

**WorkCentre XD Series  
Copier/Printer  
Service Documentation**

701P14690  
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**CAUTION**  
Certain components in the WorkCentre XD  
Series Copier/Printer are susceptible to damage  
from electrostatic discharge. Observe all ESD  
procedures to avoid component damage.

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*How to Identify and Resolve Radio-TV Interference Problems*

Stock number: 004-000-00345-4

This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402

## WARNING

Use of controls or adjustments other than those specified in this documentation may result in an exposure to dangerous laser radiation. The WorkCentre XD Series Copier/Printer is certified to comply with Laser Product Performance Standards set by the US Department of Health and Human Services as a Class 1 product. This means that it is a laser product that does not emit laser radiation during any mode of customer operation. During servicing, the laser beam could cause eye damage if looked at directly. The service procedures must be followed exactly as written.

The laser warning symbol is repeated in specific service procedures where laser light exposure is possible.



Prepared by:  
Xerox Corporation  
Multinational Customer and Service Education  
780 Salt Road  
Webster, New York 14580

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## About This Manual

This manual is part of a documentation system which also includes training.

This manual contains Repair Analysis Procedures, Repair Procedures, Adjustment Procedures, Parts List, Diagnostic Procedures, and Wiring Data information that will enable a Service Representative to repair the WorkCentre XD100/XD102/XD104 Family of copier/printers.

## Organization

This manual is divided into seven sections. The title and description of each section is listed below.

A Publication Comment Sheet is provided at the end of this manual.

### Section 1 - SERVICE CALL PROCEDURES

This section contains the following:

Initial Actions/System Checks

System Checkout

Final Action

#### Initial Actions/System Checks

This identifies how to collect the data necessary to decide how to proceed with the service call. It classifies the problem and refers you to the appropriate Repair Analysis Procedure.

#### System Checkout

The System Checkout procedure is used to verify that the copier is operating properly after a repair has been made.

#### Final Action

The Final Action procedure identifies the steps that must be performed before closing out the service call.

### Section 2 - REPAIR ANALYSIS PROCEDURES (RAPs)

This section contains the Repair Analysis Procedures (RAPs) necessary to repair faults. When using a RAP, always exit the procedure when the fault is fixed. Do not perform the remaining steps.

### Section 3 - IMAGE QUALITY REPAIR ANALYSIS PROCEDURES (RAPs)

This section contains the Repair Analysis Procedures (RAPs) necessary to repair copy quality faults. The first RAP, CQ1 Copy Defect Entry Procedure, is used to classify a copy quality problem and will reference the RAP to be used to repair the problem. When using a RAP, exit the procedure when the fault is fixed. Do not perform the remaining steps.

### Section 4 - REPAIR/ADJUSTMENT PROCEDURES

This section contains the repair and adjustment procedures for the XD100/XD102/XD104 Family of copiers.

### Section 5 - PARTS LIST

This section contains the detailed Parts List for the XD100/XD102/XD104 Family of copiers.

## **Section 6 - GENERAL PROCEDURES/ GENERAL INFORMATION**

This section contains Diagnostic Procedures, Installation and Removal Procedures, and General Information which includes Product Specifications for the XD100/XD102/XD104 Family of copiers.

## **Section 7 - WIRING DATA**

This section contains Plug/Jack Location Drawings and BSDs.

## **How to Use This Manual**

### **Introduction**

The Service Call Procedures will direct you to the proper section of the Service Manual.

You should begin the service call with the Initial Actions/System Checks Procedure. From there, you will be referred to either Section 2, Status Indicator RAPs or Section 3, Image Quality RAPs.

If you are sent to Section 3, you will perform the CQ1 Copy Defect Entry Procedure to classify the copy quality problem. You will then be directed to the proper RAP to begin your troubleshooting. From these RAPs you may be referred to other sections of the manual to make checks, adjustments, or to replace parts.

When you have made a repair, return to the System Checkout/Final Action to complete the call.

## Other Information

### The Use of Caution, Warning, and Note statements

Information relative to the completion of a task in a safe or thorough manner will be supplied in the form of a Caution, a Warning, or a Note statement. These statements are found throughout the service documentation.

Cautions, Warnings, and Note statements appear before the steps to which they apply. These statements should be read before continuing to the next step in a procedure.

The definition of a Caution, Warning, or Note is as follows:

**Caution** - A Caution statement indicates an operating or maintenance procedure, practice, or condition that, if not strictly observed, could result in damage to or destruction of equipment.

**Warning** - A Warning statement indicates an operating or maintenance procedure, practice, or condition that, if not strictly observed, could result in personal injury or loss of life.

**Note** - A Note statement indicates an operating or maintenance problem, practice, or condition that is necessary to accomplish a task efficiently.

### The Use of Acronyms, Abbreviations, Specific or Unique Terms, and Conventions

A list of acronyms and abbreviations used in this service documentation is located in the table below. Table 1

**Table 1 General Acronyms**

| Acronym | Definition                  |
|---------|-----------------------------|
| AC      | Alternating Current         |
| ACH     | Alternating Current High    |
| ACN     | Alternating Current Neutral |
| AMP     | Ampere                      |
| BSD     | Block Schematic Diagram     |
| BTU     | British Thermal Unit        |
| CD      | Circuit Diagram             |
| IQ/CQ   | Image Quality/Copy Quality  |
| DC      | Direct Current              |
| ESD     | Electrostatic Discharge     |
| HFSI    | High Frequency Service Item |
| LED     | Light Emitting Diode        |
| PL      | Parts List                  |
| PWB     | Printed Wiring Board        |
| RAP     | Repair Analysis Procedure   |
| VAC     | Volts Alternating Current   |
| VDC     | Volts Direct Current        |

### Specific Terms

Test Pattern 82P524 (USCO & XCL) and 82P523 (XL) will be referred to in this documentation as the Standard Test Pattern.

The Density Output Reference Guide, 82P520, and the Copy/Image Quality Rating Guide, 82P284, will also be referred to in this documentation.

The terms "dry ink" and "toner" are interchangeable.

### Conventions

The conventions that are used in this service documentation are presented in the table below. Table 2

**Table 2 Conventions**

|                |  |
|----------------|--|
| [nn-nn]        | Hyphenated numbers enclosed in brackets indicate a diagnostic code to be used  |
| E7-[nn]        | When a Status Code has more than one sub-code, the subcode will appear in brackets.  |
| <b>bolding</b> | When used in a sentence beginning with "Press the", any bolded numbers or words will represent an actual keypad button on the Control Console. |

## Reference Symbology

### Reference Symbols

The reference symbols (icons) used in this documentation denote supportive data which can be found in other sections of this documentation. The purpose of these symbols is to inform the Service Representative of procedures, adjustments, or other information that is important for successful diagnosis and repair.

### Schematic Symbols

These symbols represent electrical and mechanical components or devices that are commonly found in Xerox equipment. These symbols are included as an aid to understanding the representations used in the Circuit Diagrams (CDs).

### AC and DC Voltage References

The expected AC and DC voltage levels found in this machine are defined in this section. These specifications represent the expected range for AC (machine input power source) and DC (machine internal power supplies) voltages that are encountered during normal operation.

### Abbreviations

The table below lists the electrical wire colors that are identified in this service documentation and reflects the use of standardized abbreviations. Table 1

**Table 1 Wire Color Abbreviations**

| <b>Abbreviation</b> | <b>Wire Color</b> |
|---------------------|-------------------|
| BLK                 | black             |
| BLU                 | blue              |
| BRN                 | brown             |
| GRAY                | gray              |
| GRN                 | green             |
| G/Y                 | green/yellow      |
| ORN                 | orange            |
| PINK                | pink              |
| RED                 | red               |
| VIO                 | violet            |
| WHT                 | white             |
| YEL                 | yellow            |
| Y/G                 | yellow/green      |



## REFERENCE SYMBOLOGY

Notes, adjustments, and parts lists support the checklists and the RAP information. The symbols that refer to this supportive data are shown below.

### Note



This symbol is used to refer to notes found on the same page.

### Adjustments



ADJ 4.1 This symbol refers to an adjustment procedure located in Section 4 of this Service Documentation. The number adjacent to the symbol indicates the number that is assigned to that adjustment

### Parts List

#### PL 10.6

[PL 10.6] refers to the parts list located in section 5 of the Service Manual. The number after the PL designation indicates the number that is assigned to that parts list.

### Switches and Relay Contacts



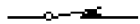
Safety interlock switch that is open.



Safety interlock switch that is closed.



Switch or relay contacts with momentary contacts shown normally open.



Switch or relay contacts with momentary contacts shown normally closed.

### Miscellaneous Symbols

Descriptions of all commonly used graphic symbols are included in order to help you in troubleshooting when performing the RAP's.

### Standby Power Input



This symbol indicates the continuation of a standby power line that is interrupted in the vertical direction.

### Feed Back



This symbol indicates a feedback signal.

### Flag



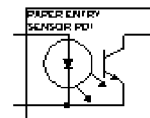
This symbol indicates an area of a Circuit Diagram that you should check.

### Ground



This symbol indicates a machine ground.

### LED/Phototransistor Sensor



This type of sensor is used in the document and paper path. It uses reflected light to switch the sensor off and on.

### Without Tag Change



This symbol indicates that the area to which the triangle points has not been modified by the tag number in the circle.



This symbol indicates that the entire page has not been modified by the tag number in the circle.

### With Tag Change



This symbol indicates that the area to which the triangle points has been modified by the tag number in the circle.



This symbol indicates that the entire page has been modified by the tag number in the circle.



### WARNING

This symbol is used to warn of possible eye damage from a laser beam if service procedures are not followed exactly as written.



### CAUTION

*This symbol is used when components in the copier are susceptible to damage from electrostatic discharge. Observe ESD procedures to avoid component damage.*



### WARNING

A warning is used to alert the personnel to an operating or maintenance procedure, practice, or condition that, if not strictly observed could result in injury or loss of life.



### CAUTION

*A caution is used to alert the personnel to an operating or maintenance procedure, practice, or condition that, if not strictly observed, could result in damage to, or destruction of equipment.*

### Signal Nomenclature

The signal is named to imply the condition of the machine when the signal is available. For example:

#### DOCUMENT JAM SENSED (L) +5 VDC

1. **DOCUMENT JAM SENSED** = Signal Name
2. **(L)** = Logic State when the signal is available in its named state. In this case the signal is Lo when a document jam is sensed.
3. **+5 VDC** = Logic level when the signal is Hi.

### DC Voltage Levels

DC Voltages should be measured between the test point and the machine frame, unless instructed otherwise. Table 2

Table 2 DC Voltage Levels

| Voltage  | Specification    |
|----------|------------------|
| +3.3 VDC | +3.3 VDC +/- 10% |
| +5 VDC   | +5 VDC +/-10%    |
| +12 VDC  | +12 VDC +/- 5%   |
| +24 VDC  | +24 VDC +/- 5%   |

### Logic Voltage Levels

Measurements of logic levels must be made with reference to the specified ground point, unless some other point is referenced in a diagnostic procedure. Table 3

Table 3 Logic Voltage Levels

| Nominal Voltage | Logic State | Actual Voltage Ranges  |
|-----------------|-------------|------------------------|
| +5 VDC          | H           | +4.8 VDC to +5.2 VDC   |
|                 | L           | 0.0 VDC to +1.0 VDC    |
| +24 VDC         | H           | +22.0 VDC to +25.7 VDC |
|                 | L           | 0.0 VDC to +3.0 VDC    |

---

# 1 Service Call Procedures

|  |     |
|--|-----|
| <b>Introduction</b>                      |     |
| Introduction .....                       | 1-3 |
| <b>Copier Maintenance</b>                |     |
| Copier Maintenance .....                 | 1-4 |
| <b>Initial Actions/System Checks</b>     |     |
| Initial Actions/System Checks .....      | 1-5 |
| <b>Status Codes/Other Faults Listing</b> |     |
| Status Codes/Other Faults Listing .....  | 1-6 |
| <b>System Checkout/Final Action</b>      |     |
| System Checkout/Final Action .....       | 1-7 |



## Introduction

Use the Service Call Procedures as a maintenance guide when performing service on the WorkCentre XD100/XD102/XD104 Family of copier/printers. The procedure has been designed to be used with the XD100/XD102/XD104 Family Service Documentation.

- **Copier Maintenance**

The maintenance/cleaning should be performed when the copier is being serviced.

- **Initial Actions/System Checks**

This diagram is designed to identify and classify the copier problem and to refer you to the appropriate RAP in order to repair the problem. When the problem has been repaired, perform the System Checkout/Final Action.

- **System Checkout/Final Actions**

This procedure should be completed at the end of every service call to ensure that the copy paper and the document are transported properly and to ensure that copy quality is within specification.

# Copier Maintenance

## Introduction

The following maintenance procedure should be performed when the copier/printer is serviced.

### Procedure

- (Table 1): Clean the following parts every time the copier/printer is serviced.

**Table 1**

| Description                           | Procedure   |
|---------------------------------------|---|
| Transfer Corotron Wire                | Clean the Transfer Corotron Wire using the Corotron Cleaner (see the User Guide). |
| Document Glass and SDF Document Glass | Clean using water or Xerox Lens and Mirror Cleaner and a lint-free Cloth.         |

- (Table 2): Perform the Total Copy Count Read procedure in Section 6. Clean the following parts when the total copy count reaches 120,000.

**Table 2**

| Description   | Procedure  |
|---|--|
| Document Cover Cushion  | Clean using Formula A on a lint-free cloth.  |
| Optics Frame interior   | Clean using Formula A on a lint-free cloth.  |
| Mirrors 1, 2, and 3   | Clean using Film Remover on a lint-free cloth.   |
| Reflector   | Clean using Lens and Mirror Cleaner on a lint-free cloth.  |
| Exposure Lamp   | Clean using Film Remover on a lint-free cloth.   |
| Lens  | Clean using Film Remover on a lint-free cloth.   |
| Focus Correction Lens (Laser Assembly)  | Do not open the Laser Assembly. Gently remove dust or toner deposits from the exposed lens surface with a dry cotton swab. |
| Transport Roller (Tray 2 Paper Feed Assembly), Upper and Lower Registration Rollers, Exit Rollers | Clean using Film Remover on a lint-free cloth.   |
| Thermistor  | Clean using Film Remover on a lint-free cloth.   |
| Thermostat  | Clean using Film Remover on a lint-free cloth.   |

- (Table 2): Perform the Total Copy Count Read procedure in Section 6. Lubricate the following when the total copy count reaches 120,000.

**Table 3**

| Description      | Procedure   |
|------------------|---|
| Mirror Base Rail | Apply a thin film of 70P95 Turbine Oil to the upper surface of the rail.    |
| Heat Roll        | Lubricate the gear with 8R983 Fuser Lube.                                   |
| Pressure Roll    | Apply 1-2 drops of 70P95 Turbine Oil to the ends of the Pressure Roll Shaft |

**Table 3**

| Description | Procedure                                       |
|-------------|---|
| Bearings    | Lubricate the bearings with 70P95 Turbine Oil.  |
| Fuser Gear  | Lubricate the Fuser Gear with 8R983 Fuser Lube. |

- (Table 2): Perform the Total Copy Count Read procedure in Section 6. Replace the following parts at the intervals shown in the table.

**Table 4**

| Description                       | Part Number                      | Copy Count | REP / PL  |
|-----------------------------------|----------------------------------|------------|-----------|
| Ozone Filter                      | 53N142                           | 120,000    | PL 1.1    |
| SDF Retard Roller                 | 22N977                           | 120,000    | REP 5.5   |
| Exposure Lamp Carriage            | 62N139                           | 120,000    | REP 6.2   |
| Lower Registration Roller         | 22N929                           | 100,000    | REP 8.13  |
| Tray 2 Feed Roller                | 22N928                           | 120,000    | REP 8.25  |
| Paper Feed Roller (Tray 1)        | 22N928                           | 120,000    | REP 8.6   |
| Transfer Corotron Wire            | 600K15950                        | 20,000     | PL 7.3    |
| Transfer/Detack Corotron Assembly | 19N415                           | 120,000    | REP 9.2   |
| Heat Roll                         | 22E20870                         | 120,000    | REP 10.2  |
| Pressure Roll                     | 22N924                           | 120,000    | REP 10.3  |
| Heat Rod                          | 122N115 (120V)<br>122N133 (230V) | 120,000    | REP 10.8  |
| Pressure Roll Stripper Fingers    | 33N169                           | 120,000    | PL 6.2    |
| Stripper Finger (3)               | 7N695                            | 120,000    | REP 10.11 |

## Initial Actions/System Checks

### Initial Actions

1. QUESTION THE OPERATOR.
2. VERIFY, CLASSIFY, AND REPAIR THE PROBLEM
3. REFER TO CUSTOMIZING YOUR COPIER IN THE USER GUIDE AND RECORD THE CUSTOMER PROGRAMMABLE SETTINGS.

### Status Indicators

- STATUS CODES  
Go to Status Codes/Other Faults Listing
- OTHER STATUS INDICATORS
  - TONER CARTRIDGE LED ON  
Go to Toner Cartridge LED On RAP
  - DRUM CARTRIDGE LED ON  
Go to Drum Cartridge LED On RAP
  - DOCUMENT JAM LED IS ON  
Go to Document Jam LED On RAP
  - SDF JAM LED IS ON  
Go to SDF Jam LED RAP
  - SDF PRESENT LED WILL NOT COME ON  
Go to SDF Jam LED RAP
  - SELECTED PAPER TRAY LED IS FLASHING  
Go to Paper Tray Ready RAP

### Copy Quality Problems

- Go to CQ1 Copy Defect Entry RAP in Section 3

### Other Faults

- COPY COUNT DISPLAY IS BLANK  
Go to 1.1 Power On RAP
- COPIER START PROBLEM  
Go to 1.1 Power On RAP
- DEAD MACHINE  
Go to 1.1 Power On RAP
- SELECTION/INDICATION PROBLEM  
Go to 2.1 Selection/Indication RAP
- ALL OTHER PROBLEMS  
Go to Section 2 contents

## Status Codes/Other Faults Listing

Table 1 Status Codes Entry Chart

| Status Code | Subcode | Description   | Corrective Action                            |
|-------------|---------|---|--|
| A1          | -       | SDF JAM PROBLEM<br>The Main PWB sensed a jam in the SDF.  | Go to A1/A2 Status Code RAP.                 |
| A2          | -       | SDF JAM PROBLEM<br>The Main PWB sensed a jam in the SDF.  | Go to A1/A2 Status Code RAP.                 |
| C1          | -       | FRONT OR SIDE DOOR OPEN<br>The Main PWB sensed that either the Front or the Side Door was open.   | Go to C1 Status Code RAP (Without SDF).      |
| CH          | -       | TONER CARTRIDGE PROBLEM<br>The Main PWB sensed that the Toner Cartridge was not present.  | Go to CH Status Code RAP (Without SDF).      |
| E2          | -       | PAPER JAM PROBLEM<br>The Main PWB sensed that a paper jam exists within the paper path.   | Go to E2 Status Code (Without SDF) RAP.      |
| E7          | 03      | LASER PROBLEM<br>The Main PWB sensed that a problem exists with the Laser Assembly or its circuitry, or with the laser drive circuit.         | Go to E7-[03] Status Code RAP (Without SDF). |
| E7          | 04      | CCD WHITE LEVEL PROBLEM<br>The Main PWB sensed that a problem exists with either the CCD drive circuit or the Exposure Lamp.                  | Go to E7-[04] Status Code RAP (Without SDF). |
| E7          | 05      | CCD BLACK LEVEL PROBLEM<br>The Main PWB sensed that a problem exists with the CCD drive circuit.  | Go to E7-[05] Status Code RAP (Without SDF). |
| E7          | 12      | SHADING CORRECTION PROBLEM<br>The Main PWB sensed that the white value obtained when the calibration strip was scanned was incorrect.         | Go to E7-[12] Status Code RAP (Without SDF). |
| E7          | 14      | IMAGE PROCESSING PROBLEM<br>The Main PWB sensed a communication problem between the CPU and the image processing (ASIC) chip.                 | Go to E7-[14] Status Code RAP.               |
| E7          | 15      | EXPOSURE LAMP PROBLEM<br>The Main PWB sensed that a problem exists with the Exposure Lamp or its circuitry, or with the exposure lamp driver. | Go to E7-[15] Status Code (Without SDF) RAP. |
| H2          | -       | THERMISTOR PROBLEM<br>The Main PWB sensed that the Thermistor RT1 was open.   | Go to H2/H3 Status Code RAP (Without SDF).   |
| H3          | -       | FUSER OVERHEAT PROBLEM<br>The Main PWB sensed a Fuser overheat condition.   | Go to H2/H3 Status Code RAP (Without SDF).   |

Table 1 Status Codes Entry Chart

| Status Code | Subcode | Description   | Corrective Action                          |
|-------------|---------|---|--|
| H4          | -       | FUSER WARM-UP PROBLEM<br>The Main PWB sensed that the Fuser did not reach 185° C within 27 seconds after power on or that the Fuser does not rise above 140° C for 6 seconds during the copy cycle. | Go to H4 Status Code RAP (Without SDF).    |
| J1          | -       | TONER CARTRIDGE PROBLEM<br>The Main PWB sensed that the Toner Cartridge is empty.   | Go to J1 Status Code RAP (Without SDF).    |
| J2          | -       | DRUM CARTRIDGE PROBLEM<br>The Main PWB sensed that the Drum Cartridge has reached the end of its life.  | Go to J2 Status Code RAP.                  |
| L1          | -       | SCAN PROBLEM<br>The Main PWB sensed that the Exposure Lamp Carriage did not leave the home position after power up or after the <b>Start</b> button was pressed.                                    | Go to L1/L3 Status Code Rap (Without SDF). |
| L3          | -       | SCAN RETURN PROBLEM<br>The Main PWB sensed that the Exposure Lamp Carriage did not return home after power up or after the copy cycle.  | Go to L1/L3 Status Code Rap (Without SDF). |
| L4          | -       | MAIN MOTOR PROBLEM<br>The Main PWB sensed a Main Drive Motor MOT1 problem.  | Go to L4 Status Code RAP (Without SDF).    |
| L6          | -       | LASER PROBLEM<br>The Main PWB sensed that the Laser Assembly polygon motor failed to achieve the correct operating speed after power up or after the <b>Start</b> button is pressed.                | Go to L6 Status Code RAP (Without SDF).    |
| P           | -       | PAPER FEED PROBLEM<br>The Main PWB sensed that the selected paper tray is out of paper or that a misfeed has occurred.  | Go to P Status Code RAP (Without SDF).     |
| U2          | 01      | MEMORY FAILURE<br>The Main PWB sensed a memory failure.   | Go to U2-[01] / U2-[04] Status Code RAP.   |
| U2          | 04      | MEMORY FAILURE<br>The Main PWB sensed an access error.  | Go to U2-[01] / U2-[04] Status Code RAP.   |



## System Checkout/Final Action

### Procedure

Make several copies of the 82P524 Test Pattern side A. (Include 78%, 86%, 129%, and 200%.) Use the alternate tray where applicable.

**Copies are delivered to the output tray.**

Y N

Refer to Initial Actions/System Checks to begin your repair.

Evaluate the copies using CQ1 Copy Defect Entry RAP.

**Image quality is acceptable.**

Y N

Go to the copy quality RAP identified by the CQ1 Copy Defect Entry RAP.

Clean the exterior of the machine and provide copy samples of the customers originals.



## 2 STATUS INDICATOR RAPS

|  |    |                               |    |
|--|----|-------------------------------|----|
| Notes:.....                                      | 3  | 8.1 Paper Tray Ready RAP..... | 66 |
| A1/A2 Status Code RAP .....                      | 4  |                               |    |
| CH Status Code RAP (Without SDF) .....           | 6  |                               |    |
| CH Status Code RAP (With SDF) .....              | 6  |                               |    |
| C1 Status Code RAP (Without SDF).....            | 7  |                               |    |
| C1 Status Code RAP (With SDF).....               | 7  |                               |    |
| E2 Status Code (Without SDF) RAP.....            | 8  |                               |    |
| E2 Status Code RAP (With SDF).....               | 10 |                               |    |
| E7-[03] Status Code RAP (Without SDF).....       | 12 |                               |    |
| E7-[03] Status Code RAP (With SDF).....          | 12 |                               |    |
| E7-[04] Status Code RAP (Without SDF).....       | 13 |                               |    |
| E7-[04] Status Code RAP (With SDF).....          | 13 |                               |    |
| E7-[05] Status Code RAP (Without SDF).....       | 14 |                               |    |
| E7-[05] Status Code RAP (With SDF).....          | 14 |                               |    |
| E7-[12] Status Code RAP (Without SDF).....       | 15 |                               |    |
| E7-[12] Status Code RAP (With SDF).....          | 15 |                               |    |
| E7-[14] Status Code RAP .....                    | 16 |                               |    |
| E7-[15] Status Code (Without SDF) RAP.....       | 16 |                               |    |
| E7-[15] Status Code RAP (With SDF).....          | 17 |                               |    |
| H2/H3 Status Code RAP (Without SDF) .....        | 18 |                               |    |
| H2/H3 Status Code RAP (With SDF) .....           | 20 |                               |    |
| H4 Status Code RAP (Without SDF).....            | 22 |                               |    |
| H4 Status Code RAP (With SDF).....               | 24 |                               |    |
| J1 Status Code RAP (Without SDF) .....           | 26 |                               |    |
| J1 Status Code RAP (With SDF) .....              | 28 |                               |    |
| J2 Status Code RAP .....                         | 30 |                               |    |
| L1/L3 Status Code Rap (Without SDF) .....        | 32 |                               |    |
| L1/L3 Status Code RAP (With SDF) .....           | 34 |                               |    |
| L4 Status Code RAP (Without SDF) .....           | 36 |                               |    |
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**Notes:**

## A1/A2 Status Code RAP

A1, indicates the Main PWB sensed an SDF jam. (The last document should be fed again.)

A2, indicates the Main PWB sensed an SDF jam. (the last 2 documents should be fed again,)

### Procedure

Clear the document jam. Open and close the SDF Feed Assembly. Press the **C** button. **The jam can be cleared.**

**Y N**  
The SDF Jam LED is flashing.

**Y N**  
Enter the diagnostic code [2-2]. Open and then close the SDF Feed Assembly.  
**The SDF Misfeed Indicator comes on and goes off.**

**Y N**  
Go to Flag 1 and check the wires for an open or short circuit. If the wires are good replace the SDF Sensor PWB PL 9.2.

Go to Flag 1 and check the wires for an intermittent condition. If the problem still exists replace the Main PWB PL 7.1.

Go to Flag 2 and check the wires for an open or short circuit. If the wires are good, replace the SDF Document Path Sensor Q3 PL 9.3.

Place a document in the SDF tray. Press the **Start** button. **The document is fed into the document path.**

**Y N**  
Enter the diagnostic code [2-3]. **The SDF Drive Motor comes on.**

**Y N**  
Go to Flag 3 and check the wires for an open circuit. If the wires are good, replace the SDF Drive Motor PL

Enter the diagnostic code [2-4]. **The SDF Feed Solenoid cycles on and off.**

**Y N**  
Go to Flag 4 and check the wires for an open or short circuit. If the wires are good, replace the SDF Feed Solenoid SOL1, PL 9.2.

Switch off the power. Remove the SDF Rear Cover and check the SDF Drive Motor and drive components for wear and or damage. **The Motor and drive components are good.**

**Y N**  
Replace the defective components PL 9.3.

Check the following for wear and or damage PL 9.3.

- Feed solenoid linkage
- Feed and Retard rolls
- Feed Clutch and drive

**The document stops before the Exit roller.**

**Y N**  
Clean and check the document path for obstructions.

**A**  
Clean and or check for the following:

1. Obstructions in the paper path
2. Exit Drive Belt, PL9.3
3. Transport Roller, PL 9.3
4. Exit roller, PL 9.3

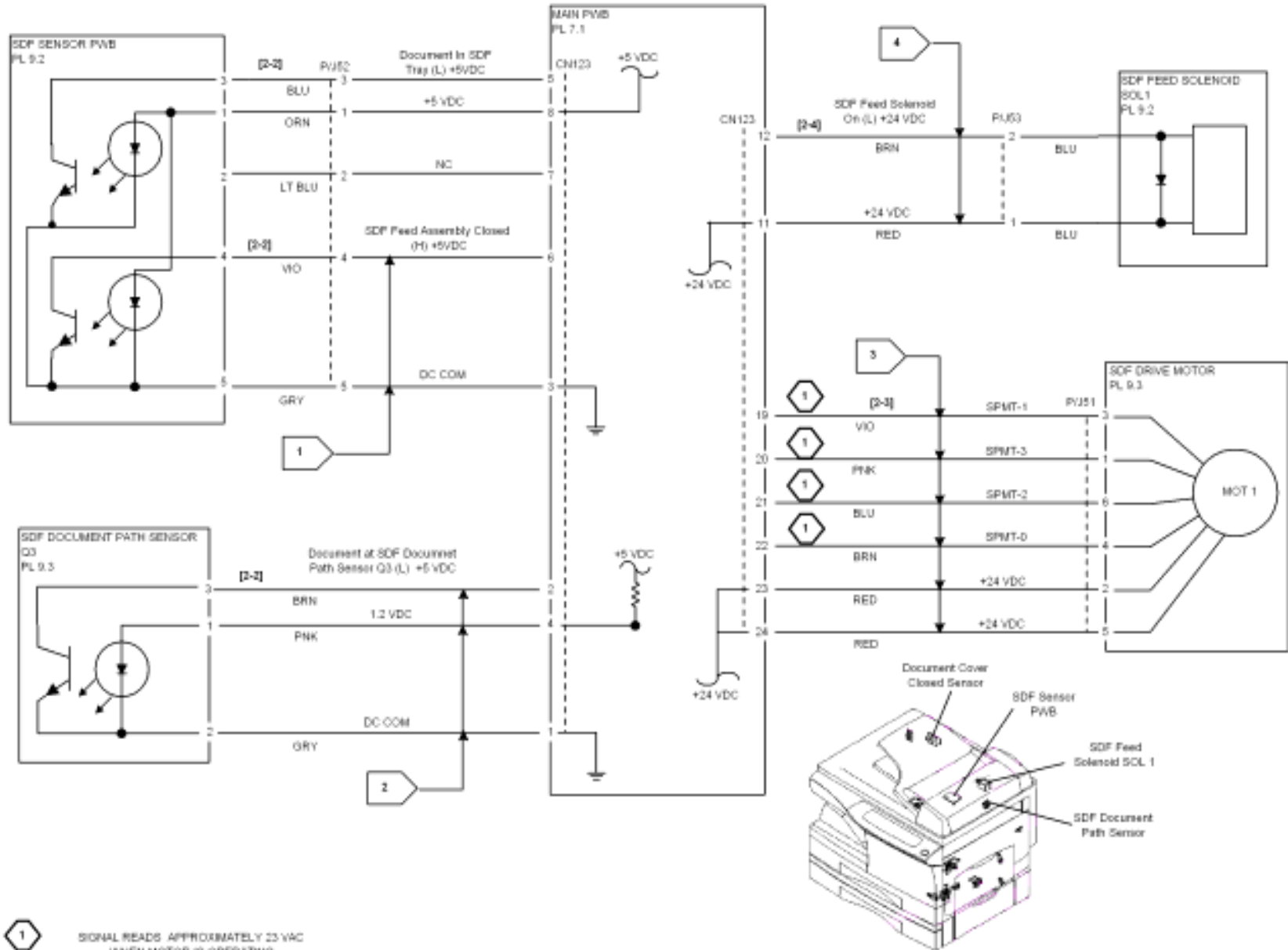


Figure 1 A1/A2 Status Code

## CH Status Code RAP (Without SDF)

The Main PWB sensed that the Toner Cartridge is not present or fully seated.

### Initial Actions

Ensure that the 2 locating pins on the rear of the toner cartridge are not broken.

Remove and reinstall the Toner Cartridge. If problem still exists, go to Flag 1 and check for a short circuit. If problem still exists, replace the Main PWB PL 7.1.

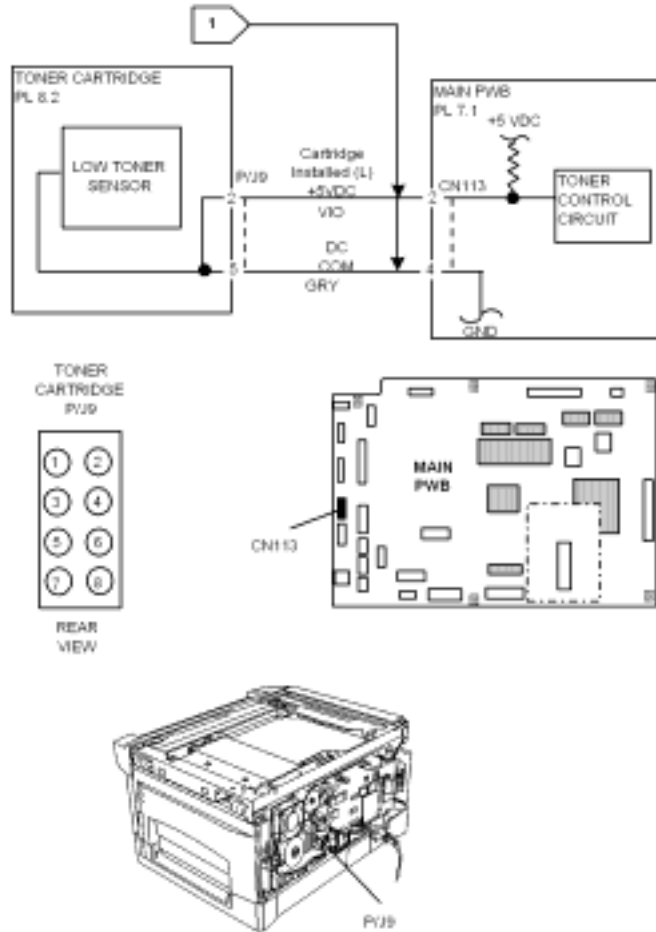


Figure 1 Toner Cartridge Installed (Without SDF)

## CH Status Code RAP (With SDF)

The Main PWB sensed that the Toner Cartridge is not present or fully seated.

### Initial Actions

Ensure that the 2 locating pins on the rear of the toner cartridge are not broken.

Remove and reinstall the Toner Cartridge. If problem still exists, go to Flag 1 and check for a short circuit. If problem still exists, replace the Main PWB PL 7.1.

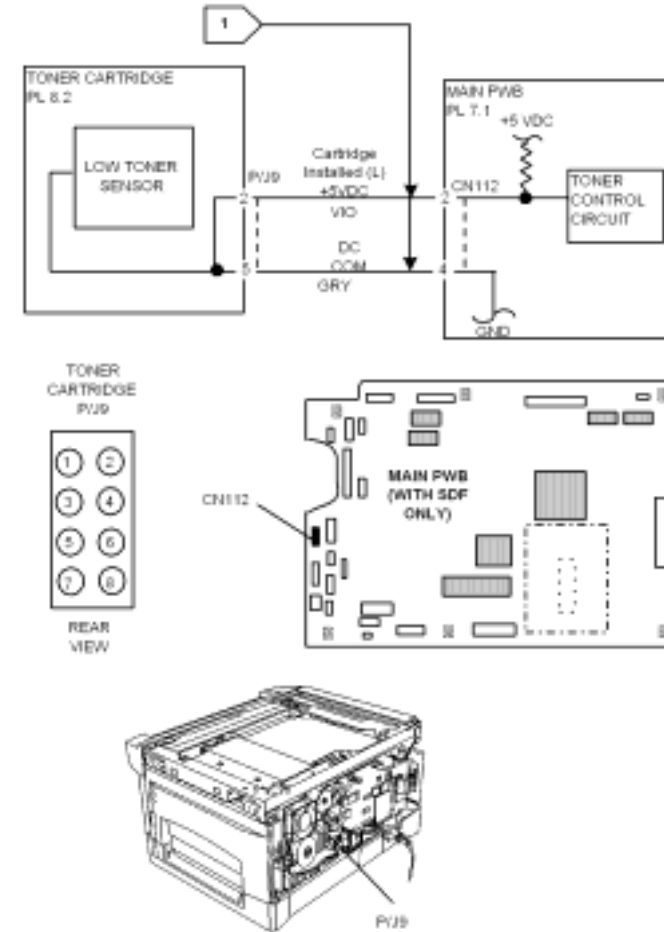


Figure 1 Toner Cartridge Installed (With SDF)



## C1 Status Code RAP (Without SDF)

The Main PWB sensed that the Side Door is open.

### Procedure

Ensure that the Side Door is closed securely. **There is +24 VDC measured at CN107-2 on the Main PWB to GND.**

Y N  
 | There is +24 VDC measured at CN107-1 to GND.  
 Y N  
 | Replace the Main PWB PL 7.1.

Go to Flag 1 and check the wires for an open circuit. If the check is good replace the Side Door Detector Switch Assembly PL 5.3.

Replace the Main PWB PL 7.1.

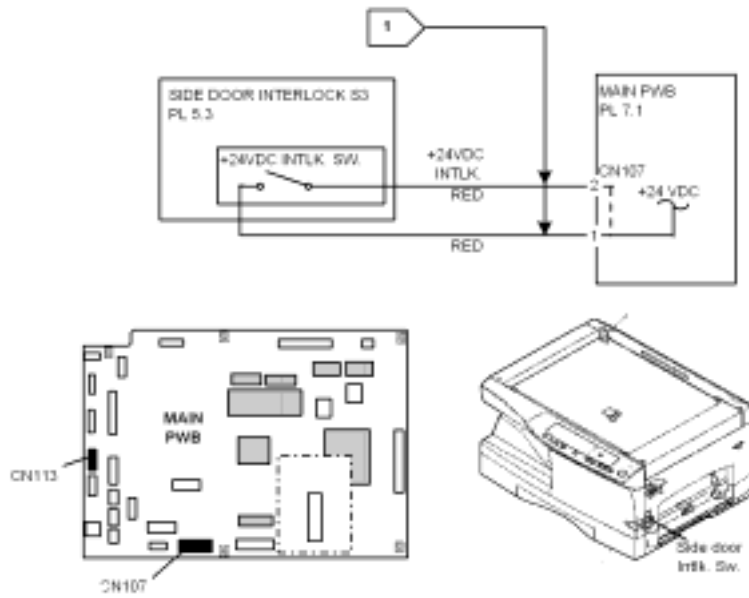


Figure 1 +24 VDC Interlock Ckt. (Without SDF)

## C1 Status Code RAP (With SDF)

The Main PWB sensed that the Side Door is open.

### Procedure

Ensure that the Side Door is closed securely. **There is +24 VDC measured at CN103-2 on the Main PWB to GND.**

Y N  
 | There is +24 VDC measured at CN103-1 to GND.  
 Y N  
 | Replace the Main PWB PL 7.1.

Go to Flag 1 and check the wires for an open circuit. If the check is good replace the Side Door Detector Switch Assembly PL 5.3.

Replace the Main PWB PL 7.1.

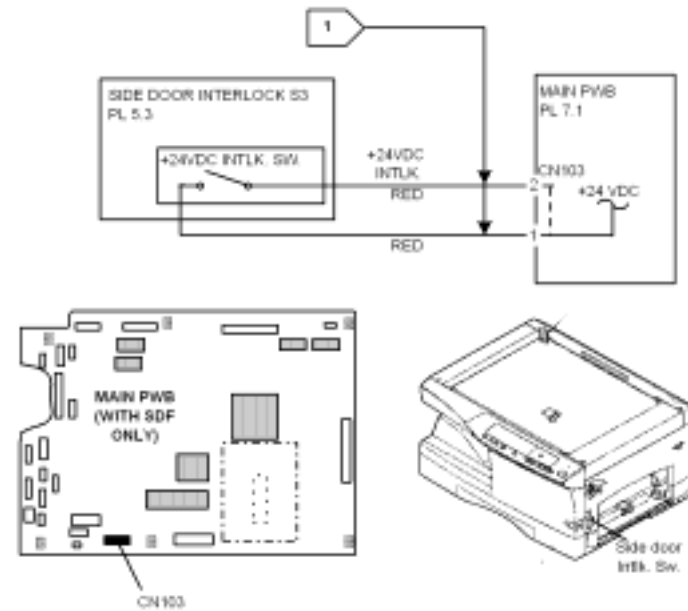


Figure 1 +24 VDC Interlock Ckt. (With SDF)

## E2 Status Code (Without SDF) RAP

The Main PWB sensed a tray misfeed or a paper jam in the paper path.

### Initial Actions

- Switch off the power and clear any document jam.
- Check for any obstructions in the paper path.

### Procedure

Switch on the power. Enter diagnostic code 30-1.

Open then close the Fuser Gate to actuate and deactivate the Fuser Jam Sensor Q3 while observing the Paper Jam lamp. **The Paper Jam lamp comes on and goes off.**

Y N

Go to Flag 2 and check the wires for an open or short circuit.

Manually actuate and deactivate the Paper Feed Sensor Q1 while observing the Toner Cartridge lamp.

**The Toner Cartridge lamp comes on and goes off.**

Y N

Go to Flag 1 and check for an open circuit.

Place a piece of paper above the Fuser Gate and use the Manual Exit Knob move the paper across the Exit Sensor Q4 while observing the Drum Cartridge Lamp.

**The Drum Cartridge lamp turns on and off.**

Y N

Go to Flag 3 and check for an open wire.

Manually actuate and deactivate Bypass Feed Sensor Q2 while observing the **Auto** exposure lamp.

**The Auto exposure LED comes on and goes off.**

Y N

Go to Flag 4 and check for an open circuit.

Press the Clear button. Enter diagnostic code 6-2. Press the Start button. **The Registration Roll Solenoid can be heard switching on and switching off.**

Y N

Press the Clear button. **There is +24 VDC measured between CN103-1 and GND.**

Y N

Replace the Main PWB PL 7.1.

Go to Flag 5 and check the wires for an open circuit. If the wires are good, replace the Registration Roll Solenoid SOL3.

Press the **Stop** button. **Paper jams in the fuser.**

Y N

Check the following:

- Ensure that the paper tray guide is set to the correct width of the copy paper.
- Inspect the paper path from this tray and the paper registration area for an obstruction such as a burr.
- Inspect the Registration Roll, PL 5.1 and the Pinch Roll, PL 1.4 for contamination and wear. Clean (with Film Remover only) or replace as required.

A

- Check the condition of the Registration Pinch Roll Springs, PL 1.4 to ensure that they are applying even tension.

Check the following:

- A deformed Pressure Roller.
- An obstruction in the Fuser.
- A binding Registration Solenoid.
- A broken Fuser Drive Gear.

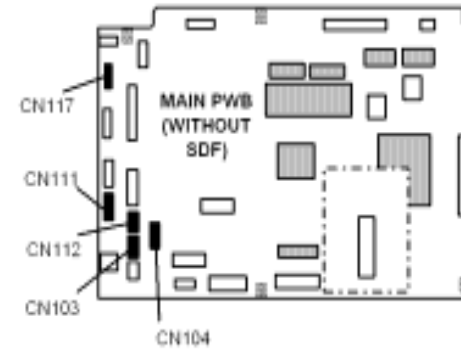


Figure 1 Main PWB (Without SDF)

A

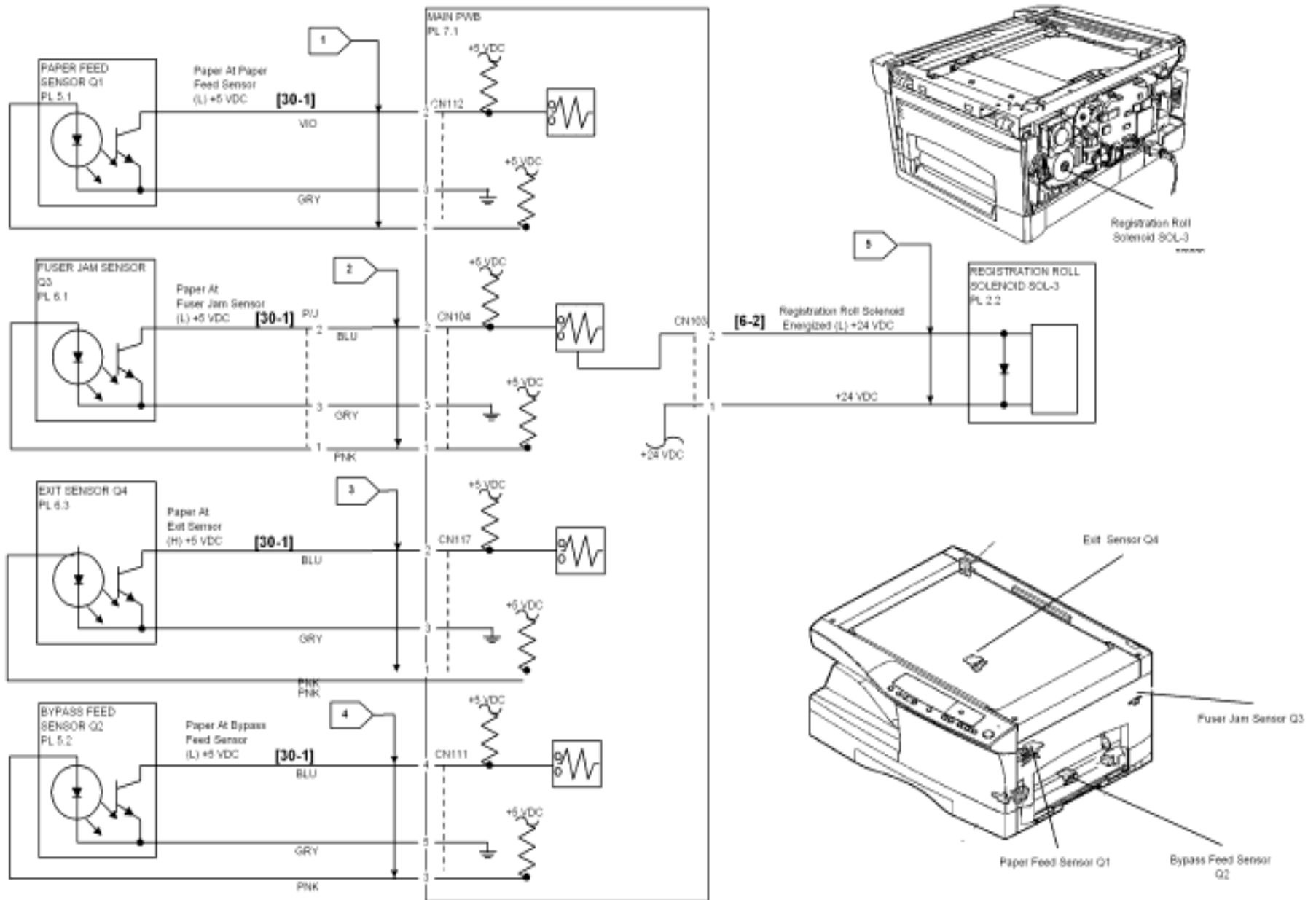


Figure 2 E2 Status Code (Without SDF)

## E2 Status Code RAP (With SDF)

The Main PWB sensed a tray misfeed or a paper jam in the paper path.

### Initial Actions

- Switch off the power and clear any document jam.
- Check for any obstructions in the paper path.

### Procedure

Switch on the power. Enter diagnostic code 30-1.

Open then close the Fuser Gate to actuate and deactivate the Fuser Jam Sensor Q3 while observing the Paper Jam lamp. **The Paper Jam lamp comes on and goes off.**

Y N

Go to Flag 2 and check the wires for an open or short circuit.

Manually actuate and deactivate the Paper Feed Sensor Q1 while observing the Toner Cartridge lamp.

**The Toner Cartridge lamp comes on and goes off.**

Y N

Go to Flag 1 and check for an open circuit.

Place a piece of paper above the Fuser Gate and use the Manual Exit Knob move the paper across the Exit Sensor Q4 while observing the Drum Cartridge Lamp.

**The Drum Cartridge lamp turns on and off.**

Y N

Go to Flag 3 and check for an open wire.

Manually actuate and deactivate Bypass Feed Sensor Q2 while observing the **Auto** exposure lamp.

**The Auto exposure LED comes on and goes off.**

Y N

Go to Flag 4 and check for an open circuit.

Press the Clear button. Enter diagnostic code 6-2. Press the Start button. **The Registration Roll Solenoid can be heard switching on and switching off.**

Y N

Press the Clear button. **There is +24 VDC measured between CN107-1 and GND.**

Y N

Replace the Main PWB PL 7.1.

Go to Flag 5 and check the wires for an open circuit. If the wires are good, replace the Registration Roll Solenoid SOL3.

Press the **Stop** button. **Paper jams in the fuser.**

Y N

Check the following:

- Ensure that the paper tray guide is set to the correct width of the copy paper.
- Inspect the paper path from this tray and the paper registration area for an obstruction such as a burr.
- Inspect the Registration Roll, PL 5.1 and the Pinch Roll, PL 1.4 for contamination and wear. Clean (with Film Remover only) or replace as required.

A

- Check the condition of the Registration Pinch Roll Springs, PL 1.4 to ensure that they are applying even tension.

Check the following:

- A deformed Pressure Roller.
- An obstruction in the Fuser.
- A binding Registration Solenoid.
- A broken Fuser Drive Gear.

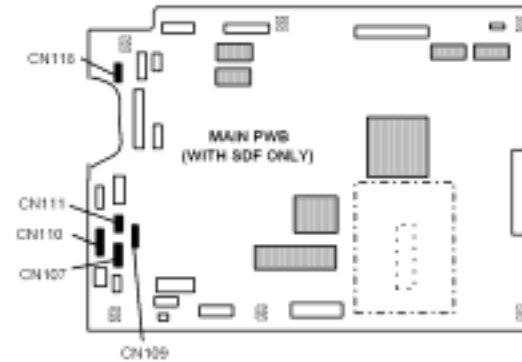


Figure 1 Main PWB (With SDF)

A

Status Code Indicators

E2 Status Code RAP (With SDF)

11/98

2-10

WorkCentre XD SERIES

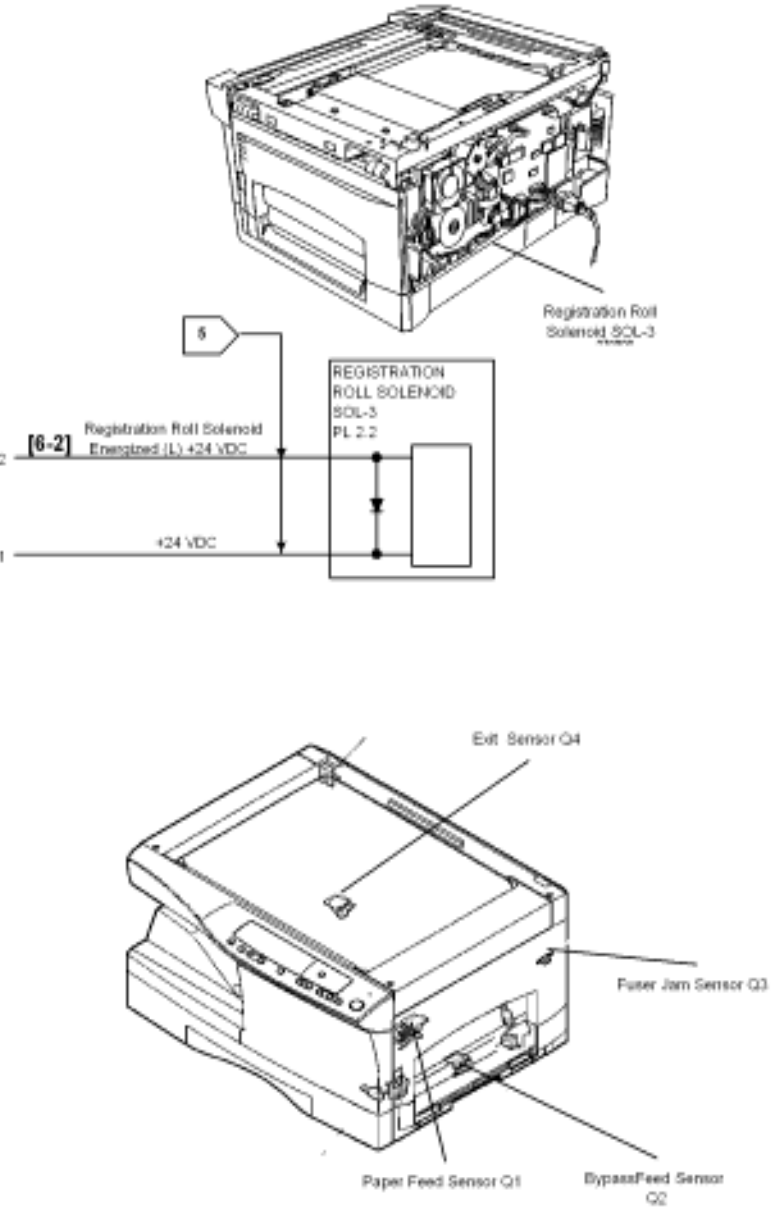
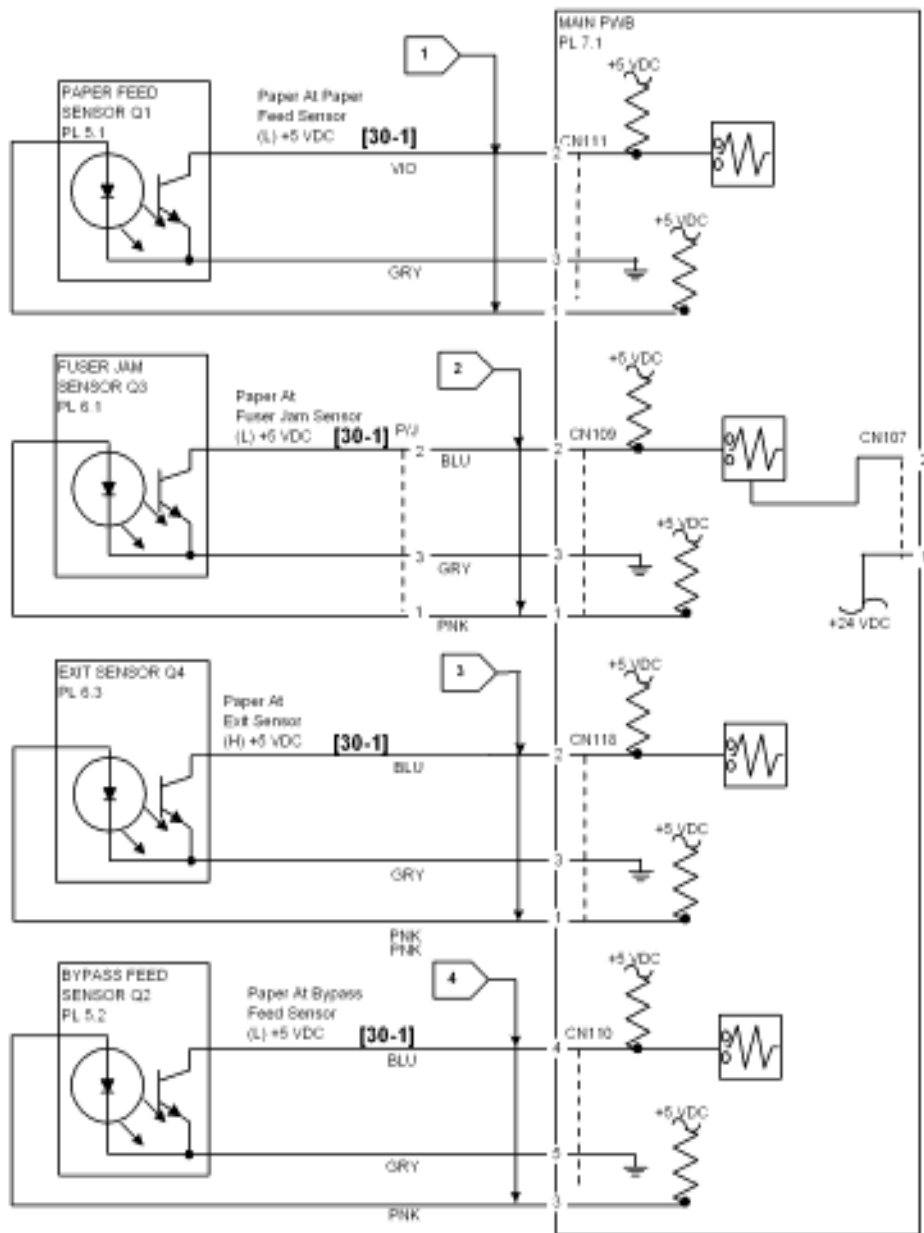


Figure 2 E2 Status Code (With SDF)

## E7-[03] Status Code RAP (Without SDF)

The Main PWB sensed a Laser Output error.

### Procedure

Switch off the power. Ensure that the Side Door is closed securely. Switch on the power.

**The E7-[03] Status Code still exists.**

Y N  
| Run several copies to ensure the problem does not reoccur.

**There is +5 VDC measured from PJ CN107-3 to GND**

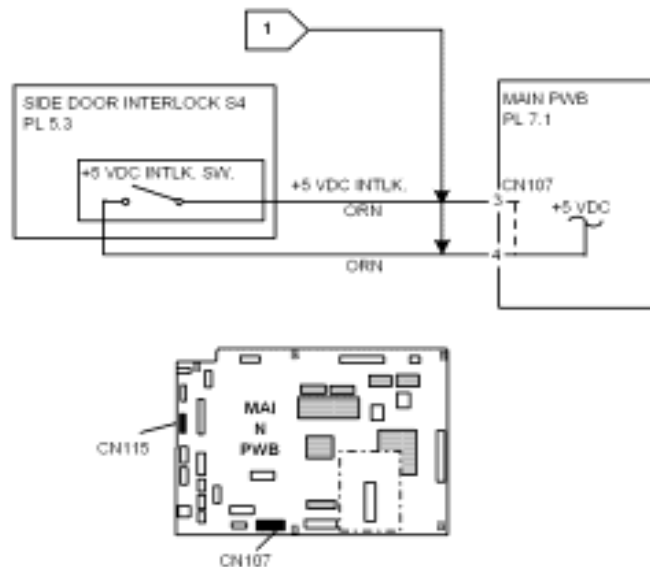
Y N  
| **There is +5 VDC measured from PJ CN107-4 to GND.**

Y N  
| Replace the Main PWB, PL 7.1.

Go to Flag 1. Check the The wires for an open circuit. If the wires are good, replace the Side Door Interlock Switch S4, PL 5.3.

Perform the following:

- Check the connector PJ CN115 on the Main PWB and the Laser Harness (PL 3.2) to the Laser Module for an open or intermittent condition.
- If the connections and wires are good replace the Laser Module, PL 3.3.
- If the problem still exists, replace the Main PWB, PL 7.1.



## E7-[03] Status Code RAP (With SDF)

The Main PWB sensed a Laser Output error.

### Procedure

Switch off the power. Ensure that the Side Door is closed securely. Switch on the power.

**The E7-[03] Status Code still exists.**

Y N  
| Run several copies to ensure the problem does not reoccur.

**There is +5 VDC measured from PJ CN103-3 to GND**

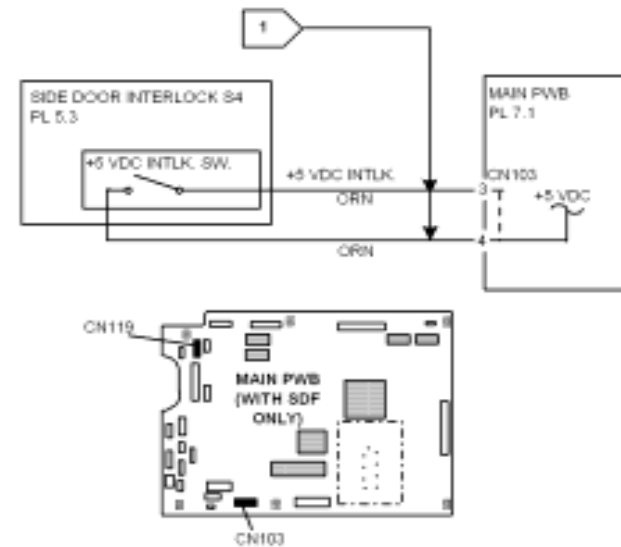
Y N  
| **There is +5 VDC measured from PJ CN103-4 to GND.**

Y N  
| Replace the Main PWB, PL 7.1.

Go to Flag 1. Check the The wires for an open circuit. If the wires are good, replace the Side Door Interlock Switch S4, PL 5.3.

Perform the following:

- Check the connector PJ CN119 on the Main PWB and the Laser Harness (PL 3.2) to the Laser Module for an open or intermittent condition.
- If the connections and wires are good replace the Laser Module, PL 3.3.
- If the problem still exists, replace the Main PWB, PL 7.1.



## E7-[04] Status Code RAP (Without SDF)

The Main PWB senses a CCD white level error.

### Procedure

Switch off the power. Switch on the power. **The E7-[04] Status Code still exists.**

**Y N**  
Run several copies to ensure the problem does not reoccur.

Check the connector PJ CN121 on the Main PWB and the ribbon cable going to the CCD PWB for an open or intermittent condition.

If the connections are good replace the Lens/CCD Module (PL 3.2).

If the problem still exists, replace the Exposure Lamp Carriage (PL 3.1).

If the problem still exists, replace the Main PWB (PL 7.1).

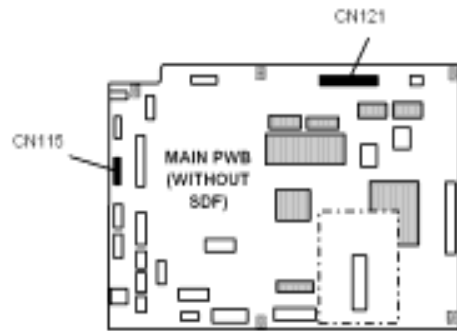


Figure 1 Main PWB (Without SDF)

## E7-[04] Status Code RAP (With SDF)

The Main PWB senses a CCD white level error.

### Procedure

Switch off the power. Switch on the power. **The E7-[04] Status Code still exists.**

**Y N**  
Run several copies to ensure the problem does not reoccur.

Check the connector PJ CN124 on the Main PWB and the ribbon cable going to the CCD PWB for an open or intermittent condition.

If the connections are good replace the Lens/CCD Module (PL 3.2).

If the problem still exists, replace the Exposure Lamp Carriage (PL 3.1).

If the problem still exists, replace the Main PWB (PL 7.1).

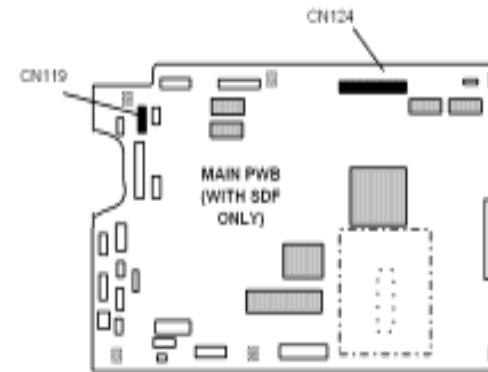


Figure 1 Main PWB (With SDF)

## E7-[05] Status Code RAP (Without SDF)

The Main PWB sensed a CCD black level error.

### Procedure

Switch off the power. Switch on the power. **The E7-[05] Status Code still exists.**

Y N

Run several copies to ensure the problem does not reoccur.

Check the connector CN121 on the Main PWB and the ribbon cable going to the CCD PWB for an open or intermittent condition.

If the connections are good replace the Lens/CCD Module (PL 3.2).

If the problem still exists, replace the Main PWB (PL 7.1).

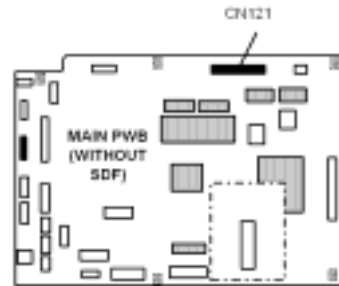


Figure 1 Main PWB (Without SDF)

## E7-[05] Status Code RAP (With SDF)

The Main PWB sensed a CCD black level error.

### Procedure

Switch off the power. Switch on the power. **The E7-[05] Status Code still exists.**

Y N

Run several copies to ensure the problem does not reoccur.

Check the connector CN124 on the Main PWB and the ribbon cable going to the CCD PWB for an open or intermittent condition.

If the connections are good replace the Lens/CCD Module (PL 3.2).

If the problem still exists, replace the Main PWB (PL 7.1).

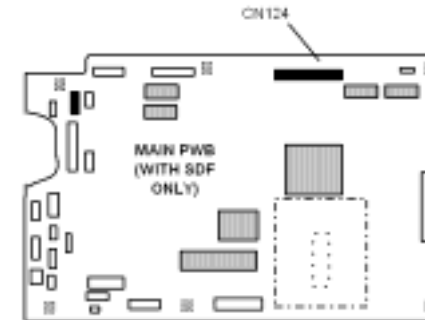


Figure 1 Main PWB (With SDF)



## E7-[12] Status Code RAP (Without SDF)

The Main PWB sensed a CCD shading level error.

### Procedure

Switch off the power. Switch on the power. **The E7-[12] Status Code still exists.**

Y N

Run several copies to ensure the problem does not reoccur.

Check the connector CN121 on the Main PWB and the ribbon cable going to the CCD PWB for an open or intermittent condition.

If the connections are good replace the Lens/CCD Module PL 3.2.

If the problem still exists, replace the Main PWB PL 7.1.

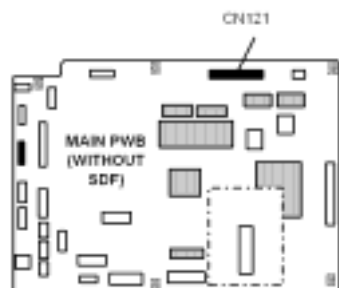


Figure 1 Main PWB (Without SDF)

## E7-[12] Status Code RAP (With SDF)

The Main PWB sensed a CCD shading level error.

### Procedure

Switch off the power. Switch on the power. **The E7-[12] Status Code still exists.**

Y N

Run several copies to ensure the problem does not reoccur.

Check the connector CN124 on the Main PWB and the ribbon cable going to the CCD PWB for an open or intermittent condition.

If the connections are good replace the Lens/CCD Module PL 3.2.

If the problem still exists, replace the Main PWB PL 7.1.

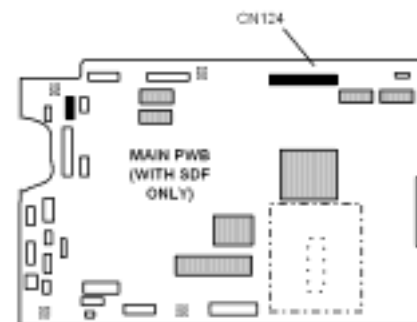


Figure 1 Main PWB (With SDF)

## E7-[14] Status Code RAP

The Main PWB sensed an ASIC communication error.

### Procedure

Switch off the power. Switch on the power. **The E7-[14] Status Code still exists.**

Y N  
| Run several copies to ensure the problem does not reoccur.

Replace the Main PWB PL 7.1.

## E7-[15] Status Code (Without SDF) RAP

The Main PWB sensed a Copy Lamp problem.

### Procedure

Switch off the power. Switch on the power. **The E7-[15] Status Code still exists.**

Y N  
| Run several copies to ensure the problem does not reoccur.

Check the connector CN118 on the Main PWB and the ribbon cable going to the Exposure Lamp Carriage PL 3.1, for an open or intermittent condition.  
If the problem still exists, replace the Main PWB PL 7.1.



Figure 1 Main PWB (Without SDF)

## E7-[15] Status Code RAP (With SDF)

The Main PWB sensed a Copy Lamp problem.

### Procedure

Switch off the power. Switch on the power. **The E7-[15] Status Code still exists.**

Y N

Run several copies to ensure the problem does not reoccur.

Check the connector CN121 on the Main PWB and the ribbon cable going to the Exposure Lamp Carriage PL 3.1, for an open or intermittent condition.

If the problem still exists, replace the Main PWB PL 7.1.

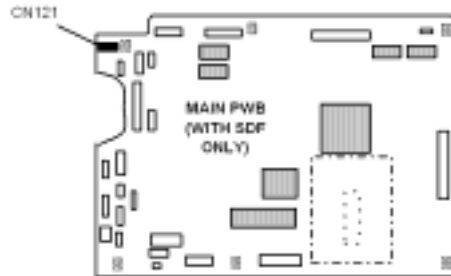


Figure 1 Main PWB (With SDF)

## H2/H3 Status Code RAP (Without SDF)

**H2**, indicates that the Main PWB sensed a fuser overheat condition (Thermistor RT1 open).

**H3**, indicates that the Main PWB sensed a fuser overheat condition.

### Procedure

The Status Code is an, H3.

Y N

Go to Flag 1 and check for an open wire. If the wires are good replace the Thermistor RT1, PL 6.1. If problem still exists, replace the Main PWB, PL 7.1.

Connect the meter between PJ CN109-17 (+) on the Main PWB and GND (refer to Flag 4).

**There is 1.2 VDC present while an H3 status code is displayed.**

Y N

**NOTE:** An H3/H4 status code must be cleared in diagnostics before the copier becomes operational again.

Enter Diagnostic code 14 to clear the H3 status code.

Switch off the power. Switch on the power.

**The H3 status code appears within 5 seconds after power on.**

Y N

**The Ventilation Fan Motor MOT3 is running.**

Y N

Go to the 4.1 Ventilation Fan Motor RAP (Without SDF).

Check the Thermistor RT1, PL 6.1 for contamination. If OK, replace the Power Supply PWB PS1, PL 7.1.

Go to Flag 1 and check the Thermistor circuit for a short circuit to ground. If OK, replace the Main PWB, PL 7.1.

Replace the Main PWB, PL 7.1. If problem still exists, replace the Power Supply PWB PS1, PL 7.1.

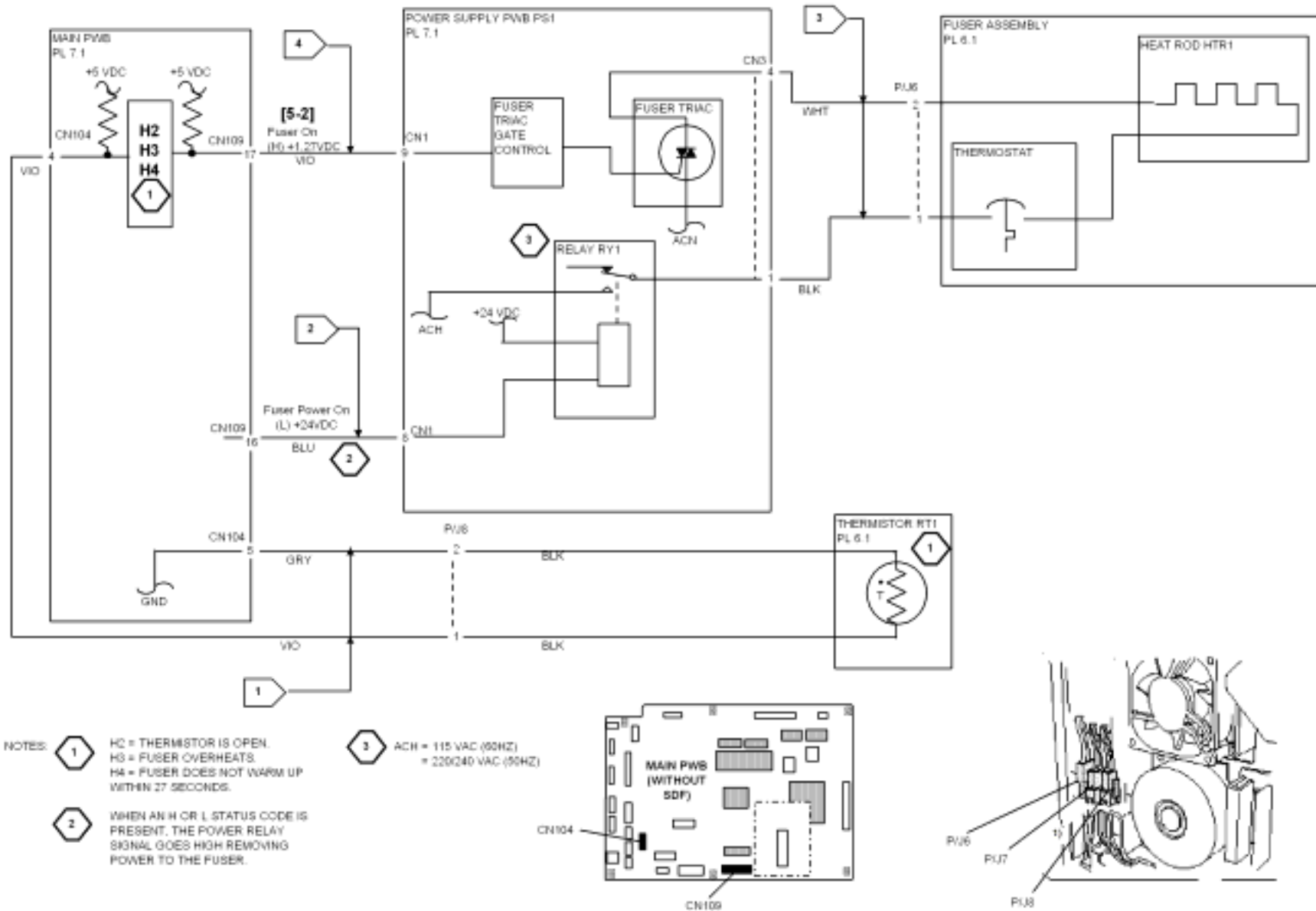


Figure 1 Fuser Heat (Without SDF)

## H2/H3 Status Code RAP (With SDF)

**H2**, indicates that The Main PWB sensed a fuser overheat condition (that the thermistor RT1 was open).

**H3**, indicates that the Main PWB sensed a fuser overheat condition.

### Procedure

**The Status Code is an, H3.**

**Y N**

Go to Flag 1 and check for an open wire. If the wires are good replace the Thermistor RT1, PL 6.1. If problem still exists, replace the Main PWB, PL 7.1.

Connect the meter between CN101-17 (+) on the Main PWB and GND (refer to Flag 4).

**There is 1.2 VDC present while an H3 status code is displayed.**

**Y N**

**NOTE:** An H3/H4 status code must be cleared in diagnostics before the copier becomes operational again.

Enter Diagnostic code 14 to clear the H3 status code.

Switch off the power. Switch on the power.

**The H3 status code appears within 5 seconds after power on.**

**Y N**

**The Ventilation Fan Motor MOT3 is running.**

**Y N**

Go to the 4.1 Ventilation Fan Motor RAP (With SDF).

Check the Thermistor RT1, PL 6.1 for contamination. If OK, replace the Power Supply PWB PS1, PL 7.1.

Go to Flag 1 and check the Thermistor circuit for a short circuit to ground. If OK, replace the Main PWB, PL 7.1.

Replace the Main PWB, PL 7.1. If problem still exists, replace the Power Supply PWB PS1, PL 7.1.

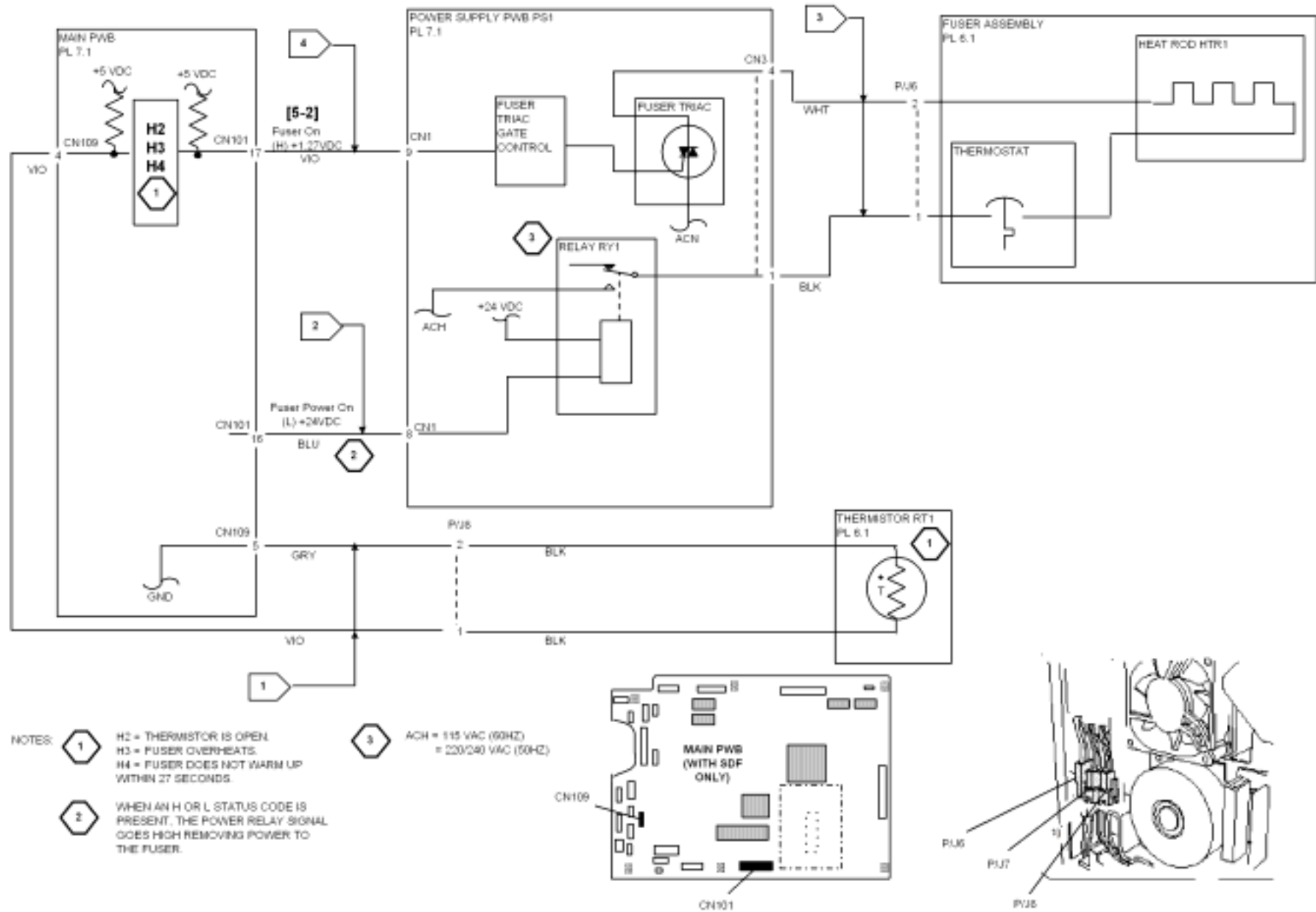


Figure 1 Fuser heat (With SDF)

## H4 Status Code RAP (Without SDF)

The Main PWB sensed that the fuser did not reach 185° C within 27 seconds after power on or that the fuser dropped below 140° C for 6 seconds during the copy cycle.

**NOTE:** An H3/H4 status code must be cleared in diagnostics before the copier becomes operational again.

### Procedure

Switch off the Power. Disconnect the connector, PJ 6 from the Fuser assembly. Connect the meter on the machine side P/J6 between pins 1 and 2 (refer to Flag 3). Set the multimeter to measure AC. Enter diagnostic code 5-2. **When the Start button is pressed the machine input line voltage is measured for approximately 5 seconds.**

**Y N**  
Reconnect connector P/J6. Press the **Stop** button. Connect the DC Meter between CN109-16 and GND. Press the **Start** button. **The meter switches from +24 VDC to 0 VDC for 5 seconds.**

**Y N**  
Go to Flag 2 and check the wire for an open or short circuit. **The wire is good.**

**Y N**  
Repair the wire or replace the DC harness, PL 7.1.

Replace the Power Supply PWB PS1, PL 7.1.

Replace the Power Supply PWB PS1, PL 7.1.

Connect the meter between CN109-17 (+) on the Main PWB and GND (refer to Flag 4). Enter diagnostic code 14. **There is approximately 1.2 VDC present.**

**Y N**  
Replace the Main PWB, PL 7.1. If problem still exists, replace the Power Supply PWB PS1, PL 7.1.

Switch off the power. Set the multimeter to the 200 ohm range. Measure the Fuser side of the connector PJ 6 between pins 1 and 2. **There is 1.7 ohms + or - 0.5 ohms measured between pins 1 and 2 of P/J 6.**

**Y N**  
Replace the Fuser Assembly, PL 6.1.

Reconnect P/J6. Switch on the power. If the problem still exists, replace the Power Supply PWB PS1, PL 7.1.



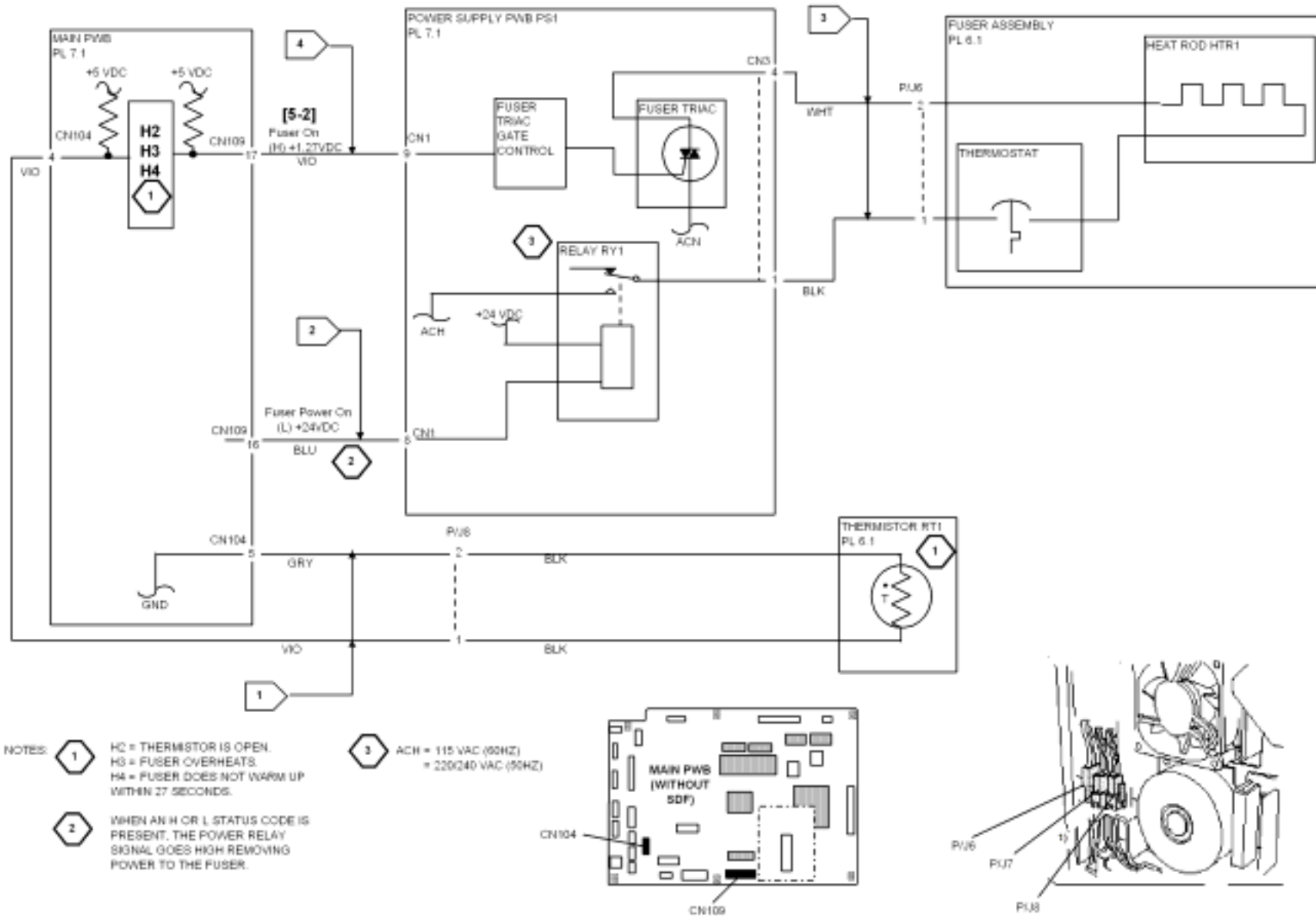


Figure 1 Fuser Heat (Without SDF)

## H4 Status Code RAP (With SDF)

The Main PWB sensed that the fuser did not reach 185° C within 27 seconds after power on or that the fuser dropped below 140° C for 6 seconds during the copy cycle.

**NOTE:** An H3/H4 status code must be cleared in diagnostics before the copier becomes operational again.

### Procedure

Switch off the Power. Disconnect the connector, PJ 6 from the Fuser assembly. Connect the meter on the machine side P/J6 between pins 1 and 2 (refer to Flag 3). Set the multimeter to measure AC. Enter diagnostic code 5-2. **When the Start button is pressed the machine input line voltage is measured for approximately 5 seconds.**

**Y N**  
Reconnect connector P/J6. Press the **Stop** button. Connect the DC Meter between CN101-16 and GND. Press the **Start** button. **The meter switches from +24 VDC to 0 VDC for 5 seconds.**

**Y N**  
Go to Flag 2 and check the wire for an open or short circuit. **The wire is good.**

**Y N**  
Repair the wire or replace the DC harness, PL 7.1.

Replace the Power Supply PWB PS1, PL 7.1.

Replace the Power Supply PWB PS1, PL 7.1.

Connect the meter between CN101-17 (+) on the Main PWB and GND (refer to Flag 3). Enter diagnostic code 14. **There is approximately 1.2 VDC present.**

**Y N**  
Replace the Main PWB, PL 7.1. If problem still exists, replace the Power Supply PWB PS1, PL 7.1.

Switch off the power. Set the multimeter to the 200 ohm range. Measure the Fuser side of the connector PJ 6 between pins 1 and 2. **There is 1.7 ohms + or - 0.5 ohms measured between pins 1 and 2 of P/J 6.**

**Y N**  
Replace the Fuser Assembly, PL 6.1.

Reconnect P/J6. Switch on the power. If the problem still exists, replace the Power Supply PWB PS1, PL 7.1.

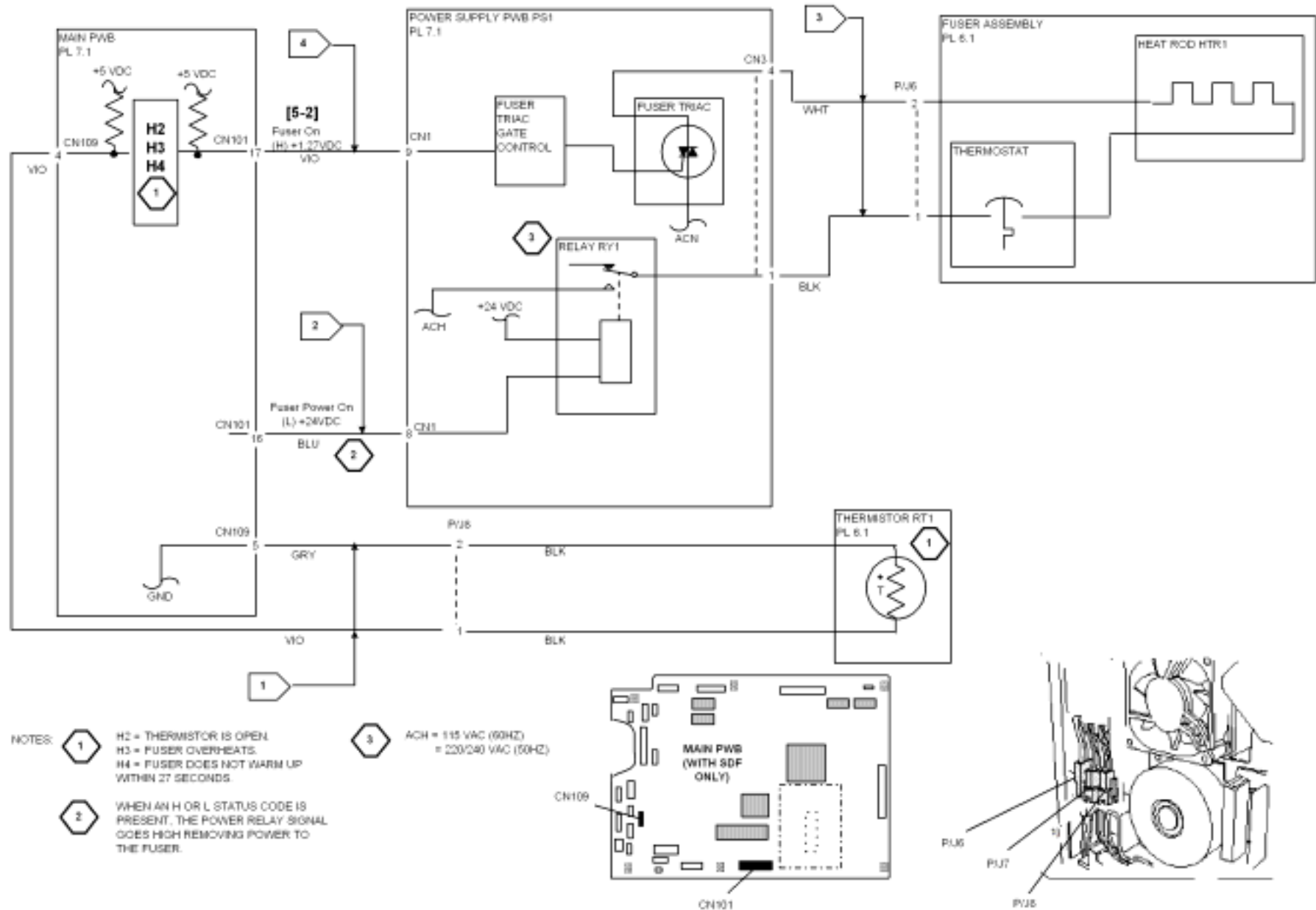


Figure 1 Fuser Heat (With SDF)

## J1 Status Code RAP (Without SDF)

J1, Indicates that the Toner Cartridge is empty.

### Initial Actions

Replace the Toner Cartridge. If a problem still exists, continue with the procedure.

**NOTE:** If the customer complains that the toner cartridge reached its end of life too soon, then instruct the customer that making copies with the document cover open or making copies with high image area coverage, such as photographs, will reduce the life of the toner cartridge.

### Procedure

Enter diagnostic code **10**.

**The Toner Motor comes on.**

Y N

Press Clear.

Set the meter to measure.

Connect the meter between PJ CN101-1 (+) and CN101-2 (-) on the Main PWB.

Press Start.

**There is approximately +22 VAC present.**

Y N

Replace the Main PWB, PL 7.1.

Go to Flag 1 and check for an open. If the wires are good, replace the Toner Motor MOT4, PL 2.1.

Switch off the power.

Connect the meter between, PJ CN113-3 on the Main PWB (+) and chassis (-).

Switch the power on.

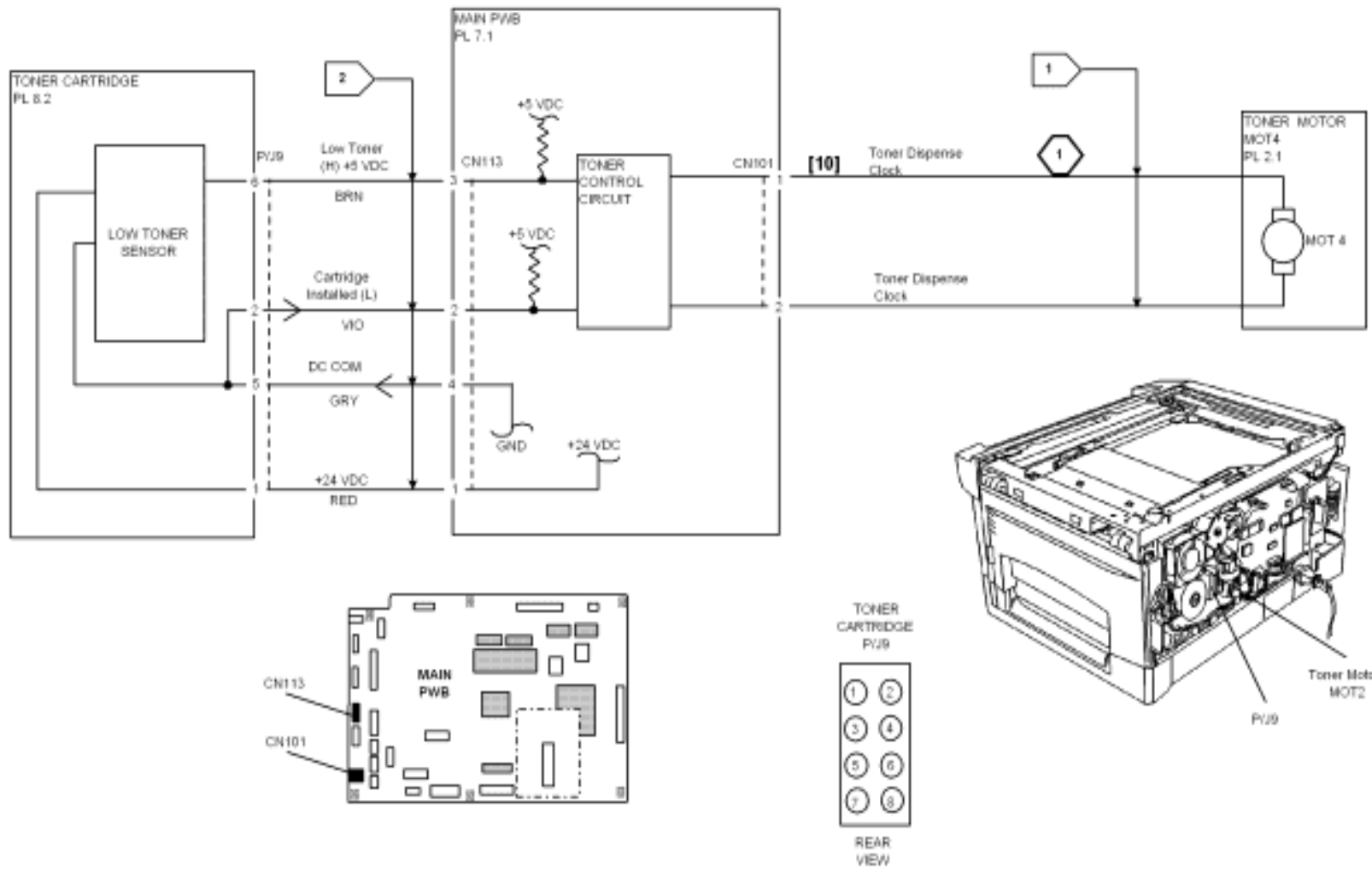
**There is a steady +5 VDC present.**

Y N

Replace the Main PWB, PL 7.1.

Perform the following:

- Go to Flag 2 and check the wires for an open circuit.
- Check for a mechanical drive problem to the Toner Cartridge.
- Replace the Toner Cartridge, PL 8.2.



NOTES: **1** THE TONER MOTOR IS ACTUATED WHEN LOW TONER CONCENTRATION IS SENSED BY THE LOW TONER SENSOR. IF THE MOTOR RUNS FOR 120 SECONDS AND THE LOW TONER SIGNAL IS STILL HIGH, THE TONER CARTRIDGE LAMP WILL FLASH.

Figure 1 J1 Status Code (Without SDF)

## J1 Status Code RAP (With SDF)

J1, Indicates that the Toner Cartridge is empty.

### Initial Actions

Replace the Toner Cartridge. If a problem still exists, continue with the procedure.

**NOTE:** If the customer complains that the toner cartridge reached its end of life too soon, then instruct the customer that making copies with the document cover open or making copies with high image area coverage, such as photographs, will reduce the life of the toner cartridge.

### Procedure

Enter diagnostic code **10**.

**The toner motor comes on.**

**Y N**

Press Clear.

Set the meter to measure.

Connect the meter between CN105-1 (+) and CN105-2 (-) on the Main PWB.

Press Start.

**There is approximately +22 VAC present.**

**Y N**

Replace the Main PWB, PL 7.1.

Go to Flag 1 and check for an open. If the wires are good, replace the Toner Motor MOT4, PL 2.1.

Switch off the power.

Connect the meter between, CN112-3 on the Main PWB (+) and chassis (-).

Switch the power on.

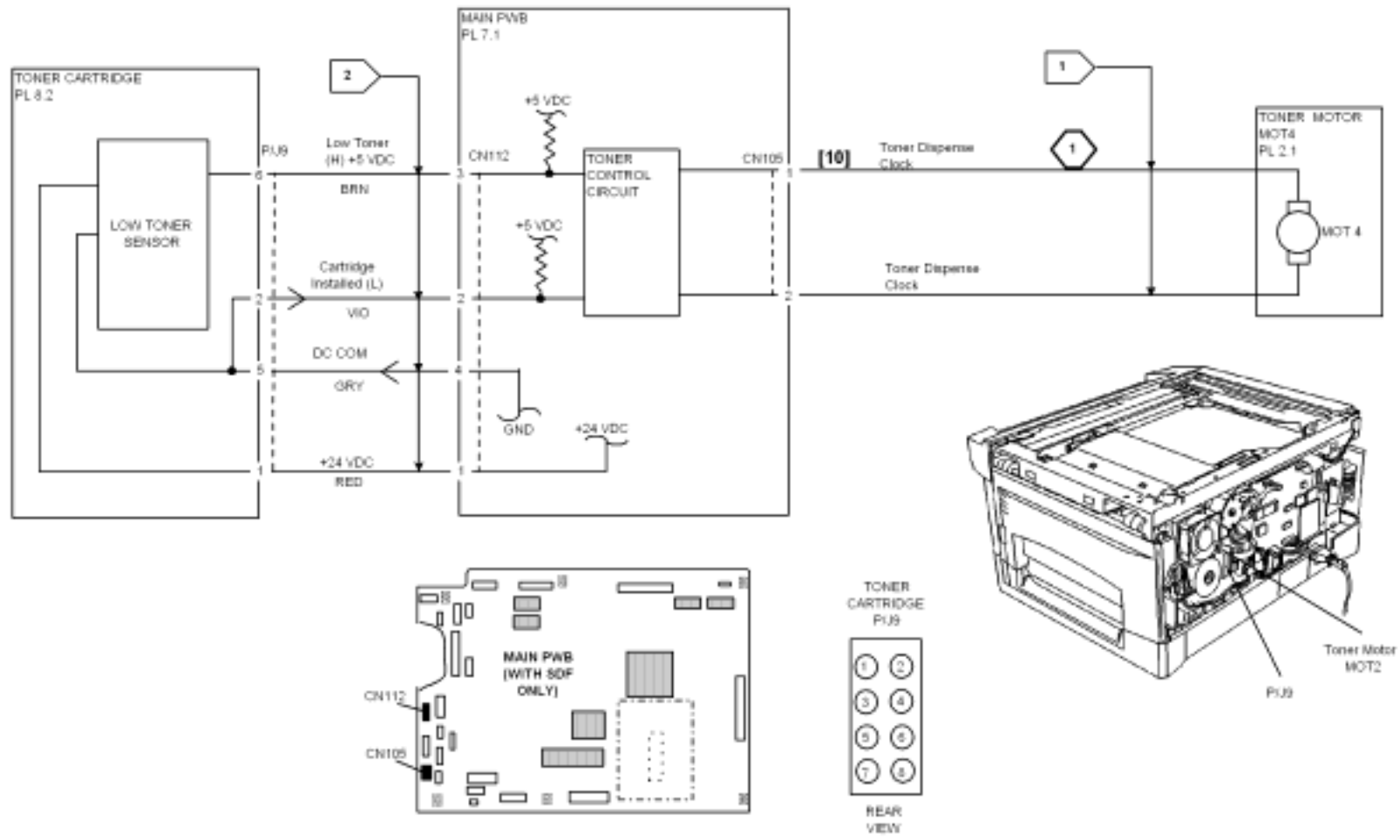
**There is a steady +5 VDC present.**

**Y N**

Replace the Main PWB, PL 7.1.

Perform the following:

- Go to Flag 2 and check the wires for an open circuit.
- Check for a mechanical drive problem to the Toner Cartridge.
- Replace the Toner Cartridge, PL 8.2.



NOTES: **1** THE TONER MOTOR IS ACTUATED WHEN LOW TONER CONCENTRATION IS SENSED BY THE LOW TONER SENSOR. IF THE MOTOR RUNS FOR 130 SECONDS AND THE LOW TONER SIGNAL IS STILL HIGH, THE TONER CARTRIDGE LAMP WILL FLASH.

Figure 1 J1 Status Code (With SDF)

## J2 Status Code RAP

J2, indicates the Drum Cartridge has reached the end of its life.

### Initial Actions

Replace the Drum Cartridge with a new, not used, Drum Cartridge. If a problem still exists, continue with the procedure.

### Procedure

**There is less than 0.5 VDC measured between PJ CN116-2 and GND.**

Y N

Go to Flag 1 and check the wires for an open circuit. If the wires are good, replace the Drum Cartridge Reset Switch, PL x.x.

Actuate the Drum Cartridge Reset Switch. **There is +5 VDC measured between PJ CN116-2 and GND.**

Y N

Go to Flag 1 and check the wires for a short circuit. If the wires are good, replace the Drum Cartridge Reset Switch, PL 5.1.

If the problem still exists, replace the Main PWB, PL 7.1.

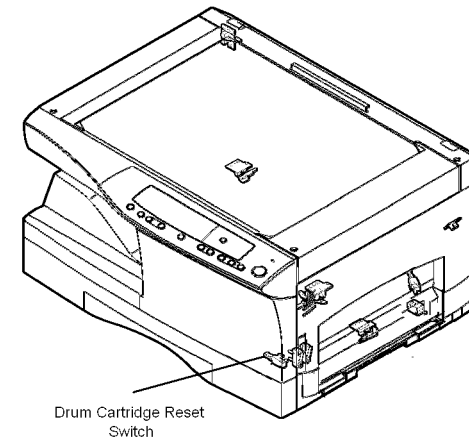


Figure 2 Drum Cartridge Reset Switch

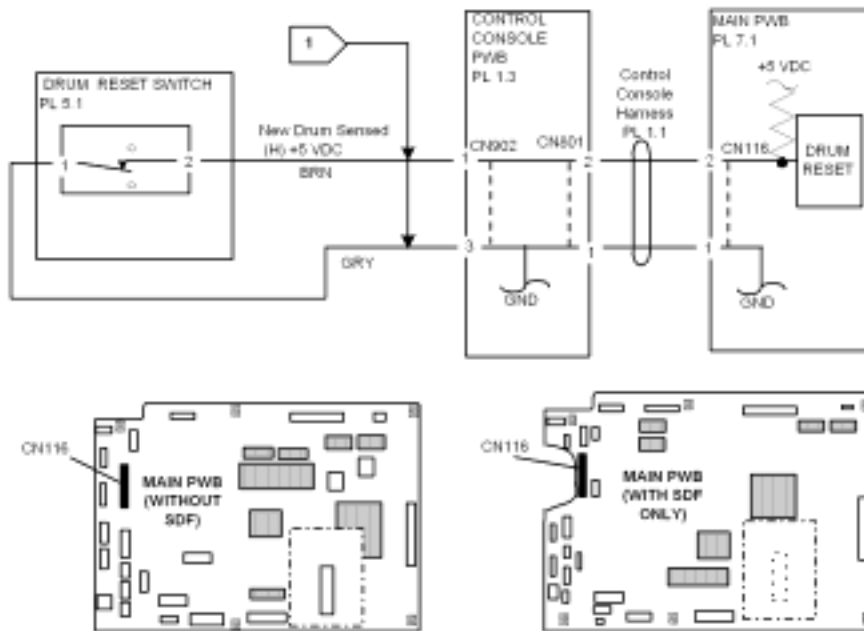


Figure 1 Drum Cartridge Reset circuit





## L1/L3 Status Code Rap (Without SDF)

**L1**, indicates that the Main PWB sensed that the carriage did not leave home after power up or after start is pressed.

**L3**, indicates that the Main PWB sensed that the carriage did not return home after power up or after the copy cycle.

**NOTE:** Ensure that the shipping screw was removed at install.

### Procedure

Switch off the power. Switch on the power. **The lamp carriage is in or moves to the home position.**

**Y N**  
Remove the right cover to gain access to the scan shaft. Manually rotate the scan shaft to position the carriage in the home position. Connect the meter to, PJ CN122-2 and GND. **There is +5 VDC measured.**

**Y N**  
Go to Flag 1 and check the wires for an open circuit. If the wires are good, replace the Scan Home Sensor Q5, PL 3.2.

Move the carriage off the home position. **The meter reads LOW.**

**Y N**  
Replace the Scan Home Sensor Q5, PL 3.2.

Go to the next step.

**There is +5 VDC measured between, PJ CN122-2 on the Main PWB and GND.**

**Y N**  
Go to Flag 2 and check the wires for a short circuit. If the wires are good, replace the Scan Home Sensor Q5, PL 3.2.

Enter diagnostic code 1-1. Press the Start button twice. **The carriage moved.**

**Y N**  
Connect the meter between, PJ CN120-1 (+) on the Main PWB and GND (-). **There is +24 VDC measured.**

**Y N**  
Replace the Main PWB, PL 7.1.

Check the following for wear or damage, PL 3.1:

- Scan Drive Gear/Pulley
- Scan Drive Belt
- Scan cables

**The components are good.**

**Y N**  
Replace the defective components, PL 3.1.

Go to Flag 1 and check the connection on CN120 on the Main PWB. If the connection is good replace the Scan Drive Motor MOT2, PL 3.1.

**A**  
Press the Clear button. Remove the right cover to gain access to the Scan Cable Drive Shaft, PL 3.1.

Manually rotate the Scan Cable Drive Shaft to position the carriage off the home position. Enter diagnostic code 1-1. **The Drum Cartridge lamp is off.**

**Y N**  
Go to Flag 2 and check for an open circuit. If the wires are good, replace the Scan Home Sensor Q5, PL 3.2.  
If the problem continues, replace the Main PWB, PL 7.1.

Check the following for wear or damage PL 3.1:

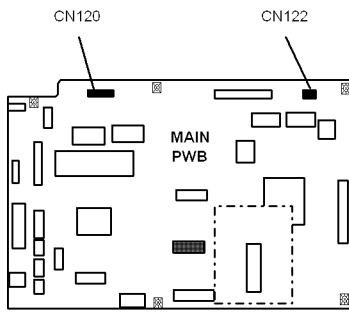
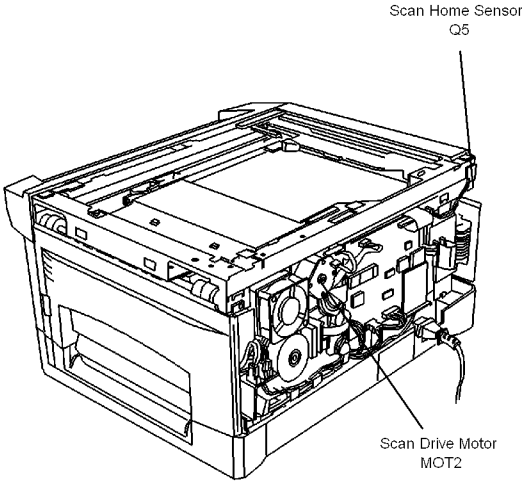
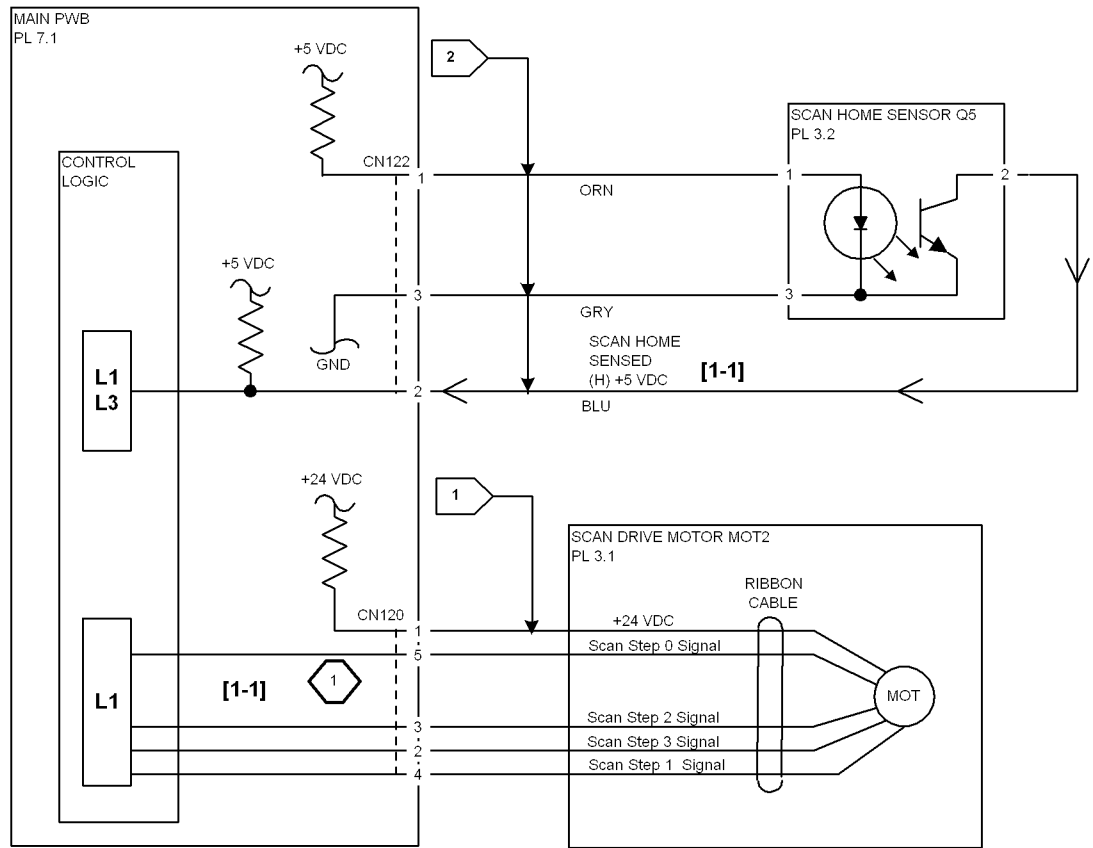
- Ribbon Cable connection to PJ CN120 on the Main PWB
- Scan Drive Gear/Pulley
- Scan Drive Belt
- Scan cables

**The components are good.**

**Y N**  
Repair and or replace the defective components PL 3.1, PL 3.2.

If the problem still exists, replacing the Main PWB, PL 7.1.

**A**



1  
STEP 0 THRU STEP 3 SIGNALS  
ARE APPROXIMATELY 22 VDC  
WHEN MOTOR IS OPERATING.

Figure 1 Scan Drive Circuit

## L1/L3 Status Code RAP (With SDF)

**L1**, indicates that the Main PWB sensed that the carriage did not leave home after power up or after start is pressed.

**L3**, indicates that the Main PWB sensed that the carriage did not return home after power up or after the copy cycle.

**NOTE:** Ensure that the shipping screw was removed at install.

### Procedure

Switch off the power. Switch on the power. **The lamp carriage is in or moves to the home position.**

**Y N**  
Remove the right cover to gain access to the scan shaft. Manually rotate the scan shaft to position the carriage in the home position. Connect the meter to, PJ CN125-2 and GND. **There is +5 VDC measured.**

**Y N**  
Go to Flag 1 and check the wires for an open circuit. If the wires are good, replace the Scan Home Sensor Q5, PL 3.2.

Move the carriage off the home position. **The meter reads LOW.**

**Y N**  
Replace the Scan Home Sensor Q5, PL 3.2.

Go to the next step.

**There is +5 VDC measured between, PJ CN125-2 on the Main PWB and GND.**

**Y N**  
Go to Flag 2 and check the wires for a short circuit. If the wires are good, replace the Scan Home Sensor Q5, PL 3.2.

Enter diagnostic code 1-1. Press the Start button twice. **The carriage moved.**

**Y N**  
Connect the meter between, PJ CN122-1 (+) on the Main PWB and GND (-). **There is +24 VDC measured.**

**Y N**  
Replace the Main PWB, PL 7.1.

Check the following for wear or damage, PL 3.1:

- Scan Drive Gear/Pulley
- Scan Drive Belt
- Scan cables

**The components are good.**

**Y N**  
Replace the defective components, PL 3.1.

Go to Flag 1 and check the connection on CN122 on the Main PWB. If the connection is good replace the Scan Drive Motor MOT2, PL 3.1.

**A**  
Press the Clear button. Remove the right cover to gain access to the Scan Cable Drive Shaft, PL 3.1.

Manually rotate the Scan Cable Drive Shaft to position the carriage off the home position. Enter diagnostic code 1-1. **The Drum Cartridge lamp is off.**

**Y N**  
Go to Flag 2 and check for an open circuit. If the wires are good, replace the Scan Home Sensor Q5, PL 3.2.  
If the problem continues, replace the Main PWB, PL 7.1.

Check the following for wear or damage PL 3.1:

- Ribbon Cable connection to PJ CN122 on the Main PWB
- Scan Drive Gear/Pulley
- Scan Drive Belt
- Scan cables

**The Components are good.**

**Y N**  
Repair and or replace the defective components PL 3.1, PL 3.2.

If the problem still exists, replacing the Main PWB, PL 7.1.

**A**

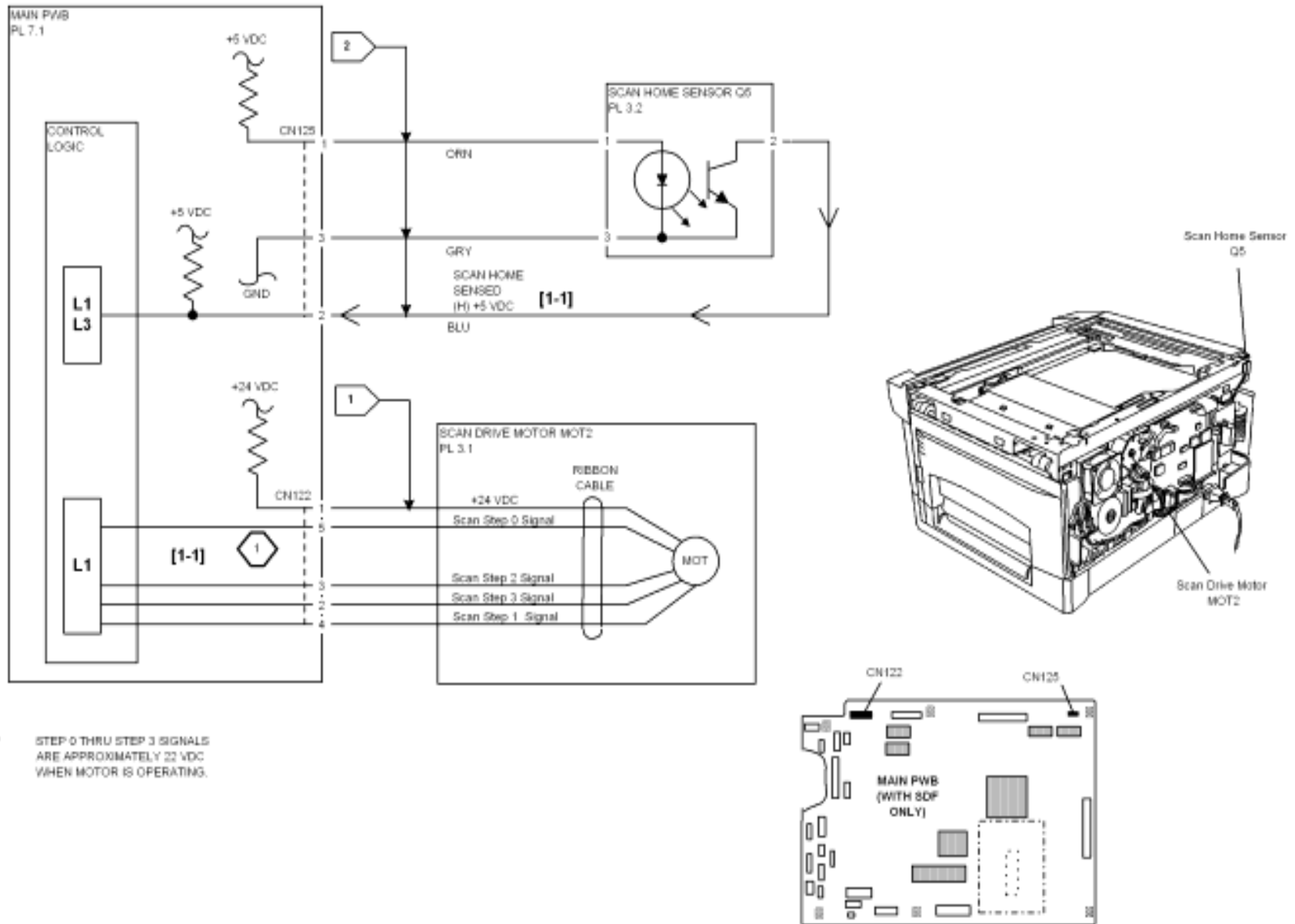


Figure 1 L1/L3 Status Code (With SDF)

## L4 Status Code RAP (Without SDF)

The Main PWB sensed a Main Drive Motor MOT1 problem.

