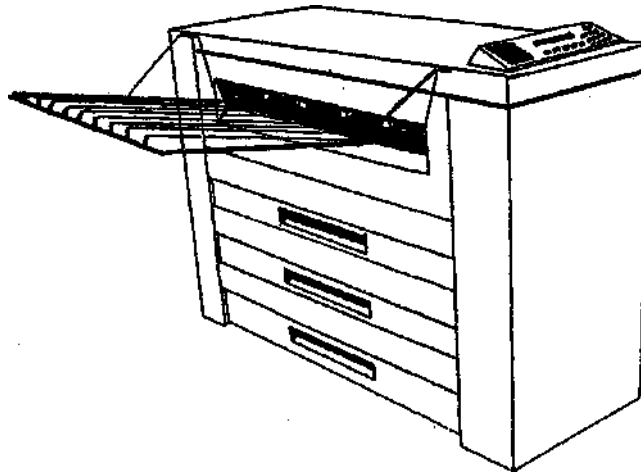


Xerox 8830 Printer

Service Manual



CAUTION

Certain components in the 8830 are susceptible to damage from electrostatic discharge. Observe all ESD procedures in order to avoid component damage

[illegible]

Revision Control List (Contd)

| | |
|------|------|
| 6-1 | 1/98 |
| 6-2 | 1/98 |
| 6-3 | 1/98 |
| 6-4 | 1/98 |
| 6-5 | 1/98 |
| 6-6 | 1/98 |
| 6-7 | 1/98 |
| 6-8 | 1/98 |
| 6-9 | 1/98 |
| 6-10 | 1/98 |
| 6-11 | 1/98 |
| 6-12 | 1/98 |
| 6-13 | 1/98 |
| 6-14 | 1/98 |
| 6-15 | 1/98 |
| 6-18 | 1/98 |
| 6-17 | 1/98 |
| 6-18 | 1/98 |
| 6-19 | 1/98 |
| 6-20 | 1/98 |
| 6-21 | 1/98 |
| 6-22 | 1/98 |
| 6-23 | 1/98 |
| 6-24 | 1/98 |
| 6-25 | 1/98 |
| 6-26 | 1/98 |
| 6-27 | 1/98 |
| 6-28 | 1/98 |
| 6-29 | 1/98 |
| 6-30 | 1/98 |
| 6-31 | 1/98 |
| 6-32 | 1/98 |
| 6-33 | 1/98 |
| 6-34 | 1/98 |
| 6-35 | 1/98 |
| 6-36 | 1/98 |
| 6-37 | 1/98 |
| 6-38 | 1/98 |
| 6-39 | 1/98 |
| 6-40 | 1/98 |
| 6-41 | 1/98 |
| 6-42 | 1/98 |
| 6-43 | 1/98 |
| 6-44 | 1/98 |
| 6-45 | 1/98 |
| 6-46 | 1/98 |
| 6-47 | 1/98 |
| 6-48 | 1/98 |
| 6-49 | 1/98 |

| | |
|------|------|
| 6-50 | 1/98 |
| 7-1 | 1/98 |
| 7-2 | 1/98 |
| 7-4 | 1/98 |
| 7-5 | 1/98 |
| 7-6 | 1/98 |
| 7-7 | 1/98 |
| 7-8 | 1/98 |
| 7-9 | 1/98 |
| 7-10 | 1/98 |
| 7-11 | 1/98 |
| 7-12 | 1/98 |
| 7-13 | 1/98 |
| 7-14 | 1/98 |
| 7-15 | 1/98 |
| 7-16 | 1/98 |
| 7-17 | 1/98 |
| 7-18 | 1/98 |
| 7-19 | 1/98 |
| 7-20 | 1/98 |
| 7-21 | 1/98 |
| 7-22 | 1/98 |
| 7-23 | 1/98 |
| 7-24 | 1/98 |
| 7-25 | 1/98 |
| 7-26 | 1/98 |
| 7-27 | 1/98 |
| 7-28 | 1/98 |
| 7-29 | 1/98 |
| 7-30 | 1/98 |
| 7-31 | 1/98 |
| 7-32 | 1/98 |
| 7-33 | 1/98 |
| 7-34 | 1/98 |
| 7-35 | 1/98 |
| 7-36 | 1/98 |
| 7-37 | 1/98 |
| 7-38 | 1/98 |
| 7-39 | 1/98 |
| 7-40 | 1/98 |
| 7-41 | 1/98 |
| 7-42 | 1/98 |
| 7-43 | 1/98 |
| 7-44 | 1/98 |
| 7-45 | 1/98 |
| 7-46 | 1/98 |
| 7-47 | 1/98 |
| 7-48 | 1/98 |

| | |
|------|------|
| 7-49 | 1/98 |
| 7-50 | 1/98 |
| 7-51 | 1/98 |
| 7-52 | 1/98 |
| 7-53 | 1/98 |
| 7-54 | 1/98 |
| 7-55 | 1/98 |
| 7-56 | 1/98 |
| 7-57 | 1/98 |
| 7-58 | 1/98 |
| 7-59 | 1/98 |
| 7-60 | 1/98 |
| 7-61 | 1/98 |
| 7-62 | 1/98 |
| 7-63 | 1/98 |
| 7-64 | 1/98 |
| 7-65 | 1/98 |
| 7-66 | 1/98 |
| 7-67 | 1/98 |
| 7-68 | 1/98 |
| 7-69 | 1/98 |
| 7-70 | 1/98 |
| 7-71 | 1/98 |
| 7-72 | 1/98 |
| 7-73 | 1/98 |
| 7-74 | 1/98 |
| 7-75 | 1/98 |
| 7-76 | 1/98 |
| 7-77 | 1/98 |
| 7-78 | 1/98 |
| 7-79 | 1/98 |
| 7-80 | 1/98 |
| 7-81 | 1/98 |
| 7-82 | 1/98 |
| 7-83 | 1/98 |
| 7-84 | 1/98 |

