

Transmittal Page

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**Xerox
WorkCentre
M20 Family
Service Manual**

Front pocket insert

**Xerox
WorkCentre M20 Family
Service Manual**

Spine insert

***Xerox WorkCentre M20 Family
Service Manual***



WorkCentre M20 Family

Service Documentation

WorkCentre M20 Service Manual

708P87563

March 2004

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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.

This manual is based on a Japanese original. The part names used throughout do not comply with the standard Xerox part naming convention. Because part names have been molded on to some plastic components and may also be embedded in the software, the part names have not been changed.

To aid part identification, an acronym list and cross reference lists of more commonly recognised part names have been included in the manual. Refer to GP 20, Acronyms and Parts Description List.

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 printed format. The information within the manual is divided into an introduction and eight other sections.

Section 1 Service Call Procedures

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

Section 2 Status Indicator Repair Analysis Procedures

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

Section 3 Image Quality

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

Section 4 Repairs/Adjustments

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

Section 5 Parts List

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

Section 6 General Procedures / Information

This section contains all other procedures, product specifications and general information.

Section 7 Wiring Data

This section contains the wiring diagrams.

Section 8 Accessories

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

Publication Comments Sheet

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

Warnings, Cautions And Notes

A translated version of all warnings is in 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.

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.

The following are examples of the symbols that are used in this manual for an electrostatic damage caution and laser radiation warning.

ESD caution symbol



CAUTION

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

Laser radiation warning symbol.



WARNING

Follow the service procedure exactly as written. Use of controls or adjustments other than those specified in this manual, may result in an exposure to invisible laser radiation. During servicing, the invisible laser radiation can cause eye damage if looked at directly.

Safety Precautions

Follow these safety, ESD, and servicing precautions to prevent personal injury and equipment damage.

1. Ensure that all built in protective devices are in place. Restore any missing protective shields.
2. Make sure there are no cabinet openings through which people, particularly children, might insert fingers or objects and contact dangerous voltages.
3. When re-installing chassis and assemblies, be sure to restore all protective devices, including control knobs and compartment covers.
4. Design alteration warning; never alter or add to the mechanical or electrical design of this equipment, such as auxiliary connectors, etc. Such alterations and modifications will void the manufacturers warranty.
5. Components, parts, and wiring that appear to have overheated or are otherwise damaged should be replaced with parts which meet the original specifications. Always determine the cause of damage or overheating, and correct any potential hazards.
6. Observe the original harness routing, especially near sharp edges, AC, and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board.
7. Product safety notice; some electrical and mechanical parts have special safety related characteristics which might not be obvious from visual inspection. These safety features and the protection they provide could be lost if a replacement component differs from the original. This holds true, even though the replacement may be rated for higher voltage, wattage, etc.
8. Use only replacement components that have the same ratings, especially for flame resistance and dielectric specifications. A replacement part that does not have the same safety characteristics as the original may create shock, fire, or other safety hazards.

ESD Precautions

1. Certain semiconductor devices can be easily damaged by static electricity. Such components are commonly called 'Electrostatically Sensitive (ES) Devices', or ESDs. Examples of typical ESDs are: integrated circuits, some field effect transistors, and semiconductor 'chip' components.

The techniques outlined below should be followed to help reduce the incidence of component damage caused by static electricity.

CAUTION

Ensure no power is applied to the chassis or circuit, and observe all other safety precautions.

2. Immediately before handling a semiconductor component or semiconductor-equipped assembly, discharge any electrostatic charge on your body by touching a known earth ground. Alternatively, employ a commercially available wrist strap device, which should be removed for your personal safety reasons prior to applying power to the unit under test.
3. After removing an electrical assembly equipped with ESDs, place the assembly on a conductive surface, such as aluminum or copper foil, or conductive foam, to prevent electrostatic charge buildup in the vicinity of the assembly.
4. Use only a grounded tip soldering iron to solder or desolder ESDs.
Use only an 'anti-static' solder removal device. Some solder removal devices not classified as 'anti-static' can generate electrical charges sufficient to damage ESDs.

5. Do not use freon propelled chemicals. When sprayed, these can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective packaging until immediately before installing it. Most replacement ESDs are packaged with all leads shorted together by conductive foam, aluminum foil, or a comparable conductive material.
7. Immediately before removing the protective shorting material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
8. Maintain continuous electrical contact between the ESD and the assembly into which it will be installed, until completely plugged or soldered into the circuit.
9. Minimize body motion when handling unpacked replacement ESDs. Normal motions, such as the brushing together of clothing fabric and lifting a foot from a carpeted floor, can generate static electricity sufficient to damage an ESD.

Lithium Battery Precautions

1. Exercise caution when replacing a lithium battery. There could be a danger of explosion and subsequent operator injury and/or equipment damage if incorrectly installed.
2. Be sure to replace the battery with the same or equivalent type recommended by the manufacturer.
3. Lithium batteries contain toxic substances and should not be opened, crushed, or burned for disposal.
4. Dispose of used batteries according to the manufacture's instructions.

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 organisations shall establish a process for individuals to report product incidents to Xerox Environment Health & Safety within 24 hours of becoming aware of the event.
2. The information to be provided at the time of reporting is contained in Appendix A (Health and Safety Incident Report involving a Xerox product).
3. The initial notification may be made by any of the following methods:
 - For incidents in North America and Developing Markets West (Brazil, Mexico, Latin American North and Latin American South):
 - Phone* Xerox EH&S at: 1-800-828-6571.
 - Electronic mail Xerox EH&S at: Doris.Bush@usa.xerox.com.
 - Fax Xerox EH&S at: 1-585-422-6449 [internet 8*222 6449].
 - For incidents in Europe and Developing Markets East (Middle East, Africa, India, China and Hong Kong):
 - Phone* Xerox EH&S at: +44 (0) 1707 353434.
 - Electronic mail Xerox EH&S at: Elaine.Grange@GBR.xerox.com.
 - Fax Xerox EH&S at: +44 (0) 1707 353914 [internet 8*668 3914].

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

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

Responsibilities for resolution:

1. Business Groups/Product Design Teams responsible for the product involved in the incident shall:
 - a. Manage field bulletins, customer correspondence, product recalls, safety retrofits.
 - b. Fund all field retrofits.

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

VI. Appendices

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

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

Translation of Warnings

Introduction

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.

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

Follow the service procedure exactly as written. Use of controls or adjustments other than those specified in this manual, may result in an exposure to invisible laser radiation. During servicing, the invisible laser radiation can cause eye damage if looked at directly.

DANGER : Les procédures de dépannage doivent être suivies à la lettre. Si les réglages ou vérifications ne sont pas effectués suivant les instructions de ce manuel, il peut y avoir un risque d'exposition dangereuse au faisceau laser. Celui-ci peut provoquer des lésions oculaires s'il est observé directement.

AVVERTENZA: Eseguire le procedure di servizio esattamente come descritto. L'utilizzo di dispositivi di controllo o di registrazione diversi da quelli riportati in questo manuale potrebbe comportare un'esposizione a radiazioni laser invisibili. Tali radiazioni possono danneggiare gli occhi se si guarda direttamente il fascio laser durante gli interventi di servizio.

VORSICHT: Die Wartungsarbeiten genau den Anweisungen entsprechend durchführen. Der Umgang mit Steuer- oder Bedienelementen, deren Verwendung nicht ausdrücklich in diesem Handbuch angewiesen wurde, kann dazu führen, dass unsichtbare Laserstrahlung frei gesetzt wird. Direkter Blickkontakt mit dem Laserstrahl kann bleibende Augenschäden verursachen.

AVISO: Siga los procedimientos de mantenimiento tal como están descritos. El uso de controles o ajustes no especificados en este manual puede tener como resultado la exposición a radiación láser invisible. Durante las operaciones de mantenimiento, la radiación de láser invisible puede causar daños en los ojos si se mira directamente a ella.

1 Service Call Procedures

SCP 1 Initial Actions

WARNING

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

DANGER : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

WARNING

Do not work in a confined space. 1m (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.

SCP 5 Subsystem Maintenance

WARNING

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

DANGER : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

2 Status Indicator RAPs

1.1 Power Failure RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

mentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegnere la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

5.1 Load Document RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegnere la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

5.2 Document Jam RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les

pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegnere la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

6.1 LSU Error RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegnere la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

WARNING

Avoid exposure to laser beam. Invisible laser radiation.

DANGER : Eviter toute exposition au faisceau laser. Radiation laser invisible.

AVVERTENZA: Evitare l'esposizione al fascio laser. Radiazioni laser invisibili.

VORSICHT: Nicht in den Laserstrahl blicken. Verletzungsgefahr durch unsichtbare Laserstrahlung.

AVISO: Evite la exposición al rayo láser. Radiación de láser invisible.

8.1 Door Open RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegnere la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

8.2 Bypass Jam RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

8.3 Duplex Jam RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

8.4 Paper Jam 0 Open/Close Door RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

8.5 Paper Jam 1 Open/Close Door RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar 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.

8.6 Paper Jam 2 Open/Close Door RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimenta-

tion électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar 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.

8.7 No Paper Add Paper RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

9.1 Install Cartridge RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

9.2 Non-Xerox Toner Cartridge RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

9.3 Drum Warning RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

9.4 Replace Drum RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

9.5 Toner Empty RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

9.6 Toner Low RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

10.1 Low Heat Error RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar 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.

10.2 Open Heat Error RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar 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.

10.3 Over Heat Error RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar 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.

20.1 Fax Error Messages RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

20.2 Scan to E-mail Error Messages RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

20.3 Fax Faults Without a Message RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

OF1 Function Impossible RAP

WARNING

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pièces mobiles peuvent également présenter un danger.

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OF2 IP Conflict RAP

WARNING

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AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

OF3 Use Auxiliary Access RAP

WARNING

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OF4 Audible Noise RAP

WARNING

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3 Image Quality RAPs

IQ1 Blank Copies RAP

WARNING

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IQ2 Black Copies From the Scanner RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

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onare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

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IQ3 Blurred Image From the Scanner RAP

WARNING

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DANGER : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

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IQ4 Vertical Black Lines or Bands RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

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IQ5 Vertical White Lines RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

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IQ6 Light Image RAP

WARNING

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IQ7 Dark Image RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

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IQ8 Background RAP

WARNING

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IQ9 Ghost Images RAP

WARNING

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IQ10 Stains on Back of Paper RAP

WARNING

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injury. Moving parts can cause injury.

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IQ11 Poor Fusing RAP

WARNING

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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.

IQ12 Partial Blank Image (Not Periodic) RAP

WARNING

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IQ13 Partial Blank Image (Periodic) RAP

WARNING

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IQ14 Different Image Density (Left and Right) RAP

WARNING

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IQ15 Horizontal Bands RAP

WARNING

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IQ16 Periodic Printing Defects Check RAP

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

4 Repairs and Adjustments

REP 1.1 SMPS + HVPS

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli

interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 1.2 PBA Main

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 2.1 ELA HOU OPE Assembly

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 4.1 ELA HOU - Drive Assembly

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 4.2 MEA Unit - Rear Cover

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 4.3 PMO Cover Exit Rear

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 4.4 ELA HOU - Frame Main Assembly

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 5.1 ELA HOU - DADF

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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 remove the DADF while the DADF is lowered. In the lowered position the counterbalance springs are compressed and can cause injury when released.

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

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

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

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

REP 6.1 Unit - LSU

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

mentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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

Avoid exposure to laser beam. Invisible laser radiation.

DANGER : Éviter toute exposition au faisceau laser. Radiation laser invisible.

AVVERTENZA: Evitare l'esposizione al fascio laser. Radiazioni laser invisibili.

VORSICHT: Nicht in den Laserstrahl blicken. Verletzungsgefahr durch unsichtbare Laserstrahlung.

AVISO: Evite la exposición al rayo láser. Radiación de láser invisible.

REP 7.1 MEC Unit - Tray Assembly

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 8.1 ELA HOU - Side Cover Assembly

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 8.2 MEA Unit - Duplex Assembly

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les

pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 8.3 Transfer Roller Assembly

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 8.4 ELA HOU - MP Assembly

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegnere la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 8.5 MEA Unit - Feed Roller Assembly

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegnere la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 8.6 ELA HOU - Pickup Assembly

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegnere la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 10.1 ELA HOU - Fuser Assembly

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les

pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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 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.

REP 10.2 MEC - Exit Assembly

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 10.3 MEA Unit - Cover PA Exit Assembly

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azionare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

REP 14.1 ELA HOU - Scanner Assembly

WARNING

Switch off the electricity to the machine. Disconnect the power 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 : Couper l'alimentation électrique de la machine. Déconnecter le cordon d'alimentation de la prise pendant les activités de dépannage ne nécessitant pas d'alimentation électrique. L'électricité peut entraîner des blessures graves voire mortelles. Les pièces mobiles peuvent également présenter un danger.

AVVERTENZA: Spegner la macchina. Scollegare il cavo elettrico dalla presa durante gli interventi che non richiedono elettricità. L'elettricità può causare infortuni o morte e azi-

onare parti della macchina che possono causare lesioni personali.

VORSICHT: Gerät ausschalten. Bei Wartungsarbeiten, die keine Stromzufuhr erfordern, Netzstecker ziehen! Bei Kontakt mit der Netzspannung besteht Verletzungs- und Lebensgefahr. Bei beweglichen Teilen besteht Verletzungsgefahr.

AVISO: Apague la máquina. Desconecte el cable de alimentación de la toma de corriente mientras efectúa tareas que no necesitan energía eléctrica. La electricidad puede causar lesiones e incluso la muerte. Las piezas móviles pueden causar lesiones.

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.

1 Service Call Procedures

SCP 1 Initial Actions..... 1-3
SCP 2 First Call Actions 1-3
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SCP 1 Initial Actions

Initial Actions are used to gather information on the machine performance

The Service Call Procedures section is used to identify a suspected problem with the machine.

Start a service call with this procedure and end with SCP 6 Final Actions.

Also refer to SCP 7 Machine Features.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer's supply while performing tasks that do not need electricity. 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.

NOTE: Ignore any references in this manual to options not installed on the machine.

1. Take note of symptoms or error messages.
2. Ask the operator to describe or demonstrate the problem.
3. Make sure that:
 - a. The power cord is connected to the wall outlet and to the machine.
 - b. Documents are not loaded in the DADF or on the document glass.
 - c. Paper is loaded correctly and all paper trays and covers are closed
 - d. If installed, the telephone line cable is connected correctly between the line socket and the wall jack.
 - e. If installed, the telephone line is good.
 - f. If installed, the USB cable, parallel printer cable or network connection is installed correctly.
4. If available, check the machine service log book for any previous actions that may be relevant to the call.
5. If this is the first service call to this machine perform SCP 2 First Call Actions, otherwise go to SCP 3 Normal Call Actions.

SCP 2 First Call Actions

First Call Actions are used for the first service call.

Procedure

1. Check the machine configuration with the customer. Check that all required hardware and software is installed and/or enabled.
2. Check that all the relevant machine settings are correctly entered, refer to GP 2.
3. Mark off any hardware/software options and modifications installed and/or enabled on the Tag matrix card.
4. If a fault is present, go to SCP 3 Normal Call Actions. If there is no fault present, go to SCP 6 Final Actions.
5. Enter the machine details and the customer details in the service logbook.

SCP 3 Normal Call Actions

Normal Call Actions are used to determine the reason for the service call.

Procedure

NOTE: If a fault message appears at any time. Refer directly to the RAP for the fault message and perform the procedure.

Perform the following:

1. Review any defective print or copy samples.
2. Determine that the user accessible settings are correct. If necessary refer to the user documentation.
3. Check all job queues and verify with the customer any requirement to print the documents in memory, before switching off the power or clearing memory.
4. Print the Billing/Counters report, then record the total print count, refer to GP 3.
5. Go to SCP 4 Fault Analysis.

SCP 4 Fault Analysis

Fault Analysis is used to identify a fault.

Procedure

When diagnosing or repairing a fault in a particular subsystem, exercise the machine in all modes until the fault is determined. In the instance of finding more than one fault or failure, correct one fault before going to the next fault. If no fault is found, go to SCP 5 Subsystem Maintenance.

Fault Messages

If a fault message is displayed, go to the relevant RAP:

- 5.1 Load Documents RAP.
- 5.2 Document Jam RAP.
- 6.1 LSU Error RAP.
- 8.1 Door Open RAP.
- 8.2 Bypass Jam RAP.
- 8.3 Duplex Jam RAP.
- 8.4 Paper Jam 0 Open/Close Door RAP.
- 8.5 Paper Jam 1 Open/Close Door RAP.
- 8.6 Paper Jam 2 Check Inside RAP.
- 8.7 No Paper Add Paper RAP.
- 9.1 Install Cartridge RAP.
- 9.2 Non-Xerox Toner Cartridge RAP.
- 9.3 Drum Warning RAP.
- 9.4 Replace Drum RAP.
- 9.5 Toner Empty RAP.
- 9.6 Toner Low RAP.
- 10.1 Low Heat Error RAP.
- 10.2 Open Heat Error RAP.
- 10.3 Over Heat Error RAP.
- 20.1 FAX Error Messages RAP.
- 20.2 Scan to E-mail Error Messages RAP.
- OF1 Function Impossible RAP.
- OF2 IP Conflict RAP.
- OF3 Use Auxiliary Access RAP.

Power Failure

If the machine fails to power on, go to the 1.1 Power Failure RAP.

Image Quality Defects

If the image quality is defective, go to the relevant RAP:

- IQ1 Blank Copies RAP.
- IQ2 Black Copies From the Scanner RAP.
- IQ3 Blurred Image From the Scanner RAP,.
- IQ4 Vertical Black Lines or Bands RAP.

- IQ5 Vertical White Lines RAP.
- IQ6 Light Image RAP
- IQ7 Dark Image RAP.
- IQ8 Background RAP
- IQ9 Ghost Images RAP.
- IQ10 Stains on Back of Paper RAP.
- IQ11 Poor Fusing RAP.
- IQ12 Partial Blank Image (Not Periodic RAP).
- IQ13 Partial Blank Image (Periodic) RAP.
- IQ14 Different Image Density (Left and Right) RAP.
- IQ15 Horizontal Bands RAP.
- IQ16 Periodic Printing Defects Check RAP.

For image quality specifications, refer to the following:

- IQS 1 Solid Area Density.
- IQS 2 Skew.
- IQS 3 Registration.

Fax Faults

If the machine has a fax fault, go to the 20.3 Fax Faults Without a Message RAP.

Audible noise

If the machine is making an unusual noise, go to the OF4 Audible Noise RAP.

Machine Settings

To make any adjustments to the machine, refer to ADJ 1.1 Machine Settings.

Additional Information

If necessary, refer to the following general procedures and information:

- GP 1 Engine Test Mode Entry.
- GP 2 User Mode Entry.
- GP 3 Service Mode Entry.
- GP 4 Fax Setup.
- GP 5 Memory Clear.
- GP 6 Maintenance.
- GP 7 Reports.
- GP 8 Firmware Upgrade.
- GP 9 Identify Sale Date (M20i Only).
- GP 10 General Disassembly Precautions.
- GP 11 Machine Specifications.
- GP 12 Circuit Description.
- GP 13 Circuit Operation.
- GP 14 Scanner Operation.
- GP 15 Host Interface.
- GP 16 Engine Controller.

- GP 17 PBA OPE Operation.
- GP 18 PBA LIU Operation.
- GP 19 SMPS Unit Operation.
- GP 20 Acronyms and Parts Description List.
- GP 21 DADF Document Feeding Specifications.
- GP 22 Paper and Media Specifications.
- GP 23 Service Log.

SCP 5 Subsystem Maintenance

Subsystem Maintenance contains information regarding the Component Life of the machine.

Component Life

WARNING

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

The component life outlined in Table 1 is a general guideline for maintenance. The example list is for an average usage of 50 transmitted and received documents per day. Environmental conditions and actual use will vary these factors. The component life shown in Table 1 is for reference only.

Table 1 Component life expectancies

Part	Component life	Parts list reference
MEA Unit - holder DADF rubber	20k feeds	PL 5.13 Item 7
MEA unit - pickup	50k feeds	PL 5.13 Item 17
RPR rubber pickup	50k feeds	PL 8.25 Item 16
Rubber pickup small	50k feeds	PL 8.25 Item 17
Rubber - roller pickup	50k feeds	PL 7.15 Item 9
Rubber - roller pickup S	50k feeds	PL 7.15 Item 10
Transfer roller	100k prints	PL 8.10 Item 33
ELA HOU - fuser assembly	100k prints	PL 9.10 Item 4
ELA - toner unit set	8k prints	PL 9.10 Item 2
ELA - OPC unit set	20k prints	PL 9.10 Item 1

SCP 6 Final Actions

Final Actions are used to evaluate the total operation of the system and to identify the actions required to complete the service call.

Procedure

Complete the following, if a fault is identified, return to SCP 4 Fault Analysis:

- Perform the end of call subsystem maintenance actions, SCP 5 Subsystem Maintenance.
- Exercise the machine in all modes, making copies and/or prints from all trays, utilising the DADF and the document glass, If a fault message is displayed or some other problem is evident, go to SCP 4 Fault Analysis.
- Make a proof copy or print of a customer document.
- If any of the customers selections were changed, return them to the customers preferred settings, refer to GP 2.
- Mark off any hardware/software options and modifications installed and/or enabled on the Tag matrix card.
- At the first service and at any subsequent service where changes are made or options are added, print the configuration report and store it in the plastic folder along with the machine log book. Discard any previous versions of the configuration report that may be in the plastic folder.
- Remove and destroy any copies of test patterns.
- Complete the machine service log book, refer to GP 23 Service Log.
- Ensure the machine and service area are clean before leaving the customer premises.
- Provide customer training if required.

SCP 7 Machine Configurations and Options

Machine Configurations and Options

Refer to Table 1 for the CopyCentre C20, WorkCentre M20 and WorkCentre M20i configurations and options.

Table 1 Machine Configurations

Features	CC C20	WC M20	WC M20i
Basic copier with paper tray 1	Yes	Yes	Yes
Paper tray 2	Optional	Optional	Optional
Bypass tray	Yes	Yes	Yes
Stand	Optional	Optional	Optional
Duplex assembly	Yes	Yes	Yes
DADF	Yes	Yes	Yes
Direct printing	No	Yes	Yes
Scan to file	No	Yes	Yes
Network printing	No	Optional (see note 1)	Yes
Fax	No	No	Yes
Scan to e-mail	No	Optional (see note 1)	Yes
Qwerty keyboard	No	Optional (see note 1)	Yes
Foreign device interface	Optional	Optional	Optional
Network connectivity kit	No	Optional	No
Postscript 3 DIMM	No	Optional (see note 1)	Yes
Onboard memory (32Mb)	Yes	Yes	Yes
Extra memory (48Mb)	No	No	Yes
Extra memory (32Mb)	No	Optional (see note 1)	No

NOTE: 1. These components are only available as part of the network accessories kit.

NOTE: 2. This service manual covers all the above configurations. Within this manual ignore any references to options that are not installed.

2 Status Indicator RAPs

1.1 Power Failure RAP.....	2-3
5.1 Load Document RAP	2-4
5.2 Document Jam RAP.....	2-4
6.1 LSU Error RAP	2-5
8.1 Door Open RAP	2-5
8.2 Bypass Jam RAP	2-6
8.3 Duplex Jam RAP.....	2-6
8.4 Paper Jam 0 Open/Close Door RAP.....	2-7
8.5 Paper Jam 1 Open/Close Door RAP.....	2-7
8.6 Paper Jam 2 Check Inside RAP.....	2-8
8.7 No Paper Add Paper RAP.....	2-8
9.1 Install Cartridge RAP.....	2-9
9.2 Non-Xerox Toner Cartridge RAP	2-9
9.3 Drum Warning RAP.....	2-10
9.4 Replace Drum RAP	2-10
9.5 Toner Empty RAP	2-11
9.6 Toner Low RAP	2-11
10.1 Low Heat Error RAP.....	2-12
10.2 Open Heat Error RAP	2-12
10.3 Over Heat Error RAP	2-13
20.1 Fax Error Messages RAP	2-13
20.2 Scan to E-mail Error Messages RAP	2-14
20.3 Fax Faults Without a Message RAP	2-15
OF1 Function Impossible RAP	2-16
OF2 IP Conflict RAP	2-16
OF3 Use Auxiliary Access RAP	2-17
OF4 Audible Noise RAP.....	2-17

1.1 Power Failure RAP

Use this RAP to identify the cause of a power supply failure.

Procedure

WARNING

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

WARNING

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

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

NOTE: Throughout this procedure, where further steps require the reconnection of a component, ensure they are reconnected before performing the next step.

Refer to Wiring Diagram 1, Wiring Diagram 2, Wiring Diagram 3 and Wiring Diagram 4. Perform the following:

1. Ensure the supply voltage is correct. If possible, connect the machine to a known good power supply. If the original power supply is faulty, inform the customer.
2. Disconnect the power cord from the power outlet and the machine. Check the continuity of the power cord. If necessary, install a new power cord, PL 1.10 Item 20.
3. Disconnect the inline connector between the CBF harness - inlet, PL 1.10 Item 8 and the CBF power switch grey, PL 1.10 Item 3. Measure the AC supply voltage between pins 1 and 2 on the inline connector. Repair the wiring as necessary.
4. Disconnect CON1 on the SMPS + HVPS. Measure the AC supply voltage between pins 1 and 3 on the connector. If necessary, install a new CBF power switch grey, PL 1.10 Item 2.
5. Check the voltages at both sides of the fuses on the SMPS + HVPS:
 - Fuse F1 - 110V (NASG) or 220/240V (XE).
 - Fuse F2 - 110V (NASG) or 220/240V (XE).
 - Fuse F3 - 5VDC.

If necessary, install a new SMPS + HVPS, PL 1.10 Item 1.

NOTE: Fuses F1, F2 and F3 are not spared.

6. Switch off the power to the machine. Disconnect all harnesses on the SMPS + HVPS, other than CON1 and CON101.
7. Switch on the power to the machine. If the machine switches on, perform step 8. If the machine fails to switch on, perform step 9.
8. Sequentially reconnect each connector onto the SMPS + HVPS. When the faulty circuit has been identified, repair the wiring or install components as necessary.
9. Reconnect all connectors to the SMPS + HVPS. Disconnect all connectors on the PBA main, PL 1.10 Item 9. Sequentially reconnect each connector onto the PBA main. If the faulty circuit is identified, repair the wiring or install components as necessary. If the machine still fails to switch on, install the following components as necessary:
 - CBF harness - power + HVPS, PL 1.10 Item 3.
 - PBA main, PL 1.10 Item 9

10. If the fault is still present, install a new SMPS + HVPS, PL 1.10 Item 1.

5.1 Load Document RAP

The machine has detected a no document loaded, when a document is required.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 5. Perform the following:

1. Load a document and try again.
2. Check that the PMO - actuator DOC moves freely, PL 5.13 Item 12.
3. If necessary, install a new ELA HOU - DADF SUB, PL 5.10 Item 31.

5.2 Document Jam RAP

The machine has detected a jammed document in the DADF.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 5. Perform the following:

1. Open the DADF and clear the jam. Raise the duplex guide. Ensure the area is clean and free from paper.
2. Ensure the customer is not attempting to feed documents that are outside specification. Refer to GP 21 DADF Document Feeding Specifications.
3. Clean the DADF pickup roller, PL 5.13 Item 17 and MEA unit DADF rubber, PL 5.13 Item 9.
4. Check the following sensors:
 - PBA SUB - DOC width, PL 5.13 Item 10.
 - PMO - actuator REGI, PL 5.10 Item 10.
 - PBA - SUB - gate, PL 5.14 Item 10.
 - PBA SUB - REGI, PL 5.10 Item 9.
 - PBA SUB - exit open, PL 5.13 Item 11.

NOTE: It is not possible to test the DADF sensors using GP 1, Engine Test Mode Entry.

5. If necessary, install a new ELA HOU - DADF SUB, PL 5.10 Item 31.

6.1 LSU Error RAP

The machine has detected that the LSU unit has not come to the ready state at the expected time.

Procedure

WARNING

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

WARNING

Avoid exposure to laser beam. Invisible laser radiation.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 3. Perform the following:

1. Switch off the machine. Switch on the machine.
2. The CBF - harness; switch - micro, PL 4.15 Item 20, controls the +5V supply to the unit - LSU. Enter GP 1 Engine Test Mode Entry. Use the sensor test to check the CBF - harness; switch - micro and install a new part as necessary.
3. If the fault persists, check the CBF harness - LSU, PL 6.10 Item 2. Repair or install a new part as necessary.
4. Enter GP 1 Engine Test Mode Entry. Use the LSU motor test to check the operation of the LSU motor.
5. Install a new unit - LSU, PL 6.10 Item 1.
6. If necessary, install a new PBA main, PL 1.10 Item 9.

8.1 Door Open RAP

The machine has detected that the right hand side cover is open. When the cover is open, there is no +5V supply to the LSU laser unit and no +24V supply to the main motor, the LSU laser unit motor or the HVPS.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 4. Perform the following:

1. Close the right hand cover.
2. Enter GP 1 Engine Test Mode Entry. Use the sensor test to check the CBF - harness; switch - micro.
3. If necessary, install new components
 - CBF - harness; switch - micro, PL 4.15 Item 20.
 - PBA main, PL 1.10 Item 9.

8.2 Bypass Jam RAP

The machine has detected a failure to feed from the bypass tray.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 4. Perform the following:

1. Check that the area at the bypass tray is clean and that the PMO actuator MP moves freely, PL 8.20 Item 12.
2. Enter GP 1 Engine Test Mode Entry. Use the sensor test to check the (ME) PBA sub MP sensor.
3. If necessary, install new components
 - PBA SUB - MP SEN, PL 8.20 Item 24.
 - PBA main, PL 1.10 Item 9.

8.3 Duplex Jam RAP

The machine has detected the paper jam during duplex printing.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 3. Perform the following:

1. Open the right hand cover. Remove all jammed paper.
2. Check that the paper path is clear and undamaged.
3. Enter GP 1 Engine Test Mode Entry. Use the sensor test to check the following sensors. Install new components as necessary:
 - FD. This is the feed sensor, part of the PBA SUB - feed & P.EMP SEN, PL 8.25 Item 12.
 - EX. This is the PBA SUB - exit sensor, PL 4.15 Item 22.
 - OB. This is the PBA SUB - bin full sensor, PL 10.10 Item 20.
4. Enter GP 1 Engine Test Mode Entry and check that the motor step - MCK2 (main) and the motor DC - MCK2 (BLDC) run. Install new components as necessary, PL 4.20.
5. Rotate the duplex drive gears at the rear of the machine to remove any paper. The gears should rotate freely. Install new components as necessary, PL 8.10 and PL 8.11.
6. Disconnect the power cord from the machine and remove the rear cover. Manually rotate, in a counter clockwise direction, the motor DC - MCK2 (BLDC), PL 4.20 Item 4. Observe the PMO - roller feed, PL 8.15 Item 10. Check that the PMO - roller feed rotates when the motor is rotated. Install new components as necessary.
7. Manually rotate, in a counter clockwise direction, the motor step - MCK2 (main), PL 4.20 Item 2. Observe the PM - roller FD F, PL 10.10 Item 16. Check that the PM - roller FD F rotate when the motor is rotated. Install new components as necessary.
8. If necessary, install a new PBA main, PL 1.10 Item 9.

8.4 Paper Jam 0 Open/Close Door RAP

The machine has failed to detect paper at the feed sensor.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 3. Perform the following:

1. Open the right hand cover. Remove all jammed paper.
2. Open the paper tray. Remove all jammed paper. Close the paper tray.
3. Enter GP 1 Engine Test Mode Entry. Use the sensor test to check FD. This is the feed sensor, part of the PBA SUB - Feed & P.EMP SEN, PL 8.25 Item 12.
4. Enter GP 1 Engine Test Mode Entry and check the motor DC - MCK2 (BLDC). Install new components as necessary, PL 4.20.
5. Enter GP 1 Engine Test Mode Entry and using the MP solenoid test. Check the operation of the solenoid - pickup, PL 4.10 Item 25. Install new components as necessary.
6. If necessary, install a new PBA main, PL 1.10 Item 9.

8.5 Paper Jam 1 Open/Close Door RAP

The machine has detected paper jammed in the fuser area.

Procedure

WARNING

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

WARNING

Do not touch the fuser while it is hot.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 3. Perform the following:

1. Open the right hand cover. Remove all jammed paper from the fuser area. Ensure that the paper path is clear.
2. Enter GP 1 Engine Test Mode Entry. Use the sensor test to check EX. This is the PBA SUB - exit sensor, PL 4.15 Item 22.
3. Enter GP 1 Engine Test Mode Entry. Check that the motor step - MCK2 (main) (fuser motor) runs. Install new components as necessary, PL 4.20.
4. If necessary, install a new PBA main, PL 1.10 Item 9.

8.6 Paper Jam 2 Check Inside RAP

The machine has detected paper at the output sensor.

Procedure

WARNING

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

WARNING

Do not touch the fuser while it is hot.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 3. Perform the following:

1. Remove all of the jammed paper from the exit area.
2. Open the right hand cover. Remove all paper.
3. Check that the paper path is clear.
4. Enter GP 1 Engine Test Mode Entry. Use the sensor test to check OB. This is the PBA SUB - bin full sensor, PL 10.10 Item 20.
5. Enter GP 1 Engine Test Mode Entry. Check that the motor step - MCK2 (main) (fuser motor) runs. Install new components as necessary, PL 4.20.
6. If necessary, install a new PBA main, PL 1.10 Item 9.

8.7 No Paper Add Paper RAP

The machine does not detect paper in the paper tray.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 3. Perform the following:

1. Add paper to the paper tray.
2. If necessary, enter GP 1 Engine Test Mode Entry and check FE. This is the paper entry sensor, part of the PBA SUB - feed & P.EMP SEN, PL 8.25 Item 12.
3. If necessary, install a new PBA main, PL 1.10 Item 9.

9.1 Install Cartridge RAP

The toner cartridge is not installed or the CRUM in the toner cartridge is not in good contact with the PMO Housing Terminal MC2.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: *If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.*

Refer to Wiring Diagram 1. Perform the following:

1. Install the ELA - toner unit set, PL 9.10 Item 2.
2. Go to GP 1. Perform the Toner State test.
3. If the test cannot be performed, check the CRUM contact within the holder terminal, PL 4.15 Item 7.
4. Install new components as necessary:
 - ELA - toner unit set, PL 9.10 Item 2.
 - PBA main, PL 1.10 Item 9.

9.2 Non-Xerox Toner Cartridge RAP

The machine detects an incompatible toner cartridge.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: *If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.*

Refer to Wiring Diagram 1 and Wiring Diagram 3. Perform the following:

1. Ensure that the cartridge is the correct Xerox cartridge for the machine, ELA - toner unit set, PL 9.10 Item 2.
2. Go to GP 1. Perform the Toner State test.
3. If the test cannot be performed, check the CRUM contact within the holder terminal, PL 4.15 Item 7.
4. Install new components as necessary:
 - ELA - toner unit set, PL 9.10 Item 2.
 - PBA main, PL 1.10 Item 9.

9.3 Drum Warning RAP

The drum cartridge is near the end of the design life. The message indicates that the drum has reached 18,000 print pages. The drum life is 20,000 print pages.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: *If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.*

1. No immediate action is necessary. Ensure that a replacement cartridge is in stock, ELA - OPC unit set, PL 9.10 Item 1.

9.4 Replace Drum RAP

The drum cartridge has reached the end of the design life of 20,000 print pages.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: *If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.*

Refer to Wiring Diagram 1 and Wiring Diagram 4. Perform the following:

1. Install a new ELA - OPC unit set, PL 9.10 Item 1.
2. Go to GP 1. Perform the OPC Fuse State test and the OPC Fuse Check test.
3. Check for continuity between the spring contacts at the rear PMO frame main, PL 4.15 Item 11, and CN22 on the PBA main, PL 1.10 Item 9.
4. If the message persists, install a new PBA main, PL 1.10 Item 9.

9.5 Toner Empty RAP

The machine has detected that the toner cartridge is empty.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: *If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.*

Refer to Wiring Diagram 1. Perform the following:

1. Install a new ELA - toner unit set, PL 9.10 Item 2.
2. If the message persists, check the PBA SUB - toner RX, PL 4.15 Item 23, and the PBA SUB - toner TX, PL 8.25 Item 5.
3. If necessary, install a new PBA main, PL 1.10 Item 9.

9.6 Toner Low RAP

The machine has detected that the toner cartridge is almost empty.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: *If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.*

1. The toner may be unevenly distributed. Remove the ELA - toner unit set and gently shake it. If the message persists, install a new ELA - toner unit set, PL 9.10 Item 2.

10.1 Low Heat Error RAP

The fuser has failed to reach the correct operating temperature or a disconnected thermistor has been detected.

Procedure

WARNING

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

WARNING

Do not touch the fuser while it is hot.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 1 and Wiring Diagram 3. Perform the following:

1. Switch off the machine, then switch on the machine.
2. Go to GP 1. Perform Fuser Temp Check to verify the condition of the thermistor.
3. Go to GP 1. Perform Fuser Control Test to verify the heating lamp.
4. Switch off the machine. Remove the ELA HOU - fuser assembly. Check that the thermistor is in good contact with the fuser roll and is clean.
5. Check for continuity between the two pins on the ELA HOU - fuser assembly, where the fuser connects to the IPR terminal fuser, PL 4.15 Item 28.

NOTE: A cold fuser will have a resistance of approximately 46 ohms (220V/240V) or approximately 14 ohms (110V).

6. If necessary, install a new ELA HOU - fuser assembly, PL 9.10 Item 4.
7. If necessary, install a new PBA main, PL 1.10 Item 9.
8. If necessary, install a new SMPS + HVPS, PL 1.10 Item 4.

10.2 Open Heat Error RAP

During normal operation, the temperature has dropped below the operating level.

Procedure

WARNING

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

WARNING

Do not touch the fuser while it is hot.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 1 and Wiring Diagram 3. Perform the following:

1. Switch off the machine. Remove the ELA HOU - fuser assembly. Check that the thermistor is clean and is in good contact with the fuser roll.
2. Check the wiring from the thermistor to the PBA main.
3. Check for continuity between the two pins on the ELA HOU - fuser assembly, where the fuser connects to the IPR terminal fuser, PL 4.15 Item 28.

NOTE: A cold fuser will have a resistance of approximately 46 ohms (220V/240V) or approximately 14 ohms (110V).

4. Check that there is continuity through the fuser heater and across the over temperature cut-out.
5. If necessary, install a new ELA HOU - fuser assembly, PL 9.10 Item 4.
6. If necessary, install a new PBA main, PL 1.10 Item 9.
7. If necessary, install a new SMPS + HVPS, PL 1.10 Item 4.

10.3 Over Heat Error RAP

The fuser temperature has risen above the normal level. Although the fuser unit can return to a normal operating temperature, the fuser unit may consequently be damaged.

Procedure

WARNING

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

WARNING

Do not touch the fuser while it is hot.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 1, Wiring Diagram 2 and Wiring Diagram 3. Perform the following:

1. Switch off the machine. Remove the fuser unit. Examine the ELA HOU - fuser assembly for heat damage. If necessary, install a new ELA HOU - fuser assembly, PL 9.10 Item 4.
2. Check that the thermistor is connected to the PBA main.
3. Check that the thermistor is clean and in good contact with the fuser roll.
4. Check the wiring from CN5 on the PBA main to CON101 on the SMPS + HVPS.
5. If necessary, install a new PBA main, PL 1.10 Item 9.
6. If necessary, install a new SMPS + HVPS, PL 1.10 Item 4.

20.1 Fax Error Messages RAP

This is the set of messages displayed when the machine encounters fax problems. The messages are listed alphabetically, together with any recommended actions. Please note that the service actions are limited. If the machine has a fax fault without displaying a message, go to the 20.3 Fax Faults Without a Message RAP.

Messages

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Comm Error

Communication failure has occurred with either Fax transmission or reception. Try re-sending the Fax.

Group not available

The user has selected a group location where only a single location can be used, or when the group location is unavailable. Try again, checking for the correct group location.

Incompatible

The remote party does not have the feature the user has requested, for example, polling.

Line Busy

The remote party did not answer. Wait and try again.

Line Error

There is a problem with the phone line, affecting transmission or reception. Try again and if necessary, wait for the line to clear.

Memory Full

The Fax data memory is full. Delete any unnecessary documents awaiting transmission, or wait until more memory becomes available, or split the current Fax in to smaller units.

No Answer

It has not been possible to connect to the remote Fax, even after re-dial attempts. Check that the remote Fax is on line and try again.

No. Not Assigned

No number has been assigned for the speed dial location selected. Assign a number to this location or dial the number manually.

Power Failure

During a power-off period, the machine has lost its user memory. Check that the backup battery on the Main PBA is holding its charge of about +3V. If necessary, install a new PBA main, PL 1.10 Item 9.

Retry Redial?

This indicates that the machine is waiting to re-dial. Press **Start** to re-dial immediately, or press **Stop** to cancel the re-dial procedure.

20.2 Scan to E-mail Error Messages RAP

This is the set of messages displayed when the machine encounters scan to e-mail problems. The messages are listed alphabetically, together with any recommended action. Please note that service actions are limited.

Messages

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Address Book Full

The address book has reached the maximum number of entries. Clear any unused entries.

Authentication Failure

Either the ESMTP account identity or the password has failed the authentication process. Ensure that the correct data is entered.

Authentication Required

The mail server requires that authentication data is entered, or the authentication process has been disabled.

Configured already

The user is attempting to configure a group that has already been configured.

Connection Failure

There has been a communication or network failure during the SMTP or ESMTP operation.

Email Associated Cannot Delete

The user has attempted to delete an address book entry that is associated with group mail. Remove the group mail association then remove the entry.

Empty Address Book

The user has attempted to retrieve an address while the address book is empty.

Enter Again

The user has attempted to enter an invalid group number.

Entry Already Exists

The user has attempted to enter an address that already exists in the address book.

Group Empty

The user has attempted to delete a number from a group that is already empty.

Group Full

The user has attempted to enter a number into a group that is full. Try deleting unused numbers.

Invalid Email ID

The user has attempted to enter an invalid email ID. Examples are:

- Spaces in the ID
- Invalid starting character such as '.', '+', '_', '@'
- More than one '@'

Invalid Login

The user has attempted to enter an invalid login name or corresponding password.

Invalid Server or Port Number

The user has selected the incorrect SMTP server or port number.

Mail Too Large

The machine is unable to split the mail and send it. This can occur when the machine is configured to send a maximum mail size. For example 1.0MB and the scanned mail page exceeds this size.

Not Assigned

The user has attempted to use a group mail that has no email assigned to it. Assign email to the group or type the email manually, using the Qwerty keyboard.

Recipient Address Failure

The email address used has not been recognised.

Send Error (SMTP)

The machine cannot connect to the server, or has lost contact due to a network problem. One of the following Simple Mail Transfer Protocol errors may have occurred:

- SMTP_SERVER_DISCONNECTION - The SMTP server has been disconnected.
- SMTP_ENCODER_FAILURE - The Network Interface Card has returned this error due to an encoding activity failure
- SMTP_MEMORY_FAILURE - The Network Interface Card has returned this error due to a memory failure during the SMTP operation.
- SMTP_MISC_ERROR - The Network Interface Card has returned this error due to any miscellaneous failure during the SMTP operation.

SMTP DNS CONN. Failure

A DNS failure has occurred. The Domain Name System has failed to translate the address correctly.

SMTP DNS Domain Error

A DNS failure has occurred due to a domain error.

SMTP SERVER CONN. Failure

An SMTP connection failure has occurred.

20.3 Fax Faults Without a Message RAP

Use this RAP when the machine has a fax fault but does not display a message. If a fax fault message is displayed, go to the 20.1 Fax Error Messages RAP.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 4. Perform the following:

1. Ensure the telephone line cable is properly connected into the line connector on the PBA LIU.
2. Check the CBF harness - LIU, PL 1.10 Item 15 from CN37 on the PBA main to CN3 on the PBA LIU.
3. Ensure the correct dialing mode is selected. Refer to GP 4 System Data.
4. Use a known good telephone handset or a line test tool to check the telephone line.
5. If necessary, install a new PBA LIU, PL 1.10 Item 13.
6. If necessary, install a new PBA main, PL 1.10 Item 9.

OF1 Function Impossible RAP

The selected mode is not supported in the current machine configuration.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: *If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.*

1. If copying, select a different copying mode.
2. If this fault occurs during Scan-to-Email, refer to Wiring Diagram 2 and Wiring Diagram 4. Check the following:
 - QWERTY connector. If necessary, install a new PBA SUB - OPE joint, PL 2.11 Item 9
 - In-line memory module. If necessary, install a new SDRAM - DIMM, PL 1.10 Item 12.

OF2 IP Conflict RAP

The machine has detected a problem connected with IP addresses.

Procedure

WARNING

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

This message is for information only.

OF3 Use Auxiliary Access RAP

The machine has detected that there is no credit in the foreign device.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 2. Perform the following:

1. If there is credit in the foreign device, check the wiring between the foreign device and the PBA foreign device interface.
2. Check the wiring between the PBA foreign device interface and the PBA main. If necessary, install a new PBA foreign device interface harness, PL 1.10 Item 17.
3. If necessary, install a new PBA foreign device interface, PL 1.10 Item 16.
4. If necessary, install a new PBA main, PL 1.10 Item 9.

OF4 Audible Noise RAP

To isolate and identify the source of unusual noises.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Ask the customer if there are any specific machine functions that are noisy. Identify the source of the noise by exercising the machine in all modes

To isolate the noise within an assembly perform the following:

- To run the motor step - MCK2 (main), enter GP 1 Engine Test Mode. Perform the fuser motor test.
- To run the motor DC - MCK2 (BLDC), enter GP 1 Engine Test Mode. Perform the BLDC motor test.
- To run the unit LSU motor, enter GP 1 Engine Test Mode. Perform the LSU motor test.
- To run the motor step - SCF, enter GP 1 Engine Test Mode. Perform the SCF motor test.

The following are possible causes and potential solutions. Go to the relevant procedure:

- Squeaks.
- Unusual Noise from the ELA HOU Scanner Assembly.

Squeaks

Possible causes are:

- Contamination of the bushes and drive shafts.

Solution:

- Clean the components.
- Plastic bushes should be cleaned and lubricated.
- Install new components as necessary.

- Bearing in cooling fans

Solution:

- Install new components as necessary.

- Mis-adjusted or worn drive belts.

Solution:

- Install new components as necessary.

- Mis-aligned or damaged parts.

Solution:

- Check for parts that are damaged or out of position.
- Adjust the components if appropriate.
- Install new components as necessary.

- Noise from the DADH input tray document guides.

Solution:

- Clean the DADH input tray in the area beneath the input guides.

Unusual Noise from the ELA HOU Scanner Assembly

Possible causes are:

- Mis-aligned or damaged parts.
- Defective motor driver.

Solution:

- Check the position of the motor step - scan and associated gears, PL 14.11.
- Ensure the ELA HOU - CCD module, PL 14.11 Item 16, moves freely.
- Install new components as necessary.

Image Quality RAPs

IQ1 Blank Copies RAP 3-3

IQ2 Black Copies From the Scanner RAP 3-3

IQ3 Blurred Image From the Scanner RAP 3-4

IQ4 Vertical Black Lines or Bands RAP 3-4

IQ5 Vertical White Lines RAP 3-5

IQ6 Light Image RAP 3-5

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IQ1 Blank Copies RAP

Use this RAP when the machine produces blank copies.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Determine the source of the problem. Make a print. Make a copy.

If the fault appears only in the copy mode, perform the following:

1. Ensure the scanner cover is closed. Room illumination can be transmitted through thin originals.
2. Go to GP 6, Maintenance, and perform the Adjust Shading procedure.

If the fault appears in all modes, perform the following:

1. Examine the ELA - toner unit set, PL 9.10 Item 2 and the ELA - OPC unit set, PL 9.10 Item 1. Ensure they are free from all packing or sealing material.
2. Shake the ELA - toner unit set. If there is a slight improvement in the image, the ELA - toner unit set is empty. Install a new ELA - toner unit set, PL 9.10 Item 2.
3. Go to GP 1 Engine Test Mode Entry and perform the LSU tests, test 1.
4. Perform the following as necessary. Refer to Wiring Diagram 3:
 - The LSU is supplied with +5V through the CBF - harness. Enter GP 1 Engine Test Mode Entry. Use the sensor test to check the CBF - harness; switch micro. Check that both micro switches in the CBF - harness; Switch Micro are switching; one controls the +5V to the unit - LSU. If necessary, install a new CBF - harness; switch micro, PL 4.15 Item 20.
 - Check the wiring between the unit - LSU and the PBA main. Repair or install a new CBF harness - LSU, PL 6.10 Item 2, as necessary.
 - Install a new unit - LSU, PL 6.10 Item 1.
5. Refer to Wiring Diagram 1. Go to GP 1, Engine Test Mode Entry. Perform test number 5 to check the MHV ADC and THV ADC read values. If necessary perform the following:
 - Check the contact springs supplying the voltages to the ELA - OPC unit set and the wiring to the SMPS + HVPS.
 - Install a new ELA - OPC unit set, PL 9.10 Item 1.
 - Install a new SMPS + HVPS, PL 1.10 Item 4.
6. Print a test pattern. For example, print the help list from the reports menu, GP 2 User Entry Mode. If necessary, install a new PBA main, PL 1.10 Item 9.

IQ2 Black Copies From the Scanner RAP

Use this RAP when the scanner produces black copies, but on-line printing is normal.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Refer to Wiring Diagram 1. Perform the following:

1. Go to GP 6 Maintenance, and perform the Adjust Shading procedure.
2. Check the ribbon cable between the ELA HOU - CCD module and the PBA main. If necessary, install a new CBF signal - CCD FFC, PL 14.11 Item 17.
3. If necessary, install a new ELA HOU - CCD module, PL 14.11 Item 16.
4. If necessary, install a new PBA main, PL 1.10 Item 9.

IQ3 Blurred Image From the Scanner RAP

Use this RAP when the scanner produces blurred images.

Procedure

WARNING

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

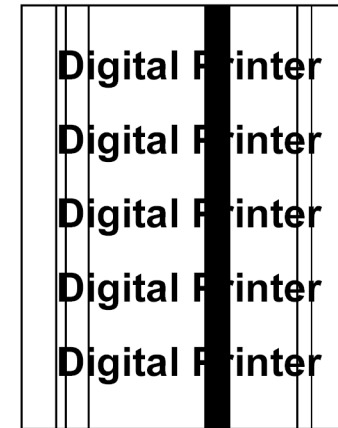
NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Perform the following:

1. Ensure that the gap between the original and the scanner glass, MCT glass DADF, PL 14.10 Item 4, is less than 0.5mm.
2. If necessary, go to GP 6 Maintenance, and perform the Adjust Shading procedure.

IQ4 Vertical Black Lines or Bands RAP

Use this RAP when there are black lines or bands along the process direction, as shown in Figure 1.



AP-1-0129-A

Figure 1 Vertical black line and band

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

1. If the defect is only present on received faxes, ensure the defect is not being generated by the fax machine that is transmitting the fax.
2. If the defect is only present when making copies, clean the MCT glass scanner, PL 14.10 Item 12.
3. If the defect is only present when making copies from the DADF, clean the MCT glass DADF, PL 14.10 Item 4
4. Lightweight media can cause fusing problems that may result in vertical lines. Ensure the customer is using media that is within specification. Refer to GP 22.
5. The fuser may be contaminated. Make 10 blank copies. If necessary, install a ELA HOU - fuser assembly, PL 9.10 Item 4.
6. Refer to Wiring Diagram 3. Check that the harness between the unit - LSU and the PBA main is correctly and securely connected.
7. Install new components as necessary:
 - ELA - OPC unit set, PL 9.10 Item 1.
 - ELA - toner unit set, PL 9.10 Item 2.
 - Unit - LSU, PL 6.10 Item 1.

IQ5 Vertical White Lines RAP

Use this RAP when there are white lines along the process direction, as shown in Figure 1.



AP-1-0130-A

Figure 1 Vertical white lines

IQ6 Light Image RAP

Use this RAP when the machine produces light images in all modes, as shown in Figure 1.



AP-1-0131-A

Figure 1 Light image

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

1. Remove the ELA - toner unit set, PL 9.10 Item 2 and the ELA - OPC unit set, PL 9.10 Item 1. Ensure there are no obstructions that block the unit - LSU from imaging the ELA - OPC unit set.
2. Go to GP 1. Engine Test Mode Entry. Perform the Toner State test. If necessary, install a new ELA - toner unit set, PL 9.10 Item 2.
3. Refer to REP 6.1. Lift out the unit - LSU. Clean the unit - LSU window using a clean, lint-free cloth. If necessary, install a new unit - LSU, PL 6.10 Item 1.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

NOTE: For solid print area specifications, refer to IQS 1 Solid Area Density.

Perform the following:

1. Ensure that the paper tray settings match the paper or media size in the trays.
2. Go to GP 1. Engine Test Mode Entry. Perform the Toner State test. If necessary, install a new ELA - toner unit set, PL 9.10 Item 2.
3. Examine the ELA - toner unit set, PL 9.10 Item 2 and the ELA - OPC unit set, PL 9.10 Item 1 and ensure they are free from all packing or sealing material.
4. Go to GP 6, Maintenance, and perform the Adjust Shading procedure.
5. Refer to REP 6.1. Lift out the unit - LSU. Clean the unit - LSU window, using a clean, lint-free cloth. If necessary, install a new unit - LSU, PL 6.10 Item 1.
6. Refer to Wiring Diagram 1. Go to GP 1 Engine Test Mode Entry. Perform test number 5 to check the MHV ADC and THV ADC read values. As necessary perform the following:
 - Check the contact springs supplying the voltages to the ELA - OPC unit set and the wiring to the SMPS + HVPS.
 - Install a new ELA - OPC unit set, PL 9.10 Item 1.

- Clean any contamination on the ELA - toner unit set. If necessary, install a new ELA - toner unit set, PL 9.10 Item 2.
7. Ensure the transfer roller contacts, which are housed within the PMO - housing terminal MC2 are not deformed. If necessary install a new ELA HOU - frame main assembly, PL 4.15 Item 1.

***NOTE:** The PMO - housing terminal MC2 is not spared.*
 8. Install a new SMPS + HVPS, PL 1.10 Item 4.

IQ7 Dark Image RAP

Use this RAP when the machine produces dark images in all modes.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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:** If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.*

Perform the following:

1. Ensure that the paper tray settings match the paper or media size in the trays.
2. Go to GP 6, Maintenance, and perform the Adjust Shading procedure.
3. Refer to Wiring Diagram 1. Perform the following:
 - Check the spring contacts and the wiring to the SMPS + HVPS.
 - If necessary, install a new SMPS + HVPS, PL 1.10 Item 4.
4. Print a test pattern. For example, print the help list from the menu. If necessary, install a new PBA main, PL 1.10 Item 9.

IQ8 Background RAP

Use this RAP when the printed sheets have a dark or spotted background, as shown in Figure 1.



AP-1-0132-A

Figure 1 Background

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Perform the following:

1. Ensure that the paper tray settings match the paper or media size in the trays. Also, ensure the media is within specification, refer to GP 22 Paper and Media Specifications.
2. Ensure the machine is being operated in the correct environmental conditions. Refer to GP 11 Machine Specifications.
3. Check for contamination of the ELA - toner unit set, and if necessary install a new ELA - toner unit set, PL 9.10 Item 2.
4. Clean any contamination on the ELA - OPC unit set and if necessary, install a new ELA - OPC unit set, PL 9.10 Item 1.
5. Refer to Wiring Diagram 1. Perform the following:
 - Go to GP 1 Engine Test Mode Entry. Perform test number 5 to check the MHV ADC and THV ADC read values.
 - Check that the high voltage spring contacts are clean and connected.
 - Check the high voltage wiring to the SMPS + HVPS.
 - Install a new SMPS + HVPS as necessary, PL 1.10 Item 4.

IQ9 Ghost Images RAP

Use this RAP when the printed sheets have ghost images, as shown in Figure 1.



AP-1-0133-A

Figure 1 Ghost images

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Perform the following:

1. Measure the distance between the image and the ghosted image. Refer to Table 1 to determine the possible cause of the defect.

Table 1 Ghosted image distance

Defect distance	Roller	Component	Parts List Ref.
94.3mm	ELA - OPC unit drum	P/O ELA - OPC unit drum	PL 9.10 Item 1
38.3mm	Charge roller	P/O ELA - OPC unit drum	PL 9.10 Item 1
43.8mm	Supply roller	P/O ELA toner unit set	PL 9.10 Item 2
54.3mm	Developer roller	P/O ELA toner unit set	PL 9.10 Item 2
51.9mm	Cleaning roller	P/O ELA toner unit set	PL 9.10 Item 2
56.6mm	Transfer roller	Transfer roller	PL 8.10 Item 33
82.6mm	Heat roller	P/O ELA HOU - fuser assembly	PL 9.10 Item 4

Table 1 Ghosted image distance

Defect distance	Roller	Component	Parts List Ref.
91.1mm	Pressure roller	P/O ELA HOU - fuser assembly	PL 9.10 Item 4

- If the distance between the image and the defect matches the heat roller or pressure roller, perform the following:
 - Ensure that the paper tray settings match the paper or media size in the trays. Ensure the media is within specification, refer to GP 22 Paper and Media Specifications.
 - Go to GP 1 Engine Test Mode Entry. Perform the Fuser Temp Check. Ensure the fuser is operating within the correct temperature range, refer to GP 11 Machine Specifications.
 - If the distance between the image and the defect matches the ELA - OPC unit drum or the charge roller, go to GP 1 Engine Test Mode Entry. Perform the PTL (Pre-Transfer Lamp), test. As necessary, perform the following:
 - Refer to Wiring Diagram 3. Check the wiring between the PBA SUB - PTL and the PBA main.
 - Install a new PBA SUB - PTL, PL 8.25 Item 6.
 - Install a new PBA main, PL 1.10 Item 9.
2. Clean any contamination around the ELA - toner unit set area and if necessary, install a new ELA - toner unit set, PL 9.10 Item 2.

IQ10 Stains on Back of Paper RAP

Use this RAP when the printed sheets have stains on the non-image side of the paper.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Perform the following:

1. Check the transfer roller, PL 8.10 Item 33 and clean as necessary.
2. Check the paper path for dirt and contamination. Clean as required.
3. Check the ELA HOU - fuser assembly and if necessary, install a new ELA -HOU - fuser assembly, PL 9.10 Item 4.

IQ11 Poor Fusing RAP

Use this RAP when the image is improperly fused.

Procedure

WARNING

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

WARNING

Do not touch the fuser while it is hot.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Perform the following:

1. Ensure that the paper tray settings match the paper or media size in the trays. Also ensure the media is within specification, refer to GP 22 Paper and Media Specifications.
2. Refer to Wiring Diagram 3. Measure the voltage across the thermistor at CN7 on the PBA main. The voltage measured should be $2.3V \pm 5\%$.
3. Examine the ELA - HOU fuser assembly and ensure the thermistor is in good contact with the heat roll and is clean. If necessary, go to the 10.1 Low Heat Error RAP or the 10.2 Open Heat Error RAP.
4. Ensure the machine is being operated in the correct environmental conditions. Refer to GP 11 Machine Specifications.
5. If the machine has been standing in a low temperature environment for a long time, try to bring the environment up to a warmer temperature before re-trying the machine.

IQ12 Partial Blank Image (Not Periodic) RAP

Use this RAP when the printed sheets have blank areas, not forming a regular pattern.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Perform the following:

1. Go to GP 1. Engine Test Mode Entry. Perform the Toner State test. If necessary, install a new ELA - toner unit set, PL 9.10 Item 2.

IQ13 Partial Blank Image (Periodic) RAP

Use this RAP when the printed sheets have blank areas that form a regular, or repeated, pattern.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Perform the following:

1. Measure the distance between the image and the defect. Refer to Table 1 to determine the possible cause of the defect.