### Initial Actions

Clear any jams in the paper path and ensure that the Side Door is closed.

### Procedure

Enter diagnostic code 25-1. **The main motor comes on.**

**Y N**  
Press the Clear button. Check the Ribbon Cable connection to PJ CN114 on the Main PWB. **The connection and the Ribbon Cable from the Main Drive Motor MOT1 are good.**

**Y N**  
Repair or replace the Main Drive Ribbon Cable, PL 2.2.

Switch off the power. **The housing of the Main Drive Motor can be turned by hand.**

**Y N**  
Check for a mechanical problem such as binding or broken gears or a binding drum cartridge. Repair and or replace as necessary PL 2.2.

Switch on the power. Connect the meter from PJ CN114 pins 1 and 2 (+) on the Main PWB and GND (-). **There is +24 VDC present.**

**Y N**  
Replace the Main PWB, PL 7.1.

Connect the meter to CN1 pins 1 and 2 (+) on the Main Drive Motor and GND (-). **There is +24 VDC present.**

**Y N**  
Replace the Main Drive Ribbon Cable, PL 2.2.

Press Start.

**The voltage decreases to approximately 10 to 14 VDC.**

**Y N**  
Replace the Main PWB, PL 7.1.

If the problem still exists, replace the Main Drive Motor MOT1, PL 2.2.

Check for a mechanical problem such as binding or broken gears or a binding drum cartridge. Repair/replace as necessary, PL 2.2.

If the problem still exists, replace the Main Drive Motor MOT1, PL 2.2.

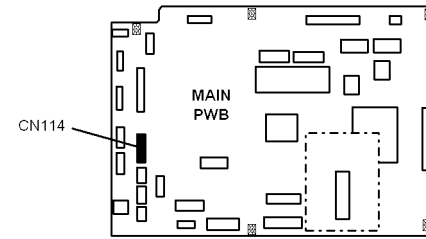
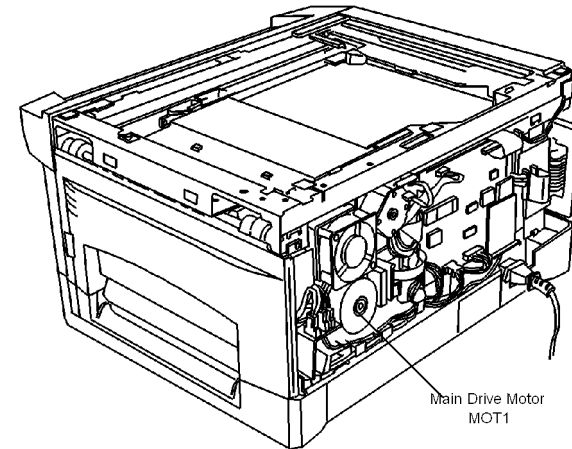


Figure 1 Main PWB



## L4 Status Code RAP (With SDF)

The Main PWB sensed a Main Drive Motor MOT1 problem.

### Initial Actions

Clear any jams in the paper path and ensure that the Side Door is closed.

### Procedure

Enter diagnostic code 25-1. **The main motor comes on.**

**Y N**  
Press the Clear button. Check the Ribbon Cable connection to PJ CN113 on the Main PWB. **The connection and the Ribbon Cable from the Main Drive Motor MOT1 are good.**

**Y N**  
Repair or replace the Main Drive Ribbon Cable, PL 2.2.

Switch off the power. **The housing of the Main Drive Motor can be turned by hand.**

**Y N**  
Check for a mechanical problem such as binding or broken gears or a binding drum cartridge. Repair and or replace as necessary PL 2.2.

Switch on the power. Connect the meter from PJ CN113 pins 1 and 2 (+) on the Main PWB and GND (-). **There is +24 VDC present.**

**Y N**  
Replace the Main PWB, PL 7.1.

Connect the meter to CN1 pins 1 and 2 (+) on the Main Drive Motor and GND (-). **There is +24 VDC present.**

**Y N**  
Replace the Main Drive Ribbon Cable, PL 2.2.

Press Start.

**The voltage decreases to approximately 10 to 14 VDC.**

**Y N**  
Replace the Main PWB, PL 7.1.

If the problem still exists, replace the Main Drive Motor MOT1, PL 2.2.

Check for a mechanical problem such as binding or broken gears or a binding drum cartridge. Repair/replace as necessary, PL 2.2.

If the problem still exists, replace the Main Drive Motor MOT1, PL 2.2.

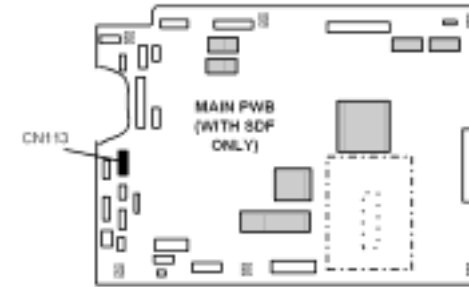
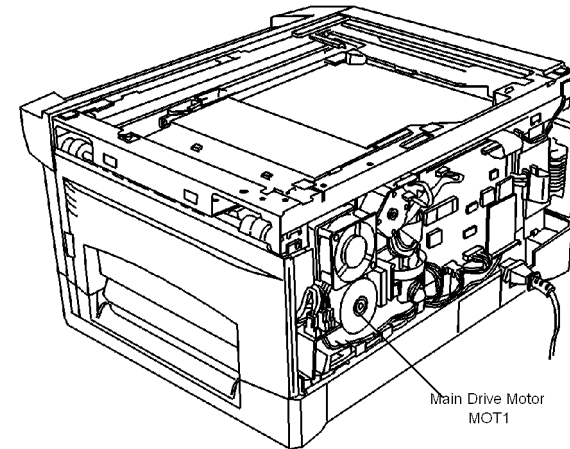


Figure 1 Main PWB (With SDF)



## L6 Status Code RAP (Without SDF)

The Main PWB sensed a Polygon motor lock signal error.

### Procedure

Enter diagnostic code **25-10**. **The Polygon Motor comes on for 30 seconds.**

**Y N**  
Check the connector CN115 on the Main PWB and the wires and connectors on the Laser Module. **The connections and wires are good.**  
**Y N**  
Replace the Laser Harness, PL 3.3.  
If the problem still exists, replace the Laser Module, PL 3.3.

Switch the power off. Switch the power on. If the problem still exists, replace the Laser Module, PL 3.3.

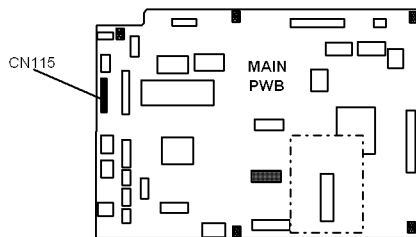


Figure 1 Main PWB

## L6 Status Code RAP (With SDF)

The Main PWB sensed a Polygon motor lock signal error.

### Procedure

Enter diagnostic code **25-10**. **The Polygon Motor comes on for 30 seconds.**

**Y N**  
Check the connector CN119 on the Main PWB and the wires and connectors on the Laser Module. **The connections and wires are good.**  
**Y N**  
Replace the Laser Harness, PL 3.3.  
If the problem still exists, replace the Laser Module, PL 3.3.

Switch the power off. Switch the power on. If the problem still exists, replace the Laser Module, PL 3.3.

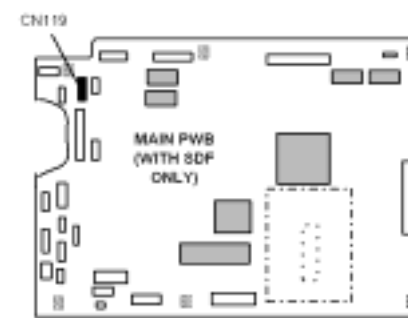


Figure 1 Main PWB (With SDF)





## P Status Code RAP (Without SDF)

The Main PWB sensed that the selected Paper Tray is out of paper or a misfeed has occurred.

### Initial Actions

Ensure pressure plate lock is removed from the paper tray.

Ensure the side and rear paper guides are installed and that they are not too tight against the paper.

### Procedure

Enter the diagnostic code **30-1**.

Manually actuate and deactuate the Paper Feed Sensor Q1 while observing the Toner Cartridge lamp. **The Toner Cartridge lamp turns on and off.**

**Y N**

Perform the following:

- Check the sensor actuator for proper operation PL 5.1.
- Go to Flag 1 and check the wires for an open circuit.

If the checks are good, replace the Paper Feed Sensor Q1, PL 5.1.

**The P status code occurs only when the Bypass Tray is used.**

**Y N**

The P status code occurs only when the main tray is used.

Enter the diagnostic code **6-1**.

Connect the meter between PJ CN102-2 (+) on the Main PWB and ground (-). Press the **Start** button.

**The meter alternates between +24 VDC and GND.**

**Y N**

Replace the Main PWB, PL 7.1.

Go to Flag 2 and check the wires for an open circuit. If the wires are good, replace the Paper Feed Solenoid SOL1, PL 2.2.

Enter the diagnostic code **6-1**.

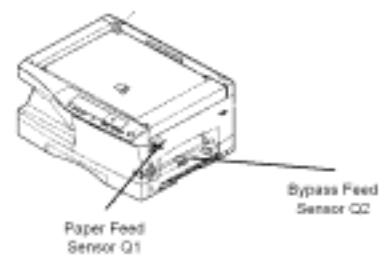
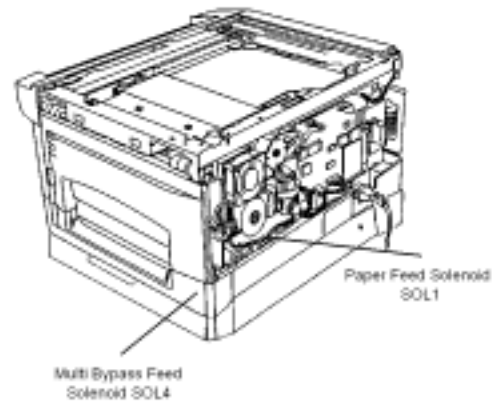
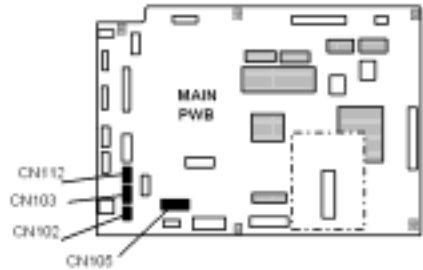
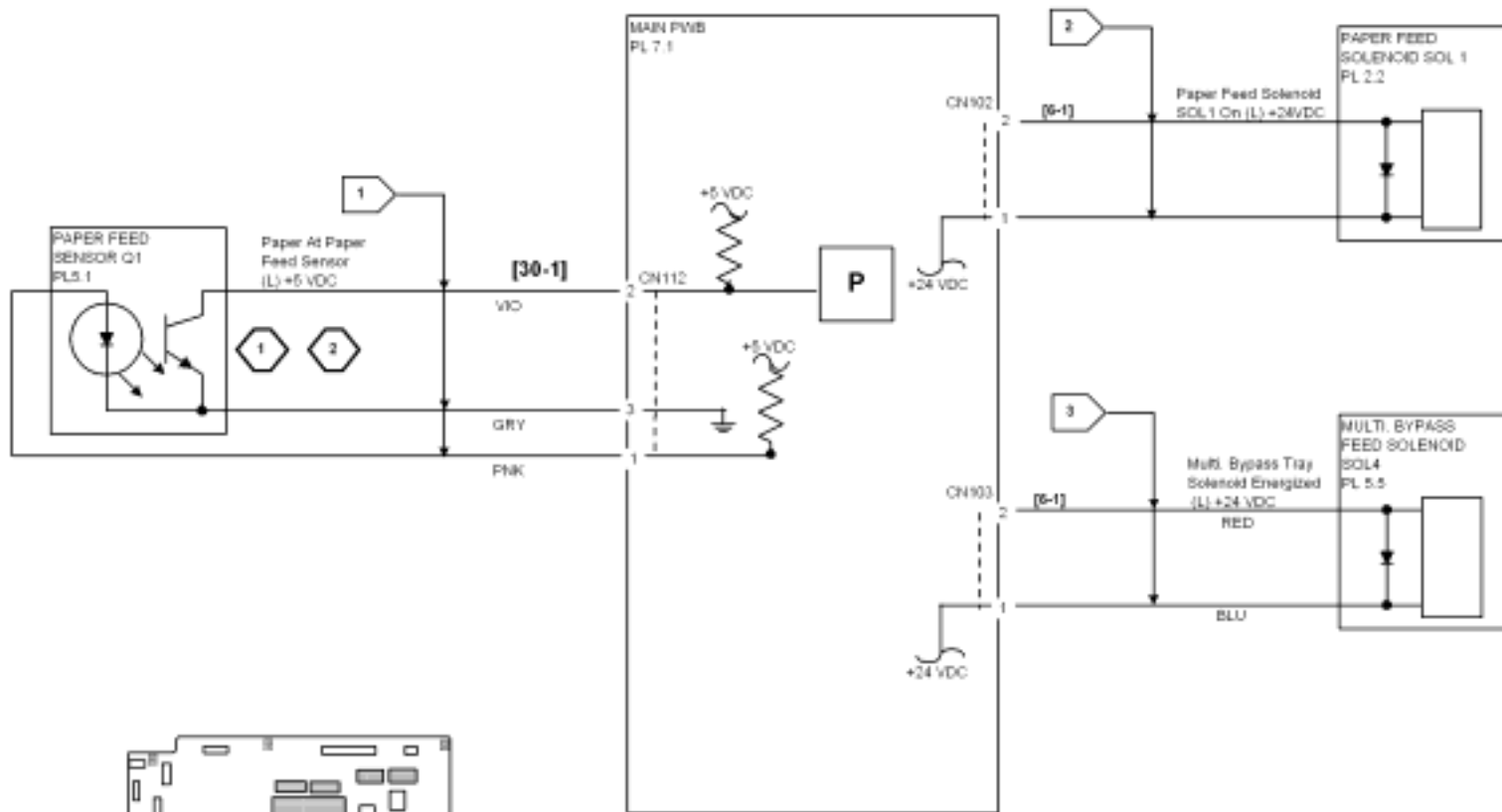
Connect the meter between, PJ CN111-2 (+) on the Main PWB and ground (-). Press the Start button. **The meter alternates between +24 VDC and GND.**

**Y N**

Replace the Main PWB, PL 7.1.

Check for a mechanical problem preventing the paper from feeding.

If the problem still exists, go to Flag 3 and check the wires for an open circuit. If the wires are good, replace the Bypass Feed Solenoid SOL4, PL 2.2.



NOTES:

- 1 A PAPER JAM WILL OCCUR (PAPER JAM LAMP FLASHING) IF:
  - A. THE PAPER FEED SENSOR IS ACTUATED AT POWER ON
  - B. THE PAPER FEED SENSOR DOES NOT DEACTIVATE IN TIME
- 2 A FLASHING "P" STATUS CODE WILL BE DISPLAYED IF THE PAPER FEED SENSOR Q1 IS NOT ACTUATED IN TIME AFTER START IS PRESSED.

Figure 1 P Code (Without SDF)

## P Status Code RAP (With SDF)

The Main PWB sensed that the selected Paper Tray is out of paper or a misfeed has occurred.

### Initial Actions

Ensure pressure plate lock is removed from the paper tray.

Ensure the side and rear paper guides are installed and that they are not too tight against the paper.

### Procedure

Enter the diagnostic code **30-1**.

Manually actuate and deactuate the Paper Feed Sensor Q1 while observing the Toner Cartridge lamp. **The Toner Cartridge LED comes on and goes off.**

Y N

Perform the following:

- Check the sensor actuator for proper operation PL 5.1.
- Go to Flag 1 and check the wires for an open circuit.

If the checks are good, replace the Paper Feed Sensor Q1, PL 5.1.

Manually actuate and deactuate the Tray 2 Feed Sensor Q7 while observing the Toner Cartridge lamp. **The Toner cartridge LED comes on and goes off.**

Y N

Perform the following:

- Check the sensor actuator for proper operation PL 5.8.
- Go to Flag 2 and check the wires for an open circuit.
- If the checks are good, replace the Tray 2 Paper Feed Sensor Q7, PL 5.8.

The P status code occurs when using the Main Tray.

Y N

The P status code occurs when using Tray 2.

Y N

The P status code occurs when using the Multisheet bypass Tray.

Y N

Return to The Call Flow Section of this manual to redefine the problem.

Enter the diagnostic Code **6-1** and select Multi Bypass Tray. Press the **Start** button.

**The Multi Bypass Feed Solenoid SOL 4, engages and disengages several times.**

Y N

Go to Flag 5 and check the wires for an open circuit. If the wires are good, replace the Multi Bypass Solenoid SOL 4, PL 5.5.

Check for a mechanical problem preventing the paper from feeding PL 5.5.

Enter the diagnostic Code **6-1** and select Tray 2. Press the **Start** button. **The Tray 2 Feed Solenoid SOL2, engages and disengages several times.**

Y N

Go to Flag 4 and check the wires for an open circuit. If the wires are good, replace the Tray 2 Solenoid SOL 2, PL5.8.

A B

Check for a mechanical problem preventing the paper from feeding PL5.8.

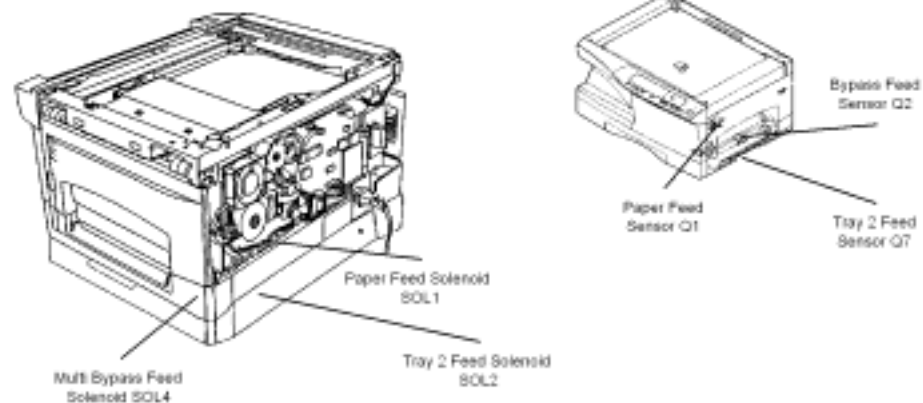
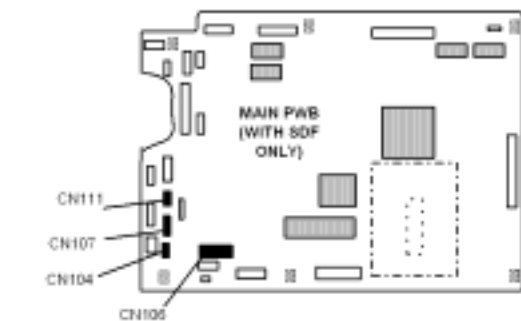
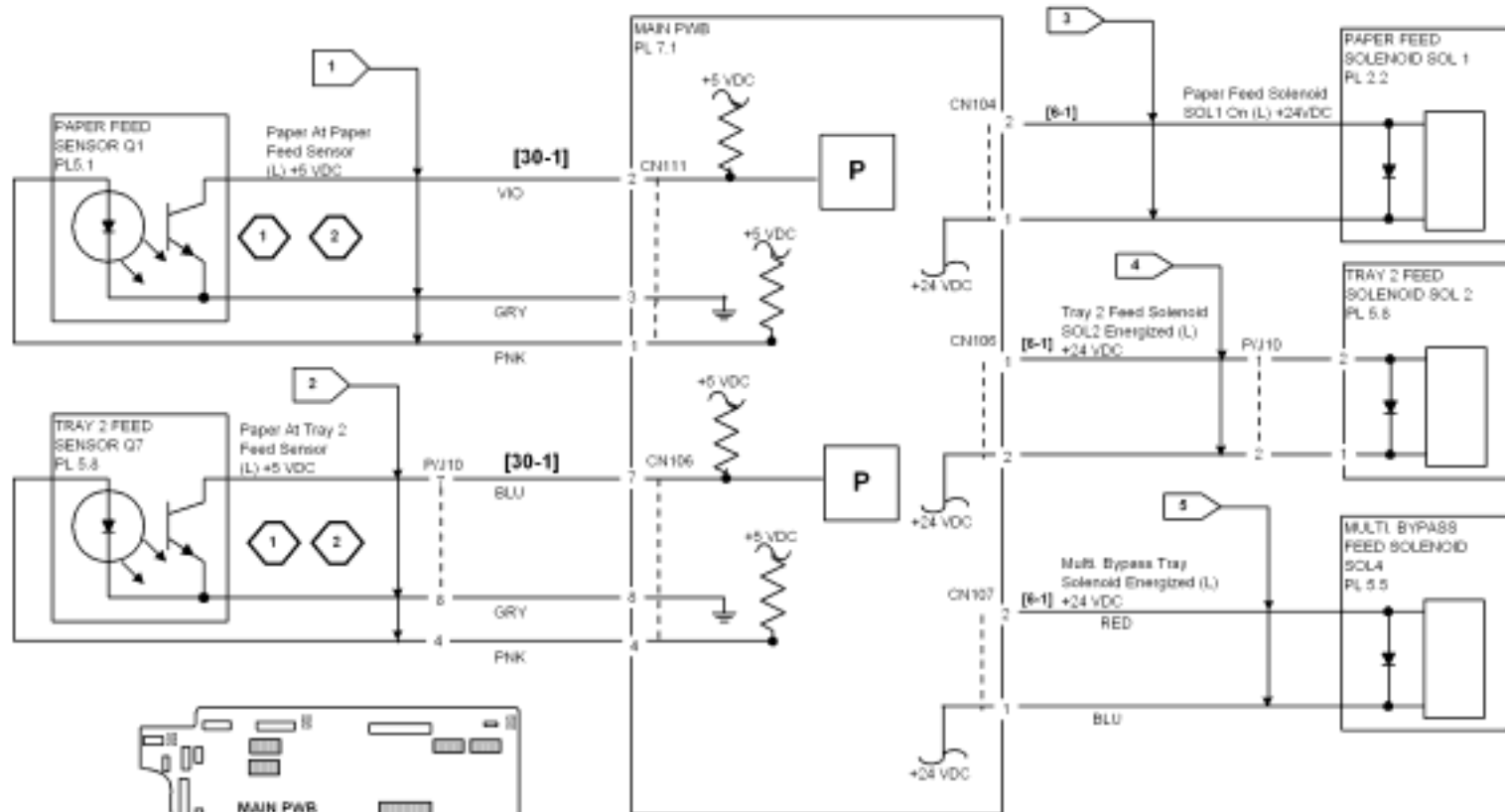
Enter the diagnostic Code **6-1** and select the Main Tray. Press the **Start** button. **The Paper Feed Solenoid SOL1, engages and disengages several times.**

Y N

Go to Flag 3 and check the wires for an open circuit. If the wires are good, replace the Paper Feed Solenoid SOL 11, PL 2.2.

Check for a mechanical problem preventing the paper from feeding PL 2.2.

A B



NOTES:

- 1 A PAPER JAM WILL OCCUR (PAPER JAM LAMP FLASHING) IF:
  - A. THE PAPER FEED SENSOR IS ACTUATED AT POWER ON
  - B. THE PAPER FEED SENSOR DOES NOT DEACTUATE IN TIME
- 2 A FLASHING "P" STATUS CODE WILL BE DISPLAYED IF THE PAPER FEED SENSOR Q1 IS NOT ACTUATED IN TIME AFTER START IS PRESSED.

Figure 1 P Code (With SDF)

## U2-[01] / U2-[04] Status Code RAP

U2-[02] indicates that the Main PWB sensed a memory failure.

U2-[04] indicates a that the Main PWB sensed an access error.

### Procedure

Perform the U2 Status Code Clear Procedure:

- Enter the diagnostic code **16**.
- Press the Start button.

If the problem still exists, replace the Main PWB, PL 7.1.

## Drum Cartridge LED On RAP

The Drum Cartridge Lamp on steady indicates that the Drum Cartridge is near end of life.

### Procedure

If the Drum Cartridge LED is still on or flashing after changing the Cartridge, go to the, J2 Status Code RAP.

## Toner Cartridge LED On RAP

Indicates that a low toner condition exists.

### Initial Actions

**NOTE:** *If the customer complains that the toner cartridge reached its end of life too soon, then instruct the customer that making copies with the document cover open or making copies with high image area coverage, such as photographs, will reduce the life of the toner cartridge.*

### Procedure

Replace the Toner Cartridge, PL 8.2. If the problem still exists, go to the, J1 Status Code RAP (Without SDF) or the J1 Status Code RAP (With SDF).

## 1.1 Power ON RAP (Without SDF)

### Initial Actions

Ensure that input power is measured at the machine power cord.

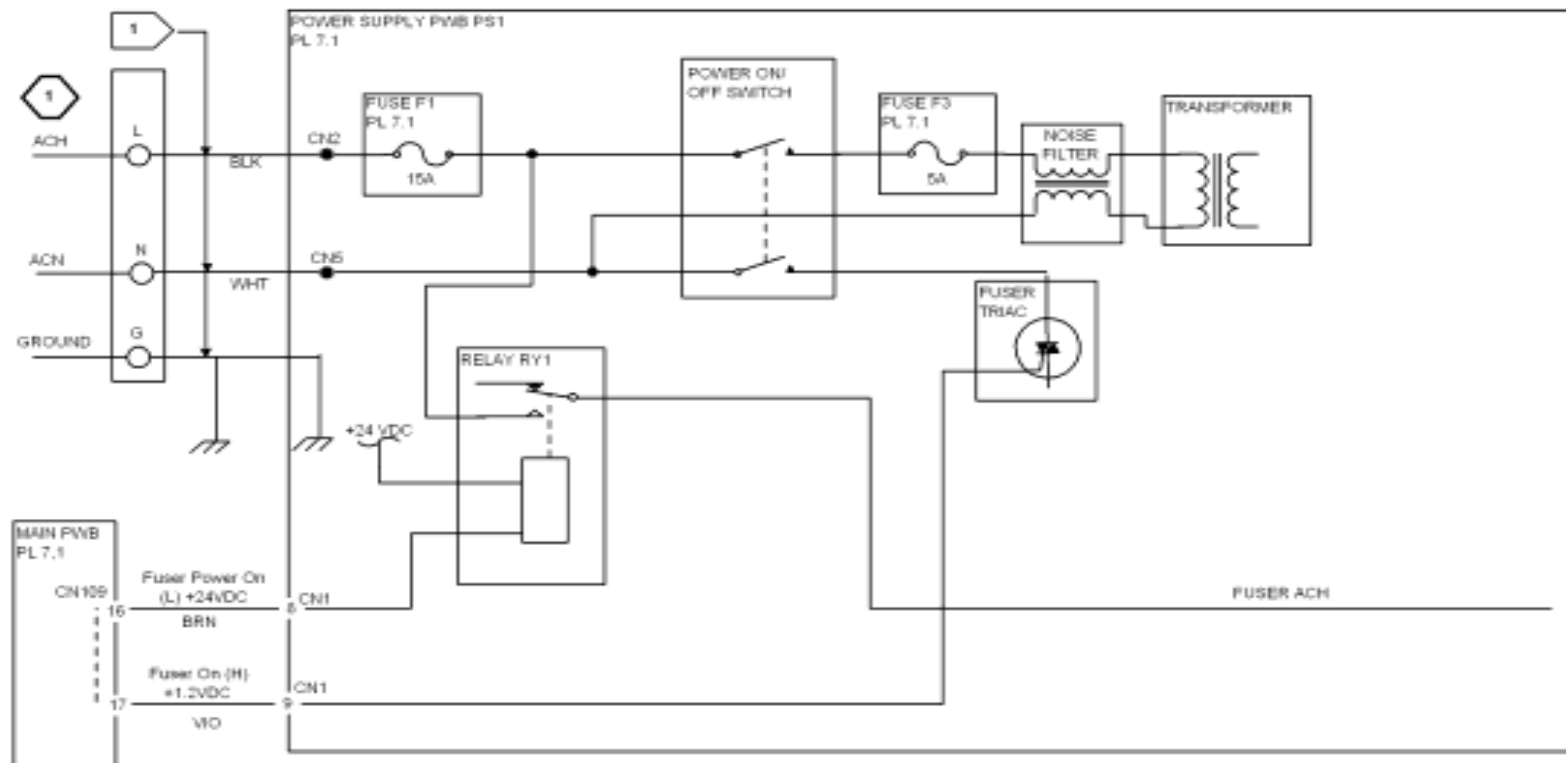
### Procedure

Switch off the power. While observing the Exposure Lamp Assembly, switch on the power.

**The Exposure Lamp Assembly moves.**

Y N  
|  
The Control Console is blank.  
Y N  
|  
Go to the 2.1 Selection/Indication RAP (without SDF).  
|  
There is +5 VDC measured from PJ CN109 pin 21 and pin 22 to GND on the Main PWB.  
Y N  
|  
ACH is measured between PJ CN2 & CN5 on the Power Supply PWB.  
Y N  
|  
Go to Flag 1 and check for an open circuit.  
|  
Switch off the power. Disconnect the power. Check Fuses PJ F1 & F3 on the Power Supply PWB for an open circuit. **The Fuses are good.**  
Y N  
|  
Replace the defective Fuse, PL 7.1. Switch on the power. **The problem is resolved.**  
Y N  
|  
Replace the Power Supply PWB, PL 7.1.  
|  
Make several copies to ensure the problem is resolved.  
|  
Replace the Power Supply PWB, PL 7.1.  
|  
There is +24 VDC measured from PJ CN109 pins 7 and pin 8 to GND, on the Main PWB.  
Y N  
|  
Go to the 1.2 DC Power (With SDF).  
|  
Go to the 2.2 Selection RAP (Without SDF).  
|  
Go to the 1.2 DC Power (With SDF).





Notes:  ACH = 115 VAC (60HZ)  
= 220/240 VAC (50HZ)

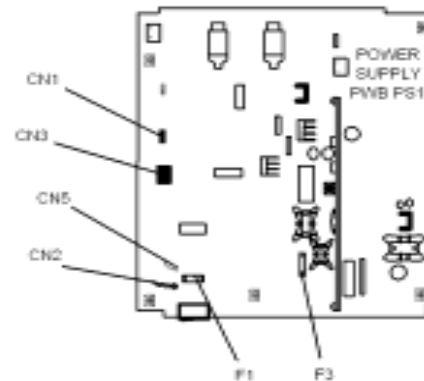


Figure 1 1.1 Power On (Without SDF)

## 1.1 Power On RAP (With SDF)

### Initial Actions

Ensure that input power is measured at the machine power cord.

### Procedure

Switch off the power. While observing the Exposure Lamp Assembly, switch on the power.

**The Exposure Lamp Assembly moves.**

Y N  
|  
The Control Console is blank.  
Y N  
|  
Go to the 2.1 Selection/Indication RAP (without SDF).  
  
There is +5 VDC measured from PJ CN101 pin 21 and pin 22 to GND on the Main PWB.  
Y N  
|  
ACH is measured between PJ CN2 & CN5 on the Power Supply PWB.  
Y N  
|  
Go to Flag 1 and check for an open circuit.  
  
Switch off the power. Disconnect the power. Check Fuses PJ F1 and F3 on the Power Supply PWB for an open circuit. **The Fuses are good.**  
Y N  
|  
Replace the defective Fuse, PL 7.1. Switch on the power. **The problem is resolved.**  
Y N  
|  
Replace the Power Supply PWB, PL 7.1.  
|  
Make several copies to ensure the problem is resolved.  
|  
Replace the Power Supply PWB, PL 7.1.  
  
There is +24 VDC measured from PJ CN101 pins 7 and pin 8 to GND, on the Main PWB.  
Y N  
|  
Go to the 1.2 DC Power (With SDF).  
|  
Go to the 2.2 Selection RAP (Without SDF).  
  
Go to the 1.2 DC Power (With SDF).

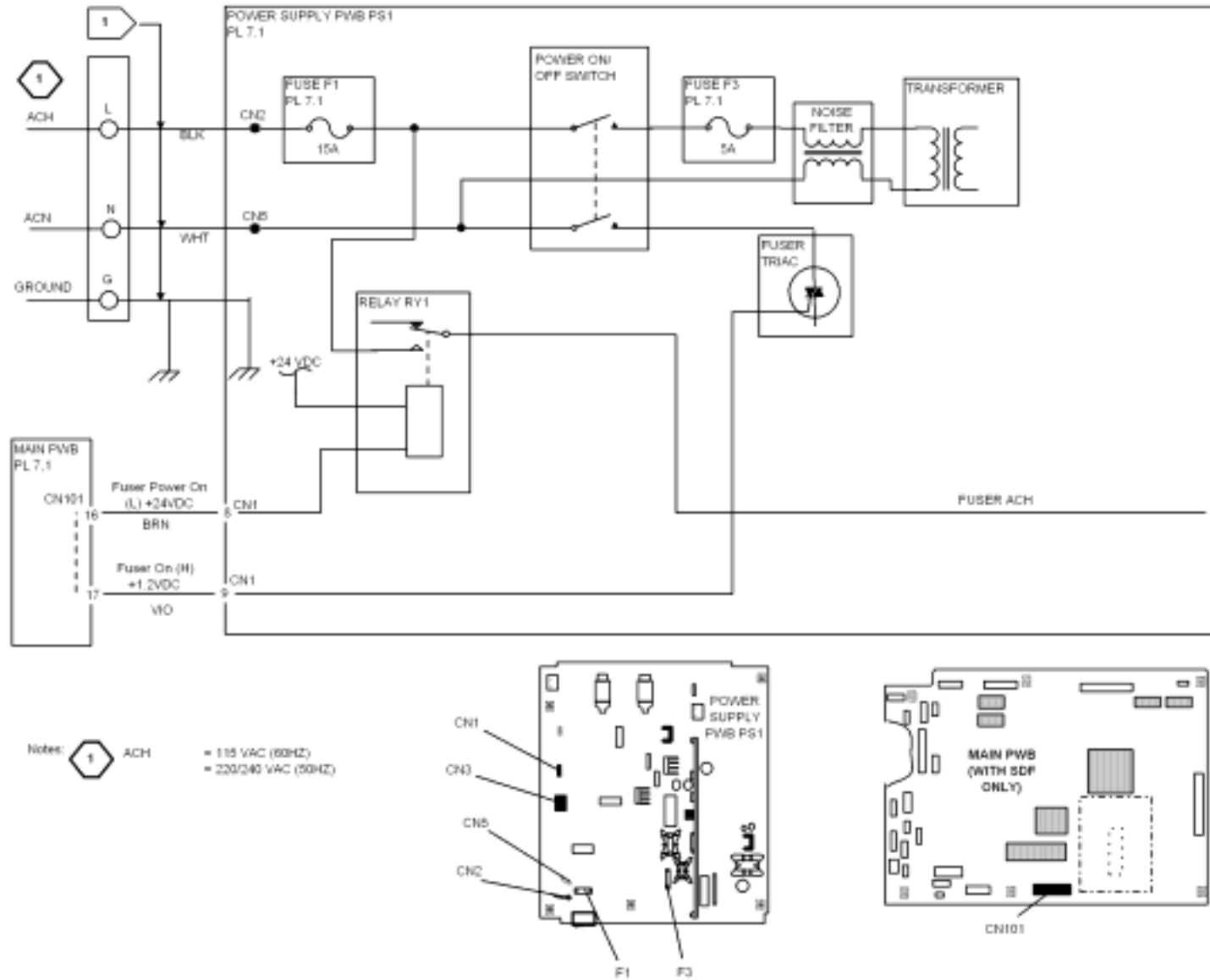


Figure 1 1.1 Power On (With SDF)

## 1.2 DC Power RAP (Without SDF)

**NOTE:** Enter this RAP from the 1.1 Power ON RAP (Without SDF) or the 1.1 Power On RAP (With SDF) only.

### Procedure

**There is +24 VDC measured between PJ CN109-7 and GND.**

**Y N**  
| Go to Flag 1. Check the wires for an open circuit.

**There is +12 VDC measured between PJ CN109-19 and GND.**

**Y N**  
| Go to Flag 2. Check the wires for an open circuit.

**There is +3.3 VDC measured between PJ CN109-20 and GND.**

**Y N**  
| Go to Flag 3. Check the wire for an open circuit. If the wire is good, replace the Power Supply PWB PS1, PL 7.1.

**There is +5 VDC measured between CN109-21 and GND.**

**Y N**  
| Go to Flag 4. Check the wires for an open circuit.

If the problem still exists, refer to BSD, 1.2 Power Generation and Distribution (Section 7) for further DC power distribution checks. Check for an intermittent or loose connection. If the problem continues, replace the Main PWB, PL 7.1.

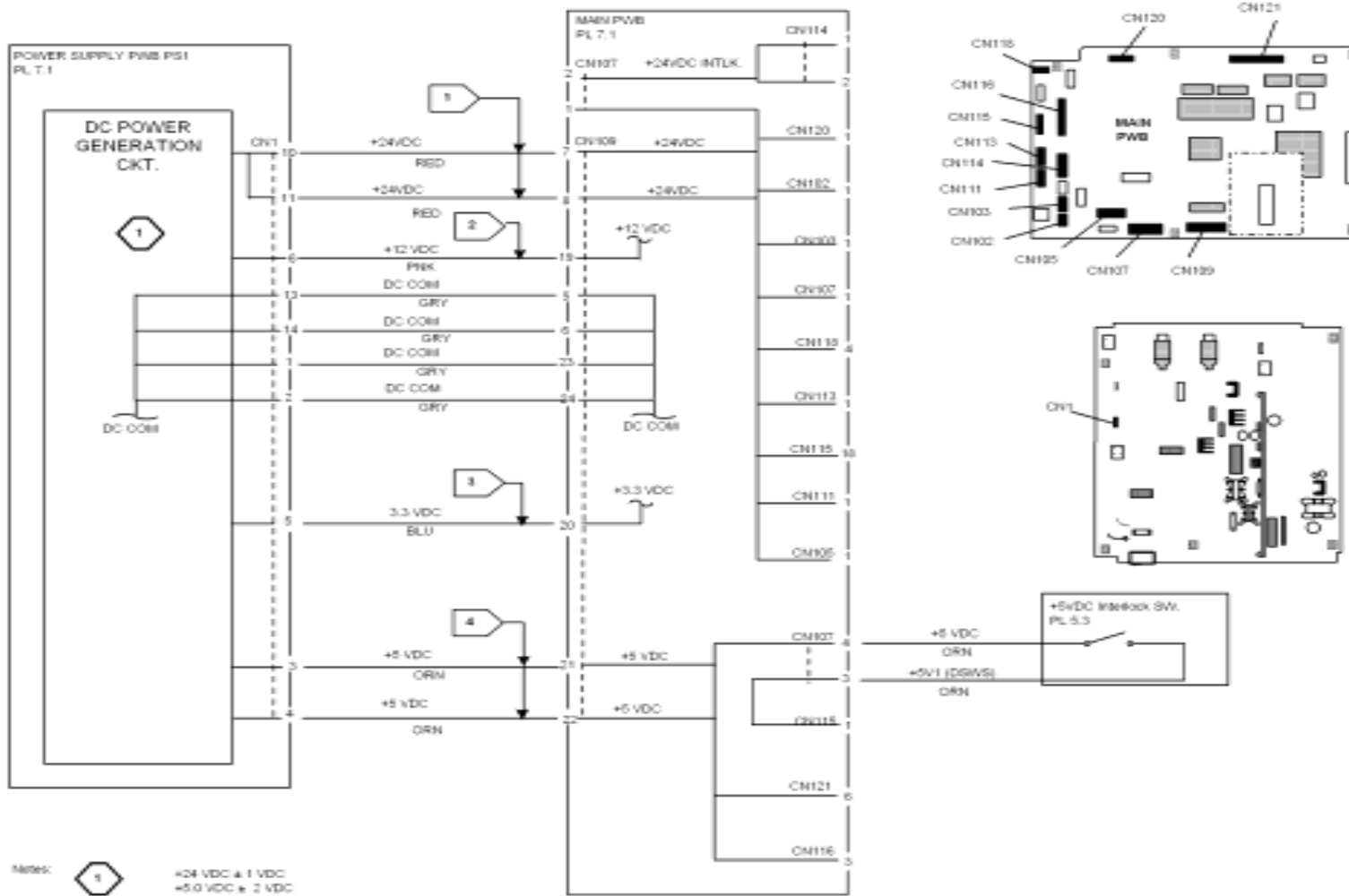


Figure 1 1.2 DC Power (Without SDF)

## 1.2 DC Power (With SDF)

**NOTE:** Enter this RAP from the 1.1 Power ON RAP (Without SDF) or the 1.1 Power On RAP (With SDF) only.

### Procedure

**There is +24 VDC measured between PJ CN101-7 and GND.**

**Y N**  
| Go to Flag 1. Check the wires for an open circuit.

**There is +12 VDC measured between PJ CN101-19 and GND.**

**Y N**  
| Go to Flag 2. Check the wires for an open circuit.

**There is +3.3 VDC measured between PJ CN101-20 and GND.**

**Y N**  
| Go to Flag 3. Check the wire for an open circuit. If the wire is good, replace the Power Supply PWB PS1, PL 7.1.

**There is +5 VDC measured between CN109-21 and GND.**

**Y N**  
| Go to Flag 4. Check the wires for an open circuit.

If the problem still exists, refer to BSD, 1.2 Power Generation and Distribution (Section 7) for further DC power distribution checks. Check for an intermittent or loose connection. If the problem continues, replace the Main PWB, PL 7.1.

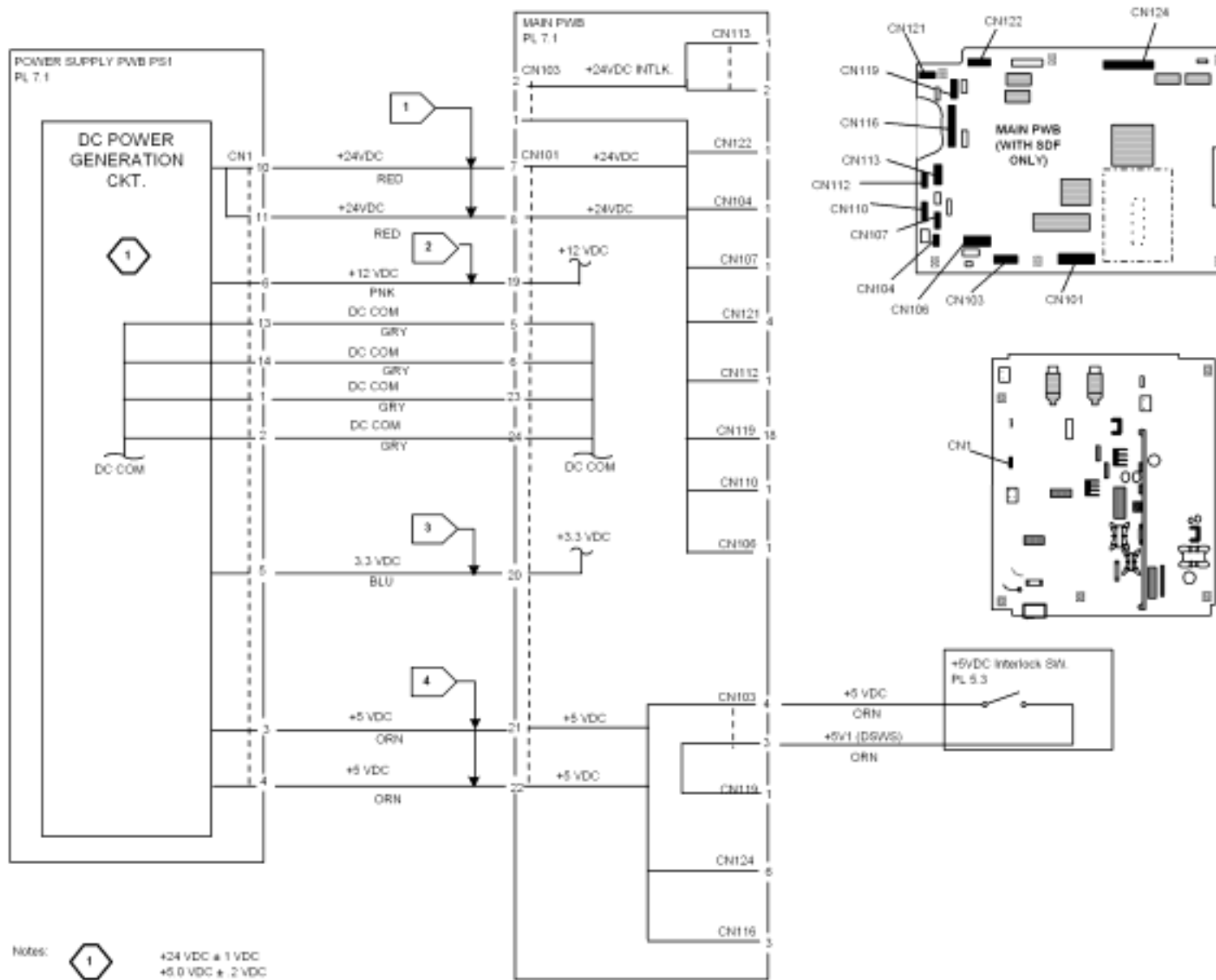


Figure 1 1.2 DC Power (With SDF)

## 2.1 Selection/Indication RAP (without SDF)

### Procedure

Enter diagnostic code 5-1 to test the control console lamps.

**Diagnostic code 5-1 can be entered.**

Y N  
Go to 2.2 Selection RAP.

Press Start several times to test the control console display and lamps. **All the LEDs come on for 5 seconds each time the Start button is pressed.**

Y N  
The Ready lamp lights.

Y N  
Go to the 2.2 Selection RAP (Without SDF).

Go to Flag 1. Check CN801 on the Control Console PWB and CN116 on the Main PWB for being properly connected to the Control Console Ribbon Cable. If defective, replace the Control Console Ribbon Cable, PL 6.3. If good, replace the Control Console PWB, PL 1.3.

If the problem still exists, replace the Main PWB, PL 7.1.

For all selection problems, go to the 2.2 Selection RAP (Without SDF).

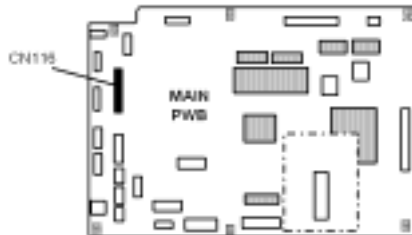


Figure 1 Main PWB (Without SDF)



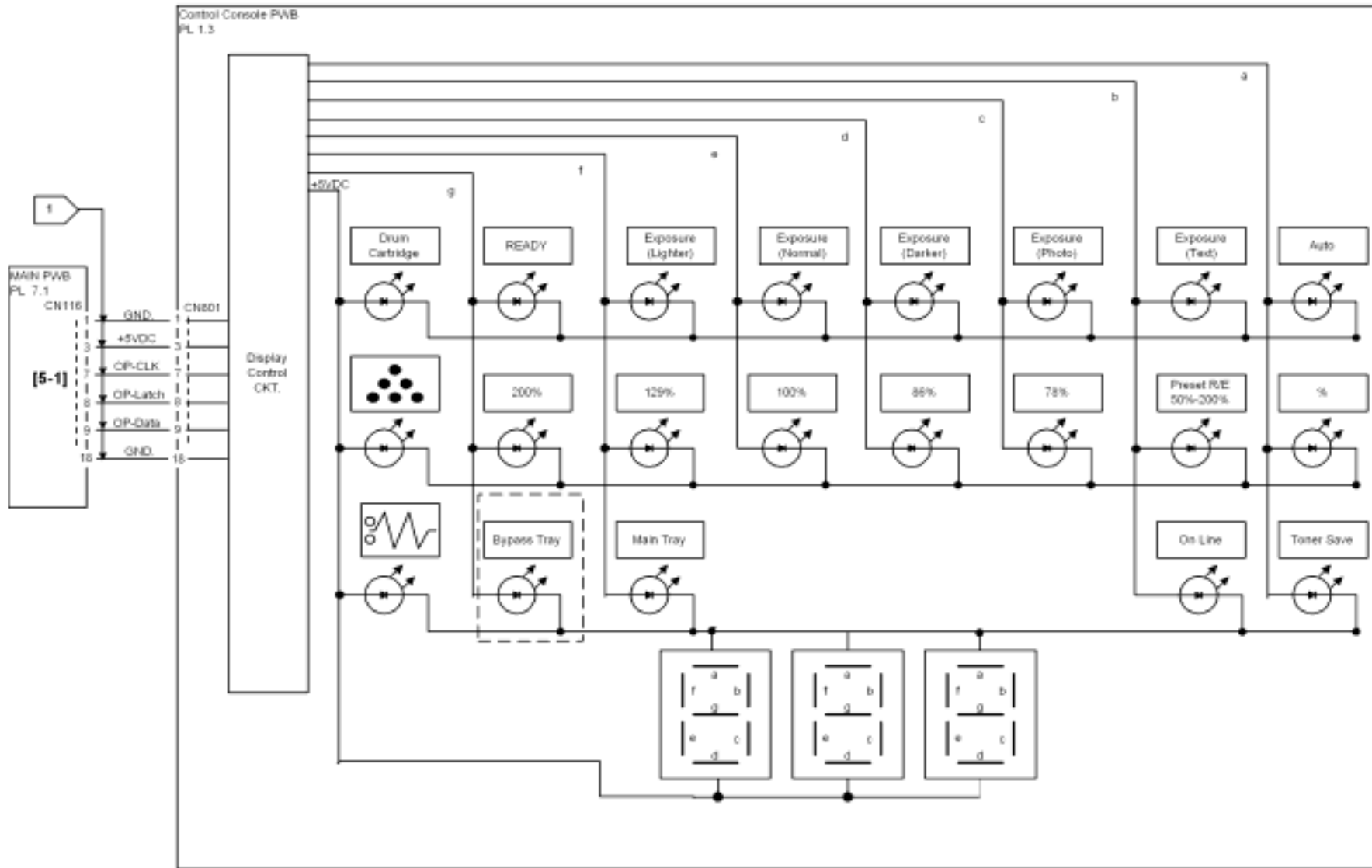


Figure 2.2.1 Selection/Indicator (Without SDF)

## 2.1 Selection/Indication RAP (with SDF)

### Procedure

Enter diagnostic code 5-1 to test the control console lamps.

**Diagnostic code 5-1 can be entered.**

Y N  
Go to 2.2 Selection RAP.

Press Start several times to test the control console display and lamps. **All the LEDs come on for 5 seconds each time the Start button is pressed.**

Y N  
The Ready lamp lights.

Y N  
Go to the 2.2 Selection RAP (Without SDF).

Go to Flag 1. Check CN801 on the Control Console PWB and CN116 on the Main PWB for being properly connected to the Control Console Ribbon Cable. If defective, replace the Control Console Ribbon Cable, PL 6.3. If good, replace the Control Console PWB, PL 1.3.

If the problem still exists, replace the Main PWB, PL 7.1.

For all selection problems, go to the 2.2 Selection RAP (Without SDF).

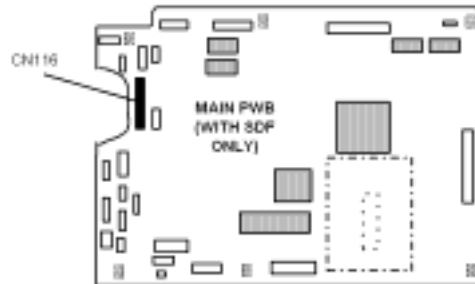


Figure 1 Main PWB (With SDF)

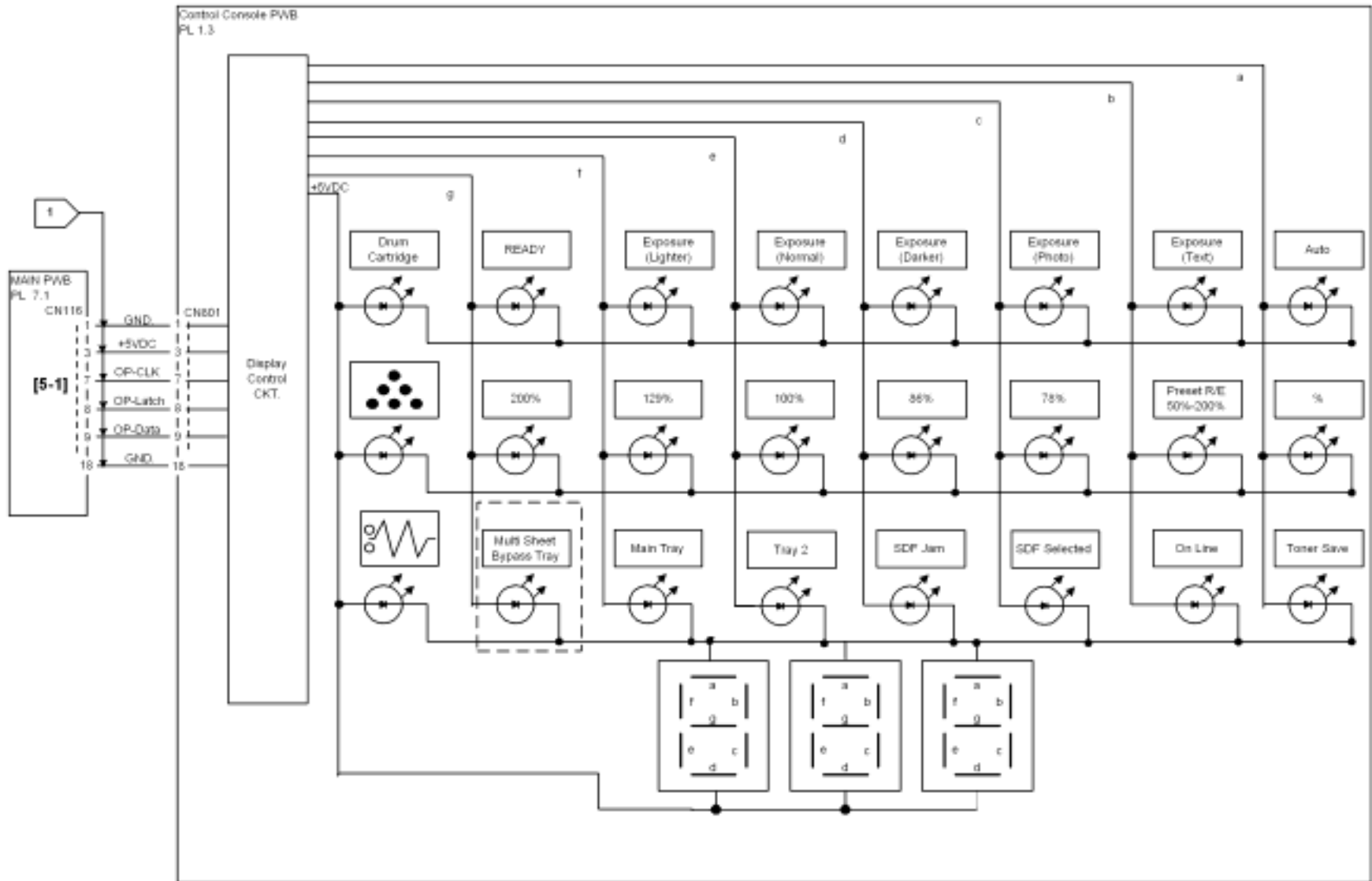


Figure 2.2.1 Selection/Indication (With SDF)

## 2.2 Selection RAP (Without SDF)

### Procedure

Switch power off, then on.

**The Ready lamp comes on or is flashing.**

**Y N**

Go to Flag 1. Check connectors and the Ribbon Cable for an open circuit. Replace the Control Console Ribbon Cable, PL 6.3 if required.

Press Start button. **The print cycle starts.**

**Y N**

Replace the Control Console PWB, PL 1.3.

If a problem still exists, replace the Control Console PWB, PL 1.3.

If the problem continues, replace the Main PWB, PL 7.1.

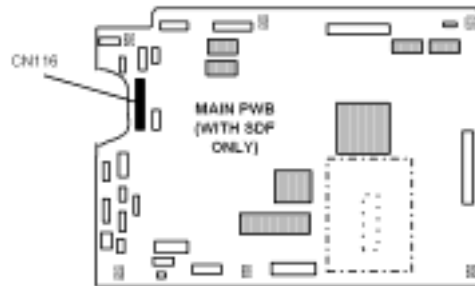


Figure 1 Main PWB (Without SDF)

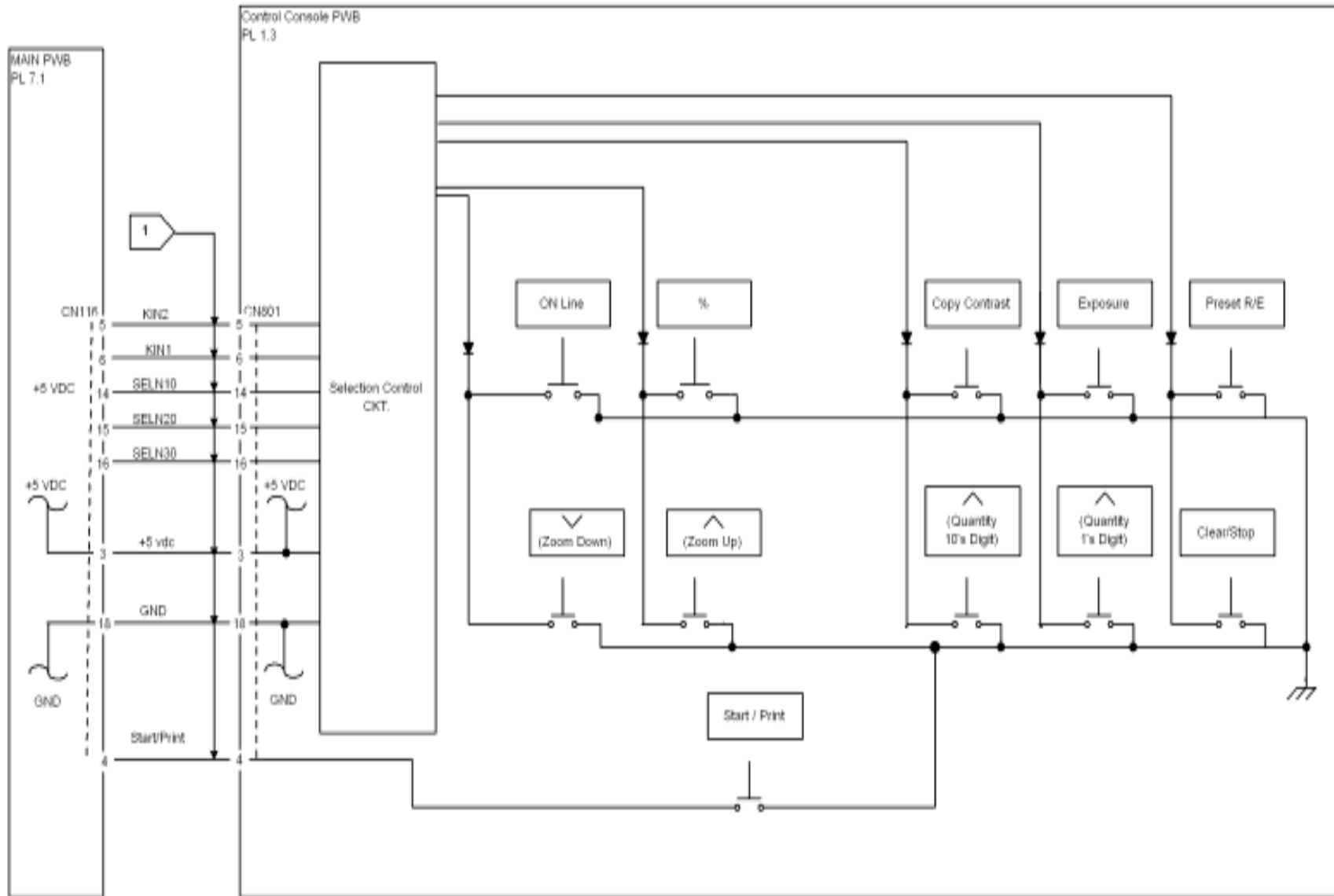


Figure 2 2.2 Selection (Without SDF)

## 2.2 Selection RAP (With SDF)

### Procedure

Switch power off, then on.

**The Ready lamp comes on or is flashing.**

Y N

Go to Flag 1. Check connectors and the Ribbon Cable for an open circuit. Replace the Control Console Ribbon Cable, PL 6.3 if required.

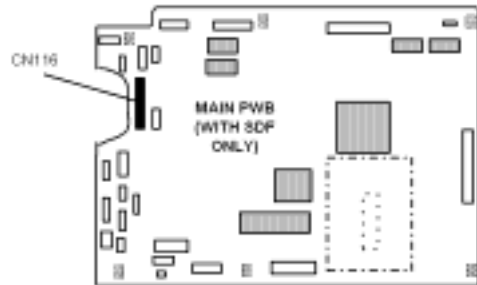
Press Start button. **The print cycle starts.**

Y N

Replace the Control Console PWB, PL 1.3.

If a problem still exists, replace the Control Console PWB, PL 1.3.

If the problem continues, replace the Main PWB, PL 7.1.



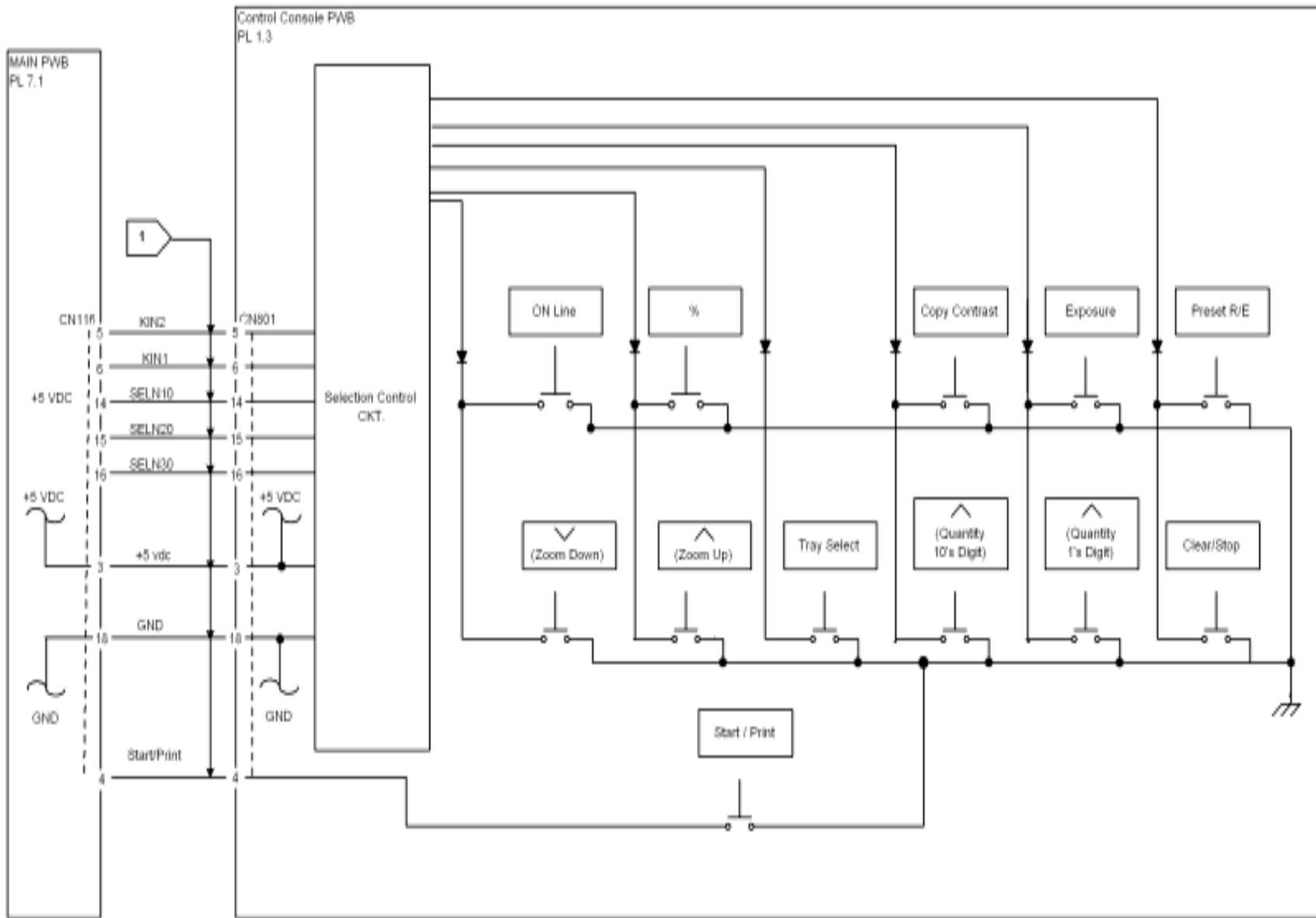


Figure 1 2.2 Selection (With SDF)

## 4.1 Ventilation Fan Motor RAP (Without SDF)

### Procedure

Switch off the power. Switch on the power. **There is +24 VDC measured between CN119-1 on the Main PWB and GND.**

Y N  
Replace the Main PWB, PL 7.1.

**The Ventilation Fan is operating at full speed.**

Y N  
Replace the Step Ventilation Fan MOT3, PL 2.1.

Allow the machine to go into **Power Saver Mode**. **The fan is operating at low speed.**

Y N  
**There is approximately +23 VDC measured between CN119-2 on the Main PWB and GND.**

Y N  
Replace the Main PWB, PL 7.1.

Replace the Ventilation Fan MOT3, PL 2.1.

The Ventilation Fan will switch off once the machine enters the **Auto Shut-off Mode**. If the fan continues to operate, replace the Ventilation Fan MOT3, PL 2.1.

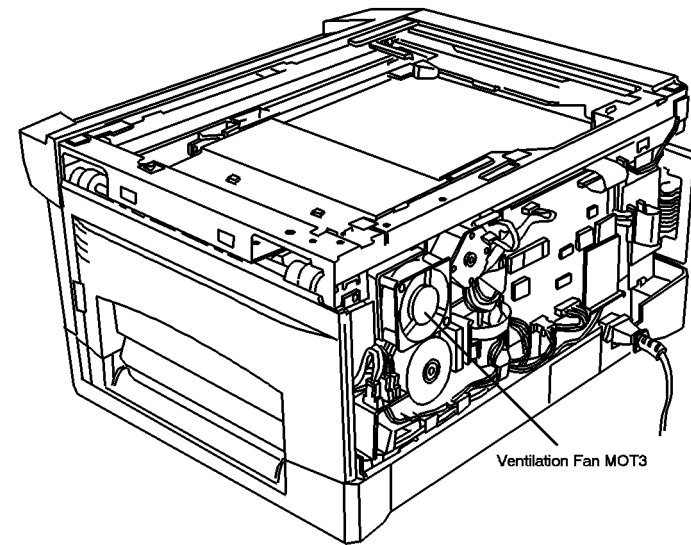
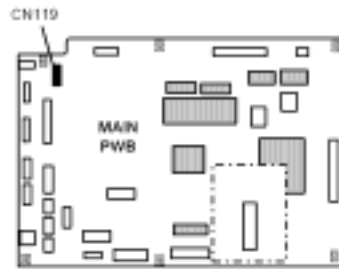


Figure 1 Ventilation Fan MOT3





## 4.1 Ventilation Fan Motor RAP (With SDF)

### Procedure

Switch off the power. Switch on the power. **There is +24 VDC measured between CN120-1 on the Main PWB and GND.**

Y N  
Replace the Main PWB, PL 7.1.

**The Ventilation Fan is operating at full speed.**

Y N  
Replace the Step Ventilation Fan MOT3, PL 2.1.

Allow the machine to go into **Power Saver Mode**. **The fan is operating at low speed.**

Y N  
**There is approximately +23 VDC measured between CN120-2 on the Main PWB and GND.**

Y N  
Replace the Main PWB, PL 7.1.

Replace the Ventilation Fan MOT3, PL 2.1.

The Ventilation Fan will switch off once the machine enters the **Auto Shut-off Mode**. If the fan continues to operate, replace the Ventilation Fan MOT3, PL 2.1.

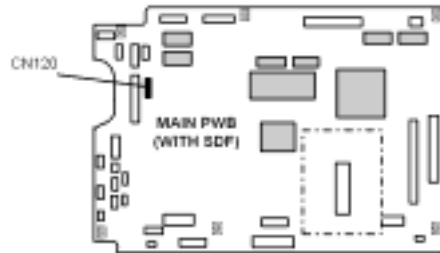


Figure 1 Main PWB (With SDF)

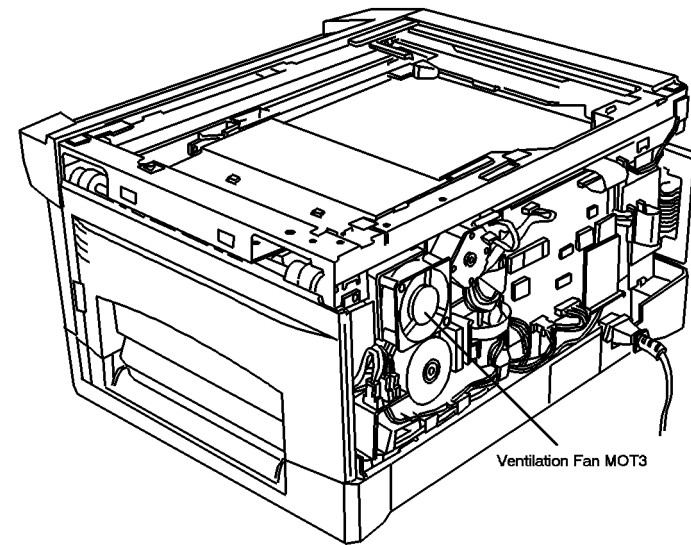


Figure 2 Ventilation Fan MOT3

## 5.1 SDF JAM LED RAP

### Initial Actions

If the Auto Start SDF mode is desired, refer to the "Programmable Settings" procedure in (Section 6).

Switch off the Power and clear any document jams. Remove any documents from the SDF.

### Procedure

Switch on the power. Enter the diagnostic code **[2-2]**. Actuate the SDF Document Present Sensor. **The Toner Cartridge LED comes on.**

**Y N**  
Go to Flag 1 and check the wires for an open circuit. If the wires are good, check the Set Detector Actuator, PL 9.2 for wear or damage.  
If the problem still exists, replace the SDF Sensor PWB, PL 9.2.

Open and then close the SDF Feed Assembly. **The SDF Jam LED comes on and goes off.**

**Y N**  
Go to Flag 2 and check the wires for an open circuit. If the wires are good, replace the SDF Sensor PWB, PL 9.2.

Exit the Diagnostic Mode. With the machine in the Ready condition insert a sheet of paper into the SDF tray. **The SDF Selected LED comes on.**

**Y N**  
**The SDF Jam LED comes on or is flashing.**

**Y N**  
Check the Set Detector Actuator, PL 9.2 for wear or damage.

**The SDF Jam LED is flashing.**

**Y N**  
Go to Flag 3 and check the wires for an open or short circuit.  
If the wires are good, check that the Document Cover Sensor Q9 is positioned correctly.  
If the problem still exists, replace the Document Cover Closed Sensor Q9.

Perform the following:

- Check the SDF Document Path Sensor Q3 for damage and ensure that it is mounted correctly, PL 9.3.
- Go to Flag 4 and check the wires for an short circuit. If the problem continues, replace the SDF Document Path Sensor Q3, PL 9.3.

If the problem still exists, replace the Main PWB, PL 7.1.

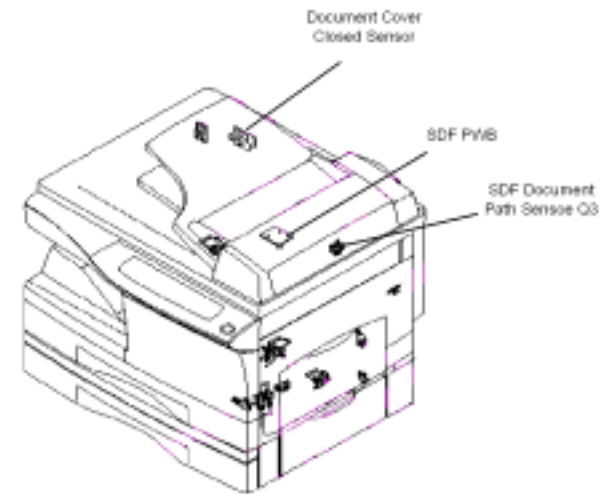
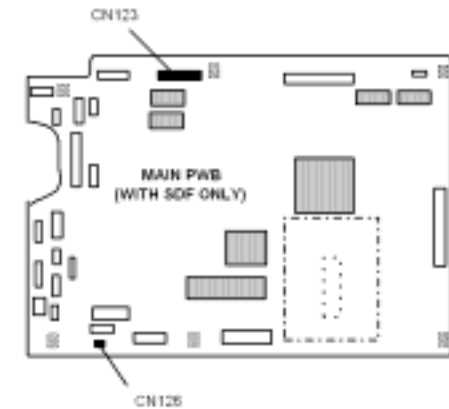
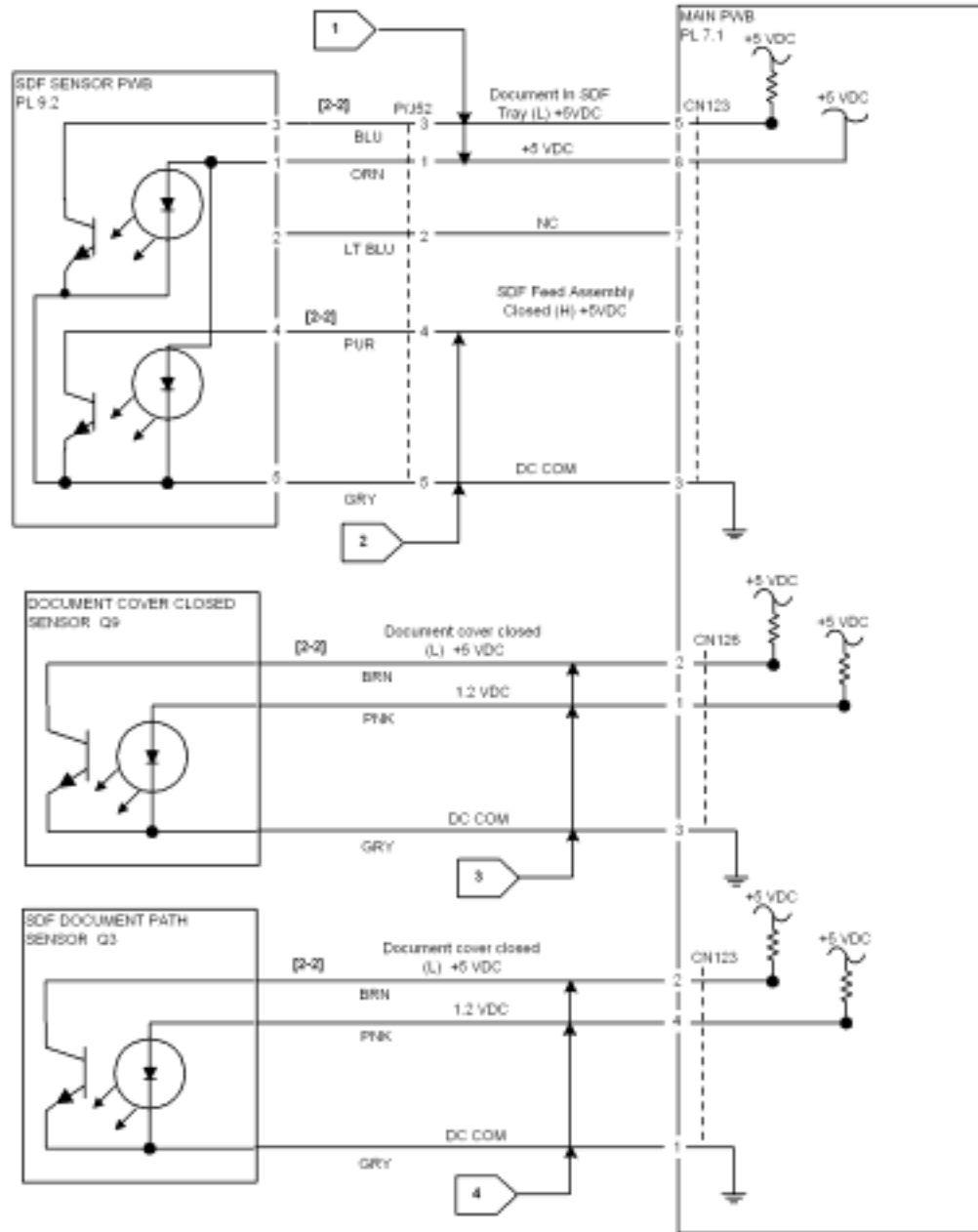


Figure 1 5.1 SDF Start Circuit

## 8.1 Paper Tray Ready RAP

### Initial Actions

Ensure that the Main Paper Tray and Paper Tray 2 if applicable are closed.

### Procedure

With the machine in a ready state, select the Main Paper Tray. **The Main Tray LED is on and not flashing.**

**Y N**

Go to Flag 1 and check the wires for a short circuit. If the wires are good, replace the Tray Detect Switch S2, PL 5.1.

Open the Main Tray. **The Main Tray LED is flashing.**

**Y N**

Go the Flag 1 and check the wires for an open circuit. It the wires are good, replace the Tray Detect Switch S2, PL 5.1.

If applicable select Tray 2. **The Tray 2 LED is on and not flashing.**

**Y N**

Go to Flag 2 and check the wires for a short circuit. If the wires are good, replace the Tray 2 Detect Switch S5, PL 5.8.

Open Tray 2. **The Tray 2 LED is flashing.**

**Y N**

Go the Flag 2 and check the wires for an open circuit. It the wires are good, replace the Tray 2 Detect Switch S5, PL 5.8.

If the problem still exists, replace the Main PWB, PL 7.1.

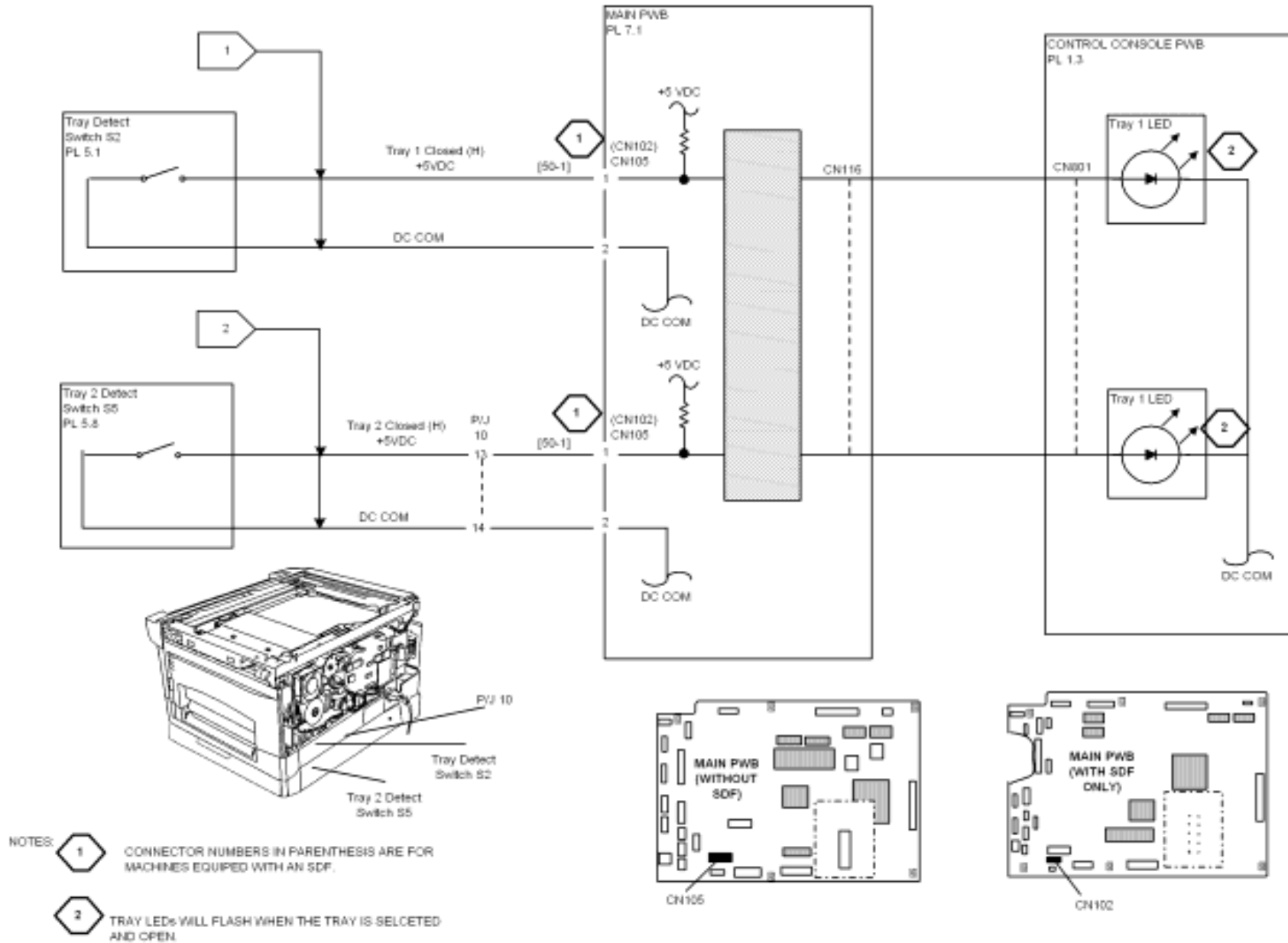


Figure 1 8.1 Paper Tray Interlocks



## 3 Image Quality

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## CQ1 Copy Defect Entry RAP

Copy quality refers to the entire copy. Defects can occur anywhere on the copy. These defects may be damaged paper or image quality defects.

Always eliminate problems which cause the damaged paper before attempting to fix the image quality problems. The damaged paper could cause the image quality problems.

### Procedure

Compare the image defect to the Definitions. After you determine which definition best describes the defect, go to the corresponding RAP. The chart which is provided with each RAP lists the Possible Causes and Corrective Actions.

The Possible Causes are arranged in order from the most to the least likely cause or the ease of the check. Corrective Action(s) are given for each cause. Read all of the possible causes before taking any corrective action.

1. Start with the first possible cause and continue through the list until you come to the cause that best applies to the image defect.
2. Perform the corrective action.
3. When the defect is corrected, go to the Copier Maintenance procedures in the Service Call Procedures in Section 1. If the defect is still present, continue with the other Possible Causes.

## Definitions

The following terms are commonly used to describe copy quality problems.

### Background

(CQ 2 Background (Bands) RAP or CQ 3 Background (Uniform) RAP) Background occurs as darkness or dirtiness on the non-image areas of the copy.

### Banding

(CQ 4 Banding RAP) Banding is a condition marked by narrow, alternating dark and light bands that run across the copy, that is, in the main scanning direction.

### Black Copy

(CQ5 Black Copy RAP) A copy that is totally black with no image.

### Blank copy

(CQ 6 Blank Copy RAP) A copy entirely without an image.

### Deletions

(CQ 8 Deletions (LE to TE) RAP) An area of the image where information has been lost. The deletions could be localized or bands from top to bottom or side to side.

### Density

(CQ 9 Light Copy RAP) or (CQ 16 Uneven Density RAP) The relative blackness between the image and non-image areas.

### Fuser Fix

(CQ 17 Unfused Copy RAP) A measure of how well the toner particles adhere to the paper as a result of the fusing process.

### Image Displacement

Part of the image information is placed elsewhere on the copy or it is completely missing. The area of the missing information is sharply defined. This is unlike deletions where the image is not sharply defined or clear.

### Image Distortion

(CQ 19 Distortion RAP) Distortion of the image from one side of the copy to the other. The image from side to side or lead edge to trail edge is not parallel to the edges of the copy. This defect may result from a problem with the alignment of the optics components.

### Light Image

(CQ 9 Light Copy RAP) Copies where the density is lighter than the specified density of the copier.

### Line Darkness

Darkness and uniformity of a line.

## **Magnification**

(CQ 20 Magnification RAP)

## **Misregistration**

(CQ 11 Misregistration RAP) The distance from the lead edge of the image to the lead edge of the paper is not within specification.

## **Offsetting**

Transfer of toner from the copy to the Fuser Assembly Heat Roll. Sometimes the toner is transferred back to the copy or consecutive copies.

## **Paper Damage**

Any physical distortion to the copy paper, including folds, nicks, wrinkles, etc.

## **Paper Handling**

The process of transporting the paper from the supply area through the xerographic and fusing subsystems.

## **Resolution**

(CQ 7 Blurred Image RAP) The uniformity or clarity of fine line detail.

## **Residual Image**

(CQ 12 Residual Image RAP) An image that is repeated onto the same copy or consecutive copies. The image can be either a ghosting or the original image or a toner image. This problem can be caused by poor cleaning of the photoreceptor, a photoreceptor that is worn, a developer roll that is worn, poor cleaning of the fuser.

## **Skew**

(CQ 13 Skew RAP) The image is skewed on the paper. The image from side to side or lead edge to trail edge is not parallel to the edges of the copy. This defect may result from misadjusted, contaminated, or worn paper transportation system components.

## **Smear**

(CQ 14 Skips/Smears RAP) Any image defect that occurs in the direction that is perpendicular to paper feed.

## **Spots**

(CQ 15 Spots RAP) Defects that are 0.2 inches (5 mm) or smaller in diameter.

## **Streaks**

(CQ 10 Lines and Streaks RAP) Any image defect that occurs in the direction of paper feed.

## **Uneven Density**

(CQ 16 Uneven Density RAP) The image darkness varies across the copy.

## **Unfused copy**

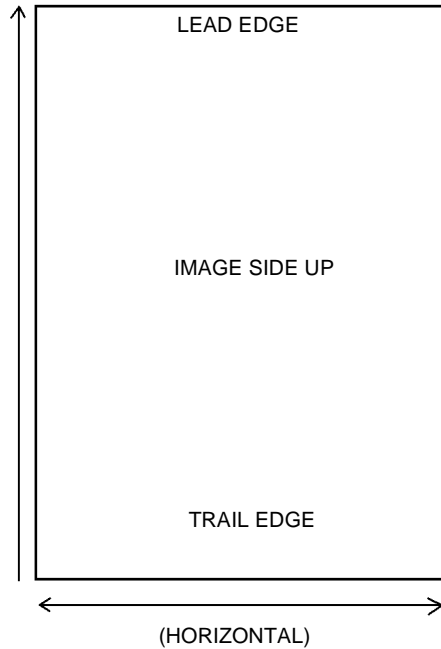
(CQ 17 Unfused Copy RAP) A copy on which the image can be easily wiped off the paper. The image has not adhered to the paper.

## **Wrinkle**

(CQ 18 Wrinkle RAP) The paper has very thin creases.

## Image Quality Diagnostics

It is important to understand the orientation of copies in order to troubleshoot image quality problems. Refer to Figure 1. The following terms will be used when referring to copies made on the machine.



**Figure 1 Copy Orientation Terms**

Determining the distance between defects may help isolate problems to a specific component. Defects that are 3.1 inches (79 mm) apart (lead edge of the defect to lead edge of the next defect) in the paper feed direction could be caused by the photoreceptor. The circumference of the photoreceptor is 3.1 inches (79 mm).

Defects that are 3.7 inches (94 mm) apart (lead edge of defect to lead edge of next defect) in the paper feed direction could be caused by the Fuser Heat Roll. The circumference of the fuser heat roll is 3.7 inches (94 mm).

Defects that are 2.5 inches (64 mm) apart (lead edge of defect to lead edge of next defect) in the paper feed direction could be caused by the Magnetic Roll. The circumference of the Magnetic Roll is 2.5 inches (64 mm).

## Image Quality Specification

### Test Patterns 82P524 (USCO and XCL) and 82P523 (XL)

The primary test pattern used on this product is the 82P524 (USCO and XCL) or the 82P523 (XL). This test pattern is the Multinational Standard Test Pattern used for the evaluation of the image quality. Side A and Side B are used to evaluate the image quality against different image quality specifications.

- Make four copies of each side of this test pattern in Text mode.
- Evaluate the Side A copies against the specifications provided in Table 1.
- Evaluate the Side B copies against the specifications provided in Table 2.

### Test Pattern 82E12130

Use Test Pattern 82E12130 to evaluate Set Document Feeder copy quality problems (skew, misregistration). If the test pattern is not available, position Test Pattern 82P524 (USCO) or 82P523 (XL) on the Document Glass and make an 8-1/2" x 14" (216 x 356 mm) copy. Ensure that the two outside 10 mm reference targets are the identical distance from the edge of the sheet. Use the copy to evaluate SDF copy quality.

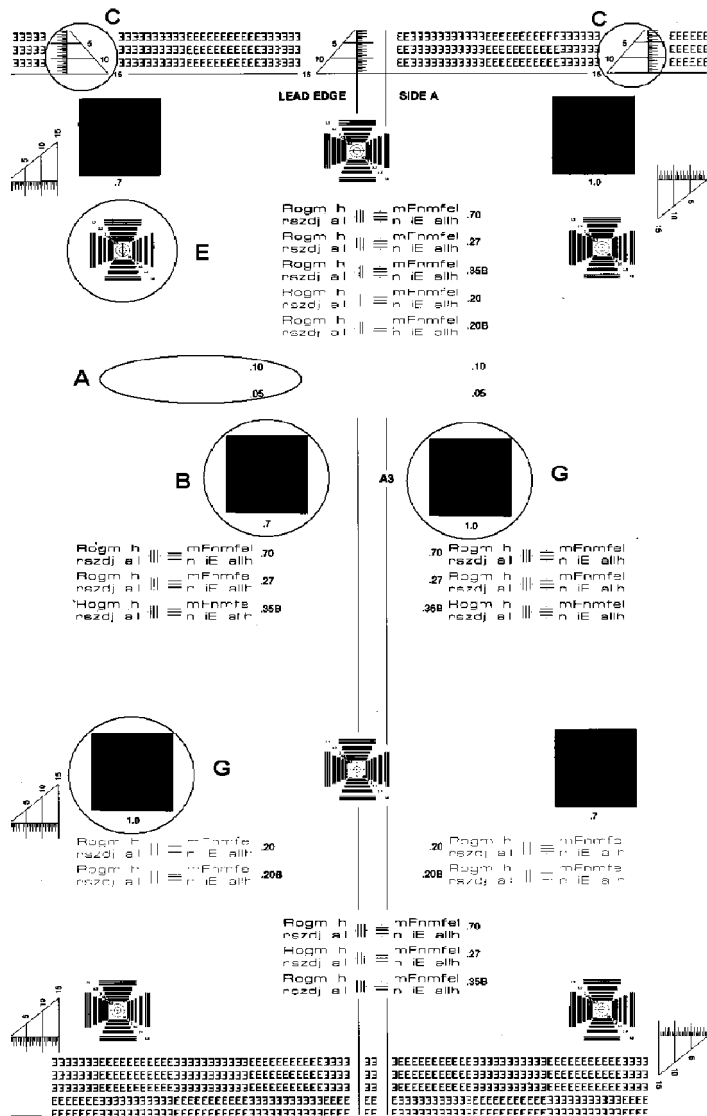


Figure 1 Test Pattern 82P524 (Side A)

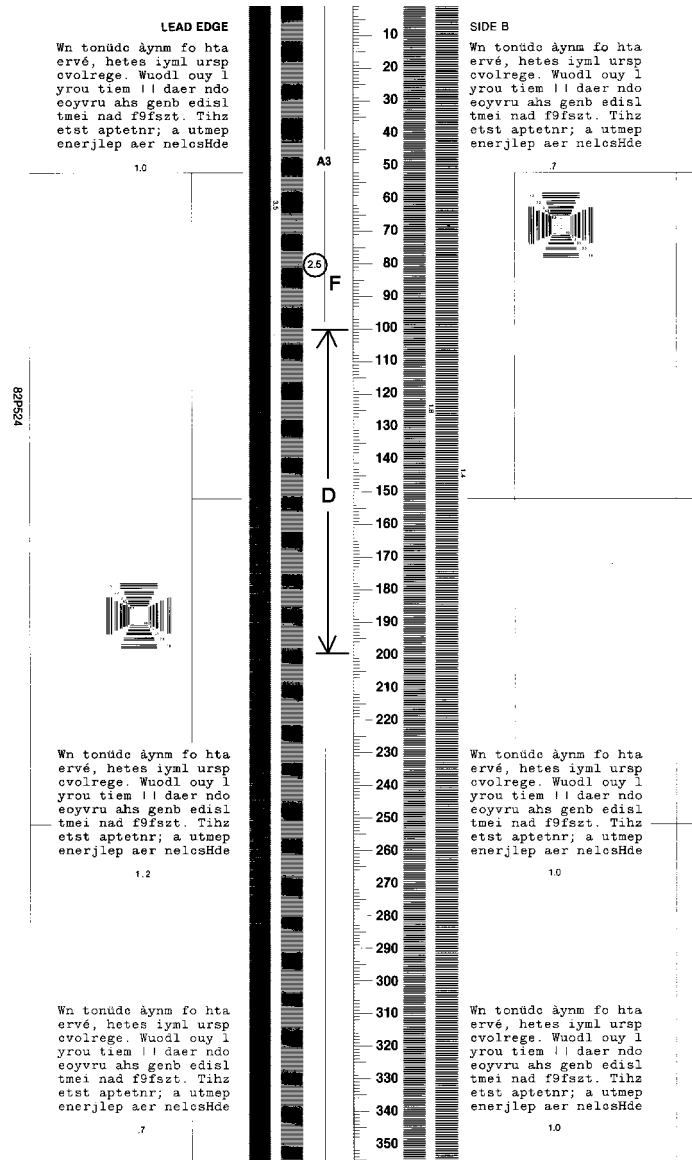


Figure 2 Test Pattern 82P524 (Side B)

## Specifications

### Using the Side A copies (Test Pattern 82P524)

Table 1

| DEFECT                       | DEFINITION OR SPECIFICATION   | REFERENCE                        |
|------------------------------|---|----------------------------------|
| Light Copy                   | The .7 solid area density block nearest the center of the copy is equal to or greater than the .7 solid area density block on the test pattern. With the dark setting selected, the .10 line pair on the test pattern is partially or completely copied. (This is a guideline only, not a specification.) | Go to CQ 9 Light Copy RAP.       |
| Misregistration (lead edge)  | The center 10 mm reference line on the copy should be 10 mm +/-2 mm from the lead edge of a 100% copy.  | Go to CQ 11 Misregistration RAP. |
| Misregistration (side edge)  | The 10 mm reference line on the two outside reference targets should be 10 mm +/- 2 mm from the front edge of a 100% copy.  | Go to CQ 11 Misregistration RAP. |
| Skew (Paper Tray 1)          | Refer to the two outside reference targets on the copy to ensure that they are within 2 mm with respect to each other. (This is a guideline only, not a specification.)   | Go to CQ 13 Skew RAP.            |
| Skew (Paper Tray 2)          | Refer to the two outside reference targets on the copy to ensure that they are within 2.5 mm with respect to each other. (This is a guideline only, not a specification.)   | Go to CQ 13 Skew RAP.            |
| Skew (Bypass/Alternate Tray) | Refer to the two outside reference targets on the copy to ensure that they are within 2.5 mm with respect to each other. (3.5 mm when using the SDF with the bypass or the alternate tray.) (This is a guideline only, not a specification.)  | Go to CQ 13 Skew RAP.            |
| Skew (SDF)                   | Refer to the two outside reference targets on the copy to ensure that they are within 3 mm with respect to each other. (3.5 mm when using the SDF with the bypass or the alternate tray.) (This is a guideline only, not a specification.)  | Go to CQ 13 Skew RAP.            |
| Unfused Copy                 | Gently rub the .7 patch four times with a paper towel (twice top-to-bottom and twice side-to-side) to determine if unfused toner is present.  | Go to CQ 17 Unfused Copy RAP.    |
| Resolution                   | The 4.3 LP/mm lines of all the resolution targets in both the top-to-bottom direction and the side-to-side direction should be resolved completely. (This is a guideline only, not a specification.)  | Go to CQ 7 Blurred Image RAP     |

### Using the Side B copies (Test Pattern 82P524)

Table 2

| DEFECT        | DEFINITION OR SPECIFICATION   | REFERENCE   |
|---------------|---|---|
| Skips/smears  | The 2.5 LP/mm array for a 100% copy should be completely resolved. (This is a guideline only, not a specification.)   | Go to CQ 14 Skips/Smears RAP.   |
| Smudge        | After image transfer, the toner image that is not yet fused is rubbed by any part of the machine or foreign material. | Inspect the copy transport area between the Transfer Corotron and the Fuser for the cause of this problem |
| Magnification | The size of the image on the copy is not equal to the magnification/reduction selected within $\pm 1\%$ .             | Go to CQ 20 Magnification RAP   |

### Using the customer's original

Table 3

| DEFECT     | DEFINITION OR SPECIFICATION   | REFERENCE  |
|------------|---|--|
| Background | The background area is darker than the corresponding area of a black-and-white original. (Classify the background defect as occurring over the entire copy, as bands in the lead edge to the trail edge direction, or as bands in the front edge to rear edge direction.) | Go to CQ 2 Background (Bands) RAP.<br>Go to CQ 3 Background (Uniform) RAP. |

Table 3

| DEFECT                                   | DEFINITION OR SPECIFICATION   | REFERENCE                            |
|--|---|--------------------------------------|
| Black Bands (Lead Edge To Trail Edge)    | Black bands are present from lead edge to trail edge on the copy.   | Go to CQ 2 Background (Bands) RAP    |
| Banding (in the main scanning direction) | Narrow, repetitive, tightly packed dark and light bands appear across the copy (in the main scanning direction).  | Go to CQ 4 Banding RAP               |
| Black copy                               | The copy is black; there is no image or only a very faint image on the copy.  | Go to CQ5 Black Copy RAP.            |
| Blank / nearly blank copies              | The copy is white; there is no image or only a very faint image on the copy.  | Go to CQ 6 Blank Copy RAP.           |
| Lines and streaks                        | One or more dark, light, or white lines appear on the copy.   | Go to CQ 10 Lines and Streaks RAP.   |
| Residual image                           | An electrostatic or toner image is transferred to subsequent copies.  | Go to CQ 12 Residual Image RAP.      |
| Spots                                    | Dark toner spots adhere to non-image areas of the copy.   | Go to CQ 15 Spots RAP.               |
| Uneven density                           | Image darkness varies across the width of the copy.   | Go to CQ 16 Uneven Density RAP.      |
| Deletions                                | <p>There is an area of the copy which carries no toner image or a very faint one. The deleted areas may be any shape or randomly distributed over the copy.</p> <p><b>NOTE:</b> <i>There is an intentional 2-5 mm deletion (maximum) along the lead edge of all the copies. There is an intentional 3-4 mm deletion (maximum) along the trail edge of all the copies.</i></p> <p>(Classify the deletion defect as random or repetitive spots, as deletions in the lead edge to the trail edge direction, or as deletions in the front edge to rear edge direction.)</p> | Go to CQ 8 Deletions (LE to TE) RAP. |

## CQ 2 Background (Bands) RAP

Randomly distributed toner deposits of varying density that appear as bands in the non-image areas of the copy.

### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

| Possible Cause                          | Corrective Action  |
|---|--|
| Contaminated Charge Corotron            | Replace the Drum Cartridge (PL 8.2).   |
| Defective Cleaning Blade                | Replace the Drum Cartridge (PL 8.2).   |
| Contaminated or defective photoreceptor | Replace the Drum Cartridge (PL 8.2).   |
| Developer/Dry Ink life exceeded.        | Replace the Toner Cartridge (PL 8.2).  |
| Contaminated Document Glass             | Clean the Document Glass with Lens and Mirror Cleaner and a lint-free cloth. |

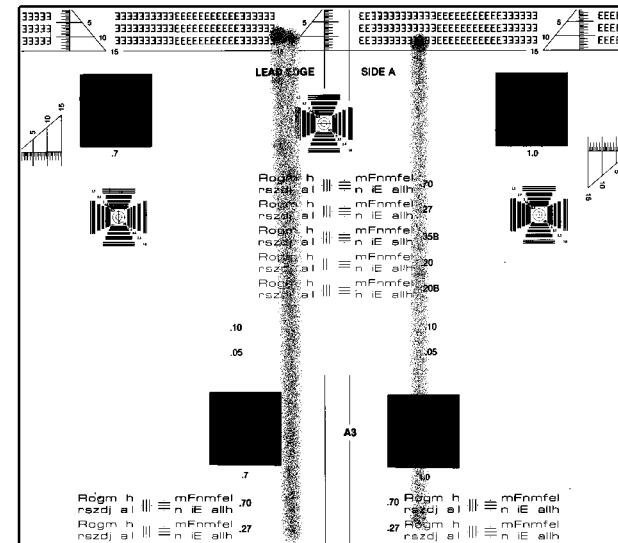


Figure 1 Background Bands

### CQ 3 Background (Uniform) RAP

Randomly distributed toner deposits of varying density that evenly cover the non-image areas of the entire copy

#### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

| Possible Cause                          | Corrective Action                             |
|---|---|
| Developer/Dry Ink life exceeded         | Replace the Toner Cartridge (PL 8.2).         |
| Defective Charge Corotron               | Replace the Drum Cartridge (PL 8.2).          |
| Defective Cleaning Blade                | Replace the Drum Cartridge (PL 8.2).          |
| Contaminated or defective photoreceptor | Replace the Drum Cartridge (PL 8.2).          |
| Incorrect developer bias                | Check the developer bias contacts for damage. |

### CQ 4 Banding RAP

Narrow, repetitive, tightly packed dark and light bands appear across the copy (in the main scanning direction).

#### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

| Possible Cause           | Corrective Action                    |
|--------------------------|--------------------------------------|
| Worn photoreceptor drive | Replace the Drum Cartridge (PL 8.2). |



## CQ5 Black Copy RAP

The copy is totally black with no image.

### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

| Possible Cause   | Corrective Action   |
|--|---|
| Defective Exposure Lamp or connections                 | Replace the Exposure Lamp Carriage (REP 6.2).   |
| Defective Charge Corotron                              | Remove the Drum Cartridge and clean the electrical contacts. Also wipe the contact wires on the Power Supply PWB. Reinstall the Drum Cartridge. If the problem still exists, replace the Drum Cartridge (PL 8.2). |
| Defective Power Supply PWB or high voltage connections | Check the Power Supply PWB connections for contamination or damage. If the problem continues, replace the Power Supply PWB (PS1) (REP 1.2).   |

## CQ 6 Blank Copy RAP

This is a copy entirely without an image.

### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

| Possible Cause                         | Corrective Action   |
|--|---|
| Open photoreceptor ground connection   | Check the photoreceptor ground connection.  |
| Open contact for the developer bias.   | Check the contacts on the Drum Cartridge for damage or contamination.   |
| Defective Transfer Corotron            | Go to GP1 Image on Photoreceptor. If the toner image appears on the photoreceptor, replace the Transfer/Detack Corotron Assembly (REP 9.2). |
| Main PWB unable to process image data. | Replace the Main PWB (REP 1.1).   |

## CQ 7 Blurred Image RAP

Poor uniformity or clarity of fine line detail. Examine the resolution targets.

### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

| Possible Cause  | Corrective Action   |
|---|---|
| Incorrect positioning of mirrors  | Check the alignment of the Half-Rate Carriage and the Exposure Lamp Carriage.   |
| Paper feed drives   | Check the drives for damage or binding.   |
| Defective Fuser   | Replace the Fuser Assembly (REP 10.1).  |
| Defective Drum Cartridge  | Remove the Drum Cartridge and clean the electrical contacts. Also wipe the contact wires on the Power Supply PWB. Reinstall the Drum Cartridge. If the problem still exists, replace the Drum Cartridge (PL 8.2). |
| Dirty electrical connections on the Drum Cartridge or Transfer/Detack Corotron Assembly | Clean the electrical connections with film remover and a lint free cloth.   |

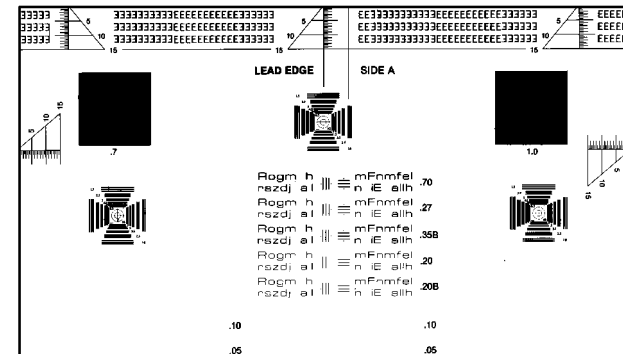


Figure 1 Blurred Image

## CQ 8 Deletions (LE to TE) RAP

An area of the image on the copy that has no toner or a very faint image.

### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

| Possible Cause                                      | Corrective Action  |
|---|--|
| Damp paper or paper curled during duplex copying    | Use fresh paper and ensure that the customer is storing the paper correctly.   |
| Developer/Dry Ink life exceeded                     | Replace the Toner Cartridge (PL 8.2).  |
| Contaminated document glass                         | Clean the Document Glass with Lens and Mirror Cleaner and a lint-free cloth.   |
| Contaminated Transfer/Detack Corotron Assembly      | Clean the Transfer Corotron Wire with the Corotron Cleaner. Clean the Detack Corotron with a soft brush. If the problem still exists, replace the Transfer/Detack Corotron Assembly (REP 9.2). |
| Contaminated magnetic roll                          | Replace the Toner Cartridge (PL 8.2).  |
| Contaminated photoreceptor                          | Replace the Drum Cartridge (PL 8.2).   |
| Toner blockage in Toner Cartridge                   | Replace the Toner Cartridge (PL 8.2).  |
| Damaged or contaminated fuser heat or pressure roll | Check or clean the rolls or replace the Fuser Assembly (REP 10.1).   |
| Burrs or contamination in the paper transport path  | Check and clean components in the paper transport path.  |
| Obstruction in the optics light path                | Remove the Document Glass Assembly (REP 6.1) and clean the mirrors 1 through 3 with Lens and Mirror Cleaner and a lint-free cloth.   |

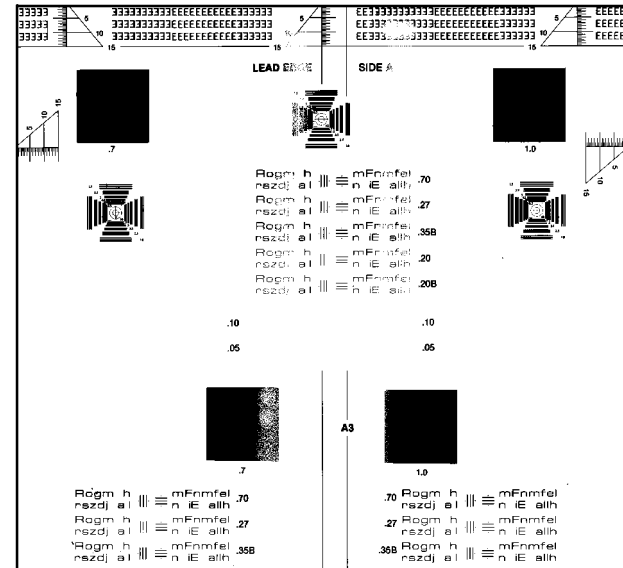


Figure 1 Deletions

## CQ 9 Light Copy RAP

The image area of a copy has low density.

### Procedure

Read all the Possible Causes. Then select a Corrective Action based on the Possible Cause after a check of the machine.

| Possible Cause                  | Corrective Action   |
|---------------------------------|---|
| Damp Paper                      | Use fresh paper and ensure that the customer is storing the paper correctly.  |
| Defective Transfer Corotron     | Clean the Transfer Corotron Wire with the Corotron Cleaner. If the problem still exists, replace the Transfer/Detack Corotron Assembly (REP 9.2).   |
| Defective photoreceptor         | Remove the Drum Cartridge and clean the electrical contacts. Also wipe the contact wires on the Power Supply PWB. Reinstall the Drum Cartridge. If the problem still exists, replace the Drum Cartridge (PL 8.2). |
| Developer/Dry Ink life exceeded | Replace the Toner Cartridge (PL 8.2).   |
| Open high voltage return line   | Check the photoreceptor ground connection. It should be less than 100 ohms.   |

## CQ 10 Lines and Streaks RAP

Black or white lines which appear in the direction of paper feed.

### Procedure

1. Clean the Document Glass with Lens and Mirror Cleaner and a lint-free cloth.

**NOTE:** Copies with lines or streaks which are caused by dirt or contamination on the Number 1 Mirror, the CCD Window, the Calibration Strip or the Laser Assembly Focus Correction Lens are more visible when the original contains halftones, photographs, or solid areas. Figure 1

2. Position the customer's original on the Document Glass, select the **Auto** exposure setting, and make one copy at 100 percent magnification and one copy at 78 percent magnification.
3. Evaluate the copies for the presence of lines or streaks caused by contamination:
  - a. If the position of the line(s) on the 100 percent and 78 percent copies changes relative to the edges of the copy paper, the contamination is in the optics area, that is, before image processing. Perform the corrective actions listed in Table 1.
  - b. If the position of the line(s) on the 100 percent and 78 percent copies does not change relative to the edges of the copy paper, the contamination is on the Focus Correction Lens, that is, after image processing. Perform the corrective actions listed in Table 2.

Run additional copies of the customer's original to determine if the problem is solved. If not, go to Table 3 and continue checking for the possible cause.

**Table 1 Contamination Before Image Processing**

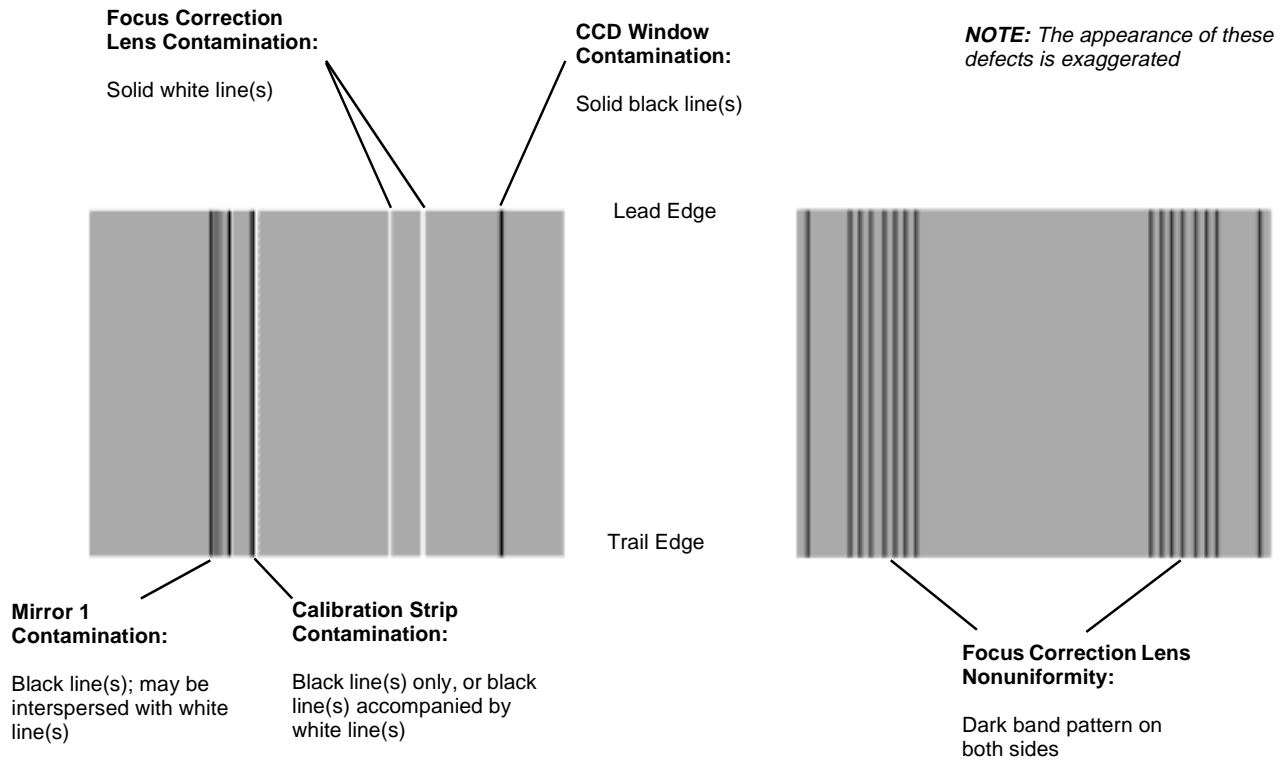
| Possible Cause                         | Corrective Action  |
|--|--|
| Contamination on Mirror Number 1       | <p>Remove the Document Cover Assembly and the Document Glass Assembly (REP 6.1).</p> <p>Gently clean the mirror using a dry cotton swab. Be careful that fibers from the swab are not left on the mirror. For stubborn contamination, clean the mirror with Lens and Mirror Cleaner and a lint-free cloth.</p> <p>Clean and replace the Document Glass and the Document Cover Assembly.</p>  |
| Contamination on the CCD Window        | <p>Remove the Document Cover Assembly and the Document Glass Assembly (REP 6.1), then remove the Lens Cover and the CCD Dust Cover.</p> <p><b>CAUTION:</b> Use only Film Remover to clean the plastic CCD Window; other solvents may damage it.</p> <p>Moisten a swab with Film Remover and gently rub it across the CCD Window to remove contamination.</p> <p>Replace the CCD Dust Cover, the Lens Cover, the Document Glass, and the Document Cover Assembly.</p> |
| Contamination on the Calibration Strip | <p>Remove the Document Cover Assembly and the Document Glass (REP 6.1).</p> <p>Clean the Calibration Strip with Film Remover and a lint free cloth.</p> <p>Replace the Document Glass and the Document Cover Assembly.</p>   |

**Table 2 Contamination After Image Processing**

| Possible Cause                         | Corrective Action   |
|--|---|
| Contamination on Focus Correction Lens | <p>Remove the Drum Cartridge and the Toner Cartridge (PL 8.2).</p> <p>Remove dust or toner deposits from the exposed surface of the lens with a dry cotton swab.</p> <p>Replace the Toner Cartridge and the Drum Cartridge.</p> |

**Table 3 Other Possible Causes/Corrective Actions**

| Possible Cause                                       | Corrective Action   |
|--|---|
| Contaminated Transfer Corotron Wire                  | Clean the Transfer Corotron Wire with the Corotron Cleaner.                 |
| The photoreceptor surface is damaged or contaminated | Determine the cause of the damage. Replace the Drum Cartridge (PL 8.2).     |
| Poor cleaning of the photoreceptor                   | Replace the Drum Cartridge (PL 8.2).  |
| The surface of the Fuser Heat Roll is damaged        | Determine the cause of the damage. Replace the Heat Roll (REP 10.2).        |
| Contaminated Charge Corotron                         | Replace the Drum Cartridge (PL 8.2).  |
| Defective photoreceptor ground                       | Check the photoreceptor ground connection. It should be less than 100 ohms. |



**Figure 1 Line Defects: Optics Contamination and Nonuniform Focus Correction Lens (Simulates Appearance Using .45 Contrast Density Test Pattern 186.904)**

## CQ 11 Misregistration RAP

**Paper Tray 1 and 2 Lead Edge:** The center 10 mm reference line on the copy should be 10 mm +/- 1.0 mm from the lead edge of a 100% copy.

**Paper Tray 1 and 2 Side Edge:** The 10 mm line on the two outside reference targets should be 10 mm +/- 2.0 mm from the front edge of a 100% copy.

**Bypass/Alternate Tray Lead Edge:** The 10 mm line on the lead edge graduated mm scale is a maximum of 10 mm +/- 3.2 mm from the lead edge of the copy.

**Bypass/Alternate Tray Side Edge:** The 10 mm line on the side edge graduated mm scale is a maximum of 10 mm +/- 3.2 mm from the side edge of the copy.

**Set Document Feeder Side Edge:** The 10 mm reference line on the two outside reference targets should be 10 mm +/- 3.4 mm from the front edge of a 100% copy.

### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

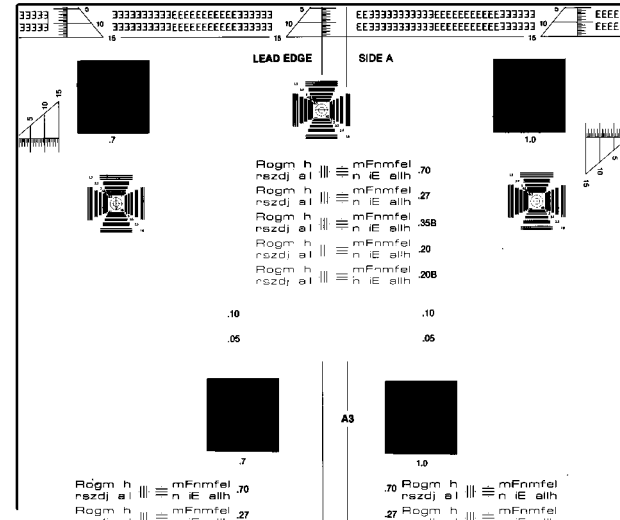


Figure 1 Lead Edge Misregistration

#### Lead Edge Misregistration

| Possible Cause  | Corrective Action   |
|---|---|
| Incorrectly loaded paper  | Show the customer how to load paper.  |
| Damaged or worn paper feeding components.   | Clean the feed and the registration rolls with Film Remover and a lint-free cloth. Check the components for wear or damage.   |
| Defective Registration Roll Solenoid (SOL3)   | Enter Output Code 6-[2] to test the operation of the solenoid. Replace the solenoid if it binds or fails to actuate (REP 8.2).  |
| Incorrect value in [50-01] for the Print Start Position, the Lead Edge Deletion, or the Scan Start Position | The default lead edge deletion is 2.5 mm.<br>Perform the Print Start Position, Lead Edge Deletion, and Scan Start Position adjustments in the Section 6 Adjustment Codes. |

#### Side Edge Misregistration

| Possible Cause   | Corrective Action   |
|--|---|
| The side guide in the paper tray is not positioned correctly | Position the side guide correctly.  |
| Incorrect value in 50-01 for center offset                   | Perform the Center Offset Adjustment procedure in the Section 6 Adjustment Codes. |

## CQ 12 Residual Image RAP

This is an image that is repeated on the same copy or consecutive copies.

### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

| Possible Cause                                  | Corrective Action                    |
|---|--------------------------------------|
| Image repeated every 3.1 inches (79 mm) on copy | Replace the Drum Cartridge (PL 8.2). |
| Image repeated every 3.7 inches (94 mm) on copy | Replace the Heat Roll (REP 10.2).    |
| Poor cleaning of the photoreceptor              | Replace the Drum Cartridge (PL 8.2). |

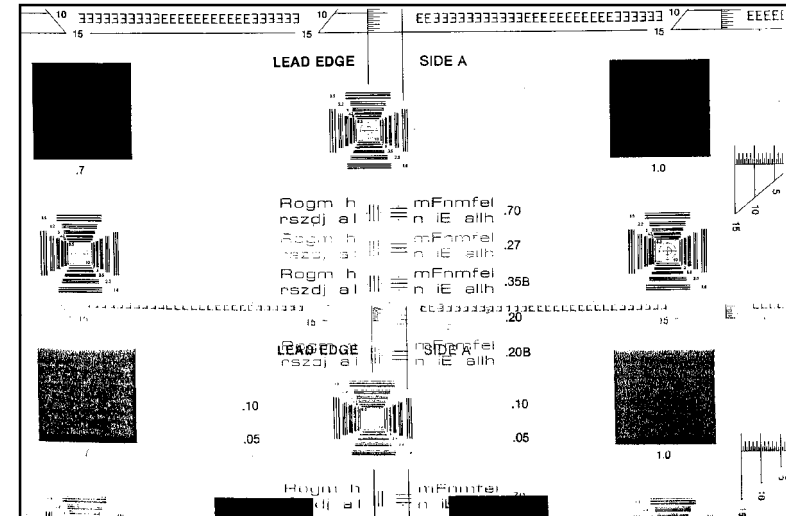


Figure 1 Residual Image

## CQ 13 Skew RAP

The image is skewed because the paper is skewed or the optics components are misadjusted and distort the image.

### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

| Possible Cause   | Corrective Action  |
|--|--|
| Paper Tray problem   | Check the condition of the front and rear paper tray snubbers. Repair as required (PL 4.1).<br><br>Ensure the paper tray guides are correctly set. Repair as required (PL 4.1).  |
| The paper is not loaded correctly.   | Show the customer how to load paper.   |
| Damaged or contaminated paper feed rollers, registration rollers, or transport rollers | Clean the paper feed and the registration rollers, and the Single Bypass Transport Rollers with Film Remover and a lint-free cloth. Check the components for wear or damage. Replace as required.<br><br>The Paper Feed Roller (REP 8.6) and the Lower Registration Roller (REP 8.13)<br><br>The Exit Roller (REP 8.9) and the Lower Transport Roller (REP 8.11)<br><br>The Transport Roller (REP 8.7) |
| Incorrect setting in 51-[2]  | Perform the Registration Buckle adjustment in the Section 6 Adjustment Codes.  |
| Optics problem   | Go to CQ 19 Distortion RAP.  |
| Worn or contaminated SDF Retard Roller, Feed Roller, or Transport Roller               | Clean the rollers with Film Remover and a lint-free cloth. Check the components for wear or damage. Replace as required.   |
| SDF Front and Rear Guides incorrectly positioned                                       | Show the customer how to load originals in the SDF.  |
| Obstruction in the SDF document path   | Open the SDF Feed Assembly and check for obstructions. Remove any obstructions which are present.  |

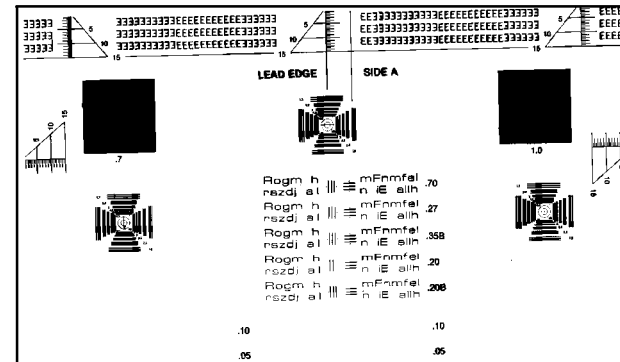


Figure 1 Skew



## CQ 14 Skips/Smears RAP

Areas of the image on the copy are blurred. This occurs at the image transfer area.

The 2.5 LP/mm ladder lines are not completely clearly visible.

### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

| Possible Cause  | Corrective Action   |
|---|---|
| Defective Transfer/Detack Corotron Assembly   | Replace the Transfer/Detack Corotron Assembly (REP 9.2).  |
| Worn or damaged paper feed components.  | Clean the paper feed and registration rollers, and Single Bypass Transport Roller with Film Remover and a lint-free cloth. Check the components for wear or damage. Replace as required:<br><br>The Paper Feed Roller (REP 8.6) and the Lower Registration Roller (REP 8.13)<br><br>The Exit Roller (REP 8.9) and the Lower Transport Roller (REP 8.11)<br><br>The Transport Roller (REP 8.7) |
| Contaminated or damaged scan rails  | Remove the Document Cover Assembly and the Document Glass Assembly (REP 6.1). Do not remove any other components in the optics area. Clean the carriage rails with a lint free towel.<br><br>Replace the half rate carriage scan rails if they are damaged (PL 3.1).  |
| Damp or curled paper  | Use fresh paper and ensure that the customer is storing the paper correctly.  |
| Dirty electrical connections on the Drum Cartridge or the Transfer/Detack Corotron Assembly | Clean the connections with film remover and a lint free cloth as required.  |

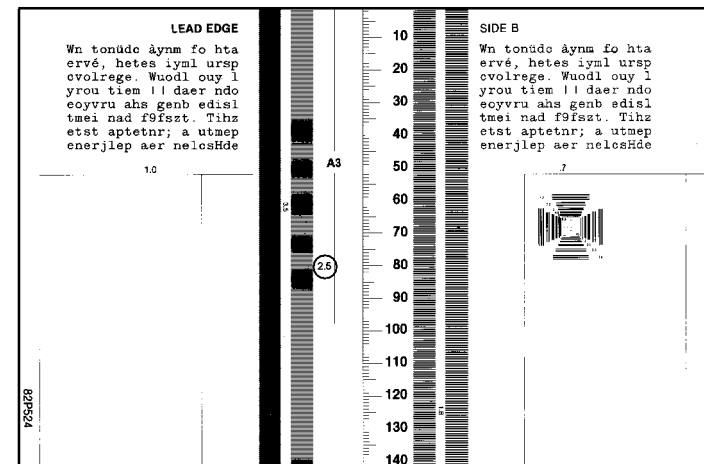


Figure 1 Skips and Smears

## CQ 15 Spots RAP

Circular black spots or irregular shaped black images on the copy.

### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

| Possible Cause                                   | Corrective Action  |
|--|--|
| Contaminated document glass                      | Clean the Document Glass with Lens and Mirror Cleaner and a lint-free cloth. |
| Damp or wrinkled paper                           | Use fresh paper and ensure that the customer is storing the paper correctly. |
| Defective, damaged or contaminated photoreceptor | Replace the Drum Cartridge (PL 8.2).   |
| Contaminated fuser heat roll                     | Replace the Heat Roll (REP 10.2).  |
| Worn magnetic roll                               | Replace the Toner Cartridge (PL 8.2).  |
| Contaminated Registration Roll                   | Clean the Registration Roll.   |





| SIZE OF BACK-GROUND SPOT   | MAXIMUM ALLOWABLE SPOTS    |                      |
|--|----------------------------|----------------------|
|  | ANY 2 INCH DIAMETER CIRCLE | 8 1/2 X 11 COPY AREA |
|  0.021" TO 0.030" | 1                          | 2                    |
|  0.016" TO 0.020" | 1                          | 7                    |
|  0.011" TO 0.015" | 6                          | 25                   |
|  0.006" TO 0.010" | 12                         | NOT SPECIFIED        |

Figure 1 Spots

## CQ 16 Uneven Density RAP

The density and line thickness vary across the copy.

### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

| Possible Cause                          | Corrective Action  |
|---|--|
| Defective or contaminated photoreceptor | Replace the Drum Cartridge (PL 8.2).   |
| Contaminated Transfer Corotron          | Clean the Transfer Corotron Wire with the Corotron Cleaner (PL 5.3). If the problem still exists, replace the Transfer/ Detack Corotron Assembly (REP 9.2).        |
| Developer/Dry Ink life exceeded         | Replace the Toner Cartridge (PL 8.2).  |
| Low toner                               | Replace the Toner Cartridge (PL 8.2).  |
| Dirty Mirrors                           | Remove the Document Cover Assembly and the Document Glass Assembly (REP 6.1) and clean the mirrors 1 through 3 with Lens and Mirror Cleaner and a lint-free cloth. |

## CQ 17 Unfused Copy RAP

The characters or image are easily wiped off a copy.

### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

| Possible Cause                        | Corrective Action   |
|---------------------------------------|---|
| Damp Paper                            | Use fresh paper and ensure that the customer is storing the paper correctly.  |
| Incorrect Fuser temperature           | Ensure that the Fuser temperature is set correctly for the customer paper that is used most often. Heavy weight paper may require a higher temperature. Light weight paper may require a lower temperature.<br><br>Refer to the appropriate parameter adjustment table in Section 6:<br><br>- Adjustment Codes<br><br>- Programmable Features Settings<br><br>- Configuration Codes |
| Defective Fuser Heat or Pressure Roll | Replace the Fuser Assembly (REP 10.1).  |

## CQ 18 Wrinkle RAP

This is damage that is probably caused by the Fuser. This is a severe case of creases that run in the direction of paper travel.

### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

**NOTE:** Wrinkles may occur when envelopes are run. Refer to the User Guide for information on running envelopes.

| Possible Cause  | Corrective Action   |
|---|---|
| Damp paper  | Use fresh paper and ensure that the customer is storing the paper correctly.  |
| Damaged or contaminated paper feed rollers, registration roller, or transport rollers | Clean all of the paper feed and transport rollers with Film Remover and a lint-free cloth. Check the components for wear or damage. |
| Damaged or contaminated Fuser Heat Roll or Pressure Roll                              | Replace as required either the Heat Roll (PL 6.1) (REP 10.2), the Pressure Roll (PL 6.2)(REP 10.3), or both.                        |

## CQ 19 Distortion RAP

Two types of image distortion can be attributed to misadjustment of the optics components - horizontal image distortion (Figure 1) and vertical image distortion (Figure 2).

**NOTE:** Perform the checks in CQ 13 Skew RAP before checking the optics components.

### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

| Possible Cause  | Corrective Action   |
|---|---|
| Half Rate Carriage or Exposure Lamp Carriage misadjusted          | Go to ADJ 6.7 Image Distortion (Horizontal and Vertical). |
| The Left or the Right Half Rate Carriage Scan Rail is misadjusted | Go to ADJ 6.7 Image Distortion (Horizontal and Vertical). |

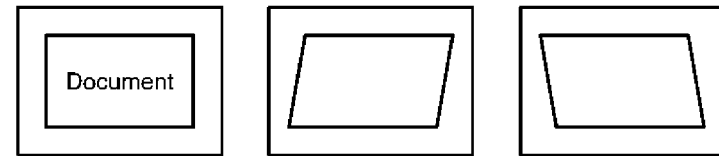


Figure 1 Horizontal Image Distortion Examples

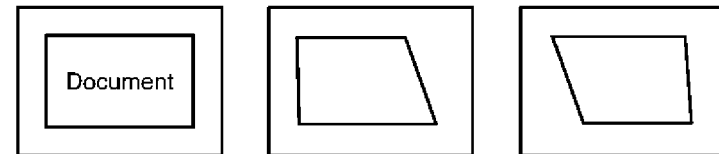


Figure 2 Vertical Image Distortion Examples

## CQ 20 Magnification RAP

The image on the copy is not within specification for the selected magnification.

### Initial Actions

Replace the copy paper with a new supply.

Ensure that the optics are clean.

### Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

| Possible Cause             | Corrective Action  |
|----------------------------|--|
| Incorrect value in 48- [1] | If the Lens/CCD Module was removed, reinstall it to the reference position (ADJ 6.2).<br>Perform ADJ 6.7 Image Distortion (Horizontal and Vertical).<br>Perform ADJ 6.8 Image Magnification. |
| Image Processing Problem   | Replace the Main PWB (REP 1.1).  |



# 4. Repair / Adjustment

## Repairs

### Electrical

|         |                             |     |
|---------|-----------------------------|-----|
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### Main Drive

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|          |  |      |
|----------|--|------|
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|----------|----------------------|------|
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## Adjustments

### Optics

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|         |                          |      |
|---------|--------------------------|------|
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**Notes:**



## REP 1.1 Main PWB

Parts List on PL 7.1

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the six screws and the PWB Cover (PL 7.1).
4. Disconnect all the Ribbon Cables and Harness from the Main PWB.
5. Remove the six mounting screws and the Main PWB.

### Replacement

1. If the Main PWB is being replaced, carefully remove the EPROM and the GDI Memory PWB from the old PWB and install them onto the new PWB.
2. Reassemble the Copier.
3. If the Main PWB has been replaced, perform the following:
  - a. Copy Density (ADJ 6.1)
  - b. Image Magnification (ADJ 6.8)

## REP 1.2 Power Supply PWB (PS1)

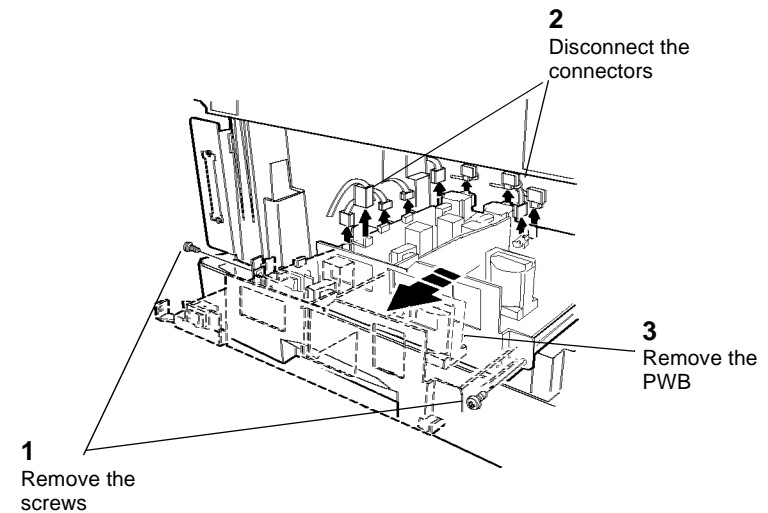
Parts List on PL 7.1

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Top Left Cover.
4. Remove the Output Tray (REP 14.7).
5. Move the Power Receptacle (REP 1.4).
6. (Figure 1): Remove the Power Supply PWB.



SKY064N

Figure 1 Removing the Power Supply PWB

## REP 1.3 Control Console PWB

Parts List on PL 1.3

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Control Console (REP 14.5).
2. (Figure 1): Remove the Control Console PWB.

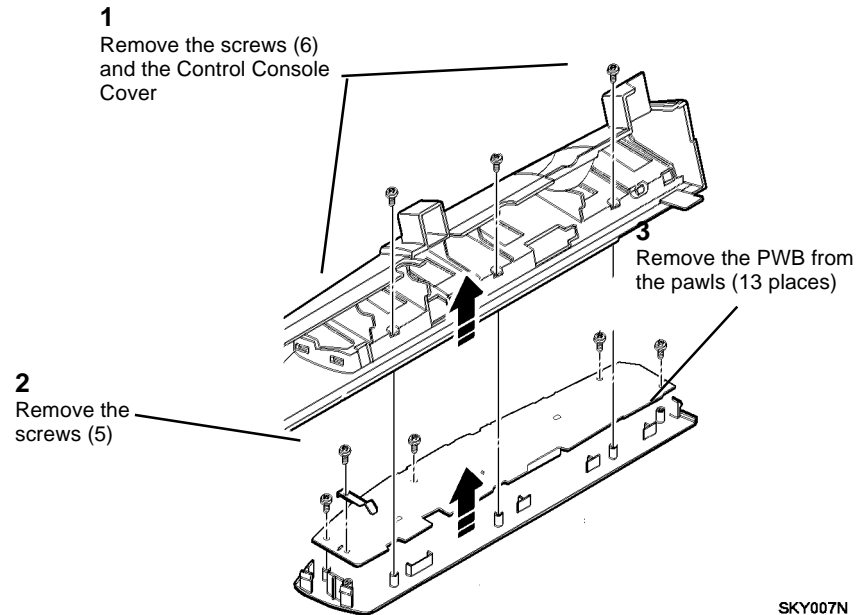


Figure 1 Removing the Control Console PWB

## REP 1.4 Power Receptacle

Parts List on PL 7.1

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Top Left Cover.
4. Remove the Output Tray (REP 14.7).

**NOTE:** The Power Receptacle is wired to the Power Supply PWB. This procedure shows how to detach it from the Base Assembly.

5. (Figure 1): Move the Power Receptacle from its position on the Base Assembly.

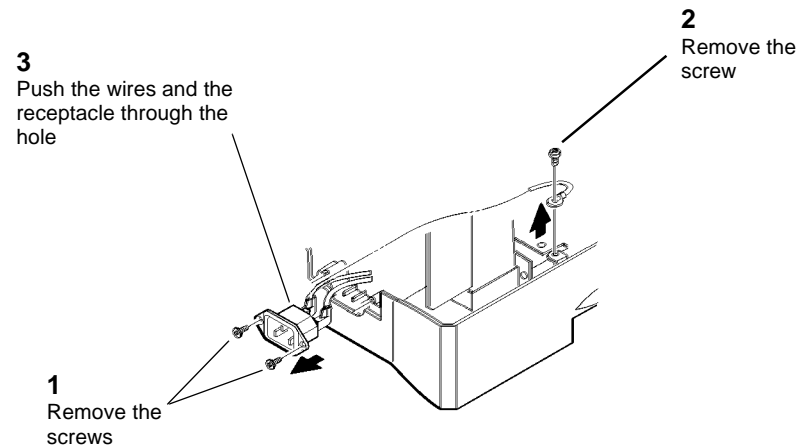


Figure 1 Moving the Power Receptacle

## REP 4.1 Main Drive Motor (MOT1)

### Parts List on PL 2.2

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. (Figure 1): Remove the Main Drive Motor.

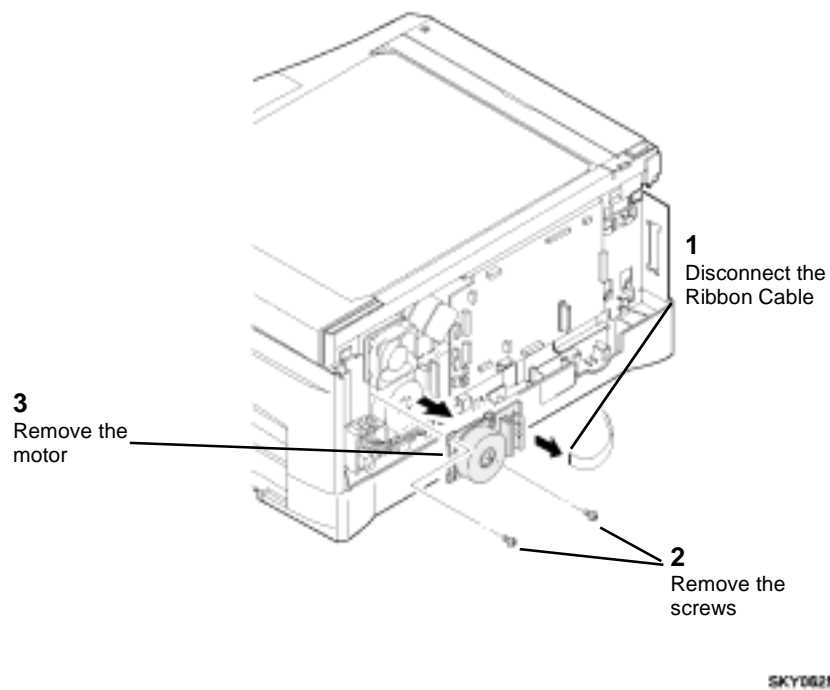


Figure 1 Removing the Main Drive Motor

**Notes:**

## REP 5.1 SDF Assembly

### Parts List on PL 9.1

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Rear Cover.
2. Remove the six screws and the PWB Cover (PL 7.1).  
*NOTE: Cut cable ties or release cable clamps as necessary.*
3. Disconnect the ground wire and cable coming from the SDF Assembly.
4. Lift the SDF Assembly up slowly off the Document Glass. While tilting the hinges in the rear direction, lift the hinges out of the hinge guides.

## REP 5.2 SDF Sensor PWB

### Parts List on PL 9.2

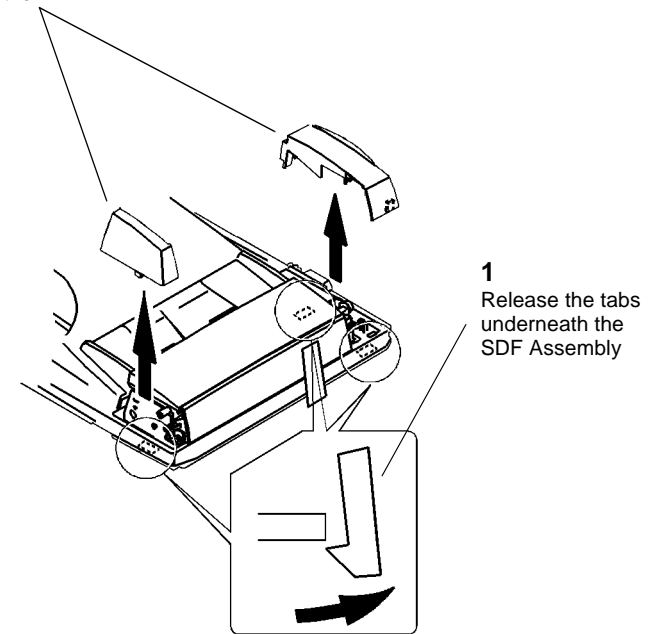
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

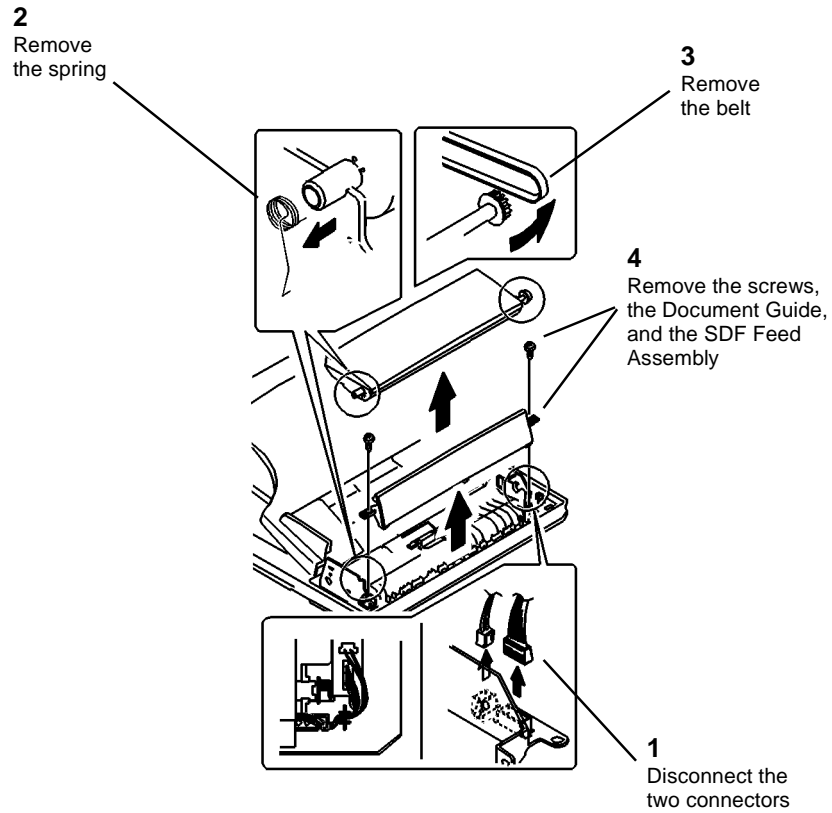
2. Remove the covers



0500001A-SKY

Figure 1 Removing the Covers

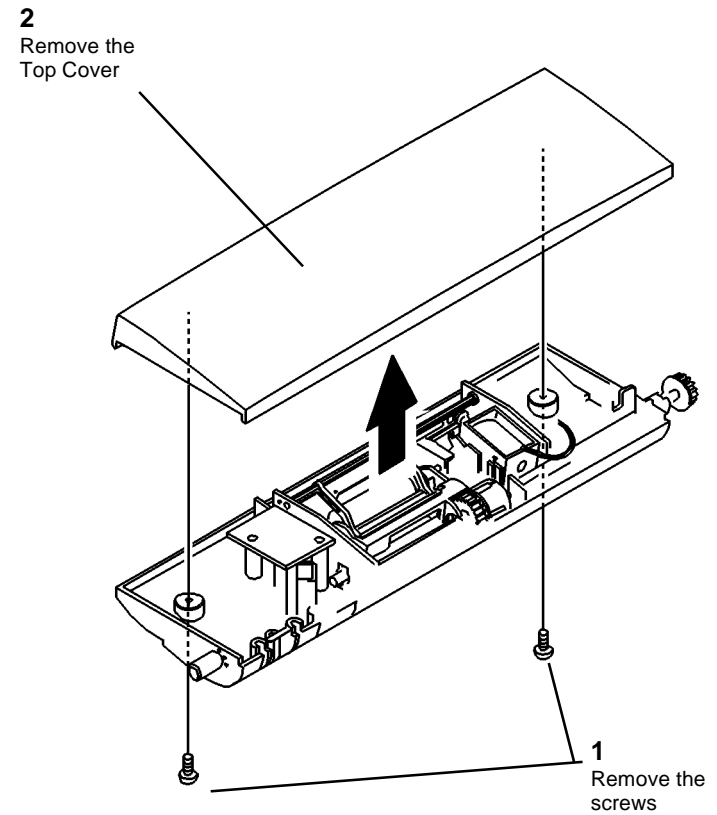
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

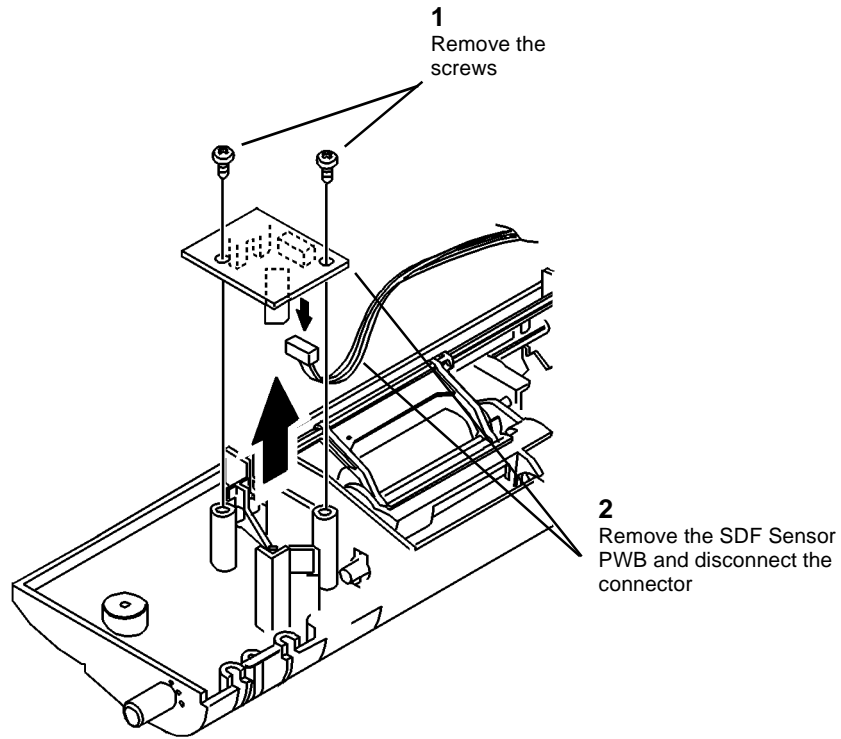
3. (Figure 3): Remove the Top Cover.



0500003A-SKY

Figure 3 Removing the Top Cover

4. (Figure 4): Remove the SDF Sensor PWB.



0500004A-SKY

Figure 4 Removing the SDF Sensor PWB

## REP 5.3 Feed Solenoid (SOL1)

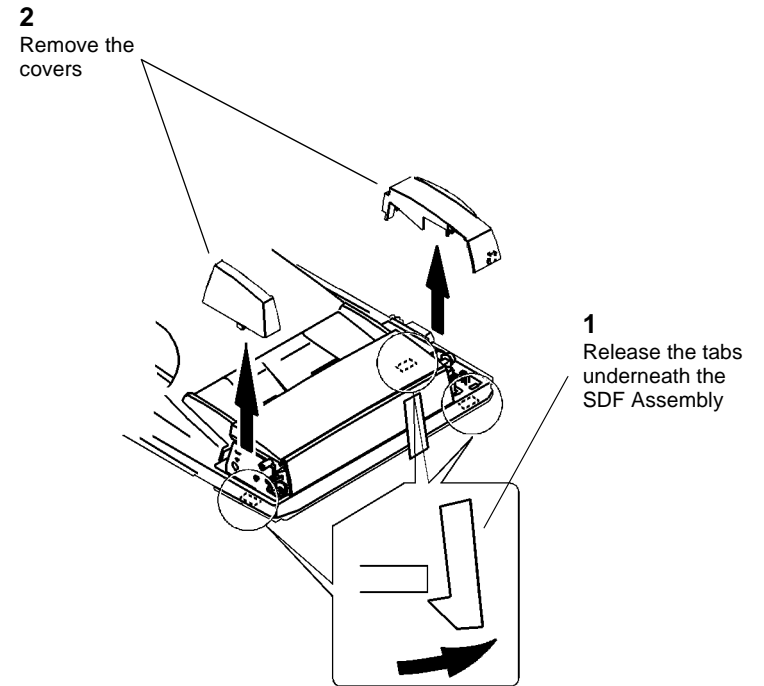
Parts List on PL 9.2

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

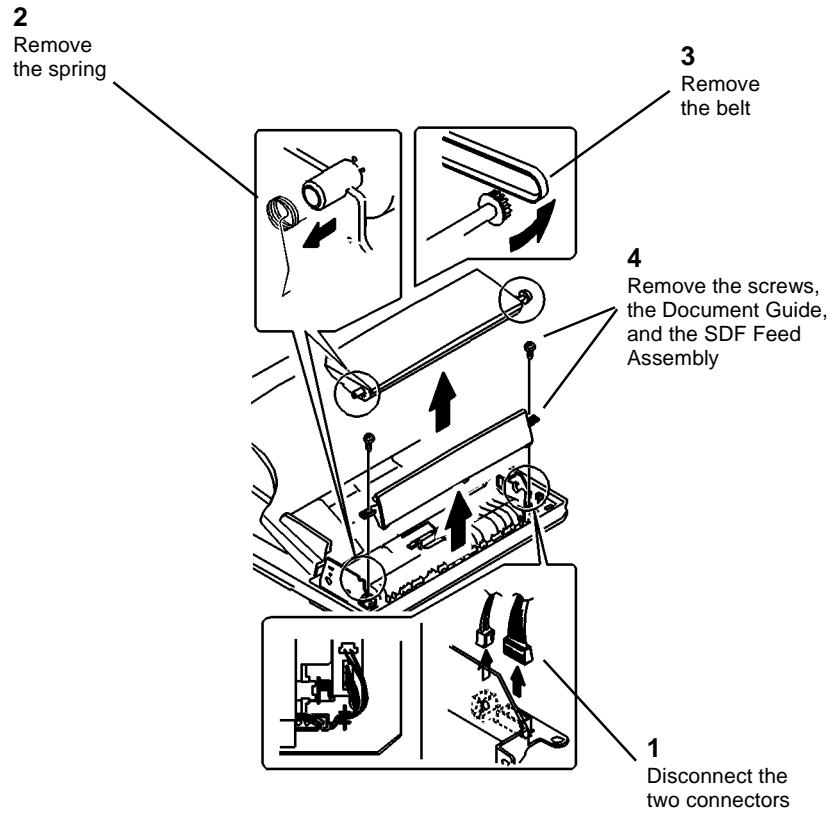
1. (Figure 1): Remove the Front Cover and the Rear Cover.



0500001A-SKY

Figure 1 Removing the Covers

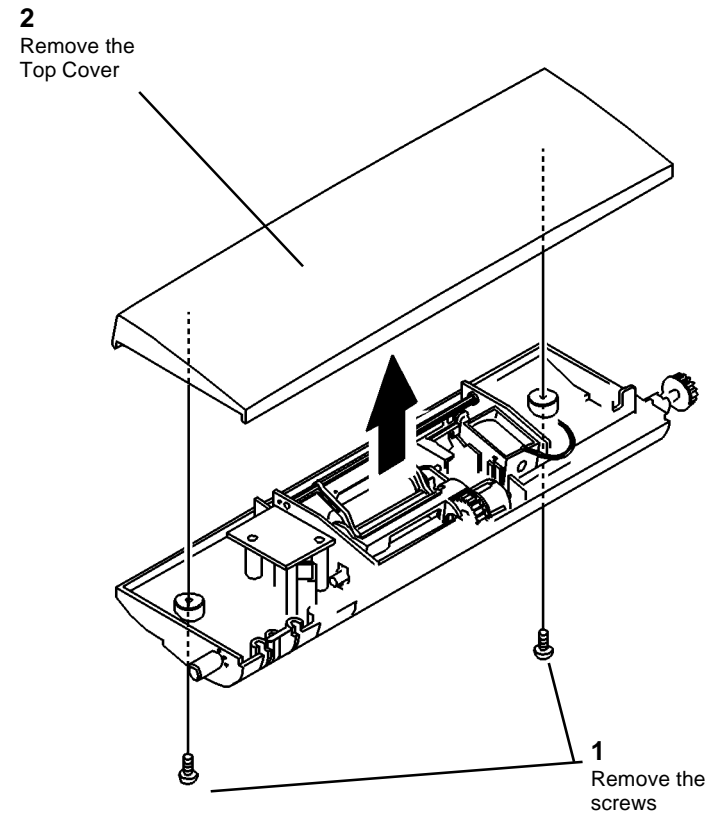
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Top Cover.



0500003A-SKY

Figure 3 Removing the Top Cover



4. (Figure 4): Remove the Feed Solenoid.

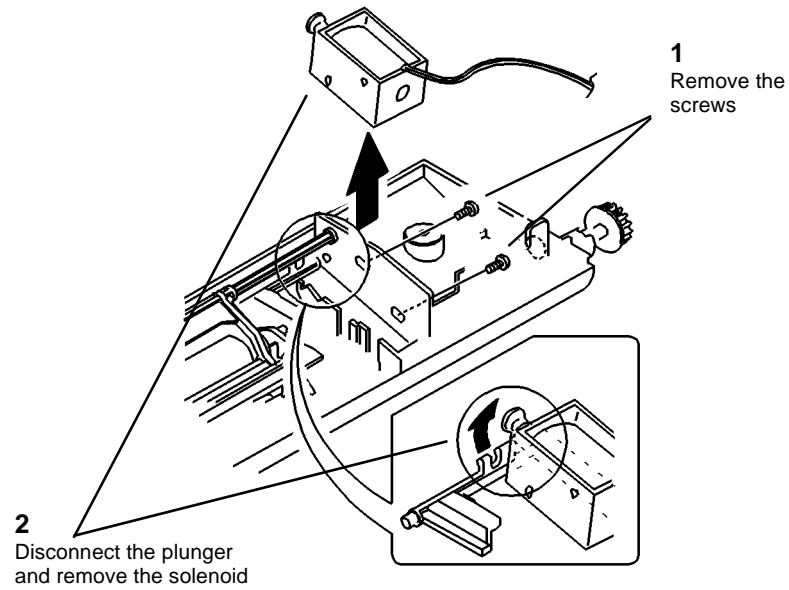


Figure 4 Removing the Feed Solenoid

0500005A-SKY

## REP 5.4 Clutch

### Parts List on PL 9.2

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

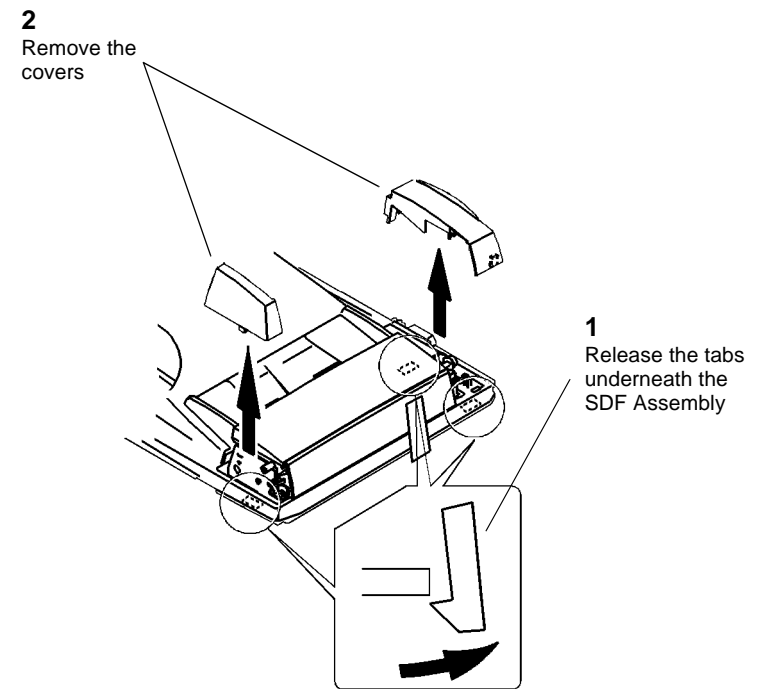
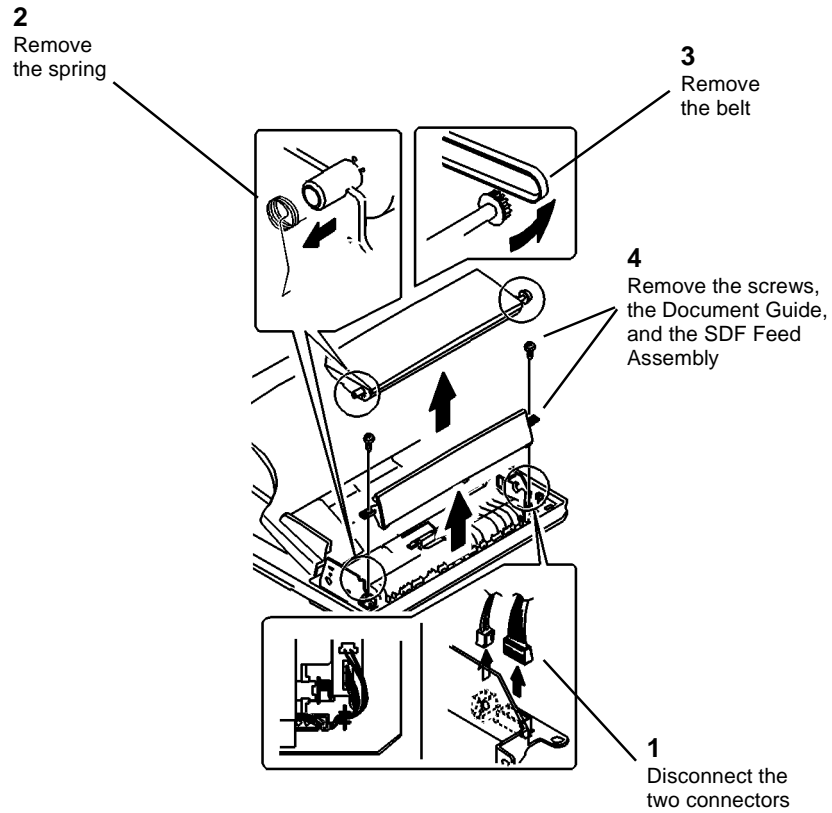


Figure 1 Removing the Covers

0500001A-SKY

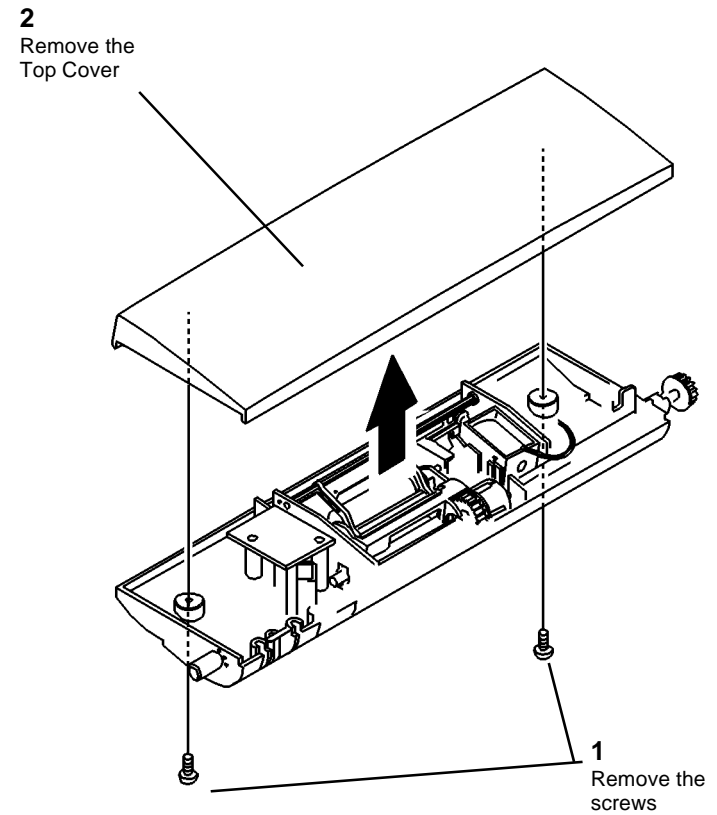
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Top Cover.



0500003A-SKY

Figure 3 Removing the Top Cover

4. (Figure 4): Prepare to remove the clutch.

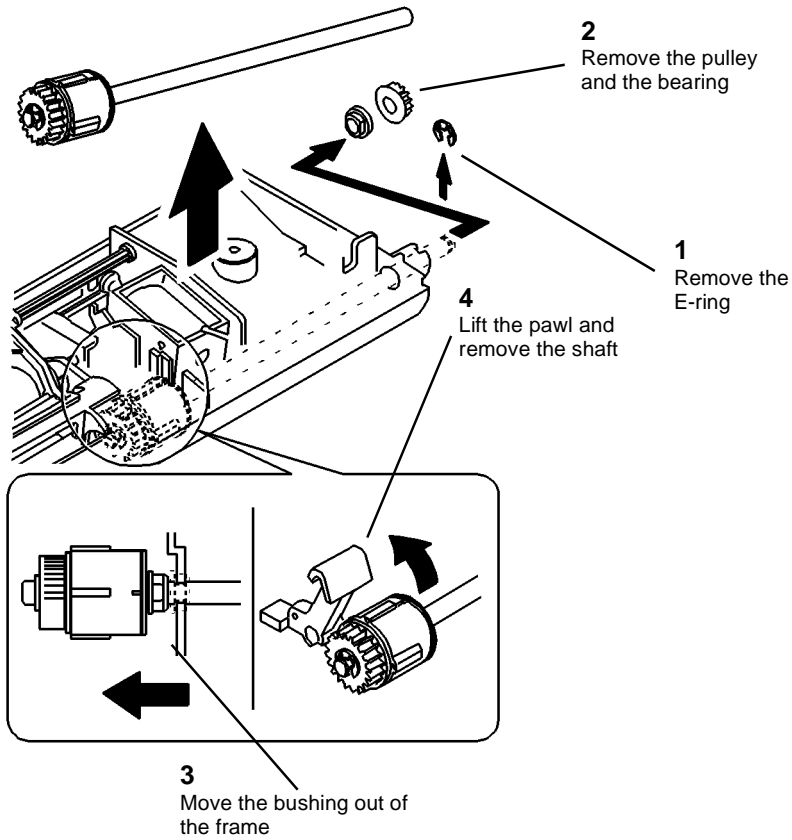


Figure 4 Preparing to Remove the Clutch

0500006A-SKY

5. (Figure 5): Remove the clutch.

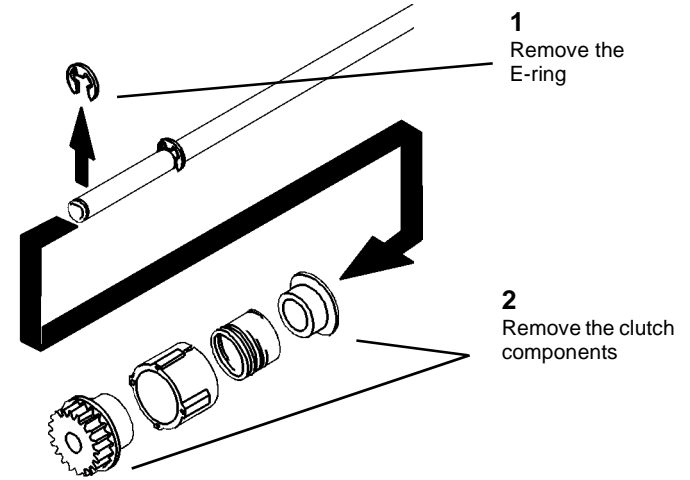


Figure 5 Removing the Clutch

0500007A-SKY

## REP 5.5 Feed Roller / Retard Roller

### Parts List on PL 9.2

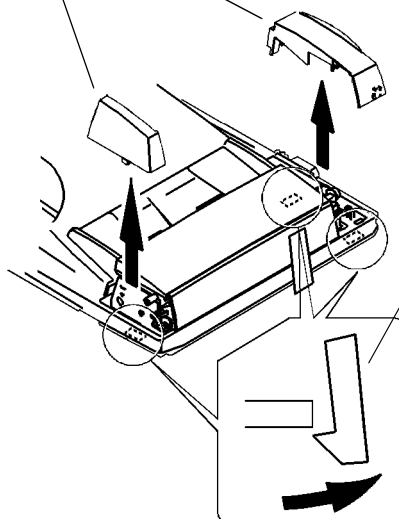
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

- 2 Remove the covers



- 1 Release the tabs underneath the SDF Assembly

0500001A-SKY

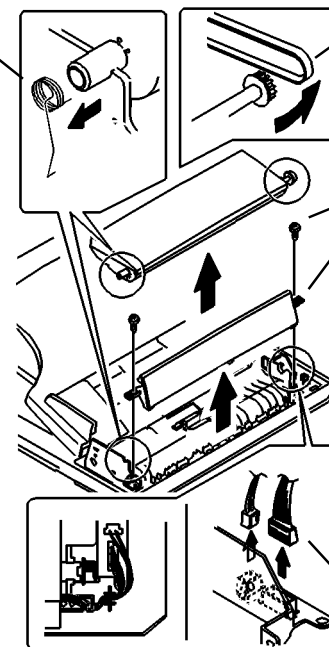
Figure 1 Removing the Covers

2. (Figure 2): Remove the SDF Feed Assembly.

- 2 Remove the spring

- 3 Remove the belt

- 4 Remove the screws, the Document Guide, and the SDF Feed Assembly



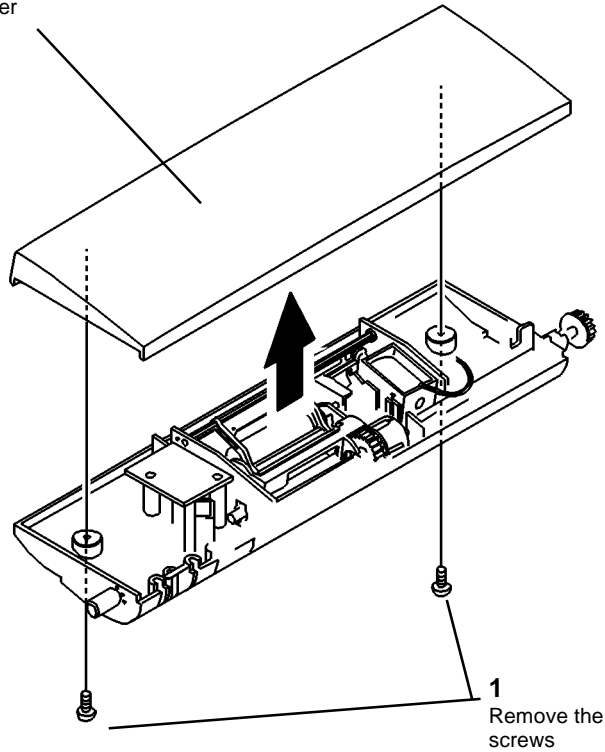
- 1 Disconnect the two connectors

0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Top Cover.

**2**  
Remove the  
Top Cover

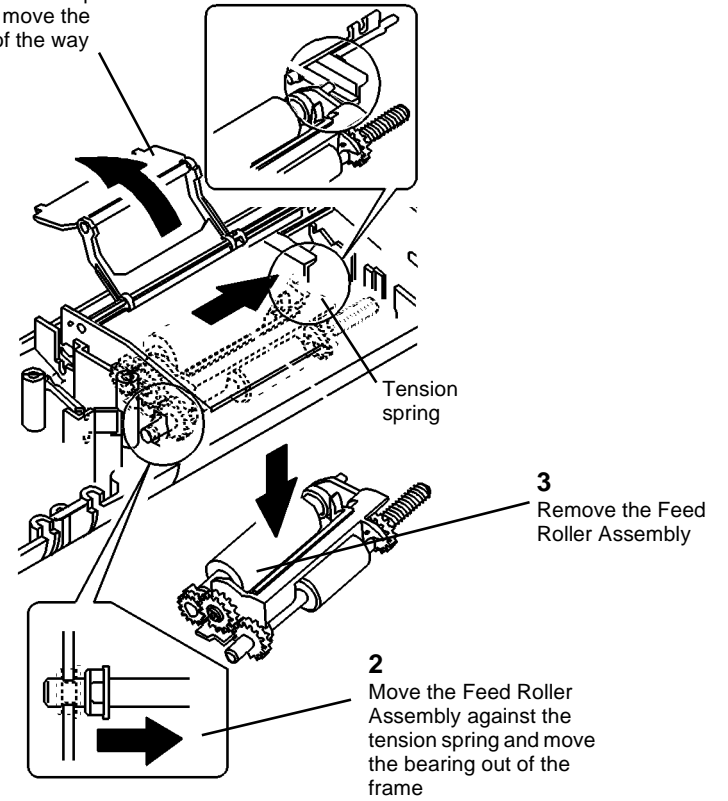


0500003A-SKY

Figure 3 Removing the Top Cover

4. (Figure 4): Remove the Feed Roller Assembly.

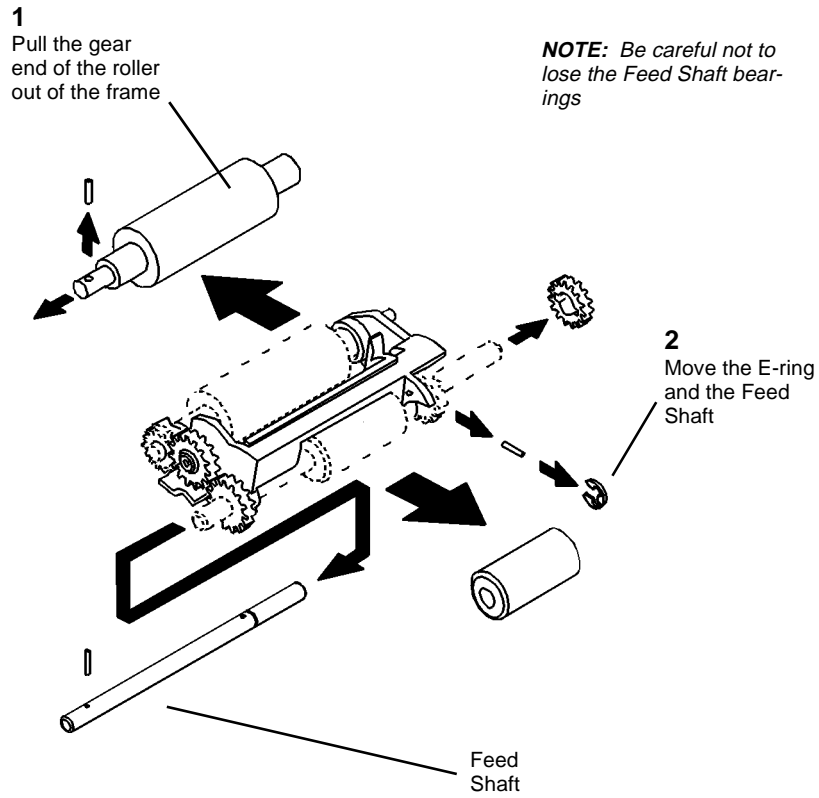
**1**  
Remove the pressure  
spring from the Paper  
Gate and move the  
gate out of the way



0500008A-SKY

Figure 4 Removing the Feed Roller Assembly

5. (Figure 5): Remove the Retard Roller.



0500009A-SKY

Figure 5 Removing the Retard Roller

## REP 5.6 Exit Drive Belt

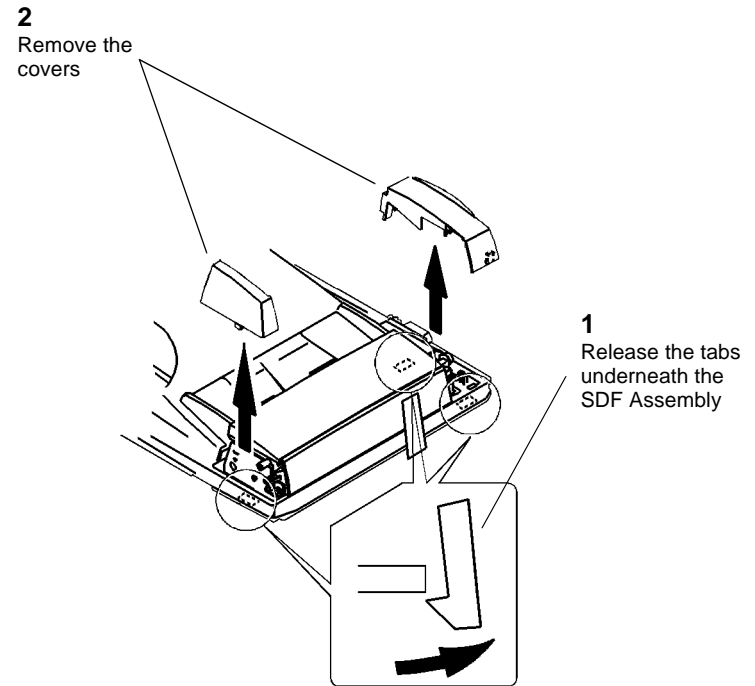
Parts List on PL 9.3

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

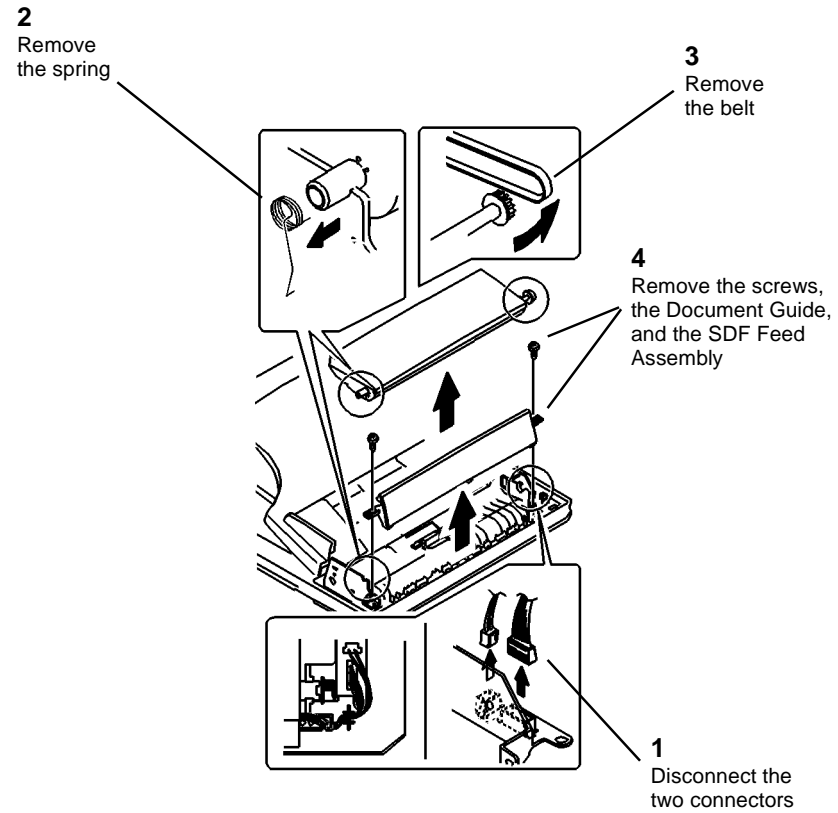
1. (Figure 1): Remove the Front Cover and the Rear Cover.



0500001A-SKY

Figure 1 Removing the Covers

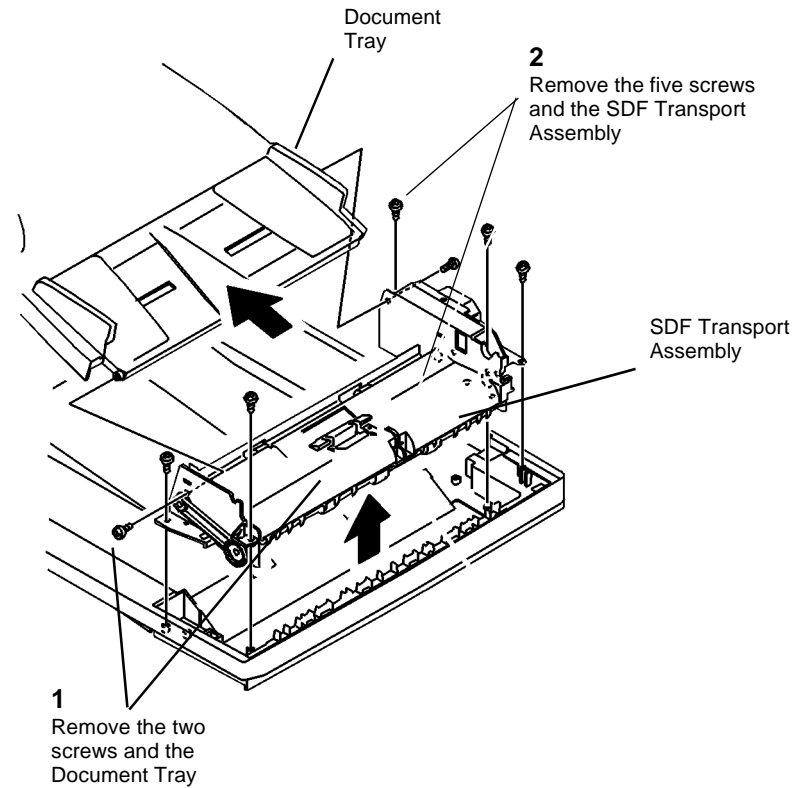
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Document Tray.



0500010A-SKY

Figure 3 Removing the Document Tray

4. (Figure 4): Remove the Exit Drive Belt.

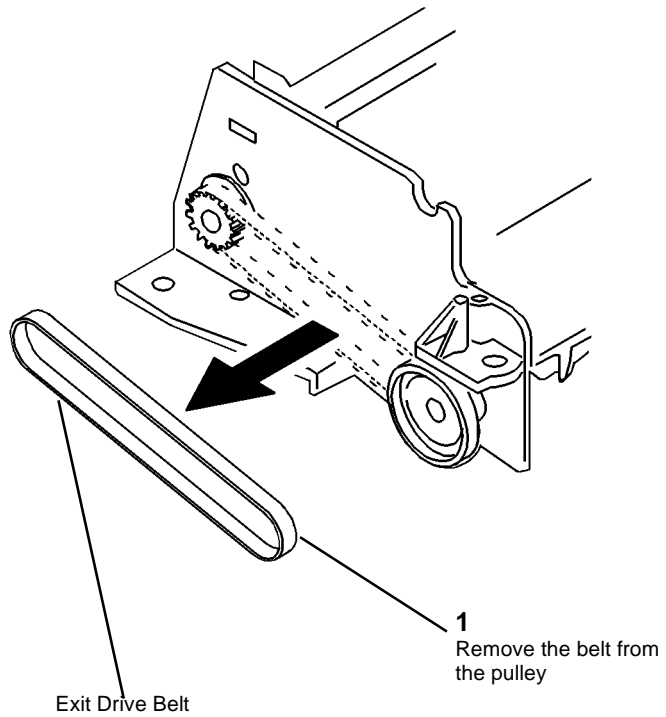


Figure 4 Removing the Exit Drive Belt

0500011A-SKY

## REP 5.7 SDF Drive Motor (MOT1)

Parts List on PL 9.3

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

2

Remove the covers

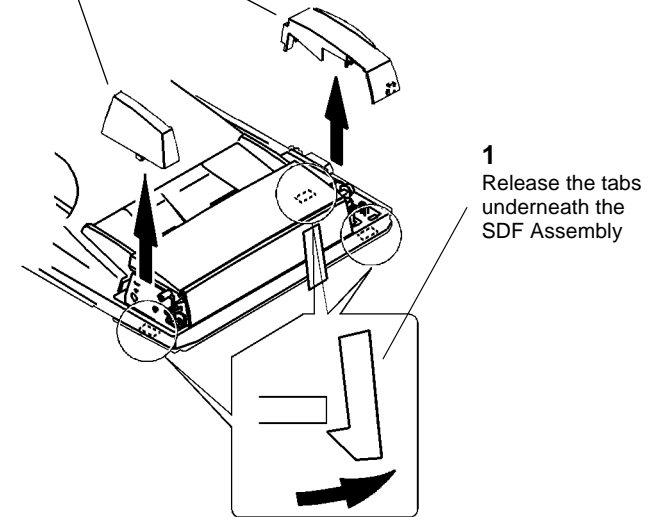
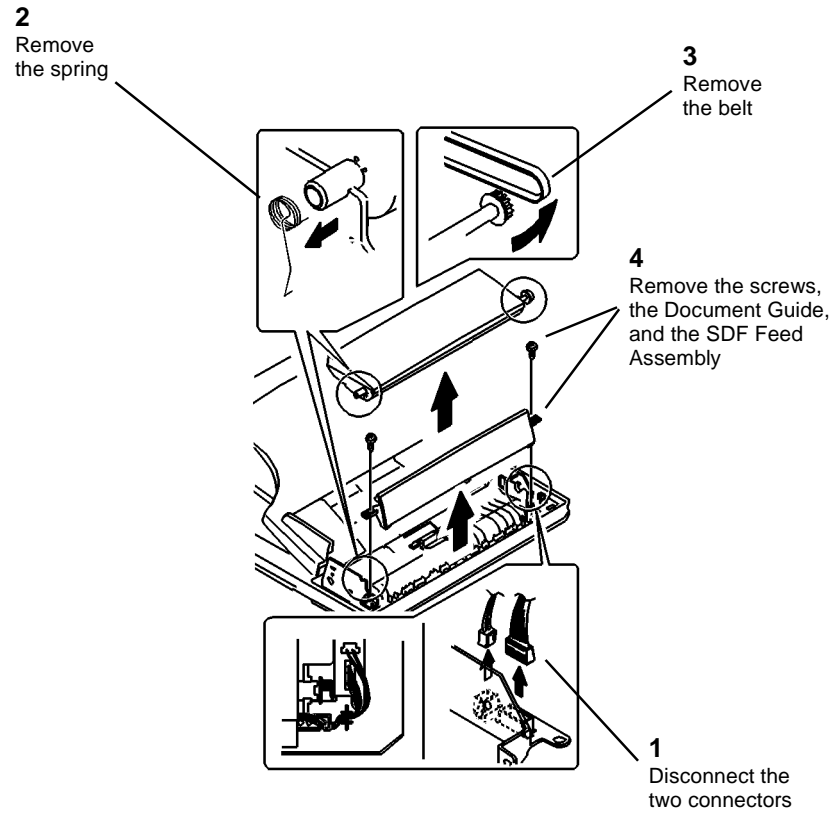


Figure 1 Removing the Covers

0500001A-SKY



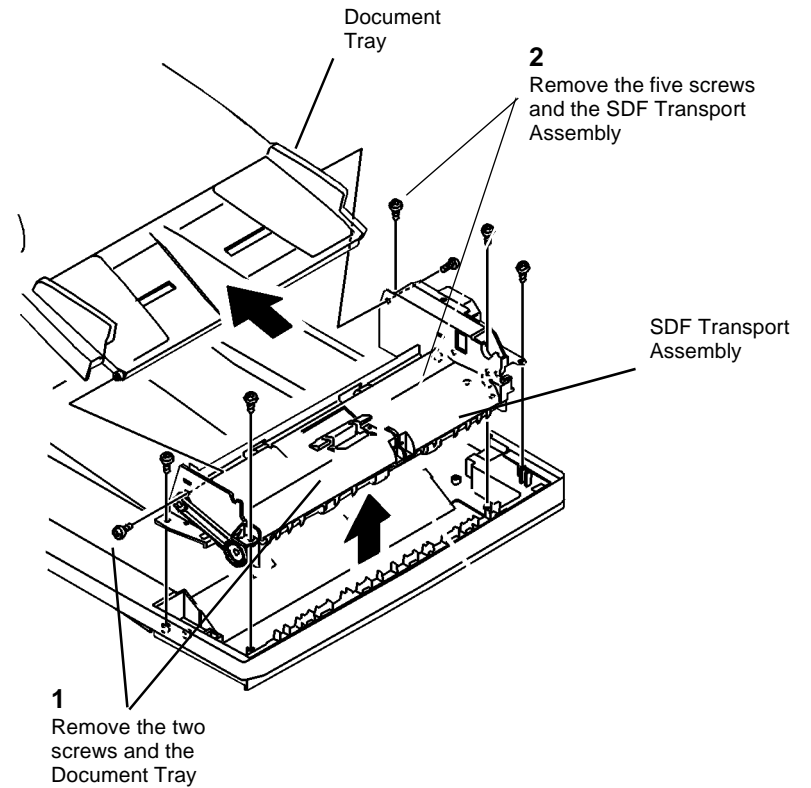
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Document Tray.



0500010A-SKY

Figure 3 Removing the Document Tray

4. (Figure 4): Remove the Exit Drive Belt.

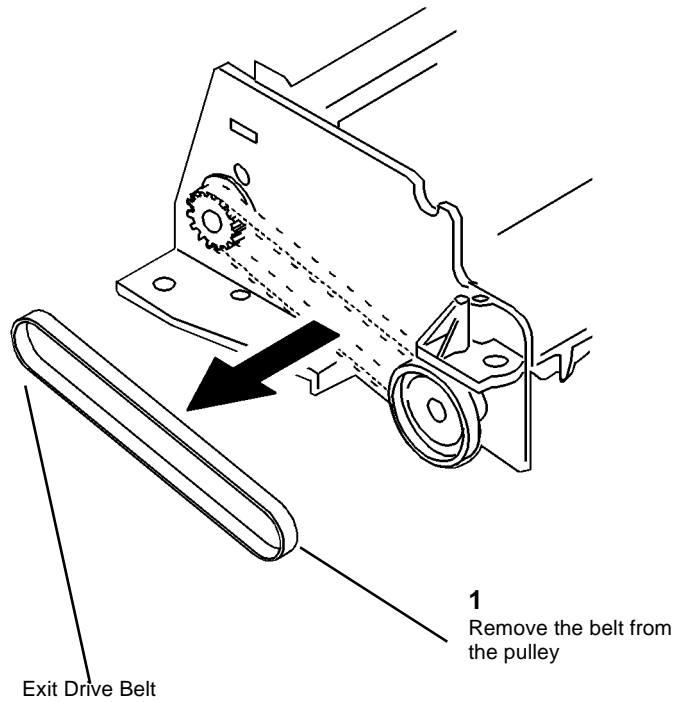


Figure 4 Removing the Exit Drive Belt

0500011A-SKY

5. (Figure 5): Remove the SDF Drive Motor.

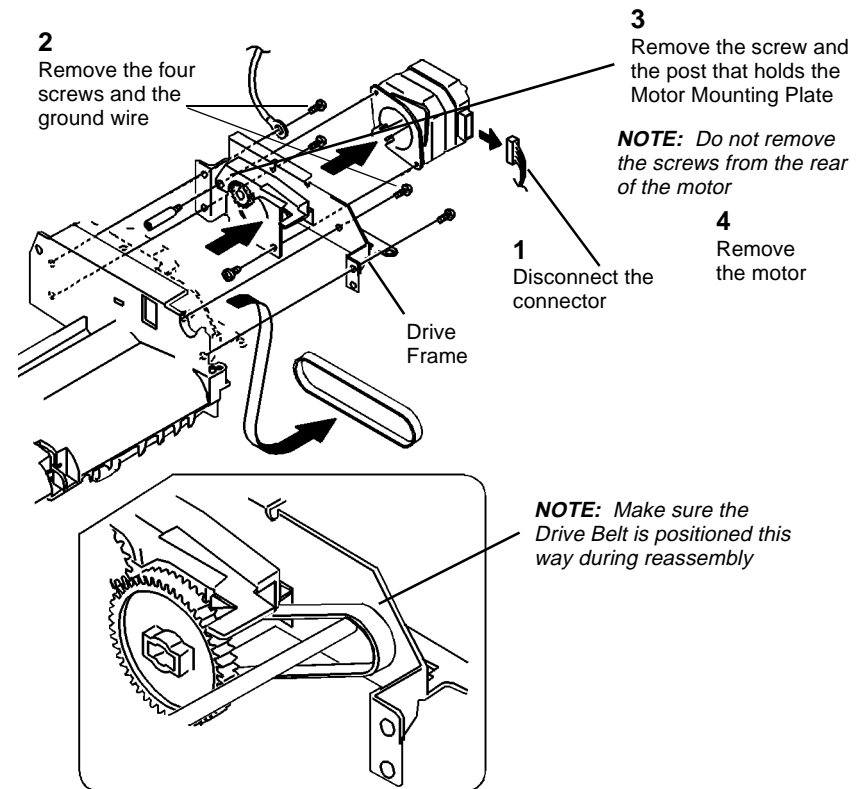


Figure 5 Removing the SDF Drive Motor

0500012A-SKY

## REP 5.8 Document Path Sensor (Q3)

### Parts List on PL 9.3

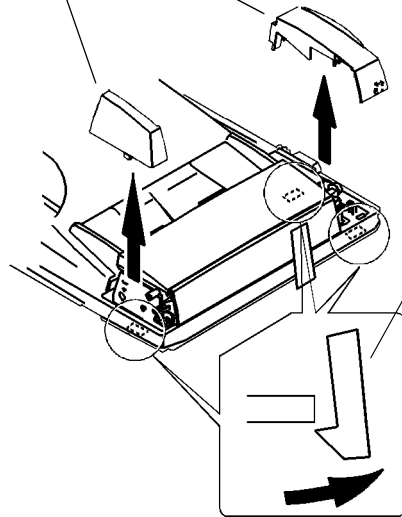
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

- 2 Remove the covers



- 1 Release the tabs underneath the SDF Assembly

Figure 1 Removing the Covers

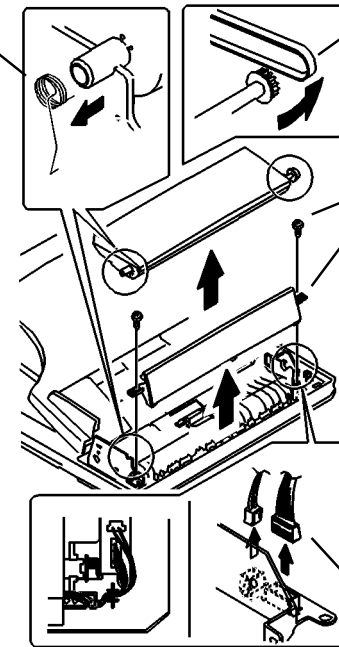
0500001A-SKY

2. (Figure 2): Remove the SDF Feed Assembly.

- 2 Remove the spring

- 3 Remove the belt

- 4 Remove the screws, the Document Guide, and the SDF Feed Assembly

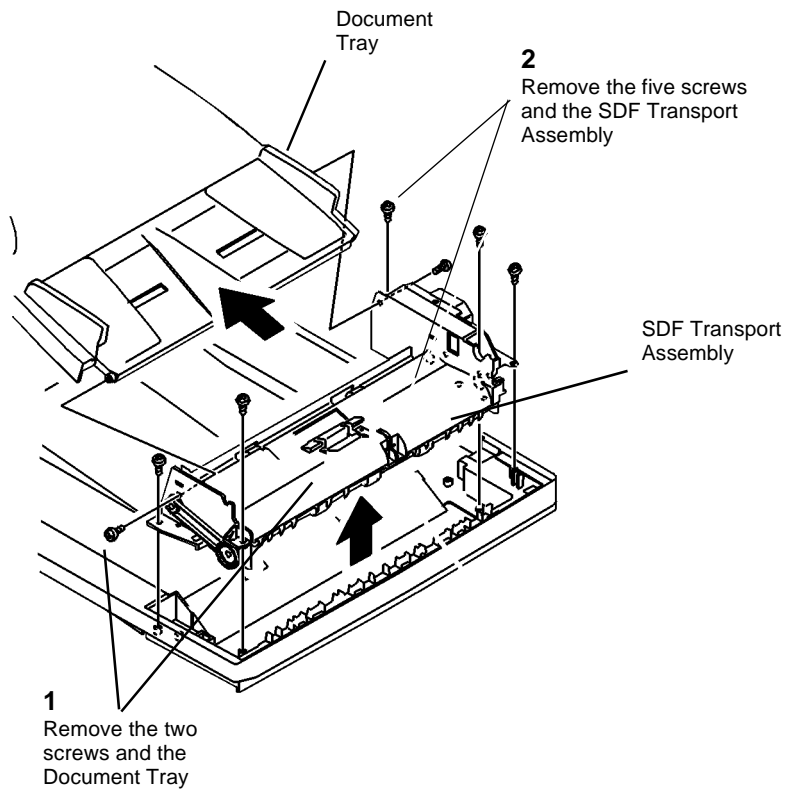


- 1 Disconnect the two connectors

Figure 2 Removing the SDF Feed Assembly

0500002A-SKY

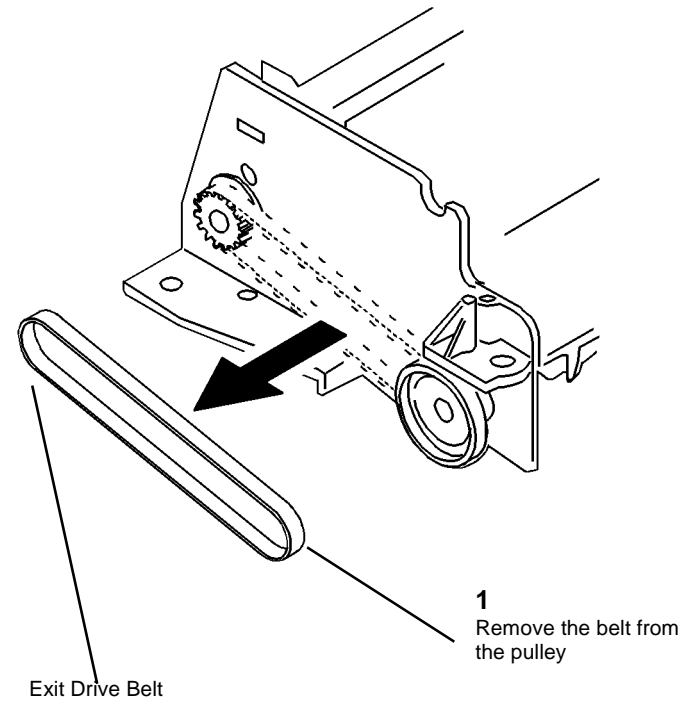
3. (Figure 3): Remove the Document Tray.



0500010A-SKY

Figure 3 Removing the Document Tray

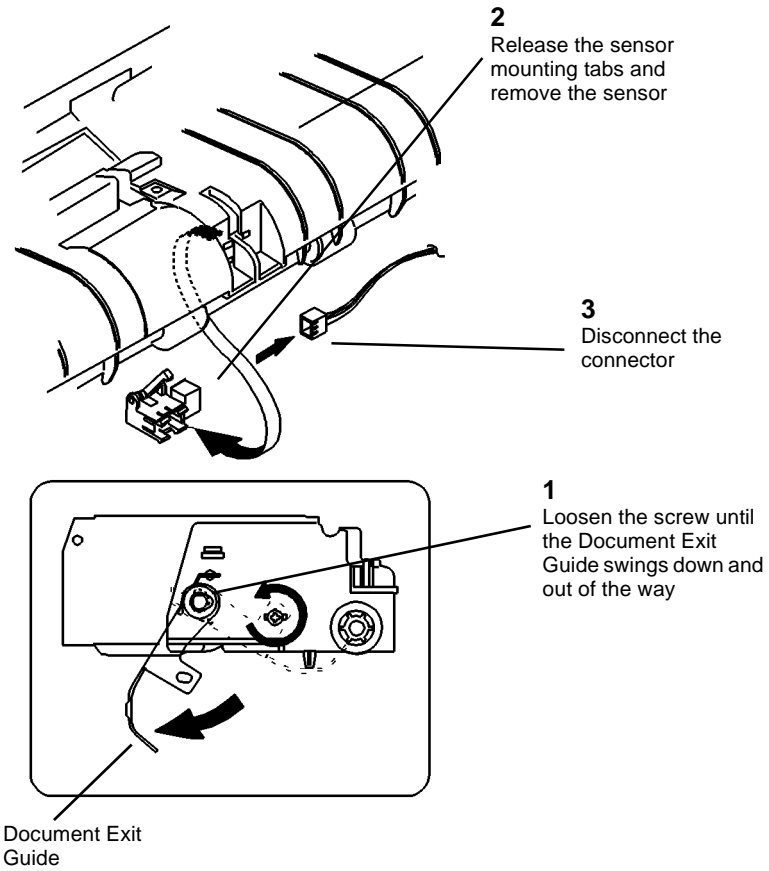
4. (Figure 4): Remove the Exit Drive Belt.



0500011A-SKY

Figure 4 Removing the Exit Drive Belt

5. (Figure 5): Remove the Document Path Sensor.



0500013A-SKY

Figure 5 Removing the Document Path Sensor

## REP 5.9 Transport Roller

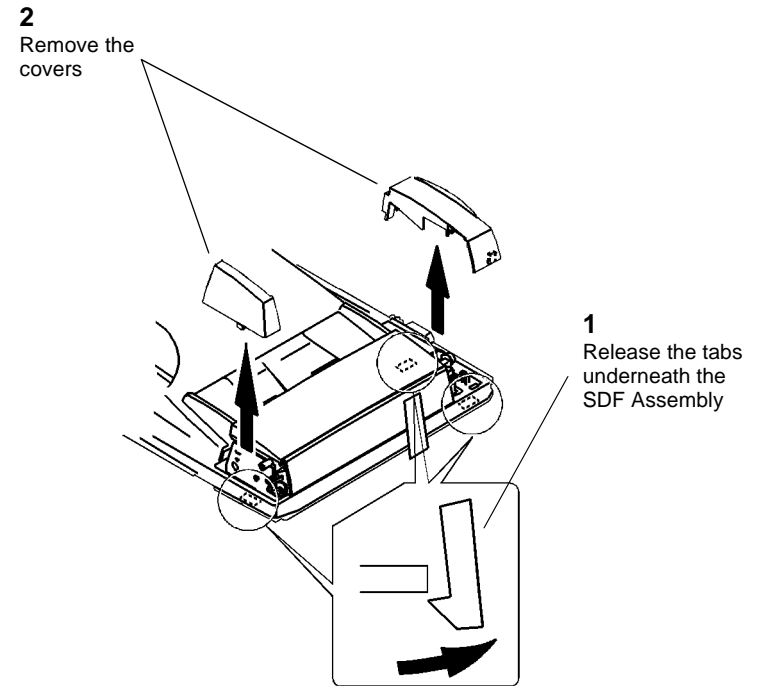
### Parts List on PL 9.1

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

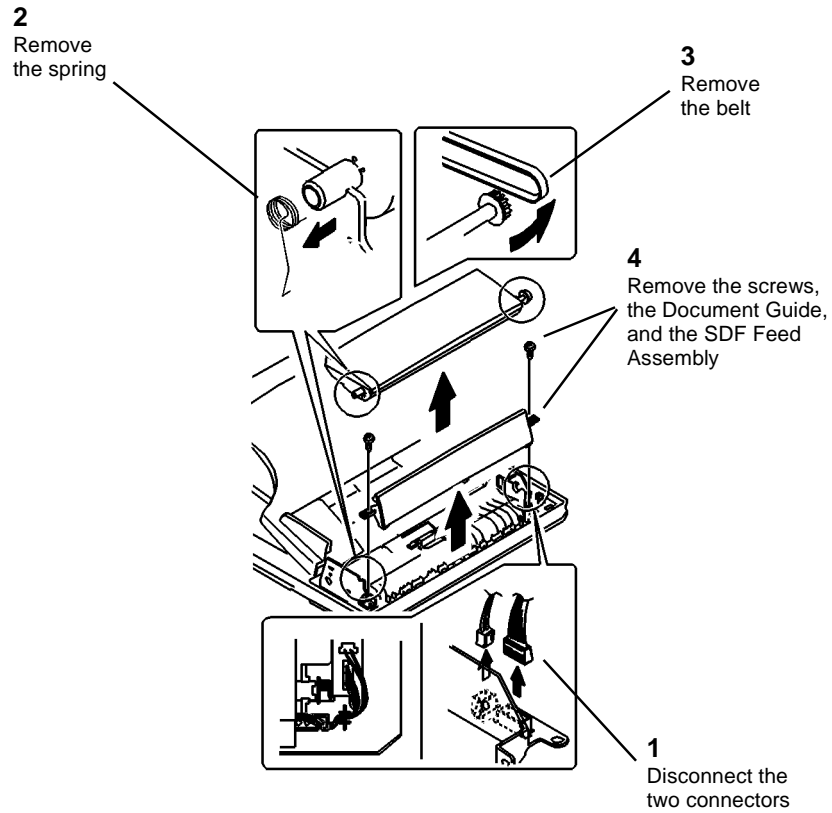
1. (Figure 1): Remove the Front Cover and the Rear Cover.



0500001A-SKY

Figure 1 Removing the Covers

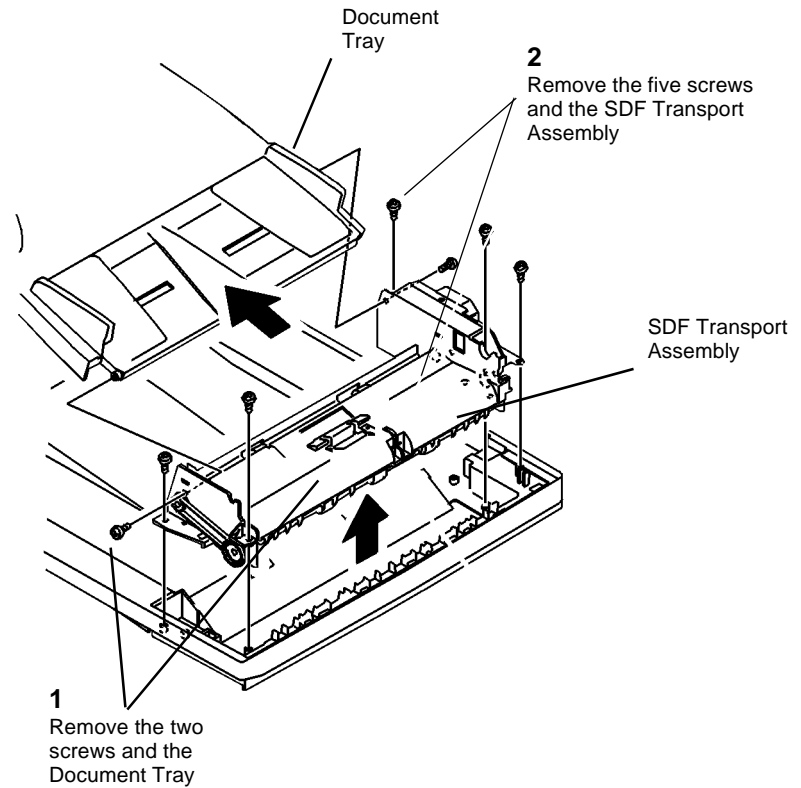
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Document Tray.



0500010A-SKY

Figure 3 Removing the Document Tray

4. (Figure 4): Remove the Exit Drive Belt.

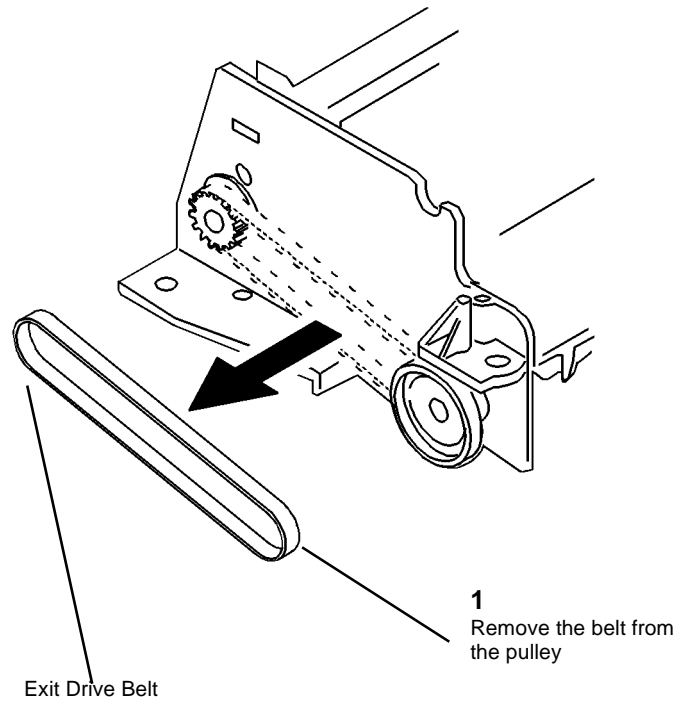


Figure 4 Removing the Exit Drive Belt

0500011A-SKY

5. (Figure 5): Remove the Transport Roller.

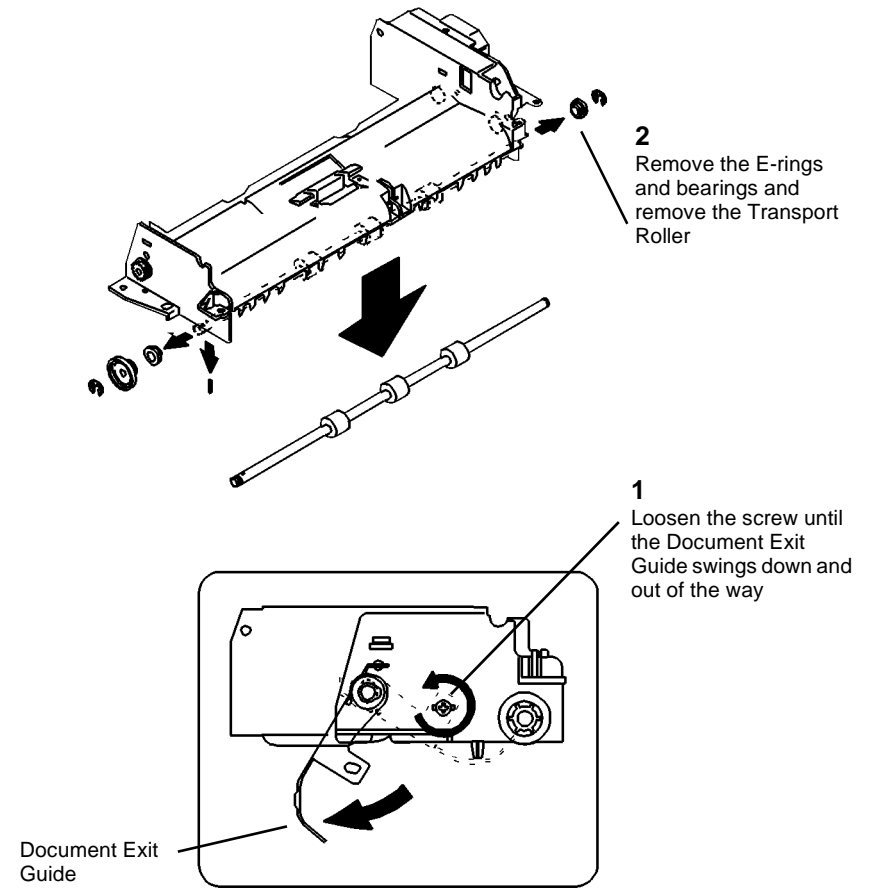


Figure 5 Removing the Transport Roller

0500014A-SKY

## REP 5.10 Exit Roller

### Parts List on PL 9.1

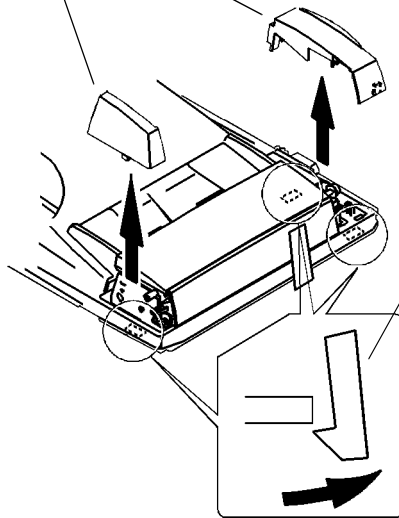
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

- 2 Remove the covers



- 1 Release the tabs underneath the SDF Assembly

Figure 1 Removing the Covers

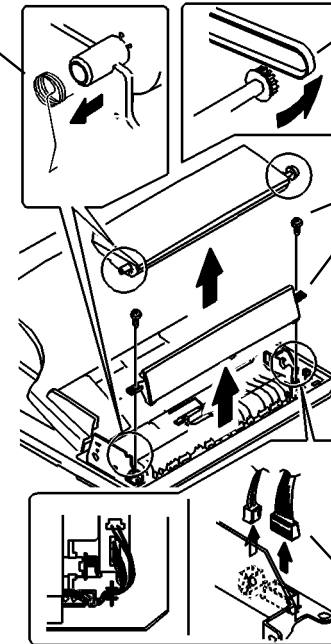
0500001A-SKY

2. (Figure 2): Remove the SDF Feed Assembly.

- 2 Remove the spring

- 3 Remove the belt

- 4 Remove the screws, the Document Guide, and the SDF Feed Assembly



- 1 Disconnect the two connectors

Figure 2 Removing the SDF Feed Assembly

0500002A-SKY



3. (Figure 3): Remove the Document Tray.

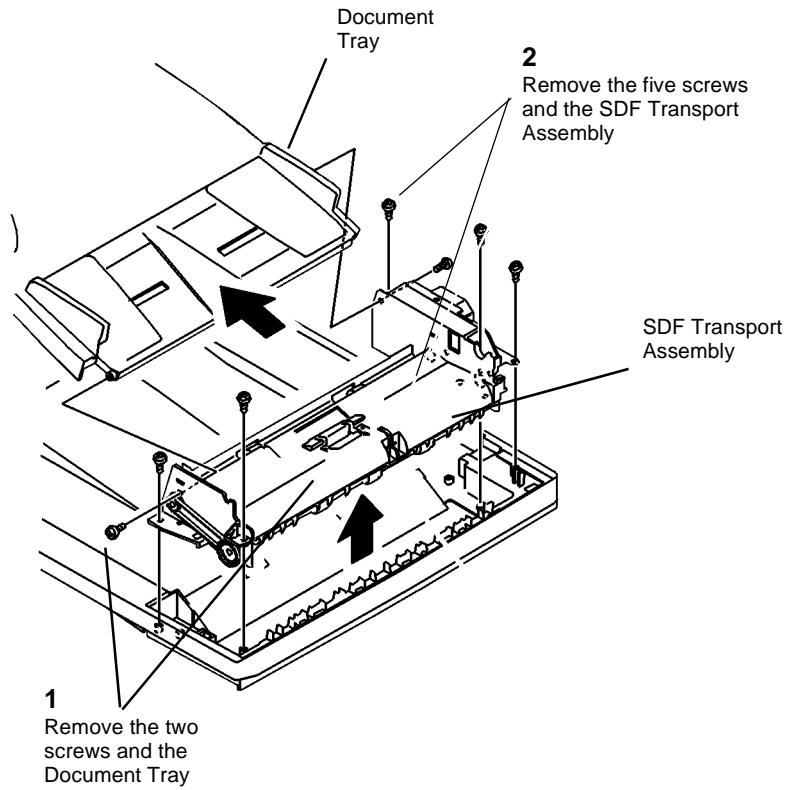


Figure 3 Removing the Document Tray

0500010A-SKY

4. (Figure 4): Remove the Exit Drive Belt.

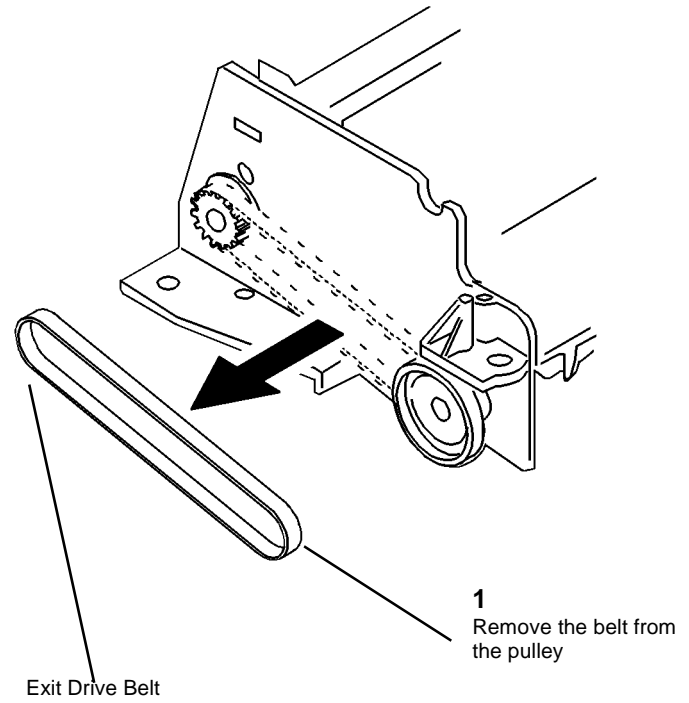
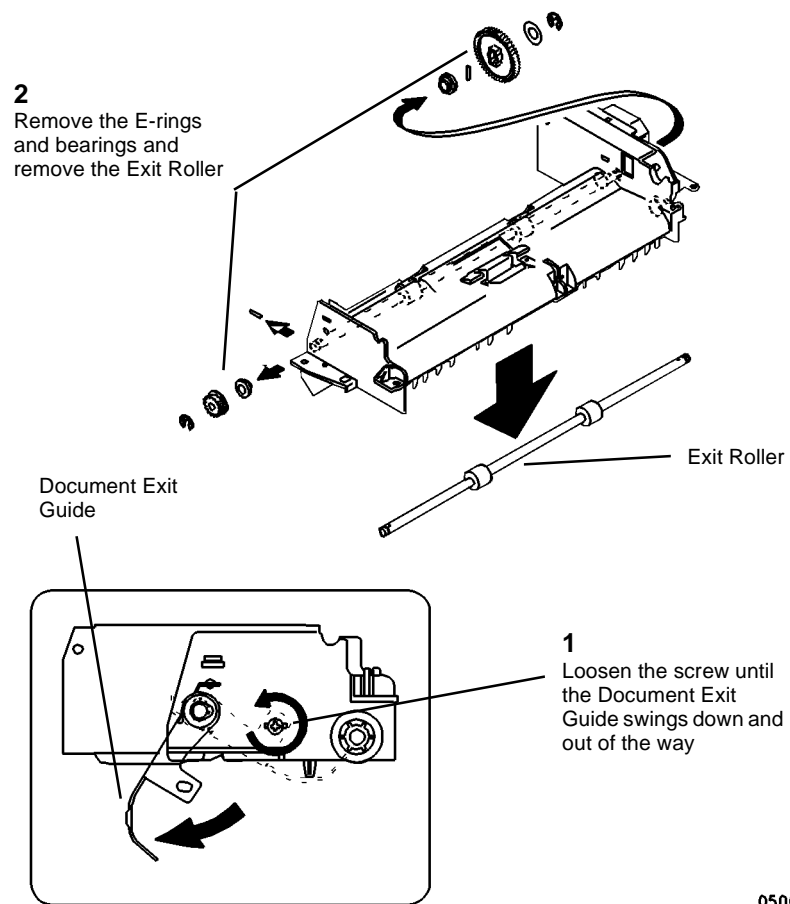


Figure 4 Removing the Exit Drive Belt

0500011A-SKY

5. (Figure 5): Remove the Exit Roller.



0500015A-SKY

Figure 5 Removing the Exit Roller

## REP 5.15 DSDF Assembly

### Parts List on PL 9.1

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Rear Cover.
2. Remove the six screws and the PWB Cover (PL 7.1).  
*NOTE: Cut cable ties or release cable clamps as necessary.*
3. Disconnect the ground wire and cable coming from the SDF Assembly.
4. Lift the SDF Assembly up slowly off the Document Glass. While tilting the hinges in the rear direction, lift the hinges out of the hinge guides.

## REP 5.16 DSDF Sensor PWB

### Parts List on PL 9.2

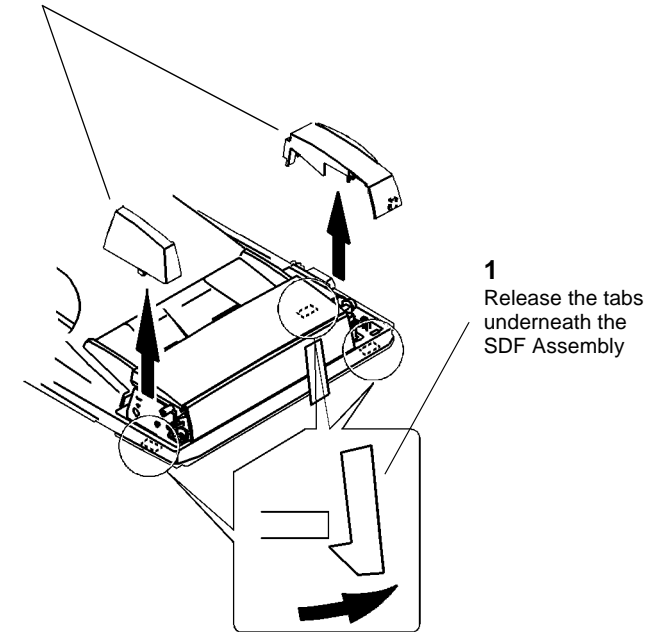
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

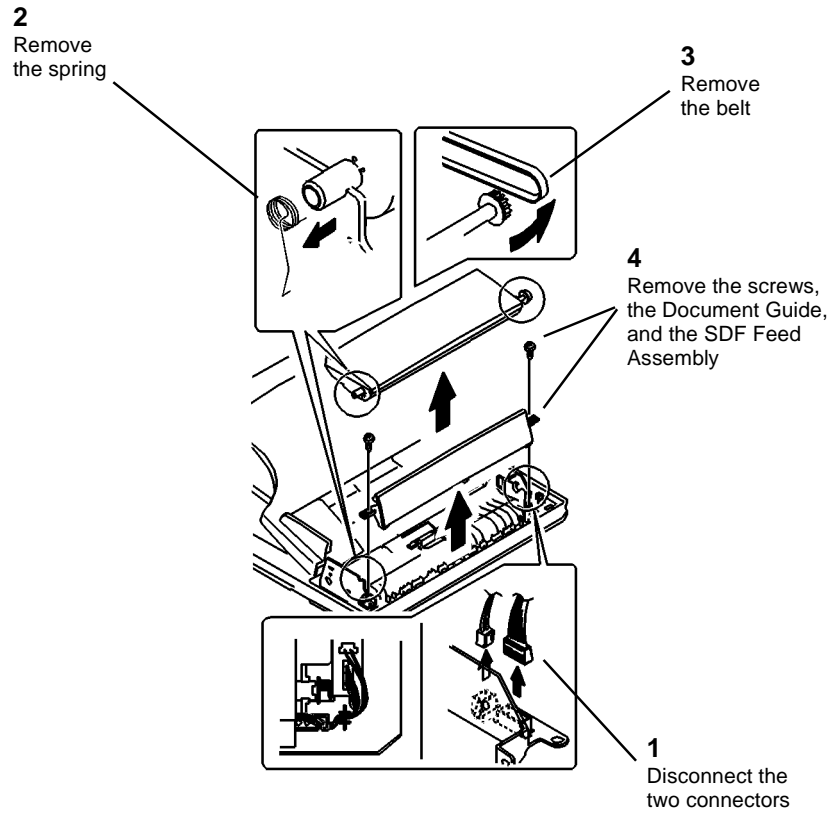
- 2  
Remove the covers



0500001A-SKY

Figure 1 Removing the Covers

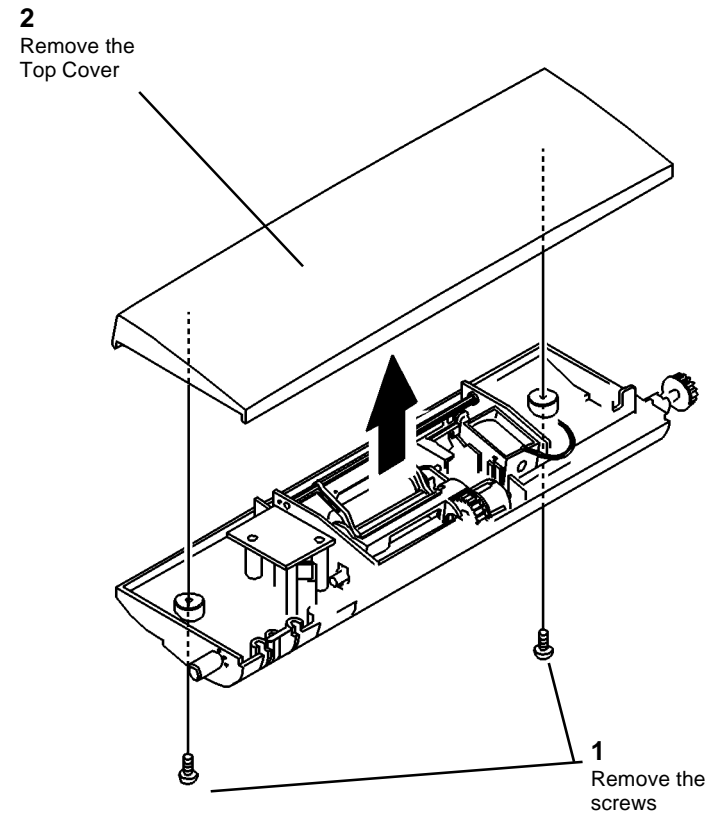
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

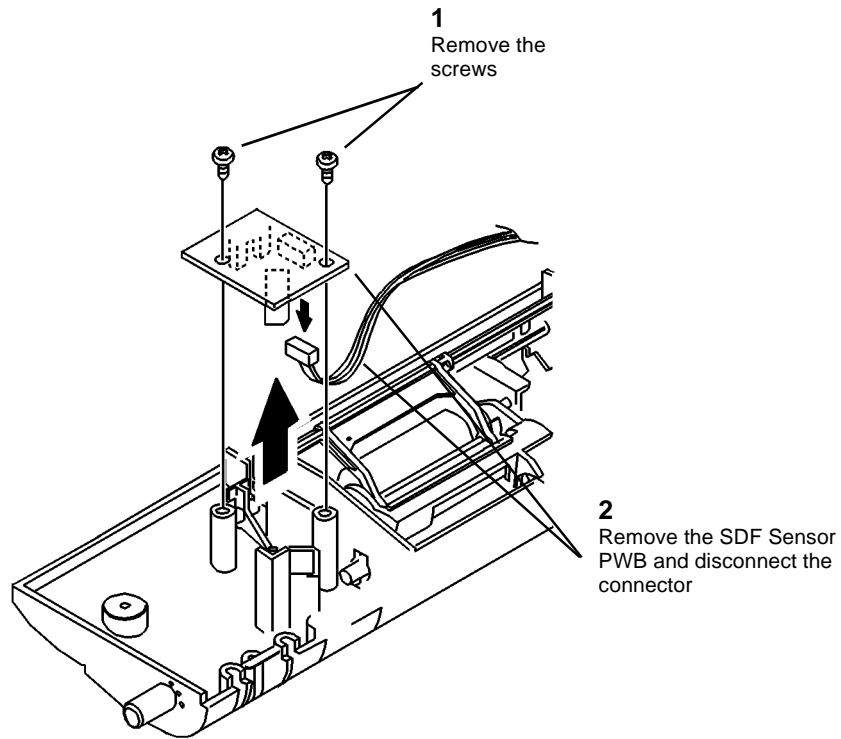
3. (Figure 3): Remove the Top Cover.



0500003A-SKY

Figure 3 Removing the Top Cover

4. (Figure 4): Remove the SDF Sensor PWB.



0500004A-SKY

Figure 4 Removing the SDF Sensor PWB

## REP 5.17 DSD Feed Solenoid (SOL1)

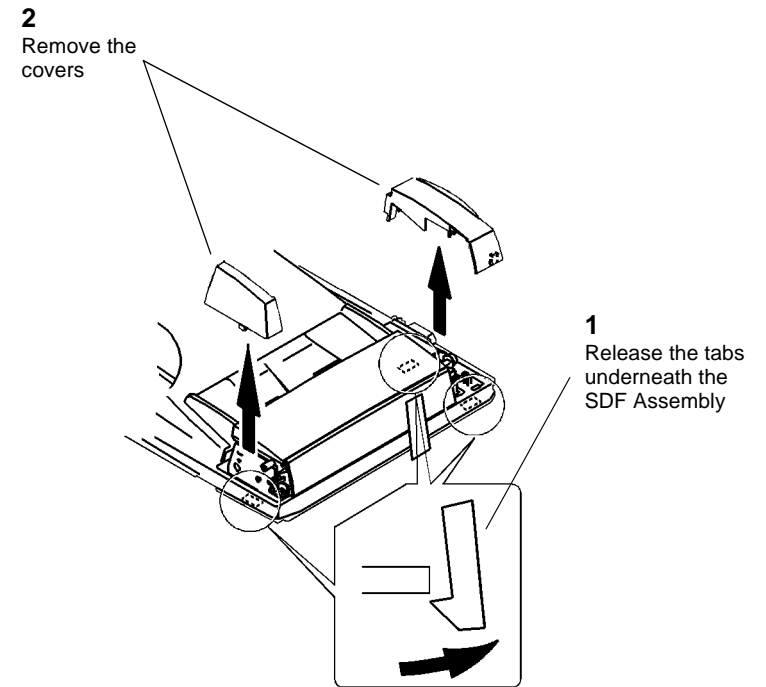
Parts List on PL 9.2

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

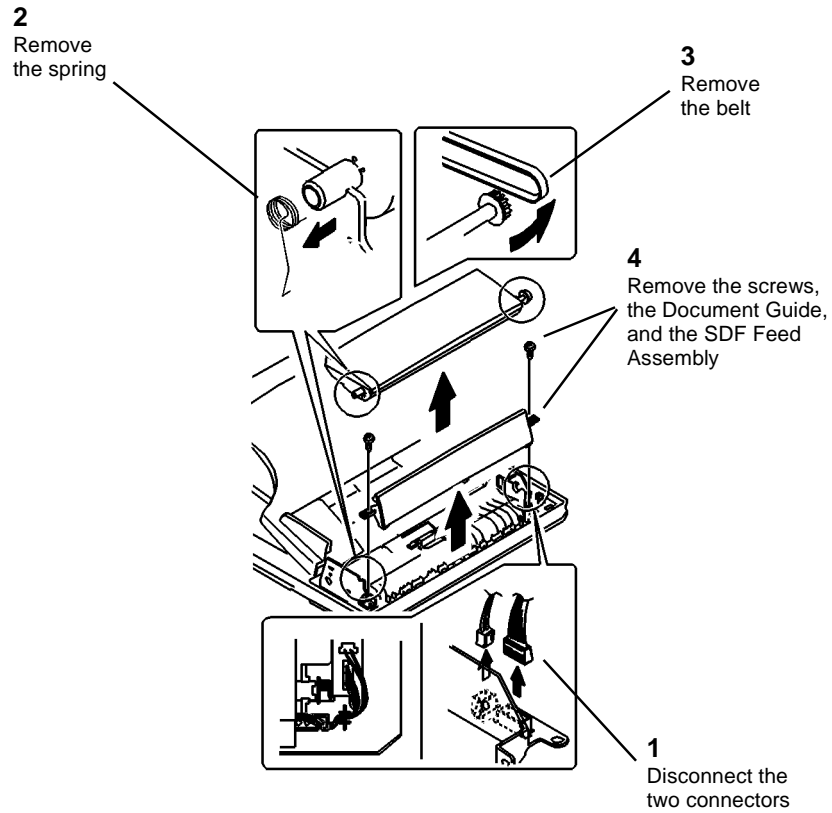
1. (Figure 1): Remove the Front Cover and the Rear Cover.



0500001A-SKY

Figure 1 Removing the Covers

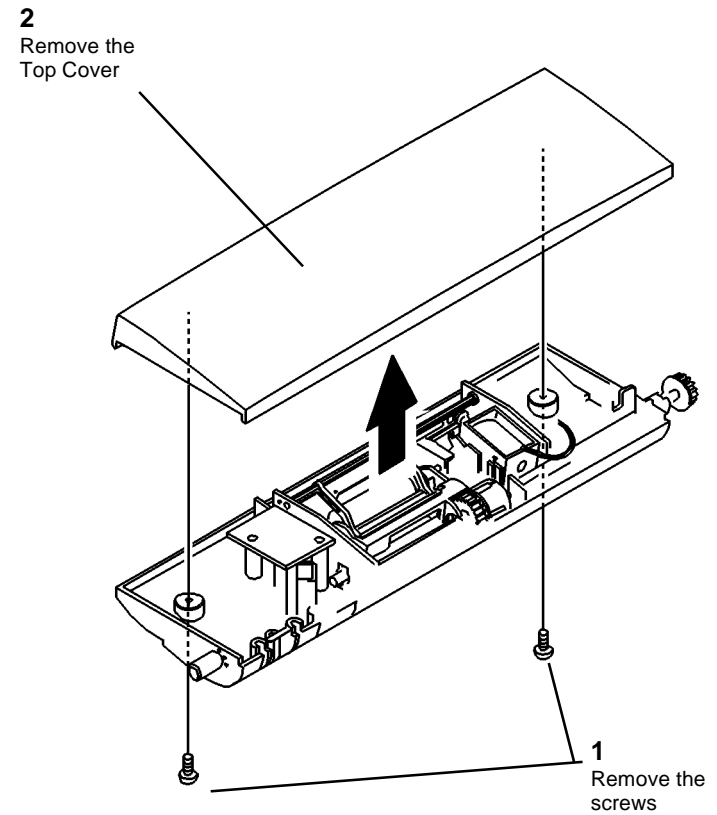
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Top Cover.



0500003A-SKY

Figure 3 Removing the Top Cover

4. (Figure 4): Remove the Feed Solenoid.