| Title..... | Page |
|---|-------------|
| Introduction..... | vi |
| About This Manual..... | vi |
| Organization..... | vi |
| How to Use This Manual..... | vii |
| Section 1 Service Call Procedures..... | 1 -1 |
| Section 2 Repair Analysis Procedures..... | 2-1 |
| Section 3 Print Quality RAPs..... | 2-1 |
| Section 4 Repairs and Adjustments..... | 4-1 |
| Section 5 Parts Lists..... | 5-1 |
| Section 6 General Procedures..... | 6-1 |
| Section 7 Wiring Data..... | 7-1 |
| Section 8 Accessories..... | 8-1 |

About this Manual

This manual is part of a documentation system that includes the training.

This manual contains Repair Analysis Procedures (RAPs), Repair Procedures, Adjustment Procedures, Parts List, Diagnostic Procedures, Installation Procedures, Wiring Data and BSDs.

This manual will enable the Service Representative to repair the 8830.

Organization

This manual **consists** of **eight** sections. The title and description of each section **are** listed below.

Section 1 Service Call Procedures

This section contains the following:

- Call Flow Diagram
- Initial Actions/ System Checks
- Printer Maintenance
- Status Code Entry Chart
- System Checkout/ Final Action

Call Flow Diagram

The Call Flow Diagram is a map of activities to be performed on each service call.

Initial Actions/ System Checks

This diagram 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 RAP.

Status Code Entry Chart

This chart provides a list of status codes, the possible cause, whether there is a RAP in Section 2, component control code, and a BSD reference.

Printer Maintenance

The Maintenance Activities procedures identify functional checks and cleaning operations that must be performed on every Normal Call. It also identifies those activities that can be performed as needed or as scheduled.

Subsystem Checks

The Subsystem Checks consist of checks and activities that must be performed when a subsystem is repaired during a Callback or when directed to them during Normal Call.

System Checkout

The System Checkout procedure is used to verify that the printer is operating correctly 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 the 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 the image quality faults. Refer to "How to Use the Image Defect Definitions" to compare the image defect to the definitions. Once you have determined the definition that best describes the defect, go to the section contents page to find the appropriate RAP. When using a RAP, always exit the procedure when the fault is fixed. Do not perform the remaining steps.

Section 4. - Repair / Adjustment

This section contains the repair and adjustment procedures for the 8830.

Section 5. - Parts List

This section contains the detailed Parts List for the 8830.

Section 6. - General Procedures

This section contains Diagnostic Procedures, Installation Procedures, and General Information, which includes Product Specifications for the 8830.

Section 7. - Wiring Data

This section contains Plug/ Jack Location index, Plug/ Jack Location Drawings, and the BSDs.

Section 6. - Accessories

This section contains service information about accessories for the 8830 Printer. As accessories are added to the customer configuration, they will be added to this section.

How to Use This Manual

The Service Call Procedures will direct you to the appropriate 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, Section 3, Image Quality RAPs, Section 7 BSDs or Section 8, Accessories.

If you are sent to Section 3, compare the image defect to the print quality definitions. Once you have determined the definition that best describes the copy defect, go to the section contents. The section contents will direct you to an image quality RAP. The RAP has a list of probable causes and corrective actions. From these RAPs you may be referred to other sections of the manual to make checks, adjustments, or to replace the parts.

When you have made a repair, always go to the Call Flow Diagram to finish the call.

1. Service Call Procedures

Section Contents

| TITLE | PAGE |
|---------------------------------------|------|
| Introduction..... | 1-2 |
| Call Flow Diagram..... | 1-3 |
| Initial Actions / System Checks..... | 1-4 |
| Print Defect Isolation Procedure..... | 1-5 |
| Workstation Checkout Procedure..... | 1-6 |
| Status Code Entry Chart..... | 1-7 |
| Message Display Entry Chart..... | 1-18 |
| Maintenance Procedures..... | 1-19 |
| System Checkout / Final Action..... | 1-25 |
| Call Back..... | 1-25 |