Table 1 Defect distance

Defect distance	Roller	Component	Parts List Ref.
94.3mm	ELA - OPC unit drum	P/O ELA - OPC unit drum	PL 9.10 Item 1
38.3mm	Charge roller	P/O ELA - OPC unit drum	PL 9.10 Item 1
43.8mm	Supply roller	P/O ELA toner unit set	PL 9.10 Item 2
54.3mm	Developer roller	P/O ELA toner unit set	PL 9.10 Item 2
51.9mm	Cleaning roller	P/O ELA toner unit set	PL 9.10 Item 2
56.6mm	Transfer roller	Transfer roller	PL 8.10 Item 33
82.6mm	Heat roller	P/O ELA HOU - fuser assembly	PL 9.10 Item 4
91.1mm	Pressure roller	P/O ELA HOU - fuser assembly	PL 9.10 Item 4

Install new components as necessary.

IQ14 Different Image Density (Left and Right) RAP

Use this RAP when the printed sheets have different areas of image density across the process direction. An example is shown in Figure 1.



AP-1-0134-A

Figure 1 Image density

Procedure

WARNING

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

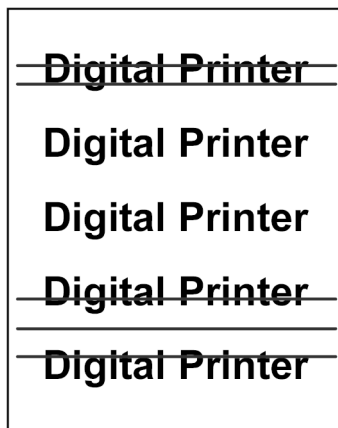
NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Perform the following:

1. The transfer roller pressure may be unbalanced. Check the spring pressure at each end, PL 8.11 Item 6 and PL 8.11 Item 10. Install new components as necessary.
2. Shake the ELA - toner unit set to evenly distribute the toner. Go to GP 1. Engine Test Mode Entry. Perform the Toner State test. If necessary, install a new ELA - toner unit set, PL 9.10 Item 2.
3. Go to GP 3. Perform the Clean Drum routine. If necessary, install a new ELA - OPC unit drum PL 9.10 Item 1.
4. If necessary install a new ELA - toner unit set, PL 9.10 Item 2.

IQ15 Horizontal Bands RAP

Use this RAP when the image has bands appearing across the process direction. An example is shown in Figure 1.



AP-1-0135-A

Figure 1 Horizontal bands

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Perform the following:

1. Check the high voltage spring contacts and clean if necessary. Check that the contact is good.
2. Go to GP 3. Perform the Clean Drum routine. If necessary, install a new ELA - OPC unit drum PL 9.10 Item 1.
3. Measure the distance between the image and the defect. Refer to Table 1 to determine the possible cause of the defect.

Table 1 Defect distance

Defect distance	Roller	Component	Parts List Ref.
94.3mm	ELA - OPC unit drum	P/O ELA - OPC unit drum	PL 9.10 Item 1
38.3mm	Charge roller	P/O ELA - OPC unit drum	PL 9.10 Item 1
43.8mm	Supply roller	P/O ELA toner unit set	PL 9.10 Item 2
54.3mm	Developer roller	P/O ELA toner unit set	PL 9.10 Item 2

Table 1 Defect distance

Defect distance	Roller	Component	Parts List Ref.
51.9mm	Cleaning roller	P/O ELA toner unit set	PL 9.10 Item 2
56.6mm	Transfer roller	Transfer roller	PL 8.10 Item 33
82.6mm	Heat roller	P/O ELA HOU - fuser assembly	PL 9.10 Item 4
91.1mm	Pressure roller	P/O ELA HOU - fuser assembly	PL 9.10 Item 4

Install new components as necessary.

4. Clean the charge roller and if necessary, install a new ELA - OPC unit set, PL 9.10 Item 1.
5. Check the condition of the ELA HOU - fuser assembly and if necessary, install a new ELA HOU - fuser assembly, PL 9.10 Item 4.
6. If necessary, install a new PBA main, PL 1.10 Item 9.

IQ16 Periodic Printing Defects Check RAP

Use this RAP when the printed image shows regular patterns in black or white, across the process direction.

Procedure

WARNING

Switch off the electricity to the machine. Disconnect the power 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: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

1. Go to GP 3. Perform the Clean Drum routine. If necessary, install a new ELA - OPC unit drum PL 9.10 Item 1.
2. Measure the distance between the repeated black or white abnormality. Refer to Table 1 identify the possible cause.

Table 1 Abnormal image distance

Defect distance	Kind of abnormal image	Roller	Component	Parts List Ref.
94.3mm	White spot. Black spot	ELA - OPC unit drum	P/O ELA - OPC unit drum	PL 9.10 Item 1
38.3mm	White spot. Black spot	Charge roller	P/O ELA - OPC unit drum	PL 9.10 Item 1
43.8mm	Horizontal dark band	Supply roller	P/O ELA toner unit set	PL 9.10 Item 2
54.3mm	Horizontal dark band	Developer roller	P/O ELA toner unit set	PL 9.10 Item 2
51.9mm	Black side contamination/transfer fault	Cleaning roller	P/O ELA toner unit set	PL 9.10 Item 2
56.6mm	Black spot, White spot	Transfer roller	Transfer roller	PL 8.10 Item 33
82.6mm	Black side contamination	Heat roller	P/O ELA HOU - fuser assembly	PL 9.10 Item 4
91.1mm	Kind of abnormal image	Pressure roller	P/O ELA HOU - fuser assembly	PL 9.10 Item 4

Install new components as necessary.

3. If the defect appears to be fuser related, ensure that the paper tray settings match the paper or media size in the trays. Also, ensure the media is within specification, refer to GP 22 Paper and Media Specifications.

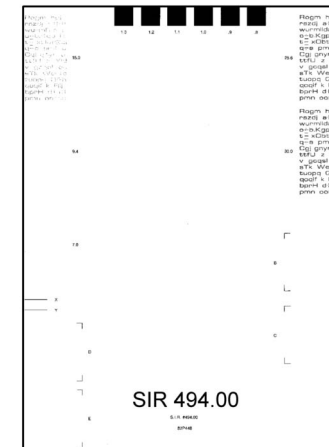
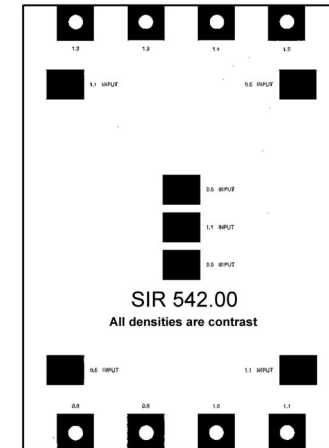
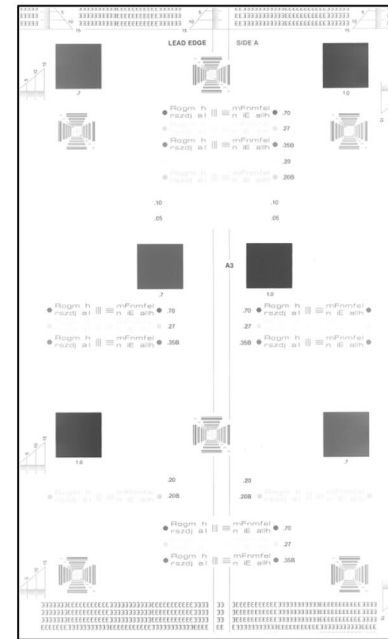
IQS 1 Solid Area Density

Documents

Test pattern: 82P524 and the solid area density scales, 82E8230 (SIR 542.00) or 82P448 (SIR 494.00).

Specification

Make a copy of the test pattern. Compare the copy with the solid area density scale. The density of the 1.0 areas on the copy of the test pattern, must be as dark or darker than the 0.8 reference on the solid area density scale. Refer to Figure 1.



AP-1-0139-A

Figure 1 Solid area density

IQS 2 Skew

Documents

Test pattern: 82P524.

Specification

Refer to Table 1, Skew specifications.

Table 1 Skew specifications

Skew	Specification
Print Skew	Max: +/-2.5mm (7/64 inch) per 250mm (10 inches) (+/-1%)

IQS 3 Registration

Documents

Test pattern: 82P524

Specifications

Refer to Table 1.

Table 1 Registration measurement

Registration	Specification
Lead edge	4mm (5/32 inches) +/- 3mm (1/8 inches)
Top edge	4mm (5/32 inches) +/- 3mm (1/8 inches)

4 Repairs and Adjustments

REP 1.1 SMPS + HVPS 4-3
REP 1.2 PBA Main 4-4
REP 2.1 ELA HOU OPE Assembly 4-5
REP 4.1 ELA HOU - Drive Assembly 4-8
REP 4.2 MEA Unit - Rear Cover 4-9
REP 4.3 PMO Cover Exit Rear 4-10
REP 4.4 ELA HOU - Frame Main Assembly 4-11
REP 5.1 ELA HOU - DADF 4-13
REP 6.1 Unit - LSU 4-20
REP 7.1 MEC Unit - Tray Assembly 4-22
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REP 8.2 MEA Unit - Duplex Assembly 4-24
REP 8.3 Transfer Roller Assembly 4-24
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REP 1.1 SMPS + HVPS

Parts List on PL 1.10

Removal

WARNING

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

WARNING

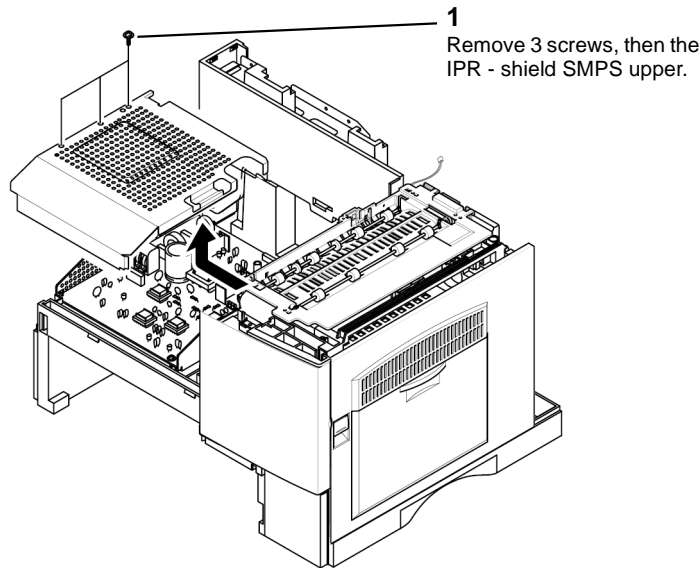
Take care during this procedure. Sharp edges may be present that can cause injury.

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

1. Remove the MEA unit - cover PA exit assembly, REP 10.3.
2. Remove the IPR - shield SMPS upper, Figure 1.

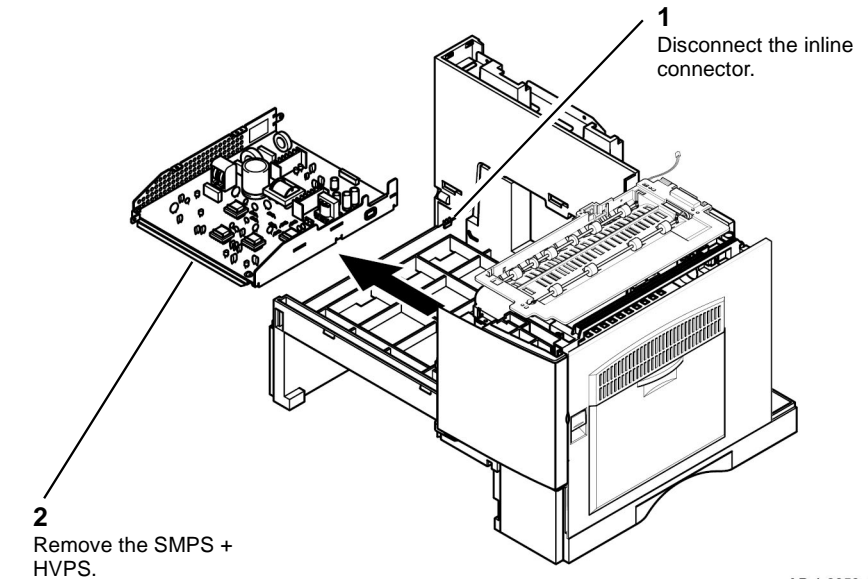


AP-1-0058-A

Figure 1 IPR - shield SMPS upper removal

3. Disconnect the following connectors from the SMPS + HVPS:
 - CON2
 - CON102
 - CON101
 - CON103

- OPC (green wire, blue shield)
 - THV (red wire, blue shield)
 - MHV
4. Remove the SMPS + HVPS, Figure 2.



AP-1-0059-A

Figure 2 SMPS + HVPS removal

Replacement

Replacement is the reverse of the removal procedure. Ensure both ground harnesses are reconnected to the IPR - shield SMPS upper.

REP 1.2 PBA Main

Parts List on PL 1.10

Removal

WARNING

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

WARNING

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

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

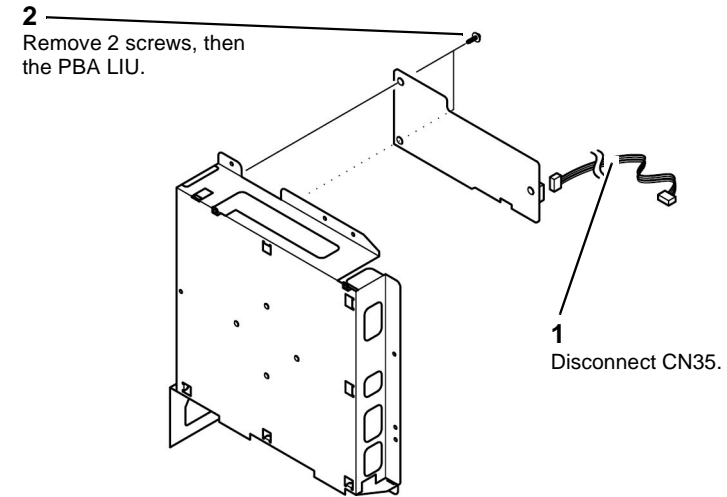
NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.



CAUTION

Ensure that E.S.D. procedures are observed during the removal and installation of the main PBA. Make a visual check to ensure that the pins are fully inserted, without being damaged.

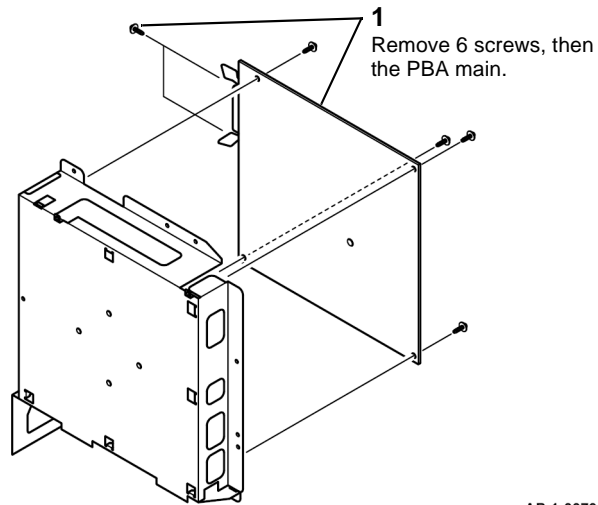
1. If a new PBA main is to be installed, go to GP 2. Print the System Data list and Connect Page (M20i only) list.
2. Remove the MEA unit - rear cover, REP 4.2.
3. Remove the PBA LIU, Figure 1.



AP-1-0078-A

Figure 1 PBA LIU removal

4. Disconnect the CNs from the PBA main.
5. If installed, remove the PBA SUB - NPC3 - MFP, PL 1.10 Item 14, SDRAM - DIMM, PL 1.10 Item 12, PBA ETC - PS - DIMM, PL 1.10 Item 11, PBA foreign device interface, PL 1.10 Item 16 and PBA foreign device interface harness, PL 1.10 Item 17.
6. Remove the PBA main, Figure 2.



AP-1-0079-A

Figure 2 PBA main removal

Replacement

1. Replacement is the reverse of the removal procedure.
2. If a new PBA main has been installed, perform a memory clear, GP 5.
3. If a new PBA main has been installed, re-enter the machine serial number. Refer to GP 6 Maintenance.
4. If a new PBA main has been installed, use the information on the System Data list and Connect Page (M20i only) list to re-enter the customers settings. Refer to GP 2 User Mode Entry.

REP 2.1 ELA HOU OPE Assembly

Parts List on PL 2.10 and PL 2.11

Removal

WARNING

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

WARNING

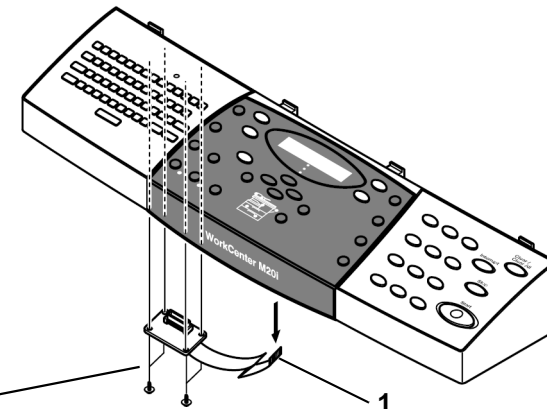
Take care during this procedure. Sharp edges may be present that can cause injury.

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

1. Remove the ELA HOU scanner assembly, perform REP 14.1, steps 1 through 8.
2. Remove the PBA SUB - OPE joint, Figure 1.



2 Remove 4 screws, then the PBA SUB - OPE joint.

1 Disconnect the CBF - signal - OPE FFC.

AP-1-0038-A

Figure 1 PBA SUB - OPE joint removal

3. Remove the PBA SUB - OPE, Figure 2.

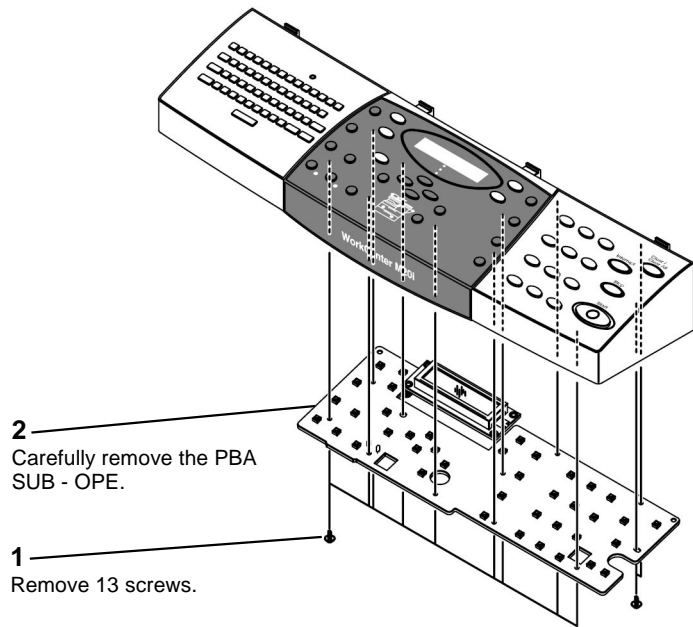


Figure 2 PBA SUB - OPE removal

AP-1-0039-A

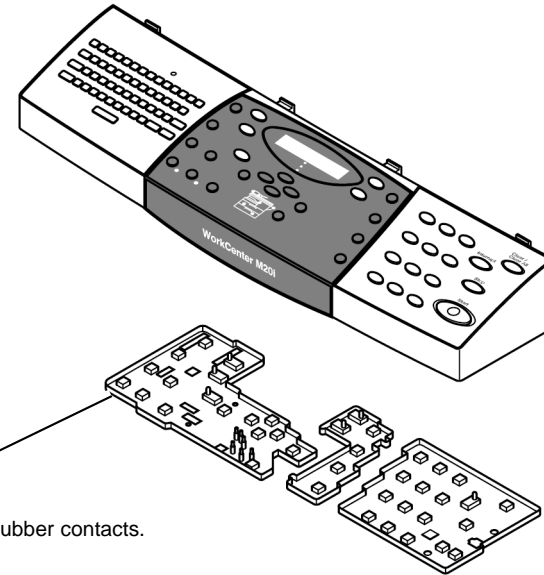


Figure 3 Rubber contacts removal

AP-1-0040-A

4. Remove the rubber contacts, Figure 3.

5. Remove the key pads, Figure 4.

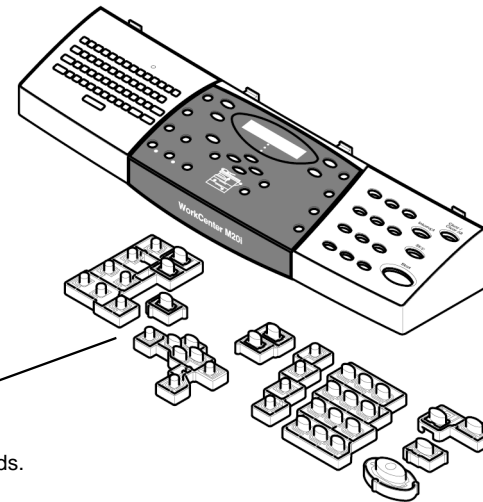


Figure 4 Key pads removal

AP-1-0041-A

6. If installed, remove the cover E-mail, Figure 5.

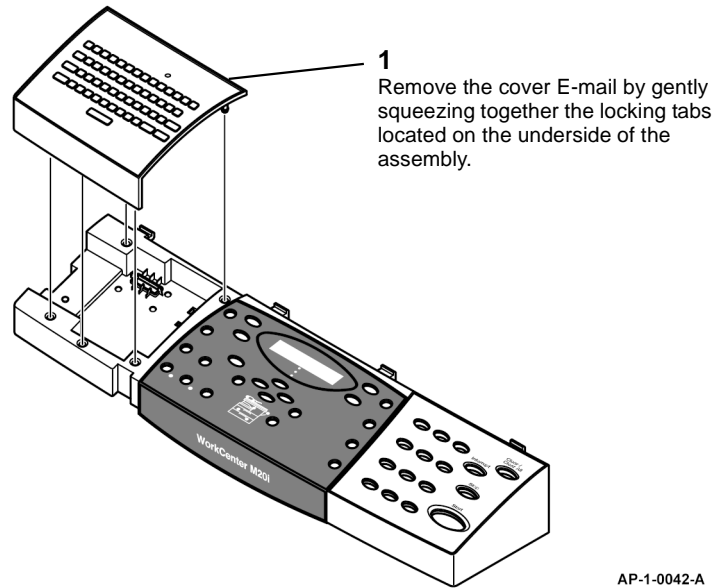


Figure 5 Cover E-mail removal

7. Remove PBA SUB E-mail, Figure 6.

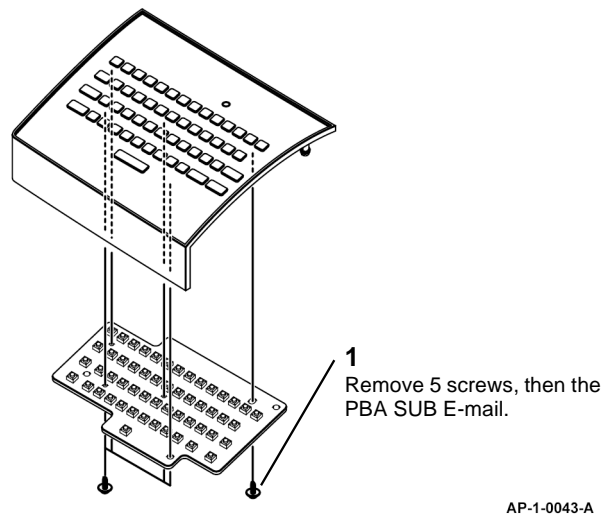


Figure 6 PBA SUB E-mail removal

8. Remove the key plate, Figure 7.

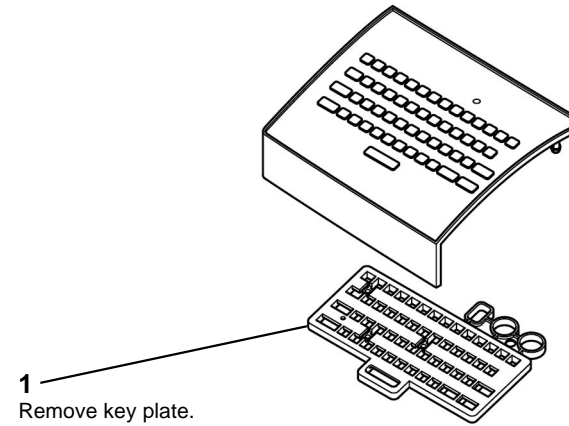


Figure 7 Key plate removal

9. Remove the E-mail key pad, Figure 8.

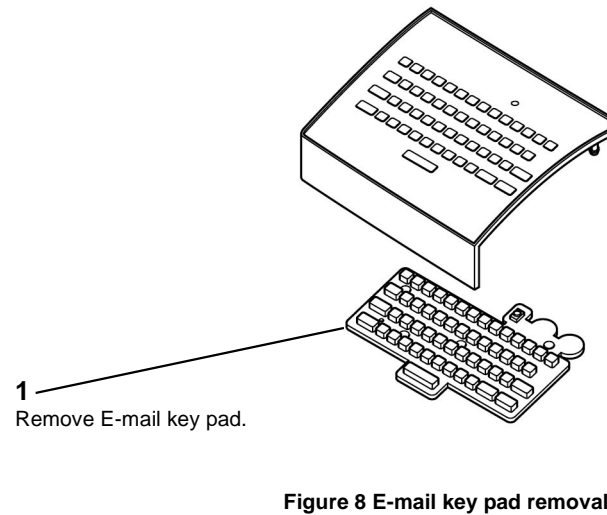


Figure 8 E-mail key pad removal

Replacement

Replacement is the reverse of the removal procedure.

REP 4.1 ELA HOU - Drive Assembly

Parts List on PL 4.20

Removal

WARNING

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

WARNING

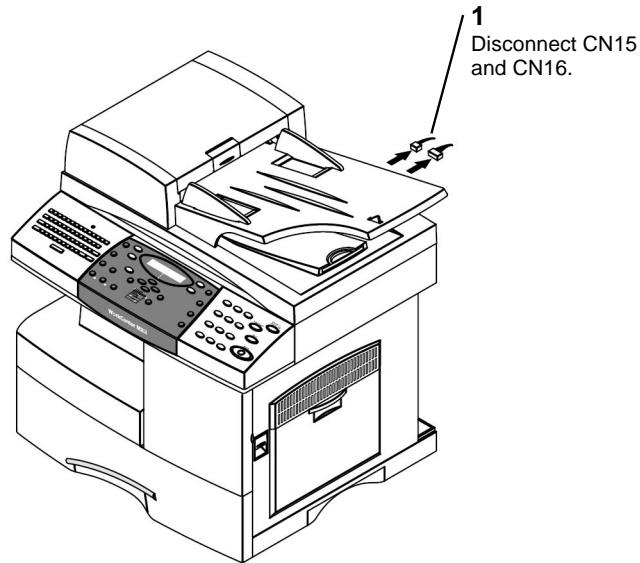
Take care during this procedure. Sharp edges may be present that can cause injury.

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

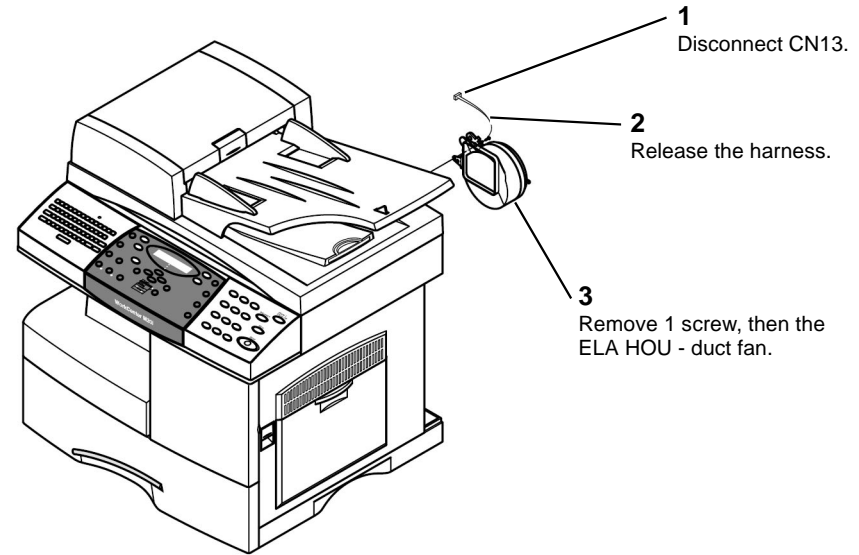
1. Remove the MEA unit - rear cover, REP 4.2.
2. Prepare to remove the ELA HOU - drive assembly, Figure 1.



AP-1-0055-A

Figure 1 Preparation

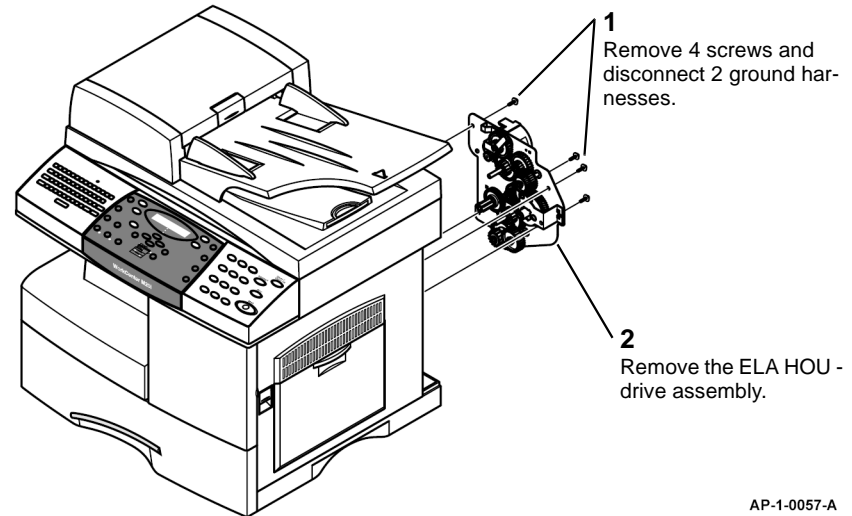
3. Remove the ELA HOU - duct fan, Figure 2.



AP-1-0056-A

Figure 2 ELA HOU - duct fan removal

4. Remove the ELA HOU - drive assembly, Figure 3.



AP-1-0057-A

Figure 3 ELA HOU - drive assembly removal

Replacement

1. Replacement is the reverse of the removal procedure. To make the replacement of the drive assembly easier, pull out the ELA - OPC unit set PL 9.10 Item 1 and ELA - toner unit set, PL 9.10 Item 2 approximately 100mm (4 inches).
2. Ensure both ground harnesses are reconnected to the ELA HOU - drive assembly.

REP 4.2 MEA Unit - Rear Cover

Parts List on PL 4.25

Removal

WARNING

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

WARNING

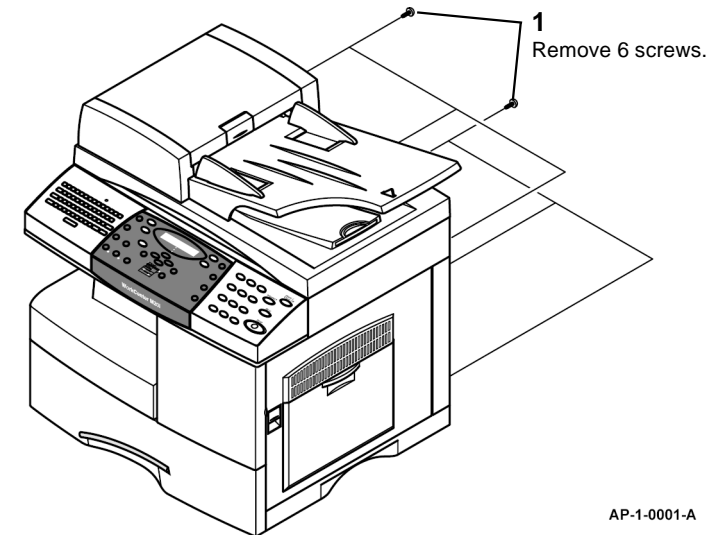
Take care during this procedure. Sharp edges may be present that can cause injury.

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

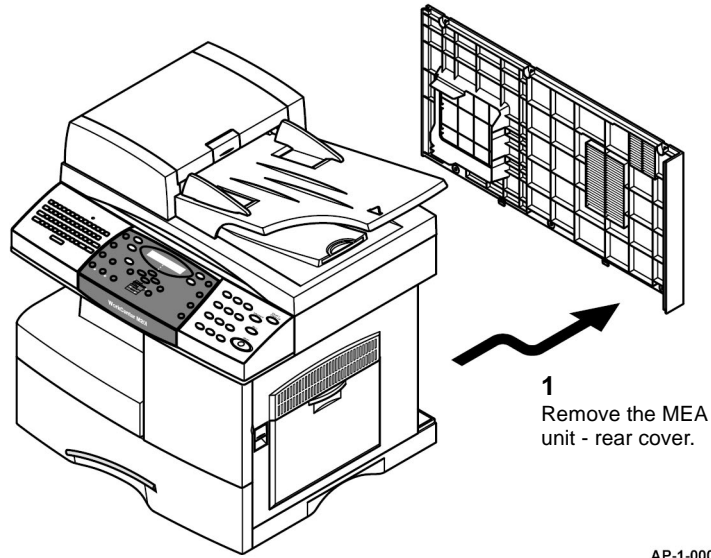
1. Remove the 6 screws securing the MEA unit - rear cover, Figure 1.



AP-1-0001-A

Figure 1 Screw removal

2. Separate the MEA unit - rear cover from the ELA HOU - base frame assembly and ELA HOU - scanner assembly, Figure 2.



- 1
Remove the MEA
unit - rear cover.

AP-1-0002-A

Figure 2 MEA unit - rear cover removal

Replacement

Replacement is the reverse of the removal procedure.

REP 4.3 PMO Cover Exit Rear

Parts List on PL 4.25

Removal

WARNING

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

WARNING

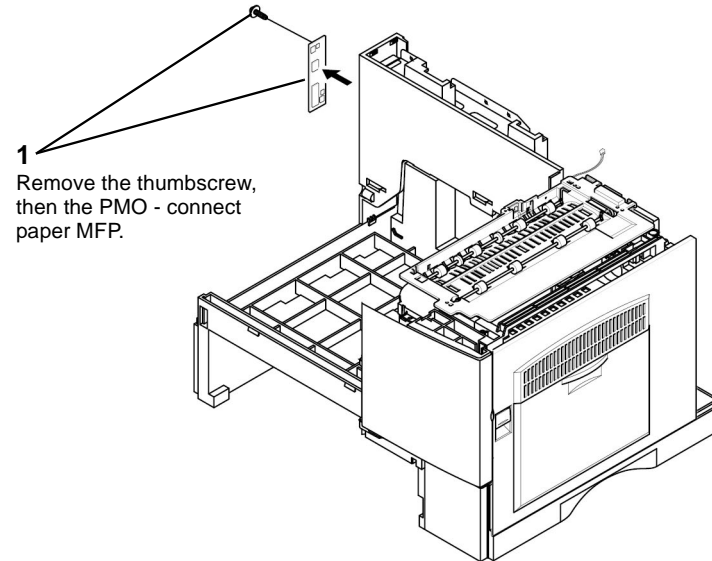
Take care during this procedure. Sharp edges may be present that can cause injury.

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

1. Remove the SMPS + HVPS, REP 1.1.
2. Remove the PMO - connect paper MFP, Figure 1.



- 1
Remove the thumbscrew,
then the PMO - connect
paper MFP.

AP-1-0062-A

Figure 1 PMO - connect paper MFP removal

3. Remove the PMO cover exit rear, Figure 2.

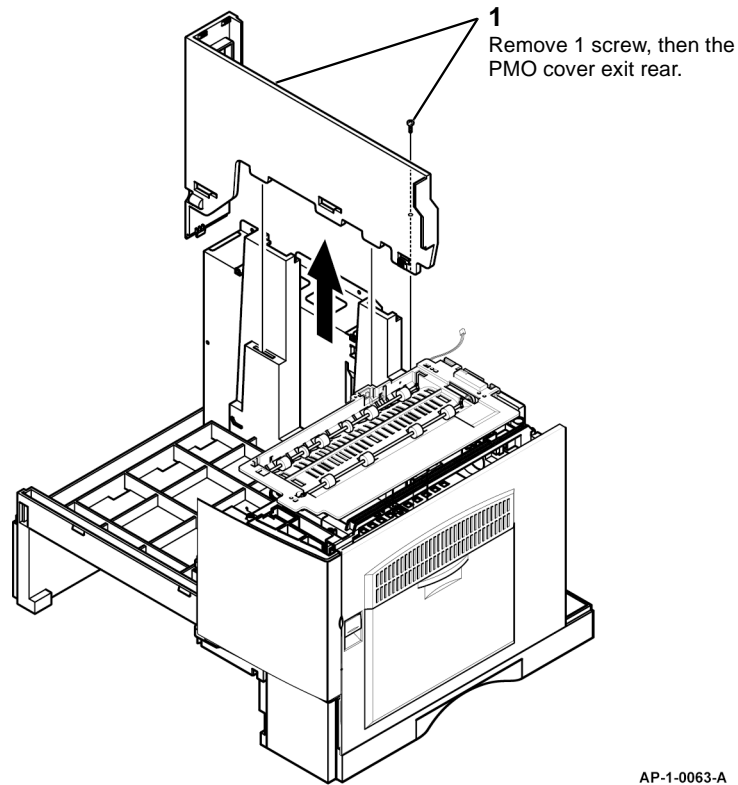


Figure 2 PMO cover exit rear removal

AP-1-0063-A

REP 4.4 ELA HOU - Frame Main Assembly

Parts List on PL 4.15

Removal

WARNING

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

WARNING

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

CAUTION

Before performing this procedure, refer to *General Disassembly Precautions, GP 10*.

NOTE: If necessary, refer to *GP 20* for the acronym list and cross reference lists of more commonly recognised part names.

1. Remove the ELA - toner unit set, PL 9.10 Item 2 and the ELA - OPC unit set, PL 9.10 Item 1.
2. Remove the ELA HOU - side cover assembly, REP 8.1.
3. Remove the ELA HOU - drive assembly, REP 4.1.
4. Remove the ELA HOU - fuser assembly, REP 10.1.
5. Remove the unit - LSU, REP 6.1.
6. Remove the PMO exit cover rear, REP 4.3.
7. Remove the PMO - dummy base frame, PMO - cam jam remove and MEA unit - cover front assembly, Figure 1.

Replacement

Replacement is the reverse of the removal procedure.

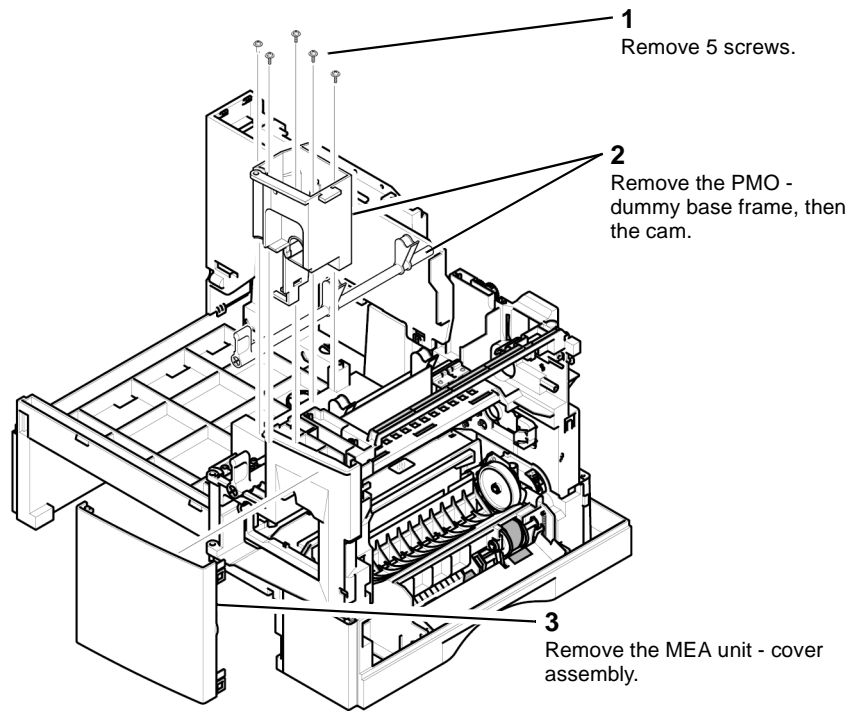


Figure 1 Dummy base frame removal

AP-1-0064-A

8. Remove the cover bracket motor and PMO lock developer, Figure 2.

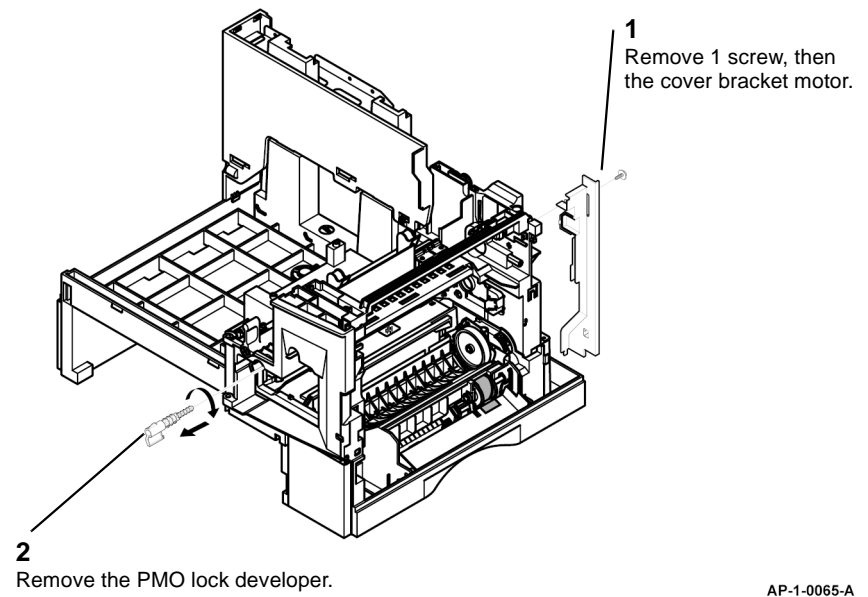


Figure 2 Cover bracket motor removal

AP-1-0065-A

9. Prepare to remove the ELA HOU - frame main assembly, Figure 3.

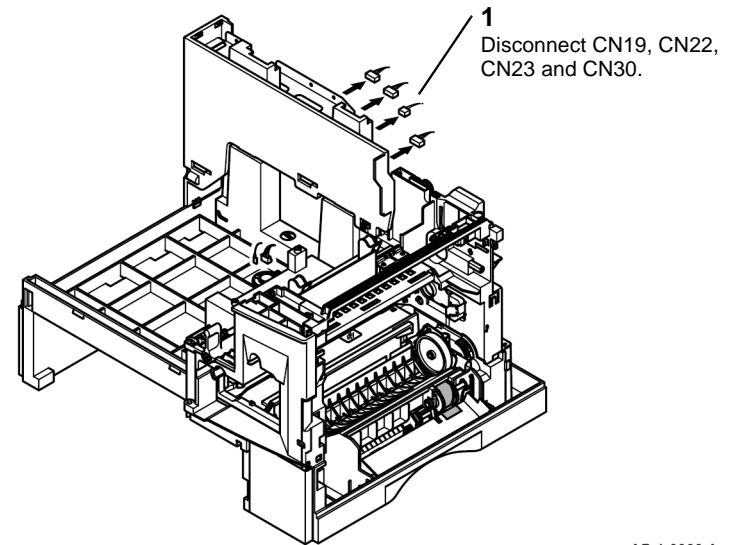


Figure 3 Preparation

AP-1-0066-A

10. Remove the ELA HOU main frame assembly, Figure 4.

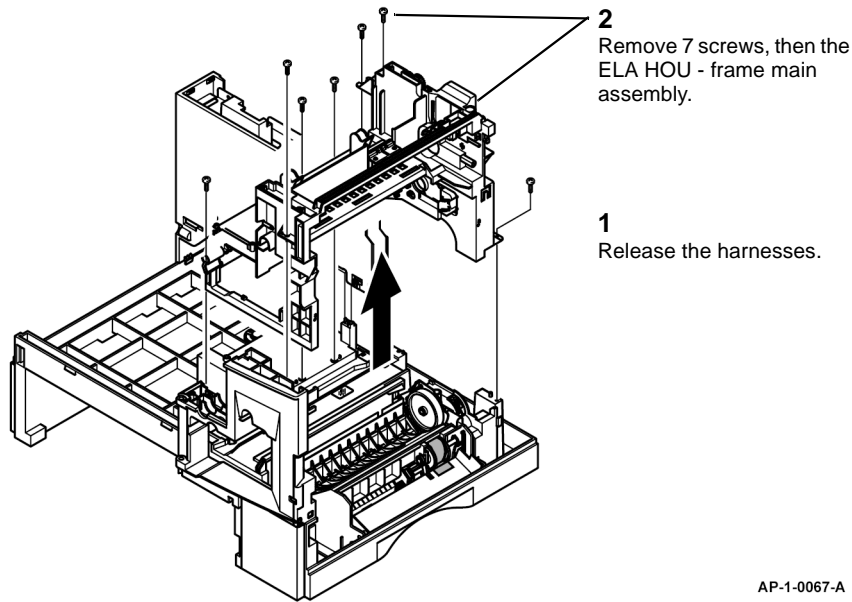


Figure 4 ELA HOU - frame main assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 5.1 ELA HOU - DADF

Parts List on PL 5.10, PL 5.11, PL 5.12, PL 5.13 and PL 5.14

Removal

WARNING

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

WARNING

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

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

1. Remove the MEA unit - rear cover, REP 4.2.
2. Disconnect the CBF harness - DSUB, Figure 1.

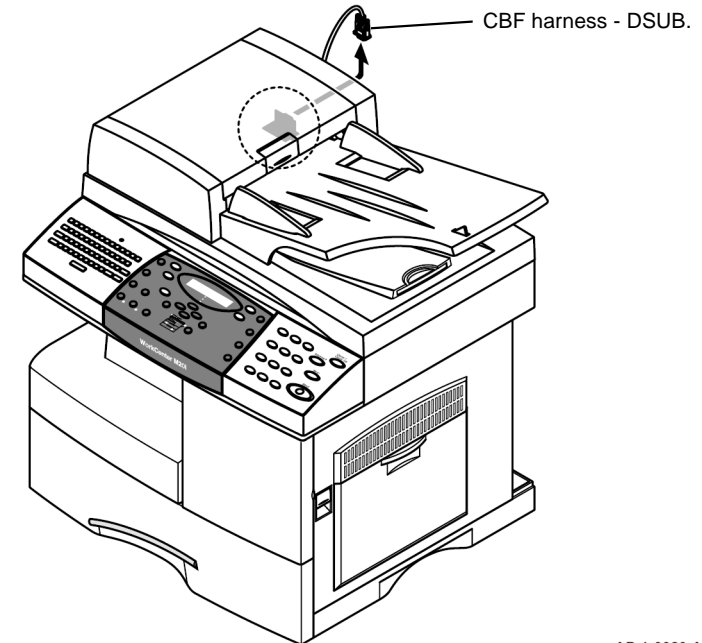


Figure 1 CBF harness - DSUB

3. Raise the DADF.

WARNING

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

4. Remove the ELA HOU - DADF, Figure 2. Place the ELA HOU - DADF on a solid flat surface.

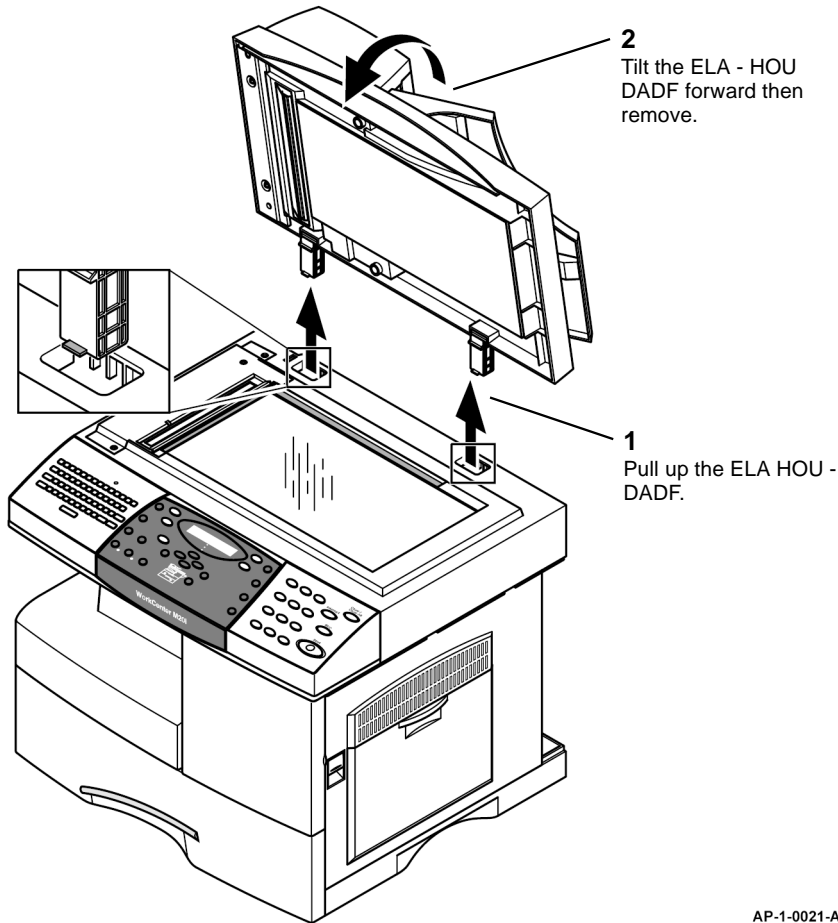
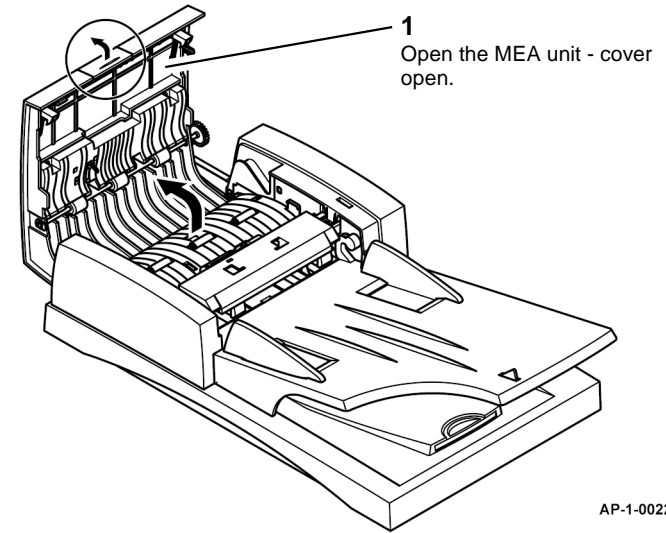


Figure 2 ELA HOU - DADF removal

AP-1-0021-A

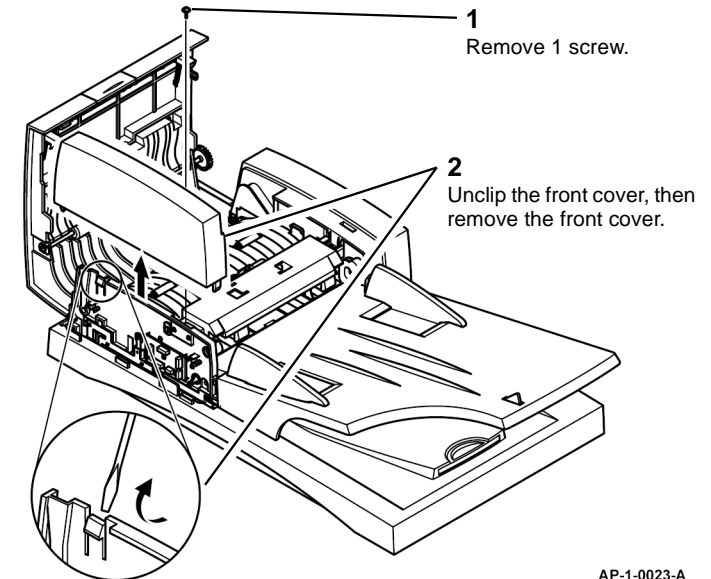
5. Open the MEA unit - cover open, Figure 3.



AP-1-0022-A

Figure 3 MEA unit - cover open

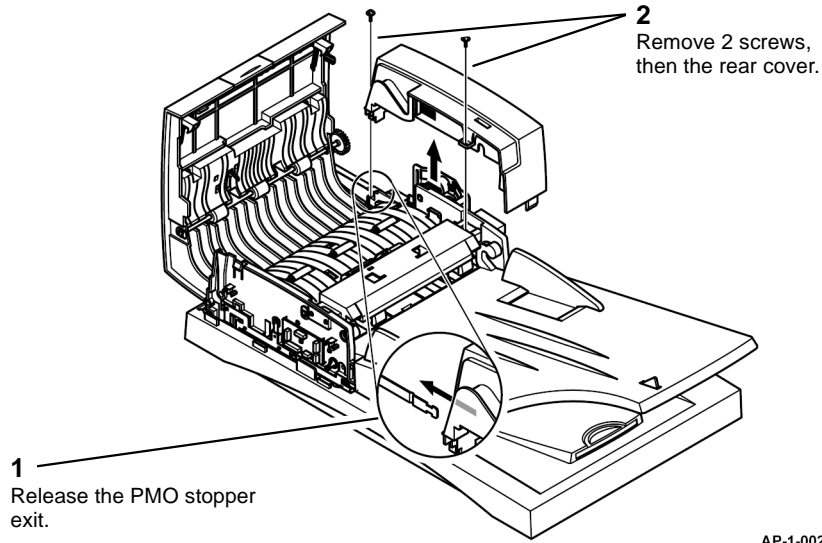
6. Remove the front cover, Figure 4.



AP-1-0023-A

Figure 4 Front cover removal

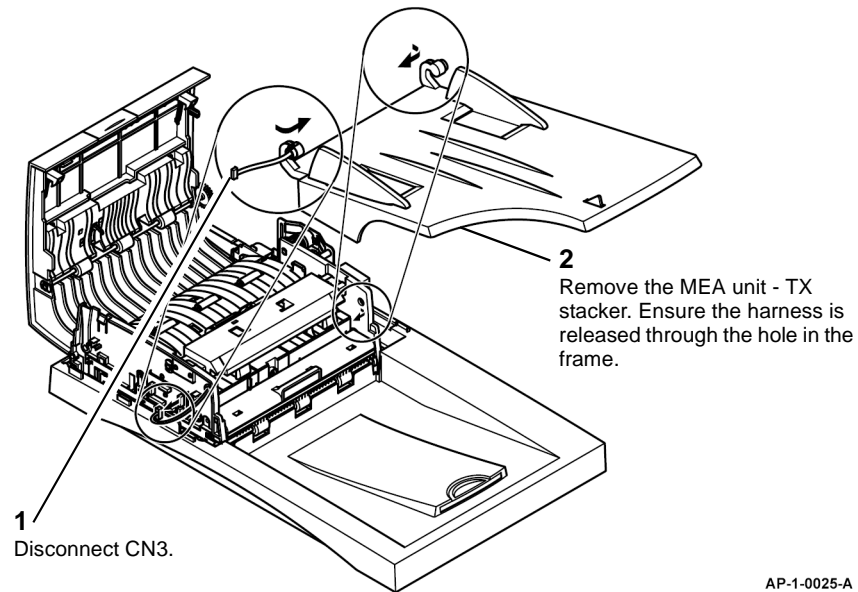
7. Remove the rear cover, Figure 5.



AP-1-0024-A

Figure 5 Rear cover removal

8. Remove the MEA unit - TX stacker, Figure 6.

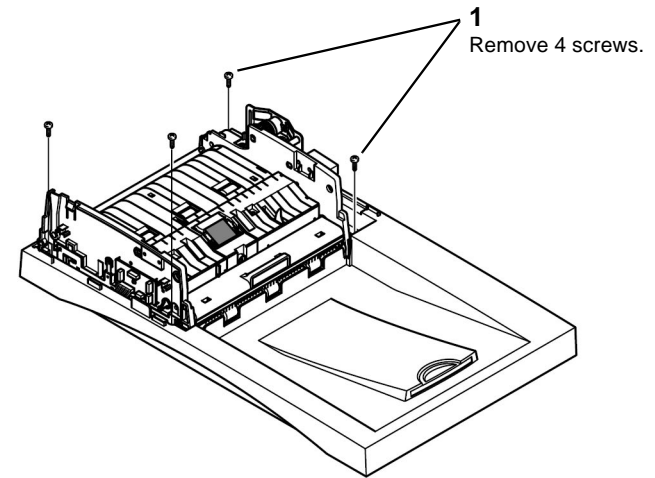


AP-1-0025-A

Figure 6 MEA unit - TX stacker removal

9. Prepare to remove the MEA unit cover open, Figure 7.

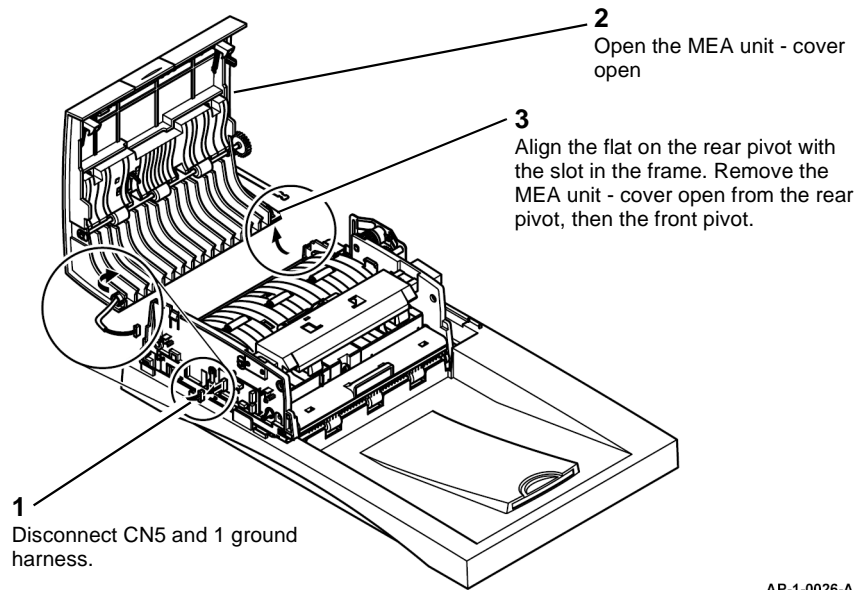
NOTE: Removing the 4 screws that secure the guide - M scan assembly will ease the removal of the MEA unit cover open.



AP-1-0136-A

Figure 7 Preparation

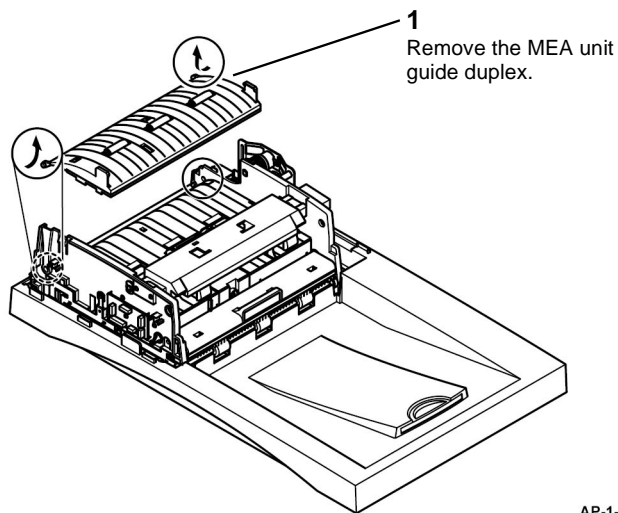
10. Remove the MEA unit cover open, Figure 8.