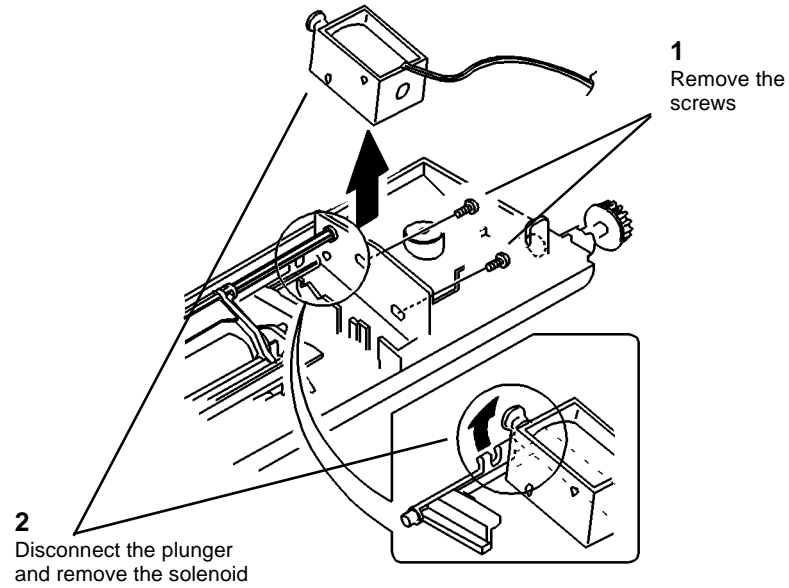


Figure 4 Removing the Feed Solenoid

0500005A-SKY

## REP 5.18 DSD Feed Clutch

Parts List on PL 9.2

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

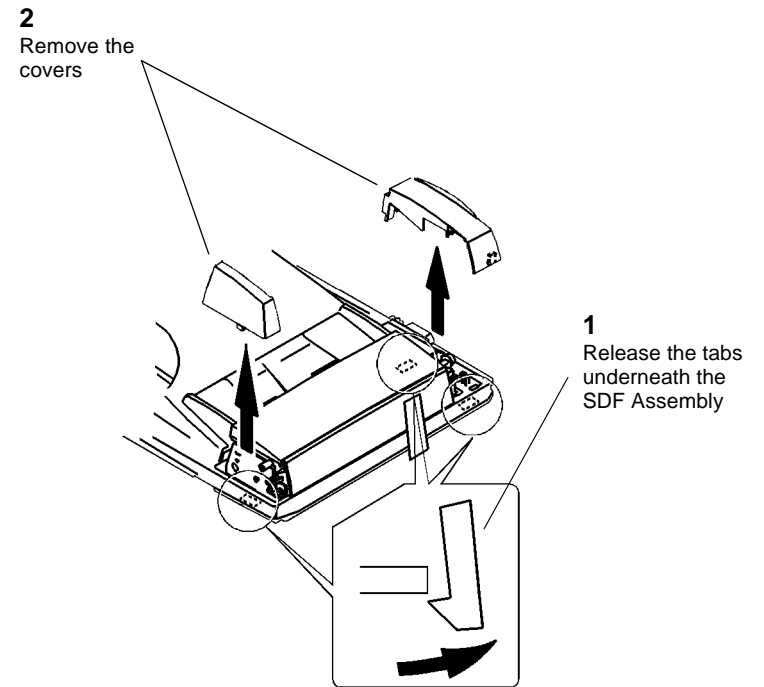
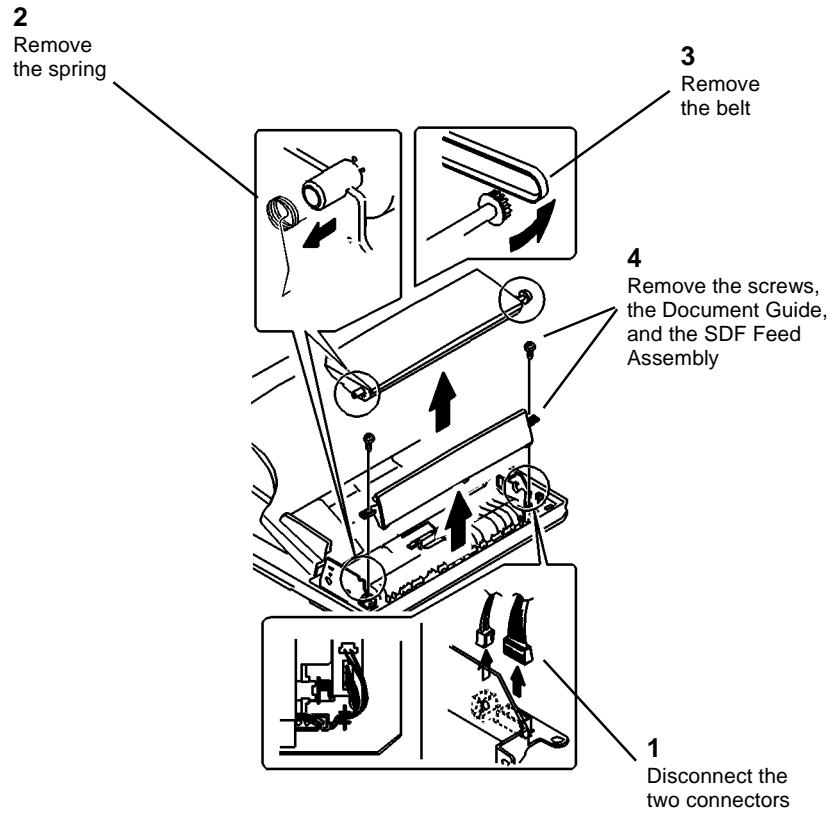


Figure 1 Removing the Covers

0500001A-SKY

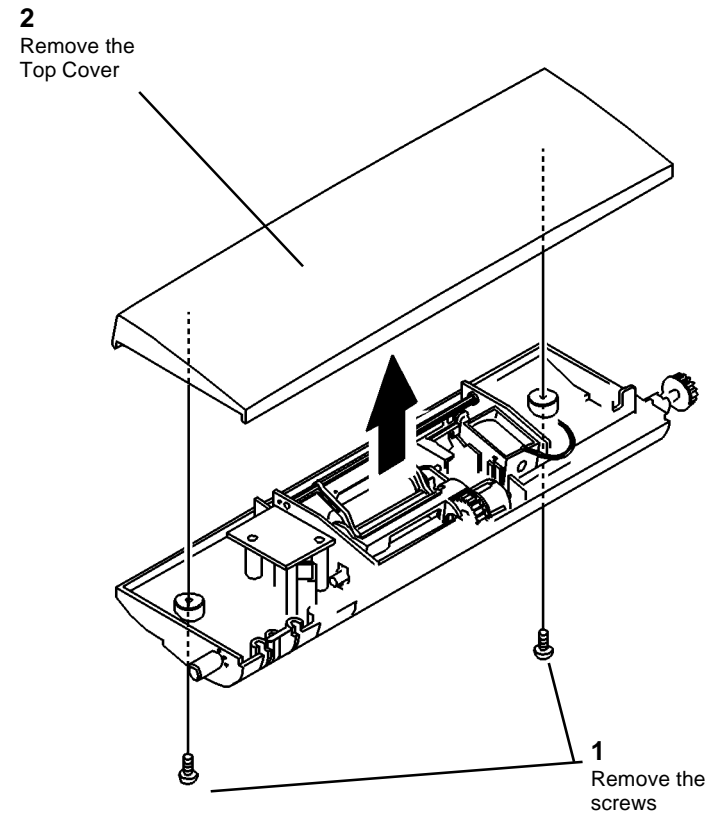
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Top Cover.



0500003A-SKY

Figure 3 Removing the Top Cover



4. (Figure 4): Prepare to remove the clutch.

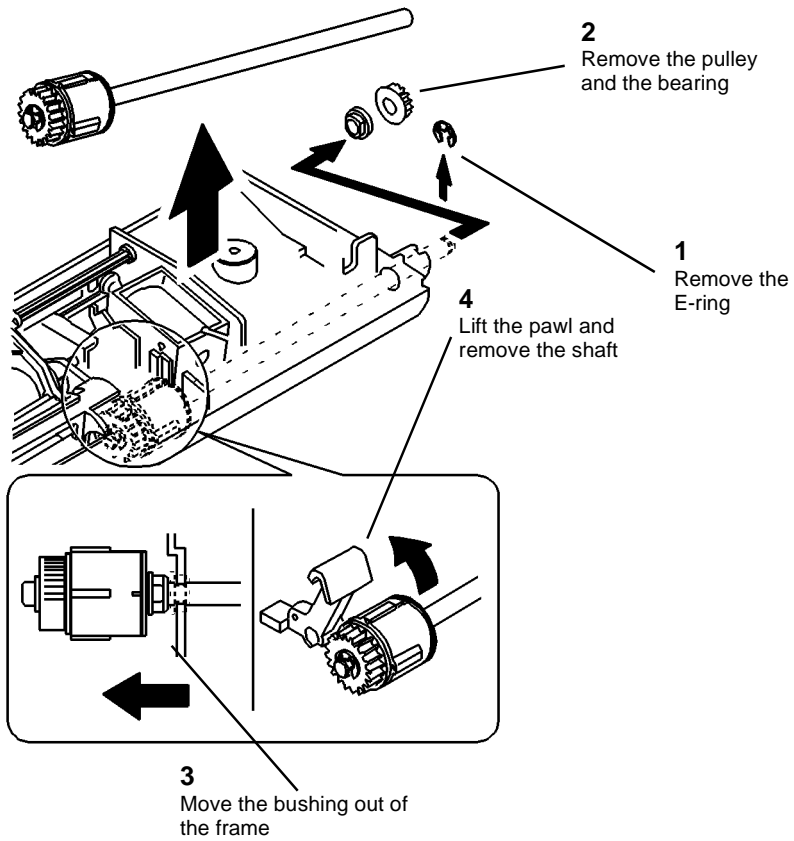


Figure 4 Preparing to Remove the Clutch

0500006A-SKY

5. (Figure 5): Remove the clutch.

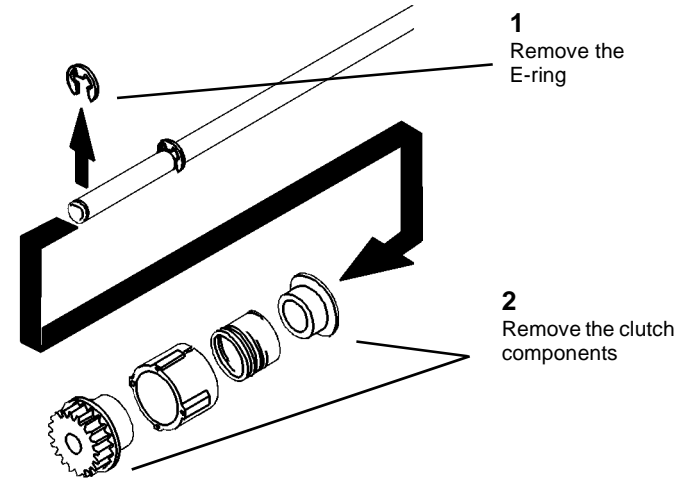


Figure 5 Removing the Clutch

0500007A-SKY

## REP 5.19 DSD Feed Roller / Retard Roller

### Parts List on PL 9.2

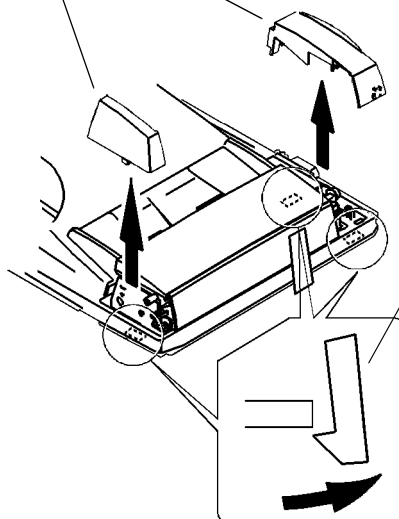
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

- 2 Remove the covers



- 1 Release the tabs underneath the SDF Assembly

0500001A-SKY

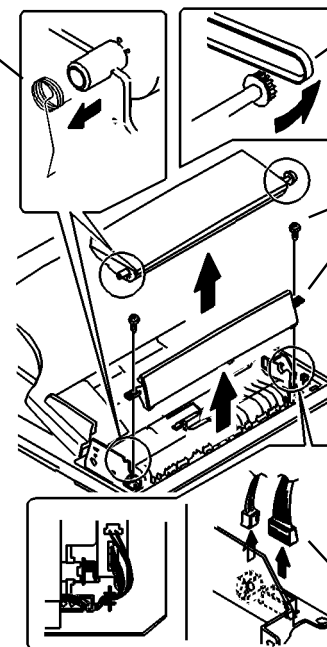
Figure 1 Removing the Covers

2. (Figure 2): Remove the SDF Feed Assembly.

- 2 Remove the spring

- 3 Remove the belt

- 4 Remove the screws, the Document Guide, and the SDF Feed Assembly



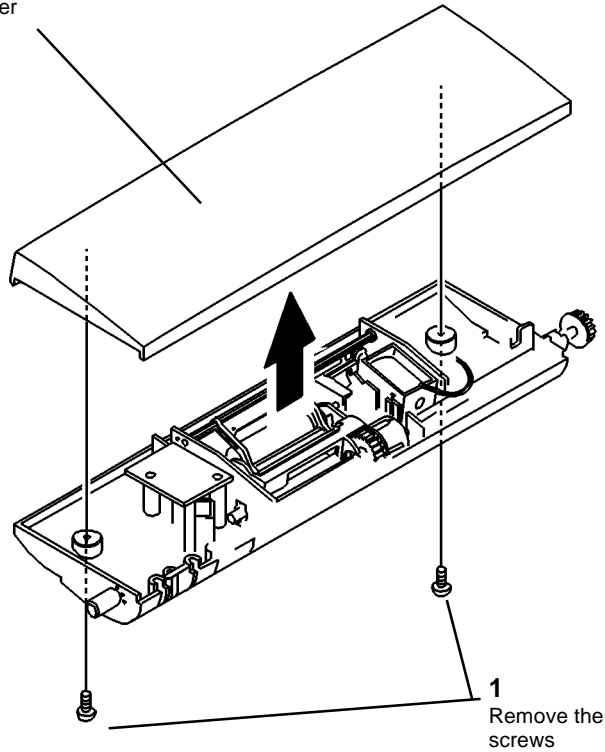
- 1 Disconnect the two connectors

0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Top Cover.

**2**  
Remove the  
Top Cover

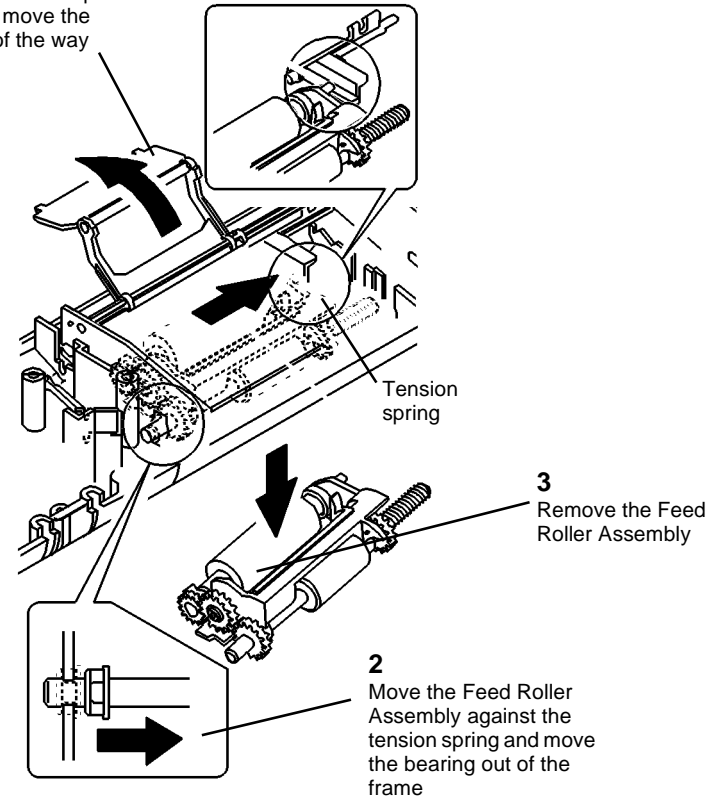


0500003A-SKY

Figure 3 Removing the Top Cover

4. (Figure 4): Remove the Feed Roller Assembly.

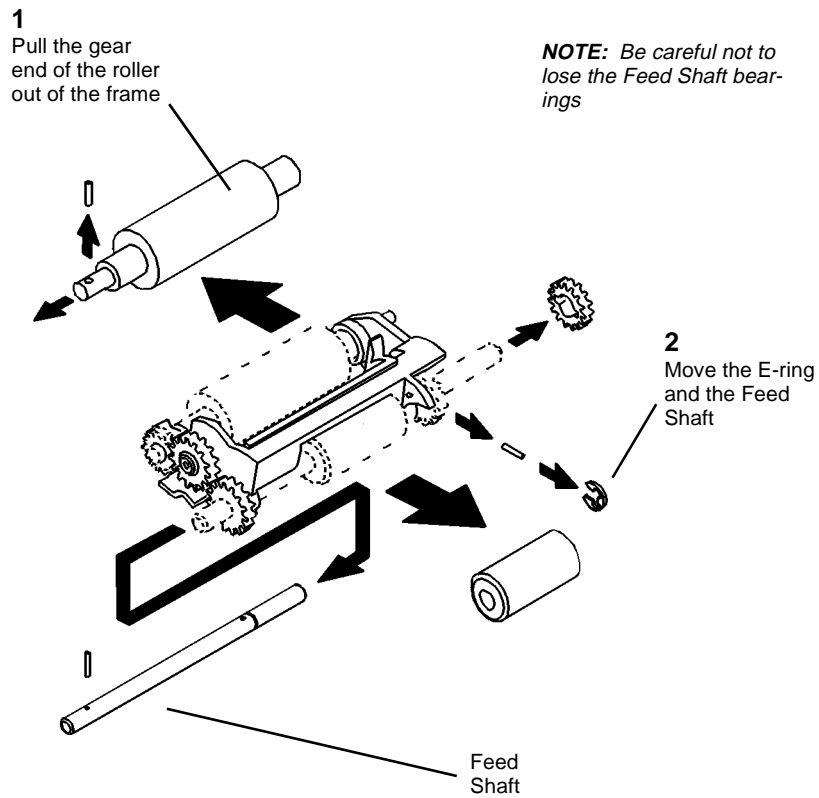
**1**  
Remove the pressure  
spring from the Paper  
Gate and move the  
gate out of the way



0500008A-SKY

Figure 4 Removing the Feed Roller Assembly

5. (Figure 5): Remove the Retard Roller.



0500009A-SKY

Figure 5 Removing the Retard Roller

## REP 5.20 DSDF Drive Motor (MOT1)

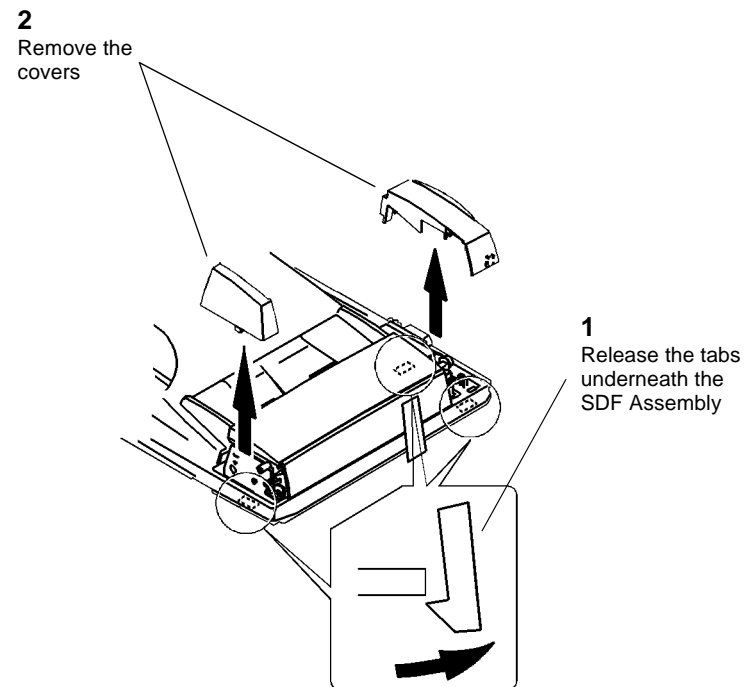
Parts List on PL 9.3

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

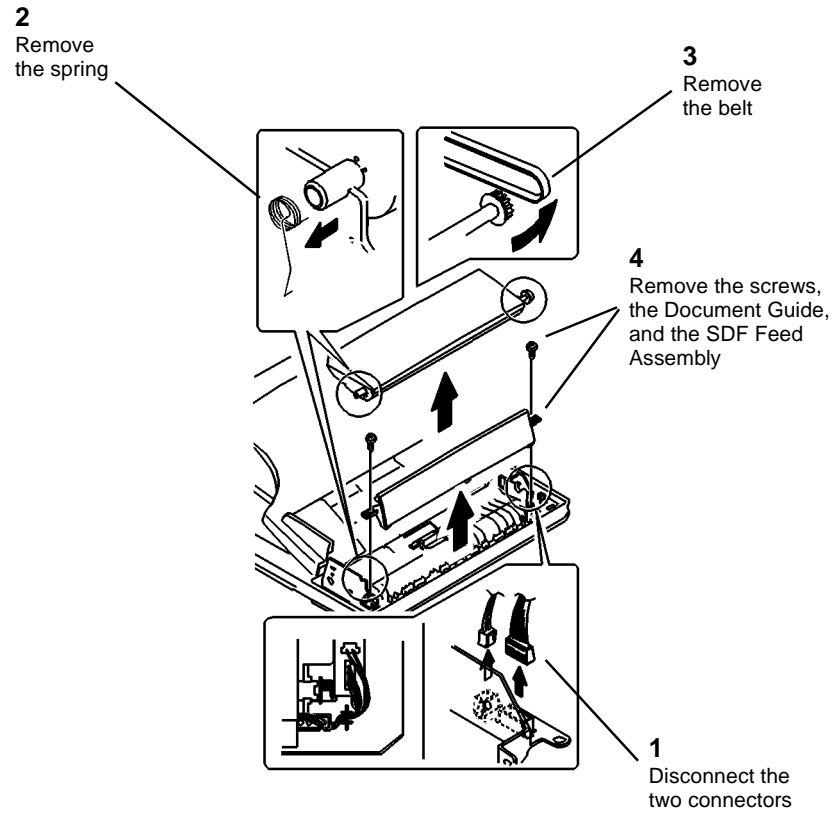
1. (Figure 1): Remove the Front Cover and the Rear Cover.



0500001A-SKY

Figure 1 Removing the Covers

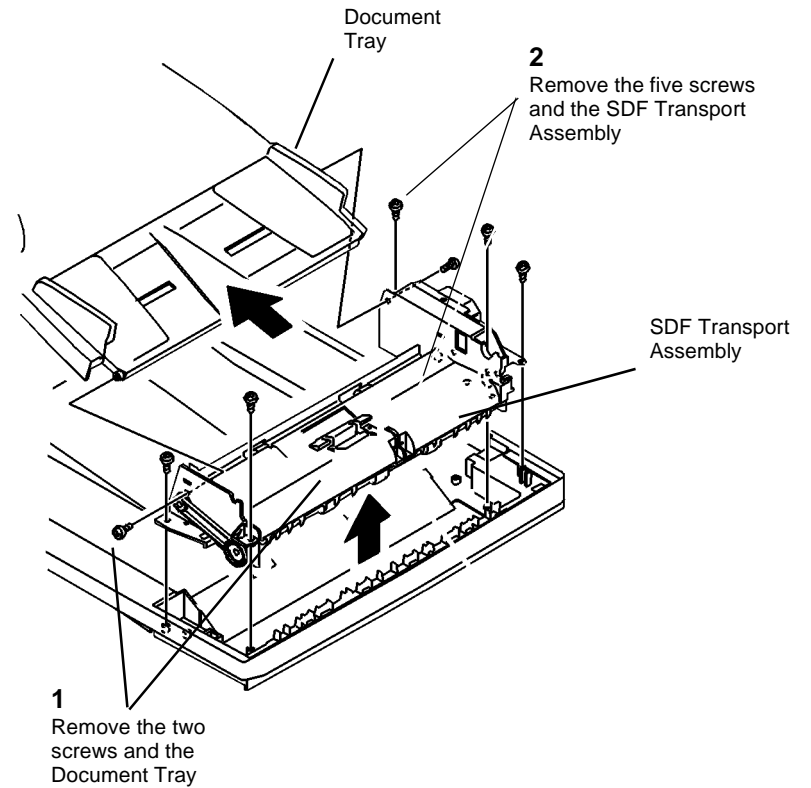
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Document Tray.



0500010A-SKY

Figure 3 Removing the Document Tray

4. (Figure 4): Remove the Exit Drive Belt.

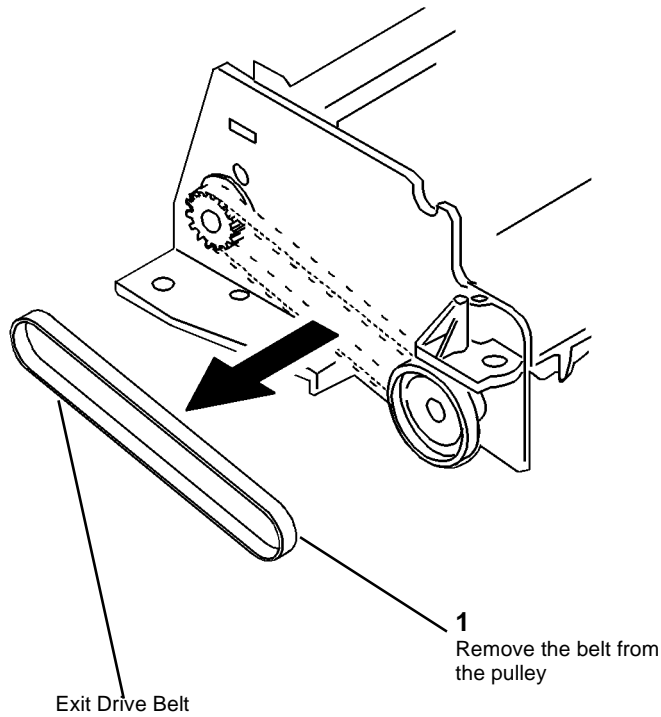


Figure 4 Removing the Exit Drive Belt

0500011A-SKY

## REP 5.21 DSDF Document Sensor (Q3)

Parts List on PL 9.3

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

- 2  
Remove the covers

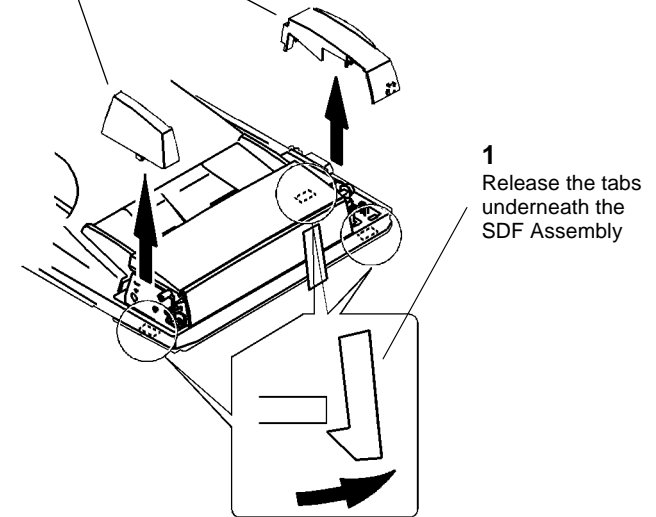
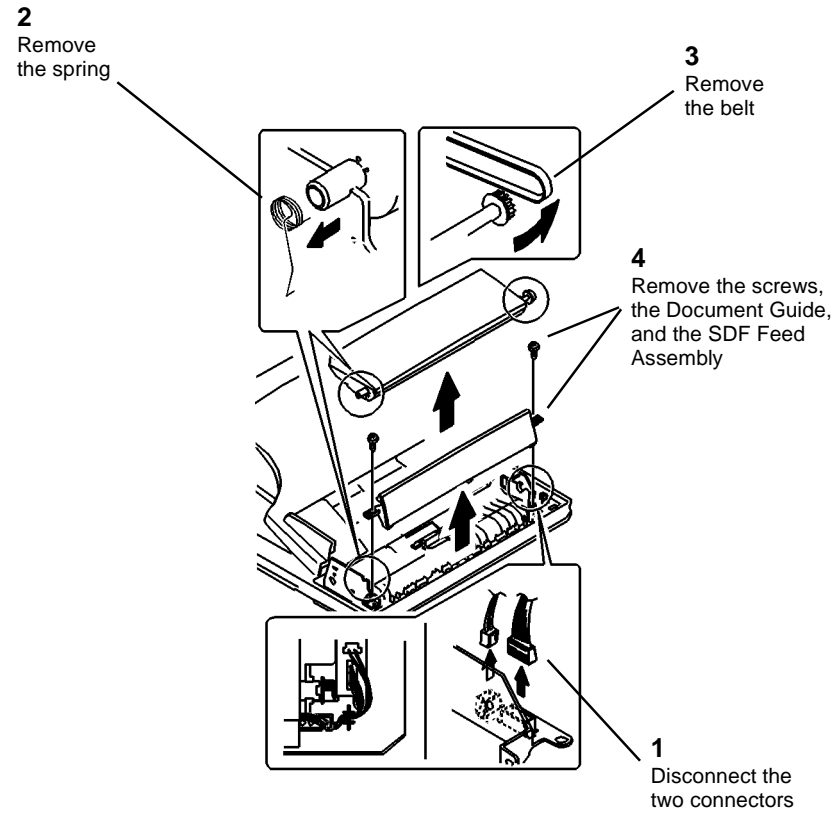


Figure 1 Removing the Covers

0500001A-SKY

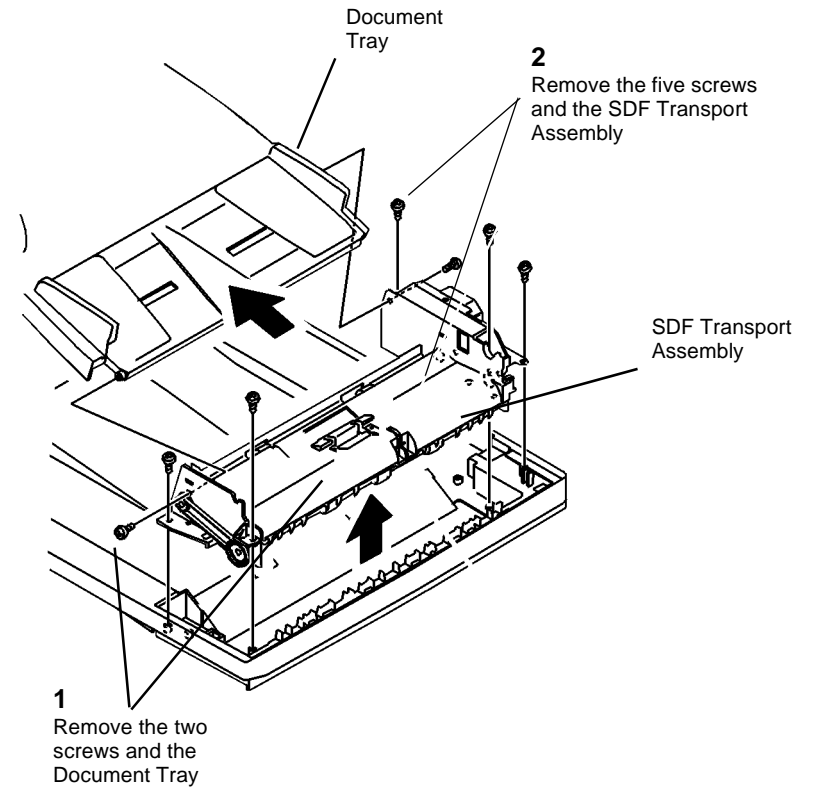
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

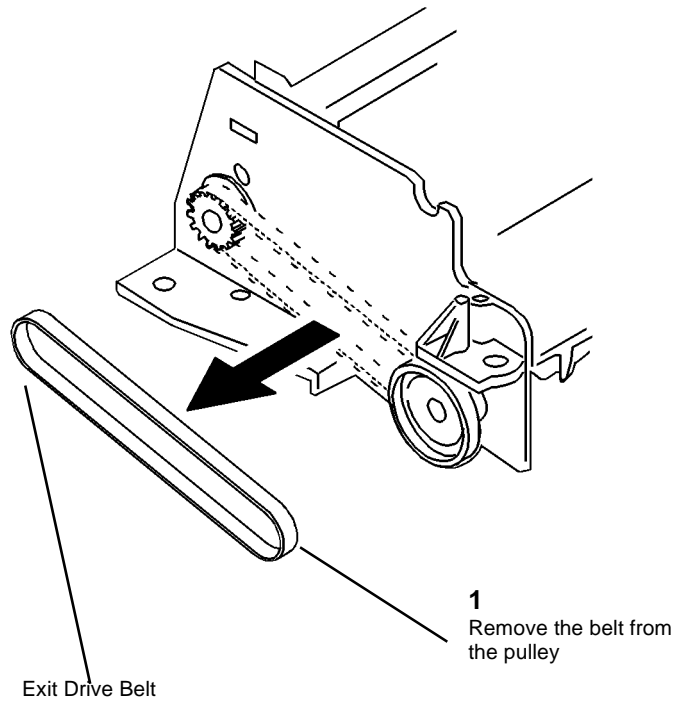
3. (Figure 3): Remove the Document Tray.



0500010A-SKY

Figure 3 Removing the Document Tray

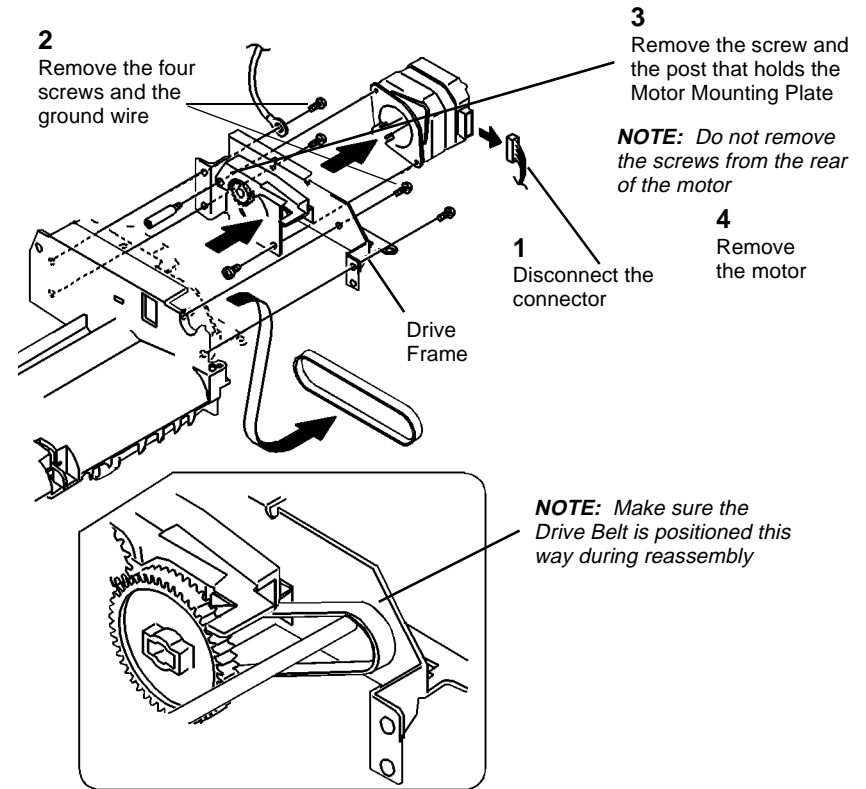
4. (Figure 4): Remove the Exit Drive Belt.



0500011A-SKY

Figure 4 Removing the Exit Drive Belt

5. (Figure 5): Remove the SDF Drive Motor.



0500012A-SKY

Figure 5 Removing the SDF Drive Motor



## REP 5.22 DSD Feed Assembly

### Parts List on PL 9.3

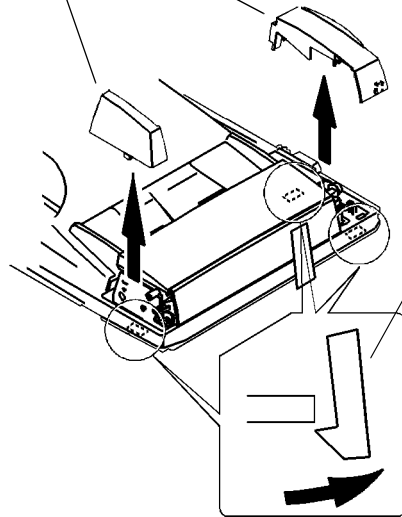
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

- 2 Remove the covers



- 1 Release the tabs underneath the SDF Assembly

0500001A-SKY

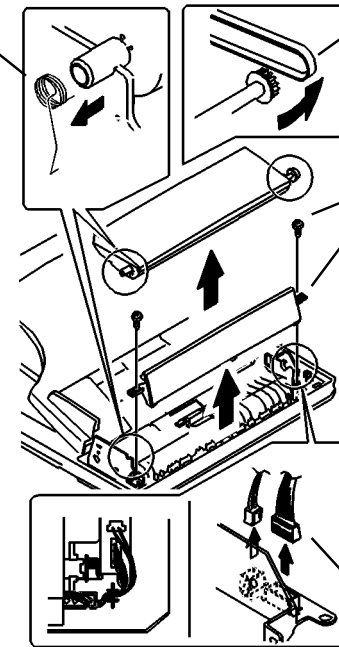
Figure 1 Removing the Covers

2. (Figure 2): Remove the SDF Feed Assembly.

- 2 Remove the spring

- 3 Remove the belt

- 4 Remove the screws, the Document Guide, and the SDF Feed Assembly



- 1 Disconnect the two connectors

0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Document Tray.

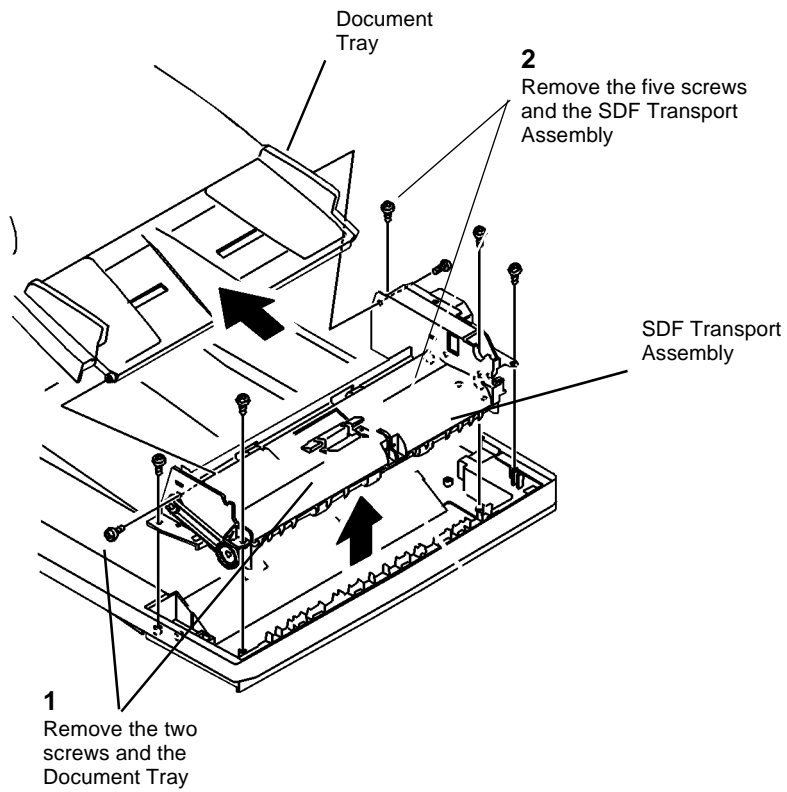


Figure 3 Removing the Document Tray

0500010A-SKY

4. (Figure 4): Remove the Exit Drive Belt.

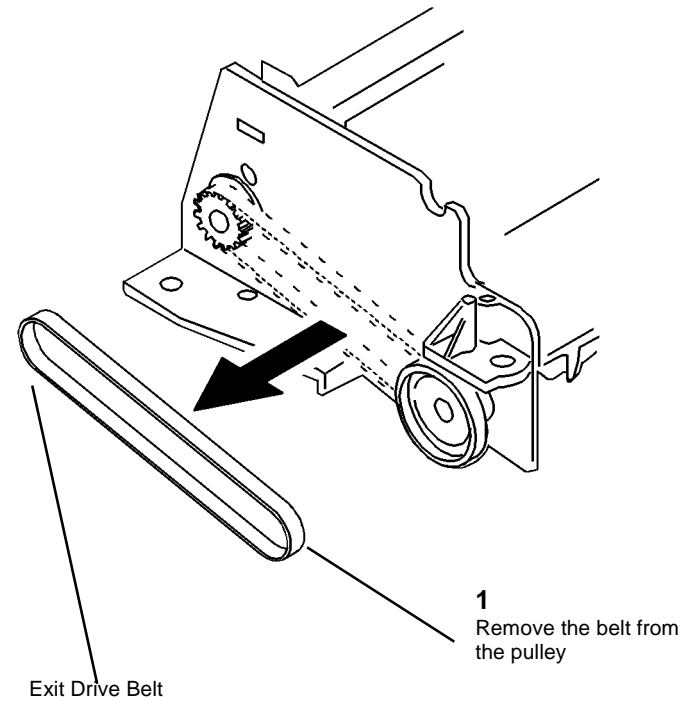


Figure 4 Removing the Exit Drive Belt

0500011A-SKY

5. (Figure 5): Remove the Document Path Sensor.

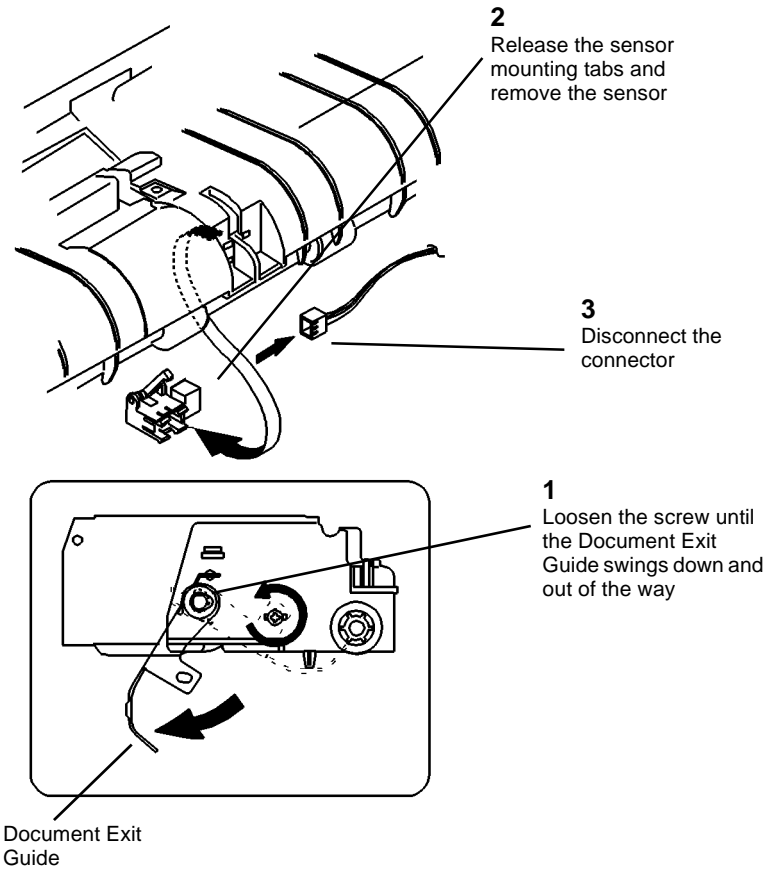


Figure 5 Removing the Document Path Sensor

0500013A-SKY

## REP 5.23 DSDF Transport Assembly

Parts List on PL 9.1

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

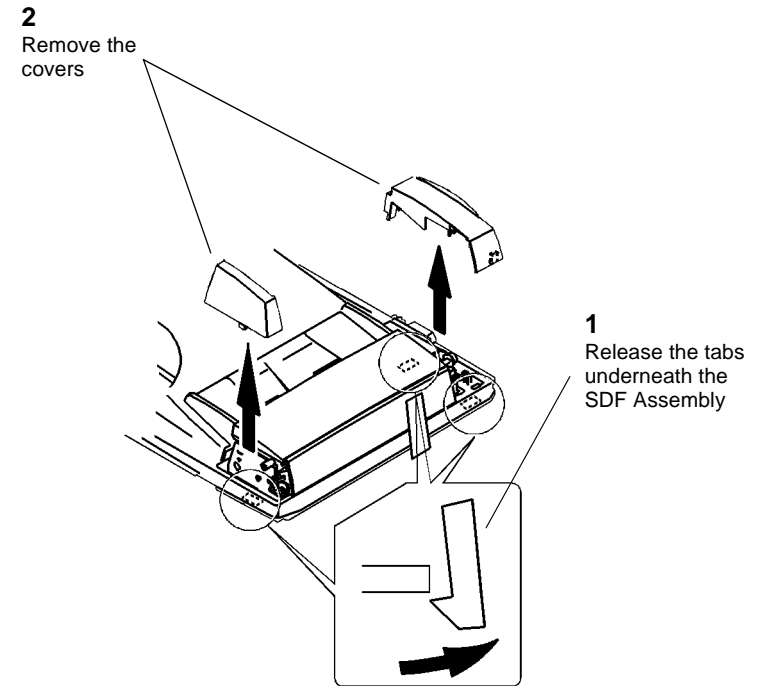
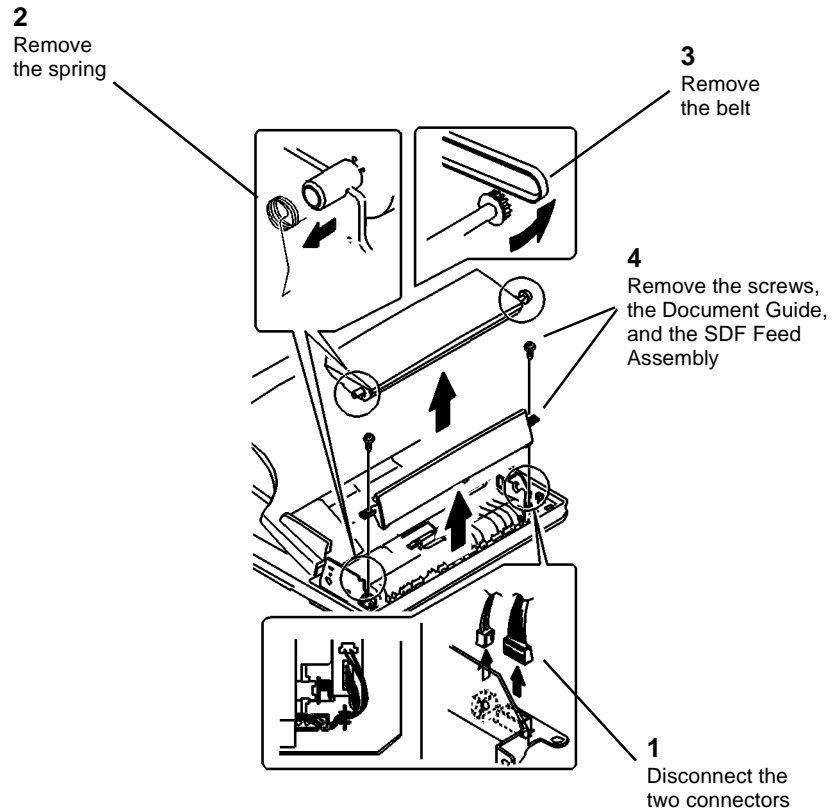


Figure 1 Removing the Covers

0500001A-SKY

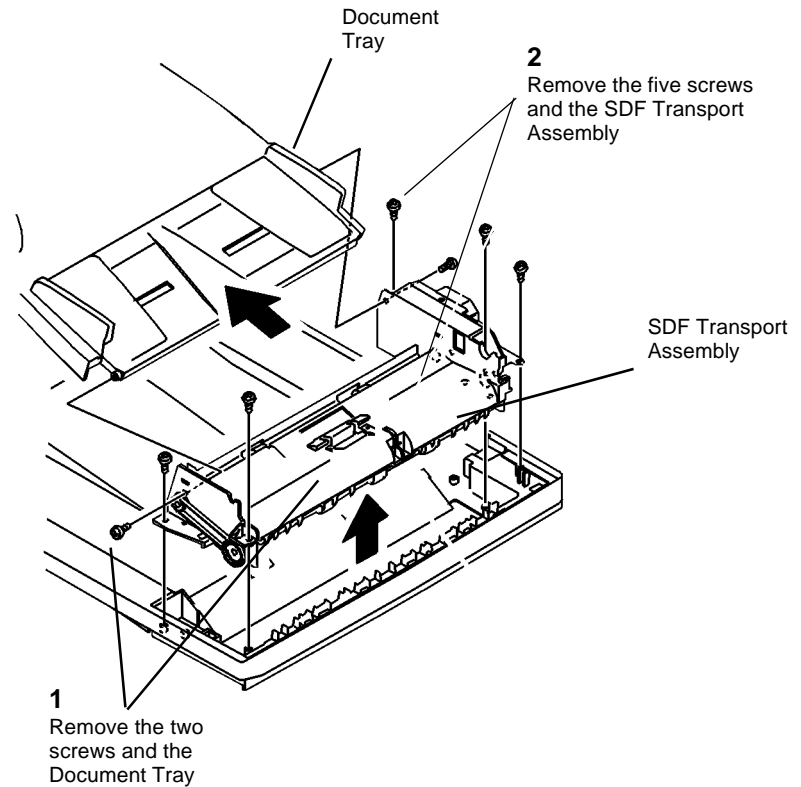
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Document Tray.



0500010A-SKY

Figure 3 Removing the Document Tray

4. (Figure 4): Remove the Exit Drive Belt.

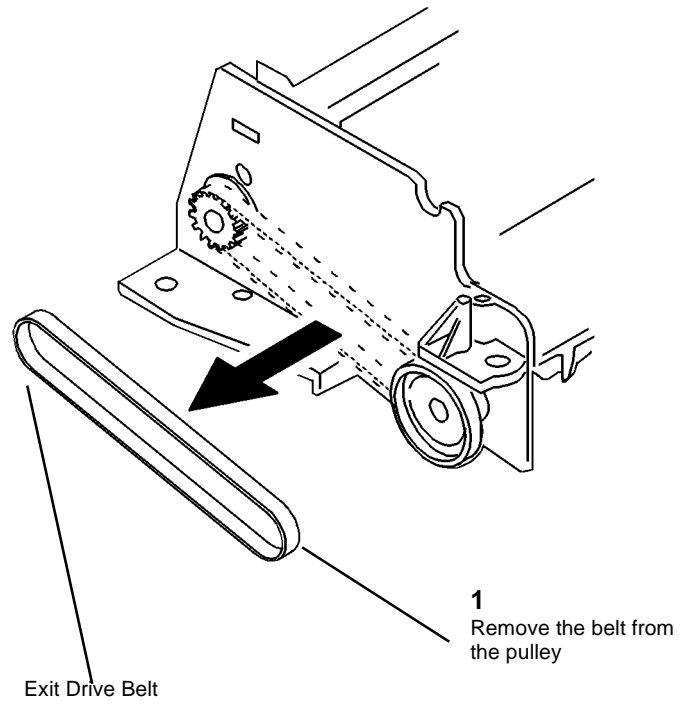


Figure 4 Removing the Exit Drive Belt

0500011A-SKY

5. (Figure 5): Remove the Transport Roller.

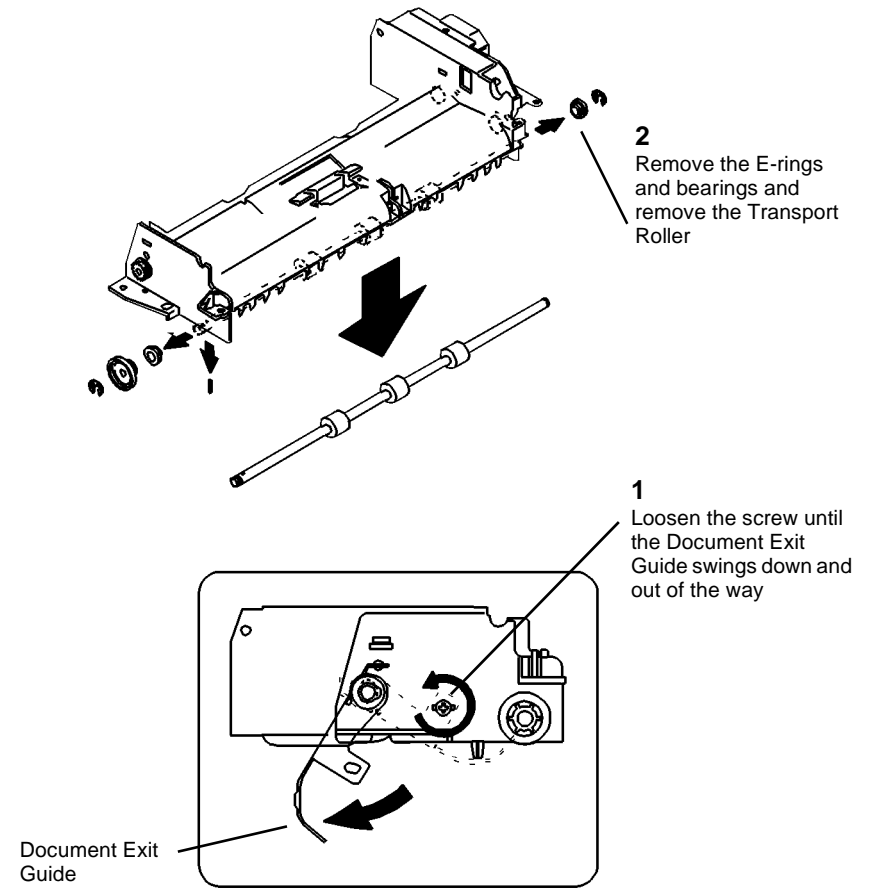


Figure 5 Removing the Transport Roller

0500014A-SKY

## REP 5.24 DSDP Pinch Roll Solenoid (SOL2)

Parts List on PL 9.1

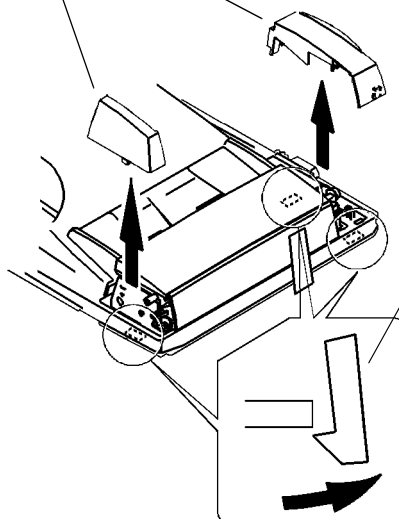
### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

- 2 Remove the covers



- 1 Release the tabs underneath the SDF Assembly

Figure 1 Removing the Covers

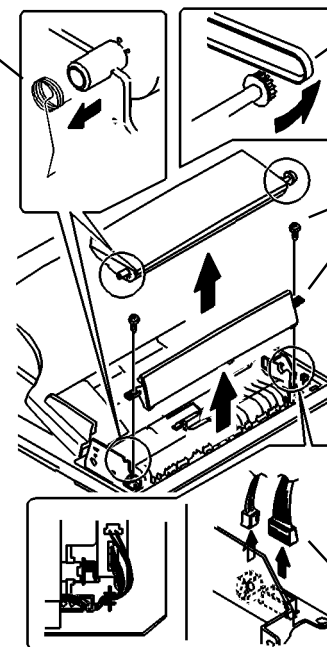
0500001A-SKY

2. (Figure 2): Remove the SDF Feed Assembly.

- 2 Remove the spring

- 3 Remove the belt

- 4 Remove the screws, the Document Guide, and the SDF Feed Assembly



- 1 Disconnect the two connectors

Figure 2 Removing the SDF Feed Assembly

0500002A-SKY

3. (Figure 3): Remove the Document Tray.

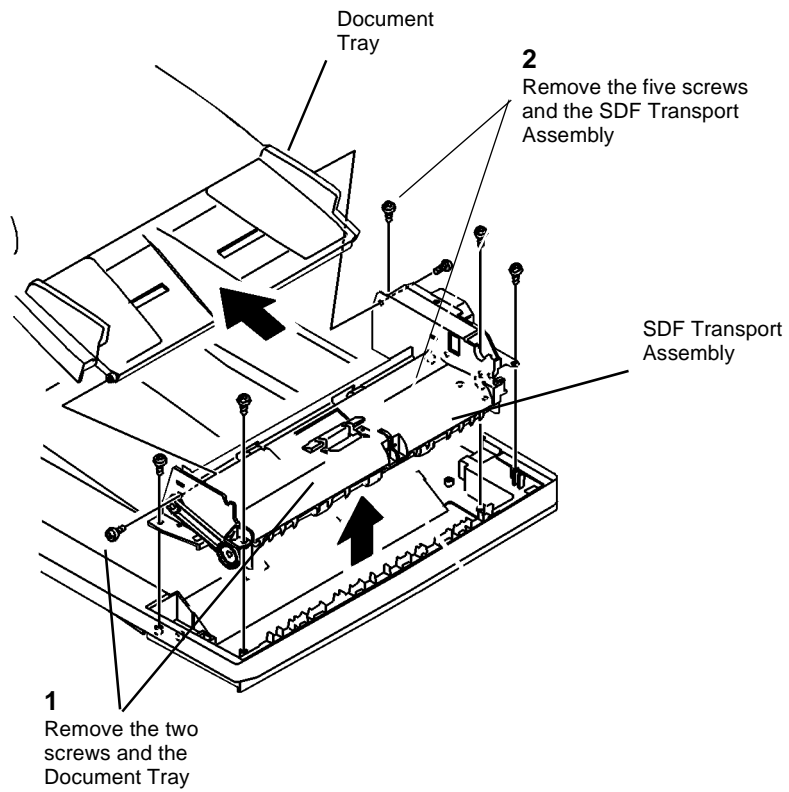


Figure 3 Removing the Document Tray

0500010A-SKY

4. (Figure 4): Remove the Exit Drive Belt.

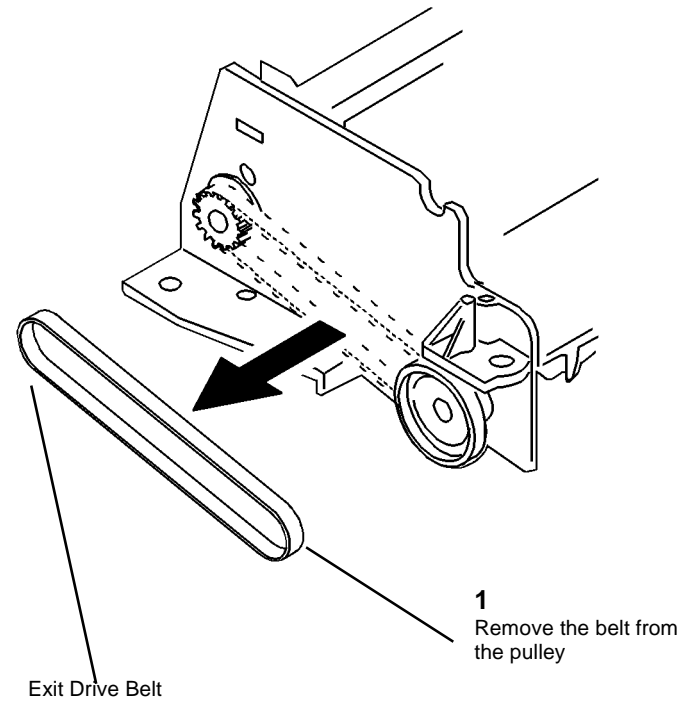


Figure 4 Removing the Exit Drive Belt

0500011A-SKY

5. (Figure 5): Remove the Exit Roller.

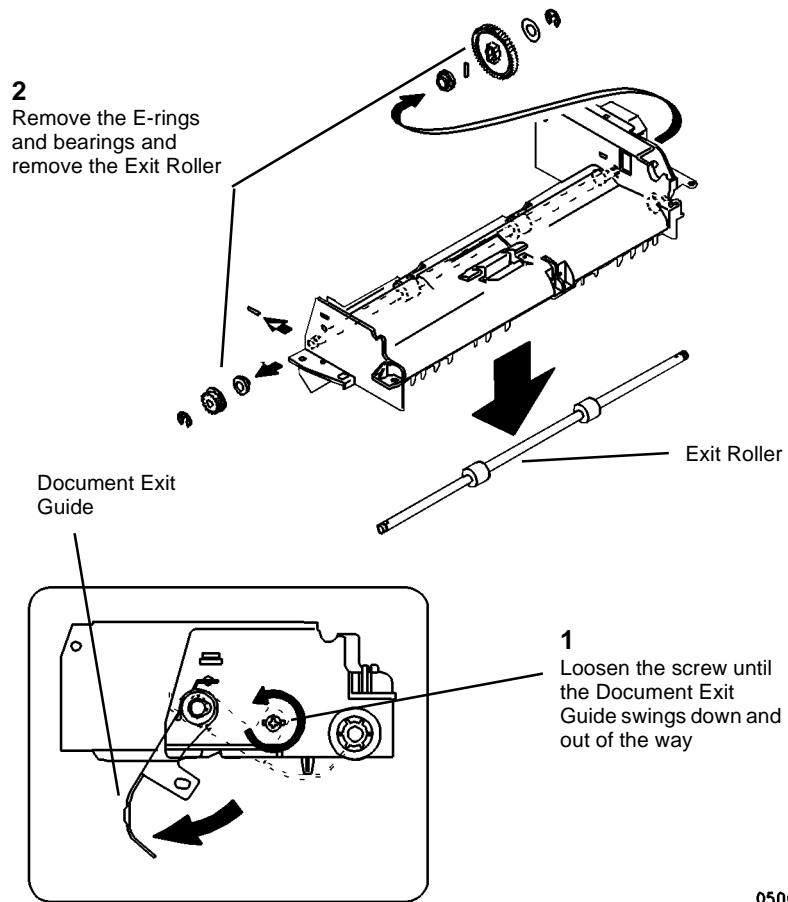


Figure 5 Removing the Exit Roller

## REP 5.25 DSDF Exit Roller

Parts List on PL 9.2

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

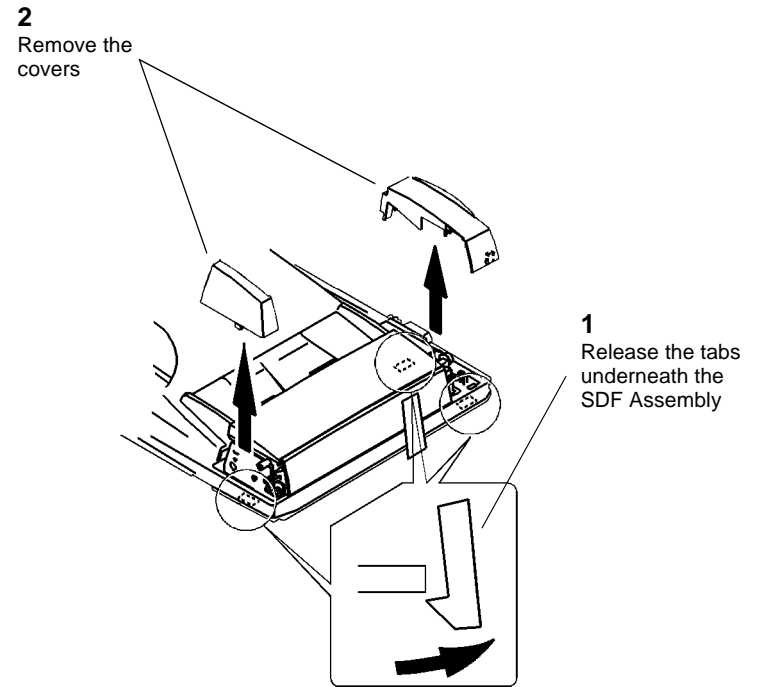
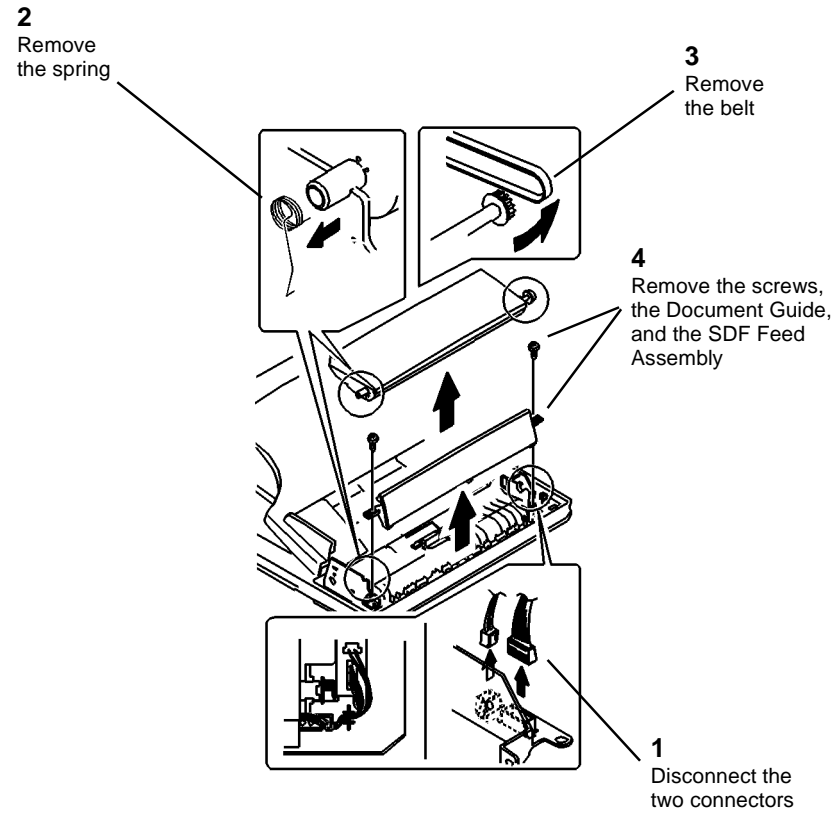


Figure 1 Removing the Covers



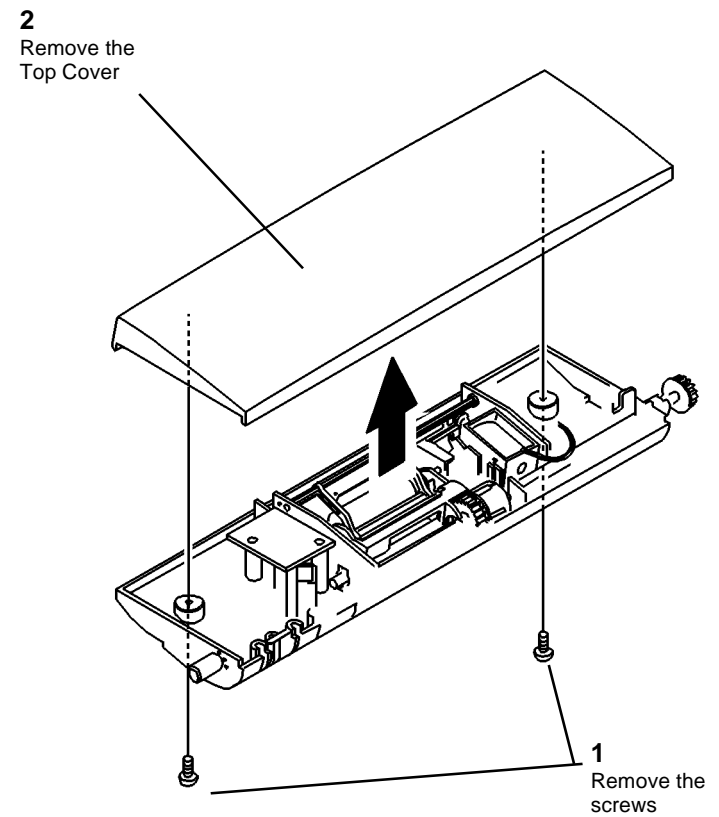
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Top Cover.



0500003A-SKY

Figure 3 Removing the Top Cover

4. (Figure 4): Prepare to remove the clutch.

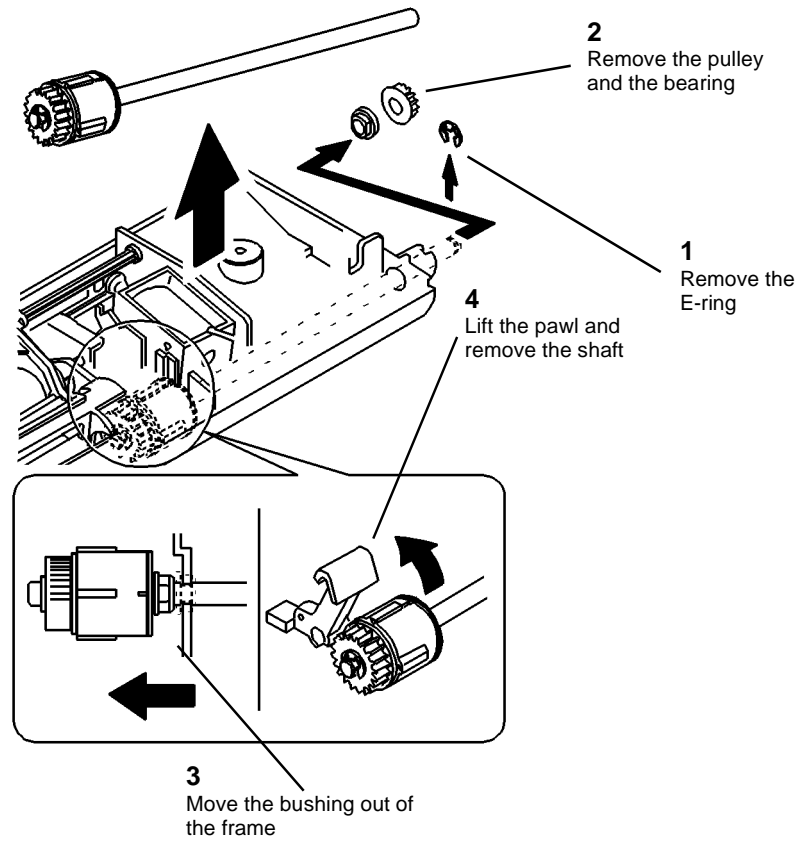


Figure 4 Preparing to Remove the Clutch

0500006A-SKY

5. (Figure 5): Remove the clutch.

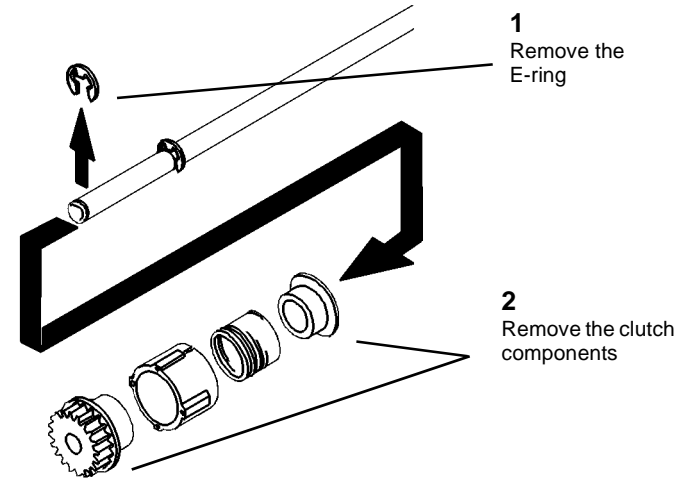


Figure 5 Removing the Clutch

0500007A-SKY

## REP 5.26 DSD Feed Transport Roller

### Parts List on PL 9.2

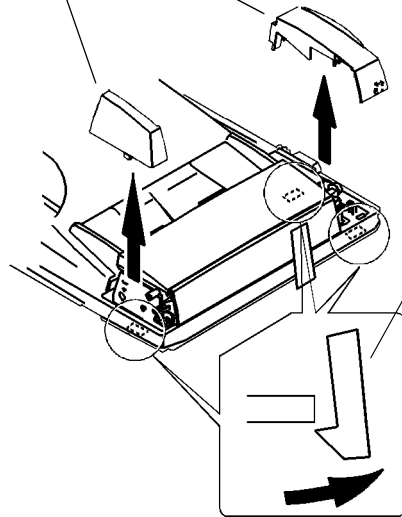
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

- 2 Remove the covers



- 1 Release the tabs underneath the SDF Assembly

Figure 1 Removing the Covers

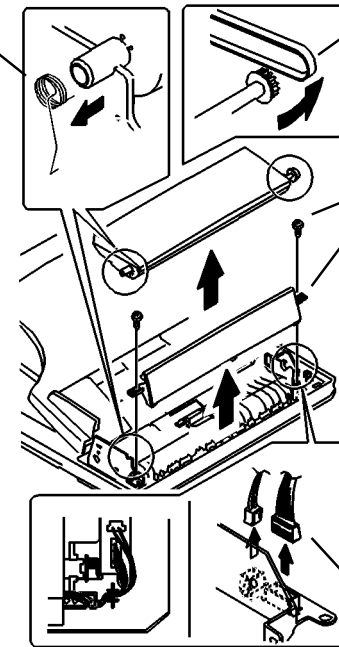
0500001A-SKY

2. (Figure 2): Remove the SDF Feed Assembly.

- 2 Remove the spring

- 3 Remove the belt

- 4 Remove the screws, the Document Guide, and the SDF Feed Assembly



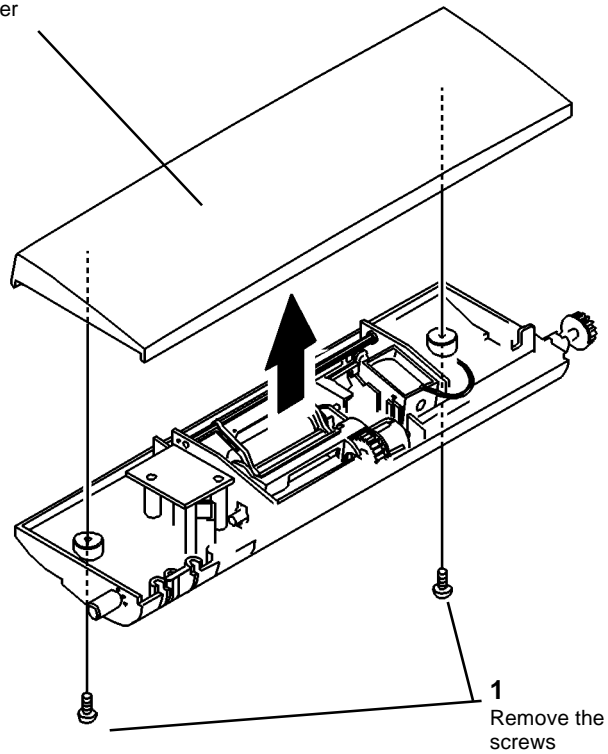
- 1 Disconnect the two connectors

Figure 2 Removing the SDF Feed Assembly

0500002A-SKY

3. (Figure 3): Remove the Top Cover.

**2**  
Remove the  
Top Cover



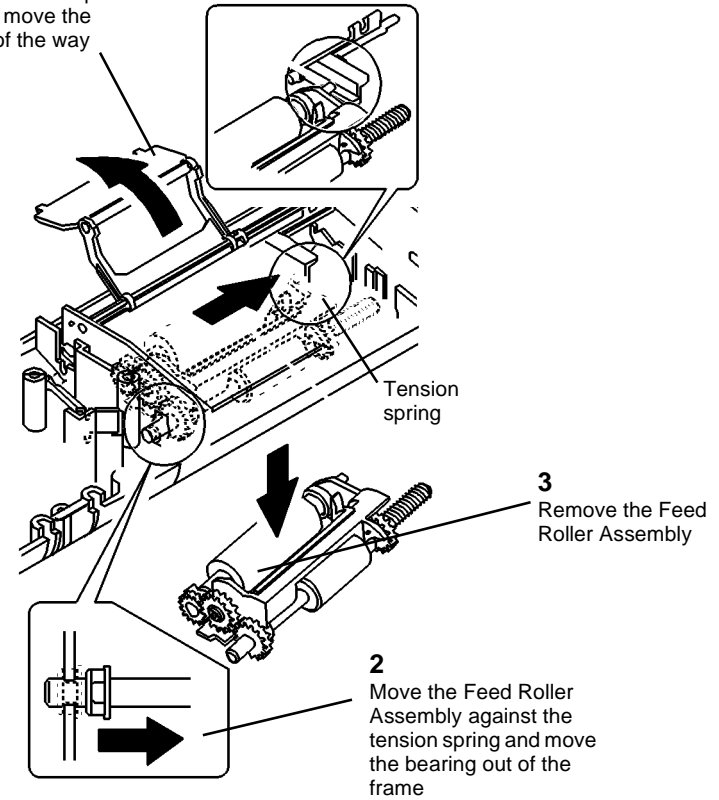
**1**  
Remove the  
screws

0500003A-SKY

Figure 3 Removing the Top Cover

4. (Figure 4): Remove the Feed Roller Assembly.

**1**  
Remove the pressure  
spring from the Paper  
Gate and move the  
gate out of the way



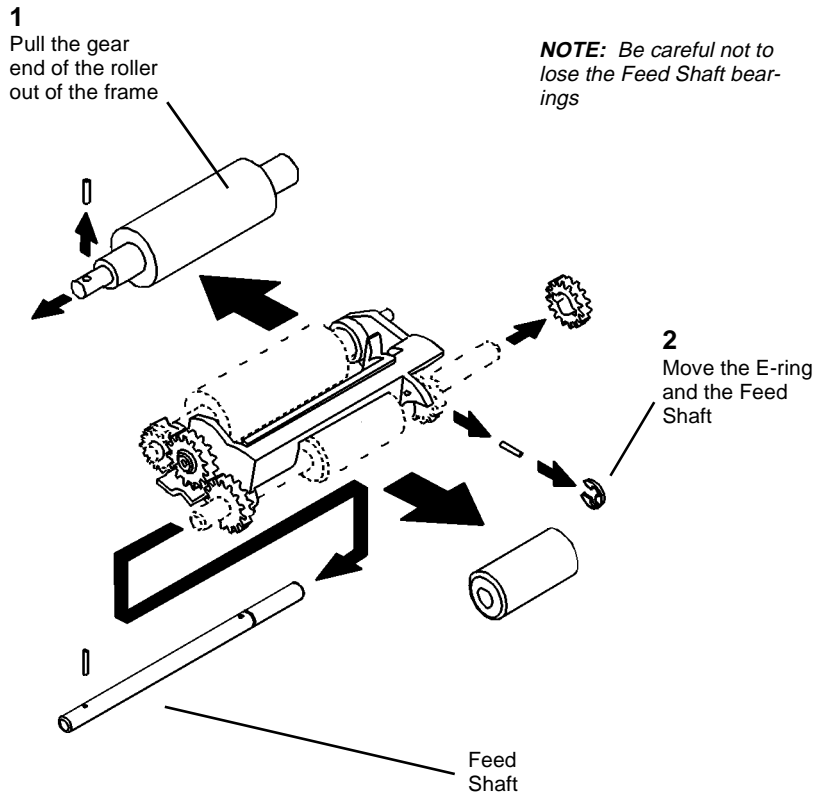
**3**  
Remove the Feed  
Roller Assembly

**2**  
Move the Feed Roller  
Assembly against the  
tension spring and move  
the bearing out of the  
frame

0500008A-SKY

Figure 4 Removing the Feed Roller Assembly

5. (Figure 5): Remove the Retard Roller.



0500009A-SKY

Figure 5 Removing the Retard Roller

## REP 5.27 DSDF Duplex Transport Roller

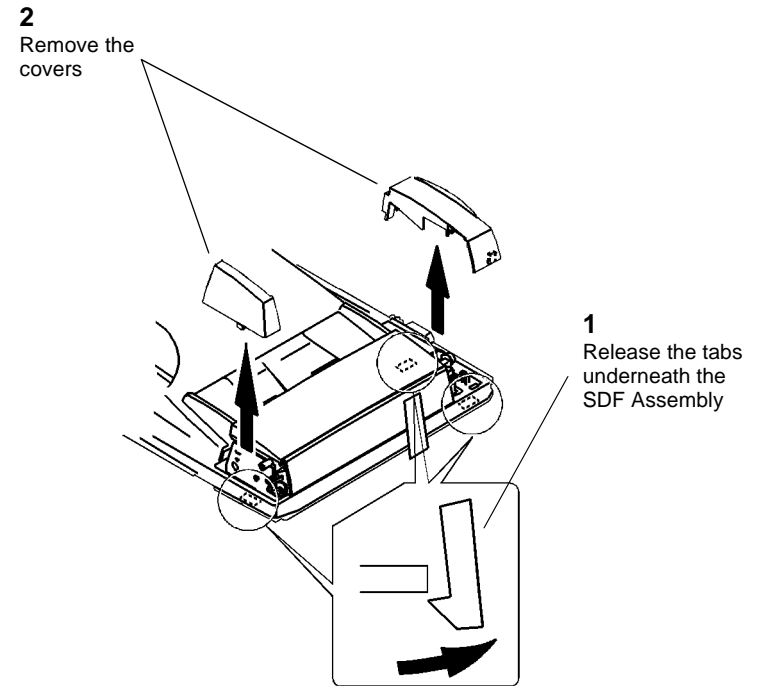
Parts List on PL 9.3

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

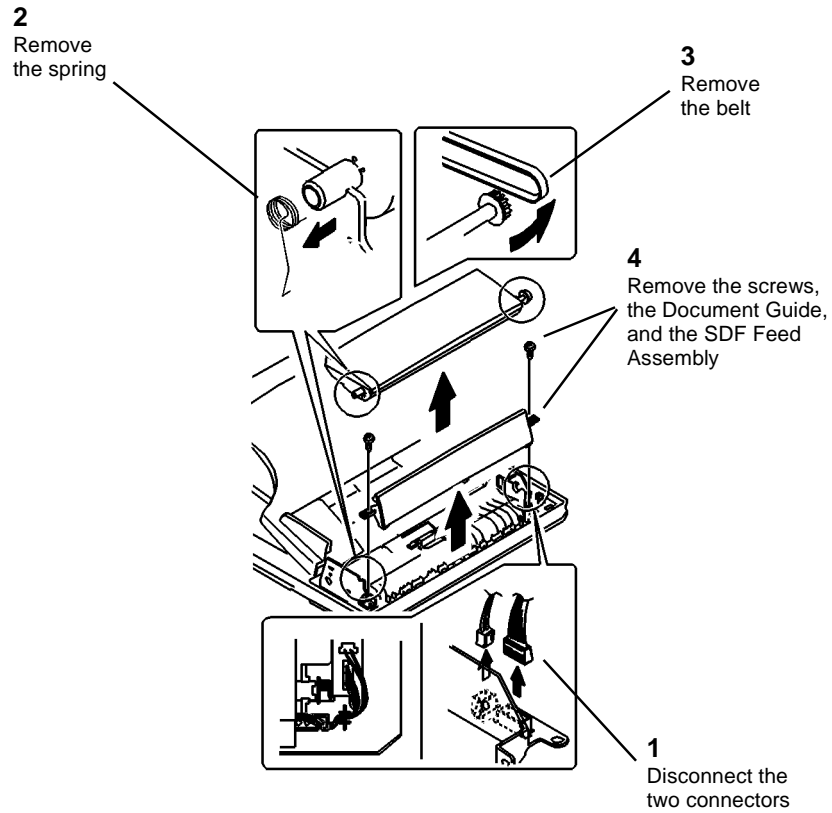
1. (Figure 1): Remove the Front Cover and the Rear Cover.



0500001A-SKY

Figure 1 Removing the Covers

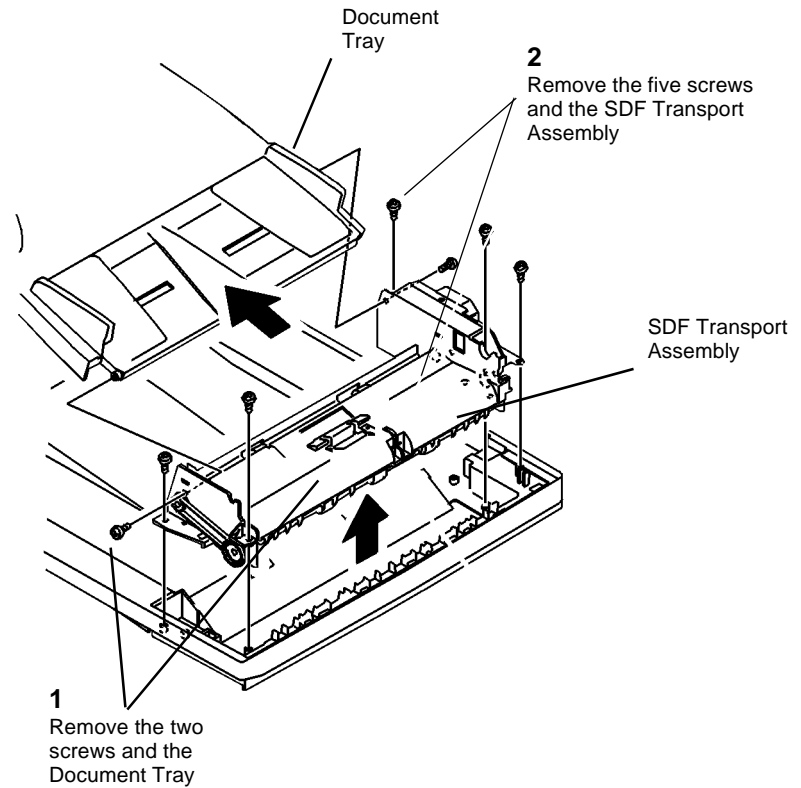
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Document Tray.



0500010A-SKY

Figure 3 Removing the Document Tray

4. (Figure 4): Remove the Exit Drive Belt.

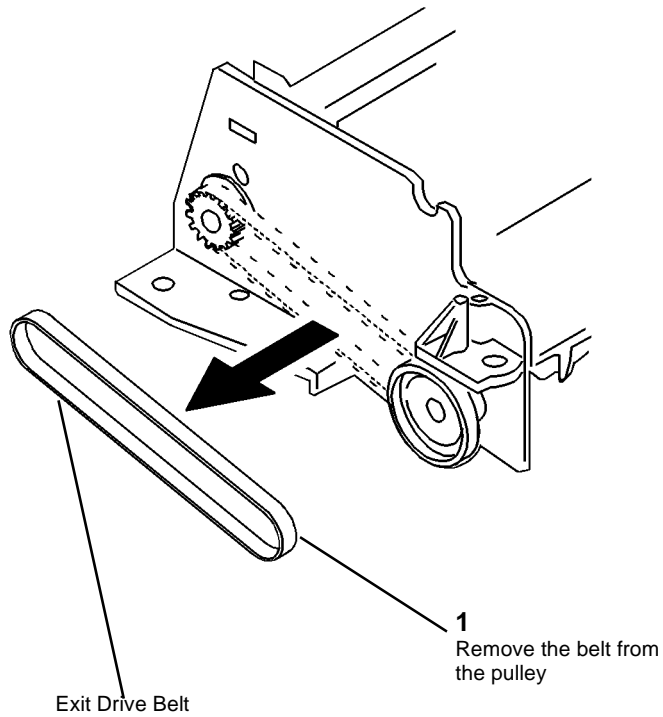


Figure 4 Removing the Exit Drive Belt

0500011A-SKY

## REP 5.28 DSDF Duplex Drive Roller

### Parts List on PL 1.4

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Unlatch the Transfer/Detect Corotron at each end and remove it.
2. (Figure 1): Remove the Inner Paper Guide.

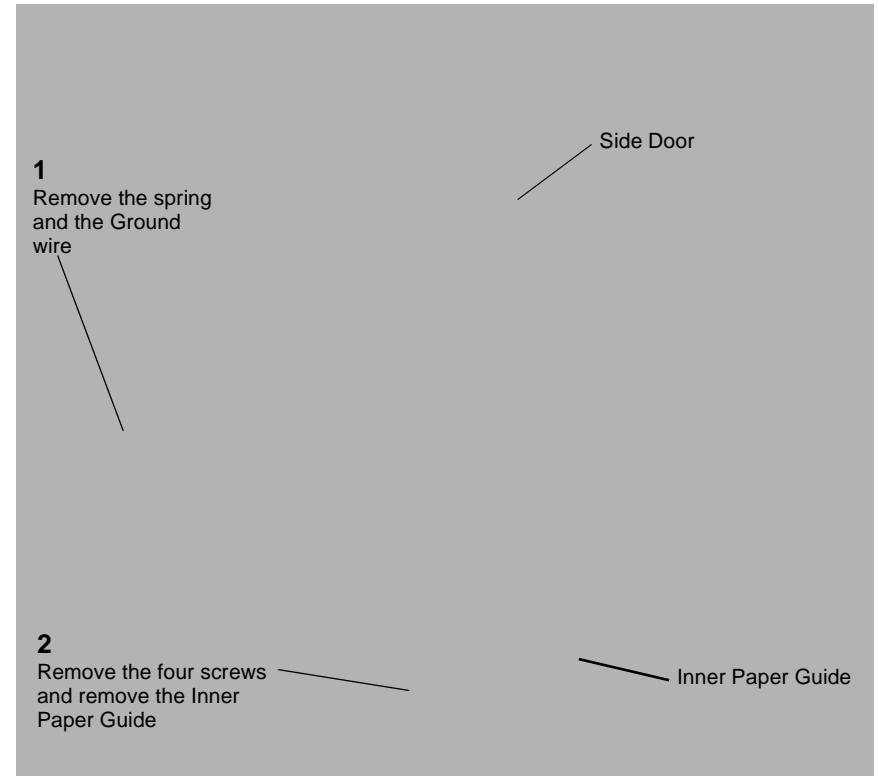


Figure 1 Removing the Covers

3. (Figure 2): Remove the Duplex Drive Roller.

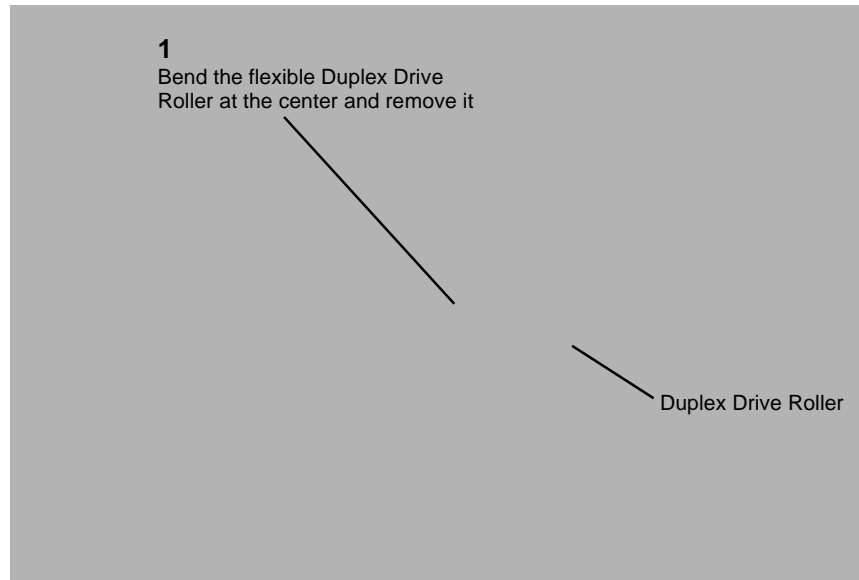


Figure 2 Removing the Duplex Drive Roller

## REP 5.29 DSDF Deflection Solenoid (SOL3)

Parts List on PL 9.3

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

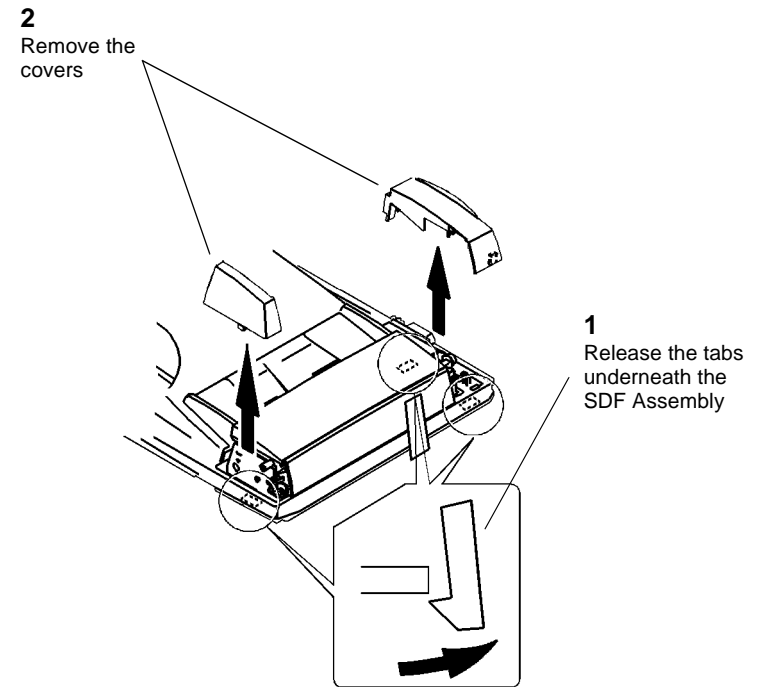
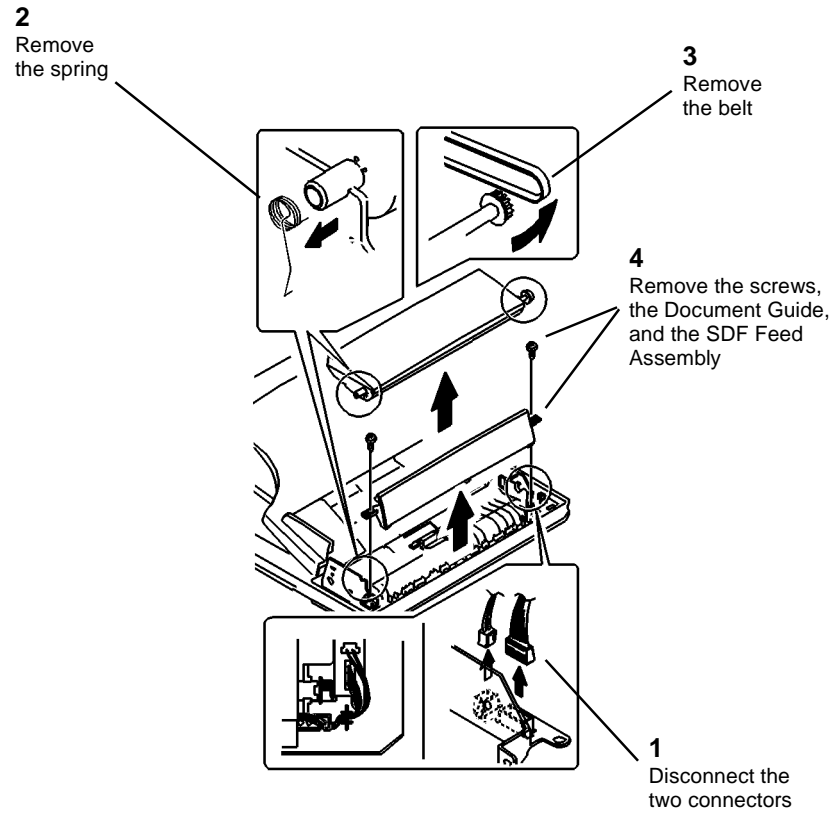


Figure 1 Removing the Covers

0500001A-SKY



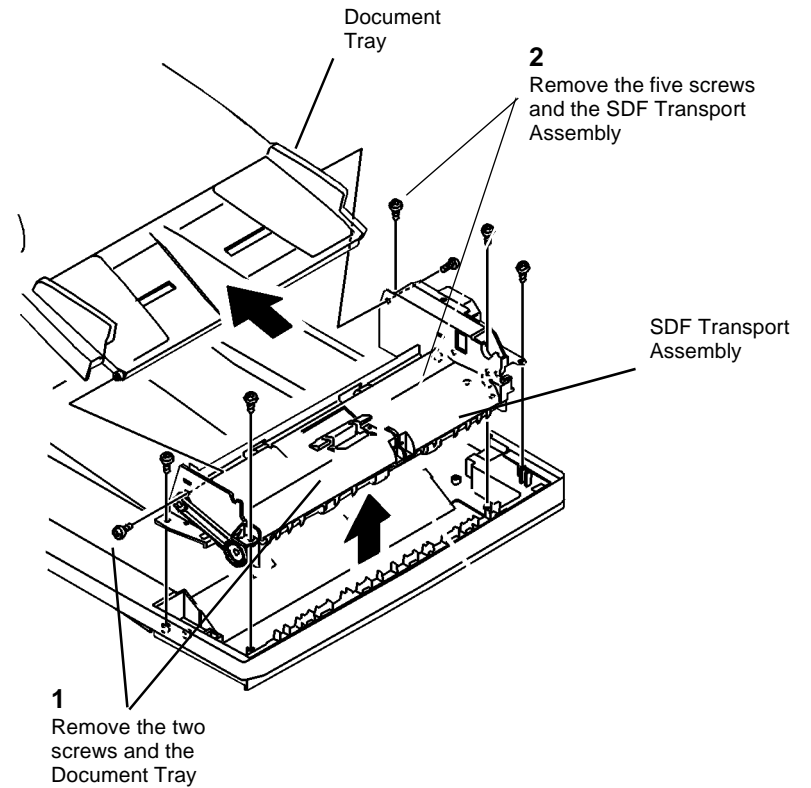
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Document Tray.



0500010A-SKY

Figure 3 Removing the Document Tray

4. (Figure 4): Remove the Exit Drive Belt.

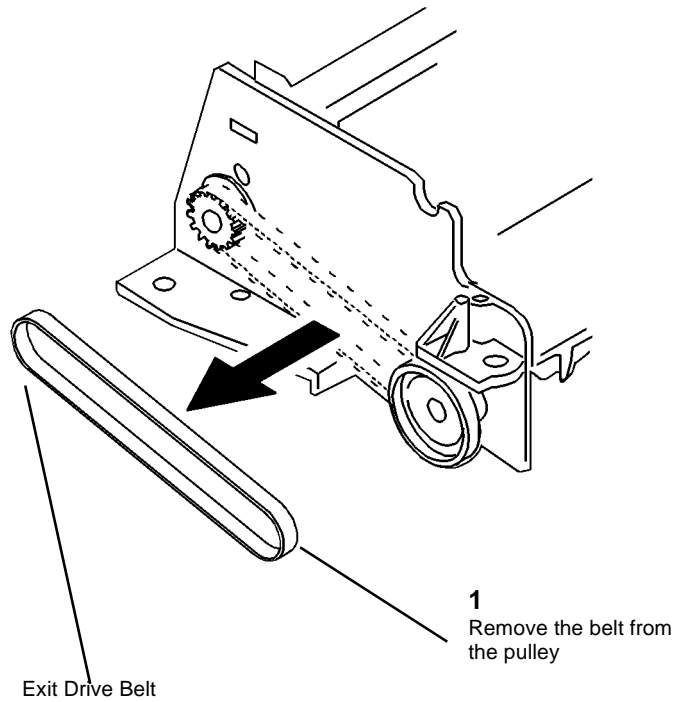


Figure 4 Removing the Exit Drive Belt

0500011A-SKY

5. (Figure 5): Remove the Document Path Sensor.

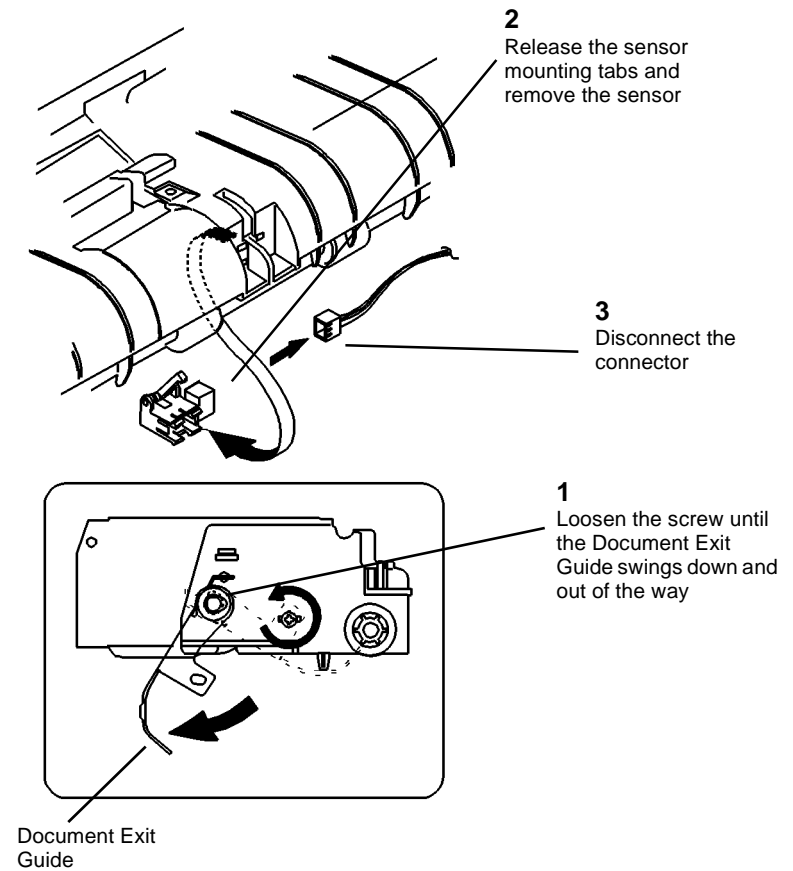


Figure 5 Removing the Document Path Sensor

0500013A-SKY

# REP 5.30 DSDF Duplex Drive Motor (MOT5)

## Parts List on PL 9.1

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Document Cover/Document Feeder Assembly.
2. (Figure 1): Remove the Rear Cover and the Access Cover.

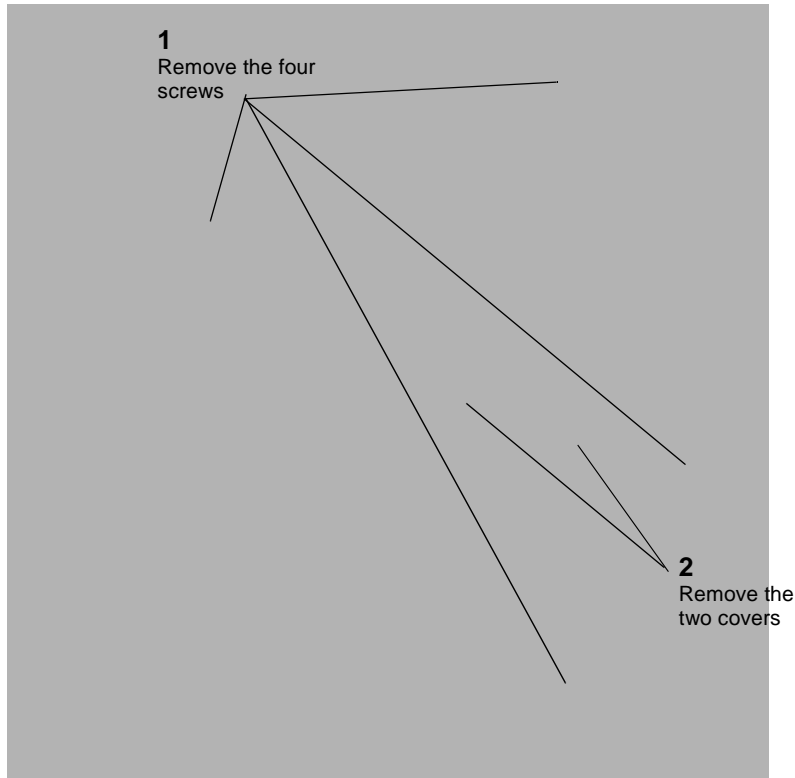


Figure 1 Removing the Covers

3. (Figure 2): Remove the PWB Cover.

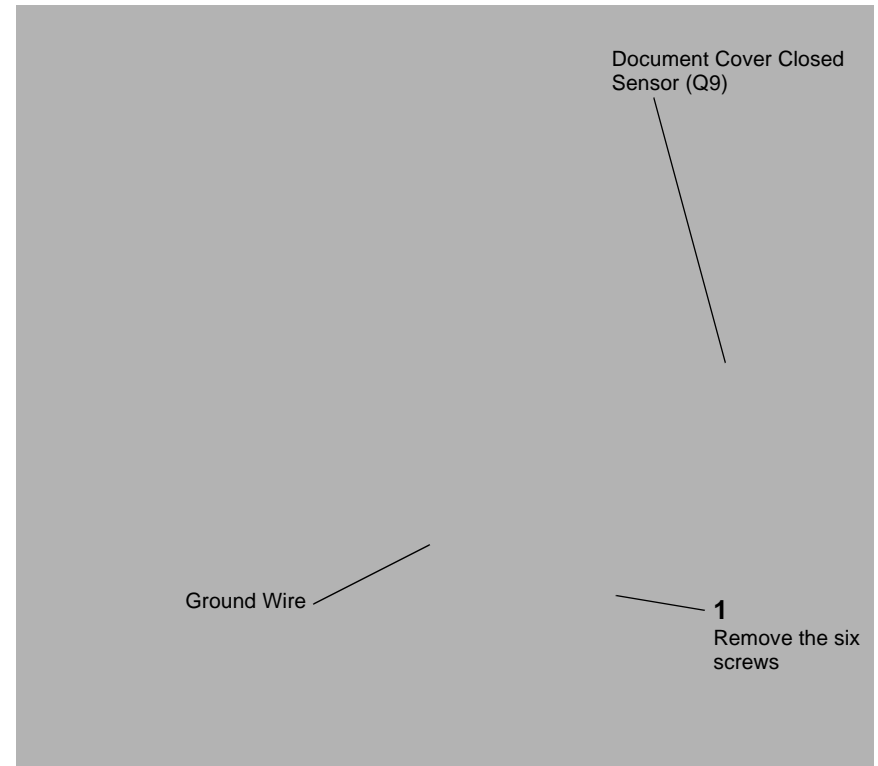


Figure 2 Removing the PWB Cover

4. (Figure 3): Remove the Main PWB.

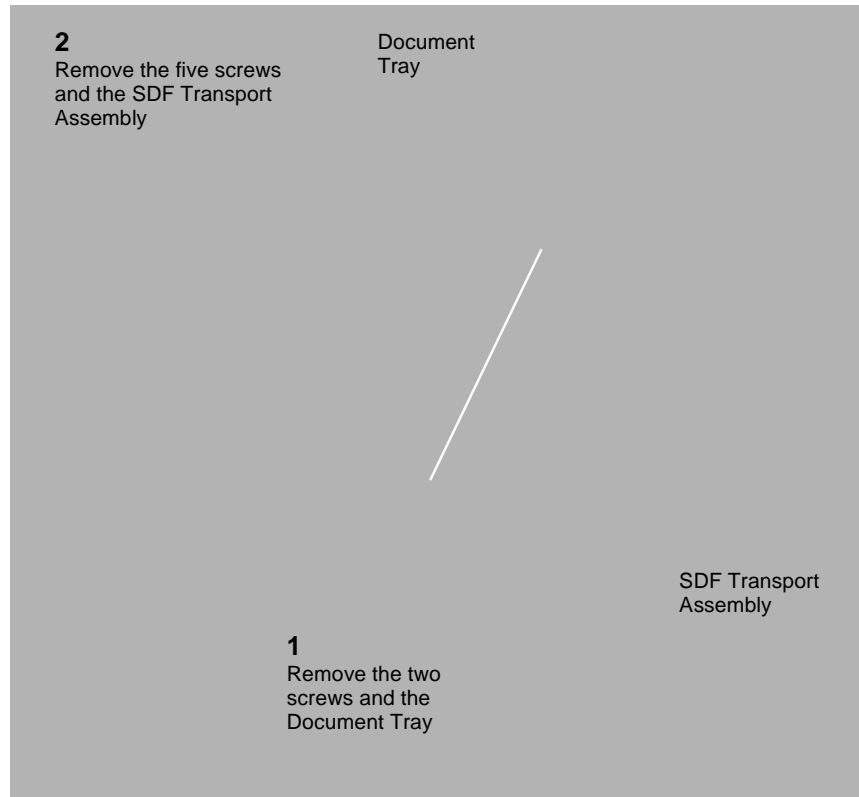


Figure 3 Removing the Main PWB

5. (Figure 4): Remove the Duplex Drive Motor (MOT5).

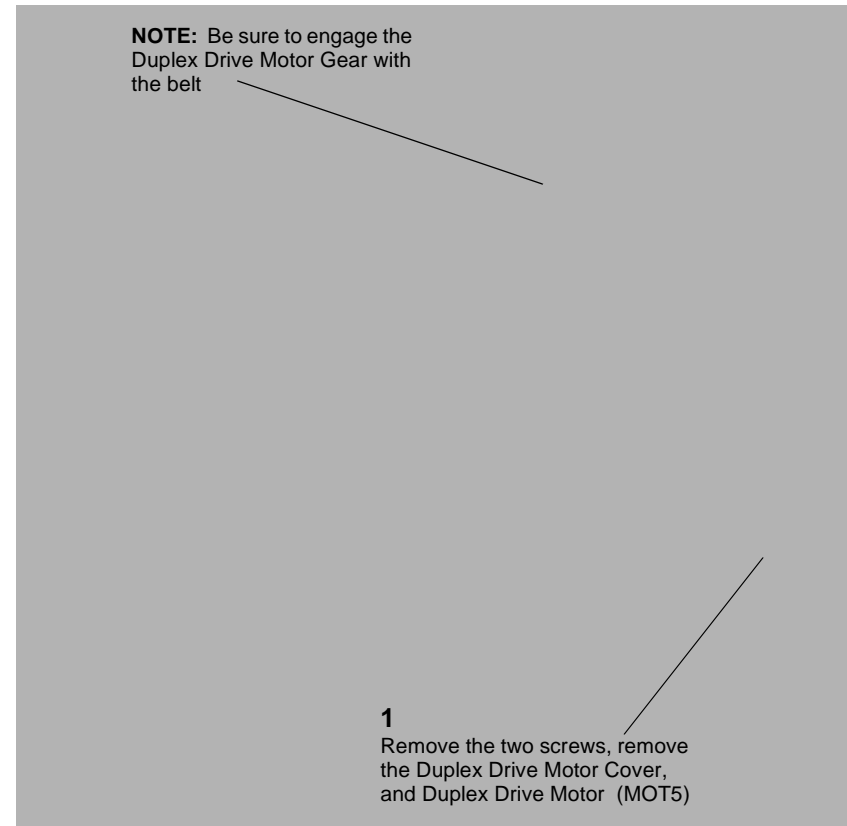


Figure 4 Removing the Duplex Drive Motor (MOT5)

## REP 5.31 DSD Feed Clutch (CL1)

### Parts List on PL 9.1

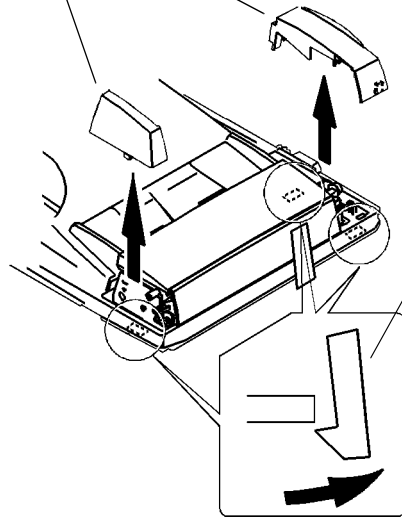
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

- 2 Remove the covers



- 1 Release the tabs underneath the SDF Assembly

Figure 1 Removing the Covers

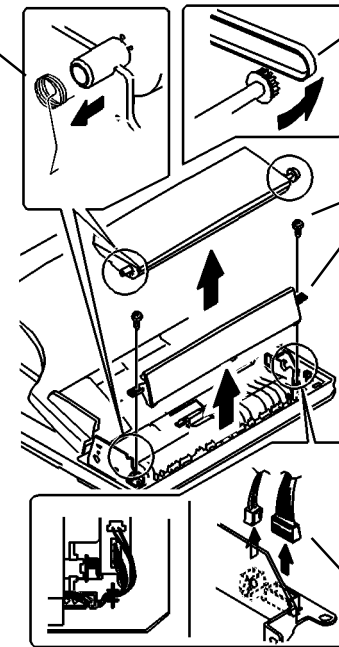
0500001A-SKY

2. (Figure 2): Remove the SDF Feed Assembly.

- 2 Remove the spring

- 3 Remove the belt

- 4 Remove the screws, the Document Guide, and the SDF Feed Assembly

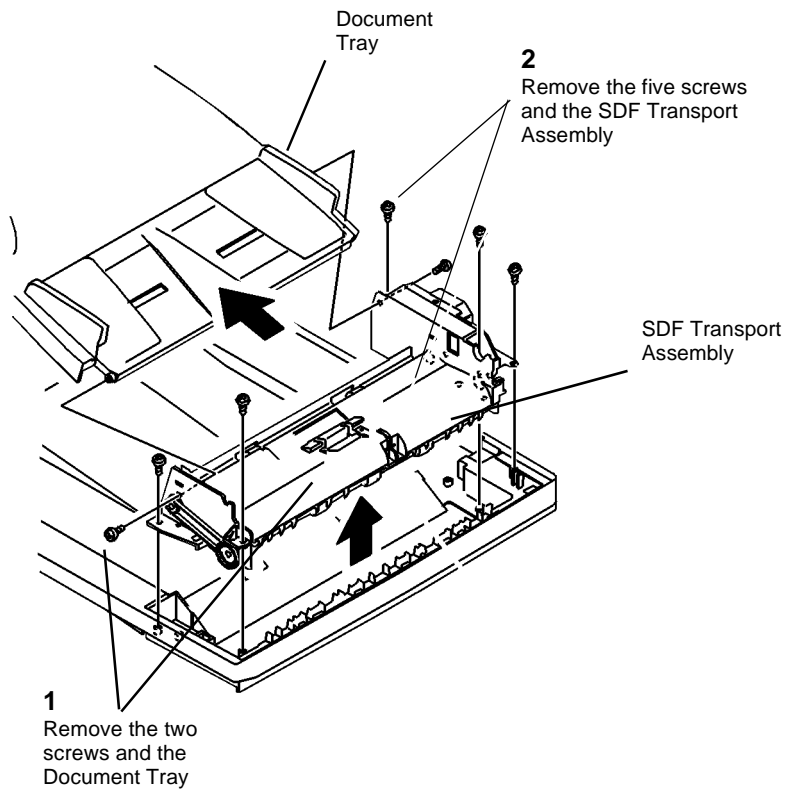


- 1 Disconnect the two connectors

Figure 2 Removing the SDF Feed Assembly

0500002A-SKY

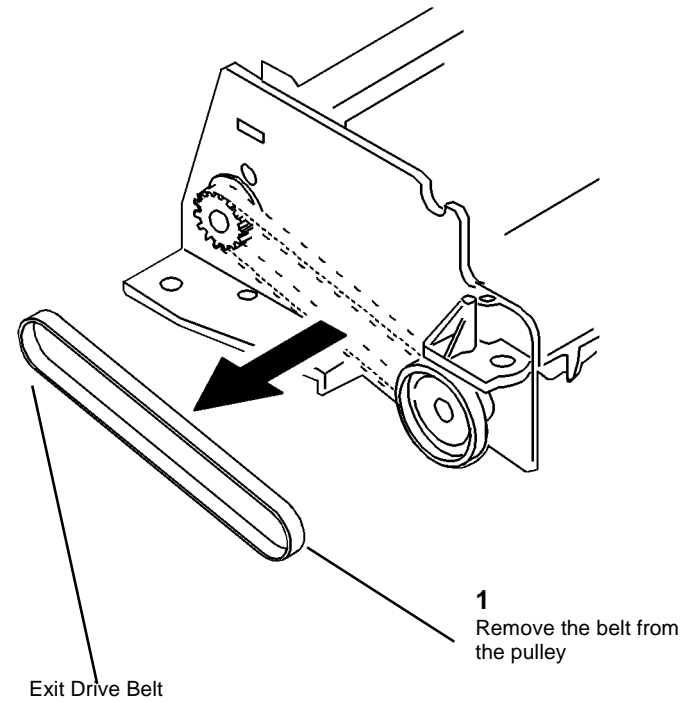
3. (Figure 3): Remove the Document Tray.



0500010A-SKY

Figure 3 Removing the Document Tray

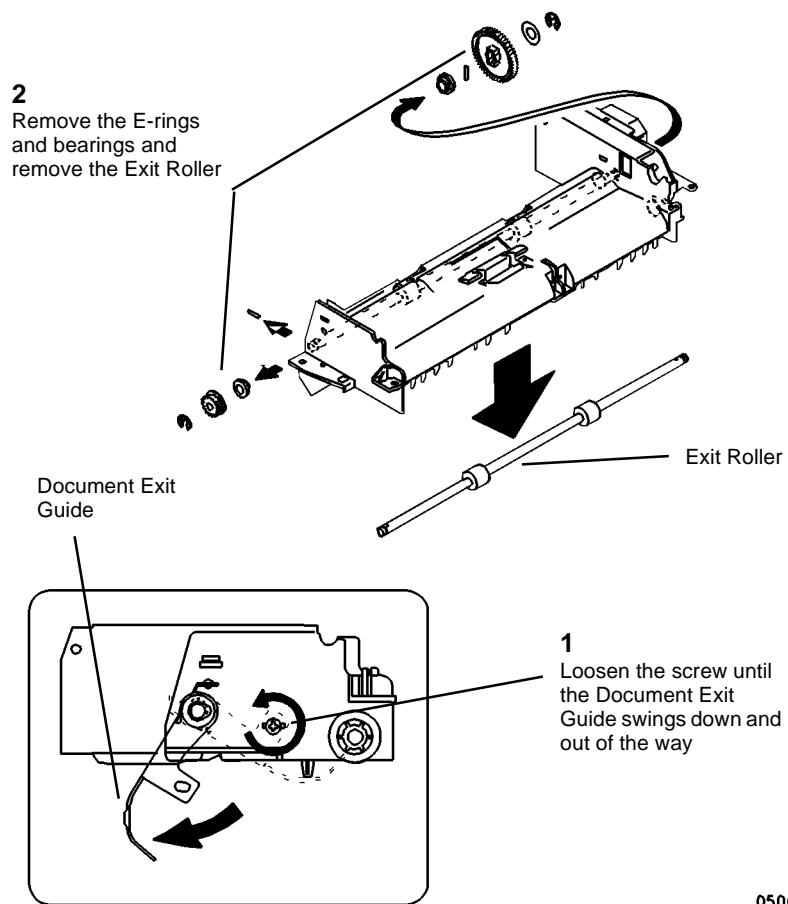
4. (Figure 4): Remove the Exit Drive Belt.



0500011A-SKY

Figure 4 Removing the Exit Drive Belt

5. (Figure 5): Remove the Exit Roller.