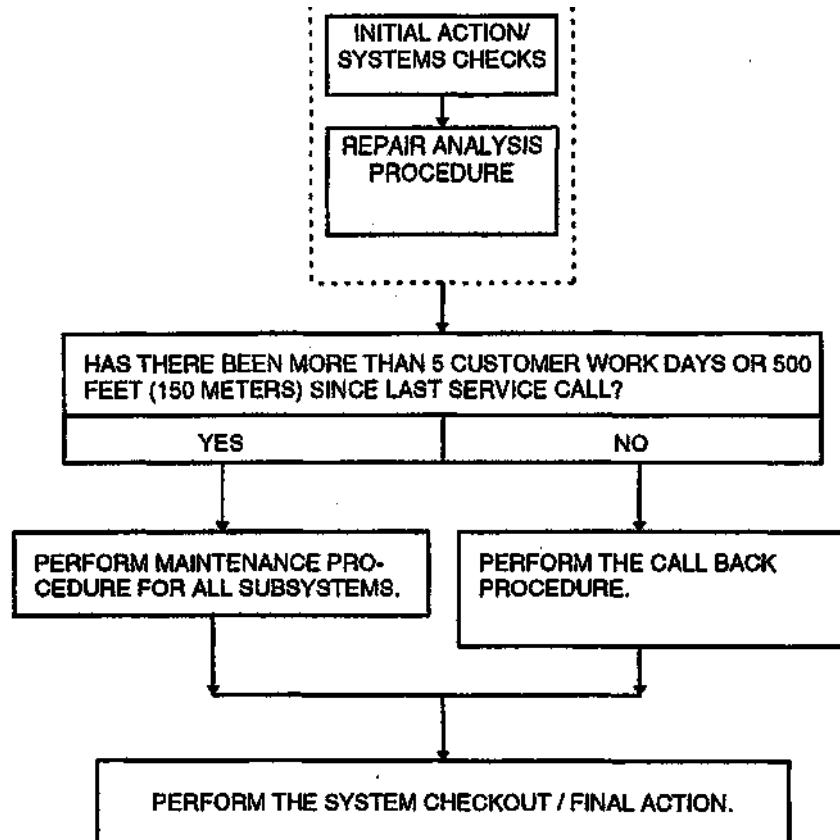
Introduction

The Service Call Procedures are designed to assist the Service Representative to identify printer faults, perform the necessary corrective action and perform the correct Maintenance Procedures. The Service Call Procedures are designed to be used with the 8830 Service Manual and is the entry level for all service calls.

- Initial Actions / System Checks - This diagram is designed to identify and classify the printer 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.
- Subsystem Checks - When the printer is being serviced, the maintenance/cleaning should be performed.
- Status Code Entry Chart - This chart contains a list of Status Codes, their related components, the corresponding RAP (Repair Analysis Procedure), BSD (Block Schematic Diagram), Component Code and Parts List reference. The chart is designed to direct you to the appropriate Clearance Procedure. When the Status Code problem has been repaired, refer to the Call Flow Diagram and continue the Service Call.

System Checkout / Final Action - The purpose of this procedure is to record the media feet count and to make a record in the machine log book of the service activities that were performed. Final Action is designed to ensure that the print is transported correctly and to ensure that image quality is within specification.