AP-1-0026-A

Figure 8 MEA unit - cover open removal

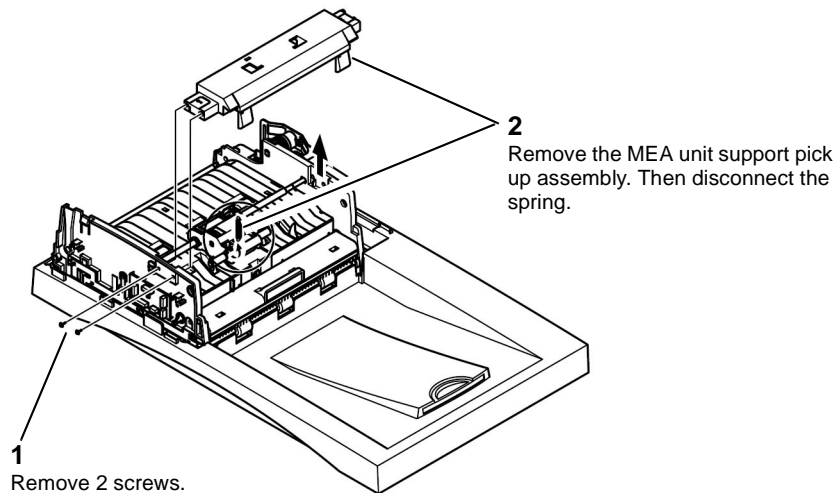
11. Remove the MEA unit guide duplex, Figure 9.



AP-1-0027-A

Figure 9 MEA unit guide duplex removal

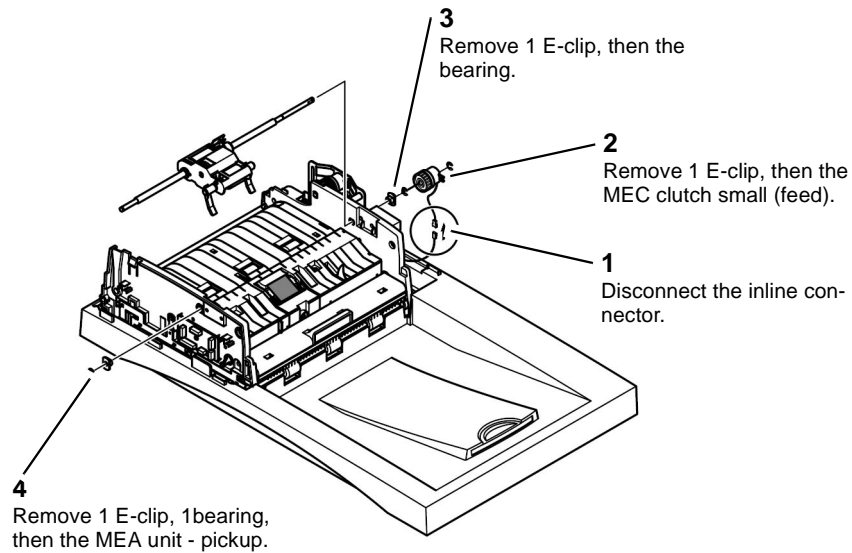
12. Remove the MEA unit support pick up assembly, Figure 10.



AP-1-0028-A

Figure 10 MEA unit support pick up assembly removal

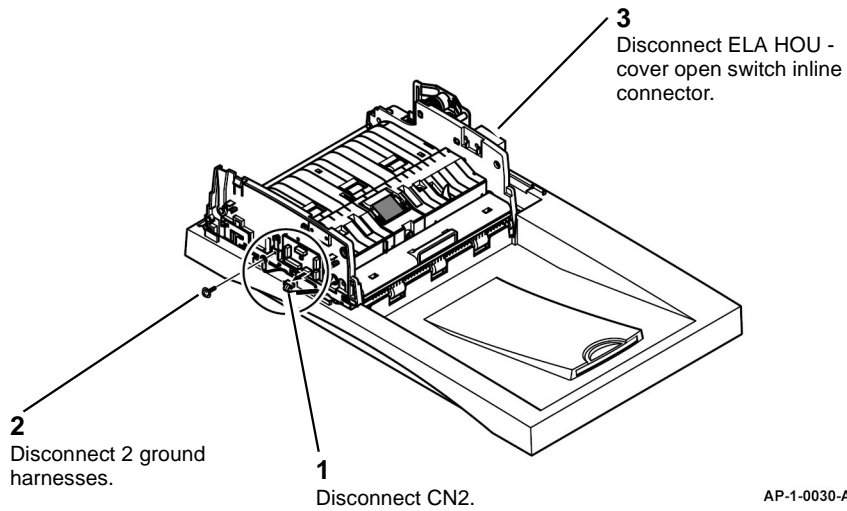
13. Remove the MEA unit - pickup, Figure 11.



AP-1-0029-A

Figure 11 MEA unit - pickup removal

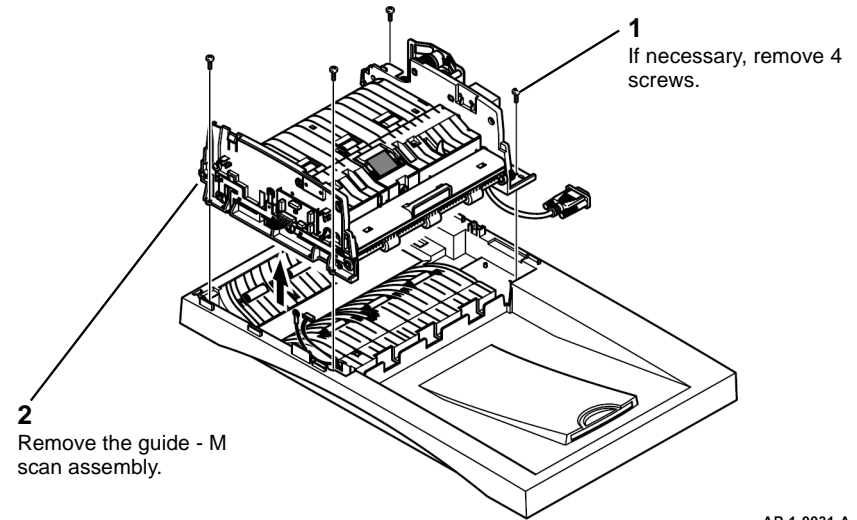
14. Prepare to remove the guide - M scan assembly, Figure 12.



AP-1-0030-A

Figure 12 Preparation

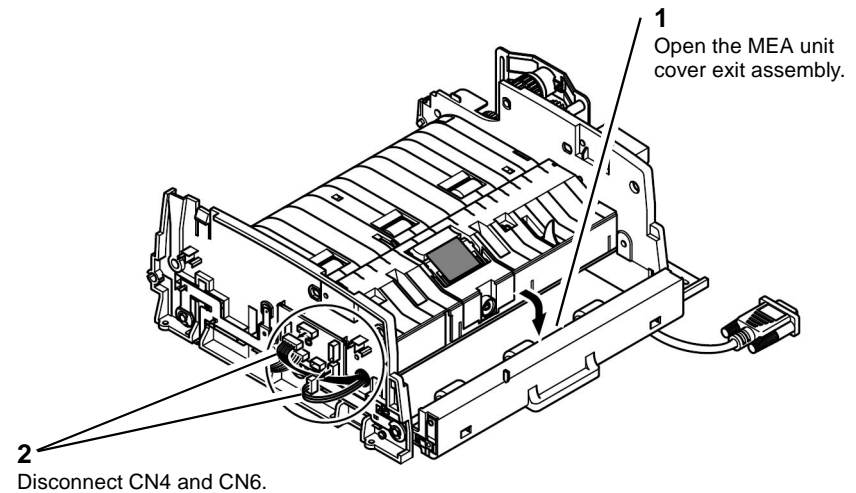
15. Remove the guide - M scan assembly, Figure 13.



AP-1-0031-A

Figure 13 Guide - M scan assembly removal

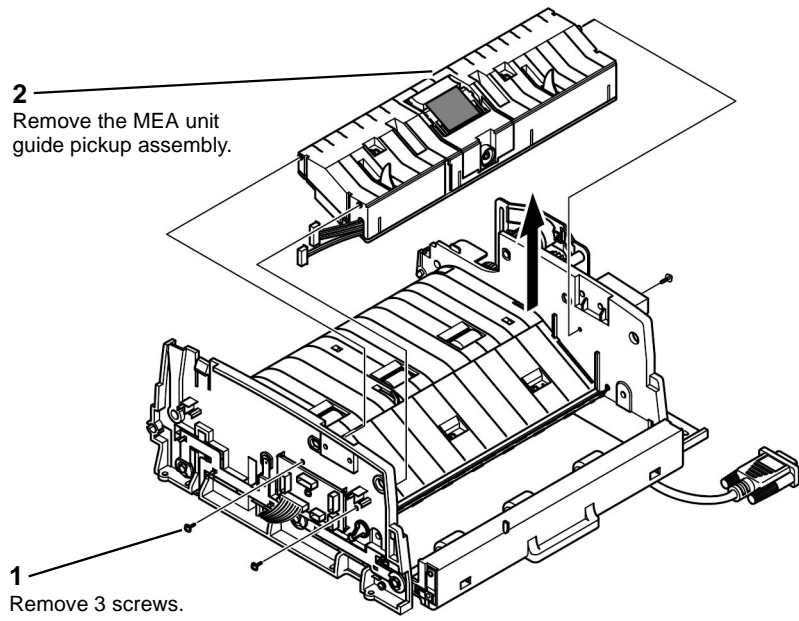
16. Prepare to remove the MEA unit guide pickup assembly, Figure 14.



AP-1-0032-A

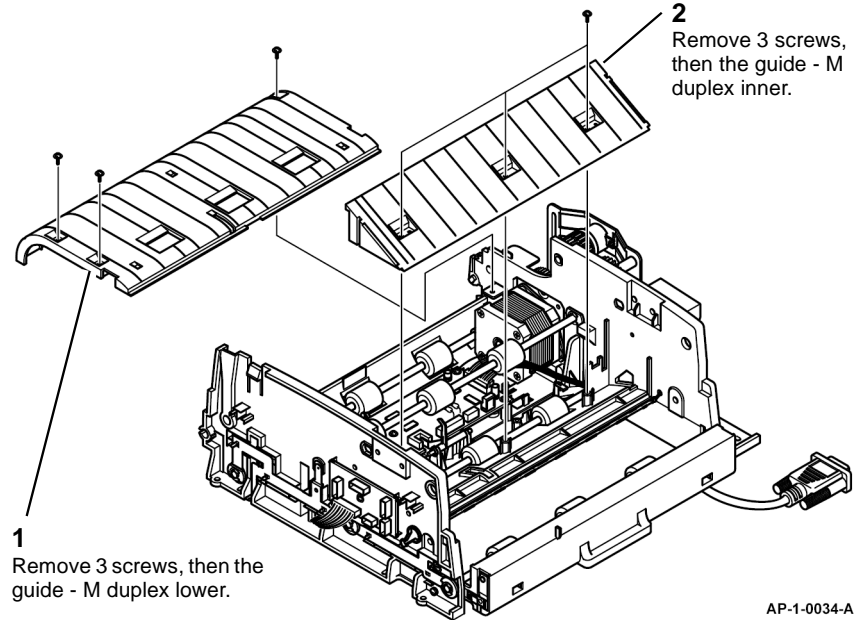
Figure 14 Preparation

17. Remove the MEA unit guide pickup assembly, Figure 15.



AP-1-0033-A

Figure 15 MEA unit guide pickup assembly removal



AP-1-0034-A

Figure 16 Guide removal

18. Remove the guides, Figure 16.

19. Remove the cover - P gear, Figure 17.

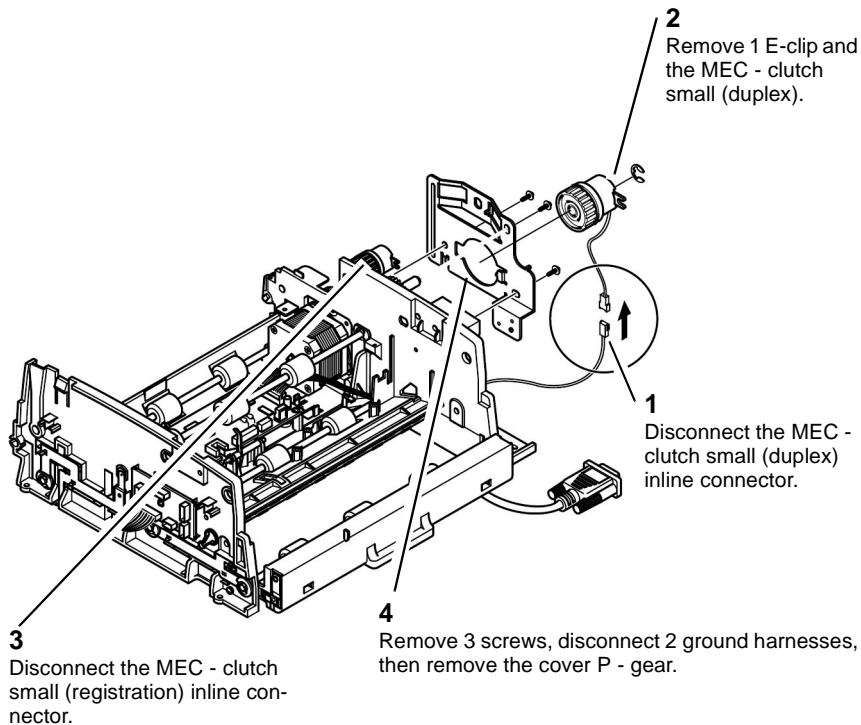
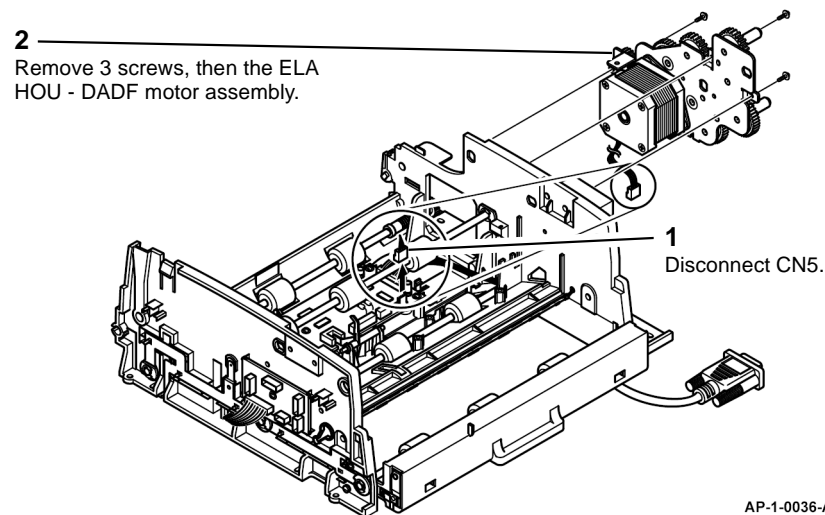


Figure 17 Cover - P gear removal

AP-1-0035-A

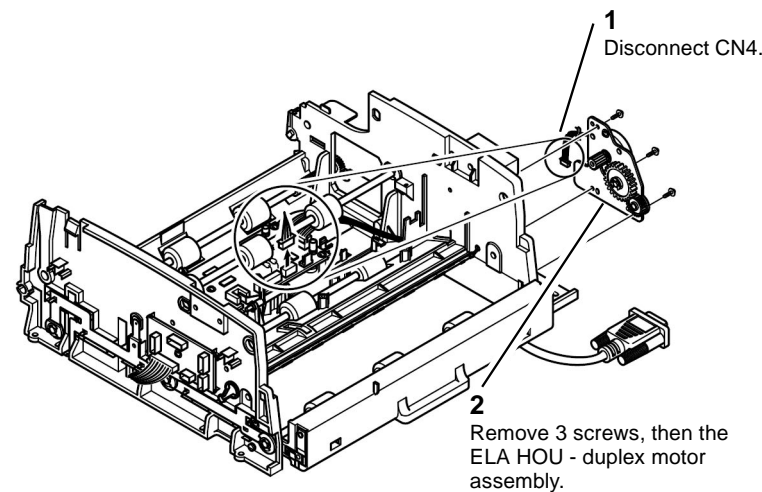
20. Remove the ELA HOU - DADF motor assembly, Figure 18.



AP-1-0036-A

Figure 18 ELA HOU - DADF motor assembly removal

21. Remove the ELA HOU - duplex motor assembly, Figure 19.



AP-1-0037-A

Figure 19 ELA HOU - duplex motor assembly removal

Replacement

1. Replacement is the reverse of the removal procedure. When reconnecting the inline connectors, ensure they are connected correctly:

- The MEC clutch small (feed) connects to the black wires.
 - The MEC clutch small (registration) connects to the green wires.
 - The MEC clutch small (duplex) connects to the yellow wires.
 - The ELA HOU - cover open switch connects to the red wires.
2. Ensure the 2 ground harnesses are installed onto the cover P - gear and the 3 ground harnesses onto the guide - M scan assembly.

REP 6.1 Unit - LSU

Parts List on PL 6.10

Removal

WARNING

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

WARNING

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

WARNING

Avoid exposure to laser beam. Invisible laser radiation.

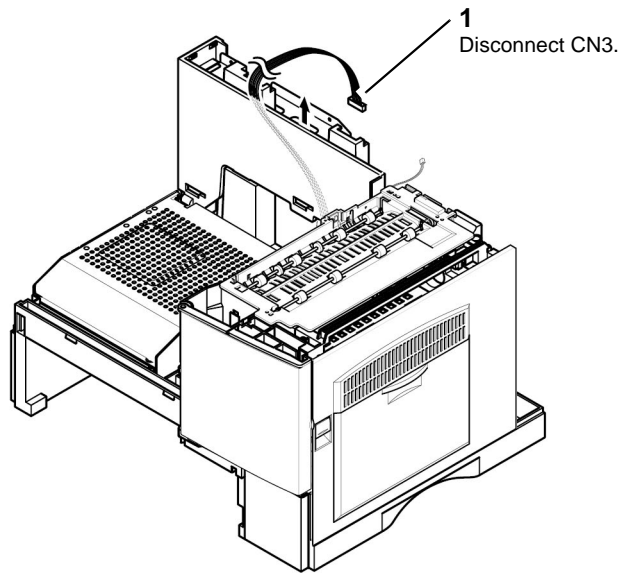
CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

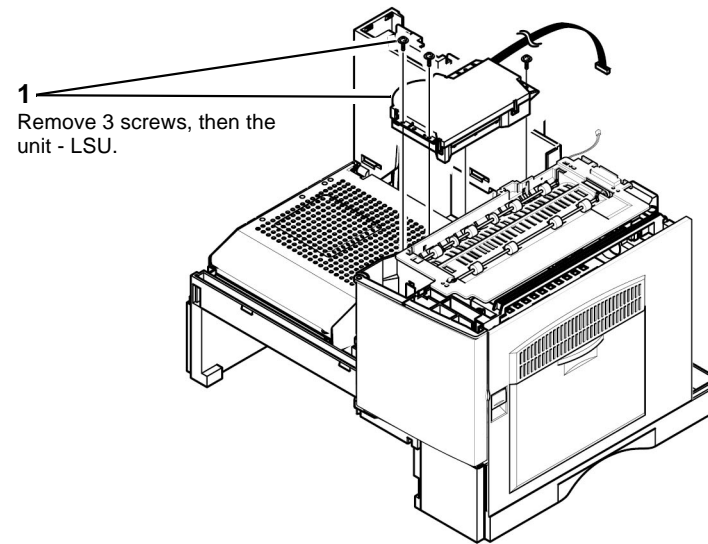


1. Remove the MEA unit - cover PA exit assembly, REP 10.3.
2. Prepare to remove the unit - LSU, Figure 1.



AP-1-0060-A

Figure 1 Preparation



AP-1-0061-A

Figure 2 Unit - LSU removal

3. Remove the unit - LSU, Figure 2.

Replacement

Replacement is the reverse of the removal procedure.

REP 7.1 MEC Unit - Tray Assembly

Parts List on PL 8.11

Removal

WARNING

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

WARNING

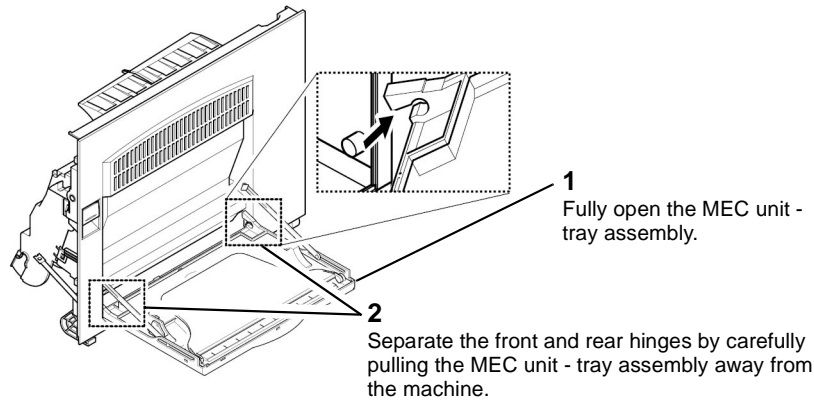
Take care during this procedure. Sharp edges may be present that can cause injury.

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

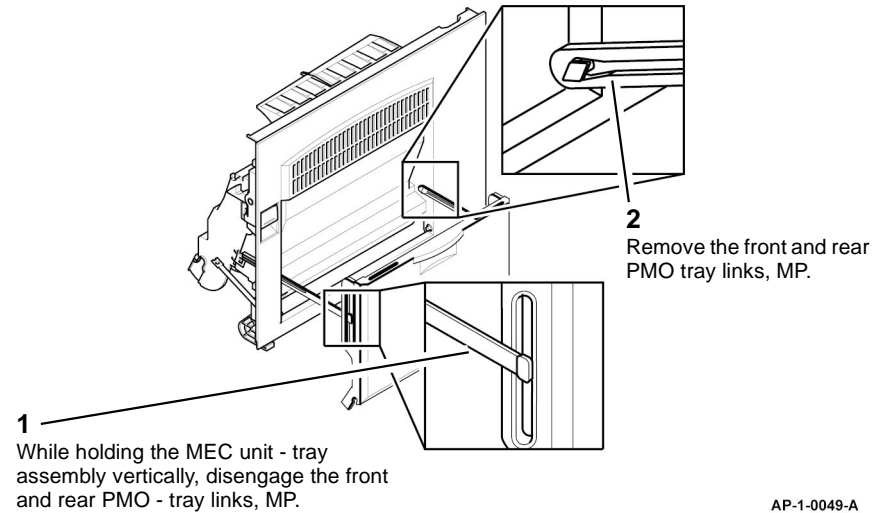
1. Prepare to remove the MEC unit - tray assembly, Figure 1.



AP-1-0048-A

Figure 1 Preparation

2. Remove the MEC unit - tray assembly and PMO - tray links, MP, Figure 2.



AP-1-0049-A

Figure 2 MEC unit - tray assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 8.1 ELA HOU - Side Cover Assembly

Parts List on PL 8.10

Removal

WARNING

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

WARNING

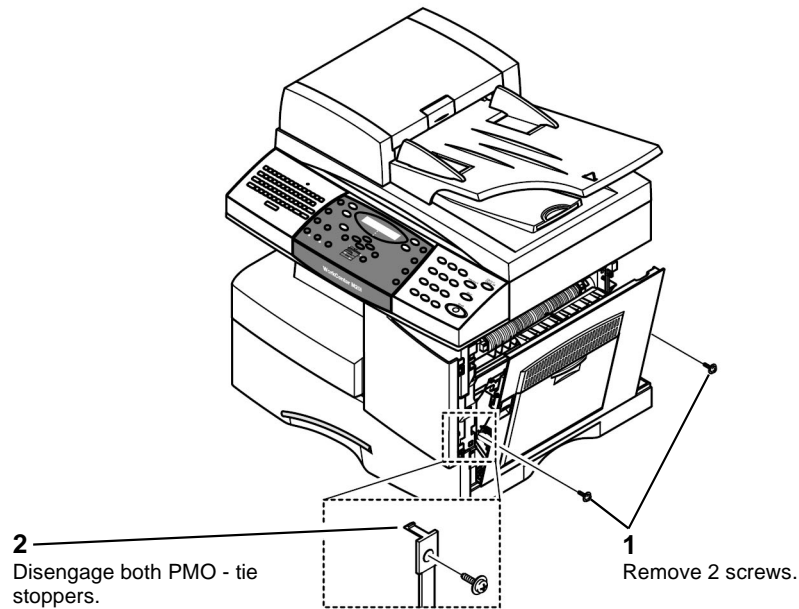
Take care during this procedure. Sharp edges may be present that can cause injury.

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

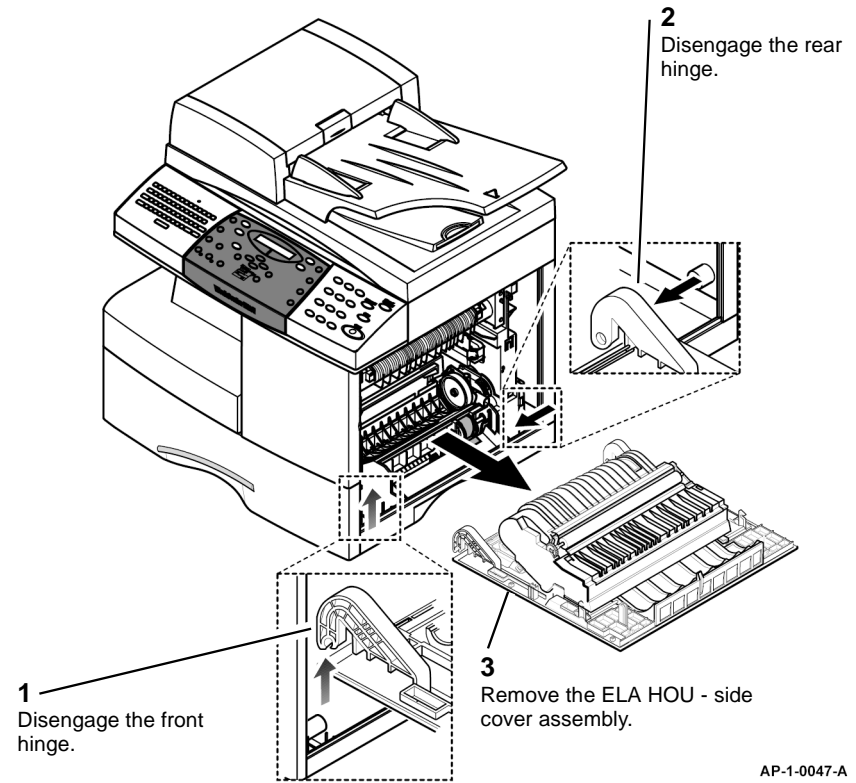
1. Prepare to remove the ELA HOU - side cover assembly, Figure 1.



AP-1-0046-A

Figure 1 Preparation

2. Fully open the ELA HOU side cover assembly. Remove the ELA HOU - side cover assembly, Figure 2.



AP-1-0047-A

Figure 2 ELA HOU - side cover removal

Replacement

Replacement is the reverse of the removal procedure.

REP 8.2 MEA Unit - Duplex Assembly

Parts List on PL 8.10 and PL 8.11

Removal

WARNING

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

WARNING

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

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

1. Remove the ELA HOU - side cover assembly, REP 8.1.
2. Remove the MEA unit - duplex assembly, Figure 1.

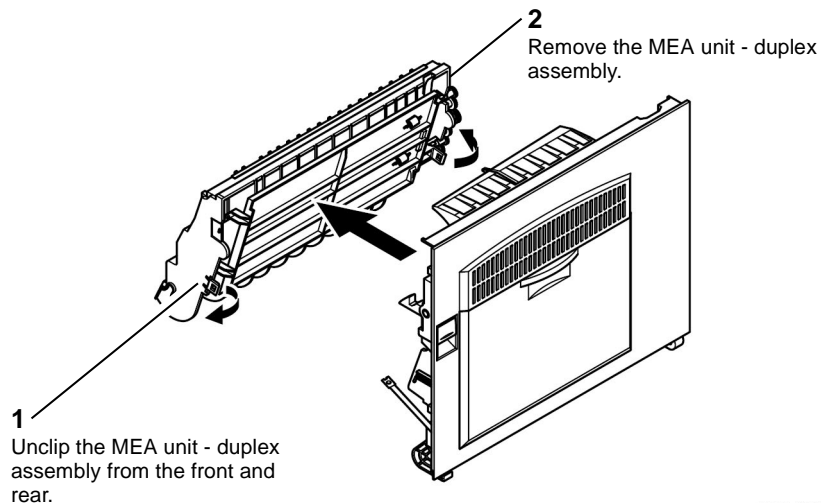


Figure 1 MEA unit - duplex assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 8.3 Transfer Roller Assembly

Parts List on PL 8.11

Removal

WARNING

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

WARNING

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

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

1. Open the ELA HOU - side cover assembly.

NOTE: For clarity, the MEA unit - duplex assembly is shown removed from the machine in Figure 1.

2. Remove the transfer roller assembly, Figure 1.

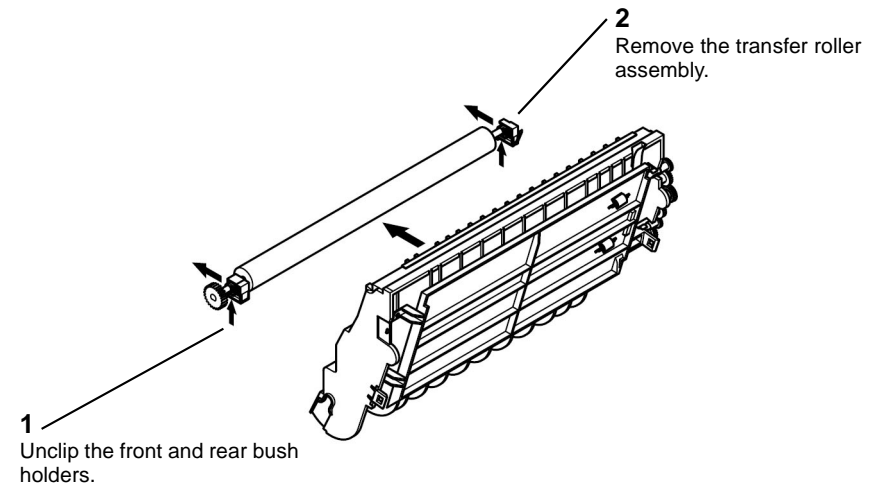


Figure 1 Transfer roller assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 8.4 ELA HOU - MP Assembly

Parts List on PL 4.25 and PL 8.20

Removal

WARNING

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

WARNING

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

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

1. Remove the ELA HOU - frame main assembly, REP 4.4.
2. Disconnect CN27 and CN31, Figure 1.

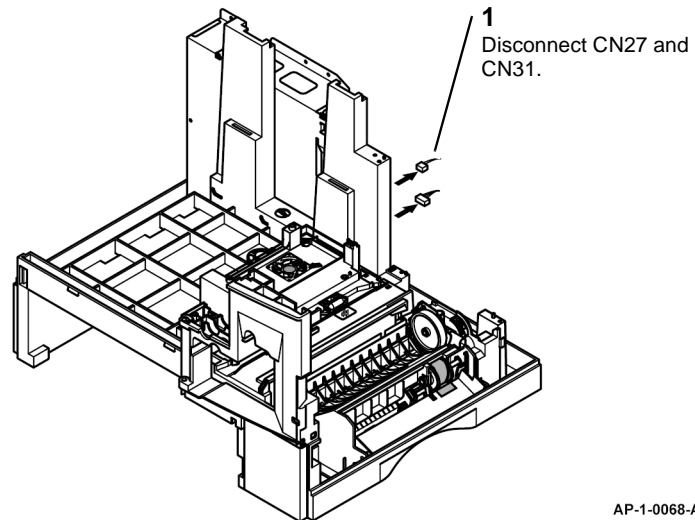


Figure 1 Connectors

3. Remove the PMO - cover feed, Figure 2.

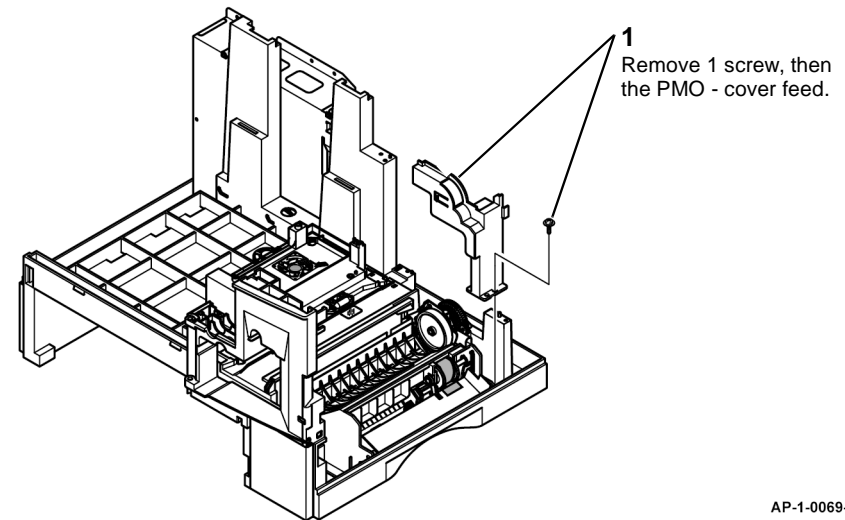


Figure 2 PMO - cover feed removal

4. Prepare to remove the ELA HOU - MP assembly, Figure 3.

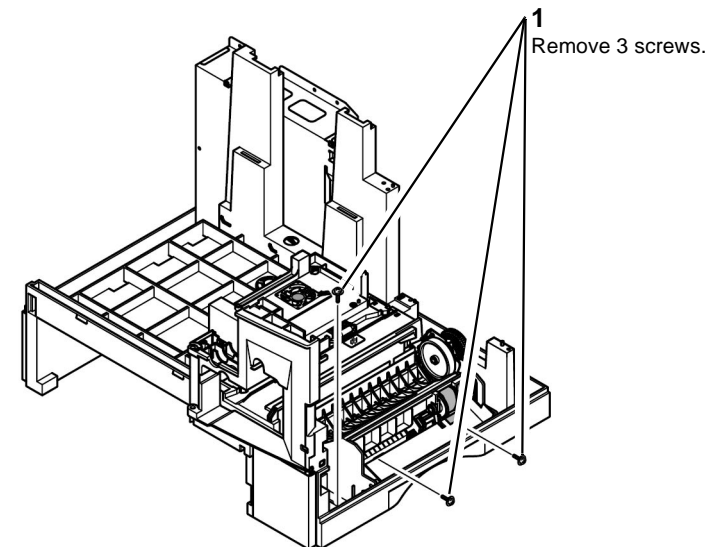
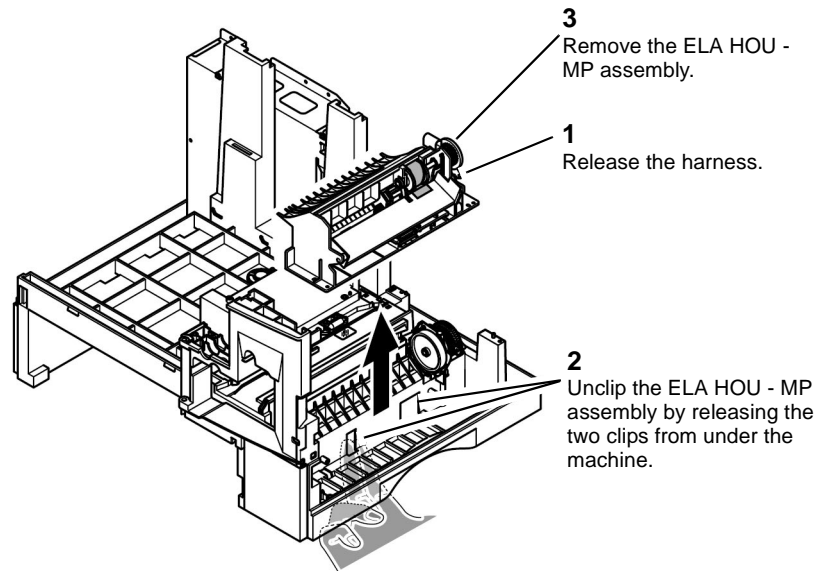


Figure 3 Preparation

5. Remove the ELA HOU - MP assembly, Figure 4.



AP-1-0071-A

Figure 4 ELA HOU - MP assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 8.5 MEA Unit - Feed Roller Assembly

Parts List on PL 8.15

Removal

WARNING

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

WARNING

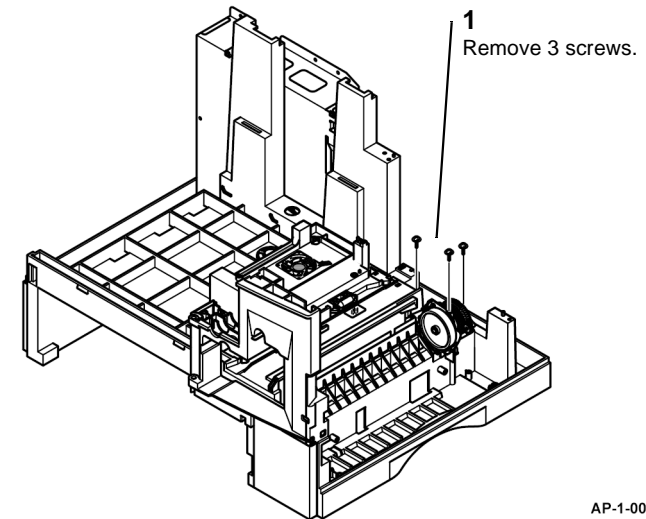
Take care during this procedure. Sharp edges may be present that can cause injury.

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

1. Remove the ELA HOU - MP assembly, REP 8.4.
2. Pull out the tray 1 cassette assembly approximately 100mm (4 inches).
3. Prepare to remove the MEA unit - feed roller assembly, Figure 1.



AP-1-0072-A

Figure 1 Preparation

4. Remove the MEA unit - feed roller assembly, Figure 2.

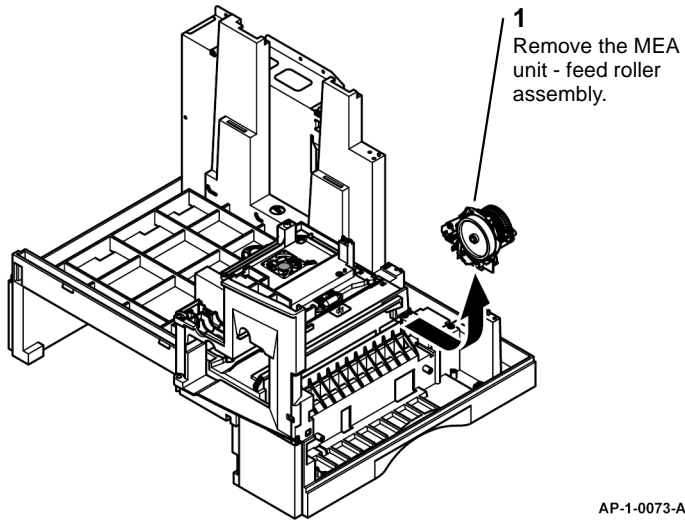


Figure 2 MEA unit - feed roller assembly removal

AP-1-0073-A

Replacement

Replacement is the reverse of the removal procedure.

REP 8.6 ELA HOU - Pickup Assembly

Parts List on PL 8.25

Removal

WARNING

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

WARNING

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

CAUTION

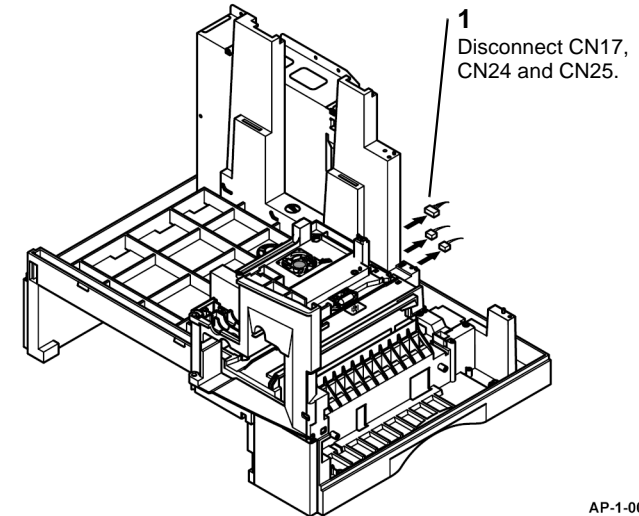
Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

1. Remove tray 1 cassette assembly, PL 7.10 Item 1.
2. Remove the ELA HOU - drive assembly, REP 4.1.

NOTE: For clarity, the machine is shown disassembled in Figure 1, Figure 2 and Figure 4.

3. Disconnect CN17, CN24 and CN25, Figure 1.



AP-1-0075-A

Figure 1 Connectors

4. Remove the MEA unit guide CST PA assembly, Figure 2.

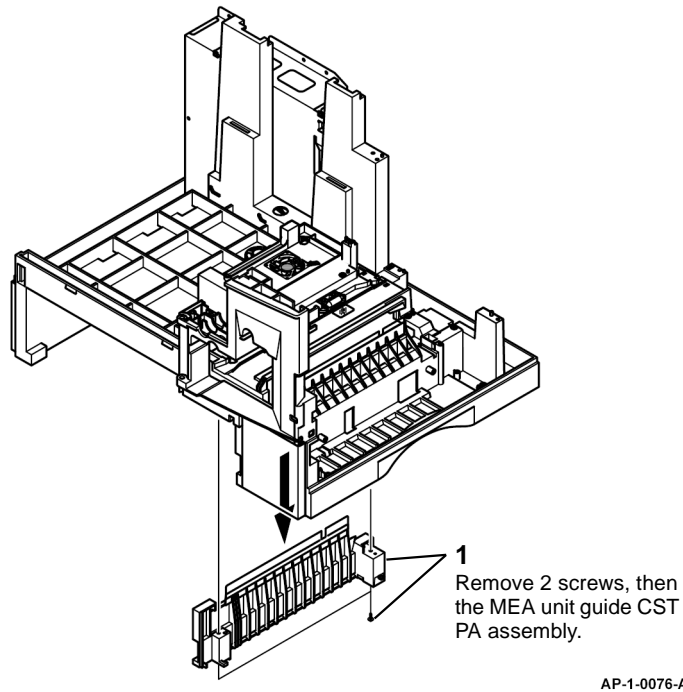


Figure 2 MEA unit guide CST PA assembly removal

5. Remove the solenoid pickup and gear - pickup, Figure 3.

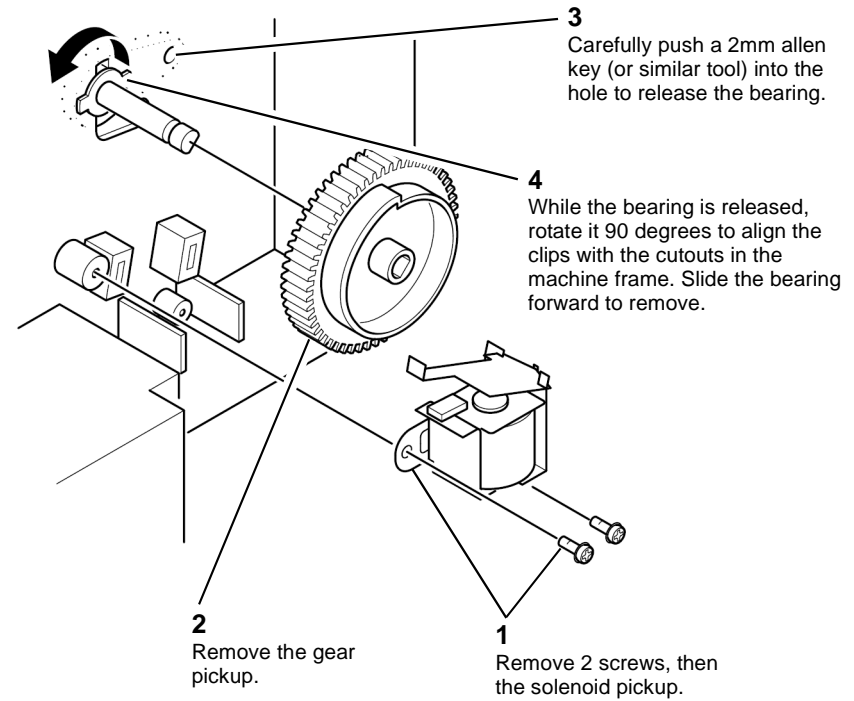
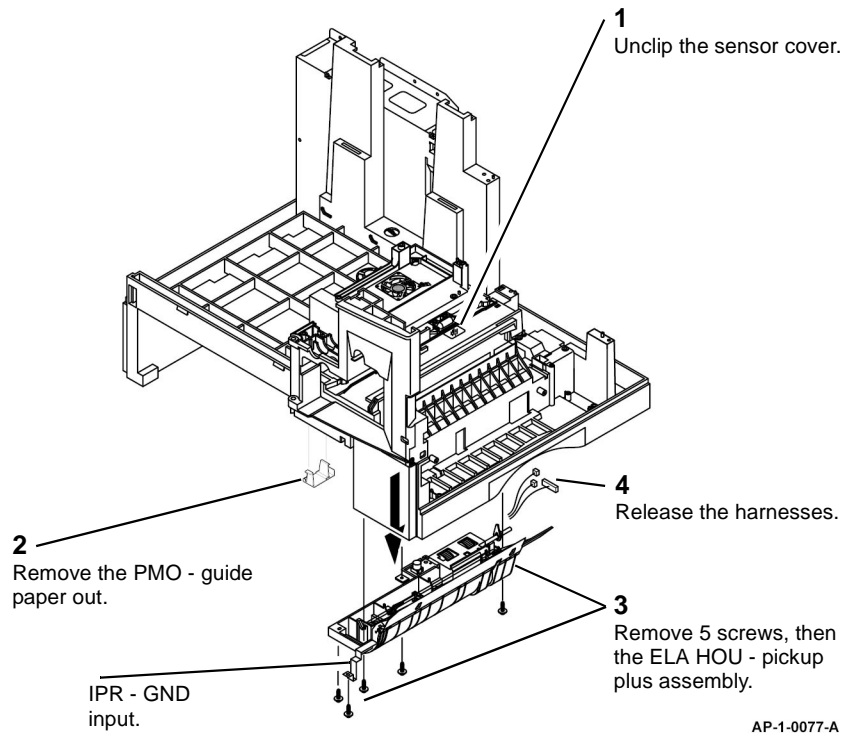


Figure 3 Solenoid and gear pickup removal

CAUTION

Do not damage the IPR GND input when removing the ELA HOU pickup plus assembly.

6. Remove the ELA HOU - pickup plus assembly, Figure 4.



AP-1-0077-A

Figure 4 ELA HOU - pickup plus assembly removal

Replacement

Replacement is the reverse of the removal procedure. When reinstalling the MEA unit guide CST PA assembly, ensure the PMO sheet guide paper, PL 4.25 Item 11 and the mylar strips, PL 4.25 Item 12 are not damaged.

REP 10.1 ELA HOU - Fuser Assembly

Parts List on PL 9.10

Removal

WARNING

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

WARNING

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

WARNING

Do not touch the fuser while it is hot.

CAUTION

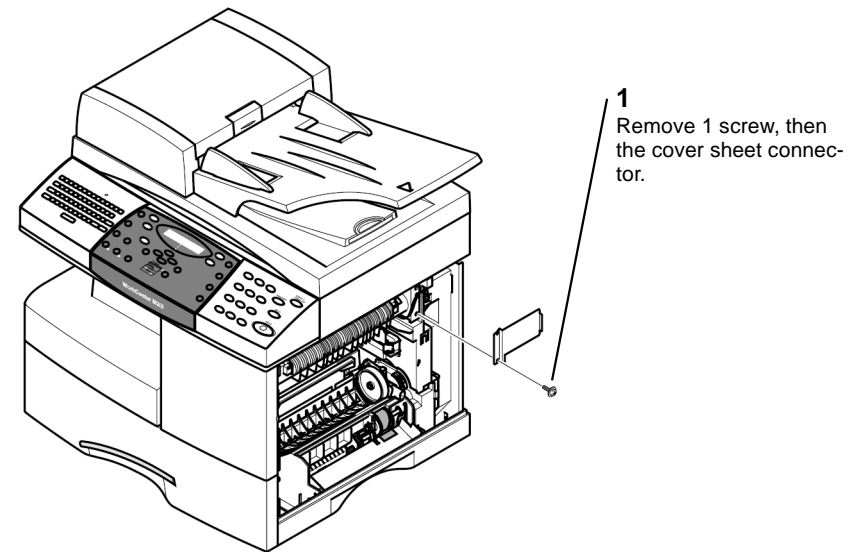
Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

1. Open the ELA HOU - side cover assembly, PL 8.10 Item 1.

NOTE: For clarity, the ELA HOU - side cover assembly is shown removed from the machine in Figure 1, Figure 2 and Figure 3.

2. Remove the cover sheet connector, Figure 1.



AP-1-0080-A

Figure 1 Cover sheet connector removal

3. Disconnect the fuser connector, Figure 2.

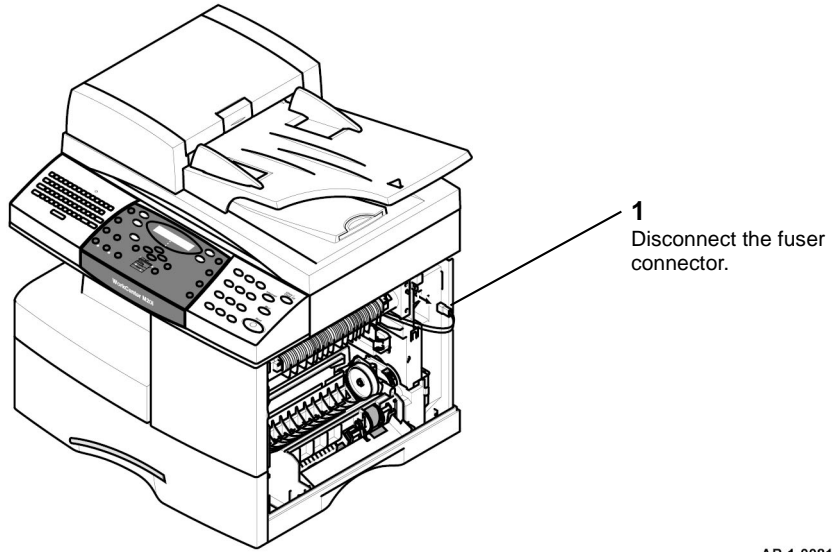


Figure 2 Fuser connector

AP-1-0081-A

4. Remove the ELA HOU - fuser assembly, Figure 3.

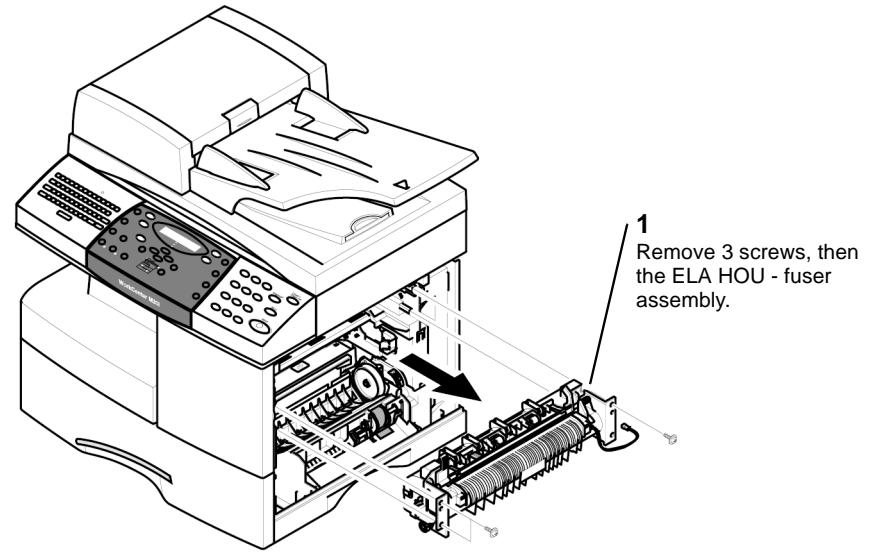


Figure 3 ELA HOU - fuser assembly removal

AP-1-0082-A

Replacement

Replacement is the reverse of the removal procedure.

REP 10.2 MEC - Exit Assembly

Parts List on PL 10.10

Removal

WARNING

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

WARNING

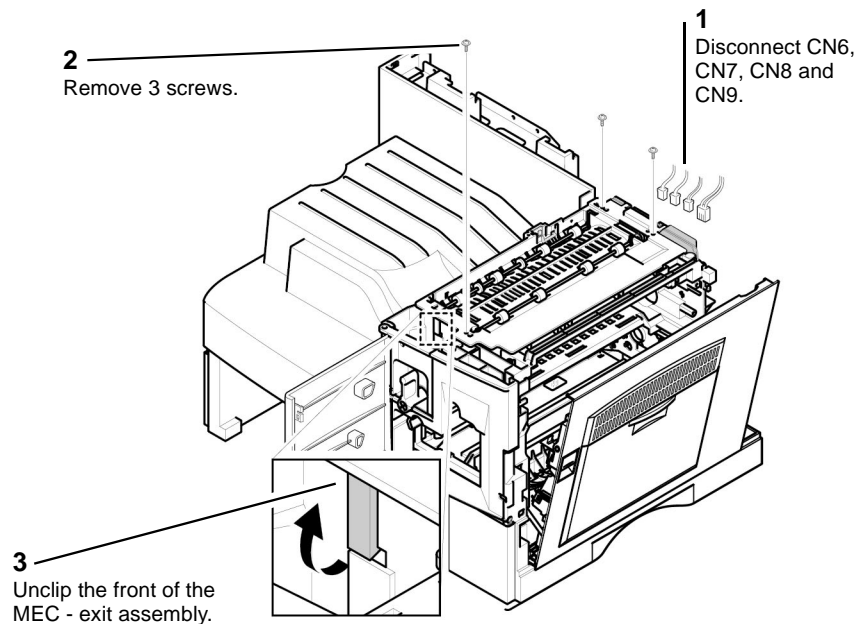
Take care during this procedure. Sharp edges may be present that can cause injury.

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

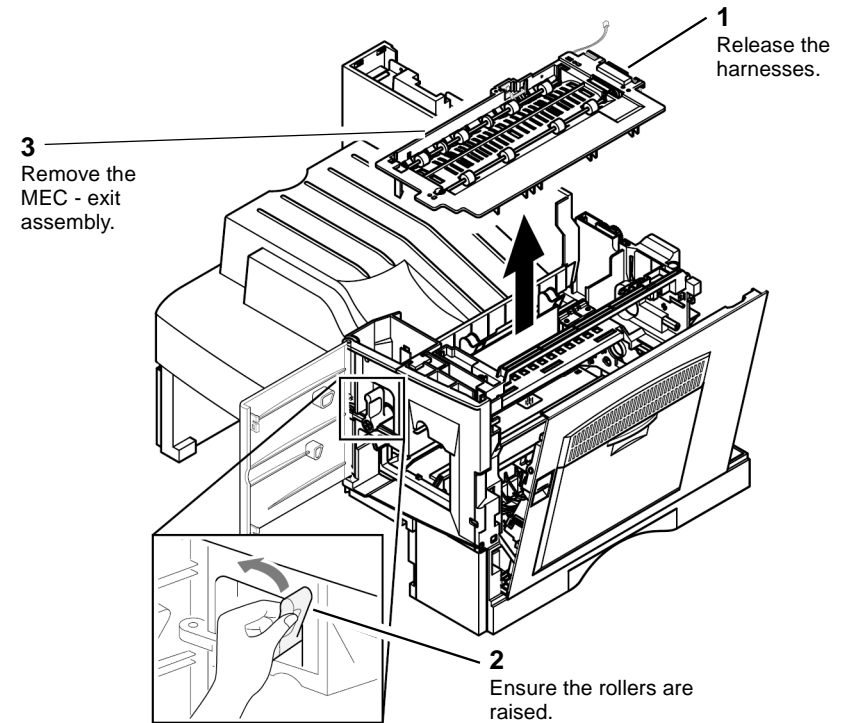
1. Remove the ELA HOU - scanner assembly, perform REP 14.1 steps 1 through 7.
2. Open the ELA HOU - side cover assembly, PL 8.10 Item 1 and the MEA unit - cover front assembly, PL 4.25 Item 6.
3. Prepare to remove the MEC - exit assembly, Figure 1.



AP-1-0052-A

Figure 1 Preparation

4. Remove the MEC - exit assembly, Figure 2.



AP-1-0053-A

Figure 2 MEC - exit assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 10.3 MEA Unit - Cover PA Exit Assembly

Parts List on PL 4.25

Removal

WARNING

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

WARNING

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

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

1. Remove the ELA HOU - scanner assembly, perform REP 14.1 steps 1 through 7.
2. Remove the MEA unit cover PA exit assembly, Figure 1.

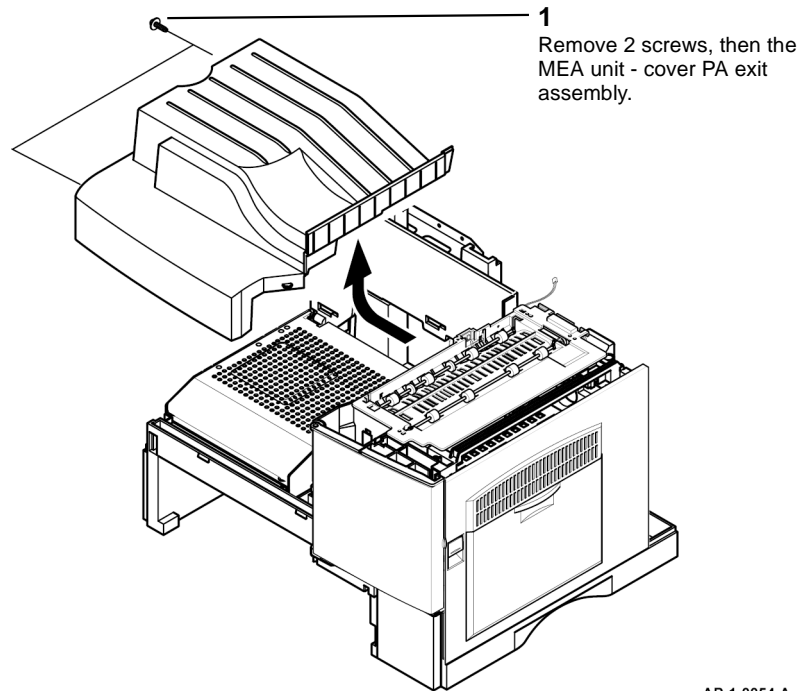


Figure 1 MEA unit - cover PA exit assembly removal

Replacement

Replacement is the reverse of the removal procedure.

REP 14.1 ELA HOU - Scanner Assembly

Parts List on PL 14.10 and PL 14.11

Removal

WARNING

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

WARNING

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

CAUTION

Before performing this procedure, refer to General Disassembly Precautions, GP 10.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

1. Remove the ELA HOU - DADF, perform REP 5.1 steps 1 through 4.
2. Remove the MEA unit - rear cover, REP 4.2.
3. Disconnect the CCD and scan harnesses from the main PBA. Disconnect 2 ground harnesses from the shield P main lower, Figure 1.

