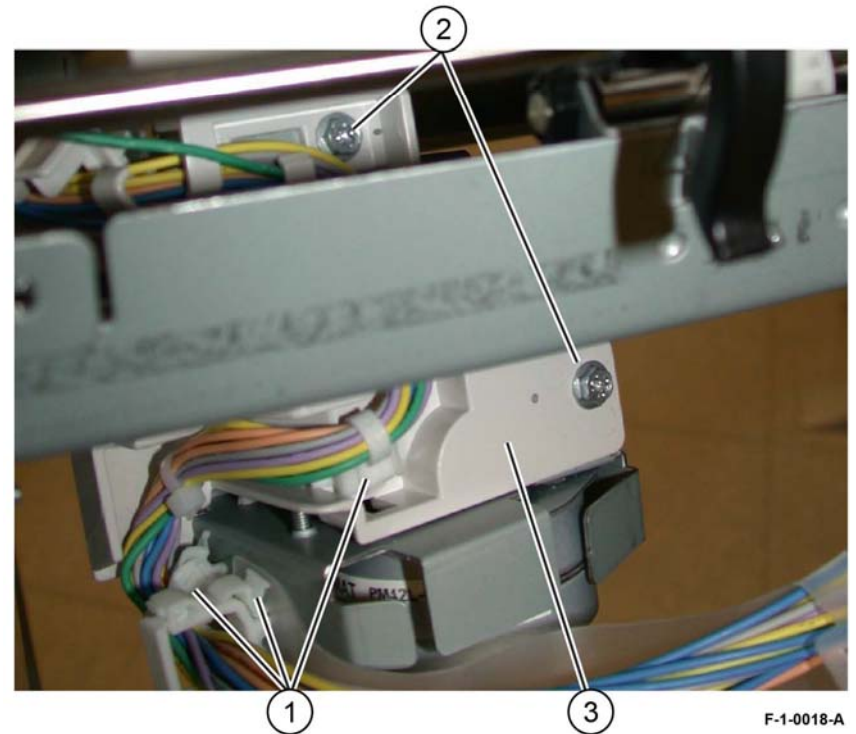
1. Remove the finisher stapler assembly, [REP 13.16](#).
2. Remove two screws (1), [Figure 1](#).



F-1-0017-A

Figure 1 Screw removal

3. Remove the wire guide, [Figure 2](#):
 - a. Pull out the cable clamps (1), then remove the wires from the wire guide.
 - b. Remove two screws (2).
 - c. Remove the wire guide (3).



F-1-0018-A

Figure 2 Wire guide removal

4. Remove the stapler move motor, [Figure 3](#):
 - a. Release the wires from the cable clamp (1).
 - b. Disconnect the connector (2).
 - c. Remove two screws (3).
 - d. Remove the stapler motor (4).

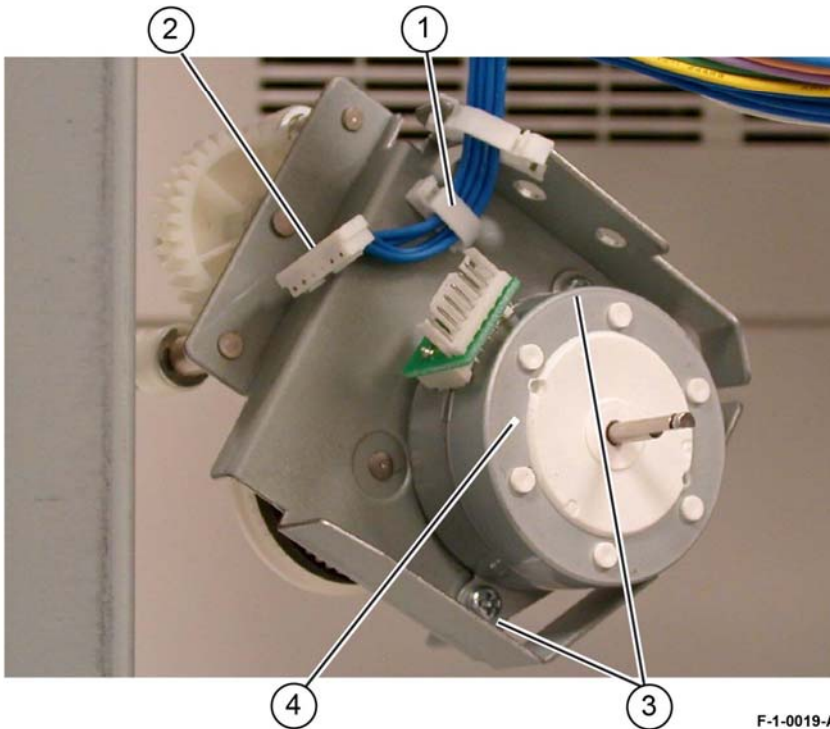


Figure 3 Stapler motor removal

F-1-0019-A

Replacement

Replacement is the reverse of the removal procedure.

REP 13.16 Stapler Assembly

Parts List on [PL 13.20](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

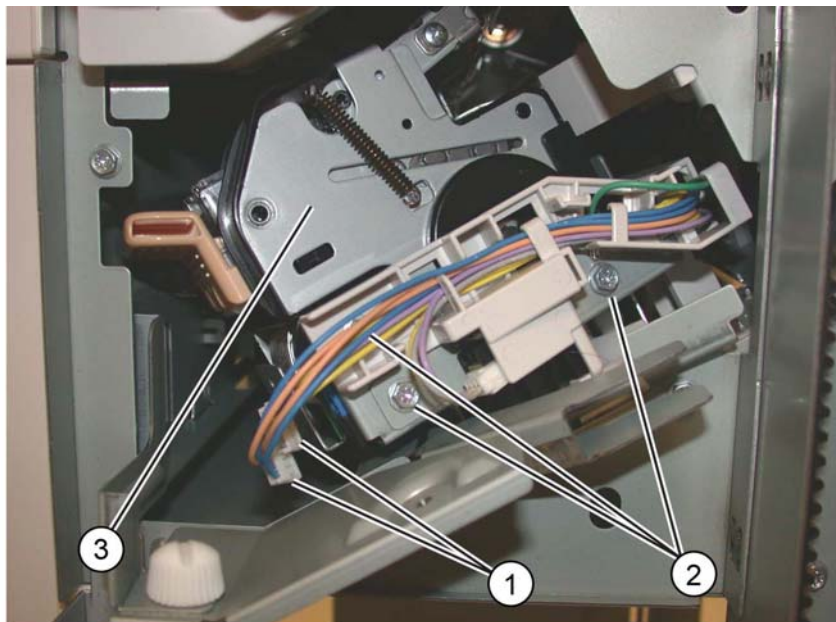
1. Remove the crease assembly, [REP 13.18](#).
2. Remove the front cover assembly, [REP 13.6](#).
3. Remove the stapler cover, [Figure 1](#):
 - a. Remove the screw (1).
 - b. Remove the stapler cover (2).



Figure 1 Stapler cover removal

F-1-0020-A

4. Remove the stapler assembly, [PL 13.20 Item 4, Figure 2](#):
 - a. Disconnect the connectors (1).
 - b. Remove three screws (2).
 - c. Remove the stapler assembly (3).



F-1-0021-A

Figure 2 Stapler assembly removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. Perform [ADJ 13.1 Booklet Folding and Staple Position](#).

REP 13.17 Compiler Tray Assembly

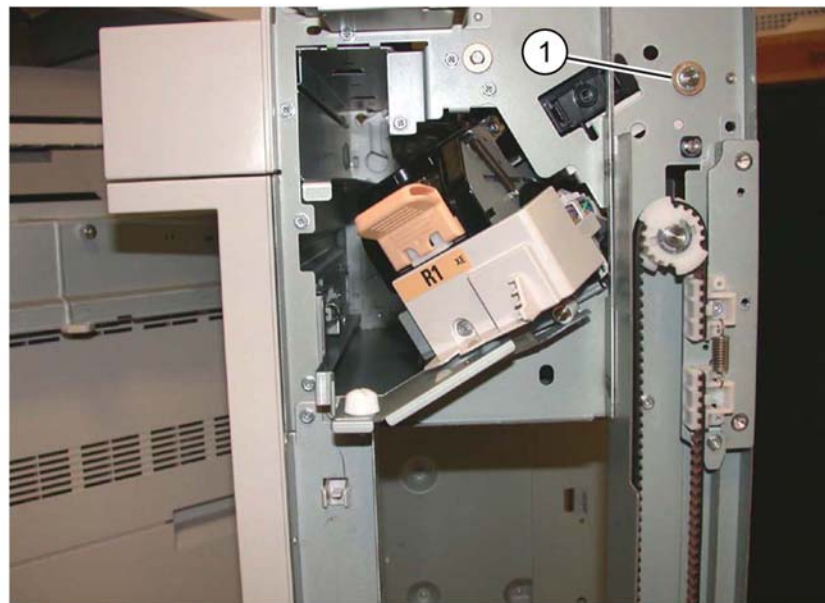
Parts List on [PL 13.28](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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. Undock the finisher, [REP 13.5](#).
2. Remove the front cover, [REP 13.6](#).
3. Remove the rear upper cover, [REP 13.7](#).
4. Remove the foot cover, [REP 13.10](#).
5. Remove the stacker lower cover, [REP 13.11](#).
6. Remove the stacker tray, [REP 13.20](#).
7. Remove the stacker upper cover, [REP 13.12](#).
8. Remove the top right cover, [REP 13.9](#).
9. Remove the E-clip and bearing from the end of the shaft (1), [Figure 1](#).



F-1-0022-A

Figure 1 E-clip and bearing removal

10. Remove the eject roller, **Figure 2**:
 - a. Remove the E-clip (1).
 - b. Slide the eject roller shaft (2) toward the front.
 - c. Remove the gear and bearing (3).
 - d. Remove the eject roll shaft (4) from the finisher.

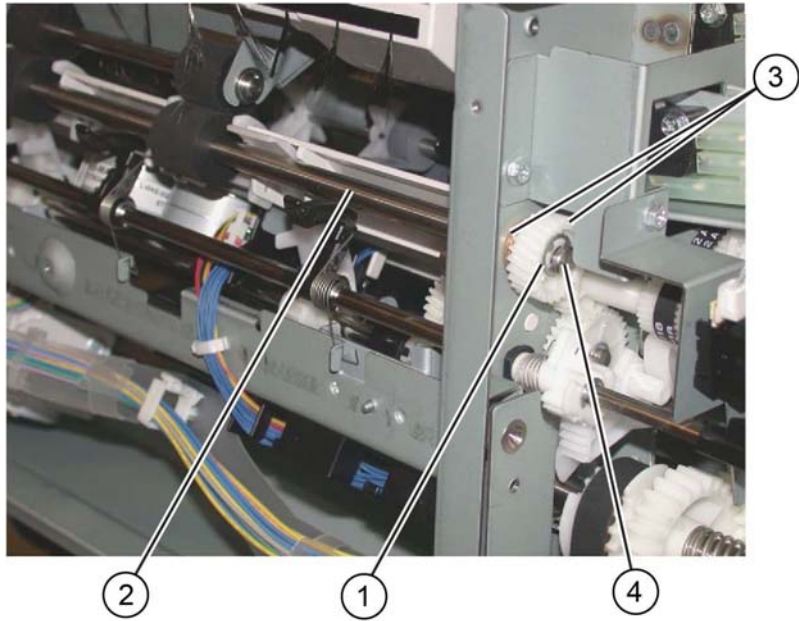


Figure 2 Eject roll shaft removal

F-1-0023-A

11. Remove the compiler tray screw (1), **Figure 3**.
NOTE: Note the position of the set clamp holders (2).

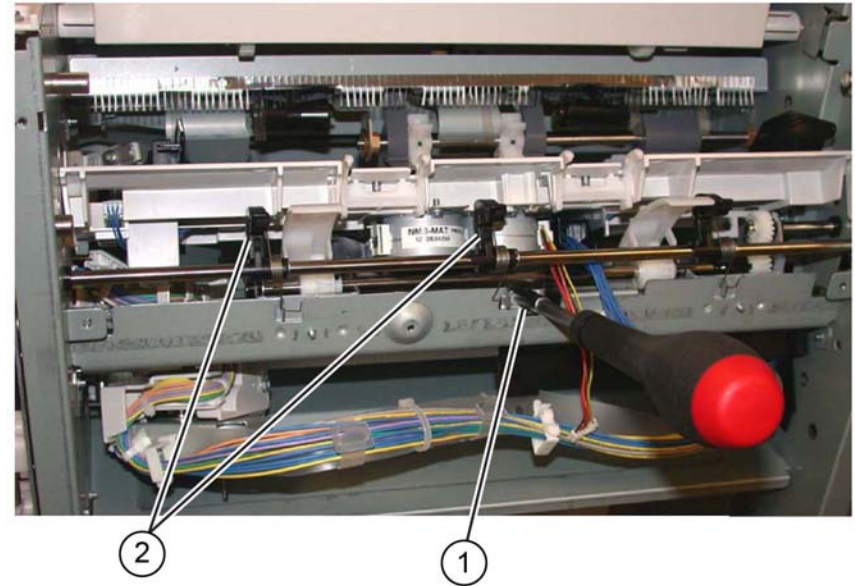
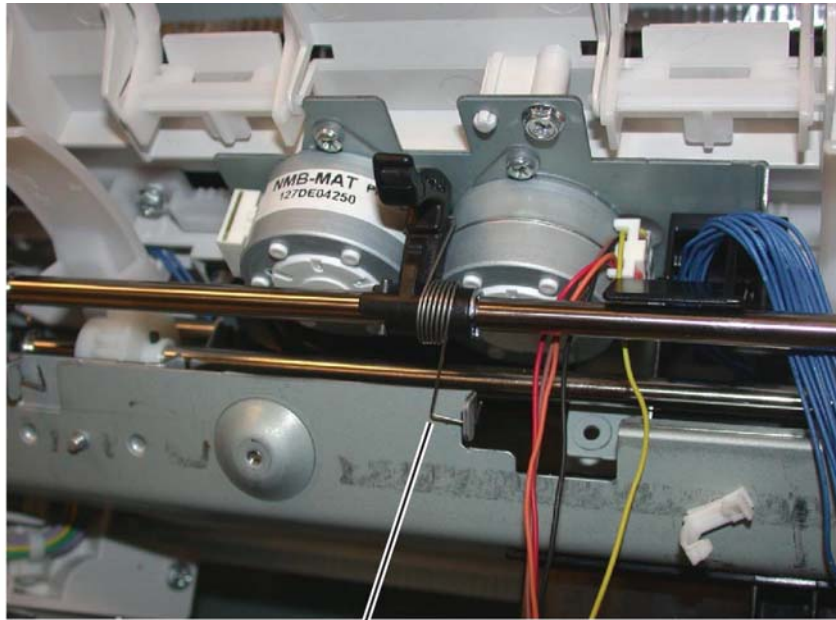


Figure 3 Compiler tray screw removal

F-1-0024-A

12. Disengage the three springs (1) from the set clamp holders, [Figure 4](#).



1

F-1-0025-A

Figure 4 Set clamp holder springs

13. Remove the front E-clip and the bearing (1) from the set clamp shaft assembly, [Figure 5](#).



F-1-0026-A

Figure 5 Front E-clip removal

14. Note the position and orientation of the set clamp shaft gear and the cam gear that it engages (1). When installing the set clamp shaft, these gears must engage in the same manner, [Figure 6](#).

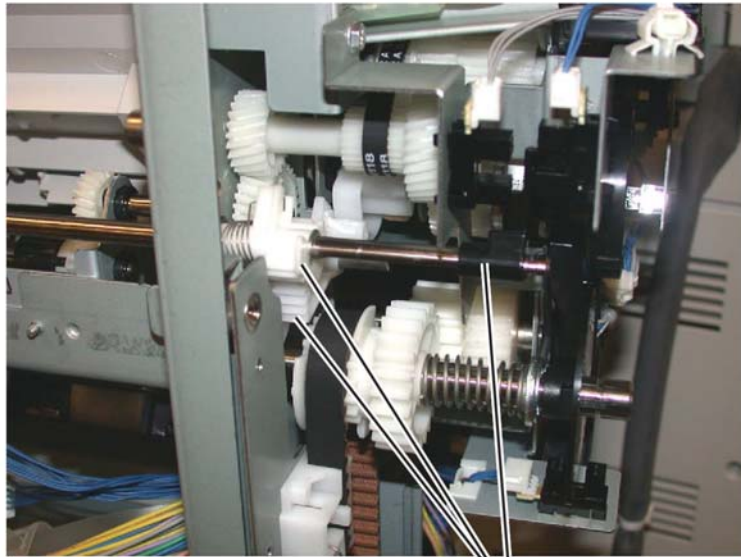


Figure 6 Gear orientation

F-1-0027-A

15. Prepare to remove the set clamp shaft, [PL 13.25 Item 9, Figure 7](#):
- Remove the rear E-clip (1) from the set clamp shaft
 - Slide the gear (2) away from the frame.
 - Disconnect the spring (3) from the gear.

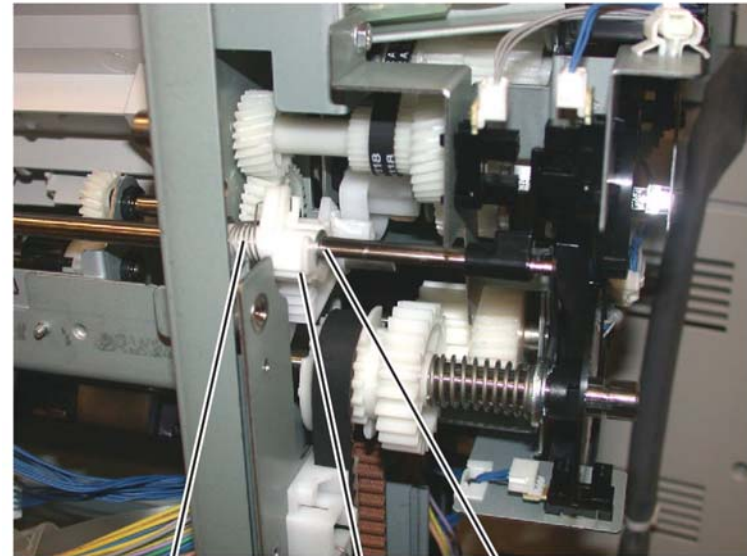


Figure 7 Preparation

F-1-0028-A

16. Slide the gear, spring and the bearing away from the frame, **Figure 8**:
 - a. Unlock, then remove the flag (1).
 - b. Slide the gear, spring and the bearing (2) away from the frame.

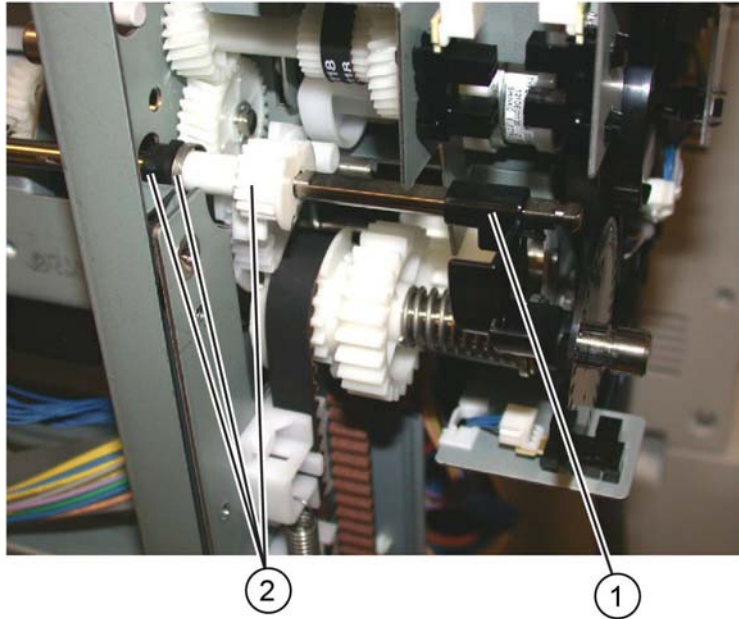


Figure 8 Flag removal

F-1-0029-A

17. Remove the set clamp shaft, **Figure 9**:
 - a. Slide the shaft toward the front (1).
 - b. Slide the shaft toward the rear, then remove (2).

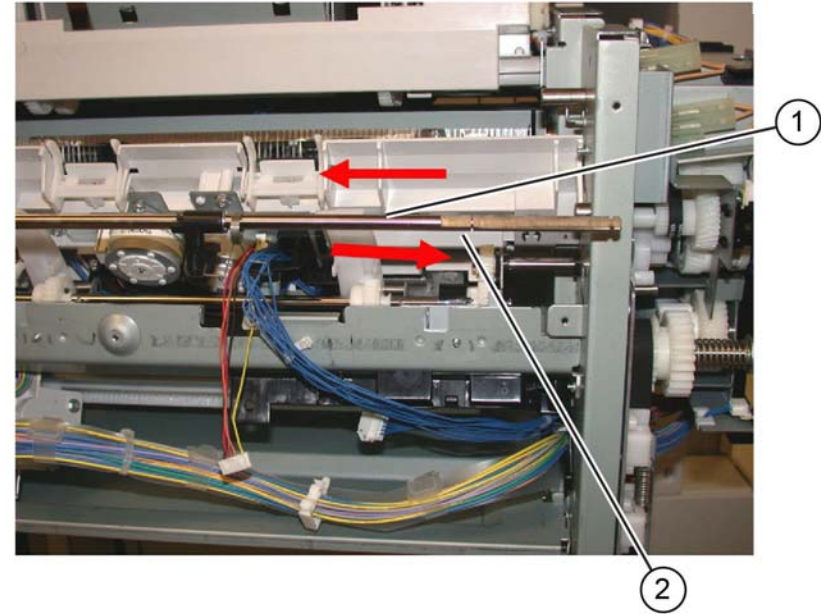
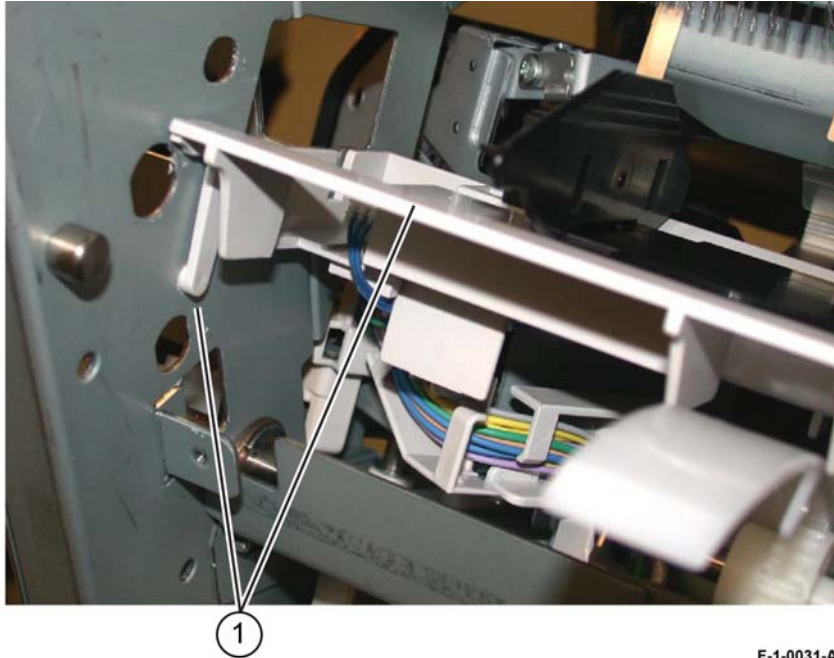


Figure 9 Set clamp shaft removal

F-1-0030-A

18. Remove the compiler tray assembly (1), [Figure 10](#).



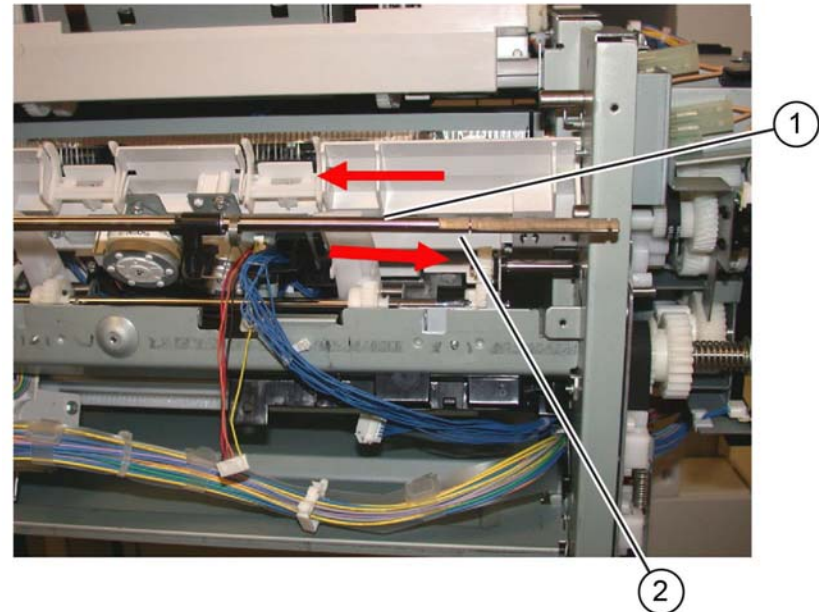
F-1-0031-A

Figure 10 Tray assembly removal

NOTE: Usually this level of compiler tray assembly removal is to facilitate removal of the front or rear tamper motors, tamper home sensors or compiler tray no paper sensor. However, if the compiler tray assembly [PL 13.28 Item 1](#), is to be completely removed, it will be necessary to disconnect all the connectors to the tamper motors, [PL 13.28 Item 6](#), tamper home sensors, [PL 13.28 Item 8](#), and no paper sensor, [PL 13.28 Item 9](#), and release the harnesses from the guides.

Replacement

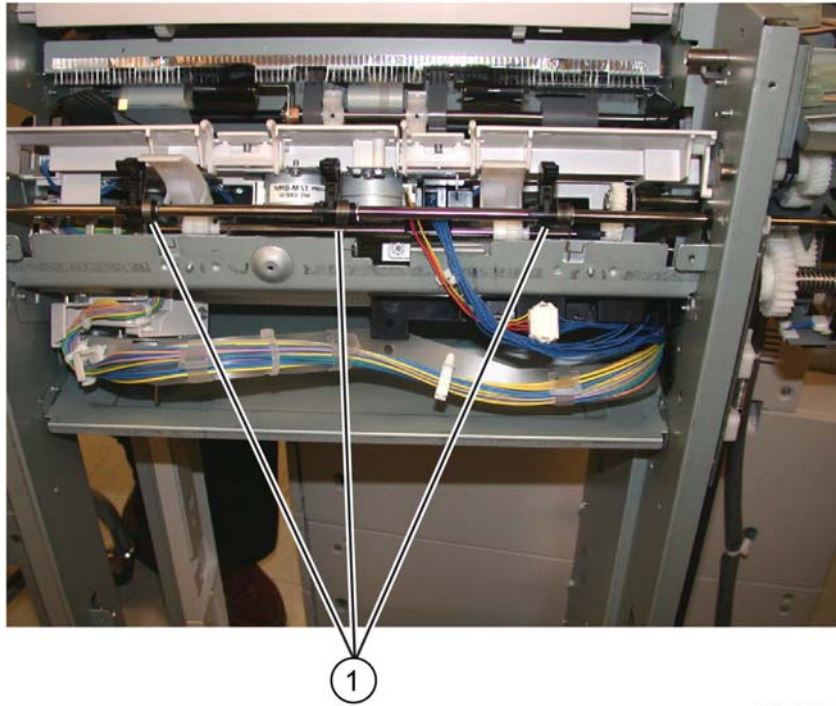
1. Route the harness through the wire guides and connect the proper connectors to the no paper sensor, [PL 13.28 Item 9](#), tamper home sensors, [PL 13.28 Item 8](#), and the tamper motors, [PL 13.28 Item 6](#).
2. Place the compiler tray assembly into position.
3. Install the set clamp shaft front end into the front frame, [Figure 11](#):
 - a. Insert the front end of the shaft into the front frame (1).
 - b. Slide the shaft toward the front until the rear end of the shaft can be inserted into the rear frame (2).



F-1-0032-A

Figure 11 Set clamp shaft installation

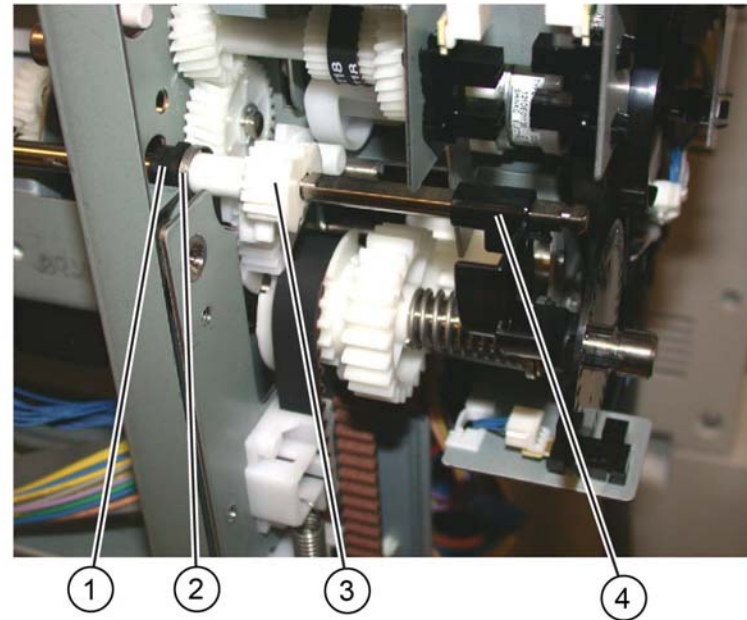
4. Slide the three set clamp holders with springs (1) into the correct location on the shaft, [Figure 12](#).



F-1-0033-A

Figure 12 Replacement preparation

5. Install the bearing, spring and gear onto the rear end of the set clamp shaft, [Figure 13](#):
 - a. Install the bearing (1).
 - b. Install the spring (2).
 - c. Install the gear (3).
 - d. Install the stack height sensor flag (4) onto the rear end of the shaft as shown.



F-1-0034-A

Figure 13 Parts installation

6. Rotate the set clamp shaft until the stack height sensor flag (1) is in the correct position, then correctly align both gears (2), **Figure 14**.

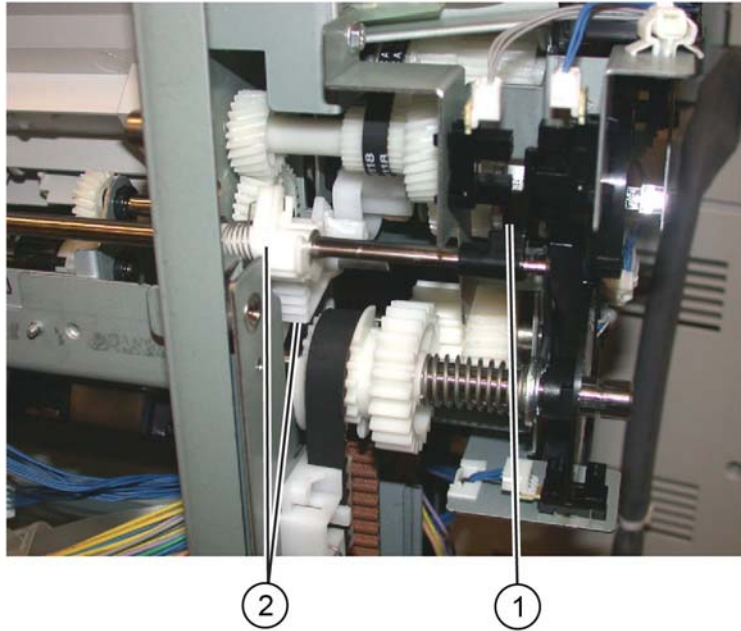


Figure 14 Parts alignment

F-1-0035-A

7. Attach the spring to the gear and slide the gear into position.

8. Ensure that the shaft gear (1), pinion gear (2) and the stack height sensor flag (3) are positioned as shown in **Figure 15**, then install the E-clip (4).

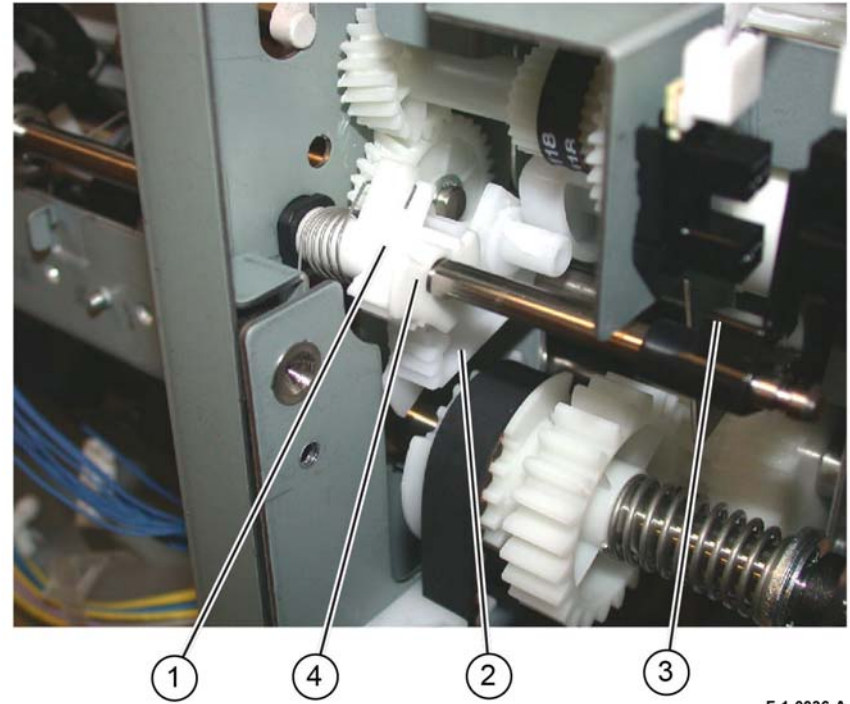


Figure 15 Parts positioning

F-1-0036-A

9. Install the bearing onto the end of the set clamp shaft, then install the E-clip (1), [Figure 16](#).



Figure 16 Bearing and E-clip

F-1-0037-A

10. Ensure that the set clamp holder springs (1) are connected, [Figure 17](#).

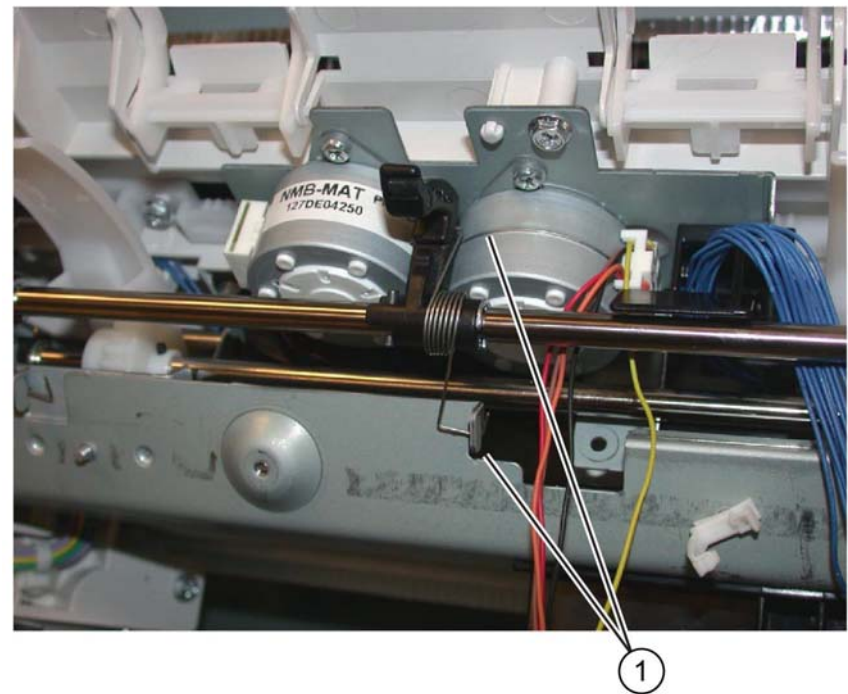
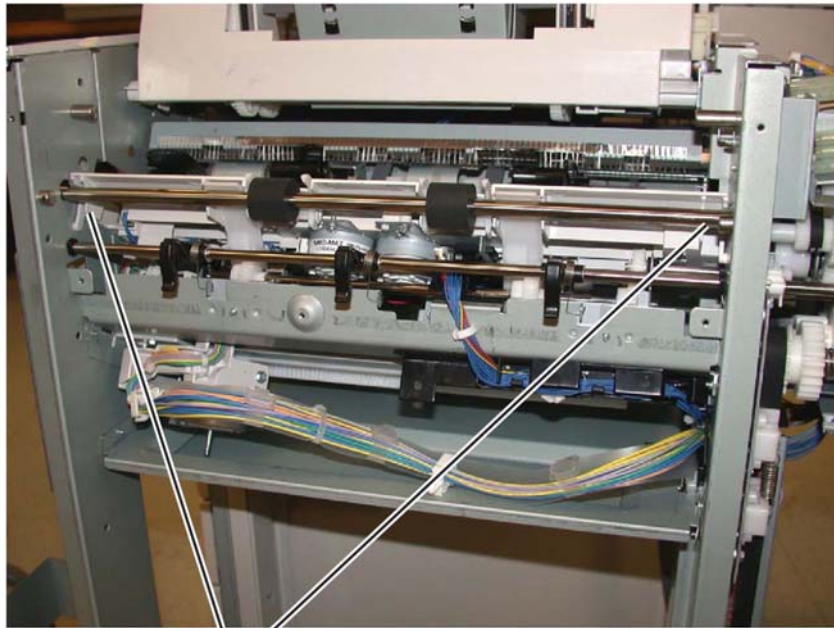


Figure 17 Set clamp holder springs

F-1-0038-A

11. Install the eject roll shaft (1) into position in the front and rear frame, [Figure 18](#).

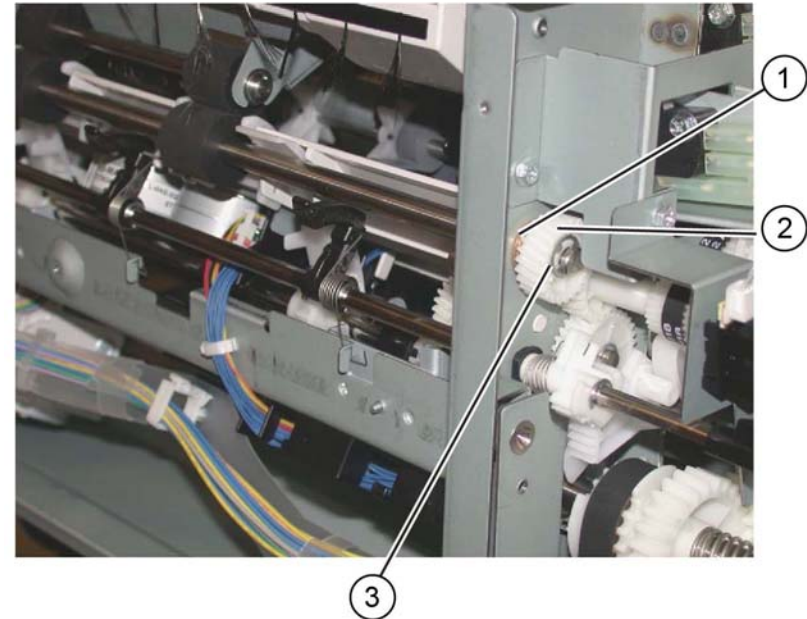


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F-1-0039-A

Figure 18 Eject roll shaft installation

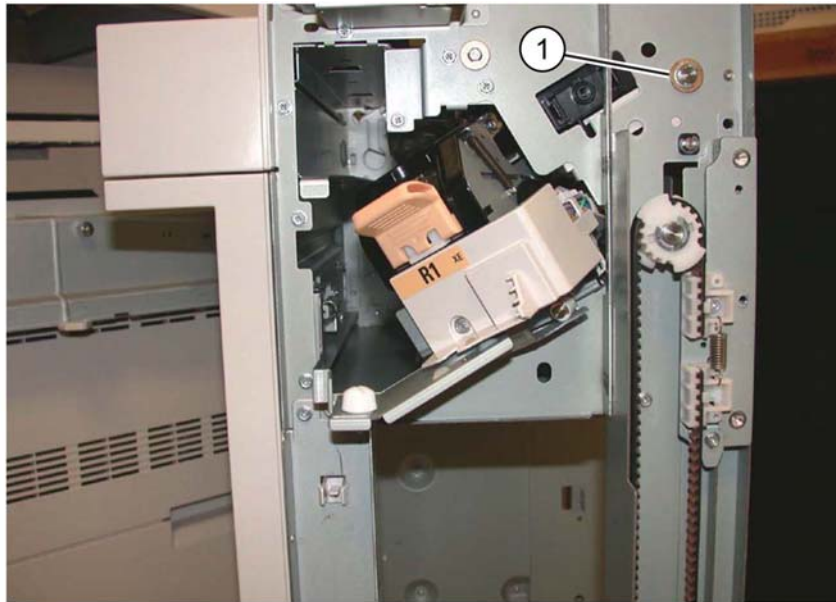
12. Install the bearing (1), gear (2) and E-clip (3) onto the rear of the eject roll shaft, [Figure 19](#).



F-1-0040-A

Figure 19 Rear components

13. Install the bearing and E-clip onto the front of the eject roll shaft (1), [Figure 20](#).



F-1-0041-A

Figure 20 Front components

14. The remainder of the replacement procedure is the reverse of the removal procedure.

REP 13.18 Crease Assembly

Parts List on [PL 13.35](#)

Removal

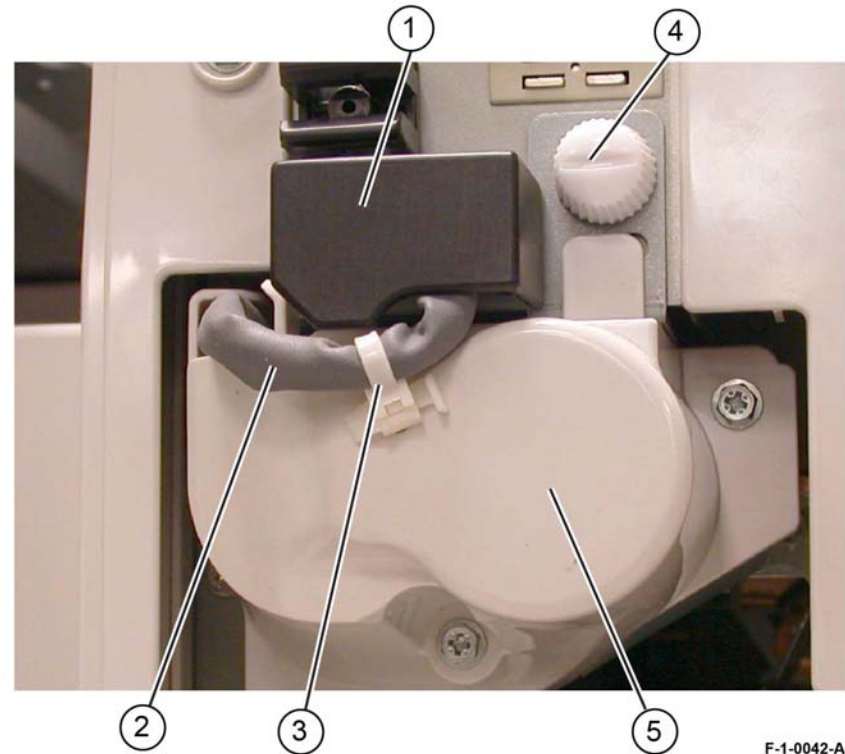
WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 crease assembly, [PL 13.35 Item 20](#), [Figure 1](#):
 - a. Open the finisher front door.
 - b. Remove the guard (1).
 - c. Disconnect the cable (2).

NOTE: Pull out the cable tie (3) to obtain additional slack in the cable.

- d. Remove the thumbscrew (4).
 - e. Pull out the crease assembly (5).



F-1-0042-A

Figure 1 Crease assembly removal

Replacement

1. Replacement is the reverse of the removal procedure.

NOTE: Ensure the locating pins (1) are correctly engaged, [Figure 2](#).

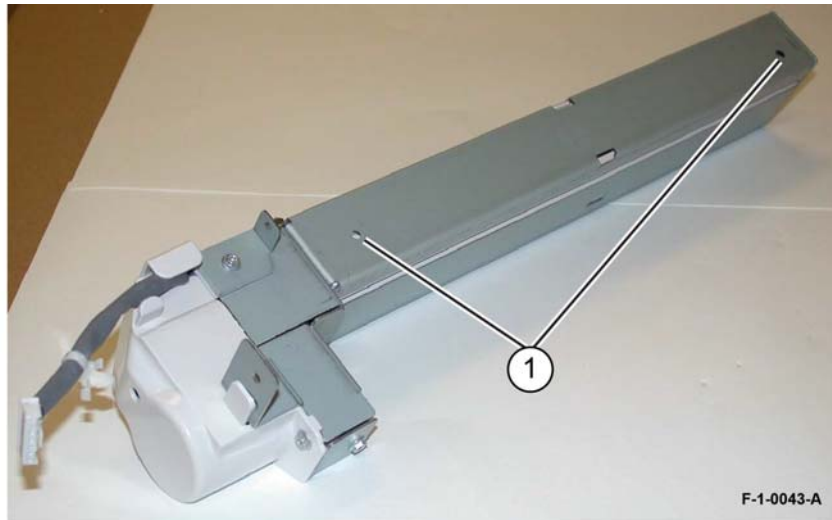


Figure 2 Crease assembly

2. Perform [ADJ 13.1](#) Finisher LX Booklet Crease/Staple Position.

REP 13.19 Stacker Elevator Motor

Parts List on [PL 13.15](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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. Undock the finisher, [REP 13.5](#).
2. Remove the booklet maker, [REP 13.31](#).
3. Remove the finisher rear upper cover, [REP 13.7](#).
4. Remove the main harness guide, [Figure 1](#).
 - a. Release two harness retainers (1).
 - b. Release the harness retainer and disconnect the motor (2).
 - c. Release the harness from the guide (3).
 - d. Remove two screws, then remove the harness guide (4).

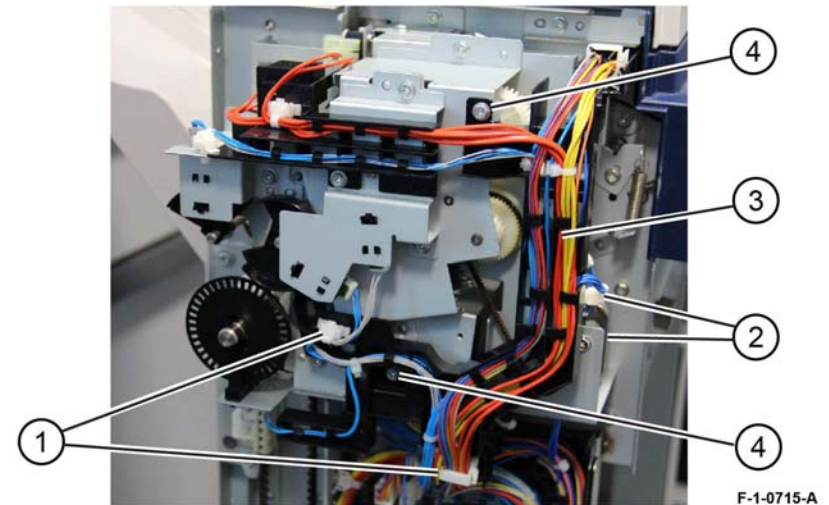
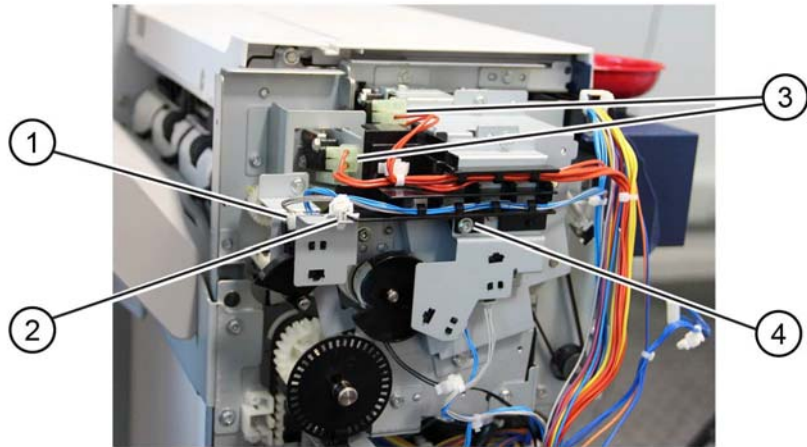


Figure 1 Main harness release

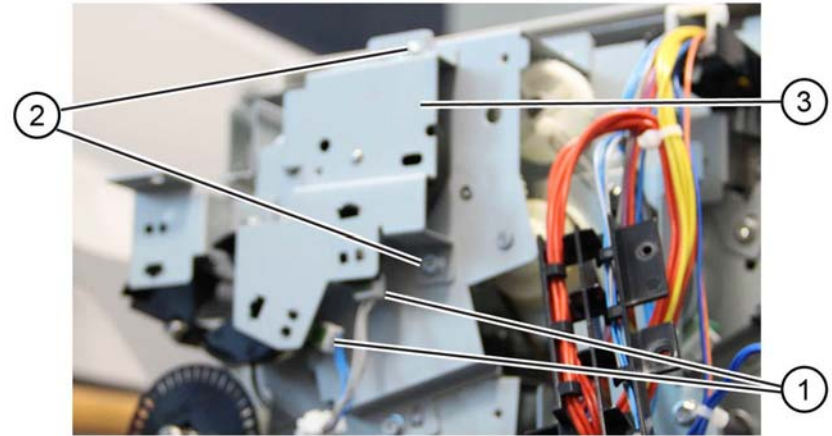
5. Release the upper harness guide [Figure 2](#).
 - a. Disconnect two sensors (1).
 - b. Release the harness retainer (2).
 - c. Disconnect two switches (3).
 - d. Remove one screw to release the harness guide (4).
 - e. Allow the harness and guide to hang to the right side.



F-1-0716-A

Figure 2 Upper harness guide release

6. Remove the sensor bracket, [Figure 3](#).
 - a. Disconnect two sensors (1).
 - b. Remove two screws (2).
 - c. Remove the sensor bracket (3).



F-1-0717-A

Figure 3 Sensor bracket removal

7. Remove the clutch, **Figure 4**.
 - a. Remove two timing wheels (1).
 - b. Remove the screw and sensor bracket (2).
 - c. Disconnect the clutch harness at the in-line connector (3).
 - d. Remove the clutch (4).

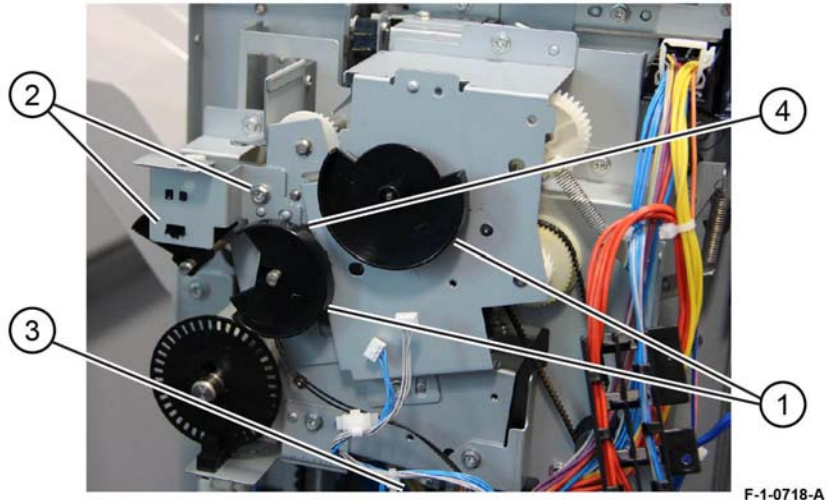


Figure 4 Clutch removal

8. Remove the bracket, **Figure 5**.
 - a. Remove three screws (1).
 - b. Remove the bracket (2).

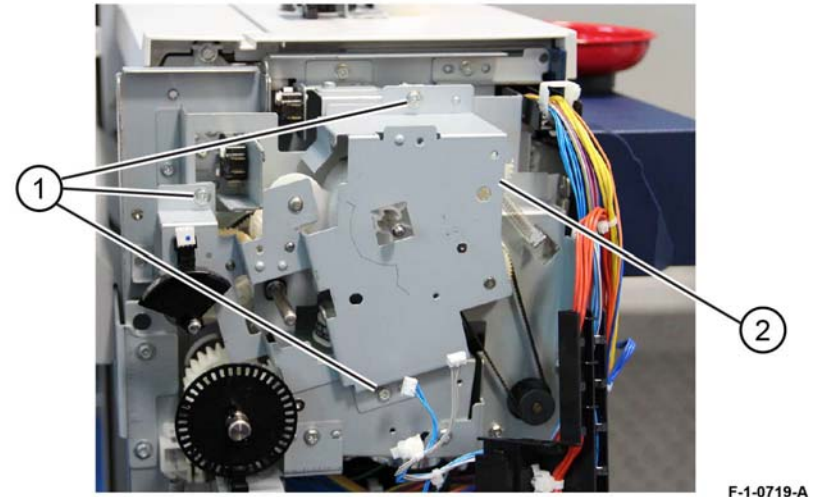


Figure 5 Bracket removal

9. Remove the motor, [Figure 6](#).
 - a. Release the locking arm, then slide the belt and pulley off of the motor shaft (1).
 - b. Remove three screws (2).
 - c. Remove the motor from the bracket, then disconnect the motor harness from the PWB.

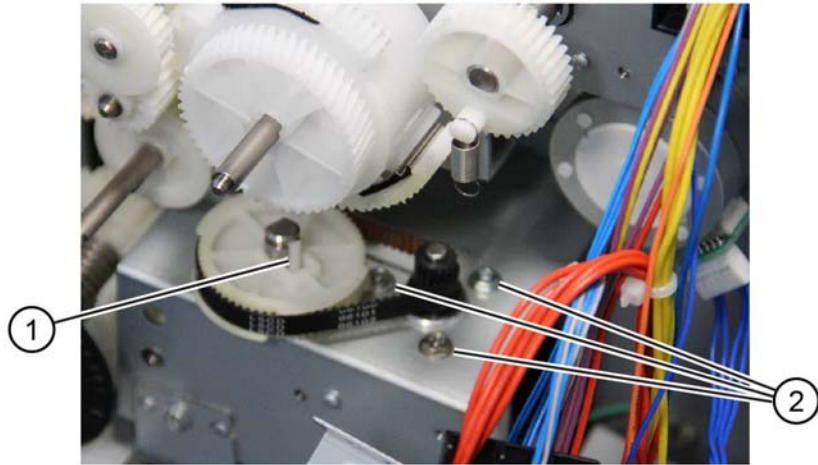


Figure 6 Motor removal

F-1-0720-A

Replacement

NOTE: When reinstalling the bracket ensure the idler gear (1) is installed on the stub shaft, [Figure 7](#).



Figure 7 Idler pulley

F-1-0721-A

The remainder of the replacement is the reverse of the removal procedure.

REP 13.20 Stacker Tray

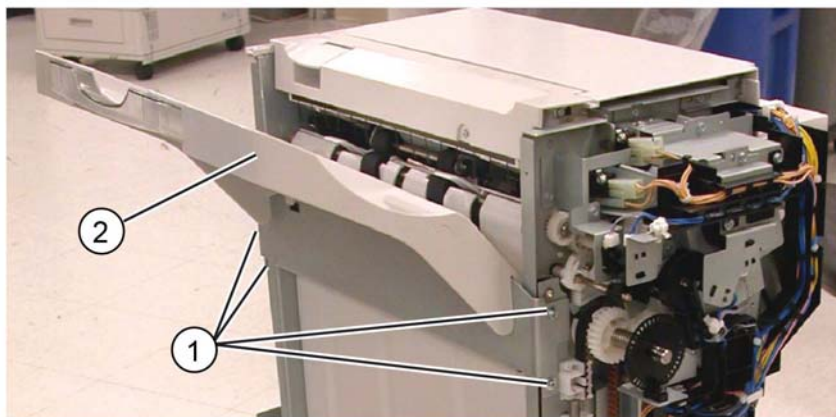
Parts List on [PL 13.15](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. If installed, remove the booklet maker assembly, [REP 13.31](#).
2. Remove the front cover assembly, [REP 13.6](#).
3. Remove the rear upper cover, [REP 13.7](#).
4. Remove the stacker tray, [PL 13.20 Item 15](#), [Figure 1](#):
 - a. Remove four screws (1).
 - b. Remove the stacker tray (2).



F-1-0044-A

Figure 1 Stacker tray removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.21 Eject Belt

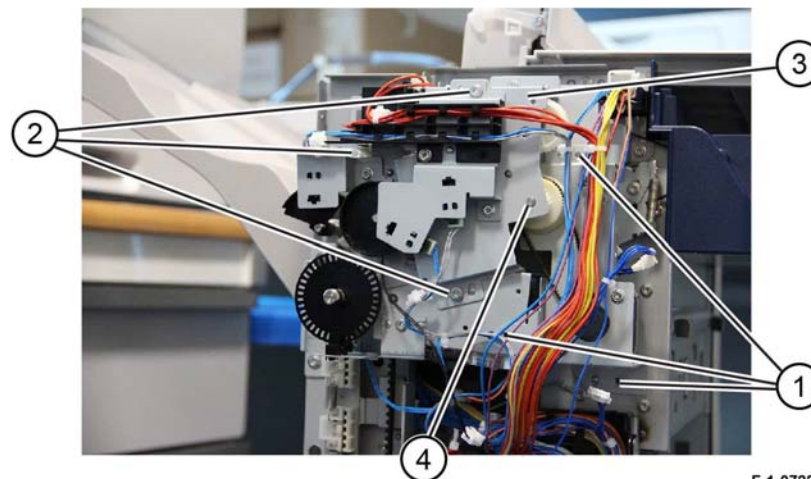
Parts List on [PL 13.27 Item 7](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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. Go to [REP 13.19](#), perform steps 1 to 5. Continue at 2 of this repair.
2. Remove the motor bracket assembly, [Figure 1](#).
 - a. Remove three screws (1).
 - b. Loosen three screws about 4 turns (2).
 - c. Pull the large bracket (3) away to release the shaft of the motor bracket assembly (4), then remove the motor bracket assembly.



F-1-0722-A

Figure 1 Motor bracket removal

3. Remove the eject belt, [PL 13.27 Item 7](#) from the pulleys.

Replacement

The replacement is the reverse of the removal procedure.

REP 13.22 Eject Motor Assembly

Parts List on [PL 13.27 Item 4](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Perform [REP 13.21](#).
2. Remove two screws and remove the eject motor, [PL 13.27 Item 4](#).

Replacement

The replacement is the reverse of the removal procedure.

REP 13.23 Finisher PWB

Parts List on [PL 13.45](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



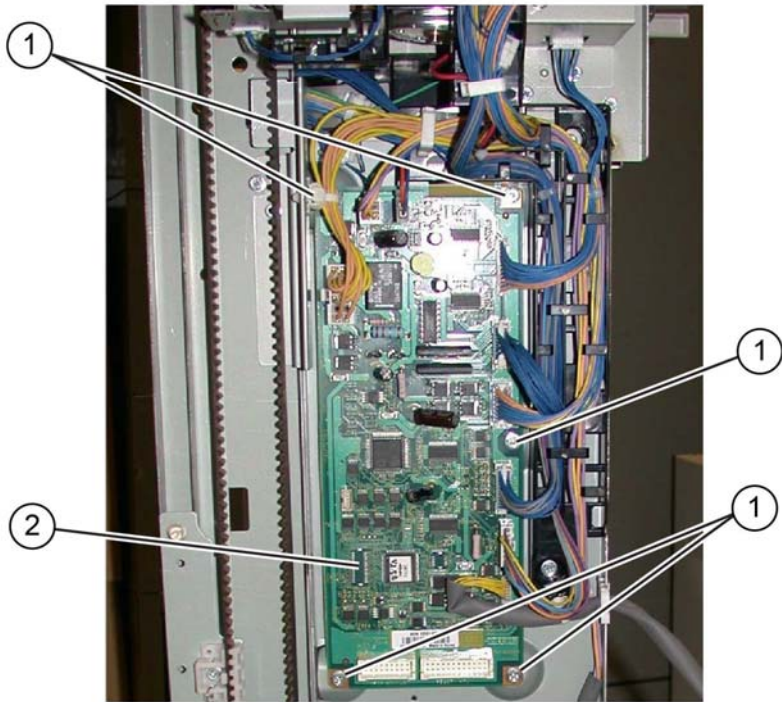
Figure 1 ESD symbol

CAUTION

Observe ESD procedures during this procedure.

1. If possible, record the current software level by either:
 - Printing the configuration report, [GP 14](#).
 - From the user interface Home screen, touch Device, then About. Scroll down to view the Software Version. Refer to [GP 3](#).
2. Remove the rear upper cover, [REP 13.7](#).

3. Remove the finisher PWB, [PL 13.45 Item 2, Figure 2](#):
 - a. Disconnect all connectors from the finisher PWB.
 - b. Remove the five screws (1).
 - c. Remove the finisher PWB (2).



F-1-0045-A

Figure 2 Finisher PWB removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. Check the current software level against the software level recorded prior to installation of the new finisher PWB. If necessary, reload the software, [GP 4](#).

REP 13.24 Finisher LVPS

Parts List on [PL PL 13.45](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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

Observe ESD procedures during this procedure.

1. Remove the rear lower cover, [REP 13.8](#).

2. Remove the finisher LVPS, PL 13.45 Item 14, Figure 2:
 - a. Disconnect two connectors (1).
 - b. Remove four screws (2).
 - c. Remove the finisher LVPS (3).



Figure 2 Finisher LVPS removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.26 Front/Rear Tamper Motor

Parts List on PL 13.28

Removal

WARNING

Switch off the electricity to the machine. Refer to GP 10. Disconnect the power 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 compiler tray, REP 13.17.
2. Place the compiler tray upside down on a work surface.
3. Remove the tamper motor, PL 13.28 Item 6, Figure 1:
 - a. Release the harness (1) from the harness guide.
 - b. Remove the screw (2), then the harness guide.
 - c. Disconnect the tamper motor connector (3).
 - d. Remove both screws to remove the tamper motor.

NOTE: Figure 1 shows the removal of the rear tamper motor.

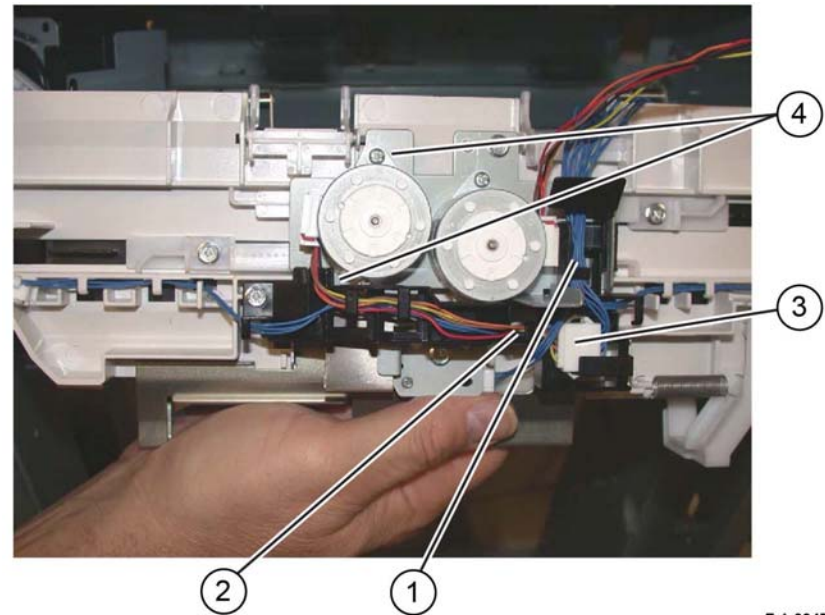


Figure 1 Tamper motor removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.27 Front/Rear Tamper Home Sensors

Parts List on [PL 13.28](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 compiler tray assembly, [REP 13.17](#).
2. Place the compiler tray upside down on a work surface.
3. Remove the front or rear tamper home sensor, [PL 13.28 Item 8, Figure 1](#):
 - a. Disconnect the connector (1).
 - b. Remove the front or rear tamper home sensor (2).

NOTE: Removal of the rear tamper home sensor is shown in [Figure 1](#).

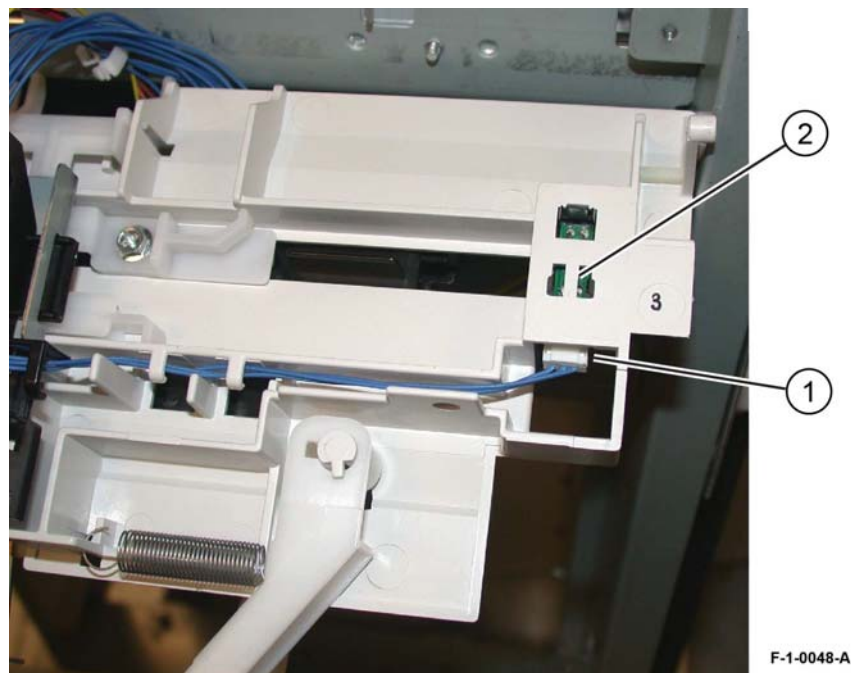


Figure 1 Tamper home sensor removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.28 Compiler Tray No Paper Sensor

Parts List on [PL 13.28](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 compiler tray assembly, [REP 13.17](#).
2. Place the compiler tray upside down on a work surface.
3. Remove the screw (1) that secures the bracket, [Figure 1](#).

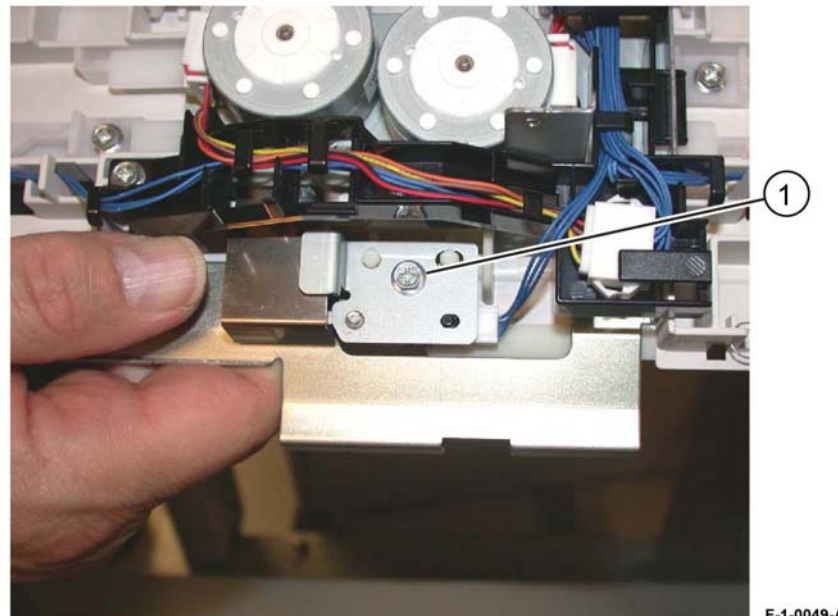
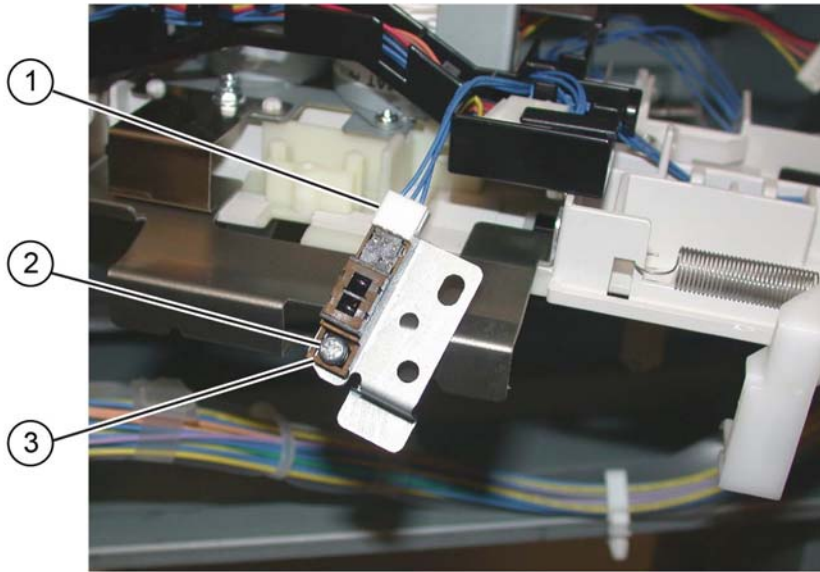


Figure 1 Bracket removal

4. Remove the compiler no paper sensor, [PL 13.28 Item 9](#), [Figure 2](#):
 - a. Disconnect the connector (1).
 - b. Remove the screw (2).
 - c. Remove the compiler tray no paper sensor (3).



F-1-0050-A

Figure 2 No paper sensor removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.29 Front/Rear Carriage Assembly

Parts List on [PL 13.15](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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. Enter [dC330](#), code 12-060 stacker motor up, to fully raise the stacker tray.
2. Remove the finisher front cover, [REP 13.6](#).
3. Remove the rear upper cover, [REP 13.7](#).
4. Remove the rear lower cover, [REP 13.8](#).
5. Remove the stacker tray, [REP 13.20](#).
6. Removing the carriage assembly, [Figure 1](#):
 - a. Disconnect, then remove the spring (1).
 - b. Use a flat bladed screwdriver to release the belt clamp latch (2).
 - c. Remove the stacker belt and carriage assembly.

NOTE: The carriage bearings (2 each assembly) are not fastened to the shafts. Ensure the bearings are retained when the carriage assembly is removed.



F-1-0051-A

Figure 1 Carriage assembly removal

Replacement

CAUTION

Ensure that the front and rear carriage assemblies are installed at the same height.

Replacement is the reverse of the removal procedure.

REP 13.30 Booklet Maker PWB

Parts List on [PL 13.70](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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

Observe ESD procedures during this procedure.

1. Remove the booklet PWB cover, [REP 13.35](#).

2. Remove the booklet PWB, PL 13.70 Item 4, Figure 2:
 - a. Disconnect the connectors from the booklet PWB.
 - b. Remove four screws (1).
 - c. Remove the booklet PWB (2).

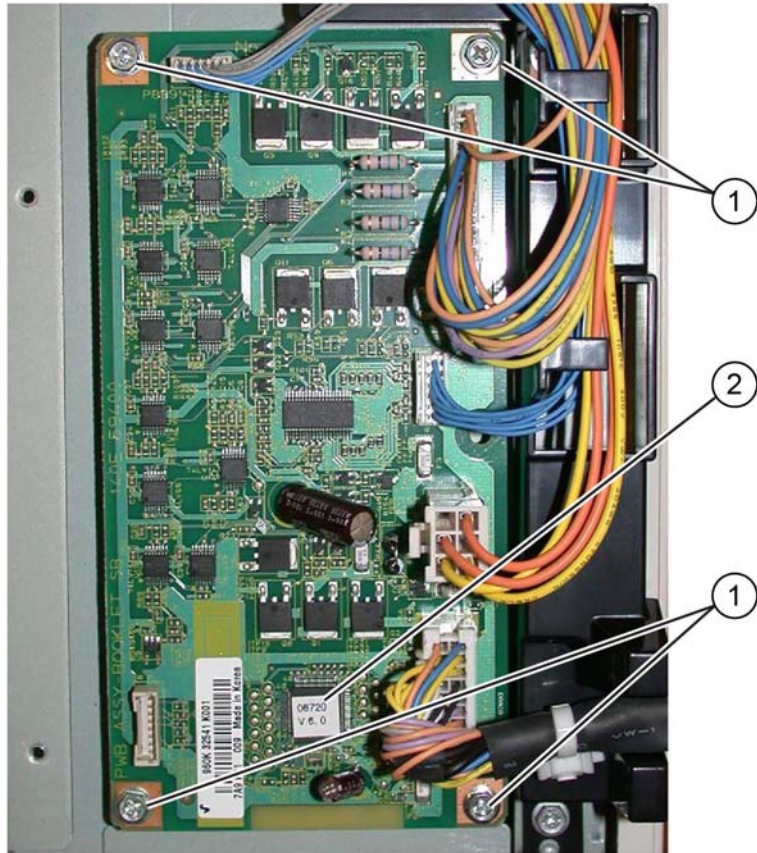


Figure 2 Booklet PWB removal

F-1-0052-A

Replacement

Replacement is the reverse of the removal procedure.

REP 13.31 Booklet Maker Assembly

Parts List on PL 13.10

Removal

WARNING

Switch off the electricity to the machine. Refer to GP 10. Disconnect the power 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. Prepare to remove the booklet maker assembly, Figure 1:
 - a. Unlatch the top right cover (1), then move it all the way to the left.
 - b. Remove the front and rear thumbscrews (2).

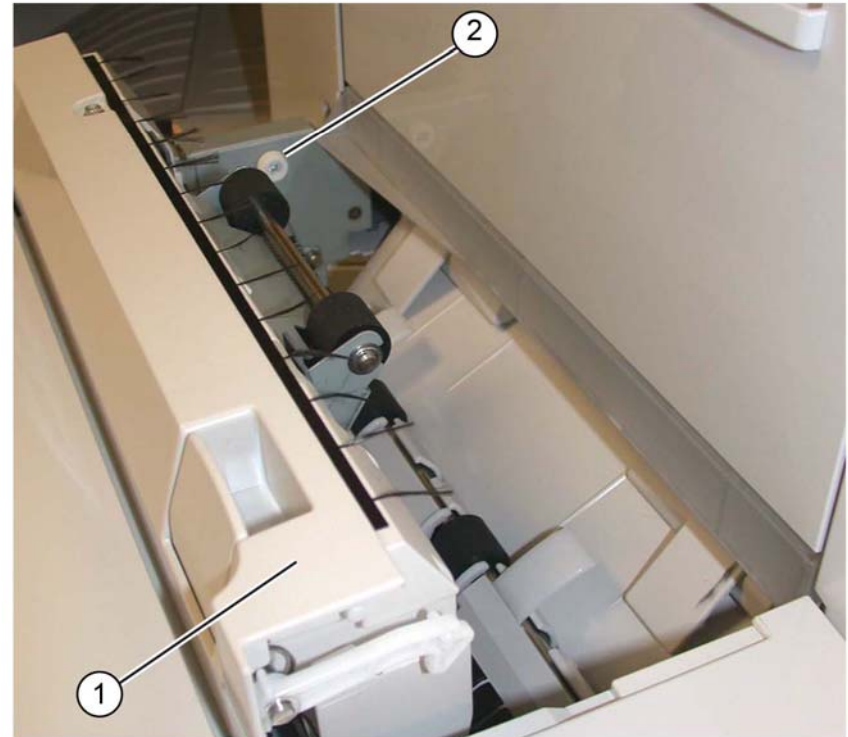


Figure 1 Preparation

F-1-0053-A

2. Remove the connector cover (1), [Figure 2](#).

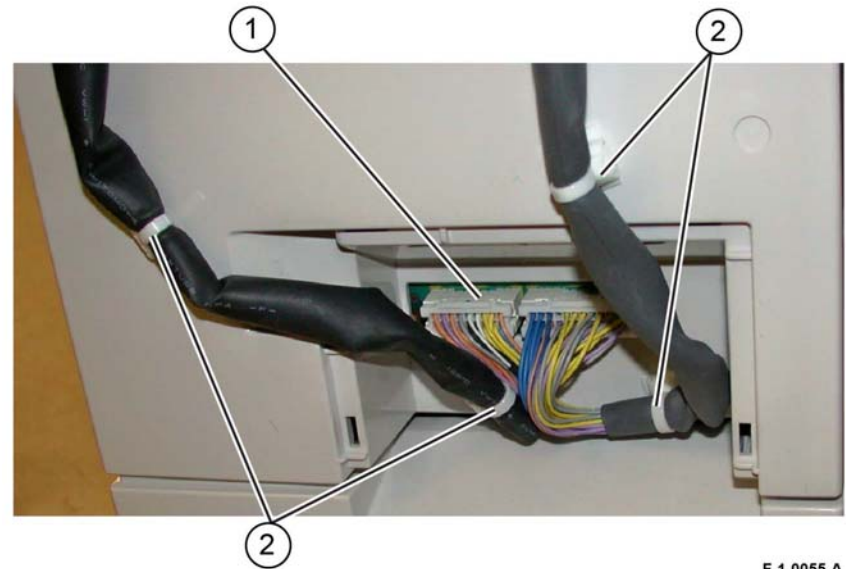


1

Figure 2 Connector cover

F-1-0054-A

3. Disconnect the booklet maker assembly from the finisher, [Figure 3](#):
 - a. Disconnect the connector (1).
 - b. Pull out the four cable ties (2).



1

2

Figure 3 Disconnection

F-1-0055-A

4. Lift the booklet maker assembly (1) off the four locating pins (2), then remove, [Figure 4](#).

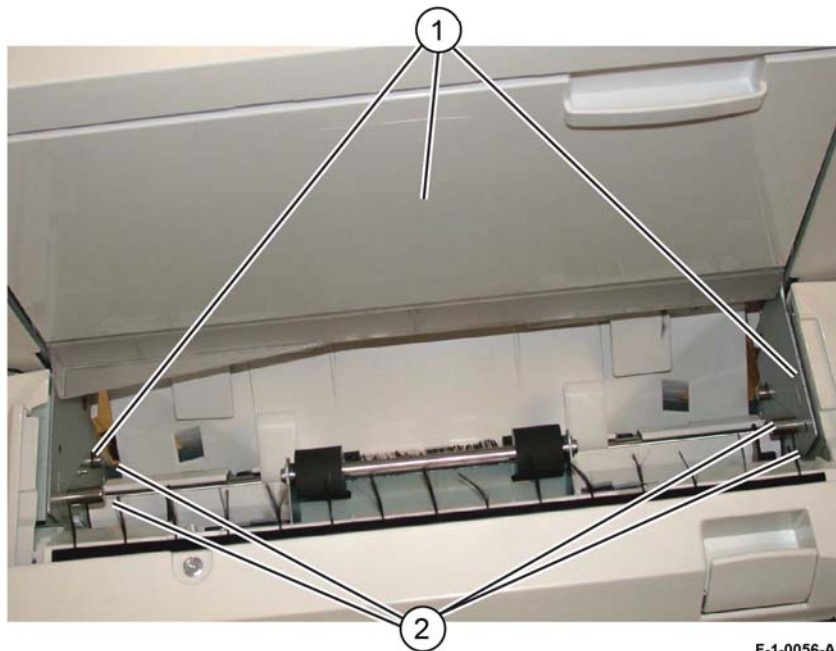


Figure 4 Removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.32 Booklet Maker Front Cover

Parts List on [PL 13.50](#)

Removal

WARNING

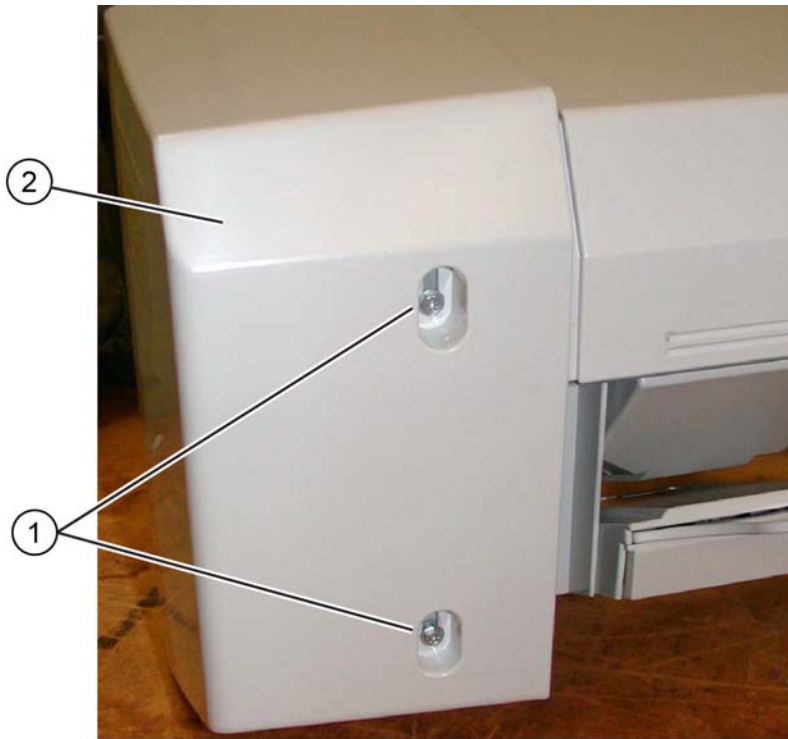
Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the booklet maker assembly from the finisher, [REP 13.31](#).
2. Remove the screw (1), [Figure 1](#).



Figure 1 Screw removal

3. Remove two screws (1), then remove the front cover (2), [PL 13.50 Item 3, Figure 2](#).



F-1-0058-A

Figure 2 Booklet front cover removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.33 Booklet Maker Rear Cover

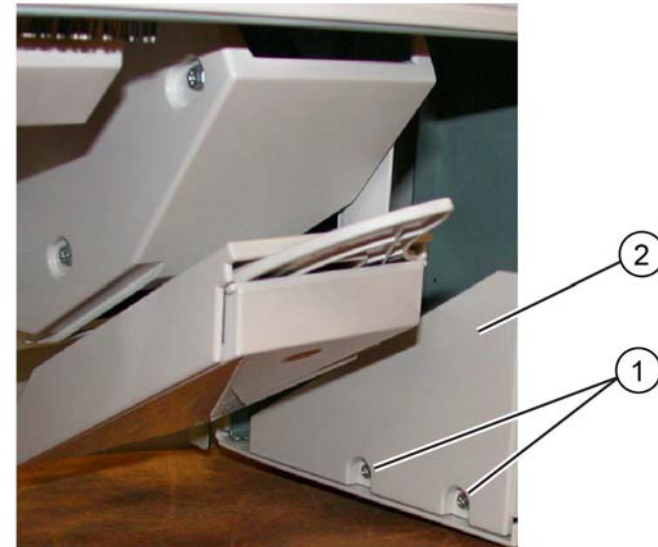
Parts List on [PL 13.50](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 booklet maker assembly from the finisher, [REP 13.31](#).
2. Remove the booklet PWB cover, [REP 13.35](#).
3. Prepare to remove the rear cover, [Figure 1](#):
 - a. Remove two self-tapping screws (1).
 - b. Remove the side cover (2).



F-1-0059-A

Figure 1 Preparation

4. Remove the screw (1), then the rear cover (2), PL 13.50 Item 4, Figure 2.

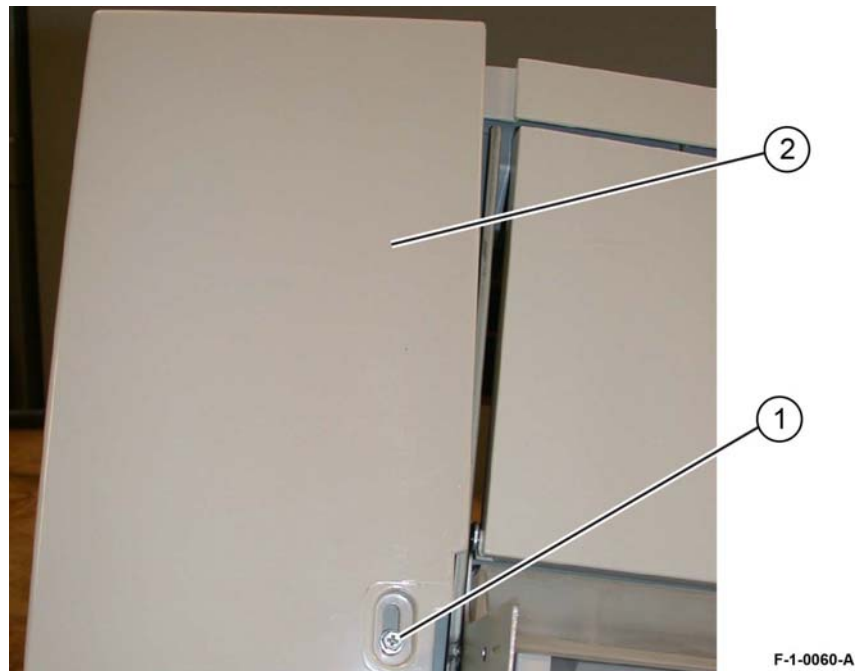


Figure 2 Booklet rear cover removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.34 Booklet Maker Top Cover

Parts List on PL 13.50

Removal

WARNING

Switch off the electricity to the machine. Refer to GP 10. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the front cover, REP 13.32.
2. Remove the rear cover, REP 13.33.
3. Remove the booklet maker top cover, PL 13.50 Item 5, Figure 1:
 - a. Remove four screws (1).
 - b. Remove the booklet maker top cover (2).

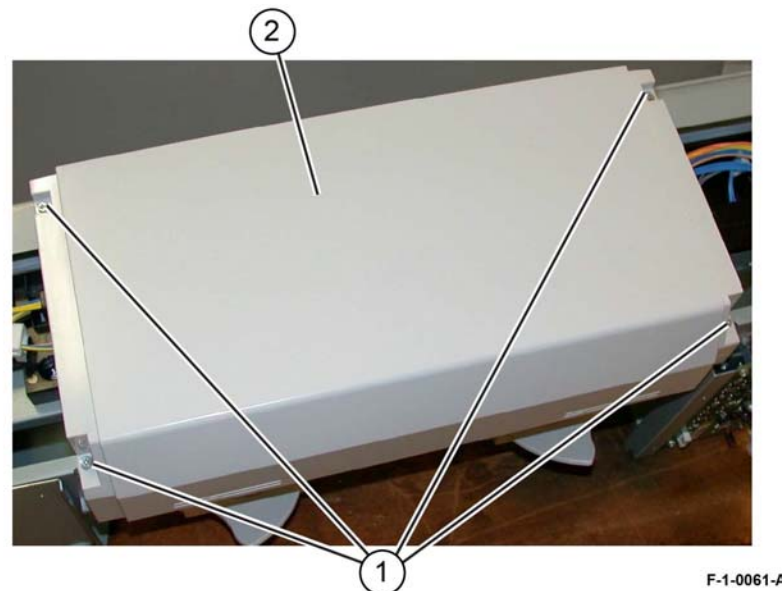


Figure 1 Booklet top cover removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.35 Booklet Maker PWB Cover

Parts List on [PL 13.50](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 booklet PWB cover, [PL 13.50 Item 7, Figure 1](#):
 - a. Remove two self-tapping screws (1).
 - b. Remove two screws (2).
 - c. Remove the booklet PWB cover (3).

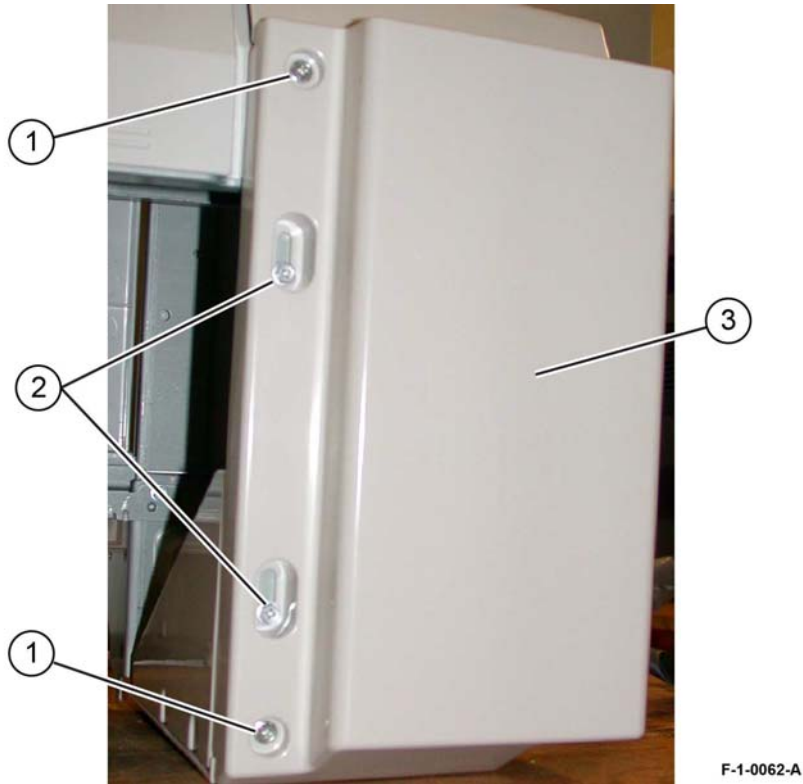


Figure 1 Booklet PWB cover removal

Replacement

Replacement is the reverse of the removal procedure.

REP 13.36 Booklet Maker Left Cover

Parts List on [PL 13.50](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 booklet maker from the finisher, [REP 13.31](#).
2. Remove the booklet maker left cover, [PL 13.50 Item 8](#):
 - a. Align the slots at the front and rear of the booklet maker left cover with the flats on the mounting pins.
 - b. Move the booklet maker left cover by allowing the flats on the mounting pins to slide through the slots in the cover.

Replacement

The replacement is the reverse of the removal procedure.

REP 13.37 Booklet Maker Front/Rear Stapler

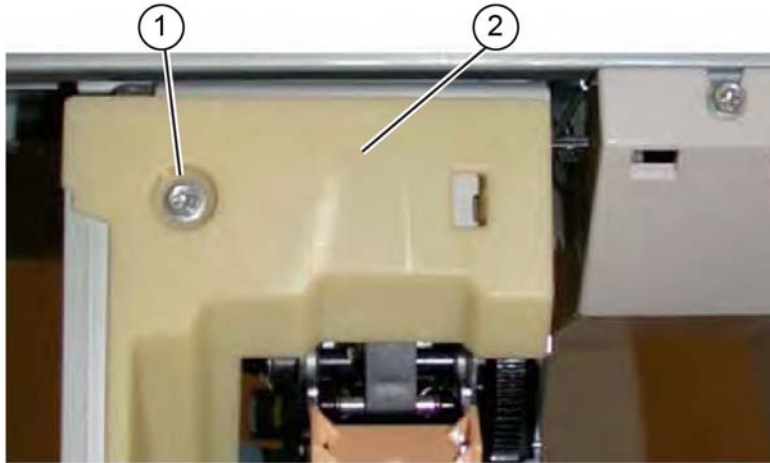
Parts List on [PL 13.60](#) and [PL 13.65](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

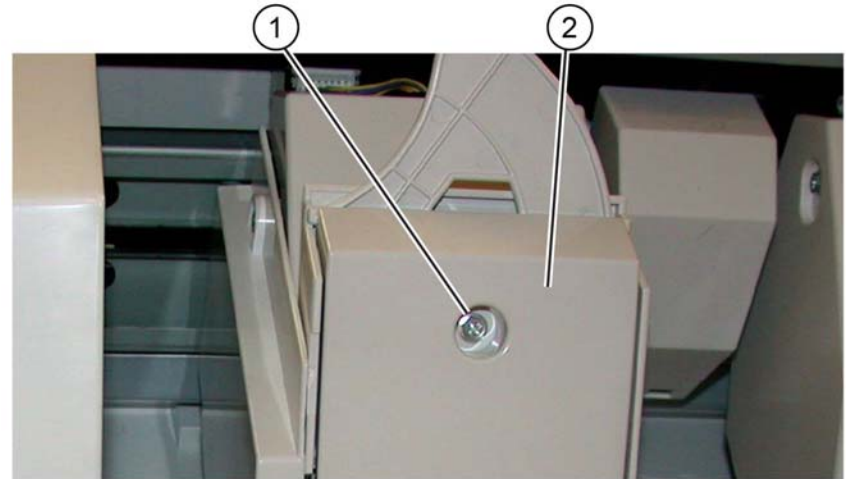
1. Remove the booklet maker from the finisher, [REP 13.31](#).
2. Remove the stapler guide, [Figure 1](#):
 - a. Remove the screw (1).
 - b. Remove the stapler guide (2).



F-1-0063-A

Figure 1 Stapler guide removal

3. Remove the stapler lower cover, [Figure 2](#):
 - a. Remove the screw (1).
 - b. Remove the stapler lower cover (2).



F-1-0064-A

Figure 2 Stapler lower cover removal

4. Prepare to remove the stapler, **Figure 3**:
 - a. Remove one screw (1).
 - b. Remove the chute (2).
 - c. Remove two screws (3).
 - d. Remove the stapler rear cover (4).



Figure 3 Preparation

F-1-0065-A

5. Remove the stapler, **PL 13.60 or PL 13.65, Figure 4**:
 - a. Release the harness from the clamp (1).
 - b. Disconnect the connector (2).
 - c. Remove three screws (3).
 - d. Remove the stapler (4).

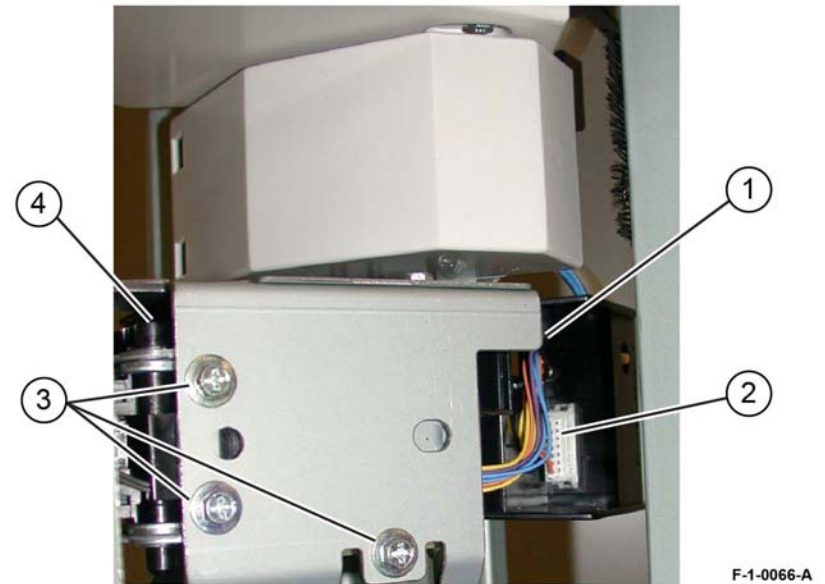


Figure 4 Stapler removal

F-1-0066-A

Replacement

1. Replacement is the reverse of the removal procedure.
2. Perform **ADJ 13.1** Finisher LX Booklet Crease/Staple Position.

REP 13.38 Booklet Maker Stapler Move Motor

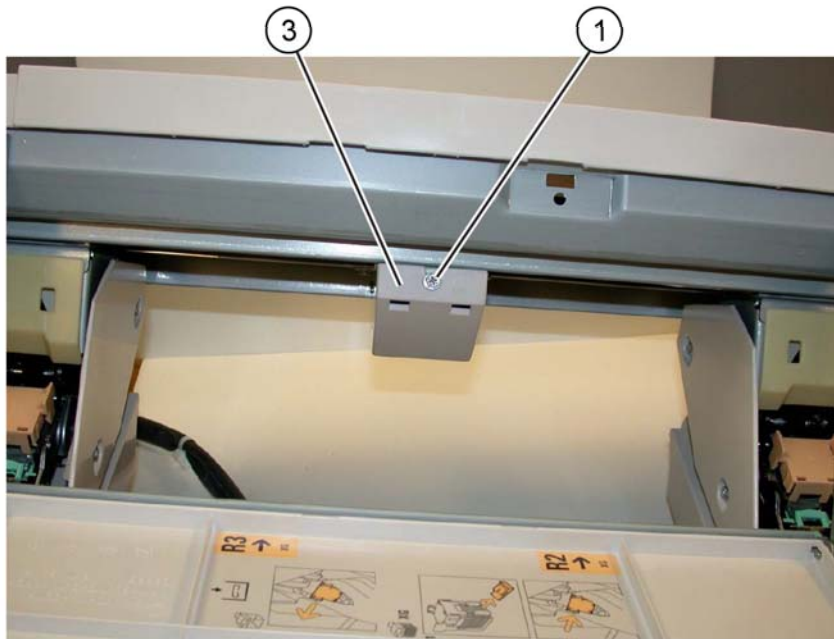
Parts List on [PL 13.55](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

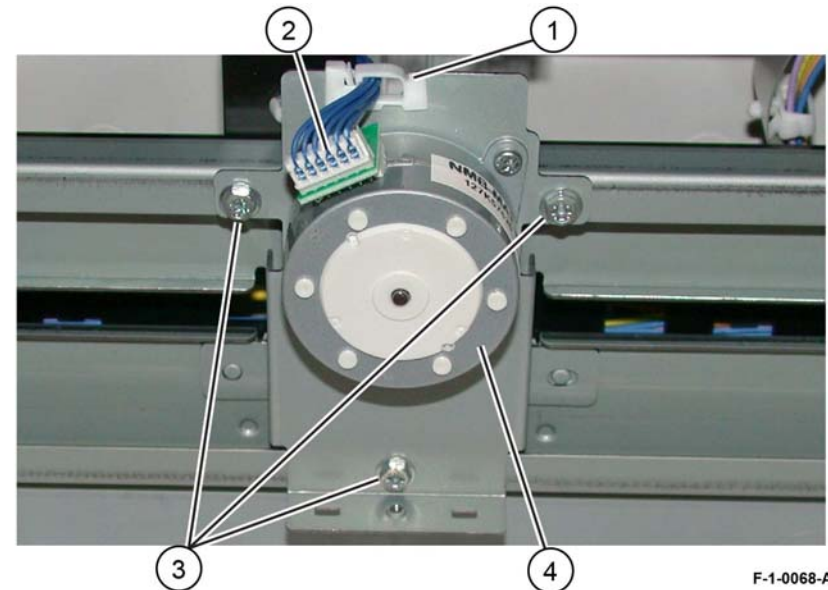
1. Remove the booklet maker assembly, [REP 13.31](#).
2. Remove the cover for the booklet stapler move motor, [Figure 1](#):
 - a. Remove the screw (1).
 - b. Remove the cover (2).



F-1-0067-A

Figure 1 Cover removal

3. Remove the booklet stapler move motor, [PL 13.55 Item 9, Figure 2](#):
 - a. Release the harness from the clamp (1).
 - b. Disconnect the connector (2).
 - c. Remove three screws (3).
 - d. Remove the booklet stapler move motor (4).



F-1-0068-A

Figure 2 Move motor removal

Replacement

Replacement is the reverse of the removal procedure.

REP 40.1 Main Drive Assembly

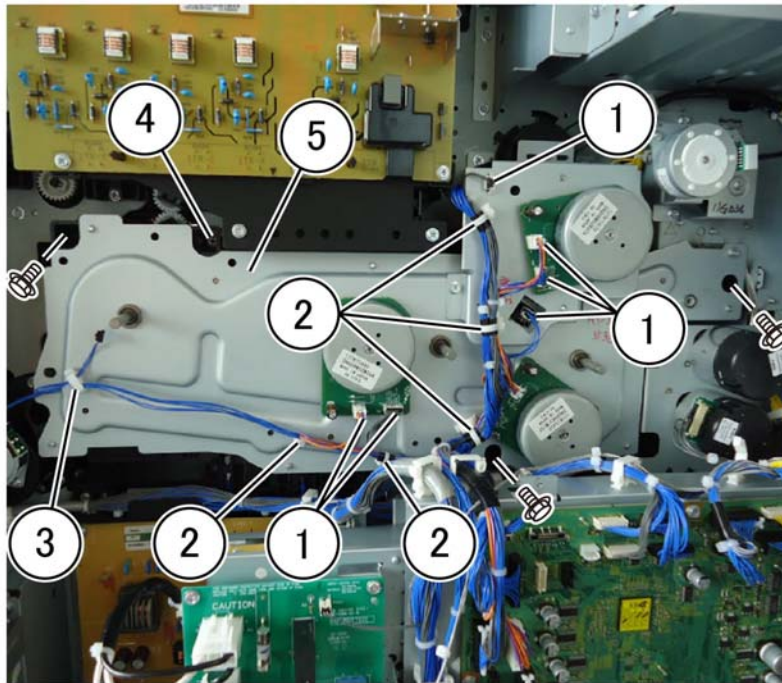
Parts List on [PL 40.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 video contact chassis assembly, [GP 32](#).
2. Remove the MCU cover, [PL 28.15 Item 10](#).
3. Remove the lower rear cover, [PL 28.15 Item 8](#).
4. Remove the main drive assembly, [PL 40.05 Item 7: Figure 1](#).
 - a. Disconnect six connectors (1).
 - b. Remove five clips (2).
 - c. Open the clamp to release the harness (3).
 - d. Remove four screws (4).
 - e. Remove the main drive assembly (5).

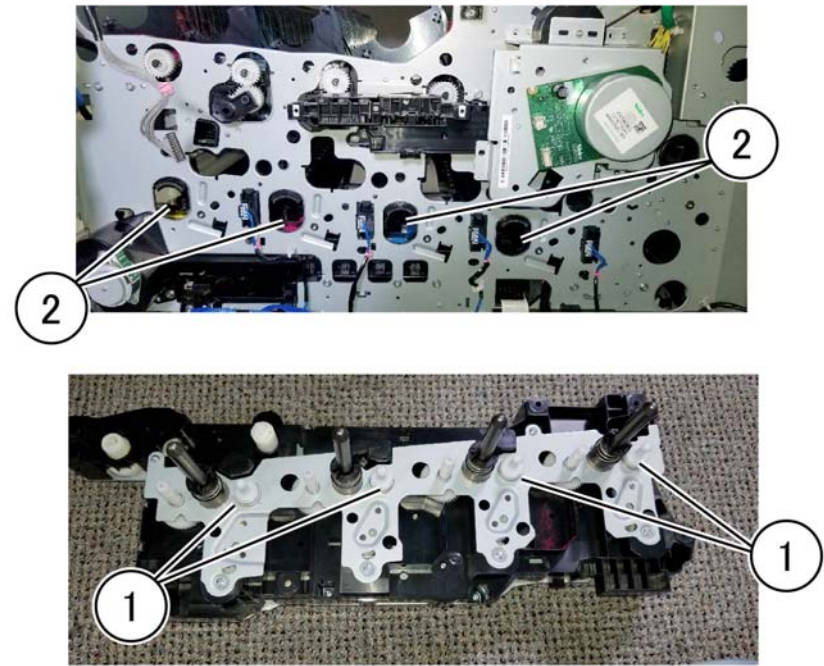


F-1-0251-A

Figure 1 Main drive assembly removal

Replacement

1. When installing the drive assembly, align each of the four bosses on the assembly (1) with the receptacles in the chassis (2), [Figure 2](#).



F-1-0252-A

Figure 2 Drive assembly alignment

2. The remainder of the replacement is the reverse of the removal procedure.

REP 40.2 Fuser Drive Assembly

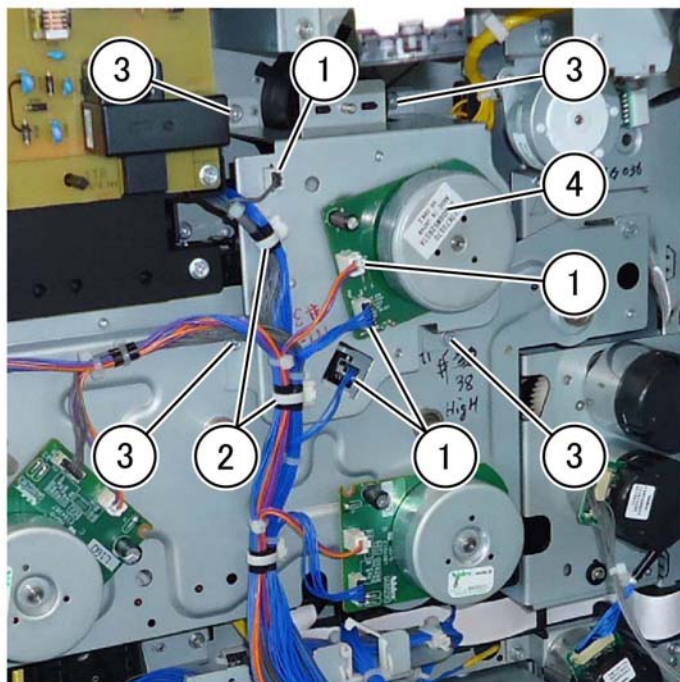
Parts List on [PL 40.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 video contact chassis assembly, [GP 32](#).
2. Remove the fusing drive assembly, [PL 40.05 Item 15: Figure 1](#).
 - a. Disconnect four connectors (1).
 - b. Remove two clips (2).
 - c. Remove four screws (3).
 - d. Remove the fusing drive assembly (4).



F-1-0253-A

Figure 1 Fusing drive assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 40.3 Temp/Humidity Sensor (No 1 external)

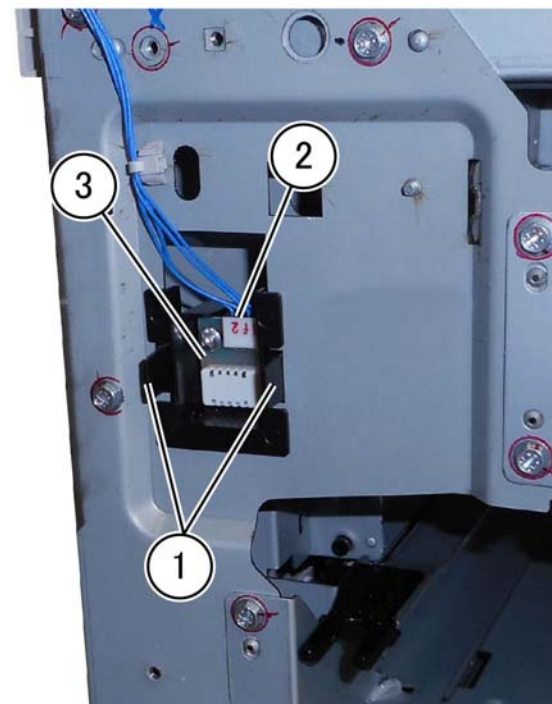
Parts List on [PL 40.10](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the front cover assembly, [PL 28.05 Item 8](#).
2. Remove tray 1 and tray 2.
3. Remove the left cover assembly if necessary, [PL 80.65 Item 1](#), [REP 80.21](#).
4. Remove the tray inner cover, [PL 28.10 Item 2](#).
5. Remove the temp/humidity sensor, [PL 40.10 Item 5: Figure 1](#).
 - a. Release the hook (1).
 - b. Disconnect the connector, (2).
 - c. Remove the temp/humidity sensor (3).



F-1-0254-A

Figure 1 Temp/humidity sensor removal

Replacement

Replacement is the reverse of the removal procedure.

REP 40.4 Duct Assembly (Front Right Marking Fan)

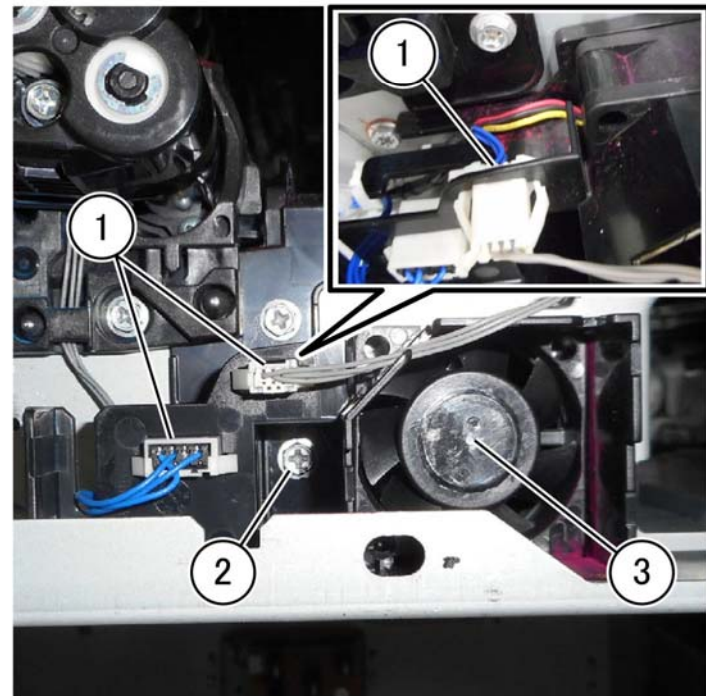
Parts List on [PL 40.10](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the front cover assembly, [PL 28.05 Item 8](#).
2. Remove the waste toner transport assembly, [PL 90.15 Item 1](#).
3. Remove the inner lower cover, [PL 28.05 Item 2](#).
4. Remove the inner hinge cover assembly, [PL 28.05 Item 4](#).
5. Remove the drum assemblies, [REP 90.1](#).
6. Remove the duct assembly, [PL 40.10 Item 7, Figure 1](#).
 - a. Disconnect three connectors (1).
 - b. Remove the screw (2).
 - c. Remove the duct assembly (3).



F-1-0255-A

Figure 1 Duct assembly removal

Replacement

The replacement is the reverse of the removal procedure.

REP 40.5 Toner Cartridge Cooling Fan Assembly

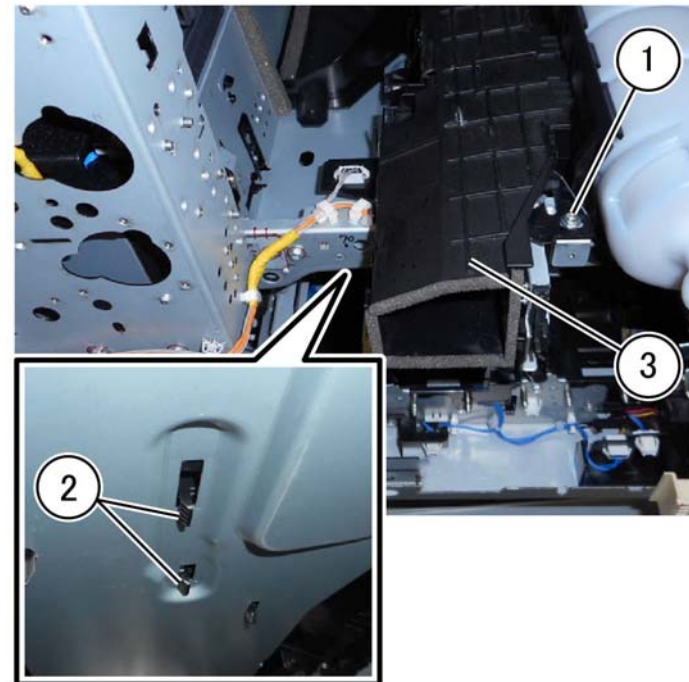
Parts List on [PL 40.10](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the front cover assembly, [PL 28.05 Item 8](#).
2. Remove the waste cartridge, [PL 90.15 Item 6](#).
3. Remove the waste toner transport assembly, [PL 90.15 Item 1](#).
4. Remove the inner cover assembly, [PL 28.05 Item 1](#).
5. Remove the inner lower cover, [PL 28.05 Item 2](#).
6. Remove the top cover, [PL 28.10 Item 9](#).
7. Remove the toner cartridge cooling fan assembly, [PL 40.10 Item 12: Figure 1](#).
 - a. Remove the screw (1).
 - b. Release the hook on the bottom (2).
 - c. Remove the toner cartridge cooling fan assembly (3).



F-1-0256-A

Figure 1 Toner cartridge cooling fan assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 40.6 Front/Left Marking Fan Assembly

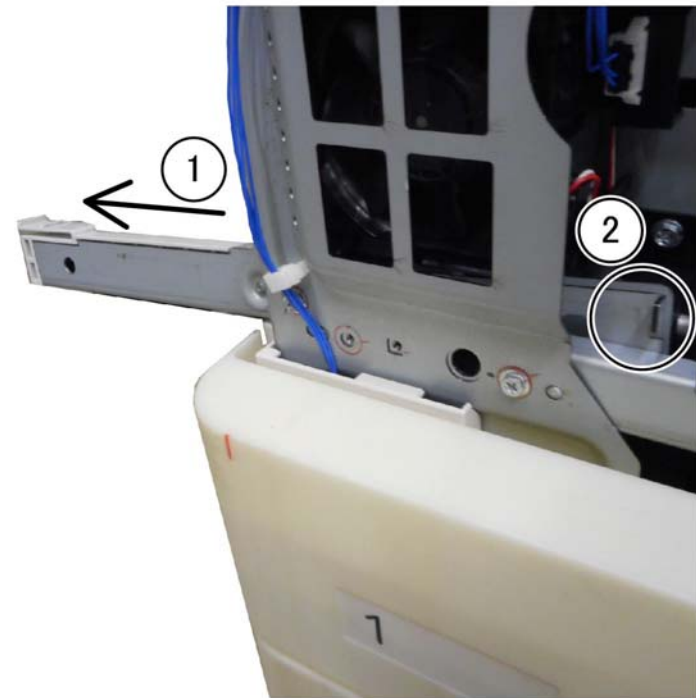
Parts List on [PL 40.10](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

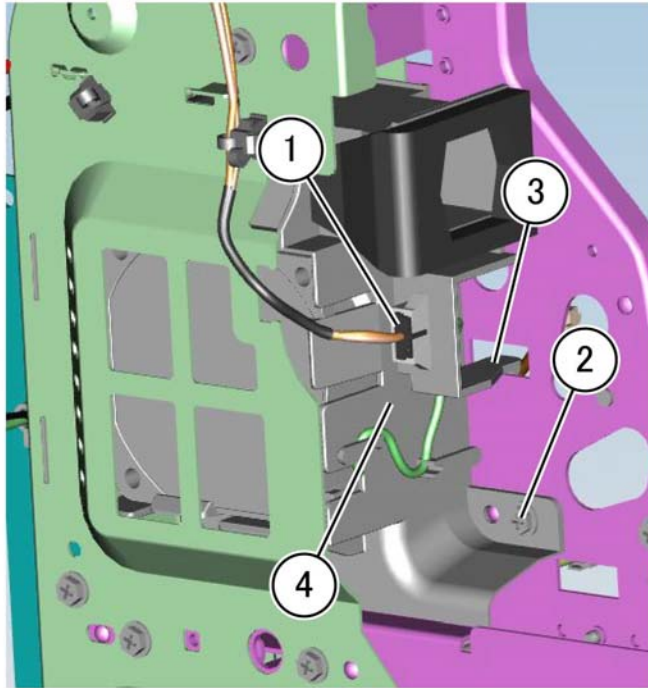
1. Remove the front cover assembly, [PL 28.05 Item 8](#).
2. Remove the inner left cover assembly, [PL 28.05 Item 5](#).
3. Remove the duct, [PL 40.10 Item 1](#).
4. Remove the front handle: [Figure 1](#).
 - a. Move the handle in the direction of the arrow.
 - b. move the handle so that it is released from the stop and remove the handle from the machine (2).



F-1-0257-A

Figure 1 Front handle removal

5. Remove the front left marking fan assembly, PL 40.10 Item 13: Figure 2.
 - a. Disconnect the connector (1).
 - b. Remove the screw (2).
 - c. Release the hook (3).
 - d. Remove the front left marking fan assembly (4).



F-1-0258-A

Figure 2 Front/Left marking fan assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 40.7 Rear Fuser Duct Assembly

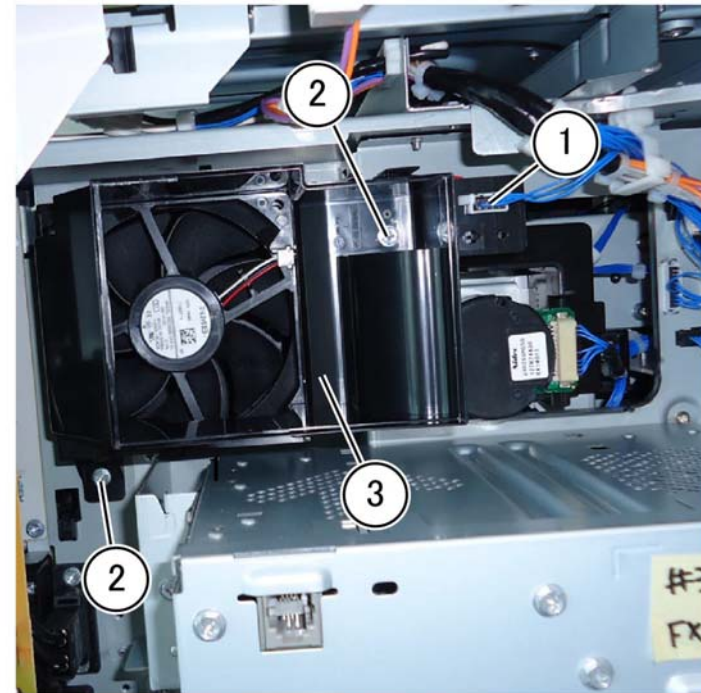
Parts List on [PL 40.15](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 controller cover assembly, PL 3.10 Item 1.
2. Remove the MCU cover, PL 28.15 Item 10.
3. Remove the lower rear cover, PL 28.15 Item 8.
4. Remove the rear fuser duct assembly, PL 40.15 Item 1: Figure 1.
 - a. Disconnect the connector (1).
 - b. Remove two screws (2).
 - c. Remove the rear duct (3).



F-1-0259-A

Figure 1 Rear duct removal

Replacement

Replacement is the reverse of the removal procedure.

REP 40.8 LVPS Fan Assembly

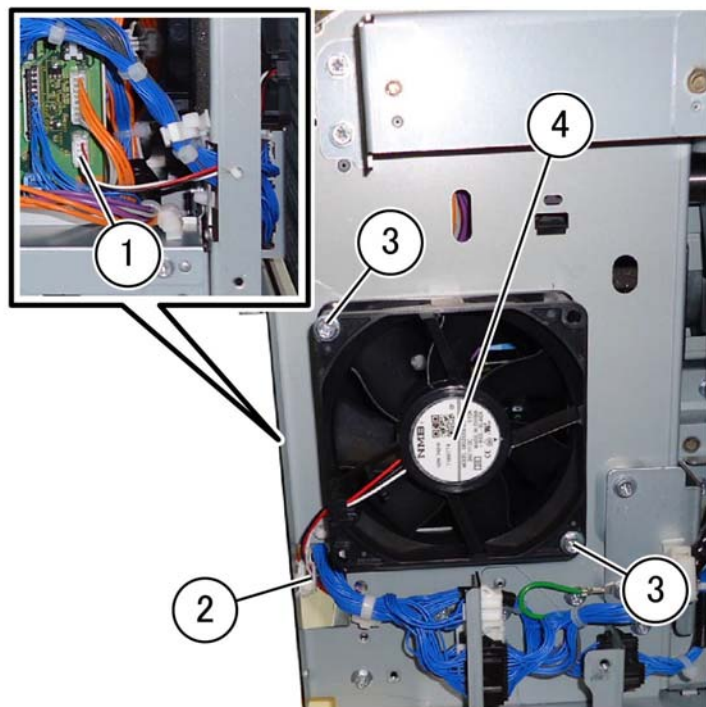
Parts List on [PL 40.15](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 lower rear cover, [PL 28.15 Item 8](#).
2. Remove the left lower cover, [PL 28.10 Item 4](#).
3. Remove the LVPS fan assembly, [PL 40.15 Item 4: Figure 1](#).
 - a. Disconnect the connector (1).
 - b. Release the clamp (2).
 - c. Remove two screws (3).
 - d. Remove the LVPS Fan (4).



F-1-0260-A

Figure 1 LVPS fan removal

Replacement

The replacement is the reverse of the removal procedure.

Initial Issue

Xerox® VersaLink® C9000 Family

REP 40.9 IHPS Intake Duct Assembly

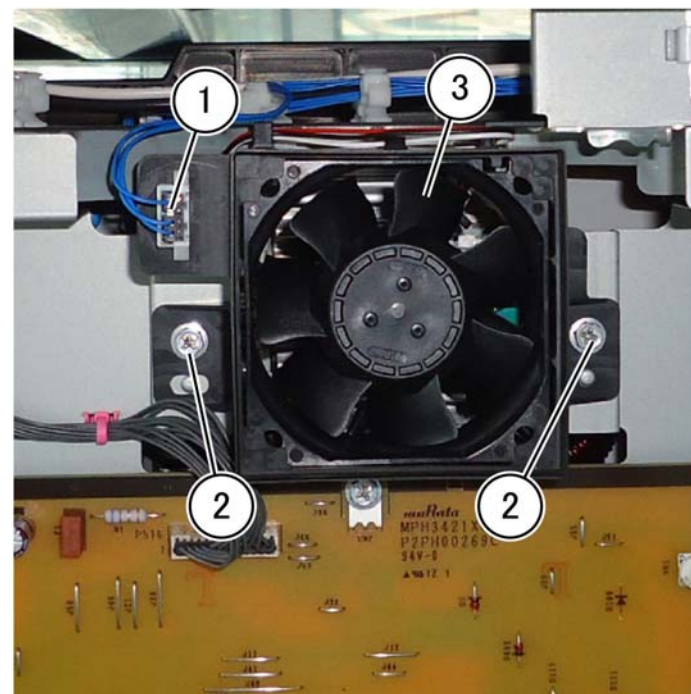
Parts List on [PL 40.15](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 video contact chassis assembly, [GP 32](#).
2. Remove the upper rear cover, [PL 28.15 Item 5](#).
3. Remove the IHPS, intake duct assembly, [PL 40.15 Item 8: Figure 1](#).
 - a. Disconnect the connector (1).
 - b. Remove the screw (2).
 - c. Remove the IHPS intake duct assembly (3).



F-1-0261-A

Figure 1 IHPS intake duct assembly removal

Replacement

The replacement is the reverse of the removal procedure.

August 2018

4-89

Repairs- Adjustments
REP 40.8, REP 40.9

REP 40.10 Toner Cartridge Exhaust Fan Assembly

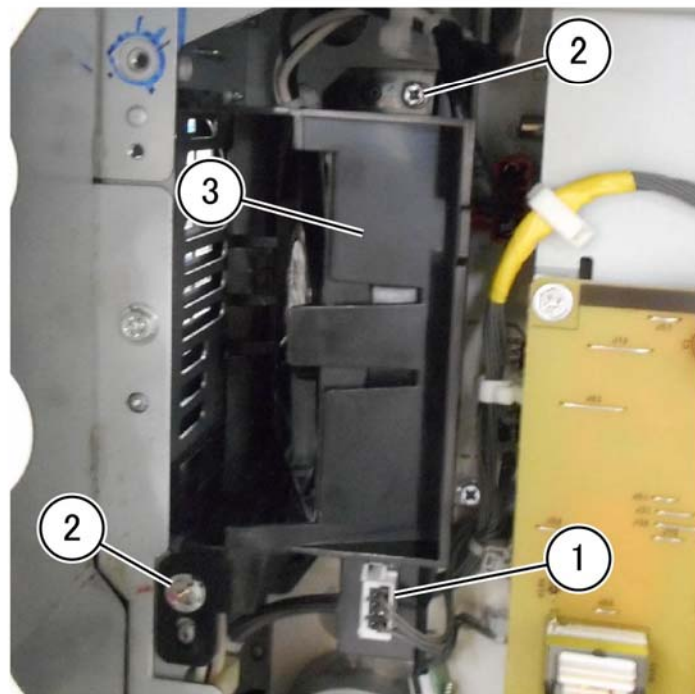
Parts List on [PL 40.15](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 video contact chassis assembly, [GP 32](#).
2. Remove the upper rear cover, [PL 28.15 Item 5](#).
3. Remove the toner cartridge exhaust fan assembly, [PL 40.15 Item 9: Figure 1](#).
 - a. Disconnect the connector (1).
 - b. Remove two screws (2).
 - c. Remove the toner cartridge exhaust fan assembly (3).



F-1-0262-A

Figure 1 Toner cartridge exhaust fan assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 60.1 LPH Assembly (Y,M,C,K)

Parts List on [PL 60.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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

Observe ESD procedures during this procedure.

CAUTION

To prevent light fatigue, either wrap the removed drum cartridge in a sheet of black paper or store it in a black bag.

CAUTION

Do not touch the surface of the drum cartridge.

The removal procedure for all LPH assemblies is the same. The following steps are for the LPH assembly (K) procedure only.

1. Open the video contact chassis unit, [GP 32](#).
2. Remove the following components:
 - a. Front cover assembly, [PL 28.05 Item 8](#).
 - b. Waste cartridge, [PL 90.15 Item 6](#).
 - c. Waste toner transport assembly, [PL 90.15 Item 1](#).
 - d. Inner cover assembly, [PL 28.05 Item 1](#).
 - e. Inner lower cover, [PL 28.05 Item 2](#).
 - f. Inner hinge cover assembly, [PL 28.05 Item 4](#).
 - g. Inner right cover, [PL 28.05 Item 6](#).
 - h. Drum assembly, [REP 90.11](#).
 - i. Developer assembly, [REP 90.3](#).
 - j. IBT belt cleaner assembly, [PL 90.30 Item 2](#).
3. Remove the IBT belt assembly, [REP 90.8](#).

4. Remove the screw (1) securing the LPH then move the LPH fully to the front, [Figure 2](#).

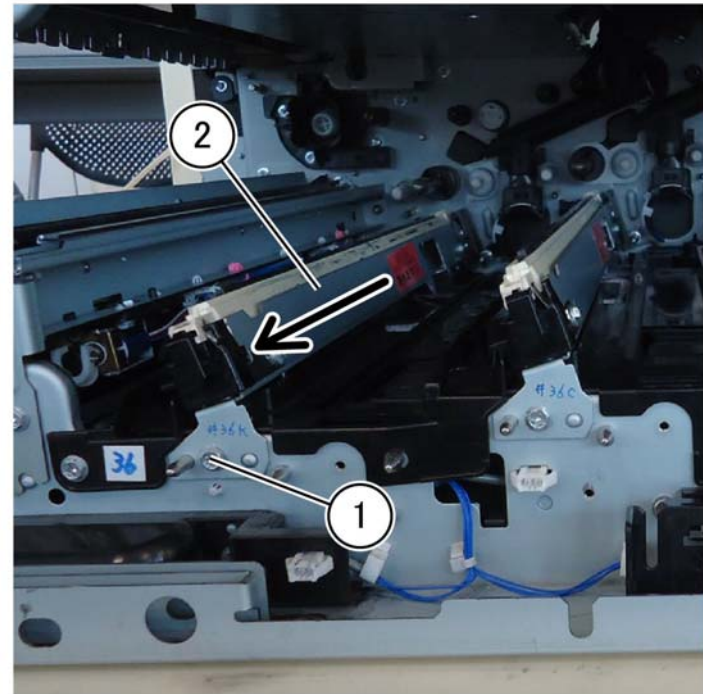
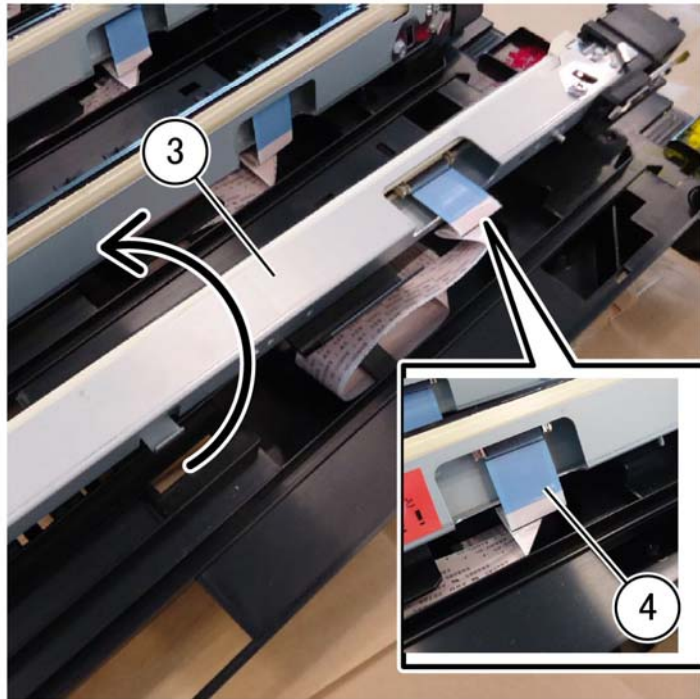


Figure 2 Remove the screw

F-1-0241-A

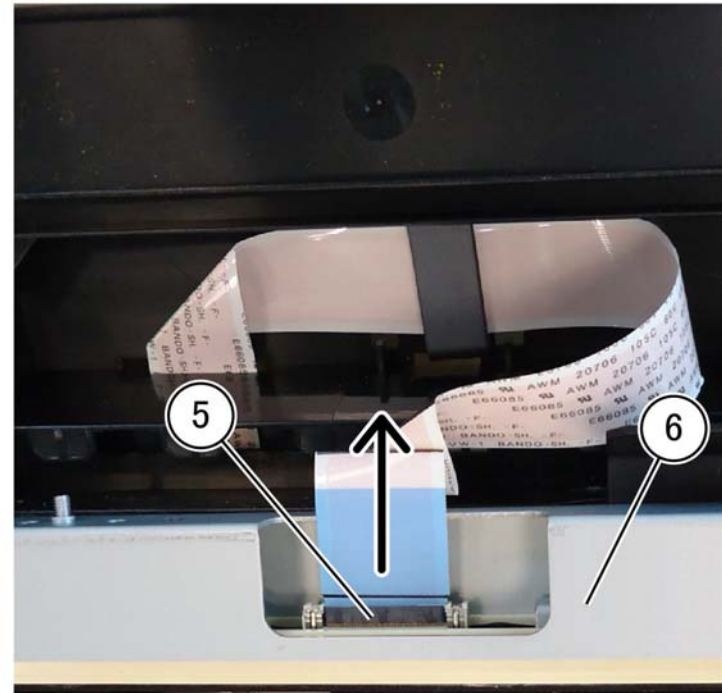
5. Roll the LPH (3) in the direction of the arrow to expose the FFC cable (4), [Figure 3](#).



F-1-0242-A

Figure 3 FFC cable

6. Press the release latch on the connector (5), remove the FFC cable from the LPH in the direction of the arrow, then remove the LPH (6), [Figure 4](#).



F-1-0243-A

Figure 4 LPH removal

Replacement

1. Replacement is the reverse of the removal procedure.

REP 60.2 FFC Cable Assembly

Parts List on [PL 60.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.



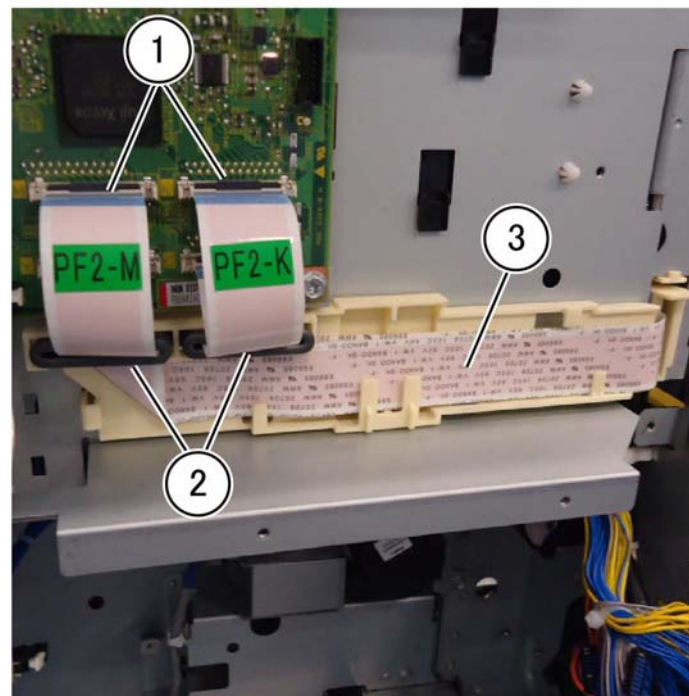
Figure 1 ESD symbol

CAUTION

Observe ESD procedures during this procedure.

1. Remove the LPH assembly (Y, M, C, K), [REP 60.1](#)
2. Remove the motor drive PWB, [REP 1.4](#).
3. Remove the AC drive PWB, [REP 1.5](#).
4. Remove the HVPS developer bias [REP 1.7](#).
5. Remove the DFE cover, [PL 3.10 Item 5](#).
6. Remove the drum assembly, [REP 90.11](#).
7. Remove the drive assembly, [REP 40.1](#).
8. Remove the fuser drive assembly, [REP 40.2](#).
9. Remove the registration drive assembly, [REP 80.32](#).

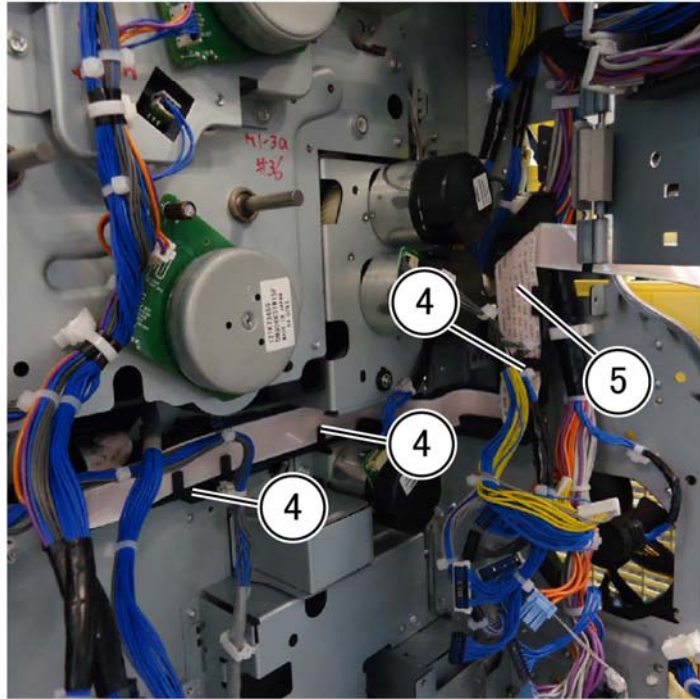
10. Release the FFC cable from the half tone PWB: [Figure 2](#).
 - a. Disconnect four FFC cables on the half tone PWB (1).
 - b. Remove four ferrites (2).
 - c. Release the FFC cable assembly from the harness guide (3).



F-1-0244-A

Figure 2 Disconnect the FFC cables

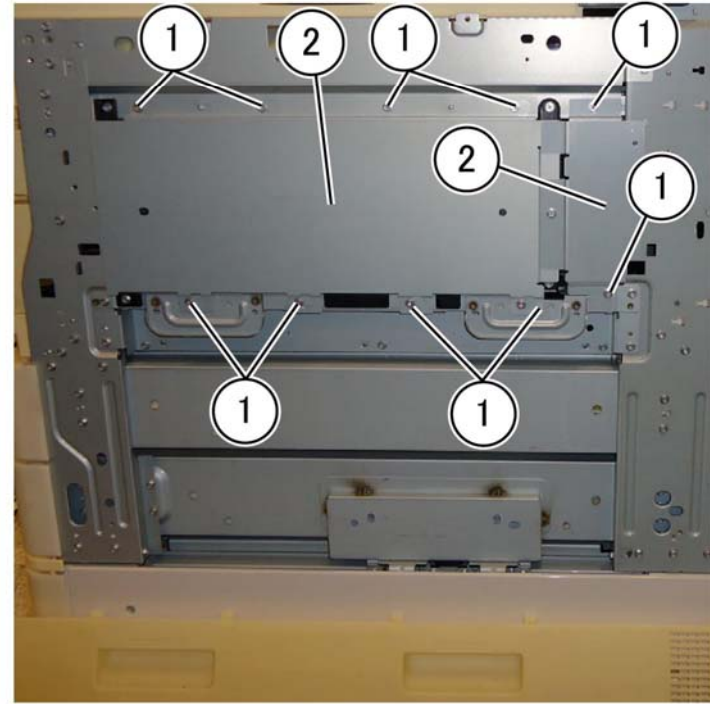
11. Release the FFC cables from the harness guide, (4) and (5): [Figure 3](#).



F-1-0245-A

Figure 3 Unharness the FFC cables

12. Remove 10 screws (1) then remove the BCR HVPS cover assembly [PL 1.20 Item 2](#), and cover, [PL 1.20 Item 3 \(2\)](#), [Figure 4](#).



F-1-0246-A

Figure 4 Cover assembly and cover

13. Remove the BCR HVPS, [REP 1.9](#)

14. Remove four screws (1), [Figure 5](#).

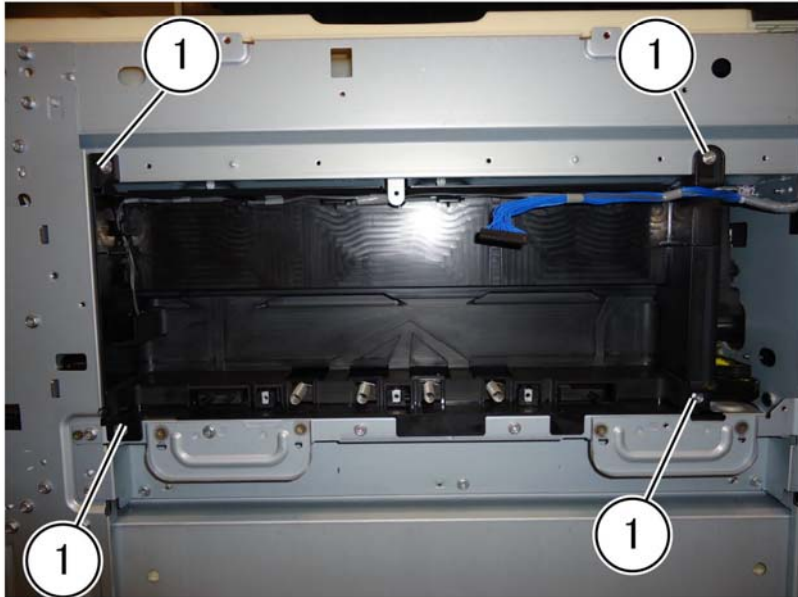


Figure 5 Remove four screws

F-1-0247-A

15. Move the conductor assembly, [PL 1.20 Item 5 \(3\)](#), to the rear, disconnect the connector (2), then remove the conductor assembly (3), [Figure 6](#).

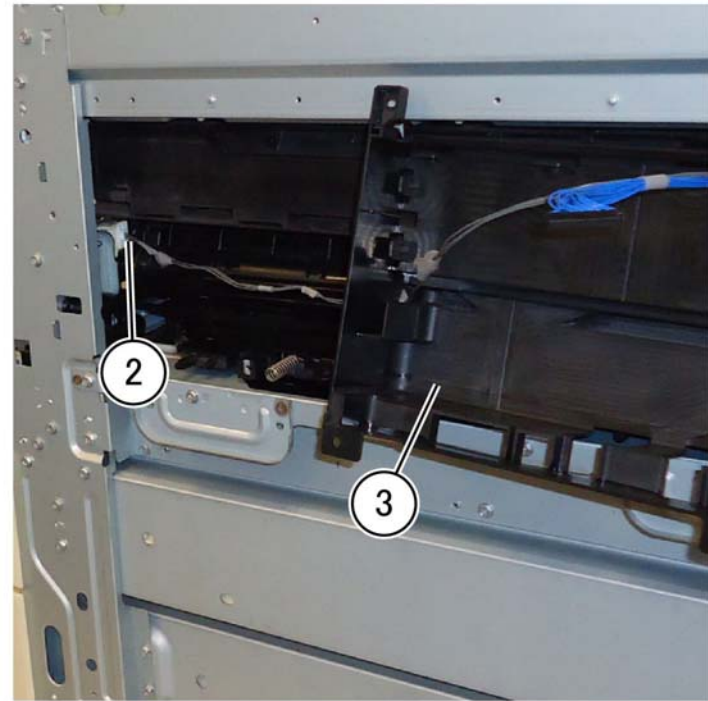
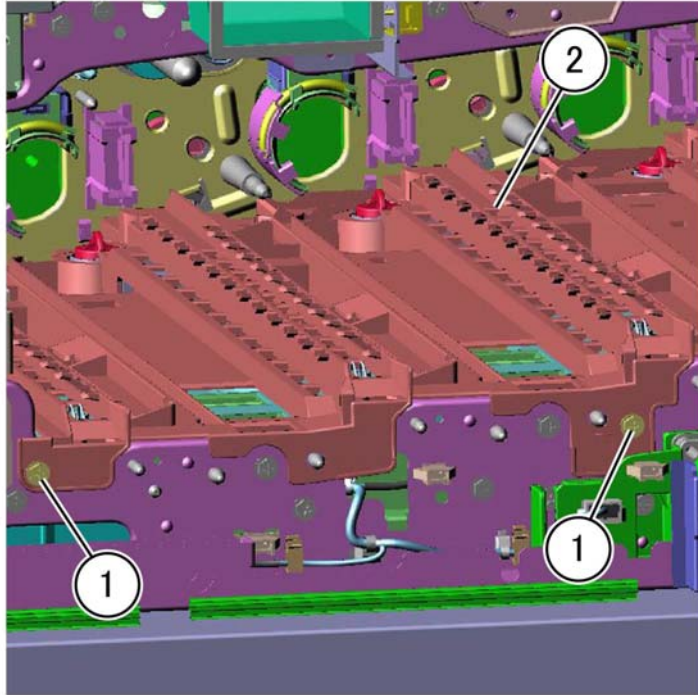


Figure 6 BCR housing removal

F-1-0248-A

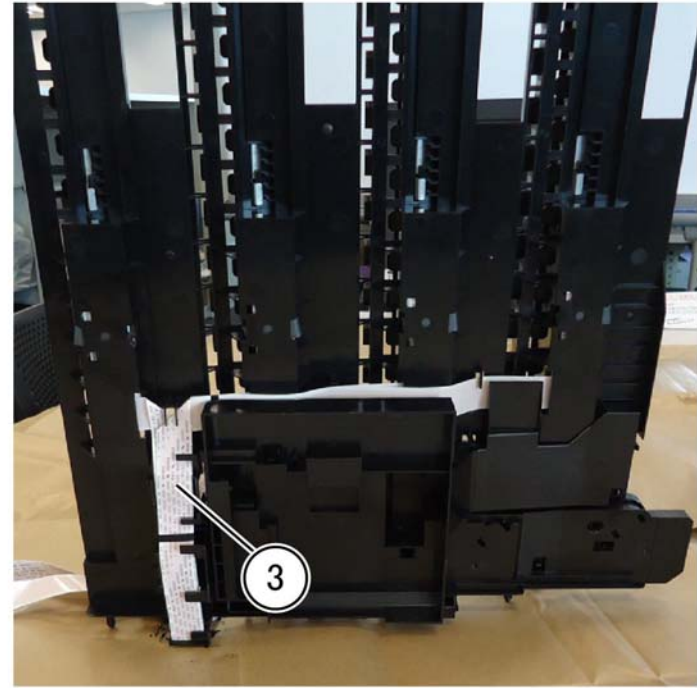
16. Remove two screws (1) then remove the marking guide, PL 90.25 Item 1 (2), Figure 7.



F-1-0249-A

Figure 7 Marking guide removal

17. Remove the FFC cable assembly, PL 60.05 Item 7 and PL 60.05 Item 8 from the marking guide PL 90.25 Item 1, Figure 8.



F-1-0250-A

Figure 8 FFC cable assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 70.1 Tray 1 and Tray 2 Paper Size Sensor

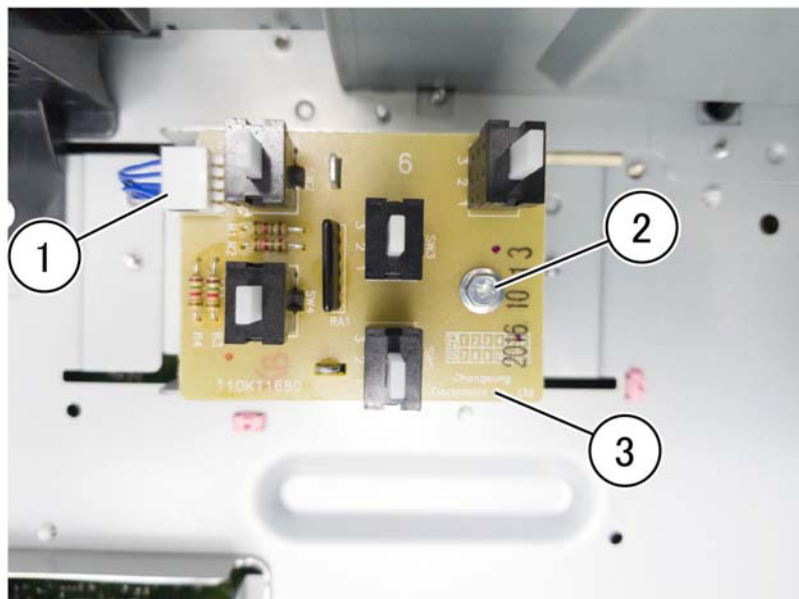
Parts List on [PL 70.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 tray 2 to gain access to the inside-rear of the machine.
2. Remove the failed paper size sensor, [PL 70.05 Item 3: Figure 1](#).
 - a. Disconnect the connector (1).
 - b. Remove the screw (2).
 - c. Remove the failed paper size sensor (3).



F-1-0411-A

Figure 1 Tray 1/2 paper size sensor

Replacement

The replacement is the reverse of the removal procedure.

REP 70.2 Pivot

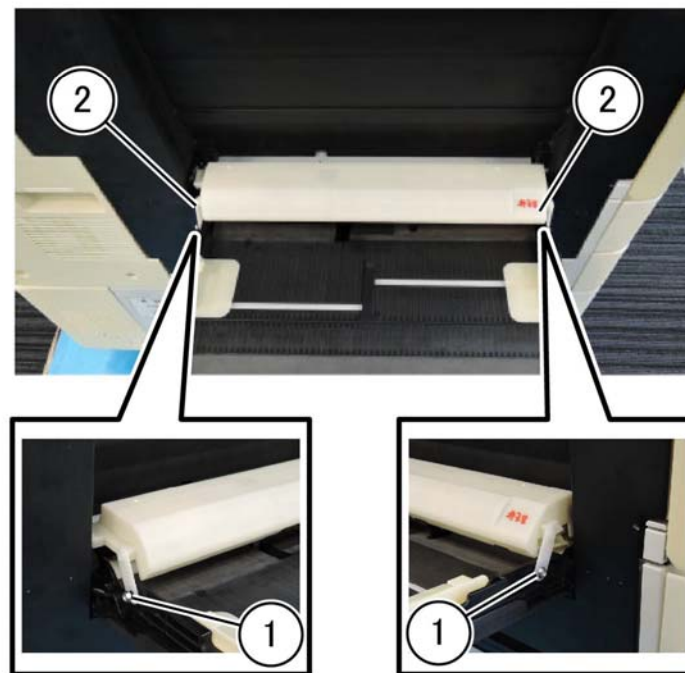
Parts List on [PL 70.50](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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. Separate the bypass tray from the lower frame assembly: [Figure 1](#).
 - a. Remove two screws (1).
 - b. Release the tray link cover from the lower frame assembly (2).



F-1-0263-A

Figure 1 Tray link cover

2. Remove the top chute assembly, [Figure 2](#).
 - a. Release four latches (1) then (2).
 - b. Remove the top chute assembly (3).

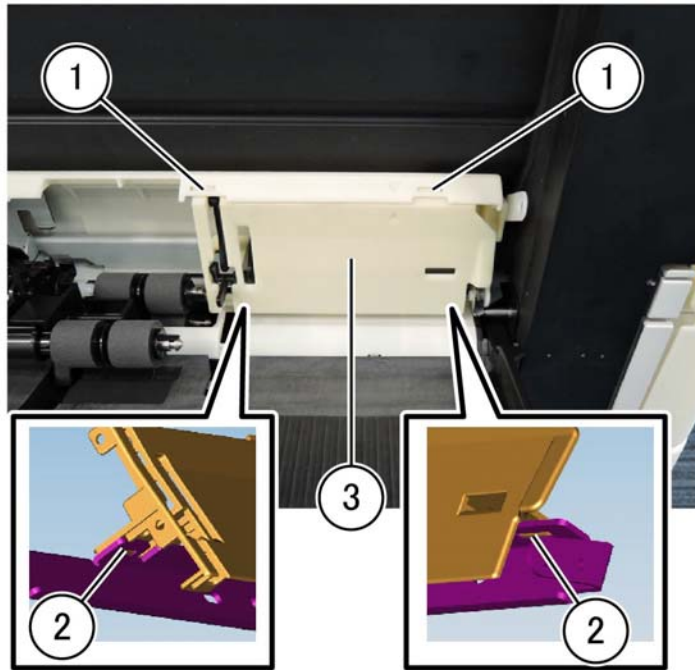


Figure 2 Top chute assembly

F-1-0264-A

3. Remove the chute front: [Figure 3](#).
 - a. Release five hooks (1) then (2).
 - b. Remove the chute front (3).

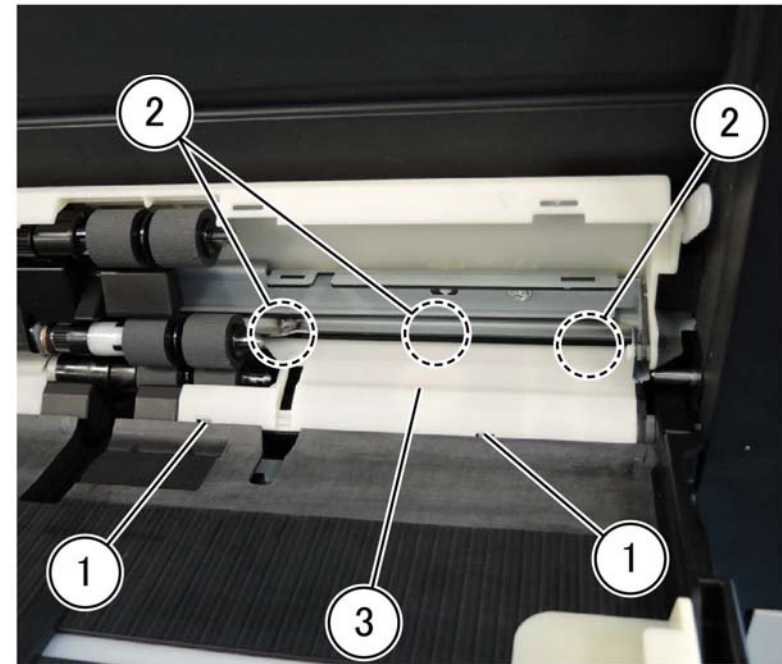
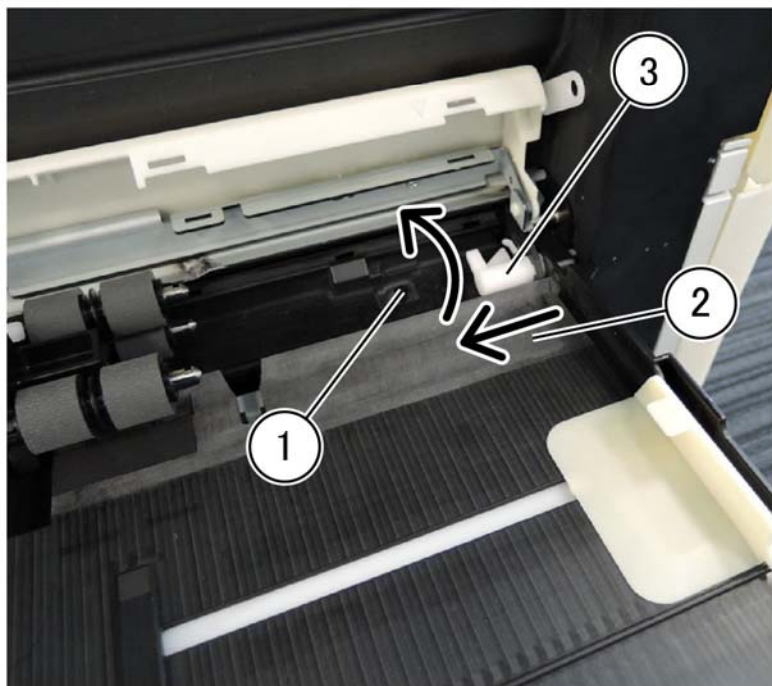


Figure 3 Chute front removal

F-1-0265-A

4. Remove the pivot, [PL 70.50 Item 1: Figure 4](#).
 - a. Rotate the pivot in the direction of the arrow (1).
 - b. Slide the pivot in the direction of the arrow (2).
 - c. Remove the pivot (3).



F-1-0266-A

Figure 4 Pivot removal

Replacement

Replacement is the reverse of the removal procedure.

REP 70.3 Bypass Tray

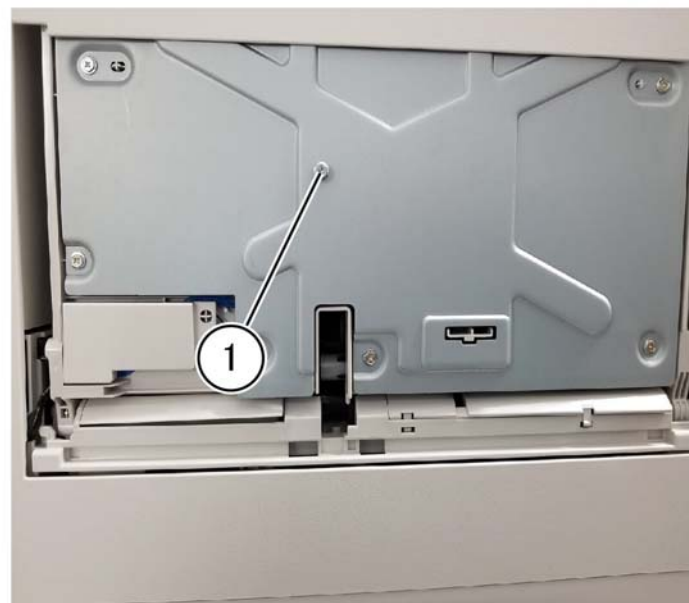
Parts List on [PL 70.50](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 pivot, [REP 70.2](#).
2. Unlock the bypass tray from the left cover, lift the extension tray up to expose the back of the bypass tray, then insert a screw in the hole (1) to keep the extension tray lifted, [Figure 1](#).



F-1-0267-A

Figure 1 Extension tray lifted

3. Remove the screw (1) then remove the connector cover, [Figure 2](#).



Figure 2 Connector cover removal

F-1-0356-A

4. Disconnect the no paper harness connector, [Figure 3](#).

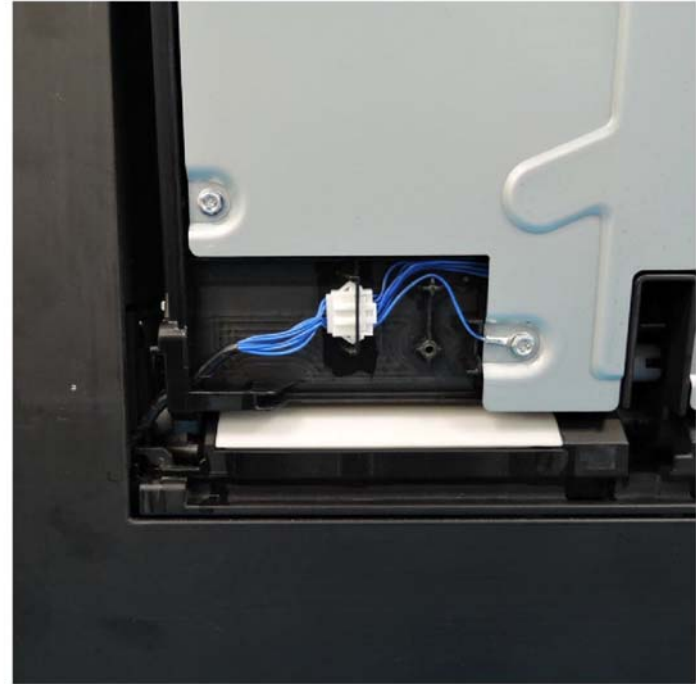
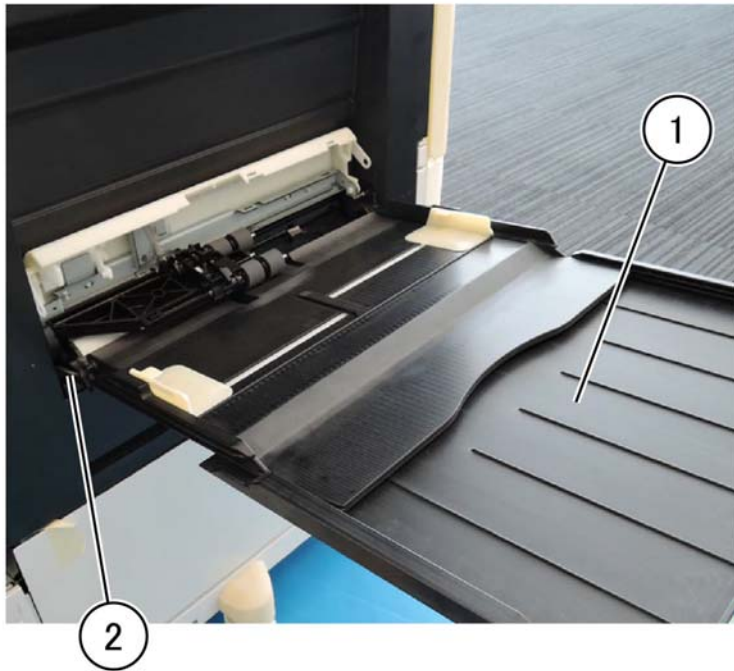


Figure 3 No paper harness connector

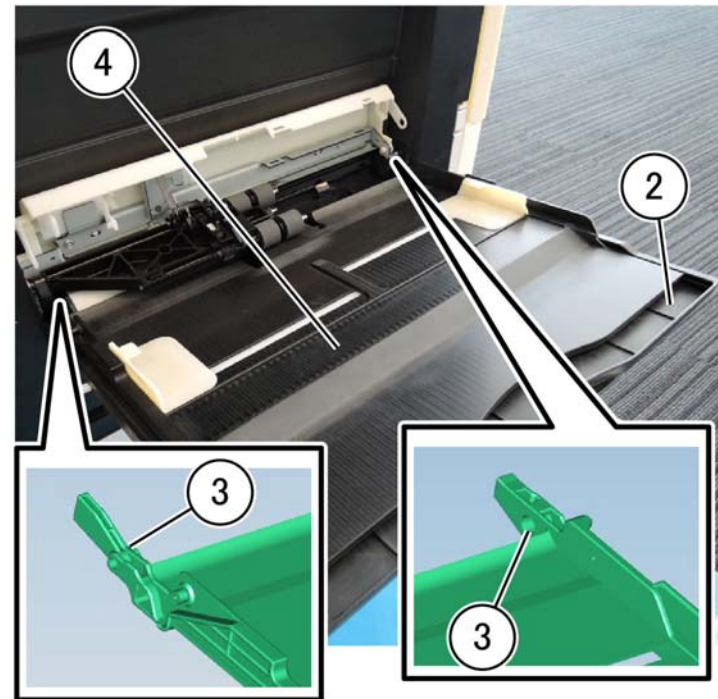
F-1-0268-A

- Lower the extension tray (1) and feed the no paper harness through the hole of the bypass tray (2), [Figure 4](#).
- Lift the extension tray (2) to 75 degrees, remove the link part (3) of the bypass tray from the main unit, then remove the bypass tray (4), [Figure 5](#).



F-1-0269-A

Figure 4 Release the harness



F-1-0270-A

Figure 5 Bypass tray removal

Replacement

The replacement is the reverse of the removal procedure.

REP 70.4 Bypass Tray Paper Size Sensor Assembly

Parts List on [PL 70.55](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Fully extend the extension tray.
2. Using firm pressure, pull the extension tray (2) from the bypass tray (1) to remove: [Figure 1](#).

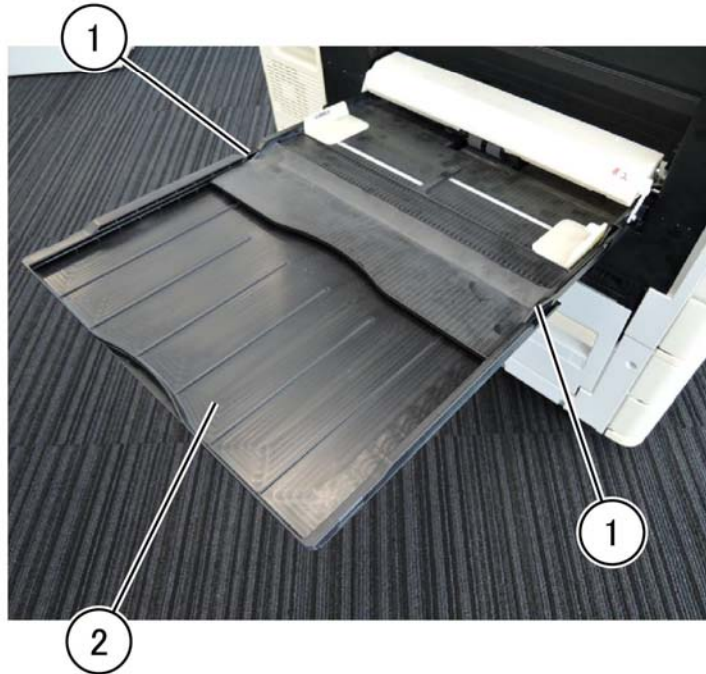


Figure 1 Extension tray removal

F-1-0271-A

3. Lift the bypass tray, remove six screws (1), then remove the tray plate (2), [Figure 2](#).

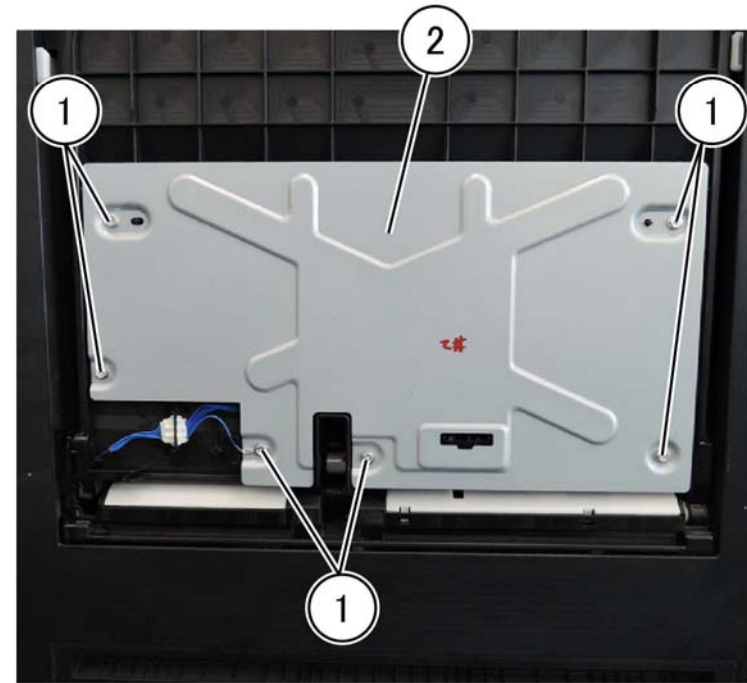
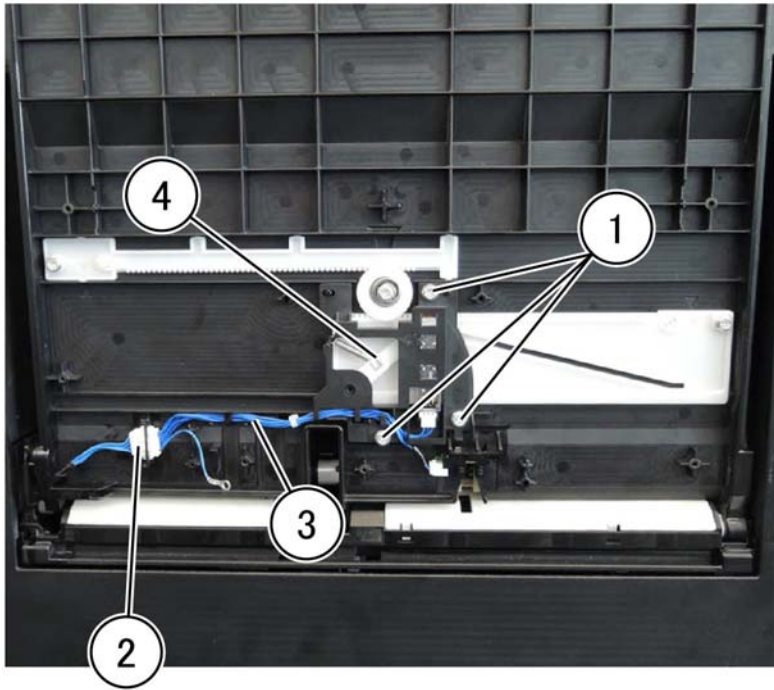


Figure 2 Tray plate removal

F-1-0272-A

4. Remove the MSI paper size sensor assembly, PL 70.55 Item 1: Figure 3.
 - a. Remove three screws (1).
 - b. Disconnect the connector (2).
 - c. Release the harness (3).
 - d. Release the bypass tray paper size sensor assembly (4).
 - e. Disconnect the paper size sensor.
 - f. Remove the bypass tray paper size sensor assembly.



F-1-0273-A

Figure 3 Assembly removal

Replacement

1. When installing the bypass tray paper size sensor assembly, put the pin into the long hole of the link, [Figure 4](#).



Figure 4 Pin and link location

F-1-0274-A

2. When installing the gear, align the marks on the front/rear rack to the marks on the bypass tray, [Figure 5](#).



Figure 5 Gear alignment

F-1-0275-A

3. The remainder of the replacement is the reverse of the removal procedure.

REP 70.5 2TM Tray 3/4 Paper Size Sensor Assembly

Parts List on [PL 70.20](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 2TM tray 3 and tray 4, [PL 70.20 Item 1](#).
2. Remove the malfunctioning paper size sensor, [PL 70.20 Item 12: Figure 1](#).
 - a. Disconnect the connector (1).
 - b. Remove the screw (2).
 - c. Remove the paper size sensor (3).

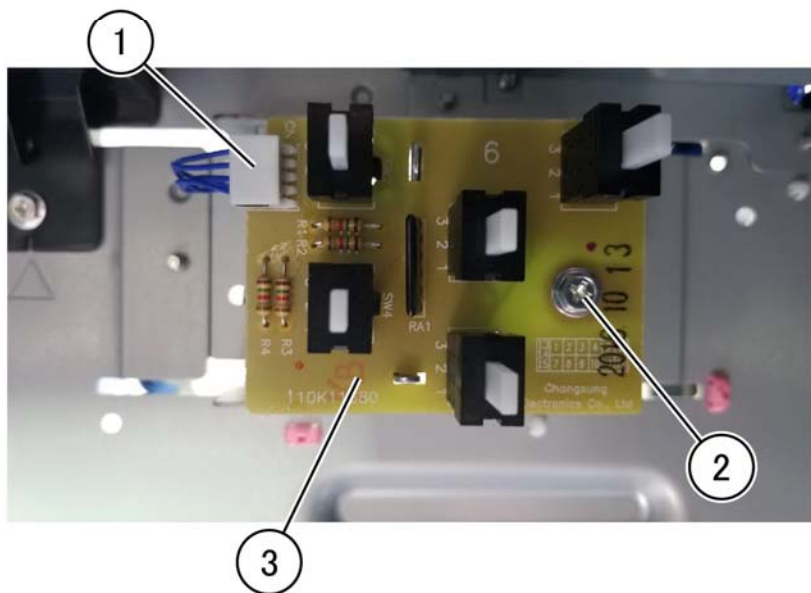


Figure 1 2TM paper size sensor removal

F-1-0357-A

Replacement

Replacement is the reverse of the removal procedure.

Initial Issue

Xerox® VersaLink® C9000 Family

REP 70.6 TTM Tray 3/4 Paper Size Sensor Assembly

Parts List on [PL 70.35](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 transport stopper, [PL 70.35 Item 20](#) or [PL 70.35 Item 21](#).
2. Remove TTM tray 3 or tray 4, [PL 70.35 Item 1](#) or [PL 70.35 Item 2](#).
3. Remove the malfunctioning paper size sensor, [PL 70.35 Item 22: Figure 1](#).
 - a. Disconnect the connector (1).
 - b. Remove the screw (2).
 - c. Remove the paper size sensor (3).

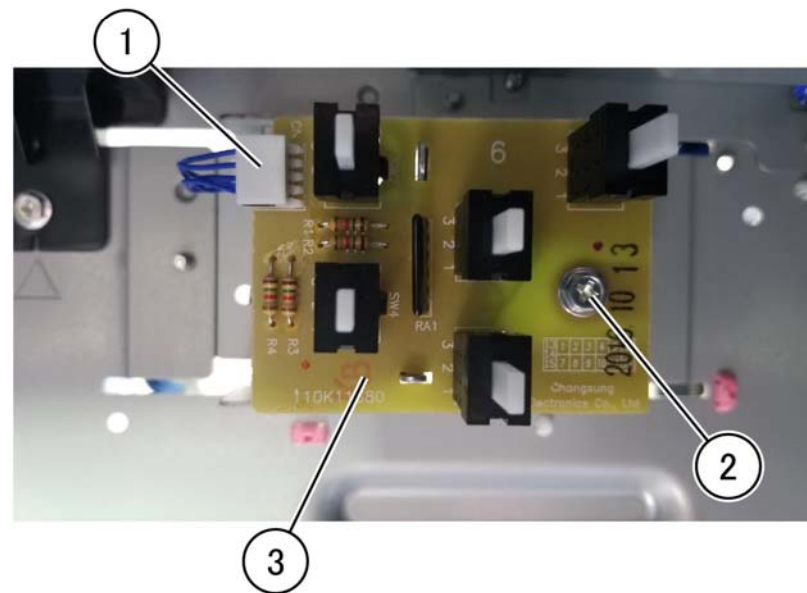


Figure 1 TTM Paper size sensor removal

F-1-0358-A

Replacement

The replacement is the reverse of the removal procedure.

August 2018

4-105

Repairs- Adjustments
REP 70.5, REP 70.6

REP 70.7 HCF Undocking

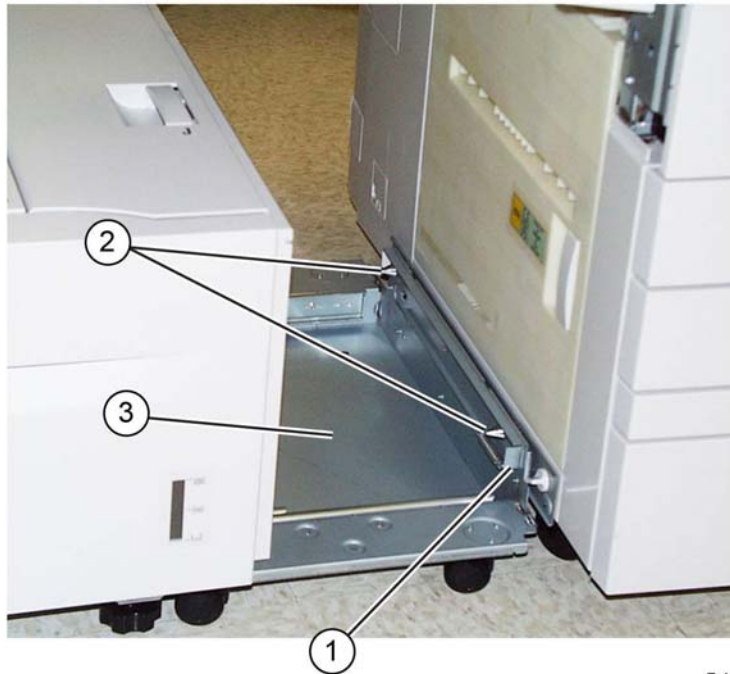
Parts List on [PL 70.75](#) and [PL 70.95](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Disconnect the HCF cable from the machine.
2. Unscrew the wing screw, then slide the HCF away from the machine.
3. Release the docking latch spring lever (1) on the right side of the docking base, [Figure 1](#).



F-1-0758-A

Figure 1 Docking base

4. Undock the HCF from the machine.

Replacement

1. Align the holes in the HCF docking base (3) with the docking points (2) on the left side of the machine. Refer to [Figure 1](#).

NOTE: It may be necessary to rotate the machine caster so that it does not interfere with docking.

2. Push the HCF into place.
3. Reconnect the HCF power cable.

REP 70.8 HCF Tray Removal

Parts List on [PL 70.80](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 tray to full stop.
2. Remove all paper from the tray.
3. Using a small screwdriver, or other small blunt instrument, release the stopper on each rail of the tray while pulling the tray out to release the tray.
4. Remove the tray.

Replacement

Replacement is the reverse of the removal procedure.

REP 70.9 HCF Tray Set Sensor

Parts List on [PL 70.75](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 left cover, [PL 70.75 Item 9](#).
2. Open the tray fully to gain access to the tray set sensor.

3. Disconnect the connector (1), then remove the tray set sensor (2), PL 70.75 Item 3, Figure 2:

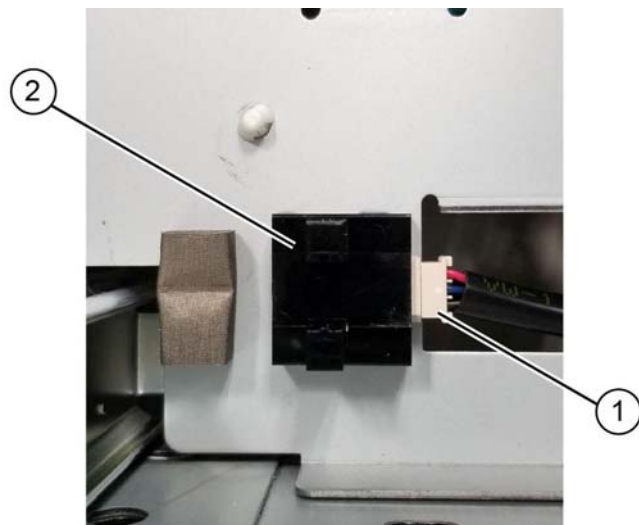


Figure 2 Tray set sensor removal

F-1-0759-A

Replacement

Replacement is the reverse of the removal procedure.

REP 70.10 HCF Tray Latch Assembly

Parts List on PL 70.80

Removal

WARNING

Switch off the electricity to the machine. Refer to GP 10. Disconnect the power 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. Undock the HCF, REP 70.7.
2. Tray latch assembly removal, Figure 1:
 - a. Lay the HCF on the left side.
 - b. Open the tray to gain access to the tray bottom and tray latch assembly, PL 70.80 Item 1.
 - c. Remove two screws (1), then remove the tray latch assembly (2).

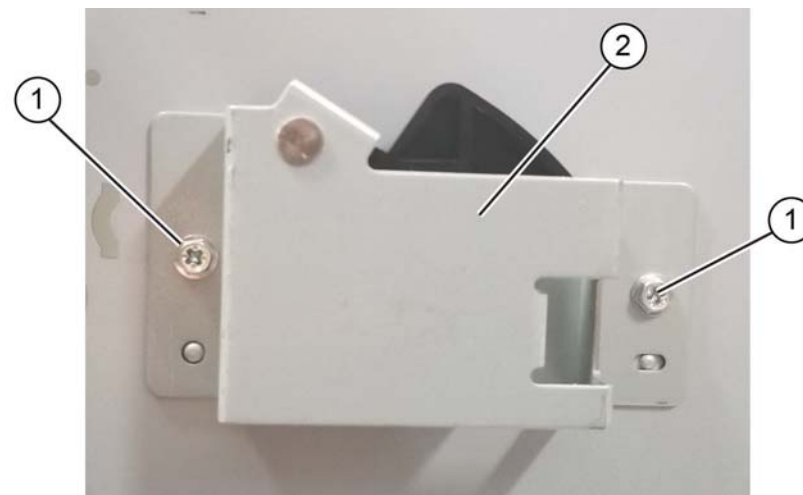


Figure 1 Tray latch assembly removal

F-1-0760-A

Replacement

Replacement is the reverse of the removal procedure.

REP 70.11 HCF Lift Gear

Parts List on [PL 70.85](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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. Undock the HCF, [REP 70.7](#).
2. Remove the HCF tray, [REP 70.8](#).
3. Remove the lift gear, [Figure 1](#):
 - a. Remove two E-clips (1) then remove the plate (2).
 - b. Remove the lift gear [PL 70.85 Item 24](#) (3).

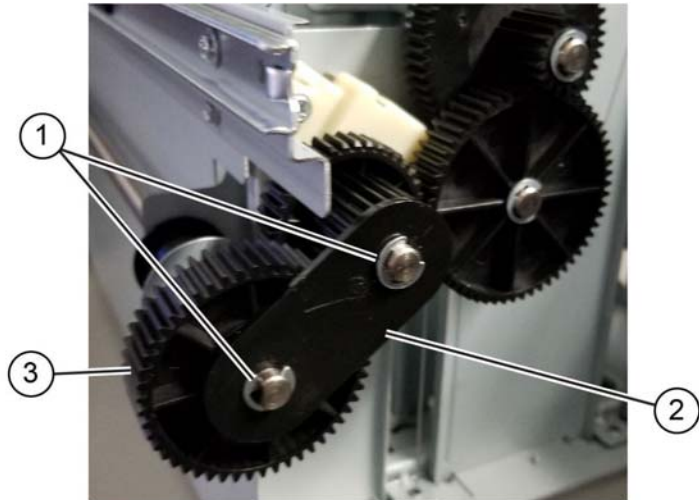


Figure 1 Lift gear removal

F-1-0761-A

Replacement

Replacement is the reverse of the removal procedure.

REP 70.12 HCF Gear Bracket Assembly

Parts List on [PL 70.85](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 HCF lift gear, [REP 70.11](#).
2. Remove three screws (1), then remove the gear bracket assembly, [PL 70.85 Item 17](#), [Figure 1](#).

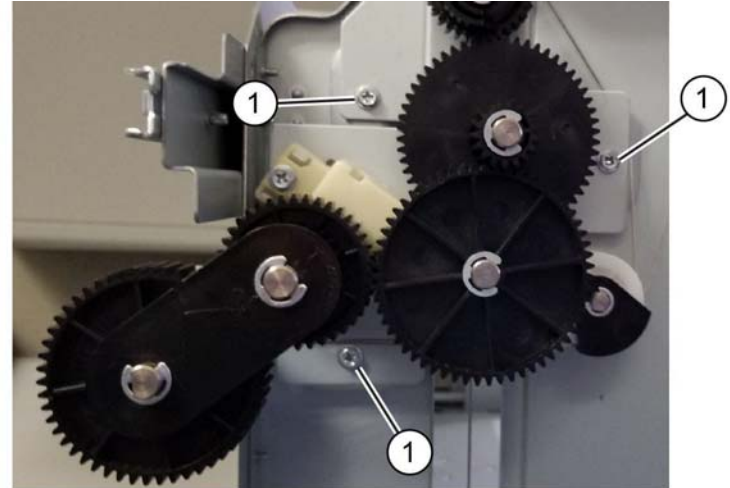


Figure 1 Gear bracket assembly removal

F-1-0762-A

Replacement

Replacement is the reverse of the removal procedure.

REP 70.13 HCF Cables (Rear)

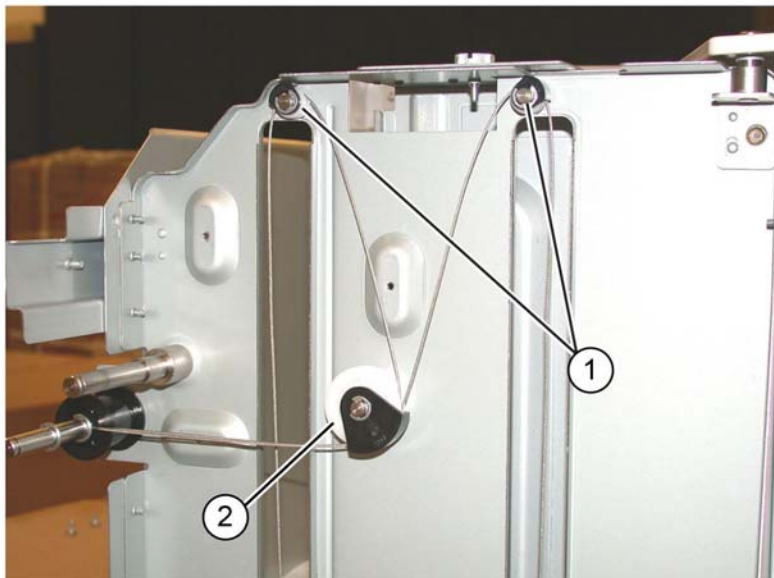
Parts List on [PL 70.85](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

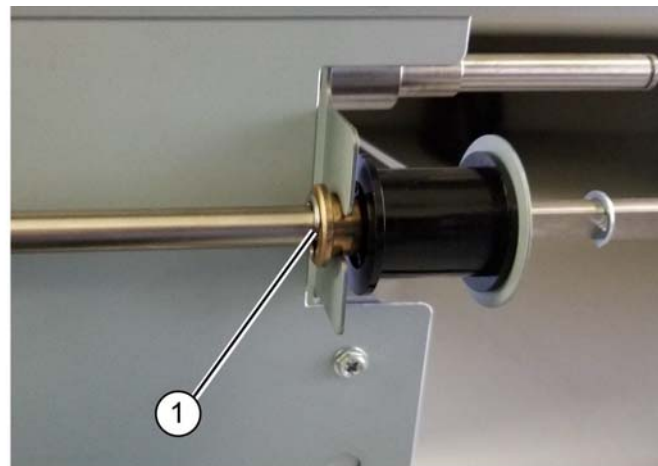
1. Remove the HCF gear bracket assembly, [REP 70.11](#).
2. Remove two E-clips the two short wire guides and two pulleys (1), then the E-clip the long wire guide and pulley (2), [Figure 1](#).



F-1-0763-A

Figure 1 Guides and pulleys removal

3. Remove the E-clip (1), [Figure 2](#):



F-1-0764-A

Figure 2 E-clip removal

- Slide the bearing (1) left, away from the frame, releasing the lift shaft (2) from the HCF frame, slide the pulley (3) to the rear, releasing the cable ends from the lift shaft (4), [Figure 3](#).

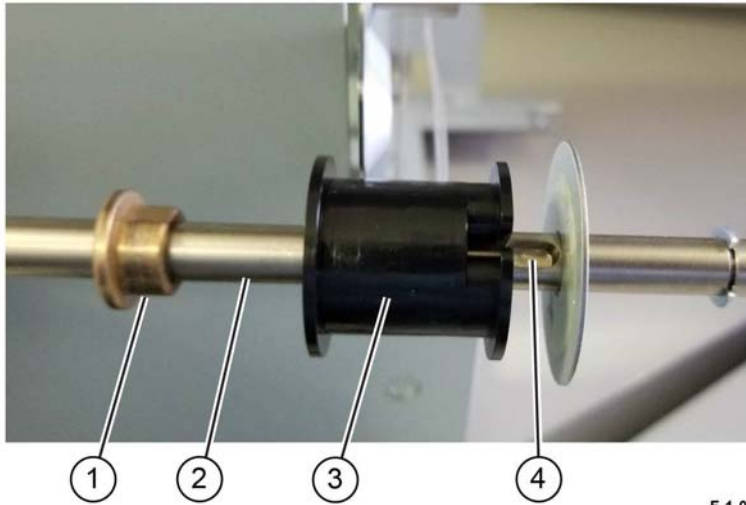


Figure 3 Releasing the cable ends

F-1-0765-A

- Thread the cables through the bottom plate, [PL 70.85 Item 11](#), to remove the cables, [Figure 4](#).

Replacement

Replacement is the reverse of the removal procedure. Refer to [Figure 4](#).

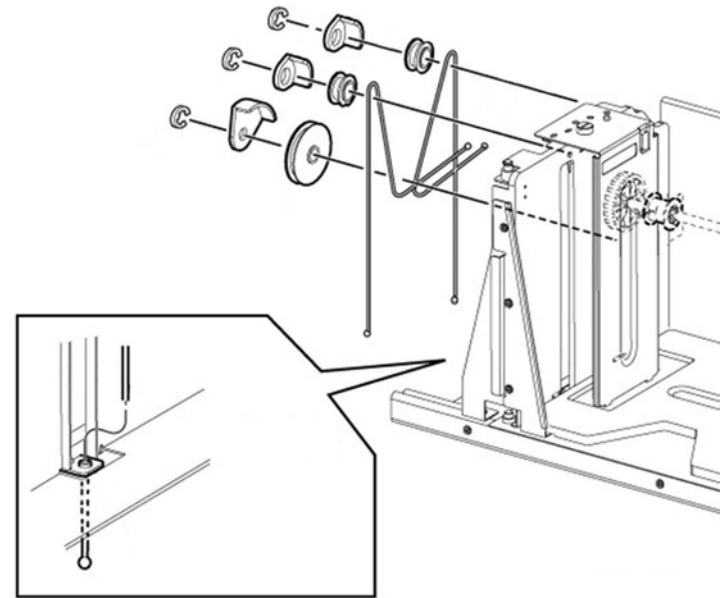


Figure 4 Replacement

F-1-0766-A

REP 70.14 HCF Cable (Front)

Parts List on [PL 70.85](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 HCF tray front cover, [PL 70.50 Item 7](#).
2. Free movement of the front tray cable pulley, [Figure 1](#):
 - a. Remove the E-ring (1) on the lift shaft.
 - b. Slide the bearing (2) to the rear on the lift shaft.
 - c. Front tray cable pulley (3), [PL 70.85 Item 4](#).

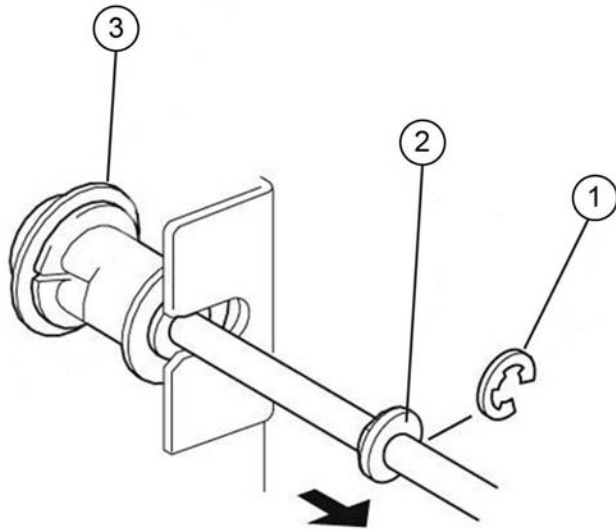
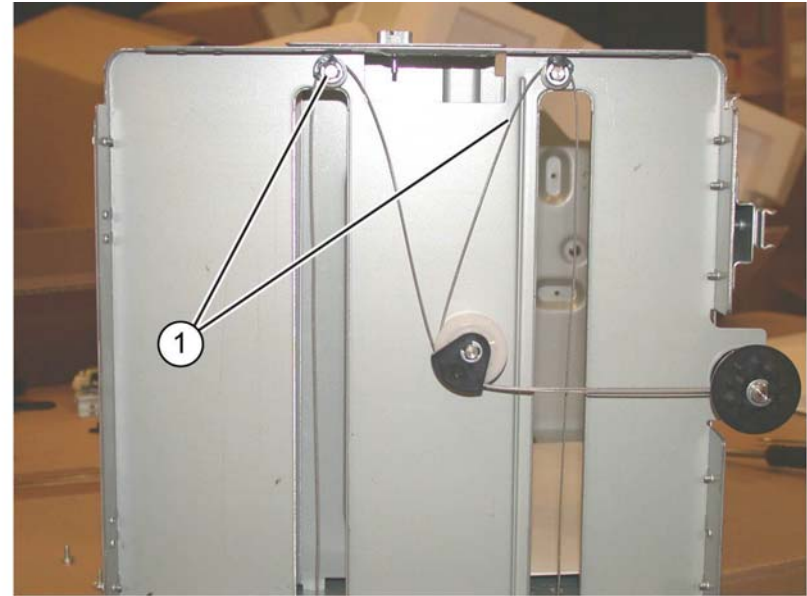


Figure 1 Tray cable pulley

F-1-0767-A

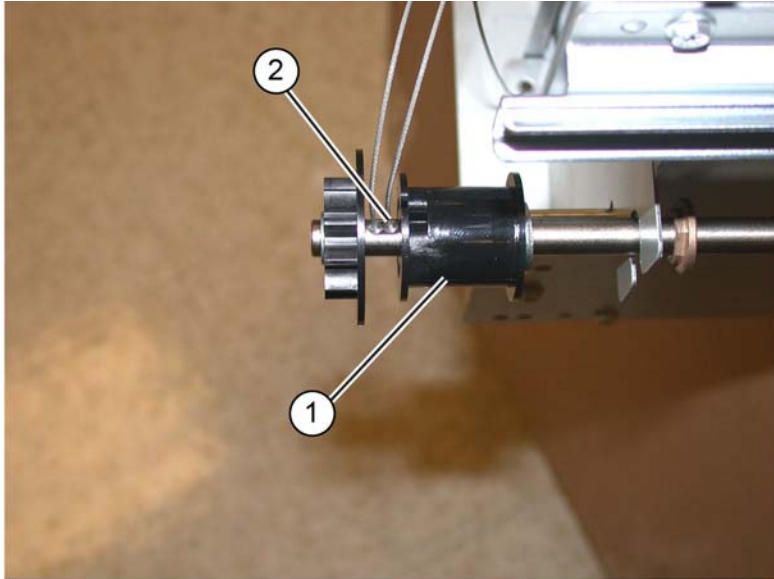
3. Prepare to remove the tray front cables. Remove two E-rings, wire guides and pulleys (1) from the front of the HCF tray, [Figure 2](#).



F-1-0768-A

Figure 2 Preparation

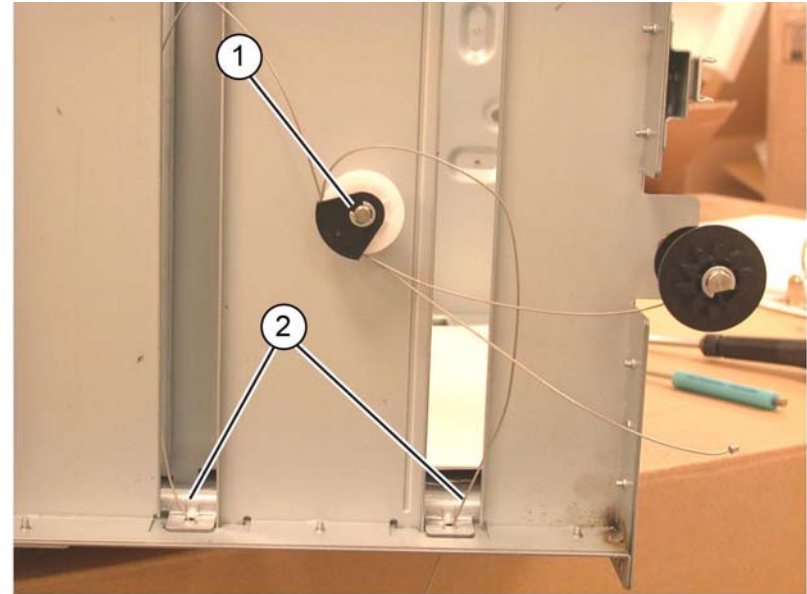
4. Slide the pulley (1) to the right to release the rear lift cable ends (2), [Figure 3](#).



F-1-0769-A

Figure 3 Releasing the cable ends

5. Remove the front tray cables, [Figure 4](#):
- Remove the E-ring, wire guide and pulley (1).
 - Remove the cables (2).



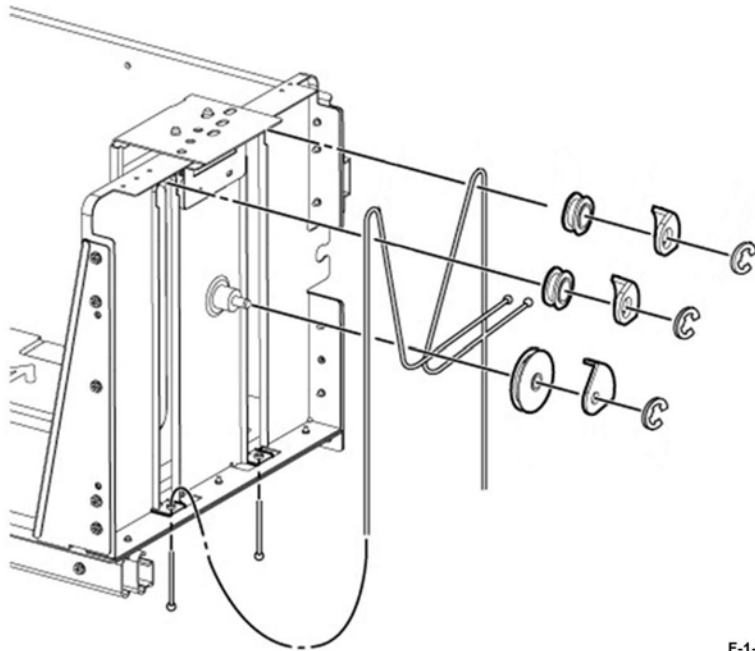
F-1-0770-A

Figure 4 Front cables removal

Replacement

Replacement is the reverse of the removal procedure. Refer to [Figure 5](#).

NOTE: When reinstalling the HCF tray front cover, raise the gear on the indicator shaft so that it meshes with the adjoining lift shaft gear.



F-1-0771-A

Figure 5 Replacement

REP 70.15 HCF Takeaway Roll and Bearing

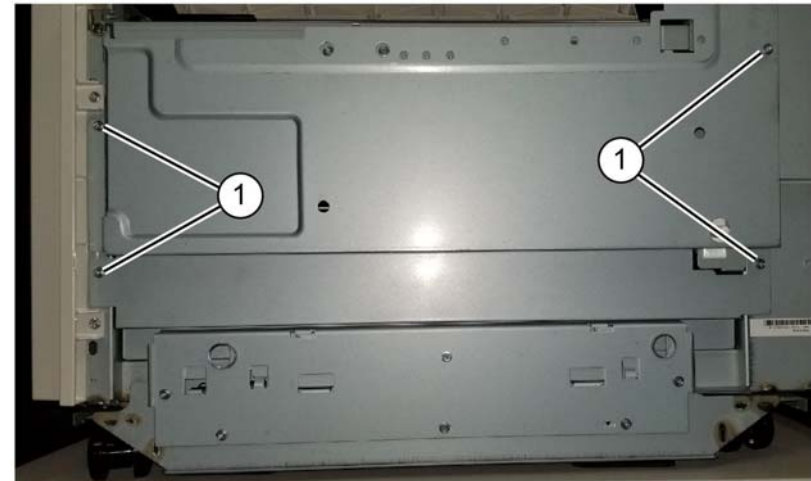
Parts List on [PL 70.90](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

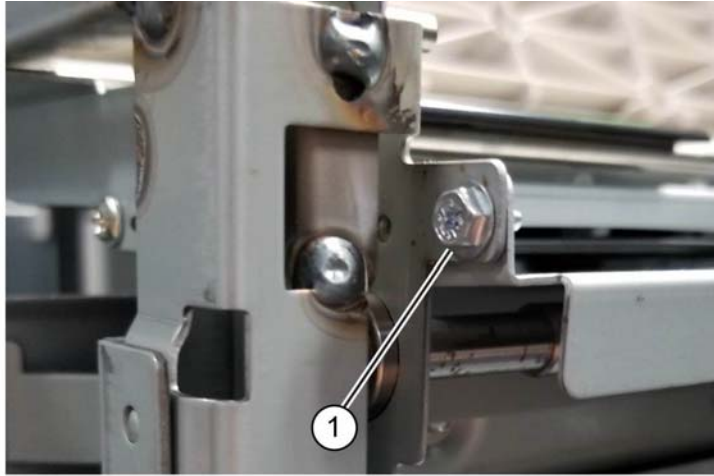
1. Undock the HCF, [REP 70.7](#).
2. Remove the right cover, [PL 70.75 Item 7](#).
3. Remove the front right cover, [PL 70.75 Item 8](#).
4. Remove four screws (1) to remove the inner right cover, [Figure 1](#).



F-1-0772-A

Figure 1 Inner right cover removal

5. Remove the lower chute, [PL 70.90 Item 24](#):
 - a. Remove the lower chute front screw (1), [Figure 2](#).



F-1-0773-A

Figure 2 Front screw removal

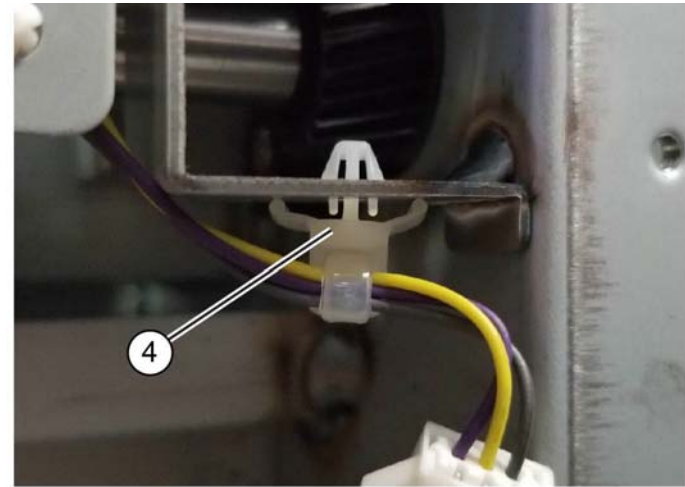
- b. Gently pry the chute from the HCF frame to get over the set notch (2), then lift the chute front out of the way of the front cover latch pin (3), [Figure 3](#).



F-1-0774-A

Figure 3 Chute front release

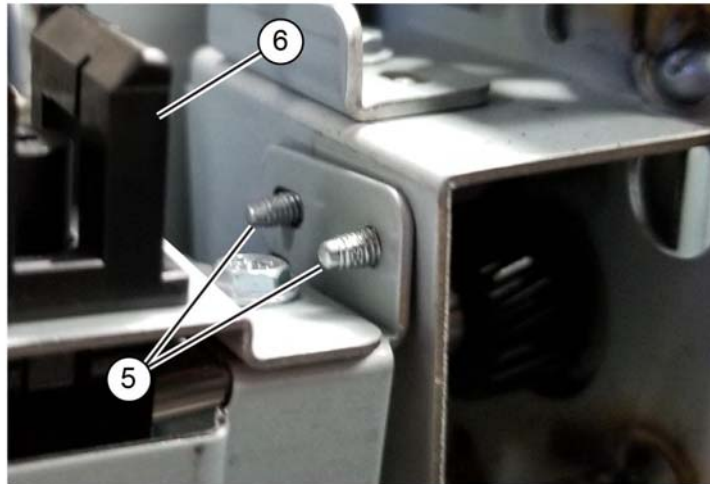
- c. Release the cable clamp from the frame (4), [Figure 4](#).



F-1-0775-A

Figure 4 Cable clamp

- d. Move the lower chute forward off the two screw shafts (5), then remove the lower chute (6), [PL 70.90 Item 24, Figure 5](#).



F-1-0776-A

Figure 5 Rear screws

NOTE: The two screw shafts are not securing the chute to the machine frame, only holding the rear side of the chute in-place. Do not attempt to remove the two screws.

6. Release the takeaway roll from the frame, [PL 70.90 Item 18](#).
a. Remove the K-clip (1), [Figure 6](#).

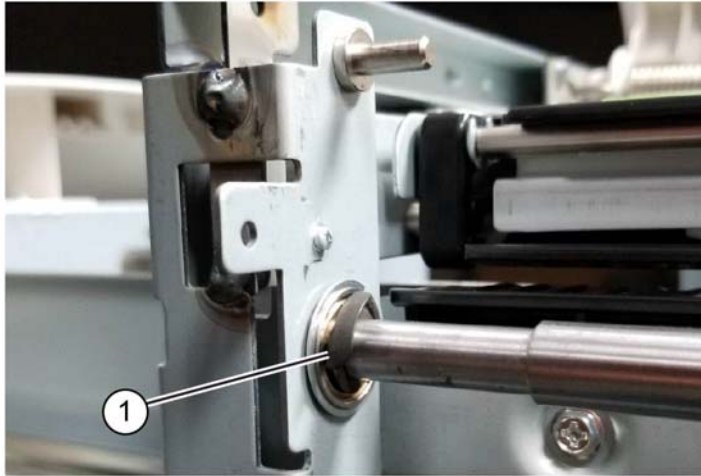


Figure 6 K-clip removal

F-1-0777-A

- c. Slide the bearing end of the takeaway roll forward (left) into the shaft hole (3), [Figure 8](#).

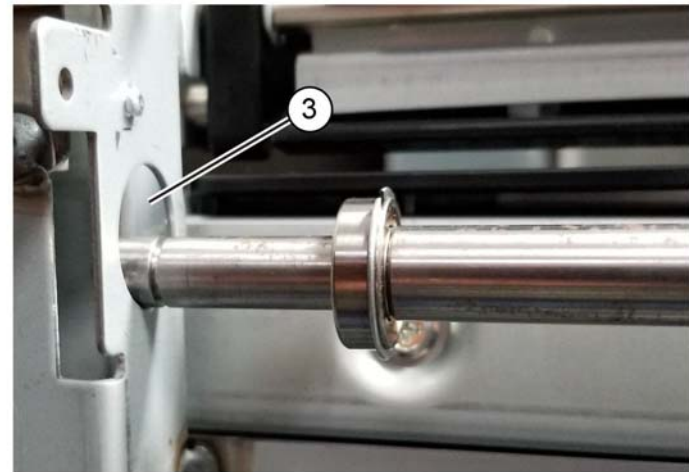


Figure 8 Shaft hole

F-1-0778-A

- b. Slide the bearing (2) to the rear (right) onto the takeaway roll, [Figure 7](#).

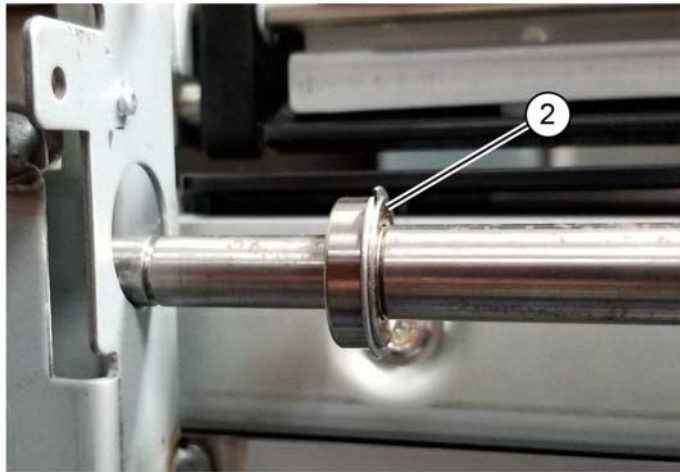


Figure 7 Slide bearing to the rear (right)

F-1-0778-A

- d. Drop the takeaway roll (4) through the notch in HCF frame, then remove the takeaway roll, [PL 70.90 Item 18](#), [Figure 9](#).

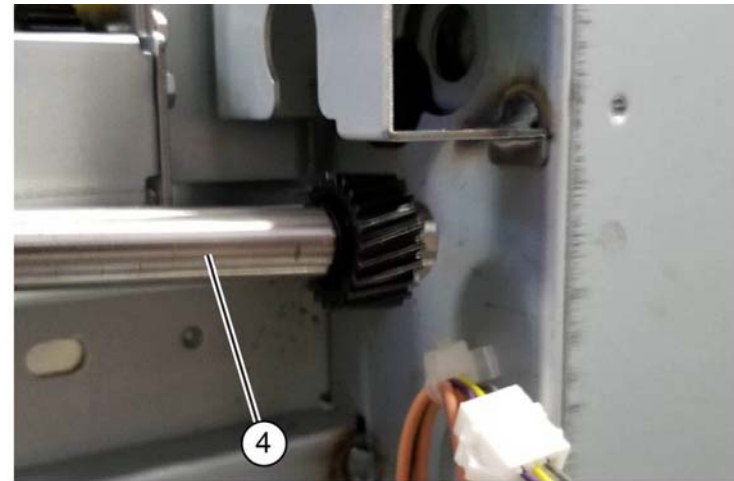


Figure 9 Takeaway roll removal

F-1-0780-A

7. Remove the bearing from the takeaway roll, [PL 70.90 Item 1](#),

Replacement

Replacement is the reverse of the removal procedure.

REP 70.16 HCF Feed Out Sensor

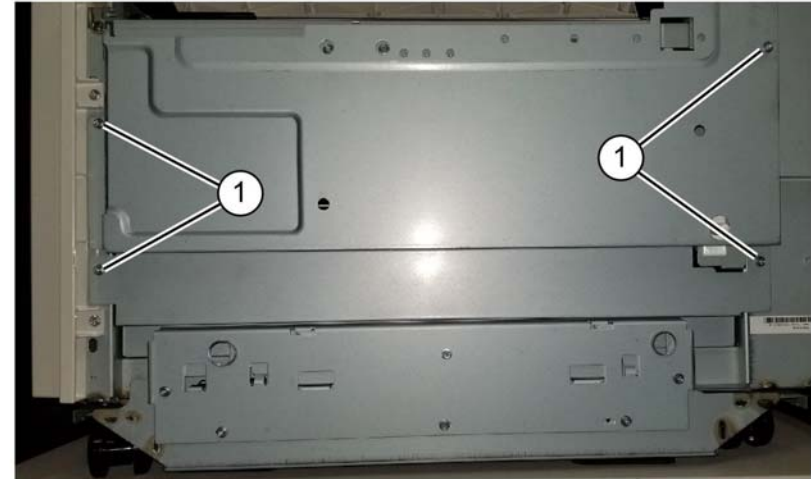
Parts List on [PL 70.90](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

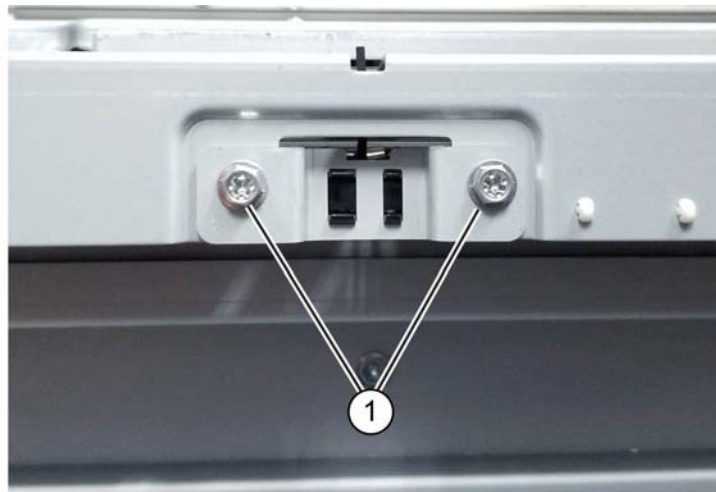
1. Undock the HCF, [REP 70.7](#).
2. Remove the right cover, [PL 70.75 Item 7](#).
3. Remove four screws (1), then remove the inner right cover, [Figure 1](#).



F-1-0781-A

Figure 1 Inner right cover removal

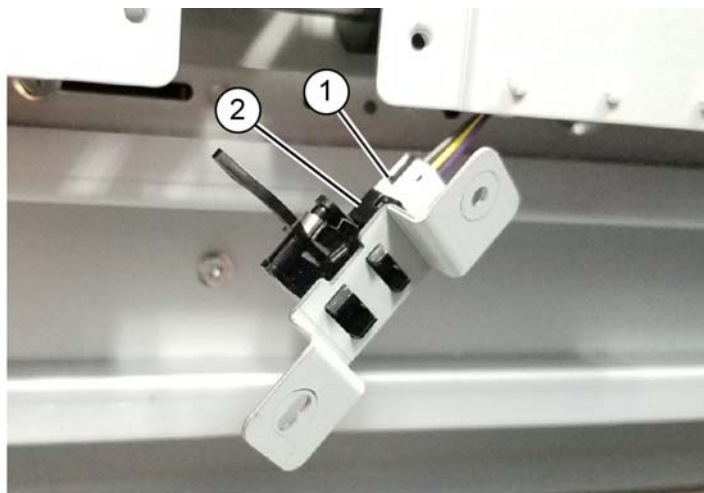
4. Remove two screws (1) holding the feed out sensor bracket, [Figure 2](#).



F-1-0782-A

Figure 2 Screw removal

5. Disconnect the connector (1), then remove the feed out sensor (2), [PL 70.90 Item 25](#) from the bracket, [Figure 3](#).



F-1-0783-A

Figure 3 Feed out sensor removal

REP 70.17 HCF Transport Interlock Switch

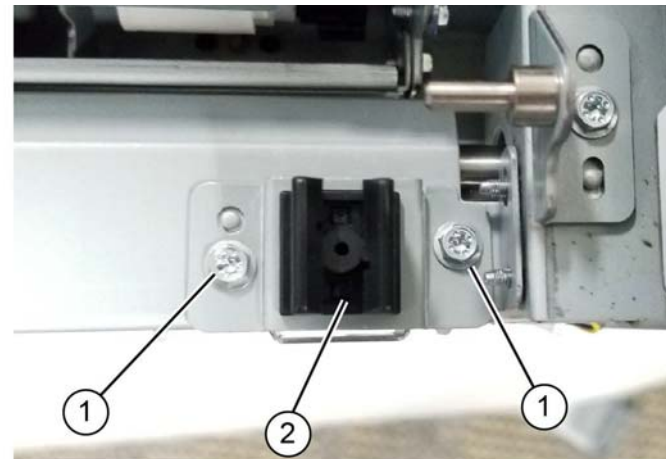
Parts List on [PL 70.90](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 two screws (1), lift the transport interlock switch (2) from the frame hole, [Figure 1](#).



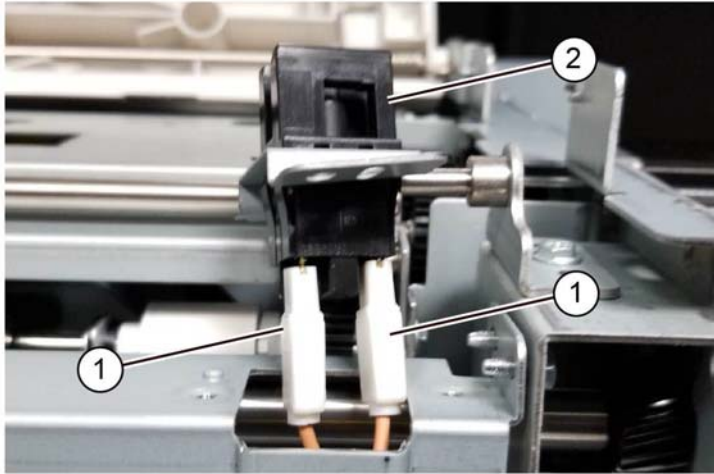
F-1-0784-A

Figure 1 Screw removal

Replacement

Replacement is the reverse of the removal procedure.

2. Disconnect two connectors (1), then remove the transport interlock switch (2), PL 70.90 Item 26, from the bracket, Figure 2.



F-1-0785-A

Figure 2 Transport interlock switch removal

Replacement

Replacement is the reverse of the removal procedure.

REP 70.18 HCF Takeaway Motor

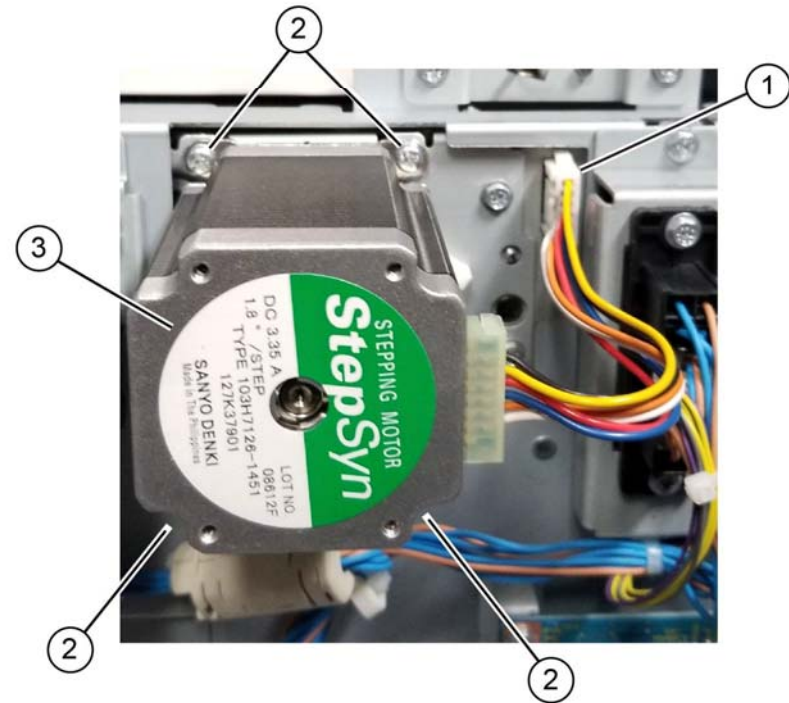
Parts List on PL 70.95

Removal

WARNING

Switch off the electricity to the machine. Refer to GP 10. Disconnect the power 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. Undock the HCF, REP 70.7.
2. Remove the rear cover, PL 70.75 Item 10.
3. Disconnect the connector (1), remove four screws (2), then remove the takeaway motor (3), PL 70.95 Item 7, Figure 1.



F-1-0786-A

Figure 1 Takeaway motor removal

Replacement

Replacement is the reverse of the removal procedure.

REP 70.19 HCF Slide Out Switch

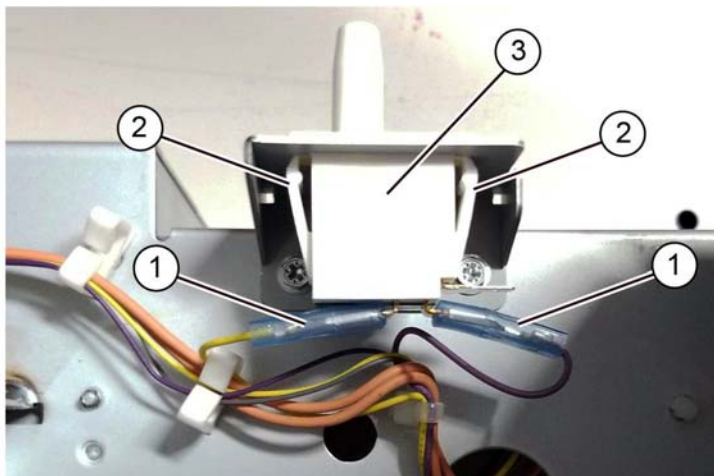
Parts List on [PL 70.95](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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. Undock the HCF, [REP 70.7](#).
2. Remove the HCF tray, [REP 70.8](#).
3. Disconnect two connectors (1), then squeeze the locks on each side of the slide out switch (2), then remove the slide out switch (3), [PL 70.95 Item 8](#) from the bracket, [Figure 1](#).



F-1-0787-A

Figure 1 Slide out switch removal

Replacement

Replacement is the reverse of the removal procedure.

REP 70.20 HCF PWB

Parts List on [PL 70.95](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

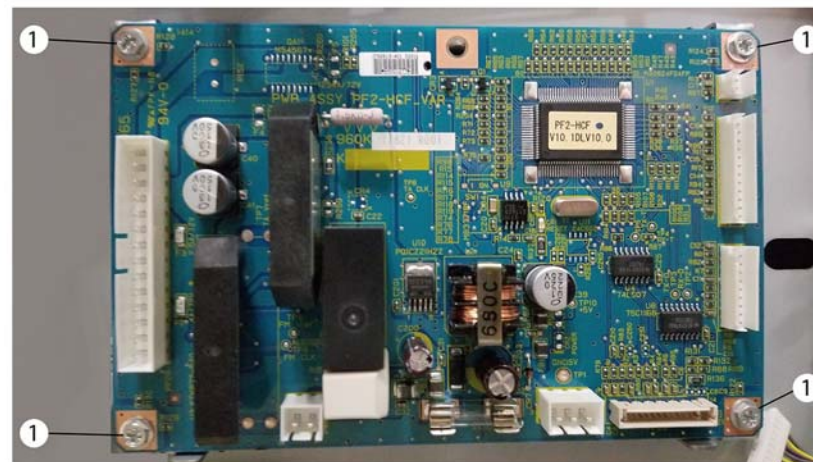


Figure 1 ESD Symbol

CAUTION

Observe ESD procedures during this procedure.

1. Print a Configuration Report, then verify the software is the latest version. Upgrade the software as necessary, [GP 4](#).
2. Undock the HCF, [REP 70.8](#).
3. Remove the rear cover, [PL 70.75 Item 10](#).
4. Disconnect all connectors from the HCF PWB, [PL 70.95 Item 9](#).
5. Remove fore screws (1), then remove the HCF PWB, [PL 70.95 Item 9](#), [Figure 2](#).



F-1-0620-A

Figure 2 HCF PWB removal

Replacement

Replacement is the reverse of the removal procedure

NOTE: Post replacement: print a configuration report, then compare to the configuration report printed at the beginning of the procedure. If necessary, reload the software, GP 4.

REP 70.21 HCF Paper Size Sensor

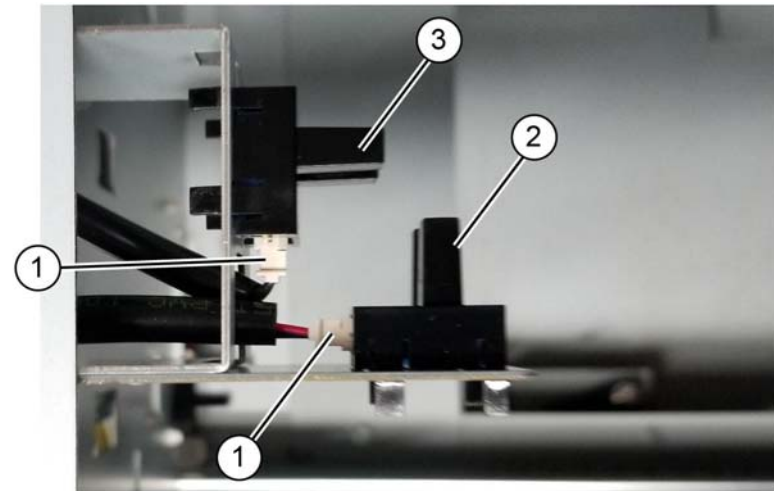
Parts List on [PL 70.95](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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. Undock the HCF, [REP 70.7](#).
2. Open the HCF tray, [PL 70.75](#).
3. Remove the rear cover, [PL 70.75 Item 10](#).
4. Remove the left top cover, [PL 70.75 Item 7](#).
5. Disconnect the connector (1), then remove the appropriate size sensor; (2) HCF paper sensor (Letter) (Q78-202), (3) HCF paper sensor (A4) (Q78-203), [PL 70.95 Item 13, Figure 1](#).



F-1-0788-A

Figure 1 Size sensor removal

Replacement

Replacement is the reverse of the removal procedure.

REP 70.22 HCF Damper and Pinion

Parts List on [PL 70.95](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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. Undock the HCF, [REP 70.7](#).
2. Remove the HCF tray, [REP 70.8](#).
3. Remove the wing screw to release the slide mechanism, then slide the HCF open to gain access to the pinion, [PL 70.95 Item 17](#) and damper, [PL 70.95 Item 16](#).
4. Remove the Pinion: [Figure 1](#):
 - a. Remove the E-clip (1), then remove the pinion (2), [PL 70.95 Item 17](#).

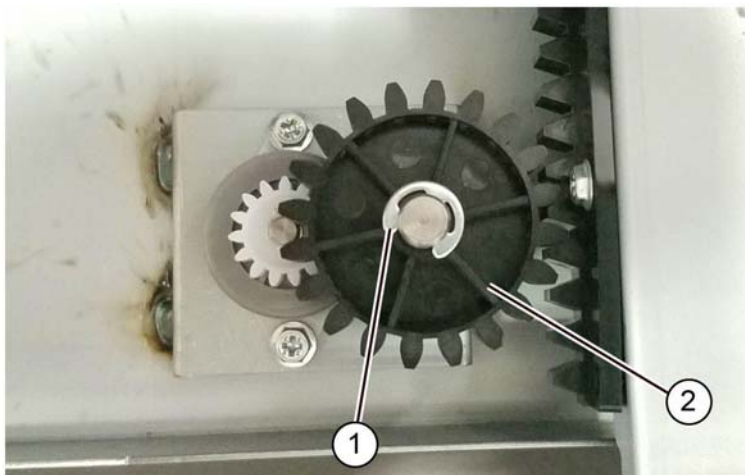


Figure 1 Pinion removal

F-1-0789-A

5. Remove the damper, [Figure 2](#).
 - a. Remove two screws (1), then remove the damper (2), [PL 70.95 Item 16](#).

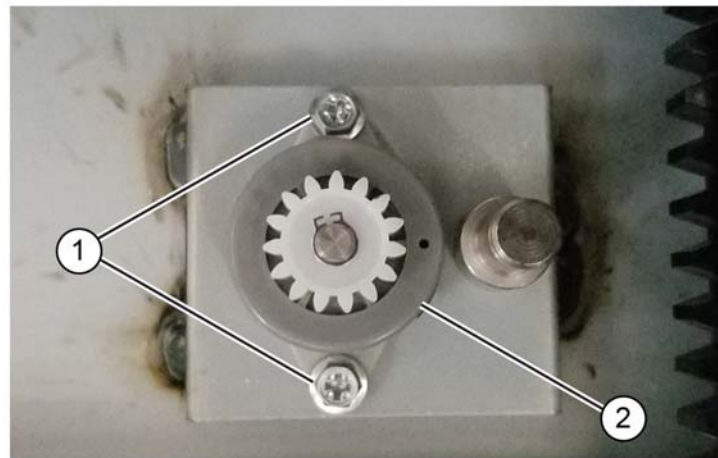


Figure 2 Damper removal

F-1-0790-A

Replacement

Replacement is the reverse of the removal procedure.

REP 70.23 HCF Feed Head

Parts List on [PL 70.75](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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. Undock the HCF, [REP 70.7](#).
2. Remove the tray, [REP 70.8](#).
3. Remove the left top cover, [PL 70.75 Item 6](#).
4. Open the top cover, [PL 70.90 Item 7](#).
5. Remove two screws (1) securing the front frame, [PL 80.100 Item 13](#), to the HCF frame, [Figure 1](#).



F-1-0791-A

Figure 1 Feeder securing screws

6. Slide the feed head assembly, [PL 70.75 Item 11](#) forward to remove.

Replacement

1. Align the guide pins of the frame with the adjacent holes in the feedhead frame pushing the feedhead assembly into the connector until fully seated.
2. The remainder of the replacement is the reverse of the removal procedure

REP 80.1 Tray 1 Feedhead Assembly

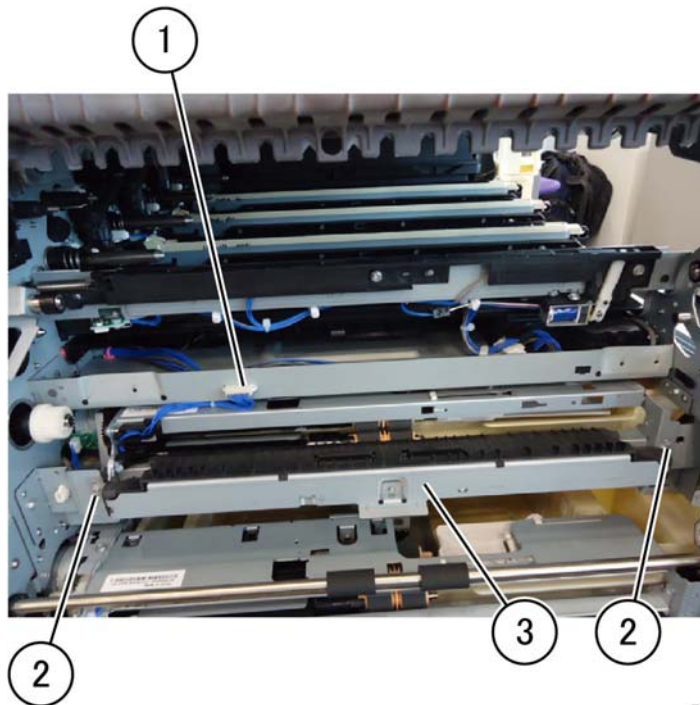
Parts List on [PL 80.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 tray 2, [PL 70.05 Item 1](#) and [PL 70.05 Item 2](#).
2. Remove the left cover assembly, [REP 80.18](#).
3. Remove the chute, [PL 70.50 Item 11](#).
4. Remove the tray 1 feedhead assembly, [PL 80.05 Item 1](#), [Figure 1](#).
 - a. Disconnect the connector (1).
 - b. Remove two screws (2).
 - c. Remove the tray 1 feedhead assembly (3).



F-1-0276-A

Figure 1 Tray 1 feedhead assembly removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. After a replacement, enter Diagnostic Mode, and use "Initialize HFSI Counter" to clear the HFSI counter:
"Chain Link: 954-800"

REP 80.2 Tray 2 Feedhead Assembly

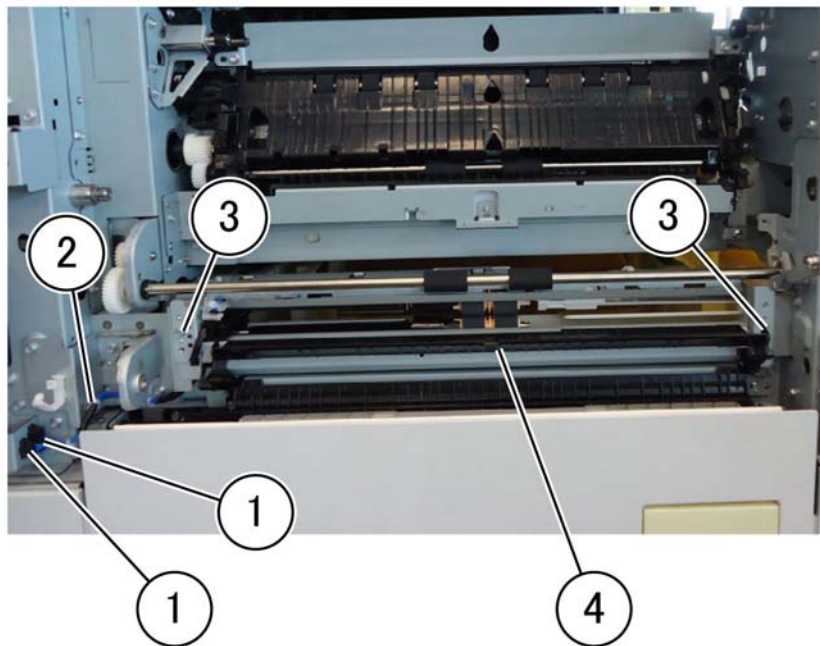
Parts List on [PL 80.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 tray 2, [PL 70.05 Item 1](#) and [PL 70.05 Item 2](#).
2. Remove the left cover assembly, [REP 80.18](#).
3. Remove the chute, [PL 70.50 Item 11](#).
4. Remove the tray 2 feedhead assembly, [PL 80.05 Item 2](#), [Figure 1](#).
 - a. Disconnect two connectors (1).
 - b. Remove the harness tie (2).
 - c. Remove two screws (3).
 - d. Remove the tray 2 feedhead assembly (4).



F-1-0277-A

Figure 1 Tray 2 feedhead assembly removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. After a replacement, enter Diagnostic Mode, and use "Initialize HFSI Counter" to clear the HFSI counter:

"Chain Link: 954-801"

REP 80.3 Tray 1/2 Feed Roll Kit

Parts List on [PL 80.10](#) and [PL 80.15](#)

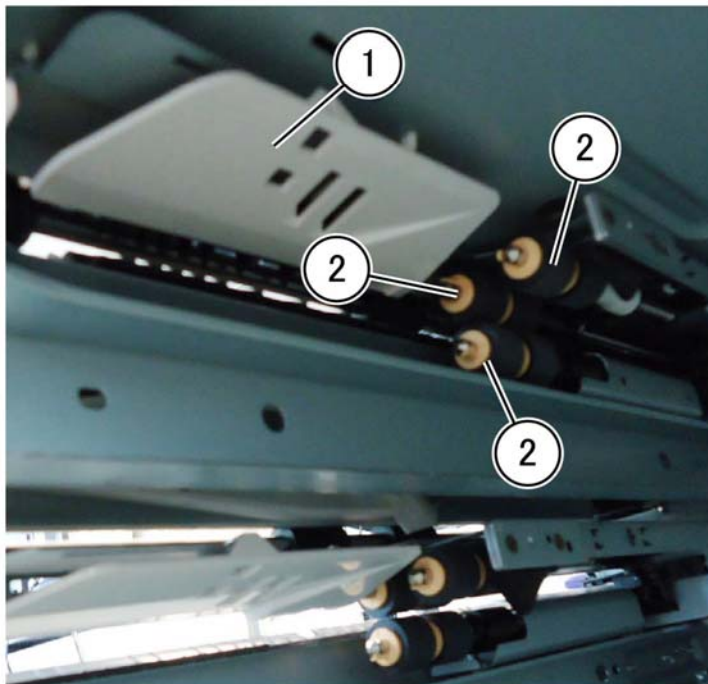
Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 feed roll kit replacement procedure is the same for tray 1 and tray 2. The feed rolls are replaced as a set, [PL 80.10 Item 11](#), [PL 80.15 Item 10](#).

1. Remove tray 1 and tray 2, [PL 70.05 Item 1](#) and [PL 70.05 Item 2](#).
2. Remove the feed, nudger, and retard roll, [PL 80.10](#) and [PL 80.15](#), [Figure 1](#).
 - a. Move the chute to the front (1).
 - b. Remove the feed, nudger, and retard roll (2).



F-1-0278-A

Figure 1 Tray 1/2 feed roll kit removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. After a replacement, enter Diagnostic Mode, and use "Initialize HFSI Counter" to clear the HFSI counter:
Tray 1: "Chain Link: 954-800".
Tray 2: "Chain Link: 954-801".

REP 80.4 2TM Feedhead 1 Assembly

Parts List on [PL 80.20](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 2TM tray 3 and tray 4 assemblies, [PL 70.20 Item 1](#).
2. Open the 2TM left cover assembly, [PL 80.20 Item 1](#).

NOTE: The feedhead 1 assembly and the feedhead 2 assembly, [PL 80.20 Item 10](#) are identified by (1) and (2). Refer to the upper position for assemblies that are in both positions.

3. Remove the feed out chute, [PL 80.20 Item 11](#), upper position.
4. Remove the connector cover [PL 80.20 Item 9](#), [Figure 1](#).
 - a. Release the hook (1).
 - b. Remove the connector cover (2), [PL 80.20 Item 9](#) upper position.

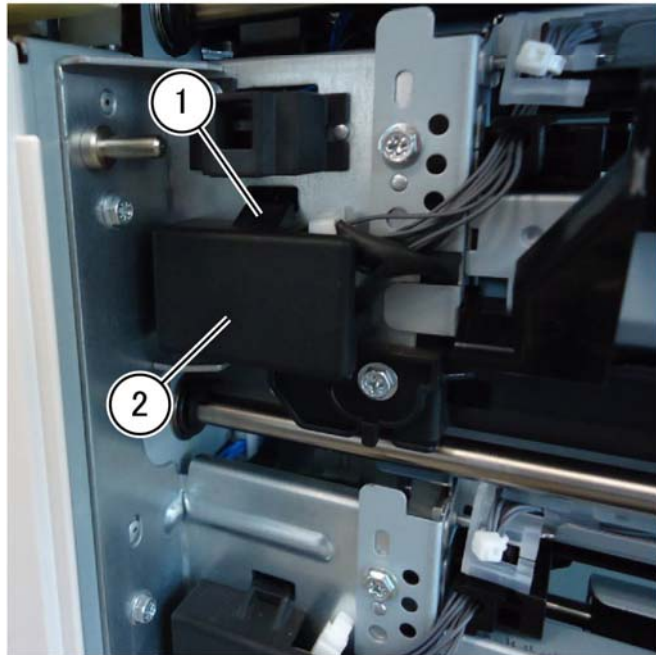


Figure 1 Connector cover removal

F-1-0279-A

5. Disconnect the 2TM feedhead 1 assembly: [Figure 2](#).
 - a. Disconnect two connectors (1).
 - b. Open the clamp (2), then move the harness out of the way.
 - c. Remove the screw at the rear (3).

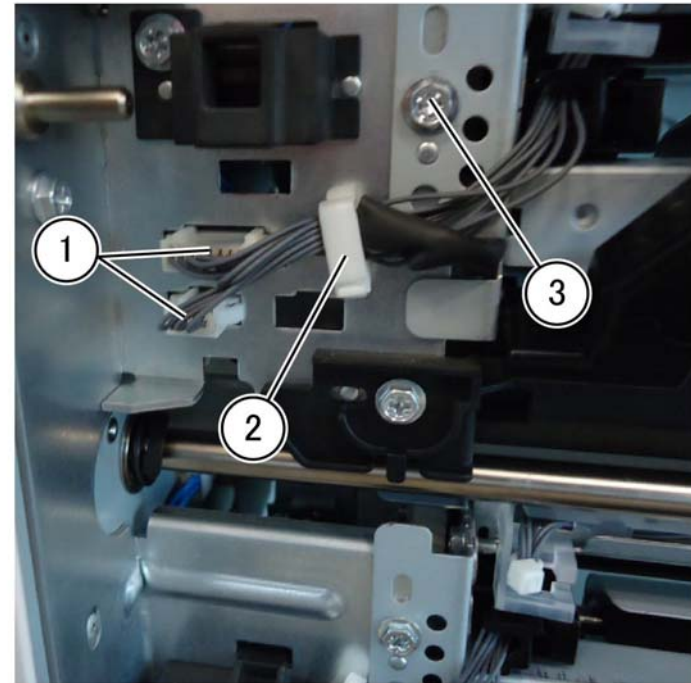
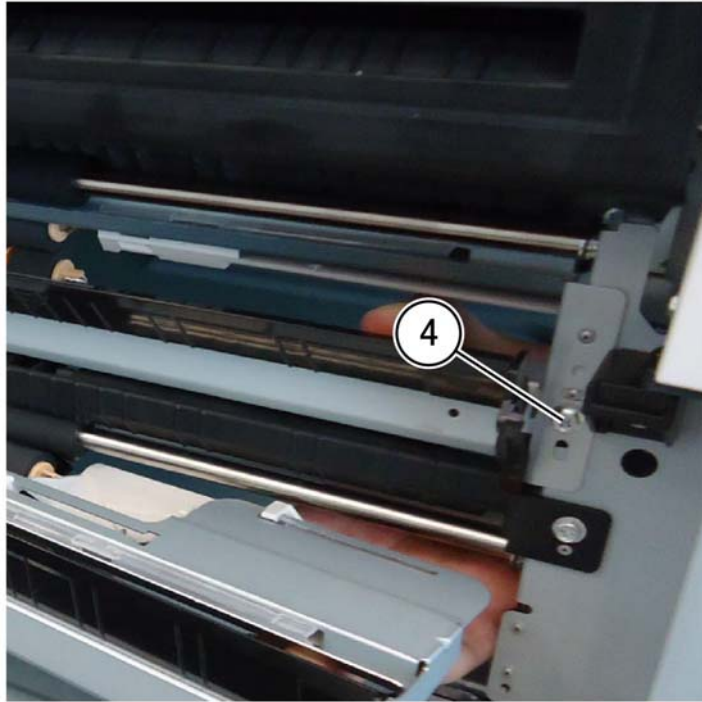


Figure 2 Rear screw removal

F-1-0280-A

- Remove the screw at the front (4), [Figure 3](#).

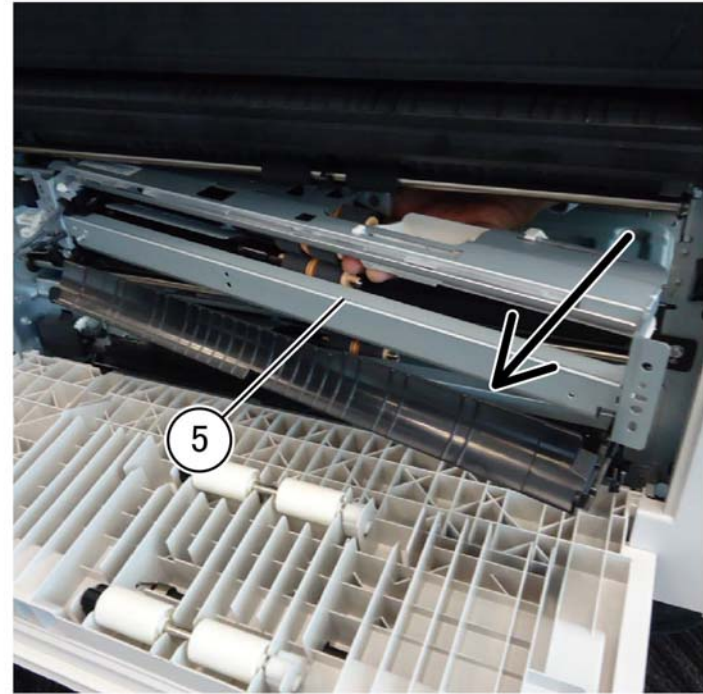


F-1-0281-A

Figure 3 Front screw removal

- Remove the takeaway roll assembly, [PL 80.25 Item 1](#), upper position.

- Remove the 2TM feedhead 1 assembly (5) in the direction of the arrow, [PL 80.20 Item 10](#) upper position, [Figure 4](#).



F-1-0282-A

Figure 4 2TM feedhead 1 assembly removal

Replacement

- Replacement is the reverse of the removal procedure.
- After a replacement, enter Diagnostic Mode, and use "Initialize HFSI Counter" to clear the HFSI counter:
"Chain Link: 954-802".

REP 80.5 2TM Feedhead 2 Assembly

Parts List on [PL 80.20](#)

Removal

WARNING

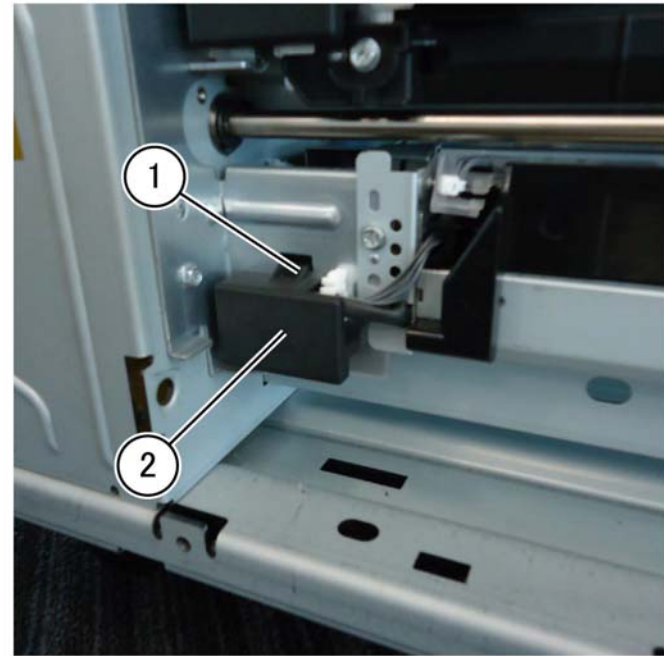
Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the 2TM tray 3 and tray 4 assemblies, [PL 70.20 Item 1](#).
2. Remove the foot cover, [PL 80.20 Item 4](#).
3. Remove the 2TM left cover, [PL 80.20 Item 7](#).
4. Open the 2TM left cover assembly, [PL 80.20 Item 1](#).

NOTE: The feedhead 1 assembly and the feedhead 2 assembly, [PL 80.20 Item 10](#) are identified by (1) and (2). Refer to the lower position for assemblies that are in both positions.

5. Remove the feed out chute, [PL 80.20 Item 11](#), lower position.

6. Remove the connector cover: [Figure 1](#).
 - a. Release the hook (1).
 - b. Remove the connector cover (2).



F-1-0283-A

Figure 1 Connector cover removal

7. Disconnect the 2TM feedhead 2 assembly: [Figure 2](#).
 - a. Disconnect two connectors (1).
 - b. Open the clamp (2), then move the harness out of the way.
 - c. Remove the screw at the rear (3).

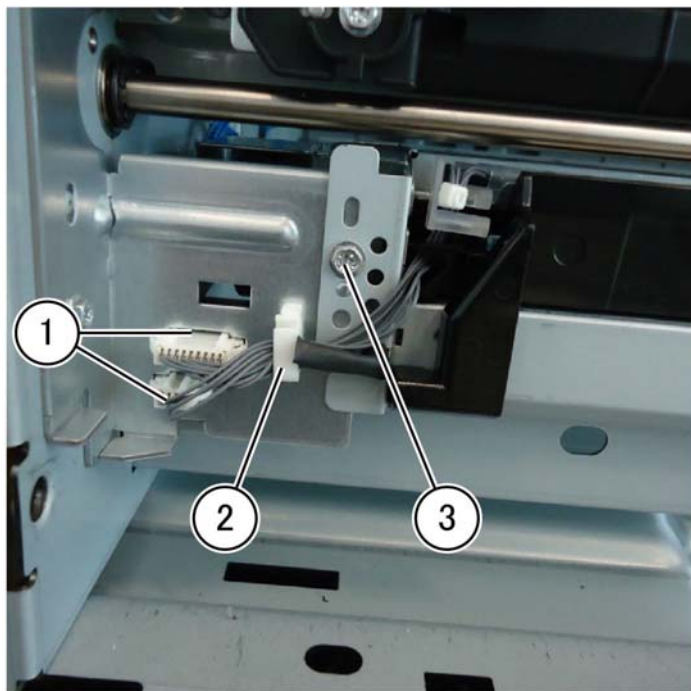


Figure 2 Rear screw removal

F-1-0284-A

8. Remove the screw at the front (4), [Figure 3](#).

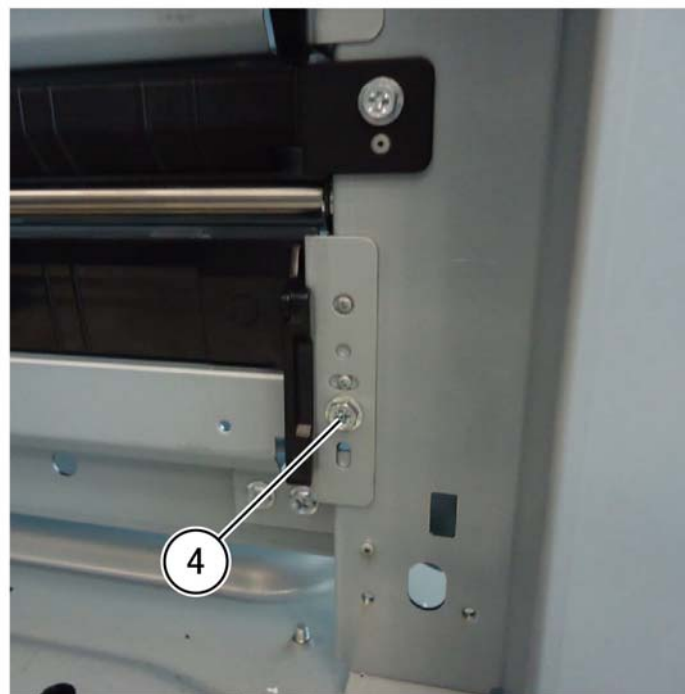
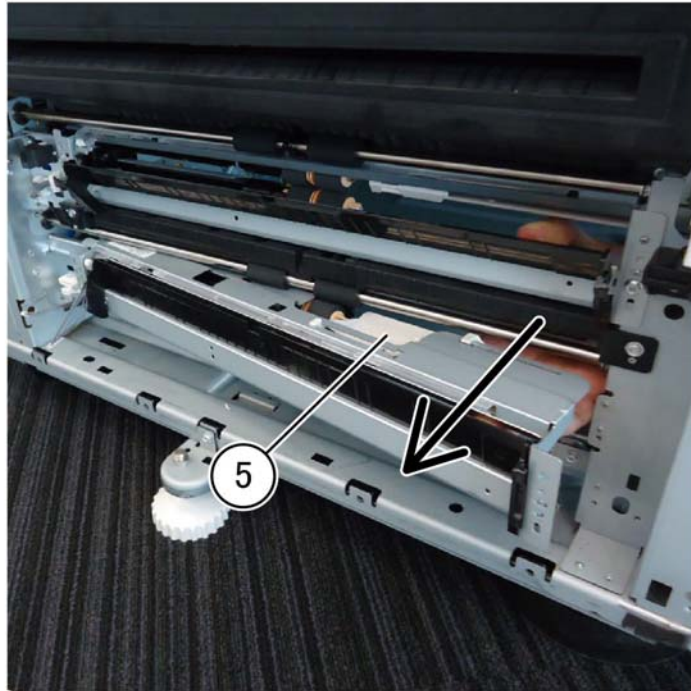


Figure 3 Front screw removal

F-1-0285-A

9. Remove the takeaway roll assembly, [PL 80.25 Item 1](#), lower position.

10. Remove the 2TM feedhead 2 assembly (5) in the direction of the arrow, PL 80.20 Item 10 lower position, Figure 4.



F-1-0286-A

Figure 4 2TH feeder 2 assembly removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. After replacement, enter Diagnostic Mode, and use "Initialize HFSI Counter" to clear the HFSI counter:
"Chain Link: 954-803".

REP 80.6 2TM Takeaway Roll Assembly (Upper)

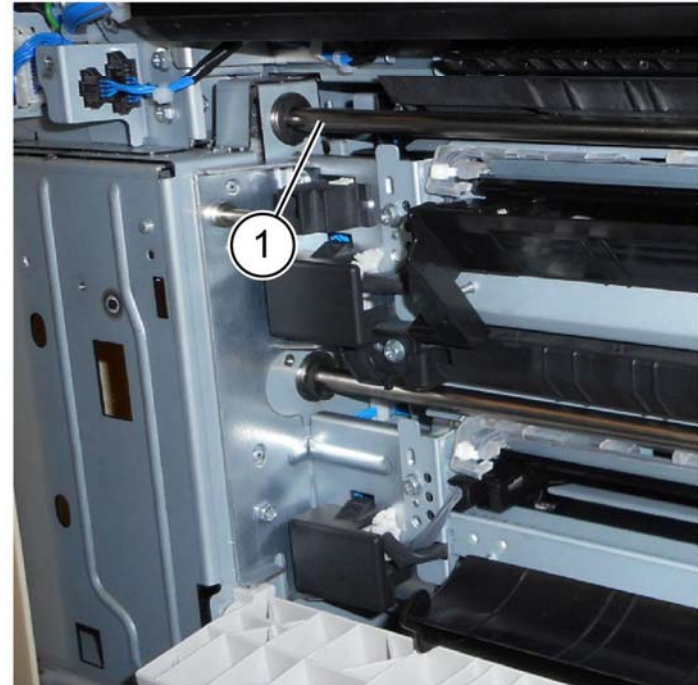
Parts List on PL 80.25

Removal

WARNING

Switch off the electricity to the machine. Refer to GP 10. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

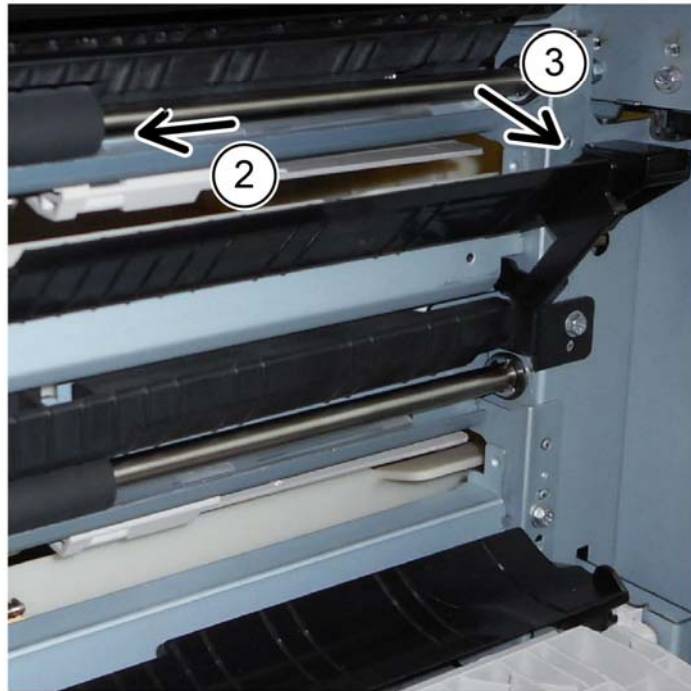
1. Open the 2TM left cover assembly, PL 80.20 Item 1.
2. Remove the k-clip (1), Figure 1.