Call Flow Diagram

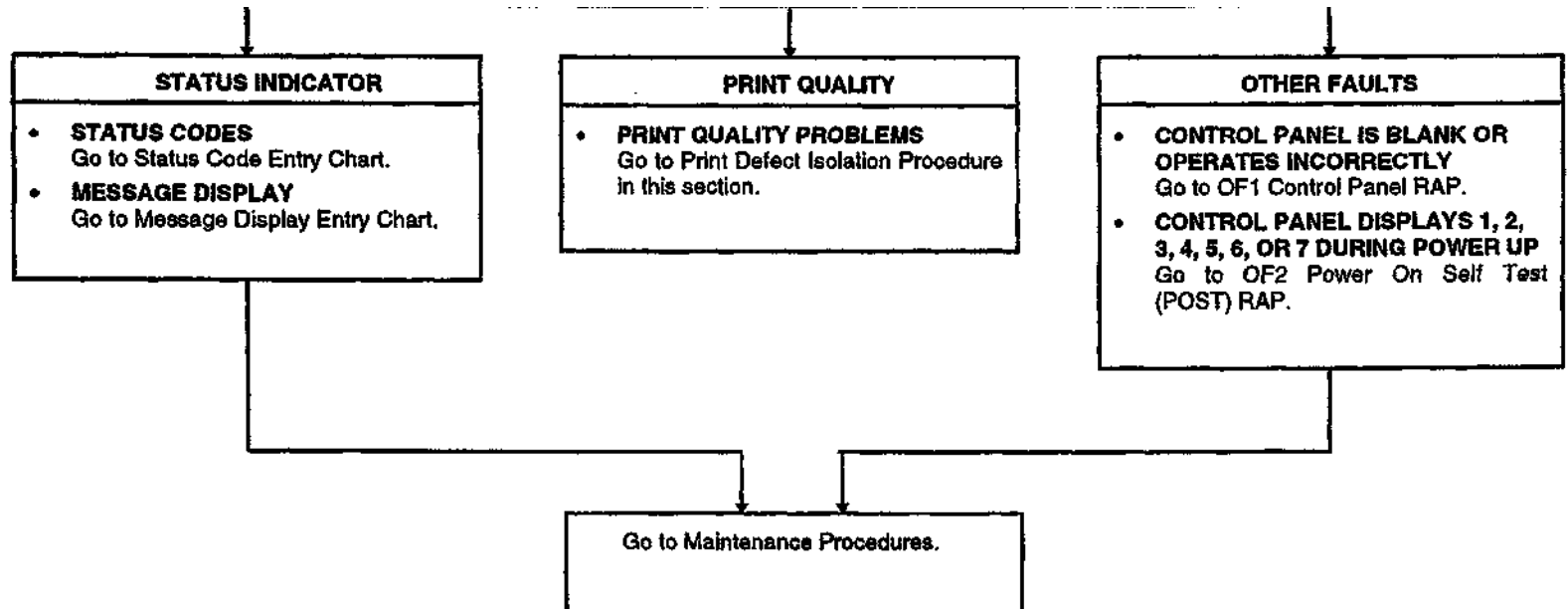


Initial Actions / System Checks

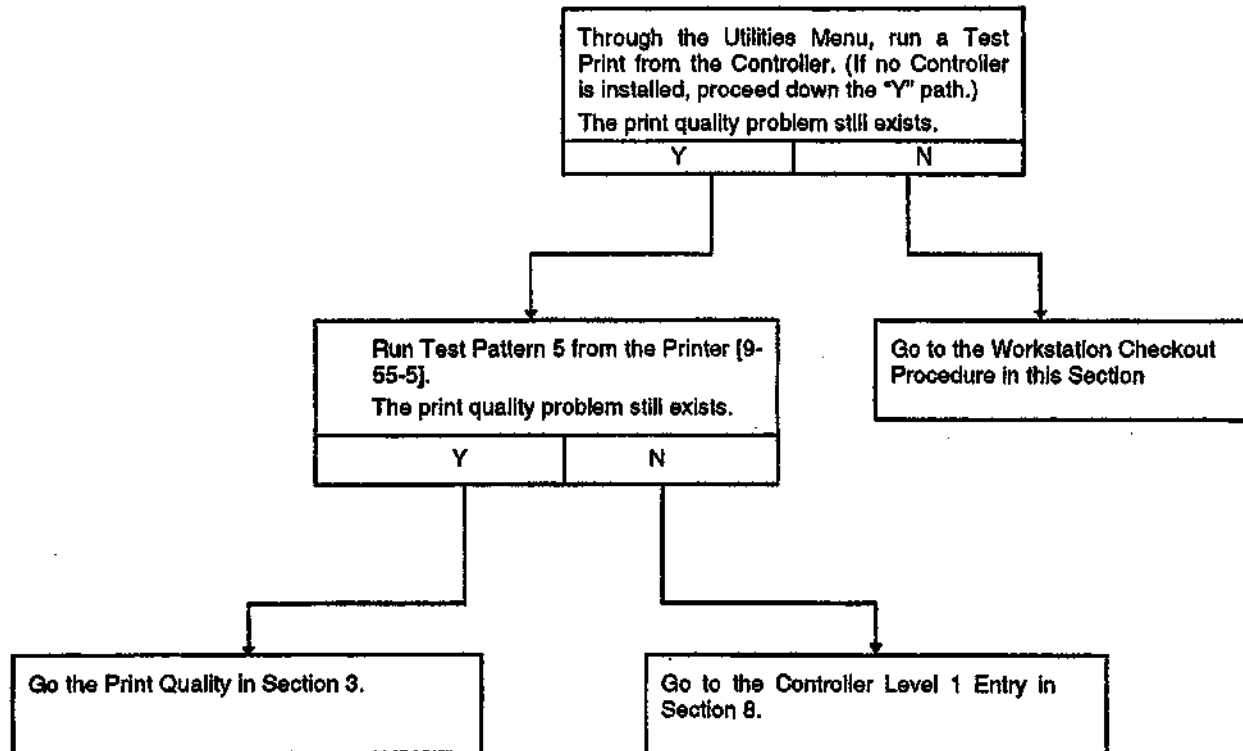
1. Ask the operator to describe the problem.
2. Ask the operator to halt all print jobs and stop controller.
3. Check the log book.
4. Check the Recent Fault Log for trends:
 - a. With a Controller - Print out the configuration sheet through the Utilities Menu. The last 25 faults are listed on the upper-right side of the sheet.
 - b. Without a Controller - Enter [0391], The display will scroll through the error codes two at a time.
5. Analyze the frequency of the fault codes and refer to the Status Code Entry Chart to troubleshoot the problem:
 - a. C or E codes should occur no more frequently than once per 1000 linear feet.
 - b. All Cutter faults should occur no more frequently than once per 10,000 linear feet.

Note: E4-09, Cx-04, and Cx-05 are out-of-media codes and will occur once per 500 linear feet. Also, 001 and 002 codes are power on/off. Question the operator if the faults are excessive.