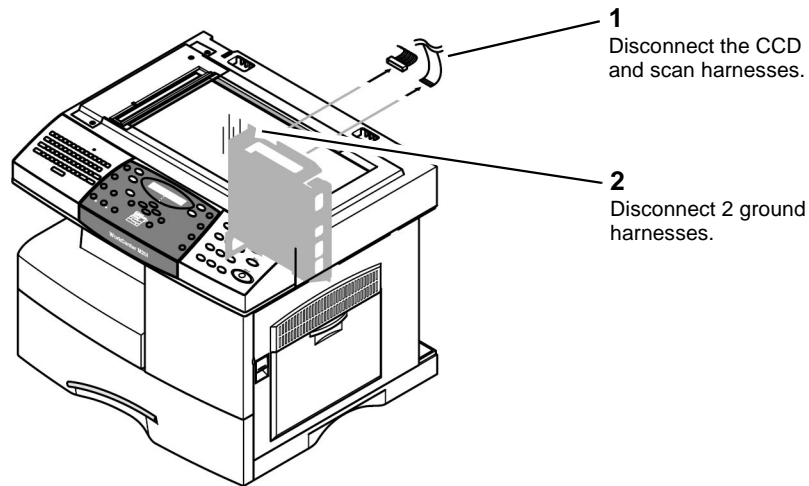


Figure 1 Harness removal

AP-1-0003-A

4. Remove 3 securing screws from the rear of the machine, Figure 2.

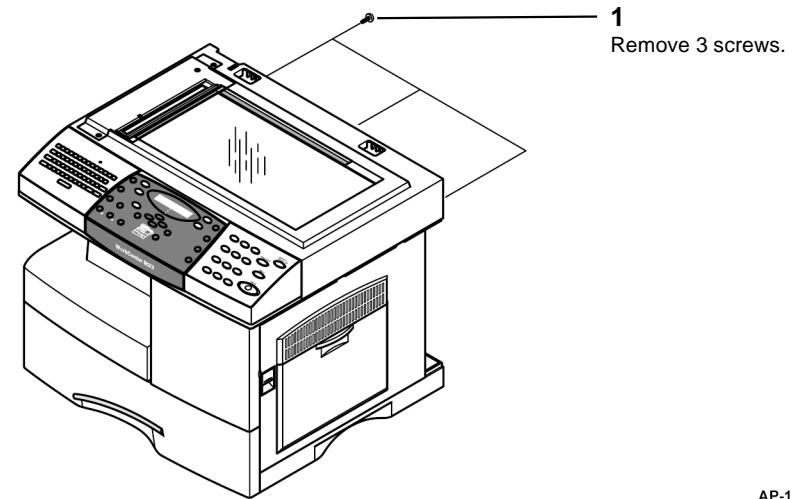


Figure 2 Screw removal

AP-1-0004-A

5. Open the ELA HOU - side cover assembly and the MEA unit - cover front assembly, Figure 3.

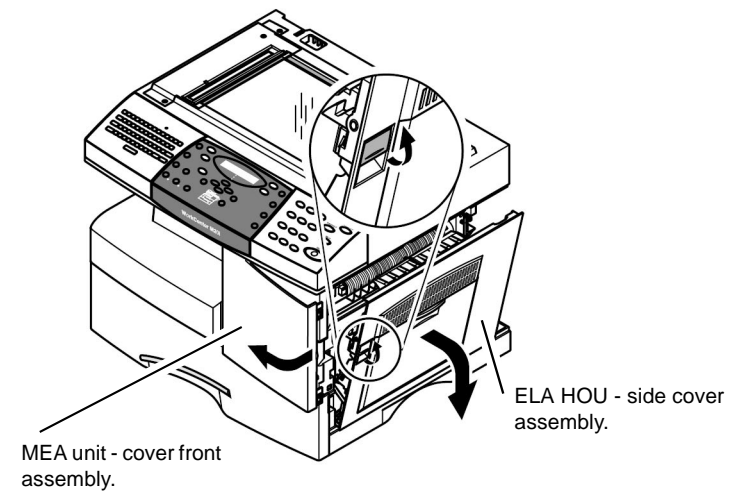


Figure 3 Opening covers

AP-1-0005-A

6. Remove 2 securing screws from the front of the machine, Figure 4.

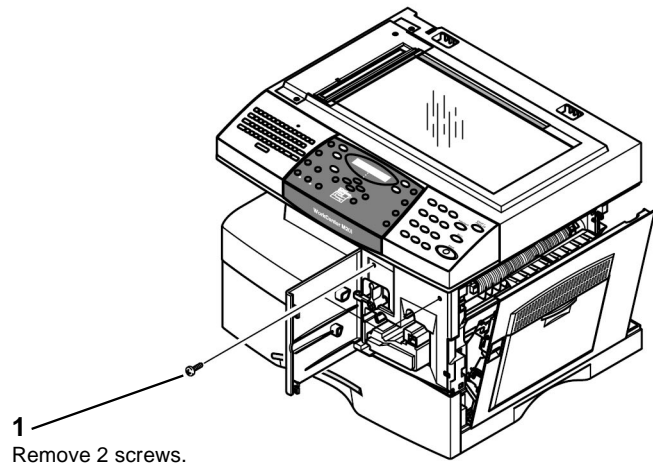
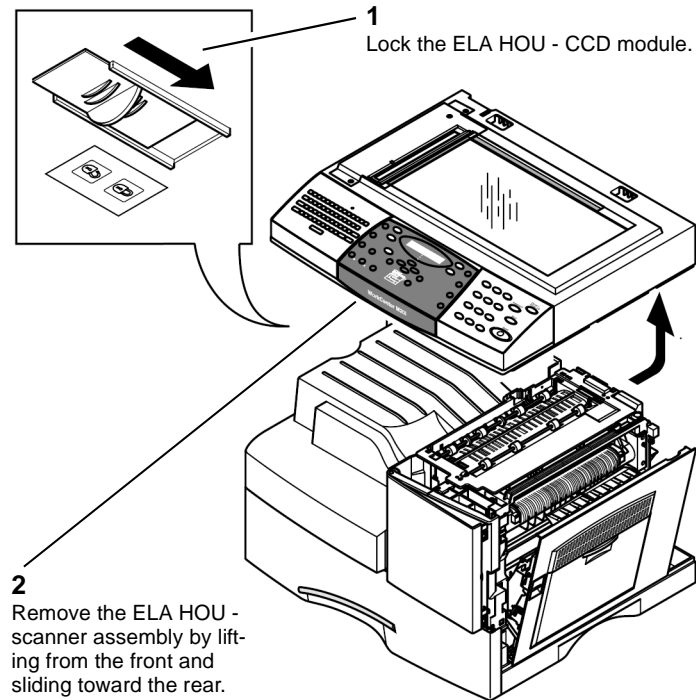


Figure 4 Screw removal

7. Remove the ELA HOU - scanner assembly, Figure 5.



AP-1-0006-A

Figure 5 ELA HOU - scanner assembly removal

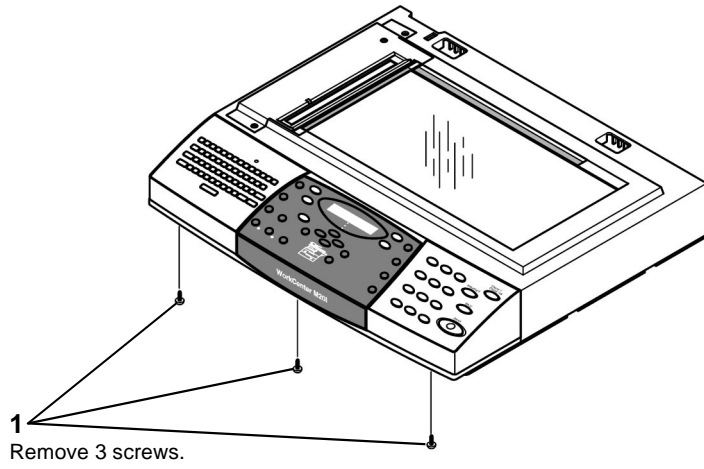
AP-1-0007-A

8. Remove the 3 screws securing the ELA HOU OPE assembly, Figure 6.

CAUTION

Do not allow the optics cavity to become contaminated. Contamination of the optics cavity can cause image quality defects.

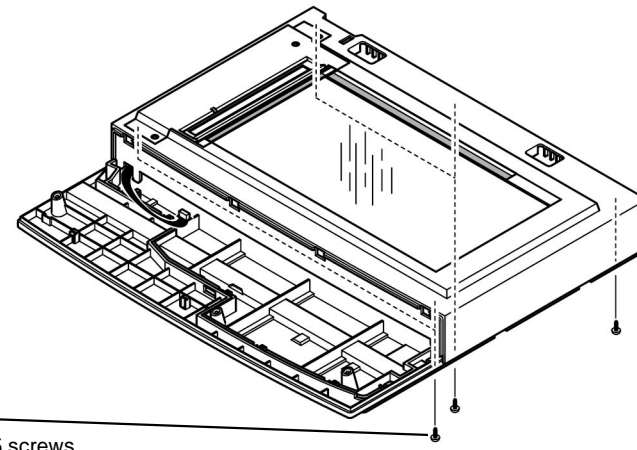
10. Remove the five screws securing the ELA HOU scan upper assembly, Figure 8.



AP-1-0008-A

Figure 6 Screw removal

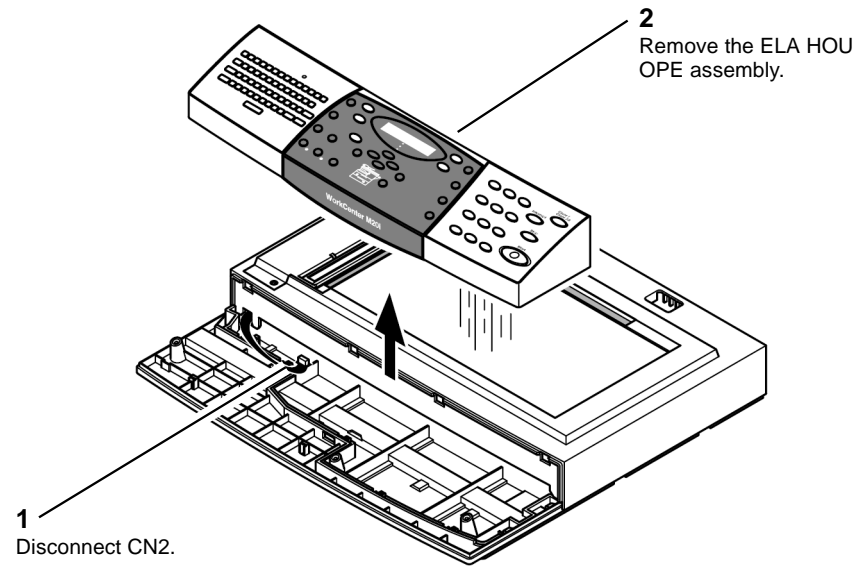
9. Remove the ELA HOU OPE assembly, Figure 7.



AP-1-0010-A

Figure 8 Screw removal

11. Remove the ELA HOU scan upper assembly, Figure 9.



AP-1-0009-A

Figure 7 ELA HOU OPE assembly removal

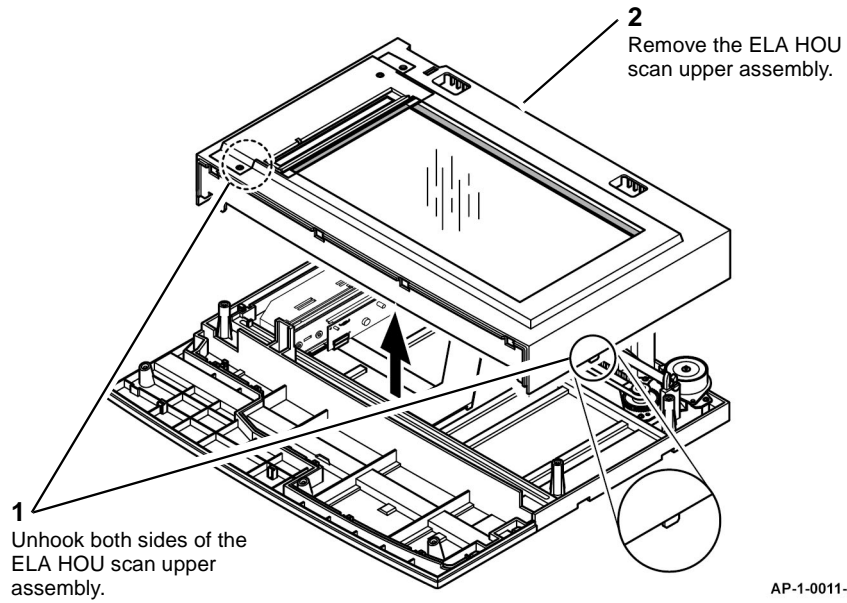


Figure 9 ELA HOU scan upper assembly removal

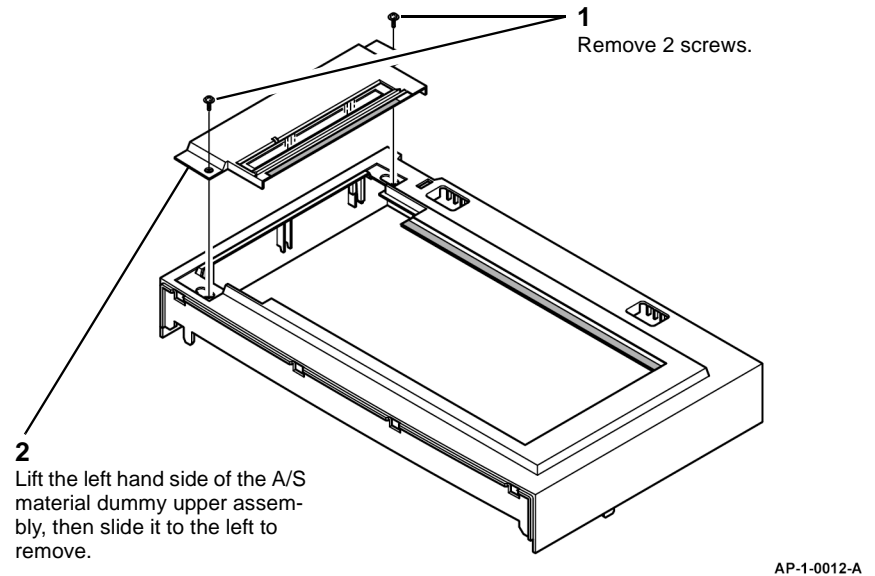


Figure 10 A/S material dummy upper assembly removal

12. Remove the A/S material dummy upper assembly, Figure 10.

13. Remove the IPR - channel base frame, Figure 11.

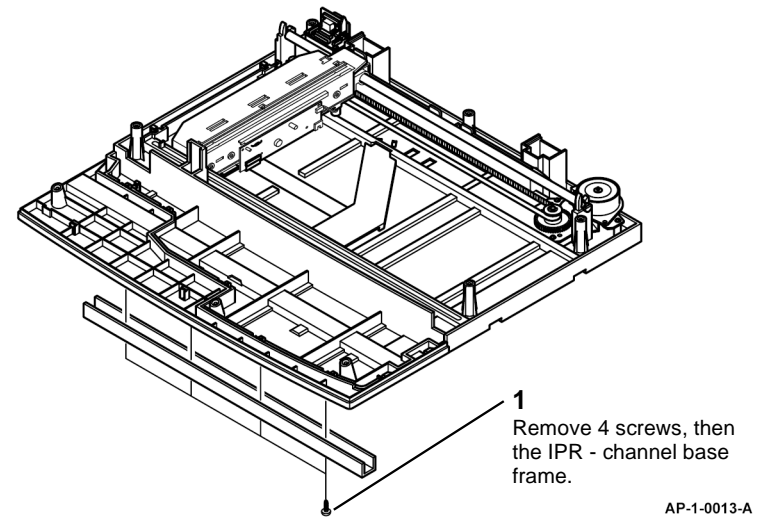


Figure 11 IPR - channel base frame removal

14. Remove the PMO - cover dummy lower, Figure 12.

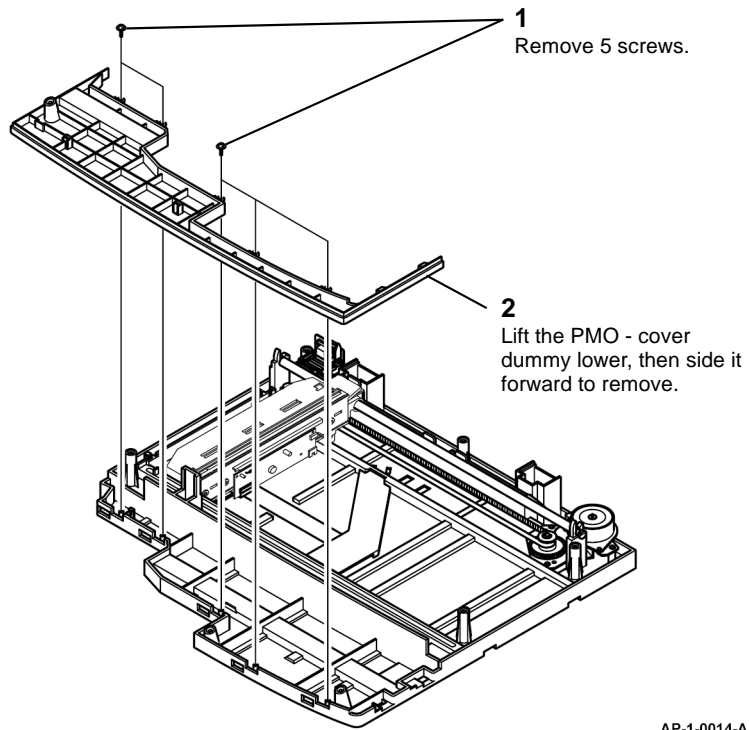


Figure 12 PMO - cover dummy lower removal

AP-1-0014-A

15. Remove the cover M CCD cable, Figure 13.

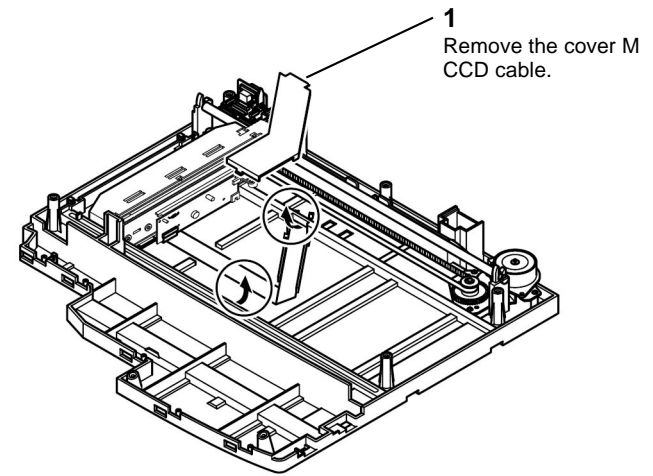


Figure 13 Cover M CCD cable removal

AP-1-0015-A

16. Remove the CBF signal - CCD FFC, Figure 14.

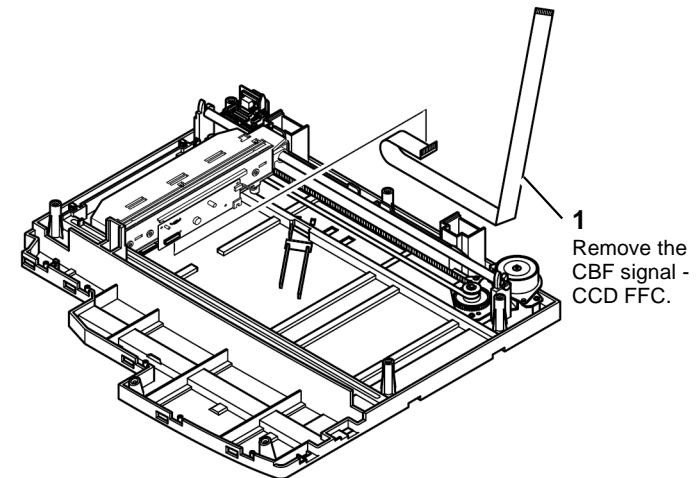
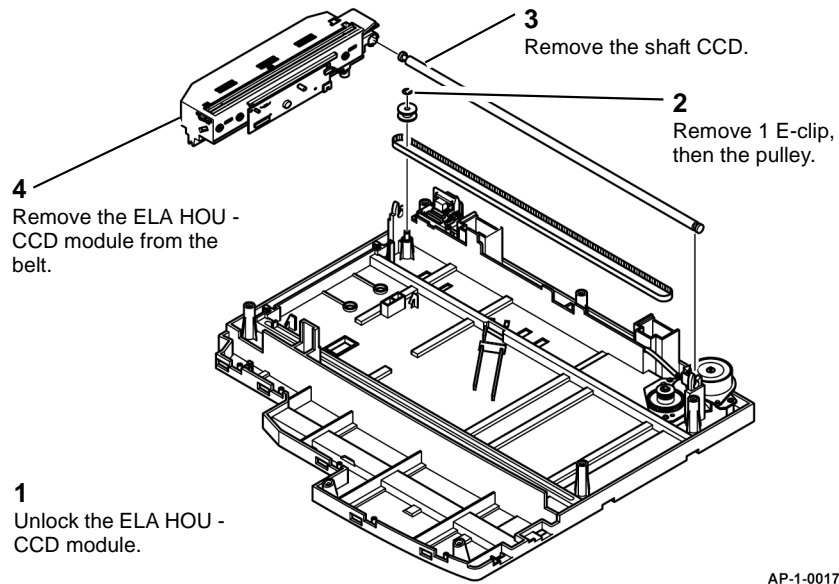


Figure 14 CBF signal - CCD FFC removal

AP-1-0016-A

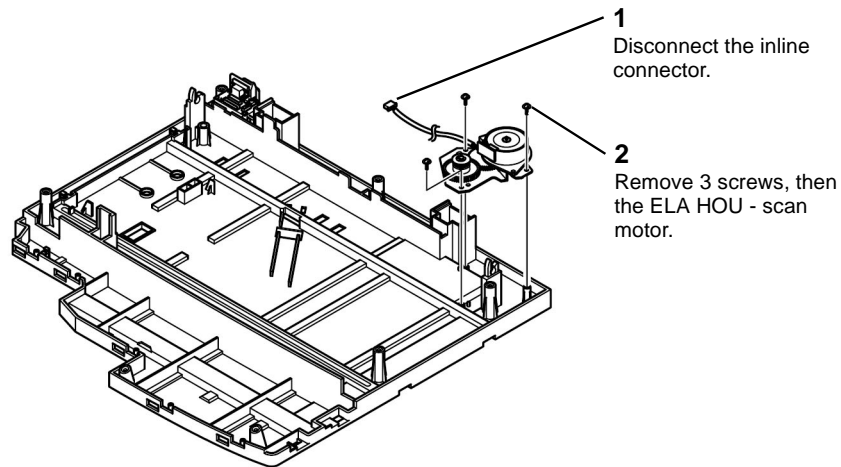
17. Remove the ELA HOU - CCD module, Figure 15.



AP-1-0017-A

Figure 15 ELA HOU - CCD module removal

18. Remove the ELA HOU - scan motor, Figure 16.



AP-1-0018-A

Figure 16 ELA HOU - scan motor removal

19. Remove the PBA SUB - D SUB, PL 14.11 Item 5.

Replacement

1. Replacement is the reverse of the removal procedure.
2. Ensure that the ELA HOU - CCD module is installed correctly, Figure 17.

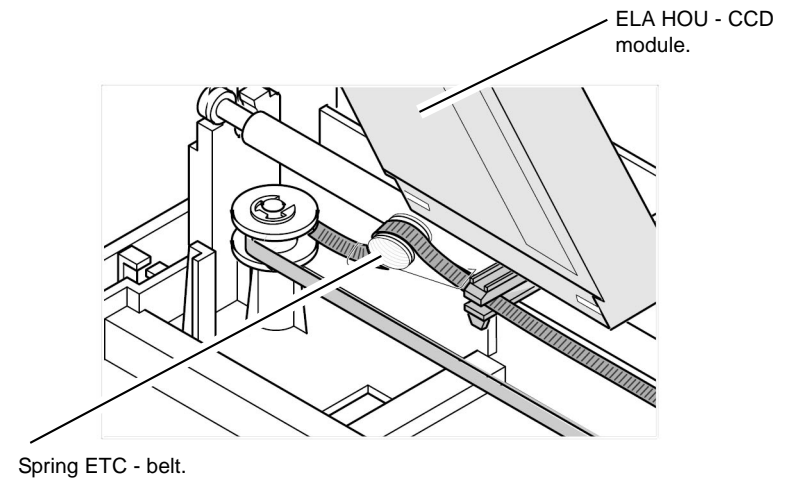


Figure 17 ELA HOU - CCD module replacement

3. Ensure the CBF signal - CCD FFC is re-installed correctly onto the ELA HOU - CCD module and the PBA main:
 - The blue flash on the end of the CBF signal - CCD FFC should face toward the ELA HOU - CCD module.
 - When connected to the PBA main, the blue flash on the other end of the CBF signal - CCD FFC should face downwards.

ADJ 1.1 Machine Settings

Purpose

To correctly set up the machine.

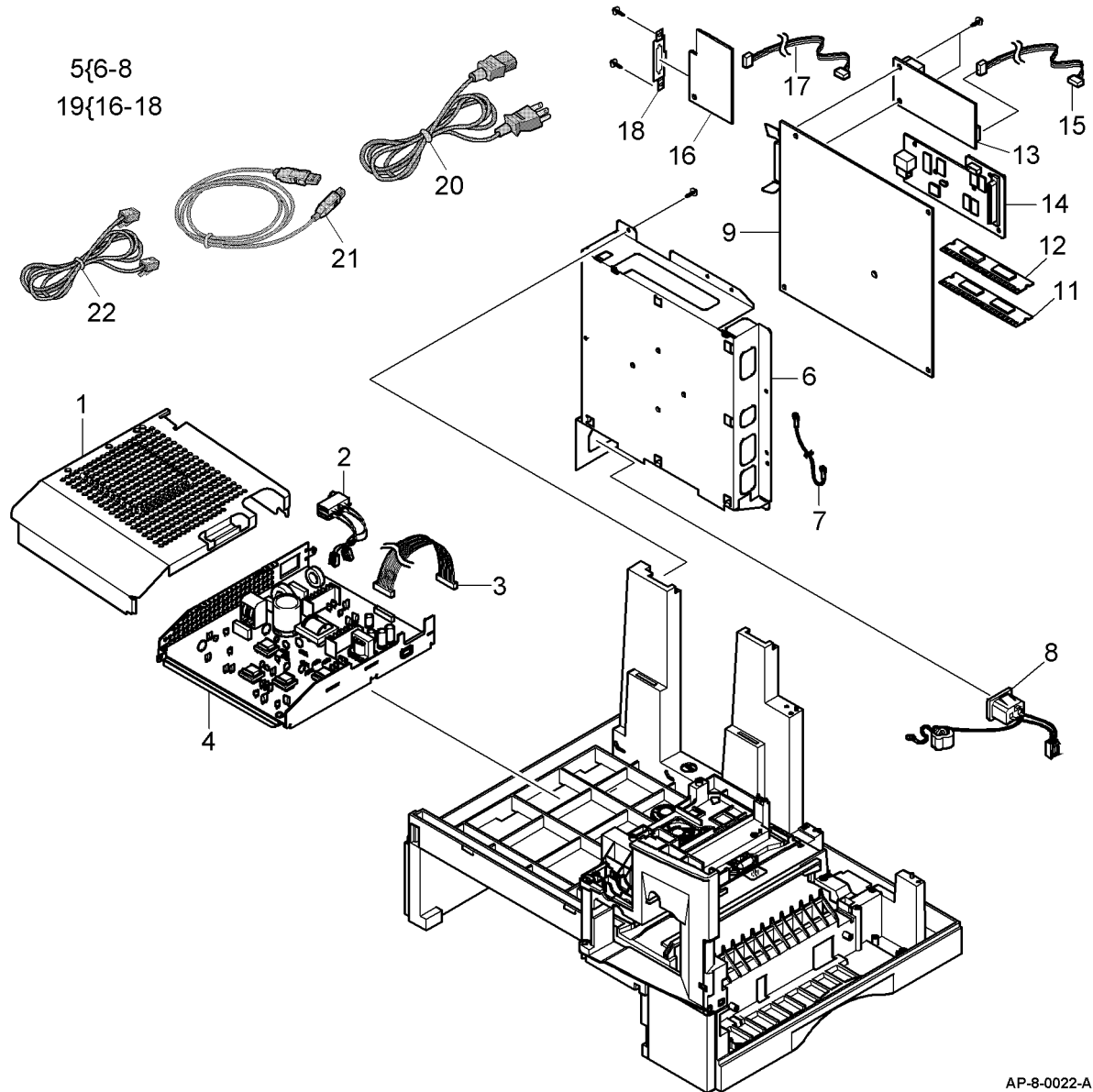
Procedure

All adjustments to the machines settings are made via GP 2, User Mode Entry or GP 3 Service Mode Entry. Go to the relevant procedure.

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PL 1.10 SMPS and PBA Main

Item	Part	Description
1	-	IPR - Shield SMPS Upper (Not Spared) (REP 1.1)
2	152N11548	CBF Power Switch Grey
3	152N11550	CBF Harness - Power + HVPS
4	140N62860	SMPS + HVPS (XE) (REP 1.1)
-	140N62859	SMPS + HVPS (NASG/XCL) (REP 1.1)
5	-	ELA HOU - Shield Main Lower (Not Spared)
6	-	Shield - P Main Lower (P/O PL 1.10 Item 5)
7	-	CBF Harness - LIU GND (P/O PL 1.10 Item 5)
8	-	CBF Harness - Inlet (P/O PL 1.10 Item 5)
9	140N62862	PBA MAIN (C20, M20) (REP 1.2)
-	140N62861	PBA MAIN (M20i) (REP 1.2)
10	-	Not Used
11	140N62864	PBA ETC - PS- DIMM
12	144N00128	SDRAM - DIMM (32MB) (C20, M20)
-	144N00129	SDRAM - DIMM (48MB) (M20i)
13	-	PBA LIU (see below for variants) (REP 1.2)
-	140N62876	PBA LIU (G1) (U.K.)
-	140N62879	PBA LIU (G4) (NASG/XCL)
-	140N62878	PBA LIU (G3) (Poland)
-	140N62877	PBA LIU (G2) (Russia)
14	140N62863	PBA SUB - NPC3 - MFP (REP 1.2)
-	140N62871	PBA SUB NPC3 Direct (REP 1.2)
15	152N11551	CBF Harness LIU
16	140N62875	PBA Foreign Device Interface
17	152N11557	PBA Foreign Device Interface Harness
18	-	PBA Foreign Device Interface Bracket (P/O PL 1.10 Item 19)
19	-	Foreign Device Interface Kit (REF: PL 31.10 Item 1)
20	117N01602	AC Power Cord (NASG/XCL)
21	117N01313	USB Cable
22	117N01620	Telephone Line Cord (NASG/XCL)

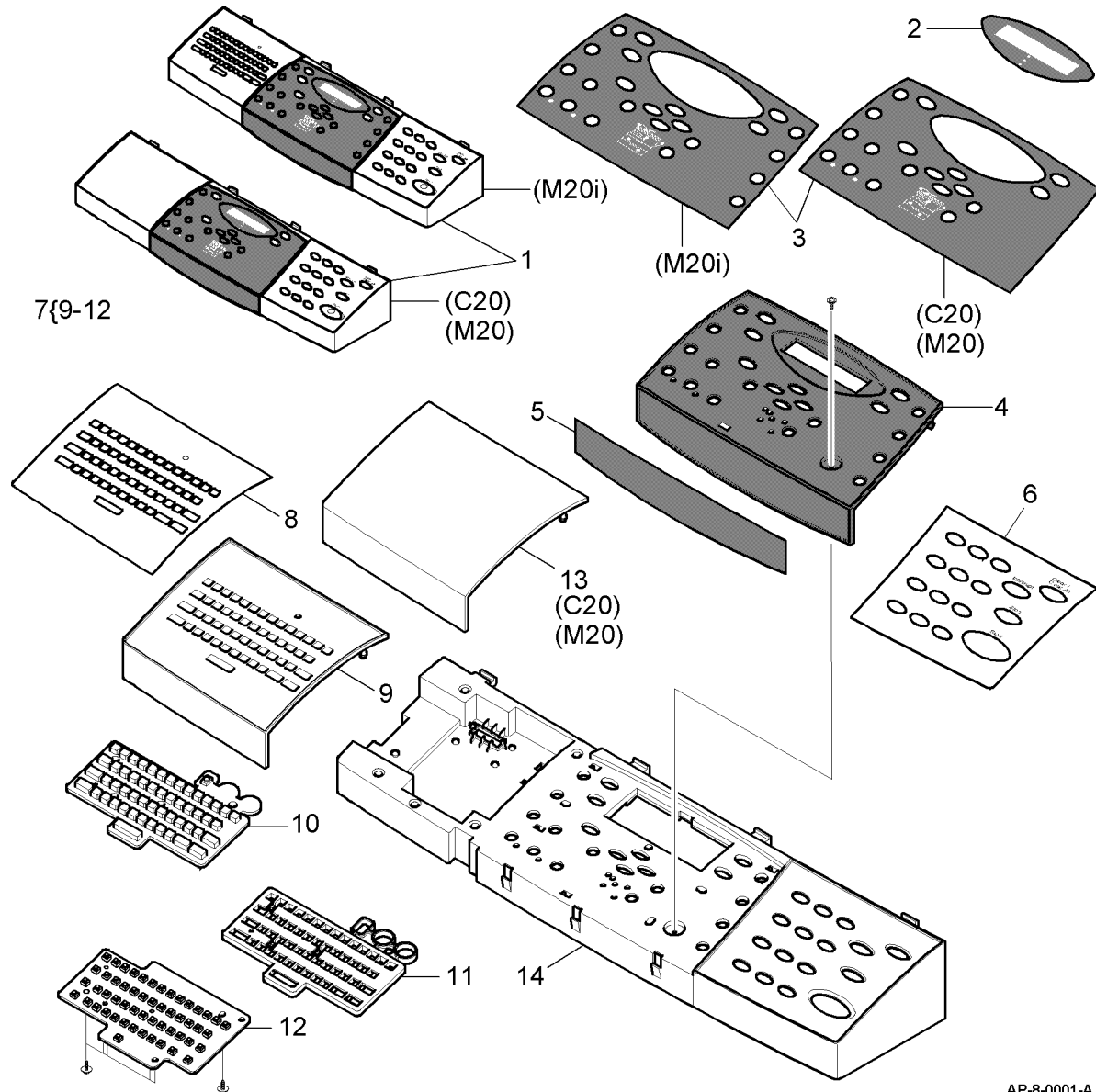


AP-8-0022-A

NOTE: 1. If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

PL 2.10 OPE Assembly (1 of 2)

Item	Part	Description
1	-	ELA HOU OPE Assembly (Not Spared) (REP 2.1)
2	-	Window LCD (Not Spared)
3	091N80194	Sheet Overlay Center (A) (C20, M20)
-	091N80193	Sheet Overlay Center (A) (M20i)
-	091N80201	Sheet Overlay Center (A) (French) ((C20, M20))
-	091N80200	Sheet Overlay Center (A) (French) ((M20i))
-	091N80203	Sheet Overlay Center (A) (C20, M20) (Portuguese)
-	091N80202	Sheet Overlay Center (A) (M20i) (Portuguese)
-	091N80199	Sheet Overlay Center (A) (C20, M20) (Spanish)
-	091N80198	Sheet Overlay Center (A) (M20i) (Spanish)
4	-	Panel OPE Front (Not Spared)
5	091N80196	Sheet Name Plate (C20)
-	091N80197	Sheet Name Plate (M20)
-	091N80195	Sheet Name Plate (M20i)
6	-	Sheet Numerical (Not Spared) (NASG/XCL)
7	002N02281	ELA HOU E-mail Option Unit
8	700N00097	Sheet Email (EU)
-	700N00096	Sheet E-mail
9	-	Cover E-mail (P/O PL 2.10 Item 7) (REP 2.1)
10	-	E-mail Keypad (P/O PL 2.10 Item 7) (REP 2.1)
11	-	Key Plate (P/O PL 2.10 Item 7) (REP 2.1)
12	-	PBA SUB E-mail (P/O PL 2.10 Item 7) (REP 2.1)
13	002N02283	Cover Dummy E-mail (C20, M20)
14	-	Cover M OPE (REF: PL 2.11 Item 1)



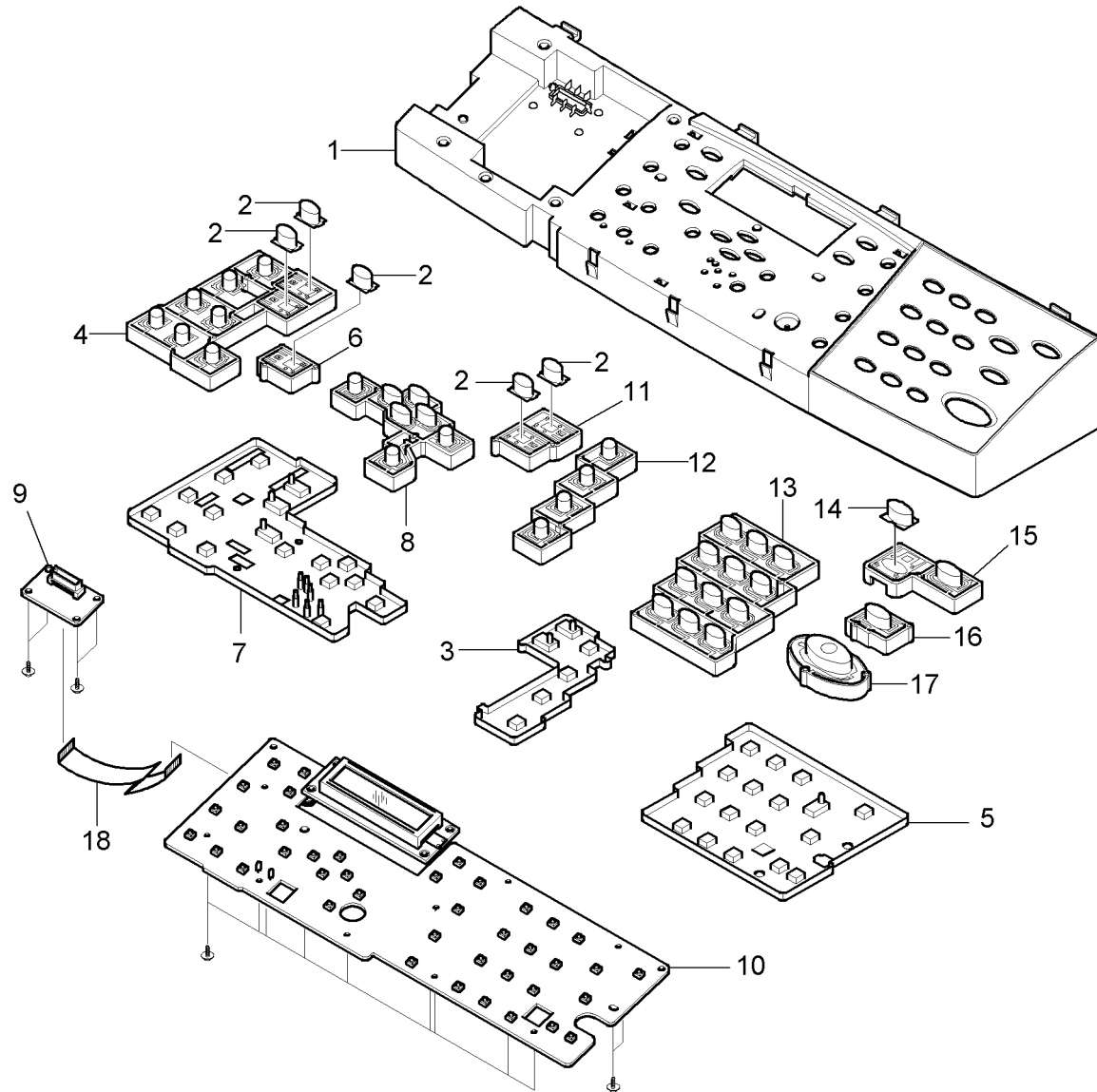
NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

AP-8-0001-A

PL 2.11 OPE Assembly (2 of 2)

Item	Part	Description
1	002N02282	Cover M OPE
2	018N00193	Indicator (REP 2.1)
3	029N00355	Rubber Scroll (A) (REP 2.1)
4	029N00345	Key M Copy (REP 2.1)
5	029N00356	Rubber Numerical (REP 2.1)
6	029N00346	Key M E-mail (REP 2.1)
7	029N00354	Rubber Copy (A) (REP 2.1)
8	029N00347	Key M Navigator (REP 2.1)
9	140N62866	PBA SUB - OPE Joint (REP 2.1)
10	140N62865	PBA SUB - OPE (REP 2.1)
11	029N00348	Key M Job Status (REP 2.1)
12	029N00349	Key M Manual (REP 2.1)
13	029N00350	Key M Numerical (REP 2.1)
14	018N00194	Indicator M Job Interrupt (REP 2.1)
15	029N00351	Key M Job Interrupt (REP 2.1)
16	029N00352	Key M Stop (REP 2.1)
17	029N00353	Key M Start (REP 2.1)
18	-	CBF Signal - OPE FFC (Not Spared)

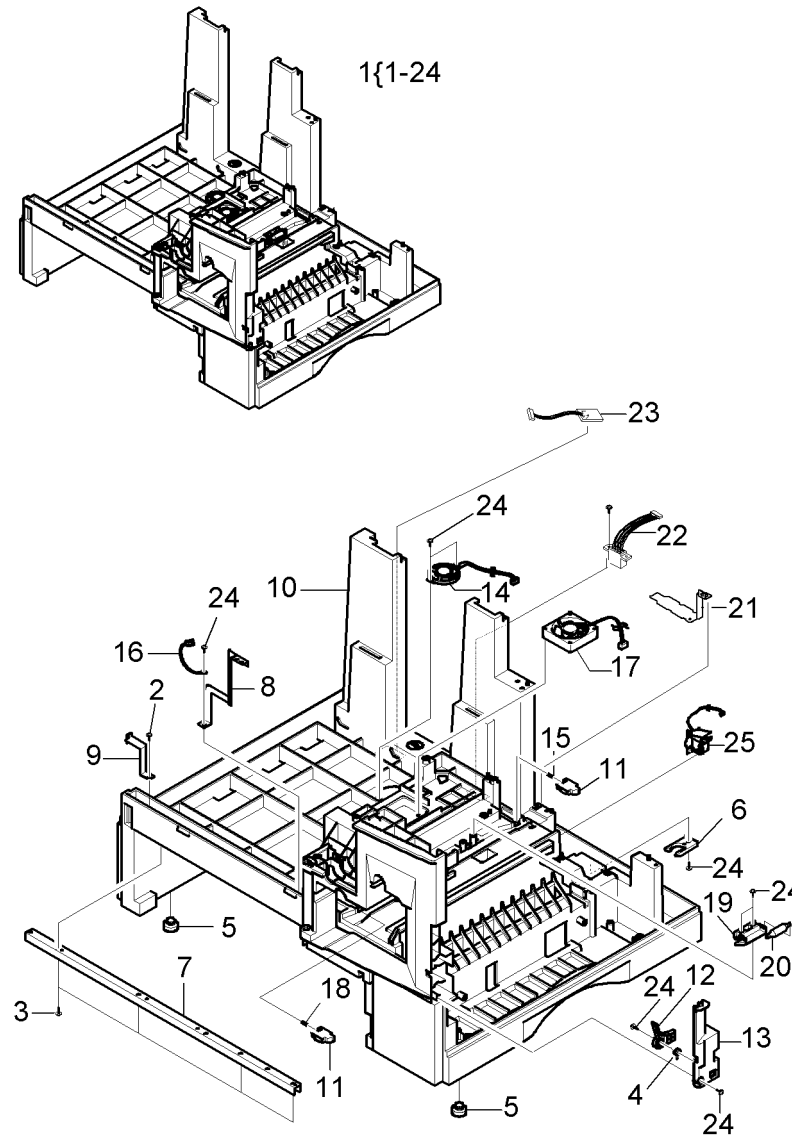
NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.



AP-8-0002-A

PL 4.10 Base Frame Assembly

Item	Part	Description
1	-	ELA HOU - Base Frame (Not Spared)
2	-	Screw - Taptite (REF: PL 31.10 Item 6)
3	-	Screw - Taptite (REF: PL 31.10 Item 6)
4	009N01467	Spring ETC - Torsion
5	017N00212	Foot
6	-	Holder Catch CST MC2 (Not Spared)
7	-	IPR - Channel Base Frame (Not Spared)
8	015N00440	IPR - Ground Plate A (OPC)
9	015N00441	IPR - Ground Plate B (Base)
10	-	PMO - Base Frame (Not Spared)
11	-	PMO - Bracket Push DEV (Not Spared)
12	030N00606	PMO - Bracket Side Open
13	-	PMO - Cover Front Dummy (Not Spared)
14	130N01213	ELA M/M - AUD Speaker
15	-	Spring ETC - DEVE Rear (Not Spared)
16	-	CBF Harness - OPC GND (Not Spared)
17	127N07300	Fan - DC (Cardinal)
18	-	Spring ETC - DEV Front (Not Spared)
19	-	Holder - M Roller (Not Spared)
20	-	Shaft DEV (Not Spared)
21	-	IPR - Ground Plate SCF (Not Spared)
22	152N01991	CBF - Harness-SCF
23	140N62870	PBA Air Temperature
24	-	Screw - Taptite (REF: PL 31.10 Item 6)
25	022N01486	Solenoid - Pickup

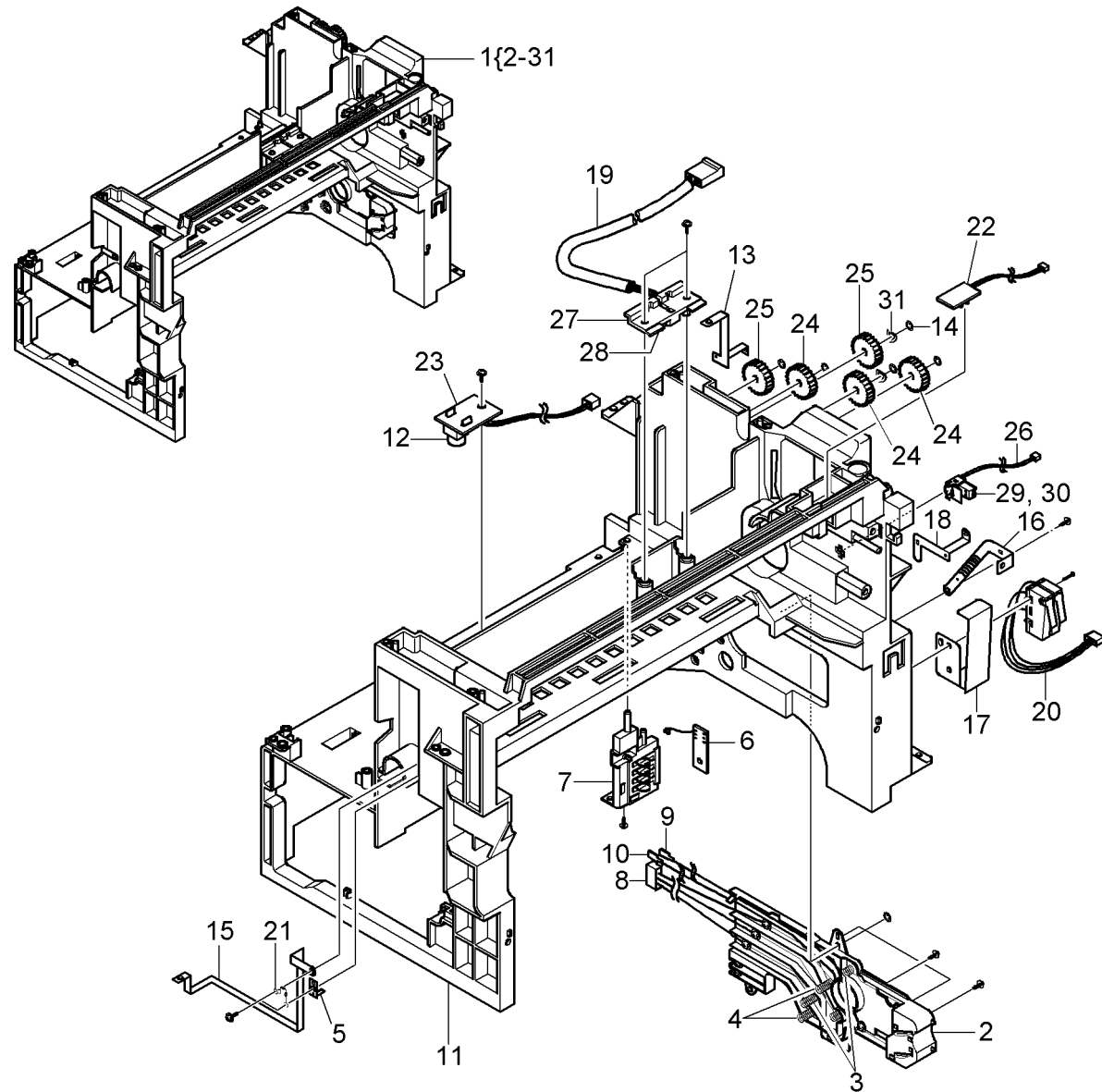


NOTE: 1. If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

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PL 4.15 Main Frame Assembly

Item	Part	Description
1	002N02279	ELA HOU - Frame Main Assembly (REP 4.4)
2	-	PMO - Housing Terminal MC2 (P/O PL 4.15 Item 1)
3	-	IPR - Terminal Blade (P/O PL 4.15 Item 1)
4	-	IPR - Terminal Supply (P/O PL 4.15 Item 1)
5	-	IPR - Terminal TR (P/O PL 4.15 Item 1)
6	140N62873	PBA SUB Terminal
7	-	Holder Terminal (P/O PL 4.15 Item 1)
8	-	CBF - Harness - Blade + Supply + DEV (P/O PL 4.15 Item 1)
9	-	CBF - Harness - Main - THV Wire (P/O PL 4.15 Item 1)
10	-	CBF - Harness - Main - MHV Wire (P/O PL 4.15 Item 1)
11	-	PMO - Frame Main (P/O PL 4.15 Item 1)
12	-	PMO - Lens Toner Sensor (P/O PL 4.15 Item 1)
13	-	IPR - GND Exit (P/O PL 4.15 Item 1)
14	-	Ring - CS (P/O PL 4.15 Item 1)
15	-	IPR - GND OPC Base (P/O PL 4.15 Item 1)
16	-	IPR - Ground Fuser MC2 (P/O PL 4.15 Item 1)
17	-	IPR - Guard C/O S/W (P/O PL 4.15 Item 1)
18	-	IPR - GND Terminal (P/O PL 4.15 Item 1)
19	152N11556	CBF Harness - AC Wire
20	110N01041	CBF - Harness; Switch - Micro
21	-	CBF - Harness Motor (P/O PL 4.15 Item 1)
22	130N01205	PBA SUB - Exit Sensor
23	130N01208	PBA SUB - Toner RX
24	-	Gear - Exit / U, ID (P/O PL 4.15 Item 1)
25	-	Gear - Exit, Idle (Z17) (P/O PL 4.15 Item 1)
26	011N00463	CBF - Harness Thermistor Joint
27	-	PMO - Housing Terminal (P/O PL 4.15 Item 1)
28	-	IPR - Terminal Fuser (P/O PL 4.15 Item 1)
29	113N00364	PMO - CAP Connector L
30	113N00365	PMO - CAP Connector U
31	-	Spring - Clutch (P/O PL 4.15 Item 1)

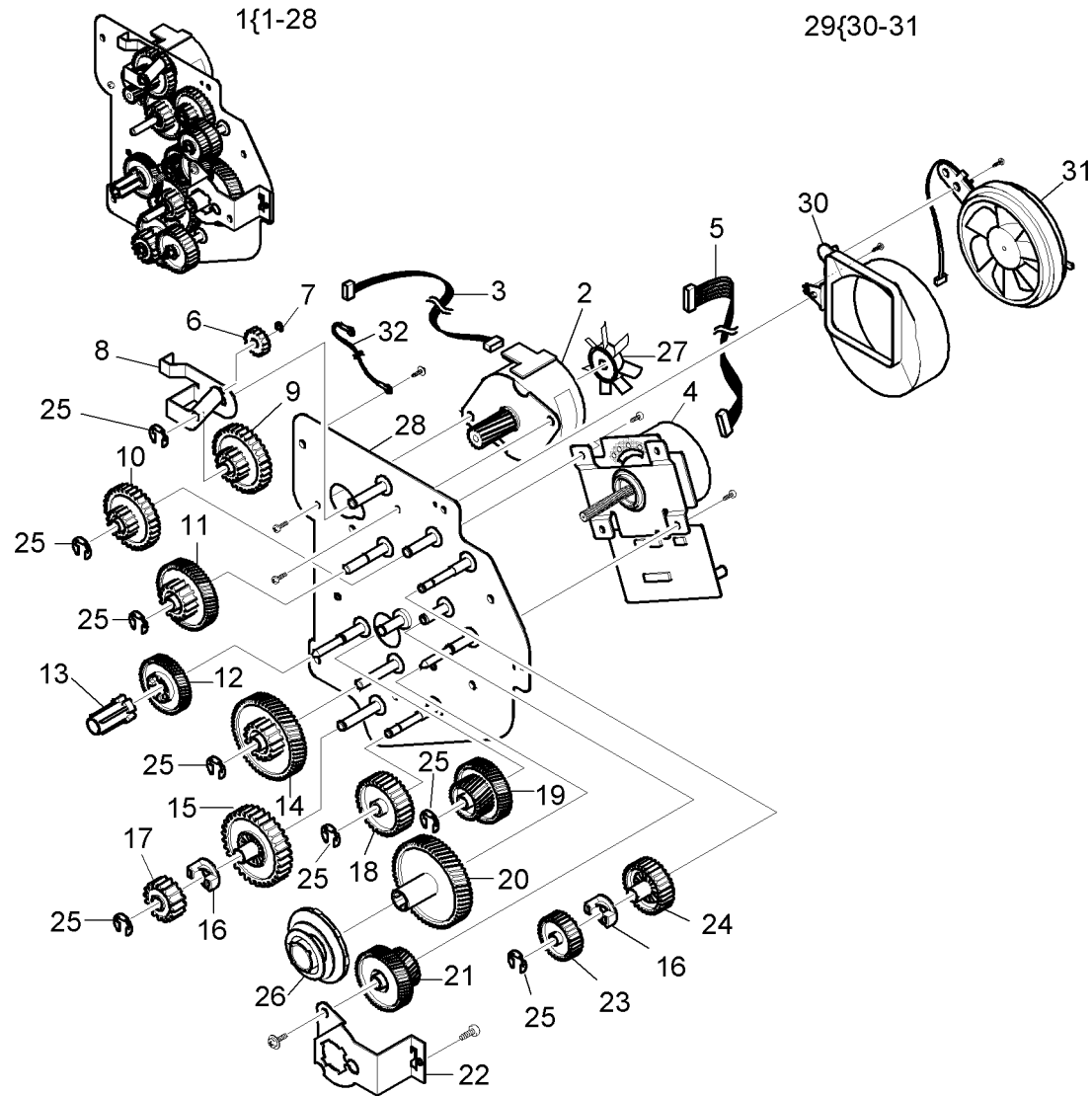


AP-8-0023-A

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

PL 4.20 Drives Assembly

Item	Part	Description
1	002N02289	ELA HOU - Drive Assembly (REP 4.1)
2	127N07298	Motor Step - MCK2 (Main)
3	152N11554	CBF Harness - Fuser Motor
4	127N07299	Motor DC - MCK2 (BLDC)
5	152N11555	CBF Harness - Feed Motor
6	-	Gear - Exit/U (P/O PL 4.20 Item 1)
7	-	Ring - C (P/O PL 4.20 Item 1)
8	-	IPR - Link Duplex (P/O PL 4.20 Item 1)
9	-	Gear - Swing DRV (34/17) (P/O PL 4.20 Item 1)
10	-	Gear - 31/19 (P/O PL 4.20 Item 1)
11	-	Gear - 71/23 (P/O PL 4.20 Item 1)
12	-	Gear - DEV DRV (P/O PL 4.20 Item 1)
13	-	PMO - DEV/Coupling (P/O PL 4.20 Item 1)
14	-	Gear - 86/23 (P/O PL 4.20 Item 1)
15	-	Gear - RDCN Feed Inner (P/O PL 4.20 Item 1)
16	-	Gear - Hub Clutch (P/O PL 4.20 Item 1)
17	-	Gear - RDCN Feed Outer (P/O PL 4.20 Item 1)
18	-	Gear - Feed DRV (P/O PL 4.20 Item 1)
19	-	Gear - OPC 53/37 (P/O PL 4.20 Item 1)
20	-	Gear - OPC DRV (P/O PL 4.20 Item 1)
21	-	Gear - OPC (P/O PL 4.20 Item 1)
22	-	IPR - BRKT - Break (P/O PL 4.20 Item 1)
23	-	Gear - Fuser DRV Outer (P/O PL 4.20 Item 1)
24	-	Gear - Fuser DRV Inner (P/O PL 4.20 Item 1)
25	-	Ring - E (REF: PL 31.10 Item 6)
26	-	MEC - Brake Gear (P/O PL 4.20 Item 1)
27	-	Fan (P/O PL 4.20 Item 1)
28	-	IPR - BRKT Motor (P/O PL 4.20 Item 1)
29	-	ELA HOU - Duct Fan (P/O PL 4.20 Item 1) (REP 4.1)
30	-	PMO - Duct Fan (P/O PL 4.20 Item 29)
31	127N01375	Fan - DC (P/O PL 4.20 Item 29)
32	-	CBF Harness - LIU GND (Not Spared)

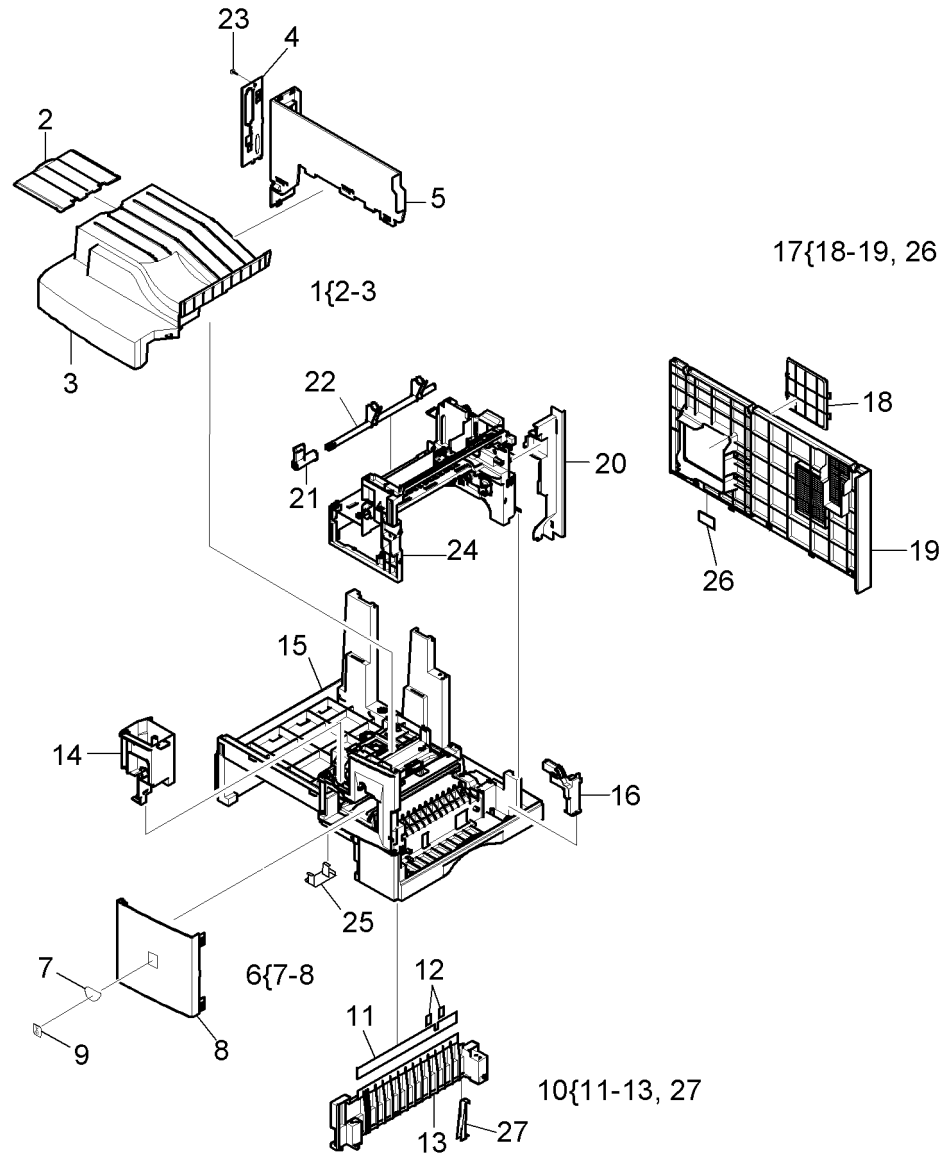


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NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