F-1-0287-A

Figure 1 K-clip removal

3. Remove the takeaway roll assembly, [PL 80.25 Item 1, Figure 2](#).
 - a. Slide the takeaway roll assembly to the rear (2).
 - b. Lift the actuator and lay the shaft out of the way.
 - c. Slide forward, then pull out from the front to remove (3).



F-1-0288-A

Figure 2 Takeaway roll assembly removal

Replacement

The replacement is the reverse of the removal procedure.

REP 80.7 2TM Tray Chute Assembly

Parts List on [PL 80.25](#)

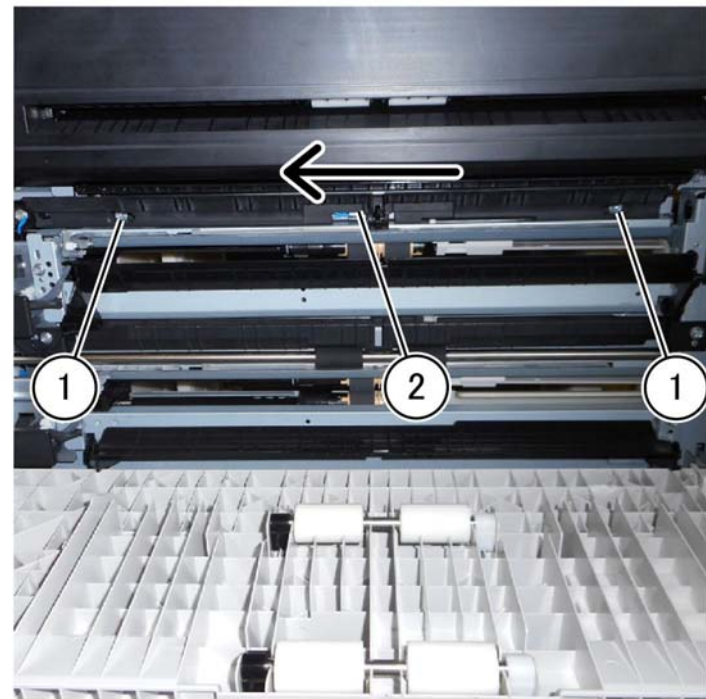
Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 describes the removal of 2TM tray 3 chute assembly, [PL 80.25 Item 3](#), tray 4 chute assembly is similar, [PL 80.25 Item 8](#).

1. Remove the 2TM feedhead 1 assembly, [REP 80.4](#).
2. Remove the upper takeaway roll assembly, [REP 80.6](#).
3. Remove the tray 3 chute assembly, [PL 80.25 Item 3, Figure 1](#).
 - a. Remove two screws (1).
 - b. Release the boss, above left and slide to the rear to remove the tray chute assembly (2),
 - c. Release two hooks, then remove the switch from the actuator.



F-1-0289-A

Figure 1 Tray 3 chute assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 80.8 2TM Takeaway Roll Assembly (Lower)

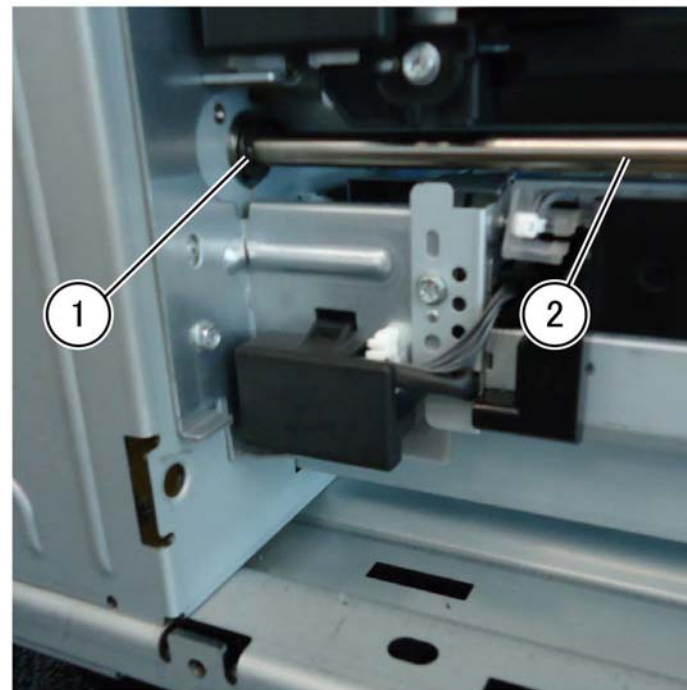
Parts List on [PL 80.25](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 2TM left cover assembly, [PL 80.20 Item 1](#).
2. Remove the 2TM takeaway roll assembly, [Figure 1](#).
 - a. Remove the k-clip (1).
 - b. Slide the 2TM takeaway roll assembly to the rear and remove (2).



F-1-0290-A

Figure 1 2TM takeaway roll assembly

Replacement

Replacement is the reverse of the removal procedure.

REP 80.9 2TM Takeaway Motor Assembly

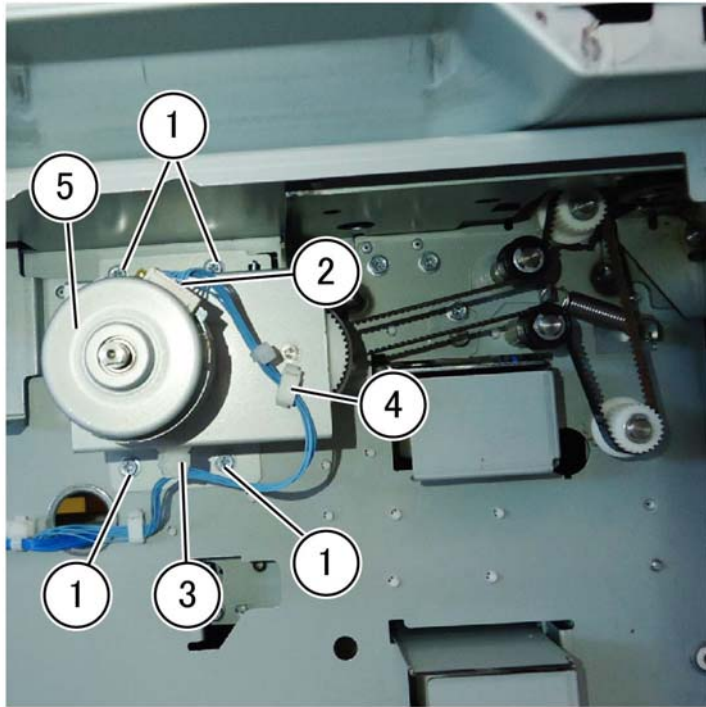
Parts List on [PL 80.30](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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, [PL 70.20 Item 11](#).
2. Remove the 2TM takeaway motor assembly, [PL 80.30 Item 1, Figure 1](#).
 - a. Remove four screws (1).
 - b. Disconnect the connector (2),
 - c. Remove the c-clip (3).
 - d. Release the harness from the clamp (4).
 - e. Remove the 2TM takeaway motor assembly (5).



F-1-0291-A

Figure 1 Takeaway motor assembly removal

REP 80.10 2TM Belt

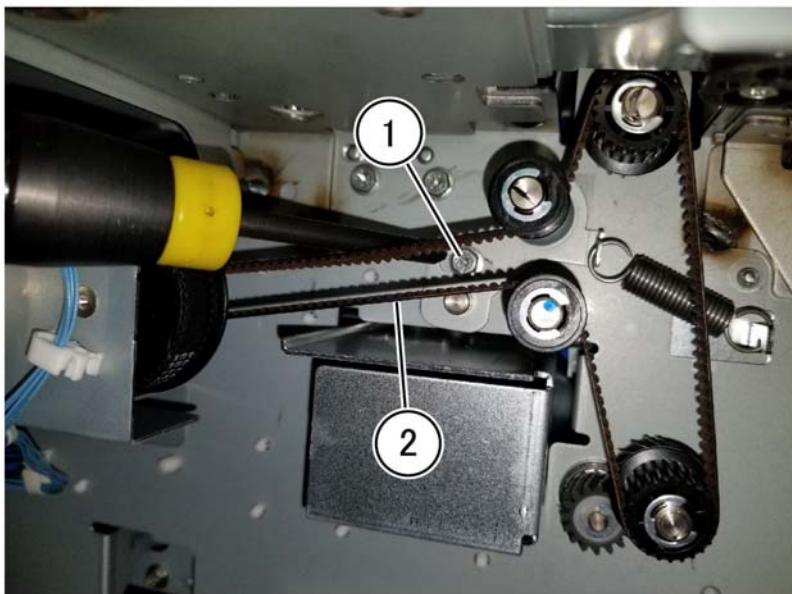
Parts List on [PL 80.30](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 2TM takeaway motor assembly, [REP 80.8](#).
2. Remove the 2TM belt, [PL 80.30 Item 2](#), [Figure 1](#).
 - a. Loosen the tensioning screw (1).
 - b. Remove the 2TM belt (2).



F-1-0415-A

Figure 1 2TM belt

Replacement

Replacement is the reverse of the removal procedure.

REP 80.12 2TM Feed Roll Kit

Parts List on [PL 80.35](#)

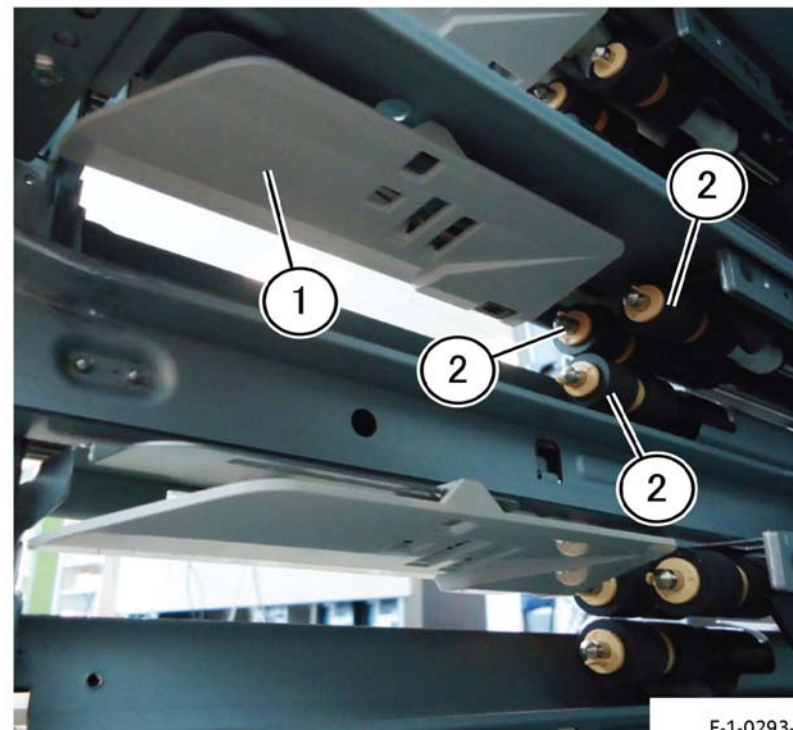
Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 feed roll kit replacement procedure is the same for tray 3 and tray 4. The feed rolls are replaced as a set, [PL 80.35 Item 13](#).

1. Remove the tray 3 & 4 assembly, [PL 70.20 Item 1](#).
2. Remove the feed, nudger, and retard roll, [PL 80.35](#), [Figure 1](#).
 - a. Move the chute to the front (1).
 - b. Remove the feed, nudger, and retard roll (2).



F-1-0293-A

Figure 1 2TM feed roll kit removal

Replacement

1. The replacement is the reverse of the removal procedure.
2. After a replacement, enter Diagnostic Mode, and use "Initialize HFSI Counter" to clear the HFSI counter:
Tray 3: "Chain Link: 954-802".
Tray 4: "Chain Link: 954-803".

REP 80.14 TTM Tray 3 Feedhead Assembly

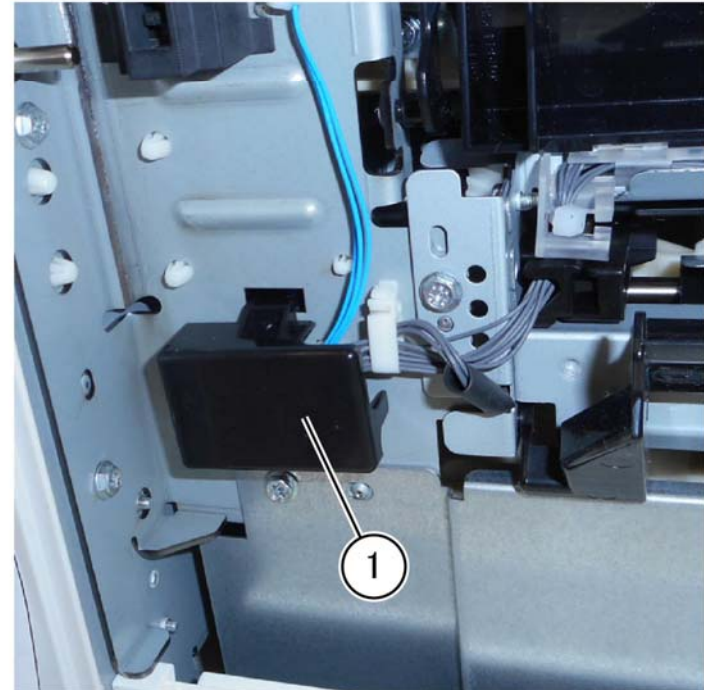
Parts List on [PL 80.40](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

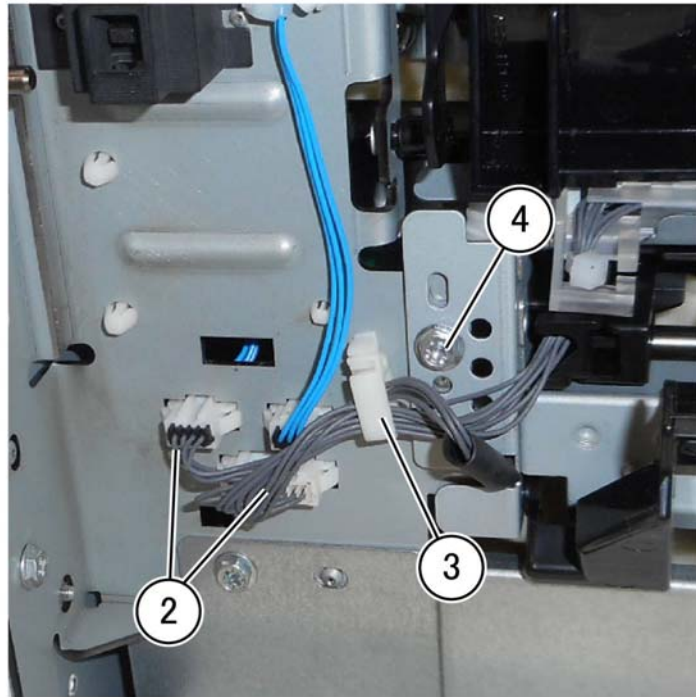
1. Open the TTM left cover assembly, [PL 70.35 Item 16](#).
2. Remove the connector cover (1), [Figure 1](#).



F-1-0294-A

Figure 1 Connector cover removal

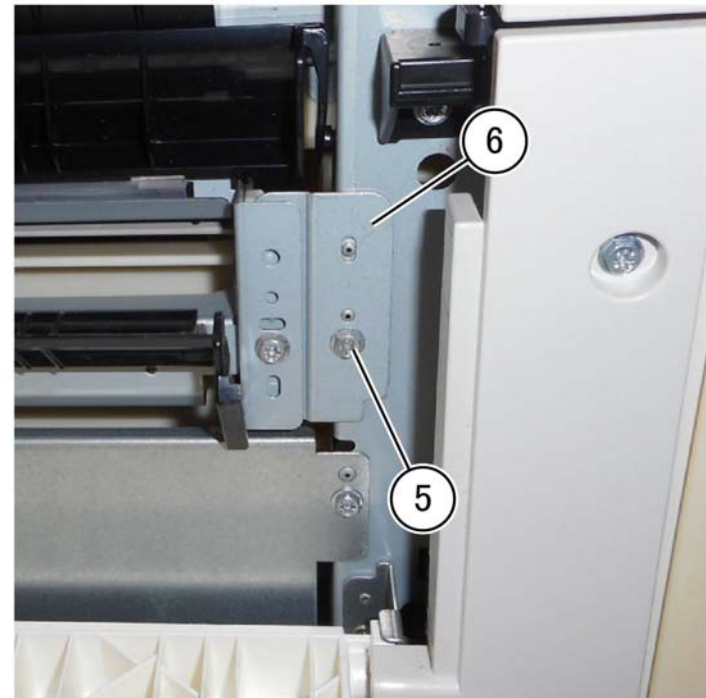
3. Disconnect two connectors (2), open the clamp (3), then remove the screw (4), [Figure 2](#).



F-1-0295-A

Figure 2 Rear side removal

4. Remove the screw (5), then remove the TTM tray 3 feedhead assembly (6) [PL 80.40 Item 3](#), [Figure 3](#).



F-1-0296-A

Figure 3 Front side removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. After a replacement, enter Diagnostic Mode, and use "Initialize HFSI Counter" to clear the HFSI counter:
"Chain Link: 954-802".

REP 80.15 TTM Tray 4 Feedhead Assembly

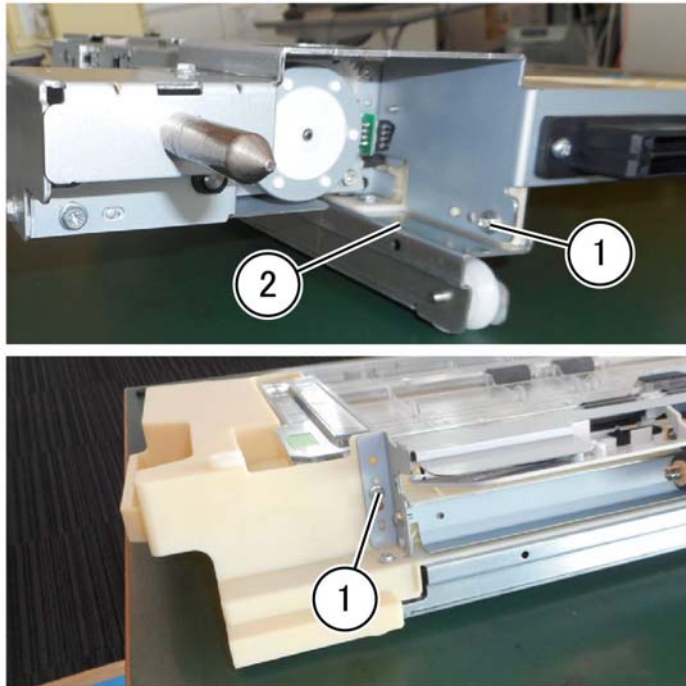
Parts List on [PL 80.55](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 TTM Tray 3 Assembly, [PL 70.35 Item 1](#).
2. Remove the TTM Tray 4 Assembly, [PL 70.35 Item 2](#).
3. Remove the TTM Transport Assembly, [PL 80.40 Item 6](#).
4. Remove the TTM tray 4 feedhead assembly, [PL 80.40 Item 7, Figure 1](#).
 - a. Remove two screws (1).
 - b. Remove the TTM tray 4 feedhead assembly (2).



F-1-0297-A

Figure 1 TTM tray 4 feedhead assembly removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. After a replacement, enter Diagnostic Mode, and use “Initialize HFSI Counter” to clear the HFSI counter:
“Chain Link: 954-803”.

REP 80.16 TTM Feed Roll Kit

Parts List on [PL 80.55](#)

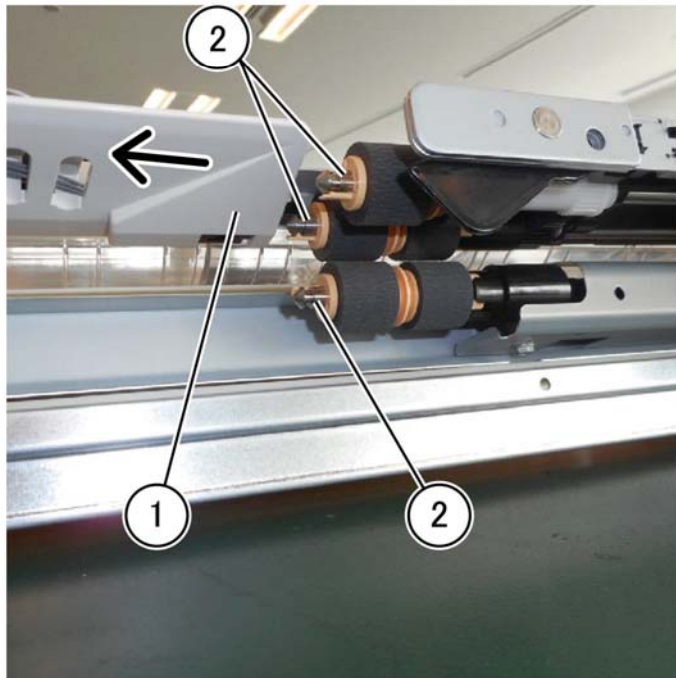
Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 feed roll kit replacement procedure is the same for tray 3 and tray 4. The feed rolls are replaced as a set, [PL 80.50 Item 11](#), [PL 80.55 Item 11](#).

1. Remove TTM tray 3 assembly, [PL 70.35 Item 1](#).
2. Remove TTM tray 4 assembly, [PL 70.35 Item 2](#).
3. If replacing the rolls for tray 4 remove the tray 4 feedhead assembly, [REP 80.15](#).
4. Remove the feed, nudger, and retard roll, [PL 80.50](#) and [PL 80.55](#), [Figure 1](#).
 - a. Move the chute to the front (1).
 - b. Remove the feed, nudger, and retard roll (2).



F-1-0299-A

Figure 1 TTM feed roll kit removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. After a replacement, enter Diagnostic Mode, and use "Initialize HFSI Counter" to clear the HFSI counter:
Tray 3: "Chain Link: 954-802".
Tray 4: "Chain Link: 954-803".

REP 80.17 TTM Transport Roll Assembly

Parts List on [PL 80.60](#)

Removal

WARNING

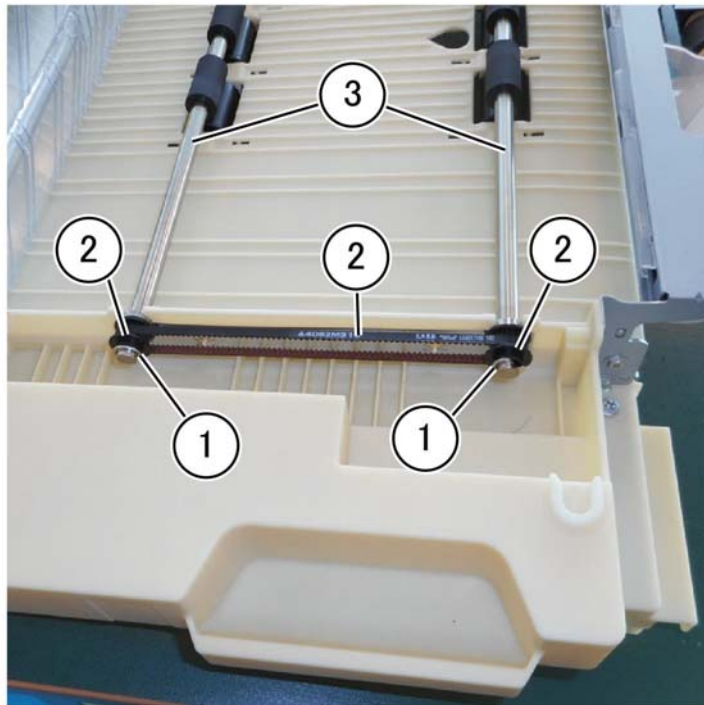
Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove TTM tray 3 assembly, [PL 70.35 Item 1](#).
2. Remove TTM tray 4 assembly, [PL 70.35 Item 2](#).
3. Remove the TTM tray 4 feedhead assembly, [REP 80.15](#).
4. Remove the transport roll assembly, [PL 80.60, Figure 1](#).

CAUTION

Take care not to lose the two washers, [PL 80.60 Item 15](#) and two bearings, [PL 80.60 Item 9](#) behind the two pulleys, [PL 80.60 Item 10](#).

- a. Move two e-rings (1).
- b. Remove two pulleys and the belt (2).
- c. Remove the transport roll assembly (3).



F-1-0300-A

Figure 1 Transport roll assembly removal

Replacement

The replacement is the reverse of the removal procedure.

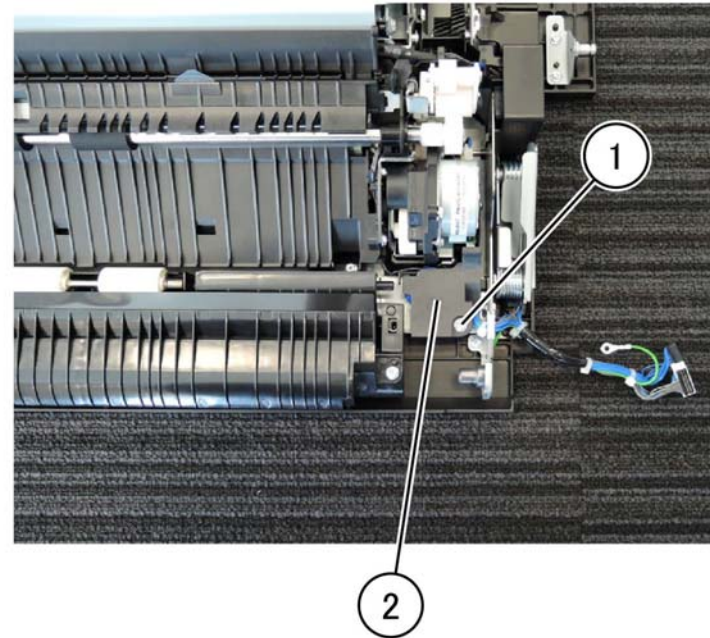
REP 80.18 Not Used
Parts List on
Removal

REP 80.19 Bypass Feedhead Assembly
Parts List on **PL 80.120**
Removal

WARNING

Switch off the electricity to the machine. Refer to **GP 10**. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

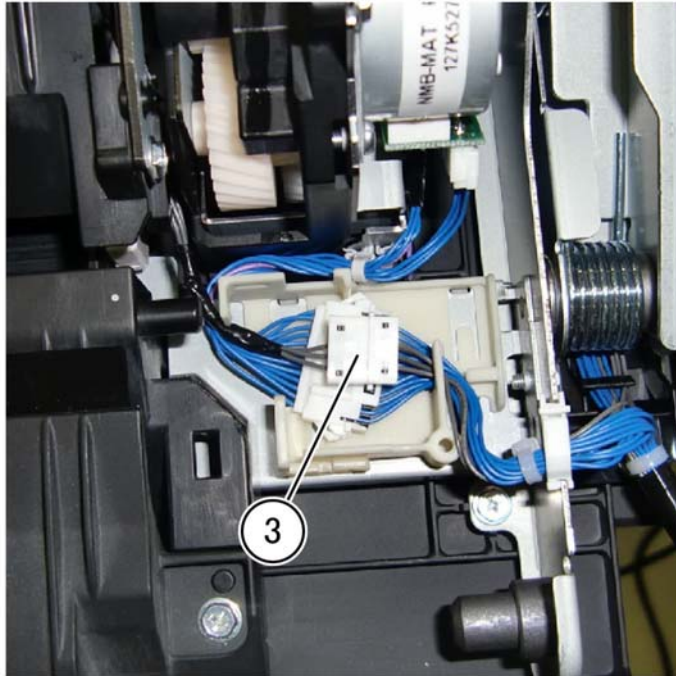
1. Remove the left cover assembly, **REP 80.21**.
2. Remove the bypass tray, **REP 70.3**.
3. Remove the bypass feedhead assembly.
 - a. Remove the screw (1), then remove the harness guide (2), **Figure 1**.



F-1-0301-A

Figure 1 Transport roll assembly removal

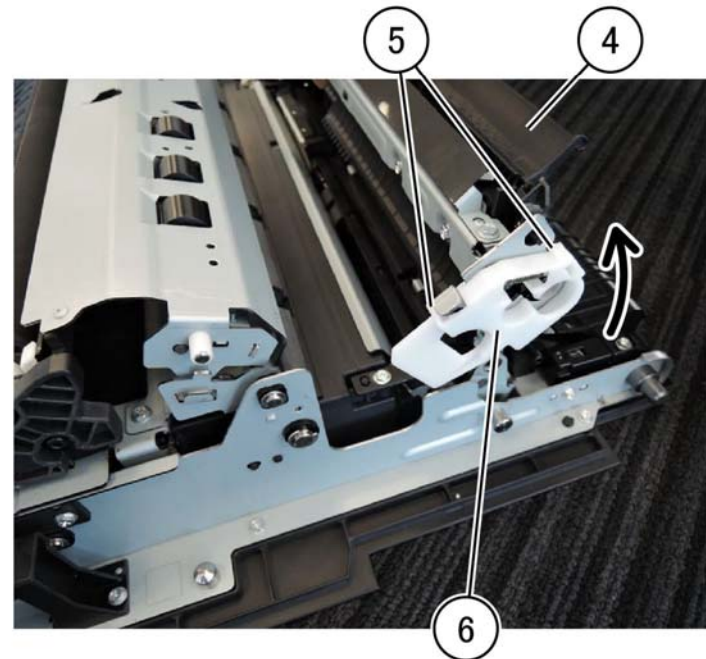
- b. Disconnect the connector (3), [Figure 2](#).



F-1-0302-A

Figure 2 Connector

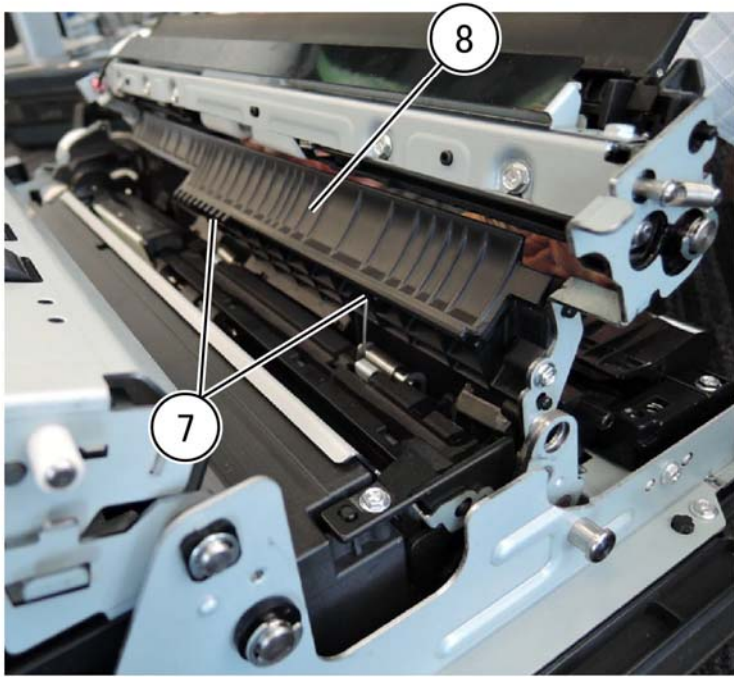
- c. Lift the bypass takeaway assembly (4) in the direction of the arrow, Remove two claws (5), than remove the knob (6), [Figure 3](#).



F-1-0303-A

Figure 3 Knob removal

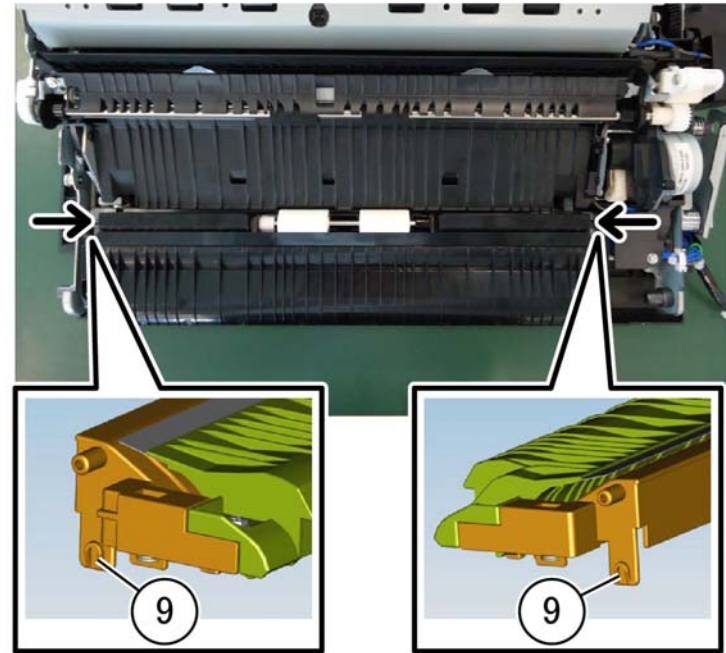
- d. Push in and move left to release two springs (7) and remove from the bypass takeaway assembly, then remove the bypass takeaway assembly (8) PL 70.50 Item 4, Figure 4.



F-1-0304-A

Figure 4 Bypass takeaway assembly removal

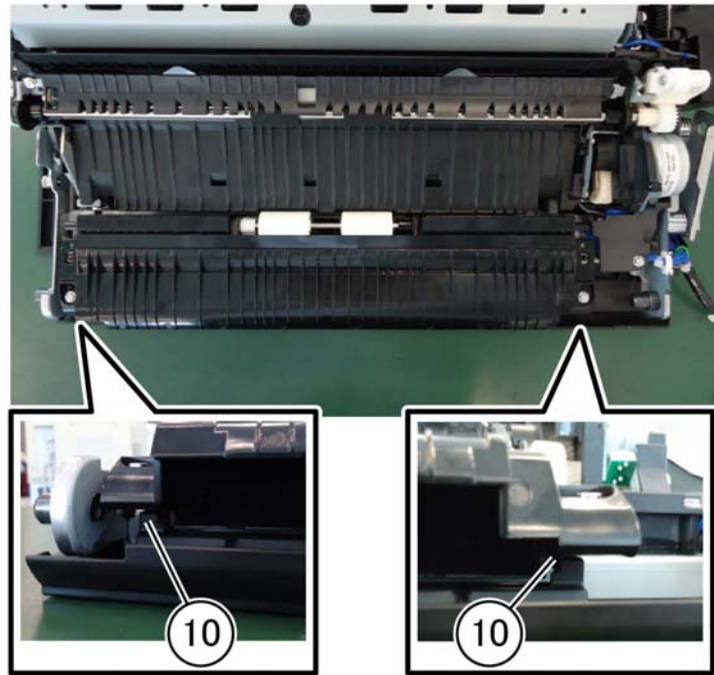
- e. Press the left lower chute assembly tabs in the direction of the arrows to release the tab pins (9), then lift the left chute assembly, Figure 5.



F-1-0305-A

Figure 5 Left lower chute pins

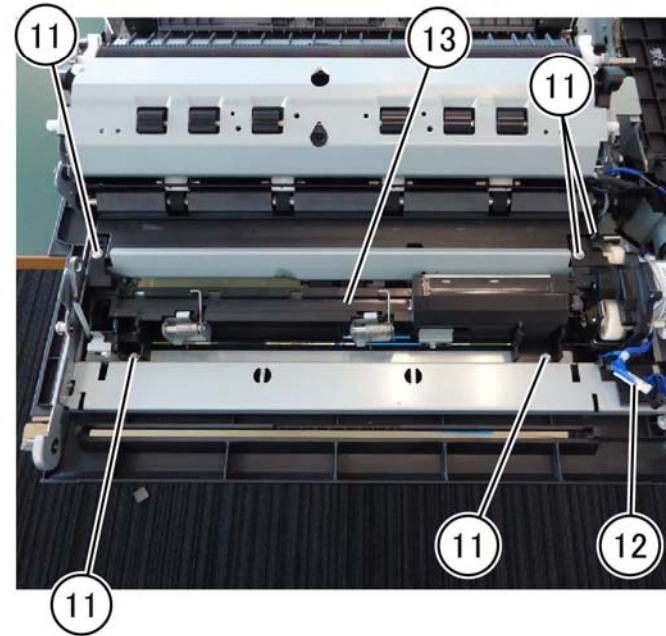
- f. Remove two screws (10) holding the miller plate, then remove the left lower chute assembly, [Figure 6](#).



F-1-0306-A

Figure 6 Left lower chute assembly removal

- g. Remove five screws (11), disconnect the connector (12), then remove the bypass feeder kit (13), [PL 70.50 Item 17, Figure 7](#).



F-1-0307-A

Figure 7 Bypass feeder kit removal

Replacement

Replacement is the reverse of the removal procedure.

REP 80.20 Bypass Tray Roll Kit

Parts List on [PL 80.120](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

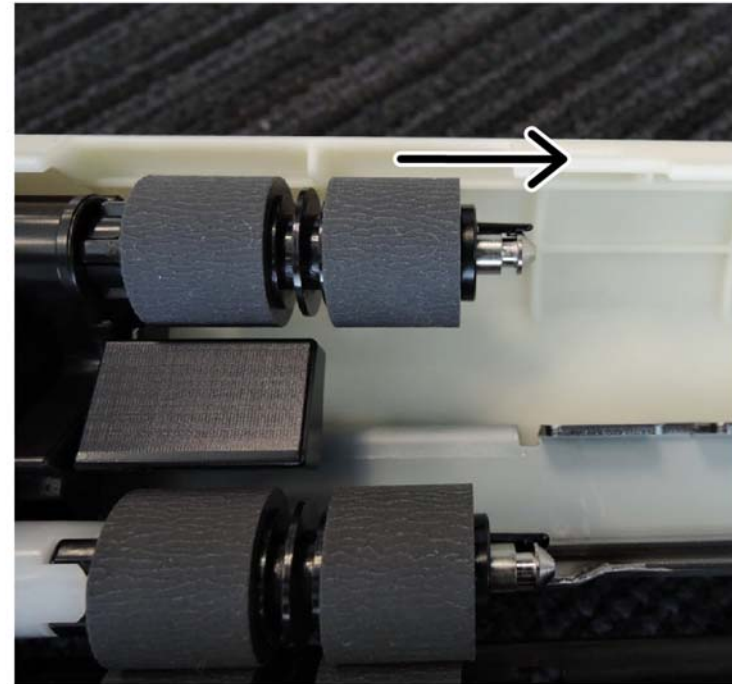
1. Remove the bypass feedhead assembly, [REP 80.19](#).
2. Remove the bypass tray roll kit.
 - a. Lift the top cover of the upper frame assembly in the direction of the arrow (1), [Figure 1](#).



F-1-0308-A

Figure 1 Lift the cover

- b. Release the hooks of the feed, nudge, and retard rolls, [PL 80.20](#), then slide and remove in the direction of the arrow (2), [Figure 2](#).



F-1-0309-A

Figure 2 Roll removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. After a replacement, enter Diagnostic Mode, and use "Initialize HFSI Counter" to clear the HFSI counter:
"Chain Link: 954-805".

REP 80.21 Left Cover Assembly

Parts List on [PL 80.65](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 lower left cover, [PL 28.10 Item 4](#).
2. Disconnect the left cover assembly harness: [Figure 1](#).
 - a. Release the clamp (1).
 - b. Disconnect two connectors (2).
 - c. Remove the screw securing the ground wire (3).

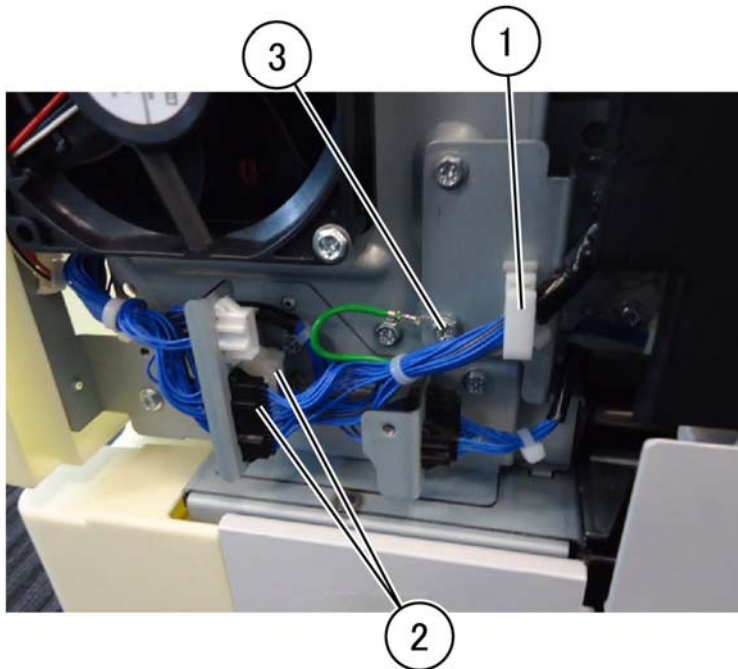


Figure 1 Disconnect the harness

F-1-0310-A

3. Remove the left cover assembly.
 - a. Open the left cover (1), then remove the KL-clip (2) securing the rear left support bracket, [PL 80.65 Item 5, Figure 2](#).

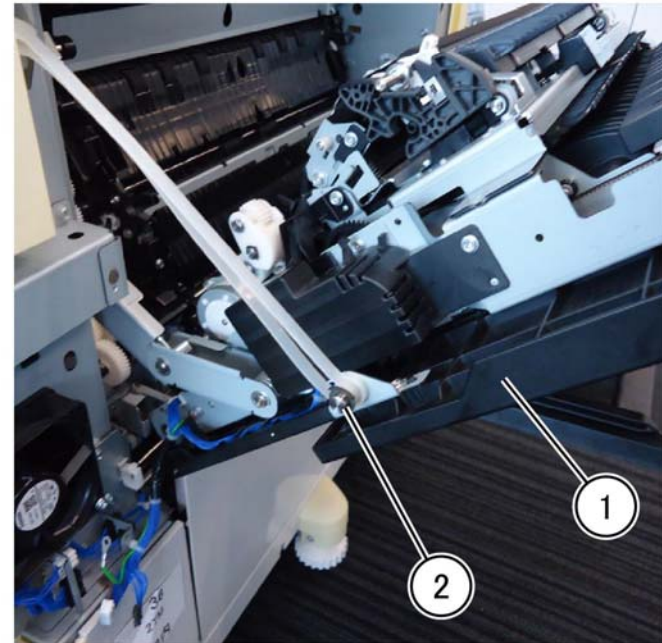


Figure 2 KL-clip removal

F-1-0311-A

- b. Remove the EL-clip (3), then release the front support from the pin, [Figure 3](#).

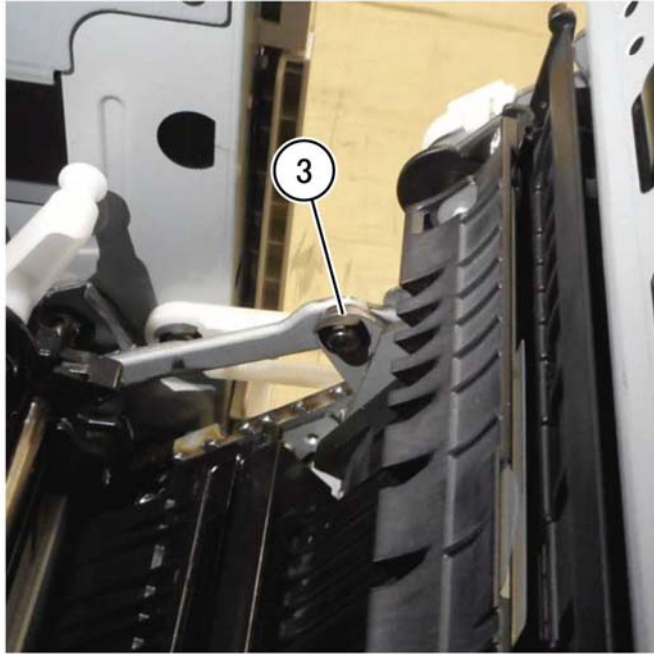


Figure 3 E-clip removal

F-1-0312-A

- c. Remove the KL-clip (4) securing the link assembly, then release the link assembly from the pin, [Figure 4](#).

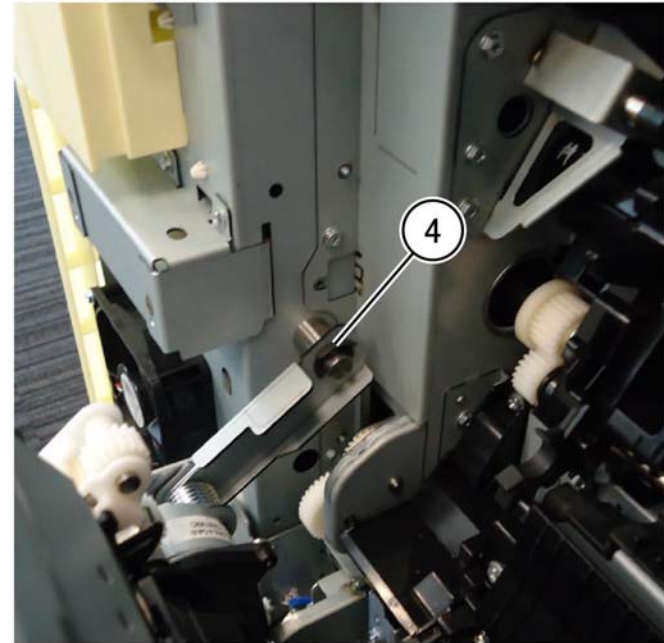


Figure 4 Release the link assembly

F-1-0313-A

- d. Remove the KL-clip (5), then securing the front support to the IOT frame, [Figure 5](#).

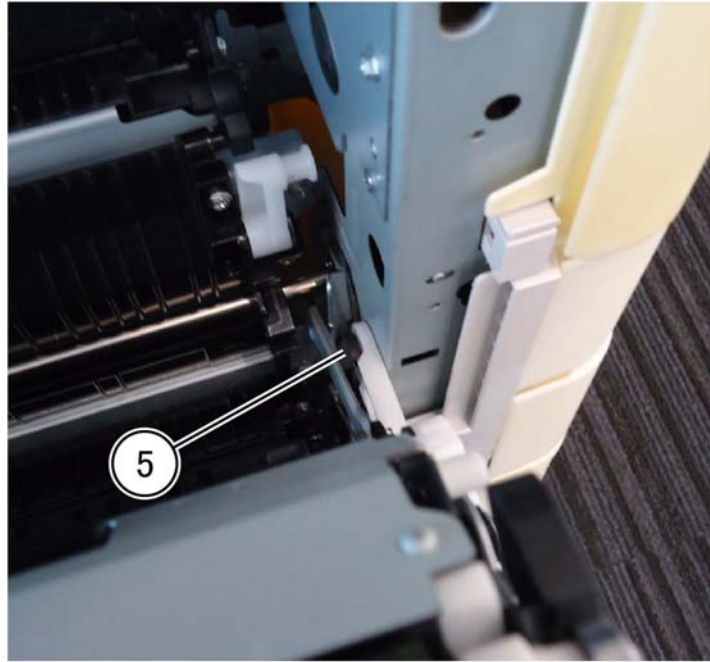


Figure 5 KL-clip removal

F-1-0314-A

- e. Open the left cover assembly 15 degrees from horizontal. Slide the left cover assembly to the rear of the machine to clear the front hinge (6) and pull out, then slide the left cover assembly forward to release the pin in the rear (7) and remove the left cover assembly, [Figure 6](#).

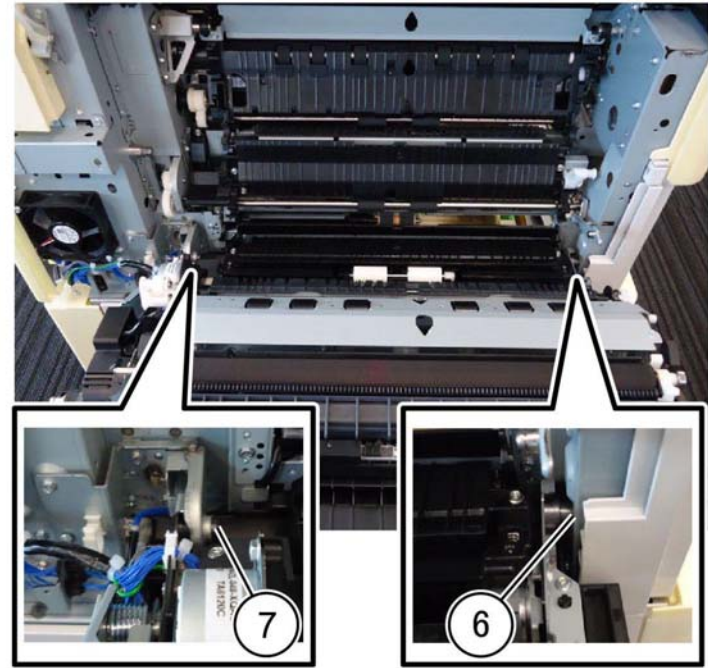


Figure 6 Left cover assembly removal

F-1-0315-A

Replacement

The replacement is the reverse of the removal procedure.

REP 80.22 2nd BTR Roll Assembly

Parts List on [PL 80.65](#)

Removal

WARNING

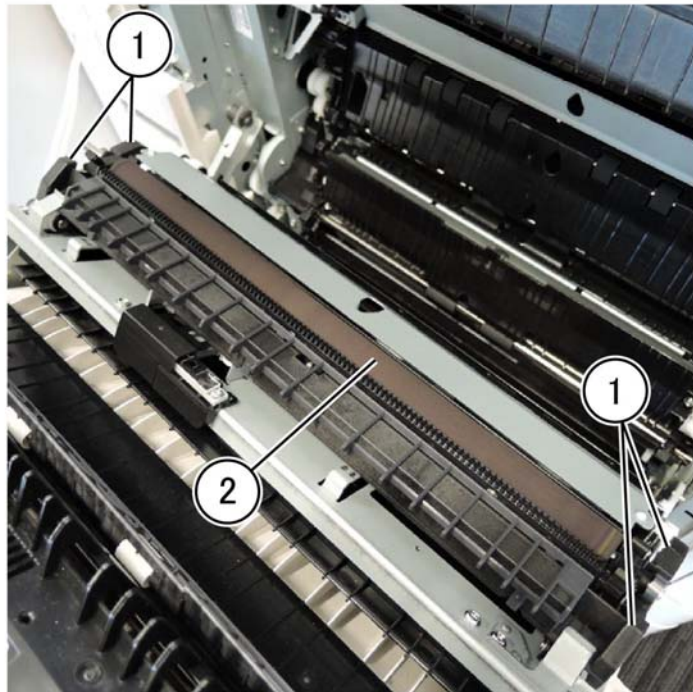
Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Open the left cover assembly, [PL 80.65 Item 1](#).
2. Remove the 2nd BTR roll assembly, [PL 80.65 Item 2](#).

CAUTION

The bearing is not secured to the 2nd BTR roll assembly, do not drop the bearing during removal and replacement.

- a. Release four hooks (1), then remove the 2nd BTR roll (2), [Figure 1](#).
[Figure 2](#)



F-1-0316-A

Figure 1 2nd BTR roll removal



F-1-0317-A

Figure 2 2nd BTR roll removed

Replacement

1. Replacement is the reverse of the removal procedure.
2. Enter [dC135](#) to reset the HFSI Counter for the 2nd BTR assembly:
"Chain Link: 954-821".

REP 80.23 2nd BTR Housing Assembly

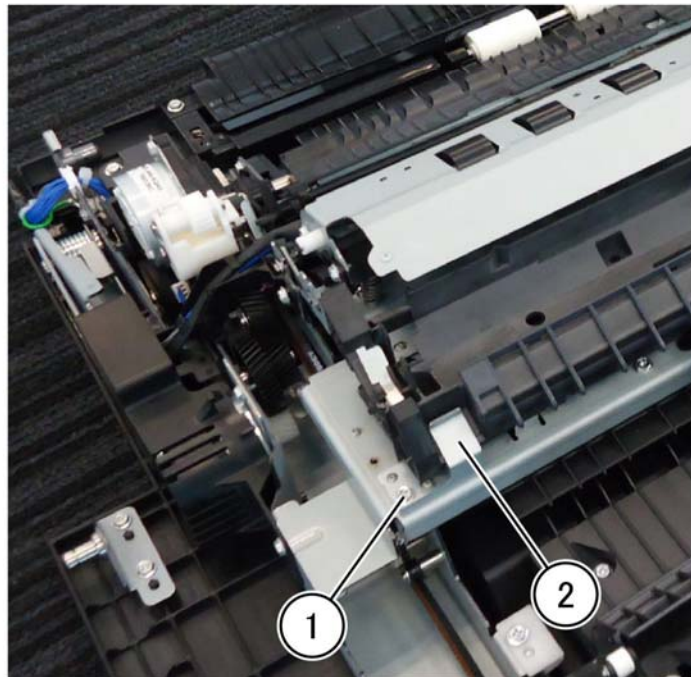
Parts List on [PL 80.70](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

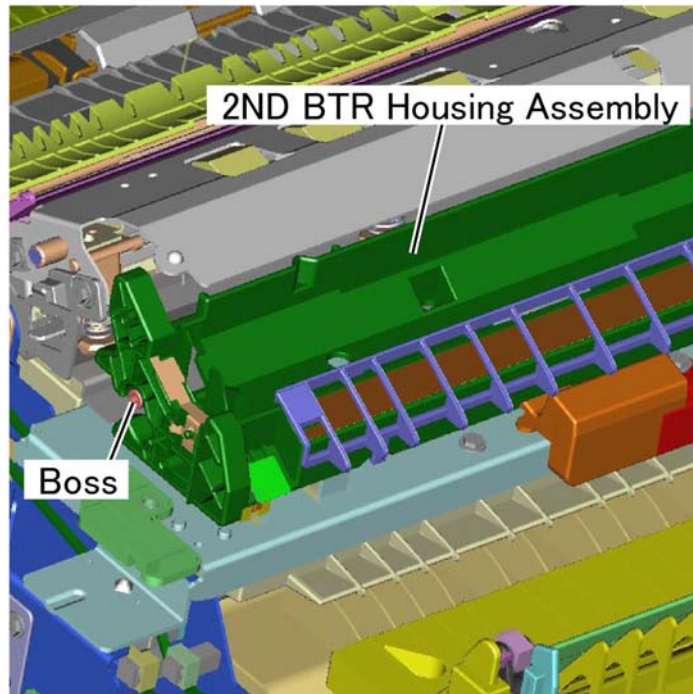
1. Open the left cover assembly, [PL 80.65 Item 1](#).
2. Remove the fusing link: [Figure 1](#).
 - a. Remove the screw (1).
 - b. Remove the bracket (2).



F-1-0318-A

Figure 1 Bracket removal

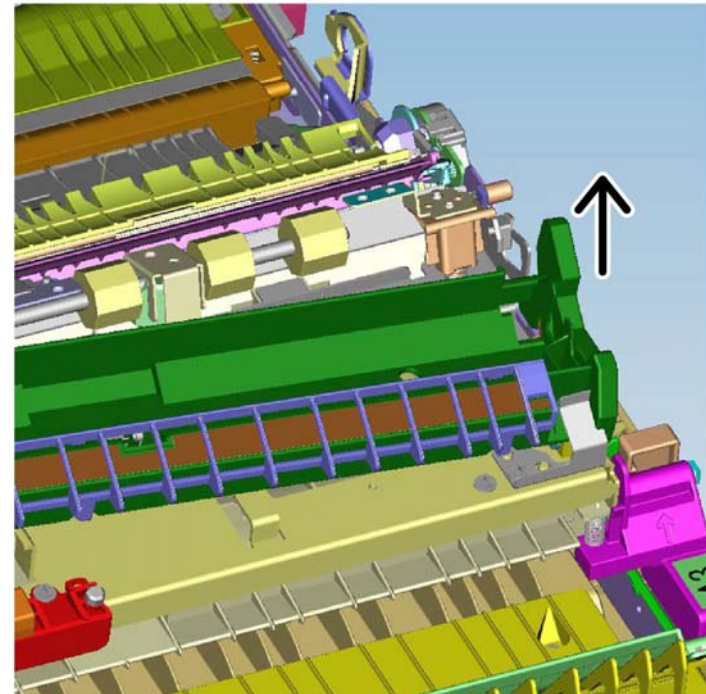
3. Release the boss securing the 2nd BTR housing assembly, PL 80.70 Item 5, Figure 2.



F-1-0319-A

Figure 2 Boss location

4. Slide the 2nd BTR housing assembly in the direction of the arrow to remove, Figure 3.



F-1-0320-A

Figure 3 2nd BTR housing assembly removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. After replacement, enter dC135 HFSI Counter to reset the counter for the 2nd BTR unit:
"Chain Link: 954-821".

REP 80.24 Duplex Inner Chute Assembly

Parts List on [PL 80.70](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

Do not touch the 2nd BTR roll surface with your hands.

1. Remove the 2nd BTR housing assembly, [REP 80.23](#).
2. Remove the screw (1), then remove the duplex motor cover (2), [Figure 1](#).

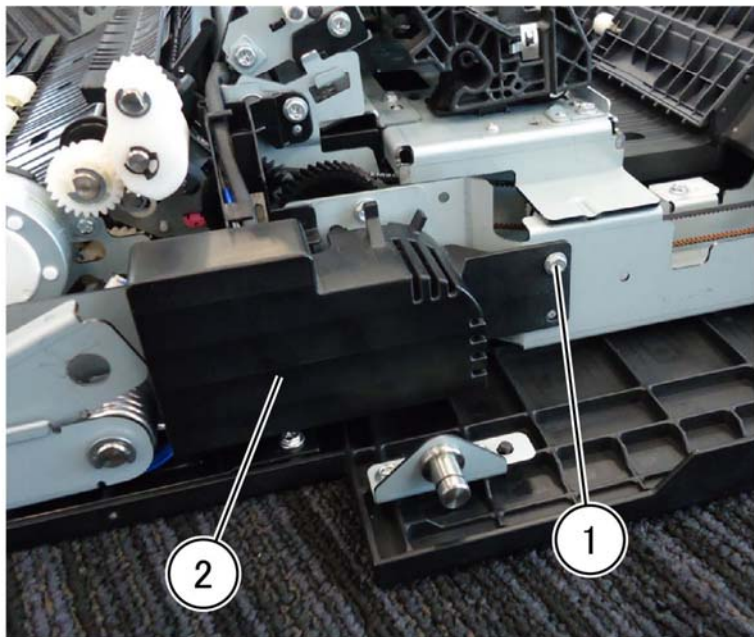


Figure 1 Duplex motor cover removal

F-1-0321-A

3. Disconnect two connectors (1), then release the harness from the harness guide (2), [Figure 2](#).

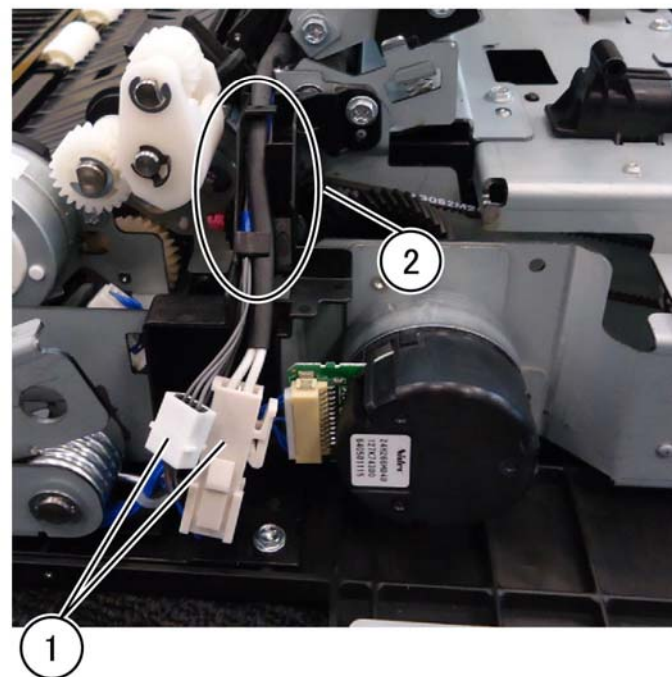


Figure 2 Release the harness

F-1-0322-A

4. Remove the duplex inner chute assembly, PL 80.80, Figure 3.
 - a. Remove the screw (1).
 - b. Remove the plate (2).

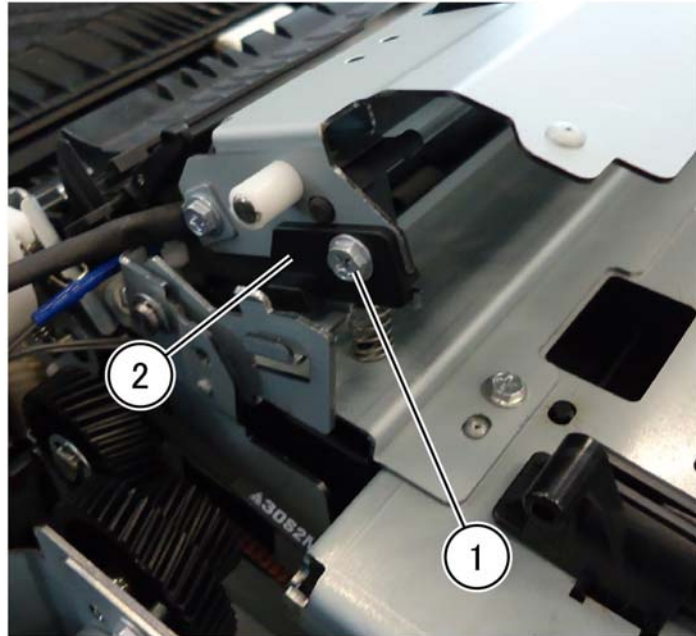


Figure 3 Plate removal

F-1-0323-A

5. Release the two registration chute pins (3), Figure 4.

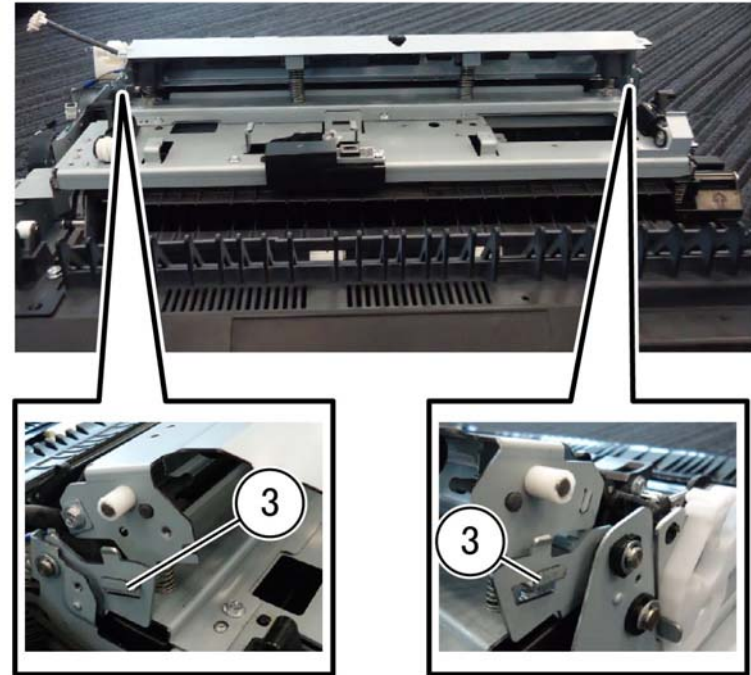


Figure 4 Pin release

F-1-0324-A

6. Lift then remove the registration chute (4), [Figure 5](#).

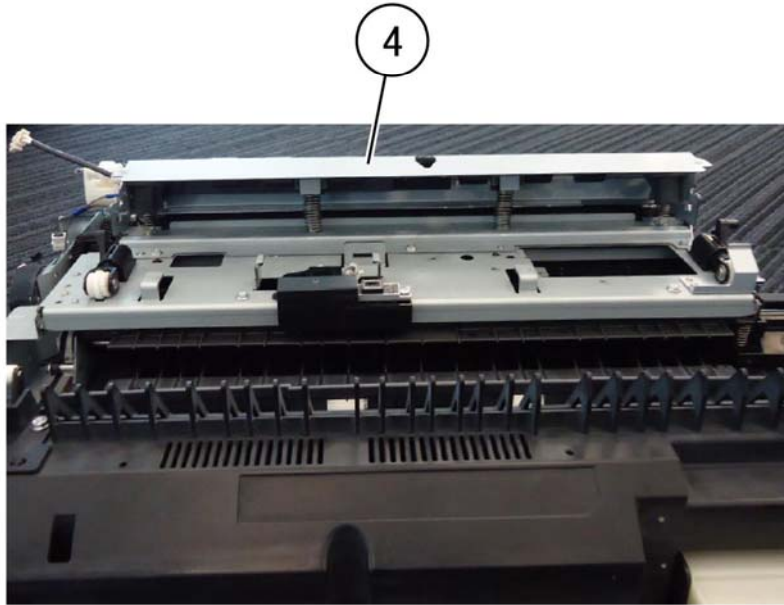


Figure 5 Registration chute removal

F-1-0325-A

7. Remove the e-clip (5), then remove the handle (6), [Figure 6](#).

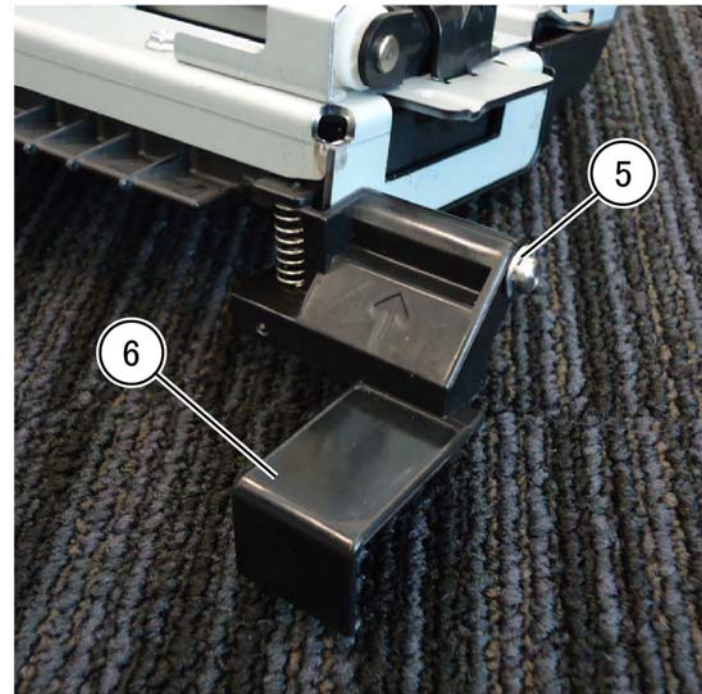


Figure 6 Handle removal

F-1-0326-A

8. Remove the POB jam sensor, [REP 80.28](#).

9. Remove four screws (8), then remove the registration tie plate (9), [Figure 7](#).

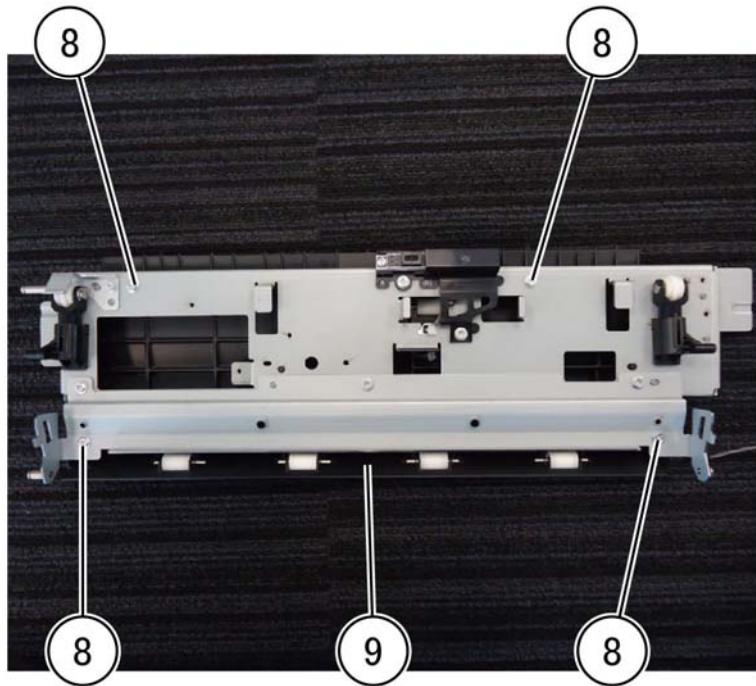


Figure 7 Tie plate removal

F-1-0327-A

10. Turn the duplex inner chute assembly over, then remove the wire harness (10), [Figure 8](#).

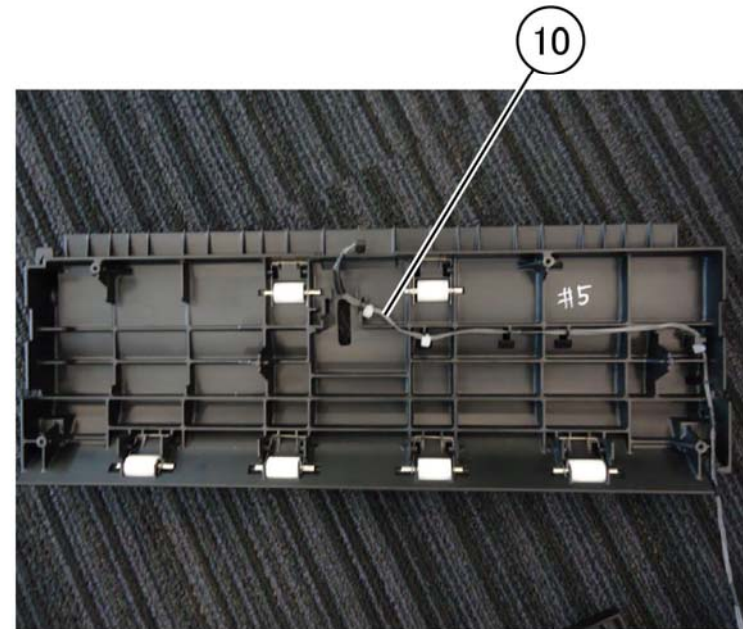


Figure 8 Wire harness removal

F-1-0328-A

Replacement

The replacement is the reverse of the removal procedure.

REP 80.25 Lower Chute Assembly

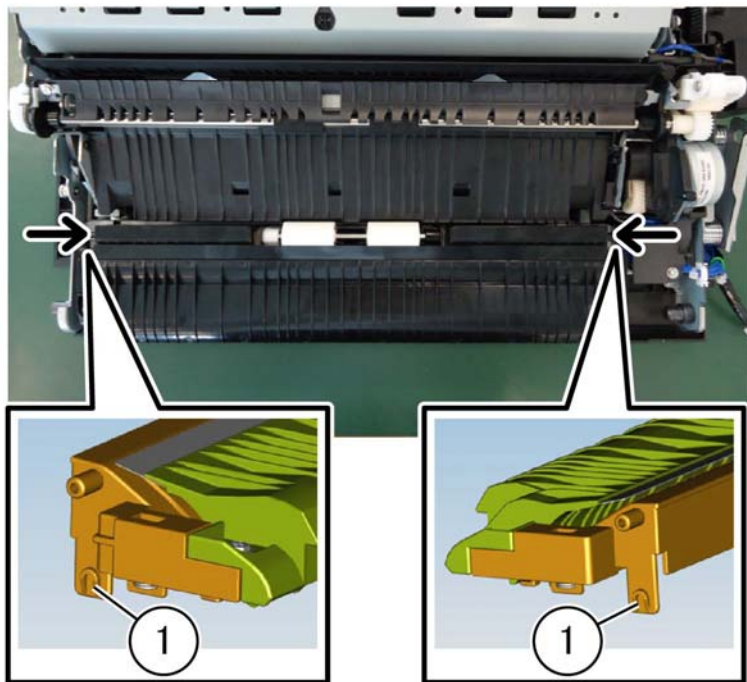
Parts List on [PL 80.75](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

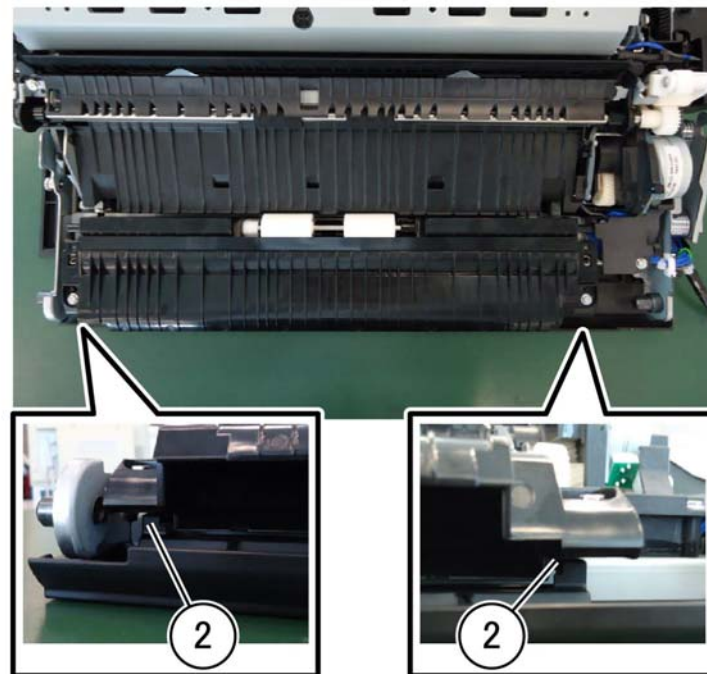
1. Open the left cover assembly, [PL 80.65 Item 1](#). If it is necessary to remove the left cover assembly refer to [REP 80.21](#).
2. Press in on the lower chute assembly (1) in the direction of the arrows, then lift the lower chute assembly, [Figure 1](#).



F-1-0329-A

Figure 1 Duplex motor cover removal

3. Release two tabs (2) attaching the left transport chassis to the lower chute assembly, then remove the lower chute assembly, [Figure 2](#).



F-1-0330-A

Figure 2 Lower chute assembly removal

Replacement

The replacement is the reverse of the removal procedure.

REP 80.26 Registration Sensor

Parts List on [PL 80.80](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 2nd BTR housing assembly, [REP 80.23](#).
2. Remove the screw (1), then remove the duplex motor cover (2), [Figure 1](#).

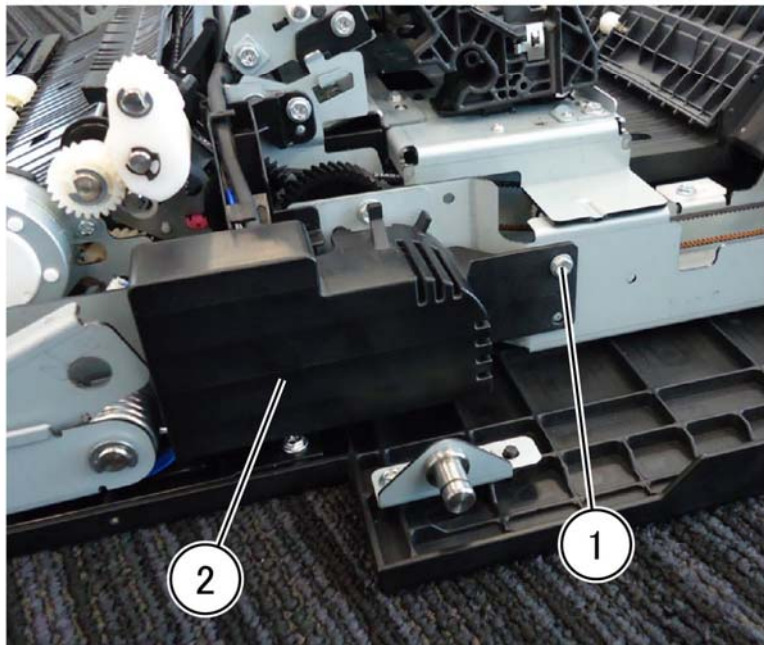


Figure 1 Registration sensor removal

F-1-0331-A

3. Disconnect two connectors (1), then release the harness from the harness guide (2), [Figure 2](#).

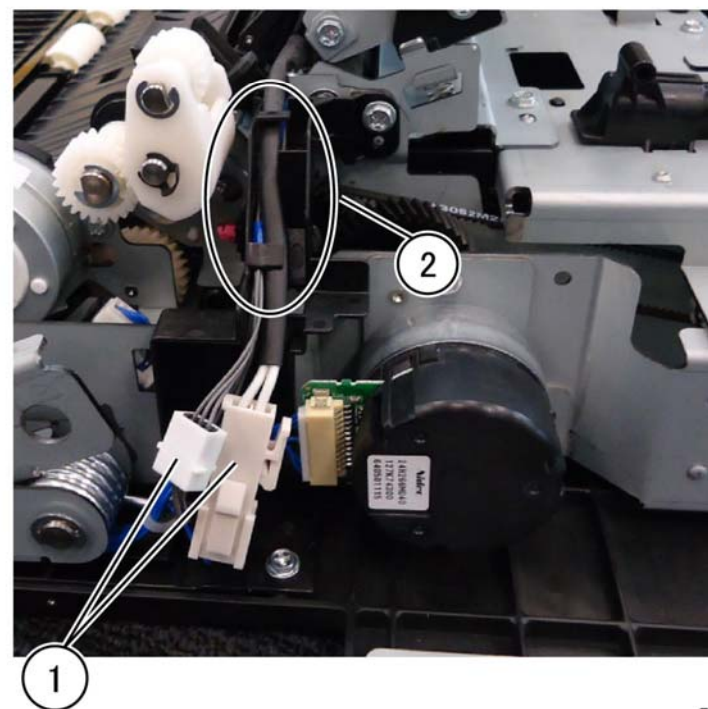


Figure 2 Release the harness

F-1-0332-A

4. Remove the duplex inner chute assembly, [REP 80.24](#).

5. Remove the registration sensor (1), [Figure 3](#).

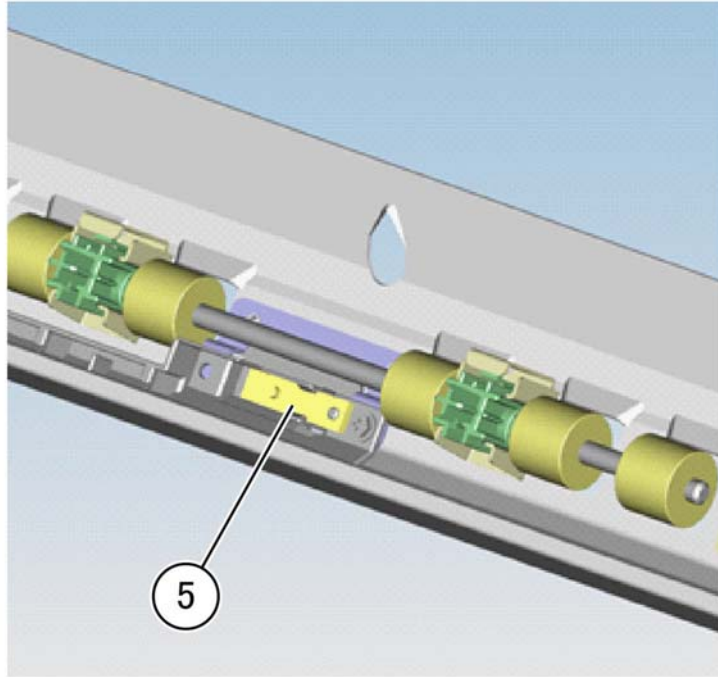


Figure 3 Registration sensor removal

F-1-0333-A

Replacement

Replacement is the reverse of the removal procedure.

REP 80.27 Handle

Parts List on [PL 80.80](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 cover assembly, [PL 80.65 Item 1](#).
2. Remove the e-clip (1), then remove the handle (2), [PL 80.80 Item 6, Figure 1](#).

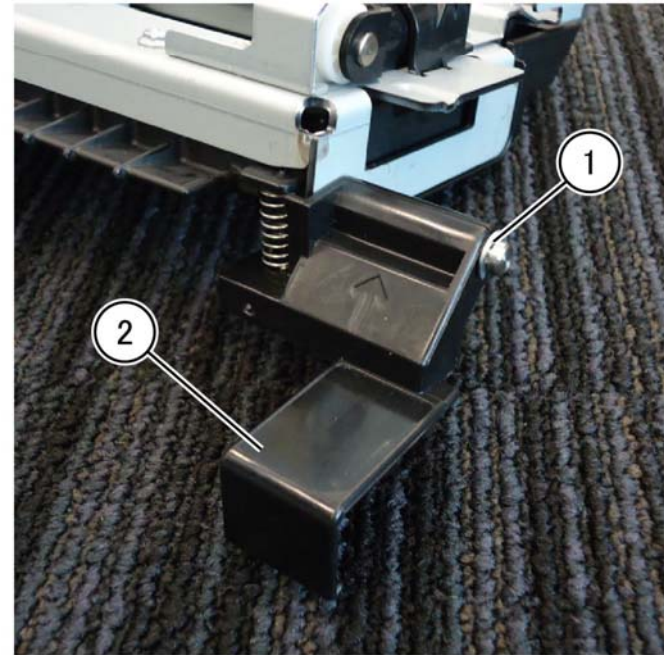


Figure 1 Disconnect the harness

F-1-0334-A

Replacement

Replacement is the reverse of the removal procedure.

REP 80.28 POB Jam Sensor

Parts List on [PL 80.80](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 2ND BTR housing assembly, [REP 80.23](#).
2. Remove the harness cover: [Figure 1](#).
 - a. Remove the screw (1).
 - b. Remove the harness cover (2).

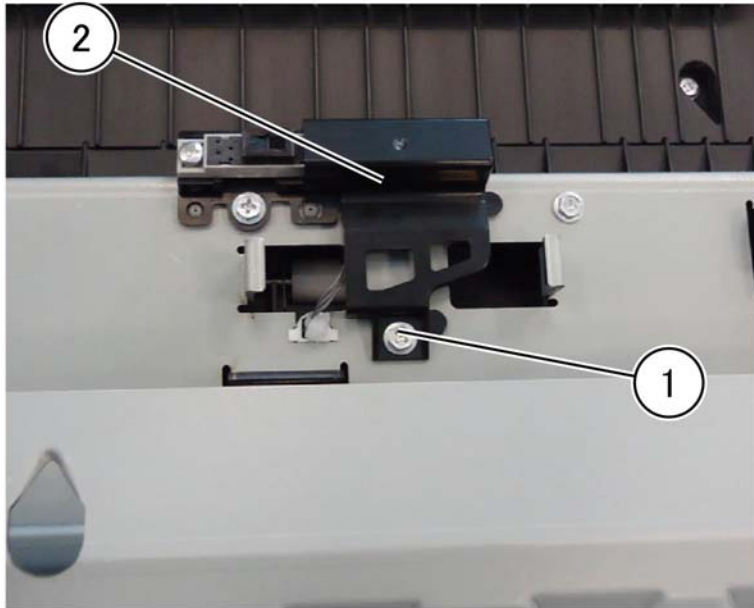


Figure 1 Harness cover removal

F-1-0335-A

3. Remove the POB jam sensor, [PL 80.80 Item 9, Figure 2](#).
 - a. Remove the screw (1).
 - b. Disconnect the connector (2).
 - c. Remove the POB jam sensor (3).

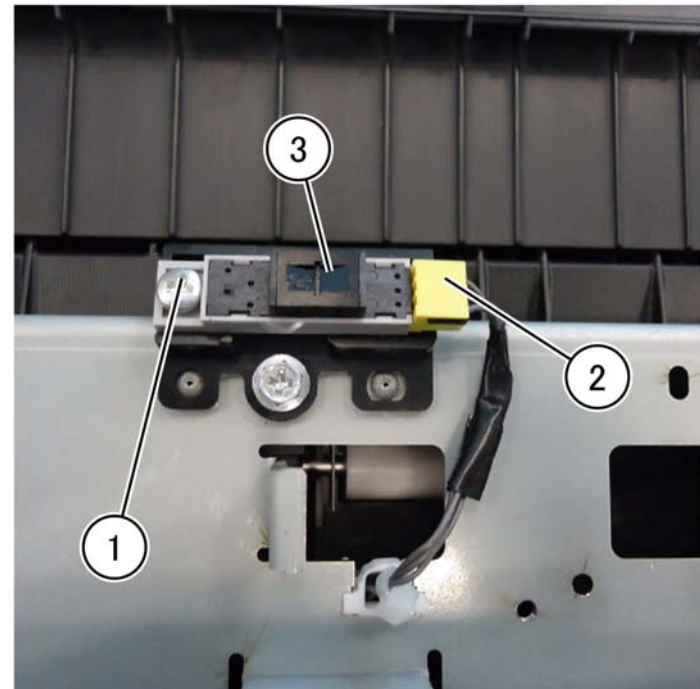


Figure 2 POB jam sensor removal

F-1-0336-A

Replacement

Replacement is the reverse of the removal procedure.

REP 80.29 Left Cover Interlock Switch Assembly

Parts List on [PL 80.65](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 video contact chassis assembly, [GP 32](#).
2. Open the left cover assembly, [PL 80.65 Item 1](#).
3. Disconnect the connector behind the video contact chassis assembly (1), [Figure 1](#).

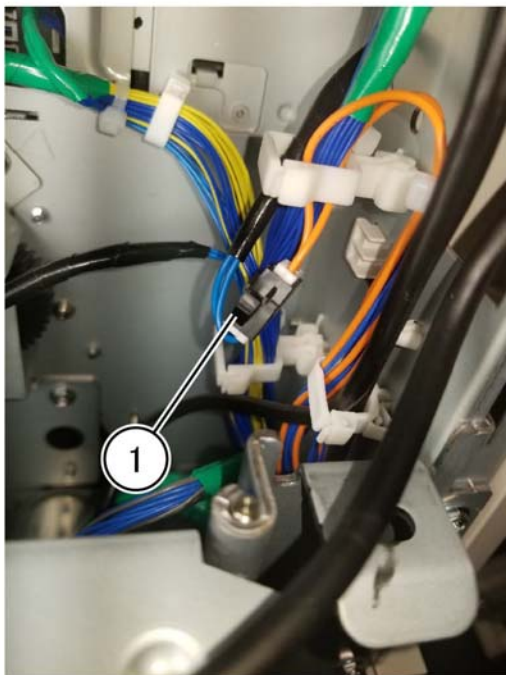


Figure 1 Connector location

F-1-0337-A

4. Remove two screws (2) then remove the interlock switch assembly (3) [PL 80.65 Item 9](#), [Figure 2](#).

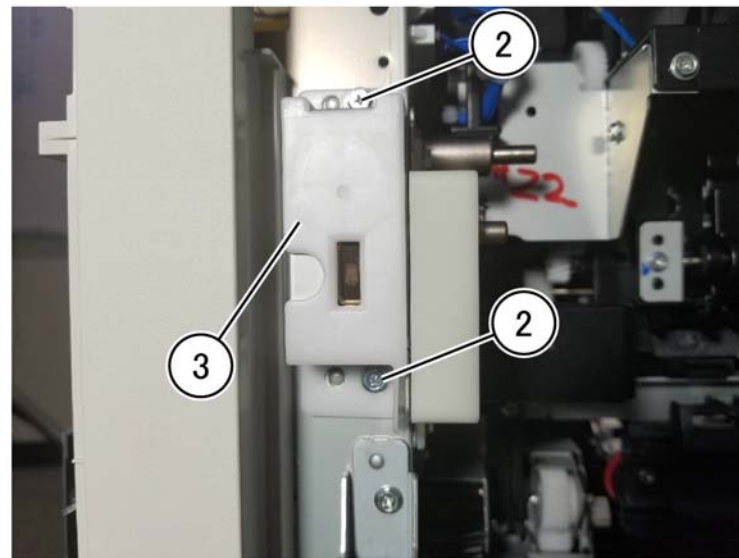


Figure 2 Interlock switch assembly removal

F-1-0338-A

Replacement

Replacement is the reverse of the removal procedure.

REP 80.30 Registration Transport Assembly

Parts List on [PL 80.90](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 cover assembly, [PL 80.65 Item 1](#).
2. Mark the position of the adjustment camshaft on the front side of the registration transport assembly, [PL 80.90 Item 1](#), before beginning removal, [Figure 1](#).

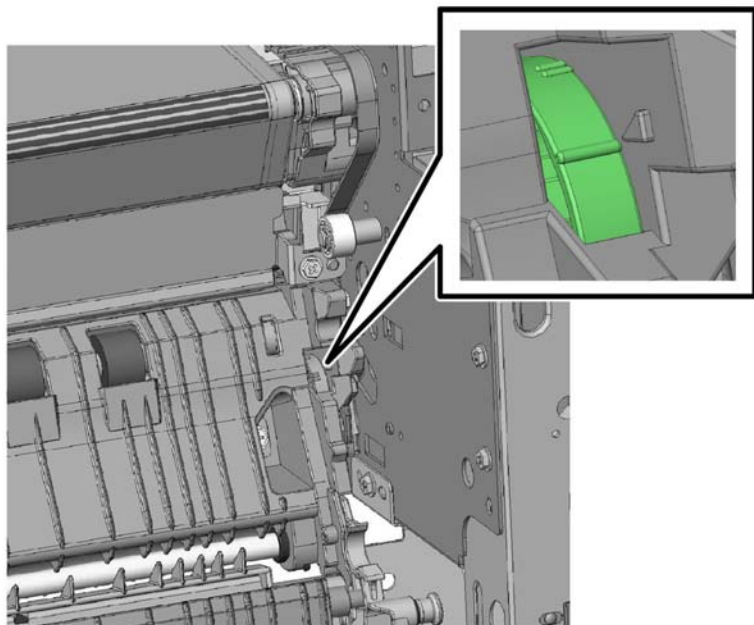
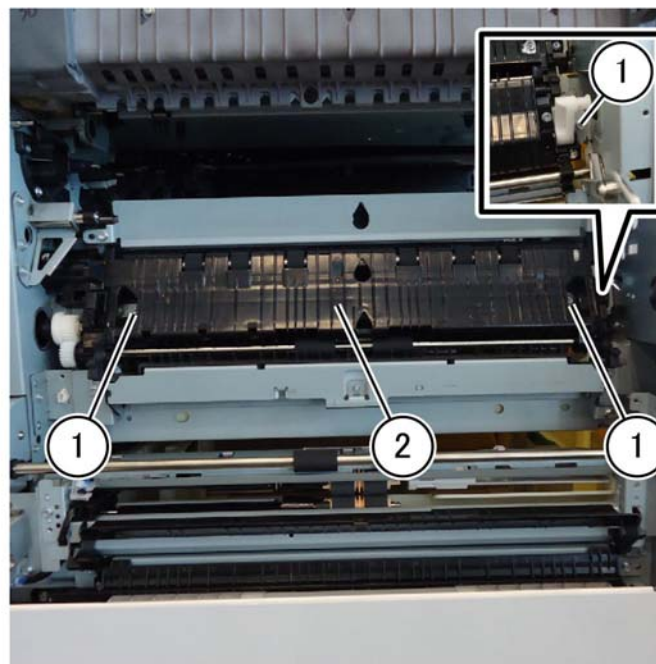


Figure 1 Mark the adjust camshaft location

F-1-0339-A

3. Remove the registration transport assembly, [PL 80.90 Item 1](#), [Figure 2](#).
 - a. Remove three screws (1).
 - b. Slide the registration transport assembly (2) left towards the shaft hole.
 - c. Lift the right side up then disengage the registration transport assembly from the pin.
 - d. Roll the top of the registration transport assembly back to release the registration transport assembly from the pin.
 - e. Pull the right-side out to release the shaft from the hole in the chassis and remove the registration transport assembly.



F-1-0340-A

Figure 2 Registration transport assembly removal

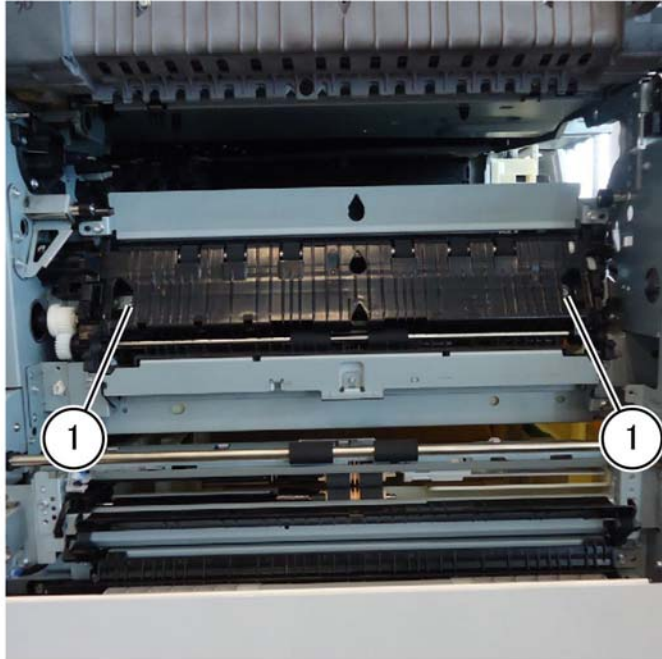
Replacement

1. Replacement is the reverse of the removal procedure.
2. Attach the registration transport assembly with the rear screw first.

CAUTION

Tighten the rear screw at the rear side of the registration transport assembly or the duplex motor drive of the motor drive PWB may be damaged.

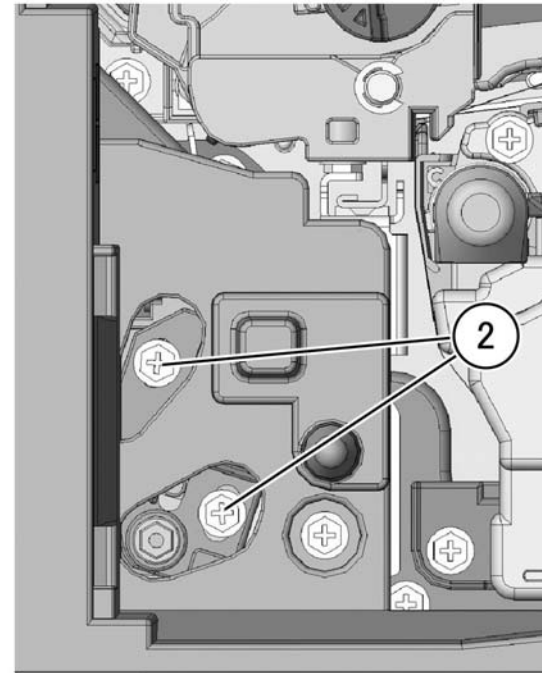
3. Set the position of the adjustment cam on the front side to the mark made before removal, Figure 1.
4. Loosen the two screws (1) of the registration transport assembly, Figure 3.



F-1-0341-A

Figure 3 Registration transport assembly screws

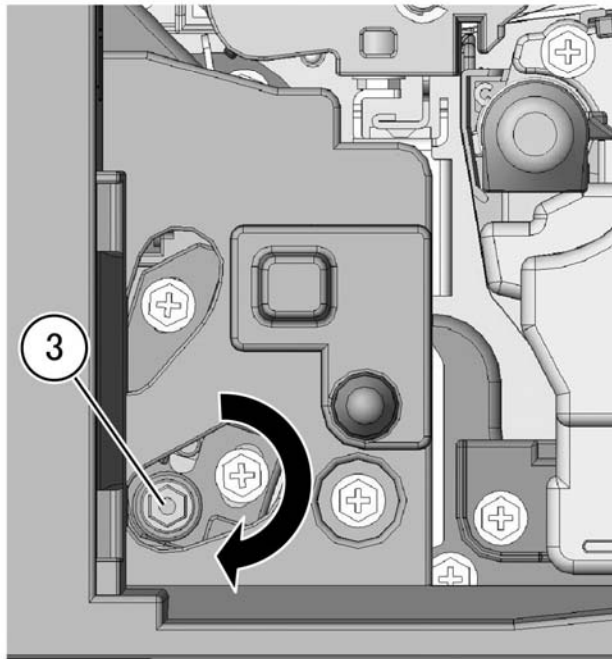
5. Remove the waste cartridge, PL 90.15 Item 6, then loosen two screws (2) securing the skew adjust block, Figure 4.



F-1-0342-A

Figure 4 Adjust block screws

- Turn the adjustment camshaft while observing the front of the registration transport assembly to verify the registration transport assembly rises as the adjustment camshaft turns, [Figure 5](#).



F-1-0343-A

Figure 5 Adjust camshaft turn location

- Tighten the two screws (1) of the registration transport assembly left loose, [Figure 3](#).
NOTE: If paper wrinkles are generated, refer to [RAP IQ2 IOT defects rap, transfer wrinkle](#). Check for moisture in the paper, replace with new paper as needed.

REP 80.31 Chute Assembly

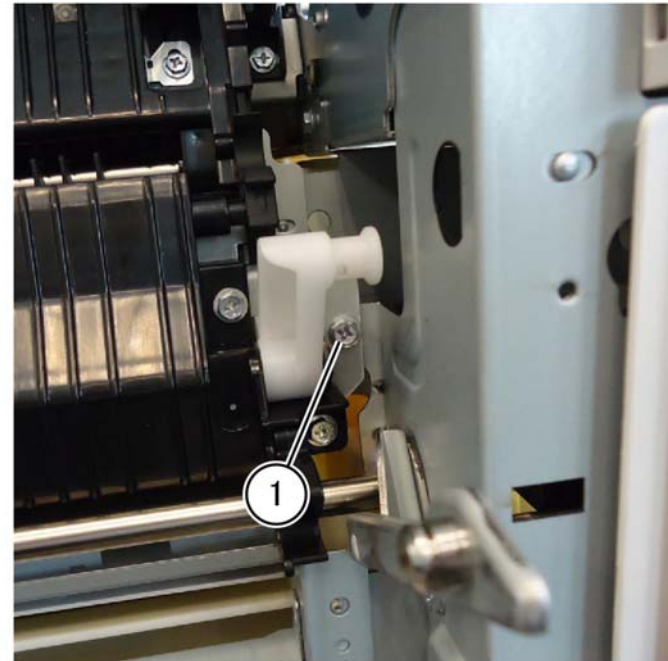
Parts List on [PL 80.90](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 left cover assembly, [REP 80.21](#).
- Remove the screw (1), [Figure 1](#).



F-1-0344-A

Figure 1 Screw removal

3. Remove the screw (2), then remove connector cover (3), [Figure 2](#).

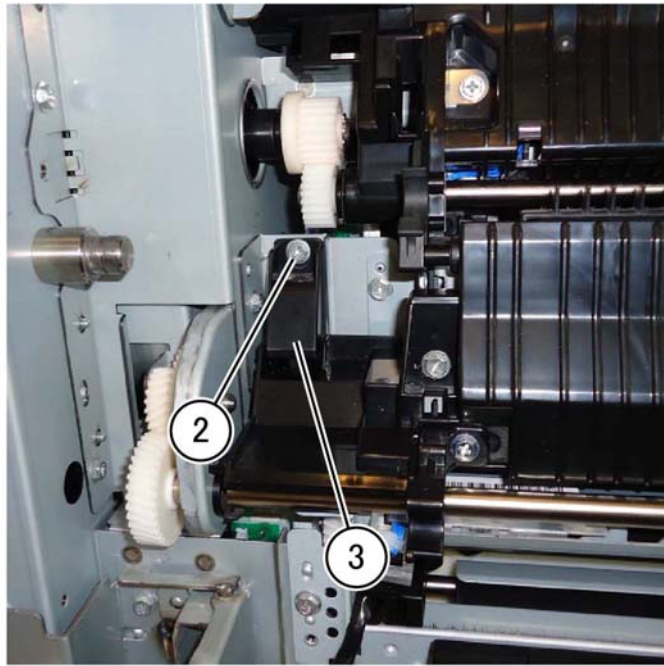


Figure 2 Connector cover removal

F-1-0345-A

4. Slide the chute assembly (3), [PL 80.90 Item 4](#), in the direction of the right-arrow, then remove the chute assembly in the direction of the out-arrow, [Figure 3](#).

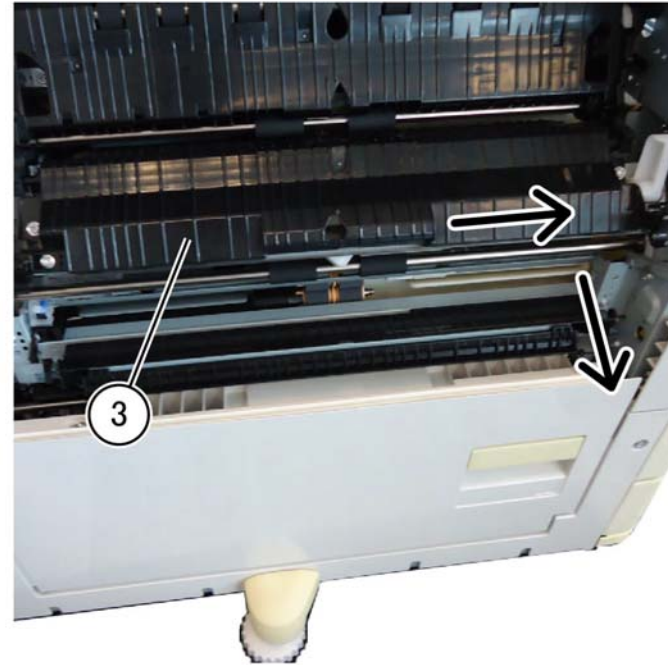


Figure 3 Chute assembly removal

F-1-0346-A

Replacement

The replacement is the reverse of the removal procedure.

NOTE: To ease assembly the following steps are suggested:

1. Lift the tray 1 feedhead assembly.
2. Insert the locating pins of the chute assembly into the frame.
3. Install the front screw.

REP 80.32 Takeaway Roll Assembly

Parts List on [PL 80.90](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 left cover assembly, [REP 80.21](#).
2. Remove the chute assembly [REP 80.31](#).
3. Remove the k-clip (1) holding the gear on the end the shaft towards the rear of the machine, then remove the gear, [Figure 1](#).

NOTE: For reassembly, note the orientation of the front-side hinge plate.

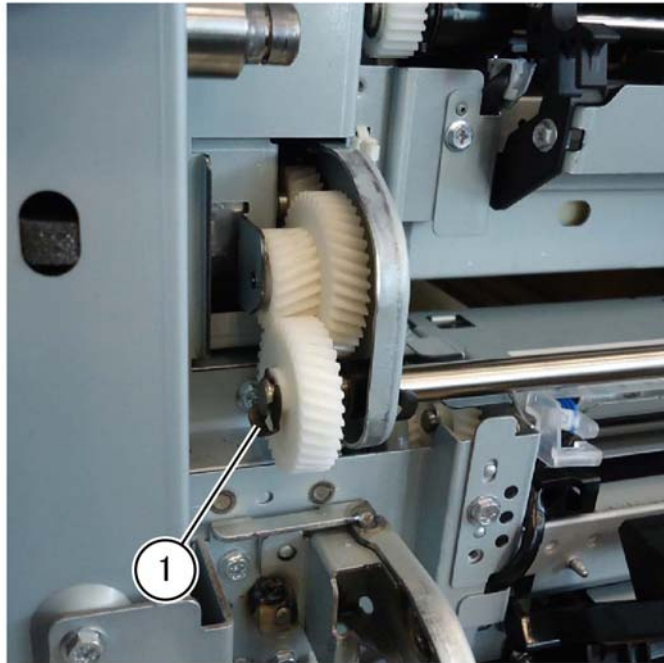


Figure 1 K-clip and gear removal

F-1-0347-A

4. Remove the k-clip on the inside of the bracket (2), [Figure 2](#).

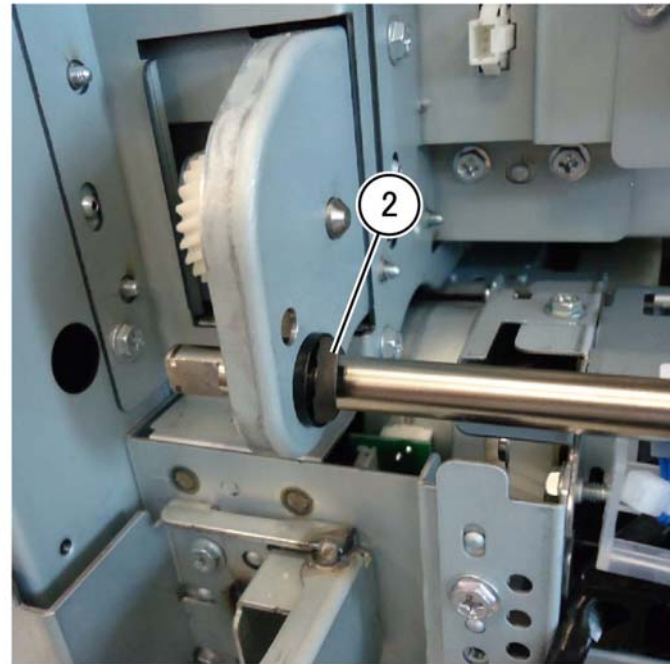
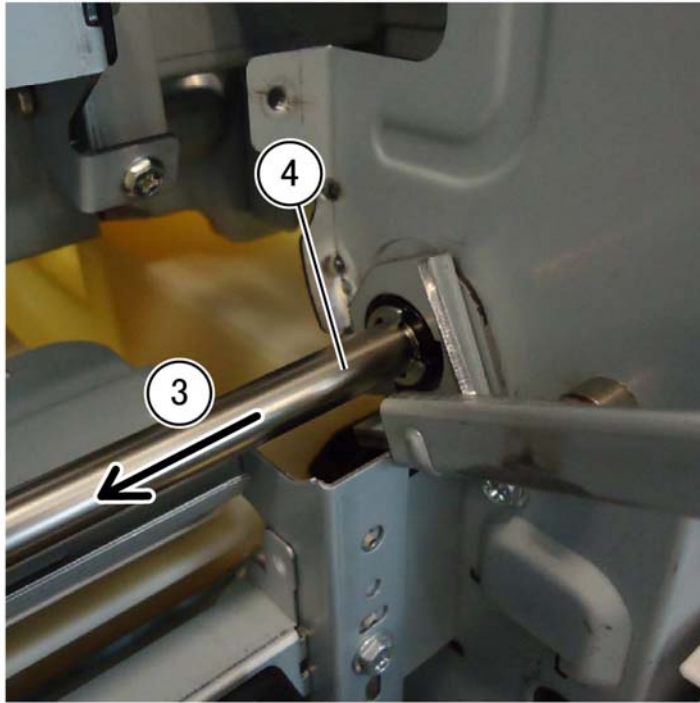


Figure 2 Connector cover removal

F-1-0348-A

- Slide the takeaway roll assembly (4), PL 80.90 Item 7, in the direction of the arrow towards the rear of the machine (3), then remove the takeaway roll assembly, Figure 3.



F-1-0349-A

Figure 3 Takeaway roll assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 80.33 Registration Drive Assembly

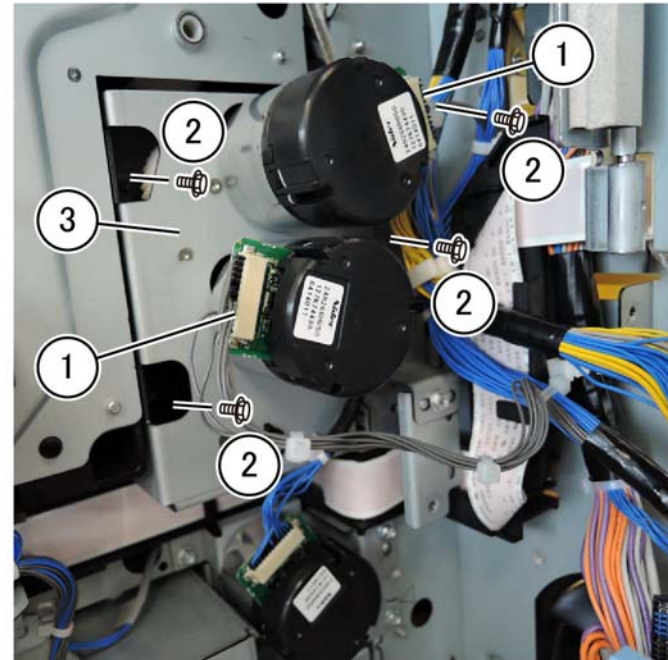
Parts List on PL 80.95

Removal

WARNING

Switch off the electricity to the machine. Refer to GP 10. Disconnect the power 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 lower rear cover, PL 28.15 Item 8.
- Open the video contact chassis assembly, GP 32.
- Remove the motor drive PWB, REP 1.4.
- Remove the registration drive assembly, PL 80.95 Item 1: Figure 1.
 - Disconnect two connectors (1).
 - Remove the five screws (2).
 - Remove the cable tie from the frame.
 - Remove the registration drive assembly (3).



F-1-0350-A

Figure 1 Registration drive assembly removal

Replacement

1. Replacement is the reverse of the removal procedure.

REP 80.34 Drive Assembly (Takeaway Motor 2)

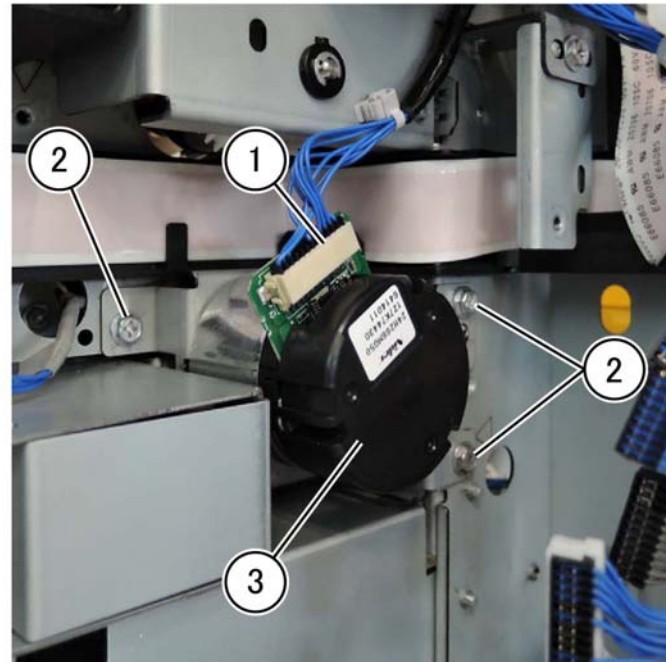
Parts List on [PL 80.95](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 motor drive PWB, [REP 1.5](#).
2. Remove the AC drive PWB, [REP 1.5](#).
3. Remove the LVPS, [REP 1.6](#).
4. Remove the takeaway motor 2 drive assembly, [PL 80.95 Item 15: Figure 1](#).
 - a. Disconnect the connector (1).
 - b. Remove the three screws (2).
 - c. Remove the drive assembly (3).



F-1-0351-A

Figure 1 Takeaway motor 2 drive removal

Replacement

Replacement is the reverse of the removal procedure.

REP 80.35 HCF Feed, Nudger, and Retard Rolls

Parts List on [PL 80.105](#) and [PL 80.110](#)

Removal

NOTE: The feed rolls are replaced as a set. Refer to, [PL 80.105 Item 24](#).

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 feeder top cover, [PL 70.90 Item 7](#).
2. Release the green lever opening the upper feeder assembly to gain access to the feed, nudger, and retard rolls.

NOTE: For reference purposes, the single roll in the upper feeder assembly is the nudger roll. The double roll in the upper feeder assembly is the feed roll. The larger double roll in the lower feeder component is the retard roll.

3. Remove the feed roll, [PL 80.105 Item 22](#), nudger roll, [PL 80.105 Item 23](#), and retard roll, [PL 80.110 Item 1](#) by squeezing the roll's shaft at both ends and lifting the roll up and out of the HCF.

Replacement

Replacement is the reverse of the removal procedure.

REP 80.36 HCF Feed Shaft Assembly, Ball Bearing and Feed Gear

Parts List on [PL 80.105](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 top cover, [PL 70.90 Item 7](#).
2. Release the green lever opening the upper feeder assembly, [PL 80.105 Item 1](#).
3. Remove the nudger roll, [PL 80.105 Item 23](#).
4. Remove the feed shaft, ball bearing, and feed gear: [Figure 1](#).
 - a. Remove the E-clip (1) and bearing (2), [PL 80.105 Item 10](#).
 - b. Slide the remaining feed shaft assembly (3) to the right (rear), then remove the feed shaft assembly, [PL 80.105 Item 4](#).

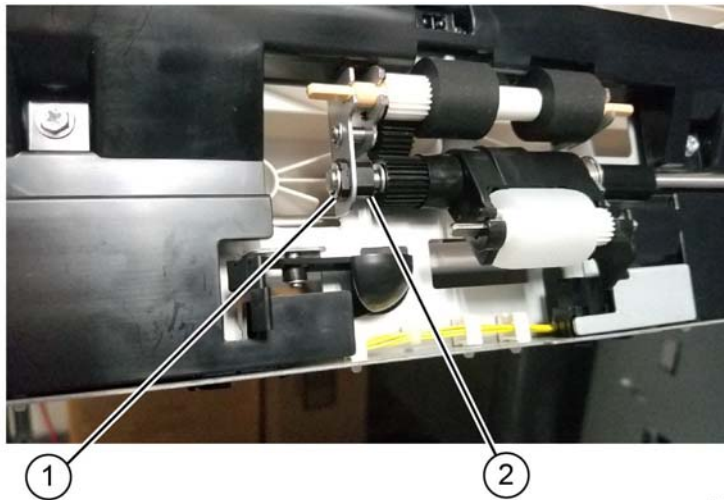


Figure 1 Feed shaft assembly removal

F-1-0792-A

5. Remove the ball bearing and feed gear, [Figure 2](#):
 - a. Remove the E-clip (1).
 - b. Remove the feed gear (2).
 - c. Remove the ball bearing (3).

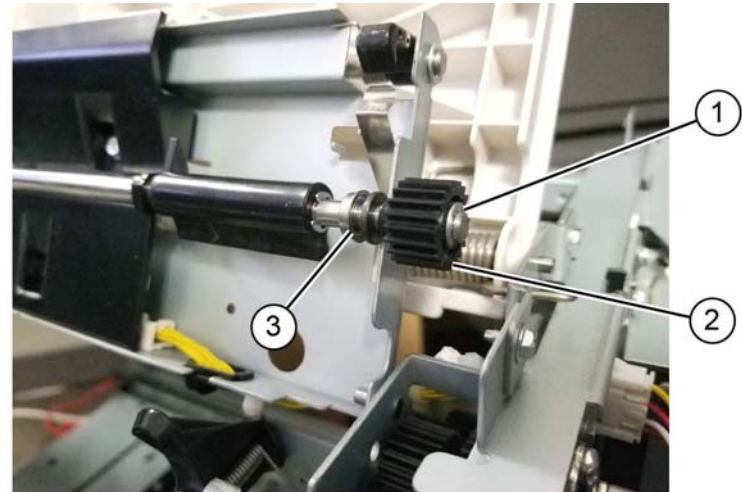


Figure 2 Ball bearing and feed gear removal

F-1-0793-A

Replacement

Replacement is the reverse of the removal procedure.

NOTE: Order replacement using feed shaft assembly, [PL 80.105 Item 4](#).

REP 80.37 HCF Latch

Parts List on [PL 80.105](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 top cover, [PL 70.90 Item 7](#).
2. Lift the upper feed assembly lever, [PL 80.105 Item 9](#), to open the upper feed assembly, gaining access to the latch shaft, [PL 80.105 Item 3](#).
3. Remove the latch, [PL 80.105 Item 2](#).
 - a. Remove three E-clips.
 - b. Release the spring, [PL 80.105 Item 18](#), from the hole in the rear latch.
 - c. Slide the latch shaft, [PL 80.105 Item 3](#), to the front (left) clearing the rear end of the latch shaft from the hole in the frame, then remove the latch shaft.
 - d. Slide the latch, [PL 80.105 Item 2](#) off the latch shaft to remove.

Replacement

Replacement is the reverse of the removal procedure.

NOTE: Ensure that the plastic pads on the lower chute fit in the track before pushing it in.

REP 80.38 HCF Level/No Paper and Pre Feed Sensor

Parts List on [PL 80.105](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 top cover, [PL 70.90 Item 7](#).
2. Lift the upper feed assembly lever, [PL 80.105 Item 9](#), to open the upper feed assembly, gaining access to the underside components.
3. Remove the rear upper chute, [PL 80.105 Item 14](#).
4. Remove the upper chute, [PL 80.105 Item 15](#).
5. Remove one screw (1), then remove the sensor cover (2), [Figure 1](#).

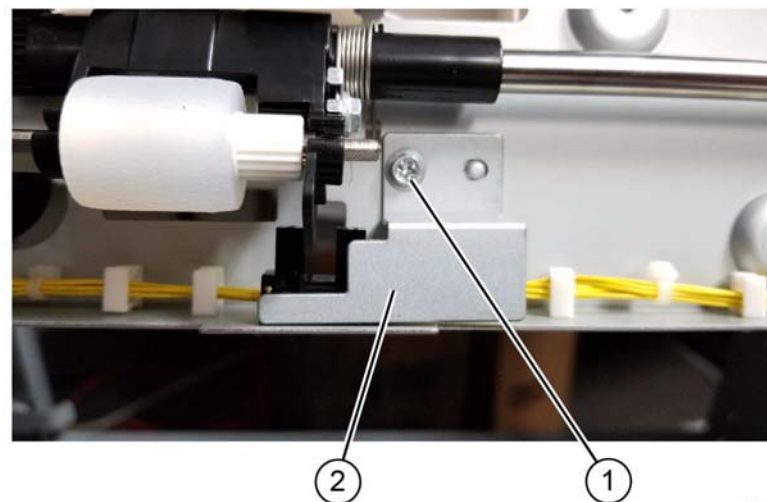


Figure 1 Sensor cover removal

F-1-0794-A

- Disconnect the connectors (1), level sensor and no paper sensor (2), PL 80.105 Item 19, then one screw (3) securing the pre feed sensor (4), PL 80.105 Item 20, Figure 2.

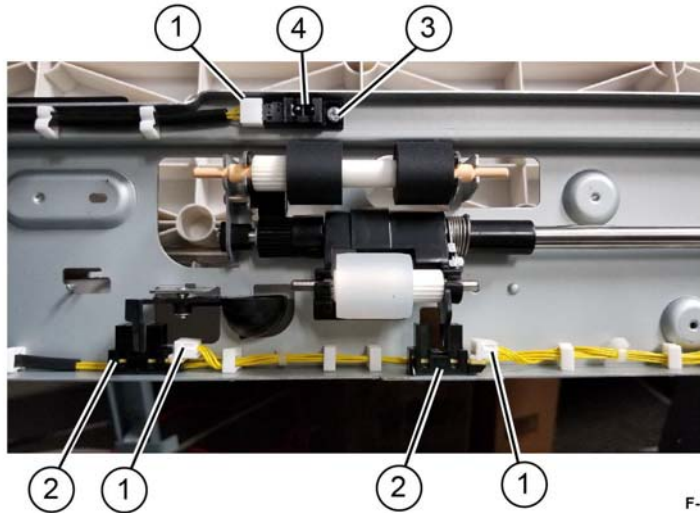


Figure 2 Sensor removal

F-1-0795-A

Replacement

Replacement is the reverse of the removal procedure.

REP 80.39 HCF Feed Lift Motor

Parts List on [PL 80.100](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

- Undock the HCF, [REP 70.7](#).
- Remove rear cover, [PL 70.75 Item 10](#).
- Disconnect the motor harness (1) from the HCF electrical harness, remove two screws (2), then remove the HCF feed lift motor (3), [PL 80.100 Item 23, Figure 1](#).

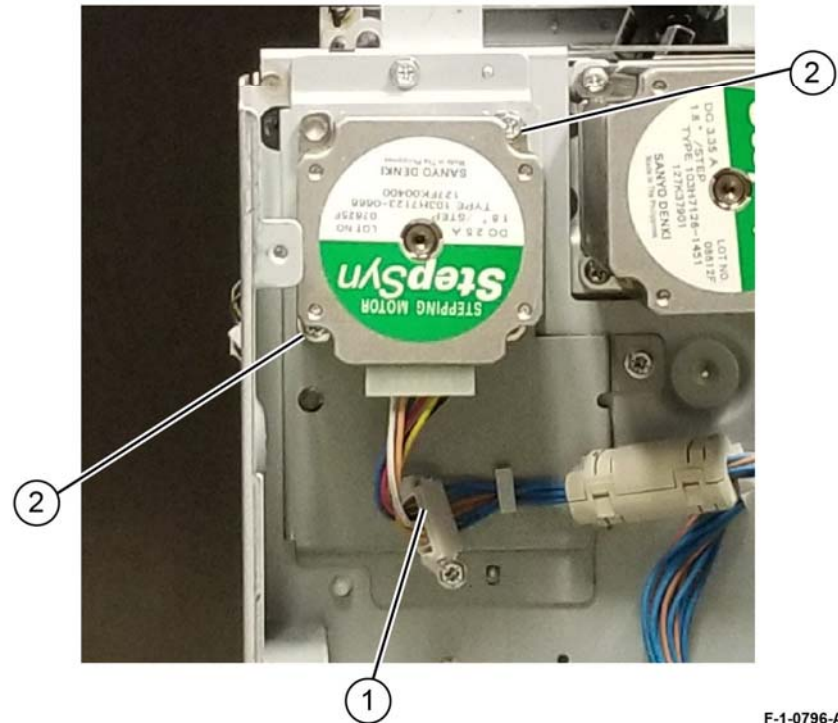


Figure 1 HCF feed lift motor removal

F-1-0796-A

Replacement

Replacement is the reverse of the removal procedure.

REP 90.1 Conductor Housing Assembly

Parts List on [PL 90.05](#)

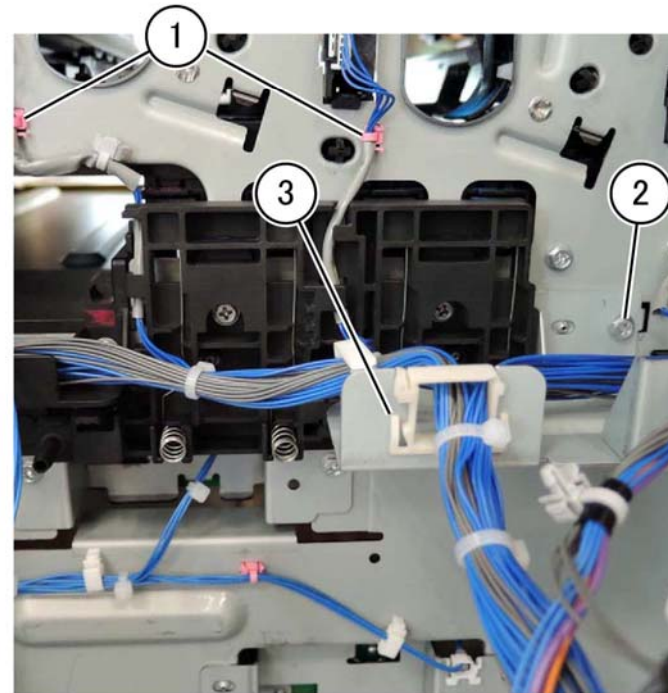
Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 lower rear cover, [PL 28.15 Item 8](#). [REP 90.1](#)
2. Remove the motor drive PWB, [REP 1.4](#).
3. Remove the motor drive chassis assembly, [PL 1.10 Item 3](#).
4. Remove the AC drive PWB, [REP 1.5](#).
5. Remove the AC bracket, [PL 1.15 Item 2](#).
6. Remove the LVPS, [REP 1.6](#).
7. Remove the fuser drive assembly, [REP 40.2](#).
8. Remove main the drive assembly, [REP 40.1](#).
9. Remove the developer bias HVPS PWB, [REP 1.7](#).

10. Remove the harness bracket: [Figure 1](#).
 - a. Release two cable ties (1).
 - b. Release the LED head harness from the guide (3).
 - c. Remove the screw (2) then remove the harness bracket.



F-1-0360-A

Figure 1 Harness bracket removal

11. Remove the conductor housing assembly, PL 90.05 Item 1, Figure 2.

CAUTION

Take care not to damage the springs or allow the springs to fall out of the conductor housing assembly.

- a. Remove two screws (1).
- b. Remove the conductor housing assembly (2).

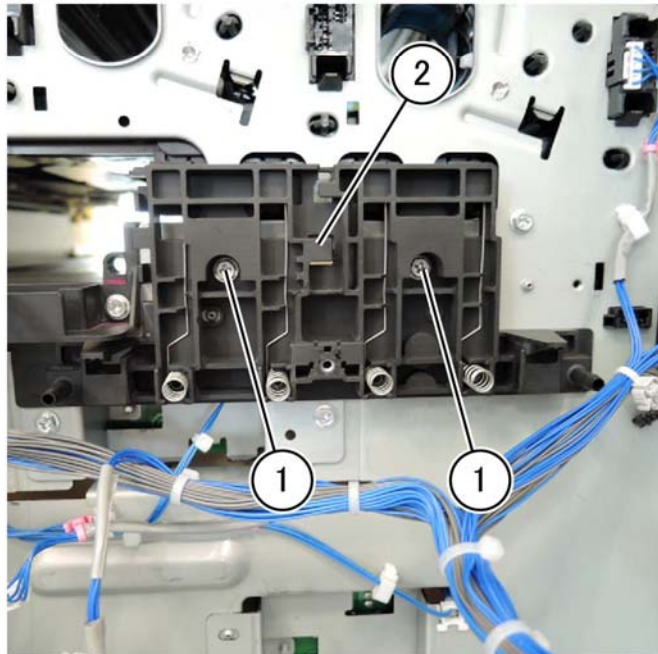


Figure 2 Conductor housing assembly removal

F-1-0361-A

Replacement

1. During replacement properly route the LED head harnesses, Figure 3.

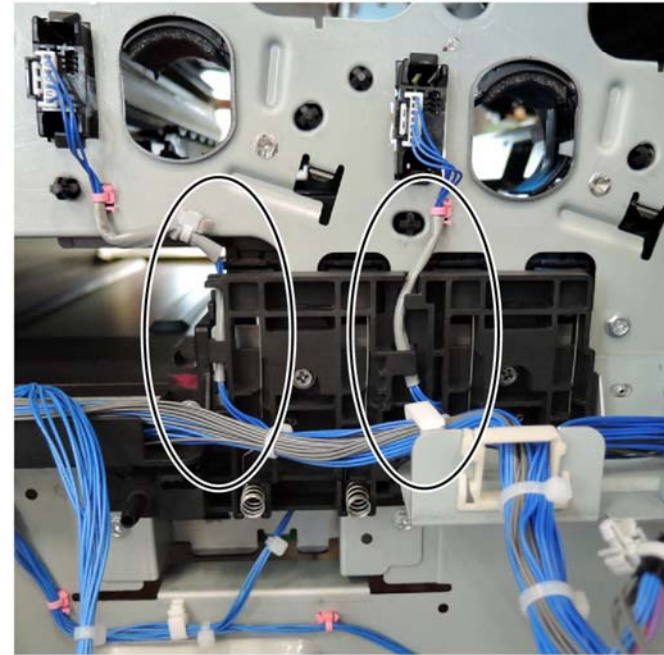


Figure 3 LED head harness routing

F-1-0362-A

2. The remainder of the replacement is the reverse of the removal procedure.

REP 90.2 Plunger

Parts List on [PL 90.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Perform the procedure to remove the FFC cable assembly [PL 60.05 Item 9](#), [REP 60.2](#).

NOTE: Plunger location:

- To access the plunger it is not necessary to remove the FCC cables [PL 60.05 Item 7](#) and [PL 60.05 Item 8](#) from the marking guide, [PL 90.25 Item 1](#).
 - The plunger is mounted on the developer conductor housing assembly, [PL 90.05 Item 2](#), part of the FCC cable assembly, [PL 60.05 Item 9](#).
2. Remove the plunger, [PL 90.05 Item 3](#), [Figure 1](#).
 - a. Press down on the plunger, turn clockwise to align the groove to the pin (1) unlocking the plunger (2).
 - b. Remove the plunger (2).

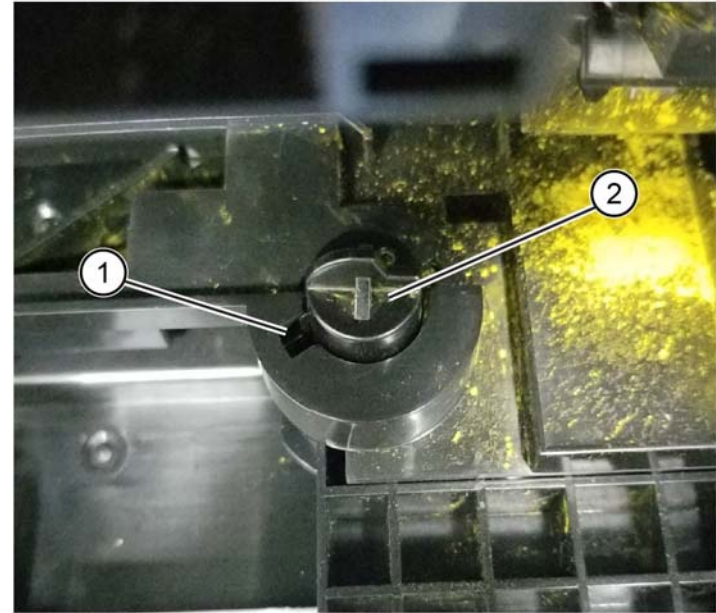


Figure 1 Plunger removal

F-1-0755-A

Replacement

1. Replacement is the reverse of the removal procedure.

NOTE: Take caution not to touch the LPH assembly during the plunger removal and replacement. If you touch it, perform LPH cleaning.

NOTE: Take caution not to spill toner onto the marking guide opening during the tasks. A power supply failure occurs when toner is adhered to the contact of the plunger. Wipe the contact part of the plunger with a dry cloth if toner has adhered to the plunger contact.

REP 90.3 New Developer Assembly (Y,M,C,K)

Parts List on [PL 90.05](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

To prevent light fatigue, either wrap the removed drum cartridge in a black sheet of paper or store it in a black bag.

CAUTION

Do not touch the surface of the drum cartridge.

NOTE: The following describes only the procedure for the developer assembly (K), the procedure is the same for all developer assemblies (Y,M,C,K).

1. Remove the front cover assembly, [PL 28.05 Item 8](#).
2. Remove the waste toner transport assembly, [PL 90.15 Item 1](#).
3. Remove the inner lower cover, [PL 28.05 Item 2](#).
4. Remove the drum assembly, [REP 90.11](#).
5. Remove the developer assembly: [Figure 1](#).
 - a. Disconnect the connector (1).
 - b. Remove the screw (2).
 - c. Remove the developer assembly (3).

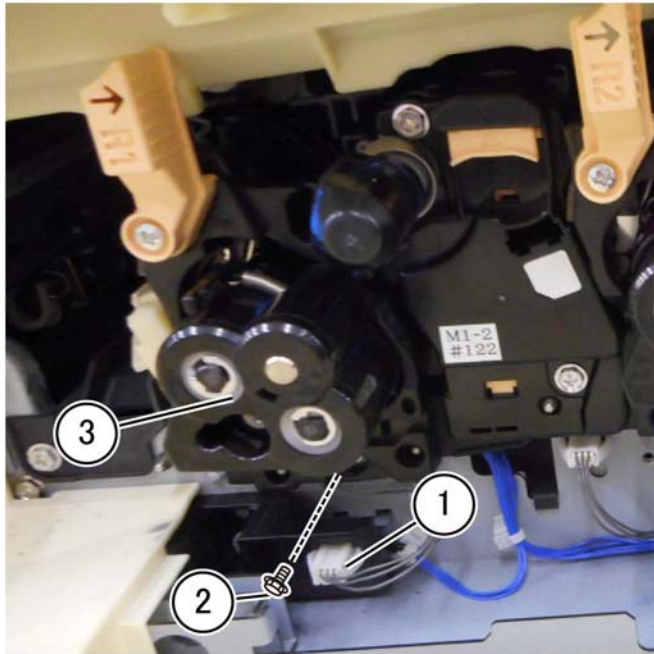


Figure 1 Developer assembly removal

F-1-0364-A

Replacement

1. Using a toner vacuum on the output port, clean the inside of the waste toner transport assembly, [PL 90.15 Item 1, Figure 2](#).

NOTE: Rotate the gear in the direction of the arrow (clockwise) to assist ejection of the toner during cleaning.

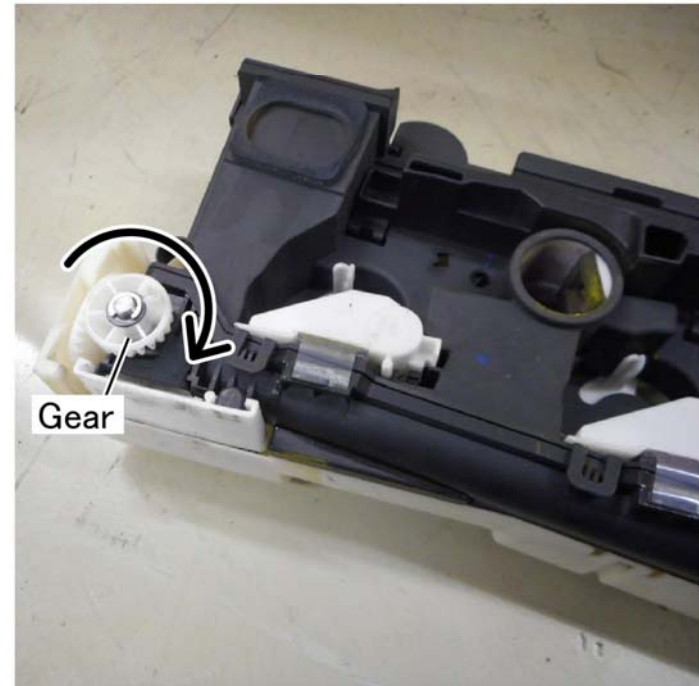


Figure 2 Rotate the gear

F-1-0365-A

2. Inspect the MOB/ADC assembly, [PL 90.30 Item 4](#). If toner is visible on the MOB/ADC assembly remove the MOB/ADC assembly for cleaning, [REP 90.9](#).

3. Inspect and clean the frame of all toner before installing the developer assembly, [Figure 3](#).



F-1-0366-A

Figure 3 Frame inspection

4. Inspect and clean all toner from the developer assembly gear before installing or banding and excessive wear of the gear will occur, [Figure 4](#).



F-1-0367-A

Figure 4 Gear inspection

5. Add new developer to the developer housing assembly, see [REP 90.7](#).
6. Remove the gear cover, [PL 90.05 Item 7](#), and the developer plate assembly, [PL 90.05 Item 6](#), from the old developer assembly, then install the gear cover and developer plate assembly onto the new developer assembly.
7. Tear off the loose half of the ATC sensor perforated tag. Leave the other half of the ATC sensor label on the developer housing. Retain the torn off tag to be used in step 11.
8. Install the developer.
9. The remainder of the replacement is the reverse of the removal procedure.
10. Enter Diagnostic Mode, then use [dC135](#) "Initialize HFSI Counter" to clear the HFSI counter:
 - "Chain Link: 954-830" (Y)
 - "Chain Link: 954-831" (M)
 - "Chain Link: 954-832" (C)
 - "Chain Link: 954-833" (K)
 - "Chain Link: 954-834" (Y)
 - "Chain Link: 954-835" (M)

"Chain Link: 954-836" (C)

"Chain Link: 954-837" (K)

11. Run **dC950** ATC Sensor Setup. Enter the value from the tag removed from the replacement developer.
12. Run **dC949** Default Developer ATC Setup.
13. Run **dC301** to initialize NVM for:
"ATC Setup Coefficient"
"ATC Setup Offset"
"ATC_Barcode_No"
"deltaATC Target Setup Correction"

REP 90.4 Toner Dispense Motor Assembly

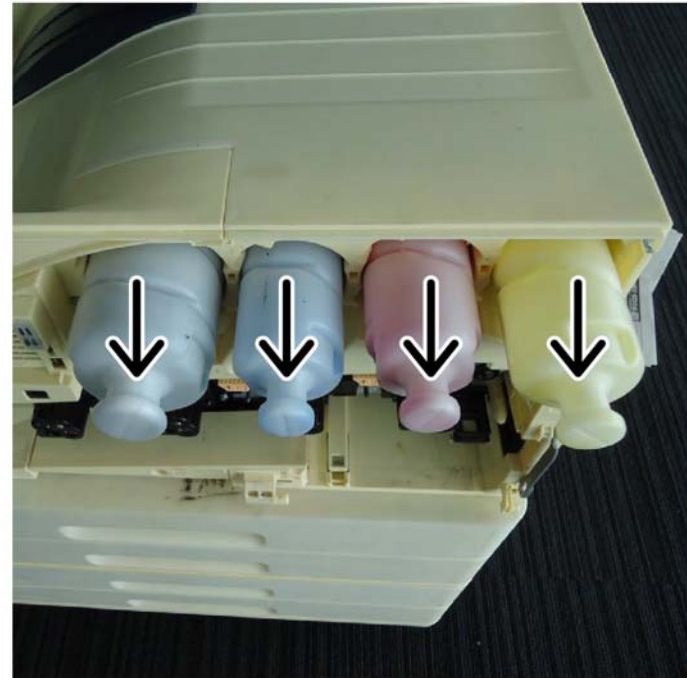
Parts List on **PL 90.10**

Removal

WARNING

Switch off the electricity to the machine. Refer to **GP 10**. Disconnect the power 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. Pull out the toner cartridge to the extent indicated in **Figure 1**.

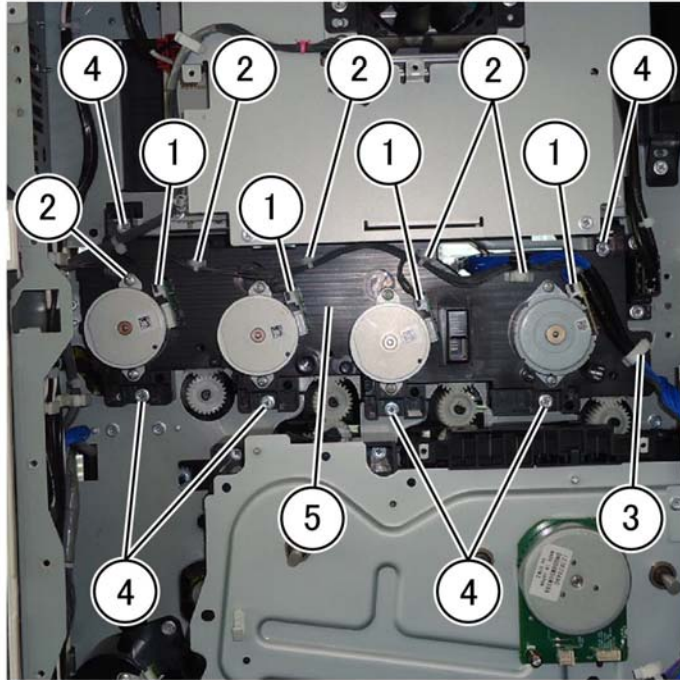


F-1-0368-A

Figure 1 Toner cartridge

2. Remove the rear lower cover, **PL 28.15 Item 8**.
3. Open the video contact chassis assembly, **GP 32**.
4. Remove the BTR HVPS PWB, **REP 1.1**.
5. Remove the conductor housing assembly, **REP 90.1**.

6. Remove the toner dispense motor assembly, [PL 90.10 Item 1](#), [Figure 2](#).
 - a. Disconnect four connectors (1).
 - b. Remove five clips (2).
 - c. Open the clamp (3), then remove the harness.
 - d. Remove six screws (4).
 - e. Remove the toner dispense motor assembly (5).



F-1-0369-A

Figure 2 Toner dispense motor assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 90.5 Toner CRUM Connector Assembly

Parts List on [PL 90.10](#)

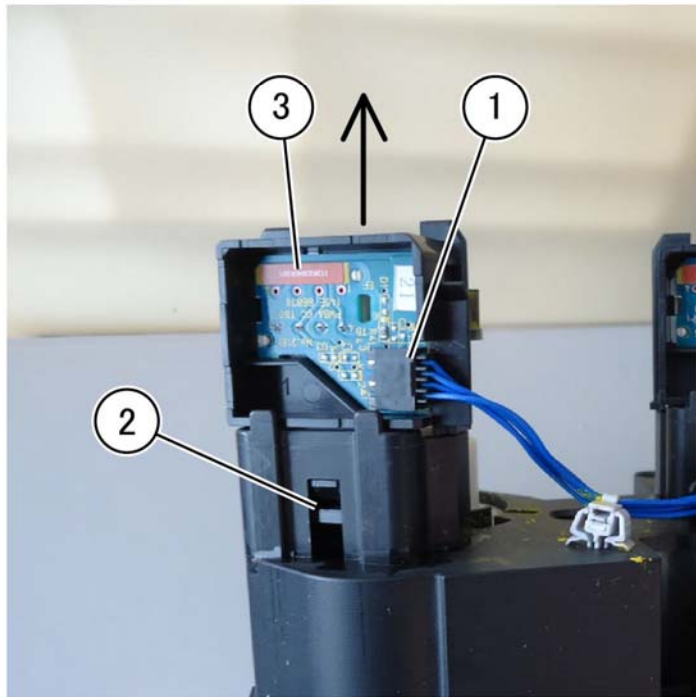
Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the front cover assembly, [PL 28.05 Item 8](#).
2. Remove the waste cartridge assembly, [PL 90.15 Item 6](#).
3. Remove the waste toner assembly, [PL 90.15 Item 6](#).
4. Remove the inner cover assembly, [PL 28.05 Item 1](#).
5. Remove the inner lower cover, [PL 28.05 Item 2](#).
6. Remove the inner hinge cover assembly, [PL 28.05 Item 4](#).
7. Remove the inner right cap cover, [PL 28.05 Item 3](#).
8. Remove the inner right cover, [PL 28.05 Item 6](#).
9. Remove the affected toner cartridge (Y,M,C,K), [PL 90.10](#).

10. Remove the toner CRUM connector assembly: [Figure 1](#).
 - (1) Disconnect the connector (1).
 - (2) Release the hook (2), and slide in the direction of the arrow.
 - (3) Remove the toner crum connector assembly (3).



F-1-0370-A

Figure 1 Toner crum connector assembly removal

Replacement

1. Replacement is the reverse of the removal procedure.

REP 90.6 Dispenser Assembly

Parts List on [PL 90.10](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

When removing the Drum, cover it with a black sheet, etc. to prevent light fatigue.

CAUTION

Do not touch the Drum surface with your hands.

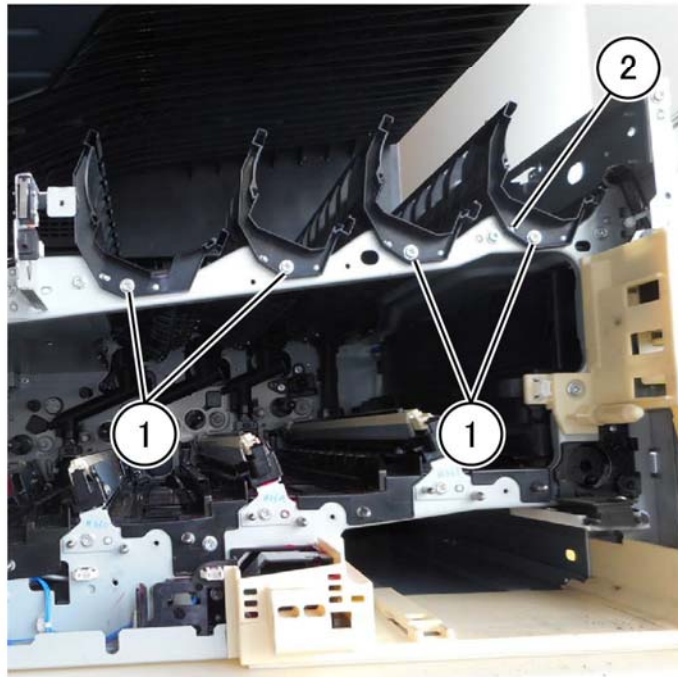
NOTE: The following procedure is for the dispenser assembly (Y) [PL 90.10 Item 27](#), the procedure is the same for all dispenser assemblies (Y,M,C,K).

1. Remove the front cover assembly, [PL 28.05 Item 8](#).
2. Remove the waste toner assembly, [PL 90.15 Item 6](#).
3. Remove the inner cover assembly, [PL 28.05 Item 1](#).
4. Remove the inner lower cover, [PL 28.05 Item 2](#).
5. Remove the inner hinge cover assembly, [PL 28.05 Item 4](#).
6. Remove the inner right cap cover, [PL 28.05 Item 3](#).
7. Remove the inner right cover, [PL 28.05 Item 6](#).
8. Remove the IBT belt assembly, [REP 90.8](#).
9. Remove the drum assembly, [REP 90.11](#).
10. Remove the developer assembly, [REP 90.3](#).
11. Remove the affected toner cartridge (Y,M,C,K), [PL 90.10](#).

12. Remove the dispenser assembly: [Figure 1](#).

- (1) Remove four screws (1).
- (2) Remove the dispenser assembly (3).

NOTE: Always remove in the order (Y,M,C,K).



F-1-0371-A

Figure 1 Dispenser assembly removal

Replacement

1. Replacement is the reverse of the removal procedure.

REP 90.7 Developer Replacement

Parts List on [PL 90.05](#)

Removal

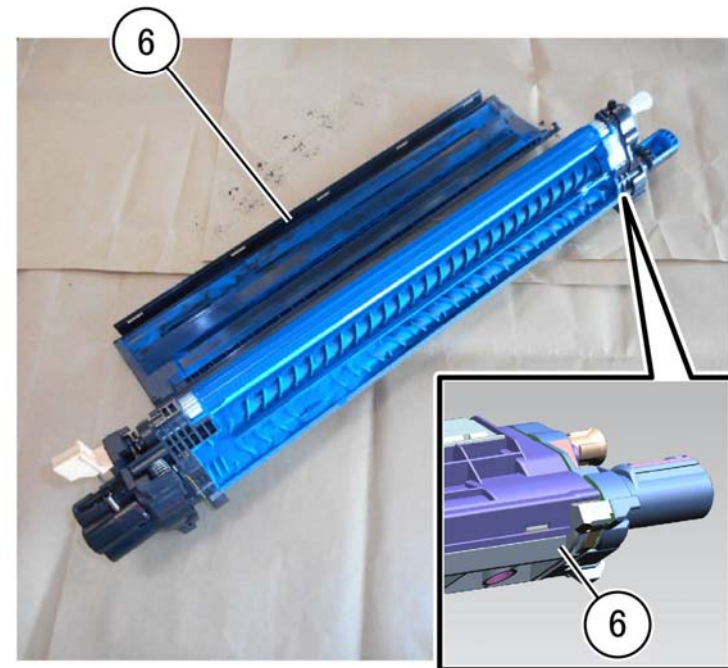
WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

To prevent light fatigue, either wrap the removed drum cartridge in a black sheet of paper or store it in a black bag.

1. Prepare the black paper or black bag.
2. Remove the front cover assembly, [PL 28.05 Item 8](#).
3. Remove the waste cartridge, [PL 90.15 Item 6](#).
4. Remove the inner lower cover, [PL 28.05 Item 2](#).
5. Remove the drum assembly, [REP 90.11](#).
6. Remove the developer assembly, [REP 90.3](#).
7. Release the snap fit and remove the upper cover (6), [Figure 1](#).



F-1-0372-A

Figure 1 Upper cover removal

8. Remove the triumph plate (7), [Figure 2](#).

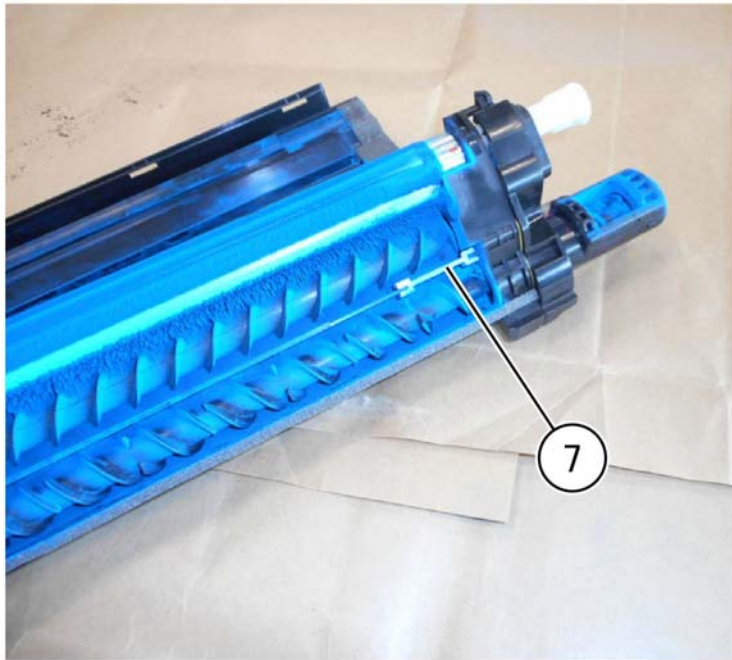


Figure 2 Triumph plate removal

F-1-0373-A

9. Place the developer housing assembly (1) into the plastic bag shipped with the developer, turn the developer housing assembly upside down, then rotate the gear (2) clockwise to eject the developer into the bag, [Figure 3](#).

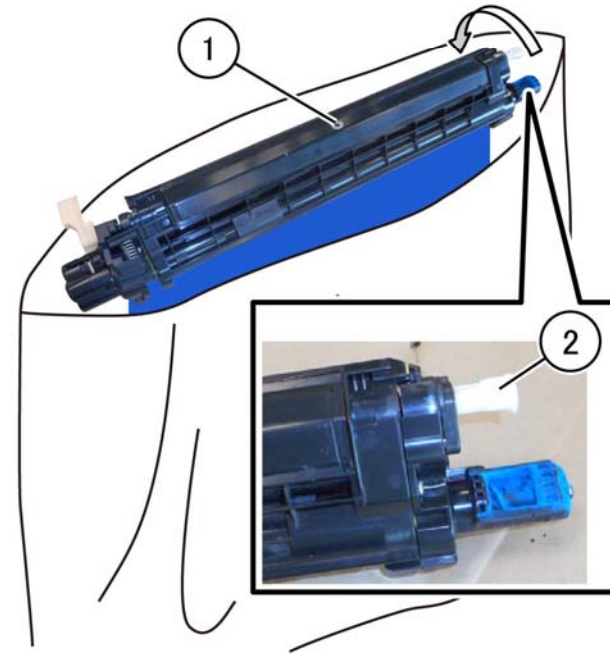


Figure 3 Eject old developer

F-1-0374-A

10. Install the triumph plate back into the developer housing assembly, [Figure 2](#).

11. Open the bag of new developer carefully, then slowly add new developer to the magnetic roller side, [Figure 4](#).

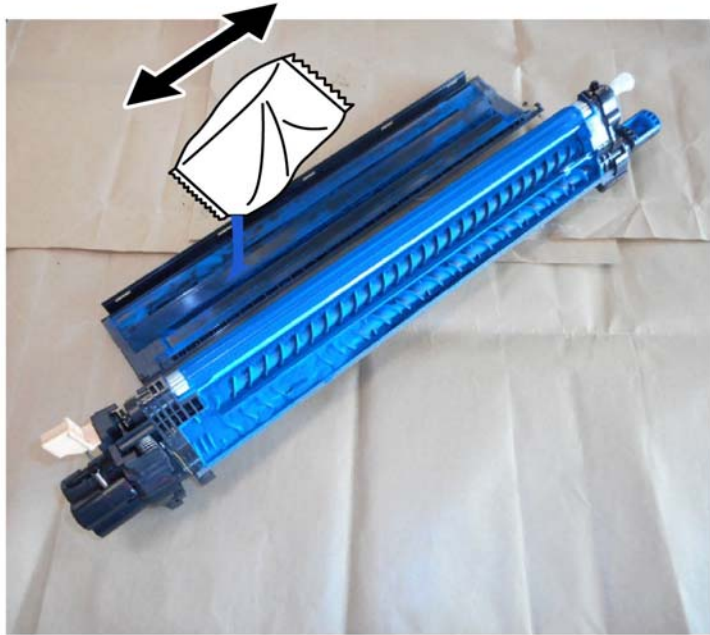


Figure 4 Add new developer

F-1-0375-A

12. Rotate the gear (1) to the right (clockwise) to evenly distribute the developer on the magnetic roller, [Figure 5](#).

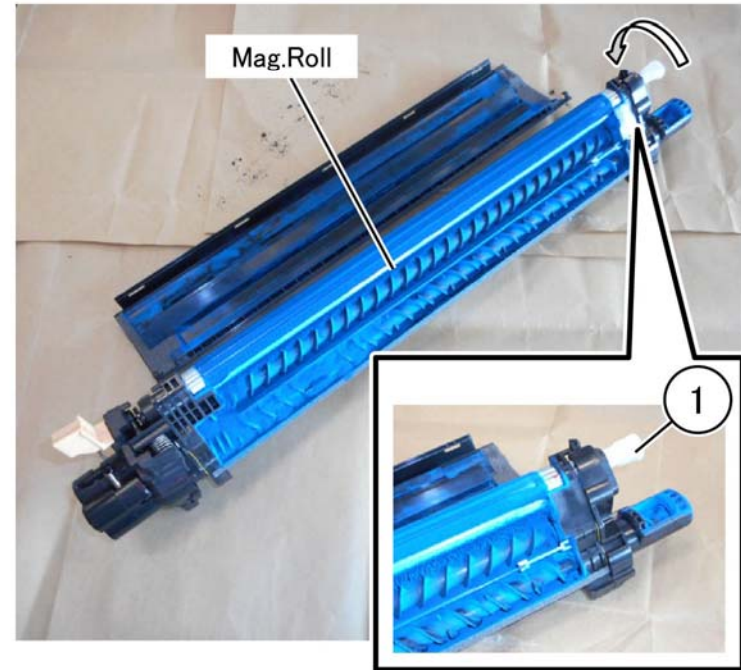


Figure 5 Rotate the gear

F-1-0376-A

NOTE: Do not fill developer past the line inside the housing, approximately 3mm, below the upper cover installation slot, [Figure 6](#).

13. Clean any developer or toner from the location indicated by the black dashed area outlined in [Figure 7](#).

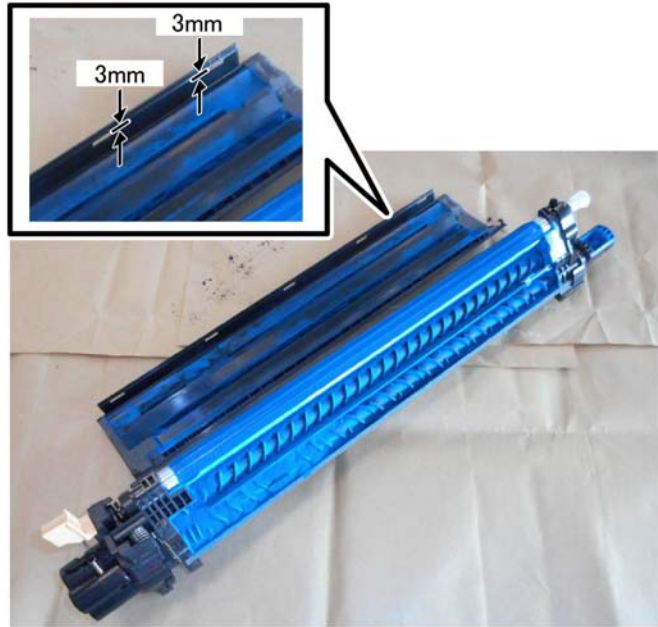


Figure 6 Fill line

F-1-0377-A



Figure 7 Clean housing area

F-1-0378-A

14. Inspect and clean all developer or toner from the seal on the upper cover, [Figure 8](#).

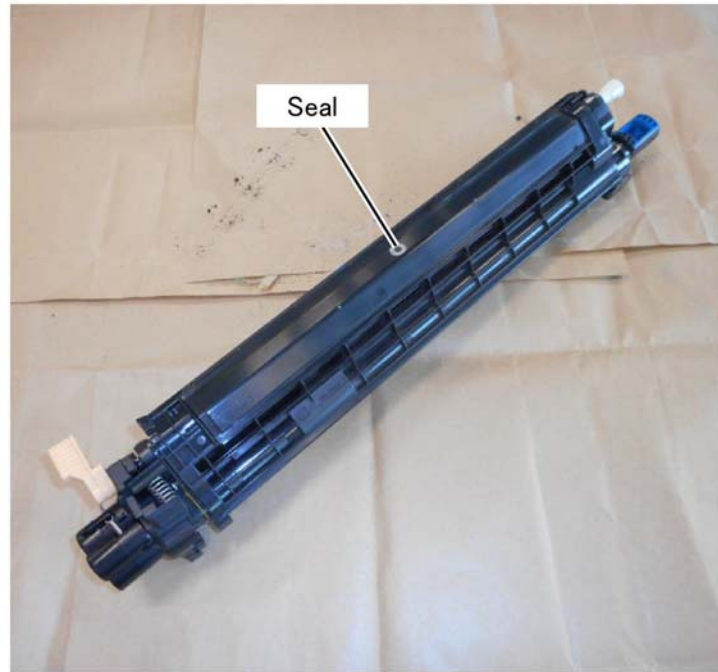


Figure 8 Clean the seal

F-1-0379-A

16. Turn the developer housing over, inspect and clean all developer or toner from the DRS block located in [Figure 9](#).

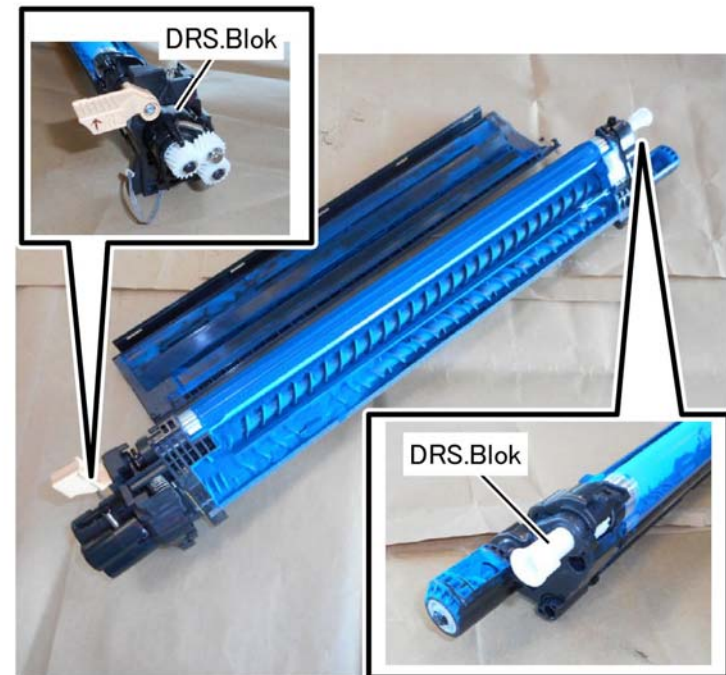
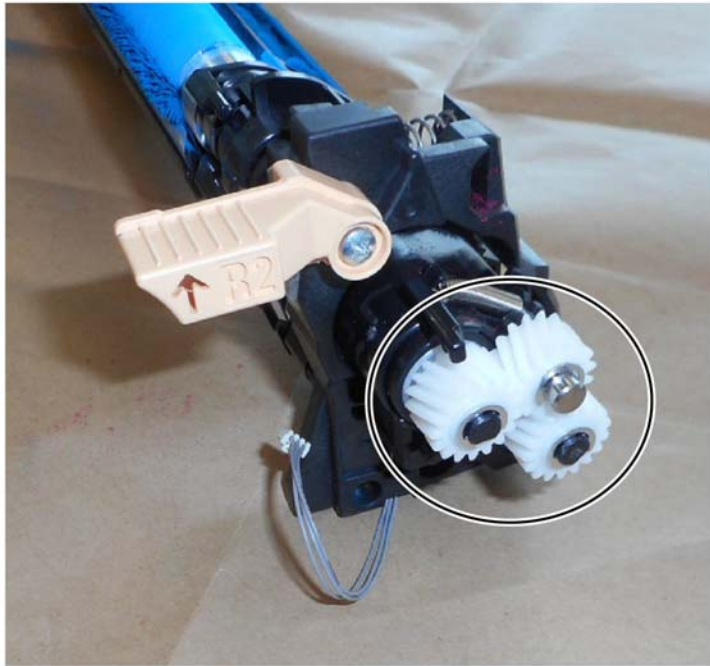


Figure 9 Clean the DRS block

F-1-0380-A

15. Install the upper cover removed in Step 6.

17. Inspect and clean all developer or toner from the gear by turning the gear clockwise, [Figure 10](#).



F-1-0381-A

Figure 10 Clean the gear

REP 90.8 IBT Belt Assembly

Parts List on [PL 90.30](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

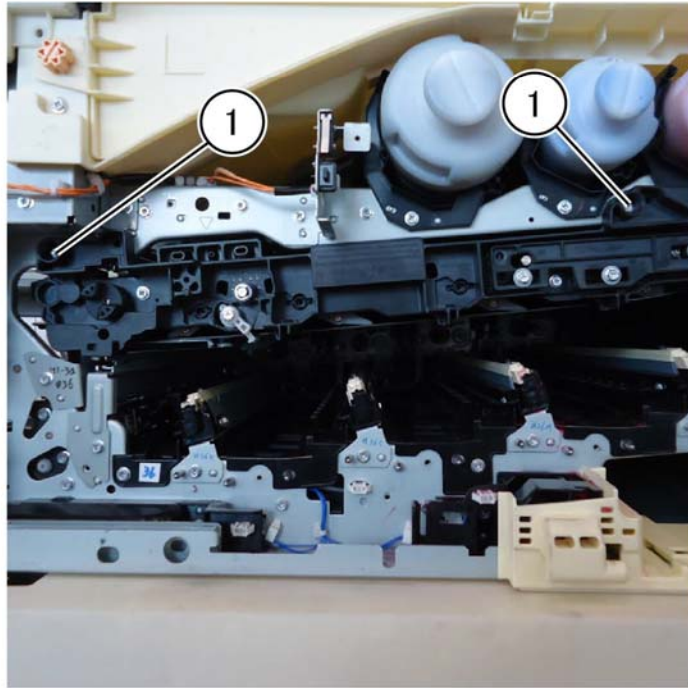
To prevent light fatigue, either wrap the removed drum cartridge in a black sheet of paper or store it in a black bag.

1. Remove the front cover assembly, [PL 28.05 Item 8](#).
2. Remove the waste cartridge, [PL 90.15 Item 6](#).
3. Remove the inner lower cover, [PL 28.05 Item 2](#).
4. Remove the drum assembly, [REP 90.11](#).
5. Remove the IBT belt cleaner assembly, [PL 90.30 Item 2](#).
6. Open the left cover, [PL 80.65 Item 1](#).

Replacement

1. Replacement is the reverse of the removal procedure.
2. Enter Diagnostic Mode [GP 1](#), then use [dC135](#) "Initialize HFSI Counter" to clear the HFSI counter:
 - "Chain Link: 954-834" (Y)
 - "Chain Link: 954-835" (M)
 - "Chain Link: 954-836" (C)
 - "Chain Link: 954-837" (K)

7. Remove the IBT belt assembly, PL 90.30 Item 1.
 - a. Remove two screws (1), Figure 1.

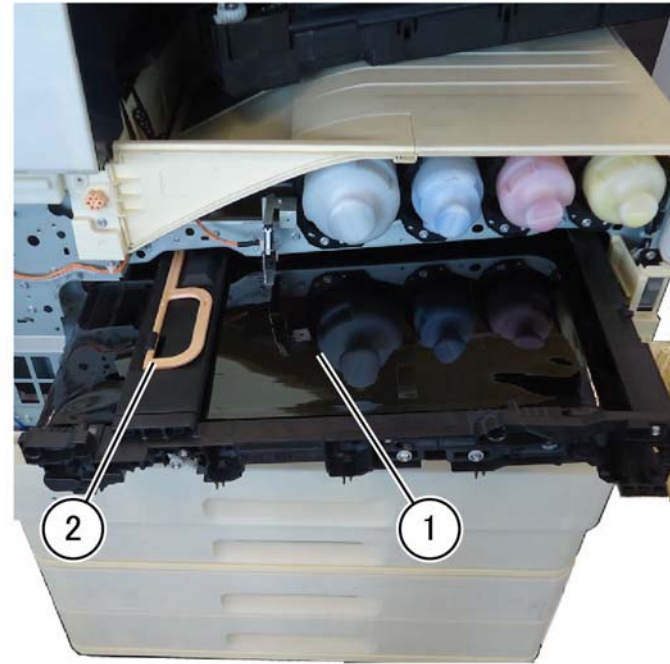


F-1-0382-A

Figure 1 Remove two screws

- b. Pull the IBT belt assembly (1) out to full stop, grasp the IBT belt assembly handle (2), then remove the IBT belt assembly (1), Figure 2.

NOTE: A stopper mechanism is in place to prevent the IBT belt assembly from falling out of the machine. The stopper mechanism is configured to release when the handle is lifted.



F-1-0383-A

Figure 2 IBT belt assembly removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. Enter Diagnostic Mode GP 1, then use dC135 "Initialize HFSI Counter" to clear the HFSI counter:
"Chain Link: 954-820"

REP 90.9 MOB/ADC Assembly

Parts List on [PL 90.30](#)

Removal

WARNING

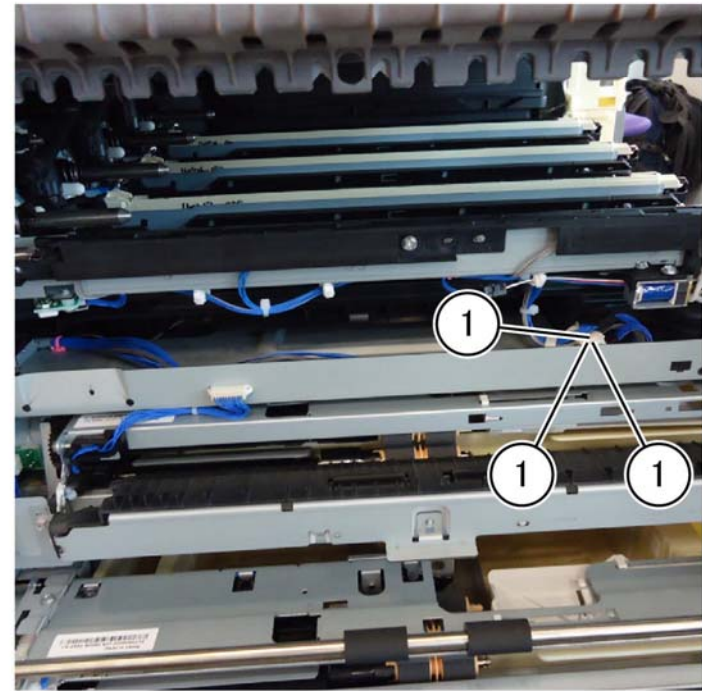
Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

To prevent light fatigue, either wrap the removed drum cartridge in a black sheet of paper or store it in a black bag.

1. Remove the front cover assembly, [PL 28.05 Item 8](#).
2. Remove the waste cartridge, [PL 90.15 Item 6](#).
3. Remove the inner cover assembly, [PL 28.05 Item 1](#).
4. Remove the inner lower cover, [PL 28.05 Item 2](#).
5. Remove the developer assembly, [REP 90.3](#).
6. Remove the drum assembly, [REP 90.11](#).
7. Open the left cover, [PL 80.65 Item 1](#).
8. Remove the IBT belt cleaner assembly, [PL 90.30 Item 2](#).
9. Remove the registration transport assembly, [REP 80.30](#).

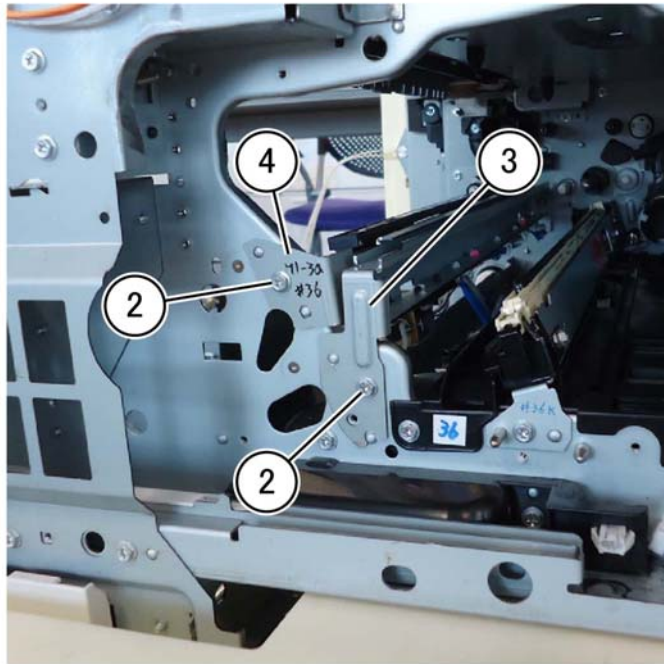
10. Remove the MOB/ADC assembly, [PL 90.30 Item 4](#).
 - a. Disconnect three connectors (1), [Figure 1](#).



F-1-0384-A

Figure 1 Connectors location

- b. Remove two screws (2), remove the lower guide-IBT (3), then remove the MOB/ADC assembly (4), [Figure 2](#).



F-1-0385-A

Figure 2 MOB/ADC assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 90.10 Upper Conductor Housing Assembly

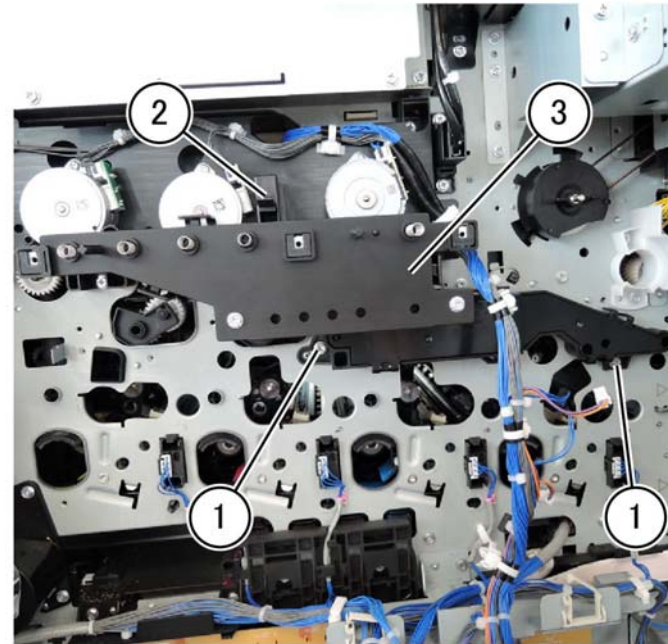
Parts List on [PL 90.30](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 BTR HVPS PWB, [REP 1.1](#).
2. Remove the conductor housing assembly: [Figure 1](#).
 - a. Remove two screws (1).
 - b. Release the hook (2).
 - c. remove the upper conductor housing assembly, [PL 90.30 Item 7](#), (3).



F-1-0386-A

Figure 1 Conductor housing assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 90.11 Drum Assembly

Parts List on [PL 90.15](#)

Removal

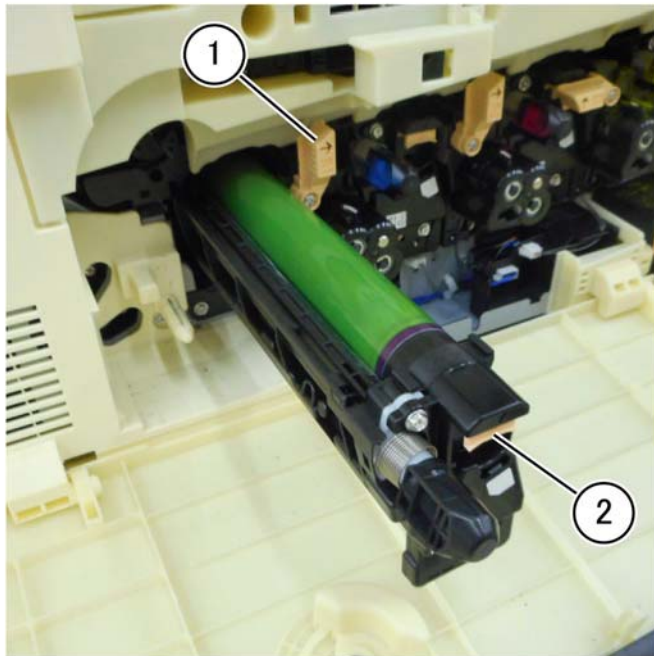
WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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: Cover the drum assembly with a dark material after removal to reduce light fatigue while out of the machine.

NOTE: Do not touch the drum assembly surface.

1. Remove the front cover assembly, [PL 28.05 Item 8](#).
2. Remove the waste cartridge, [PL 90.15 Item 1](#).
3. Remove the inner lower cover, [PL 28.05 Item 2](#).
4. Remove the drum assembly, [PL 90.15, Figure 1](#).
 - a. Raise the developer assembly lever (1).
 - b. Raise the hook and remove the drum assembly (2).



F-1-0387-A

Figure 1 Drum assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 90.12 Gear Housing Assembly

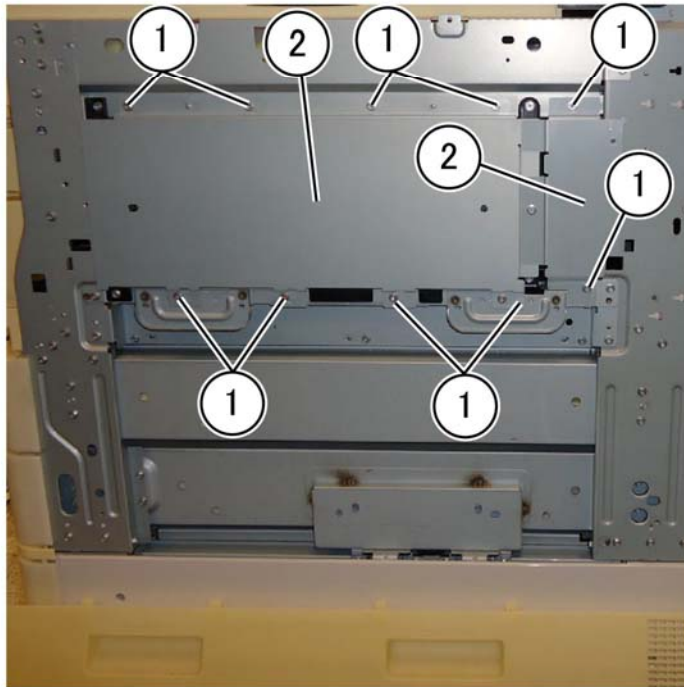
Parts List on [PL 90.20](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 four developer assemblies, [REP 90.3](#).
2. Remove the upper right front cover, [PL 28.15 Item 1](#).
3. Remove the cover assembly and cover: [Figure 1](#).
 - a. Remove ten screws (1).
 - b. Remove the cover assembly and cover (2).

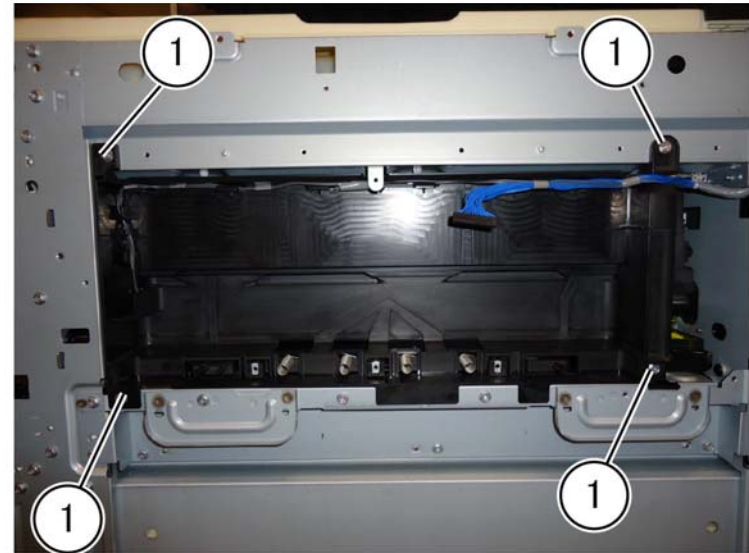


F-1-0388-A

Figure 1 Drum assembly removal

4. Remove the BCR HVPS, [REP 1.9](#).

5. Remove the conductor assembly: [Figure 2](#).
 - a. Remove four screws (1).



F-1-0389-A

Figure 2 Screw location

- b. Disconnect the connector (2) and remove the conductor housing assembly (3), [Figure 3](#).
6. Remove two screws (1), then remove the gear housing assembly (2), [Figure 4](#).

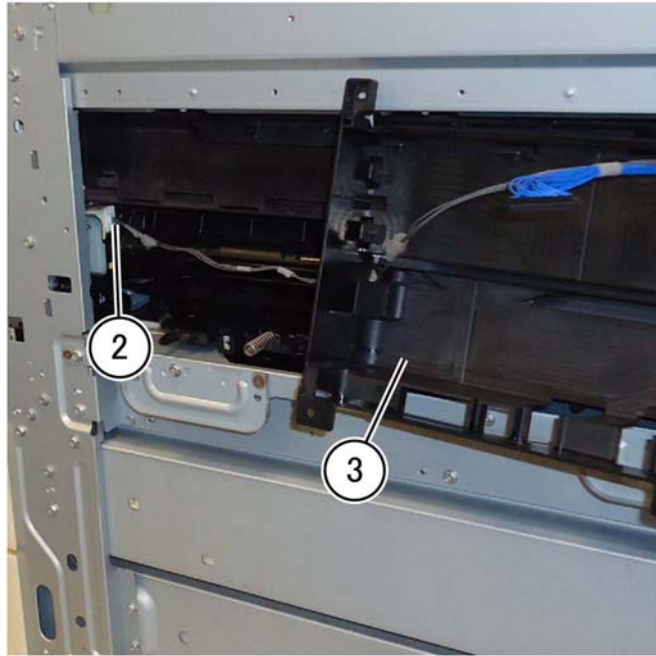


Figure 3 Conductor housing removal

F-1-0390-A

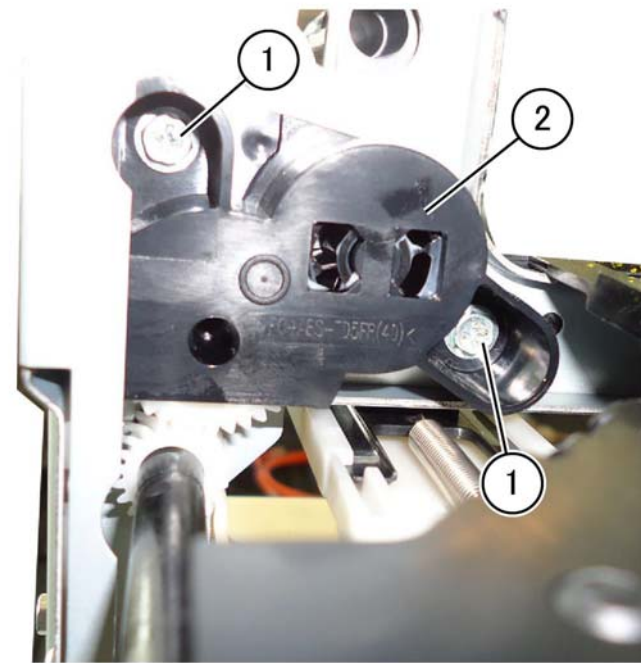


Figure 4 Gear housing assembly removal

F-1-0391-A

Replacement

Replacement is the reverse of the removal procedure.

REP 90.13 Drive Shaft

Parts List on [PL 90.20](#)

Removal

WARNING

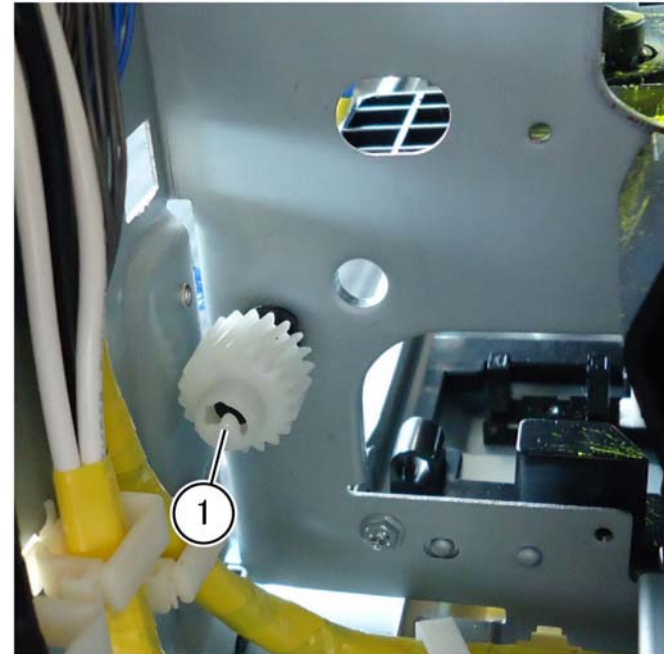
Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

NOTE: When removing the Drum, cover it with a black sheet, etc. to prevent light fatigue.

NOTE: Do not touch the Drum surface with your hands.

1. Remove the front cover assembly, [PL 28.05 Item 8](#).
2. Remove the waste toner transport assembly, [PL 90.15 Item 1](#).
3. Remove the waste cartridge, [PL 90.15 Item 6](#).
4. Remove the inner cover assembly, [PL 28.05 Item 1](#).
5. Remove the inner lower cover, [PL 28.05 Item 2](#).
6. Remove the inner hinge cover assembly, [PL 28.05 Item 4](#).
7. Remove the inner right cap cover, [PL 28.05 Item 3](#).
8. Remove the inner right cover, [PL 28.05 Item 6](#).
9. Remove the (Y) drum assembly, [REP 90.11](#).
10. Remove the (Y) developer assembly, [REP 90.3](#).
11. Remove the (Y) toner cartridge, [PL 90.10 Item 27](#).
12. Remove the agitator motor assembly, [REP 90.14](#).

13. Release the latch inside the rear gear (1), then remove the gear and sleeve bearing, [Figure 1](#).



F-1-0392-A

Figure 1 Rear gear removal

14. Grasp the rear-end of the drive shaft (2), PL 90.20 Item 2, pulling the front-end of the drive shaft through the frame hole, then remove the drive shaft from the front, Figure 2.

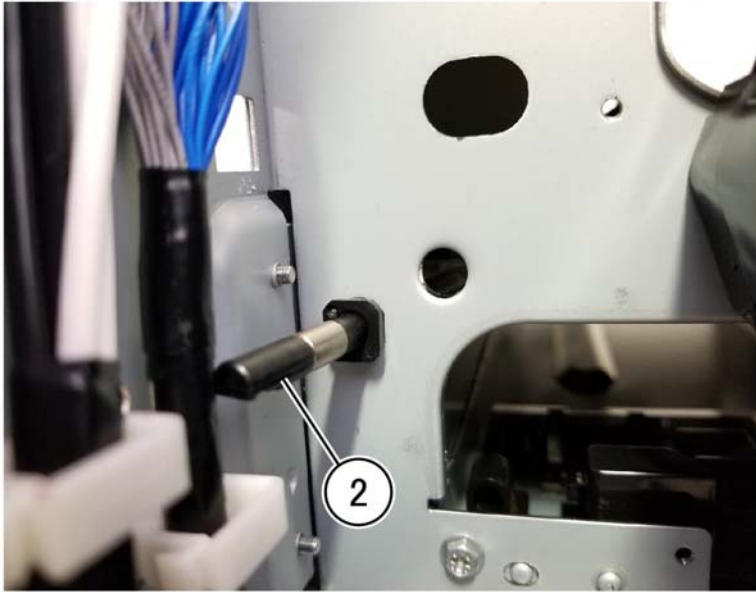


Figure 2 Drive shaft rear-end

F-1-0393-A

Replacement

Replacement is the reverse of the removal procedure.

NOTE: The flanged end of the sleeve bearing seats against the gear on both ends, Figure 3. The shaft of the sleeve bearing seats inside the frame hole, Figure 4.

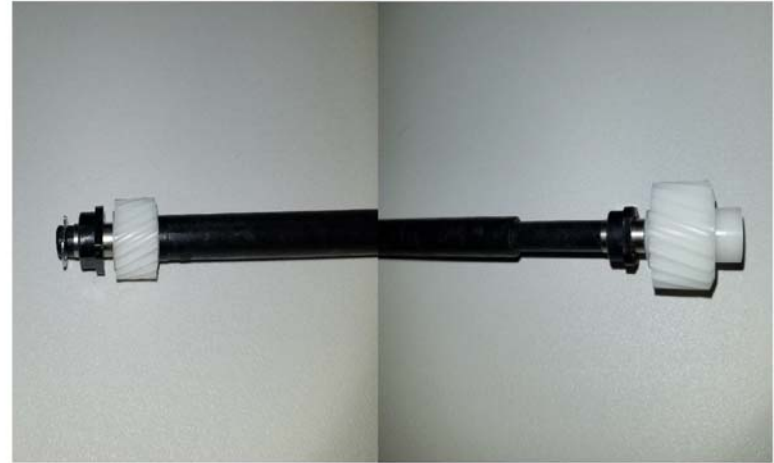


Figure 3 Sleeve bearing to gear position

F-1-0394-A

REP 90.14 Agitator Motor Assembly

Parts List on [PL 90.20](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

Cover the drum assembly with a dark material after removal to reduce light fatigue while out of the machine.

CAUTION

Do not touch the drum assembly surface.

1. Remove the lower rear cover, [PL 28.15 Item 8](#).
2. Open the video contact chassis assembly, [GP 32](#).



F-1-0395-A

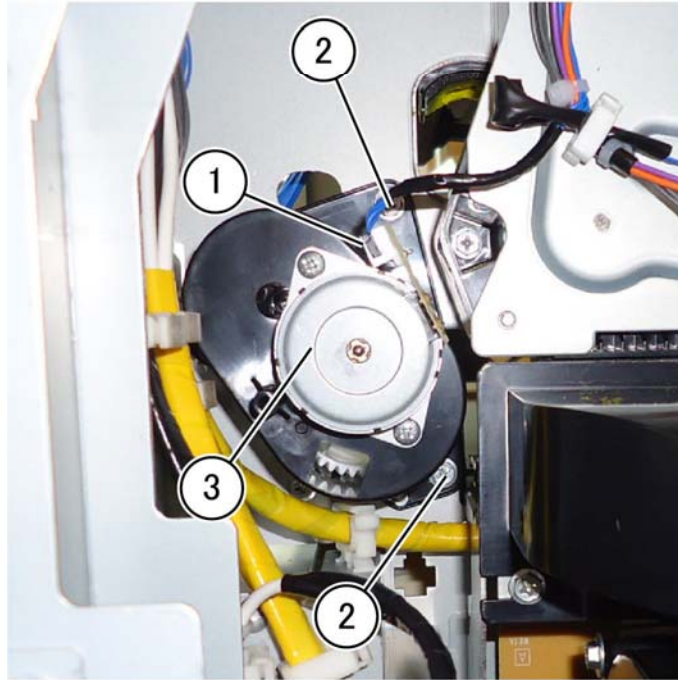
Figure 4 Sleeve bearing in the frame

3. Remove the agitator motor assembly, [PL 90.20 Item 9, Figure 1](#).

CAUTION

Use extreme caution when disconnecting the connector from the motor. The connector PWB is very fragile and will break easily.

- a. Disconnect the connector (1).
- b. Remove two screws (2).
- c. Remove the agitator motor assembly (3).



F-1-0396-A

Figure 1 Agitator motor assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 90.15 Joint Pipe Assembly

Parts List on [PL 90.20](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

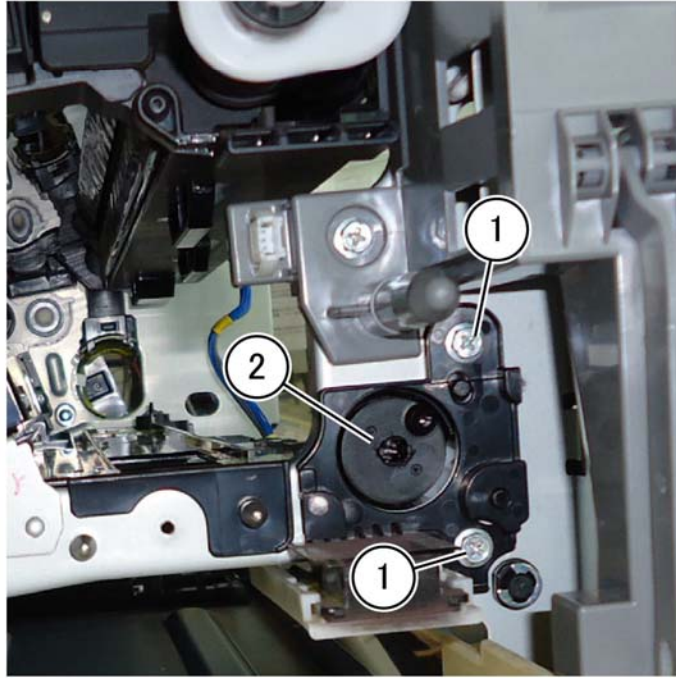
Cover the drum assembly with a dark material after removal to reduce light fatigue while out of the machine.

CAUTION

Do not touch the drum assembly surface.

1. Remove the front cover assembly, [PL 28.05 Item 8](#).
2. Remove the waste cartridge, [PL 90.15 Item 6](#).
3. Remove the waste toner transport assembly, [PL 90.15 Item 1](#).
4. Remove the inner cover assembly, [PL 25.05 Item 1](#).
5. Remove the inner lower cover, [PL 28.05 Item 2](#).
6. Remove the inner hinge cover assembly, [PL 28.05 Item 4](#).
7. Remove the inner right cap cover, [PL 28.05 Item 3](#).
8. Remove the inner right cover, [PL 28.05 Item 6](#).

9. Remove the joint pipe assembly, [PL 90.20 Item 11, Figure 1](#).
 - a. Remove two screws (1).
 - b. Remove the joint pipe assembly (2).



F-1-0397-A

Figure 1 Joint pipe assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 90.16 Housing Assembly

Parts List on [PL 90.25](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

Cover the drum assembly with a dark material after removal to reduce light fatigue while out of the machine.

CAUTION

Do not touch the drum assembly surface.

1. Remove the front cover assembly, [PL 28.05 Item 8](#).
2. Remove the waste toner assembly, [PL 90.15 Item 1](#).
3. Remove the inner lower cover, [PL 28.05 Item 2](#).
4. Remove the drum assembly, [REP 90.11](#).
5. Remove the developer assembly, [REP 90.3](#).
6. Remove the FFC cable assembly, [REP 60.2](#).
7. Remove two screws (1), [Figure 1](#).

- Remove the housing assembly (2), PL 90.25 Item 2, Figure 2.

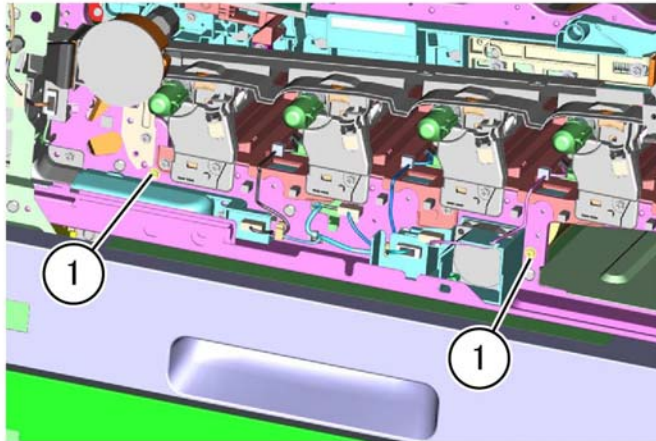


Figure 1 Screw removal

F-1-0398-A

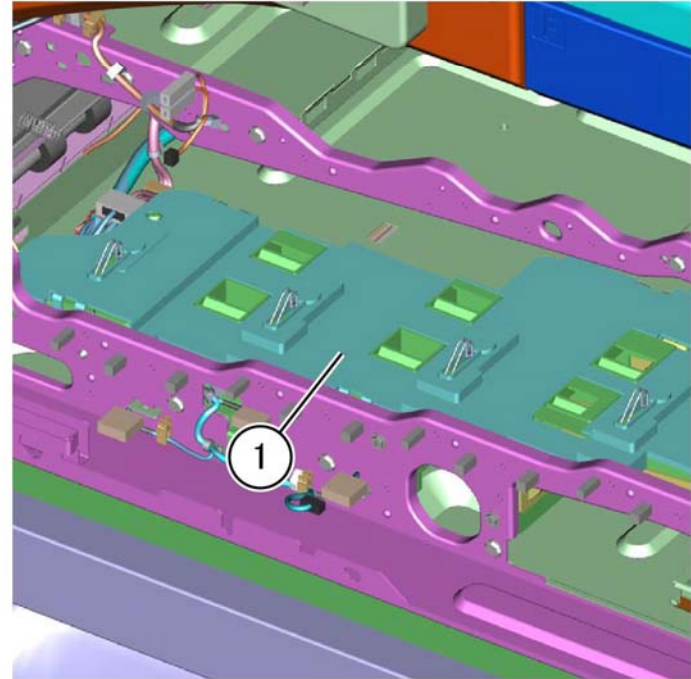


Figure 2 Housing assembly removal

F-1-0399-A

Replacement

Replacement is the reverse of the removal procedure.

REP 90.17 Sleeve Bearing

Parts List on [PL 90.20](#)

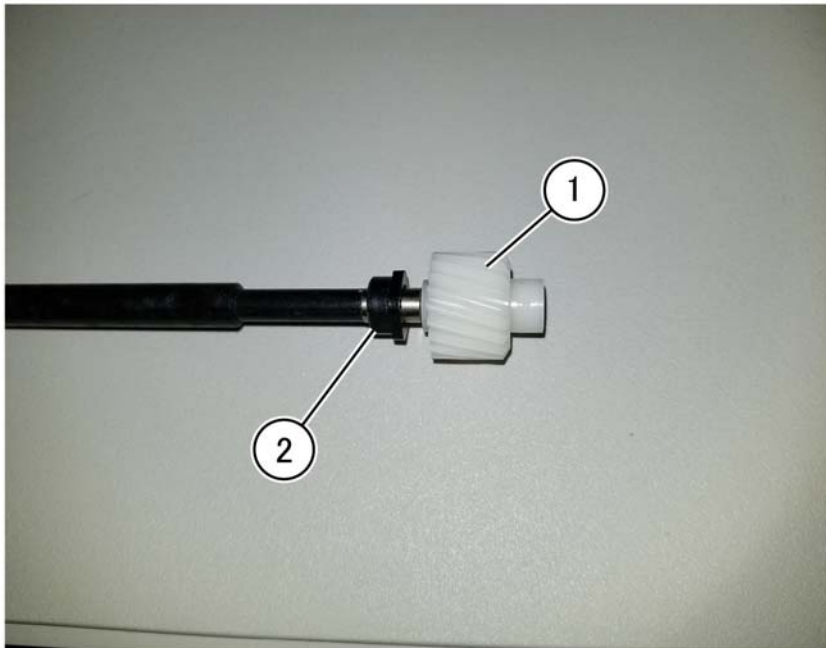
Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 drive shaft, [REP 90.13](#).
2. Remove the rear sleeve bearing, [PL 90.20 Item 3, Figure 1](#).
 - a. Release the gear latch, then remove the helical gear (1) and sleeve bearing (2).

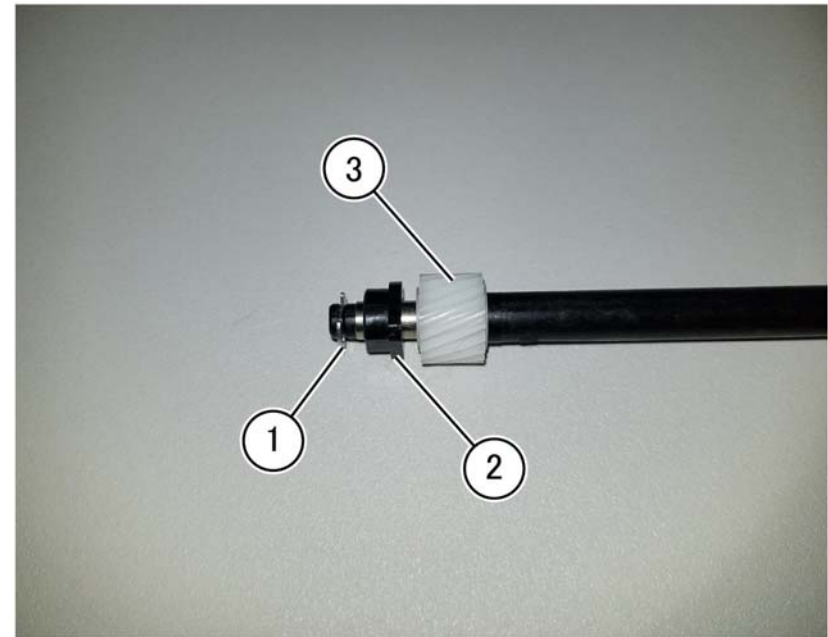
NOTE: During replacement, the bearing flange seats against the gear.



F-1-0400-A

Figure 1 Rear sleeve bearing removal

3. Remove the front sleeve bearing, [PL 90.20 Item 3, Figure 2](#).
 - a. Remove the e-clip (1).
 - b. Remove the sleeve bearing (2) leaving the gear (3) on the drive shaft.



F-1-0401-A

Figure 2 Front sleeve bearing alignment

Replacement

Replacement is the reverse of the removal procedure.

NOTE: Verify both bearings installed with the flange side against the gear.

REP 90.18 Waste Toner Cartridge Sensors

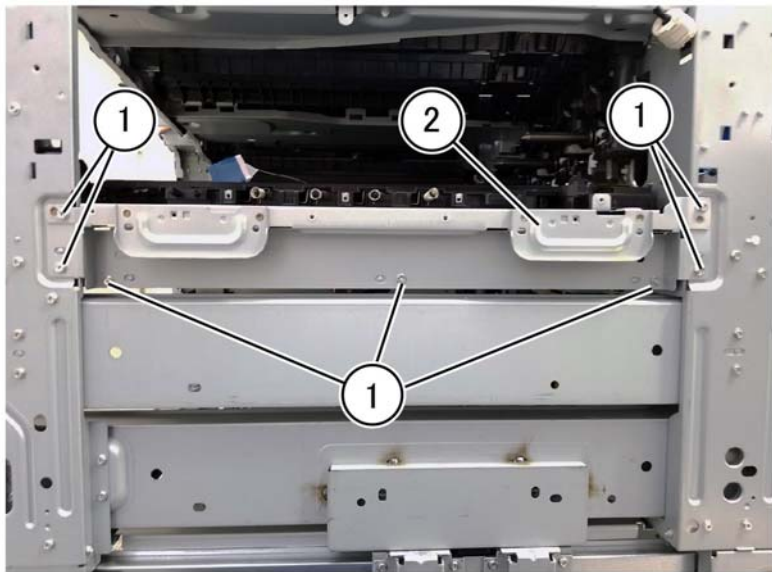
Parts List on [PL 90.20](#)

Removal

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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 BCR HVPS PWB, [REP 1.9](#).
2. Remove the lower right front cover, [PL 28.15 Item 2](#).
3. Remove the upper right rear cover, [PL 28.15 Item 3](#).
4. Remove the conductor assembly, [PL 1.20 Item 5](#).
5. Remove seven screws (1), then remove the handle assembly (2), [Figure 1](#).

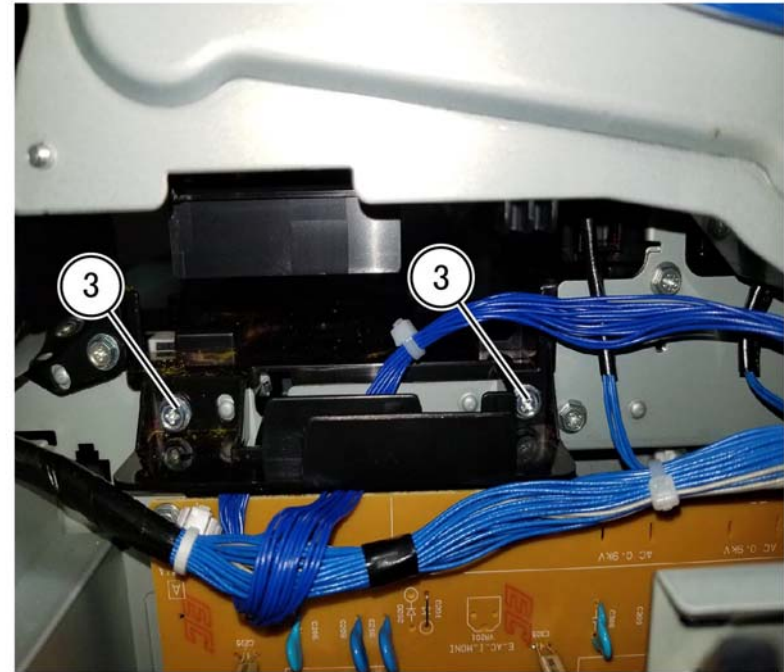


F-1-0402-A

Figure 1 Handle assembly removal

6. Remove the agitator motor assembly, [REP 90.14](#).
7. Remove the drive shaft, [REP 90.13](#).

8. Remove two screws (3) securing the cartridge guide, [Figure 2](#).

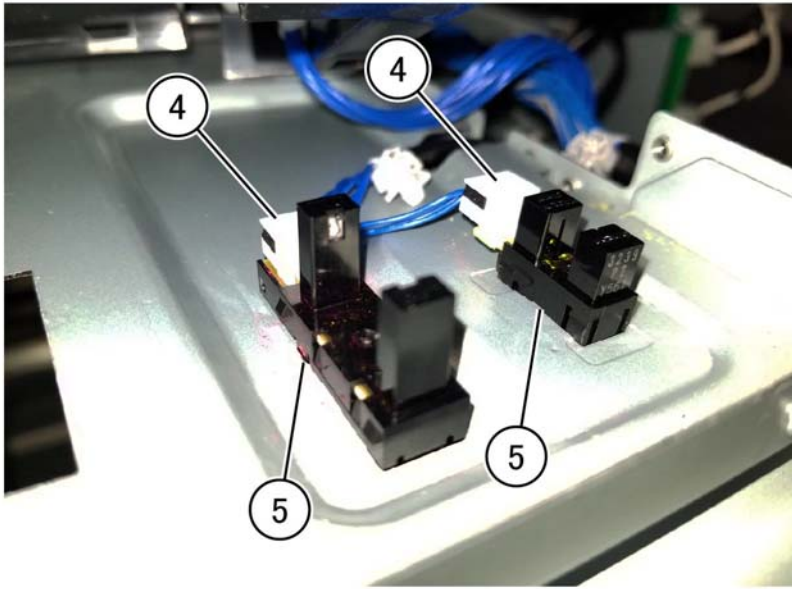


F-1-0403-A

Figure 2 Cartridge guide screws

9. Release two tabs and move the cartridge guide out of the way to gain access to the sensors.

10. Disconnect the connector (4) of the failed sensor, release the sensor housing hooks of the failed sensor (5), then remove the sensor, [PL 90.20 Item 6](#) or [PL 90.20 Item 7](#), [Figure 3](#).



F-1-0404-A

Figure 3 Sensor removal

Replacement

Replacement is the reverse of the removal procedure.

ADJ 10.1 Fuser Paper Wrinkle Adjustment

Purpose

To adjust the fuser paper alignment to reduce occurrences of paper wrinkle.

Adjustment

1. Remove the fuser, [PL 10.05 Item 14](#).
2. Adjustment bracket (1), [Figure 1](#).
 - a. Loosen the top screw (2).
 - b. Remove the screw in location C (3).

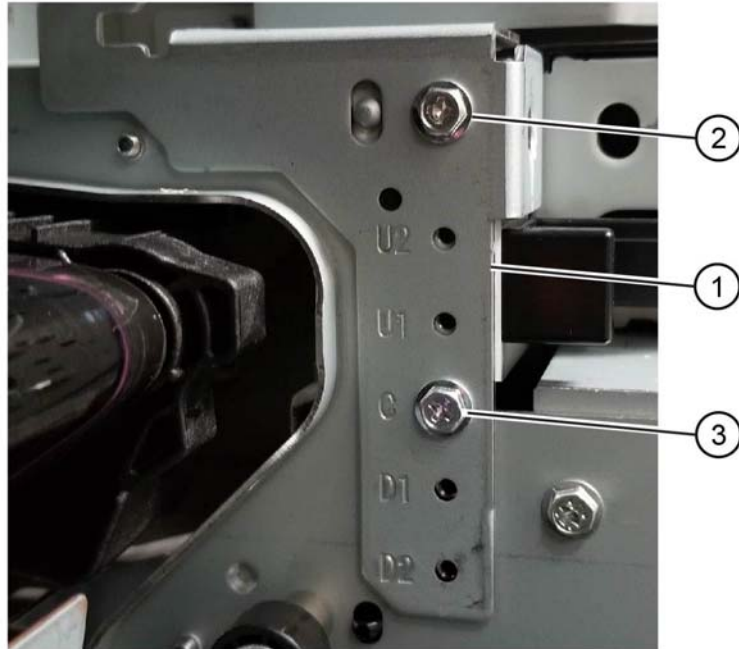


Figure 1 Loosen adjustment bracket

F-1-0678-A

3. Left side of the paper is wrinkled, go to Step 4. Right side of the paper is wrinkled, go to Step 5.
4. Adjust the position of the bracket for left side wrinkle.
 - a. Begin adjustment inserting the screw removed from location C into the hole marked D1 (4) and tighten both D1 (4) and the top screw (2), [Figure 2](#).

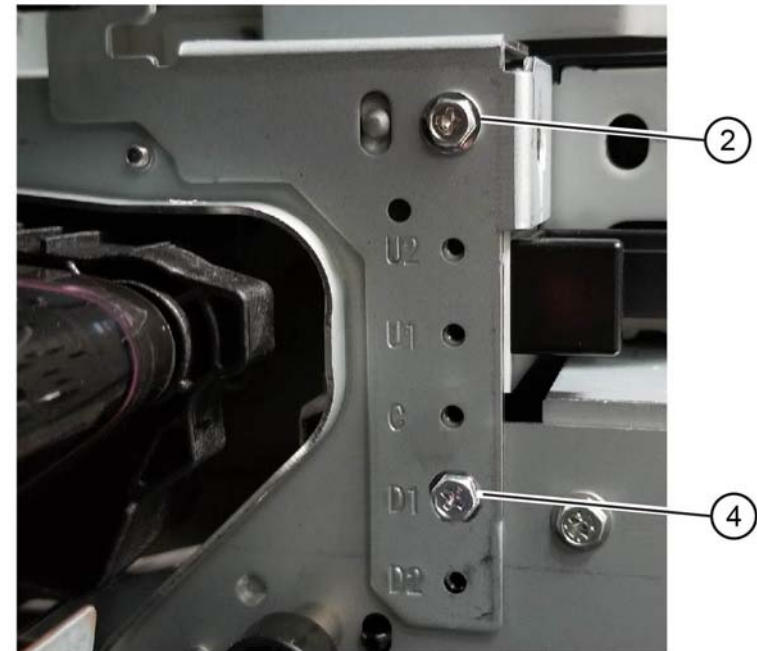
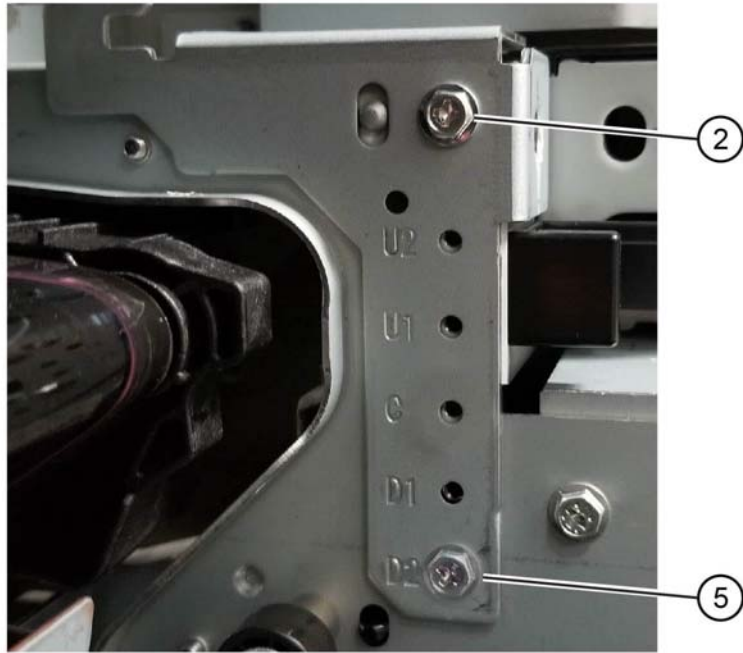


Figure 2 Initial left side adjustment

F-1-0679-A

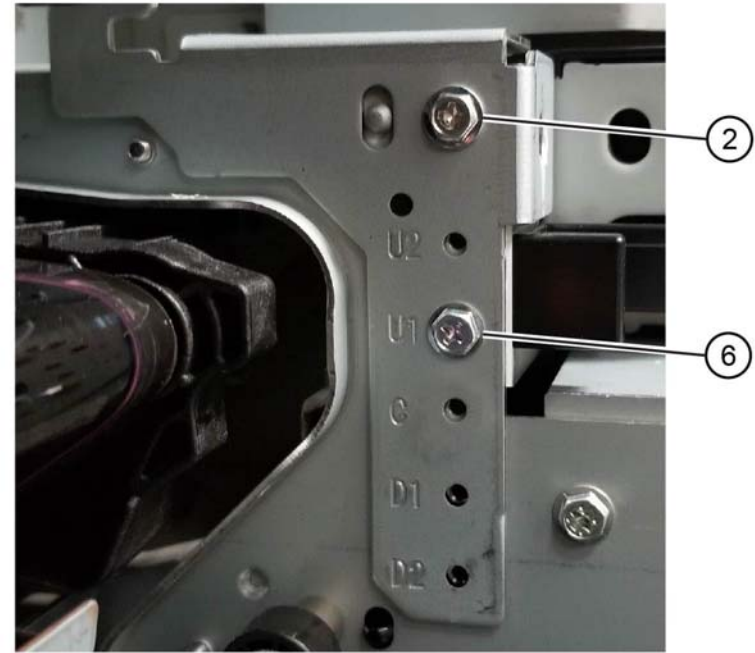
- b. After testing if more adjustment is required, loosen the top screw (2), remove the screw from D1 (4), install into the hole marked D2 (5), tighten the top screw (2), [Figure 3](#).



F-1-0680-A

Figure 3 Subsequent left side adjustment

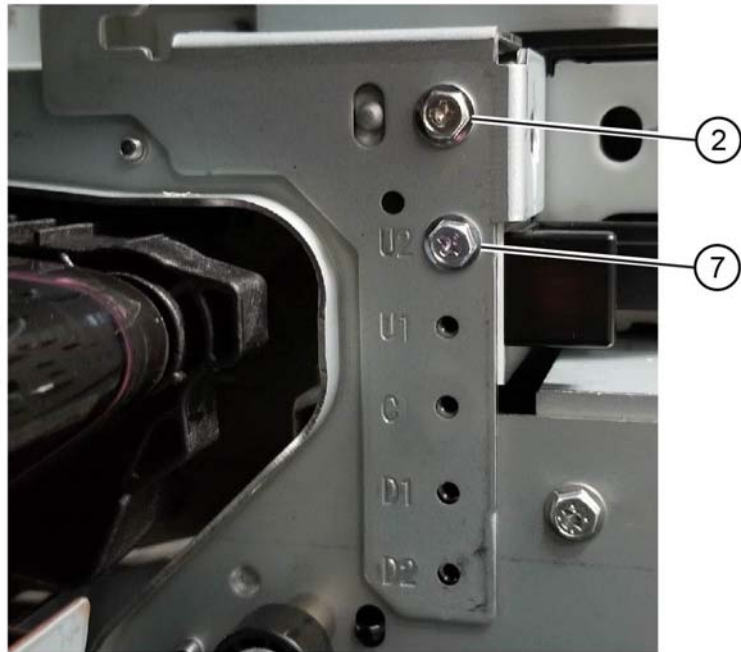
5. Adjust the position of the bracket for right side wrinkle.
- a. Begin adjustment inserting the screw removed from location C into the hole marked U1 (6) and tighten both U1 (6) and the top screw (2), [Figure 4](#).



F-1-0681-A

Figure 4 Initial right side adjustment

- b. After testing if more adjustment is required, loosen the top screw (2), remove the screw from U1, install into the hole marked U2 (7), tighten the top screw (2), **Figure 5**.



F-1-0682-A

Figure 5 Subsequent right side adjustment

6. Install the fuser.

ADJ 13.1 Booklet Folding and Staple Position

Purpose

To adjust the position of the booklet fold and staple position.

***NOTE:** This adjustment can also be performed by the customer.*

Procedure

***NOTE:** For a description of the print/copy orientation definitions, refer to [GP 31 Print/Copy Orientation Definitions](#).*

1. Enter Customer Administrator Tools, [GP 23](#).
2. Touch **Device**, then **Support**.
3. Touch **Fold Position**.
4. Follow the on screen instructions.
5. Exit Customer Administrator Tools, [GP 23](#).

ADJ 60.1 Image Position

Purpose

To adjust the position of the image on the page.

NOTE: This adjustment can also be performed by the customer.

Procedure

NOTE: For a description of the print/copy orientation definitions, refer to [GP 31 Print/Copy Orientation Definitions](#).

1. Enter Customer Administration Tools, [GP 23](#).
2. Touch **Device**, then **Support**.
3. Touch **Image Position**.
4. Follow the on screen instructions.
5. Exit Customer Administrator Tools, [GP 23](#).

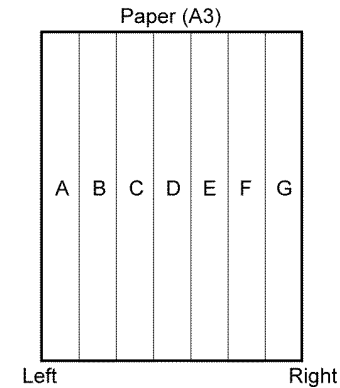
ADJ 60.2 LPH Exposure Amount Detail Correction

Purpose

To supply a process of adjusting the LPH exposure amount to correct uneven density in the process direction due to various causes in the vicinity of the drum for each YMCK color individually.

The LPH Exposure Amount Adjustment can be performed as a negative correction within the range of 0 to -17(%)

Correction Area



TF-1-0675-A

Figure 1 Correction areas

Refer to [Table 1](#) for specific dimensions of correction areas defined in [Figure 1](#).

Table 1 Correction area dimensions

	A	B	C	D	E	F	G
Distance from the left of image (mm)	0	54	108	162	216	270	325

As shown in [Figure 1](#), the LPH zone is divided into 7 areas by setting the 6 points - from A (leftmost edge) to G (rightmost edge).

Adjustment is performed at each area to lower the LPH exposure amount until the density is even.

NOTE: There are cases where point A or G will lie beyond the image zone. Furthermore, the 162mm mark is the center of the image.

NOTE:

- Make adjustments as small as possible. A large adjustment can cause jumps in gradation.
- The adjustment amount (%) is not = amount of change in density.
- The actual exposure level includes a process that converts the brightness of ADC Sensor, PL 90.30 Item 11, Position to 100%. (For more information refer also to MOB and ADC sensors.)

Procedure

1. LPH Exposure Amount Fine Adjustment ON/OFF Switch Selector (smile correction). To enable the LPH Exposure Amount Fine Adjustment function, set the following NVM as ON.

Table 2 Smile correction switch

NVM Name	NVM Address	Description	Default Value	Adjustment Range
Smile Correction Switch	749-255	0:OFF 1:ON	1	0 or 1

NOTE: Smile correction is the name given to the process that allows the adjustment of uniformity of density, giving accurate color edge-to-edge and page-to-page.

2. Select Correction Method

The LPH Exposure Amount Fine Adjustment can be done by:

- Correcting the density skew in the IN-OUT direction - see [IN/OUT Density Correction](#) below
- Selecting a pre-prepared pattern to perform the correction - see [Pattern Selection Correction](#) below
- Using custom correction to manually correct the adjustment amount for each area - see [Custom Correction](#) below

A combination of the three correction methods below can be used. However, the correction cannot go beyond the 0 to -17 (%) range.

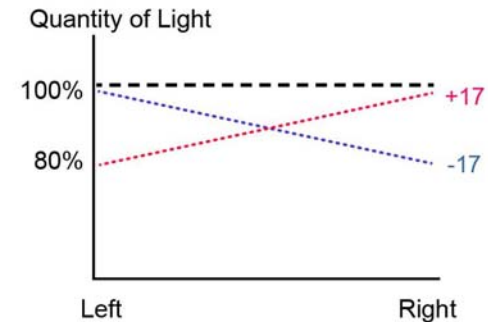
IN/OUT Density Correction

- Corrects the IN-OUT density skew in the process direction of the photoreceptor.
- When there is density skew from the left to the right of the image, the adjustment amount to correct that has to be set for each color.
- Setting Range is -17 to +17 (%)

Refer to [Table 3](#).

Table 3 IN/OUT Density Correction

NVM Name	NVM Address		Default Value	Adjustment Range (units: 0.1%)
In Out Tendency (IN/OUT correction)	749-276	Y	0	-170~170
	749-277	M	0	-170~170
	749-278	C	0	-170~170
	749-279	K	0	-170~170



TF-1-0676-A

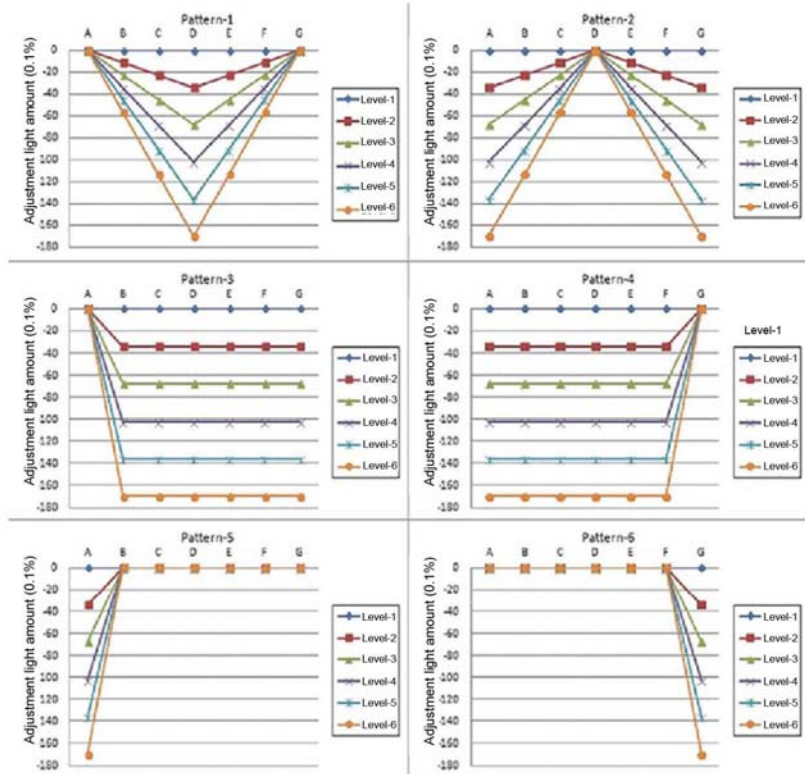
Figure 2 IN/OUT density correction

NOTE: Although there is also an adjustment range at the positive side, it only involves reducing the brightness at the IN side or the OUT side and therefore will not have any correction that goes above 100%.

Pattern Selection Correction

Select the Pattern 1~6 and Level 1~6 that is most suitable for the density correction from Figure 3.

- The selected Pattern and Level are reflected as LPH Brightness Correction by changing the following NVMs.
- As there are separate NVMs for each color, they can each be corrected independently.



TF-1-0677-A

Figure 3 Correction patterns

Refer to Table 4 and Table 5.

Table 4 Correction Pattern

NVM Name	NVM Address		Default Value	Adjustment Range (units: 0.1%)
Correction Pattern (Pattern Selection)	749-280	Y	0	1~6
	749-281	M	0	1~6
	749-282	C	0	1~6
	749-283	K	0	1~6

Table 5 Correction Level

NVM Name	NVM Address		Default Value	Adjustment Range (units: 0.1%)
Correction Level	749-284	Y	0	1~6
	749-285	M	0	1~6
	749-286	C	0	1~6
	749-287	K	0	1~6

NOTE:

"0" and "5" for Pattern means "Disabled" and "1" for Level means "No correction".

Custom Correction

The required adjustment amount for the correction of every area must be input into the NVM for each YMCK color. Refer to Table 6.

NOTE: Only negative correction can be performed for density correction.

Table 6 Custom Correction Value

NVM Name	NVM Address	Description		Default Value							Adjustment Range
				A	B	C	D	E	F	G	
Custom Correction Value	749-288~294	R/E (%) within Pulse Width Variable Range	Y	0	0	0	0	0	0	0	-170~170
	749-295~301		M	0	0	0	0	0	0	-170~170	
	749-302~308		C	0	0	0	0	0	0	-170~170	
	749-309~315		K	0	0	0	0	0	0	-170~170	

The NVM Addresses correspond in ascending order to ABCDEFG.

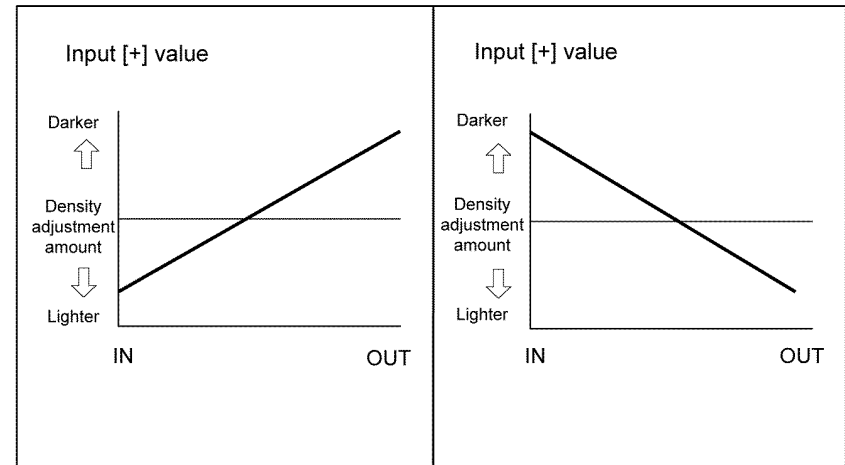
Although there is also an adjustment range at the positive side, the brightness will saturate at 100%. The positive correction of up to the 100% range will only be applied when the exposure amount has been corrected towards the negative side at IN-OUT Density Correction or Pattern Selection Correction.

NOTE: IN/OUT Density Correction, Pattern Selection Correction and Custom Correction can be used in combination.

- The total amount of exposure adjustment for these Smile Corrections are restricted to within 0 to -17%. [Correction sum from 0 to -17%] = [IN/OUT correction amount%] + [Pattern selection correction amount%] + [Custom correction amount%] If the sum of the above 3 is less than -17%, it is limited uniformly to -17%.
- If the correction is larger than 0% it will be uniformly limited to 0%.
- The above are the restrictions that apply to the exposure amount correction and correction by smile correction function. But, inside the actual M/C, the light intensity at the ADC sensor position is considered 100% due to another process, after light intensity correction by smile correction.

Inclination Adjustment Procedure

1. Adjust the density distribution based on the printout sample. (Adjustment amount is -17~17) The greater the value, the greater the adjustment amount. [Figure 4.](#)



TF-1-0704-A

Figure 4 Density adjustment

2. Printout the sample with [Print] again after adjustment and check the adjustment result.
3. Readjust if necessary.
4. Press [OK] after confirming the numbers.
5. Exit diagnostics, GP 1.

ADJ 90.1 Marking Refresh

Purpose

To adjust the density level.

NOTE: This adjustment is only available when the machine determines that the density level has degraded. This adjustment can also be performed by the customer.

Procedure

1. Enter Customer Administrator Tools, [GP 23](#).
2. Touch **Device**, then **Supplies**.
3. Touch **Drum Cartridge**.
4. Touch **Marking Refresh**.
5. Exit Customer Administrator Tools, [GP 23](#).

ADJ 90.2 Color Calibration - Automatic

Purpose

To automatically adjust the color calibration.

NOTE: This adjustment can also be performed by the customer.

Procedure

NOTE: For a description of the print/copy orientation definitions, refer to [GP 31 Print/Copy Orientation Definitions](#).

1. Enter Customer Administration Tools, [GP 23](#).
2. Touch **Device**, then **Support**.
3. Touch **Color Calibration - Automatic**.
4. Follow the on screen instructions.
5. Exit Customer Administrator Tools, [GP 23](#).