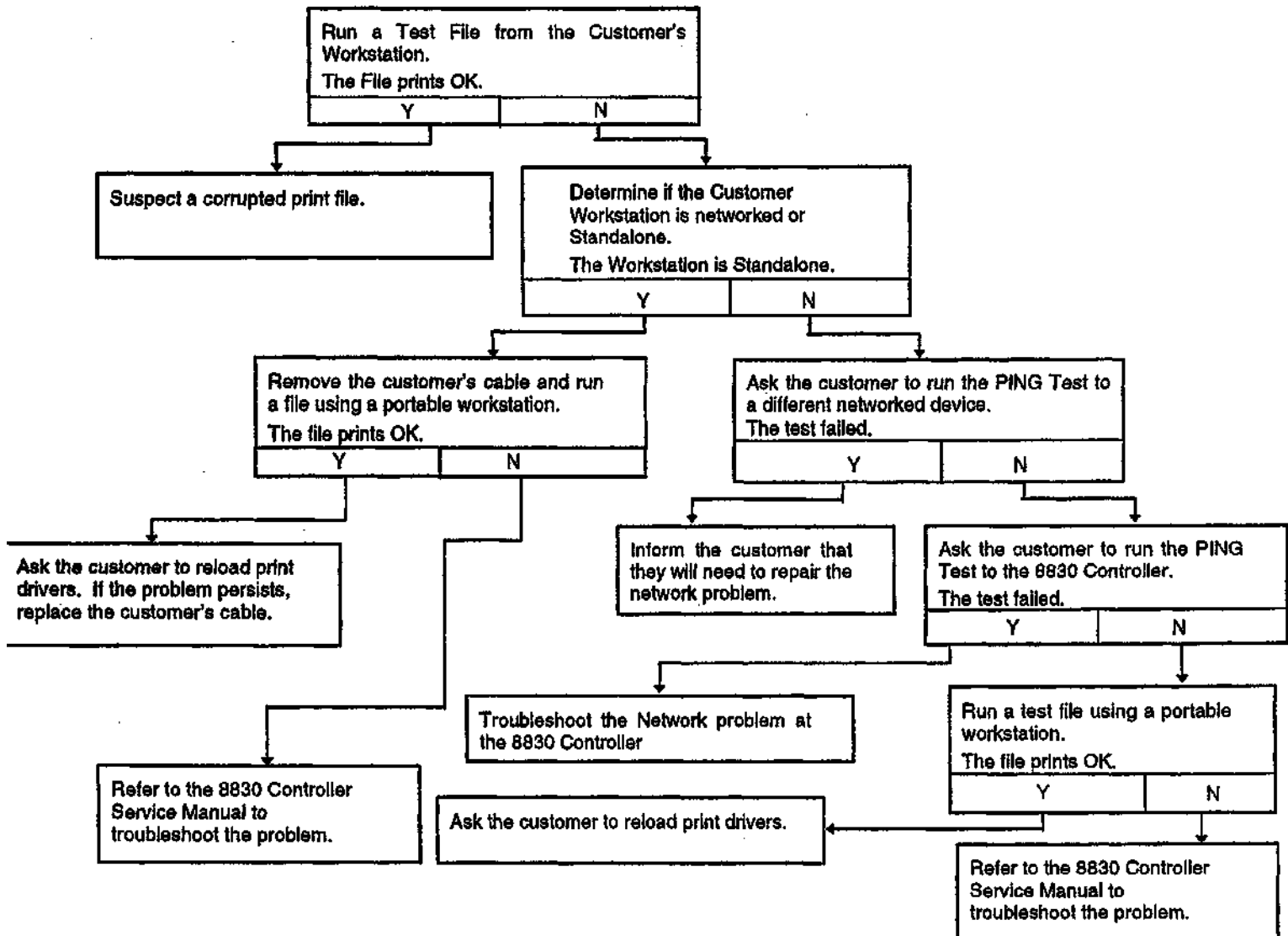
6. Record the readings from the media length counter.
7. Attempt to duplicate the problem.



Print Defect Isolation Procedure



Workstation Checkout Procedure



Status Code Entry Chart

| Status Code | Description | Components | RAP | Comp Code | BSD Ref | PL Ref |
|-------------------------|--|---|-----|---|--------------------------------------|------------------|
| C1-01 C2-01 C3-01 | Position sensor error The Roll 1, 2, or 3 position sensor did not actuate or deactuate. | Roll 1 position sensor (Q1) Roll 2 position sensor (Q2) Roll 3 position sensor (Q3) Main PWB (A3) <i>NOTE: The sensors are interchangeable.</i> | NO | Roll 1 [0707] Roll 2 [0708] Roll 3 [0709] | 7.2 7.3 7.4 | PL 7.1 PL 1.3 |
| C1-04 C2-04 C3-04 | Media registration sensor error The media sensor did not actuate or deactuate when feeding from roll 1, 2, or 3. | Media registration sensor (A21Q1) Main PWB (A3) Driver PWB Registration Rolls Transport Driver Motor Motor Driver PWB | YES | [0803] | 8.1 | PL 8.2 PL 1.3 |
| C1-05 C2-05 C3-05 | Motion sensor error Motion was not detected or the media stopped moving when feeding from roll 1, 2, or 3. | Roll 1 motion sensor (Q4) Roll 2 motion sensor (Q5) Roll 3 motion sensor (Q6) Main PWB (A3) Driver PWB Motor Driver PWB Media Feed Rolls Media Feed Clutch Media Feed Drive Motor <i>NOTE: The sensors and the clutches are interchangeable.</i> | NO | Roll 1 [0710] Roll 2 [0711] Roll 3 [0712] | 7.2 7.3 7.4 7.1 | PL 7.1 PL 1.3 |

Status Code Entry Chart (cont.)

| Status Code | Description | Components | RAP | Comp Code | BSD Ref | PL Ref |
|-------------------------|---|--|-----|-----------|---------|------------------|
| C3-06 | Roll 2 position sensor error Media was not detected at the Roll 2 position sensor when feeding from roll 3. | Roll 2 position sensor (Q2) Main PWB (A3) | NO | [0708] | 7.3 | PL 7.1 PL 1.3 |
| C3-07 | Roll 1 position sensor error Media was not detected at the Roll 1 position sensor when feeding from Roll 3. | Roil 1 position sensor (Q1) Main PWB (A3) | NO | [0707] | 7.2 | PL 7.1 PL 1.3 |
| C1-09 C2-09 C3-09 | Firmware error This is a firmware problem. Press power off (0) then power on (1). If problem persists, replace the firmware. | | NO | | | |
| C1-19 C2-19 C3-19 | This Is a Firmware problem This is a firmware problem. Press power off (0) then power on (1). If problem persists, replace the firmware. | | NO | | | |
| C1-29 C2-29 C3-29 | This is a Firmware problem. This is a firmware problem. Press power off (0) then power on (1). If problem persists, replace the firmware. | | NO | | | |
| C1-39 C2-39 C3-39 | This is a Firmware problem. This is a firmware problem. Press power off (0) then power on (1). If problem persists, replace the firmware. | | NO | | | |