0500015A-SKY

Figure 5 Removing the Exit Roller





## REP 6.1 Document Glass Assembly

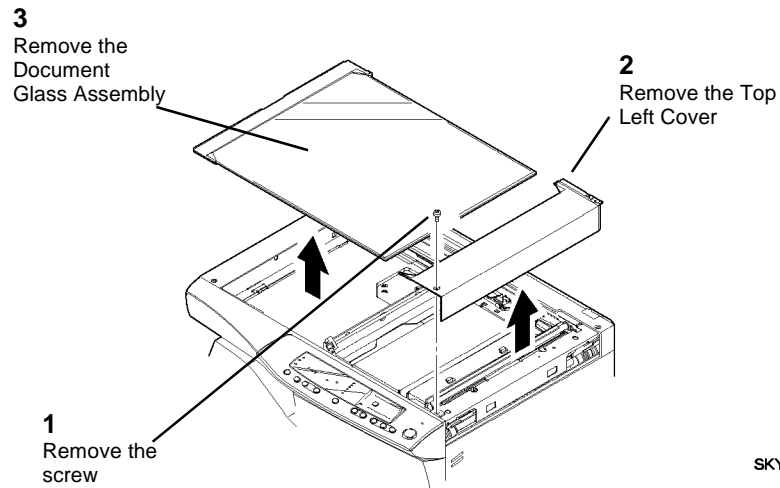
### Parts List on PL 1.1

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
2. (Figure 1): Remove the Document Glass Assembly.



SKY009N

Figure 1 Removing the Document Glass Assembly

## REP 6.2 Exposure Lamp Carriage

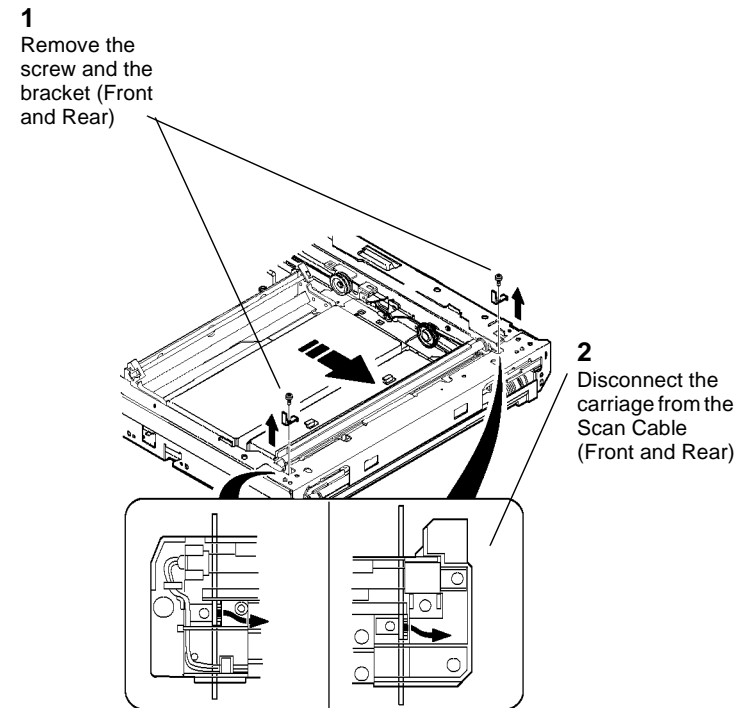
### Parts List on PL 3.1

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Document Glass Assembly (REP 6.1)
2. (Figure 1): Prepare to remove the Exposure Lamp Carriage.



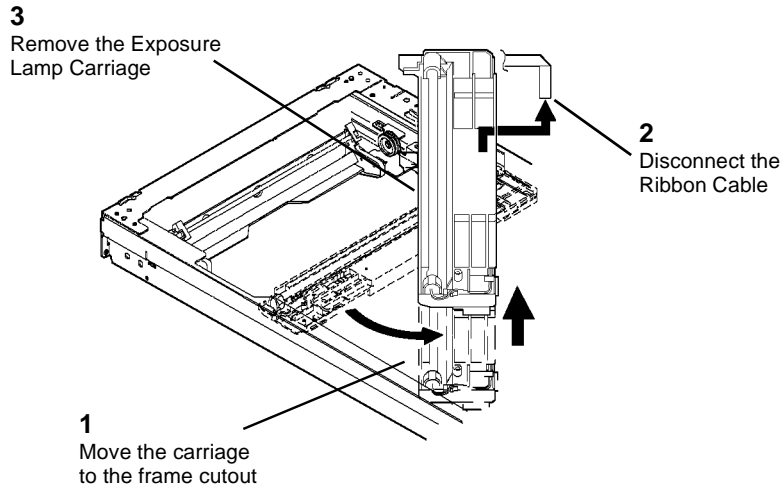
SKY010T

Figure 1 Preparing to Remove the Exposure Lamp Carriage

**CAUTION**

*Be careful not to damage the ribbon cable.*

3. (Figure 2): Remove the Exposure Lamp Carriage.



SKY011N

Figure 2 Removing the Exposure Lamp Carriage

## REP 6.3 Scan Drive Motor (MOT2)

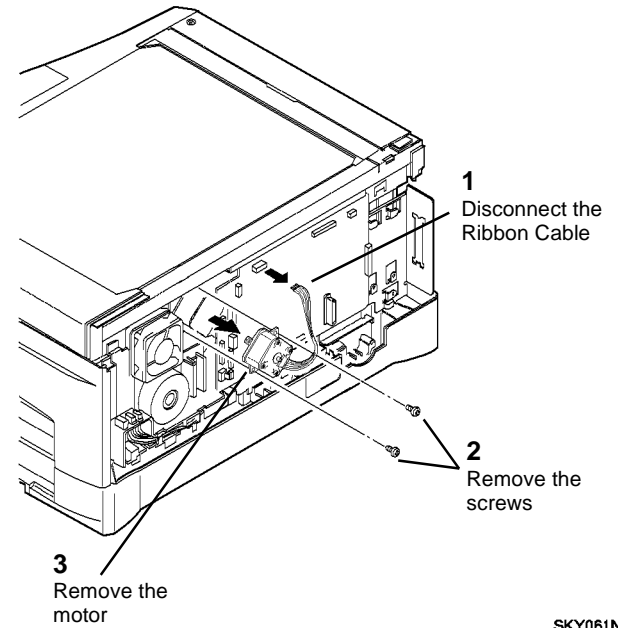
### Parts List on PL 3.1

#### Removal

**WARNING**

**Switch off the Main Power Switch. Disconnect the Power Cord.**

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the PWB Cover (PL 7.1).
4. (Figure 1): Remove the Scan Drive Motor.



SKY061N

Figure 1 Removing the Scan Drive Motor

## REP 6.4 Laser Module

### Parts List on PL 3.3

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Side Door
  - f. Document Glass Assembly (REP 6.1)
  - g. Control Console (REP 14.5)
  - h. Main PWB (REP 1.1)
  - i. Optics Frame Assembly (REP 6.6)
  - j. Exit Roller (REP 8.9)
  - k. Manual Exit Drive Belt (REP 8.10)
2. (Figure 1): Remove the Laser Module.

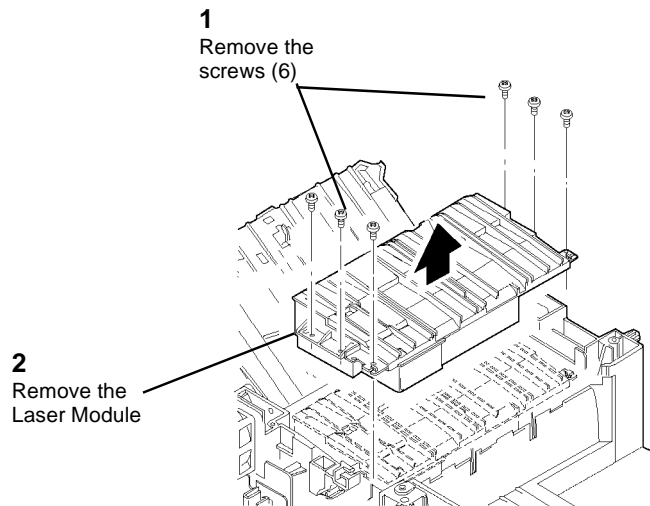


Figure 1 Removing the Laser Module

## REP 6.5 Lens/CCD Module

### Parts List on PL 3.2

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
2. Remove the Document Glass Assembly (REP 6.1).
3. (Figure 1): Remove the Lens/CCD Module.

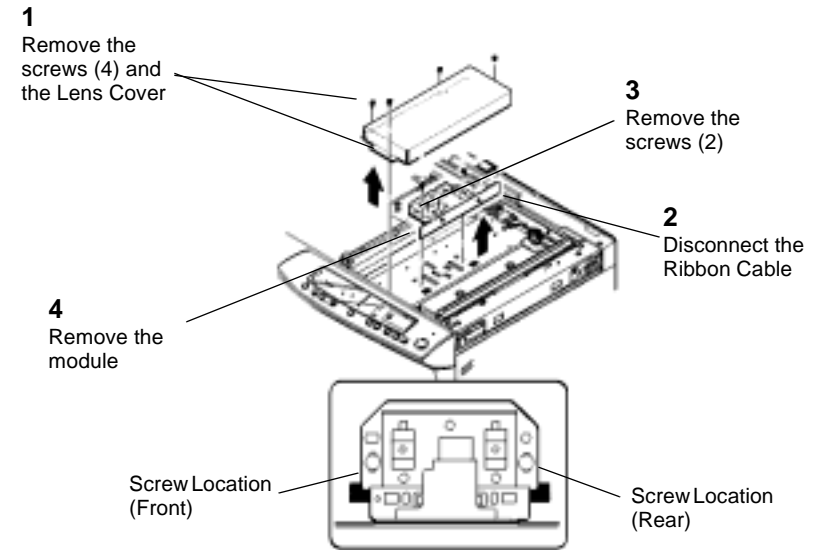


Figure 1 Removing the Lens/CCD Module

#### Replacement

1. If the Lens/CCD Module is being replaced, perform Lens/CCD Module (ADJ 6.2).

## REP 6.6 Optics Frame Assembly

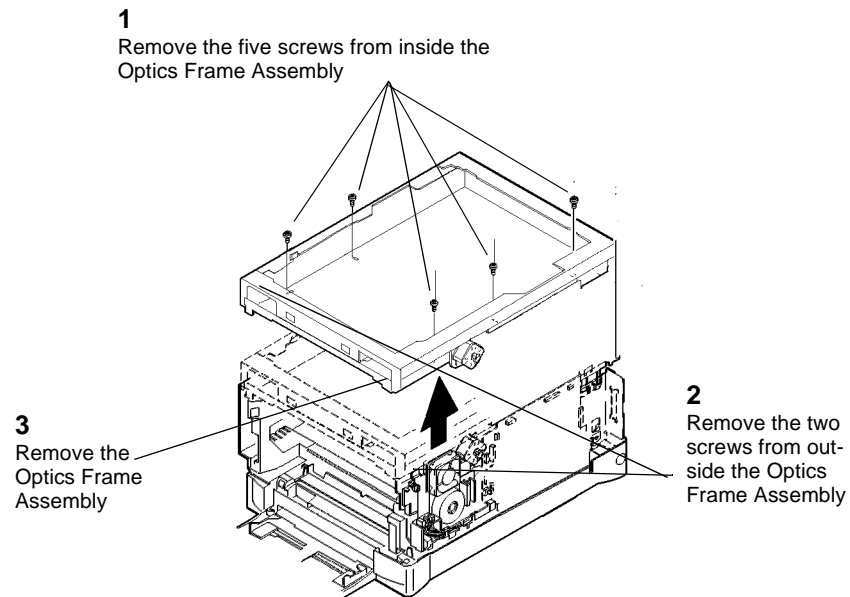
### Parts List on PL 3.1

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Document Glass Assembly (REP 6.1)
  - f. Control Console (REP 14.5)
  - g. Main PWB (REP 1.1)
2. Remove the three screws from the upper portion of the PWB Mounting Bracket (PL 7.1).
3. (Figure 1): Remove the Optics Frame Assembly.



SKY028N

Figure 1 Removing the Optics Frame Assembly

## REP 8.1 Paper Feed Solenoid (SOL1)

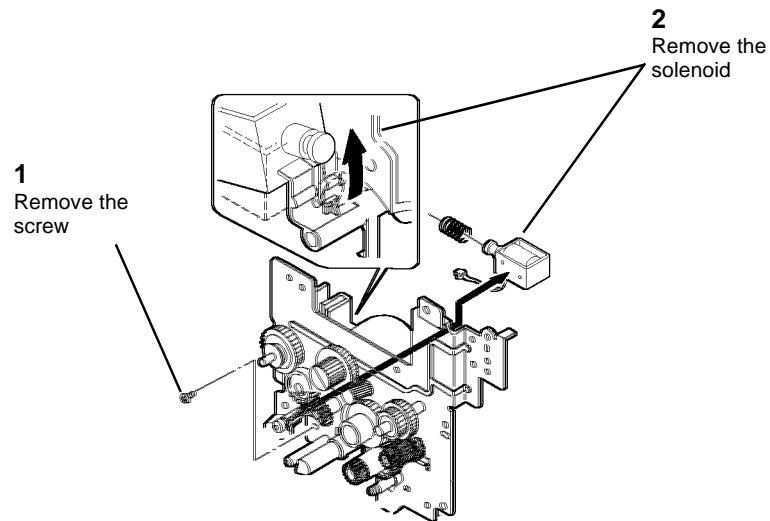
### Parts List on PL 2.2

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Side Door
  - f. Document Glass Assembly (REP 6.1)
  - g. Control Console (REP 14.5)
  - h. Main PWB (REP 1.1)
  - i. Optics Frame Assembly (REP 6.6)
  - j. Exit Roller (REP 8.9)
  - k. Manual Exit Drive Belt (REP 8.10)
  - l. Main Drive Assembly (REP 8.12)
2. (Figure 1): Remove the Paper Feed Solenoid.



SKY038Nb

Figure 1 Removing the Paper Feed Solenoid

## REP 8.2 Registration Roll Solenoid (SOL3)

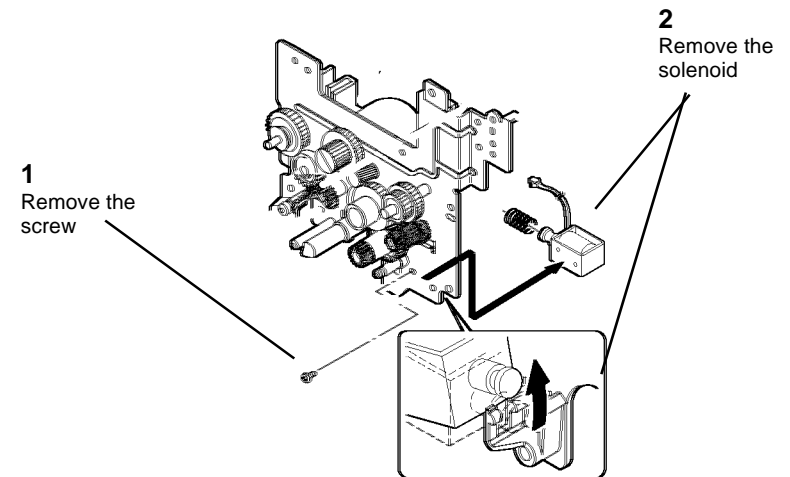
### Parts List on PL 2.2

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Side Door
  - f. Document Glass Assembly (REP 6.1)
  - g. Control Console (REP 14.5)
  - h. Main PWB (REP 1.1)
  - i. Optics Frame Assembly (REP 6.6)
  - j. Exit Roller (REP 8.9)
  - k. Manual Exit Drive Belt (REP 8.10)
  - l. Main Drive Assembly (REP 8.12)
2. (Figure 1): Remove the Registration Roll Solenoid.



SKY038NA

Figure 1 Removing the Registration Roll Solenoid

## REP 8.3 Paper Feed Sensor (Q1)

## Parts List on PL 5.1

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Side Door
  - f. Document Glass Assembly (REP 6.1)
  - g. Control Console (REP 14.5)
  - h. Main PWB (REP 1.1)
  - i. Optics Frame Assembly (REP 6.6)
  - j. Laser Module (REP 6.4)
2. (Figure 1): Remove the Upper Front Paper Guide.

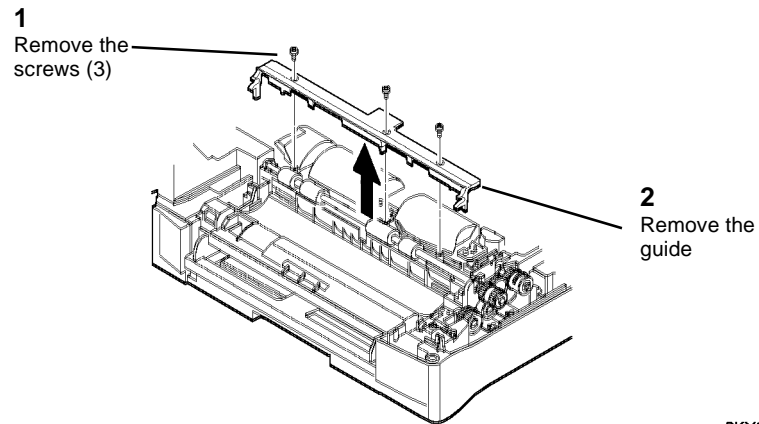


Figure 1 Removing the Upper Front Paper Guide

3. (Figure 2): Remove the Paper Feed Sensor.

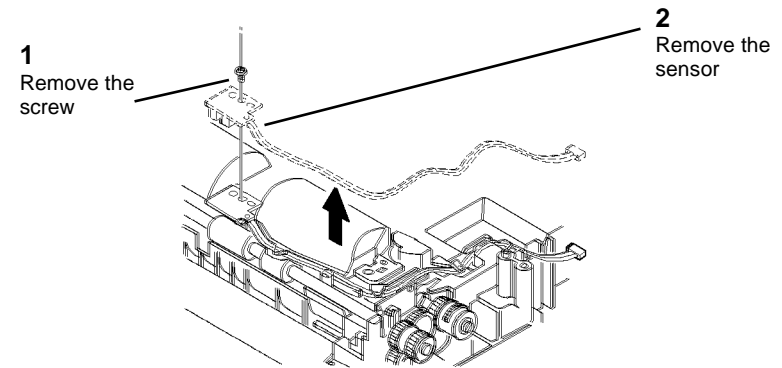


Figure 2 Removing the Paper Feed Sensor

## REP 8.4 Bypass Feed Sensor (Q2) (XD100/XD102)

### Parts List on PL 5.2

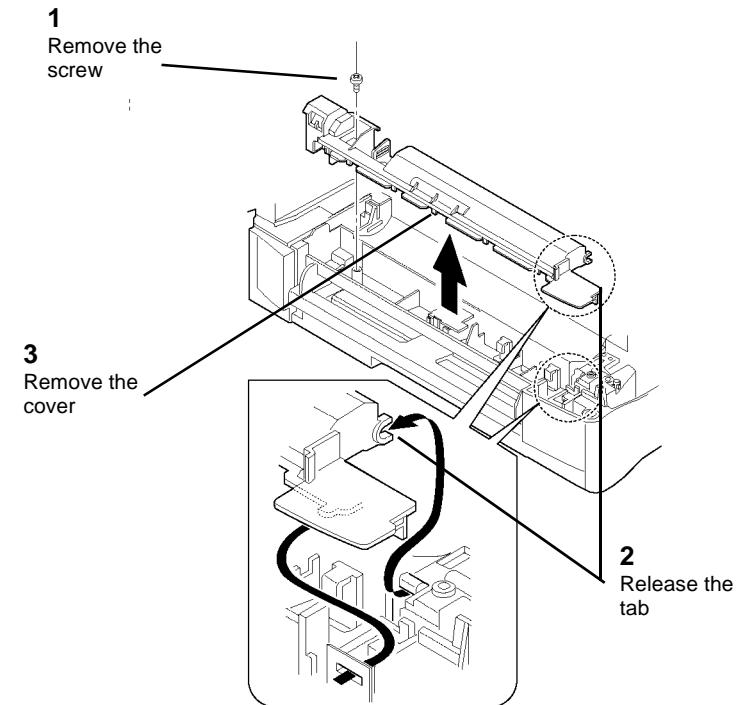
### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Side Door
  - f. Document Glass Assembly (REP 6.1)
  - g. Control Console (REP 14.5)
  - h. Main PWB (REP 1.1)
  - i. Optics Frame Assembly (REP 6.6)
  - j. Laser Module (REP 6.4)

2. (Figure 1): Remove the Upper Cover.



SKY045N

Figure 1 Removing the Upper Cover

3. (Figure 2): Remove the Bypass Feed Sensor.

## REP 8.5 Tray Detect Switch Harness

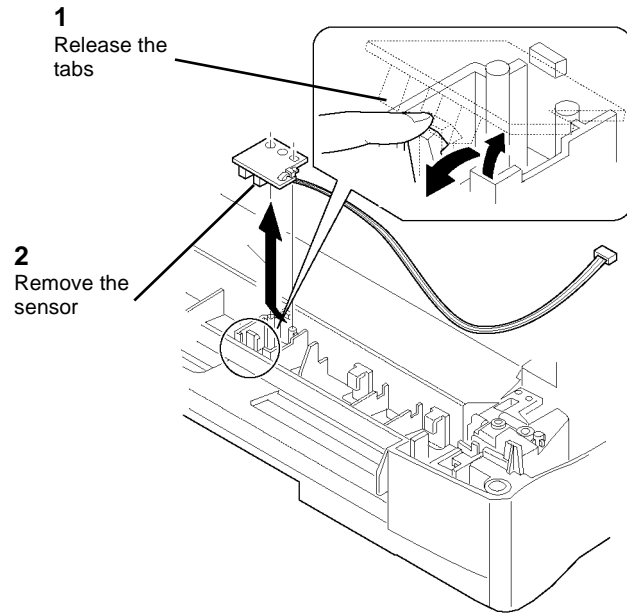
### Parts List on PL 5.1

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Side Door
  - f. Document Glass Assembly (REP 6.1)
  - g. Control Console (REP 14.5)
  - h. Main PWB (REP 1.1)
  - i. Optics Frame Assembly (REP 6.6)
  - j. Laser Module (REP 6.4)
  - k. Main Drive Assembly (REP 8.12)



SKY048N

Figure 2 Removing the Bypass Feed Sensor



2. (Figure 1): Remove the Intermediate Frame Assembly.

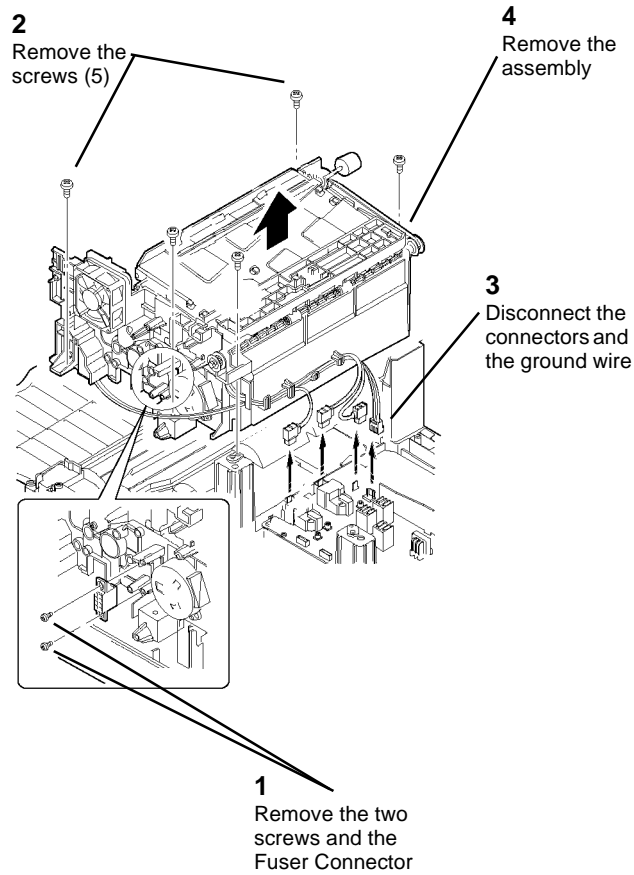


Figure 1 Removing the Intermediate Frame Assembly

3. (Figure 2): Remove the Upper Front Paper Guide.

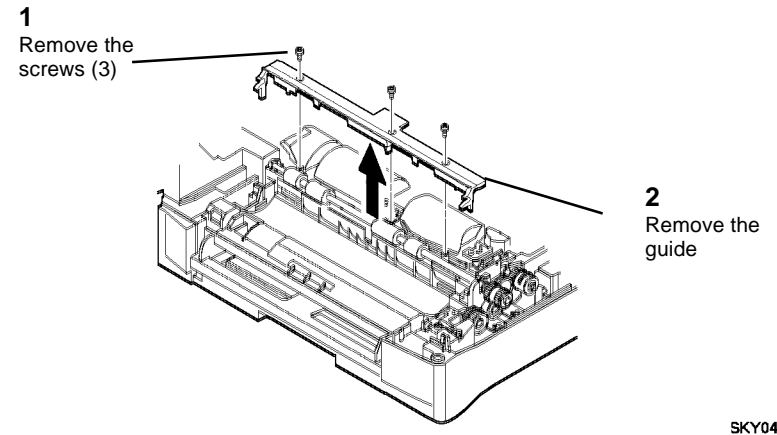


Figure 2 Removing the Upper Front Paper Guide

4. (Figure 3): Remove the Tray Detect Switch Harness.

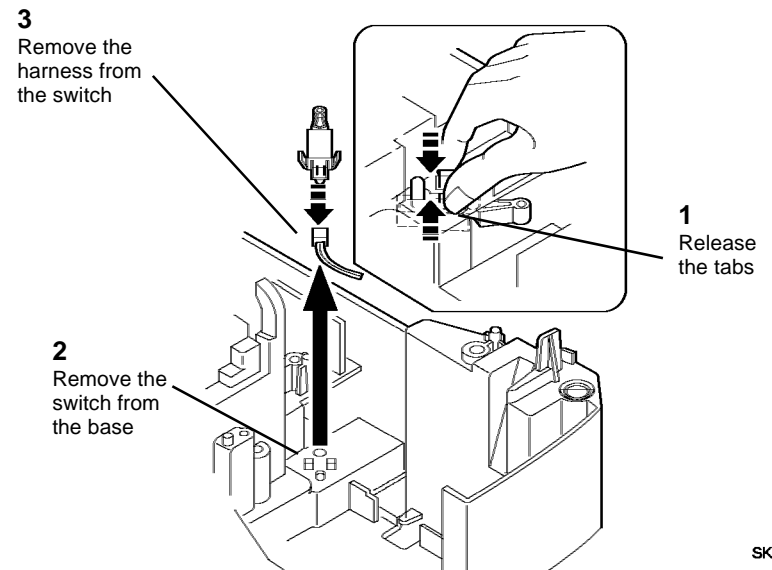


Figure 3 Removing the Tray Detect Switch Harness

## REP 8.6 Paper Feed Roller

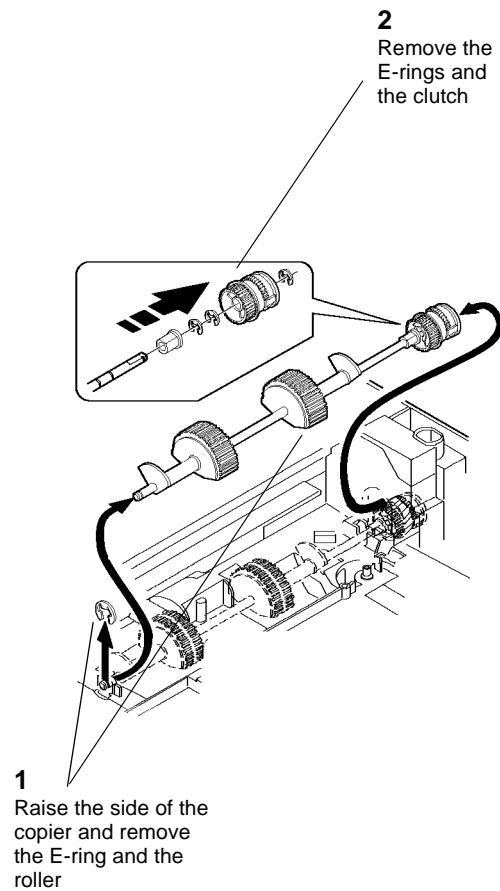
Parts List on PL 5.1

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Paper Tray.
2. (Figure 1): Remove the Paper Feed Roller.



SKY044T

Figure 1 Removing the Paper Feed Roller

## REP 8.7 Transport Roller (XD100/XD102)

Parts List on PL 5.2

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Side Door
  - f. Document Glass Assembly (REP 6.1)
  - g. Control Console (REP 14.5)
  - h. Main PWB (REP 1.1)
  - i. Optics Frame Assembly (REP 6.6)
  - j. Laser Module (REP 6.4)
  - k. Main Drive Assembly (REP 8.12)
  - l. Paper Feed Sensor (REP 8.3)

2. (Figure 1): Remove the Upper Cover.

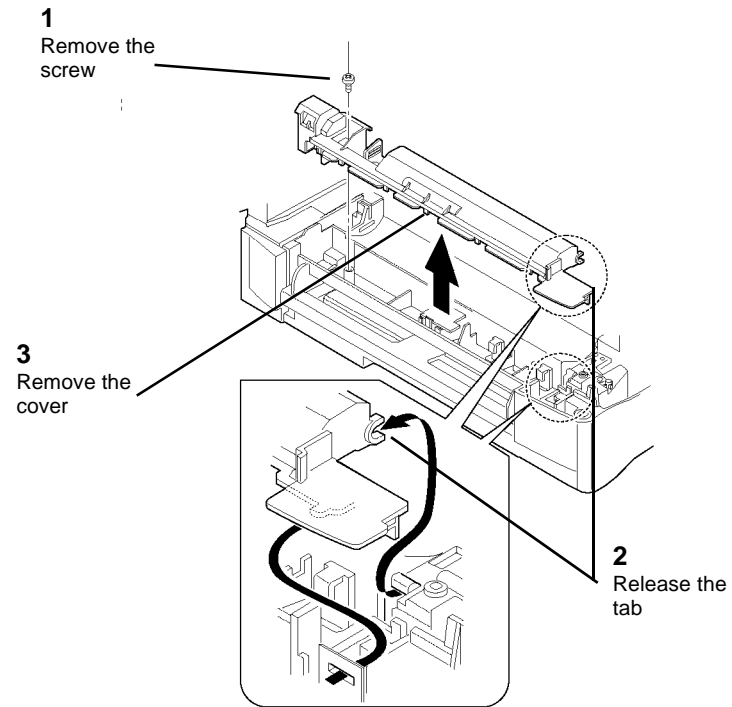


Figure 1 Removing the Upper Cover

SKY045N

3. (Figure 2): Remove the Bypass Frame.

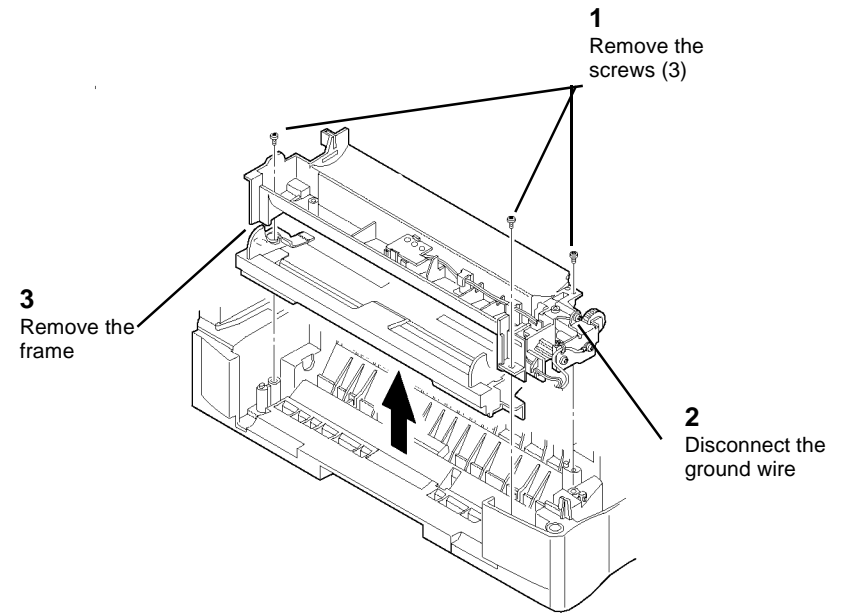


Figure 2 Removing the Bypass Frame

SKY047N

4. (Figure 3): Turn over the Bypass Frame and remove the Transport Roller.

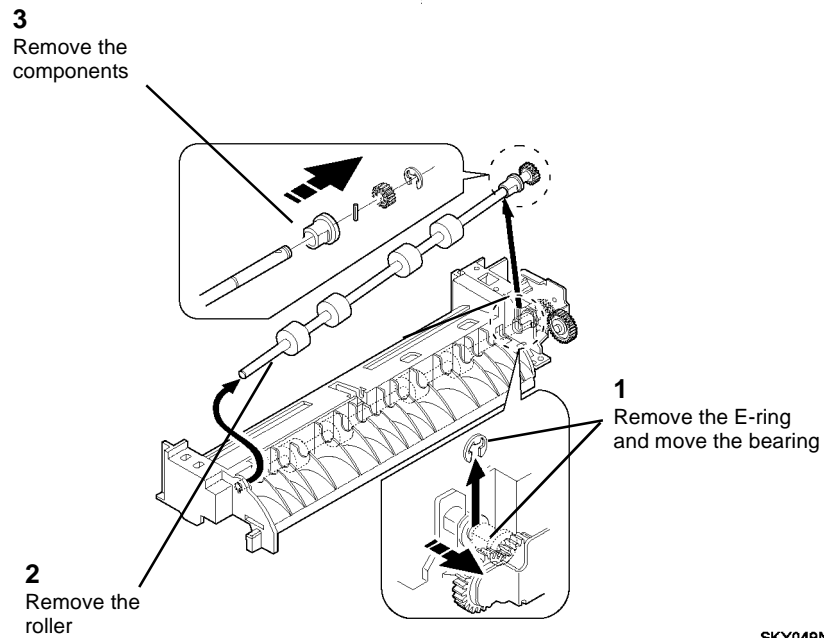


Figure 3 Removing the Transport Roller

## REP 8.8 Side Door Interlock Switch (S3/S4)

Parts List on PL 5.3, PL 5.4

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Side Door
  - f. Document Glass Assembly (REP 6.1)
  - g. Control Console (REP 14.5)
  - h. Main PWB (REP 1.1)
  - i. Optics Frame Assembly (REP 6.6)
  - j. Laser Module (REP 6.4)
  - k. Main Drive Assembly (REP 8.12)
  - l. Paper Feed Sensor (REP 8.3)

SKY049N

**NOTE:** Although the Upper Covers on the XD100 and the XD102 are not identical to the Upper Cover on the XD104, this procedure may be used to remove the similar components.

2. (Figure 1): Remove the Upper Cover.

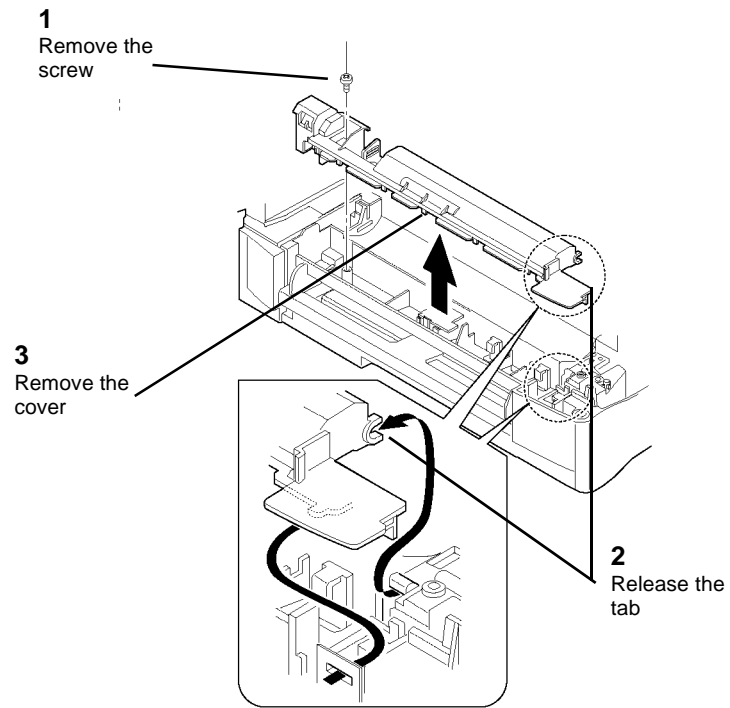


Figure 1 Removing the Upper Cover

SKY045N

3. (Figure 2): Remove the Side Door Interlock Switch.

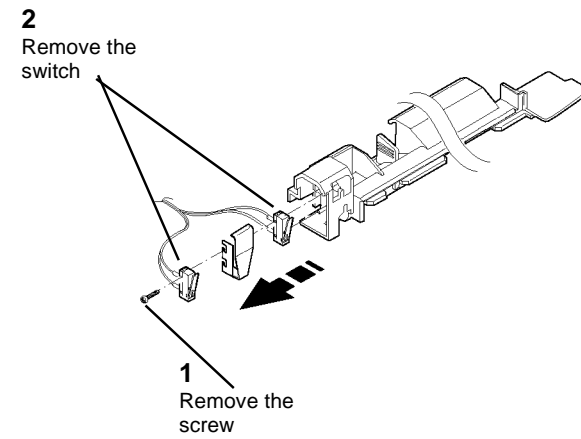


Figure 2 Removing the Side Door Interlock Switch

SKY046N

## REP 8.9 Exit Roller

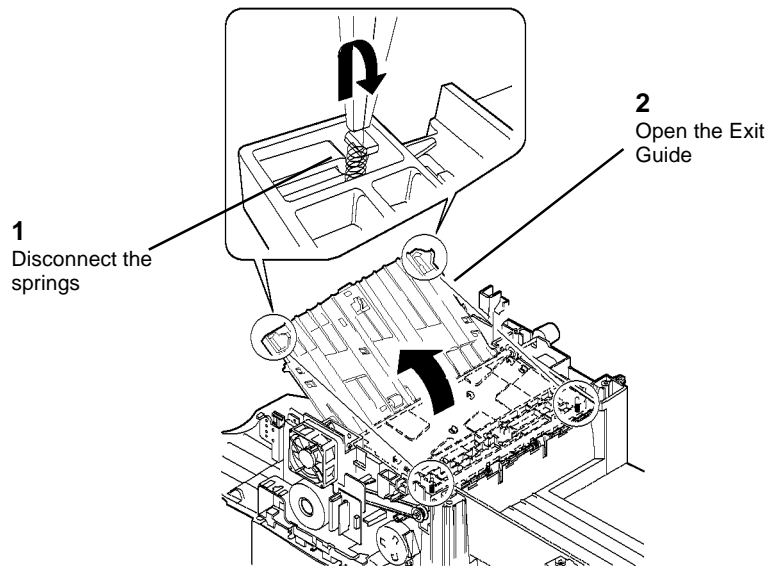
### Parts List on PL 2.1

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

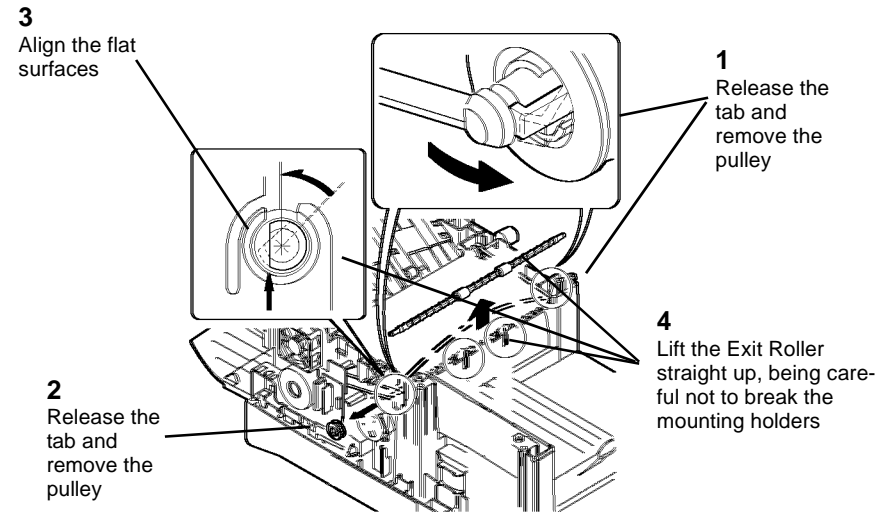
1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Document Glass Assembly (REP 6.1)
  - f. Control Console (REP 14.5)
  - g. Main PWB (REP 1.1)
  - h. Optics Frame Assembly (REP 6.6)
2. (Figure 1): Open the Exit Guide.



SKY031N

Figure 1 Opening the Exit Guide

3. (Figure 2): Remove the Exit Roller.



SKY032N

Figure 2 Removing the Exit Roller

## REP 8.10 Manual Exit Drive Belt

### Parts List on PL 2.1

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Document Glass Assembly (REP 6.1)
  - f. Control Console (REP 14.5)
  - g. Main PWB (REP 1.1)
  - h. Optics Frame Assembly (REP 6.6)
  - i. Exit Roller (REP 8.9)
2. (Figure 1): Remove the Manual Exit Drive Belt.

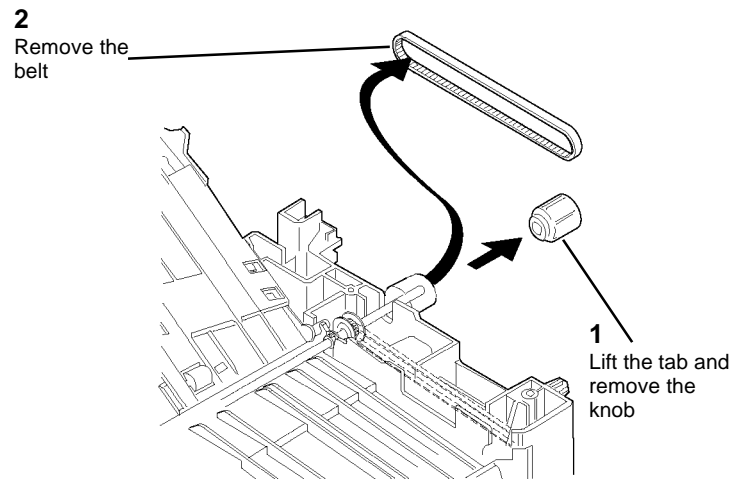


Figure 1 Removing the Manual Exit Drive Belt

SKY033N

## REP 8.11 Lower Transport Roller

### Parts List on PL 2.1

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Document Glass Assembly (REP 6.1)
  - f. Control Console (REP 14.5)
  - g. Main PWB (REP 1.1)
  - h. Optics Frame Assembly (REP 6.6)
  - i. Exit Roller (REP 8.9)
  - j. Manual Exit Drive Belt (REP 8.10)
2. (Figure 1): Prepare to remove the roller.

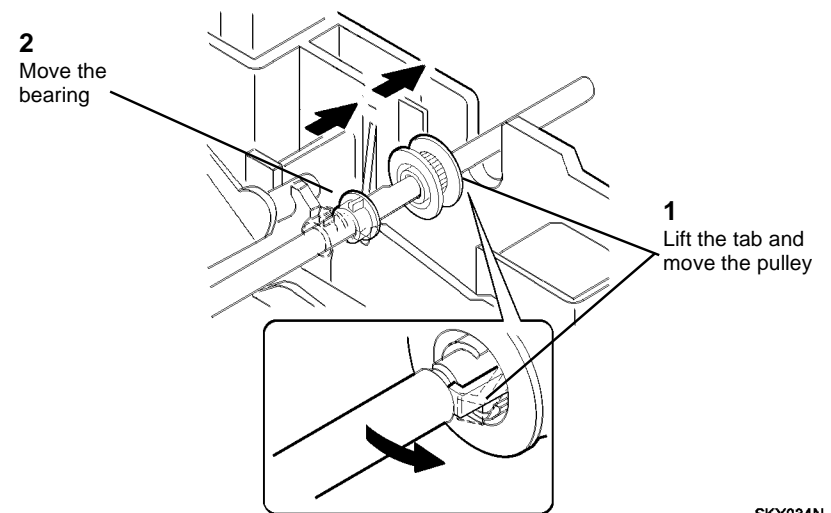
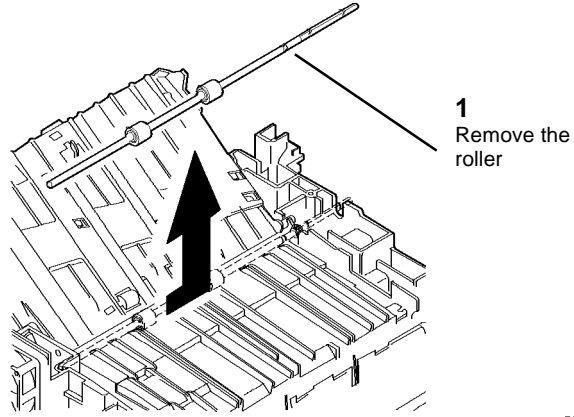


Figure 1 Preparing to Remove the Roller

SKY034N

3. (Figure 2): Remove the Lower Transport Roller.



SKY035N

Figure 2 Removing the Lower Transport Roller

## REP 8.12 Main Drive Assembly

### Parts List on PL 2.1

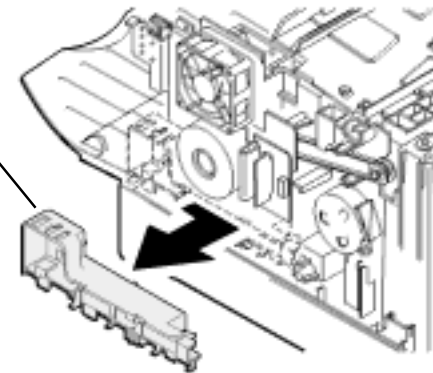
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Side Door
  - f. Document Glass Assembly (REP 6.1)
  - g. Control Console (REP 14.5)
  - h. Main PWB (REP 1.1)
  - i. Optics Frame Assembly (REP 6.6)
  - j. Exit Roller (REP 8.9)
  - k. Manual Exit Drive Belt (REP 8.10)
2. (Figure 1): Remove the Harness Guide.

- 1  
Pull the guide out  
and rotate it  
downward

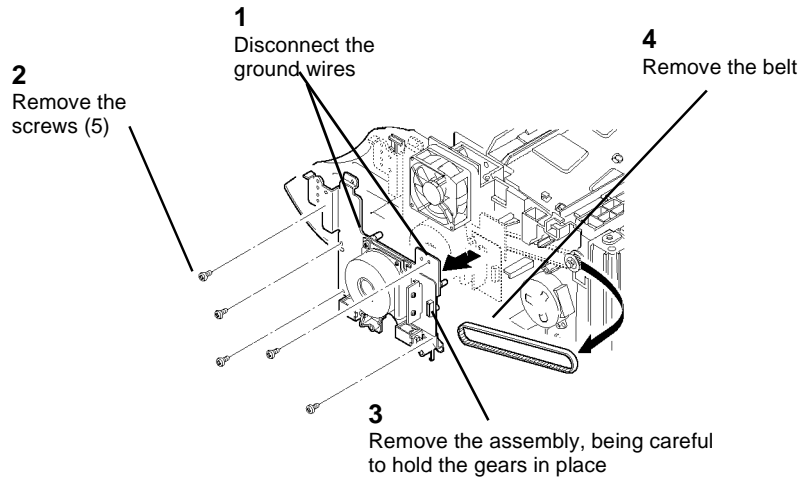


SKY036N

Figure 1 Removing the Harness Guide



3. (Figure 2): Remove the Main Drive Assembly and the Exit Drive Belt.



SKY037N

Figure 2 Removing the Main Drive Assembly

## REP 8.13 Lower Registration Roller

### Parts List on PL 5.1

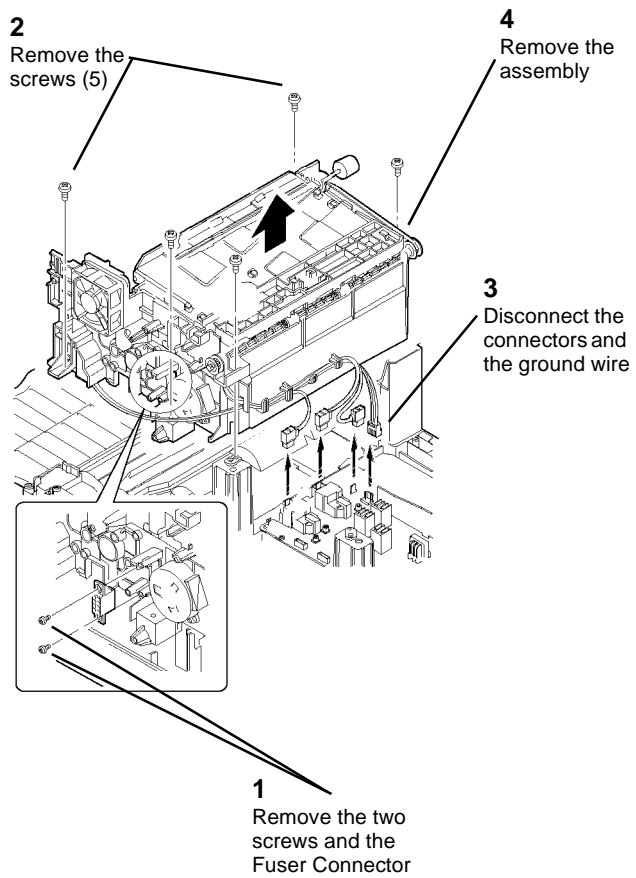
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Side Door
  - f. Document Glass Assembly (REP 6.1)
  - g. Control Console (REP 14.5)
  - h. Main PWB (REP 1.1)
  - i. Optics Frame Assembly (REP 6.6)
  - j. Laser Module (REP 6.4)
  - k. Main Drive Assembly (REP 8.12)

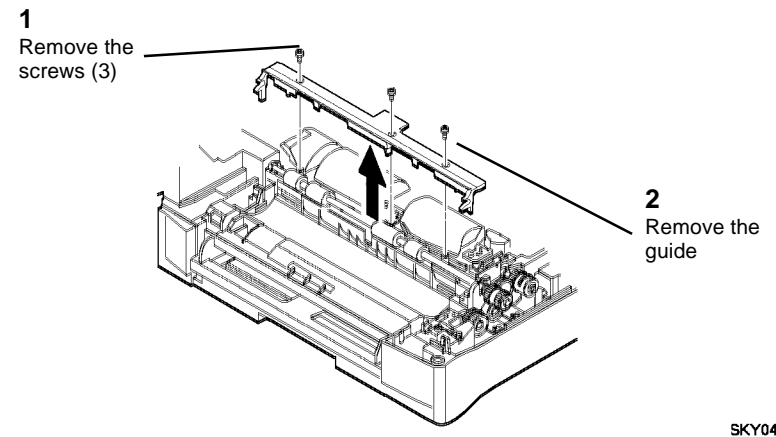
2. (Figure 1): Remove the Intermediate Frame Assembly.



SKY040N

Figure 1 Removing the Intermediate Frame Assembly

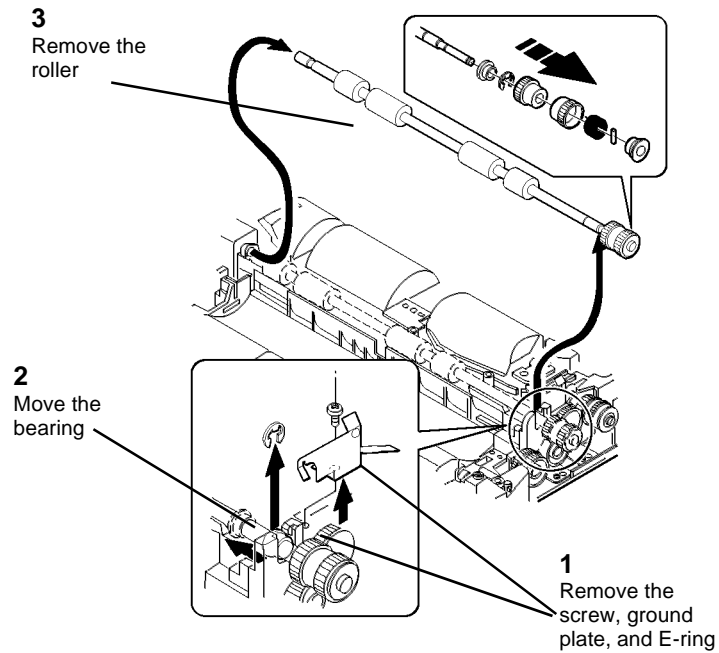
3. (Figure 2): Remove the Upper Front Paper Guide.



SKY042N

Figure 2 Removing the Upper Front Paper Guide

4. (Figure 3): Remove the Lower Registration Roller.



SKY041N

Figure 3 Removing the Lower Registration Roller

## REP 8.14 Tray Detect Switch (S2)

### Parts List on PL 5.1

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Side Door
  - f. Document Glass Assembly (REP 6.1)
  - g. Control Console (REP 14.5)
  - h. Main PWB (REP 1.1)
  - i. Optics Frame Assembly (REP 6.6)
  - j. Laser Module (REP 6.4)
  - k. Main Drive Assembly (REP 8.12)

2. (Figure 1): Remove the Intermediate Frame Assembly.

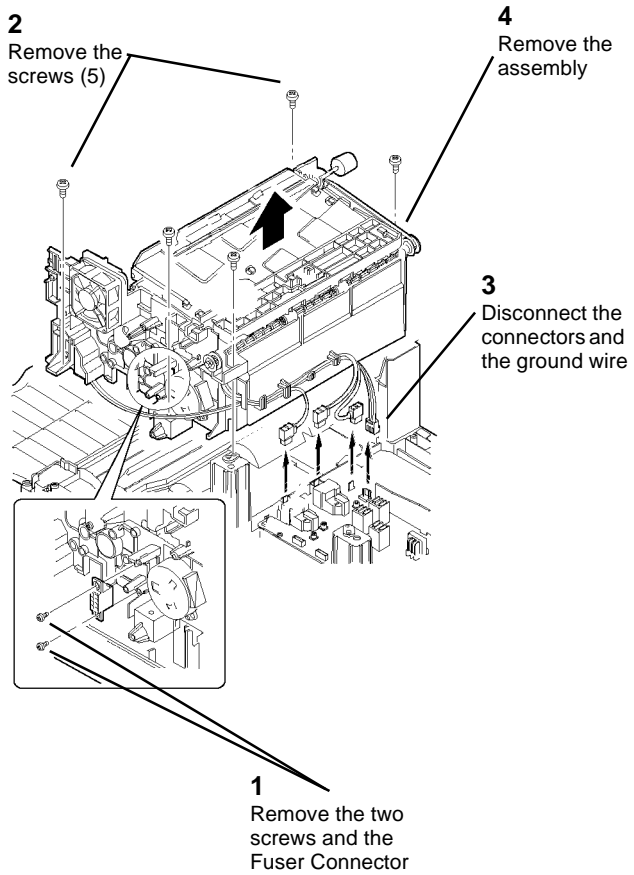


Figure 1 Removing the Intermediate Frame Assembly

3. (Figure 2): Remove the Upper Front Paper Guide.

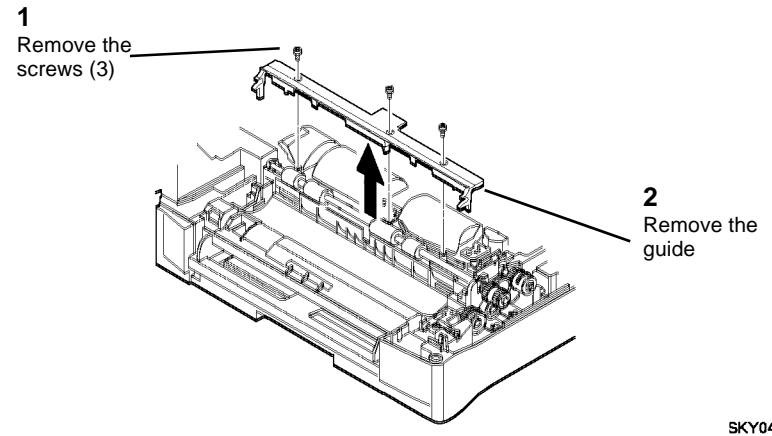


Figure 2 Removing the Upper Front Paper Guide

4. (Figure 3): Remove the Tray Detect Switch.

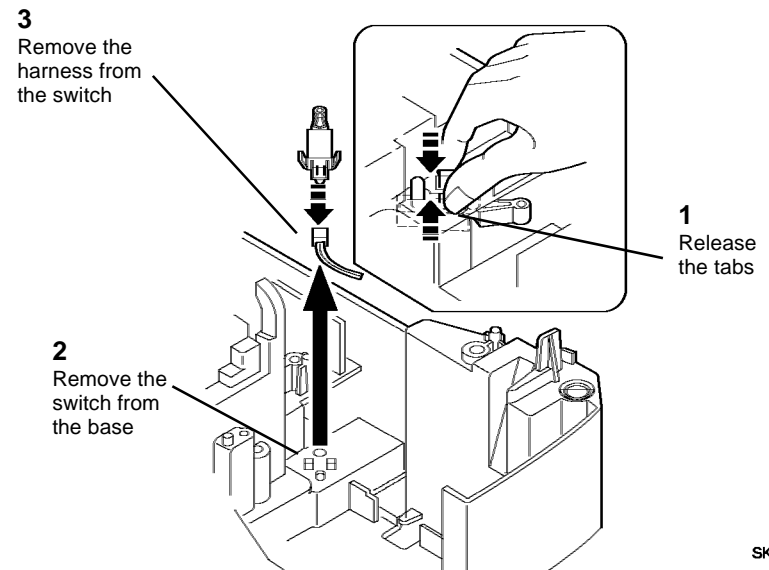


Figure 3 Removing the Tray Detect Switch

## REP 8.15 Feed Roll (XD104)

### Parts List on PL 5.5

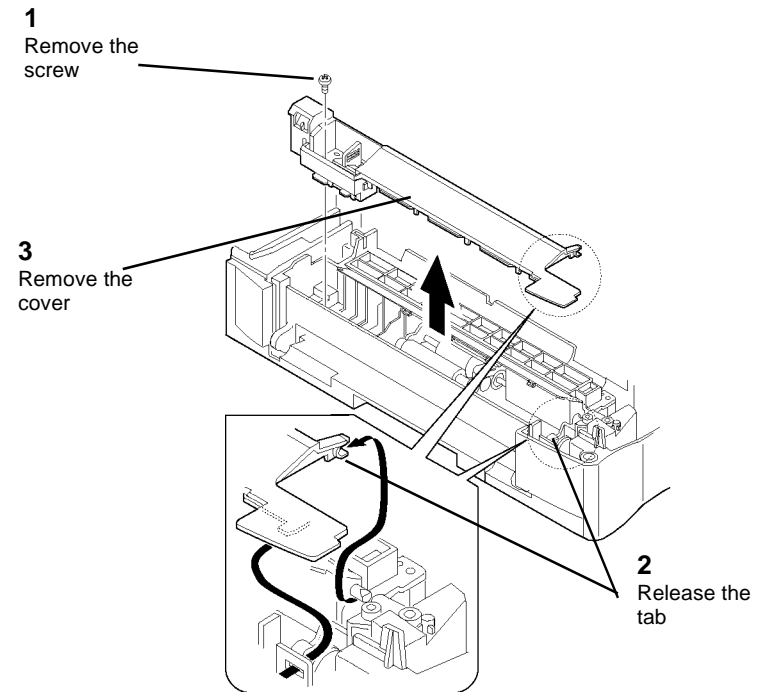
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Side Door
  - f. Document Glass Assembly (REP 6.1)
  - g. Control Console (REP 14.5)
  - h. Main PWB (REP 1.1)
  - i. Optics Frame Assembly (REP 6.6)
  - j. Laser Module (REP 6.4)
  - k. Main Drive Assembly (REP 8.12)
  - l. Paper Feed Sensor (REP 8.3)

2. (Figure 1): Remove the Upper Cover.



SKY052N

Figure 1 Removing the Upper Cover

3. (Figure 2): Remove the Bypass Frame.

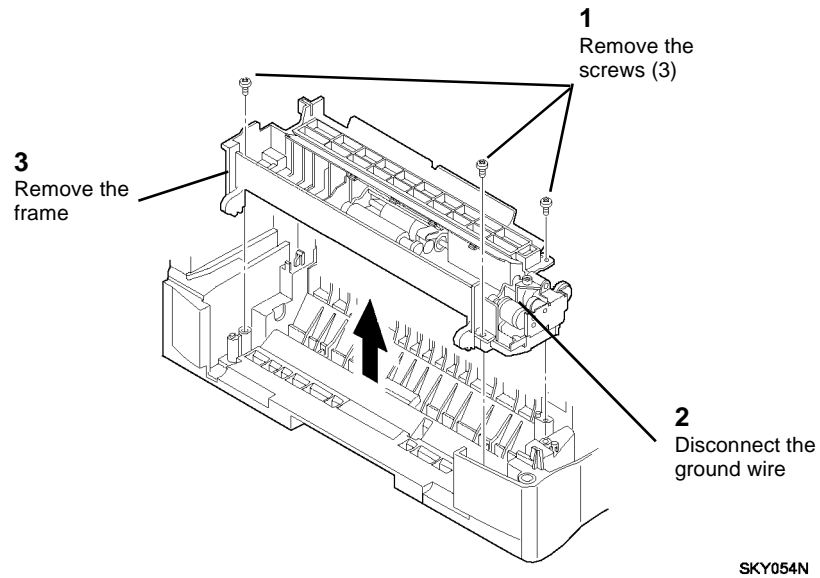


Figure 2 Removing the Bypass Frame

4. (Figure 3): Remove the Feed Roll and Shaft Assembly

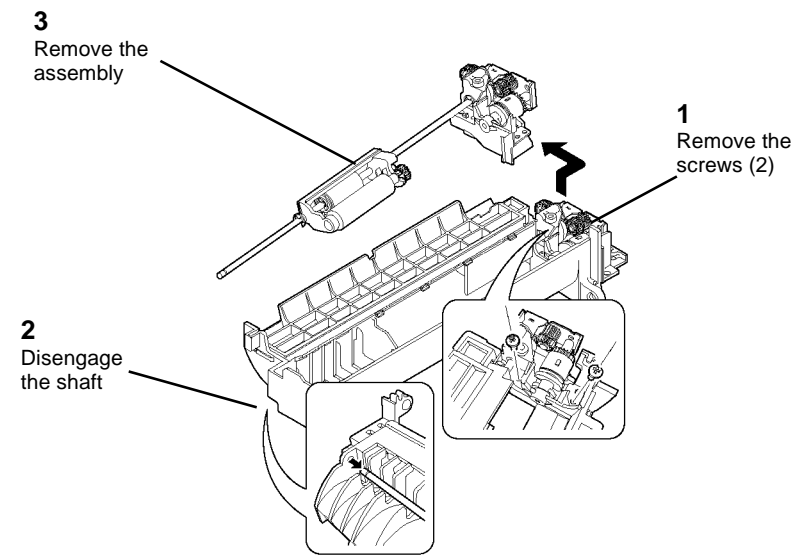
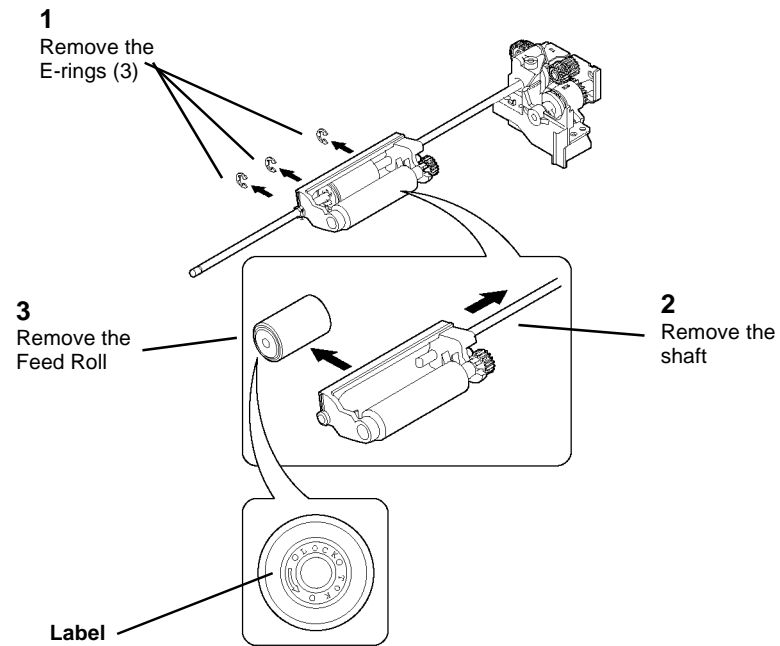


Figure 3 Removing the Feed Roll and Shaft Assembly

5. (Figure 4): Remove the Feed Roll.



SKY056N

Figure 4 Removing the Feed Roll

### Replacement

1. Reinstall the Feed Roller with the label oriented as shown in (Figure 4).

## REP 8.16 Retard Roll (XD104)

### Parts List on PL 5.5

### Removal

### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Side Door
  - f. Document Glass Assembly (REP 6.1)
  - g. Control Console (REP 14.5)
  - h. Main PWB (REP 1.1)
  - i. Optics Frame Assembly (REP 6.6)
  - j. Laser Module (REP 6.4)
  - k. Main Drive Assembly (REP 8.12)
  - l. Paper Feed Sensor (REP 8.3)

2. (Figure 1): Remove the Upper Cover.

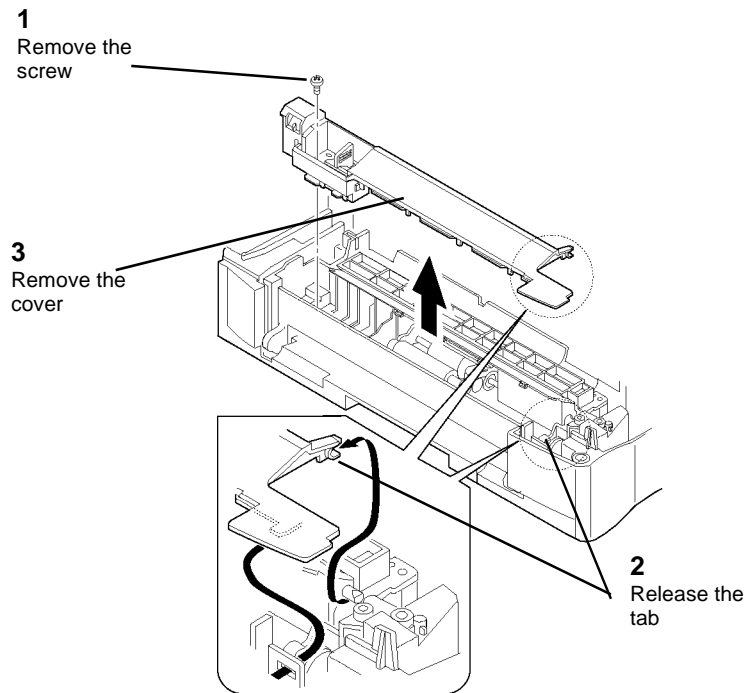


Figure 1 Removing the Upper Cover

SKY052N

3. (Figure 2): Remove the Bypass Frame.

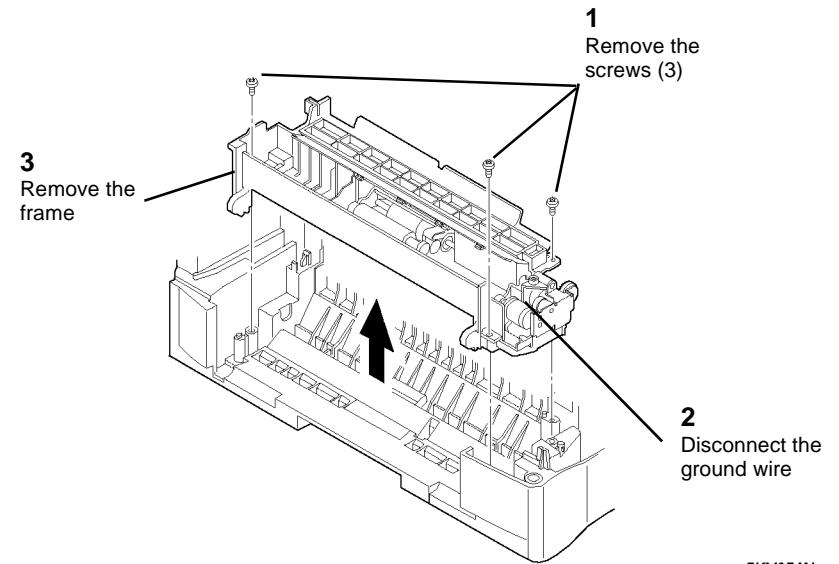


Figure 2 Removing the Bypass Frame

SKY054N



4. (Figure 3): Remove the Feed Roll and Shaft Assembly

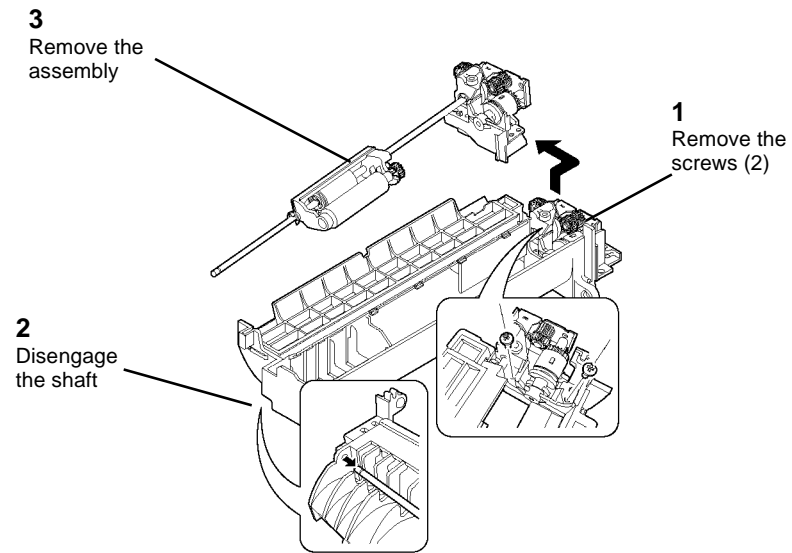
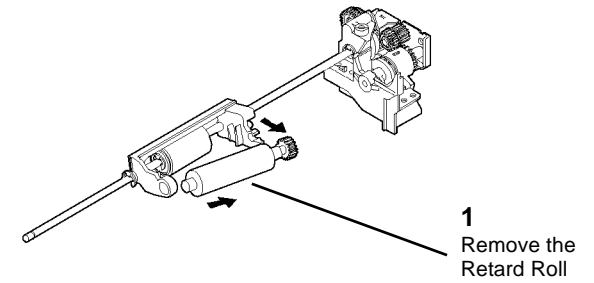


Figure 3 Removing the Feed Roll and Shaft Assembly

SKY055N

5. (Figure 4): Remove the Retard Roll.



SKY057N

Figure 4 Removing the Retard Roll

## REP 8.17 Feed Solenoid (XD104)

### Parts List on PL 5.5

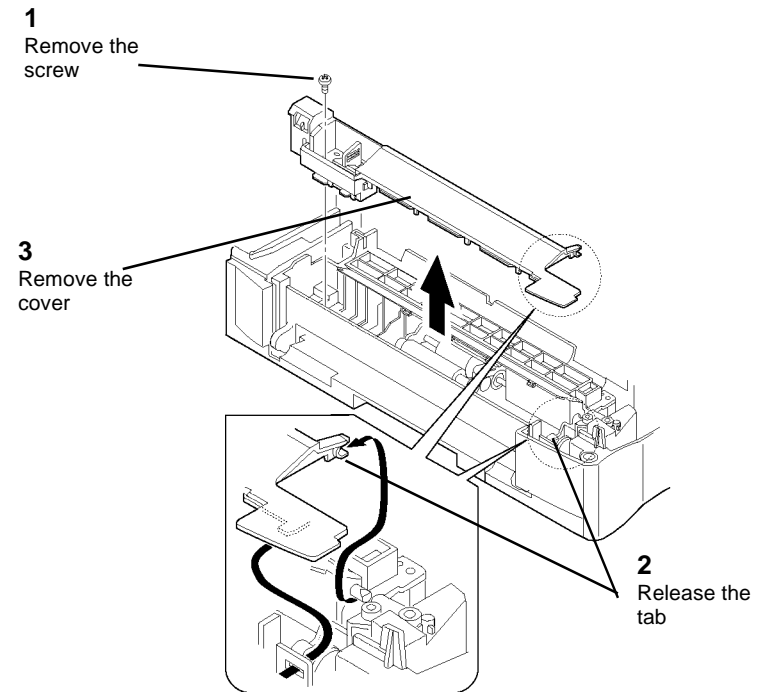
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Side Door
  - f. Document Glass Assembly (REP 6.1)
  - g. Control Console (REP 14.5)
  - h. Main PWB (REP 1.1)
  - i. Optics Frame Assembly (REP 6.6)
  - j. Laser Module (REP 6.4)
  - k. Main Drive Assembly (REP 8.12)
  - l. Paper Feed Sensor (REP 8.3)

2. (Figure 1): Remove the Upper Cover.



SKY052N

Figure 1 Removing the Upper Cover

3. (Figure 2): Remove the Bypass Frame.

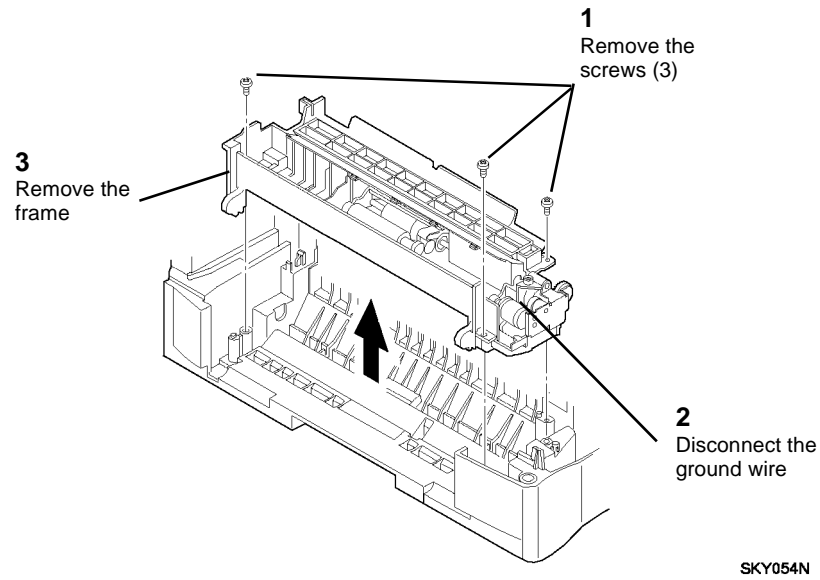


Figure 2 Removing the Bypass Frame

4. (Figure 3): Remove the Feed Roll and Shaft Assembly

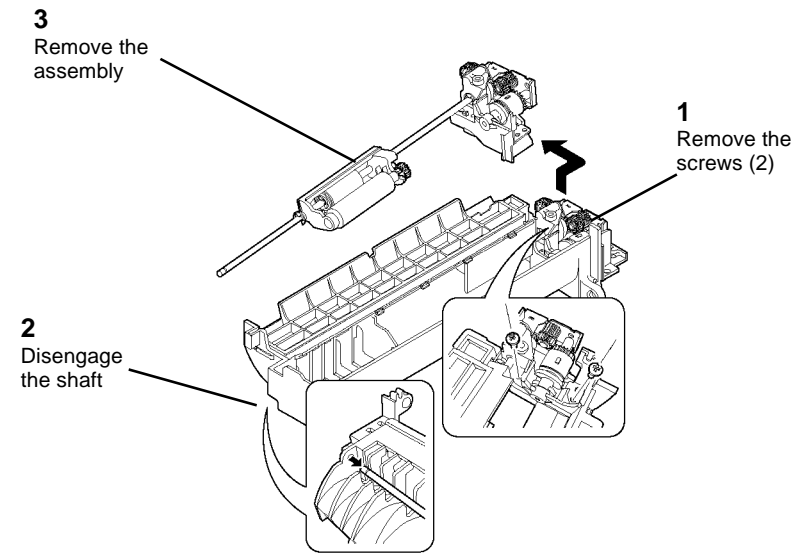


Figure 3 Removing the Feed Roll and Shaft Assembly

5. (Figure 4): Remove the Feed Solenoid.

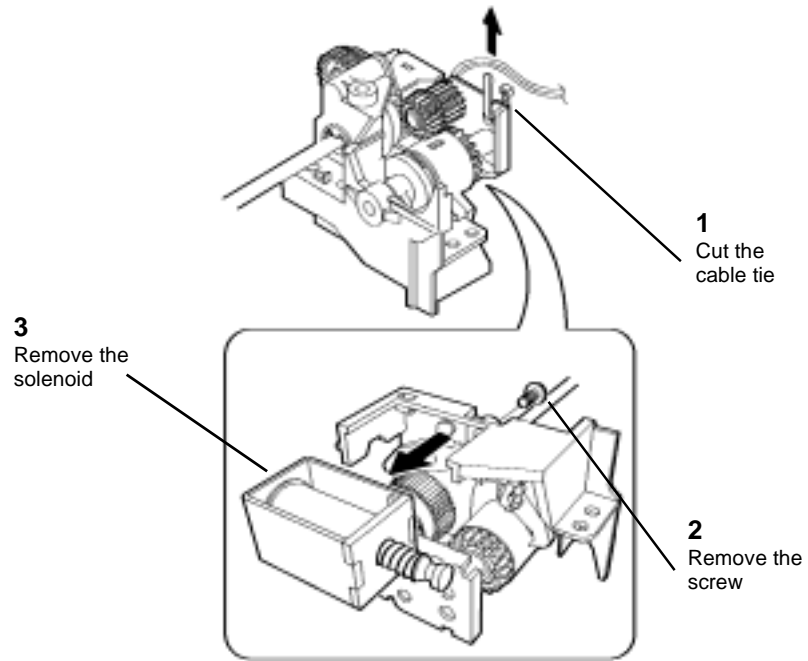


Figure 4 Removing the Feed Solenoid

SKY068N

## REP 8.20 Tray 2 Paper Feed Sensor (Q7)

Parts List on PL 5.8

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Rear Cover.

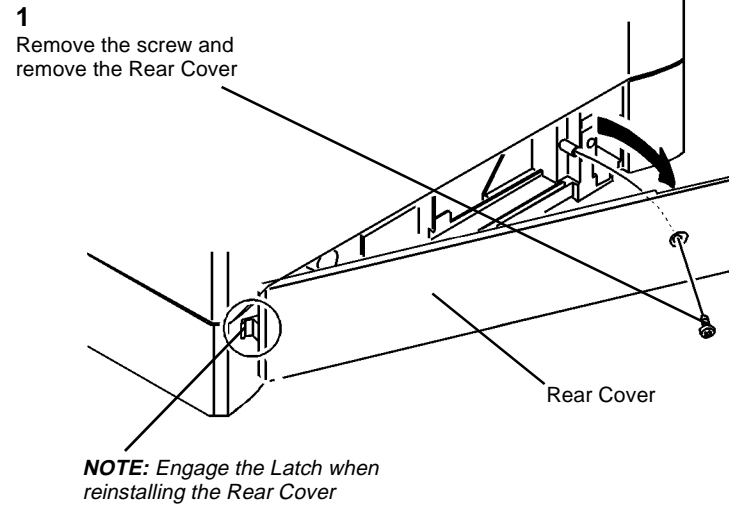


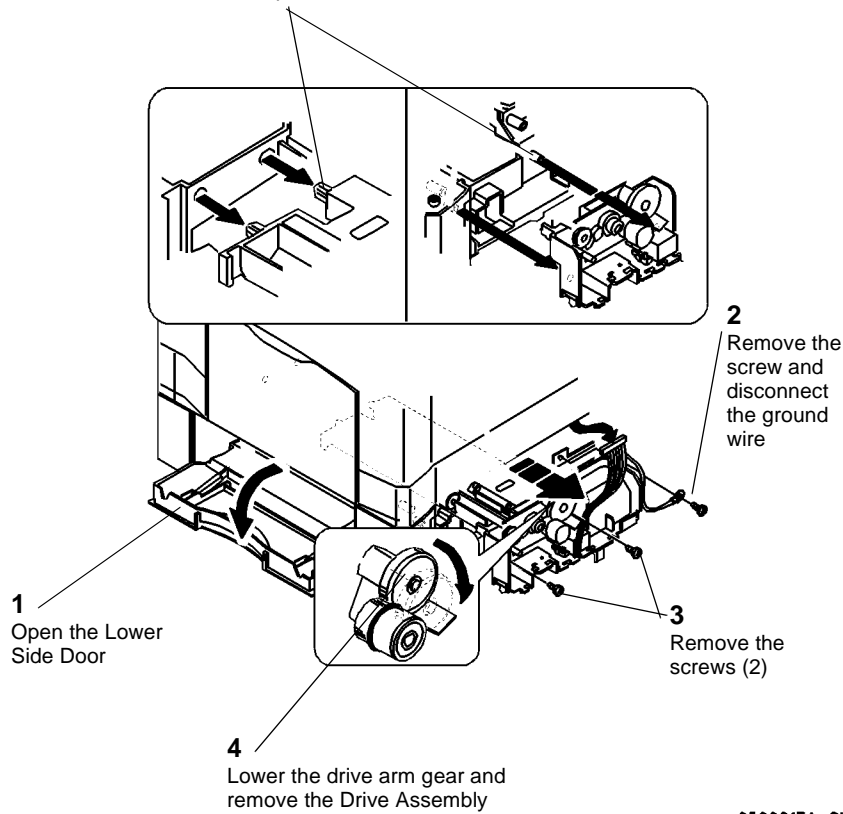
Figure 1 Removing the Rear Cover

0500016A-SKY

2. (Figure 2): Remove the Tray 2 Drive Assembly.

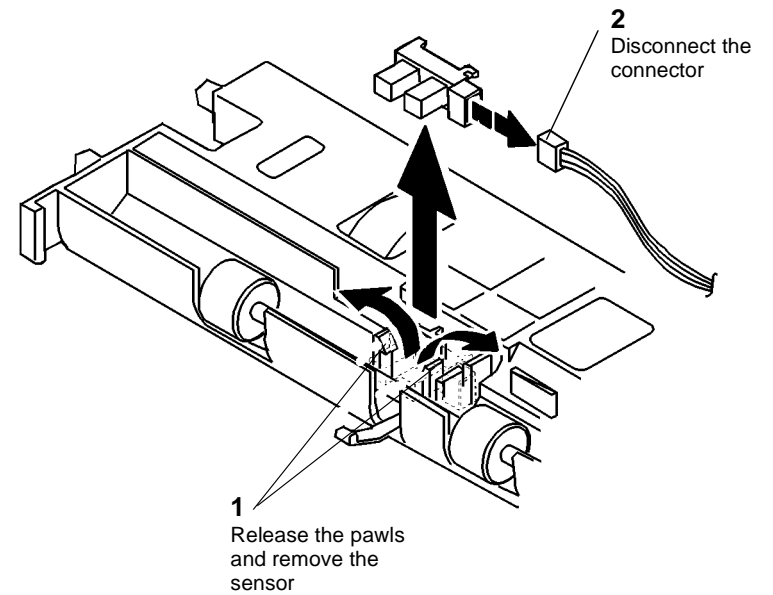
3. (Figure 3): Remove the Tray 2 Paper Feed Sensor (Q7).

**NOTE:** When reinstalling Tray 2 Drive Assembly, make sure it is mounted on the locator posts



0500017A-SKY

Figure 2 Removing the Drive Assembly



0500018A-SKY

Figure 3 Removing the Paper Feed Sensor (Q7)

## REP 8.21 Tray 2 Detect Switch (S5)

### Parts List on PL 5.8

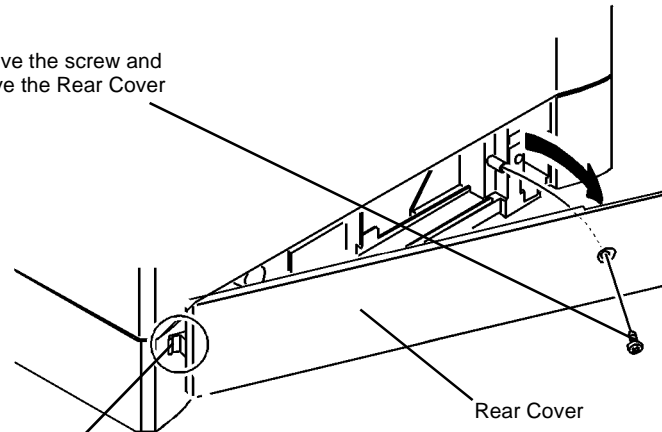
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Rear Cover.

- 1 Remove the screw and remove the Rear Cover



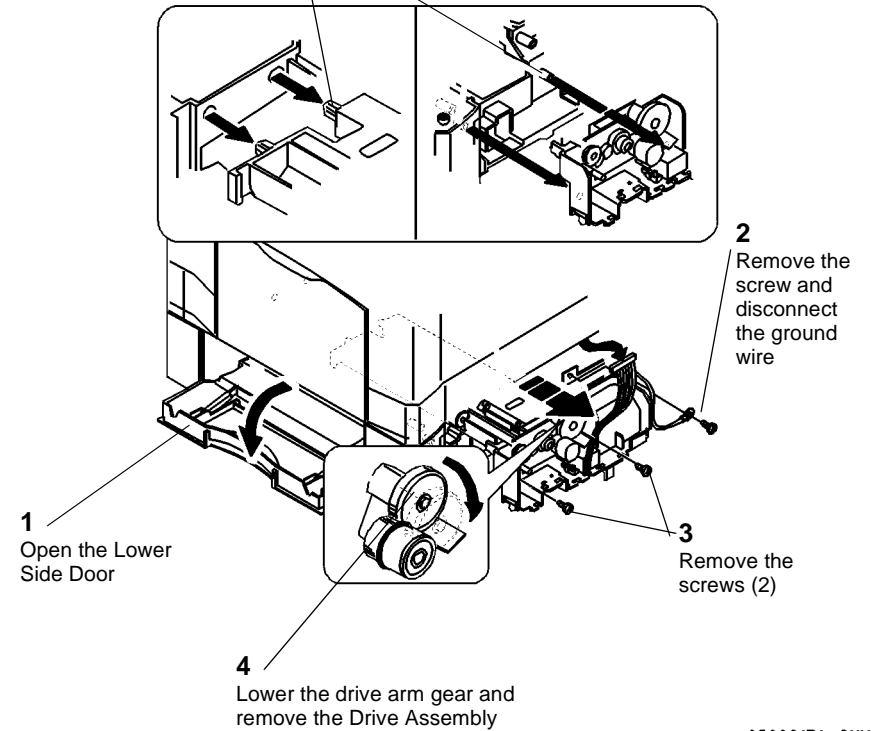
*NOTE: Engage the Latch when reinstalling the Rear Cover*

0500016A-SKY

Figure 1 Removing the Rear Cover

2. (Figure 2): Remove the Tray 2 Drive Assembly.

*NOTE: When reinstalling Tray 2 Drive Assembly, make sure it is mounted on the locator posts*



0500017A-SKY

Figure 2 Removing the Drive Assembly

3. (Figure 3): Remove the Detect Switch (S5).

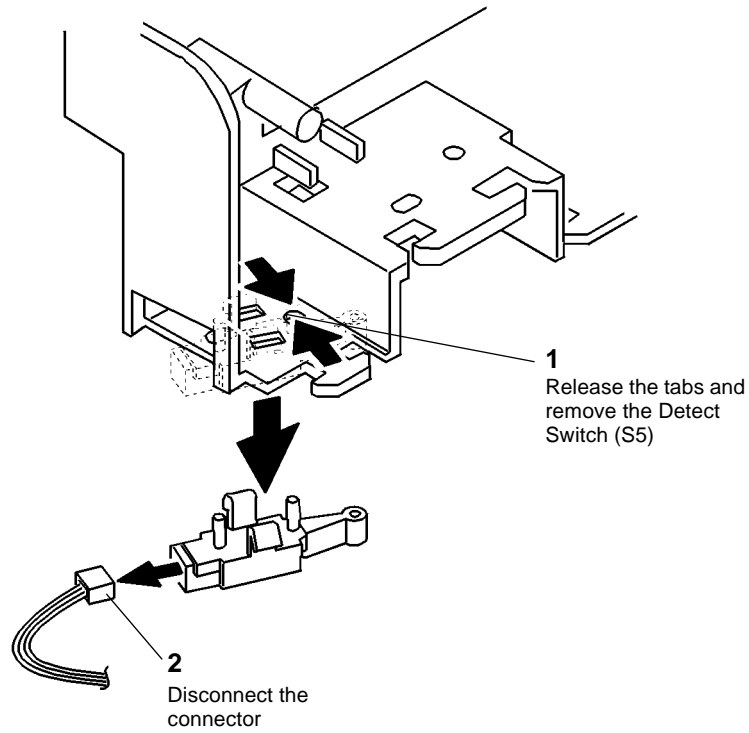


Figure 3 Removing the Detect Switch (S5)

0500019A-SKY

## REP 8.22 Tray 2 Paper Feed Solenoid (SOL2)

### Parts List on PL 5.8

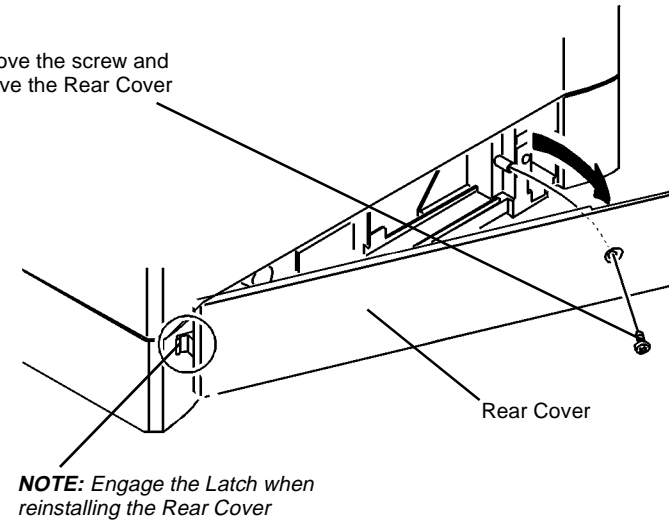
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Rear Cover.

- 1 Remove the screw and remove the Rear Cover

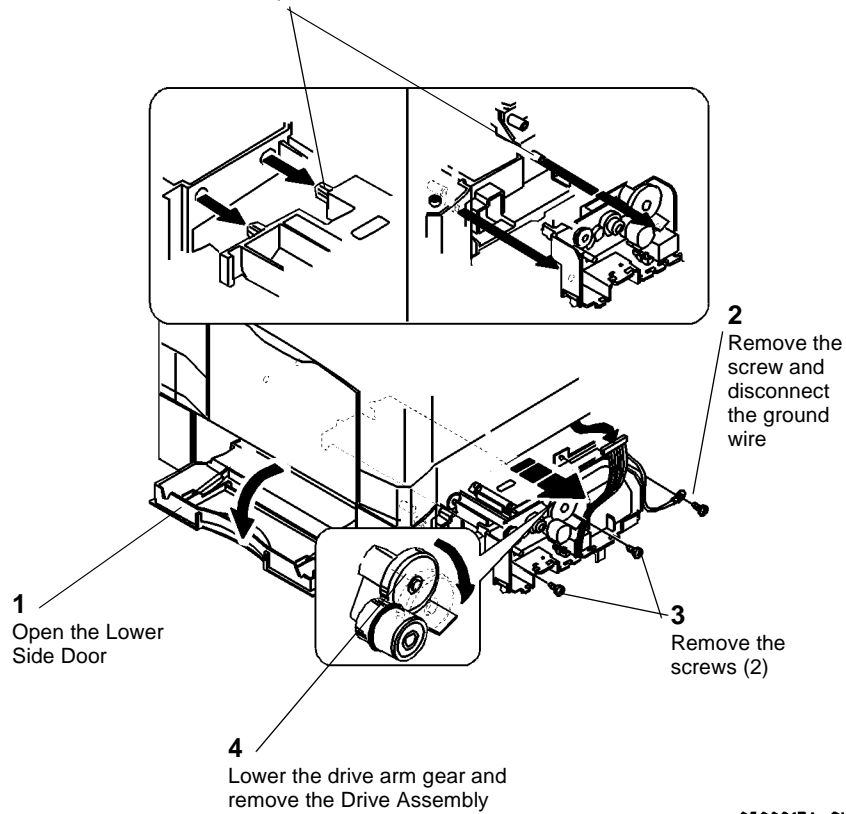


0500016A-SKY

Figure 1 Removing the Rear Cover

2. (Figure 2): Remove the Tray 2 Drive Assembly.

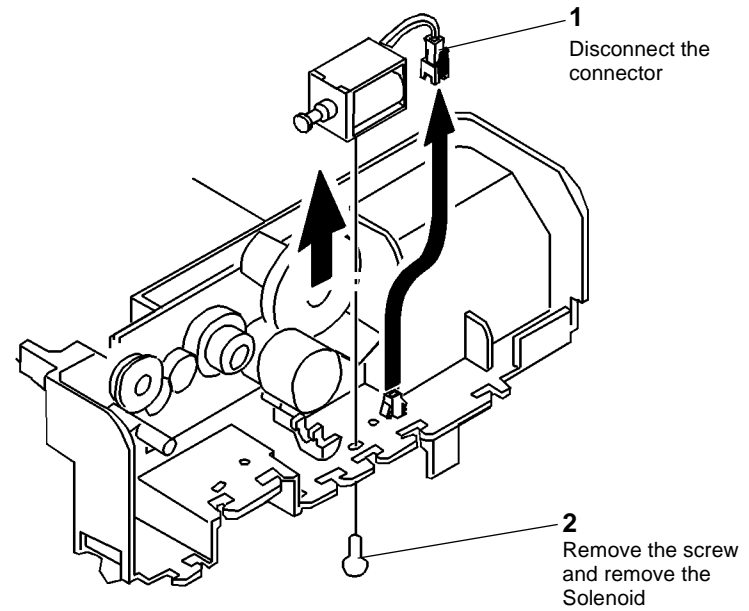
**NOTE:** When reinstalling Tray 2 Drive Assembly, make sure it is mounted on the locator posts



0500017A-SKY

Figure 2 Removing the Drive Assembly

3. (Figure 3): Remove the Paper Feed Solenoid (SOL2).



0500020A-SKY

Figure 3 Removing the Paper Feed Solenoid (SOL2)



## REP 8.23 Tray 2 Transport Roller

### Parts List on PL 5.8

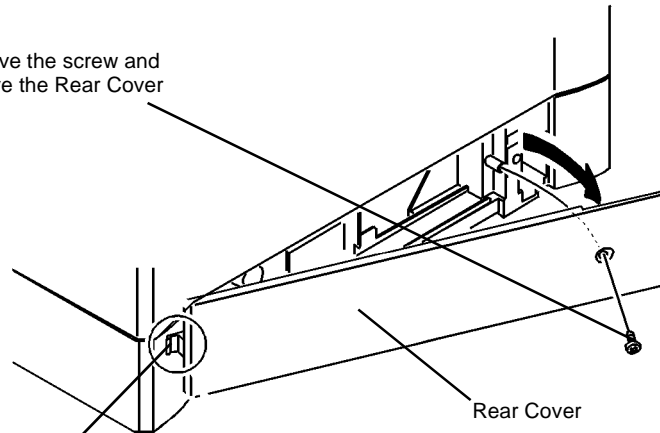
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Rear Cover.

- 1 Remove the screw and remove the Rear Cover



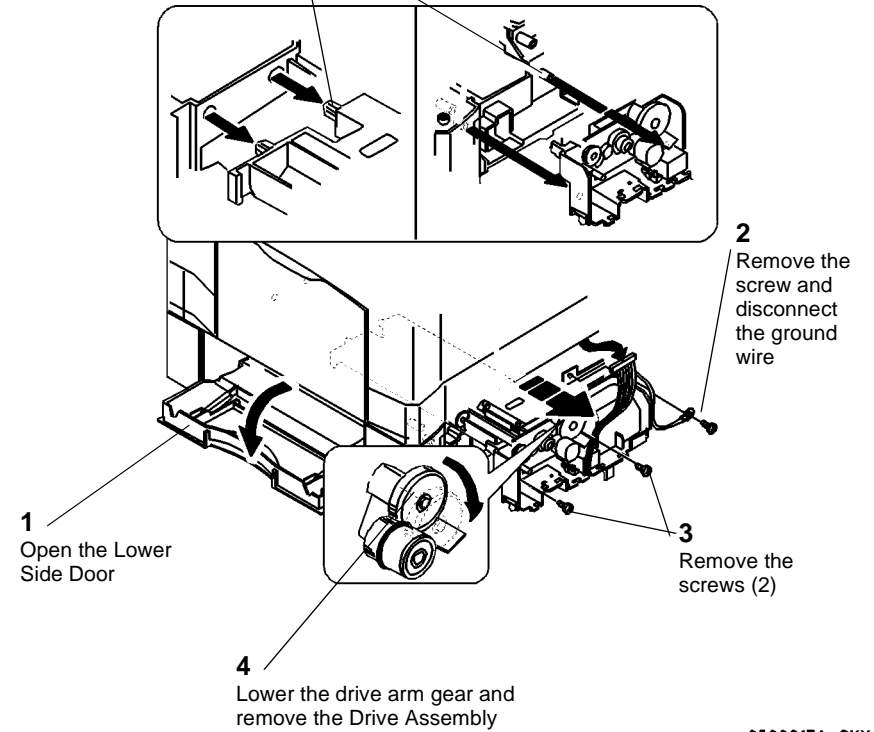
**NOTE:** Engage the Latch when reinstalling the Rear Cover

0500016A-SKY

Figure 1 Removing the Rear Cover

2. (Figure 2): Remove the Tray 2 Drive Assembly.

**NOTE:** When reinstalling Tray 2 Drive Assembly, make sure it is mounted on the locator posts



0500017A-SKY

Figure 2 Removing the Drive Assembly

3. (Figure 3): Remove the Transport Roller.

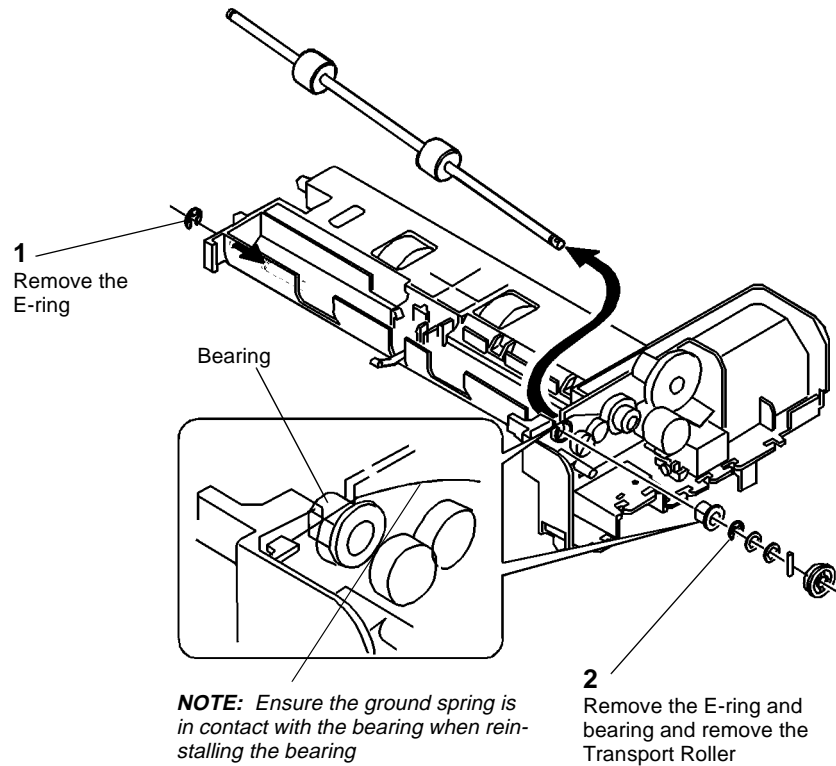


Figure 3 Removing the Transport Roller

0500021A-SKY

## REP 8.24 Tray 2 Paper Feed Clutch

### Parts List on PL 5.8

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Rear Cover.

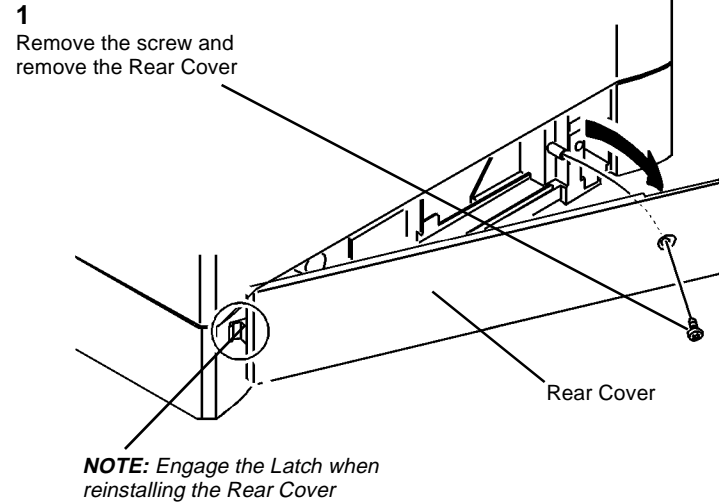
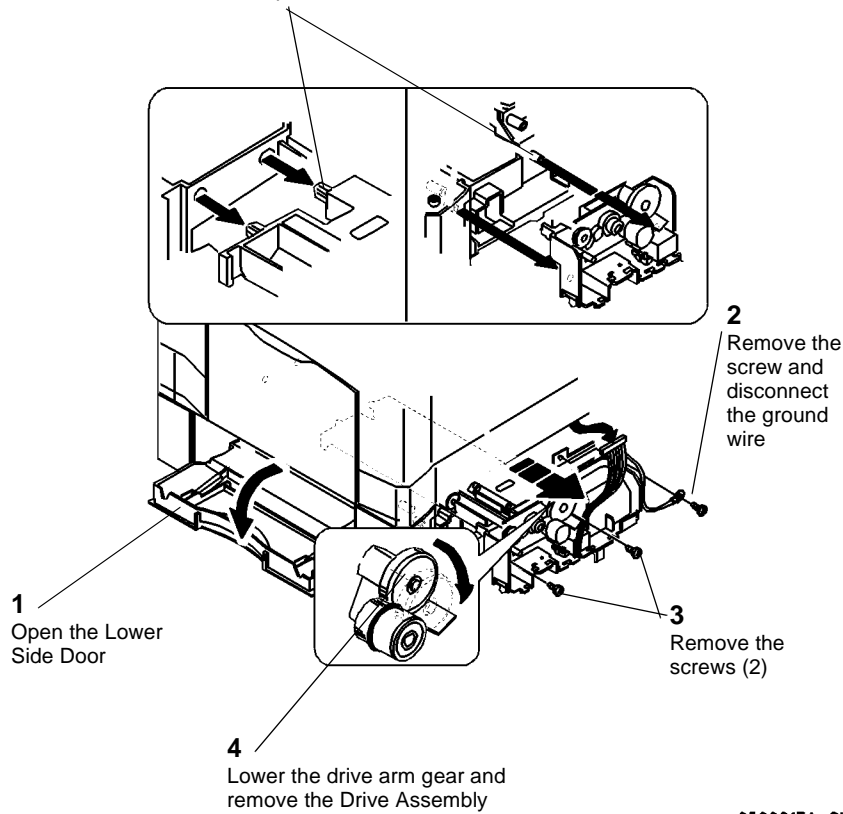


Figure 1 Removing the Rear Cover

0500016A-SKY

2. (Figure 2): Remove the Tray 2 Drive Assembly.

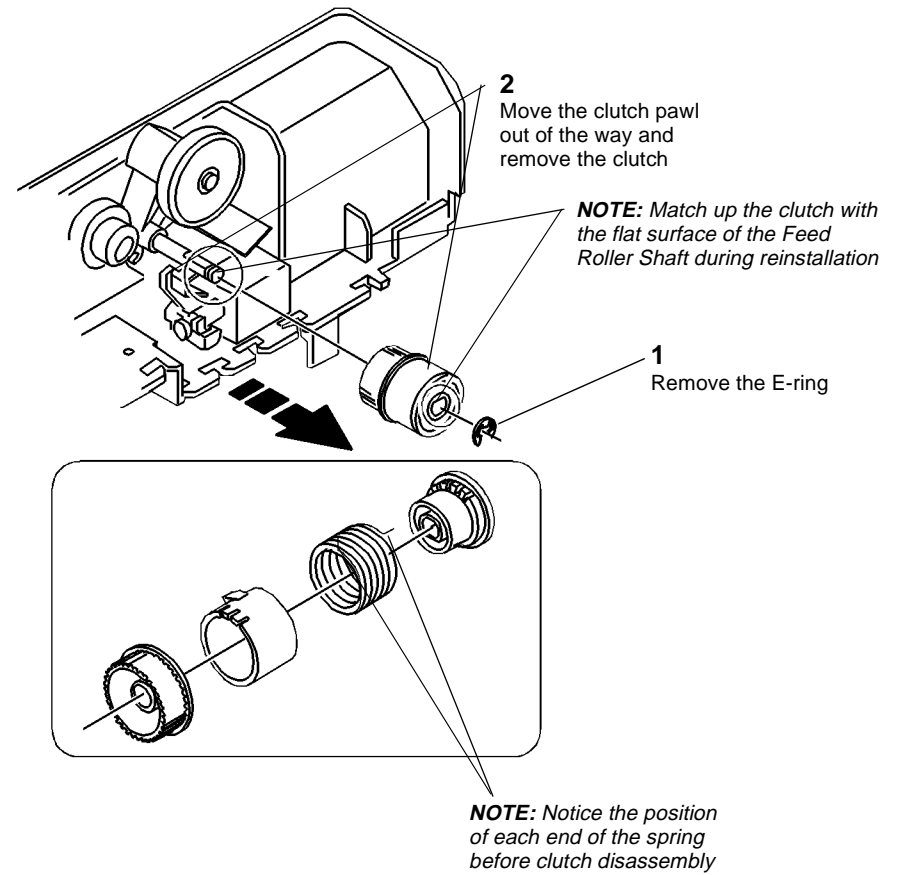
**NOTE:** When reinstalling Tray 2 Drive Assembly, make sure it is mounted on the locator posts



0500017A-SKY

Figure 2 Removing the Drive Assembly

3. (Figure 3): Remove the Paper Feed Clutch.



0500022A-SKY

Figure 3 Removing the Paper Feed Clutch

## REP 8.25 Tray 2 Feed Roller

### Parts List on PL 5.8

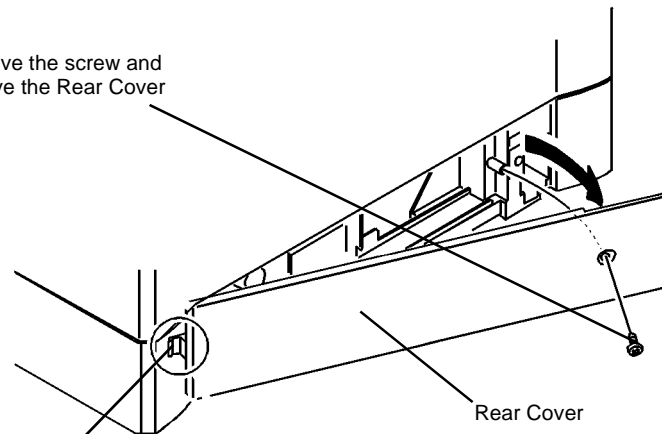
#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Rear Cover.

- 1 Remove the screw and remove the Rear Cover



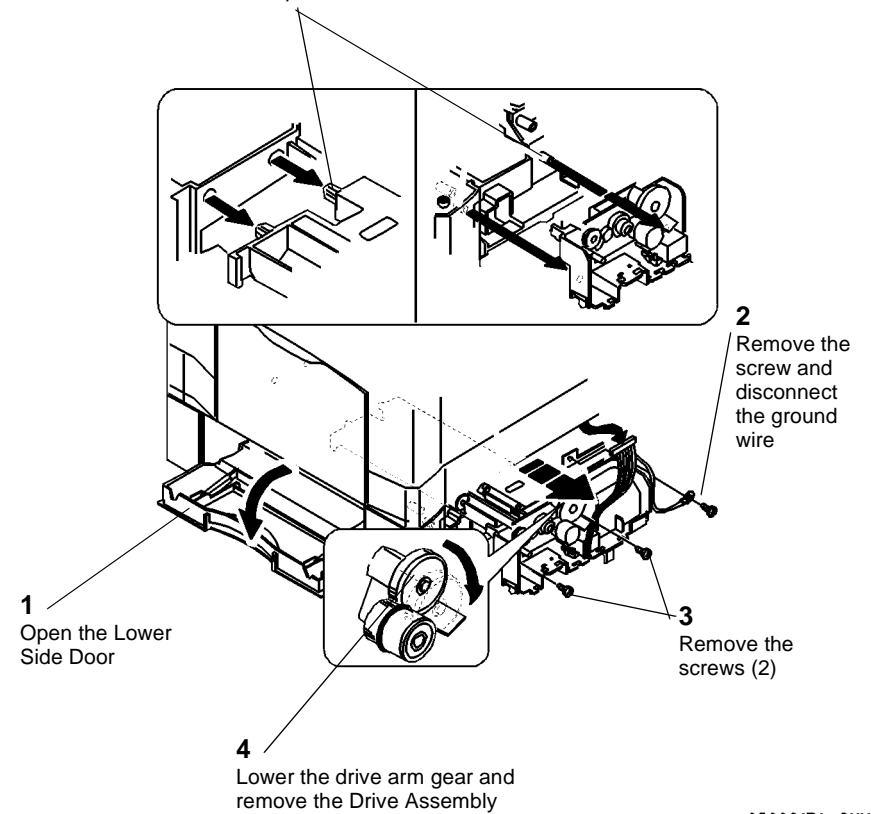
**NOTE:** Engage the Latch when reinstalling the Rear Cover

0500016A-SKY

Figure 1 Removing the Rear Cover

2. (Figure 2): Remove the Tray 2 Drive Assembly.

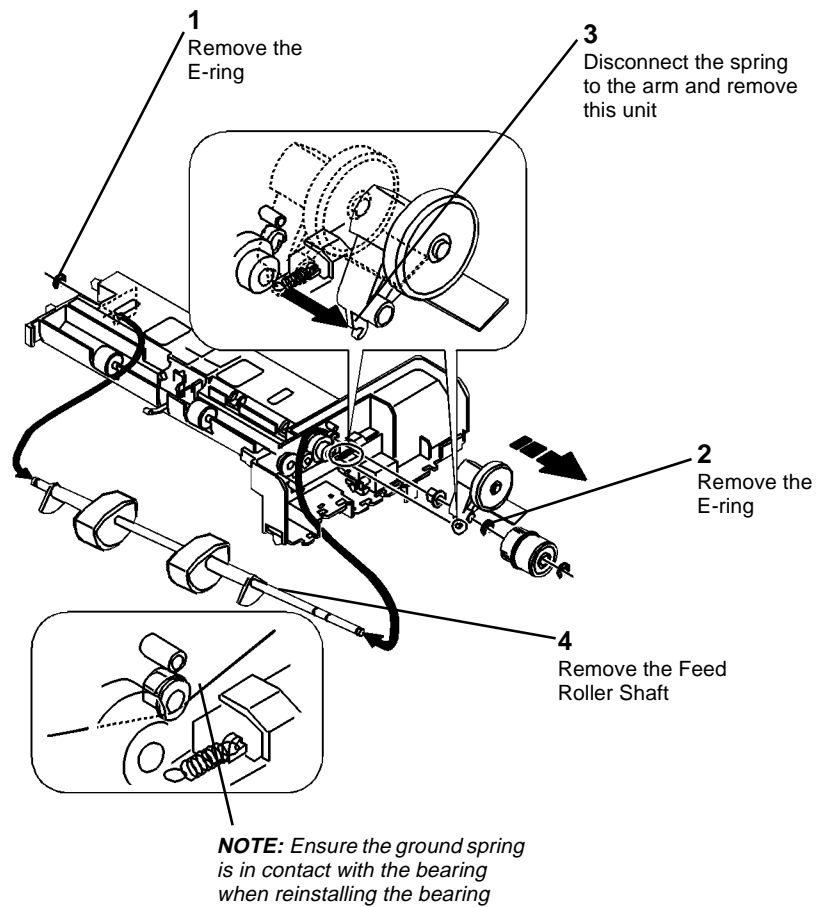
**NOTE:** When reinstalling Tray 2 Drive Assembly, make sure it is mounted on the locator posts



0500017A-SKY

Figure 2 Removing the Drive Assembly

3. Remove the Tray 2 Clutch (REP 8.24).
4. (Figure 3): Remove the Tray 2 Feed Roller.



0500023A-SKY

Figure 3 Removing the Feed Roller

**Notes:**

## REP 9.1 Toner Motor (MOT4)

Parts List on PL 2.1

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Main PWB (REP 1.1).
4. (Figure 1): Remove the Toner Motor.

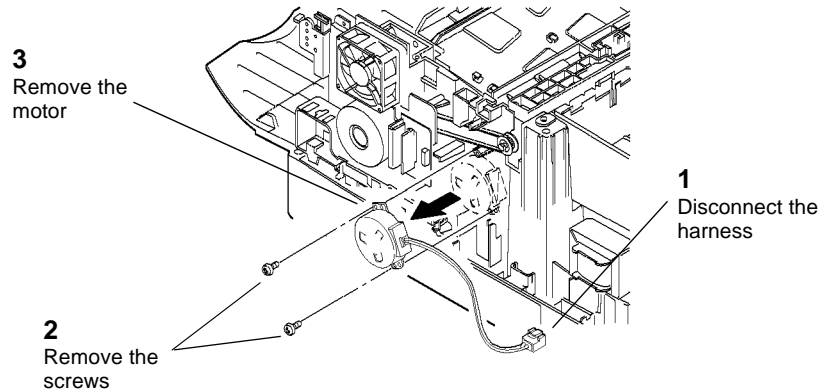


Figure 1 Removing the Toner Motor

SKY030N

## REP 9.2 Transfer/Detack Corotron Assembly

Parts List on PL 1.4, PL 7.3

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Open the Side Door.
2. (Figure 1): Remove the Transfer/Detack Corotron Assembly.