PL 4.25 Covers

Item	Part	Description
1	002N02107	MEA Unit - Cover PA Exit Assembly
2	050N00392	PMO - Tray Extension MP NE
3	-	PMO - Cover Paper Exit (P/O PL 4.25 Item 1) (REP 10.3)
4	-	PMO - Connect Paper MFP (C20, M20) (Not Spared)
-	-	PMO - Connect Paper MFP (M20i) (Not Spared)
5	002N02009	PMO Cover Exit Rear (REP 4.3)
6	002N02161	MEA Unit - Cover Front Assembly
7	-	Plate - Badge (XRX) (P/O PL 4.25 Item 6)
8	-	Cover - M - Front (P/O PL 4.25 Item 6)
9	091N00699	IPR - Badge (XRX)
10	001N00384	MEA Unit Guide CST PA Assembly
11	-	PMO - Sheet Guide Paper (P/O PL 4.25 Item 10)
12	-	Mylar Strip (P/O PL 4.25 Item 10)
13	-	PMO - Guide Cassette Rail (P/O PL 4.25 Item 10)
14	001N00451	PMO - Dummy Base Frame
15	-	ELA HOU - Base Frame Assembly (Not Spared)
16	-	PMO - Cover Feed (Not Spared) (REP 8.4)
17	002N02280	MEA Unit - Rear Cover (REP 4.2)
18	-	Cover Rear Dummy (P/O PL 4.25 Item 17)
19	-	Cover - Main - Rear (P/O PL 4.25 Item 17)
20	002N02017	Cover Bracket Motor
21	011N00465	PMO - Lever Jam Remove
22	011N00464	PMO - CAM Jam Remove
23	-	Special Screw (Panel MFP) (Not Spared)
24	-	ELA HOU - Frame Main Assembly (REF: PL 4.15 Item 1)
25	038N00371	PMO - Guide Paper Out
26	-	Label - Guide DIMM (P/O PL 4.25 Item 17)
27	-	IPR - Guide CST Paper (P/O PL 4.25 Item 10)

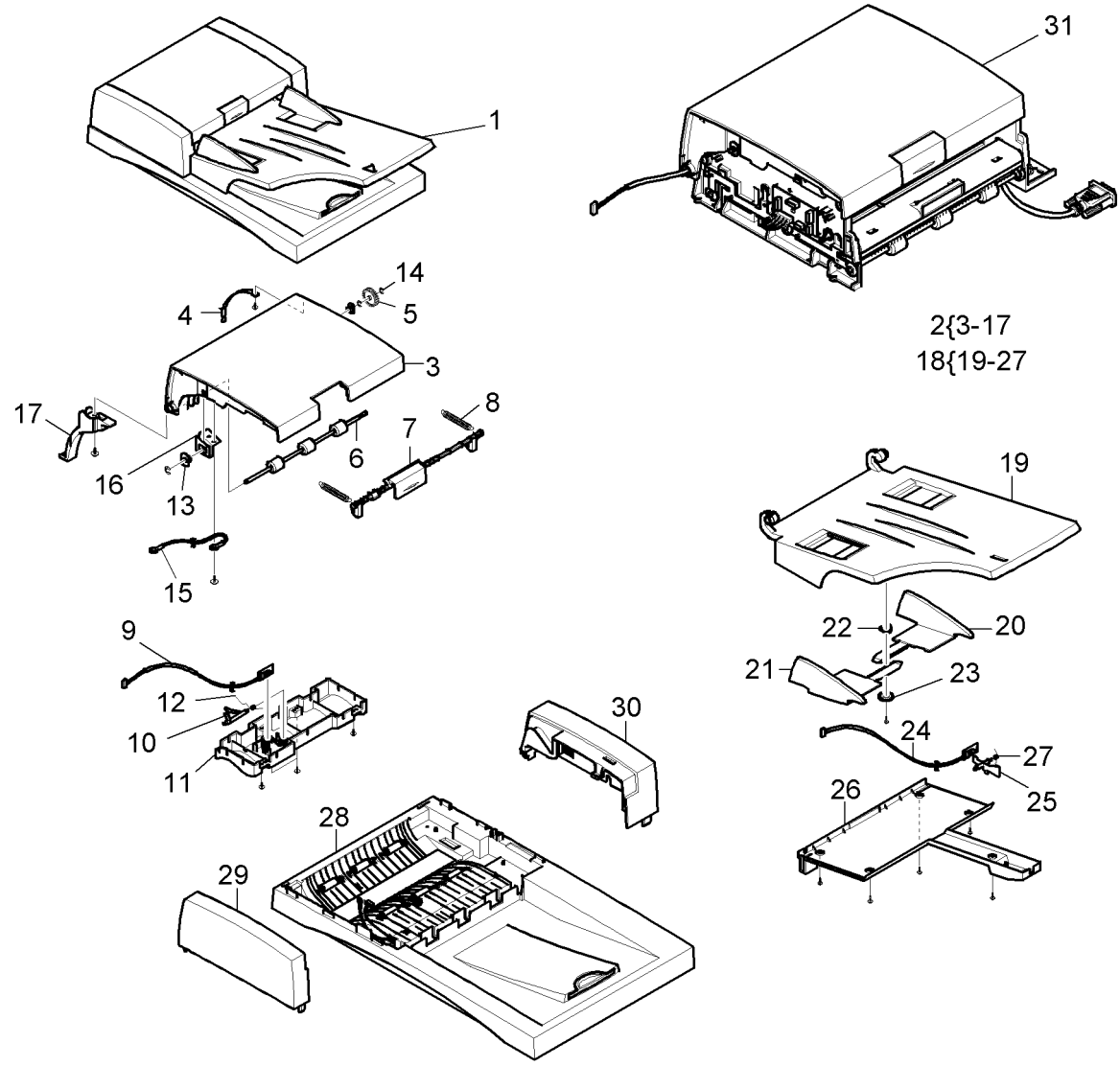


NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

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PL 5.10 DADF Assembly (1 of 5)

Item	Part	Description
1	002N02275	ELA HOU - DADF
2	002N02288	MEA Unit - Cover Open (REP 5.1)
3	-	Cover - M Open (P/O PL 5.10 Item 2)
4	-	PMO Stopper Exit (P/O PL 5.10 Item 2)
5	-	Gear - DADF 24 (A) (P/O PL 5.10 Item 2)
6	-	Roller - REGI (P/O PL 5.10 Item 2)
7	-	PMO - Lever Open (P/O PL 5.10 Item 2)
8	-	Spring ETC - Knockup, MP (P/O PL 5.10 Item 2)
9	140N62869	PBA SUB - REGI
10	-	PMO - Actuator REGI (P/O PL 5.10 Item 2)
11	-	Cover - M Sensor (P/O PL 5.10 Item 2)
12	-	Spring ETC - Torsion DOC (P/O PL 5.10 Item 2)
13	-	Bush - 6D (P/O PL 5.10 Item 2)
14	-	Ring - E (REF: PL 31.10 Item 6)
15	-	CBF Harness - LIU GND (P/O PL 5.10 Item 2)
16	-	Ground - P Duplex (P/O PL 5.10 Item 2)
17	-	Cover - M - Harness (P/O PL 5.10 Item 2)
18	050N00443	MEA Unit - TX Stacker (REP 5.1)
19	-	PMO - TX Stacker (P/O PL 5.10 Item 18)
20	-	Guide - M DOC Left (P/O PL 5.10 Item 18)
21	-	Guide - M DOC Right (P/O PL 5.10 Item 18)
22	-	IPR - Washer Spring CU (P/O PL 5.10 Item 18)
23	-	PMO - Gear Pinion (P/O PL 5.10 Item 18)
24	140N62867	PBA SUB - Length
25	120N00438	PMO - Actuator Length
26	-	PMO - TX Stacker Lower (P/O PL 5.10 Item 18)
27	-	Spring ETC - Torsion DOC (CC-F) (P/O PL 5.10 Item 18)
28	-	ELA Unit - Platen Cover (REF: PL 5.14 Item 1)
29	002N02286	Front Cover
30	002N02287	Rear Cover
31	002N02291	ELA HOU - DADF SUB (P/O PL 5.10 Item 1)

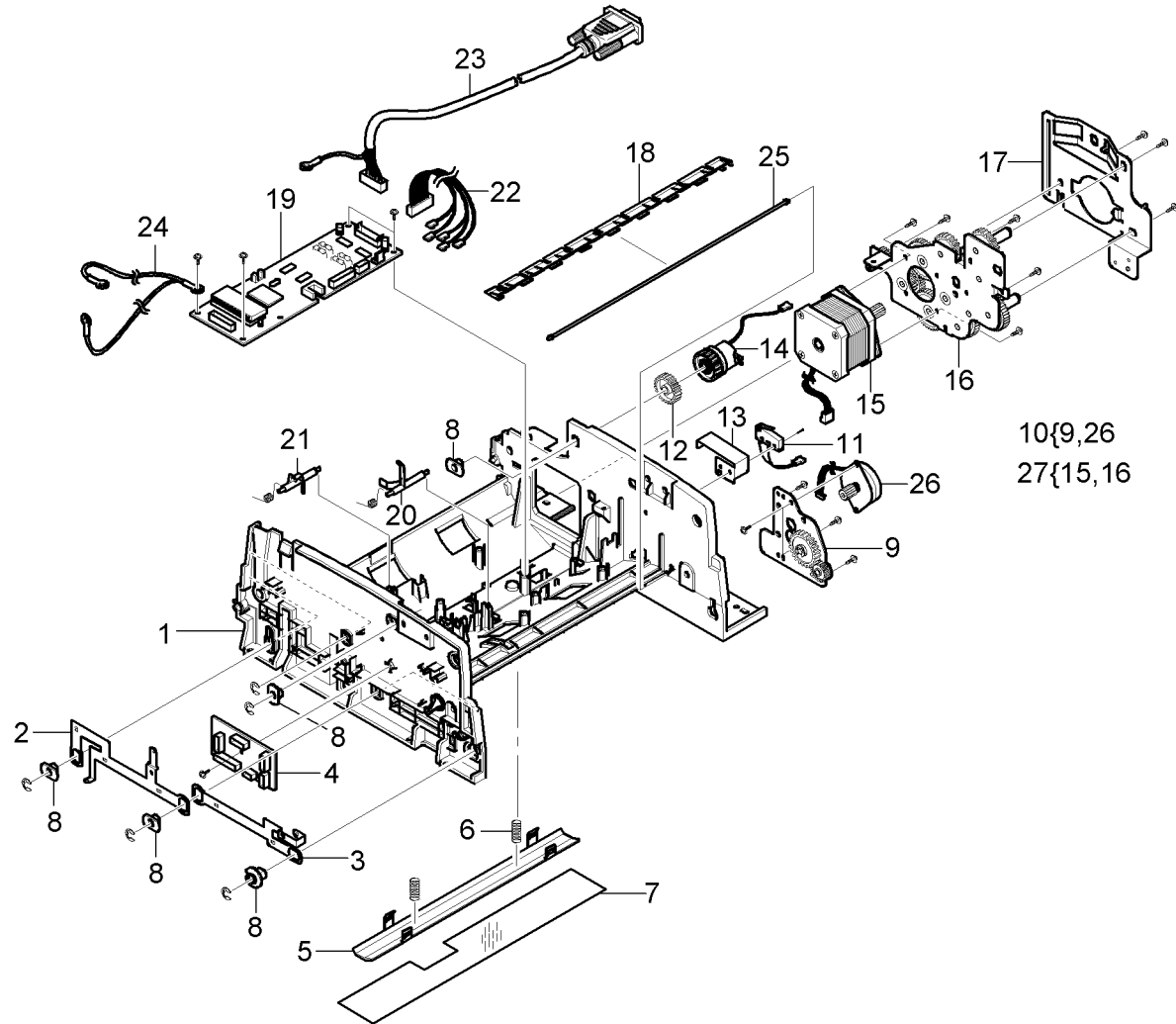


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NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

PL 5.11 DADF Assembly (2 of 5)

Item	Part	Description
1	-	Guide - M SCAN (P/O PL 5.10 Item 31)
2	-	Ground - P SCAN Roller (P/O PL 5.10 Item 31)
3	-	Ground - P Exit Roller (P/O PL 5.10 Item 31)
4	-	PBA SUB - Sensor IF (P/O PL 5.10 Item 31)
5	-	IPR - BRKT White Bar (P/O PL 5.10 Item 31)
6	-	Spring ETC - White Bar (P/O PL 5.10 Item 31)
7	-	Sheet - Guide Paper (P/O PL 5.10 Item 31)
8	-	Bush - 6D (P/O PL 5.10 Item 31)
9	-	Bracket - P - Duplex Motor (P/O PL 5.11 Item 10) (REP 5.1)
10	-	ELA HOU - Duplex Motor (P/O PL 5.10 Item 31) (REP 5.1)
11	-	ELA HOU - Cover Open Switch (P/O PL 5.10 Item 31)
12	-	Gear - DADF 24 (A) (P/O PL 5.10 Item 31)
13	-	IPR - Guard C/O S/W (P/O PL 5.10 Item 31)
14	-	MEC - Clutch Small (Registration) (P/O PL 5.10 Item 31)
15	-	Motor Step - DADF (P/O PL 5.11 Item 27)
16	-	Bracket - P - DADF Motor (P/O PL 5.11) (REP 5.1)
17	-	Cover - P Gear (P/O PL 5.10 Item 31)
18	-	Sheet - Guide Paper (P/O PL 5.10 Item 31)
19	-	PBA SUB - DADF (P/O PL 5.10 Item 31)
20	-	PMO - Actuator (P/O PL 5.10 Item 31)
21	-	PMO - Actuator Duplex (P/O PL 5.10 Item 31)
22	-	CBF Harness - Clutch IF (P/O PL 5.10 Item 31)
23	-	CBF Harness - DSUB (P/O PL 5.10 Item 31)
24	-	CBF Harness DADF GND (P/O PL 5.10 Item 31)
25	-	Shaft Gate Duplex (P/O PL 5.10 Item 31)
26	-	Motor Step - Duplex (P/O PL 5.11 Item 10)
27	-	ELA HOU - DADF Motor (P/O PL 5.10 Item 31) (REP 5.1)

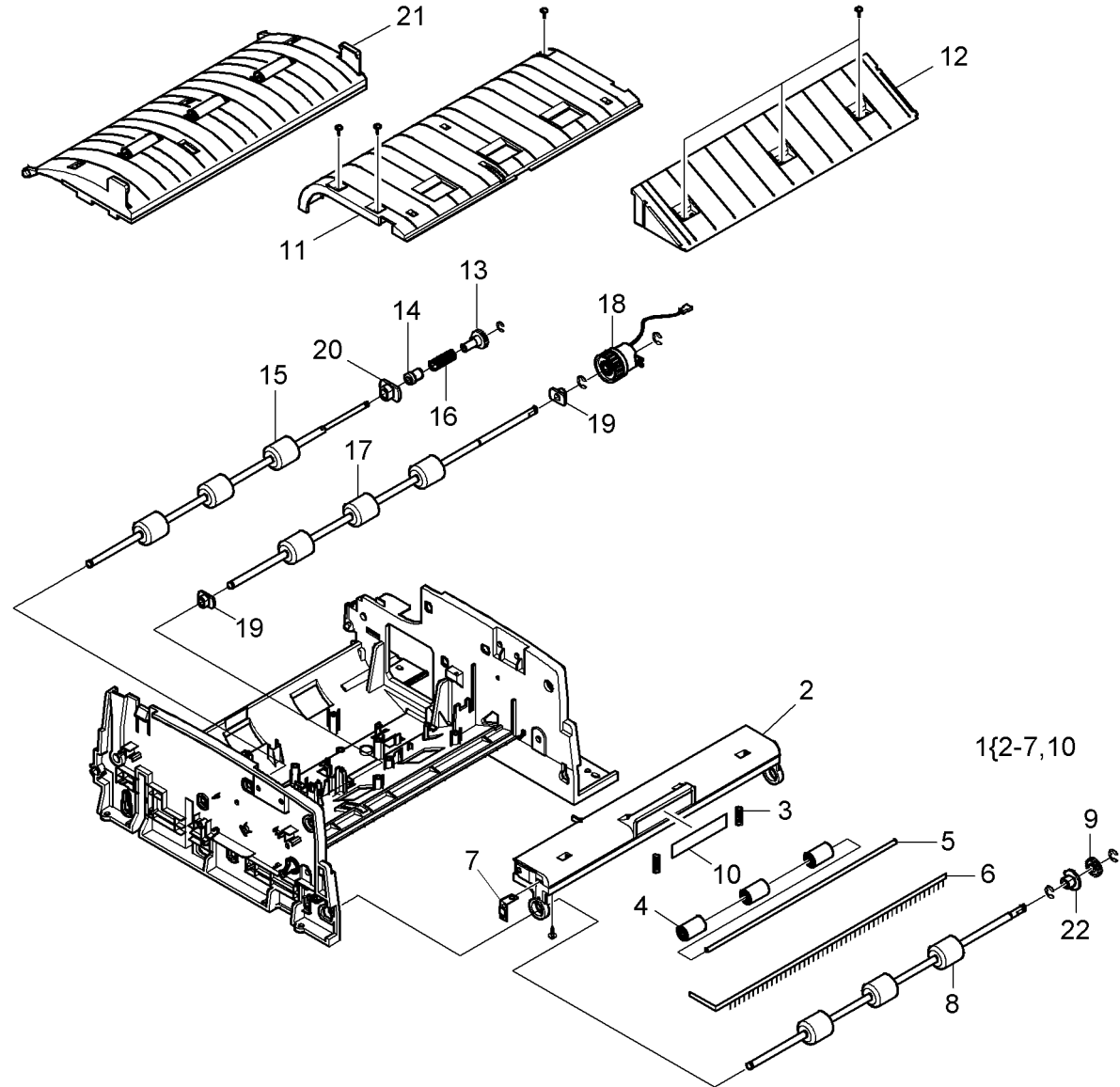


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NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

PL 5.12 DADF Assembly (3 of 5)

Item	Part	Description
1	-	MEA Unit - Cover Exit Assembly (P/O PL 5.10 Item 31)
2	-	Cover M Exit (P/O PL 5.12 Item 1)
3	-	Spring ETC - White BAR (P/O PL 5.12 Item 1)
4	-	PMO - Roller Idle Scan (P/O PL 5.12 Item 1)
5	-	Shaft - Exit Idle (P/O PL 5.12 Item 1)
6	-	MEC - Brush Antistatic (P/O PL 5.12 Item 1)
7	-	Ground - P - Exit Cover (P/O PL 5.12 Item 1)
8	-	Roller - Exit (P/O PL 5.10 Item 31)
9	-	Gear (P/O PL 5.10 Item 31)
10	-	Label - Cover - Exit (P/O PL 5.12 Item 1)
11	-	Guide - M Duplex Lower (P/O PL 5.10 Item 31) (REP 5.1)
12	-	Guide - M Duplex Inner (P/O PL 5.10 Item 31) (REP 5.1)
13	-	Gear - M Scan Roller (P/O PL 5.10 Item 31)
14	-	PMO - Bushing Holder (P/O PL 5.10 Item 31)
15	-	Roller - SCAN (P/O PL 5.10 Item 31)
16	-	Spring ETC Clutch (P/O PL 5.10 Item 31)
17	-	Roller - Duplex (P/O PL 5.10 Item 31)
18	-	MEC - Clutch Small (Duplex) (P/O PL 5.10 Item 31)
19	-	Bush - 6 D (P/O PL 5.10 Item 31)
20	-	Bush - 10 - D (P/O PL 5.10 Item 31)
21	-	MEA Unit Guide Duplex (P/O PL 5.10 Item 31) (REP 5.1)
22	-	Bush - 6D (L) (P/O PL 5.10 Item 31)



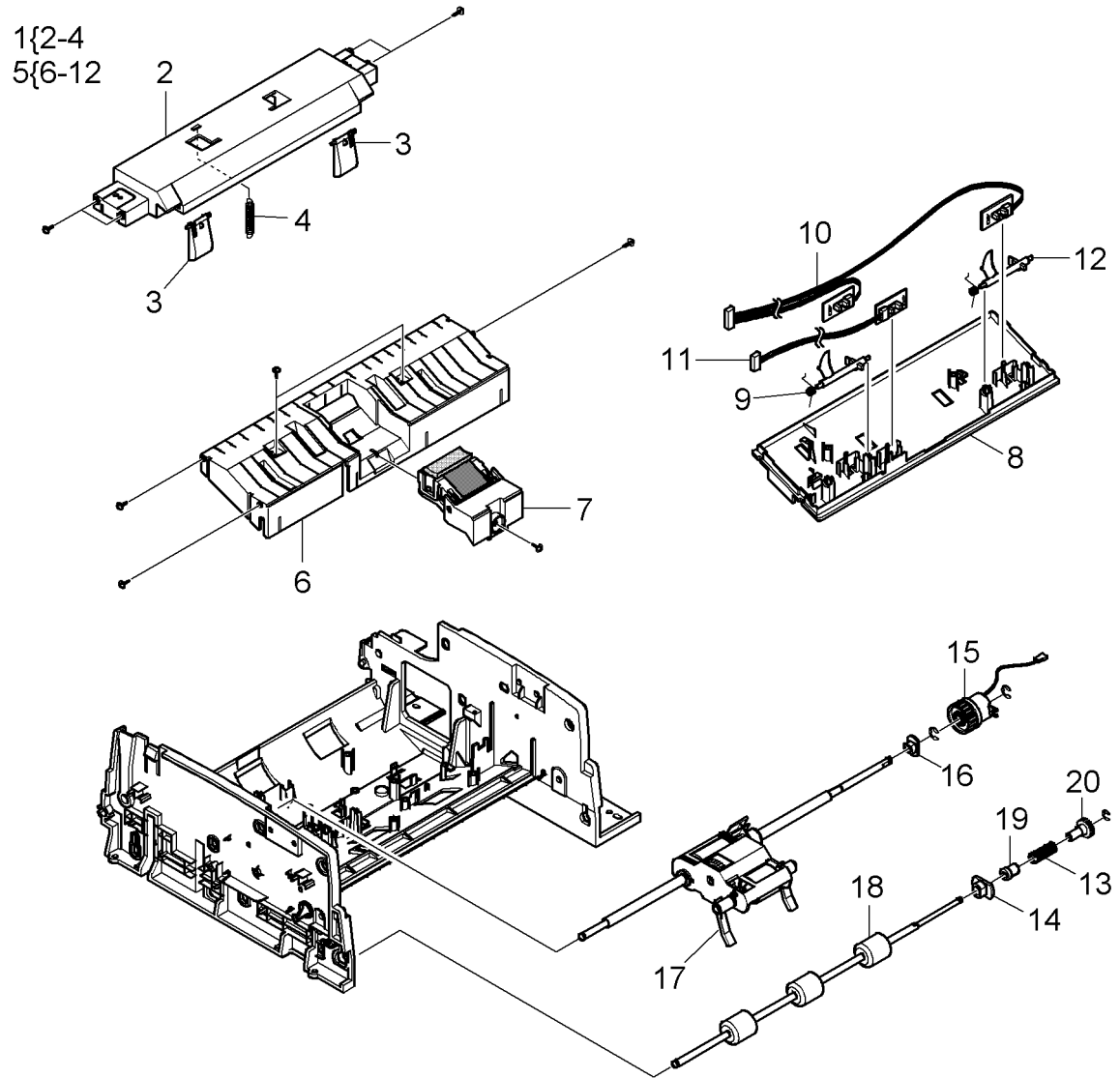
NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

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PL 5.13 DADF Assembly (4 of 5)

Item	Part	Description
1	-	MEA Unit Support Pickup Assembly (P/O PL 5.10 Item 31) (REP 5.1)
2	-	Pickup Support (P/O PL 5.13 Item 1)
3	-	Decurler (P/O PL 5.13 Item 1)
4	-	Spring (P/O PL 5.13 Item 1)
5	-	MEA Unit Guide Pickup Assembly (P/O PL 5.10 Item 31) (REP 5.1)
6	-	Guide - M Pickup Upper (P/O PL 5.13 Item 5)
7	019N00795	MEA Unit - Holder DADF Rubber
8	-	Guide - M Pickup Lower (P/O PL 5.13 Item 5)
9	-	Spring ETC - Torsion DOC (CC2 - F) (P/O PL 5.13 Item 5)
10	-	PBA SUB - DOC Width (P/O PL 5.13 Item 5)
11	-	PBA SUB - Exit Open (P/O PL 5.13 Item 5)
12	-	PMO - Actuator DOC (P/O PL 5.13 Item 5)
13	-	Spring ETC - Clutch (P/O PL 5.10 Item 31)
14	-	Bush - 10 - D (P/O PL 5.10 Item 31)
15	-	MEC - Clutch Small (Feed) (P/O PL 5.10 Item 31) (REP 5.1)
16	-	Bush 6 D (P/O PL 5.10 Item 31)
17	-	MEA Unit - Pickup (P/O PL 5.10 Item 31) (REP 5.1)
18	-	Roller Feed (P/O PL 5.10 Item 31)
19	-	PMO - Bushing Holder (P/O PL 5.10 Item 31)
20	-	Bush - M Feed Roller (P/O PL 5.10 Item 31)

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

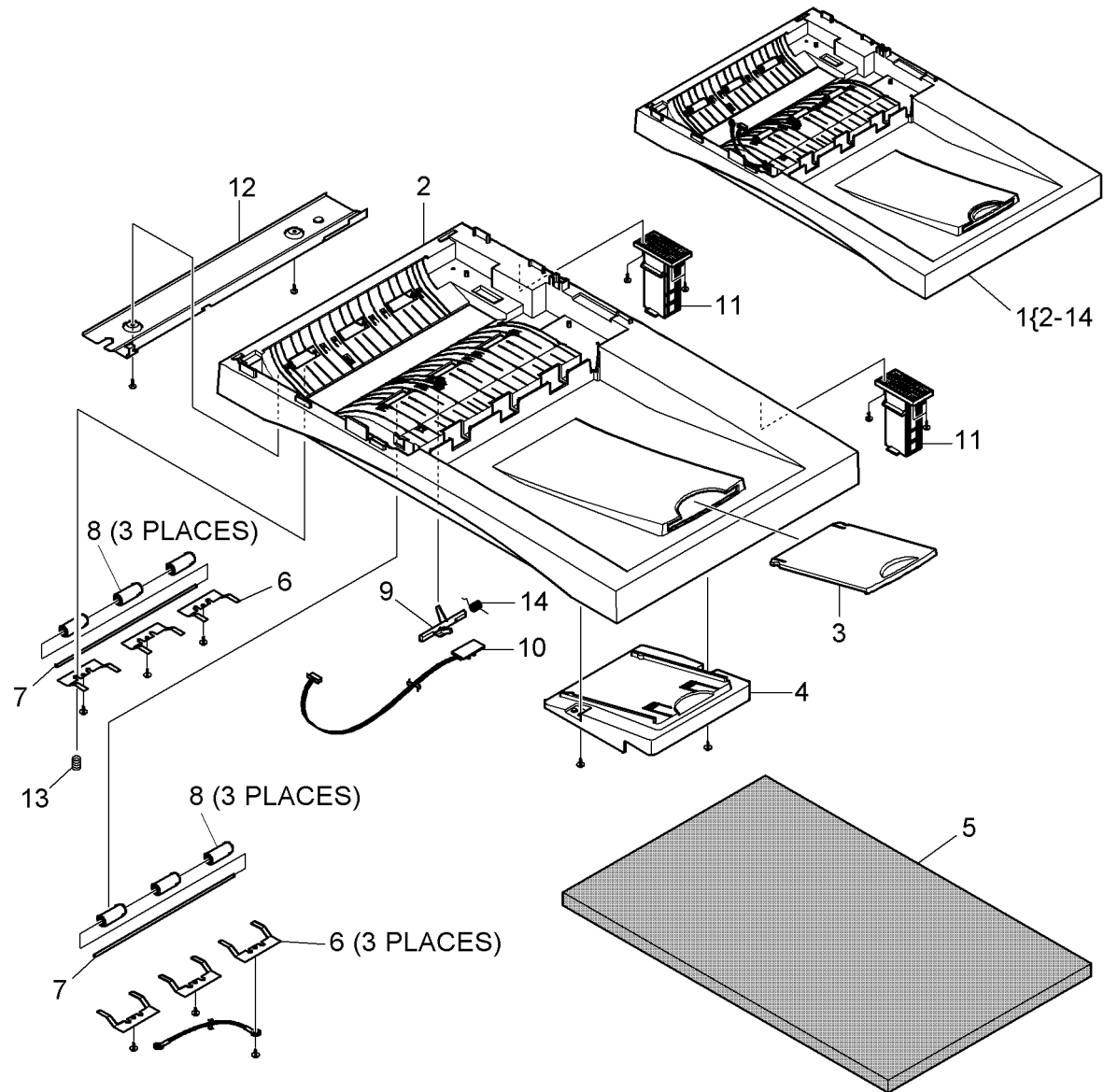


AP-8-0019-A

PL 5.14 DADF Assembly (5 of 5)

Item	Part	Description
1	002N02285	ELA Unit - Platen Cover (REF: PL 5.10 Item 28)
2	-	PMO - Cover Platen (C) (P/O PL 5.14 Item 1)
3	-	PMO - Extension Platen (P/O PL 5.14 Item 1)
4	-	Guide - M Extension (P/O PL 5.14 Item 1)
5	025N00081	DADF Document Cushion
6	-	IPR - P Pinch (Scan) (P/O PL 5.14 Item 1)
7	006N01241	Shaft - Pinch
8	022N01511	PMO - Roll Pinch
9	130N01201	PMO - Actuator Sensor SCAN
10	140N62868	PBA SUB - GATE
11	003N00939	MEA Unit - Hinge Assembly
12	-	Plate - P - Dummy Platen (P/O PL 5.14 Item 1)
13	-	Spring ETC - Charge (P/O PL 5.14 Item 1)
14	-	Spring ETC - Torsion DOC (P/O PL 5.14 Item 1)

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

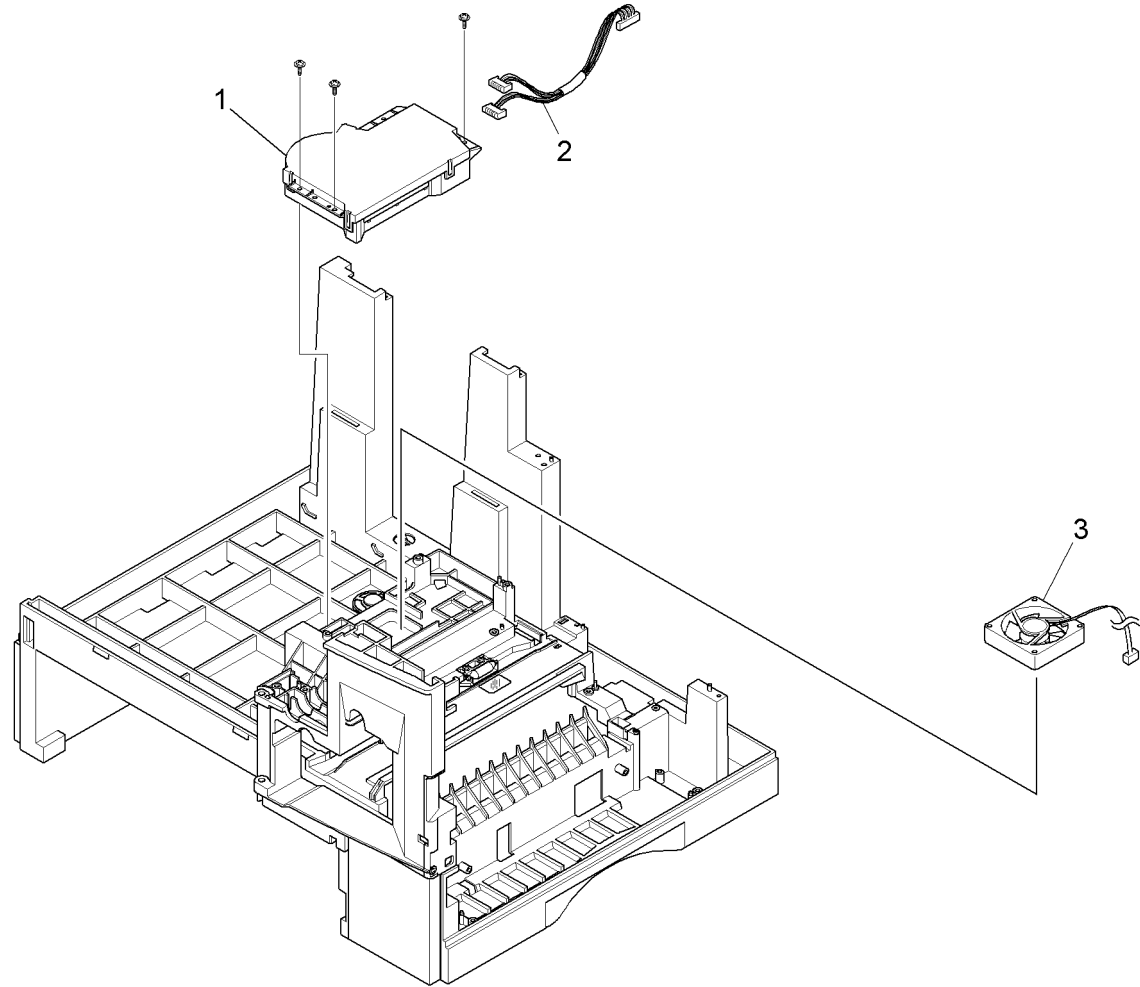


AP-8-0020-A

PL 6.10 LSU

Item	Part	Description
1	122N00234	Unit - LSU (REP 6.1)
2	152N11549	CBF Harness - LSU
3	-	Fan DC (Cardinal) (REF: PL 4.10 Item 17)

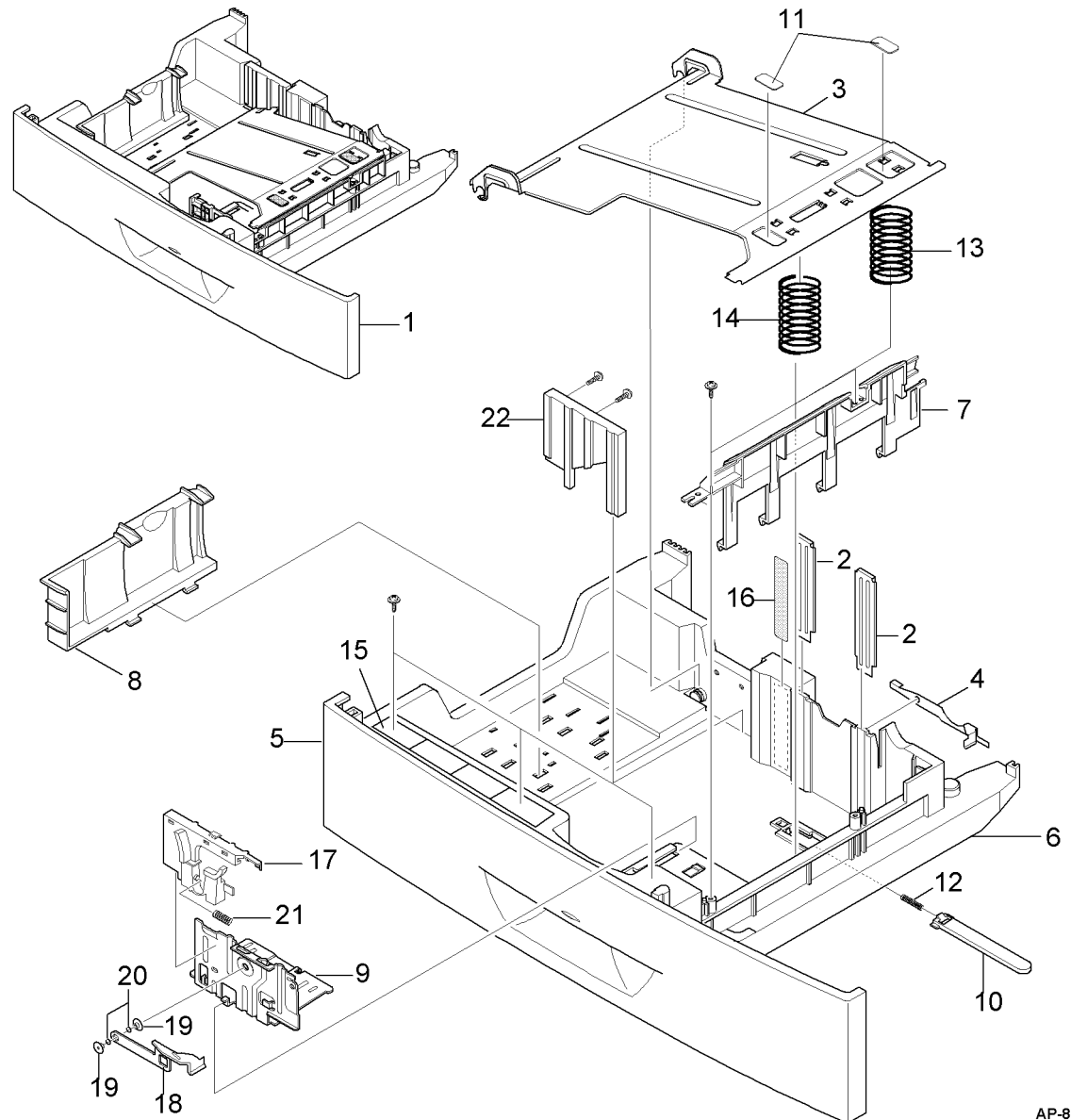
NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.



AP-8-0012-A

PL 7.10 Tray 1 Cassette Assembly

Item	Part	Description
1	050N00442	Mec - Cassette Assembly (A4)
-	050N00441	Mec- Cassette Assembly (Letter)
2	-	Plate Guide Paper (P/O PL 7.10 Item 1)
3	-	IPR - Plate K/UP (P/O PL 7.10 Item 1)
4	-	IPR Finger Right (P/O PL 7.10 Item 1)
5	-	PMO - Cover Cassette (P/O PL 7.10 Item 1)
6	-	PMO - Frame Cassette (P/O PL 7.10 Item 1)
7	-	Guide Front CST Plus (P/O PL 7.10 Item 1)
8	-	PMO - Guide Rear (P/O PL 7.10 Item 1)
9	-	Guide Side CST (P/O PL 7.10 Item 1)
10	-	PMO - Locker Plate (P/O PL 7.10 Item 1)
11	-	Pad - CST Plus (P/O PL 7.10 Item 1)
12	-	Spring - Locker Plate (P/O PL 7.10 Item 1)
13	009N01465	Spring CS RE
14	009N01466	Spring CS FR
15	091N80204	Label (R) - Instruction CST Plus
16	091N80205	Label (R) - Height CST
17	-	Guide Side Handle (P/O PL 7.10 Item 1)
18	-	IPR Finger Left (P/O PL 7.10 Item 1)
19	-	PMO - Bushing Finger F (P/O PL 7.10 Item 1)
20	-	Washer Plain (REF: PL 31.10 Item 6)
21	-	Spring White Bar (P/O PL 7.10 Item 1)
22	-	Guide Sub Wall (P/O PL 7.10 Item 1)



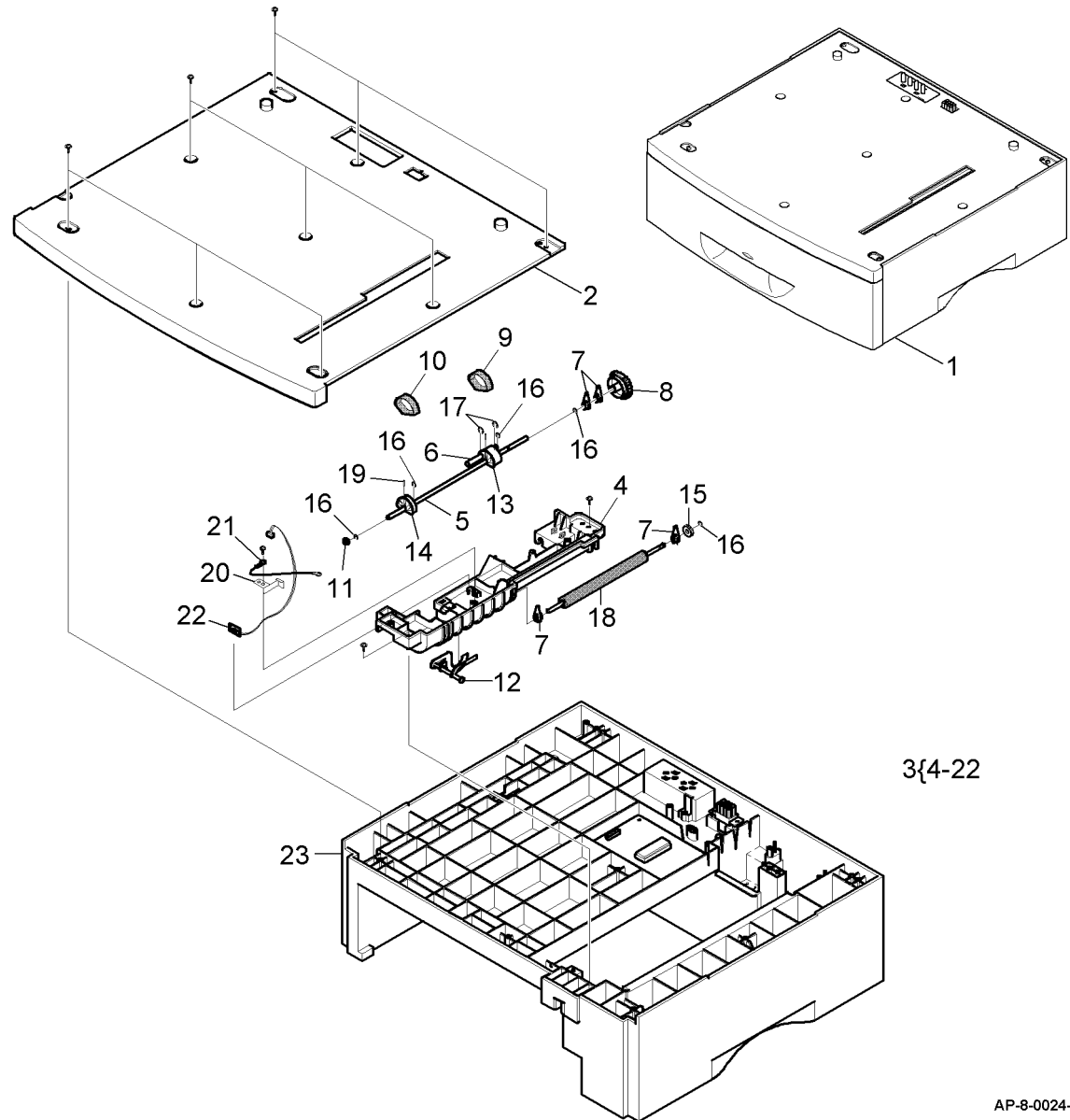
NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

AP-8-0007-A

PL 7.15 Tray 2 Cassette Assembly (1 of 2)

Item	Part	Description
1	-	ELA Unit - SCF (MC2) (REF: PL 31.10 Item 3)
2	-	PMO - Cover Top SCF (Not Spared)
3	-	ELA HOU - Upper SCF2 (Not Spared)
4	-	PMO - Guide Paper Upper SCF (Not Spared)
5	-	Shaft - Pickup CST (Not Spared)
6	-	Shaft - Pickup SUB (Not Spared)
7	-	PMO - Bearing Shaft (Not Spared)
8	-	Gear - Pickup (Not Spared)
9	022N01600	Rubber - Roller Pickup
10	130N01337	Rubber - Roller Pickup S
11	-	PMO - Bushing P/U MP (Not Spared)
12	120N00393	PMO - M - Actuator No Paper
13	-	Housing - M - Pickup Large (Not Spared)
14	-	Housing - M - Pickup Small (Not Spared)
15	-	Gear - Feed (SCF) (Not Spared)
16	-	Ring - E ID4 (REF: PL 31.10 Item 6)
17	-	RING - E ID5 (REF: PL 31.10 Item 6)
18	-	Feed Roller SCF MC2 (Not Spared)
19	-	ICT - Pin ADF (Not Spared)
20	-	Ground Plate SCF (Not Spared)
21	-	CBF Harness GND Star Wheel (Not Spared)
22	-	PBA SUB - Exit SEN (Not Spared)
23	-	PMO - Base Frame - SCF (REF: PL 7.16 Item 2)

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

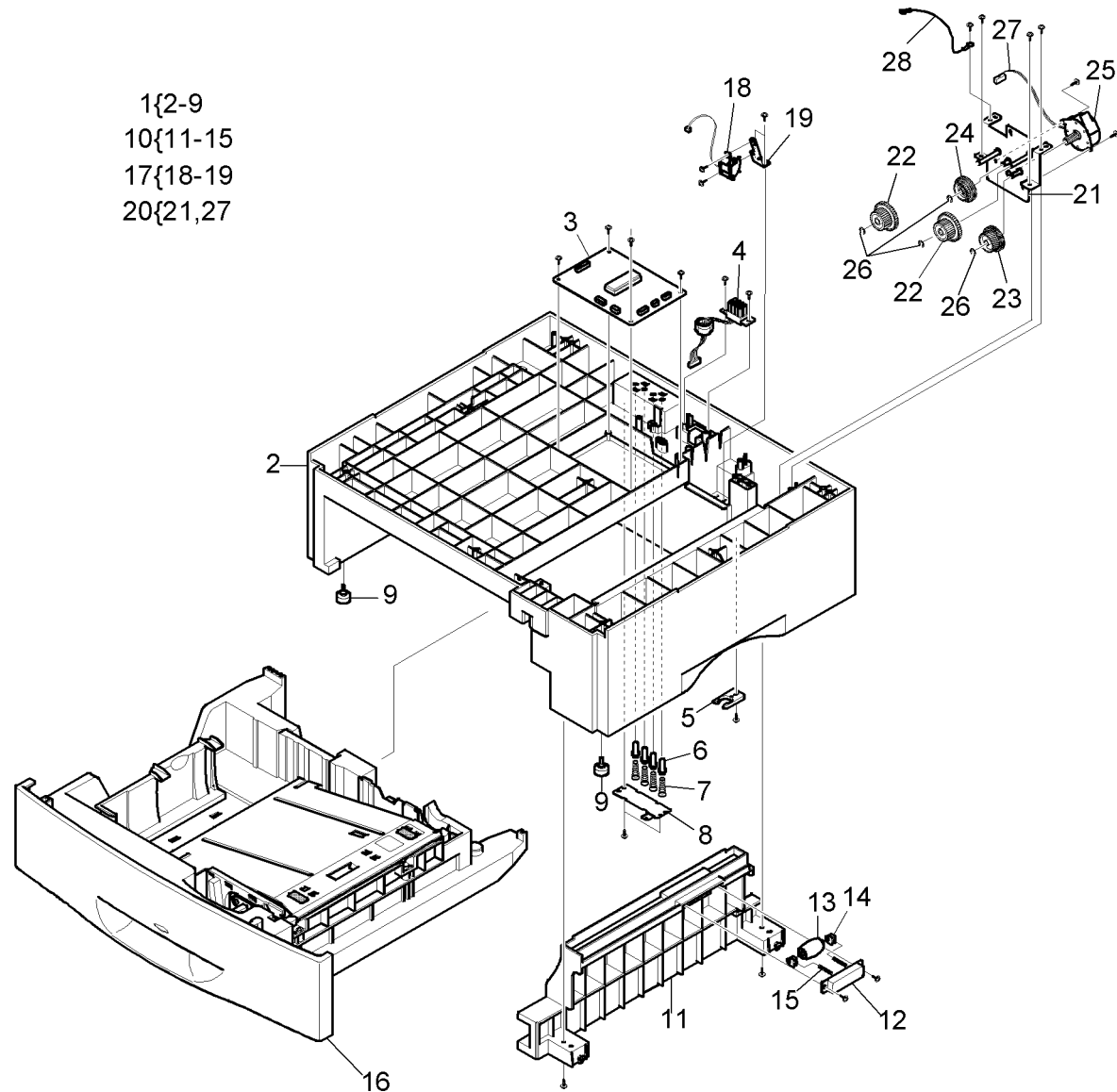


AP-8-0024-A

PL 7.16 Tray 2 Cassette Assembly (2 of 2)

Item	Part	Description
1	-	ELA HOU - Frame - SCF (MC2) (Not Spared)
2	-	PMO - Base Frame - SCF (Not Spared)
3	140N62874	PBA SCF
4	152N01992	CBF Harness - SCF 8P
5	-	CAM Catch (Not Spared)
6	006N01184	ICT - Shaft HV Large
7	009N01410	Spring ETC - HV Large
8	015N00486	IPR - Plate Ground (A)
9	-	Foot (Not Spared)
10	-	MEA Unit - Lower SCF2 (Not Spared)
11	-	PMO - Guide Paper Lower (Not Spared)
12	-	PMO - Holder Idle Roll 16 (Not Spared)
13	-	PMO - Roller Idle (SCF) (Not Spared)
14	-	PMO - Bush Idle Roll - SCF16 (Not Spared)
15	-	Spring ETC - Pad (Not Spared)
16	-	MEA Unite-Cassette (Not Spared)
17	-	ELA HOU - Solenoid SCF2 (Not Spared)
18	-	Solenoid Pickup (Not Spared)
19	-	Bracket Clutch SCF (Not Spared)
20	-	ELA HOU - Motor SCF2 (Not Spared)
21	-	Bracket SCF Motor (Not Spared)
22	-	SCF Gear 41/23 (Not Spared)
23	-	OPC Gear 53/37 (Not Spared)
24	-	SCF Gear 53/31 (Not Spared)
25	-	Motor Step - SCF (2K) (Not Spared)
26	-	Ring - E (REF: PL 31.10 Item 6)
27	-	CBF Harness SCF (Not Spared)
28	-	CBF Harness - GND (Not Spared)

1{2-9
10{11-15
17{18-19
20{21,27

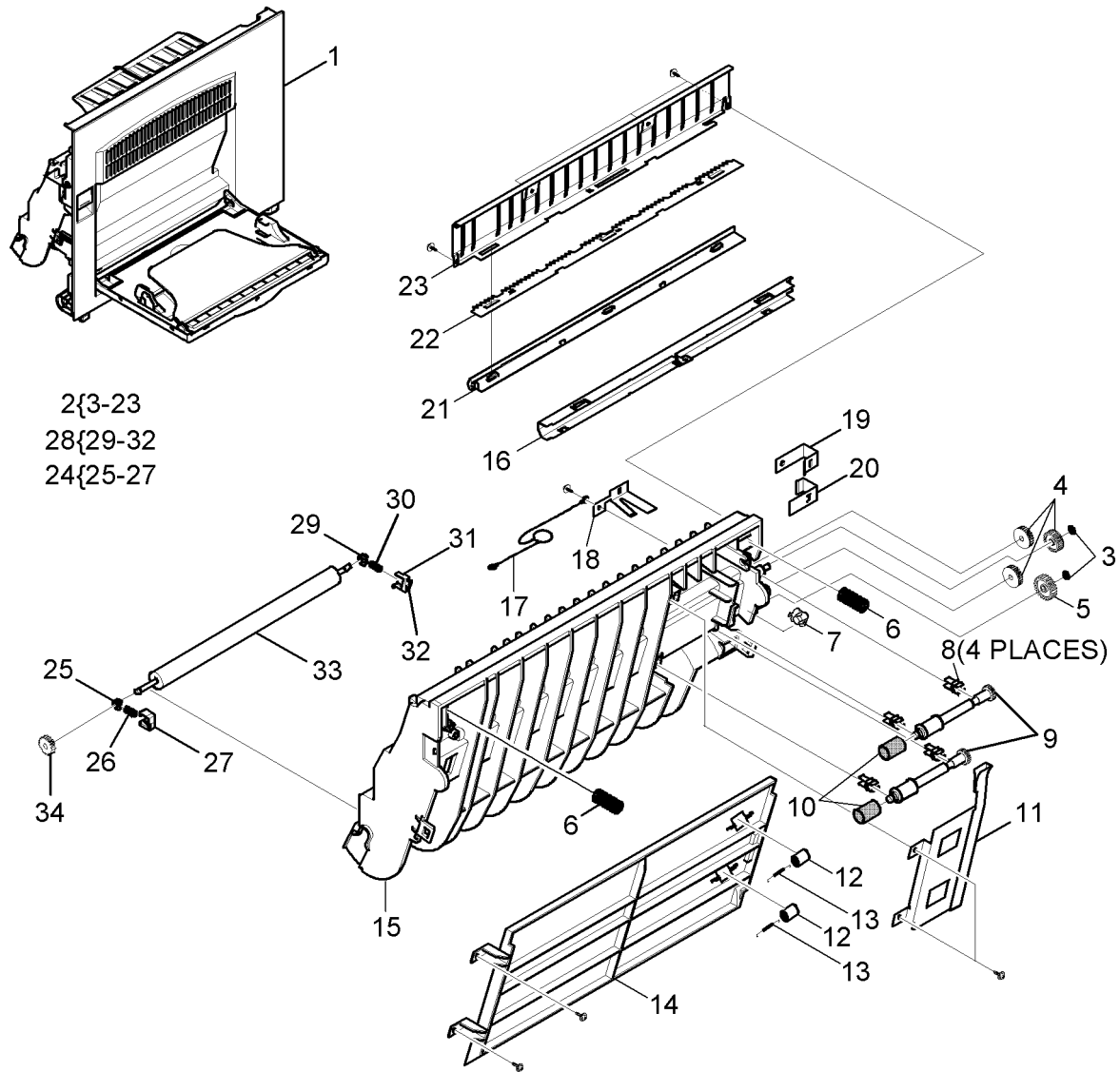


NOTE: 1. If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

AP-8-0025-A

PL 8.10 Side Cover Assembly (1 of 2)

Item	Part	Description
1	-	ELA HOU - Side Cover Assembly (Not Spared)
2	022N02057	MEA Unit - Duplex Assembly (REP 8.2)
3	-	Ring - CS (REF: PL 31.10 Item 6)
4	-	Gear - Dup Idler 17 (see NOTE 2)
5	-	Gear - MP/DUP DRV (see NOTE 2)
6	-	Spring Feed (see NOTE 2)
7	-	PMO - Bushing Feed (see NOTE 2)
8	-	PMO - Bushing TX(B4) (see NOTE 2)
9	-	PMO - Shaft DUP Driver (see NOTE 2)
10	-	RPR - Rubber Exit (see NOTE 2)
11	-	IPR - BRKT G DUP (see NOTE 2)
12	-	PMO - Roller Exit (see NOTE 2)
13	-	Spring Fuser Exit (see NOTE 2)
14	-	PMO - GP Lower DP (see NOTE 2)
15	-	PMO - Feed Frame (see NOTE 2)
16	-	IPR - Bracket Guide B (see NOTE 2)
17	-	CBF Harness - OPE GND (see NOTE 2)
18	-	IPR - BRKT Ground B (see NOTE 2)
19	-	IPR - BRKT Ground A (see NOTE 2)
20	-	IPR - BRKT Ground TR (see NOTE 2)
21	-	PMO - Holder Saw (see NOTE 2)
22	-	IPR - Plate saw (see NOTE 2)
23	-	IPR - BRKT Guide A (see NOTE 2)
24	009N01363	MEA Unit - Hold Gear
25	-	PMO - Bush (P/O PL 8.10 Item 24)
26	-	Spring ETC - TRR (P/O PL 8.10 Item 24)
27	-	PMO - Holder Gear TR (P/O PL 8.10 Item 24)
28	-	MEA Unit - Hold TR GND (Not Spared)
29	-	PMO - Bush (P/O PL 8.10 Item 28)
30	-	Spring ECT - TR (P/O PL 8.10 Item 28)
31	-	Spring ETC - Plate TR (P/O PL 8.10 Item 28)
32	-	PMO - Holder GND TR (P/O PL 8.10 Item 28)
33	022N01475	Transfer Roller
34	007N01114	Gear Transfer



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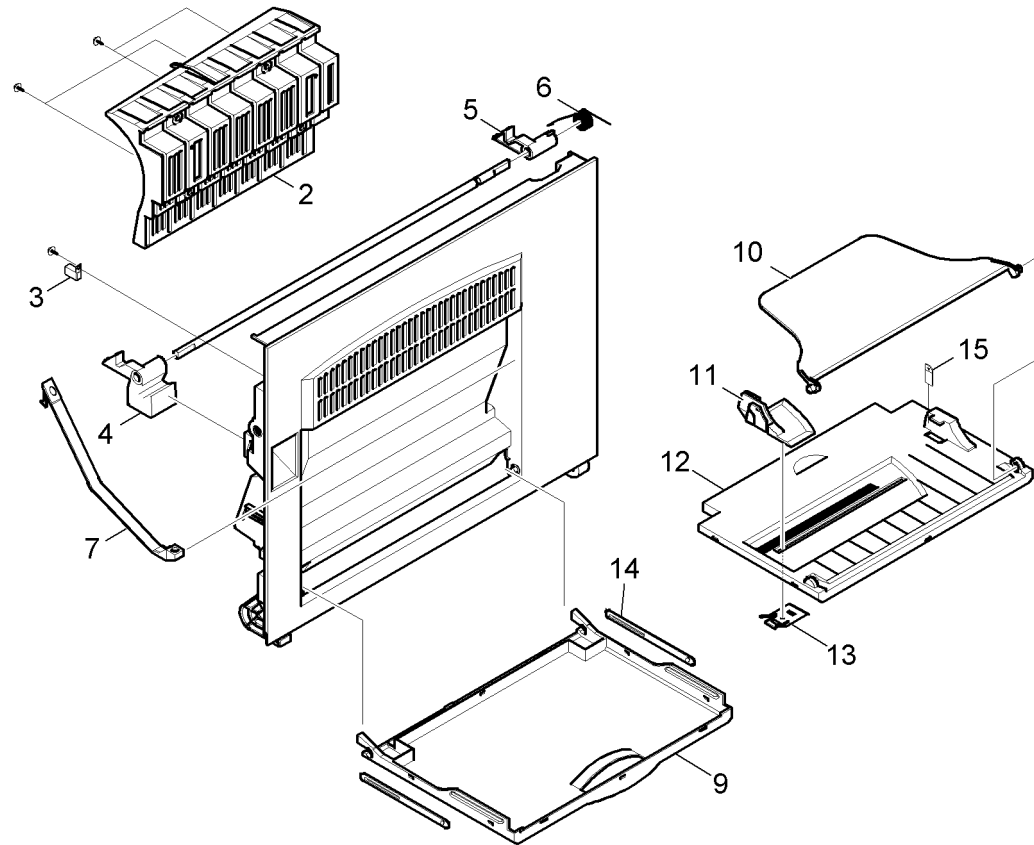
NOTE: 1. If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

NOTE: 2. Part of PL 8.10 Item 2.