Status Code Entry Chart (cont.)

| Status Code | Description | Components | RAP | Comp Code | BSD Ref | PL Ref |
|-------------------------|---|--|-----|-----------|---------|------------------|
| C1-59 C2-59 C3-59 | This is a Firmware problem This is a firmware problem. Press power off (0) then power on (1). If problem persists, replace the firmware. | | NO | | | |
| C4-24 | Registration sensor error The cut sheet does not reach the media registration sensor in time. | Media registration sensor (A21Q1) Main PWB (A3) Registration Rolls Transport Drive Motor Transport Motor Driver PWB Cut Sheet Feed Clutch / Rolls Driver PWB | NO | [0801] | 8.1 | PL 8.4 PL 1.3 |
| C4-34 | Sheet feed sensor error The sheet feed sensor deactuated too early while making a print. The operator may have removed the cut sheet media. | Sheet feed sensor (Q2) Main PWB (A3) | NO | [0801] | 8.1 | PL 8.4 PL 1.3 |
| C4-49 | This is a Firmware problem This is a firmware problem. Press power off (0) then power on (1). If problem persists, replace the firmware. | | NO | | | |
| E2-01 | Media registration sensor error The media trail edge jammed in the media registration sensor area. | Media registration sensor (A21Q1) Main PWB (A3) | NO | [0803] | 8.1 | PL 8.2 PL 1.3 |
| E2-09 | This is a Firmware problem This is a firmware problem. Press power off (0) then power on (1). If problem persists, replace the firmware. | | NO | | | |

Status Code Entry Chart (cont.)

| Status Code | Description | Components | RAP | Comp Code | BSD Ref | PL Ref |
|-------------|---|---|-----|-----------|---------|-------------------|
| E2-11 | Registration sensor error The media registration sensor was detected to be actuated when the machine powered up. | Media registration sensor (A21Q1) Main PWB (A3) | NO | [0803] | 8.1 | PL 8.2 PL 1.3 |
| E4-01 | Media exit sensor error The media trail edge jammed in the media exit sensor area. | Media exit sensor error (Q3) Main PWB (A3) Exit Rollers and Drive | NO | [0807] | 10.3 | PL 8.4 PL 1.3 |
| E4-02 | Media exit sensor error Lead edge of media did not reach the media exit switch in time. | Media exit sensor error (Q3) Main PWB (A3) Fuser Drive Motor Heat Roll Transfer/Detack Corotron Fabric Guide | NO | [0807] | 10.3 | PL 8.4 PL 1.3 |
| E4-03 | Stripper finger jam switch error The stripper finger jam switch was actuated during run. | Stripper finger jam switch (A23S1) Main PWB (A3) Stripper Finger Damaged | NO | [1005] | 10.3 | PL 10.4 PL 1.3 |
| E4-04 | Stacker Full The Stacker Full Sensor was actuated during a run or was detected to be actuated when the machine powered | Stacker Full Sensor | NO | [0808] | | |
| E4-09 | This is a Firmware problem Press power off (0) then power on (1). If problem persists, replace the firmware. | | NO | | | |
| E4-11 | Media exit sensor error The media exit sensor was detected to be actuated when the machine powered up. This requires the media exit area to be opened, and the media to be removed. | Media exit sensor (A23S1) Main PWB (A3) | NO | [0807] | 10.3 | PL 8.4 PL 1.3 |

Status Code Entry Chart (cont.)

| Status Code | Description | Components | RAP | Comp Code | BSD Ref | PL Ref |
|-------------|---|--|-----|-----------|---------|-------------------|
| E4-12 | Sheet feed sensor error The sheet feed sensor was detected to be actuated when the machine powered up. This requires the media exit area to be opened, and to be removed. | Sheet feed sensor (A21Q2) Main PWB (A3) | NO | [0801] | 8.1 | PL 8.4 PL 1.3 |
| E4-13 | Stripper finger Jam switch error The stripper finger jam switch was actuated at power on. | Stripper finger jam switch (A23S1) Main PWB (A3) | NO | [1005] | 10.3 | PL 10.4 PL 1.3 |
| E4-14 | Media buckle sensor error The media buckle sensor was detected to be actuated when the machine powered up. This requires the media exit area to be opened, and the media to be removed. | Media buckle sensor A21Q5) Main PWB (A3) Fabric Guide Position | NO | [0802] | 4.1 | PL 8.4 PL 1.3 |
| E5-03 | Top cover interlock switch error The top cover was opened during print. | Top cover interlock switch (S26) Driver PWB (A2) | NO | [0911] | 1.3 | PL 14.5 PL 1.1 |
| E5-04 | Cutter cover interlock switch error The cutter was opened during print. | Cutter cover interlock switch (S1) Driver PWB (A2) | NO | [0702] | 1.3 | PL 7.6 PL 1.1 |
| E5-05 | Feed shelf interlock switch error The sheet feed shelf was opened during print. | Feed shelf interlock switch (S29) Driver PWB (A2) | NO | [0910] | 1.2 | PL 14.3 PL 1.1 |
| E5-06 | Front door Interlock switch error The front door was opened during print. | Front door interlock switch (S21) Driver PWB (A2) | NO | [0101] | 1.3 | PL 14.3 PL 1.1 |