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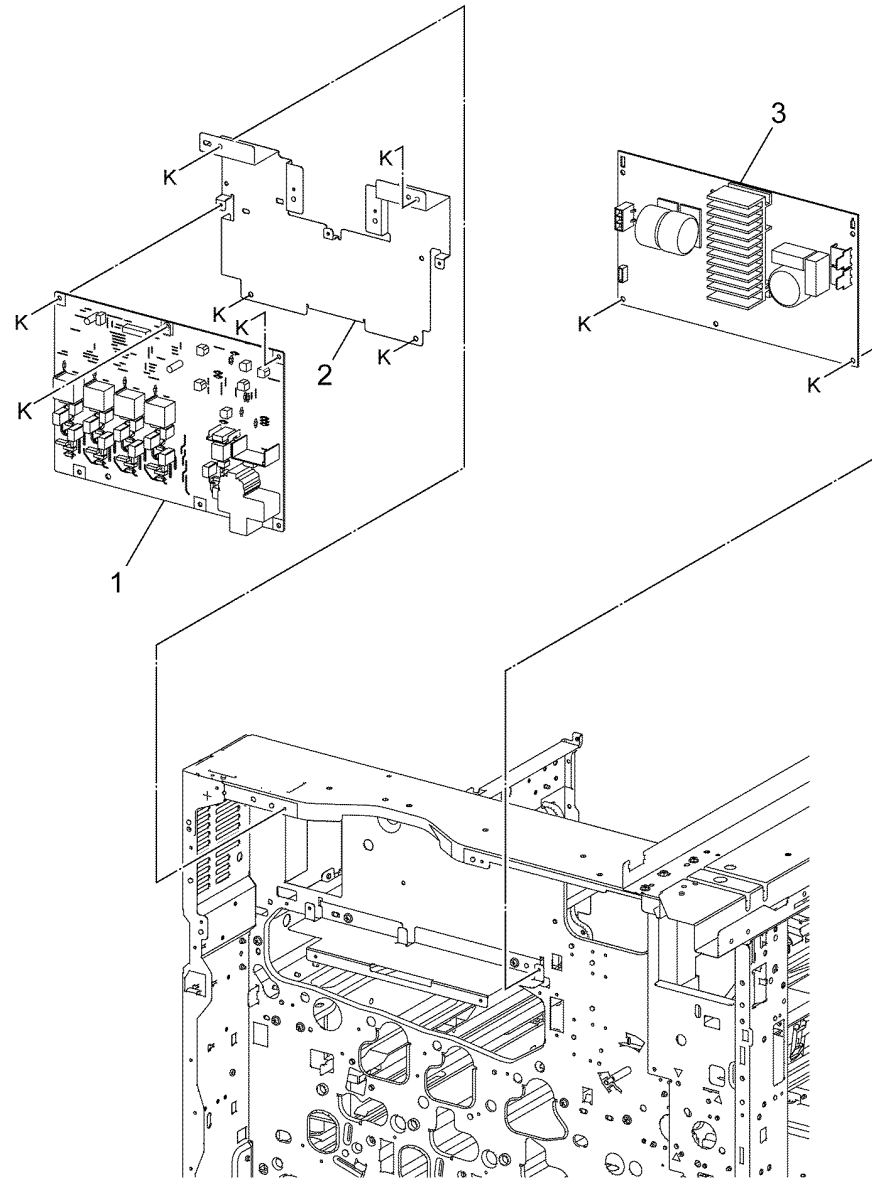
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PL 1.05 Electrical - Rear (1 of 3)

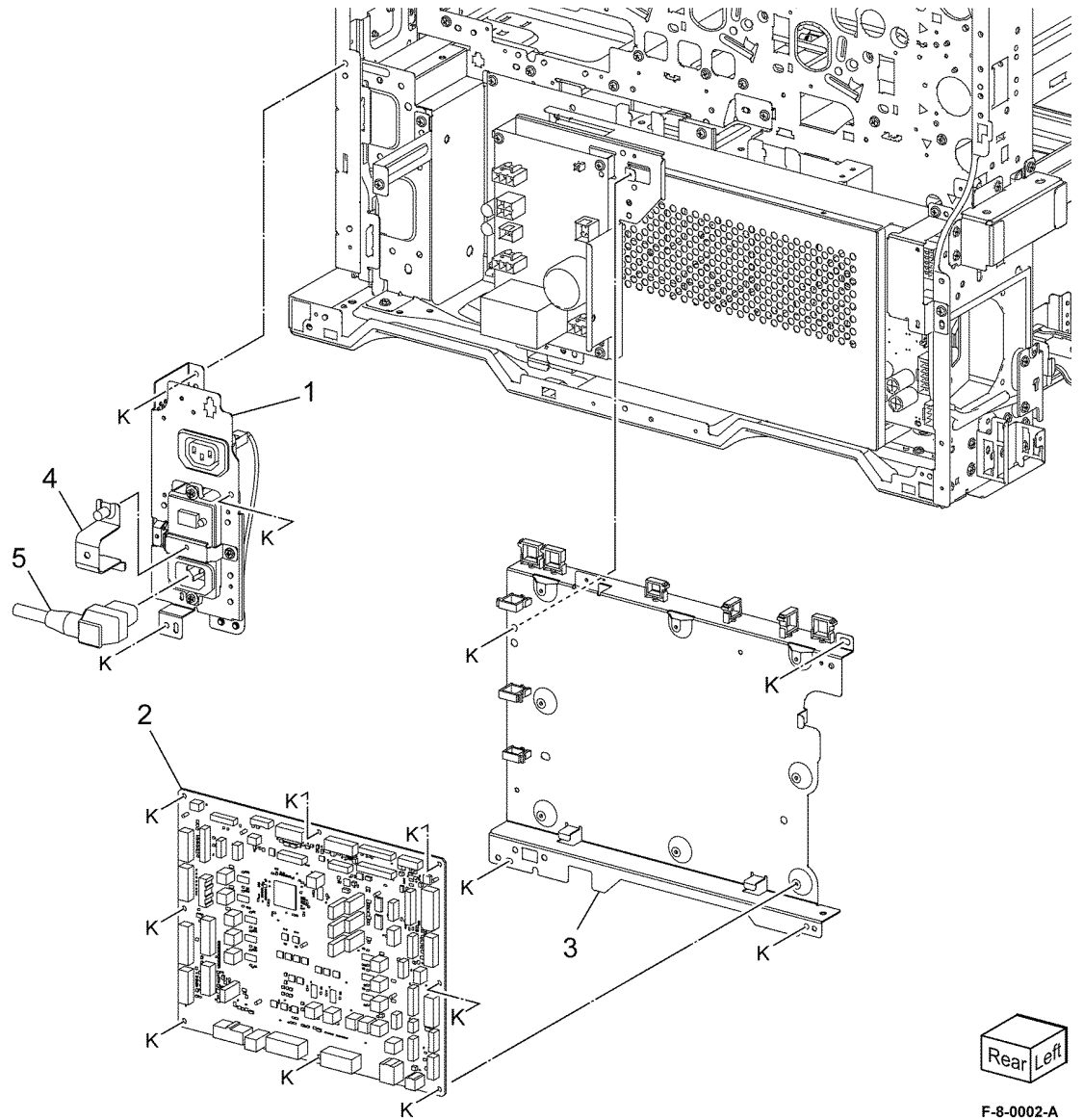
Item	Part	Description
1	105E23240	BTR HVPS PWB (REP 1.1)
2	-	Bracket (Not Spared)
3	105E23001	Fuser heater power supply (110V) (REP 1.2)
-	105E22322	Fuser heater power supply (220V) (REP 1.2)



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PL 1.10 Electrical - Rear (2 of 3)

Item	Part	Description
1	101K69950	GFI chassis assembly (REP 1.3)
2	960K81545	Motor drive PWB (REP 1.4)
3	-	Motor drive chassis assembly (Not Spared)
4	-	Power cord bracket (Not Spared)
5	-	Power cord (Not Spared)

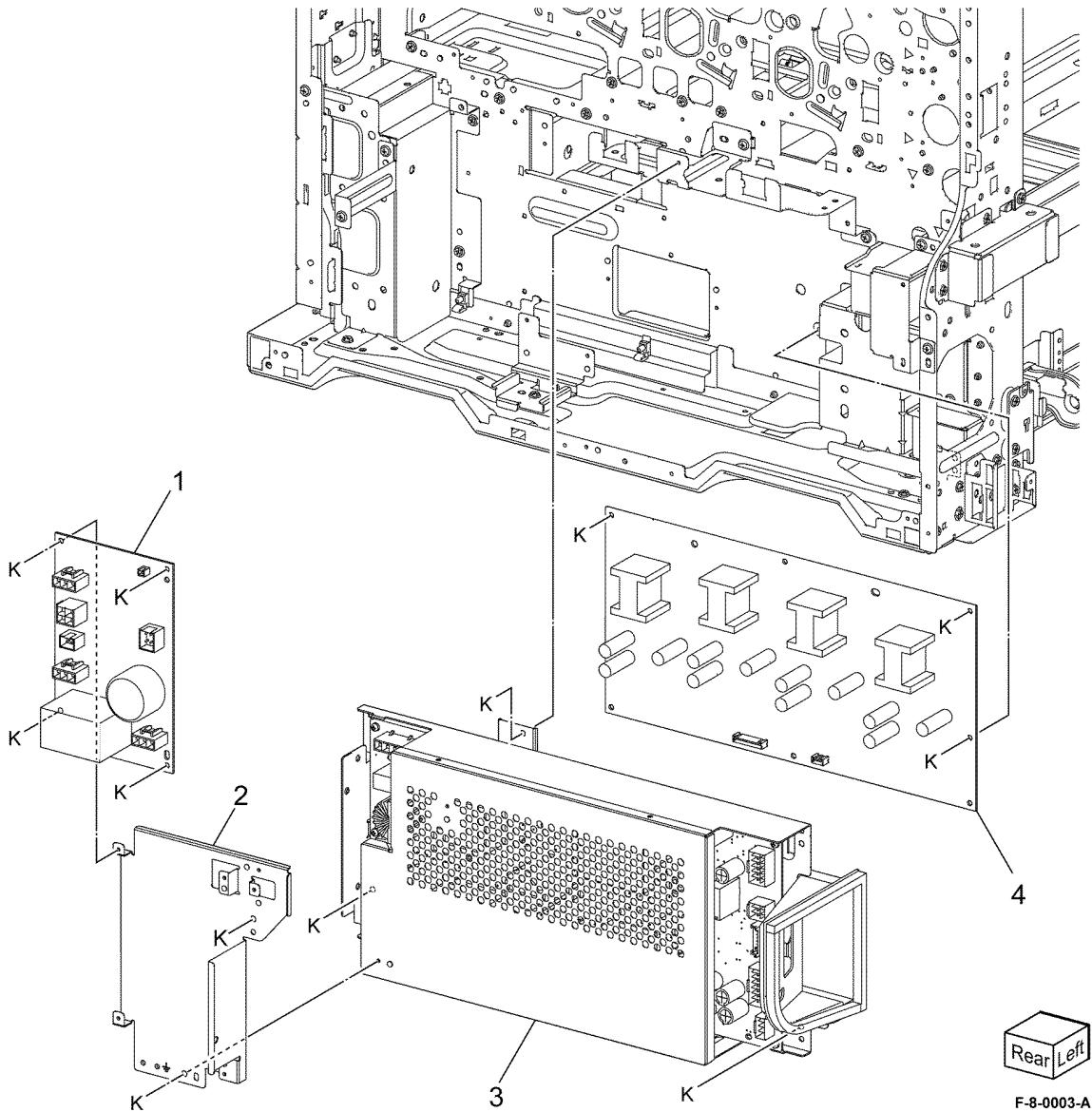


Rear Left

F-8-0002-A

PL 1.15 Electrical - Rear (3 of 3)

Item	Part	Description
1	105K32890	AC drive PWB (110V) (REP 1.5)
-	105K33530	AC drive PWB (110V) (REP 1.5) (alternative)
-	105K32900	AC drive PWB (220V) (REP 1.5)
-	105K33540	AC drive PWB (220V) (REP 1.5) (alternative)
2	-	AC bracket (Not Spared)
3	112K91350	LVPS (REP 1.6)
4	105E22572	Developer bias HVPS PWB (REP 1.7)

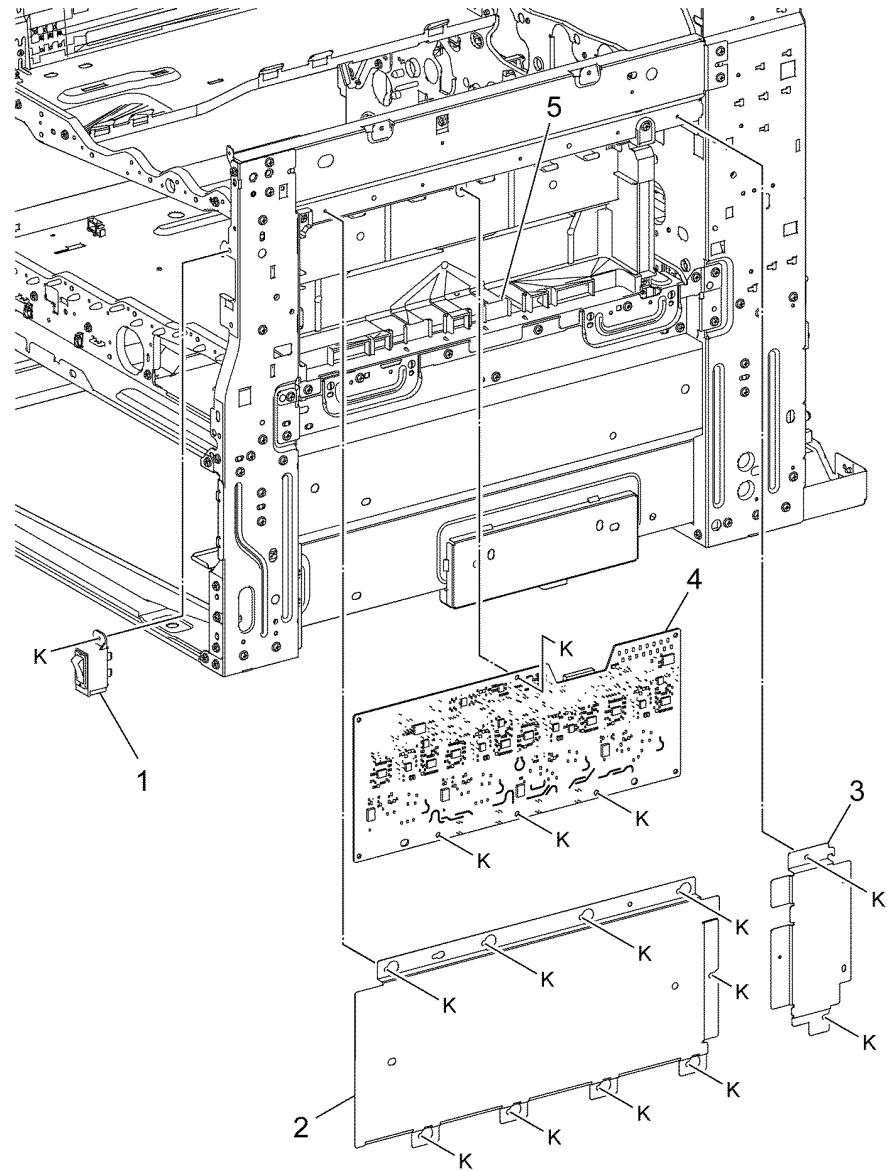


Rear Left

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PL 1.20 Electrical - Front/Right

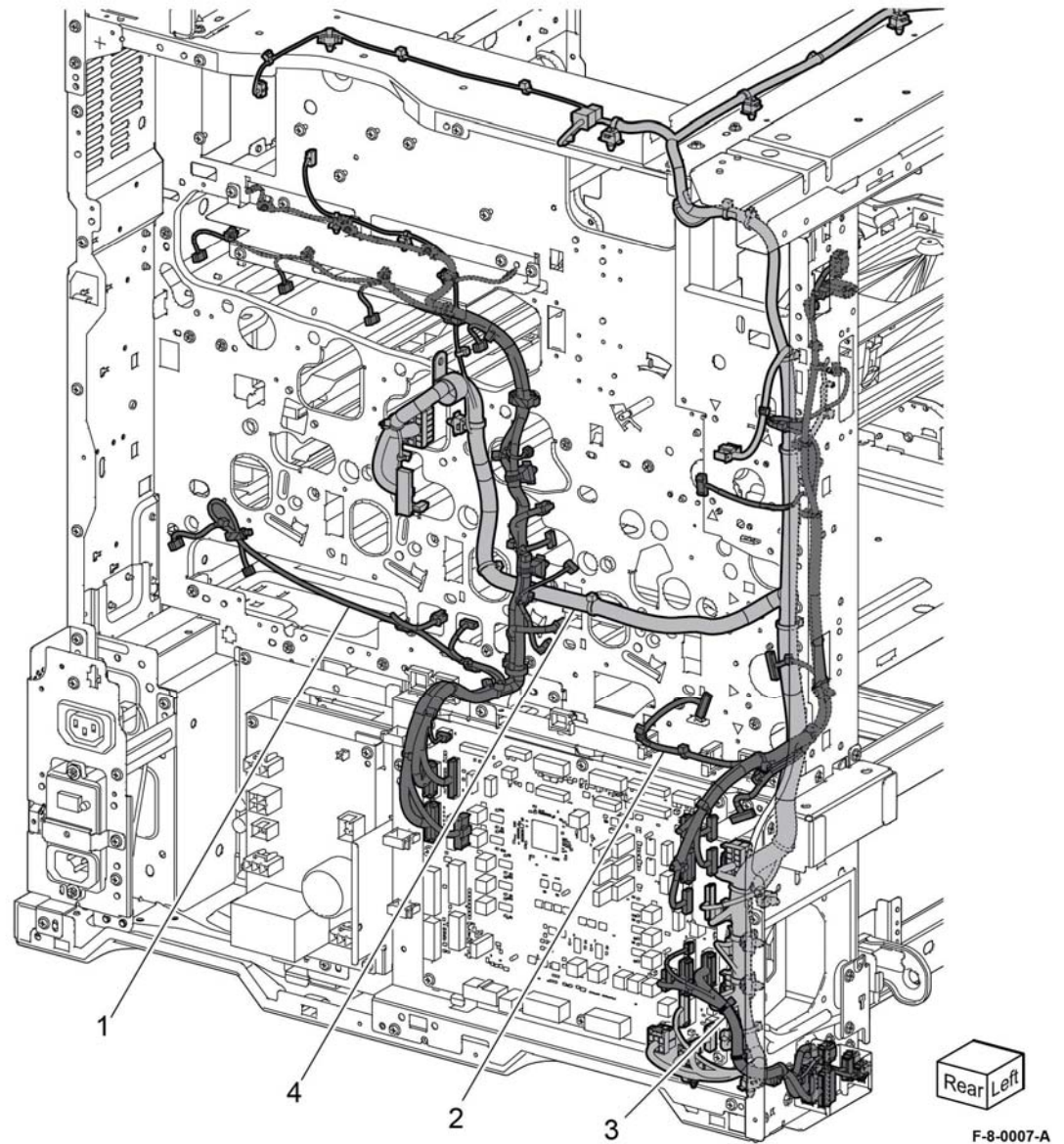
Item	Part	Description
1	049K35050	Main power switch (REP 1.8)
2	-	BCR HVPS cover (Not Spared)
3	-	Cover (Not Spared)
4	105E23230	BCR HVPS PWB (REP 1.9)
5	-	Conductor assembly (Not Spared)



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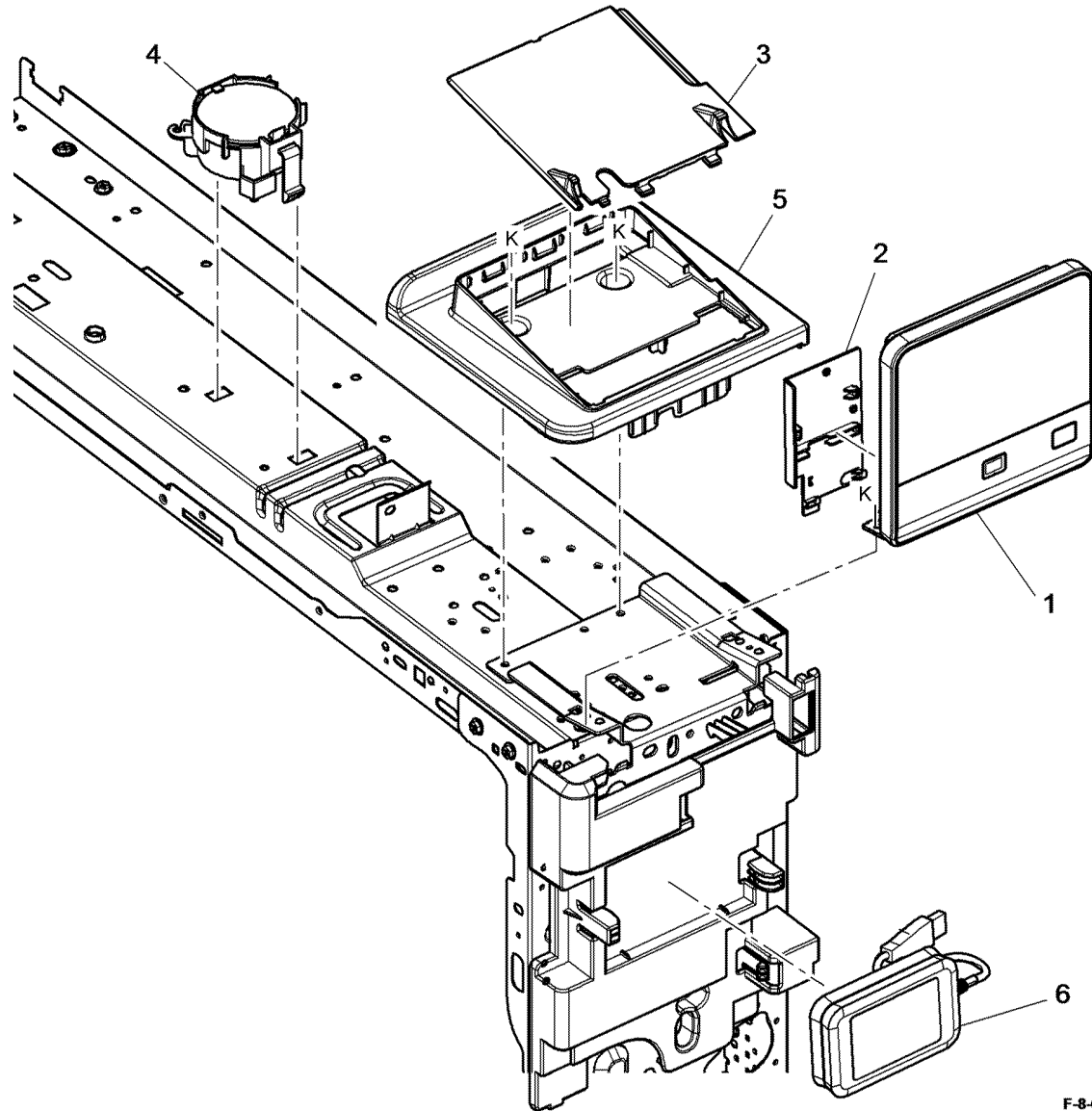
PL 1.25 Wire Harness

Item	Part	Description
1	—	Drive harness (Not Spared)
2	—	PH drive harness (Not Spared)
3	—	LH harness (Not Spared)
4	—	DC power harness (Not Spared)



PL 2.05 User Interface

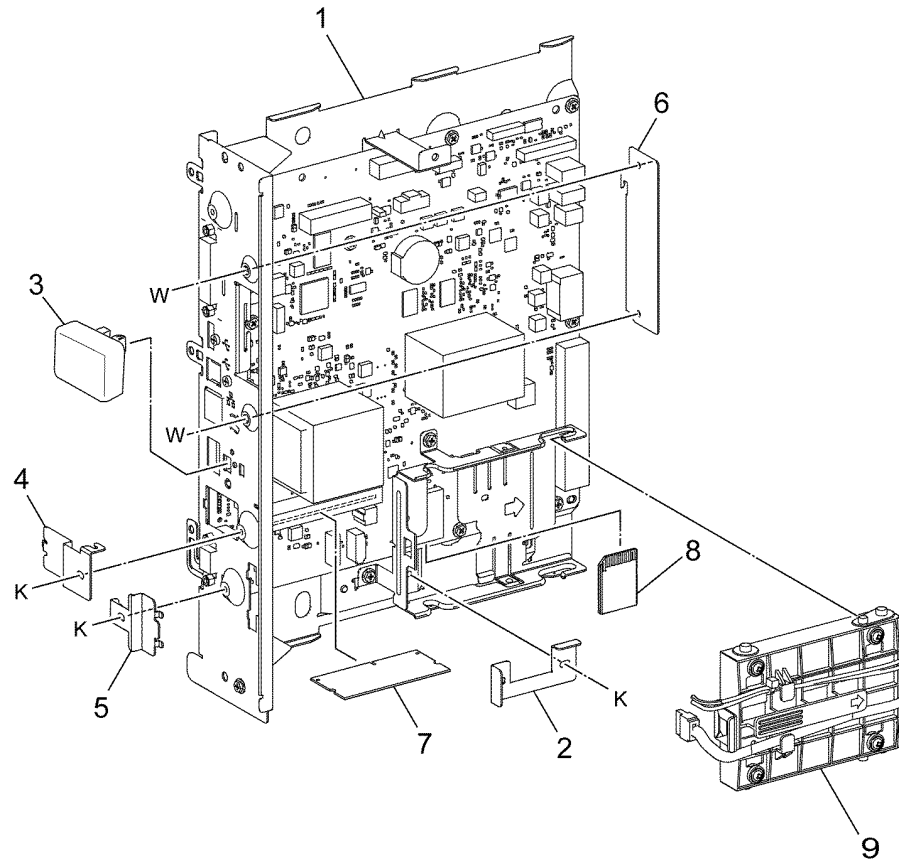
Item	Part	Description
1	948K19282	UI console assembly (REP 2.1)
2	822E32001	Cable cover (REP 2.1)
3	822E48500	UI top cover
4	-	Speaker assembly (Not Spared)
5	822E48510	UI base cover
6	-	Card reader assembly (Not Spared)



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PL 3.05 Control Unit (ESS PWB)

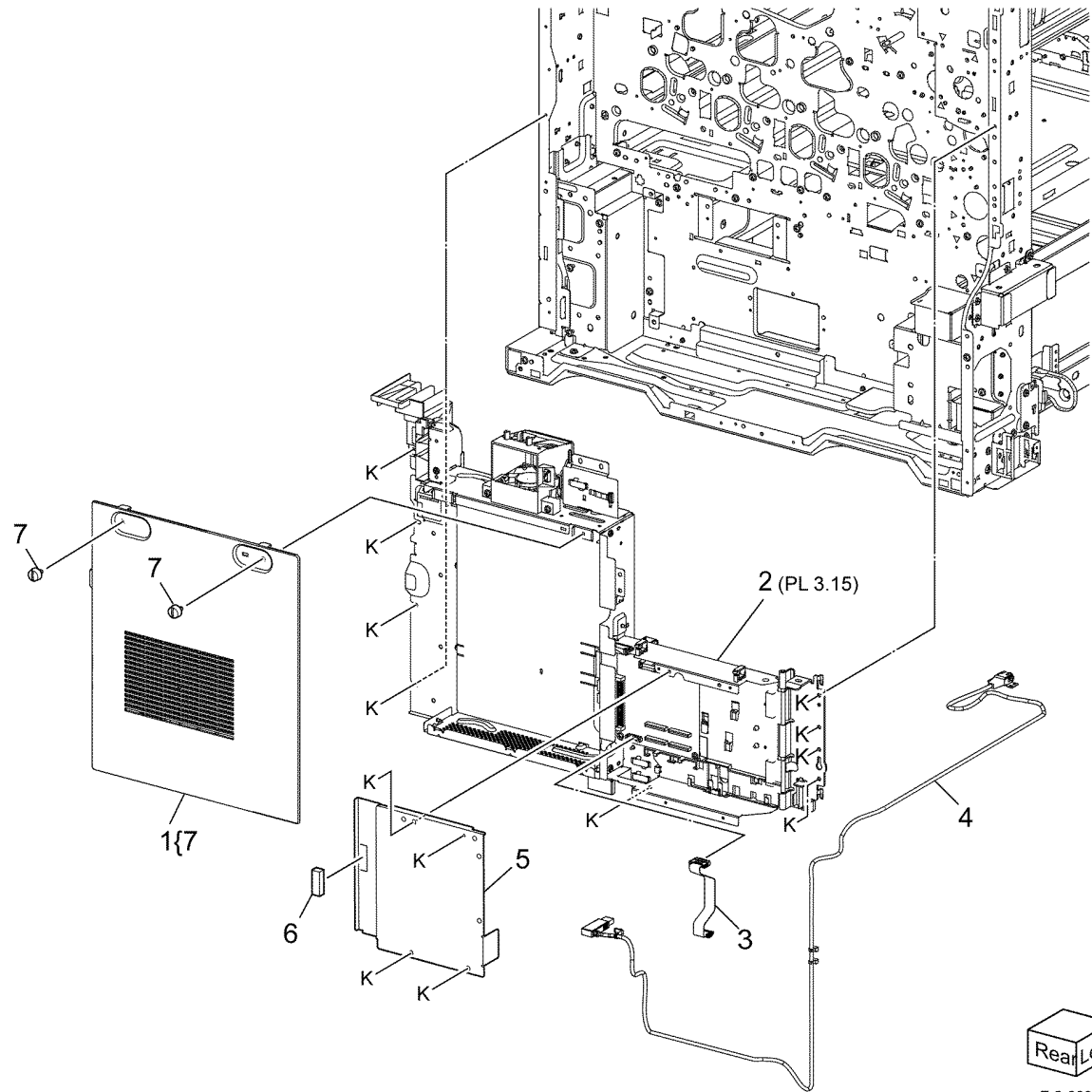
Item	Part	Description
1	101K69280	Controller PWB assembly (REP 3.1)
2	–	SD card clip (Not Spared)
3	101K72680	Wi-fi dongle
4	–	Blanking cover (Not Spared)
5	–	SIM card blanking cover (Not Spared)
6	–	PCI blanking cover (Not Spared)
7	133K28271	DIMM (4GB)
8	540K22511	SD memory card (REP 3.2)
9	101K73920	HDD



F-8-0010-A

PL 3.10 Video Contact Chassis Unit

Item	Part	Description
1	607K11840	Controller cover assembly kit
2	-	Video contact chassis assembly (Not Spared)
3	117K49232	Motor drive ribbon cable
4	117K49390	USB cable
-	117K50010	USB cable (alternative)
-	117K49210	USB cable (alternative)
5	-	DFE cover (Not Spared)
6	-	Shield gasket (Not Spared)
7	-	Thumbscrew (P/O PL 3.10 Item 1)

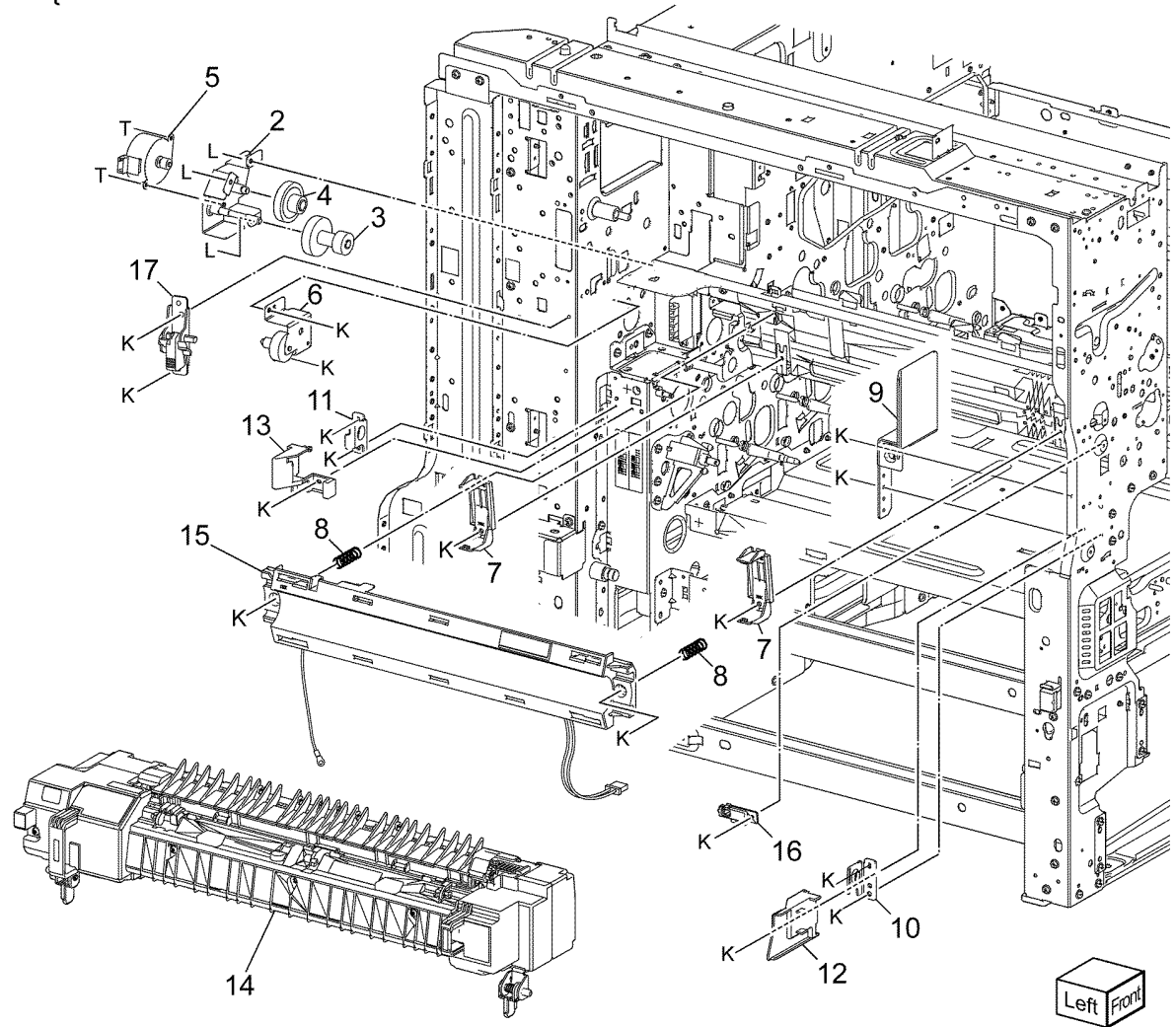


F-8-0004-A

PL 10.05 Fuser

Item	Part	Description
1	007K21640	Retract motor assembly (REP 10.1)
2	-	Motor bracket (P/O PL 10.05 Item 1)
3	-	Gear (17/40T) (P/O PL 10.05 Item 1)
4	-	Gear (17/54T) (P/O PL 10.05 Item 1)
5	-	Roll latch motor (P/O PL 10.05 Item 1)
6	007K21650	Retract gear assembly
7	-	Support (Not Spared)
8	-	Spring (Not Spared)
9	-	Adjust plate (Not Spared)
10	-	Front fuser bracket (Not Spared)
11	-	Rear fuser bracket (Not Spared)
12	-	Front stopper lever (Not Spared)
13	-	Rear stopper lever (Not Spared)
14	115R00143	Fuser (110/220V) (REP 10.2)
15	-	Fuser heater coil - see below for variants
-	104K91373	110V (REP 10.3)
-	104K91393	220V (REP 10.3)
16	-	Holder (Not Spared)
17	-	Stopper lever assembly (Not Spared)

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Left Front

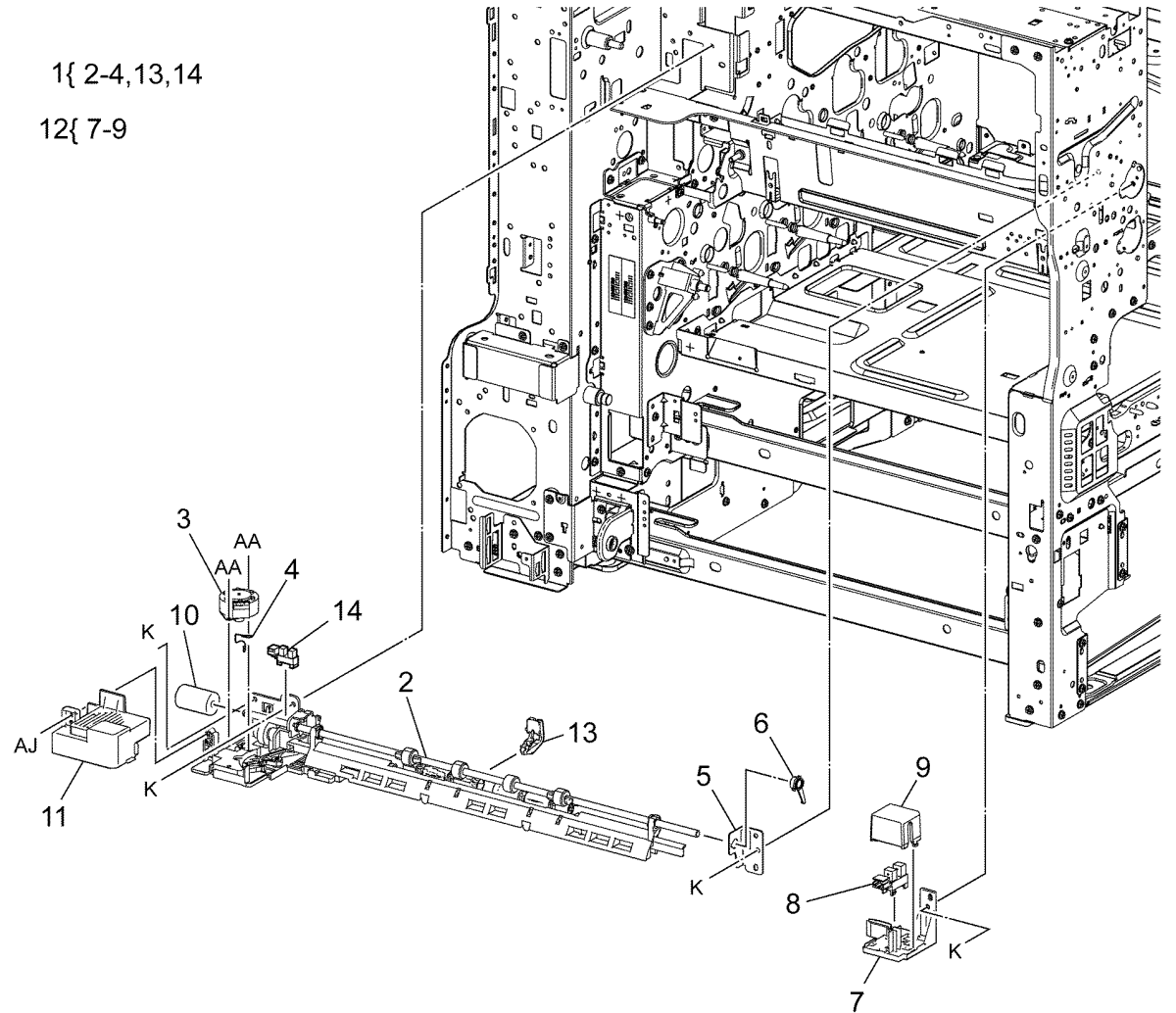
F-8-0011-A

PL 10.10 Exit 1 Transport Components

Item	Part	Description
1	859K08131	Exit 1 transport assembly (REP 10.4)
2	-	Exit 1 transport (P/O PL 10.10 Item 1)
3	-	Exit 1 OCT motor (MOT77-040) (REP 10.5)
4	-	Ground spring (P/O PL 10.10 Item 1)
5	-	Bracket (Not Spared)
6	013E46800	Bearing
7	-	Front guide (P/O PL 10.10 Item 12)
8	-	Exit 1 OCT home position sensor (Q77-109) (P/O PL 10.10 Item 12) (REP 10.6)
9	-	Exit 1 OCT home position sensor cover (P/O PL 10.10 Item 12)
10	807E20620	Exit 1 drive gear (REP 10.7)
11	948K02070	Motor cover
12	032K10662	Exit 1 sensor guide assembly
13	-	Guard (P/O PL 10.10 Item 1)
14	-	Exit 1 OCT full stack sensor (Q77-124) (P/O PL 10.10 Item 1)

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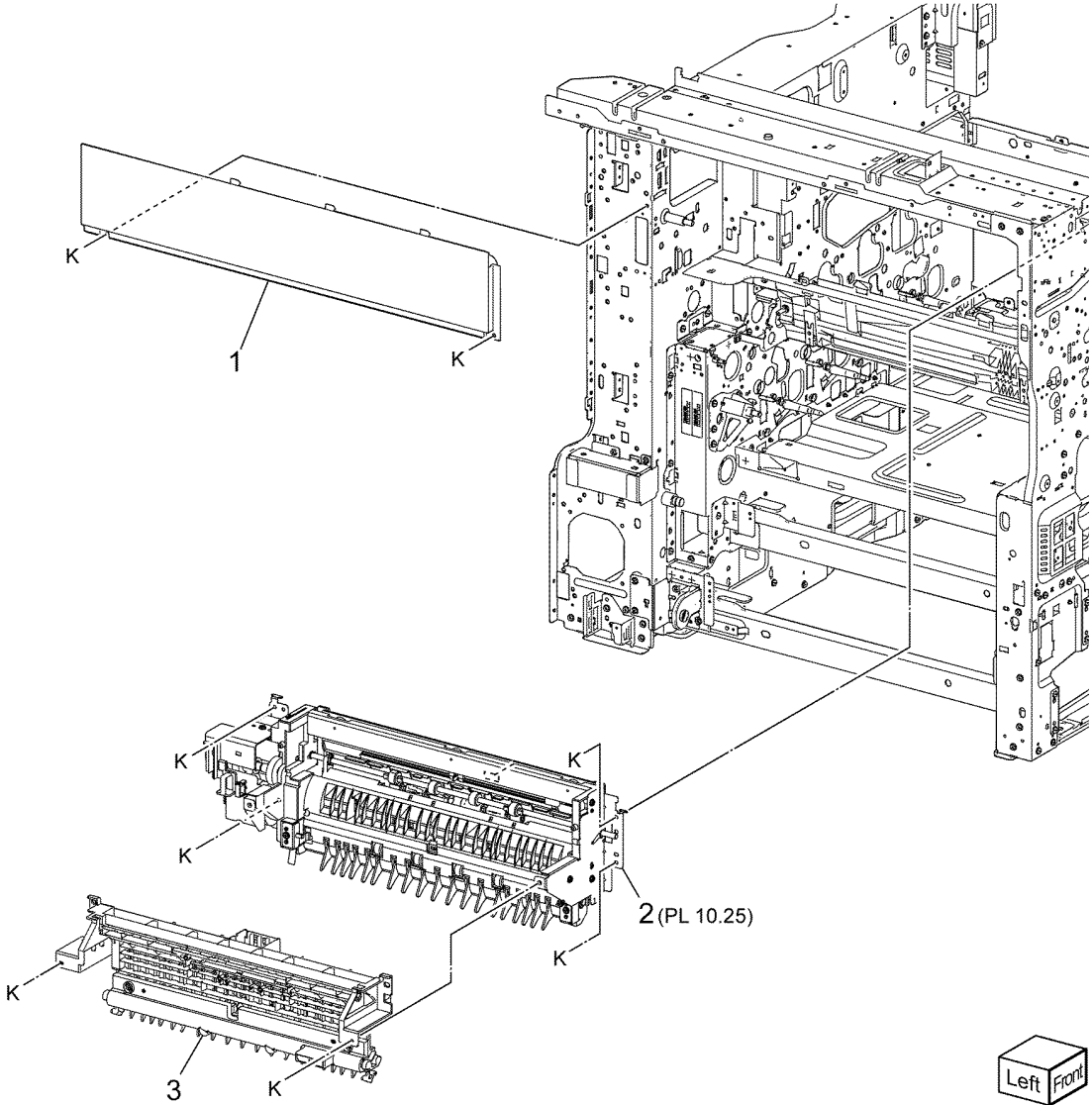
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PL 10.15 Exit 2 Transport Components

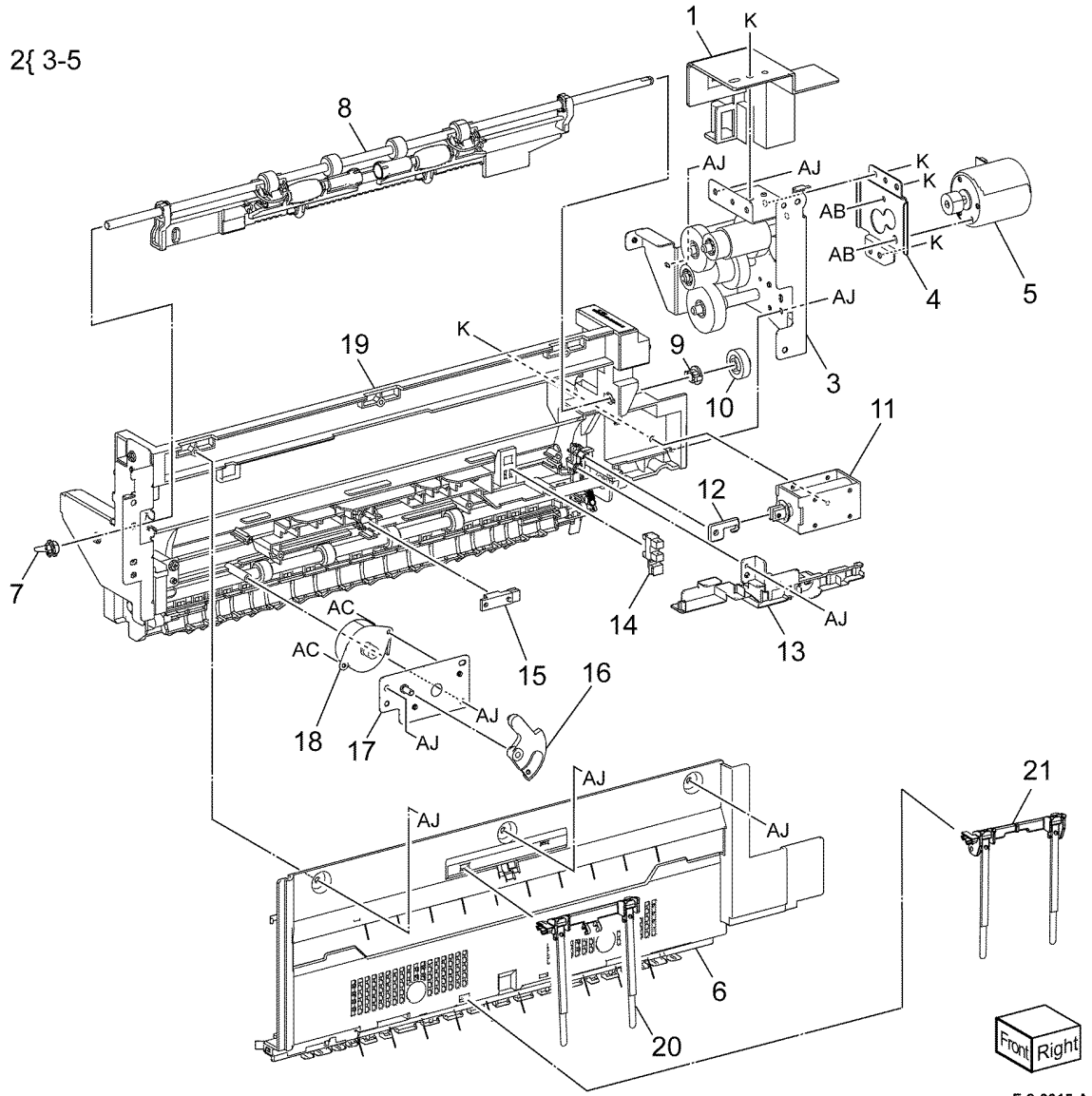
Item	Part	Description
1	822E33800	Left top cover
2	859K10296	Exit 2 transport assembly (REP 10.8)
3	-	Top chute assembly (Not Spared)



F-8-0013-A

PL 10.25 Exit 2 Transport Assembly

Item	Part	Description
1	-	Harness guide (P/O PL 10.15 Item 2)
2	-	Exit 2 drive assembly (P/O PL 10.15 Item 2) (REP 10.9)
3	-	Exit 2 drive bracket assembly (P/O PL 10.25 Item 2)
4	-	Motor bracket (P/O PL 10.25 Item 2)
5	-	Exit 2 drive motor (MOT77-060) (P/O PL 10.25 Item 2)
6	-	Exit 2 guide assembly (P/O PL 10.15 Item 2)
7	-	Bearing (P/O PL 10.15 Item 2)
8	-	Exit 2 chute assembly (P/O PL 10.15 Item 2)
9	-	Bearing (P/O PL 10.15 Item 2)
10	-	Gear (P/O PL 10.15 Item 2)
11	-	Exit 1 gate solenoid (SOL77-003) (P/O PL 10.15 Item 2) (REP 10.10)
12	-	Link (P/O PL 10.15 Item 2)
13	-	Harness guide (P/O PL 10.15 Item 2)
14	-	Exit 2 OCT home position sensor (Q77-110) (P/O PL 10.15 Item 2) (REP 10.11)
15	-	Exit 2 sensor (Q77-113) (P/O PL 10.15 Item 2)
16	-	Offset gear (P/O PL 10.15 Item 2) (REP 10.12)
17	-	Motor bracket (P/O PL 10.15 Item 2)
18	-	Exit 2 OCT motor (MOT77-045) (P/O PL 10.15 Item 2)
19	-	Exit 2 transport chassis (P/O PL 10.15 Item 2)
20	036K92441	Exit 2 bail arm assembly
21	036K92431	Exit 1 bail arm assembly

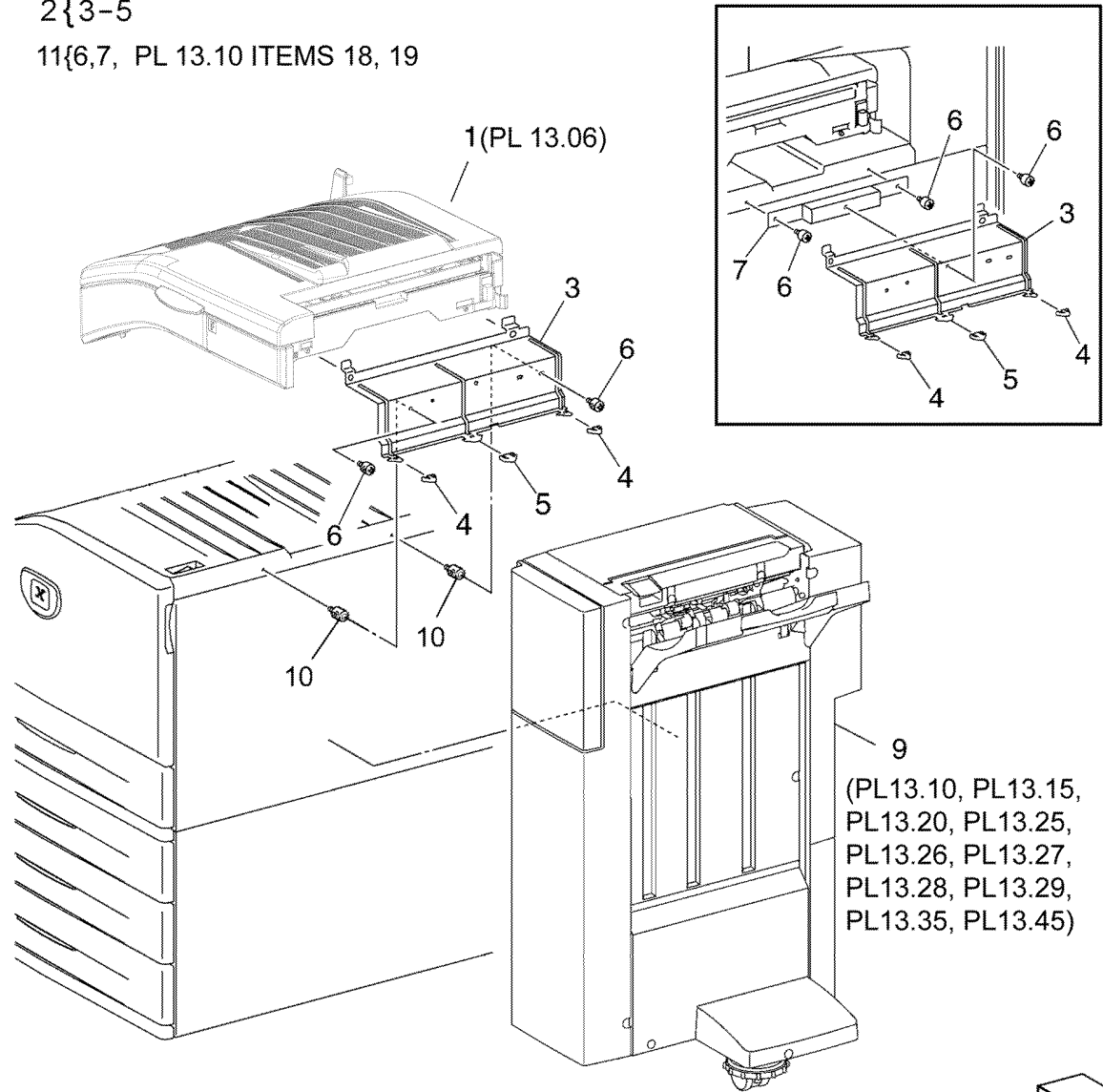


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PL 13.05 Office Finisher LX - Horizontal Transport Assembly (1 of 5)

Item	Part	Description
1	859K04770	Horizontal transport assembly (REP 13.1)
2	068K59494	Docking plate assembly
3	-	Docking plate (P/O PL 13.05 Item 2)
4	-	Side guide (P/O PL 13.05 Item 2)
5	-	Center guide (P/O PL 13.05 Item 2)
6	026K81200	Thumb screw
7	868E51550	Docking bracket
8	-	Not used
9	-	Finisher LX assembly (Not Spared) (REP 13.5)
10	-	HTU spacer (Not Spared)
11	-	Gap kit

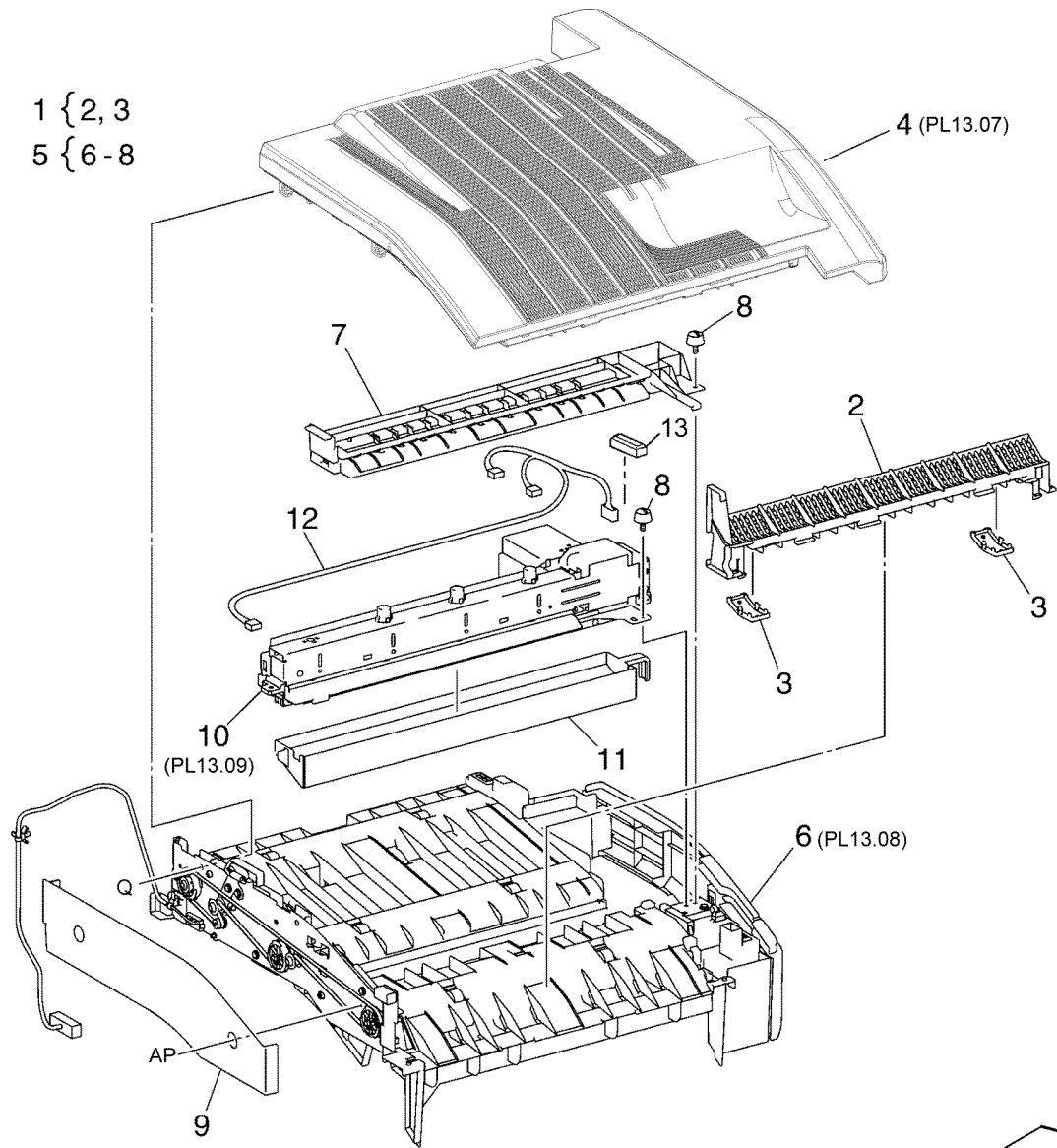
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PL 13.06 Office Finisher LX - Horizontal Transport Assembly (2 of 5)

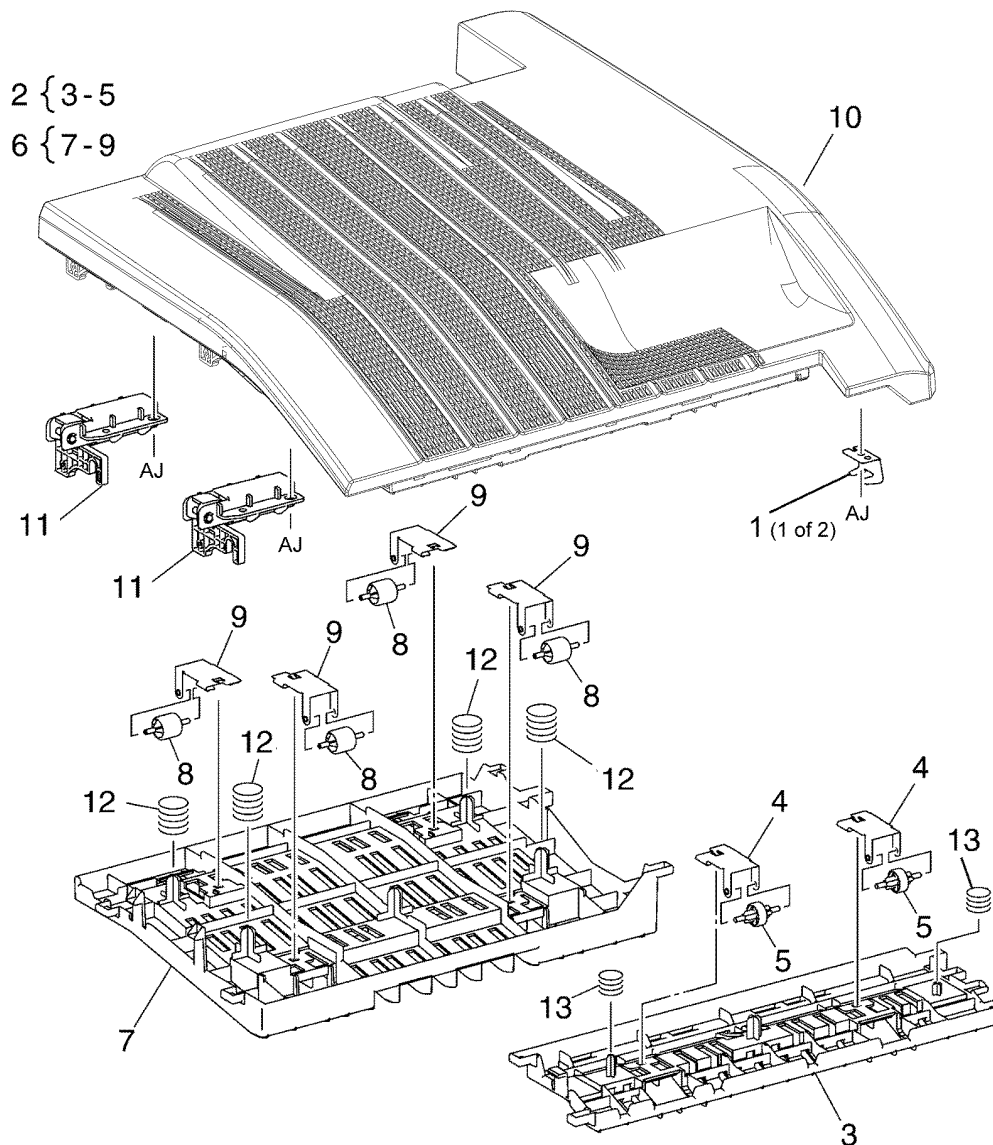
Item	Part	Description
1	-	Left cover assembly (Not Spared)
2	-	Left cover (P/O PL 13.06 Item 1)
3	-	Paper guide (P/O PL 13.06 Item 1)
4	-	Top cover assembly (Not Spared)
5	-	Lower chute assembly (Not Spared)
6	-	Lower chute assembly (P/O PL 13.06 Item 5)
7	-	Chute assembly (P/O PL 13.06 Item 5)
8	026K81200	Thumb screw
9	-	Rear cover (Not Spared)
10	180K00393	Punch assembly (2/3 Hole) (REP 13.2, ADJ 13.1)
-	180K00403	Punch assembly (2/4 Hole) (REP 13.2, ADJ 13.1)
11	695K19403	Punch box
12	-	Wire harness (Not Spared)
13	-	Connector cover (Not Spared)



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PL 13.07 Office Finisher LX - Horizontal Transport Assembly (3 of 5)

Item	Part	Description
1	-	Bracket (P/O PL 13.06 Item 4)
2	054K50020	Left chute assembly
3	-	Left chute (P/O PL 13.07 Item 2)
4	-	Pinch spring (P/O PL 13.07 Item 2)
5	-	Pinch roller (P/O PL 13.07 Item 2)
6	054K35246	Right chute assembly
7	-	Right chute (P/O PL 13.07 Item 6)
8	-	Nip roll (P/O PL 13.07 Item 6)
9	-	Nip spring (P/O PL 13.07 Item 6)
10	-	Top cover (Not Spared)
11	-	Horizontal transport counter balance (Not Spared)
12	-	Spring (Not Spared)
13	-	Spring (Not Spared)

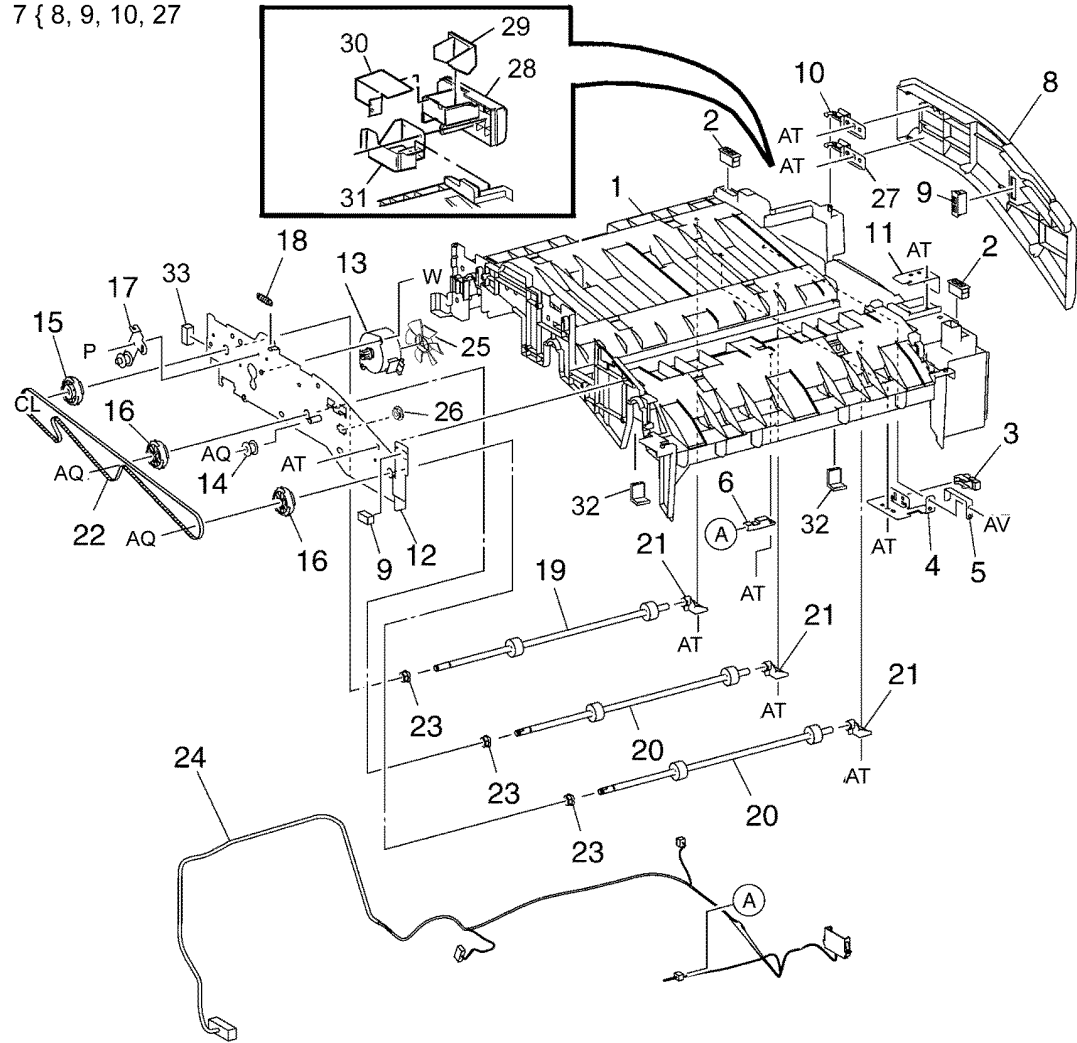


F-8-0090-A

PL 13.08 Office Finisher LX - Horizontal Transport Assembly (4 of 5)

Item	Part	Description
1	-	Lower chute (P/O PL 13.06 Item 6)
2	-	Magnet (P/O PL 13.06 Item 6)
3	930W00125	Horizontal transport open sensor (Q12-303)
4	-	Sensor bracket (Not Spared)
5	-	Actuator (Not Spared)
6	930W00211	Horizontal transport entrance sensor (Q12-190)
7	948K05100	Horizontal transport front cover assembly
8	-	Horizontal transport front cover (P/O PL 13.08 Item 7)
9	835E43650	Gasket
10	-	Hinge (P/O PL 13.08 Item 7)
11	-	Bracket (P/O PL 13.06 Item 6)
12	-	Rear frame assembly (P/O PL 13.06 Item 6)
13	127K57622	Horizontal transport motor (MOT12-032) (REP 13.4)
14	-	Tension pulley (Not Spared)
15	-	Pulley (43T) (Not Spared)
16	-	Pulley (43T) (Not Spared)
17	-	Tension bracket (P/O PL 13.06 Item 6)
18	-	Spring tension (Not Spared)
19	-	Drive roll (Not Spared)
20	-	Drive roll (Not Spared)
21	-	Bearing (Not Spared)
22	423W01154	Horizontal transport belt (REP 13.3)
23	-	Sleeve bearing (Not Spared)
24	-	Wire harness (Not Spared)
25	-	Fan blade (Not Spared)
26	-	Pinch bushing (Not Spared)
27	-	Lower hinge (P/O PL 13.08 Item 7)
28	-	Front cover (Not Spared)
29	-	Switch cover (Not Spared)
30	-	Cover (Not Spared)
31	-	Bracket (Not Spared)
32	-	Pinch cushion (Not Spared)
33	-	Gasket (Not Spared)

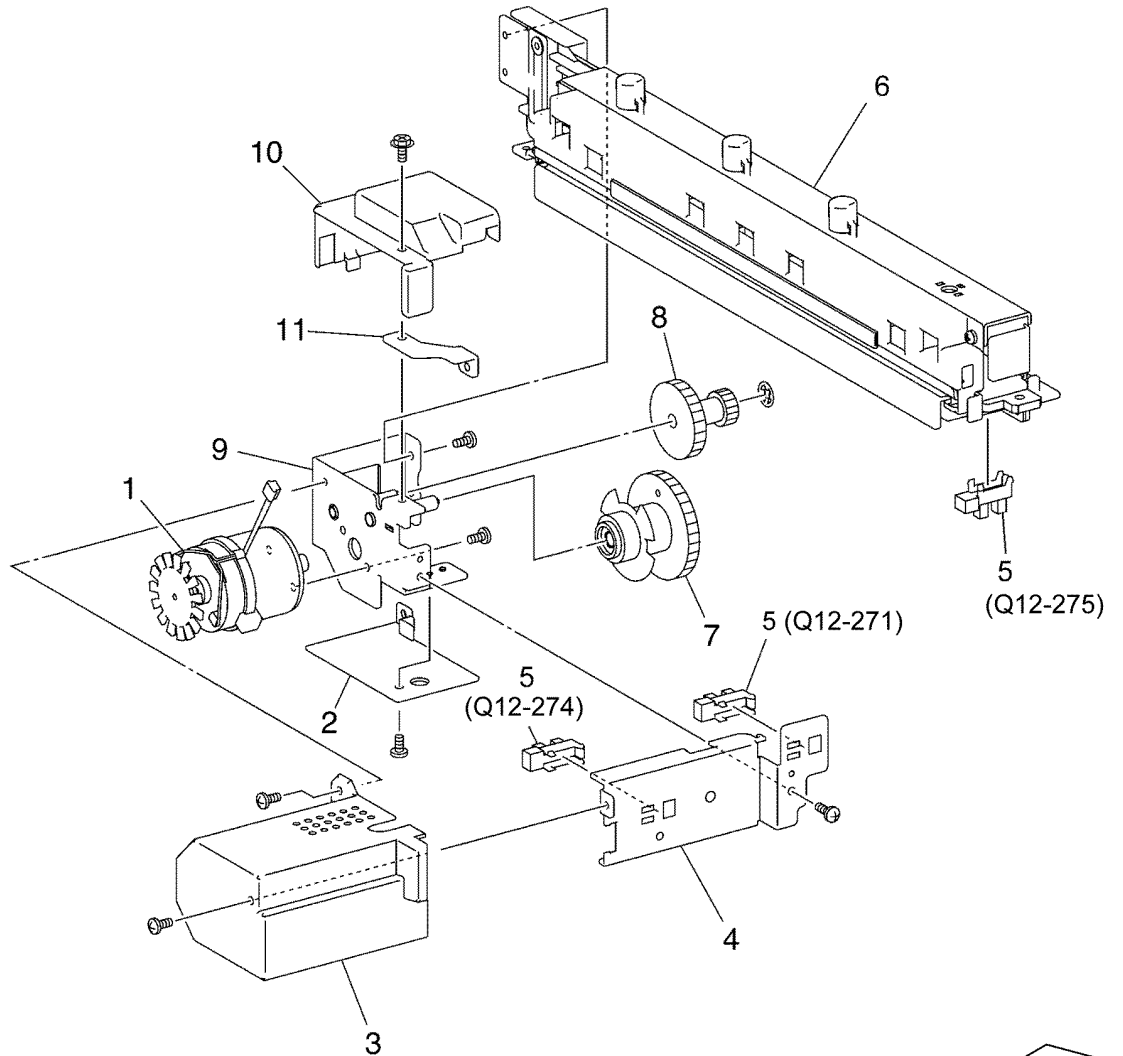
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PL 13.09 Office Finisher LX - Horizontal Transport Assembly (5 of 5)

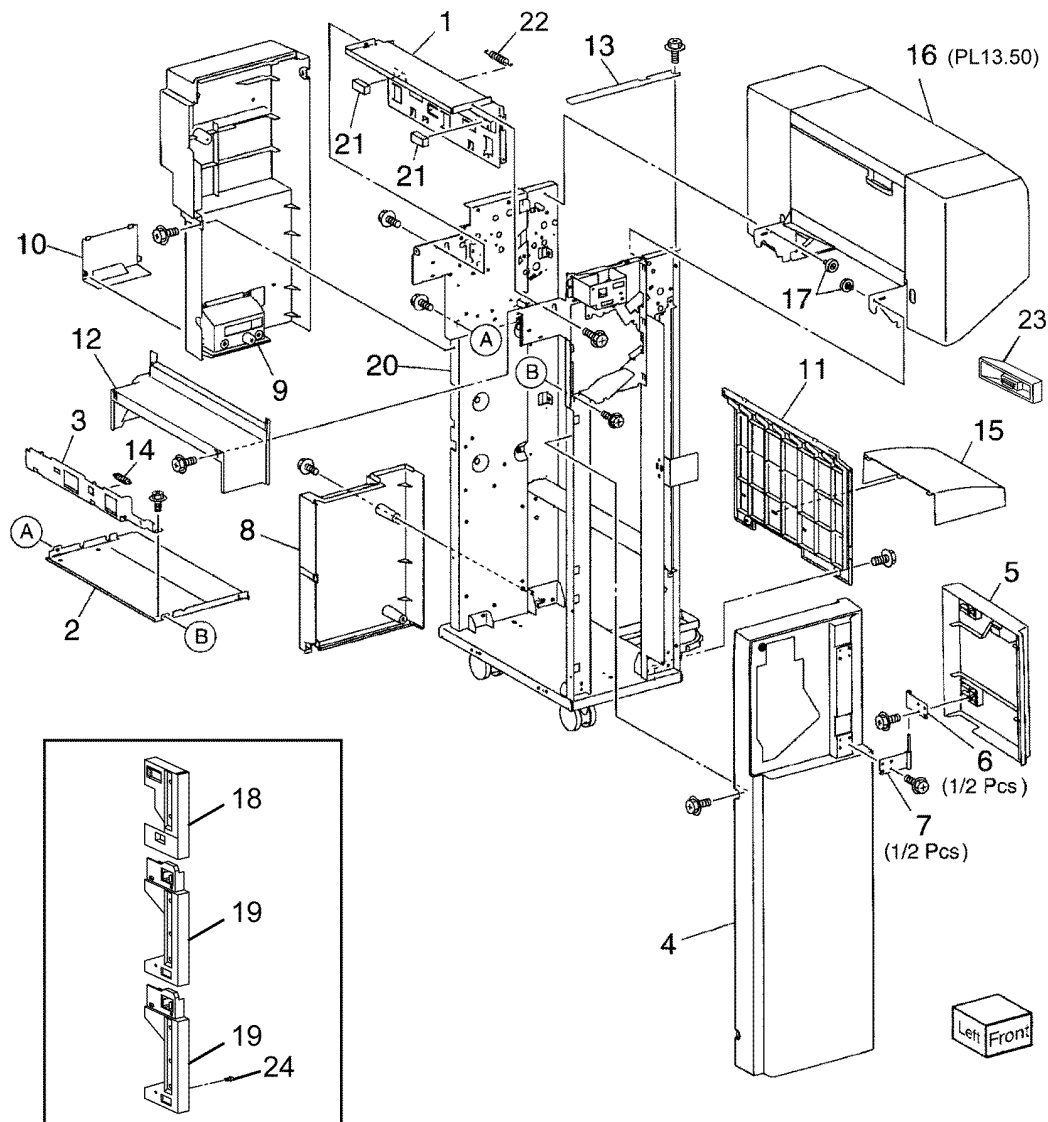
Item	Part	Description
1	-	Punch motor (MOT12-074) (P/O PL 13.06 Item 10)
2	-	Punch lower cover (P/O PL 13.06 Item 10)
3	-	Punch motor cover (P/O PL 13.06 Item 10)
4	-	Sensor bracket (P/O PL 13.06 Item 10)
5	930W00111	Punch encoder sensor (Q12-274)/ Punch home sensor (Q12-271)/ Punch box set sensor (Q12-275)
6	-	Punch frame assembly (P/O PL 13.06 Item 10)
7	-	Encoder/gear assembly (P/O PL 13.06 Item 10)
8	-	Gear (P/O PL 13.06 Item 10)
9	-	Motor bracket (P/O PL 13.06 Item 10)
10	-	Punch top cover (P/O PL 13.06 Item 10)
11	-	Bracket (P/O PL 13.06 Item 10)



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PL 13.10 Office Finisher LX Covers

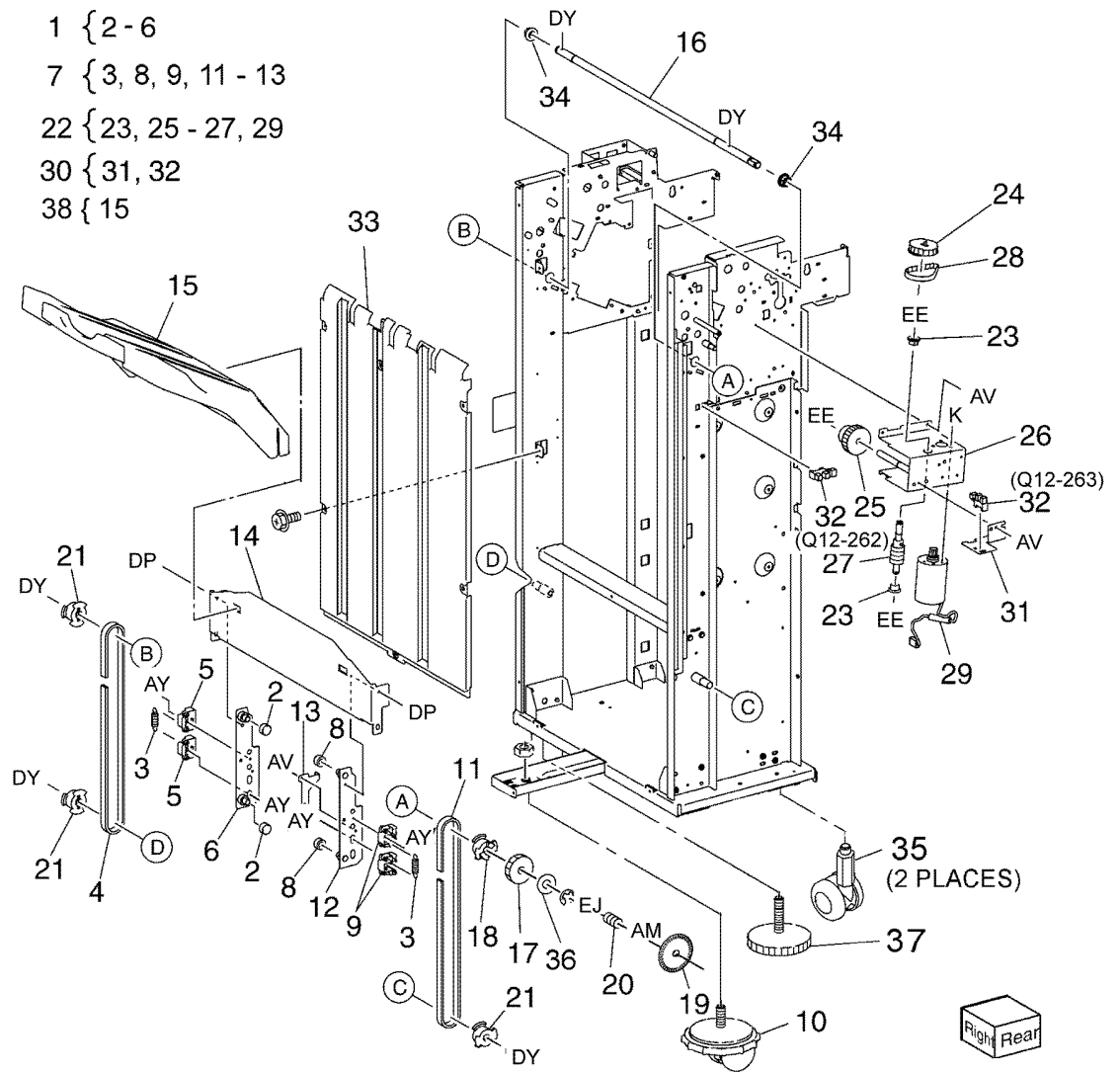
Item	Part	Description
1	848E22730	Plate
2	-	Lower plate (Not Spared)
3	-	Docking lever (Not Spared)
4	848E75671	Front cover (REP 13.6)
5	848K57230	Front door
6	-	Bracket (Not Spared)
7	-	Hinge (Not Spared)
8	-	Rear lower cover (Not Spared) (REP 13.8)
9	-	Rear upper cover (Not Spared) (REP 13.7)
10	-	Connector cover (Not Spared)
11	848E75711	Stacker lower cover (REP 13.11)
12	-	LH cover (Not Spared)
13	-	Cover (Not Spared)
14	-	Spring (Not Spared)
15	-	Foot cover (Not Spared) (REP 13.10)
16	801K30704	Booklet maker assembly (REP 13.31)
17	-	Thumb screw (Not Spared)
18	-	Upper adjust cover (Not Spared)
19	-	Lower adjust cover (Not Spared)
20	-	Base frame assembly (Not Spared)
21	835E43650	Gasket
22	-	Extension spring (Not Spared)
23	-	Paper guide (Not Spared)
24	-	Thumb screw (Not Spared)



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PL 13.15 Office Finisher LX Stacker

Item	Part	Description
1	-	Front carriage assembly (Not Spared) (REP 13.29)
2	-	Bearing (P/O PL 13.15 Item 1)
3	-	Spring (P/O PL 13.15 Item 1)
4	-	Front stacker belt (P/O PL 13.15 Item 1)
5	-	Clamp (P/O PL 13.15 Item 1)
6	-	Front carriage assembly (P/O PL 13.15 Item 1)
7	-	Rear carriage assembly (REP 13.29)
8	-	Bearing (P/O PL 13.15 Item 7)
9	-	Clamp (Not Spared)
10	-	Knob caster assembly (Not Spared)
11	-	Rear stacker belt (P/O PL 13.15 Item 7)
12	-	Rear carriage (P/O PL 13.15 Item 7)
13	-	Actuator (P/O PL 13.15 Item 7)
14	-	Carriage tray (Not Spared)
15	-	Stacker tray (REP 13.20)
16	-	Shaft (Not Spared)
17	-	Gear (Not Spared)
18	-	Pulley (Not Spared)
19	146E90651	Encoder
20	-	Spring (Not Spared)
21	-	Pulley (18T) (Not Spared)
22	068K58304	Stacker elevator motor assembly
23	-	Bearing (P/O PL 13.15 Item 22)
24	-	Pulley (60T) (Not Spared)
25	-	Gear (15T/37T) (P/O PL 13.15 Item 22)
26	-	Motor bracket (P/O PL 13.15 Item 22)
27	-	Worm shaft (P/O PL 13.15 Item 22)
28	-	Belt (Not Spared)
29	-	Stacker elevator motor (MOT12-060) (P/O PL 13.15 Item 22) (REP 13.19)
30	-	Stacker encoder sensor assembly (Not Spared)
31	-	Bracket (P/O PL 13.15 Item 30)
32	930W00111	Stacker encoder sensor (Q12-263)/stacker paper sensor (Q12-262)
33	-	Stacker upper cover (Not Spared) (REP 13.12)
34	-	Bearing (Not Spared)
35	017K96450	Caster assembly
36	-	Washer (Not Spared)
37	017K94901	Adjustable foot assembly
38	607K04580	Stacker tray kit

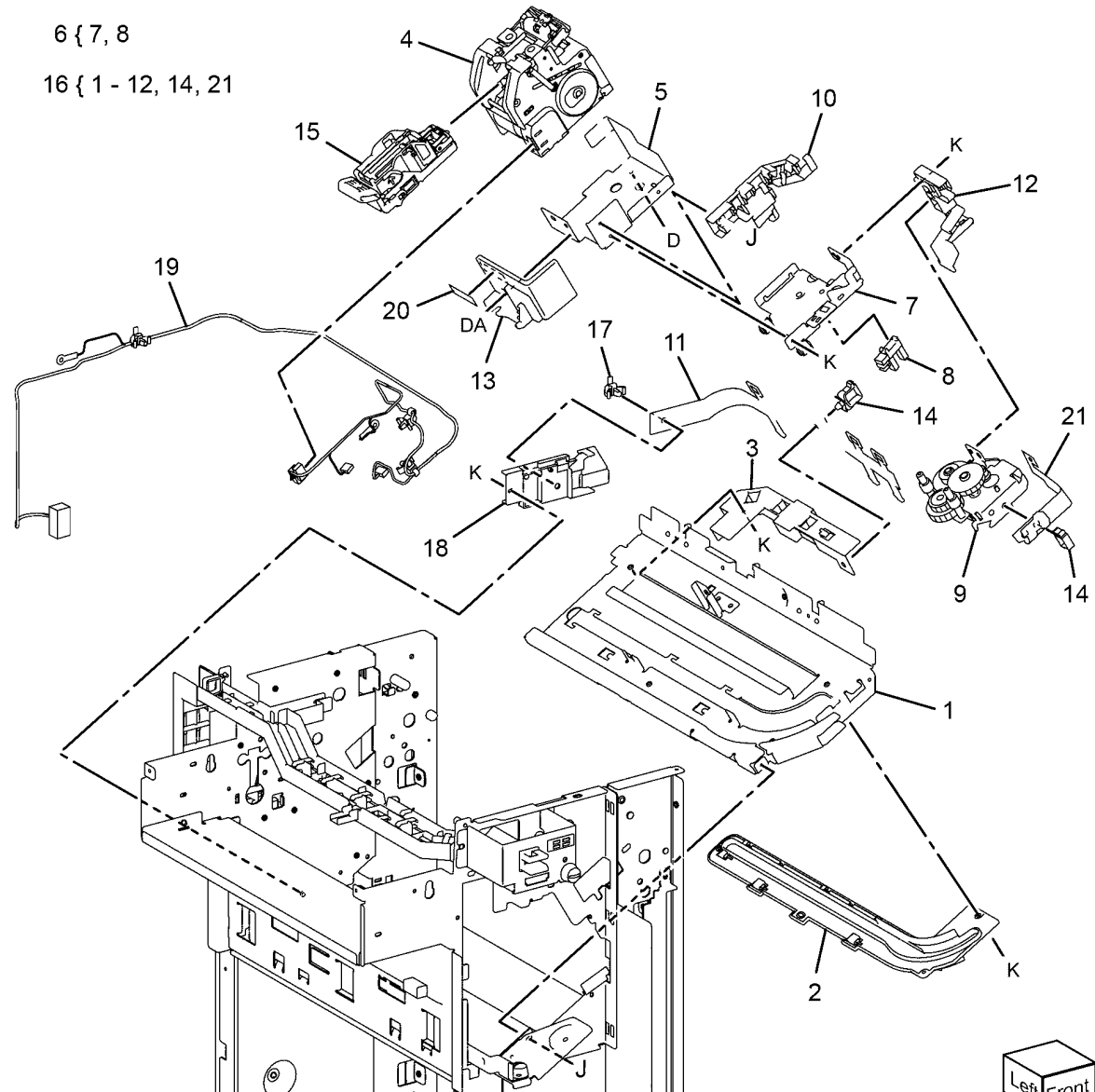


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PL 13.20 Office Finisher LX Stapler

Item	Part	Description
1	-	Base frame (P/O PL 13.20 Item 16)
2	-	Rail (P/O PL 13.20 Item 16)
3	-	Harness guide (P/O PL 13.20 Item 16)
4	029K93260	Stapler assembly (REP 13.16)
5	-	Holder (P/O PL 13.20 Item 16)
6	-	Stapler move position sensor assembly (Not Spared)
7	-	Bracket (P/O PL 13.20 Item 6)
8	130E94940	Stapler move position sensor (Q12-241)
9	068K58811	Stapler move motor assembly (MOT12-046) (REP 13.15)
10	-	Harness guide (P/O PL 13.20 Item 16)
11	-	Harness support guide (P/O PL 13.20 Item 16)
12	-	Harness guide (P/O PL 13.20 Item 16)
13	-	Stapler cover (Not Spared)
14	-	Clamp (P/O PL 13.20 Item 16)
15	-	Stapler cartridge (See NOTE)
16	801K64900	Stapler unit
17	-	Cable band (Not Spared)
18	-	Harness guide (Not Spared)
19	952K35890	Wire harness
20	-	Label (Not Spared)
21	-	Stapler move motor bracket (P/O PL 13.20 Item 9)

6 { 7, 8
16 { 1 - 12, 14, 21



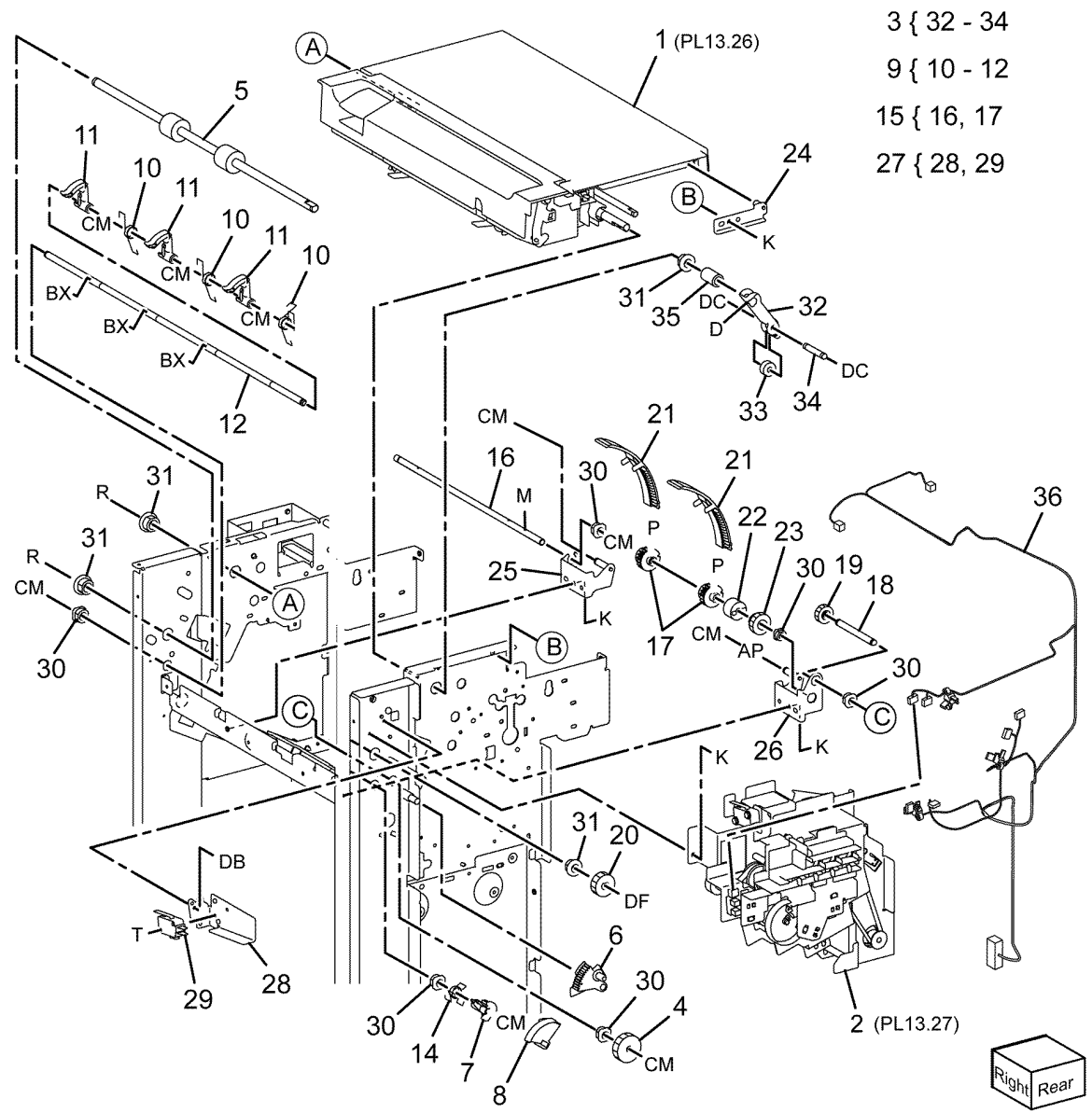
NOTE: Refer to PL 25.10 for the staple refills and cartridge.



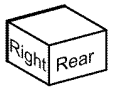
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PL 13.25 Office Finisher LX Ejector (1 of 5)

Item	Part	Description
1	-	Eject cover assembly (Not Spared)
2	-	Eject assembly (Not Spared)
3	031K93790	Clamp arm assembly
4	807E21400	Gear (31T)
5	059K55111	Eject roller
6	807E21380	Sector gear (72T)
7	807E21391	Gear (18T)
8	120E29773	Actuator
9	006K86733	Set clamp shaft assembly
10	809E79060	Spring
11	-	Set clamp holder (P/O PL 13.25 Item 9)
12	-	Shaft (P/O PL 13.25 Item 9)
13	-	Not used
14	809E79080	Spring
15	006K86743	Guide paper shaft assembly
16	-	Guide paper shaft (P/O PL 13.25 Item 15)
17	-	Gear (20T) (P/O PL 13.25 Item 15)
18	-	Shaft (Not Spared)
19	807E21420	Gear (19T)
20	807E21370	Gear (25T)
21	038E36490	Guide paper (left/right)
22	005K14950	Clutch
23	807E45590	Gear (23T)
24	-	Stopper (Not Spared)
25	-	Bracket (front) (Not Spared)
26	-	Bracket (rear) (Not Spared)
27	-	Option switch assembly (Not Spared)
28	-	Bracket (P/O PL 13.25 Item 27)
29	-	Option switch (P/O PL 13.25 Item 27)
30	413W11660	Sleeve bearing
31	-	Bearing (Not Spared)
32	-	Clamp arm (P/O PL 13.25 Item 3)
33	-	Roll (P/O PL 13.25 Item 3)
34	-	Shaft (P/O PL 13.25 Item 3)
35	-	Spacer (Not Spared)
36	962K60434	Wire harness



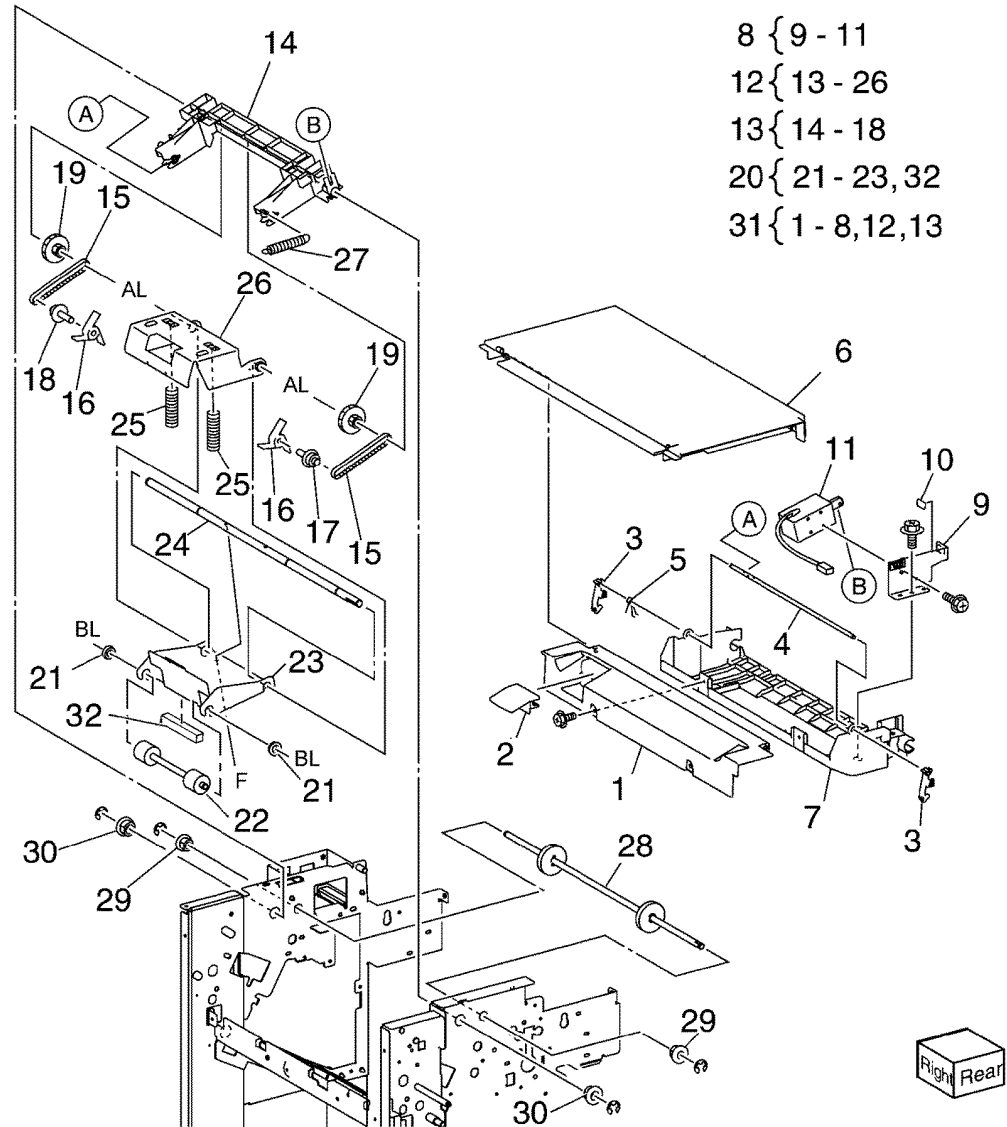
- 3 { 32 - 34
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- 15 { 16, 17
- 27 { 28, 29



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PL 13.26 Office Finisher LX Ejector (2 of 5)

Item	Part	Description
1	-	Top right cover (P/O PL 13.26 Item 31)
2	-	Top cover lever (P/O PL 13.26 Item 31)
3	-	Top cover latch (P/O PL 13.26 Item 31)
4	-	Shaft (P/O PL 13.26 Item 31)
5	-	Spring (P/O PL 13.26 Item 31)
6	-	Eject cover (P/O PL 13.26 Item 31) (REP 13.9)
7	-	Eject chute (P/O PL 13.26 Item 31)
8	121K41632	Sub paddle solenoid assembly (REP 13.14)
9	-	Bracket (P/O PL 13.26 Item 8)
10	-	Damper (P/O PL 13.26 Item 8)
11	-	Sub paddle solenoid (SOL12-013) (P/O PL 13.26 Item 8)
12	-	Eject roller assembly (P/O PL 13.26 Item 31)
13	031K94470	Paddle arm assembly
14	-	Sub paddle arm (P/O PL 13.26 Item 13)
15	-	Belt (P/O PL 13.26 Item 14)
16	-	Sub paddle (P/O PL 13.26 Item 13)
17	-	Pulley (P/O PL 13.26 Item 13)
18	-	Pulley (P/O PL 13.26 Item 13)
19	-	Gear/Pulley (31T/20T) (Not Spared)
20	059K55715	Eject nip roll assembly
21	-	Bearing (P/O PL 13.26 Item 20)
22	-	Eject nip roll (P/O PL 13.26 Item 20)
23	-	Bracket (P/O PL 13.26 Item 20)
24	-	Shaft (P/O PL 13.26 Item 12)
25	-	Spring (P/O PL 13.26 Item 12)
26	-	Bracket (P/O PL 13.26 Item 12)
27	-	Spring (Not Spared)
28	006K86691	Eject drive shaft
29	-	Bearing (Not Spared)
30	-	Bearing (Not Spared)
31	-	Eject chute assembly (Not Spared)
32	-	Static eliminator (P/O PL 13.26 Item 20)

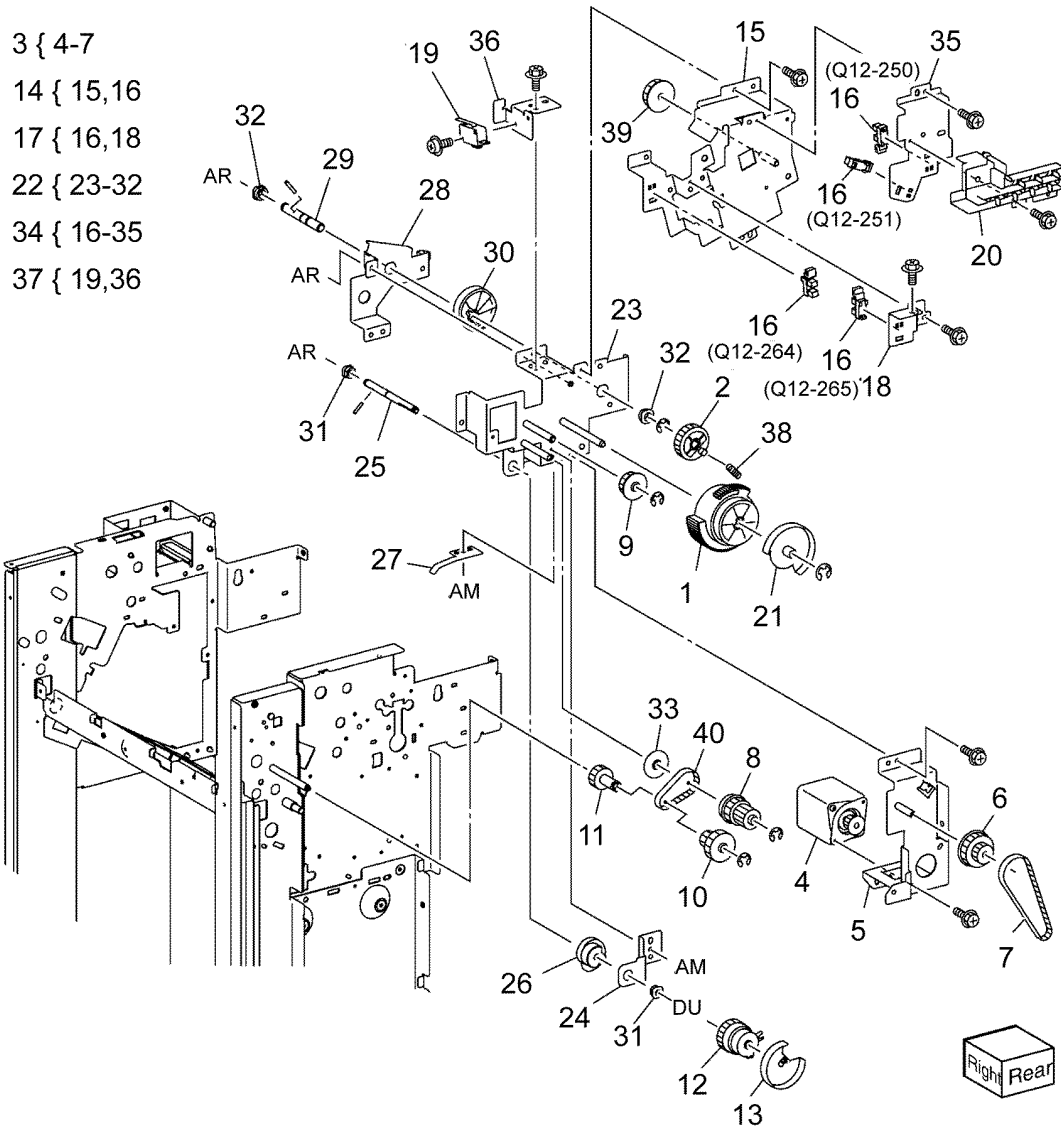


- 8 { 9 - 11
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- 13 { 14 - 18
- 20 { 21 - 23, 32
- 31 { 1 - 8, 12, 13

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PL 13.27 Office Finisher LX Ejector (3 of 5)

Item	Part	Description
1	007K15451	Gear (82T/77T/51T)
2	-	Gear (38T) (Not Spared)
3	127K57196	Eject motor assembly
4	-	Eject motor (MOT12-054) (P/O PL 13.27 Item 3) (REP 13.22)
5	-	Bracket (P/O PL 13.27 Item 3)
6	-	Gear/Pulley (20T/49T) (P/O PL 13.27 Item 3)
7	-	Belt (P/O PL 13.27 Item 7)
8	-	Gear (28T/22T/38T) (Not Spared)
9	-	Gear (25T) (Not Spared)
10	-	Gear/Pulley (32T/25T) (Not Spared)
11	-	Gear (23T) (Not Spared)
12	121K34631	Set clamp clutch (34T) (CL12-050)
13	120E29593	Set clamp cam actuator
14	130K72171	Stacker height sensor 1 assembly
15	-	Bracket (P/O PL 13.27 Item 14)
16	930W00111	Stack height sensor 1 (Q12-264) (REP 13.13)/Stack height sensor 2 (Q12-265) (REP 13.13)/Eject clamp home sensor (Q12-250)/Set clamp home sensor (Q12-251) ()
17	-	Stacker height sensor 2 assembly (P/O PL 13.27 Item 34)
18	-	Bracket (P/O PL 13.27 Item 17)
19	-	Eject cover switch (S12-300) (P/O PL 13.27 Item 37)
20	-	Harness guide (P/O PL 13.27 Item 34)
21	120E29852	Gear select actuator
22	068K58732	Eject drive bracket assembly
23	-	Bracket (P/O PL 13.27 Item 22)
24	-	Bracket (P/O PL 13.27 Item 22)
25	-	Shaft (P/O PL 13.27 Item 22)
26	-	Clamp set cam (P/O PL 13.27 Item 22)
27	809E79070	Spring
28	-	Bracket (P/O PL 13.27 Item 22)
29	-	Shaft (P/O PL 13.27 Item 22)
30	-	Eject clamp cam (P/O PL 13.27 Item 22)
31	413W11660	Sleeve bearing
32	-	Sleeve bearing (P/O PL 13.27 Item 22)
33	-	Drive eject flange (Not Spared)
34	-	Eject clamp home sensor assembly (Not Spared)
35	-	Bracket (P/O PL 13.27 Item 34)
36	-	Bracket (P/O PL 13.27 Item 37)
37	068K58742	Eject cover switch assembly
38	809E79820	Spring
39	807E22040	Gear (30T)
40	-	Belt (Not Spared)



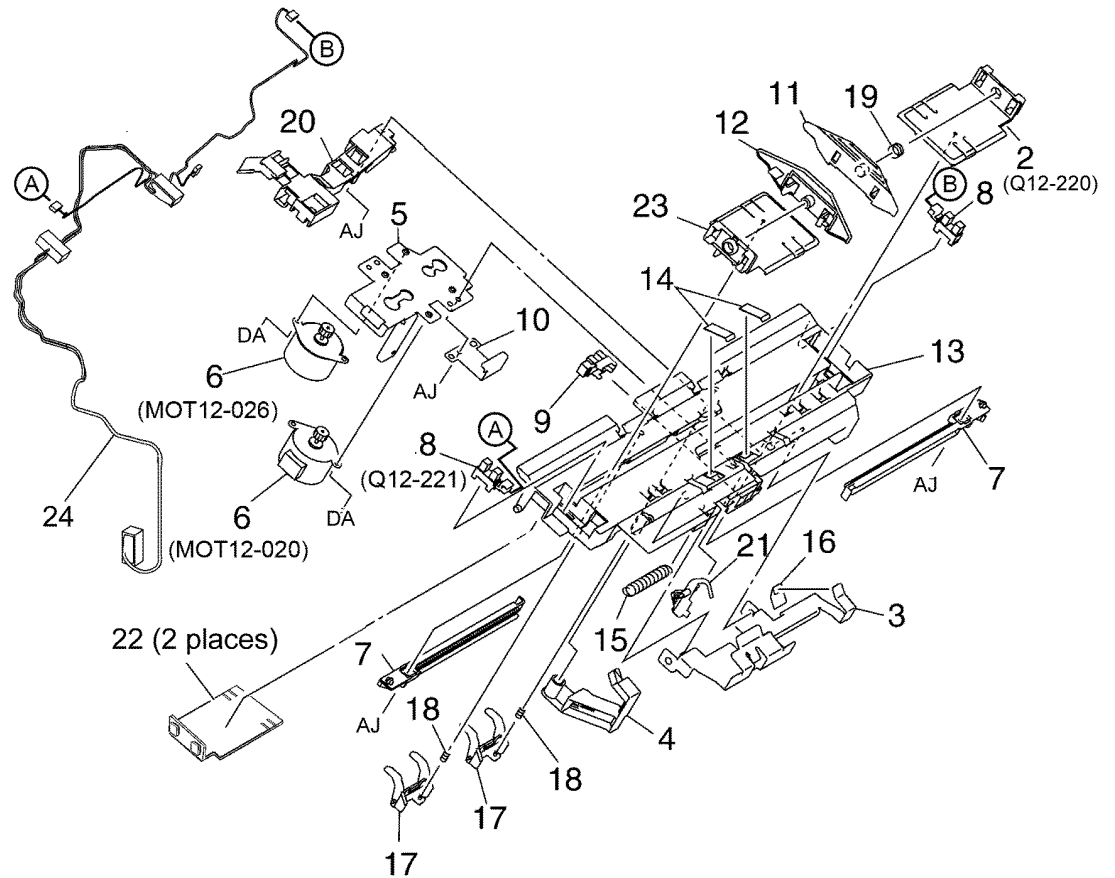
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- 17 { 16,18
- 22 { 23-32
- 34 { 16-35
- 37 { 19,36

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PL 13.28 Office Finisher LX Ejector (4 of 5)

Item	Part	Description
1	050K61092	Compiler tray assembly (REP 13.17)
2	-	Rear tamper guide (P/O PL 13.28 Item 1)
3	-	Compiler center paper guide (P/O PL 13.28 Item 1)
4	-	Compiler rear paper guide (P/O PL 13.28 Item 1)
5	-	Bracket (P/O PL 13.28 Item 1)
6	127K58040	Front tamper motor (MOT12-020)/Rear tamper motor (MOT12-026) (REP 13.26)
7	-	Rack (front) (P/O PL 13.28 Item 1)
8	930W00111	Front tamper home sensor (Q12-220)/Rear tamper home sensor (Q12-221) (REP 13.27)
9	930W00211	Compiler tray no paper sensor (Q12-151) (REP 13.27)
10	-	Spring (P/O PL 13.28 Item 1)
11	-	Tamper front guide (P/O PL 13.28 Item 1)
12	-	Tamper rear guide (P/O PL 13.28 Item 1)
13	-	Compiler tray (P/O PL 13.28 Item 1)
14	-	Paper paddle guide (P/O PL 13.28 Item 1)
15	-	Spring (P/O PL 13.28 Item 1)
16	-	Paper end guide (P/O PL 13.28 Item 1)
17	-	Paper tray guide (P/O PL 13.28 Item 1)
18	-	Spring (P/O PL 13.28 Item 1)
19	-	Spring (P/O PL 13.28 Item 1)
20	-	Harness guide (P/O PL 13.28 Item 1)
21	-	Actuator (P/O PL 13.28 Item 1)
22	-	Tamper base (P/O PL 13.28 Item 1)
23	-	Front tamper guide (P/O PL 13.28 Item 1)
24	962K60454	Wire harness

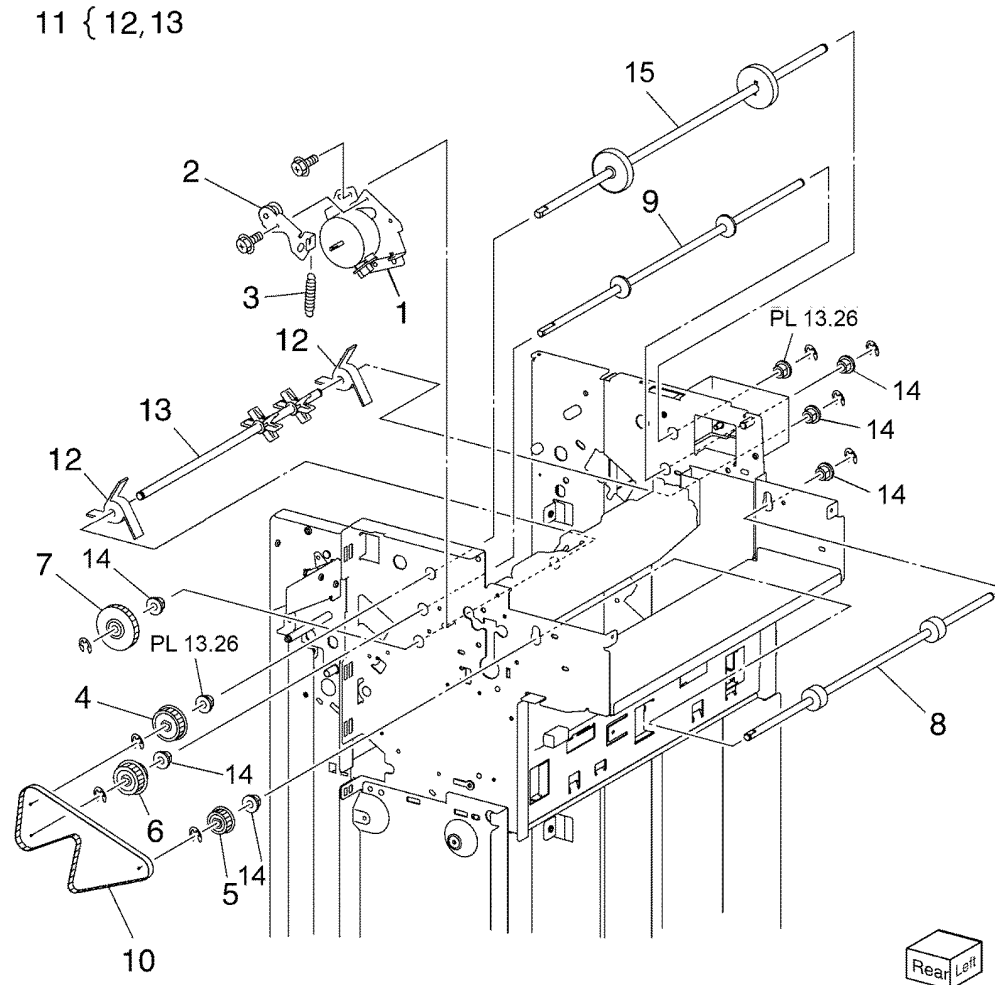
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F-8-0099-A

PL 13.29 Office Finisher LX Ejector (5 of 5)

Item	Part	Description
1	068K58823	Transport motor (MOT12-013)
2	-	Tension roller assembly (Not Spared)
3	-	Spring (Not Spared)
4	-	Pulley (30T) (Not Spared)
5	-	Pulley (41T) (Not Spared)
6	-	Gear/Pulley (27T/30T) (Not Spared)
7	-	Gear (Not Spared)
8	059K55082	Entrance roller
9	059K55092	Exit roller
10	-	Transport belt (Not Spared) (REP 13.21)
11	006K98010	Paddle shaft assembly
12	-	Cyclone paddle (P/O PL 13.29 Item 11)
13	-	Paddle shaft (P/O PL 13.29 Item 11)
14	413W75959	Bearing
15	-	Eject drive shaft (REF: PL 13.26 Item 28)

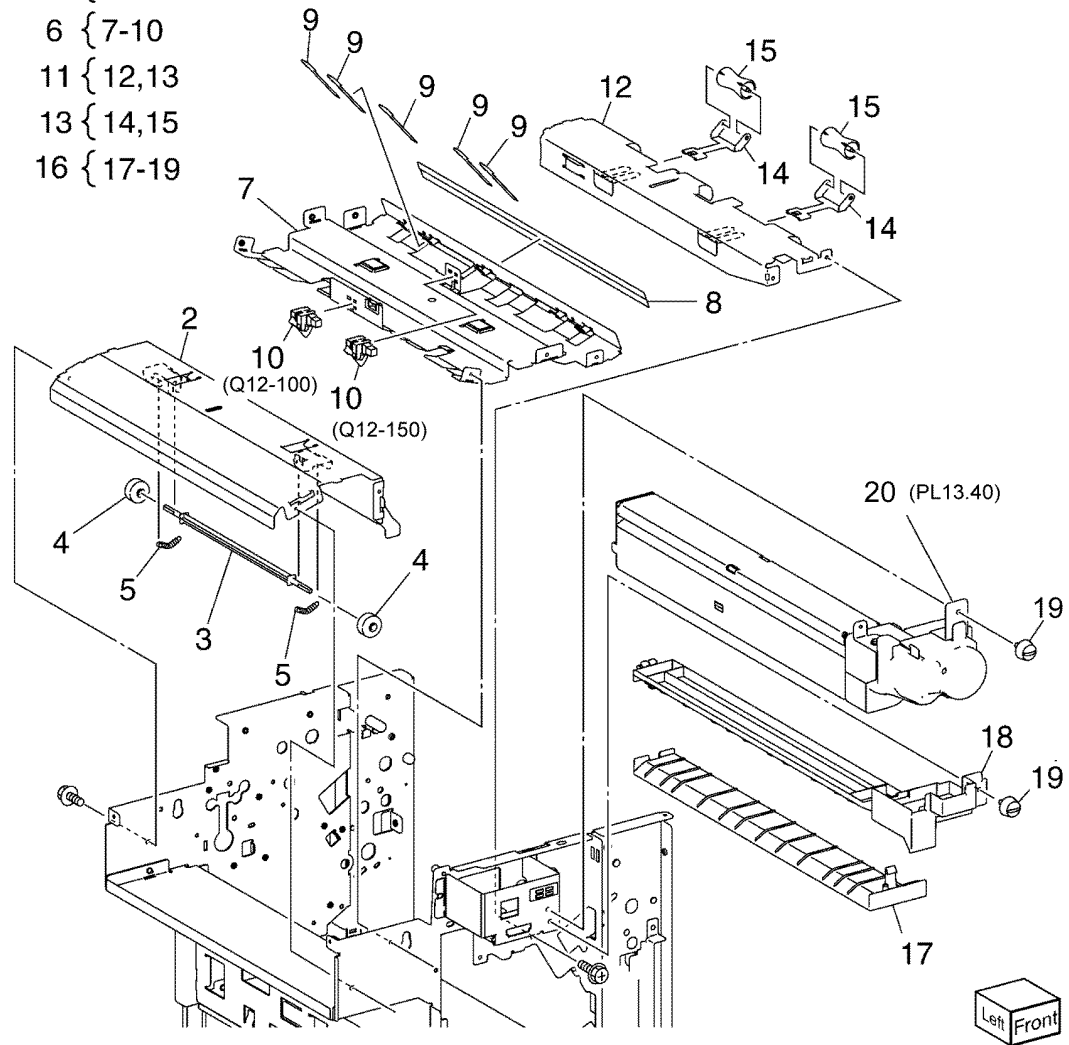


F-8-0100-A

PL 13.35 Office Finisher LX Exit and Folder Assembly

Item	Part	Description
1	054K35532	Lower chute assembly
2	-	Lower chute (P/O PL 13.35 Item 1)
3	-	Shaft (P/O PL 13.35 Item 1)
4	-	Nip roll (P/O PL 13.35 Item 1)
5	-	Spring (P/O PL 13.35 Item 1)
6	054K35540	Exit upper chute assembly
7	-	Exit upper chute (P/O PL 13.35 Item 6)
8	-	Static eliminator (P/O PL 13.35 Item 6)
9	-	Paper guide (P/O PL 13.35 Item 6)
10	130K88311	Compiler exit sensor (Q12-150)/ Finisher entrance sensor (Q12-100)
11	054K48531	Exit lower chute assembly
12	-	Exit lower chute (P/O PL 13.35 Item 11)
13	-	Nip roll assembly (P/O PL 13.35 Item 11)
14	-	Spring (P/O PL 13.35 Item 13)
15	-	Nip roll (P/O PL 13.35 Item 13)
16	607K03960	Chute assembly
17	-	Lower chute (P/O PL 13.35 Item 16)
18	-	Upper chute (P/O PL 13.35 Item 16)
19	026K81200	Thumb screw
20	695K18692	Crease assembly (Option) (REP 13.18)

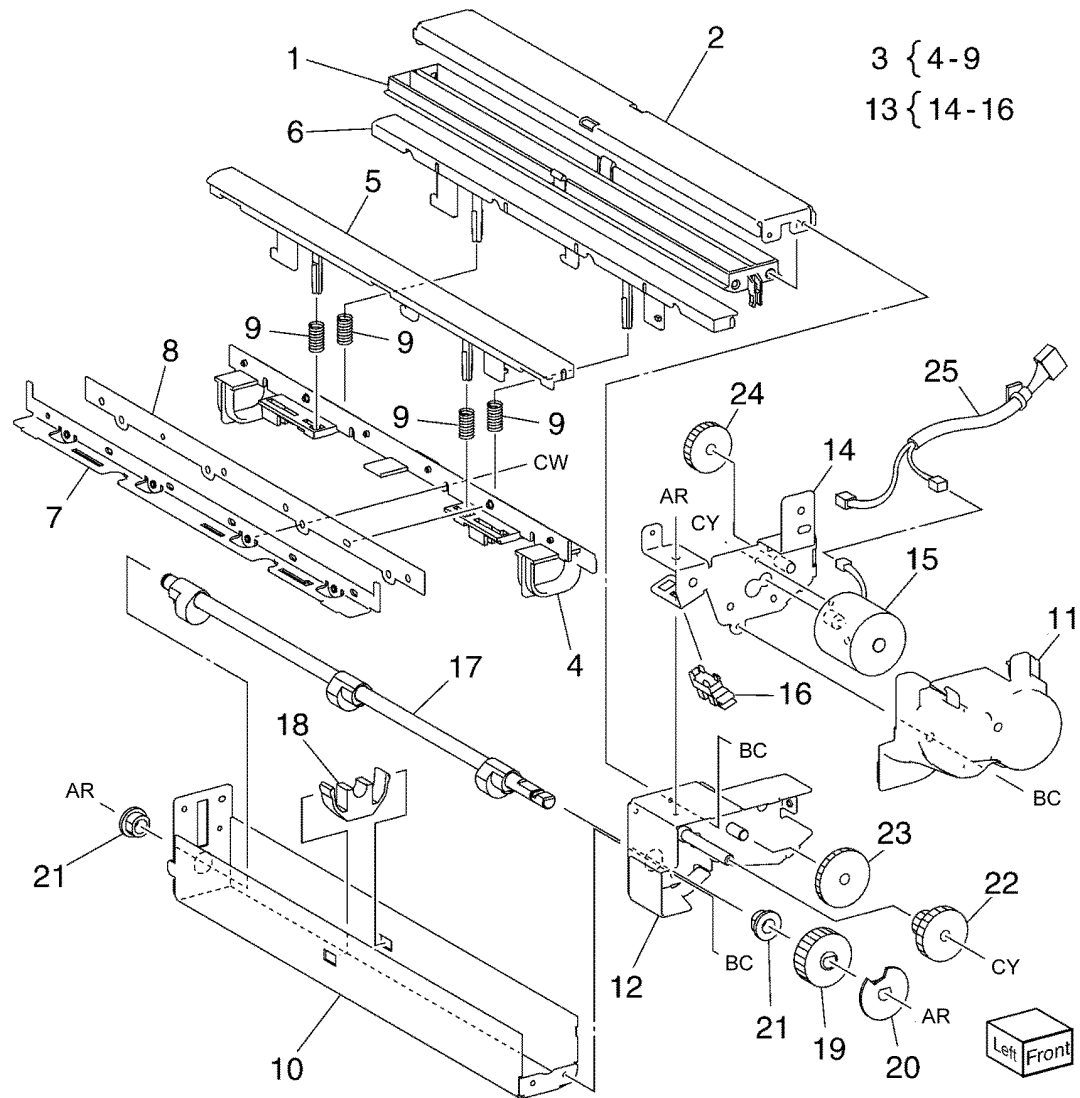
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PL 13.40 Office Finisher LX Folder Assembly

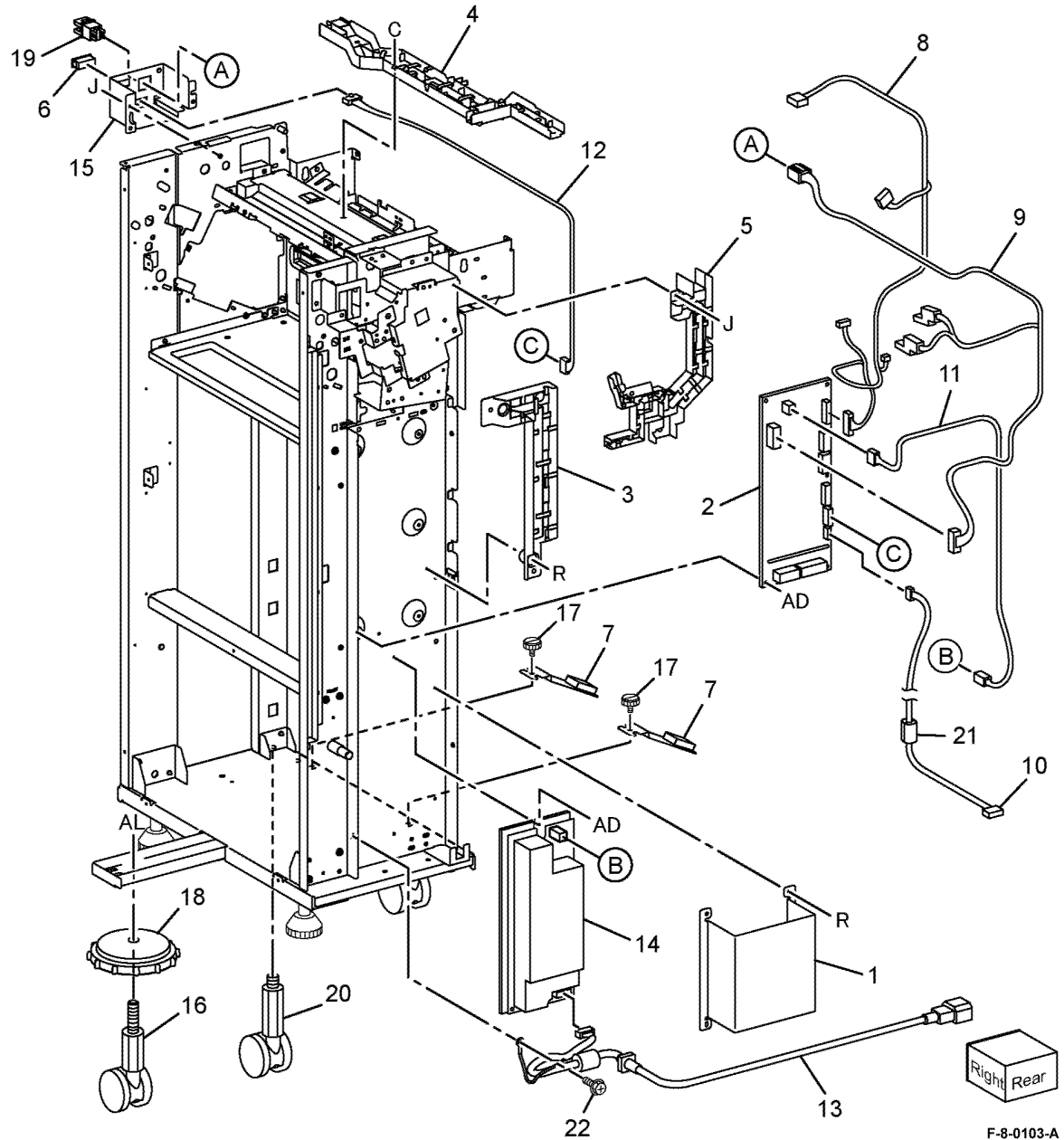
Item	Part	Description
1	-	Upper chute (P/O PL 13.35 Item 20)
2	-	Upper plate (P/O PL 13.35 Item 20)
3	-	Knife assembly (P/O PL 13.35 Item 20)
4	-	Blade holder (P/O PL 13.40 Item 3)
5	-	Lower holder 1 (P/O PL 13.40 Item 3)
6	-	Lower holder 2 (P/O PL 13.40 Item 3)
7	-	Bracket (P/O PL 13.40 Item 3)
8	-	Blade (P/O PL 13.40 Item 3)
9	-	Spring (P/O PL 13.35 Item 2)
10	-	Frame (P/O PL 13.35 Item 20)
11	-	Front cover (Not Spared)
12	-	Bracket (P/O PL 13.35 Item 20)
13	-	Knife motor assembly (P/O PL 13.35 Item 20)
14	-	Motor bracket (P/O PL 13.40 Item 13)
15	-	Knife motor (MOT13-022) (P/O PL 13.40 Item 13)
16	930W00111	Folder home sensor (Q12-101)
17	-	Cam shaft assembly (P/O PL 13.35 Item 20)
18	-	Guide (P/O PL 13.35 Item 20)
19	-	Gear (28T/8T) (P/O PL 13.35 Item 20)
20	-	Encoder (P/O PL 13.35 Item 20)
21	-	Bearing (P/O PL 13.35 Item 20)
22	-	Gear (12T/27T) (P/O PL 13.35 Item 20)
23	-	Gear (12T/30T) (P/O PL 13.35 Item 20)
24	-	Gear (12T/51T) (P/O PL 13.35 Item 20)
25	-	Wire harness (P/O PL 13.35 Item 20)



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PL 13.45 Office Finisher LX Folder Electrical

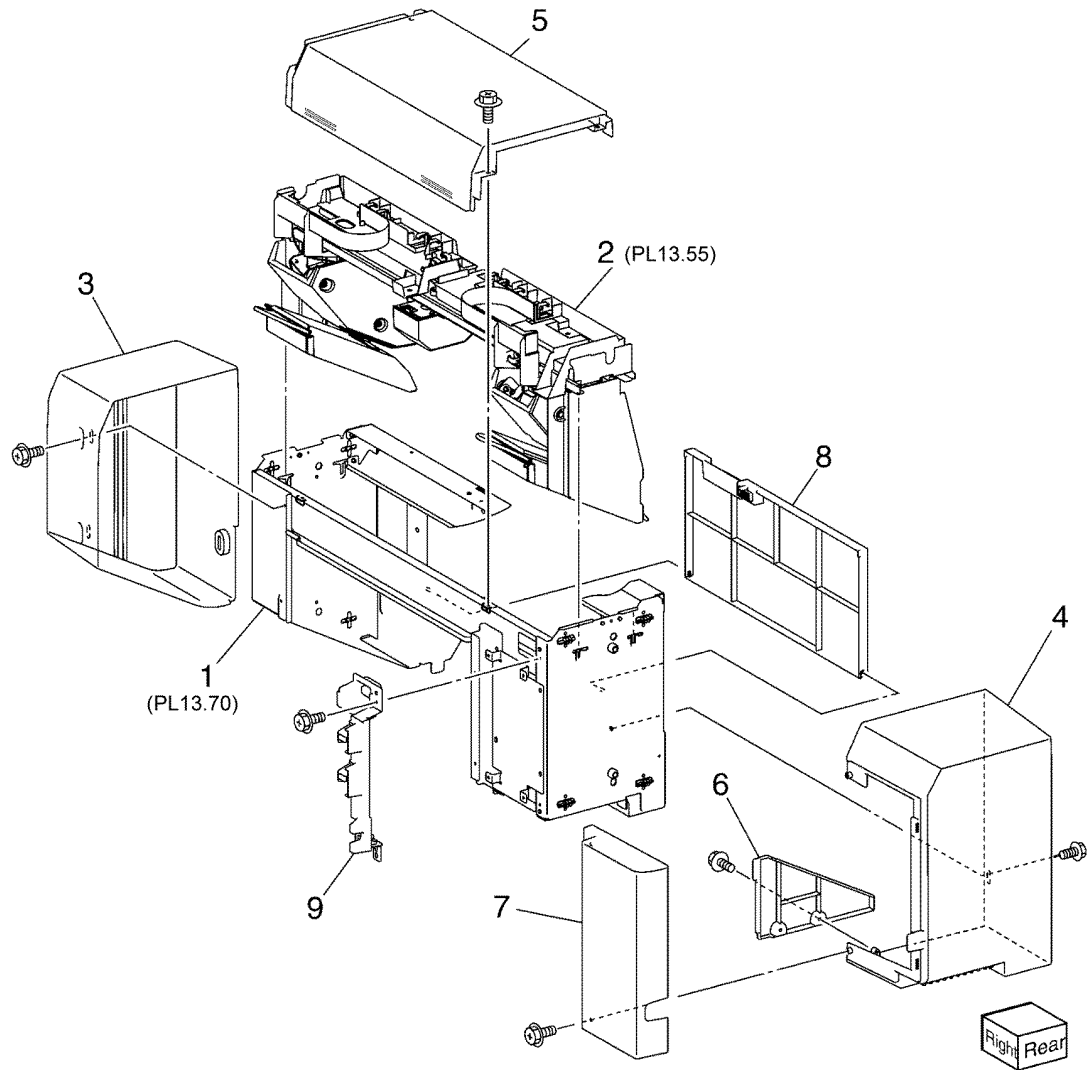
Item	Part	Description
1	-	LVPS cover (Not Spared)
2	960K96561	Finisher PWB (REP 13.23)
3	-	Harness guide (Not Spared)
4	-	Harness guide (Not Spared)
5	-	Harness guide (Not Spared)
6	-	Magnet (Not Spared)
7	-	Gasket plate assembly (Not Spared)
8	-	Wire harness (Not Spared)
9	-	Wire harness (Not Spared)
10	962K60482	Wire harness (IF)
11	962K60493	Wire harness (LVPS)
12	962K60594	Wire harness (IF)
13	962K60511	Power cable
14	105E22590	Finisher LVPS (REP 13.24)
15	-	Bracket (Not Spared)
16	-	Caster (Not Spared)
17	-	Thumb Screw (Not Spared)
18	-	Knob (Not Spared)
19	110E97990	Finisher front door interlock switch (S12-302)
20	017K96450	Caster
21	-	Core (Not Spared)
22	-	Screw (Not Spared)



F-8-0103-A

PL 13.50 Office Finisher LX Booklet Cover

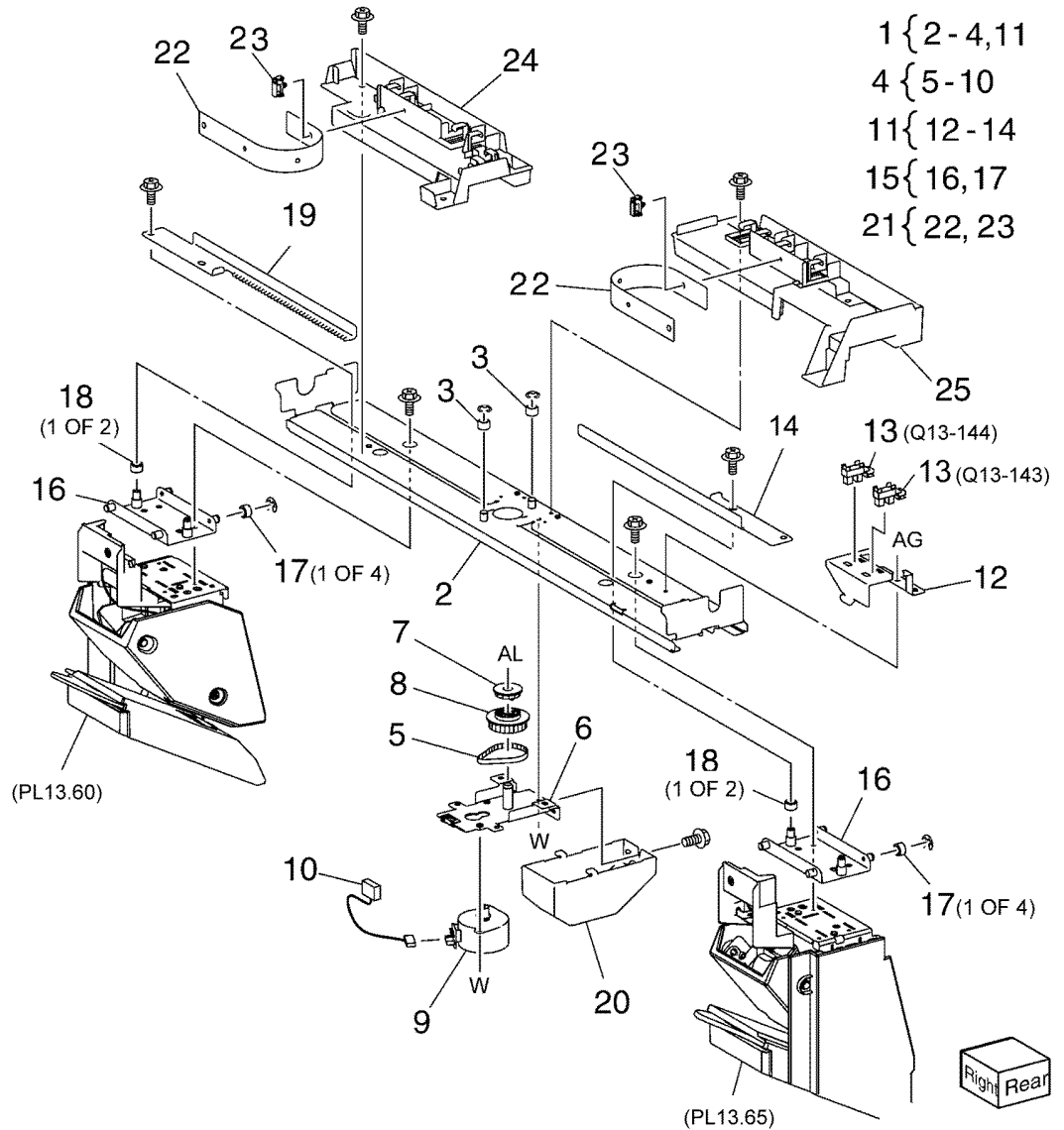
Item	Part	Description
1	-	Frame assembly (Not Spared)
2	-	Booklet stapler assembly (Not Spared) (ADJ 13.1)
3	-	Front cover (Not Spared)(REP 13.32)
4	-	Rear cover (Not Spared) (REP 13.33)
5	-	Top cover (Not Spared) (REP 13.34)
6	-	Side cover (Not Spared)
7	-	PWB cover (Not Spared) (REP 13.35)
8	-	Left cover (Not Spared) (REP 13.36)
9	-	Harness guide (Not Spared)



F-8-0104-A

PL 13.55 Office Finisher LX Booklet Stapler Assembly

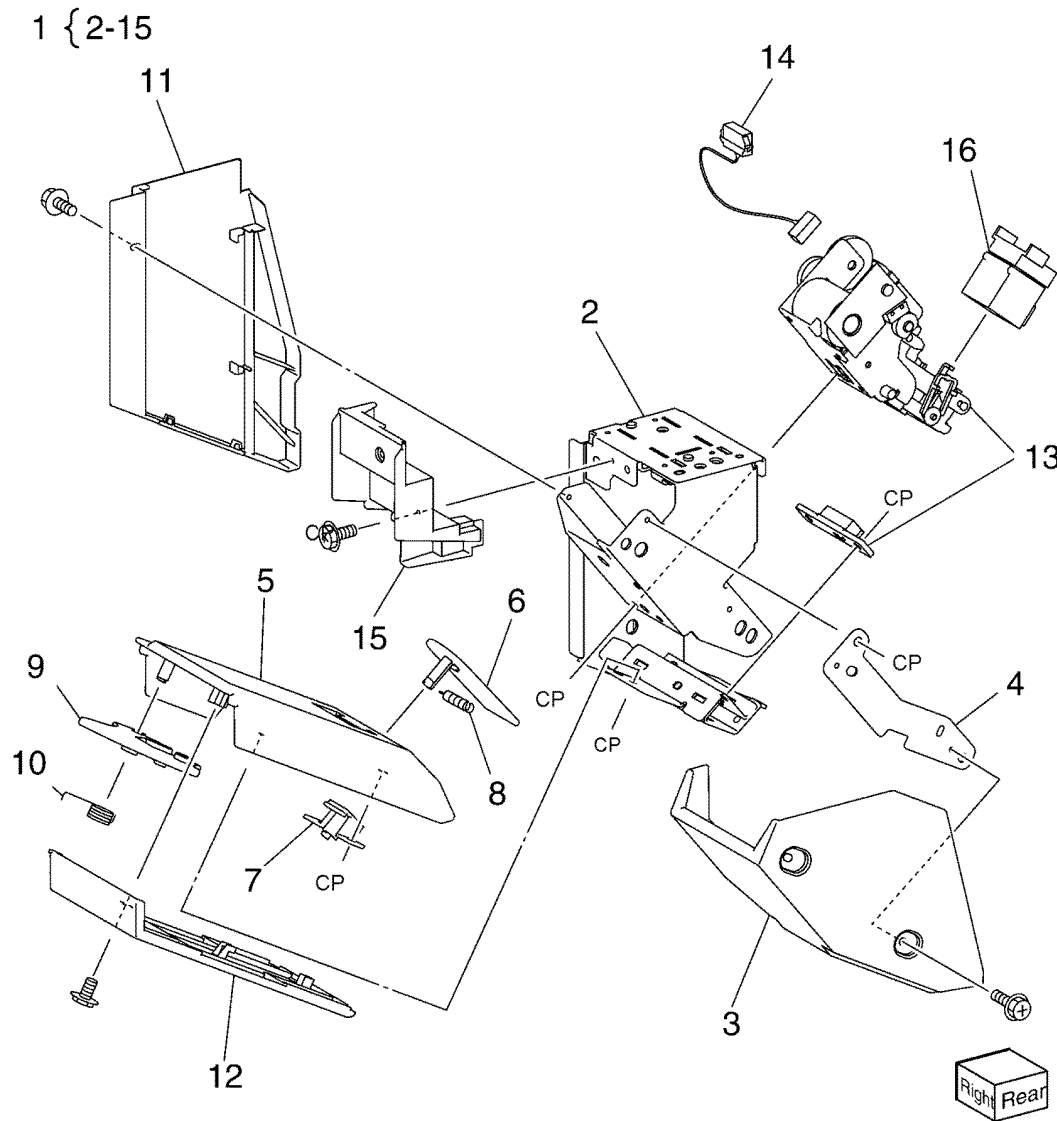
Item	Part	Description
1	-	Front carriage rail (Not Spared)
2	-	Frame (P/O PL 13.55 Item 1)
3	-	Core (P/O PL 13.55 Item 1)
4	127K57052	Booklet stapler move motor assembly
5	-	Belt (P/O PL 13.55 Item 4)
6	-	Bracket (P/O PL 13.55 Item 4)
7	-	Gear (12T) (P/O PL 13.55 Item 4)
8	-	Pulley (50T) (P/O PL 13.55 Item 4)
9	-	Booklet stapler move motor (MOT13-028) (P/O PL 13.55 Item 4) (REP 13.38)
10	-	Wire harness (P/O PL 13.55 Item 4)
11	-	Sensor bracket assembly (P/O PL 13.55 Item 1)
12	-	Sensor bracket (P/O PL 13.55 Item 11)
13	930W00111	Booklet stapler move position sensor (Q13-143)/Booklet stapler move home sensor (Q13-144)
14	-	Rear rack gear (Not Spared)
15	-	Carriage assembly (Not Spared)
16	-	Carriage (P/O PL 13.55 Item 15)
17	-	Core (P/O PL 13.55 Item 15)
18	-	Core (Not Spared)
19	-	Front rack gear (Not Spared)
20	-	Motor cover (Not Spared)
21	-	Harness guide assembly (Not Spared)
22	-	Harness strap (P/O PL 13.55 Item 21)
23	-	Locking clamp (P/O PL 13.55 Item 21)
24	-	Harness guide (front) (Not Spared)
25	-	Harness guide (rear) (Not Spared)



F-8-0105-A

PL 13.60 Office Finisher LX Booklet Front Stapler Assembly

Item	Part	Description
1	029K92491	Booklet front stapler assembly
2	-	Bracket (P/O PL 13.60 Item 1)
3	-	Rear cover (P/O PL 13.60 Item 1)
4	-	Bracket (P/O PL 13.60 Item 1)
5	-	Chute (P/O PL 13.60 Item 1)
6	-	Sub chute (P/O PL 13.60 Item 1)
7	-	Support (P/O PL 13.60 Item 1)
8	-	Spring (P/O PL 13.60 Item 1)
9	-	Exit sub chute (P/O PL 13.60 Item 1)
10	-	Spring (P/O PL 13.60 Item 1)
11	-	Front cover (P/O PL 13.60 Item 1)
12	-	Lower cover (P/O PL 13.60 Item 1)
13	-	Booklet stapler assembly (P/O PL 13.60 Item 1) (REP 13.37, ADJ 13.1)
14	-	Wire harness (P/O PL 13.60 Item 1)
15	-	Guide (P/O PL 13.60 Item 1)
16	-	Booklet staple cassette assembly

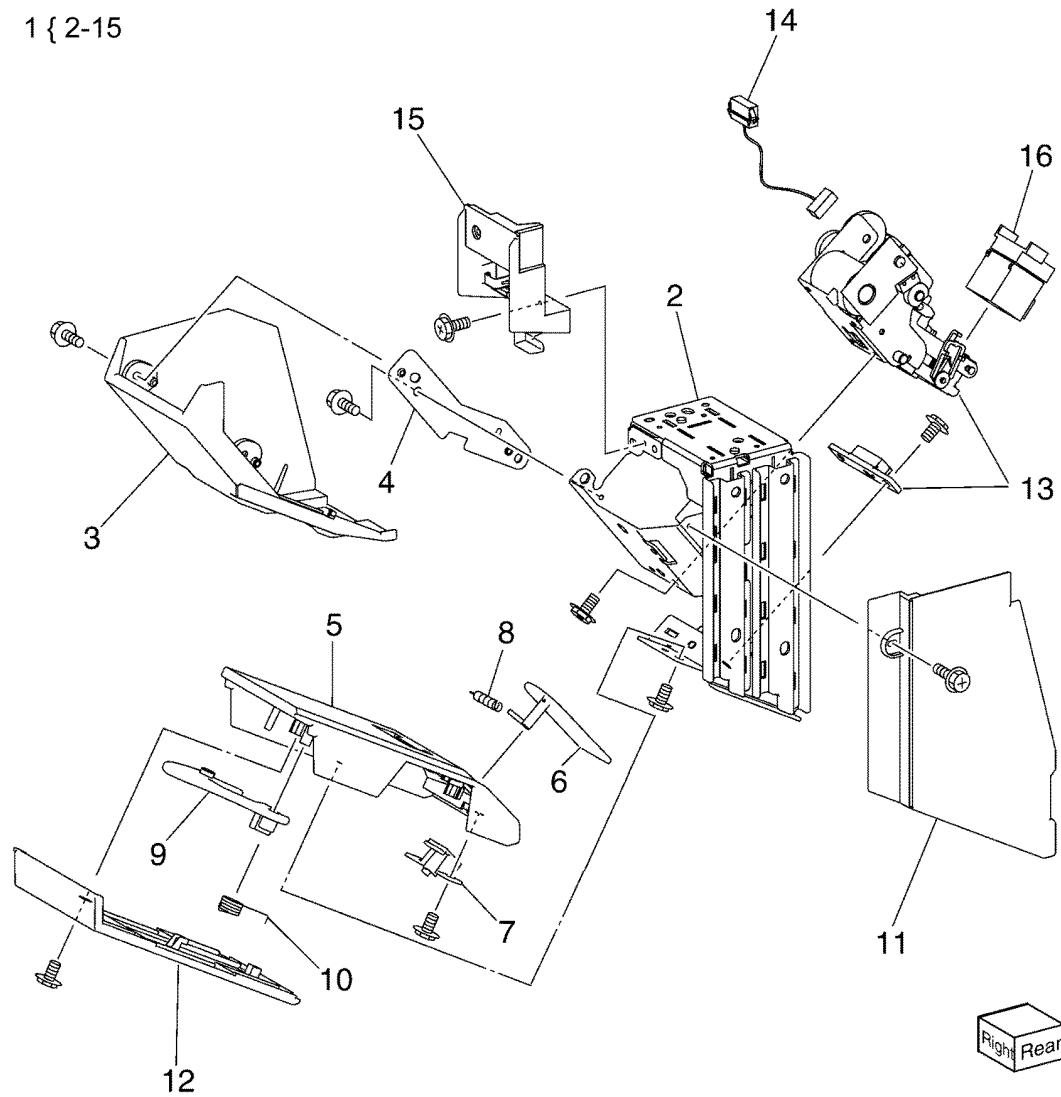


F-8-0106-A

PL 13.65 Office Finisher LX Booklet Rear Stapler Assembly

Item	Part	Description
1	029K92501	Booklet rear stapler assembly
2	-	Bracket (P/O PL 13.65 Item 1)
3	-	Rear cover (P/O PL 13.65 Item 1)
4	-	Bracket (P/O PL 13.65 Item 1)
5	-	Chute (P/O PL 13.65 Item 1)
6	-	Sub chute (P/O PL 13.65 Item 1)
7	-	Support (P/O PL 13.65 Item 1)
8	-	Spring (P/O PL 13.65 Item 1)
9	-	Sub chute (P/O PL 13.65 Item 1)
10	-	Spring (P/O PL 13.65 Item 1)
11	-	Front cover (P/O PL 13.65 Item 1)
12	-	Lower cover (P/O PL 13.65 Item 1)
13	-	Booklet stapler assembly (P/O PL 13.65 Item 1) (REP 13.37, ADJ 13.1)
14	-	Wire harness (P/O PL 13.65 Item 1)
15	-	Guide (P/O PL 13.65 Item 1)
16	-	Booklet staple cassette assembly

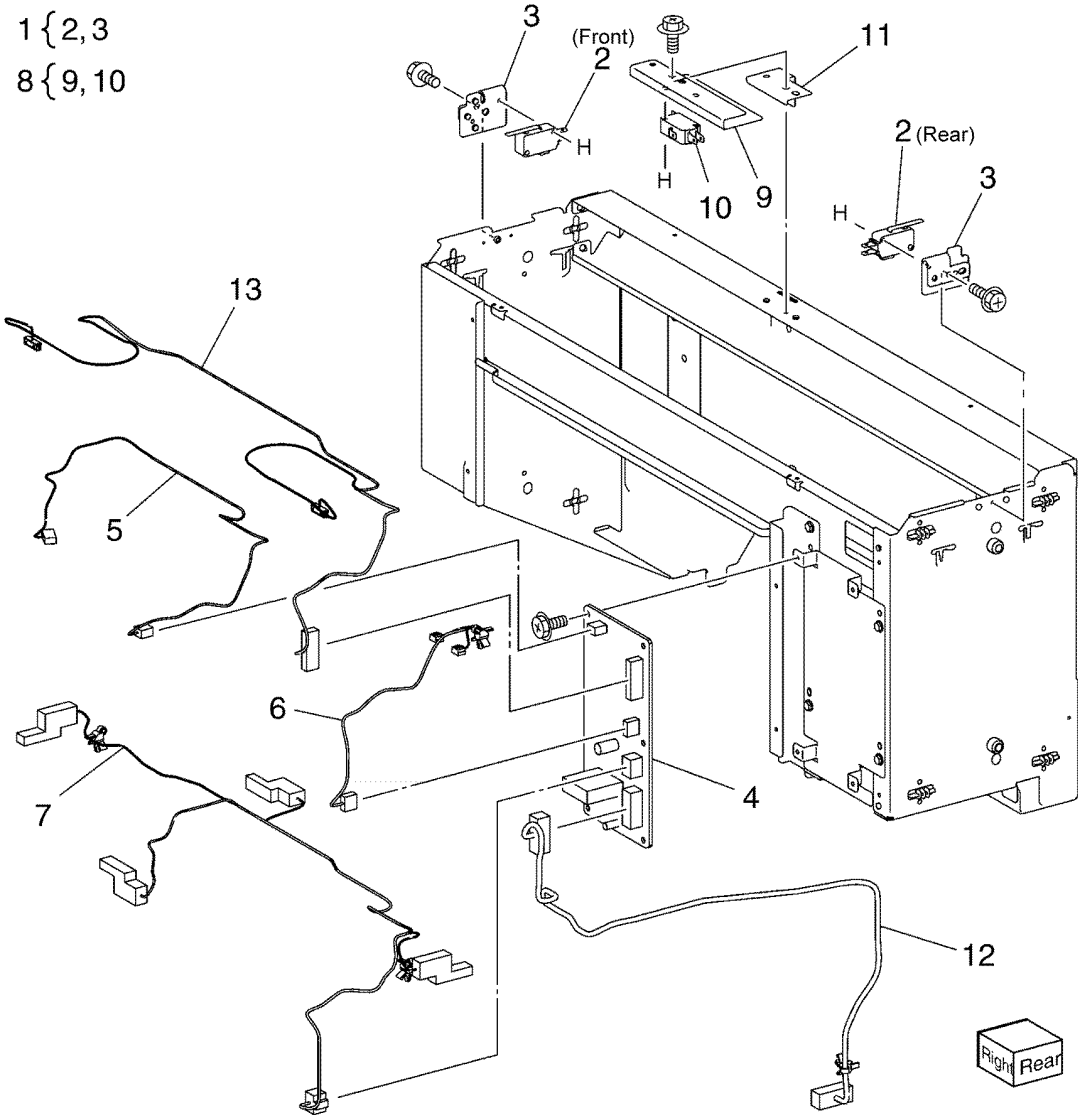
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F-8-0107-A

PL 13.70 Office Finisher LX Booklet Electrical

Item	Part	Description
1	068K58351	Stapler rear safety switch/stapler front safety switch
2	-	Booklet stapler safety switch assembly (P/O PL 13.70 Item 1)
3	-	Bracket (P/O PL 13.70 Item 1)
4	960K32545	Booklet PWB (REP 13.30)
5	-	Wire harness (Not Spared)
6	-	Wire harness (Not Spared)
7	-	Wire harness (Not Spared)
8	068K58361	Booklet stapler cover switch assembly
9	-	Bracket (P/O PL 13.70 Item 8)
10	-	Booklet cover open switch (S13-300) (P/O PL 13.70 Item 8)
11	-	Plate (Not Spared)
12	-	Wire harness (Not Spared)
13	-	Wire harness (Not Spared)



F-8-0108-A

PL 25.05 Consumables and Tools (1 of 2)

Item	Part	Description
1	–	Toner cartridge (C) - see variants below
–	106R04034	45ppm Standard (7.6K) (XC)
–	106R04038	45ppm Standard (7.6K) (XE)
–	106R04042	45ppm Standard (7.6K) (DMO)
–	106R04046	45ppm High capacity (16.5K) (XC)
–	106R04050	45ppm High capacity (16.5K) (XE)
–	106R04054	45ppm High capacity (16.5K) (DMO)
–	106R04058	45ppm WW metered (26K)
–	106R04062	55ppm Standard (12.3K) (XC)
–	106R04066	55ppm Standard (12.3K) (XE)
–	106R04070	55ppm Standard (12.3K) (DMO)
–	106R04074	55ppm High capacity (26.5K) (XC)
–	106R04078	55ppm High capacity (26.5K) (XE)
–	106R04082	55ppm High capacity (26.5K) (DMO)
–	106R04086	55ppm WW metered (26K)
2	–	Toner cartridge (M)- see variants below
–	106R04035	45ppm Standard (7.6K) (XC)
–	106R04039	45ppm Standard (7.6K) (XE)
–	106R04043	45ppm Standard (7.6K) (DMO)
–	106R04047	45ppm High capacity (16.5K) (XC)
–	106R04051	45 ppm High capacity (16.5K) (XE)
–	106R04055	45ppm High capacity (16.5K) (DMO)
–	106R04059	45ppm WW metered (26K)
–	106R04063	55ppm Standard (12.3K) (XC)
–	106R04067	55ppm Standard (12.3K) (XE)
–	106R04071	55ppm Standard (12.3K) (DMO)
–	106R04075	55ppm High capacity (26.5K) (XC)
–	106R04079	55ppm High capacity (26.5K) (XE)
–	106R04083	55ppm High capacity (26.5K) (DMO)
–	106R04087	55ppm WW metered (26K)

**NO EXPLODED
VIEW PROVIDED**

F-3-0115-A

PL 25.10 Consumables and Tools (2 of 2)

Item	Part	Description
1	–	Toner cartridge (Y) - see variants below
–	106R04036	45ppm Standard (7.6K) (XC)
–	106R04040	45ppm Standard (7.6K) (XE)
–	106R04044	45ppm Standard (7.6K) (DMO)
–	106R04048	45ppm High capacity (16.5K) (XC)
–	106R04052	45ppm High capacity (16.5K) (XE)
–	106R04056	45ppm High capacity (16.5K) (DMO)
–	106R04060	45ppm WW metered (26K)
–	106R04064	55ppm Standard (12.3K) (XC)
–	106R04068	55ppm Standard (12.3K) (XE)
–	106R04072	55ppm Standard (12.3K) (DMO)
–	106R04076	55ppm High capacity (26.5K) (XC)
–	106R04080	55ppm High capacity (26.5K) (XE)
–	106R04084	55ppm High capacity (26.5K) (DMO)
–	106R04088	55ppm WW metered (26K)
2	–	Toner cartridge (K)- see variants below
–	106R04037	45ppm Standard (12.6K) (XC)
–	106R04041	45ppm Standard (12.6K) (XE)
–	106R04045	45ppm Standard (12.6K) (DMO)
–	106R04049	45ppm High capacity (20.9K) (XC)
–	106R04053	45ppm High capacity (20.9K) (XE)
–	106R04057	45ppm High capacity (20.9K) (DMO)
–	106R04061	45ppm WW metered (36K)
–	106R04065	55ppm Standard (18.9K) (XC)
–	106R04069	55ppm Standard (18.9K) (XE)
–	106R04073	55ppm Standard (18.9K) (DMO)
–	106R04077	55ppm High capacity (31.4K) (XC)
–	106R04081	55ppm High capacity (31.4K) (XE)
–	106R04085	55ppm High capacity (31.4K) (DMO)
–	106R04089	55ppm WW metered (36K)
3	008R12964	Staple cartridge (5000) - LX Finisher and BR Finisher
4	008R13177	Staple refills - BR Finisher BM (5000)
5	109R00790	Tray 1-4 feed rolls
6	104R00256	Transfer belt cleaner
7	101R00602	Drum cartridge
8	108R01504	Waste cartridge
9	116R00016	Tray 5 feed rolls (REF: PL 80.120 Item 6)
10	116R00015	2nd BTR roller
11	115R00143	Fuser assembly
12	116R00017	Tray 6 feed rolls (REF: PL 80.105 Item 24)

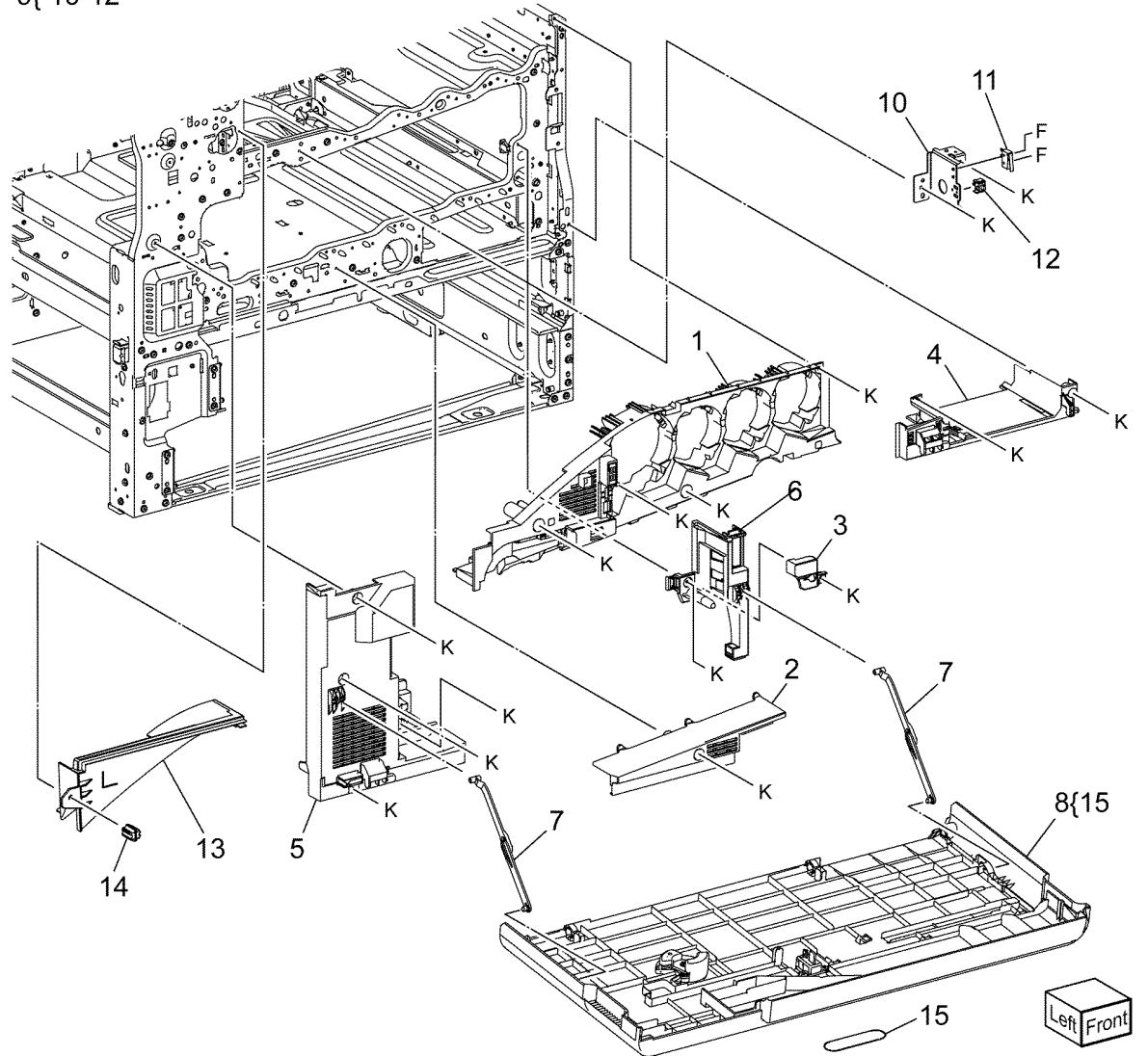
**NO EXPLODED
VIEW PROVIDED**

F-8-0185-A

PL 28.05 Covers (1 of 3)

Item	Part	Description
1	-	Inner cover assembly (Not Spared)
2	-	Inner lower cover (Not Spared)
3	-	Inner right cap cover (Not Spared)
4	-	Inner hinge cover assembly (Not Spared)
5	-	Inner left cover (Not Spared)
6	-	Inner right cover (Not Spared)
7	674K05081	Front cover strap kit
8	948K13110	Front cover assembly
9	110K18350	Front cover interlock switch assembly (S77-303)
10	-	Bracket (P/O PL 28.05 Item 9)
11	-	Front cover interlock switch (P/O PL 28.05 Item 9)
12	-	Front cover open switch (P/O PL 28.05 Item 9)
13	-	Inner upper cover (Not Spared)
14	-	Knob (Not Spared)
15	-	Logo badge (P/O PL 28.05 Item 8)

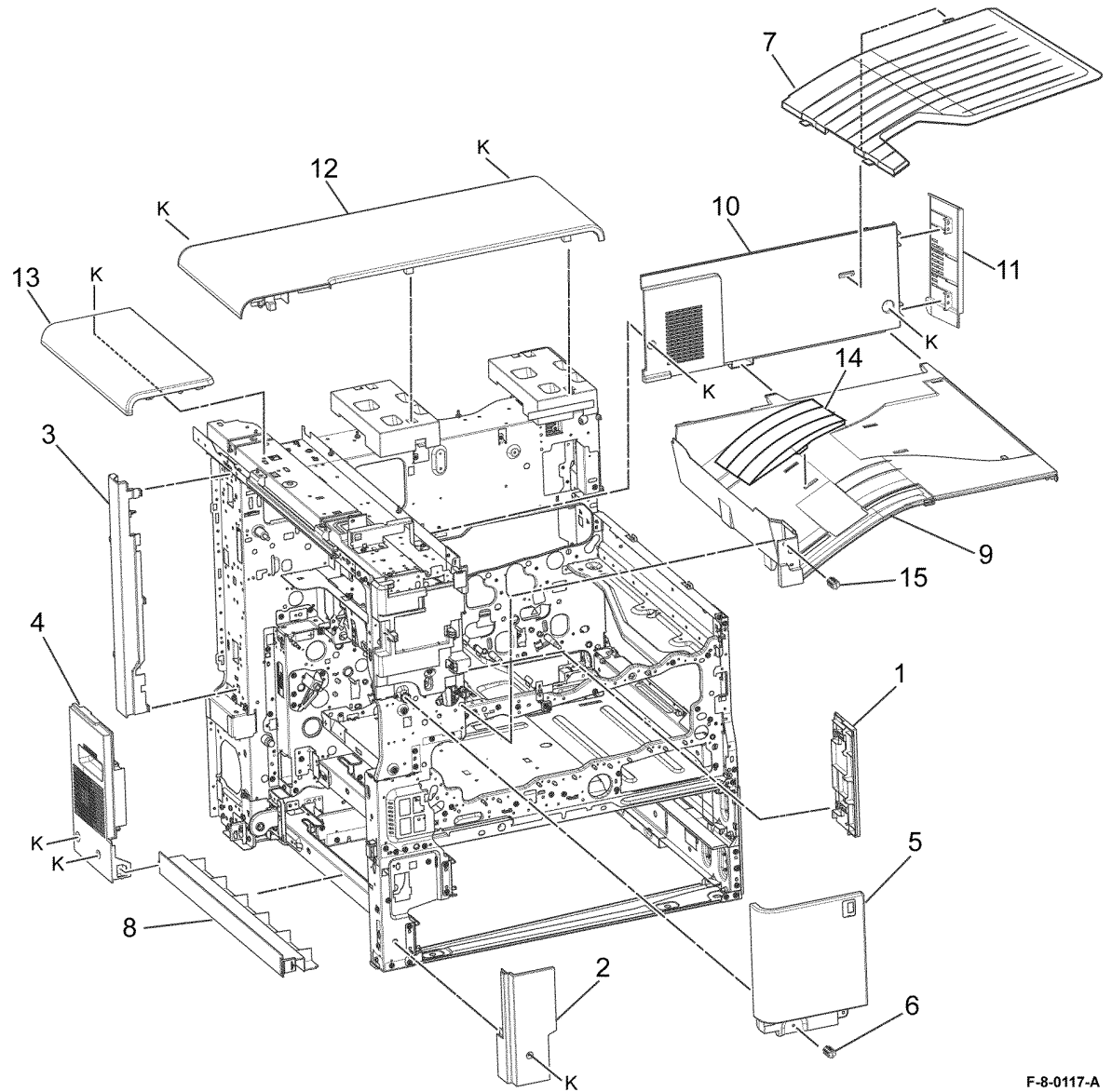
9{ 10-12



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PL 28.10 Covers (2 of 3)

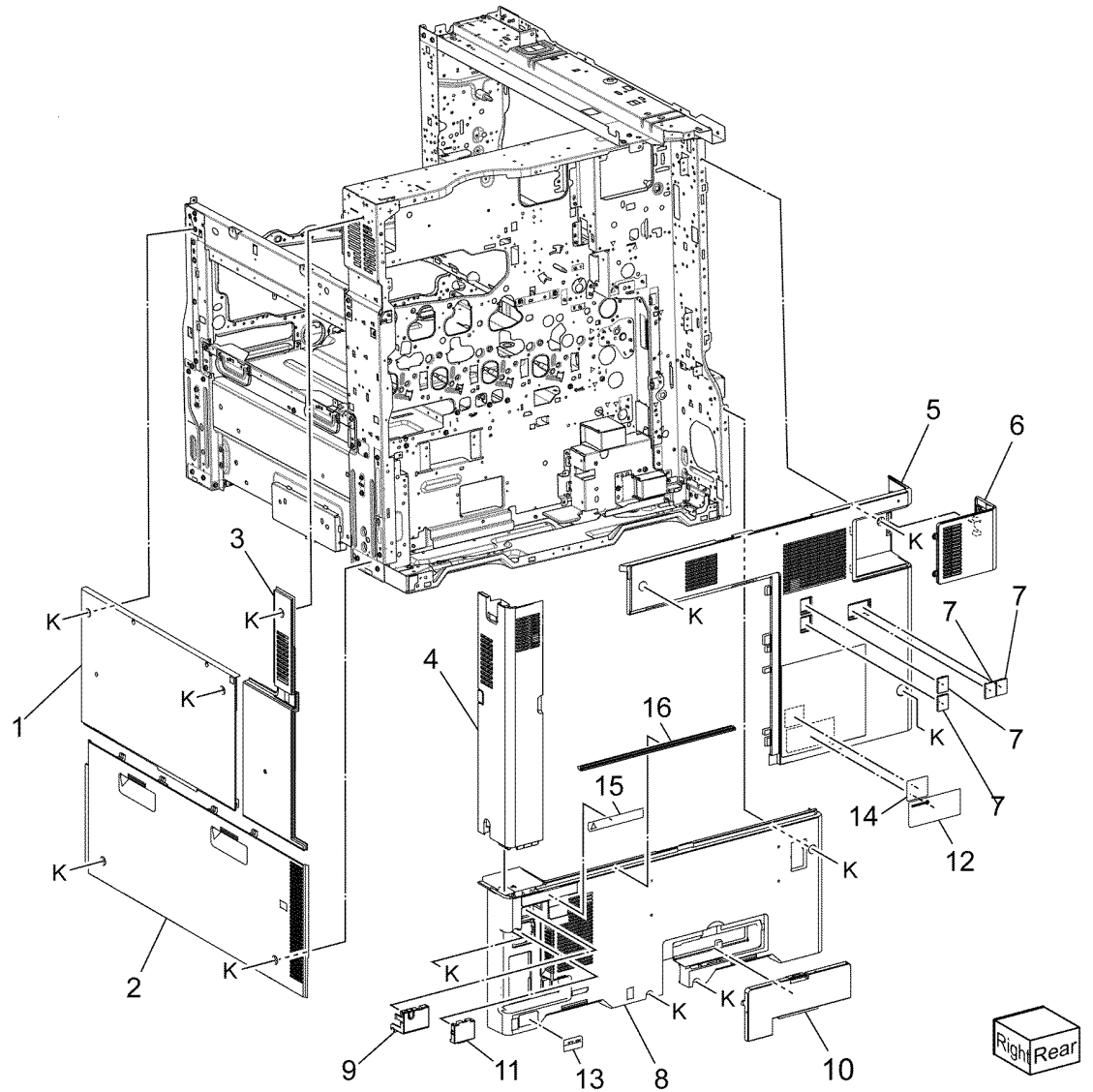
Item	Part	Description
1	–	Front exit cover (Not Spared)
2	–	Tray inner cover (Not Spared)
3	822E25072	Upper left cover
4	822E25112	Lower left cover
5	822E46761	Pillar cover
6	–	Thumbscrew (Not Spared)
7	050E32924	Exit 2 tray
8	–	Bottom left cover (Not Spared)
9	822E24855	Top cover
10	–	Top rear cover (Not Spared)
11	822E46741	Right upper cover
12	822E46701	Upper top cover
13	822E46680	Top left cover
14	050K79510	Add tray
15	–	Thumbscrew (Not Spared)



F-8-0117-A

PL 28.15 Covers (3 of 3)

Item	Part	Description
1	822E25191	Upper right front cover
2	822E25133	Lower right front cover
3	822E33951	Upper right rear cover
4	822E25311	ESS rear cover
5	822E25321	Upper rear cover
6	822E25420	Left rear cover
7	-	Cap cover (Not Spared)
8	822E25443	Lower rear cover
9	-	EPSV cover (Not Spared)
10	822E25601	MCU cover
11	-	Outlet cover (Not Spared)
12	-	Label (Date) (Not Spared)
13	-	Label (GFI) (Not Spared)
14	-	Label (Warning) (Not Spared)
15	-	Label (Earth) (Not Spared)
16	-	Gasket (Not Spared)



F-8-0118-A

PL 31.05 Maintenance/Removal/Installation Kits

Item	Part	Description
1	607K10570	FFC Cable assembly kit (REF: PL 60.05 Item 9)
2	607K10600	Tray 1 kit (REF: PL 70.05 Item 1)
3	607K10631	Bypass tray kit (REF: PL 70.50 Item 16)
4	607K10642	Bypass feeder kit (REF: PL 70.50 Item 17)
5	--	Not used
6	674K05081	Front cover strap kit (REF: PL 28.05 Item 7)
7	607K10610	Tray 2-4 kit (REF: PL 70.05 Item 2)

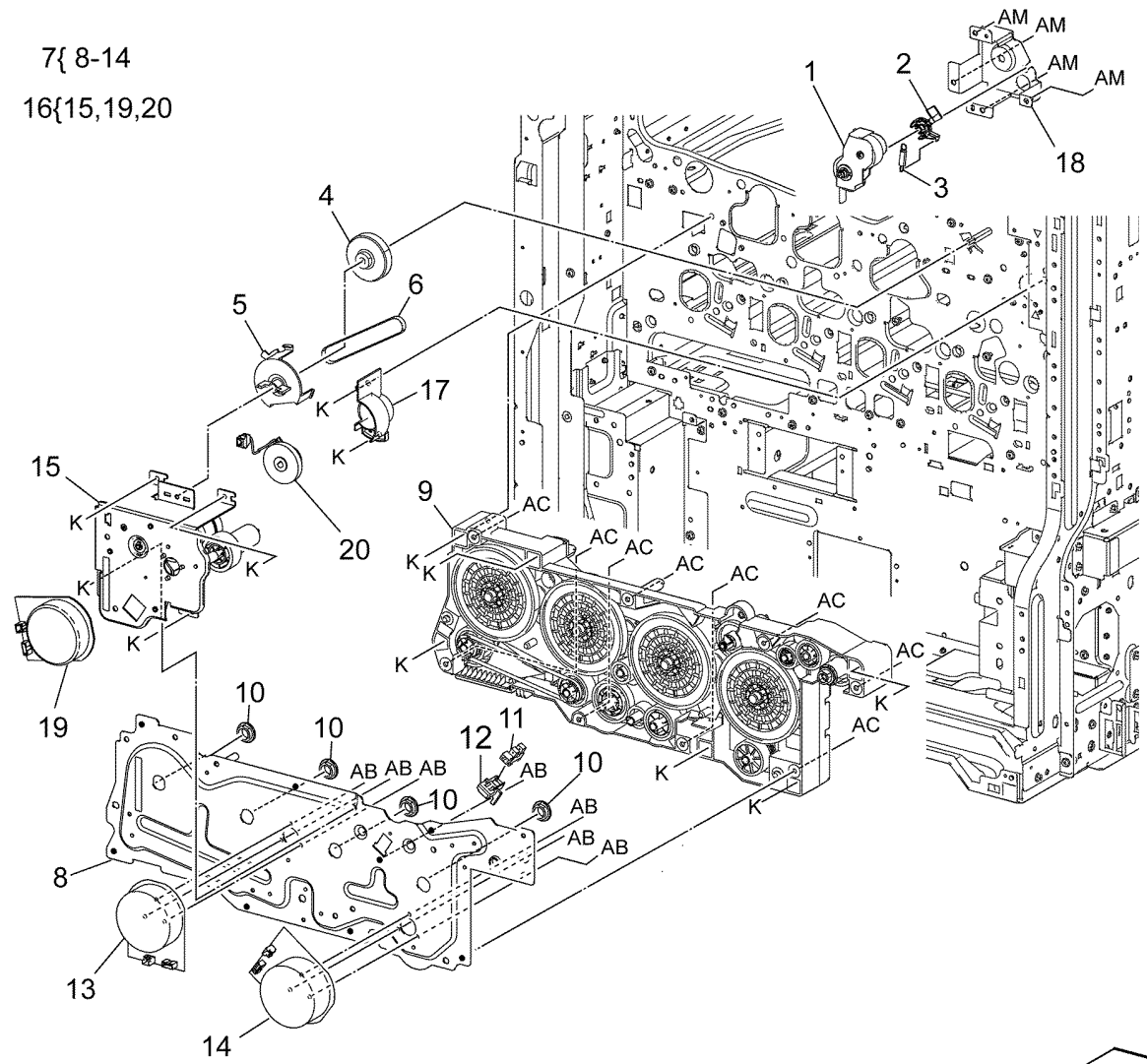
**NO EXPLODED
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F-8-0121-A

PL 40.05 Main Drive Assembly

Item	Part	Description
1	-	Fuser input bracket assembly (Not Spared)
2	-	Spacer (Not Spared)
3	-	Spring (Not Spared)
4	807E51730	Helical gear
5	-	Flange (Not Spared)
6	423W10354	Drive belt
-	423W10355	Drive belt (alternative)
7	007K22595	Main drive assembly (MOT42-018) (REP 40.1)
8	-	Drum drive bracket assembly (P/O PL 40.05 Item 7)
9	-	Drum drive housing assembly (P/O PL 40.05 Item 7)
10	-	Bearing (P/O PL 40.05 Item 7)
11	930W00121	BTR contact/retract sensor (Q94-200)
12	-	Sensor bracket (P/O PL 40.05 Item 7)
13	-	Drum/developer (C, M, Y) motor (MOT42-007) (P/O PL 40.05 Item 7)
14	-	Drum/developer (K)/ IBT motor (MOT42-001) (P/O PL 40.05 Item 7)
15	-	Fuser drive bracket assembly (P/O PL 40.05 Item 16)
16	007K21444	Fuser drive assembly (REP 40.2)
17	-	Gear lever (Not Spared)
18	-	Bracket (Not Spared)
19	-	Fuser unit drive motor (P/O PL 40.05 Item 16)
20	-	BTR contact/retract clutch assembly (P/O PL 40.05 Item 16)

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16{15,19,20

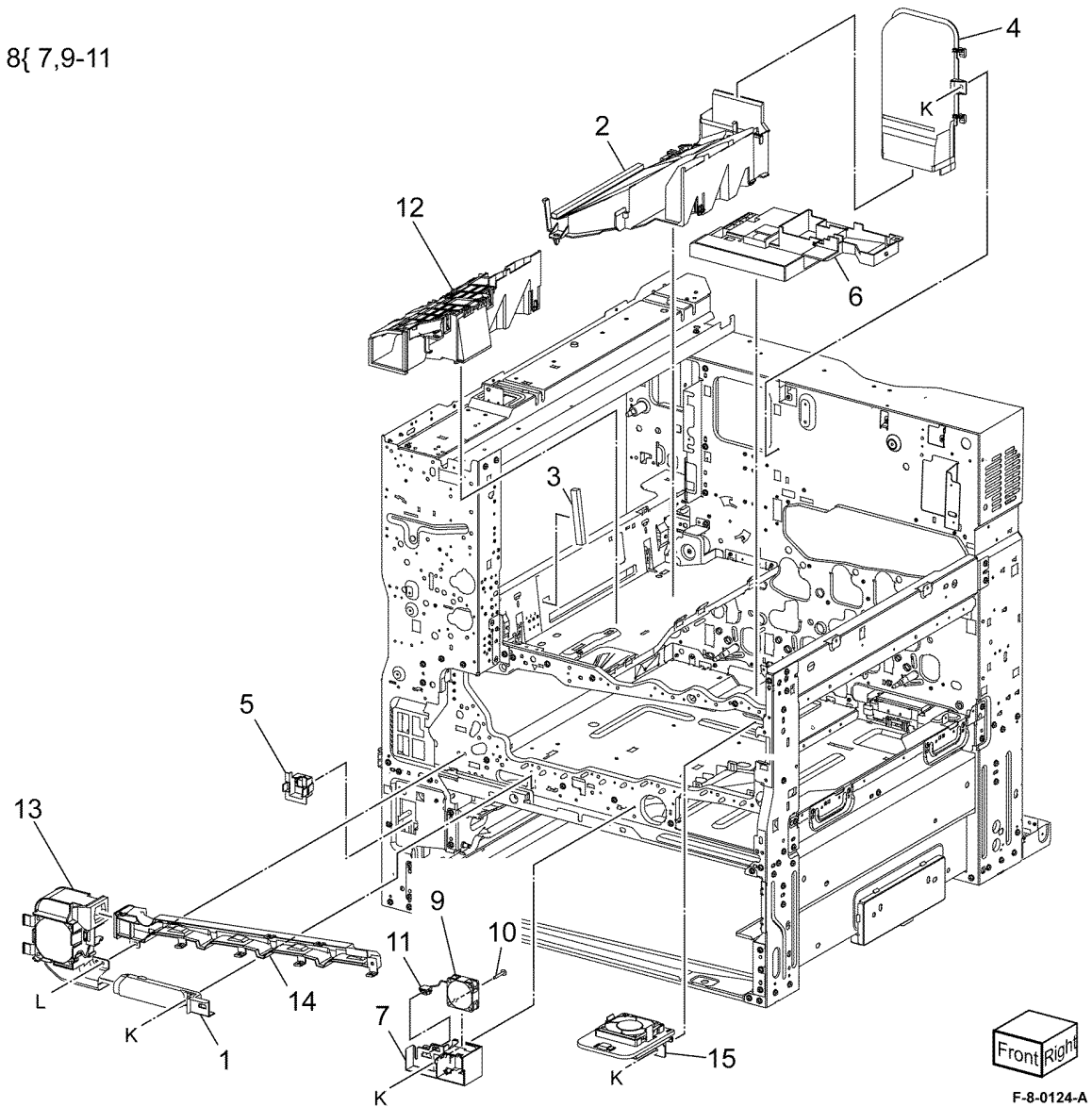


F-8-0123-A

PL 40.10 NOHAD (front)

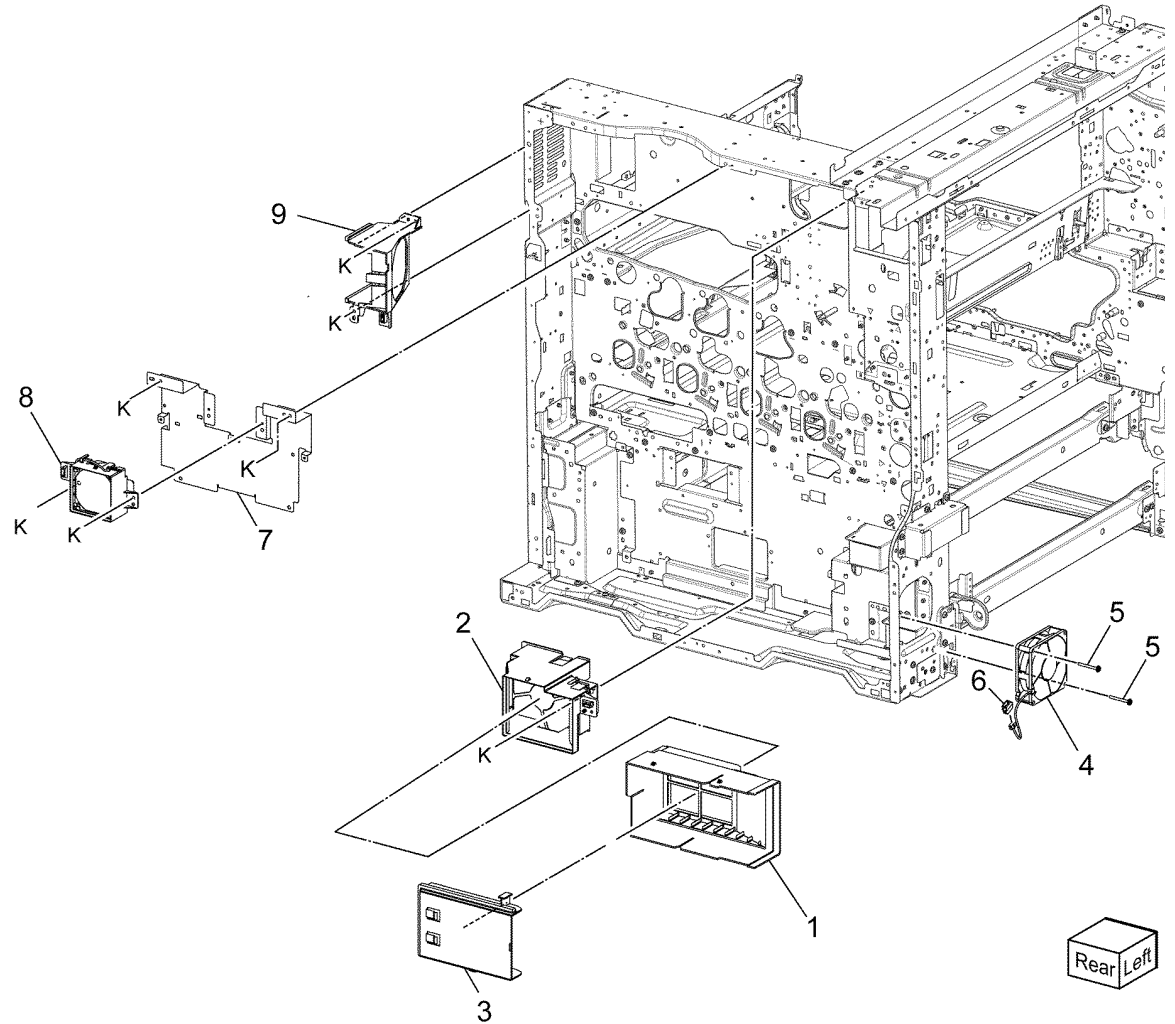
Item	Part	Description
1	–	Duct (Not Spared)
2	–	Fuser duct assembly (Not Spared)
3	–	Fuser seal (Not Spared)
4	–	Fuser duct (Not Spared)
5	930K00500	Temp/Humidity sensor (external) (REP 40.3)
6	–	Rear duct (Not Spared)
7	–	P1 duct (P/O PL 40.10 Item 8)
8	–	Duct assembly (Not Spared) (REP 40.4)
9	127K69610	Front/right marking fan
10	–	Screw (P/O PL 40.10 Item 8)
11	–	Connector (P/O PL 40.10 Item 8)
12	127K74190	Toner cartridge cooling fan assembly (REP 40.5)
13	054K55030	Front/Left marking fan assembly (MOT42-067) (REP 40.6)
14	–	Front duct (Not Spared)
15	054K55060	Marking fan duct assembly (MOT42-025)

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PL 40.15 NOHAD (rear)

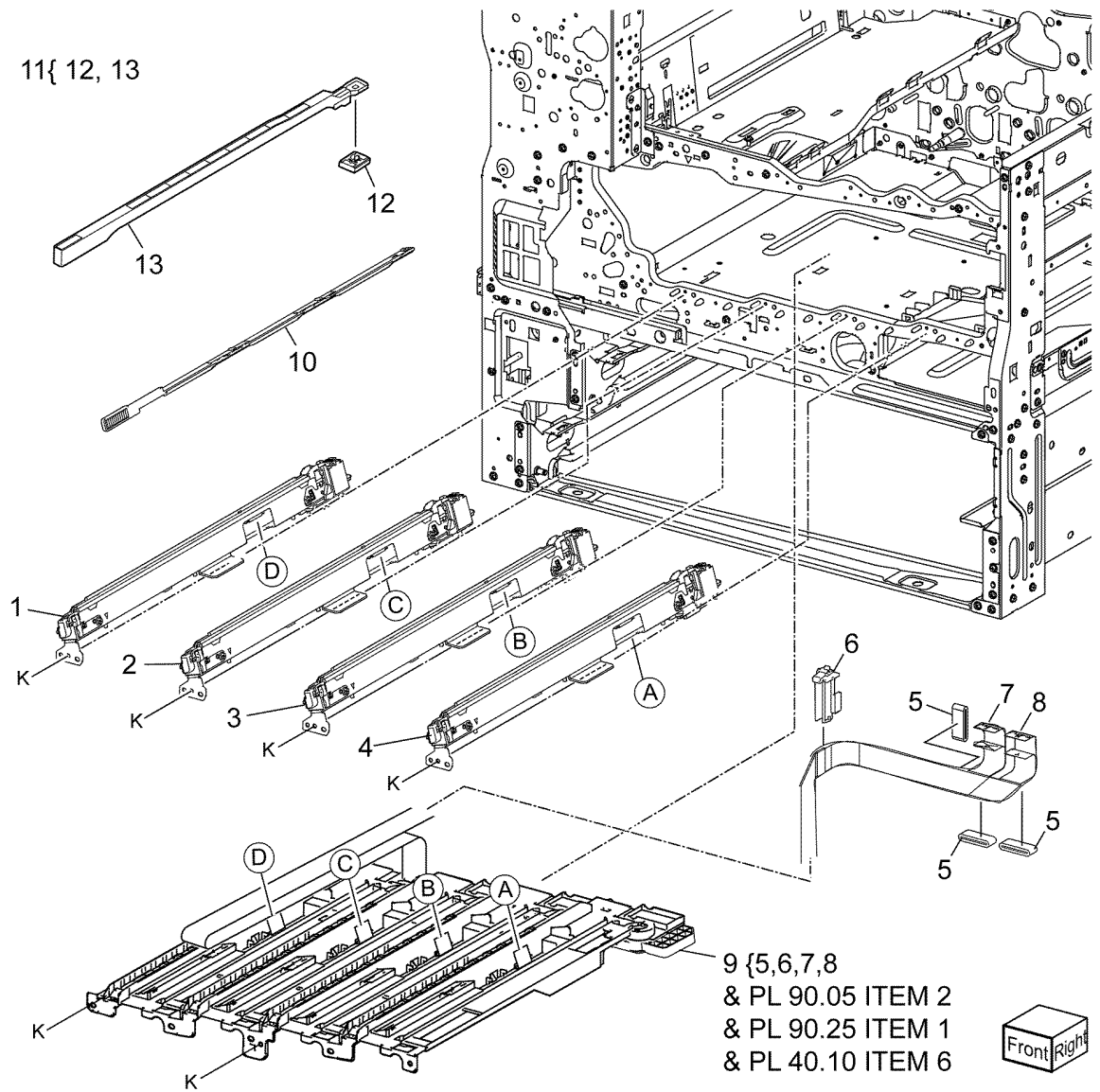
Item	Part	Description
1	–	Rear fuser duct assembly (Not Spared) (REP 40.7)
2	054K55050	Fuser unit exhaust fan assembly (MOT42-058)
3	815K16761	Side plate
4	127K74210	LVPS fan assembly (MOT42-052) (REP 40.8)
5	–	Screw (P/O PL 40.15 Item 4)
6	–	Connector (P/O PL 40.15 Item 4)
7	–	Bracket (P/O PL 40.15 Item 8)
8	054K55210	IHPS intake duct assembly (MOT42-069) (REP 40.9)
9	054K54990	Toner cartridge exhaust fan assembly (REP 40.10)



F-8-0125-A

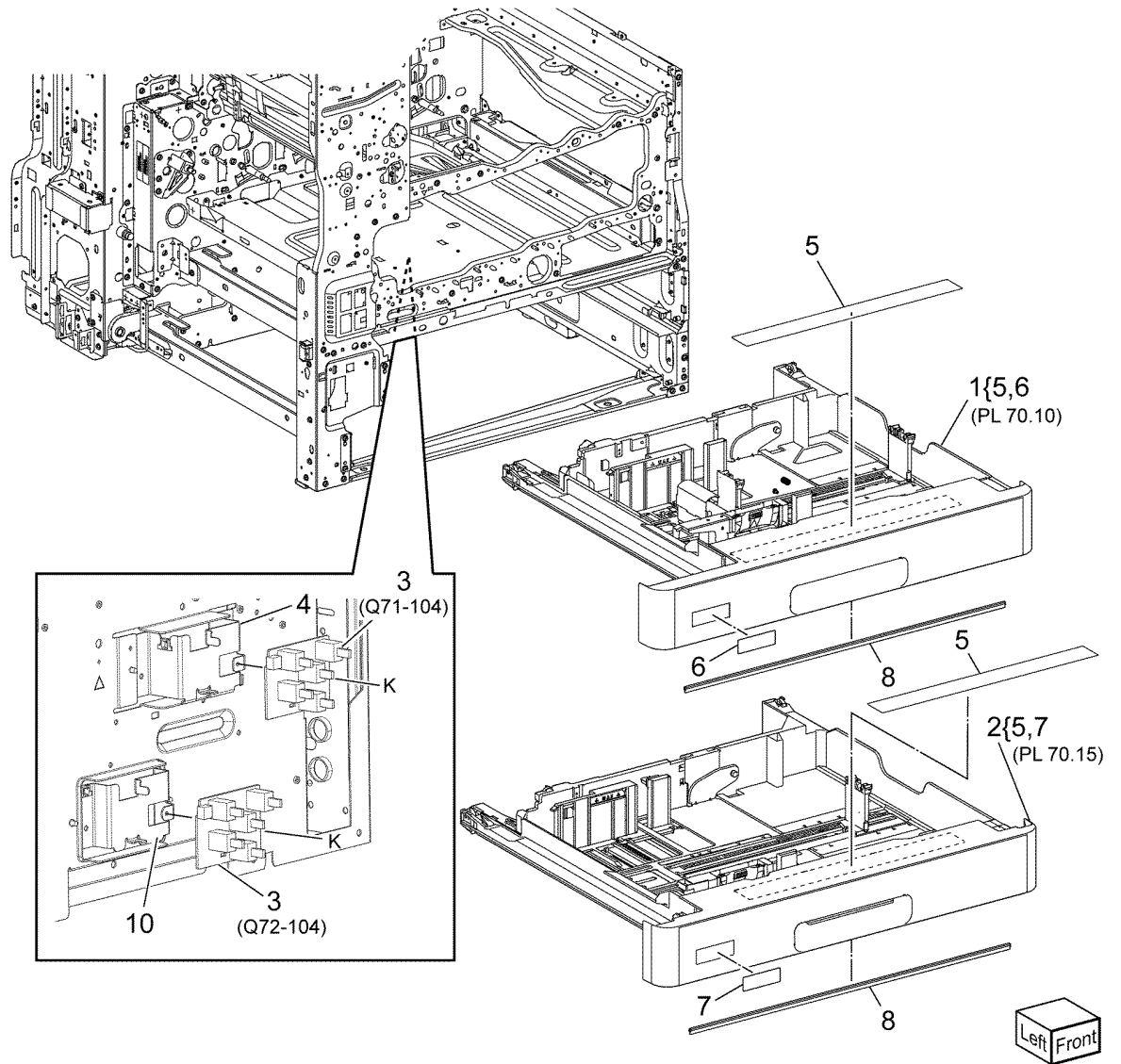
PL 60.05 LPH Module

Item	Part	Description
1	930K00722	LPH assembly (K) (REP 60.1)
2	-	LPH assembly (C) (REP 60.1)
3	-	LPH assembly (M) (REP 60.1)
4	-	LPH assembly (Y) (REP 60.1)
5	-	Core ferrite (P/O PL 60.05 Item 9)
6	-	FFC guide (P/O PL 60.05 Item 9)
7	-	FFC cable (P/O PL 60.05 Item 9)
8	-	FFC cable (P/O PL 60.05 Item 9)
9	607K10570	FFC cable assembly kit (REP 60.2)
10	042K94930	LPH cleaner
11	-	Cleaner assembly kit
12	-	Cleaner base assembly (P/O PL 60.05 Item 11)
13	-	Cleaner rod (P/O PL 60.05 Item 11)



PL 70.05 Tray 1 & 2 Assembly

Item	Part	Description
1	607K10600	Tray 1 assembly
2	607K10610	Tray 2 assembly
3	110K12100	Tray 1 paper size sensor (Q71-104) / Tray 2 paper size sensor (Q72-104) (REP 70.1)
-	110K17951	Tray 1 paper size sensor (Q71-104) (REP 70.1) / Tray 2 paper size sensor (Q72-104) (REP 70.1) (Alternative)
4	-	Bracket (Not Spared)
5	-	Label (instruction) (P/O PL 70.05 Item 1 & PL 70.05 Item 2)
6	-	Label (No. 1) (P/O PL 70.05 Item 1)
7	-	Label (No. 2) (P/O PL 70.05 Item 2)
8	-	Gasket (Not Spared)
9	-	Not used
10	-	Bracket (Not Spared)

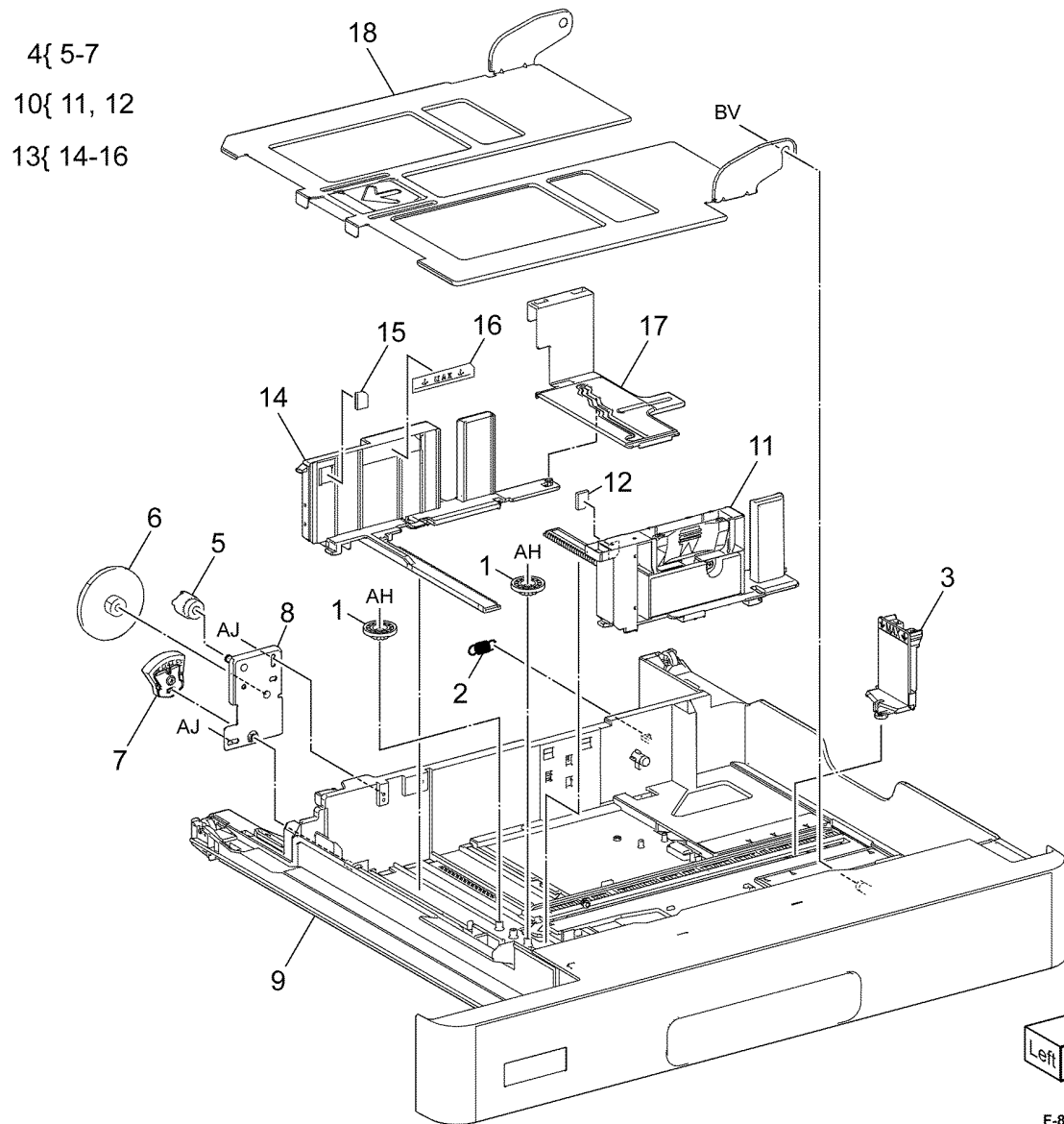


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PL 70.10 Tray 1 Assembly

Item	Part	Description
1	-	Pinion (P/O PL 70.05 Item 1)
2	-	Spring (P/O PL 70.05 Item 1)
3	-	End guide (Not Spared)
4	-	Tray gear assembly (Not Spared)
5	-	Gear (13) (P/O PL 70.10 Item 4)
6	-	Gear (13/60) (P/O PL 70.10 Item 4)
7	-	Gear assembly (P/O PL 70.10 Item 4)
8	-	Bracket (P/O PL 70.05 Item 1)
9	-	Cassette assembly (P/O PL 70.05 Item 1)
10	-	Front side guide assembly (Not Spared)
11	-	Front side guide (P/O PL 70.10 Item 10)
12	-	Pad (P/O PL 70.10 Item 10)
13	-	Rear side guide assembly (Not Spared)
14	-	Rear side guide (P/O PL 70.10 Item 13)
15	-	Pad (P/O PL 70.10 Item 13)
16	-	Label (MAX) (P/O PL 70.10 Item 13)
17	-	Side actuator (P/O PL 70.05 Item 1)
18	-	Lift plate (P/O PL 70.05 Item 1)

NOTE: All parts are part of PL 70.05 Item 1.

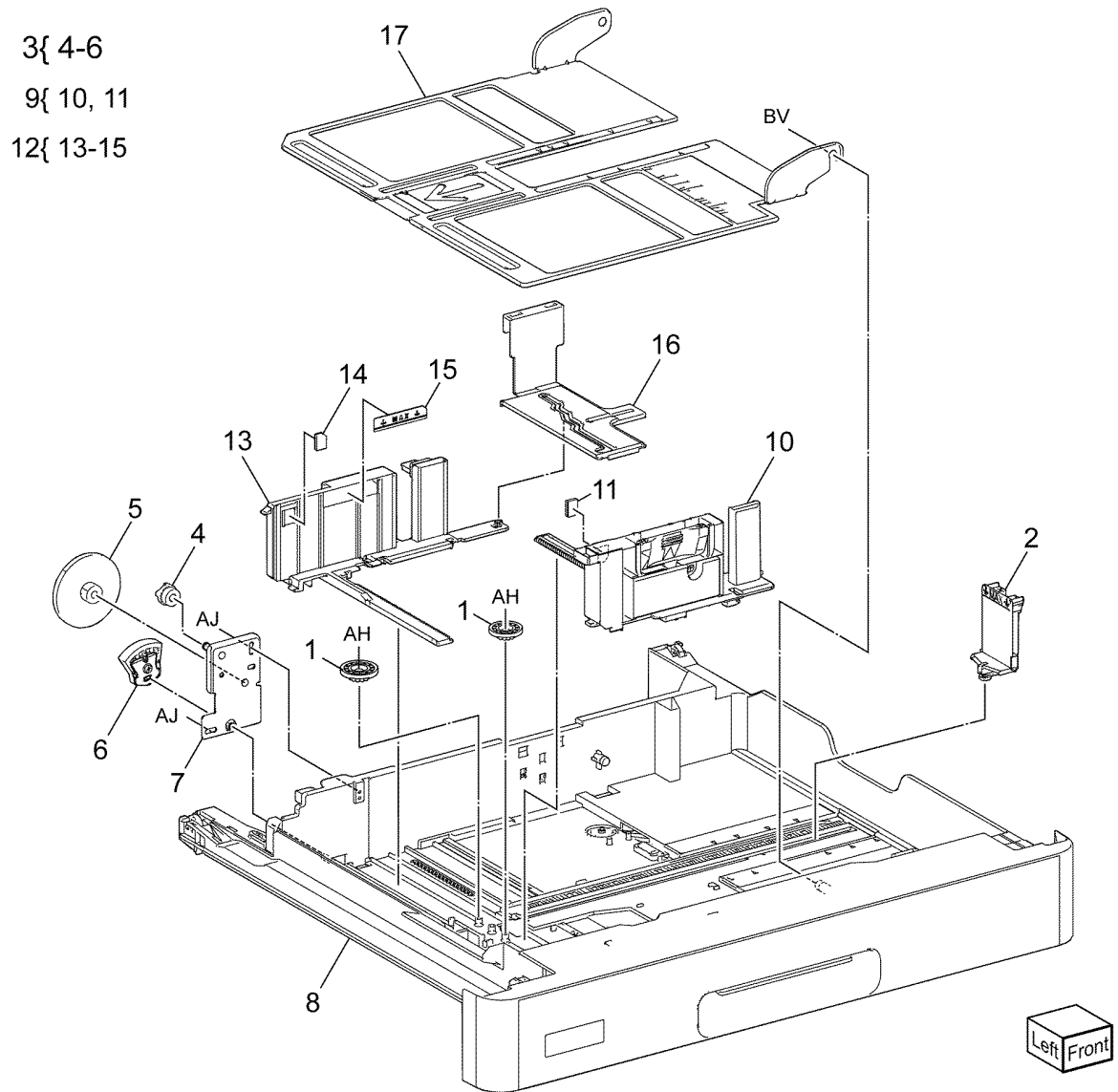


F-8-0128-A

PL 70.15 Tray 2 Assembly

Item	Part	Description
1	-	Pinion (P/O PL 70.05 Item 2)
2	-	End guide kit (Not Spared)
3	-	Tray gear kit (Not Spared)
4	-	Gear (13) (P/O PL 70.15 Item 3)
5	-	Gear (13/60) (P/O PL 70.15 Item 3)
6	-	Gear assembly (P/O PL 70.15 Item 3)
7	-	Bracket (P/O PL 70.05 Item 2)
8	-	Cassette assembly (P/O PL 70.05 Item 2)
9	-	Front side guide kit (Not Spared)
10	-	Front side guide (P/O PL 70.15 Item 9)
11	-	Pad (P/O PL 70.15 Item 9)
12	-	Rear side guide kit (Not Spared)
13	-	Rear side guide (P/O PL 70.15 Item 12)
14	-	Pad (P/O PL 70.15 Item 12)
15	-	Label (MAX) (P/O PL 70.15 Item 12)
16	-	Side actuator (P/O PL 70.05 Item 2)
17	-	Lift plate (P/O PL 70.05 Item 2)

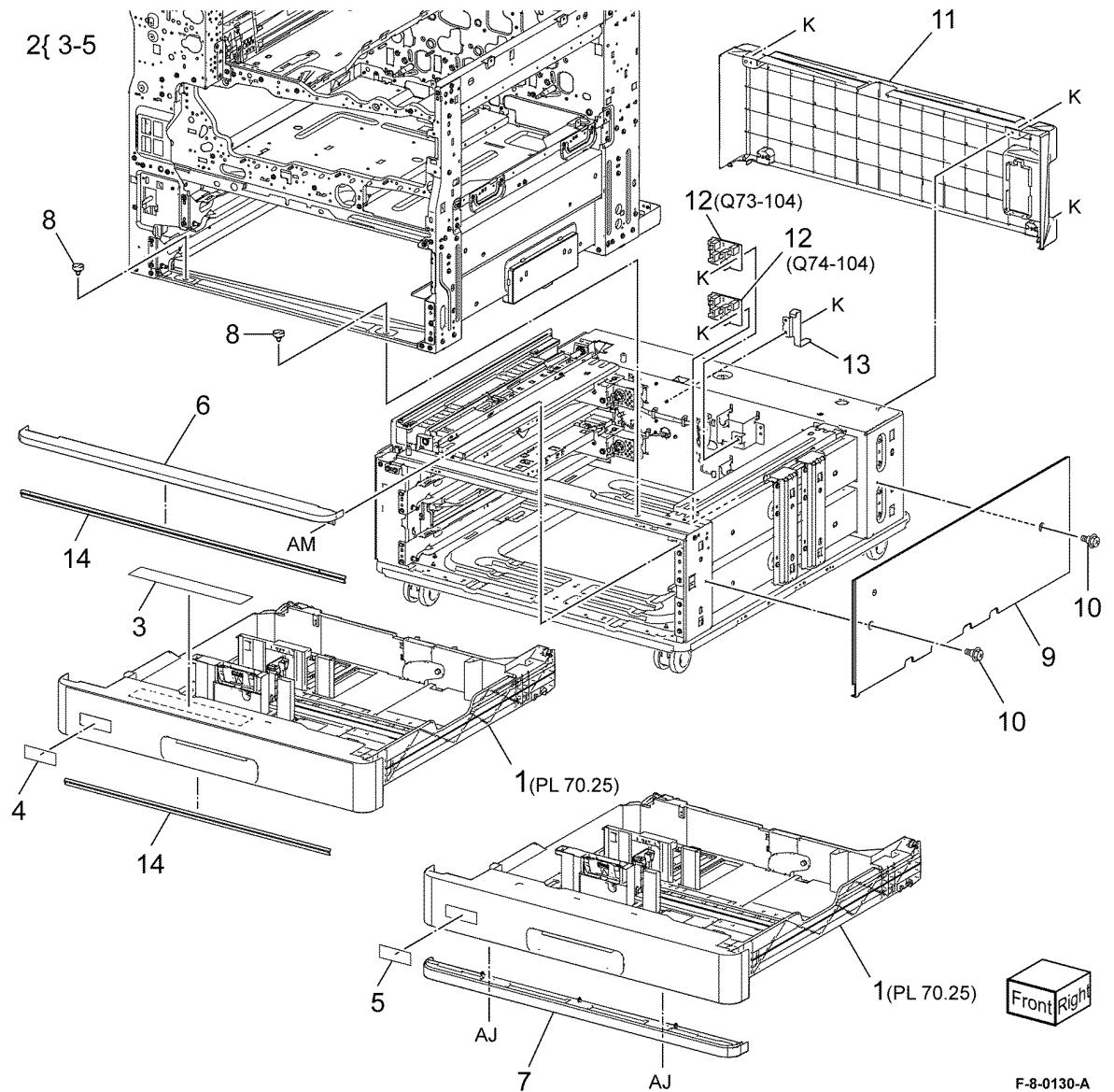
NOTE: All parts are part of PL 70.05 Item 2.



F-8-0129-A

PL 70.20 2TM Components

Item	Part	Description
1	-	Tray 3 & 4 assembly (REF:PL 70.25)
2	-	2TM tray label kit (P/O PL 31.05 Item 7)
3	-	Label (instruction) (P/O PL 31.05 Item 7)
4	-	Label (No. 3) (P/O PL 31.05 Item 7)
5	-	Label (No. 4) (P/O PL 31.05 Item 7)
6	-	Top cover (Not Spared)
7	822E41111	Foot cover
8	-	Docking screw (Not Spared)
9	822E41071	Right cover
10	-	Shoulder screw (Not Spared)
11	822E41013	Rear cover
12	110K12100	Tray 3 paper size sensor (Q73-104) / Tray 4 paper size sensor (Q74-104) (REP 70.5)
-	110K17951	Tray 3 paper size sensor (Q73-104)/ Tray 4 paper size sensor (Q74-104) (alternative) (REP 70.5)
13	-	Joint bracket (Not Spared)
14	-	Gasket (Not Spared)

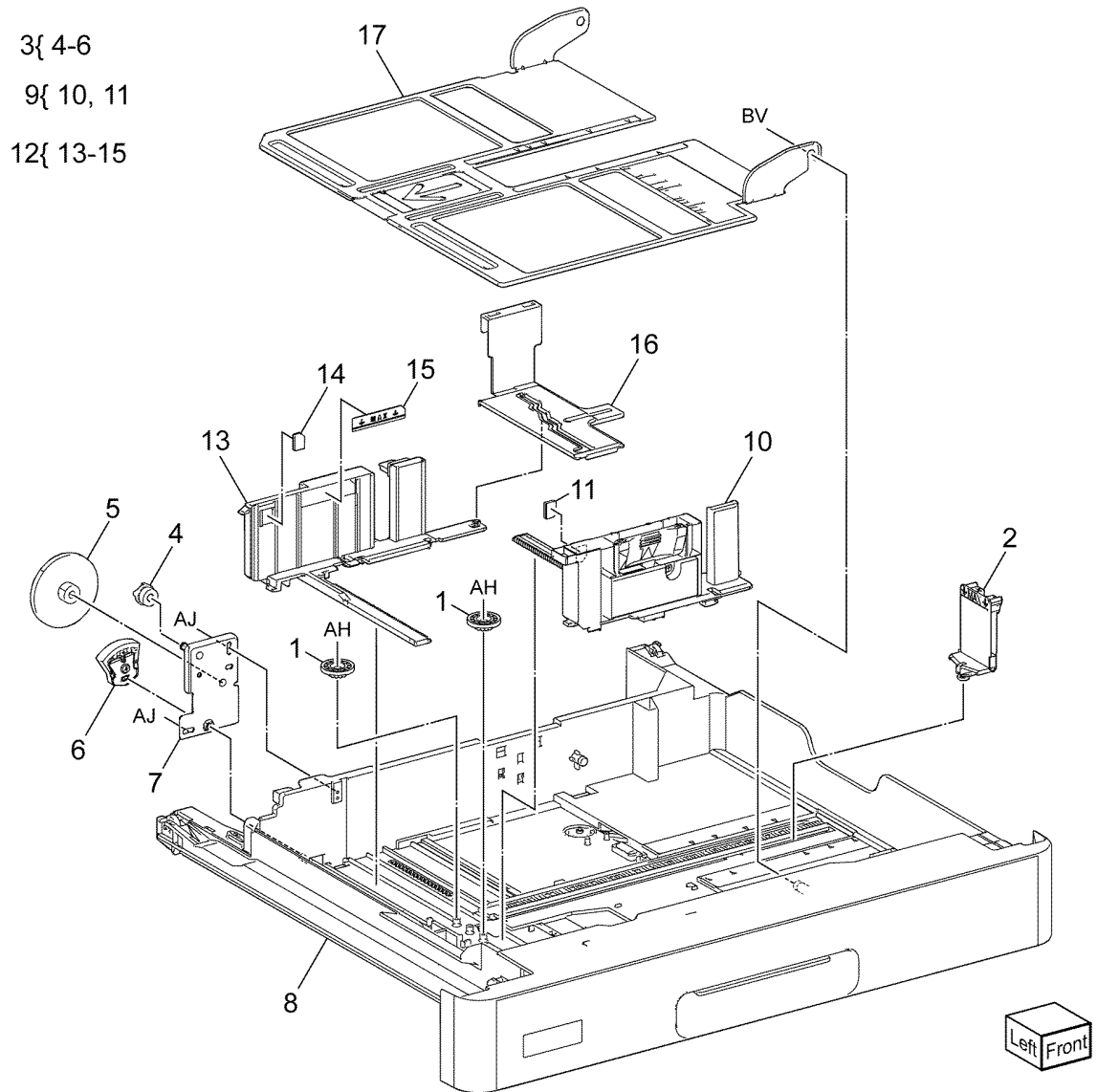


F-8-0130-A

PL 70.25 2TM Tray 3/4 Assembly

Item	Part	Description
1	-	Pinion (P/O PL 70.20 Item 1)
2	-	End guide (P/O PL 70.20 Item 1)
3	-	Tray gear kit (Not Spared)
4	-	Gear (13) (P/O PL 70.25 Item 3)
5	-	Gear (13/60) (P/O PL 70.25 Item 3)
6	-	Gear assembly (P/O PL 70.25 Item 3)
7	-	Bracket (P/O PL 70.20 Item 1)
8	-	Cassette assembly (P/O PL 70.20 Item 1)
9	-	Front side guide kit (Not Spared)
10	-	Front side guide (P/O PL 70.25 Item 9)
11	-	Pad (P/O PL 70.25 Item 9)
12	-	Rear side guide kit (Not Spared)
13	-	Rear side guide (P/O PL 70.25 Item 12)
14	-	Pad (P/O PL 70.25 Item 12)
15	-	Label (MAX) (P/O PL 70.25 Item 12)
16	-	Side actuator (P/O PL 70.20 Item 1)
17	-	Lift plate (P/O PL 70.20 Item 1)

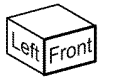
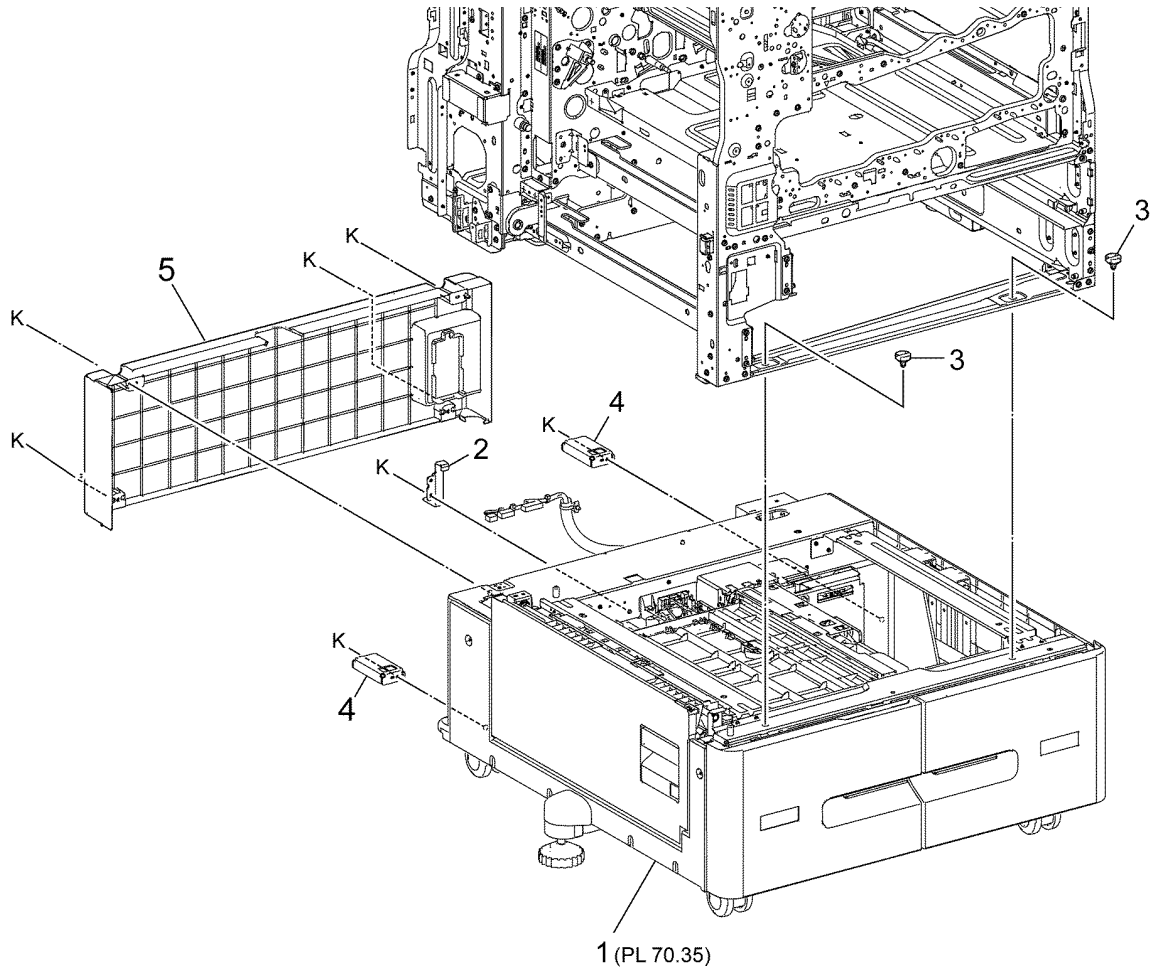
NOTE: All parts are part of PL 70.20 Item 1.



F-8-0131-A

PL 70.30 TTM Components

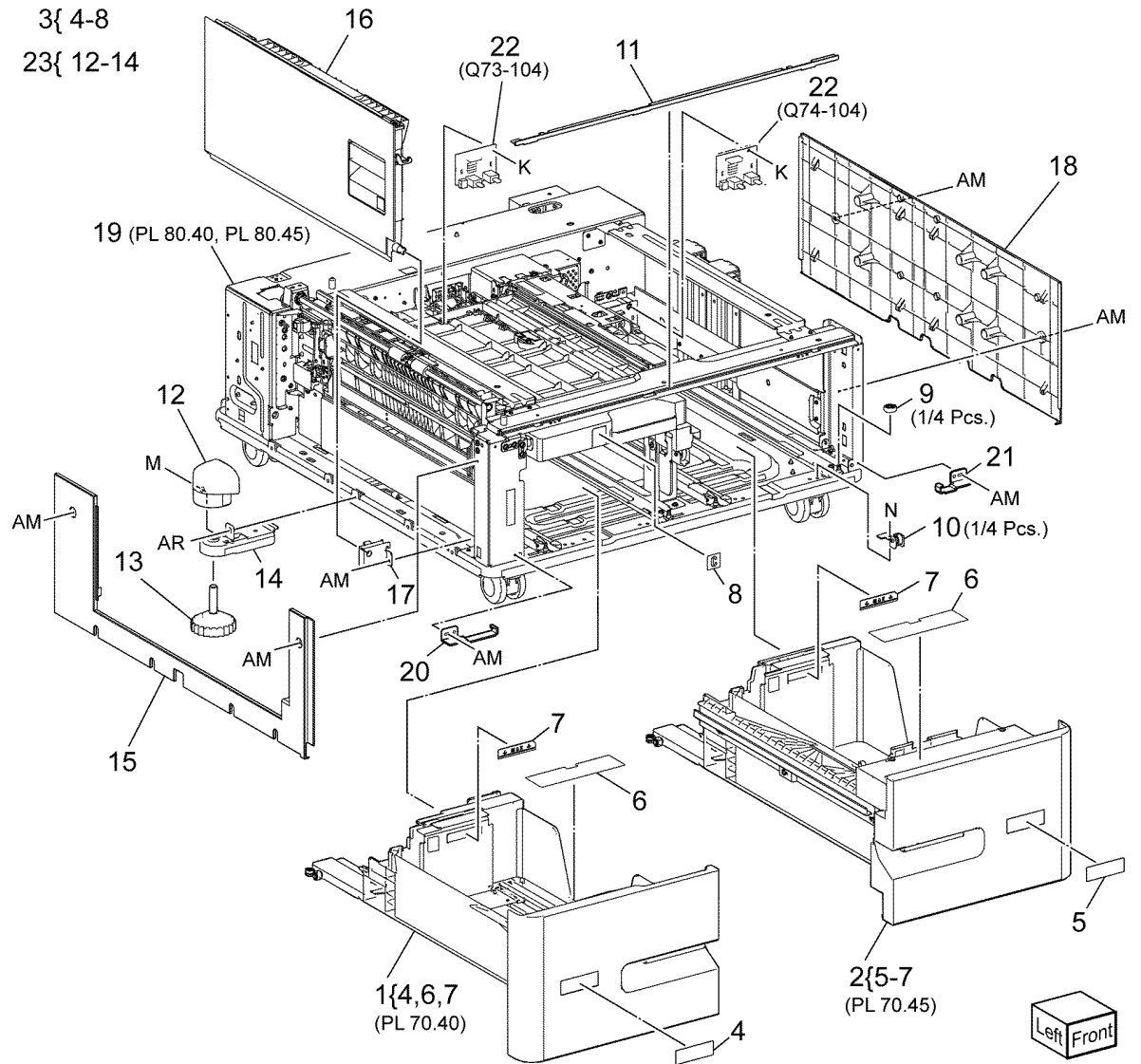
Item	Part	Description
1	—	TTM module
2	—	Joint bracket (Not Spared)
3	—	Docking screw (Not Spared)
4	—	Cover bracket (Not Spared)
5	822E41013	Rear cover



F-8-0132-A

PL 70.35 TTM Covers and Tray 3/4 Assembly

Item	Part	Description
1	607K10491	TTM Tray 3 assembly
2	607K10500	TTM Tray 4 assembly
3	-	Not used
4	-	Label (No. 3) (P/O PL 70.35 Item 1)
5	-	Label (No. 4) (P/O PL 70.35 Item 2)
6	-	Label (instruction) (P/O PL 70.35 Item 1 & PL 70.35 Item 2)
7	-	Label (MAX) (P/O PL 70.35 Item 1 & PL 70.35 Item 2)
8	-	Label (C) (Not Spared)
9	-	Upper roller (Not Spared)
10	-	Roller bracket assembly (Not Spared)
11	-	Top cover (Not Spared)
12	-	Foot cover (P/O PL 70.35 Item 23)
13	-	Adjuster foot (P/O PL 70.35 Item 23)
14	-	Foot bracket (P/O PL 70.35 Item 23)
15	822E41053	Left cover
16	948K12040	Left door assembly
17	-	Pivot bracket (Not Spared)
18	822E41071	Right cover
19	-	TTM frame assembly (Not Spared)
20	-	Left stopper (Not Spared)
21	-	Right stopper (Not Spared)
22	110K17960	Tray 3 paper size sensor (Q73-104)/ Tray 4 paper size sensor (Q74-104) (REP 70.6)
-	110K15040	Tray 3 paper size sensor (Q73-104)/ Tray 4 paper size sensor (Q74-104) (alternative) (REP 70.6)
-	110K11820	Tray 3 paper size sensor (Q73-104)/ Tray 4 paper size sensor (Q74-104) (alternative) (REP 70.6)
23	607K11480	Adjuster foot assembly



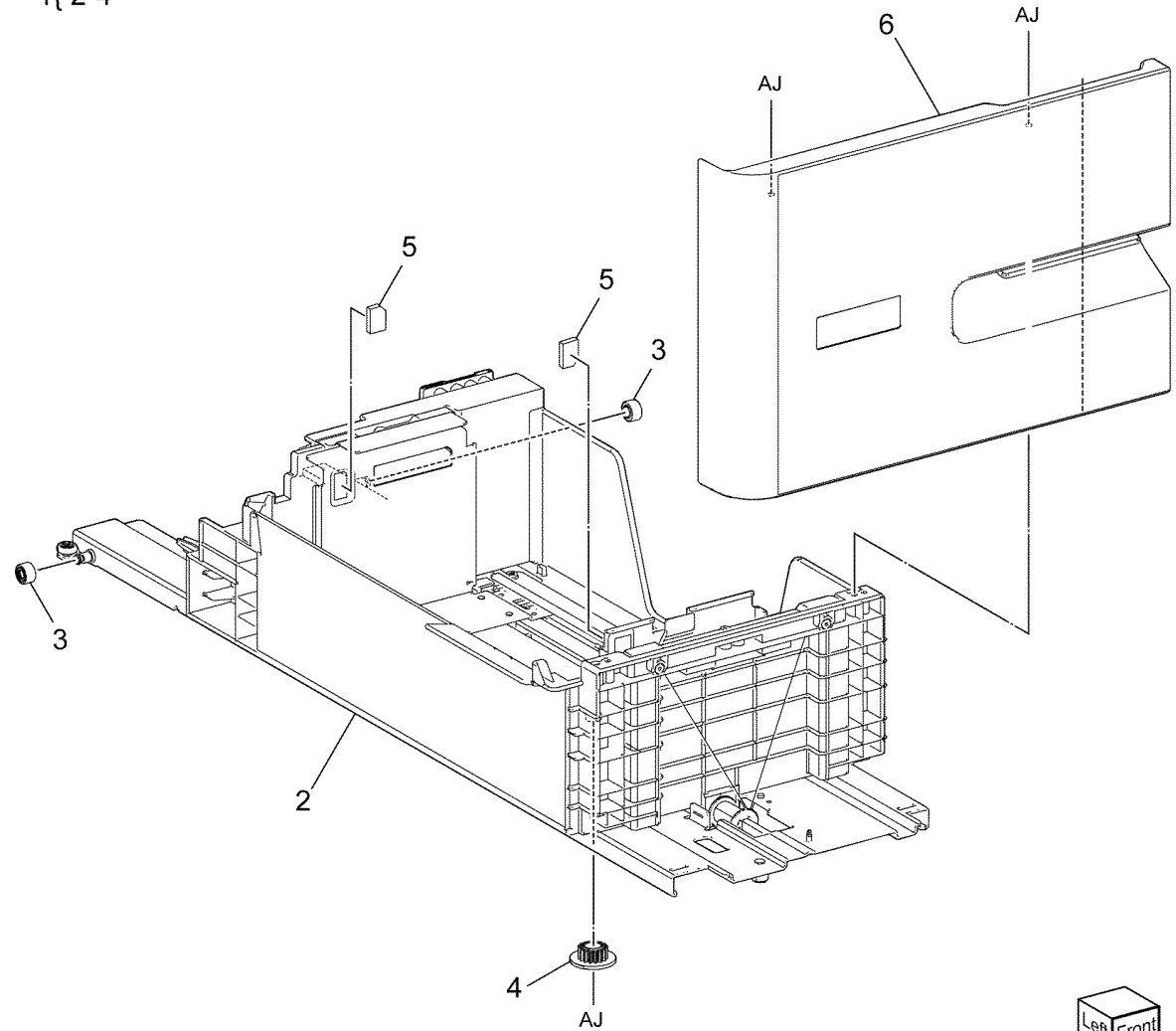
Left Front

F-8-0133-A

PL 70.40 TTM Tray 3 Assembly

Item	Part	Description
1	-	Tray 3 chassis assembly
2	-	Tray 3 chassis (P/O PL 70.40 Item 1)
3	-	Upper roller (P/O PL 70.40 Item 1)
4	-	Pinion (P/O PL 70.40 Item 1)
5	-	Pad (P/O PL 70.35 Item 1)
6	-	Tray 3 cover assembly (P/O PL 70.35 Item 1)

1{ 2-4

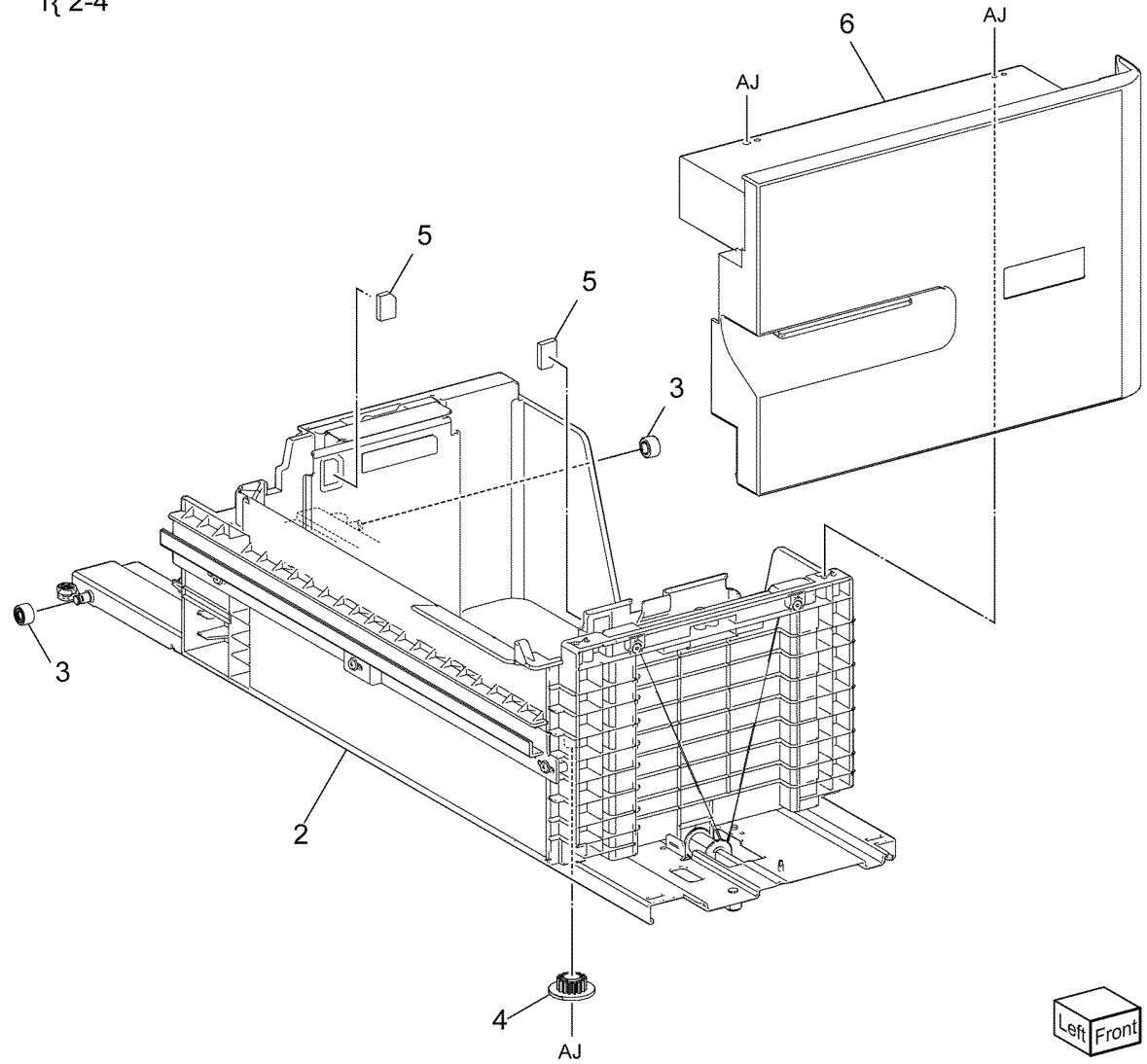


F-8-0134-A

PL 70.45 TTM Tray 4 Assembly

Item	Part	Description
1	-	Tray 4 chassis assembly (P/O PL 70.35 Item 2)
2	-	Tray 4 chassis (P/O PL 70.45 Item 1)
3	-	Upper roller (P/O PL 70.45 Item 1)
4	-	Pinion (P/O PL 70.45 Item 1)
5	-	Pad (P/O PL 70.35 Item 2)
6	-	Tray 4 cover assembly (P/O PL 70.35 Item 2)

1{ 2-4



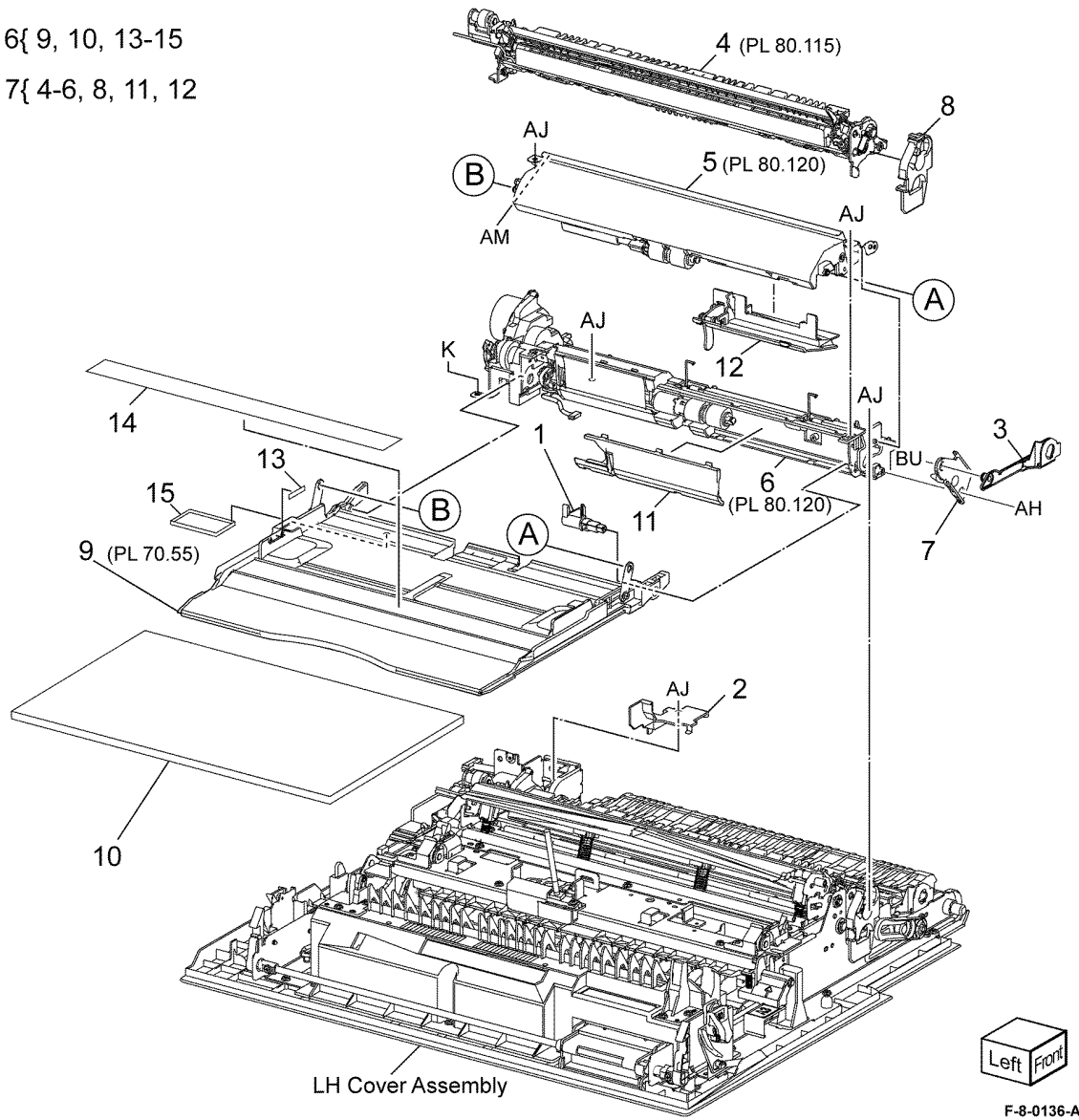
F-8-0135-A

PL 70.50 Bypass Tray Components

Item	Part	Description
1	029E54380	Pivot (REP 70.2)
2	-	Harness guide (Not Spared)
3	-	Stopper link (Not Spared)
4	054K55424	Takeaway assembly
5	-	Upper feedhead assembly (P/O PL 70.50 Item 17)
6	-	Lower feedhead assembly (P/O PL 70.50 Item 17)
7	-	Stopper plate (Not Spared)
8	-	Knob (P/O PL 70.50 Item 17)
9	-	Tray assembly (P/O PL 70.50 Item 16)
10	-	Extension tray (P/O PL 70.50 Item 16)
11	-	Chute front (P/O PL 70.50 Item 17)
12	-	Top chute assembly (P/O PL 70.50 Item 17)
13	-	Label (MAX) (P/O PL 70.50 Item 16)
14	-	Label (instruction) (P/O PL 70.50 Item 16)
15	-	Harness cover (P/O PL 70.50 Item 16)
16	607K10631	Bypass tray kit
17	607K10642	Bypass feeder kit

16{ 9, 10, 13-15

17{ 4-6, 8, 11, 12



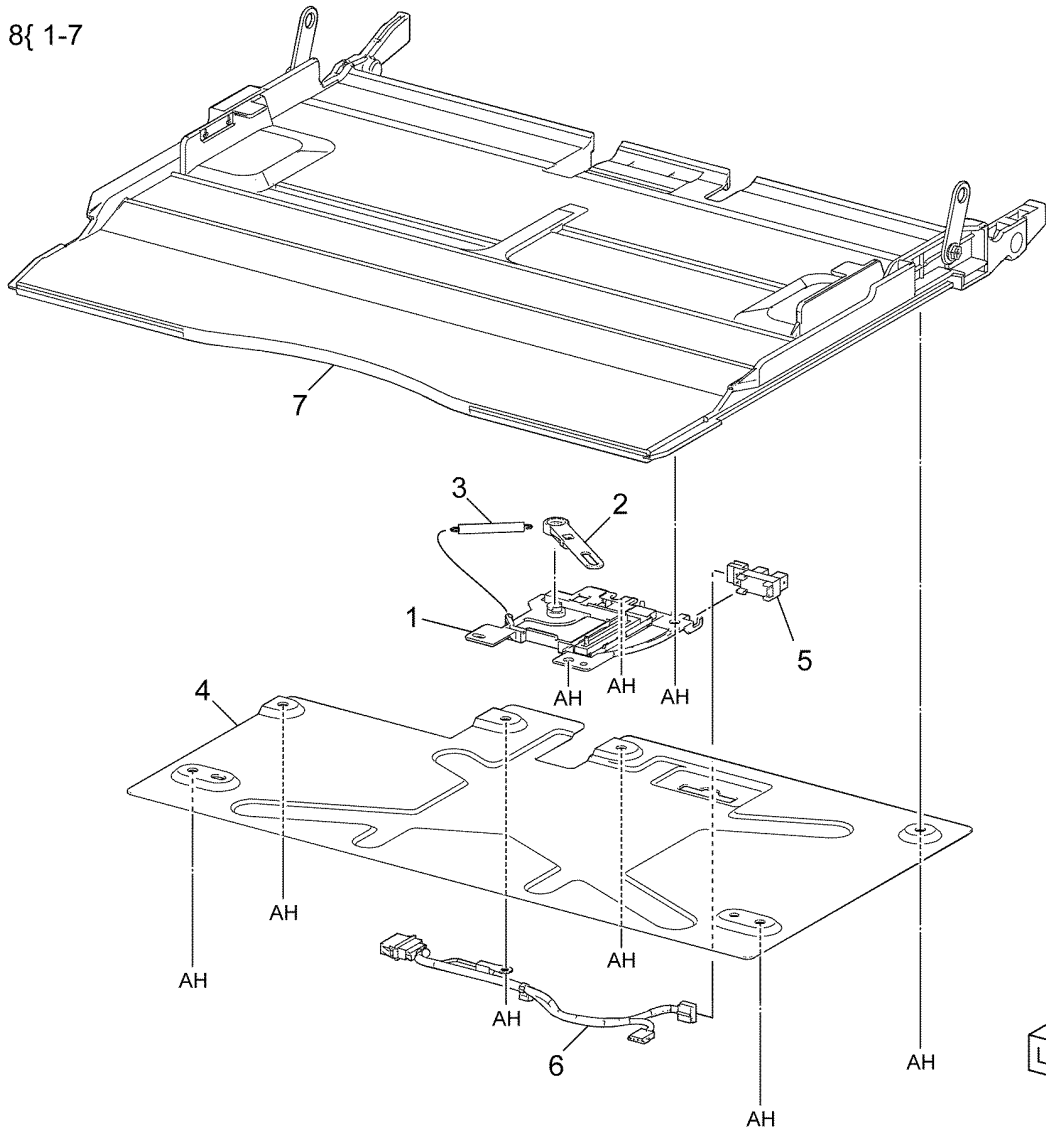
Left Front

F-8-0136-A

PL 70.55 Bypass Tray Assembly

Item	Part	Description
1	-	Paper size sensor assembly (P/O PL 70.55 Item 8) (REP 70.4)
2	-	Link (P/O PL 70.55 Item 8)
3	-	Spring (P/O PL 70.55 Item 8)
4	-	Tray plate (P/O PL 70.55 Item 8)
5	-	No paper sensor (Q75-101) (P/O PL 70.55 Item 8)
6	-	No paper sensor harness (P/O PL 70.55 Item 8)
7	-	Bypass tray (P/O PL 70.55 Item 8)
8	-	Bypass tray assembly (P/O PL 70.50 Item 16) (REP 70.3)

8{ 1-7

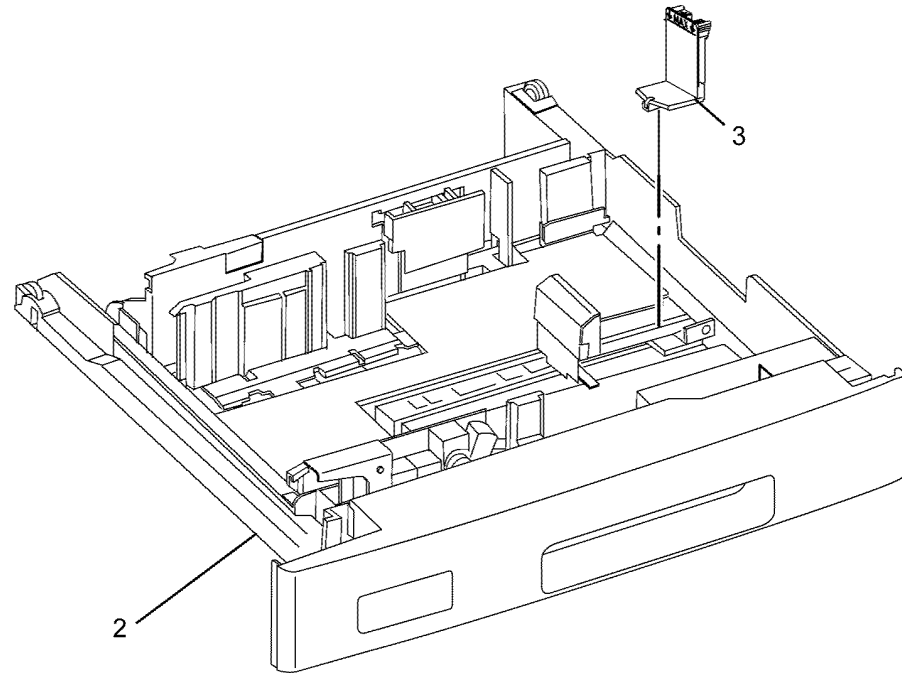


F-8-0139-A

PL 70.70 Envelope Tray

Item	Part	Description
1	050K76591	Envelope tray assembly
2	-	Envelope tray (P/O PL 70.70 Item 1)
3	-	End guide (P/O PL 70.70 Item 1)

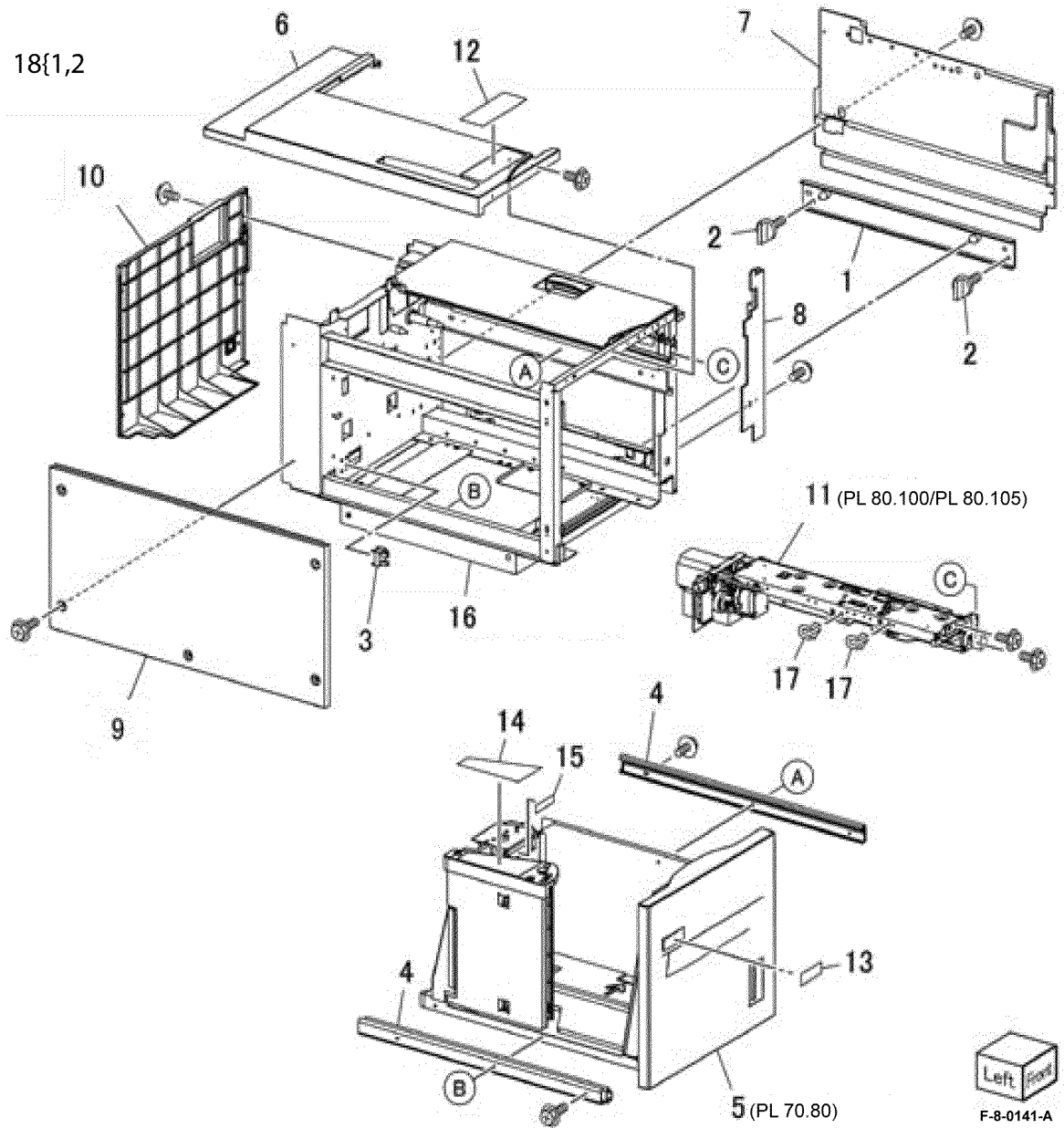
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F-8-0140-A

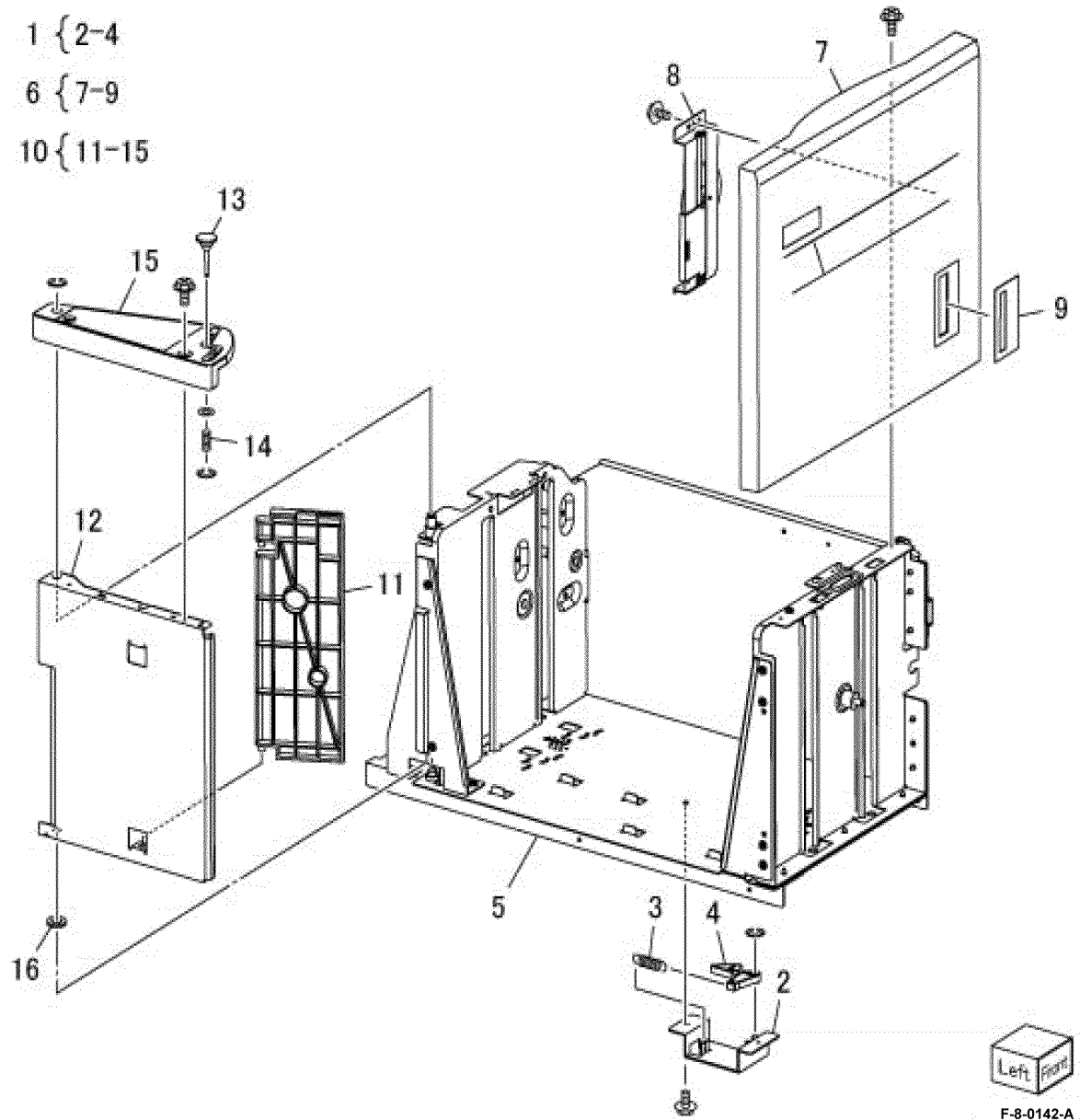
PL 70.75 HCF Unit

Item	Part	Description
1	–	Joint plate (P/O PL 70.75 Item 18)
2	003K91881	Knob
3	130K55590	Tray set sensor (Q78-204)(REP 70.9)
4	801K15701	Tray rail
5	050K51976	HCF tray (REP 70.7, REP 70.8)
6	–	Left top cover (Not Spared)
7	–	Right cover (Not Spared)
8	–	Front right cover (Not Spared)
9	–	Left cover (Not Spared)
10	–	Rear cover (Not Spared)
11	–	HCF feed head (REF: PL 80.100 & PL 80.105) (REP 70.23)
12	–	Label (Top) (Not Spared)
13	–	Label (Tray number) (Not Spared)
14	–	Label (End) (Not Spared)
15	–	Label (Size) (Not Spared)
16	–	Frame assembly (Not Spared)
17	–	Plate assembly (Not Spared)
18	604K23830	HCF docking plate



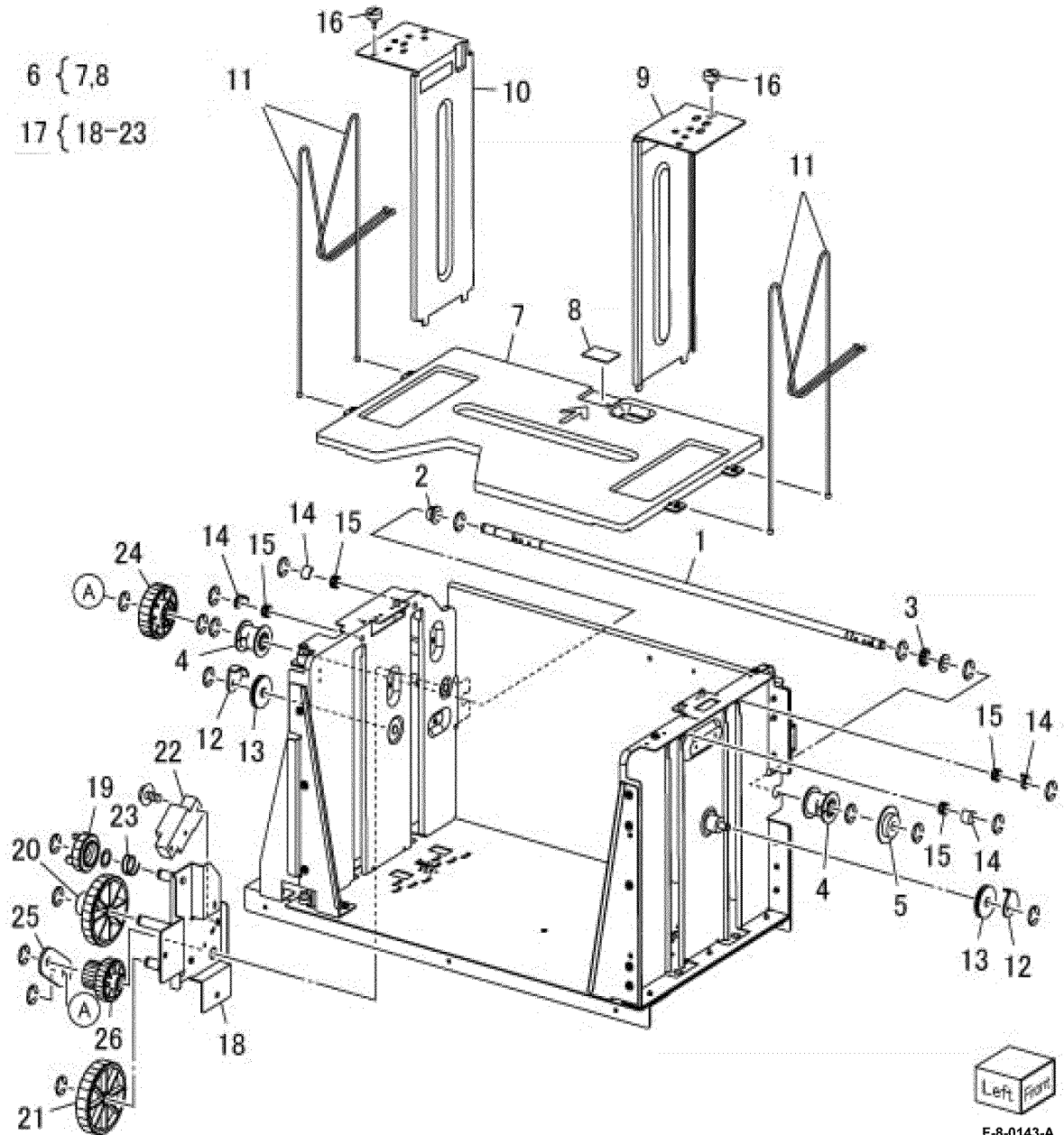
PL 70.80 HCF Tray 6 (1 of 2)

Item	Part	Description
1	003K13592	Tray latch assembly (REP 70.10)
2	-	Bracket (P/O PL 70.80 Item 1)
3	-	Spring (P/O PL 70.80 Item 1)
4	-	Latch lever (P/O PL 70.80 Item 1)
5	-	Tray
6	-	Front cover assembly
7	-	Front cover (P/O PL 70.80 Item 6)
8	-	Gear bracket (P/O PL 70.80 Item 6)
9	-	Label (Gauge) (P/O PL 70.80 Item 6)
10	-	Frame
11	-	Plate (P/O PL 70.80 Item 10)
12	-	Bracket (P/O PL 70.80 Item 10)
13	-	Pin (P/O PL 70.80 Item 10)
14	-	Spring (P/O PL 70.80 Item 10)
15	-	Top plate (P/O PL 70.80 Item 10)
16	-	Wave washer (Not Spared)



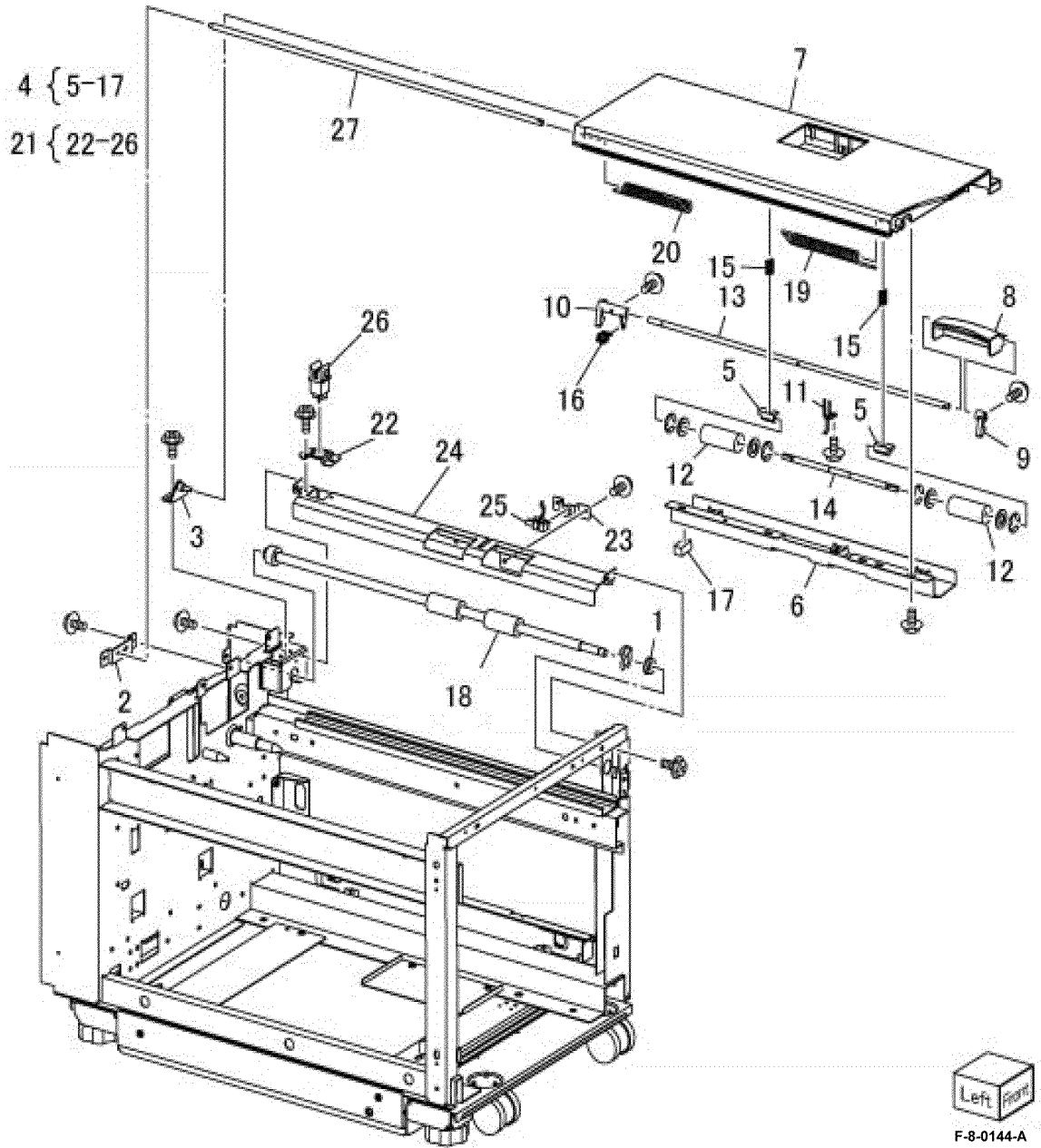
PL 70.85 HCF Tray 6 (2 of 2)

Item	Part	Description
1	-	Lift shaft (P/O PL 70.75 Item 5)
2	-	Bearing (P/O PL 70.75 Item 5)
3	-	Bearing (P/O PL 70.75 Item 5)
4	020E37620	Pulley
5	-	Gear (P/O PL 70.75 Item 5)
6	-	Bottom plate assembly (P/O PL 70.75 Item 5)
7	-	Bottom plate (P/O PL 70.85 Item 6)
8	019E58620	Pad
9	-	Front side guide (P/O PL 70.75 Item 5)
10	-	Rear side guide (P/O PL 70.75 Item 5)
11	604K19981	Cable and pulley kit (REP 70.13)
12	032E22410	Long wire guide
13	-	Pulley (P/O PL 70.75 Item 5)
14	-	Short wire guide (P/O PL 70.75 Item 5)
15	-	Pulley (P/O PL 70.75 Item 5)
16	-	Screw (P/O PL 70.75 Item 5)
17	015K65532	Gear bracket assembly (REP 70.12)
18	-	Gear bracket (P/O PL 70.85 Item 17)
19	-	Contact gear (P/O PL 70.85 Item 17)
20	-	Gear (P/O PL 70.85 Item 17)
21	-	Gear (P/O PL 70.85 Item 17)
22	-	Brake (P/O PL 70.85 Item 17)
23	-	Spring (P/O PL 70.85 Item 17)
24	807E04500	Lift gear (REP 70.11)
25	-	Plate (P/O PL 70.75 Item 5)
26	-	Gear (P/O PL 70.75 Item 5)



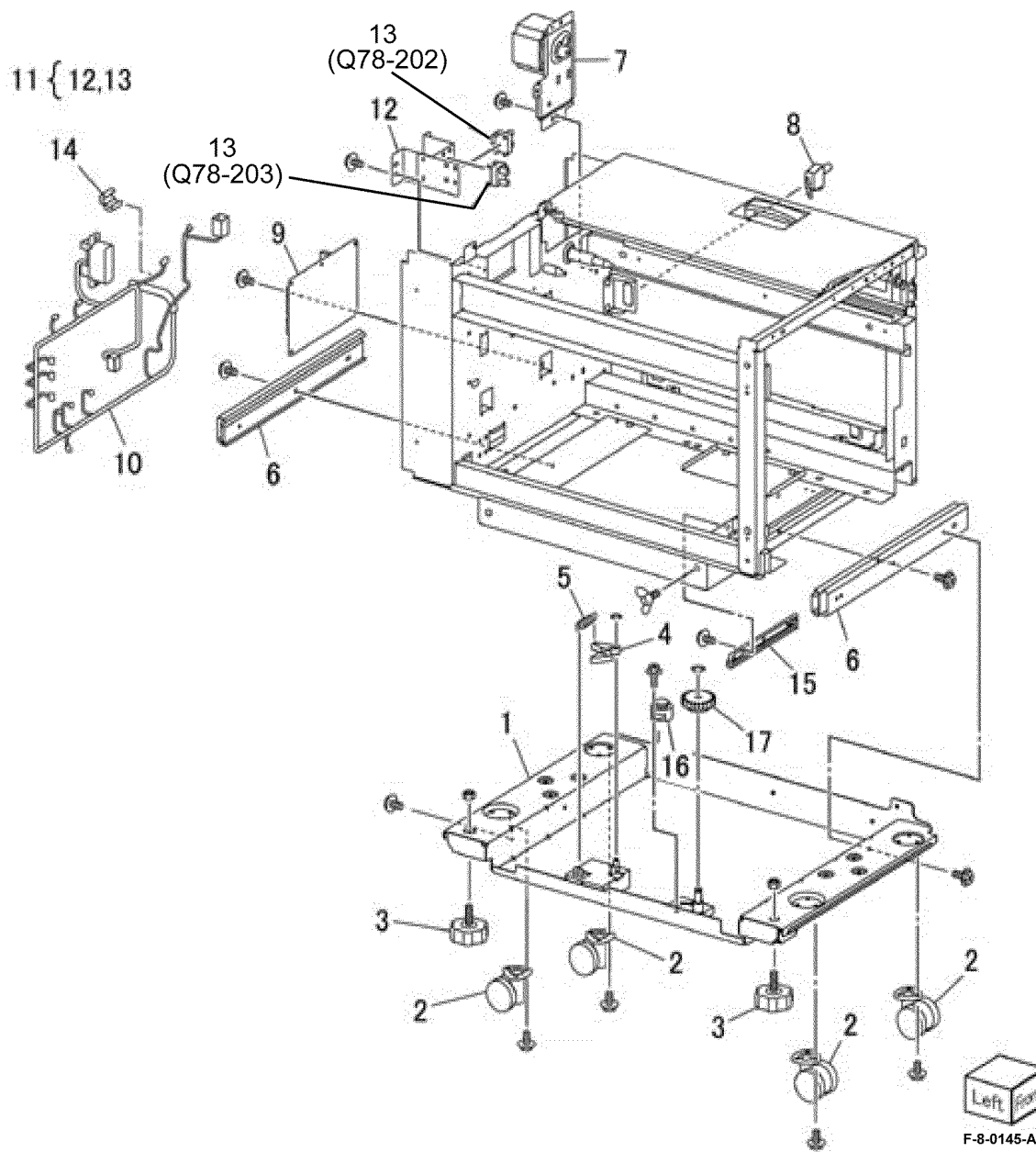
PL 70.90 HCF Top Cover Unit

Item	Part	Description
1	013E17100	Bearing
2	-	Bracket (Not Spared)
3	-	Pivot bracket (Not Spared)
4	-	Transport cover assembly
5	-	Bearing (P/O PL 70.90 Item 4)
6	-	Upper chute (P/O PL 70.90 Item 4)
7	-	Top cover (P/O PL 70.90 Item 4)
8	-	Knob (P/O PL 70.90 Item 4)
9	-	Latch (P/O PL 70.90 Item 4)
10	-	Latch (P/O PL 70.90 Item 4)
11	-	Spring (P/O PL 70.90 Item 4)
12	059E01430	Pinch roller
13	-	Shaft (P/O PL 70.90 Item 4)
14	-	Shaft (P/O PL 70.90 Item 4)
15	-	Spring (P/O PL 70.90 Item 4)
16	-	Spring (P/O PL 70.90 Item 4)
17	-	Gasket (P/O PL 70.90 Item 4)
18	059K36260	Takeaway roll (REP 70.15)
19	-	Spring (Left) (Not Spared)
20	-	Spring (Right) (Not Spared)
21	-	Lower chute assembly (Not Spared)
22	-	Bracket (P/O PL 70.90 Item 21)
23	-	Bracket (P/O PL 70.90 Item 21)
24	-	Lower chute (P/O PL 70.90 Item 21)
25	130K88150	Feed out sensor (Q78-101) (REP 70.16)
26	110E94770	Transport interlock switch (S78-300) (REP 70.17)
27	-	Pivot shaft (Not Spared)



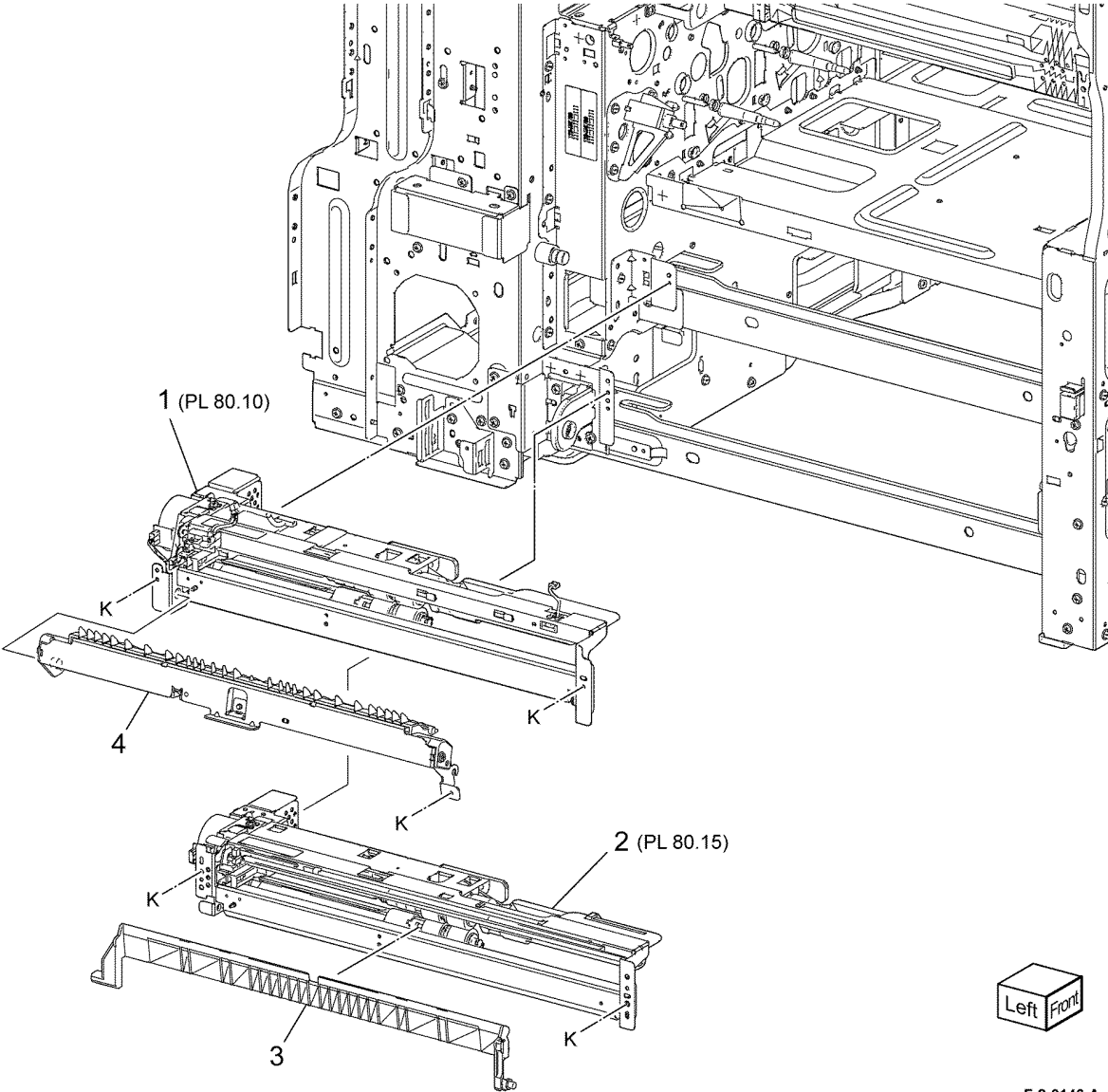
PL 70.95 HCF Electrical and Rail

Item	Part	Description
1	-	Plate (Not Spared)
2	017E92820	Rack caster
3	017E97191	Foot
4	-	Latch lever (Not Spared)
5	-	Spring (Not Spared)
6	801K15690	Rail
7	127K47152	Takeaway motor (MOT78-007) (REP 70.18)
8	110E10381	Slide out switch (S78-301)(REP 70.19)
9	960K88140	HCF PWB (REP 70.20)
10	-	Wire harness (Not Spared)
11	130K55590	HCF Size Sensor Assembly (REP 70.21)
12	-	Bracket (P/O PL 70.95 Item 11)
13	-	HCF paper sensor (Letter) (Q78- 202) / HCF paper sensor (A4) (Q78-203) (P/O PL 70.95 Item 11)
14	-	Core (Not Spared)
15	-	Gear rack (Not Spared)
16	004K03000	Damper (REP 70.22)
17	807E32730	Pinion (REP 70.22)