PL 8.11 Side Cover Assembly (2 of 2)

Item	Part	Description
1	050N00445	MEA Unit - Side SUB Assembly
2	-	PMO - Guide DP Side (P/O PL 8.11 Item 1)
3	-	Guide Side Push (P/O PL 8.11 Item 1)
4	-	PMO - Locker Open (P/O PL 8.11 Item 1)
5	-	PMO - Locker Side R (P/O PL 8.11 Item 1)
6	-	Spring - Locker Torsion (P/O PL 8.11 Item 1)
7	-	PMO - Tie Stopper (P/O PL 8.11 Item 1)
8	-	MEA Unit - Tray Assembly (P/O PL 8.11 Item 1) (REP 7.1)
9	-	PMO - Tray Case, MP (P/O PL 8.11 Item 8)
10	-	PMO - Side Exit, MP (P/O PL 8.11 Item 8)
11	-	PMO - Side Guide, MP (P/O PL 8.11 Item 8)
12	-	PMO - Tray Cover, MP (P/O PL 8.11 Item 8)
13	-	IPR - Guide Latch, MP (P/O PL 8.11 Item 8) (REP 8.3)
14	-	PMO - Tray Link, MP (P/O PL 8.11 Item 8)
15	-	Label (R) - Height, MP (P/O PL 8.11 Item 8)

1{2-15
8{9-15

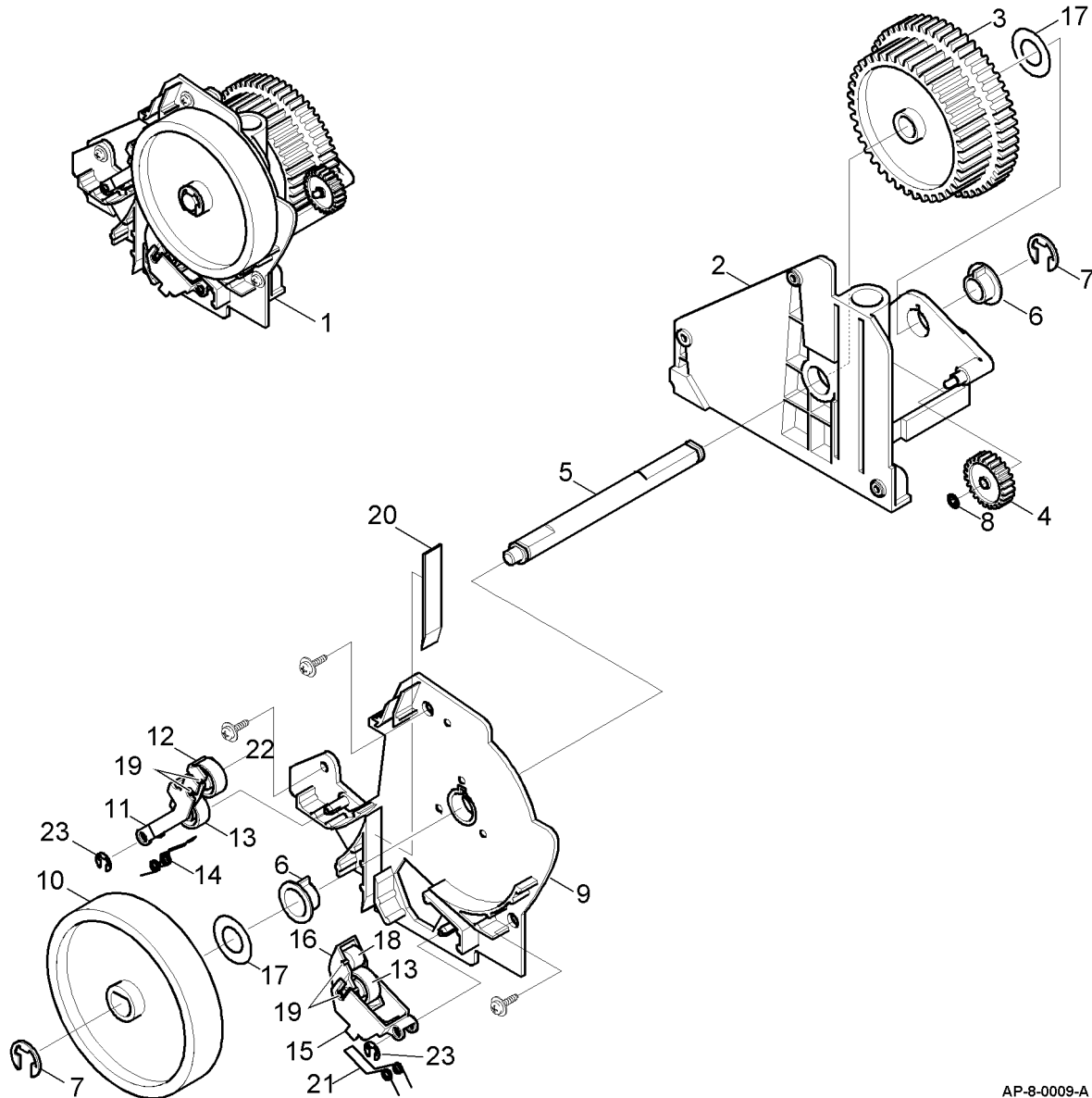


NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

AP-8-0006-A

PL 8.15 Feeder Assembly

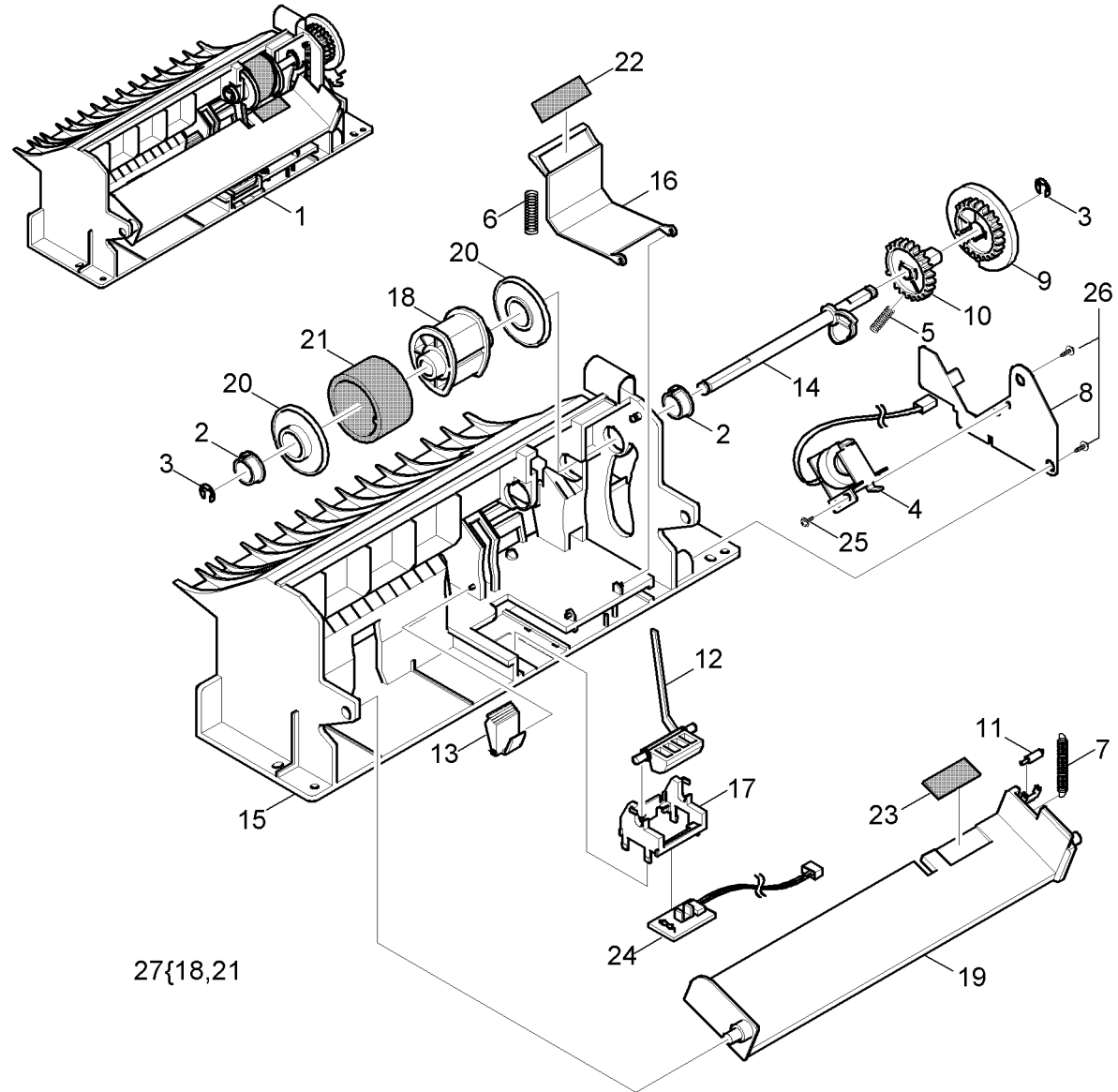
Item	Part	Description
1	022N02056	MEA Unit - Feed Roller Assembly (REP 8.5)
2	-	PMO - Frame Feed (P/O PL 8.15 Item 1)
3	-	Gear - Feed (P/O PL 8.15 Item 1)
4	-	Gear - MP/DUP DRV (P/O PL 8.15 Item 1)
5	-	ICT - Shaft Feed (P/O PL 8.15 Item 1)
6	-	PMO - Bushing P/U, MP (P/O PL 8.15 Item 1)
7	-	Ring - E (P/O PL 8.15 Item 1)
8	-	Ring - CS (P/O PL 8.15 Item 1)
9	-	PMO - BRKT Feed (P/O PL 8.15 Item 1)
10	022N01470	PMO - Roller Feed
11	-	PMO - Holder Pinch C (P/O PL 8.15 Item 1)
12	-	PMO - Holder Pinch SUB (P/O PL 8.15 Item 1)
13	-	PMO - Roller Feed L (P/O PL 8.15 Item 1)
14	-	Holder Push Feed CST (P/O PL 8.15 Item 1)
15	-	PMO - Holder Pinch M (P/O PL 8.15 Item 1)
16	-	PMO - SUB Holder Feed (P/O PL 8.15 Item 1)
17	-	Washer - Plain (P/O PL 8.15 Item 1)
18	-	PMO - Roller Feed S (P/O PL 8.15 Item 1)
19	-	IPR - Shaft Feed Idler (P/O PL 8.15 Item 1)
20	-	Sheet Feed (P/O PL 8.15 Item 1)
21	-	Spring - Feed MP Feed (P/O PL 8.15 Item 1)
22	-	PMO Roller Pinch Feed (P/O PL 8.15 Item 1)
23	-	E - Clip (P/O PL 8.15 Item 1)



AP-8-0009-A

PL 8.20 MP Assembly

Item	Part	Description
1	600N01741	ELA HOU - MP Assembly (REP 8.4)
2	013N00515	PMO - Bushing Pickup, MP
3	-	Ring - E (REF: PL 31.10 Item 6)
4	-	Solenoid - MP (P/O PL 8.20 Item 1)
5	009N01364	Spring - Cam MP
6	-	Spring - Pickup, MP (P/O PL 8.20 Item 1)
7	009N01365	Spring - Knockup, MP
8	-	IPR - Bracket Solenoid (P/O PL 8.20 Item 1)
9	-	PMO - Holder Cam (P/O PL 8.20 Item 1)
10	-	PMO - Gear P/U MPF (P/O PL 8.20 Item 1)
11	-	PMO - Roller Cam, MP (P/O PL 8.20 Item 1)
12	120N00392	PMO - Actuator, MP
13	022N01479	PMO - Adjuster, MP
14	-	PMO - Cam Pickup, MP
15	-	PMO - Frame, MP (P/O PL 8.20 Item 1)
16	019N00613	PMO - Holder Pad, MP
17	130N01206	PMO - Holder Sensor, MP
18	-	PMO - Housing Pickup, MP (P/O PL 8.20 Item 27)
19	-	PMO - Plate Knockup, MP (P/O PL 8.20 Item 1)
20	013N00516	PMO - Idle Pickup, MP
21	130N01338	RPR - Rubber Pickup, MP
22	019N00612	RPR - RCT - Pad Pickup, MP
23	019N00796	RPR - Pad MP Plus
24	130N01203	PBA SUB - MP SEN
25	-	Screw - Taptite (REF: PL 31.10 Item 6)
26	-	Screw - Taptite (REF: PL 31.10 Item 6)
27	022N01483	A/S Material-Pickup, MP

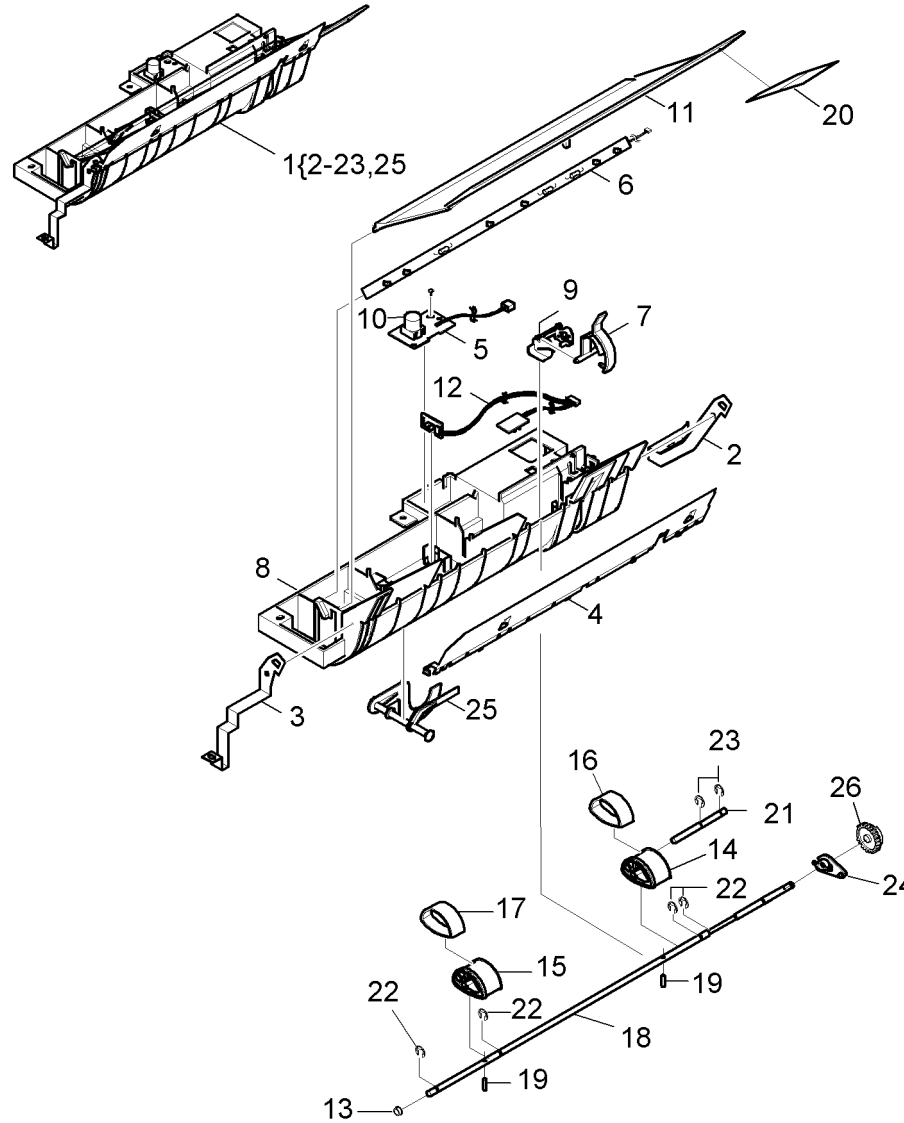


NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

AP-8-0010-A

PL 8.25 Pickup Assembly

Item	Part	Description
1	002N02276	ELA HOU - Pickup Assembly (REP 8.6)
2	-	IPR - GND Feed (P/O PL 8.25 Item 1)
3	-	IPR - GND Input (P/O PL 8.25 Item 1)
4	-	IPR - Guide Input (P/O PL 8.25 Item 1)
5	130N01207	PBA SUB - Toner TX
6	140N05940	PBA Sub - PTL
7	-	PMO - Actuator Feed Sensor (P/O PL 8.25 Item 1)
8	-	PMO - Guide Paper (P/O PL 8.25 Item 1)
9	-	PMO - Holder Sensor Feed (P/O PL 8.25 Item 1)
10	-	PMO - Lens Toner Sensor (P/O PL 8.25 Item 1)
11	-	PMO - PTL Path (P/O PL 8.25 Item 1)
12	130N01204	PBA SUB - Feed & P.EMP SEN
13	-	PMO - Bushing P/U,MP (P/O PL 8.25 Item 1)
14	-	Housing - Pickup Large (P/O PL 8.25 Item 1)
15	-	Housing - Pickup Small (P/O PL 8.25 Item 1)
16	022N01600	RPR Rubber Pickup
17	130N01337	Rubber Pickup Small
18	-	Shaft - Pickup CST (P/O PL 8.25 Item 1)
19	-	Shaft Pin ADF (P/O PL 8.25 Item 1)
20	-	Sheet - PTL Path (P/O PL 8.25 Item 1)
21	-	Shaft - SUB - Pickup (P/O PL 8.25 Item 1)
22	-	Ring - E ID4 (REF: PL 31.10 Item 6)
23	-	Ring - E ID5 (REF: PL 31.10 Item 6)
24	-	PMO - Bearing Shaft (Not Spared)
25	120N00393	PMO - Actuator No Paper
26	007N01193	Gear Pickup



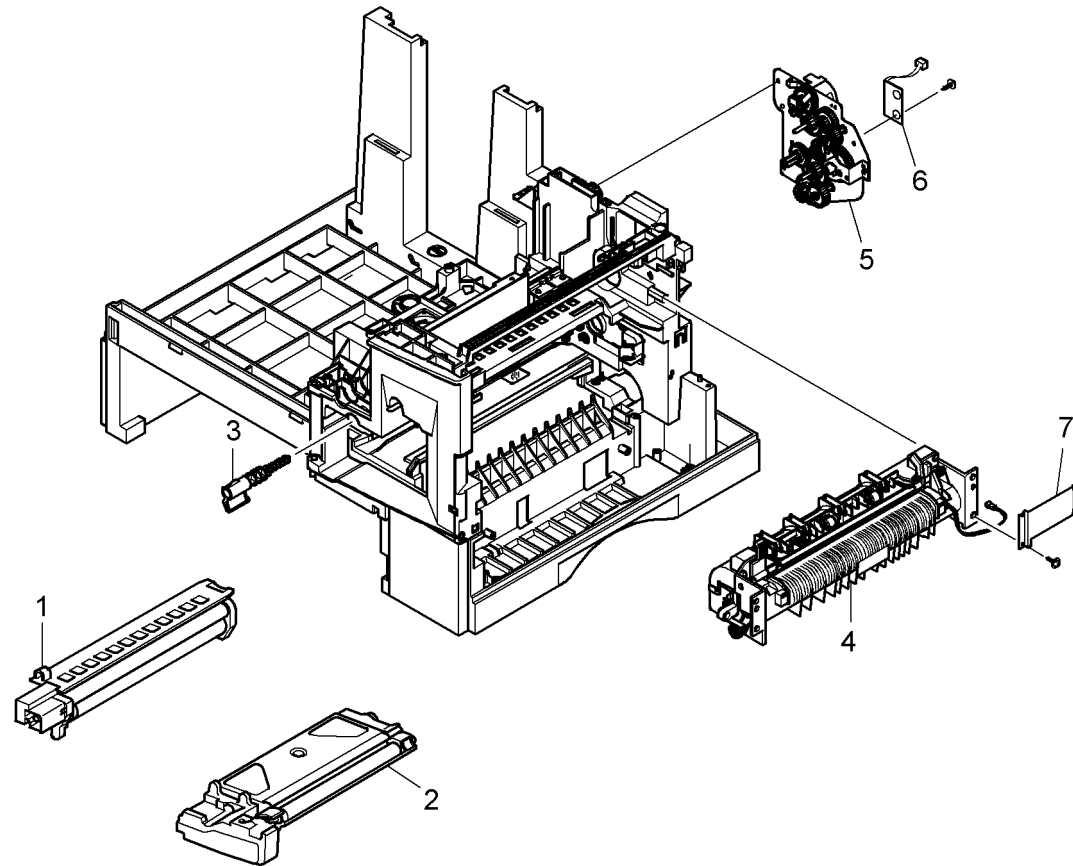
AP-8-0011-A

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

PL 9.10 Toner, Drum Cartridge & Fuser

Item	Part	Description
1	113R00671	ELA Unit - OPE Drum Set
2	106R01048	ELA - Toner Unit Set (XE)
-	106R01047	ELA - Toner Unit Set (NASG/XCL)
3	007N01118	PMO Lock Drive
4	002N02278	ELA HOU - Fuser Assembly (XE) (REP 10.1)
-	002N02277	ELA HOU - Fuser Assembly (NASG/XCL) (REP 10.1)
5	-	ELA HOU - Drives Assembly (REF: PL 4.20 Item 1)
6	-	PBA Bias (Not Spared)
7	-	Cover Sheet Connector (Not Spared)

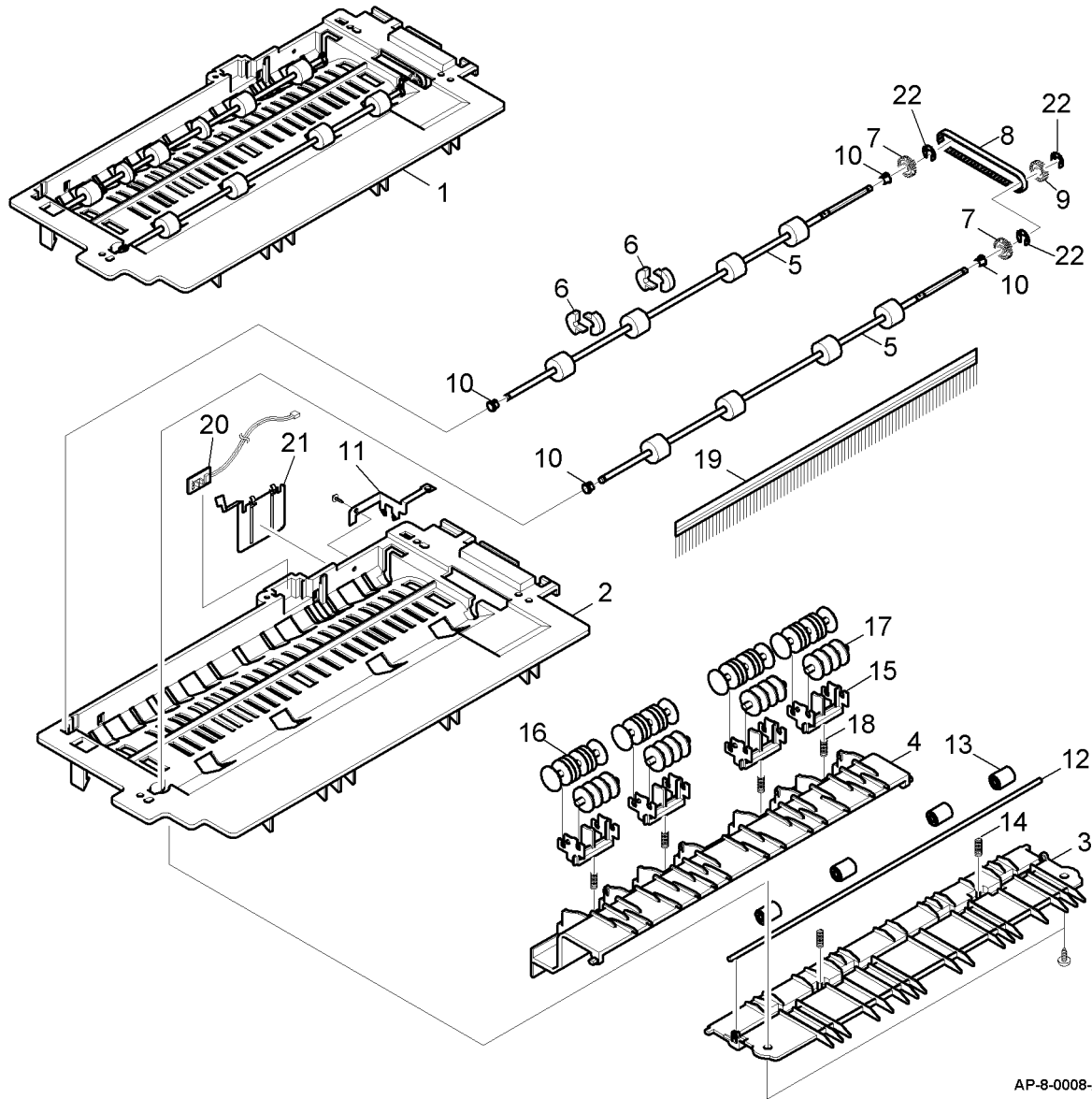
NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.



AP-8-0021-A

PL 10.10 Exit Assembly

Item	Part	Description
1	600N01736	MEC - Exit Assembly (REP 10.2)
2	-	PMO - Guide - Exit Upper (P/O PL 10.10 Item 1)
3	-	PMO - Guide - Exit Lower (P/O PL 10.10 Item 1)
4	-	PMO - Guide - Jam Remove (P/O PL 10.10 Item 1)
5	007N01115	MEC - Roller Exit Drive
6	022N01474	PMO - Roller Decurl
7	020N00768	PMO - Pulley Duplex
8	023N01051	Belt - Timing Gear
9	007N01261	Gear - Duplex
10	013N00514	PMO - Bearing Large DP
11	-	IPR - Ground - Exit (P/O PL 10.10 Item 1)
12	-	ICT - Shaft - Exit Lower ID (P/O PL 10.10 Item 1)
13	-	PMO - Roller Exit (P/O PL 10.10 Item 1)
14	-	Spring - Exit Roll FD (P/O PL 10.10 Item 1)
15	-	PMO - Holder Exit Roll (P/O PL 10.10 Item 1)
16	-	PMO - Roller FD F (P/O PL 10.10 Item 1)
17	-	PMO - Roller FD R (P/O PL 10.10 Item 1)
18	-	Spring - Exit Lower Idle (P/O PL 10.10 Item 1)
19	115N00354	MEC - Brush Antistatic
20	-	PBA SUB - Bin Full Sensor (P/O PL 10.10 Item 1)
21	-	Actuator SUB - Bin Full Sensor (P/O PL 10.10 Item 1)
22	-	E - Clip (REF: PL 31.10 Item 6)



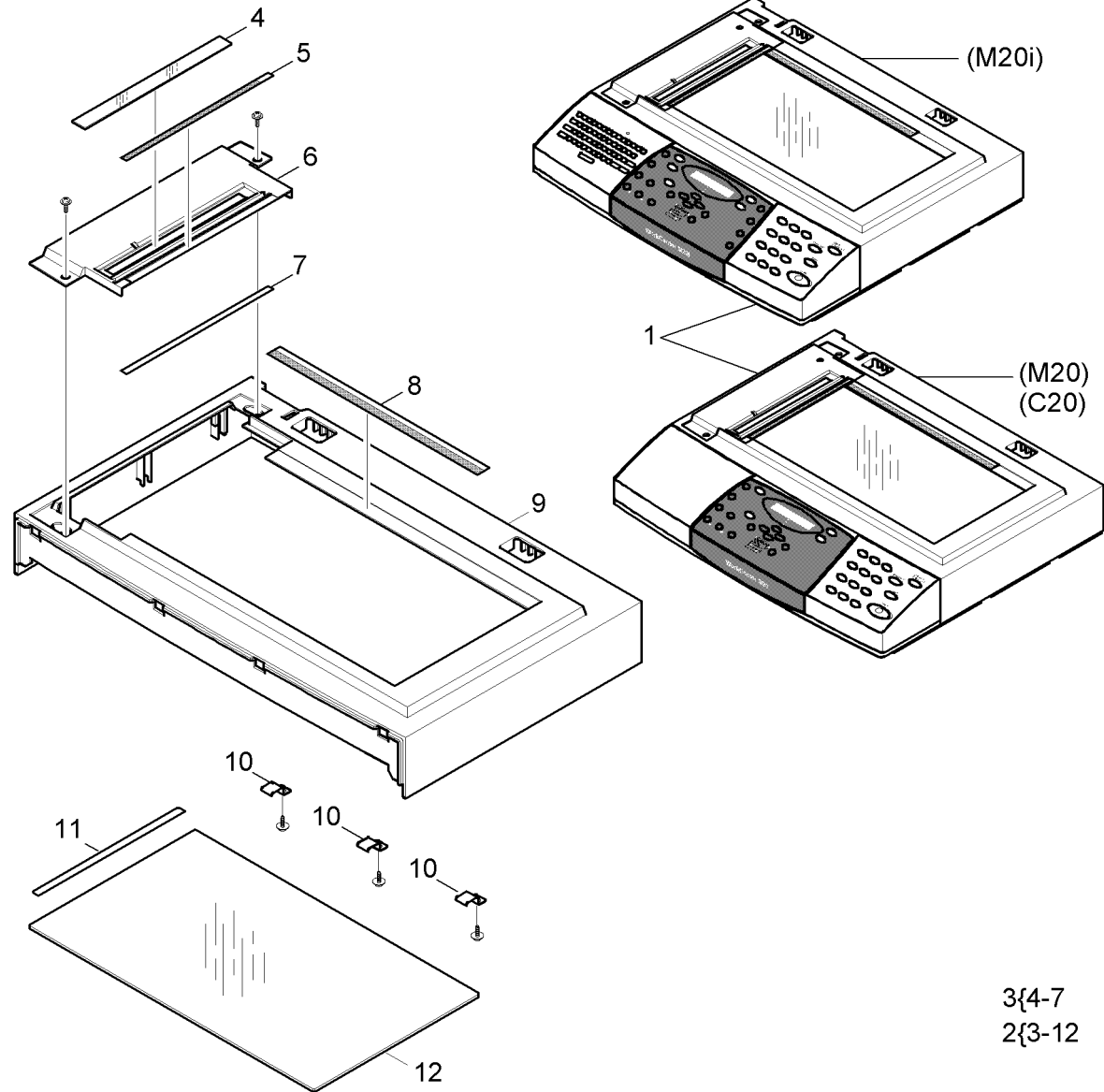
AP-8-0008-A

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

PL 14.10 ELA HOU Scanner Assembly (1 of 2)

Item	Part	Description
1	002N02274	ELA HOU - Scanner Assembly (C20, M20) (REP 14.1)
-	002N02273	ELA HOU - Scanner Assembly (M20i) (REP 14.1)
2	002N02284	ELA HOU SCAN Upper Assembly (REP 14.1)
3	019N00797	A/S Material Dummy Upper Assembly (REP 14.1)
4	-	MCT Glass DADF (P/O PL 14.10 Item 3)
5	-	Label (L) Registration Edge (L) (P/O PL 14.10 Item 3)
6	-	PMO Dummy Upper (P/O PL 14.10 Item 3)
7	-	Sheet Dummy Upper (P/O PL 14.10 Item 3)
8	-	PPR Registration Edge (F) (P/O PL 14.10 Item 2)
9	-	PMO Cover Scan Upper (P/O PL 14.10 Item 2)
10	-	IPR Holder Glass (P/O PL 14.10 Item 2)
11	-	Label (P) Sheet Shading (P/O PL 14.10 Item 2)
12	-	MCT Glass Scanner (Legal) (P/O PL 14.10 Item 2)

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

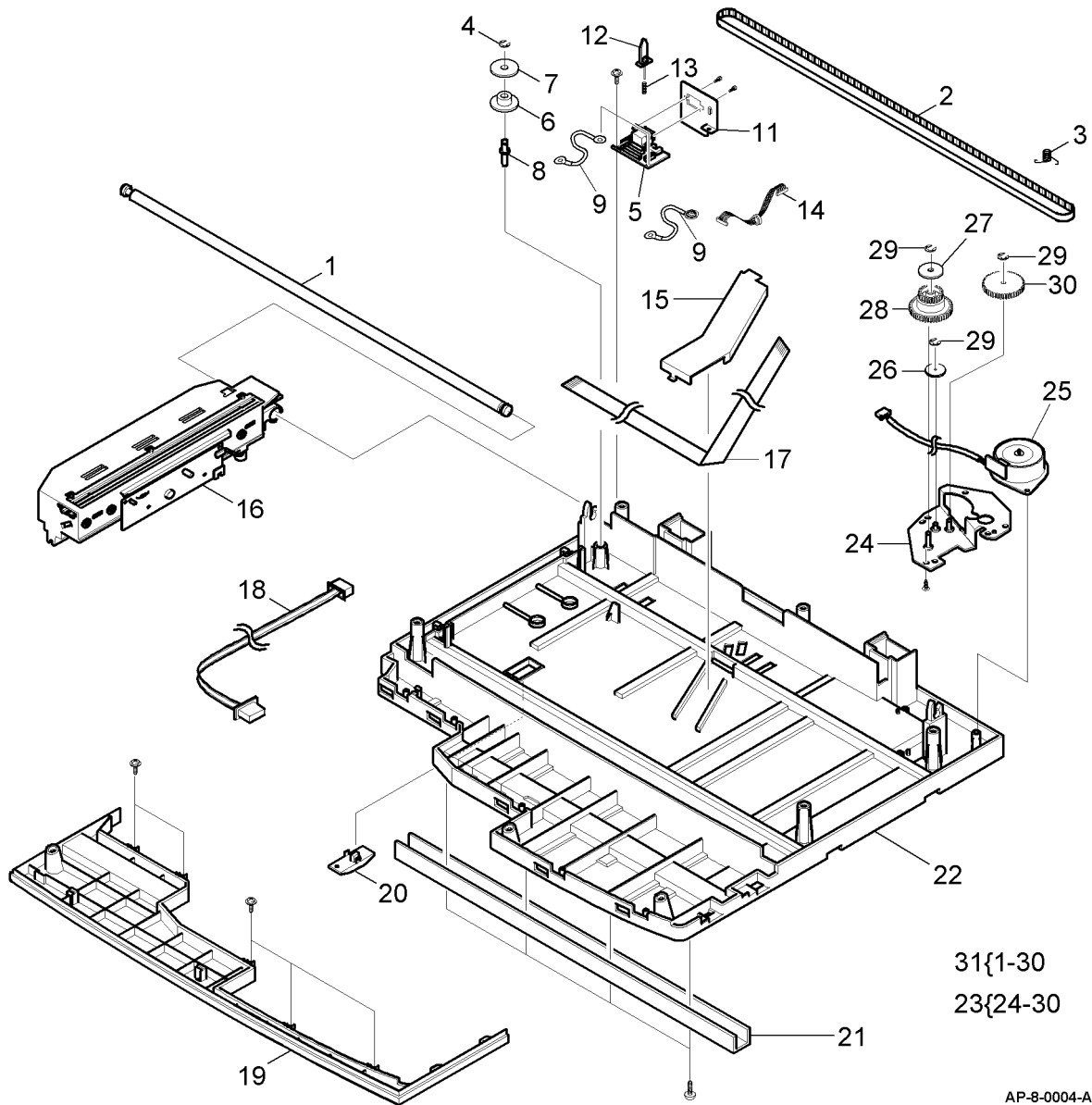


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2{3-12

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PL 14.11 ELA HOU Scanner Assembly (2 of 2)

Item	Part	Description
1	-	Shaft CCD (UMAX) (Not Spared) (REP 14.1)
2	023N00954	Belt - Timing Gear (REP 14.1)
3	023N00955	Spring ETC - Belt
4	-	Ring - E (REF: PL 31.10 Item 6)
5	140N62872	PBA SUB - D SUB (REP 14.1)
6	-	PMO Pulley (Not Spared)
7	-	Washer Plain (Not Spared)
8	-	ICT - Insert Shaft (Not Spared)
9	-	CBF Harness- Driver GND (Not Spared)
10	-	Not Used (Not Spared)
11	140N05936	IPR - BRK Scan BD
12	011N00473	PMO Lever Sensor
13	-	Spring ETC - Exit (Not Spared)
14	152N11552	CBF Harness - Scan Motor
15	-	Cover M CCD Cable (Not Spared) (REP 14.1)
16	002N02166	ELA HOU - CCD Module (REP 14.1)
17	117N01605	CBF Signal - CCD FFC (P/O PL 14.11 Item 31) (REP 14.1)
18	152N11553	CBF Harness - OPE
19	-	PMO - Cover Dummy Lower (Not Spared) (REP 14.1)
20	-	Holder M CCD (UMAX) (Not Spared)
21	-	IPR - Channel Base Frame (Not Spared) (REP 14.1)
22	-	Cover - Scan Lower (UMAX) (Not Spared)
23	002N02290	ELA HOU - Scan Motor (REP 14.1)
24	-	Bracket - Motor - Platen (P/O PL 14.11 Item 23)
25	-	Motor Step - Scan (P/O PL 14.11 Item 23)
26	-	Gear Idle (P/O PL 14.11 Item 23)
27	-	PMO - Holder Belt (P/O PL 14.11 Item 23)
28	-	Gear - Timing (P/O PL 14.11 Item 23)
29	-	Ring - E (REF: PL 31.10 Item 6)
30	-	Gear Reduction 73/37 (P/O PL 14.11 Item 23)
31	-	ELA HOU - Scan Lower (P/O PL 14.10 Item 1)



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23{24-30

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NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

PL 31.10 Maintenance/Installation/ Removal Kits

Item	Part	Description
1	–	Foreign Interface Device Kit (see NOTE 2)
2	497N00184	Network Accessory Kit
3	498N00364	2nd Paper Tray
4	098N01724	Stand
5	–	Repackaging Kit (see NOTE 2)
6	–	Common Hardware Kit (see NOTE 2)

NOTE: 1. If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

NOTE: 2. Part number unavailable at time of publication.

**NO EXPLODED
VIEW PROVIDED**

AP-8-0027-1

Part Number Index

Table 1 Part Number Index

Part Number	Part List
001N00384	PL 4.25
001N00451	PL 4.25
002N02009	PL 4.25
002N02017	PL 4.25
002N02107	PL 4.25
002N02161	PL 4.25
002N02166	PL 14.11
002N02273	PL 14.10
002N02274	PL 14.10
002N02275	PL 5.10
002N02276	PL 8.25
002N02277	PL 9.10
002N02278	PL 9.10
002N02279	PL 4.15
002N02280	PL 4.25
002N02281	PL 2.10
002N02282	PL 2.11
002N02283	PL 2.10
002N02284	PL 14.10
002N02285	PL 5.14
002N02286	PL 5.10
002N02287	PL 5.10
002N02288	PL 5.10
002N02289	PL 4.20
002N02290	PL 14.11
002N02291	PL 5.10
003N00939	PL 5.14
006N01184	PL 7.16
006N01241	PL 5.14
007N01114	PL 8.10
007N01115	PL 10.10
007N01118	PL 9.10
007N01193	PL 8.25
007N01261	PL 10.10
009N01363	PL 8.10
009N01364	PL 8.20
009N01365	PL 8.20
009N01410	PL 7.16
009N01465	PL 7.10

Table 1 Part Number Index

Part Number	Part List
009N01466	PL 7.10
009N01467	PL 4.10
011N00463	PL 4.15
011N00464	PL 4.25
011N00465	PL 4.25
011N00473	PL 14.11
013N00514	PL 10.10
013N00515	PL 8.20
013N00516	PL 8.20
015N00440	PL 4.10
015N00441	PL 4.10
015N00486	PL 7.16
017N00212	PL 4.10
018N00193	PL 2.11
018N00194	PL 2.11
019N00612	PL 8.20
019N00613	PL 8.20
019N00795	PL 5.13
019N00796	PL 8.20
020N00768	PL 10.10
019N00797	PL 14.10
022N01470	PL 8.15
022N01474	PL 10.10
022N01475	PL 8.10
022N01479	PL 8.20
022N01483	PL 8.20
022N01486	PL 4.10
022N01511	PL 5.14
022N01600	PL 8.25
	PL 7.15
022N02056	PL 8.15
022N02057	PL 8.10
023N00954	PL 14.11
023N00955	PL 14.11
023N01051	PL 10.10
025N00081	PL 5.14
029N00345	PL 2.11
029N00346	PL 2.11
029N00347	PL 2.11
029N00348	PL 2.11
029N00349	PL 2.11

Table 1 Part Number Index

Part Number	Part List
029N00350	PL 2.11
029N00351	PL 2.11
029N00352	PL 2.11
029N00353	PL 2.11
029N00354	PL 2.11
029N00355	PL 2.11
029N00356	PL 2.11
030N00606	PL 4.10
038N00371	PL 4.25
050N00392	PL 4.25
050N00441	PL 7.10
050N00442	PL 7.10
050N00443	PL 5.10
050N00445	PL 8.11
091N00699	PL 4.25
091N80193	PL 2.10
091N80194	PL 2.10
091N80195	PL 2.10
091N80196	PL 2.10
091N80197	PL 2.10
091N80198	PL 2.10
091N80199	PL 2.10
091N80200	PL 2.10
091N80201	PL 2.10
091N80202	PL 2.10
091N80203	PL 2.10
091N80204	PL 7.10
091N80205	PL 7.10
098N01724	PL 31.10
106R01047	PL 9.10
106R01048	PL 9.10
110N01041	PL 4.15
113N00364	PL 4.15
113N00365	PL 4.15
113R00671	PL 9.10
115N00354	PL 10.10
117N01313	PL 1.10
117N01602	PL 1.10
117N01605	PL 14.11
117N01620	PL 1.10
120N00392	PL 8.20

Table 1 Part Number Index

Part Number	Part List
120N00393	PL 8.25
	PL 7.15
120N00438	PL 5.10
122N00234	PL 6.10
127N01375	PL 4.20
127N07298	PL 4.20
127N07299	PL 4.20
127N07300	PL 4.10
130N01201	PL 5.14
130N01203	PL 8.20
130N01204	PL 8.25
130N01205	PL 4.15
130N01206	PL 8.20
130N01207	PL 8.25
130N01208	PL 4.15
130N01213	PL 4.10
130N01337	PL 8.25
	PL 7.15
130N01338	PL 8.20
140N05936	PL 14.11
140N05940	PL 8.25
140N62859	PL 1.10
140N62860	PL 1.10
140N62861	PL 1.10
140N62862	PL 1.10
140N62863	PL 1.10
140N62864	PL 1.10
140N62865	PL 2.11
140N62866	PL 2.11
140N62867	PL 5.10
140N62868	PL 5.14
140N62869	PL 5.10
140N62870	PL 4.10
140N62871	PL 1.10
140N62872	PL 14.11
140N62873	PL 4.15
140N62874	PL 7.16
140N62875	PL 1.10
140N62876	PL 1.10
140N62877	PL 1.10
140N62878	PL 1.10

Table 1 Part Number Index

Part Number	Part List
140N62879	PL 1.10
144N00128	PL 1.10
144N00129	PL 1.10
152N01991	PL 4.10
152N01992	PL 7.16
152N11548	PL 1.10
152N11549	PL 6.10
152N11550	PL 1.10
152N11551	PL 1.10
152N11552	PL 14.11
152N11553	PL 14.11
152N11554	PL 4.20
152N11555	PL 4.20
152N11556	PL 4.15
152N11557	PL 1.10
498N00184	PL 31.10
498N00364	PL 31.10
600N01736	PL 10.10
600N01741	PL 8.20
700N00096	PL 2.10
700N00097	PL 2.10

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GP 1 Engine Test Mode Entry

Purpose

To test various functions or components of the machine. The test is performed, then the result is displayed on the LCD.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Procedure

1. Press **Menu/Exit**, #, **1, 9, 3, 1** in sequence. The LCD will display 'Engine Test (Diagnostic)'.

2. Press **Enter**. The machine has now entered service (tech) mode.
3. Use the numbered keys to select the relevant test number. Use the left and right keys to scroll through the available tests, refer to Figure 1. To view details of each test number., refer to Table 1 Test Map.
4. To exit engine test mode, switch off the machine, then switch on the machine.

NOTE: To escape from the current test mode to the higher test mode, press the stop button.

NOTE: To escape from the engine test mode to the normal mode, press again the stop button.

Sensor Test Description

Refer to Table 2 Sensor Description, for the sensor names that are displayed on the LCD. Actuating the relevant sensor changes its displayed state.

Table 1 Test Map

Test No.	Test Items (Description)	Setting	Description	Setting	Description	
0	ALL MOTOR TEST	ON	Runs the Dev motor & Fuser Motor	OFF	Stops the Dev motor & Fuser Motor	
	FUSER MOTOR TEST (STEPPER)	ON	Runs the Fuser Motor only.	OFF	Stops the Fuser Motor	
	Deve. MOTOR TEST (BLDC)	ON	Runs the Developer Motor only.	OFF	Stops the Developer Motor	
	FUSER MTR DIR TEST	FWD	Runs the Fuser Motor forward	RVS	Runs the Fuser Motor in reverse	
	ALL MOTOR STOP	STOP	Stops the Developer Motor & Fuser Motor.	NEXT	Go to next test item (FCF SOLENOID TEST).	
	FCF(1st Tray) SOLENOID TEST	ON	Energizes the Solenoid on the First Cassette Feeder (FCF). (200ms. timeout)	OFF	De-energizes the Solenoid on the FCF.	
	MPF(MP Tray) SOLENOID TEST	ON	Energizes the Solenoid on the Multi-Purpose Feeder (MPF). (200ms. timeout)	OFF	De-energizes the Solenoid of the MPF.	
	PTL TEST	ON	Switches on the Pre-Transfer Lamp (PTL).	OFF	Switches off the PTL	
	FAN TEST	ON	Runs the Fuser Fan and the LSU fan.	OFF	Stops the Fuser Fan and the LSU Fan motors	
	FUSER CONTROL TEST	ON	Switches on the Fuser Heater. (only when the fuser temp is less than the stand-by temp)	OFF	Switches off the Fuser Heater.	
	FUSER TEMP CHECK	CHECK	Displays the FUSER ADC VALUE. See below for typical ADC conversions: 112 = 170C, 105 = 175C, 97 = 180C, 90 = 185C, 84 = 190C, 77 = 195C, 71 = 200C, 66 = 205C, 60 = 210C, 55 = 215C, 51 = 220C, 46 = 225C. Refer to GP 11 for the correct fuser operating temperatures.	NEXT	Go to first test in sequence (ALL MOTOR TEST)	
	1	LSU MOTOR TEST	ON	Runs the Polygon Mirror Motor in the LSU.	OFF	Stops the Polygon Mirror Motor in the LSU.
		LASER DIODE TEST	ON	Switches on the LASER diode in the LSU.	OFF	Switches off the LASER diode in the LSU
LSU READY TEST		CHECK	Checks the time of LSU ready The time in milliseconds, will be displayed after approximately 10 seconds. The LSU ready time will include 500 milliseconds stabilisation time.	NEXT	Go to next test (LSU HSYNC TEST)	
LSU HSYNC TEST		CHECK	Checks the time of the LSU HSYNC (Horizontal Synch. Signal). The time in milliseconds, will be displayed after approximately 10 seconds.	NEXT	Go to the next test (LSU MOTOR TEST)	

Table 1 Test Map

Test No.	Test Items (Description)	Setting	Description	Setting	Description
2	SENSOR TEST	CHECK	Monitors the status of the Paper Path Sensors and Interlock. '1': Active, '0': Inactive Refer to Table 2 Sensor description for details.	NEXT	Go to the top level of Engine test mode.
3	SCF MOTOR TEST	ON	Runs the Second Cassette Feeder (SCF) Motor	OFF	Stops the SCF Motor
	SCF SOLENOID TEST	ON	Energizes the Second Cassette Feeder (SCF) Solenoid (300ms. timeout)	OFF	De-energizes the SCF Solenoid
	SCF EMP/INST CHECK	CHECK	Checks if the Second Tray is installed. (Monitors the Second Cassette Feeder (SCF) Paper Empty Sensor)	NEXT	Go to the next test (SCF MOTOR TEST)
4	OPC FUSE STATE	CHECK	Checks for a new OPC Fuse. (Compares against previous known state during warm-up)	NEXT	Go to the next test (OPC FUSE CHECK)
	OPC FUSE CHECK	CHECK	Displays the current state of the OPC Fuse.	NEXT	Go to the next test (TONER STATE)
	TONER STATE	CHECK	Displays the Toner status. This test does not check current toner status. It only displays the stored value in the SDRAM when the side cover was last opened or at power on. To update the stored value in the SDRAM open and close the side cover.	NEXT	Go to the next test (TONER LOW CHECK)
	TONER LOW CHECK	CHECK	Checks current toner status	NEXT	Go to the next test (PAGE COUNTER INC)
	PAGE COUNTER INC	CHECK	Increases the page count by 1	NEXT	Go to the next test (AIR TEMP CHECK)
	AIR TEMP CHECK	CHECK	Displays the temperature of current working environment using ADC values. See below for typical ADC conversions: 200 = -11C/12F, 178 = 0C/32F, 155 = 10C/50F, 121 = 25C/77F, 73 = 50C/122F	NEXT	Go to the next test (OPC FUSE STATE)
5	MHV SUPPLY 1350V (Not to be used during service, manufacturing use only)	ON	Switches on 1350V to the MHV		Switches off the voltage to the MHV
	MHV ADC READ	CHECK	Reads and displays the MHV ADC value. If the ADC value is between 1 and 254 inclusive, this indicates that the MHV value is good. If the value is 0 or 255 the display will read "Over The Range". This indicates problems with the toner cartridge or drum cartridge or their respective contacts.		Go to next test (DEV SUPPLY 450v)
	DEV SUPPLY -450V (Not to be used during service, manufacturing use only)	ON	Switches on -450V to the DEV		Switches of the voltage to the DEV
	THV SUPPLY NEG VOLT(Not to be used during service, manufacturing use only)	ON	Switches on negative voltage to the THV		Switches off the negative voltage to the THV

Table 1 Test Map

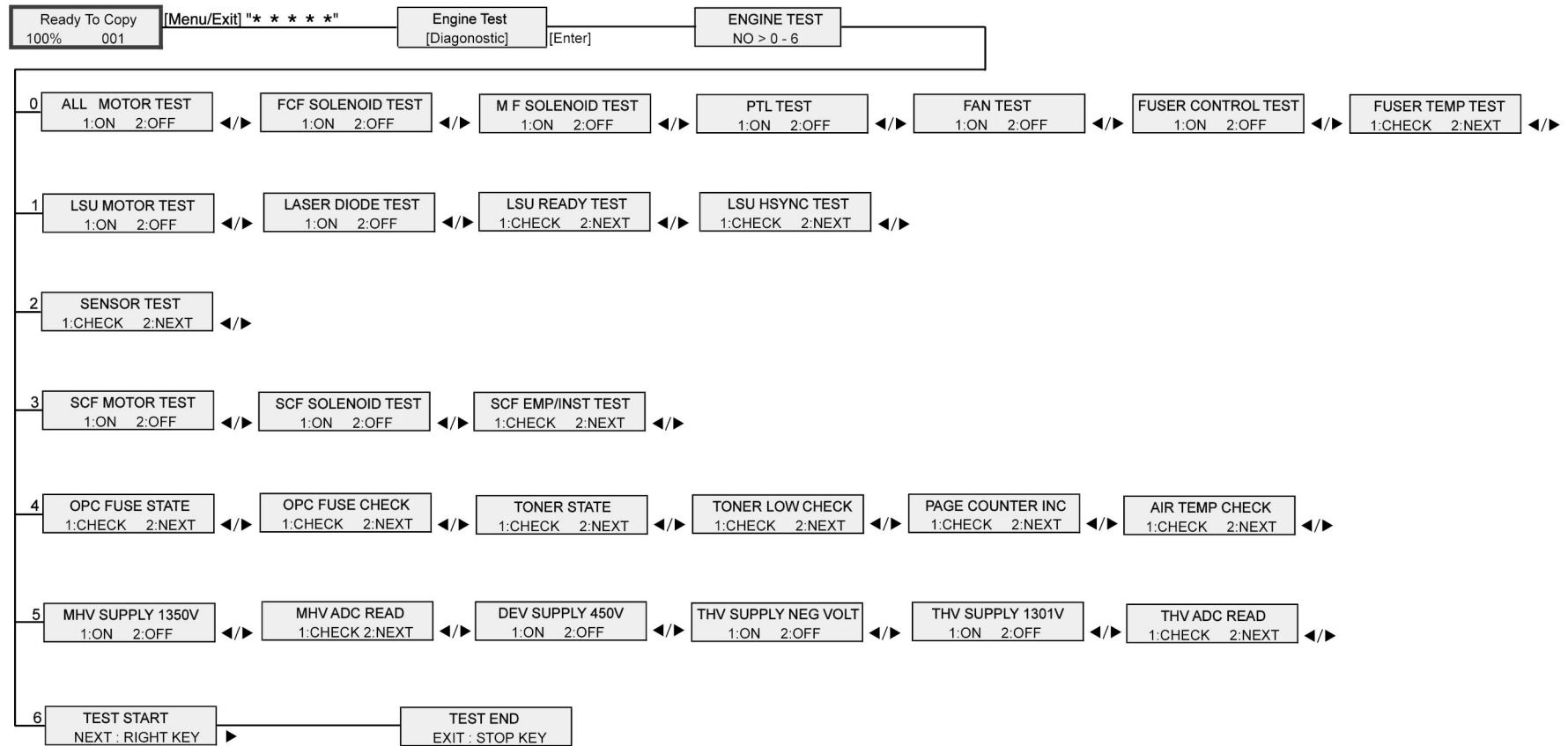
Test No.	Test Items (Description)	Setting	Description	Setting	Description
	THV SUPPLY 1301V (Not to be used during service, manufacturing use only)	ON	Switches on 1301V to the THV		Switches off the voltage to the THV
	THV ADC READ	CHECK	Reads and displays the THV ADC value. If the ADC value is between 1 and 254 inclusive, this indicates that the THV value is good. If the value is 0 or 255 the display will read "Over The Range". This indicates problems with the toner cartridge or drum cartridge or their respective contacts	NEXT	Go to the next test (MHV SUPPLY 1350V)
6	Auto TEST	NEXT	RIGHT KEY. Automatically starts test sequence at 2 second intervals. For actual components tested refer to the following items.	EXIT	STOP KEY. Returns to the top level of Engine Test Mode.
			ALL MOTOR CONTROL		
			FUSER MOTOR CONTROL		
			DEV MOTOR CONTROL		
			DUPLEX CONTROL		
			FCF PICKUP CONTROL		
			MP PICKUP CONTROL		
			PTL CONTROL		
			FAN CONTROL		
			FUSER CONTROL		
			LSU MOTOR CONTROL		
			LASER DIODE CONTROL		
			SENSOR DETECT CV / FD / EX / OB / FE / ME		
			MHV CONTROL		
			DEV CONTROL		
			THV NEG CONTROL		
			THV CONTROL		
			MHV ADC READ		
			THV ADC READ		
			TEST END		

Table 2 Sensor Description

Table 2 Sensor Description

Displayed name.	Sensor name	Parts list
CV	CBF - harness; switch - micro (Right hand cover interlock)	PL 4.15 Item 20
FD	PBA sub feed and P.EMP sensor (Feed sensor)	PL 8.25 Item 12 (Actuator - PL 8.25 Item 25)
EX	PBA sub exit sensor (Exit sensor)	PL 4.15 Item 22

Displayed name.	Sensor name	Parts list
OB	PBA sub bin full sensor (Output bin sensor)	PL 10.10 Item 20 (Actuator - PL 10.10 Item 21)
FE	PBA sub feed and P.EMP sensor (Tray 1 empty sensor)	PL 8.25 Item 12 (Actuator - PL 8.25 Item 7)
ME	PBA sub MP sensor (Paper transport sensor)	PL 8.20 Item 24 (Actuator - PL 8.20 Item 12)



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Figure 1 LCD test sequence

GP 2 User Mode Entry

Purpose

To adjust the user settings. Table 1 and Table 2 show the functions that can be set by the user.

Procedure

1. Press **Machine Status**.
2. Use the up and down keys to scroll through the functions.
3. Press **Enter** to select the required function.
4. Use the left and right keys to scroll through the items.
5. Press **Enter** to select the required item.
6. Use the left and right keys to scroll through the options.
7. Press **Enter** to select the required option.

Table 1 M20i user mode settings

Function	Item	Option
Machine Setup	Tray 1 Size	Letter / A4 / Legal / Folio
	Tray 2 Size	Letter / A4 / Legal / Folio
	Bypass Size	Letter / A4 / Legal / Folio / A5/ Statement
	Power Save	On / Off
	Machine Timeout	15 / 30 / 60 / 180 / Off
	Stamp RX Name	On / Off
	Alarm Sound	On / Off
	Key Sound	On / Off
	Speaker Control	On / Off / Comm.
	Language	English / French / German / Italian / Spanish / Portuguese / Dutch / Danish / Finnish / Norwegian / Swedish / Russian
	Localisation	Inch / MM
	Select Country	UK / Greece / Turkey / Ukraine / Slovenia / Russia / Yugoslavia / Australia / HongKong / NewZealand / SouthAfrica / Israel / Korea / K.Xerox / China / India / Asia_STD / Malaysia / Singapore / USA/Canada / Brazil / Chile / Columbia / Mexico / Argentina / Peru / Germany / France / Austria / Switzerland / Italy / Spain / Portugal / Norway / Finland / Sweden / Netherlands / Denmark / Belgium / Hungary / Poland / Czech / Romania / Bulgaria / Ireland
	USB Mode	Fast / Slow
	Device Name	Fax / ID
	Date & Time	00-00-0000 / 00:00 (AM)
	Clock Mode	12/ 24 Hours

Table 1 M20i user mode settings

Function	Item	Option
	Toner Save	On / Off
	Discard Size	0-30 MM
Fax Setup	Lighten/Darken	L[--*--]D
	Resolution	Standard / Fine / Superfine
	Receive Mode	Fax / Tel / Ans/Fax
	Fax Duplex	Off / Long Edge / Short Edge
	Speed Dials	New / Edit / Delete
	Group Dials	New / Edit
	MSG Confirm	On-Err / On / Off
	Auto Reduction	On / Off
	Prefix Dial	Fax
	Auto Report	On / Off
	ECM mode	On / Off
	Redials	0-13
	Ring to Answer	1-7
	Redial Term	1-15
	Ringer	Low / Med / High / Off
	Junk Fax Setup	On / Off
	Secure Receive	On / Off / Print
	Fax Tray	Tray 1 / Tray 1 & Tray 2 / All
	Dial Mode	Tone / Pulse
System Admin Tools	Password Protect	No / Yes
	Department	Enter Master Code
	Auxiliary Access	On / Off
	Network Setup	Reset NIC / Configure Network / Netware / Use Factory Defaults
	Email Setup	SMTP Server Setup / Auth User Setup / Auto Send to Self / Guest User Access / Default From / Default Subject / LDAP Server Setup
	Change Passcode	
	Clear Memory	System Data / Fax TX History / Fax RX History / Fax Phone Book / Email Address Book / Email TX History
	Maintenance	Serial Number / Clean Drum / New Drum / Billing Counters / Notify Toner Low
	Mailbox Setup	Create / Delete

Table 1 M20i user mode settings

Function	Item	Option
	Fax/Email Forward	Fax / Email
Reports		Fax Phonebook / Fax TX / Fax RX / System Data / Scheduled Jobs / Fax TX Confirm / Email TX REport / Junk Fax List / Billing/ counters / Connect Page / User Auth List / Print All Reports

Table 2 C20 user mode settings

Function	Item	Option
Machine Setup	Tray 1 Size	Letter / A4 / Legal / Folio
	Tray 2 Size	Letter / A4 / Legal / Folio
	Bypass Size	Letter / A4 / Legal / Folio / A5/ Statement
	Power Save	On / Off
	Machine Timeout	15 / 30 / 60 / 180 / Off
	Alarm Sound	On / Off
	Key Sound	On / Off
	Language	English / French / German / Italian / Spanish / Portuguese / Dutch / Danish / Finnish / Norwegian / Swedish / Russian
	Localisation	Inch / MM
	Select Country	UK / Greece / Turkey / Ukraine / Slovenia / Russia / Yugoslavia / Australia / HongKong / NewZealand / SouthAfrica / Israel / Korea / K.Xerox / China / India / Asia_STD / Malaysia / Singapore / USA/Canada / Brazil / Chile / Columbia / Mexico / Argentina / Peru / Germany / France / Austria / Switzerland / Italy / Spain / Portugal / Norway / Finland / Sweden / Netherlands / Denmark / Belgium / Hungary / Poland / Czech / Romania / Bulgaria / Ireland
	USB Mode	Fast / Slow
	Toner Save	On / Off
System Admin Tools	Password Protect	No / Yes
	Network Setup	Reset NIC / Configure Network / Netware / Use Factory Defaults
	Email Setup	SMTP Server Setup / Auth User Setup / Auto Send to Self / Guest User Access / Default From / Default Subject / LDAP Server Setup

Table 2 C20 user mode settings

Function	Item	Option
	Change Passcode	
	Clear Memory	System Data / Fax TX History / Fax RX History / Fax Phone Book / Email Address Book / Email TX History
	Maintenance	Serial Number / Clean Drum / New Drum / Billing Counters / Notify Toner Low
Reports		System Data / Email TX REport / Billing/ counters / Print All Reports

GP 3 Service Mode Entry

Purpose

To perform various tests to isolate the cause of a fault.