Status Code Entry Chart (cont.)

| Status Code | Description | Components | RAP | Comp Code | BSD Ref | PL Ref |
|-------------|--|---|-----|-----------|---------|--------|
| E6-00 | Front door interlock switch error The C button was pressed while a print was being made in the roll feed mode. An operator induced soft shutdown results in a complete print being made. The left side door must be opened and then closed. | instruct the customer as to the appropriate time to press "C" | | | | |
| E6-01 | Front door interlock switch error The Exit button was pressed while a print was being made in the roll feed mode. An operator-induced hard shutdown results in a partial print being made. The left side door must be opened and then closed. | Instruct the customer as to the appropriate time to press "Exit" | | | | |
| E7-01 | Communication error The IOT is unable to communicate with the ESS. The IOT off-line and media menus will still function, but cannot print from the ESS or network. | Perform GP5 Communication Loopback Test located in Section 6. (For the 6830 Folder, refer to the Folder Communication Test in the folder service manual.) | | | | |
| E7-02 | Printer message display error A required message is not available in the language EPROM. Update the language EPROM. | Language EPROM | NO | [0211] | 2.1 | |
| E9-XX | Software shutdown This error is of unknown cause. Please contact Software engineering. | | | | | |
| Fx-xx | Refer to the Folder Service Manual for all F-codes. | | | | | |

Status Code Entry Chart (cont.)

| Status Code | Description | Components | RAP | Comp Code | BSD Ref | PL Ref |
|-------------|--|---|-----|-----------|---------|------------------|
| J1-01 | Toner sensor error Out of toner. | Toner sensor (A22Q1). Main PWB(A3) | NO | [0921-6] | 9.7 | PL 9.9 PL 1.3 |
| J2-02 | Cartridge home sensor error Toner cartridge could not find the home position. | Cartridge Home Sensor (A22Q2) Main PWB (A3) Cartridge Drive Motor Cartridge Drive Gear | NO | [901] | 9.7 | PL 9.9 PL 1.3 |
| LL-00 | Communication error Applies only to printers with a bit mapped user interface (FX). | | | | | |
| LL-02 | Check sum test error Both message ROMs have failed the checksum test immediately after power up. | | | | | |
| LL-05 | Fuser oil web error NVM count of web encoder pulses indicates the fuser oil web has reached end of life. | Web oiler motor (A23MOT1) Driver PWB (A2) CONTROL EPROMS | NO | [1034] | 10.2 | PL 10.4 |
| LL-06 | Fuser oil web error No encoder pulses are being received from the fuser oil web. | Web oiler optical switch (A23S2) Web oiler motor (A23MOT1) Driver PWB (A2) | NO | [1033] | 10.2 | PL 10.4 |
| LL-07 | Fuser oil web error Web Oiler Assembly connector not connected. | P/J 4, wiring harness, pins Driver PWB (A2) <i>NOTE: Tag 3 must be installed for this code. If not, disable the fault detection using [10-35]</i> | NO | [1033] | 10.2 | PL 10.4 |
| LL-10 | Module wrap-around error The paper transport assembly or the Xerographic module is disconnected. | Xerographic module (A23) Paper transport assembly (A21) Driver PWB (A2) | NO | [0701] | 7.5 | PL 1.1 |

Status Code Entry Chart (cont.)

| Status Code | Description | Components | RAP | Comp Code | BSD Ref | PL Ref |
|-------------|---|---|-----|-----------|------------|--|
| LL-11 | Communications error Failed communications between the Driver PWB (A2) and the Main PWB (A3). | Driver PWB (A2) (fuser drive circuit) Driver PWB (A2) (drum drive circuit) Main PWB (A3) CAUTION: Fuser must be up to temperature before running motors. | NO | [0403] | 4.1 4.3 | PL 1.1 |
| LL-12 | Photoreceptor motor stall fault | Drum drive motor (A20MOT3) Driver PWB (A2) ADJ 8.4 Media Transport | NO | [0403] | 4.3 | |
| LL-21 | HVPS Charge error The charge scorotron fault signal was active for 1.5 seconds. | Xerographic HVPS (A25) Driver PWB (A2) Scorotron | NO | | 9.1 | PL 1.3 PL 1.1 |
| LL-22 | Transfer / Detach HVPS Charge error The transfer / detach corotron fault signal was active for 1.5 seconds. | Xerographic HVPS (A25) Driver PWB (A2) Transfer/Detack Corotron | NO | | 9.8 | PL 1.3 PL 1.1 |
| LL-30 | Cutter error The cutter did not leave or reach the home sensor. Turn power off, then on. | Cutter home sensor (A8Q1) Driver PWB (A2) Cutter Drive Motor | NO | | 7.5 | |
| LL-41 | Fuser error The fuser did not reach 110°F within one minute. | Fuser heat rod (HTR1) Thermistor assembly (A23RT1) Fuser power relay (K1)Triac (Q1) AC Power module (A1) Driver PWB (A2) Main PWB (A3) | YES | [1004] | 10.1 | PL 14.3 PL 1.1 PL 10.4 PL 1.2 PL 1.3 |

Status Code Entry Chart (cont.)