PL 80.05 Tray 1 & 2 Feedhead Assembly

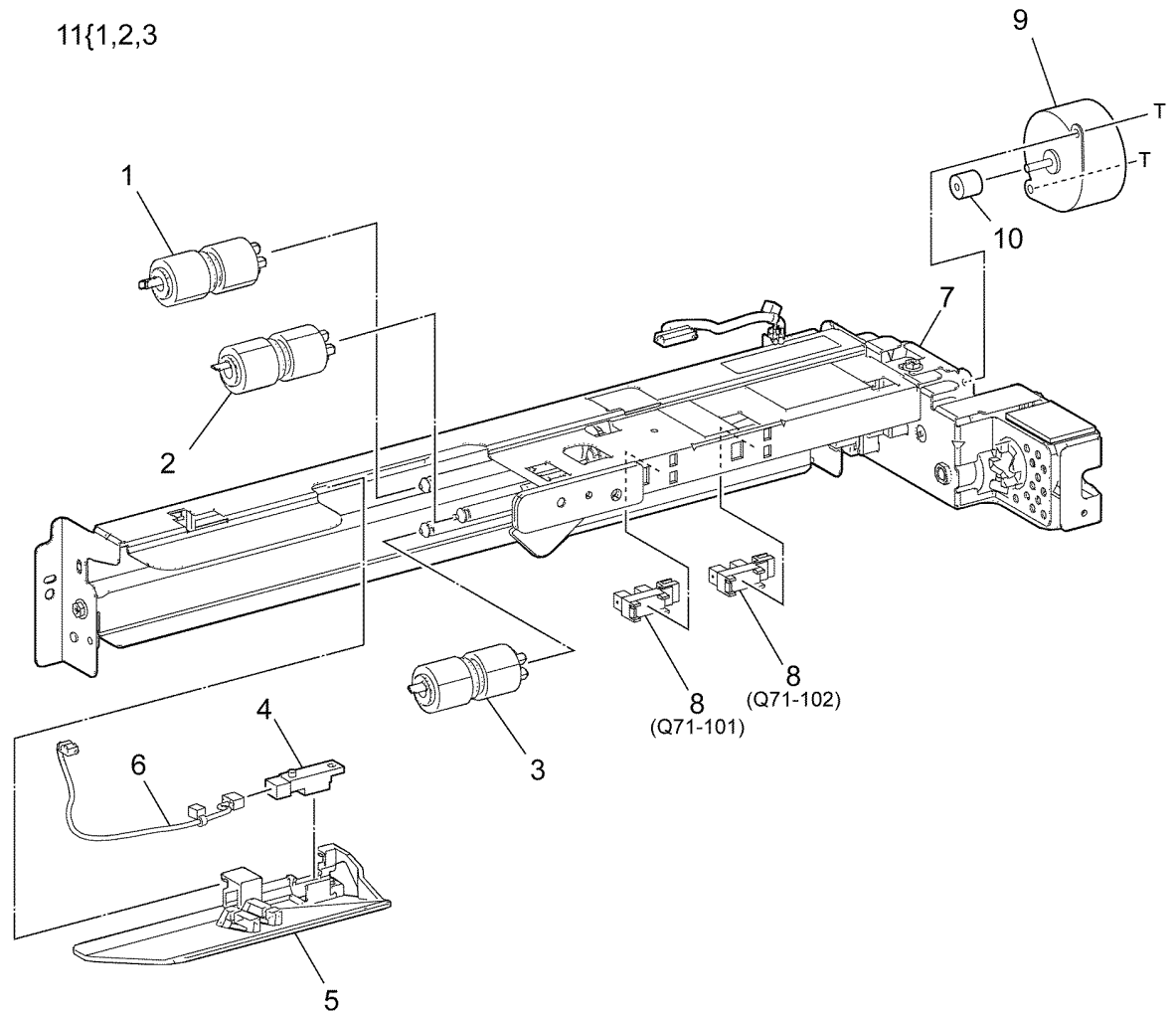
Item	Part	Description
1	859K14361	Tray 1 feedhead assembly (REP 80.1)
2	859K14380	Tray 2 feedhead assembly (REP 80.2)
3	054E36442	Feed out chute
4	054K55444	Feedhead chute assembly



F-8-0146-A

PL 80.10 Tray 1 Feedhead Assembly

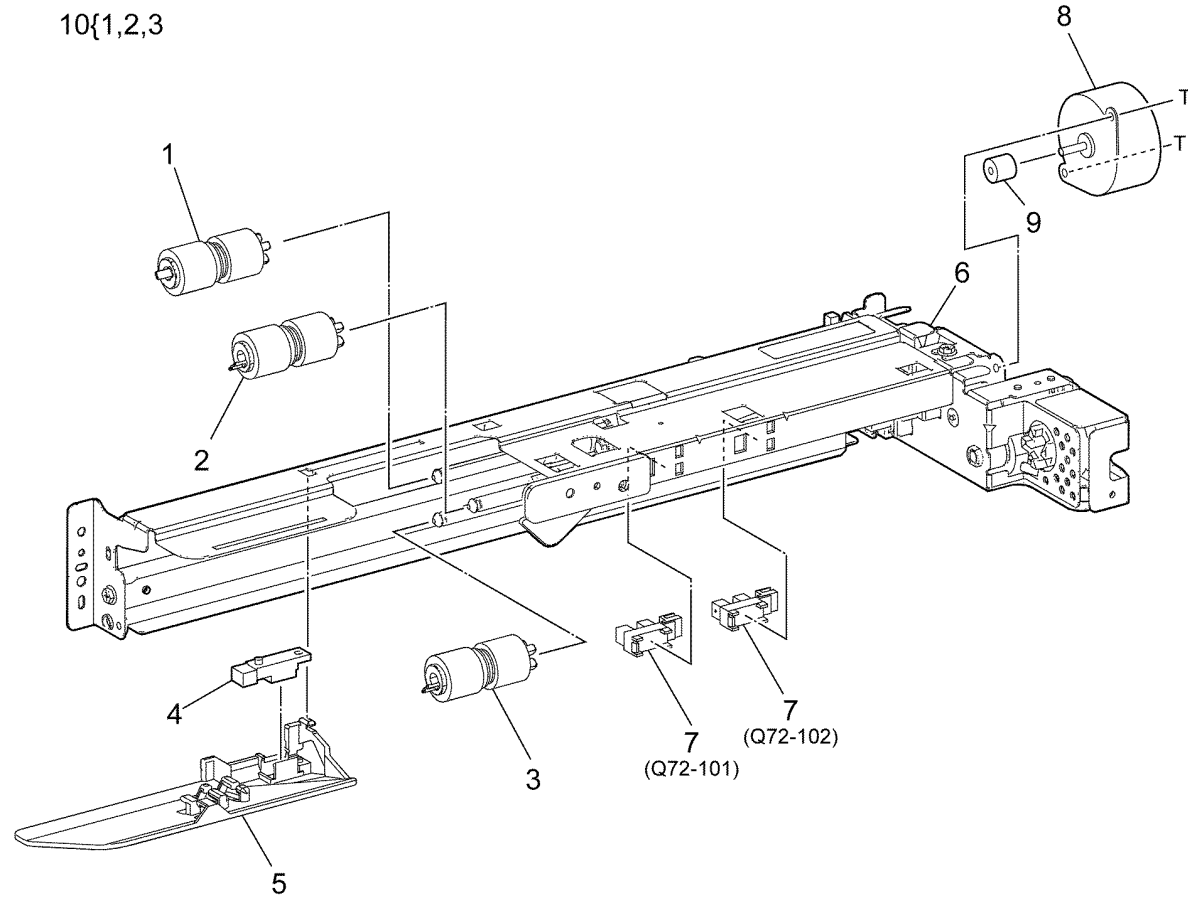
Item	Part	Description
1	-	Feed roll (P/O PL 80.10 Item 11) (REP 80.3)
2	-	Nudger roll (P/O PL 80.10 Item 11) (REP 80.3)
3	-	Retard roll (P/O PL 80.10 Item 11) (REP 80.3)
4	930W00211	Tray 1 pre-feed sensor (Q71-105)
5	-	Chute (P/O PL 80.10 Item 7)
6	-	Wire harness (P/O PL 80.10 Item 7)
7	-	Feedhead assembly (P/O PL 80.05 Item 1)
8	-	Tray 1 no paper sensor (Q71-101)/ Tray 1 level sensor (Q71-102) (P/ O PL 80.05 Item 1)
9	-	Tray 1 feed /lift motor (MOT71-001) (P/O PL 80.05 Item 1)
10	-	Gear (P/O PL 80.10 Item 9)
11	109R00790	Tray 1-4 feed rolls



F-8-0147-A

PL 80.15 Tray 2 Feedhead Assembly

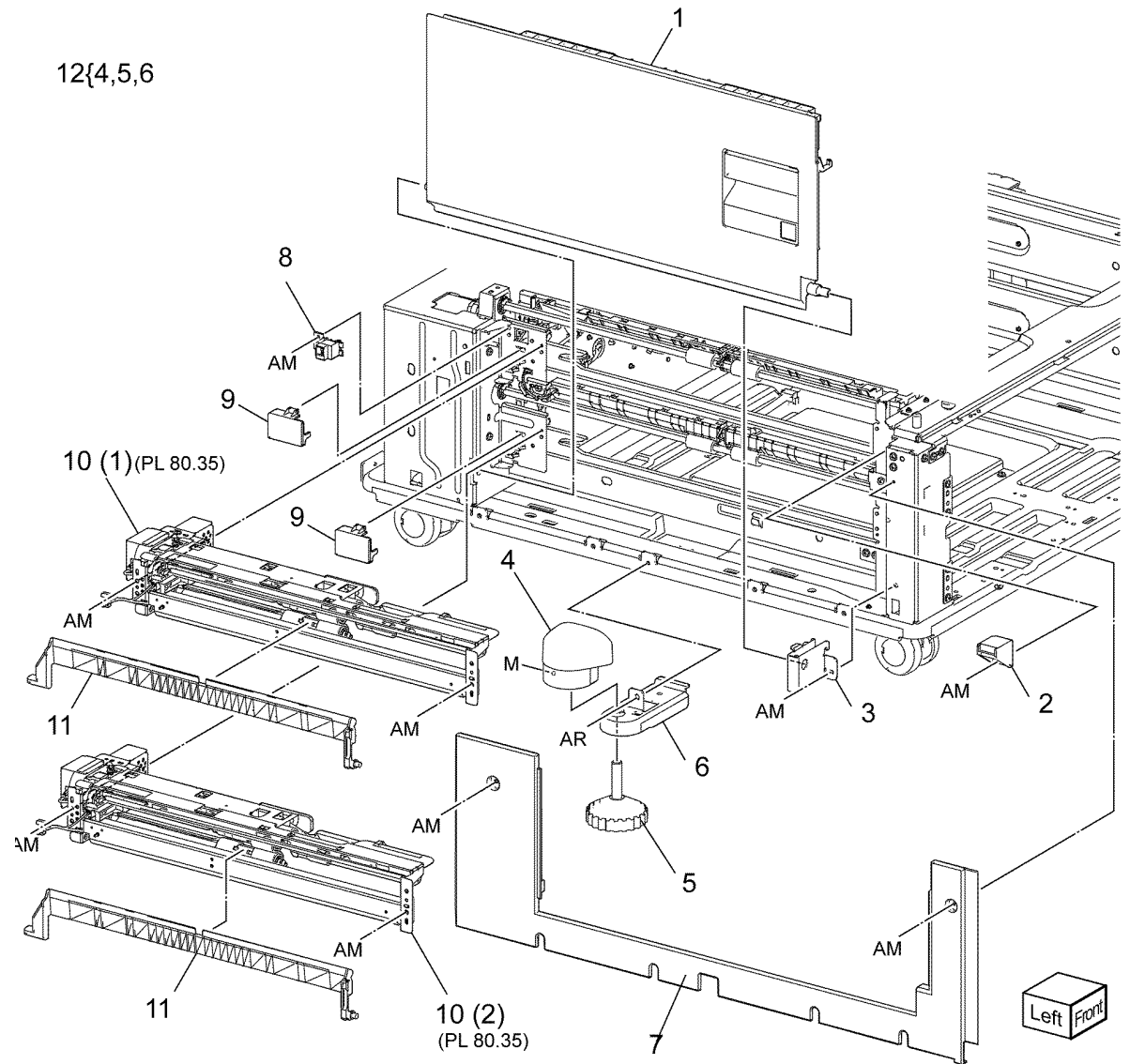
Item	Part	Description
1	-	Feed roll (P/O PL 80.15 Item 10) (REP 80.3)
2	-	Nudger roll (P/O PL 80.15 Item 10) (REP 80.3)
3	-	Retard roll (P/O PL 80.15 Item 10) (REP 80.3)
4	930W00211	Tray 2 pre-feed sensor (Q72-105)
5	-	Chute (P/O PL 80.15 Item 6)
6	-	Feedhead assembly (P/O PL 80.05 Item 2)
7	-	Tray 2 no paper sensor (Q72-101) / Tray 2 level sensor (Q72-102) (P/O PL 80.05 Item 2)
8	-	Tray 2 feed/lift motor (MOT72-001) (P/O PL 80.05 Item 2)
9	-	Gear (P/O PL 80.15 Item 8)
10	109R00790	Tray 1-4 feed rolls



F-8-0148-A

PL 80.20 2TM Left Cover Feedhead Assembly

Item	Part	Description
1	948K12050	Left door assembly
2	-	Latch holder (Not Spared)
3	-	Pivot bracket (Not Spared)
4	-	Foot cover (P/O PL 80.20 Item 12)
5	-	Adjuster foot (P/O PL 80.20 Item 12)
6	-	Foot bracket (P/O PL 80.20 Item 12)
7	822E41053	Left cover
8	948K01810	2TM left door interlock switch (S77-306)
9	822E27982	Connector cover
10	859K04741	2TM feedhead 1 assembly (REP 80.4)/ 2TM feedhead 2 assembly (REP 80.5) (REF: PL 80.35)
11	054E36442	Feed out chute
12	607K11480	Adjuster foot assembly

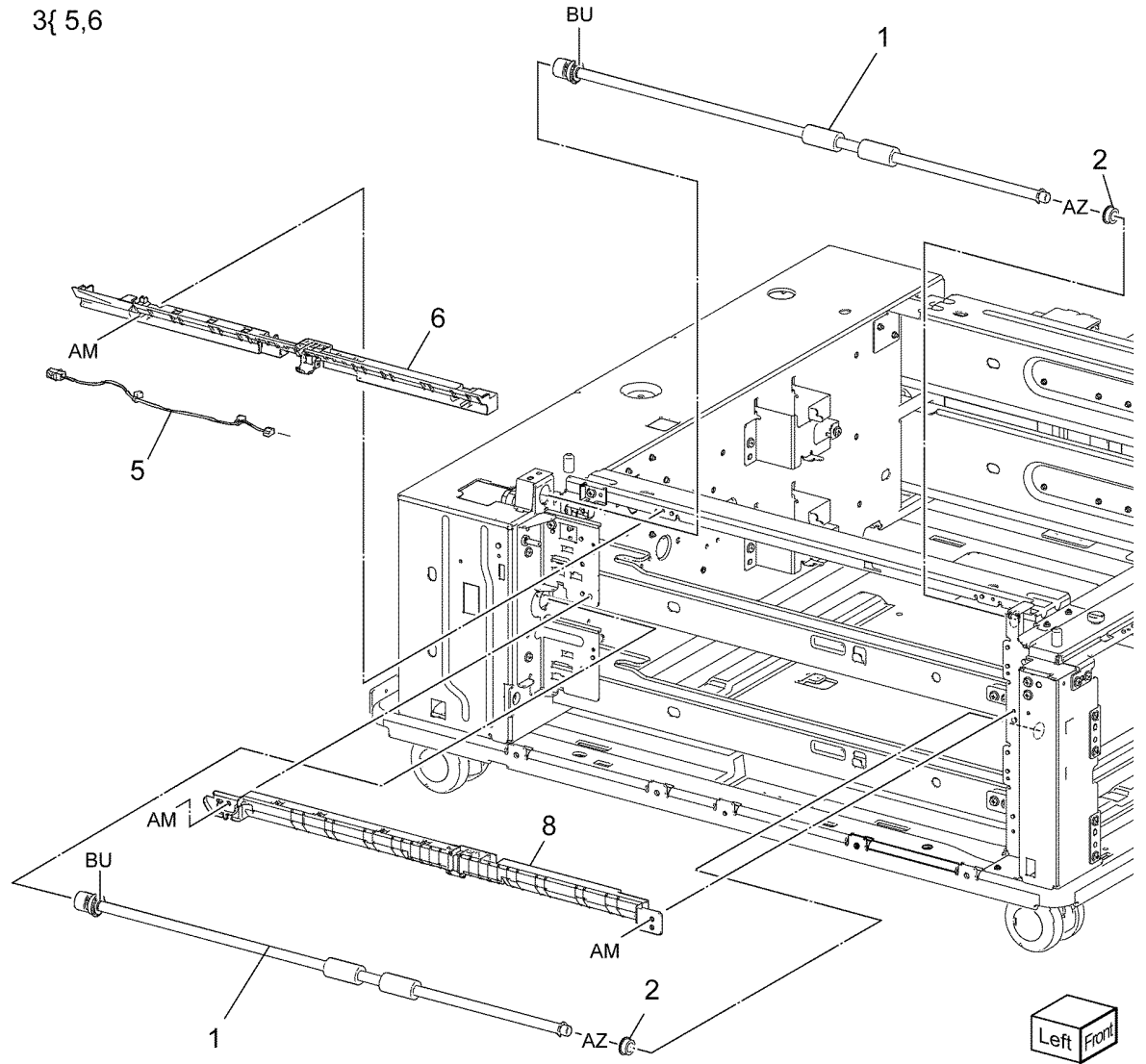


F-8-0149-A

PL 80.25 2TM Takeaway Assembly

Item	Part	Description
1	859K07790	Takeaway roll assembly (upper) (REP 80.6)/ Takeaway roll assembly (lower) (REP 80.8)
2	413W88650	Bearing
3	054K55191	Tray 3 chute assembly (REP 80.7)
4	-	Not used
5	-	Tray 3 feed out sensor harness (P/ O PL 80.25 Item 3)
6	-	Tray 3 chute (P/O PL 80.25 Item 3)
7	-	Not used
8	-	Tray 4 chute assembly (Not Spared)

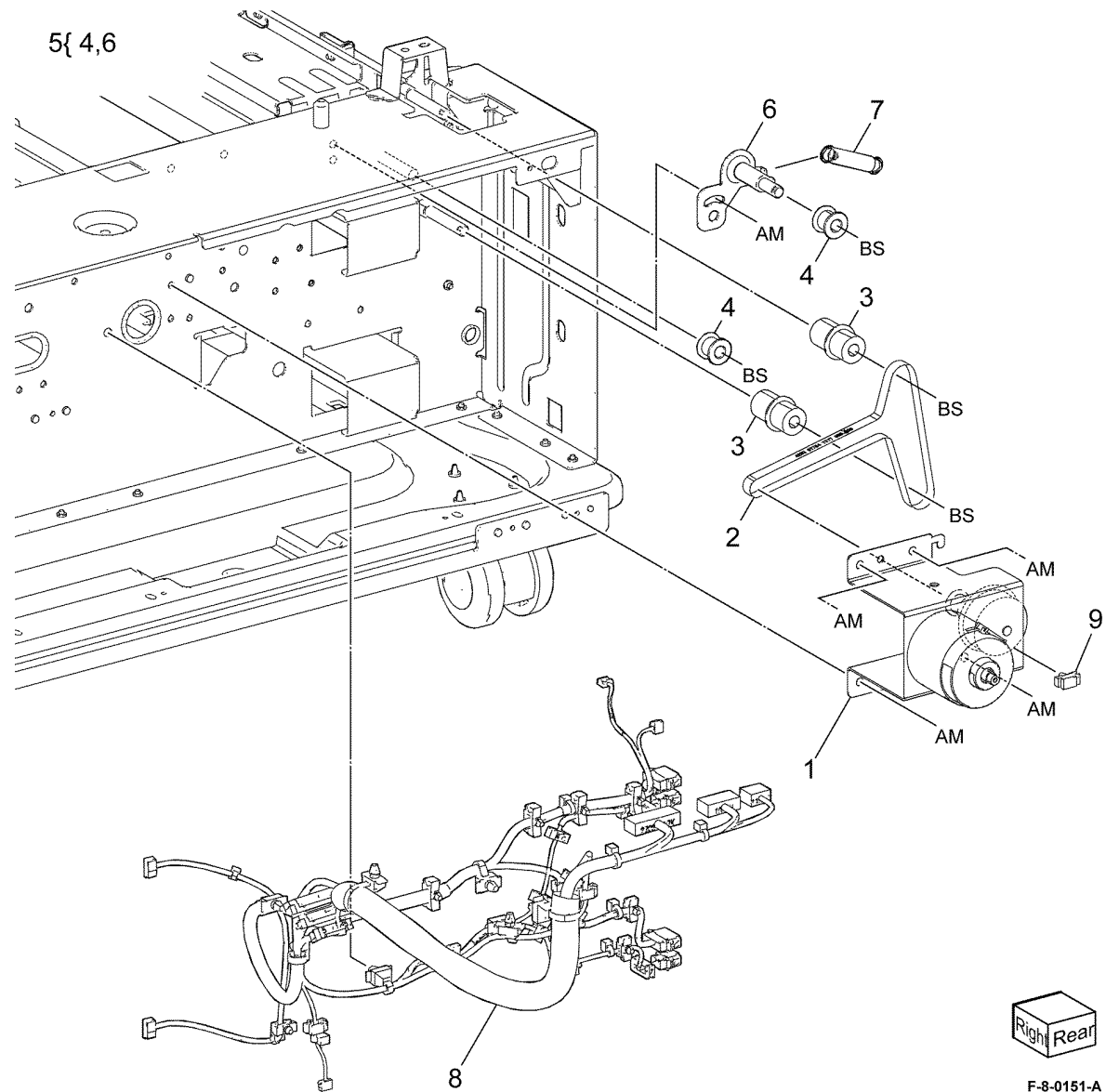
3{ 5,6



F-8-0150-A

PL 80.30 2TM Drive Assembly

Item	Part	Description
1	049K41791	Takeaway motor assembly (REP 80.9)
2	423W37754	Belt (REP 80.10)
3	-	Pulley (24T) (Not Spared)
4	-	Roller (P/O PL 80.30 Item 5)
5	-	Tension bracket assembly (Not Spared)
6	-	Tension bracket (P/O PL 80.30 Item 5)
7	-	Spring (Not Spared)
8	-	Wire harness assembly (Not Spared)
9	-	Clamp (Not Spared)

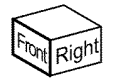
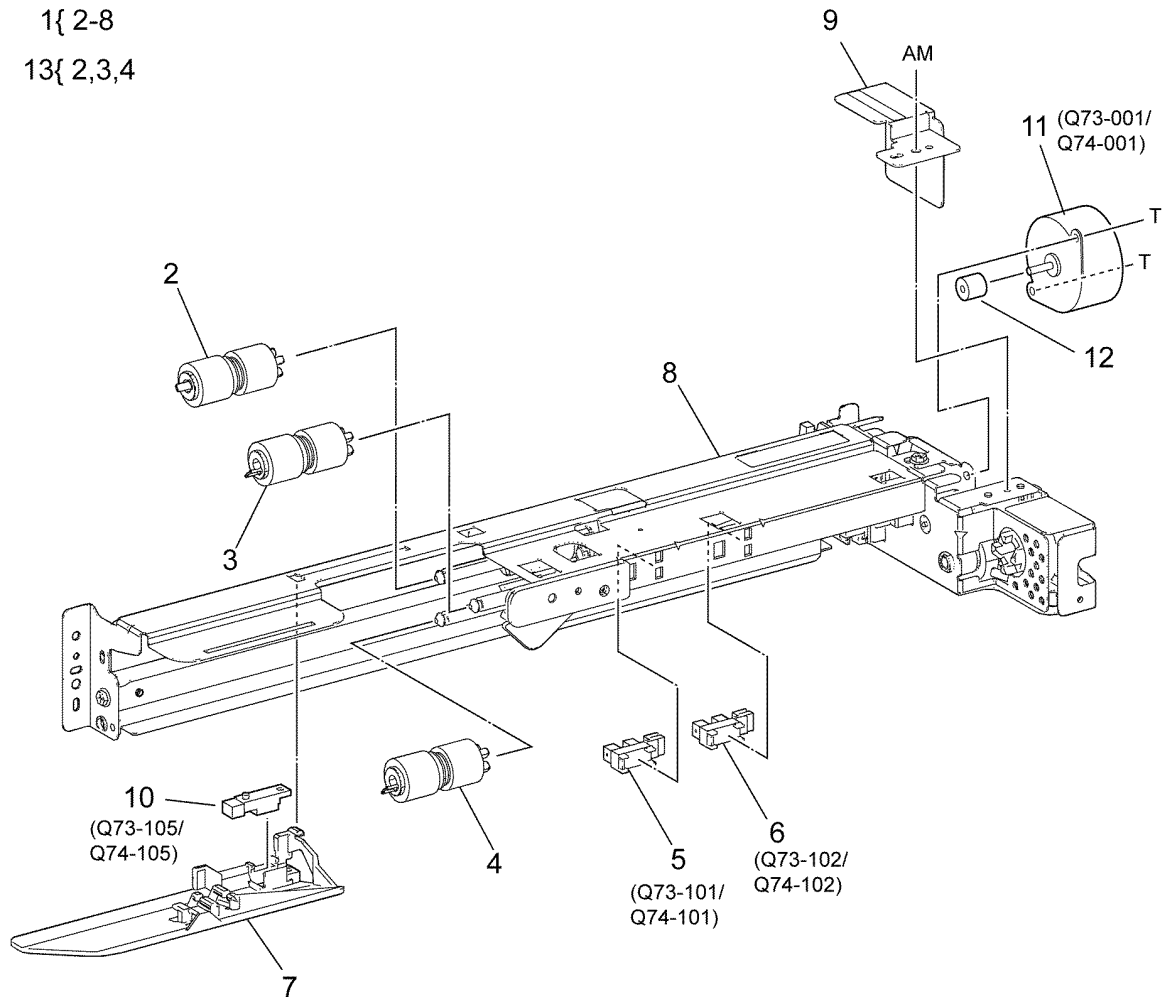


Right Rear

F-8-0151-A

PL 80.35 2TM Tray 3 & 4 Feedhead Assembly

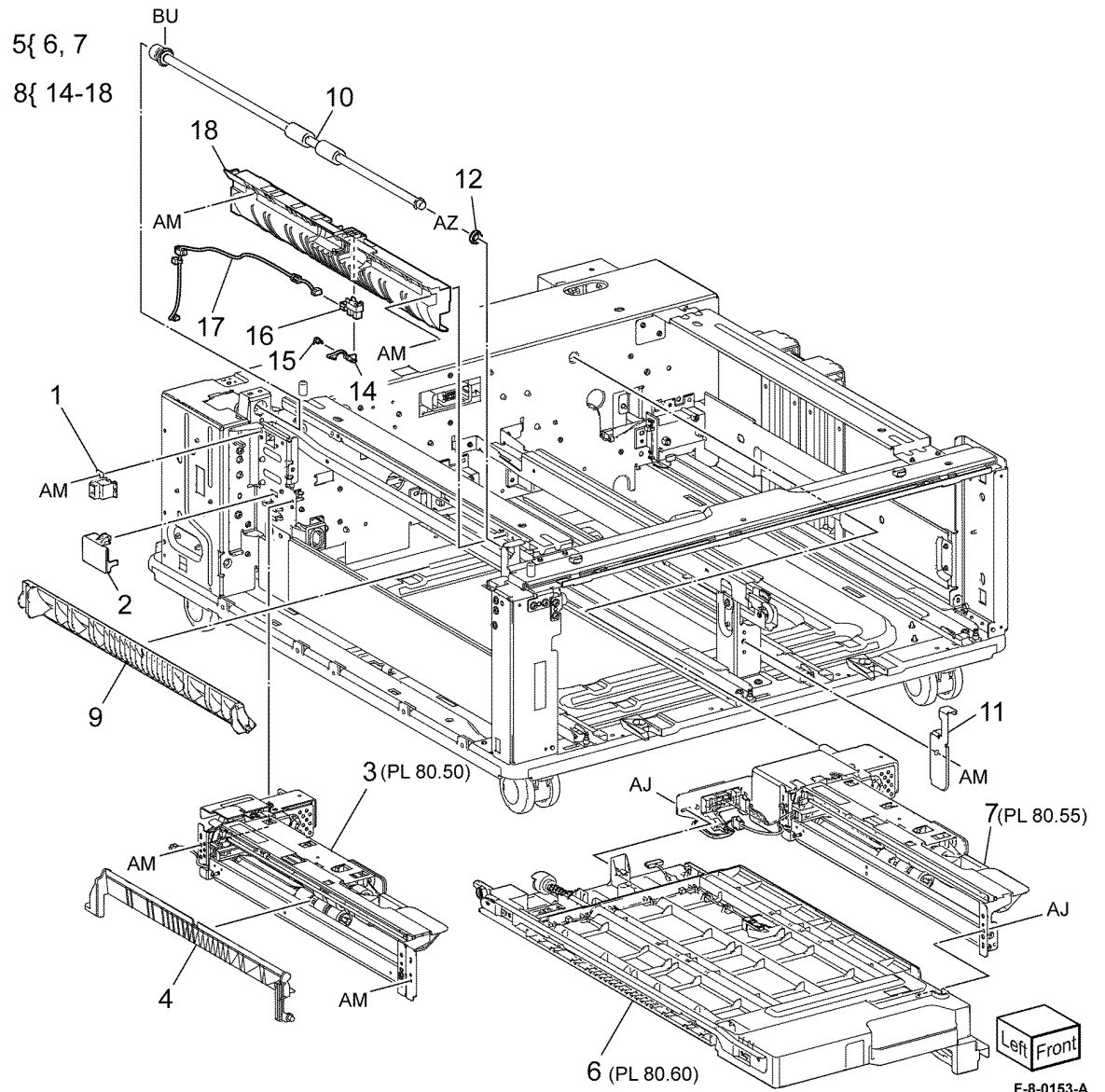
Item	Part	Description
1	-	Feedhead assembly (REF: PL 80.40 Item 3 & PL 80.40 Item 7)
2	-	Feed roll (P/O PL 80.35 Item 13) (REP 80.12)
3	-	Nudger roll (P/O PL 80.35 Item 13) (REP 80.12)
4	-	Retard roll (P/O PL 80.35 Item 13) (REP 80.12)
5	-	Tray 3 no paper sensor (Q73-101)/ Tray 4 no paper sensor (Q74-101) (P/O PL 80.20 Item 10)
6	-	Tray 3 level sensor (Q73-102)/ Tray 4 level sensor (Q74-102) (P/O PL 80.20 Item 10)
7	-	Chute (P/O PL 80.35 Item 1)
8	-	Feedhead frame (P/O PL 80.35 Item 1)
9	-	Bracket (Not Spared)
10	930W00211	Tray 3 pre-feed sensor (Q73-105)/ Tray 4 pre-feed sensor (Q74-105)
11	-	Tray 3 lift motor (MOT73-001)/Tray 4 lift motor (MOT74-001) (P/O PL 80.35 Item 1)
12	-	Gear (P/O PL 80.35 Item 11)
13	109R00790	Tray 1-4 feed rolls



F-8-0152-A

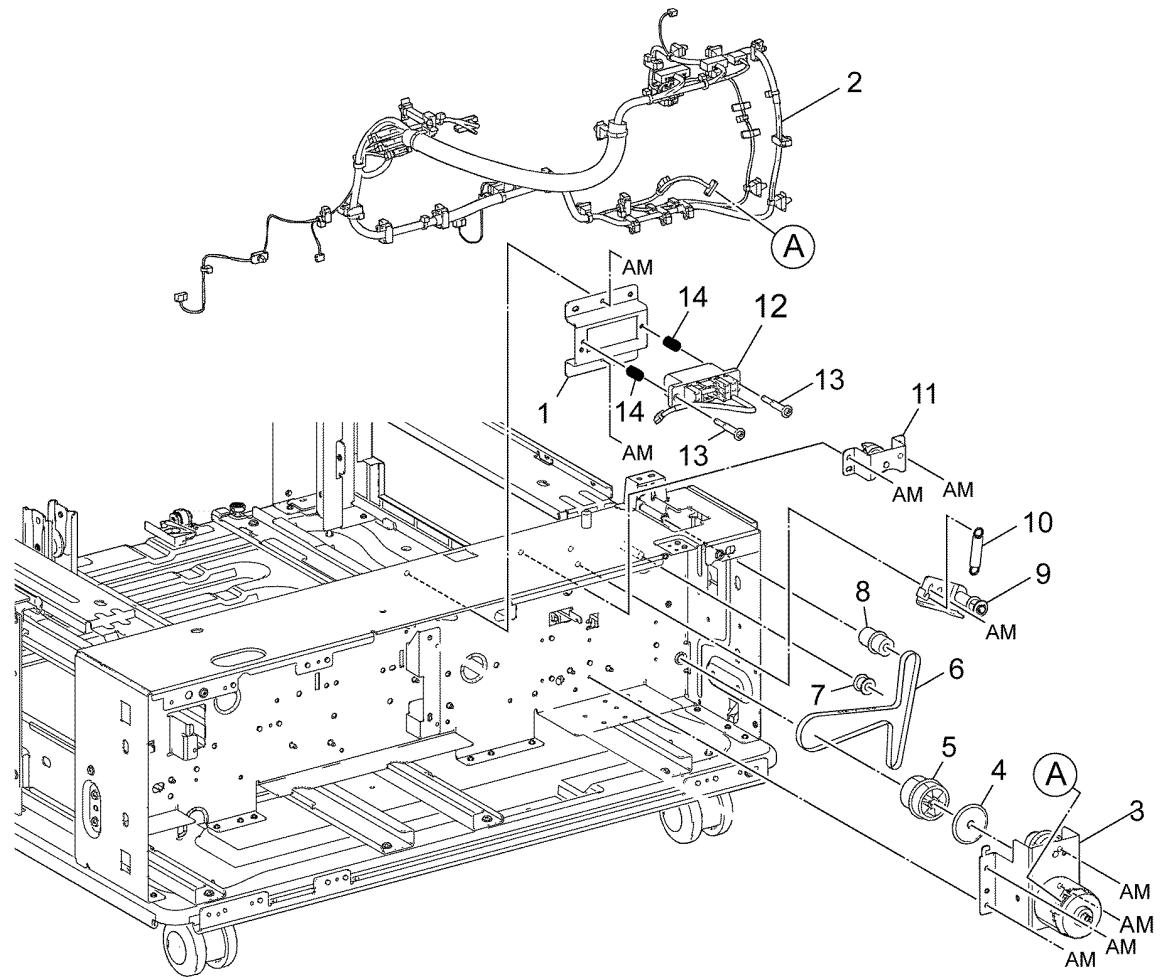
PL 80.40 TTM Transport assembly / Tray 3 & 4 Feedhead Assembly

Item	Part	Description
1	948K01810	TTM left door interlock switch (S77-306)
2	—	Connector cover (Not Spared)
3	859K02411	Tray 3 feedhead assembly (REP 80.14)
4	054E33803	Feed out chute
5	859K02862	Transport assembly (REF: PL 80.60)
6	—	TTM transport assembly (P/O PL 80.40 Item 5)
7	859K02931	Tray 4 feedhead assembly (REP 80.15)
8	054K56450	Takeaway chute assembly
9	054E39560	Transport feed chute
10	859K07790	Takeaway roll assembly
11	—	Transport stopper (Not Spared)
12	413W88650	Bearing
13	—	Not used
14	—	Actuator (P/O PL 80.40 Item 8)
15	—	Spring (P/O PL 80.40 Item 8)
16	—	Feed out sensor 3 (Q73-103) (P/O PL 80.40 Item 8)
17	—	Harness assembly (P/O PL 80.40 Item 8)
18	—	Takeaway chute (P/O PL 80.40 Item 8)



PL 80.45 TTM Drive Assembly

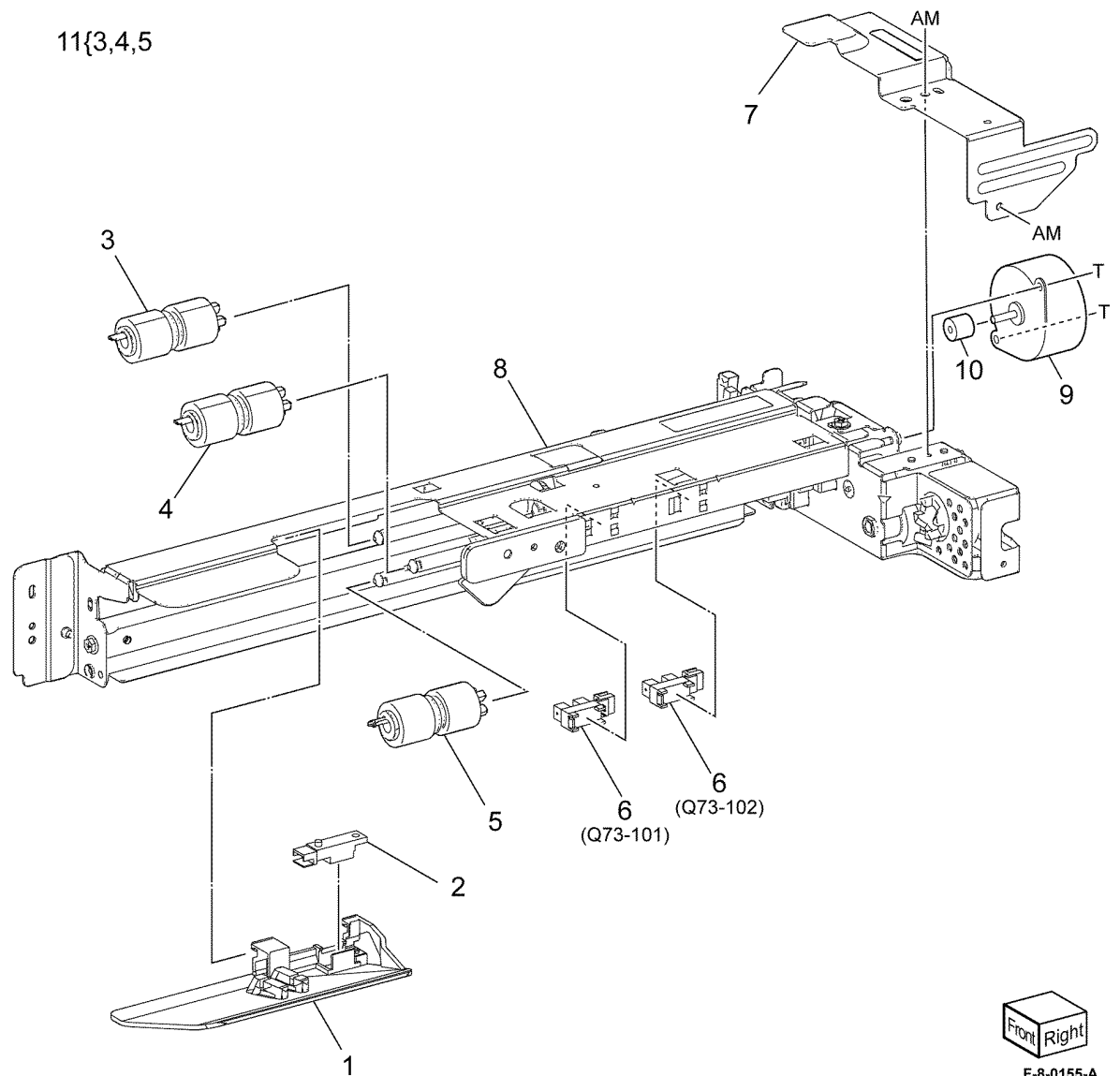
Item	Part	Description
1	-	Connector bracket (Not Spared)
2	-	Wire harness (Not Spared)
3	049K31871	Takeaway motor assembly (MOT77-035)
4	-	Collar (Not Spared)
5	-	Pulley (48T) (Not Spared)
6	423W85054	Belt
7	-	Roller (Not Spared)
8	-	Pulley (Not Spared)
9	-	Tension bracket assembly (Not Spared)
10	-	Spring (Not Spared)
11	-	Transport bracket assembly (Not Spared)
12	-	Drawer harness (Not Spared)
13	-	Shoulder screw (Not Spared)
14	-	Spring (Not Spared)



F-8-0154-A

PL 80.50 TTM Tray 3 Feedhead Assembly

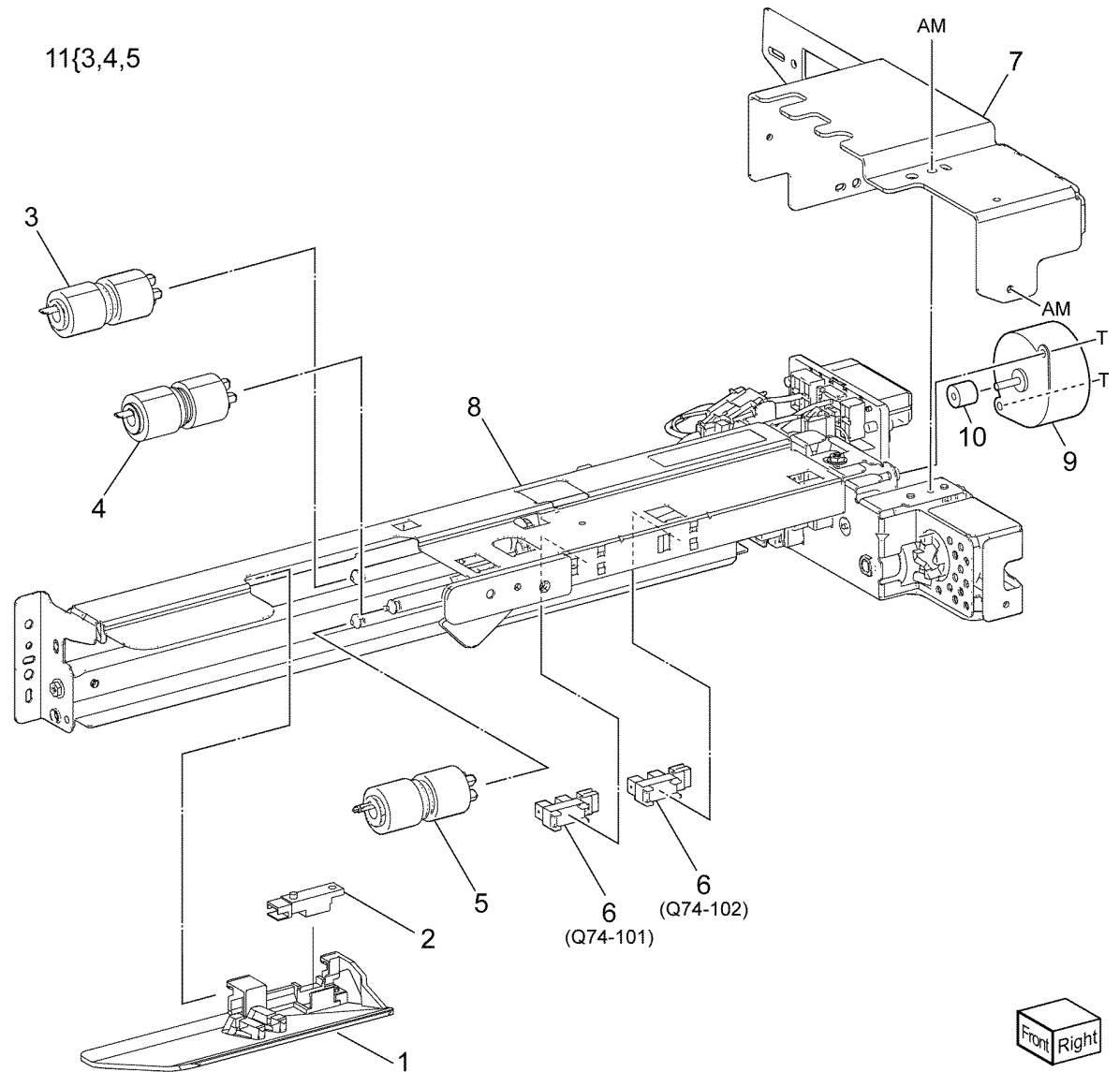
Item	Part	Description
1	-	Chute (P/O PL 80.40 Item 3)
2	930W00211	Tray 3 pre-feed sensor (Q73-105)
3	-	Feed roll (P/O PL 80.50 Item 11) (REP 80.16)
4	-	Nudger roll (P/O PL 80.50 Item 11) (REP 80.16)
5	-	Retard roll (P/O PL 80.50 Item 11) (REP 80.16)
6	-	Tray 3 no paper sensor (Q73-101)/ Tray 3 level sensor (Q73-102) (P/ O PL 80.40 Item 3)
7	-	Feedhead cover (P/O PL 80.40 Item 3)
8	-	Feedhead frame (P/O PL 80.40 Item 3)
9	-	Tray 3 feed/lift motor (MOT73-001) (P/O PL 80.40 Item 3)
10	-	Gear (P/O PL 80.50 Item 9)
11	109R00790	Tray 1-4 feed rolls



F-8-0155-A

PL 80.55 TTM Tray 4 Feedhead Assembly

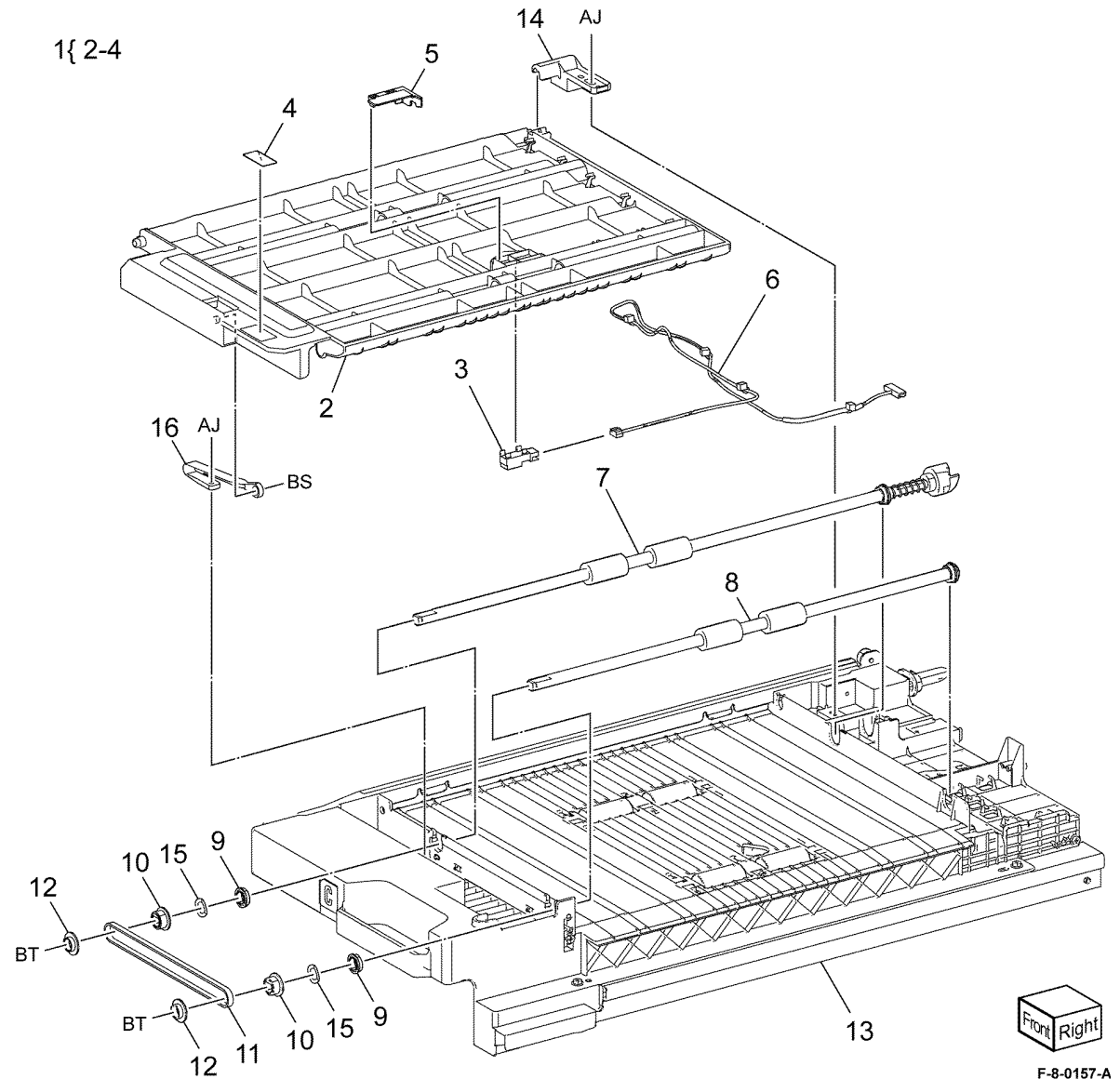
Item	Part	Description
1	-	Chute (P/O PL 80.40 Item 7)
2	930W00211	Tray 4 pre-feed sensor (Q74-105)
3	-	Feed roll (P/O PL 80.55 Item 11) (REP 80.16)
4	-	Nudger roll (P/O PL 80.55 Item 11) (REP 80.16)
5	-	Retard roll (P/O PL 80.55 Item 11) (REP 80.16)
6	-	Tray 4 no paper sensor (Q74-101)/ Tray 4 level sensor (Q74-102) (P/ O PL 80.40 Item 7)
7	-	Feedhead cover (P/O PL 80.40 Item 7)
8	-	Feedhead frame (P/O PL 80.40 Item 7)
9	-	Tray 4 feed/lift motor (MOT74-001) (P/O PL 80.40 Item 7)
10	-	Gear (P/O PL 80.55 Item 9)
11	109R00790	Tray 1-4 feed rolls



F-8-0156-A

PL 80.60 TTM Transport Assembly

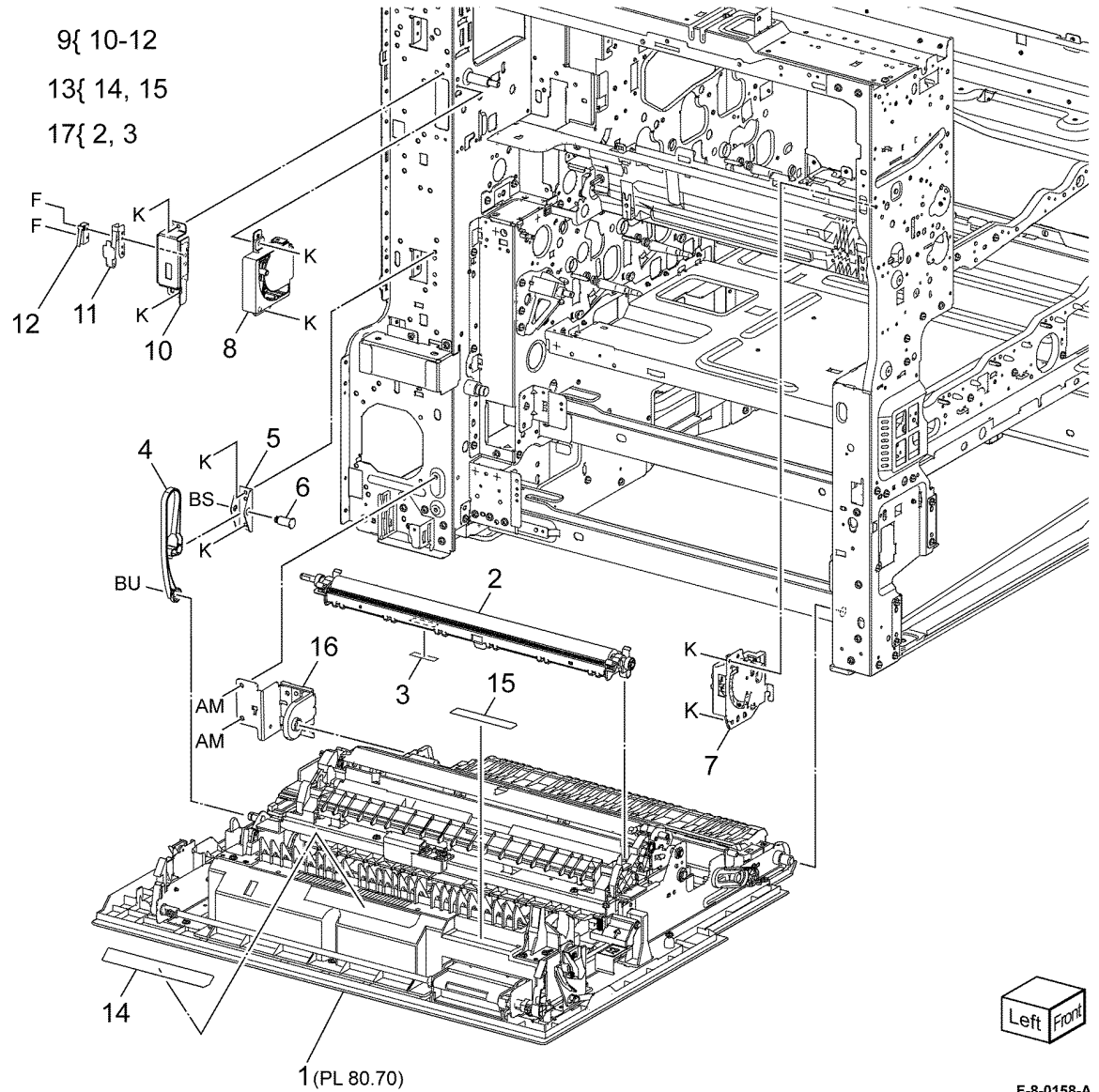
Item	Part	Description
1	-	Upper chute transport kit (REF: PL 80.40 Item 5)
2	-	Upper chute transport (P/O PL 80.60 Item 1)
3	-	Feed out sensor 4 (Q74-103) (P/O PL 80.60 Item 1)
4	-	Label (Transport) (P/O PL 80.60 Item 1)
5	-	Feed out sensor cover (Not Spared)
6	-	Feed out sensor harness (Not Spared)
7	-	Transport roll assembly (Not Spared) (REP 80.17)
8	-	Transport roll (Not Spared)
9	-	Bearing (Not Spared)
10	-	Pulley (Not Spared)
11	-	Belt (Not Spared)
12	-	Collar (Not Spared)
13	-	Lower chute transport (Not Spared)
14	-	Rear jam clearance handle (Not Spared)
15	-	Washer (Not Spared)
16	-	Front jam clearance handle (Not Spared)



F-8-0157-A

PL 80.65 Left Cover Components

Item	Part	Description
1	859K14042	Left cover assembly (REP 80.21)
2	-	2nd BTR roll assembly (P/O PL 80.65 Item 17) (REP 80.22)
3	-	Label (P/O PL 80.65 Item 17)
4	869E24730	Rear left support
5	-	Support bracket (Not Spared)
6	-	Shaft (Not Spared)
7	-	Front lever assembly (Not Spared)
8	-	Rear lever assembly (Not Spared)
9	110K18150	Interlock switch assembly (S77-300) (REP 80.29)
10	-	Switch bracket (P/O PL 80.65 Item 9)
11	-	Switch plate (P/O PL 80.65 Item 9)
12	-	Left cover interlock switch (P/O PL 80.65 Item 9)
13	-	Caution label kit (Not Spared)
14	-	Label (Finger caution) (P/O PL 80.65 Item 1)
15	-	Label (Caution) (P/O PL 80.65 Item 1)
16	-	Rear bracket (Not Spared)
17	116R00015	2nd BTR assembly

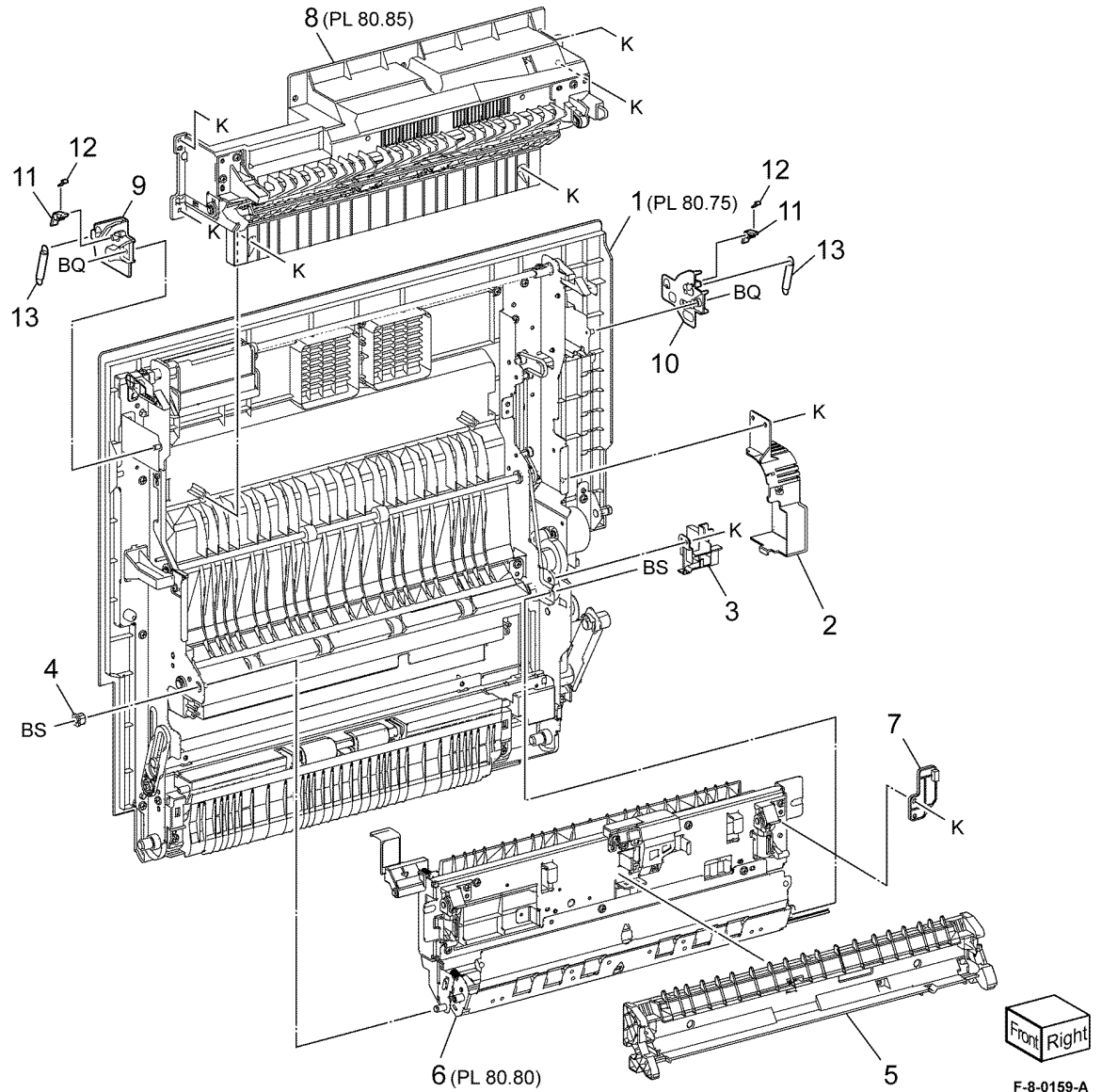


F-8-0158-A

PL 80.70 Left Cover Transport Components

Item	Part	Description
1	-	Left cover assembly (REF: PL 80.75)
2	-	Duplex motor cover
3	-	Harness guide
4	-	Bearing
5	-	2nd BTR housing assembly (REF: PL 80.65 Item 17) (REP 80.23)
6	-	Duplex inner chute assembly (REF: PL 80.80) (REP 80.24)
7	-	Link (P/O PL 80.70 Item 6)
8	-	Duplex chute assembly (REF: PL 80.85)
9	-	Front toggle guide
10	-	Rear toggle guide
11	-	Toggle gate
12	-	Spring
13	-	Toggle spring

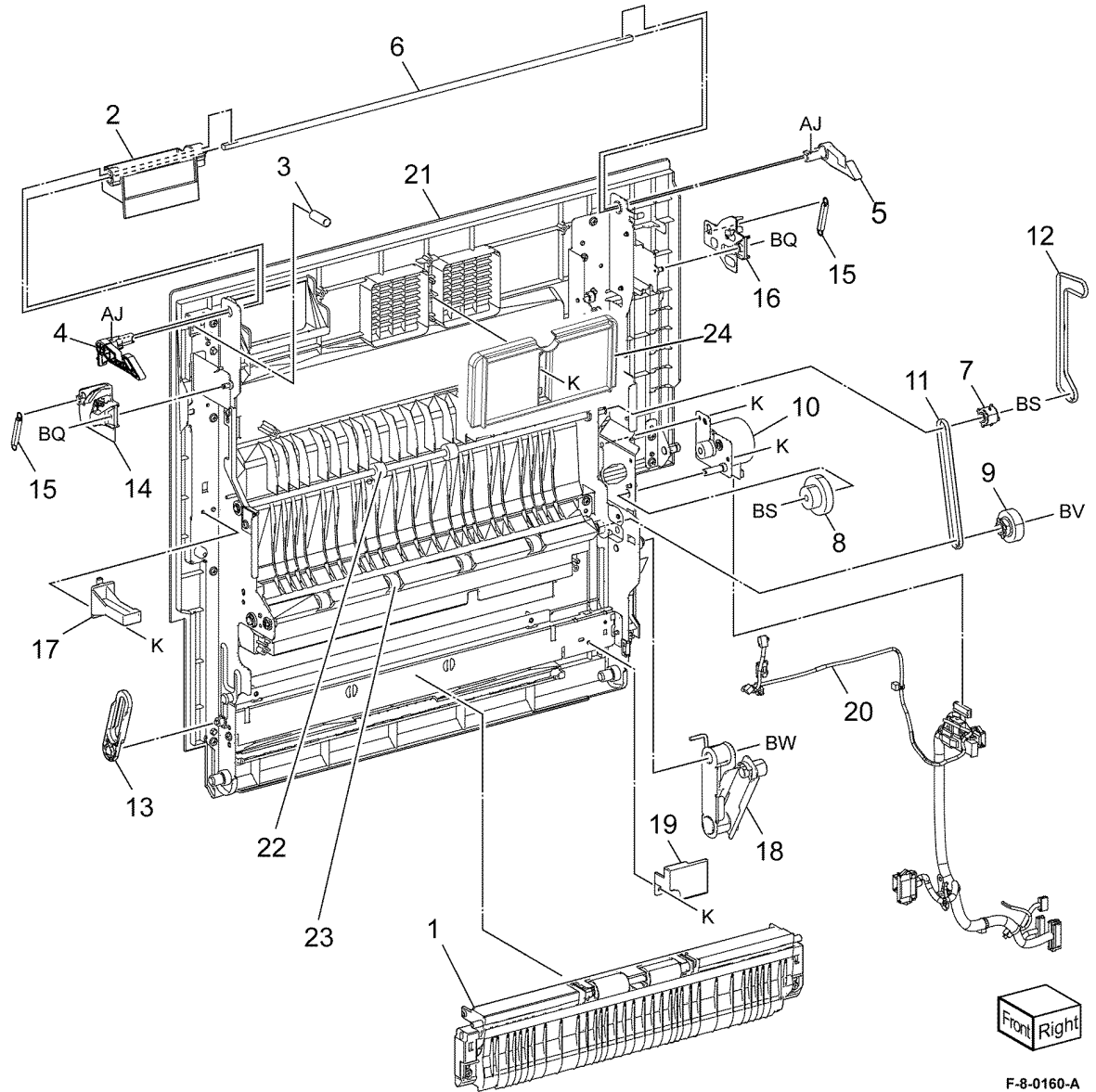
NOTE: All parts are part of PL 80.65 Item 1.



PL 80.75 Left Cover Transport Assembly

Item	Part	Description
1	-	Lower chute assembly (REP 80.25)
2	-	Handle
3	-	Spring
4	-	Front latch
5	-	Rear latch
6	-	Shaft
7	-	Pulley
8	-	Gear
9	-	Gear/pulley
10	-	Duplex motor and bracket assembly (MOT77-071)
11	-	Belt
12	-	Belt
13	-	Front support
14	-	Front toggle guide assembly
15	-	Spring
16	-	Rear toggle guide assembly
17	-	Close stopper
18	-	Link assembly
19	-	Connector cover
20	-	Harness assembly
21	-	Left cover assembly
22	-	Mid duplex roll assembly
23	-	Lower duplex roll assembly
24	-	Vent cover

NOTE: All components are part of PL 80.65 Item 1.

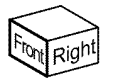
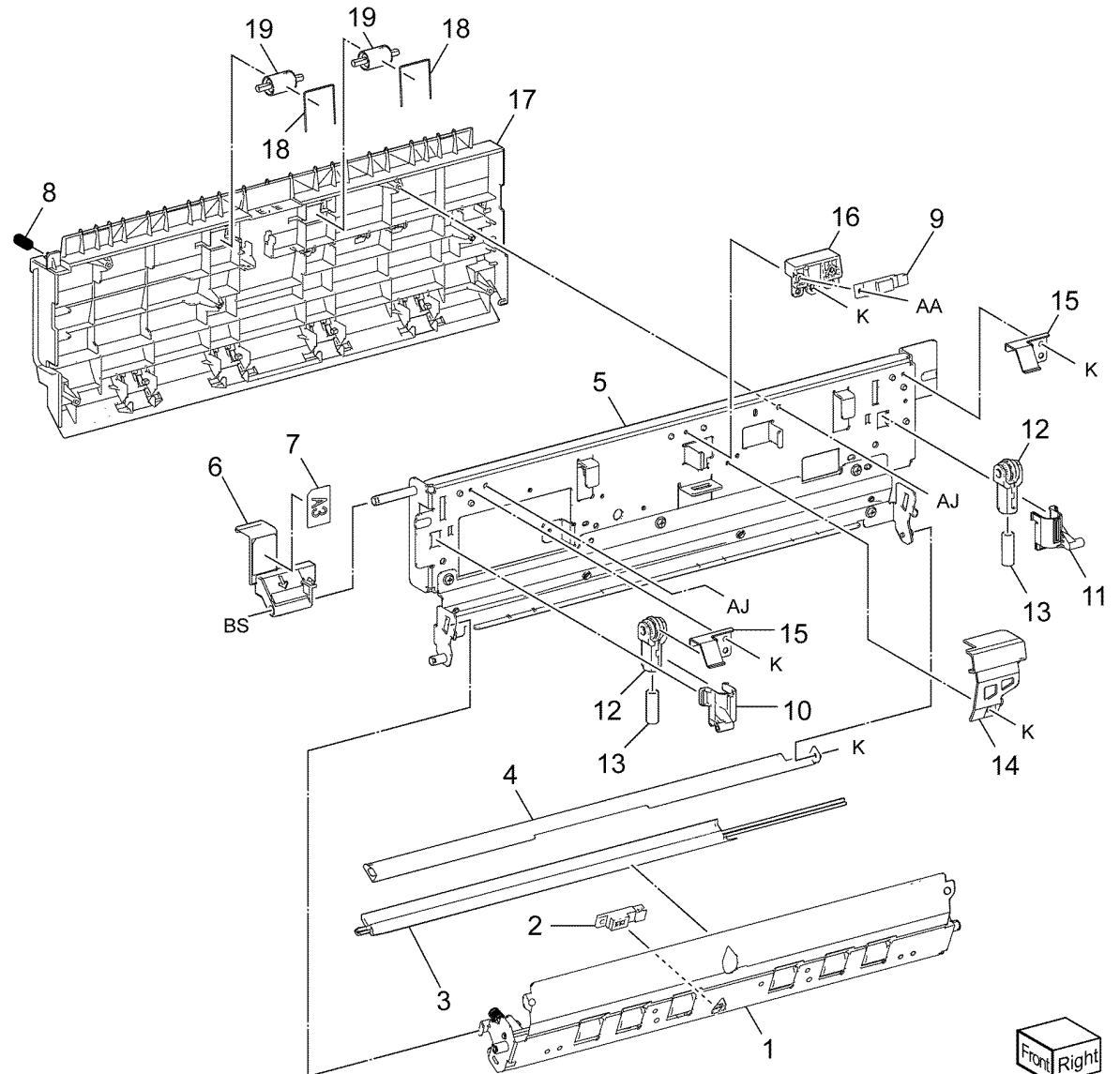


F-8-0160-A

PL 80.80 Duplex Inner Chute Assembly

Item	Part	Description
1	-	Registration chute assembly
2	-	Registration sensor (Q77-103) (REP 80.26)
3	-	Registration heater assembly
4	-	Registration heater bracket
5	-	Registration tie plate
6	-	Handle (REP 80.27)
7	-	Label (A3)
8	-	Spring
9	-	POB jam sensor (Q94-201) (REP 80.28)
10	-	Front spring housing
11	-	Rear spring housing
12	-	2nd roller assembly
13	-	Spring
14	-	Harness cover
15	-	BTR bracket
16	-	POB jam sensor holder
17	-	Duplex inner chute
18	-	Pinch spring
19	-	Pinch roller

NOTE: All components are part of PL 80.65 Item 1.

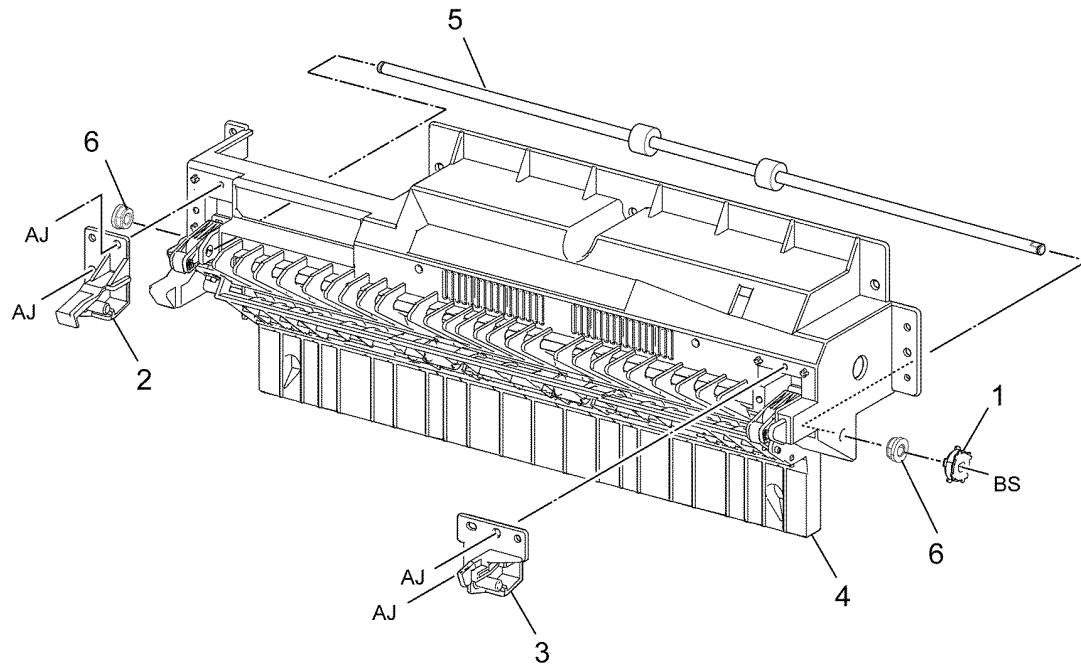


F-8-0161-A

PL 80.85 Duplex Chute Assembly

Item	Part	Description
1	—	Pulley
2	—	Front holder assembly
3	—	Rear holder assembly
4	—	Duplex chute housing assembly
5	—	Upper duplex roll assembly
6	—	Bearing

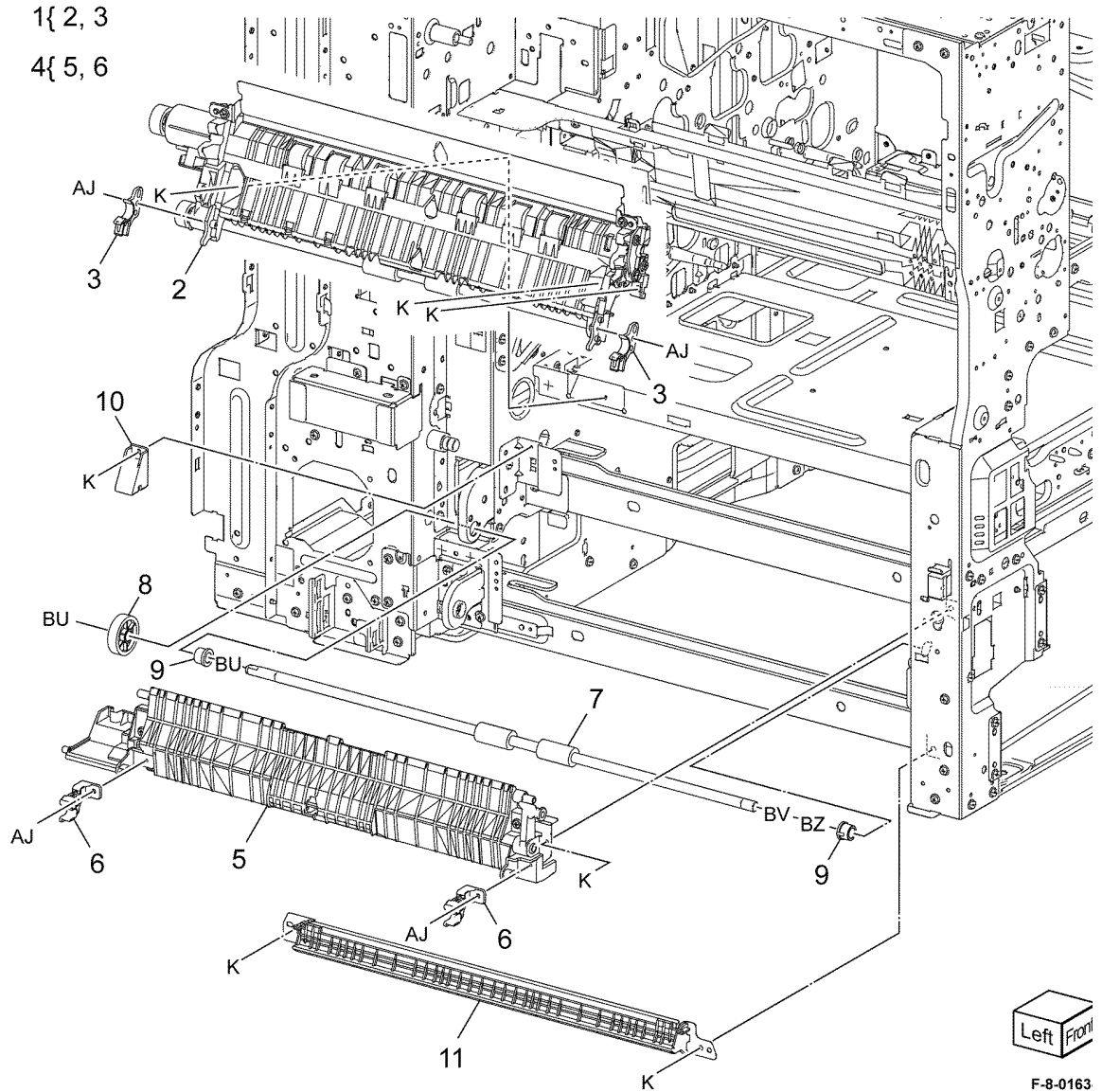
NOTE: All components are part of PL 80.65 Item 1.



F-8-0162-A

PL 80.90 Registration Transport Assembly

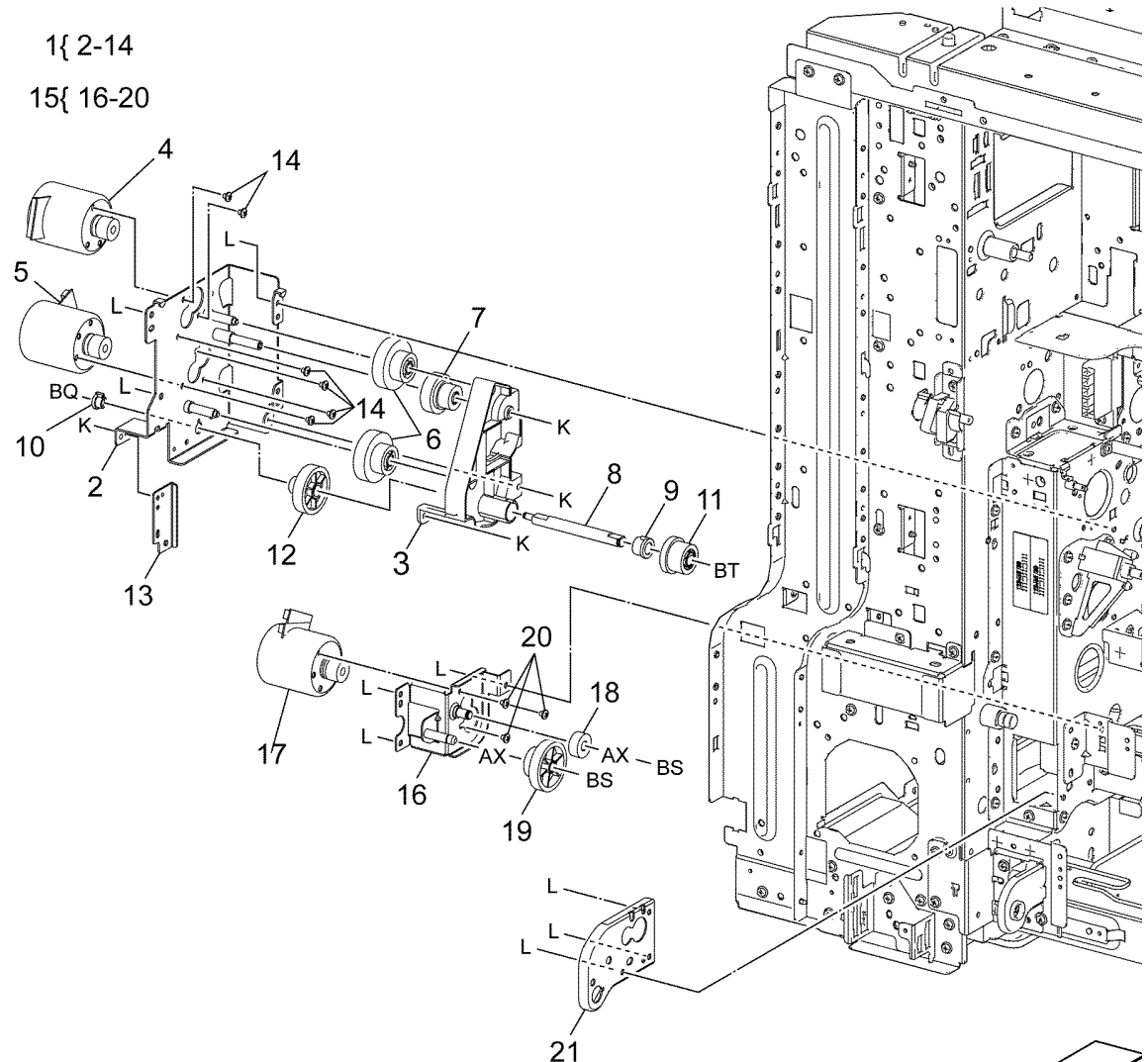
Item	Part	Description
1	859K03317	Registration transport assembly (REP 80.30)
2	-	Registration transport (P/O PL 80.90 Item 1)
3	-	Chute holder (P/O PL 80.90 Item 1)
4	-	Chute assembly (Not Spared) (REP 80.31)
5	-	Chute (P/O PL 80.90 Item 4)
6	-	Chute guide (P/O PL 80.90 Item 4)
7	859K07200	Takeaway roll 2 assembly (REP 80.32)
-	859K02290	Takeaway roll 2 assembly (alternative)(REP 80.32)
8	807E52000	Drive gear
9	013E46820	Bearing
10	-	Connector cover (Not Spared)
11	-	Upper chute assembly (Not Spared)



F-8-0163

PL 80.95 Registration Drive Assembly

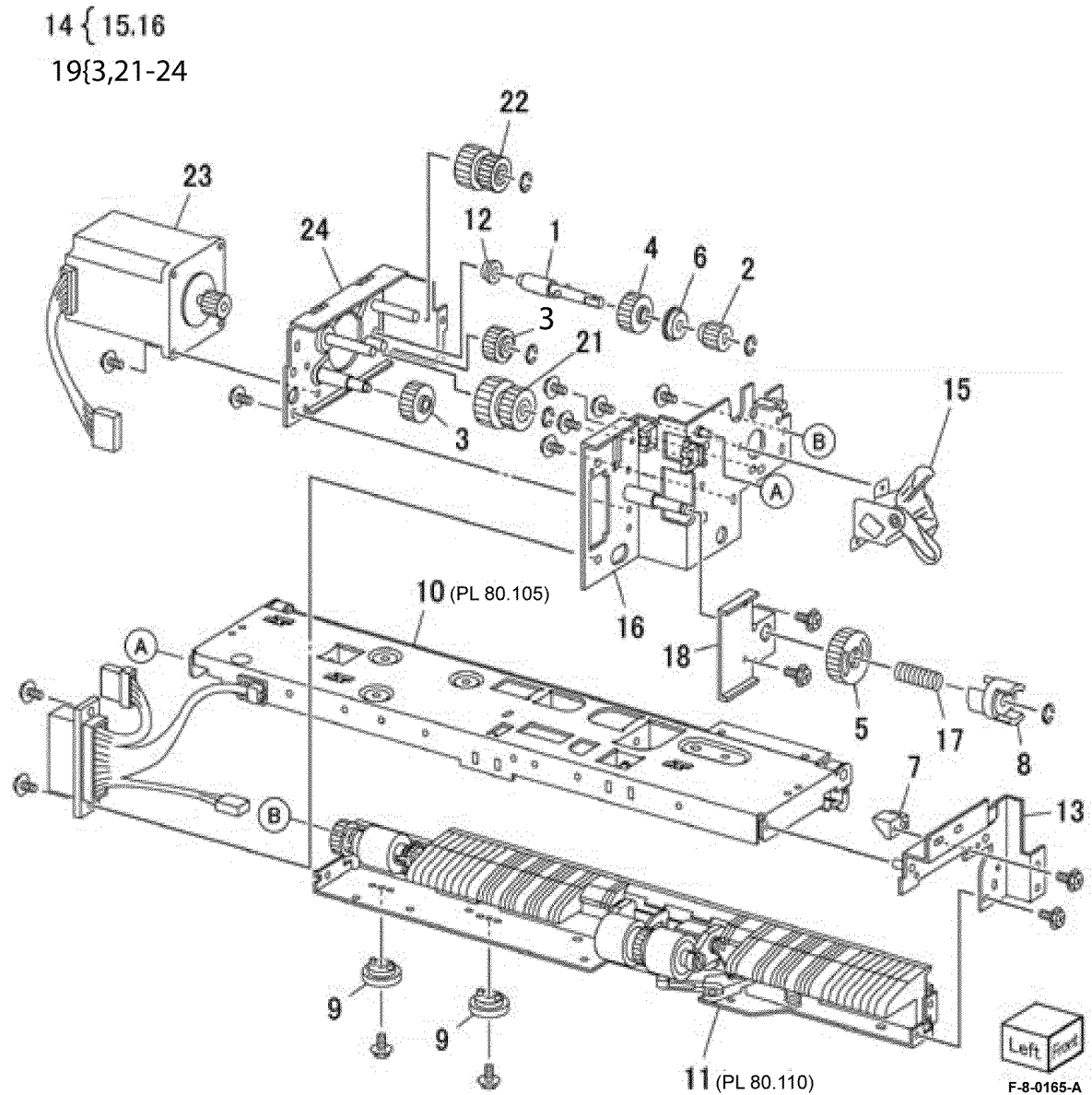
Item	Part	Description
1	007K22002	Registration drive assembly (REP 80.33)
2	-	Motor bracket (P/O PL 80.95 Item 1)
3	-	Block (P/O PL 80.95 Item 1)
4	-	Registration motor (MOT77-055) (P/O PL 80.95 Item 1)
5	-	Takeaway motor 1 (MOT77-050) (P/O PL 80.95 Item 1)
6	-	Gear (39/22) (P/O PL 80.95 Item 1)
7	-	Gear (30/18) (P/O PL 80.95 Item 1)
8	-	Shaft (P/O PL 80.95 Item 1)
9	-	Bearing
10	-	Bearing (P/O PL 80.95 Item 1)
11	-	Gear (37) (P/O PL 80.95 Item 1)
12	-	Gear (25) (P/O PL 80.95 Item 1)
13	-	Bracket (P/O PL 80.95 Item 1)
14	-	Screw (P/O PL 80.95 Item 1)
15	007K22022	Takeaway drive assembly (REP 80.34)
16	-	Takeaway motor 2 bracket (P/O PL 80.95 Item 15)
17	-	Takeaway motor 2 (MOT77-051) (P/O PL 80.95 Item 15)
18	-	Gear (18) (P/O PL 80.95 Item 15)
19	-	Gear (Z39/22) (P/O PL 80.95 Item 15)
20	-	Screw (P/O PL 80.95 Item 15)
21	-	Drive bracket (Not Spared)



F-8-0164-

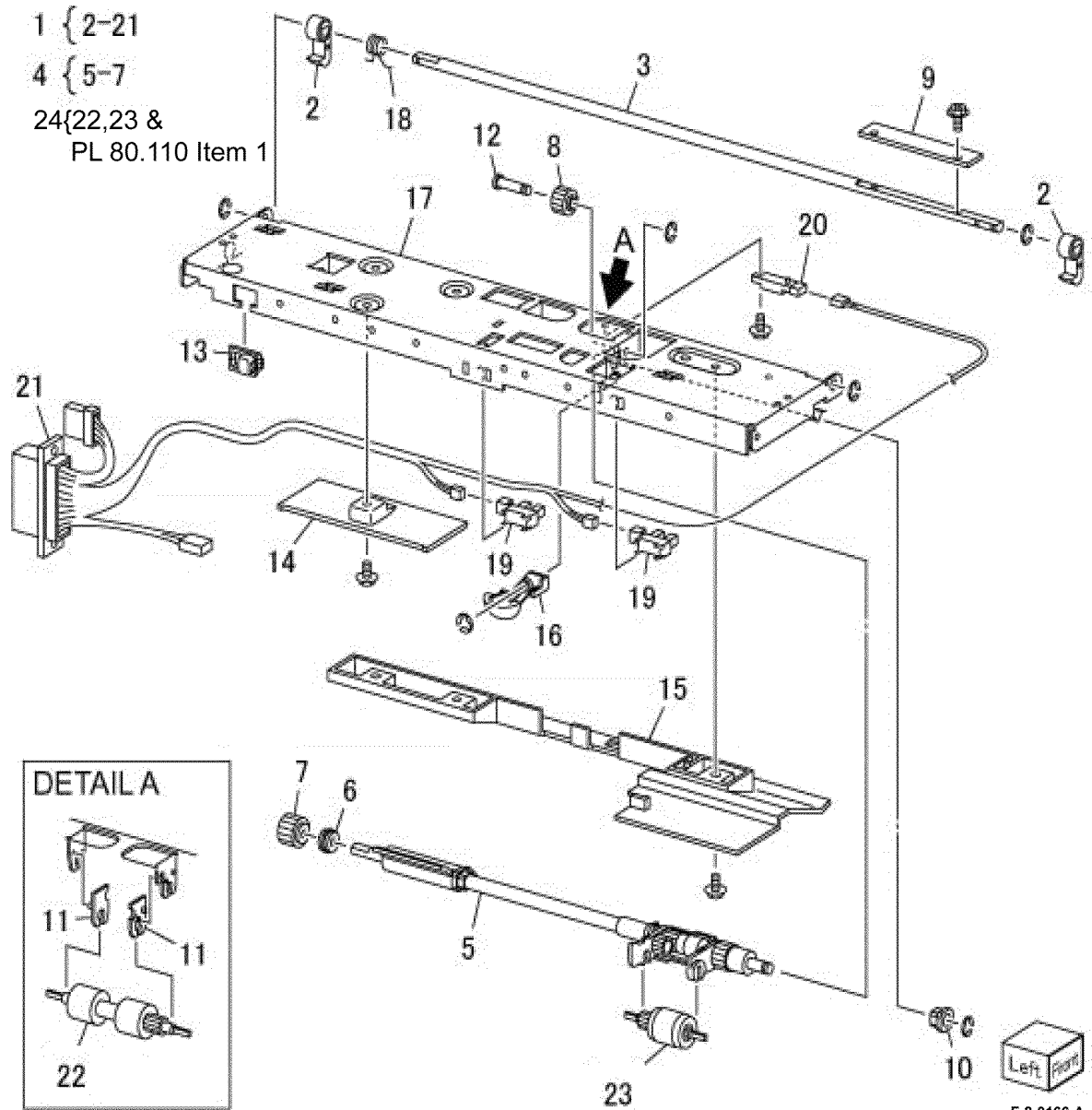
PL 80.100 HCF Feeder (1 of 3)

Item	Part	Description
1	-	Shaft (P/O PL 70.75 Item 11)
2	007E78760	Gear (19T)
3	007E78770	Gear (25T)
4	007E78780	Gear (25T)
5	007E78790	Gear (40T)
6	013E25530	Bearing
7	-	Block (P/O PL 70.75 Item 11)
8	-	Spacer (P/O PL 70.75 Item 11)
9	019E56470	Holder
10	-	Upper feeder assembly (P/O PL 70.75 Item 11)
11	-	Lower feeder assembly (P/O PL 70.75 Item 11)
12	413W66250	Ball bearing
13	-	Front frame (P/O PL 70.75 Item 11)
14	-	Rear frame assembly (P/O PL 70.75 Item 11)
15	-	Link assembly (P/O PL 80.100 Item 14)
16	-	Rear frame (P/O PL 80.100 Item 14)
17	-	Spring (P/O PL 70.75 Item 11)
18	-	Bracket (P/O PL 70.75 Item 11)
19	-	Drive gear assembly (P/O PL 70.75 Item 11)
21	007K88520	Gear (23T/27T)
22	007K88530	Gear (31T/36T)
23	127K37901	HCF feed lift motor (MOT78-003) (REP 80.39)
24	-	Motor frame (P/O PL 80.100 Item 19)



PL 80.105 HCF Feeder (2 of 3)

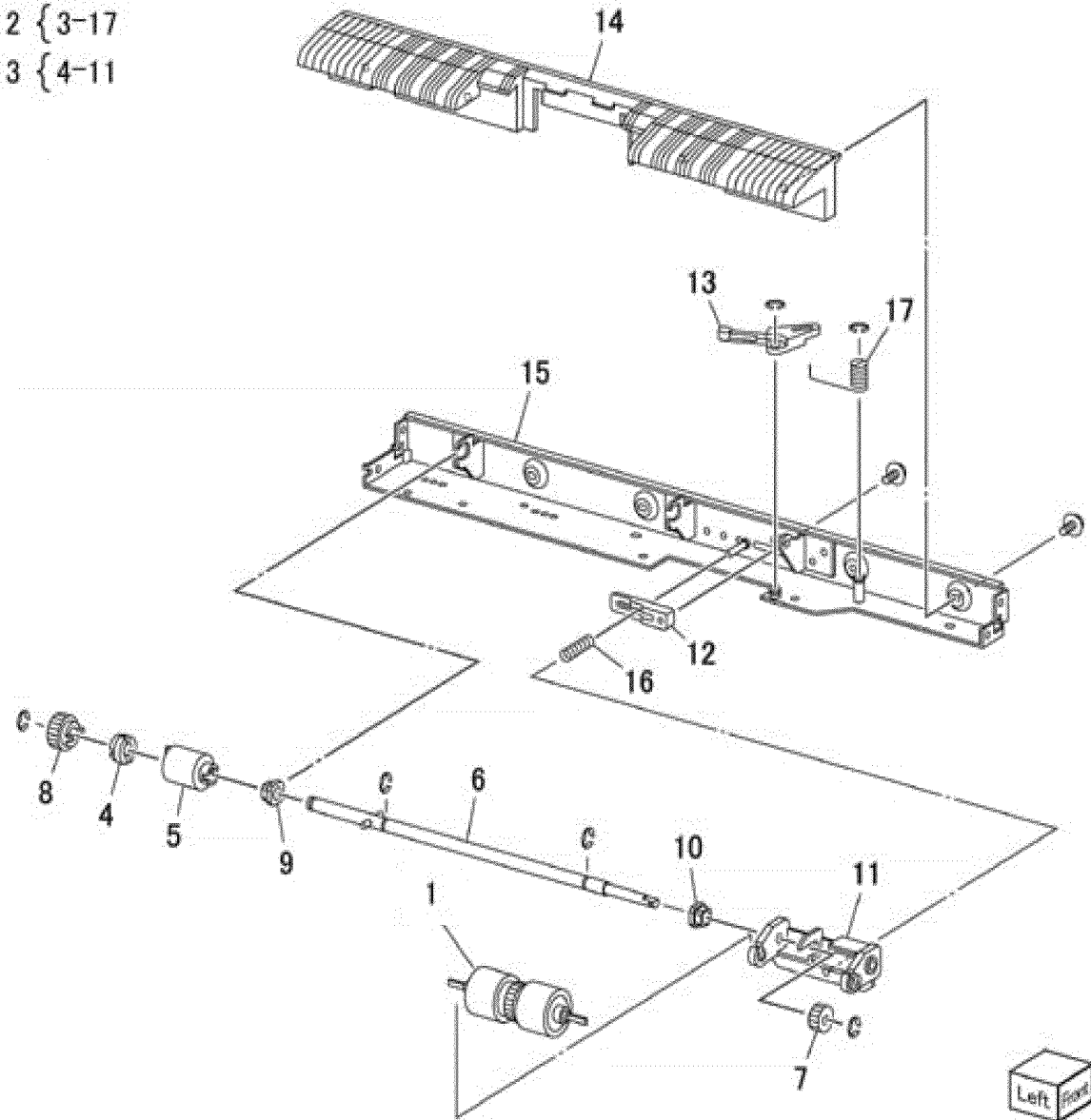
Item	Part	Description
1	-	Upper feeder assembly (P/O PL 70.75 Item 11)
2	003E59570	Latch (REP 80.37)
3	-	Shaft latch (P/O PL 80.105 Item 1)
4	006K23124	Feed shaft assembly (REP 80.36)
5	-	Feed shaft (P/O PL 80.105 Item 4)
6	413W66250	Ball bearing (REP 80.36)
7	-	Gear (20T) (P/O PL 80.105 Item 4)
8	007E78180	Feed gear (25T) (REP 80.36)
9	-	Lever (P/O PL 80.105 Item 1)
10	-	Bearing (P/O PL 80.105 Item 1)
11	-	Spacer (P/O PL 80.105 Item 1)
12	-	Pin drive (P/O PL 80.105 Item 1)
13	-	Guide (P/O PL 80.105 Item 1)
14	-	Rear upper chute (P/O PL 80.105 Item 1)
15	-	Upper chute (P/O PL 80.105 Item 1)
16	120E21900	Actuator
17	-	Upper Frame (P/O PL 80.105 Item 1)
18	-	Spring (P/O PL 80.105 Item 1)
19	930W00112	HCF level sensor / HCF no paper sensor (REP 80.38)
20	930W00211	HCF pre feed sensor (REP 80.38)
21	-	Wire harness (P/O PL 80.105 Item 1)
22	-	Feed roll (P/O PL 80.105 Item 24)
23	-	Nudger roll (P/O PL 80.105 Item 24)
24	116R00017	Tray 6 feed rolls



PL 80.110 HCF Feeder (3 of 3)

Item	Part	Description
1	-	Retard roll (P/O PL 80.105 Item 24)
2	-	Lower feeder assembly (P/O PL 70.75 Item 11)
3	-	Retard shaft assembly (P/O PL 80.110 Item 2)
4	-	Collar (P/O PL 80.110 Item 3)
5	005K06701	Friction clutch
6	-	Shaft (P/O PL 80.110 Item 3)
7	007E78170	Gear (15T)
8	007E89760	Gear (22T)
9	013E23600	Bearing
10	013E23610	Bearing
11	-	Retard bracket (P/O PL 80.110 Item 3)
12	-	Slide (P/O PL 80.110 Item 2)
13	-	Lever (P/O PL 80.110 Item 2)
14	-	Lower chute (P/O PL 80.110 Item 2)
15	-	Lower frame (P/O PL 80.110 Item 2)
16	-	Spring (P/O PL 80.110 Item 2)
17	-	Spring (P/O PL 80.110 Item 2)

2 { 3-17
3 { 4-11

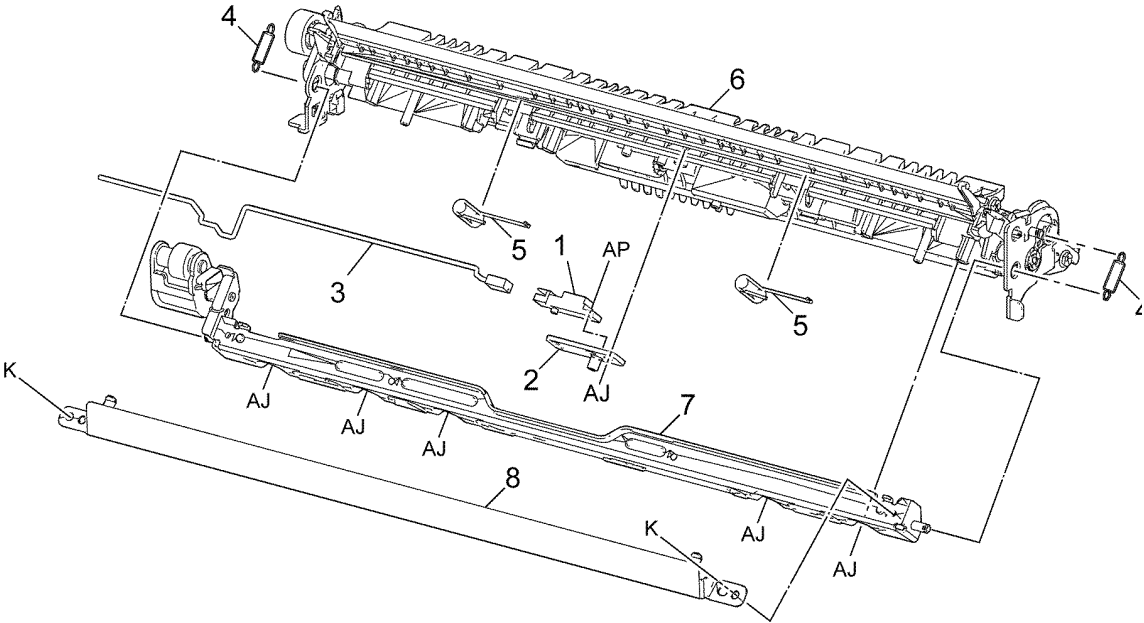


F-8-0167-A

PL 80.115 Bypass Tray Takeaway Assembly

Item	Part	Description
1	930W00211	Feed out sensor (Q77-104)
2	-	Feed out sensor holder
3	-	Feed out sensor harness
4	-	Spring
5	-	Spring
6	-	Pinch chute
7	-	Tie plate
8	-	Miler plate

NOTE: All parts are part of PL 70.50 Item 4.

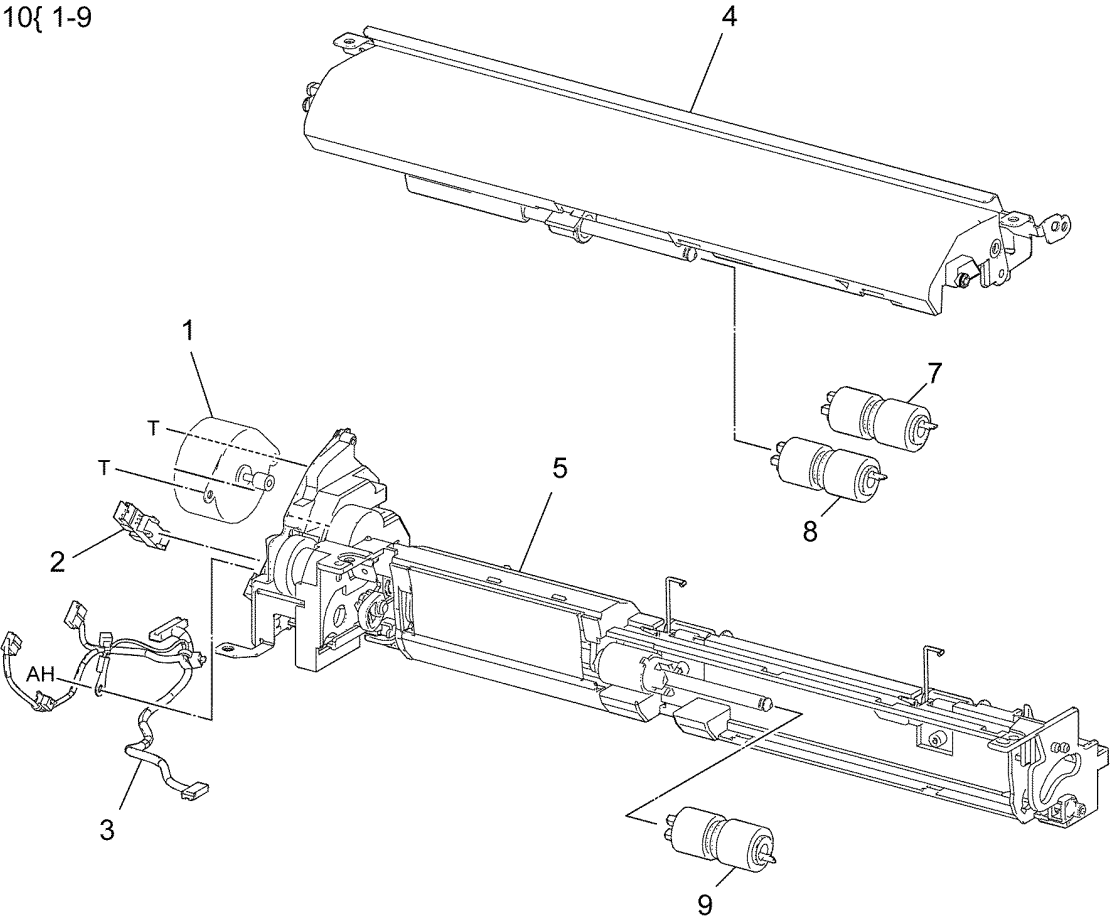


F-8-0137

PL 80.120 Bypass Tray Feedhead Assembly

Item	Part	Description
1	-	Bypass tray feed/lift motor (MOT75-003) (P/O PL 80.120 Item 10)
2	-	Bypass tray nudger position sensor (Q75-102) (P/O PL 80.120 Item 10)
3	-	Harness assembly (P/O PL 80.120 Item 10)
4	-	Upper feedhead assembly (P/O PL 80.120 Item 10)
5	-	Lower frame (P/O PL 80.120 Item 10)
6	116R00016	Bypass tray roll kit (REP 80.20)
7	-	Feed roll (P/O PL 80.120 Item 6)
8	-	Nudger roll (P/O PL 80.120 Item 6)
9	-	Retard roll (P/O PL 80.120 Item 6)
10	-	Bypass tray feedhead assembly (P/O PL 70.50 Item 17) (REP 80.19)

6{ 7-9
10{ 1-9

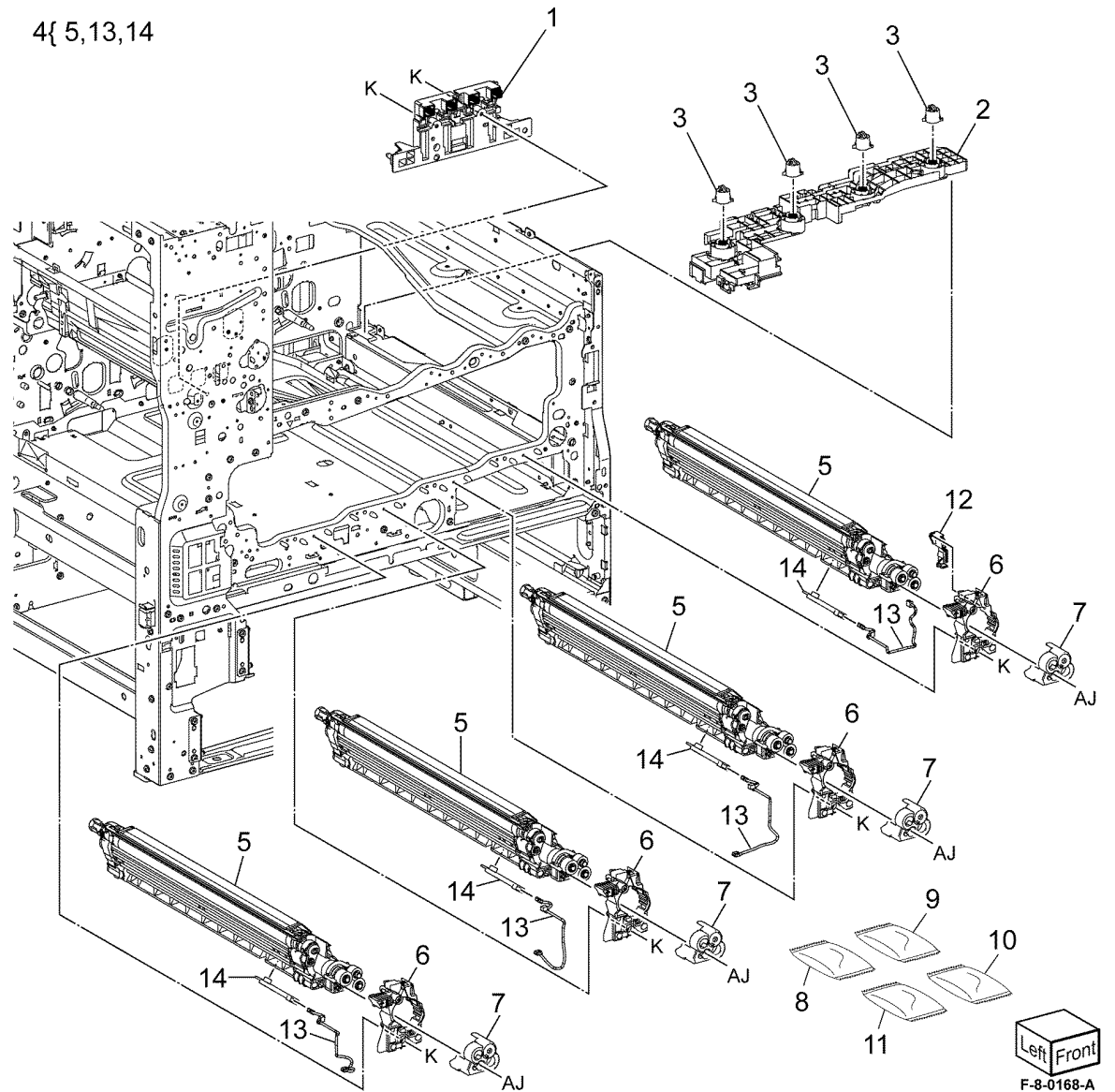


F-8-0138-

PL 90.05 Developer Unit

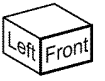
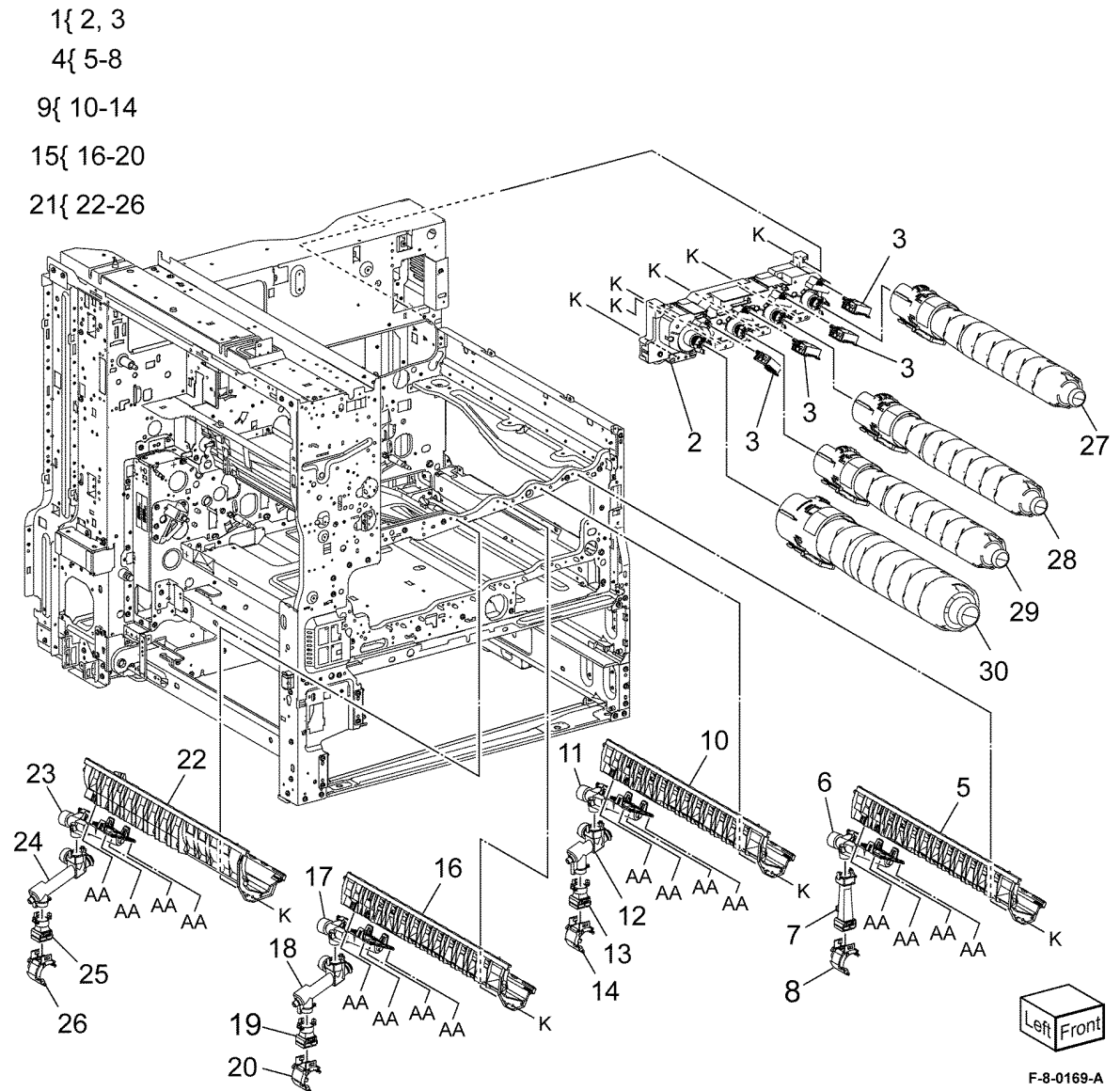
Item	Part	Description
1	948K01510	Conductor housing assembly (REP 90.1)
2	948K01530	Developer conductor housing assembly
3	010E96730	Plunger (REP 90.2)
4	948K13033	Developer housing kit (See NOTE)
5	-	Developer assembly (P/O PL 90.05 Item 4) (REP 90.3)
6	-	Developer plate assembly (Not Spared)
7	-	Gear cover (Not Spared)
8	607K12421	Developer material (Y) (REP 90.7)
9	607K12411	Developer material (M) (REP 90.7)
10	607K12401	Developer material (C) (REP 90.7)
11	607K12391	Developer material (K) (REP 90.7)
12	-	Harness guide (Not Spared)
13	-	Wire harness (P/O PL 90.05 Item 4)
14	-	ATC sensor (P/O PL 90.05 Item 4)

NOTE: When ordering item 4 also order relevant Developer material items 8,9,10 or 11.



PL 90.10 Toner Dispense

Item	Part	Description
1	007K23170	Toner dispense motor assembly (MOT92-005) (REP 90.4)
2	-	Drive assembly (P/O PL 90.10 Item 1)
3	019K16490	Toner CRUM connector assembly (REP 90.5)
4	094K94141	Dispenser assembly (Y) (REP 90.6)
5	-	Toner guide assembly (P/O PL 90.10 Item 4)
6	-	Main pipe (Y) (P/O PL 90.10 Item 4)
7	-	Lower pipe (Y) (P/O PL 90.10 Item 4)
8	-	Shutter (Y) (P/O PL 90.10 Item 4)
9	094K94151	Dispenser assembly (M) (REP 90.6)
10	-	Toner guide assembly (M) (P/O PL 90.10 Item 9)
11	-	Main pipe (M) (P/O PL 90.10 Item 9)
12	-	Sub pipe (M) (P/O PL 90.10 Item 9)
13	-	Lower pipe (M) (P/O PL 90.10 Item 9)
14	-	Shutter (M) (P/O PL 90.10 Item 9)
15	094K94161	Dispenser assembly (C) (REP 90.6)
16	-	Toner guide assembly (C) (P/O PL 90.10 Item 15)
17	-	Main pipe (C) (P/O PL 90.10 Item 15)
18	-	Sub pipe (C) (P/O PL 90.10 Item 15)
19	-	Lower pipe (C) (P/O PL 90.10 Item 15)
20	-	Shutter (C) (P/O PL 90.10 Item 15)
21	094K94171	Dispenser assembly (K) (REP 90.6)
22	-	Toner guide assembly (K) (P/O PL 90.10 Item 21)
23	-	Main pipe (K) (P/O PL 90.10 Item 21)
24	-	Sub pipe (K) (P/O PL 90.10 Item 21)
25	-	Lower pipe (K) (P/O PL 90.10 Item 21)
26	-	Shutter (K) (P/O PL 90.10 Item 21)
27	-	Toner cartridge (Y) (REF: PL 25.10 Item 1)
28	-	Toner cartridge (M) (REF: PL 25.05 Item 2)
29	-	Toner cartridge (C) (REF: PL 25.05 Item 1)
30	-	Toner cartridge (K) (REF: PL 25.10 Item 2)

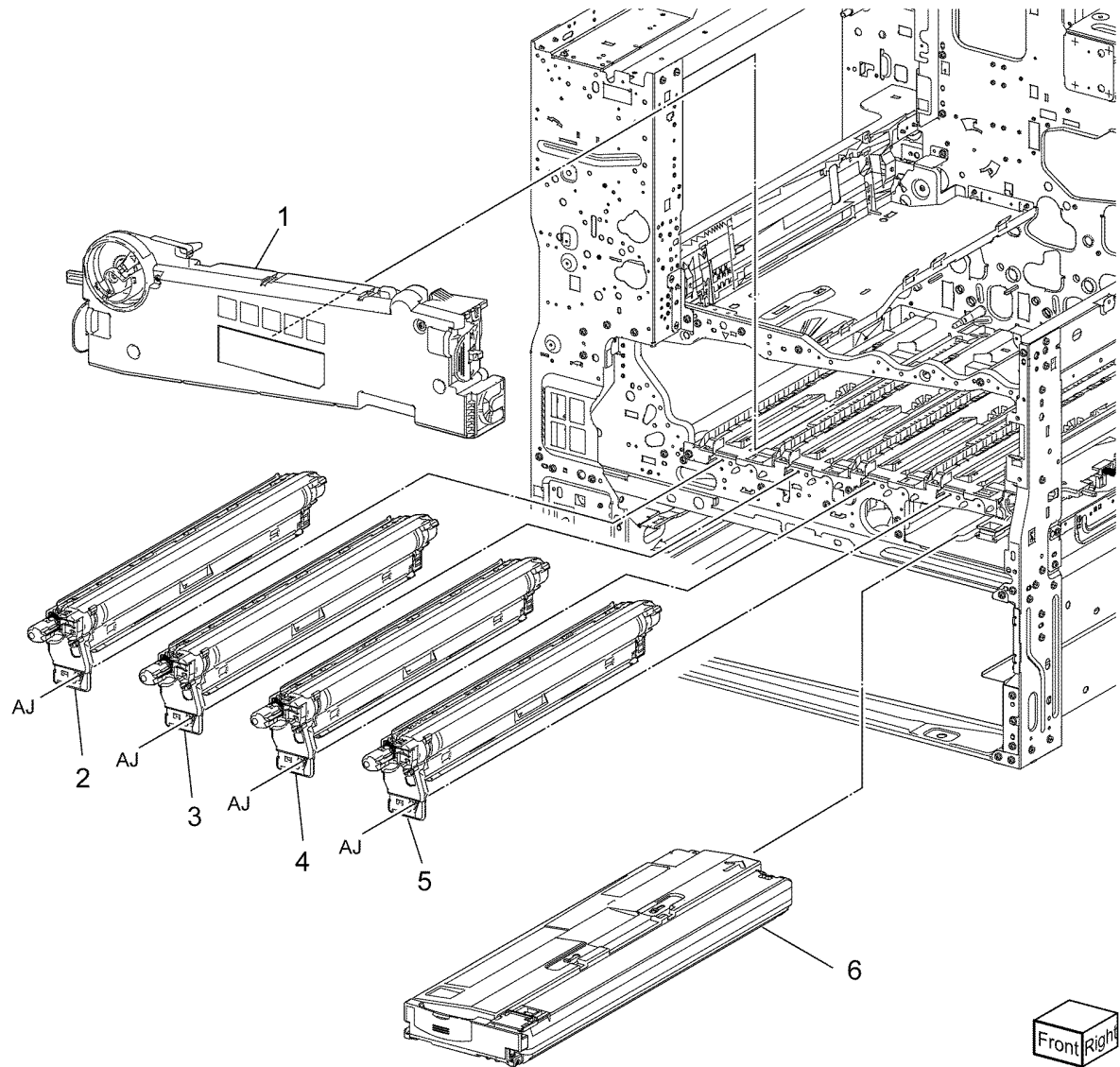


F-8-0169-A

PL 90.15 Xerographic Components

Item	Part	Description
1	948K00016	Waste toner transport assembly
2	-	Drum assembly (K) (NOTE) (REP 90.11)
3	-	Drum assembly (C) (NOTE) (REP 90.11)
4	-	Drum assembly (M) (NOTE) (REP 90.11)
5	-	Drum assembly (Y) (NOTE) (REP 90.11)
6	108R01504	Waste cartridge

NOTE: The part number for all Drum assemblies is 101R00602.

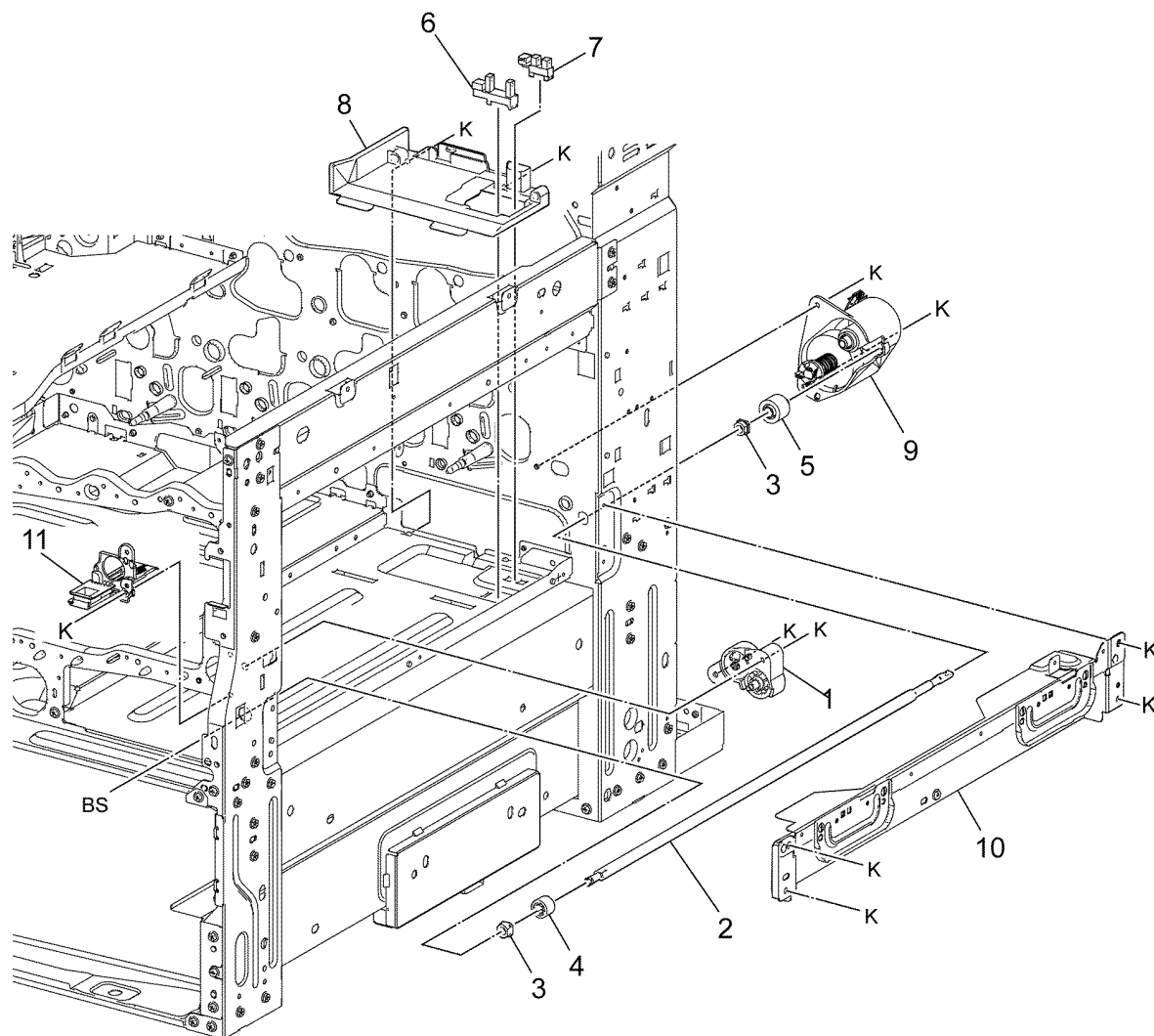


Front Right

F-8-0170-A

PL 90.20 Xerographic Assembly (1 of 2)

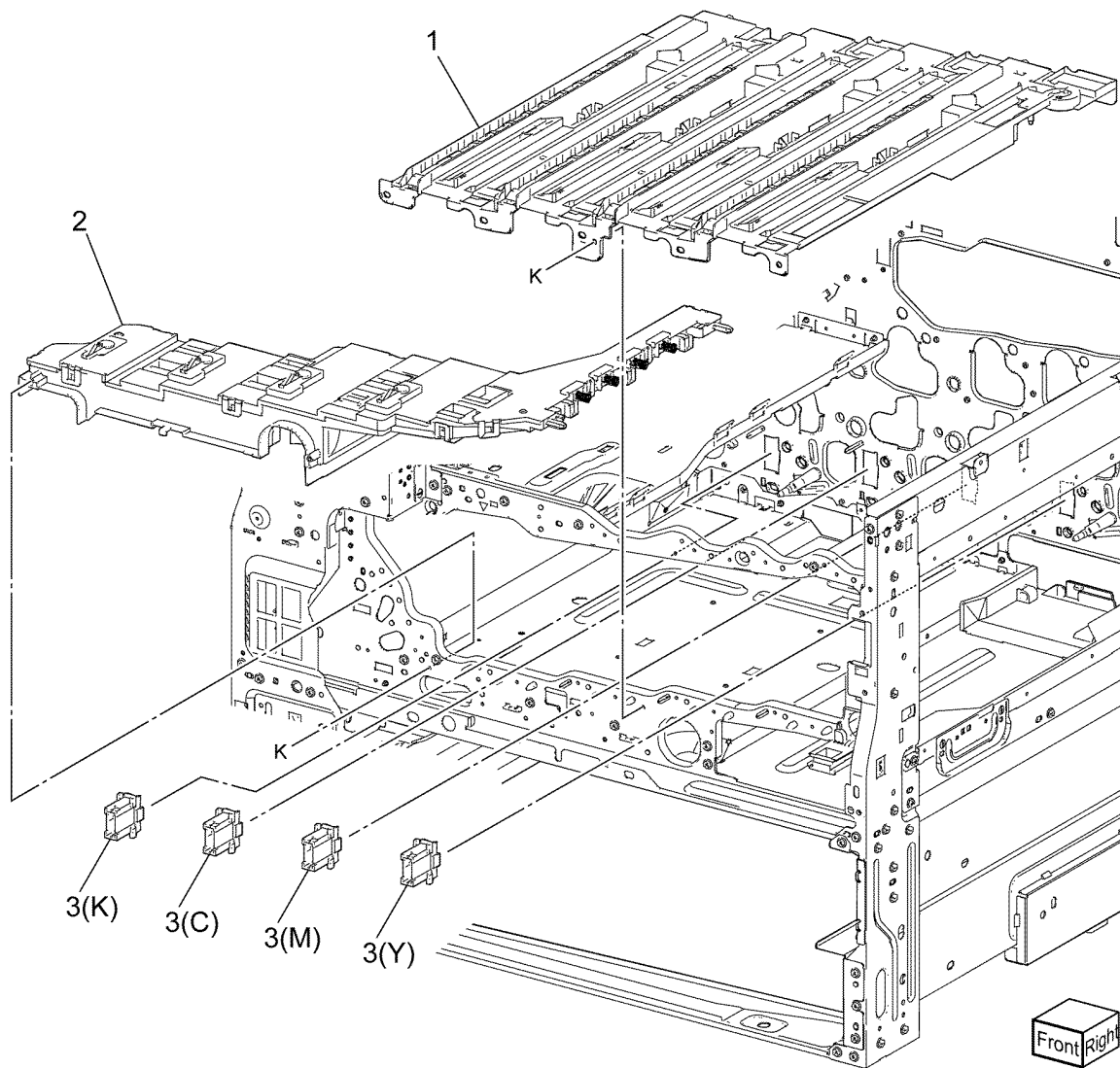
Item	Part	Description
1	948K02890	Gear housing assembly (REP 90.12)
2	-	Drive shaft (Not Spared) (REP 90.13)
3	413W11660	Sleeve bearing (REP 90.17)
4	807E52060	Gear
5	807E51980	Helical gear
6	930W00511	Waste toner bottle full sensor (Q91-201) (REP 90.18)
7	130E81600	Waste toner bottle position sensor (Q91-200) (REP 90.18)
8	-	Bottle guide (Not Spared)
9	948K00350	Agitator motor assembly (MOT91-006) (REP 90.14)
10	-	Handle assembly (Not Spared)
11	052K14000	Joint pipe assembly (REP 90.15)



F-8-0171-A

PL 90.25 Xerographic Assembly (2 of 2)

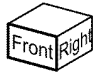
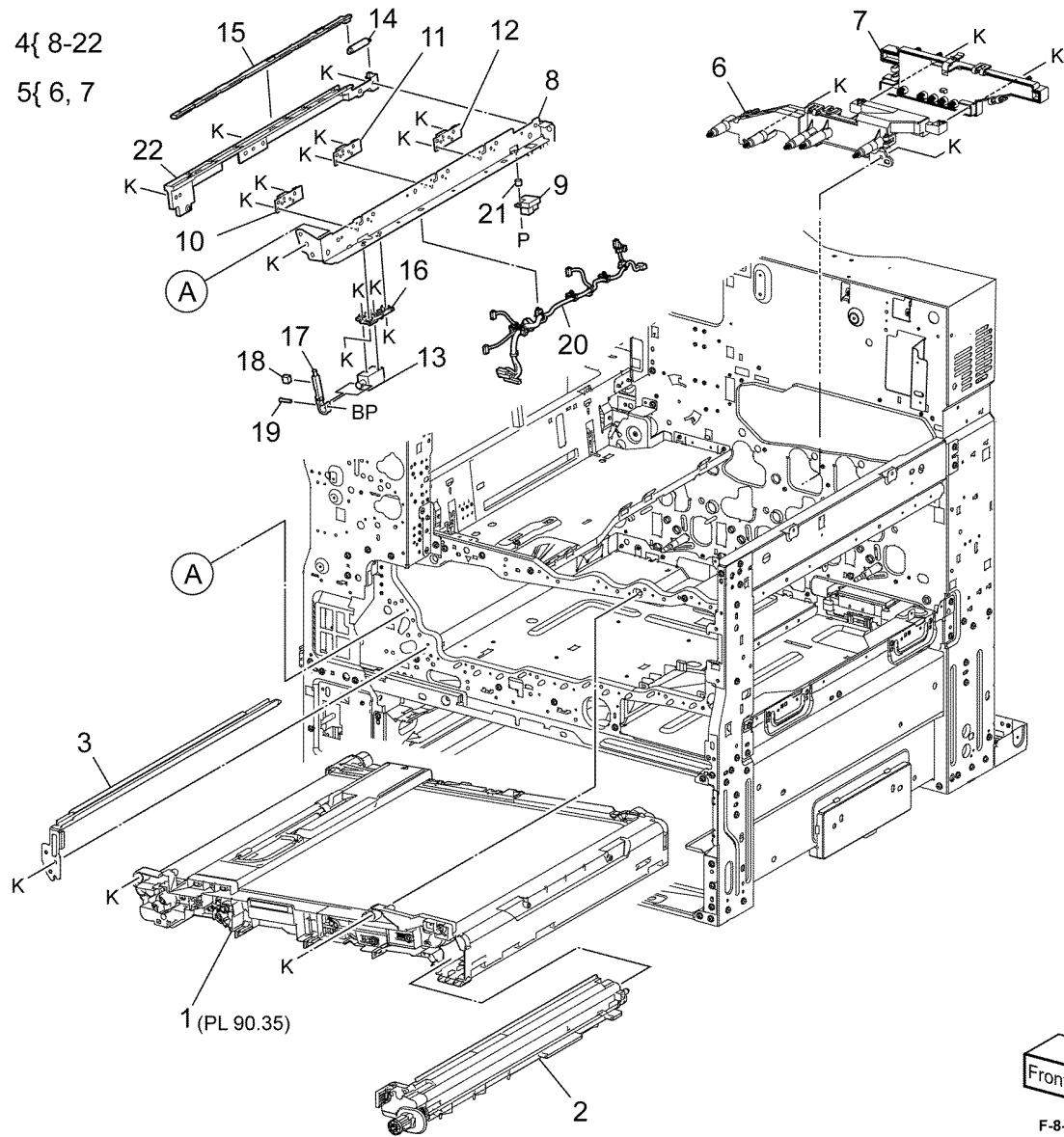
Item	Part	Description
1	-	Marking guide (P/O PL 60.05 Item 1)
2	948K00060	Housing assembly (REP 90.16)
3	113E48880	Drum CRUM connector



F-8-0172-A

PL 90.30 IBT Belt Unit Components

Item	Part	Description
1	064K02536	IBT belt assembly (REP 90.8)
2	104R00256	IBT belt cleaner assembly
3	-	IBT lower guide (Not Spared)
4	930K02752	MOB/ADC Assembly (REP 90.9)
5	948K01955	Conductor housing assembly (REP 90.10)
6	-	Lower conductor housing assembly (P/O PL 90.30 Item 5)
7	-	Upper conductor housing assembly (P/O PL 90.30 Item 5)
8	-	Bracket (P/O PL 90.30 Item 4)
9	-	Temp/Humidity sensor (internal) (P/O PL 90.30 Item 4)
10	-	Front MOB sensor (P/O PL 90.30 Item 4)
11	-	ADC sensor (Q92-029) (P/O PL 90.30 Item 4)
12	-	Rear MOB sensor (P/O PL 90.30 Item 4)
13	-	Shutter solenoid (P/O PL 90.30 Item 4)
14	-	Spring (P/O PL 90.30 Item 4)
15	-	Shutter (P/O PL 90.30 Item 4)
16	-	Solenoid holder (P/O PL 90.30 Item 4)
17	-	Arm (P/O PL 90.30 Item 4)
18	-	Cushion (P/O PL 90.30 Item 4)
19	-	Pin (P/O PL 90.30 Item 4)
20	-	MOBC harness assembly (P/O PL 90.30 Item 4)
21	-	Humidity spacer (P/O PL 90.30 Item 4)
22	-	Cover (P/O PL 90.30 Item 4)

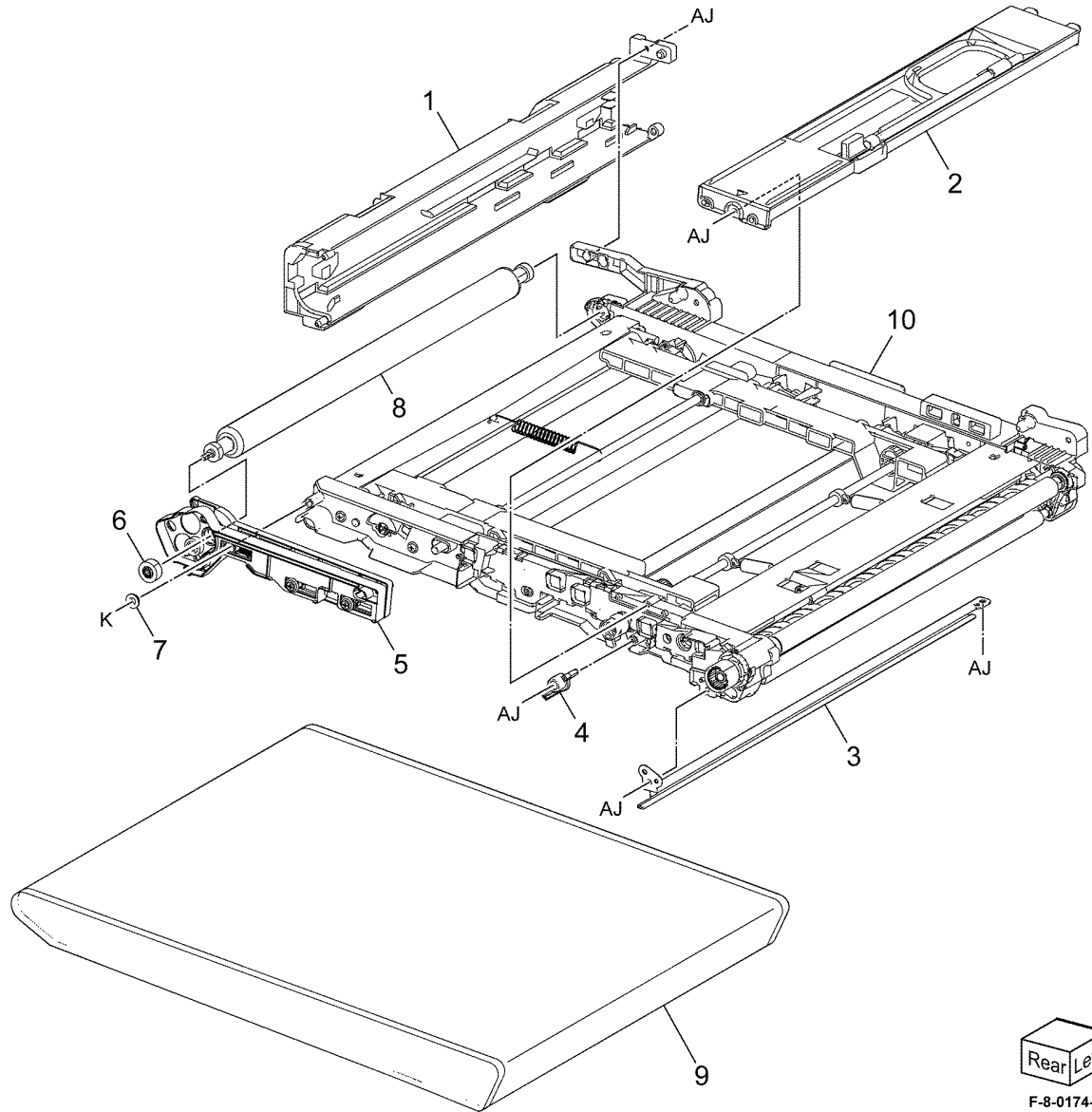


F-8-0173-A

PL 90.35 IBT Belt Unit Assembly

Item	Part	Description
1	-	Cleaner housing guide
2	-	Handle holder
3	-	IBT upper guide
4	-	Belt arm
5	-	Tension holder assembly
6	-	Tension gear
7	-	Tension collar
8	-	Tension roller assembly
9	-	IBT belt
10	-	IBT handle unit

NOTE: All parts are part of PL 90.30 Item 1.



Common Hardware

Item	Part	Description
A	-	Flat head screw (M3 x 14)
B	-	Screw (M3x6:Red)
C	-	Sems screw (M3x6)
D	-	Sems screw (M3x8)
E	-	Sems screw (M8x20)
F	-	Pan head screw (M2x10)
G	-	Screw (M3x4:Blue)
H	-	Screw (M3x4:White)
J	-	Screw (M3x6:Red)
K	-	Screw (M3x6:White)
L	-	Round point screw (M3x6:White)
M	-	Screw (M3x8)
N	-	Screw (M3x8)
P	-	Screw (M3x10)
Q	-	Screw (M3x12:White)
R	-	Screw (M3x14:White)
S	-	Screw (M3x16)
T	-	Pan head screw (M3x6:White)
U	-	Pan head screw (M3x14)
V	-	Screw (M4x6:White)
W	-	Screw (M4x8:White)
X	-	Pan head screw (M4x8:White)
Y	-	Screw (M4x10:White)
Z	-	Bind head screw (M3x6)
AA	-	Bind shuthead screw (3x8)
AB	-	Bind head screw (M3x4)
AC	-	Bind head screw (M3x6)
AD	-	Shoulder screw
AE	-	Setscrew (M4x4)
AF	-	Setscrew (M4x6)
AG	-	Tapping screw (M4x10)
AH	-	Tapping screw (M3x6:White)
AJ	-	Tapping screw (M3x8:White)
AK	-	Tapping screw (M3x10:White)
AL	-	Tapping screw (M3x10)
AM	-	Screw (M3x6)
AN	-	Round point screw (M3x7:White)
AP	-	Screw (M3x8:White)
AQ	-	Round point screw (M3x9:White)
AR	-	Screw (M4x8:White)
AS	-	Flat head knurling screw
AT	-	Flange nut (3)
AU	-	Special nut
AV	-	Washer (4)
AW	-	Nylon washer (6) (t 0.25)
AX	-	Nylon washer (6) (t 0.5)
AY	-	Nylon washer (6) (t 1)
AZ	-	Nylon washer (8) (t 1)
BA	-	Nylon washer (10) (t1.5)
BB	-	Dowel pin (1.6x8)
BC	-	Dowel pin (2.5x10)
BD	-	Dowel pin (2.5x16)
BE	-	Dowel pin (2.5x14)
BF	-	Dowel pin (3x10)
BG	-	Dowel pin (4x20)
BH	-	Spring pin (2x8)
BJ	-	Spring pin (2x12)
BK	-	Slotted tubular pin spring (2.5x10)
BL	-	Slotted tubular pin spring (3x10)
BM	-	Slotted tubular pin spring (3x16)
BN	-	C-clip (8)
BP	-	E-Clip (2:White)
BQ	-	E-Clip (3:White)
BR	-	KL-Clip (4)
BS	-	E-Clip (4:White)
BT	-	E-Clip (5:White)
BU	-	KL-Clip (6)
BV	-	E-Clip (6:White)
BW	-	E-clip (7)
BX	-	Pan Head Screw (M3x4:White)
BY	-	Knurling screw
BZ	-	Nylon washer (8) (t0.5)
CA	-	E-Clip (10:White)
CB	-	Screw (M4x16:White)
CC	-	Screw (M3x10:White)
CD	-	Screw (M4x30:White)
CE	-	Shoulder Screw
CF	-	Tapping Screw (M4x8:White)
CG	-	Tapping Screw (M3x14:White)
CH	-	Screw (M3x12:White)
CJ	-	Screw (M4x6:White)
CK	-	Screw (M4x10:White)
CL	-	Hexagon Nut
CM	-	Washer (10:White)
CN	-	Nylon Washer (8) (t 0.25)
CP	-	Nylon Washer (8) (t 1.5)
CQ	-	Spring Washer
CR	-	Dowel Pin (2x10)
CS	-	Dowel Pin (3x16)
CT	-	KL-Clip (3)
CU	-	KL-Clip (8)
CV	-	E-Clip (8:White)
CW	-	Sems Screw (M3x10)
CX	-	Pan Head Screw (Mx5)
CY	-	Screw (M2x10)
CZ	-	Tapping screw (M3x4)
DA	-	Pan Head Screw (M2.5x6)
DB	-	Pan Head Screw (M3x4)
DC	-	Pan head screw (M3x8)
DD	-	Set screw (M3x4)
DE	-	Tapping screw (M4x12)

DF	-	Tapping screw (M3x8)
DG	-	Washer (2.5(10.5))
DH	-	Washer (4) (10.8)
DJ	-	Washer (5)
DK	-	Nylon washer (4)
DL	-	Nylon washer (5)
DM	-	Nylon washer (10) (10.25)
DN	-	Nylon washer (10) (10.5)
DP	-	Spring washer
DQ	-	Dowel pin (2x12)
DR	-	Dowel pin (3x12)
DS	-	Dowel pin (3x14)
DT	-	Dowel pin (4x16)
DU	-	E-clip (1.5)
DV	-	E ring (2.5)
DW	-	Wing screw
DX	-	Screw (M4x6)
DY	-	Sems Screw (M3x6)
DZ	-	Screw (M3x6)
EA	-	Screw (M3x5)
EB	-	Screw (M2x10)
EC	-	Bind Head Screw (M3x8)
ED	-	screw (3x18)
EE	-	E-ring
EF	-	Dowel pin (2x10)
EG	-	Tapping screw (M4x5)
EH	-	Screw (3x6)
EJ	-	Washer (3) (10.5)
EK	-	Screw (3x8)
EL	-	Screw (2x4)
EM	-	Screw (3x8)

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GP 1 Diagnostics Entry

Purpose

This procedure describes how to enter and exit diagnostics and the available service routines.

How to Enter Diagnostics

1. If necessary, switch on the machine, [GP 10](#).

NOTE: Log out of system administration tools and delete all print jobs in the queue before entering diagnostics.

2. When the machine is ready, press and hold the Home button for 5 seconds. Release the home button.
3. When the passcode screen opens, enter the passcode, 6789. Touch **OK**. If the UI displays a message requesting a maintenance password, touch **Next**.

NOTE: The system administrator can set an extra level of diagnostics password protection. Security sensitive customers may have this feature enabled. If this feature is enabled, obtain the maintenance password from the customer.

4. If required, enter the maintenance password, touch **OK**. If the maintenance password is unavailable, refer to [Administrator Password Not Available](#).
5. Touch Diagnostics.
6. Select the relevant diagnostics routine:
 - [dC118](#) Jam Counter
 - [dC120](#) Failure Counter
 - [dC122](#) Shutdown History
 - [dC125](#) Faults
 - [dC126](#) System Registration Adjustment
 - [dC131](#) NVM Read/Write
 - [dC132](#) Device ID and Billing Data
 - [dC135](#) HFSI Counter
 - [dC140](#) Analog Component Monitoring
 - [dC301](#) Initialize NVM
 - [dC305](#) Panel Diagnostics
 - [dC330](#) Component Control
 - [dC355](#) Hard Disk Diagnostics
 - [dC362](#) Restore NVM Values
 - [dC363](#) Backup NVM Values
 - [dC402](#) LPH EEPROM Self Test
 - [dC612](#) Print Test Pattern
 - [dC671](#) Registration Measurement Cycle
 - [dC673](#) Registration Control Sensor Check Cycle
 - [dC675](#) Registration Control Setup Cycle
 - [dC740](#) MSI Guide Adjustment
 - [dC924](#) TRC Manual Adjustment
 - [dC937](#) Procon On/Off Print

- [dC949](#) Default Developer ATC Setup
- [dC950](#) ATC Sensor Setup
- [dC991](#) Tone Up/Down
- [dC1215](#) Transfer Voltage Adjustment

How to Exit Diagnostics

1. Touch Exit. Select either Clear Error Log History or Keep Error Log History.
2. Touch Service.
3. Touch Log Out.

Administrator Password Not Available

If the maintenance passcode is unavailable, perform the steps that follow:

1. From the Embedded Web Server Home screen, select **Log In**, then **Admin**.
2. Enter the password '1111' (default setting). Select **Log In**. If the administrator password is unknown, perform [GP 29](#) System Administrator Password Reset.
3. Select **System, Security**.
4. Select **Customer Service Engineer Access Restriction**. If this option is not displayed, select **SSL/TLS Settings**, then enable **HTTP-SSL/TLS Communication**. Then select **OK**, then **Restart Now**. After the restart, select **System**, then **Security**, then **Customer Service Engineer Access Restriction**.
5. Disable the feature, select **OK**, then **Restart Now**.
6. Enter diagnostics normally.

GP 2 Fault Codes and History Files

Purpose

To describe access to fault history information and explain the fault code structure.

Fault Data Available from Diagnostics

Diagnostics (GP 1) gives access to the fault history options that follow:

- For information on paper jam codes, refer to dC118 Jam Counter.
- For information on failures, refer to dC120 Failure Counter.
- For information on current machine faults, refer to dC125 Faults.

Function, Fault, Component Codes

Refer to Table 1 for a description of the function and fault code prefixes.

Table 1 Fault code prefixes and Functions

Chain Code	Function
118	Machine Controller
121	Accessory
123	User Interface
124	Machine Controller
125	Machine Controller
127	Machine Controller
500	Machine Controller

Table 1 Fault code prefixes and Functions

Chain Code	Function
001	Standby power
002	User interface
003	Machine run control
010	Fusing and copy/print transportation
012	BR Finisher and LX Finisher
013	LX Finisher Booklet Maker
016	Network controller
017	Network controller
018	Network controller
021	Machine Controller
023	User interface
024	Machine Controller
025	Hard Disk Drive
026	Machine Controller
027	Machine Controller
028	Machine Controller
029	Network controller
041 to 047	Main drives
058	Fusing
060 to 061	LED print head
071 to 078	Paper supply, feed and transportation
089	Image Transfer
091 to 099	Xerographics
102	Machine Controller
103	Machine Controller
112	Finisher
116	Machine Controller
117	Machine Controller

GP 3 Device Information

Purpose

To provide machine hardware and software information.

Service Information Available

From the Home screen, touch Device. This gives the options that follow:

- Language
- About:
 - Device Name
 - Model
 - Serial Number
 - Xerox Asset Tag
 - Customer Asset Tag
 - Software Version
 - Contact information
 - Network information
 - Information Pages
- Software Update
- Notifications
- Paper Trays
- Supplies
- Billing Usage
- General:
 - Measurements
 - Date & Time
 - System Timeout
 - Display Brightness
 - Sounds
 - Power Save
 - Feature Installation
- Connectivity
- Support
- Resets:
 - Reset 802.1X and IPsec
 - Reset Fonts, Forms and Macros
 - Reset to Factory Defaults

GP 4 Machine Software

Purpose

To provide machine software information and explain the software loading procedures.

Obtaining Machine Software

The firmware download manager tool (FWDLMgr.exe) and the device firmware file (.bin) can be downloaded from the Xerox.com, Product Support & Drivers page.

Procedure

Four methods are available to download the machine software:

1. [Software Loading via the Special Boot Menu](#)
2. [Software Loading via the Embedded Web Server](#)
3. [Software Download via the USB Port](#)
4. [Software Download via the Network Port \(Port 9100\)](#)

Software Loading via the Special Boot Menu

NOTE: A video of this procedure is available on the EDOC. The video is accessible from the Library menu on the Service Interface.

1. Download the firmware (.bin) file, refer to [Obtaining Machine Software](#).
2. Create a folder named 'DWLD' on the USB memory device.
3. Store the software download file (.bin) in the 'DWLD' folder
4. Switch off the machine, [GP 10](#). Insert the USB memory device.
5. Enter special boot mode, [GP 22](#). Select Download Mode on SPECIAL BOOT MENU 1/3, then touch **YES**. The UI will display SW update progress. The machine will eventually reboot.

CAUTION

Do not switch off the printer until the reboot is complete. The printer will reboot after the download is complete.

6. After the reboot, a Software Upgrade Report will print. Remove the USB memory device.

Software Loading via the Embedded Web Server

There are three options available for updating the software via the Embedded Web Page:

- [Check Now](#)
- [Periodic Updates](#)
- [Updates with File Specified](#)

Check Now

Use this feature to check for software updates.

Perform the steps that follow:

1. Log in as an administrator via the Embedded Web Server. Ensure that software Update is set to **Enable** (Home/System/Software Update/Enable).
2. Touch **Check Now**.

Periodic Updates

Use this feature setup the device to check periodically (daily, weekly, monthly) for software updates.

Perform the steps that follow:

1. Log in as an administrator via the Embedded Web Server. Ensure that software Update is set to **Enable** (Home/System/Software Update/Enable).
2. Under the Check Automatically banner, use to pull down menu to set "When should the Device check for updates?" to Never, Daily, Weekly or Monthly.

Updates with File Specified

Perform the steps that follow:

1. Download the firmware (.bin) file, refer to [Obtaining Machine Software](#).
2. Log in as an administrator via the Embedded Web Server. Ensure that software Update is set to **Enable** (Home/System/Software Update/Enable).
3. Select **System**.
4. Select **Software Update**.
5. Under **Update with File Specified**, click **Select**, browse and select the desired bin file and click **Open**.
6. Select **Install Now**.

Software Download via the USB Port

Perform the steps that follow:

1. Download the appropriate firmware download manager tool (FWDLMgr.exe) and firmware (.bin) to an appropriate file location on the PWS. Refer to [Obtaining Machine Software](#).
2. Connect a USB cable (type A/B) from the PWS to the machine.
3. Double click on FWDLMgr.exe to run the firmware download manager tool.
4. Touch **Agree** on the Firmware Update Tool (License).
5. The Printer Model And File Selection window will open. From the pull down menu, select the printer model, then browse to where the firmware file (.bin) is located. Double-click the (.bin) file then select **Add**, then select **Next**.
6. The Communication Interface Selection window will open. Select **USB Port**, then select **Next**.
7. The software update status appears on the Update in Progress screen.

CAUTION

Do not switch off the machine until the reboot is complete. The machine will reboot after the download is complete.

8. When the update is complete, the Result window will open. Touch **complete**. The machine will reboot, and a Software Upgrade Report will be printed.

Software Download via the Network Port (Port 9100)

Perform the steps that follow:

1. Download the appropriate firmware download manager tool (FWDLMgr.exe) and firmware (.bin) to an appropriate file location on the PWS. Refer to [Obtaining Machine Software](#).
2. Switch off the machine, [GP 10](#).

3. Disconnect the ethernet cable from the machine. Connect an ethernet crossover cable from the PWS network port to the machine network port. Refer to [GP 25 Ethernet Crossover Cable Setup](#).
 4. Switch on the machine, [GP 10](#). When the machine reaches the Ready state, print a configuration report, [GP 14](#).
 5. Ensure the IP address (refer to the configuration report) of the machine can be pinged from the PWS:
 - a. Open a command window (CMD):
 - If running Windows 7, select **Start** and in the Search box above the Start button, type **CMD**, then press **Enter**.
- NOTE:** *If the Windows key is enabled (the key located in the lower left corner with the Microsoft logo), hold the Windows key down, press R and release both keys to open the Command window.*
- b. In the Command window (where the blinking cursor is) type ping. Press the space bar once, then enter the IP address of the device. Press **Enter**.
 - c. If the ping command is successful, the device will reply four times. This should not take more than two or three seconds.
 - d. If the ping command times out, or responds with 'host unreachable', check the IP address that was entered. If the IP address is correct, contact 2nd level support.
6. Log in as an administrator via the Embedded Web Server. Ensure that software Update is set to **Enable** (Home/System/Software Update/Enable).
 7. Double click on FWDLMgr.exe to run the firmware download manager tool.
 8. Touch **Agree** on the Firmware Update Tool (License).
 9. The Printer Model And File Selection window will open. From the pull down menu, select the printer model, then browse to where the firmware file (.bin) is located. Double-click the (.bin) file then touch **Add** and then touch **Next**.
 10. The Communication Interface Selection window will open. Select **Network (Port9100)**, then touch **Next**.
 11. The Printer Specification window will open. Specify the printer to be updated (entering the IP address is the best method). Touch **Next** to start the software download.
 12. The software update status appears on the Update in Progress screen.

CAUTION

Do not switch off the machine until the reboot is complete. The machine will reboot after the download is complete.

13. When the update is complete, the Result window will open. Touch **complete**. The machine will reboot, and a Software Upgrade Report will be printed.

GP 5 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.

Rollers

- Flats.
- Tears.
- Contamination.
- Secure E-clips and other retainers.

Shafts

- Contamination.
- Misalignment.
- Rotates without binding.

GP 6 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

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. 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.

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.

- Disconnect PJB ([Flag 2](#)). Check that +24V is measured when the component control code for the motor is entered.
- Disconnect PJA ([Flag 1](#)). Check for +24V on the LVPS.
- Disconnect PJC ([Flag 3](#)). Check that the signal changes on the ESS PWB when the component control code for the motor is entered.
- Check the wiring and the connectors for the motor circuit.

Four Wire Stepper Motor

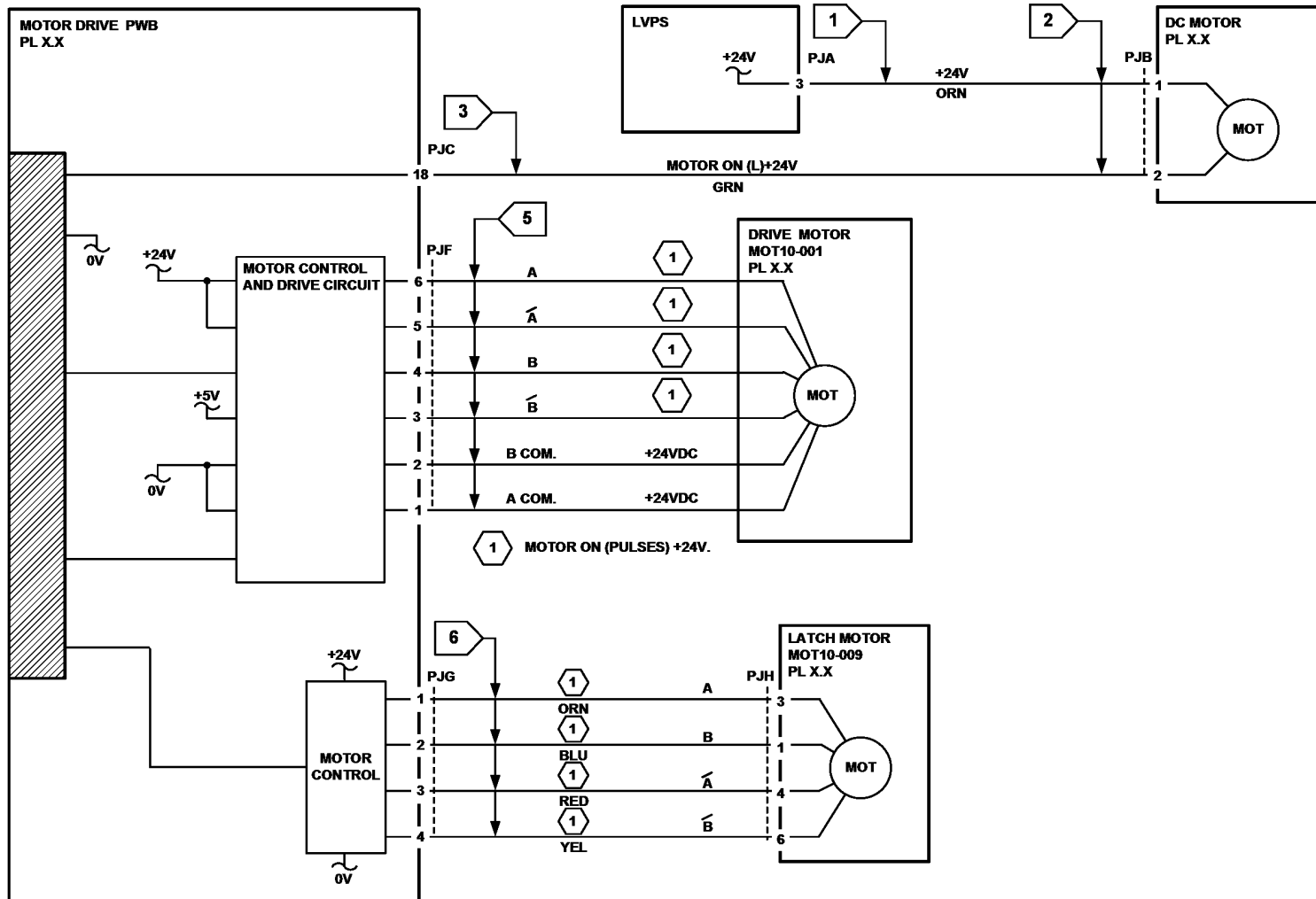
NOTE: A stepper motor with an internal open circuit may appear to be fully functional under [dC330](#) component control. However, under normal operation it will run with intermittent failure. Use the standard digital meter to check that the resistance of the stepper motor coils are similar.

- Disconnect PJH ([Flag 6](#)). Check the motor on pulses on the harness when the component control code for the motor is entered.
- Disconnect PJJ ([Flag 6](#)). 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.

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.

- Disconnect PJF ([Flag 5](#)). Check the +24V supply and the motor on pulses when the component control code for the motor is entered.
- Check the wiring and the connectors for the motor circuit.



TF-1-0178-A

Figure 1 Wiring diagram

GP 7 How to Check a Sensor

Purpose

Use this procedure to check the operation of a sensor.

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.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). 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 actuates 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.

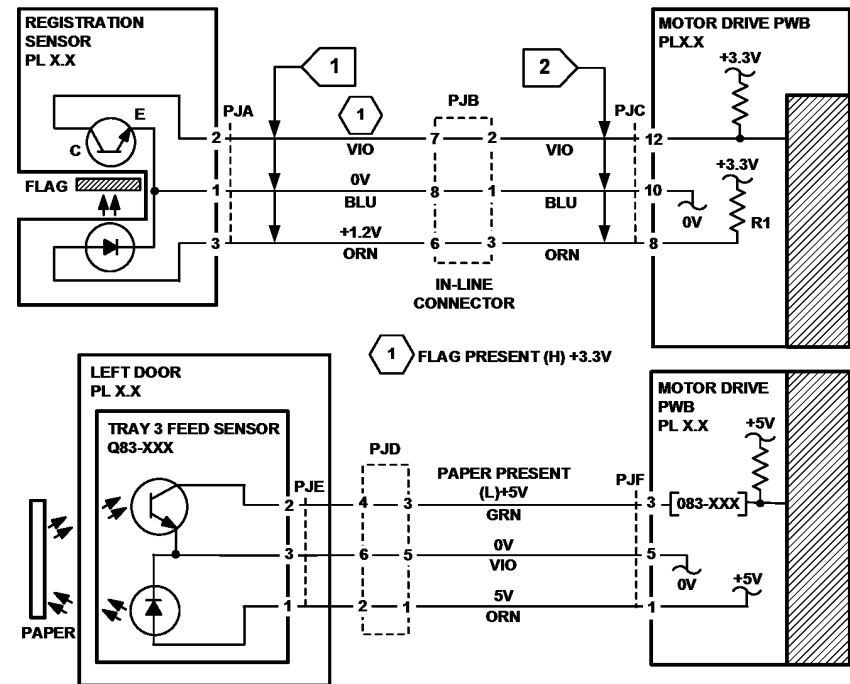
Quick Sensor Check

Enter the component control code for the sensor. Refer to [dC330](#). Actuate 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](#):

- Disconnect PJA ([Flag 1](#)). Check for +3.3V and 0V at PJA on the harness.
- Disconnect PJC ([Flag 2](#)). Check the wiring and the connectors for the sensor circuit.
- Check for +3.3V and 0V at PJC ([Flag 2](#)) on the ESS PWB.
- If necessary, install new components or repair the wiring.



TF-1-0179-A

Figure 1 Wiring diagram

GP 8 How to Check a Solenoid or Clutch

Purpose

Use this procedure to check a clutch or solenoid.

Initial Actions

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

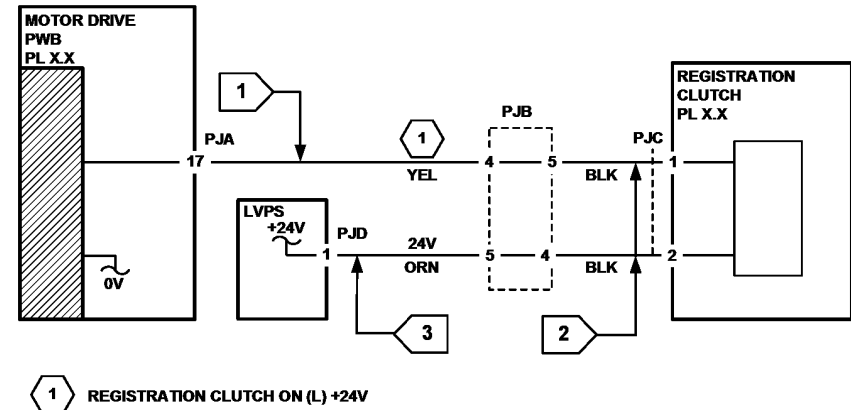
1. For a clutch, check that the mechanical components are clean, free to move and are lubricated correctly
2. For a solenoid, check that the armature and associated mechanical components are free to move.

Procedure

NOTE: The voltages, PJ numbers, pin numbers and PWB names shown are an example only.

NOTE: When a solenoid is energized in diagnostics, armature movement is seen. When a clutch is energized in diagnostics, the sound of the clutch action is heard. If possible, energize the motor connected to the clutch to confirm when the clutch is energized.

- Check that the signal changes on the ESS PWB (Flag 1) when the component control code for the clutch or solenoid is entered.
- Disconnect PJC (Flag 2). Check that +24V is measured when the component control code for the clutch or solenoid is entered.
- Disconnect PJD (Flag 3). Check for +24V on the LVPS.
- Check the wiring and the connectors for the clutch or solenoid circuit.



TF-1-0180-A

Figure 1 Wiring diagram

GP 9 How to Check a Switch

Purpose

Use this procedure to check the operation of a switch.

NOTE: The circuit in [Figure 1](#) shows an interlock switch actuated by the closing of a door.

Initial Actions

WARNING

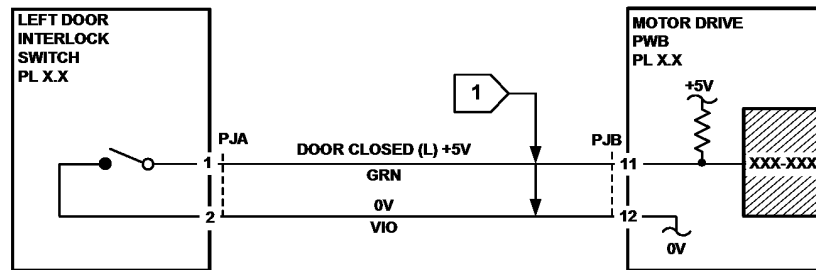
Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to [GP 10](#). Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

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.

Procedure

- Disconnect PJA ([Flag 1](#)). Check the electrical operation of the switch.
- Disconnect PJB ([Flag 1](#)). Check for +5V and 0V on the IOT PWB.
- Check the wiring and the connectors for the switch circuit.



TF-1-0181-A

Figure 1 Wiring diagram

GP 10 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](#)
- [Quick Restart](#)
- [Switch On Procedure](#)
- [Sleep 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. The Power Down Options window will display.
2. Touch Power Off.
3. Open the front cover, [PL 28.05 Item 8](#). Switch off the main power switch, [PL 1.20 Item 1](#).
4. When the machine has switched off, remove the power cord bracket, [PL 1.10 Item 4](#), then remove the power lead from the outlet.

Quick Restart

The quick restart causes the system to reset the software of the ESS PWB, the drive PWB and the UI.

1. Press the Power button on the UI. 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, install the power cord bracket, [PL 1.10 Item 4](#).
4. Switch on the main power switch, [PL 1.20 Item 1](#).
5. Press the Power button on the UI.
6. 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 LEDs on the controller PWB. Refer to the [OF1 POST Error RAP](#). TBD

Restart

Restart is selected from the Power Down Options window. When pressed, the machine should restart within 2 minutes.

Sleep Mode

Sleep is selected from the Power Down Options window. When pressed, the machine should immediately enter sleep mode.

GP 12 Machine Lubrication

Purpose

To give information on the use of lubricants.

Procedure

WARNING

Ensure that the electricity to the machine is switched off while performing tasks that do not need electricity. Refer to GP 10. Disconnect the power cord. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

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.
- 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 13 Network Clone Procedure

Purpose

Use this procedure to establish a network connection between the PWS and printer, create a copy of network configuration settings and then distribute these settings to multiple devices on the network. This cloning process can also be used to backup and restore network settings lost during a software reload.

NOTE: To establish a direct Ethernet connection between the PWS and printer requires the printer's driver installation CD-ROM, a crossover cable, and the PWS.

Depending on the printer, a Windows 7 (W7) driver might not be available on the printer's driver installation CD-ROM. If not, download the driver from Xerox.com under the Support and Drivers page. Windows 7 has two kernel types, 32 and 64-bit. If installation of the wrong driver is attempted, Windows displays an error to indicate the driver is incorrect. To check the kernel type, click on Start, in the right column, right click on Computer and select Properties, the kernel type will be listed as System Type.

Procedure

Refer to the relevant procedure:

- [Establishing a LAN Connection](#)
- [Creating the Clone File](#)
- [Using the Clone File](#)
- [Set a Static IP Address on the PWS](#)
- [PWS Browser Proxy Server Setting](#)

Establishing a LAN Connection

Use these steps to establish a Local Area Network (LAN) connection between the PWS and printer using a crossover cable.

NOTE: Record the original data for every change. It may be necessary to reset the IP address, depending on PWS usage and local network practice.

1. Print a Configuration Report, GP 14. Note the printer's IP address.
2. Connect the crossover cable between the PWS and printer.
3. Open a Command window (CMD) on the PWS.
 - If running Windows XP, click on **Start**, then select **Run**. Type **CMD** in the Run dialog box and press **Enter**.
 - If running Windows 7, select **Start** and in the Search box above the Start button, type **CMD** and press **Enter**.

NOTE: If the Windows key is enabled (the key located in the lower left corner with the Microsoft logo), hold the Windows key down, press R and release both keys to open the Run dialog box.

4. Type **ipconfig** at the prompt, record the current network settings displayed. Restore these settings when the LAN connection is no longer needed.

NOTE: Use the IPv4 address for the Local Area Connection, not the address listed under Wireless Ethernet Connection (if enabled in the laptop).

- Check the IP addresses of the PWS and printer. If the PWS has been connected to the same subnet, the PWS and printer address should share the same values for the first three and have a different value for the fourth number. Refer to [Table 1](#) for an example.

Table 1 Example LAN settings

	Printer	PWS / Laptop
IP Address	192.168.0.2	192.168.0.5
Subnet Mask	255.255.255.0	255.255.255.0
Gateway/Router	192.168.0.1	192.168.0.1

If the PWS and printer share similar, but unique IP address, continue. If not, use the Set a Static IP Address on the PWS to set the PWS IP address.

- After verifying the IP addresses are correctly configured, PING the printer:
 - In the Command window (where the blinking cursor is) type the word **PING**. Press the space bar once and enter the printer's IP address and press **Enter**. As an example: ping 192.168.0.2.
 - If the printer responds to the PING command, it replies four times. This should not take more than two or three seconds.
 - If the PING command times out, or responds with "host unreachable", check the IP addresses that were entered. If the IP address is correct, contact 2nd level support.
- If the PING command replies, exit the Command window (type "exit" at the prompt and press **Enter**). This test verifies the Ethernet connection is good.
- Install the printer driver and setup the printer as a local printer. Select connect to the printer using "other" port type. From the dialog drop down select Standard TCP/IP port.
- For the printer name or IP address, enter the printer's IP address (192.168.0.2 in this example).
- When the driver installation finishes, Select **Yes** at the Print Test Print dialog box.

NOTE: If the test page does not print, the customer could have Accounting enabled (if the device supports it) requiring that a special code is submitted with the print job before the printer prints.
- After the test print is completed, open a web browser on the PWS.
- In the Address Bar (in place of a web site address or URL), enter the printer's IP address (192.168.0.2 in this example).
- If the connection is working correctly, the web page of the printer will be displayed.

NOTE: If the printer's web page cannot be opened, verify that Web Services are enabled on the configuration page. If the web browser is set to use a Proxy address for the internet connection, it will not be possible to open the printer's web page as there will be no connection to that proxy server while directly connected to the printer via the crossover Ethernet cable. Refer to PWS Browser Proxy Server Setting for instructions on Internet Explorer proxy configuration.

Creating the Clone File

NOTE: This procedure can be performed from any PC connected to the network or the PWS connected to the machine using an Ethernet crossover cable. The only requirement on the PC is an Internet Browser.

- Open Internet Explorer
- Enter the machine's IP address in the **Address** line and select **Go**.
- When the **Internet Services** window opens, login to **Admin** mode, [GP 23](#). Click on the **Home** tab, then the **Cloning** link.
- Select individual parameters to clone from the device or Select/Clear All.
- Click on Create.
- If prompted, save the clone file to an easily remembered location that for later installation. If not prompted to save the file, look for it in the Downloads folder.
- Click Close.
- Log out of **Admin** mode, [GP 19](#).

Using the Clone File

NOTE: This procedure can be performed from any PC connected to the network or the PWS connected to the machine using an Ethernet crossover cable. The only requirement on the PC is an Internet Browser.

- Open Internet Explorer
- Enter the machine's IP address in the **Address** line and select **Go**.
- When the **Internet Services** window opens, login to **Admin**, [GP 23](#). Click on the **Home** tab, then the **Cloning** link.
- Click on the **Select** button.
- Use the **Browse** button to navigate to the clone file, or type the full path to the file, then click **Open**.
- Click **Install**.
- Verify the cloned settings with a new Configuration Report.

Set a Static IP Address on the PWS

Use this procedure to manually set the PWS IP address. Instructions are given for W7 and XP.

NOTE: If the PWS has a wireless Ethernet card/adaptor installed, Windows will not use the wired Ethernet port by default until either the PWS is rebooted or the wireless Ethernet card is temporarily disabled. If unsure how to disable/enable the wireless Ethernet card, restart the PWS after setting the IP address.

For W7:

- Open the **Control Panel**.
- Select **Network Sharing Center**.
- Select **Change Adaptor Settings** in the upper left corner of the Control Panel.
- Right-click on **Local Area Connection**, then select **Properties**.
- On the Networking tab (for local area connection), click on **Internet Protocol Version 4** (TCP/IPv4), then select **Properties**.
- Select **Use the following IP address** and enter an IP address similar to the printer to manually set the PWS IP address and subnet mask to match the printer's IP configuration settings.

7. Click **OK** twice and exit Network Connections and return to [Creating the Clone File](#).

For XP:

1. Click **Start** and select **Control Panel**.
2. Click **Network and Internet Connections** and then select **Network Connections**.
3. Right-click on **Local Area Connection** and then select **Properties**.
4. On the General tab (for local area connection), click **Internet Protocol (TCP/IP)**, and then click on **Properties**.
5. Click **Use the following IP address** to manually set the computer's IP address and subnet mask to match the printer's IP configuration.
6. Click **OK** twice to exit Network Connections and return to [Creating the Clone File](#).

PWS Browser Proxy Server Setting

The following steps ensure the proxy server settings are correct.

1. Open **Windows Internet Explorer**.
2. Select **Tools - Internet Options**.
3. Select the **Advanced** tab.
4. Scroll down to **HTTP 1.1 Settings**.
5. Ensure that the "Use HTTP 1.1 through proxy connections" box is **un-checked**.
6. Select **OK** to close the **Internet Options** window.
7. Close **Windows Internet Explorer**.

GP 14 Printing Reports

Purpose

To list reports available from the UI:

- [Configuration Report](#)
- [Billing Summary Report](#)
- [Supplies Usage](#)
- [PostScript Font List](#)
- [PCL Font List](#)
- [Demonstration Print](#)
- [Startup Page](#)
- [Job History](#)

Procedure

Perform the steps that follow:

1. From the Home Screen, touch Device.
2. Touch About.
3. Scroll to the bottom of the list, then touch Information Pages.
4. Select the desired report, then touch Print.

Configuration Report

The Configuration Report lists the current state of system configuration parameters including installed options and network settings.

Billing Summary Report

The Billing Summary Report lists Device Information, Billing Meter impression counters (for customers on billing meter supplies plans only) and Sheet Count by Paper Type.

Supplies Usage

The Supplies Usage report includes the current status of printer consumables and routine maintenance items. Installation dates and replacement part numbers are listed.

PostScript Font List

This report provides a list of the installed PostScript fonts.

PCL Font List

This report provides a list of the installed PCL fonts.

Demonstration Print

This report shows a brief synopsis of the device.

Startup Page

This report lists device type, software versions, enabled protocols and mobile connectivity.

Job History

Print lists of all jobs, print jobs, job via network communications, and file transfer jobs.

GP 15 Paper and Media Size Specifications

Purpose

To list the paper and media size specifications.

Specifications

NOTE: Check that the paper tray settings match the paper size in the tray.

Refer to the tables that follow:

- [Table 1](#). Supported paper size and weight for trays 1, 2, 3, 4, 5 and 6.

- [Table 2](#). Recommended paper types.
- [Table 3](#). Supported banner size media.
- [Table 4](#). Office Finisher LX supported paper size. The table defines the paper sizes that can be delivered to the output bins of the Office finisher LX.
- [Table 5](#). Office Finisher LX recommended paper types. The table defines the paper types that can be delivered to the output bins of the Office finisher LX.
- [Table 6](#). Envelope Tray supported envelope sizes.

Table 1 Supported paper size and weight

	Tray	Supported Paper (Standard Size)	Supported Paper (Custom Size) (W x L)	Supported Paper Weight	Capacity	Remarks
IOT	1	Min: Postcard SEF Max: A3 SEF, 11x17 inch SEF	Min: 100.0 x 148.0mm Max: 297.0 x 431.8mm	64 to 300gsm (17 to 203lbs)	520 (80gsm/54lbs)	Stack height 54mm (2.1 inches)
	2	Min: Postcard SEF Max: SRA3 SEF, 12x18 inch SEF	Min: 100.0 x 148.0mm Max: 220.0 x 457.2mm	64 to 300gsm (17 to 203lbs)	520 (80gsm/54lbs)	Stack height 54mm (2.1 inches)
2TM	3	Min: Postcard SEF Max: SRA3 SEF, 12x18 inch SEF	Min: 100.0 x 148.0mm Max: 320.0 x 457.2mm	64 to 300gsm (17 to 203lbs)	520 (80gsm/54lbs)	Stack height 54mm (2.1 inches)
	4	Min: Postcard SEF Max: SRA3 SEF, 12x18 inch SEF	Min: 100.0 x 148.0mm Max: 320.0 x 457.2mm	64 to 300gsm (17 to 203lbs)	520 (80gsm/54lbs)	Stack height 54mm (2.1 inches)
TTM	3	Min. B5 LEF Max. A4 LEF/8.5x11 inch LEF	Not supported	64 to 300gsm (17 to 203lbs)	980 (80gsm/54lbs)	
	4	Min. B5 LEF Max. A4 LEF/8.5x11 inch LEF	Not supported	64 to 300gsm (17 to 203lbs)	1280 (80gsm/54lbs)	
Bypass	5	Min: Postcard SEF Max: SRA3 SEF, 12x18 inch SEF	Min. 88.9 x 98.4mm Max. 320.0 x 482.6mm For banner printing, max. feed length is 1320.8mm (52 inch) Banner size: 483mm < feed length < 1320.8mm (52 inch)	64 to 350gsm (17 to 236lbs)	100 (80gsm/54lbs)	Stack height 10mm (0.4 inch) Feed performance for paper less than 140mm (5.5 inches) in length may result in fuser jams.
HCF	6	Min. B5 LEF, 7.25x10.5 inch LEF Max. A4 LEF/8.5x11 inch LEF	Not supported	64 to 216gsm (17 to 146lbs)	2000 (80gsm/54lbs)	

Table 2 Recommended paper types

Media type	Weight	Trays 1 and 2 (52 to 300gsm) (*1)	Envelope tray	Trays 3 and 4 (2TM) (52 to 300gsm) (*1)	Trays 3 and 4 (TTM) (52 to 300gsm) (*1)	Tray 5 (bypass) (52 to 350gsm) (*1)	Tray 6 (HCF) (52 to 216gsm)	Auto Duplexing (52 to 300gsm) (*3)
Lightweight	52 to 63gsm	NA	NA	NA	NA	NA	NA	NA
Plain	64 to 105gsm	Y	N	Y	Y	Y	Y	Y
Bond	64 to 105gsm	Y	N	Y	Y	Y	Y	Y
Lightweight card stock	106 to 176gsm	Y	N	Y	Y	Y	Y	Y
Card stock	177 to 220gsm	Y	N	Y	Y	Y	Y (*2)	Y
Heavyweight card stock	221 to 300gsm	Y (*1)	Y (*1)	Y (*1)	Y (*1)	Y (*1)	Y (*2)	Y (*3)
Extra heavyweight card stock	301 to 350gsm	Y (*1)	N	Y (*1)	Y (*1)	Y (*1)	N	N
Letterhead	64 to 105gsm	Y	N	Y	Y	Y	Y	Y
Labels	106 to 176gsm	Y	N	Y	Y	Y	N	N
Envelope	-	N	Y	N	N	Y	N	N
Postcard	106 to 220gsm	Y	N	Y	Y	Y	N	Y
Lightweight glossy card stock	106 to 176gsm	Y	N	Y	Y	Y	Y	Y
Glossy card stock	177 to 220gsm	Y	N	Y	Y	Y	Y (*2)	Y
Heavyweight glossy card stock	221 to 300gsm	Y (*1)	N	Y (*1)	Y (*1)	Y (*1)	Y (*2)	Y (*3)
Extra heavyweight glossy card stock	301 to 350gsm	Y (*1)	N	Y (*1)	Y (*1)	Y (*1)	N	N
Pre-printed	64 to 105gsm	Y	N	Y	Y	Y	N	N
Hole punched	64 to 105gsm	Y	N	Y	Y	Y	Y	Y
Recycled	64 to 105gsm	Y	N	Y	Y	Y	Y	Y
Custom types 1 to 5	64 to 105gsm	Y	N	Y	Y	Y	Y	Y

NOTE: (*1)

Paper weighing over 256gsm, performance may not be guaranteed for some papers. Banner size printing is available from tray 5 (bypass). The controller does not restrict use of any media type. 350gsm media should only be used for the C9000 and only via tray 5 (bypass). The driver restricts use of media type to the following 9 media types:

1. Plain and bond.
2. Lightweight card stock.
3. Card stock.
4. Heavyweight card stock.
5. Extra heavyweight card stock.
6. Lightweight glossy card stock.
7. Glossy card stock.
8. Heavyweight glossy card stock.
9. Extra heavyweight glossy card stock.

NOTE: (*2)

The HCF supports up to 216gsm. Performance guaranteed for paper up to 216gsm, but the controller does not restrict the use of heavyweight glossy card stock (221-300gsm).

NOTE: (*3)

Paper weighing over 220gsm, performance may not be guaranteed for some papers.

Table 3 Supported banner size media

Media	Size	Weight
Xerox accent opaque	320 x 1016mm (12.6 x 40 in.)	104 gsm (65 lb.)
Xerox accent opaque	320 x 1016mm (12.6 x 40 in.)	176 gsm (70 lb.)
Xerox accent opaque	320 x 1016mm (12.6 x 40 in.)	216 gsm (80 lb.)
Xerox vitality or Xerox business	320 x 1320.8mm (12.6 x 52 in.)	75gsm
Xerox vitality or Xerox business	320 x 1320.8mm (12.6 x 52 in.)	221 to 256gsm
Xerox vitality or Xerox business	320 x 1320.8mm (12.6 x 52 in.)	257 to 300gsm

Table 4 Office Finisher LX supported paper size

Paper Size	Orientation	Width (cross feed)	Length (feed direction)	Staple Front	Staple Rear	Staple Dual	Stacked	Notes
A6	SEF	105mm	148.5mm	N	N	N	N	
	LEF	148.5mm	105mm	N	N	N	N	
A5	SEF	148.5mm	210mm	N	N	N	N	
	LEF	210mm	148.5mm	N	N	N	Y	
A4	SEF	210mm	297mm	Y	Y	Y	Y	
	LEF	297mm	210mm	Y	Y	Y	Y	
A3	SEF	297mm	420mm	Y	Y	Y	Y	
B6	SEF	128.5mm	182mm	N	N	N	N	
	LEF	182mm	128.5mm	N	N	N	N	
B5	SEF	182mm	257mm	N	N	N	N	
	LEF	257mm	182mm	Y	Y	Y	Y	
B4	SEF	257mm	364mm	Y	Y	Y	Y	
5.5 x 85 in. (statement)	SEF	139.7mm	215.9mm	N	N	N	N	
	LEF	215.9mm	139.7mm	N	N	N	N	
7.25 x 10.5 in. (executive)	SEF	184.2mm	266.7mm	N	N	N	N	
	LEF	266.7mm	184.2mm	Y	Y	Y	Y	
8 x 10 in.	SEF	203.2mm	254mm	N	N	N	N	
	LEF	254mm	203.2mm	Y	Y	Y	Y	
8.5 x 11 in. (letter)	SEF	215.9mm	279.4mm	Y	Y	Y	Y	
	LEF	279.4mm	215.9mm	Y	Y	Y	Y	
215 x 315mm (8.46 x 12.4 in.)	SEF	215mm	315mm	Y	Y	Y	Y	
8.5 x 13 in.	SEF	215.9mm	330.2mm	Y	Y	Y	Y	
8.5 x 14 in. (legal)	SEF	215.9mm	355.6mm	Y	Y	Y	Y	
11 x 15 in.	SEF	279.4mm	381mm	Y	Y	Y	Y	
11 x 17 in. (ledger)	SEF	279.4mm	431.8mm	Y	Y	Y	Y	
A4-cover	SEF	223mm	297mm	Y	Y	Y	Y	
	LEF	297mm	223mm	Y	Y	Y	Y	
A4-tab (index)	LEF	297mm	223mm	-	-	-	-	
9 x 11 in. (letter cover)	SEF	228.6mm	279.4mm	Y	Y	Y	Y	
	LEF	279.4mm	228.6mm	Y	Y	Y	Y	
Minimum size	-	210mm	182mm	-	-	-	-	
Maximum size	-	297mm	432mm	-	-	-	-	

Table 5 Office Finisher LX recommended paper types

Media type	Weight	Stack (52 to 2200gsm)	Offset (52 to 220gsm)	Punch (52 to 200gsm)	Staple (52 to 220gsm)	Booklet (60 to 220gsm)	Crease (fold line only) (60 to 105gsm)
Lightweight	52 to 63gsm	NA	NA	NA	NA	NA	NA
Plain	64 to 105gsm	Y	Y	Y	Y (*1)	Y (*3)	Y
Bond	64 to 105gsm	Y	Y	Y	Y (*1)	Y (*3)	Y
Lightweight card stock	106 to 176gsm	Y	Y	Y	Y (*1)	Y (*3)	N
Card stock	177 to 220gsm	Y	Y	Y (*2)	Y (*1)	Y (*3)	N
Heavyweight card stock	221 to 300gsm	N	N	N	N	N	N
Extra heavyweight card stock	301 to 350gsm	N	N	N	N	N	N
Letterhead	64 to 105gsm	Y	Y	Y	N	Y (*3)	Y
Labels	106 to 176gsm	N	N	N	N	N	N
Envelope	-	N	N	N	N	N	N
Postcard	106 to 220gsm	N	N	N	N	N	N
Lightweight glossy card stock	106 to 176gsm	Y	Y	Y	Y (*1)	N	N
Glossy card stock	177 to 220gsm	Y	Y	Y (*2)	Y (*1)	N	N
Heavyweight glossy card stock	221 to 300gsm	N	N	N	N	N	N
Extra heavyweight glossy card stock	301 to 350gsm	N	N	N	N	N	N
Pre-printed	64 to 105gsm	Y	Y	Y	Y (*1)	N	Y
Hole punched	64 to 105gsm	Y	Y	N	Y (*1)	N	N
Recycled	64 to 105gsm	Y	Y	Y	Y (*1)	Y (*3)	Y
Custom types 1 to 5	64 to 105gsm	Y	Y	Y	Y (*1)	Y (*3)	Y

NOTE: (*1)

Able to staple up to 50-sheets with 52 - 90gsm plain paper. 50-sheets stapling not guaranteed for paper over 90gsm.

NOTE: (*2)

Punch available up to 200gsm

NOTE: (*3)

Paper over 90gsm can be used as a cover page.

Table 6 Envelope Tray supported envelope sizes

Size group	Name	Cross feed width x feed length	XC auto detect by default	XE auto detect by default
A	No. 7-3/4 (Monarch) envelope LEF	190.5 x 98.4mm	Y	Y
A	ISO-C6 Envelope LEF	162 x 114mm	(NVM)	(NVM)
C	No. 10 (Commercial # 10) envelope LEF	241.3 x 104.8	Y	(NVM)
C	ISO-DL envelope LEF	220 x 110mm	(NVM)	Y
F	ISO-C4 envelope SEF	229 x 324mm	Y	Y

GP 16 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

- Desktop machine = 809mm (31.9 inches).
- Stacked machine (2TM or TTM) = 1071mm (42.2 inches).
- Stacked machine (2TM or TTM) and BR finisher = 1071mm (42.2 inches).
- Stacked machine (2TM or TTM), LX finisher = 1071mm (42.2 inches).
- Stacked machine (2TM or TTM), LX finisher and booklet maker = 1080mm (42.5 inches).

Machine Weight

- Desktop machine = 80.8kg (178lb).
- Desktop and 2TM = 108kg (238lb).

- Desktop and TTM = 114.6kg (252.6lb).

Finishers

- Office finisher LX = 28kg (61.7lb).
- BR Finisher = 39.5kg (87.1lb).
- Booklet = 9.2kg (20.2lb).
- Punch = 0.7kg (1.5lb).

Paper Trays

- HCF = 29kg (63.9lb).
- 2TM = 27.2kg (60lb).
- TTM = 33.8kg (82.5lb).

Machine Dimensions and Installation Space Requirements

Table 1 shows the dimensions of the machine 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

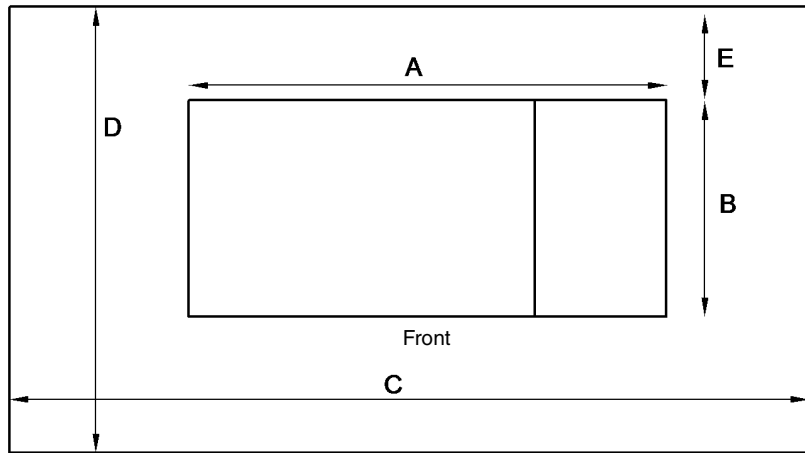
For machines with an HCF, the required install width (dimension C) includes the extra space required (250mm/9.8 inches) to slide the HCF away from the machine.

The installation dimensions in Table 1 show the machine footprint with the bypass tray and output trays fully extended.

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	
			Moveable	Fixed	Moveable	Fixed	Moveable	Fixed
Desktop machine	620 / 24.4	723 / 28.5	1678 / 66.1	2620 / 103.1	1299 / 51.1	2723 / 107.2	100 / 4	1000 / 39.4
Stacked machine (2TM or TTM)	620 / 24.4	723 / 28.5	1299 / 51.1	2620 / 103.1	1678 / 66.1	2723 / 107.2	100 / 4	1000 / 39.4
Stacked machine (2TM or TTM) with HCF	1055 / 41.5	723 / 28.5	1387 / 54.6	3012 / 118.6	1678 / 66.1	2723 / 107.2	100 / 4	1000 / 39.4
Stacked machine (2TM or TTM) with Office finisher LX	1228 / 48.4	723 / 28.5	1887 / 74.3	3228 / 127	1678 / 66.1	2723 / 107.2	100 / 4	1000 / 39.4
Stacked machine (2TM or TTM) with Office finisher LX and booklet maker	1228 / 48.4	723 / 28.5	1887 / 74.3	3228 / 127	1678 / 66.1	2723 / 107.2	100 / 4	1000 / 39.4
Stacked machine (2TM or TTM) with office finisher LX, booklet maker and HCF	1572 / 61.9	723 / 28.5	1975 / 77.8	3572 / 140.6	1678 / 66.1	2723 / 107.2	100 / 4	1000 / 39.4
Stacked machine (2TM or TTM) with BR finisher and booklet maker	1438 / 56.6	723 / 28.5	2054 / 80.8	3438 / 135.4	1678 / 66.1	2723 / 107.2	100 / 4	1000 / 39.4
Stacked machine (2TM or TTM) with BR finisher, booklet maker and HCF	1781 / 70.1	723 / 28.5	2142 / 84.3	3781 / 148.9	1678 / 66.1	2723 / 107.2	100 / 4	1000 / 39.4

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.



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Figure 1 Installation plan

GP 17 Electrical Power Requirements

Power Requirements

Refer to [Table 1](#).

Table 1 Electrical power requirements

Nominal Voltage	Average Current	Comments
110-127VAC (60Hz) Plus 10% minus 10%	Less than or equal to 12A RMS.	50/60Hz plus 3% minus 3%
220-240VAC (50Hz) Plus 10% minus 10%	Less than or equal to 10A RMS.	50/60Hz plus 3% minus 3%

Power Consumption

Refer to [Table 2](#).

Table 2 Power consumption

Region	Voltage	Power Consumption Value (W)
XC	115VAC	1380 or less
XE	220VAC	2200 or less

Operation Modes

Refer to [Table 3](#) and [Table 4](#).

For full descriptions of operating modes refer to [IOT Modes and System Status](#) in the Product Technical Overview.

Table 3 Operation modes

Mode	State
Standby/Ready	The state prior to entering run mode.
Run Mode	Normal operation mode
Low Power/Semiconscious Mode	A lower power consumption mode than ready mode
Deep Sleep Mode	A lower power consumption mode than low power mode.
Plug-in/Off Mode (sub power)	The controller is maintained with the programs running.

Table 4 IOT states

Sub-System	Standby/Ready Mode	Run Mode	Low Power Mode/Semiconscious Mode	Deep Sleep Mode	Plug-in/Off Mode (sub power)
Fuser	Maintaining standby temperature	Maintaining operating temperature	Maintaining low temperature	Off	Off
Xerographcs	Off	Operating state	Off	Off	Off

Table 4 IOT states

Sub-System	Standby/Ready Mode	Run Mode	Low Power Mode/Semiconscious Mode	Deep Sleep Mode	Plug-in/Off Mode (sub power)
Print Head Assembly	Off	Operating state	Off	Off	Off
Fusing Fan	Temperature control in stop or rotate (slow)	Temperature controlled slow or fast rotation	Temperature control in stop or rotate (slow)	Off	Off
Marking Fan	Temperature control led either stop or slow rotation	Temperature controlled, either stopped or slow or fast rotation	Temperature control led either stop or slow rotation	Off	Off
ESS (Reference only)	Standby	Operating state	Standby	Ready to receive	Inactive
HDD	Accessible	Accessible	Accessible	Not accessible	Not accessible

GP 18 Environmental Data

Operating

- Temperature range: 10 to 32 degrees C (50 to 90 degrees F).
- Relative humidity: 15 to 85%.
- Altitude: 0 to 2500 metres (0 to 8200 feet).
- Noise:
 - [Table 1](#) contains the maximum value in decibels of noise that can be generated by the C8000.
 - [Table 2](#) contains the maximum value in decibels of noise that can be generated by the C9000.

Table 1 C8000 - 45ppm

	IOT	IOT plus finisher
Declared A-weighted sound power level (B) at standby <i>NOTE: LwAd – sound power level at a source = measure LwA value (per 1 machine) + 0.3B</i>	3.24	3.36
Declared A-weighted sound power level (B) running <i>NOTE: LwAd – sound power level at a source = measure LwA value (per 1 machine) + 0.3B</i>	6.63	7.56
Sound pressure level (dB) <i>NOTE: LpAm – sound pressure level at a bystander position.</i>	50.8	57.7

Table 2 C9000 - 55ppm

	IOT	IOT plus finisher
Declared A-weighted sound power level (B) at standby <i>NOTE: LwAd – sound power level at a source = measure LwA value (per 1 machine) + 0.3B</i>	3.24	3.38
Declared A-weighted sound power level (B) running <i>NOTE: LwAd – sound power level at a source = measure LwA value (per 1 machine) + 0.3B</i>	6.83	7.71
Sound pressure level (dB) <i>NOTE: LpAm – sound pressure level at a bystander position.</i>	52.7	59.4

Storage

- Altitude: 0 to 3100 metres (0 to 10170 feet).
- Maximum temperature 48 degrees C (118 degrees F).

GP 19 Obtaining Audit and Device Logs

Purpose

To obtain then download device data for analysis by 2nd level support.

NOTE: It may not be possible to obtain a device log if the device executed a reboot after an error occurred. To enable the device log collection enter **dC131** then set the NVM chain-link code 700-530 value to 0. Repeat the device log procedure then reset the NVM chain-link code 700-530 value back to 1.

Procedure

Audit Log

To obtain the Audit Log:

1. Obtain the machine's IP address by printing a configuration report. Refer to [GP 14](#) Printing Reports.
2. Access the web UI by entering the IP address into a web browser on a PC on the same network as the machine.
3. Log in to the web UI as an administrator. Refer to [GP 23](#) Customer Administration Tools.
4. **Ensure HTTP - SSL/TLS is enabled:**
 - a. Click **Connectivity**.
 - b. Click **HTTP**.
 - c. Enable HTTPS.
 - d. Click **OK**. You will be prompted to restart the machine, click **Restart Now**.
5. When the machine restarts, log back in as an administrator, then click **System**.
6. Click **Logs**.
7. Click **Audit Log**.
8. Click **Enable**.
9. Click **Export**. The auditlog.txt file is downloaded via the web browser.

Device Log

To obtain the Device Log:

1. Obtain the machine's IP address by printing a configuration report. Refer to [GP 14](#) Printing Reports.
2. Access the web UI by entering the IP address into a web browser on a PC on the same network as the machine.
3. Log in to the web UI as an administrator. Refer to [GP 23](#) Customer Administration Tools.
4. Click **System**.
5. Click **Logs**.
6. Click **Device Log**.
7. Click **Accept**. The devicelog.dat file is downloaded via the web browser.

GP 20 First Print Out Time and Power On Time

First Print Out

Refer to [Table 1](#). The first print out time (FPOT) is the duration from selecting the print button on a client computer to the delivery of the first copy to output tray 1. Values are based on paper fed from tray 1.

Table 1 First Print Out

Description	Response Time PCL color mode	Response Time PCL B/W mode	Response Time Postscript (reference only) color mode	Response Time Postscript (reference only) color mode	Notes
FPOT 45ppm B/W priority mode	12.3 seconds or less	9.7 seconds or less	8.1 seconds	6.6 seconds	A4 or 8.5x11 LEF
FPOT 45ppm color priority mode	11.0 seconds or less	11.0 seconds or less	7.9 seconds	6.5 seconds	A4 or 8.5x11 LEF
FPOT 55ppm B/W priority mode	11.8 seconds or less	9.0 seconds or less	7.7 seconds	6.4 seconds	A4 or 8.5x11 LEF
FPOT 55ppm color priority mode	10.5 seconds or less	10.0 seconds or less	7.4 seconds	6.1 seconds	A4 or 8.5x11 LEF

Power On

Refer to [Table 2](#) for power on timings.

Table 2 Power On

Description	Response Time
Time to Standby/Ready Mode from Plug-in/Off Mode (sub power)	60 seconds or less
Time to Standby/Ready Mode from Semiconscious/Low-Power Mode	10 seconds or less
Time to Standby/Ready Mode from Deep Sleep Mode	10 seconds or less

GP 21 Restriction of Hazardous Substances (RoHS)

Purpose

To provide information on the RoHS Directive.

The RoHS Directive restricts the use of certain hazardous substances in electrical and electronic equipment. It applies to equipment placed in the European Union (EU) market. The directive takes effect from 1st July 2006.

NOTE: *Currently these restrictions are only for the European Union (EU) market and some associated countries. For more information go to www.Xerox.com. However, Xerox has mandated that all Xerox® VersaLink® C8000/9000 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 (PBDEs)
- Polybrominated Biphenyls (PBBs)

Identification of a RoHS Compliant Machine

Xerox will maintain a central list of RoHS compliant machines.

All Xerox® VersaLink® C8000/9000 machines are RoHS compliant at time of manufacture.

Procedure

CAUTION

Failure to comply with RoHS guidelines can result in product recalls, imprisonment, fines or penalties.

Use only spares that are listed in the Xerox® VersaLink® C8000/9000 Spare Parts List. Do not use spare parts from other similar machines, even if the parts look identical. All Xerox® VersaLink® C8000/9000 machines are RoHS compliant at time of manufacture and must be maintained as RoHS compliant.

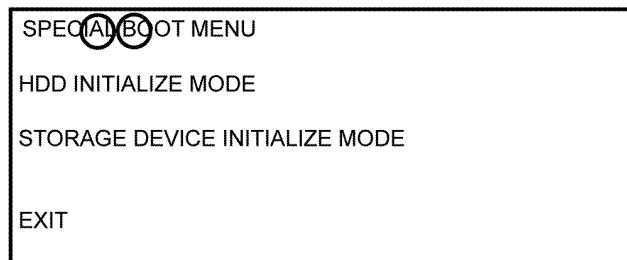
GP 22 Special Boot Modes

Purpose

To start the device in various modes to enable special functions.

Procedure

1. Switch off the machine, [GP 10](#).
2. Simultaneously press then hold down the **Home** and **Power** buttons until the device powers on and SPECIAL BOOT MENU appears, [Figure 1](#).
3. Simultaneously touch the letters **A** in SPECIAL, **B** in BOOT and the **Home** button. Do not hold any of the three locations, just touch/press then release simultaneously, [Figure 1](#).



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Figure 1 Accessing special boot mode

4. At the keypad screen enter code number, 6789#. The first SPECIAL BOOT MENU screen will display.

CAUTION

Do not switch off the device until the reboot is complete. The device will reboot after the download is complete.

5. Scroll through the SPECIAL BOOT MENU screens to select the appropriate function, refer to [Table 1](#). Follow the on screen instructions. The device may reboot, then print a report.

Table 1 Next level of menu

Function	Display	Notes
DOWNLOAD MODE	--BOOT MODE-- DOWNLOAD MODE ARE YOU SURE? YES NO	Machine starts in Firmware Download Mode. Refer to GP 4 .
LONGDIAG MODE	--BOOT MODE-- LONGDIAG MODE ARE YOU SURE? YES NO	Performs a more detailed check than the usual device diagnostic items at machine start. If a fault code is displayed, perform the relevant procedure.

Table 1 Next level of menu

Function	Display	Notes
01. JOB LOG CLEAR MODE	--BOOT MODE-- 01. JOB LOG CLEAR MODE ARE YOU SURE? YES NO	Used to clear corrupted jobs.
02. FACTORY INITMODE	--BOOT MODE-- 02. FACTORY INIT MODE ARE YOU SURE? YES NO	CAUTION <i>Do not perform this mode unless directed.</i> Machine will be reset and the message NVMEM IS CLEARED will be displayed. Switch the machine off, then on, GP 10 . Fault code 116-334 will be displayed, again switch the machine off, then on, GP 10 . Fault code 124-315 will be displayed, perform dC132 . The machine will restart at the install wizard. CAUTION <i>All customer configured settings will be deleted. To restore the customer configured settings, a clone file is required. Refer to GP 13.</i>
03. NVRAM INIT MODE	--BOOT MODE-- 03. NVRAM INIT MODE ARE YOU SURE? YES NO	Forcibly initializes the controller NVM back to default. This is the same as initializing the Sys - System NVM and Sys - User NVM in dC301 .
04. HDD FORMATMODE	--BOOT MODE-- 04. HDD FORMAT MODE ARE YOU SURE? YES NO	All pending jobs will be deleted. The HDD will be forcibly reformatted. CAUTION <i>All customer data on the HDD (mailboxes, user IDs and account IDs) will be deleted.</i>
06. HDD INITIALIZE MODE	--BOOT MODE-- 06. HDD INITIALIZE MODE ARE YOU SURE? YES NO	All pending jobs will be deleted. The spool area of the HDD will be initialized. CAUTION <i>All customer data on the HDD (mailboxes, user IDs and account IDs) will be deleted.</i>
SKIP INSTALL WIZARD	--BOOT MODE-- SKIP INSTALL WIZARD ARE YOU SURE? YES NO	Starts the machine without displaying the install wizard.

GP 23 Customer Administration Tools

Purpose

To gain access to Customer Administration Tools on the UI.

How to Enter Customer Administration Tools

Perform the steps that follow:

1. Switch on the machine, [GP 10](#).
2. When the machine is ready, touch Log In in the top left corner of the UI.
3. Touch Admin.
4. The User Accounts screen displays. Enter user name 'admin' (case sensitive) or touch admin if the account already exists.
5. Enter the password '1111' (default setting). Touch OK.

NOTE: If the administrator password is unknown, perform [GP 29 System Administrator Password Reset](#).

Call Closeout

Perform the steps that follow:

1. Touch Admin in the top left corner of the UI.
2. Touch Logout.

GP 24 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 23](#).
2. Touch General.
3. Touch Date & Time.
4. Again, touch Date & Time.
5. Correctly set the date and time. Touch OK.
6. Touch the back arrow.
7. Touch Admin.
8. Log out of Customer Administration Tools.

GP 25 Ethernet Crossover Cable Setup

Purpose

To connect and then configure the PWS to communicate with a device via a ethernet crossover cable (600T02252).

Procedure

WARNING

Switch off the electricity to the machine GP 10. Disconnect the power 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. Print a configuration report, GP 14.
2. Ensure that Windows firewall and wireless network connectivity on the PWS are turned off.
3. Record the IP address and Subnet Mask of the PWS.

CAUTION

Before changing the value of a setting ensure the original value is recorded. All the original values will need to be restored to the PWS at the end of the procedure.

- a. Open a command window on the PWS:
 - If running Windows 7, select **Start** and in the Search box above the Start button, type **CMD**, then press **Enter**.
- NOTE:** If the Windows key is enabled (the key located in the lower left corner with the Microsoft logo), hold the Windows key down, press R and release both keys to open the Command window.
- b. Type **ipconfig** at the command prompt, then record the Local Area Connection: IPv4 Address and Subnet Mask.
4. Configure the LAN connection of the PWS to enable communication with the device. Go to the relevant procedure:
 - [Windows 7](#) and [Windows 10](#)

Windows 7 and Windows 10

Perform the steps that follow:

1. Open Start/Control Panel/ Network and Sharing Centre.
2. From the left pane, select Change adapter settings.
3. Right-click on the Local Area Connection icon. Select Properties. The Local Area Connection Properties window will open.

4. Highlight Internet Protocol Version 4 (TCP/IPv4). Select Properties, refer to [Figure 1](#). The Internet Protocol Version 4 (TCP/IPv4) Properties window will open.

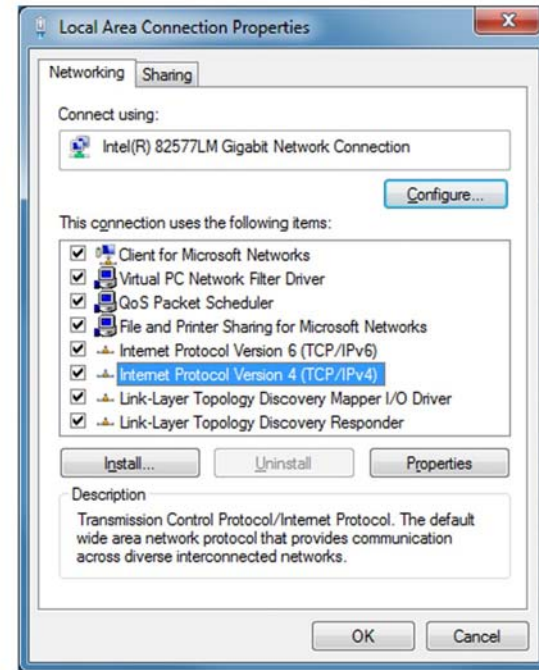


Figure 1 Properties window

5. Double-click the entry Internet Protocol Version 4 (TCP/IPv4).

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- Select Use the following IP address. Enter the IP address and subnet mask, [Figure 2](#).

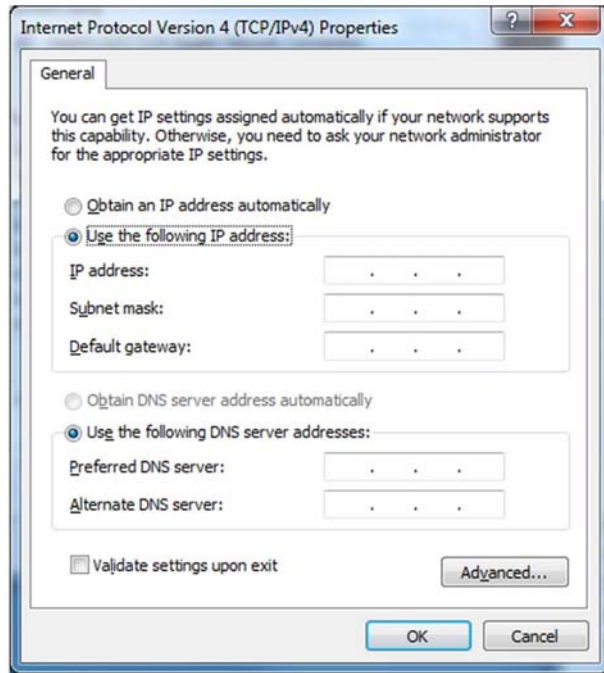


Figure 2 Properties window

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- Refer to the configuration report. Set the IP address of the PWS to one number higher than the device. For example, if the IP address of the device is 192.168.196.112, set the IP address of the 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 device.
- Click on OK to close the properties dialog box, then OK to close the second properties dialog box.
- Close the Local Area Connection Status dialog box.
- Connect the ethernet crossover cable to the device, then continue with your procedure.

GP 27 Billing Plan/Region Conversion Process

Purpose

To provide information about the process to follow when a customer requires a billing plan change. For billing impression mode refer to [GP 28](#).

General Information

Xerox® VersaLink® C8000 and C9000 printers are shipped from manufacturing in a neutral state with neutral starter toner cartridges. The first toner cartridges installed after the neutral starter toner cartridges sets the region and the billing plan of the machine.

The billing plan governs what consumables are compatible with the product:

- The metered billing plan allows metered consumables to be used on a machine that is included as part of the metered contract.
- The sold billing plan only allows sold consumables (purchased by the customer), to be used.

NOTE: Sold supplies can also be used in metered machines. However, metered supplies cannot be used in sold machines (a fault code will be generated and a message displayed on the UI indicating toner incompatibility).

There are four billing plans supported:

- NA/XE Sold.
- DMO Sold.
- Worldwide Metered.
- PagePack (XE only).

Should a customer wish to convert their billing plan, this can be done from either the user interface or Embedded Web Server and involves obtaining the following:

- For Sold to Metered or Metered to Sold; a plan conversion code.
- For Sold to XE PagePack or XE PagePack to Sold; a supplies plan activation code.

To confirm the customer's current billing plan, either:

- Print a configuration report, [GP 14](#). The supplies plan will be listed as either Activated (Metered/PagePack) or Not Activated (Sold).
- Enter [dC131](#). Check the NVM location values listed in [Table 1](#).

Table 1 Initialization kit numbers

Chain	Link	Parameter	Value
700	400	Total Service Contract Mode	1 = Metered 2 = Sold 15 = Neutral (starter cartridge, region not yet set)
700	774	PagePack Contract Setting	0 = Unlimited (Metered/Sold) 1 = Non-PagePack Contract (NA PagePack) 2 = Pack Contract (XE PagePack)
700	775	Supplies Plan Number	0 to 268435455
700	776	PagePack Contract Length	0 to 127 (Months) (1-126 = XE PagePack) (127 = NA PagePack)

Table 1 Initialization kit numbers

Chain	Link	Parameter	Value
700	777	PagePack Region Code	0 = Worldwide/Neutral 1 = DMO/Sold 2 = NA/XE Sold 3 to 7 = Invalid

Refer to [PL 25.05](#) for the toner cartridge part numbers.

Procedure

Refer to the relevant procedure:

- [Conversion Process from the User Interface](#)
- [Conversion Process from the Embedded Web Server](#)

Conversion Process from the User Interface

Perform the steps that follow:

1. From the Home screen, touch the **Device** button. Scroll down, then touch **Supplies**, then **Supplies Plan**. For plan conversion, record the device serial number and total impressions. For supplies plan activation, record the serial number and sequence number.
2. Contact the relevant OPCO:
 - **DMO** - Follow the local process.
 - **GIS** - Conversion requests must be approved by the GIS Headquarter VP of Service. Request that your field service manager contact their GIS Company VP of Service for directions. The GIS Core Company VP of Service will require authorization to convert the machine from sold to metered and provide a status of your request. Do not call field engineering to obtain a service plan conversion pin code.
 - **USCU** - Call PageConnect at 1-888-892-6483 or send an email to pageconnectprogram@xerox.com requesting a pin code. Provide the machine serial number and the number of total impressions.
 - **USEU** - Call Xerox Corporate Licensing System (XDSS) on 1-800-890-3260 or 1-800-635-8054, prompt eight for toner conversions. Provide the machine serial number and the number of total impressions.
 - **XCL** - Call the Customer Delivery Organization (CDO) Field support number 1-800-647-1331, prompt 8 (license strings) for a toner conversion PIN. Provide the machine serial number and the total number of impressions.
 - **XE** - Email OFFICE.Europe.Page.Pack.PIN@xerox.com.
3. A six character pin code will be provided.

NOTE: The plan conversion pin code is valid for approximately 500 additional impressions after being generated.

4. From the Home screen, touch the **Device** button. Scroll down, then touch **Supplies**, then **Supplies Plan**. Select either **Supplies Plan Activation** or **Plan Conversion** as necessary.
5. Select the **Enter and Apply Supplies Plan Activation Code** or **Enter and Apply Plan Conversion Code** entry field on the UI. Enter the six digit pin code that was provided.
6. Select **OK**.

NOTE: If converting from Metered to Sold or PagePack to Sold, appropriate Sold toner cartridges must be installed immediately after the conversion process or the device will display an incompatible toner error message.

7. Confirm the service plan is correct by printing a configuration report, [GP 14](#) or checking the NVM values, refer to [Table 1](#).

Conversion Process from the Embedded Web Server

Perform the steps that follow:

1. From the Home screen, scroll down to Supplies, then select **Details**.
2. Scroll down, beneath Options, select **Supplies Plan**.
3. The Supplies Plan window opens. Select either **Supplies Plan Activation** or **Plan Conversion** as necessary.

NOTE: The device serial number and sequence number are listed on the Supplies Activation screen. The device serial number and total impressions are listed on the Plan Conversion screen.

4. Contact the relevant OPCO:
 - **DMO** - Follow the local process.
 - **GIS** - Conversion requests must be approved by the GIS Headquarter VP of Service. Request that your field service manager contact their GIS Company VP of Service for directions. The GIS Core Company VP of Service will require authorization to convert the machine from sold to metered and provide a status of your request. Do not call field engineering to obtain a service plan conversion pin code.
 - **USCU** - Call PageConnect at 1-888-892-6483 or send an email to pageconnectprogram@xerox.com requesting a pin code. Provide the machine serial number and the number of total impressions.
 - **USEU** - Call Xerox Corporate Licensing System (XDSS) on 1-800-890-3260 or 1-800-635-8054, prompt eight for toner conversions. Provide the machine serial number and the number of total impressions.
 - **XCL** - Call the Customer Delivery Organization (CDO) Field support number 1-800-647-1331, prompt 8 (license strings) for a toner conversion PIN. Provide the machine serial number and the total number of impressions.
 - **XE** - Email OFFICE.Europe.Page.Pack.PIN@xerox.com.
5. A six character pin code will be provided.

NOTE: The plan conversion pin code is valid for approximately 500 additional impressions after being generated.

6. From the Home screen, scroll down to Supplies, then select **Details**. Scroll down, beneath Options, select **Supplies Plan**.
7. The Supplies Plan window opens. Select either **Supplies Plan Activation** or **Plan Conversion** as necessary. Enter the six digit pin code that was provided.
8. Select **Apply**.

NOTE: If converting from Metered to Sold or PagePack to Sold, an appropriate Sold toner cartridge must be installed immediately after the conversion process or the device will display an incompatible toner error message.

9. Confirm the service plan is correct by printing a configuration report, [GP 14](#) or checking the NVM values, refer to [Table 1](#).

GP 28 Billing Impression Mode Change Process

Purpose

To provide information about the process to follow when a customer requires a billing impression mode (BIM) change.

General Information

Xerox® VersaLink® C8000 and C9000 machines can be ordered with the option to bill customers two meter clicks for oversized media using Billing Impression Mode 'A4 Impressions'. Sales will order the equipment using a market code to determine if Billing Impression Mode is 'A3 Impressions' or 'A4 Impressions'.

If Billing Impression Mode is set for 'A4 Impressions', any media over 145 inches square (935cm square) will be billed as 2 meter clicks. For example, an 8.5x14 page is 119 inches square, so it will be billed as 1 click. A 11x17 page is 187 inches square (greater than 145 inches square), so if the machine is setup for BIM 'A4 Impressions', a 11x17 page will be billed as 2 meter clicks.

The BIM can only be changed if the current BIM does not match the customers contract. If the customer disagrees, advise them to contact their sales representative to discuss their contract.

Procedure

Perform the relevant procedure:

- [How to Check the Customers Current BIM](#)
- [How to Verify the Contract and Change the BIM](#)

How to Check the Customers Current BIM

Refer to the relevant procedure:

- [From the User Interface](#)
- [From the Embedded Web Server](#)

From the User Interface

Perform the steps that follow:

1. From the Home screen, touch the **Device** button. Scroll down, then touch **Billing/Usage**, then **Impression Mode**.
2. On the Impression Mode screen, the current BIM will be displayed alongside Current Mode.

NOTE: Record the serial number and sequence number to obtain a BIM pin code.

From the Embedded Web Server

Perform the steps that follow:

1. From the Home screen, select **Log In**, then **Admin**.
2. Enter the password '1111' (default setting). Select **Log In**.
3. Scroll down, beneath Billing/Usage, select **Details**.
4. The Billing Details & Usage Counters window opens. Select **Impression Mode**.
5. On the Impression Mode screen, the current BIM will be displayed alongside Current Mode.

NOTE: Record the serial number and sequence number to obtain a BIM pin code.

How to Verify the Contract and Change the BIM

If the machines BIM is thought to be incorrect, contact the relevant OPCO:

- **GIS** - Contact the service manager.
- **USEU/XCL/USCU** - Call Xerox Corporate Licensing System (XDSS) on 1-800-890-3260.
- **XE/DMO** - Advise the customer to contact their sales representative.

The OPCO will require the machine's serial number and sequence number. If the machine's BIM does not match the customer's contract, the OPCO can generate a six digit PIN code to correct the BIM.

Once the OPCO has generated the PIN code, it will be provided via telephone, email or the Xerox Software Activation Portal at <https://www.xeroxlicensing.xerox.com/fik>. The PIN code can be entered:

- [From the User Interface](#)
- [From the Embedded Web Server](#)

From the User Interface

Perform the steps that follow:

1. From the Home screen, touch the **Device** button. Scroll down, then touch **Billing/Usage**, then **Impression Mode**.
2. On the Impression Mode screen, touch **Enter PIN**.
3. Use the displayed keyboard to enter the six digit PIN code, then touch **Enter**.
4. Verify that the BIM has been changed. Refer to [How to Check the Customers Current BIM](#).

From the Embedded Web Server

Perform the steps that follow:

1. From the Home screen, select **Log In**, then **Admin**.
2. Enter the password '1111' (default setting). Select **Log In**.
3. Scroll down, beneath Billing / Usage, select **Details**.
4. The Billing Details & Usage Counters window opens. Select **Impression Mode**.
5. On the Impression Mode screen, enter the six digit PIN code on the Enter and Apply PIN line. Select **Apply**.
6. Verify that the BIM has been changed. Refer to [How to Check the Customers Current BIM](#).

GP 29 System Administrator Password Reset

Purpose

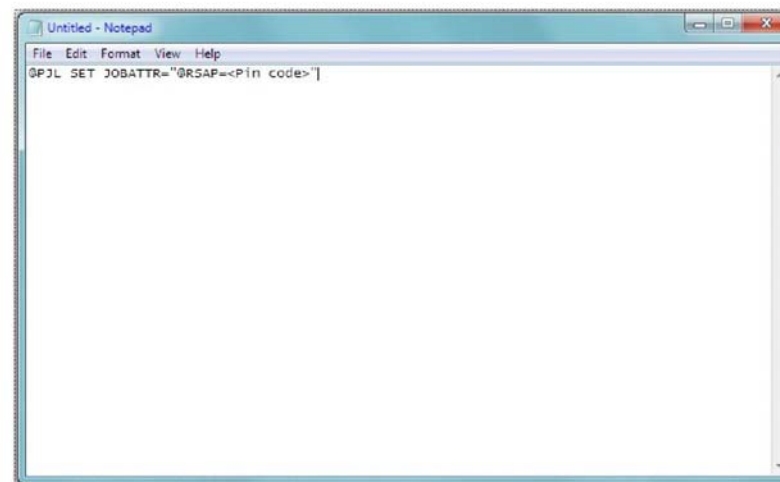
To reset the system administrator password.

Procedure

Perform the steps that follow:

1. Create a PIN code using the administrator password reset tool.
 - a. Run the administrator password reset tool.
 - b. Enter the serial number of the device with no punctuation or spaces.
 - c. Enter the total page count from the device.
 - d. Press **Calculate**.
 - e. Note the 12 digit reset code.
2. Create a reset file using Windows Notepad.
 - a. **Windows 7**
 - Go to: 'Start' > 'All Programs' > 'Accessories' > 'Notepad'
 - b. **Windows 8 or 10**
 - In Search window (next to the Start button or Windows icon) type 'Notepad' then select 'Notepad' from the list.

- c. Copy the line below and paste into the new Notepad text area, [Figure 1](#).
@PJM SET JOBATTR="@RSAP=<Pin code>"
 - Replace <Pin code> with the actual 12 digit PIN code that you generated from the SA Password tool.
 - Example of PIN code: @PJM SET JOBATTR="@RSAP=123456789123"



F-1-0405-A

Figure 1 Notepad example

- d. Save this Notepad file as Reset.PJL to your PC.
3. Submitting the Reset.PJL file using DirectPrint utility.
 - a. Run the DirectPrint utility.
 - b. Select the Reset.PJL file where you saved it to on your computer by clicking the "..." box next to filename.
 - c. Enter the IP Address of the Machine in the field box under Printer/IP.
 - d. Select Print.
 - e. You will hear a job completed tone at the machine and observe changes are being made on the UI.

NOTE: The process only takes a few seconds. If the UI screen is hung on changes being made, switch off, then switch on the machine, GP 10.

- f. The administrator password should now be defaulted to '1111'. Use the web UI to access the device to confirm.
- 4. Troubleshooting reset file not accepted error, Table 1.

Table 1 File not accepted procedure

Status Code	Procedure
016-749	<ul style="list-style-type: none"> • Verify the license string @PJM SET JOBATTR="@RSAP=<Pin code>" was copied to Notepad correctly. • Verify the PIN code is correct. • When generating the code, make sure the current total meter read was used.

GP 31 Print/Copy Orientation Definitions

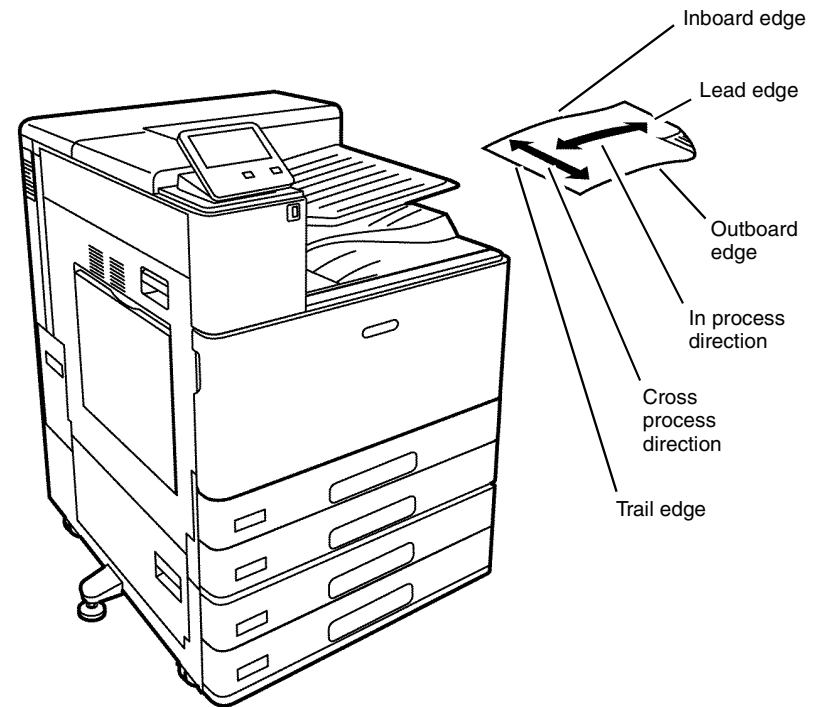
Purpose

To describe the print/copy orientation definitions.

Definitions

Refer to Figure 1. Be aware of the points that follow:

- **Inboard edge** - can also be described as the top edge or side edge.
- **In process direction** - can also be described as the slow scan direction.
- **Cross process direction** - can also be described as the fast scan direction.



F-1-0668-A

Figure 1 Print/copy orientation definitions

GP 32 How to Open and Close the Video Contact Chassis Unit

Purpose

To open the video contact chassis assembly during repair and replacement procedures.

Opening Procedure

WARNING

Switch off the electricity to the machine. Refer to [GP 10](#). Disconnect the power 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

Observe ESD procedures during this procedure.

1. Remove the following covers:
 - a. Remove the MCU cover, [PL 28.15 Item 10](#).
 - b. Remove the left rear cover, [PL 28.15 Item 6](#).
 - c. Remove the controller cover assembly, [PL 3.10 Item 1](#).
 - d. Remove the lower rear cover, [PL 28.15 Item 8](#).
 - e. Remove the upper rear cover, [PL 28.15 Item 5](#).

2. Open the video contact chassis assembly, [PL 3.10 Item 2](#).
 - a. Disconnect the motor drive ribbon cable (1) from the motor drive PWB (2), [Figure 2](#).

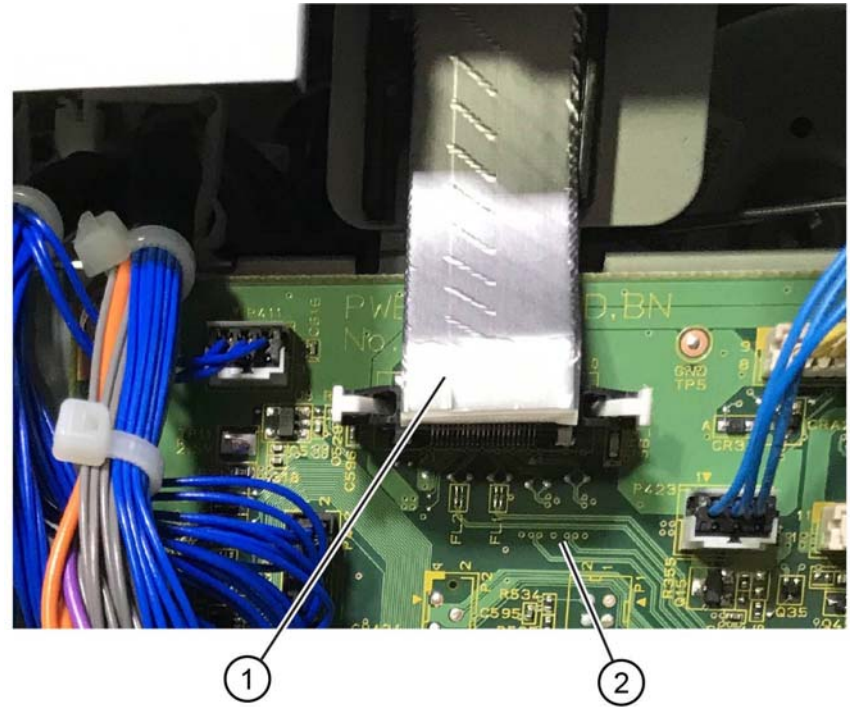


Figure 2 Ribbon cable disconnect

F-1-0670-A

- b. Remove one screw (3) from behind the motor drive ribbon cable and above the motor drive PWB, [Figure 3](#).

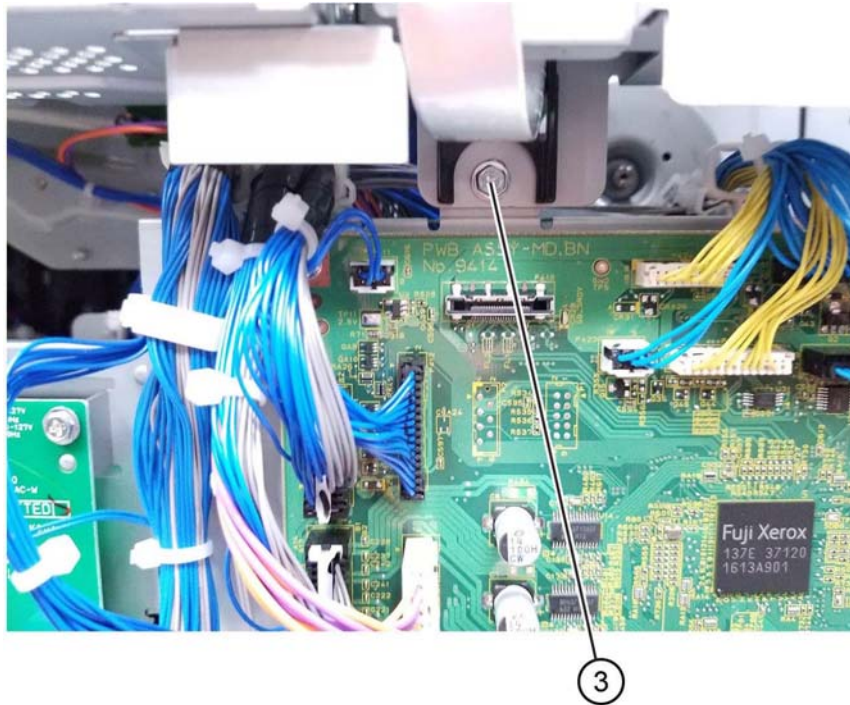


Figure 3 Screw removal

F-1-0671-A

- c. Remove one screw (4) above the video contact control chassis assembly, [Figure 4](#).

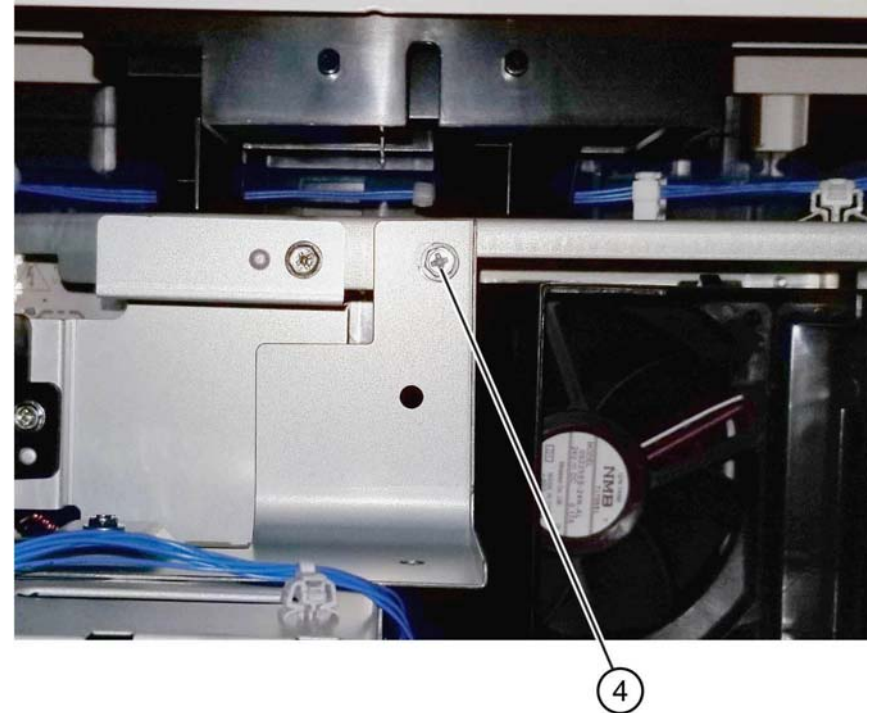


Figure 4 Screw removal

F-1-0672-A

d. Remove five screws (5), Figure 5.

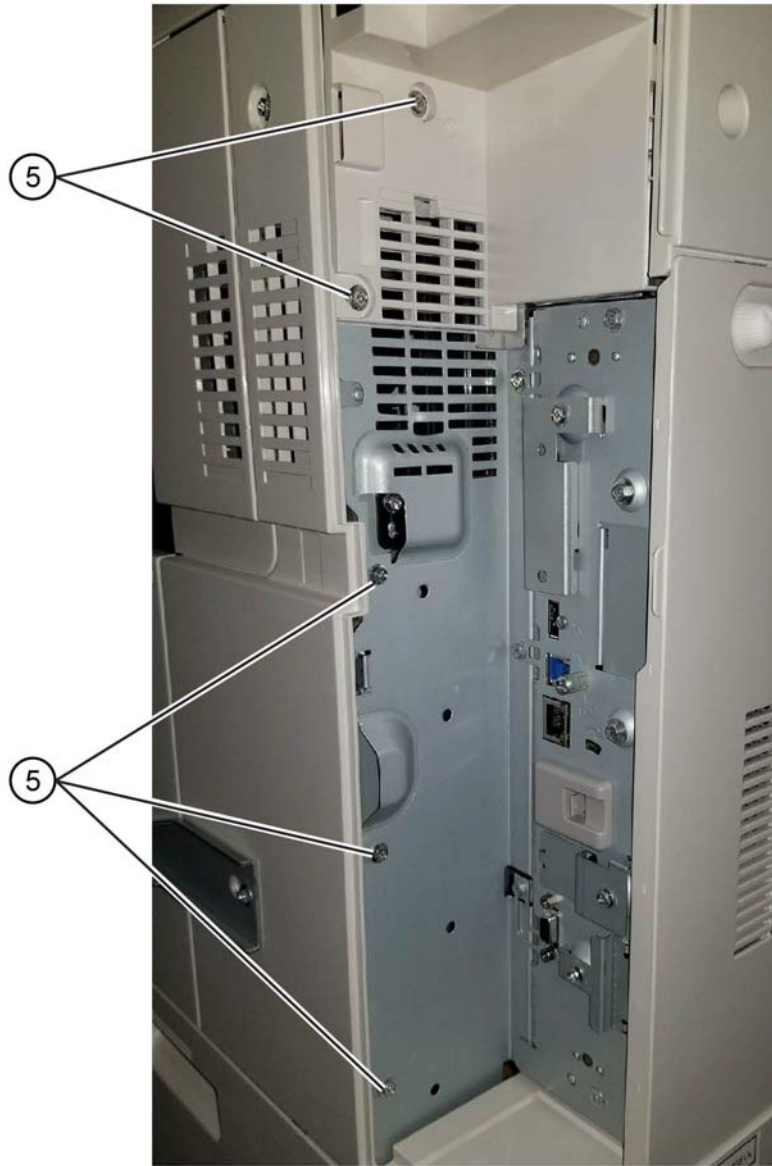


Figure 5 Screw removal

F-1-0673-A

e. Open the video contact chassis unit (6), Figure 6.



Figure 6 Video contact chassis unit open

F-1-0674-A

Closing Procedure

Closing is the reverse of the opening procedure.

GP 33 How To Capture A Nananana.log From The WebUI

Purpose

To capture the nananana.log file for Support troubleshooting of the machine state.

Opening Procedure

1. Log into WebUI as administrator; [Figure 1](#).

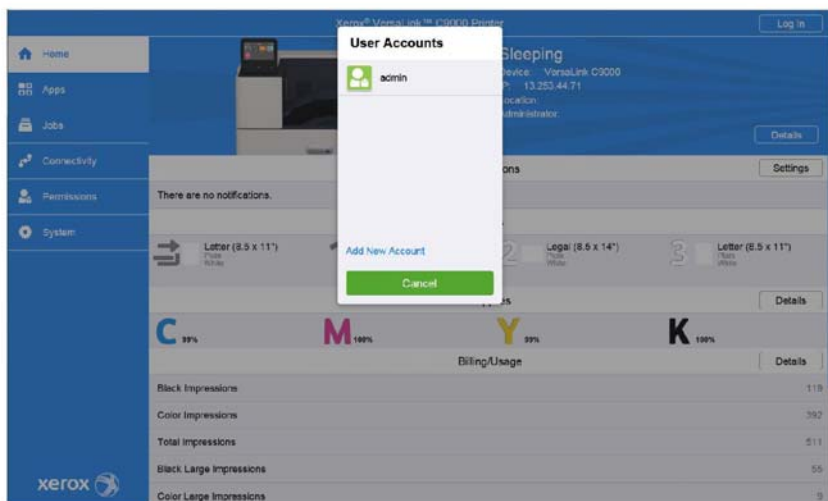


Figure 1 Administrator login

F-1-0723-A

2. In the web browser address URL, enter "nananana.cmd" after the IP address of the machine: [Figure 2](#).
 - a. ex. <http://xxx.xxx.xxx.xxx/nananana.cmd> (1).
 - b. Log in at the dialog box (2):
 - i. User name - "Analyst"
 - ii. Password - "Xerox"
 - iii. OK

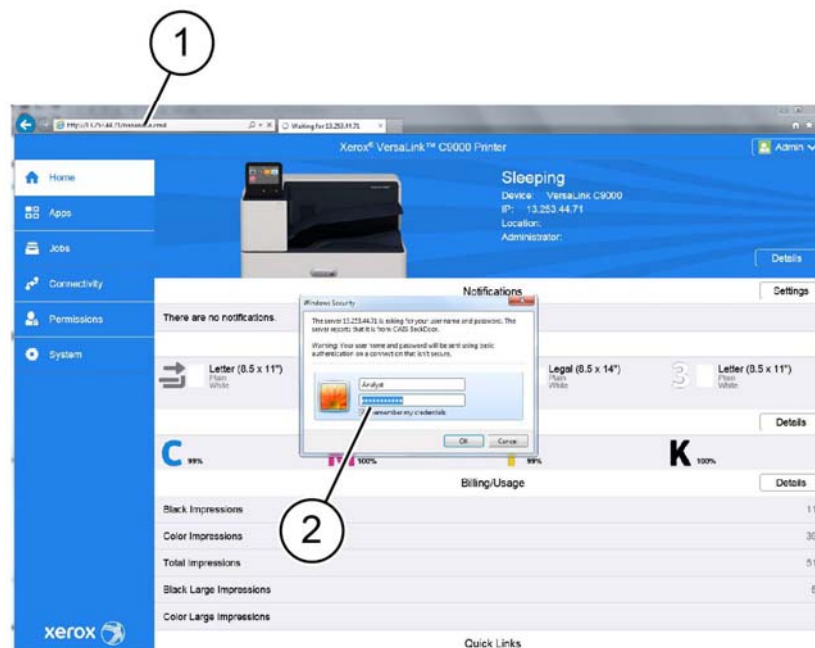


Figure 2 Nananana.cmd entry

F-1-0724-A

3. Select "MAKE a new log file" (3) in the list on the screen, [Figure 3](#).

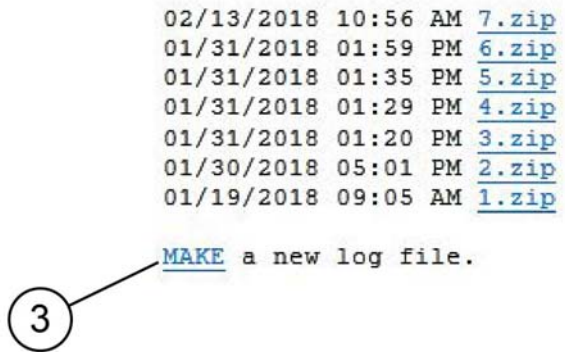


Figure 3 Selecting MAKE

4. Press the back button (4) on the web browser, then press the refresh button (5) to refresh the screen and update the list items. [Figure 4](#).

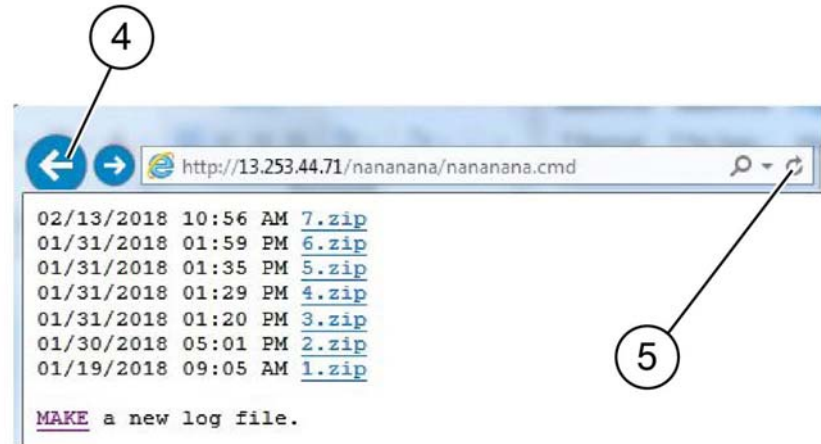



Figure 4 Screen refresh

NOTE: Depending on the size of the nananana.log file the.zip file may take a few seconds to post, continue to refresh the screen as necessary.

- The new.zip file appears. Click on the hyperlink on the file name (6) to download and save the.zip file to provide to Support, [Figure 5](#).

NOTE: A.txt file may appear. The.txt file does not contain logs for the operating system. The.zip file contains the logs for the operating system. If the.zip file is not created, provide the.txt file to Support in its place.

```
02/14/2018 09:43 AM 8.zip
02/13/2018 10:56 AM 7.zip
01/31/2018 01:59 PM 6.zip
01/31/2018 01:35 PM 5.zip
01/31/2018 01:29 PM 4.zip
01/31/2018 01:20 PM 3.zip
01/30/2018 05:01 PM 2.zip
01/19/2018 09:05 AM 1.zip
```



MAKE a new log file.

F-1-0727-A

Figure 5 New log file appears

GP 34 Print Spool

Purpose

To switch on or switch off print spooling from the WebUI.

Procedure

- Open a browser window, then enter the machine TCP/IP address in the address line.
- The WebUI starts.
- Select **Connectivity**.
- Select **LPD**.
- Click on **Spool** to turn on or off.
 - Spool off:** Machine determined print job order.
 - A large print job sent before a small print job may print after the small job.
 - Spool on:** Queued.
 - Print jobs are processed in order received regardless of size.
- Restart the machine to save and implement the new settings.

GP 36 How to Manually Configure an IP Address

Purpose

Manual configuration of the IP address of the printer.

Manual IP setup

To assign a static IP address to the printer:

1. At the printer user interface, press the Home button.
2. Touch Device >Connectivity>Ethernet>IPv4.
3. Touch STATIC.
4. At the restart system prompt, touch Continue.
5. Touch the IPv4 Address field.
6. Using the keypad, enter the address as x.x.x.x, where x is a number from 0 to 255, then touch Enter.
7. Touch the subnet mask field.
8. Using the keypad, enter the address as x.x.x.x, where x is a number from 0 to 255, then touch Enter.
9. Touch the gateway address field.
10. Using the keypad, enter the address as x.x.x.x, where x is a number from 0 to 255, then touch Enter.
11. Touch Restart.

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
1TM	One Tray Module
2TM	Two Tray Module
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
AMPV	Average Monthly Print Volume
ANSAM	Answer Tone, Amplitude Modulated
APS	Auto Paper Selection
ARP	Address Resolution Protocol. Converts an IP address to a MAC address. See RARP.
ASIC	Application Specific Integrated Circuit
B	Bels (applies to sound power level units)
Binding	Part of the communication between modules.
BM	Booklet Maker
BootP	Boot Protocol. AN IP protocol for automatically assigning IP addresses.
BPS	Bits Per Second
BS	Behavior Specification
BT	Busy Tone
BCR	Bias Charge Roll
BTR	Bias Transfer Roll
C	Celsius
CAT	Customer Administration 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 over the internet.
CIPS	Common Image Path Software

Table 1 Abbreviations

Term	Description
CIS	Contact Image Sensor
CL	Copy Lighter. A copy density setting
CQ	Copy Quality
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)
DADF	Duplex Automatic Document Feeder
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 Configuration 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
EEC	European Economic Community
EEPROM	Electrically Erasable/Programmable Read Only Memory
EH&S	Environmental Health and Safety
EJS	Easy Java Simulation

Table 1 Abbreviations

Term	Description
ELT	Extract, Load, Transform
EMC	Electromagnetic Compatibility
EME	Electromagnetic Emission
ENS	Event Notification Service. Used by a software module to alert another module of an event.
EOM	End Of Message
EOP	End Of Procedure
EOR	End Of Retransmission
EPA	Environmental Protection Agency
EPROM	Erasable / Programmable Read Only Memory
ERR	End Retransmission Response
ERU	Engineer Replaceable Unit
ESD	Electrostatic Discharge
ESS	Electronic Sub-System (equivalent to Network Controller)
EU	European Union
EUR	Europe
FAR	Fully Active Retard feeder
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
FPGA	Field Programmable Gate Array
FPOT	First Print Out Time
FRU	Field Replaceable Unit
FRU	Fuser Replacement Unit
FX	Fuji Xerox
g	gram or gramme (one thousandth part of a kilogram)
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 (unit of frequency of one cycle per second)
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
IIT	Image Input Terminal
Intlk	Interlock
ioctl	Input/output control
IOT	Image Output Terminal
IP	Internet Protocol
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 (International unit of mass)
kHz	kilohertz (frequency of one thousand cycles per second)
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
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

Table 1 Abbreviations

Term	Description
LVF BM	Low Volume Finisher Booklet maker
LVDS	Low Voltage Differential Signal
LVPS	Low Voltage Power Supply
LUI	Local User Interface
m	metre (International unit of measurement)
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	millimeter (one thousandth of a metre)
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 (one thousandth of a second)
N	Newton (a unit of force)
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 (a unit of torque equivalent to one Newton at one metre radius)
NOHAD	Noise, Ozone, Heat, Airflow and Dust
NTP	Network Time Protocol
NVM	Non-Volatile Memory
OA	Open Architecture
ODIO	On Demand Image Overwrite

Table 1 Abbreviations

Term	Description
OEM	Original Equipment Manufacturer
OpCo	Operating Company
OS	Operating System
P/R	Photoreceptor
PABX	Private Automatic Branch Exchange
PC	Personal Computer
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
Procon	Process control
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.
PTO	Product Technical Overview
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 Protocol. 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
Reg	Registration

Table 1 Abbreviations

Term	Description
Registration Service	Monitors when RPC services go online 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
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
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)
SIMM	Single In-line Memory Module
SIR	Standard Image Reference
SLP	Service Location Protocol (finds servers)
SM	Scheduled Maintenance
SMART	Systematic Material Acquisition Release Technique
Smile Correction	Correction process that allows the adjustment of uniformity of density, giving accurate color edge-to-edge and page-to-page.
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
spi	Spots per inch

Table 1 Abbreviations

Term	Description
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)
STM	Single Tray Module
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
TIFF	Tagged Image File Format
TP	Test Point
TRC	Toner Reproduction Curve
TTM	Tandem Tray Module
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
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

Table 1 Abbreviations

Term	Description
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

dC118 Jam Counter

Purpose

To view the number of jams that have occurred. dC118 Jam Counter records the number of occurrences of a jam and allows the counters to be sorted by occurrences.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Touch dC118 Jam Counter.

NOTE: *There will be a delay while the machine retrieves the jam counter data.*

3. A list of jams that have occurred is displayed.
4. Touch X to return to the Diagnostics screen.
5. Exit diagnostics, [GP 1](#).

dC120 Failure Counter

Purpose

To view the faults raised by the machine. dC120 Fault Counters records the number of occurrences of a fault.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Touch dC120 Failure Counter.

NOTE: *There will be a delay while the machine retrieves the fault counter data.*

3. A list of faults that have occurred on the machine is displayed.
4. Touch X to return to the Diagnostics screen.
5. Exit diagnostics, [GP 1](#).

dC122 Fault History

Purpose

To view the fault history in chronological order and in more detail than shown in [dC120](#) Failure Counter.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Touch dC122 Fault History.
3. The dC122 Fault History screen is displayed.
4. Faults are listed in a time and date order.
5. Touch X to return to the Diagnostics screen.
6. Exit diagnostics, [GP 1](#).

dC125 Active Faults

Purpose

To view the current faults.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Touch [dC125](#) Active Faults.

NOTE: *There will be a delay while the machine retrieves the fault data.*

3. A list of current faults is displayed.
4. Touch X to return to the Diagnostics screen.
5. Exit diagnostics, [GP 1](#).

dC126 System Registration Adjustment

Purpose

To measure and adjust the image to paper registration for the IOT from the output result of the Built-in Adjustment Test Pattern.

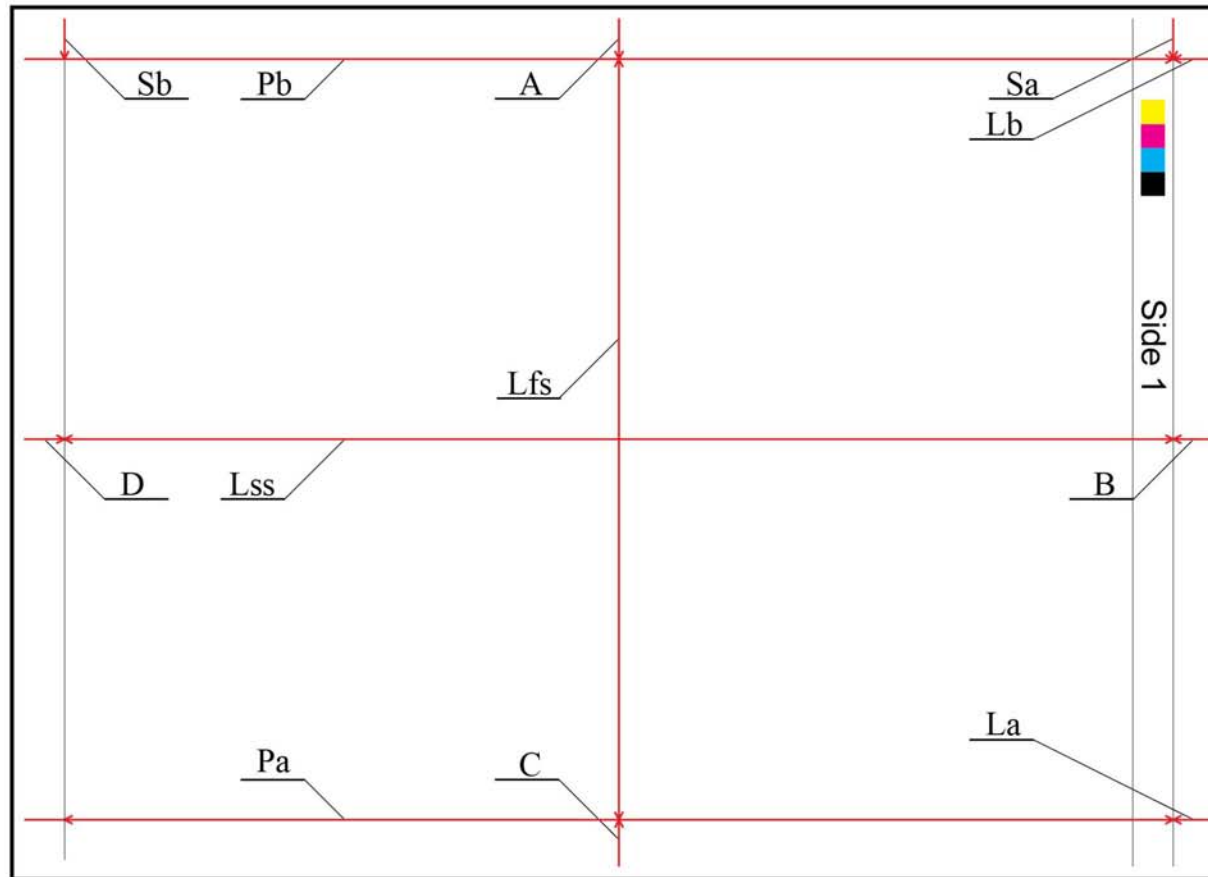
NOTE: This routine only works correctly for A3 or 11x17 inch paper. Ensure there is A3 or 11x17 inch paper available in one of the paper trays.

If setting system registration for A4 or 8.5x11 inch paper, perform [ADJ 60.1 Image Position](#).