Procedure

1. Press **Menu/Exit, #, 1, 9, 3, 4** in sequence. The LCD will display 'T' or 'TECH'. The machine has now entered service (tech) mode.

NOTE: While in tech mode, the machine will perform all normal operations.

2. Refer to Table 1 or Table 2. Perform the following:
 - a. Press **Machine Status**.
 - b. Use the up and down keys to scroll through the functions.
 - c. Press **Enter** to select the required function.
 - d. Use the left and right keys to scroll through the items.
 - e. Press **Enter** to select the required item.
 - f. Use the left and right keys to scroll through the options.
 - g. Press **Enter** to select the required option.
3. To exit service (tech) mode, press **Menu/Exit, #, 1, 9, 3, 4** in sequence or switch off the machine, then switch on the machine.

NOTE: Options that have been changed in service mode will not be retained unless the machines memory is cleared.

Table 1 M20i service mode settings

Function	Item	Option
Machine Setup	Tray 1 Size	Letter / A4 / Legal / Folio
	Tray 2 Size	Letter / A4 / Legal / Folio
	Bypass Size	Letter / A4 / Legal / Folio / A5/ Statement
	Power Save	On / Off
	Machine Timeout	15 / 30 / 60 / 180 / Off
	Stamp RX Name	On / Off
	Alarm Sound	On / Off
	Key Sound	On / Off
	Speaker Control	On / Off / Comm.
	Language	English / French / German / Italian / Spanish / Portuguese / Dutch / Danish / Finnish / Norwegian / Swedish / Russian
	Localisation	Inch / MM

Table 1 M20i service mode settings

Function	Item	Option
	Select Country	UK / Greece / Turkey / Ukraine / Slovenia / Russia / Yugoslavia / Australia / HongKong / NewZealand / SouthAfrica / Israel / Korea / K.Xerox / China / India / Asia_STD / Malaysia / Singapore / USA/Canada / Brazil / Chile / Columbia / Mexico / Argentina / Peru / Germany / France / Austria / Switzerland / Italy / Spain / Portugal / Norway / Finland / Sweden / Netherlands / Denmark / Belgium / Hungary / Poland / Czech / Romania / Bulgaria / Ireland
	USB Mode	Fast / Slow
	Device Name	Fax / ID
	Date & Time	00-00-0000 / 00:00 (AM)
	Clock Mode	12/ 24 Hours
	Toner Save	On / Off
	Discard Size	0-30 MM
Fax Setup	Lighten/Darken	L[-*-]D
	Resolution	Standard / Fine / Superfine
	Receive Mode	Fax / Tel / Ans/Fax
	Fax Duplex	Off / Long Edge / Short Edge
	Speed Dials	New / Edit / Delete
	Group Dials	New / Edit
	MSG Confirm	On-Err / On / Off
	Auto Reduction	On / Off
	Prefix Dial	Fax
	Auto Report	On / Off
	ECM mode	On / Off
	Redials	0-13
	Ring to Answer	1-7
	Redial Term	1-15
	Ringer	Low / Med / High / Off
	Junk Fax Setup	On / Off
	Secure Receive	On / Off / Print
	Fax Tray	Tray 1 / Tray 1 & Tray 2 / All
	Dial Mode (GP 4)	Tone / Pulse
System Admin Tools	Password Protect	No / Yes
	Department	Enter Master Code
	Auxiliary Access	On / Off

Table 1 M20i service mode settings

Function	Item	Option
	Network Setup	Reset NIC / Configure Network / Netware / Use Factory Defaults
	Email Setup	SMTP Server Setup / Auth User Setup / Auto Send to Self / Guest User Access / Default From / Default Subject / LDAP Server Setup
	Change Passcode	
	Clear Memory	System Data / Fax TX History / Fax RX History / Fax Phone Book / Email Address Book / Email TX History / Clear All Memory (GP 5)
	Maintenance (GP 6)	Serial Number / Clean Drum / New Drum / Billing Counters / Notify Toner Low / Send Level / Dial Mode / Switch Test / Modem Test / DRAM Test / ROM Test / Pattern Test / Shading Test / Error Rate / Modem Speed / Engine Test / Silence Time / Flash Upgrade / Reset Passcode
	Mailbox Setup	Create / Delete
	Fax/Email Forward	Fax / Email
Reports (GP 7)		Protocol / Fax Phonebook / Fax TX / Fax RX / System Data / Scheduled Jobs / Fax TX Confirm / Email TX Report / Junk Fax List / Billing/ Counters / Connect Page / User Auth List / Print All Reports (includes Help List)

Table 2 C20 service mode settings

Function	Item	Option
Machine Setup	Tray 1 Size	Letter / A4 / Legal / Folio
	Tray 2 Size	Letter / A4 / Legal / Folio
	Bypass Size	Letter / A4 / Legal / Folio / A5/ Statement
	Power Save	On / Off
	Machine Timeout	15 / 30 / 60 / 180 / Off
	Alarm Sound	On / Off
	Key Sound	On / Off
	Language	English / French / German / Italian / Spanish / Portuguese / Dutch / Danish / Finnish / Norwegian / Swedish / Russian
	Localisation	Inch / MM

Table 2 C20 service mode settings

Function	Item	Option
	Select Country	UK / Greece / Turkey / Ukraine / Slovenia / Russia / Yugoslavia / Australia / HongKong / NewZealand / SouthAfrica / Israel / Korea / K.Xerox / China / India / Asia_STD / Malaysia / Singapore / USA/Canada / Brazil / Chile / Columbia / Mexico / Argentina / Peru / Germany / France / Austria / Switzerland / Italy / Spain / Portugal / Norway / Finland / Sweden / Netherlands / Denmark / Belgium / Hungary / Poland / Czech / Romania / Bulgaria / Ireland
	USB Mode	Fast / Slow
	Toner Save	On / Off
System Admin Tools	Password Protect	No / Yes
	Network Setup	Reset NIC / Configure Network / Netware / Use Factory Defaults
	Email Setup	SMTP Server Setup / Auth User Setup / Auto Send to Self / Guest User Access / Default From / Default Subject / LDAP Server Setup
	Change Passcode	
	Clear Memory	System Data / Fax TX History / Fax RX History / Fax Phone Book / Email Address Book / Email TX History / Clear All Memory (GP 5)
	Maintenance (GP 6)	Serial Number / Clean Drum / New Drum / Billing Counters / Notify Toner Low / Switch Test / DRAM Test / ROM Test / Pattern Test / Shading Test / Engine Test / Flash Upgrade / Reset Passcode
Reports (GP 7)		System Data / Email TX Report / Billing/ Counters / Print All Reports (includes Help List)

GP 4 Fax Setup

Purpose

To give details of the fax setup that can be selected in service mode, GP 3:

- Dialing Mode

Dialing Mode

Select the dialing mode according to the users line status:

- TONE: Electronic dialing (modern systems).
- PULSE: Mechanical dialing (older systems).

GP 5 Memory Clear

Purpose

To give details of the memory clear procedure that can be performed in service mode, GP 3:

- Clear All Memory

Clear All Memory

This function resets the system to the default factory setting. All the values will be returned to default values, and all the information, which has been set by the user, will be lost. A memory clear must be performed if a new main PBA has been installed.

Perform the following:

1. Enter service mode, GP 3.
2. Select 'MEMORY CLEAR'.
3. Press the ENTER button.
4. Select the relevant country.
5. Press the ENTER button.

GP 6 Maintenance

Purpose

To give details of the maintenance tests or procedures that can be performed in service mode, GP 3:

- Serial Number
- Clean Drum
- New Drum
- Notify Toner Low
- Billing Counters
- Send Level
- Dial Mode (M20i only)
- Switch Test
- Modem Test
- DRAM Test
- ROM Test
- Pattern Test
- Shading Test
- Error Rate
- Modem Speed
- Engine Test
- Silence Time
- Flash Upgrade
- Reset Passcode

Serial Number

Use this procedure to restore the machine serial number after replacing the Main PBA.

The serial number of each machine is marked on the rating label, which is located on the rear of the machine.

The serial number should be 16 digits. The actual serial number is comprised by the product code of 3 digits and serial number of 6 digits. Therefore the last 7 digits are input by null code '0'. Example: RYR361001 = RYR361001000000.

Clean Drum

Use this procedure to clean the toner remaining on the OPC drum, so a clean printout can be obtained. Perform this procedure if stains or specks appear on the prints and print quality is defective.

The machine automatically prints a sheet of paper. The toner particles on the OPC drum surface are fixed to the paper.

It may be necessary to perform this procedure several times until a clean print is produced.

New Drum

If the 'New OPC Error' message is displayed after initial power on or after closing the cover after installing a new drum, it makes installing a new drum compulsory.

Notify Toner Low

When this feature is enabled, if the toner level becomes low, the information will be sent to a specified contact point, for example, the service company. To enable, access this menu, select ON, and when the LCD prompts, enter the name and the number of the contact point, the customers fax number, the model name, and the serial number.

Billing Counters

Displays the following counters

- Total impressions
- Toner impressions
- Drum impressions
- DADF scanned pages
- Platen scanned pages
- Replaced toner
- Replaced drum

Send Level

The transmission signal level can set. Typically, the level should be under -12dBm.

NOTE: The send fax level is set at the optimum level during manufacture. Do not change the send fax level arbitrarily.

Dial Mode (M20i only)

Refer to GP 4.

Switch Test

Use this feature to test all keys on the operation control panel. The result will be displayed on the LCD window each time you press a key.

Modem Test

Use this procedure to hear various transmission signals to the telephone line from the modem and to check the modem. If no transmission signal is heard, the modem part of the main board is defective.

DRAM Test

Use this procedure to test the machines DRAM. The result will appear on the LCD display. If the memory is working correctly, the LCD will display 'OK'.

ROM Test

Use this procedure to test the machines ROM. The result and the software version will appear on the LCD display:

- FLASH VER: 1.00 V

- ENGINE VER:1.00V

Pattern Test

This procedure is used during manufacturing only. Not to be used during service.

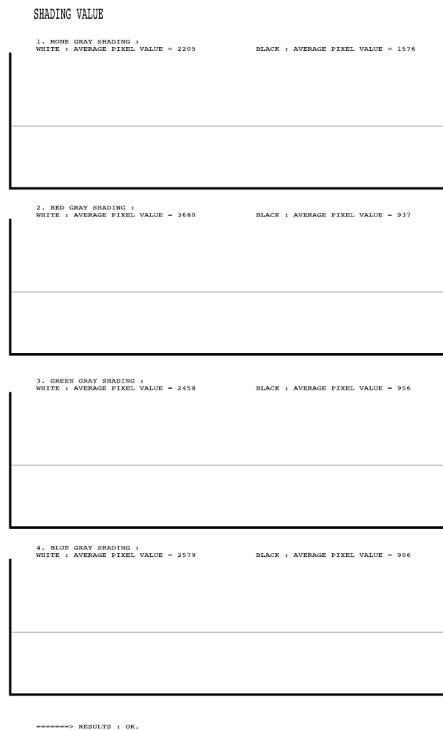
Shading Test

Use this procedure to test the CCD. If the image quality is unsatisfactory, perform this procedure to check the operation of the CCD.

NOTE: Before performing the adjust shading test, ensure the DADF is lowered.

Perform the following:

1. Enter service mode, GP 3.
2. Select 'ADJUST SHADING'.
3. Press the SET UP button, then an image will be scanned.
4. After the scan, the CCD shading profile will be printed, Figure 1.
5. If the printed image is different to the CCD shading profile image, the CCD is defective.



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Figure 1 Shading profile

Error Rate

If the error rate is about to exceed the set value, the Baud rate is automatically lowered, by up to a maximum of 2400 bps, to ensure that the error rate remains below the set level.

The rate can be set between 5% and 10%.

Modem Speed

The maximum modem speed can be set.

The machine will automatically lower the modem speed setting when communicating with a machine that has a lower transmit/receive setting.

The default modem speed setting is 33.6Kbps. This default setting should not be changed.

Engine Test

Refer to Engine Test Mode Entry, GP 1.

Silence Time

In ANS/FAX mode, after a call is picked up by the answering machine, the machine monitors the line. If a period of silence is detected on the line at any time, the call will be treated as a fax message and the machine will begin receiving.

Silence detection time is selectable between limited (approximately 12 seconds) and unlimited time. When '12 sec' is selected, the machine switches to receiving mode as soon as it detects a period of silence. When 'unlimited' is selected, the machine waits until the answering operation is concluded even though a period of silence is detected. After the answering operation is concluded, the machine switches to receiving mode.

Flash Upgrade

The firmware upgrade procedure has two methods, local and remote. For more information, refer to Firmware Upgrade, GP 8.

Reset Passcode

Use this procedure to either disable or reset the system administrator passcode.

Junk Fax List

This list shows specific information about the fax numbers from which the machine will receive faxes.

Email TX Report

This report shows specific information concerning scan to email activities, the time and dates of the most recent transmissions.

Billing/Counters

This list shows specific information about the machines total print count.

Connect Page

This list shows specific information about the machines connection profile.

User Auth List

This list shows specific information about the authorised email users.

Print All Reports

This function will print all available reports including the Help List. The Help List shows a brief description on the machine's basic functions and commands. Use it as a quick reference guide

GP 8 Firmware Upgrade

Purpose

To give details of the 2 possible firmware upgrade procedures, local and remote:

- Local Machine
- Remote FAX

Local Machine

RCP (Remote Control Panel) mode

Use this method if the machine can be connected to a PC via a parallel port or USB port.

1. Connect the PC to the machine with either a parallel cable or USB cable.
2. Execute RCP and select Firmware Update. Current firmware version and emulation version are displayed in the current version window.
3. Use the browse function to locate the firmware file to update.
4. Click the Update icon, the firmware file is transmitted to the machine automatically. The machine will initialize when the update is complete.
5. Click the Refresh icon and check what has been updated.

DOS Command mode

Use this method if the machine can be connected to a PC via a parallel port only.

1. The following files are required; **down.bat**, **down_com.bin**, **fprt.exe**, and **Rom File**: file name for upgrade. Save the files in the same folder.
2. Open the DOS command window.
3. In the DOS window, input as below and push the enter key. It will then automatically upgrade. There are two commands for which can be used. Use the correct command depending on the condition of machine:
 - a. When the machine is in idle condition, use **down "rom file"**.
 - b. When the machine is in idle condition (TECH MODE/MAINTENANCE/FLASH UPGRADE/LOCAL) use **fprt "rom file"**.

NOTE: Do not turn off the power during the upgrade process.

Remote FAX

Use this is a function to update a remote machine that has a fax. A local fax machine that has the latest firmware can send files to the remote fax machine through the telephone line.

NOTE: To perform this procedure successfully, the sending and receiving machines must be identical configurations.

1. Operate the local fax machine that has the latest firmware to prepare for the upgrade, (TECH MODE/MAINTENANCE/FLASH UPGRADE/REMOTE).
2. Input the fax number of the machine to be upgraded.

NOTE: Several machines can be upgraded at the same time. In this case, enter the fax number of each machine.

3. After pressing the enter button, the firmware file will be sent. This procedure will take approximately 15 minutes.

NOTE: A sending fax machine must be set up as ECM mode. The receiving machines memory must be set up as 100%. If not, the function will not operate successfully.

GP 9 Identify Sale Date (M20i Only)

Purpose

This function confirms the date that the consumer bought the product and the date that the product was first used. The machine recognizes the first scan page count, print page count etc.

Procedure

Perform the following:

1. Press **MENU, #, 1, 9, 3, #** in sequence.

NOTE: *The Firmware version will be displayed on the LCD.*

2. Press 1: The LCD display shows the "Updated date"
Press 2: The LCD display shows "Product first use date"

NOTE: *These contents are remembered after a memory delete (Clear All Memory).*

3. To exit sale date, switch off the machine then switch on the machine.

GP 10 General Disassembly Precautions

Purpose

Use this procedure when disassembling and reassembling components.

Procedure

The close proximity of cables to moving parts makes proper routing essential. If components are removed, any cables disturbed by the procedure must be restored as close as possible to their original positions. Before removing any component from the machine, note the cable routing that will be affected.

Whenever servicing the machine, perform the following:

1. Check to verify that documents are not stored in memory.
2. Unplug the power cord.
3. Use a flat and clean surface.
4. Only install authorized components.
5. Do not forcibly remove plastic components.
6. Ensure all components are in their correct position.

GP 11 Machine Specifications

Specifications are correct at the time of publication. Machine specifications are subject to change without notice. Refer to the following tables for machine specifications:

- Table 1 General Specifications.
- Table 2 Printer Specifications.
- Table 3 Facsimile Specifications (M20i Only).
- Table 4 Scanner Specifications.
- Table 5 Copy Specifications.
- Table 6 Telephone Specifications (M20i Only).
- Table 7 Consumables.
- Table 8 Fuser Operating Temperatures.
- Table 9 HVPS Output.

Table 1 General specifications

Item	Description
Type of Unit	Desktop
Operation System	Win98/ME/ NT 4.0/2000/XP
Duplex Printing	Yes(Default)
Printing Speed	Simplex: 22ppm for 8.5x11, 21ppm for A4 Duplex: 13ppm for 8.5x11, 12.6ppm for A4
Interface	IEEE1284 (ECP)
	USB (without HUB mode)
CPU	120 MHz(ARM946ES)
System Memory	32Mb
Warming up Time	40 Sec(Stand-By), 25°C
Absolute Storage Condition	Temperature: -20°C ~ 40°C, Humidity: 10% RH ~ 95% RH
Operating Condition	Temperature: 10°C ~ 32°C, Humidity: 20% RH ~ 80% RH
Recommended Operating Condition	Temperature: 16°C ~ 30°C, Humidity: 30% RH ~ 70% RH
Dimension(W X D X H)	Basic: 560 X 433 X 397 mm(Platen cover attached) Extended: 560 X 433 X 490 mm (DADF attached) 560 X 433 X 530 mm (SCF attached) 560 X 433 X 620 mm (both DADF and SCF attached)
Weight	About 26Kg(with CRU)
Acoustic Noise	Less than 65 dB(Copy/Printing scanning mode)
Power Rating	AC 100VAC ~ 127VAC ± 15%, 50/60Hz ± 3Hz AC 220VAC ~ 240VAC ± 15%, 50/60Hz ± 3Hz
Power Consumption	Avg. 500W/h(Print/Copy)
Power Save Consumption	Avg. 35W/h
Recommended System Requirement	Pentium IV 1.2 Ghz, 128 MB RAM, 220MB(Hard Disk)
Minimum System Requirement	Pentium III 500Mhz, 32 MB RAM, 100MB(Hard Disk)
LCD	20 characters X 2 lines

Table 1 General specifications

Item	Description
Memory	4 Mbyte for flash Memory, 32 Mbyte SDRAM

Table 2 Printer specifications

Item	Description
Standard Recommendation	ITU-T Group3(ITU: International Telecommunications Union)
Application Circuit	PSTN or behind PABX (PSTN: Public Switched Telephone Network. PABX: Private Automatic Branch Exchange)
Data coding (Compression)	MH/MR/MMR/JBIG/JPEG (Color/Transmission)
Modem speed	33600/28800/21600/19200/14400/12000
Transmission Speed	Approximately 3 sec(33,600 bps)
Effective Scanning Width	8.2 inches(208 mm)
Halftone	256 Levels
Paper Capacity (Input)	DADF (Duplex Automatic Document Feeder): 50Sheets (75g)
FAX Mode	Standard /Fine/Super Fine/Halftone
Memory	8MB

Table 3 Facsimile specifications

Item	Description
Standard Recommendation	ITU-T Group3(ITU: International Telecommunications Union)
Application Circuit	PSTN or behind PABX (PSTN: Public Switched Telephone Network. PABX: Private Automatic Branch Exchange)
Data coding (Compression)	MH/MR/MMR/JBIG/JPEG (Color/Transmission)
Modem speed	33600/28800/21600/19200/14400/12000
Transmission Speed	Approximately 3 sec (33,600 bps)
Effective Scanning Width	8.2 inches (208 mm)
Halftone	256 Levels
Paper Capacity (Input)	DADF (Duplex Automatic Document Feeder): 50 Sheets (75g)
FAX Mode	Standard /Fine/Super Fine/Halftone
Memory	8MB

Table 4 Scanner specifications

Item	Description
Type	Flatbed (with DADF)
Speed	Mono Binary: 0.68 msec/line, Color/Mono. Gray: 2.5 msec/line
Device	Color CCD (Charge Coupled Device) Module

Table 4 Scanner specifications

Item	Description
Interface	IEEE1284 (ECP Support) USB (without HUB Mode)
Compatibility	TWAIN Standard, WIA(TBD)
Optical Resolution (H X V)	600 X 600 dpi
Interpolation Resolution	Max. 4800 dpi
Halftone	256 Levels
Effective Scan width	8.2 inches(208 mm)

Table 5 Copy specifications

Item	Description
Mode	B/W
Quality	Text/Photo/Mixed
Mono Copy Speed(1)	Platen (SDMP): 21 cpm ADF (SDMP): 21 cpm ADF (MDSP): Text/mixed: Approx. 21 cpm
Optical Resolution (H x V)	600 X 600 dpi
Multi Copy	1 to 999
Maximum Original Size	Legal
Maximum Page Size	Legal
Paper Type Selection	Plain, Cardstock, Transparency, Bond, Labels, Colored
Zoom Range	Platen: 25 ~ 400%(1% Step) ADF: 25~100%(1% Step)

NOTE: (1) Speed claims based on the test chart: Letter size.

SDMP: Single Document Multiple Printout

MDSP: Multiple Document Single Printout

Table 6 Telephone specifications

Item	Description
Speed Dial	200 Locations
Tone/Pulse	Tone only user mode. Tone/Pulse selectable in tech mode.
Ringer Volume	OFF, LOW, MEDIUM, HIGH
Chain Dial	None
Pause	Yes, using the Pause/Redial Key

Table 7 Consumables

Item	Life expectancy
Toner Cartridge	8,000 sheets (5% coverage pattern, simplex normal mode)
Drum Cartridge	20,000 sheets (simplex normal mode)

Table 8 Fuser operating temperatures

Machine State or Paper Type	Environment (Power on/after 2 minutes/after 30 prints/after 60 prints)		
	LL	NN	HH
Machine in standby	200/195 degrees C	195/188 degrees C	195/185 degrees C
Plain	205/195 degrees C	200/195 degrees C	200/195 degrees C
Thick/Bond/Label	205/195 degrees C	200/195 degrees C	200/195 degrees C
Thin	195/190 degrees C	190/183/178/173 degrees C	190/180 degrees C
Envelope	200 degrees C	200/195 degrees C	195/190 degrees C
Cardstock	210/205 degrees C	210/205 degrees C	205/200 degrees C
OHP	175 degrees C	170 degrees C	170 degrees C

The environment acronyms are as follows:

- LL - Low temperature/low humidity.
- NN - Normal temperature/normal humidity.
- HH - High temperature/high humidity.

Table 9 HVPS Output

HVPS Output	Voltage
Transfer High Voltage (THV)	Max +5000V DC +/- 10%
Transfer Cleaning Voltage (THV Neg)	-1000V DC +/- 15%
Developing Voltage (DEV)	-250V to -500V DC +/- 5%

Table 9 HVPS Output

HVPS Output	Voltage
Charge Voltage (MHV)	-1300V to -1450V DC +/- 5%
Supply Voltage	-400V to -650V DC +/- 5%
Blade Voltage	-300V to -550V DC +/- 5%
OPC Drum	-135V +/- 15%

GP 12 Circuit Description

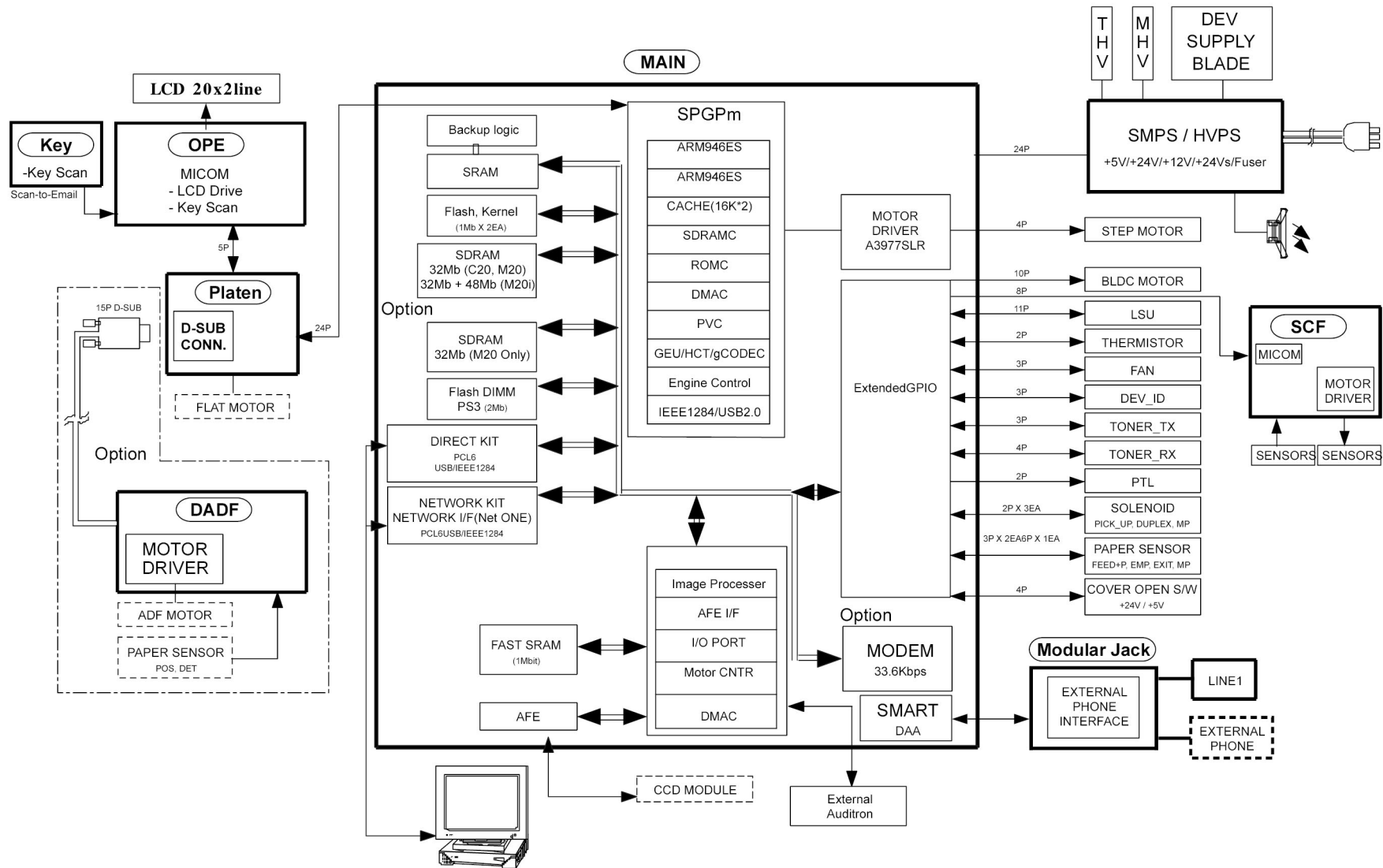
Purpose

To give information about the machines main circuitry.

PBA main

NOTE: *If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.*

The main circuit that consists of CPU, MFP controller (built in 32bit RISC processor core: ARM946ES) including various I/O device drivers, system memory, scanner, printer, motor driver, PC I/F and FAX transceiver controls the whole system. The entire structure of the main circuit is as shown in Figure 1.



AP-1-0085-A

Figure 1 Main circuit

GP 13 Circuit Operation

Purpose

To give information about the operation of the machines circuitry:

- Power On/Off Reset
- Program ROM (Flash Memory) Control
- AC Characteristics
- USB (Universal Serial Bus)
- SRAM: 1MByte SRAM K6F1008U2C
- FAX Transceiver

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Power On/Off Reset

Signal Operation

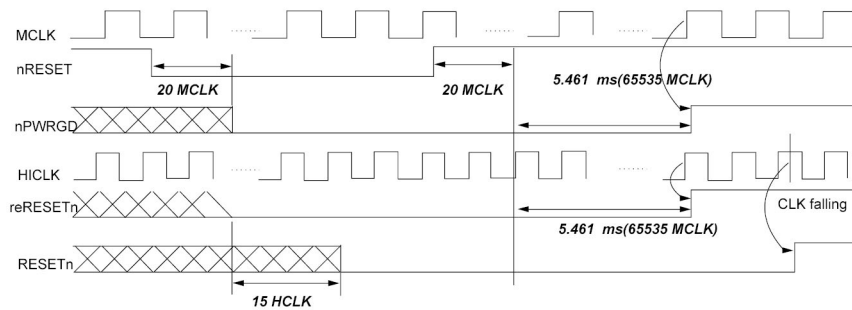
Input signal: +3.3V Power Line (VCC)

Output Signal: XC61 FN 3112 (POWER ON/OFF DETECT VCC RISING/FALLING 3.1V)

RESET TIME (Td): 5.461ms

Timing Chart

Refer to Figure 1.



AP-8-0086-A

Figure 1 Timing chart

Program ROM (Flash Memory) Control

Device

Refer to Table 1.

Table 1 Device

TYPE NO.	AM29LU160DB
CAPACITY	4 MBYTE (1M * 16BITS * 2)

Programming

Refer to Table 2.

Table 2 Programming

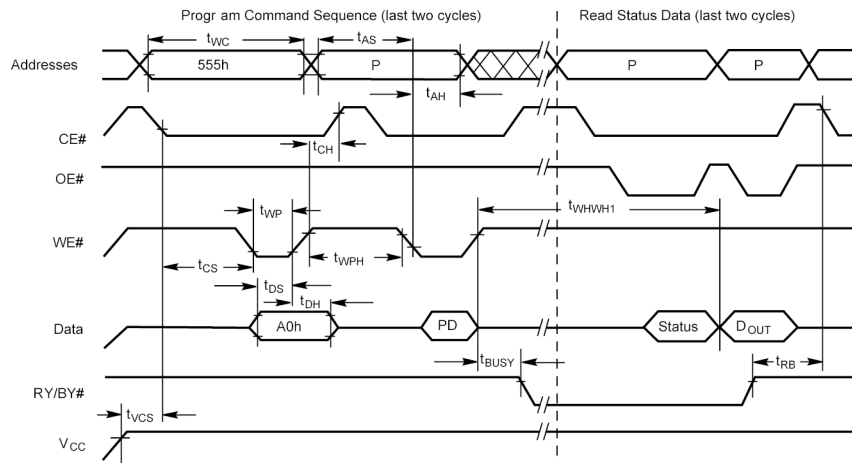
BEFORE ASS'Y	EPROM PROGRAMMER or PROGRAMMING at the factory
AFTER ASS'Y	DOWNLOAD from PC

Operating Principle

When the RCSO (ROM CHIP SELECT) signal is activated from the CPU after the POWER is ON, it activates RD SIGNAL and reads the DATA (HIGH/LOW) stored in the FLASH MEMORY to control the overall system. The FLASH MEMORY may also write. When turning the power on, press and hold the key (power switch) for 2-3 seconds, then the LED will scroll and the PROGRAM DOWNLOAD MODE will be activated. In this mode, you can download the program through the parallel port.

AC Characteristics

Refer to Figure 2 and Figure 3.

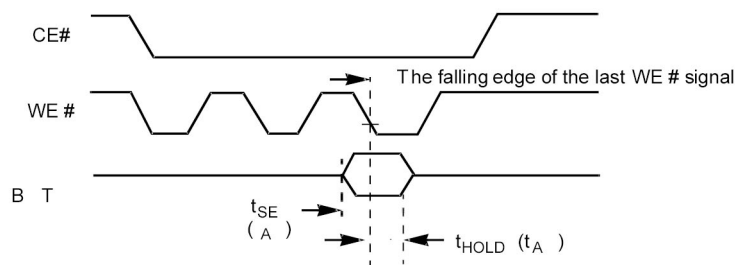


AP-8-0087-A

Figure 2 Program operation timings

NOTE: 1. PA= program address, PD= program data, Dout is the true data at the program address.

NOTE: 2. Figure 2 shows device in word mode.



AP-8-0088-A

Figure 3 BYTE# timings for write operations

NOTE: Refer to the Erase/Program Operations table for T_{as} and T_{ah} specifications

USB (Universal Serial Bus)

NS's USBN9602 is used as the interface IC and 48MHz clock is used. When the data is received through the USB port, EIRQ1 SIGNAL is activated to send interrupt to the CPU, then it directly sends the data to DRAM by IOCS4* & DRAMA (11) SIGNAL through DRAMD (24;31).

SRAM: 1MByte SRAM K6F1008U2C

It stores a variety of option data.

FAX Transceiver

General

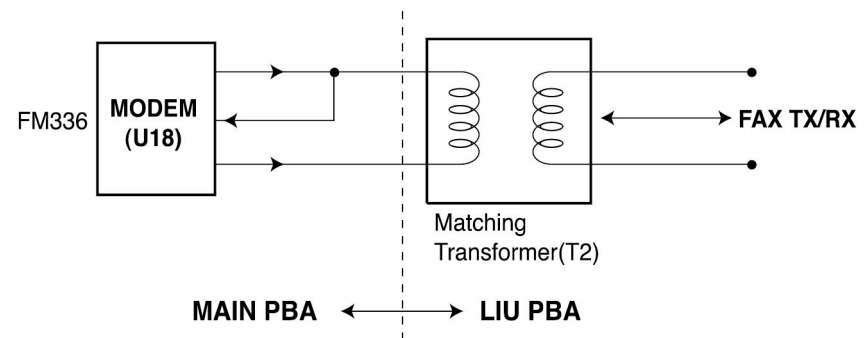
This circuit processes transmission signals of modem and between LIU and modem.

Modem (U44)

FM336 is a single ship fax modem. It has functions of DTMF detection and DTMF signal production as well as functions of a modem. TX A1, 2 is a transmission output port and RX IN is a received data input port. /POR signal controlled by MFP controller (U3:ARM946ES) can initialize modem (/M_RST) without turning off the system. D0-D7 are 8-bit data buses. RS0-RS4 signals to select the register in modem chips. /RS and /WR signals control READ and WRITE respectively. /IRQ is a signal for modem interrupt.

Transmission speed of FM336 is supported up to 33.6k.

The modem is connected to LINE through transformer directly, refer to Figure 4.



AP-8-0091-A

Figure 4 Fax transceiver

GP 14 Scanner Operation

Purpose

To give information about the operation of the scanner:

- Summary
- CCD
- Key Features

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Summary

This flat-bed type device to read manuscripts has 600dpi CCD as an image sensor. There is one optical sensor for detecting CCD home position and scan-end position. The home position is detected by an optical sensor which is attached to the CCD Module. The scan-end position is calculated by the number of motor steps. Refer to Figure 1 for the scanner block diagram.

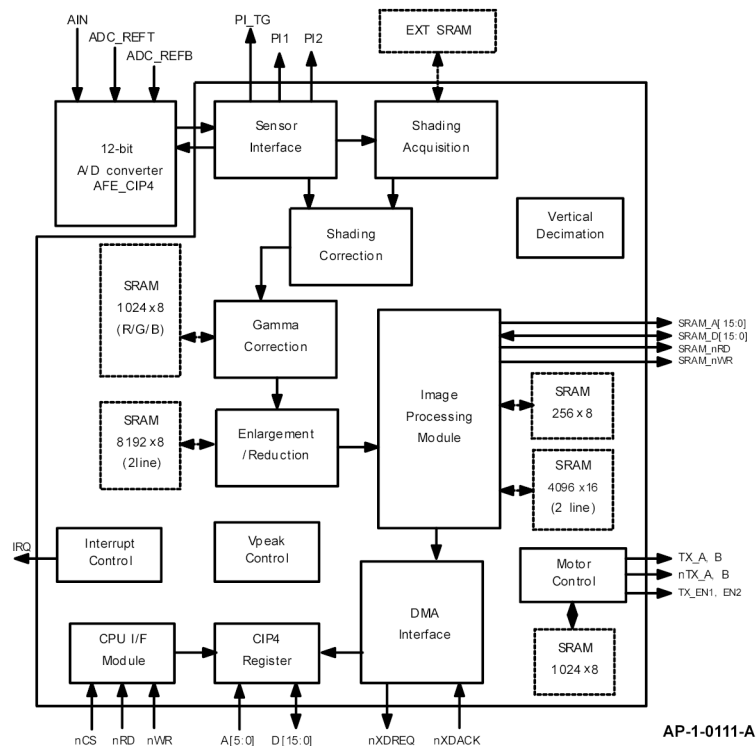


Figure 1 Block Diagram

CCD

Charge Coupled Device improves productivity and allows a compact design. The machine uses a color CCD.

- Minimum Scan Line Time for One Color: 2.5mSec.
- Light Source Power: +18V.
- Maximum Pixel frequency: 10MHz.
- Effective Sensor Element: 5340 X 3.
- Clamp Level: 0.7~ 0.8V.
- Bright Output: MIN 0.8V8-3-2 Key Features.

Key Features

Overview

1. 0.5m C-MOS process (TLM), 208-PIN QFP, STD85 library.
2. Frequency: Max PLL 80 MHz.
3. On-Chip oscillator.
4. Method: Raster scanning method.
5. Image Sauce: 300/400/600dpi CIS & CCD.
6. Scanning Mode:
 - color gray image: each 8 bits / RGB.
 - mono gray image: 8 bits / pixel.
 - binary image: 1 bit / pixel (for text/photo/mixed mode).
7. Maximum scanning width: A3, 600dpi (8K effective pixels).
8. Ideal MSLT (A4, 600/300dpi):
 - color gray image: 3x5Kx80nsec = 1.2msec (7/28 CPM).
 - mono gray image: 1x5Kx80nsec = 0.4msec (21/84 CPM).
 - binary image: 1x5Kx80nsec = 0.4msec (21/84 CPM).
9. A/D conversion depth: 12bits.

Pixel Processing Structure

- Minimum pixel processing time: 4 system clocks.
 - High speed pipeline processing method.
- (Shading correction, Gamma correction, Enlargement/Reduction and Binarisation)

Shading Correction

1. White shading correction support for each R/G/B.
2. White shading data memory: 3x8Kx12bits = 288Kbits - 384Kbits (external).
3. Black shading data memory: 3x8Kx12bits = 288Kbits - 384Kbits (external).

Gamma Correction

1. Independent Gamma table for each RGB component.
2. Gamma table data memory: 3x1Kx8bits = 24Kbits (internal).

Binarisation (mono)

1. 256 Gray's halftone representation for Photo document: 3x5 EDF (Error Diffusion) method proposed by Stucki.
2. LAT (Local Adaptive Threshold) for text document:
 - use of 5x5 LOCAL WINDOW (TIP ALGORITHM).

- ABC (Automatic Background Control): Tmin Automatic change.

3. Mixed mode processing for text/photo mixed document.
4. EDF data memory: 2x4Kx16bits = 128Kbits (internal).
5. LAT data memory: 4x4Kx16bits = 256Kbits (external).

Scaling of Input Image

1. Scaling factor:
 - Horizontal direction: 25 ~ 800% by 1% unit.
 - Vertical direction: 25 ~ 100% by 1% unit.
2. Scaling data memory: 2x8Kx8bits = 128Kbits (internal).

Intelligent Scan Motor Controller

1. Automatic acceleration/deceleration/uniform velocity.
2. Data memory: 256x16bits = 4Kbits (internal).

Auto-Run

Automatic CLK_LINE (line processing start control) and TG (line scan start control) signal generation.

1. Available re-synchronization of TG signal.
2. Programmable TG's period & CLK_LINE's occurrence number.

Processed Data Output Format in DTM (Data Transfer Module)

1. DMA mode: Burst/On-demand mode.
2. CDIP I/F: LINE_SYNC, PIXEL_SYSNC, PIXEL_DATA[7:0].

36 General Purpose Input/Output: 8(GPO), 28(GPIO)

Black/White Reversion and Image Mirroring Support

Refer to Figure 2 and Figure 3.

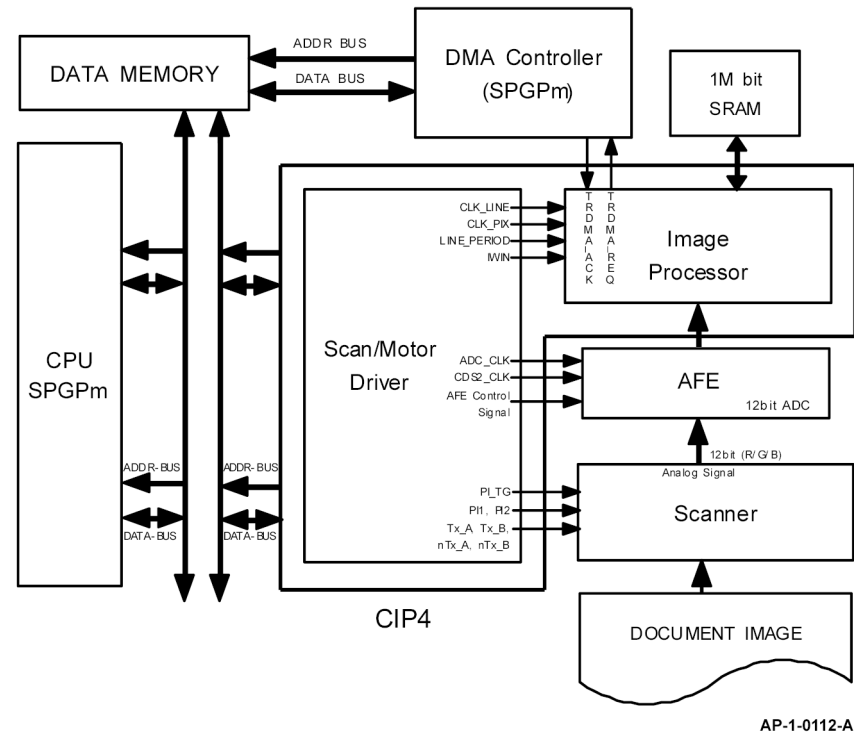


Figure 2 External interface with CIP4

AP-1-0112-A

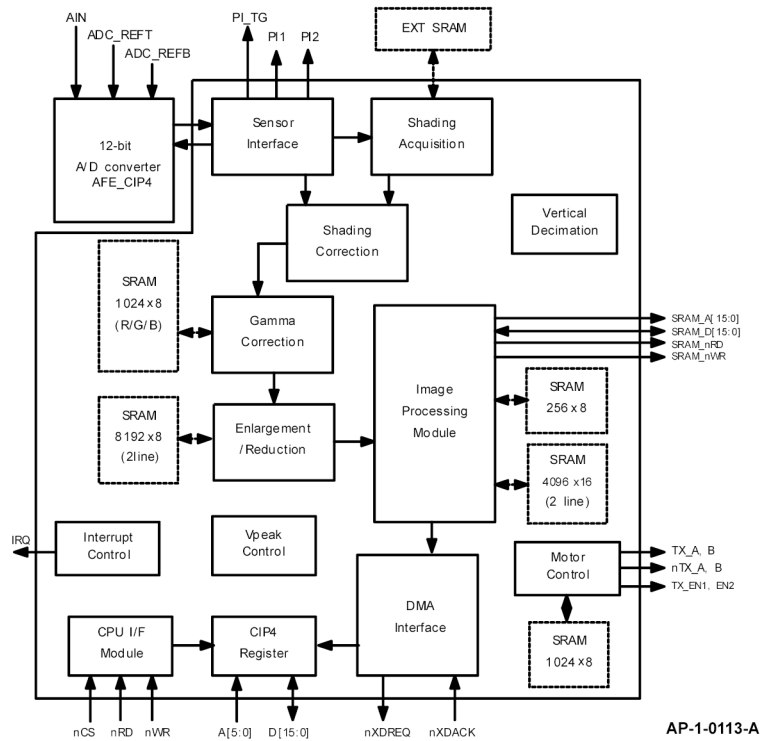


Figure 3 Block Diagram of CIP4

GP 15 Host Interface

Purpose

To give information about the machines interfaces:

- Host Interface
- USB Interface (Option: Direct Kit/Network Kit)

Referred to IEEE 1284 standard.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

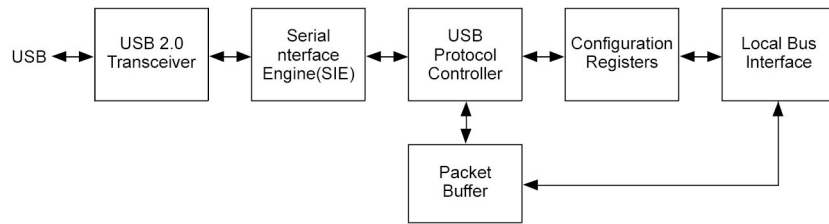
Host Interface

PARALLEL PORT INTERFACE PART ARM946ES has the Parallel Port Interface Part that enables Parallel Interface with a PC. This part is connected to a PC through a Centronics connector. It generates major control signals that are used to actuate parallel communication. It is comprised of /ERROR, PE, BUSY, /ACK, SLCT, /INIT, /SLCTIN, /AUTOFD and /STB. This part and the PC data transmission method support the method specified in IEEE P1283 Parallel Port Standard (<http://www.fapo.com/ieee1284.html>). In other words, it supports both compatibility mode (basic print data transmitting method), the nibble mode (4bit data; supports data uploading to PC) and ECP (enhanced capabilities port: 8bits data - high speed two-way data transmission with PC).

Compatibility mode is generally referred to as the Centronics mode and this is the protocol used by most PC's to transmit data to a printer. ECP mode is an improved protocol for the communication between a PC and peripherals such as a printer and a scanner, and it provides high speed two-way data communication. ECP mode provides two cycles in the two-way data transmission; data cycle and command cycle. The command cycle has two formats; Run-Length Count and Channel Addressing. RLE (Run-Length Count) has high compression rate (64x) and it allows real-time data compression that is useful for the printer and scanner that need to transmit large raster image that has a series of same data. Channel Addressing was designed to address multiple devices with single structure. For example, like this system, when the fax/printer/scanner have one structure, the parallel port can be used for other purposes while the printer image is being processed. This system uses RLE for high speed data transmission. PC control signal and data send/receive tasks such as PC data printing, high speed uploading of scanned data to PC, upload/download of the fax data to send or receive and monitoring the system control signal and overall system from PC are all processed through this part.

USB Interface (Option: Direct Kit/Network Kit)

Refer to Figure 1.



AP-1-0117-A

Figure 1 USB interface

Features

- USB Specification Version 2.0 Compliant (high and full speed).
- Interfaces between a local CPU bus and a USB bus.
- Supports USB Full Speed (12 Mbps) and High Speed (480 Mbps).
- Supports optional Split Bus DMA, with dedicated DMA and CPU access.
- Provides 3 Configurable Physical Endpoints, in addition to Endpoint 0.
- Provides 30 Configurable Virtual Endpoints.
- Each endpoint can be Isochronous, Bulk, or Interrupt, as well as IN or OUT.
- Supports high-bandwidth isochronous mode.
- Supports Max Packet Size up to 1K bytes, double buffered.
- Internal 3 Kbyte memory provides transmit and receive buffers.
- Local CPU bus easily interfaces to generic CPUs.
- 8-bit or 16-bit CPU or DMA bus transfers.
- Multiple register address modes supports both direct and indirect register addressing.
- Automatic retry of failed packets.
- Diagnostic register allows forced USB errors.
- Software controlled disconnect allows re-enumeration.
- Atomic operation to set and clear status bits, simplifying software.
- Low power CMOS in 64 Pin Plastic TQFP Package.
- 30 MHz oscillator with internal phase-lock loop multiplier.
- Provides an output clock to the local bus-8 programmable frequencies from OFF to 60 MHz.
- 2.5V, 3.3V operating voltages with 5V tolerant I/O.

GP 16 Engine Controller

Purpose

To give information about the machines control circuits:

- Fuser Control/Thermistor Circuit
- Paper Sensing Circuit
- LSU Circuit
- Fan/Solenoid Actuation Circuit
- PTL Actuation Circuit
- Motor Actuation Circuit
- High Voltage Power Supply

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Fuser Control/Thermistor Circuit

This circuit controls the heat lamp temperature to fix the transferred toner onto the paper. It is comprised of the thermistor that has the negative resistance against the temperature and LM393 (voltage comparator) and transistor for switching.

The thermistor has the resistance value reverse proportional to the heat lamp surface temperature. The voltage value is read by #60 pin (AVIN2) of CPU referring to the parallel combined resistance with the resistor (R43) connected parallel to it and the voltage distribution of R29. The voltage read activates (inactivates) 'fuser' signal to high (or low) referring to the set temperature and when the 'fuser on' signal turns down (high) to low (high) by Q3 switching, the S21ME4 inside SMPS (PC3) turns on (off) and this eventually turns two-way thyristor (SY1) on (off) to allow (shut) AC voltage to the heat lamp.

LM393 is a H/W designed to protect the system when the software heat lamp control does not run normal. When the thermistor temperature goes up to 210C, #1 pin's level (LM393) will turn low to turn the 'fuser on' signal to high. (forcefully shuts off Q3) In other words LM393 shuts off the heat lamp forcefully.

Paper Sensing Circuit

Cover Open Sensing

Cover Open Sensor is located on the right rear side of the printer. In case the right cover is open, it shuts +5V (LSU laser unit) and +24V (main motor, polygon motor of fixer LSU and HVPS) that are supplied to each unit. It detects the cover opening through CPU. In this case, the red LED of the OP Panel LED will turn on.

Paper Empty Sensing

The paper empty sensor (photo interrupter), located inside bottom of the bin cassette detects paper with the actuator connected to it and informs the CPU of whether there is paper. When there is no paper in the cassette, the red LED of the OP panel LED will turn on to tell the user to fill the cassette with papers.

Paper Feeding

When the paper is fed into the set and passes through the actuator of the feed sensor unit, transistor inside the photo interrupter will turn on, 'nFEED' signal will turn low and inform CPU that the paper is currently fed into the system. CPU detects this signal and sprays video data after certain time (related to paper adjustment). If the paper does not hit the feed sensor within certain time, CPU detects this and informs as "Paper Jam0" (red LED on the OP panel will turn on)

Paper Exit Sensing

The system detects the paper going out of the set with the exit sensor assembled to the actuator attached to the frame. If CPU does not turn back high a while after the paper hits the exit sensor, CPU detects this and inform as "Paper Jam2" (red LEDs on the OP panel will turn on).

LSU Circuit

Polygon Motor Unit (actuated by +24V)

The polygon motor inside LSU rotates by the 'PMOTOR' signal. When it reaches the motor constant velocity section through the initial transient (transient response) section, it sends the 'nLREADY' signal to the CPU.

The 'clock' pin is the pin that receives clock of the required frequency when LSU uses external CLK as the motor rotational frequency. Currently the external clock circuit is located in the HVPS and $1686\text{Hz} = 6.9083\text{MHz}$ (crystal frequency)212(74HC4060N IC), is used as the rotational frequency of the polygon motor.

Laser Unit (actuated by +5V)

After laser is turned on by 'nLD_ON' signal, it is reflected by 6 mirrors (polygon mirror) attached to the polygon motor and performs scan in horizontal way. When the laser beam hits the corner of the polygon mirror, it generates 'nHSYNC' signal (pulse) and the CPU forms the left margin of the image using this signal (horizontal synchronous signal).

Fan/Solenoid Actuation Circuit

The fan actuation circuit its power using NPN TR. When it receives 'FAN' signal from the CPU. The TR will turn on to make the voltage supplied to the fan to 24V in order to actuate the fan.

The solenoid is actuated in the same way. When it receives control signal from the CPU, the solenoid for paper feeding is actuated by switching circuit.

D29(1N4003) diode is applied to the both ends of the output terminal to protect Q22(KSC1008-Y) from noise pulse induced while the solenoid is de-energized.

PTL Actuation Circuit

PTL actuation circuit switches its power using NPN TR.

Motor Actuation Circuit

Motor actuation circuit is determined while selecting the initial driver IC (provided by the vendor). This system uses TEA3718(U57, U58), A2918(U59)'s motor driver IC. However, the sensing resistance (R273, R274, R292, R293) and reference resistance (R284, R289, R294, R295) can vary depending on the motor actuation current value.

It receives motor enable signal (2 phase) from CPU and generates bipolar pulse (constant-current) and sends its output to stepping motor input.

High Voltage Power Supply

Summary

It is the high voltage power supply that has DC+24V/DC+5V (used for the image forming device in OA digital picture developing method) as the rated inputs. It supplies electrifying voltage (MHV), supply voltage (SUPPLY), developing voltage (DEV), blade voltage (BLADE) and transferring voltage (THV). Each high voltage supply shows the voltage required in each digital picture process.

Digital Picture Process

Digital picture developing method is widely used by copy machine, laser beam printer and fax paper. The process is comprised of electrification, exposure, develop, transfer and fixing. Refer to Figure 1.

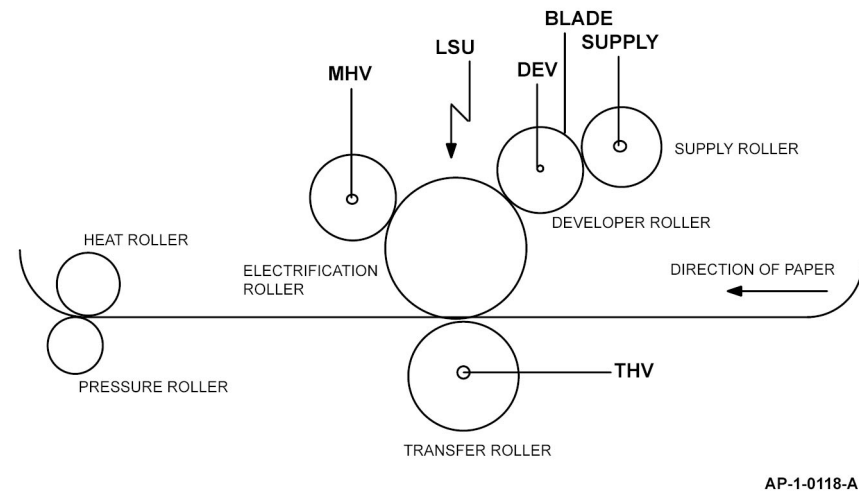


Figure 1 Process

First, in the electrification process, retain constant charge at approximately -900V for the electric potential on the OPC surface by electrifying OPC drum at approximately -1.4KV through the electrification roller. The electrified surface of OPC is exposed responding to the video data by the LSU that received print command due to rotation. The unexposed non-video section will retain the original electric potential of -900V, but the electric potential of the image area exposed by LSU will be approximately -180V that it will form the electrostatic latent image. The surface of the photo-conductive drum where the electrostatic latent image is formed reaches the developer as the drum rotates. Then the electrostatic latent image formed on the OPC drum is developed by the toner supplied to the developing roller by supplying roller and it is transformed into visible image. It is the process to change the afterimage on the OPC drum surface formed by LSU into visible image by the toner particles.

While the supply roller energized with -450V by HVPS and the developer roller energized with -300V rotate in the same direction, it keeps the toner particles between two rollers supplied to OPC drum in negative state by the friction between two rollers.

The toner supplied to the developer roller is biased to bias electric potential by the developer roller and transferred to the developing area. After (-) toner is attached to the developer roller, it will move to the exposed high electric potential surface (-180V) rather than to the unexposed low electric potential surface (-900V) of the developer roller and OPC drum. Eventually the toner will not settle in the low electric potential surface to form the visible image.

Later, the OPC drum continues to rotate and reaches to transfer location in order to accomplish the transfer process.

This process transfers the (-)toner on the transfer roller to the printing paper by the transfer roller. The (-)toner attached to the OPC drum will be energized to hundreds to thousands of the (+)transfer voltage by HVPS. The (+)electrostatic force of the transfer roller generated has higher adhesiveness than the (-)toner OPC drum and thus it moves to the surface of the paper passing through the transfer roller.

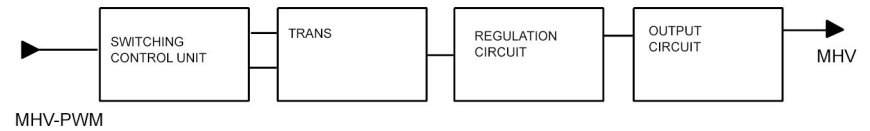
The toner transferred to the paper with weak electrostatic force is fixed to the paper by the pressure and heat of the fixer composed of pressure roller and heat roller.

The toner attached to the paper is melted by applying the heat (approximately 180C) from the heat roller and the pressure (approximately 4kg) from the pressure roller. After the fixing process, the paper is sent out of the set to finish the printing process.

Organization of the Device

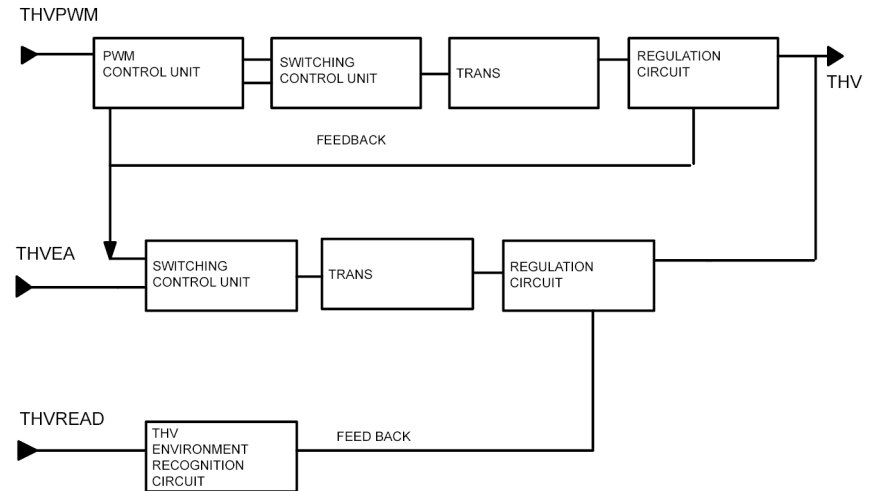
The HVPS is comprised of electrification output unit, bias output unit and transfer output unit. Refer to Figure 2, Figure 3, Figure 4 and Figure 5.

1. Input Unit.
2. Electrification Output (Enable) Unit: MHV (Main High Voltage).
3. Bias Output (Enable) Unit: DEV (Development Voltage)/Supply (Supply Voltage)/BLADE (Blade Voltage).
4. Transfer '+' Output (Enable) Unit: THV (+) (Transfer High Voltage(+)).
5. Transfer '-' Output (Enable) Unit: THV (-) (Transfer High Voltage(-)).
6. Switching Unit.
7. Feedback Unit.
8. Regulation Unit.
9. Output Unit.