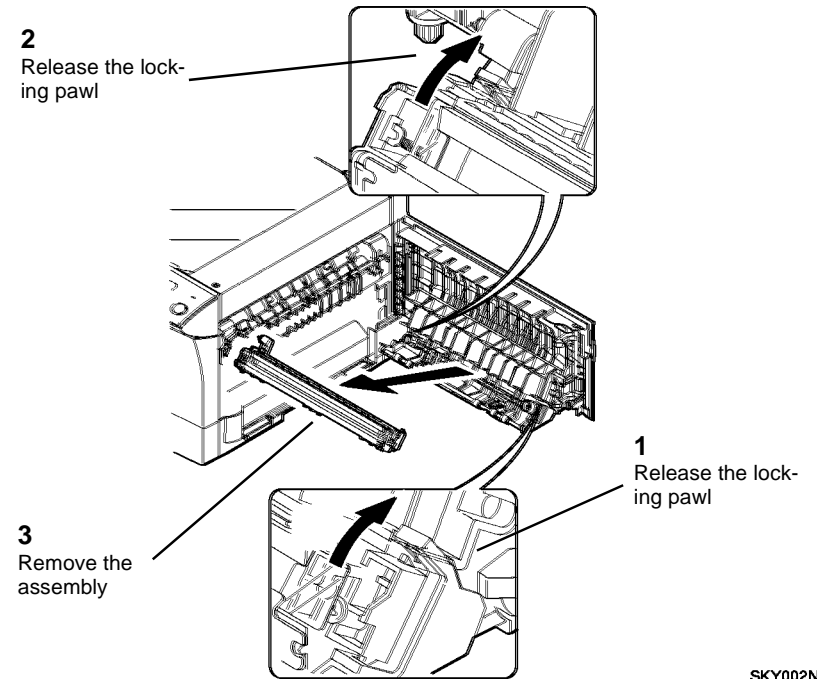


Figure 1 Removing the Transfer/Detack Corotron Assembly

SKY002N

**Notes:**



## REP 10.1 Fuser Assembly

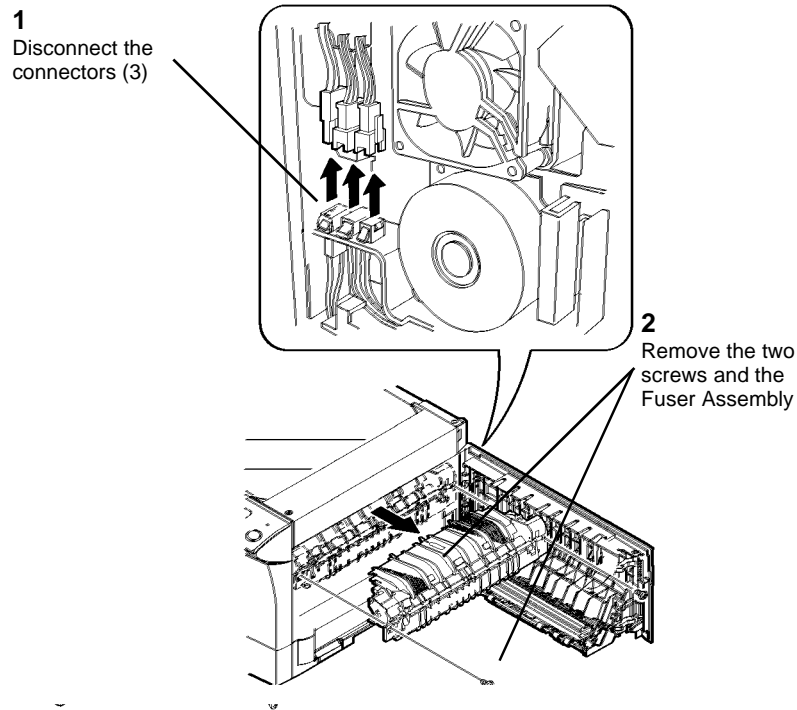
Parts List on PL 6.1

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Open the Side Door.
4. (Figure 1): Remove the Fuser Assembly.



SKY014N

Figure 1 Removing the Fuser Assembly

7. (Figure 2): Remove the Heat Roll.

## REP 10.2 Heat Roll

Parts List on PL 6.1

### Removal

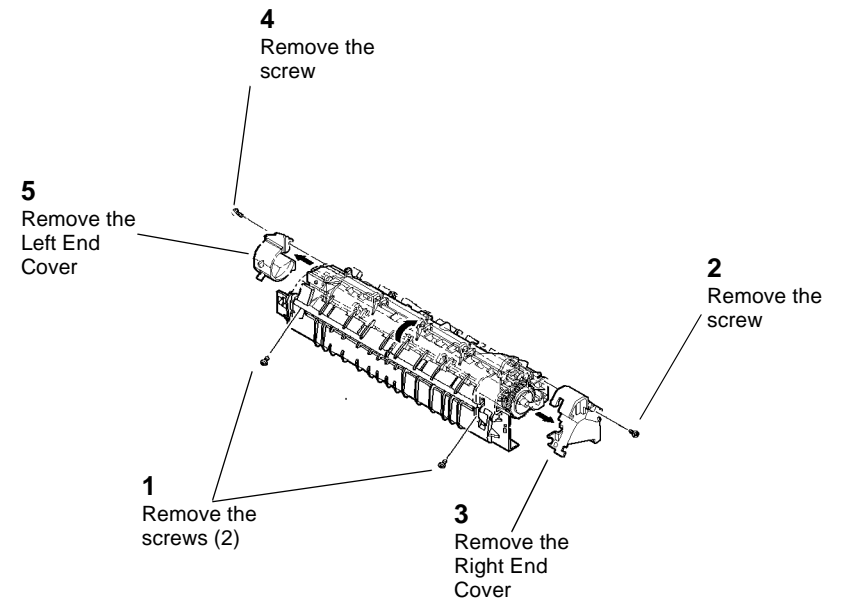
#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. Remove the Paper Guide (REP 10.10).

**NOTE:** Cut cable ties as necessary.

5. (Figure 1): Remove the End Covers and open the assembly.



SKY024N

Figure 1 Removing the End Covers

6. Remove the Heat Rod (REP 10.8).

## REP 10.3 Pressure Roll

### Parts List on PL 6.2

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. Remove the Paper Guide (REP 10.10).

**NOTE:** Cut cable ties as necessary.

5. (Figure 1): Remove the Right End Cover and open the assembly.

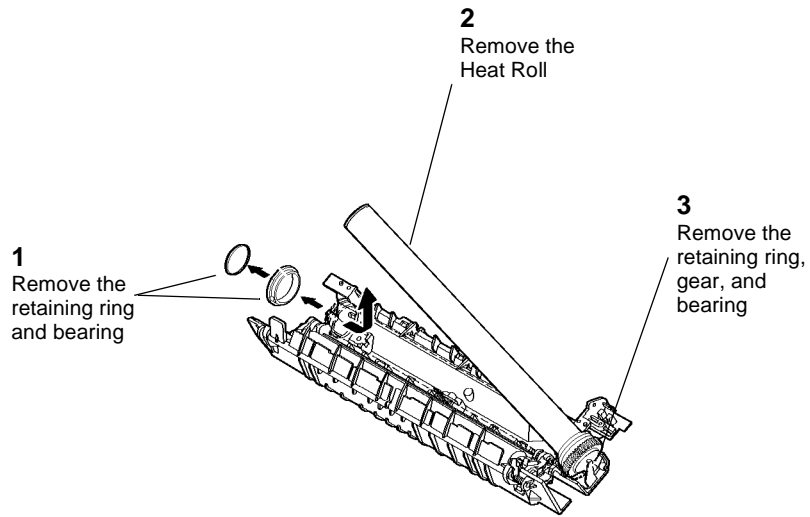


Figure 2 Removing the Heat Roll

SKY025N

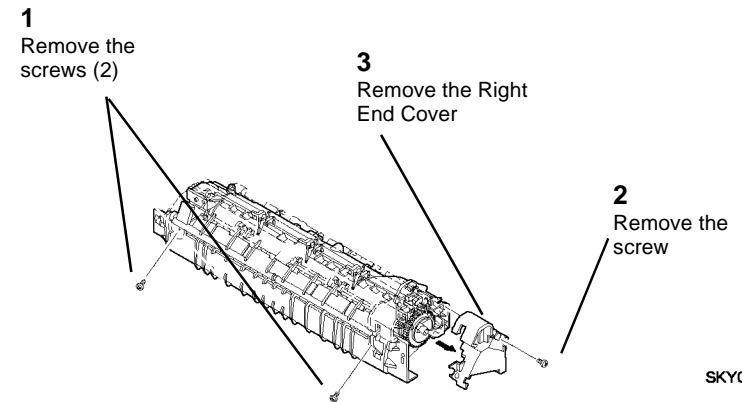
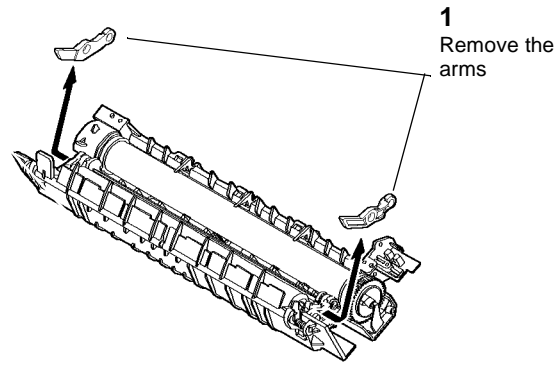


Figure 1 Removing the Right End Cover

SKY017N

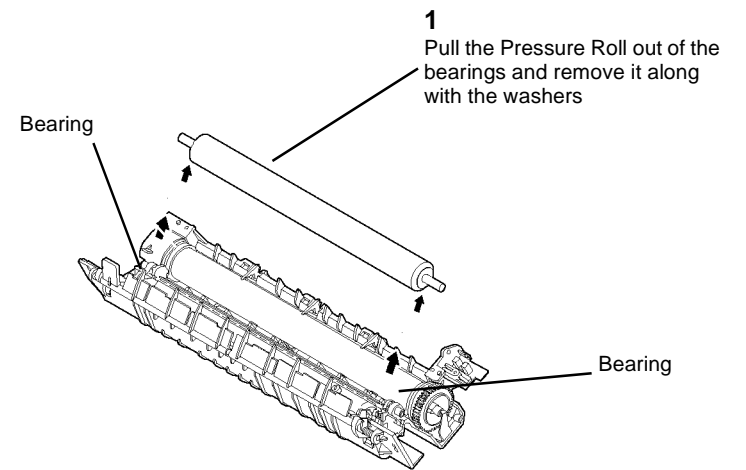
6. (Figure 2): Remove the Pressure Roll Arms.



SKY022N

Figure 2 Removing the Pressure Roll Arms

7. (Figure 3): Remove the Pressure Roll.



SKY023N

Figure 3 Removing the Pressure Roll

## REP 10.4 Thermistor (RT1)

Parts List on PL 6.1

### Removal

#### WARNING

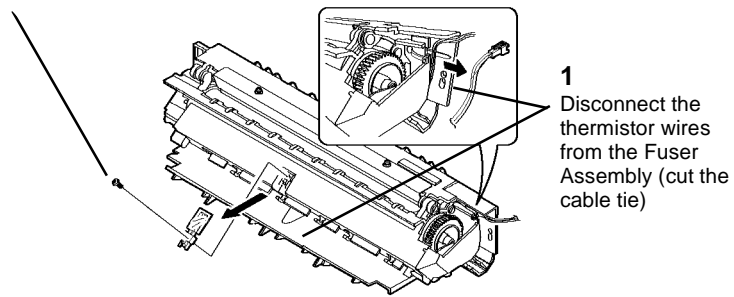
Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).

**NOTE:** Cut cable ties as necessary.

4. (Figure 1): Remove the Thermistor.

- 2  
Remove the screw  
and the thermistor



SKY015N

Figure 1 Removing the Thermistor

## REP 10.5 Fuser Jam Sensor (Q3)

Parts List on PL 6.1

### Removal

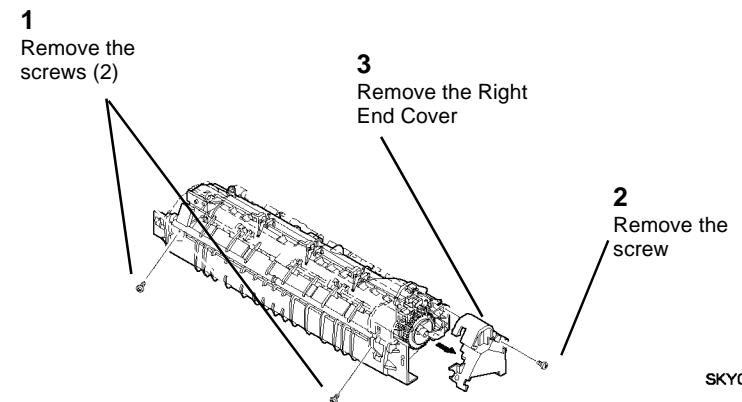
#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. Remove the Paper Guide (REP 10.10).

**NOTE:** Cut cable ties as necessary.

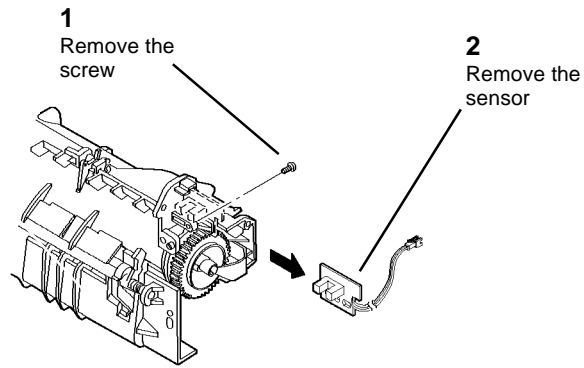
5. (Figure 1): Remove the Right End Cover.



SKY017N

Figure 1 Removing the Right End Cover

6. (Figure 2): Remove the Fuser Jam Sensor.



SKY018N

Figure 2 Removing the Fuser Jam Sensor

## REP 10.6 Ventilation Fan (MOT 3)

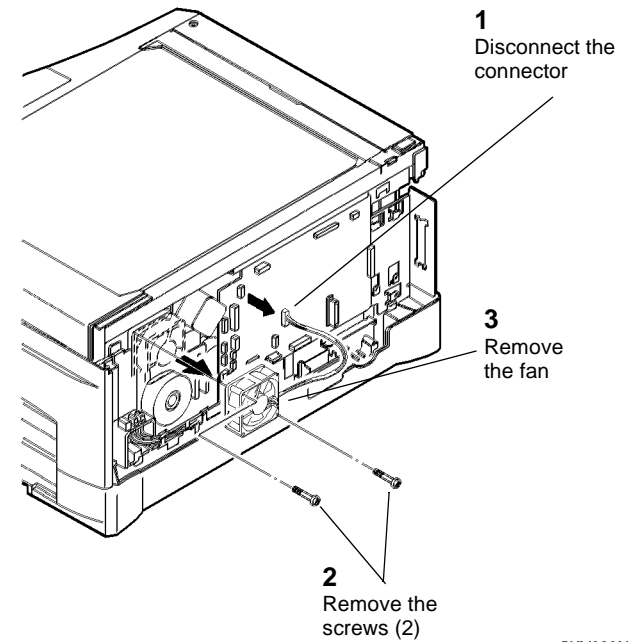
Parts List on PL 2.1

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the six screws and the PWB Cover (PL 7.1).
4. (Figure 1): Remove the Ventilation Fan.



SKY063N

Figure 1 Removing the Ventilation Fan

## REP 10.7 Exit Sensor (Q4)

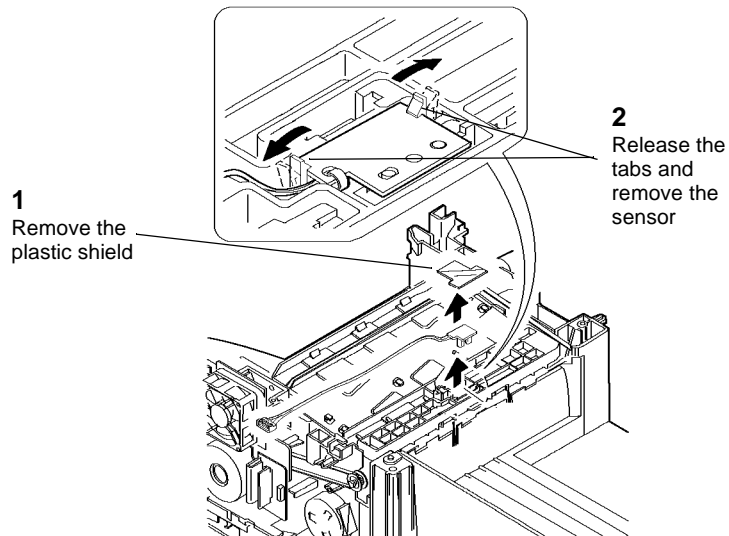
Parts List on PL 6.3

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Document Cover Assembly
  - b. Rear Cover
  - c. Top Right Cover
  - d. Top Left Cover
  - e. Document Glass Assembly (REP 6.1)
  - f. Control Console (REP 14.5)
  - g. Main PWB (REP 1.1)
  - h. Optics Frame Assembly (REP 6.6)
2. (Figure 1): Remove the Exit Sensor.



SKY029N

Figure 1 Removing the Exit Sensor

## REP 10.8 Heat Rod

Parts List on PL 6.1

### Removal

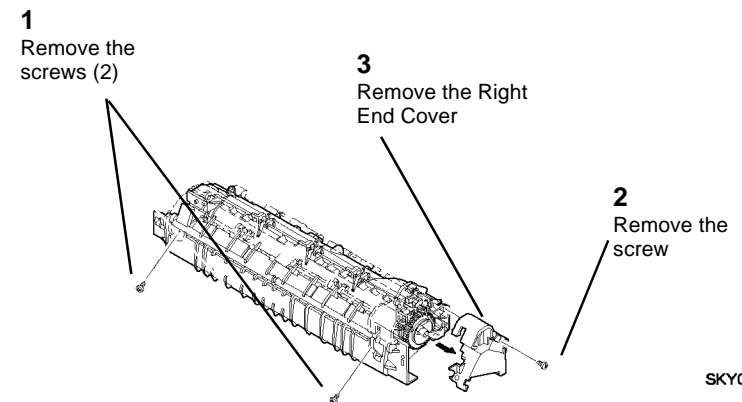
#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. Remove the Paper Guide (REP 10.10).

**NOTE:** Cut cable ties as necessary.

5. (Figure 1): Remove the Right End Cover.



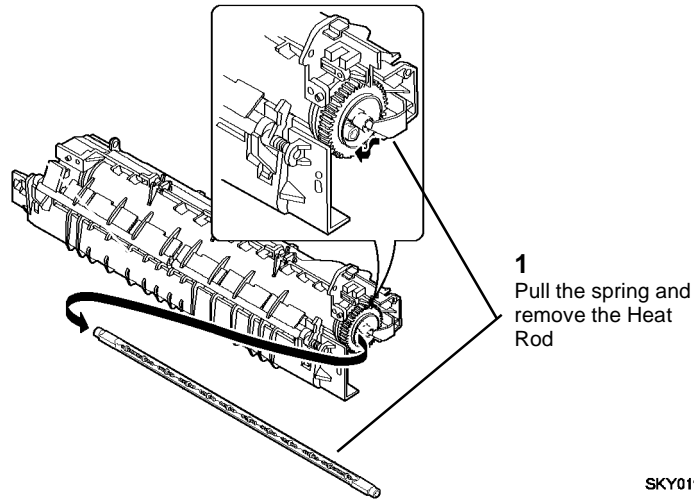
SKY017N

Figure 1 Removing the Right End Cover

### CAUTION

Wear gloves or wrap a sheet of paper around the Heat Rod when handling it. Do not touch the glass section of the Heat Rod. Oil from fingers can cause damage to the rod. If you touch the Heat Rod, clean the rod with Film Remover on a lint-free cloth.

6. (Figure 2): Remove the Heat Rod.



SKY019N

Figure 2 Removing the Heat Rod

## REP 10.9 Thermostat

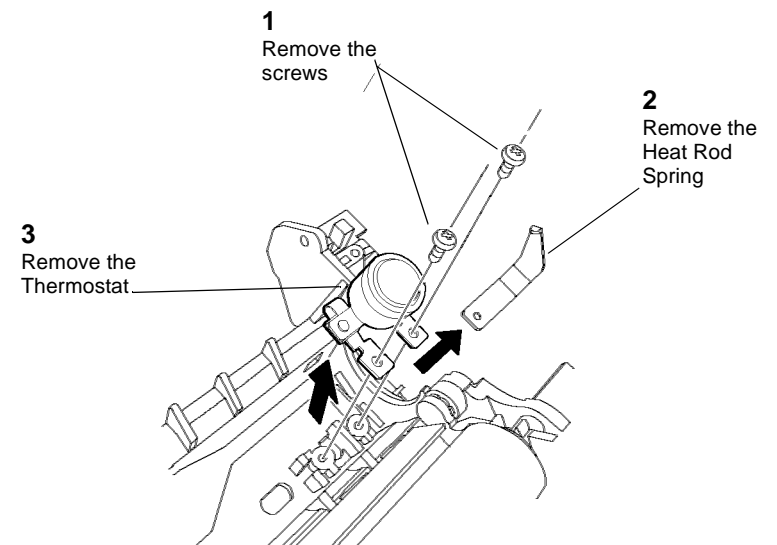
### Parts List on PL 6.1

### Removal

### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. Remove the Paper Guide (REP 10.10).
5. Remove the Heat Roll (REP 10.2).
6. (Figure 1): Remove the Thermostat.



SKY027N

Figure 1 Removing the Thermostat

## REP 10.10 Paper Guide

Parts List on PL 6.1

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. (Figure 1): Remove the Paper Guide.

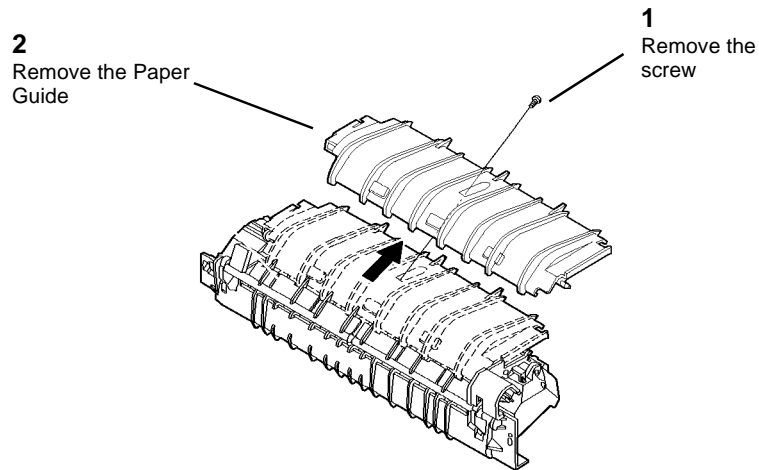


Figure 1 Removing the Paper Guide

## REP 10.11 Stripper Fingers

Parts List on PL 6.1

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. Remove the Paper Guide (REP 10.10).

**NOTE:** Cut cable ties as necessary.

5. (Figure 1): Remove the Right End Cover and open the assembly.

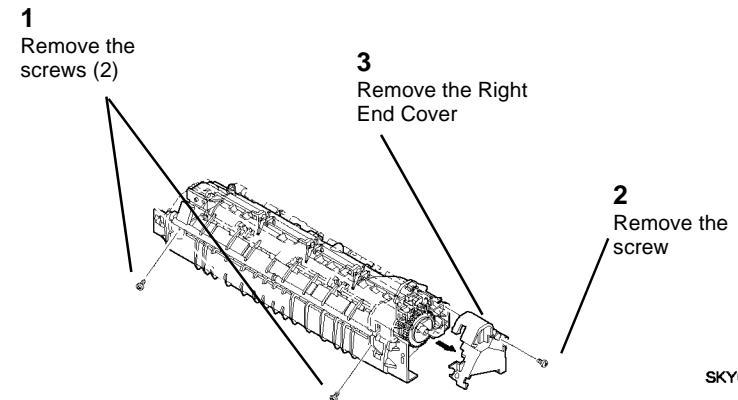


Figure 1 Removing the Right End Cover



6. (Figure 2): Remove the Stripper Fingers.

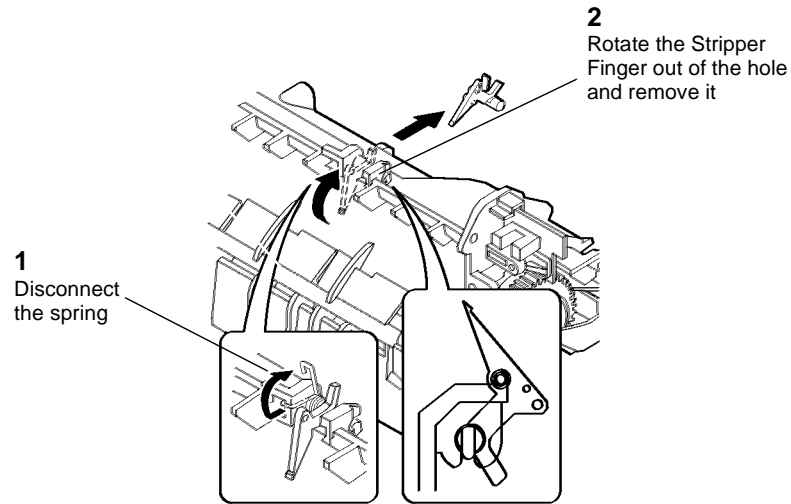


Figure 2 Removing the Stripper Fingers

SKY020N

## REP 10.12 Fuser Gate

### Parts List on PL 6.2

#### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. Remove the Paper Guide (REP 10.10).

**NOTE:** Cut cable ties as necessary.

5. (Figure 1): Remove the Right End Cover.

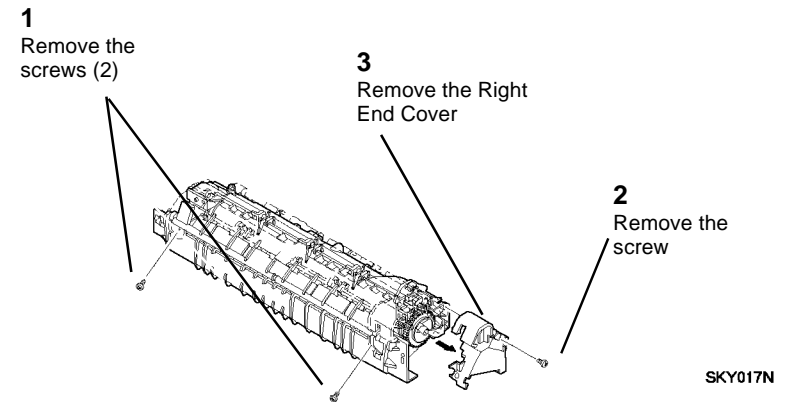
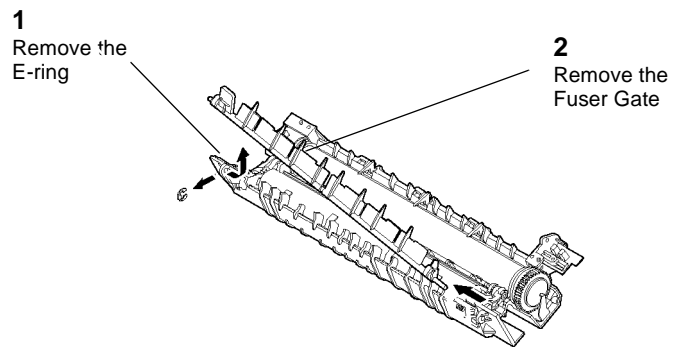


Figure 1 Removing the Right End Cover

SKY017N

6. (Figure 2): Remove the Fuser Gate.



SKY021N

**Figure 2 Removing the Fuser Gate**

## REP 14.5 Control Console

Parts List on PL 1.1

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Raise the Document Cover Assembly and open the Front Door.

#### CAUTION

Take care not to damage the ribbon cable and the harness connected to the Control Console PWB.

2. (Figure 1): Remove the Control Console.

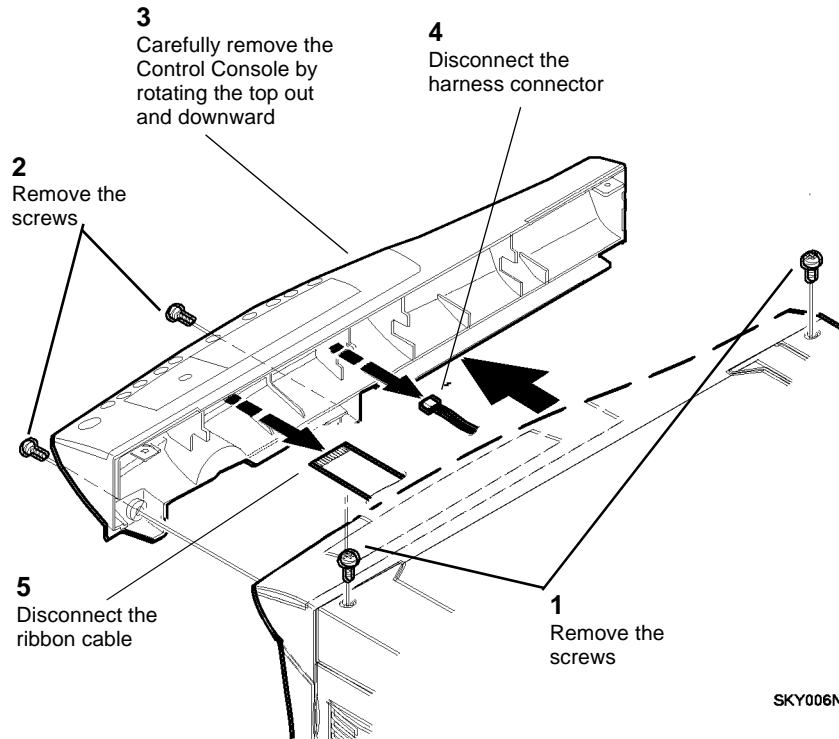


Figure 1 Removing the Control Console

## REP 14.7 Output Tray

Parts List on PL 1.1

### Removal

#### WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
  - a. Paper Tray (PL 4.1)
  - b. Document Cover Assembly
  - c. Rear Cover
  - d. Top Left Cover
2. Remove the screw located on the left side of the Output Tray.
3. Pry the tray away from the Main Power Switch using a flat-bladed screwdriver.
4. Release the locking tab which is located in the front left corner of the Output Tray.
5. (Viewed from the Top) Remove the Output Tray by rotating it counterclockwise.

**Notes:**





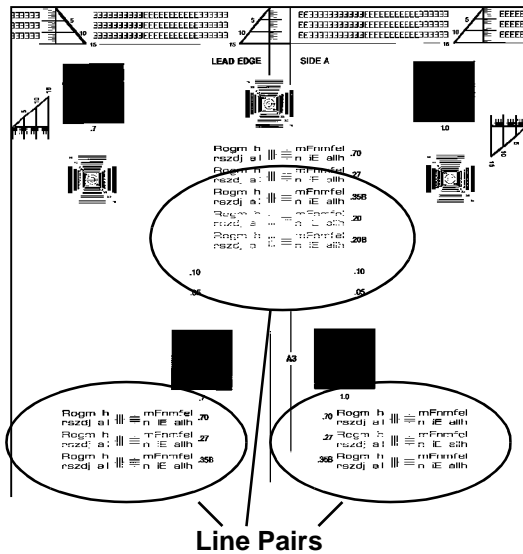
## ADJ 6.1 Copy Density

### Purpose

The purpose is to set the exposure level so that the correct density is produced.

### Check

1. Clean the Optics and the Document Glass.
2. Set the magnification to 100%.
3. Set the Exposure to the Text mode.
4. Make five copies of Side A of the standard test pattern. Align the Test Pattern to provide the measurement targets.
5. (Figure 1): Check the fifth copy. The 0.10 line pair on the copy should be partially visible but not legible. The 0.05 line pair should not be visible on the copy.
  - a. If the .20B line pair is just visible and the .1 line pair is not visible, the exposure is correct.
  - b. If the .20B line pair is not visible, decrease the exposure.
  - c. If the .1 line pair is visible, increase the exposure.

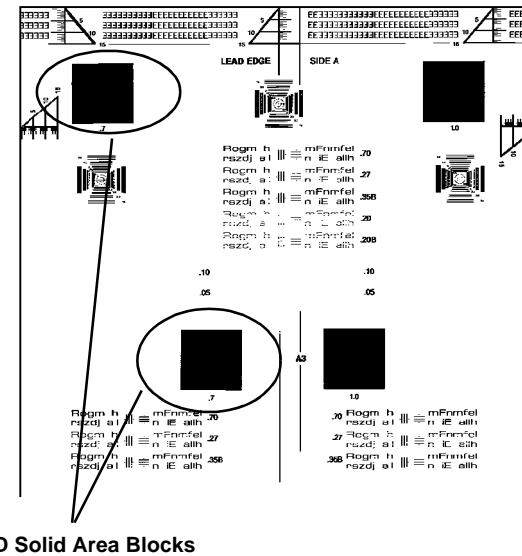


SKY201N

Figure 1 Checking the Exposure on the Copy

6. Repeat steps 4 and 5 for the Auto mode.

7. Set the Exposure to the Photo mode.
8. Make five copies of Side A of the standard test pattern. Align the Test Pattern to provide the measurement targets.
9. (Figure 2): Check the fifth copy. The .7 Solid Area Density Block on the copy should match the corresponding block on the Test Pattern.
  - a. If the .7 Solid Area Density Block matches the corresponding block on the Test Pattern, the exposure is correct.
  - b. If the .7 Solid Area Density Block is too light, decrease the exposure.
  - c. If the .7 Solid Area Density Block is too dark, increase the exposure.



SKY201N

Figure 2 Checking the Exposure on the Copy

10. Repeat steps 8 and 9 for the Toner Saver mode.

### Adjustment

1. Enter Diagnostic Code 46-1 and adjust the mode(s) identified in the check as requiring adjustment.
2. Adjust the Text mode.
  - a. Select Text.
  - b. Place the Test Pattern as described in the check.
  - c. Press the Start button.
    - A copy is made.

- d. Decrease the number to increase the exposure (copy becomes lighter) and press the Start button.
  - Evaluate the copy per the check and adjust as required.
- e. Increase the number to decrease the exposure (copy becomes darker) and press the Start button.
  - Evaluate the copy per the check and adjust as required.
3. Adjust the Auto mode.
  - a. Select Auto.
  - b. Place the Test Pattern as described in the check.
  - c. Press the Start button.
    - A copy is made.
  - d. Decrease the number to increase the exposure (copy becomes lighter) and press the Start button.
    - Evaluate the copy per the check and adjust as required.
  - e. Increase the number to decrease the exposure (copy becomes darker) and press the Start button.
    - Evaluate the copy per the check and adjust as required.
4. Adjust the Photo mode.
  - a. Select Photo.
  - b. Place the Test Pattern as described in the check.
  - c. Press the Start button.
    - A copy is made.
  - d. Decrease the number to increase the exposure (copy becomes lighter) and press the Start button.
    - Evaluate the copy per the check and adjust as required.
  - e. Increase the number to decrease the exposure (copy becomes darker) and press the Start button.
    - Evaluate the copy per the check and adjust as required.
5. Adjust the Toner Saver mode.
  - a. Select Toner Saver.
  - b. Place the Test Pattern as described in the check.
  - c. Press the Start button.
    - A copy is made.
  - d. Decrease the number to increase the exposure (copy becomes lighter) and press the Start button.
    - Evaluate the copy per the check and adjust as required.
  - e. INcrease the number to decrease the exposure (copy becomes darker) and press the Start button.
    - Evaluate the copy per the check and adjust as required.
6. Exit Diagnostics.

## ADJ 6.2 Lens/CCD Module

### Purpose

The purpose is to position the Lens/CCD Module at the factory-specified setting.

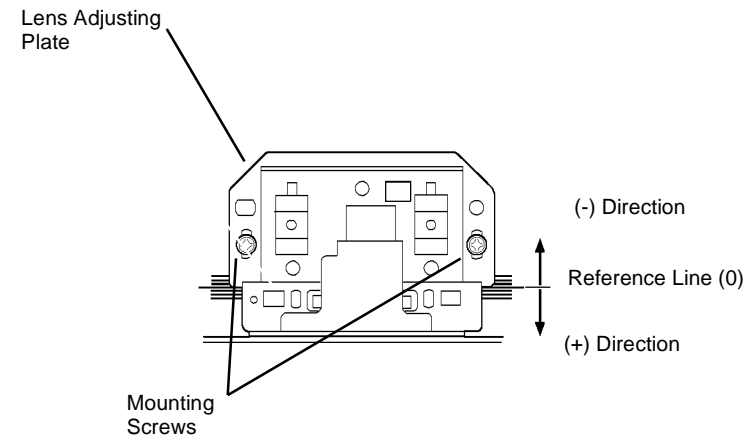
### Adjustment

#### CAUTION

Only the mounting screws shown below are to be utilized by the Service Representative. The module is available only as an assembly and must not be disassembled

**NOTE:** Example: Lens Unit Number is -2.8. Install the edge of the Lens/CCD Module two lines from the Reference Line.

1. (Figure 1): Install the module so that the Lens Adjusting Plate is aligned with the lines on the Base Plate according to the number written on the Lens Adjusting Plate.



SKY091N

Figure 1 Adjusting the Lens/CCD Module



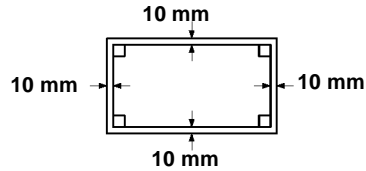
## ADJ 6.7 Image Distortion (Horizontal and Vertical)

### Purpose

The purpose is to correct image distortion by changing the parallelism of the mirrors (Exposure Lamp Carriage and Half-Rate Carriage).

### Check

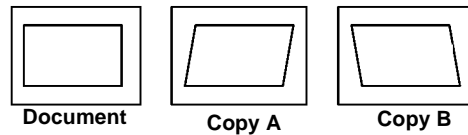
- (Figure 1): Make a Test Pattern for the check and adjustment by drawing a rectangle on a sheet of 8-1/2" X 14" (B4) paper. Ensure that the corners are square.



SKY070N

Figure 1 Making the Test Pattern

- (Figure 2): Make several copies of the Test Pattern.
  - If the copies look like the Document, the check is good.
  - If the copies look like A or B, perform the Horizontal Image Distortion Adjustment.



SKY069N

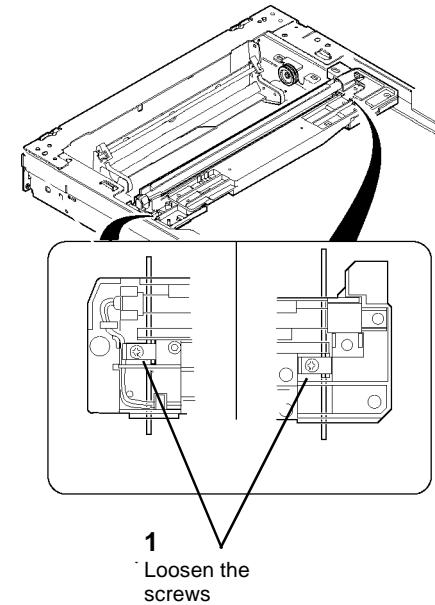
Figure 2 Checking the Copies

### Adjustment

#### HORIZONTAL IMAGE DISTORTION

- Remove the Document Glass Assembly (REP 6.1).

- (Figure 3): Loosen the screws on the Exposure Lamp Carriage.



SKY072N

Figure 3 Loosening the Exposure Lamp Carriage Screws

3. (Figure 4): Rotate the Scan Drive Gear until the Half-Rate Carriage comes in contact with the Positioning Brackets.
  - a. If contact is equal on both sides, the adjustment is good.
  - b. If there is no contact on one side, continue with the adjustment.

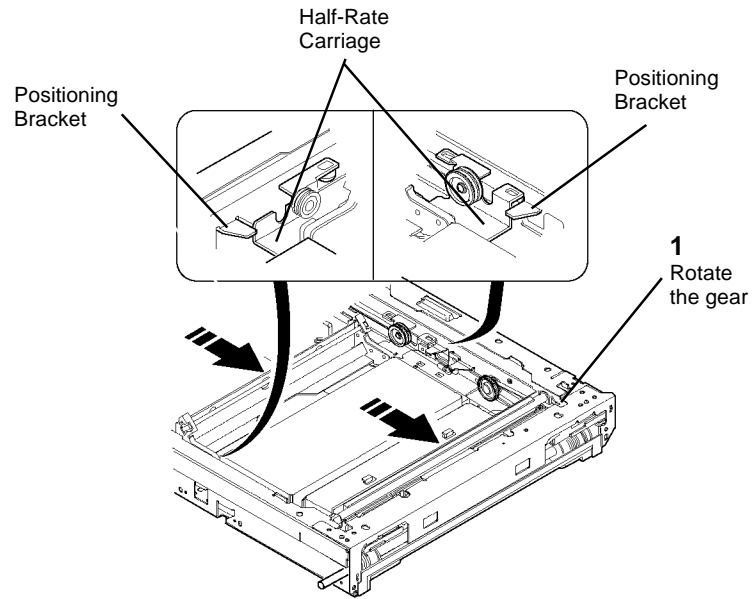
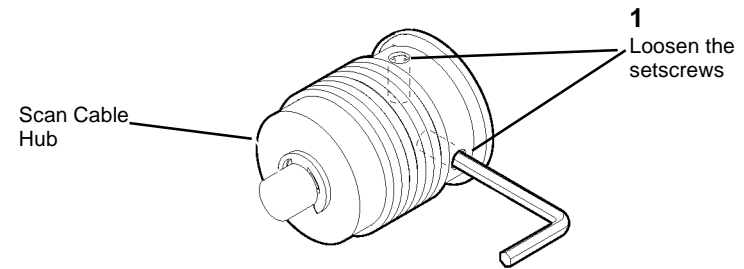


Figure 4 Checking the Contact of the Half-Rate Carriage

SKY073N

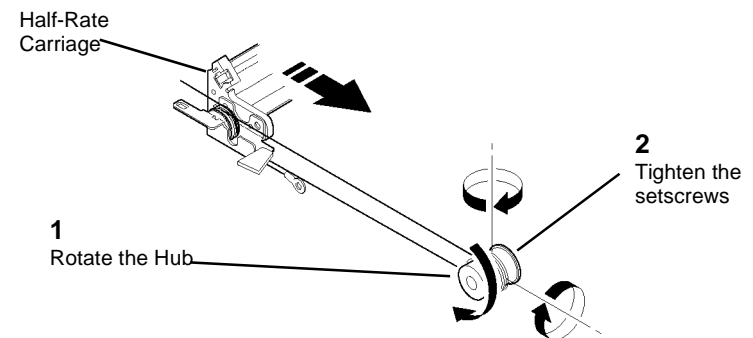
4. (Figure 5): Loosen the setscrews on the Scan Cable Hub on the side where there was no contact.



SKY074A

Figure 5 Loosening the Setscrews on the Scan Cable Hub

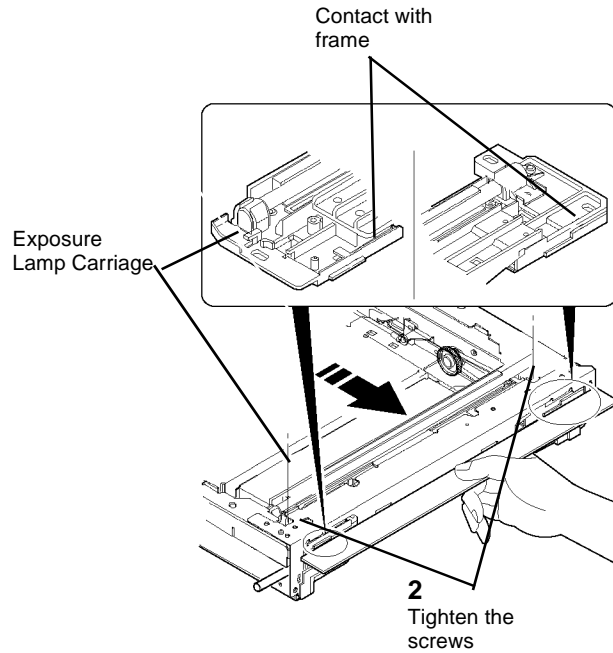
5. (Figure 6): Without moving the Scan Cable Hub Shaft, rotate the Hub until the Half-Rate Carriage makes contact with the Positioning Bracket.



SKY075I

Figure 6 Aligning the Half-Rate Carriage

- Repeat steps 3 through 5 until the parallelism of the Half-Rate Carriage is properly adjusted.
- (Figure 7): With the Half-Rate Carriage against the Positioning Brackets, move the Exposure Lamp Carriage into contact with the frame and tighten the mounting screws.

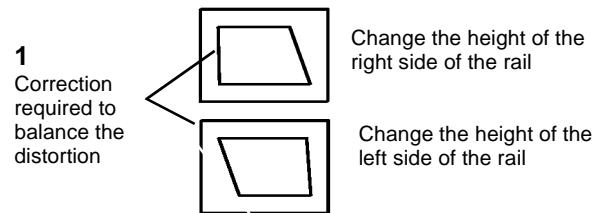


**Figure 7 Aligning the Half-Rate Carriage**

SKY076N

**VERTICAL IMAGE DISTORTION**

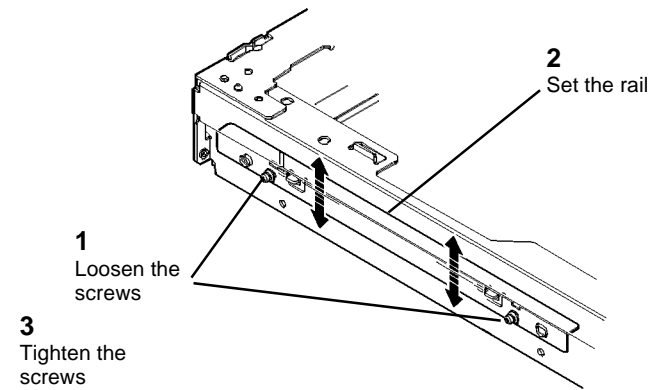
- (Figure 8): Correction is made for Vertical Image Distortion when the copy of the Test Pattern looks like the following figure. If all corners are well-formed right angles, no further adjustment is required,



**Figure 8 Evaluating the Copies**

SKY085N

- (Figure 9): Loosen the mounting screws of the Half-Rate Carriage Rail to set the balance.



SKY084N

**Figure 9 Aligning the Half-Rate Carriage Rail**

- Reassemble the Copier and repeat the check.
- Check Image Magnification (ADJ 6.8).

## ADJ 6.8 Image Magnification

### Purpose

The purpose is to provide the correct vertical and horizontal magnification.

### Check

1. Make a 100% copy of Side B of the Standard Test Pattern.
2. The magnification of a 100% copy should be within 1.0% of the original size in the vertical and horizontal directions.

### Adjustment

MAGNIFICATION (Front to Rear)

1. Enter Diagnostic Code 48-1.
2. Press the Exposure Mode button until the Text lamp is lit.
3. To change the magnification, press the Copy Quantity buttons.
  - a. To increase the magnification, increase the number.
  - b. To decrease the magnification, decrease the number.
  - c. Press the Clear button.

MAGNIFICATION (Lead Edge to Trail Edge)

1. Enter Diagnostic Code 48-1.
2. Press the Exposure Mode button until the Photo lamp is lit.
3. To change the magnification, press the Copy Quantity buttons.
  - a. To increase the magnification, increase the number.
  - b. To decrease the magnification, decrease the number.
  - c. Press the Clear button.
4. Repeat the check.

## ADJ 8.2 Lead Edge Deletion

### Purpose

The purpose is to set the Lead Edge Deletion to within specification.

### Check

1. Make a copy with the Document Cover Assembly open (Dark Dusting).
2. Check that the Lead Edge Deletion is 1 to 4 mm.

### Adjustment

1. Enter Diagnostic Code **48-1**.
2. Press the **Exposure** button until the **Text** lamp is lit.

**NOTE:** Each increment to the **Copy Quantity** display changes the deletion by 0.1 mm.

3. To change the Lead Edge Deletion, press the **Copy Quantity** buttons.
  - a. To increase the deletion, increase the number.
  - b. To decrease the deletion, decrease the number.
  - c. Press the **Clear** button.
4. Repeat the check.

## ADJ 8.3 Trail Edge Deletion

### Purpose

The purpose is to set the Trail Edge Deletion to within specification.

### Check

1. Make a copy with the Document Cover Assembly open (Dark Dusting).
2. Check that the Trail Edge Deletion is a maximum of 4 mm.

### Adjustment

1. Enter Diagnostic Code **48-1**.
2. Press the **Exposure** button until the **Auto**, **Text**, and **Photo** lamps are lit.

**NOTE:** Each increment to the **Copy Quantity** display changes the deletion by 0.1 mm.

3. To change the Trail Edge Deletion, press the **Copy Quantity** buttons.
  - a. To increase the deletion, increase the number.
  - b. To decrease the deletion, decrease the number.
  - c. Press the **Clear** button.
4. Repeat the check.

## ADJ 9.1 Developer Bias

### Purpose

The purpose is to adjust the developer bias voltage.

### Adjustment

#### WARNING

Switch off the Main Power Switch, and disconnect the Power Cord before inserting the meter lead probes onto the Power Supply PWB.

1. Set the digital multi meter range to 4000 VDC.
2. (Figure 1): Connect the positive lead to connector pin CN10-1

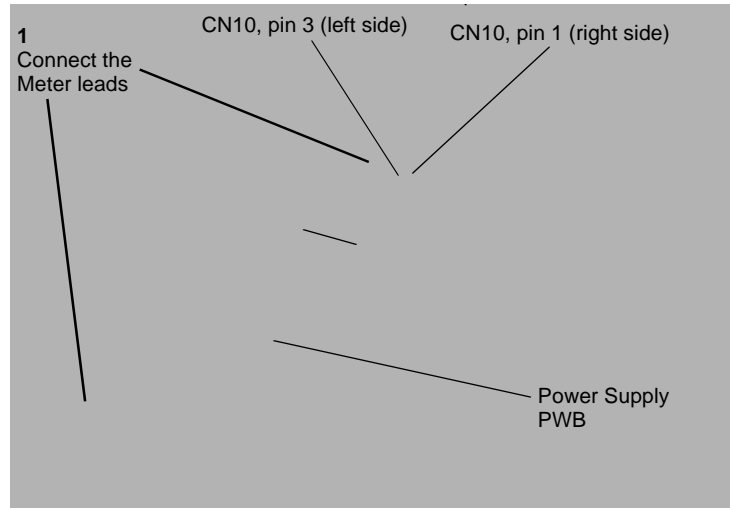


Figure 1 Adjusting the Developer Bias Voltage

3. Connect the negative lead to CN10-2.
4. Enter Diagnostic Code 25-1. When Start is pressed, the Developer Bias is present for 30 seconds.
5. Adjust VR-121 for a voltage of  $-380 \pm 15$  VDC.

## ADJ 9.2 Grid Bias

### Purpose

The purpose is to adjust the grid bias voltage.

### Adjustment

#### WARNING

Switch off the Main Power Switch, and disconnect the Power Cord before inserting the meter lead probes onto the Power Supply PWB.

**NOTE:** Set the LOW output voltage first. Set the HIGH output voltage last.

1. Set the digital multi meter range to 4000 VDC.
2. (Figure 1): Connect the positive lead to connector pin CN11-3

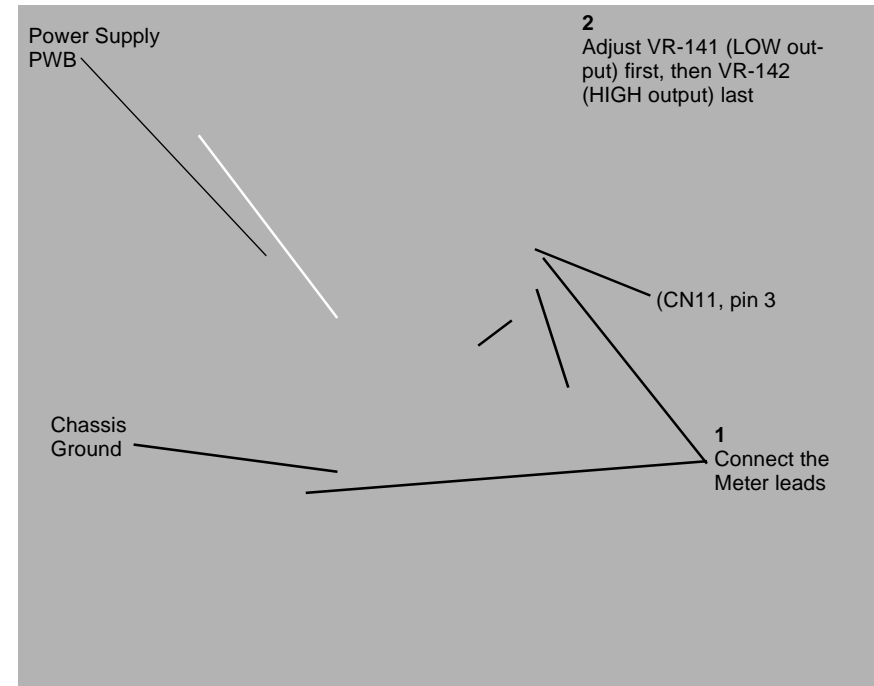


Figure 1 Adjusting the Grid Bias Voltage

3. Connect the negative lead to the Chassis Ground.
4. Enter Diagnostic Code 8-3.
5. Adjust VR-141 for a LOW output voltage of  $-420 \pm 20$  VDC.
6. Enter Diagnostic Code 8-2.
7. Adjust VR-142 for a HIGH output voltage of  $+580 \pm 20$  VDC.

**Notes:**





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## Introduction

### Overview

The Parts List section identifies all part numbers and the corresponding location of all spared subsystem components.

### Organization

#### Parts Lists

Each item number in the part number listing corresponds to an item number in the related illustration. All the parts in a given subsystem of the machine will be located in the same illustration or in a series of associated illustrations.

#### Electrical Connectors and Fasteners

This section contains the illustrations and descriptions of the plugs, jacks, and fasteners used in the machine. A part number listing of the connectors is included.

#### Common Hardware

The common hardware is listed in alphabetical order by the letter or letters used to identify each item in the part number listing and in the illustrations. Dimensions are in millimeters unless otherwise identified.

#### Part Number Index

This index lists all the spared parts in the machine in numerical order. Each number is followed by a reference to the parts list on which the part may be found.

## Other Information

### Abbreviations

Abbreviations are used in the parts lists and the exploded view illustrations to provide information in a limited amount of space. The following abbreviations are used in this manual:

Table 1

| Abbreviation | Meaning                       |
|--------------|-------------------------------|
| A            | Amp                           |
| DH           | Document Handler              |
| EMI          | Electro Magnetic Induction    |
| HZ           | Hertz                         |
| MLN          | Multinational                 |
| NOHAD        | Noise Ozone Heat Air Dirt     |
| P/O          | Part of                       |
| PWB          | Printed Wiring Board          |
| REF          | Reference                     |
| R/E          | Reduction/Enlargement         |
| USMG         | United States Marketing Group |
| USO          | United States Operations      |
| V            | Volt                          |
| W/           | With                          |
| W/O          | Without                       |
| XCL          | Xerox Canada Limited          |
| XL           | Xerox Limited                 |
| XLA          | Xerox Latin America           |

### Symbology

Symbology used in the Parts List section is identified in the Symbology section.

## Subsystem Information

### Use of the Term "Assembly"

The term "assembly" will be used for items in the part number listing that include other itemized parts in the part number listing. When the word "assembly" is found in the part number listing, there will be a corresponding item number on the illustrations followed by a bracket and a listing of the contents of the assembly.

### Brackets

A bracket is used when an assembly or kit is spared, but is not shown in the illustration. The item number of the assembly or kit precedes the bracket; the item numbers of the piece parts follow the bracket.

### Tag

The notation "Tag" in the part description indicates that the item is the entire Tag. The notation "P/O Tag" indicates that the item is only part of a tag change, or modification, to the equipment.

When a part or an item assembly has a Tag associated with it, check the change Tag Index in the General Information section of the Service Data for the name and purpose of the modification.

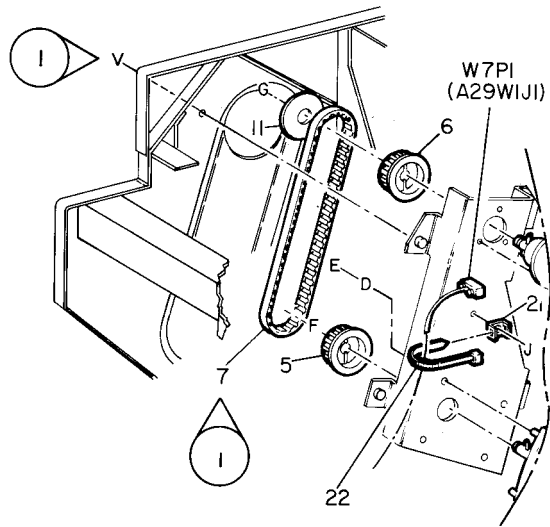
In some cases, a part or assembly may be spared in two versions: with the Tag and without the Tag. In those cases, use whichever part is appropriate for the configuration of the machine on which the part is to be installed. If the machine does not have a particular Tag and the only replacement part available is listed as "W/Tag," install the Tag kit or all of the piece parts. The Change Tag Index tells you which kit or piece parts you need.

Whenever you install a Tag kit or all the piece parts that make up a Tag, mark the appropriate number on the Tag matrix.

## Symbology

The following symbols are used in the Parts List sections of the documentation.

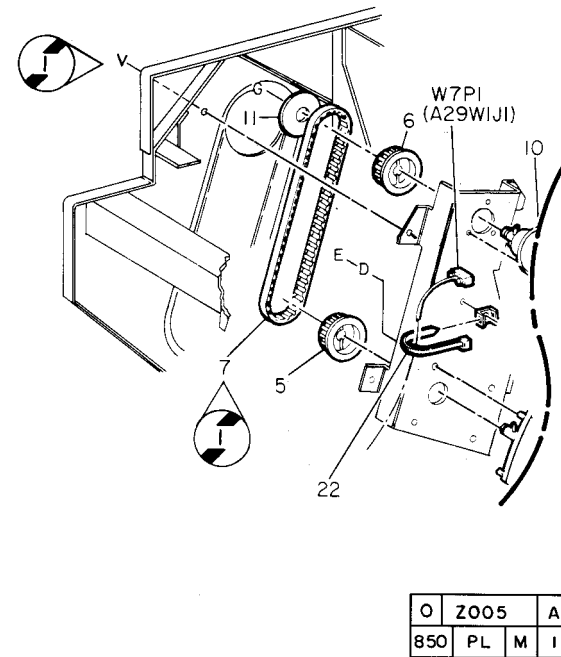
A Tag number within a circle pointing to an item number shows that the part has been changed by the tag number within the circle (Figure 1). Information on the modification is in the Change Tag Index.



|     |      |     |
|-----|------|-----|
| O   | Z004 | A   |
| 850 | PL   | M I |

Figure 1 With Tag Symbol

A Tag number within a circle having a shaded bar and pointing to an item number shows that the configuration of the part shown is the configuration before the part was changed by the Tag number within the circle (Figure 2).



|     |      |     |
|-----|------|-----|
| O   | Z005 | A   |
| 850 | PL   | M I |

Figure 2 Without Tag Symbol

A tag number within a circle with no apex shows that the entire drawing has been changed by the tag number within the circle (Figure 3). Information on the modification is in the Change Tag Index.

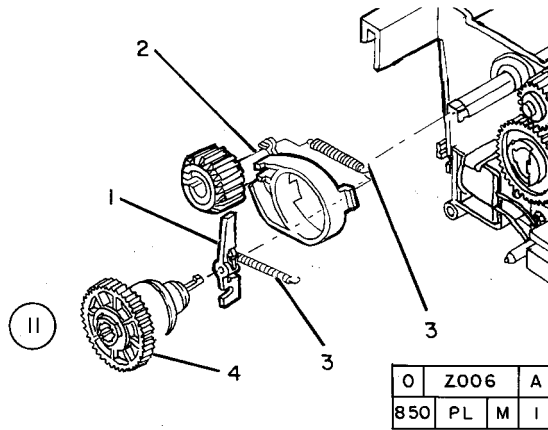


Figure 3 Entire Drawing With Tag Symbol

A tag number within a circle with no apex and having a shaded bar shows that the entire drawing was the configuration before being changed by the tag number within the circle (Figure 4).

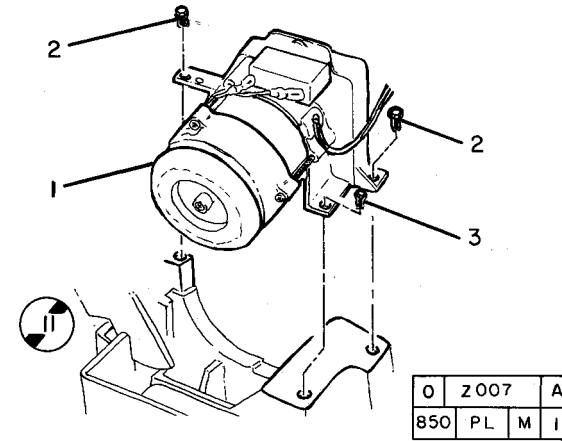
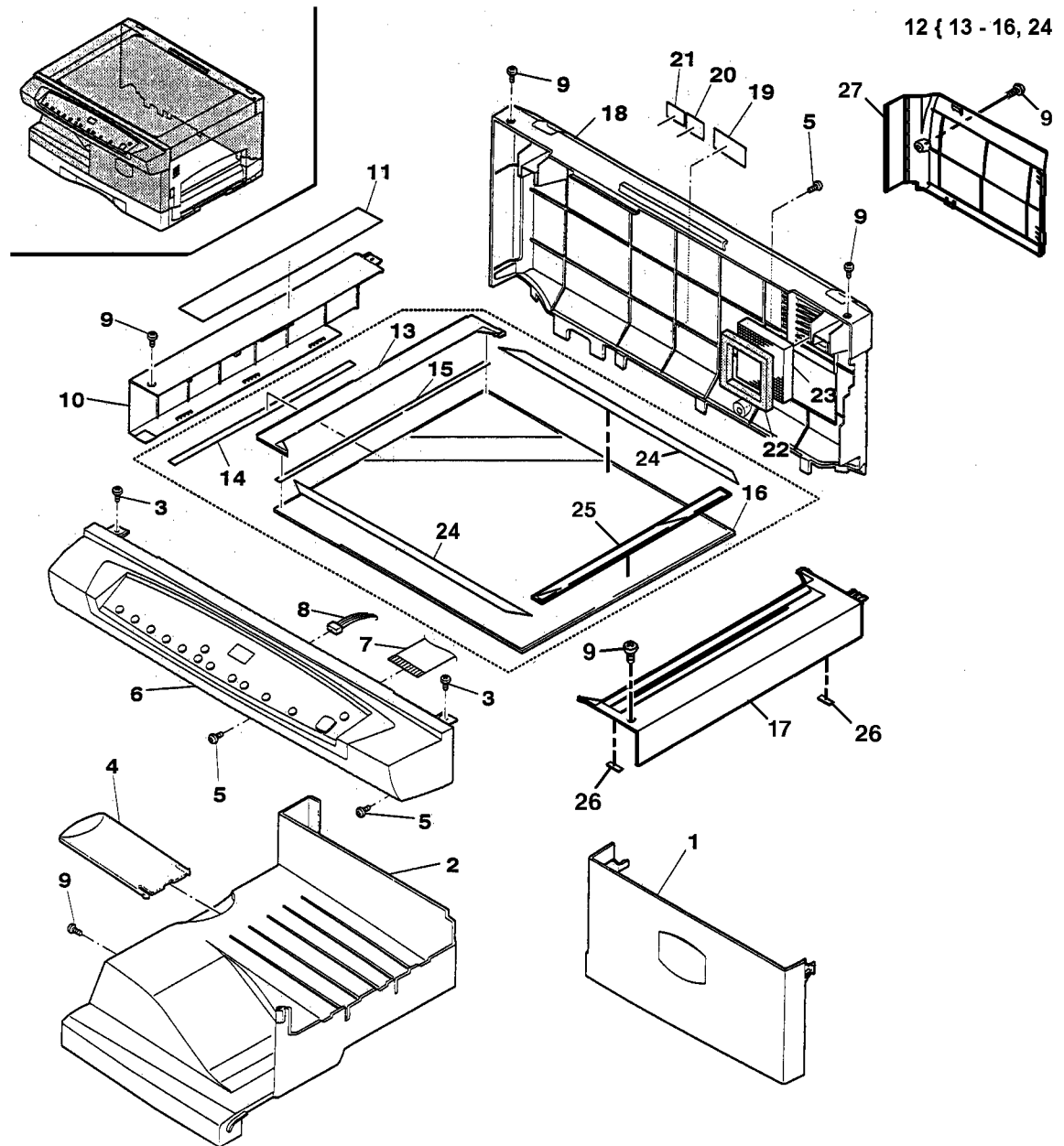


Figure 4 Entire Drawing Without Tag Symbol

# PL 1.1 PRINTER COVERS (XD120F)

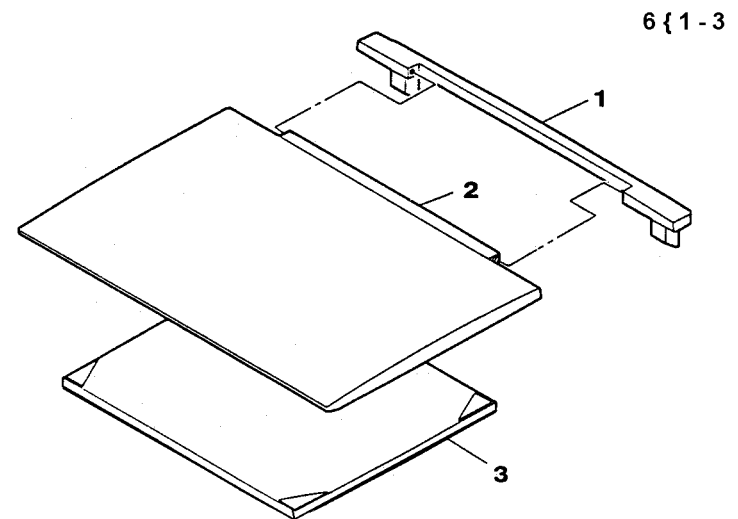
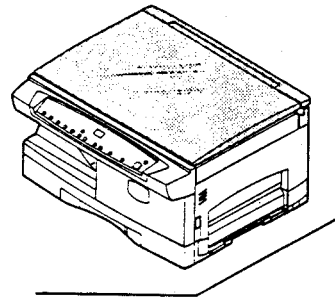
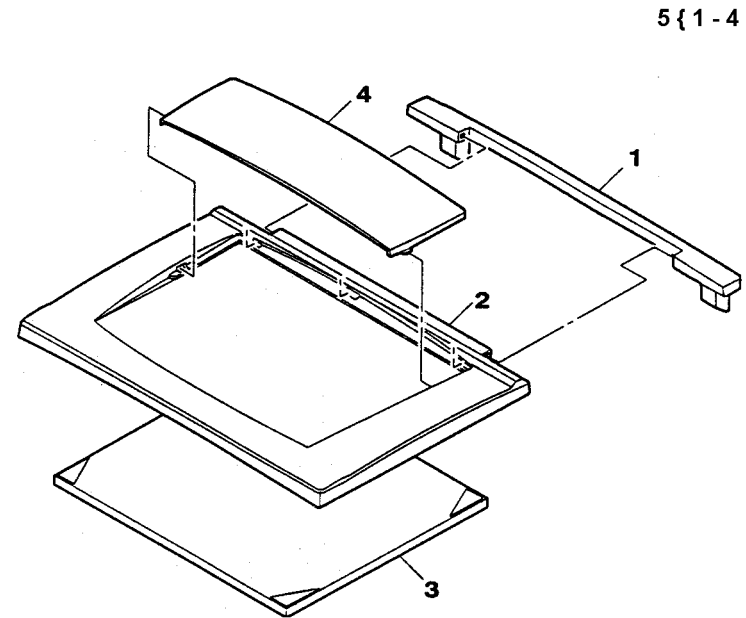
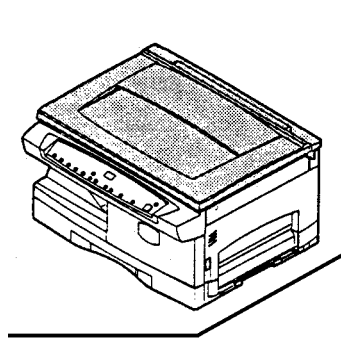
| Item | Part     | Description                                 |
|------|----------|---|
| 1    | 2N1525   | FRONT DOOR (USO/XCL)                        |
| -    | 2N1566   | FRONT DOOR (XL)                             |
| 2    | -        | OUTPUT TRAY (USO/XCL) (REP 14.7)            |
| 3    | -        | SCREW (3X8)                                 |
| 4    | 50N230   | TRAY EXTENSION (USO/XCL)                    |
| -    | 50N259   | TRAY EXTENSION (XL)                         |
| 5    | -        | SCREW (4X12)                                |
| 6    | -        | CONTROL CONSOLE (REP 14.5)                  |
| 7    | 152N1630 | CONTROL CONSOLE HARNESS                     |
| 8    | 152N1637 | HARNESS                                     |
| 9    | -        | SCREW (3X8)                                 |
| 10   | -        | TOP LEFT COVER                              |
| 11   | -        | INSTRUCTION LABEL                           |
| 12   | 90N138   | DOCUMENT GLASS ASSEMBLY (USO/XCL) (REP 6.1) |
| -    | 90N139   | DOCUMENT GLASS ASSEMBLY (XL) (REP 6.1)      |
| 13   | -        | REGISTRATION GUIDE                          |
| 14   | -        | CALIBRATION STRIP                           |
| 15   | -        | ADHESIVE STRIP                              |
| 16   | -        | DOCUMENT GLASS                              |
| 17   | 2N1561   | TOP RIGHT COVER (XD120F)                    |
| 18   | 2N1560   | REAR COVER (XD120F)                         |
| 19   | -        | CAUTION LABEL                               |
| 20   | -        | LABEL                                       |
| 21   | -        | SERVICE LABEL                               |
| 22   | -        | FAN GASKET                                  |
| 23   | 53N142   | OZONE FILTER                                |
| 24   | -        | DOCUMENT GLASS EDGE                         |
| 25   | 62N147   | SDF WINDOW (XD120F)                         |
| 26   | 4N193    | SDF GLASS CUSHION (XD120F)                  |
| 27   | -        | SDF SMALL REAR COVER (XD120F)               |



000001B-SKW

# PL 1.2 DOCUMENT GLASS COVER (XD100/102/104)

| Item | Part   | Description  |
|------|--------|--|
| 1    | -      | REAR PIVOT ATTACHMENT                                |
| 2    | -      | DOCUMENT COVER                                       |
| 3    | -      | DOCUMENT COVER CUSHION                               |
| 4    | -      | DOCUMENT ORGANIZER                                   |
| 5    | 2N1534 | DOCUMENT COVER ASSEMBLY<br>(W/ORGANIZER) (XD100/104) |
| 6    | 2N1526 | DOCUMENT COVER ASSEMBLY<br>(W/O ORGANIZER) (XD102)   |

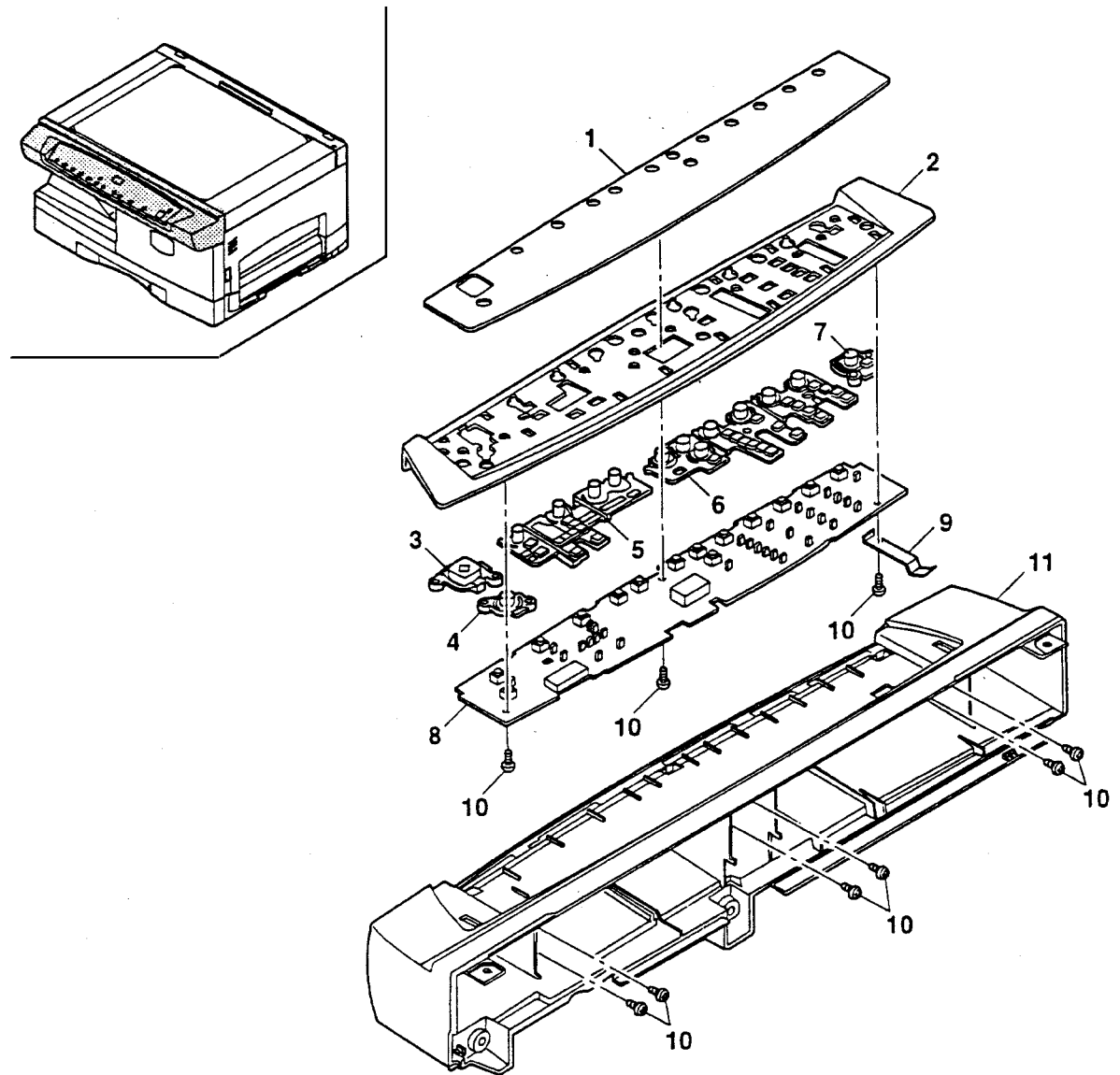


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## PL 1.3 CONTROL CONSOLE (X100/102,XD120F)

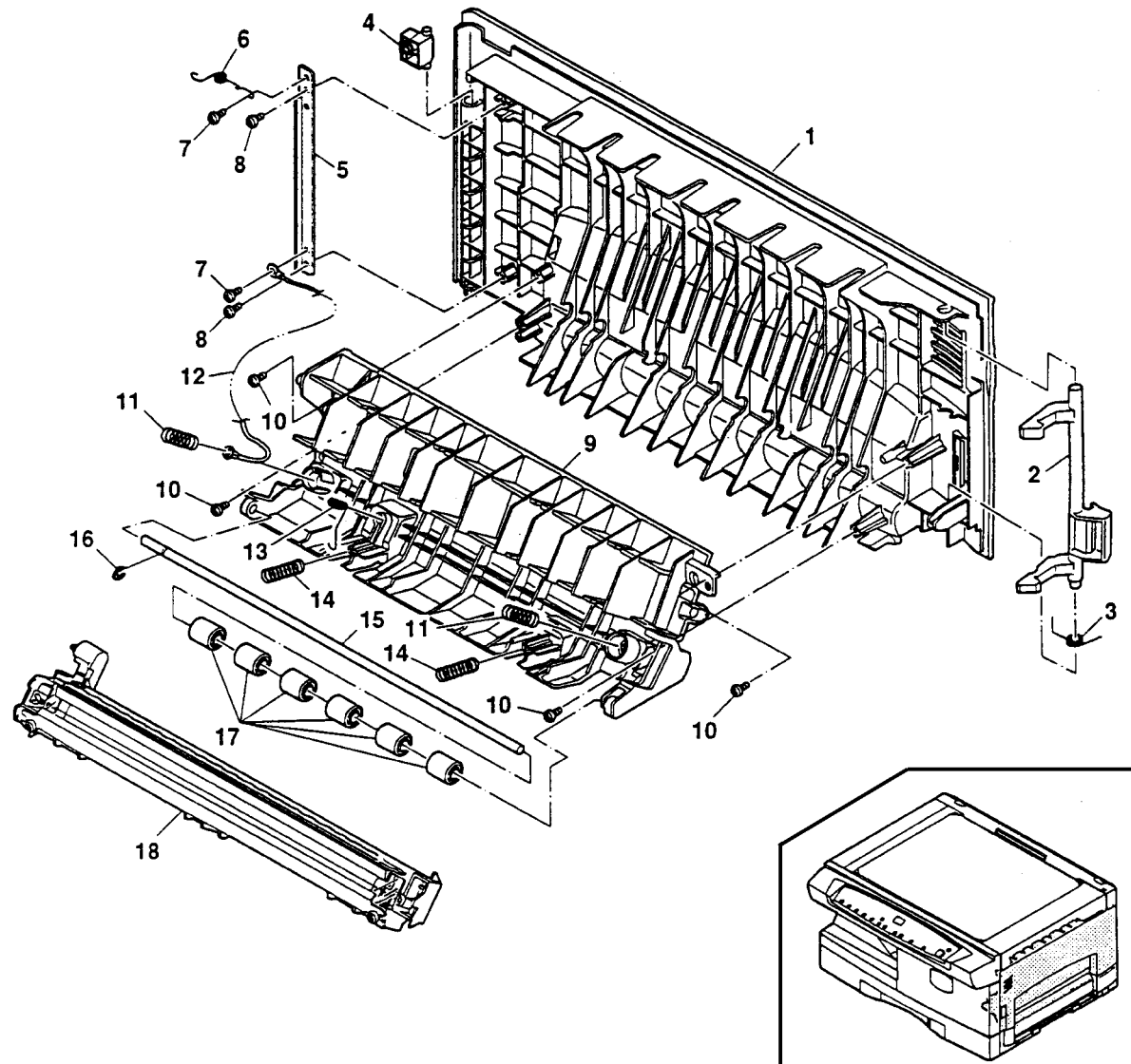
| Item | Part     | Description                        |
|------|----------|------------------------------------|
| 1    | 53N162   | CONTROL BUTTON COVER<br>(ACO) (XL) |
| -    | 53N163   | (XD102) (US)                       |
| -    | 53N164   | (XD102) (XL) (ACO)                 |
| -    | 53N165   | (XD104) (XL) (ACO)                 |
| -    | 53N166   | (XD100) (US)                       |
| -    | 53N170   | (XD120F) (US)                      |
| 2    | -        | CONTROL CONSOLE COVER              |
| 3    | 3N673    | START PRINT BUTTON                 |
| 4    | 3N669    | CLEAR/STOP BUTTON                  |
| 5    | 3N671    | FUNCTION BUTTON (R)                |
| 6    | 3N672    | FUNCTION BUTTON (L)                |
| 7    | 3N670    | BOOK MODE SELECT BUTTON            |
| 8    | 140N5107 | CONTROL CONSOLE PWB<br>(XD100/102) |
| -    | 140N5206 | CONTROL CONSOLE PWB<br>(XD120F)    |
| 9    | -        | GROUNDING SPRING                   |
| 10   | -        | SCREW (3X8)                        |
| 11   | -        | CONTROL CONSOLE                    |



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## PL 1.4 SIDE DOOR

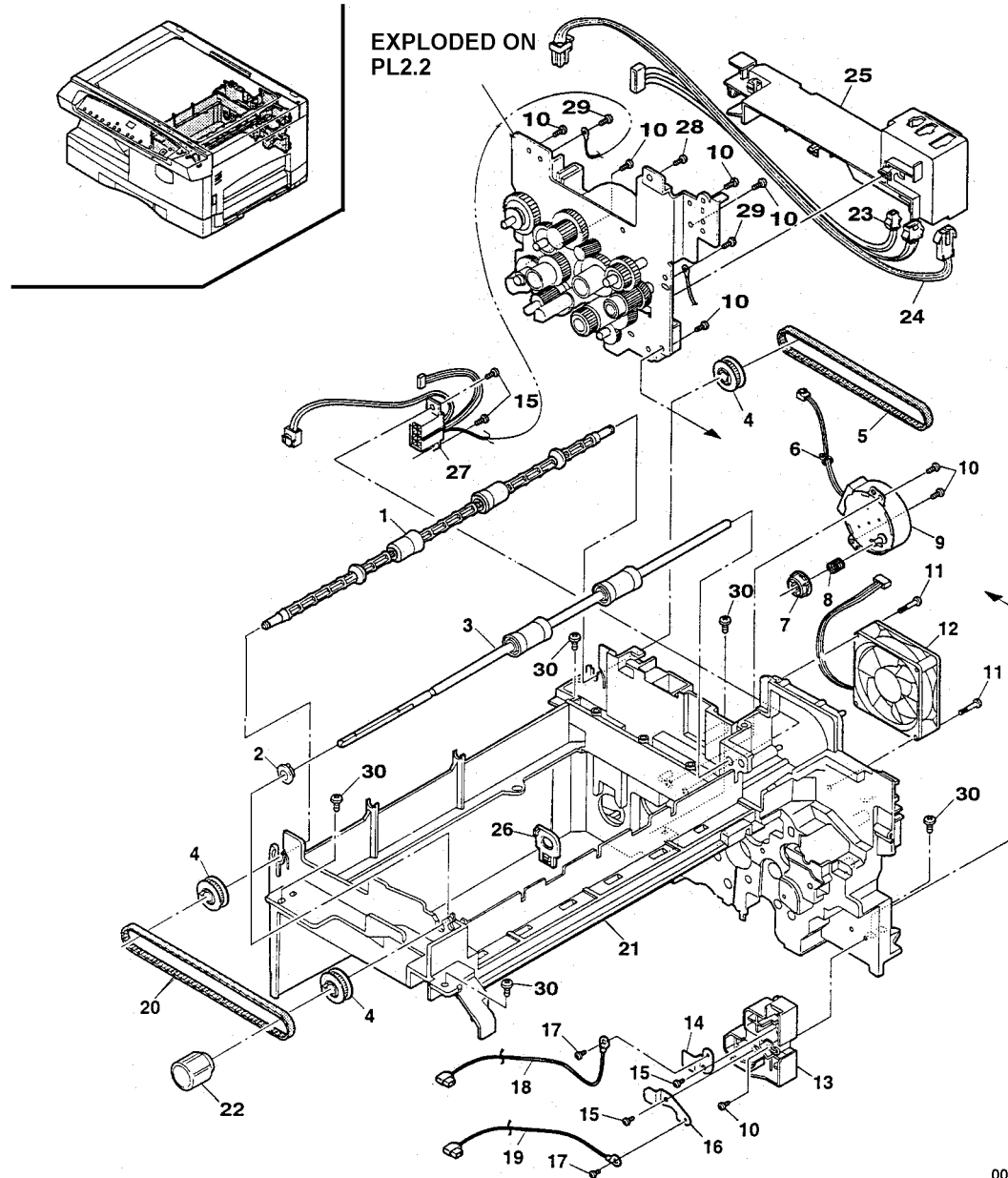
| Item | Part     | Description                                       |
|------|----------|---|
| 1    | —        | SIDE DOOR   |
| 2    | 3N668    | SIDE DOOR LATCH                                   |
| 3    | 9N978    | LATCH SPRING                                      |
| 4    | —        | HINGE GUIDE                                       |
| 5    | —        | GROUNDING PLATE                                   |
| 6    | —        | GROUNDING SPRING                                  |
| 7    | —        | SCREW (3X6)                                       |
| 8    | —        | SCREW (3X6)                                       |
| 9    | —        | INNER PAPER GUIDE                                 |
| 10   | —        | SCREW (3X10)                                      |
| 11   | 9N964    | PRESSURE SPRING                                   |
| 12   | 152N1635 | GROUND WIRE                                       |
| 13   | 9N963    | GROUNDING SPRING                                  |
| 14   | 9N962    | PRESSURE SPRING                                   |
| 15   | —        | SHAFT   |
| 16   | —        | E-RING  |
| 17   | 22E22060 | UPPER ROLLER                                      |
| 18   | 19N415   | TRANSFER/DETACK<br>COROTRON ASSEMBLY (REP<br>9.2) |



000004A-SKW

# PL 2.1 DRIVES AND MID-FRAME COMPONENTS

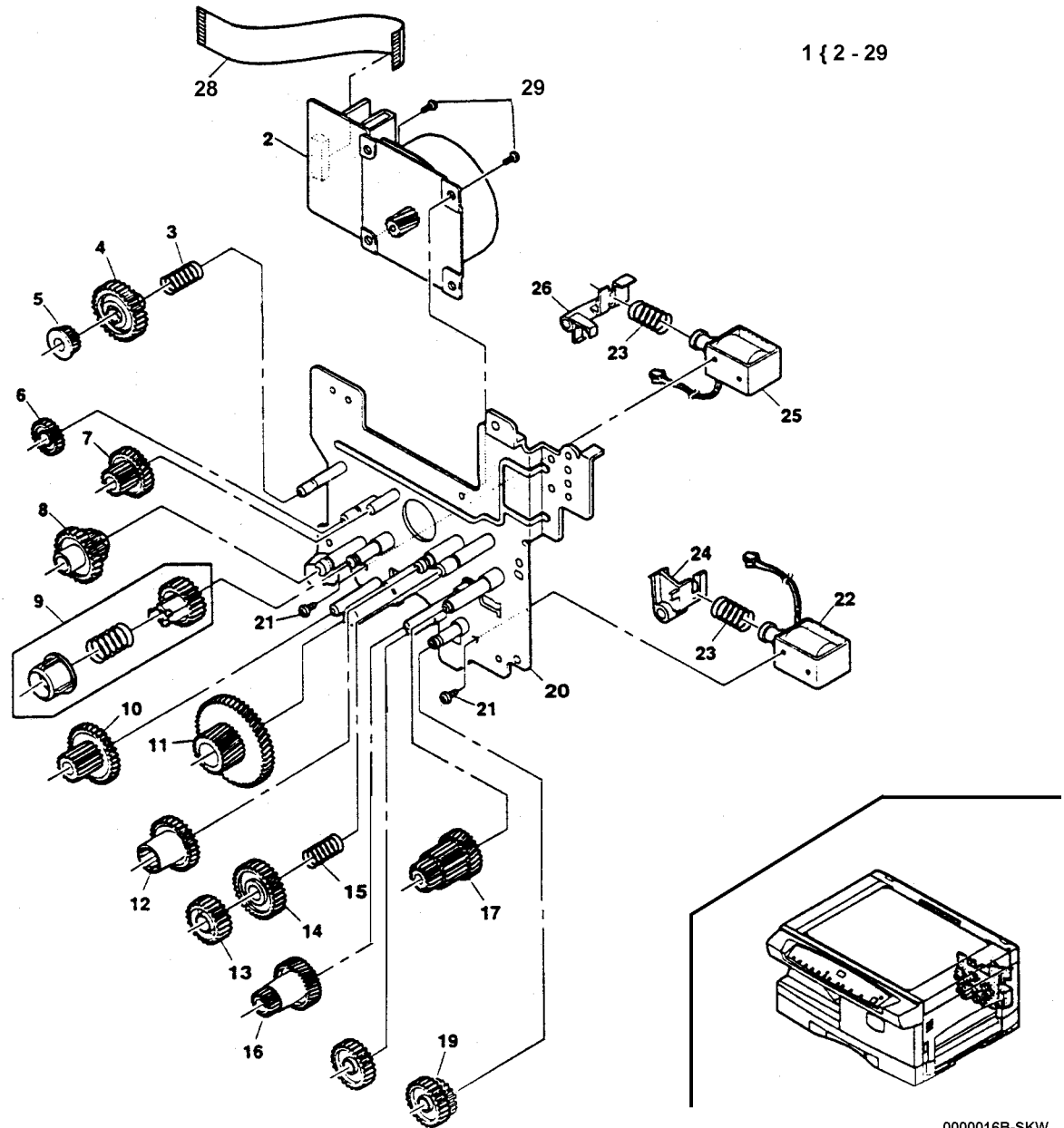
| Item | Part     | Description                        |
|------|----------|------------------------------------|
| 1    | 22N926   | EXIT ROLLER (REP 8.9)              |
| 2    | -        | BEARING                            |
| 3    | 22N925   | LOWER TRANSPORT ROLLER (REP 8.11)  |
| 4    | 20N449   | PULLEY (22T)                       |
| 5    | 23N596   | EXIT DRIVE BELT                    |
| 6    | -        | CABLE TIE                          |
| 7    | -        | COUPLING                           |
| 8    | -        | SPRING                             |
| 9    | 127N972  | TONER MOTOR (MOT 4) (REP 9.1)      |
| 10   | -        | SCREW (3X10)                       |
| 11   | -        | SCREW (3X30)                       |
| 12   | 127N971  | VENTILATION FAN (MOT 3) (REP 10.6) |
| 13   | -        | TRANSFER COROTRON CONTACT HOUSING  |
| 14   | -        | BIAS CONTROL PLATE                 |
| 15   | -        | SCREW (3X6)                        |
| 16   | -        | TRANSFER COROTRON PLATE            |
| 17   | -        | SCREW (3X6)                        |
| 18   | 152N1634 | BIAS CONTROL HARNESS               |
| 19   | 152N1636 | TRANSFER COROTRON HARNESS          |
| 20   | 23N597   | MANUAL EXIT DRIVE BELT (REP 8.10)  |
| 21   | -        | CENTER FRAME                       |
| 22   | 3N675    | MANUAL EXIT KNOB                   |
| 23   | 152N1626 | FUSER JAM SENSOR HARNESS           |
| 24   | 152N1623 | FUSER HEAT ROD HARNESS (100V)      |
| -    | 152N1660 | (230V)                             |
| 25   | -        | HARNESS GUIDE                      |
| 26   | -        | GUIDE PIN                          |
| 27   | 152N1627 | DVS HARNESS                        |
| 28   | -        | SCREW (3X6)                        |
| 29   | -        | SCREW (3X8)                        |
| 30   | -        | SCREW (4X12)                       |



0000010B-SKW

# PL 2.2 MAIN DRIVES ASSEMBLY

| Item | Part     | Description                                  |
|------|----------|--|
| 1    | 5N602    | MAIN DRIVE ASSEMBLY (REP 8.12)               |
| 2    | 127N969  | MAIN DRIVE MOTOR (MOT 1) (REP 4.1)           |
| 3    | -        | SPRING                                       |
| 4    | -        | GEAR   |
| 5    | -        | PULLEY                                       |
| 6    | 7N705    | GEAR (28T)                                   |
| 7    | 7N704    | GEAR (46/16T)                                |
| 8    | 7N708    | GEAR (30/15T)                                |
| 9    | 7N701    | DRIVE GEAR ASSEMBLY                          |
| 10   | 7N709    | GEAR (37/15T)                                |
| 11   | 7N702    | GEAR (68/26T)                                |
| 12   | 7N710    | COUPLING GEAR (34T)                          |
| 13   | 7N713    | RATCHET GEAR (21T)                           |
| 14   | 7N712    | RATCHET GEAR (28T)                           |
| 15   | -        | SPRING                                       |
| 16   | 7N703    | GEAR (55/19T)                                |
| 17   | 7N711    | GEAR (33/20/15T)                             |
| 18   | 7N706    | GEAR (20T)                                   |
| 19   | 7N707    | GEAR (31/17T)                                |
| 20   | -        | MAIN DRIVE BRACKET                           |
| 21   | -        | SCREW (3X4)                                  |
| 22   | 121N400  | PAPER FEED SOLENOID (SOL 1) (REP 8.1)        |
| 23   | -        | SPRING                                       |
| 24   | -        | PAWL   |
| 25   | 121N401  | REGISTRATION ROLL SOLENOID (SOL 3) (REP 8.2) |
| 26   | -        | PAWL   |
| 27   | -        | SCREW (3X10)                                 |
| 28   | 152N1633 | MAIN MOTOR HARNESS                           |
| 29   | -        | SCREW (4X6)                                  |

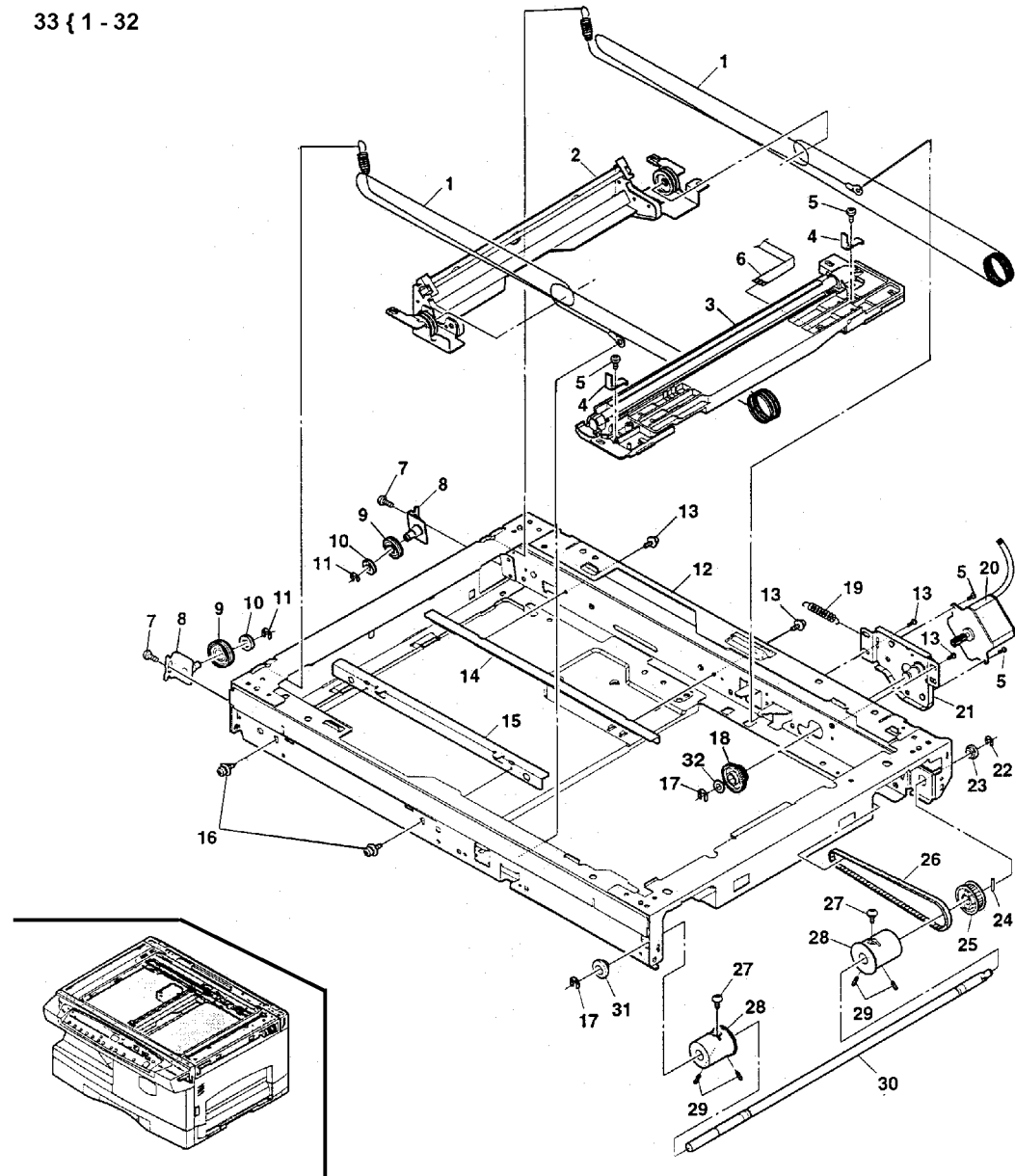


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# PL 3.1 OPTICS FRAME (1 OF 2)

| Item | Part     | Description                        |
|------|----------|------------------------------------|
| 1    | 12N105   | SCAN CABLE                         |
| 2    | -        | HALF RATE CARRIAGE ASSEMBLY        |
| 3    | 62N139   | EXPOSURE LAMP CARRIAGE (REP 6.2)   |
| 4    | -        | CABLE CLAMP                        |
| 5    | -        | SCREW (3X5)                        |
| 6    | 152N1631 | EXPOSURE LAMP HARNESS              |
| 7    | -        | SCREW                              |
| 8    | -        | PULLEY STUD PLATE                  |
| 9    | -        | PULLEY                             |
| 10   | -        | PULLEY                             |
| 11   | -        | E-RING                             |
| 12   | -        | OPTICS FRAME                       |
| 13   | -        | SCREW (3X8)                        |
| 14   | -        | SCAN RAIL (REAR)                   |
| 15   | -        | SCAN RAIL (FRONT)                  |
| 16   | -        | SCREW                              |
| 17   | -        | E-RING                             |
| 18   | 7N694    | SCAN DRIVE GEAR/PULLEY             |
| 19   | -        | MOTOR TENSION SPRING               |
| 20   | 127N970  | SCAN DRIVE MOTOR (MOT 2) (REP 6.3) |
| 21   | -        | SCAN DRIVE MOTOR MOUNTING PLATE    |
| 22   | -        | E-RING                             |
| 23   | -        | BEARING                            |
| 24   | -        | SPRING PIN (3MM)                   |
| 25   | -        | SCAN DRIVE PULLEY                  |
| 26   | 64N25    | SCAN DRIVE BELT                    |
| 27   | -        | SCREW (3X4)                        |
| 28   | -        | SCAN CABLE HUB                     |
| 29   | -        | SCREW (4X6)                        |
| 30   | -        | SCAN CABLE DRIVE SHAFT             |
| 31   | -        | BEARING                            |
| 32   | -        | WASHER                             |
| 33   | -        | OPTICS FRAME ASSEMBLY (REP 6.6)    |

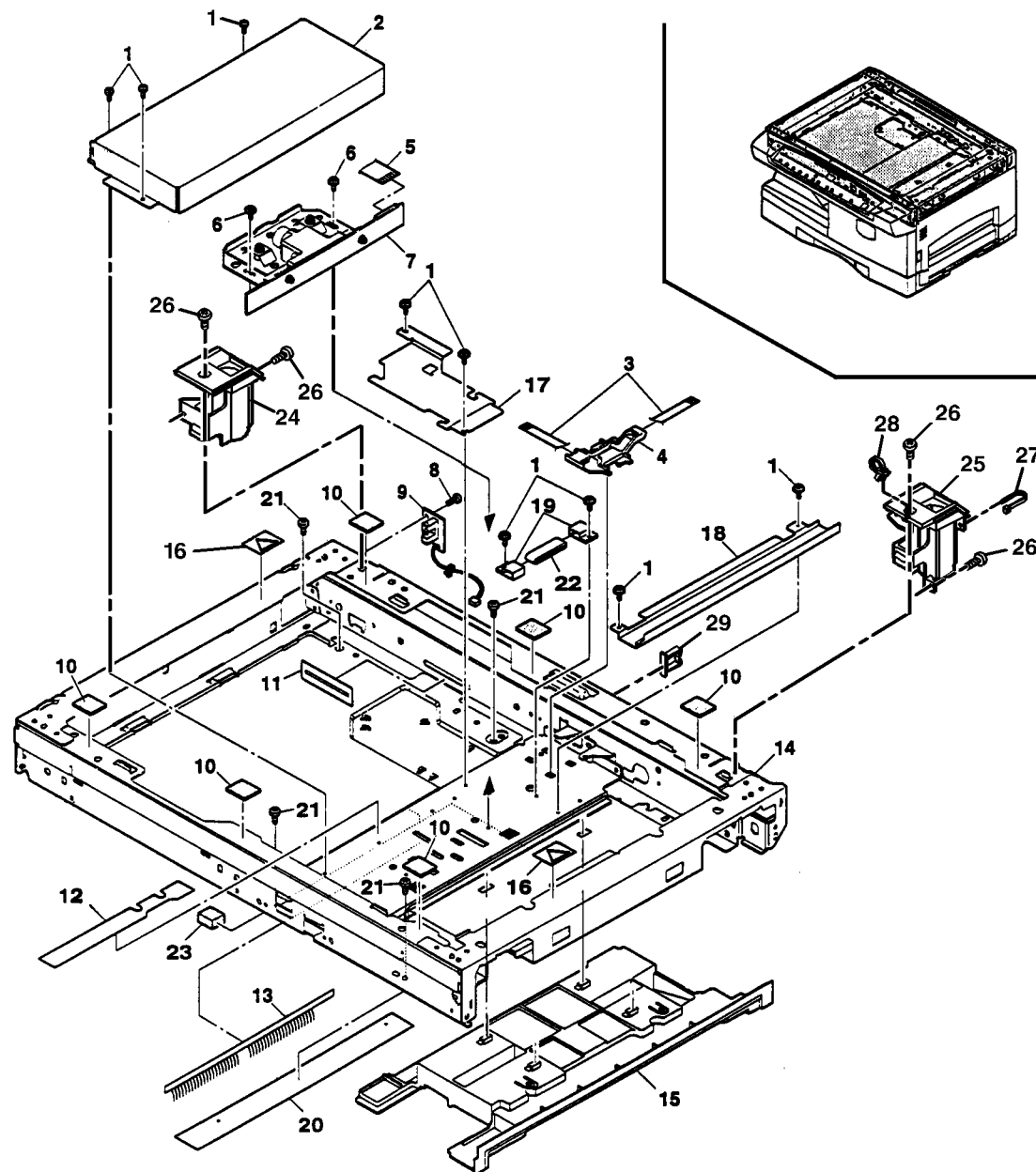
33 { 1 - 32



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## PL 3.2 OPTICS FRAME (XD120F) (2 OF 2)

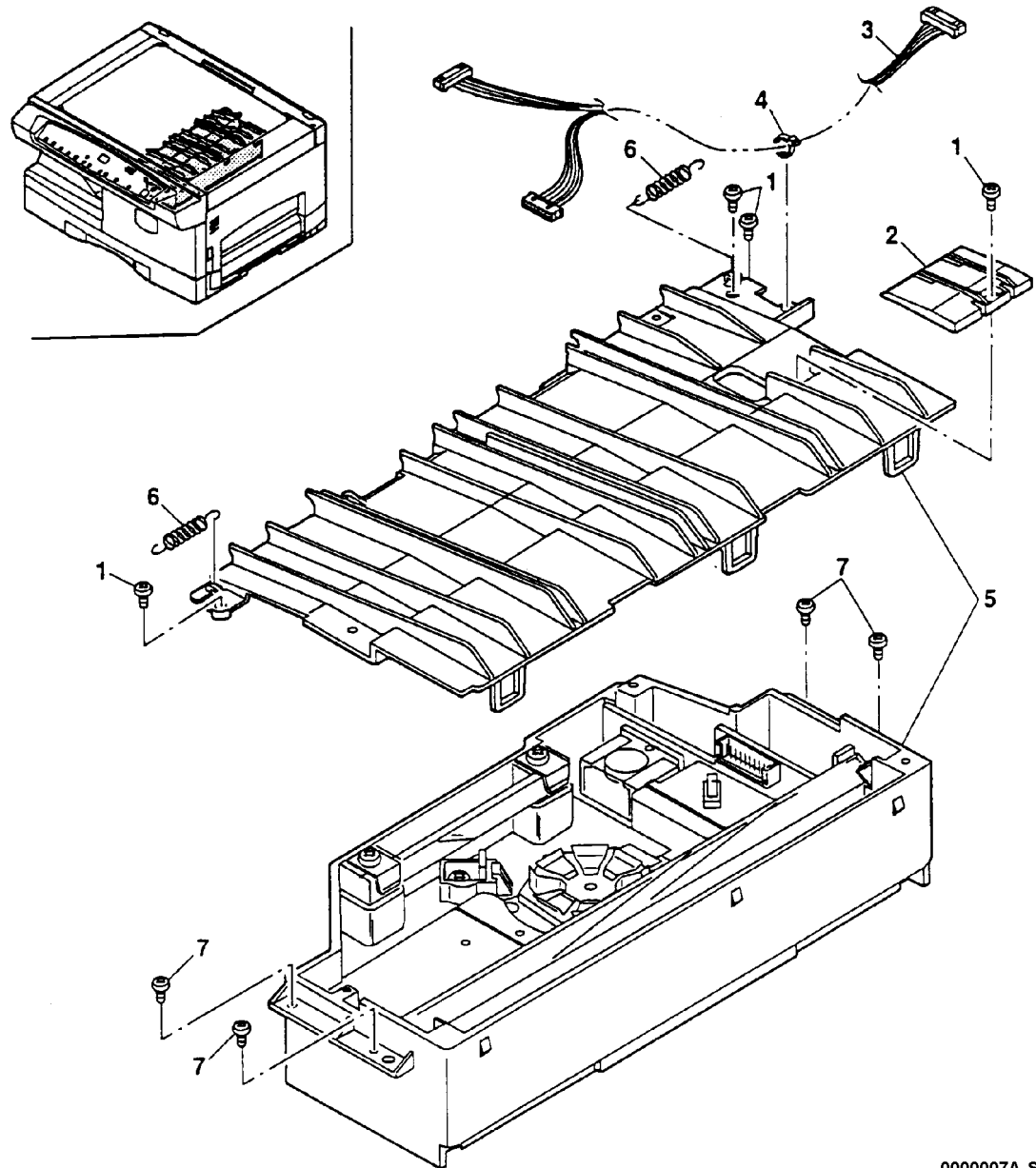
| Item | Part     | Description                    |
|------|----------|--------------------------------|
| 1    | —        | SCREW (3X8)                    |
| 2    | —        | LENS COVER                     |
| 3    | 152N1631 | EXPOSURE LAMP HARNESS          |
| 4    | —        | HARNESS GUIDE                  |
| 5    | 152N1632 | CCD HARNESS                    |
| 6    | —        | SCREW                          |
| 7    | 62N141   | LENS/CCD MODULE (REP 6.5)      |
| 8    | —        | SCREW (3X8)                    |
| 9    | 140N5112 | SCAN HOME SENSOR (Q5)          |
| 10   | —        | DOCUMENT GLASS CUSHION         |
| 11   | —        | RIBBON GUIDE                   |
| 12   | —        | PROTECTOR SHEET                |
| 13   | 115N273  | DISCHARGE BRUSH                |
| 14   | —        | OPTICS FRAME GUIDE             |
| 15   | —        | UPPER DUPLEX PAPER GUIDE       |
| 16   | 96E90830 | CAUTION LABEL                  |
| 17   | —        | CCD HARNESS COVER              |
| 18   | —        | CCD PWB COVER                  |
| 19   | —        | FERRITE HOLDER                 |
| 20   | —        | LOWER SHEET                    |
| 21   | —        | SCREW (4X12)                   |
| 22   | —        | FERRITE                        |
| 23   | —        | CUSHION                        |
| 24   | 3N684    | SDF LEFT HINGE GUIDE (XD120F)  |
| 25   | 3N685    | SDF RIGHT HINGE GUIDE (XD120F) |
| 26   | —        | SCREW (3X8) (XD120F)           |
| 27   | —        | WIRE BAND (XD120F)             |
| 28   | —        | BAND (PLT1M) (XD120F)          |
| 29   | —        | WIRE HOLDER (LWS-1M) (XD120F)  |



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## PL 3.3 LASER ASSEMBLY

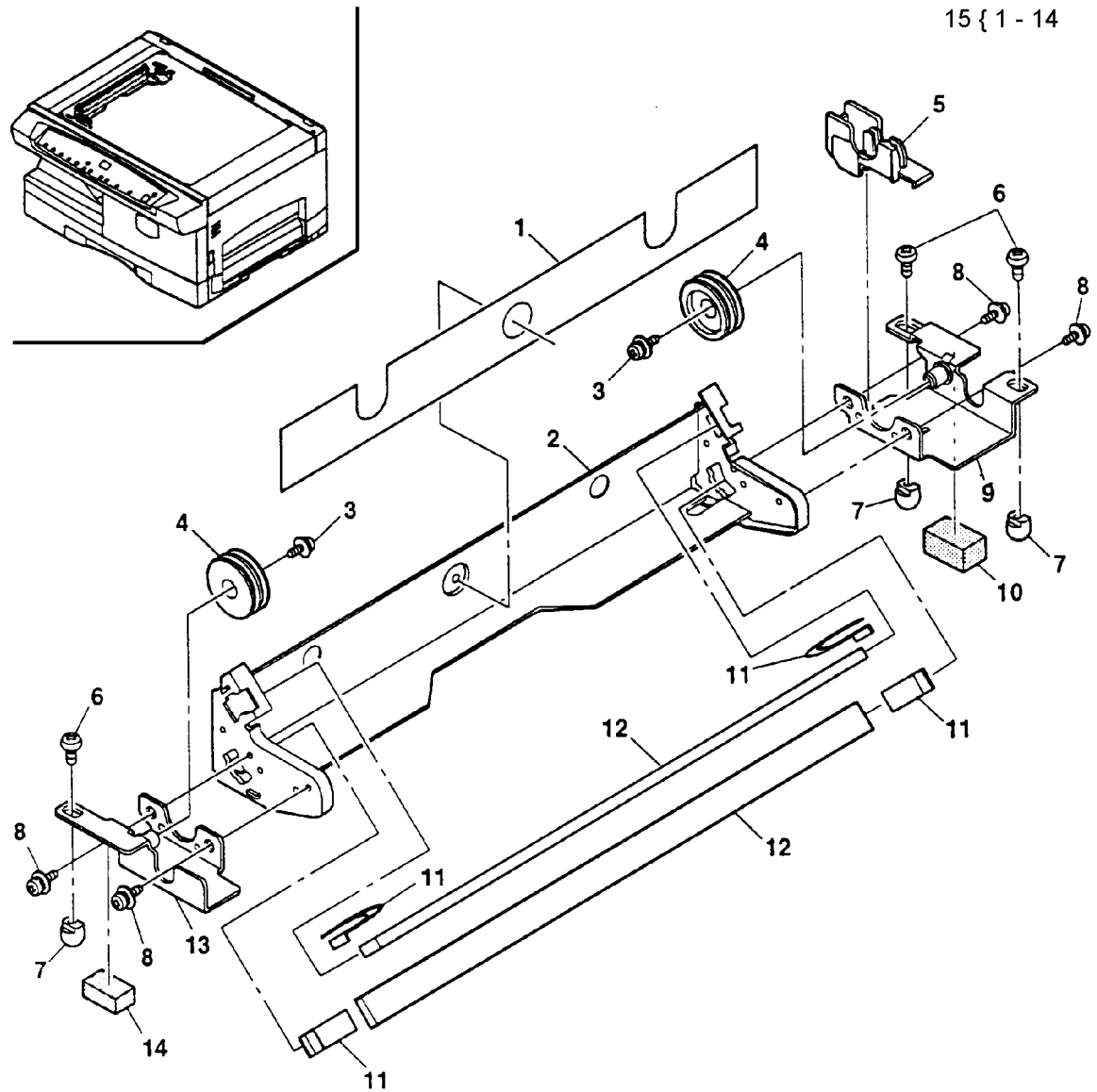
| Item | Part     | Description            |
|------|----------|------------------------|
| 1    | -        | SCREW (3X6)            |
| 2    | -        | LASER HARNESS COVER    |
| 3    | 152N1628 | LASER HARNESS          |
| 4    | -        | TIE WRAP               |
| 5    | 62N142   | LASER MODULE (REP 6.4) |
| 6    | -        | SPRING                 |
| 7    | -        | SCREW                  |



000007A-SKW

# PL 3.4 HALF RATE CARRIAGE ASSEMBLY

| Item | Part     | Description                 |
|------|----------|-----------------------------|
| 1    | -        | LIGHT SHIELD                |
| 2    | -        | HALF RATE CARRIAGE          |
| 3    | -        | SCREW (4X6)                 |
| 4    | -        | PULLEY                      |
| 5    | -        | GUIDE                       |
| 6    | -        | SCREW (4X6)                 |
| 7    | 10N64    | SLIDE BUTTON                |
| 8    | -        | SCREW                       |
| 9    | -        | PULLEY BRACKET (REAR)       |
| 10   | 4N188    | CUSHION (REAR)              |
| 11   | 19E26730 | MIRROR CLIP                 |
| 12   | 62N140   | MIRROR                      |
| 13   | -        | PULLEY BRACKET (FRONT)      |
| 14   | 4E8450   | CUSHION (FRONT)             |
| 15   | -        | HALF RATE CARRIAGE ASSEMBLY |



15 { 1 - 14

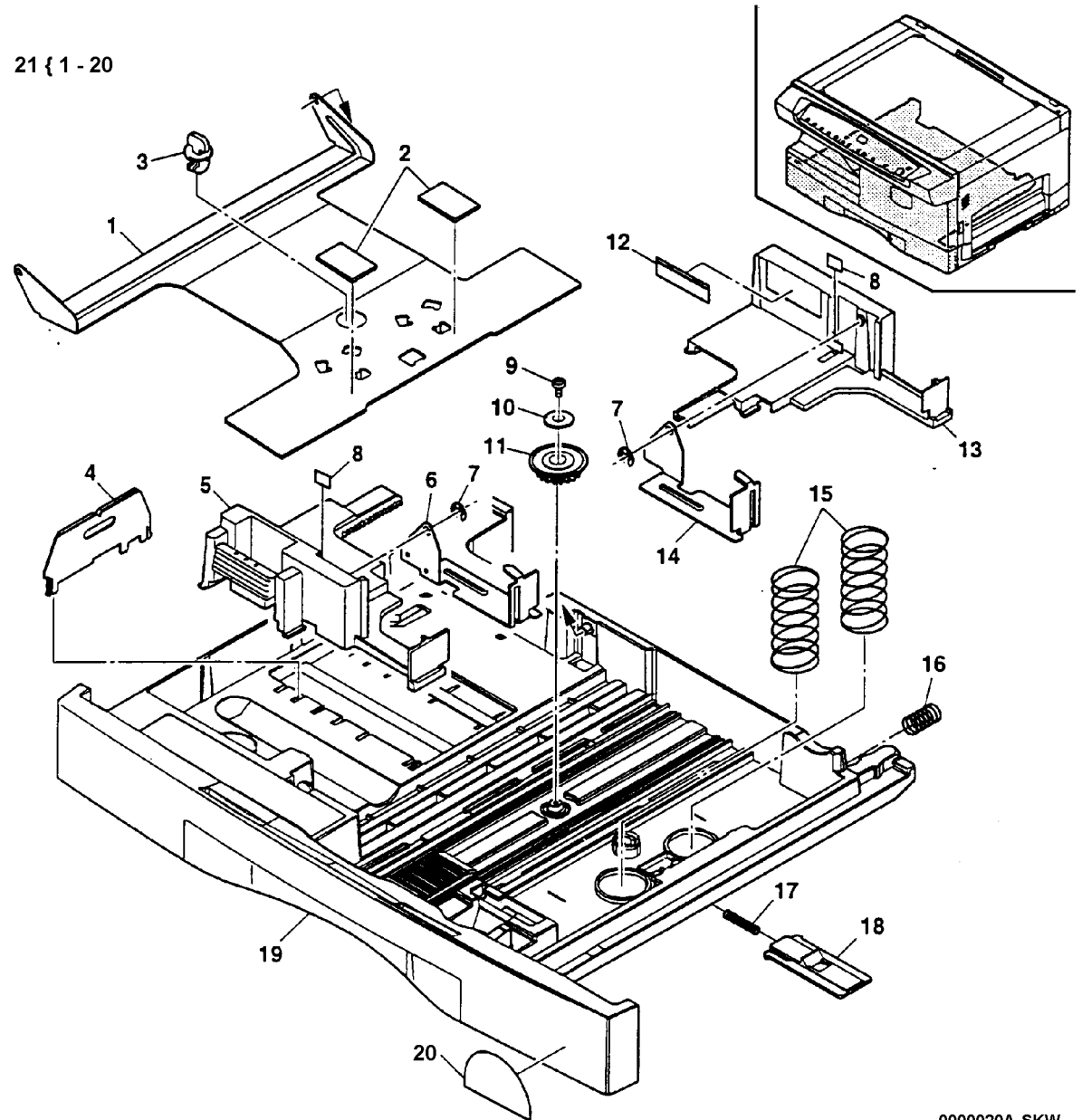
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# PL 4.1 250 SHEET TRAY

| Item | Part      | Description          |
|------|-----------|----------------------|
| 1    | -         | PAPER PRESSURE PLATE |
| 2    | 19E37760  | RETARD PAD           |
| 3    | 120E10520 | PRESSURE PLATE LOCK  |
| 4    | 3E26060   | PAPER SIZE GUIDE     |
| 5    | -         | FRONT PAPER GUIDE    |
| 6    | 19E37850  | FRONT PAPER SNUBBER  |
| 7    | -         | E-RING               |
| 8    | -         | LABEL                |
| 9    | -         | SCREW (3X8)          |
| 10   | -         | WASHER               |
| 11   | -         | GEAR                 |
| 12   | -         | LOAD LABEL           |
| 13   | -         | REAR PAPER GUIDE     |
| 14   | 19E37840  | REAR PAPER SNUBBER   |
| 15   | 809E24950 | LIFT SPRING          |
| 16   | -         | TRAY SPRING          |
| 17   | -         | SPRING               |
| 18   | -         | PLATE RELEASE        |
| 19   | -         | TRAY FRAME           |
| 20   | -         | LABEL                |
| 21   | 50N233    | 250 SHEET PAPER TRAY |