Test Pattern

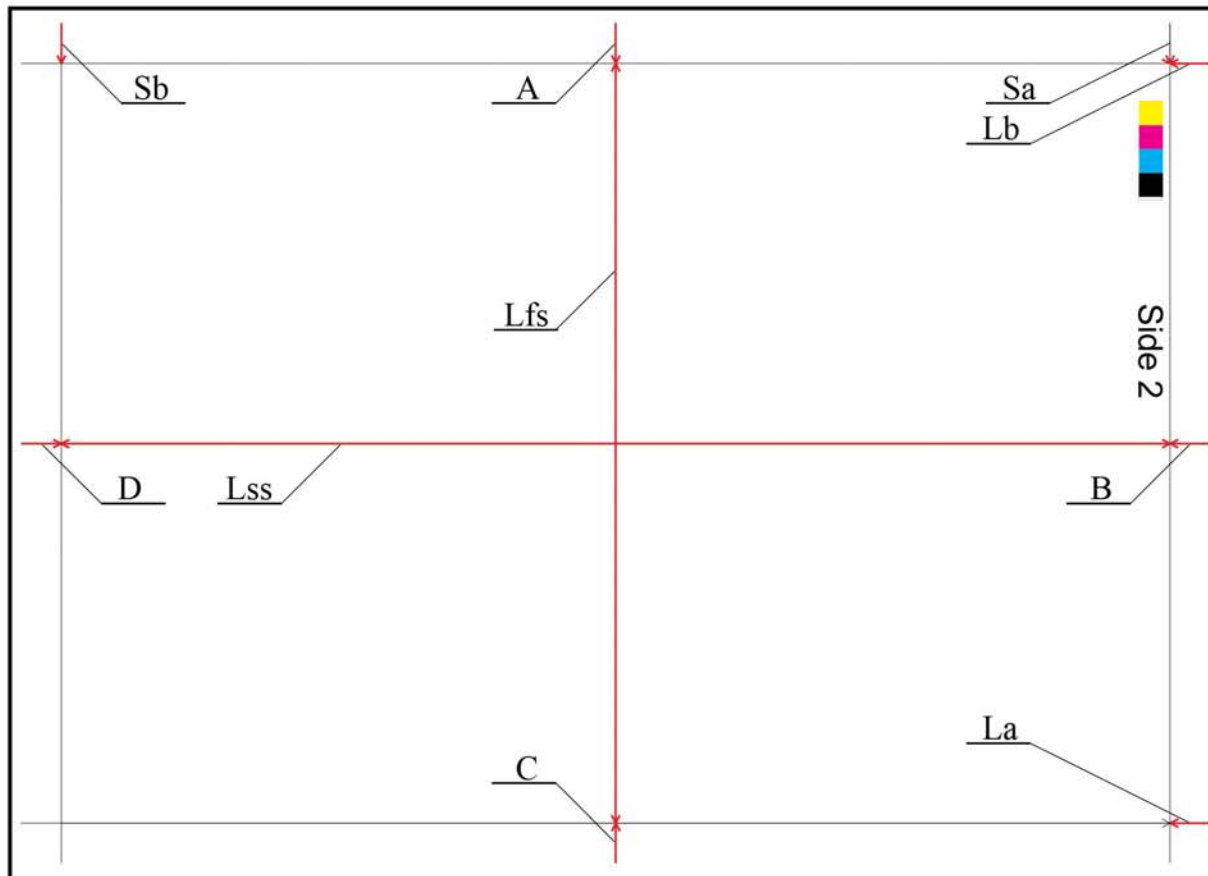
Print the Adjustment Test Pattern (containing the record of measurement (length) locations of the various alignment components) that is stored in the controller and then follow the instructions on the UI screen to input the result of measurements from the measurement locations on the printout via the UI screen to send the misalignment to the IOT and adjust the alignment component.

For adjustment items other than the Side 1/Side 2 Registration, successive adjustments can be performed using the output result of 1 chart sheet. Refer to [Figure 1](#) and [Figure 2](#).



F-1-0696-A

Figure 1 Registration test pattern side 1



F-1-0697-A

Figure 2 Registration test pattern side 2

Procedure

1. Enter Diagnostics mode and select dC126 System Registration Adjustment. [Figure 3](#).

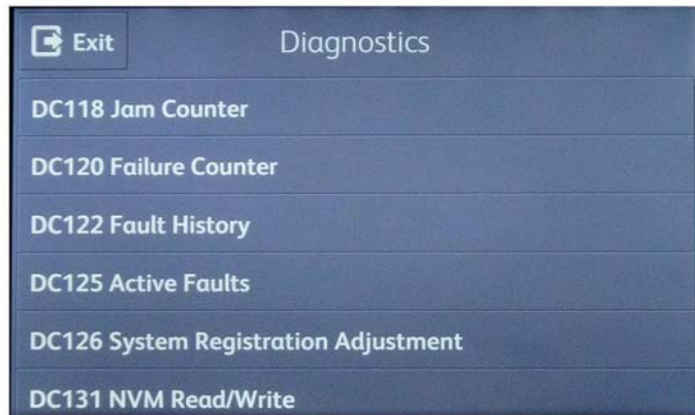


Figure 3 Diagnostics screen

F-1-0728-A

2. Load A3 or 11"x17" paper in the proper tray then select **Paper Supply** to select the proper tray, [Figure 4](#).



Figure 4 Tray selection

F-1-0729-A

NOTE: If the incorrect expected paper size for the procedure is in the default tray, the above message will be displayed. Ignoring the message above produces an incorrect print pattern for the procedure. Changing the tray to the correct paper size corrects the error.

Adjustment Options

- [Side 1/Side 2 Perpendicularity Adjustment](#)
- [Side 1/Side 2 Slow Scan Reduce/Enlarge Adjustment](#)
- [Side 1/Side 2 Lead Edge Registration Adjustment](#)
- [Side 1/Side 2 Side Edge Registration Adjustment](#)
- [Side 1/Side 2 Registration Adjustment](#)

NOTE: Before performing this adjustment, make sure that [dC675 Registration Control Setup Cycle](#) has already been completed. Appropriate alignment adjustment cannot be performed if the Registration Control Setup Cycle is not finished properly.

Side 1/Side 2 Perpendicularity Adjustment

1. Select **Perpendicularity** from the procedure selection, [Figure 5](#).



Figure 5 Procedure selection

F-1-0756-A

- The **Side 1 Perpendicularity** screen will display, [Figure 6](#).

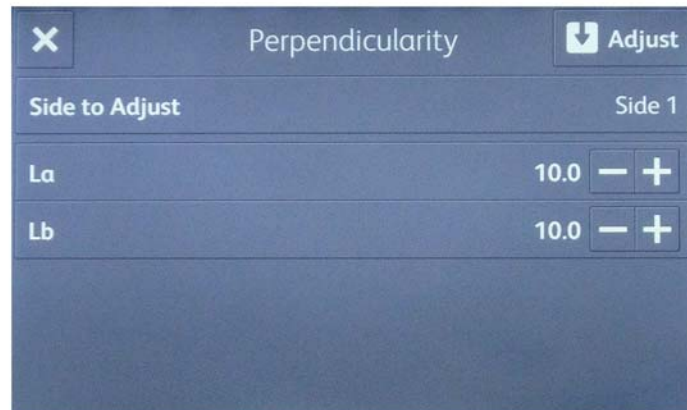


Figure 6 Perpendicularity screen Side 1

F-1-0730-A

2. Measure **La** and **Lb** on Side 1 of the measurement chart, [Figure 7](#).

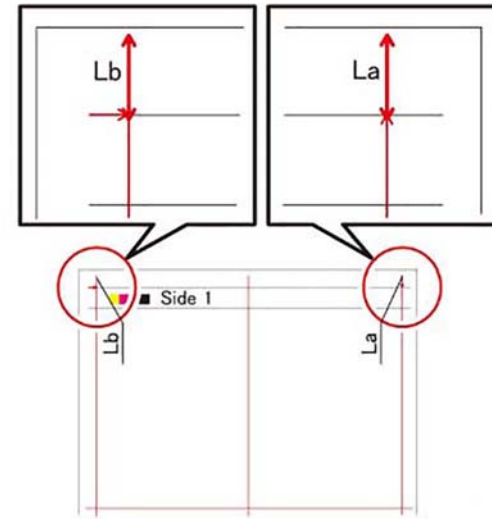


Figure 7 Side 1 La and Lb measurement

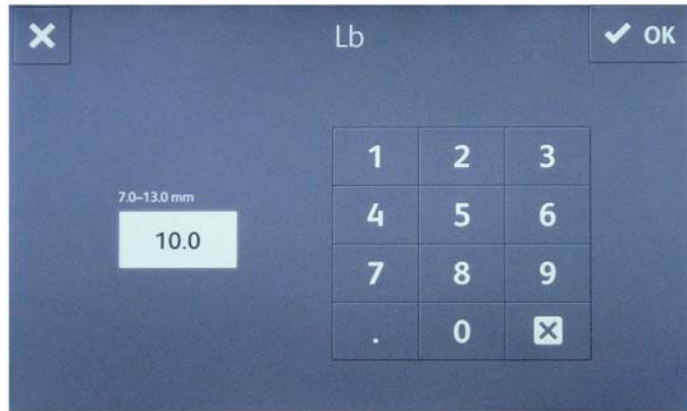
F-1-0746-A

3. Select **Side 1**, input the measured value, and select **OK**. [Figure 8](#) and [Figure 9](#).



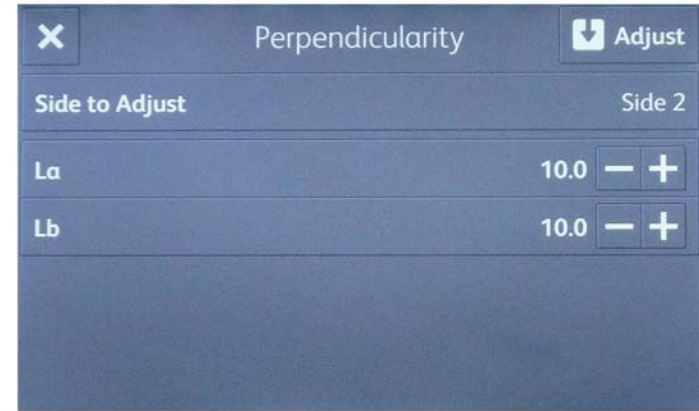
Figure 8 Perpendicularity La value input

F-1-0731-A



F-1-0732-A

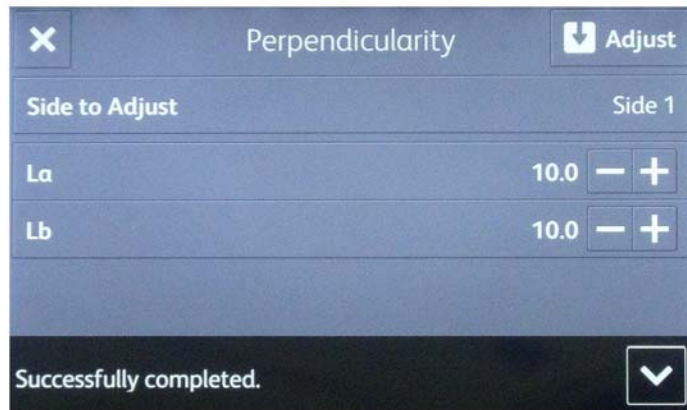
Figure 9 Perpendicularity Lb value input



F-1-0734-A

Figure 11 Perpendicularity screen side 2

4. Select **Adjust**. automatic adjustment is performed, then **Successfully completed** is displayed, [Figure 10](#).



F-1-0733-A

Figure 10 Side 1 perpendicularity adjustment completed

5. Select **Side to Adjust**, then **Side 2**. Repeat steps 2, 3, and 4 above for **Side 2**.
6. Input the measured value, and select **Adjust**, [Figure 11](#).

Side 1/Side 2 Slow Scan Reduce/Enlarge Adjustment

NOTE: Slow scan refers to the process direction.

1. Select **Slow Scan %**. [Figure 12](#).



Figure 12 Slow Scan % selection

2. Measure **Lss** on **Side 1** of the measurement chart, [Figure 13](#).

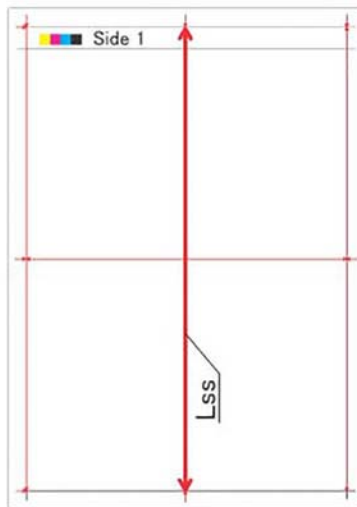


Figure 13 Side 1 Lss measurement

F-1-0735-A

3. Input the measured value for **Side 1**, then select **Adjust**. [Figure 14](#).



Figure 14 TBD Slow Scan % Side 1 adjustment entry

F-1-0757-A

4. Measure **Lss** on **Side 2** of the measurement chart. [Figure 15](#).

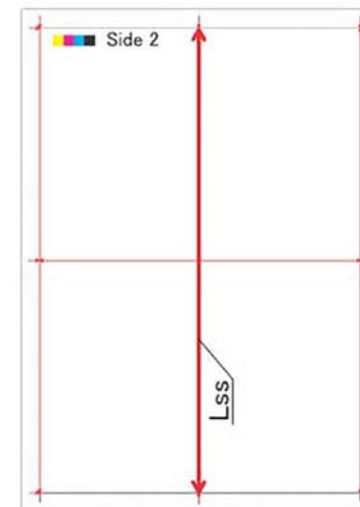


Figure 15 Side 2 Lss measurement

F-1-0749-A

F-1-0748-A

5. Select **Side 2**, input the measured value, then select **Adjust**. [Figure 16](#).



Figure 16 Slow Scan % Side 2 adjustment entry

F-1-0737-A

Side 1/Side 2 Lead Edge Registration Adjustment

1. Select **Lead Registration**. [Figure 17](#).



Figure 17 Lead edge registration selection

F-1-0738-A

2. Measure **B** on **Side 1** of the measurement chart, [Figure 18](#).

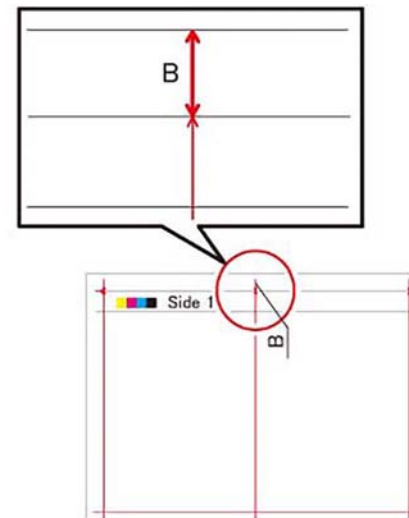


Figure 18 Lead edge side 1 measurement

F-1-0750-A

3. Select **Side 1**, input the measured value, and select **Adjust**. [Figure 19](#).



Figure 19 Lead Registration Side 1 input

F-1-0739-A

6. Select **Side 2**, input the measured value, and select **Adjust**. [Figure 21](#).



Figure 21 Lead Registration Side 2 input

F-1-0740-A

4. Select **Apply Value to All Paper Types**, [Figure 19](#).
5. Measure **B** on **Side 2** of the measurement chart. [Figure 20](#).

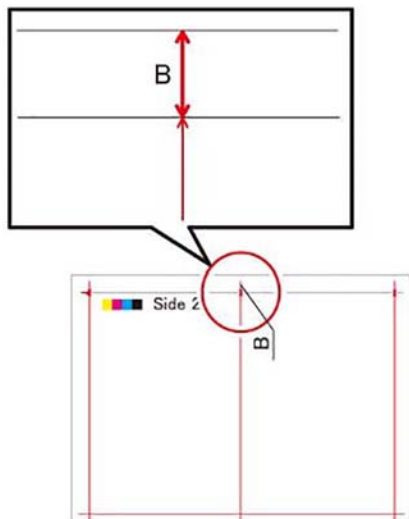


Figure 20 Lead edge side 2 measurement

F-1-0751-A

7. Select **Apply Value to All Paper Types**.

Side 1/Side 2 Side Edge Registration Adjustment

1. Select **Paper Supply** for the correct tray, then select **Side Registration**. [Figure 22](#).



Figure 22 Side edge registration selection

F-1-0741-A

2. Measure **A** on **Side 1** of the measurement chart. [Figure 23](#).

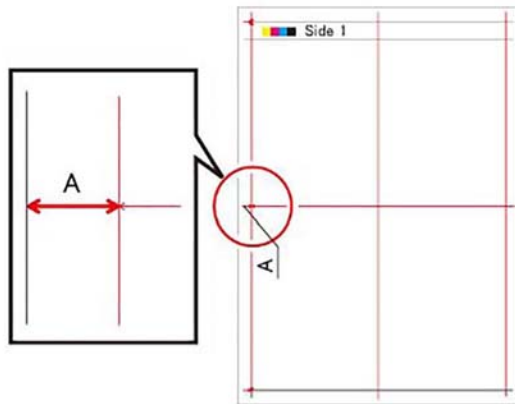


Figure 23 Side 1 Side Registration measurement

F-1-0752-A

3. Select **Side 1**. Input the measured value, then select **Adjust**. [Figure 24](#).



Figure 24 Side 1 Side Registration input

F-1-0742-A

4. Measure **A** on **Side 2** of the measurement chart. [Figure 25](#).

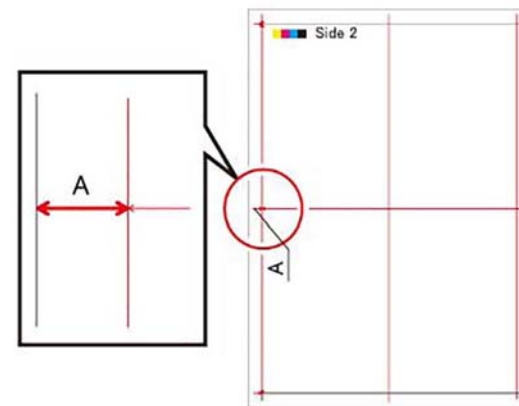


Figure 25 Side 2 Side Registration measurement

F-1-0753-A

5. Select **Side 2**, input the measured value, then select **Adjust**. [Figure 26](#).



F-1-0743-A

Figure 26 Side 2 Side Registration adjustment

6. Set each tray, bypass, or HCF individually. Print out a measurement chart, then perform procedures 2 through 5 for each tray.

NOTE: Load A3 or 11"x17" (Standard paper) into the Tray/MSI.

Side 1/Side 2 Registration Adjustment

NOTE: Before performing this adjustment, make sure that all System Registration adjustments other than the Front/Back Registration have already been completed.

NOTE: Do not use perforated paper, labels, etc.

1. Select **Paper Supply** for the appropriate tray, select **Print** to print a measurement page, then **Side 1/Side 2 Registration** to perform adjustments, [Figure 27](#).



F-1-0744-A

Figure 27 Side 1/Side 2 Registration selection

2. Measure **A** to **D** on **Side 1** and **Side 2** of the measurement chart. [Figure 28](#).

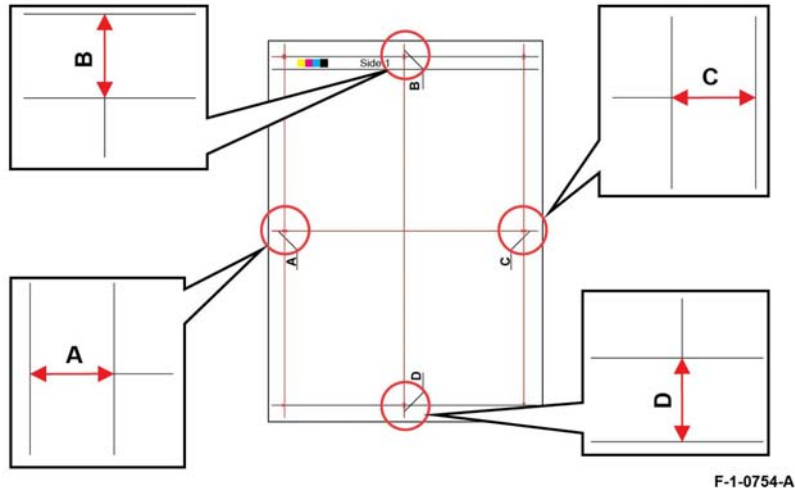


Figure 28 Side 1/Side 2 Registration measurement

3. Enter the measured values for **A** to **D** on **Side 1** and **Side 2** of the measurement chart, then select **Adjust**. [Figure 29](#).



Figure 29 Side 1/Side 2 Registration adjustment

F-1-0745-A

dC131 NVM Read/Write

Purpose

To review and modify values within the machine configuration and control parameters stored in NVM.

Description

Each NVM item is identified using an NVM chain link number in the form XXX-XXX.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Touch dC131 NVM Read/Write.
3. To read NVM, enter the required chain link number. The current value will be displayed.
4. To write NVM:
 - a. Enter the required chain link number.
 - b. Touch Change.
 - c. Enter a new value.
 - d. Touch OK.
 - e. The new value will be displayed in the Current Value box.
5. Touch Close to return to the Diagnostics screen.
6. Exit diagnostics, [GP 1](#).

NOTE: *The Edoc CD must be in the CD drive to use the links below.*

For the NVM tables, refer to the documents that follow:

- NVM List 501 Fuser 5.
- NVM List 502 Process Control 8.
- NVM List 503 Process Control 9.
- NVM List 504 Process Control 10.
- NVM List 505 Transfer 5.
- NVM List 506 Transfer 6.
- NVM List 507 Transfer 7.
- NVM List 508 Transfer 8.
- NVM List 509 Transfer 9.
- NVM List 510 LPH 2.
- NVM List 511 LPH 3.
- NVM List 512 Xerographic Cleaning 3.
- NVM List 513 Xerographic Cleaning 4.
- NVM List 740 IOT Manager.
- NVM List 741 Drive.
- NVM List 742 Paper Handling 1.
- NVM List 743 Paper Handling 2.
- NVM List 744 Fuser 1.
- NVM List 745 Transfer 1.
- NVM List 746 Transfer 2.
- NVM List 747 Transfer 3.
- NVM List 748 Transfer 4.
- NVM List 749 LPH 1.
- NVM List 750 Xerographic Cleaning 1.
- NVM List 751 Xerographic Cleaning 2.
- NVM List 752 Process Control 1.
- NVM List 753 Process Control 2.
- NVM List 754 Process Control 3.
- NVM List 755 Process Control 4.
- NVM List 756 Process Control 5.
- NVM List 757 LPH 4.
- NVM List 758 High Voltage.
- NVM List 759 Registration control 1.
- NVM List 760 Registration control 2.
- NVM List 761 Development.
- NVM List 764 Output.
- NVM List 765 Fuser 2.
- NVM List 766 Rmt 1.
- NVM List 767 Fi_767.
- NVM List 980 Process Control 6.
- NVM List 981 Process Control 7.
- NVM List 984 Process Control 11.
- NVM List 985 Fuser 6.
- NVM List 986 Fuser 3.
- NVM List 987 Fuser 4.
- NVM List 988 Crm_988.
- NVM List 998 Marking System.
- NVM List 999 Rmt 2.

dC132 Device ID and Billing Data

Purpose

To view and, if required, synchronize the serial and product numbers between the halftone PWB, back plane PWB, and controller PWB when a new back plane PWB or new halftone PWB and controller PWB has been installed.

The serial and product numbers are held at the following locations:

- EPROM on the halftone PWB (IOT).
- SEEP ROMM of back plane PWB (SYS1).
- SRAM of controller PWB (SYS2).

NOTE: This function must only be used when a failure has occurred. When the values at the three locations (IOT, SYS1, SYS2) are the same, there is no need to continue with the procedure.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select **dC132** Device ID and Billing Data.
3. To change the values, select IOT, SYS1 or SYS2.
4. Follow the on screen instructions to enter the required values, then select OK.
5. Exit diagnostics, [GP 1](#).

dC135 HFSI Counter

Purpose

To view the counters for high frequency service items (HFSI).

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select **dC135** HFSI Counter.
3. Select Details. The Details screen will open, displaying the part name, current value, replacement data and the specified life.
4. Refer to [Table 1](#) to observe the status of the items.
5. To reset an HFSI value:
 - a. Select Reset.
 - b. The Reset Current Value screen will open.
 - c. Select Yes to reset the NVM value.

NOTE: The three previous replacement values will be modified.

6. To edit the specified life of an HFSI:
 - a. Select Spec Life.
 - b. The Spec Life screen will open.
 - c. Enter the new value.
 - d. Select OK.
7. Select X to return to the HFSI Counter screen.
8. Select X to return to the Diagnostics screen.
9. Exit diagnostics, [GP 1](#).

Table 1 HFSI Details

Chain-Link	Name	Spec Life
954-800	Tray 1 Feed/Retard/Nudger Rolls	300K feeds
954-801	Tray 2 Feed/Retard/Nudger Rolls	300K feeds
954-802	Tray 3 Feed/Retard/Nudger Rolls	300K feeds
954-803	Tray 4 Feed/Retard/Nudger Rolls	300K feeds
954-804	HCF Feed/Retard/Nudger Rolls	300K feeds
954-805	MSI (Bypass Tray) Feed Roll/Retard	100K feeds
954-820	IBT Unit	480K
954-821	2nd BTR Unit	200K
954-822	IBT Cleaner Unit	160K
954-830	Developer Unit Y	1500K prints
954-831	Developer Unit M	1500K prints
954-832	Developer Unit C	1500K prints
954-833	Developer Unit K	1500K prints
954-834	Developer Y	1500K prints
954-835	Developer M	1500K prints
954-836	Developer C	1500K prints

Table 1 HFSI Details

Chain-Link	Name	Spec Life
954-837	Developer K	1500K prints
VersaLink C8000		
954-840	45ppm Y Drum Cartridge PV	213K prints
954-841	45ppm M Drum Cartridge PV	213K prints
954-842	45ppm C Drum Cartridge PV	213K prints
954-843	45ppm K Drum Cartridge PV	240K prints
954-844	45ppm Y Drum Cartridge Cycle	1120K cycles
954-845	45ppm M Drum Cartridge Cycle	1120K cycles
954-846	45ppm C Drum Cartridge Cycle	1120K cycles
954-847	45ppm K Drum Cartridge Cycle	1120K cycles
VersaLink C9000		
954-840	55ppm Y Drum Cartridge PV	190K prints
954-841	55ppm M Drum Cartridge PV	190K prints
954-842	55ppm C Drum Cartridge PV	190K prints
954-843	55ppm K Drum Cartridge PV	224K prints
954-844	55ppm Y Drum Cartridge Cycle	1120K cycles
954-845	55ppm M Drum Cartridge Cycle	1120K cycles
954-846	55ppm C Drum Cartridge Cycle	1120K cycles
954-847	55ppm K Drum Cartridge Cycle	1120K cycles
954-850	Fusing Unit Print Count	500K feeds

dC140 Analog Component Monitoring

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.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select dC140 Analog Component Monitoring.
3. Select Chain-Link.
4. Enter the relevant Chain-Link number, refer to [Table 1](#).
5. Select OK.
6. Select Start. The screen will display the information that follows:
 - Chain-Link number of the component.
 - Input or output code clarification.
 - The enabled or disabled state.
 - The output level.
7. Select Stop All to stop component operation.
8. Select Close to return to the Diagnostics screen.
9. Exit diagnostics, [GP 1](#).

Table 1 Component list

Chain-Link	Component Name	Description
010-200	Heat Belt STS Centre	Displays the status of the centre heat sensor.
010-201	Heat Belt STS Rear	Displays the status of the rear heat sensor.
041-200	MD_Fuse1_CHK	Displays the status of fuses F1, F6 and F10 on the motor drive PWB.
041-201	MD_Fuse2_CHK	Displays the status of fuses F2 and F3 on the motor drive PWB.
041-202	MD_Fuse3_CHK	Displays the status of fuses F5 and F8 on the motor drive PWB.
041-203	MD_Fuse4_CHK	Displays the status of fuse F7 on the motor drive PWB.
041-204	MD_Fuse6_CHK	Displays the status of fuse F11 on the motor drive PWB.
041-205	MD_Fuse7_CHK	Displays the status of fuse F13 on the motor drive PWB.
042-200	NOHAD_ENV_SNR_TEM MP	Displays the status of the temperature sensor.
042-201	NOHAD_ENV_SNR_HU M	Displays the status of the humidity sensor.
071-200	Tray 1 Size Sensor	Displays the status of the tray 1 size sensor:
072-200	Tray 2 Size Sensor	Displays the status of the tray 2 size sensor:

Table 1 Component list

Chain-Link	Component Name	Description
073-200	Tray 3 Size Sensor	Displays the status of the tray 3 size sensor.
074-200	Tray 4 Size Sensor	Displays the status of the tray 4 size sensor.
075-200	MSI Size Sensor	Displays the status of the bypass tray (MSI) size sensor.
089-200	MOB_SNR_OUT_ANA	Displays the status of the rear MOB sensor.
089-201	MOB_SNR_IN_ANA	Displays the status of the front MOB sensor.
091-202	BCR DC I MONI Y	Displays the DC status of the Y BCR.
091-203	BCR DC I MONI M	Displays the DC status of the M BCR.
091-204	BCR DC I MONI C	Displays the DC status of the C BCR.
091-205	BCR DC I MONI K	Displays the DC status of the K BCR.
092-203	ATC_SNR_Y	TC detection in the Y developer housing assembly.
092-204	ATC_SNR_M	TC detection in the M developer housing assembly.
092-205	ATC_SNR_C	TC detection in the C developer housing assembly.
092-206	ATC_SNR_K	TC detection in the K developer housing assembly.
092-207	ADC_SNR_VSPC	Displays the ADC sensor input status.
092-208	PROREGI_ENV_SNR_T EMP	Displays the temperature sensor input status.
092-209	PROREGI_ENV_SNR_H UM	Displays the humidity sensor input status.
092-210	ATC_SNR_VDIF	Displays the ADC sensor input status.

dC301 NVM Initialization

Purpose

To reset the values of all applicable NVM parameters to default.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select dC301 Initialize NVM.
3. Select the area to be initialized. Refer to [Table 1](#).

Table 1 NVM areas

Area	Comments
IOT 1	Motor drive PWB NVM. After initializing the IOT 1 NVM, ensure the tray module type is correctly set, refer to the 077-211 Tray Module Mismatch RAP.
IOT 2	Do not use.
Finisher	Finisher NVM.
IFM	Do not use.
IISS - IIT/IPS	Do not use.
IISS - Extension	Do not use.
Input Device	Do not use.
Sys - System	Controller PWB NVM.
Sys - User	SD card customer settings. The installation wizard will have to be run after initializing the SD card NVM.
Fault Counter	Fault history.
HCS 1	Do not use.
HCS 2	Do not use.
PFIM	Do not use.

4. Select Start.
5. Follow the UI messages to initialize the NVM.
6. Select Close to return to the Diagnostics screen.
7. Enter [dC131](#). Ensure NVM value 790-900 is set to 1. If the NVM value was changed, switch off, then switch on the machine, [GP 10](#). Verify that the Embedded Web Server is working.
8. Exit diagnostics, [GP 1](#).

dC305 UI Panel Diagnostics

Purpose

To test the LED and audio functions of the user interface.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select dC305 UI Panel Diagnostics.
3. Select [LED Test](#) or [Audio Test](#).
4. Exit diagnostics, [GP 1](#).

LED Test

1. Select the 1 or more LEDs to be diagnosed:
 - Interactive
 - Error
 - NFC
 - Power
 - Data
2. Select the display pattern to be diagnosed. The selected LEDs are switched on.
3. Select All Off.
4. Select the back button (top left) to return to the Diagnostics screen.

Audio Test

1. Select Volume. Adjust the volume as necessary.
2. Select the pattern to be diagnosed. The audio sounds with the specified volume and pattern:
 - Pattern 1
 - Pattern 2
 - Pattern 3
 - Pattern 4
 - Pattern 5
 - Pattern 6
3. Select the back button (top left) to return to the Diagnostics screen.

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, tray size sensing, development housing ATC sensors and MOB sensor, 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 BSD 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 010.
- [Table 2](#) Input Codes 012 and 013 - Office Finisher LX.
- [Table 3](#) Input Codes 071 to 078.
- [Table 4](#) 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 5](#) Output Codes 010
- [Table 6](#) Output Codes 012 and 013 - Office Finisher LX.
- [Table 7](#) Output Codes 042.
- [Table 8](#) Output Codes 061 and 062.
- [Table 9](#) Output Codes 071 to 078.
- [Table 10](#) Output Codes 091 to 094.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select dC330 Component Control.

CAUTION

Check the component control tables for components that will damage the machine if run together.

3. Select Chain-Link.
4. Enter the relevant Chain-Link number.
5. Select OK.
6. Select Start. The component will operate and the screen will display the information that follows:
 - Chain-Link number of the component.
 - Input or output code clarification.
 - The component status.
 - Operation counter.
7. Toggle Cyclic Motion to repeat the operation.
8. Select Stop All to stop component operation.
9. Select Close to return to the Diagnostics screen.
10. Exit diagnostics, [GP 1](#).

Input Codes

Table 1 Input Code 010 Fusing

Code	Displayed Name	Description	General
010-201	Fusing Thermostat Status.	Displays the current level of the thermostat.	H: Disconnected L: Connected
010-202	Fusing P/Roll Latch Sensor.	Displays the current level of the p/roll latch sensor.	H: On L: Off
010-203	Belt Speed Sensor.	Displays the current level of the fuser belt speed sensor.	0: On 1: Off

Table 2 Input Codes 012 and 013 - Office Finisher LX

Code	Displayed Name	Description	General
012-100	Finisher Entrance Sensor	Finisher entry sensor (Q12-100)	High/Low
012-110	Reg. Clutch on Detect	Registration clutch (CL12-110)	On/off
012-111	IOT Exit Sensor	IOT exit sensor (Q12-111)	High/Low
012-150	Compiler Exit Sensor	Compiler exit sensor (Q12-150)	High/Low
012-151	Compiler Tray No Paper Sensor	Compiler tray no paper sensor (Q12-151)	High/Low
012-190	H-Transport Entrance Sensor	H-transport entrance sensor (Q12-190)	High/Low
012-220	Front Tamper Home Sensor	Front tamper home sensor (Q12-220)	High = home
012-221	Rear Tamper Home Sensor	Rear tamper home sensor (Q12-221)	High = home
012-241	Stapler Move Position Sensor	Stapler move position sensor (Q12-241)	High/Low
012-242	Low Staple Sensor	Low staples sensor (Q12-242)	High = almost empty
012-243	Self Priming Sensor	Self priming sensor (Q12-243)	High = ready
012-244	Staple Home Sensor	Staple head home sensor (Q12-244)	High = staple head home
012-250	Eject Clamp Home Sensor	Eject clamp home sensor (Q12-250)	High/Low
012-251	Set Clamp Home Sensor	Set clamp home sensor (Q12-251)	High = set clamp home
012-260	Upper Limit Sensor	Upper limit sensor (Q12-260)	High/Low
012-262	Stacker Paper Sensor	Stacker paper sensor (Q12-262)	High/Low
012-263	Stacker Encoder Sensor	Stacker encoder sensor (Q12-263)	High/Low
012-264	Stack Height Sensor 1	Stack height sensor 1 (Q12-264)	High/Low
012-265	Stack Height Sensor 2	Stack height sensor 2 (Q12-265)	High/Low
012-271	Punch Home Sensor	Punch home sensor (Q12-271)	High/Low
012-274	Punch Encoder Sensor	Punch encoder sensor (Q12-274)	High/Low
012-275	Punch Box Set Sensor	Punch box set sensor (Q12-275)	High/Low

Table 2 Input Codes 012 and 013 - Office Finisher LX

Code	Displayed Name	Description	General
012-277	Puncher Detect	Puncher detect (Q12-277)	High/Low
012-300	Eject Cover Switch	Eject cover switch (S12-300)	High/Low
012-302	Fin. Front Door Intlk Switch	Finisher front door interlock switch (S12-302)	High/Low
012-303	H-Transport Open Sensor	H-transport open sensor (Q12-303)	High/Low
013-101	Folder Home Sensor	Folder home sensor (Q13-101)	High/Low
013-107	Booklet Front Low Staple Switch	Booklet front low staple switch (S13-107)	High = Staple slow
013-108	Booklet Rear Low Staple Switch	Booklet rear low staple switch (S13-108)	High = Staple slow
013-141	Booklet Front Staple Home Switch	Booklet front staple home switch (S13-141)	High/Low
013-142	Booklet Rear Staple Home Switch	Booklet rear staple home switch (S12-142)	High/Low
013-143	Booklet Stapler Move Position Sensor	Booklet stapler move position sensor (S13-143)	High/Low
013-144	Booklet Stapler Move Home Sensor	Booklet stapler move home sensor (S13-144)	High/Low
013-160	Folder Detect	Folder detect	High/Low
013-161	Booklet Detect	Booklet detect	High/Low
013-300	Booklet Cover Open Switch	Booklet cover open switch (S13-300)	High/Low
013-301	Booklet Safety Switch	Booklet safety switches	High/Low

Table 3 Input codes 071 to 078

Code	Displayed Name	Description	General
071-101	Tray 1 No Paper Sensor	Tray 1 no paper sensor (Q71-101)	High = Tray Empty
071-102	Tray 1 Level Sensor	Tray 1 level sensor (Q71-102)	High = Tray Empty
071-104	Tray 1 Tray Paper Size Switch (digital)	Tray 1 paper size switch (S71-104)	High = Paper Detected
071-105	Tray 1 Pre Feed Sensor	Tray 1 pre feed sensor (Q71-105)	High = Paper Detected
072-101	Tray 2 No Paper Sensor	Tray 2 no paper sensor (Q72-101)	High = Tray Empty
072-102	Tray 2 Level Sensor	Tray 2 level sensor (Q72-102)	High = Tray Empty
072-104	Tray 2 Tray Paper Size Sensor (digital)	Tray 2 paper size sensor (Q72-104)	High = Tray Missing
072-105	Tray 2 Tray Pre Feed Sensor	Tray 2 pre feed sensor (Q72-105)	High = Paper Detected
073-101	Tray 3 No Paper Sensor	Tray 3 no paper sensor (Q73-101)	High = Tray Empty
073-102	Tray 3 Level Sensor	Tray 3 level sensor (Q73-102)	High = Tray Empty
073-103	Tray 3 Feed Out Sensor	Tray 3 feed out sensor (Q73-103)	High = Paper Detected

Table 3 Input codes 071 to 078

Code	Displayed Name	Description	General
073-104	Tray 3 Tray Paper Size Sensor (digital)	Tray 3 paper size sensor (Q73-104)	High = Tray Missing
073-105	Tray 3 Pre Feed Sensor	Tray 3 pre feed sensor (Q73-105)	High = Tray Missing
074-101	Tray 4 No Paper Sensor	Tray 4 no paper sensor (Q74-101)	High = Tray Empty
074-102	Tray 4 Level Sensor	Tray 4 level sensor (Q74-102)	High = Tray Empty
074-103	Tray 4 Feed Out Sensor	Tray 4 feed out sensor (Q74-103)	High = Paper Detected
074-104	Tray 4 Tray Paper Size Sensor (digital)	Tray 4 paper size sensor (Q74-104)	High = Tray Missing
074-105	Tray 4 Pre Feed Sensor	Tray 4 pre feed sensor (Q74-105)	High = paper detected
075-101	MSI No Paper Sensor	Bypass tray no paper sensor (Q75-101)	High/Low
075-102	MSI Nudger Position Sensor	Bypass tray nudger position sensor (Q75-102)	High/Low
077-100	Tray 2 Exit Sensor	Exit 2 sensor (Q77-113)	High = paper detected
077-101	Exit 1 Sensor	Exit 1 sensor (Q77-101)	High = paper detected
077-102	POB Jam Sensor	POB Jam Sensor (Q94-201)	High = paper detected
077-103	Regi Sensor	Registration sensor (Q77-103)	High = paper detected
077-104	MSI Feed Out Sensor	Bypass tray feed out sensor (Q77-104)	High = paper detected
077-109	OCT1 Home Position Sensor	Exit 1 OCT home position sensor (Q77-109).	High = paper detected
077-110	OCT2 Home Position Sensor	Exit 2 OCT home position sensor (Q77-110).	High/Low
077-124	OCT1 Full Stack Sensor	Exit 1 OCT full stack sensor (Q77-124).	High/Low
077-125	OCT2 Full Stack Sensor	Exit 2 OCT full stack sensor (Q77-125).	High/Low
077-300	Left Cover Interlock Switch	Left cover interlock switch (S77-300).	High/Low
077-303	Front Cover Interlock Switch	Front cover interlock switch (S77-303).	High/Low
077-306	Tray Module Left Cover Interlock Switch	TM left cover interlock switch (S77-306).	High/Low
077-307	Trans Path Drawer Switch	TM Transport Path Drawer Switch (S77-307).	High/Low
078-100	HCF1 Pre Feed Sensor	HCF pre feed sensor (Q78-100).	High/Low
078-101	HCF1 Feed Out Sensor	HCF feed out sensor (Q78-101)	High/Low

Table 3 Input codes 071 to 078

Code	Displayed Name	Description	General
078-200	HCF1 No Paper Sensor	HCF no paper sensor (Q78-200)	High/Low
078-201	HCF1 Level Sensor	HCF level sensor (Q78-201)	High/Low
078-202	HCF1 Size Sensor A	HCF size sensor A (Q78-202)	High/Low
078-203	HCF1 Size Sensor B	HCF size sensor B (Q78-203)	High/Low
078-204	HCF1 Tray In Sensor	HCF tray in sensor (Q78-204)	High/Low
078-300	HCF1 Transport Interlock	HCF transport interlock(S78-300)	High/Low
078-301	HCF1 Side Out Switch	HCF side out switch (S78-301)	High/Low

Table 4 Input codes 091

Code	Displayed Name	Description	General
091-201	Waste Toner Full Sensor	Detects toner waste bottle near full.	-

Output Codes

Table 5 Output Codes 010

Code	Displayed Name	Description	General
010-001	Fusing Motor(308mm Speed)	Runs the drive fuser motor at 308mm/s.	
010-002	Fusing Motor(255mm Speed)	Runs the drive fuser motor at 255mm/s.	
010-003	Fusing Motor(233mm Speed)	Runs the drive fuser motor at 233mm/s.	
010-004	Fusing Motor(185mm Speed)	Runs the drive fuser motor at 185mm/s.	
010-005	Fusing Motor(150mm Speed)	Runs the drive fuser motor at 150mm/s.	
010-006	Fusing Motor(121mm Speed)	Runs the drive fuser motor at 121mm/s.	
010-009	P/Roll Latch ON	Runs the roll latch motor to move pressure roller to the fully cammed (latched) position.	
010-010	P/Roll Latch OFF	Runs the roll latch motor to move pressure roller to the uncammed (unlatched) position.	
010-011	P/Roll Half Latch	Runs the roll latch motor to move pressure roller to the half-cammed (half-latched) position.	
010-201	Fusing Thermostat Status	Display's the current level of Thermostat.	
010-202	Fusing P/Roll Latch Sensor	Display's current level of pressure roller latch sensor.	

Table 5 Output Codes 010

Code	Displayed Name	Description	General
010-203	Belt Speed Sensor	Display's current level of fuser belt speed sensor.	

Table 6 Output Codes 012 and 013 - Office Finisher LX

Code	Displayed Name	Description	General
012-013	Sub Paddle Solenoid	Energizes the sub paddle solenoid (SOL12-013).	On/off. 250 ms
012-018	Transport Motor Reverse	Runs the transport motor (MOT12-018) in reverse.	On/off.
012-020	Front Tamper Mot Low Front	Runs the front tamper motor (MOT12-020) at low speed to move the front tamper forward.	On/off. 82 pulses
012-022	Front Tamper Mot High Front	Runs the front tamper motor (MOT12-020) at high speed to move the front tamper forward.	On/off. 82 pulses
012-023	Front Tamper Mot Low Rear	Runs the front tamper motor (MOT12-020) at low speed to move the front tamper backward.	On/off. 82 pulses
012-025	Front Tamper Mot High Rear	Runs the front tamper motor (MOT12-020) at high speed to move the front tamper backward.	On/off. 82 pulses
012-026	Rear Tamper Motor Low Front	Runs the rear tamper motor (MOT12-026) at low speed to move the rear tamper forward.	On/off. 82 pulses
012-028	Rear Tamper Motor High Front	Runs the rear tamper motor (MOT12-026) at high speed to move the front tamper forward.	On/off. 82 pulses
012-029	Rear Tamper Motor Low Rear	Runs the rear tamper motor (MOT12-026) at low speed to move the rear tamper backward.	On/off. 82 pulses
012-031	Rear Tamper Motor High Rear	Runs the rear tamper motor (MOT12-026) at high speed to move the rear tamper backward.	On/off. 82 pulses
012-032	H-Transport Motor 1	Runs the horizontal transport motor (MOT12-032) forward at highest speed.	On/off.
012-033	H-Transport Motor 2	Runs the horizontal transport motor (MOT12-032) forward at high speed.	On/off.
012-034	H-Transport Motor 3	Runs the horizontal transport motor (MOT12-032) forward at mid speed.	On/off.
012-035	H-Transport Motor 4	Runs the horizontal transport motor (MOT12-032) forward at low speed.	On/off.
012-036	Transport Motor 1	Runs the transport motor (MOT12-036) forward at high speed.	On/off.

Table 6 Output Codes 012 and 013 - Office Finisher LX

Code	Displayed Name	Description	General
012-037	Transport Motor 2	Runs the transport motor (MOT12-036) forward at mid speed.	On/off.
012-038	Transport Motor 3	Runs the transport motor (MOT12-036) forward at low speed.	On/off.
012-039	H-Transport Motor Reverse	Runs the horizontal transport motor (MOT12-032) in reverse.	On/off.
012-040	Stapler Move Motor Front Low	Runs the stapler move motor (MOT12-040) to move the stapler assembly to the front at low speed.	On/off.
012-042	Stapler Move Motor Front High	Runs the stapler move motor (MOT12-040) to move the stapler assembly to the front at high speed.	On/off.
012-043	Stapler Move Motor Rear Low	Runs the stapler move motor (MOT12-040) to move the stapler assembly to the rear at low speed.	On/off.
012-045	Stapler Move Motor Rear High	Runs the stapler move motor (MOT12-040) to move the stapler assembly to the rear at high speed.	On/off.
012-046	Staple Motor Forward	Runs the stapler motor (MOT12-046) forwards.	On/off.
012-047	Staple Motor Reverse	Runs the stapler motor (MOT12-046) in reverse.	On/off. 200ms timeout.
012-050	Set Clamp Clutch	Energizes the set clamp clutch (CL12-050).	On/off. 583 pulses.
012-052	Eject Clamp Up	Runs the eject motor (MOT12-054) in reverse at high speed to raise the eject clamp roll.	On/off. 200ms timeout.
012-053	Eject Clamp Down	Runs the eject motor (MOT12-054) in reverse at high speed to lower the eject clamp roll.	On/off. 46 pulses after home.
012-054	Eject Motor Forward Low	Runs the eject motor (12-054) forward at low speed.	On/off. 1136 pulses.
012-055	Eject Motor Forward High	Runs the eject motor (12-054) forward at high speed.	On/off. 1136 pulses.
012-060	Stacker Motor Up	Runs the stacker motor (MOT12-060) to drive the stacker tray up.	On/Off. 500ms timeout.
012-061	Stacker Motor Down	Runs the stacker motor (MOT12-060) to drive the stacker tray down.	On/Off. 500ms timeout.
012-074	Punch Motor Move Home	Runs the punch motor (MOT12-074) to drive the punch home.	On/off.
012-077	Punch (2 hole)	Runs the punch motor (MOT12-074) to drive 2 hole punch movement.	On/off.
012-078	Punch (3 hole)	Runs the punch motor (MOT12-074) to drive 3 hole punch movement.	On/off.

Table 6 Output Codes 012 and 013 - Office Finisher LX

Code	Displayed Name	Description	General
012-079	Punch (4 hole)	Runs the punch motor (MOT12-074) to drive 4 hole punch movement.	On/off.
013-022	Knife Motor Forward	Runs the knife motor (MOT13-022) forward.	On/off.
013-023	Knife Motor Reverse	Runs the knife motor (MOT13-022) in reverse.	On/off.
013-024	Booklet Front Stapler Motor Forward	Runs the front booklet staple motor (MOT13-024) forward.	On/off.
013-025	Booklet Front Stapler Motor Reverse	Runs the front booklet staple motor (MOT13-024) in reverse.	On/off.
013-026	Booklet Rear Stapler Motor Forward	Runs the rear booklet staple motor (MOT13-026) forward.	On/off.
013-027	Booklet Front Stapler Motor Reverse	Runs the rear booklet staple motor (MOT13-026) in reverse.	On/off.
013-028	Booklet Staple Move Motor In	Runs the booklet staple move motor (MOT13-028) to move booklet stapler to the I/B side.	On/off. 350 pulses
013-029	Booklet Staple Move Motor Out	Runs the booklet staple move motor (MOT13-028) to move booklet stapler to the O/B side.	On/off. 350 pulses

Table 7 Output Codes 042

Code	Displayed Name	Description	General
041-001	All Sub consistent mode	Drum, toner dispense, paper path, waste toner bottle auger, fuser, exit 1 noise detection processing.	-
041-002	Drum abnormal noise detection mode	Drum abnormal sound detection processing.	-
041-003	Dispense noise detection mode	Dispense abnormal sound detection processing.	-
041-004	Paper path, waste toner bottle auger, fuser, exit 1 abnormal noise detection mode.	Paper path, waste toner bottle auger, fuser, exit 1 abnormal noise detection.	-
042-001	(K) IBT Motor (308mm/s)	Runs the (K) IBT motor (MOT42-001) at 308mm/s.	On/off
042-002	(K) IBT Motor (225mm/s)	Runs the (K) IBT motor (MOT42-001) at 225mm/s.	On/off
042-003	(K) IBT Motor (233mm/s)	Runs the (K) IBT motor (MOT42-001) at 233mm/s.	On/off
042-004	(K) IBT Motor (185mm/s)	Runs the (K) IBT motor (MOT42-001) at 185mm/s.	On/off
042-005	(K) IBT Motor (155mm/s)	Runs the (K) IBT motor (MOT42-001) at 155mm/s.	On/off

Table 7 Output Codes 042

Code	Displayed Name	Description	General
042-006	(K) IBT Motor (120mm/s)	Runs the (K) IBT motor (MOT42-001) at 120mm/s.	On/off
042-007	(Y,M,C) Motor (255mm/s)	Runs the (Y,M,C) motor (MOT42-007) at 255mm/s.	On/off
042-008	(Y,M,C) Motor (233mm/s)	Runs the (Y,M,C) motor (MOT42-007) at 233mm/s.	On/off
042-009	(Y,M,C) Motor (185mm/s)	Runs the (Y,M,C) motor (MOT42-007) at 185mm/s.	On/off
042-010	(Y,M,C) Motor (155mm/s)	Runs the (Y,M,C) motor (MOT42-007) at 155mm/s.	On/off
042-011	(Y,M,C) Motor (120mm/s)	Runs the (Y,M,C) motor (MOT42-007) at 120mm/s.	On/off
042-012	(Y,M,C) Drum Motor (308mm/s)	Runs the (Y,M,C) drum motor (MOT42-007) at 308mm/s.	On/off
042-013	(Y,M,C) Drum Motor (233mm/s)	Runs the (Y,M,C) drum motor (MOT42-007) at 233mm/s.	On/off
042-014	(Y,M,C) Drum Motor (185mm/s)	Runs the (Y,M,C) drum motor (MOT42-007) at 185mm/s.	On/off
042-015	(Y,M,C) DEVE Motor (308mm/s)	Runs the (Y,M,C) developer motor (MOT42-007) at 308mm/s.	On/off
042-016	(Y,M,C) DEVE Motor (233mm/s)	Runs the (Y,M,C) developer motor (MOT42-007) at 233mm/s.	On/off
042-017	(Y,M,C) DEVE Motor (185mm/s)	Runs the (Y,M,C) developer motor (MOT42-007) at 185mm/s.	On/off
042-018	Main Drive Motor All (255mm/s)	Runs the (K)IBT motor/YMC motor (MOT42-001/MOT42-007) at 255mm/s.	On/off
042-019	Main Drive Motor All (233mm/s)	Runs the (K)IBT motor/YMC motor (MOT42-001/MOT42-007) at 233mm/s.	On/off
042-020	Main Drive Motor All (185mm/s)	Runs the (K)IBT motor/YMC motor (MOT42-001/MOT42-007) at 185mm/s.	On/off
042-021	Main Drive Motor All (155mm/s)	Runs the (K)IBT motor/YMC motor (MOT42-001/MOT42-007) at 155mm/s.	On/off
042-022	Main Drive Motor All (120mm/s)	Runs the (K)IBT motor/YMC motor (MOT42-001/MOT42-007) at 120mm/s.	On/off
042-023	Main Drive Motor All (308mm/s)	Runs the (K)IBT motor/YMC Drum (MOT42-001/MOT42-007) at 308mm/s.	On/off
042-024	Main Drive Motor All (233mm/s)	Runs the (K)IBT motor/YMC Drum (MOT42-001/MOT42-007) at 233mm/s.	On/off

Table 7 Output Codes 042

Code	Displayed Name	Description	General
042-025	Main Drive Motor All (185mm/s)	Runs the (K)IBT motor/YMC Drum (MOT42-001/MOT42-007) at 185mm/s.	On/off
042-050	Marking Fan Low Speed Rotation	Runs the marking fan (MOT42-025) at low speed.	On/off
042-051	Marking Fan High Speed Rotation	Runs the marking fan (MOT42-025) at high speed.	On/off
042-052	LVPS Fan Low Speed Rotation	Runs the LVPS fan (MOT42-052) at low speed.	On/off
042-053	LVPS Fan High Speed Rotation	Runs the LVPS fan (MOT42-052) at high speed.	On/off
042-054	(P1) Front/Right Marking Fan Rotation	Runs the (P1) front/right marking fan.	On/off
042-055	Toner Cartridge Cooling Fan Rotation	Runs the toner cartridge cooling fan.	On/off
042-056	Toner Cartridge Exhaust Fan Rotation	Runs the toner cartridge exhaust fan.	On/off
042-057	REAR ADD Fan Rotation	Runs the rear add fan.	On/off
042-058	Fusing Unit Exhaust Fan Low Speed Rotation	Runs the fuser exhaust fan (MOT42-058) at low speed.	On/off
042-059	Fusing Unit Exhaust Fan Mid Speed Rotation	Runs the fuser exhaust fan (MOT42-058) at mid speed.	On/off
042-060	Fusing Unit Exhaust Fan High Speed Rotation	Runs the fuser exhaust fan (MOT42-058) at high speed.	On/off
042-061	(P2) Front/Left Marking Fan Low Speed Rotation	Runs the (P2) front/left marking fan (MOT42-067) at low speed.	On/off
042-062	(P2) Front/Left Marking Fan High Speed Rotation	Runs the (P2) front/left marking fan (MOT42-067) at high speed.	On/off
042-069	IHPS Intake Fan Low Speed Rotation	Runs the IHPS intake fan (MOT42-069) at low speed.	On/off
042-070	IHPS Intake Fan High Speed Rotation	Runs the IHPS intake fan (MOT42-069) at low speed.	On/off

Table 8 Output Codes 061 and 062

Code	Displayed Name	Description	General
061-001	LPH Forced Light Output (Cin100%)	Switches on the print head assembly (Cin 100%).	On/off

Table 8 Output Codes 061 and 062

Code	Displayed Name	Description	General
061-002	LPH forced ON (Cin 50%)	Switches on the print head assembly (Cin 50%).	On/off
061-003	LPH forced ON (thyristor transfer)	Switches on the print head assembly (performs thyristor transfer only).	On/off

Table 9 Output Codes 071 to 078

Code	Displayed Name	Description	General
071-001	Tray 1 Feed Motor 2-phase (CW2) Feed Direction	Runs the tray 1 feed/lift motor (MOT71-001) at paper feed speed in the clockwise (feed) direction.	On/off
071-002	Tray 1 Feed Motor 2-phase (CCW2) Lift Up Direction	Runs the tray 1 feed/lift motor (MOT71-001) at tray lift speed in the counter clockwise (lift) direction.	On/off
072-001	Tray 2 Feed Motor 2-phase (CW2) Feed Direction	Runs the tray 2 feed/lift motor (MOT72-001) at paper feed speed in the clockwise (feed) direction (2 phase control).	On/off
072-002	Tray 2 Feed Motor 2-phase (CCW2) Lift Up Direction	Runs the tray 2 feed/lift motor (MOT72-001) at tray lift speed in the counter clockwise (lift) direction.	On/off
073-001	Tray 3 Feed Motor 2-phase (CW2) Feed Direction	Runs the tray 3 feed/lift motor (MOT73-001) at paper feed speed in the clockwise (feed) direction (2 phase control).	On/off
073-002	Tray 3 Feed Motor 2-phase (CCW2) Lift Up Direction	Runs the tray 3 feed/lift motor (MOT73-001) at paper feed speed in the counter clockwise (lift) direction (1-2 phase control)	On/off
074-001	Tray 4 Feed Motor 2-phase (CW 2) Feed Direction	Runs the tray 4 feed/lift motor (MOT74-001) at paper feed speed in the clockwise (feed) direction (2 phase control).	On/off
074-002	Tray 4 Feed Motor 2-phase (CCW 2) Lift Up Direction	Runs the tray 4 feed/lift motor (MOT74-001) at tray lift speed in the counter clockwise (lift) direction.	On/off
075-003	MSI Feed Motor 2-phase (CW2) Feed Direction	Runs the bypass tray feed/lift motor (MOT78-003) in the clockwise (feed) direction at paper feed speed.	On/off
075-004	MSI Feed Motor 1-2 Phase (CCW1-2) Nudger Up/Down Direction	Runs the bypass tray feed/lift motor (MOT78-003) in the counter clockwise (nudger roll up/down) direction at the nudger roll up/down speed.	On/off
077-003	Exit 1 Gate Solenoid	Energizes the exit 1 gate solenoid (SOL77-003).	On/off

Table 9 Output Codes 071 to 078

Code	Displayed Name	Description	General
077-035	TM T/A Motor Full Speed	Runs the TM T/A motor 2 (MOT77-035) at full speed.	On/off
077-040	OCT 1 Motor (CW 1-2 Phase Mode)	Moves the Exit 1 roll to cross-process direction (turn the motor on for 1000msec until timer is turned off) Clockwise = Exit roll moves to M/C front (outboard) side.	On/off
077-041	OCT 1 Motor (CCW 1-2 Phase Mode)	Moves the Exit 1 roll to cross-process direction (turn the motor on for 1000msec until timer is turned off) Counterclockwise = Exit roll moves to M/C rear (inboard) side.	On/off
077-042	OCT 1 Motor (CW 2 Phase Mode)	Moves the Exit 1 roll to cross-process direction (turn the motor on for 1000msec until timer is turned off) Clockwise = Exit roll moves to M/C front (outboard) side.	On/off
077-043	OCT 1 Motor (CCW 2 Phase Mode)	Moves the Exit 1 roll to cross-process direction (turn the motor on for 1000msec until timer is turned off) Counterclockwise = Exit roll moves to M/C rear (inboard) side.	On/off
077-045	OCT 2 Motor (CW 1-2 Phase Mode)	Moves the Exit 2 roll to cross-process direction (turn the motor on for 1000msec until timer is turned off) Clockwise = Exit roll moves to M/C front (outboard) side.	On/off
077-046	OCT 2 Motor (CCW 1-2 Phase Mode)	Moves the Exit 2 roll to cross-process direction (turn the motor on for 1000msec until timer is turned off) Counterclockwise = Exit roll moves to M/C rear (inboard) side.	On/off
077-047	OCT 2 Motor (CW 2 Phase Mode)	Moves the Exit 2 roll to cross-process direction (turn the motor on for 1000msec until timer is turned off) Clockwise = Exit roll moves to M/C front (outboard) side.	On/off
077-048	OCT 2 Motor (CCW 2 Phase Mode)	Moves the Exit 2 roll to cross-process direction (turn the motor on for 1000msec until timer is turned off) Counterclockwise = Exit roll moves to M/C rear (inboard) side.	On/off
077-050	Take Away Motor 1	Runs the take away motor 1 (MOT77-050) in the feed direction at maximum speed.	On/off

Table 9 Output Codes 071 to 078

Code	Displayed Name	Description	General
077-051	Take Away Motor 2	Runs the take away motor 2 (MOT77-051) in the feed direction at maximum speed.	On/off
077-055	Regi Motor	Runs the registration motor (MOT77-055) in the feed direction at maximum speed (640mm/s).	On/off
077-060	Exit 2 Motor (CW)	Runs the exit 2 drive motor (MOT77-060) in the feed direction at maximum speed.	On/off
077-061	Exit 2 Motor (CCW)	Runs the exit 2 drive motor (MOT77-060) in the pull-back direction at maximum speed.	On/off
077-071	Duplex Motor	Runs the duplex motor (MOT77-071) in the reverse (pull-back) direction at maximum speed.	On/off
078-003	HCF1 Feed Motor - Feed Direction	Runs the HCF feed/lift motor (MOT78-003) of tray 6 in the clockwise (feed) direction at paper feed speed.	On/off
078-004	HCF1 Feed Motor - Lift Up	Runs the HCF feed/lift motor (MOT78-003) of tray 6 at tray lift speed in the counter clockwise (lift) direction.	On/off
078-006	HCF 1 T/A Motor (500mm/s)	Runs the HCF T/A motor (MOT78-093) at 500mm/s speed.	On/off
078-007	HCF 1 T/A Motor (640mm/s)	Runs the HCF T/A motor (MOT78-093) at 640mm/s speed.	On/off
078-008	HCF 1 T/A Motor (364mm/s)	Runs the HCF T/A motor (MOT78-093) at 364mm/s speed.	On/off

Table 10 Output Codes 091 to 094

Code	Displayed Name	Description	General
091-001	BCR Y AC DC	Energizes the BCR AC/DC Y bias voltage.	On/off
091-002	BCR M AC DC	Energizes the BCR AC/DC M bias voltage.	On/off
091-003	BCR C AC DC	Energizes the BCR AC/DC C bias voltage.	On/off
091-004	BCR K AC DC	Energizes the BCR AC/DC K bias voltage.	On/off
091-005	BCR AC Clock	Testing to output charge control AC clock (Hz) of BCR. Chart control AC clock for the highest process speed is output.	On/off

Table 10 Output Codes 091 to 094

Code	Displayed Name	Description	General
091-006	Agitator Motor	Runs the agitator motor (MOT91-006).	On/off
091-007	Waste toner conveyance (Waste toner transport assembly) sequence at replacement of drum cartridge	Runs the agitator motor (MOT91-006). Note: The agitator motor runs when interlock is opened.	On/off
091-008	BCR Y AC	Energizes the output AC of BCR (Yellow). See the following NVMs for AC output value: 45ppm M/C: NvM 750-046 (ConstB-CRACOut #PS3) 55ppm M/C: NVM 750-047 (ConstB-CRACOut #PS4)	On/off
091-009	BCR M AC	Energizes the output of BCR (Magenta). See the following NVMs for AC output value: 45ppm M/C: NvM 750-046 (ConstB-CRACOut #PS3) 55ppm M/C: NVM 750-047 (ConstB-CRACOut #PS4(750-047))	On/off
091-010	BCR C AC	Energizes the output AC of BCR (Cyan). See the following NVMs for AC output value: 45ppm M/C: NvM 750-046 (ConstB-CRACOut #PS3) 55ppm M/C: NVM 750-047 (ConstB-CRACOut #PS4(750-047))	On/off
091-011	BCR K AC	Energizes the output AC of BCR (Black). The following NVMs should be referenced for AC output value of each speed model: 45ppm M/C: NvM 750-046 (ConstB-CRACOut #PS3) 55ppm M/C: NVM 750-047 (ConstB-CRACOut #PS4(750-047))	On/off

Table 10 Output Codes 091 to 094

Code	Displayed Name	Description	General
091-012	BCR Y DC	Energizes the output DC of BCR (Yellow) The following NVM should be referenced for DC output value. NVM 756-001 (BCR_DC_OUT[Y])	On/off
091-013	BCR M DC	Energizes the output DC of BCR (Magenta) The following NVM should be referenced for DC output value. NVM 756-002 (BCR_DC_OUT[M])	On/off
091-014	BCR C DC	Energizes the output DC of BCR (Cyan) The following NVM should be referenced for DC output value. NVM 756-003 (BCR_DC_OUT[C])	On/off
091-015	BCR K DC	Energizes the output DC of BCR (Black) The following NVM should be referenced for DC output value. NVM 756-004 (BCR_DC_OUT[K])	On/off
092-003	ADC_SNR_SOL_OPEN	Energizes the ADC solenoid to open the ADC shutter. <i>Note: The ADC shutter needs to be closed (092-004) after performing this component control otherwise the sensor inside the shutter may get contaminated. ADC shutter automatically closes when a print job is run.</i>	On/100ms timeout.
092-004	ADC_SNR_SOL_CLOSE	De-energizes the ADC solenoid to close the ADC shutter.	Off/100ms timeout.
092-005	DISPENSE MOTOR-Y (120mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (120mm/s).	On/off
092-006	DISPENSE MOTOR-M (120mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (120mm/s).	On/off
092-007	DISPENSE MOTOR-C (120mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (120mm/s).	On/off
092-008	DISPENSE MOTOR-K (120mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (120mm/s).	On/off
092-009	DISPENSE MOTOR-Y (150mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (150mm/s).	On/off

Table 10 Output Codes 091 to 094

Code	Displayed Name	Description	General
092-010	DISPENSE MOTOR-M (150mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (150mm/s).	On/off
092-011	DISPENSE MOTOR-C (150mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (150mm/s).	On/off
092-012	DISPENSE MOTOR-K (150mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (150mm/s).	On/off
092-013	DISPENSE MOTOR-Y (185mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (185mm/s).	On/off
092-014	DISPENSE MOTOR-M (185mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (185mm/s).	On/off
092-015	DISPENSE MOTOR-C (185mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (185mm/s).	On/off
092-016	DISPENSE MOTOR-K (185mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (185mm/s).	On/off
092-017	DISPENSE MOTOR-Y (246mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (246mm/s).	On/off
092-018	DISPENSE MOTOR-M (246mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (246mm/s).	On/off
092-019	DISPENSE MOTOR-C (246mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (246mm/s).	On/off
092-020	DISPENSE MOTOR-K (246mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (246mm/s).	On/off
092-021	DISPENSE MOTOR-Y (278mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (278mm/s).	On/off
092-022	DISPENSE MOTOR-M (278mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (278mm/s).	On/off
092-023	DISPENSE MOTOR-C (278mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (278mm/s).	On/off
092-024	DISPENSE MOTOR-K (278mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (278mm/s).	On/off

Table 10 Output Codes 091 to 094

Code	Displayed Name	Description	General
092-025	DISPENSE MOTOR-Y (308mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (308mm/s).	On/off
092-026	DISPENSE MOTOR-M (308mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (308mm/s).	On/off
092-027	DISPENSE MOTOR-C (308mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (308mm/s).	On/off
092-028	DISPENSE MOTOR-K (308mm/s)	Runs the dispense motor assembly (MOT92-005) at process speed (308mm/s).	On/off
092-029	ADC_SNR_LED	Energizes the LED output.	On/off
093-001	Deve Motor YMC (120mm/s)	Runs the YMC developer motor (MOT42-007) at process speed of 120mm/s.	On/off
093-002	Deve Motor YMC (150mm/s)	Runs the YMC developer motor (MOT42-007) at process speed of 150mm/s.	On/off
093-003	Deve Motor YMC (185mm/s)	Runs the YMC developer motor (MOT42-007) at process speed of 185mm/s.	On/off
093-004	Deve Motor YMC (233mm/s)	Runs the YMC developer motor (MOT42-007) at process speed of 233mm/s.	On/off
093-005	Deve Motor YMC (278mm/s)	Runs the YMC developer motor (MOT42-007) at process speed of 278mm/s.	On/off
093-006	Deve Motor YMC (308mm/s)	Runs the YMC developer motor (MOT42-007) at process speed of 308mm/s.	On/off
093-007	Deve Motor K(120mm/s)	Runs the K developer motor (MOT42-001) at process speed of 120mm/s.	On/off
093-008	Deve Motor K(150mm/s)	Runs the K developer motor (MOT42-001) at process speed of 150mm/s.	On/off
093-009	Deve Motor K(185mm/s)	Runs the K developer motor (MOT42-001) at process speed of 185mm/s.	On/off
093-010	Deve Motor K(233mm/s)	Runs the K developer motor (MOT42-001) at process speed of 233mm/s.	On/off
093-011	Deve Motor K(278mm/s)	Runs the K developer motor (MOT42-001) at process speed of 278mm/s.	On/off

Table 10 Output Codes 091 to 094

Code	Displayed Name	Description	General
093-012	Deve Motor K(308mm/s)	Runs the K developer motor (MOT42-001) at process speed of 308mm/s.	On/off
093-013	Deve Motor YMC (120mm/s)	Runs the YMC developer motor (MOT42-007) at process speed of 120mm/s.	On/off
093-014	Deve Motor YMC (150mm/s)	Runs the YMC developer motor (MOT42-007) at process speed of 150mm/s.	On/off
093-015	Deve Motor YMC (185mm/s)	Runs the YMC developer motor (MOT42-007) at process speed of 185mm/s.	On/off
093-016	Deve Motor YMC (235mm/s)	Runs the YMC developer motor (MOT42-007) at process speed of 235mm/s.	On/off
093-017	Deve Motor YMC (278mm/s)	Runs the YMC developer motor (MOT42-007) at process speed of 278mm/s.	On/off
093-018	Deve Motor YMC (308mm/s)	Runs the YMC developer motor (MOT42-007) at process speed of 308mm/s.	On/off
093-019	Deve Motor K(120mm/s)	Runs the K developer motor (MOT42-001) at process speed of 120mm/s.	On/off
093-020	Deve Motor K(150mm/s)	Runs the K developer motor (MOT42-001) at process speed of 150mm/s.	On/off
093-021	Deve Motor K(185mm/s)	Runs the K developer motor (MOT42-001) at process speed of 185mm/s.	On/off
093-022	Deve Motor K(233mm/s)	Runs the K developer motor (MOT42-001) at process speed of 233mm/s.	On/off
093-023	Deve Motor K(278mm/s)	Runs the K developer motor (MOT42-001) at process speed of 278mm/s.	On/off
093-024	Deve Motor K(308mm/s)	Runs the K developer motor (MOT42-001) at process speed of 308mm/s.	On/off
093-025	Deve Bias DC Y (120mm/s)	Runs the DEVE BIAS-DC-MINUS-Y (negative DC bias voltage of Yellow developer) at process speed of 120mm/s.	On/off

Table 10 Output Codes 091 to 094

Code	Displayed Name	Description	General
093-026	Deve Bias DC M (120mm/s)	Runs the DEVE BIAS-DC-MINUS-M (negative DC bias voltage of magenta developer) at process speed of 120mm/s.	On/off
093-027	Deve Bias DC C (120mm/s)	Runs the DEVE BIAS-DC-MINUS-C (negative DC bias voltage of cyan developer) at process speed of 120mm/s.	On/off
093-028	Deve Bias DC K (120mm/s)	Runs the DEVE BIAS-DC-MINUS-K (negative DC bias voltage of black developer) at process speed of 120mm/s.	On/off
093-029	Deve Bias DC Y (150mm/s)	Runs the DEVE BIAS-DC-MINUS-M (negative DC bias voltage of Yellow developer) at process speed of 150mm/s.	On/off
093-030	Deve Bias DC M (150mm/s)	Runs the DEVE BIAS-DC-MINUS-C (negative DC bias voltage of magenta developer) at process speed of 150mm/s.	On/off
093-031	Deve Bias DC C (150mm/s)	Runs the DEVE BIAS-DC-MINUS-C (negative DC bias voltage of cyan developer) at process speed of 150mm/s.	On/off
093-032	Deve Bias DC K (150mm/s)	Runs the DEVE BIAS-DC-MINUS-K (negative DC bias voltage of black developer) at process speed of 150mm/s.	On/off
093-033	Deve Bias DC Y (185mm/s)	Runs the DEVE BIAS-DC-MINUS-Y (negative DC bias voltage of Yellow developer) at process speed of 185mm/s.	On/off
093-034	Deve Bias DC M (185mm/s)	Runs the DEVE BIAS-DC-MINUS-M (negative DC bias voltage of magenta developer) at process speed of 185mm/s.	On/off
093-035	Deve Bias DC C (185mm/s)	Runs the DEVE BIAS-DC-MINUS-C (negative DC bias voltage of cyan developer) at process speed of 185mm/s.	On/off
093-036	Deve Bias DC K (185mm/s)	Runs the DEVE BIAS-DC-MINUS-K (negative DC bias voltage of black developer) at process speed of 185mm/s.	On/off

Table 10 Output Codes 091 to 094

Code	Displayed Name	Description	General
093-037	Deve Bias DC Y (235mm/s)	Runs the DEVE BIAS-DC-MINUS-Y (negative DC bias voltage of Yellow developer) at process speed of 235mm/s.	On/off
093-038	Deve Bias DC M (235mm/s)	Runs the DEVE BIAS-DC-MINUS-M (negative DC bias voltage of magenta developer) at process speed of 235mm/s.	On/off
093-039	Deve Bias DC C (235mm/s)	Runs the DEVE BIAS-DC-MINUS-C (negative DC bias voltage of cyan developer) at process speed of 235mm/s.	On/off
093-040	Deve Bias DC K (235mm/s)	Runs the DEVE BIAS-DC-MINUS-K (negative DC bias voltage of black developer) at process speed of 235mm/s.	On/off
093-041	Deve Bias DC Y (278mm/s)	Runs the DEVE BIAS-DC-MINUS-Y (negative DC bias voltage of Yellow developer) at process speed of 278mm/s.	On/off
093-042	Deve Bias DC M (278mm/s)	Runs the DEVE BIAS-DC-MINUS-M (negative DC bias voltage of magenta developer) at process speed of 278mm/s.	On/off
093-043	Deve Bias DC C (278mm/s)	Runs the DEVE BIAS-DC-MINUS-C (negative DC bias voltage of cyan developer) at process speed of 278mm/s.	On/off
093-044	Deve Bias DC K (278mm/s)	Runs the DEVE BIAS-DC-MINUS-K (negative DC bias voltage of black developer) at process speed of 278mm/s.	On/off
093-045	Deve Bias DC Y (308mm/s)	Runs the DEVE BIAS-DC-MINUS-Y (negative DC bias voltage of Yellow developer) at process speed of 308mm/s.	On/off
093-046	Deve Bias DC M (308mm/s)	Runs the DEVE BIAS-DC-MINUS-M (negative DC bias voltage of magenta developer) at process speed of 308mm/s.	On/off
093-047	Deve Bias DC C (308mm/s)	Runs the DEVE BIAS-DC-MINUS-C (negative DC bias voltage of cyan developer) at process speed of 308mm/s.	On/off

Table 10 Output Codes 091 to 094

Code	Displayed Name	Description	General
093-048	Deve Bias DC K (308mm/s)	Runs the DEVE BIAS-DC-MINUS-K (negative DC bias voltage of black developer) at process speed of 308mm/s.	On/off
093-049	Deve Bias AC Y (120mm/s)	Runs the DEVE BIAS-AC-MINUS-Y (negative AC bias voltage of Yellow developer) at process speed of 120mm/s.	On/off
093-050	Deve Bias AC M (120mm/s)	Runs the DEVE BIAS-AC-MINUS-M (negative AC bias voltage of magenta developer) at process speed of 120mm/s.	On/off
093-051	Deve Bias AC C (120mm/s)	Runs the DEVE BIAS-AC-MINUS-C (negative AC bias voltage of cyan developer) at process speed of 120mm/s.	On/off
093-052	Deve Bias DC K (120mm/s)	Runs the DEVE BIAS-AC-MINUS-K (negative AC bias voltage of black developer) at process speed of 120mm/s.	On/off
093-053	Deve Bias AC Y (150mm/s)	Runs the DEVE BIAS-AC-MINUS-Y (negative AC bias voltage of Yellow developer) at process speed of 150mm/s.	On/off
093-054	Deve Bias AC M (150mm/s)	Runs the DEVE BIAS-AC-MINUS-M (negative AC bias voltage of magenta developer) at process speed of 150mm/s.	On/off
093-055	Deve Bias AC C (150mm/s)	Runs the DEVE BIAS-AC-MINUS-C (negative AC bias voltage of cyan developer) at process speed of 150mm/s.	On/off
093-056	Deve Bias DC K (150mm/s)	Runs the DEVE BIAS-AC-MINUS-K (negative AC bias voltage of black developer) at process speed of 150mm/s.	On/off
093-057	Deve Bias AC Y (185mm/s)	Runs the DEVE BIAS-AC-MINUS-Y (negative AC bias voltage of Yellow developer) at process speed of 185mm/s.	On/off
093-058	Deve Bias AC M (185mm/s)	Runs the DEVE BIAS-AC-MINUS-M (negative AC bias voltage of magenta developer) at process speed of 185mm/s.	On/off

Table 10 Output Codes 091 to 094

Code	Displayed Name	Description	General
093-059	Deve Bias AC C (185mm/s)	Runs the DEVE BIAS-AC-MINUS-C (negative AC bias voltage of cyan developer) at process speed of 185mm/s.	On/off
093-060	Deve Bias DC K (185mm/s)	Runs the DEVE BIAS-AC-MINUS-K (negative AC bias voltage of black developer) at process speed of 185mm/s.	On/off
093-061	Deve Bias AC Y (235mm/s)	Runs the DEVE BIAS-AC-MINUS-Y (negative AC bias voltage of Yellow developer) at process speed of 235mm/s.	On/off
093-062	Deve Bias AC M (235mm/s)	Runs the DEVE BIAS-AC-MINUS-M (negative AC bias voltage of magenta developer) at process speed of 235mm/s.	On/off
093-063	Deve Bias AC C (235mm/s)	Runs the DEVE BIAS-AC-MINUS-C (negative AC bias voltage of cyan developer) at process speed of 235mm/s.	On/off
093-064	Deve Bias DC K (235mm/s)	Runs the DEVE BIAS-AC-MINUS-K (negative AC bias voltage of black developer) at process speed of 235mm/s.	On/off
093-065	Deve Bias AC Y (278mm/s)	Runs the DEVE BIAS-AC-MINUS-Y (negative AC bias voltage of Yellow developer) at process speed of 278mm/s.	On/off
093-066	Deve Bias AC M (278mm/s)	Runs the DEVE BIAS-AC-MINUS-M (negative AC bias voltage of magenta developer) at process speed of 278mm/s.	On/off
093-067	Deve Bias AC C (278mm/s)	Runs the DEVE BIAS-AC-MINUS-C (negative AC bias voltage of cyan developer) at process speed of 278mm/s.	On/off
093-068	Deve Bias DC K (278mm/s)	Runs the DEVE BIAS-AC-MINUS-K (negative AC bias voltage of black developer) at process speed of 278mm/s.	On/off
093-069	Deve Bias AC Y (308mm/s)	Runs the DEVE BIAS-AC-MINUS-Y (negative AC bias voltage of Yellow developer) at process speed of 308mm/s.	On/off

Table 10 Output Codes 091 to 094

Code	Displayed Name	Description	General
093-070	Deve Bias AC M (308mm/s)	Runs the DEVE BIAS-AC-MINUS-M (negative AC bias voltage of magenta developer) at process speed of 308mm/s.	On/off
093-071	Deve Bias AC C (308mm/s)	Runs the DEVE BIAS-AC-MINUS-C (negative AC bias voltage of cyan developer) at process speed of 308mm/s.	On/off
093-072	Deve Bias DC K (308mm/s)	Runs the DEVE BIAS-AC-MINUS-K (negative AC bias voltage of black developer) at process speed of 308mm/s.	On/off
094-001	2nd BTR Voltage	Energizes the negative (-) constant voltage of 2nd BTR.	On/off
094-002	2nd BTR CLN Voltage	Energizes the positive (+) constant voltage of 2nd BTR.	On/off
094-003	2nd BTR Current	Energizes the negative (-) constant current of 2nd BTR.	On/off
094-004	1st BTR Current Y	Energizes the positive (+) constant current of 1st BTR for Yellow.	On/off
094-005	1st BTR Current M	Energizes the positive (+) constant current of 1st BTR for magenta.	On/off
094-006	1st BTR Current C	Energizes the positive (+) constant current of 1st BTR for cyan.	On/off
094-007	1st BTR Current K	Energizes the positive (+) constant current of 1st BTR for black.	On/off
094-008	1st BTR Retract	Energizes the 1st BTR to retract position.	On/off
094-009	1st BTR Contact	Energizes the 1st BTR to contact position.	On/off
094-010	IBT MOT ON (120mm/s)	Runs the IBT motor at process speed of 120mm/s.	On/off
094-011	IBT MOT ON (150mm/s)	Runs the IBT motor at process speed of 150mm/s.	On/off
094-012	IBT MOT ON (185mm/s)	Runs the IBT motor at process speed of 185mm/s.	On/off
094-013	IBT MOT ON (233mm/s)	Runs the IBT motor at process speed of 233mm/s.	On/off
094-014	IBT MOT ON (278mm/s)	Runs the IBT motor at process speed of 278mm/s.	On/off
094-015	IBT MOT ON (308mm/s)	Runs the IBT motor at process speed of 308mm/s.	On/off

Table 10 Output Codes 091 to 094

Code	Displayed Name	Description	General
094-016	IBT MOT REVERSE ON	Runs the IBT motor in reverse direction at process speed of 120mm/s. Note: <i>IBT motor automatically stops running after a specified period of time (NVM 998-258) after reverse rotation start.</i> (Clock = NVM 741-001:K_IBT motor Speed at 120mm/s)	On/off
094-200	1st BTR ConRet Sensor	Energizes the 1st BTR contract/retract sensor to display sensor value.	On/off
094-201	POB Jam Sensor	Testing to detect active level of POB Jam Sensor	On/off

dC355 Hard Disk Diagnostics

Purpose

To initialize hard disk or perform the failure prediction test.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select dC355 Hard Disk Diagnostics.
3. Select Failure Prediction Test or Initialize Hard Disk.
4. Follow the UI messages, then select Start.
5. The result is displayed. Select Close.
6. Select Close to return to the Hard Disk Diagnostics screen.
7. Select Back to return to the Diagnostics screen.
8. Exit diagnostics, [GP 1](#).

dC362 Restore NVM Values

Purpose

To restore NVM values.

CAUTION

Do not perform this routine if installing a new controller PWB assembly.

CAUTION

To avoid the loss of NVM data, perform this routine before performing dC301 NVM Backup Restore.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select dC362 Restore NVM Values.
3. Select Start.
4. Refer to the Restore NVM confirmation screen, then select Yes to continue.
5. Wait for the process to complete, then select Close.
6. Select Close to return to the Diagnostics screen.
7. Exit diagnostics, [GP 1](#).

dC363 Backup NVM Values

Purpose

To backup NVM values.

CAUTION

Do not perform this routine if installing a new controller PWB assembly.

CAUTION

To avoid the loss of NVM data, perform this routine before performing dC301 NVM Backup Restore.

Procedure

1. Enter Diagnostics, GP 1.
2. Select dC363 Backup NVM Values.
3. Select Back Up Files, then select Start.
4. Refer to the Backup NVM confirmation screen, then select Yes to continue.
5. Wait for the process to complete, then select Close.
6. Select Close to return to the Diagnostics screen.
7. Exit diagnostics, GP 1.

dC402 LPH EEPROM Self Test

Purpose

To check LPH EEPROM data for errors.

Procedure

1. Enter Diagnostics, GP 1.
2. Select dC402 LPH EEPROM Self Test.
3. Select **Start**.
4. Wait for the test to complete.
5. Select **close**.
6. Select **X**.
7. Exit diagnostics, GP 1.

dC612 Print Test Pattern

Purpose

To print the internal test patterns.

NOTE: All test prints should be printed long edge feed.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select dC612 Print Test Pattern.
3. Select the test pattern required. Refer to [IQ1](#) Image Quality Entry RAP. Select from the available options for the required test pattern:
 - Pattern number
 - Quantity
 - Paper Supply
 - Output Color
 - Cin%
 - Screen
 - Output destination
 - 1 sided or 2 Sided
4. Select the Start button.
5. Select the Close button to return to the diagnostics screen.
6. Exit diagnostics, [GP 1](#).

Pattern Numbers and Images

NOTE: If the settings for a test pattern are incorrect, an error message is displayed and the test pattern will not be printed. In this case, ensure the settings match the requirements listed in [RAP IQ1](#) under Internal Test Patterns, then repeat the test print.

dC671 Registration Measurement Cycle

Purpose

This procedure checks and adjusts color registration:

- Performs measurement to determine the condition of the registration control.
- Checks that the belt controls are operating normally.
- Measures/displays the amount of color shift relative to black.
- Displays the results as either OK or NG (OK=Good/Pass, NG=Not Good/Fail).

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select [dC671](#) Registration Measurement Cycle.
3. Select Start, the Registration Measurement Cycle Processing message displays.
4. Wait for the process to complete, then select Close.
5. OK or NG is displayed in the Result column for each row.
6. Select Close to return to the Diagnostics screen.
7. Exit diagnostics, [GP 1](#).

Refer to [IQS 1](#) Color Reproduction.

dC673 Registration Control Sensor Check Cycle

Purpose

This is a self-diagnostic cycle for checking that the registration detection system is operating normally. Color shift is detected using a cyan patch. Any misregistration detected in the MOB sensor is displayed on the screen.

This detection result is compared with the target value to determine the OK or NG status (OK=Good/Pass, NG=Not Good/Fail). Correction is not performed.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select [dC673](#) Registration Control Sensor Check Cycle.
3. Select Start, the Registration Control Sensor Check Cycle Processing message displays.
4. Wait for the process to complete, then select Close.
5. OK or NG is displayed in the Result column for each row.
6. Select Close to return to the diagnostics screen.
7. Exit diagnostics, [GP 1](#).

dC675 Registration Control Setup Cycle

Purpose

This is a setup procedure to be used after removal of key marking module components such as:

- LPH.
- 2nd BTR.
- IBT belt.
- IBT cleaning unit.
- Belt module.
- Developer.

Function 1: This is a registration control full cycle that can be performed after NVM initialization. Performing this function corrects the color registration into the predefined range. The corrected shift amount for each color is saved in the NVM and it is displayed at normal completion.

Function 2: On entering a setup cycle, the IOT does not start. The registration control shift correction amount is displayed automatically on the UI screen and is used as a tool for determining the cause when a failure occurs.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select [dC675](#) Registration Control Setup Cycle. Readings for all four colors are displayed on the screen. Scroll down to view more readings.
3. Select Start, the Registration Control Setup Cycle Processing message displays.
4. Wait for the process to complete, then select Close.
5. Select Close to return to the Diagnostics screen.
6. Exit diagnostics, [GP 1](#).

NOTE: If a fail occurs after performing this procedure resolve the fail first and then perform again. The appropriate alignment adjustment cannot be performed if this procedure is not completed properly.

dC740 Bypass Tray Guide Adjustment

Purpose

To correctly set the MSI (bypass tray) paper guides sensor.

NOTE: This adjustment is performed when replacing the MSI size sensor and when a size detection error occurs.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. On the [Maintenance / Diagnostics] screen, select [Registration].
3. On the [Registration] screen, select [Tray 5 Guide Adjustment].
4. The [Tray 5 Guide Adjustment] screen is displayed.
5. Select [Minimum Size Position] or [Maximum Size Position].
6. When [Minimum Size Position] is selected.
 - a. Follow the instructions on the screen and align the Paper Guides to the minimum size position.
 - b. Press <Start>.
 - If the sensor output value is within the specified range, [OK] will be displayed. At the same time, the NVM [742-271] MSI Side Guide Minimum Position data is changed.
 - If the sensor output value is out of the specified range, [NG] will be displayed. If [NG], check the guide position and try again.
7. When [Maximum Size Position] is selected.
 - a. Follow the instructions on the screen and align the Paper Guides to the maximum size position.
 - b. Press <Start>.
 - If the sensor output value is within the specified range, [OK] will be displayed. At the same time, the NVM [742-272] MSI Side Guide Maximum Position data is changed.
 - If the sensor output value is out of the specified range, [NG] will be displayed. If [NG], check the guide position and try again.
8. Select [Close] to return to the [Registration] screen.
9. Exit diagnostics, [GP 1](#).

dC924 TRC Manual Adjustment

Purpose

This procedure allows a manual density adjustment. It sets an offset amount of the ADC look-up table created by the ADC patch to finely adjust the gradation.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select [dC924](#) TRC Manual Adjustment.
3. Select the color to be adjusted.
 - Select the - or + for Low, Medium or High to decrease or increase any of these values between -128 and +127.
4. Select **Target**.
 - None
 - Copy & Print Jobs
5. Select Adjust.
6. Select close **X**.
7. Exit diagnostics, [GP 1](#).

dC931 Density Uniformity Adjustment

Purpose

By adjusting the IN-OUT direction of the LPH light exposure amount (MC rear-front), the IN-OUT uneven density of each of the colors YMCK is corrected independently.

NOTE: There are usually no problems adjusting in Primary Color, but even if the uneven density is corrected for each individual color by the status, environment and machine difference of the MC image developing unit, the RGB and Gray for Secondary/Process Color may not necessarily be corrected in equivalence. In this case it is possible to specifically adjust the uneven density for RGB or the specified color the customer wishes to adjust.

However, as the unevenness in density for each Single Color for YMCK may worsen instead in this case, it is necessary to check the Primary Color after Secondary/Process Color adjustment and adjust the density to the customer's desired level.

Primary Colors are Y, M, C, and K; Secondary Colors are R, B, and G, which are printed with 2 of the colors Y, M, and C; Process Color is gray color printed with all 3 colors Y, M, and C.

NOTE: Although the standard test pattern density (Cin) is Low: 25% and Mid: 80%, if it is different from the customer's density requirement, change the Cin% on the screen before performing this. (However, limit the total Y,M,C,K to 240% or less.)

If this setting is used it is possible to set 2 types of density for each of the Y, M, C, and K colors.

Function Description:

There are 2 functions: [PG Output Mode](#) and [Adjustment Mode](#).

PG Output Mode

- The 3 types of In/Out Built-in PG is output for the Primary Colors, Secondary/Process Colors, and Single Color specified from the 4 YMCK colors. (As the PG for Primary Colors and Secondary/Process Colors consist of multiple colors, they are output as the same PG regardless of the color specified)
- The output mode outputs one sheet in 4C mode. Paper size and type follow the Tray Settings. (1 to 4 can be specified using Chain-Link in the UI)
- The PG output Procon setup conditions for Potential Control and Toner Supply Control are the same as in Customer mode settings.
- When performing PG output it is important to run the Minisetup in Procon setup.

Adjustment Mode

- The Form Adjustment (1 to 6), Form Adjustment Level (1 to 6) and Position Adjustment (6 areas: B, C, D, E, F, G) found in the In/Out Adjustment Settings of the specified color can be set from the screen.

- The items and the setting range for the Plane Irregularity Adjustment are shown in [Table 1](#):

Table 1 Specification

Item	Display	Description	Setting Range
Shape (1-6)	Each of the four colors of Y, M, C, K	Correction shape pattern specified <ul style="list-style-type: none"> Display NVM during the entry. Each of the 4 values can be changed individually from the screen. 	1~6
Level (1-6)	Each of the four colors of Y, M, C, K	Form Adjustment Level specification <ul style="list-style-type: none"> Display NVM during the entry. Each of the 4 values can be changed individually from the screen. 	1~6
Position Adjustment	Each of the four colors of Y, M, C, K	[Position Adjustment] screen selection button <ul style="list-style-type: none"> Display NVM value during the entry on [Position Adjustment] screen. Each value at the 6 locations (B, C, D, E, F, G) can be changed individually from the [Position Adjustment] screen. 	-17~17 (only numbers in the - direction are - enabled)
Check print Cin%	Each of the four colors of Y, M, C, K Coverage 1, Coverage 2 (2 types)	Built-in PG Pattern Print Cin specification <ul style="list-style-type: none"> This option can be changed from the screen. Coverage 1: concentration of the thin part of the horizontal band of the internal PG pattern print (25%) Coverage 2: concentration of the dark part of the horizontal band of the internal PG pattern print (80%) 	0~100%
Sample Printout	Select 2 from: Full Color (Primary Colors, Secondary/Process Colors), or Single Color	Built-in PG Pattern Print Color Selection Button <ul style="list-style-type: none"> This option can be changed from the screen. 	2 types of Full Color (Primary Colors, Secondary/Process Colors), Single Color
Inclination (-17~17)	Each of the four colors of Y, M, C, K	Correction Shape Inclination Specification <ul style="list-style-type: none"> Display NVM during the entry. Each of the 4 values can be changed individually from the screen. 	-17~17

Procedure

Primary, Secondary, Process Color Rough Adjustment Procedure

1. Load A3 paper into Tray 1.
2. Enter Diagnostics, **GP 1**.
3. Select **dC931, Density Uniformity Adjustment**.
4. Select **Print Settings**.
5. Specify **Tray 1 - A3**.
6. Select **Full Color**, then **OK**.
7. Select **Print Sample**, **Figure 1**:
 - The Print Sample will be printed out in the order of Primary color, Secondary color, and Process color.
8. Check the Print Sample for incorrect color density.
9. Adjustment:
 - a. Select **Color** (Yellow, Magenta, Cyan, or Black).
 - b. Select **Shape**, 1 ~ 6.
 - c. Select **Level**, -17 ~ +17.
 - d. Select **Inboard/Outboard**, -17 ~ +17.
 - e. Select **Print Sample**.



F-1-0698-A

Figure 1 Test pattern

10. Check the color density repeating Steps 4 to 9 until the density is even.
11. Refer to the **ADJ 60.2**, LPH Exposure Amount Detail Correction for detailed information on how to adjust inclination and color density shape.
12. Select **OK** to return to the Diagnostics screen.
13. Exit diagnostics, **GP 1**.

dC937 Procon On/Off Print

Purpose

The procedure prints out the process control test pattern in two different modes. The comparison between the two prints can help isolate process control related image quality problems. Ensure that paper is loaded in tray 1 before starting this procedure as test patterns are printed.

The Procon On/Off Print consists of the following:

- **Procon On Print:** This is a print mode that uses the current Procon Data with the Procon (Process Control) soft enabled and the TRC Adjustment turned on.
- **Procon Off Print:** This is a print mode that uses IOT features with the Procon routine fully turned off.

Procedure

Procon On Print

1. Enter Diagnostics, [GP 1](#).
2. Select dC937 Procon On/Off Print.
3. Select Procon On Print.
4. Select Start. The internal test pattern Pcon PG is printed.
5. Check the image quality of the internal test pattern Pcon PG print.
6. Select Close to return to the Procon On / Off Print screen.

Procon Off Print

1. Select Procon Off Print.
2. Select Start. The internal test pattern Pcon PG is printed.
3. Compare the output of the ProCon On and ProCon Off prints. Evaluate according to one of the following problem statements:
 - The problem involves a single color, this is an indication that the imaging unit and/or power supplies or LPH may be at fault.
 - The problem involves all colors, this is an indication that the 2nd BTR and/or transfer belt assembly may be at fault.
 - The ProCon Off print is OK, but ProCon On print is unacceptable, this is an indication that process control items, rather than IOT items are at fault.
4. Select Close to return to the Procon On / Off Print screen.
5. Select Back to return to the Diagnostics screen.
6. Exit diagnostics, [GP 1](#).

dC949 Default Developer ATC Setup

Purpose

This procedure sets the ATC target value by having the ATC sensor measure the toner density of the developer housing assembly. This procedure can also work as the check function of the ATC sensors, that measures the toner density of the developing powder and displays readings for ATC measure value ATC target value for all four colors. Below these readings, only fail states are displayed.

For each color, there is a setting switch option that can be set to either on or off. If performed in the on state, this procedure changes the value of the ATC target. Perform in the on state only directly after a developer replacement. For performance checks on the ATC sensors, set switches to off.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select [dC949](#) Default Developer ATC Setup.
3. Select Setting Switch.
4. To turn on any of the four colors, select the left of the two boxes below each color.
5. To turn off any of the four colors, select the right of the two boxes below each color.
6. Select OK to return to the Default Developer ATC Setup screen.
7. Select Start.
8. After the Successfully Completed message is displayed, select Close.
9. Select Close to return to the Diagnostics screen.
10. Exit diagnostics, [GP 1](#).

dC950 ATC Sensor Setup

Purpose

CAUTION

This procedure should only be performed after installation of a new ATC sensor or drum cartridge. Or when there is reason to believe that the calibration values in NVM are incorrect

To acquire the sensitivity correction values (correction coefficient and correction offset) for adjusting the ATC sensor output from the bar code numbers which display the sensitivity attribute in every ATC sensor. The bar code numbers are set in NVM (bar code number) manually from this adjustment screen.

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select [dC950](#) ATC Sensor Setup.
3. Select Bar Code No.
4. Select on the - or + for Yellow, Magenta, Cyan and Black to decrease or increase any of these values between 0 and +99. Default values are 55 for all colors.
5. Select OK.
6. Select Start.
7. After the Successfully Completed message is displayed, select Close.
8. Select Close to return to the Diagnostics screen.
9. Exit diagnostics, [GP 1](#).

dC991 Tone Up/Down

Purpose

Adjusts toner density. Make this adjustment if the difference between the current TC target number and the TC value number is large (30 or higher).

Procedure

1. Enter Diagnostics, [GP 1](#).
2. Select [dC991](#) Toner Density Adjustment.
3. Observe numbers for TC Target and TC Value for each color. Only make adjustments if difference is greater than 30. To exit at this point, select Close to return to the Diagnostics screen.
4. To proceed with adjustment, select Number of Sheets.
5. For one color only, select - or + to choose a number of sheets to be printed.

NOTE: *Negative numbers are permitted. For example entering -6 will result in 6 sheets being printed. The toner density will reduce for each sheet. If +6 is entered, toner density will increase for each sheet.*

6. Select Start to commence printing.

NOTE: *If negative numbers were inputted, the first print will have a high density, with each subsequent print will have a slightly lower density. If positive numbers were inputted, the first print will have a low density, with each subsequent print will have a slightly higher density.*

7. Observe numbers for TC Target and TC Value. Make further adjustments if necessary.
8. Select Close to return to the Diagnostics screen.
9. Exit diagnostics, [GP 1](#).

dC1215 Transfer Voltage Adjustment

Purpose

To adjust the transfer voltage to minimise the transfer capability difference caused by different paper type.

Procedure

1. Enter Diagnostics, **GP 1**.
2. Select **dC1215 Transfer Voltage Adjustment**.
3. **Print Sample**
4. Select **Next** to adjust **Side 1** or **Side 2**.
5. Select **OK** or **Back** if no change.
6. **Print Sample**.
7. Compare the first print sample to the post-adjustment print sample.
8. Select **Next** to make any adjustments as necessary repeating **Steps 3 ~ 6** until the transfer voltage is correct for the image expected.
9. Select **X** to return to the Diagnostic menu.
10. Exit Diagnostics, **GP 1**.

Change Tags

Change Tag Introduction

This section describes tags associated with the printer, as well as multinational applicability, classification codes, and permanent or temporary modification information. Important modifications to the printer are identified by a tag number which is recorded on a tag matrix inside the front door.

Classification Codes

A tag number may be required to identify differences between parts that cannot be interchanged, or differences in diagnostic, repair, installation, or adjustment procedures.

A tag number may also be required to identify the presence of optional hardware, special non-volatile memory programming, or whether mandatory modifications have been installed. Each tag number is given a classification code to identify the type of change that the tag has made. The classification codes and their descriptions are listed in [Table 1](#).

Table 1 Classification codes

Classification Code	Description
M	Mandatory tag.
N	Tag not installed in the field.
O	Optional tag.
R	Repair tag.

Change Tags

There are no Change Tags currently in effect for this product.

PJ Locations

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Wiring Diagrams

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Block Schematic Diagrams (BSDs)

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PJ Locations

PJ Location Tables

To locate a connector, go to the appropriate table.

- Connectors 1 to 99, [Table 1](#).
- Connectors 100 to 199, [Table 2](#).
- Connectors 200 to 399, [Table 3](#).
- Connectors 400 to 599, [Table 4](#).
- Connectors 600 to 1399, [Table 5](#).
- Connectors 8800 to 8999, [Table 6](#).

Location of Figures for PWB Connectors and In-line Connectors

NOTE: Part list references are given with each figure.

- Back plane PWB, [Figure 25](#).
- BCR HVPS, [Figure 1](#).
- BTR HVPS, [Figure 18](#).
- Bypass tray, [Figure 6](#).
- Controller PWB, [Figure 23](#).
- Developer bias HVPS/LVPS, [Figure 16](#).
- Dispense motor/GFI, [Figure 19](#).
- Drum CRUM, [Figure 15](#).
- Drum/developer/fuser drives, [Figure 13](#).
- Exit 1 and 2, [Figure 22](#).
- Fuser, [Figure 21](#).
- Fuser power supply, [Figure 18](#).
- Halftone PWB/AC drive PWB, [Figure 24](#).
- HCF Top, [Figure 32](#).
- HCF Rear, [Figure 33](#).
- IOT front location/ATC sensor, [Figure 17](#).
- LPH/toner cartridge CRUM, [Figure 3](#).
- LX finisher horizontal transport, [Figure 26](#).
- Machine left side, [Figure 20](#).
- Main power switch, [Figure 1](#).
- MOB assembly, [Figure 4](#).
- Motor drive PWB, [Figure 2](#).
- NOHAD, [Figure 14](#).
- Office finisher LX front, [Figure 27](#).
- Office finisher LX rear, [Figure 28](#).
- Office finisher LX top, [Figure 29](#).
- Office Finisher LX Booklet Maker Top, [Figure 30](#)
- Office Finisher LX Booklet Maker PWB, [Figure 31](#)
- Registration, Tray 1/2 feeder, [Figure 7](#).
- Tray 1, 2 paper size sensors, [Figure 5](#).
- Tray module (2TM) 1 of 2, [Figure 8](#).

- Tray module (2TM) 2 of 2, [Figure 9](#).
- Tray module (TTM) 1 of 3, [Figure 10](#).
- Tray module (TTM) 2 of 3, [Figure 11](#).
- Tray module (TTM) 3 of 3, [Figure 12](#).

Table 1 Connectors 1 to 99

Connector No.	Figure No.	Item No.	Connector Location
FS001	Figure 32	3	HCF top
P1	Figure 2	5	Motor drive PWB
P/J1	Figure 16	9	Developer bias HVPS/LVPS
P/JF01	Figure 33	4	HCF rear
FS002	Figure 32	3	HCF top
P2	Figure 2	45	Motor drive PWB
P/JF02	Figure 33	5	HCF rear
FS003	Figure 32	8	HCF top
P/J3	Figure 24	16	Halftone PWB/AC drive PWB
P/JF03	Figure 33	6	HCF rear
FS004	Figure 32	8	HCF top
P/J4	Figure 24	17	Halftone PWB/AC drive PWB
P/JF04	Figure 33	7	HCF rear
P/J5	Figure 24	10	Halftone PWB/AC drive PWB
P/JF05	Figure 33	8	HCF rear
P/J6	Figure 24	13	Halftone PWB/AC drive PWB
P/JF06	Figure 33	9	HCF rear
P/J7	Figure 24	14	Halftone PWB/AC drive PWB
P8	Figure 24	15	Halftone PWB/AC drive PWB
P/JF08	Figure 33	3	HCF rear
P/J10	Figure 19	11	Dispense motor/GFI
P/J11	Figure 19	7	Dispense motor/GFI
P/J12	Figure 1	5	Main power switch
P/J13	Figure 1	4	Main power switch
P/J14	Figure 1	2	Main power switch
P/J15	Figure 1	3	Main power switch
J20	Figure 10	12	Tray module (TTM) 1 of 3
T20	Figure 21	6	Fuser
J21	Figure 10	13	Tray module (TTM) 1 of 3
T21	Figure 21	4	Fuser
P/J22	Figure 19	12	Dispense motor/GFI
P/J23	Figure 19	5	Dispense motor/GFI
P/J24	Figure 19	6	Dispense motor/GFI
P/J30	Figure 18	6	BTR HVPS/fuser power supply
T31	Figure 6	5	Bypass tray
T33	Figure 20	8	Machine left side

Table 1 Connectors 1 to 99

Connector No.	Figure No.	Item No.	Connector Location
T34	Figure 20	9	Machine left side
P/JF51	Figure 33	2	HCF rear
P/JF52	Figure 33	1	HCF rear
P/JF53	Figure 33	10	HCF rear
P/JF54	Figure 32	2	HCF top
P/JF56A	Figure 32	9	HCF top
P/JF56B	Figure 32	9	HCF top
P/JF57	Figure 33	11	HCF rear
P/JF58	Figure 32	1	HCF top
P/JF60	Figure 32	7	HCF top
P60/J61	Figure 18	3	BTR HVPS/fuser power supply
P/JF61	Figure 32	5	HCF top
P61/J60	Figure 18	4	BTR HVPS/fuser power supply
P/JF62	Figure 32	6	HCF top
P/JF67	Figure 32	4	HCF top
T80	Figure 10	14	Tray module (TTM) 1 of 3
T80	Figure 19	8	Dispense motor/GFI
T82	Figure 6	3	Bypass tray
J88	Figure 19	10	Dispense motor/GFI
T88	Figure 19	9	Dispense motor/GFI
J90	Figure 10	15	Tray module (TTM) 1 of 3

Table 2 Connectors 100 to 199

Connector No.	Figure No.	Item No.	Connector Location
P/J111	Figure 11	14	Tray module (TTM) 2 of 3
P/J111	Figure 15	8	Drum CRUM
P/J111	Figure 9	4	Tray module (2TM) 2 of 2
P/J112	Figure 11	15	Tray module (TTM) 2 of 3
P/J112	Figure 9	3	Tray module (2TM) 2 of 2
P/J113	Figure 11	16	Tray module (TTM) 2 of 3
P/J113	Figure 9	2	Tray module (2TM) 2 of 2
P/J115	Figure 17	3	IOT front location/ATC sensor
P/J116	Figure 3	1	LPH/toner cartridge CRUM
P/J117	Figure 3	4	LPH/toner cartridge CRUM
P/J118	Figure 3	3	LPH/toner cartridge CRUM
P/J119	Figure 3	2	LPH/toner cartridge CRUM
P/J120	Figure 15	2	Drum CRUM
P/J120	Figure 11	11	Tray module (TTM) 2 of 3
P/J121	Figure 11	10	Tray module (TTM) 2 of 3
P/J121	Figure 15	3	Drum CRUM
P/J121	Figure 9	5	Tray module (2TM) 2 of 2
P/J122	Figure 11	9	Tray module (TTM) 2 of 3
P/J122	Figure 15	4	Drum CRUM
P/J122	Figure 9	6	Tray module (2TM) 2 of 2
P/J123	Figure 11	8	Tray module (TTM) 2 of 3
P/J123	Figure 15	5	Drum CRUM
P/J123	Figure 9	7	Tray module (2TM) 2 of 2
P/J124	Figure 17	12	IOT front location/ATC sensor
P/J125	Figure 17	13	IOT front location/ATC sensor
P/J126	Figure 17	14	IOT front location/ATC sensor
P/J127	Figure 17	15	IOT front location/ATC sensor
P/J129	Figure 20	2	Machine left side
P/J132	Figure 20	10	Machine left side
P/J133	Figure 20	11	Machine left side
P/J134	Figure 6	10	Bypass tray
P/J135	Figure 22	11	Exit 1 and 2
P/J136	Figure 22	10	Exit 1 and 2
P/J138	Figure 22	15	Exit 1 and 2
P/J139	Figure 22	13	Exit 1 and 2
J140	Figure 13	4	Drum/developer/fuser drives
P/J141	Figure 22	1	Exit 1 and 2
P/J142	Figure 22	3	Exit 1 and 2
P/J143	Figure 22	2	Exit 1 and 2
P/J151	Figure 4	1	MOB assembly
P/J152	Figure 4	2	MOB assembly

Table 2 Connectors 100 to 199

Connector No.	Figure No.	Item No.	Connector Location
P/J101	Figure 12	2	Tray module (TTM) 3 of 3
P/J101	Figure 20	1	Machine left side
P/J101	Figure 8	4	Tray module (2TM) 1 of 2
P/J102	Figure 12	1	Tray module (TTM) 3 of 3
P/J102	Figure 9	9	Tray module (2TM) 2 of 2
P/J103	Figure 12	3	Tray module (TTM) 3 of 3
P/J103	Figure 17	5	IOT front location/ATC sensor
P/J103	Figure 9	10	Tray module (2TM) 2 of 2
P/J104	Figure 11	4	Tray module (TTM) 2 of 3
P/J104	Figure 17	6	IOT front location/ATC sensor
P/J104	Figure 9	16	Tray module (2TM) 2 of 2
P/J105	Figure 17	7	IOT front location/ATC sensor
P/J110	Figure 11	12	Tray module (TTM) 2 of 3
P/J110	Figure 15	7	Drum CRUM
P/J110	Figure 9	11	Tray module (2TM) 2 of 2

Table 2 Connectors 100 to 199

Connector No.	Figure No.	Item No.	Connector Location
P/J153	Figure 4	7	MOB assembly
P/J154	Figure 4	8	MOB assembly
P/J155	Figure 4	6	MOB assembly
P/J170	Figure 7	5	Registration, tray 1/2 feeder
P/J171	Figure 7	6	Registration, tray 1/2 feeder
P/J172	Figure 7	9	Registration, tray 1/2 feeder
P/J174	Figure 5	1	Tray 1, 2 paper size sensors
P/J175	Figure 5	2	Tray 1, 2 paper size sensors
P/J177	Figure 7	12	Registration, tray 1/2 feeder
P/J178	Figure 7	11	Registration, tray 1/2 feeder
P/J179	Figure 7	10	Registration, tray 1/2 feeder
P/J181	Figure 6	2	Bypass tray
P/J182	Figure 6	1	Bypass tray
P/J183	Figure 6	9	Bypass tray
P/J190	Figure 21	1	Fuser
P/J192	Figure 21	8	Fuser
P/J193	Figure 21	10	Fuser
P/J194	Figure 21	7	Fuser
P/J195	Figure 21	11	Fuser
P/J196	Figure 21	9	Fuser
P/J197	Figure 24	11	Halftone PWB/AC drive PWB

Table 3 Connectors 200 to 399

Connector No.	Figure No.	Item No.	Connector Location
P/J222	Figure 19	3	Dispense motor/GFI
P/J223	Figure 19	4	Dispense motor/GFI
P/J225	Figure 13	3	Drum/developer/fuser drives
P/J226	Figure 22	16	Exit 1 and 2
P/J231	Figure 7	2	Registration, tray 1/2 feeder
P/J232	Figure 7	1	Registration, tray 1/2 feeder
P/J233	Figure 7	3	Registration, tray 1/2 feeder
P/J234	Figure 20	3	Machine left side
P/J235	Figure 22	12	Exit 1 and 2
P/J236	Figure 22	8	Exit 1 and 2
P/J237	Figure 22	9	Exit 1 and 2
P/J240	Figure 13	1	Drum/developer/fuser drives
P/J261	Figure 17	9	IOT front location/ATC sensor
P/J262	Figure 14	3	NOHAD
P/J263	Figure 14	1	NOHAD
P/J264	Figure 14	4	NOHAD
P/J265	Figure 17	2	IOT front location/ATC sensor
P/J267	Figure 17	1	IOT front location/ATC sensor
P/J270	Figure 14	5	NOHAD
P/J270	Figure 15	6	Drum CRUM
P/J272	Figure 14	6	NOHAD
P/J273	Figure 14	2	NOHAD
P/J275	Figure 7	4	Registration, tray 1/2 feeder
P/J276	Figure 7	15	Registration, tray 1/2 feeder
P/J277	Figure 6	8	Bypass tray
P/J300	Figure 23	7	Controller PWB
P/J302	Figure 23	10	Controller PWB
P310	Figure 23	11	Controller PWB
P313	Figure 25	1	Back plane PWB
P321	Figure 23	3	Controller PWB
J330	Figure 23	12	Controller PWB
P332	Figure 23	19	Controller PWB
J335	Figure 25	6	Back plane PWB
P335	Figure 23	8	Controller PWB
P336	Figure 23	2	Controller PWB
J340	Figure 23	16	Controller PWB
J346	Figure 23	18	Controller PWB
J348	Figure 23	1	Controller PWB
J351	Figure 23	13	Controller PWB
P/J352	Figure 23	6	Controller PWB
P380	Figure 23	14	Controller PWB

Table 3 Connectors 200 to 399

Connector No.	Figure No.	Item No.	Connector Location
P/J201	Figure 11	17	Tray module (TTM) 2 of 3
P/J201	Figure 9	1	Tray module (2TM) 2 of 2
P/J201	Figure 13	2	Drum/developer/fuser drives
P/J202	Figure 11	7	Tray module (TTM) 2 of 3
P/J202	Figure 13	8	Drum/developer/fuser drives
P/J202	Figure 9	8	Tray module (2TM) 2 of 2
P/J203	Figure 13	7	Drum/developer/fuser drives
P/J203	Figure 8	8	Tray module (2TM) 1 of 2
P/J203	Figure 10	7	Tray module (TTM) 1 of 3
P/J211	Figure 13	9	Drum/developer/fuser drives
P/J212	Figure 13	5	Drum/developer/fuser drives
P/J213	Figure 13	6	Drum/developer/fuser drives
P/J215	Figure 15	1	Drum CRUM
P/J220	Figure 19	1	Dispense motor/GFI
P/J221	Figure 19	2	Dispense motor/GFI

Table 3 Connectors 200 to 399

Connector No.	Figure No.	Item No.	Connector Location
P390	Figure 23	20	Controller PWB

Table 4 Connectors 400 to 599

Connector No.	Figure No.	Item No.	Connector Location
P/J400	Figure 2	29	Motor drive PWB
P/J401	Figure 2	31	Motor drive PWB
P/J404	Figure 2	30	Motor drive PWB
P/J405	Figure 2	9	Motor drive PWB
P/J408	Figure 2	18	Motor drive PWB
P/J409	Figure 2	27	Motor drive PWB
P/J410	Figure 2	1	Motor drive PWB
P/J411	Figure 2	48	Motor drive PWB
P/J412	Figure 2	47	Motor drive PWB
P/J413	Figure 2	44	Motor drive PWB
P/J414	Figure 2	41	Motor drive PWB
P/J415	Figure 2	40	Motor drive PWB
P/J416	Figure 2	6	Motor drive PWB
P/J417	Figure 2	37	Motor drive PWB
P/J418	Figure 2	39	Motor drive PWB
P/J420	Figure 2	10	Motor drive PWB
P/J421	Figure 2	14	Motor drive PWB
P/J422	Figure 2	19	Motor drive PWB
P/J423	Figure 2	2	Motor drive PWB
P/J424	Figure 2	3	Motor drive PWB
P/J425	Figure 2	7	Motor drive PWB
P/J426	Figure 2	43	Motor drive PWB
P/J427	Figure 2	46	Motor drive PWB
P/J428	Figure 2	26	Motor drive PWB
P/J429	Figure 2	24	Motor drive PWB
P/J431	Figure 2	25	Motor drive PWB
P/J433	Figure 2	12	Motor drive PWB
P/J434	Figure 2	16	Motor drive PWB
P/J435	Figure 2	8	Motor drive PWB
P/J436	Figure 2	23	Motor drive PWB
P/J437	Figure 2	13	Motor drive PWB
P/J441	Figure 2	42	Motor drive PWB
P/J442	Figure 2	38	Motor drive PWB
P/J443	Figure 2	4	Motor drive PWB
P/J444	Figure 2	28	Motor drive PWB
P/J445	Figure 2	15	Motor drive PWB

Table 4 Connectors 400 to 599

Connector No.	Figure No.	Item No.	Connector Location
P/J446	Figure 2	17	Motor drive PWB
J451	Figure 8	1	Tray module (2TM) 1 of 2
J451	Figure 10	4	Tray module (TTM) 1 of 3
J451	Figure 25	4	Back plane PWB
P/J451	Figure 24	8	Halftone PWB/AC drive PWB
P/J451	Figure 2	34	Motor drive PWB
J452	Figure 8	2	Tray module (2TM) 1 of 2
J452	Figure 10	5	Tray module (TTM) 1 of 3
P452	Figure 2	33	Motor drive PWB
J453	Figure 8	3	Tray module (2TM) 1 of 2
J453	Figure 10	6	Tray module (TTM) 1 of 3
P453	Figure 2	32	Motor drive PWB
P/J480C	Figure 3	8	LPH/toner cartridge CRUM
P/J480M	Figure 3	7	LPH/toner cartridge CRUM
P/J480Y	Figure 3	6	LPH/toner cartridge CRUM
P/J480K	Figure 3	9	LPH/toner cartridge CRUM
P551/J480	Figure 24	7	Halftone PWB/AC drive PWB
P550/J481	Figure 24	1	Halftone PWB/AC drive PWB
P485	Figure 2	11	Motor drive PWB
P486	Figure 2	20	Motor drive PWB
P490	Figure 2	36	Motor drive PWB
P491	Figure 2	35	Motor drive PWB
P/J492	Figure 2	21	Motor drive PWB
P/J493	Figure 2	22	Motor drive PWB
P/J501	Figure 16	7	Developer bias HVPS/LVPS
P/J502	Figure 16	5	Developer bias HVPS/LVPS
P/J503	Figure 16	6	Developer bias HVPS/LVPS
P/J509	Figure 16	8	Developer bias HVPS/LVPS
P/J510	Figure 16	4	Developer bias HVPS/LVPS
P/J511	Figure 24	12	Halftone PWB/AC drive PWB
P/J513	Figure 1	1	BCR HVPS
P/J514	Figure 16	1	Developer bias HVPS/LVPS
P/J515	Figure 16	2	Developer bias HVPS/LVPS
P/J516	Figure 18	1	BTR HVPS/fuser power supply
P/J530	Figure 18	5	BTR HVPS/fuser power supply
P/J540	Figure 24	9	Halftone PWB/AC drive PWB
P550/J481	Figure 24	1	Halftone PWB/AC drive PWB
P551/J480	Figure 24	7	Halftone PWB/AC drive PWB
P552	Figure 24	2	Halftone PWB/AC drive PWB
P554	Figure 24	6	Halftone PWB/AC drive PWB
P555	Figure 24	5	Halftone PWB/AC drive PWB

Table 4 Connectors 400 to 599

Connector No.	Figure No.	Item No.	Connector Location
P556	Figure 24	4	Halftone PWB/AC drive PWB
P557	Figure 24	3	Halftone PWB/AC drive PWB
P/J590	Figure 28	15	Office finisher LX rear
P/J591	Figure 28	14	Office finisher LX rear

Table 5 Connectors 600 to 1399

Connector No.	Figure No.	Item No.	Connector Location
DJ600/J600	Figure 21	3	Fuser
DP600/P600	Figure 21	2	Fuser
P/J601	Figure 7	7	Registration, tray 1/2 feeder
P/J602	Figure 7	8	Registration, tray 1/2 feeder
P/J604	Figure 17	8	IOT front location/ATC sensor
P/J605	Figure 17	10	IOT front location/ATC sensor
P/J606	Figure 17	4	IOT front location/ATC sensor
P/J607	Figure 17	11	IOT front location/ATC sensor
P/J608	Figure 4	5	MOB assembly
P/J609	Figure 4	3	MOB assembly
P/J610	Figure 4	4	MOB assembly
P/J611	Figure 11	19	Tray module (TTM) 2 of 3
P/J611	Figure 9	17	Tray module (2TM) 2 of 2
P/J612	Figure 11	18	Tray module (TTM) 2 of 3
P/J612	Figure 9	15	Tray module (2TM) 2 of 2
P/J613	Figure 11	20	Tray module (TTM) 2 of 3
P/J613	Figure 9	14	Tray module (2TM) 2 of 2
P/J614	Figure 10	11	Tray module (TTM) 1 of 3
P/J616	Figure 11	5	Tray module (TTM) 2 of 3
P/J617	Figure 11	13	Tray module (TTM) 2 of 3
DJ618	Figure 11	1	Tray module (TTM) 2 of 3
DJ618A	Figure 11	2	Tray module (TTM) 2 of 3
DJ618B	Figure 11	3	Tray module (TTM) 2 of 3
DP618	Figure 10	3	Tray module (TTM) 1 of 3
DP618A	Figure 10	2	Tray module (TTM) 1 of 3
DP618B	Figure 10	1	Tray module (TTM) 1 of 3
P/J619	Figure 11	6	Tray module (TTM) 2 of 3
P/J621	Figure 9	13	Tray module (2TM) 2 of 2
P/J621	Figure 7	13	Registration, tray 1/2 feeder
P/J622	Figure 9	12	Tray module (2TM) 2 of 2
P/J622	Figure 7	14	Registration, tray 1/2 feeder
P/J623	Figure 8	6	Tray module (2TM) 1 of 2

Table 5 Connectors 600 to 1399

Connector No.	Figure No.	Item No.	Connector Location
P/J623	Figure 10	9	Tray module (TTM) 1 of 3
P/J623	Figure 6	4	Bypass tray
P/J624	Figure 8	7	Tray module (2TM) 1 of 2
P/J624	Figure 10	10	Tray module (TTM) 1 of 3
P/J624	Figure 6	7	Bypass tray
P/J625	Figure 8	5	Tray module (2TM) 1 of 2
P/J625	Figure 10	8	Tray module (TTM) 1 of 3
P/J625	Figure 20	7	Machine left side
P/J626	Figure 20	6	Machine left side
P/J628	Figure 6	6	Bypass tray
P/J629	Figure 20	4	Machine left side
P/J630	Figure 20	5	Machine left side
P/J631	Figure 22	6	Exit 1 and 2
P/J632	Figure 22	4	Exit 1 and 2
P/J633	Figure 22	14	Exit 1 and 2
P/J634	Figure 22	5	Exit 1 and 2
J634	Figure 21	5	Fuser
P/J634	Figure 3	10	LPH/toner cartridge CRUM
P634	Figure 18	2	BTR HVPS/fuser power supply
P636	Figure 3	5	LPH/toner cartridge CRUM
P/J638	Figure 22	7	Exit 1 and 2
DP800	Figure 32	10	HCF top
DP800	Figure 16	3	Developer bias HVPS/LVPS
J1312	Figure 23	4	Controller PWB
J1314	Figure 23	5	Controller PWB
J1315	Figure 23	17	Controller PWB
P/J1332	Figure 23	9	Controller PWB
P1371/J1341	Figure 25	3	Back plane PWB
J1344	Figure 23	15	Controller PWB
P1353	Figure 25	5	Back plane PWB
P1364	Figure 25	2	Back plane PWB
P1371/J1341	Figure 25	3	Back plane PWB

Table 6 Connectors 8800 to 8999

Connector No.	Figure No.	Item No.	Connector Location
J8860	Figure 26	1	LX finisher horizontal transport
J8861	Figure 26	4	LX finisher horizontal transport
P/J8862	Figure 26	2	LX finisher horizontal transport
J8863	Figure 26	7	LX finisher horizontal transport

Table 6 Connectors 8800 to 8999

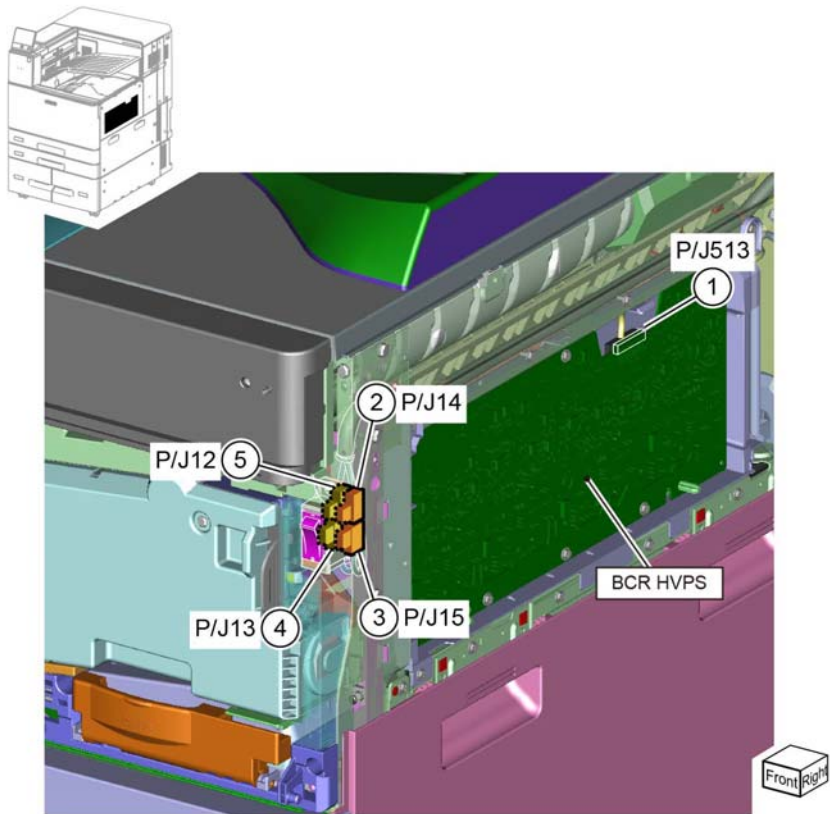
Connector No.	Figure No.	Item No.	Connector Location
P8863	Figure 26	5	LX finisher horizontal transport
J8864	Figure 26	8	LX finisher horizontal transport
J8865	Figure 26	10	LX finisher horizontal transport
J8866	Figure 26	6	LX finisher horizontal transport
P/J8867	Figure 26	9	LX finisher horizontal transport
J8868	Figure 29	4	Office finisher LX top
J8869	Figure 29	3	Office finisher LX top
J8870	Figure 28	24	Office finisher LX rear
J8871	Figure 28	23	Office finisher LX rear
J8872	Figure 28	21	Office finisher LX rear
J8873	Figure 28	2	Office finisher LX rear
J8874	Figure 28	1	Office finisher LX rear
J8875	Figure 28	22	Office finisher LX rear
P/J8876	Figure 29	5	Office finisher LX top
P/J8877	Figure 28	20	Office finisher LX rear
P/J8878	Figure 28	6	Office finisher LX rear
P/J8879	Figure 28	5	Office finisher LX rear
J8880	Figure 29	7	Office finisher LX top
J8881	Figure 29	11	Office finisher LX top
J8882	Figure 29	6	Office finisher LX top
P/J8883	Figure 29	8	Office finisher LX top
P/J8884	Figure 29	10	Office finisher LX top
J8885	Figure 27	6	Office finisher LX front
J8886	Figure 27	5	Office finisher LX front
J8887	Figure 27	4	Office finisher LX front
P/J8888	Figure 29	9	Office finisher LX top
J8889	Figure 28	3	Office finisher LX rear
J8890	Figure 28	4	Office finisher LX rear
J8891	Figure 29	2	Office finisher LX top
P/J8892	Figure 30	1	LX booklet maker top
P/J8893	Figure 30	2	LX booklet maker top
J8894	Figure 31	1	LX booklet maker PWB
J8895	Figure 31	3	LX booklet maker PWB
P/J8896	Figure 30	7	LX booklet maker top
J8897	Figure 30	4	LX booklet maker top
J8898	Figure 30	5	LX booklet maker top
J8899	Figure 30	6	LX booklet maker top
J8900	Figure 30	8	LX booklet maker top
J8901	Figure 30	3	LX booklet maker top
P8903	Figure 29	1	Office finisher LX top
P/J8903	Figure 27	1	Office finisher LX front

Table 6 Connectors 8800 to 8999

Connector No.	Figure No.	Item No.	Connector Location
J8904	Figure 27	2	Office finisher LX front
P/J8905	Figure 27	3	Office finisher LX front
P/J8906	Figure 31	2	LX booklet maker PWB
J8980	Figure 28	19	Office finisher LX rear
P/J8981A/B	Figure 28	10	Office finisher LX rear
J8982	Figure 28	18	Office finisher LX rear
P/J8983	Figure 28	8	Office finisher LX rear
J8984A/B	Figure 28	9	Office finisher LX rear
J8985	Figure 31	4	LX booklet maker PWB
P8985	Figure 28	17	Office finisher LX rear
P/J8986	Figure 28	7	Office finisher LX rear
P8987	Figure 28	16	Office finisher LX rear
P/J8988	Figure 28	11	Office finisher LX rear
J8989	Figure 28	13	Office finisher LX rear
P/J8990	Figure 28	12	Office finisher LX rear
P/J8991	Figure 31	9	LX booklet maker PWB
P/J8992	Figure 31	7	LX booklet maker PWB
P/J8993	Figure 31	6	LX booklet maker PWB
P/J8994	Figure 31	5	LX booklet maker PWB
P/J8995	Figure 31	8	LX booklet maker PWB

Main Power Switch / BCR HVPS

Location: PL 1.20

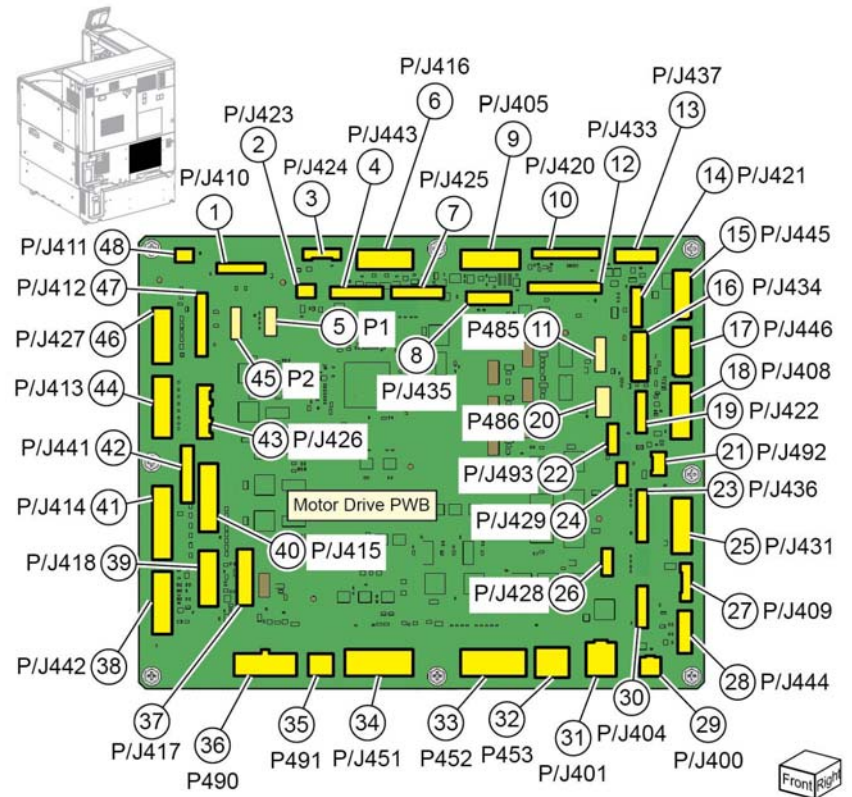


TF-1-0603-A

Figure 1 Main Power Switch/BCR HVPS

Motor Drive PWB

Location: PL 1.10

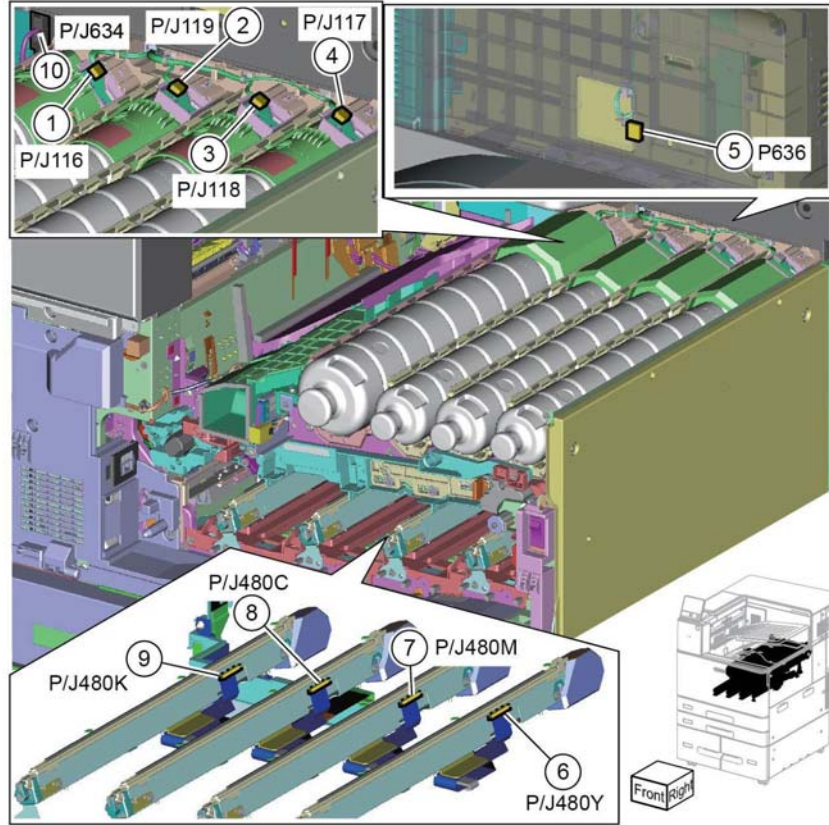


TF-1-0604-A

Figure 2 Motor Drive PWB

LPH/Toner Cartridge CRUM

Location: PL 60.05, PL 90.10

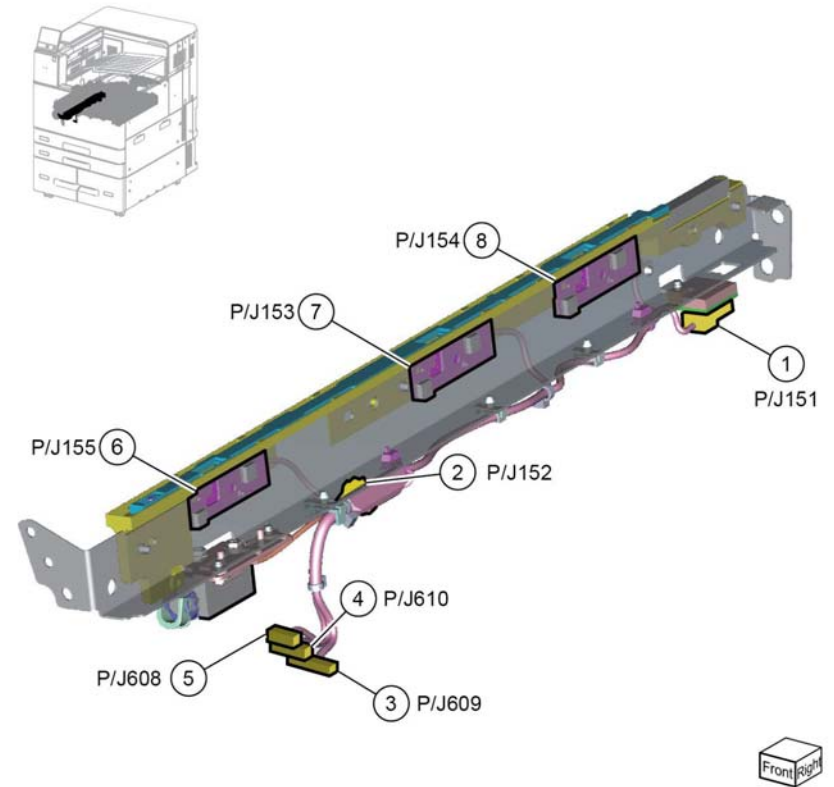


TF-1-0605-A

Figure 3 LPH/Toner Cartridge CRUM

MOB Assembly

Location: PL 90.30



TF-1-0606-A

Figure 4 MOB Assembly

Tray 1 and 2 Paper Size Sensors

Location: PL 70.05

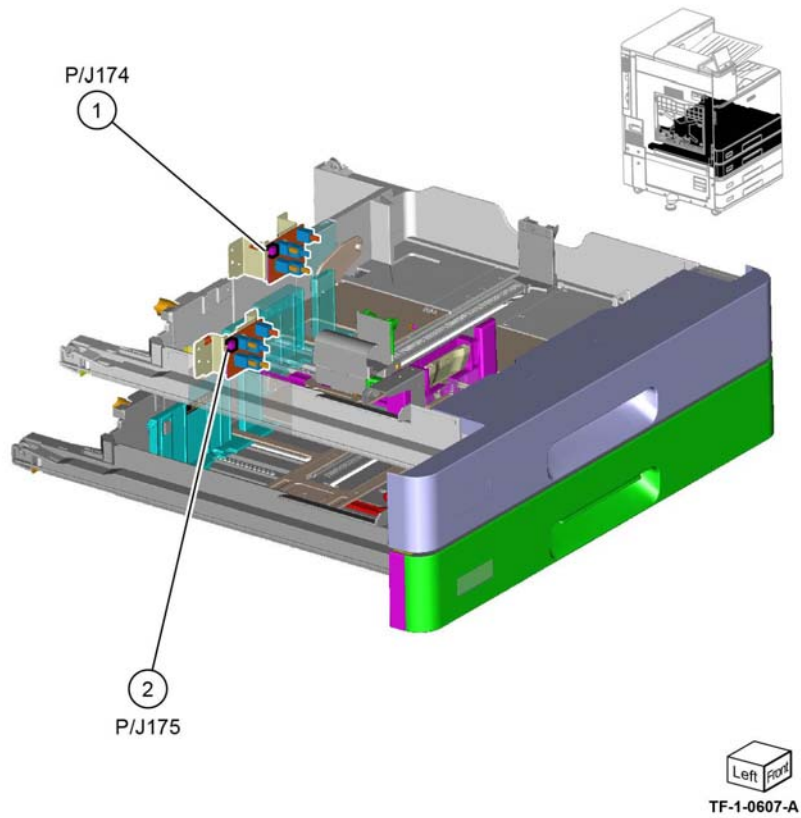


Figure 5 Tray 1, 2 Paper Size Sensors

Bypass Tray

Location: PL 80.120

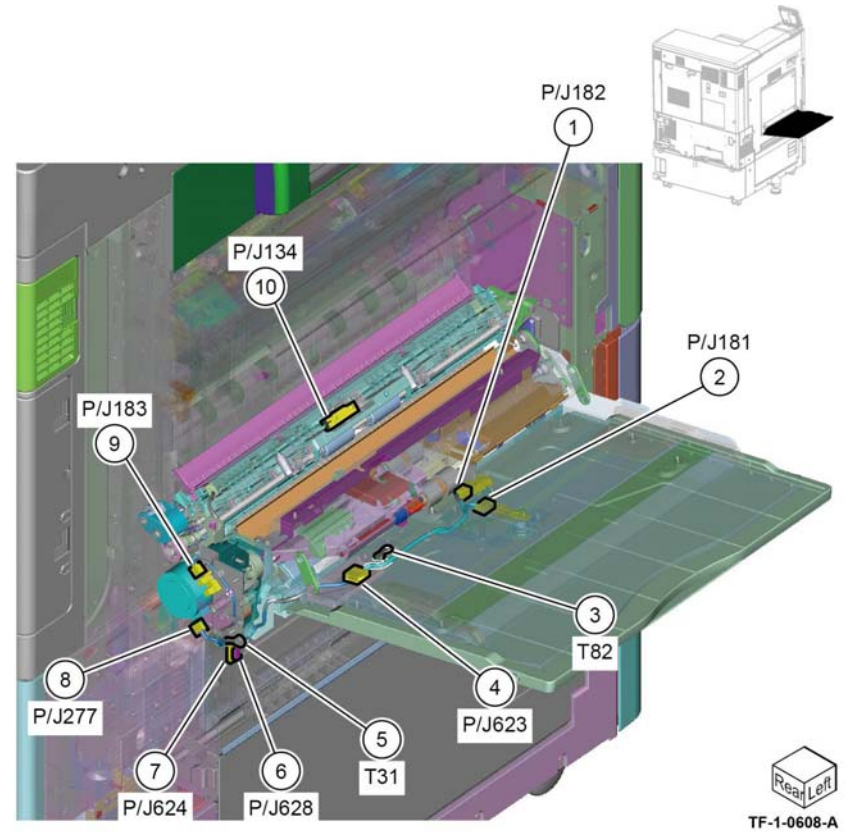
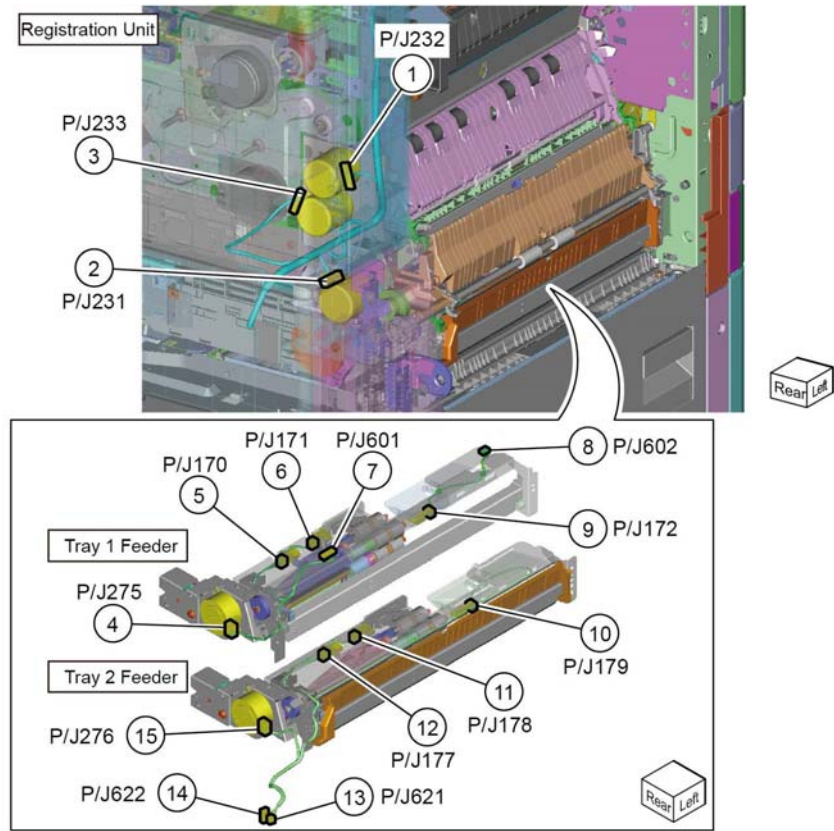


Figure 6 Bypass Tray

Registration, Tray 1/2 Feeder

Location: PL 80.05

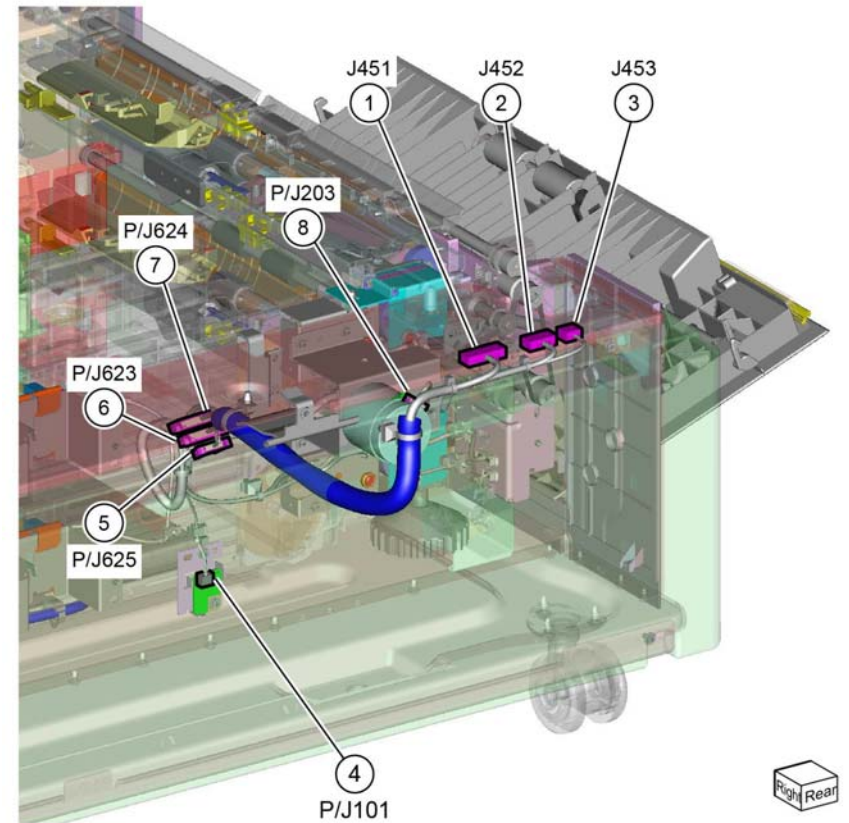


TF-1-0609-A

Figure 7 Registration, Tray 1/2 Feeder

Tray Module (2TM) 1 of 2

Location: PL 80.25



TF-1-0610-A

Figure 8 Tray Module (2TM) 1 of 2

Tray Module (2TM) 2 of 2

Location: PL 80.20

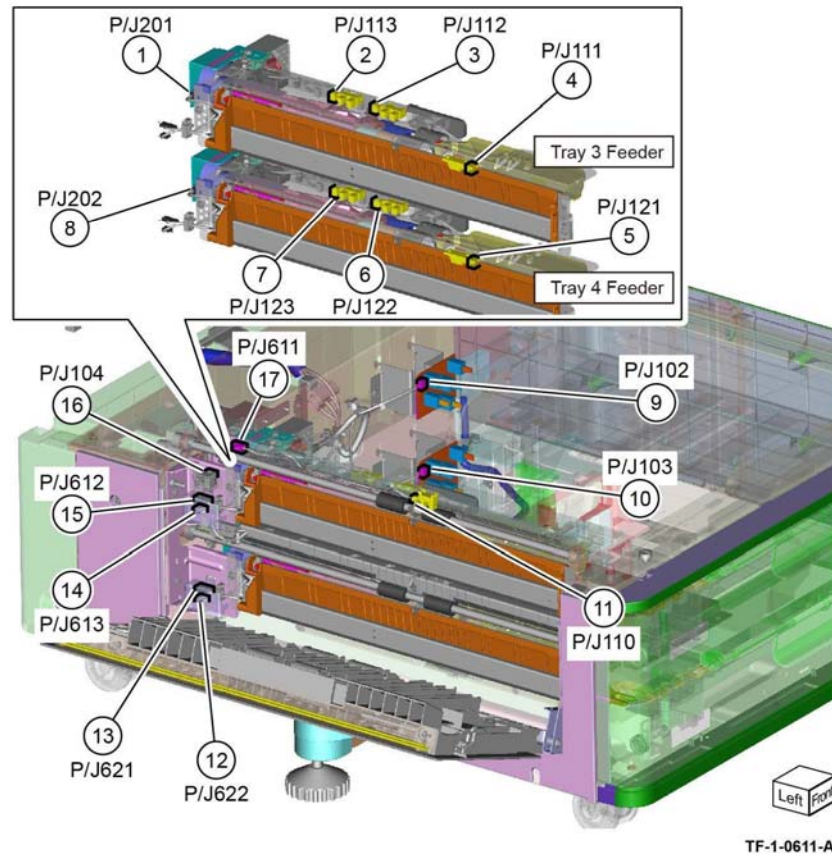


Figure 9 Tray Module (2TM) 2 of 2

Tray Module (TTM) 1 of 3

Location: PL 70.30, PL 70.35

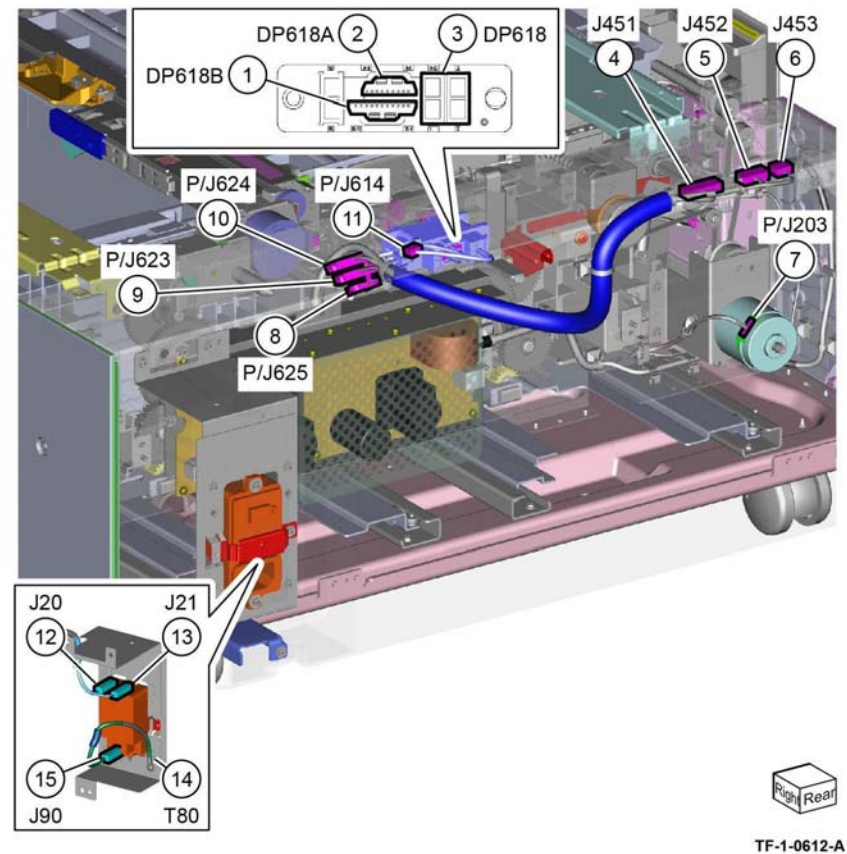
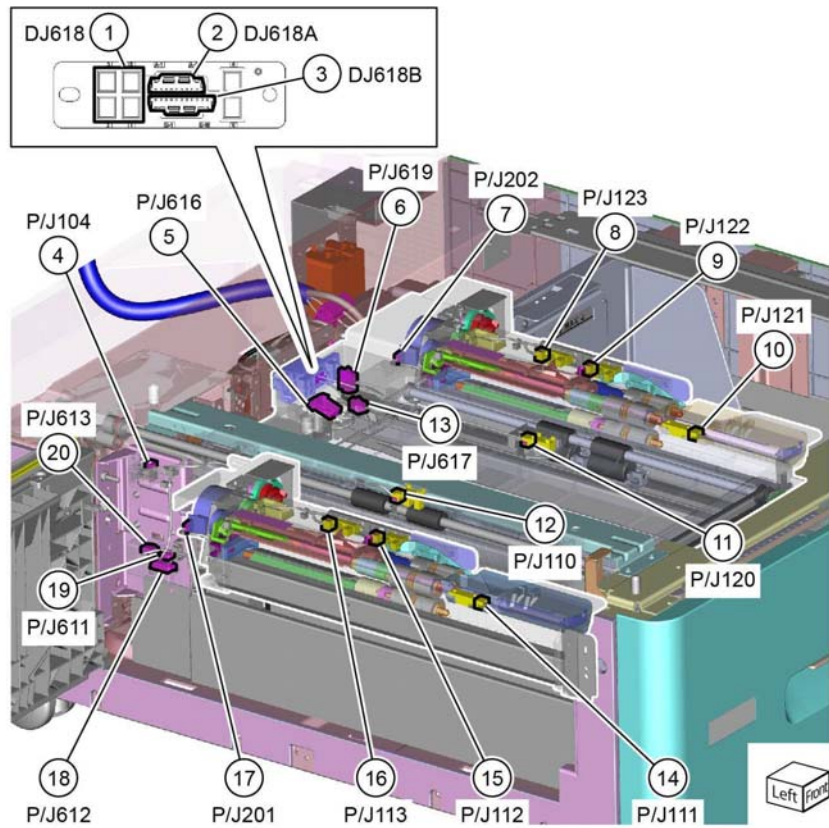


Figure 10 Tray Module (TTM) 1 of 3

Tray Module (TTM) 2 of 3

Location: PL 70.30, PL 70.35

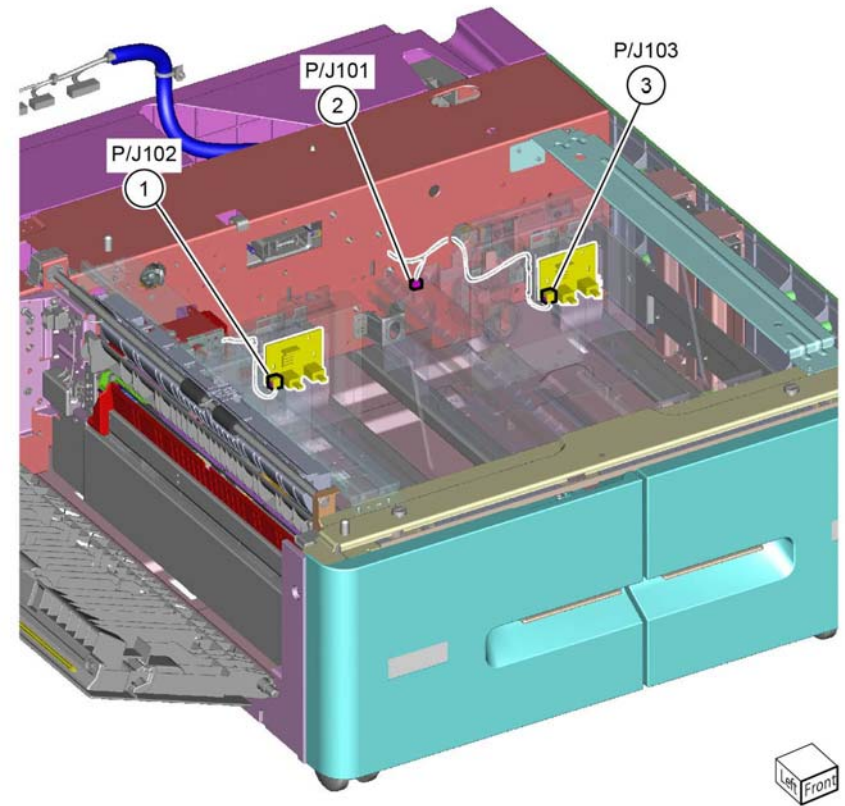


TF-1-0613-A

Figure 11 Tray Module (TTM) 2 of 3

Tray Module (TTM) 3 of 3

Location: PL 70.30, PL 70.35



TF-1-0614-A

Figure 12 Tray Module (TTM) 3 of 3

Drum/Developer/Fuser Drives

Location: PL 40.05

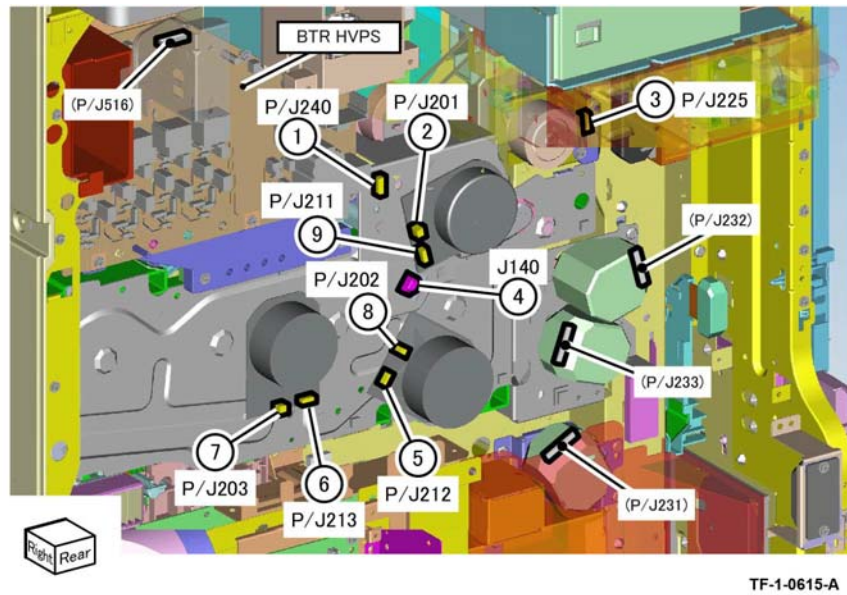


Figure 13 Drum/Developer/Fuser Drives

NOHAD

Location: PL 40.10, PL 40.15

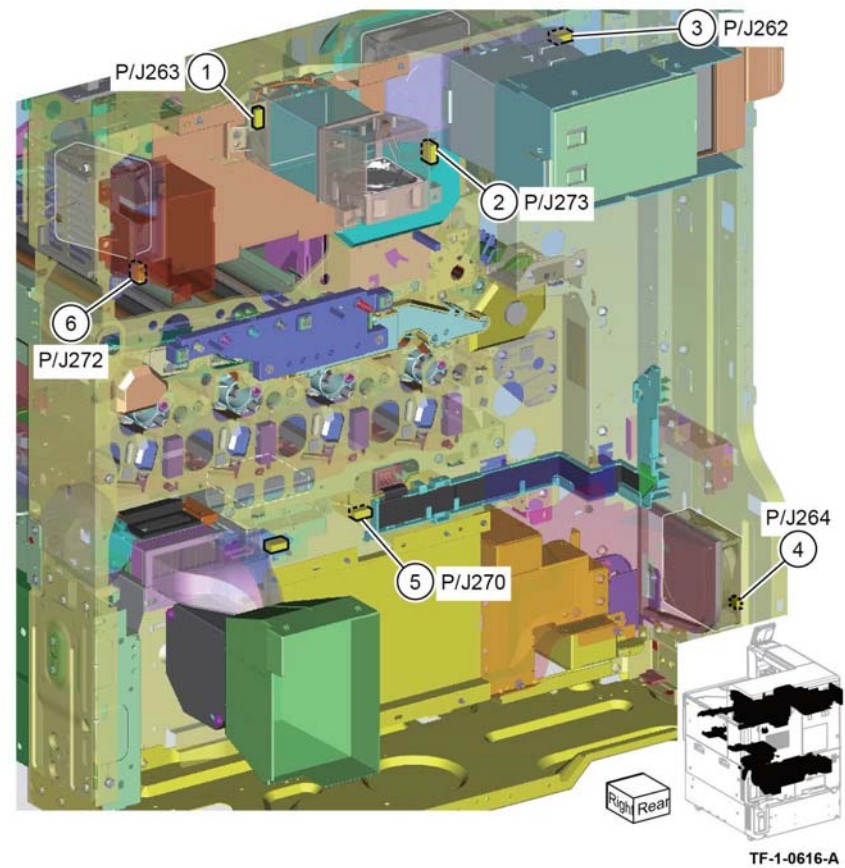
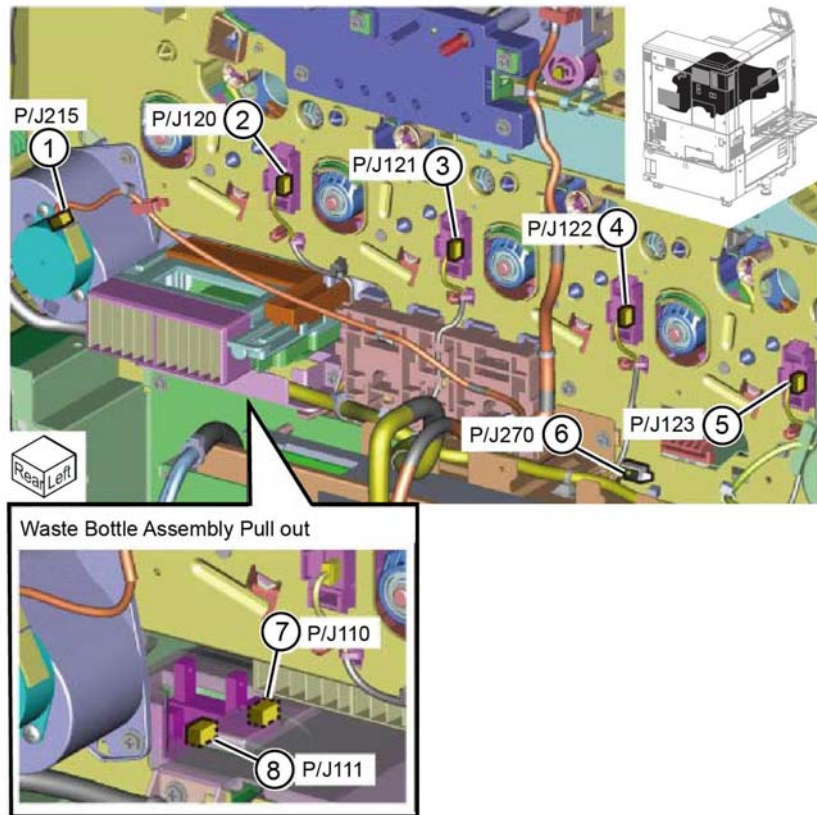


Figure 14 NOHAD

Drum CRUM

Location: PL 90.25

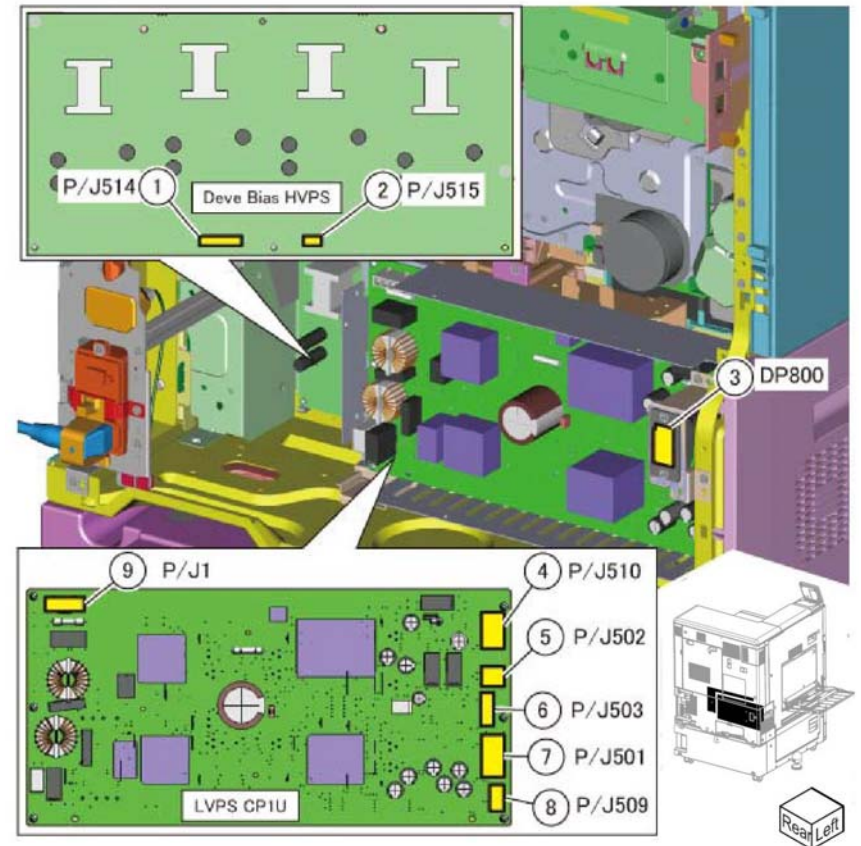


TF-1-0617-A

Figure 15 Drum CRUM

Developer Bias HVPS/LVPS

Location: PL 1.15

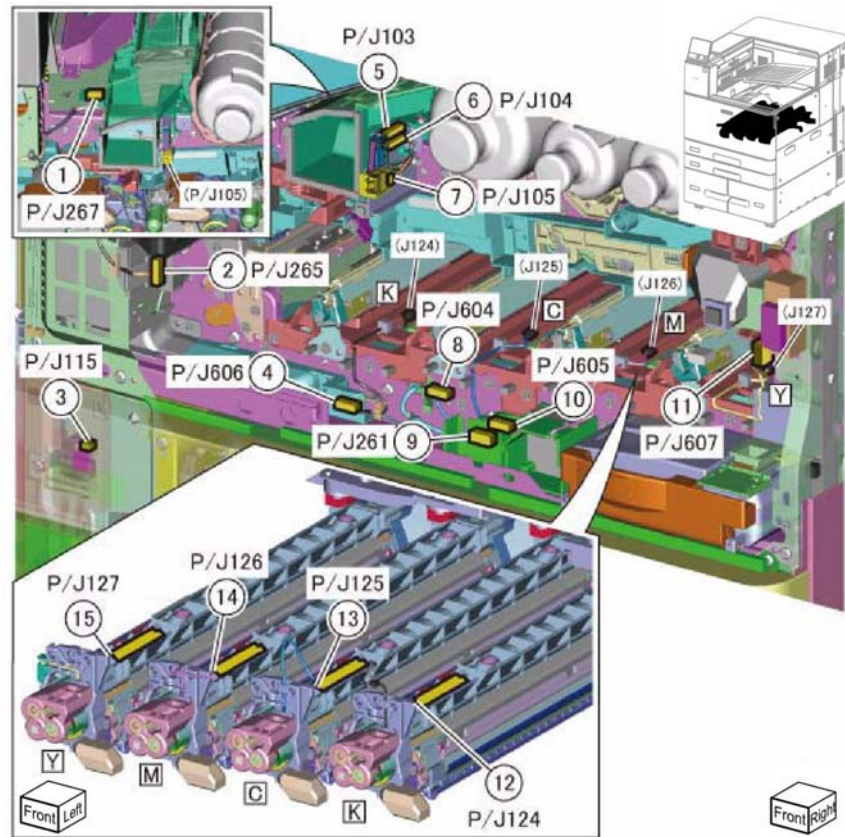


TF-1-0618-A

Figure 16 Developer Bias HVPS/LVPS

IOT Front Location / ATC Sensor

Location: PL 90.10, PL 90.15

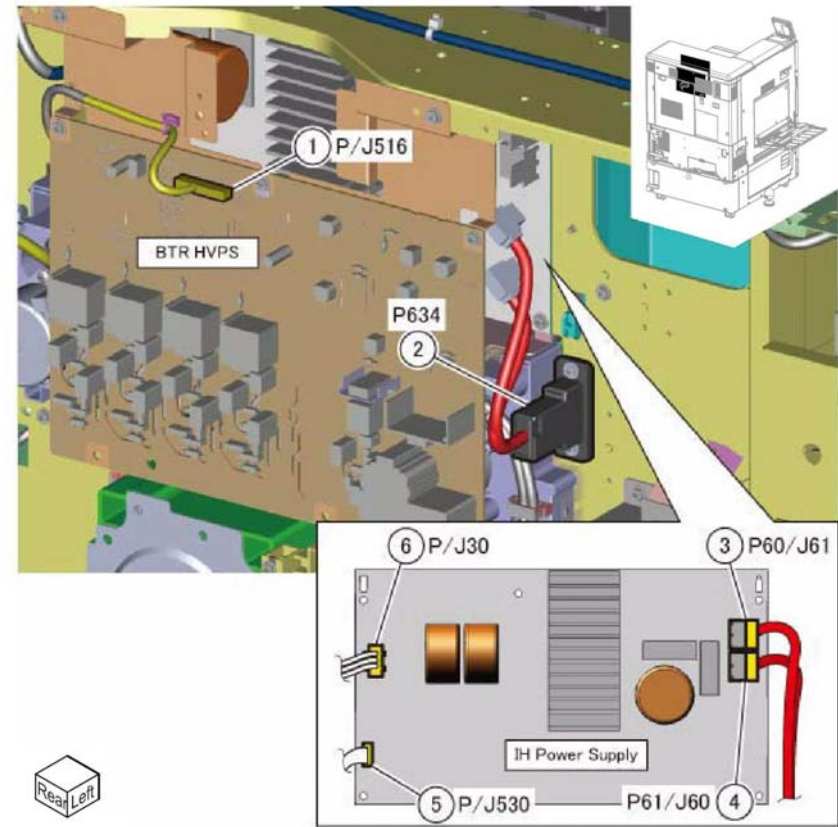


TF-1-0619-A

Figure 17 IOT Front Location/ATC Sensor

BTR HVPS/Fuser Heater Power Supply

Location: PL 1.05

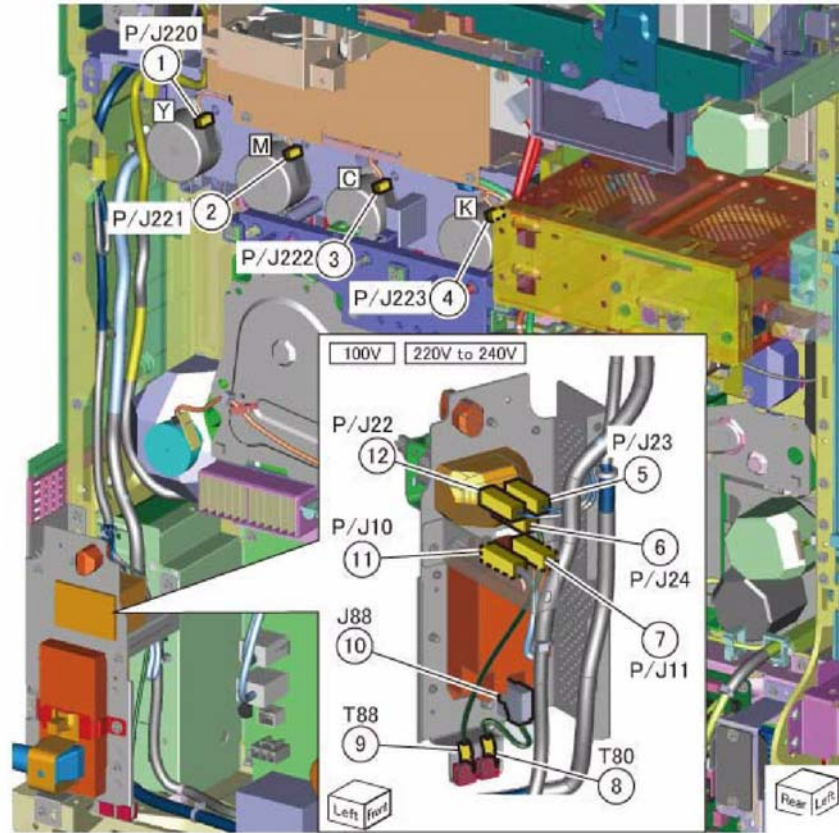


TF-1-0620-A

Figure 18 BTR HVPS/Fuser Power Supply

Dispense Motor/GFI

Location: PL 1.10, PL 90.10

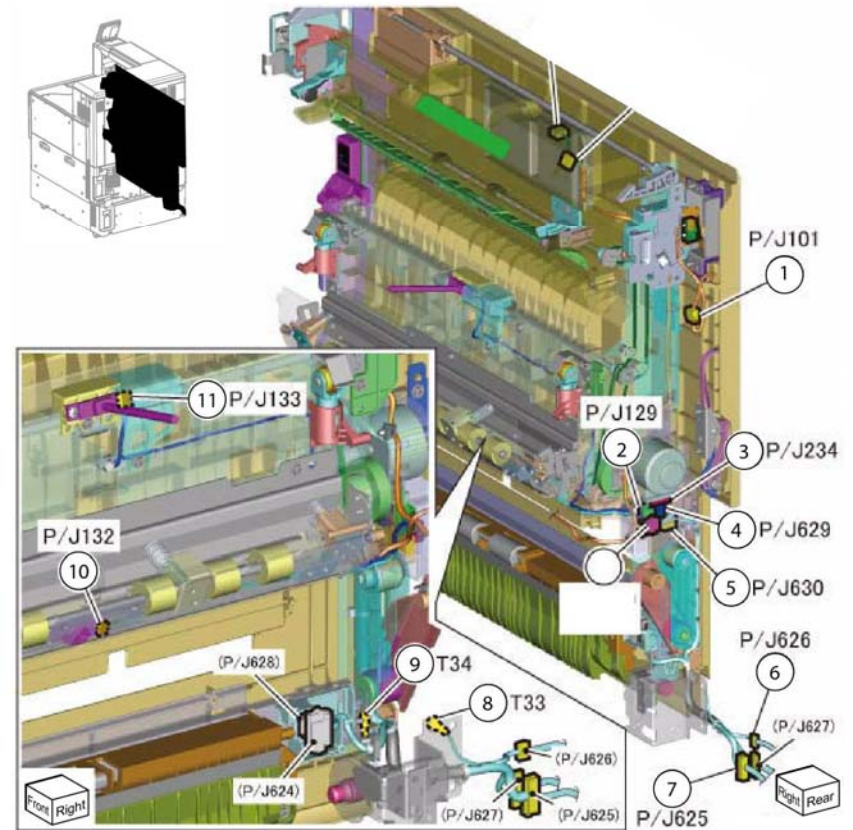


TF-1-0621-A

Figure 19 Dispense Motor/GFI

Machine Left Side

Location: PL 80.70, PL 80.75, PL 80.80, PL 80.85, PL 80.90

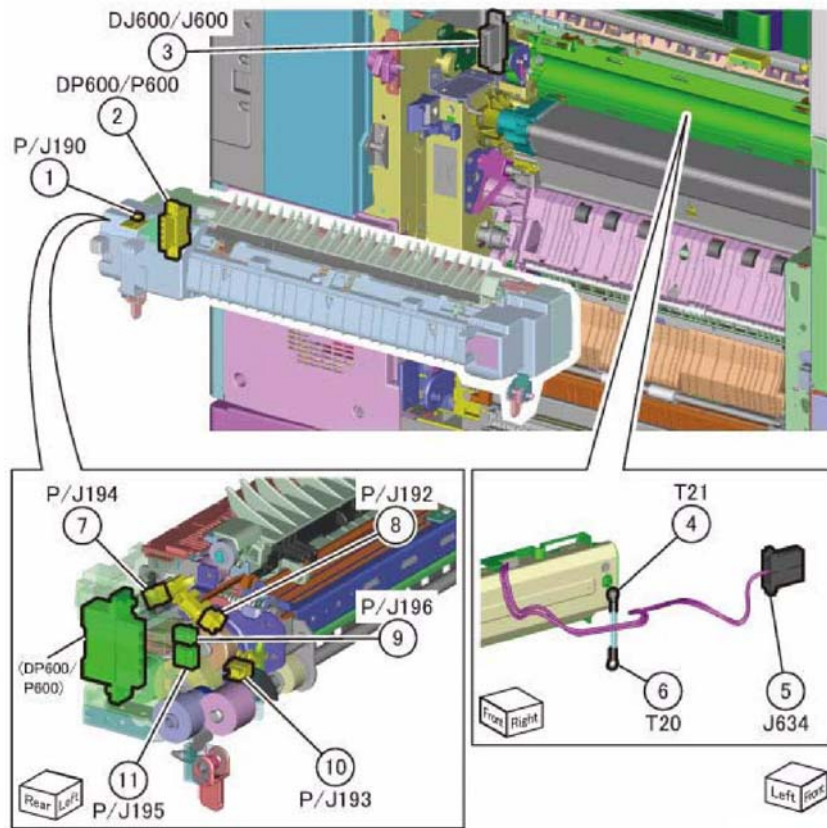


TF-1-0622-A

Figure 20 Machine Left Side

Fuser

Location: PL 10.05

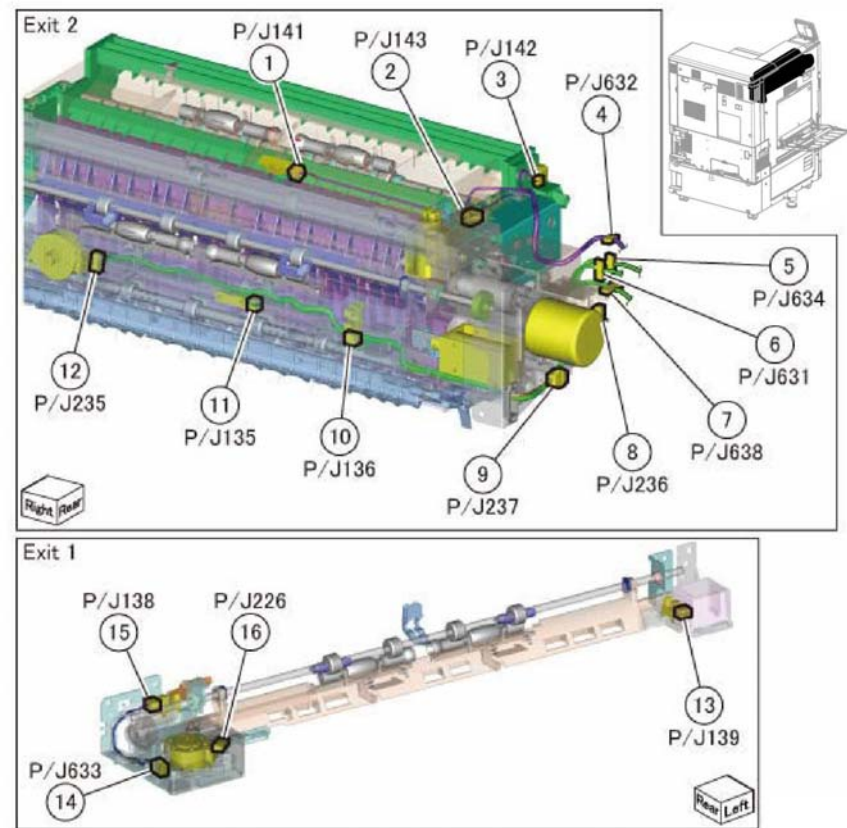


TF-1-0623-A

Figure 21 Fuser

Exit 1 and 2

Location: PL 10.10, PL 10.15, PL 10.25

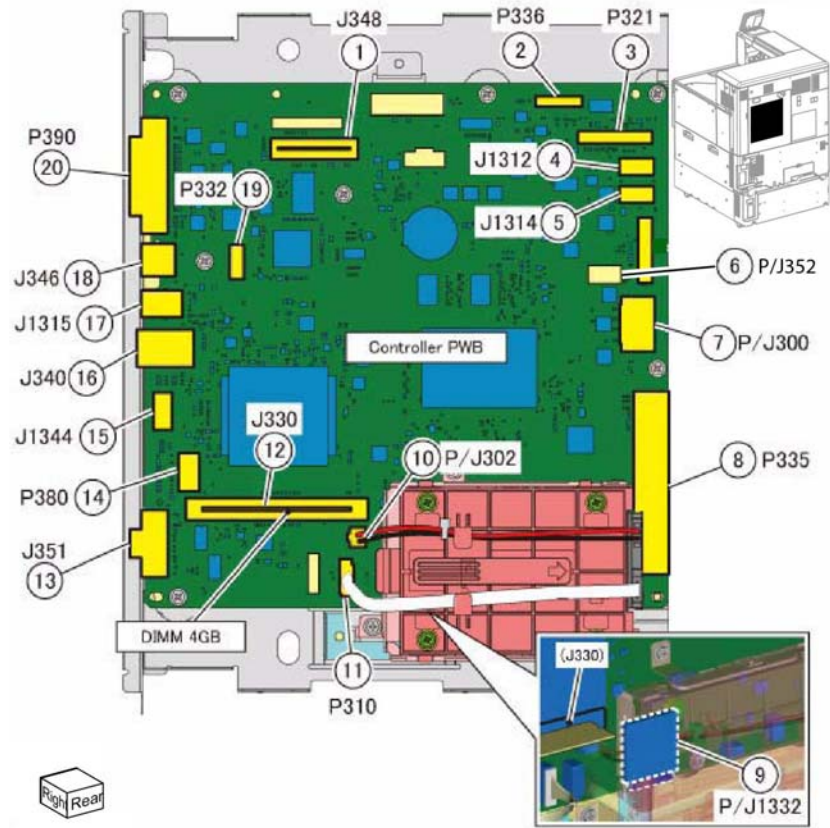


TF-1-0624-A

Figure 22 Exit 1 and 2

Controller PWB

Location: PL 3.05

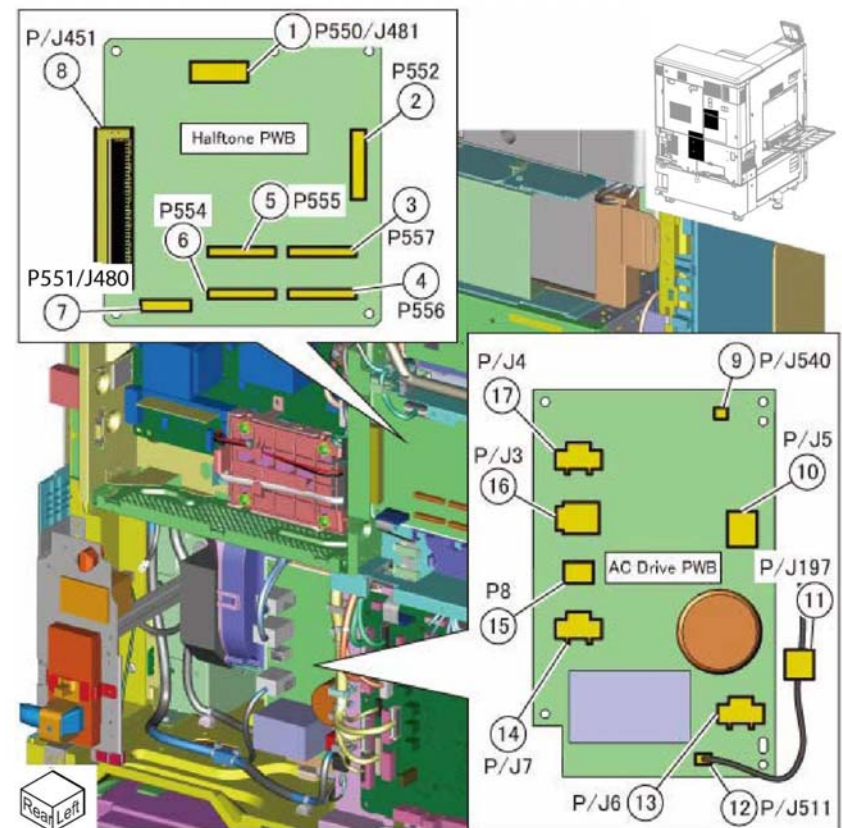


TF-1-0625-A

Figure 23 Controller PWB

HalfTone PWB/AC Drive PWB

Location: PL 1.15, PL 3.15



TF-1-0626-A

Figure 24 HalfTone PWB/AC Drive PWB

Back Plane PWB

Location: PL 3.15

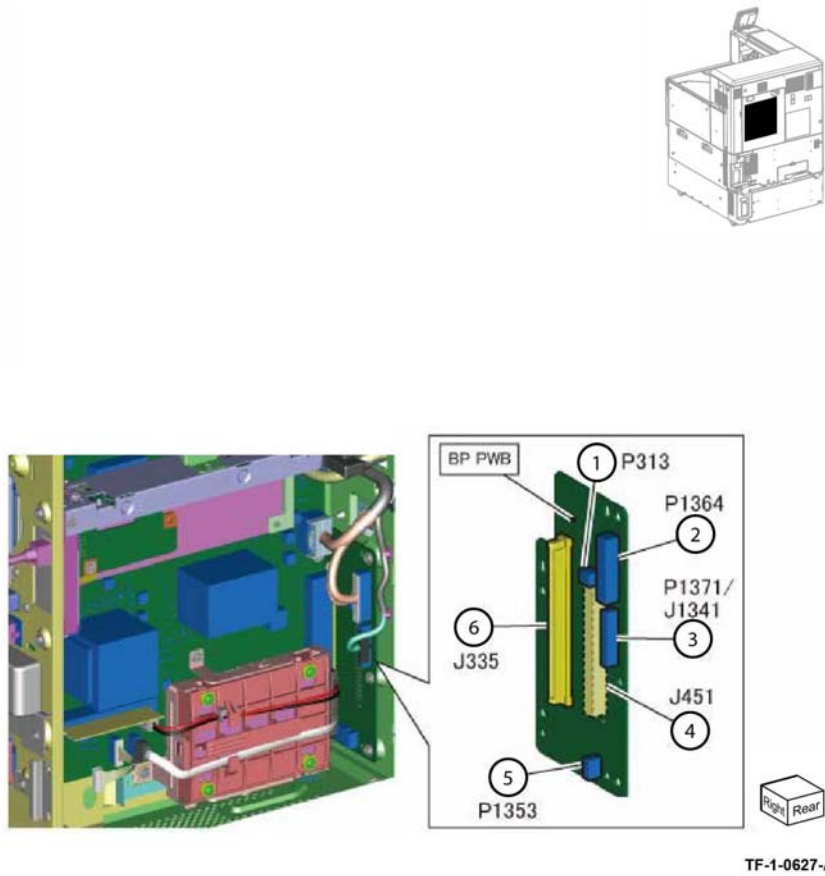


Figure 25 Back Plane PWB

Office Finisher LX Horizontal Transport

Location: PL 13.06

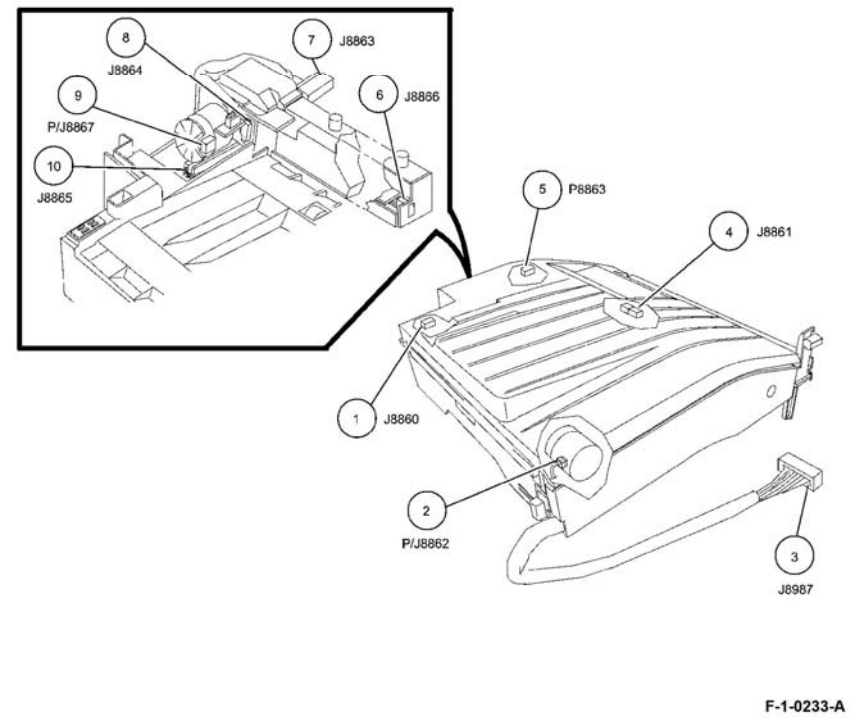
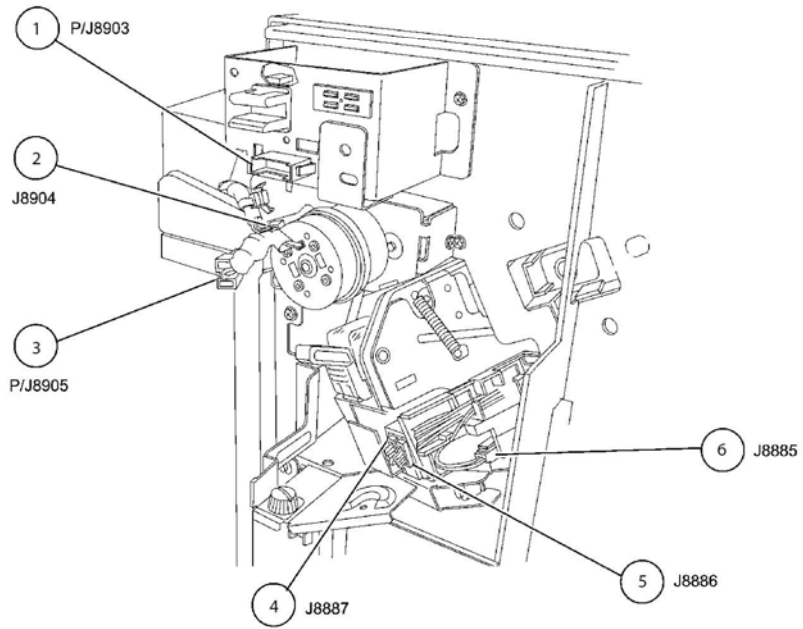


Figure 26 LX Finisher horizontal transport

Office Finisher LX Front

Location: PL 13.20

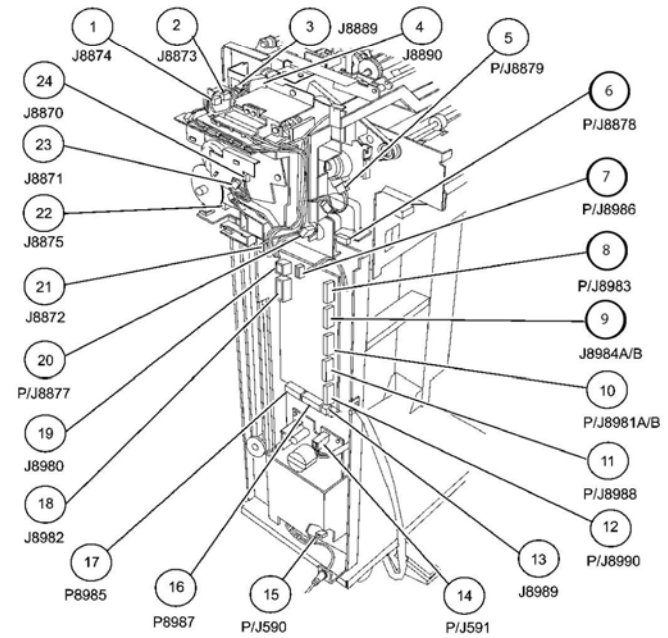


F-1-0234-A

Figure 27 Office finisher LX front

Office Finisher LX Rear

Location: PL 13.45

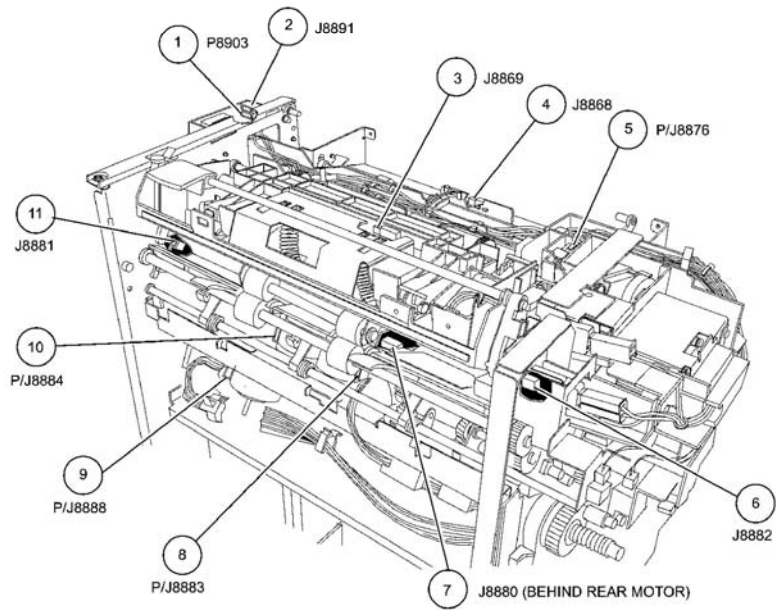


F-1-0235-A

Figure 28 Office finisher LX rear

Office Finisher LX Top

Location: PL 13.25

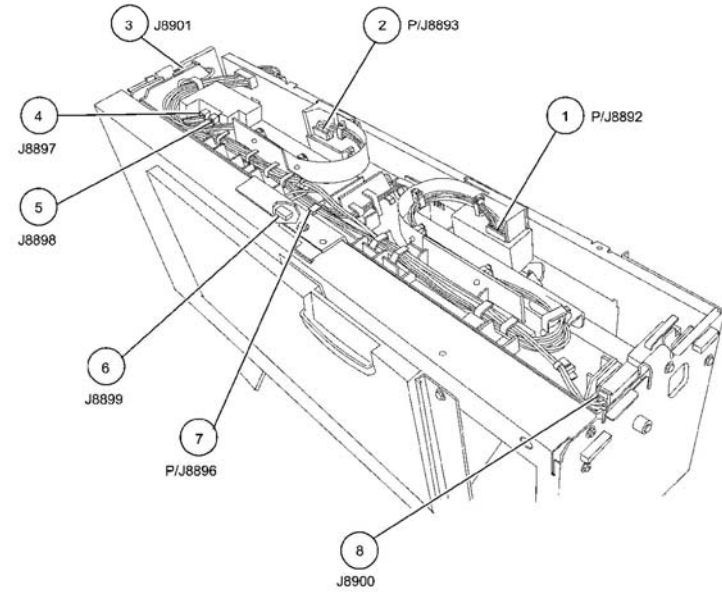


F-1-0236-A

Figure 29 Office finisher LX top

Office Finisher LX Booklet Maker Top

Location: PL 13.70

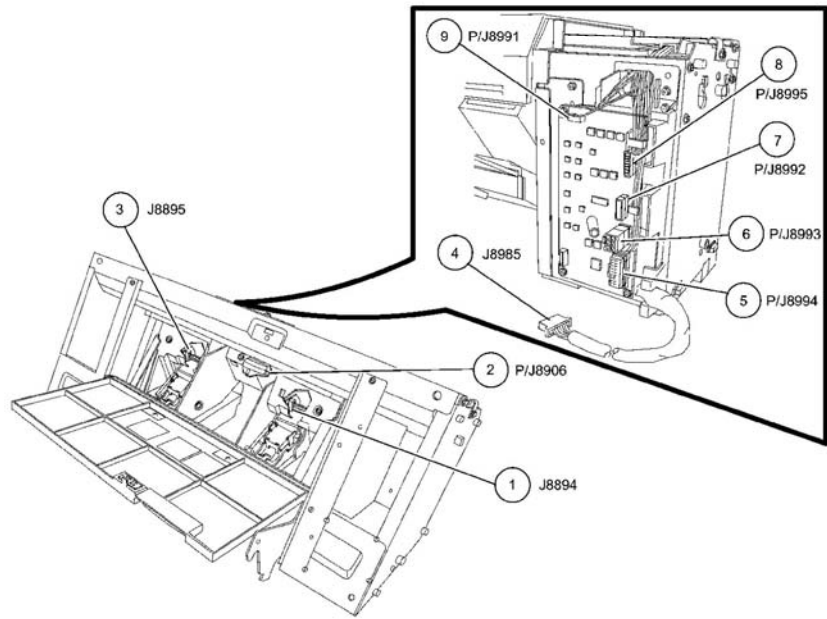


F-1-0237-A

Figure 30 LX Booklet maker top

Office Finisher LX Booklet Maker PWB

Location: PL 13.70

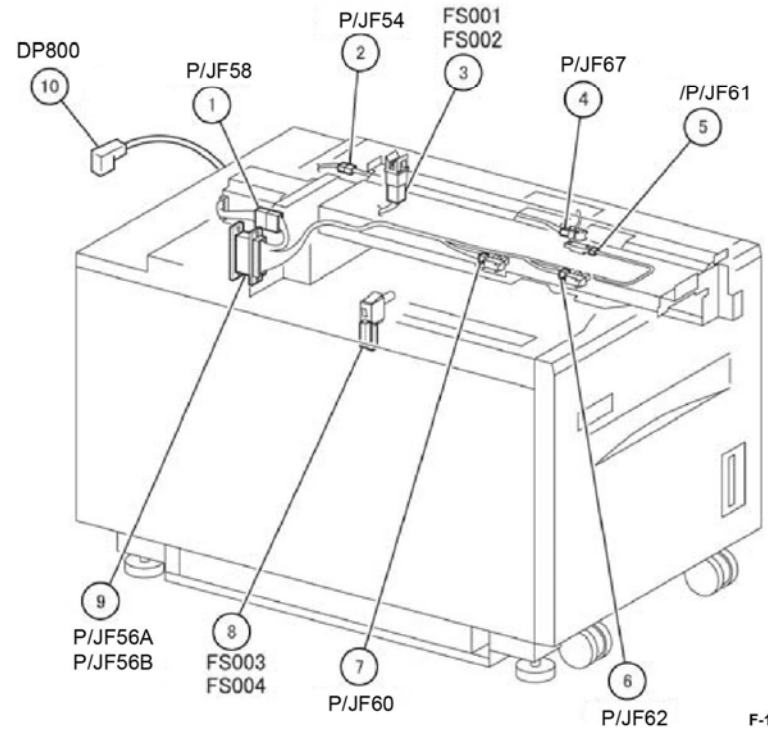


F-1-0238-A

Figure 31 LX Booklet maker PWB

HCF Top

Location: PL 70.95

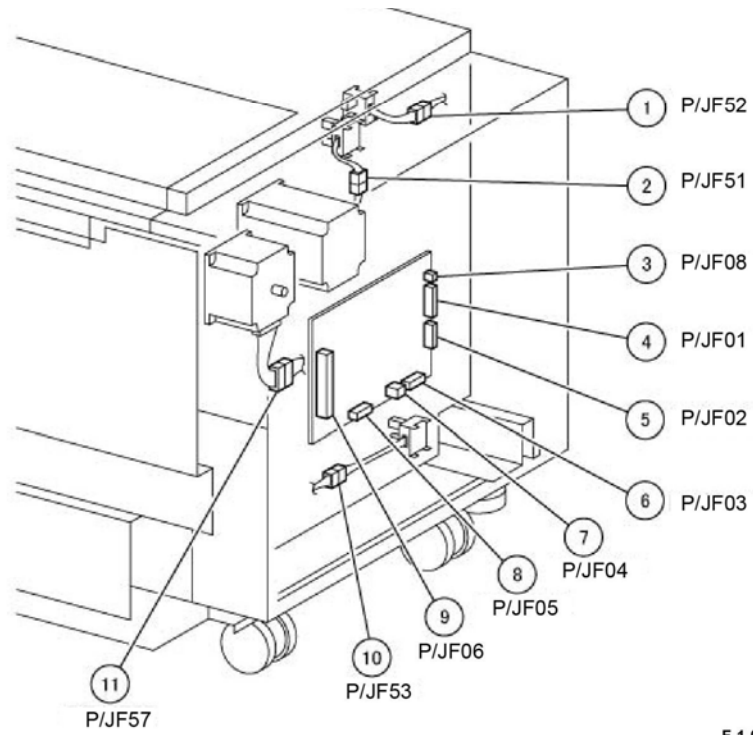


F-1-0239-A

Figure 32 HCF top

HCF Rear

Location: PL 70.95



F-1-0240-A

Figure 33 HCF rear

Wiring Diagrams

Purpose

Wiring diagrams are an aid to trace wiring faults. Wiring diagrams are used to complement the block schematic diagrams (BSDs).

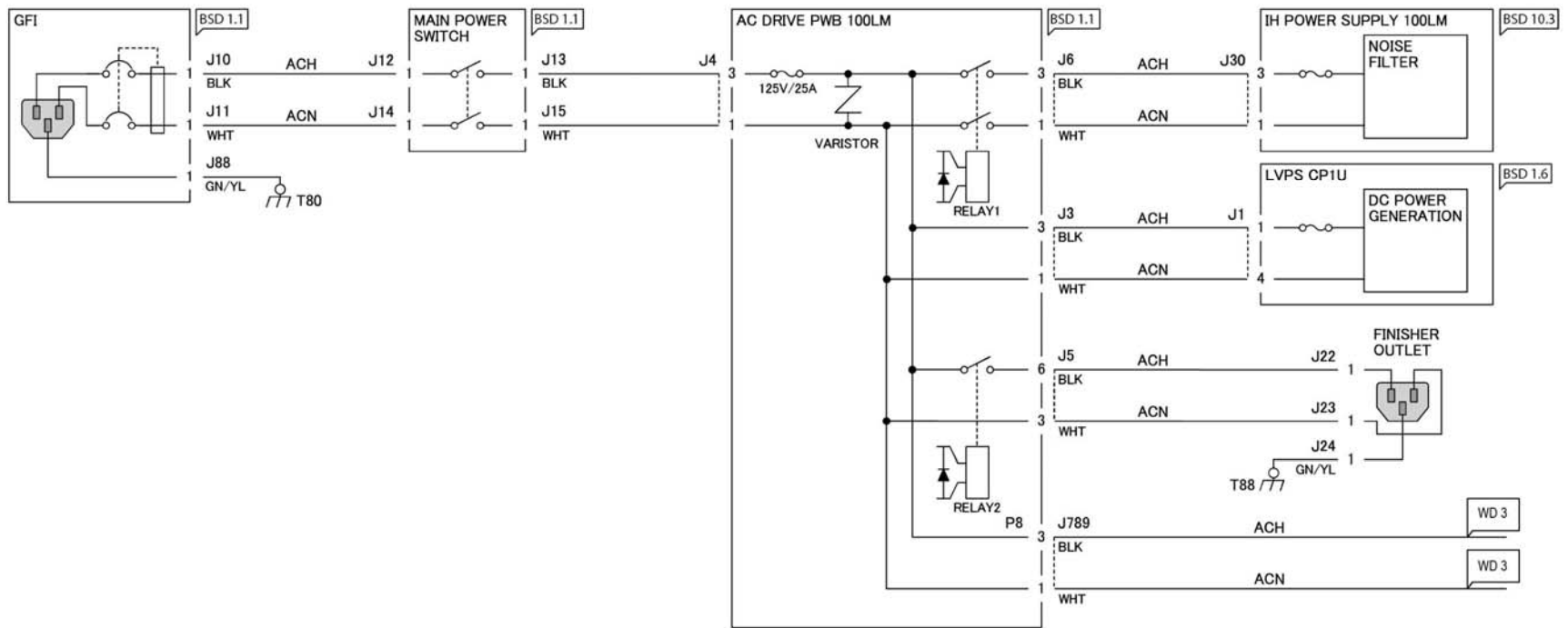
Introduction

Refer to the wiring diagrams that follow:

- Wiring Diagram 1 ACH/ACN 100VAC [Figure 1](#).
- Wiring Diagram 2 ACH/ACN 220 to 240VAC [Figure 2](#).
- Wiring Diagram 3 ACH/ACN [Figure 3](#).
- Wiring Diagram 4 +24VDC (1 of 3) [Figure 4](#).
- Wiring Diagram 5 +24VDC (2 of 3) [Figure 5](#).
- Wiring Diagram 6 +24VDC (3 of 3) [Figure 6](#).
- Wiring Diagram 7 +5VDC (1 of 4) [Figure 7](#).
- Wiring Diagram 8 +5VDC (2 of 4) [Figure 8](#).
- Wiring Diagram 9 +5VDC (3 of 4) [Figure 9](#).
- Wiring Diagram 10 +5VDC (4 of 4) [Figure 10](#).
- Wiring Diagram 11 +3.3VDC/+2.5VDC (1 of 2) [Figure 11](#).
- Wiring Diagram 12 +3.3VDC/+2.5VDC (2 of 2) [Figure 12](#).
- Wiring Diagram 13 DC COM (1 of 6) [Figure 13](#).
- Wiring Diagram 14 DC COM (2 of 6) [Figure 14](#).
- Wiring Diagram 15 DC COM (3 of 6) [Figure 15](#).
- Wiring Diagram 16 DC COM (4 of 6) [Figure 16](#).
- Wiring Diagram 17 DC COM (5 of 6) [Figure 17](#).
- Wiring Diagram 18 DC COM (6 of 6) [Figure 18](#).
- Wiring Diagram 19 2TM Tray +24VDC/+5VDC/+3.3VDC [Figure 19](#).
- Wiring Diagram 20 TTM TRAY +24VDC/+5VDC/+3.3VDC [Figure 20](#).
- Wiring Diagram 21 2TM Tray DC COM [Figure 21](#).
- Wiring Diagram 22 TTM Tray DC COM [Figure 22](#).
- Wiring Diagram 23 Office Finisher LX +5VDC [Figure 23](#).
- Wiring Diagram 24 Office Finisher LX +24VDC [Figure 24](#).
- Wiring Diagram 25 Office Finisher LX DC RTN [Figure 25](#).
- Wiring Diagram 26 HCF +24VDC [Figure 26](#).
- Wiring Diagram 27 HCF +5VDC [Figure 27](#).
- Wiring Diagram 28 HCF DC COM [Figure 28](#).

Wiring Diagram 1 ACH/ACN 100VAC

WD 1 ACH/ACN 100VAC

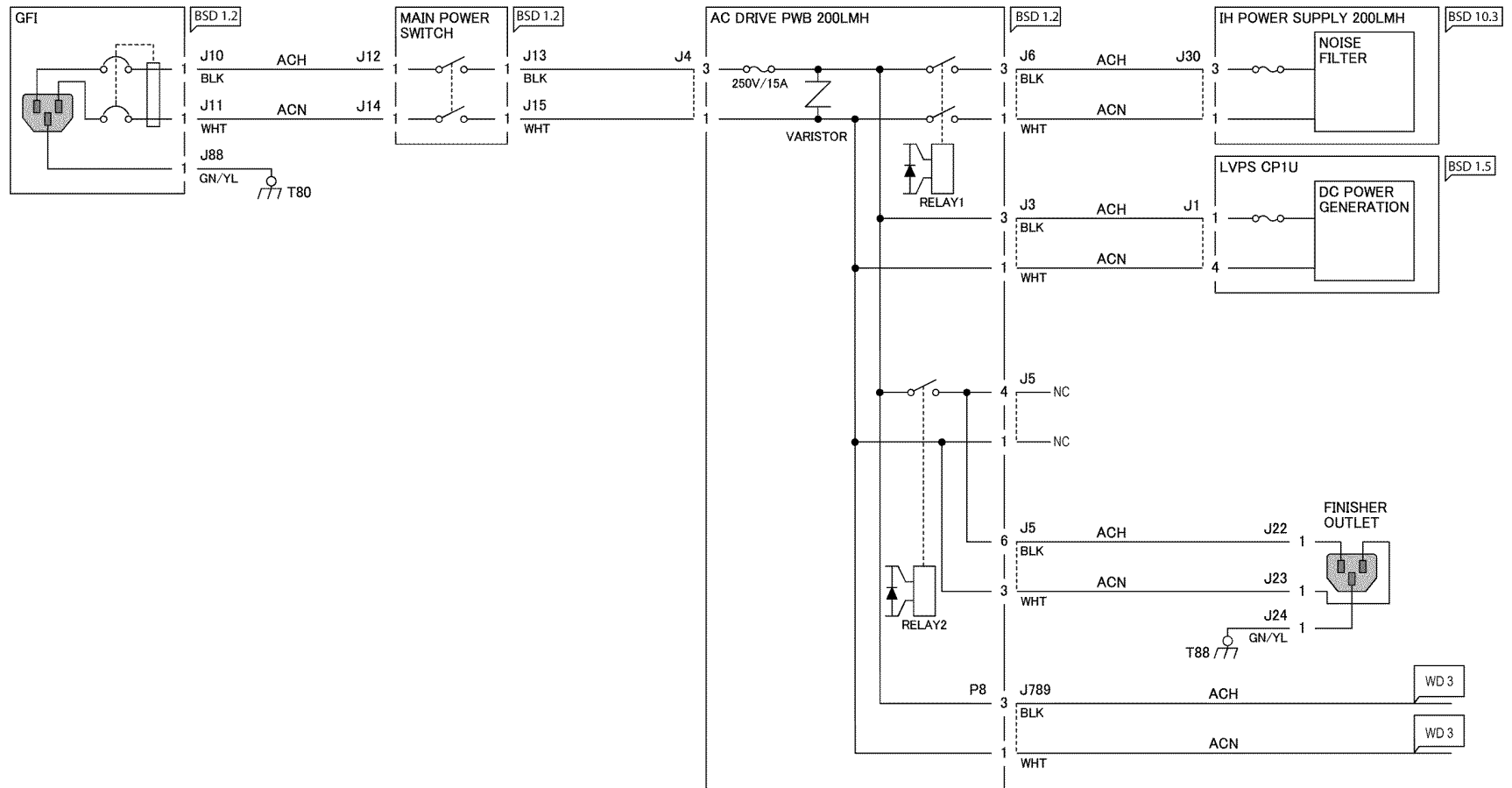


TF-1-0019-A

Figure 1 Wiring diagram 1

Wiring Diagram 2 ACH/ACN 220 to 240VAC

WD 2 ACH/ACN 220 to 240VAC

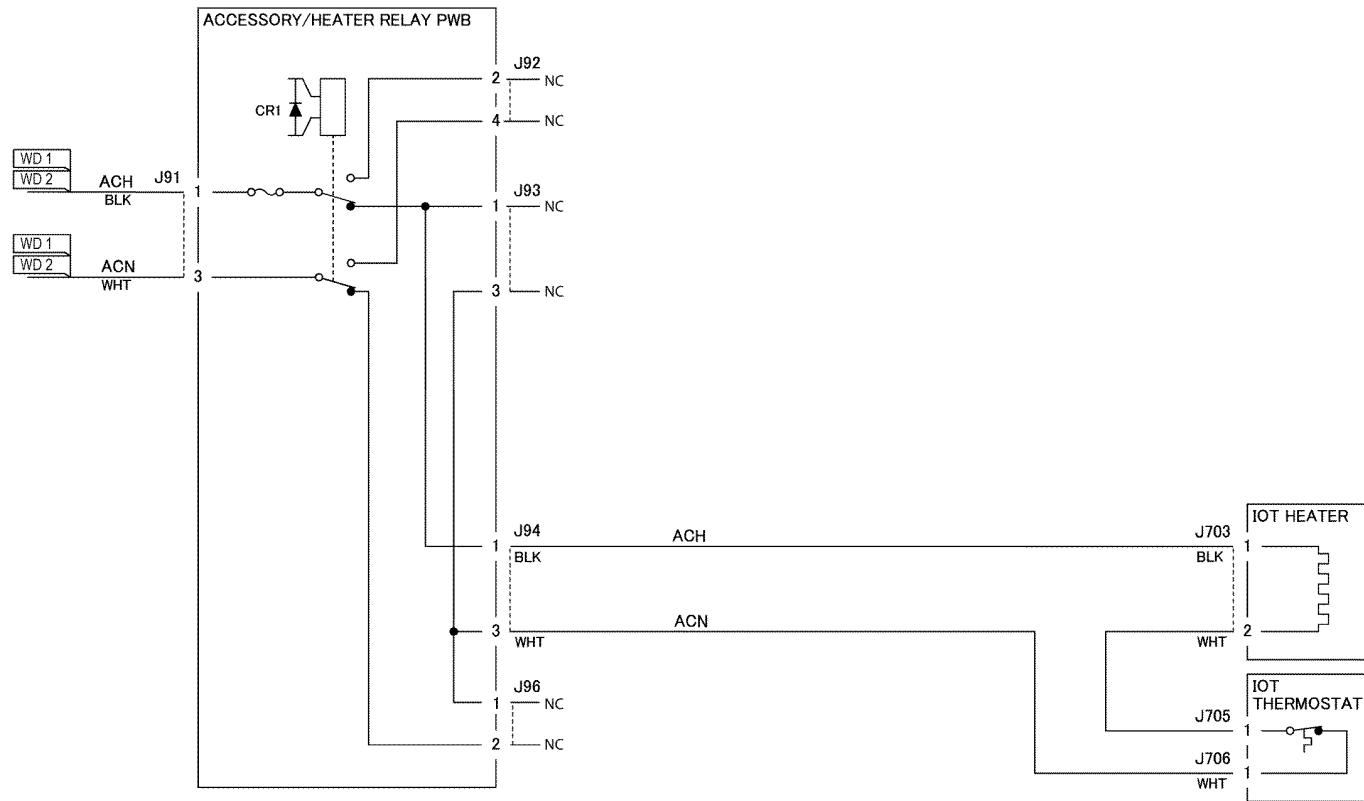


TF-1-0020-A

Figure 2 Wiring diagram 2

Wiring Diagram 3 ACH/ACN

WD 3 ACH/ACN

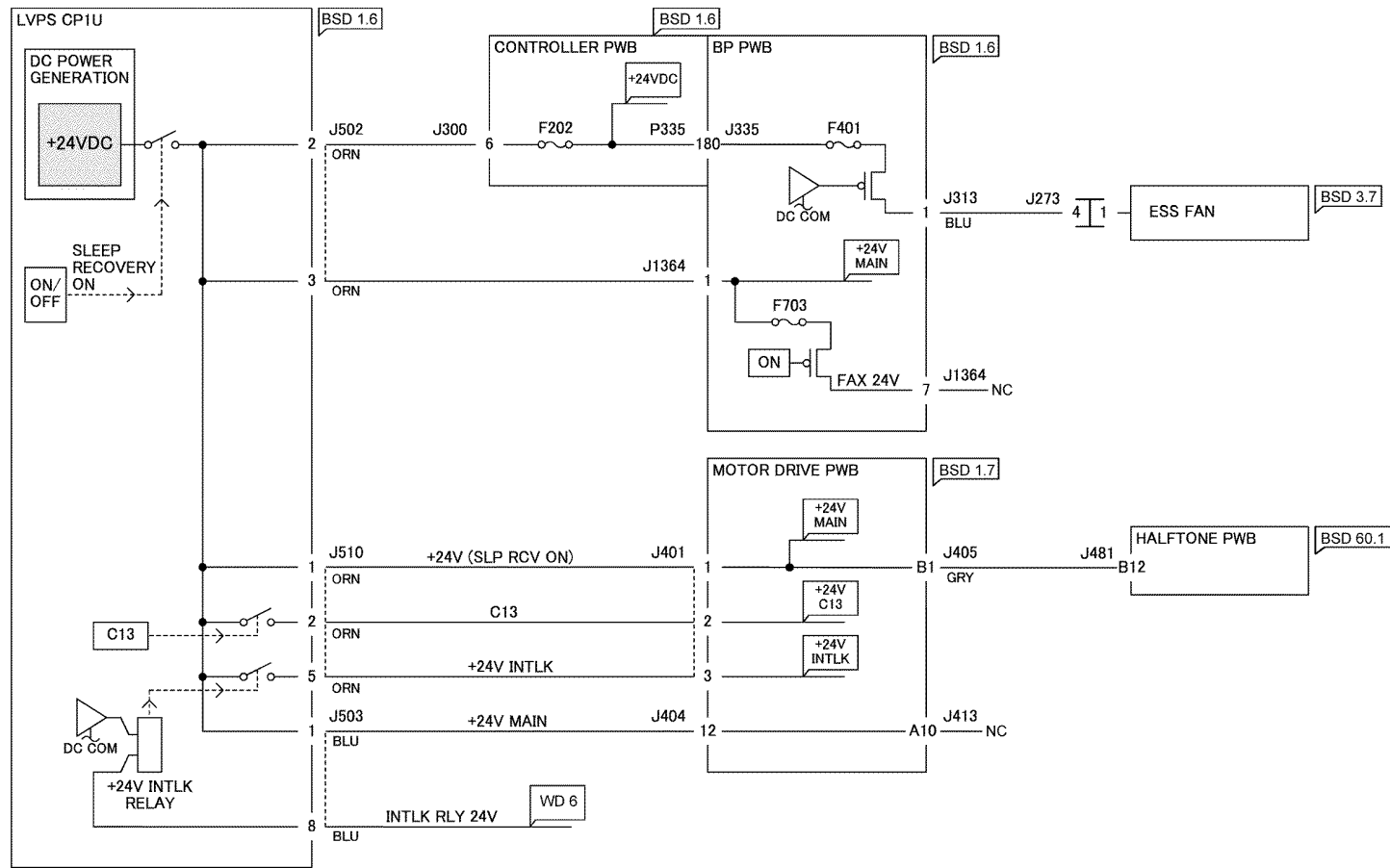


TF-1-0021-A

Figure 3 Wiring diagram 3

Wiring Diagram 4 +24VDC (1 of 3)

WD 4 +24VDC

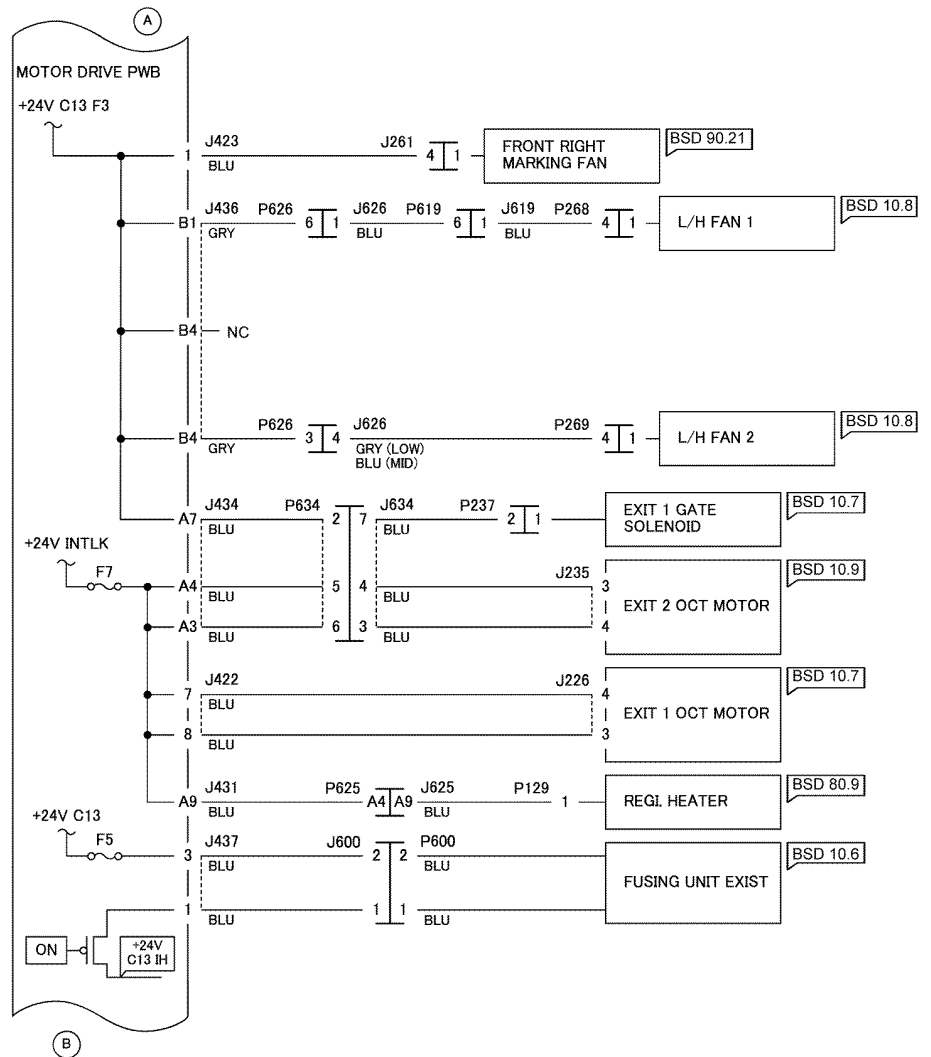
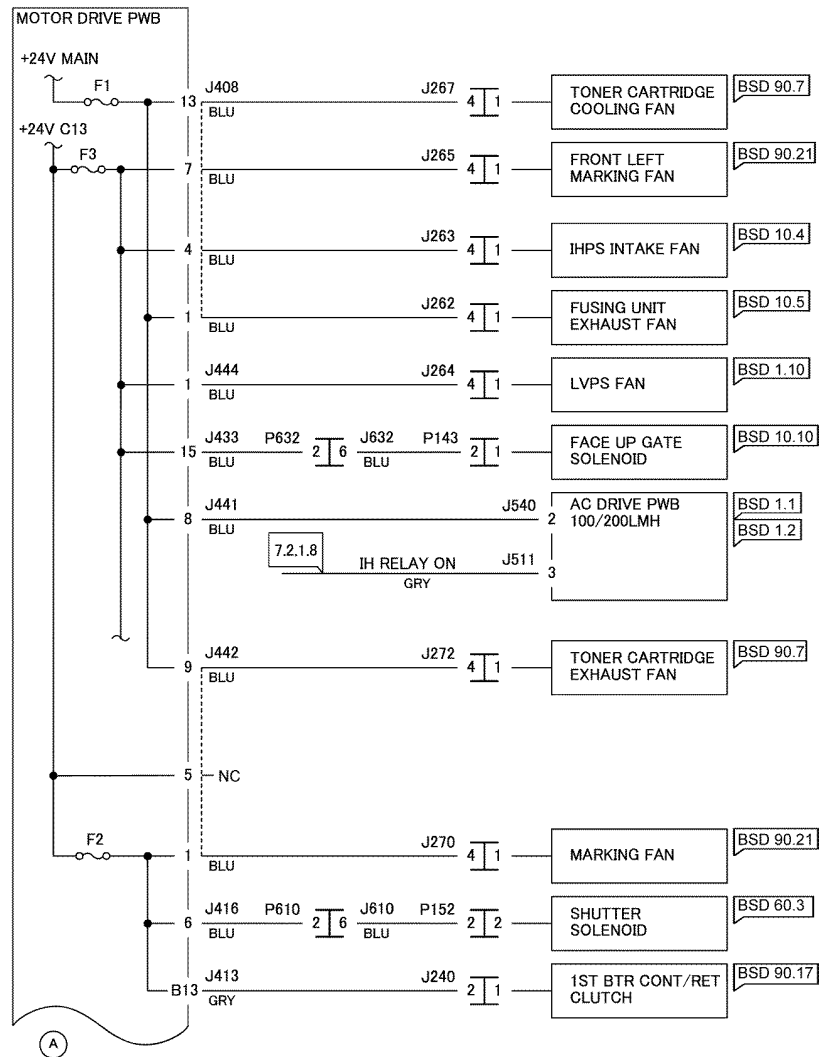


TF-1-0022-A

Figure 4 Wiring diagram 4

Wiring Diagram 5 +24VDC (2 of 3)

WD 5 +24VDC (2 of 3)

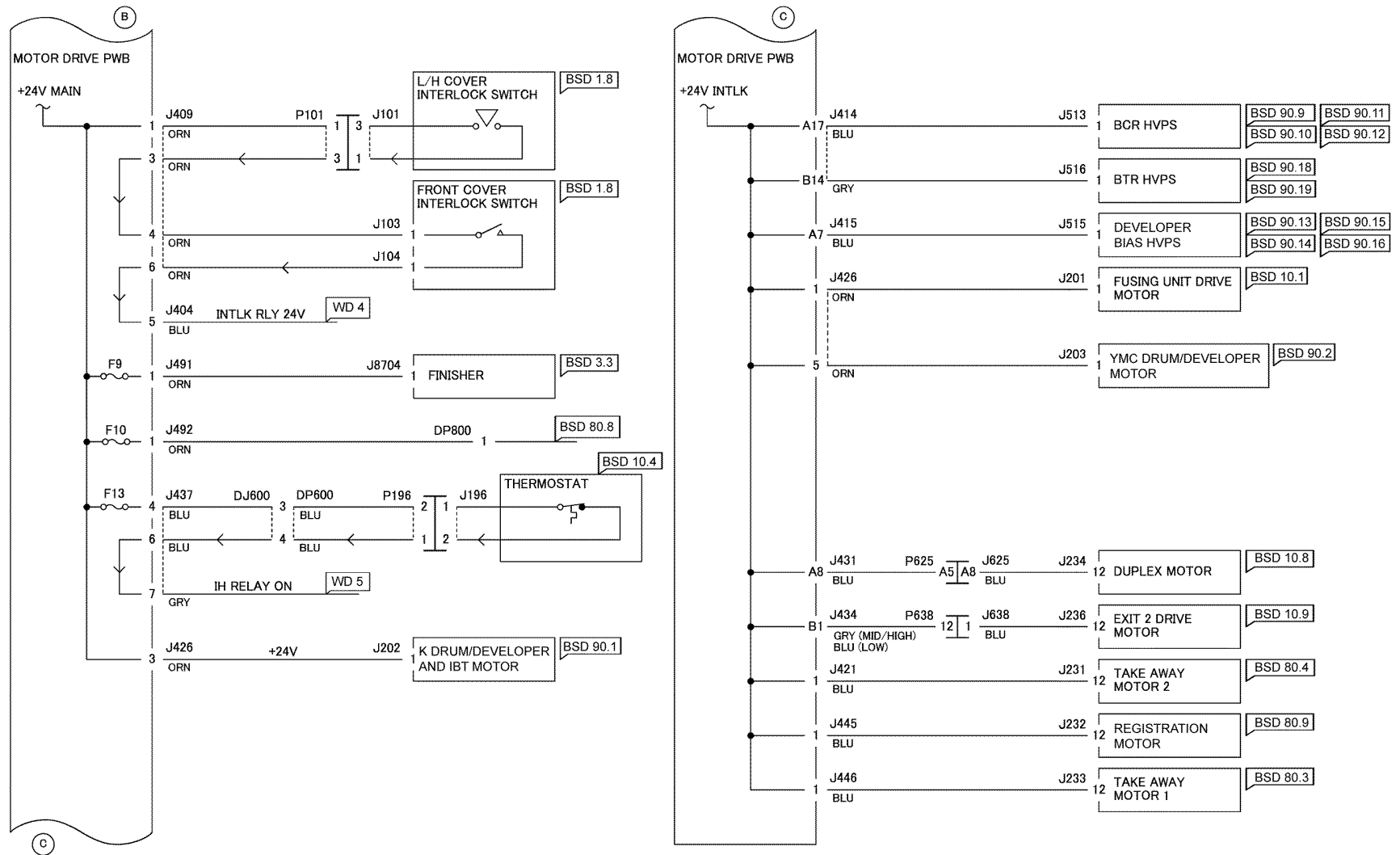


TF-1-0023-A

Figure 5 Wiring diagram 5

Wiring Diagram 6 +24VDC (3 of 3)

WD 6 +24VDC (3 of 3)

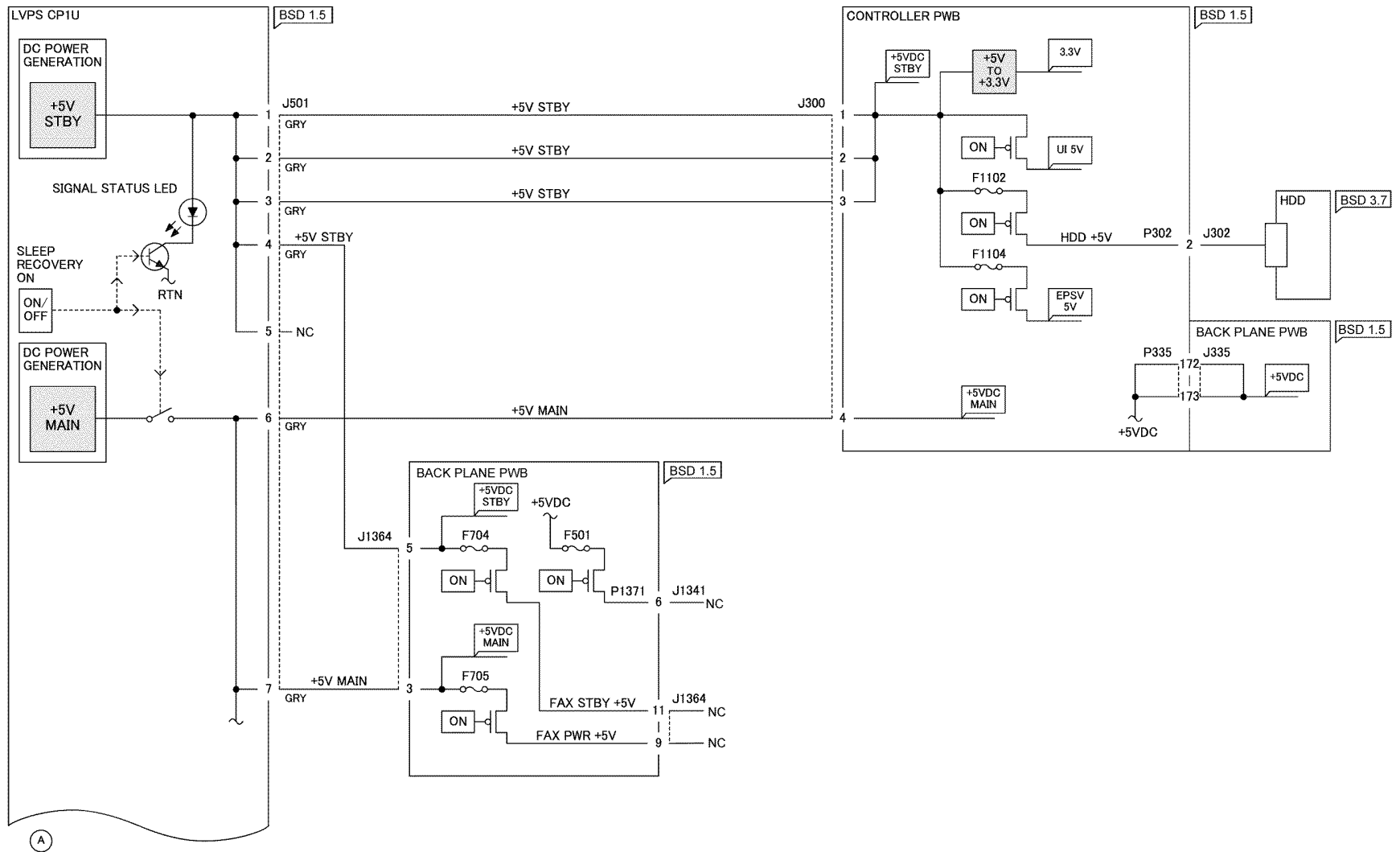


TF-1-0024-A

Figure 6 Wiring diagram 6

Wiring Diagram 7 +5VDC (1 of 4)

WD 7 +5VDC (1 of 4)

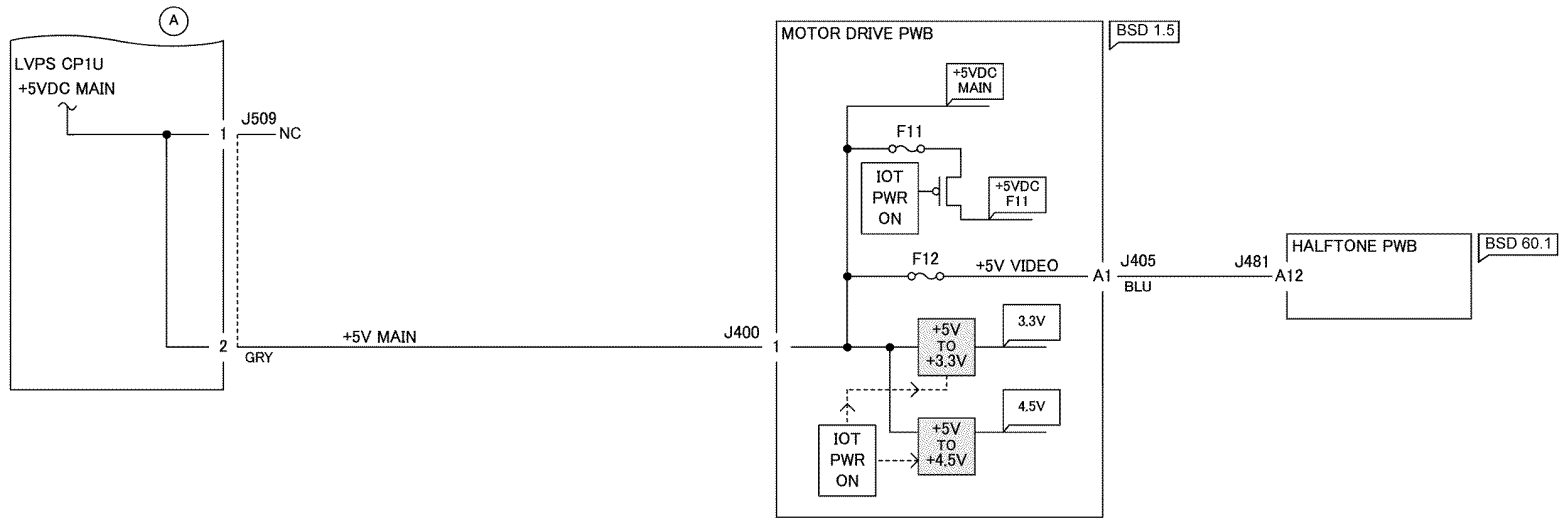


TF-1-0025-A

Figure 7 Wiring diagram 7

Wiring Diagram 8 +5VDC (2 of 4)

WD 8 +5VDC (2 of 4)

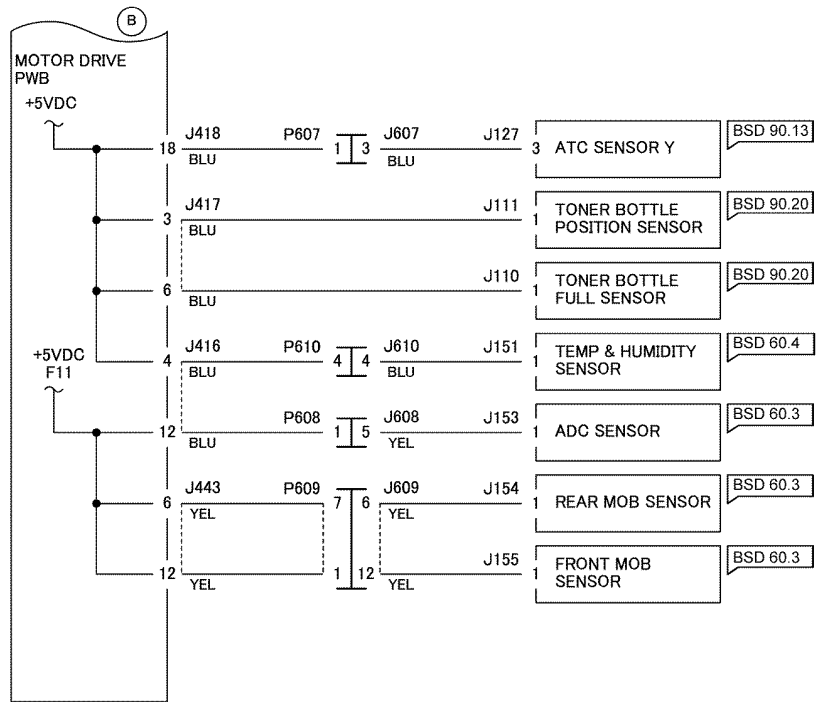


TF-1-0026-A

Figure 8 Wiring diagram 8

Wiring Diagram 10 +5VDC (4 of 4)

WD 10 +5VDC (4 of 4)

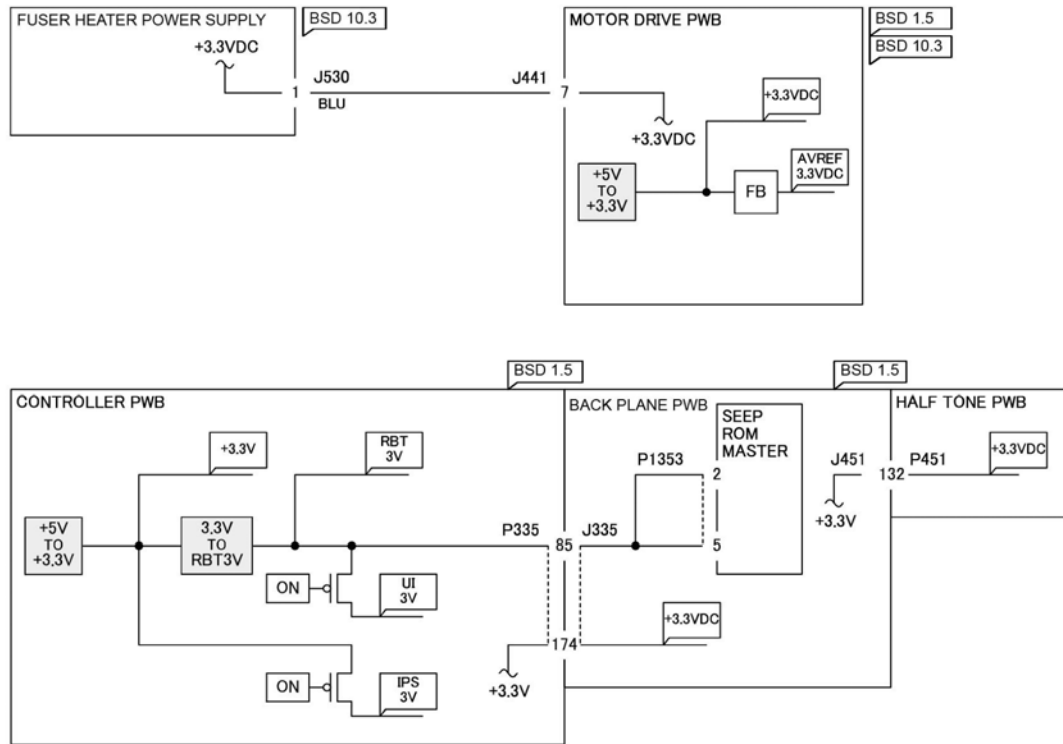


TF-1-0028-A

Figure 10 Wiring diagram 10

Wiring Diagram 11 +3.3VDC/+2.5VDC (1 of 2)

WD 11 +3.3VDC/+2.5VDC (1 of 2)

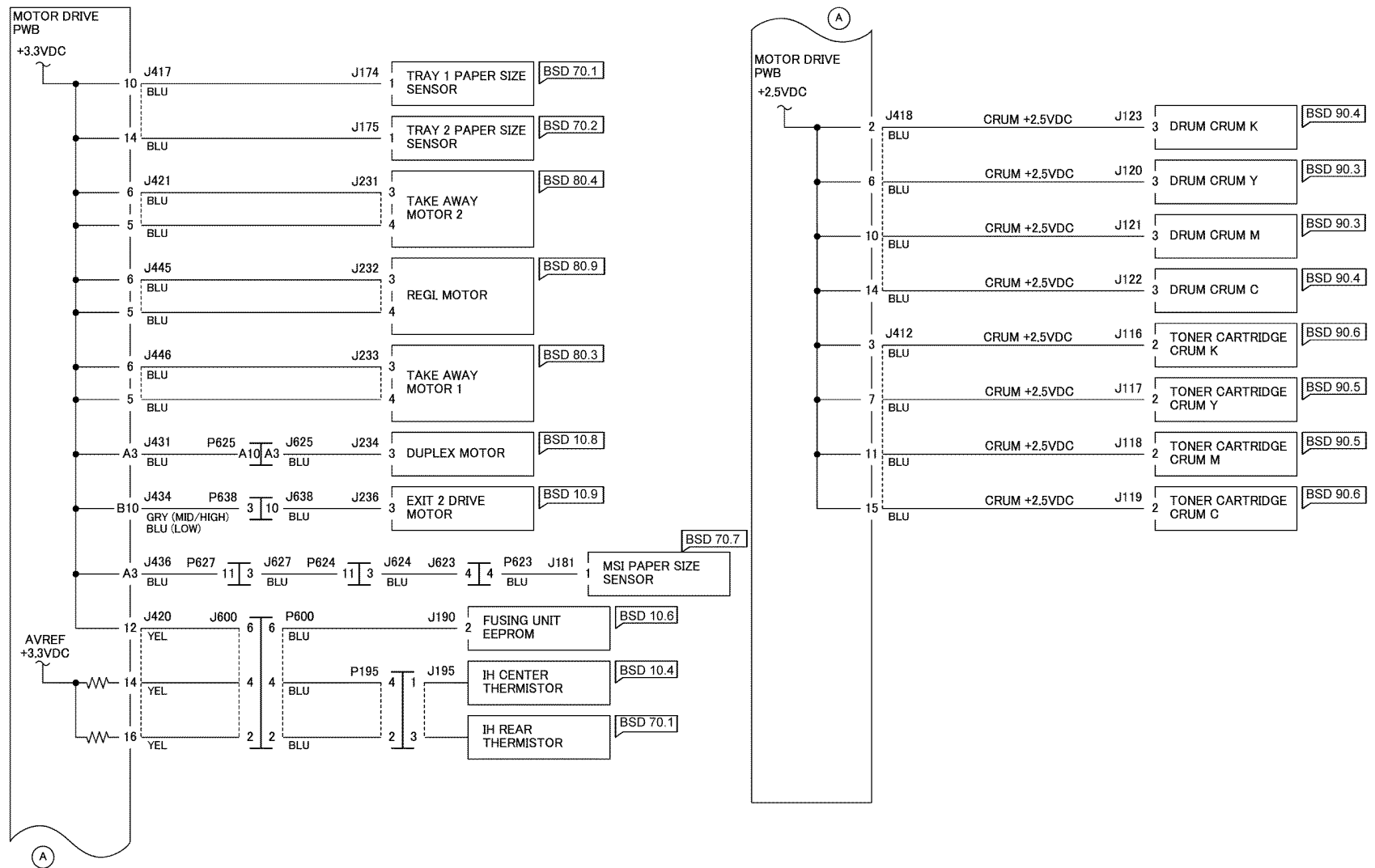


TF-1-0029-A

Figure 11 Wiring diagram 11

Wiring Diagram 12 +3.3VDC/+2.5VDC (2 of 2)

WD 12 +3.3VDC/+2.5VDC (2 of 2)

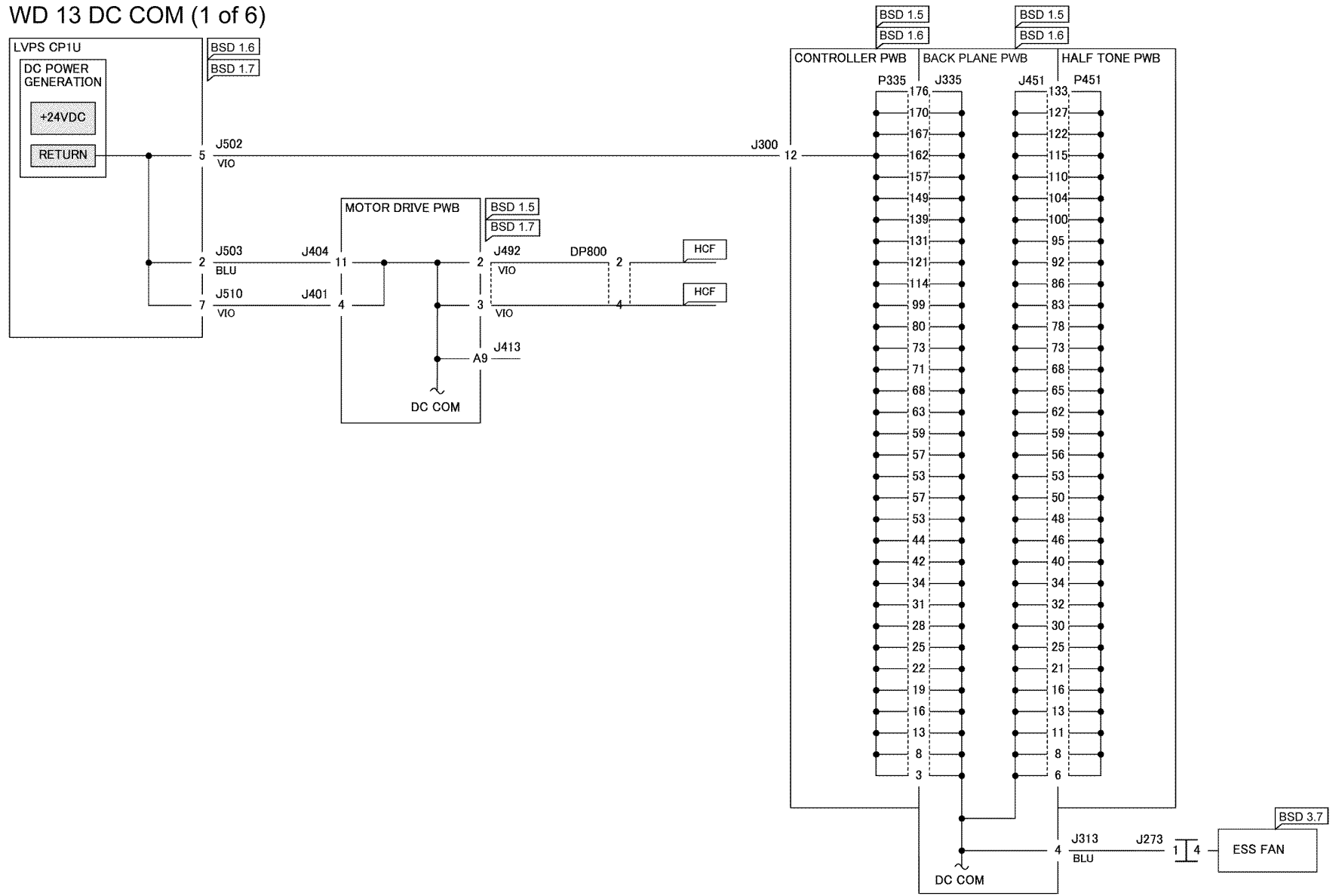


TF-1-0030-A

Figure 12 Wiring diagram 12

Wiring Diagram 13 DC COM (1 of 6)

WD 13 DC COM (1 of 6)

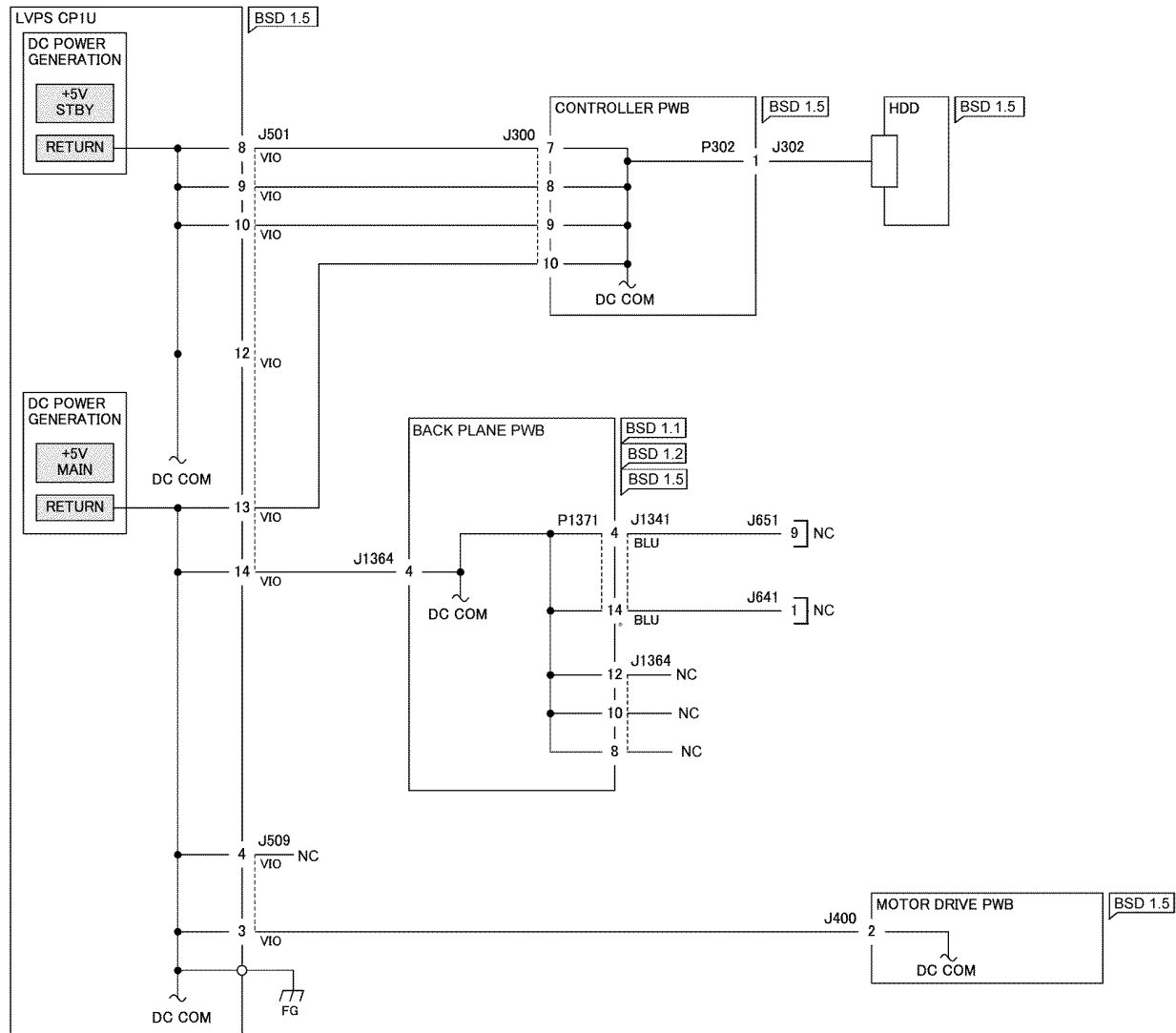


TF-1-0031-A

Figure 13 Wiring diagram 13

Wiring Diagram 14 DC COM (2 of 6)

WD 14 DC COM (2 of 6)