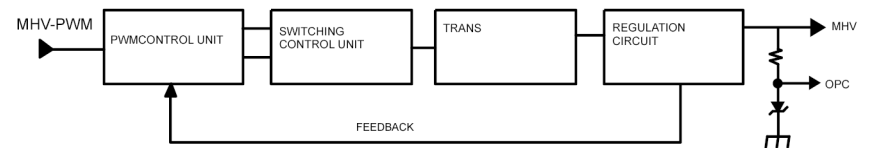
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Figure 2 Electrification unit block diagram



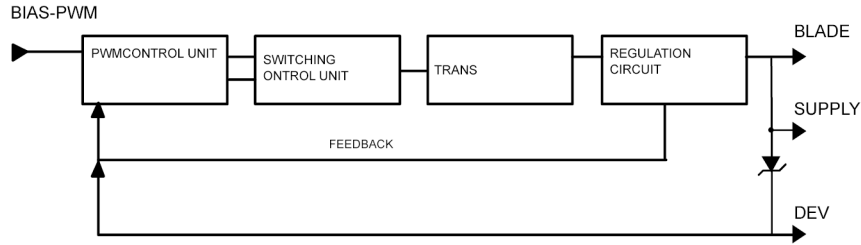
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Figure 3 Transfer Output Unit Block Diagram



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Figure 4 MHV output unit block diagram



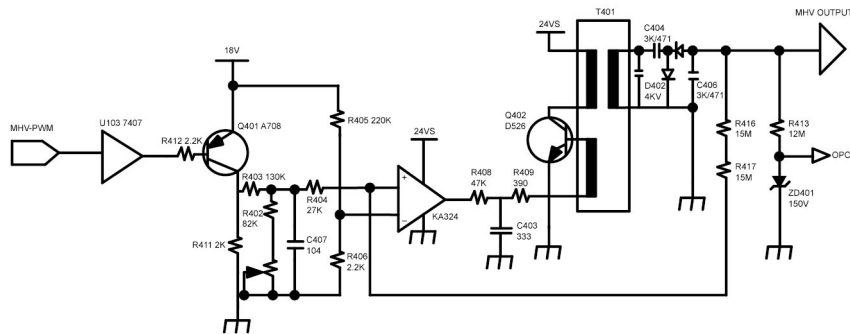
(BIAS Output Unit Block Diagram)

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Figure 5 Bias output unit block diagram

MHV (Electrification Output Enable)

Electrification Output Enable is the electrification output control signal 'PWM-LOW ACTIVE'. When MHV-PWM LOW signal is received, Q401 turns on and the steady voltage will be accepted to the non-inverting terminal of OP-AMP 324. As the voltage higher than the inverting reference voltage of OP-AMP, which is set to R405 and R406, OP-AMP output turns high. This output sends IB to the TRANS auxiliary wire through current-restricting resistance Q402 via R408 and C403 and Q402 turns on. When the current is accepted to Q402, Ic increases to the current proportional to time through the T401 primary coil, and when it reaches the Hfe limit of Q402, it will not retain the "on" state, but will turn to "off". As Q402 turns "off", TRANS N1 will have counter-electromotive force, discharge energy to the secondary unit, sends current to the load and outputs MHV voltage through the high voltage output enable, which is comprised of Regulation circuit. Refer to Figure 6.

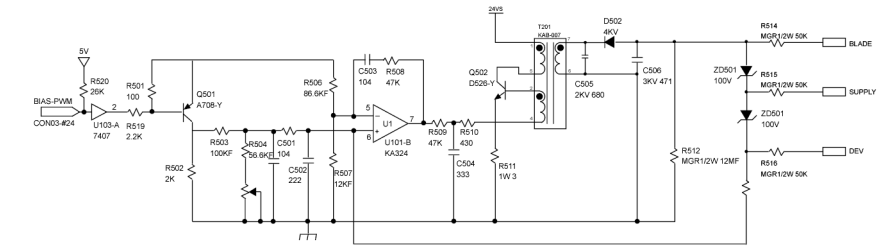


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Figure 6 MHV signal

BIAS (Supply/Dev/Blade Output Unit)

BIAS (Electrification Output Enable) Electrification Output Enable is the electrification output control signal 'PWM-LOW ACTIVE'. When BIAS-PWM LOW signal is received, Q501 turns on and the steady voltage will be accepted to the non-inverting terminal of OP-AMP 324. As the voltage higher than the inverting reference voltage of OP-AMP, which is set to R506 and R507, OP-AMP output turns high. This output sends IB to the TRANS auxiliary wire through current-restricting resistance Q502 via R509 and C504 and Q502 turns on. When the current is accepted to Q502, Ic increases to the current proportional to time through the T201 primary coil, and when it reaches the Hfe limit of Q502, it will not retain the "on" state, but will turn to "off". As Q502 turns "off", TRANS N1 will have counter-electromotive force, discharge energy to the secondary unit, sends current to the load and outputs DEV voltage through the high voltage output enable, which is comprised of Regulation-circuit. Refer to Figure 7.



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Figure 7 Bias signal

THV (THV(+)/THV(-) Output Unit)

Transfer (+) output unit is the transfer output control signal 'PWM-LOW ACTIVE'. When THV-PWM LOW signal is received, Q203 turns on and the steady voltage will be accepted to the non-inverting terminal of OP-AMP 324. As the voltage is higher than the inverting reference voltage of OP-AMP, OP-AMP output turns high.

The 24V power adjusts the electric potential to ZD201 and ZD202, sends IB to TRANS auxiliary wire through current-restricting resistance R215 via R212 and C204, and eventually Q204 will turn on. When the current is accepted to Q402, Ic increases to the current proportional to time through the T201 primary coil, and when it reaches the Hfe limit of Q204, it will not retain the "on" state, but will turn to "off". As Q402 turns "off", TRANS N1 will have counter-electromotive force, discharge energy to the secondary coil, sends current to the load and outputs THV voltage through the high voltage output enable, which is comprised of Regulation-circuit. The output voltage is determined by the DUTY width. Q203 switches with PWM DUTY cycle to fluctuate the output by fluctuating the OP-AMP non-inverting end VREF electric potential, and the maximum is output at 0% and the minimum, at 100%. Transfer(-) output unit is THV-EA 'L' enable.

GP 17 PBA OPE Operation

Purpose

To give information about the operation of the PBA OPE.

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Summary

The OPE board is separated functionally from the main board and operated by the MICOM (HT48R50) in the board. OPE and the main use UART (universal asynchronous receiver/transmitter) channel to exchange information. OPE reset can be controlled by the main. OPE MICOM controls key-scanning and LCD and LED display. If there occurs an event in OPE (such as key touch), it sends specific codes to the main to respond to the situation and the main analyzes these codes and operates the system. For example, if the main is to display messages in OPE, the main transmits data through UART line to OPE according to the designated format and OPE displays this on LCD, LED. OPE's sensing is also transmitted to the main through UART line and then the main drives necessary operation.

OPE PBA consists of U1(MICOM, HT48R50), LCD, key matrix, LED indicators. Refer to Figure 1.

- Signals from the key matrix are delivered to U1 input pin group (D1~D6).
- U1 pin 48 (TX DATA) is the UART code sent to MAIN PBA.
- Display from the controller is received at U1 pin 5(RX DATA).
- LCD drive signals are sent from U1 P2-x pin group, P3-4~P3-6 pins.
- Machine status LED drive signals are sent from U1 LED0~LED7.

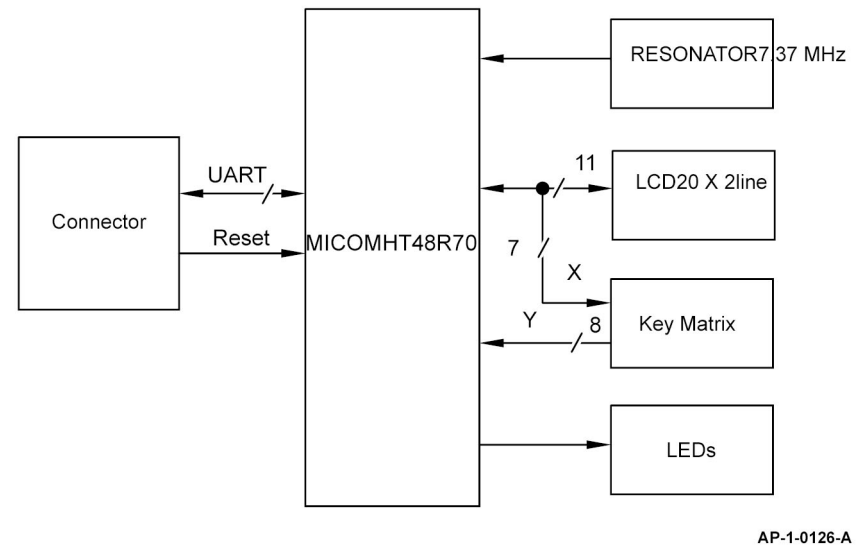


Figure 1 OPE block diagram

GP 18 PBA LIU

Purpose

To give information about the operation of the PBA LIU:

- Summary
- DC Matching Part
- AC Matching Part
- Dialer Part
- Ring Detection Part

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

Summary

LIU wire connects main BD's MODEM and line parts, and impedance matching (AC, DC), ring detection part and line seizure (dialer).

DC Matching Part

Normal movement range of LIU is 12mA ~ 9mA.

Adapting CTR21 standard, the regulation limits to 60mA CURRENT flow through the terminal.

Therefore, select (*:for EU PIT) Option to connect necessary items then the current through LIU will not exceed 60mA.

- CTR21 Standard (Europe): 12mA~60mA
- OTHER Standard (U.S.): 12mA~90mA

DC has a character to pass through the LINE. And with Q1 (VN2410) GATE section's LINE INPUT current and Q1 Source connection to R20, can be decided as follows:

- $-VDCR = VL1 + ILINE \times R20$
(VDCR: Tip-Ring CD Voltage, ILINE:
Current flow)VL1:Line Input Voltage, VL1=VBD1+VCE(Q2)+VDS(Q1)

AC Matching Part

Basic LIU's AC IMPEDANCE is 600 and uses R47, 48 and C36 to possibly control combined IMPEDANCE.

- U.S. Usage: A terminal IMPEDANCE 600W(30%)
- CTR21: A Terminal IMPEDANCE 270+750W//150nF

Dialer Part

MF Dial

DTMF Dialing is controlled by MODEM and should be selected by appropriate LEVEL and on-off time output based on each countries own national specification.

- Frequency Tolerance: 1.5%
High Group: 1209, 1336, 1477, 1633Hz
Low Group: 697, 770, 852, 941 Hz

Refer to Table 1.

Table 1 Tolerance levels

	U.S. Usage	CTR21
High Frequency Level	-9.0+2.0/-2.5	-7.0 +1.0/-2.0
Low Frequency Level	-9.0+1.0/-2.0	-11.0+2.5/-2.0

DP Dial

Controls from MAIN through / DP-Terminal. for U.S.Usage, set time to DF signal of 40:60 M/B. DP signal is made of U6 (pcb817). The DC current which flows through Q2 Base is regulated by On/Off switch and turns to DP dial signal with a COUPLER.

- CTR 21 does not have telephone capability but has the number 3 and 4 Line Connection. No DP condition but possibility to get approval only on DTMF Dial based terminal.

Ring Detection Part

RING SIGNALS from the LINE section (TIP, RING) are further passed through C5, R3, ZD1, and ZD2 and ends up at U9, (PC 814). U9 then detects above RING SIGNAL and passes the output to MAIN BD. The wire diagrams C5 is RINGER CAPACITOR and it normally uses 1UF/ 250V.

A R3 limits AC current and controls upper and lower REN meter.

GP 19 SMPS Unit Operation

Purpose

To give information about the operation of the SMPS (Switching Mode Power Supply):

- Summary
- DC Matching Part
- AC Matching Part
- Dialer Part

NOTE: If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.

SMPS Specifications

The SMPS (Switching Mode Power Supply) Unit used here is a PWM (Pulse Width Modulation) type power supply unit that supplies DC+5V to controller and control panel, and DC+5V, DC+24V and DC+12V to the engine. It also supplies AC power to fixer heat lamp. Refer to Table 1 for output channel information.

Table 1 Output channel information

No.	Output Channel	Ch.1	Ch.2	Ch.3
1	Channel Name	+5.1V	+24.0V	+12.0V
2	Rated Output Voltage	+5.1V	+24.0V	+12.0V
3	Rate Output Current	2A	2.5A	0.8A
4	Maximum Load Current and Load Pattern	2.5A Continued	3.0A Continued	0.8A Continued
5	Load Change Range	0.5~2.0A	0.1~0.3A	0.1~0.8A
6	Rate output voltage (For rated I/O)	+5.1V5% (+4.84~+5.35V)	+24.0V10% (+21.60~+26.40V)	+12V5% (+11.40~+12.60V)
7	1) Total Output Voltage Deviation (Input, Load, Temp., Aging) 2) Dynamic Input Change 3) Dynamic Load Change	Including All +5.1V5% (+4.84~+5.35V) Including Set Error	Including All +24.0V10% (+21.60~+26.40V) Including Set Error	Including All +12V5% (+11.40~+12.60V) Including Set Error
8	Refer to ripple & noise 27	150mVp-p or less	500mVp-p or less	200mVp-p or less
9	Refer to load short and overload protection 23 Refer to load short and overload protection 23	Must not ignite or generate smoke when output shorted for 5 sec.	Output voltage must shutdown within the range of 3.5A~6.5A	Must not ignite or generate smoke when output shorted for 5 sec.

AC Input Stage

AC input power path is consist of the fuse (F1) for AC current limit, the varistor (TNR1) for bypassing high voltage surge, the discharge resistor (R1), the AC impulse noise filtering circuit (C2, C4, LF1), the common mode grounding circuit (C5, C6), the second noise filter (C7, LF2), and the thermistor (TH1).

When the power is turned on, TH 1 limits current by it's high resistance, and when it's temperature rise, it's resistance become about Zero ohm.

SMC (Switched Mode Control)

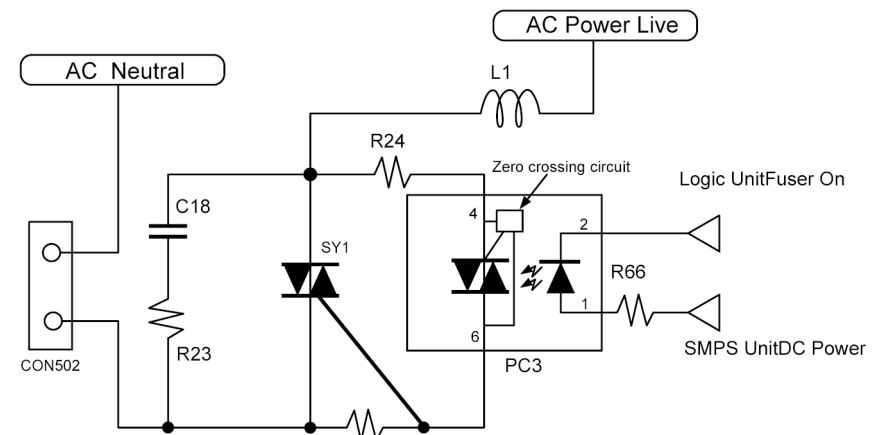
The AC input voltage is rectified and filtered by BD1 and C10 to create the DC high voltage applied to the primary winding of T1, Q5 pin #1 is driven by the SMPS device IC2, IC2. auto-starts and chops the DC voltage. The U502 is PWM SMPS IC and has internally a SMC (switched mode control) IC and a MOSFET output stage. The SMC IC has a auto-restart without a power supply for the IC and a thermal shutdown function and so on. R4, R5, C11, D1 clamp leading-edge voltage spikes caused by transformer leakage inductance.

The power secondary winding (Pin #5~6)is rectified and filtered by D8, D9, L2, C33, C34 to create the 5V output voltage. The bias winding (Pin #9~8)is rectified and flittered by D2 and C12 to create U502 bias voltage. The secondary output 5V is regulated through the path of the voltage divide by R34, R35.

Fixed Temperature Control

Fixed Lamp Control Circuit

Refer to Figure 1.



AP-1-0127-A

Figure 1 Fixed lamp control circuit

The Concept of Fixed Lamp Control

For fixed lamp control, the logic unit "fuser on" control signal and SMPS unit DC power must be supplied. This circuit turns on only when "fuser on" sends the signal and the DC power is supplied.

The following explains how the fixed lamp control circuit works. Logic unit "fuser on" sends trigger current to triac driver PC3 LED, then the infrared ray is detected by PC3 photo detector. Next, YC3 triac is conducted. The conducted current sends trigger input to triac SY1 gate. At this point, SY1 is conducted and AC power is supplied to fixed lamp. Lamp is turned on and temperature rises.

As this fixed lamp control circuit uses the AC voltage ("+" and "-" are repeated) as the power supply, it used two-way triac (SY1), which has advantage over one-way SCR considering the price, size and reliability.

The triac's gate can be triggered by either forward or reverse signal. Once triac is turned on, it will not be controlled by gate signal, but will be continuously on until the current between major terminals decreases below the holding current. In other words, you cannot turn it off with reverse signal unlike SCR. This property is called current-voltage threshold rise rate (commutation: dv/dt). In AC power control application, triac has to turn off conduction in each zero crossing or switch it twice in each cycle. This switching operation is called commutation. It is possible to turn off the triac at the end of half cycle by eliminating the gate signal when the load current (I_L) is gained at the level equal to or lower than holding current. When triac commutes off-line, the direction of the voltage of the both ends of triac will be reversed and increase up to the maximum value of line voltage (VAC). At this point, the width of rise rate will be determined by dv/dt and overshoot voltage, by the circuit. When triac commutes off-line, the voltage of both ends of triac will have the same voltage as the line voltage. Refer to Figure 2.

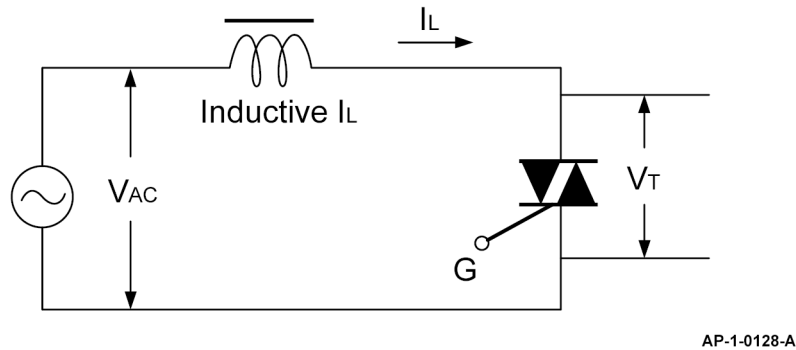


Figure 2 Inductive circuit

GP 20 Acronyms and Parts Description List

Purpose

To provide a list of acronyms used throughout this service manual with an explanation of their meaning. Refer to Table 1.

To also provide a cross reference list of part descriptions used throughout this service manual with a list of more commonly recognised part descriptions. Refer to the relevant section:

- SMPS and PBA Main
- OPE Assembly
- Frames, Drives and Covers
- DADF
- LSU
- Cassette Assembly
- SCF
- Side Cover Assembly
- Feeder Assembly
- MP Assembly
- Pickup Assembly
- Toner, Drum Cartridge and Fuser
- Exit Assembly
- Scanner Assembly

NOTE: All tables have the items listed in parts list order.

Acronyms

Refer to Table 1.

Table 1 Acronyms

Acronym	Description	PL Ref.
IPR - shield SMPS upper	IPR - Iron press	PL 1.10 Item 1
CBF power switch grey	CBF - Cable form	PL 1.10 Item 2
SMPS + HVPS	SMPS - Switching Mode Power Supply HVPS - High Voltage Power Supply	PL 1.10 Item 4
Shield - P main lower	P - Press	PL 1.10 Item 6
CBF harness - LIU GND	LIU - Line interface unit for FAX GND - Ground	PL 1.10 Item 7
PBA main	PBA - Printed circuit board assembly	PL 1.10 Item 9
PBA LIU	PBA - Printed circuit board assembly LIU - Line Interface unit for FAX	PL 1.10 Item 13
Cover - M - OPE	M - Mold OPE - Operation panel (control panel)	PL 2.10 Item 14
Key - M - copy	M - Mold	PL 2.11 Item 4
Holder catch CST MC2	MC2 - Development code name for machine	PL 4.10 Item 6

Table 1 Acronyms

Acronym	Description	PL Ref.
IPR - ground plate A (OPC)	OPC - Organic photo conductive	PL 4.10 Item 8
ELA M/M - AUD speaker	ELA M/M - Electrical assembly M/M AUD - Audio	PL 4.10 Item 14
CBF harness - OPC GND	OPC GNG - Organic photo conductive ground	PL 4.10 Item 16
IPR - ground plate SCF	SCF - Second cassette feeder (tray2)	PL 4.10 Item 21
CBF - harness - main - THV wire	THV - Transfer high voltage	PL 4.15 Item 9
CBF - harness - main - MHV wire	MHV - High voltage (charge voltage)	PL 4.15 Item 10
Gear - exit/ U, ID	U - Upper ID - Idler	PL 4.15 Item 24
IPR - terminal FU	FU - Fuser	PL 4.15 Item 28
Motor step - MCK2 (main)	MCK2 - Development code name for machine	PL 4.20 Item 2
Gear - exit/ U	Exit/U - Exit/upper	PL 4.20 Item 6
Gear - RDCN feed inner	RDCN - Reduction	PL 4.20 Item 15
MEA unit - cover PA exit assembly	MEA - Mechanical assembly PA - Paper	PL 4.25 Item 1
PMO - tray extension MP NE	PMO - Processing mold MP - Multi purpose (bypass) tray NE - for NEC	PL 4.25 Item 2
PMO - connect paper MFP	MFP - Multi-functional peripheral	PL 4.25 Item 4
MPR - name/plate XRX	MPR - Machinery Press XRX - Xerox	PL 4.25 Item 7
Cover - M - front	M - Mold	PL 4.25 Item 8
MEA unit guide CST PA assembly	CST - Cassette (paper tray) PA - paper	PL 4.25 Item 10
PMO - cover BRKT motor	BRKT - Bracket	PL 4.25 Item 20
PMO - cam jam remove	PMO - Processing mold	PL 4.25 Item 22
Special screw (panel MFP)	MFP - Multi functional peripheral	PL 4.25 Item 23
Roller - REGI	REGI - Registration	PL 5.10 Item 6
PBA SUB - REGI	PBA SUB - REGI - Sub printed circuit board assembly for the registration	PL 5.10 Item 9
MEA unit - TX stacker	TX - Transmit	PL 5.10 Item 18
IPR - washer spring CU	CU - Curve	PL 5.10 Item 22
Ground - P _scan roller	Ground - P - Ground press	PL 5.11 Item 2
IPR - guard C/O S/W	C/O - Cover open S/W - Switch	PL 5.11 Item 13
IPR-P _pinch (scan)	IPR-P - Iron press	PL 5.14 Item 6
Unit - LSU	LSU - Laser scanning unit	PL 6.10 Item 1
CBF harness - LSU	LSU - Laser scanning unit	PL 6.10 Item 2
MEC - cassette assembly (letter)	MEC - Mechanical combined unit	PL 7.10 Item 1
Spring CS RE	CS - Compress RE - Rear	PL 7.10 Item 13

Table 1 Acronyms

Acronym	Description	PL Ref.
Spring CS FR	CS - Compress FR - Front	PL 7.10 Item 14
PMO - bushing finger, F	F - Front	PL 7.10 Item 19
Ring - CS	CS - Compress	PL 8.10 Item 3
Gear - MP/DUP DRV	MP - Multi purpose (bypass) tray DUP DRV - Duplex driver	PL 8.10 Item 5
PMO - bushing TX (B4)	TX - Transmit	PL 8.10 Item 8
IPR - BRKT G DUP	IPR - Iron press BRKT - Bracket G - Ground DUP - Duplex	PL 8.10 Item 11
PMO - GP lower DP	PMO - Processing mold GP - Guide paper DP - Duplex	PL 8.10 Item 14
PMO - bushing P/U MP	P/U - Pickup MP - Multi purpose (bypass) tray	PL 8.10 Item 24
Spring ETC - TR_R	TR_R - Transfer Roller - Right	PL 8.10 Item 26
PMO - holder gear TR	TR - Transfer roller	PL 8.10 Item 27
Spring ETC - TR_L	TR_L - Transfer roller - Left	PL 8.10 Item 30
PMO - guide DP side	DP - Duplex	PL 8.11 Item 2
PMO - BUSHING P/U,MP	P/U - Pickup MP - Multi purpose (bypass) tray	PL 8.11 Item 4
PMO - tray case, MP	MP - Multi purpose tray (bypass tray)	PL 8.11 Item 12
ELA HOU - MP assembly	MP - Multi purpose (bypass) tray	PL 8.20 Item 1
PMO - holder cam MPF	MPF - Multi purpose feeder	PL 8.20 Item 9
PMO - gear P/U MPF	P/U - Pickup MPF - Multi functional peripheral	PL 8.20 Item 10
RPR - rubber pickup, MP	RPR - Rubber press	PL 8.20 Item 21
PBA SUB - MP SEN	PBA SUB - MP SEN - Sub printed circuit board assembly for the MP-SEN (Multi purpose (bypass) tray sensor)	PL 8.20 Item 24
A/S material pickup, MP	A/S - After service	PL 8.20 Item 27
PBA SUB - PTL	PBA SUB - PTL - Sub printed circuit board assembly for the PTL (pre transfer lamp)	PL 8.25 Item 6
PBA SUB - feed + P. EMP SEN	PBA SUB - feed - Sub printed circuit board assembly for the feeder and paper empty sensor P. EMP SEN - Paper empty sensor	PL 8.25 Item 12
ELA - OPC unit set	OPC - Organic photo-conductive	PL 9.10 Item 1
PMO - locker DEVE	DEVE - Developer	PL 9.10 Item 3
ICT - shaft - exit lower ID	ID - Idler	PL 10.10 Item 12
Spring - exit roll FD	FD - Face down	PL 10.10 Item 14

Table 1 Acronyms

Acronym	Description	PL Ref.
ELA HOU - scanner assembly	ELA - Electrical assembly HOU - Housing	PL 14.10 Item 1
A/S material - dummy upper assembly	A/S - After - service	PL 14.10 Item 3
MCT - glass DADF	MCT - Machinery cutting	PL 14.10 Item 4
PPR - registration edge (F)	PPR - Processing press	PL 14.10 Item 8
IPR - holder glass	IPR - Iron press	PL 14.10 Item 10
MCT - glass scanner (legal)	MCT - Machinery cutting	PL 14.10 Item 12
PBA SUB - D_SUB	PBA SUB - D_SUB - Sub printed circuit board assembly for the D-SUB type electrical connector.	PL 14.11 Item 5
ICT - insert shaft	ICT - Iron cutting	PL 14.11 Item 8
IPR - BRK scan BD	IPR - Iron press BRK - Bracket BD - Board	PL 14.11 Item 11
Cover - M - CCD cable	M - Mold CCD - Charge coupled device	PL 14.11 Item 15
CBF signal - CCD FFC	CCD - Charge coupled device FFC - Flexible flat cable	PL 14.11 Item 17
CBF harness - OPE	OPE - Operation panel (control panel)	PL 14.11 Item 18
Cover - scan lower (UMAX)	UMAX - Suppliers name for CCD module	PL 14.11 Item 22

SMPS and PBA Main

Refer to Table 2.

Table 2 SMPS and PBA main

Part name	Commonly known as	PL Ref.
IPR - Shield SMPS upper	Power supply unit cover	PL 1.10 Item 1
CBF power switch grey	On/Off switch	PL 1.10 Item 2
SMPS + HVPS	Power supply unit	PL 1.10 Item 4
CBF harness - inlet	Power socket	PL 1.10 Item 8
PBA main	Main PWB	PL 1.10 Item 9
PBA ETC -PS - DIMM	Postscript DIMM	PL 1.10 Item 11
PBA LIU	Fax PWB	PL 1.10 Item 13
PBA SUB - NPC3 - MFP	Network interface PWB	PL 1.10 Item 14
PBA foreign device interface	Foreign device interface PWB	PL 1.10 Item 16

OPE Assembly

Refer to Table 3.

Table 3 OPE assembly

Part name	Commonly known as	PL Ref.
ELA HOU OPE assembly	User interface assembly	PL 2.10 Item 1
PBA SUB E-mail	E-mail PWB	PL 2.10 Item 12
PBA SUB - OPE	User interface PWB	PL 2.11 Item 10

Frames, Drives and Covers

Refer to Table 4.

Table 4 Frames, drives and covers

Part name	Commonly known as	PL Ref.
Fan - DC (cardinal)	ROS cooling fan	PL 4.10 Item 17
CBF - harness-SCF	IOT - Tray 2 power/communications harness	PL 4.10 Item 22
Solenoid - pickup	Paper feed solenoid	PL 4.10 Item 25
Holder terminal	Developer module CRUM connector	PL 4.15 Item 7
PBA SUB terminal	Developer module CRUM PWB	PL 4.15 Item 6
CBF - harness - blade + supply + DEV	Developer module power supply harness	PL 4.15 Item 8
CBF - harness - main - THV Wire	Transfer roller power supply lead	PL 4.15 Item 9
CBF - harness - Main - MHV wire	Charge roller power supply lead	PL 4.15 Item 10
CBF harness - AC wire	Fuser power supply harness	PL 4.15 Item 19
CBF - harness; switch - micro	Right hand cover interlock switch	PL 4.15 Item 20
PBA SUB - exit sensor	Fuser exit sensor	PL 4.15 Item 22
PBA SUB - toner RX	Toner empty sensor (transmitter)	PL 4.15 Item 23
CBF - harness thermistor joint	Thermistor harness	PL 4.15 Item 26
IPR - terminal fuser	Fuser power supply connector	PL 4.15 Item 28
ELA HOU - drive assembly	Main drive assembly	PL 4.20 Item 1
Motor step - MCK2 (main)	Fuser and exit drive motor	PL 4.20 Item 2
Motor DC - MCK2 (BLDC)	Feed motor	PL 4.20 Item 4
Fan - DC	Fuser cooling fan	PL 4.20 Item 31
MEA unit - cover PA exit assembly	Exit cover assembly	PL 4.25 Item 1
PMO cover exit rear	Rear exit cover	PL 4.25 Item 5
MEA unit - cover front assembly	Front door assembly	PL 4.25 Item 6
MEA unit guide CST PA assembly	Tray 1 paper feed guide	PL 4.25 Item 10
PMO - lever jam remove	Jam clearance latch	PL 4.25 Item 21
PMO - cam jam remove	Jam clearance cam	PL 4.25 Item 22

DADF

Refer to Table 5.

Table 5 DADF

Part name	Commonly known as	PL Ref.
ELA HOU - DADF	DADF assembly	PL 5.10 Item 1
MEA unit - cover open	DADF top cover assembly	PL 5.10 Item 2
Roller - REGI	Registration roller	PL 5.10 Item 6
PBA SUB - REGI	Registration sensor	PL 5.10 Item 9
MEA unit - TX stacker	Input tray assembly	PL 5.10 Item 18
PBA SUB - length	Length detect sensor	PL 5.10 Item 24
ELA HOU - DADF SUB	Document transport assembly	PL 5.10 Item 31
PBA SUB - sensor IF	DADF sensor PWB	PL 5.11 Item 4
ELA HOU - duplex motor	DADF duplex motor assembly	PL 5.11 Item 10
PBA SUB - DADF	DADF main PWB	PL 5.11 Item 19
MEA unit - cover exit assembly	DADF exit assembly	PL 5.12 Item 1
MEA unit support pickup assembly	Feed roll assembly support	PL 5.13 Item 1
MEA unit guide pickup assembly	Feed assembly	PL 5.13 Item 5
MEA Unit - DADF rubber	Retard pad	PL 5.13 Item 9
PBA SUB - DOC width	Document width sensors	PL 5.13 Item 10
PBA SUB - exit open	DADF exit assembly open sensor	PL 5.13 Item 11
MEA Unit - Pickup	Feed roll assembly	PL 5.13 Item 17
PBA - SUB - gate	Scan exit sensor	PL 5.14 Item 10

LSU

Refer to Table 6.

Table 6 LSU

Part name	Commonly known as	PL Ref.
Unit - LSU	ROS	PL 6.10 Item 1
CBF Harness - LSU	ROS power/communications harness	PL 6.10 Item 2
Fan DC (cardinal)	ROS cooling fan	PL 6.10 Item 3

Cassette Assembly

Refer to Table 7.

Table 7 Cassette assembly

Part name	Commonly known as	PL Ref.
Mec- cassette assembly	Tray 1 assembly	PL 7.10 Item 1
PMO - cover cassette	Tray 1 front cover	PL 7.10 Item 5
PMO - Guide rear	Left hand paper guide	PL 7.10 Item 8
Guide side CST	Front paper guide	PL 7.10 Item 9
Guide side handle	Front paper guide handle	PL 7.10 Item 17

SCF

Refer to Table 8.

Table 8 SCF

Part name	Commonly known as	PL Ref.
ELA unit - SCF	Tray 2 assembly	PL 7.15 Item 1
Rubber - roller pickup	Nudger roll	PL 7.15 Item 9
Rubber - roller pickup S	Small nudger roll	PL 7.15 Item 10
PMO - M - actuator no paper	Paper empty sensor actuator	PL 7.15 Item 12
Feed roller SCF MC2	Tray 2 feed roll	PL 7.15 Item 18
PBA SUB - exit SEN	Tray 2 empty sensor	PL 7.15 Item 22
ELA HOU - solenoid SCF2	Tray 2 feed solenoid assembly	PL 7.15 Item 23
Solenoid pickup	Tray 2 feed solenoid	PL 7.16 Item 18
Motor step - SCF (2K)	Tray 2 feed motor	PL 7.16 Item 25
PBA SCF	Tray 2 PWB	PL 7.16 Item 3
CBF harness - SCF 8P	Tray 2 - IOT power/communications harness	PL 7.15 Item 4
MEA unit - lower SCF2	Tray 2 paper feed guide	PL 7.15 Item 10

Side Cover Assembly

Refer to Table 9.

Table 9 Side cover assembly

Part name	Commonly known as	PL Ref.
ELA HOU side cover assembly	Right hand cover and duplex assembly	PL 8.10 Item 1
MEA unit - duplex assembly	Duplex assembly	PL 8.10 Item 2
MEA unit - side SUB	Right hand cover assembly	PL 8.11 Item 1
MEC unit - tray assembly	Bypass tray	PL 8.11 Item 8

Feeder Assembly

Refer to Table 10.

Table 10 Feeder assembly

Part name	Commonly known as	PL Ref.
MEA unit - feed roller assembly	Main feed roll assembly	PL 8.15 Item 1
PMO - roller feed	Main feed roll	PL 8.15 Item 10

MP Assembly

Refer to Table 11.

Table 11 MP assembly

Part name	Commonly known as	PL Ref.
ELA HOU - MP assembly	Paper transport assembly	PL 8.20 Item 1

Table 11 MP assembly

Part name	Commonly known as	PL Ref.
Solenoid - MP	Bypass tray feed solenoid	PL 8.20 Item 4
PMO - actuator, MP	Paper present sensor actuator	PL 8.20 Item 12
PMO - housing pickup, MP	Paper feed ramp	PL 8.20 Item 19
RPR - rubber pickup, MP	Bypass tray feed roll	PL 8.20 Item 21
RPR - RCT - pad pickup, MP	Retard pad	PL 8.20 Item 22
PBA SUB - MP SEN	Paper present sensor	PL 8.20 Item 24
MS material pickup - MP	Bypass tray feed roll assembly	PL 8.20 Item 27

Pickup Assembly

Refer to Table 12.

Table 12 Pickup assembly

Part name	Commonly known as	PL Ref.
ELA HOU - pickup assembly	Paper transport assembly	PL 8.20 Item 1
PBA SUB - toner TX	Toner empty sensor (receiver)	PL 8.20 Item 5
PBA Sub - PTL	Pre-transfer lamp	PL 8.20 Item 6
PMO - actuator feed sensor	Tray 1 feed sensor actuator	PL 8.20 Item 7
PBA SUB - feed & P.EMP SEN	Tray 1 empty sensor and feed sensor assembly	PL 8.25 Item 12
RPR rubber pickup	Tray 1 feed roll (large)	PL 8.25 Item 16
Rubber pickup small	Tray 1 feed roll (small)	PL 8.25 Item 17
PMO - actuator no paper	Tray 1 empty sensor actuator	PL 8.25 Item 25

Toner, Drum Cartridge and Fuser

Refer to Table 13.

Table 13 Toner, drum cartridge and fuser

Part name	Commonly known as	PL Ref.
ELA - OPC unit set	Xerographic module	PL 9.10 Item 1
ELA - toner unit set	Developer module	PL 9.10 Item 2
ELA HOU - fuser assembly	Fuser module	PL 9.10 Item 4

Exit Assembly

Refer to Table 14.

Table 14 Exit assembly

Part name	Commonly known as	PL Ref.
MEC - exit assembly	Paper exit assembly	PL 10.10 Item 1
PBA SUB - bin full sensor	Exit tray full sensor	PL 10.10 Item 20
Actuator SUB - bin full sensor	Exit tray full sensor actuator	PL 10.10 Item 21

Scanner Assembly

Refer to Table 15.

Table 15 Scanner assembly

Part name	Commonly known as	PL Ref.
ELA HOU - scanner assembly	Scanner	PL 14.10 Item 1
ELA HOU SCAN upper assembly	Scanner top cover assembly	PL 14.10 Item 2
A/S material dummy upper assembly	CVT glass assembly	PL 14.10 Item 3
MCT glass DADF	CVT glass	PL 14.10 Item 4
MCT glass scanner (legal)	Document glass	PL 14.10 Item 12
PBA SUB - D SUB	Scanner PWB	PL 14.11 Item 5
PMO lever sensor	DADF angle sensor actuator	PL 14.11 Item 12
ELA HOU - CCD module	CCD module	PL 14.11 Item 16
CBF signal - CCD FFC	CCD harness	PL 14.11 Item 17
CBF Harness - OPE	Scanner-UI harness	PL 14.11 Item 18
Holder M CCD	CCD lock	PL 14.11 Item 20
ELA HOU - scan motor	Scan motor assembly	PL 14.11 Item 23
Motor step - scan	Scan motor	PL 14.11 Item 25

GP 21 DADF Document Feeding Specifications

Purpose

To list the specifications of the documents that can be fed through the DADF.

Specifications

Refer to Table 1.

Table 1 Specifications

Item	Specification
Length	145mm - 356mm (5.75 inches - 14inches)
Width	145mm - 216mm (5.75 inches - 8.5 inches)
Weight	50 gsm - 105 gsm (12.5lb - 28lb)
Thickness	0.075mm - 0.13mm
Curl	Less than 5mm

GP 22 Paper and Media Specifications

Purpose

To list the paper and media size specifications.

Specifications

NOTE: Ensure that the paper tray settings match the paper size in the tray.

Refer to Table 1 for the paper and media sizes that can be used in the machine. Refer to Table 2 for the paper or media weight that can be used in the machine.

Table 1 Paper and media specifications

Paper Type	Size		Input Source		
	W x L (mm)	W x L (inch)	Bypass	Tray 1 or 2	Duplex
Letter	215.9 x 27	8.5 x 11	X	X	X
Legal	215.9 x 355.6	8.5 x 14	X	X	X
Folio	216 x 330	8.5 x 13	X	X	X
A4	210 x 297	8.27 x 11.69	X	X	X
JIS B5	182 x 257	7.17 x 10.12	X		
Executive	184.2 x 266.7	7.25 x 10.5	X		
A5	148.5 x 210	5.85 x 8.27	X		
Statement	N/A	5.5 x 8.5	X		
A6 CARD	105 x 148.5	4.13 x 5.85	X		
Post card 4 x 6	101.6 x 152.4	4 x 6	X		
Hagaki	100 x 148	3.94 x 5.83	X		
Envelope B5	176 x 250	N/A	X		
Envelope 7-3/4	98.4 x 190.5	3.88 x 7.5	X		
Envelope COM-10 (see note)	105 x 241	4.12 x 9.5	X		
Envelope DL	110 x 220	4.33 x 8.66	X		
Envelope C5	162 x 229	6.38 x 9.02	X		
Envelope C6	114 x 162	N/A	X		
Custom	98 x 148 - 215.9 x 355.6	3.86 x 5.83 - 8.5 x 14	X		

NOTE: COM-10 envelope weight must not exceed 75 gsm (20lb).

Table 2 Paper or media weights

Paper or Media Source	Weight
Tray 1	60 gsm - 90 gsm (16lb - 24lb)
Tray 2	60 gsm - 90 gsm (16lb - 24lb)
Bypass	60 gsm - 163 gsm (16lb - 43lb)
Duplex	60 gsm - 75gsm (16lb - 20lb)

Wiring Diagrams..... 7-3

Wiring Diagrams

Purpose

Wiring diagrams are an aid to trace wiring faults. Wiring Diagrams are used to complement the fault analysis information contained in the relevant RAP.

NOTE: *If necessary, refer to GP 20 for the acronym list and cross reference lists of more commonly recognised part names.*

Introduction

The main PBA connections are in the following wiring diagrams:

Input power and power distribution, Wiring Diagram 1.

PBA main, ELA HOU platen assembly and PBA foreign device interface, Wiring Diagram 2.

PBA main, unit - LSU, exit assembly, ELA HOU drive assembly and ELA HOU pickup assembly (tray 1), Wiring Diagram 3.

PBA main, ELA HOU frame main assembly and ELA HOU MP assembly, Wiring Diagram 4.

DADF, Wiring Diagram 5.

Tray 2 module, Wiring Diagram 6.

The wiring diagrams have the following features:

- The connections on the PWBs are in numerical sequence where possible.
- The complete component to PWB wiring is shown. All interconnecting connectors shown, in part or whole. Connectors shown in part have reference to other wiring diagrams as necessary.
- Where necessary, components have references to show additional connections to them.
- Relevant parts list references are shown.

Wiring Diagram 1

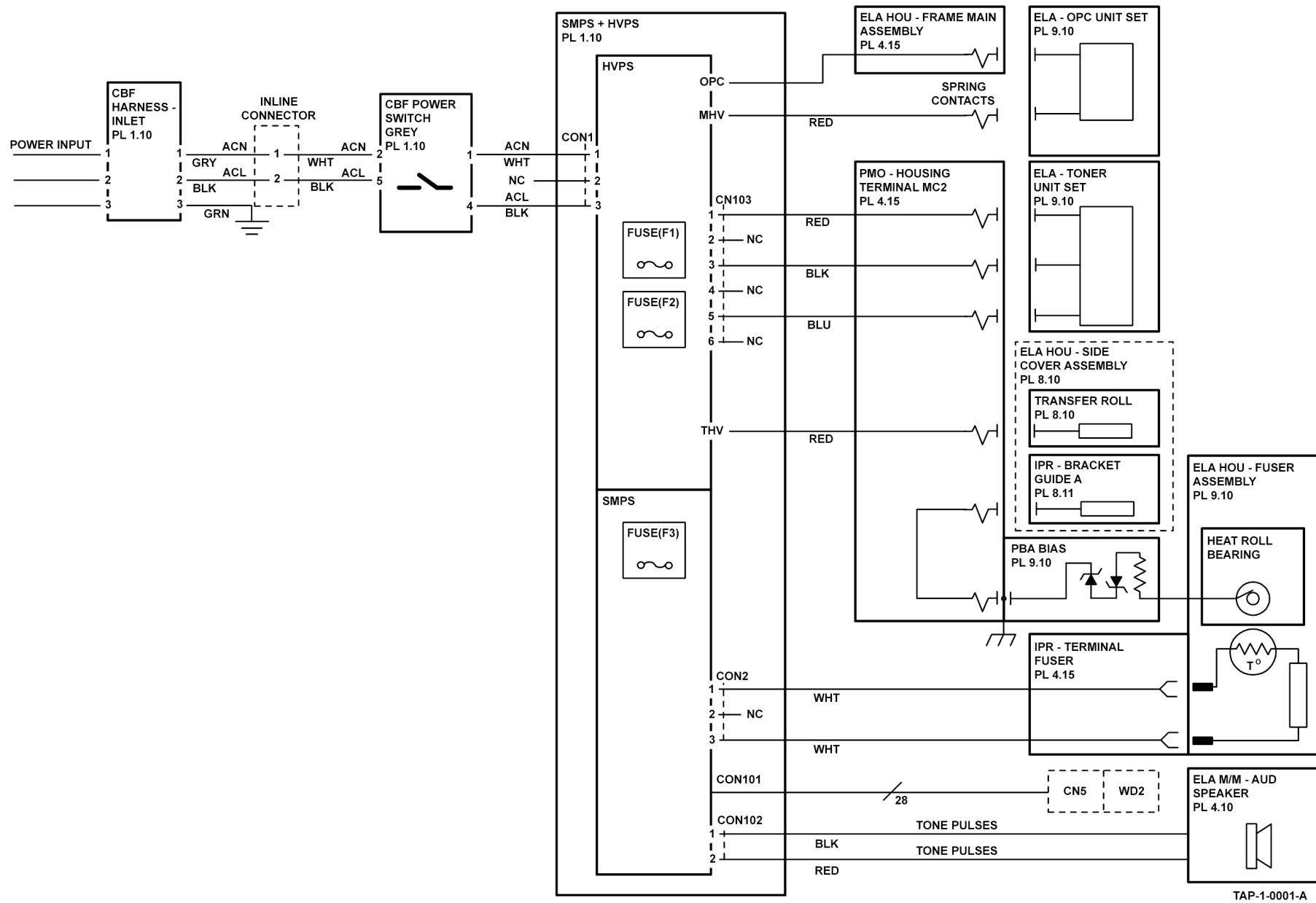
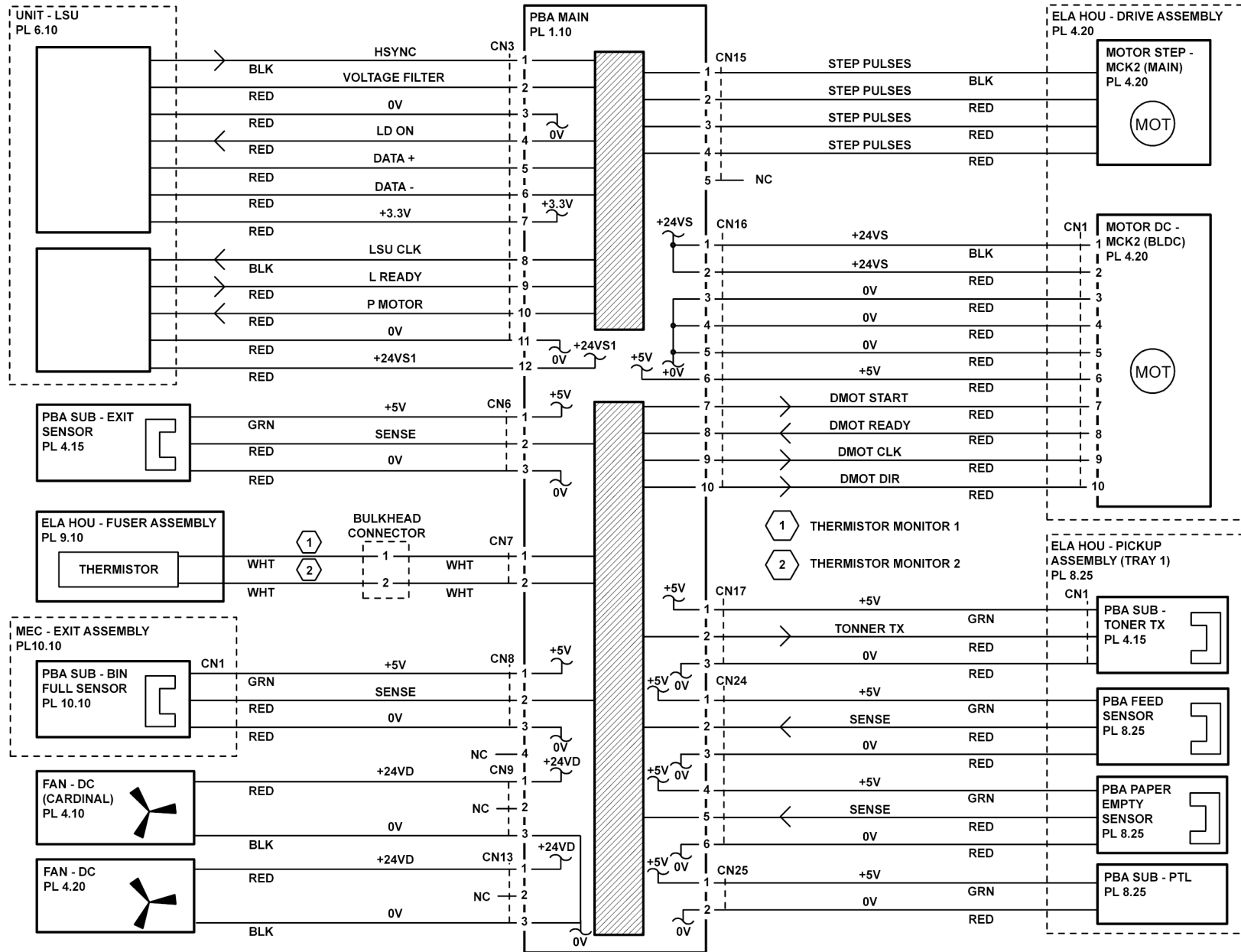


Figure 1 Wiring Diagram 1

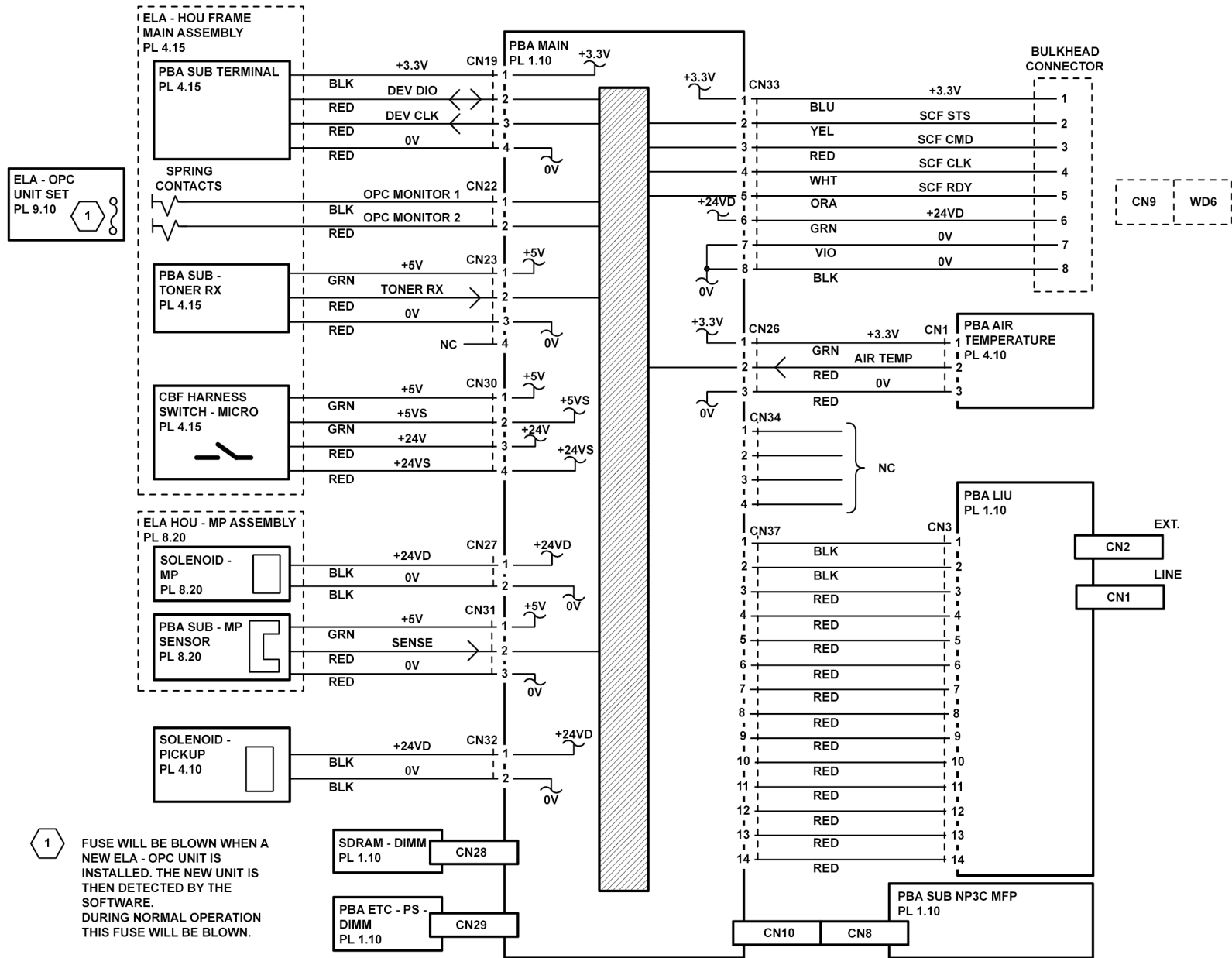
Wiring Diagram 3



TAP-1-0003-A

Figure 3 Wiring Diagram 3

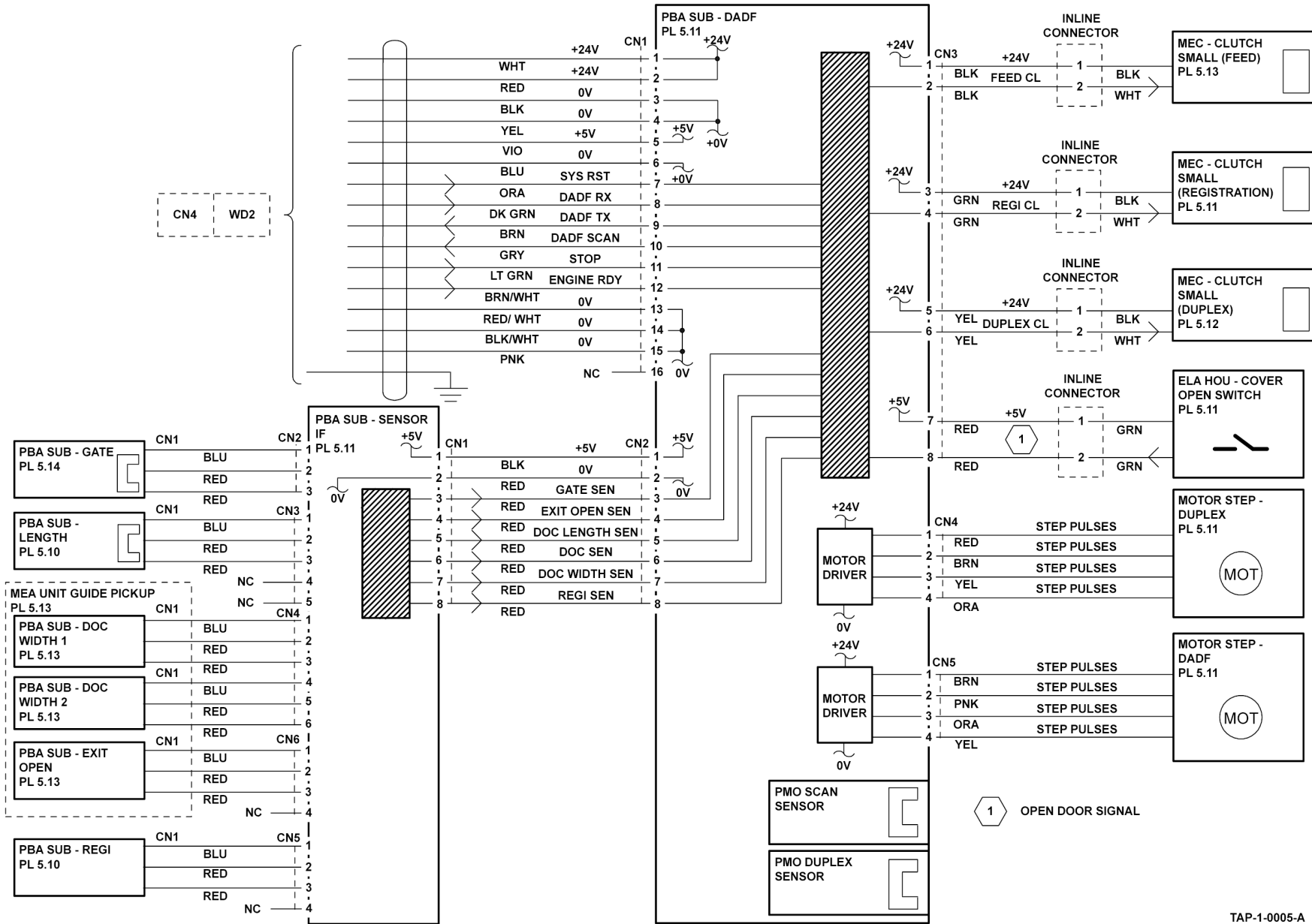
Wiring Diagram 4



TAP-1-0004-A

Figure 4 Wiring Diagram 4

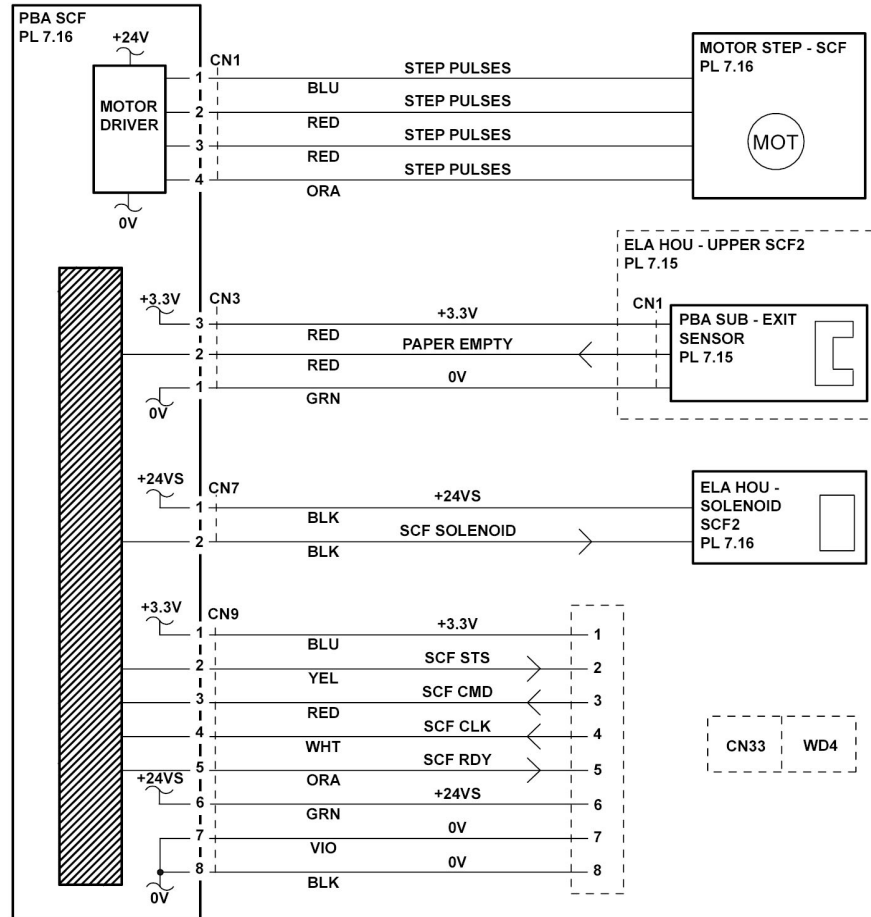
Wiring Diagram 5



TAP-1-0005-A

Figure 5 Wiring Diagram 5

Wiring Diagram 6



TAP-1-0006-A

Figure 6 Wiring Diagram 6

ACC 1 PBA Foreign Device Checkout	8-3
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ACC 1 PBA Foreign Device Checkout

Procedure

Go to the OF3 Use Auxiliary Access RAP.

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