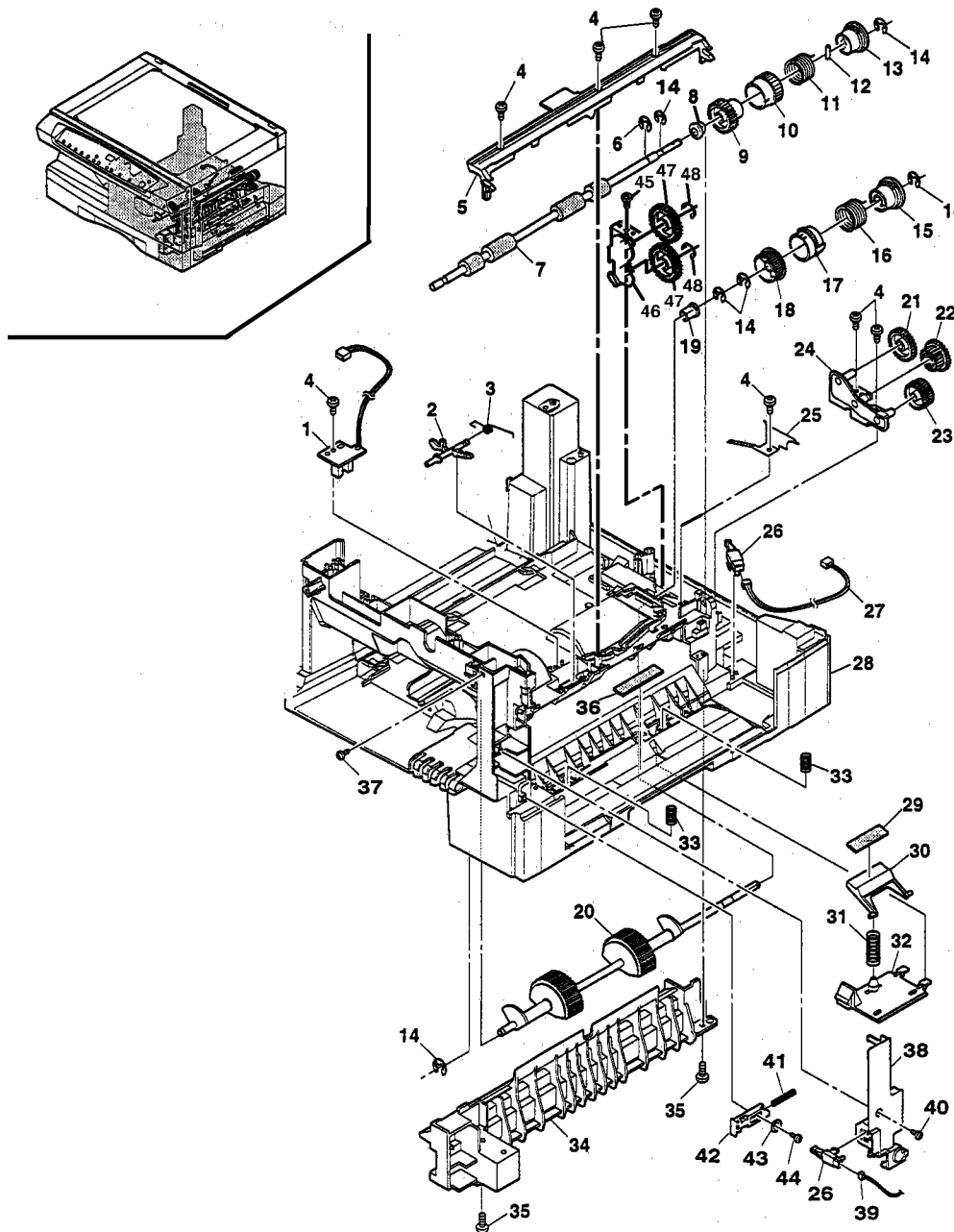
21 { 1 - 20



0000020A-SKW

# PL 5.1 PAPER FEEDING AND DRIVES (XD100/102/104)

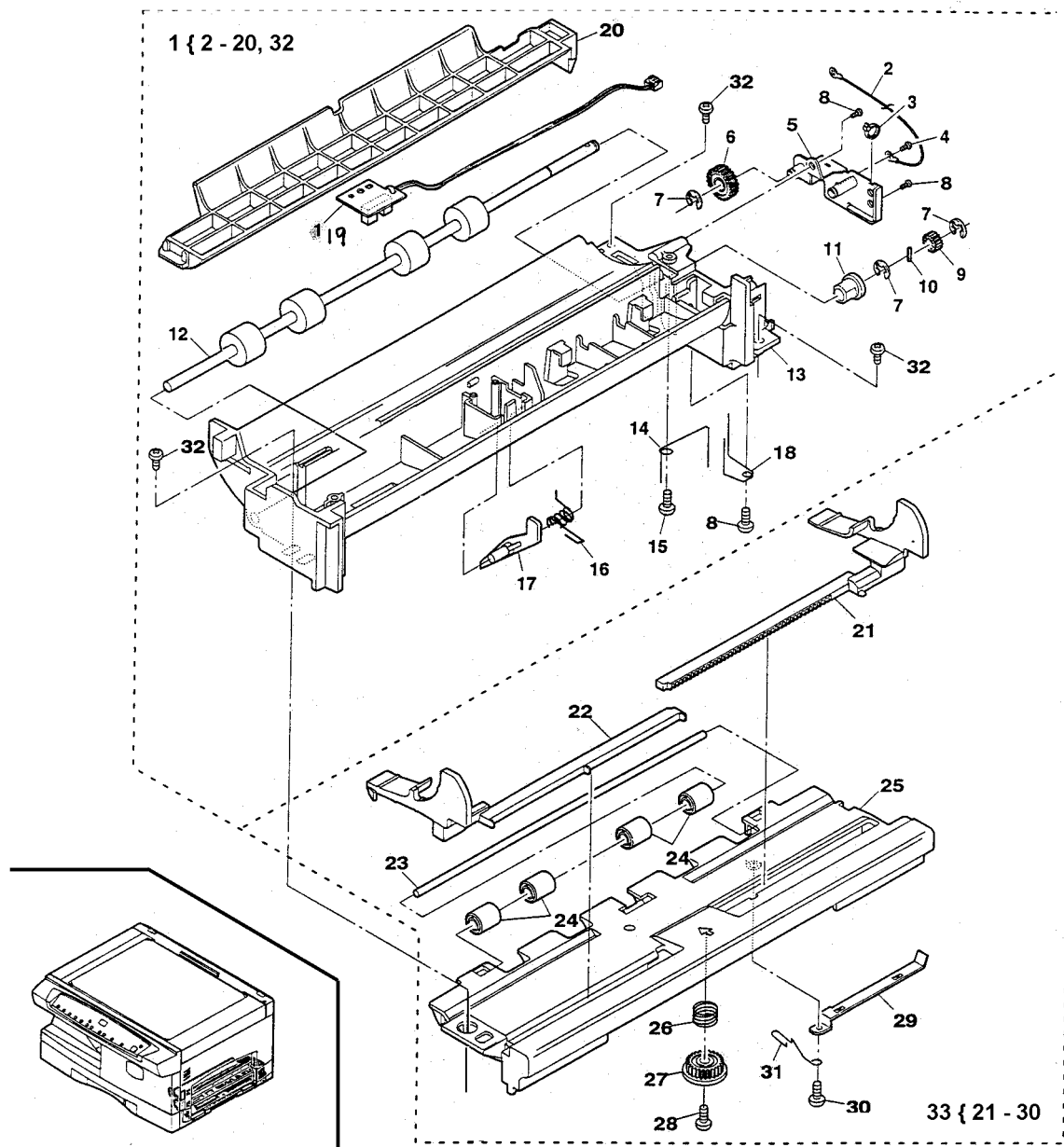
| Item | Part     | Description   |
|------|----------|---|
| 1    | 140N5109 | PAPER FEED SENSOR (Q1) (REP 8.3)                          |
| 2    | 120N276  | SENSOR ACTUATOR   |
| 3    | -        | ACTUATOR SPRING   |
| 4    | -        | SCREW (3X10)  |
| 5    | -        | UPPER FRONT PAPER GUIDE                                   |
| 6    | -        | E-RING  |
| 7    | 22N929   | LOWER REGISTRATION ROLLER (REP 8.13)                      |
| 8    | -        | BEARING   |
| 9    | -        | CLUTCH GEAR (26T)   |
| 10   | 5E9640   | CLUTCH SLEEVE   |
| 11   | -        | CLUTCH SPRING   |
| 12   | -        | SPRING PIN  |
| 13   | -        | CLUTCH BOSS   |
| 14   | -        | E-RING  |
| 15   | 5E4260   | CLUTCH BOSS   |
| 16   | 9E17190  | CLUTCH SPRING   |
| 17   | 16N174   | CLUTCH SLEEVE   |
| 18   | 7E47590  | CLUTCH GEAR (29T)   |
| 19   | 13E12330 | BEARING   |
| 20   | 22N928   | PAPER FEED ROLLER (REP 8.6)                               |
| 21   | 7N698    | GEAR (33T)  |
| 22   | 7N700    | GEAR (21/29T)   |
| 23   | 7N699    | GEAR (30T)  |
| 24   | -        | GEAR SUPPORT BRACKET                                      |
| 25   | -        | GROUNDING PLATE   |
| 26   | 110N817  | TRAY DETECT SWITCH (S2) (REP 8.14) DRUM RESET SWITCH (S6) |
| 27   | 152N1638 | TRAY DETECT SWITCH HARNESS (REP 8.5)                      |
| 28   | -        | BASE FRAME  |
| 29   | 19E15900 | RETARD PAD  |
| 30   | -        | RETARD ARM  |
| 31   | -        | LIFT SPRING   |
| 32   | -        | RETARD SUPPORT PLATE                                      |
| 33   | -        | SPRING (XD100/102)  |
| 34   | -        | PAPER GUIDE   |
| 35   | -        | SCREW (4X12)  |
| 36   | 38E13480 | RETARD PAD (XD104)  |
| 37   | -        | SCREW (3X8)   |
| 38   | -        | SENSOR COVER  |
| 39   | 152N1637 | D-RST HARNESS   |
| 40   | -        | SCREW (3X12)  |
| 41   | 9N970    | FRONT LEVER SPRING  |
| 42   | 3N674    | FRONT LEVER PLATE   |
| 43   | -        | WASHER  |
| 44   | -        | SCREW (3X10)  |
| 45   | -        | SCREW (4X12) (XD120F)                                     |
| 46   | 15N289   | FIXING PLATE (XD120F)                                     |
| 47   | 7E47680  | JOINT GEAR (XD120F)                                       |
| 48   | -        | E-RING (XD120F)   |



0000011B-SKW

# PL 5.2 SINGLE BYPASS (XD100/102)

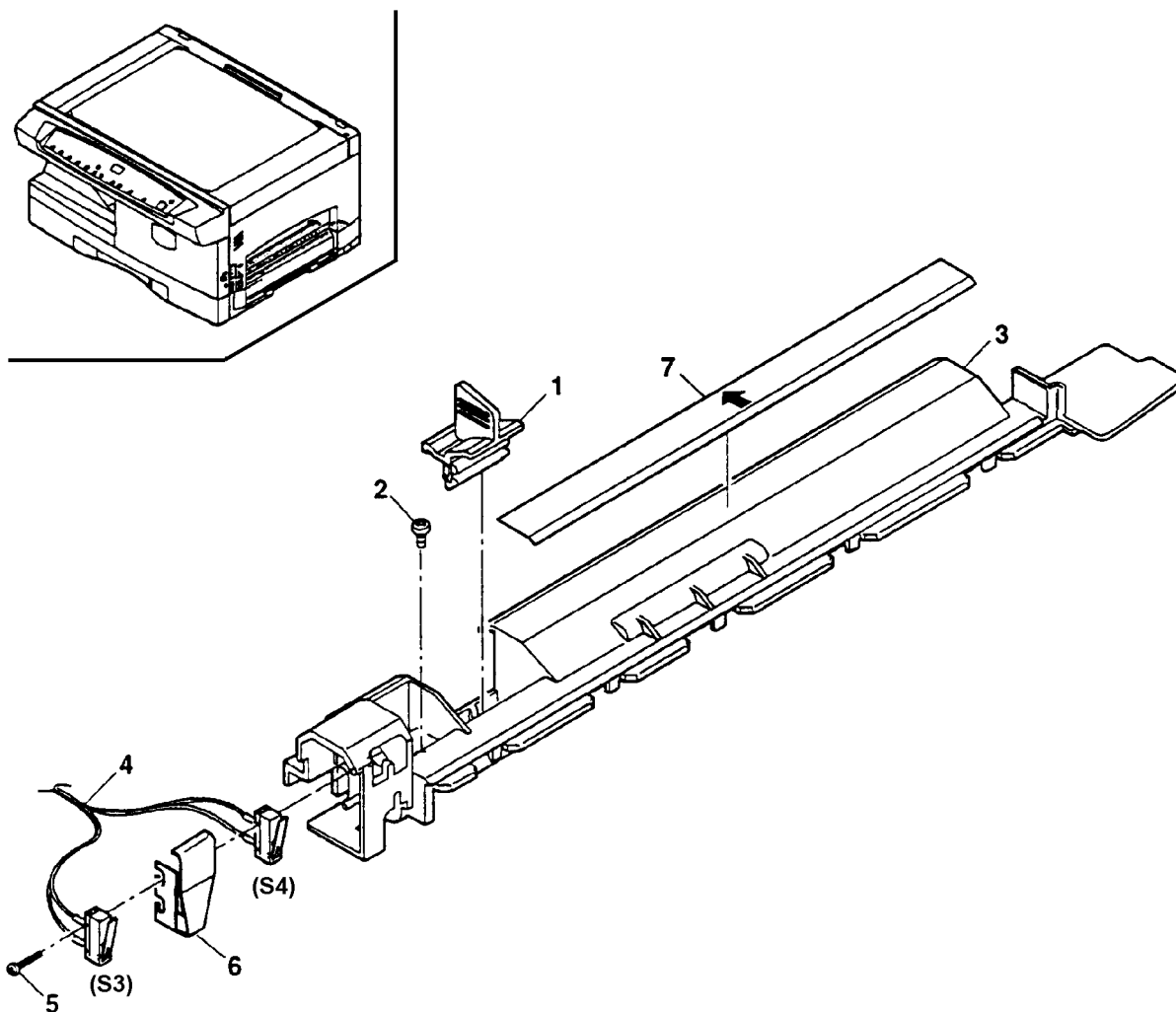
| Item | Part     | Description                          |
|------|----------|--------------------------------------|
| 1    | 22N933   | SINGLE BYPASS ASSEMBLY               |
| 2    | -        | GROUND WIRE                          |
| 3    | -        | TIE WRAP                             |
| 4    | -        | SCREW (3X6)                          |
| 5    | -        | PAPER FEED BRACKET                   |
| 6    | -        | GEAR (27T)                           |
| 7    | -        | E-RING                               |
| 8    | -        | SCREW 3X8                            |
| 9    | -        | GEAR (16T)                           |
| 10   | -        | SPRING PIN                           |
| 11   | -        | BUSHING                              |
| 12   | 22N932   | TRANSPORT ROLLER (REP 8.7)           |
| 13   | -        | BYPASS FRAME                         |
| 14   | -        | GROUNDING SPRING                     |
| 15   | -        | SCREW (3X6)                          |
| 16   | -        | ACTUATOR SPRING                      |
| 17   | 120N277  | ACTUATOR                             |
| 18   | -        | SPRING                               |
| 19   | 140N5106 | BYPASS FEED SENSOR (Q2)<br>(REP 8.4) |
| 20   | -        | DUPLEX UPPER GUIDE                   |
| 21   | -        | SINGLE BYPASS GUIDE (R)              |
| 22   | -        | SINGLE BYPASS GUIDE (F)              |
| 23   | -        | SCREW (3X6)                          |
| 24   | 22E22060 | BYPASS ROLL                          |
| 25   | -        | SINGLE BYPASS FRAME                  |
| 26   | -        | SPRING                               |
| 27   | -        | PAPER FEED GEAR                      |
| 28   | -        | SCREW (3X6)                          |
| 29   | -        | GROUNDING SPRING                     |
| 30   | -        | SCREW (3X6)                          |
| 31   | -        | GROUNDING SPRING                     |
| 32   | -        | SCREW (4X12)                         |
| 33   | 22N930   | SINGLE BYPASS UPPER<br>ASSEMBLY      |



0000013B-SWK

## PL 5.3 SINGLE BYPASS COVER (XD100/102)

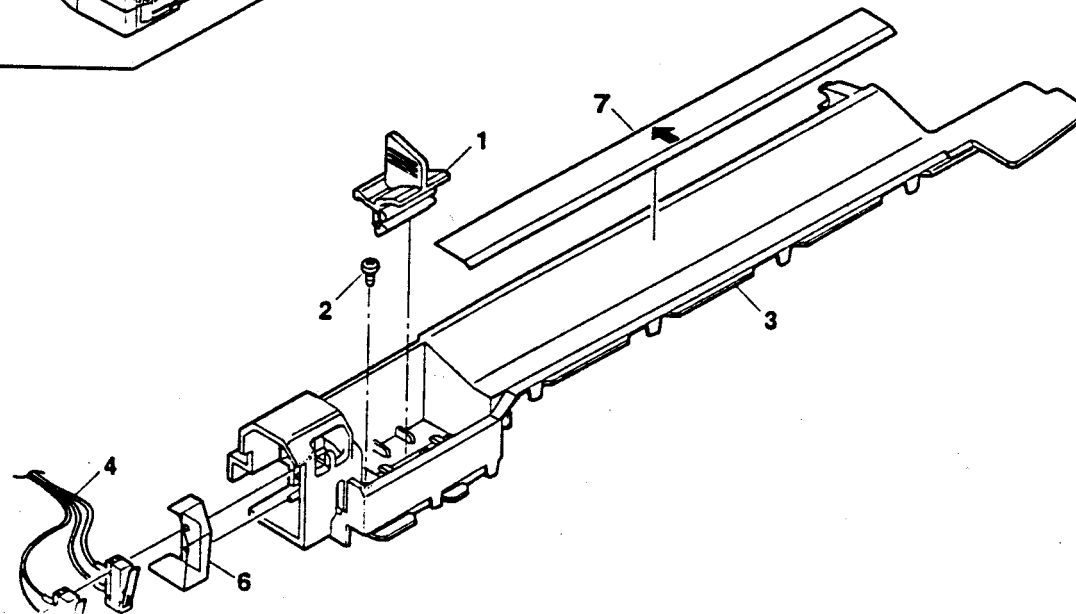
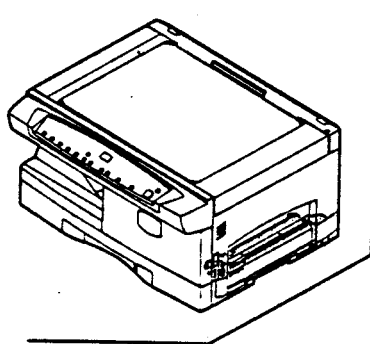
| Item | Part    | Description  |
|------|---------|--|
| 1    | 42E1430 | COROTRON CLEANER   |
| 2    | -       | SCREW  |
| 3    | -       | UPPER COVER  |
| 4    | 110N783 | SIDE DOOR INTERLOCK SWITCH<br>(S3/S4) (24V/5V) (REP 8.8) |
| 5    | -       | SCREW (2X16)   |
| 6    | -       | SWITCH ACTUATOR  |
| 7    | -       | CAUTION LABEL (XL)                                       |



0000017A-SKW

## PL 5.4 MULTISHEET BYPASS COVER (XD104)

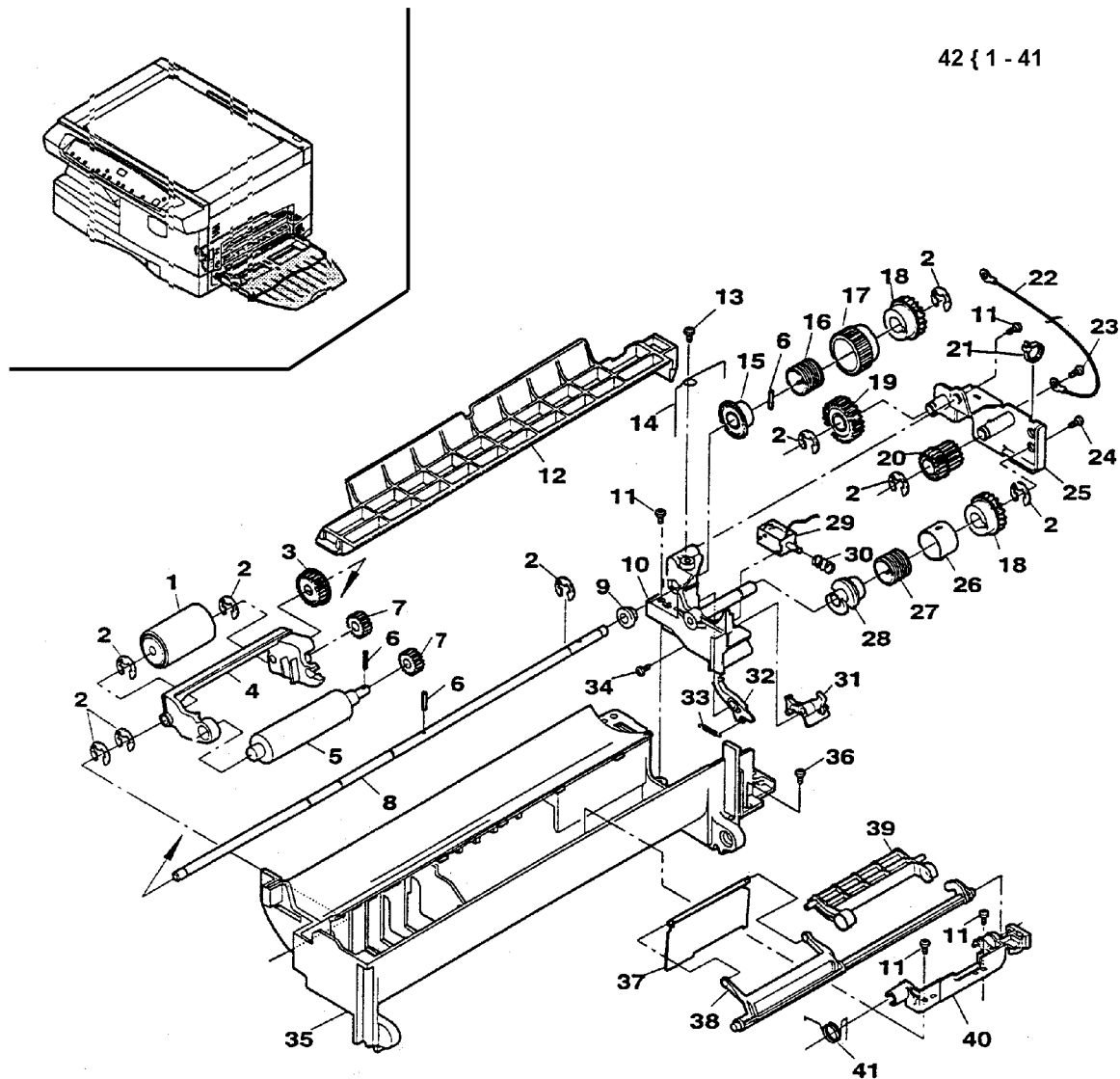
| Item | Part    | Description  |
|------|---------|--|
| 1    | 42E1430 | COROTRON CLEANER   |
| 2    | -       | SCREW  |
| 3    | -       | UPPER COVER  |
| 4    | 110N783 | SIDE DOOR INTERLOCK SWITCH<br>(S3/S4) (24V/5V) (REP 8.8) |
| 5    | -       | SCREW (2X16)   |
| 6    | -       | SWITCH ACTUATOR  |
| 7    | -       | CAUTION LABEL (XL)                                       |



000026A-SKW

# PL 5.5 MULTISHEET BYPASS FEEDER (XD104)

| Item | Part     | Description              |
|------|----------|--------------------------|
| 1    | 5E10560  | FEED ROLL (REP 8.15)     |
| 2    | -        | E-RING                   |
| 3    | -        | GEAR (20T)               |
| 4    | -        | ROLL SUPPORT             |
| 5    | 22E20680 | RETARD ROLL (REP 8.16)   |
| 6    | -        | SPRING PIN               |
| 7    | -        | GEAR (16T)               |
| 8    | -        | SHAFT                    |
| 9    | -        | BUSHING                  |
| 10   | -        | SUPPORT                  |
| 11   | -        | SCREW (3X8)              |
| 12   | -        | UPPER GUIDE              |
| 13   | -        | SCREW (3X6)              |
| 14   | -        | GROUNDING SPRING         |
| 15   | 5E9560   | CLUTCH BOSS              |
| 16   | 9E57550  | FEED CLUTCH SPRING       |
| 17   | 5E9640   | CLUTCH SLEEVE            |
| 18   | 5E9540   | CLUTCH BOSS              |
| 19   | -        | GEAR (27T)               |
| 20   | -        | GEAR (20T)               |
| 21   | -        | TIE WRAP                 |
| 22   | -        | GROUNDING WIRE           |
| 23   | -        | SCREW (3X6)              |
| 24   | -        | SCREW (3X6)              |
| 25   | -        | SUPPORT PLATE            |
| 26   | -        | CLUTCH SLEEVE            |
| 27   | -        | CLUTCH SPRING            |
| 28   | -        | CLUTCH BOSS              |
| 29   | 121N402  | FEED SOLENOID (REP 8.17) |
| 30   | -        | SOLENOID SPRING          |
| 31   | -        | RATCHET ARM              |
| 32   | -        | RATCHET ARM              |
| 33   | -        | SPRING                   |
| 34   | -        | SCREW (3X8)              |
| 35   | -        | FRAME                    |
| 36   | -        | SCREW (4X12)             |
| 37   | -        | GATE                     |
| 38   | -        | SUPPORT FRAME            |
| 39   | -        | ARM                      |
| 40   | -        | HINGE                    |
| 41   | -        | SPRING                   |
| 42   | -        | FEEDER ASSEMBLY          |



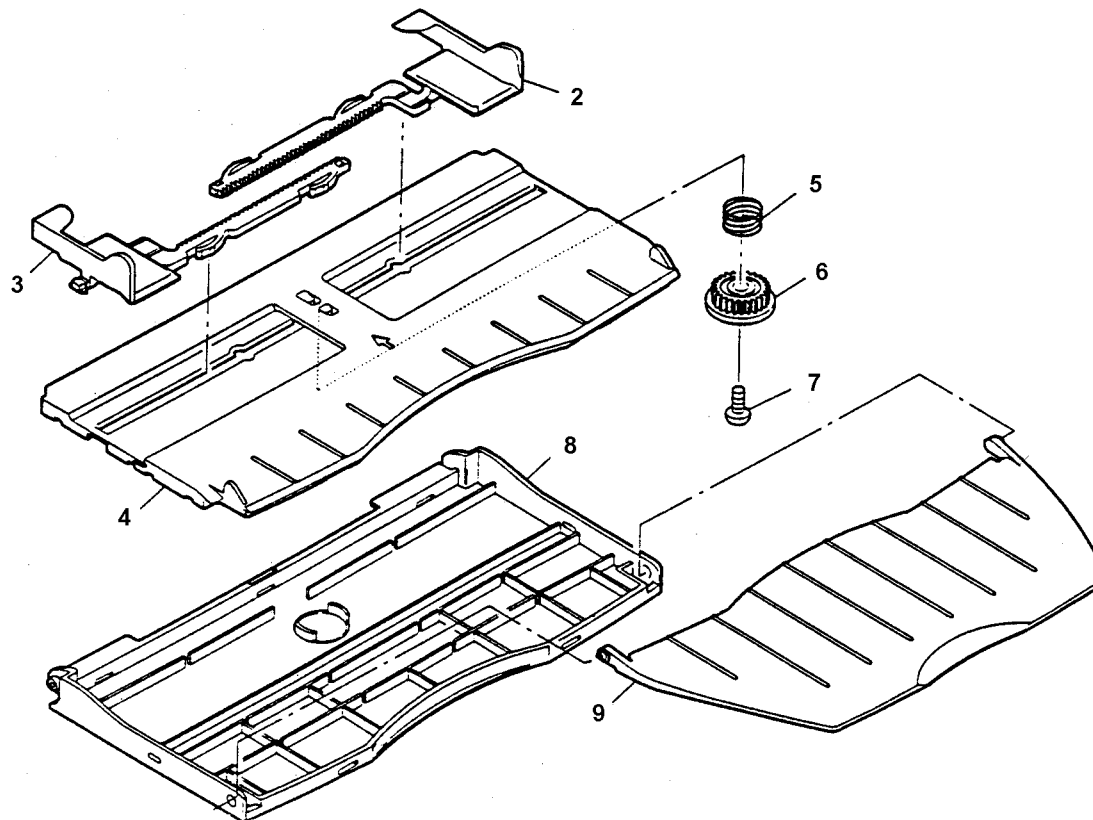
42 { 1 - 41

000023A-SKW

# PL 5.6 MULTISHEET BYPASS TRAY (XD104)

| Item | Part | Description    |
|------|------|----------------|
| 1    | -    | TRAY ASSEMBLY  |
| 2    | -    | REAR GUIDE     |
| 3    | -    | FRONT GUIDE    |
| 4    | -    | TRAY COVER     |
| 5    | -    | SPRING         |
| 6    | -    | GEAR           |
| 7    | -    | SCREW (3X6)    |
| 8    | -    | TRAY BASE      |
| 9    | -    | TRAY EXTENSION |

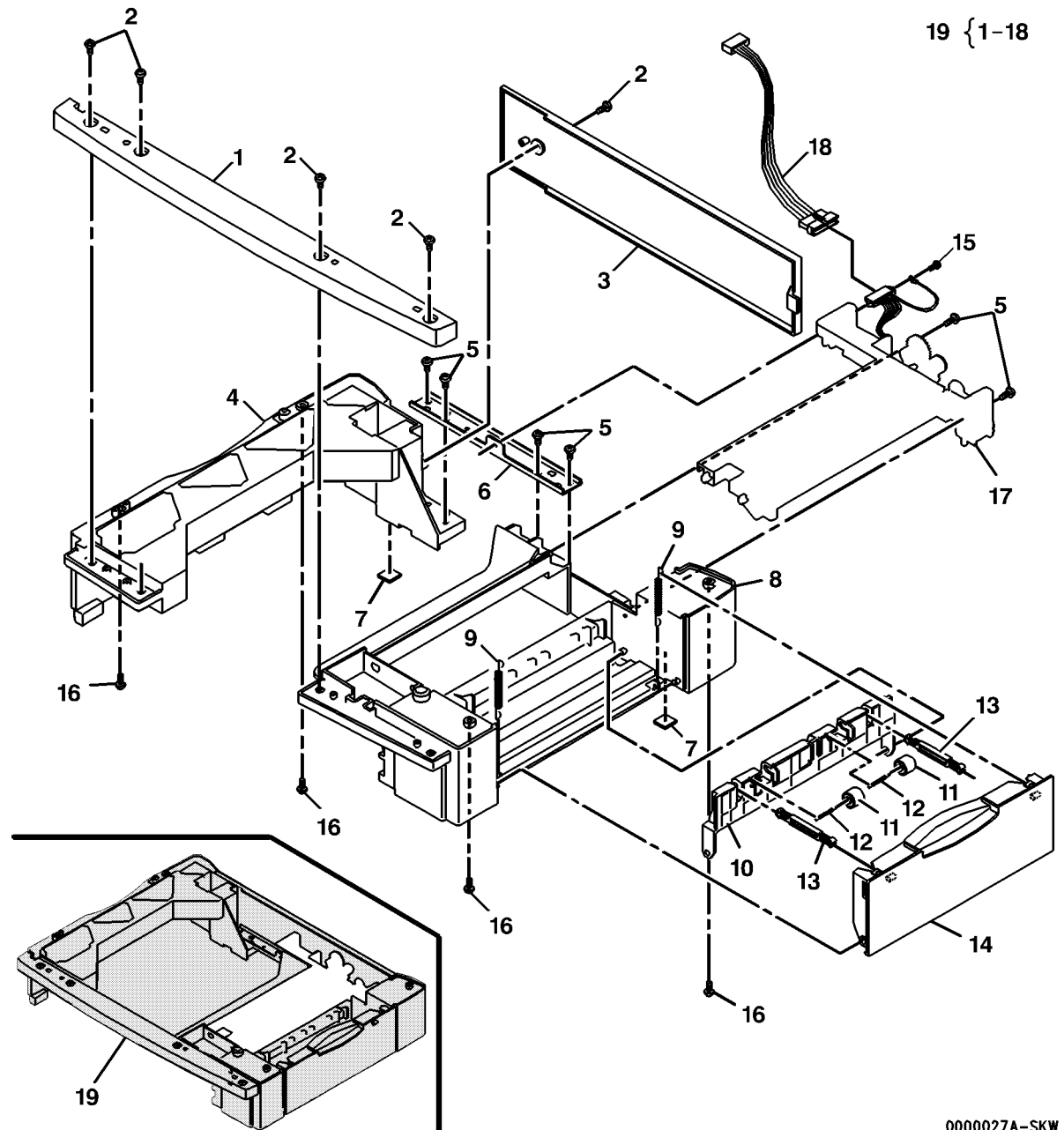
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0000024A-SKW

# PL 5.7 TRAY 2 FRAME ASSEMBLY (XD120F)

| Item | Part      | Description            |
|------|-----------|------------------------|
| 1    | -         | FRONT COVER            |
| 2    | -         | SCREW (4X12)           |
| 3    | -         | REAR COVER             |
| 4    | -         | LEFT TRAY GUIDE        |
| 5    | -         | SCREW (4X12)           |
| 6    | -         | REAR TIE PLATE         |
| 7    | 17E8540   | RUBBER FOOT            |
| 8    | -         | RIGHT TRAY GUIDE       |
| 9    | 809E11980 | TRANSPORT COVER SPRING |
| 10   | -         | TRANSPORT COVER        |
| 11   | 22N970    | IDLER ROLLER           |
| 12   | 9N1003    | IDLER SPRING           |
| 13   | 31N159    | ARM                    |
| 14   | -         | LOWER SIDE DOOR        |
| 15   | -         | SCREW (4X8)            |
| 16   | -         | SCREW (3X16)           |
| 17   | -         | TRAY 2 FEED ASSEMBLY   |
| 18   | 152N1655  | TRAY 2 HARNESS         |
| 19   | 50N256    | 250 CASSETTE ASSEMBLY  |



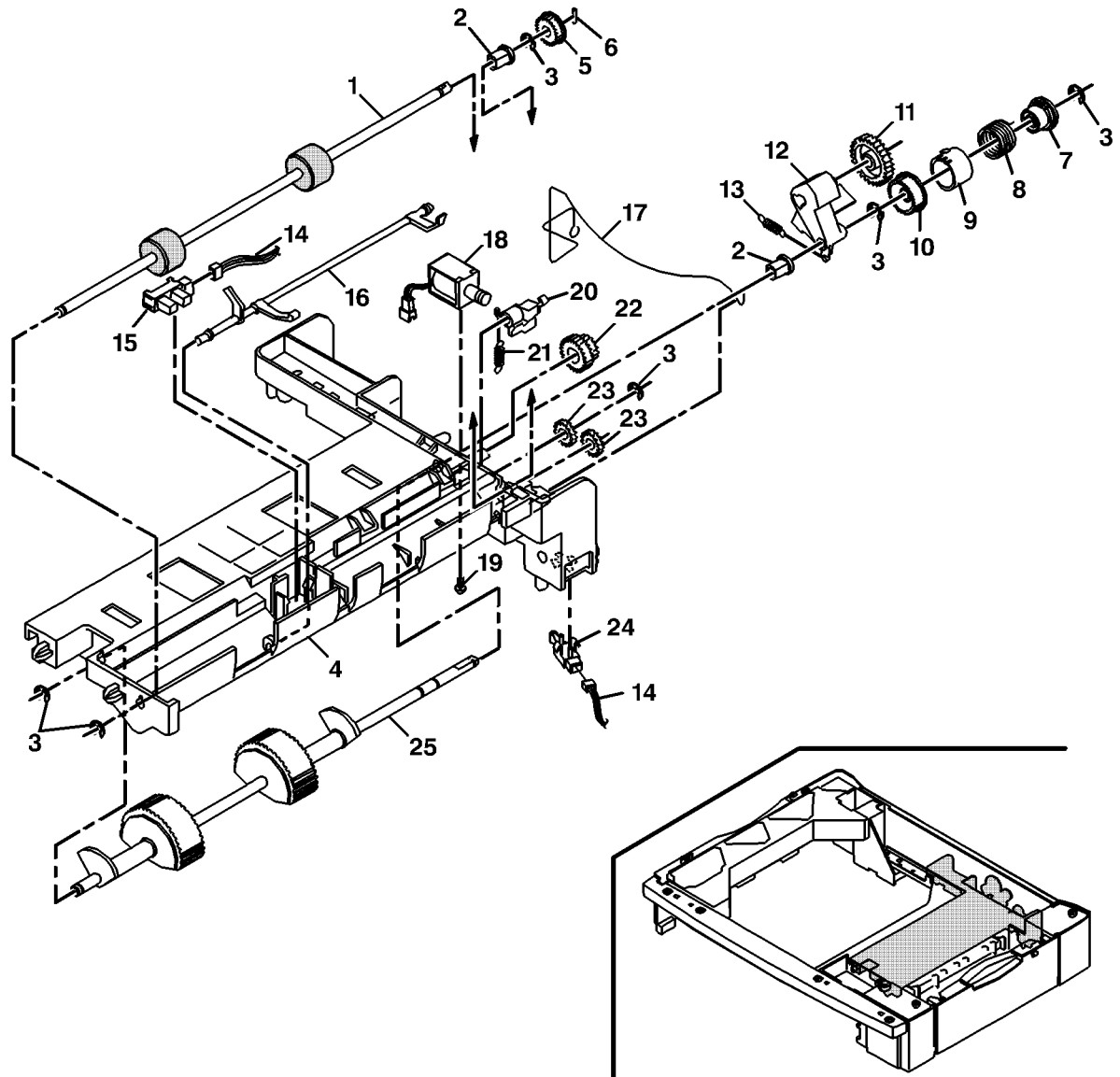
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# PL 5.8 TRAY 2 PAPER FEED ASSEMBLY (XD120F)

26 { 1-25

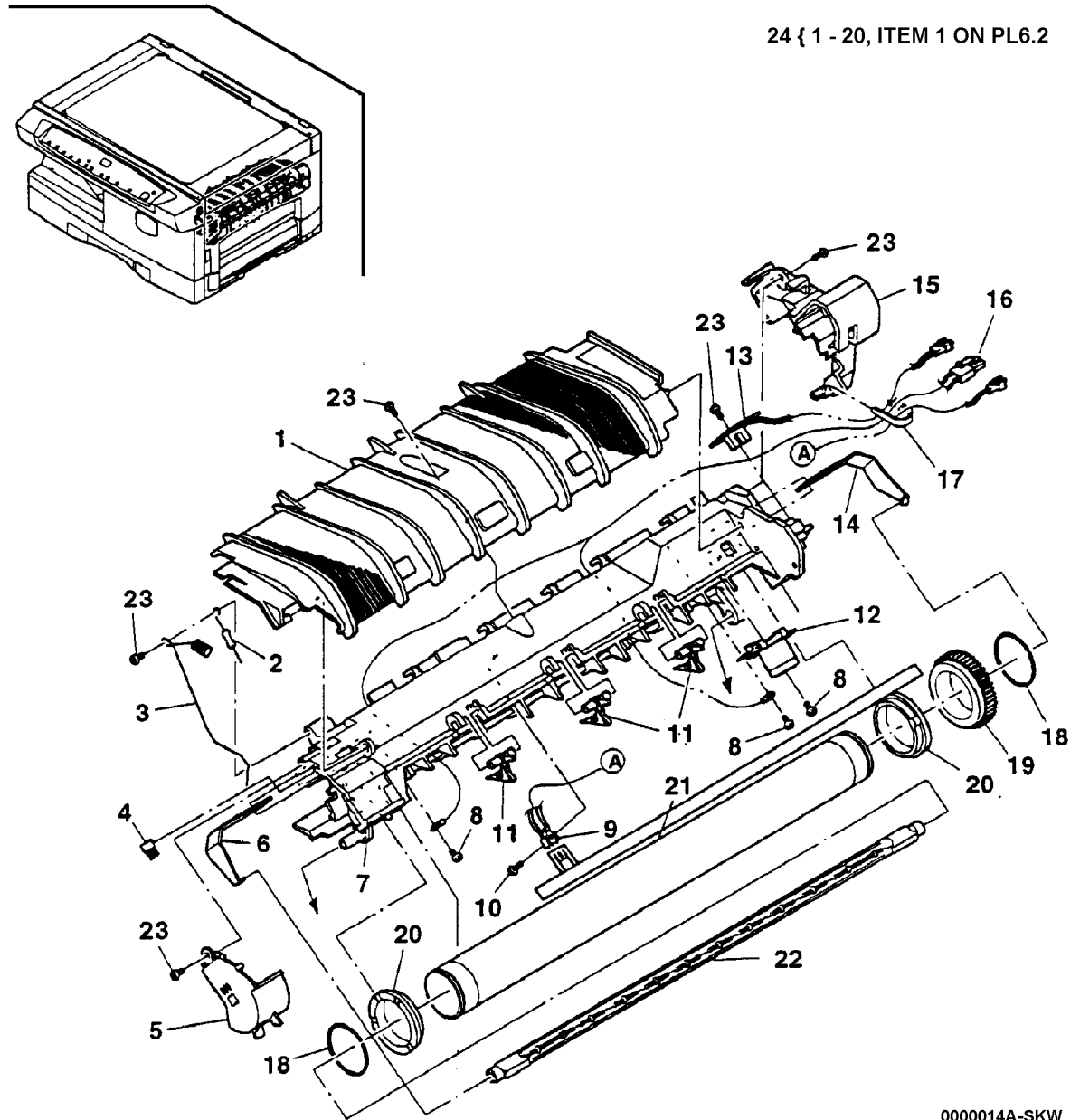
| Item | Part      | Description                                   |
|------|-----------|---|
| 1    | 22N980    | TRAY 2 TRANSPORT ROLLER (REP 8.23)            |
| 2    | 13E12360  | BEARING (B-F5-13)                             |
| 3    | -         | E-RING  |
| 4    | -         | DRIVE FRAME                                   |
| 5    | 7E29480   | GEAR (20T)                                    |
| 6    | 29N182    | SPRING PIN                                    |
| 7    | 5E4260    | CLUTCH BOSS                                   |
| 8    | 9E17190   | CLUTCH SPRING                                 |
| 9    | -         | CLUTCH SLEEVE                                 |
| 10   | 7E47590   | CLUTCH GEAR (29T) (REP 8.24)                  |
| 11   | 7E47670   | GEAR (40)                                     |
| 12   | 31E8940   | ARM   |
| 13   | 809E12000 | SPRING  |
| 14   | -         | TRAY 2 HARNESS                                |
| 15   | 110E5370  | TRAY 2 PAPER FEED SENSOR (Q7) (REP 8.20)      |
| 16   | 120N287   | ACTUATOR                                      |
| 17   | 9N1016    | GROUND SPRING                                 |
| 18   | 121N411   | TRAY 2 PAPER FEED SOLENOID (SOL 2) (REP 8.22) |
| 19   | -         | SCREW (3X6)                                   |
| 20   | 7N742     | CLUTCH PAWL                                   |
| 21   | 809E12010 | CLUTCH PAWL SPRING                            |
| 22   | 7N743     | GEAR (18/26T)                                 |
| 23   | 7E29490   | GEAR (16T)                                    |
| 24   | 110N817   | TRAY 2 DETECT SWITCH (S5) (REP 8.21)          |
| 25   | 22N928    | TRAY 2 FEED ROLLER (REP 8.25)                 |
| 26   | -         | TRAY 2 FEED ASSEMBLY                          |



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## PL 6.1 FUSING (1 OF 2)

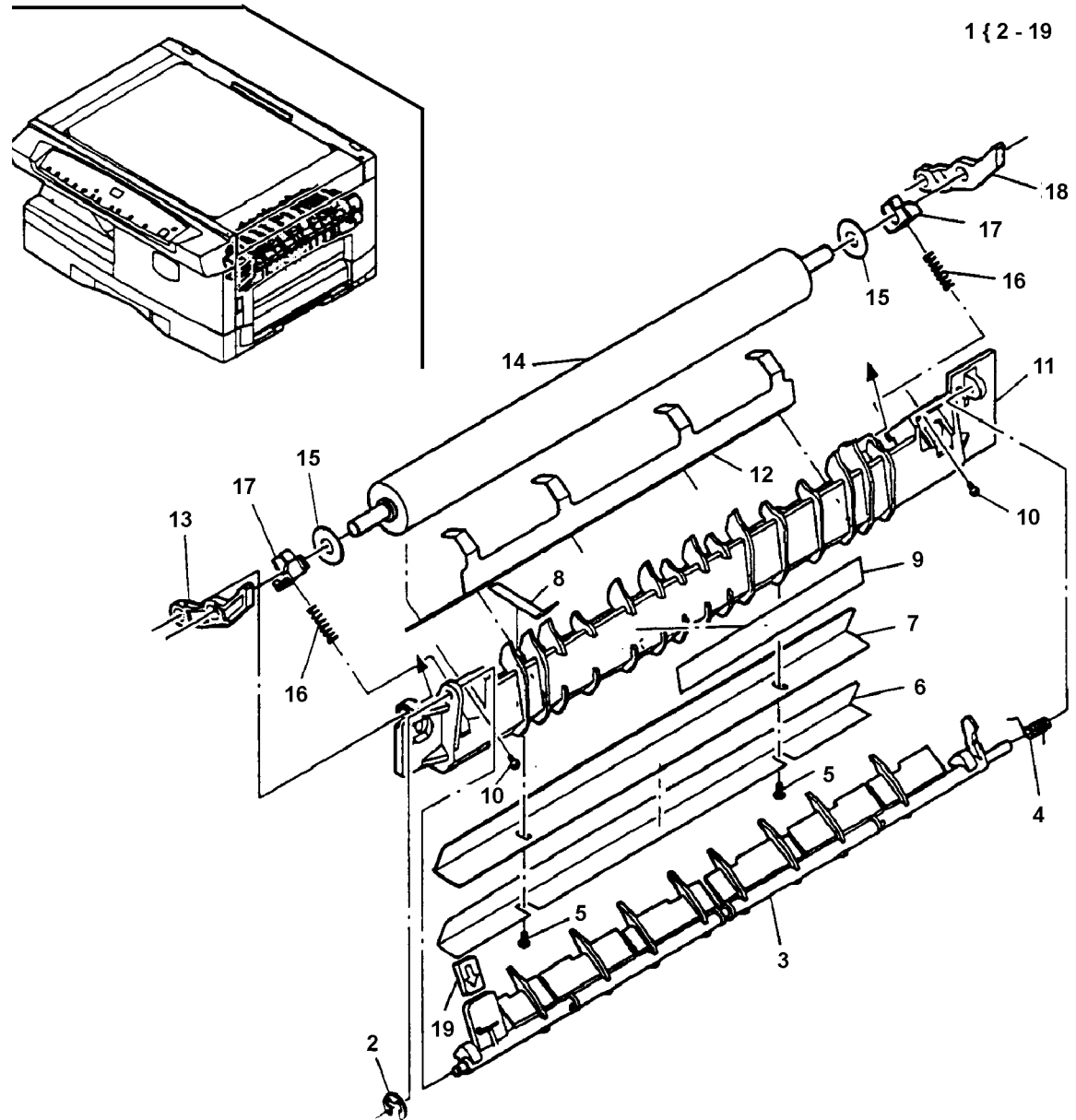
| Item | Part     | Description                      |
|------|----------|----------------------------------|
| 1    | -        | PAPER GUIDE (REP 10.10)          |
| 2    | -        | RESISTOR (1/2 W)                 |
| 3    | -        | GROUND WIRE                      |
| 4    | -        | DISCHARGE BRUSH                  |
| 5    | -        | END COVER                        |
| 6    | -        | HEAT ROD SPRING (F)              |
| 7    | -        | FUSER UPPER FRAME                |
| 8    | -        | SCREW (3X6)                      |
| 9    | 130E7840 | THERMISTOR (RT1) (REP 10.4)      |
| 10   | -        | SCREW (3X10)                     |
| 11   | 7N695    | STRIPPER FINGER (REP 10.11)      |
| 12   | 130E9190 | THERMOSTAT (REP 10.9)            |
| 13   | 140N5110 | FUSER JAM SENSOR (Q3) (REP 10.5) |
| 14   | -        | HEAT ROD SPRING (R)              |
| 15   | -        | END COVER (R)                    |
| 16   | 152N1624 | FUSER ASSEMBLY HARNESS (100V)    |
| -    | 152N1661 | HARNESS (230V)                   |
| 17   | -        | TIE WRAP                         |
| 18   | -        | RETAINING RING                   |
| 19   | 7E14961  | DRIVE GEAR (45T)                 |
| 20   | 13E12780 | BEARING                          |
| 21   | 22E23440 | HEAT ROLL (REP 10.2)             |
| 22   | 122N115  | HEAT ROD (120V) (REP 10.8)       |
| -    | 122N133  | HEAT ROD (230V) (REP 10.8)       |
| 23   | -        | SCREW                            |
| 24   | 126N58   | FUSER ASSEMBLY (120V) (REP 10.1) |
| -    | 126N70   | FUSER ASSEMBLY (230V) (REP 10.1) |



0000014A-SKW

## PL 6.2 FUSING (2 OF 2)

| Item | Part   | Description                         |
|------|--------|-------------------------------------|
| 1    | —      | FUSER ASSEMBLY (P/O PL 6.1 item 24) |
| 2    | —      | E-RING                              |
| 3    | 38N230 | FUSER GATE (REP 10.12)              |
| 4    | —      | GATE SPRING                         |
| 5    | —      | SCREW                               |
| 6    | —      | FRONT PAPER GUIDE SHEET             |
| 7    | —      | FRONT PAPER GUIDE                   |
| 8    | —      | GROUNDING STRAP                     |
| 9    | —      | HIGH TEMP CAUTION LABEL             |
| 10   | —      | SCREW (3X12)                        |
| 11   | —      | FUSER LOWER FRAME                   |
| 12   | 33N169 | PRESSURE ROLL STRIPPER FINGERS      |
| 13   | —      | PRESSURE ROLL ARM (F)               |
| 14   | 22N924 | PRESSURE ROLL (REP 10.3)            |
| 15   | —      | WASHER                              |
| 16   | —      | PRESSURE SPRING                     |
| 17   | —      | PRESSURE ROLL BEARING               |
| 18   | —      | PRESSURE ROLL ARM (R)               |
| 19   | —      | HANDLE LABEL                        |

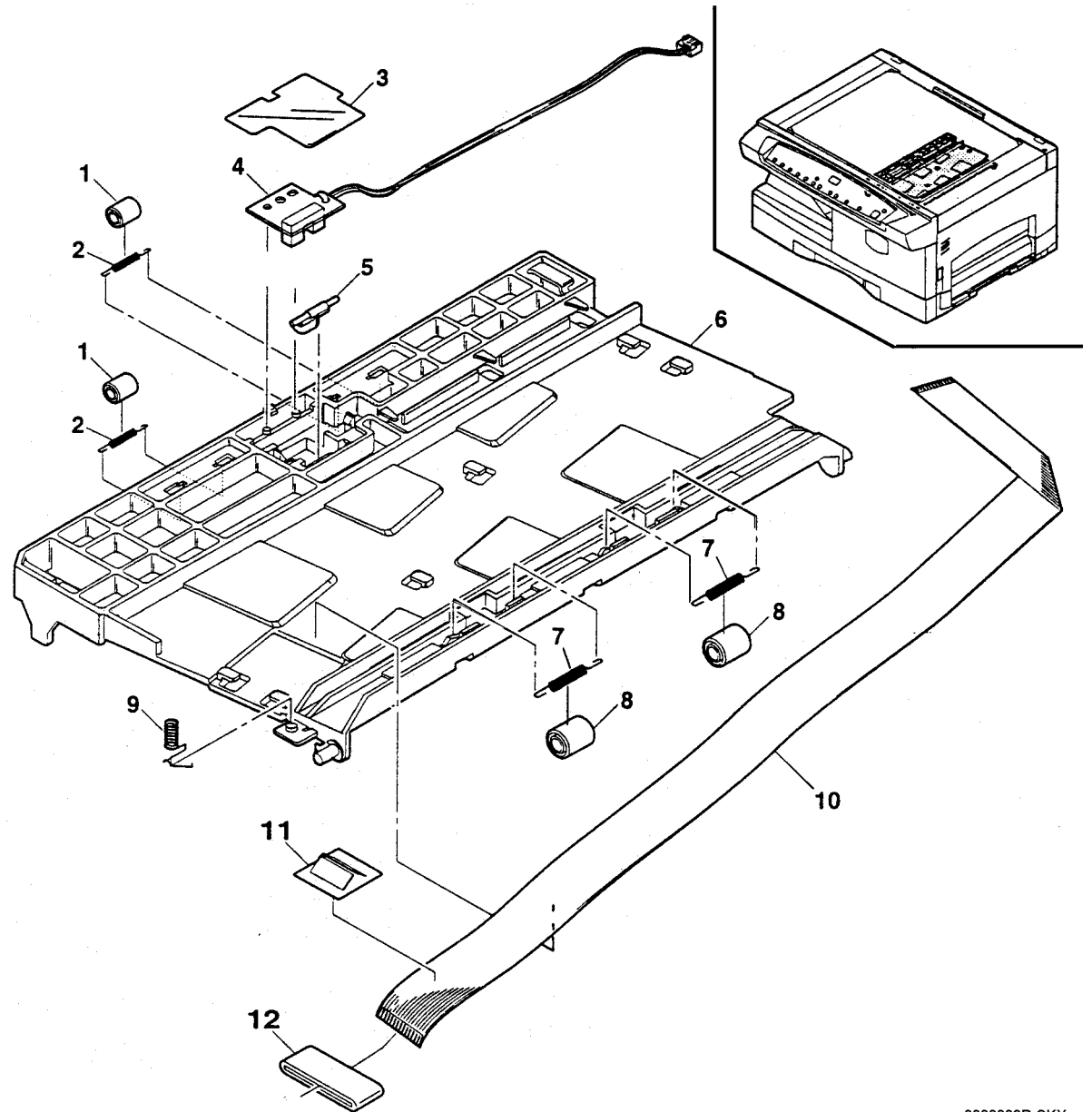


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0000015A-SKW

## PL 6.3 OUTPUT TRANSPORT

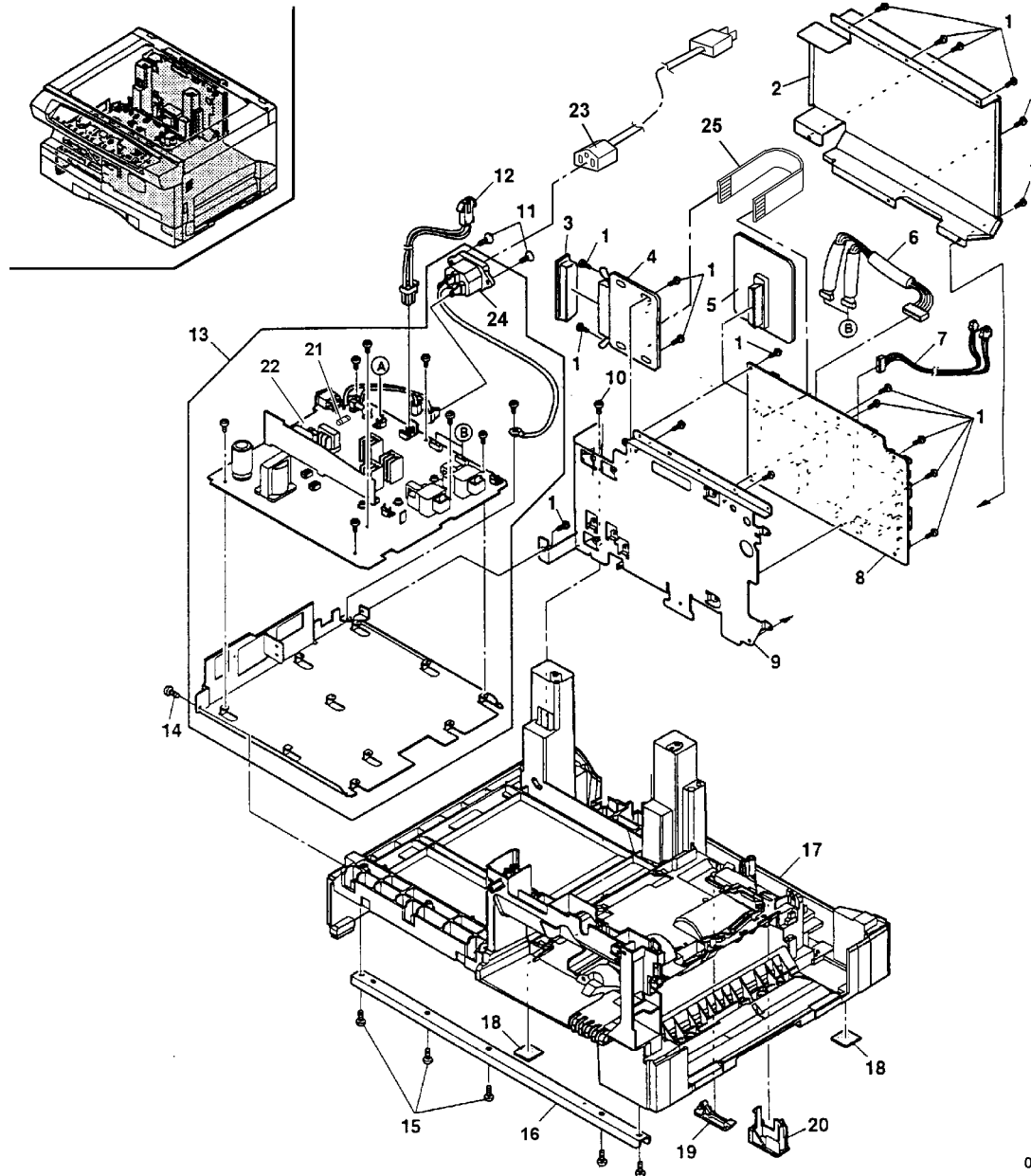
| Item | Part     | Description                  |
|------|----------|------------------------------|
| 1    | 22N927   | UPPER EXIT ROLLER            |
| 2    | 9N966    | TENSION SPRING               |
| 3    | —        | PWB INSULATOR                |
| 4    | 140N5111 | EXIT SENSOR (Q4) (REP 10.7)  |
| 5    | 120N275  | SENSOR ACTUATOR              |
| 6    | —        | EXIT GUIDE                   |
| 7    | 9N965    | TENSION SPRING               |
| 8    | 22E22060 | UPPER ROLLER                 |
| 9    | —        | GROUNDING SPRING             |
| 10   | 152N1630 | CONTROL CONSOLE RIBBON CABLE |
| 11   | —        | FERRITE RETAINER             |
| 12   | —        | FERRITE                      |



000009B-SKY

# PL 7.1 ELECTRICAL COMPONENTS (XD120F)

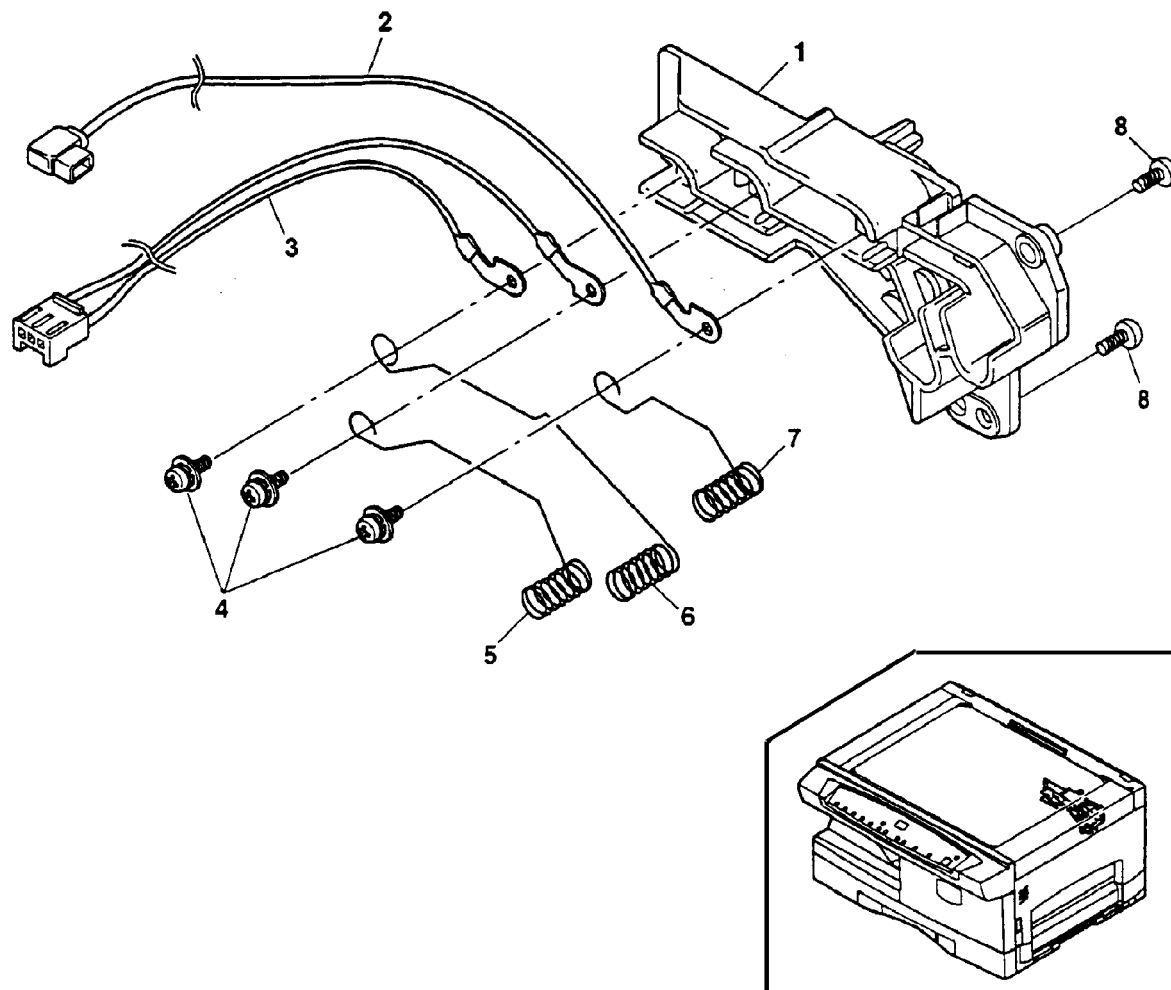
| Item | Part     | Description                                   |
|------|----------|---|
| 1    | –        | SCREW (3X6)                                   |
| 2    | –        | PWB COVER                                     |
| 3    | –        | CONNECTOR CAP                                 |
| 4    | 140N5114 | GDI PWB                                       |
| 5    | 140N5113 | GDI MEMORY PWB                                |
| 6    | 152N1629 | CENTER FRAME HARNESS<br>(100V)                |
| –    | 152N1662 | (230V)  |
| 7    | 152N1626 | FUSER HARNESS                                 |
| 8    | 140N5116 | MAIN PWB (10CPM) (REP 1.1)                    |
| –    | 140N5205 | MAIN PWB (XD120F)                             |
| –    | 108N367  | FUSE  |
| 9    | –        | PWB MOUNTING BRACKET                          |
| 10   | –        | SCREW (3X10)                                  |
| 11   | –        | SCREW (3X10)                                  |
| 12   | 152N1623 | FUSER HEAT ROD HARNESS<br>(120V)              |
| –    | 152N1660 | (230V)  |
| 13   | 140N5115 | POWER SUPPLY PWB (120V)<br>(PS1) (REP 1.2)    |
| –    | 140N5117 | POWER SUPPLY PWB (230V)<br>(PS1) (REP 1.2)    |
| –    | 140N5207 | POWER SUPPLY PWB (120V)<br>(XD120F) (REP 1.2) |
| 14   | –        | SCREW   |
| 15   | –        | SCREW (4X12)                                  |
| 16   | –        | STIFFENER BAR                                 |
| 17   | –        | BASE FRAME                                    |
| 18   | –        | RUBBER FOOT                                   |
| 19   | –        | 2ND TRAY CONNECTOR COVER                      |
| 20   | –        | 2ND TRAY GEAR COVER                           |
| 21   | 108E3660 | FUSE (F1) (15A) (125V)                        |
| –    | 108E4370 | FUSE (F1) (10A) (250V)                        |
| 22   | 108N368  | FUSE (F3) (5A) (125V)                         |
| –    | 108N369  | FUSE (F3) (15A) (250V)                        |
| 23   | 117E9750 | POWER CORD (60HZ)                             |
| 24   | –        | POWER RECEPTACLE (REP 1.4)                    |
| 25   | 152N1652 | GDI HARNESS                                   |



0000012B-SKW

## PL 7.2 DRUM CARTRIDGE CONTACT HOUSING

| Item | Part     | Description                    |
|------|----------|--------------------------------|
| 1    | 113N301  | DRUM CARTRIDGE CONTACT HOUSING |
| 2    | 152N1625 | CHARGE COROTRON HARNESS        |
| 3    | 152N1622 | GRID BIAS/MAIN PWB HARNESS     |
| 4    | -        | SCREW (3X6)                    |
| 5    | 9N968    | CONTACT SPRING                 |
| 6    | 9N969    | CONTACT SPRING                 |
| 7    | 9N967    | CONTACT SPRING                 |
| 8    | -        | SCREW (3X8)                    |

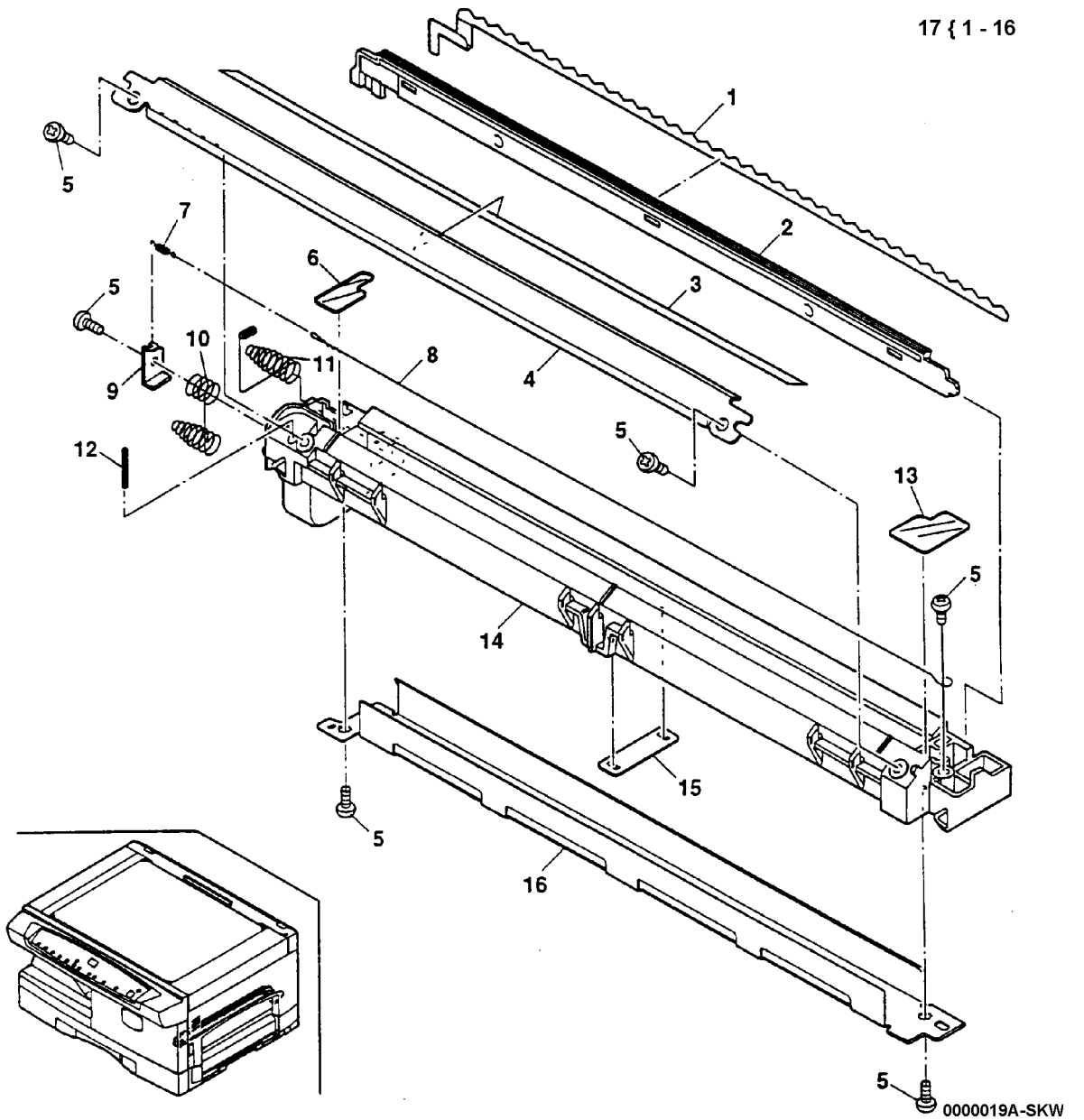


0000018A-SKW

# PL 7.3 TRANSFER/DETACK COROTRON ASSEMBLY

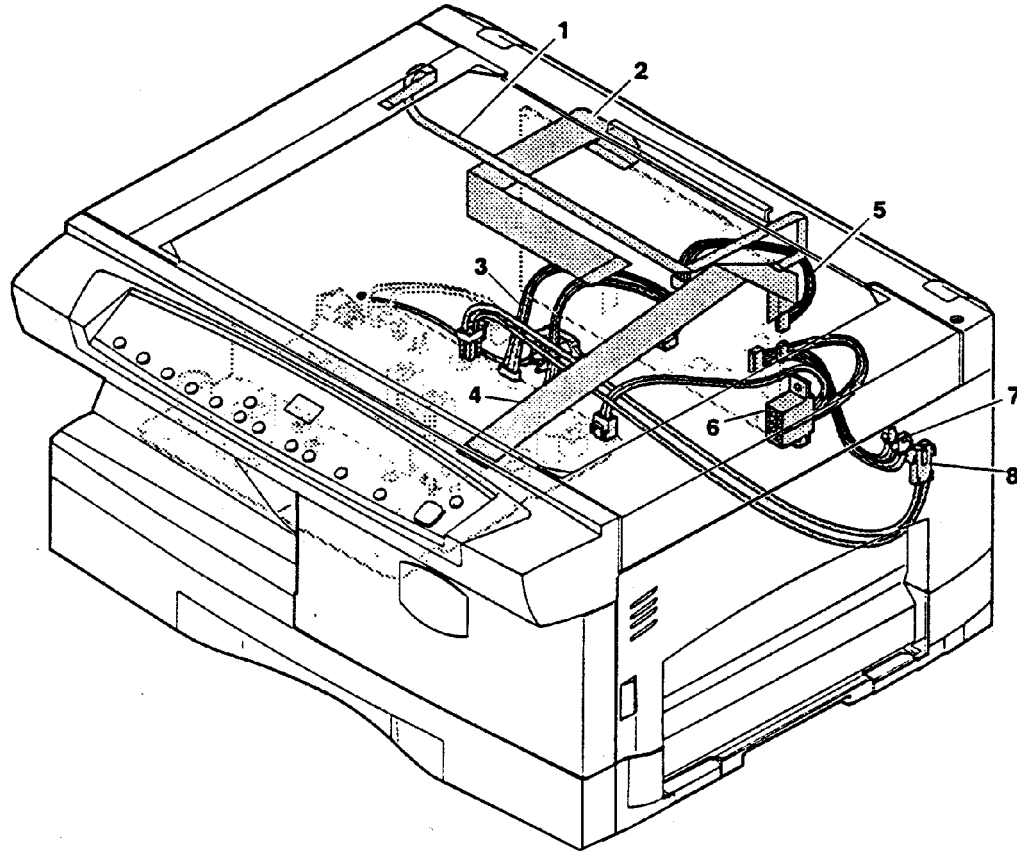
17 { 1 - 16

| Item | Part      | Description                                       |
|------|-----------|---|
| 1    | -         | DETACK COROTRON                                   |
| 2    | -         | GUIDE   |
| 3    | -         | INSULATOR   |
| 4    | -         | FRONT GUIDE                                       |
| 5    | -         | SCREW (3X6)                                       |
| 6    | -         | CONTACT COVER (R)                                 |
| 7    | -         | TENSION SPRING                                    |
| 8    | 600K15950 | TRANSFER COROTRON WIRE                            |
| 9    | -         | SPRING BRACKET                                    |
| 10   | -         | TRANSFER COROTRON SPRING                          |
| 11   | -         | BC SPRING   |
| 12   | -         | GROUNDING SPRING                                  |
| 13   | -         | CONTACT COVER (F)                                 |
| 14   | -         | COROTRON HOUSING                                  |
| 15   | -         | PLATE   |
| 16   | -         | GROUNDING PLATE                                   |
| 17   | 19N415    | TRANSFER/DETACK<br>COROTRON ASSEMBLY (REP<br>9.2) |



## PL 7.4 HARNESES (XD120F)

| Item | Part     | Description                    |
|------|----------|--------------------------------|
| 1    | 152N1631 | CL LEAD HARNESS                |
| 2    | 152N1632 | ICU-CCD HARNESS                |
| 3    | 152N1629 | CENTER FRAME HARNESS<br>(100V) |
| 4    | 152N1630 | OP HARNESS                     |
| 5    | 152N1633 | MAIN MOTOR HARNESS             |
| 6    | 152N1627 | DVS HARNESS                    |
| 7    | -        | PPD2 INTERFACE HARNESS         |
| 8    | 152N1623 | HL HARNESS (100V)              |

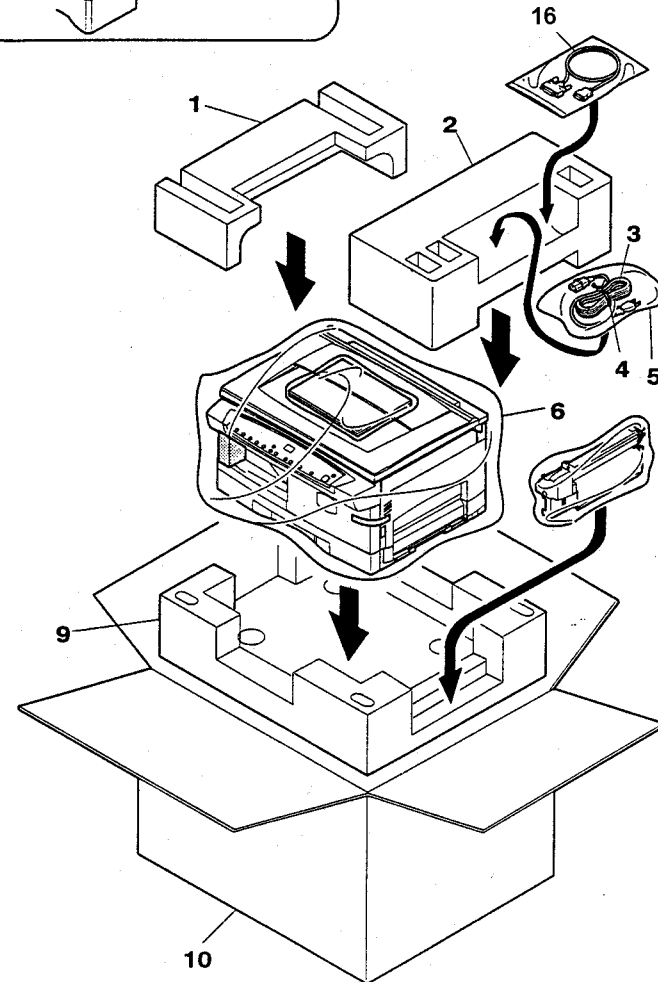
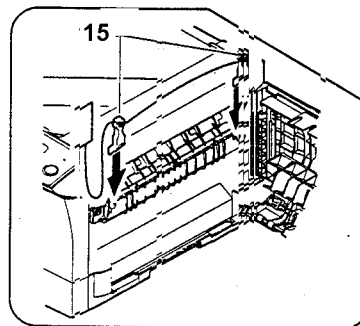
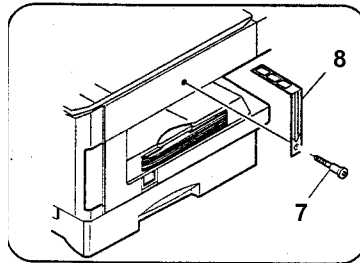
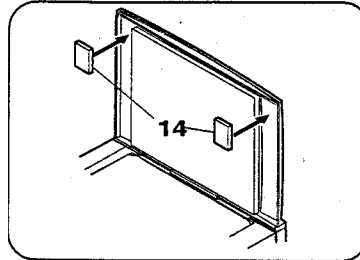
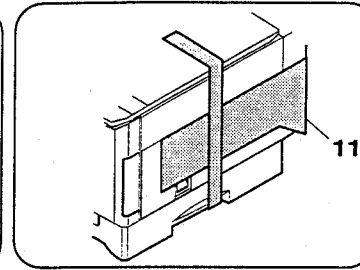
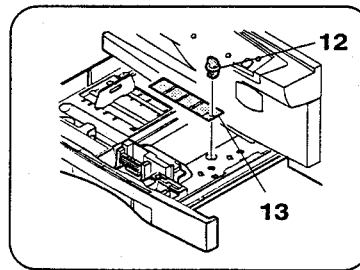


000025A-SKW



## PL 8.1 PACKAGING AND ACCESSORIES

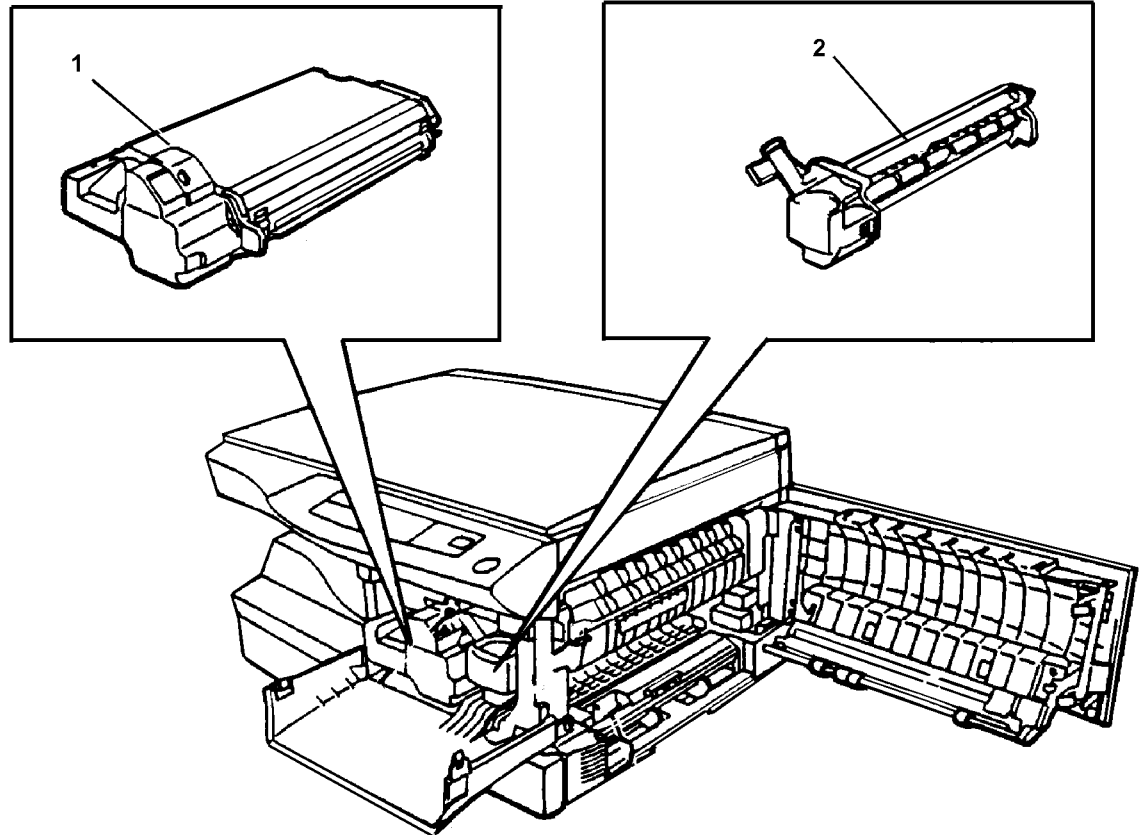
| Item | Part      | Description                       |
|------|-----------|-----------------------------------|
| 1    | -         | TOP PACKING CUSHION (L)           |
| 2    | -         | TOP PACKING CUSHION (R)           |
| 3    | -         | POWER CORD                        |
| 4    | -         | TIE WRAP                          |
| 5    | -         | BAG                               |
| 6    | -         | BAG                               |
| 7    | 26E39240  | HALF RATE CARRIAGE SHIPPING SCREW |
| -    | 701P98251 | INSTRUCTIONS                      |
| 8    | -         | SHIPPING STRAP                    |
| 9    | -         | BOTTOM PACKING CUSHION            |
| 10   | -         | BOX                               |
| 11   | -         | SHIPPING CUSHION                  |
| 12   | 120E10520 | THUMB SCREW                       |
| 13   | -         | LABEL                             |
| 14   | -         | DOCUMENT COVER CUSHION            |
| 15   | 7N696     | PRESSURE BLOCK LEVER              |
| 16   | 117E19340 | PRINTER CABLE                     |
| -    | 117E18690 | ALTERNATE                         |



0000021B-SKW

## PL 8.2 DRUM AND TONER CARTRIDGES

| Item | Part   | Description     |
|------|--------|-----------------|
| 1    | 6R914  | TONER CARTRIDGE |
| 2    | 13R551 | DRUM CARTRIDGE  |

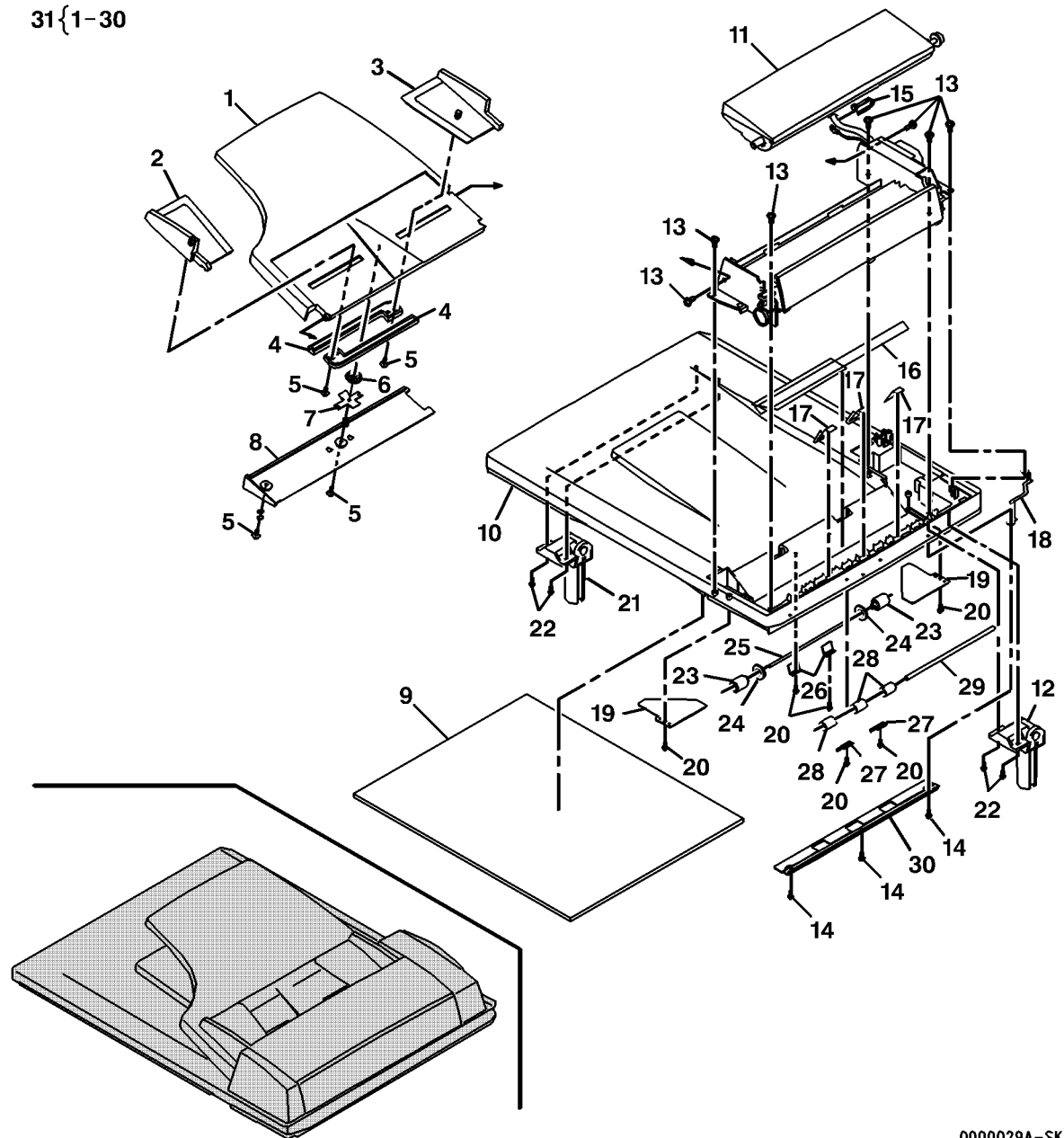


000022A-SKW

# PL 9.1 SET DOCUMENT FEEDER (SDF) ASSEMBLY (XD120F)

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| Item | Part    | Description                    |
|------|---------|--------------------------------|
| 1    | 50N258  | DOCUMENT TRAY                  |
| 2    | 15N295  | FRONT GUIDE                    |
| 3    | 15N296  | REAR GUIDE                     |
| 4    | 7N737   | FEED RACK                      |
| 5    | -       | SCREW (3X8X)                   |
| 6    | 7E52500 | GEAR                           |
| 7    | 15N297  | SPRING                         |
| 8    | 2N1562  | LOWER COVER                    |
| 9    | 4N192   | DOCUMENT COVER CUSHION         |
| 10   | 50N257  | BASE                           |
| 11   | -       | SDF FEED ASSEMBLY              |
| 12   | 3N683   | HINGE RIGHT                    |
| 13   | -       | SCREW (4X10)                   |
| 14   | -       | SCREW (3X8)                    |
| 15   | -       | TIE WRAP                       |
| 16   | 38N255  | MYLAR GUIDE                    |
| 17   | 38N256  | MYLAR GUIDE                    |
| 18   | 9N1006  | GROUND STRAP                   |
| 19   | 38N254  | PAD                            |
| 20   | -       | SCREW (3X8)                    |
| 21   | 3N682   | HINGE LEFT                     |
| 22   | -       | SCREW (4X10)                   |
| 23   | 22N976  | SDF EXIT ROLLER (REP 5.10)     |
| 24   | 14N330  | SPONGE                         |
| 25   | 6N890   | EXIT SHAFT                     |
| 26   | 9N1005  | SPRING                         |
| 27   | 9N1004  | SPRING                         |
| 28   | 22N973  | SDF TRANSPORT ROLLER (REP 5.9) |
| 29   | 6N889   | TRANSPORT SHAFT                |
| 30   | 15N294  | BASE PLATE                     |
| 31   | 22N992  | SDF ASSEMBLY (REP 5.1)         |

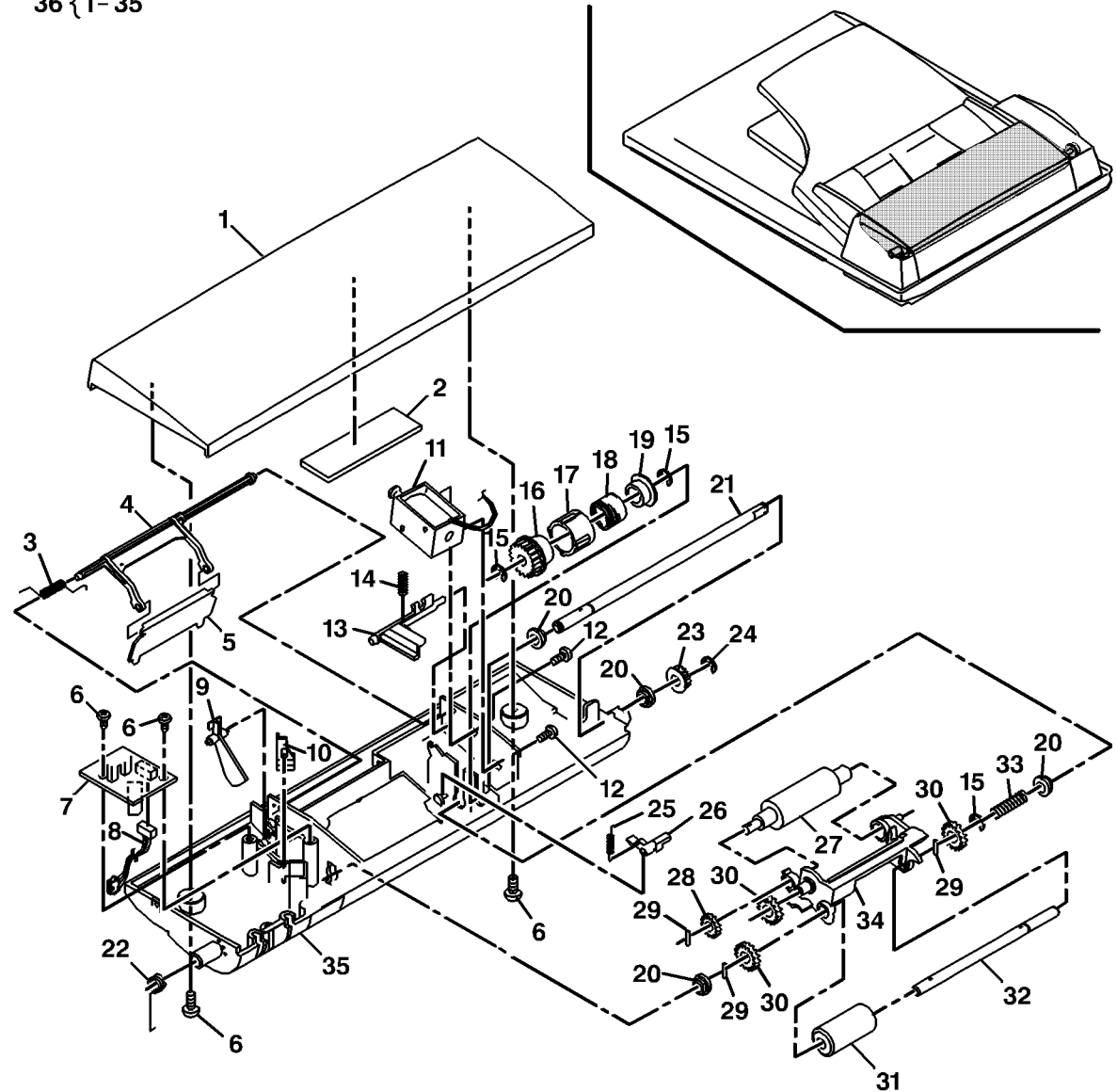


0000029A-SKW

# PL 9.2 SDF PAPER FEED ASSEMBLY (XD120F)

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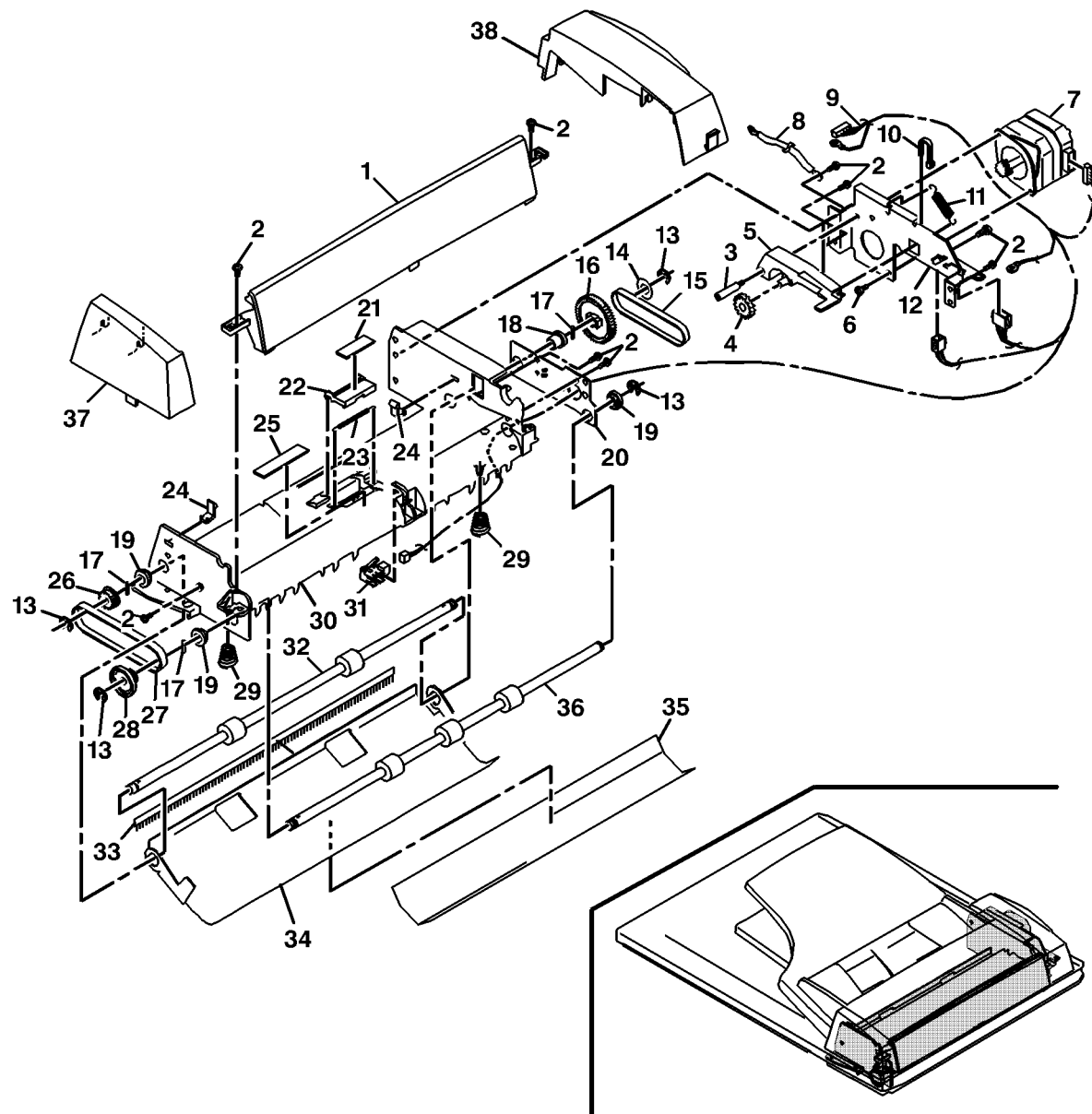
| Item | Part     | Description                            |
|------|----------|--|
| 1    | 2N1563   | FEED ASSEMBLY TOP COVER                |
| 2    | 14N331   | PAD                                    |
| 3    | 9N1010   | PAPER STOP SPRING                      |
| 4    | 31N161   | ARM                                    |
| 5    | 3N686    | PAPER GATE                             |
| 6    | -        | SCREW                                  |
| 7    | 140N5199 | SDF SENSOR PWB (REP 5.2)               |
| 8    | 152N1656 | SDF SENSOR HARNESS                     |
| 9    | 120N284  | SDF ACTUATOR                           |
| 10   | 120N285  | SENSOR ACTUATOR                        |
| 11   | 121N410  | SDF FEED SOLENOID (SOL 1)<br>(REP 5.3) |
| 12   | -        | SCREW (3X4)                            |
| 13   | 31N160   | SOLENOID ARM                           |
| 14   | 9N1009   | SPRING                                 |
| 15   | -        | E RING                                 |
| 16   | 7N738    | CLUTCH GEAR (REP 5.4)                  |
| 17   | 16N176   | CLUTCH SLEEVE                          |
| 18   | 9N1011   | CLUTCH SPRING                          |
| 19   | 5E9560   | CAM BOSS                               |
| 20   | 16E9640  | BUSHING                                |
| 21   | 6N892    | CLUTCH SHAFT                           |
| 22   | 9N1007   | TENSION SPRING                         |
| 23   | 20N464   | 20MXL PULLEY                           |
| 24   | -        | E RING                                 |
| 25   | 9N1008   | CLUTCH PAWL SPRING                     |
| 26   | 7N739    | CLUTCH PAWL                            |
| 27   | 22N977   | RETARD ROLLER (REP 5.5)                |
| 28   | 7E29490  | GEAR (16T)                             |
| 29   | 29N182   | SPRING PIN                             |
| 30   | 7E29480  | GEAR (20T)                             |
| 31   | 5E10560  | FEED ROLLER (REP 5.5)                  |
| 32   | 6N891    | FEED SHAFT                             |
| 33   | 9N1012   | SPRING                                 |
| 34   | 31N162   | ARM                                    |
| 35   | 1N280    | LOWER COVER                            |
| 36   | -        | SDF PAPER FEED ASSEMBLY                |



0000030A-SKW

# PL 9.3 SDF TRANSPORT ASSEMBLY (XD120F)

| Item | Part     | Description                           |
|------|----------|---------------------------------------|
| 1    | 38N257   | DOCUMENT GUIDE                        |
| 2    | -        | SCREW (3X8)                           |
| 3    | 26N524   | SCREW                                 |
| 4    | 7E29260  | GEAR (27T)                            |
| 5    | 31N163   | DRIVE ARM                             |
| 6    | -        | SCREW (3X4)                           |
| 7    | 127N988  | SDF DRIVE MOTOR (MOT 1)<br>(REP 5.7)  |
| 8    | 152N1658 | GROUND WIRE                           |
| 9    | 152N1657 | SDF HARNESS                           |
| 10   | -        | TIE WRAP                              |
| 11   | 9N1015   | SPRING                                |
| 12   | 1N282    | DRIVE FRAME                           |
| 13   | -        | E RING                                |
| 14   | 28E10220 | WASHER                                |
| 15   | 23N622   | DRIVE BELT (83MXL4.8)                 |
| 16   | 7N740    | GEAR (48T/15T)                        |
| 17   | -        | SPRING PIN (2-9)                      |
| 18   | 13N378   | BEARING                               |
| 19   | 13N377   | BEARING                               |
| 20   | 1N281    | REAR FRAME                            |
| 21   | 38N260   | RETARD PAD                            |
| 22   | 15N298   | PRESSURE PLATE                        |
| 23   | 9N1013   | PRESSURE SPRING                       |
| 24   | 7N741    | FEED ASSEMBLY LATCH                   |
| 25   | 38E13480 | PAD                                   |
| 26   | 20E20740 | PULLEY                                |
| 27   | 23N623   | EXIT DRIVE BELT (REP 5.6)             |
| 28   | 3N687    | PAPER ADVANCE KNOB                    |
| 29   | 9N1014   | EXIT GUIDE SPRING                     |
| 30   | 38N258   | SDF DOCUMENT TRANSPORT                |
| 31   | 130N854  | SDF DOCUMENT SENSOR (Q3)<br>(REP 5.8) |
| 32   | 22N979   | ROLLER, EXIT                          |
| 33   | 42N77    | DISCHARGE BRUSH                       |
| 34   | 38N259   | DOCUMENT EXIT GUIDE                   |
| 35   | 38N261   | REFLECTOR                             |
| 36   | 22N978   | TRANSPORT ROLLER                      |
| 37   | 2N1564   | SDF FRONT COVER                       |
| 38   | 2N1565   | SDF REAR COVER                        |



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| 2N1526      | PL 1.2    |
| 2N1534      | PL 1.2    |
| 2N1560      | PL 1.1    |
| 2N1561      | PL 1.1    |
| 2N1562      | PL 9.1    |
| 2N1563      | PL 9.2    |
| 2N1564      | PL 9.3    |
| 2N1565      | PL 9.3    |
| 2N1566      | PL 1.1    |
| 3N668       | PL 1.4    |
| 3N669       | PL 1.3    |
| 3N670       | PL 1.3    |
| 3N671       | PL 1.3    |
| 3N672       | PL 1.3    |
| 3N673       | PL 1.3    |
| 3N674       | PL 5.1    |
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| 3N685       | PL 3.2    |
| 3N686       | PL 9.2    |
| 3N687       | PL 9.3    |
| 3E26060     | PL 4.1    |
| 4N188       | PL 3.4    |
| 4N192       | PL 9.1    |
| 4N193       | PL 1.1    |
| 4E8450      | PL 3.4    |
| 5N602       | PL 2.2    |
| 5E4260      | PL 5.1    |
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| 6N891       | PL 9.2    |
| 6N892       | PL 9.2    |
| 6R914       | PL 8.2    |
| 7N694       | PL 3.1    |
| 7N695       | PL 6.1    |
| 7N696       | PL 8.1    |
| 7N698       | PL 5.1    |
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| 7N700       | PL 5.1    |
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| 7N702       | PL 2.2    |
| 7N703       | PL 2.2    |
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| 7N709       | PL 2.2    |
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| 9N962       | PL 1.4    |
| 9N963       | PL 1.4    |
| 9N964       | PL 1.4    |
| 9N965       | PL 6.3    |
| 9N966       | PL 6.3    |
| 9N967       | PL 7.2    |
| 9N968       | PL 7.2    |
| 9N969       | PL 7.2    |
| 9N970       | PL 5.1    |
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| 9N1004      | PL 9.1    |
| 9N1005      | PL 9.1    |
| 9N1006      | PL 9.1    |
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| 9N1009      | PL 9.2    |
| 9N1010      | PL 9.2    |
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| 16E9640     | PL 9.2    |
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| 19E37840    | PL 4.1    |
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## Entering/Exiting Diagnostics

1. Switch on the power.
 

**NOTE:** Step 2 must be performed within 4 seconds to enter diagnostics.
2. Press the **Clear** button, press the **Exposure Mode** button, press the **Clear** button, and press the **Exposure Mode** button.
  - a. All lamps on the Control Console will go out.
  - b. The copy count display will become blank.
3. Using the **Copy Quantity** button(s), select the number that corresponds to the desired diagnostic test.
4. Press **Start**.
5. Using the **Copy Quantity** button(s), select the number that corresponds to the desired subcode.
  - a. Pressing the Copy Quantity "ones" button increases the count by one. Pressing the Copy Count "tens" button increases the count by 10.
  - b. Pressing and holding the % button while pressing the **Copy Quantity** "ones" button will decrease the count by one. Pressing and holding the % button while pressing the **Copy Quantity** "tens" button will decrease the count by 10.
6. Press the **Start** button.
 

**NOTE:** When exiting diagnostics, the number of times Clear needs to be pressed depends on the diagnostic code that is entered.
7. To exit diagnostics, either switch the power off, then on, or press the **Clear** button until the Ready LED illuminates and a copy quantity of 1 appears in the Copy Quantity display.

## Input Codes

An Input Code is entered to check the operation of a sensor or a switch. Enter the code for the component. Manually actuate the component while observing the appropriate lamp on the Control Console. Testing input components requires that the lamps on the Control Console function correctly.

**Table 1 Input Codes**

| Code   | Input Component   | Control Console Lamp  |
|--------|---|---|
| 2-[2]  | SDF Sensor Status<br>Set Detect Sensor<br>Document Path Sensor<br>Document Cover Closed Sensor<br>Position Sensor | Toner Cartridge LED<br>Paper Jam LED<br>Drum Cartridge LED<br>SDF Jam LED |
| 30-[1] | Paper Feed Sensor Q1  | Toner Cartridge LED   |
| 30-[1] | Fuser Jam Sensor Q2   | Paper Jam LED   |
| 30-[1] | Paper Exit Sensor Q3  | Drum cartridge LED  |
| 30-[1] | Bypass Tray Paper Sensor  | Exposure LED  |
| 30-[1] | New Drum Cartridge Sensor   | R/E LED   |

## Output Codes

An Output Code is entered to check the operation of an output component such as a clutch or a motor.

**Table 1 Output Codes**

| Code    | Output Component   | Description   |
|---------|--|---|
| 1-[1]   | Scan Drive Motor MOT2  | The optics will scan at a speed that corresponds to the selected magnification when the <b>Start</b> button is pressed.<br>The Drum Cartridge LED will illuminate when the Scan Home sensor is in the home position.  |
| 2-[3]   | SDF Drive Motor MOT1   | The SDF Motor operates for 10 seconds at a speed that corresponds to the current magnification.   |
| 2-[4]   | SDF Feed Solenoid SOL1   | The SDF Paper Feed Solenoid cycles 20 times between On (500 ms) and Off (500 ms) when the <b>Start</b> Button is pressed.   |
| 5-[1]   | Control Console LED check  | The LEDs on the Control Console will illuminate for five seconds when the <b>Start</b> button is pressed.   |
| 5-[2]   | Heat Rod HTR1 and Exhaust Fan MOT3   | The heat rod will pulse on five times each time the <b>Start</b> button is pressed. The Exhaust Fan will rotate in the high speed mode.   |
| 5-[3]   | Exposure Lamp  | The exposure lamp will illuminate for five seconds each time the <b>Start</b> button is pressed.  |
| 6-[1]   | Paper Feed Solenoid SOL1 (Tray 1), Paper Feed Solenoid SOL2 (Tray 2), Alternate Tray Feed Solenoid | The paper feed solenoid for the selected paper tray will cycle on and off 20 times when the <b>Start</b> button is pressed.   |
| 6-[2]   | Registration Roller Solenoid check   | The registration roller solenoid will cycle on and off 20 times when the <b>Start</b> button is pressed.  |
| 10      | Toner Motor MOT4   | The toner motor will operate for 30 seconds when the <b>Start</b> button is pressed.  |
| 25-[1]  | Main Motor MOT1  | The main motor will operate for 30 seconds when the <b>Start</b> button is pressed.<br><br>If the Toner Cartridge is installed, the Developer Bias, Charge Corotron, and Grid Bias are also enabled.<br><br>If the Toner Cartridge is removed before this check is run, only the Main Motor is energized. |
| 25-[10] | Polygon Motor operation check  | The polygon motor operates for 30 seconds when the <b>Start</b> button is pressed.  |
| 61-[3]  | Polygon Motor (HSYNC output) check   | HSYNC is performed and the Polygon Motor is run for 30 seconds when the <b>Start</b> button is pressed. Fault Code E7 will set when the control logic fails to detect HSYNC.  |

## Counter Data Codes

**Table 1 Counter Data Codes**

| Code    | Copier Counter Data   |
|---------|---|
| 22-[5]  | Total Copies<br><br>The copy count will flash 3 digits at a time, 2 times (6 digits).<br>000 → 234 (Example shows a copy count of 234.)<br><br>The display will pause about 2 seconds between counts. |
| 22-[12] | Drum Cartridge Count Check<br><br>The drum cartridge count will flash 3 digits at a time, 2 times (6 digits).<br>000 → 234 (Example shows a drum cartridge count of 234.)                             |
| 22-[21] | Scanner Counter Check<br><br>The scanner counter value will flash 3 digits at a time, 2 times (6 digits).<br>000 → 234 (Example shows a scanner count of 234.)  |

## Counter Reset Codes

A code is entered to reset or disable drum count data.

**Table 1 Counter Reset Codes**

| Code    | Copier Counter Data  |
|---------|--|
| 24-[7]  | <b>Drum Cartridge Count Clear</b><br>When Start is pressed, the drum copy count will reset to 000-000. |
| 24-[13] | <b>Scanner Counter Clear</b><br>When Start is pressed, the scanner counter value is reset to 000-000.  |

## Status Code Clear

A code is entered to clear a U2 or other status code.

**Table 1 Status Code Clear Codes**

| Code | Status Code  |
|------|--|
| 14   | <b>Status Code Clear - Codes other than U2</b><br>When Start is pressed, Status codes other than U2 will be cleared. |
| 16   | <b>U2 Status Code Clear</b><br>When Start is pressed, a U2 Status code will be cleared.                              |

## Adjustment Codes

A code is entered to perform an adjustment.

Table 1 Adjustment Codes

| Code    | Function                        | Range                      | Default | ADJ | Description   |
|---------|---------------------------------|----------------------------|---------|-----|---|
| 8-[2]   | Grid Bias Voltage (High mode)   | -550 to -580 VDC           | -       | -   | When the <b>Start</b> button is pressed, the Charge Corotron output is present for 30 seconds in the High mode.   |
| 8-[3]   | Grid Bias Voltage (Low mode)    | -400 to -450 VDC           | -       | -   | When the <b>Start</b> button is pressed, the Charge Corotron output is present for 30 seconds in the Low mode.  |
| 8-[6]   | Transfer Corotron voltage       | +1200 VDC (not under load) | -       | -   | When the <b>Start</b> button is pressed, the Transfer Corotron output is present for 30 seconds. This measurement is made at the Transfer Corotron Plate with the Side Door open and the Side Door Interlock Switch (S3/S4) actuated.   |
| 25-[1]  | Developer Bias Voltage          | -400 VDC                   | -       | -   | When the <b>Start</b> button is pressed, the Main Drive Motor will come on and the developer bias voltage will be present for 30 seconds.   |
| 26-[43] | Side Edge Erase (XD120f/XD124f) | 0 to 5.0 mm                | 2.0 mm  | -   | <p>When the <b>Start</b> button is pressed, the code number for the side edge erase amount is displayed.</p> <p><b>Code Erase Amount (mm)</b></p> <p>0 = 0 mm<br/>           1 = 0.5 mm<br/>           2 = 1.0 mm<br/>           3 = 1.5 mm<br/>           4 = 2.0 mm (default)<br/>           5 = 2.5 mm<br/>           6 = 3.0 mm<br/>           7 = 3.5 mm<br/>           8 = 4.0 mm<br/>           9 = 4.5 mm<br/>           10 = 5.0 mm</p> <p>To change the side edge erase amount, press the <b>Copy Quantity</b> "ones" button until the desired code is displayed, then press the <b>Start</b> button.</p> |
| 43-[1]  | Fuser temperature               | 175 to 200°C               | 190°C   | -   | <p>When the <b>Start</b> button is pressed, the code number for the fuser temperature is displayed.</p> <p><b>Code Temperature (C)</b></p> <p>0 = 175<br/>           1 = 180<br/>           2 = 185<br/>           3 = 190 default<br/>           4 = 195<br/>           5 = 200</p> <p>To change the fuser temperature, press the <b>Copy Quantity</b> "ones" button to select the code for the desired temperature and then press the <b>Start</b> button.</p>  |



Table 1 Adjustment Codes

| Code   | Function   | Range        | Default | ADJ | Description   |
|--------|--|--------------|---------|-----|---|
| 43-[4] | Multi-copy fusing temperature                              | 155 to 180°C | 165°C   | -   | <p>When the <b>Start</b> button is pressed, the code number for the multi-copy fusing temperature is displayed.</p> <p><b>NOTE:</b> To reduce heat build up in the machine during jobs of 20 copies or more, the fusing temperature is lowered to the selected value in the list below when the twentieth copy is reached.</p> <p><b>Code Temperature (C)</b><br/>           0 = 155<br/>           1 = 160<br/>           2 = 165 default<br/>           3 = 170<br/>           4 = 175<br/>           5 = 180</p> <p>To change the multi-copy fusing temperature, press the <b>Copy Quantity</b> "ones" button to select the code for the desired temperature and then press the <b>Start</b> button.</p> |
| 46-[1] | Copy Density adjustment                                    | 00 to 99     | 50      | 6.1 | <p>When the <b>Start</b> button is pressed, the exposure setting for Auto mode is displayed. To view the settings for the other modes, press the Exposure Mode button until the appropriate LED or LEDs illuminate.</p> <p><b>Exposure Mode / Illuminated LED</b><br/>           Auto / Auto mode LED<br/>           Text / Text mode LED<br/>           Photo / Photo mode LED<br/>           Toner Save / Toner Save LED</p> <p>To change an exposure setting value, press the <b>Copy Quantity</b> buttons until the desired setting appears in the Copy Quantity display.</p> <p>Press the <b>Clear</b> button to exit and store the new setting or settings.</p>                                       |
| 48-[1] | Image Magnification (Front to Rear ) Adjustment: Automatic | 00 to 99     | 50      | 6.8 | <p>Press the <b>Exposure</b> button until only the <b>Auto</b> lamp is lit, then press the <b>Start</b> button. The machine scans the reference line on the calibration strip, calculates the correct magnification, and automatically adjusts the setting. The adjusted setting appears in the Quantity display.</p> <p>Press the <b>Clear</b> button to exit the mode.</p>  |
| 48-[1] | Image Magnification (Front to Rear ) Adjustment: Manual    | 00 to 99     | 50      | 6.8 | <p>Press the <b>Exposure</b> button until only the <b>Text</b> lamp is lit. The current setting is displayed in the Quantity display.</p> <p>To change magnification, press the <b>Copy Quantity</b> buttons. Increasing the number increases the magnification. Decreasing the number decreases the magnification.</p> <p>Press the <b>Clear</b> button to exit and store the new setting.</p>   |

Table 1 Adjustment Codes

| Code   | Function                                      | Range    | Default | ADJ | Description  |
|--------|---|----------|---------|-----|--|
| 48-[1] | Image Magnification (Lead Edge to Trail Edge) | 00 to 99 | 50      | 6.8 | <p>Press the <b>Exposure</b> button until only the <b>Photo</b> lamp is lit. The scan speed is adjusted.</p> <p>To change magnification, press the <b>Copy Quantity</b> buttons. Increasing the number increases the magnification. Decreasing the number decreases the magnification.</p> <p>Press the <b>Clear</b> button to exit and store the new setting.</p>   |
| 50-[1] | Lead Edge Deletion                            | 00 to 99 | 50      | 8.2 | <p>Press the <b>Exposure</b> button until only the <b>Text</b> lamp is lit. The Lead Edge Deletion setting is displayed.</p> <p>To change Lead Edge Deletion, press the <b>Copy Quantity</b> buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To decrease the lead edge deletion, decrease the number.<br/>To increase the lead edge deletion, increase the number.</p> <p>Press the <b>Clear</b> button to exit and store the new setting.</p>  |
| 50-[1] | Trail Edge Deletion                           | 00 to 99 | 50      | 8.3 | <p>Press the <b>Exposure</b> button until the Auto, <b>Text</b>, and Photo lamps are lit. The Trail Edge Deletion setting is displayed.</p> <p>To change Trail Edge Deletion, press the <b>Copy Quantity</b> buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To decrease the trail edge deletion, decrease the number.<br/>To increase the trail edge deletion, increase the number.</p> <p>Press the <b>Clear</b> button to exit and store the new setting.</p>  |
| 50-[1] | Lead Edge (Scan Start) Timing                 | 00 to 99 | 50      | -   | <p>Press the <b>Exposure</b> button until only the <b>Photo</b> lamp is lit.</p> <p><b>NOTE:</b> To check this adjustment, check the lead edge registration at 70% and 141%. If they are not equal, the adjustment needs to be performed.</p> <p>The Scan Start Timing setting is displayed.</p> <p>To change Scan Start Timing, press the <b>Copy Quantity</b> buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To decrease the time before scan start, increase the number.<br/>To increase the time before scan start, decrease the number.</p> <p>Press the <b>Clear</b> button to exit and store the new setting.</p> |

Table 1 Adjustment Codes

| Code    | Function   | Range    | Default | ADJ | Description   |
|---------|--|----------|---------|-----|---|
| 50-[1]  | Lead Edge Registration   | 00 to 99 | 50      | -   | <p>Press the <b>Exposure</b> button until only the <b>Auto</b> lamp is lit. The Lead Edge Registration setting is displayed.</p> <p>To change Lead Edge Registration, press the <b>Copy Quantity</b> buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To decrease the distance between the lead edge and the image, enter a higher number. This action lengthens the Registration Roller off time.</p> <p>To increase the distance between the lead edge and the image, enter a lower number. This action shortens the Registration Roller off time.</p> <p>Press the <b>Clear</b> button to exit and store the new setting.</p>                                |
| 50-[1]  | SDF Lead Edge (Scan Start) Timing  | 00 to 99 | 50      | -   | <p>Press the <b>Exposure</b> button until the <b>Auto</b> and <b>Text</b> lamps are lit. The SDF Lead Edge (Scan Start) Timing setting is displayed.</p> <p>To change SDF Lead Edge Timing, press the <b>Copy Quantity</b> buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To decrease the time before scan start, increase the number.</p> <p>To increase the time before scan start, decrease the number.</p> <p>Press the <b>Clear</b> button to exit and store the new setting.</p>  |
| 50-[10] | Center Offset Adjustment:<br><br>Paper Tray1 and Paper Tray 2            | 00 to 99 | 50      | -   | <p><b>Paper Tray 1:</b><br/>Press the <b>Exposure</b> button until the <b>Auto</b> and <b>Paper Tray 1</b> lamps are lit.</p> <p><b>Paper Tray 2:</b><br/>Press the <b>Exposure</b> button until the <b>Auto</b> and <b>Paper Tray 2</b> lamps are lit. The Center Offset setting is displayed.</p> <p>To change the Center Offset setting, press the <b>Copy Quantity</b> buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To shift the image toward the front of the machine, increase the number.</p> <p>To shift the image toward the rear of the machine, decrease the number.</p> <p>Press the <b>Clear</b> button to exit and store the new setting.</p> |
| 50-[10] | Center Offset Adjustment:<br><br>Paper Tray Bypass (XD100/XD102/ XD120f) | 00 to 99 | 50      | -   | <p>Press the <b>Exposure</b> button until only the <b>Auto</b> lamp is lit. The Center Offset setting is displayed.</p> <p>To change the Center Offset setting, press the <b>Copy Quantity</b> buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To shift the image toward the front of the machine, increase the number.</p> <p>To shift the image toward the rear of the machine, decrease the number.</p> <p>Press the <b>Clear</b> button to exit and store the new setting.</p>   |

Table 1 Adjustment Codes

| Code    | Function  | Range    | Default | ADJ | Description  |
|---------|---|----------|---------|-----|--|
| 50-[10] | Center Offset Adjustment: Print Position<br><br>Alternate Paper Tray (XD104/XD124f)           | 00 to 99 | 50      | -   | <p>Press the <b>Exposure</b> button until the <b>Auto</b> and <b>Alternate Tray</b> lamps are lit. The Center Offset setting is displayed.</p> <p>To change the Center Offset setting, press the <b>Copy Quantity</b> buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To shift the image toward the front of the machine, increase the number.<br/>To shift the image toward the rear of the machine, decrease the number.</p> <p>Press the <b>Clear</b> button to exit and store the new setting.</p>  |
| 50-[10] | Center Offset Adjustment: Scan<br><br>Scan from SDF (XD120f/XD124f)                           | 00 to 99 | 50      | -   | <p>Press the <b>Exposure</b> button until the <b>Auto</b>, <b>Text</b> and <b>Photo</b> lamps are lit. The Center Offset setting is displayed.</p> <p>To change the Center Offset setting, press the <b>Copy Quantity</b> buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To shift the image toward the front of the machine, decrease the number.<br/>To shift the image toward the rear of the machine, increase the number.</p> <p>Press the <b>Clear</b> button to exit and store the new setting.</p>  |
| 50-[10] | Center Offset Adjustment: Scan<br><br>Scan from Document Glass                                | 00 to 99 | 50      | -   | <p>Press the <b>Exposure</b> button until the <b>Auto</b> and <b>Text</b> lamps are lit. The Center Offset setting is displayed.</p> <p>To change the Center Offset setting, press the <b>Copy Quantity</b> buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To shift the image toward the front of the machine, decrease the number.<br/>To shift the image toward the rear of the machine, increase the number.</p> <p>Press the <b>Clear</b> button to exit and store the new setting.</p>  |
| 51-[2]  | Registration Buckle: Paper Tray 1 and Paper Tray 2<br><br>(XD100/XD102/ XD104/XD120f/ XD124f) | 00 to 99 | 50      | -   | <p><b>Paper Tray 1:</b><br/>Press the <b>Exposure</b> button until the <b>Auto</b> and <b>Paper Tray 1</b> lamps are lit.</p> <p><b>Paper Tray 2:</b><br/>Press the <b>Exposure</b> button until the <b>Auto</b> and <b>Paper Tray 2</b> lamps are lit. The setting for the selected Paper Tray is displayed in the Copy Quantity display and the LED for the selected magnification is lit.</p> <p>To change the setting, select the desired magnification, then press the <b>Copy Quantity</b> buttons.<br/>To increase the buckle, increase the number.<br/>To decrease the buckle, decrease the number.</p> <p>Press the <b>Clear</b> button to exit and store the new setting(s).</p> |

Table 1 Adjustment Codes

| Code   | Function   | Range    | Default | ADJ | Description  |
|--------|--|----------|---------|-----|--|
| 51-[2] | Registration<br>Buckle:<br>Paper Tray Bypass<br><br>(XD100/XD102/<br>XD120f) | 00 to 99 | 50      | -   | <p>Press the <b>Exposure</b> button until the <b>Auto</b> lamp flashes.<br/>The Paper Tray setting is displayed in the Copy Quantity display and the LED for the selected magnification is lit.</p> <p>To change the setting, select the desired magnification, then press the <b>Copy Quantity</b> buttons.</p> <p>To increase the buckle, increase the number.<br/>To decrease the buckle, decrease the number.</p> <p>Press the <b>Clear</b> button to exit and store the new setting(s).</p>   |
| 51-[2] | Registration<br>Buckle:<br>Alternate<br>Paper Tray<br>(XD104/XD124f)         | 00 to 99 | 50      | -   | <p>Press the <b>Exposure</b> button until the <b>Auto</b> and <b>Alternate Paper Tray</b> lamps are lit.<br/>The Alternate Paper Tray setting is displayed in the Copy Quantity display and the LED for the selected magnification is lit.</p> <p>To change the setting, select the desired magnification, then press the <b>Copy Quantity</b> buttons.</p> <p>To increase the buckle, increase the number.<br/>To decrease the buckle, decrease the number.</p> <p>Press the <b>Clear</b> button to exit and store the new setting(s).</p>                              |
| 51-[6] | SDF Exposure<br>Correction   | 00 to 99 | 50      | -   | <p>The current setting for SDF Exposure is displayed when this diagnostic code is entered.</p> <p>To change the setting, press the copy quantity "tens" button until the new value is displayed, then press the <b>Start</b> button. The new value is stored and a copy is made. If necessary, repeat the process until the output has the desired density.</p> <p>Increase the setting to obtain darker copy output.<br/>Decrease the number to obtain lighter copy output.</p> <p>Press the <b>Clear</b> button to store the setting and exit the Diagnostic mode.</p> |

## Configuration Codes

These codes allow the displaying or changing of various machine configurations.