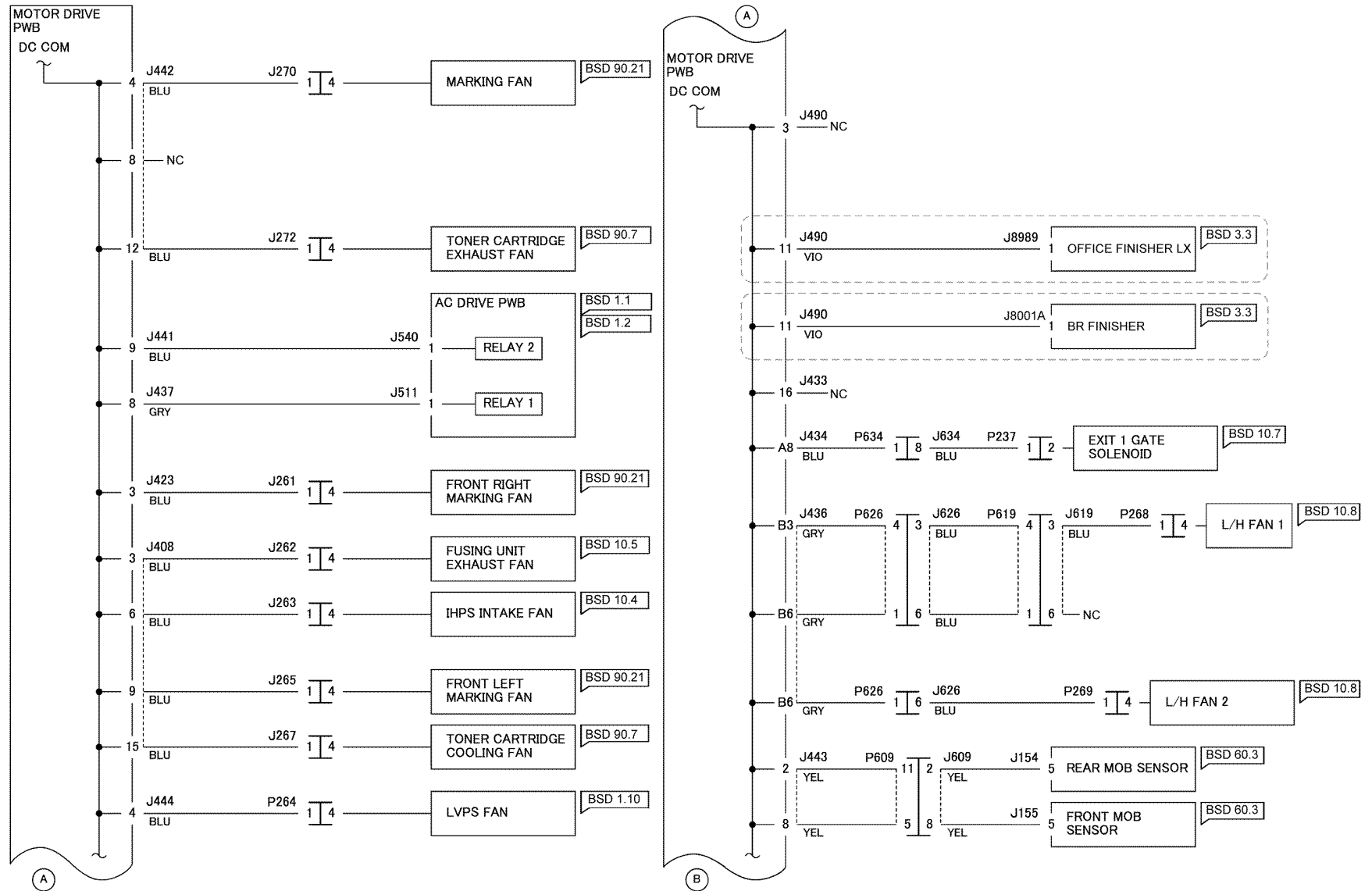


TF-1-0032-A

Figure 14 Wiring diagram 14

Wiring Diagram 15 DC COM (3 of 6)

WD 15 DC COM (3 of 6)



TF-1-0033-A

Figure 15 Wiring diagram 15

Wiring Diagram 16 DC COM (4 of 6)

WD 16 DC COM (4 of 6)

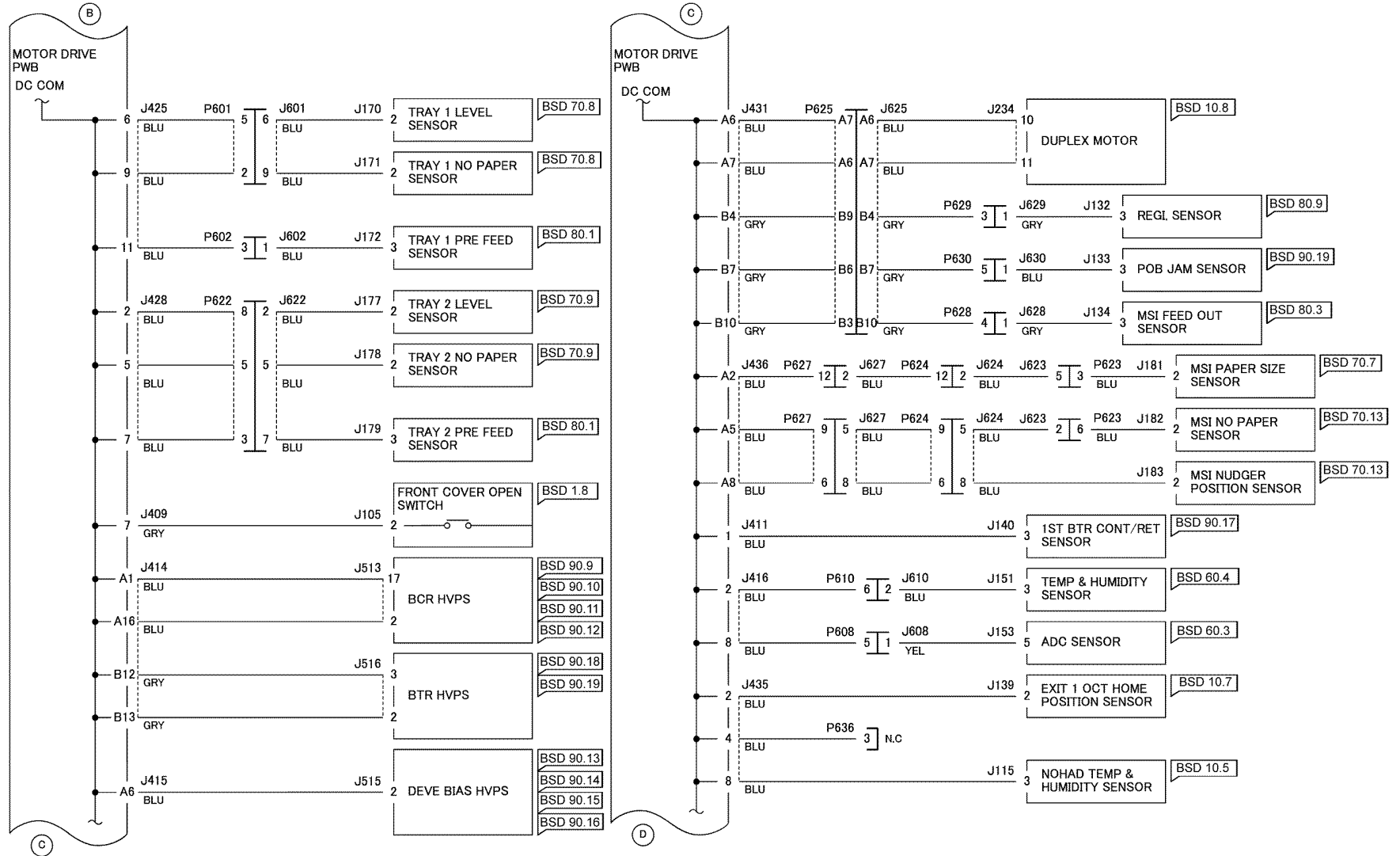
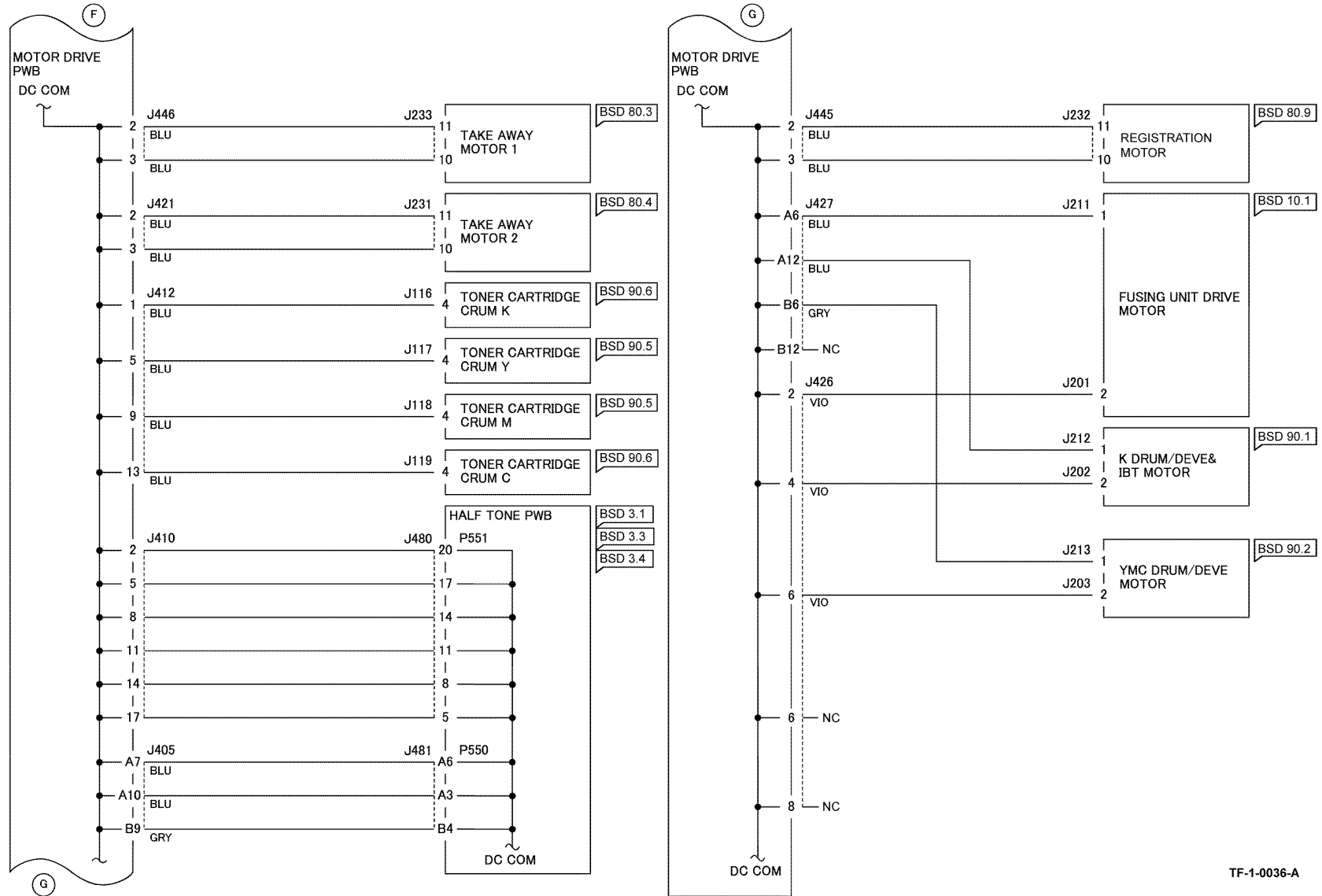


Figure 16 Wiring diagram 16

TF-1-0034-A

Wiring Diagram 18 DC COM (6 of 6)

WD 18 DC COM (6 of 6)

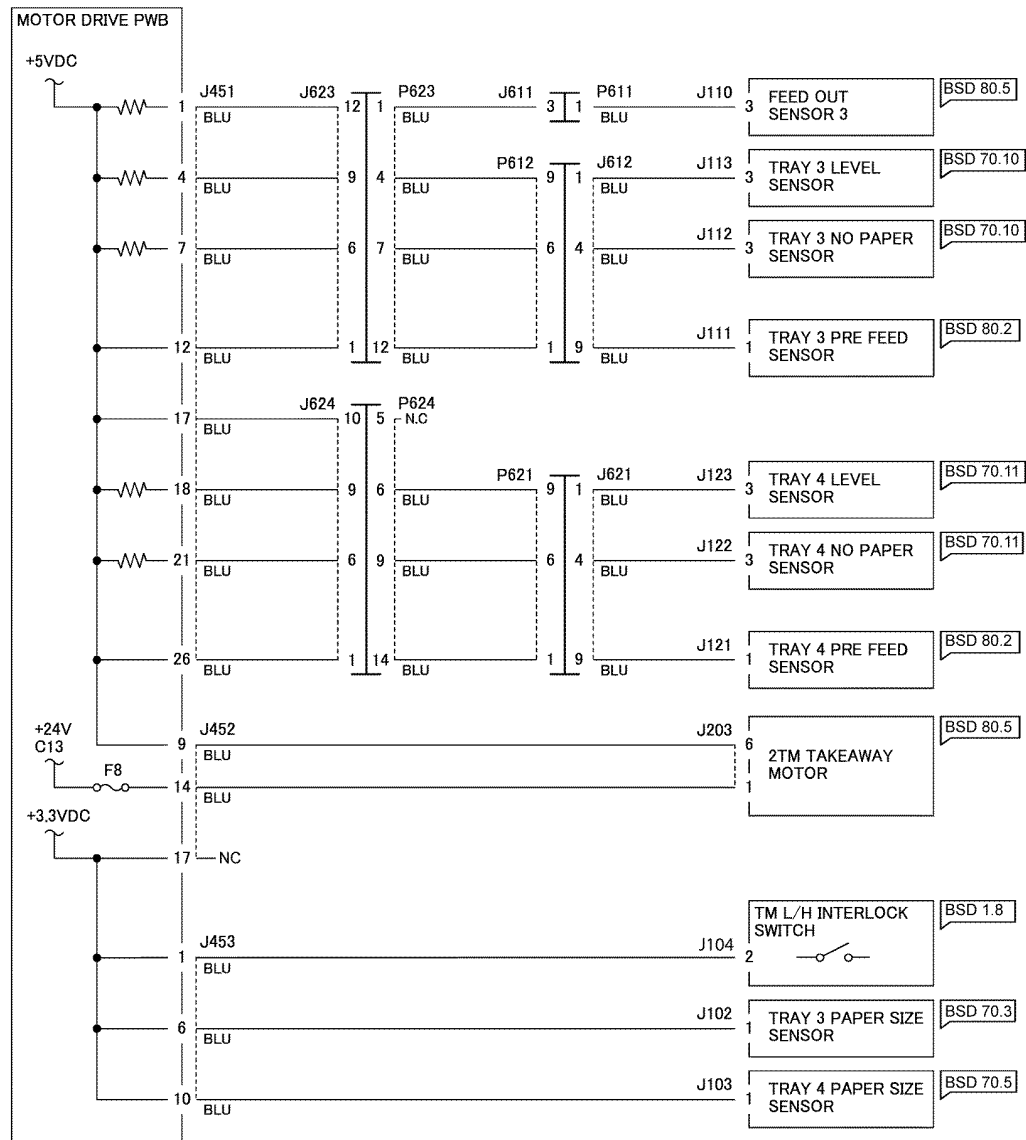


TF-1-0036-A

Figure 18 Wiring diagram 18

Wiring Diagram 19 2TM Tray +24VDC/+5VDC/+3.3VDC

WD 19 2TM TRAY+24VDC/+5VDC/+3.3VDC

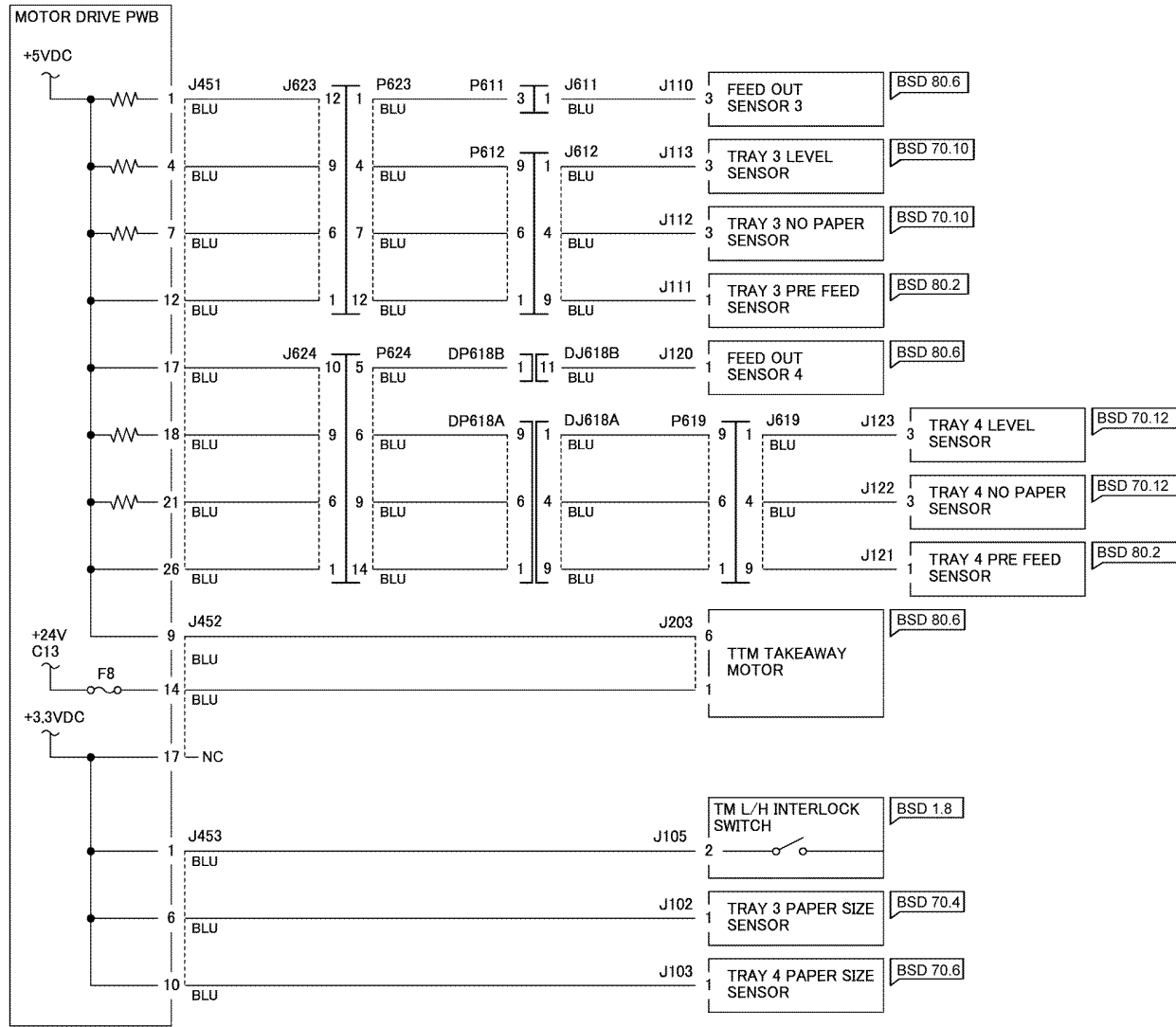


TF-1-0037-A

Figure 19 Wiring diagram 19

Wiring Diagram 20 TTM TRAY +24VDC/+5VDC/+3.3VDC

WD 20 TTM TRAY +24VDC/+5VDC/+3.3VDC

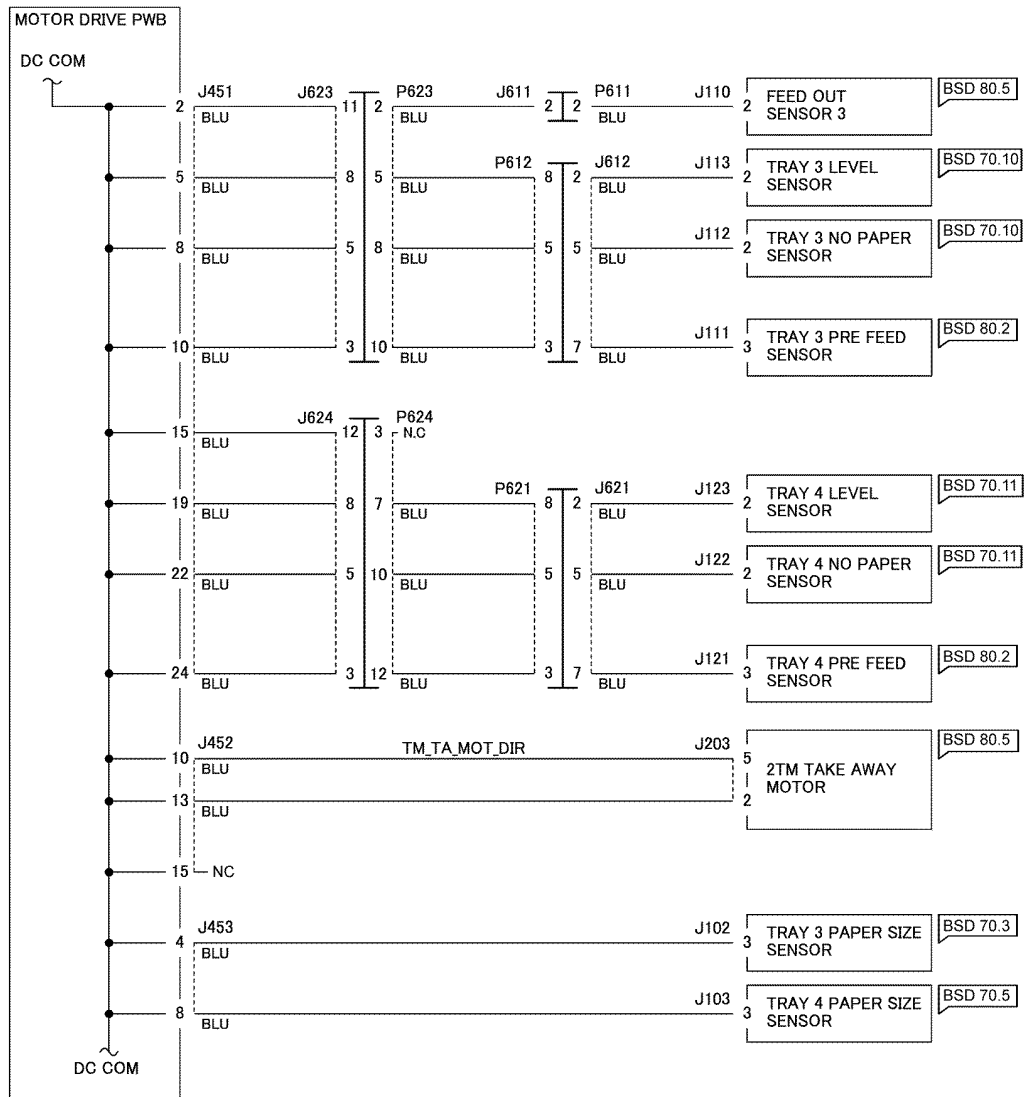


TF-1-0038-A

Figure 20 Wiring diagram 20

Wiring Diagram 21 2TM Tray DC COM

WD 21 2TM TRAY DC COM

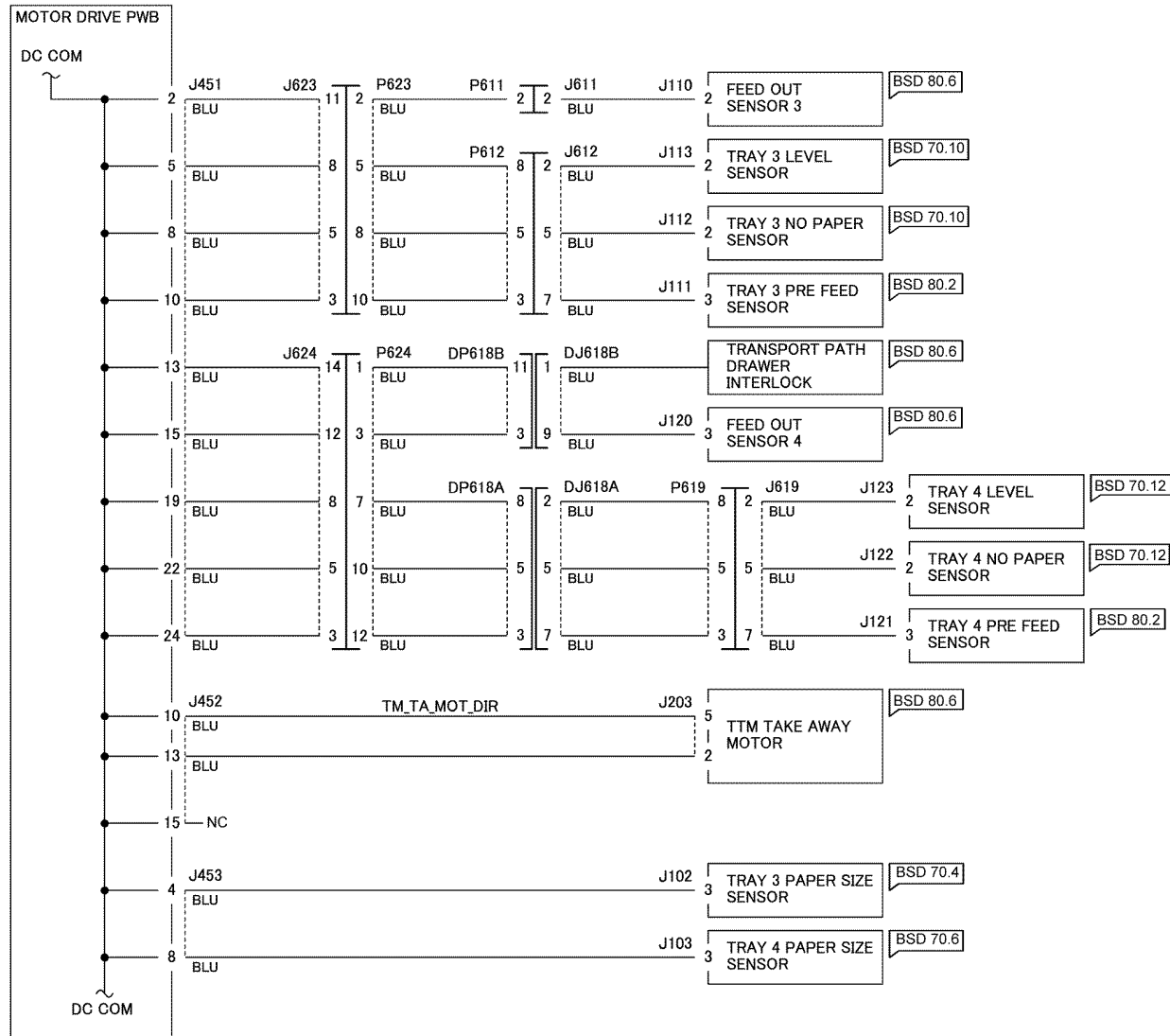


TF-1-0039-A

Figure 21 Wiring diagram 21

Wiring Diagram 22 TTM Tray DC COM

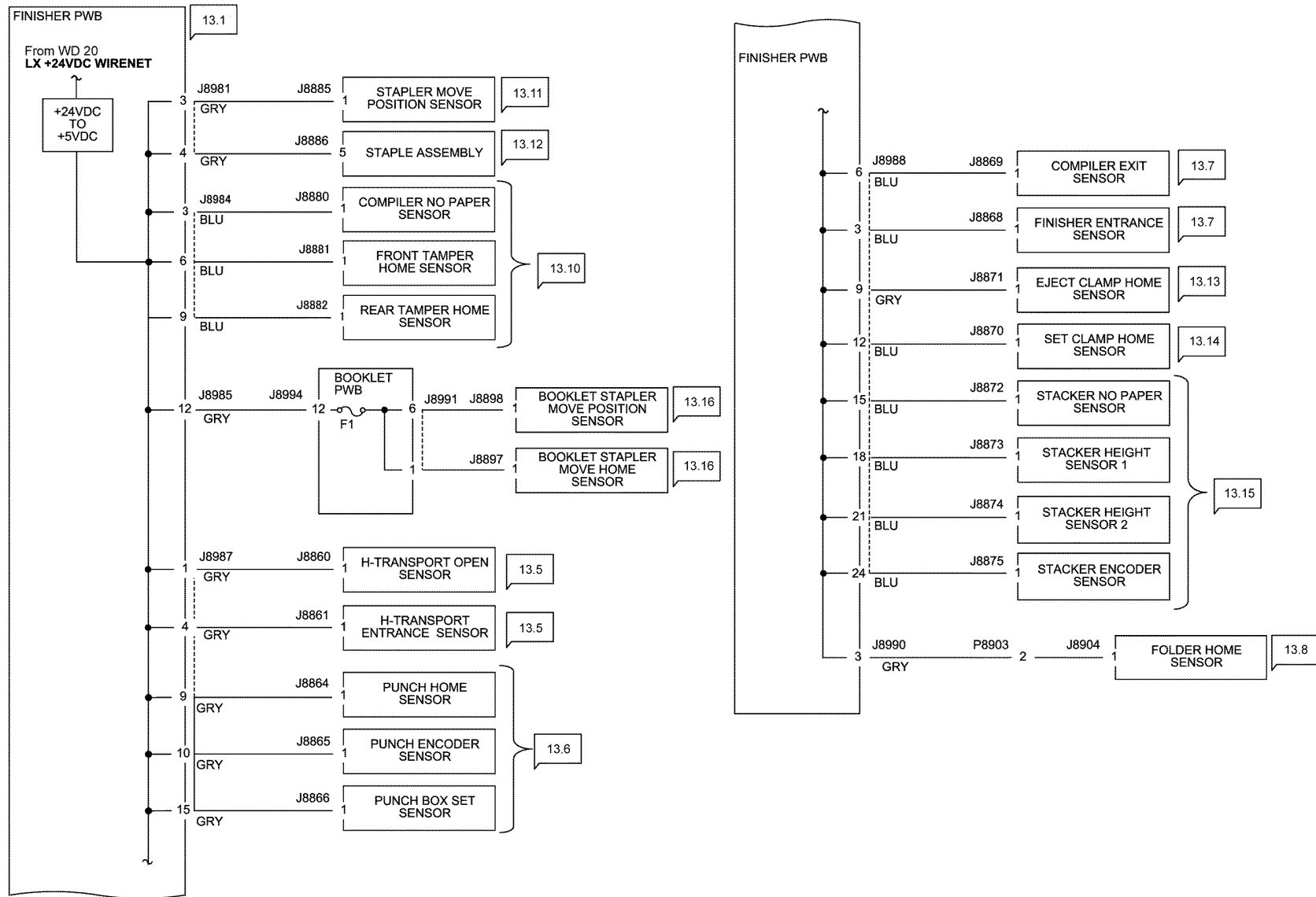
WD 22 TTM TRAY DC COM



TF-1-0120-A

Figure 22 Wiring diagram 22

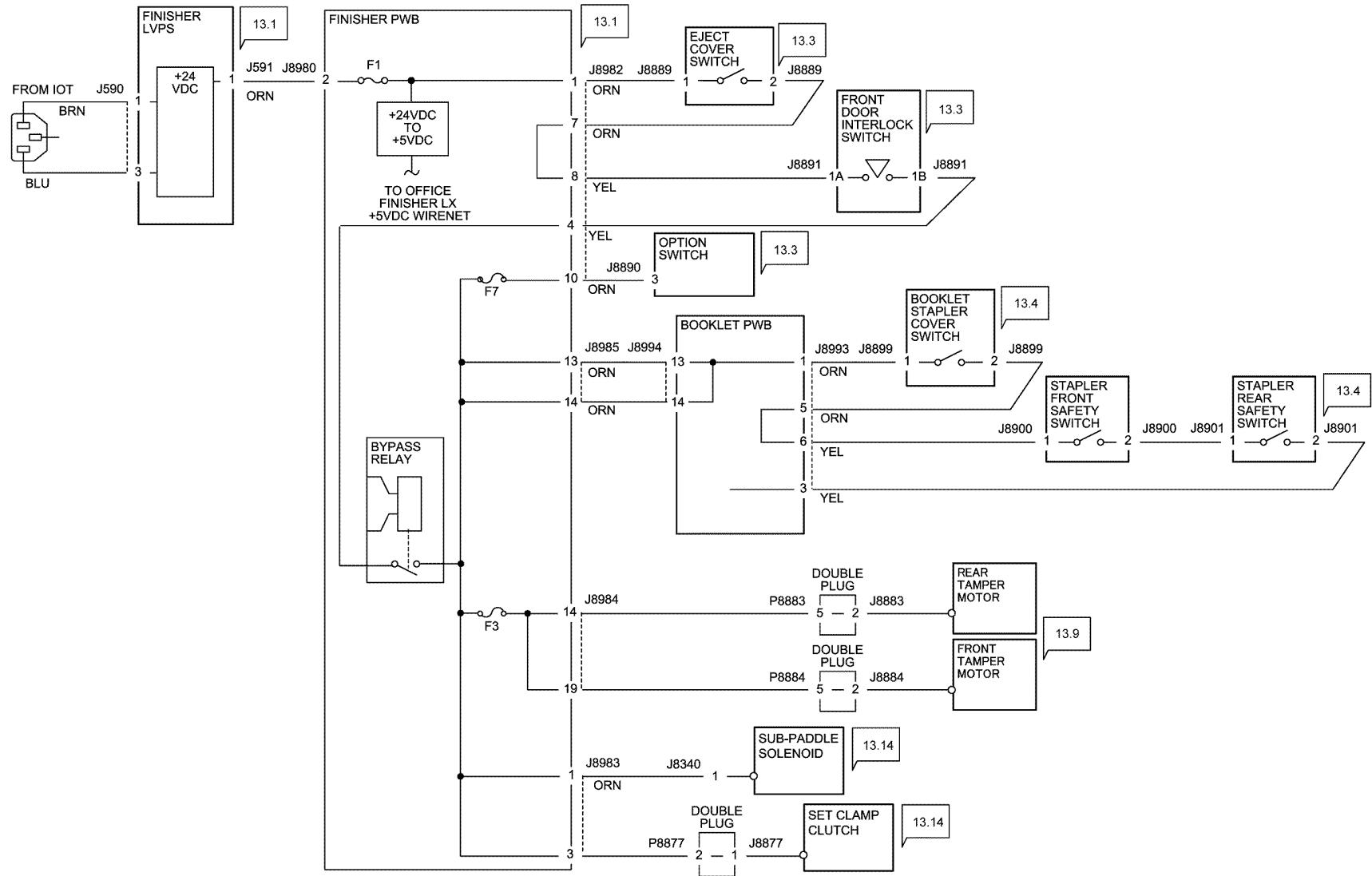
Wiring Diagram 38 Office Finisher LX +5VDC



TF-1-0127-A

Figure 23 Wiring diagram 38

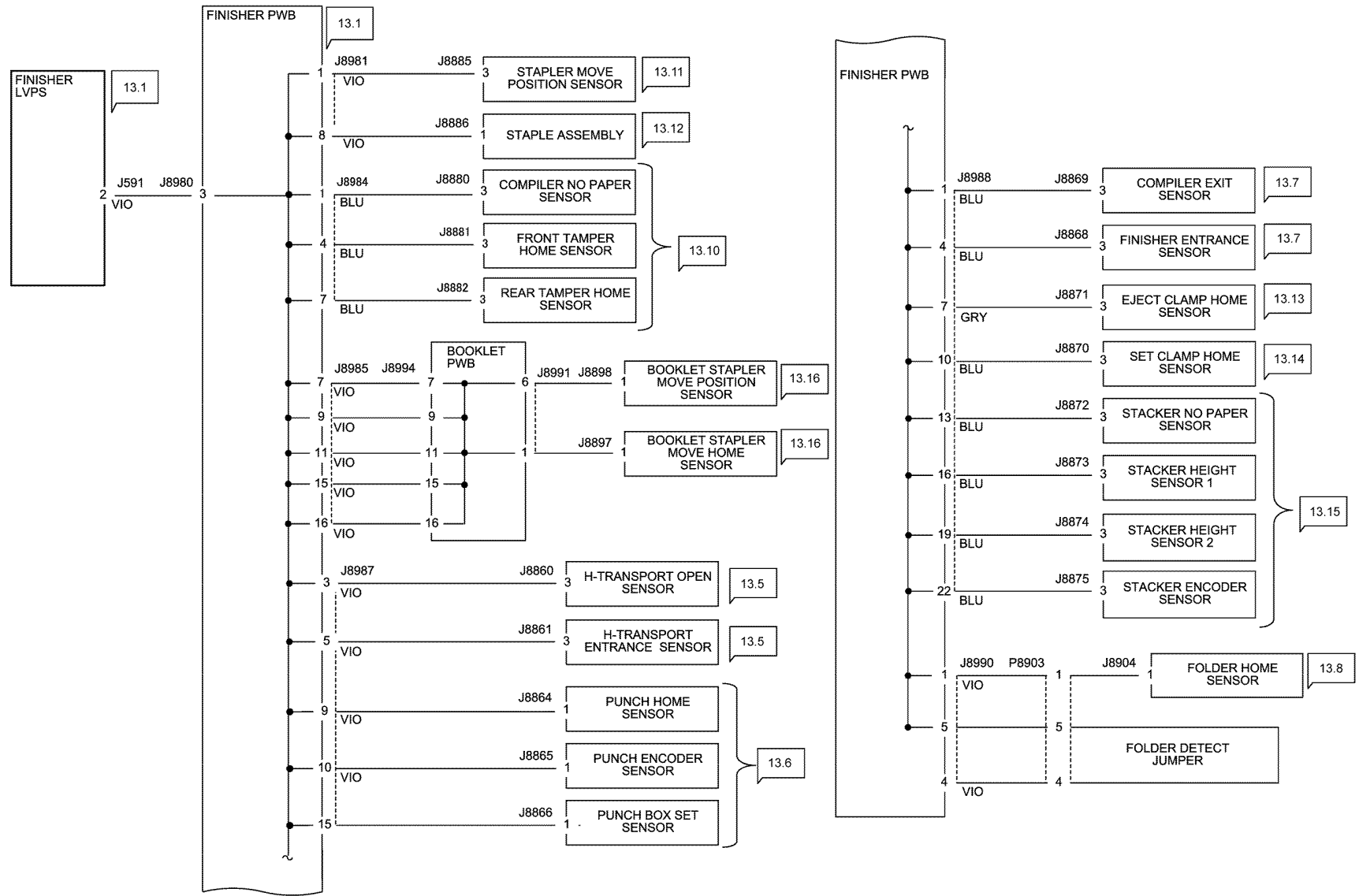
Wiring Diagram 39 Office Finisher LX +24VDC



TF-1-0128-A

Figure 24 Wiring diagram 39

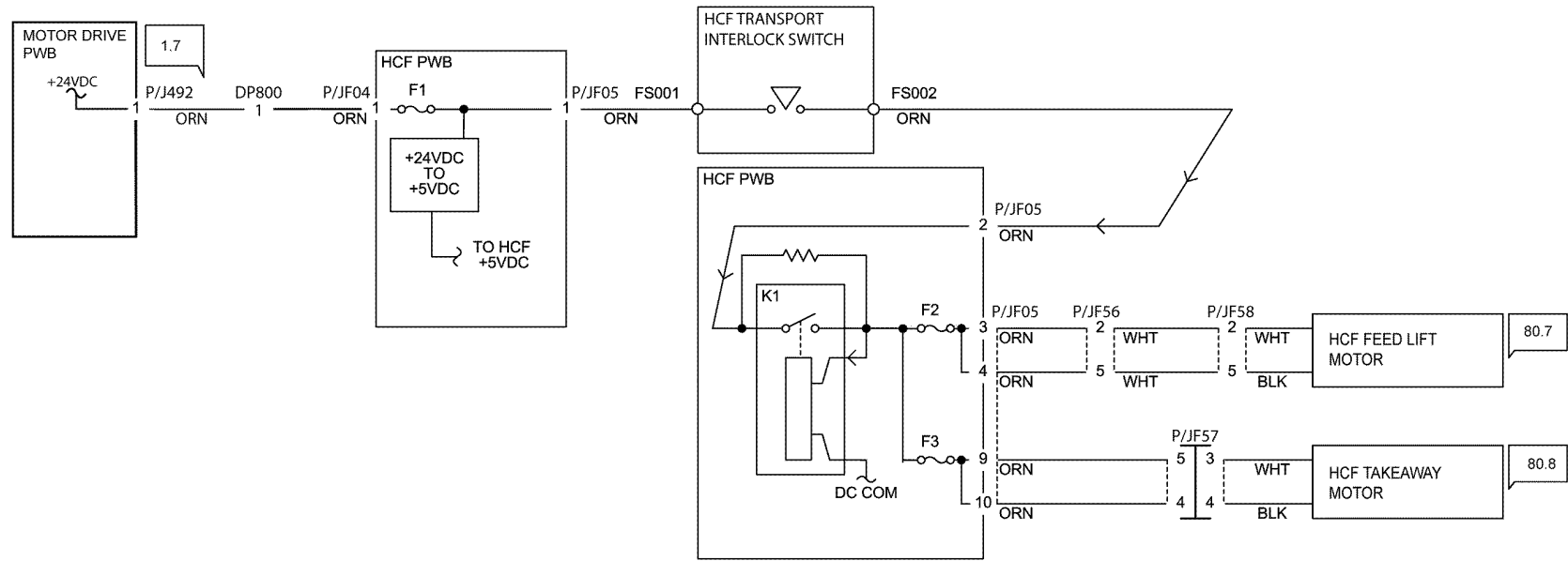
Wiring Diagram 40 Office Finisher LX DC RTN



TF-1-0129-A

Figure 25 Wiring diagram 40

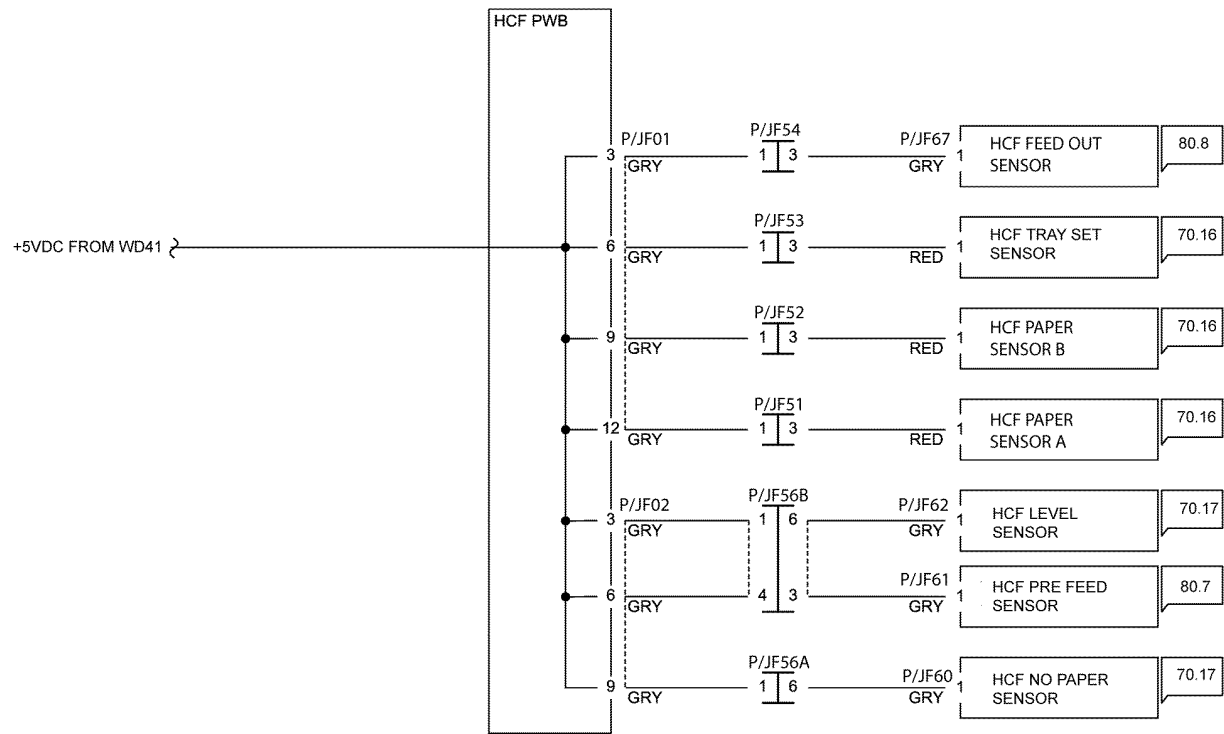
Wiring Diagram 41 HCF +24VDC



TF-1-0130-A

Figure 26 Wiring diagram 41

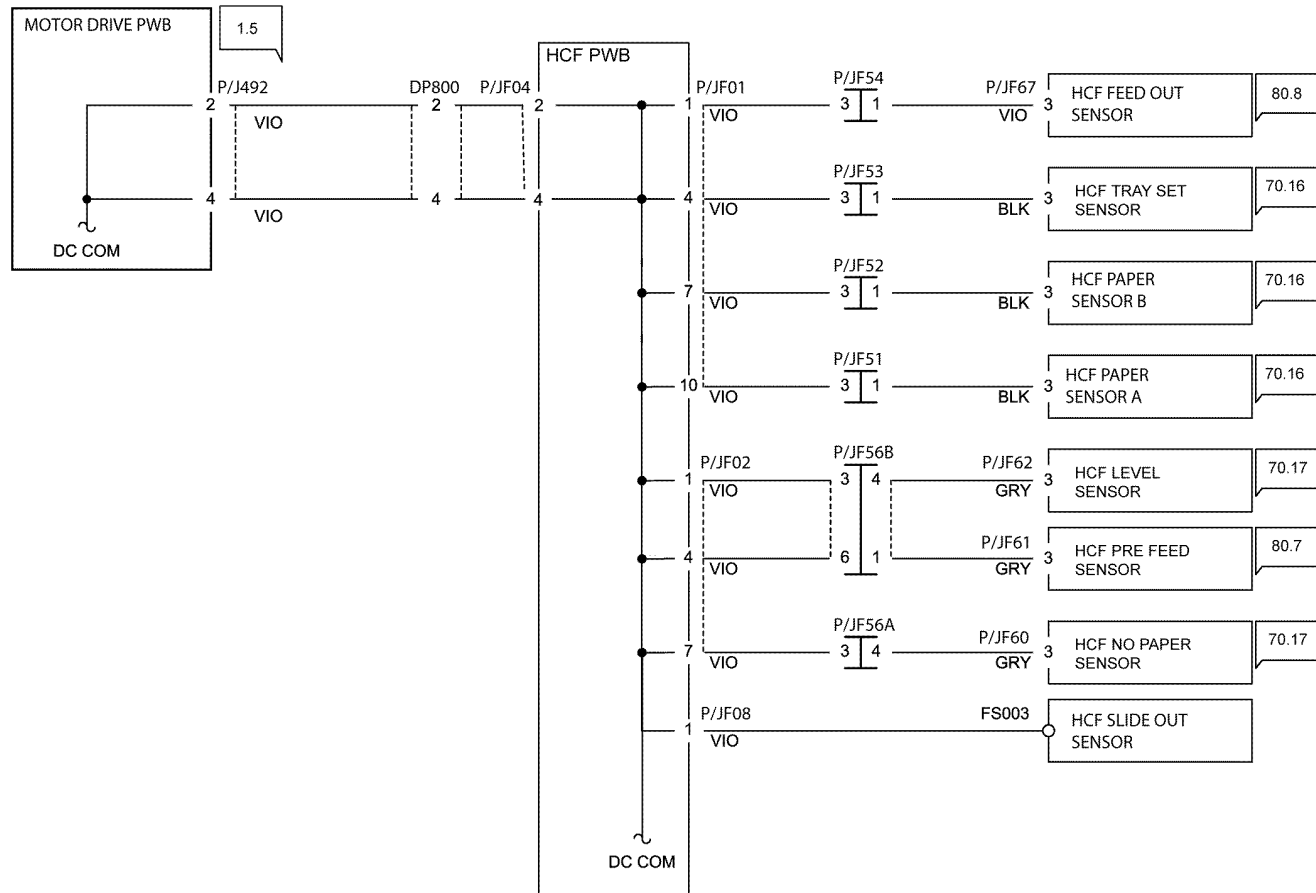
Wiring Diagram 42 HCF +5VDC



TF-1-0131-A

Figure 27 Wiring diagram 42

Wiring Diagram 43 HCF DC COM



TF-1-0132-A

Figure 28 Wiring diagram 43

Symbology

Refer to [Figure 1](#).

Symbol	Description
	Refers to Notes that are usually on the same page.
	Refers to test data usually on the same page in case the voltage value shown on the BSD is different from the measured value.
PL 7.7	Refers to a component in the Parts List.
	Refers to an adjustment procedure.
	A variable resistor adjustable in the field.
	A signal test point.
	Identifies where the input comes from.
	Identifies where the output from the functions go.
	Signal lines are connected vertically.
	Signal lines connected horizontally.
	Signal line connected to a specific location in the same function.
	Signal line connected to a specific location in the same function.

Symbol	Description
	Signal line connected to a specific location in another sheet (shown at lower right of the BSD).
	Signal line connected to a specific location in another sheet (shown at lower right of the BSD).
	Power output in Chain 1.
	Frame ground.
	Twisted pair of wires.
	Signal runs from right to left.
	Feedback signal.
	Mechanical linkage to a part
	Mechanical drive signal showing signal direction.
	Paper feed direction.
	Heat , light or air signal showing signal direction.
	Control logic.

Symbol	Description
	Double plug connector.
	Drawer plug connector.
	Shorting plug connector.
	Fasten connector.
	Electrically conductive material such as a leaf spring or plate is used for connection.
	The part highlighted by the arrow has been modified.
	The part highlighted by the arrow has not been modified.
	The whole figure or framed illustration has been modified.
	The whole figure or framed illustration has not been modified.
	Direction of air flow.
	Switch that is also used as an interlock switch.
	Cheater type of interlock switch.
	Chip fuse.

TF-1-0040-A

Figure 1 BSD Symbology

Block Schematic Diagrams (BSDs)

Block Schematic Diagrams

Refer to the relevant BSD.

Chain 1

- BSD 1.1 Main Power On (100 VAC)
- BSD 1.2 Main Power On (220-240 VAC)
- BSD 1.3 Machine Power Control (1 of 2)
- BSD 1.4 Machine Power Control (2 of 2)
- BSD 1.5 DC Power Generation +5V
- BSD 1.6 DC Power Generation +24V (1 of 2)
- BSD 1.7 DC Power Generation +24V (2 of 2)
- BSD 1.8 Interlock Switching
- BSD 1.9 Fuse Check
- BSD 1.10 LVPS Cooling
- BSD 1.11 PWB Locations
- BSD 1.12 DC Power Distribution HCF

Chain 2

- BSD 2.1 User Interface

Chain 3

- BSD 3.1 PWB Communications (Controller to Motor Drive PWB)
- BSD 3.2 PWB Communications (Controller to UI PWB)
- BSD 3.3 PWB Communications (Controller to Finisher)
- BSD 3.4 PWB Communications (Controller to HCF)
- BSD 3.5 PWB Communications (Controller to Halftone/Back plane)
- BSD 3.6 Electric Billing
- BSD 3.7 ESS (Controller)
- BSD 3.8 ESS (Controller) Status LED (1 of 5)
- BSD 3.9 ESS (Controller) Status LED (2 of 5)
- BSD 3.10 ESS (Controller) Status LED (3 of 5)
- BSD 3.11 ESS (Controller) Status LED (4 of 5)
- BSD 3.12 ESS (Controller) Status LED (5 of 5)

Chain 10

- BSD 10.1 Fusing Unit Drive
- BSD 10.2 Pressure Roll Latch/Unlatch
- BSD 10.3 Fusing Heat (1 of 2)
- BSD 10.4 Fusing Heat (2 of 2)
- BSD 10.5 Fusing
- BSD 10.6 Fuser Detection
- BSD 10.7 Exit 1 Paper Transport
- BSD 10.8 Duplex Paper Transport
- BSD 10.9 Exit 2 Paper Transport (1 of 2)
- BSD 10.10 Exit 2 Paper Transport (2 of 2)

Chain 13

- BSD 13.1 Office Finisher LX DC Power Generation
- BSD 13.2 Office Finisher LX DC Power Distribution
- BSD 13.3 Office Finisher LX Interlock Switching
- BSD 13.4 Office Finisher LX Booklet Interlock Switching
- BSD 13.5 Office Finisher LX Horizontal Transport
- BSD 13.6 Office Finisher LX Punch
- BSD 13.7 Office Finisher LX Transportation
- BSD 13.8 Office Finisher LX Folding
- BSD 13.9 Office Finisher LX Tamping and Offset (1 of 2)
- BSD 13.10 Office Finisher LX Tamping and Offset (2 of 2)
- BSD 13.11 Office Finisher LX Staple Positioning
- BSD 13.12 Office Finisher LX Staple Control
- BSD 13.13 Office Finisher LX Eject Control (1 of 2)
- BSD 13.14 Office Finisher LX Eject Control (2 of 2)
- BSD 13.15 Office Finisher LX Stacker Tray Control
- BSD 13.16 Office Finisher LX Booklet Staple Positioning
- BSD 13.17 Office Finisher LX Booklet Staple Control (1 of 2 - Front)
- BSD 13.18 Office Finisher LX Booklet Staple Control (2 of 2 - Rear)

Chain 40

- BSD 40.1 K Drum/Developer and IBT Drive Control
- BSD 40.2 YMC Drum and Developer Drive Control
- BSD 40.3 Marking Air Flow
- BSD 40.4 Toner Cartridge Cooling

Chain 60

- BSD 60.1 LPH Y and M
- BSD 60.2 LPH C and K
- BSD 60.3 Color Registration
- BSD 60.4 Temperature and Humidity Sensing

Chain 70

- BSD 70.1 Tray 1 Paper Size Sensing
- BSD 70.2 Tray 2 Paper Size Sensing
- BSD 70.3 Tray 3 Paper Size Sensing (2TM)
- BSD 70.4 Tray 3 Paper Size Sensing (TTM)
- BSD 70.5 Tray 4 Paper Size Sensing (2TM)
- BSD 70.6 Tray 4 Paper Size Sensing (TTM)
- BSD 70.7 Bypass Tray Paper Size Sensing
- BSD 70.8 Tray 1 Paper Stacking
- BSD 70.9 Tray 2 Paper Stacking
- BSD 70.10 Tray 3 Paper Stacking (2TM/TTM)
- BSD 70.11 Tray 4 Paper Stacking (2TM)
- BSD 70.12 Tray 4 Paper Stacking (TTM)
- BSD 70.13 Bypass Tray Paper Sensing and Stacking

- BSD 70.14 IOT and 2TM Paper Path and Drive Transmission
- BSD 70.15 IOT and TTM Paper Path and Drive Transmission
- BSD 70.16 HCF Paper Size Sensing and Tray Set
- BSD 70.17 HCF Paper Stacking

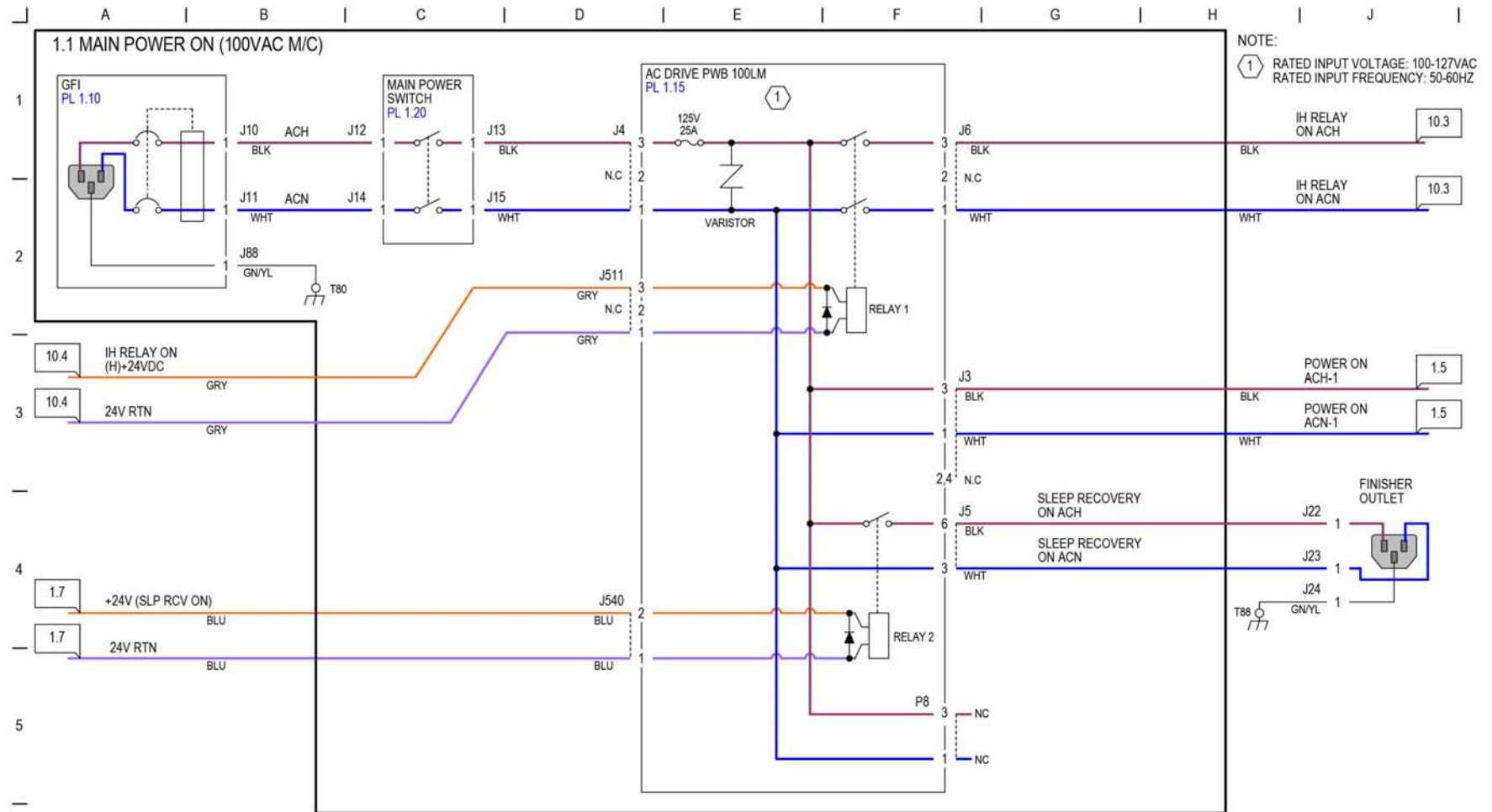
Chain 80

- BSD 80.1 Tray 1 and 2 Paper Pre-feeding
- BSD 80.2 Tray 3 and 4 Paper Pre-feeding
- BSD 80.3 Tray 1 and Bypass Tray Paper Transport
- BSD 80.4 Tray 2 Paper Transport
- BSD 80.5 2TM Paper Transport
- BSD 80.6 TTM Paper Transport
- BSD 80.7 HCF Paper Feeding
- BSD 80.8 HCF Paper Transportation
- BSD 80.9 Registration

Chain 90

- BSD 90.1 K Drum/Developer and IBT Drive Control
- BSD 90.2 YMC Drum and Developer Drive Control
- BSD 90.3 Drum Life Control (Y, M)
- BSD 90.4 Drum Life Control (C, K)
- BSD 90.5 Toner Cartridge Life Control (Y, M)
- BSD 90.6 Toner Cartridge Life Control (C, K)
- BSD 90.7 Toner Cartridge Cooling
- BSD 90.8 Toner Dispense Control
- BSD 90.9 Charging and Exposure Y
- BSD 90.10 Charging and Exposure M
- BSD 90.11 Charging and Exposure C
- BSD 90.12 Charging and Exposure K
- BSD 90.13 Development Y
- BSD 90.14 Development M
- BSD 90.15 Development C
- BSD 90.16 Development K
- BSD 90.17 1st BTR Contact/retract
- BSD 90.18 Image Transfer to IBT
- BSD 90.19 Image Transfer to Paper
- BSD 90.20 Waste Toner Disposal
- BSD 90.21 Marking Air Flow

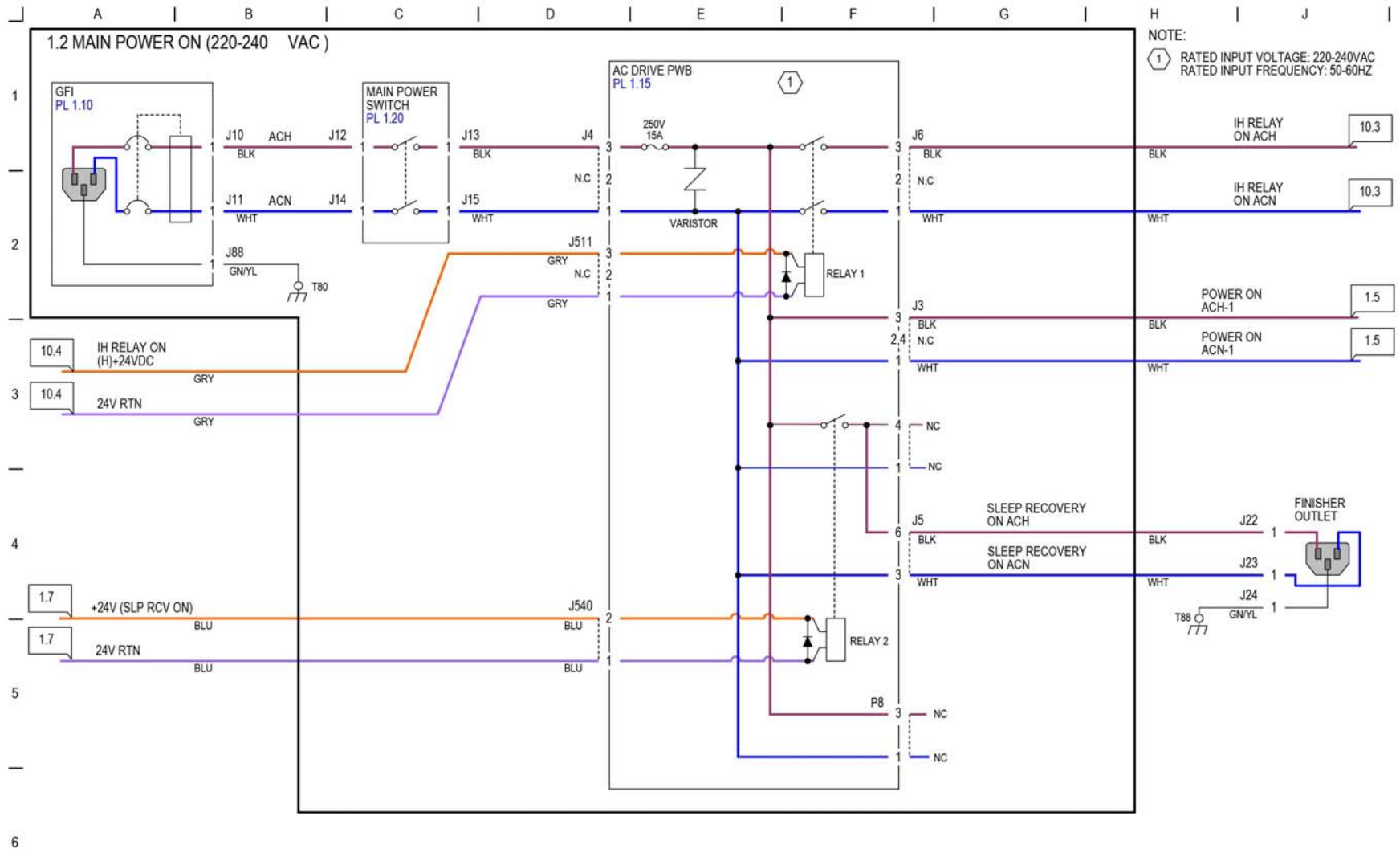
BSD 1.1 Main Power On (100 VAC)



TF-1-0041-A

Figure 1 BSD 1.1

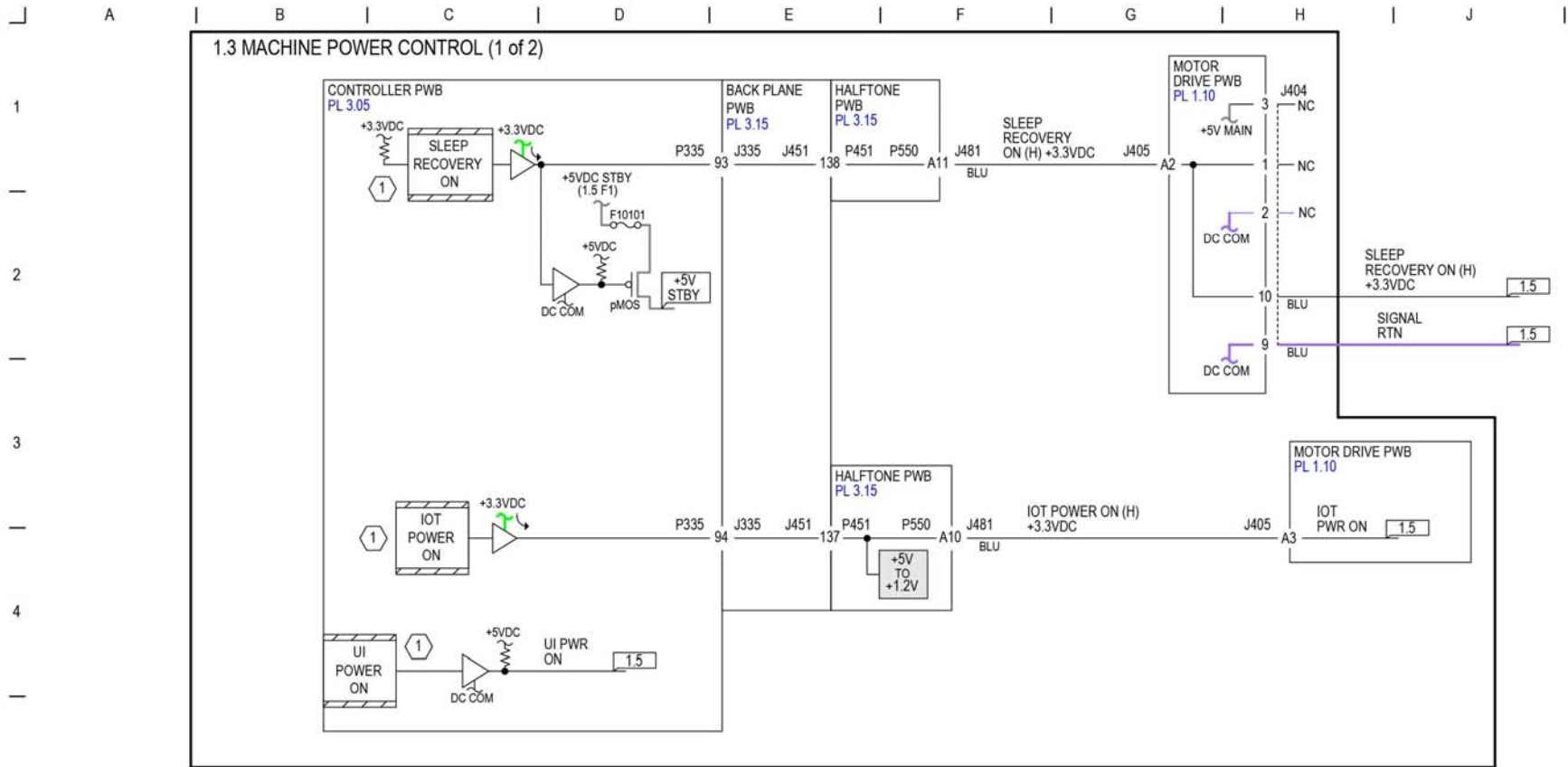
BSD 1.2 Main Power On (220-240 VAC)



TF-1-0043-A

Figure 2 BSD 1.3

BSD 1.3 Machine Power Control (1 of 2)



5 NOTE: ① THE FOLLOWING TABLE SHOWS THE RELATIONSHIP BETWEEN THE CONTROL SIGNAL AND OUTPUT VOLTAGE IN EACH OPERATION MODE.

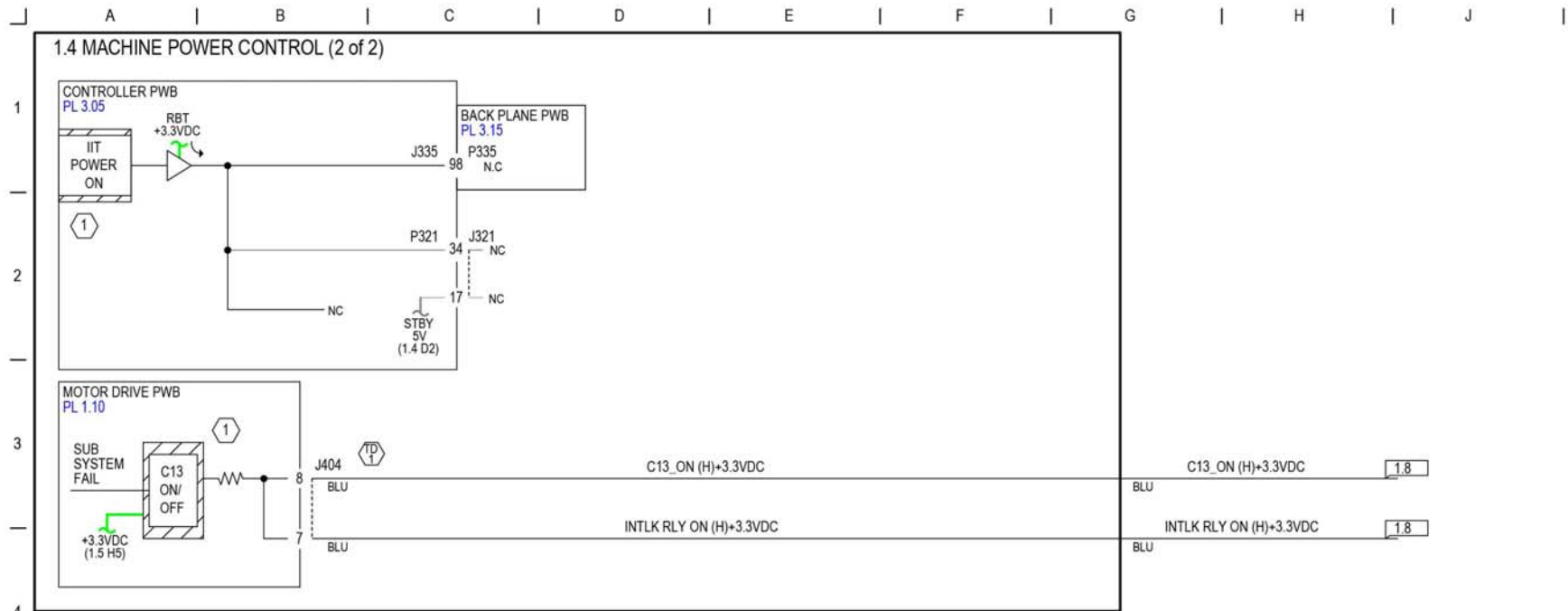
Control Signal Name	LVPS Output Voltage Name	Signal Description	Main Power SW Status	Sub SW Status	Low Power Mode *4	Sleep Mode *4
MAIN POWER SW ON	5V_STBY	CONT	+5V is always output when the Breaker (GFI) and Main PWR SW are turned ON	ON	ON	ON
			When the Sub SW is OFF	OFF		
SLEEP RECOVERY ON (Controller)	5V_MAIN/+24V	This signal is used to turn ON/OFF the 5V/24V.	OFF	ON	ON	OFF *1
UI ON (Controller)	5V_STBY	This signal is used to turn ON/OFF the 5V for UI.	OFF	ON	OFF *2	OFF
IOT PWR ON (Controller)	+5V/24V INTLK	This signal is used to turn ON/OFF the 5V/24V.	OFF	ON	ON	OFF *3

*1 : On when Power Saver button is on.
 On when access a folder.
 *2 : On when Power Saver button is on.
 *3 : On when Print.
 *4: When Smart Power Saver is enabled

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Figure 3 BSD 1.3

BSD 1.4 Machine Power Control (2 of 2)



NOTE:

① THE FOLLOWING TABLE SHOWS THE REL ATIONSHIP BETWEEN THE CONTROL SIGNAL AND OUTPUT VOLTAGE IN EACH OPERATION MODE.

Control Signal Name	LVPS Output Voltage Name	Signal Description	Main Power SW Status	Sub SW Status	Low Power Mode *2	Sleep Mode *2
MAIN POWER SW ON	5V_STBY	CONT	+5V is always output when the Breaker (GFI) and Main PWR SW are turned ON	ON	ON	ON
			When the Sub SW is OFF	OFF		
C13_SAFETY (Motor Drive PWB)	+24V_C13	A +24V power supply line that is cutoff at Sub System Fail	OFF	ON	ON	OFF *1
IIT PWR ON (Controller)	IIT_24V	This signal is used to turn ON/OFF the 24V for IIT.	OFF		OFF	OFF

*1 : On when Print or Fax Receive.

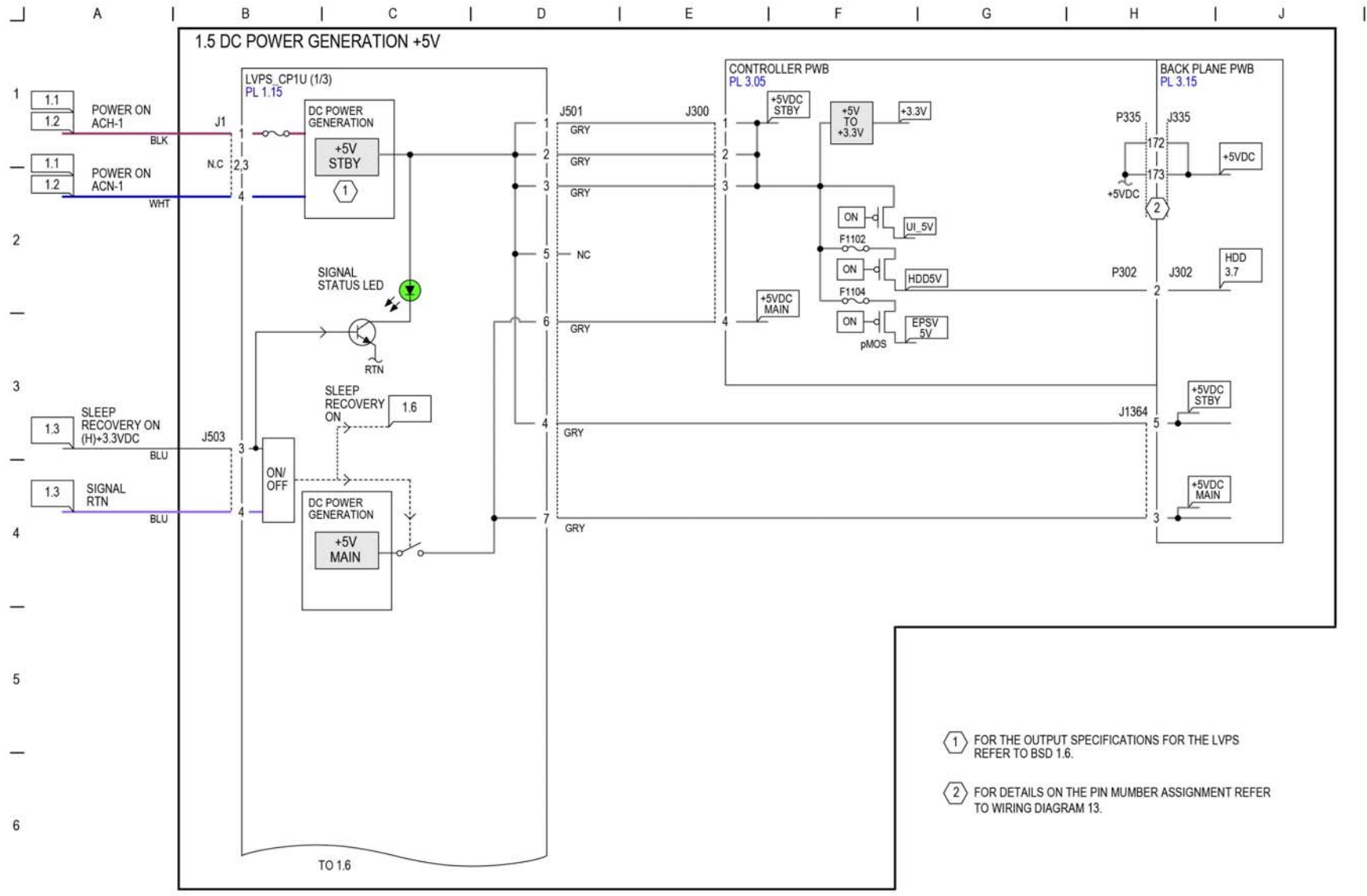
*2 : When Smart Power Saver is enabled

② Test Point : Motor Drive PWB J404-8(+)/GND(-)
Normally, approx. +3.13VDC
At the occurrence of Sub System Fail: 0VDC

TF-1-0045-A

Figure 4 BSD 1.4

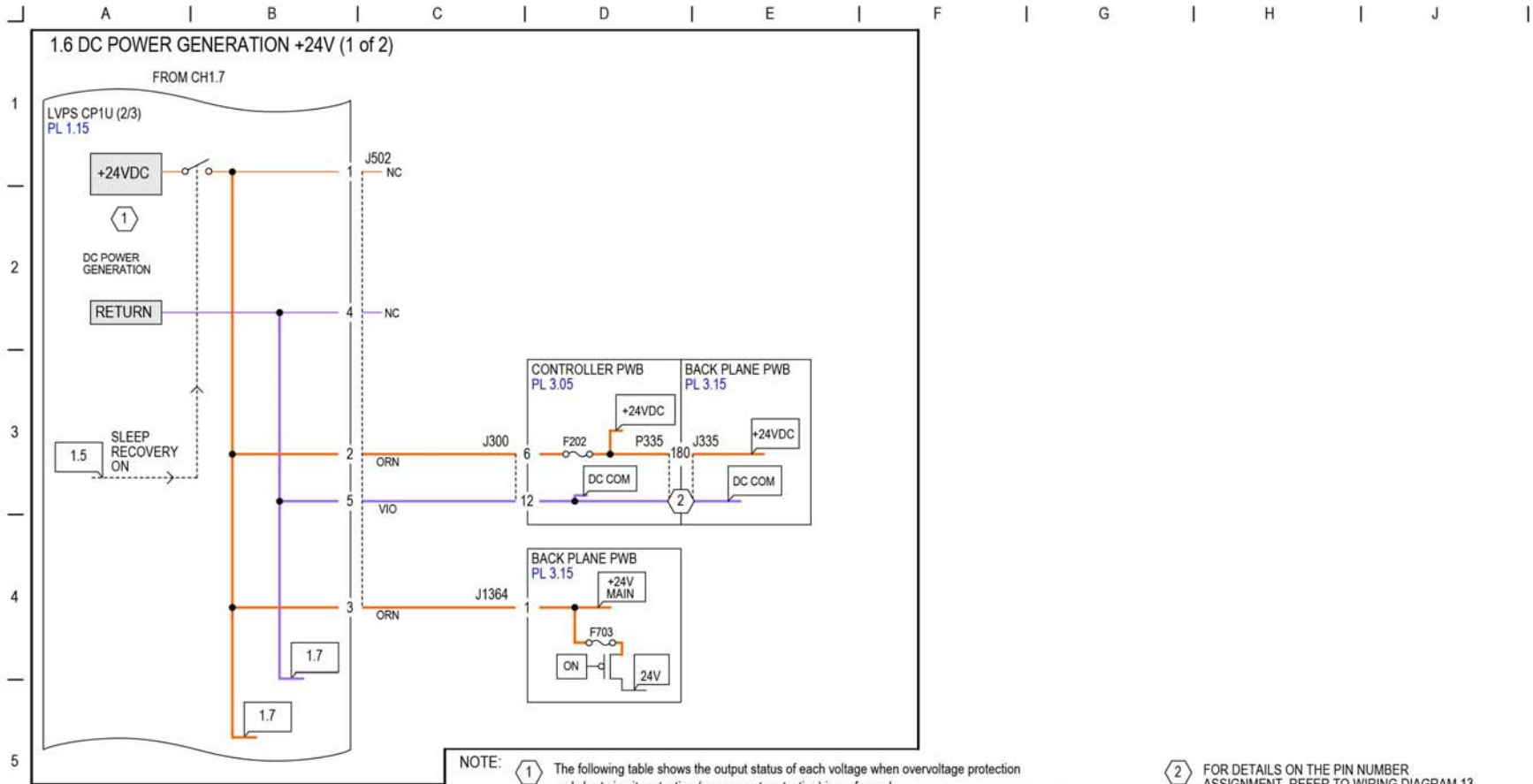
BSD 1.5 DC Power Generation +5V



TF-1-0046-A

Figure 5 BSD 1.5

BSD 1.6 DC Power Generation +24V (1 of 2)



NOTE: ¹ The following table shows the output status of each voltage when overvoltage protection and short circuit protection (overcurrent protection) is performed.

² FOR DETAILS ON THE PIN NUMBER ASSIGNMENT, REFER TO WIRING DIAGRAM 13.

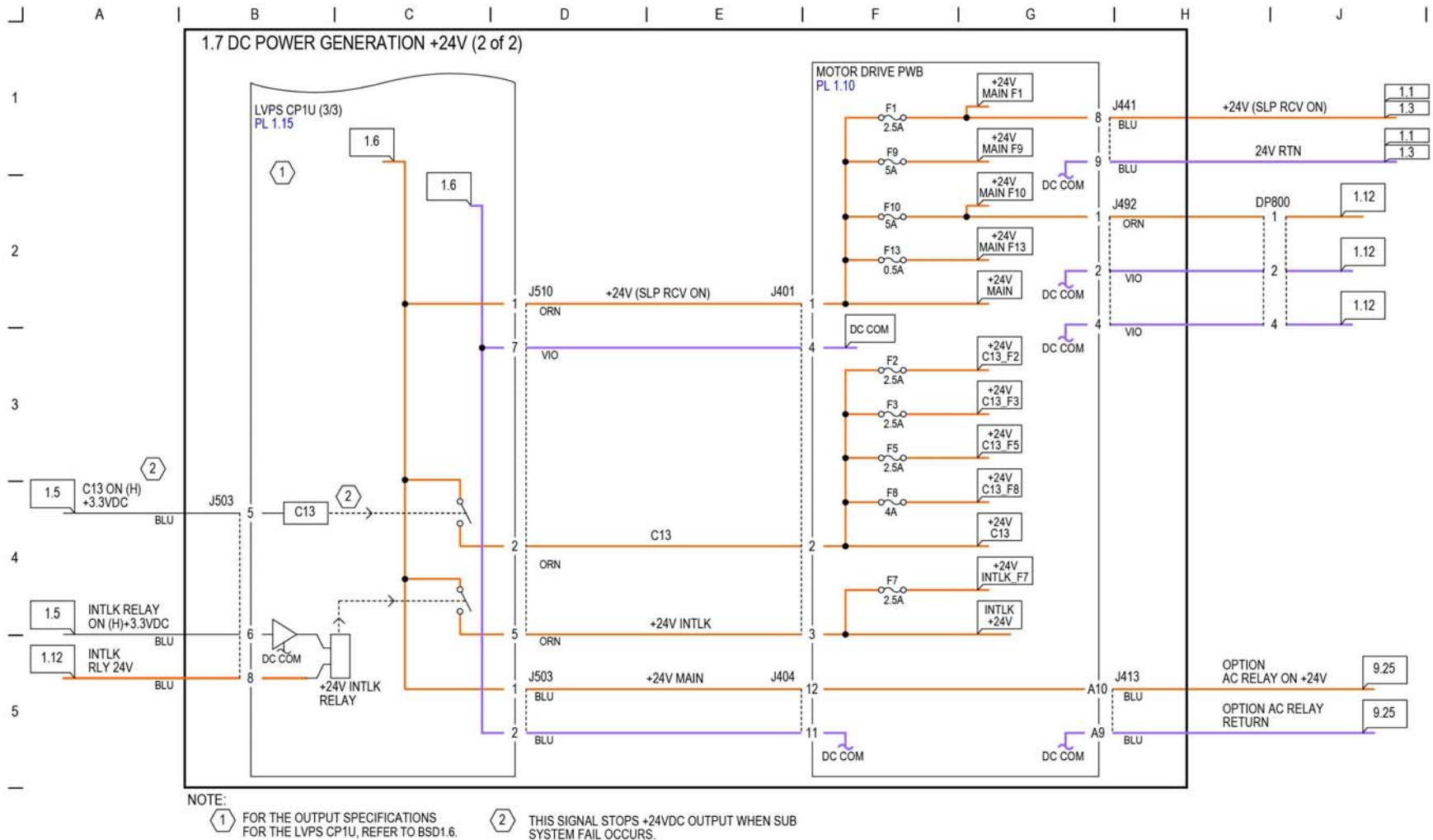
	+5V STBY	+5V MAIN	+24V	+24V_C13	+24V_INTLK
Overvoltage	6-8V	6-8V	26.7-32V		
Output status when overvoltage is detected *1	Cuts off all outputs			Cuts off other than in 5V STBY.	
	+5V STBY	Cut off	Cut off	Cut off	Cut off
	+5V MAIN	Cut off	Cut off	Cut off	Cut off
Output status when short circuit is detected *2	+24V	Normal Output	Cut off	Cut off	Cut off
	+24V_C13	Normal Output	Normal Output	Normal Output	Cut off
	+24V_INTLK	Normal Output	Normal Output	Normal Output	Cut off

*1: The system recovers when the power is turned ON again at 15 seconds after the input is turned OFF with no damages.

*2: When the short circuit is solved, the system recovers when the power is turned ON again at 15 seconds after the input is turned OFF.

Figure 6 BSD 1.6

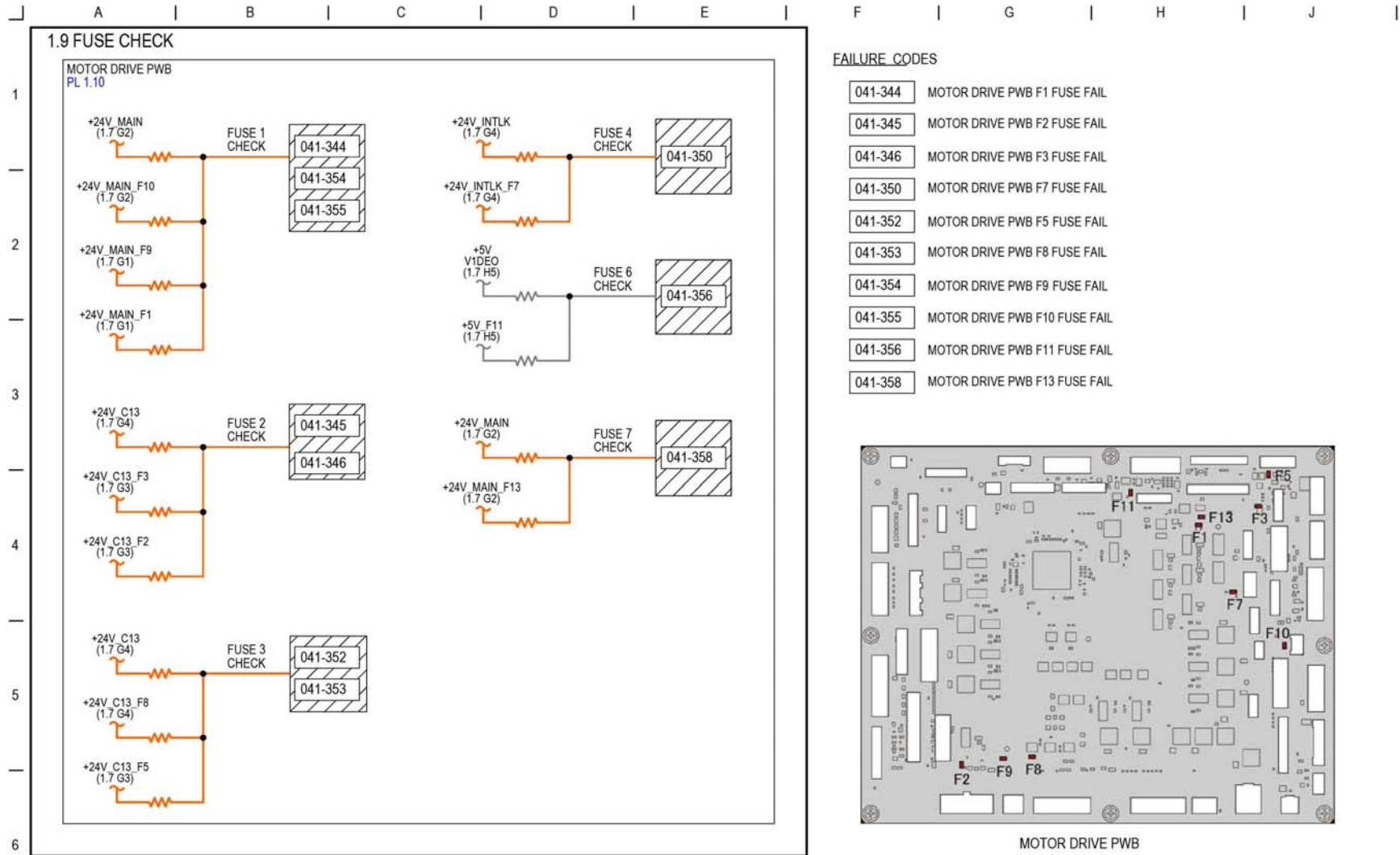
BSD 1.7 DC Power Generation +24V (2 of 2)



TF-1-0048-A

Figure 7 BSD 1.7

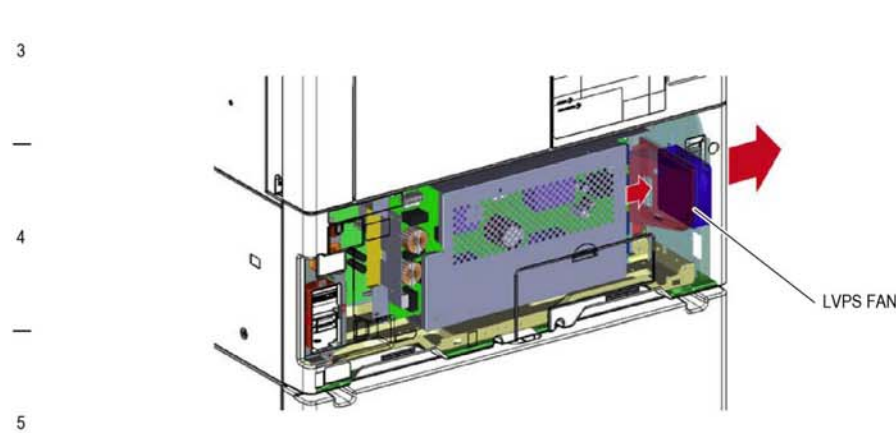
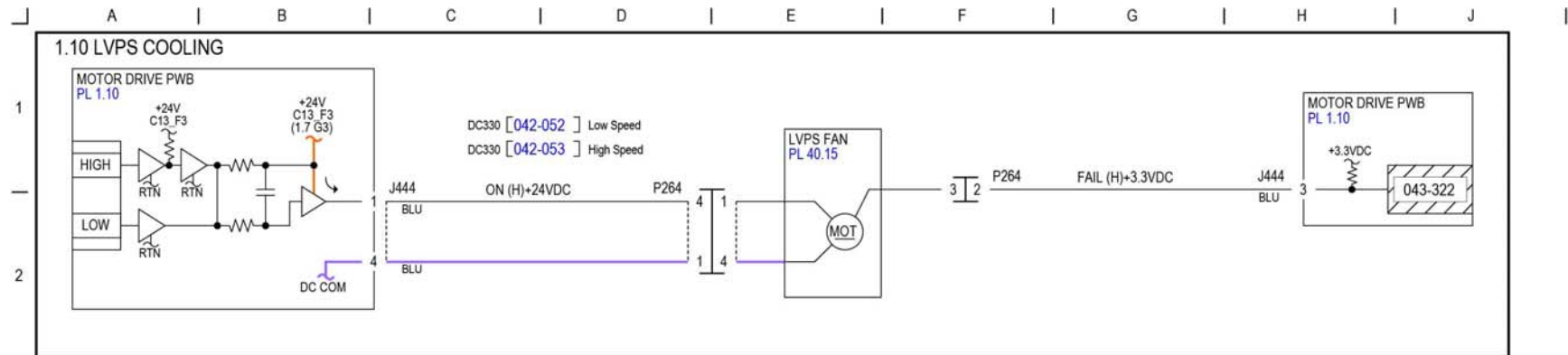
BSD 1.9 Fuse Check



TF-1-0050A

Figure 9 BSD 1.9

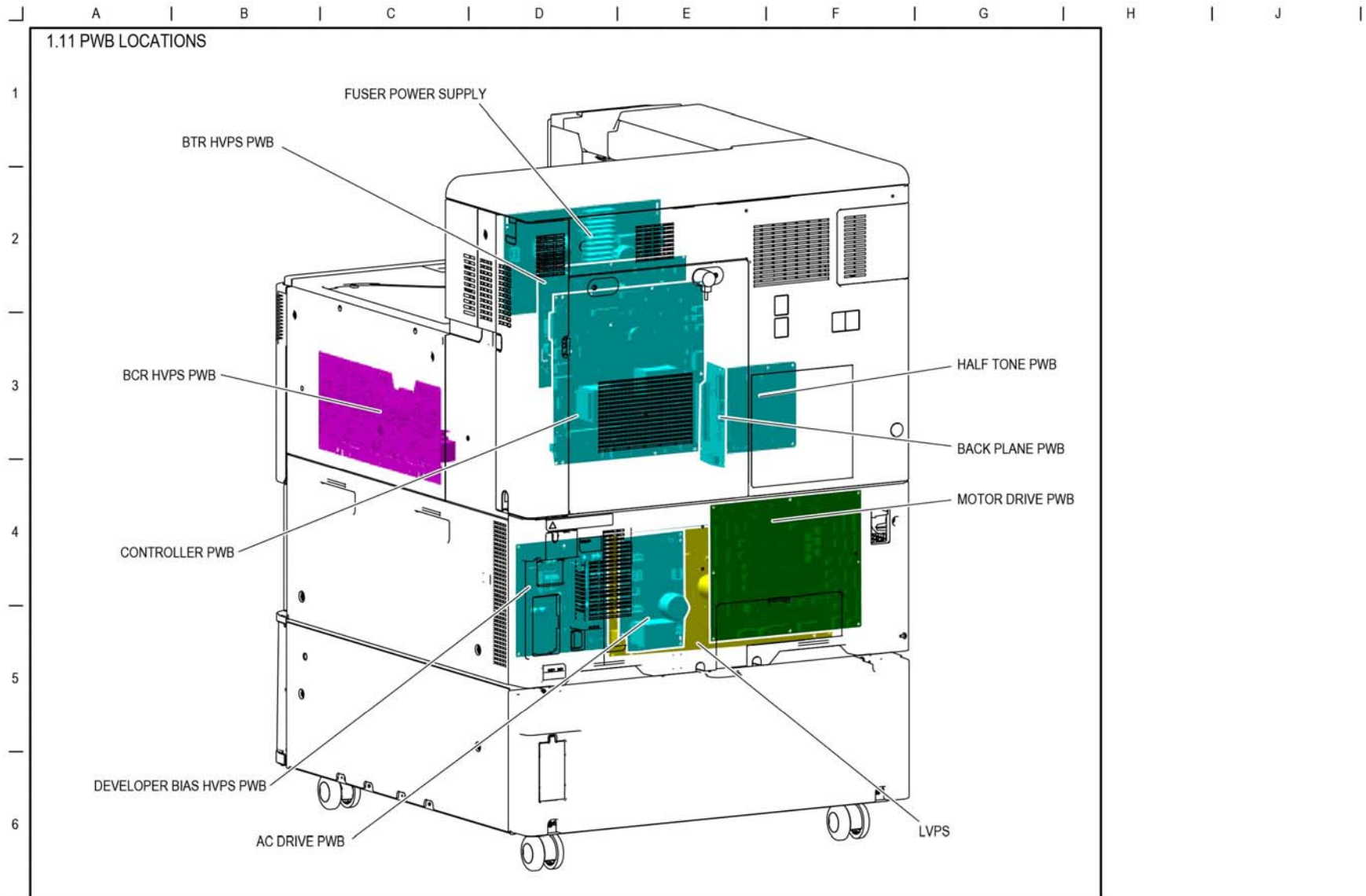
BSD 1.10 LVPS Cooling



TF-1-0051-A

Figure 10 BSD 1.10

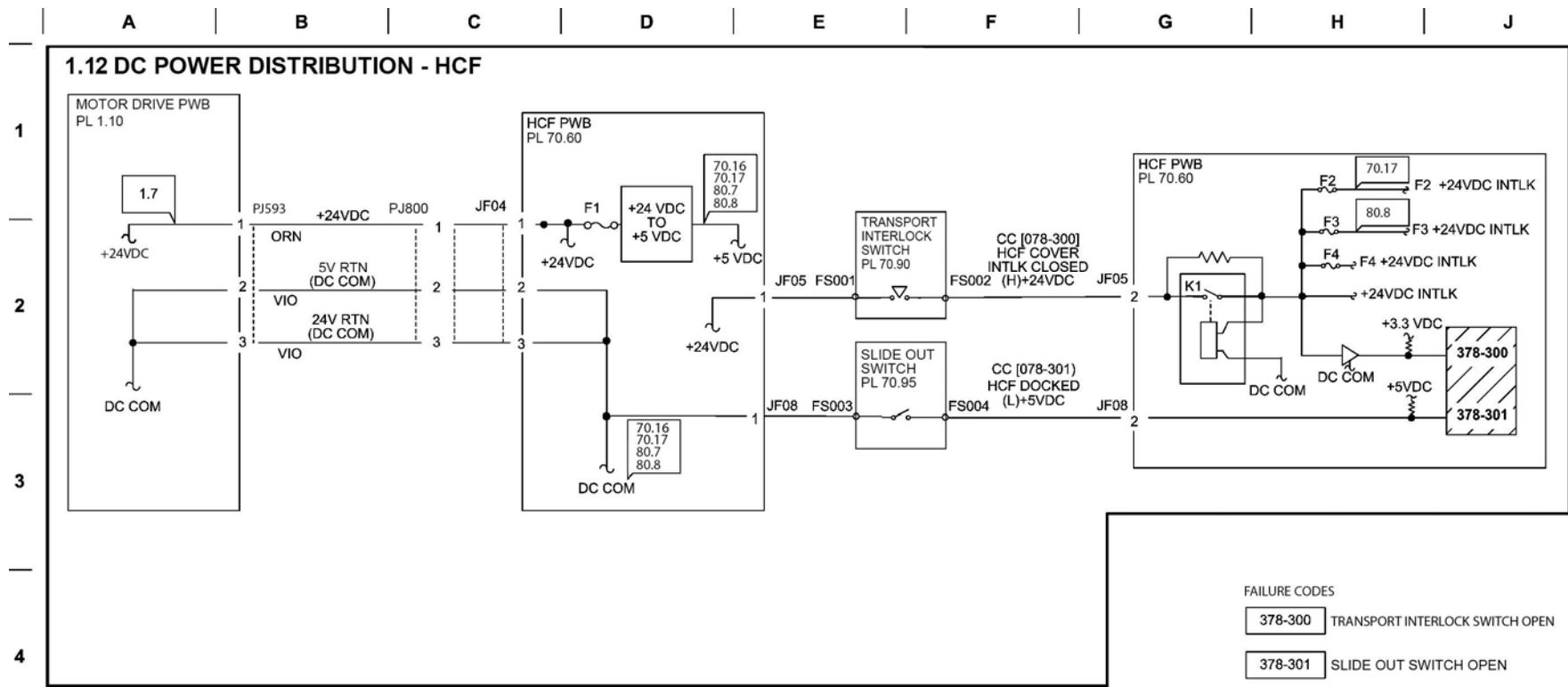
BSD 1.11 PWB Locations



TF-1-0042-A

Figure 11 BSD 1.11

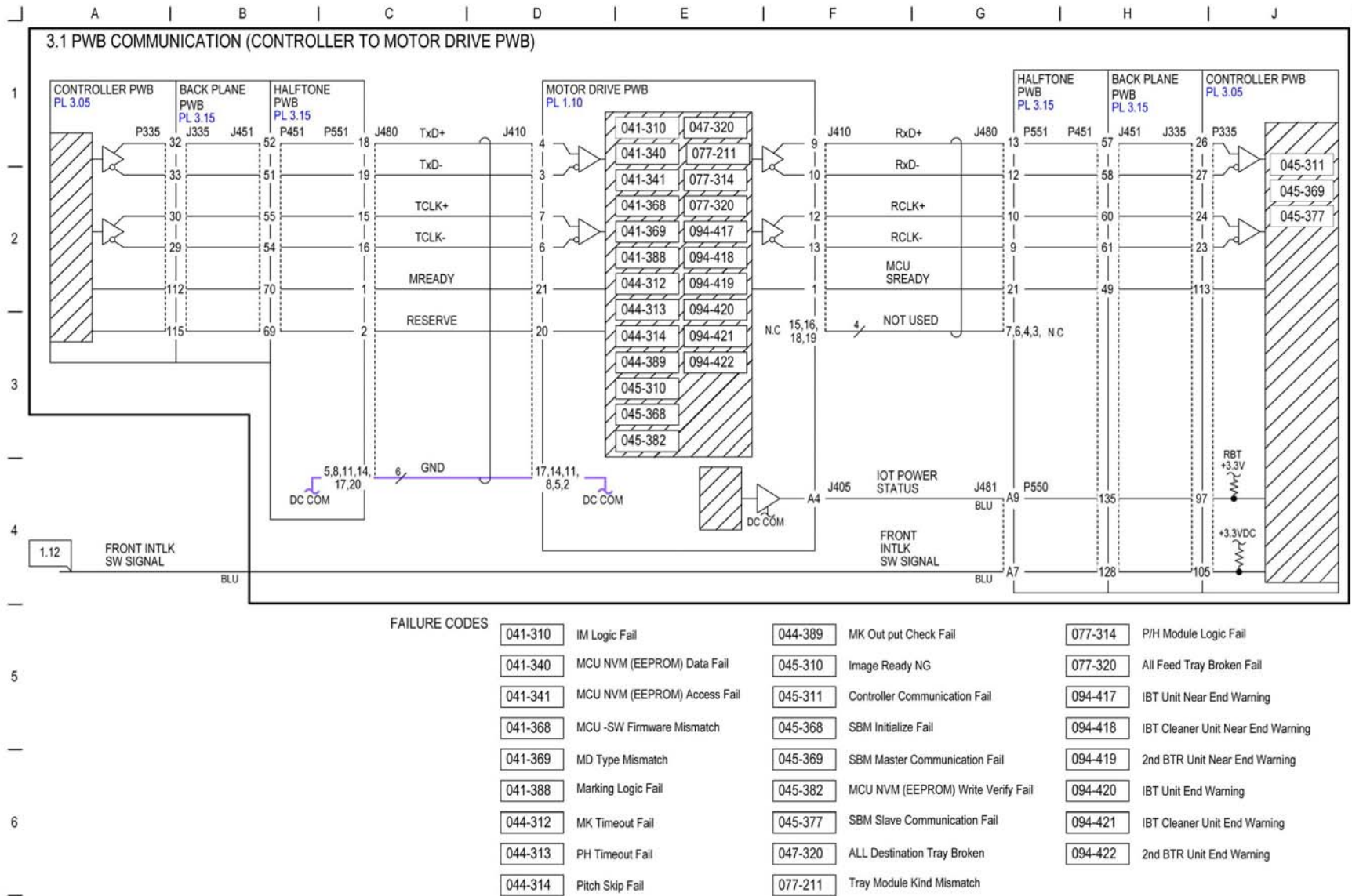
BSD 1.12 DC Power Distribution HCF



TF-1-0133-A

Figure 12 BSD 1.11

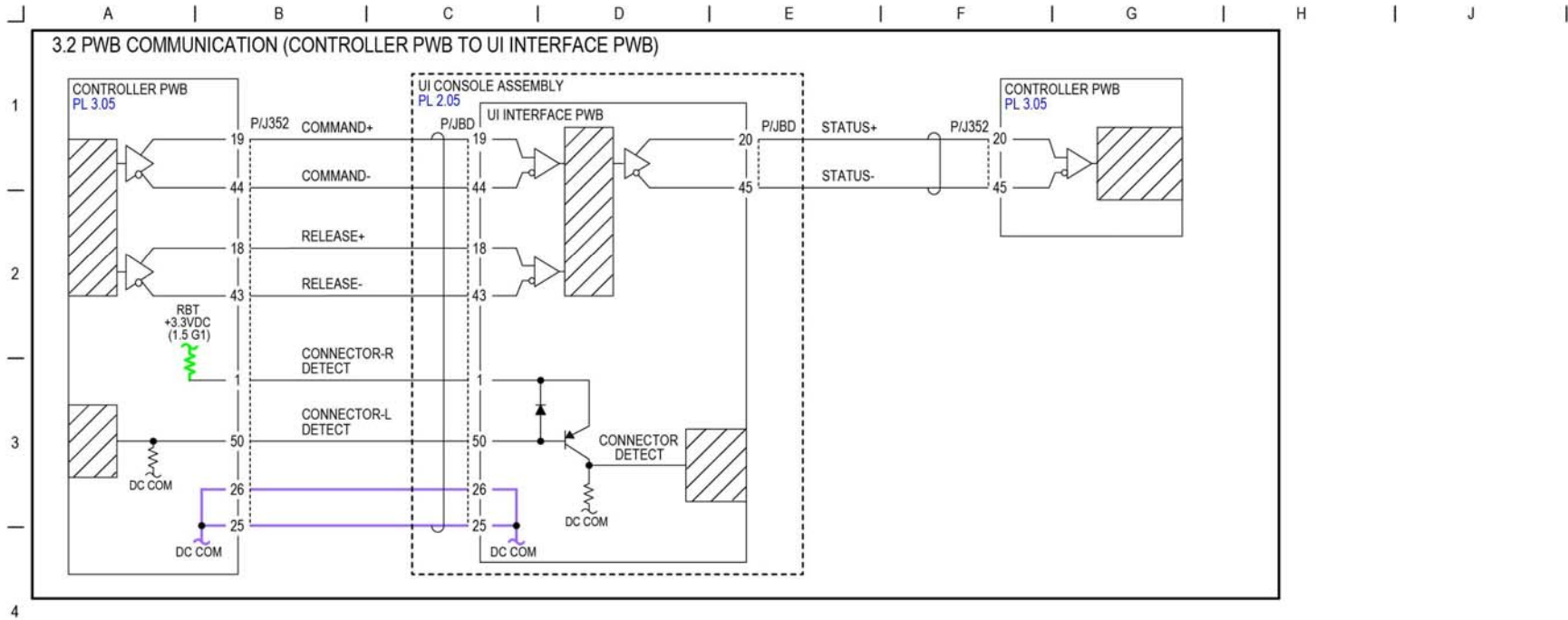
BSD 3.1 PWB Communications (Controller to Motor Drive PWB)



TF-1-0053-A

Figure 14 BSD 3.1

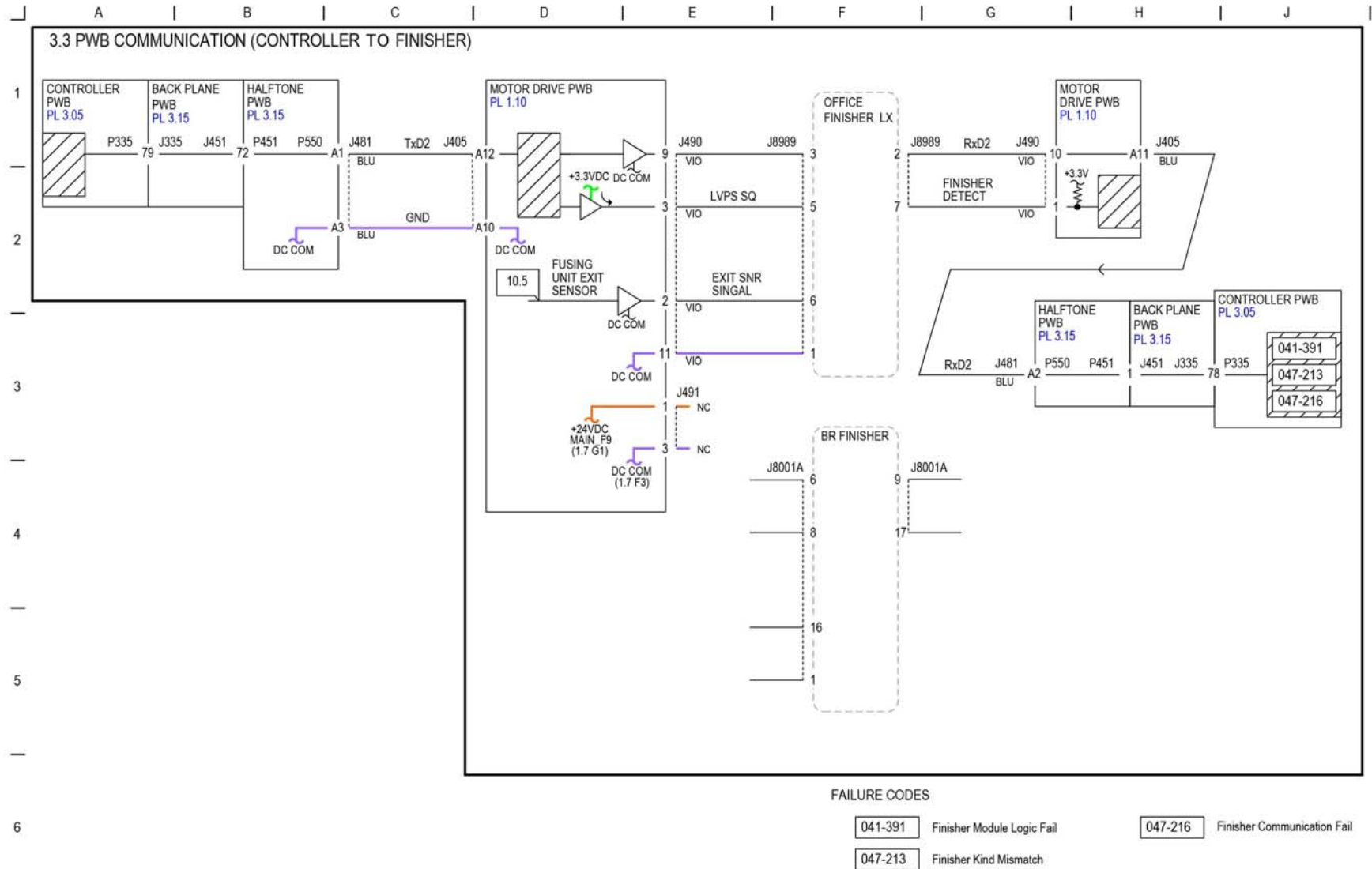
BSD 3.2 PWB Communications (Controller to UI PWB)



TF-1-0054-A

Figure 15 BSD 3.2

BSD 3.3 PWB Communications (Controller to Finisher)



TF-1-0055-A

Figure 16 BSD 3.3

BSD 3.4 PWB Communications (Controller to HCF)

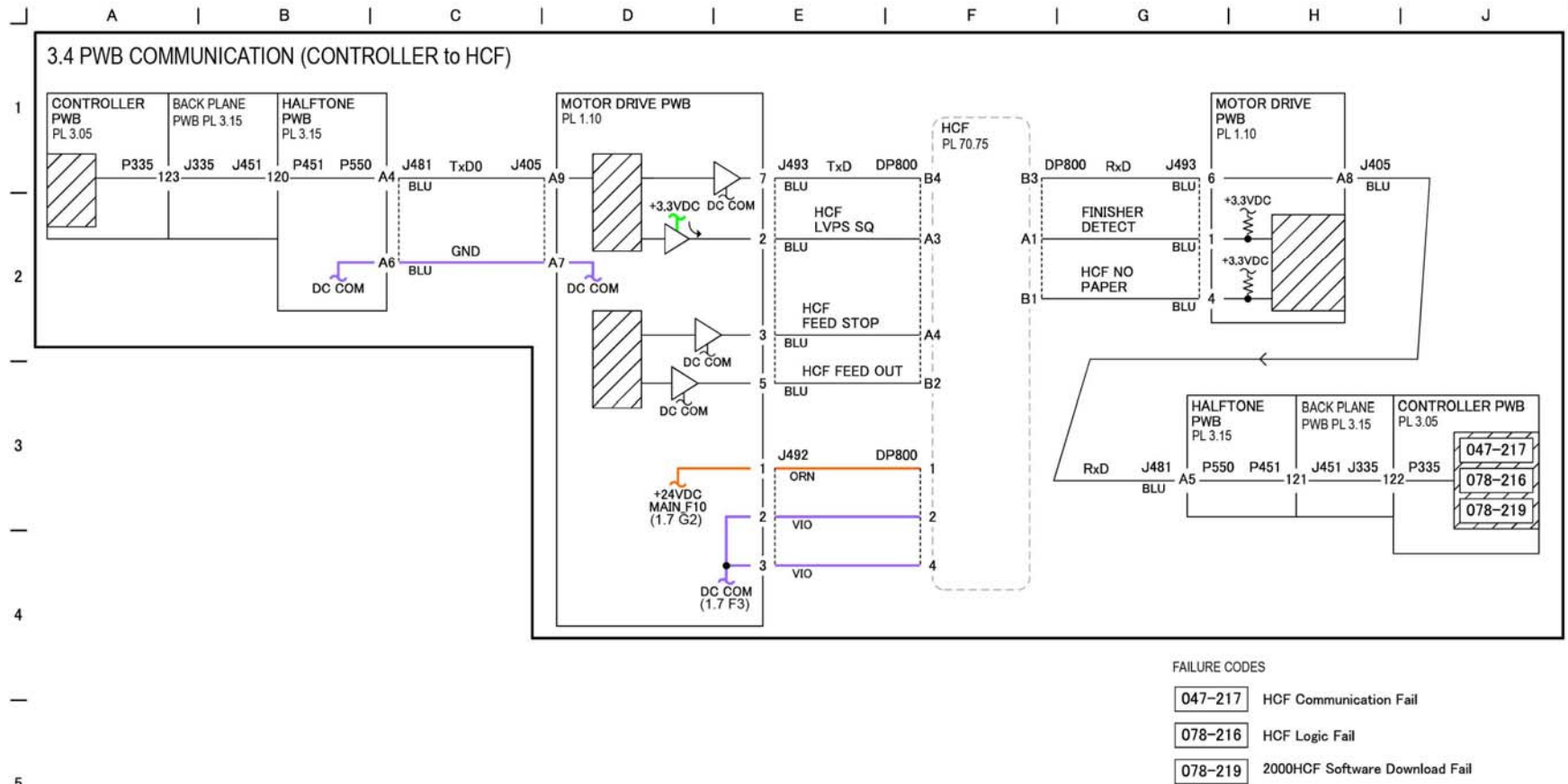
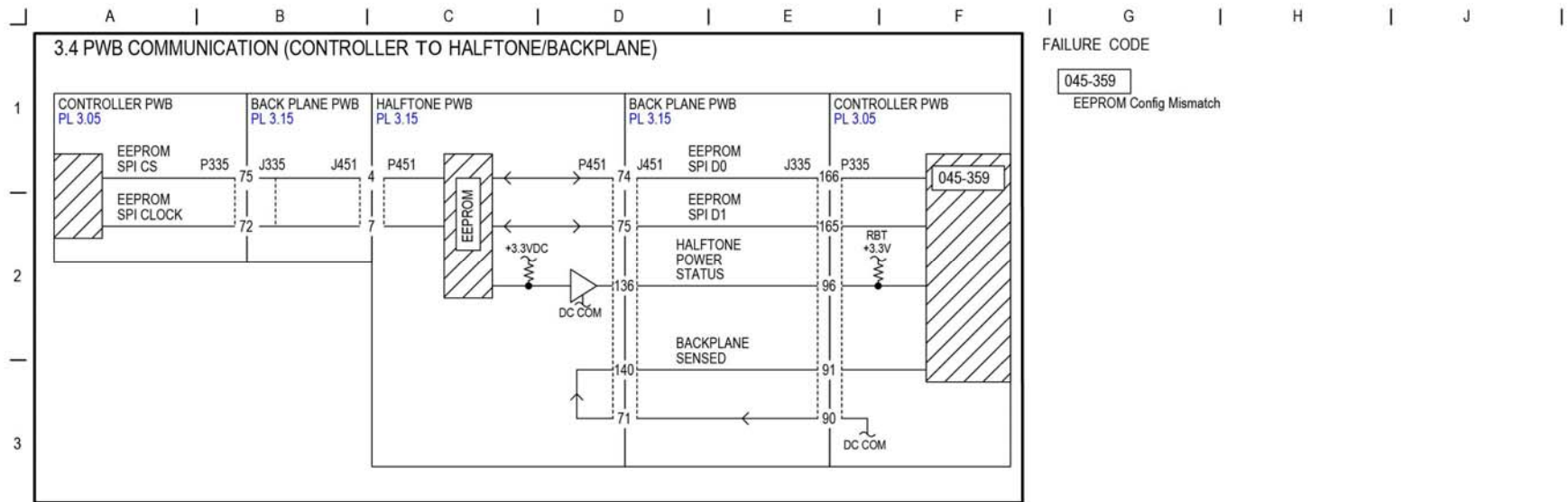


Figure 17 BSD 3.4

TF-1-0145-A

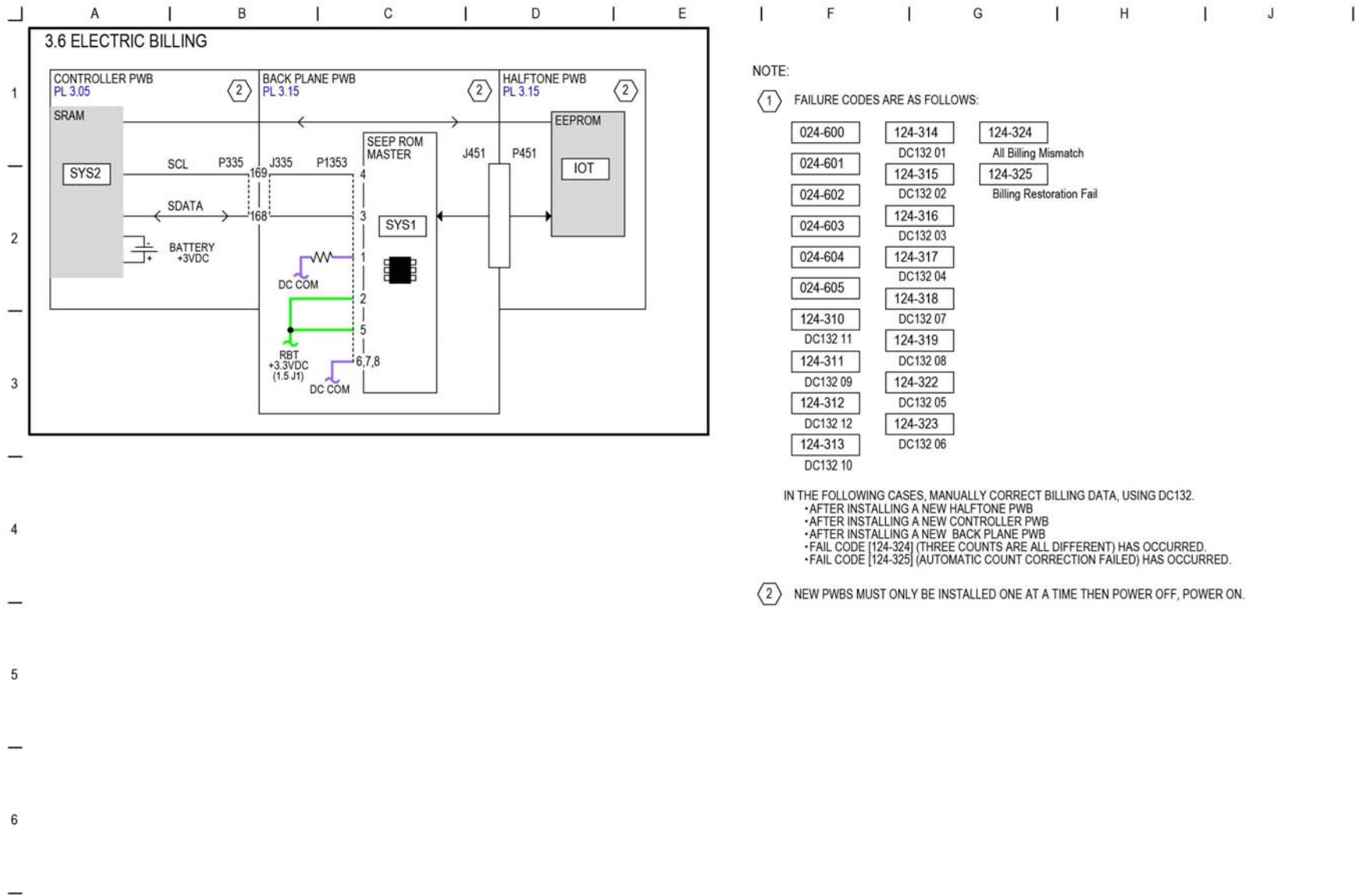
BSD 3.5 PWB Communications (Controller to Halftone/Back plane)



TF-1-0056-A

Figure 18 BSD 3.5

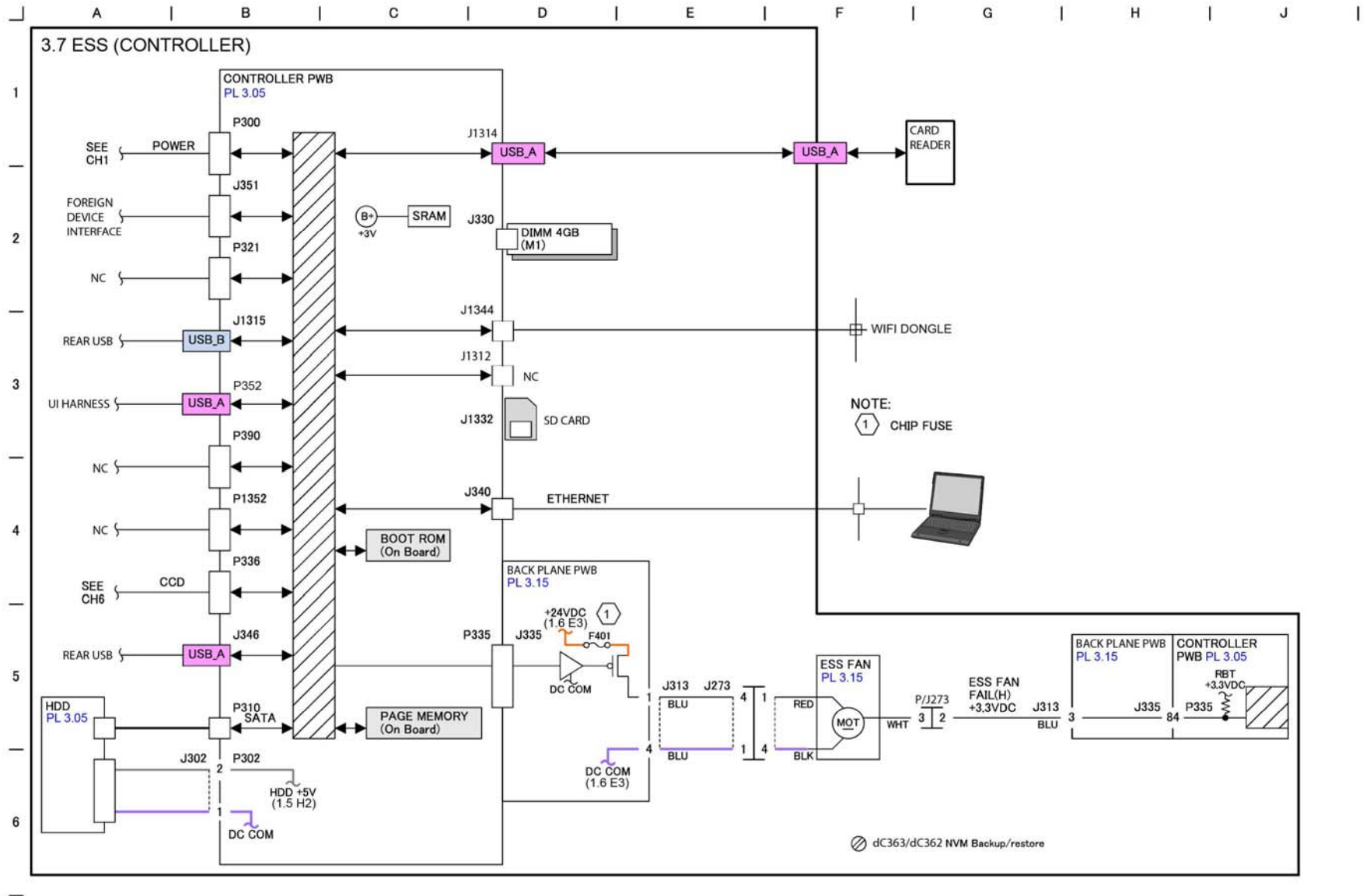
BSD 3.6 Electric Billing



TF-1-0057-A

Figure 19 BSD 3.6

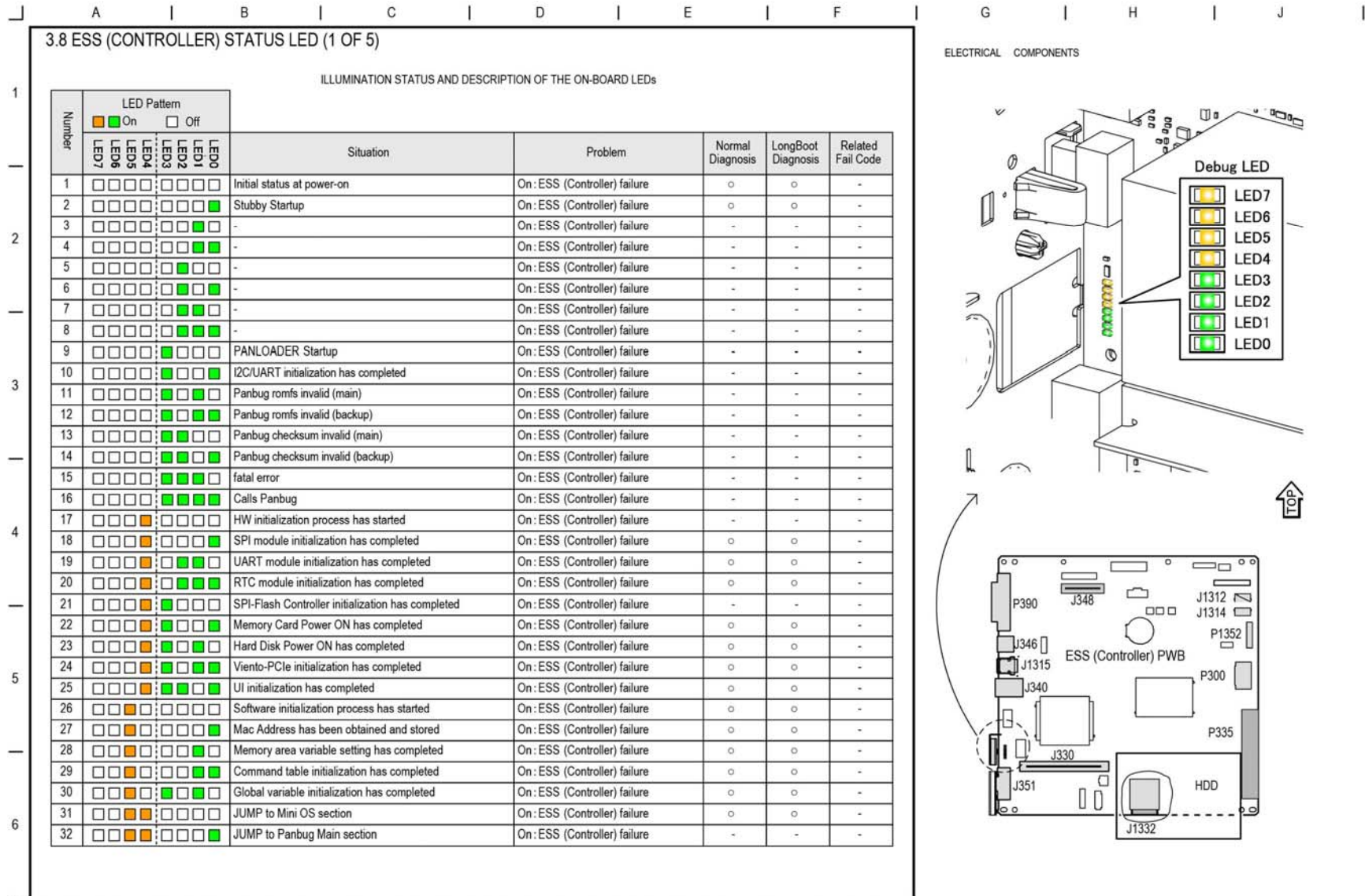
BSD 3.7 ESS (Controller)



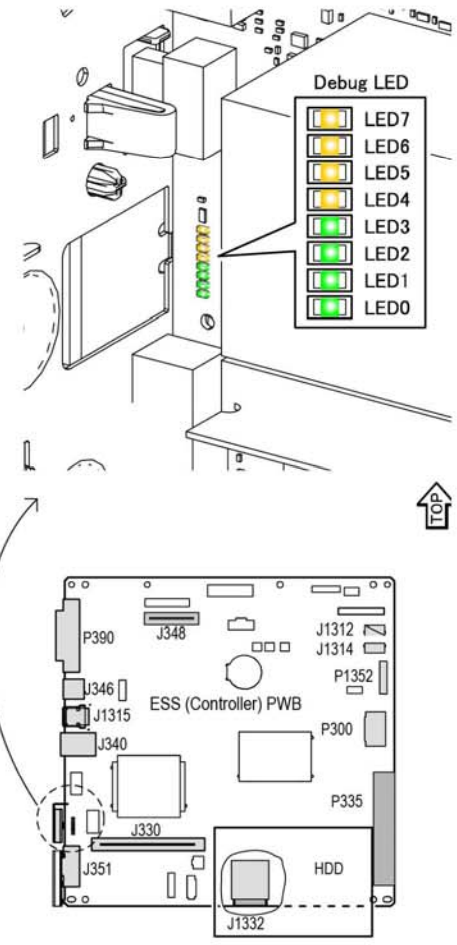
TF-1-0119-A

Figure 20 BSD 3.7

BSD 3.8 ESS (Controller) Status LED (1 of 5)



ELECTRICAL COMPONENTS



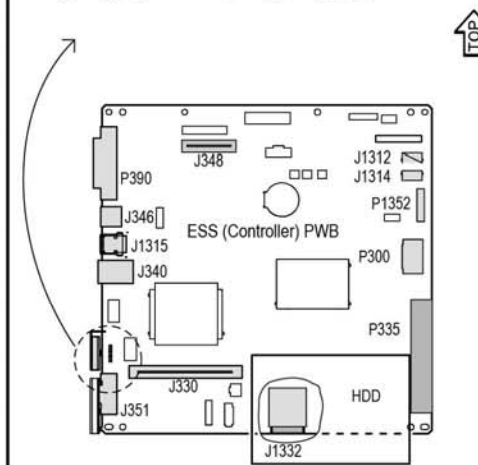
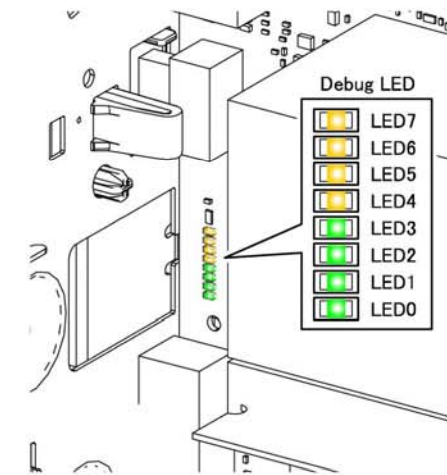
TF-1-0059-A

Figure 21 BSD 3.8

BSD 3.9 ESS (Controller) Status LED (2 of 5)

3.9 ESS (CONTROLLER) STATUS LED (2 OF 5)		ILLUMINATION STATUS AND DESCRIPTION OF ON-BOARD LEDs										
Number	LED Pattern							Situation	Problem	Normal Diagnosis	LongBoot Diagnosis	Related Fail Code
	LED7	LED6	LED5	LED4	LED3	LED2	LED1					
33	On	On	On	On	On	On	On	0xFF -> 0x00 is repeating alternately. DDR initialization process has failed	Blinking: ESS (Controller) failure	-	-	-
34	On	On	On	On	On	On	On	0xF0 -> 0x0F is repeating alternately. Boot Loader checksum error - L2 Boot has read a Boot Loader checksum error from FCSP1	Blinking: RAM failure	-	-	-
35	On	On	On	On	On	On	On	CA15-0: (0xA0 -> 0x05 is repeating alternately. CPLD is showing an invalid boot mode.	Blinking: ESS (Controller) failure	-	-	-
36	On	On	On	On	On	On	On	LED High Speed Shift ON is operated. Indicates that the Board configuration information is invalid.	Blinking: ESS (Controller) failure	-	-	-
37	On	On	On	On	On	On	On	CA15-0: After the recovery from Switch OFF mode is detected by CPLD flag, before proceeding to read the NVM recovery data	On: ESS (Controller) failure	-	-	-
38	On	On	On	On	On	On	On	CA15-0: After reading the NVM recovery data, before calculating the checksum on the DDR	On: ESS (Controller) failure	-	-	-
39	On	On	On	On	On	On	On	CA15-0: Immediately before jumping to the Switch OFF recovery point	On: ESS (Controller) failure	-	-	-
40	On	On	On	On	On	On	On	CA15-0: (0xC0 -> 0x03 is repeating alternately. Checksum error during recovery from Switch OFF mode	Blinking: ESS (Controller) failure	-	-	-
41	On	On	On	On	On	On	On	Immediately after the system has recovered from SCB to Linux and before it calls Panbug	On: ESS (Controller) failure	o	o	-
42	On	On	On	On	On	On	On		On: ESS (Controller) failure	-	-	-
43	On	On	On	On	On	On	On		On: ESS (Controller) failure	-	-	-
44	On	On	On	On	On	On	On		On: ESS (Controller) failure	-	-	-
45	On	On	On	On	On	On	On		On: ESS (Controller) failure	-	-	-
46	On	On	On	On	On	On	On		On: ESS (Controller) failure	-	-	-
47	On	On	On	On	On	On	On		Blinking: ESS (Controller)/RAM failure	-	-	-
48	On	On	On	On	On	On	On		Blinking: ESS (Controller)/RAM failure	-	-	-
49	On	On	On	On	On	On	On	Memory Card module initialization has started	Blinking: RAM or Memory Card error	o	o	117-319
50	On	On	On	On	On	On	On	Memory Card Power ON has completed	Blinking: RAM or Memory Card error	o	o	117-319
51	On	On	On	On	On	On	On	Memory Card initialization has completed	Blinking: RAM or Memory Card error	o	o	117-319
52	On	On	On	On	On	On	On	Memory Card Driver has an error	Blinking: RAM or Memory Card error	o	o	117-319
53	On	On	On	On	On	On	On	Unsupported Memory Card has been inserted	Blinking: RAM or Memory Card error	o	o	117-321
54	On	On	On	On	On	On	On	Memory Card has not been inserted	Blinking: RAM or Memory Card error	o	o	117-329
55	On	On	On	On	On	On	On	Memory module initialization has completed	Blinking: RAM or Memory Card error	o	o	117-319
56	On	On	On	On	On	On	On	Read process from Memory Card has started	Blinking: RAM or Memory Card error	o	o	117-319

ELECTRICAL COMPONENTS



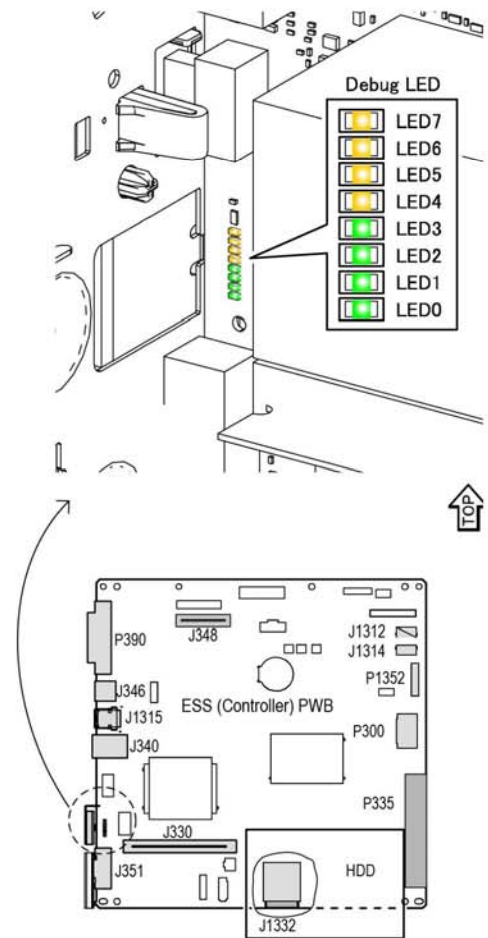
TF-1-0060_A

Figure 22 BSD 3.9

BSD 3.10 ESS (Controller) Status LED (3 of 5)

3.10 ESS (CONTROLLER) STATUS LED (3 OF 5)		ILLUMINATION STATUS AND DESCRIPTION OF ON-BOARD DEBUG LEDs										
Number	LED Pattern							Situation	Problem	Normal Diagnosis	LongBoot Diagnosis	Related Fail Code
	LED7	LED6	LED5	LED4	LED3	LED2	LED1					
57	On	On	On	On	Off	Off	Off	Memory Module initialization check has completed	Blinking: RAM or Memory Card error	o	o	117-319
58	On	On	On	On	Off	Off	Off	S72 Program memory expansion has completed	Blinking: RAM or Memory Card failure	o	o	117-319
59	On	On	On	On	Off	Off	Off	926I Program memory expansion has completed	Blinking: RAM or Memory Card failure	o	o	-
60	On	On	On	On	Off	Off	Off	926M Program memory expansion has completed	Blinking: RAM or Memory Card failure	o	o	-
61	Off	Off	Off	Off	Off	Off	Off					
62	On	On	On	On	Off	Off	Off	BackPlane disconnected has been detected	On: BackPlane connection failure	-	o	016-327
63	On	On	On	On	Off	Off	Off	UI Cable disconnected has been detected	On: UI Cable connection failure	-	o	016-326
64	On	On	On	On	Off	Off	Off	MCU Harness disconnected has been detected	On: MCU Harness connection error	-	o	016-328
65	On	On	On	On	Off	Off	Off	PCI Option Unknown Device connected has been detected	On: Detected a Device that does not support PCI Option	o	o	117-336
66	On	On	On	On	Off	Off	Off	PCIe Option Unknown Device connected has been detected	On: Detected a Device that does not support PCI Ex Option	o	o	117-337
67	On	On	On	On	Off	Off	Off	Memory Card disconnected has been detected	On: Memory Card connection error	o	o	117-338
68	Off	On	On	On	Off	Off	Off	IO ASIC diagnostic has started	On: ASIC failure	o	o	016-355
69	Off	On	On	On	Off	Off	Off	IO ASIC diagnostic has completed	-	-	-	-
70	Off	On	On	On	Off	Off	Off	Codec ASIC diagnostic has started	On: ASIC failure	o	o	016-356
71	Off	On	On	On	Off	Off	Off	Codec ASIC diagnostic has completed	-	-	-	-
72	Off	On	On	On	Off	Off	Off	Standard Font ROM diagnostic has started	On: ASIC failure	o	o	-
73	Off	On	On	On	Off	Off	Off	Standard Font ROM diagnostic has completed	-	-	-	-
74	Off	On	On	On	Off	Off	Off	Expanded Font ROM diagnostic has started	On: ASIC failure	-	o	116-380 116-310 116-317
75	Off	On	On	On	Off	Off	Off	Extension Font ROM diagnostic has completed	-	-	-	-
76	Off	On	On	On	Off	Off	Off	SEEP diagnostics has started	On: SEEPROM failure	-	o	016-351 016-350
77	Off	On	On	On	Off	Off	Off	SEEP diagnostic has completed	-	-	-	-
78	Off	On	On	On	Off	Off	Off	Timer diagnostics has started	On: Timer failure	o	o	016-343
79	Off	On	On	On	Off	Off	Off	Timer diagnostic has completed	-	-	-	-
80	Off	On	On	On	Off	Off	Off	Page Memory diagnostics has started	On: RAM failure	-	o	016-317
81	Off	On	On	On	Off	Off	Off	Page Memory diagnostic has completed	-	-	-	-
82	Off	On	On	On	Off	Off	Off	OS communication diagnostics has started	On: OS communication error	-	o	016-383
83	Off	On	On	On	Off	Off	Off	OS communication diagnostics has completed	-	-	-	-
84	Off	On	On	On	Off	Off	Off	RTC diagnostics has started	On: RTC failure	-	o	016-342
85	Off	On	On	On	Off	Off	Off	RTC diagnostics has completed	-	-	-	-
86	Off	On	On	On	Off	Off	Off	UI Check has started	On: ESS (Controller)/UI failure	-	o	016-362
87	Off	On	On	On	Off	Off	Off	UI Check has completed	-	-	-	-

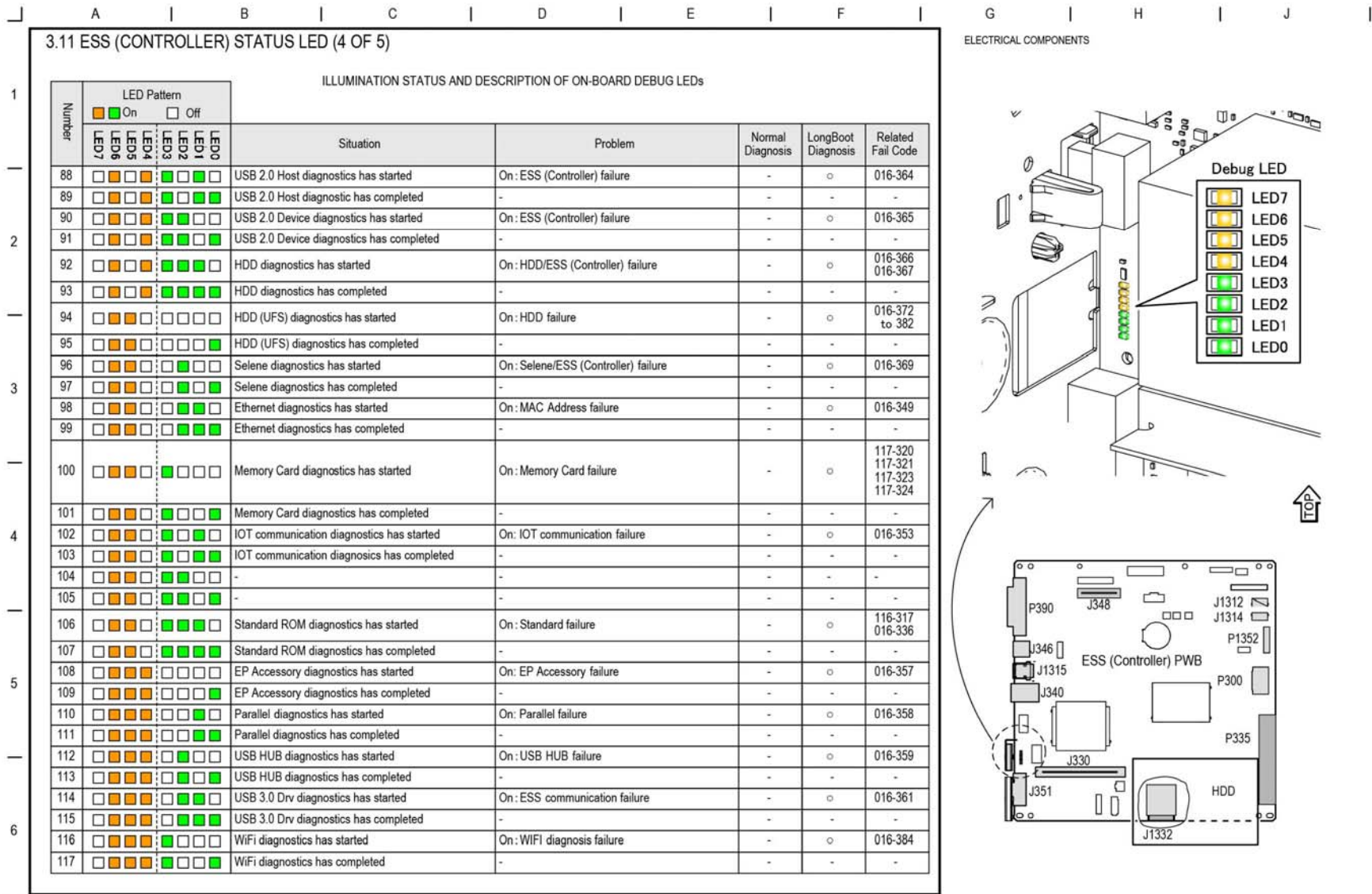
ELECTRICAL COMPONENTS



TF-1-0061-A

Figure 23 BSD 3.10

BSD 3.11 ESS (Controller) Status LED (4 of 5)



ELECTRICAL COMPONENTS

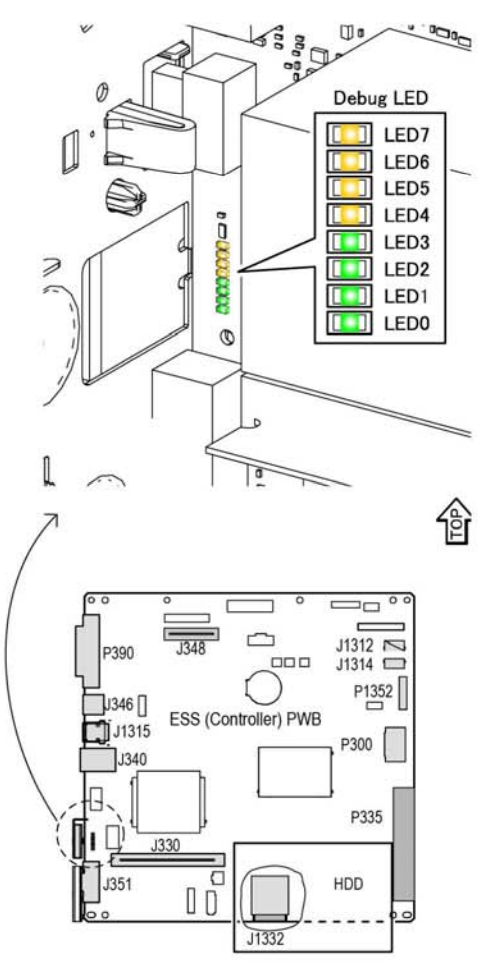


Figure 24 BSD 3.11

TF-1-0062-A

BSD 3.12 ESS (Controller) Status LED (5 of 5)

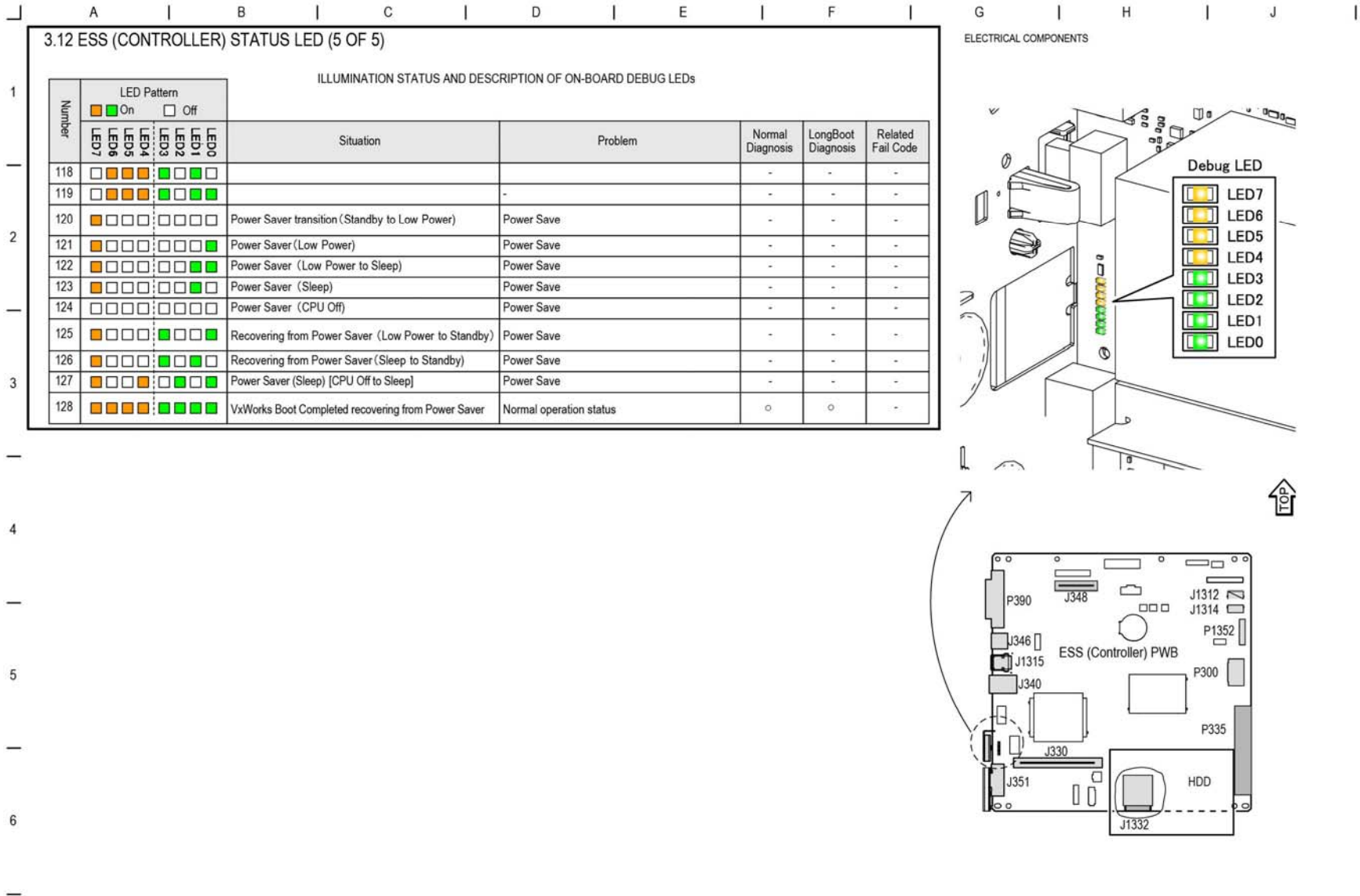


Figure 25 BSD 3.12

BSD 10.1 Fusing Unit Drive

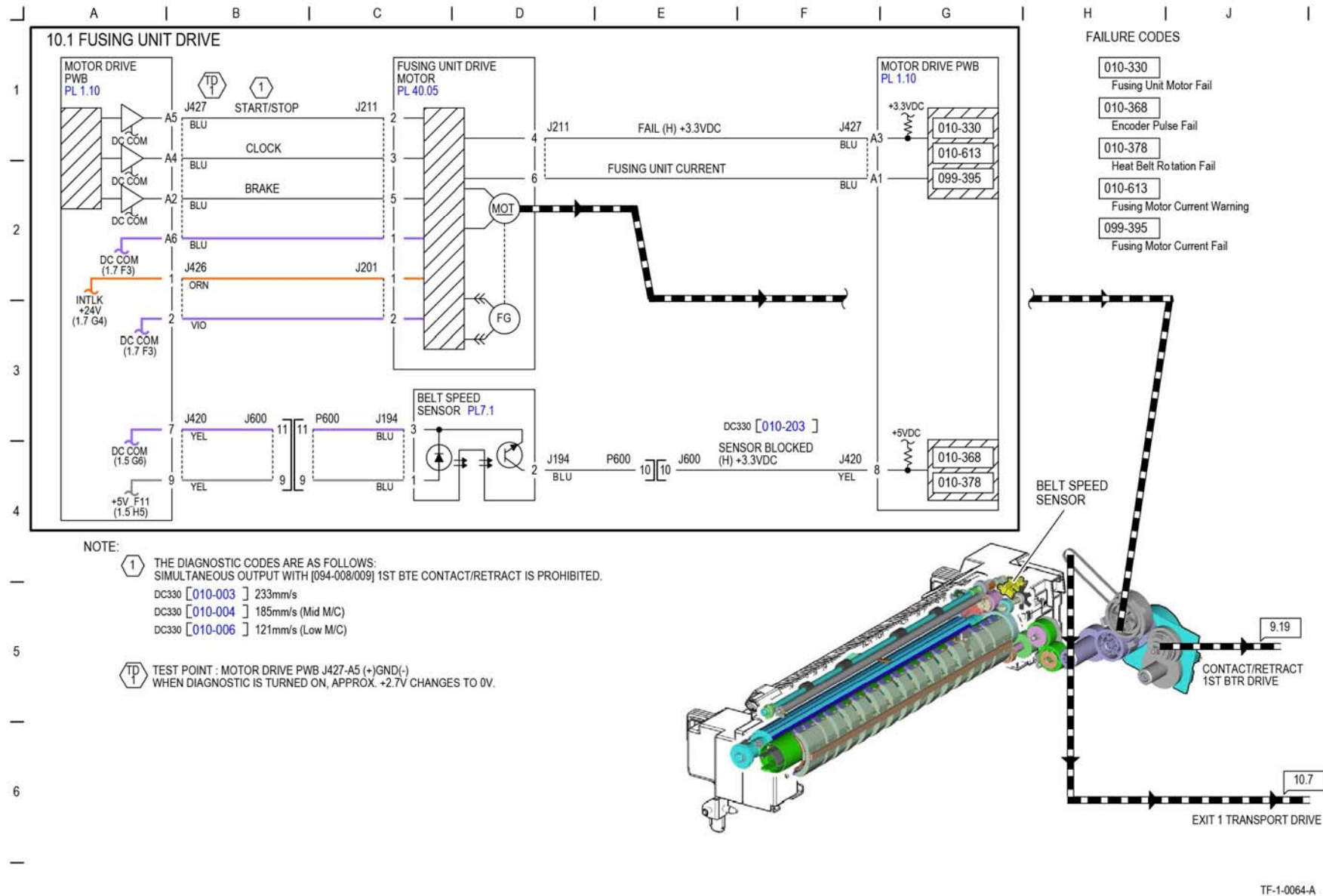


Figure 26 BSD 10.1

BSD 10.2 Pressure Roll Latch/Unlatch

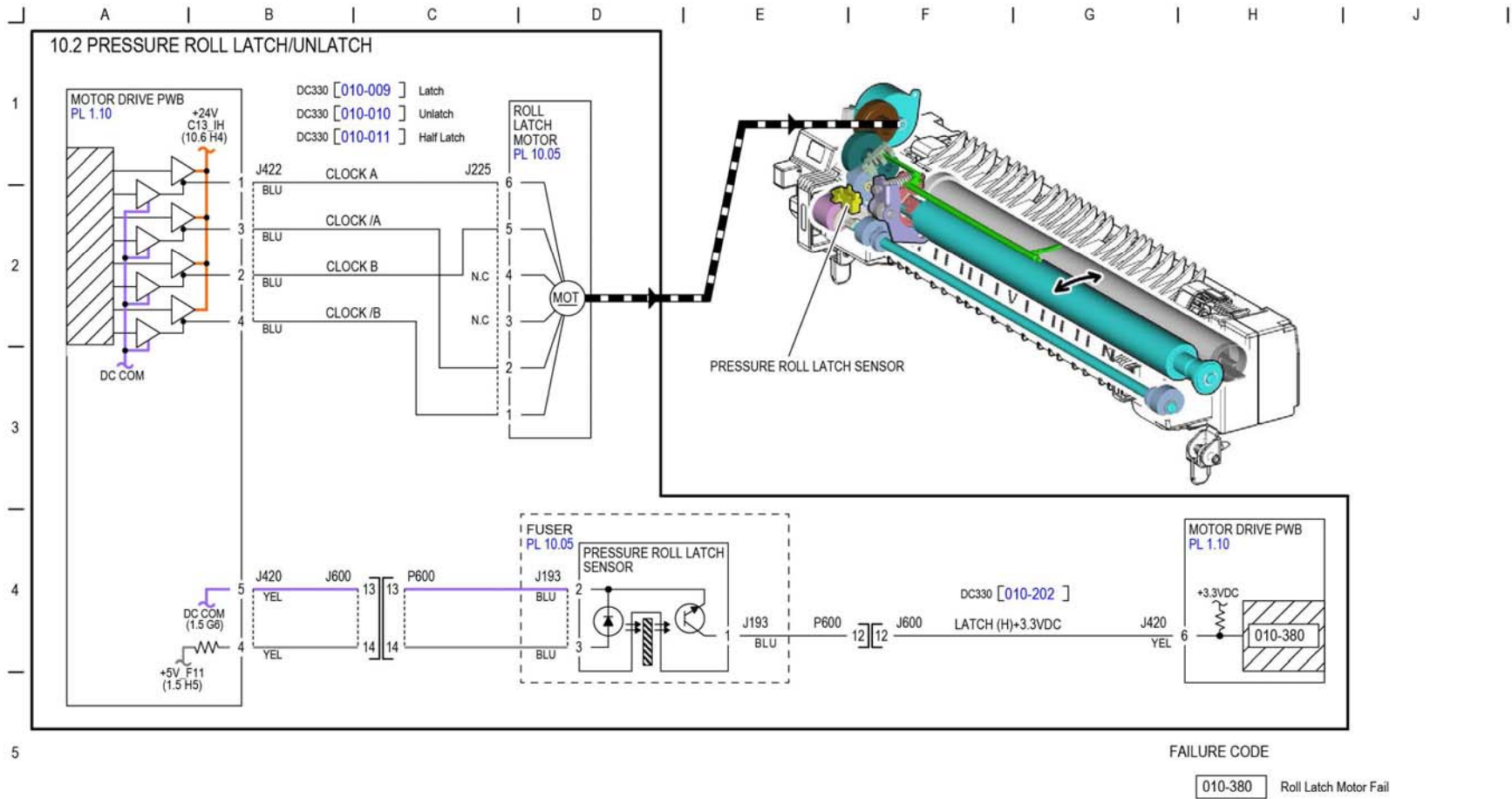


Figure 27 BSD 10.2

TF-1-0065-A

BSD 10.3 Fusing Heat (1 of 2)

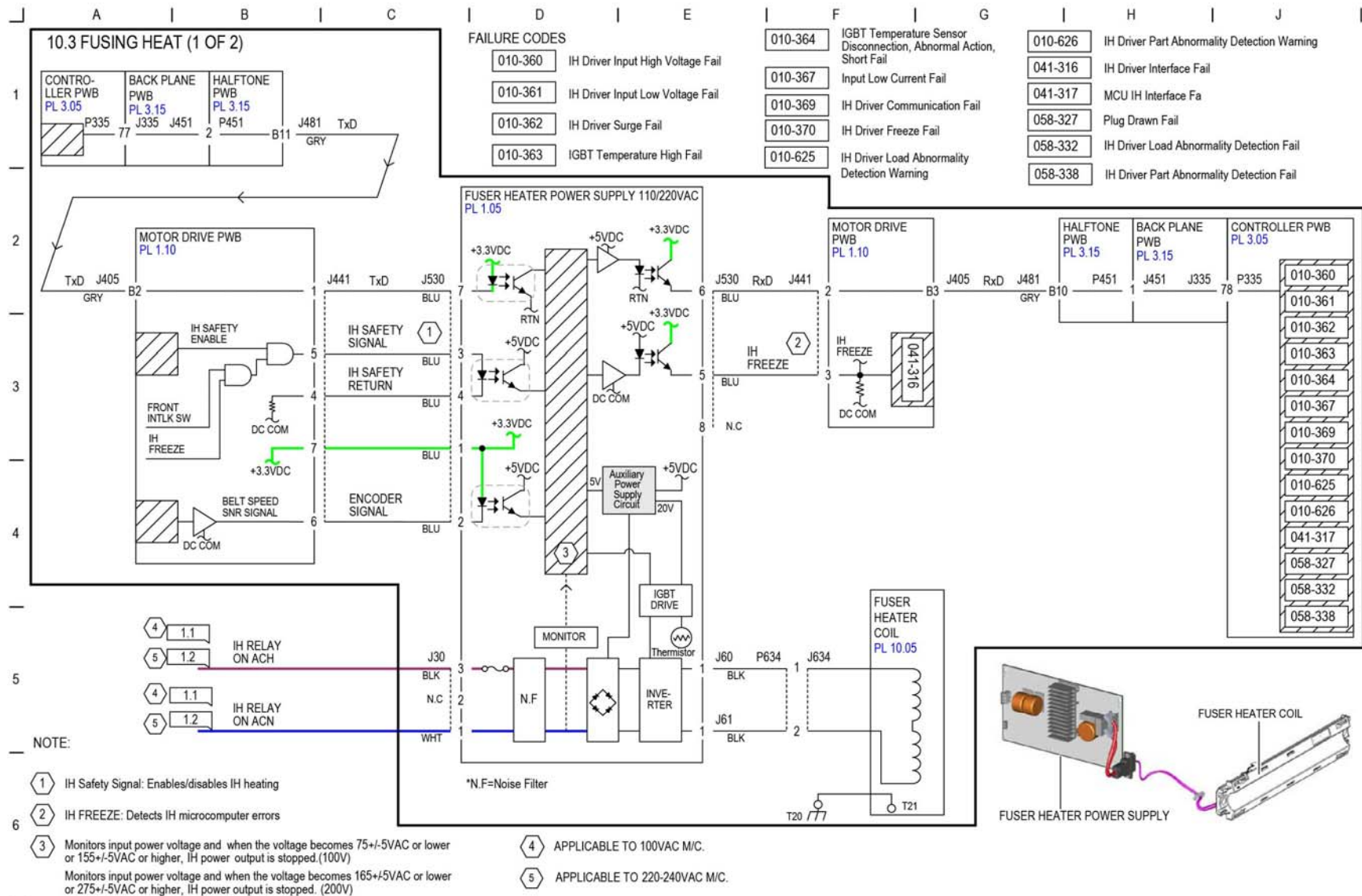
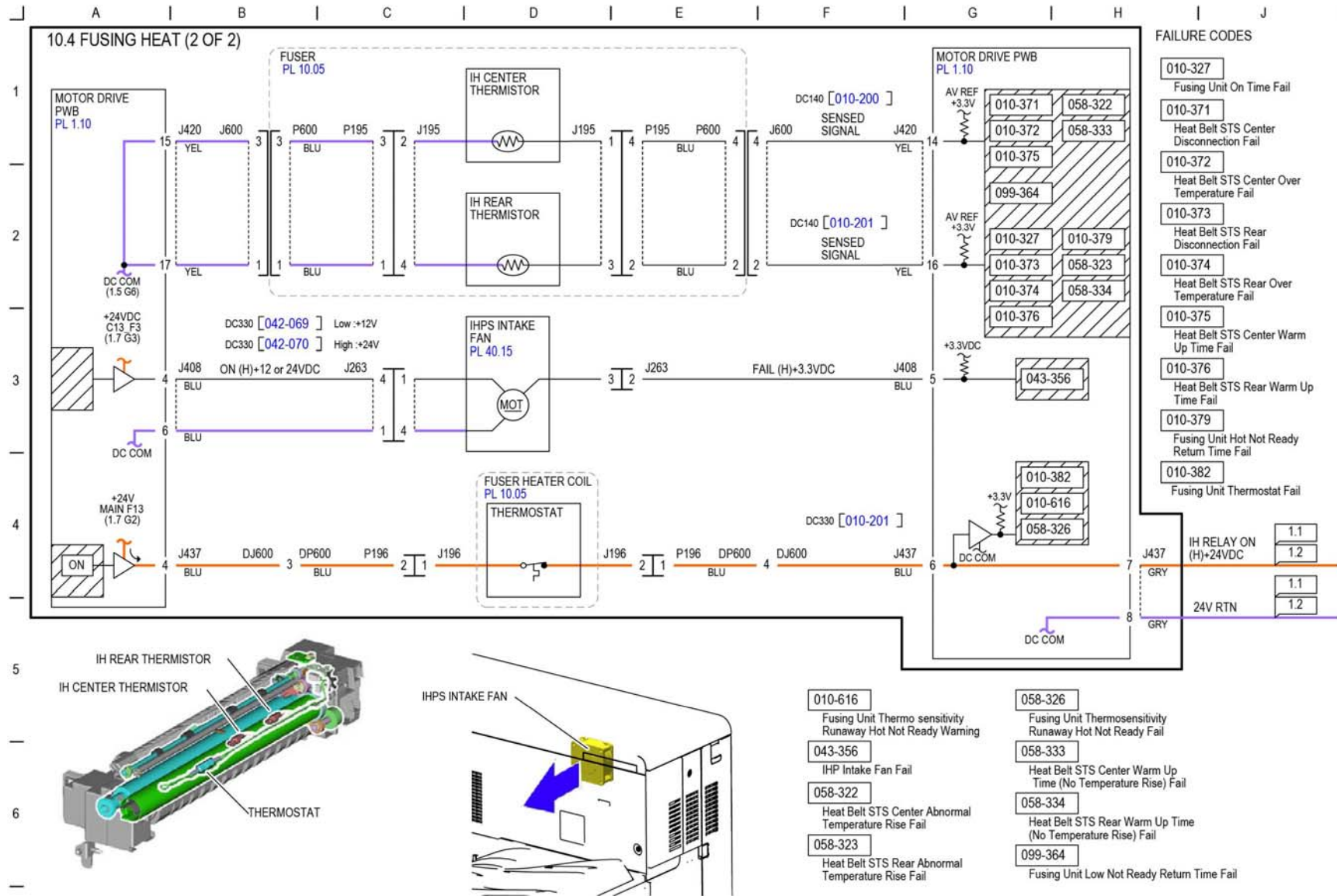


Figure 28 BSD 10.3

TF-1-0066-A

BSD 10.4 Fusing Heat (2 of 2)



TF-1-0067-A

Figure 29 BSD 10.4

BSD 10.5 Fusing

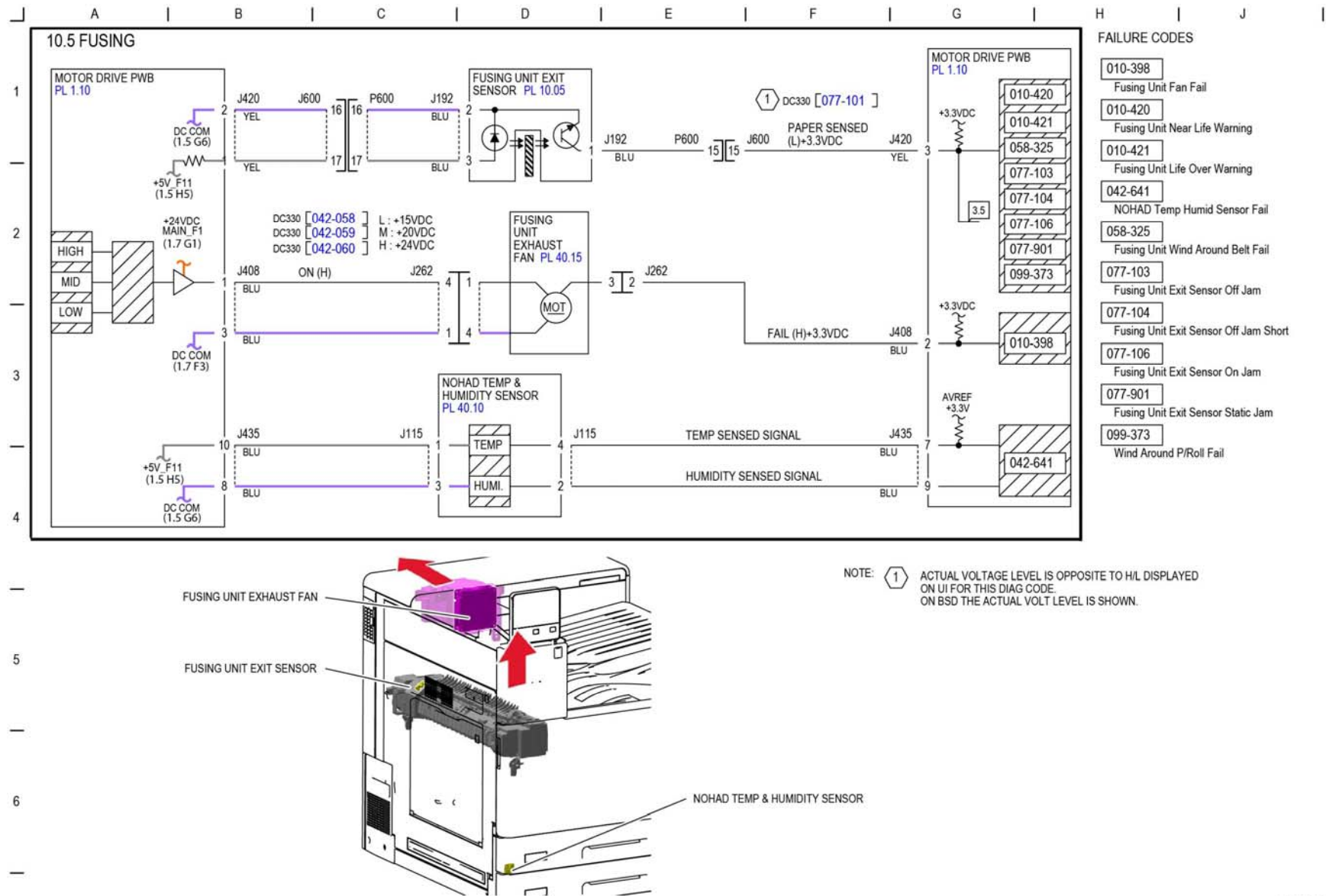
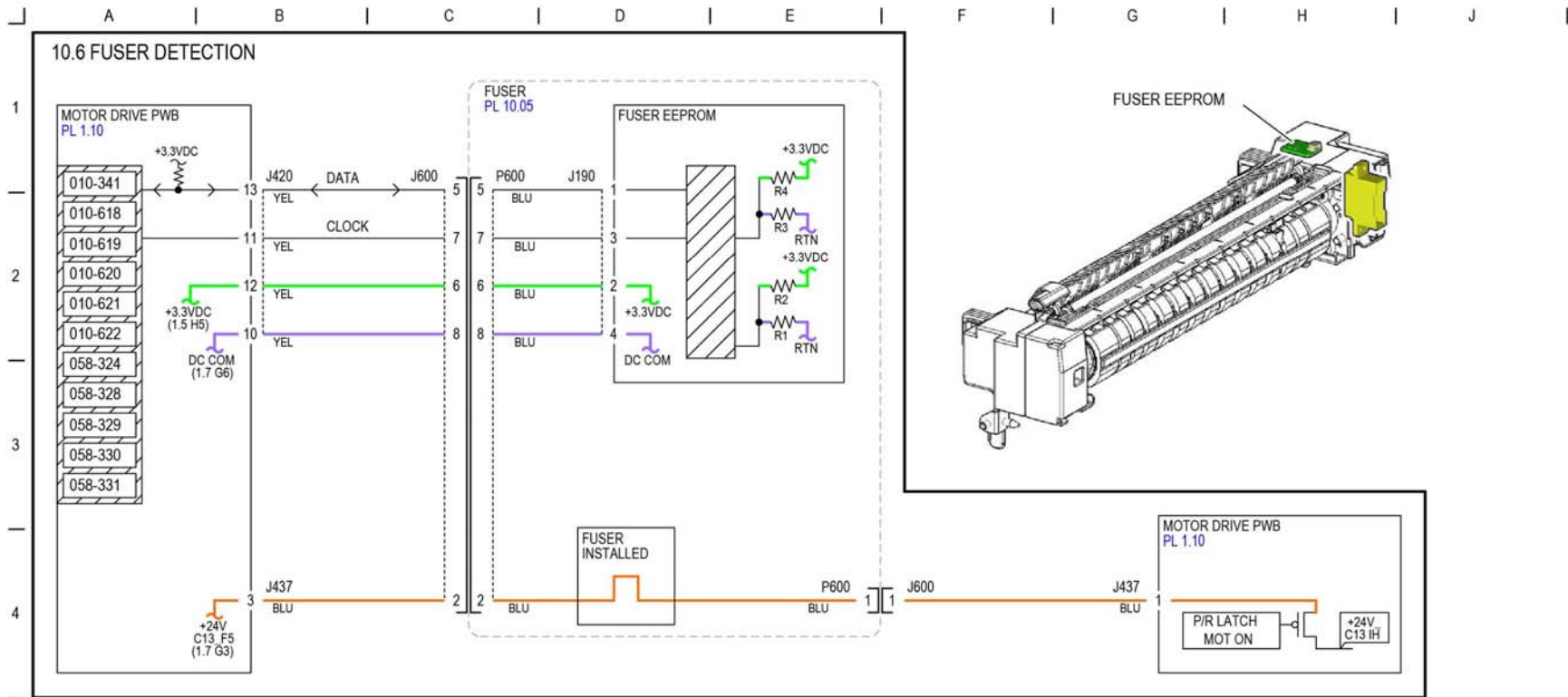


Figure 30 BSD 10.5

BSD 10.6 Fuser Detection



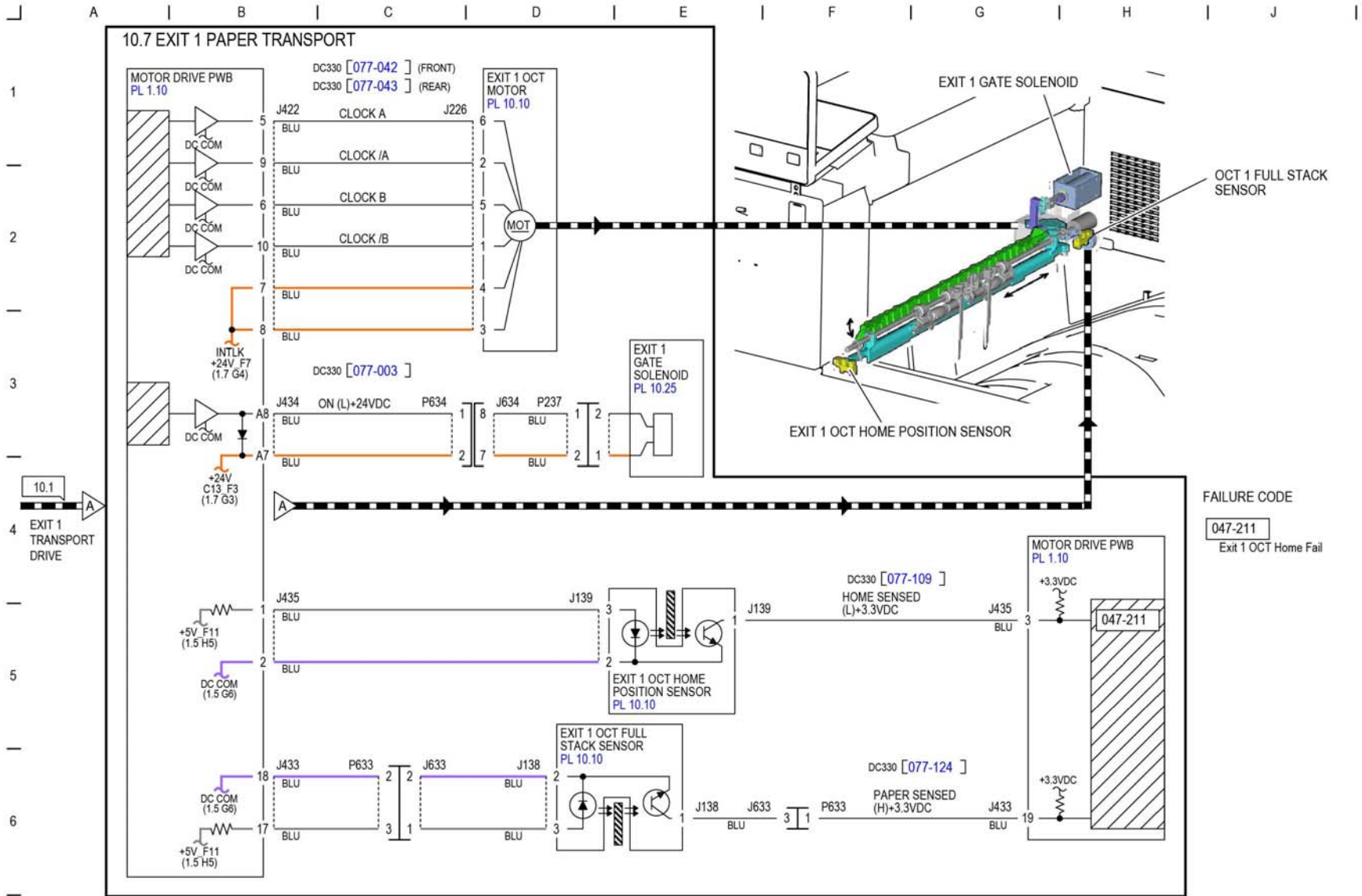
FAILURE CODES

- | | |
|---|---|
| 010-341
Fusing Unit Assy Illegal Fail | 058-324
Fusing Unit Non-Wearing Fail |
| 010-618
Fusing Unit E2PROM Write Limit Info | 058-328
Fusing Unit E2PROM I2C Master Communication Fail |
| 010-619
Fusing Unit E2PROM I2C Master Communication Info | 058-329
Fusing Unit E2PROM Data Mismatch |
| 010-620
Fusing Unit E2PROM Data Mismatch Info | 058-330
Fusing Unit E2PROM Not In Position |
| 010-621
Fusing Unit E2PROM Not In Position Info | 058-331
Fusing Unit E2PROM Data Broken |
| 010-622
Fusing Unit E2PROM Data Broken Info | |

TF-1-0069-A

Figure 31 BSD 10.6

BSD 10.7 Exit 1 Paper Transport



TF-1-0070-A

Figure 32 BSD 10.7

BSD 10.8 Duplex Paper Transport

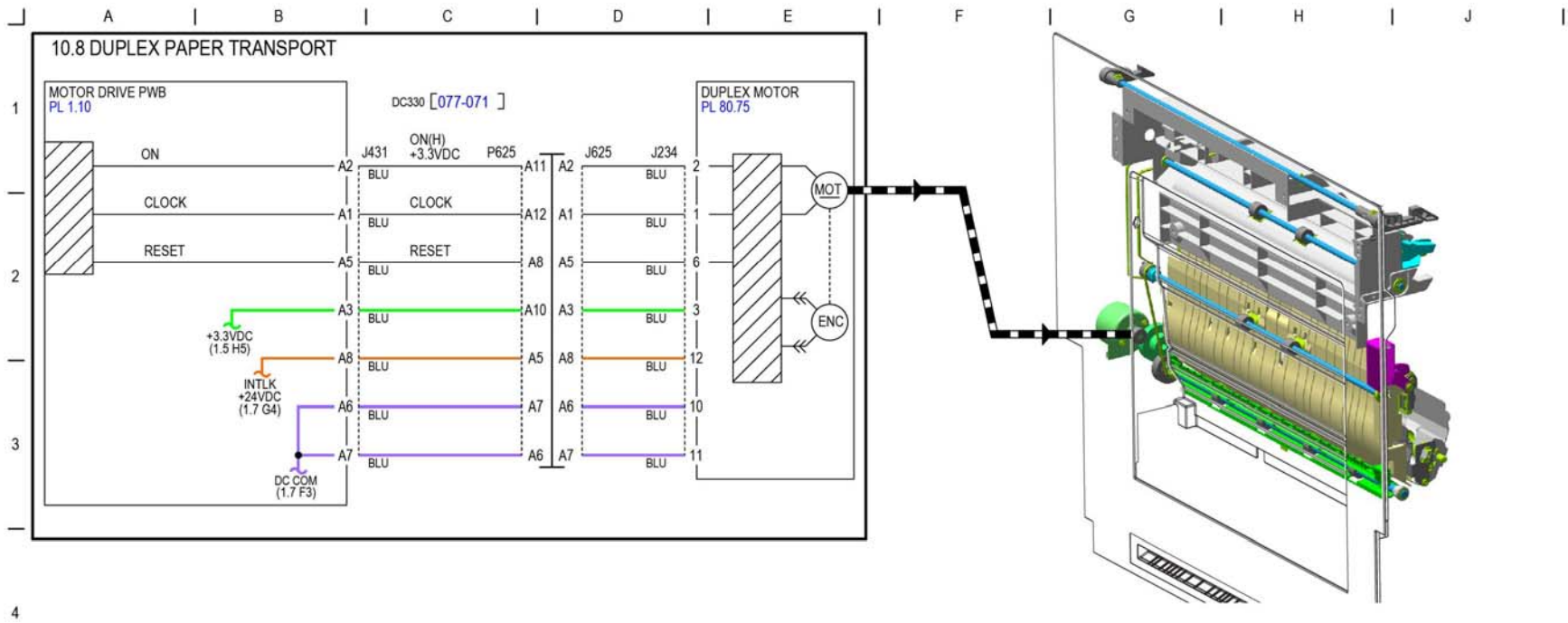
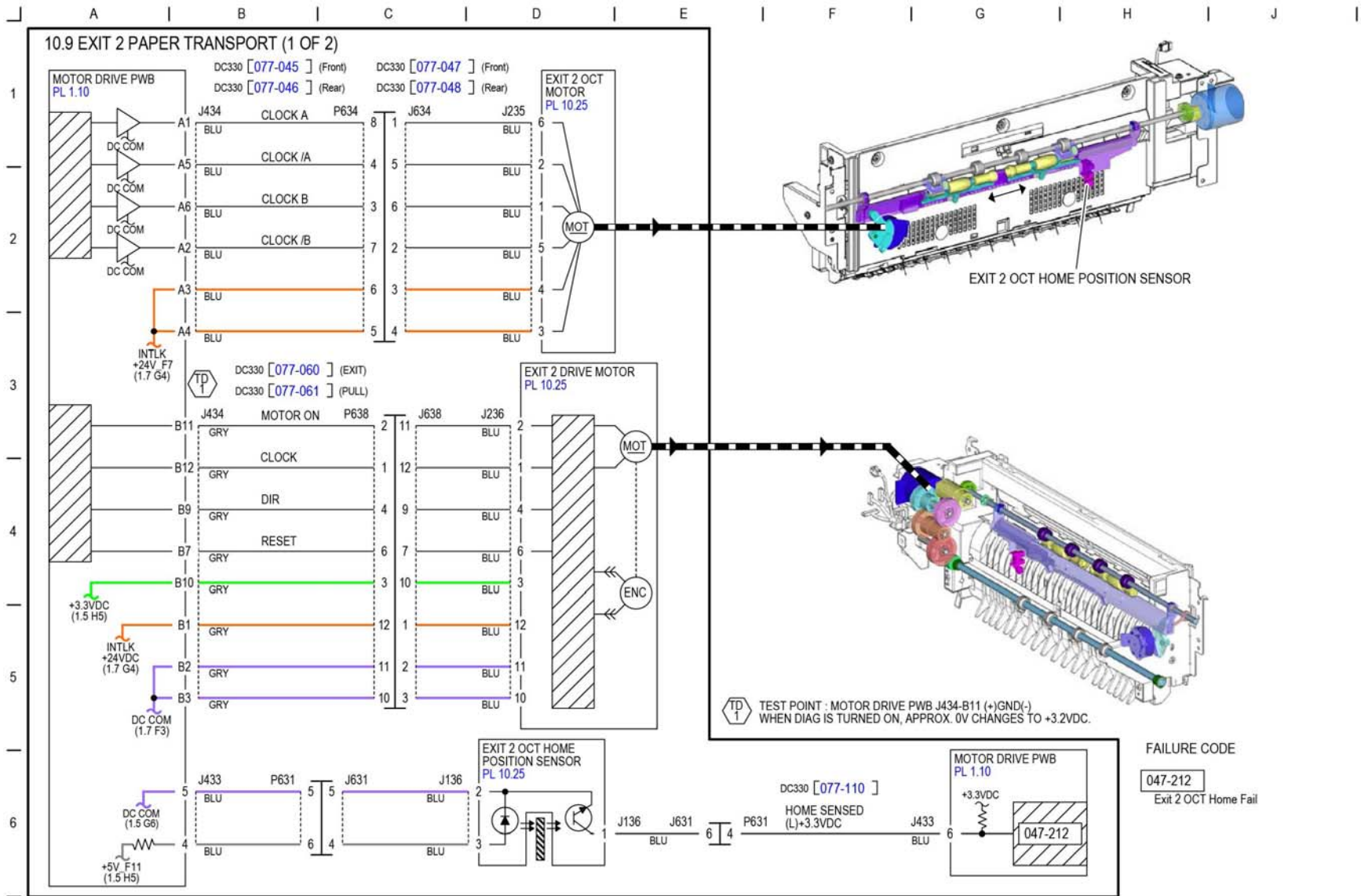


Figure 33 BSD 10.8

TF-1-0071-A

BSD 10.9 Exit 2 Paper Transport (1 of 2)



TF-1-0072-A

Figure 34 BSD 10.9

BSD 10.10 Exit 2 Paper Transport (2 of 2)

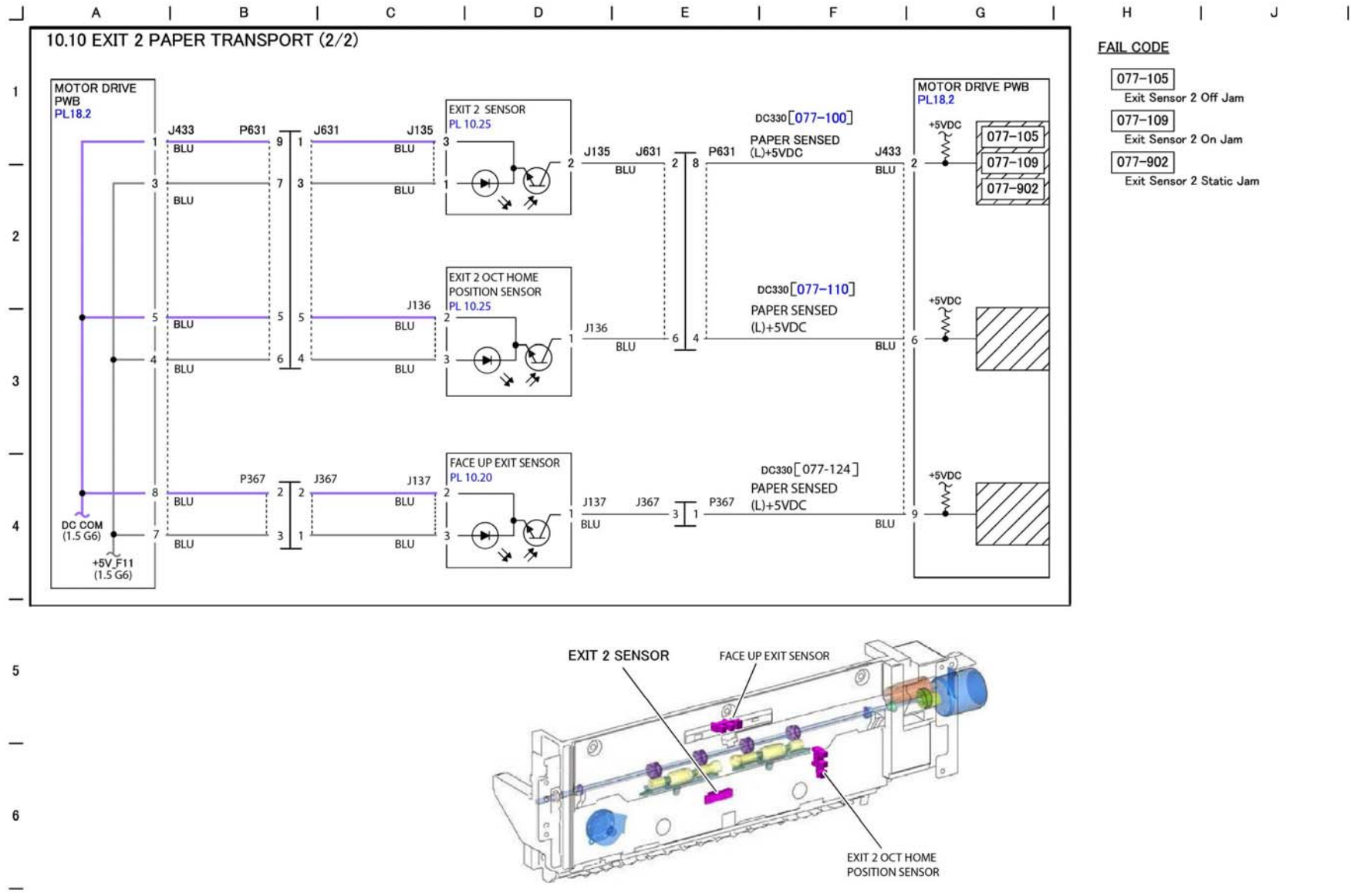
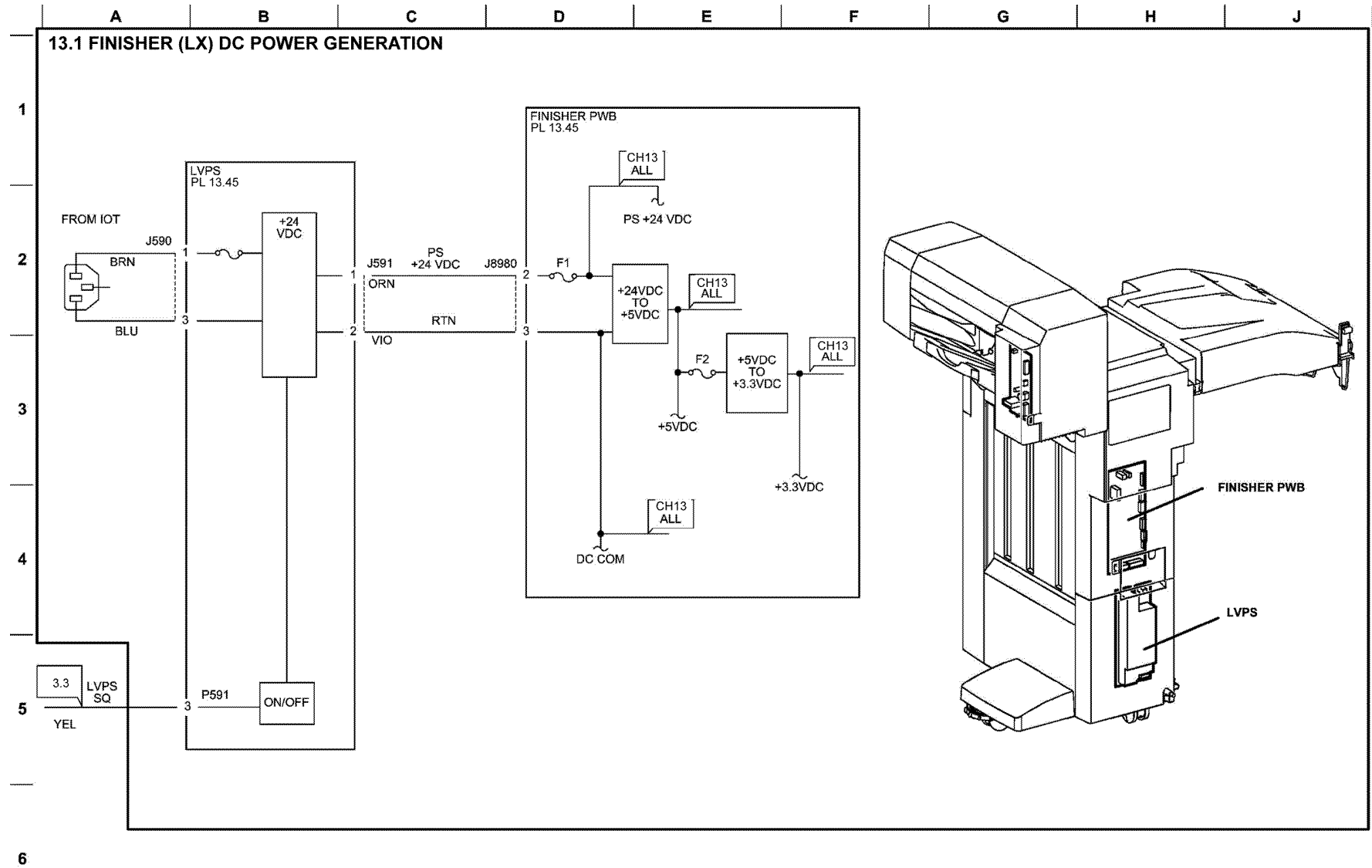


Figure 35 BSD 10.10

TF-1-0073-A

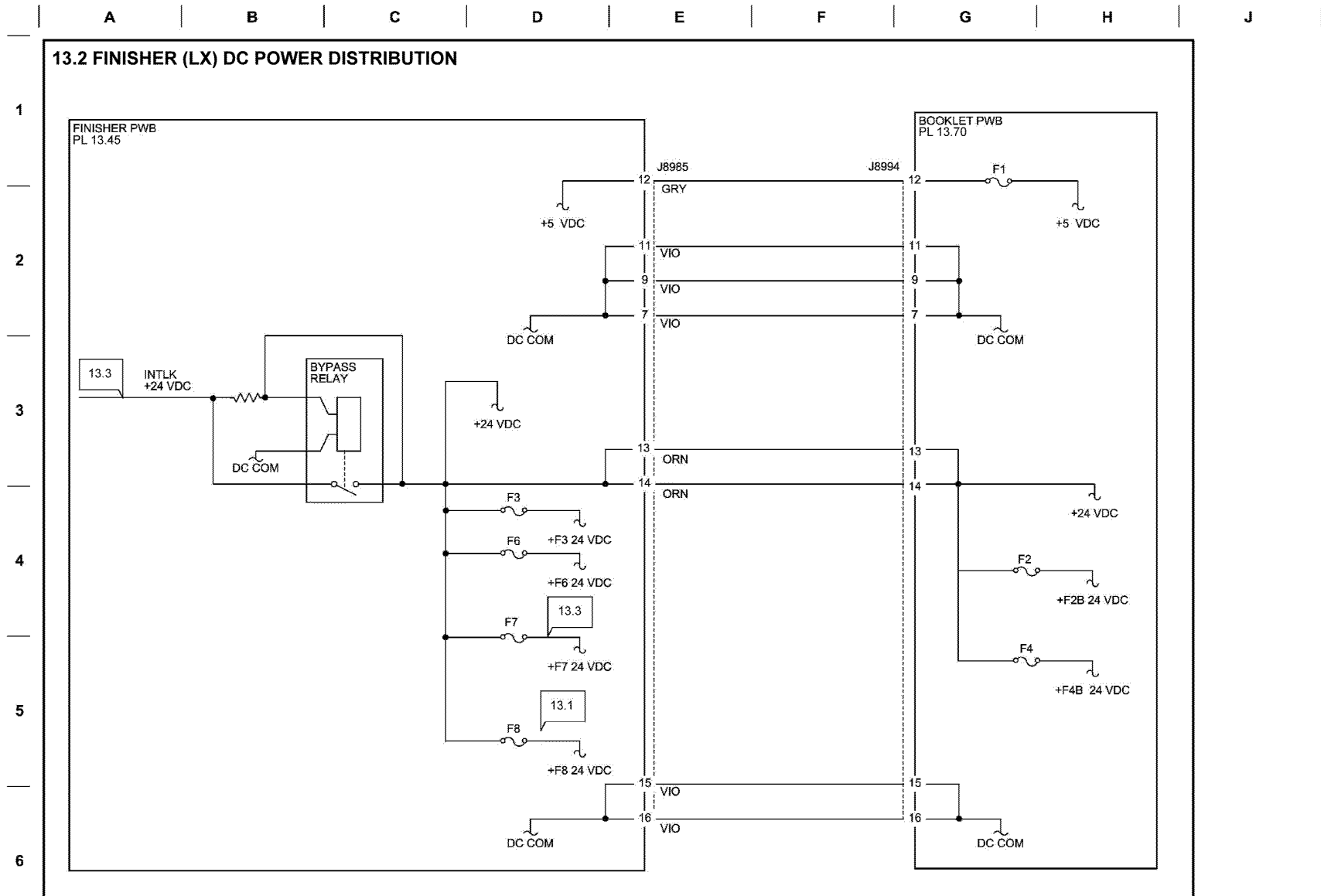
BSD 13.1 Office Finisher LX DC Power Generation



TF-1-0074-A

Figure 36 BSD 13.1

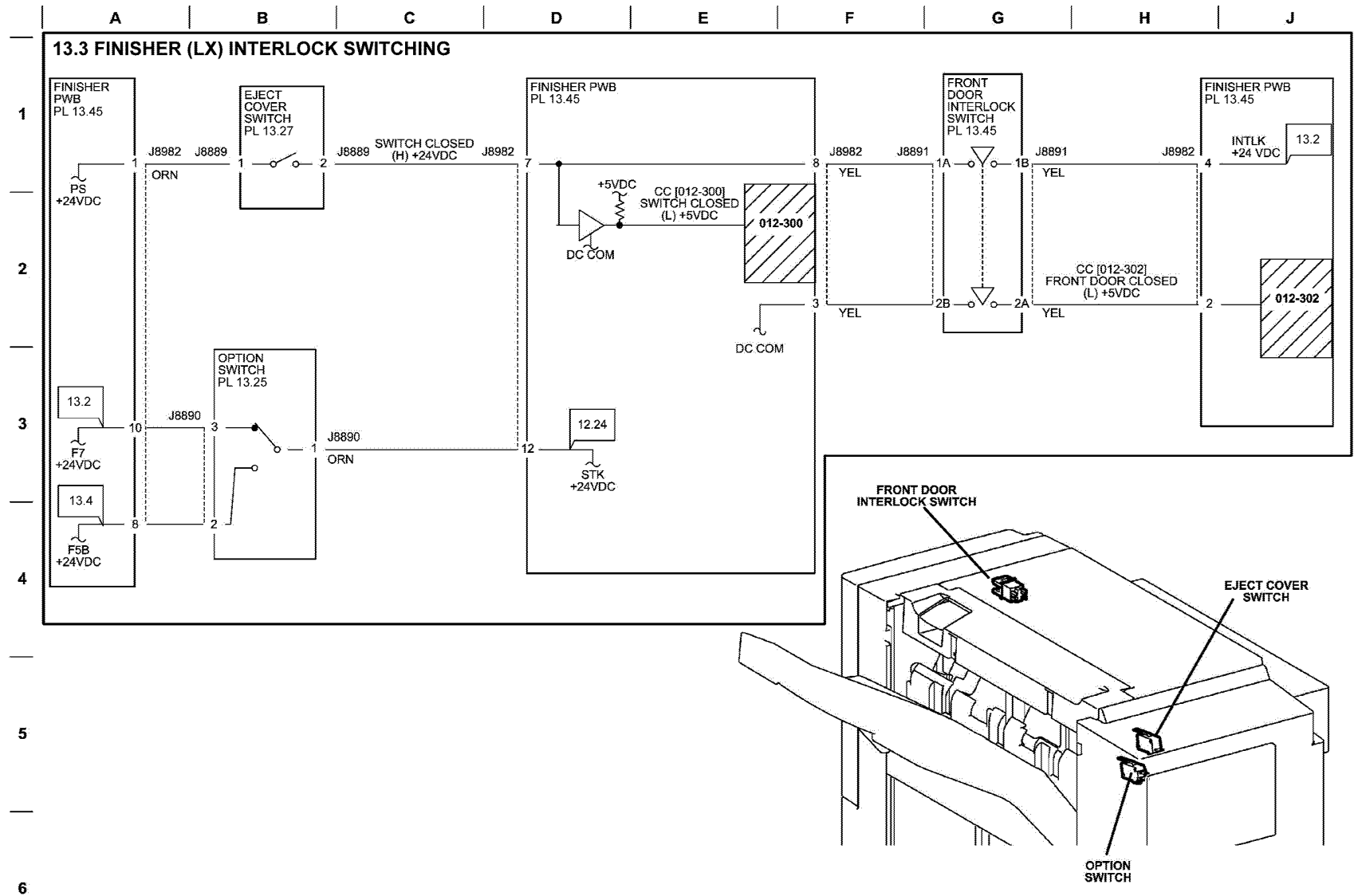
BSD 13.2 Office Finisher LX DC Power Distribution



TF-1-0075-A

Figure 37 BSD 13.2

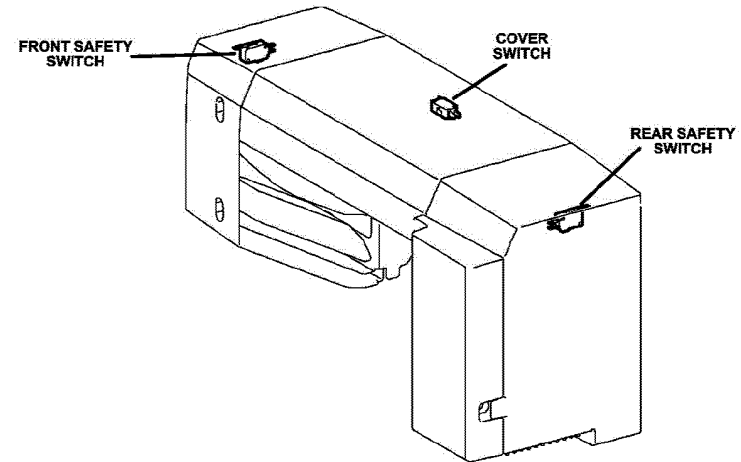
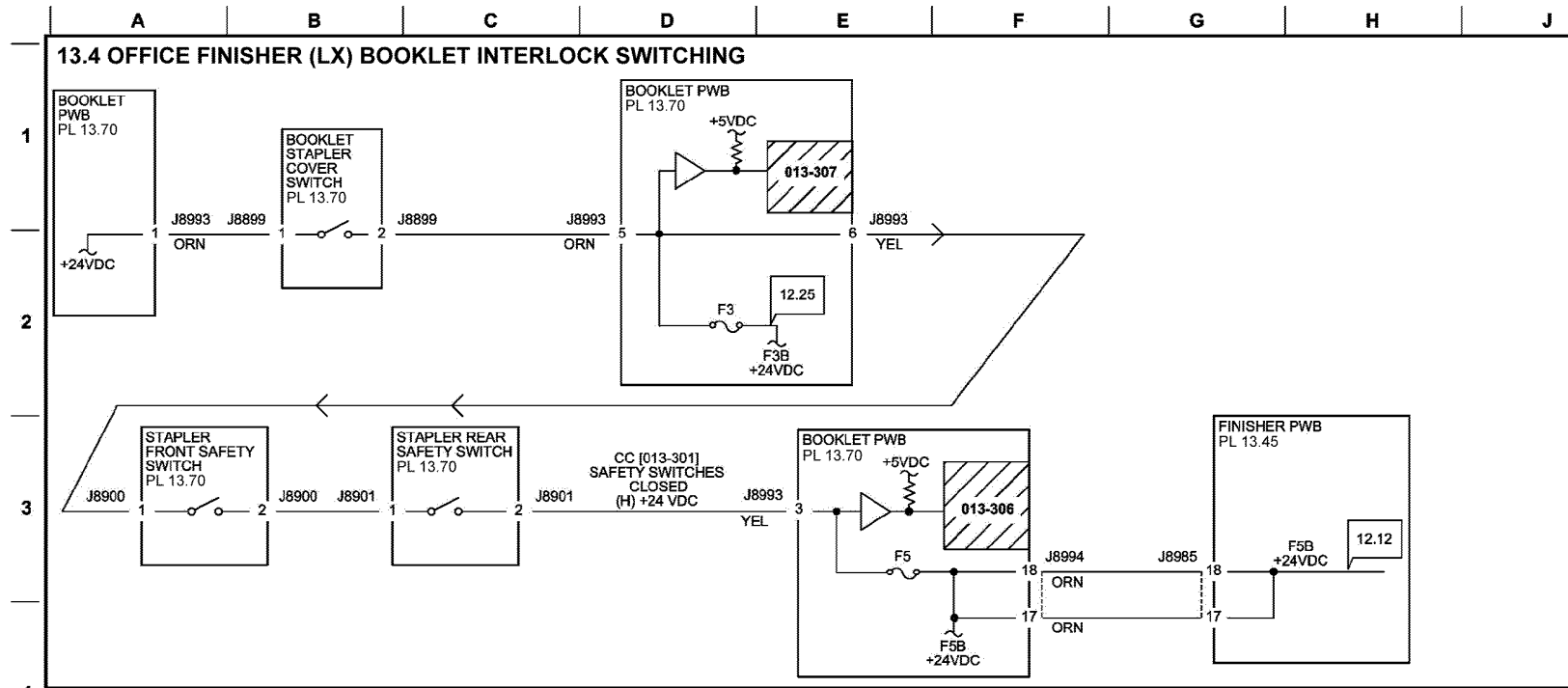
BSD 13.3 Office Finisher LX Interlock Switching



TF-1-0076-A

Figure 38 BSD 13.3

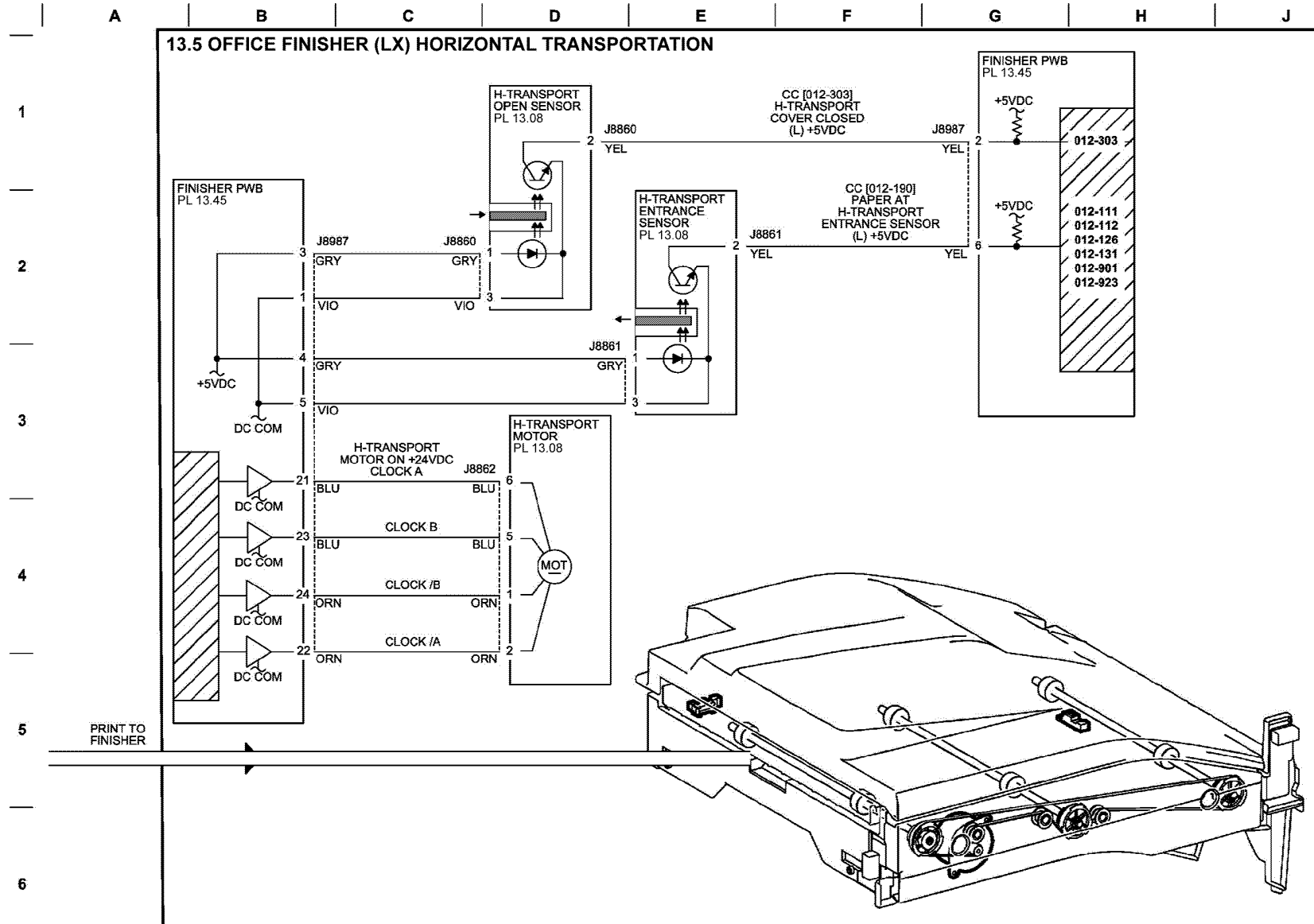
BSD 13.4 Office Finisher LX Booklet Interlock Switching



TF-1-0077-A

Figure 39 BSD 13.4

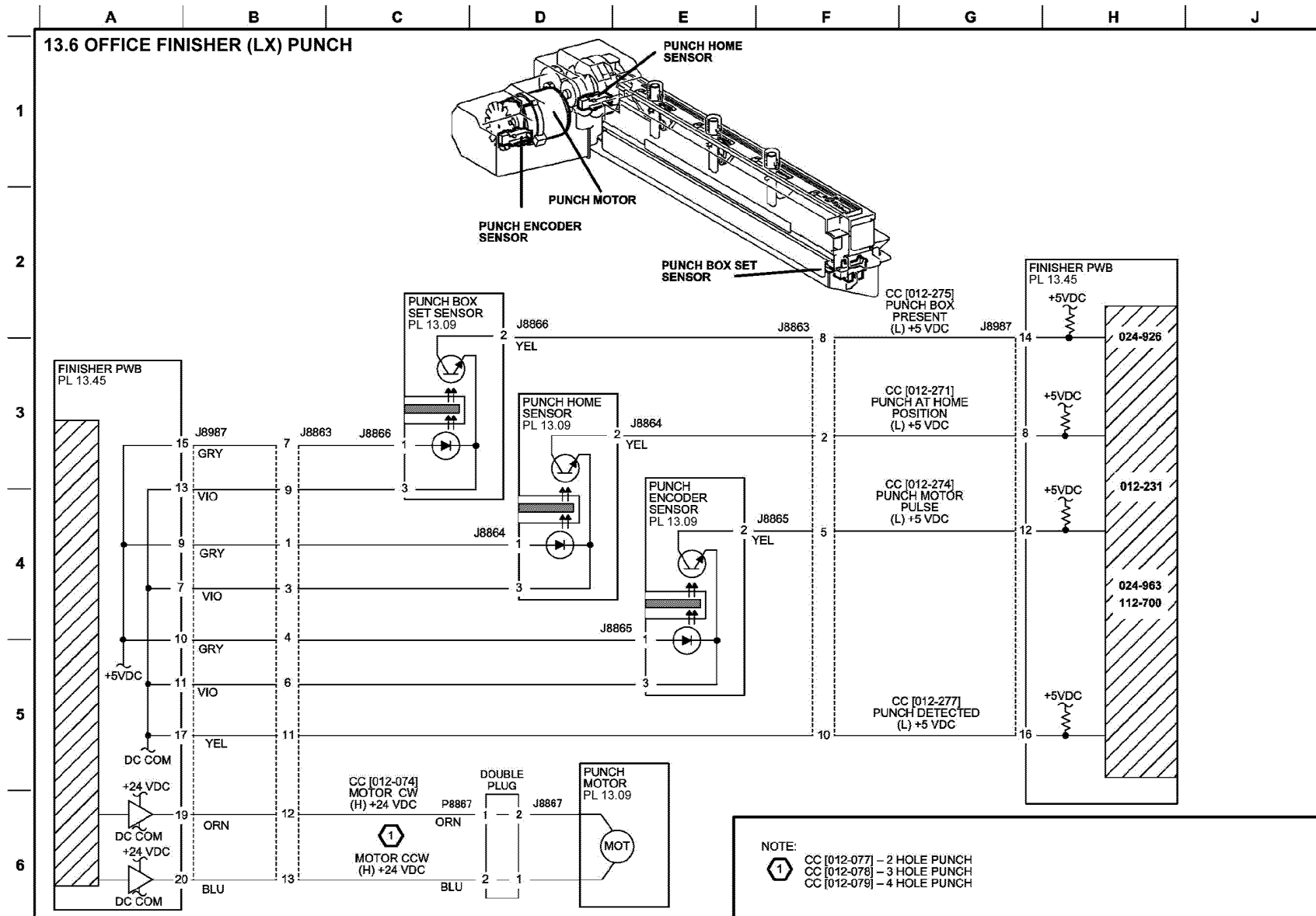
BSD 13.5 Office Finisher LX Horizontal Transport



TF-1-0078-A

Figure 40 BSD 13.5

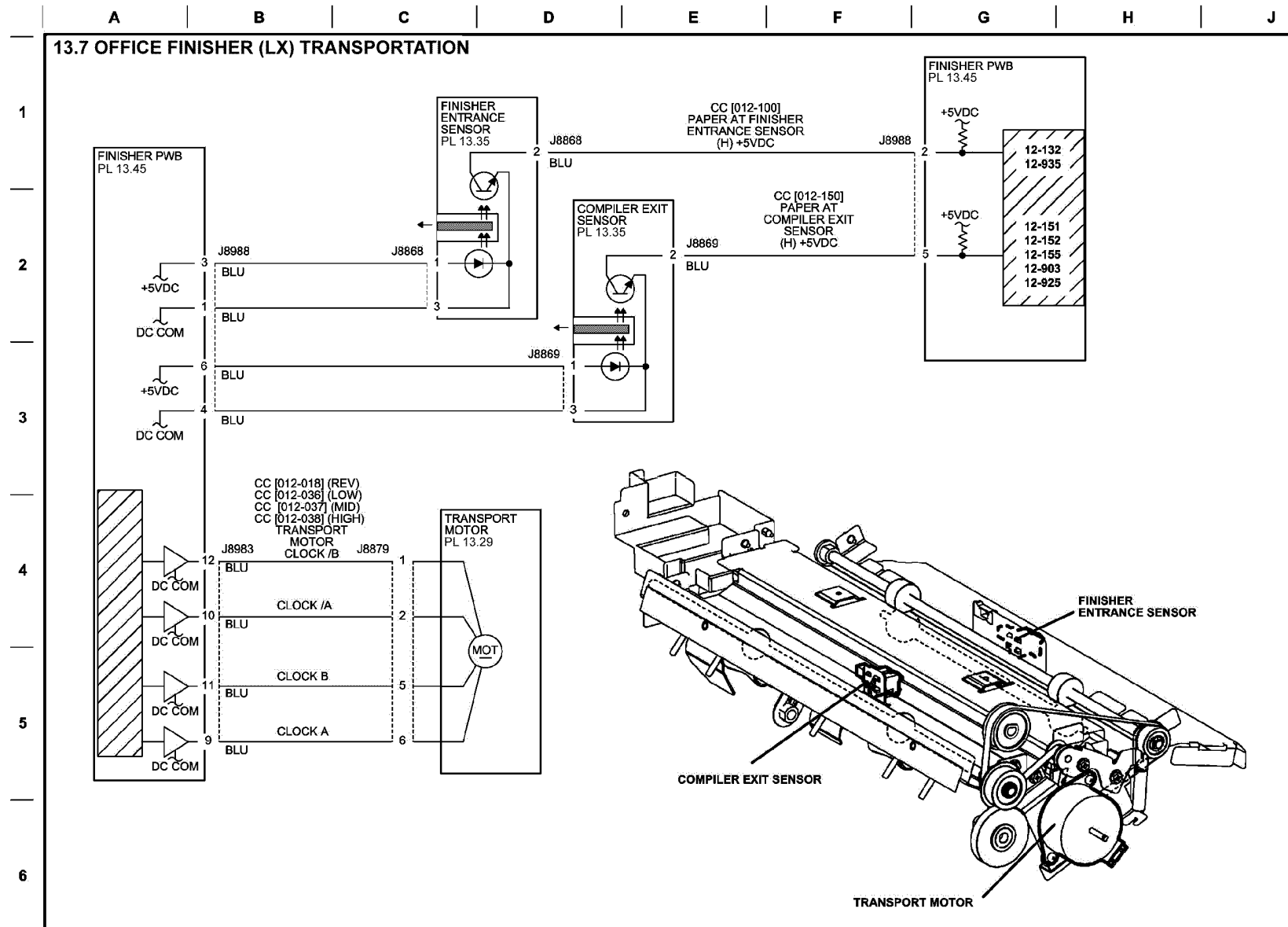
BSD 13.6 Office Finisher LX Punch



TF-1-0079-A

Figure 41 BSD 13.6

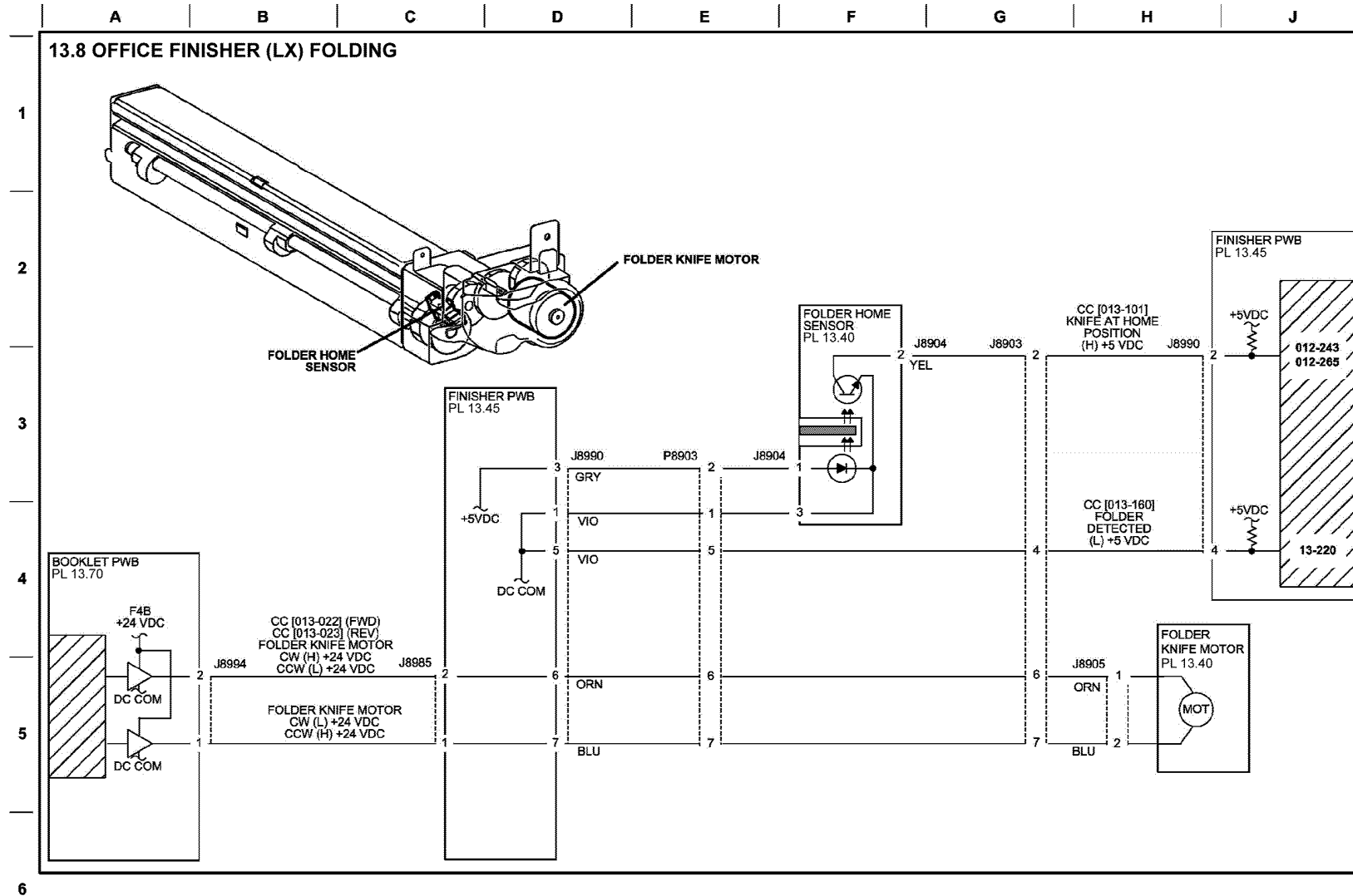
BSD 13.7 Office Finisher LX Transportation



TF-1-0080-A

Figure 42 BSD 13.7

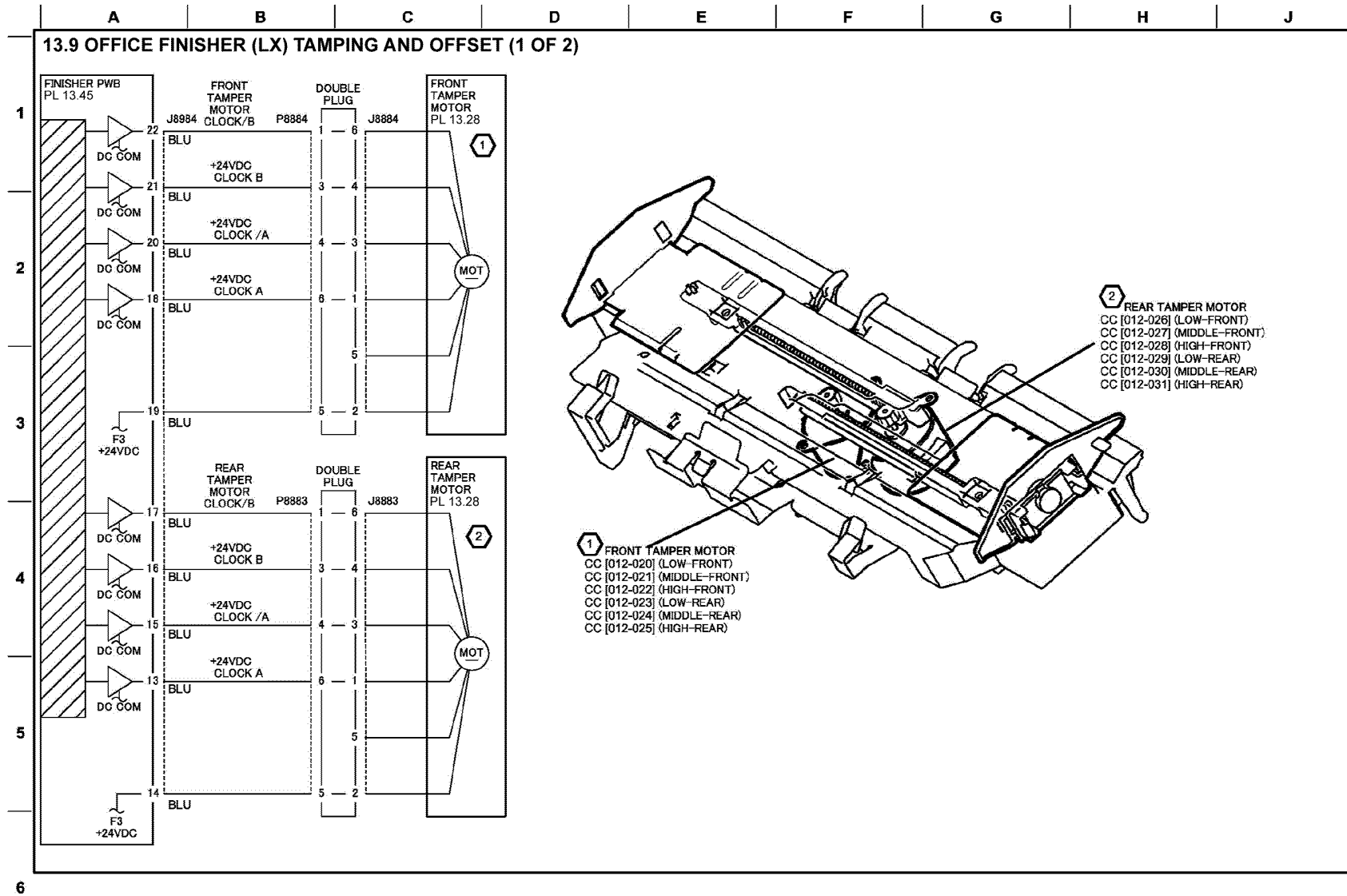
BSD 13.8 Office Finisher LX Folding



TF-1-0081-A

Figure 43 BSD 13.8

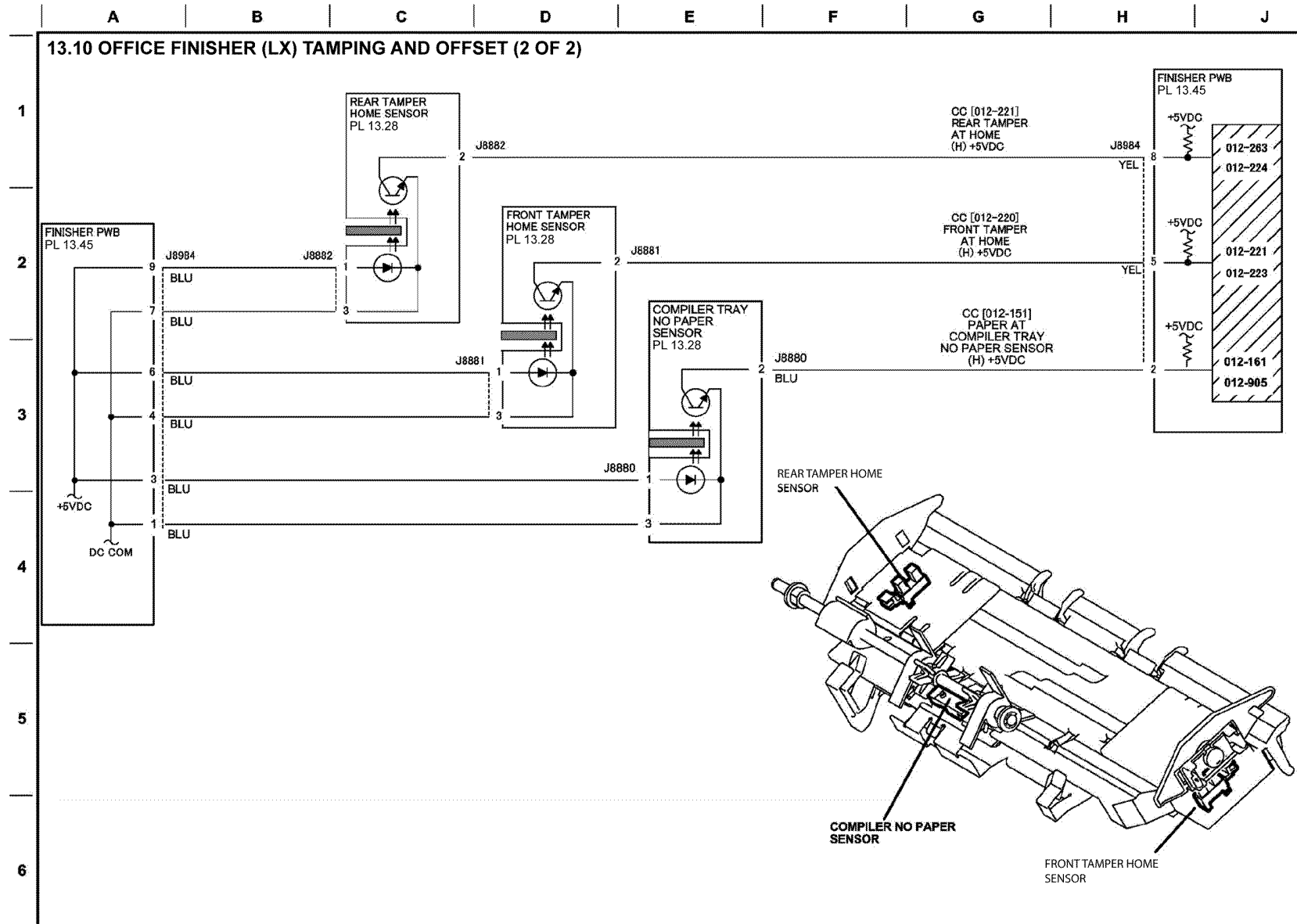
BSD 13.9 Office Finisher LX Tamping and Offset (1 of 2)



TF-1-0082-A

Figure 44 BSD 13.9

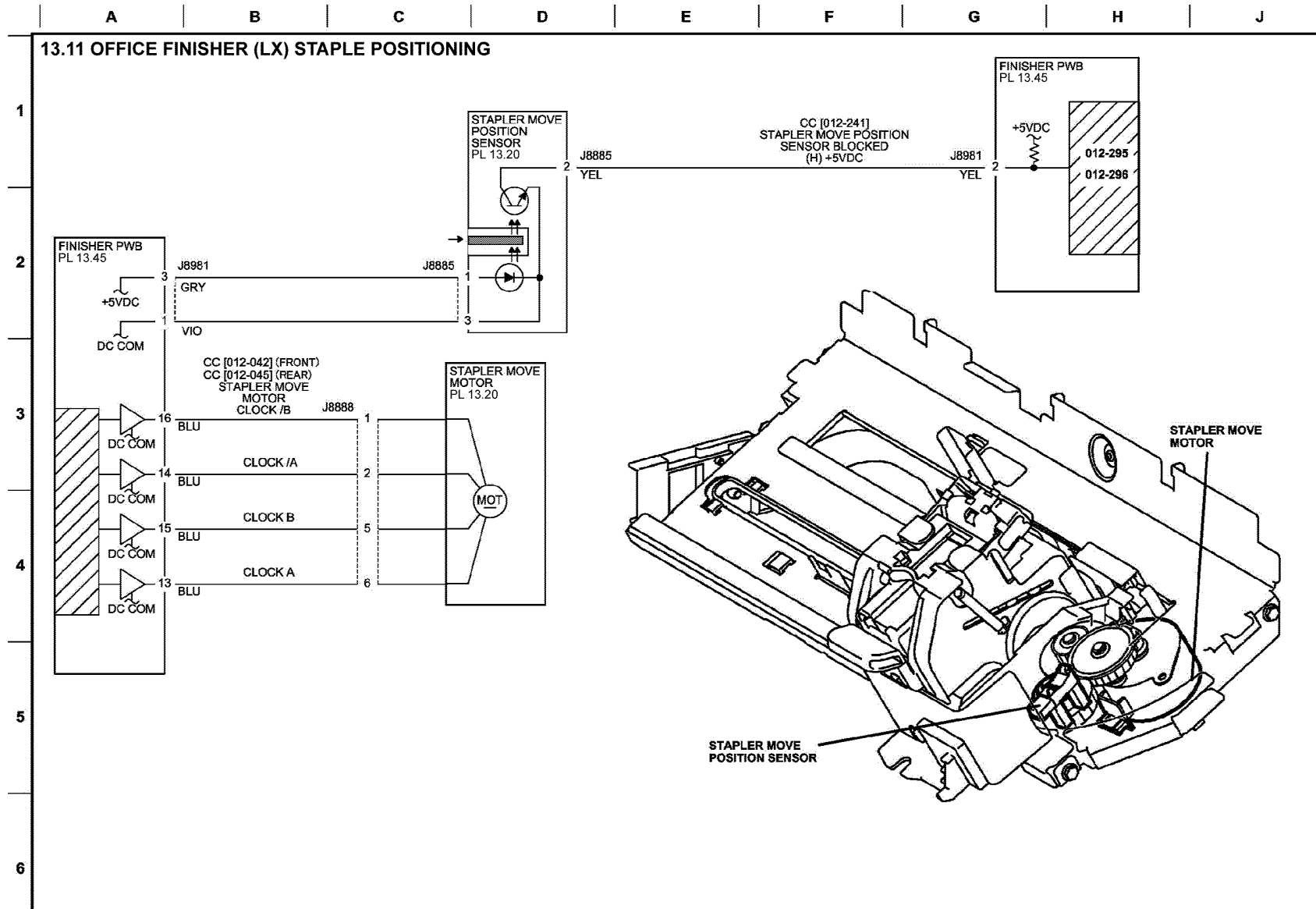
BSD 13.10 Office Finisher LX Tamping and Offset (2 of 2)



TF-1-0083-A

Figure 45 BSD 13.10

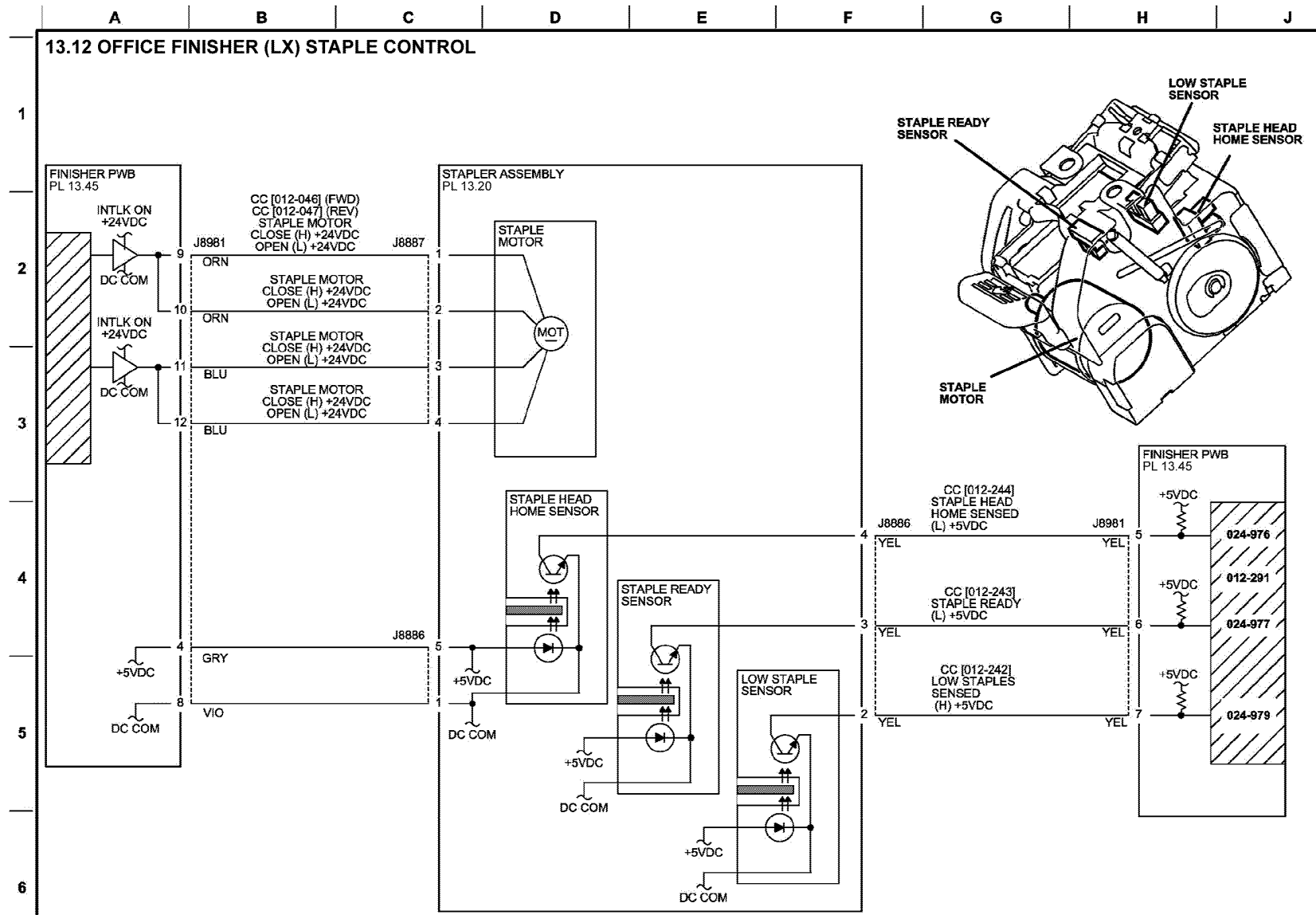
BSD 13.11 Office Finisher LX Staple Positioning



TF-1-0084-A

Figure 46 BSD 13.11

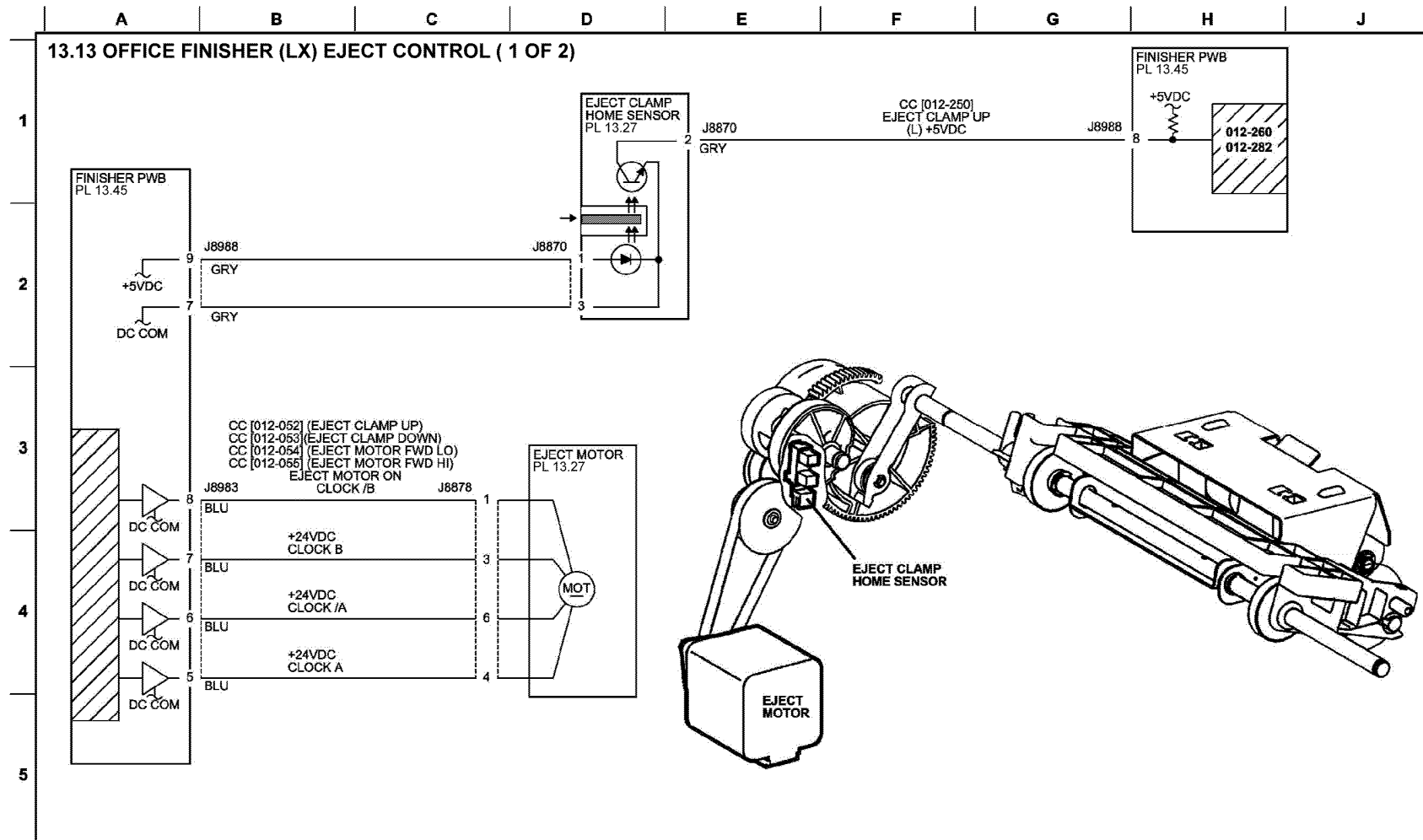
BSD 13.12 Office Finisher LX Staple Control



TF-1-0085-A

Figure 47 BSD 13.12

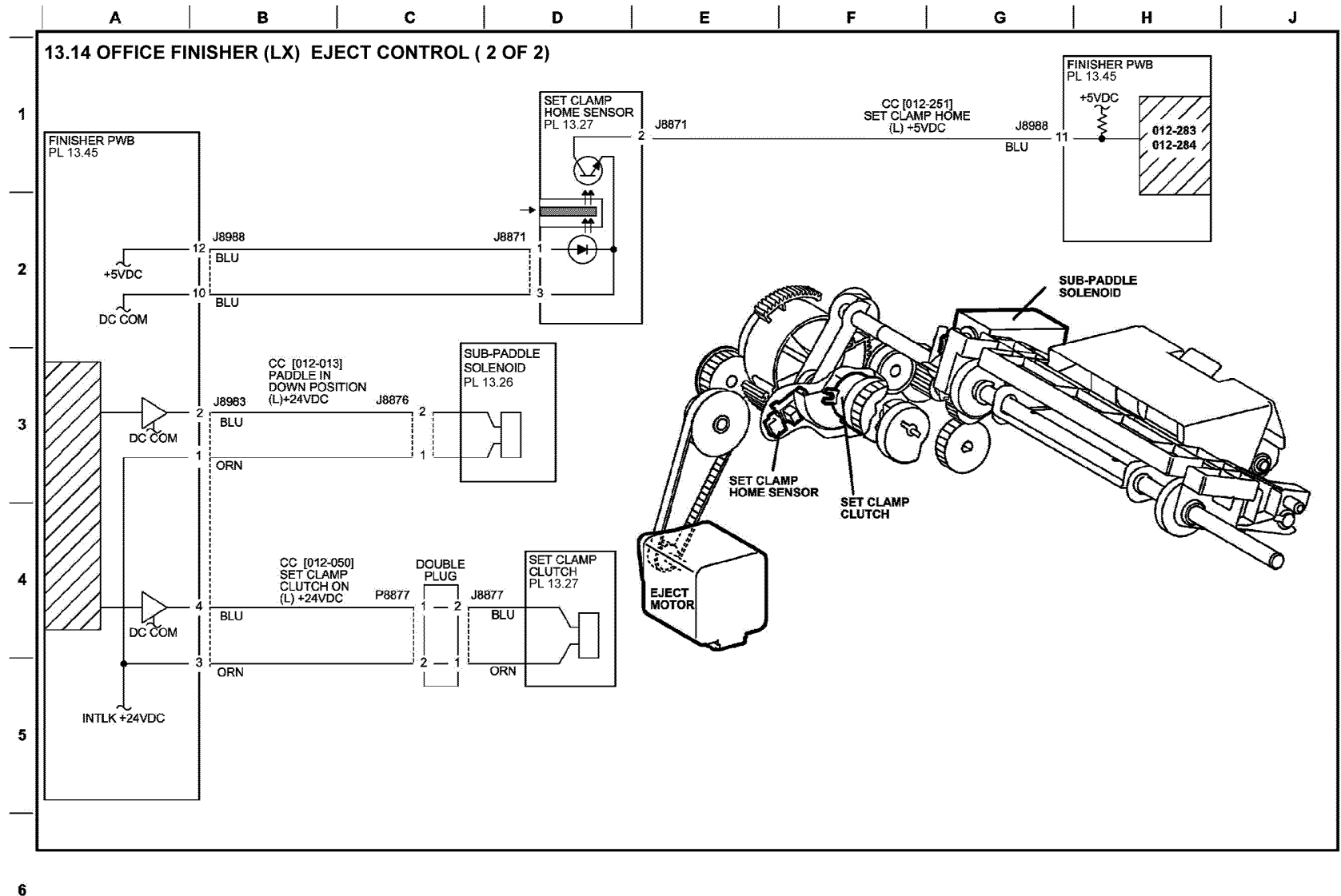
BSD 13.13 Office Finisher LX Eject Control (1 of 2)



TF-1-0086-A

Figure 48 BSD 13.13

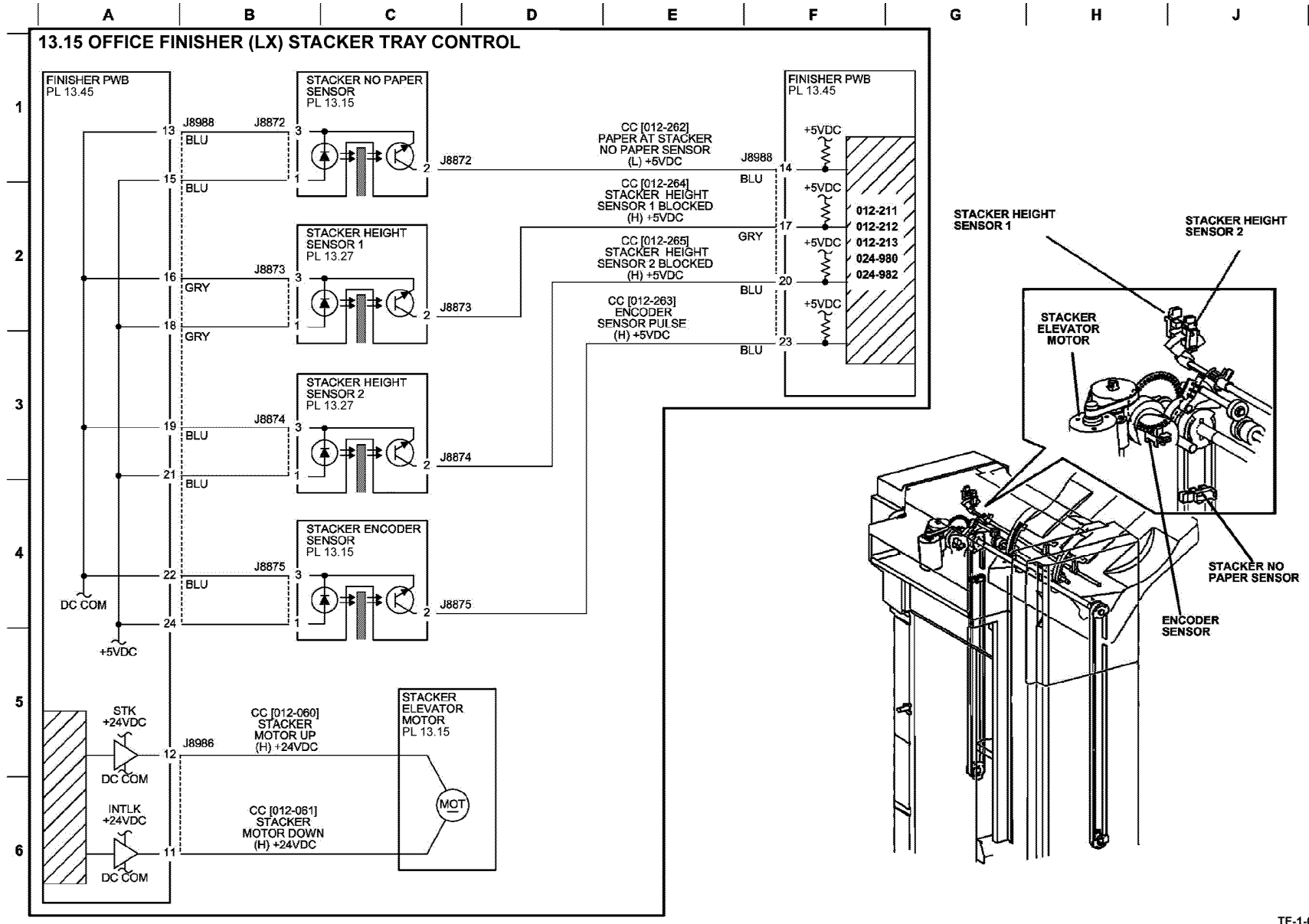
BSD 13.14 Office Finisher LX Eject Control (2 of 2)



TF-1-0087-A

Figure 49 BSD 13.14

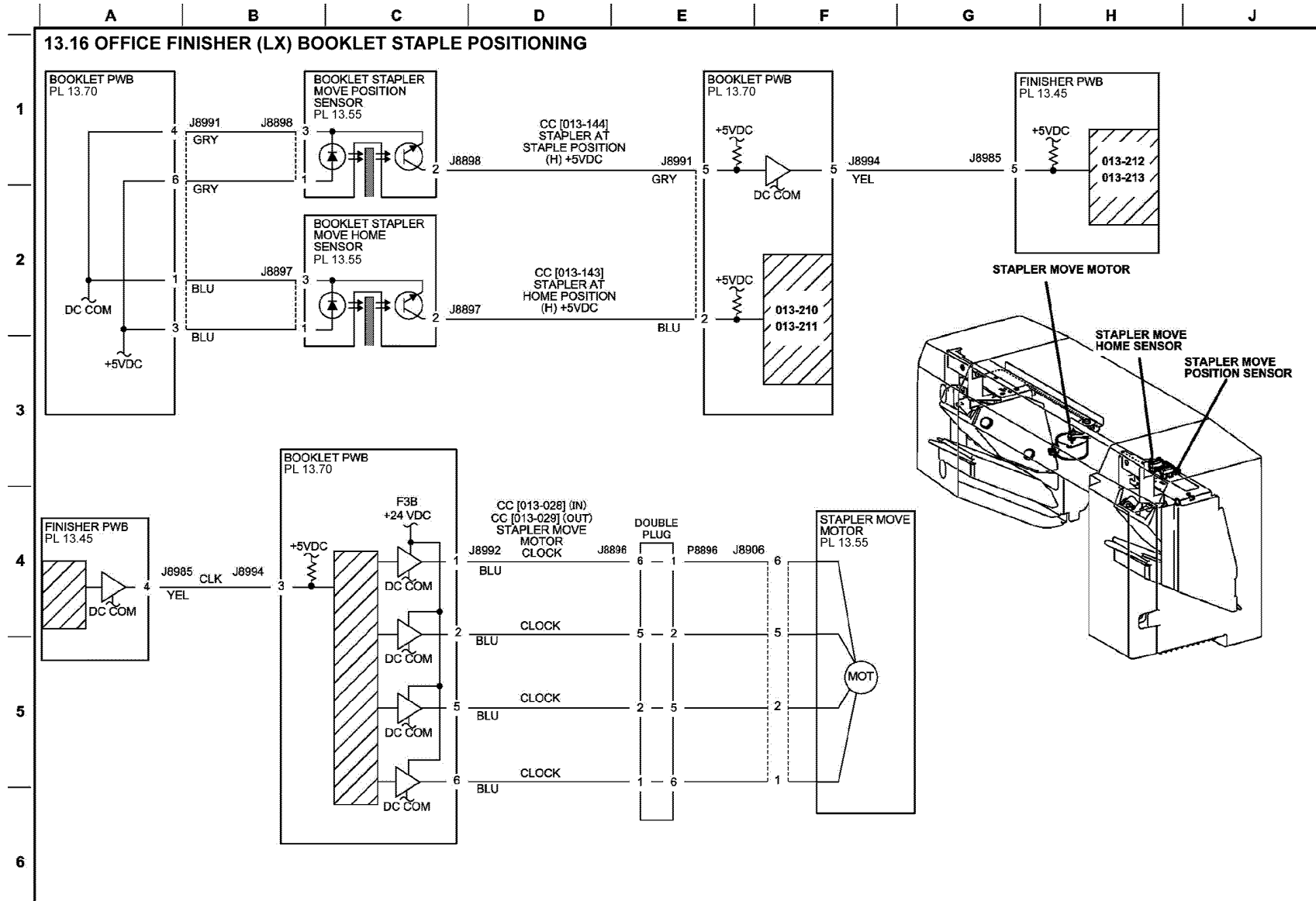
BSD 13.15 Office Finisher LX Stacker Tray Control



TF-1-0088-A

Figure 50 BSD 13.15

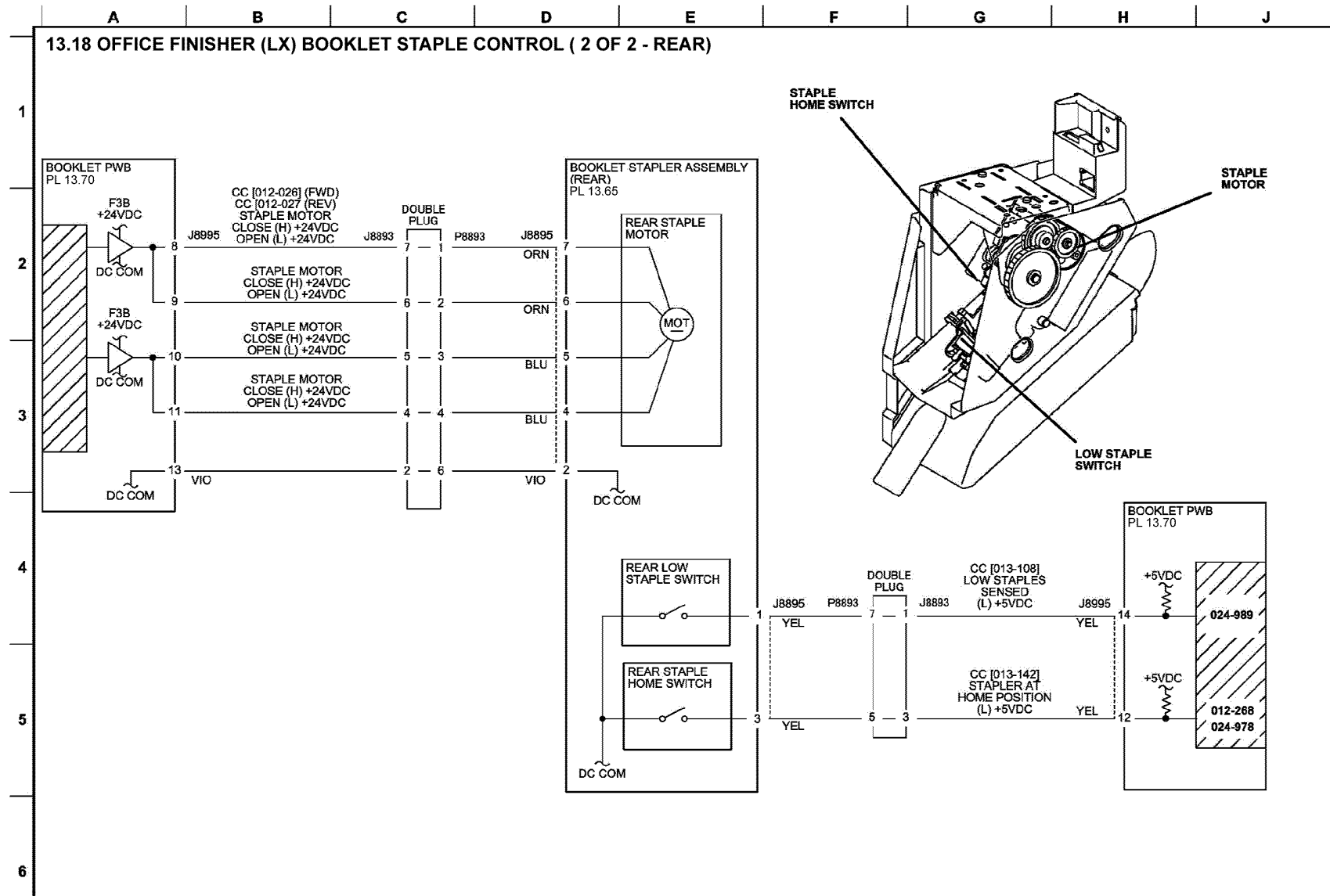
BSD 13.16 Office Finisher LX Booklet Staple Positioning



TF-1-0089-A

Figure 51 BSD 13.16

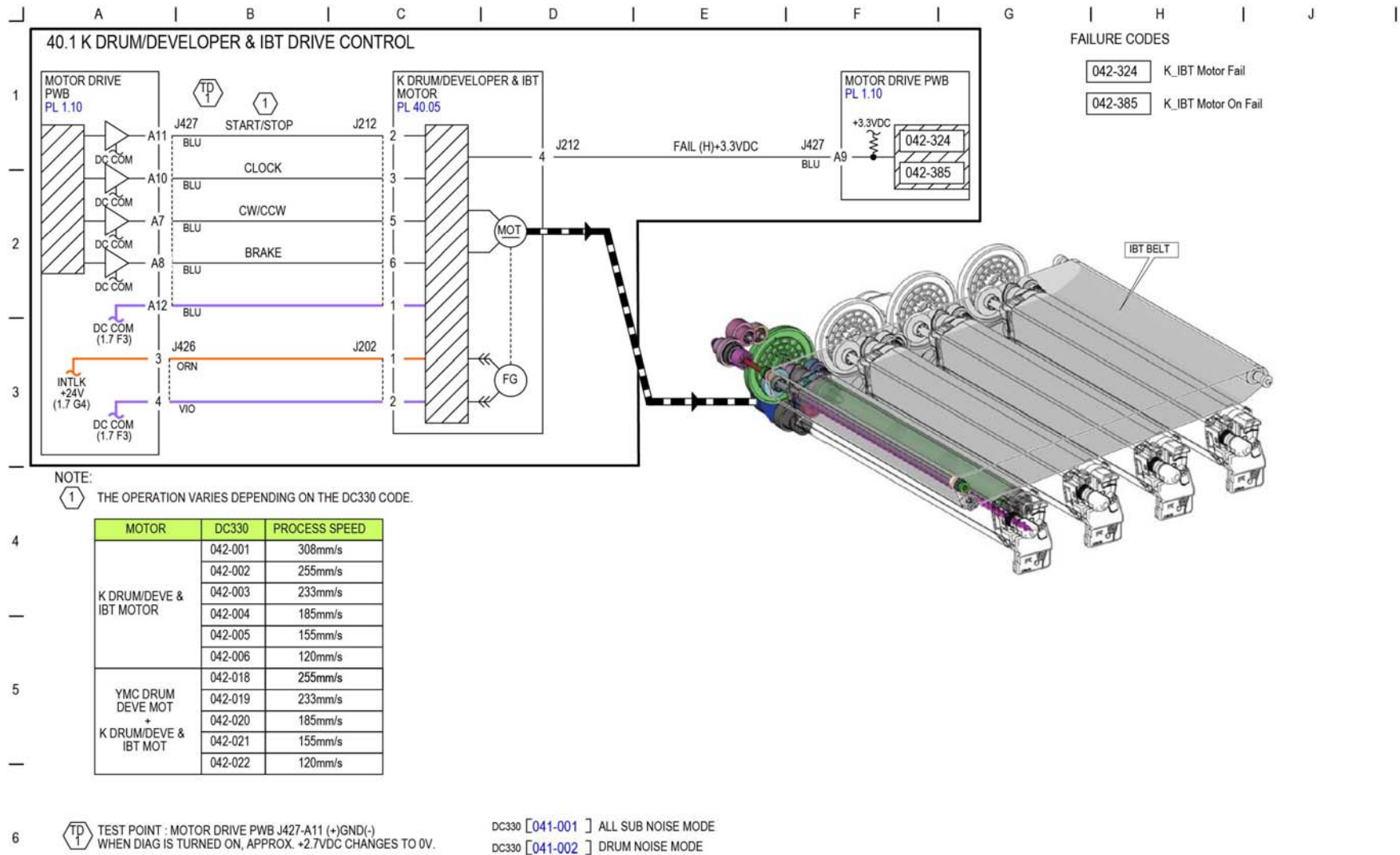
BSD 13.18 Office Finisher LX Booklet Staple Control (2 of 2 - Rear)



TF-1-0091-A

Figure 53 BSD 13.18

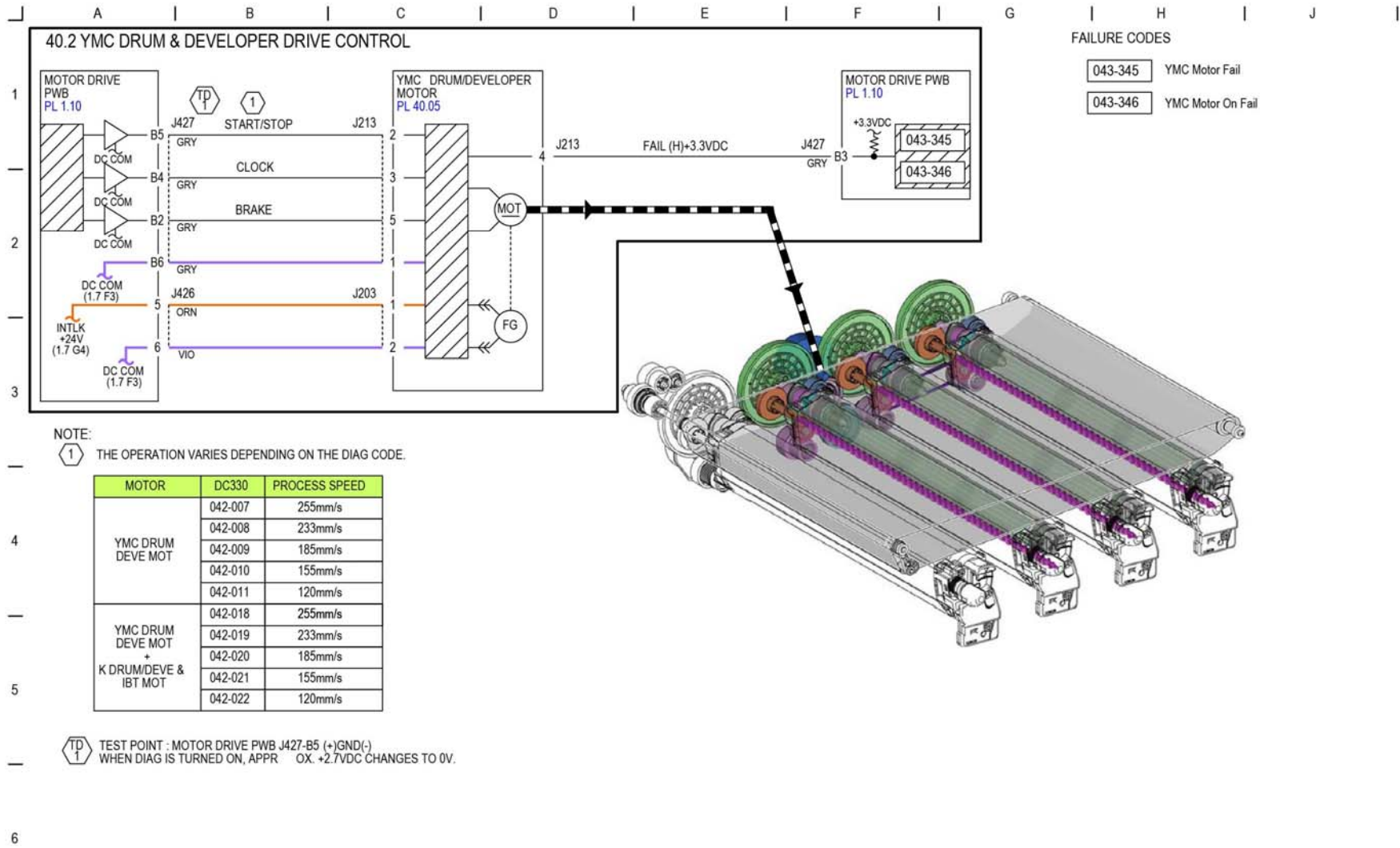
BSD 40.1 K Drum/Developer and IBT Drive Control



TF-1-0092-A

Figure 54 BSD 40.1

BSD 40.2 YMC Drum and Developer Drive Control



TF-1-0093-A

Figure 55 BSD 40.2

BSD 40.3 Marking Air Flow

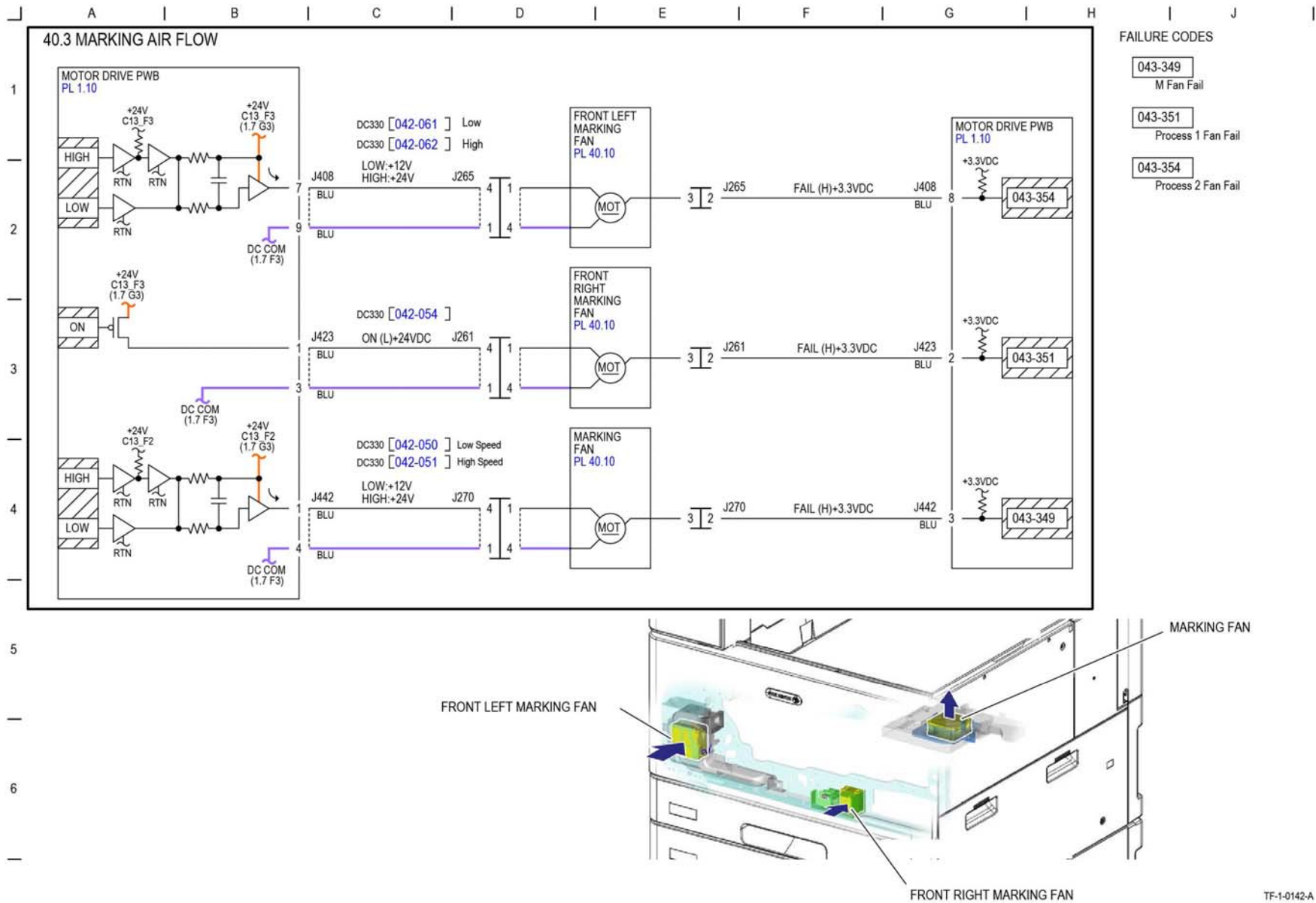


Figure 56 BSD 40.3

BSD 40.4 Toner Cartridge Cooling

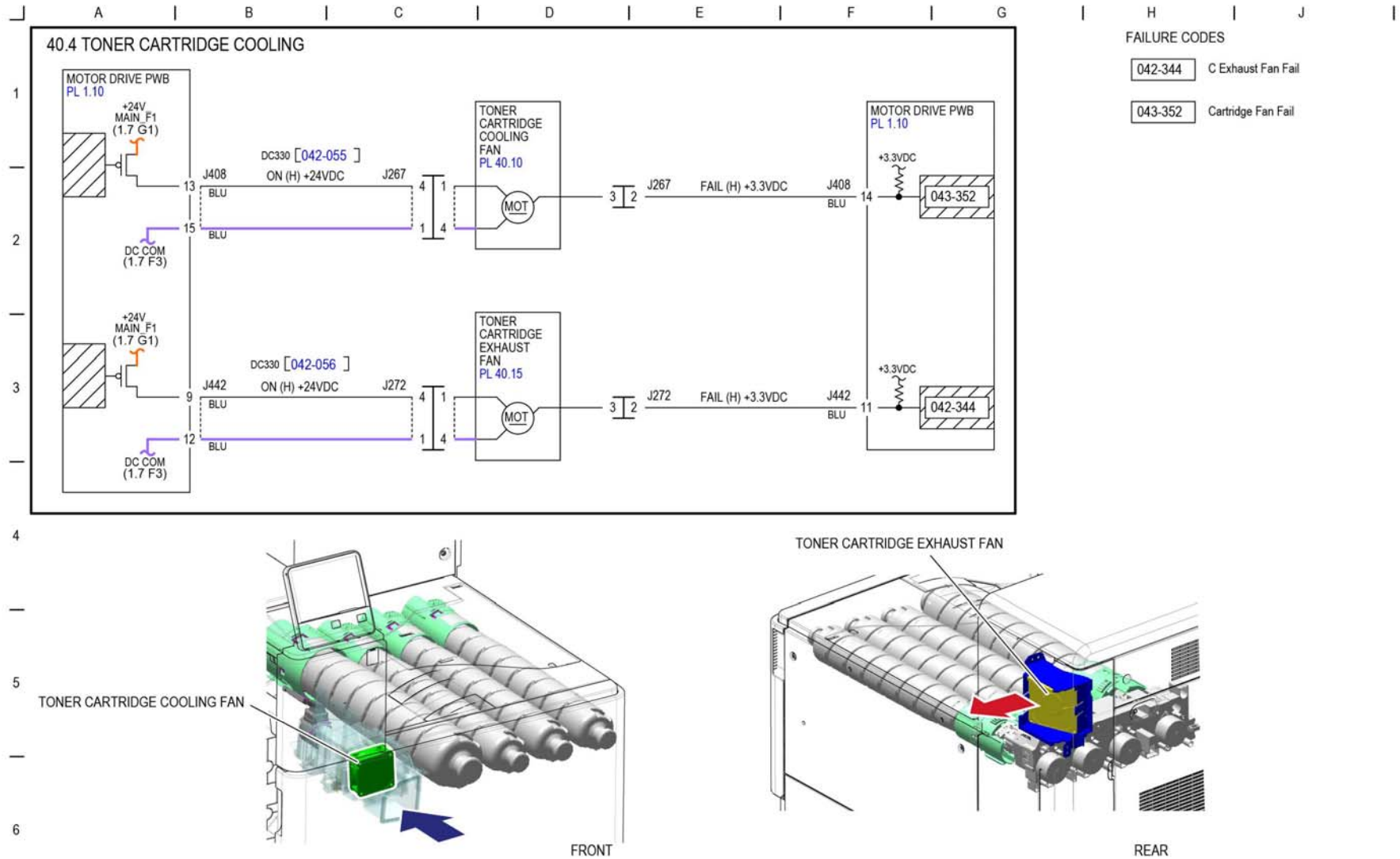


Figure 57 BSD 40.4

TF-1-0143-A

BSD 60.1 LPH Y and M

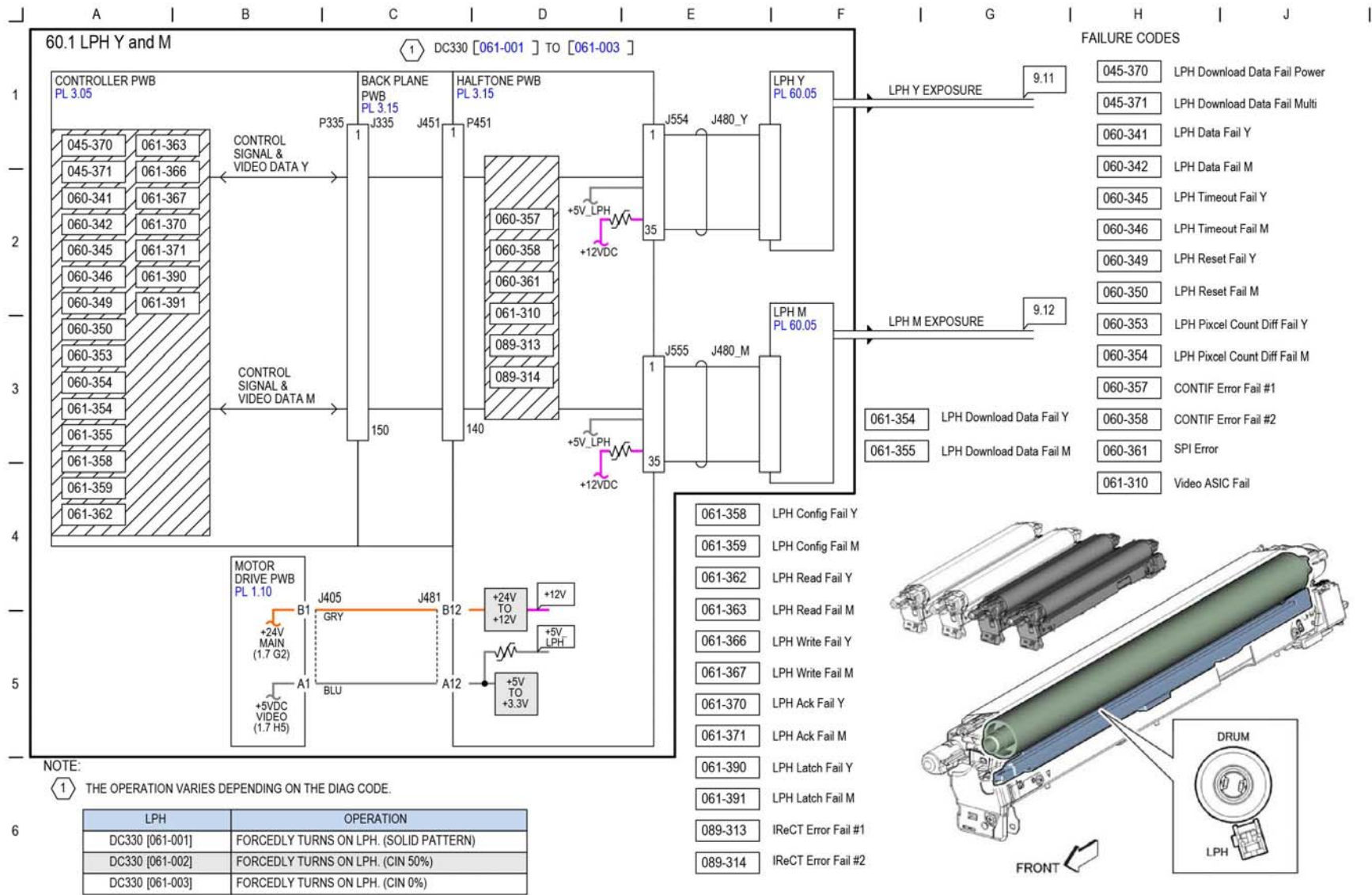
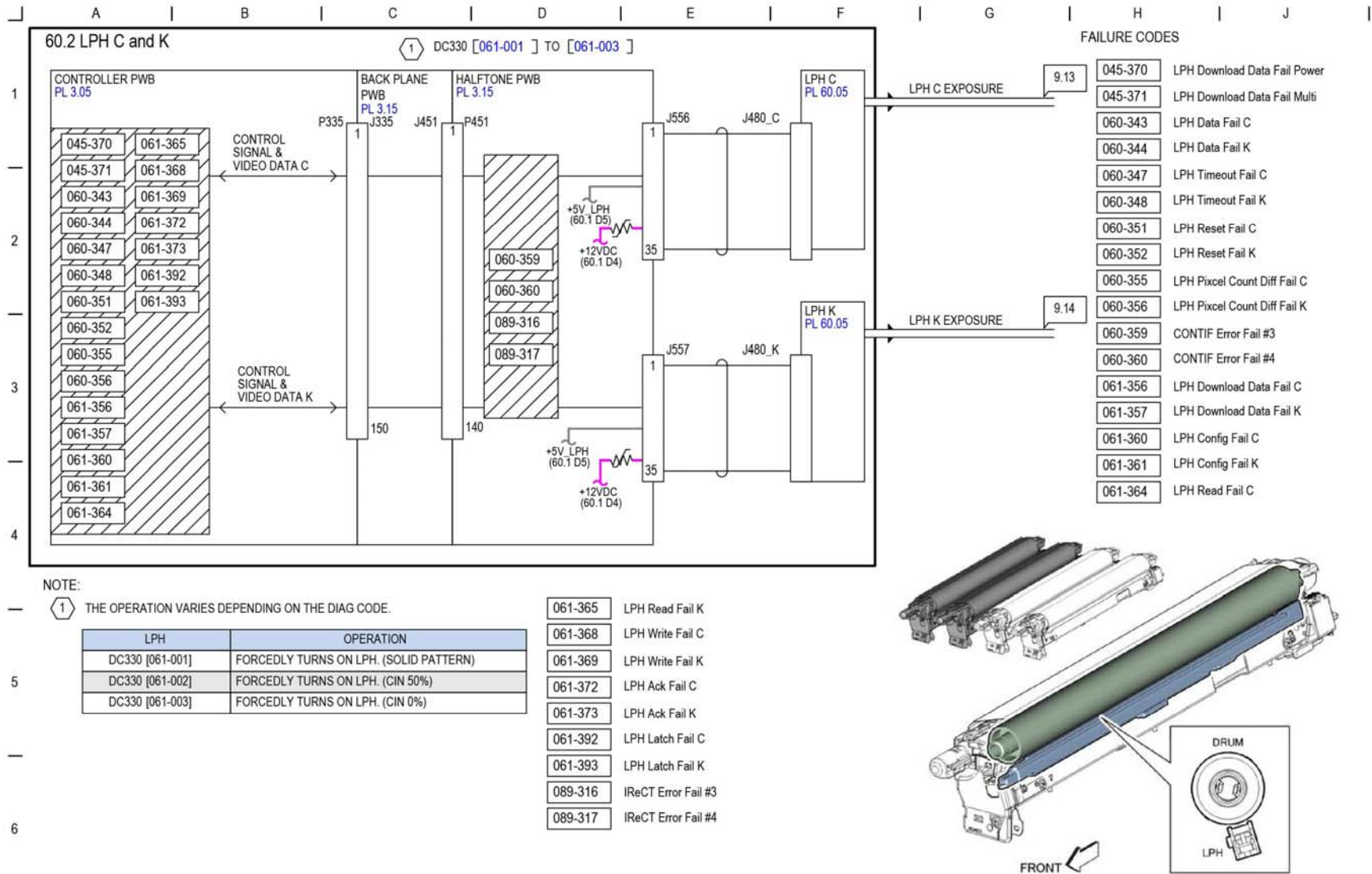


Figure 58 BSD 60.1

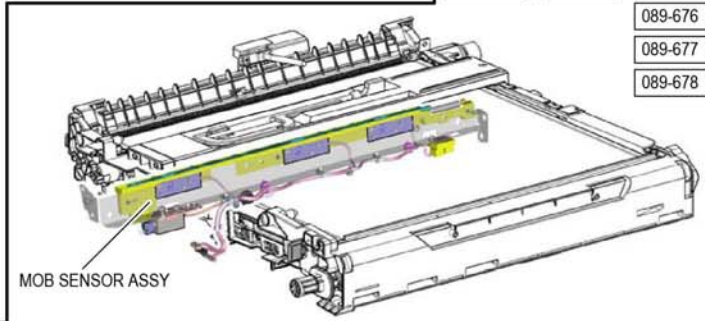
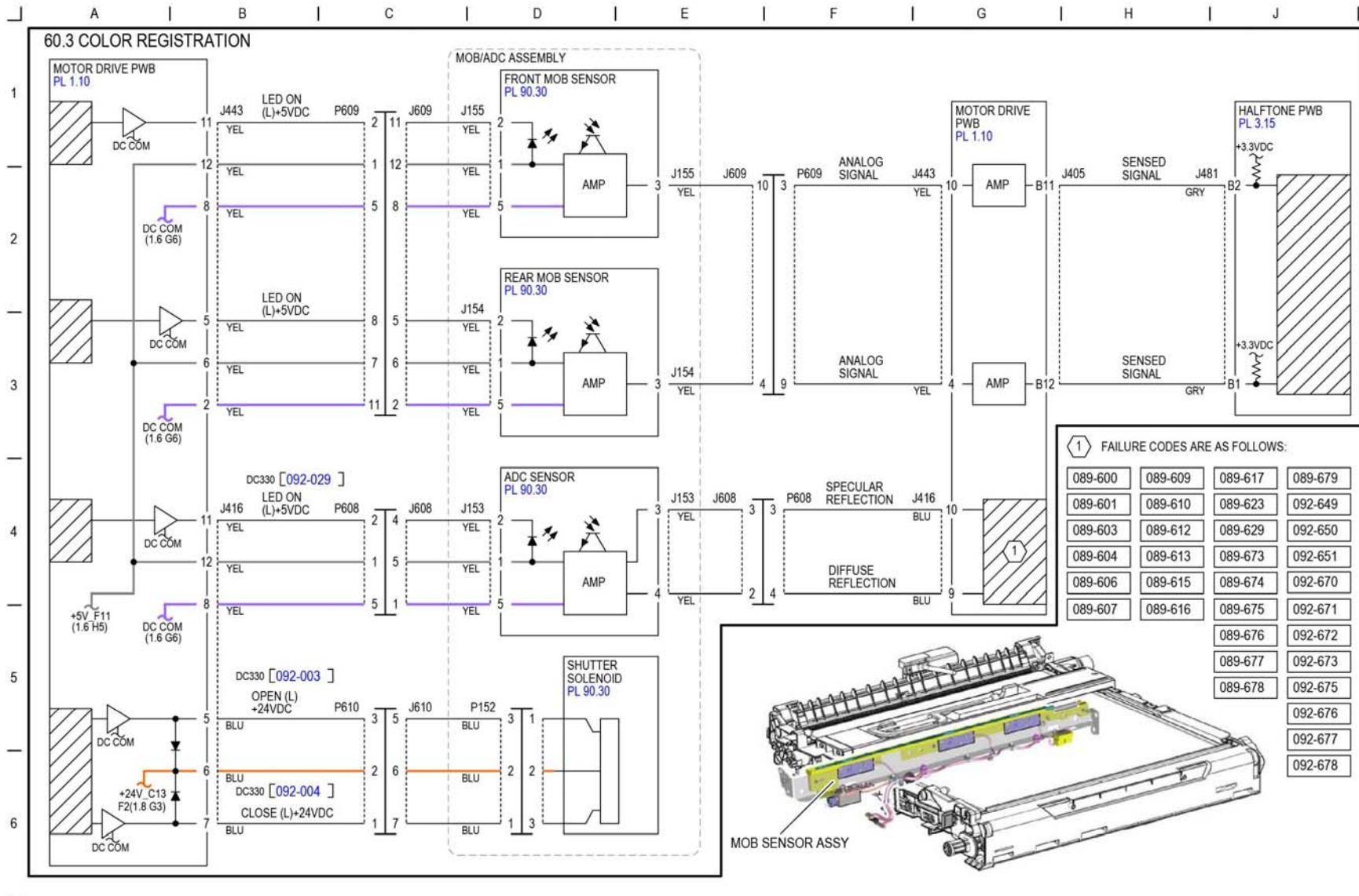
BSD 60.2 LPH C and K



TF-1-0095-A

Figure 59 BSD 60.2

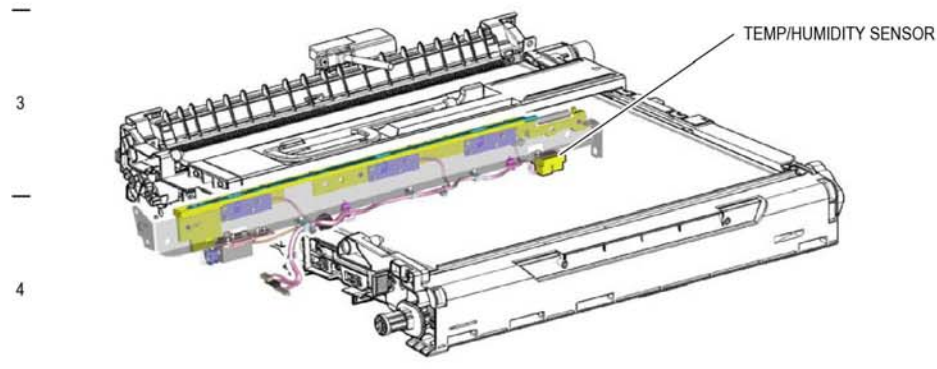
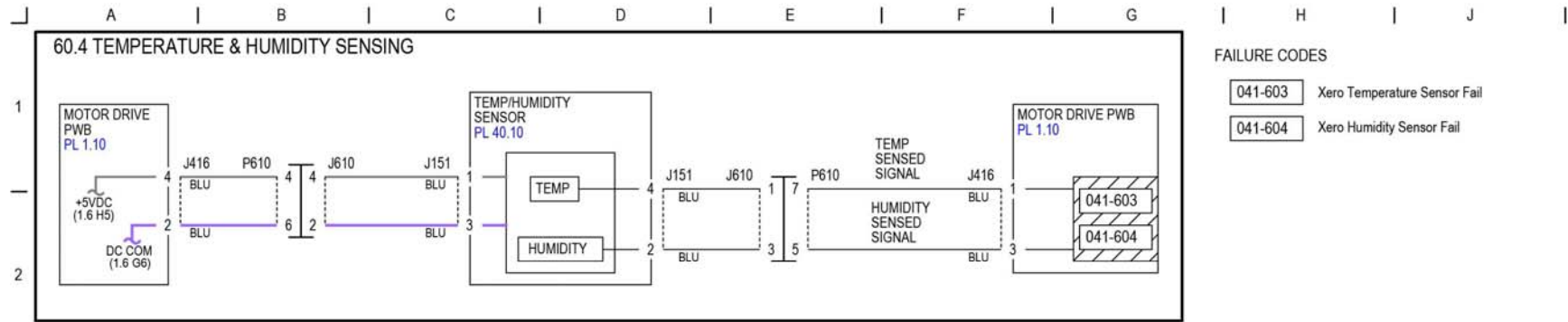
BSD 60.3 Color Registration



TF-1-0096-A

Figure 60 BSD 60.3

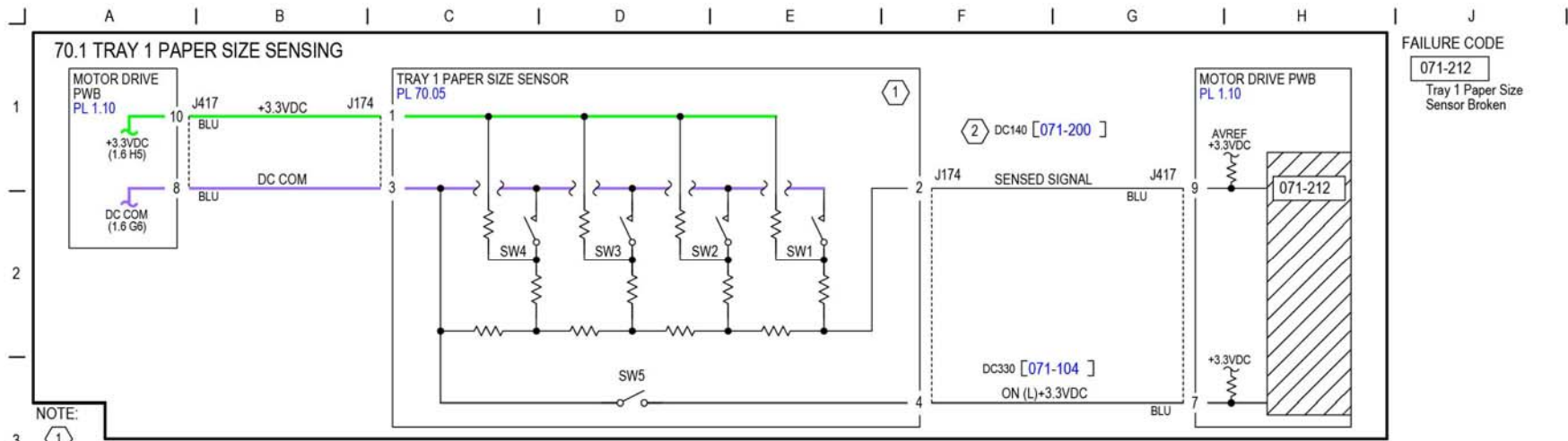
BSD 60.4 Temperature and Humidity Sensing



TF-1-0144-A

Figure 61 BSD 60.4

BSD 70.1 Tray 1 Paper Size Sensing



FAILURE CODE
071-212
 Tray 1 Paper Size Sensor Broken

NOTE:
 ①

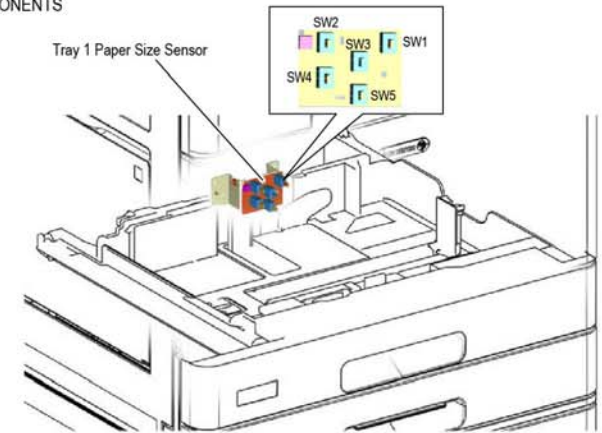
Paper size is sensed by voltage corresponding to combined resistance of Paper Size Sensor and SW5 On/Off. The table below shows the relation between paper size and combination of Switch ON/OFF pattern, voltage and AD value. (Any combination other than the ones below results in an undetermined size.)

Paper Size	SW1	SW2	SW3	SW4	SW5	Voltage Value (V) (J417-9)	AD Value DC140[071-200]
No Tray	OFF	OFF	OFF	OFF	OFF	3.085±0.066	922-989
Post Card (100x148)	OFF	OFF	OFF	OFF	ON	3.085±0.066	922-989
A5S/5.5"x8.5"S (*1)	OFF	OFF	ON	OFF	OFF	2.671±0.066	797-857
B5S	OFF	OFF	ON	ON	ON	2.468±0.066	735-796
8.5"x13"S	OFF	ON	OFF	ON	OFF	2.064±0.066	610-671
8.5"x14"S	OFF	ON	OFF	ON	ON		
A4S	OFF	ON	ON	OFF	OFF	1.864±0.066	548-609
8.5"x11"S	OFF	ON	ON	OFF	ON		
SRA3 S/ 13"x18"S/12"x18"S(*1)	ON	OFF	OFF	ON	ON	1.278±0.066	366-427
A4L	ON	OFF	ON	OFF	OFF	1.079±0.066	304-365
A3S	ON	OFF	ON	ON	OFF	0.881±0.066	244-303
B5L/7.25"x10.5"L(*1)	ON	ON	OFF	OFF	ON	0.691±0.066	184-243
8KS(*2)	ON	ON	OFF	ON	OFF	0.493±0.066	124-183
B4S	ON	ON	OFF	ON	ON		
8.5"x11"L	ON	ON	ON	OFF	OFF	0.300±0.066	64-123
16KL(*2)/7.25"x10.5"L(*1)	ON	ON	ON	OFF	ON		
11"x17"S	ON	ON	ON	ON	ON	0.106±0.066	0-63

*1: Paper size is changed in diag.
 *2: System Setting enables switching between GCO and TFX sizes.

② DC140[071-200] displays AD Value from Tray 1 Paper Size Sensor. Normally, the value is in the following output range:
 • Normal output range : 0-989
 • 11"x17" : 0-63
 • A5SEF : 797-857
 • Tray not installed : 922-989

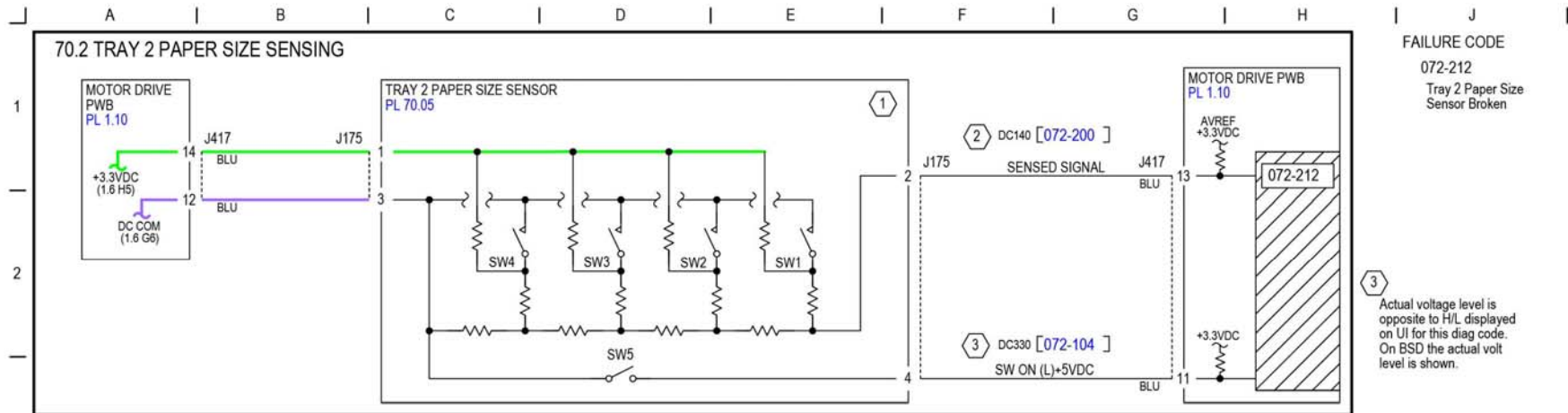
ELECTRICAL COMPONENTS



TF-1-0097-A

Figure 62 BSD 70.1

BSD 70.2 Tray 2 Paper Size Sensing



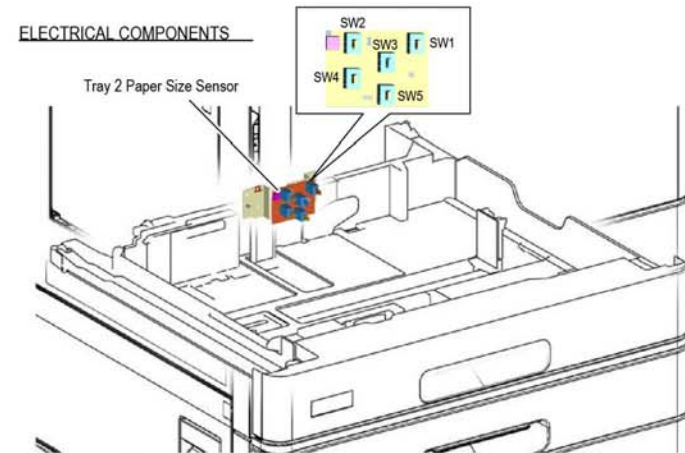
FAILURE CODE
072-212
Tray 2 Paper Size
Sensor Broken

NOTE: ¹ Paper size is sensed by voltage corresponding to combined resistance of Paper Size Sensor and SW5 On/Off. The table below shows the relation between paper size and combination of Switch ON/OFF pattern, voltage and AD value. (Any combination other than the ones below results in an undetermined size.)

Paper Size	SW1	SW2	SW3	SW4	SW5	Voltage Value (V) (J417-13)	AD Value DC140[072-200]
No Tray	OFF	OFF	OFF	OFF	OFF	3.085±0.066	922-989
Post Card (100x148)	OFF	OFF	OFF	OFF	ON	3.085±0.066	922-989
A5S/5.5"x8.5"S (*1)	OFF	OFF	ON	OFF	OFF	2.671±0.066	797-857
B5S	OFF	OFF	ON	ON	ON	2.468±0.066	735-796
8.5"x13"S	OFF	ON	OFF	ON	OFF	2.064±0.066	610-671
8.5"x14"S	OFF	ON	OFF	ON	ON		
A4S/DT Spe. A4S	OFF	ON	ON	OFF	OFF	1.864±0.066	548-609
8.5"x11"S	OFF	ON	ON	OFF	ON		
8"x10"S	OFF	ON	ON	ON	ON	1.666±0.066	488-547
12.6"x19.2"Sor13"x19"S	ON	OFF	OFF	OFF	ON	1.481±0.066	428-487
SRA3 S/12"x18"S(*1)	ON	OFF	OFF	ON	ON	1.278±0.066	366-427
A4L/DT Spe. A4L	ON	OFF	ON	OFF	OFF	1.079±0.066	304-365
A3S	ON	OFF	ON	ON	OFF	0.881±0.066	244-303
B5L/7.25"x10.5"L(*1)	ON	ON	OFF	OFF	ON	0.691±0.066	184-243
8KS(*2)	ON	ON	OFF	ON	OFF	0.493±0.066	127-183
B4S	ON	ON	OFF	ON	ON		
8.5"x11"L	ON	ON	ON	OFF	OFF	0.300±0.066	64-123
16KL(*2)/7.25"x10.5"L(*1)	ON	ON	ON	OFF	ON		
11"x17"S	ON	ON	ON	ON	ON	0.106±0.066	0-63

² DC140[072-200] displays AD Value from Tray 2 Paper Size Sensor. Normally, the value is in the following output range:

- Normal output range : 0-989
- 11"x17" : 0-63
- A5SEF : 797-857
- Tray not installed : 922-989

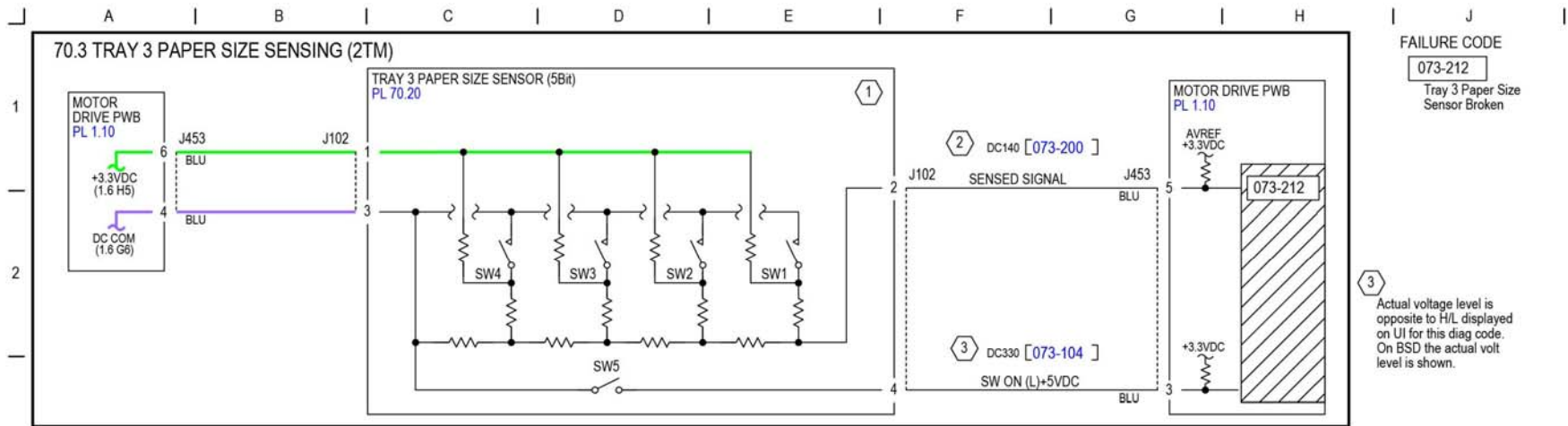


*1: Paper size is changed in diag.
*2: System Setting enables switching between GCO and TFX sizes.

TF-1-0098-A

Figure 63 BSD 70.2

BSD 70.3 Tray 3 Paper Size Sensing (2TM)



FAILURE CODE
073-212
 Tray 3 Paper Size Sensor Broken

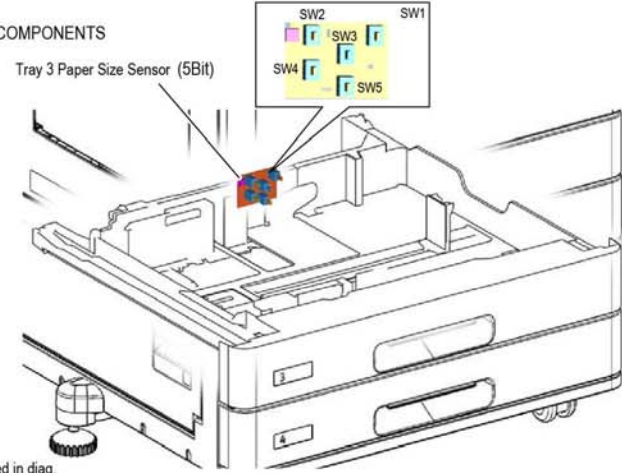
3 Actual voltage level is opposite to H/L displayed on UI for this diag code. On BSD the actual volt level is shown.

NOTE: **1** Paper size is sensed by voltage corresponding to combined resistance of Paper Size Sensor and SW5 On/Off. The table below shows the relation between paper size and combination of Switch ON/OFF pattern, voltage and AD value. (Any combination other than the ones below results in an undetermined size.)

Paper Size	SW1	SW2	SW3	SW4	SW5	Voltage Value (V) (J417-13)	AD Value DC140[072-200]
No Tray	OFF	OFF	OFF	OFF	OFF	3.085±0.066	922-989
Post Card(100x148)	OFF	OFF	OFF	OFF	ON	3.085±0.066	922-989
A5S/5.5"x8.5"S (*1)	OFF	OFF	ON	OFF	OFF	2.671±0.066	797-857
B5S	OFF	OFF	ON	ON	ON	2.468±0.066	735-796
8.5"x13"S	OFF	ON	OFF	ON	OFF	2.064±0.066	610-671
8.5"x14"S	OFF	ON	OFF	ON	ON	2.064±0.066	610-671
A4S/DT Spe. A4S	OFF	ON	ON	OFF	OFF	1.864±0.066	548-609
8.5"x11"S	OFF	ON	ON	OFF	ON	1.864±0.066	548-609
8"x10"S	OFF	ON	ON	ON	ON	1.666±0.066	488-547
12.6"x19.2"Sor13"x19"S	ON	OFF	OFF	OFF	ON	1.481±0.066	428-487
SRA3 S/12"x18"S(*1)	ON	OFF	OFF	ON	ON	1.278±0.066	366-427
A4L/DT Spe. A4L	ON	OFF	ON	OFF	OFF	1.079±0.066	304-365
A3S	ON	OFF	ON	ON	OFF	0.881±0.066	244-303
B5L/7.25"x10.5"L(*1)	ON	ON	OFF	OFF	ON	0.691±0.066	184-243
8KS(*2)	ON	ON	OFF	ON	OFF	0.493±0.066	127-183
B4S	ON	ON	OFF	ON	ON	0.493±0.066	127-183
8.5"x11"L	ON	ON	ON	OFF	OFF	0.300±0.066	64-123
16KL(*2)/7.25"x10.5"L(*1)	ON	ON	ON	OFF	ON	0.300±0.066	64-123
11"x17"S	ON	ON	ON	ON	ON	0.106±0.066	0-63

2 DC140[073-200] displays AD Value from Tray 3 Paper Size Sensor. Normally, the value is in the following output range:
 • Normal output range : 0-989
 • 11"x17" : 0-63
 • A5SEF : 797-857
 • Tray not installed : 922-989

ELECTRICAL COMPONENTS

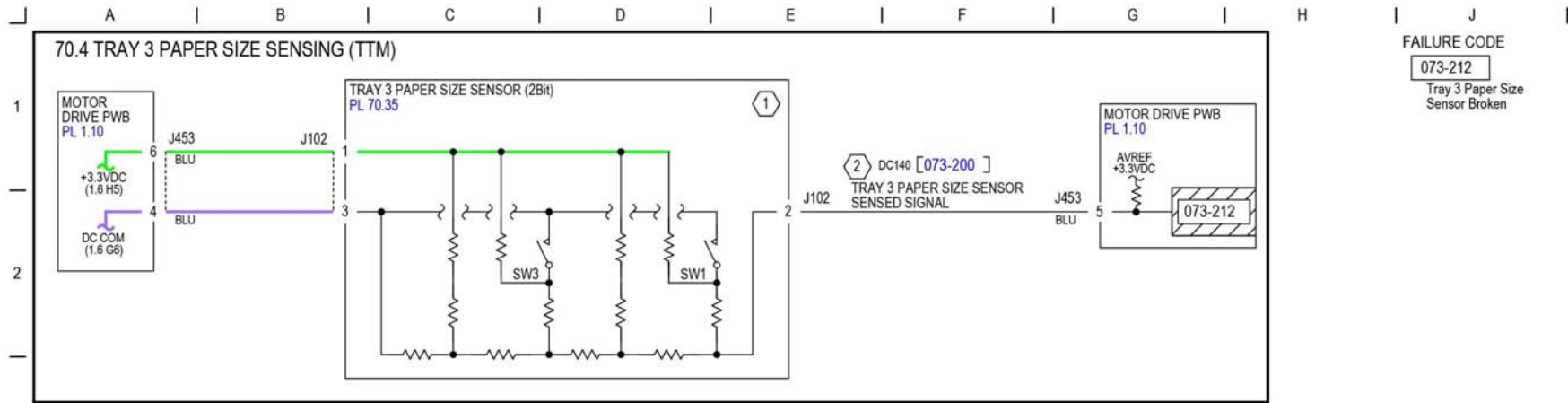


*1: Paper size is changed in diag.
 *2: System Setting enables switching between GCO and TFX sizes.

TF-1-0099-A

Figure 64 BSD 70.3

BSD 70.4 Tray 3 Paper Size Sensing (TTM)



FAILURE CODE
073-212
 Tray 3 Paper Size
 Sensor Broken

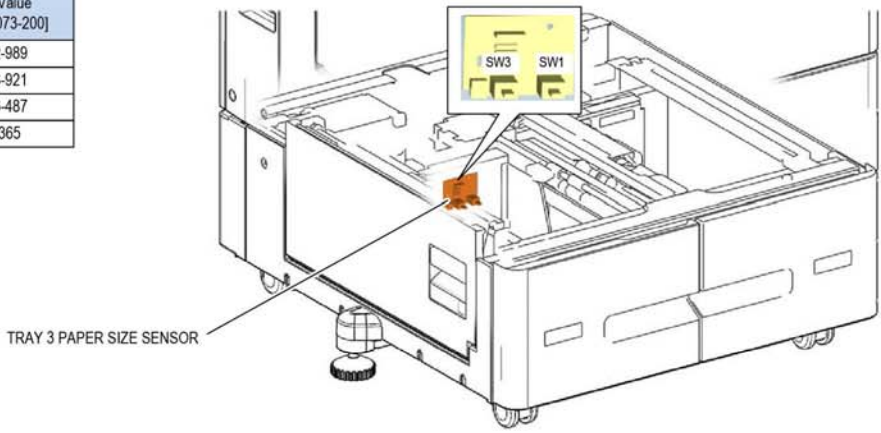
NOTE: ① Paper size is sensed by voltage corresponding to combined resistance of Paper Size Sensor. The table below shows the relation between paper size and combination of Switch ON/OFF pattern, voltage and AD value. (Any combination other than the ones below results in an undetermined size.)

Paper Size	SW1	SW3	Voltage Value (V) (J453-5)	AD Value DC140[073-200]
No Tray	OFF	OFF	3.085±0.066	922-989
B5L/7.25"X10.5"L(*1)	OFF	ON	2.671±0.066	488-921
8.5"X11"L	ON	OFF	1.481±0.066	366-487
A4L	ON	ON	1.079±0.066	0-365

*1: Paper size is changed in diag.

② DC140[073-200] displays AD Value from Tray 3 Paper Size Sensor. Normally, the value is in the following output range.
 • Normal output range : 0-989
 • A4LEF : 0-365
 • 8.5"×11" : 366-487
 • B5LEF : 488-921
 • Tray not installed : 922-989

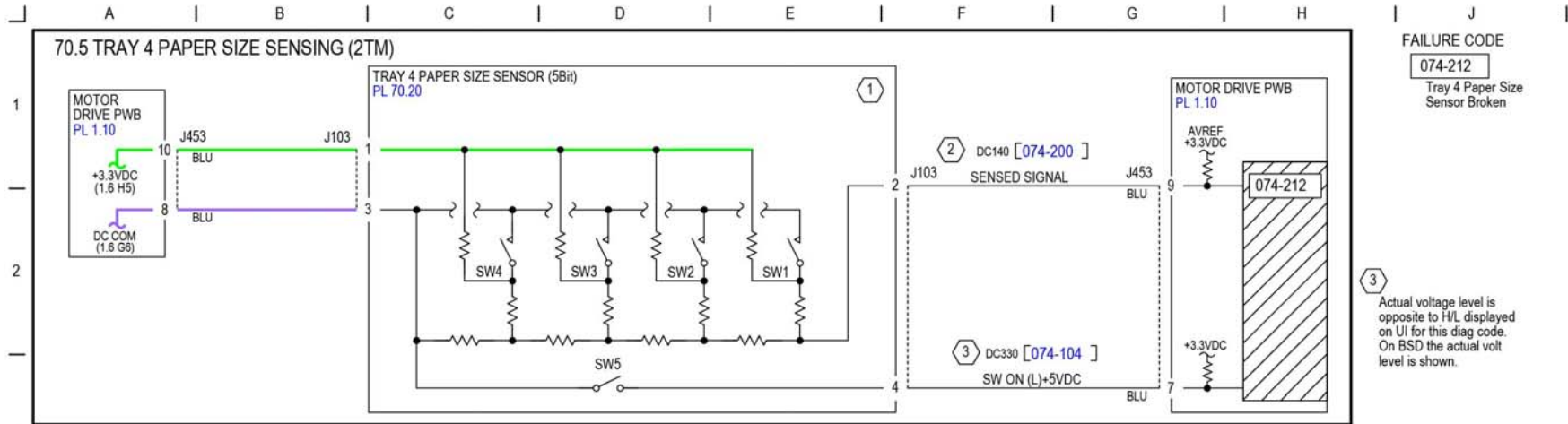
ELECTRICAL COMPONENTS



TF-1-0100-A

Figure 65 BSD 70.4

BSD 70.5 Tray 4 Paper Size Sensing (2TM)



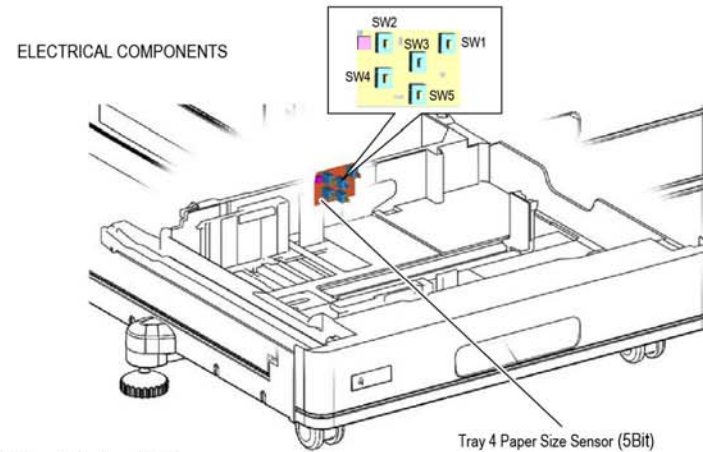
FAILURE CODE
074-212
 Tray 4 Paper Size Sensor Broken

3 Actual voltage level is opposite to H/L displayed on UI for this diag code. On BSD the actual volt level is shown.

NOTE: 1 Paper size is sensed by voltage corresponding to combined resistance of Paper Size Sensor and SW5 On/Off. The table below shows the relation between paper size and combination of Switch ON/OFF pattern, voltage and AD value. (Any combination other than the ones below results in an undetermined size.)

Paper Size	SW1	SW2	SW3	SW4	SW5	Voltage Value (V) (J453-9)	AD Value DC140[072-200]
No Tray	OFF	OFF	OFF	OFF	OFF	3.085±0.066	922-989
Post Card (100x148)	OFF	OFF	OFF	OFF	ON	3.085±0.066	922-989
A5S/5.5"x8.5"S (*1)	OFF	OFF	ON	OFF	OFF	2.671±0.066	797-857
B5S	OFF	OFF	ON	ON	ON	2.468±0.066	735-796
8.5"x13"S	OFF	ON	OFF	ON	OFF	2.064±0.066	610-671
8.5"x14"S	OFF	ON	OFF	ON	ON		
A4S/DT Spe. A4S	OFF	ON	ON	OFF	OFF	1.864±0.066	548-609
8.5"x11"S	OFF	ON	ON	OFF	ON		
8"x10"S	OFF	ON	ON	ON	ON	1.666±0.066	488-547
12.6"x19.2"Scor13"x19"S	ON	OFF	OFF	OFF	ON	1.481±0.066	428-487
SRA3 S/12"x18"S(*1)	ON	OFF	OFF	ON	ON	1.278±0.066	366-427
A4L/DT Spe. A4L	ON	OFF	ON	OFF	OFF	1.079±0.066	304-365
A3S	ON	OFF	ON	ON	OFF	0.881±0.066	244-303
B5L/7.25"x10.5"L(*1)	ON	ON	OFF	OFF	ON	0.691±0.066	184-243
8KS(*2)	ON	ON	OFF	ON	OFF	0.493±0.066	127-183
B4S	ON	ON	OFF	ON	ON		
8.5"x11"L	ON	ON	ON	OFF	OFF	0.300±0.066	64-123
16KL(*2)/7.25"x10.5"L(*1)	ON	ON	ON	OFF	ON		
11"x17"S	ON	ON	ON	ON	ON	0.106±0.066	0-63

2 DC140[074-200] displays AD Value from Tray 4 Paper Size Sensor. Normally, the value is in the following output range:
 • Normal output range : 0-989
 • 11"x17" : 0-63
 • A5SEF : 797-857
 • Tray not installed : 922-989

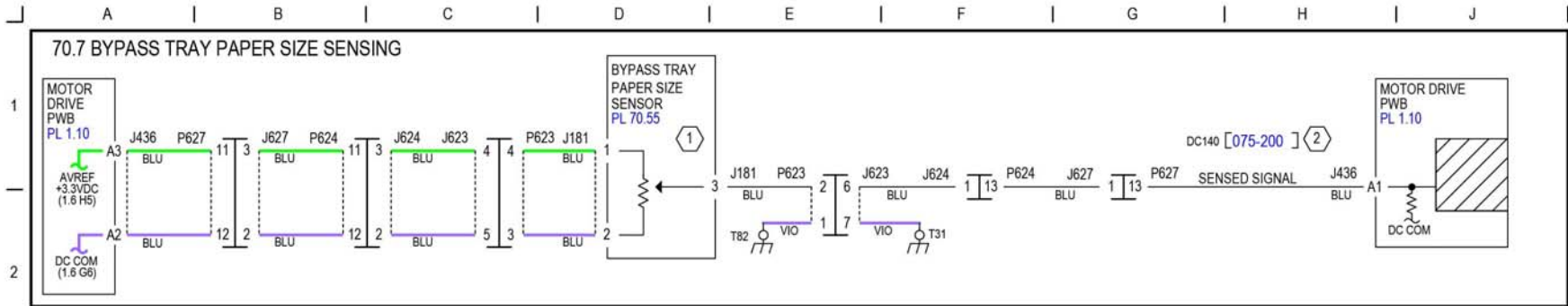


*1: Paper size is changed in diag.
 *2: System Setting enables switching between GCO and TFX sizes.

TF-1-0101-A

Figure 66 BSD 70.5

BSD 70.7 Bypass Tray Paper Size Sensing



NOTE: ① Paper width (size in fast scan direction) is sensed by voltage corresponding to the Bypass Tray Paper Size Sensor resistance. As to MSI, AD values corresponding to paper sizes (widths) vary depending on the machine because when the Bypass Tray is installed on IOT before shipment, Bypass Tray Size Sensing is adjusted in diagnostics. The values below are for reference.

② DC140[075-200] displays AD Value from Bypass Tray Paper Size Sensor. Normally, the value is in the following output range:
 • Normal output range : 86-966 (Nominal)
 51-1023 (NVM range)
 • Abnormal range : Constant and within the NVN range above.

Paper Size	Voltage Value (V) (J436-A1)	AD Value DC140[075-200]
Post Card S	2.945-3.004	908.374-935.445
5.5"X8.5"S	2.472-2.531	762.064-788.741
A5S	2.373-2.432	731.393-758.070
B5S	1.968-2.026	605.752-632.429
8"X10"S	1.801-1.860	554.018-580.694
8.5"X11"S(Letter)&X13"X14"	1.564-1.622	480.481-507.157
A4S	1.634-1.693	502.283-528.959
7.25"X10.5"L	0.958-1.017	292.758-319.434
B5L	1.074-1.132	328.603-355.279
B4S		
16KL(Taiwan)	0.954-1.013	291.649-318.326
8KS(Taiwan)		
16KL(Mainland China)	0.919-0.977	280.563-307.240
8KS(Mainland China)		
11"X17"S	0.807-0.865	245.827-272.504
8.5"X11"L(Letter)		
A4L	0.597-0.656	180.790-207.466
A3S		
12.6"X19.2"S	0.457-0.516	137.554-164.231
13"X19"(X18")	0.341-0.399	101.340-128.016
SRA3	0.323-0.381	95.797-122.474

Ref. Paper length (size in slow scan direction) is sensed by timing how long paper takes to pass the Registration Sensor.

ELECTRICAL COMPONENTS

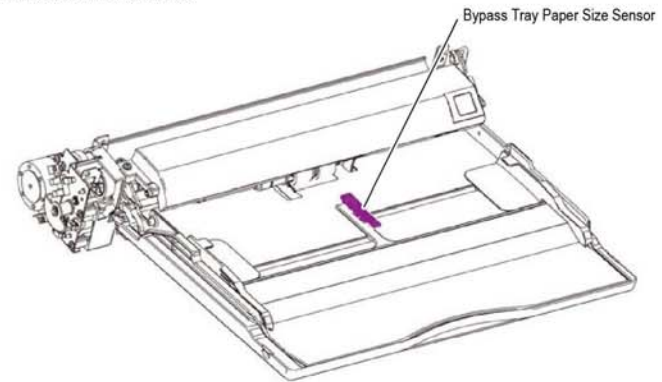
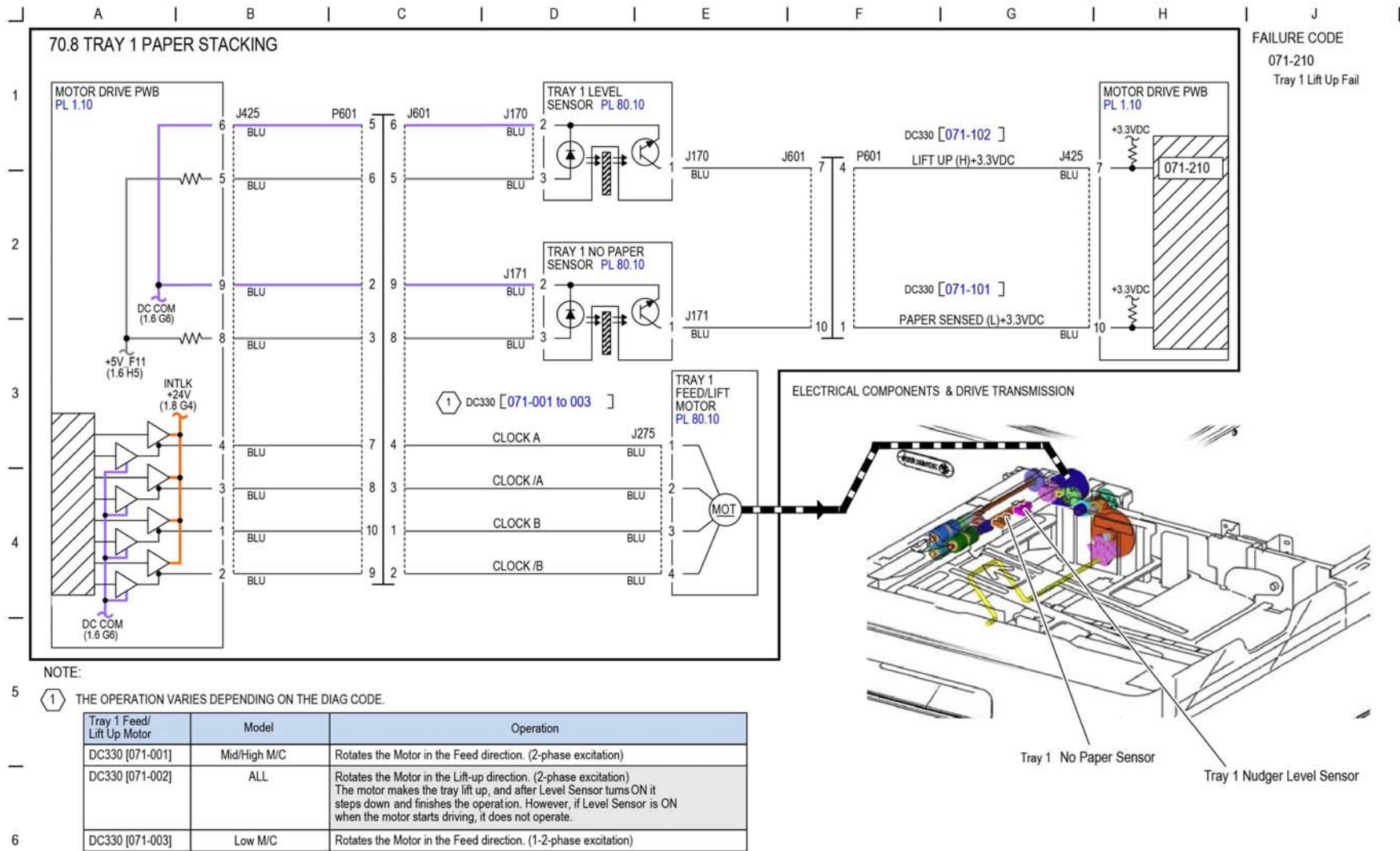


Figure 68 BSD 70.7

TF-1-0103-A

BSD 70.8 Tray 1 Paper Stacking



TF-1-0104-A

Figure 69 BSD 70.8

BSD 70.9 Tray 2 Paper Stacking

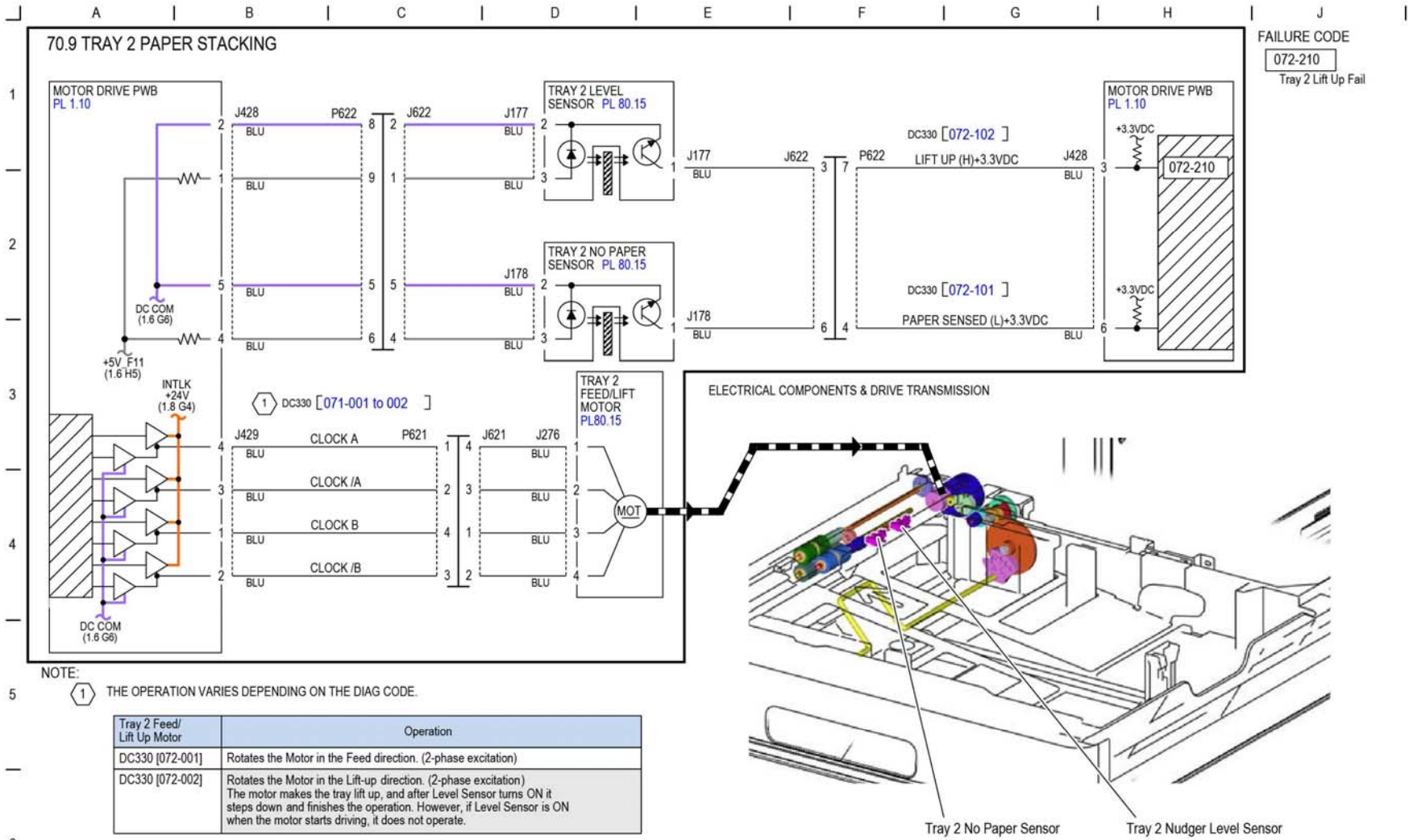
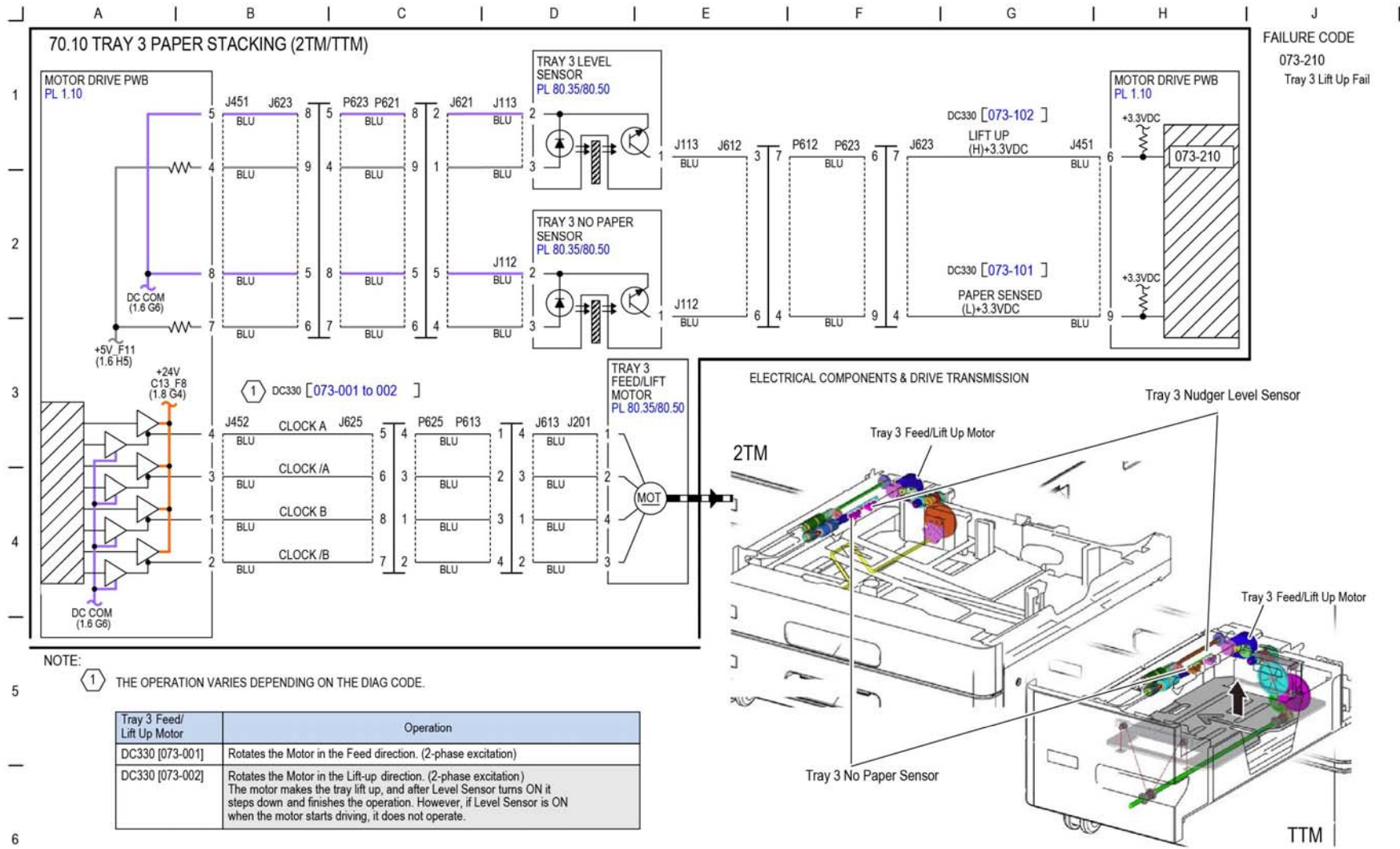


Figure 70 BSD 70.9

TF-1-0105-A

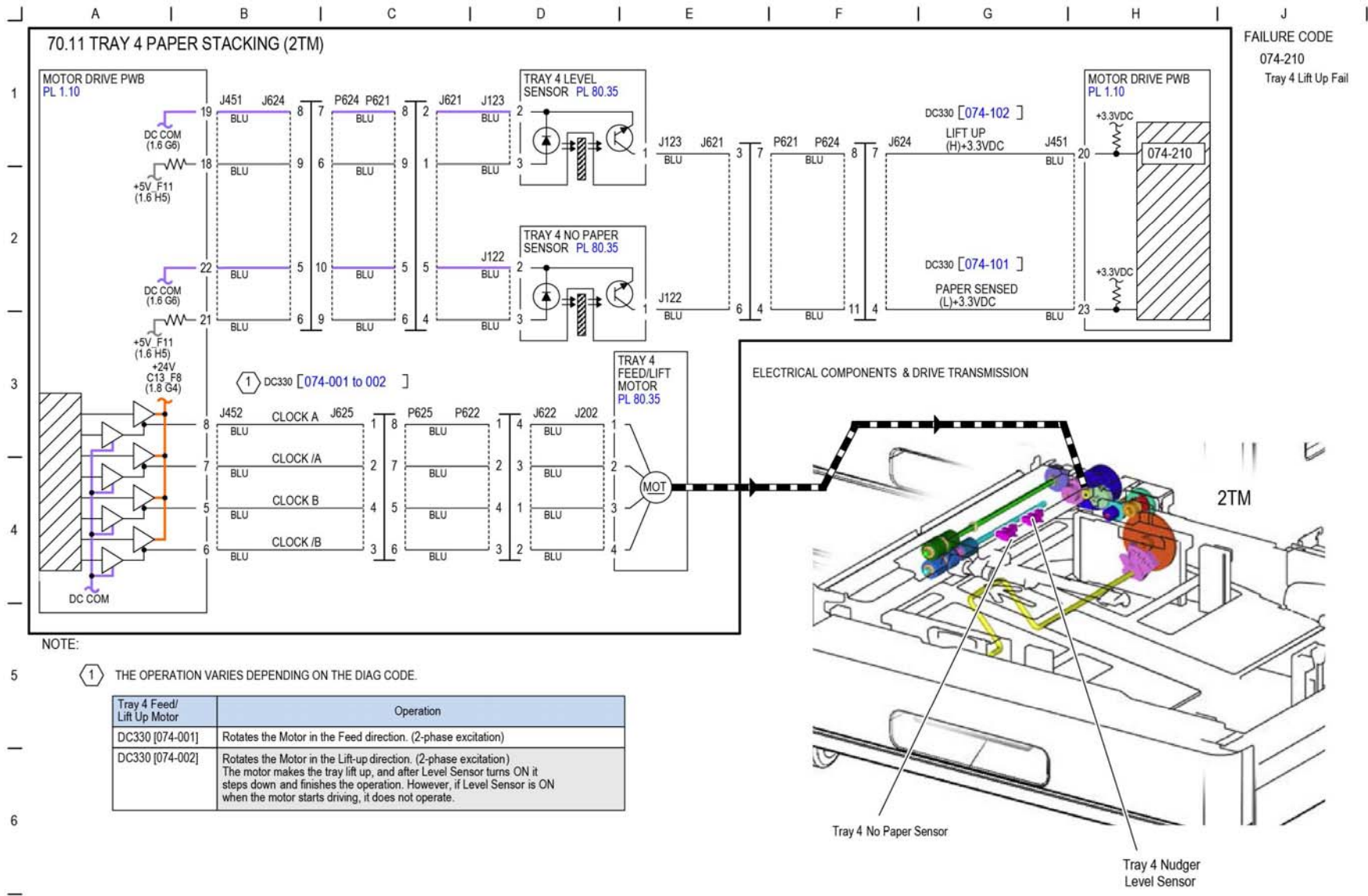
BSD 70.10 Tray 3 Paper Stacking (2TM/TTM)



FAILURE CODE
073-210
Tray 3 Lift Up Fail

Figure 71 BSD 70.10

BSD 70.11 Tray 4 Paper Stacking (2TM)



TF-1-0107-A

Figure 72 BSD 70.11

BSD 70.12 Tray 4 Paper Stacking (TTM)

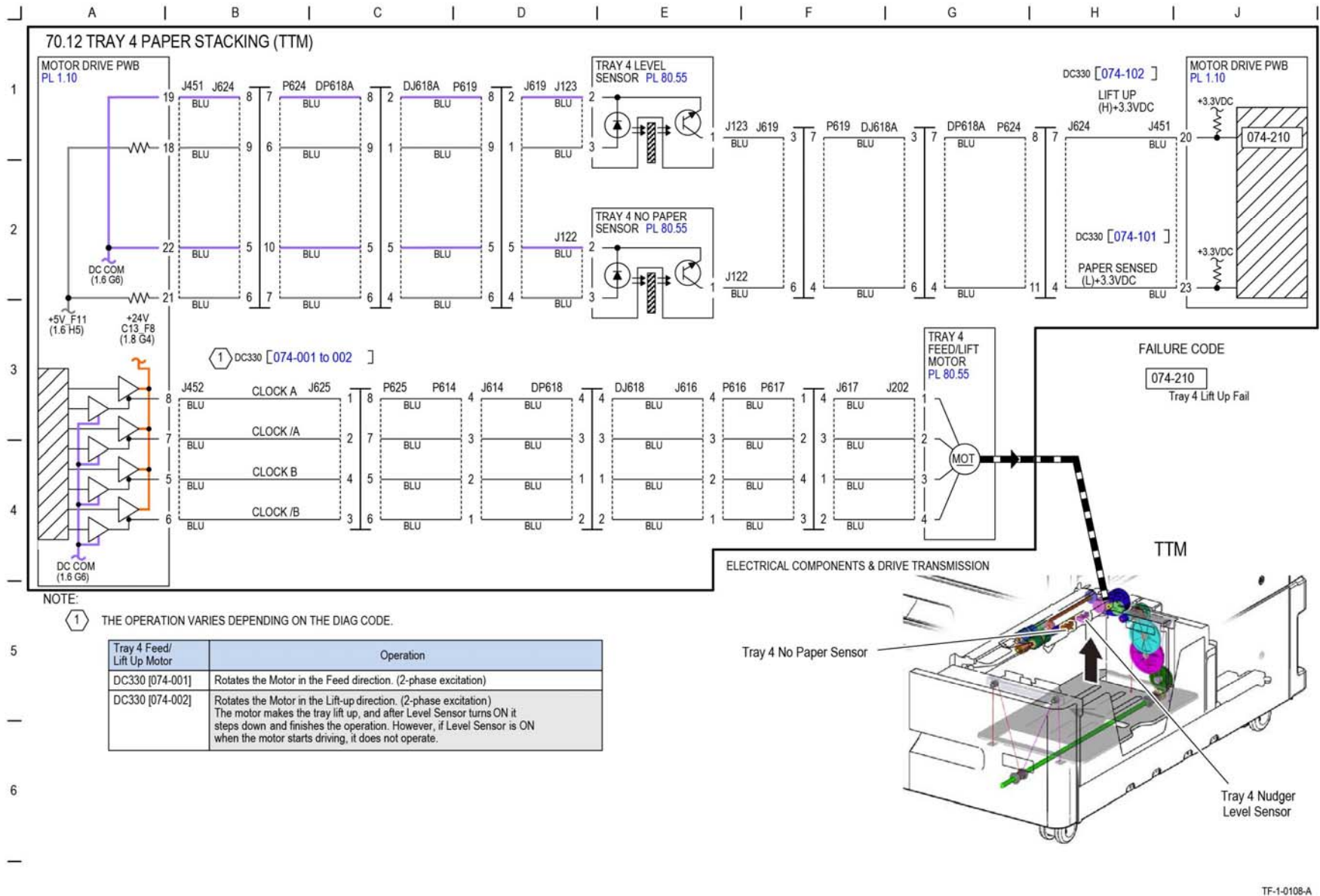
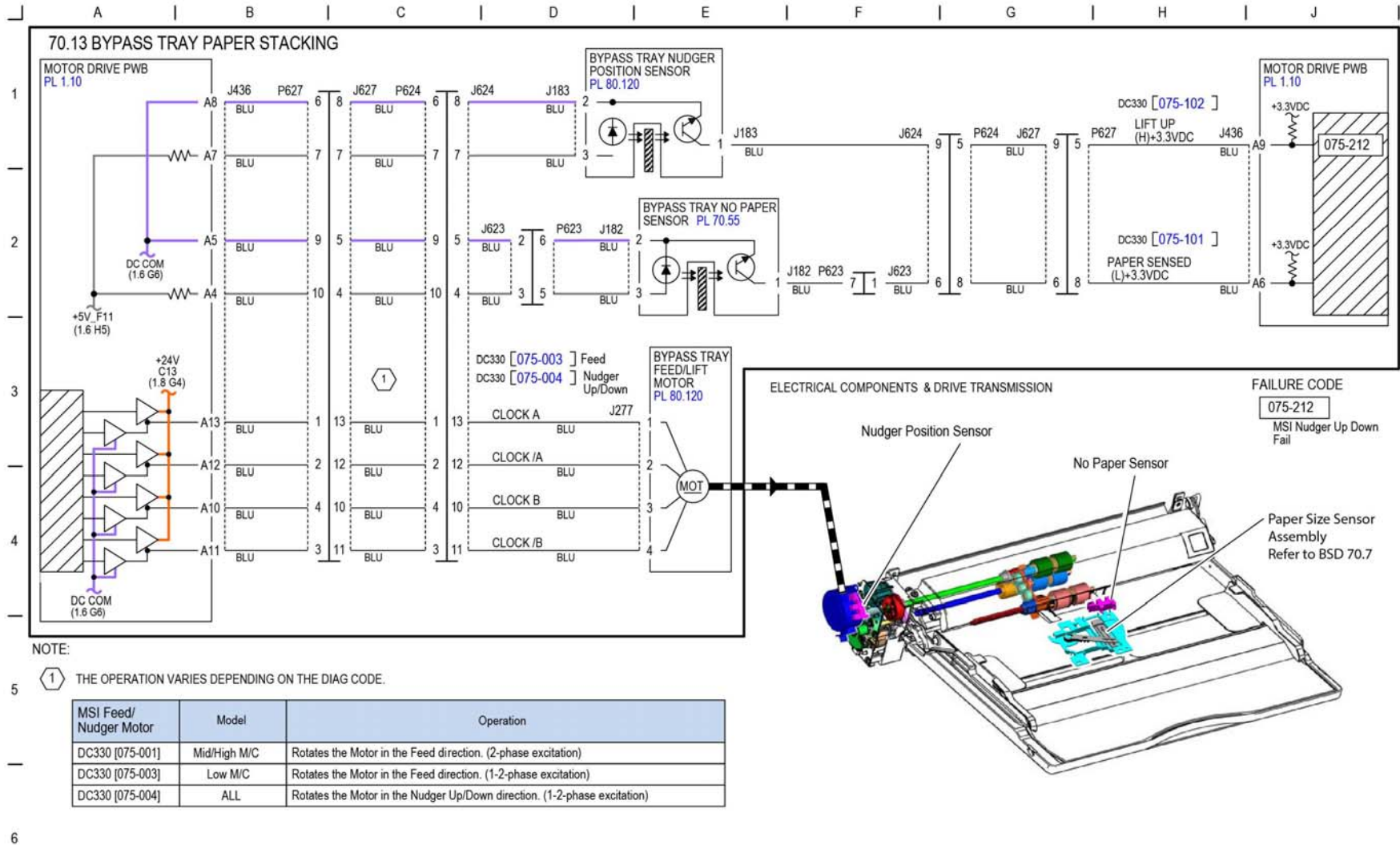


Figure 73 BSD 70.12

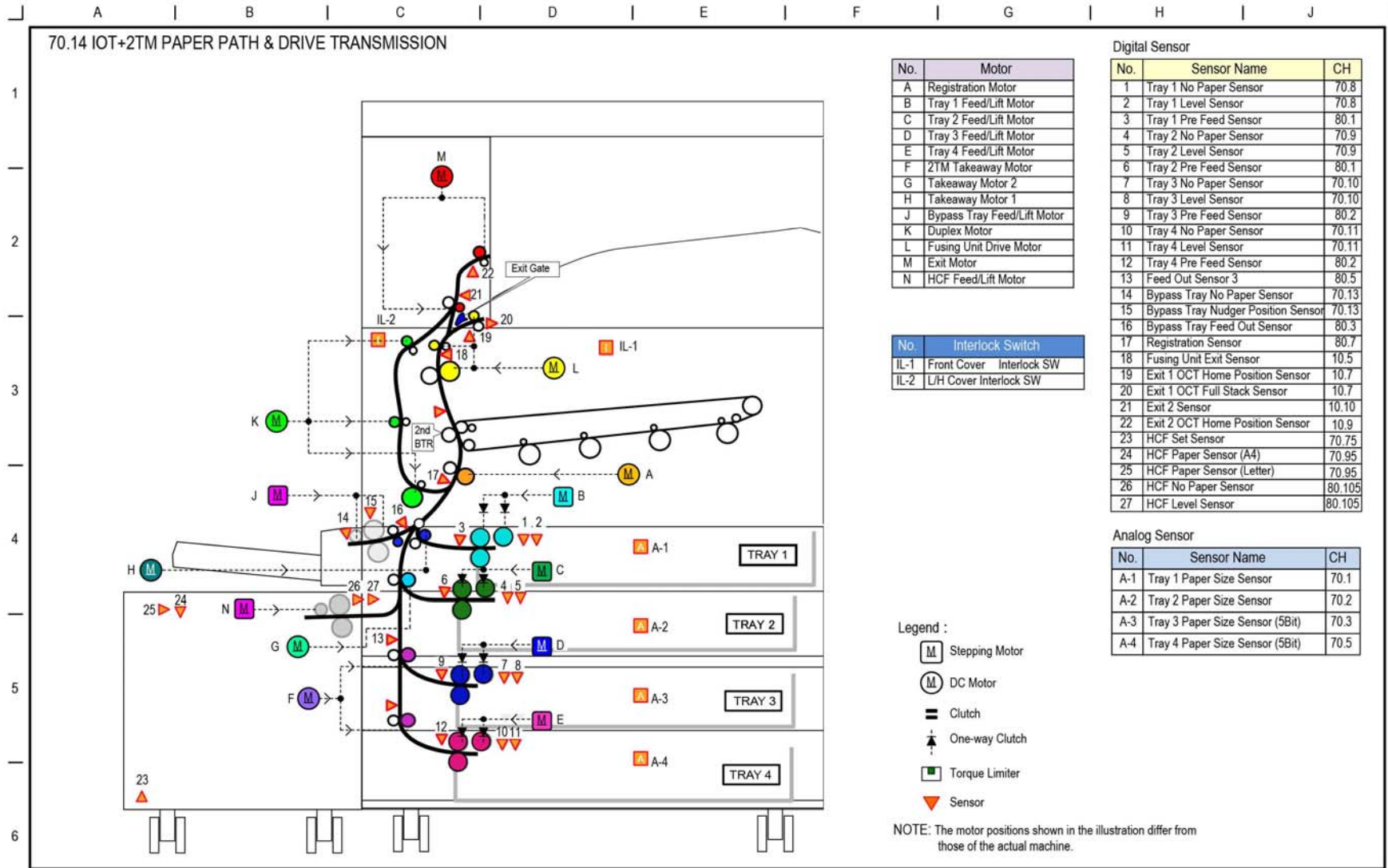
BSD 70.13 Bypass Tray Paper Sensing and Stacking



TF-1-0109-A

Figure 74 BSD 70.13

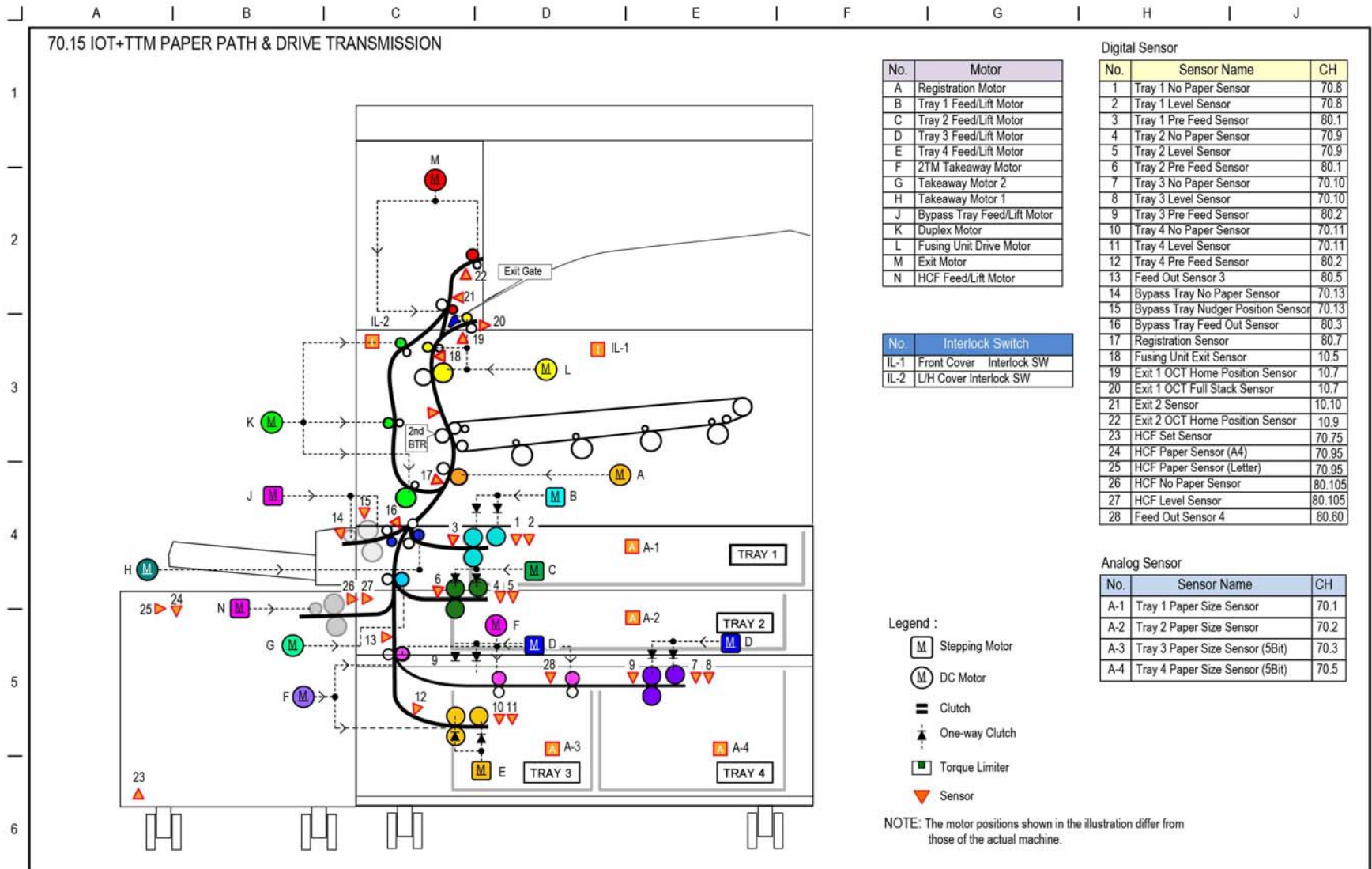
BSD 70.14 IOT and 2TM Paper Path and Drive Transmission



TF-1-0110-A

Figure 75 BSD 70.14

BSD 70.15 IOT and TTM Paper Path and Drive Transmission



TF-1-0111-A

Figure 76 BSD 70.15

BSD 70.16 HCF Paper Size Sensing and Tray Set

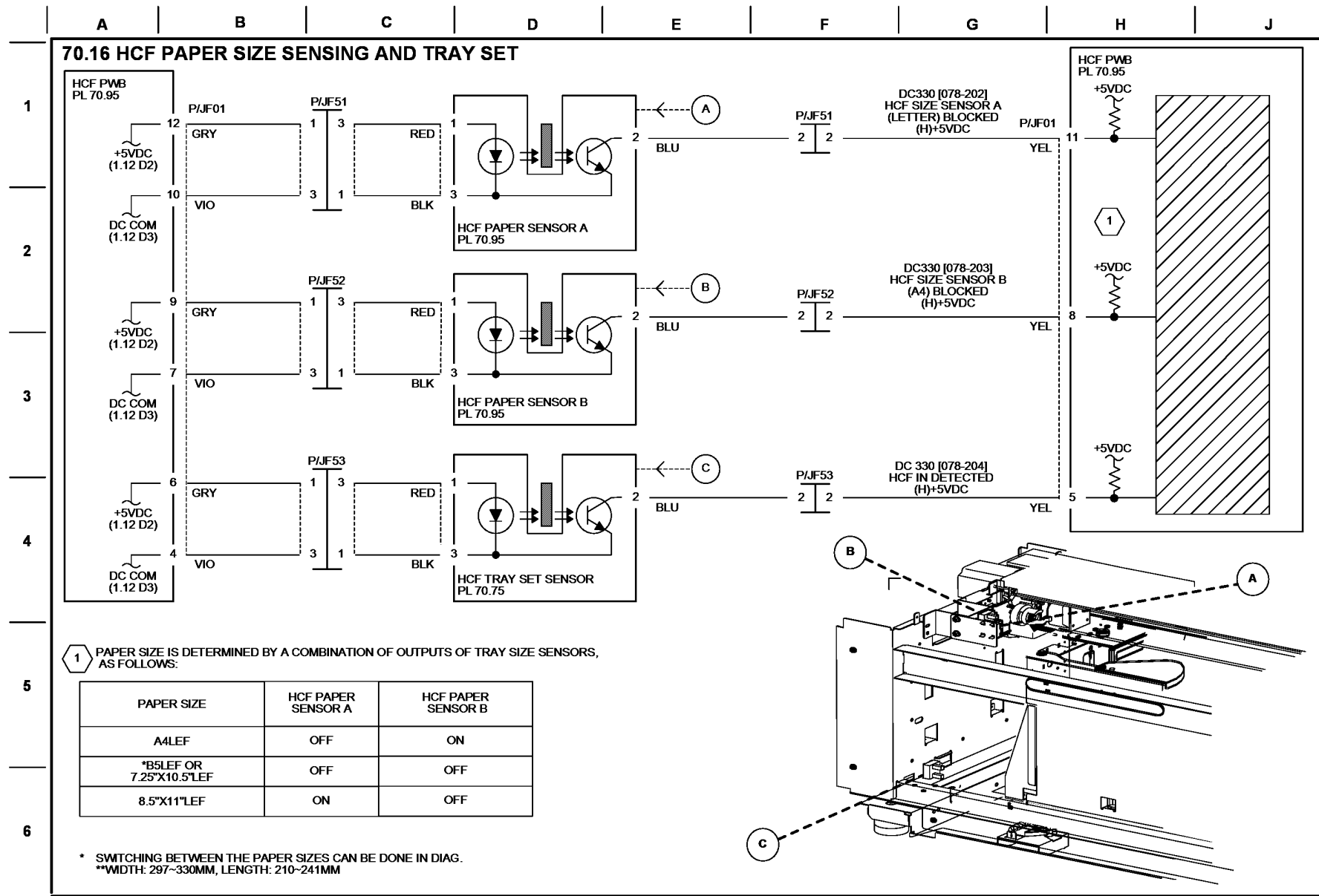
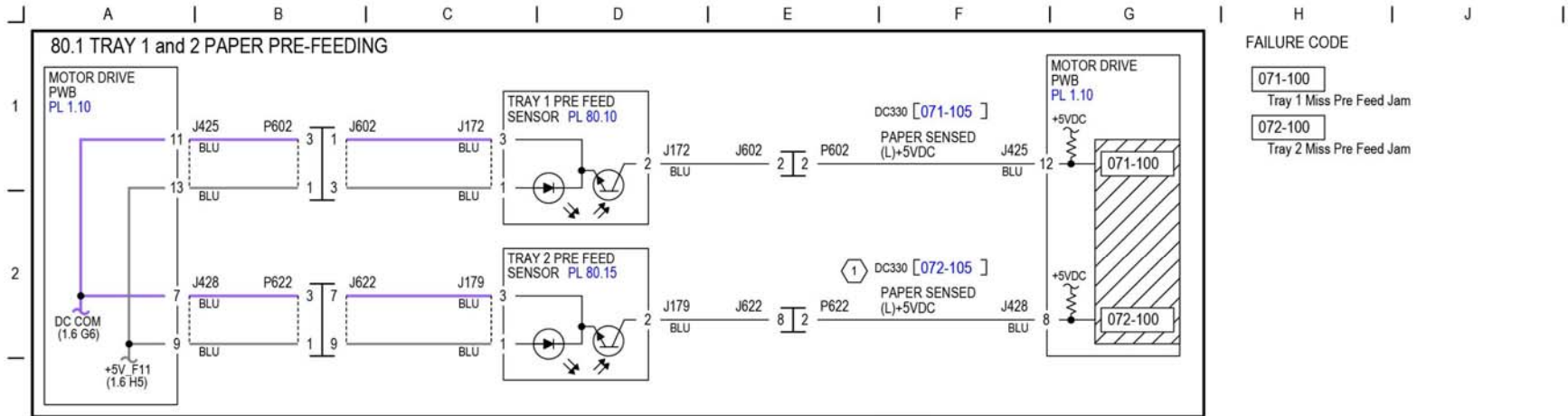


Figure 77 BSD 70.16

BSD 80.1 Tray 1 and 2 Paper Pre-feeding



NOTE:
 ① ACTUAL VOLTAGE LEVEL IS OPPOSITE TO H/L DISPLAYED ON UI FOR THIS DIAG CODE. ON BSD THE ACTUAL VOLT LEVEL IS SHOWN.

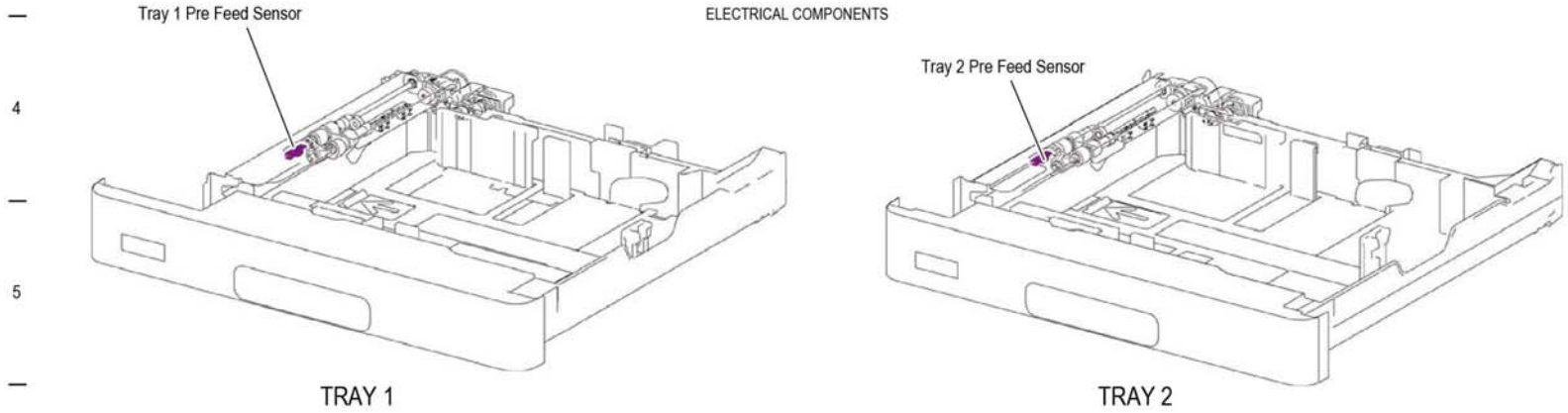


Figure 79 BSD 80.1

TF-1-0112-A

BSD 80.2 Tray 3 and 4 Paper Pre-feeding

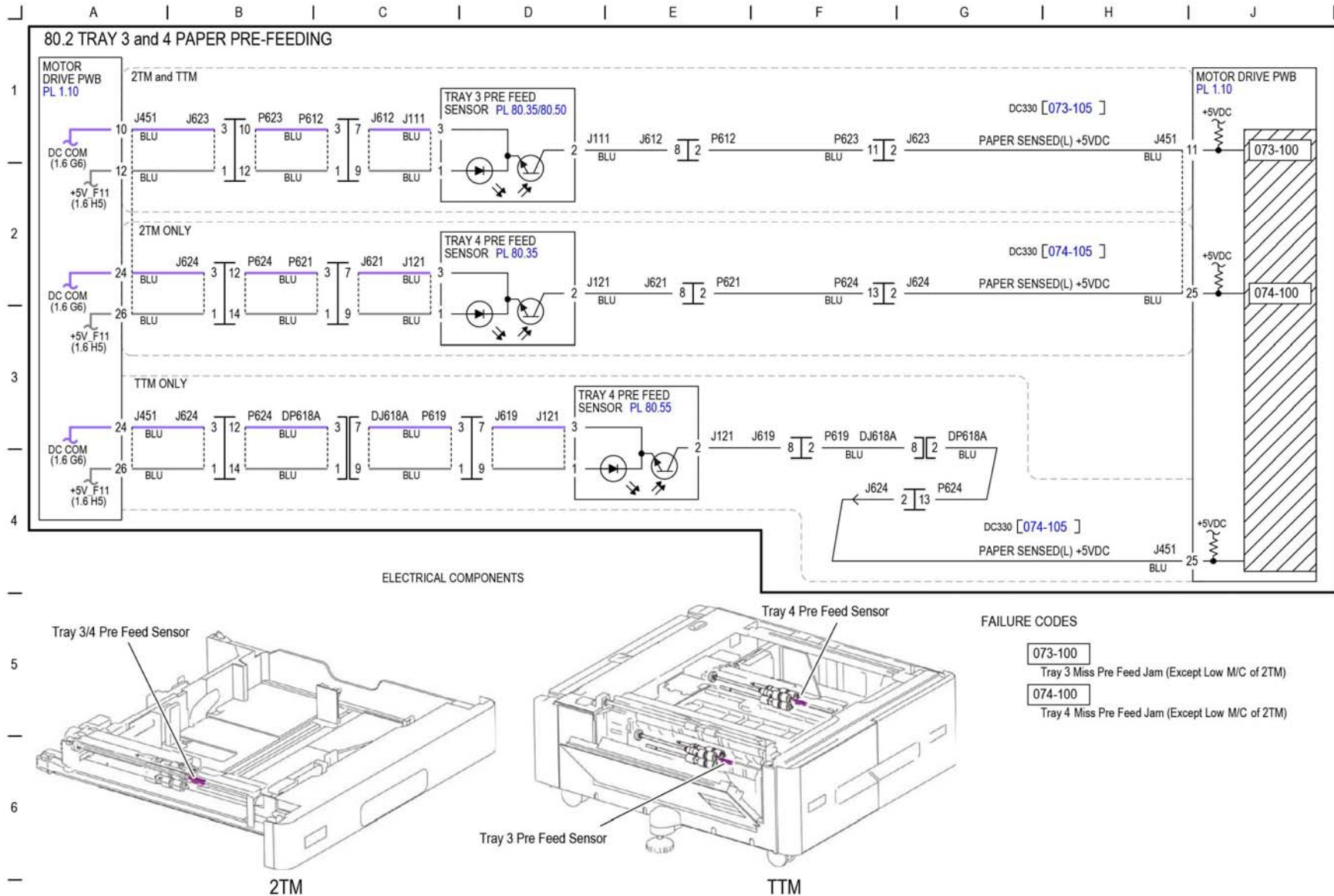
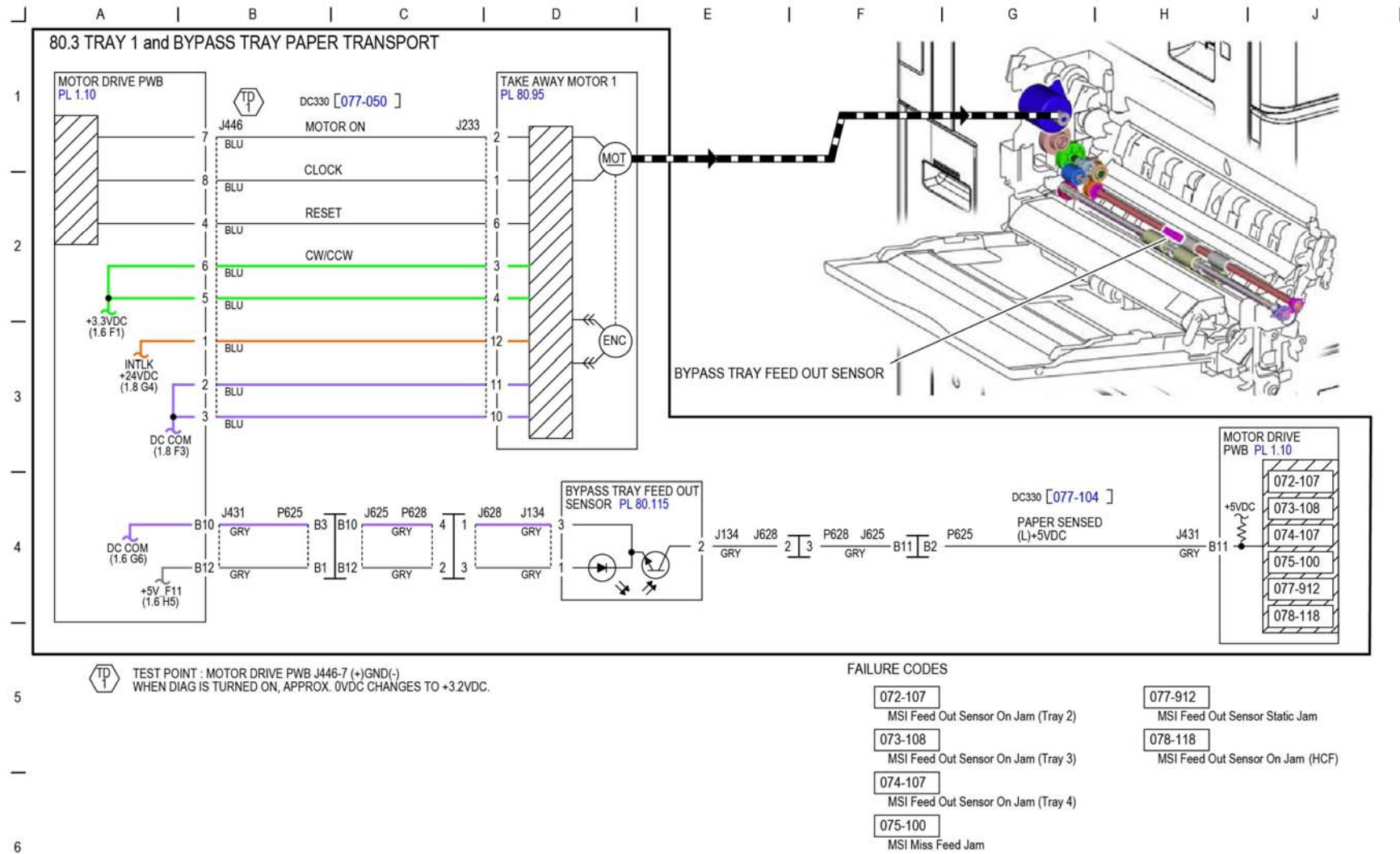


Figure 80 BSD 80.2

TF-1-0113-A

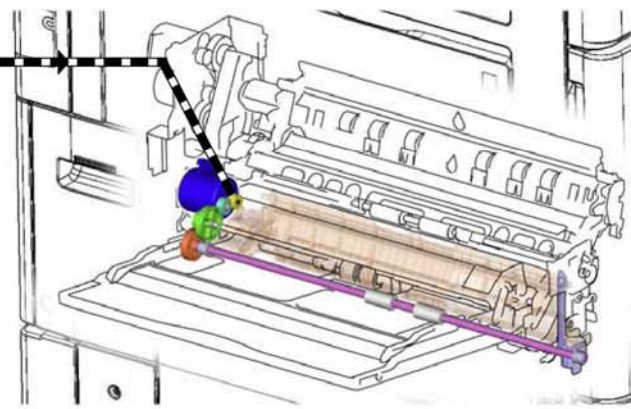
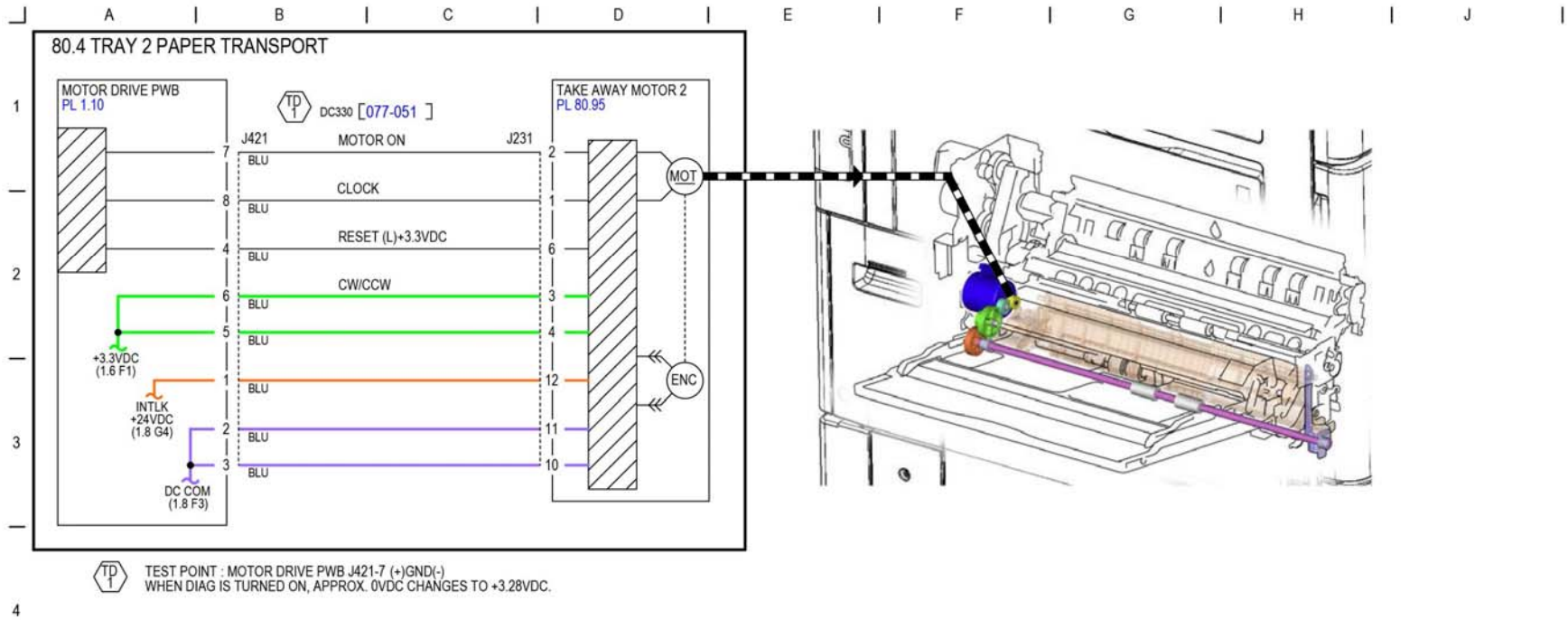
BSD 80.3 Tray 1 and Bypass Tray Paper Transport



TF-1-0114-A

Figure 81 BSD 80.3

BSD 80.4 Tray 2 Paper Transport



TF-1-0115-A

Figure 82 BSD 80.4

BSD 80.5 2TM Paper Transport

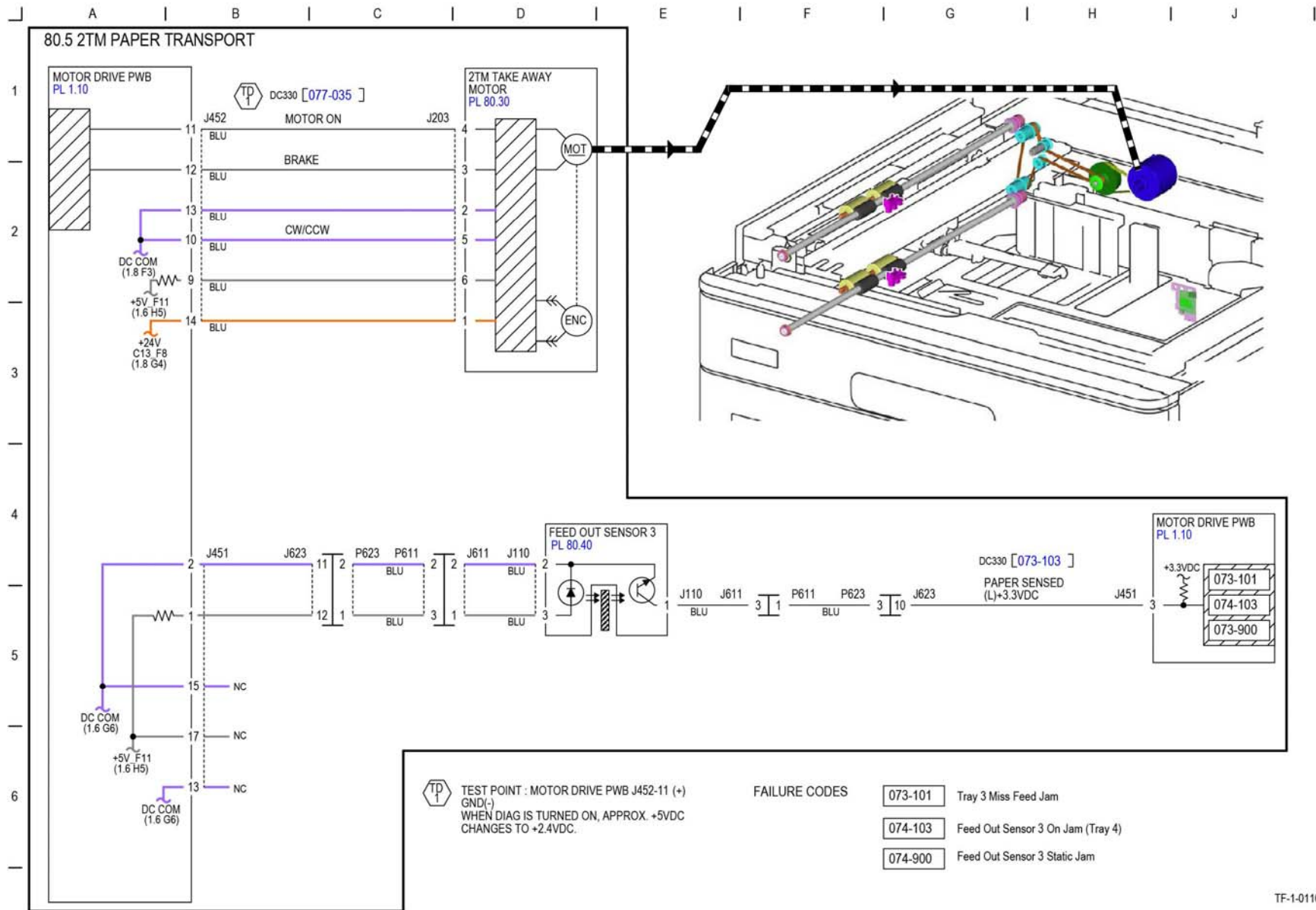
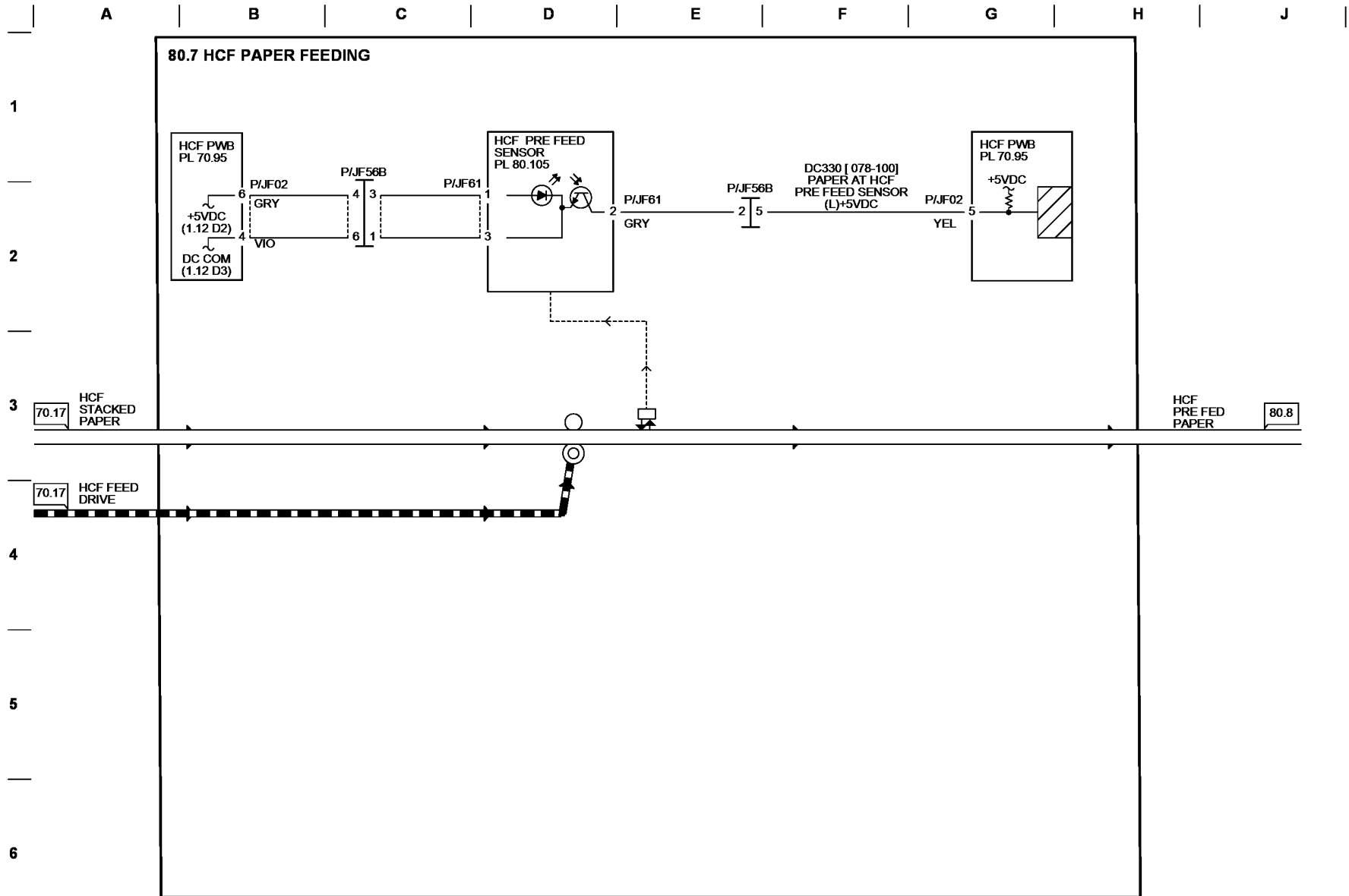


Figure 83 BSD 80.5

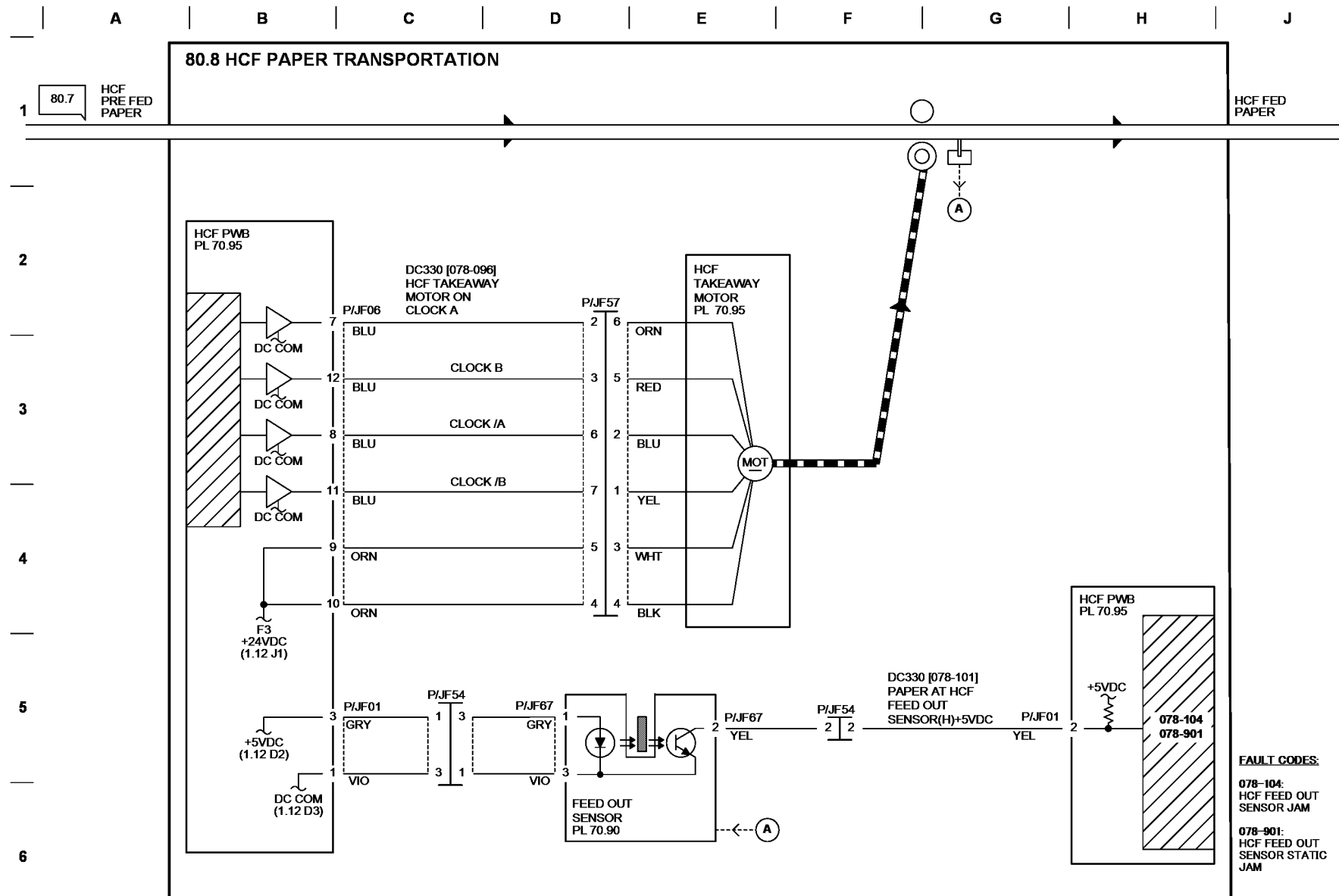
BSD 80.7 HCF Paper Feeding



TF-1-0184-A

Figure 85 BSD 80.7

BSD 80.8 HCF Paper Transportation



TF-1-0185-A

Figure 86 BSD 80.8

BSD 80.9 Registration

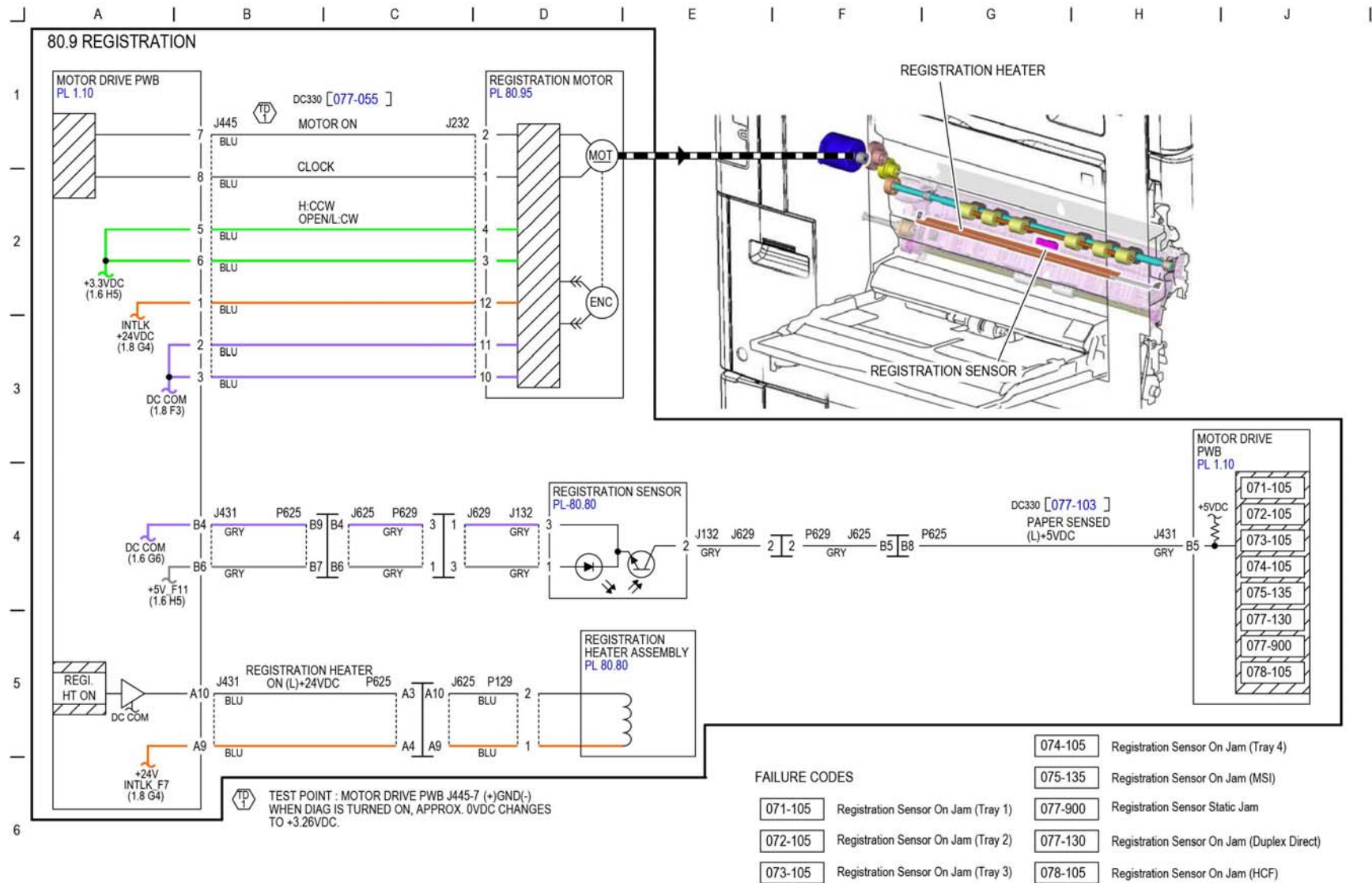
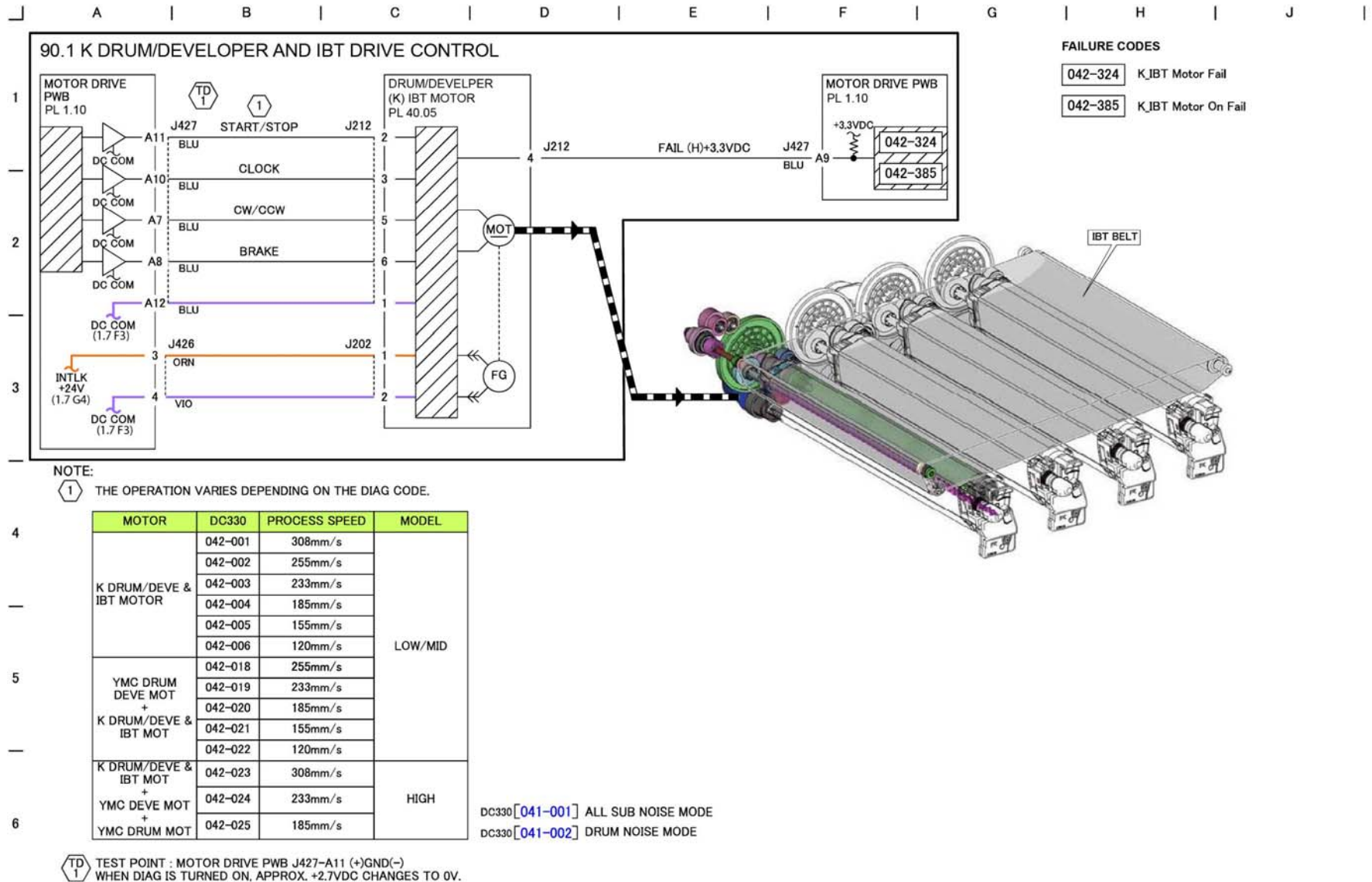


Figure 87 BSD 80.9

TF-1-0118-A

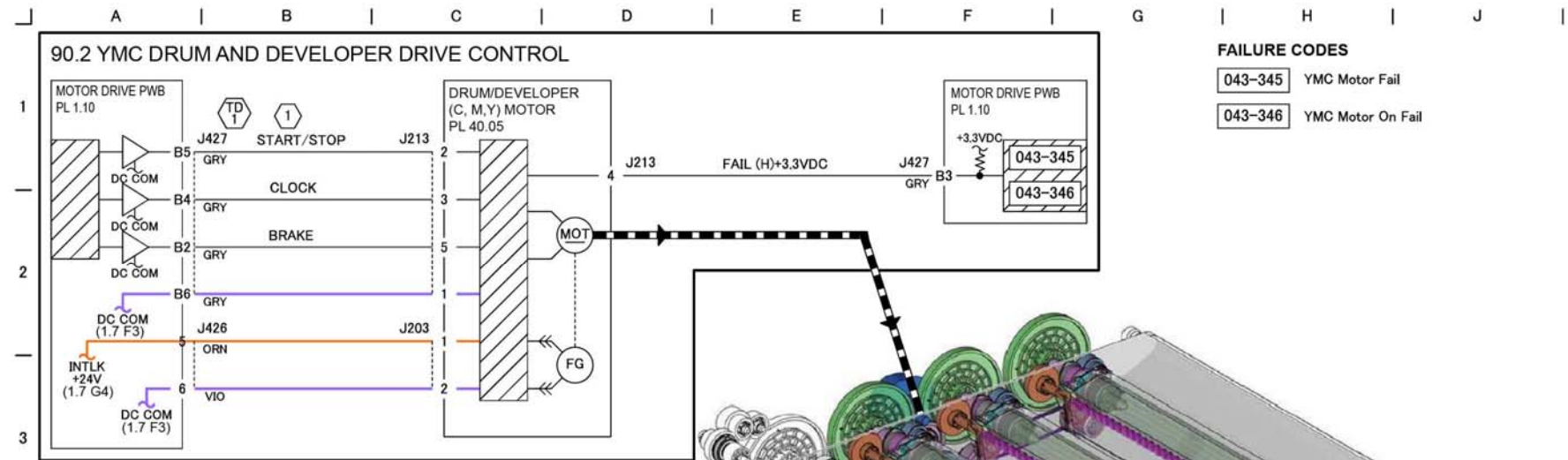
BSD 90.1 K Drum/Developer and IBT Drive Control



TF-1-0186-A

Figure 88 BSD 90.1

BSD 90.2 YMC Drum and Developer Drive Control



FAILURE CODES
 043-345 YMC Motor Fail
 043-346 YMC Motor On Fail

NOTE:
 ① THE OPERATION VARIES DEPENDING ON THE DIAG CODE.

MOTOR	DC330	PROCESS SPEED
YMC DRUM DEVE MOT	042-007	255mm/s
	042-008	233mm/s
	042-009	185mm/s
	042-010	155mm/s
	042-011	120mm/s
YMC DRUM DEVE MOT + K DRUM/DEVE & IBT MOT	042-018	255mm/s
	042-019	233mm/s
	042-020	185mm/s
	042-021	155mm/s
	042-022	120mm/s

① TEST POINT : MOTOR DRIVE PWB, J427-B5 (+)GND(-)
 WHEN DIAG IS TURNED ON, APPROX. +2.7VDC CHANGES TO 0V.

TF-1-0187-A

Figure 89 BSD 90.2

BSD 90.3 Drum Life Control (Y, M)

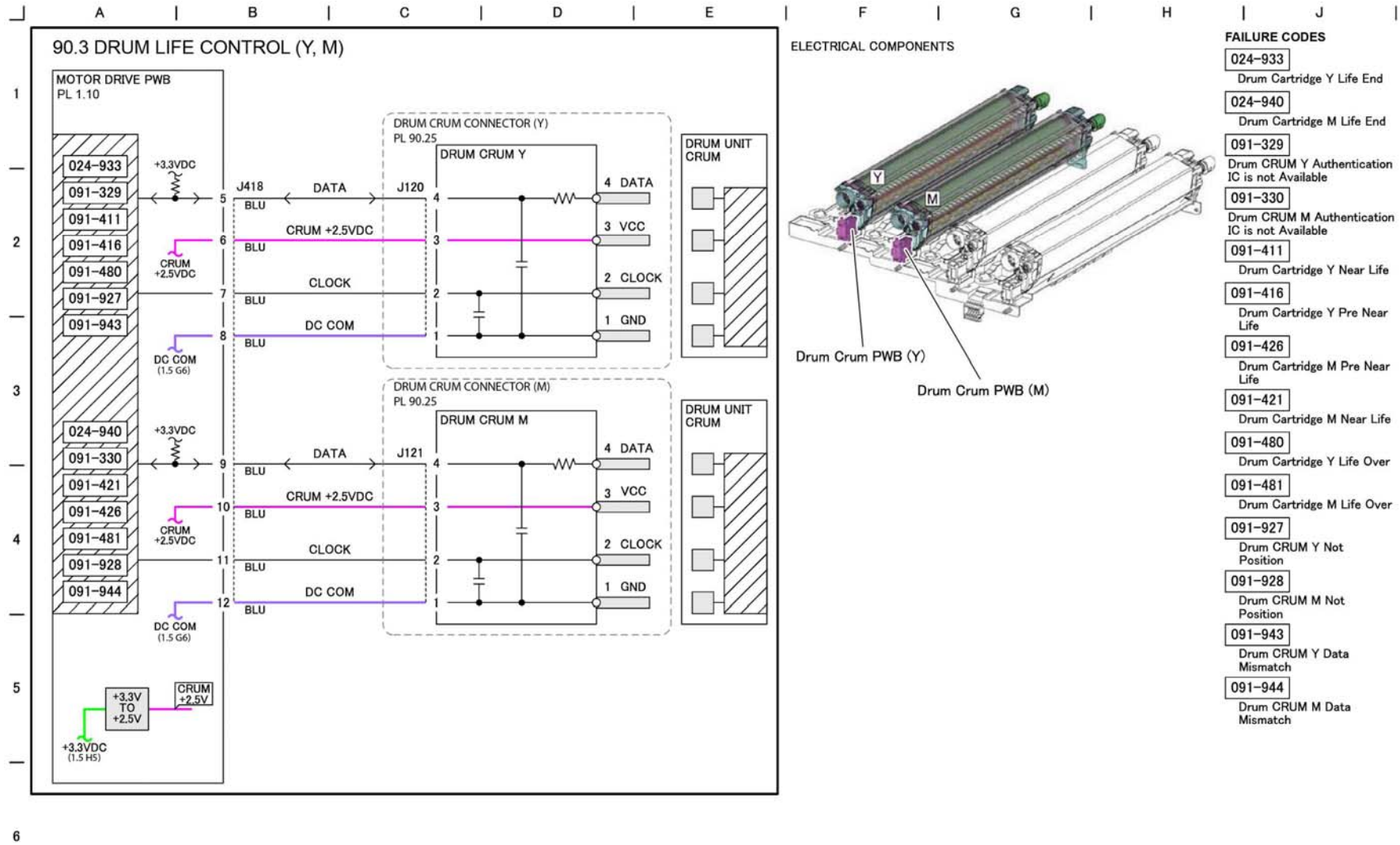


Figure 90 BSD 90.3

TF-1-0188-A

BSD 90.4 Drum Life Control (C, K)

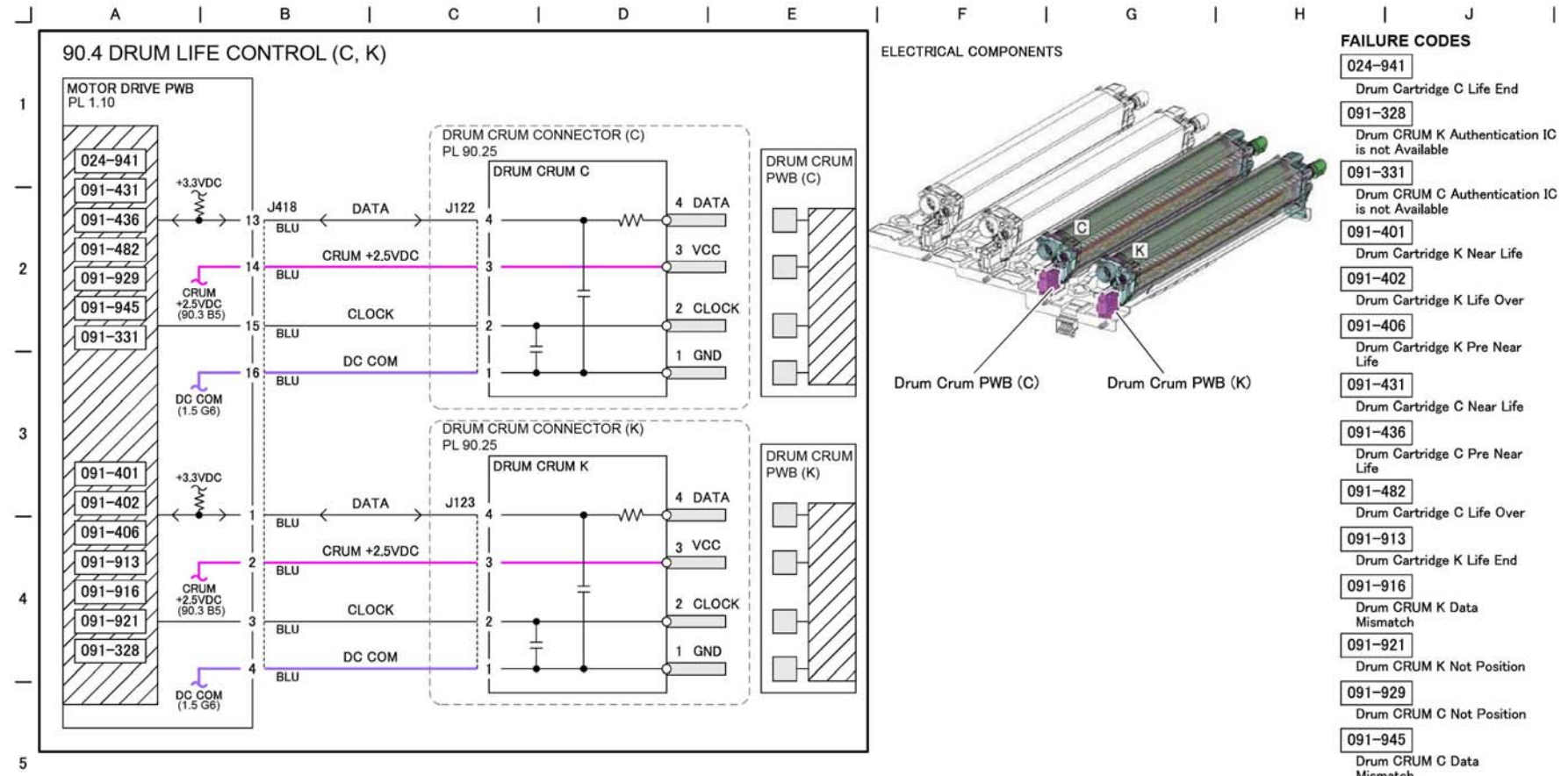
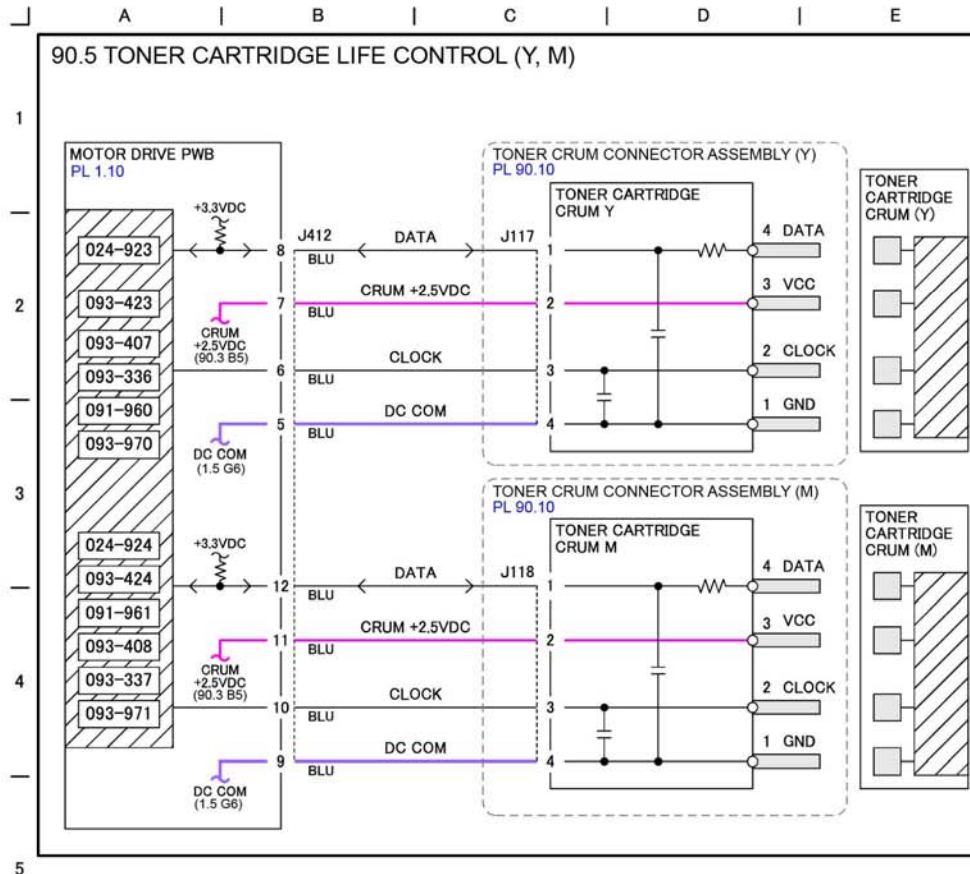


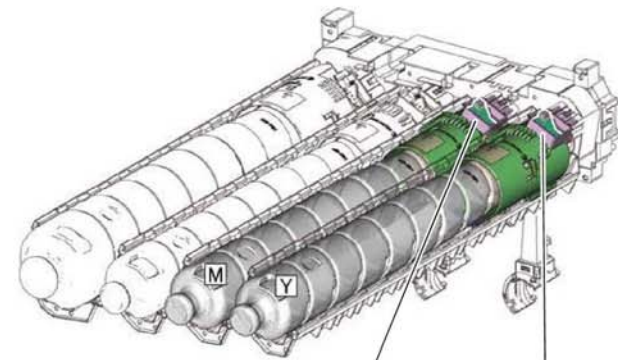
Figure 91 BSD 90.4

TF-1-0189-A

BSD 90.5 Toner Cartridge Life Control (Y, M)



ELECTRICAL COMPONENTS



Toner Cartridge Crum (M)
Toner Cartridge Crum (Y)

FAILURE CODES

- | | |
|---|--|
| 024-923
Toner Cartridge Y Empty | 093-407
Toner Cartridge Y Pre Near Empty |
| 024-924
Toner Cartridge M Empty | 093-408
Toner Cartridge M Pre Near Empty |
| 091-960
Toner CRUM Y Data Mismatch Fail | 093-423
Toner Cartridge Y Near Empty |
| 091-961
Toner CRUM M Data Mismatch Fail | 093-424
Toner Cartridge M Near Empty |
| 093-336
Toner CRUM Y Authentication IC is not Available | 093-970
Toner CRUM Y Not Position |
| 093-337
Toner CRUM M Authentication IC is not Available | 093-971
Toner CRUM M Not Position |

TF-1-0190-A

Figure 92 BSD 90.5

BSD 90.6 Toner Cartridge Life Control (C, K)

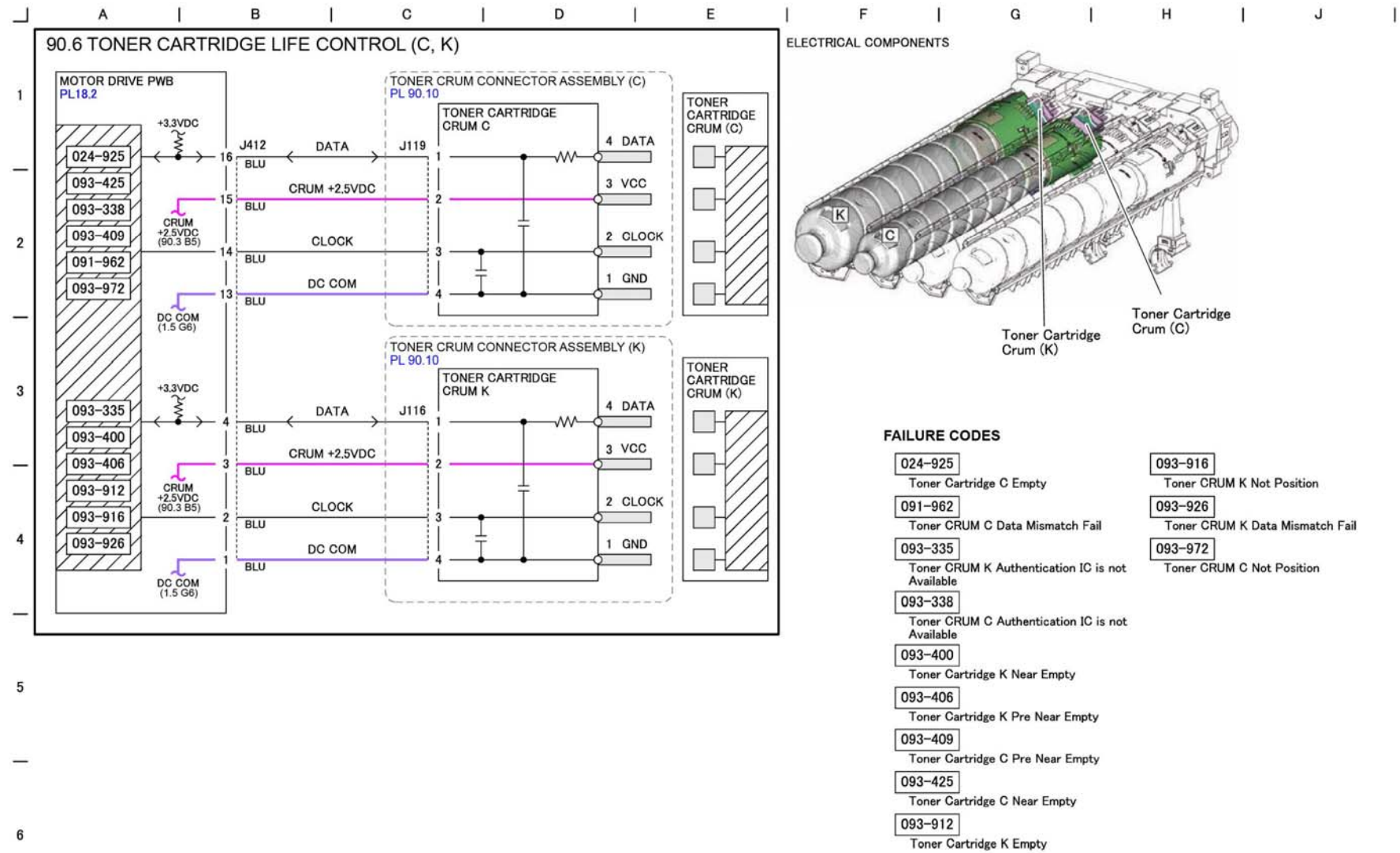
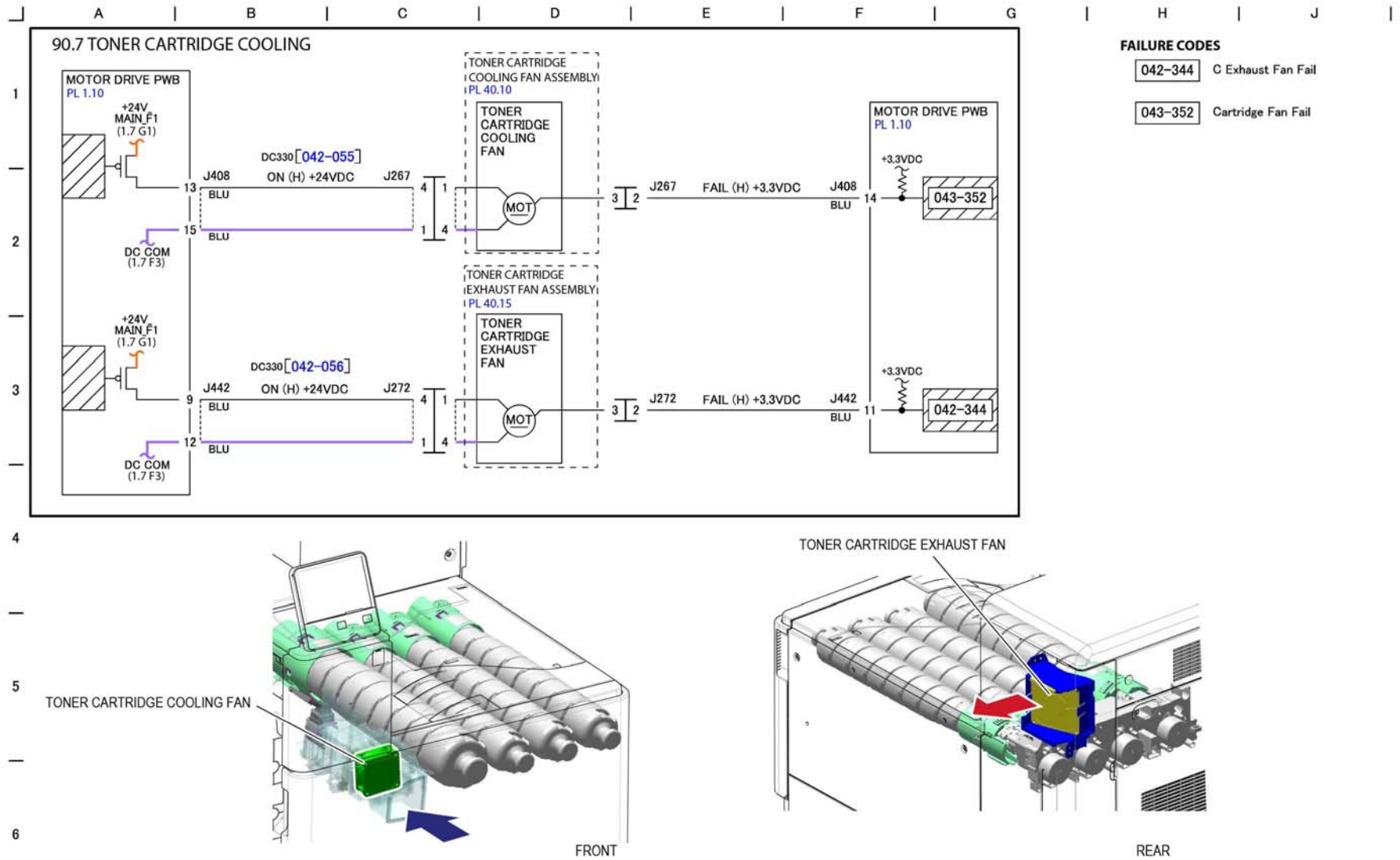


Figure 93 BSD 90.6

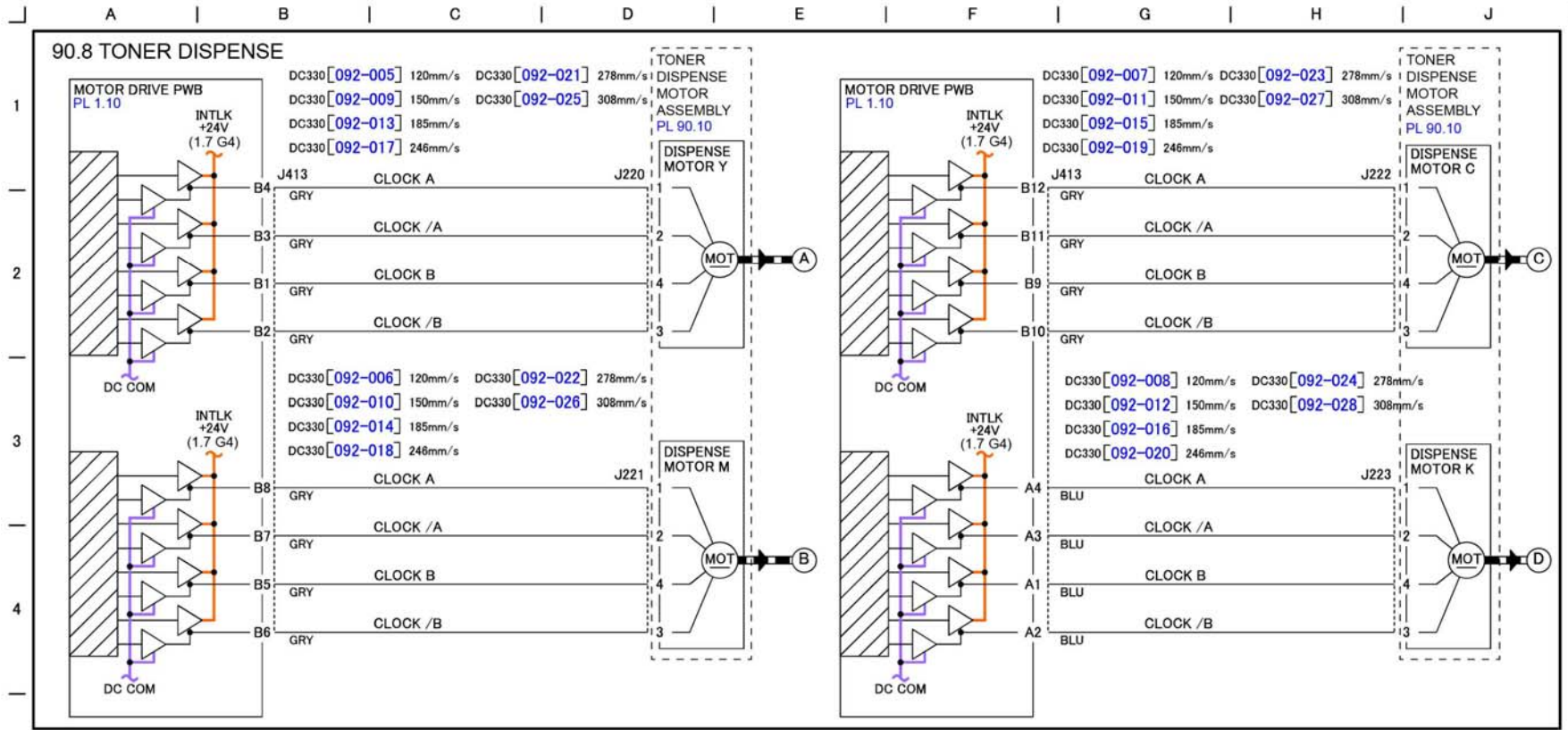
BSD 90.7 Toner Cartridge Cooling



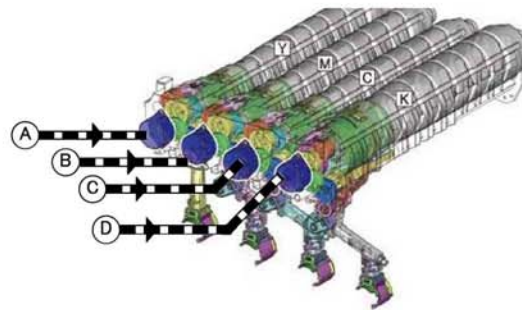
TF-1-0192-A

Figure 94 BSD 90.7

BSD 90.8 Toner Dispense Control



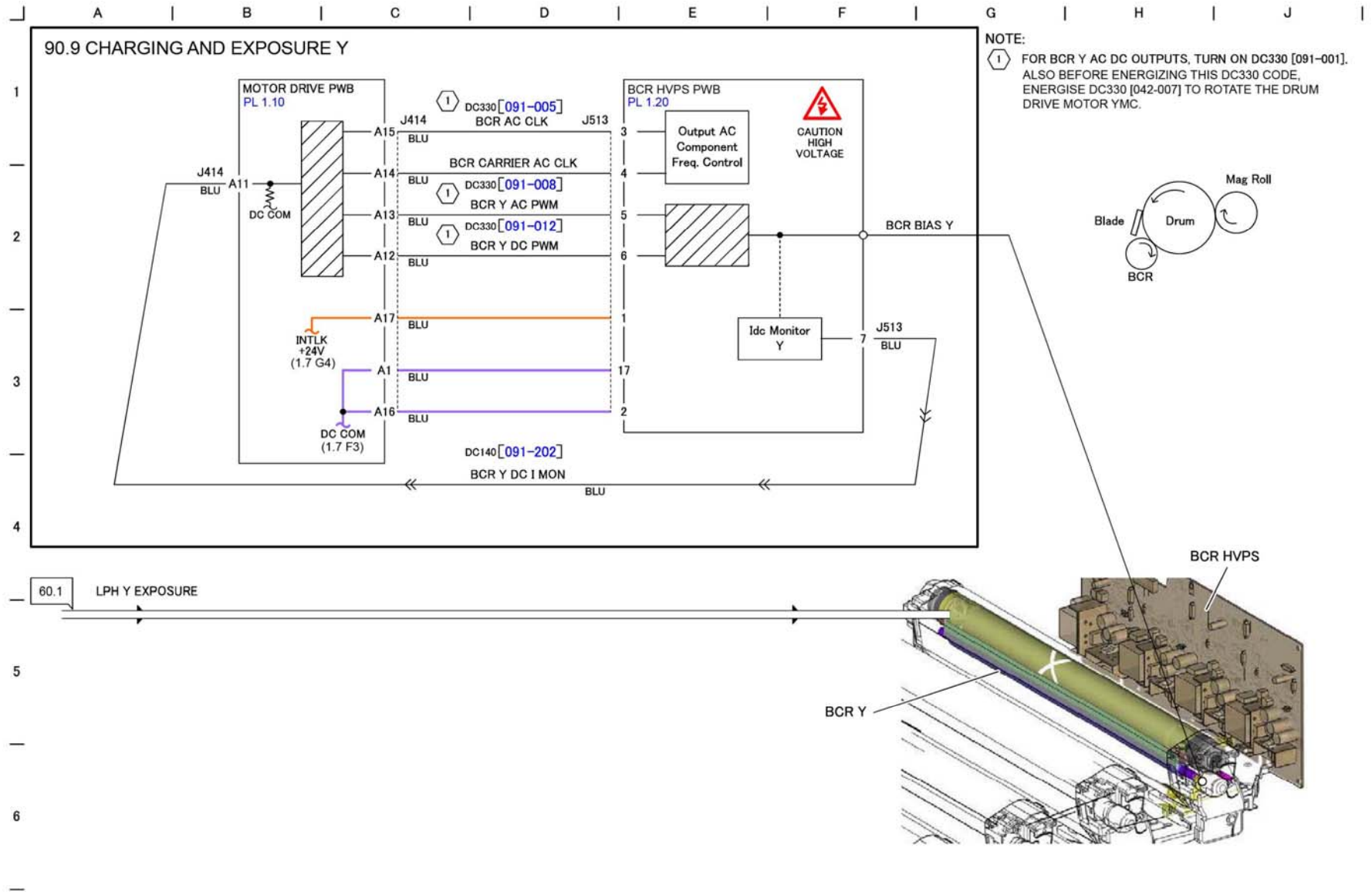
DC330[041-003] DISPENSE NOISE MODE



TF-1-0193-A

Figure 95 BSD 90.8

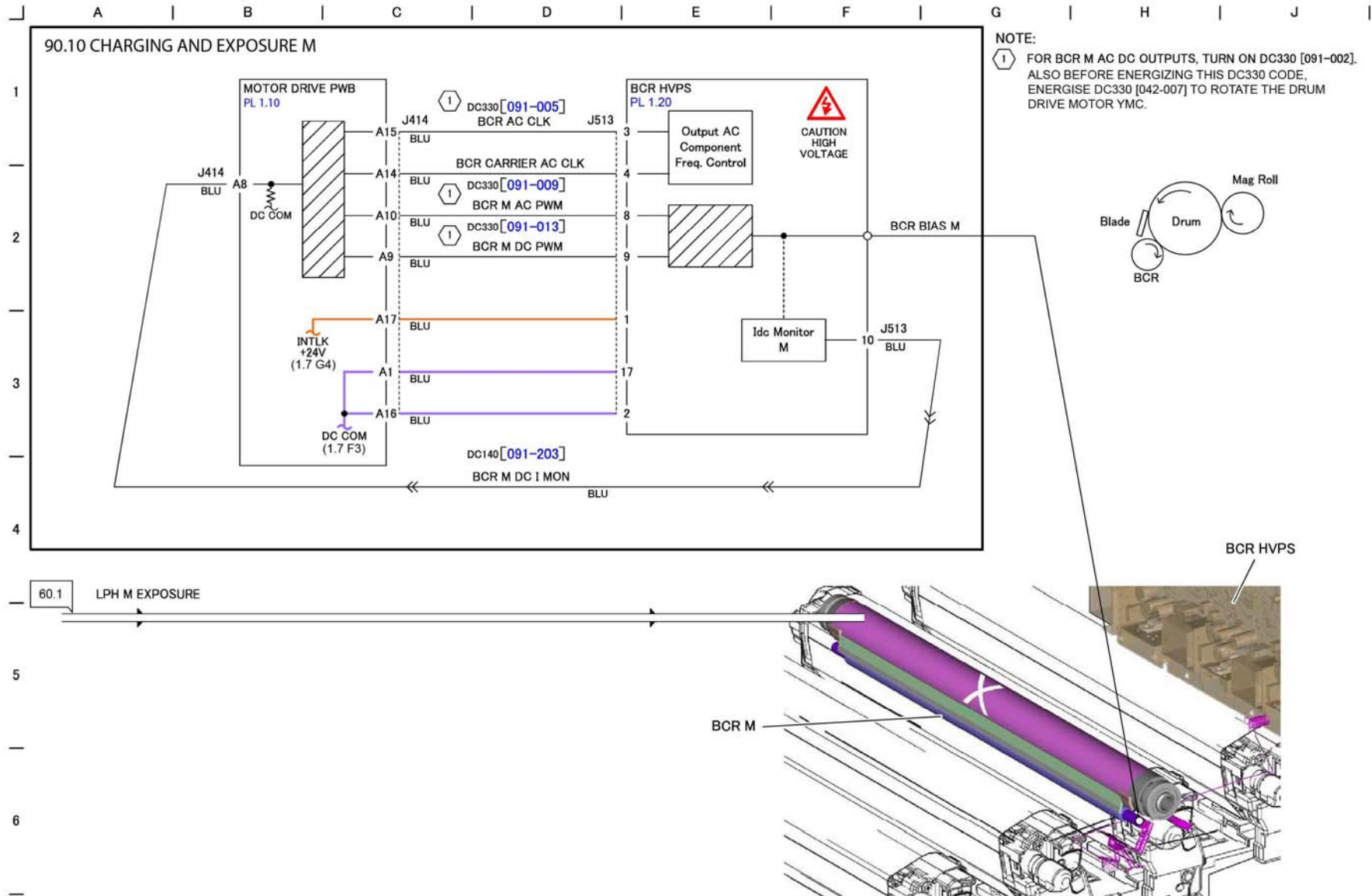
BSD 90.9 Charging and Exposure Y



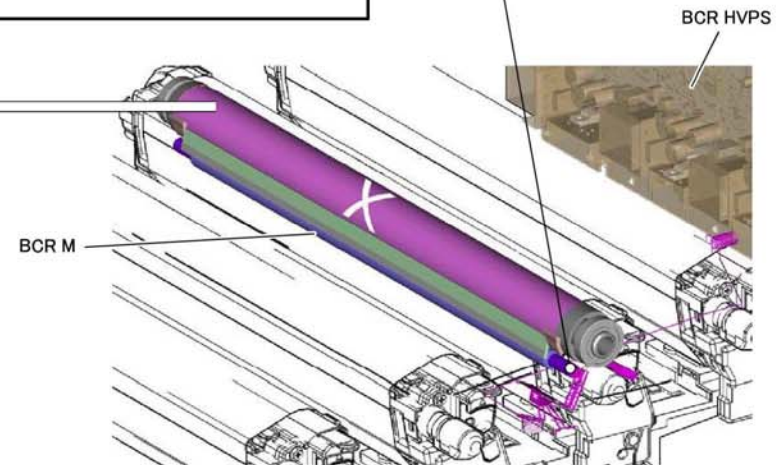
TF-1-0194-A

Figure 96 BSD 90.9

BSD 90.10 Charging and Exposure M



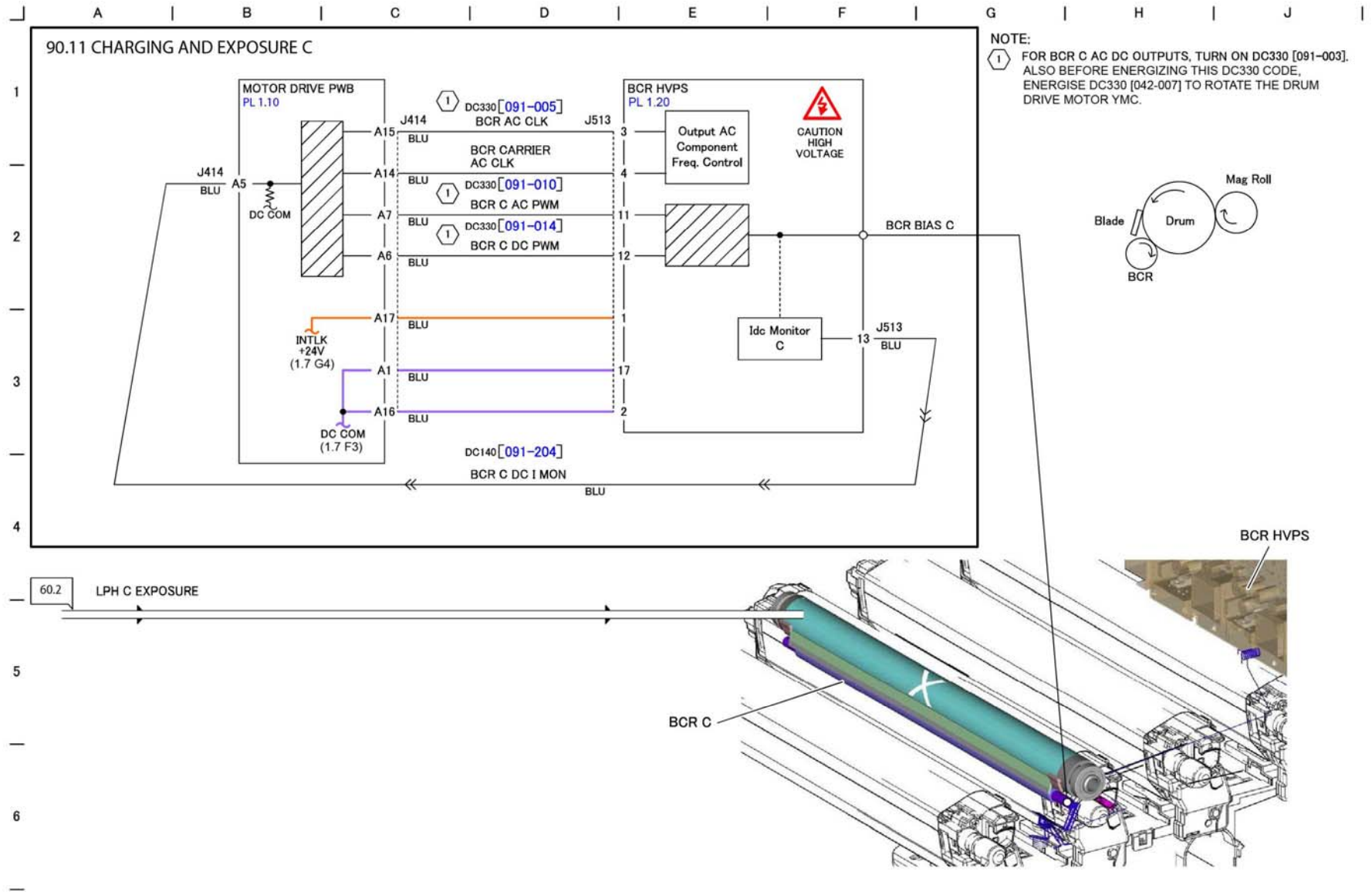
60.1 LPH M EXPOSURE



TF-1-0195-A

Figure 97 BSD 90.10

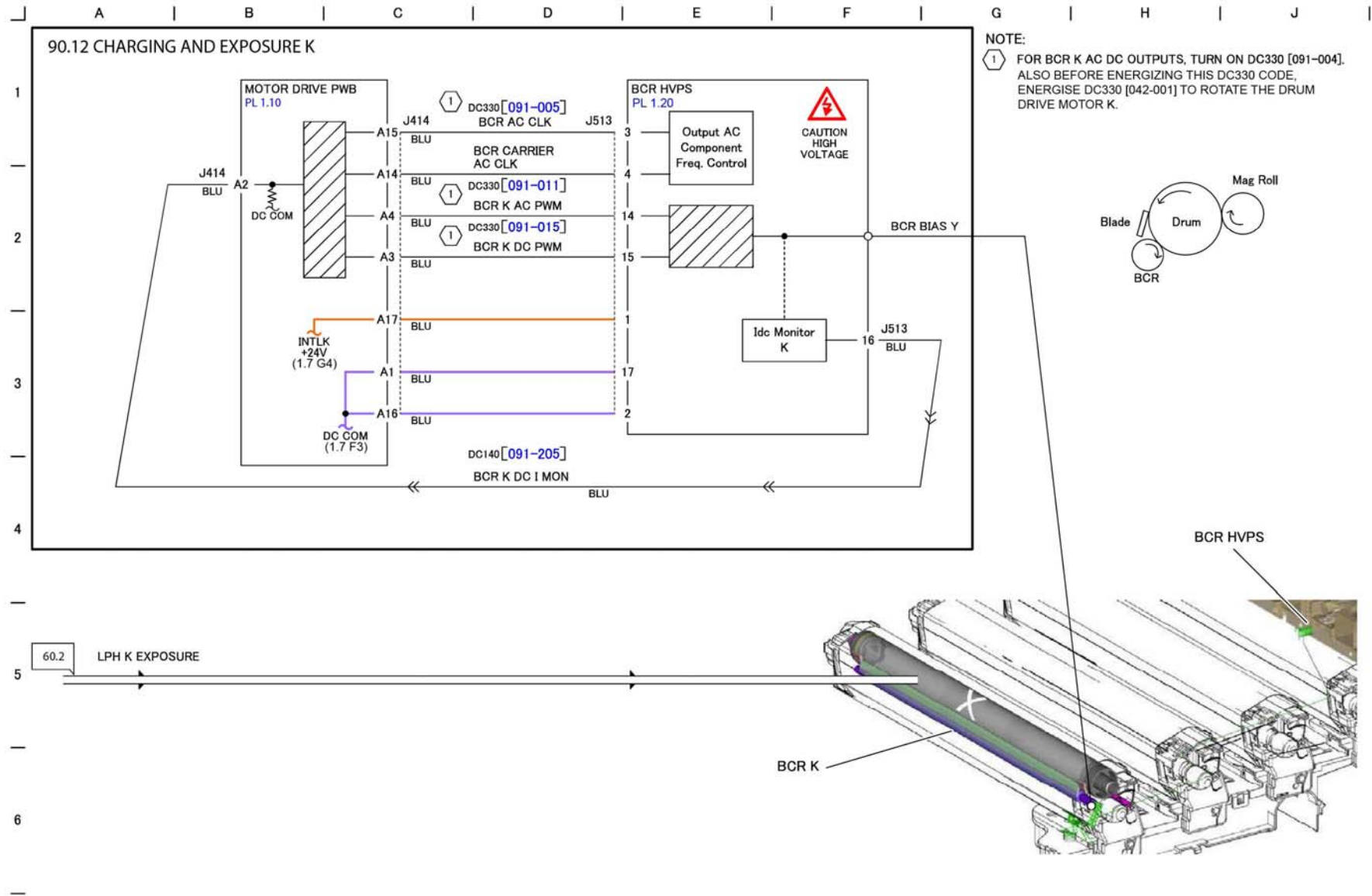
BSD 90.11 Charging and Exposure C



TF-1-0196-A

Figure 98 BSD 90.11

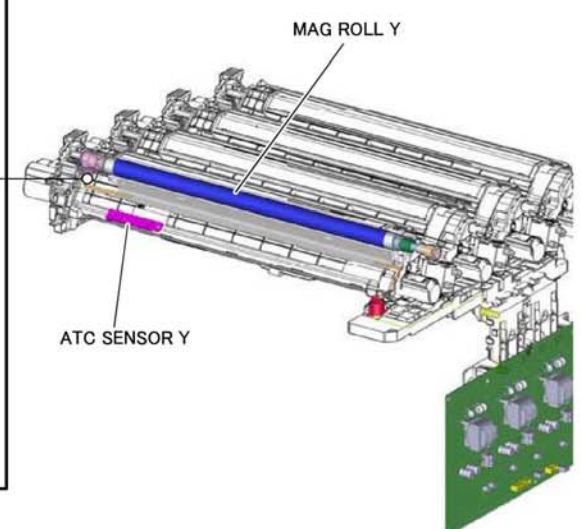
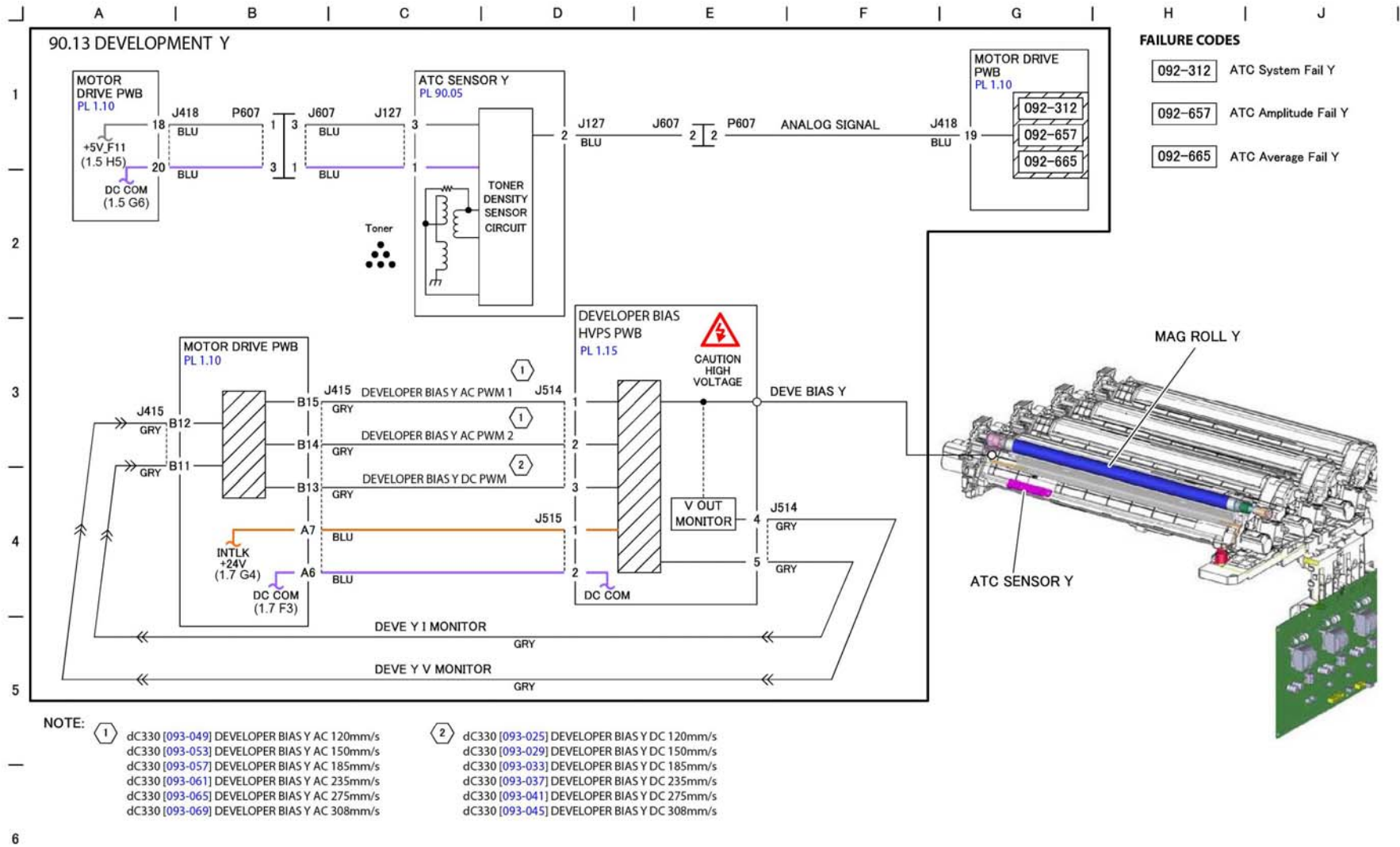
BSD 90.12 Charging and Exposure K



TF-1-0197-A

Figure 99 BSD 90.12

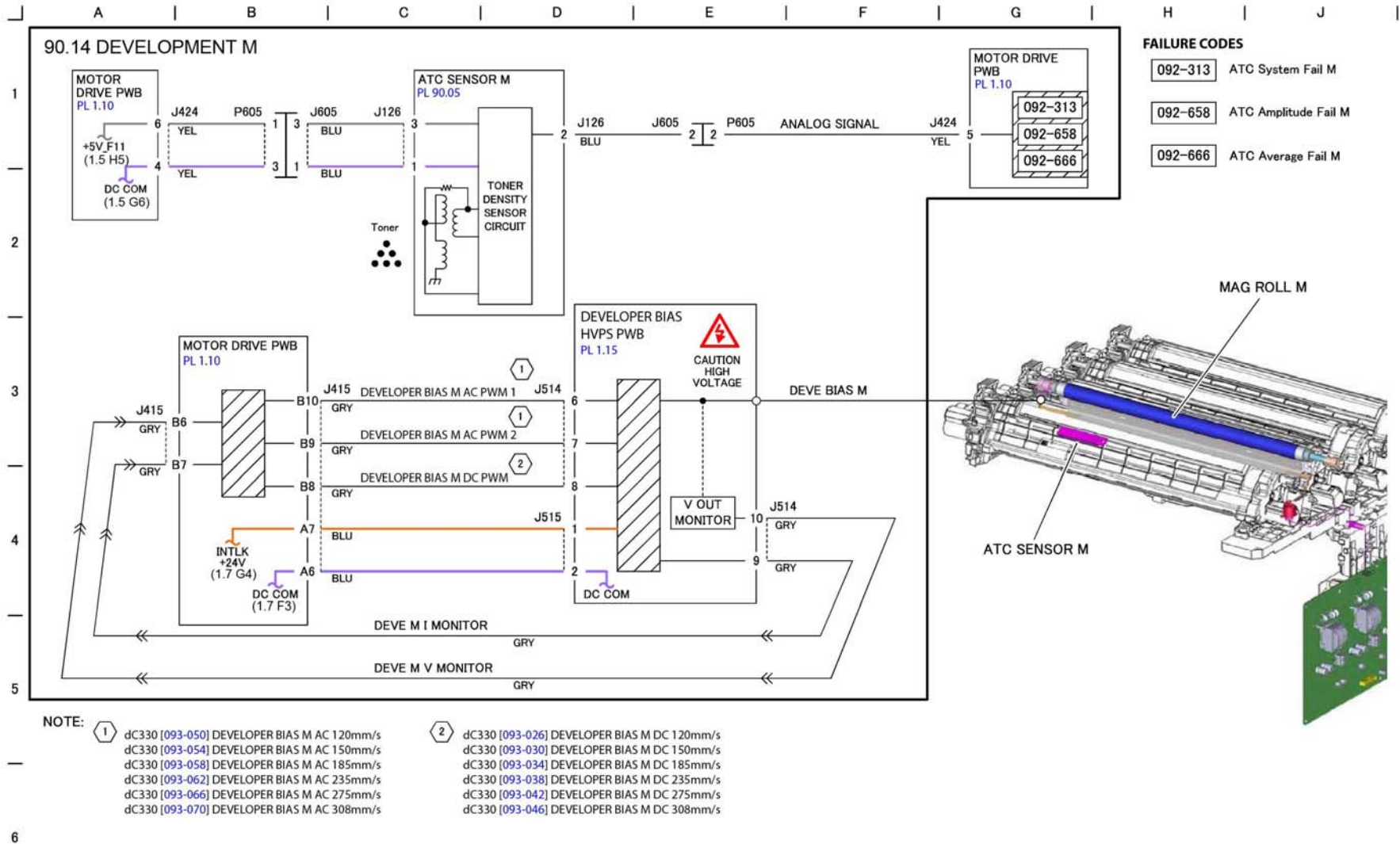
BSD 90.13 Development Y



TF-1-0198-A

Figure 100 BSD 90.13

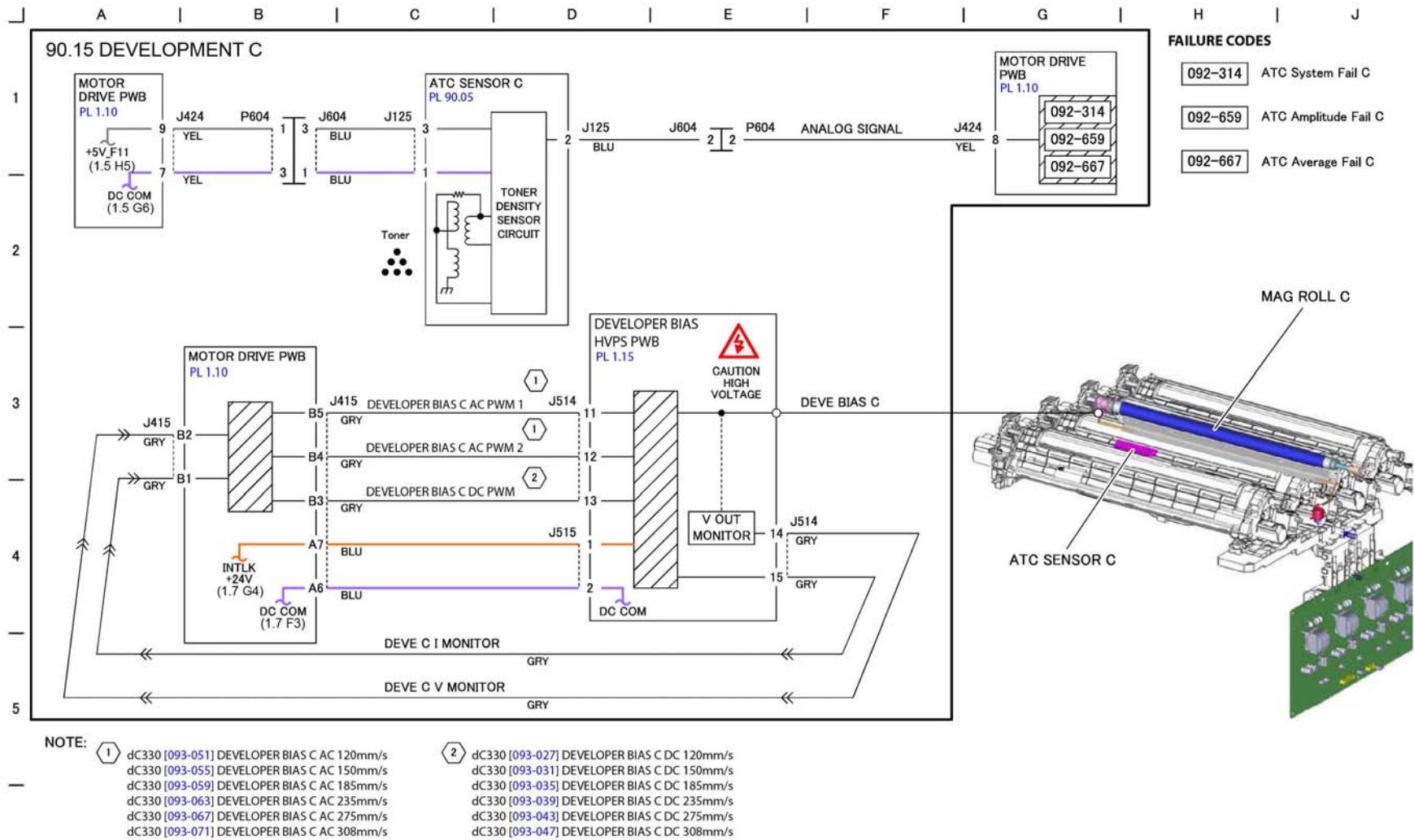
BSD 90.14 Development M



TF-1-0199-A

Figure 101 BSD 90.14

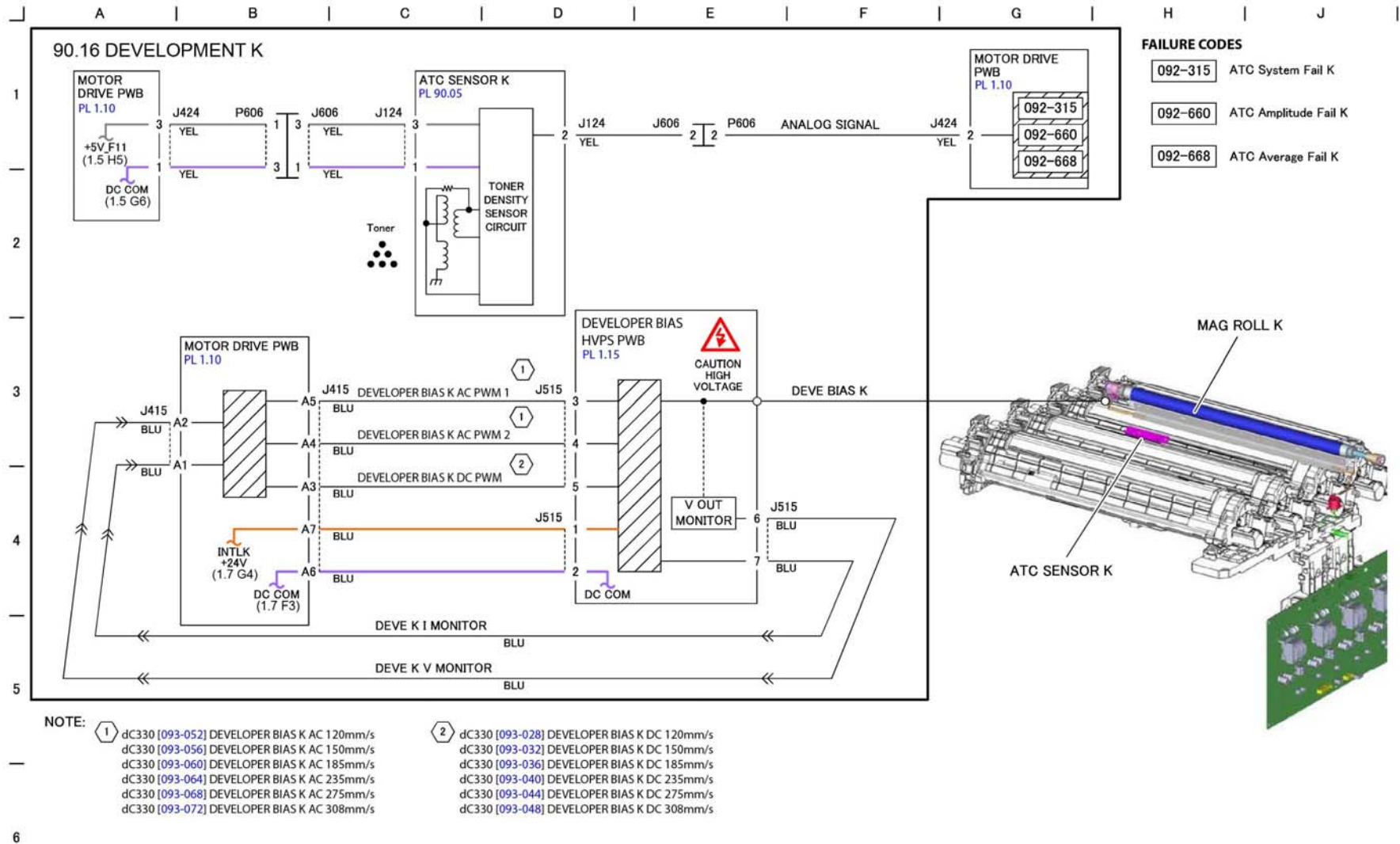
BSD 90.15 Development C



TF-1-0200-A

Figure 102 BSD 90.15

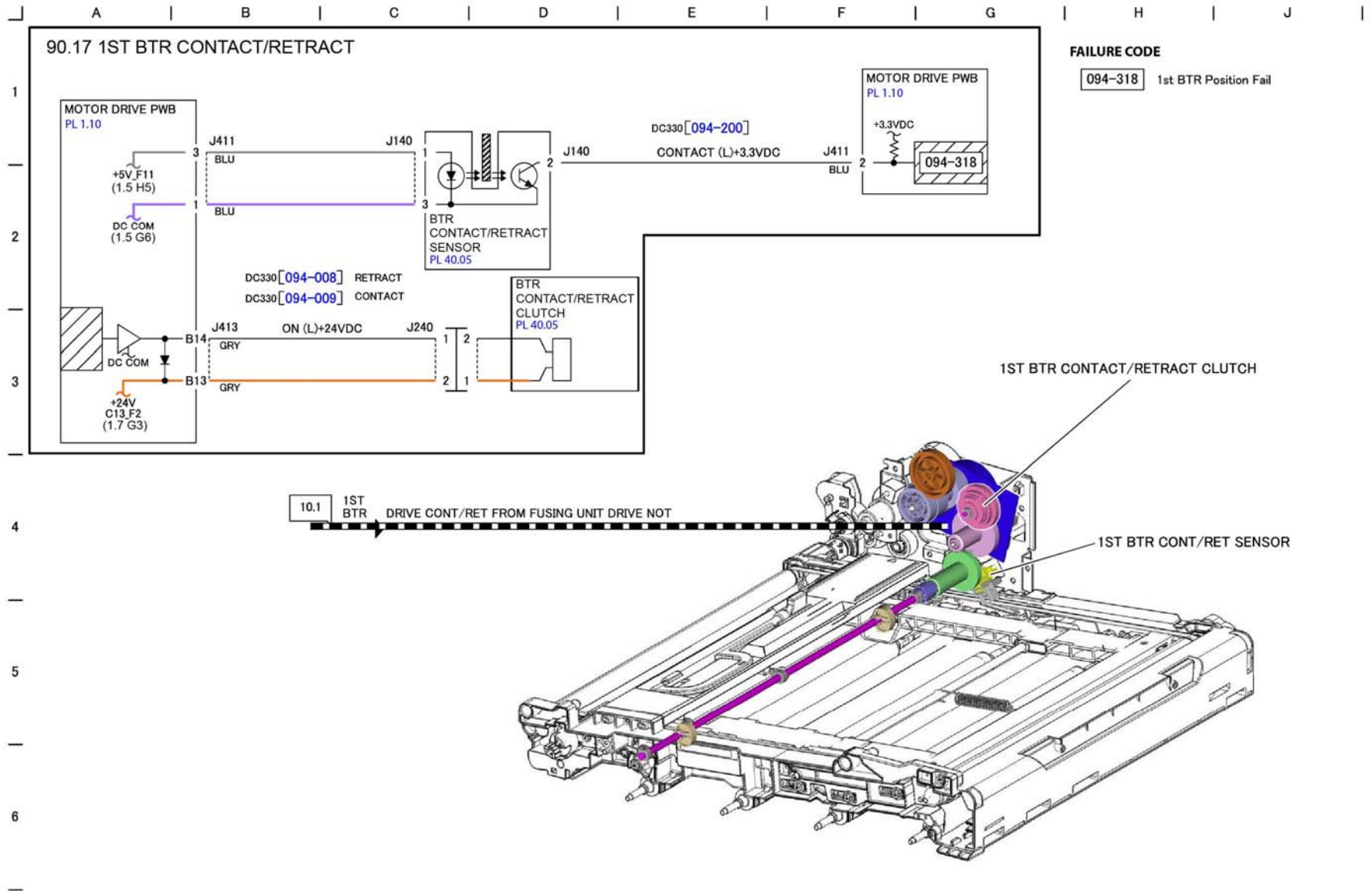
BSD 90.16 Development K



TF-1-0201-A

Figure 103 BSD 90.16

BSD 90.17 1st BTR Contact/retract



FAILURE CODE
 094-318 1st BTR Position Fail

10.1 1ST BTR DRIVE CONT/RET FROM FUSING UNIT DRIVE NOT

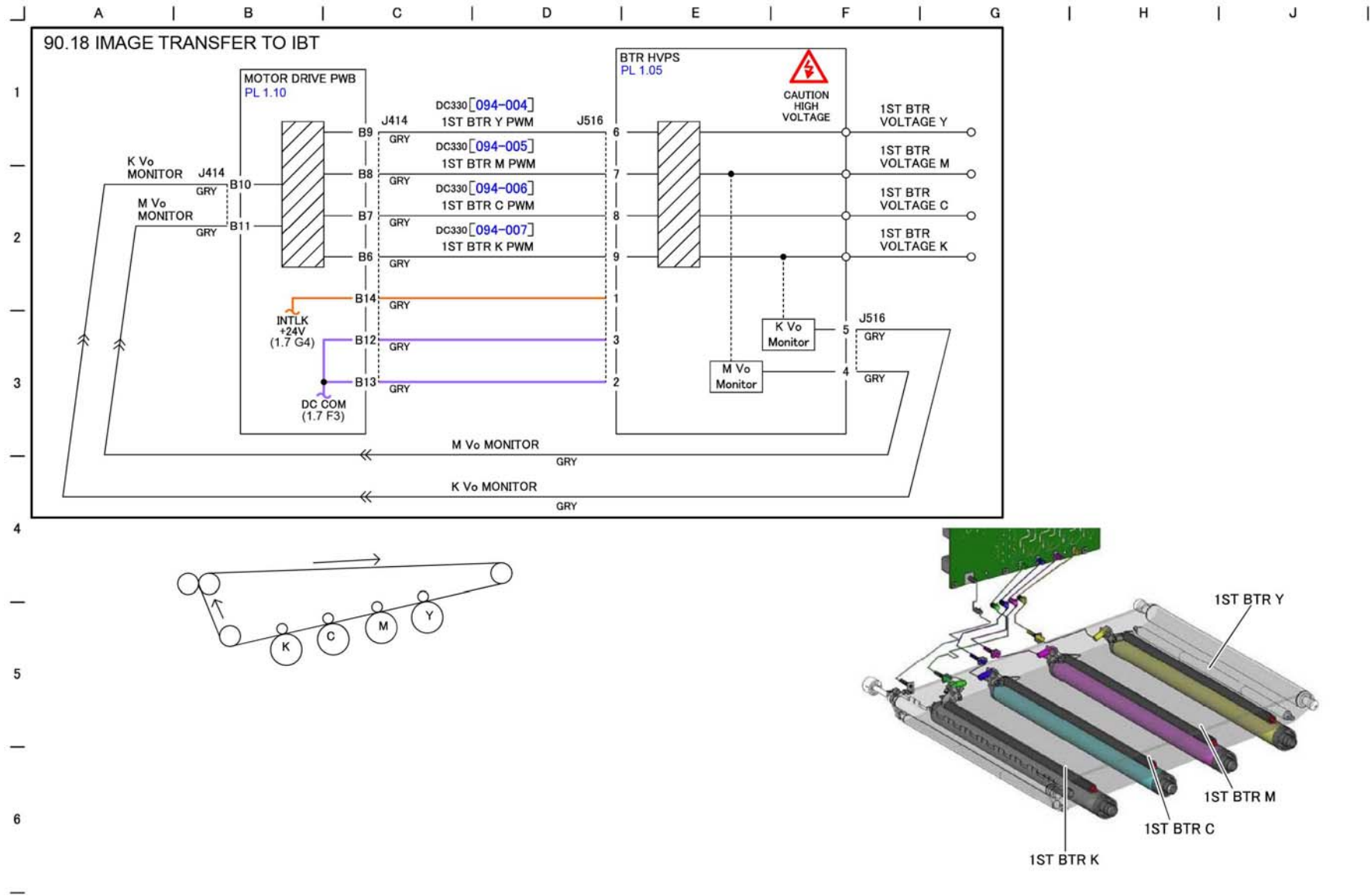
1ST BTR CONTACT/RETRACT CLUTCH

1ST BTR CONT/RET SENSOR

TF-1-0202-A

Figure 104 BSD 90.17

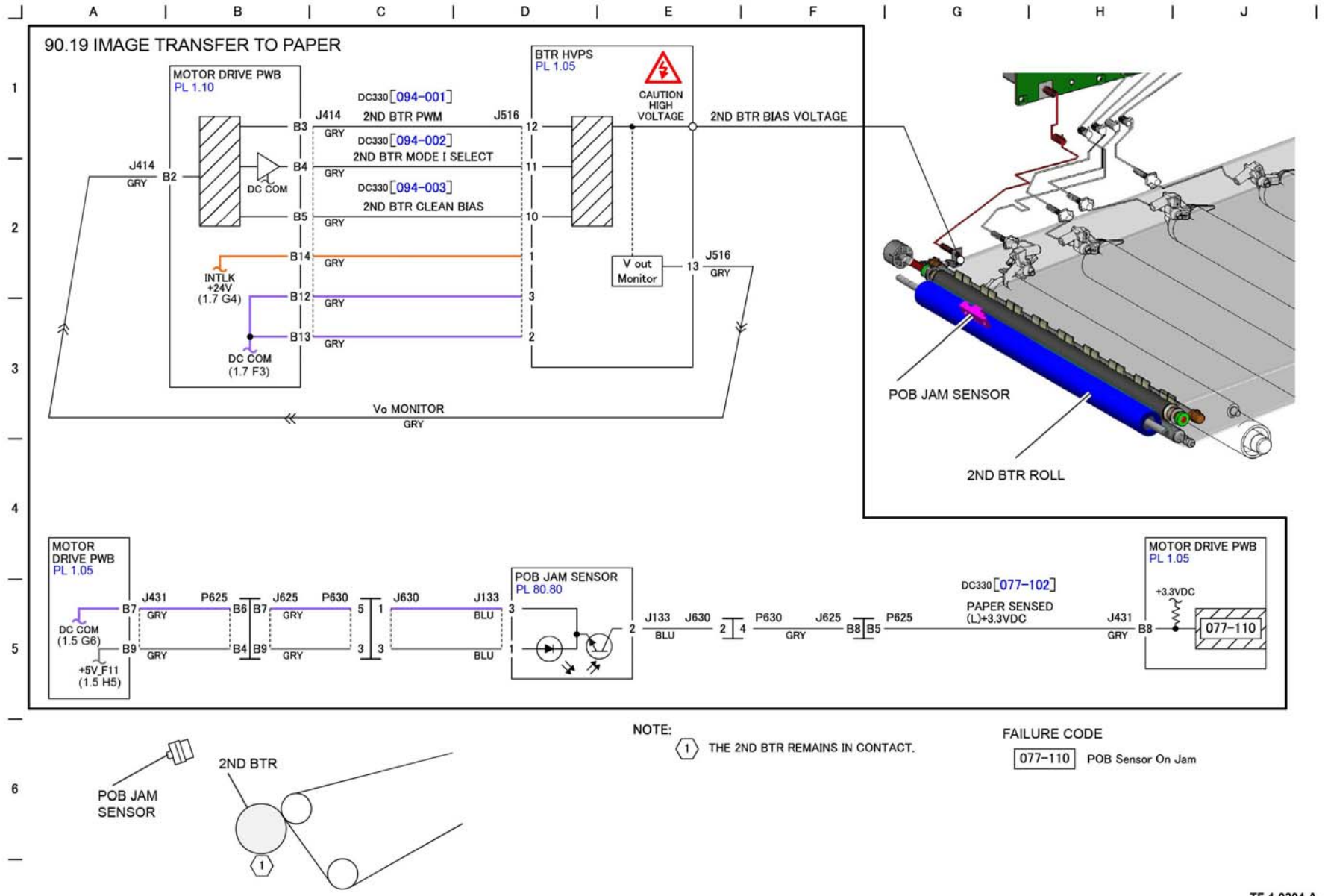
BSD 90.18 Image Transfer to IBT



TF-1-0203-A

Figure 105 BSD 90.18

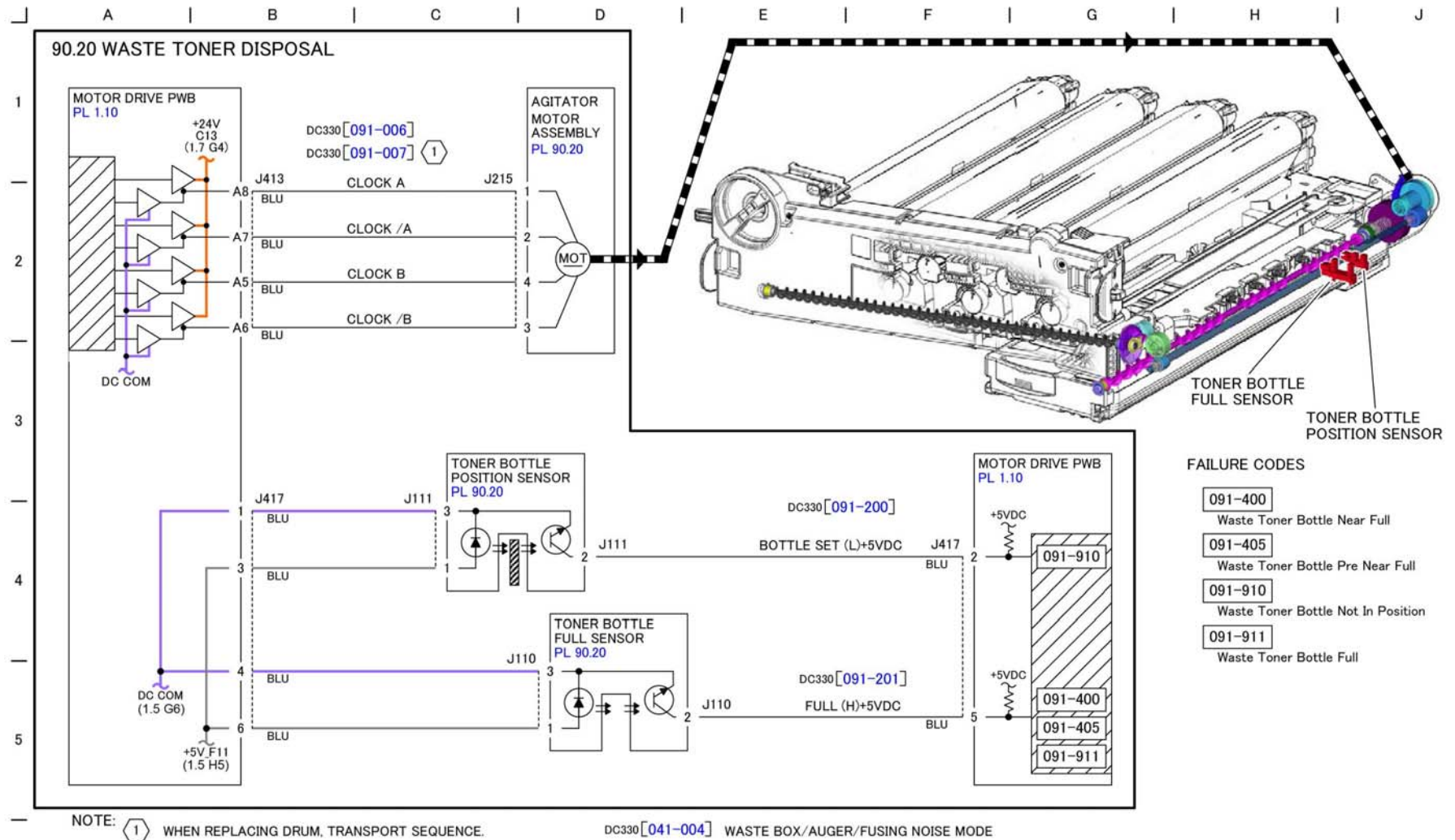
BSD 90.19 Image Transfer to Paper



TF-1-0204-A

Figure 106 BSD 90.19

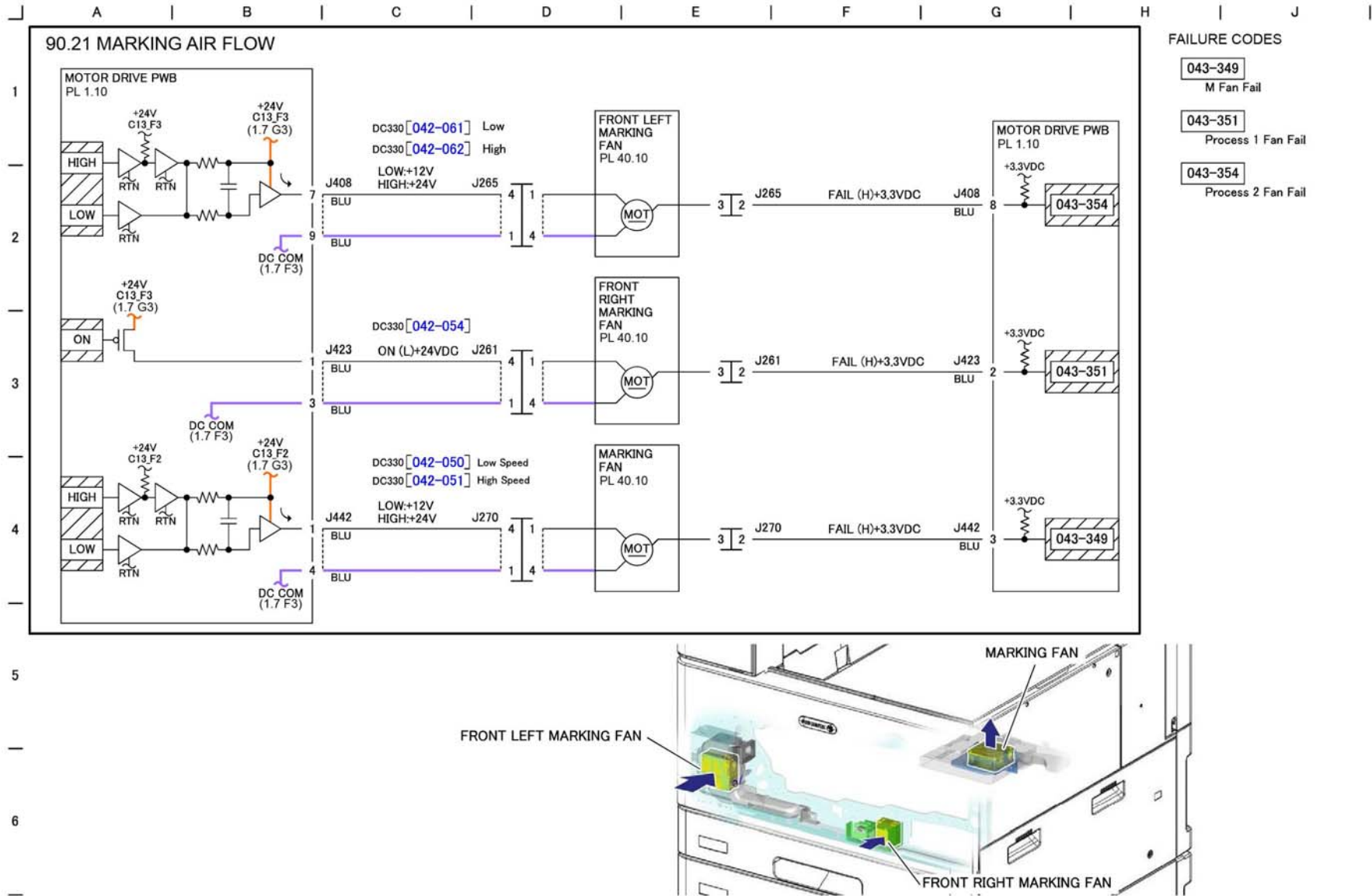
BSD 90.20 Waste Toner Disposal



TF-1-0205-A

Figure 107 BSD 90.20

BSD 90.21 Marking Air Flow



TF-1-0206-A

Figure 108 BSD 90.21

8 Product Technical Overview

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System Overview

Machine Configurations

The Xerox® VersaLink® C8000 and C9000 printer are available in the following configurations:

- Xerox® VersaLink® C8000DT Color Printer - 45ppm
- Xerox® VersaLink® C9000DT Color Printer - 55ppm
- Up to 1200 x 2400 dpi
- Duplex printing

Basic Configuration:

- Color print engine
- Tray 1 - Up to 520 sheets; Custom sizes: 3.9 x 5.8 in. to 11.69 x 17 in./100 x 148 mm to 297 x 431.8 mm (64 to 300 gsm)
- Tray 2 - Up to 520 sheets; Custom sizes: 3.9 x 5.8 in. to 12.598 x 18 in./100 x 148 mm to 320 x 457.2 mm (64 to 300 gsm)
- Bypass Tray - Up to 100 sheets; Custom sizes: 3.5 x 3.9 in. to 12.6 x 19 in./88.9 x 98.4 mm to 320 x 482.6 mm; Banners: 19 x 52 in./483 x 1320.8 mm (64 to 350 gsm)
- 1.6 GHz processor
- Memory: 5 GB

Optional Configurations:

- Two Tray Module (2TM): Up to 1,040 sheets (2 x 550 sheets vertically configured); Custom sizes: 3.9 x 5.8 in. to 12.6 x 18 in./100 x 148 mm to 320 x 457.2 mm (64 to 300 gsm). Refer to [Paper Supply](#).
- Tandem Tray Module (TTM): Up to 2,000 sheets (2 x 1000 sheets side by side); 8.5 x 11 in., 7.25 x 10.5 in./A4, B5 (64 to 300 gsm). Refer to [Paper Supply](#).
- **High Capacity Feeder:** Up to 2,000 sheets; 8.5 x 11 in., 7.25 x 10.5 in./A4, B5 (64 to 216 gsm) The High Capacity Feeder requires the machine to be configured with either a 2TM or a TTM.
- Envelope Tray (replaces Tray 1): Up to 50 envelopes: #10 Commercial, Monarch, DL, C4, C6 (106 to 300 gsm)
- 320 GB HDD Productivity Kit (standard on C9000, option on C8000)
- Optional Wi-Fi kit (Wi-Fi® or Wi-Fi Direct®) available for C8000 or C9000.
- Common Access Card (CAC) reader. available for C8000 or C9000.
- Xerox Precise Color Management System (Calibration and Color Management Software includes the Color Measurement Device powered by X-Rite) optional accessory for C9000 only.

Output/Finishing

- Catch Tray (standard): 500 sheets, offsets
- **Office Finisher LX** with booklet maker: 2,000 sheet stacker, 50 sheets stapled, 2-position stapling, optional hole-punch, booklet maker (score, saddle stitch). The Office Finisher LX requires the machine to be configured with either a 2TM or a TTM.
- BR Finisher: 1,500 sheet stacker and 500 sheet top tray, 50-sheet multiposition stapling and 2/3 hole punching plus saddle-stitch booklet making (2 to 15 sheets, 60 pages) and V-folding. The Business Ready Finisher requires the machine to be configured with either a 2TM or a TTM.

Printing

- Page description languages: PCL® 5e/PCL 6/PDF/XPS/TIFF/JPEG/HP-GL/Adobe® PostScript® 3™
- Color management: Embedded spot color table

Connectivity

- Ethernet 10/100/1000 Base-T
- USB 3.0
- NFC Tap-to-Pair
- Wi-Fi see options.

Controller Features

- Nextwave
- Configuration Cloning
- Xerox Extensible Interface Platform®
- Xerox App Gallery
- Xerox® Standard Accounting Tool
- Role Based Permissions
- Convenience Authentication Enabled

User Interactivity

- Customize and personalize: Walkup customization, Personalize Home Screen by User, Multiple Home Screens with Simple ID, Customize by Site, Function or Workflow with Xerox App Gallery and Xerox® App Studio
- Embedded Web Server (PC or mobile): Status Information, Responsive Design, Settings, Device Management, Cloning

Security

- Network: IPsec, HTTPS, Network Authentication, SNMPv3, SSL/TLS, Security Certificates, Automatic Self-Signed Certificate
- Device Access: Firmware Verification, User access and internal firewall, Port/IP/Domain Filtering, Audit Log, Access Controls, User Permissions, Smart Card Enabled (CAC/PIV/.NET), Xerox® Integrated RFID Card Reader Bay
- Data Protection: Job Level Encryption via HTTPS/IPPS submission, Encrypted hard disk (AES 256-bit, FIPS 140-2) and image overwrite
- SNMPv3 operation in FIPS mode support, SIPRNet Support, HTTPS/HTTP simultaneous support, Weblet Encryption support.

Other Features

- Print from USB, Secure Print, Sample Set, Personal Print, Saved Job, Xerox® Earth Smart Driver Settings, Job Identification, Store and Recall Driver Settings, Bi-directional Real-time Status, Scaling, Job Monitoring, Skip Blank Pages, Draft Mode
- Mobile Printing: Apple® AirPrint®, Google Cloud Print™ Ready, Xerox® Print Service and Mopria® Print Service Plug-ins for Android™
- Mobility Options: @PrintByXerox, Xerox® Mobile Print and Mobile Print Cloud.
- Print from Google Drive™, Microsoft® OneDrive®, Dropbox™, Microsoft Office 365®, Box®, Xerox® DocuShare® Platform
- Foreign Device Interface available for C8000 or C9000 - for devices such as coin operated printing or card operated printing.
- Weblet Certificate Support, Personal Favorite, One Touch App.

Standby Power

Mains Power Input

The Xerox® VersaLink® C8000 and C9000 machines are equipped with a power button on the UI and a main power switch on the front of the IOT. To access the main power switch, open the front cover assembly, [PL 28.05 Item 8](#).

Refer to [GP 10](#) for power off, quick restart and power on procedures.

Mains power is supplied via the GFI chassis assembly ([PL 1.10 Item 1](#)) [Figure 1](#), to the main power switch ([PL 1.20 Item 1](#)), [Figure 2](#).

- [BSD 1.1 Main Power On \(100 VAC\)](#)
- [BSD 1.2 Main Power On \(220-240 VAC\)](#)

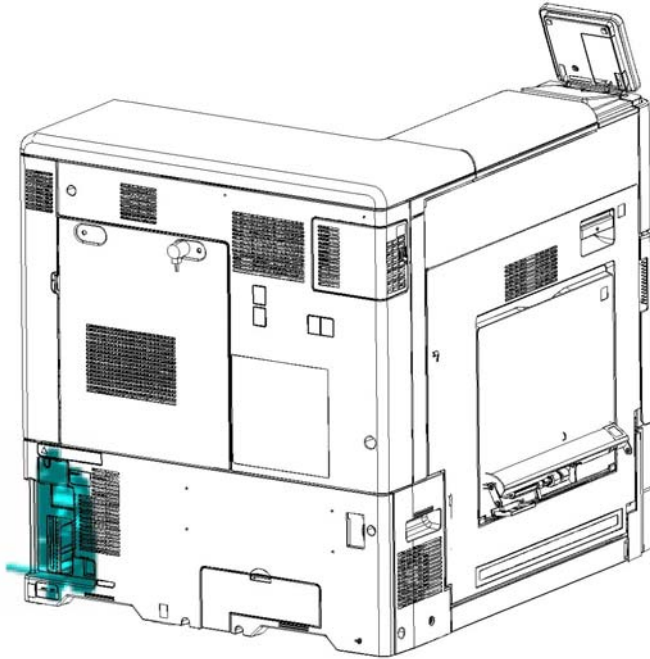


Figure 1 Mains power connector

F-5-0090-A

Closing the main power switch, [PL 1.20 Item 1](#), supplies AC power to the [AC Drive PWB, PL 1.15 Item 1](#), from which it is distributed to the [Low Voltage Power Supply](#), the fusing circuit and the finisher power outlet.

- [BSD 1.1 Main Power On \(100 VAC\)](#)
- [BSD 1.2 Main Power On \(220-240 VAC\)](#)

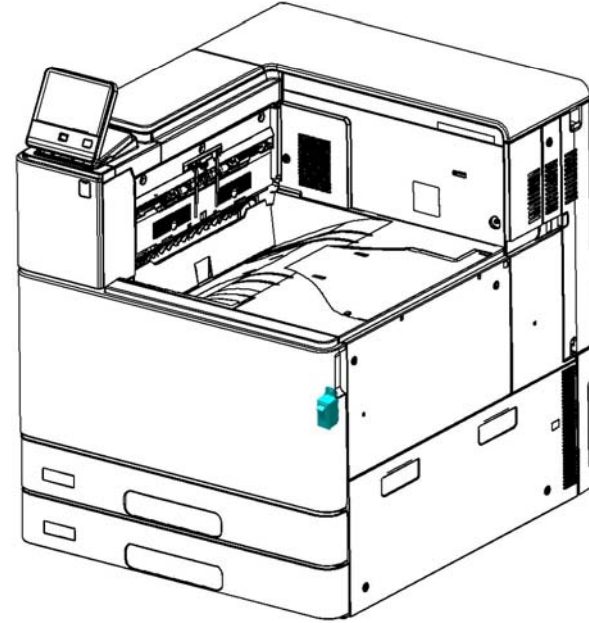


Figure 2 Main power switch

F-5-0095-A

AC Drive PWB

The AC drive PWB, [PL 1.15 Item 1](#) receives AC power from the main power switch, [PL 1.20 Item 1](#). The main functions of the AC drive PWB, are as follows:

- Provides ground fault interrupt and filtered power.
- Supplies AC power to the [Low Voltage Power Supply \(LVPS, PL 1.15 Item 3\)](#).
- Supplies AC power to the IH power supply PWB, [PL 1.05 Item 3](#).
- Supplies AC power to the finisher outlet.

Refer to [NOHAD](#) for the LVPS fan.

Refer to [Figure 3](#).

- [BSD 1.1 Main Power On \(100 VAC\)](#)
- [BSD 1.2 Main Power On \(220-240 VAC\)](#)

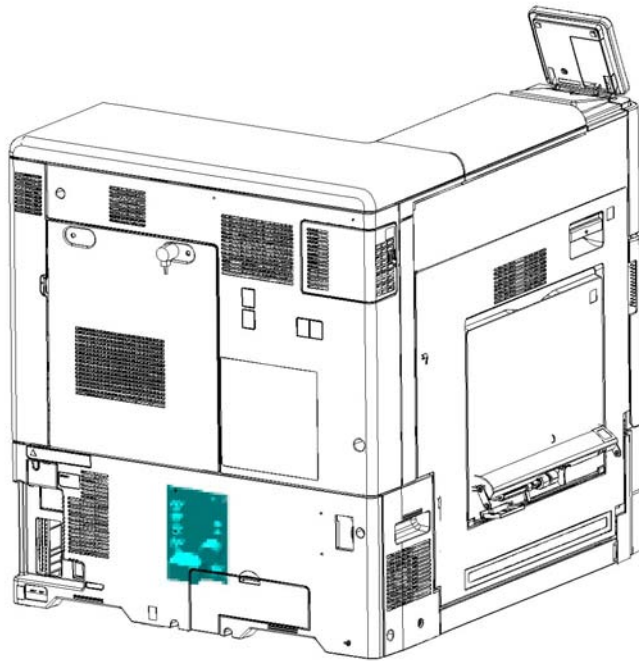


Figure 3 AC Drive PWB

F-5-0092-A

Low Voltage Power Supply

The LVPS, [PL 1.15 Item 3](#), receives AC power from the [AC Drive PWB](#). The LVPS generates 5VDC power and 24VDC power distributed to the following:

- [Controller \(ESS\) PWB, PL 3.05 Item 1](#).
- [Back Plane PWB, PL 3.15 Item 2](#).
- [Motor Drive PWB, PL 1.10 Item 2](#).

When the machine goes into sleep mode the 5VDC power and the 24VDC power is withheld and only a 5VDC standby power is supplied. Refer to [Sleep Recovery](#) in the UI section for details of power up during sleep recovery.

Refer to [Figure 4](#).

- [BSD 1.5 DC Power Generation +5V](#)
- [BSD 1.6 DC Power Generation +24V \(1 of 2\)](#)
- [BSD 1.7 DC Power Generation +24V \(2 of 2\)](#)

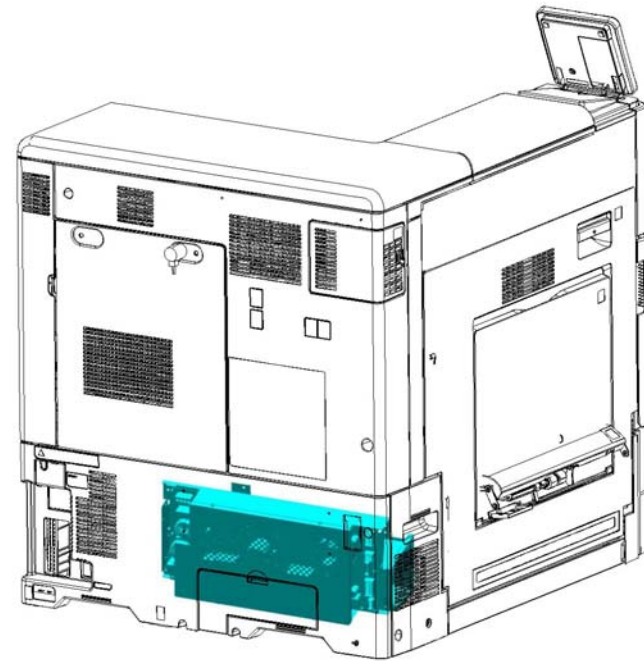


Figure 4 LVPS

F-5-0093-A

Bias Charge Roll HVPS PWB

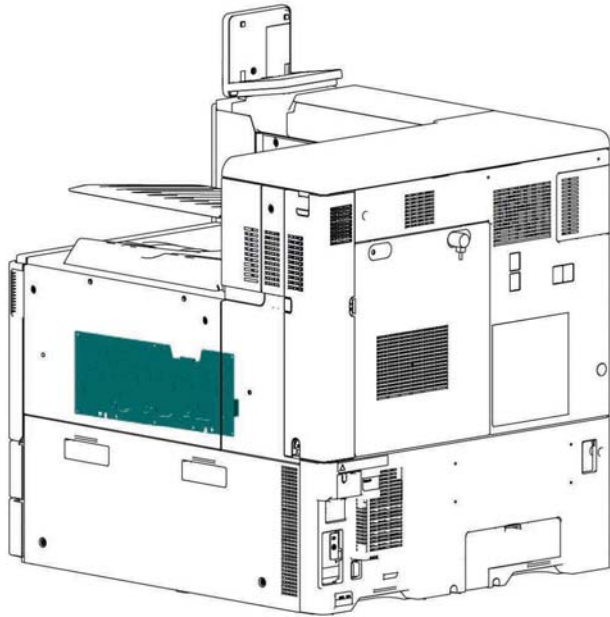
The BCR HVPS converts 24VDC power into the high voltages required by the bias charge roller within the xerographic subsystem. (Refer to [Xerographics Overview](#).)

The bias charge roll HVPS, [PL 1.20 Item 4](#), receives 24VDC interlocked power from the motor drive PWB, [PL 1.10 Item 2](#). The BCR HVPS transforms the voltages (one each for CMYK) into high voltage and supplies them to each of the bias charge rollers, one for each color.

The BCR HVPS monitors the bias charge roll bias output and feeds it back to the [Motor Drive PWB](#).

Refer to [Figure 5](#).

- [BSD 90.9 Charging and Exposure Y](#)
- [BSD 90.10 Charging and Exposure M](#)
- [BSD 90.11 Charging and Exposure C](#)
- [BSD 90.12 Charging and Exposure K](#)



F-5-0103-A

Figure 5 BCR HVPS

Bias Transfer Roll HVPS PWB

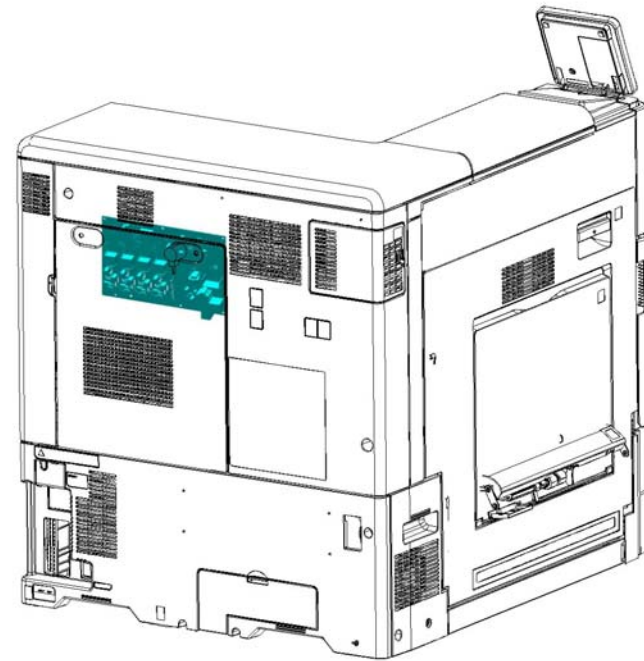
The BTR HVPS converts +24VDC power into the high voltages required by the bias transfer roller within the xerographic subsystem. (Refer to [Xerographics Overview](#).)

The bias transfer roller HVPS, [PL 1.05 Item 1](#) receives 24VDC interlocked power from the motor drive PWB, [PL 1.10 Item 2](#). The BTR HVPS transforms the voltages (one each for CMYK) into high voltage and supplies them to each of the bias transfer rollers, one for each color.

The BTR HVPS monitors the magenta and black output voltages and feeds them back to the [Motor Drive PWB](#).

Refer to [Figure 6](#).

- [BSD 90.18 Image Transfer to IBT](#)
- [BSD 90.19 Image Transfer to Paper](#)



F-5-0088-A

Figure 6 Bias transfer roll HVPS PWB

Developer Bias HVPS PWB

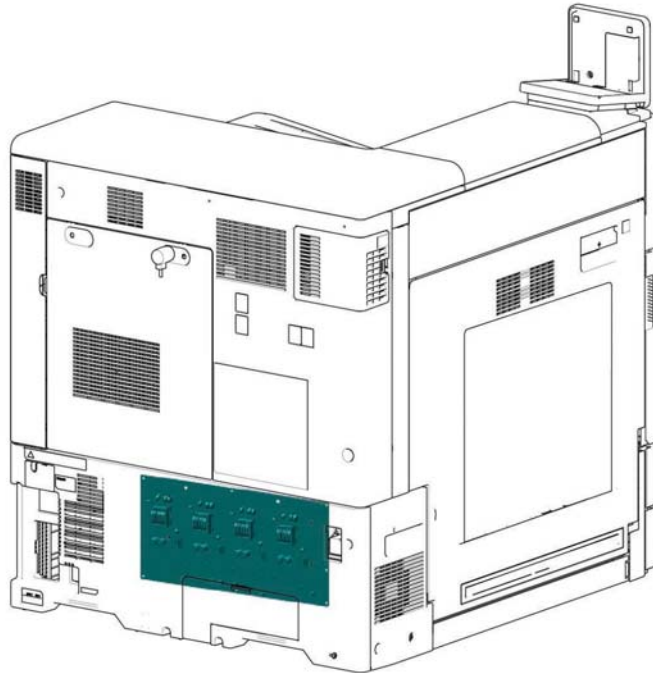
The developer bias HVPS converts 24VDC power to the high voltages required by the developer bias within the Xerographic subsystem.

The developer bias HVPS [PL 1.15 Item 4](#), receives 24VDC interlocked power from the motor drive PWB, [PL 1.10 Item 2](#). The developer bias HVPS transforms the voltages (one each for CMYK) into high voltage and supplies them to each of the developer bias rollers, one for each color.

The developer bias HVPS monitors the bias power output and feeds it back to the [Motor Drive PWB](#).

Refer to [Figure 7](#).

- [BSD 90.13 Development Y](#)
- [BSD 90.14 Development M](#)
- [BSD 90.15 Development C](#)
- [BSD 90.16 Development K](#)



F-5-0102-A

Figure 7 Developer bias HVPS

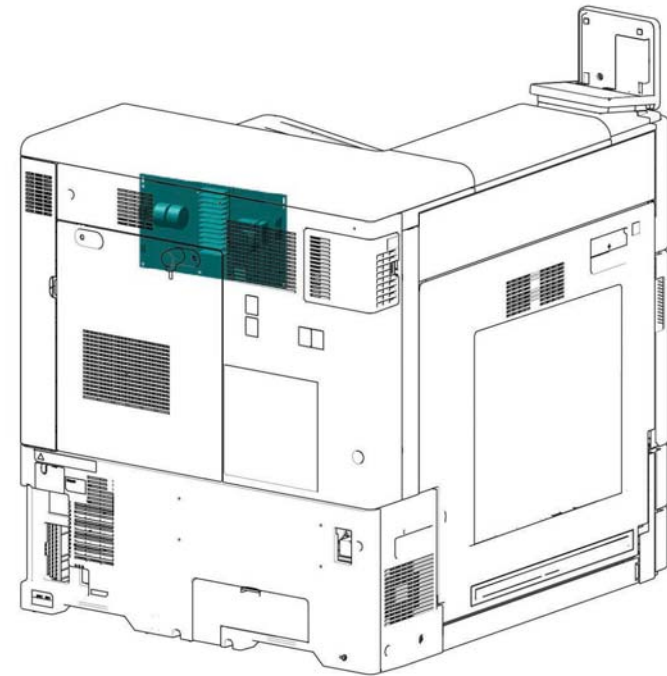
Fuser Heater Power Supply

The fuser heater power supply, [PL 1.05 Item 3](#), takes power from the IH relay and converts it to the high voltages required for fusing. The fuser is in two parts, the fuser, [PL 10.05 Item 14](#), and the instant heat (IH) coil unit, [PL 10.05 Item 15](#). Refer to [Fuser Components](#) for details.

The fuser heater power supply is monitored by the [Motor Drive PWB](#) which in turn communicates with the [Controller \(ESS\) PWB](#).

Refer to [Figure 8](#).

- [BSD 10.3 Fusing Heat \(1 of 2\)](#)
- [BSD 10.4 Fusing Heat \(2 of 2\)](#)
- [BSD 10.5 Fusing](#)



F-5-0100-A

Figure 8 Fuser heater power supply

Motor Drive PWB

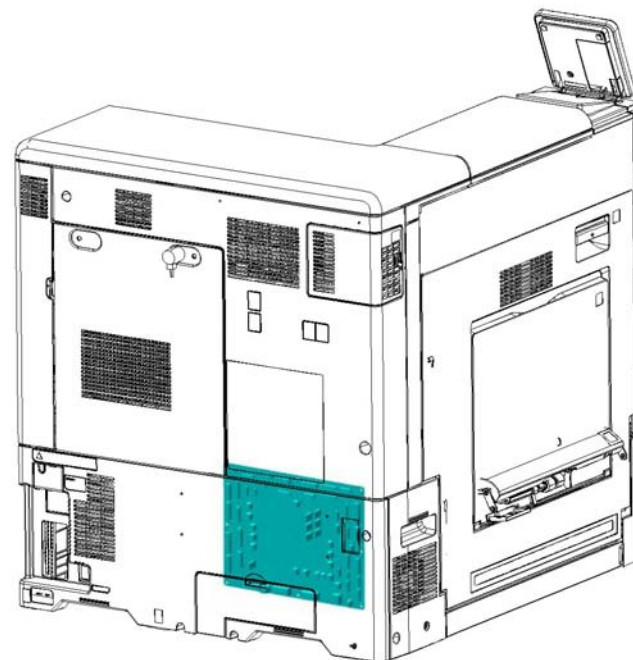
The motor drive PWB, [PL 1.10 Item 2](#), controls the print engine, providing power and drive signals to most of the motors, sensors, clutches and solenoids. Refer to [Figure 9](#).

It performs the following functions:

- Receives 5VDC and 24VDC from the [Low Voltage Power Supply](#).
 - [BSD 1.5 DC Power Generation +5V](#)
 - [BSD 1.7 DC Power Generation +24V \(2 of 2\)](#)
- Passes on sleep recovery signal to [Low Voltage Power Supply](#). Refer to [BSD 1.5 DC Power Generation +5V](#).
- Monitors the interlocks on left cover, front cover, front cover open switch, tray module interlock switch, [Machine Interlocks](#). Refer to [BSD 1.8 Interlock Switching](#).
- Monitors the continuity of fuses shown on [BSD 1.9 Fuse Check](#), and generates a fault code on failure.
- Supplies 24VDC to the LVPS fan and monitors for failure. If a fail condition is indicated error code 043-322 is logged. Refer to [NOHAD](#) and [BSD 1.10 LVPS Cooling](#).
- Monitors communication from the [Controller \(ESS\) PWB](#) to the motor drive PWB and logs fault codes. Refer to [BSD 3.1 PWB Communications \(Controller to Motor Drive PWB\)](#)
- Acts as a path receiving data from the [Controller \(ESS\) PWB](#) (via the back plane PWB and the half tone PWB) and communicates with the finisher ([Office Finisher LX](#) or [BR Finisher](#)). Data from the finisher is received by the motor drive PWB and passed back to the controller PWB. Error codes are logged by the controller PWB. Refer to [BSD 3.3 PWB Communications \(Controller to Finisher\)](#).
- Acts as a path receiving data from the [Controller \(ESS\) PWB](#) (via the back plane PWB and the half tone PWB) and communicates with the [High Capacity Feeder](#). Data from the HCF is received by the motor drive PWB and passed back to the controller PWB. Error codes are logged by the controller PWB. Refer to [BSD 3.4 PWB Communications \(Controller to HCF\)](#)
- Supplies 24VDC and 5VDC power to the [Halftone PWB](#). Refer to [BSD 60.1 LPH Y and M](#).
- Monitors the marks on belt (MOB) sensors and the automatic density control (ADC) sensor ([MOB and ADC sensors](#)). Refer to [BSD 60.3 Color Registration](#).
- Monitors the internal temperature and humidity sensors. If a temperature error is detected error code 041-603 is logged. If a humidity error is detected error code 041-604 is logged. Refer to [Temperature and Humidity Detection](#) and [BSD 60.4 Temperature and Humidity Sensing](#).
- Monitors the paper size sensors for trays 1, 2, 3, 4 and the bypass tray (MSI). Refer to [Paper Size Detection](#) and [Bypass Tray \(Tray 5\)](#).
 - [BSD 70.1 Tray 1 Paper Size Sensing](#)
 - [BSD 70.2 Tray 2 Paper Size Sensing](#)
 - [BSD 70.3 Tray 3 Paper Size Sensing \(2TM\)](#)
 - [BSD 70.4 Tray 3 Paper Size Sensing \(TTM\)](#)
 - [BSD 70.5 Tray 4 Paper Size Sensing \(2TM\)](#)
 - [BSD 70.6 Tray 4 Paper Size Sensing \(TTM\)](#)
 - [BSD 70.7 Bypass Tray Paper Size Sensing](#)
- Monitors the paper level sensors and no paper sensors for trays 1, 2, 3 and 4. Refer to [Remaining Paper Indication](#) and [No Paper Detection: Trays 1, 2, 3 and 4](#)
 - [BSD 70.8 Tray 1 Paper Stacking](#)
 - [BSD 70.9 Tray 2 Paper Stacking](#)
 - [BSD 70.10 Tray 3 Paper Stacking \(2TM/TTM\)](#)
 - [BSD 70.11 Tray 4 Paper Stacking \(2TM\)](#)
 - [BSD 70.12 Tray 4 Paper Stacking \(TTM\)](#)
- Monitors the pre-feed sensors and for trays 1, 2, 3 and 4. Refer to [Paper Transport to Registration Transport Assembly](#).
 - [BSD 80.1 Tray 1 and 2 Paper Pre-feeding](#)
 - [BSD 80.2 Tray 3 and 4 Paper Pre-feeding](#)
- Controls the feed/lift motor for trays 1, 2, 3 and 4. Refer to [Paper Tray Elevation and Feeding: Trays 1, 2, 3 and 4](#).
 - [BSD 70.8 Tray 1 Paper Stacking](#)
 - [BSD 70.9 Tray 2 Paper Stacking](#)
 - [BSD 70.10 Tray 3 Paper Stacking \(2TM/TTM\)](#)
 - [BSD 70.11 Tray 4 Paper Stacking \(2TM\)](#)
 - [BSD 70.12 Tray 4 Paper Stacking \(TTM\)](#)
- Monitors the bypass tray (MSI) nudge position sensor and no paper sensor. Refer to [Bypass Tray \(Tray 5\)](#) and [BSD 70.13 Bypass Tray Paper Sensing and Stacking](#)
- Controls the bypass tray feed lift motor. Refer to [Bypass Tray \(Tray 5\)](#) and [BSD 70.13 Bypass Tray Paper Sensing and Stacking](#)
- Controls the bypass tray takeaway motor and monitors the feed out sensor for the bypass tray. Refer to [Bypass Tray \(Tray 5\)](#) and [BSD 80.3 Tray 1 and Bypass Tray Paper Transport](#).
- Controls the 2TM takeaway motor and monitors the feed out sensor 3 within the 2TM. Refer to [Takeaway Rolls and Drives](#) and [BSD 80.5 2TM Paper Transport](#).
- Controls the TTM takeaway motor and monitors the feed out sensor 3 and 4 within the TTM. Refer to [Takeaway Rolls and Drives](#) and [BSD 80.6 TTM Paper Transport](#).
- Monitors the presence of the TTM via the [Transport Path Drawer Interlock \(TTM only\)](#). Refer to [BSD 80.6 TTM Paper Transport](#).
- Controls the registration motor and monitors the registrations sensor. Supplies 24VDC to the registration heater. Refer to [Registration Transport Assembly](#) and [BSD 80.9 Registration](#).
- Controls the drum/development and IBT drive motor (K), [PL 40.05 Item 14](#). Refer to [Main Drive Assembly](#) and [BSD 90.1 K Drum/Developer and IBT Drive Control](#)
- Controls the drum/development motor (CMY), [PL 40.05 Item 13](#). Refer to [Main Drive Assembly](#) and [BSD 90.2 YMC Drum and Developer Drive Control](#).
- Monitors the drum CRUMs for KCMY, [PL 90.25 Item 3](#). Refer to [Drum Cartridge CRUM](#).
 - [BSD 90.3 Drum Life Control \(Y, M\)](#)
 - [BSD 90.4 Drum Life Control \(C, K\)](#)
- Monitors the toner cartridge CRUM for KCMY, [PL 90.10 Item 3](#). Refer to [Toner Cartridge CRUM](#).
 - [BSD 90.5 Toner Cartridge Life Control \(Y, M\)](#)
 - [BSD 90.6 Toner Cartridge Life Control \(C, K\)](#)
- Controls and monitors the toner cartridge cooling and exhaust fans. Refer to [NOHAD](#) and [BSD 90.7 Toner Cartridge Cooling](#)
- Controls the toner dispense motors for KCMY. Refer to [Toner Dispenser Assemblies](#) and [BSD 90.8 Toner Dispense Control](#)

- Supplies 24VDC interlocked power to the BCR HVPS for KCMY and monitors the outputs. Refer to [Bias Charge Roll HVPS PWB](#).
 - [BSD 90.9 Charging and Exposure Y](#)
 - [BSD 90.10 Charging and Exposure M](#)
 - [BSD 90.11 Charging and Exposure C](#)
 - [BSD 90.12 Charging and Exposure K](#)
- Monitors the automatic toner control (ATC) sensor for KCMY. Refer to [Developer Units](#).
 - [BSD 90.13 Development Y](#)
 - [BSD 90.14 Development M](#)
 - [BSD 90.15 Development C](#)
 - [BSD 90.16 Development K](#)
- Supplies 24VDC to the developer bias HVPS for KCMY. Refer to [Developer Bias HVPS PWB](#).
 - [BSD 90.13 Development Y](#)
 - [BSD 90.14 Development M](#)
 - [BSD 90.15 Development C](#)
 - [BSD 90.16 Development K](#)
- Monitors the BTR contact/retract sensor and controls the BTR contact/retract clutch. Refer to [IBT Unit greyscale and full-color mode switching](#) and [BSD 90.17 1st BTR Contact/retract](#).
- Supplies 24VDC interlocked power to the BTR HVPS for 1st bias transfer (KCMY) and monitors the output to M and K. Refer to [1st Bias Transfer](#) and [BSD 90.18 Image Transfer to IBT](#).
- Supplies 24VDC interlocked power to the BTR HVPS for the 2nd bias transfer and monitors the output. Refer to [2nd Bias Transfer](#) and [BSD 90.19 Image Transfer to Paper](#).
- Monitors the paper on belt (POB) jam sensor. Refer to [Paper on Belt Jam Sensor](#) and [BSD 90.19 Image Transfer to Paper](#)
- Controls the agitator motor (waste toner) and monitors the (waste) toner bottle position sensor and the (waste) toner bottle full sensor. Refer to [Drum Cartridge and Transfer Belt Cleaning](#) and [BSD 90.20 Waste Toner Disposal](#).
- Controls the marking fans. Refer to [NOHAD](#) and [BSD 90.21 Marking Air Flow](#)
- Controls the fusing unit drive motor and monitors the fusing belt speed sensor. Refer to [Fuser Sensors and Drives](#) and [BSD 10.1 Fusing Unit Drive](#).
- Controls the pressure roll latch motor and monitors the pressure roll latch sensor. Refer to [Fuser Sensors and Drives](#) and [BSD 10.2 Pressure Roll Latch/Unlatch](#).
- Controls the instant heat power supply and monitors the output. Data is fed back to the Controller (ESS) PWB via the [Halftone PWB](#) and the [Back Plane PWB](#). Refer to [Fuser Heater Power](#) and [BSD 10.3 Fusing Heat \(1 of 2\)](#).
- Monitors the fuser thermistors and the instant heat coil unit thermostat. It also controls the instant heat power supply intake fan. Refer to [Fuser Temperature Control](#) and [BSD 10.4 Fusing Heat \(2 of 2\)](#).
- Monitors the fusing unit exit sensor, fusing unit exhaust fan and the NOHAD temperature and humidity sensor. Refer to [Fuser Sensors and Drives](#), [NOHAD](#), [Temperature and Humidity Detection](#) and [BSD 10.5 Fusing](#)
- Monitors the fusing unit EEPROM to verify that the fuser is installed. Refer to [Fuser Sensors and Drives](#) and [BSD 10.6 Fuser Detection](#).
- Controls the exit 1 offset catch tray motor and the exit 1 gate solenoid. It also monitors the exit 1 offset catch tray home position sensor and the exit 1 offset catch tray full stack sensor. Refer to [Exit 1](#) and [BSD 10.7 Exit 1 Paper Transport](#)
- Controls the duplex motor. Refer to [Duplex Transport](#), [Duplex Printing](#) and [BSD 10.8 Duplex Paper Transport](#)
- Controls the exit 2 offset catch tray motor, the exit 2 drive motor and monitors the exit 2 offset catch tray home position sensor. Refer to [Exit 2](#) and [BSD 10.9 Exit 2 Paper Transport \(1 of 2\)](#).
- Monitors the exit 2 sensor and the exit 2 offset catch tray home position sensor. Refer to [Exit 2](#), and [BSD 10.10 Exit 2 Paper Transport \(2 of 2\)](#).