**Table 1 Configuration Codes**

| Code    | Function             | Range          | Default | ADJ | Description   |
|---------|----------------------|----------------|---------|-----|---|
| 22-[14] | P-ROM version        | -              | -       | -   | When the <b>Start</b> button is pressed, the P-ROM version displays as three digits on the Copy Quantity display.   |
| 26-[1]  | Tray Configuration   | 0 or 1         | -       | -   | When the <b>Start</b> button is pressed, the current tray configuration is displayed.<br><br>0 = Single sheet bypass<br>1 = Alternate Tray<br><br>To change the configuration, press the <b>Copy Quantity</b> "ones" button until the desired code is displayed, then press the <b>Start</b> button.                    |
| 26-[2]  | SDF Setting          | 0 or 1 or 2    | -       | -   | When the <b>Start</b> button is pressed, the current SDF configuration is displayed.<br><br>0 = Without SDF<br>1 = With SDF<br>2 = Not available<br><br>To change the configuration, press the <b>Copy Quantity</b> "ones" button until the desired code is displayed, then press the <b>Start</b> button.              |
| 26-[3]  | Paper Tray 2 setting | 0 or 1         | -       | -   | When the <b>Start</b> button is pressed, the current Paper Tray 2 configuration is displayed.<br><br>0 = Without Paper tray 2<br>1 = With Paper tray 2<br><br>To change the configuration, press the <b>Copy Quantity</b> "ones" button until the desired code is displayed, then press the <b>Start</b> button.        |
| 26-[6]  | Paper size type      | 0 or 1         | -       | -   | When the <b>Start</b> button is pressed, the current paper size type is displayed.<br><br>0 = Inch series<br>1 = AB series<br>2 = Japan AB Series<br><br>To change the configuration, press the <b>Copy Quantity</b> "ones" button until the desired code is displayed, then press the <b>Start</b> button.             |
| 26-[7]  | Copy output speed    | 10, 12, 15 cpm | -       | -   | When the <b>Start</b> button is pressed, the machine copy output speed is displayed.  |
| 26-[20] | Trail edge deletion  | 0 or 1         | 0       | -   | When this code is entered, the currently active code number is displayed.<br><br>0 = Trail edge deletion is allowed<br>1 = Trail edge deletion is not allowed<br><br>To change the configuration, press the <b>Copy Quantity</b> "ones" button until the desired code is displayed, then press the <b>Start</b> button. |

Table 1 Configuration Codes

| Code    | Function                       | Range      | Default | ADJ | Description  |
|---------|--------------------------------|------------|---------|-----|--|
| 26-[30] | CE mark application            | 0 or 1     | 0       | -   | <p>When this code is entered, the currently active code number is displayed.</p> <p>0 = CE mark application control off<br/>1 = CE mark application control on</p> <p>To change the configuration, press the <b>Copy Quantity</b> "ones" button until the desired code is displayed, then press the <b>Start</b> button.</p> |
| 26-[38] | Drum cartridge life end        | 0 or 1     | 0       | -   | <p>When this code is entered, the currently active code number is displayed.</p> <p>0 = End of life disabled<br/>1 = End of life enabled</p> <p>To change the configuration, press the <b>Copy Quantity</b> "ones" button until the desired code is displayed, then press the <b>Start</b> button.</p>                       |
| 26-[39] | Memory capacity                | 0, 1, 2    | -       | -   | <p>When this code is entered, the currently active code number is displayed.</p> <p>0 = No memory<br/>1 = 4 Mbyte<br/>2 = 6 Mbyte</p> <p>To change the configuration, press the <b>Copy Quantity</b> "ones" button until the desired code is displayed, then press the <b>Start</b> button.</p>                              |
| 26-[40] | Polygon motor off time setting | 0, 1, 2, 3 | -       | -   | <p>When this code is entered, the currently active code number is displayed.</p> <p>0 = 0 seconds<br/>1 = 30 seconds<br/>2 = 60 seconds<br/>3 = 90 seconds</p> <p>To change the configuration, press the <b>Copy Quantity</b> "ones" button until the desired code is displayed, then press the <b>Start</b> button.</p>     |

## Total Copy Count Read

1. Enter diagnostics.
2. Record the total copy count.
  - a. Enter code 22-[5].
  - b. The copy count will flash 3 digits at a time, 2 times (6 digits), then repeat the sequence indefinitely. The most significant digits will flash first.  
For example, 000 → 234 (Example shows a Copy count of 234.)
  - c. The display will pause about 1 second between counts.
3. To end the copy count read, press the **Clear** button.

## Drum Cartridge Count Read

1. Enter diagnostics.
2. Record the drum cartridge copy count.
  - a. Enter code 22-[12].
  - b. The drum count will flash 3 digits at a time, 1 times (6 digits), then repeat the sequence indefinitely. The most significant digits will flash first.  
For example, 000 → 234 (Example shows a drum count of 234.)
  - c. The display will pause about 1 second between counts.
3. To end the drum count read, press the **Clear** button.



## Drum Cartridge Count Clear

1. Enter diagnostics.
2. Enter code 24-[7].
3. Press the **Start** button.
4. The drum cartridge count will reset to 0.
5. Exit diagnostics.

## GP1 Image on Photoreceptor

1. Open the document cover and prepare the copier to make a copy of Side B of the Standard Test Pattern (82P524).
2. Leaving the document cover open, press the **Start** button. (The carriage will begin to scan.) Open the copier or turn off the power when the carriage reaches the center. This will cause a paper jam.
3. Clear the paper jam, being careful not to disturb the image on the photoreceptor.
4. Observe the image on the photoreceptor.
5. Repeat steps 1 through 4 two more times, or as required.

## Programmable Settings Features 0-9, 11, 12 & 14

To change a programmable setting, refer to Table 1.

**NOTE:** Programmable features can only be accessed while the copier is in the Ready mode.

1. Press the **Toner Save** mode button.  
The LED illuminates.
2. Press the **Toner Save** mode button again and hold it for 4 to 6 seconds.  
The LED next to Auto mode lights.  
The three red LEDs (Jam, Toner Cartridge indicator, Photoreceptor) flash.
3. Press the "10's" button to select the program number of the feature to be changed.  
**NOTE:** You will not be given the choice to change an option if the copier is not equipped with the feature.
4. Press the **Start** button.  
The current setting for the program will flash.
5. Press the 1's-unit button until the desired option number is displayed.
6. Press the **Start** button to store the selection.
7. Press the **Clear** button to continue making other changes, or press the **Exposure Mode** button to return to Ready mode.

### Feature 10

To change the programmable feature, refer to Table 1.

**NOTE:** Programmable features can only be accessed while the copier is in the Ready mode.

1. Press the **Toner Save** mode button.  
The LED illuminates.
2. Press the **Toner Save** mode button again and hold it for 4 to 6 seconds.  
The LED next to Auto mode lights.  
The three red LEDs (Toner Cartridge, Drum Cartridge, Paper Jam) flash.
3. Press the "10's" button until the number 10 is displayed.  
**NOTE:** You will not be given the choice to change an option if the copier is not equipped with the feature.
4. Press the **Start** button.  
The current reduction/enlargement setting will flash.
5. Press the **Zoom-Up** or **Zoom-Down** button until the desired percentage is displayed.
6. Press the **Start** button to store the selection.

7. Press the **Clear** button to continue making other changes, or press the **Exposure Mode** button to return to Ready mode.

**Table 1 Programmable Features Settings**

| Program Number | Program  | Option Number and Option   |
|----------------|--|--|
| 0              | Priority Tray                                    | 0 - Main paper tray<br>1 - Alternate paper tray  |
| 1              | Auto Clear Time Out                              | 0 - Off<br>1 - 30 seconds<br>2 - 60 seconds (default)<br>3 - 90 seconds<br>4 - 120 seconds                                   |
| 2              | Time-out to Power Save                           | 0 - Off<br>1 - 45 seconds<br>2 - 90 seconds (default)<br>3 - 2 minutes<br>4 - 5 minutes                                      |
| 3              | Time-out to Power Shut-Off                       | 0 - 2 minutes<br>1 - 5 minutes (default)<br>2 - 15 minutes<br>3 - 30 minutes<br>4 - 60 minutes<br>5 - 120 minutes<br>6 - Off |
| 4              | Default Magnification                            | 0 - 100% (default)<br>1 - 99%<br>2 - 101%  |
| 5              | Default Exposure                                 | 0 - Auto Exposure (default)<br>1 - Text<br>2 - Photo 1   |
| 6              | Auto Contrast Adjustment                         | 0 - Lightest<br>1 - Lighter<br>2 - Normal (default)<br>3 - Darker<br>4 - Darkest   |
| 7              | Paper Trail Edge Deletion<br>(4 mm)              | 0 - On (default)<br>1 - Off  |
| 8              | Paper Tray Bypass Auto Start                     | 0 - On (default)<br>1 - Off  |
| 9              | SDF Auto Start                                   | 0 - On (default)<br>1 - Off  |
| 10             | R/E Preset                                       | 50 - 200%<br>50% (default)   |
| 11             | Auto Paper Tray Switching<br>(XD120f and XD124f) | 0 - On<br>1 - Off (default)  |

**Table 1 Programmable Features Settings**

| Program Number | Program                       | Option Number and Option   |
|----------------|-------------------------------|--|
| 14             | Return to Print Mode Time Out | 0 - 60 seconds (default)<br>1 - 90 seconds<br>2 - 120 seconds<br>3 - 150 seconds<br>4 - 180 seconds<br>5 - Off - no time out |
| 16             | Drum Cartridge Life Remaining | Percent (0-100)  |

## Physical Characteristics

**Table 1 Machine Dimensions**

| Machine Dimensions | Width x Depth x Height                      |
|--------------------|---|
| XD100/XD102        | 24 x 17.5 x 12 inches (610 x 445 x 304 mm)  |
| XD104              | 30 x 17.5 x 12 inches (762 x 445 x 304 mm)  |
| XD120f             | 24 x 18.75 x 18 inches(610 x 476 x 457 mm)  |
| XD124f             | 30 x 18.75 x 18 inches (762 x 476 x 457 mm) |

**Table 2 Machine Weight**

| Machine Weight  | (includes Drum Cartridge and Toner Cartridge) |
|-----------------|---|
| with cartridges | 40.9 lbs (18.6 kg) (XD100/XD102/XD104)        |
| with cartridges | 53 lbs (24.1 kg) (XD120F/XD124f)              |

## Copier Footprint

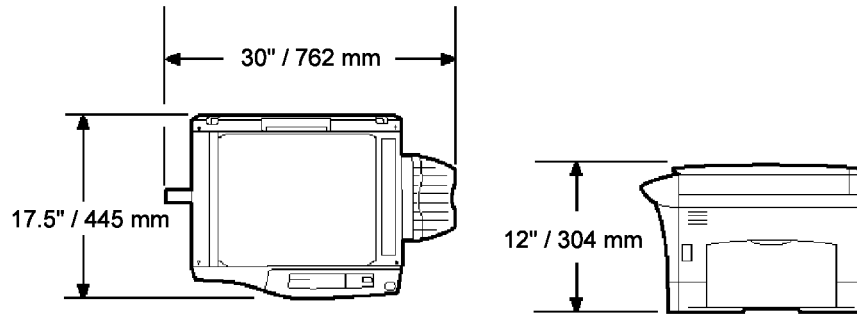


Figure 1 Copier Footprint (XD100/XD102/XD104)

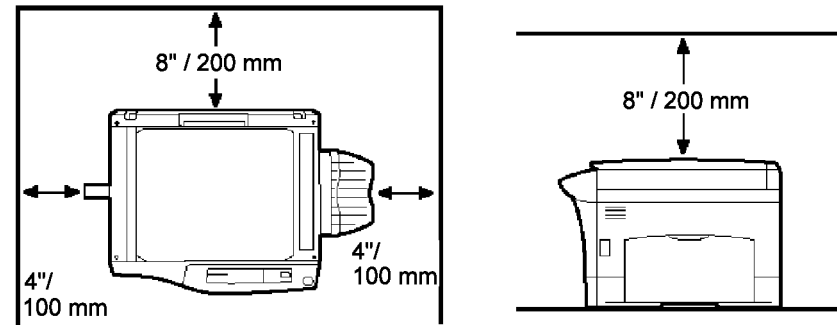


Figure 3 Minimum Clearances (All models)

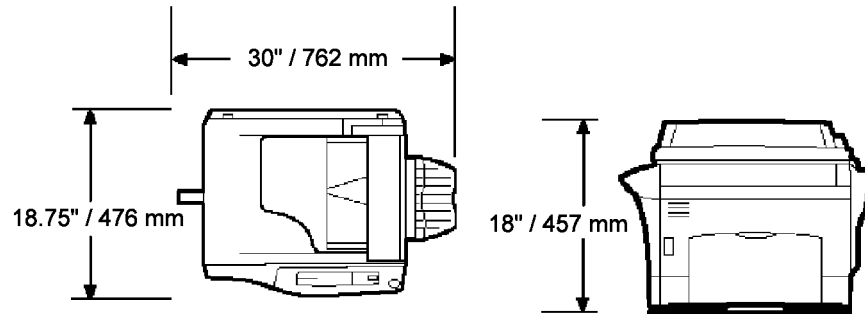


Figure 2 Copier Footprint (XD120f/XD124f)

## Electrical Requirements

**Table 1 Electrical Requirements**

|                         |   |
|-------------------------|---|
| Electrical Requirements | 120 VAC +/- 10%, 50/60 Hz, 15A                          |
| Power Consumption       | MAX: 1.0 kW<br>Standby: 14.3 Watts<br>Shut-off: 5 Watts |

## Copier Capabilities

**Table 1 Copier Capabilities**

|                            |  |
|----------------------------|--|
| Original Size              | Document Glass: 10" x 14" maximum (B4)<br>Set Document Feeder: 10" x 14" (B4) maximum  |
| SDF Capacity               | 30 pages, 20 lb/80 gsm<br>16 lb - 24 lb (60 -90 gsm)   |
| Copy Ratio Percentages     | 1:1 +/- 1%<br>Preset: 50, 64, 78, 100, 129, 200, one customer settable<br>Zoom: 50 - 200%  |
| Copy Paper Size and Weight | <b>Tray 1 and Tray 2</b><br>5.5x8.5" / A5 to 8.5x14" / 216x356mm<br>16-24 lb / 60-90 gsm<br><b>Bypass Tray/Alternate Tray</b><br>3.5x5.5" / 89x140mm to<br>8.5x14" / 216x356mm<br>14-34 lb / 52-130 gsm    |
| Copy Rate                  | 10 cpm at 600 dpi, 8-1/2" x 11" (A4) landscape and smaller, same size originals (XD100/XD102/XD104)<br><br>12 cpm at 600 dpi, 8-1/2" x 11" (A4) landscape and smaller, same size originals (XD120f/XD124f) |
| Print Rate                 | 8 ppm at 600 dpi with ECP parallel port communications enabled   |
| Paper Tray Capacity:       |  |
| XD100                      | 250 sheets - 20 lb/80 gsm  |
| XD102                      | 200 sheets - 24 lb/90 gsm  |
| XD104                      | 250 sheets - 20 lb/80 gsm  |
| XD120f/XD124f              | Tray 1 - 250 sheets, 20 lb/80 gsm<br>Tray 2 - 250 sheets, 20 lb/80 gsm   |
| Paper Tray Bypass:         |  |
| XD100                      | 1  |
| XD102                      | 1  |
| XD120f                     | 1  |
| Alternate Paper Tray:      |  |
| XD104/XD124f               | 50   |
| First copy output time     | 9 seconds  |
| Warm up time               | less than 23 seconds   |
| Restrictions:              | Feed recycled paper, labels, or transparencies one sheet at a time.  |
| Paper Stock                | Use labels and transparencies which are specifically designed for copiers (high temperatures).   |

**Table 2 Tools**

| <b>Tool</b>              | <b>Part Number</b>                                      |
|--------------------------|---|
| All Purpose Cleaner      | XL - 8R90175  |
| Antistatic Fluid         | 8R90273   |
| Black Bag                | 95P2362   |
| Bottom Pad               | USCO/XCL/XL - 19P580                                    |
| Cotton Swab              | USCO - 35P2162  |
| Cleaning Cloth           | XL - 8R90019  |
| Film Remover             | USCO/XCL - 43P45  |
| Formula A                | USCO/XCL - 43P48<br>XL - 8R90175                        |
| General Cleaning Solvent | USCO - 43P78<br>XL - 8R90176                            |
| Fuser Lube               | 8R983   |
| Turbine Oil              | 70P95   |
| Heavy-Duty Towels        | USCO/XCL - 35P3191                                      |
| Lens and Mirror Cleaner  | USCO/XCL - 3P81<br>XL - 8R901784                        |
| Lint-Free Cloth          | USCO/XCL/XL - 600S4372                                  |
| Oil                      | USCO/XCL - 70P23<br>XL - 70P95                          |
| Service Log Pouch        | 600K53510   |
| Test Pattern             | 82P524 (USCO and XCL)<br>82P523 (XL)<br>82P12130 (USCO) |

**Table 3 Supplies**

| <b>Supply Name</b> | <b>Part Number</b> |
|--------------------|--------------------|
| Toner Cartridge    | 6R915              |
| Drum Cartridge     | 13R552             |

# Lot Number Identification

## Drum Cartridge

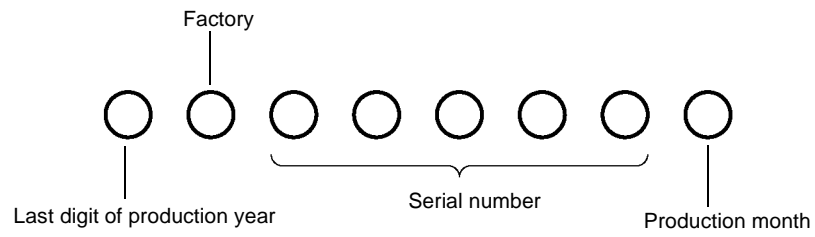


Figure 1 Drum Cartridge Lot Number Identification

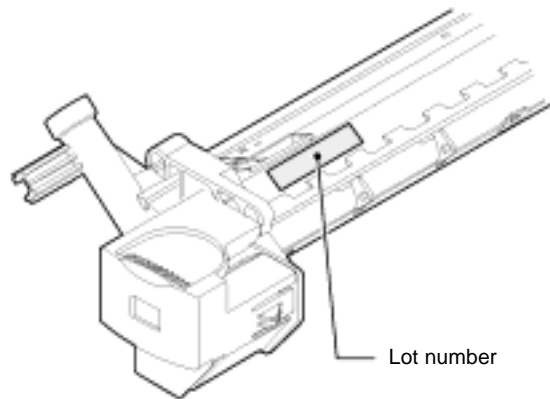


Figure 2 Drum Cartridge Lot Number Label Location

## Toner Cartridge

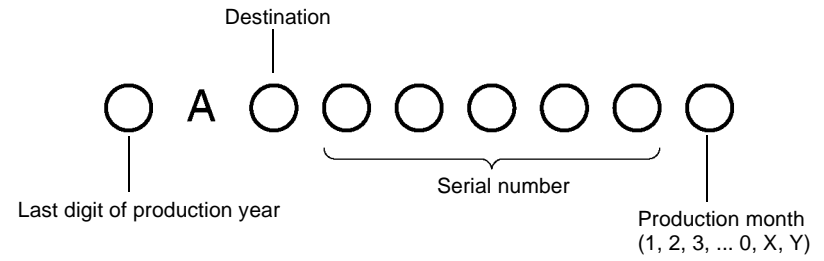


Figure 3 Toner Cartridge Lot Number Identification

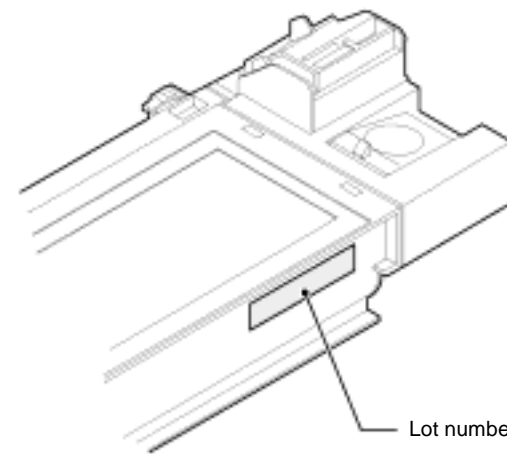


Figure 4 Toner Cartridge Lot Number Label Location

## General Service Notes

### WorkCentre XD Series Toner Cartridge Yield

A small number of customers may complain that they are not getting 6000 copies from their toner cartridge.

The expected Toner Cartridge yield of 6000 copies is based on an average area coverage of six (6) percent per 8.5" X 11" (A4) copy. However, yield varies with area coverage of customer documents, document size, contrast setting, and percent of copies made with the document cover open. Therefore, the 6000 copies yield cannot be guaranteed.

It is important to understand that many of the customer's documents are greater than 6% area coverage. Any document which contains more area coverage than the samples represented in Figure 1 and Figure 2, will result in a yield of less than 6000 copies. Figure 3 and Figure 4 show examples of area coverage that exceeds 6%.

1. In cascade development gray lines develop nearly as completely as black lines.
  2. This indicates the high contrast which may be obtained with this type of development.
  3. However, the deposition of powder in any area is approximately proportional to the electrostatic contrast between that area and its background.
  4. A black line on a gray background will reproduce as a dense line on a clear background because only potential differences are developed.
  5. Summarizing, we may say that cascade-development xerography has the following characteristics:
    - a. Narrow lines are developed to a density approximately proportional to the contrast between the line and its background density.
    - b. Wide areas are developed at the edges to about the same degree, and are essentially underdeveloped internally.
  6. Xerocopies made with a developer having a high triboelectric difference have less background and sharper, more well defined characters of somewhat lower density than those made with a developer having a low triboelectric difference.
  7. If, however, the triboelectric difference is too great, very little powder deposition will occur in the image areas and a washed-out print will result.

(Text from XEROGRAPHY TODAY, 1955 "Photographic Engineering")
- KTP 310.201

Figure 1 Three percent coverage

Section 8-24. Quarterly and annual financial reports.

The commissioner of finance shall prepare for the mayor for submission in their entirety to the council complete financial reports for each quarter, for each fiscal year, and for such other periods as may be required by the mayor. The annual financial report shall be printed for distribution as soon as possible after the close of each fiscal period.

Section 8-25. Special audits.

Upon the death, resignation, removal, or expiration of the term of any officer of the city, other than the auditor, shall make an audit and investigation of the accounts of such officer and shall report the condition thereof to the mayor and the council. Either the council or the mayor may at any time provide for an audit or investigation of the accounts of any officer or department of the city government. In case of death, resignation, or removal of the auditor, the mayor shall cause an audit to be made of his or her accounts. If, as a result of any audit, or investigation, an officer be found indebted to the city, the auditor or other persons making such audit shall immediately give notice thereof to the council, the mayor and the city attorney, and the latter shall forthwith proceed to collect such indebtedness.

Section 8-26. Various funds.

The various independent funds, and the provisions governing their use shall be specified in the administrative code.

Section 8-27. Capital fund.

There is hereby established a capital fund which shall be used to account for capital improvements financed from capital authorizations transferred from the general and other funds, proceeds of obligations, and capital reserve funds. A capital appropriation contained in the operating budget shall be transferred to the capital fund and shall continue in force until the purposes for

82

Figure 2 Five percent coverage



1. Surface dye sensitization has not been achieved with selenium. The reason may be that, since the lack of grains results in a low surface/volume ratio, no appreciable perturbation of the band structure of selenium can occur. However, dye sensitization of zinc oxide grains in a resin binder has been known for many years. It has recently been reported that the amount of dye required amounts to at most a few monolayers. If too much dye is added, the sensitivity of the zinc oxide layer passes through a maximum and then decreases.
2. When used with corona charging, these dyed zinc oxide layers have a quantum efficiency still limited to unity. The dye molecule absorbs a photon of visible light and then injects an electron into the conduction band of a zinc oxide crystallite. This electron now behaves as if it had been created by an ultraviolet photon within the crystallite itself. The increase in sensitivity is thus due solely to extended spectral response. The use of dyes such as rose bengal and fluorescein can broaden the spectral response of zinc oxide from its inherent range 320-420 m $\mu$  into the visible range out to 630 m $\mu$ . There is some evidence that a single dye molecule can repeatedly undergo the optical sensitizing process, going back each time to its initial state through a mechanism of regeneration.
3. Hologed zinc oxide papers are about as photosensitive as silver halide contact papers, and the dye-sensitized papers are close to the speed of enlarging papers or ordinary selenium plates (i.e., ASA 1-2). The best of the panchromatic selenium structures described above have a speed of ASA 10, or approximately that of Kodachrome film. In order to achieve higher speed xerographic plates, a quantum efficiency of greater than one will have to be achieved.
4. Intense activity on this problem of quantum amplification is evident in several laboratories, but no practical successes have been published. It is true that in electrode structures photoconductive gain is greater than one has been observed for several materials such as cadmium sulfide, cadmium selenide, zinc sulfide, and even zinc oxide. For example, in a *n*-type semiconductor an absorbed photon liberates an electron-hole pair; the hole is trapped, the electron drifts to the anode, and if the contact cathode is the injecting type, electrons will continue to flow (secondary photocurrent) until the hole disappears by recombination with a trapped electron.
5. This gain, which is the ratio of carrier lifetime to transit time, can be achieved only with ohmic contacts. With a blocking contact, which is obtained in charging a xerographic plate in the conventional manner of use, a quantum efficiency of more than one is impossible. For instance, for an *n*-type photoconductor, charged negatively by corona, the electron generated by photon absorption discharges one positive charge at the anode, and the blocking contact prevents injection of another electron. Even if xerographic plates could be made to work somehow with ohmic contacts, the gain could be achieved only with a slow rise time of the photocurrent. This is because the photoconductors used for xerography contain a large number of traps, which act as a reservoir which must be filled or unfilled in order to change the secondary photocurrent.
6. The approaches to obtaining quantum gain are therefore being pursued: (1) doping of the semiconductor so that the recombination centers, which normally lie near the filled band, instead lie closer to the Fermi level so that the traps are effectively kept occupied by excitation from the recombination center; and (2) the use of multiple-layer structures in which the amplification and storage layers are separated.
7. Because of the need for ohmic contacts, and also because all presently known quantum gain materials exhibit high dark current, these structures cannot be employed in the ordinary single-electrode imaging systems with corona sensitization. However, electro-deposition of metal ions from solution has been used to develop a latent conductivity image in exposed zinc oxide binder layers to give a quantum gain of 10. The solution is in contact with the positive electrode, and the back of the zinc oxide layer has an injecting metal electrode so that electrons can flow toward the surface to reduce the metal ions to the free metal.
8. Many organic compounds have been reported to have photoconductive properties, and three types of systems can be distinguished: solids, suspensions, and solutions of organic compounds (in resins and waxes). All of these systems have certain properties in common: (a) the molecular structure is conjugated, and the photoconductivity is electrochromic; (b) the photoeffects involve molecular, rather than conduction or crystal energy levels; (c) electron and hole migration, trapping, recombination, and carrier decay mechanisms are similar to inorganic semiconductors; and (d) carrier excitation often occurs via a charge-transfer transition. (Text from *ADVANCES IN XEROGRAPHY*, 1958-1962, 1963, 1964.)

Figure 3 Eleven percent coverage



**Curtis House After Restoration**

### Wins Art Award

By ALEX

The Newton Art Association last night presented its annual amateur art award to 24-year-old Diane M. Augustine of 832 Briarcliff Road. Besides the honor the award is covered by amateur artists all over the tri-county area; a cash award of \$500 was made.

Cited as reason for the award was Diane's recent one person show at the Newton Mall, which included the masterful and impressive work "Whaling," a 15-foot long oil painting portraying the death struggle of a giant whale in the same showing. Diane's range of artistic talents was also seen to encompass scenes, landscapes, portraits, and even Mondrian-style geometric art.



**Curtis House Restored**

By ALICE

Restoration of the historical Curtis House has just been completed by the Donald M. Curtis family of Newton.

The Curtis House, located at 14 Hooper Street, was extensively damaged in a fire three years ago. Smoke damage on the second floor and water damage left the house uninhabitable. For one year, the house was boarded up and all but forgotten as the Donald Curtises moved into their present home on Vining Drive.

"We loved that house," Mrs. Elaine Curtis explained, "but after the fire we just didn't have the money to make the needed repairs."

Then the family came into a substantial inheritance. Their decision to restore the five-generation-old Curtis House to its former majesty was almost immediate.

"Once we had the money," said Donald, "there was nothing to stop us from having the repairs made to the house. And we decided it only made sense to restore the architectural details which once distinguished the house."

The Curtis House was built in 1881 by Colonel Norman F. Curtis, whose descendants are now a substantial part of the population of modern Newton. Since then the house has been passed down from generation to generation to the Donald Curtises.

The house has always remained in the Curtis family, though the original estate included stables (facing on Justice Street) which were sold to pay taxes on the extensive holdings.

Asked what he thought about the prospect of moving back into the Hooper Street House, 11 year old Dennis Curtis exclaimed, "I can't wait!"



**Diane**

"I really appreciate this honor," said Diane, visibly moved at the announcement. Later she confided that the money was important to her as well, because it would pay for badly needed supplies of paints and canvases.

Diane Augustine graduated with high honors from the School of Journalism of Clarendon Community College in Newton. Since graduating, she worked at house painting for one year before she landed her present job at the Newton Dispatch.

(continued on page 15)

Figure 4 Twenty-three percent coverage



## Plug/Jack Location Index

|                                     |     |
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| Plug / Jack Location Index .....    | 7-3 |
| Plug / Jack Location Drawings ..... | 7-4 |

## BSDs

|                                |     |
|--------------------------------|-----|
| Block Schematic Diagrams ..... | 7-9 |
|--------------------------------|-----|



Plug / Jack Location Index

| P/J no. | LOCATION                  | FIG. | P/J no. | LOCATION                | FIG. |
|---------|---------------------------|------|---------|-------------------------|------|
|         |                           |      | P/J9    | To Toner Cartridge      | 7-4  |
| CN1     | On Power supply PWB       | 7-1  | CN1     | On Power supply PWB     | 7-1  |
| CN2     | On Power supply PWB       | 7-1  | CN2     | On Power supply PWB     | 7-1  |
| CN6     | On Power supply PWB       | 7-1  | CN6     | On Power supply PWB     | 7-1  |
| CN9     | On Power supply PWB       | 7-1  | CN9     | On Power supply PWB     | 7-1  |
| CN10    | On Power supply PWB       | 7-1  | CN10    | On Power supply PWB     | 7-1  |
| CN11    | On Power supply PWB       | 7-1  | CN11    | On Power supply PWB     | 7-1  |
| CN101   | On Main PWB (Without SDF) | 7-2  | CN101   | On Main PWB (With SDF)  | 7-3  |
| CN101   | On Main PWB (With SDF)    | 7-3  | CN101   | On Main PWB (With SDF)  | 7-3  |
| CN102   | On Main PWB (Without SDF) | 7-2  | CN104   | On Main PWB (With SDF)  | 7-3  |
| CN102   | On Main PWB (With SDF)    | 7-3  | CN105   | On Main PWB (With SDF)  | 7-3  |
| CN103   | On Main PWB (Without SDF) | 7-2  | CN106   | On Main PWB (With SDF)  | 7-3  |
| CN103   | On Main PWB (Without SDF) | 7-2  | CN107   | On Main PWB (With SDF)  | 7-3  |
| CN104   | On Main PWB (Without SDF) | 7-2  | CN108   | On Main PWB (With SDF)  | 7-3  |
| CN105   | On Main PWB (Without SDF) | 7-2  | CN109   | On Main PWB (With SDF)  | 7-3  |
| CN106   | On Main PWB (Without SDF) | 7-2  | CN110   | On Main PWB (With SDF)  | 7-3  |
| CN107   | On Main PWB (Without SDF) | 7-2  | CN111   | On Main PWB (With SDF)  | 7-3  |
| CN108   | On Main PWB (Without SDF) | 7-2  | CN112   | On Main PWB (With SDF)  | 7-3  |
| CN109   | On Main PWB (Without SDF) | 7-2  | CN113   | On Main PWB (With SDF)  | 7-3  |
| CN110   | On Main PWB (Without SDF) | 7-2  | CN114   | On Main PWB (With SDF)  | 7-3  |
| CN111   | On Main PWB (Without SDF) | 7-2  | CN115   | On Main PWB (With SDF)  | 7-3  |
| CN112   | On Main PWB (Without SDF) | 7-2  | CN116   | On Main PWB (With SDF)  | 7-3  |
| CN113   | On Main PWB (Without SDF) | 7-2  | CN117   | On Main PWB (With SDF)  | 7-3  |
| CN114   | On Main PWB (Without SDF) | 7-2  | CN118   | On Main PWB (With SDF)  | 7-3  |
| CN115   | On Main PWB (Without SDF) | 7-2  | CN119   | On Main PWB (With SDF)  | 7-3  |
| CN116   | On Main PWB (Without SDF) | 7-2  | CN120   | On Main PWB (With SDF)  | 7-3  |
| CN117   | On Main PWB (Without SDF) | 7-2  | CN121   | On Main PWB (With SDF)  | 7-3  |
| CN118   | On Main PWB (Without SDF) | 7-2  | CN122   | On Main PWB (With SDF)  | 7-3  |
| CN119   | On Main PWB (Without SDF) | 7-2  | CN123   | On Main PWB (With SDF)  | 7-3  |
| CN120   | On Main PWB (Without SDF) | 7-2  |         |                         |      |
| CN121   | On Main PWB (Without SDF) | 7-2  | P/J6    | To Fuser Heat Rod       | 7-4  |
| CN122   | On Main PWB (Without SDF) | 7-2  | P/J7    | To Fuser Jam Sensor     | 7-4  |
| CN123   | On Main PWB (Without SDF) | 7-2  | P/J8    | To Fuser Thermistor RT1 | 7-4  |
| P/J6    | To Fuser Heat Rod         | 7-4  | P/J9    | To Toner Cartridge      | 7-4  |
| P/J7    | To Fuser Jam Sensor       | 7-4  |         |                         |      |
| P/J8    | To Fuser Thermistor RT1   | 7-4  |         |                         |      |

## Plug / Jack Location Drawings

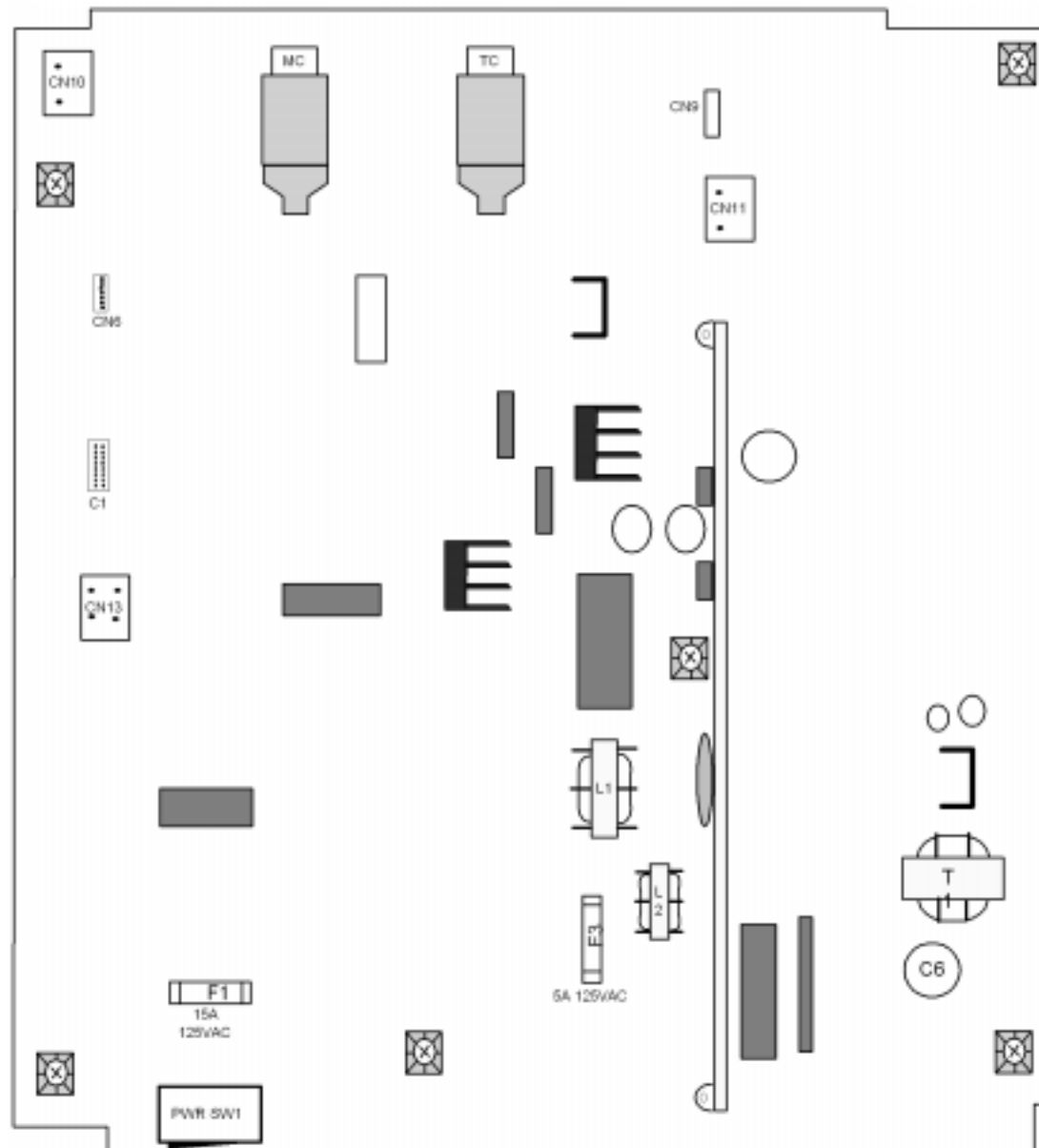


Figure 1 POWER SUPPLY PWB

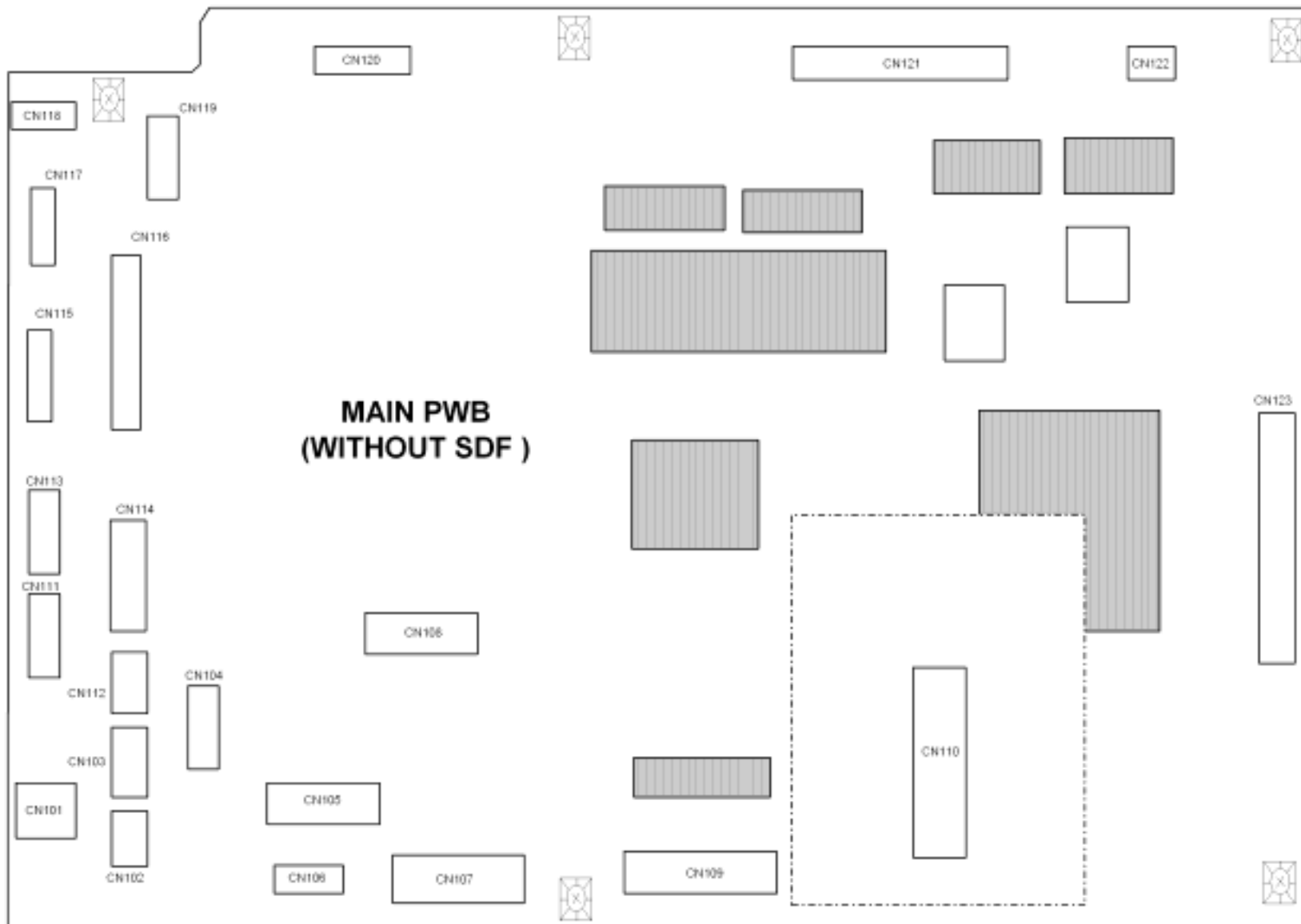


Figure 2 MAIN PWB (Without SDF)

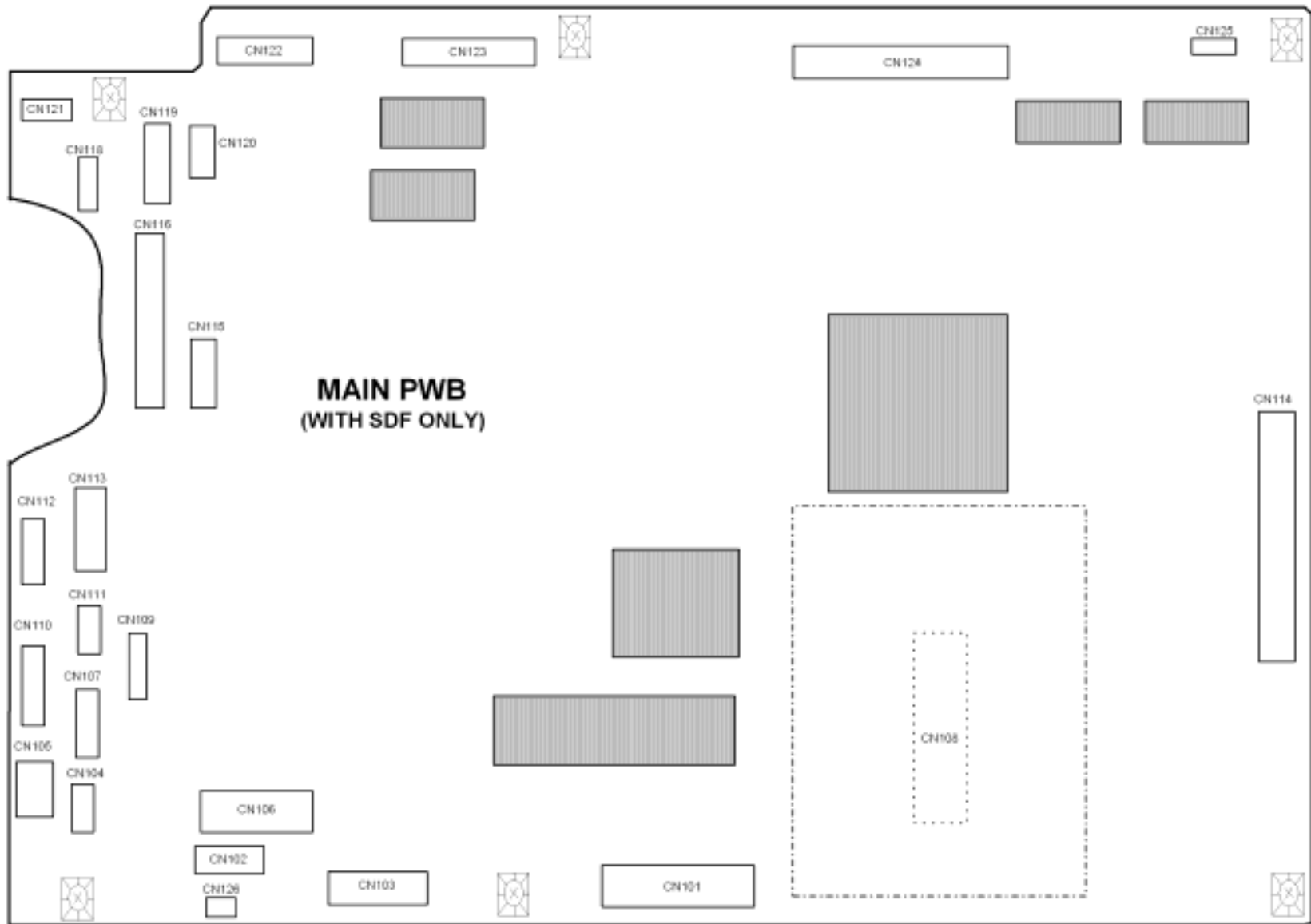


Figure 3 MAIN PWB (With SDF)



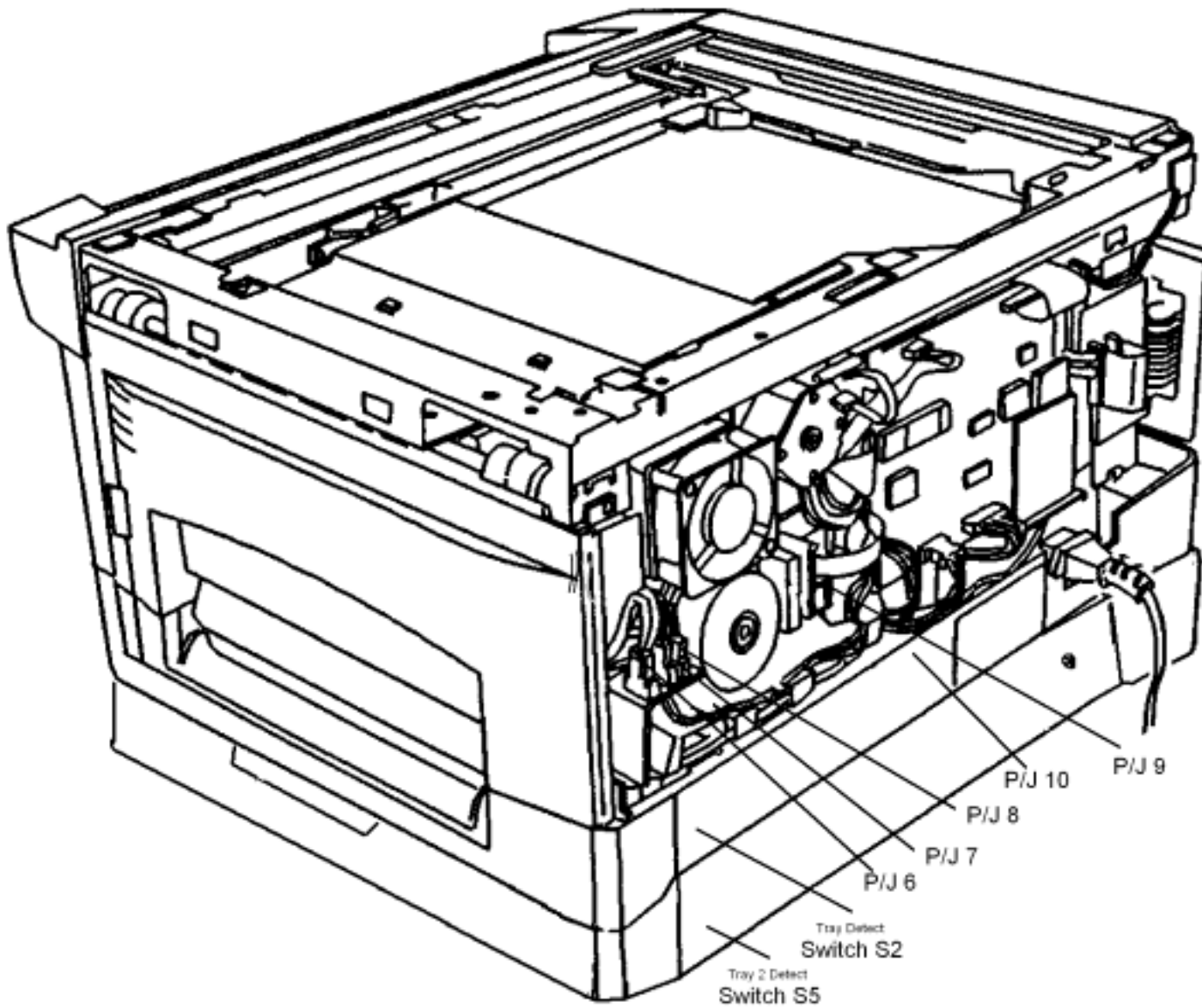


Figure 4 Machine P/J Locations



## Block Schematic Diagrams

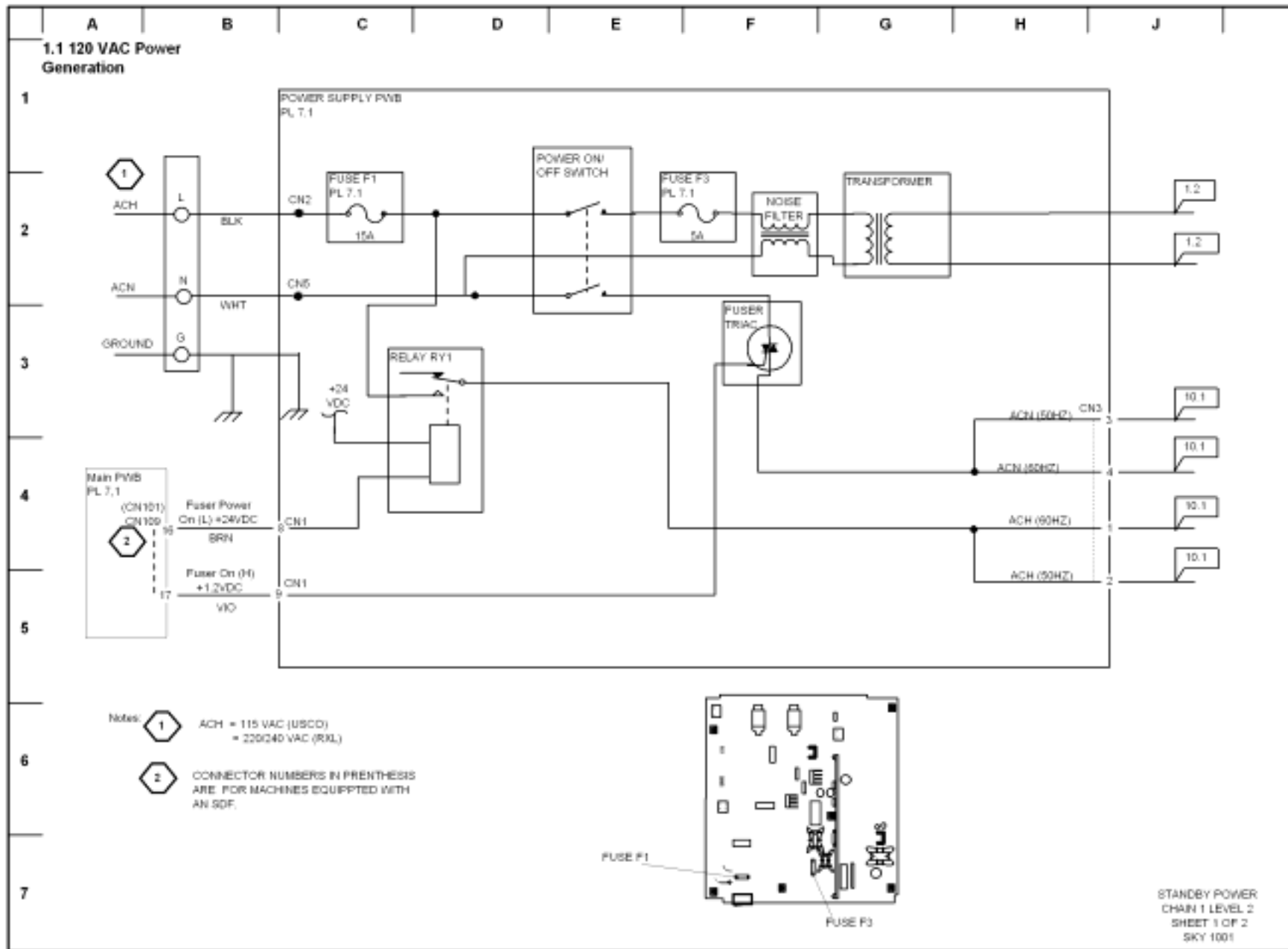


Figure 1.1.1 Power Ge3neration

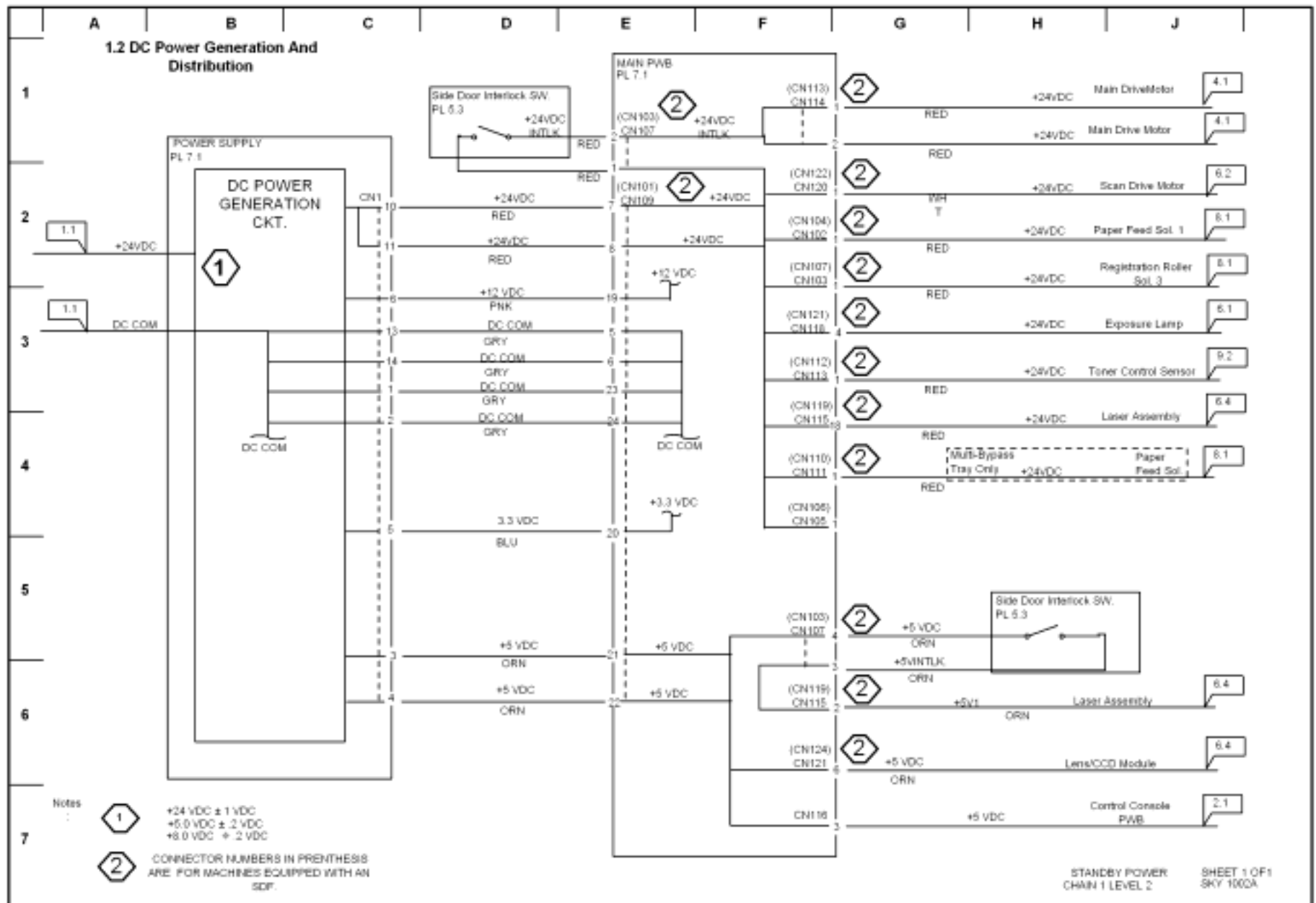


Figure 2 1.2 Power generation and distribution

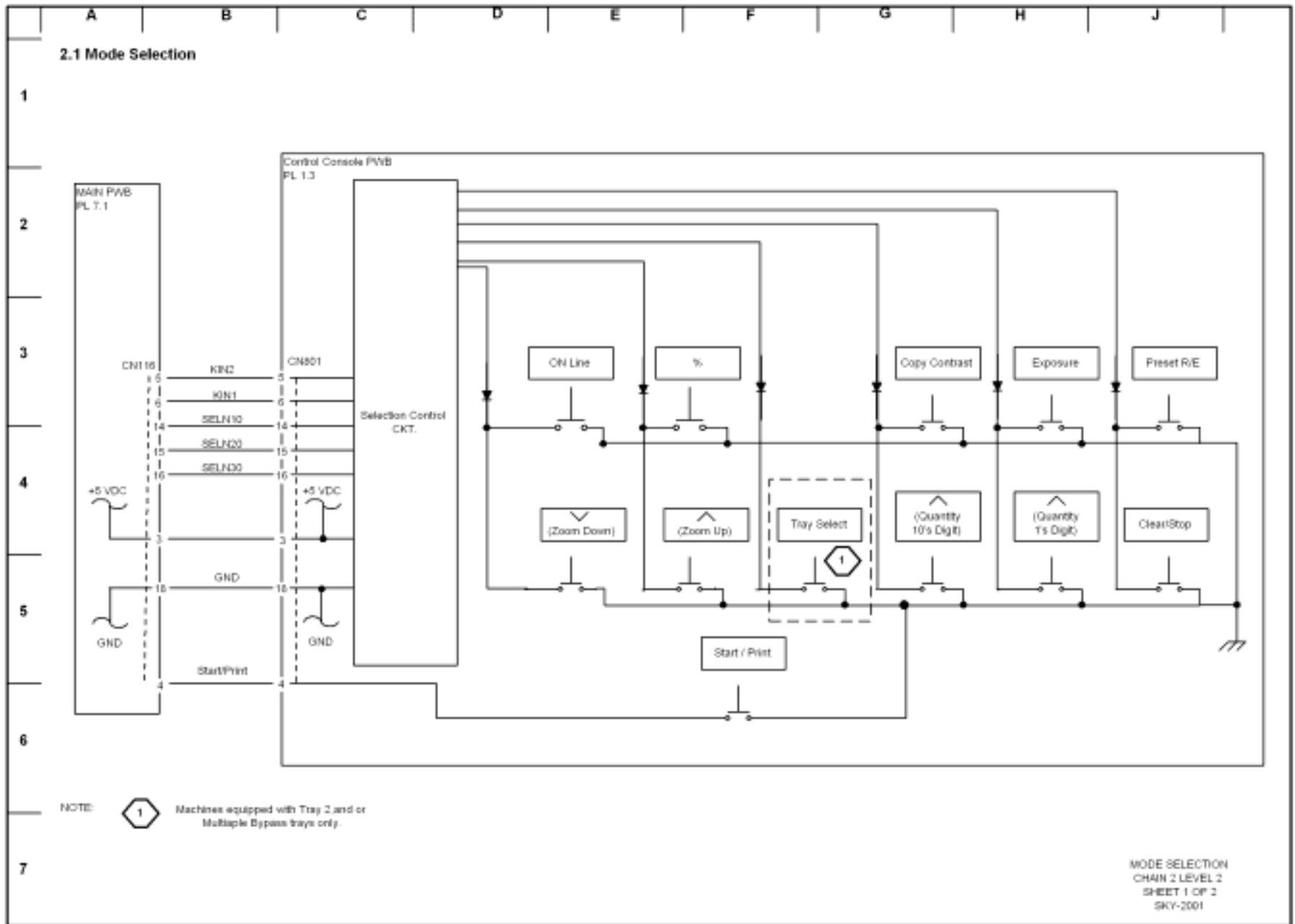


Figure 3 Mode Selection

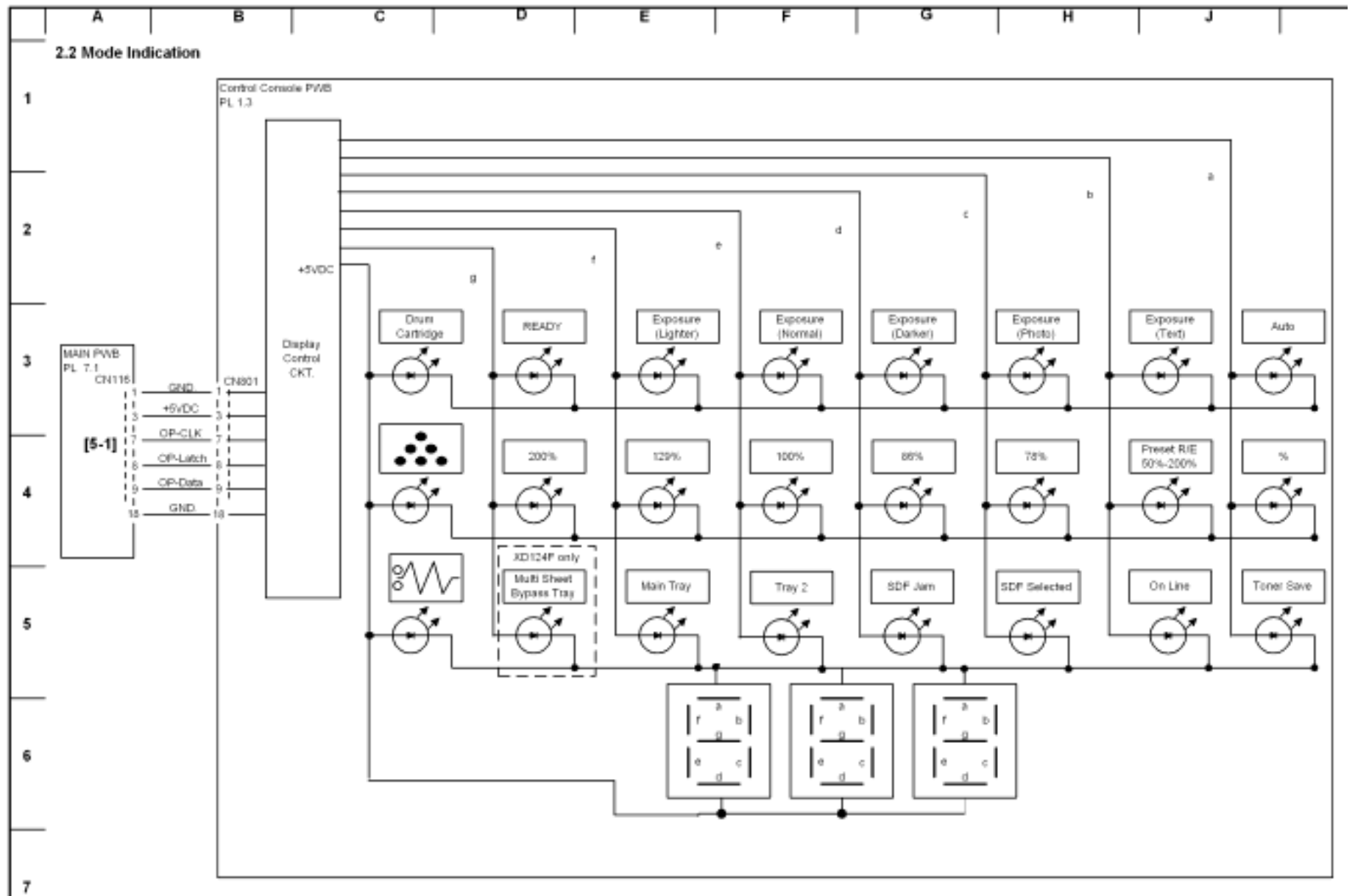


Figure 4 2.2 Mode Indication

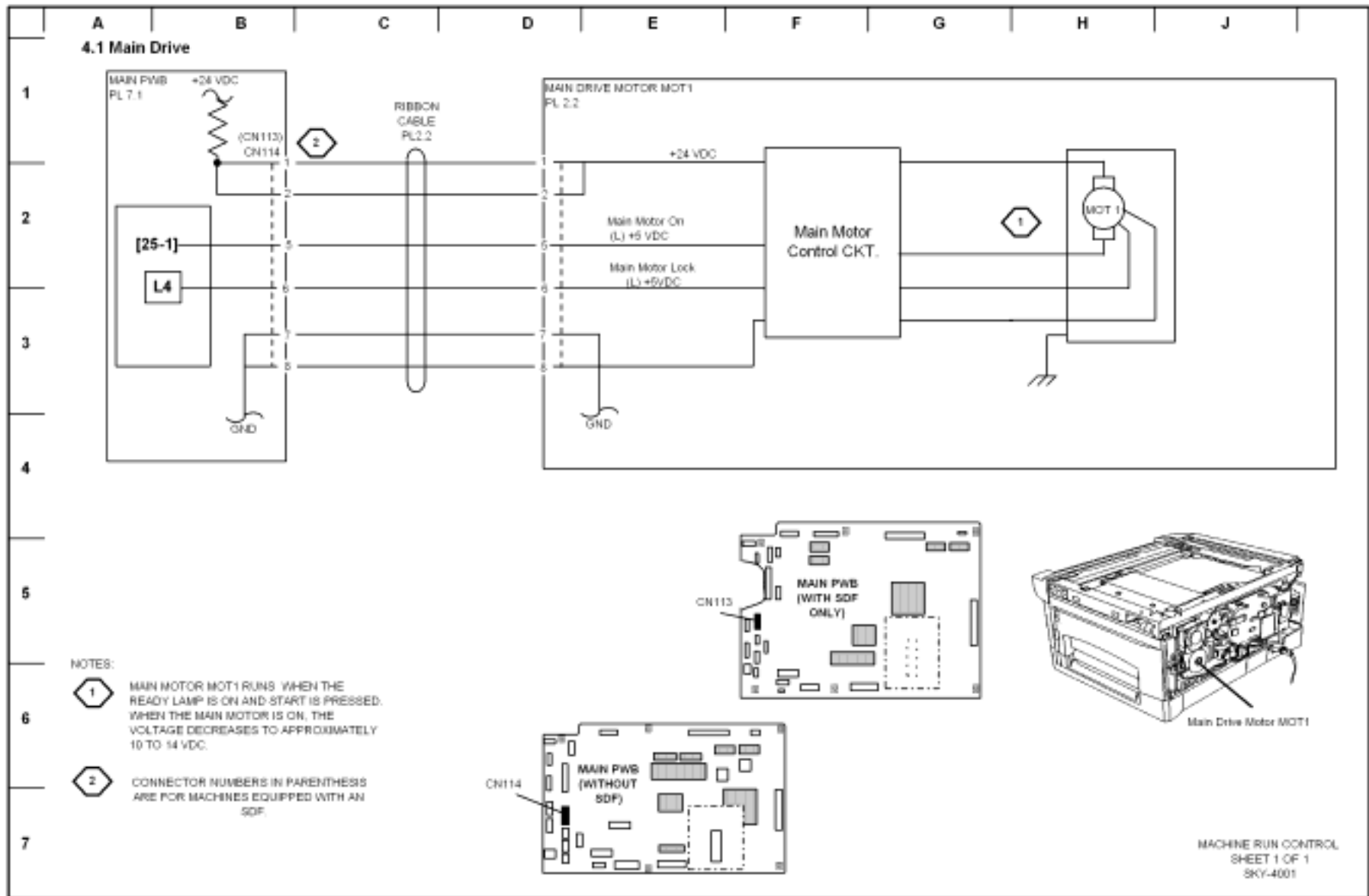


Figure 5 Main Drive Motor



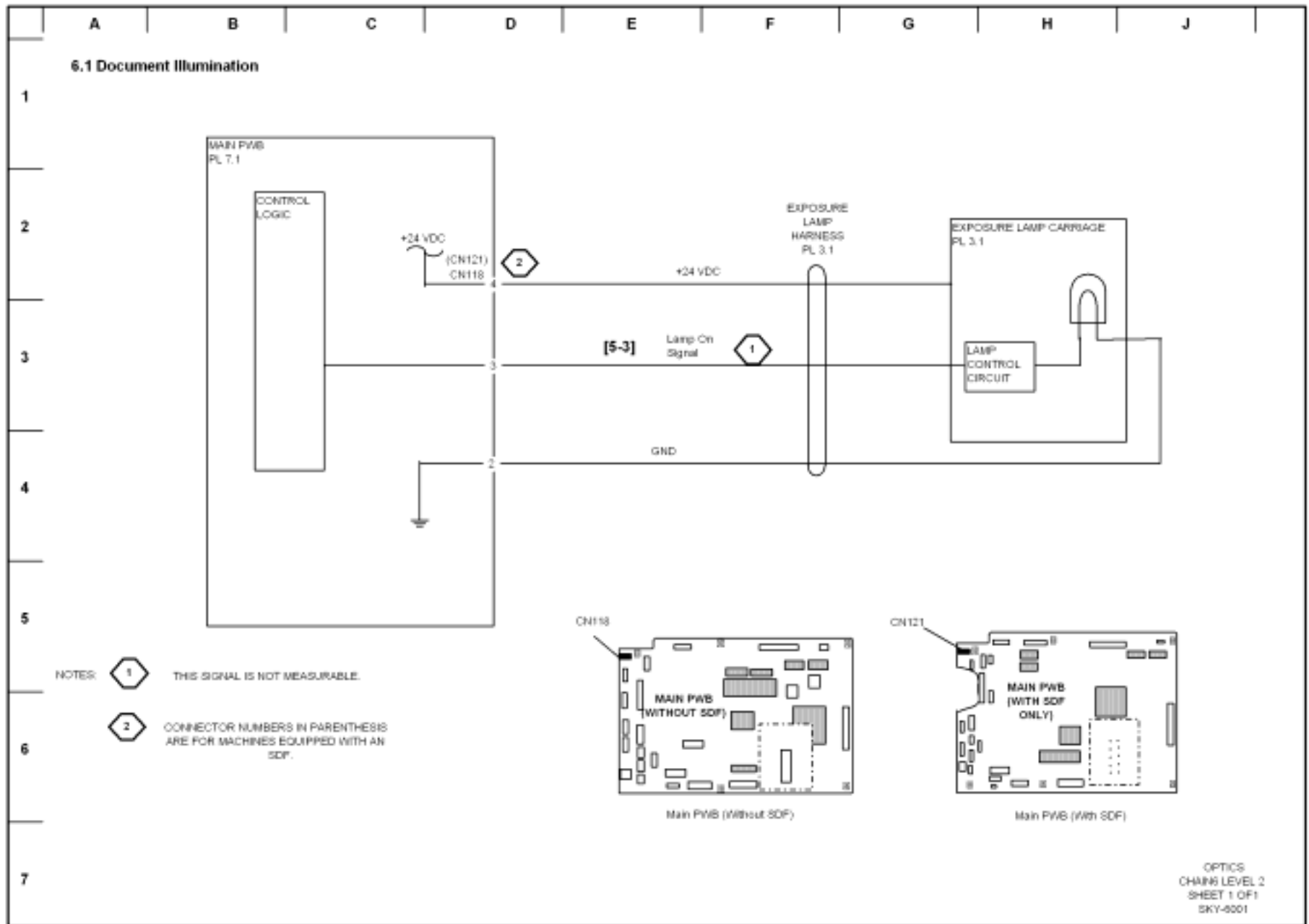


Figure 6 Documentation Illumination

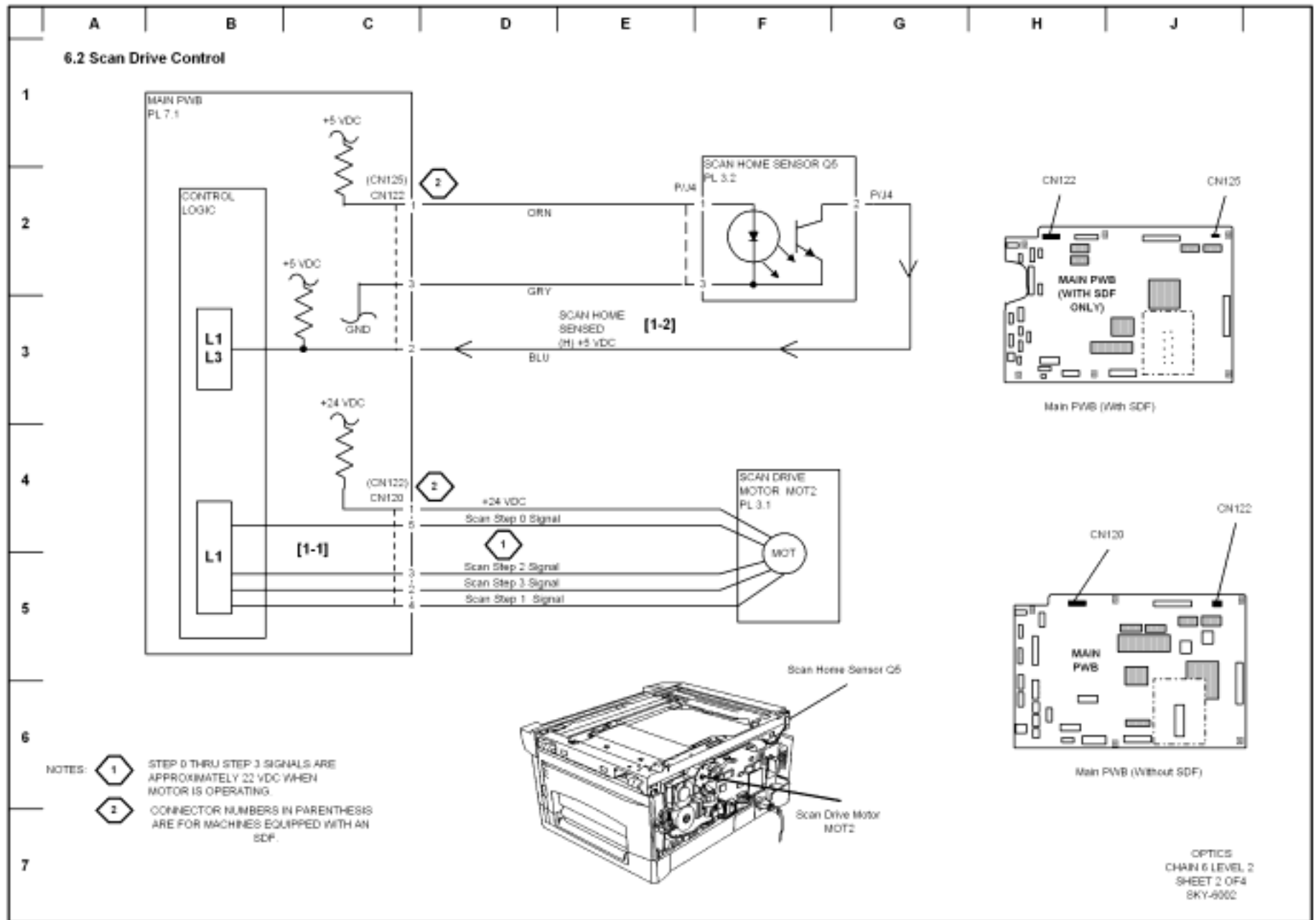


Figure 7 6.2 Scan Drive Control

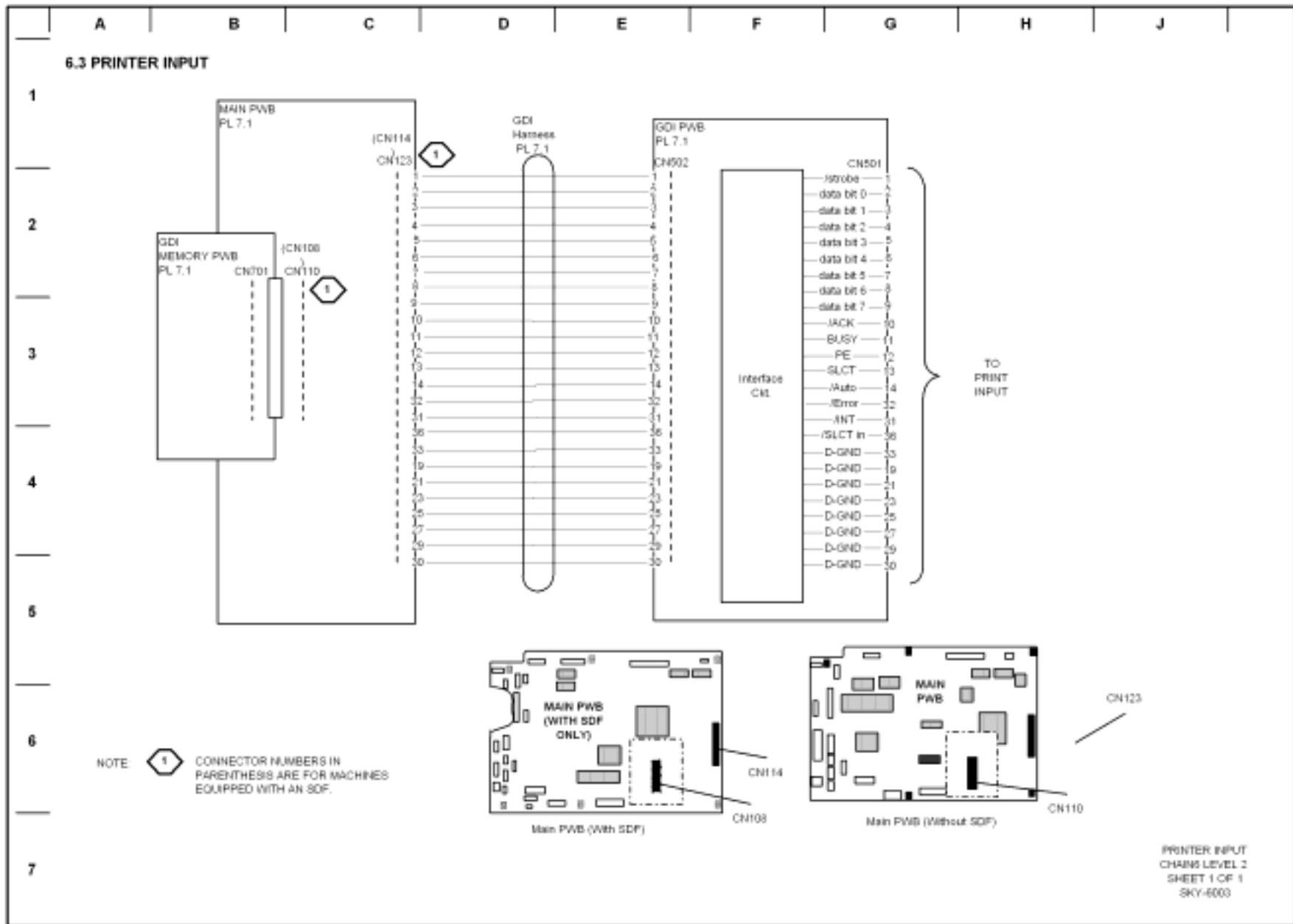


Figure 8 6.3 Printer Input

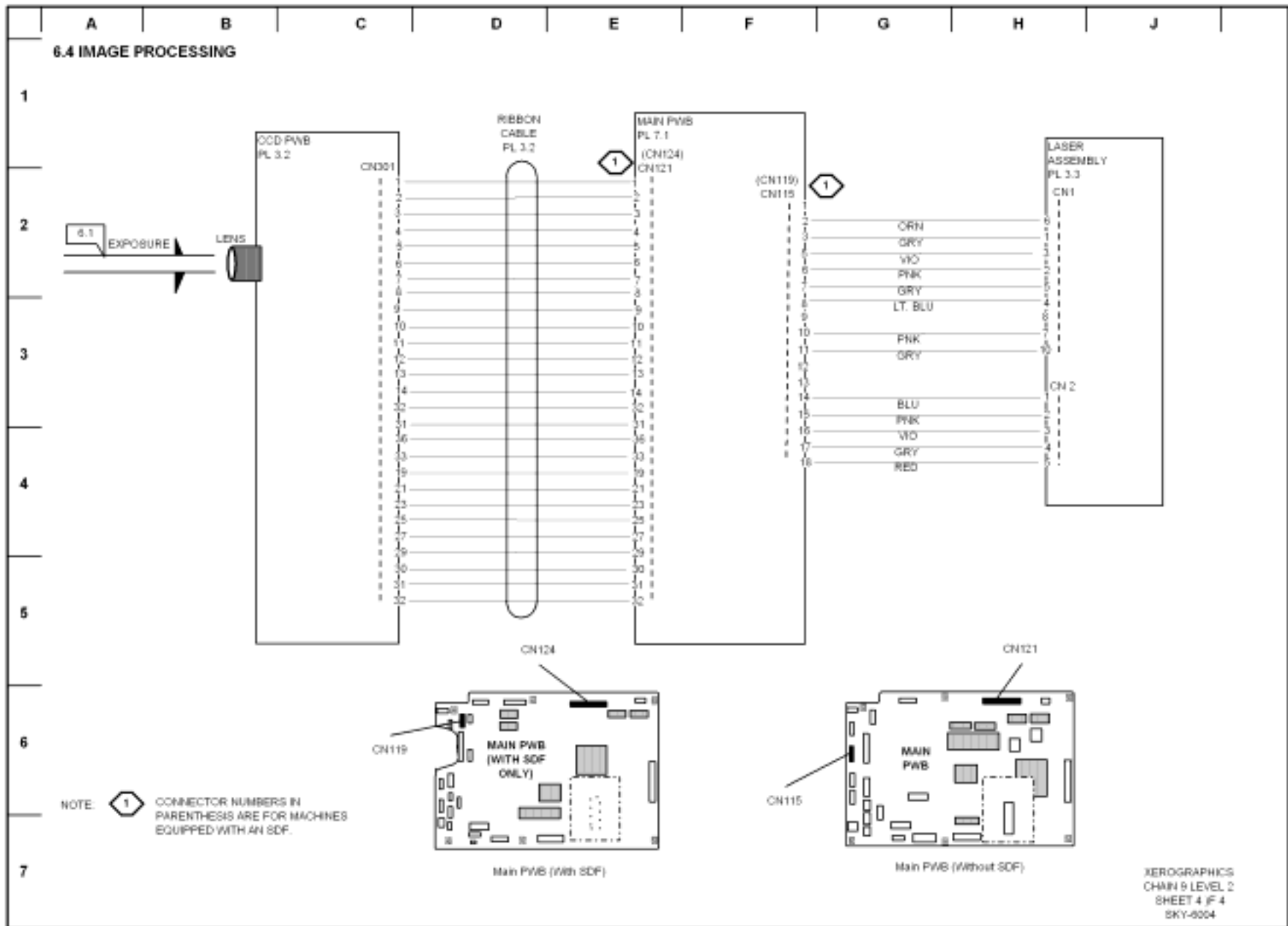


Figure 9 6.4 Image Processing

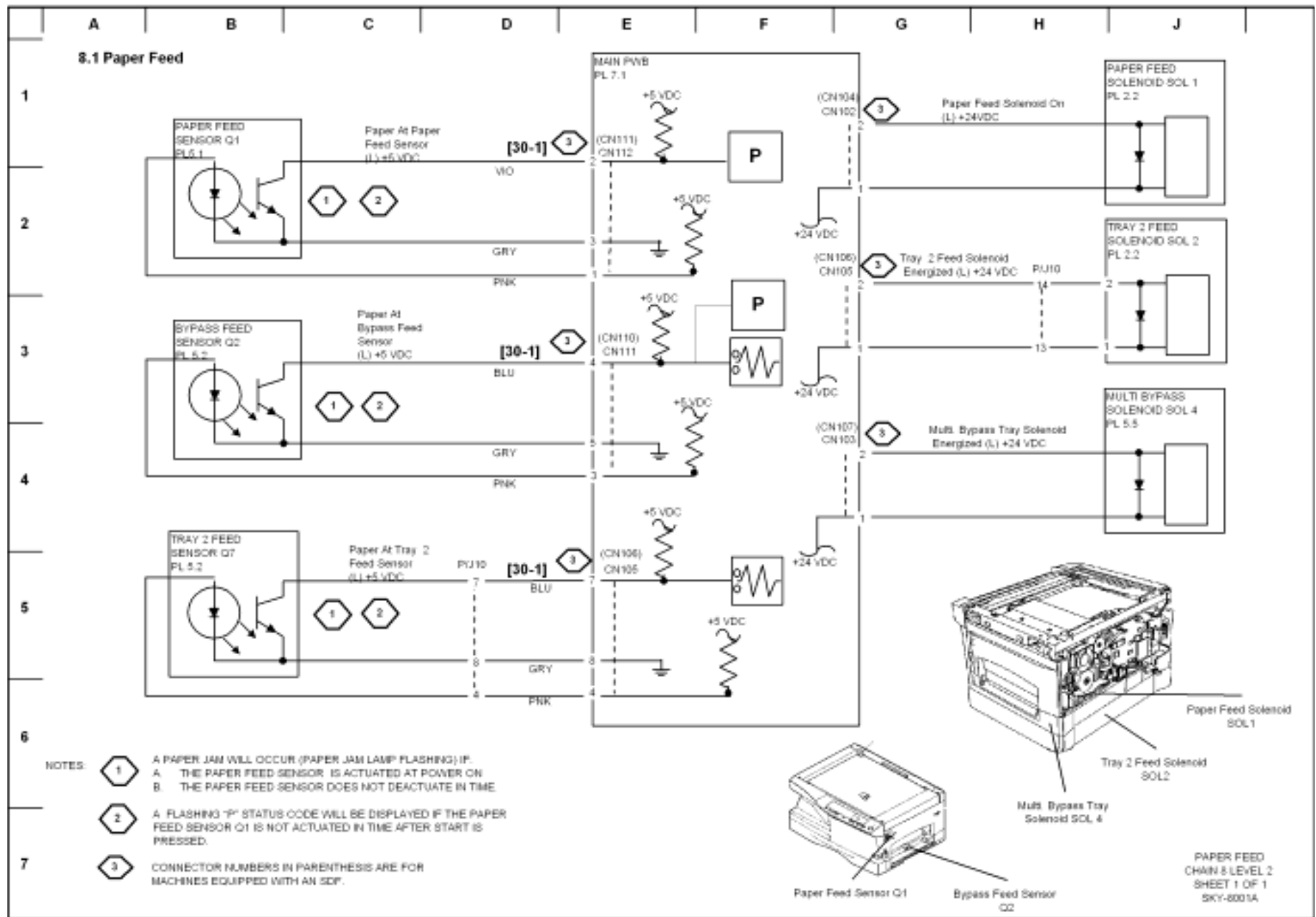


Figure 10 8.1 Paper Feed

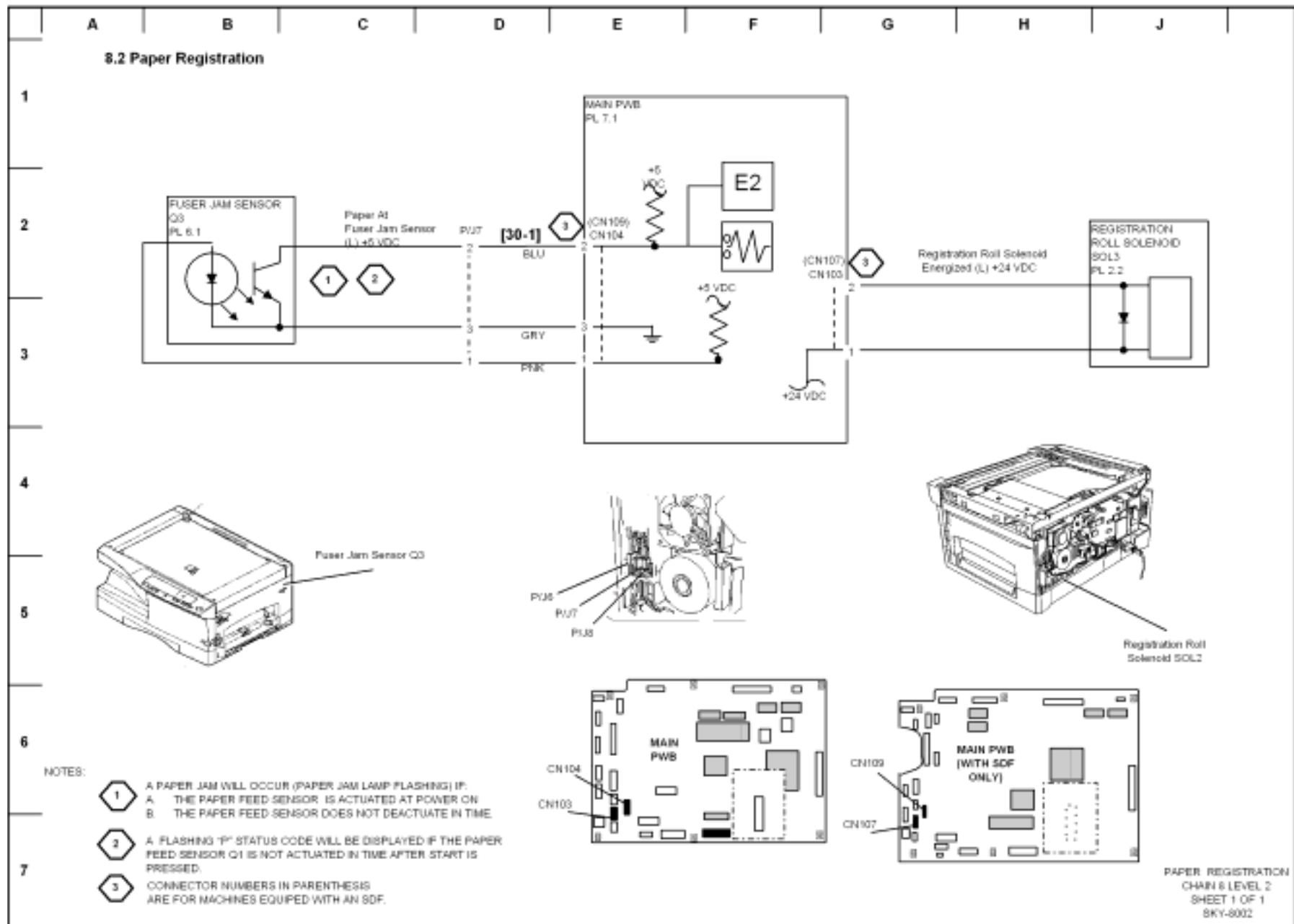


Figure 11 8.2 Paper Registration

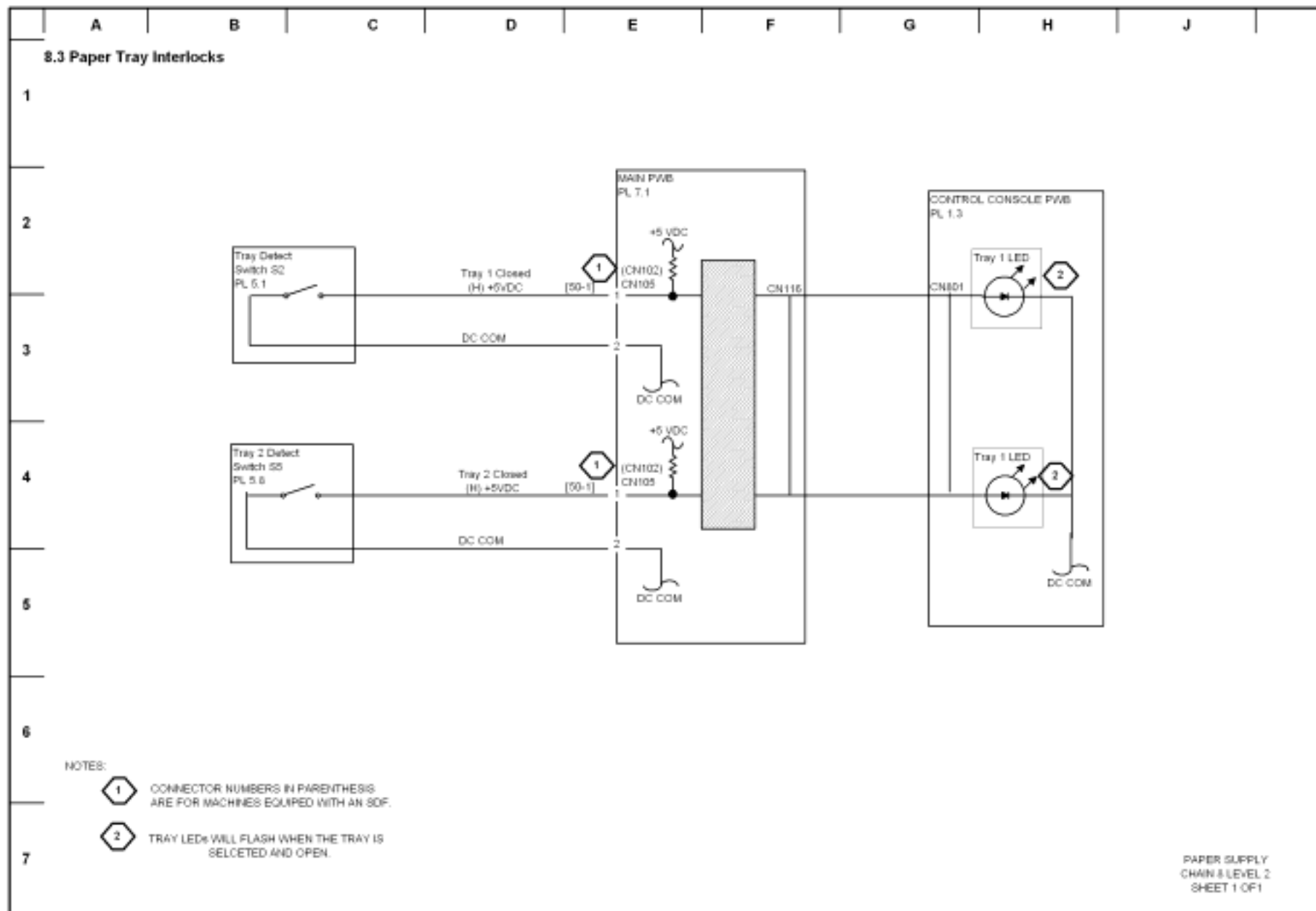


Figure 12 8.3 Paper Tray Interlocks

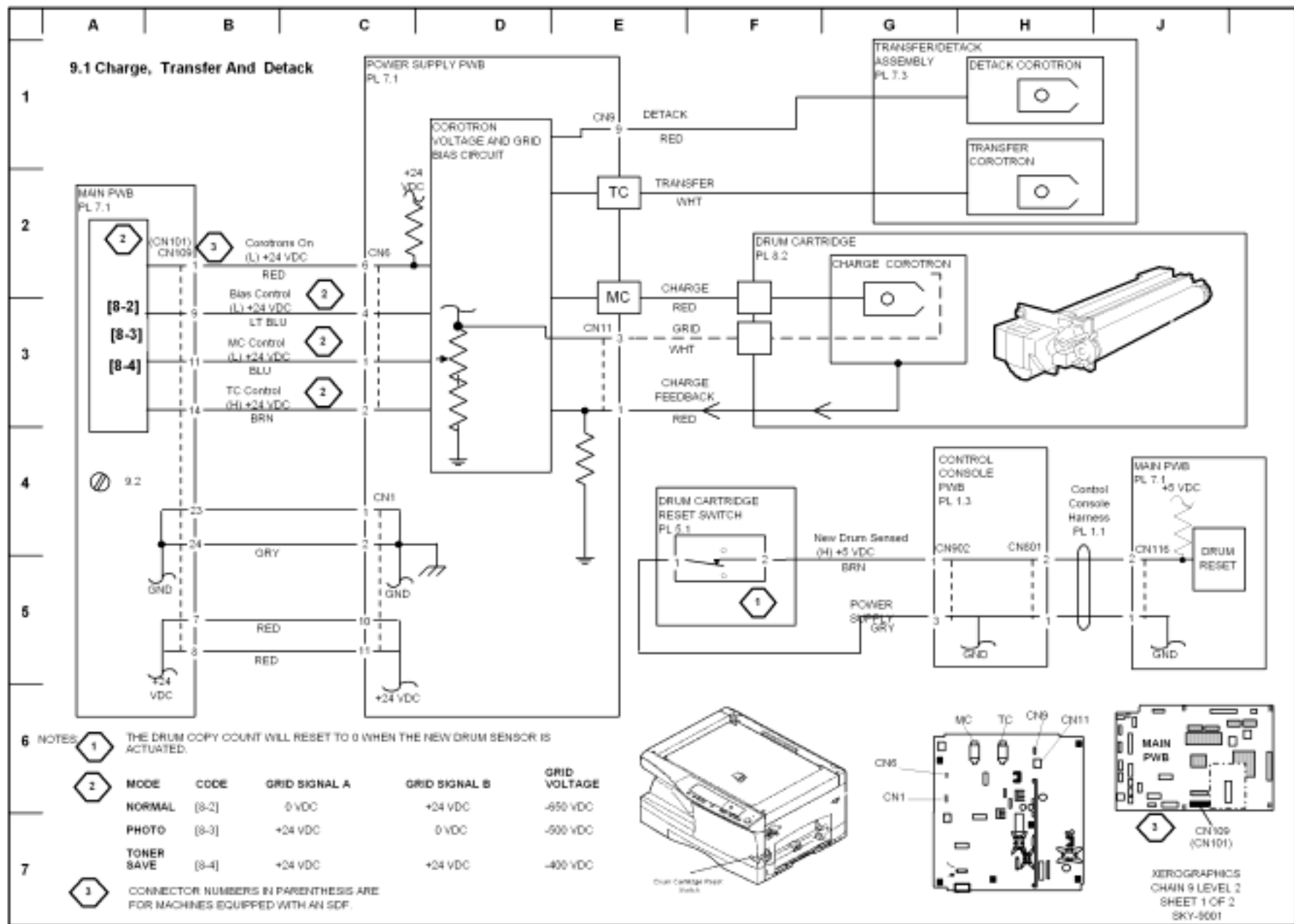


Figure 13 9.1 Charge, Transfer and Detack



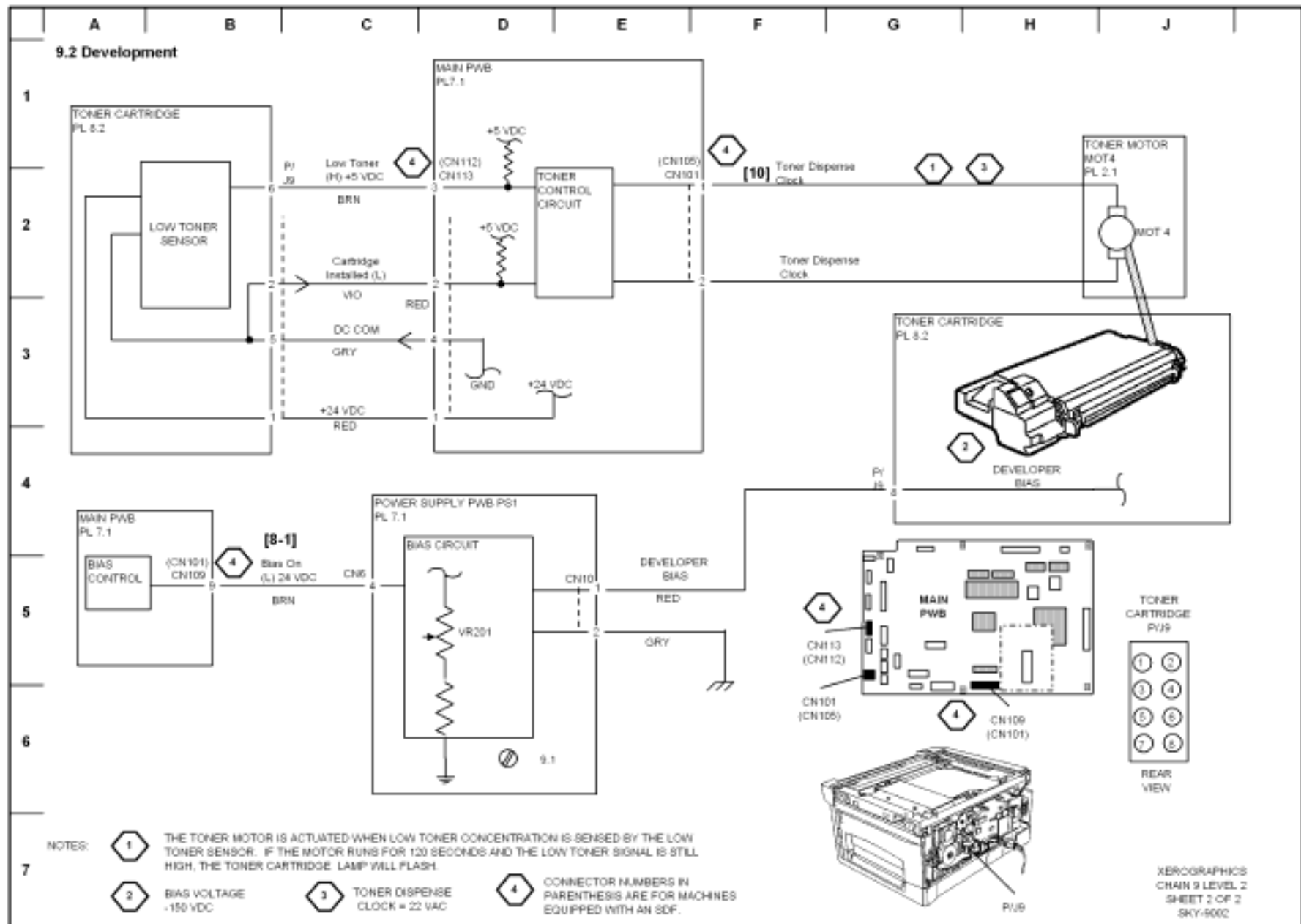


Figure 14 Development

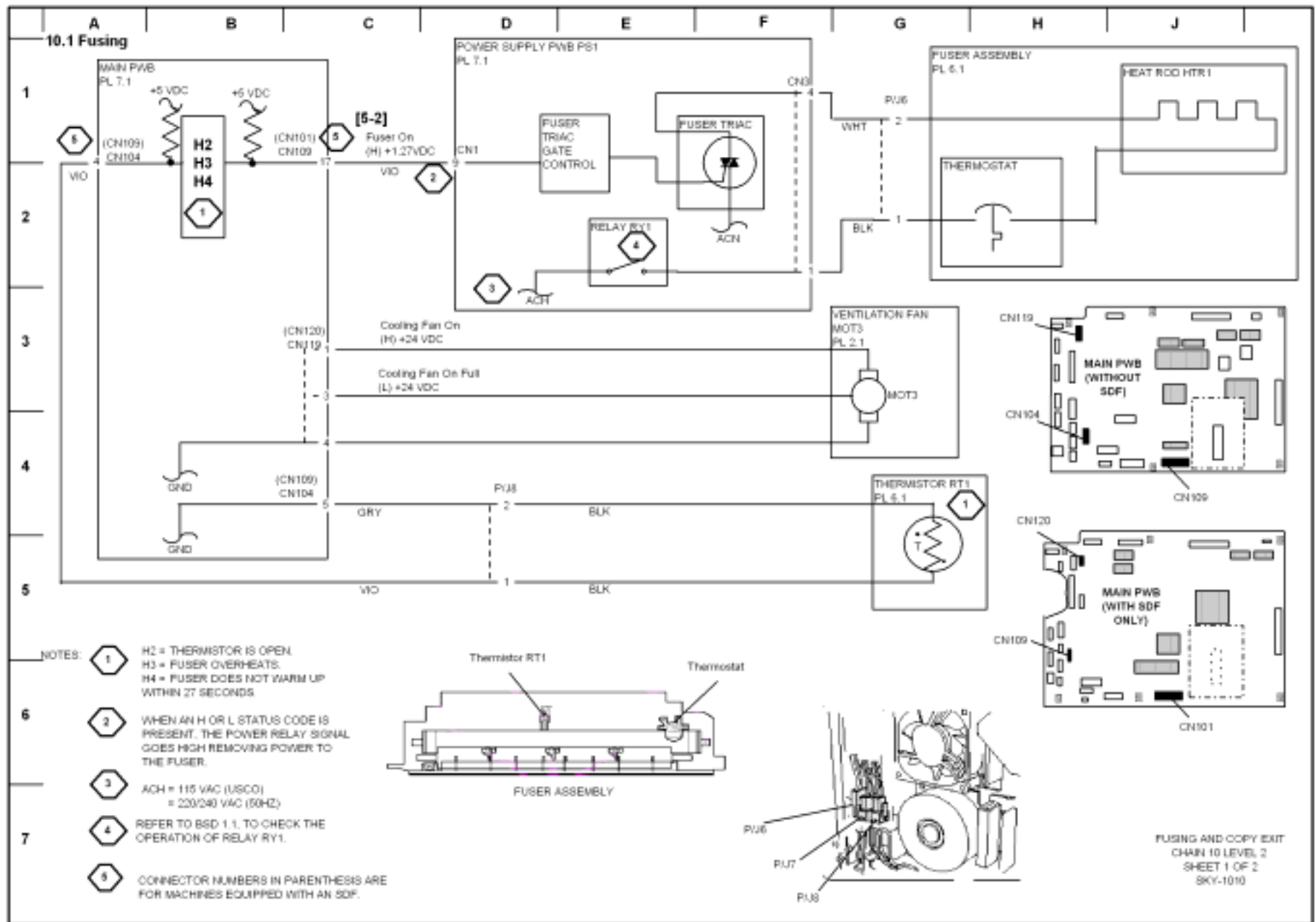


Figure 15 10.1 Fusing

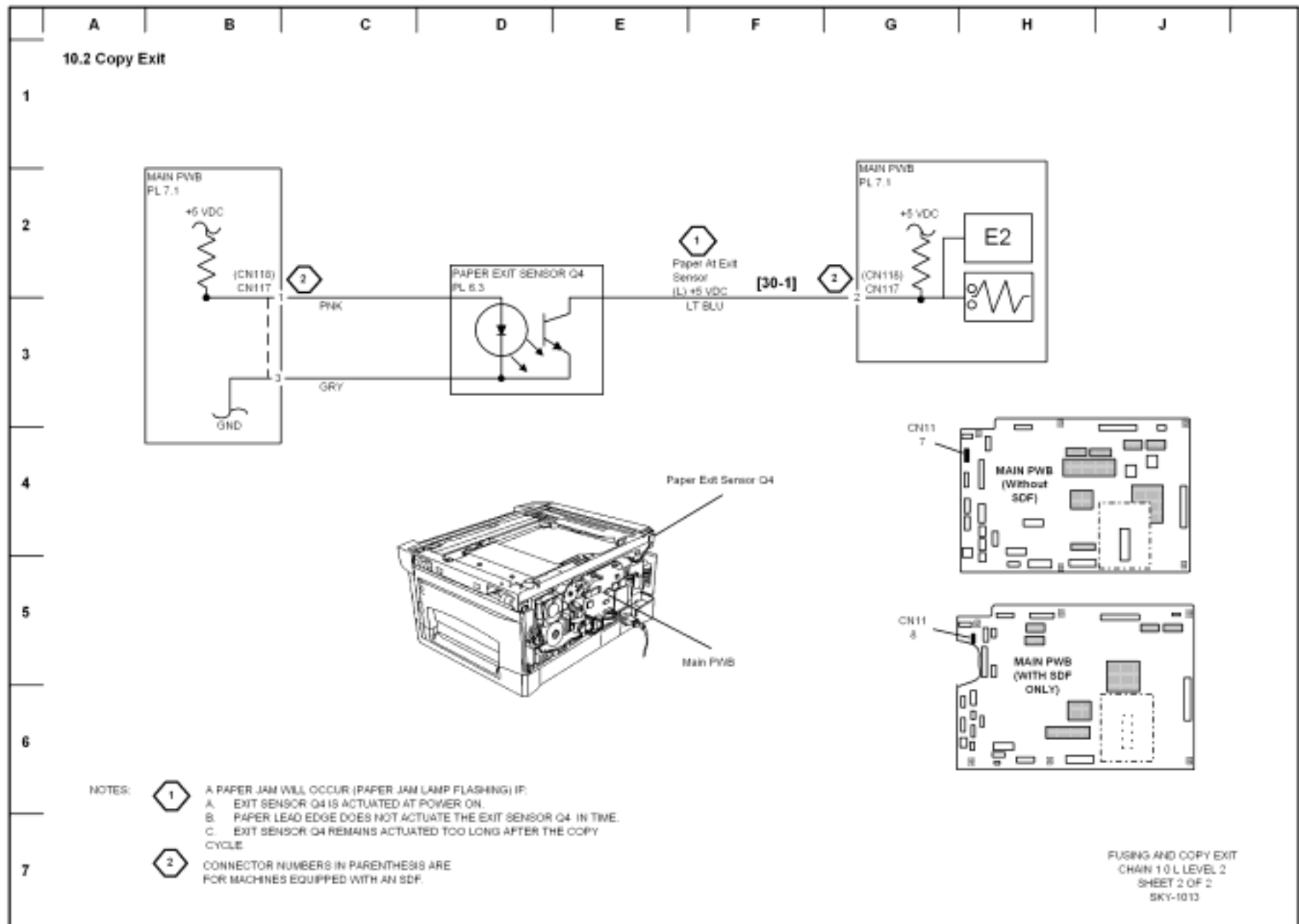


Figure 16 10.2 Copy Exit