NOTE: The face up sensor is installed but is not used in the C8000 or the C9000 printers.



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Figure 9 Motor drive PWB

Machine Interlocks

Front Cover Interlock Assembly

The front cover interlock assembly contains 2 switches, one to generate the code that the cover is open and to prompt a change of display on the UI, the second switch cuts the 24VDC interlocked supply. They are operated by the same action of opening the front cover.

Front Cover Open Switch

The front cover open switch, [PL 28.05 Item 12](#), is monitored by the [Motor Drive PWB](#). When the switch is open code 077-300 is logged.

Front Cover Interlock Switch

The front cover interlock switch, [PL 28.05 Item 11](#), is wired in series with the left cover interlock switch. It cuts power to the 24V interlocked supply.

Refer to [Figure 10](#) and [BSD 1.8 Interlock Switching](#).



Front cover interlock switch

Front cover open switch

F-5-0131-A

Figure 10 Front cover switches

Left Cover Interlock Switch

The left cover interlock switch, [PL 80.65 Item 9](#), is monitored by the [Motor Drive PWB](#). When interrupted it logs code 077-301. It is wired in series with the front cover interlock switch so it cuts power to the 24V interlocked supply.

Refer to [Figure 11](#) and [BSD 1.8 Interlock Switching](#).



Left cover interlock switch

F-5-0132-A

Figure 11 Left cover interlock switch

Transport Path Drawer Interlock

The transport path drawer interlock is shown on [BSD 80.6 TTM Paper Transport](#). This is not an interlock in the normal sense. It does not disconnect power, it is a signal to the IOT that the TTM transport assembly is in the operational position. Refer to [Transport Path Drawer Interlock \(TTM only\)](#).

Tray Module Interlocks

The tray module interlock acts when the tray module left door is opened. Code 077-305 is logged. The same circuit is used in the 2TM and the TTM.

- 2TM - PL 80.20 Item 8, refer to [Figure 12](#).
- TTM - PL 80.40 Item 1, refer to [Figure 13](#).

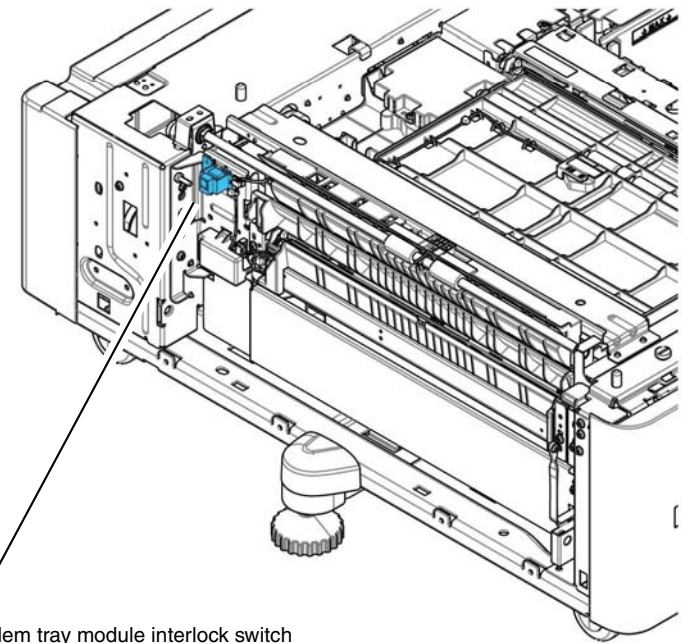
Refer to [BSD 1.8 Interlock Switching](#).



Two tray module interlock switch

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Figure 12 Two tray module interlock switch



Tandem tray module interlock switch

F-5-0134-A

Figure 13 Tandem tray module interlock switch

HCF Interlocks

Transport cover interlock switch, [PL 70.90 Item 26](#), cuts +24VDC power to the K1 relay on the HCF PWB, [PL 70.95 Item 9](#), when opened, turning off the HCF feed/lift motor, [PL 80.100 Item 23](#), and the takeaway motor, [PL 70.95 Item 7](#).

Docking interlock switch, [PL 70.95 Item 8](#), The docking interlock switch detects if the HCF is in the home position (against the left side of the machine) following jam clearance.

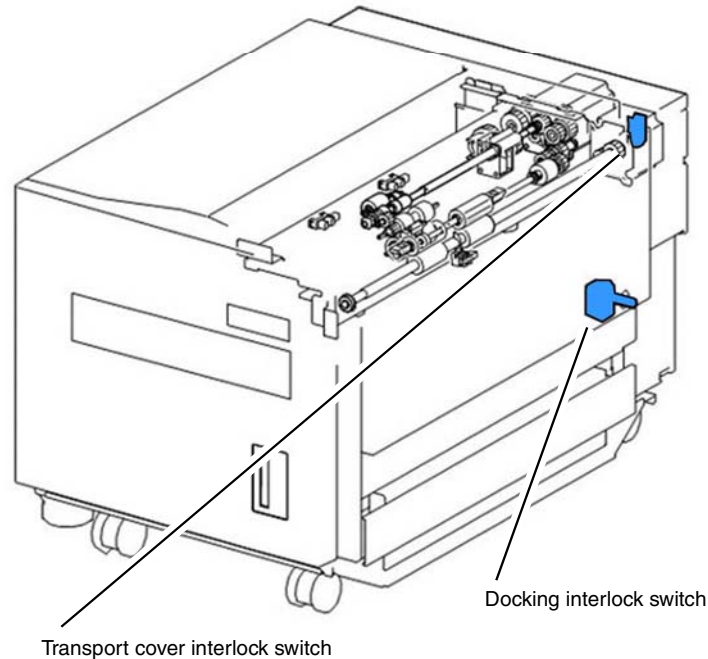


Figure 14 HCF interlocks

Refer also to:

- [High Capacity Feeder: Sensors and Interlocks](#)
- [BSD 1.12 DC Power Distribution HCF](#)

Finisher Interlocks

For finisher interlocks refer to:

- [Office Finisher LX Interlocks](#)
- Go to the separate BR Finisher Service Manual

IOT Modes and System Status

Refer also to [GP 17 Electrical Power Requirements](#).

Plug-in/Off Mode (sub power)

This is not an operating mode. Plug in/off is the condition of the machine when power is connected but the machine is powered down. When the power button is pressed to shut down (and confirmed) this is the condition of the machine. This is the lowest power state that the machine can enter. Only the [AC Drive PWB](#), [Low Voltage Power Supply](#) and power management circuitry on the [Controller \(ESS\) PWB](#) is active. The only method that can be used to power the machine on, in this mode, is to press the UI power button.

Standby/Ready Mode

This is the normal operating condition of the machine when it is ready for printing. The UI is active and illuminated in this mode. This is the condition of the machine while a user is programming a job via the UI or performing any other UI activity. In this mode the system is ready to print with little or no delay in hard copy output. The system has full functionality when in this mode.

Run Mode

This is the condition of the machine when it is actively printing a job. The machine enters this state when it executes a print job via the network. In this mode the system is in the process of marking images and/or collating in an output device.

Sleep States

NOTE: The user will not be able to tell the difference semi conscious state and deep sleep state. Visually the machine appears the same.

Semiconscious/Low Power Mode

The machine enters semi conscious mode after a period of inactivity after the most recent print job. In semi-conscious mode the UI is inactive and the power button is illuminated. The delay time is preset but is adjustable by the customer in the range 0 to 30 minutes. Semi conscious mode allows the system to perform the following limited functions:

- Access to the remote control panel via the web UI.
- Wireless printing (if installed)
- All non print related network requests (including HDD access), such as access from the web UI.

NOTE: If Wake on USB is enabled the system remains in semi conscious mode and does not enter deep sleep mode.

Deep Sleep Mode

Recovery from this mode to standby/ready is from either pressing the UI power button or an incoming print job. The machine does not wake from sleep mode upon insertion of a USB drive.

- Only standby power is available, controller network control, power management.
- The system is able to wake up for network printing.

- The system is able to wake up when a user presses the UI power button.

Auto Power Off

Enables the system to switch off after a specified time in deep sleep mode via an adjustable timeout that is accessed using tools or in the Web UI. The default is 'disabled'. Once the machine has switched off it can be switched on via the power switch on the UI. When the machine has powered down automatically it is in the same state as it would be after first connecting mains power

User Interface

The user interface (UI) displays the state of the printer via the LCD touch screen. The UI enables operation of the machine by means of the touch screen and buttons. Refer to [Figure 1](#).

The UI speaker generates synchronised operational sounds for the UI.

The user interface (UI) consists of the components that follow:

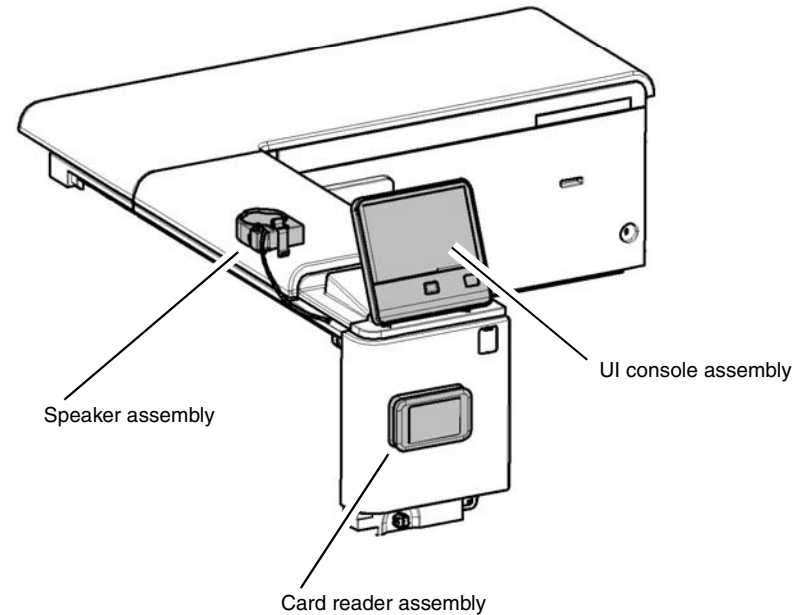
- UI console assembly, [PL 2.05 Item 1](#).
- Power button.
- Home button.
- LED machine status display.
- Card reader assembly.
- USB port under the UI console assembly.

NOTE: The UI console assembly, is replaced as a single item. The components within the UI are not accessible.

Sleep Recovery

When the UI power button is activated a 3.3V sleep recovery signal is sent via a path through the [Back Plane PWB](#), the [Controller \(ESS\) PWB](#) (waking the controller PWB in the process), the [HalfTone PWB](#) and the [Motor Drive PWB](#). When the sleep recovery signal reaches the [Low Voltage Power Supply](#) 5VDC power is restored. The restoration of 5V power, in turn, restores the 24V DC power.

Refer to [Figure 1](#) and [BSD 2.1 User Interface](#)



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Figure 1 User interface

Machine Run Control

Overview

The main functions of run control are to:

- Perform self-testing at power on to verify the communication status between PWBs.
- Monitor and control the operation of the base machine and the installed options during all power states.
- Detect, log, and report faults.
- Communicate with the user through the user interface.

Controller (ESS) PWB

The primary functions of the controller PWB, [PL 3.05 Item 1](#), are as follows:

1. Receives digital data from the network.
2. Processes this data based upon the user's requests (made at the user interface or a remote PC/server)
3. Sends the processed image data to the LPH, via the [Back Plane PWB](#) and the [Halftone PWB](#) to be written to the [LED Print Head \(LPH\)](#) for each of the four colors.
4. Sends printing, paper supply, and finishing requests to the [Motor Drive PWB](#).

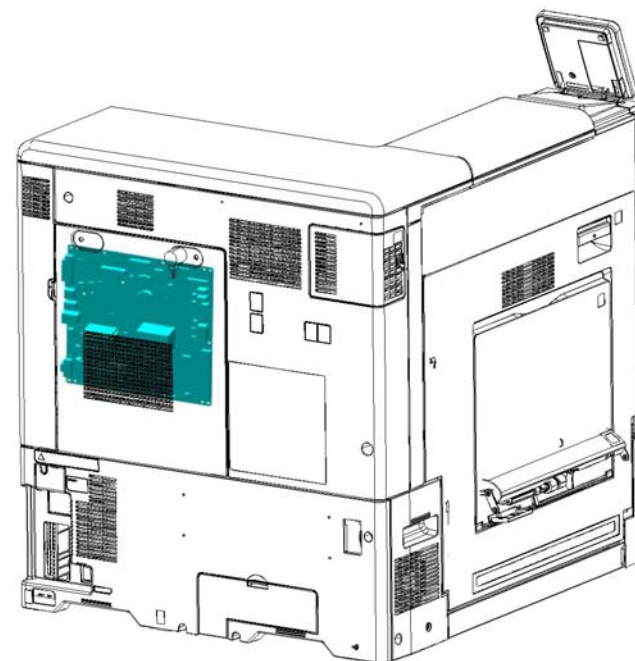
The controller PWB performs the following functions:

- Sends data to the [Motor Drive PWB](#) via the [Back Plane PWB](#) and the [Halftone PWB](#). The motor drive PWB in turns sends signals back to the controller PWB via the halftone PWB, back plane PWB.
- Communicates with the UI.
- Communicates with the finisher via the [Back Plane PWB](#), [Halftone PWB](#) and the [Motor Drive PWB](#) receiving information from the finisher by the reverse route.
- Communicates with the [High Capacity Feeder](#) via the [Back Plane PWB](#), [Halftone PWB](#) and the [Motor Drive PWB](#) receiving information from the HCF by the reverse route.

The controller PWB is contained in a chassis, [PL 3.10](#). The chassis contains the controller PWB, [PL 3.05 Item 1](#) and the HDD, [PL 3.05 Item 9](#), along with mechanical parts and harnesses.

Refer to [Figure 1](#).

- [BSD 3.1 PWB Communications \(Controller to Motor Drive PWB\)](#)
- [BSD 3.2 PWB Communications \(Controller to UI PWB\)](#)
- [BSD 3.3 PWB Communications \(Controller to Finisher\)](#)
- [BSD 3.4 PWB Communications \(Controller to HCF\)](#)
- [BSD 3.5 PWB Communications \(Controller to Halftone/Back plane\)](#)
- [BSD 3.6 Electric Billing](#)
- [BSD 3.7 ESS \(Controller\)](#)
- [BSD 3.8 ESS \(Controller\) Status LED \(1 of 5\)](#)
- [BSD 3.9 ESS \(Controller\) Status LED \(2 of 5\)](#)
- [BSD 3.10 ESS \(Controller\) Status LED \(3 of 5\)](#)
- [BSD 3.11 ESS \(Controller\) Status LED \(4 of 5\)](#)
- [BSD 3.12 ESS \(Controller\) Status LED \(5 of 5\)](#)

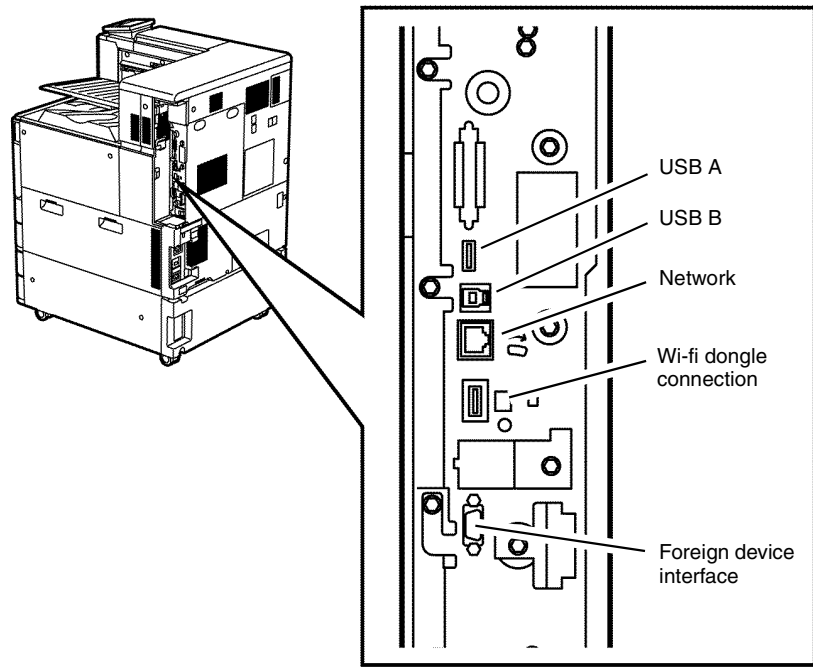


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Figure 1 Controller PWB

Controller Interface

The functions of the connectors along the external edge of the Controller (ESS) PWB are shown in Figure 2.



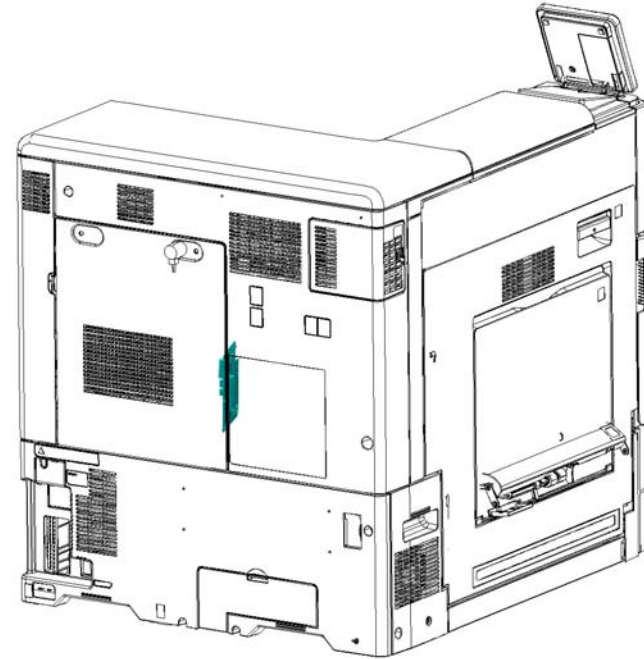
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Figure 2 Controller interface

Back Plane PWB

The backplane PWB PL 3.15 Item 2, provides a communication link between the Controller (ESS) PWB and the Halftone PWB. The route through the back plane PWB and the Halftone PWB carries all the communications between the controller PWB and the Motor Drive PWB.

Refer to Figure 3.



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Figure 3 Back plane PWB

Halftone PWB

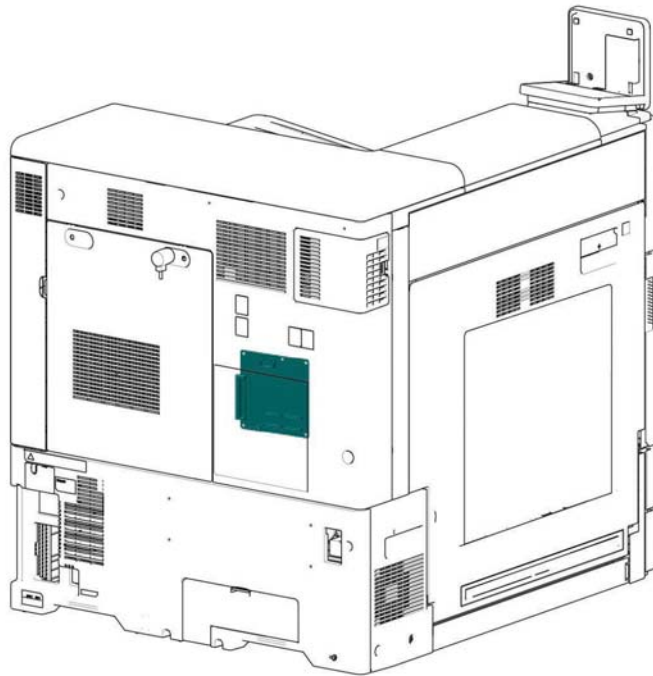
The halftone PWB, [PL 3.15 Item 4](#), takes the image data from the [Controller \(ESS\) PWB](#), via the [Back Plane PWB](#), and sends it to the [LED Print Head \(LPH\)](#) for each of the 4 colors.

The halftone PWB receives 24VDC and 5VDC from the [Motor Drive PWB](#). The 24VDC is converted to 12VDC. The 5VDC is converted to 3.3VDC.

The halftone PWB, along with the [Back Plane PWB](#) also provides the communication route from the [Controller \(ESS\) PWB](#) to the [Motor Drive PWB](#).

Refer to [Figure 4](#).

- [BSD 60.1 LPH Y and M](#)
- [BSD 60.2 LPH C and K](#)



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Figure 4 Halftone PWB

Main Drives and NOHAD

Main Drives

The main drives are located to the rear of the machine behind the [Controller \(ESS\) PWB](#) and the [Half-tone PWB](#).

Main Drive Assembly

NOTE: The Xerox® VersaLink® C8000 and C9000 printers use the same main drive assembly. The print speed difference is generated by the software.

The main drive assembly, [PL 40.05 Item 7](#), drives the xerographic drums and associated components including the developers and the IBT belt.

The main drive assembly consists of:

- The drum motor, [PL 40.05 Item 13](#) is controlled by the [Motor Drive PWB](#). It drives the following:
 - Xerographic drum for colors Y, M and C, [PL 90.15](#)
 - Developer for Y, M and C, [PL 90.05](#).
- The drum/developer IBT motor, [PL 40.05 Item 14](#) is controlled by the [Motor Drive PWB](#). It drives the following:
 - Xerographic drum for K, [PL 90.15](#)
 - Developer for K, [PL 90.05](#).
 - IBT belt, [PL 90.30](#) and [PL 90.35](#).
- The drum drive bracket assembly, [PL 40.05 Item 8](#).
- The drum drive housing assembly, [PL 40.05 Item 9](#).

Refer to [Figure 1](#) and [Figure 2](#).

- [BSD 40.1 K Drum/Developer and IBT Drive Control](#)
- [BSD 40.2 YMC Drum and Developer Drive Control](#)

Fuser Drive Assembly

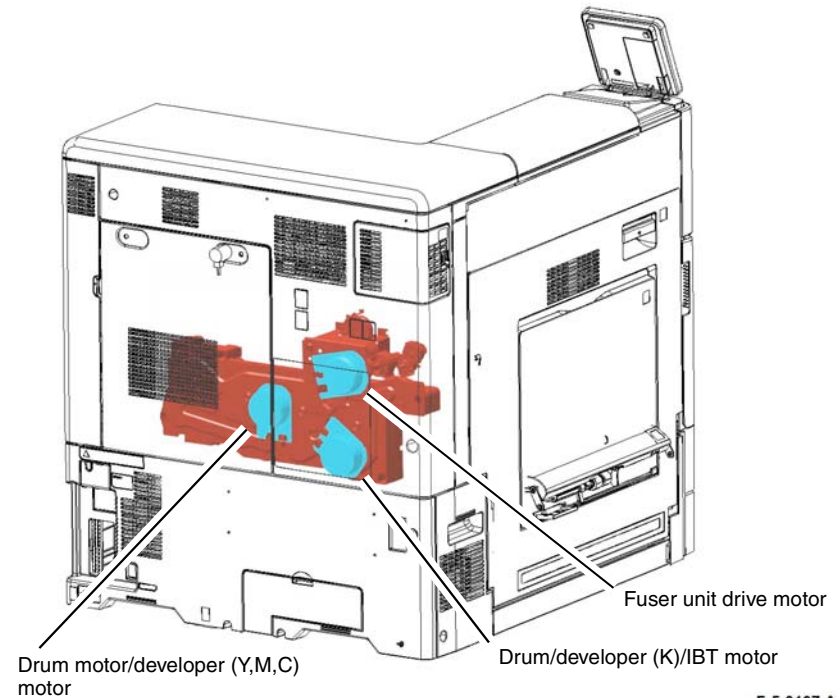
The fuser drive assembly, [PL 40.05 Item 16](#), is controlled by the [Motor Drive PWB](#). It drives the fuser. The motor drive PWB monitors the belt speed sensor within the fuser unit, [PL 10.05 Item 14](#).

The fuser drive assembly consists of:

- The fuser unit drive motor, [PL 40.05 Item 19](#).
- The fuser drive bracket assembly, [PL 40.05 Item 15](#).
- The BTR contact/retract clutch assembly, [PL 40.05 Item 20](#).

Refer to [Figure 1](#), [Figure 2](#).

Refer to [BSD 10.1 Fusing Unit Drive](#)



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Figure 1 Main drive assembly

Main Drive Paths

The main motor drive paths are shown in [Figure 2](#).

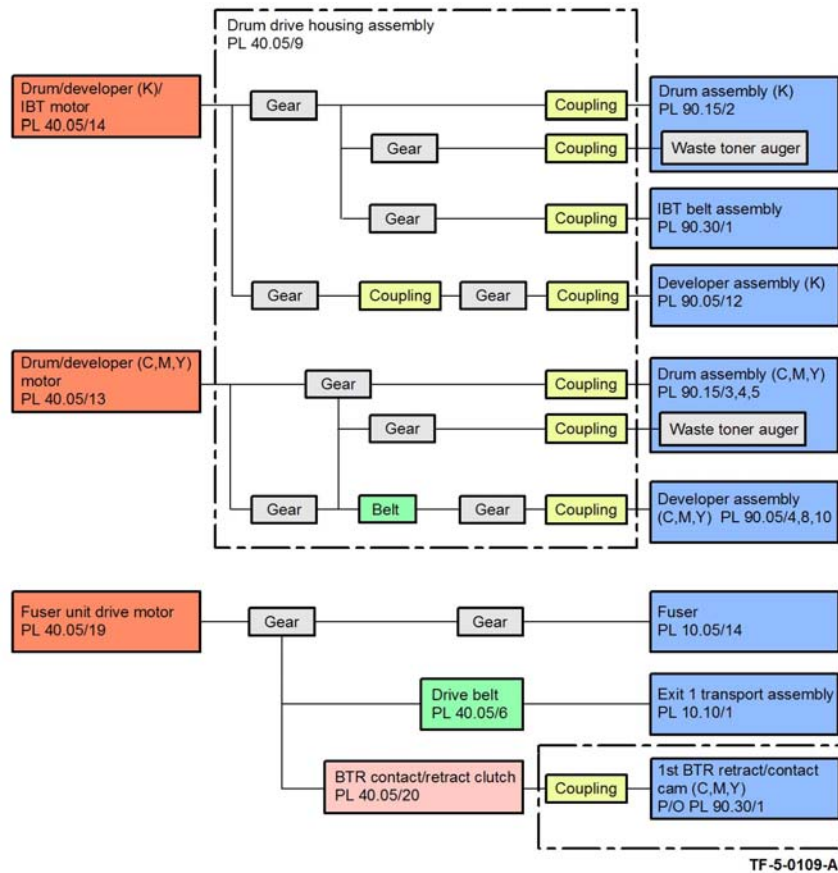


Figure 2 Main drives

NOHAD

The Xerox® VersaLink® C8000 and C9000 printers employ 8 main cooling fans.

Refer also to [Temperature and Humidity Detection](#).

- [Low Voltage Power Supply fan](#), PL PL 40.15 Item 4, receives 24VDC from the [Motor Drive PWB](#). The motor drive PWB logs code 043-322 if a fan failure is detected, [Figure 7](#).
- IHPS intake duct assembly, [PL 40.15 Item 8](#), runs at 2 speeds. The fan receives power from the [Motor Drive PWB](#). At low speed the fan receives 12VDC, at high speed it receives 24VDC. The motor drive PWB logs code 043-356 if a fan failure is detected, [Figure 8](#).
- Front/right marking fan (P1), [PL 40.10 Item 9](#), receives 24VDC from the [Motor Drive PWB](#). The motor drive PWB logs code 043-351 if a fan failure is detected, [Figure 3](#).
- Front left marking fan (P2), [PL 40.10 Item 13](#), runs at 2 speeds. The fan receives power from the [Motor Drive PWB](#). At low speed the fan receives 12VDC, at high speed it receives 24VDC. The motor drive PWB logs code 043-354 if a fan failure is detected, [Figure 3](#).
- Fuser unit exhaust fan, [PL 40.15 Item 2](#), [Figure 5](#).
- Marking fan duct assembly, [PL 40.10 Item 15](#), runs at 2 speeds. The fan receives power from the [Motor Drive PWB](#). At low speed the fan receives 12VDC, at high speed it receives 24VDC. The motor drive PWB logs code 043-349 if a fan failure is detected, [Figure 4](#).
- Toner cartridge cooling fan assembly, [PL 40.10 Item 12](#), receives 24VDC from the [Motor Drive PWB](#). The motor drive PWB logs code 043-352 if a fan failure is detected, [Figure 6](#).
- Toner cartridge exhaust fan assembly, [PL 40.15 Item 9](#), receives 24VDC from the [Motor Drive PWB](#). The motor drive PWB logs code 042-344 if a fan failure is detected, [Figure 6](#).

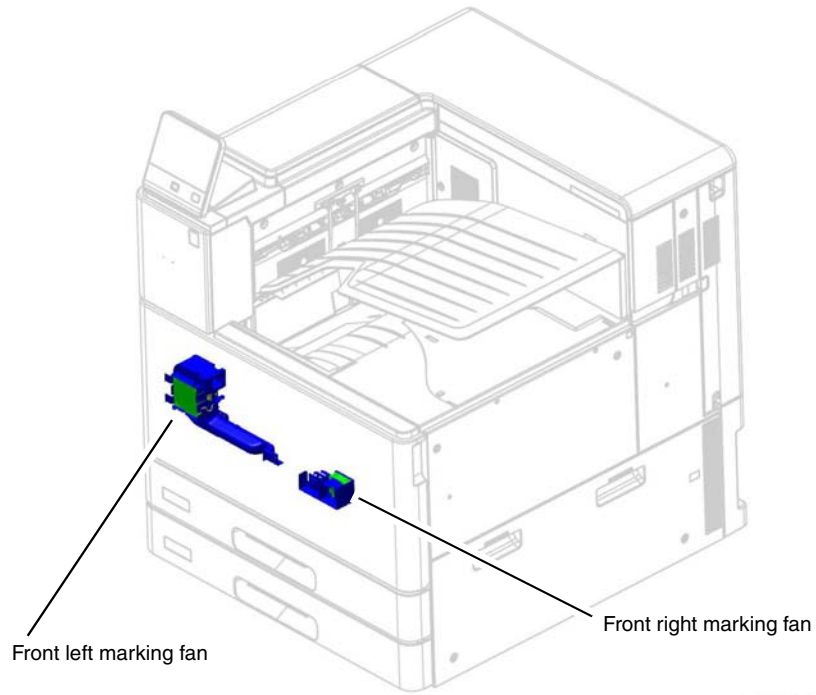
Refer to:

- [BSD 40.3 Marking Air Flow](#)
- [BSD 40.4 Toner Cartridge Cooling](#)

Other fans

- [ESS fan](#), [PL 3.15 Item 7](#).

Refer to [BSD 3.7 ESS \(Controller\)](#)

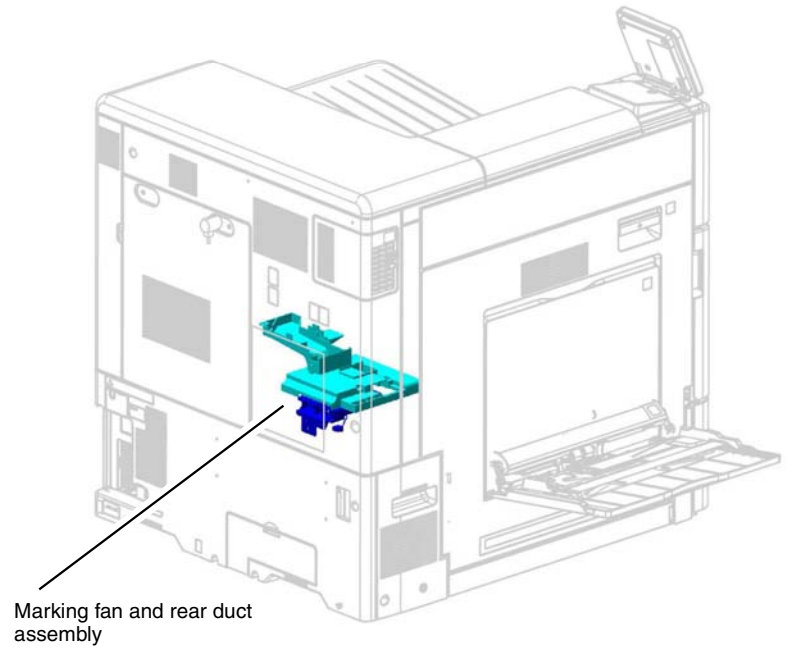


Front left marking fan

Front right marking fan

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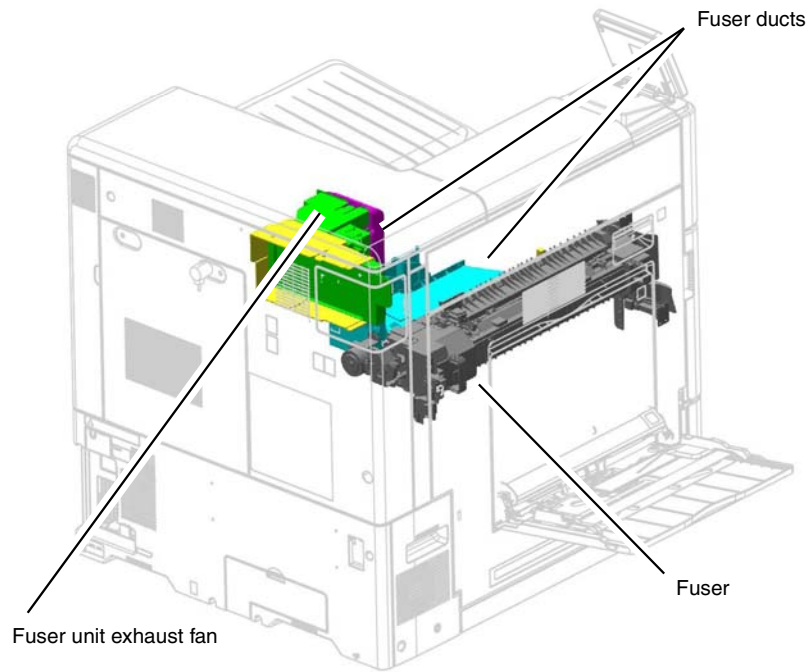
Figure 3 Front marking fans



Marking fan and rear duct assembly

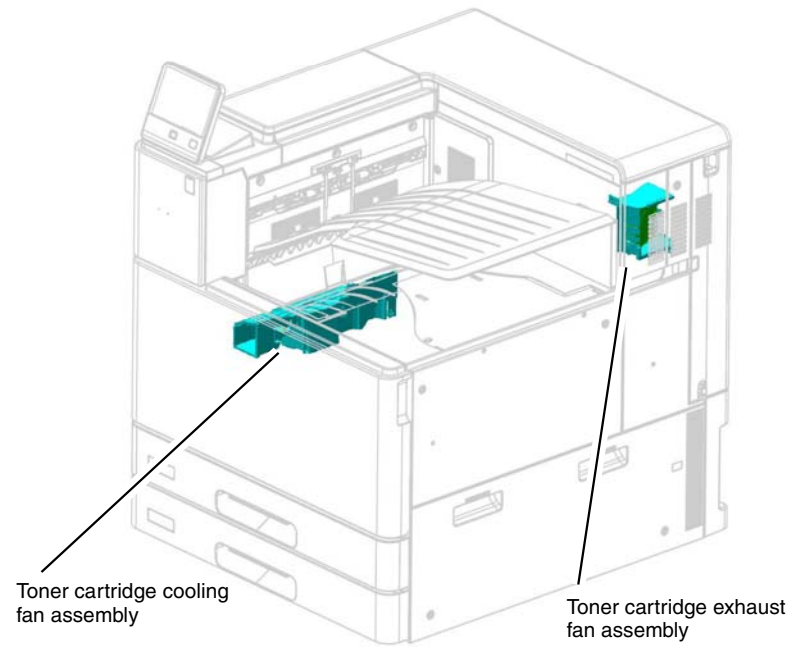
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Figure 4 Marking fan and rear duct assembly



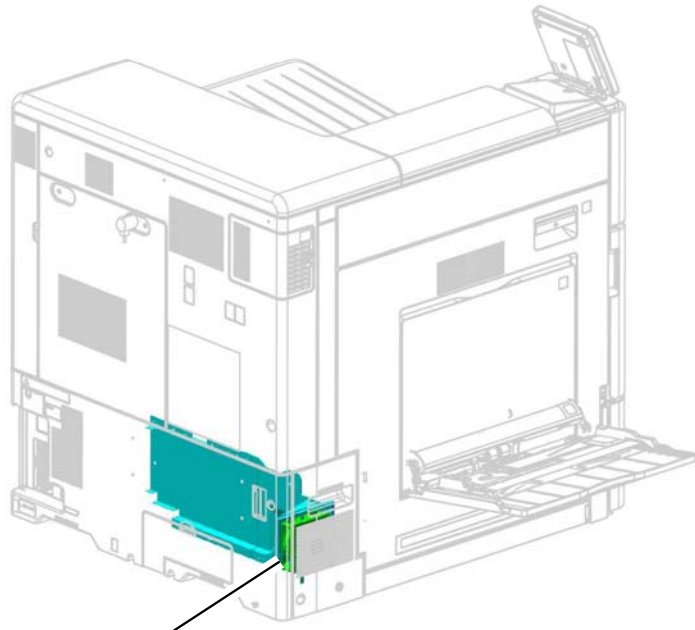
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Figure 5 Fuser fan and ducts



F-5-0148-A

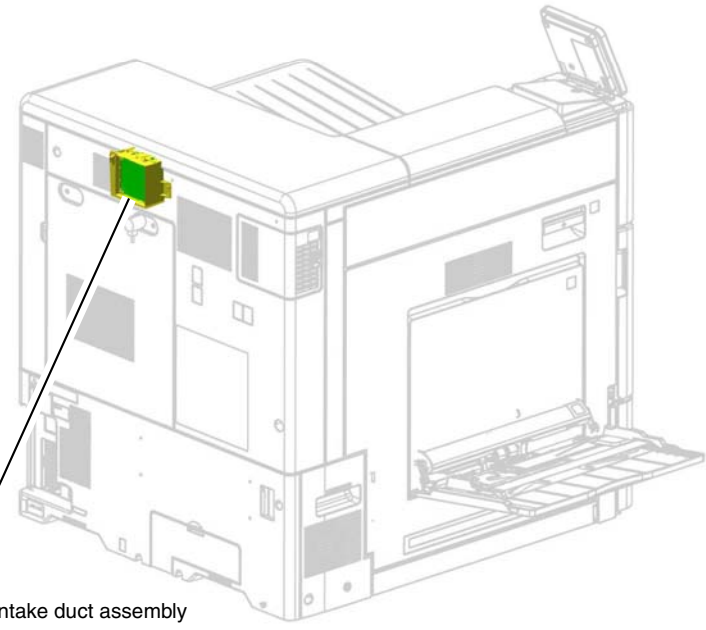
Figure 6 Toner cartridge cooling fan and exhaust fan



LVPS fan assembly

F-5-0149-A

Figure 7 LVPS fan assembly



IHPS intake duct assembly

F-5-0150-A

Figure 8 IHPS intake duct assembly

Temperature and Humidity Detection

Temperature and humidity is managed by two sensors.

- [NOHAD Temperature/Humidity \(No.1, External\) Sensor - PL 40.10 Item 5.](#)
- [Temperature/Humidity \(No.2, Internal\) Sensor - PL 90.30 Item 9.](#)

NOHAD Temperature/Humidity (No.1, External) Sensor

The NOHAD temp & humidity sensor, [PL 40.10 Item 5](#), is monitored by the [Motor Drive PWB](#). The sensor detects changes in external temperature and humidity. The motor drive PWB logs code 042-641 if a value is detected outside of the optimum for the machine. Code 042-641 is categorized as a hidden fail value and does not appear on the UI. [dC120](#) will record 042-641 in the failure code list.

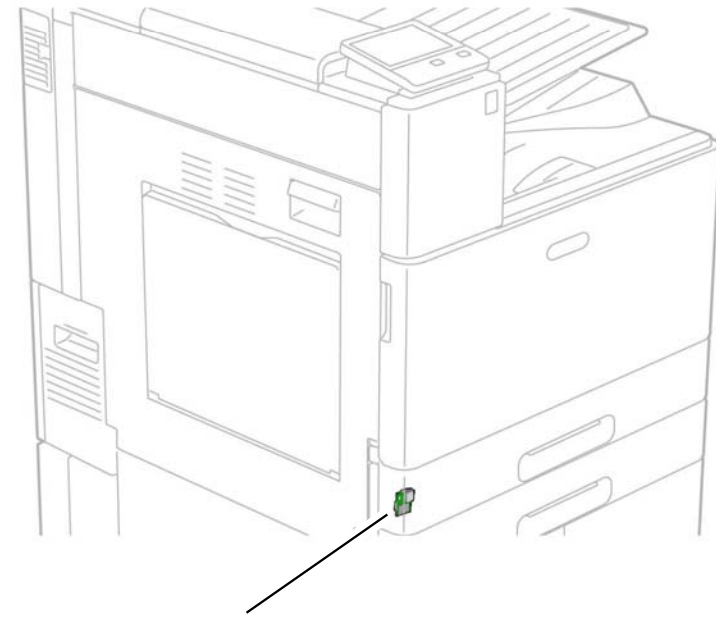
Values from the external sensor are used as part of the ON/OFF control logic for the following fans:

NOTE: The external sensor only contributes to ON/OFF signals for these fans, fan speed is controlled by the [Temperature/Humidity \(No.2, Internal\) Sensor](#).

- Fusing unit exhaust fan, [PL 40.15 Item 2.](#)
- Marking fan, [PL 40.10 Item 15.](#)
- Front/right marking fan (P1), [PL 40.10 Item 9.](#)
- Front/left marking fan (P2), [PL 40.10 Item 13.](#)
- Toner cartridge cooling fan assembly, [PL 40.10 Item 2.](#)
- Toner cartridge exhaust fan, [PL 40.15 Item 9.](#)
- LVPS fan, [PL 40.15 Item 4.](#)
- IHPS intake duct assembly, [PL 40.15 Item 8.](#)

The external sensor, in conjunction with values from the [Temperature/Humidity \(No.2, Internal\) Sensor](#), also contributes to ON/OFF control logic for the registration heater assembly, [PL 80.80 Item 3.](#)

Refer to [Figure 9](#) and [BSD 10.5 Fusing](#).



Temperature and humidity sensor (external)

F-5-0144-A

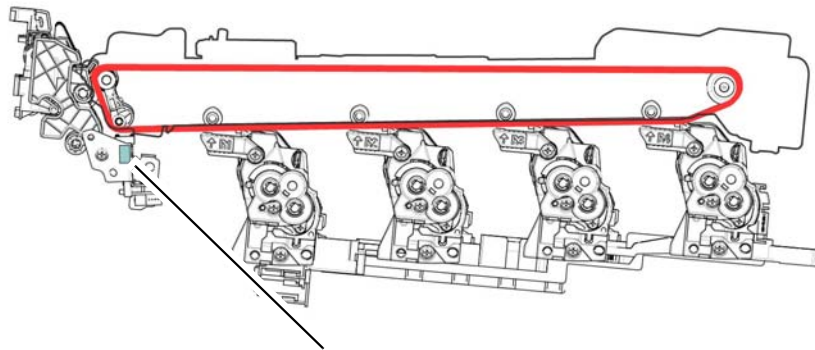
Figure 9 NOHAD temperature and humidity sensor

Temperature/Humidity (No.2, Internal) Sensor

A second temperature and humidity sensor, [PL 90.30 Item 9](#), is installed below the IBT belt assembly. This sensor measures the temperature and humidity inside the machine.

Values from the internal temperature and humidity sensor are used for many subsystems including control of fans and heaters, fuser temperature control and process control.

Refer to [Figure 10](#) and [BSD 60.4 Temperature and Humidity Sensing](#).



Location of internal temperature and humidity sensor on bracket below the IBT unit towards the rear of the machine. Refer to [PL 90.30 Item 9](#).

F-5-0157-A

Figure 10 Temperature and humidity sensor (internal)

Paper Supply and Feed

Paper Supply

Paper tray characteristics

- Tray 1 - up to 520 sheets (80gsm/54lbs) A4/letter LEF or SEF or A3/11 x 17in SEF
- Tray 2 - up to 520 sheets (80gsm/54lbs) A4/letter LEF or SEF or SRA3 SEF, 12x18 inch SEF
- Tray 3 2TM - up to 520 sheets (80gsm/54lbs) A4/letter LEF or SEF or SRA3 SEF, 12x18 inch SEF
- Tray 4 2TM - up to 520 sheets (80gsm/54lbs) A4/letter LEF or SEF or SRA3 SEF, 12x18 inch SEF
- Tray 3 TTM - up to 980 sheets (80gsm/54lbs) A4/letter LEF or 8.5x11in LEF
- Tray 4 TTM - up to 1280 sheets (80gsm/54lbs) A4/letter LEF or 8.5x11in LEF
- HCF - up to 2000 sheets A4/letter LEF or 8.5x11in LEF (80gsm/54lbs)
- Bypass tray - up to 100 sheets custom sizes (80gsm/54lbs)
- Envelope tray (replaces tray 1) - up to 50 envelopes

Refer also to [Machine Configurations](#) in the Machine Overview section of this PTO and [GP 15](#) for full paper specifications.

Paper Supply Configurations

The Xerox® VersaLink® C8000 and C9000 paper supply is available in the following configurations, [Figure 1](#):

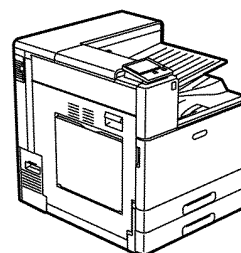
- C8000/C9000 with built in paper tray 1 and 2.
- Stacked machine with paper tray 1 and 2 and 2 tray module (2TM).
- Stacked machine with paper tray 1 and 2 and tandem tray module (TTM).
- An optional envelope tray, [PL 70.70](#), can be added in the position of tray 1.
- An optional 2000 sheet high capacity feeder (HCF), [PL 70.75](#), can also be added to a stacked machine. This would normally be used with a finisher.
- All Xerox® VersaLink® C8000 and C9000 machine configurations feature a bypass tray (Tray 5), [PL 70.50](#).

NOTE: The HCF can only be installed on machines configured with either a 2TM or TTM.

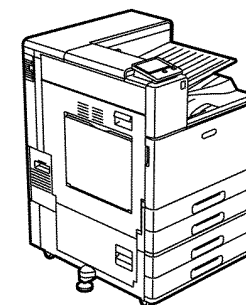
NOTE: Tray 2, Tray 3 (2TM) and Tray 4 (2TM) can carry a maximum size of SRA3 or 12x18 inches.

Paper Tray Functionality

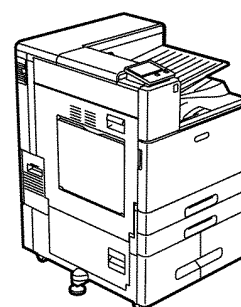
- [Paper Tray Elevation and Feeding: Trays 1, 2, 3 and 4](#)
- [Paper Size Detection](#)
- [No Paper Detection: Trays 1, 2, 3 and 4](#)
- [Remaining Paper Indication](#)
- [Sensors and Motors, Trays 1, 2, 3, 4 \(including 2TM and TTM\)](#)
- [Bypass Tray \(Tray 5\)](#)
- [High Capacity Feeder](#)



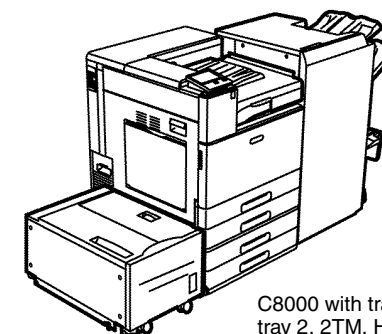
C8000/CC9000 with tray 1 and tray 2



C8000/C9000 with tray 1, tray 2 and 2TM



C8000/C9000 with tray 1, tray 2 and TTM



C8000 with tray 1, tray 2, 2TM, HCF and BR finisher

F-5-0108-A

Figure 1 Example configurations

Paper Tray Elevation and Feeding: Trays 1, 2, 3 and 4

NOTE: The paper elevation mechanism is similar for trays 1, 2, 3 and 4 within the 2TM. The TTM (trays 3 and 4) is different.

Paper Elevation - Trays 1 and 2 plus 3 and 4 within the 2TM.

Paper trays 1, 2, 3 and 4 (2TM only) have similar paper elevator systems that lift the paper stack into the paper feed position. The paper feed side of a hinged bottom plate is raised by a lift shaft until the paper stack is at the correct height to feed the top sheet of paper, [Figure 2](#). The tray drops mechanically when the tray is opened as the gears disengage.

Each paper tray has a level sensor and a no paper sensor. The sensors are monitored by the [Motor Drive PWB](#).

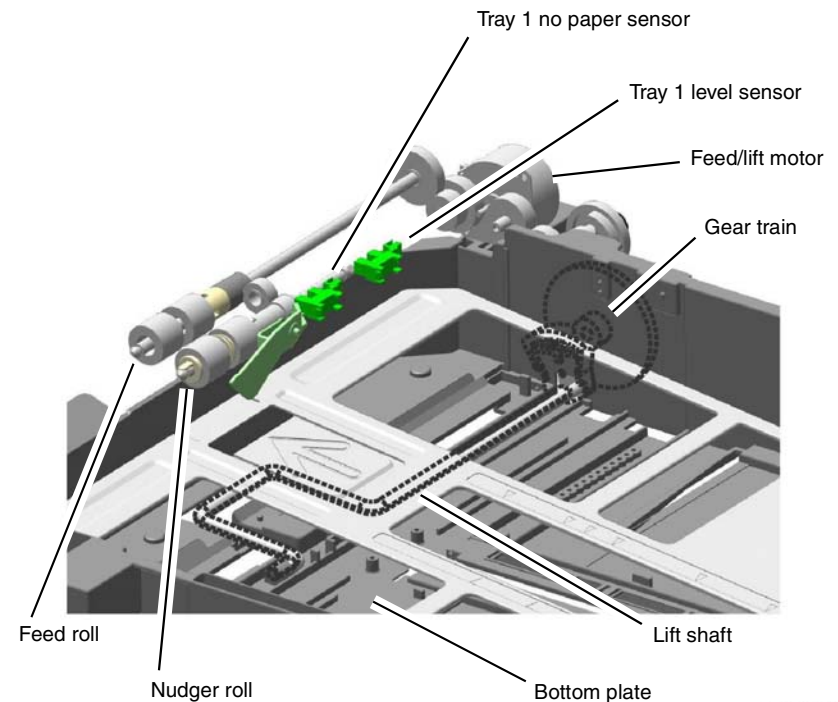
When any of the paper trays 1, 2, 3 or 4 are fully inserted into a powered on machine the state of their tray level sensor is checked by the [Motor Drive PWB](#). If the motor drive PWB detects a High signal (3.3VDC) from the tray level sensor the control logic activates the feed/lift motor to run. The motor elevates (via a gear train and lift shaft) the bottom plate and paper stack of the tray up to the paper feed position. In the feed position the elevated paper stack actuates the tray level sensor to signal Low. When the tray level sensor Low signal is detected by the motor drive PWB the feed/lift motor begins to rotate in the feed (opposite) direction, driving the nudger and feed rolls and thereby feeding the top sheet towards the takeaway rolls.

If, while the tray is elevated, the no paper sensor detects no paper (High, 3.3VDC), the control logic stops the operation of the tray and notifies the user on the UI.

During paper feeding the tray level sensor is continuously monitored. When the tray level sensor High is detected (3.3VDC), the control logic determines that it cannot feed the next sheet. The feed/lift motor then begins rotating in the lift direction thereby, recommencing elevation of the paper stack to the paper feed position, then the feed cycle begins again,

Refer to [Figure 2](#).

- [BSD 70.8 Tray 1 Paper Stacking](#)
- [BSD 70.9 Tray 2 Paper Stacking](#)
- [BSD 70.10 Tray 3 Paper Stacking \(2TM/TTM\)](#)
- [BSD 70.11 Tray 4 Paper Stacking \(2TM\)](#)



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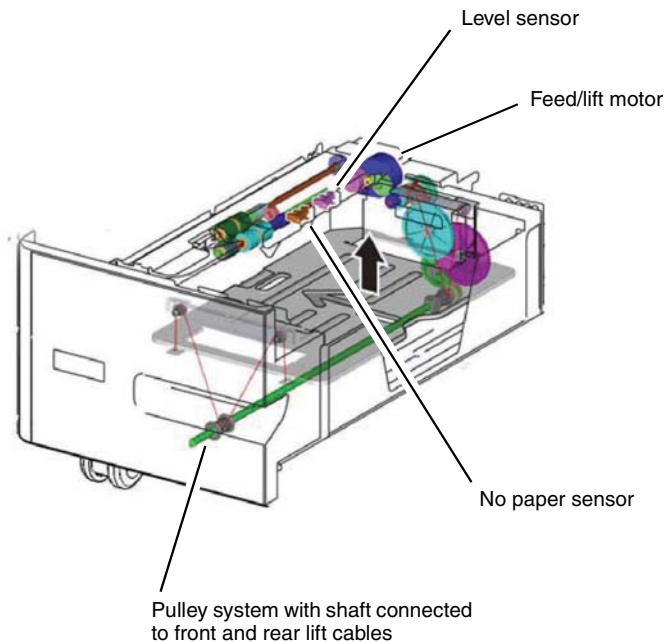
Figure 2 Tray 1 components

Paper Elevation - Trays 3 and 4 (TTM only)

Tray 3 and 4 (TTM) uses a bottom plate raised by a pulley and cable system. The bottom plate is supported by four cables which are raised as the feed/lift motor runs in the lift direction. The feed lift motor is a bi directional stepping motor.

When the tray is loaded and pushed into the machine, thereby actuating the paper size sensor (see [Paper Size Detection](#)), the control logic commands the feed/lift motor to rotate in the lift direction. The motor provides drive to the cable and pulley system raising the stack. When the stack actuates the level sensor to signal Low the motor stops, holding the paper stack in the feed position. The tray level is maintained by a clutch. Refer to [Figure 3](#) and [Figure 4](#).

- [BSD 70.10 Tray 3 Paper Stacking \(2TM/TTM\)](#)
- [BSD 70.12 Tray 4 Paper Stacking \(TTM\)](#)

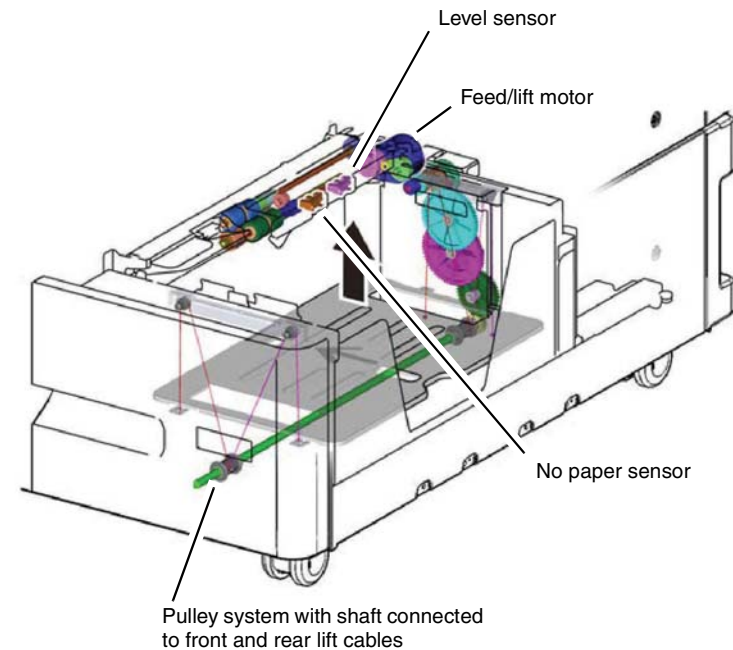


F-5-0119-A

Figure 3 Tandem tray module tray 3

In the feed position the control logic directs the feed/lift motor to rotate in the feed direction. When the height of the paper stack is no longer adequate to actuate the tray level sensor the sensor signals High (3.3VDC) and the control logic directs the feed/lift motor to rotate in the lift direction again.

When the last sheet feeds from the tray the tray no paper sensor actuator drops into an opening in the paper tray elevator unblocking the tray no paper sensor (refer to [Feedhead Components](#)). This signals the control logic that the tray is empty and to display a (tray empty) message on the UI, Refer to [No Paper Detection: Trays 1, 2, 3 and 4](#).



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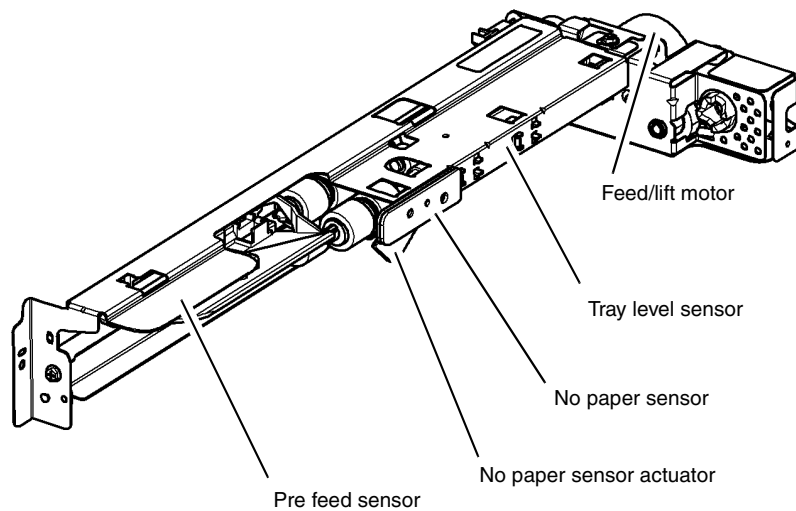
Figure 4 Tandem tray module tray 4

Feedhead Components

The feedheads in trays 1 and 2 and trays 3 and 4 (in both the 2TM and the TTM) are similar. Tray 1 feedhead is shown as a typical example.

The tray level sensor, no paper sensor and pre feed sensor are all integral to the feeder assembly. The pre feed sensor is used to detect paper mis feeds and paper jams. [Figure 5](#).

- [BSD 70.8 Tray 1 Paper Stacking](#)
- [BSD 70.9 Tray 2 Paper Stacking](#)
- [BSD 70.10 Tray 3 Paper Stacking \(2TM/TTM\)](#)
- [BSD 70.11 Tray 4 Paper Stacking \(2TM\)](#)
- [BSD 70.12 Tray 4 Paper Stacking \(TTM\)](#)



F-5-0115-A

Figure 5 Tray 1 feedhead assembly

Paper Size Detection

Paper Size Detection - Trays 1 and 2, and Trays 3 and 4 (within the 2TM only).

NOTE: Paper size detection is similar for trays 1, 2, 3 and 4 within the 2TM. The TTM (3 and 4) is different. Refer to [Paper Size Detection - Trays 3 and 4 in the TTM](#).

Paper size is detected by a combination of switches mounted on the rear of the bay into which the paper tray is installed. The switches are actuated by a slotted panel on the rear of the paper tray. A lever system attached to the paper guides moves the slotted panel actuating the switches.

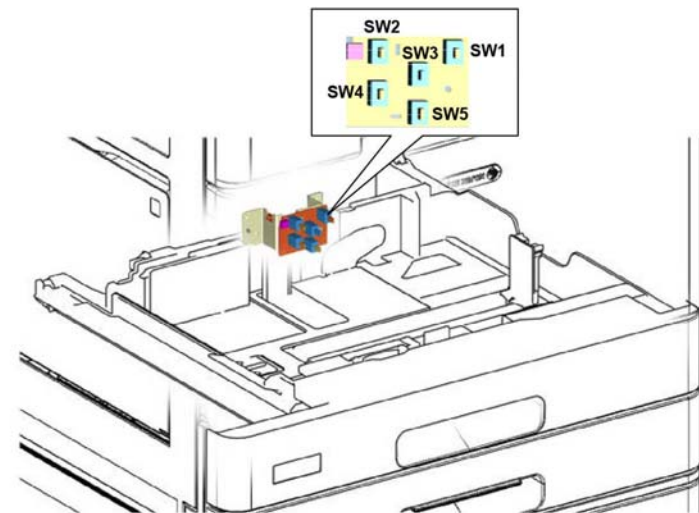
The combination of on and off signals from the paper size switches changes an output voltage. This output voltage is then converted from an analog to a digital value that is monitored by a the [Motor Drive PWB](#). The digital value indicates the size of the paper. Refer to BSDs listed below for details.

Paper size detection is performed at power on and every 0.1 second thereafter. However, the paper size sensor for a tray that has begun to feed paper is not monitored.

If a tray selected on the UI does not contain paper of the selected size, the machine will not print using that tray. If an analog to digital value that is not appropriate for the size of paper in a specific tray is detected the machine will not print using that tray.

The paper size switches within trays 1 and 2 and trays 3 and 4 of the 2TM operate in a similar way. [Figure 6](#) shows the position of the switch in tray 1 and 2; trays 3 and 4 of the 2TM are in a similar location. The paper size switches in the TTM are different.

- [BSD 70.1 Tray 1 Paper Size Sensing](#)
- [BSD 70.2 Tray 2 Paper Size Sensing](#)
- [BSD 70.3 Tray 3 Paper Size Sensing \(2TM\)](#)
- [BSD 70.5 Tray 4 Paper Size Sensing \(2TM\)](#)



F-5-0116-A

Figure 6 Tray 1 paper size switch location

Paper Size Detection - Trays 3 and 4 in the TTM

The TTM paper size sensors contain two switches mounted on the rear of the bay into which the tray is installed. Movement of the paper guides moves an actuator assembly on the rear of the paper tray.

The actuator assembly consists of a black housing with two openings facing the switches. A sheet of transparent film, mounted inside the housing, is moved by the paper guides. Holes in the film align with the holes in the housing to either open or close the opening dependent on the position of the paper guides. As the paper tray closes the combination of open or closed openings actuate the switches.

The combination of the on and off states of the switches changes the output voltage which is sensed by the [Motor Drive PWB](#).

Paper size switch locations in the TTM are shown in [Figure 7](#).

- [BSD 70.4 Tray 3 Paper Size Sensing \(TTM\)](#)
- [BSD 70.6 Tray 4 Paper Size Sensing \(TTM\)](#)

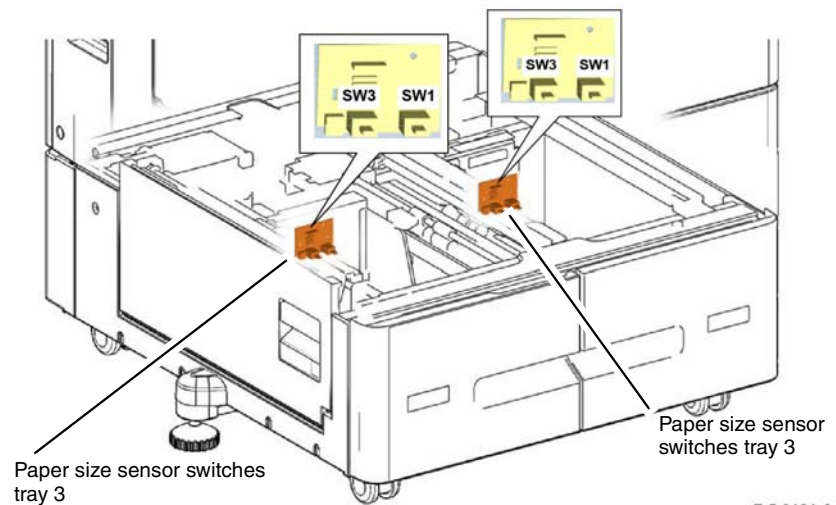


Figure 7 TTM paper size sensors

No Paper Detection: Trays 1, 2, 3 and 4

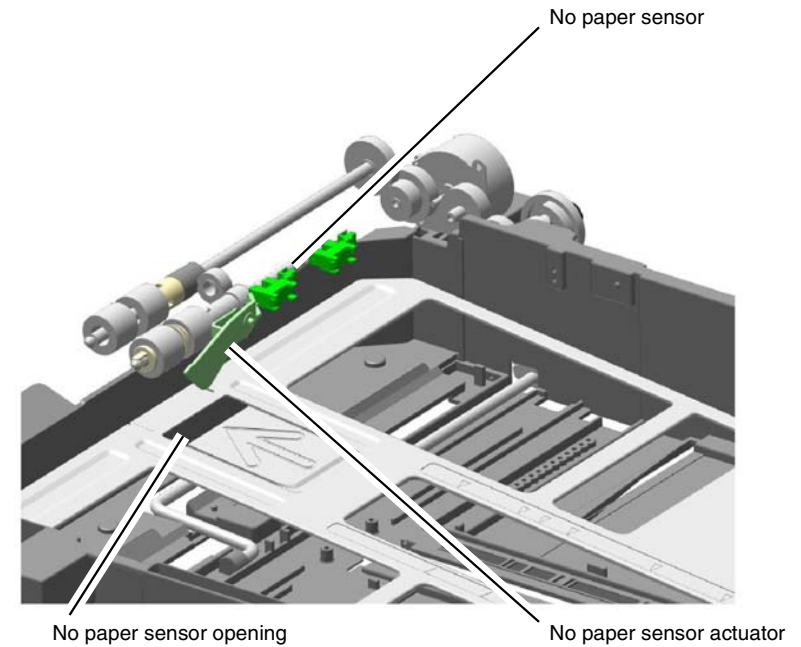
NOTE: The no paper detection system is different on the *High Capacity Feeder*.

The no paper sensor detects if there is paper in the paper tray. The no paper sensors monitor every 0.01 second while the machine is in operation and at standby. When the last sheet feeds from the tray, the no paper sensor actuator drops into an opening in the paper tray bottom plate and unblocks the no paper sensor. This signals to the control logic that the tray is empty and to display a tray empty message on the UI.

If it is determined that a tray has no paper, the machine prohibits that tray from being used. If no paper is detected during feed, the machine will finish with the paper that is being fed and then stop. However, if the machine is in auto tray switch (ATS) mode and the same size of paper is found in another tray, the machine will start to feed paper from that tray.

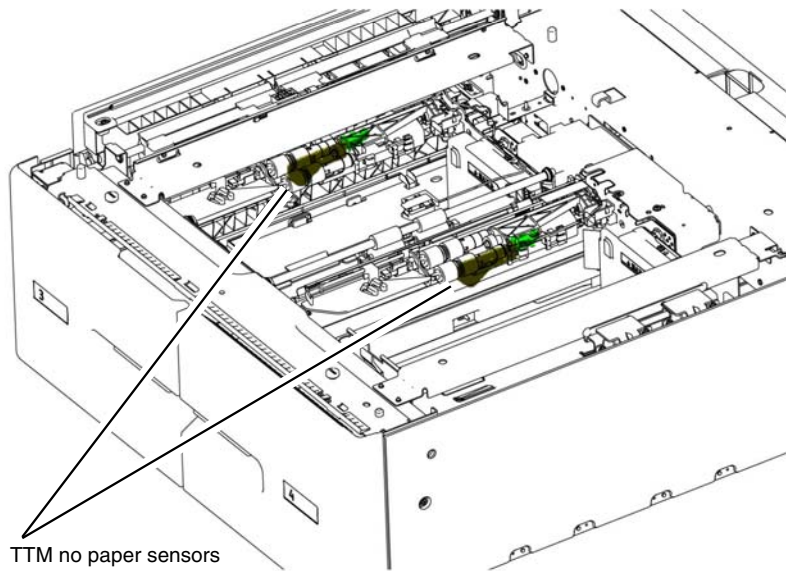
- [BSD 70.8 Tray 1 Paper Stacking](#)
- [BSD 70.9 Tray 2 Paper Stacking](#)
- [BSD 70.10 Tray 3 Paper Stacking \(2TM/TTM\)](#)
- [BSD 70.11 Tray 4 Paper Stacking \(2TM\)](#)
- [BSD 70.12 Tray 4 Paper Stacking \(TTM\)](#)

Refer to [Figure 8](#) and [Figure 9](#).



F-5-0122-A

Figure 8 Tray 1 no paper sensor



F-5-0123-A

Figure 9 TTM no paper sensor

Remaining Paper Indication

The machine informs the user of the amount of paper in each tray at five levels: 100%, 75%, 50%, 25%, and 0%.

The calculation of the amount of paper in a paper tray by the control logic is dependent on the time that elapses during elevation of the paper stack. The calculation is based on the time taken from when the tray feed/lift motor begins to drive the lift plate, until the paper stack triggers the tray level sensor On.

Sensors and Motors, Trays 1, 2, 3, 4 (including 2TM and TTM)

Table 1 Tray 1 and 2 Sensors and Motors

Component	Fail Code
Tray 1 paper size sensor Tray 2 paper size sensor PL 70.05 Item 3	Tray 1 071-212 Tray 2 072-212
Tray 1 no paper sensor PL 80.10 Item 8 Tray 2 no paper sensor PL 80.15 Item 7	N/A
Tray 1 level sensor PL 80.10 Item 8 Tray 2 level sensor PL 80.15 Item 7	Tray 1 071-210 Tray 2 072-210
Tray 1 feed/lift motor PL 80.10 Item 9 Tray 2 feed/lift motor PL 80.15 Item 8	

Table 2 Tray 3 and 4 (2TM) Sensors and Motors

Component	Fail Code
Tray 3 paper size sensor Tray 4 paper size sensor PL 70.20 Item 12	Tray 3 073-212 Tray 4 074-212
Tray 3 no paper sensor Tray 4 no paper sensor PL 80.35 Item 5	N/A
Tray 3 level sensor Tray 4 level sensor PL 80.35 Item 6	Tray 3 073-210 Tray 4 074-210
Tray 3 feed/lift motor Tray 4 feed/lift motor PL 80.35 Item 11	
Tray 3 feed out sensor Tray 4 feed out sensor PL 80.25 Item 4	

Table 3 Tray 3 and 4 (TTM) Sensors and Motors

Component	Fail Code
Tray 3 paper size sensor PL 70.35 Item 22 Tray 4 paper size sensor PL 80.40 Item 13	Tray 3 073-212 Tray 4 074-212

Table 3 Tray 3 and 4 (TTM) Sensors and Motors

Component	Fail Code
Tray 3 no paper sensor PL 80.50 Item 6 Tray 4 no paper sensor PL 80.55 Item 6	N/A
Tray 3 level sensor PL 80.50 Item 6 Tray 4 level sensor PL 80.55 Item 6	Tray 3 073-210 Tray 4 074-210
Tray 3 feed/lift motor PL 80.50 Item 9 Tray 4 feed/lift motor PL 80.55 Item 9	
Tray 3 pre-feed sensor PL 80.50 Item 2	
Tray 4 feed out sensor PL 80.60 Item 3	

Transport Path Drawer Interlock (TTM only)

The transport path drawer interlock is a wire link across the connector on the rear of the TTM transport assembly, [PL 80.40 Item 6](#). The connector is shown at [PL 80.45 Item 12](#) described as drawer harness. The mating connector is shown on [PL 80.40 Item 7](#) attached to the tray 4 feedhead assembly.

A 3.3VDC signal is supplied from the [Motor Drive PWB](#) through the connector and back to the motor drive PWB. When the signal is Low the motor drive PWB detects that the TTM transport assembly, [PL 80.40 Item 6](#), is in the operational position. When the transport is pulled out for jam clearance the connector separates the feed head and transport wiring.

The connector can only be accessed by removing the TTM from the machine and accessing the transport assembly through the open top of the TTM. Refer to [PL 70.35](#).

Refer to [BSD 80.6 TTM Paper Transport](#)

Bypass Tray (Tray 5)

The bypass tray is located on the left side of the IOT below the left cover assembly.

The bypass tray has a no paper sensor, [PL 70.55 Item 5](#) actuated by a flag when paper is inserted. The [Motor Drive PWB](#) continually monitors the no paper sensor, a High signal (3.3VDC) indicates no paper. When the signal goes Low the control logic determines that paper has been inserted.

Refer to [BSD 70.13 Bypass Tray Paper Sensing and Stacking](#)

The bypass tray has an analogue paper size sensor, [PL 70.55 Item 1](#). The sensor is actuated by a link, [PL 70.55 Item 2](#). The link is driven by a gear actuated by the paper width guides. The [Motor Drive PWB](#) monitors the position of the paper size sensor and references a list of paper sizes stored in NVM.

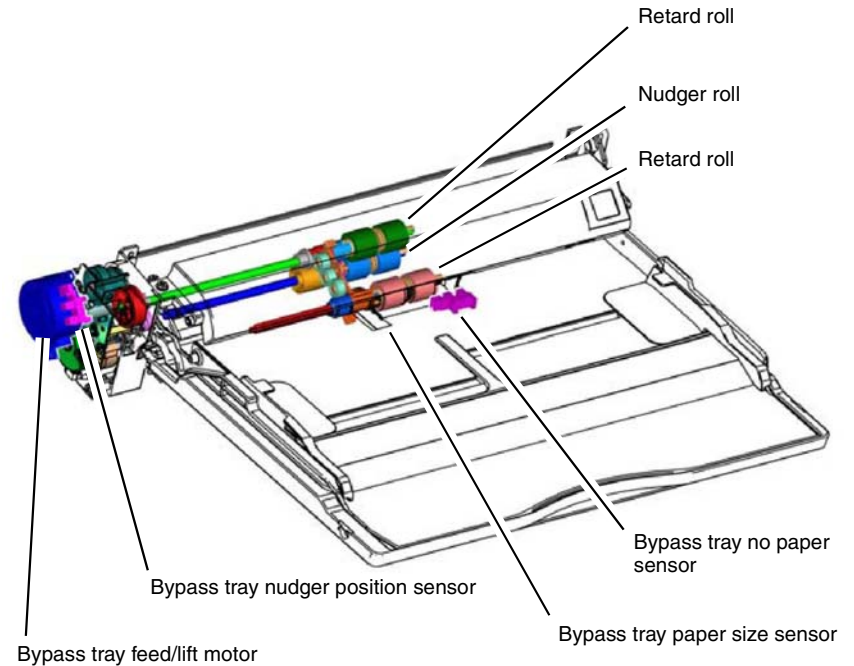
Refer to [BSD 70.7 Bypass Tray Paper Size Sensing](#)

The bypass tray has a bypass tray nudger position sensor, [PL 80.120 Item 2](#). The sensor is actuated when the bypass tray nudger roll, [PL 80.120 Item 8](#), is lifted by the paper stack. The [Motor Drive PWB](#) monitors the nudger position sensor, a Low signal indicates the nudger roll has been lifted by paper.

Refer to [BSD 70.13 Bypass Tray Paper Sensing and Stacking](#)

When paper is loaded into the bypass tray the motor drive PWB detects a High signal (3.3VDC) from the bypass tray no paper sensor and the control logic activates the feed/lift motor, [PL 80.120 Item 1](#) to run. The motor elevates the tray (via a gear train and lift shaft) and paper stack acting on a link attached to the base of the tray. When the paper stack actuates the bypass tray nudger position sensor the control logic deactivates the feed/lift motor. When paper is requested from the bypass tray the feed/lift motor operates in the feed direction. If feeding the paper causes the bypass tray nudger position sensor to go High (3.3VDC) the control logic runs the feed/lift motor again in the lift direction until the stack is detected once more.

Refer to [Figure 10](#).



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Figure 10 Bypass tray components

For detailed media information refer to [GP 15 Paper and Media Size Specifications](#).

Table 4 Tray 5 (Bypass Tray) Sensors and Motors

	Fail Code
Bypass tray paper size sensor PL 70.55 Item 1	None
Bypass tray no paper sensor PL 70.55 Item 5	N/A
Bypass tray nudger position sensor PL 80.120 Item 2	075-212
Bypass tray feed/lift motor PL 80.120 Item 1	
Bypass tray feed out sensor PL 80.115 Item 1	

High Capacity Feeder

The High Capacity Feeder (HCF) is primarily loaded with 8.5x11 or A4 paper. The capacity of the HCF is 2000 sheets of 80gsm (20lb) paper.

For detailed media information refer to [GP 15 Paper and Media Size Specifications](#).

High Capacity Feeder: Sensors and Interlocks

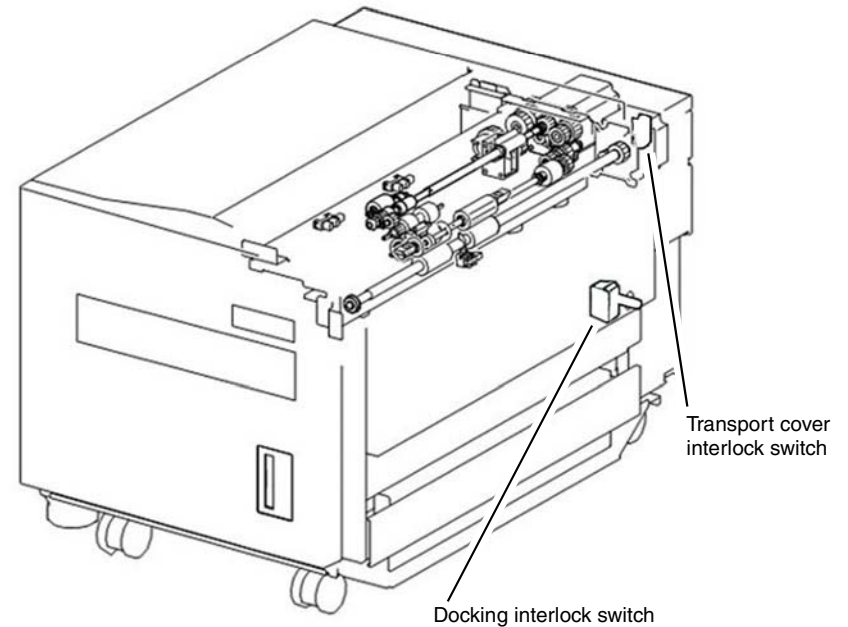
During jam clearance the operator may need to slide the HCF to the left, away from the machine. The HCF docking interlock switch, [PL 70.95 Item 8](#), detects if the HCF is in the home position (against the left side of the machine) following jam clearance.

Refer to [PL 70.90 Item 26](#). The HCF transport cover interlock switch cuts +24VDC power to the K1 relay on the HCF PWB, [PL 70.95 Item 9](#), when opened, turning off the HCF feed/lift motor, [PL 80.100 Item 23](#), and the takeaway motor, [PL 70.95 Item 7](#).

The HCF tray set sensor, [PL 70.75 Item 3](#), detects that the HCF tray is in the operating position. This prevents the HCF feed/lift motor from operating with the drawer open, [Figure 12](#).

Refer to [Figure 11](#).

- [BSD 1.12 DC Power Distribution HCF](#)
- [BSD 70.16 HCF Paper Size Sensing and Tray Set](#)
- [BSD 70.17 HCF Paper Stacking](#)



F-5-0104-A

Figure 11 HCF interlocks

High Capacity Feeder: Loading and Size Sensing

When the HCF tray is pulled out to load paper the lift gear is separated from the drive gear and the tray is free to fall to the bottom position. A torque limiter on the lift shaft slows the fall of the paper tray to prevent damage to feeder components.

Size sensing is determined by the HCF paper sensor A (letter), [PL 70.95 Item 13](#), and the HCF size sensor B (A4), [PL 70.95 Item 13](#). The paper tray guides actuate the size sensors, [Figure 12](#) and [Table 5](#). A combination of ON/OFF states of sensor A and sensor B indicate the loaded paper size.

Refer to:

- [Figure 12](#)
- [Table 5](#)
- [BSD 70.16 HCF Paper Size Sensing and Tray Set](#)

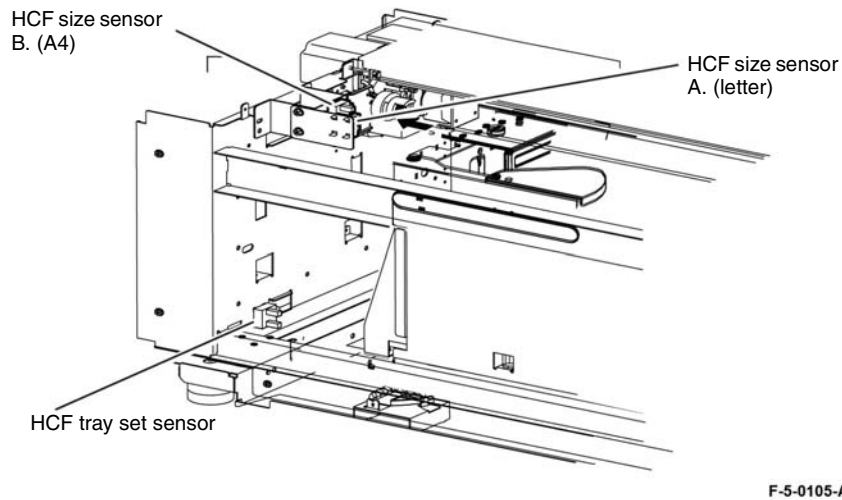


Figure 12 HCF tray in and paper size sensors

Table 5 Paper size by sensor state

Paper Size	Tray Paper Size Sensor	
	Sensor B (A4)	Sensor A (Letter)
B5 LEF or 7.25x10.5 inch LEF	OFF	OFF
8.5x11 inch (letter) LEF	OFF	ON
A4 LEF	ON	OFF

High Capacity Feeder: Tray Lift Operation

When the HCF tray is pushed in and actuates the HCF tray set sensor, [PL 70.75 Item 3](#), [Figure 12](#), the following sequence of events occurs:

1. The nudger roll, [PL 80.105 Item 23](#), is lowered.
2. The HCF feed/lift motor switches, [PL 80.100 Item 23](#), on and rotates CCW to lift the tray through a pulley and cable arrangement.
3. Lift continues until the paper stack reaches and lifts the nudger roll, deactuating the HCF level sensor, [PL 80.105 Item 19](#).
4. The HCF feed/lift motor switches off.

Refer to [Figure 13](#) and [BSD 70.17 HCF Paper Stacking](#).

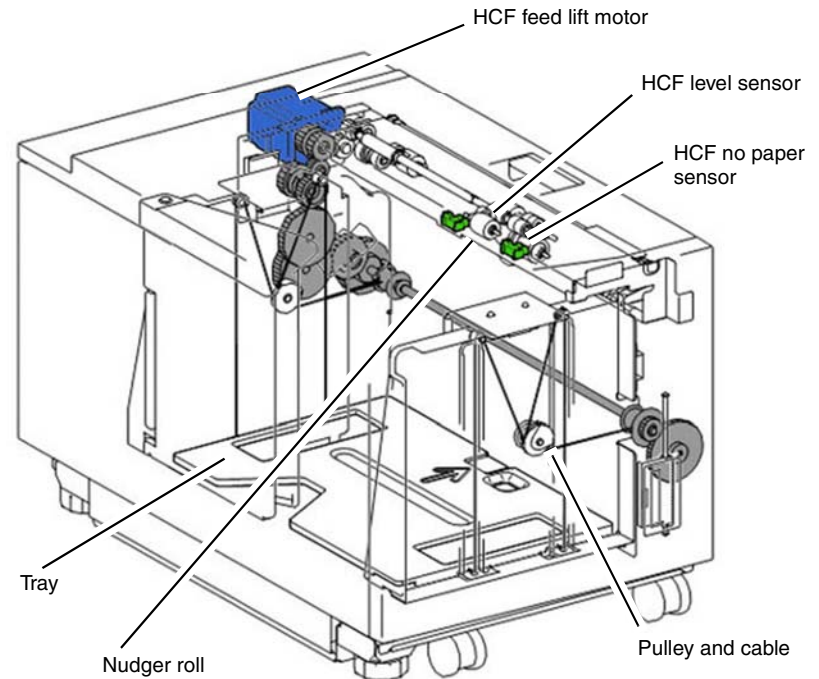


Figure 13 HCF level sensor

High Capacity Feeder: Remaining Paper Calculation

The control logic calculates the amount of paper that remains in the HCF tray by the time it takes for the paper stack to deactivate the HCF level sensor, [PL 80.105 Item 19, Figure 13](#). The value is then displayed on the UI for operator information. Refer to [Table 6](#) for the time/quantity relationship.

If the HCF is empty, the HCF no paper sensor, [PL 80.105 Item 19](#), will actuate, and a Tray Empty message will display.

Refer to [Figure 13](#) and [BSD 70.17 HCF Paper Stacking](#).

Table 6 Time/quantity relationship

Paper Remaining	Lift Time (msec)
25%	8798-11526
50%	6068-8797
75%	3338-6067
FULL	0-3337

Table 7 Tray 5 HCF Sensors and Motors

HCF paper sensor A4 HCF paper sensor Letter PL 70.95 Item 11
HCF tray set sensor PL 70.75 Item 3
HCF takeaway motor PL 70.95 Item 7
HCF feed/lift motor PL 80.100 Item 23
HCF level sensor HCF no paper sensor PL 80.105 Item 19
HCF prefeed sensor PL 80.105 Item 20
HCF feedout sensor PL 70.90 Item 25

Paper Transport

Paper Transport Overview

NOTE: Paper feed from trays 1, 2, 3, 4, 5 and the HCF is discussed in the [Paper Supply](#) section, as are the functions of the paper trays' paper size sensors, level sensors, no paper sensors, and feed/lift motors.

The purpose of the paper transport system is to take a sheet of media from any of the various paper trays and then deliver that media un-skewed to the point of xerographic transfer. Refer to [Xerographics Overview](#) for details on the xerographic process, [Fuser Overview](#) for details on fusing and [Print Transportation Overview](#) for post fuser print transportation.

Takeaway Rolls and Drives

Each individual paper tray with the exception of tray 3 and 4 of the TTM has an associated takeaway roll that takes over transportation of media fed via the paper feeder and then drives that media along the paper path towards the registration nip rolls. The TTM tray 4 has a transport assembly that transports the paper across the top of tray 3 to a combined takeaway roll for the TTM unit.

Tray 1 and Tray 2. Refer to [Figure 1](#) or [Figure 2](#).

- Tray 1 takeaway roll. Driven by takeaway motor 1, [PL 80.95 Item 5](#).
Refer to [BSD 80.3 Tray 1 and Bypass Tray Paper Transport](#)
- Takeaway roll 2, [PL 80.90 Item 7](#). Driven by takeaway motor 2, [PL 80.95 Item 17](#).
Refer to [BSD 80.4 Tray 2 Paper Transport](#)

Two tray module (2TM). Refer to [Figure 1](#).

- 2TM upper takeaway roll, [PL 80.25 Item 1](#), the upper takeaway roll serves tray 3 and tray 4. Driven by 2TM takeaway motor assembly, [PL 80.30 Item 1](#).
Refer to [BSD 80.5 2TM Paper Transport](#)
- 2TM lower takeaway roll, [PL 80.25 Item 1](#), the lower takeaway roll serves tray 4 only. Driven by 2TM takeaway motor assembly, [PL 80.30 Item 1](#).
Refer to [BSD 80.5 2TM Paper Transport](#)

Tandem tray module (TTM). Refer to [Figure 2](#).

- TTM takeaway roll, [PL 80.40 Item 10](#), serves tray 3 and 4. Driven by TTM takeaway motor assembly, [PL 80.45 Item 3](#).
Refer to [BSD 80.6 TTM Paper Transport](#)
- TTM tray 4 transport assembly, [PL 80.40 Item 6](#), transports the paper from tray 4 across the top of tray 3 to the TTM takeaway roll.
Refer to [BSD 80.6 TTM Paper Transport](#)
The TTM transport assembly, [PL 80.60](#), contains the following
 - Transport roll assembly, [PL 80.60 Item 7](#). Driven by TTM takeaway motor assembly, [PL 80.45 Item 3](#).
 - Transport roll, [PL 80.60 Item 8](#). Driven by TTM takeaway motor assembly, [PL 80.45 Item 3](#).

Bypass tray. Refer to [Figure 1](#) or [Figure 2](#).

- Bypass tray takeaway roll, driven by takeaway motor 1, [PL 80.95 Item 5](#).
Refer to [BSD 80.3 Tray 1 and Bypass Tray Paper Transport](#)

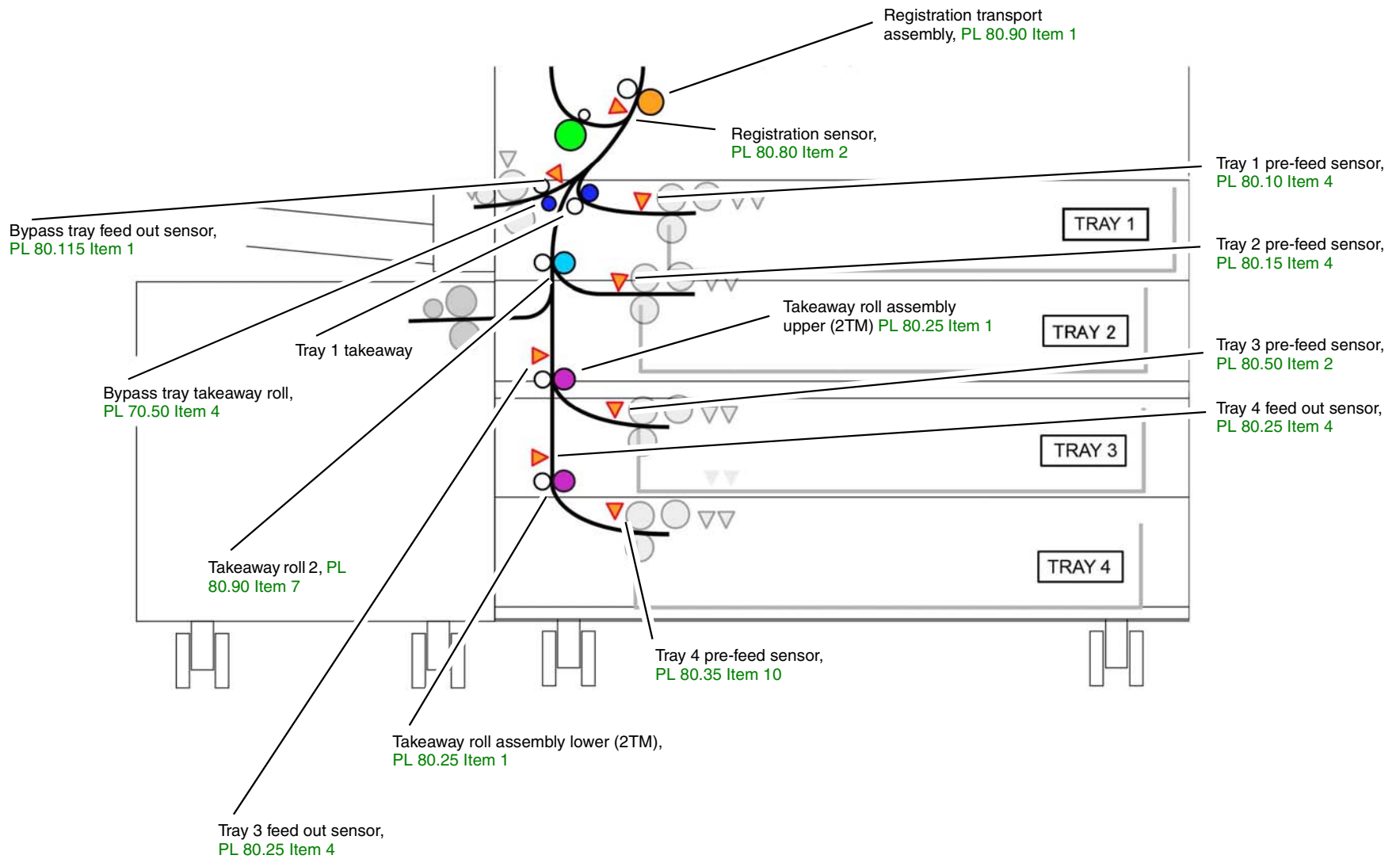
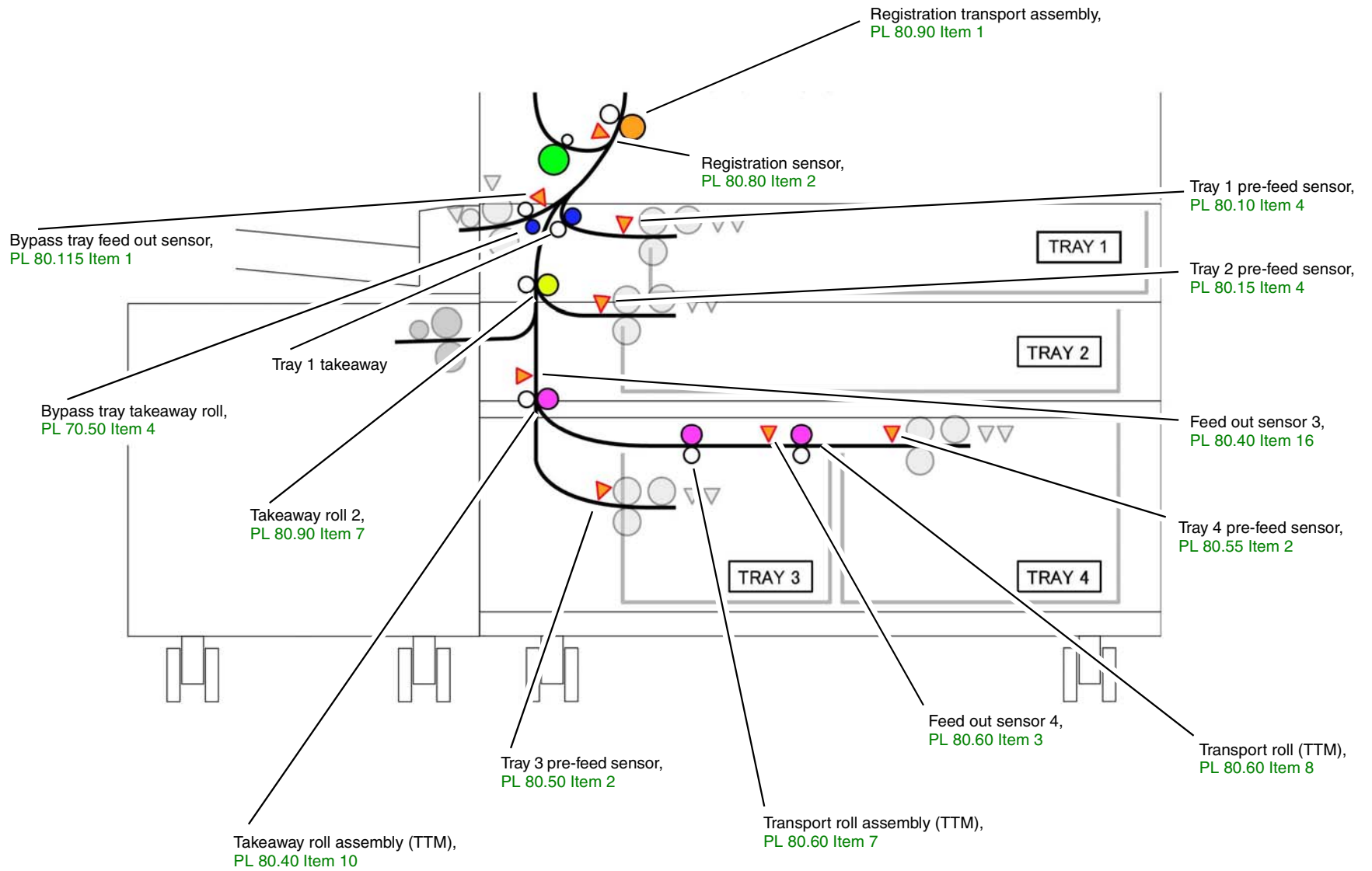


Figure 1 Paper path from 2TM configuration

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TF-5-0156-A

Figure 2 Paper path from TTM configuration

Paper Transport to Registration Transport Assembly

Refer to [Paper Supply](#) for details of paper tray operation. Refer to [Figure 1](#) and [Figure 2](#).

- Paper from tray 1:
 1. triggers the tray 1 pre feed sensor, [PL 80.10 Item 4](#), dC330 code 071-105
 2. passes through the tray 1 takeaway roll
 3. triggers the registration sensor, [PL 80.80 Item 2](#), dC330 code 077-103
 4. passes into the [Registration Transport Assembly](#), [PL 80.90 Item 1](#)
- Paper from tray 2:
 1. triggers the tray 2 pre feed sensor, [PL 80.15 Item 4](#), dc330 code 072-105
 2. passes through takeaway roll 2, [PL 80.90 Item 7](#)
 3. passes through the bypass tray takeaway roll, [PL 70.50 Item 4](#)
 4. triggers the registration sensor, [PL 80.80 Item 2](#), dC330 code 077-103
 5. passes into the [Registration Transport Assembly](#), [PL 80.90 Item 1](#)
- Paper from 2TM tray 3:
 1. triggers the tray 3 pre feed sensor, [PL 80.35 Item 10](#), dC330 code 073-105
 2. passes through the 2TM upper takeaway roll, [PL 80.25 Item 1](#)
 3. triggers tray 3 feed out sensor 3, [PL 80.25 Item 4](#), dC330 code 073-103
 4. passes through takeaway roll 2, [PL 80.90 Item 7](#)
 5. passes through the bypass tray takeaway roll, [PL 70.50 Item 4](#)
 6. triggers the registration sensor, [PL 80.80 Item 2](#), dC330 code 077-103
 7. passes into the [Registration Transport Assembly](#), [PL 80.90 Item 1](#)
- Paper from 2TM tray 4:
 1. triggers the tray 4 prefeed sensor, [PL 80.35 Item 10](#), dC330 code 074-105
 2. passes through 2TM lower takeaway roll, [PL 80.25 Item 1](#)
 3. triggers tray 4 feed out sensor, [PL 80.25 Item 4](#)
 4. passes through 2TM upper takeaway roll, [PL 80.25 Item 1](#)
 5. triggers tray 3 feed out sensor, [PL 80.25 Item 4](#), dC330 code 073-103
 6. passes through takeaway roll 2, [PL 80.90 Item 7](#)
 7. passes through the bypass tray takeaway roll, [PL 70.50 Item 4](#)
 8. triggers the registration sensor, [PL 80.80 Item 2](#), dC330 code 077-103
 9. passes into the [Registration Transport Assembly](#), [PL 80.90 Item 1](#)
- Paper from TTM tray 3:
 1. triggers tray 3 pre-feed sensor, [PL 80.50 Item 2](#)
 2. passes through the TTM takeaway roll assembly, [PL 80.40 Item 10](#)
 3. triggers feed out sensor 3, [PL 80.40 Item 16](#), dC330 code 073-103
 4. passes through takeaway roll 2, [PL 80.90 Item 7](#)
 5. passes through the bypass tray takeaway roll, [PL 70.50 Item 4](#)
 6. triggers the registration sensor, [PL 80.80 Item 2](#), dC330 code 077-103
 7. passes into the [Registration Transport Assembly](#), [PL 80.90 Item 1](#)
- Paper from TTM tray 4:
 1. triggers tray 4 pre-feed sensor, [PL 80.55 Item 2](#), dC330 code 074-105
 2. passes through TTM transport roll, [PL 80.60 Item 8](#)
 3. triggers feed out sensor 4, [PL 80.60 Item 3](#), dC330 code 074-103
 4. passes through TTM transport roll assembly, [PL 80.60 Item 7](#)
 5. passes through the TTM takeaway roll assembly, [PL 80.40 Item 10](#)
 6. triggers feed out sensor 3, [PL 80.40 Item 16](#), dC330 code 073-103
 7. passes through takeaway roll 2, [PL 80.90 Item 7](#)
 8. passes through the bypass tray takeaway roll, [PL 70.50 Item 4](#)
 9. triggers the registration sensor, [PL 80.80 Item 2](#), dC330 code 077-103
 10. passes into the [Registration Transport Assembly](#), [PL 80.90 Item 1](#)
- Paper from the bypass tray:
 1. passes through the bypass tray takeaway roll, [PL 70.50 Item 4](#)
 2. triggers the bypass tray feed out sensor, [PL 80.115 Item 1](#), dC330 code 077-104
 3. triggers the registration sensor, [PL 80.80 Item 2](#), dC330 code 077-103
 4. passes into the [Registration Transport Assembly](#), [PL 80.90 Item 1](#)

Refer to:

- [BSD 80.3 Tray 1 and Bypass Tray Paper Transport](#)
- [BSD 80.4 Tray 2 Paper Transport](#)
- [BSD 80.5 2TM Paper Transport](#)
- [BSD 80.6 TTM Paper Transport](#)

Registration Transport Assembly

The registration roll is driven by the registration motor, [PL 80.95 Item 4](#). As the registration roll receives the paper fed from the paper trays a buckle is formed in each sheet as it reaches the registration nip to remove any skew. At this point there is a small delay for sheet scheduling. After this time has expired the registration roll is run to transport the sheet to the [Intermediate Belt Transfer \(IBT\) Unit](#).

The registration motor is controlled by the [Motor Drive PWB](#) with an encoder signal monitored by the motor drive PWB.

The registration sensor is monitored by the [Motor Drive PWB](#). When paper is sensed the 5VDC signal from the sensor goes LOW generating code 077-103.

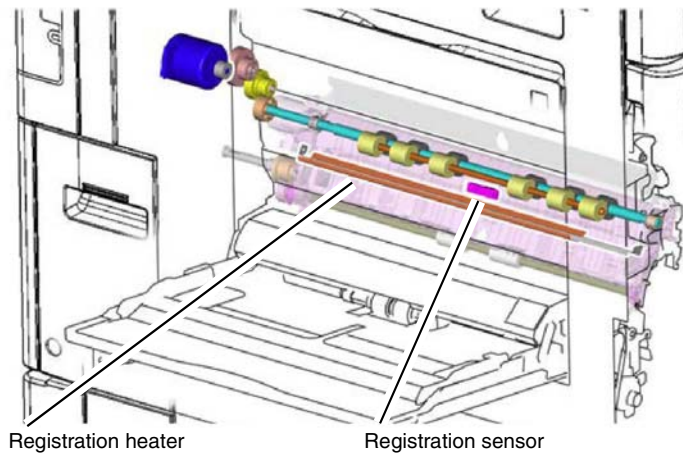
Registration Heater

The purpose of the registration heater is to prevent dew condensation inside the printer. ON/OFF control of the registration heater is determined by temperature and humidity values from [Temperature/Humidity \(No.2, Internal\) Sensor](#).

The registration heater is designed for use in environments with wide variations in temperature and humidity.

- NVM 741-335 activates the registration heater control based on the temperature inside the printer. Default value 0 = activation disabled. 1 = activation enabled.
- The registration heater starts working when temperature from [Temperature/Humidity \(No.2, Internal\) Sensor](#) is lower than threshold value and stops working when temperature from the internal sensor rises beyond the threshold value.

Refer to [Figure 3](#) and [BSD 80.9 Registration](#).



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Figure 3 Registration transport

Duplex Transport

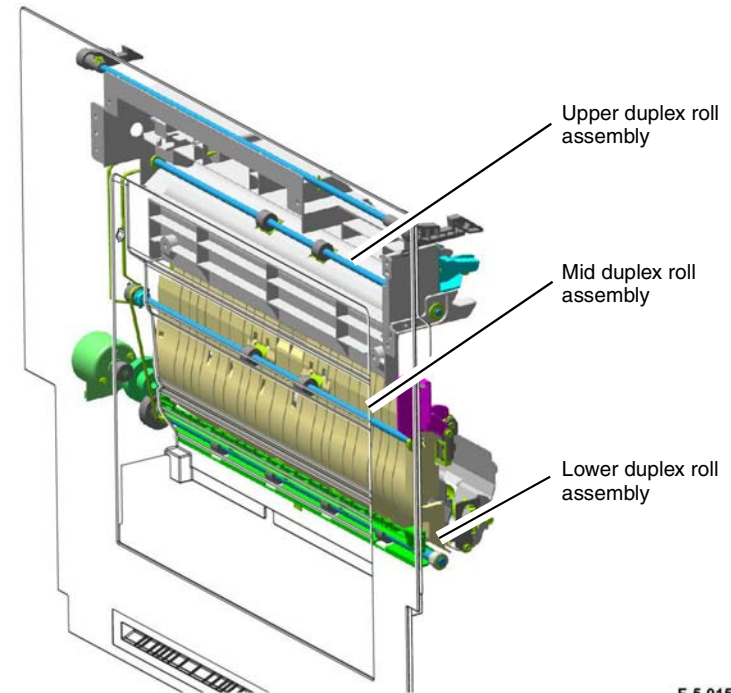
The duplex paper path reverses the direction of travel, enabling side 2 printing. The duplex rolls are driven by the duplex motor, [PL 80.75 Item 10](#). The duplex motor is controlled by the [Motor Drive PWB](#) with an encoder signal monitored by the motor drive PWB.

The duplex transport fans are controlled by the [Motor Drive PWB](#).

Duplex rolls

- Upper duplex roll assembly, [PL 80.55 Item 9](#).
- Mid duplex roll assembly, [PL 80.75 Item 22](#).
- Lower duplex roll assembly, [PL 80.75 Item 23](#).

Refer to [Figure 4](#) and [BSD 10.8 Duplex Paper Transport](#).



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Figure 4 Duplex transport assembly

High Capacity Feeder: Paper Feed

1. The HCF feed/lift motor, [PL 80.100 Item 23](#), switches on in a clockwise direction, rotating the nudger roll and feed rolls.
2. The top sheet feeds into the nip of the feed roll, [PL 80.105 Item 22](#), and retard roll, [PL 80.110 Item 1](#), actuating the HCF pre feed sensor, [PL 80.105 Item 19](#); this turns on the takeaway motor, [PL 70.95 Item 7](#).
3. Paper continues to advance, actuating the HCF feed out sensor, PL.
4. The takeaway motor, [PL 70.95 Item 7](#), rotates the takeaway rolls, [PL 70.90 Item 18](#), transporting the sheet to the takeaway rolls in the IOT's takeaway (vertical) transport.
5. When the trail edge of the paper clears the HCF feed out sensor, [PL 70.90 Item 25](#), a timed interval begins after which the takeaway motor switches off.
6. As paper continues to feed from the paper stack, the HCF level sensor, [PL 80.105 Item 19](#), will de actuate, causing a lift cycle. The HCF lift/feed motor will switch off to stop feeding, then begin rotating counter clockwise to lift the paper stack, causing the feed cycle to begin again.

Refer to [Figure 5](#).

- [BSD 70.17 HCF Paper Stacking](#)
- [BSD 80.7 HCF Paper Feeding](#)
- [BSD 80.8 HCF Paper Transportation](#)

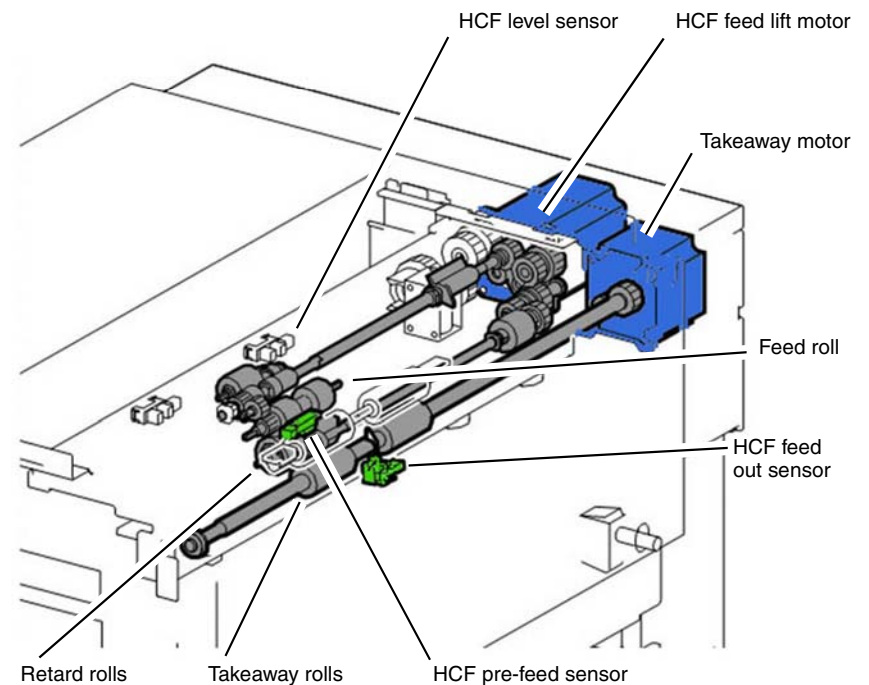


Figure 5 HCF paper feed

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Xerographics

Xerographics Overview

The Xerox® VersaLink® C8000 and C9000 printer employ a four-color, intermediate belt transfer printer engine which utilizes the xerographic process described below:

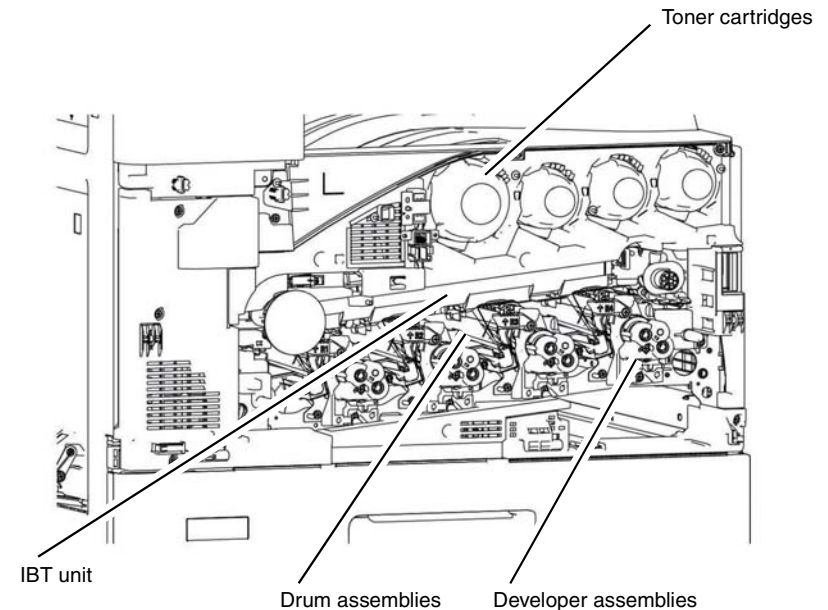
1. **Charge:** A negative charge is uniformly distributed over the surface of each of the four photoreceptor drums by a dedicated bias charge roll (BCR). The BCR is a part of the drum assembly, PL 90.15. Refer to LED Print Head (LPH).
2. **Expose:** Each color-specific LED Print Head (LPH), PL 60.05, creates a latent image on the Photoreceptor Drum Assembly for the specific color by exposing it with light emitted from a semiconductor LED.
3. **Develop:** Toner is transported from the color-specific Toner Cartridges, PL 90.10, via the dispenser, to the corresponding Developer Units, PL 90.05, then via a magnetic developer roll onto the Photoreceptor Drum Assembly, PL 90.15. The toner particles are attracted to the latent image formed on the photoreceptor drum by the exposure process.
4. **Transfer:** The 1st Bias Transfer roll (1st BTR), one for each color, transfers the toner image from each photoreceptor drum to the Intermediate Belt Transfer (IBT) Unit to build up the color image. The 2nd Bias Transfer (2nd BTR) then transfers the image from the IBT assembly to the surface of the paper. The four 1st bias transfer rollers are within the IBT assembly, PL 90.30 Item 1. The 2nd bias transfer roller is within the left cover transport, PL 80.70 Item 5.
5. **Clean:** Waste toner is removed from the surface of each Photoreceptor Drum Assembly and the Intermediate Belt Transfer (IBT) Unit by independent cleaning mechanisms, then transported to a waste toner bottle for periodic emptying, PL 90.15 Item 1. Refer to Drum Cartridge and Transfer Belt Cleaning.

NOTE: The print engine employs the “Write Black” xerography principle; when developing the image, the discharged areas of the photoreceptor drum attract toner.

The print engine uses the following components in the xerographic process.

- Toner Cartridge (customer replaceable unit), PL 90.10. Refer to Toner Cartridges for details
- Toner dispenser assembly, PL 90.10. Refer to Toner Dispenser Assemblies for details
- LED Print Head (LPH) PL 60.05. Refer to LED Print Head (LPH) for details
- Developer unit, PL 90.05. Refer to Developer Units for details
- Drum cartridge (customer replaceable unit), PL 90.15. Refer to Photoreceptor Drum Assembly for details
- Intermediate belt transfer unit (IBT) containing the transfer belt and 1st BTR, PL 90.30. Refer to Intermediate Belt Transfer (IBT) Unit and 1st Bias Transfer for details.
- 2nd BTR (customer replaceable unit), PL 80.70 Item 5. Refer to 2nd Bias Transfer for details.
- Bias Charge Roll HVPS PWB, PL 1.20 Item 4.
- Bias Transfer Roll HVPS PWB, PL 1.05 Item 1.

Figure 1 shows the main xerographic components as viewed from the front of the machine, with the waste toner bottle removed.



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Figure 1 Main xerographic components

Toner Cartridges

The toner cartridges, [PL 25.05](#) are customer replaceable units (CRU). The larger black toner cartridge carries a higher capacity of toner than the yellow, cyan and magenta cartridges due to the expected higher use of black toner.

Refer to [BSD 90.8 Toner Dispense Control](#)

Toner Cartridge Life Control

The toner cartridge does not include a toner empty sensor. Toner level is monitored by a combination of feedback from the automatic toner control (ATC) sensor, [PL 90.05 Item 14](#), and pixel counting. The machine monitors toner level and informs the user when it reaches these states:

- Pre-Near End-of-Life: the toner cartridge is approximately 25% full.
- Near End-of-Life: the dispense motor is on but the ATC sensor detects no increase in toner in the drum cartridge.
- End-of-Life: the ATC sensor detects no toner in the drum cartridge. The machine hard stops at this point. The ATC sensors are within the [Developer Units](#).
- [BSD 90.5 Toner Cartridge Life Control \(Y, M\)](#)
- [BSD 90.6 Toner Cartridge Life Control \(C, K\)](#)

NOTE: *The toner cartridge is a CRU and is not serviceable.*

Toner Cartridge CRUM

The toner cartridges are each equipped with customer replaceable unit monitor (CRUM). The CRUM monitors and stores information about the customer replaceable unit (CRU). The information stored in the CRUM is used to:

- Monitor CRU usage (total number of copies/prints).
- Indicate how near the CRU is to the end of its life.
- Prevent the installation and use of an unauthorized or incorrect CRU (CRUM checks for Xerox trademark on the CRU).
- Indicate that a new CRU has been installed.
- [BSD 90.5 Toner Cartridge Life Control \(Y, M\)](#)
- [BSD 90.6 Toner Cartridge Life Control \(C, K\)](#)

The CRUM consists of two components - a CRUM reader and a CRUM PWB. The CRUM PWB is mounted at the rear of the toner cartridge.

Toner Dispenser Assemblies

Each toner cartridge is installed in a toner dispenser, [PL 90.10](#). Toner is transported from the toner cartridge to each developer. The four dispensers are driven by the dispense motor assembly, [PL 90.10 Item 1](#). There is one dispense motor for each color within the toner dispense motor assembly. The toner dispense motors are controlled by the [Motor Drive PWB](#).

Refer to [BSD 90.8 Toner Dispense Control](#)

LED Print Head (LPH)

Exposure of the image on the drums is achieved using a dedicated LED print head (LPH), one for each color, C, M, Y and K, [PL 60.05](#).

The LED printheads are controlled by the [Controller \(ESS\) PWB](#) via the [Back Plane PWB](#) and the [Halftone PWB](#).

The LEDs are switched on and off based on the image density data from the [Controller \(ESS\) PWB](#). Light from the LED is directed onto the surface of the photoreceptor. The regions of the photoreceptor that are exposed by the LED become discharged, forming the electrostatic latent image that attracts the toner.

Refer to:

- [BSD 60.1 LPH Y and M](#)
- [BSD 60.2 LPH C and K](#)

Developer Units

The four developer units, [PL 90.05](#), are engineer replaceable units (ERU). The machine will stop operation when developer unit end of life is reached and will generate a fault code. Refer to the HFSI data in [dC135](#) for developer unit life span.

Toner is supplied from each of the toner cartridges to the corresponding photoreceptor drum by the [Toner Dispenser Assemblies](#), the augers and developer rolls. The rotation of the augers mixes the toner and carrier beads which make up the developer mixture. The mixing process produces an electrostatic charge on the toner.

Each developer roll has a magnetic core which causes a brush composed of developer mixture to form at its surface similar to the way iron filings stand up on the surface of a magnet. The height of the brush is controlled by the trimmer blade. The developer brush contacts the photoreceptor drum and the toner is attracted from the brush to the latent image formed by exposure to the LPH, that is, to the areas that have a reduced charge. The carrier material and any excess toner not attracted to the drum falls back into the developer reservoir where it is mixed back into the developer mixture by the continued movement of the augers.

Toner concentration, the amount of toner to carrier material in the developer mixture, is controlled by an automatic toner control system. The automatic toner control (ATC) sensor on each developer, [PL 90.05 Item 14](#), feeds data back to the [Motor Drive PWB](#). As toner is used up in the printing process the developer level rises and more toner is added from the toner cartridge until the ATC sensor detects the designated toner concentration.

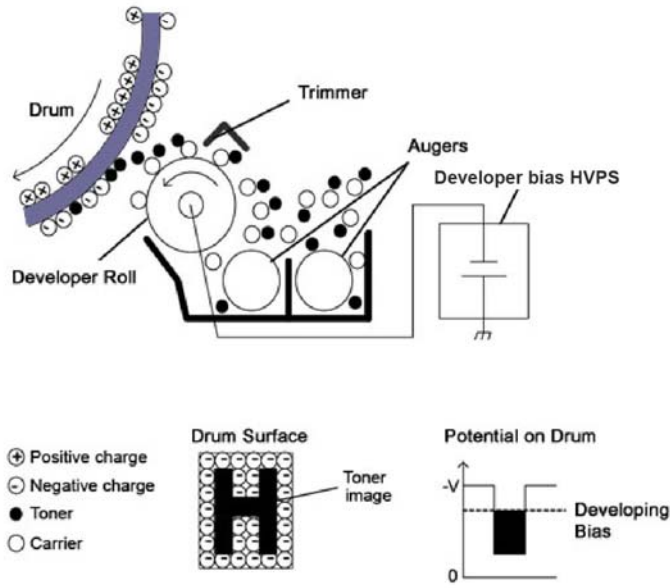
The ATC system allows for calculation of toner usage to calculate the remaining toner level. This is described in the [Toner Cartridges](#) section.

A developer bias voltage that is applied to the developer roll controls the development process and thereby controls the amount of toner applied to the drum. The developer bias voltage is modified based on the user's selections on the UI. Darker images require a greater amount of charge to be applied than lighter images. The high voltages required by each developer unit to energize the developer rolls are provided by the [Developer Bias HVPS PWB](#).

The mechanical drive for each of the four developer units is provided by the [Main Drive Assembly](#).

Refer to [Figure 2](#).

- [BSD 90.1 K Drum/Developer and IBT Drive Control](#)
- [BSD 90.2 YMC Drum and Developer Drive Control](#)
- [BSD 90.13 Development Y](#)
- [BSD 90.14 Development M](#)
- [BSD 90.15 Development C](#)
- [BSD 90.16 Development K](#)



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Figure 2 Developer operation

Photoreceptor Drum Assembly

The C8000/C9000 contains four drums, one for each color K,C,M and Y. [PL 90.15](#). The drums are customer replaceable units, (CRU). The machine will stop operation when end of life is reached and generate a fault code. A message on the UI will inform the customer to replace the cartridge. Refer to the HFSI data in [dC135](#) for drum assembly life span.

Each of the four drum cartridges contains the following components:

- Photoreceptor drum
- Bias charge roll (BCR)
- Drum cartridge CRUM
- Waste toner auger

Refer to:

- [BSD 90.1 K Drum/Developer and IBT Drive Control](#)
- [BSD 90.2 YMC Drum and Developer Drive Control](#)
- [BSD 90.3 Drum Life Control \(Y, M\)](#)
- [BSD 90.4 Drum Life Control \(C, K\)](#)

Bias Charge Roll

Within each of the four drum cartridges a bias charge roll (BCR) is in constant contact with and rotates with the photoreceptor drum. It applies a uniform DC voltage charge superimposed with AC voltage on the surface of the photoreceptor, preparing it to be exposed by the LED print head (LPH).

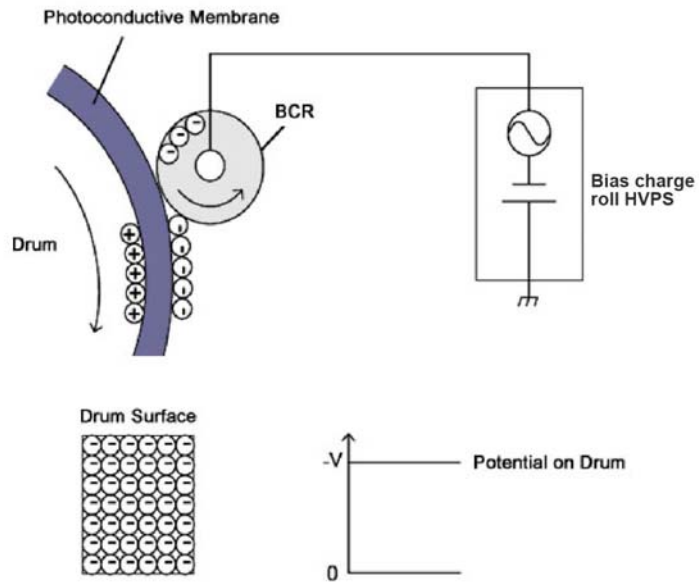
The surface of the drum is a light-sensitive, dispersion undercoat (DUC) membrane. After the photoreceptor's surface receives a uniform charge from the bias charge roller, the LPH exposes (discharges) the image areas.

Drum Cartridge (Power)

The high voltages required by the drum cartridge for charging are provided by the [Bias Charge Roll HVPS PWB](#).

Refer to [Figure 3](#).

- [BSD 90.9 Charging and Exposure Y](#)
- [BSD 90.10 Charging and Exposure M](#)
- [BSD 90.11 Charging and Exposure C](#)
- [BSD 90.12 Charging and Exposure K](#)



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Figure 3 Photoreceptor drum charging

Drum Cartridge (Drive)

The mechanical drives for the drums are driven by two motors.

- Drum assembly K, [PL 90.15 Item 2](#) - driven by drum/developer (K)/IBT motor, [PL 40.05 Item 14](#).
- Cyan, magenta and yellow drums.
 - Drum assembly C, [PL 90.15 Item 3](#) - driven by drum/developer (C,M,Y) motor [PL 40.05 Item 13](#).
 - Drum assembly M, [PL 90.15 Item 4](#) - driven by drum/developer (C,M,Y) motor [PL 40.05 Item 13](#).
 - Drum assembly Y, [PL 90.15 Item 5](#) - driven by drum/developer (C,M,Y) motor [PL 40.05 Item 13](#).

The drum waste toner auger is driven by the same motor as the drum via a separate gear and coupling.

Refer to [Main Drive Paths](#).

- [BSD 90.1 K Drum/Developer and IBT Drive Control](#)
- [BSD 90.2 YMC Drum and Developer Drive Control](#)

Drum Cartridge CRUM

NOTE: The drum cartridge is a CRU and is not serviceable.

The drum cartridge is equipped with customer replaceable unit monitor (CRUM). A CRUM monitors and stores information about the customer replaceable unit (CRU). The information stored in the CRUM is used to:

- Monitor CRU usage (total number of copies/prints)
- Indicate how near the CRU is to the end of its life.
- Prevent the installation and use of an unauthorized or incorrect CRU (CRUM checks for Xerox trademark on the CRU)
- Indicate that a new CRU has been installed

The CRUM consists of two components - a CRUM reader and a CRUM PWB. The CRUM PWB is mounted at the rear of the drum cartridge.

Refer to:

- [BSD 90.3 Drum Life Control \(Y, M\)](#)
- [BSD 90.4 Drum Life Control \(C, K\)](#)

Intermediate Belt Transfer (IBT) Unit

The Intermediate Belt Transfer (IBT) unit is an engineer replaceable unit (ERU). The IBT unit contains the transfer belt and four **1st Bias Transfer Rolls (1st BTR)** to facilitate the first image transfer from all four photoreceptor drums. Refer to the HFSI data in **dC135** for IBT unit life span.

The four colors of toner are transferred to the belt in four layers in the order Y, M, C and K. the belt then transfers the four colors of toner to the paper at **2nd Bias Transfer** before the paper is transported to the fusing module (see **Fuser Overview**).

First bias transfer (**1st Bias Transfer**) refers to the process of transfer to the belt. Second bias transfer (**2nd Bias Transfer**) refers to transfer from the belt to the paper. Therefore there is one 1st BTR for each color. The transfer to the paper is performed by the 2nd bias transfer roll.

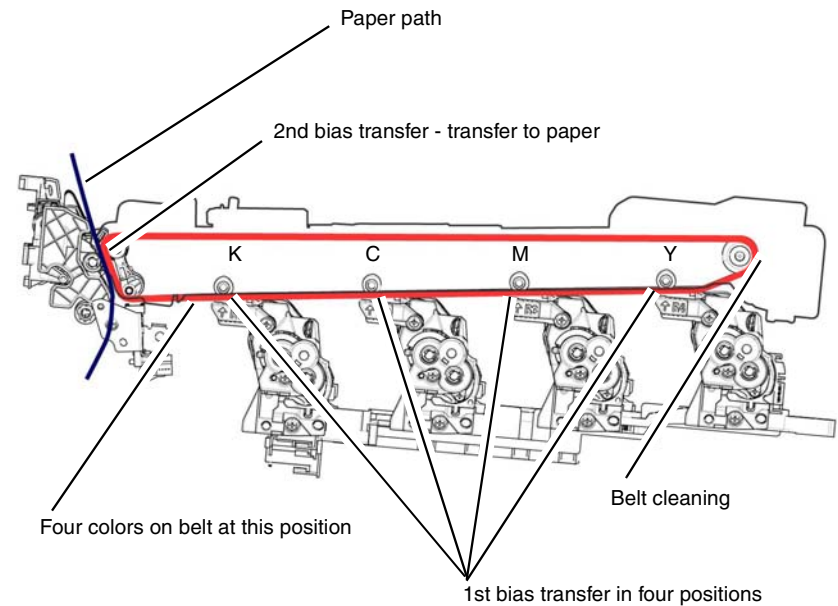
In the case of 1st bias transfer the bias transfer roller carries a charge that has a greater electrostatic attraction than the charge that is holding the image on the drum. This means that the toner particles are drawn away from the drum to the belt as the belt passes between the BTR and the drum.

The 1st bias transfer process continues for each of the four colors until the four toner colors are on the belt together. The process is then repeated, at 2nd bias transfer, to transfer the image from the belt to the paper.

The belt is then cleaned before repeating the cycle. Refer to **Drum Cartridge and Transfer Belt Cleaning**.

Mechanical drive for the IBT units is provided by the drum/developer (K)/IBT motor, **PL 40.05 Item 14** via the drum drive housing assembly **PL 40.05 Item 9**.

Refer to **Figure 4**.



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Figure 4 Image transfer process

Transfer

1st Bias Transfer

The toner image is transferred first from the [Photoreceptor Drum Assembly](#) to the surface of the IBT belt by the 1st bias transfer roll (1st BTR). The 1st BTR is constructed of a metal shaft surrounded by a soft, conductive urethane roll which is given a positive charge. Power for the charge on the 1st BTR is supplied by the [Bias Transfer Roll HVPS PWB](#). As the photoreceptor and BTR rotate together, the positive charge of the BTR attracts the negative charge of the toner from the photoreceptor drum to the transfer belt. This process is repeated for all four colors to build up the image on the transfer belt. The four 1st bias transfer rolls are part of the IBT belt assembly, [PL 90.30 Item 1](#).

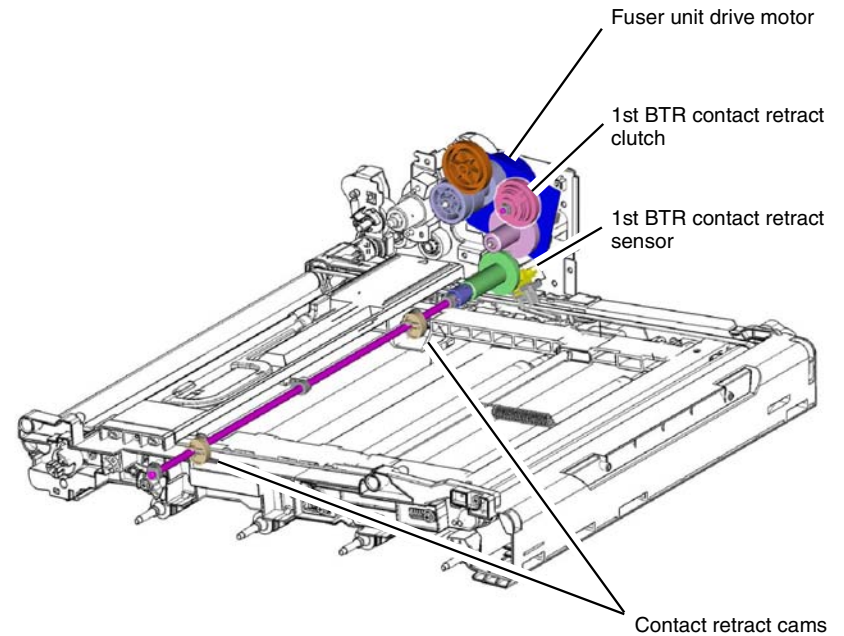
Refer to [BSD 90.18 Image Transfer to IBT](#)

IBT Unit greyscale and full-color mode switching

In order to reduce wear on the cyan, yellow and magenta photoreceptor drums the 1st BTR rollers are retracted from the C, M and Y drums when operating in greyscale modes. The [Motor Drive PWB](#) operates the 1st BTR contact retract clutch, [PL 40.05 Item 20](#). The clutch allows drive from the fuser unit drive motor, [PL 40.05 Item 19](#), to the 1st BTR contact/retract cam which moves the 1st bias transfer roll (C, M, and Y only) away from the belt. The BTR contact/retract sensor, [PL 40.05 Item 11](#), is monitored by the motor drive PWB to monitor the state of the 1st BTR rolls. The sensor monitors one of the 1st bias transfer rolls and implies the state of the other two.

There is a single drive from the fuser unit drive motor with a signal contact retract clutch. Beyond the clutch the drive splits to drive the individual cams for the C, M and Y bias transfer rollers. Refer to [Main Drive Paths](#).

Refer to [Figure 4](#) and [Figure 5](#) and [BSD 90.17 1st BTR Contact/retract](#)



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Figure 5 First BTR contact/retract mechanism

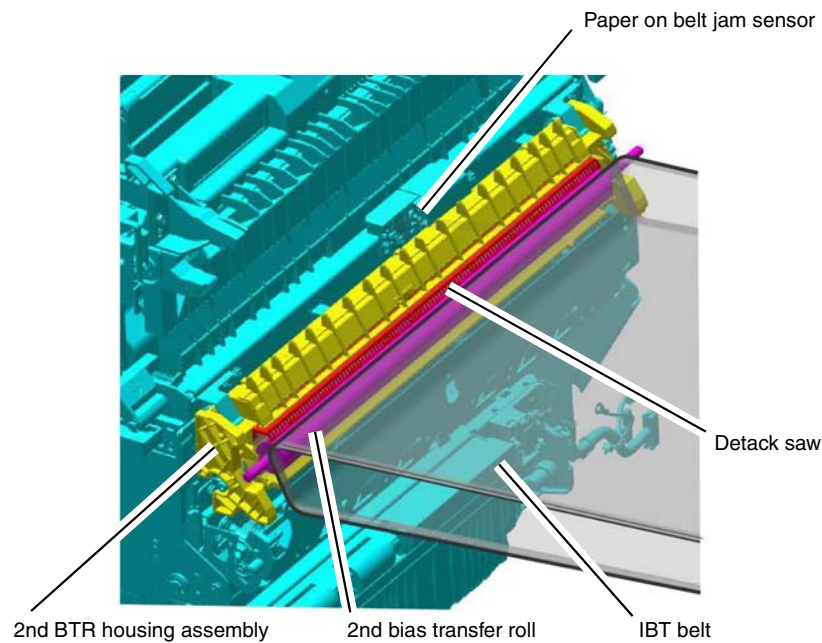
2nd Bias Transfer

The toner image is transferred from the **Intermediate Belt Transfer (IBT) Unit** to the surface of the paper using the 2nd bias transfer roll (2nd BTR), **PL 80.70 Item 5**. The 2nd BTR is constructed of a metal shaft surrounded by a soft, conductive urethane roll which is given a positive charge. Power for the charge is supplied by the **Bias Transfer Roll HVPS PWB**. As the transfer belt and paper pass between the 2nd BTR and the belt the positive charge of the 2nd BTR attracts the negatively charged toner to the paper.

The paper is released from the transfer belt by the detack saw. A voltage is applied to the detack saw to eliminate the charge on the paper and allow it to release from the belt. If the detack saw fails to separate the paper from the belt the **Paper on Belt Jam Sensor** detects the jam.

Figure 6 shows the IBT belt and the 2nd bias transfer roll. The tension roll and other IBT components inside the belt have been removed for clarity.

Refer to **BSD 90.19 Image Transfer to Paper**



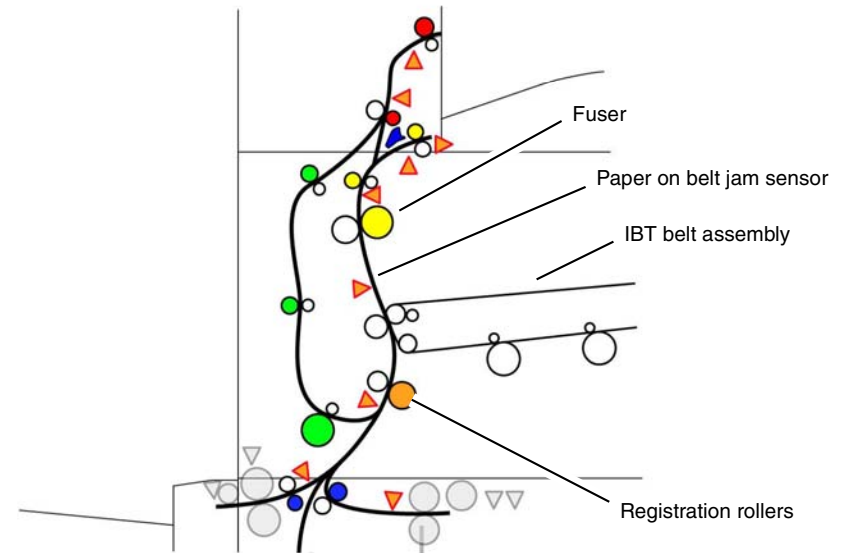
F-5-0126-A

Figure 6 Second transfer

Paper on Belt Jam Sensor

The paper on belt jam sensor, **PL 80.80 Item 9**, detects paper in the path from the **Intermediate Belt Transfer (IBT) Unit** to the fuser (**Fuser Overview**). The sensor is monitored by the **Motor Drive PWB**. When the sensor detects High (3.3VDC) the control logic determines a detack failure. Detack failure indicates that the paper has left the paper path and is jammed on the IBT unit. The IBT unit is stopped and code 077-110 is logged.

Refer to **Figure 7** and **BSD 90.19 Image Transfer to Paper**.



F-5-0192-A

Figure 7 Paper on belt jam sensor

Drum Cartridge and Transfer Belt Cleaning

As each of the four photoreceptor drums rotate ([Photoreceptor Drum Assembly](#)) their surfaces are cleaned by the cleaning blade. A waste toner auger within the drum cartridge carries the waste toner and developer particles away from the cleaning blade to the waste toner transport assembly, [PL 90.15 Item 1](#). The waste toner transport assembly transports the waste to the waste toner bottle assembly, [PL 90.15 Item 6](#). The waste toner bottle assembly contains an auger to carry the waste toner away from the point where it enters from the waste toner transport assembly.

The [Intermediate Belt Transfer \(IBT\) Unit](#) is cleaned by the IBT belt cleaner assembly, [PL 90.30 Item 2](#). Waste toner is transported by an auger to the front of the IBT belt cleaner assembly into the waste toner transport assembly, [PL 90.15 Item 1](#). The waste toner from the belt joins the waste from the drums and is transported into the waste toner bottle assembly, [PL 90.15 Item 6](#).

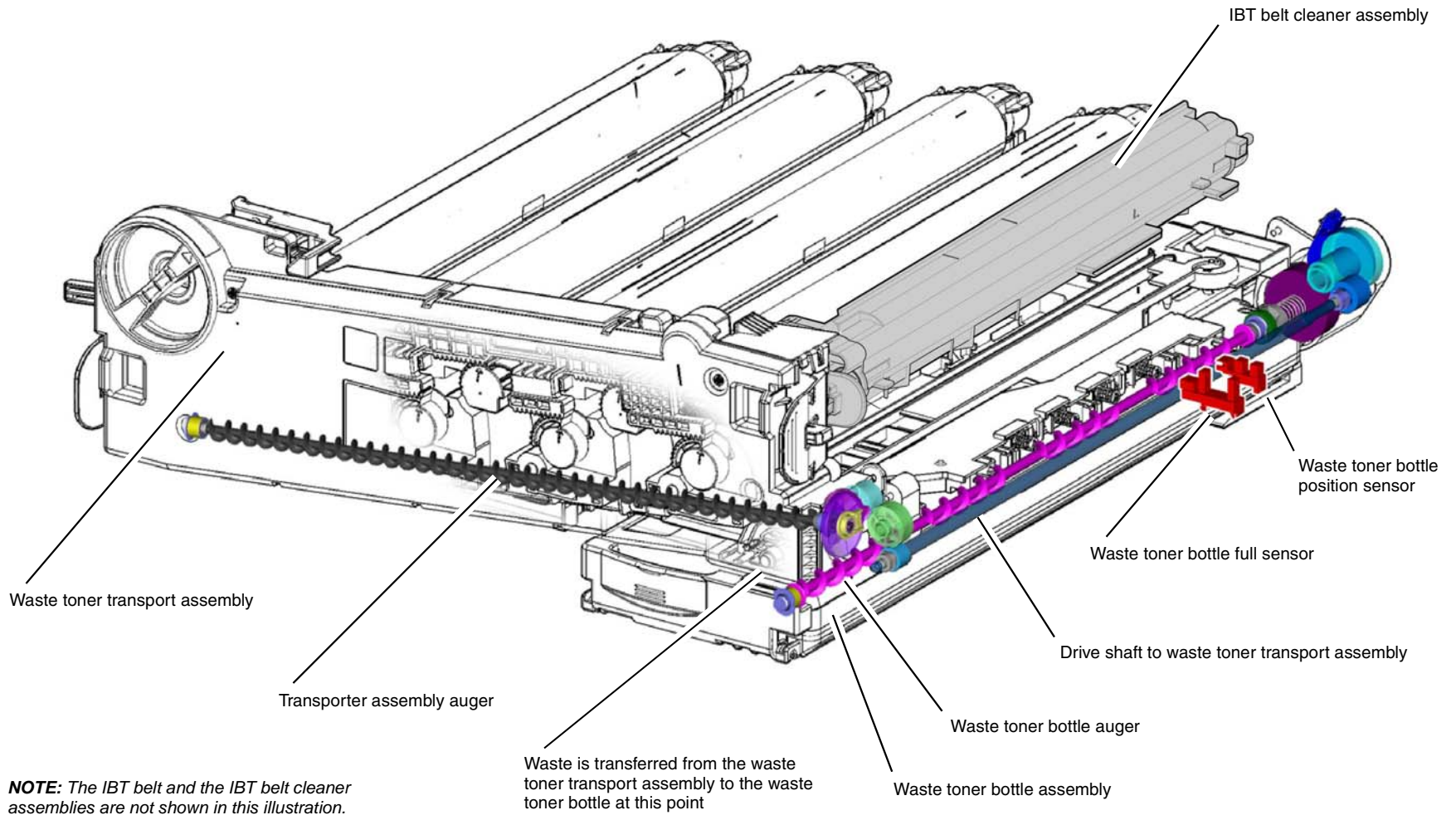
Drives. (See also [Main Drives](#).)

- The drum cartridge augers are driven by the drum/developer motors, [PL 40.05 Item 13](#), and [PL 40.05 Item 14](#).
- The auger within the waste toner bottle assembly is driven by the agitator motor assembly, [PL 90.20 Item 9](#).
- The waste toner transport assembly, [PL 90.15 Item 1](#), is driven by a drive from the agitator motor assembly, [PL 90.20 Item 1](#) and [PL 90.20 Item 2](#).
- The IBT cleaning assembly, [PL 90.30 Item 2](#), is driven by a drive from the waste toner transport assembly, [PL 90.15 Item 1](#).

Sensors

- Waste toner bottle full sensor, [PL 90.20 Item 6](#). This sensor detects the fill level of the waste toner bottle in three levels, full, near full and pre near full.
- Waste toner bottle position sensor, [PL 90.20 Item 7](#). This sensor detects that the waste toner bottle is in position.
- The waste toner bottle sensors are monitored by the [Motor Drive PWB](#).

Refer to [Figure 8](#) and [BSD 90.20 Waste Toner Disposal](#).



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Figure 8 Drum and IBT cleaning

Process Control

Overview

Process control maintains image quality by compensating for changes in temperature and humidity and the aging of machine components. In part, this involves controlling the charge potential of the **Bias Charge Roll** and the light output from the **LED Print Head (LPH)**. Image quality deterioration also occurs as the photoconductive layer on the **Photoreceptor Drum Assembly** wears with increased use.

Process control uses inputs from the:

- CRUMs
- Environment sensors (refer to [Temperature and Humidity Detection](#)).
- Automatic toner control (ATC) sensor, [PL 90.05 Item 14](#), one each for K, C, M, Y (refer to [Developer Units](#)).
- Marks on belt (MOB) sensor, [PL 90.30 Item 10](#), [PL 90.30 Item 12](#).
- Automatic density control (ADC) sensor, [PL 90.30 Item 11](#).

The internal temperature/humidity sensor, [PL 90.30 Item 9](#), monitors the environmental conditions inside the machine.

Automatic Toner Control Sensors

The ATC sensors, [PL 90.05 Item 14](#) (one within each of the [Developer Units](#)), monitor the toner concentration inside the developer. The ATC system is described in the developer units section and hereafter in [Automatic Toner Control \(ATC\) Sensor Check](#).

Refer to:

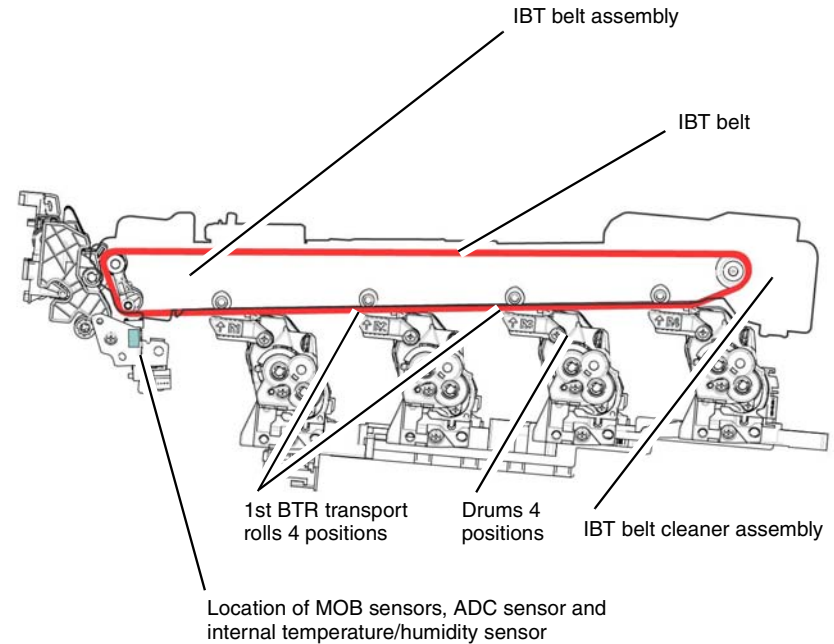
- [BSD 90.13 Development Y](#)
- [BSD 90.14 Development M](#)
- [BSD 90.15 Development C](#)
- [BSD 90.16 Development K](#)

NOTE: *BSDs 90.13/14/15/16 make reference to the toner density sensor circuit. This is part of the automatic toner control system within the developer unit. This should not be confused with the automatic density control sensors that monitor toner concentration on the transfer belt.*

MOB and ADC sensors

The MOB and ADC sensors monitor the toner concentration on the transfer belt. The sensors are mounted in a row across the belt in a position after the fourth color has been added and before the toner is transferred to the paper, [PL 90.30 Item 8](#) and [Figure 9](#). The MOB and ADC sensors are monitored by the [Motor Drive PWB](#) which feeds data to the [Half-tone PWB](#). Refer to [Automatic Density Control](#).

Refer to [Figure 9](#) and [BSD 60.3 Color Registration](#)



F-5-0128-A

Figure 9 MOB and ADC sensors.

Process control uses the information from the [Automatic Toner Control Sensors](#) and the [MOB and ADC sensors](#) to:

- Alter the voltage of the **Bias Charge Roll** as required
- Alter the **LED Print Head (LPH)** light intensity
- Control the toner dispense rate, see [Toner Dispenser Assemblies](#).

Process Control Sensor Checks

Environmental Sensor Check

When the power is ON, the temperature and humidity sensor values are continuously monitored to measure the temperature and humidity in the machine. The sensors are mounted on the same bracket as the MOB and ADC sensors, [PL 90.30 Item 8](#).

Refer to [BSD 10.5 Fusing](#) and [BSD 60.4 Temperature and Humidity Sensing](#).

Automatic Toner Control (ATC) Sensor Check

Each of the four ATC sensors ([PL 90.05 Item 14](#)) check the toner concentration while the developer roll is being driven ([Developer Units](#)). The method is as follows:

- The ATC sensor output is read at predetermined intervals.
- The read values, excluding some of the highest and lowest, are averaged.
- The difference between maximum and minimum values is calculated.
- The average read value is corrected to determine the ATC output value (current toner concentration).

Values derived from the internal temperature and humidity sensor and the cumulative drum rotation time are used to adjust the ATC target value.

Refer to:

- [BSD 90.13 Development Y](#)
- [BSD 90.14 Development M](#)
- [BSD 90.15 Development C](#)
- [BSD 90.16 Development K](#)

NOTE: *BSDs 90.13/14/15/16 make reference to the toner density sensor circuit. This is part of the automatic toner control system within the developer unit. This should not be confused with the automatic density control sensors that monitor toner concentration on the transfer belt.*

Charge Control and Exposure Control

Charge Control

Charge control corrects the charge voltage (the BCR output, [Bias Charge Roll HVPS PWB](#)). Charge control correction factors include temperature and humidity and the cumulative number of drum rotations. These values are added to calculate the charge voltage correction value. Charge control occurs at the following times:

- At power on
- On return from power save mode
- At the start of a print job

Refer to:

- [BSD 90.9 Charging and Exposure Y](#)
- [BSD 90.10 Charging and Exposure M](#)
- [BSD 90.11 Charging and Exposure C](#)
- [BSD 90.12 Charging and Exposure K](#)

Exposure Control

Exposure control corrects the quantity of LED light for image exposure on the [Photoreceptor Drum Assembly](#). Correction factors for temperature and humidity ([Temperature and Humidity Detection](#)), cumulative number of drum rotations, and no-toner state detection are added to calculate the exposure correction value. Exposure control occurs at the following times:

- At power on
- On return from Power Save Mode
- At the start of a print job
- When the print count reaches a predetermined level

Refer to:

- [BSD 60.1 LPH Y and M](#)
- [BSD 60.2 LPH C and K](#)
- [BSD 90.9 Charging and Exposure Y](#)
- [BSD 90.10 Charging and Exposure M](#)
- [BSD 90.11 Charging and Exposure C](#)
- [BSD 90.12 Charging and Exposure K](#)

Fusing

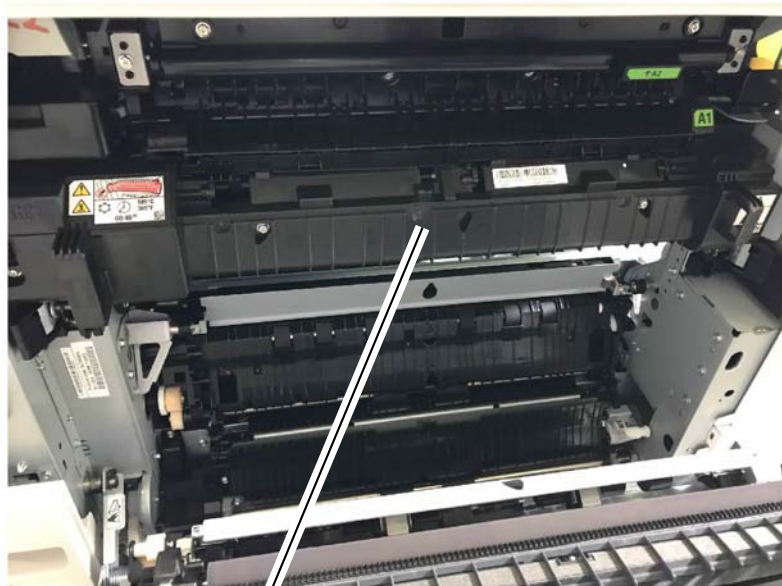
Fuser Overview

The fuser module bonds the toner to the paper by applying heat and pressure. This process melts the toner and fuses it to the paper.

Refer to HFSI data in [dC135](#) for fuser unit life span.

Refer to [Figure 1](#).

- [BSD 10.1 Fusing Unit Drive](#)
- [BSD 10.2 Pressure Roll Latch/Unlatch](#)
- [BSD 10.3 Fusing Heat \(1 of 2\)](#)
- [BSD 10.4 Fusing Heat \(2 of 2\)](#)
- [BSD 10.5 Fusing](#)
- [BSD 10.6 Fuser Detection](#)



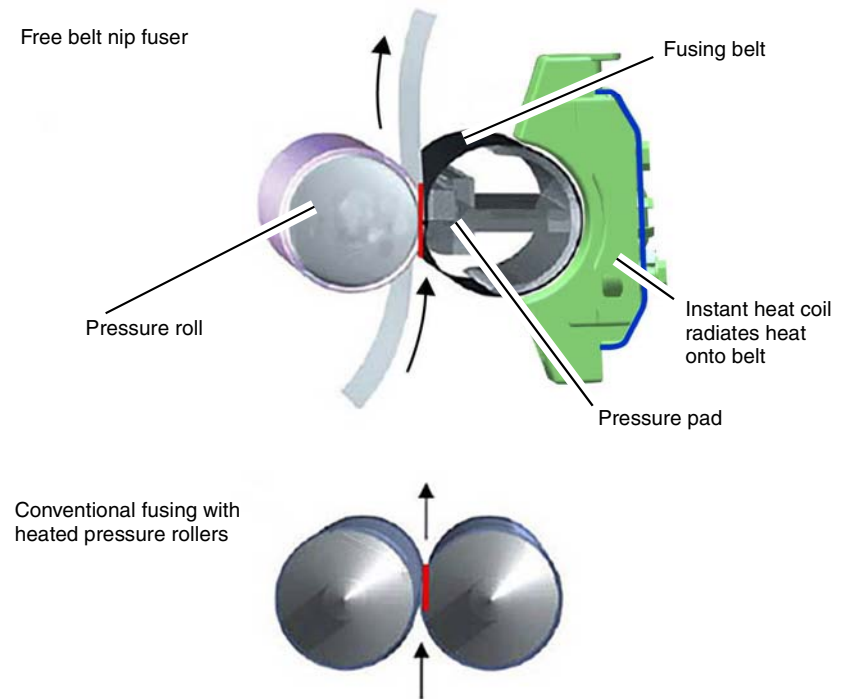
Fuser

F-5-0154-A

Figure 1 Fuser

Fusing works using a free belt nip fusing mechanism consisting of a pressure roll that presses against a heated belt. The belt is held against the pressure roll by a pressure pad inside the belt. The belt is driven by friction applied by the rotation of the pressure roll and the movement of the paper through the fusing nip. The pressure roll is driven by the fuser unit drive motor, [PL 40.05 Item 19](#), (refer also to [Fuser Drive Assembly](#)). A latch mechanism allows for the fusing nip to open for jam clearance when the left cover, [PL 80.70 Item 1](#), is opened. The fuser nip is opened when printing is not in progress to prevent deformation of the pressure roll.

Refer to [Figure 2](#).



F-5-0142-A

Figure 2 Free belt nip fusing

Fuser Components

The fuser module, [PL 10.05 Item 14](#), consists of a pressure roll, a fusing belt, a thermostat and thermistors. An instant heat (IH) coil unit, [PL 10.05 Item 15](#) is installed separately from the fuser. The fuser unit can be used in any territory whereas the IH coil unit is specified for use on either 110V or 220V supplies.

Refer to [Figure 3](#).

- [BSD 10.1 Fusing Unit Drive](#)
- [BSD 10.2 Pressure Roll Latch/Unlatch](#)
- [BSD 10.5 Fusing](#)

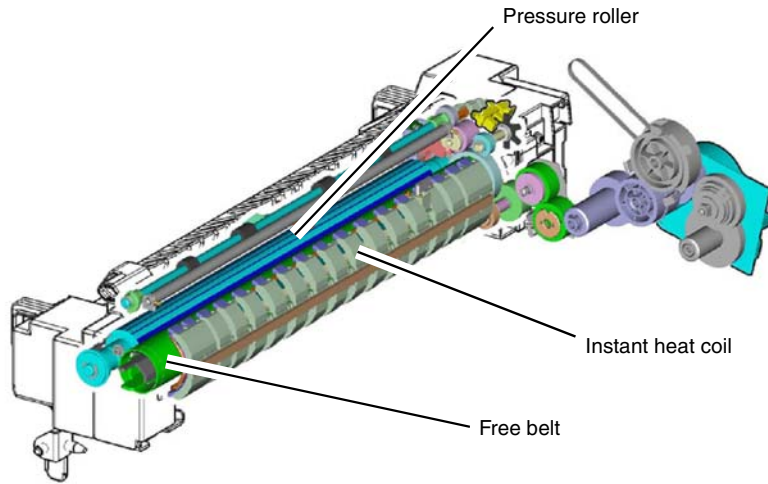


Figure 3 Fuser with IH coil unit

The fuser contains three sensors

- Belt speed sensor
- Pressure roll latch sensor
- Fusing unit exit sensor

NOTE: These sensors are part of the fuser module, [PL 10.05 Item 14](#) and are not individually listed in the Parts List.

A separate retract motor assembly, [PL 10.05 Item 1](#), drives the latch/unlatch mechanism. Refer to [Fuser Sensors and Drives](#), [Figure 5](#). The motor is mounted on the rear of the machine behind the video contact chassis assembly, refer also to [PL 3.15](#) and [GP 32](#) for location and access.

Fuser temperature control is managed by two thermistors and a thermostat. Refer to [Fuser Temperature Control](#).

Fuser Heater Power

The fuser is powered by the [Fuser Heater Power Supply](#). The fuser heater power supply is controlled by the [Motor Drive PWB](#) in turn controlled by the [Controller \(ESS\) PWB](#).

The [Fuser Heater Power Supply](#) ([PL 1.05 Item 3](#)) supplies high voltage AC power to the IH coil unit, [PL 10.05 Item 15](#).

Refer also to:

- [BSD 10.3 Fusing Heat \(1 of 2\)](#)
- [BSD 10.4 Fusing Heat \(2 of 2\)](#)

Fuser Sensors and Drives

NOTE: The sensors within the fuser are part of the fuser unit and are not shown in the Parts List.

The main drive for the fuser unit is supplied by the [Fuser Drive Assembly](#), [PL 40.05 Item 16](#). The motor drives the pressure roll which drives the fuser belt. Movement of the belt is measured by the belt speed sensor.

The **belt speed sensor** is monitored by the [Motor Drive PWB](#). The sensor detects the movement of an encoder to measure the speed of movement of the fuser belt.

Refer to [Figure 4](#).

- [BSD 10.1 Fusing Unit Drive](#)
- [BSD 10.2 Pressure Roll Latch/Unlatch](#)

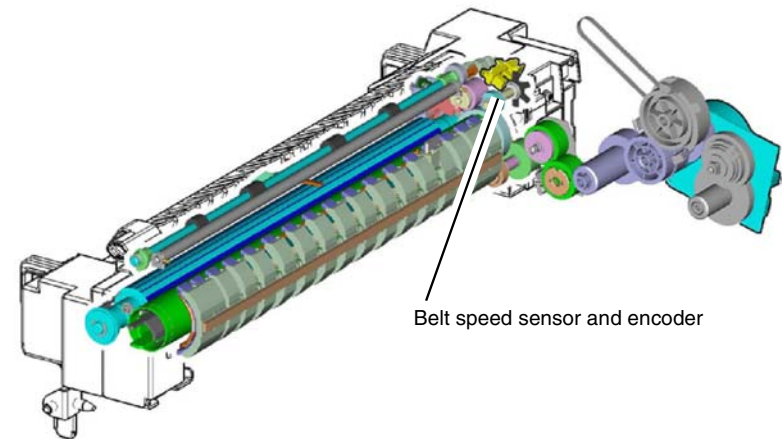
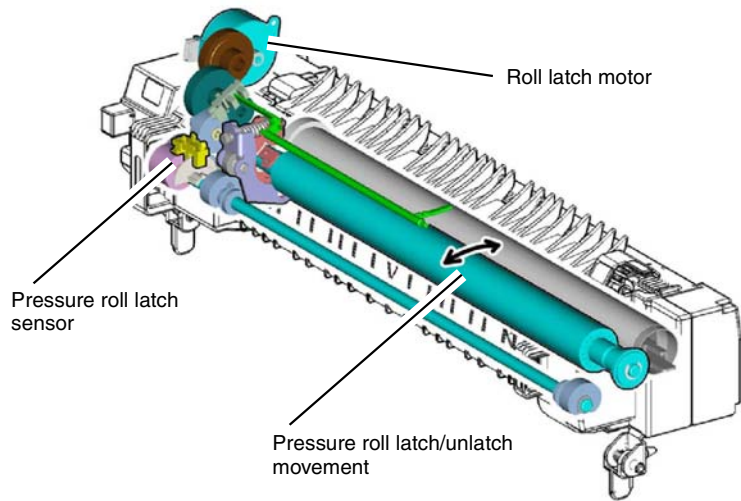


Figure 4 Belt speed sensor

The **pressure roll latch sensor** is monitored by the **Motor Drive PWB**. It measures the position of a cam attached to the pressure roll mechanism.

The pressure roll latch is driven by the retract motor assembly, **PL 10.05 Item 1**. The pressure roll is unlatched when the fuser is not operational or when the left cover is opened for jam clearance.

Refer to **Figure 5** and **BSD 10.2 Pressure Roll Latch/Unlatch**.

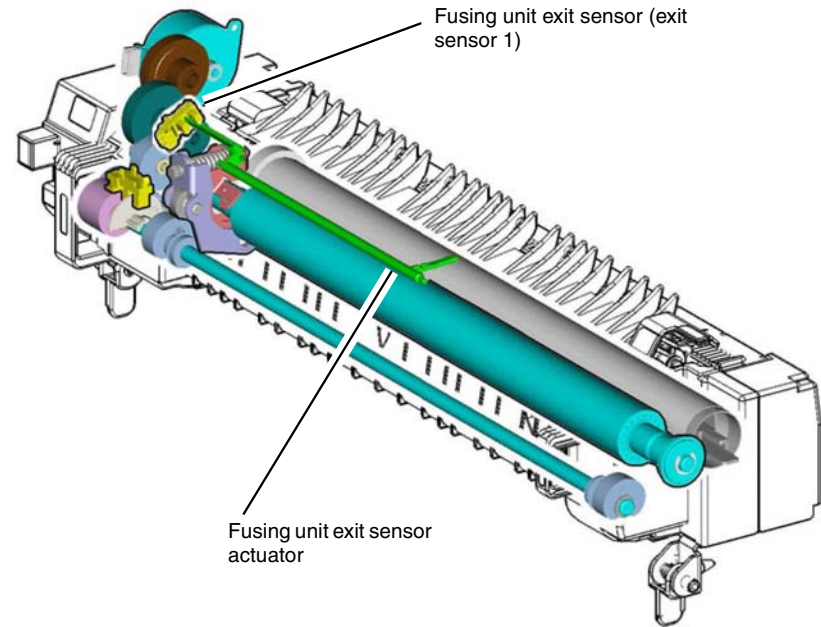


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Figure 5 Pressure roll latch mechanism

The **fusing unit exit sensor** (exit sensor 1) is monitored by the **Motor Drive PWB**. Paper leaving the fuser lifts an actuator which unblocks the sensor sending a 3.3VDC signal to the motor drive PWB. Once the paper has fully exited the fuser the actuator returns to the default position blocking the sensor.

Refer to **Figure 6** and **BSD 10.5 Fusing**



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Figure 6 Fusing unit exit sensor

The fusing unit EEPROM contains data about the fuser which is read by the **Motor Drive PWB**. The Motor drive PWB monitors the connection of pin 2 across P/J 600 to verify that the fuser is installed.

Refer to [Figure 7](#) and [BSD 10.6 Fuser Detection](#).

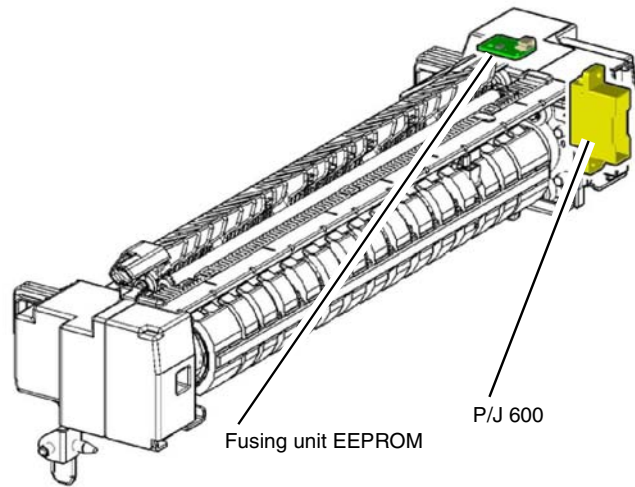


Figure 7 Fuser presence detection

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Fuser Temperature Control

Fuser temperature control is monitored by the **Motor Drive PWB**. Two thermistors (IH center thermistor, IH rear thermistor) are mounted inside the fuser belt to monitor the temperature of the fuser unit, [PL 10.05 Item 14](#).

The maximum temperature of the IH coil unit, [PL 10.05 Item 15](#), is defined by a thermostat in the IH coil unit. If the temperature exceeds a predetermined value it cuts the 24VDC supply to the IH relay on the **AC Drive PWB**. This switches off the AC supply from the **Fuser Heater Power Supply** to the IH coil unit.

Refer to [Figure 8](#).

- [BSD 10.3 Fusing Heat \(1 of 2\)](#)
- [BSD 10.4 Fusing Heat \(2 of 2\)](#)

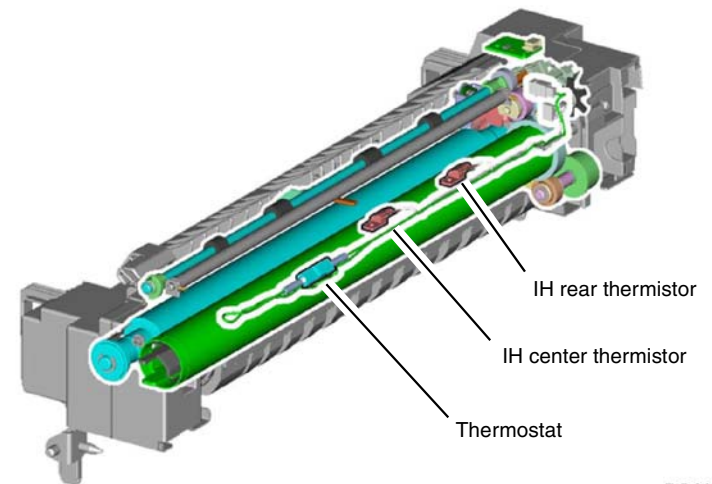


Figure 8 Thermistors and thermostat

F-5-0139-A

Fuser Cooling

Fuser cooling is performed by the fuser unit exhaust fan assembly, [PL 40.15 Item 2](#). Warm air is drawn away by the fan and expelled by the fuser duct assembly, [PL 40.10 Item 2](#) and [PL 40.10 Item 4](#).

Refer to:

- [BSD 10.4 Fusing Heat \(2 of 2\)](#)
- [BSD 10.5 Fusing](#)
- [NOHAD](#).

Fuser Life

The fuser, [PL 10.05 Item 14](#), is a customer replaceable unit (CRU). The fuser heater coil is an engineer replaceable unit, [PL 10.05 Item 15](#). Refer to the HFSI data in [dC135](#) for fuser unit life span.

The fuser may require more frequent replacement if any of the following usage factors exist:

- Area coverage exceeds 5%
- Paper larger than letter size is commonly printed
- Printing short-edge feed
- Printing on specialty media

Print Quantity Counter:

Fusing assembly print count (NVM name `niot_HFSIFusingAssyPrintCount`) increments each time the fuser exit sensor registers OFF.

Each A4 LEF fed sheet is counted as 100 HFSI counts. When the HFSI counter (chain-link 954-850) reaches the threshold value listed in [dC135](#), a request for change of fuser is indicated.

Print Transportation

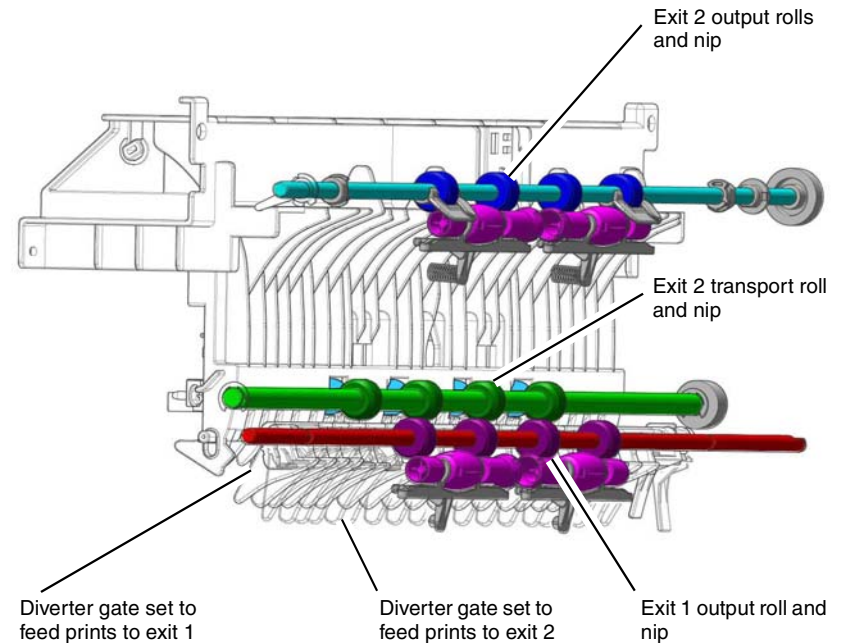
Print Transportation Overview

Print transportation consists of a diverter gate, two exits and associated sensors and drives.

- The lower exit is designated **Exit 1**. Refer to exit 1 transport assembly, [PL 10.10 Item 1](#). If a finisher is installed output to the finisher passes through exit 1 into the horizontal transport, [PL 13.05](#).
- The upper exit is designated **Exit 2**. Refer to exit 2 chute assembly, [PL 10.25 Item 8](#). If a finisher is installed prints output to exit 2 are collated on top of the horizontal transport, [PL 13.05](#).
- Diverter gate, part of exit 2 transport assembly, [PL 10.15 Item 2](#). The diverter gate is driven by exit 1 gate solenoid, [PL 10.25 Item 11](#). Refer also to [Figure 3](#). The exit gate solenoid is normally de-energized (L). With the solenoid in this state, the diverter gate directs prints to exit 1. To direct prints to exit 2 the [Motor Drive PWB](#) supplies 24VDC (H) to energise the solenoid.

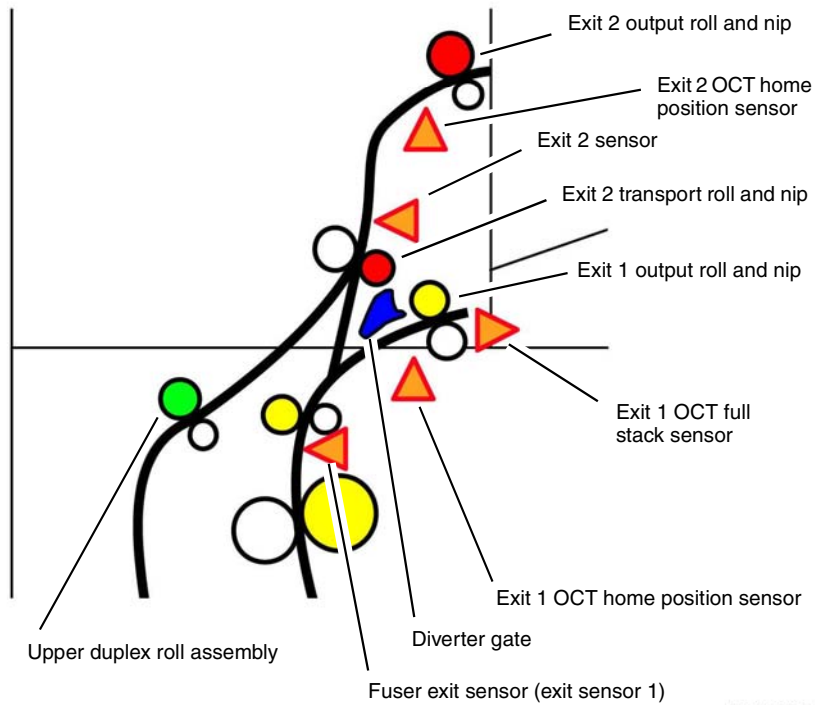
Refer to [Figure 1](#) and [Figure 2](#).

- [BSD 10.1 Fusing Unit Drive](#)
- [BSD 10.7 Exit 1 Paper Transport](#)
- [BSD 10.8 Duplex Paper Transport](#)
- [BSD 10.9 Exit 2 Paper Transport \(1 of 2\)](#)
- [BSD 10.10 Exit 2 Paper Transport \(2 of 2\)](#)



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Figure 1 Print transport components



F-5-0193-A

Figure 2 Print transportation sensors and rollers

Exit 1

Exit 1 offsets prints for collation in the main output tray. If a finisher is installed exit 1 is used to feed prints into the horizontal transport, [PL 13.05](#). Offsetting is disabled if a horizontal transport is installed.

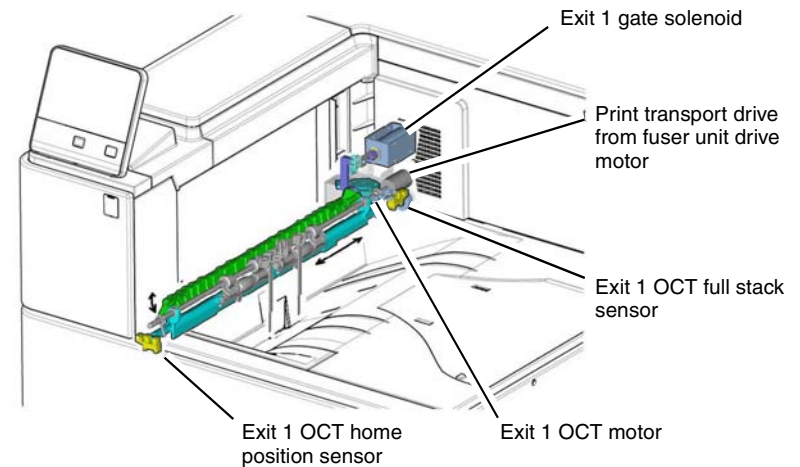
Exit 1 transport consists of the following:

- Exit 1 transport nip. Refer to [Figure 1](#).
- Exit 1 offset catch tray (OCT) motor, [PL 10.10 Item 3](#). drives the movement of the offsetting mechanism.
- Exit 1 offset catch tray (OCT) home position sensor, [PL 10.10 Item 8](#). The sensor is actuated by the position of the offsetting mechanism. When the offsetting mechanism is in the home position no signal is generated (L) and code 047-211 is logged by the [Motor Drive PWB](#). When the offsetting mechanism is in the away position 3.3VDC (H) is generated.
- Exit 1 offset catch tray (OCT) full stack sensor, [PL 10.10 Item 14](#). The sensor is actuated when the paper in offset catch tray 1 reaches the full level. The signal from the sensor goes high and 3.3VDC is sent to the [Motor Drive PWB](#). Code 077-124 is logged.

Print transport for exit 1 is driven by the fuser unit drive motor. Refer to [Fuser Drive Assembly](#) and [PL 40.05 Item 19](#). Drive input to exit 1 transport is via gear, [PL 10.10 Item 10](#).

Refer to [Figure 3](#).

- [BSD 10.1 Fusing Unit Drive](#)
- [BSD 10.7 Exit 1 Paper Transport](#)

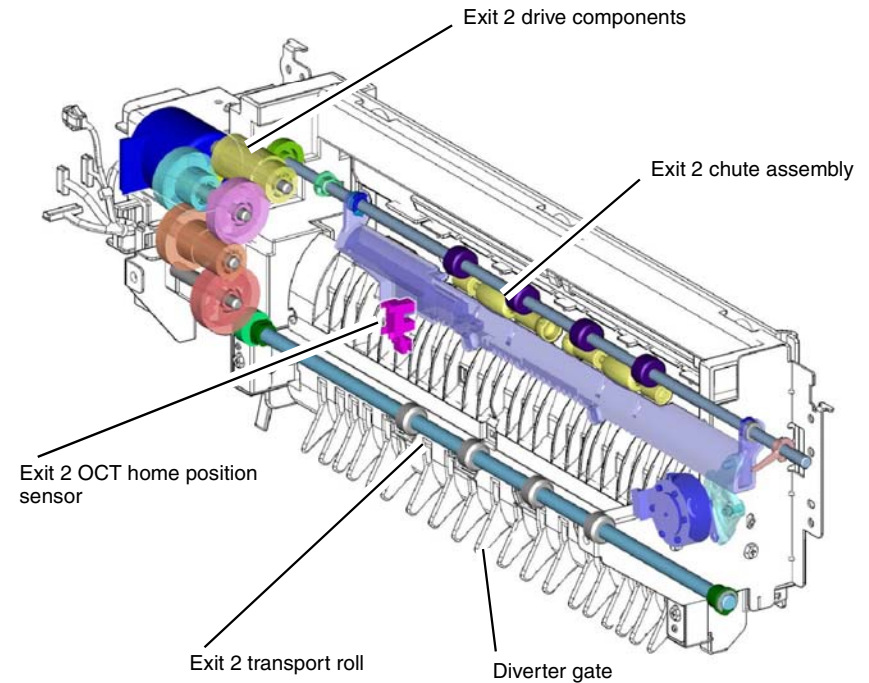


F-5-0162-A

Figure 3 Exit 1

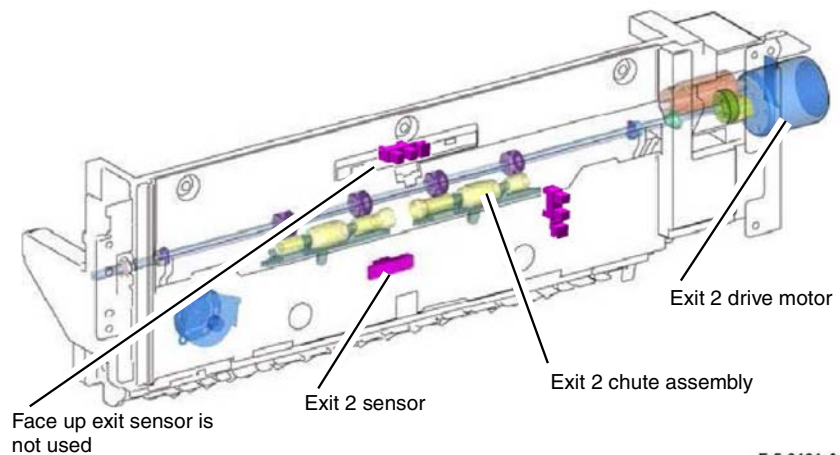
Exit 2

- The exit 2 rolls are driven by the exit 2 drive motor, [PL 10.25 Item 5](#). An encoder on the motor sends data to the [Motor Drive PWB](#). Refer to [Figure 4](#) and [BSD 10.9 Exit 2 Paper Transport \(1 of 2\)](#).
- Exit 2 sensor, [PL 10.25 Item 15](#). The sensor is actuated by paper passing the exit 2 transport roll and along the exit 2 print path. The sensor sends 5VDC to the [Motor Drive PWB](#). When paper is sensed the signal goes Low. Refer to [Figure 5](#) and [BSD 10.10 Exit 2 Paper Transport \(2 of 2\)](#).
- Exit 2 offset catch tray (OCT) home position sensor, [PL 10.25 Item 14](#). The sensor is actuated by a flag on the exit 2 chute assembly. The sensor goes High and sends 3.3VDC to the [Motor Drive PWB](#) when the chute moves away from the home position. Refer to [Figure 4](#) and [BSD 10.9 Exit 2 Paper Transport \(1 of 2\)](#).
- Exit 2 offset catch tray (OCT) motor, [PL 10.25 Item 18](#). The motor is controlled by the [Motor Drive PWB](#) operating a gear and lever that moves the exit 2 chute assembly. Refer to [Figure 6](#) and [BSD 10.9 Exit 2 Paper Transport \(1 of 2\)](#).
- Exit 2 chute assembly, [PL 10.25 Item 8](#). Refer to [Figure 4](#) and [Figure 5](#).
- The face up exit sensor is not used on the C8000 or the C9000 printers. The sensor is connected to and monitored by the [Motor Drive PWB](#). In other machines the sensor would be triggered by prints passing in front of the sensor. This part of the print path is not utilized in the C8000 or the C9000. Any codes generated by the sensor are in error. Refer to [Figure 5](#), and [BSD 10.10 Exit 2 Paper Transport \(2 of 2\)](#).



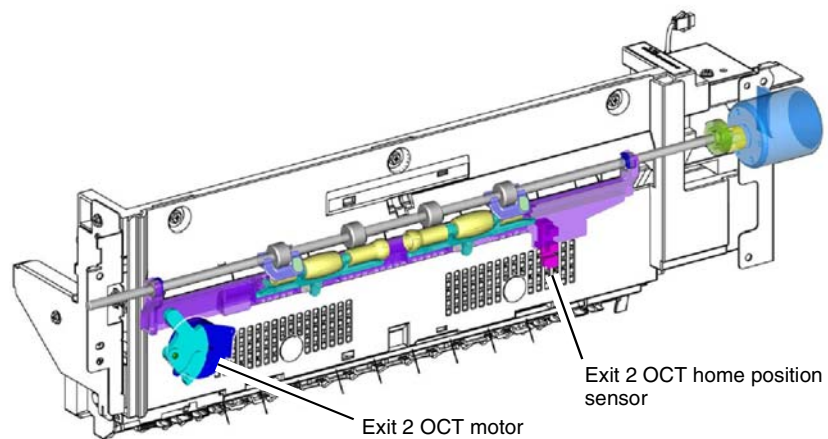
F-5-0164-A

Figure 4 Exit 2 rolls and drives



F-5-0161-A

Figure 5 Exit 2 chute assembly



F-5-0163-A

Figure 6 Exit 2 OCT components

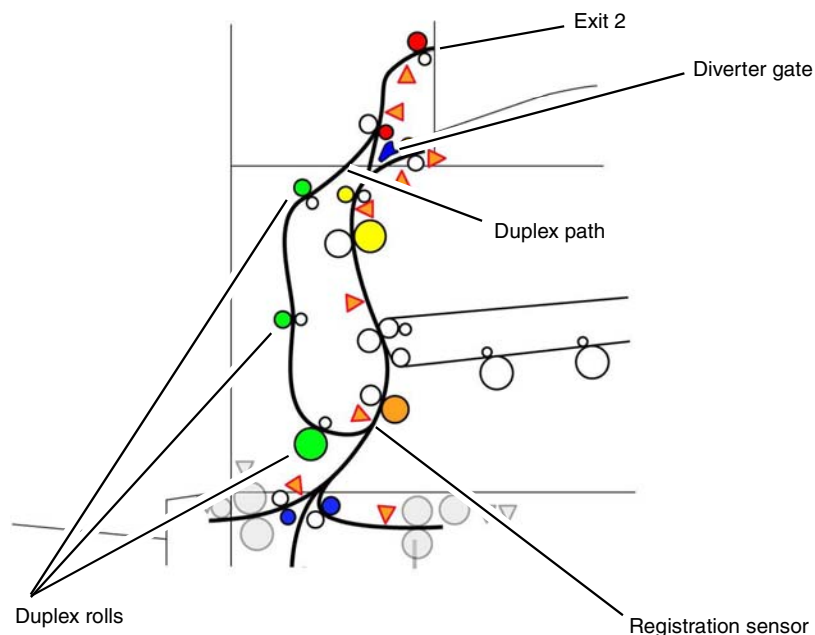
Duplex Printing

The duplex printing function first prints the front side of the sheet and then partially ejects the lead edge of the sheet into the exit 2 tray. If a finisher is installed the lead edge is ejected onto the top of the horizontal transport.

After the trail edge of the sheet passes the diverter gate the sheet is drawn back into the machine. The junction to the duplex path is straight so the sheet automatically passes into the duplex path via the duplex rolls, PL 80.85. At the end of the duplex path the sheet arrives at the registration sensor, PL 80.80 Item 2, to begin the process of printing the second side.

Refer to Figure 7.

Refer also to Registration Transport Assembly and Duplex Transport.



F-5-0190-A

Figure 7 Duplex path

Finishers

Office Finisher LX

Overview

The Office Finisher LX consists of a horizontal transport and finisher LX. It can collate, stack, staple, and hole punch sets of copies or prints.

When fitted with the optional booklet maker assembly, the finisher also can produce booklets.

The Finisher LX handles a variety of standard paper sizes, ranging from A4 SEF/8.5x11 inch up to A3 SEF/11x17 inch. The centre tray has a capacity of 200 sheets of A3/11x17 inch paper. The stacker tray has a capacity of 2000 sheets of A4/8.5x11 inch SEF or 1000 sheets of A3/11x17 inch paper.

The finisher LX can collate, stack, staple, and hole punch up to 2000 sheets or 200 sets of 90gsm or 20lb paper. For paper sizes greater than A4 SEF, the maximum number of sets is limited to 100. Refer to [Figure 1](#).

NOTE: The finisher cannot handle transparencies or envelopes.

The main components of the finisher are:

- **Horizontal Transport Assembly** - feeds the sheets exiting from the IOT to the finisher.
- **Finisher** - squares up the edges of sheets in the compiler tray to create sets and ejects/offsets the sets into the stacker tray.
- **Compiler Stapler** - Staples sets as specified.
- **Hole Punch Assembly** - Punches 2, 3 or 4 holes depending on the market. If ordered by the customer, the punch unit is in the horizontal transport.
- **Stacker Tray** - Collects the sets ejected from the finisher.
- **Booklet Maker** - (optional) saddle stitches and creases booklets

Refer to [Figure 2](#) and [Figure 3](#) for supported paper sizes.



F-5-0001-A

Figure 1 Office finisher LX

Name SEF/LEF	Inches		mm		Stacker Tray							IOT Inner Tray
	FS	SS	FS	SS	Stack	Offset	Punch	Staple	Booklet	Crease-Fold		
Postcard(Japan) S			100.0	148.0	N	N	N	N	N	N	N	"9
Postcard(Japan)L			148.0	100.0	N	N	N	N	N	N	N	"9
Reply Postcard S			148.0	200.0	N	N	N	N	N	N	N	"9
Reply Postcard L			200.0	148.0	N	N	N	N	N	N	N	"9
Postcard (US) S	4	6	101.6	152.4	N	N	N	N	N	N	N	"9
Postcard (US) L	6	4	152.4	101.6	N	N	N	N	N	N	N	"9
5x7(postcard) S	5	7	127.0	177.8	N	N	N	N	N	N	N	"9
5x7(postcard) L	7	5	177.8	127.0	N	N	N	N	N	N	N	"9
3.5x5 S	3.5	5	88.9	127.0	N	N	N	N	N	N	N	"9
3.5x5 L	5	3.5	127.0	88.9	N	N	N	N	N	N	N	"9
3.5x5.5 S	3.5	5.5	88.9	137.9	N	N	N	N	N	N	N	"9
3.5x5.5 L	5.5	3.5	137.9	88.9	N	N	N	N	N	N	N	"9
A6 S			105.0	148.0	N	N	N	N	N	N	N	"9
A6 L			148.0	105.0	N	N	N	N	N	N	N	"9
B6 S			128.0	182.0	N	N	N	N	N	N	N	"9
B6 L			182.0	128.0	N	N	N	N	N	N	N	"9
A5 S			148.0	210.0	N	N	N	N	N	N	N	"9
A5 L			210.0	148.0	N	N	N	N	N	N	N	"9
Statement S	5.5	8.5	139.7	215.9	N	N	N	N	N	N	N	"9
Statement L	8.5	5.5	215.9	139.7	N	N	N	N	N	N	N	"9
6x9(postcard) S	6	9	152.4	228.6	N	N	N	N	N	N	N	"9
6x9(postcard) L	9	6	228.6	152.4	N	N	N	N	N	N	N	"9
B5 S			182.0	257.0	N	N	N	N	N	N	N	"9
B5 L			257.0	182.0	Y	Y	Y(2,U2,3)	Y	N	N	N	"9
Executive S	7.2	10.5	184.2	266.7	N	N	N	N	N	N	N	"9
Executive L	10	7.25	266.7	184.2	Y	Y	Y(2,U2,3,4)	Y	N	N	N	"9
16K(TFX) S			194.0	267.0	N	N	N	N	N	N	N	"9
16K(TFX) L			267.0	194.0	Y	Y	Y(2,U2,3,4)	Y	N	N	N	"9
16K(GCO) S			195.0	270.0	N	N	N	N	N	N	N	"9
16K(GCO) L			270.0	195.0	Y	Y	Y(2,U2,3,4)	Y	N	N	N	"9
UK-Quatro S	8	10	203.2	254.0	N	N	N	N	N	N	N	"9
UK-Quatro L	10	8	254.0	203.2	Y	Y	Y(2,U2,3)	Y	N	N	N	"9
Letter S	8.5	11	215.9	279.4	Y	Y	Y(2,U2)	Y	Y	Y	Y	"9
Letter L	11	8.5	279.4	215.9	Y	Y	Y(2,U2,3,4,S4)	Y	N	N	N	"9
Letter-Cover S	9	11	228.6	279.4	Y	Y	N	Y	Y	Y	Y	"9
Letter-Cover L	11	9	279.4	228.6	Y	Y	Y(2,U2,3,4,S4)	Y	N	N	N	"9
A4 S			210.0	297.0	Y	Y	Y(2,U2)	Y	Y	Y	Y	"9
A4 L			297.0	210.0	Y	Y	Y(2,U2,3,4,S4)	Y	N	N	N	"9
A4-Cover S			223.0	297.0	Y	Y	N	Y	Y	Y	Y	"9
A4-Cover L			297.0	223.0	Y	Y	Y(2,U2,3,4,S4)	Y	N	N	N	"9
Special A4 S			226.0	310.0	Y	Y	N	Y	Y	Y	Y	"9
Special A4 L			310.0	226.0	N	N	N	N	N	N	N	"9
Spanish S	8.4	12.4	215.0	315.0	Y	Y	Y(2,U2)	Y	Y	Y	Y	"9
Foolscap S	8.5	13	215.9	330.2	Y	Y	Y(2,U2)	Y	Y	Y	Y	"9
Mexican Folio	8.5	13.4	215.9	340	Y	Y	Y(2,U2)	Y	Y	Y	Y	"9
Legal S	8.5	14	215.9	355.6	Y	Y	Y(2,U2)	Y	Y	Y	Y	"9
11x15 S	11	15	279.4	381.0	Y	Y	Y(2,U2,3,4,S4)	Y	Y	Y	Y	"9

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Figure 2 Supported paper sizes

Name SEF/LEF	Inches		mm		Stacker Tray							IOT Inner Tray
	FS	SS	FS	SS	Stack	Offset	Punch	Staple	Booklet	Crease-Fold		
B4S			257.0	364.0	Y	Y	Y(2,U2,3)	Y	Y	Y	Y	"9
8K(TFX) S			267.0	388.0	Y	Y	Y(2,U2,3,4)	Y	Y	Y	Y	"9
8K(GCO) S			270.0	390.0	Y	Y	Y(2,U2,3,4)	Y	Y	Y	Y	"9
A3 S			297.0	420.0	Y	Y	Y(2,U2,3,4,S4)	Y	Y	Y	Y	"9
Ledger S	11	17	279.4	431.8	Y	Y	Y(2,U2,3,4,S4)	Y	Y	Y	Y	"9
12x18 S	12	18	304.8	457.2	N	N	N	N	N	N	N	"9
12x19 S	12	19	304.8	482.6	N	N	N	N	N	N	N	"9
DTSpecial A3 S			310.0	432.0	N	N	N	N	N	N	N	"9
SRA3 S	12	17.7	320.0	450.0	N	N	N	N	N	N	N	"9
12.6x19.2 S	12	19.2	320.0	487.7	N	N	N	N	N	N	N	"9
Special A3 S			328.0	453.0	N	N	N	N	N	N	N	"9
13x18 S	13	18	330.2	457.2	N	N	N	N	N	N	N	"9
13x19 S	13	19	330.2	482.6	N	N	N	N	N	N	N	"9
Choukei-3(Envelope)			120.0	235.0	N	N	N	N	N	N	N	"9
Kakukei-2(Envelope)			240.0	332.0	N	N	N	N	N	N	N	"9
C4(Envelope) S			229.0	324.0	N	N	N	N	N	N	N	"9
C5(Envelope) S			162.0	229.0	N	N	N	N	N	N	N	"9
C5(Envelope) L			229.0	162.0	N	N	N	N	N	N	N	"9
Com10 (Envelope)			241.3	104.8	N	N	N	N	N	N	N	"9
DL (Envelope) L			220	110	N	N	N	N	N	N	N	"9
Monarch			190.5	98.4	N	N	N	N	N	N	N	"9
Unfixed form			100.0 to 330.2	148.0 to 488.0	P *1 *4	P *1 *4	P *2 *4	P *1 *4	P *6 *4	P *6 *4	P *9	"9

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Figure 3 Supported paper sizes

Horizontal Transport Assembly

The horizontal transport assembly moves the sheets from the exit 1 assembly to the Finisher LX.

The horizontal transport assembly has its own drives, rollers, sensors, and interlocks and is powered and controlled by the finisher.

The top cover can be opened for jam clearance. Refer to [Figure 4](#).

NOTE: If a booklet maker also is installed, the hole punch is installed in the horizontal transport.



F-5-0004-A

Figure 4 Horizontal transport assembly

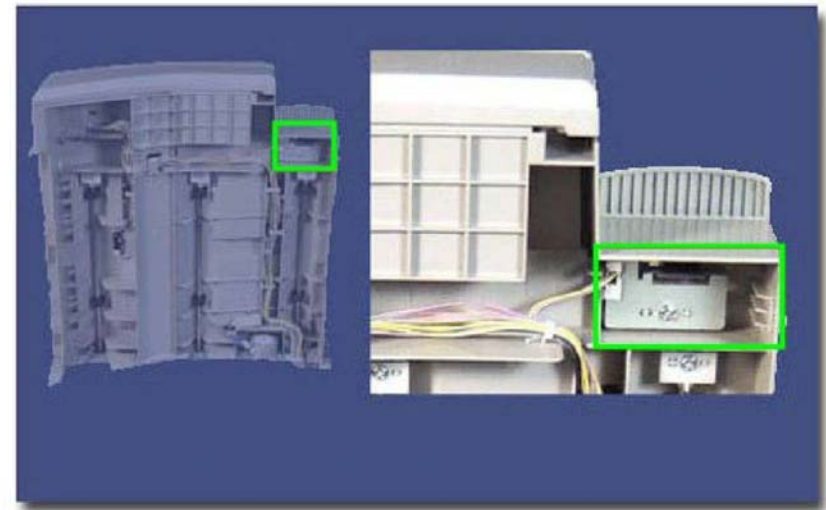
Top Cover Interlock

The horizontal transport assembly has one Interlock, the H-transport open sensor.

The H-transport open sensor senses when the top cover is raised and disconnects the 24V supply from the horizontal transport assembly.

The H-transport open sensor can be viewed from the underside of the horizontal transport. Refer to [Figure 5](#).

NOTE: The internal components and operation of the horizontal transport shown at the right are identical to the unit that installs on the Xerox® VersaLink® C8000 and C9000 machines; only the cover color is different.



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Figure 5 Horizontal transport open sensor

Sensors

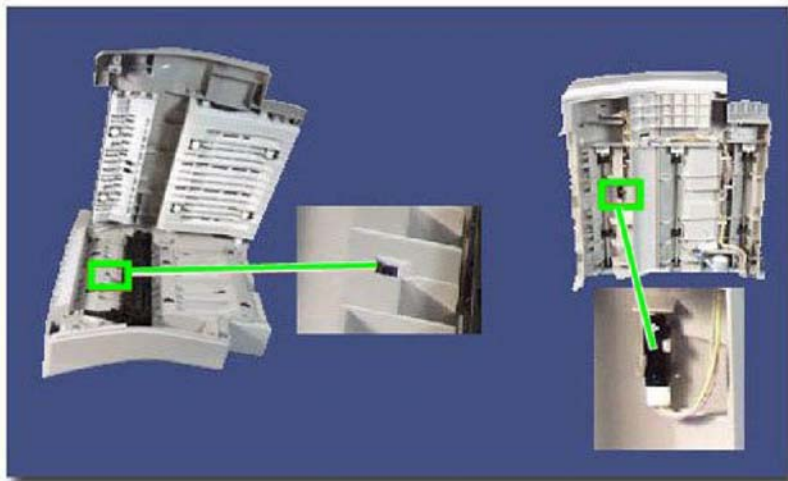
The movement of paper through the horizontal transport is monitored by the entrance sensor.

The entrance sensor is an optical sensor which is triggered when the light it emits is reflected by the sheet of paper.

As paper is fed from exit 1 into the horizontal transport, the entrance sensor detects this.

If, after a preset amount of time, the entrance sensor does not de-actuate, this indicates a paper jam and an error message is displayed on the UI. Refer to [Figure 6](#).

NOTE: The internal components and operation of the horizontal transport shown at the right are identical to the unit that installs on the Xerox® VersaLink® C8000 and C9000 machines; only the cover color is different.



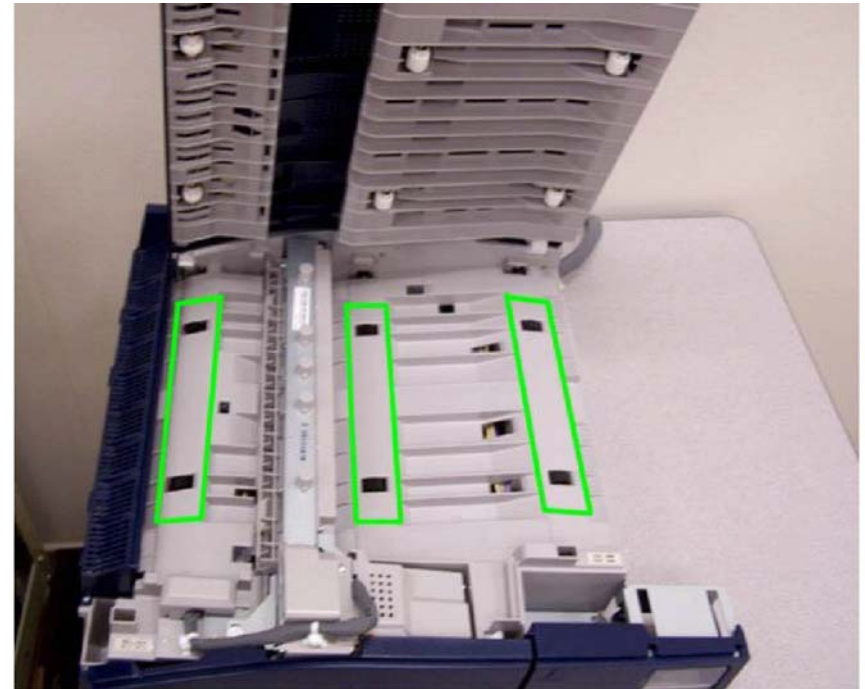
F-5-0006-A

Figure 6 Entrance sensor

Rolls and Drives

The paper is moved through the horizontal transport assembly by three sets of transport rolls.

Drive is provided to the transport rolls by the transport motor through a system of gears and belts. Refer to [Figure 7](#).



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Figure 7 Transport rolls

Power and Control

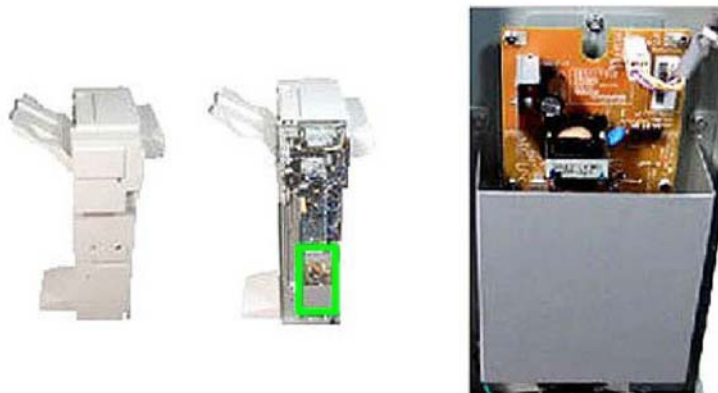
The Finisher LX contains all the electrical and mechanical components required to collate, stack, staple, and hole punch sets of copies or prints. Sets can be output to the center tray or to the stacker tray.

NOTE: When the Finisher LX is installed, the center tray is the top surface of the horizontal transport.

LVPS

Power is supplied to the finisher components by the low voltage power supply (LVPS).

The LVPS receives 110/240VAC supply from the GFI via the power cord and provides +24V to the finisher PWB. Refer to [Figure 8](#).



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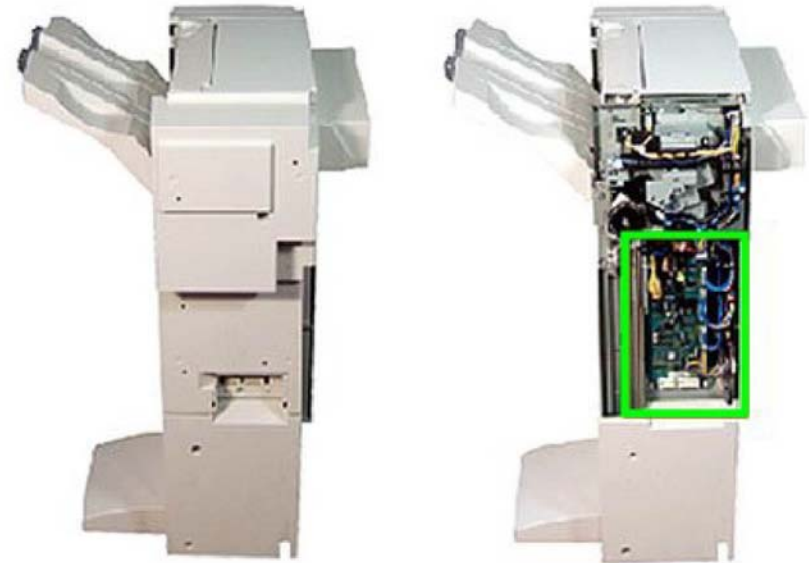
Figure 8 Low voltage power supply

Finisher PWB

All the sensors, switches, interlocks, motors, and clutches are controlled by the finisher PWB.

The finisher PWB receives +24V from the LVPS, which in turn it supplies to the motors and clutches.

In addition to the +24V supplies, the finisher PWB also provides +5V supply for all the sensors and switches. Refer to [Figure 9](#).



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Figure 9 Finisher PWB

Office Finisher LX Interlocks

Finisher LX has two Interlocks which disconnect the + 24V supply when deactivated. These are:

- **Eject Cover Switch** - triggered when the eject cover is raised. Refer to [Figure 10](#).
- **Front Door Interlock** - triggered when the front cover is opened. Refer to [Figure 11](#).

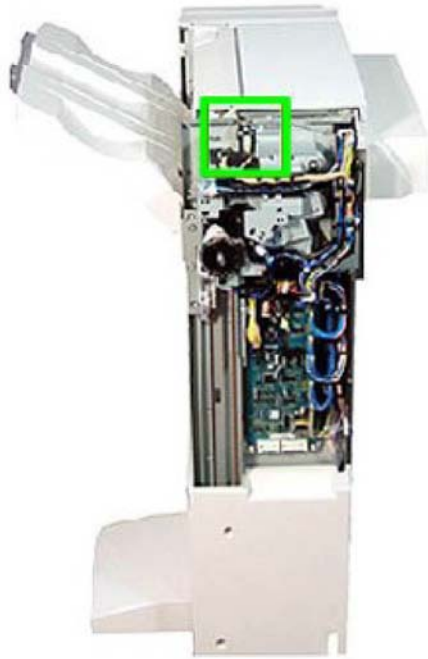


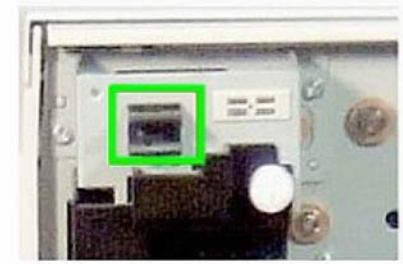
Figure 10 Eject cover switch



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Figure 11 Front door interlock

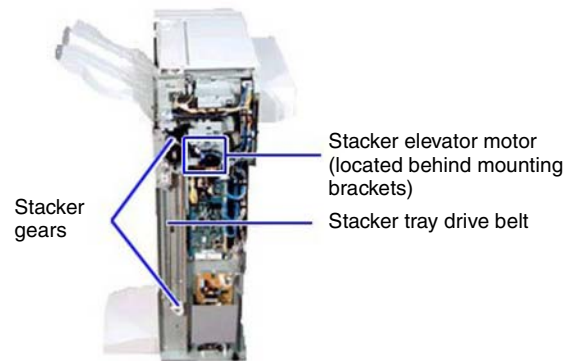


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Stacker Tray

The stacker tray is an output tray on the finisher LX that is used to store compiled sets in a stack. The stacker tray lowers in steps to accommodate up to 200 sets.

The stacker tray is raised and lowered by a system of gears and belts. The gears and belts are driven by the stacker elevator motor through a rack gear. Refer to [Figure 12](#).



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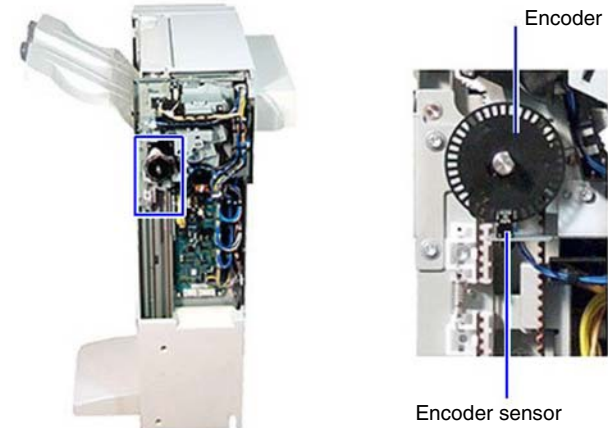
Figure 12 Stacker tray

Elevation System

The position of the stacker tray is controlled by an encoder and sensor.

The encoder has a number of apertures cut into it and is connected directly to the main stacker tray drive gear via a shaft.

As the stacker tray drive gear rotates to lower or raise the stacker tray, the encoder also rotates. The rotation of the encoder is monitored by the encoder wheel sensor which is an optical sensor that reflects light onto the encoder. Refer to [Figure 13](#).

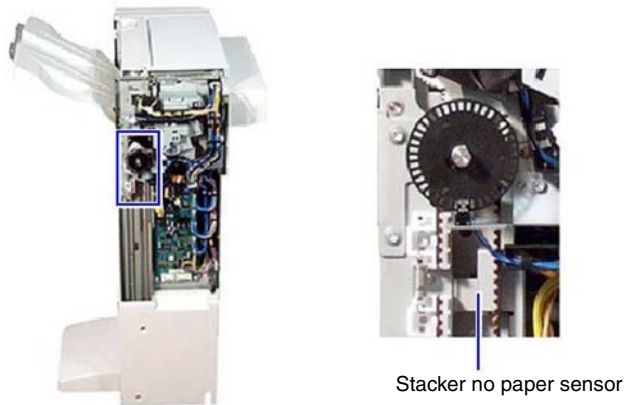


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Figure 13 Encoder and sensor

No Paper Sensor

The uppermost position of the stacker tray is monitored by the stacker no paper sensor. When actuated, this indicates that the stacker tray is in the uppermost feed position. Refer to [Figure 14](#).



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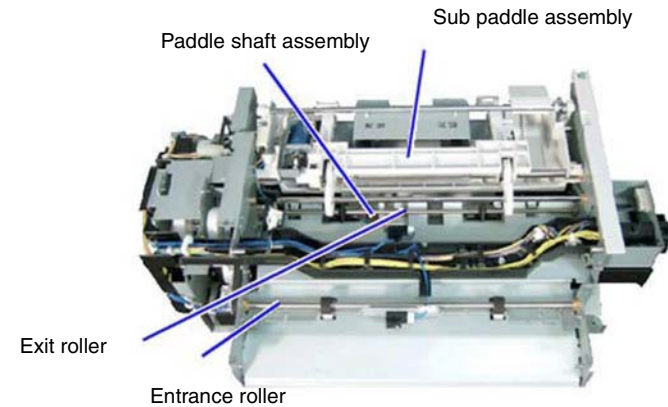
Figure 14 Stacker no paper sensor

Paper Feed

Drive

The sheets of paper are moved through the main section of the compiler by the entrance roll, exit roll, paddle shaft assembly and sub-paddle assembly.

Drive is provided to these components by the transport motor and a system of gears and pulleys. Refer to [Figure 15](#) and [Figure 16](#).



F-5-0015-A

Figure 15 Compiler components

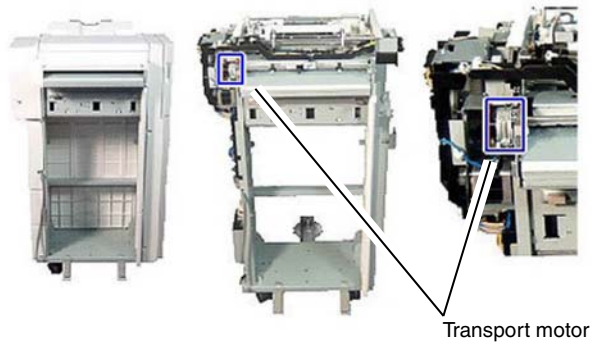


Figure 16 Transport motor

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Compiler Entrance and Exit Sensors

The progress of paper through the main compiler is monitored by two sensors, (1) the entrance sensor and (2) the compiler exit sensor.

The entrance sensor is actuated by the lead edge of the paper entering the finisher from the horizontal transport. This signals the paper feed process to begin.

The compiler exit sensor is used to ensure that paper successfully moves through the paper path. If the compiler exit sensor is not actuated within a pre-set time of the entrance sensor being actuated, a paper jam condition is signalled and an error message appears. Refer to [Figure 17](#).

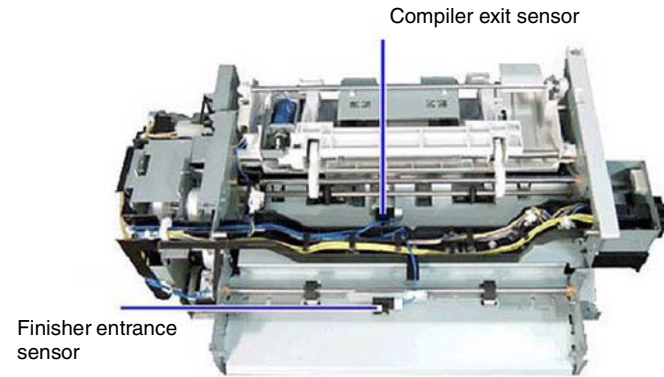


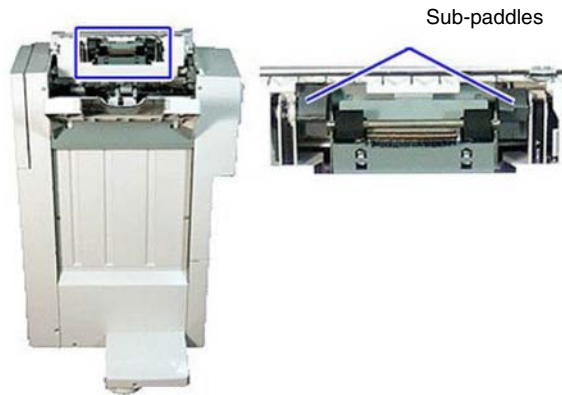
Figure 17 Entrance sensor and compiler exit sensor

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Sub Paddle Assembly

The sub-paddle assembly actively drives fed paper into the compiler tray when it exits the exit roll.

The sub-paddle assembly consists of a set of sub-paddles, an eject chute, and a solenoid. The rotation of the sub paddles actively drives the paper against the compiler backstops where the paper is tamped, stapled (if required), and ejected. Refer to [Figure 18](#).



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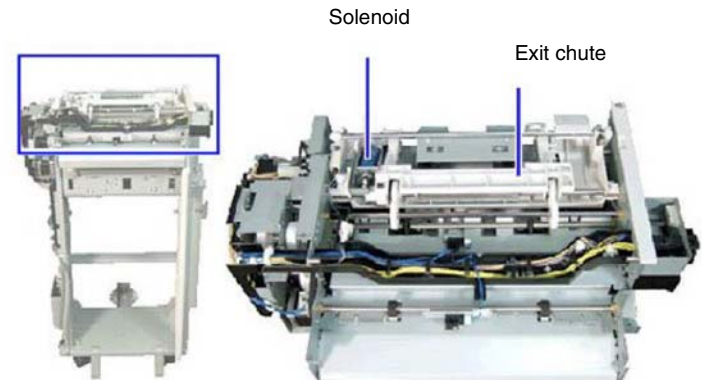
Figure 18 Sub paddle assembly

Exit Chute

When instructed, the solenoid is energized, which lowers the eject chute and the sub paddles onto the paper.

The rotation of the sub paddles actively drives the paper against the compiler backstops where the paper is tamped, stapled (if required), and ejected.

The sub paddles rotate constantly and only come into contact with the paper when the solenoid is actuated. Refer to [Figure 19](#), [Figure 20](#) and [Figure 21](#).



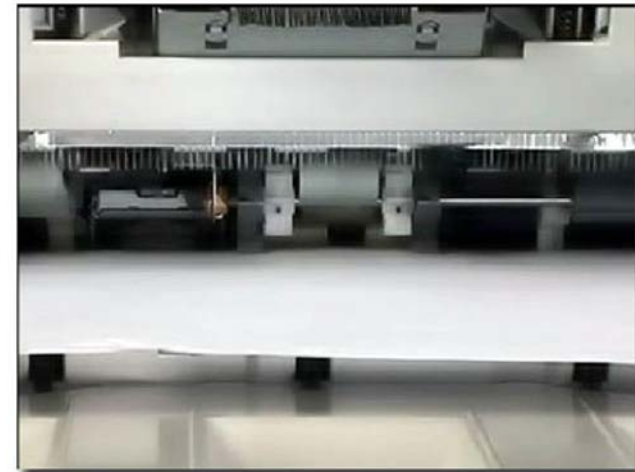
F-5-0019-A

Figure 19 Exit chute



F-5-0020-A

Figure 20 Sub paddle assembly



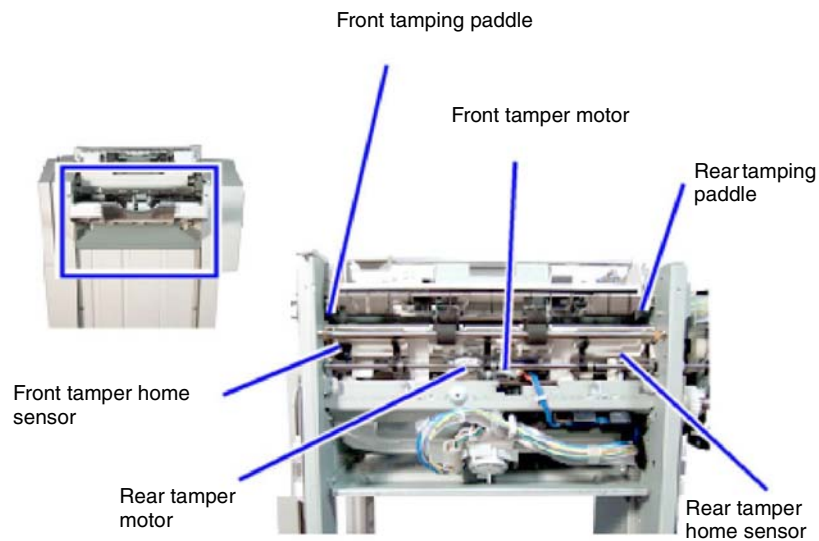
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Figure 21 Closer view

Tamper Assemblies

The tamper assemblies are used to compile sets of paper into registered stacks either for stapling or exit to the stacker tray. The tamper assemblies tamp the sets of paper to the front, center, or rear of the compiler, as required.

The Finisher LX has two separate tamper assemblies which operate as a single unit. These are the front and rear tamper assemblies. Each tamper assembly consists of a tamping paddle, tamper paddle motor, and a tamper home sensor. Refer to [Figure 22](#).



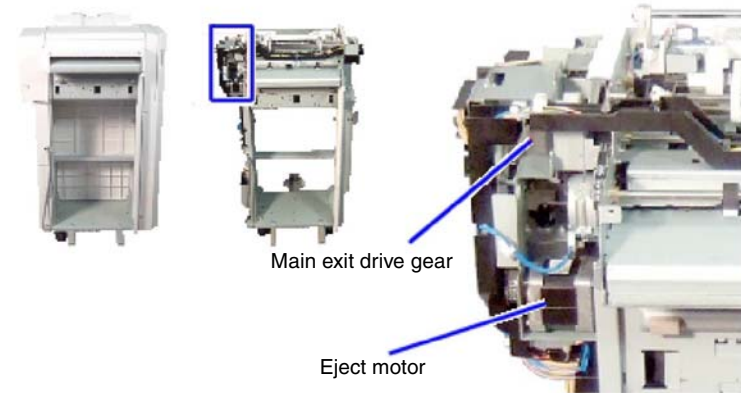
F-5-0022-A

Figure 22 Tamper assemblies

Exit and Stack

The exit roll, paper guides, and set clamp assembly all are driven by the eject motor through the main exit drive gear.

Each assembly has a discrete system of gears and quadrant gears which transfer drive from the main exit drive gear to the individual assembly. Refer to [Figure 23](#).



F-5-0023-A

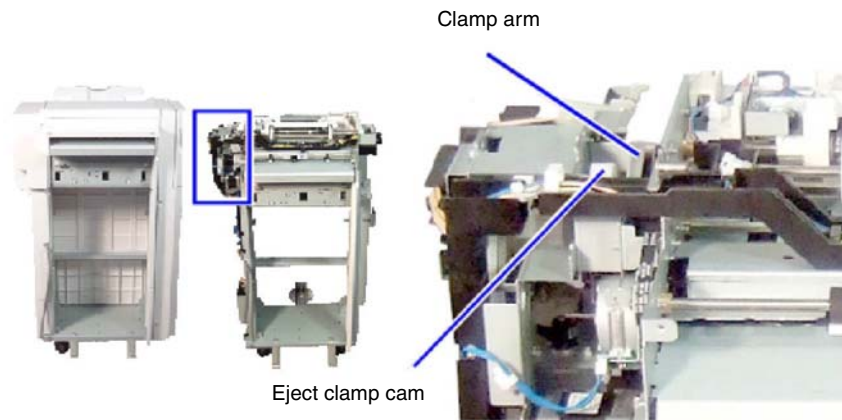
Figure 23 Main exit drive

Exit Roll Assembly

The exit roll assembly consists of exit roll gears, exit roll cam, upper exit roll, lower exit roll, retaining chassis, and retaining chassis lever. The upper exit roll is free rotating and is maintained in the raised or lowered position by the retaining chassis.

The exit cam roll, driven by the main exit drive gear, moves the retaining chassis into the raised or lowered position by actuating the retaining chassis lever.

The lower exit roll is driven by the exit roll gears through the main exit drive gear. Paper is moved from the compiler tray to the stacker tray when the upper exit roll is lowered onto the lower exit roll. Refer to [Figure 24](#).

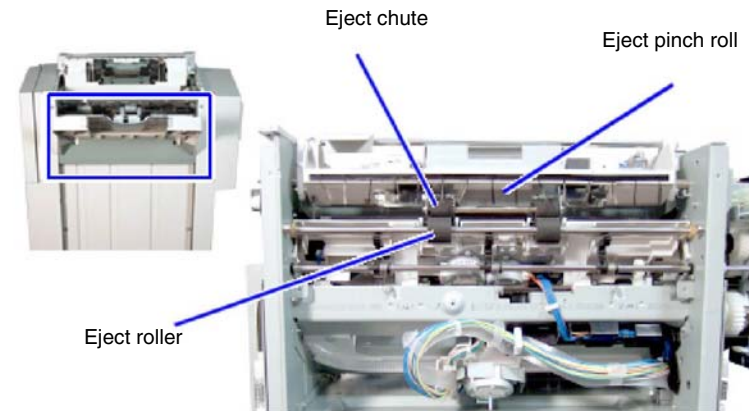


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Figure 24 Exit clamp

The eject roll is driven by the exit roll gears through the main exit drive gear.

Paper is moved from the compiler tray to the stacker tray when the eject pinch roll is lowered onto the eject roll. Refer to [Figure 25](#).



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Figure 25 Exit roll assembly

Paper Support Assembly

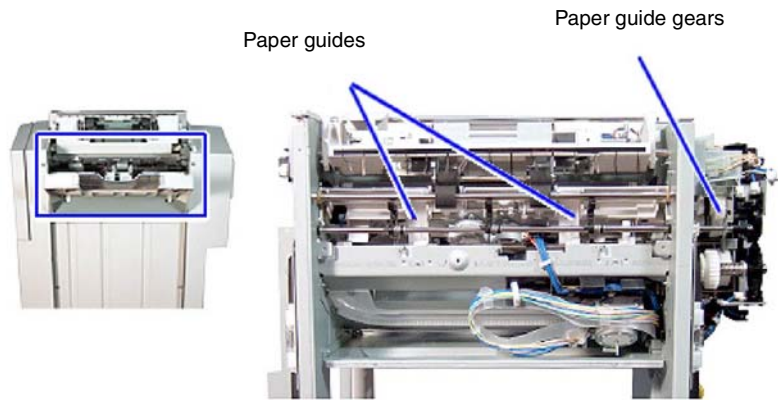
Paper Guide

The paper guide consists of two paper guides, the eject assembly, the gear select actuator, and an eject clamp home sensor.

Each paper guide features an integral rack which connects to the gears.

As the main exit drive gear rotates, the eject assembly also rotates, thereby extending or retracting the paper guide.

This action is reversed by a change in direction of the main exit drive gear. Refer to [Figure 26](#).



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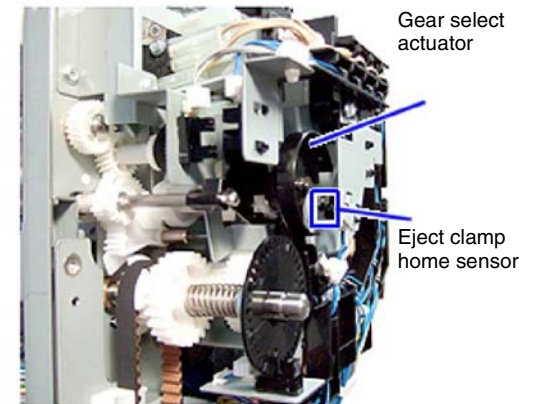
Figure 26 Paper guide

Eject Assembly

The position of the paper guide is monitored by the eject clamp home sensor.

The gear select actuator is fixed to the end of one of the drive shafts for the eject assembly and rotates to trigger the eject clamp home sensor.

The eject clamp home sensor and gear select actuator are only used to confirm that the support arms are fully extended or retracted. They do not control drive to the main exit drive gear. Refer to [Figure 27](#).



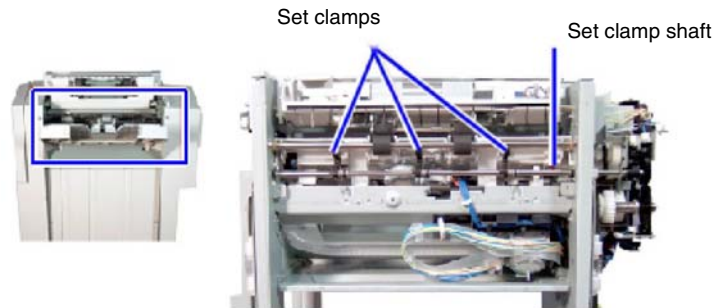
F-5-0027-A

Figure 27 Eject assembly

Paper Clamp Assembly

Set Clamps

The set clamp assembly uses set clamps to hold sets of paper in position on the stacker tray. The set clamps are fixed to the set clamp shaft which is rotated by the set clamp quadrant gear. Drive is provided by the main exit drive gear. Refer to [Figure 28](#).

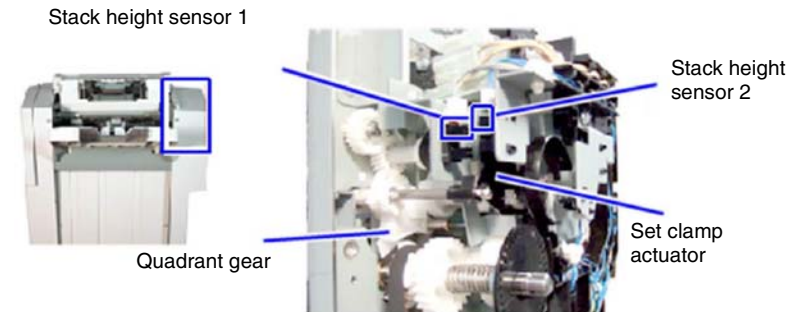


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Figure 28 Set clamps

Set Clamp Position

The position of the set clamps is monitored by two sensors. These are the upper and lower stack height sensors. The set clamp actuator is fixed to the end of the paper clamp shaft and triggers the sensors when the set clamps are in either the upper or lower position. The sensors and actuator are only used to confirm that the set clamps are fully raised or lowered. They do not control drive to the main exit drive gear. Refer to [Figure 29](#).



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Figure 29 Set clamp position

Booklet Maker

The optional booklet maker produces pre-creased booklets with either 1 or 2 staples. The booklet maker is supplied with a crease assembly which is installed into the Finisher LX. Refer to [Figure 30](#).



Figure 30 Booklet maker and crease assembly

Power and Control

The Finisher LX supplies the booklet PWB with a +24V power supply through the interconnection harness.

The booklet PWB controls all the booklet maker components and distributes the + 24V supply to the motors and + 5V to the sensors and interlocks.

The crease assembly is powered and controlled by the finisher PWB. Refer to [Figure 31](#).

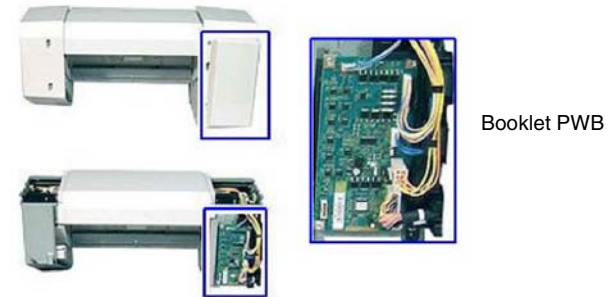


Figure 31 Booklet maker power and control

Booklet Maker Interlocks

The booklet maker has three Interlocks: the booklet stapler cover switch, the front booklet stapler safety switch, and rear booklet stapler safety switch.

Interlock - Booklet Stapler Cover Switch

The booklet stapler cover switch is actuated when the side cover is opened. When actuated, all + 24V supplies are removed from the booklet maker. Refer to [Figure 32](#).



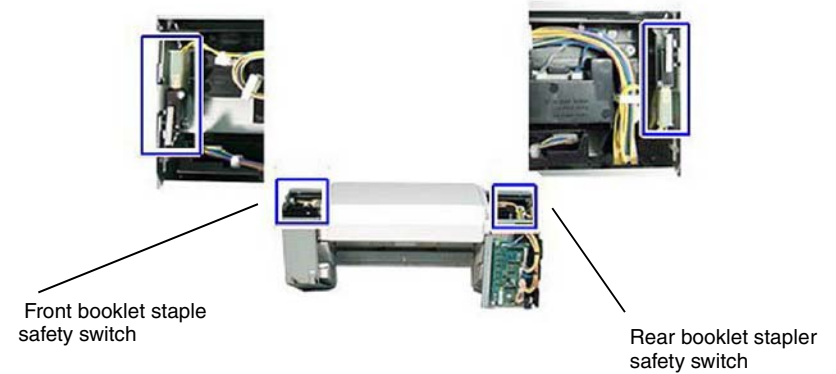
F-5-0032-A

Figure 32 Booklet stapler cover switch

Interlock - Front and Rear Booklet Stapler Safety Switches

The front and rear booklet stapler safety switches are actuated when either the front or rear covers are raised.

These Interlocks prevent the booklet maker from operating when either the front or rear covers are obstructed, i.e., raised, or when the booklet maker is incorrectly mounted. Refer to [Figure 33](#).



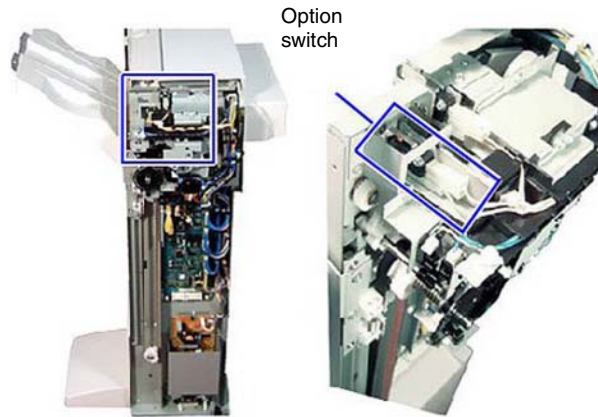
F-5-0033-A

Figure 33 Front and rear safety switches

Interlock - Finisher Side Interlock

An option switch is used to detect when the booklet maker is installed on the finisher. This Interlock is located on the Finisher LX, not the booklet maker.

When Interlocks are open, power is removed and an error message displays on the UI. Refer to [Figure 34](#).



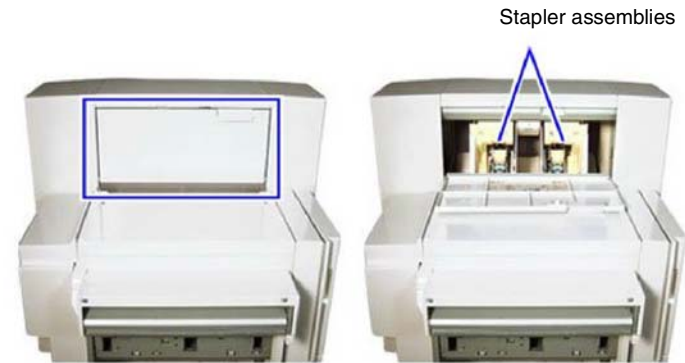
F-5-0034-A

Figure 34 Finisher side interlock

Stapler Assembly

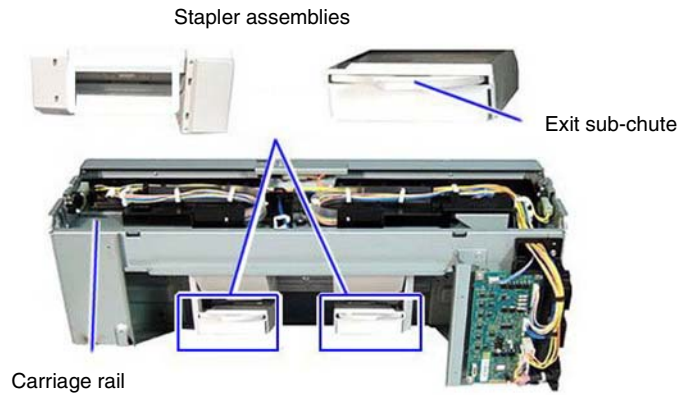
The booklet maker contains two stapler assemblies which support and staple compiled booklets prior to ejecting into the stacker tray.

Each stapler assembly contains a staple module and an exit sub chute. The staple units are mounted on a carriage rail. Refer to [Figure 35](#) and [Figure 36](#).



F-5-0035-A

Figure 35 Stapler assemblies



F-5-0036-A

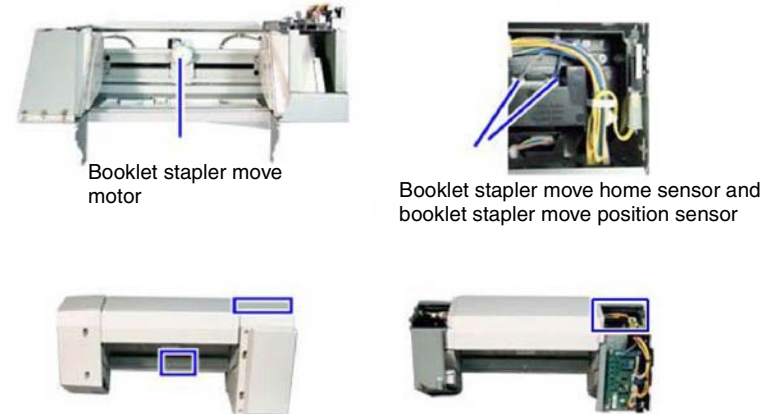
Figure 36 Components

Stapler Assembly Carriage Rail and Move Motor

The stapler assemblies are moved into position along the carriage rail by the booklet stapler move motor.

The booklet stapler move motor drives two rack gears, one connected to each stapler assembly.

The position of the stapler assemblies is controlled by the booklet stapler move home sensor and booklet stapler move position sensor which monitor the position of the rack gears. Refer to [Figure 37](#).



F-5-0037-A

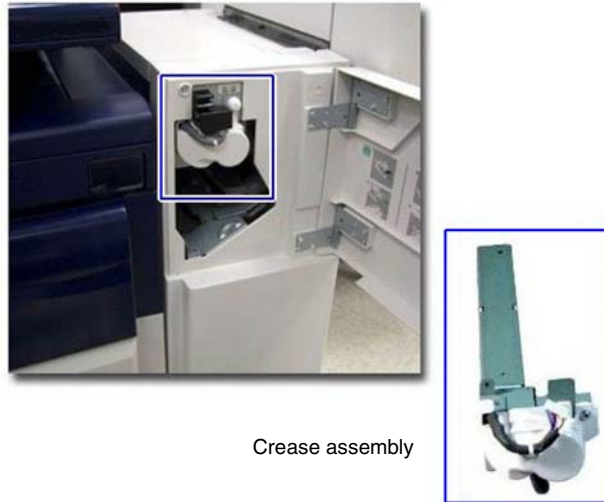
Figure 37 Stapler move motor

Crease Assembly

The crease assembly pre-creases sheets of paper prior to collating, stapling and stacking of booklets.

It is installed behind the compiler within the Finisher LX and is controlled by the finisher PWB.

Refer to [Figure 38](#).



Crease assembly

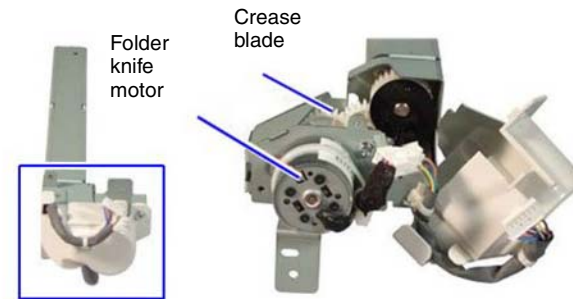
F-5-0038-A

Figure 38 Crease assembly

Crease Assembly Folder and Gears

The crease assembly consists of a folder knife motor, gears, crease blade and paper chute.

The folder knife motor raises and lowers the crease blade through one cycle of the gears. Refer to [Figure 39](#).



F-5-0039-A

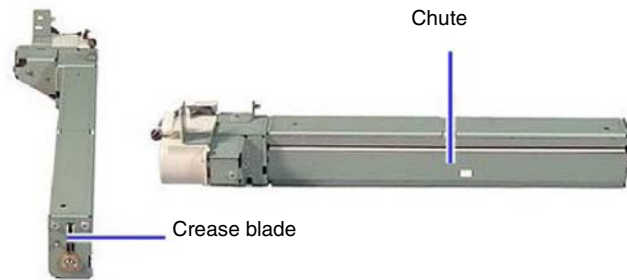
Figure 39 Crease assembly folder and gears

Crease Assembly Position

The action of the crease blade pressing the paper against the paper chute creates a pre-crease in the sheet of paper.

The position of the paper within the crease assembly is monitored by the entrance and compiler exit sensors (part of the finisher LX).

When the paper is in the correct position within the paper chute, the paper momentarily stops feeding and the crease blade is raised and lowered. Paper feed now resumes. Refer to [Figure 40](#).



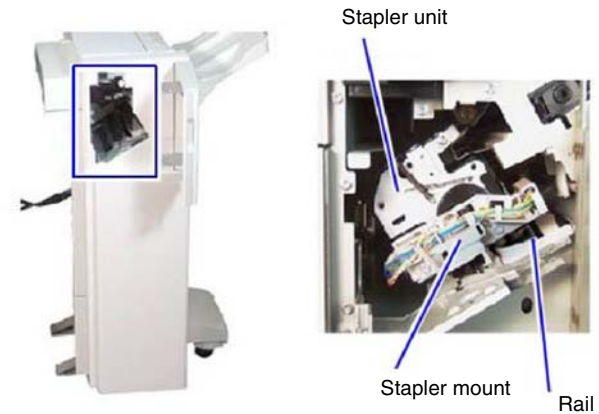
F-5-0040-A

Figure 40 Crease blade and chute

Compiler Stapler

Stapler Unit

The compiler stapler has a stapler unit which is installed on a stapler mount. The stapler mount moves the stapler unit to key stapling positions along the rail. Refer to [Figure 41](#).



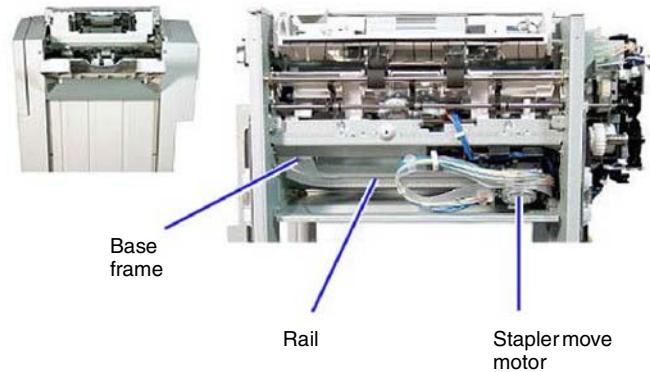
F-5-0041-A

Figure 41 Stapler unit

Stapler Mount

The stapler mount is driven by the stapler move motor which is secured to the bottom of the stapler mount.

A gear fixed to the end of the stapler move motor drives the stapler mount along the rail, which is an integral part of the base frame. Refer to [Figure 42](#).



F-5-0042-A

Figure 42 Stapler mount movement

Stapler Mount Position

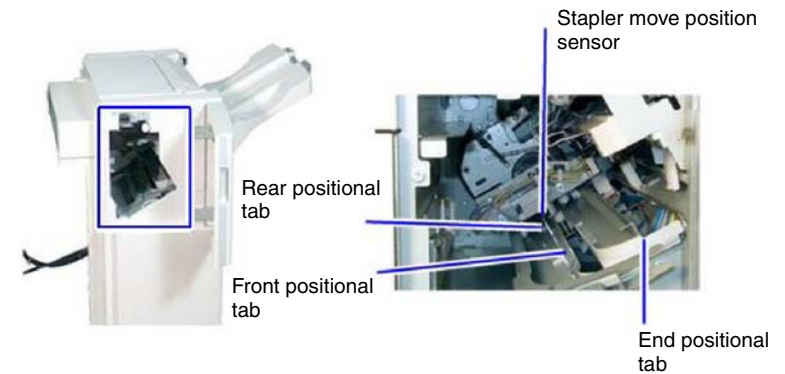
The position of the stapler mount is controlled by the stapler move position sensor.

As the stapler mount moves along the base frame, the light emitted between the two prongs of the stapler move position sensor is interrupted by one of three positional tabs.

These are the end, front, and rear positional tabs.

The end positional tab is used to indicate the correct position along the base frame for single stapling.

The front and rear positional tabs are used to indicate the correct position along the base frame for double stapling. Refer to [Figure 43](#).



F-5-0043-A

Figure 43 Stapler mount position

Stapler Cartridge

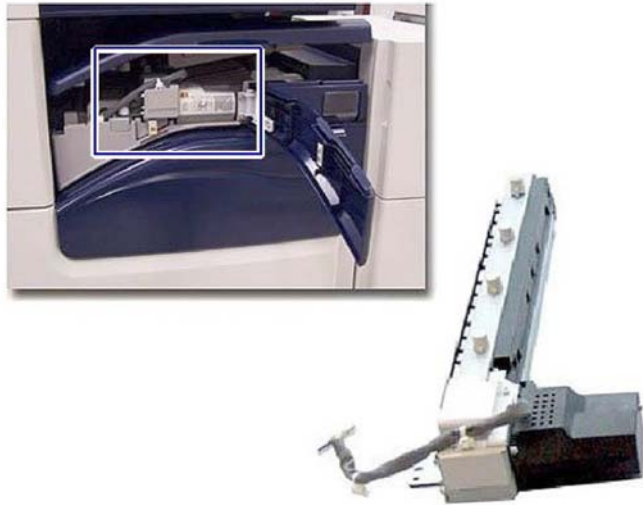
The staple units contain a staple cartridge CRU, staple clinch motor, cam and a staple drive mechanism.

When required, the staple clinch motor is energized to drive the cam.

One full rotation of the cam causes the staple drive mechanism to drive and clinch a staple, stored in the staple cartridge CRU, through the paper set. Refer to [PL 13.20](#).

Hole Punch Assembly

The hole punch assembly punches either 2 or 4 holes in Europe or 2 or 3 holes in North America. The hole punch assembly is installed within the horizontal transport. It is controlled by the finisher PWB. Refer to [Figure 44](#).



F-5-0044-A

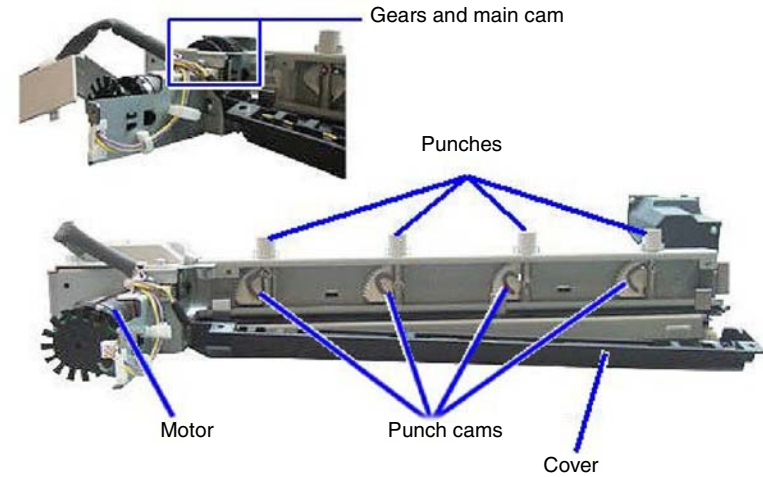
Figure 44 Hole punch assembly

Hole Punch Components

The hole punch assembly consists of a motor, gears, main cam, four (XE) or three (USSG, XCL) punch cams and a punch box.

The motor raises and lowers the punches through one cycle of the gears.

When the motor rotates in a clockwise direction it operates the two inner punch cams and in a counter-clockwise direction it operates all four (XE) or three (USSG, XCL) punch cams. Refer to [Figure 45](#).



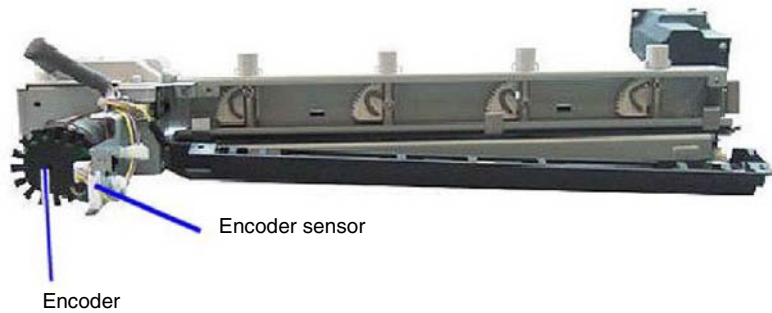
F-5-0045-A

Figure 45 Hole punch components

Hole Punch Encoder

The operation of the hole punch is controlled by an encoder and sensor. The encoder has a number of apertures cut into it and is connected to the motor. As the motor rotates the gears to operate the hole punch, the encoder also rotates.

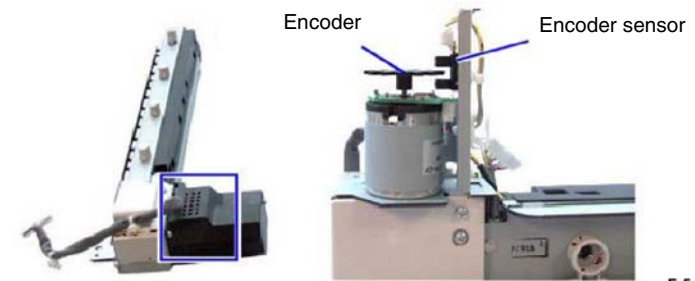
The rotation of the encoder is monitored by the encoder sensor which is an optical sensor that reflects light onto the encoder. Refer to [Figure 46](#).



F-5-0046-A

Figure 46 Hole punch encoder

The rotation of the encoder wheel causes the apertures to pass through the encoder sensor wheel, allowing light to pass. This triggers the sensor, which indicates that the hole punch has rotated one cycle. Refer to [Figure 47](#).

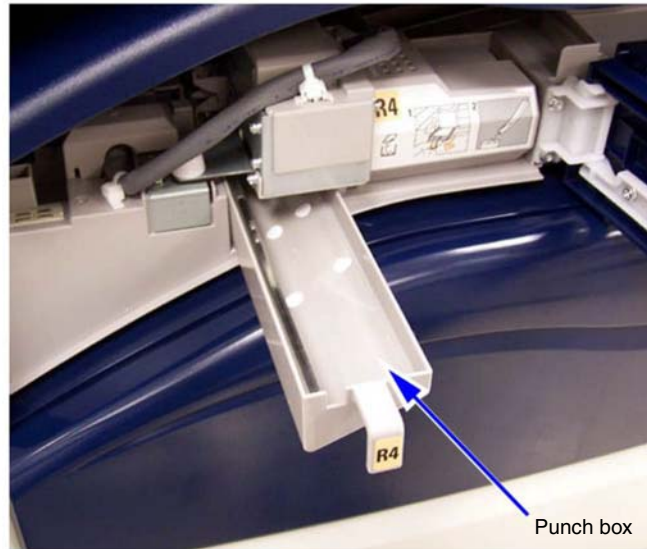


F-5-0047-A

Figure 47 Encoder wheel and sensor

Hole Punch Box

The punch box is located beneath the hole punch assembly and collects the discarded chads. This will need to be emptied periodically. Refer to [Figure 48](#).



Punch box

F-5-0048-A

Figure 48 Hole punch box

Customer Replaceable Units

Refer to [Figure 49](#). The only customer replaceable units (CRUs) for the LX finisher are:

- The 5,000 stitch staple cartridge and
- The two staple cassettes for the booklet maker. Each of the staple cassettes holds 2,000 staples.

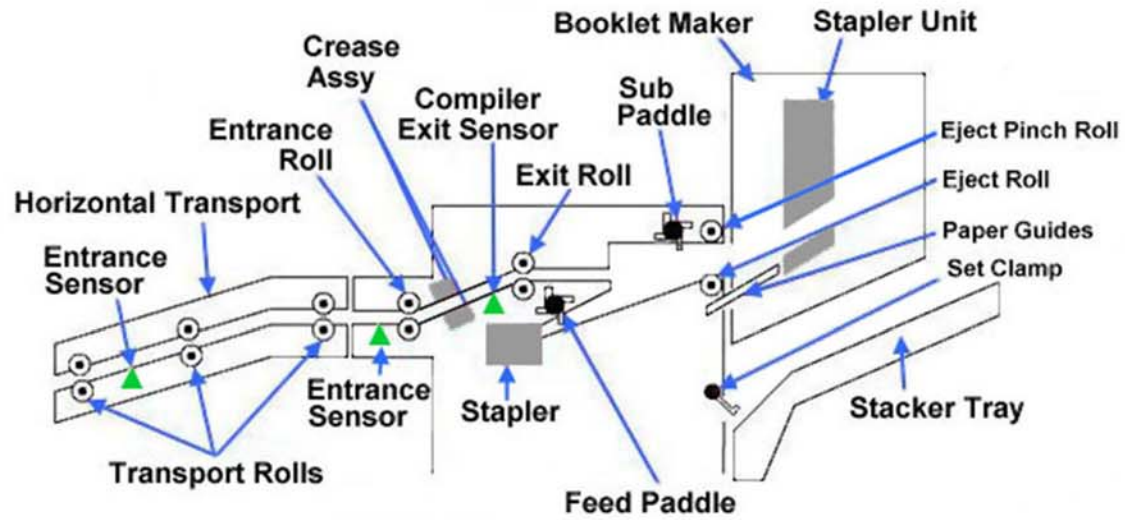


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Figure 49 Customer replaceable units

Paper Path Components

Refer to [Figure 50](#).



TF-5-0050-A

Figure 50 Paper path components

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