| Status Code | Description | Components | RAP | Comp Code | BSD Ref | PL Ref |
|-------------|--|--|-----|-----------|-----------------------------|--|
| LL-42 | Fuser temperature error The fuser roll temperature is greater than the maximum allowable temperature for more than thirty seconds. Maximum temperature is currently 348° F (176° C). | Triac (Q1) AC Power module (A1) Driver PWB (A2) | YES | [1004] | 10.1 | PL 10.4 PL 1.2 |
| LL-43 | Fuser temperature error Fuser temperature has exceeded the temperature limit. The FUSER OPEN (L) +26 VDC signal is low. | Triac (Q1) AC Power module (A1) Driver PWB (A2) Thermal fuse (A23F1) | YES | [1004] | 10.1 | PL 1.3 |
| LL-44 | Fuser temperature error Fuser temperature exceeded 420° F (215° C). The TEMPERATURE LIMIT signal exceeds its limit. | Triac (Q1) LVPS (A5) Driver PWB (A2) Main PWB (A3) | YES | [1004] | 10.1 1.2 10.1 10.1 | PL 10.4 PL 1.1 PL 1.3 PL 1.3 |
| LL-45 | Fuser temperature error Fuser was in the warm up mode too long. | Fuser heat rod (HTR1) Fuser power relay (K1) Triac (Q1) Ballast resistors (R1 & R2) Fuser ballast power relay (K3) Driver PWB (A2) Main PWB (A3) | YES | [1004] | 10.1 | PL 14.3 PL 1.1 PL 10.4 PL 10.4 PL 10.4 PL 1.1 PL 1.3 |
| LL-4F | Fuser fault Fuser was expected to be warming but is not. | Fuser power relay (1K1) Fuser ballast power relay (A1K3) Fuser Triac (A1Q1) Fuser heater (A23HR1) | NO | [1004] | 10.1 | |
| LL-50 | Power supply error 26 VDC Bulk power supply failure. | LVPS (A5) Driver PWB (A2) Main PWB (A3) | NO | | 1.2 | PL 1.1 PL 1.3 PL 1.3 |

Status Code Entry Chart (cont.)

| Status Code | Description | Components | RAP | Comp Code | BSD Ref | PL Ref |
|-------------|---|--|-----|-----------|---------|--------|
| LL-51 | Power On Self Test fault The internal RAM failed POST. | Main PWB (A3) | NO | | | |
| LL-52 | Power On Self Test fault or Main PWB installed without CONTROL EPROMS The external RAM failed POST. | Install the Control EPROM Main PWB (A3) | NO | | | |
| LL-53 | Power On Self Test fault IOT firmware checksum error. | Install the Control EPROM Main PWB (A3) | NO | | | |
| LL-54 | Power On Self Test fault An unknown device failed POST. | Main PWB (A3) | NO | | | |
| LL-55 | Power On Self Test LVPS fault The +10 V FWR voltage was detected to be off when it should have been on. | LVPS | NO | | 1.2 | PL 1.1 |
| LL-56 | Power On Self Test ADC/DAC fault The ADC/DAC failed POST | Main PWB (A3) Driver PWB (A2) | NO | | | PL 1.1 |
| LL-57 | Power On Self Test SCC fault | Main PWB (A3) | NO | | | PL 1.1 |
| LL-58 | Power On Self Test Extra "Return Value" from the Operating System. Reboot (Power off / Power On). | Install the Control EPROM Main PWB (A3) | NO | | | PL 1.1 |

Status Code Entry Chart (cont.)

| Status Code | Description | Components | RAP | Comp Code | BSD Ref | PL Ref |
|-------------|---|---|-----|----------------------------|--------------------------|---|
| LL-60 | Power On Self Test NVM Checksum fault Record the existing NVM values. Run diagnostic [0360] to reset NVM to the default values. Manually restore the required NVM values. | | NO | | | |
| LL-61 | Power On Self Test revision level fault Power the printer up in diagnostics and run f0360] to reset NVM to default values. | | NO | | | |
| LL-89 | This is a Firmware problem This is a firmware problem. Press power off (0) then power on (1). If problem persists, replace the firmware. | | NO | | | |
| LL-90 | Overtoned fault Toner concentration of the developer material is too high. | Cartridge drive motor (A22MOT1) Cartridge home sensor (A22Q2) Toner sensor (A22Q1) Main PWB (A3) | Yes | [0921-4] [0906] | 3.1 9.7 9.7 9.3 | PL 1.3 |
| LL-91 | Undertoned fault Toner concentration of the developer material is too low. | Cartridge drive motor (A22MOT1) Cartridge home sensor (A22Q2) Toner sensor (A22Q1) Main PWB (A3) | Yes | [0905] [0906] [0925] | 9.7 | PL 9.9 PL 9.9 PL 9.9 PL 1.3 |
| U1-01 | Media counter error Print counter is disconnected. | Media counter Main PWB (A3) | NO | [0203] | 3.1 | PL 1.3 |

Message Display Entry Chart

| MESSAGE DISPLAYED | CAUSE | CLEARANCE PROCEDURE | BSD Ref |
|---|--|---|---------|
| PRINTER IS WARMING UP (Continuously displayed) | No fuser heat | ... | 10.1 |
| ADJUSTING THE PRINT QUALITY (Continuously displayed) | Toner dispense problem | ... | 9.3 |
| PLEASE CLOSE THE MEDIA DRAWER X (Refer to Note) | Drawer X read switch is open. | Refer to the display on the control panel and follow the clearance procedure. | 7.1 |
| PLEASE CLOSE THE CUT SHEET FEED SHELF | Cut sheet feed shelf interlock switch (S29) is open. | Refer to the display on the control panel and follow the clearance procedure. | 1.2 |
| PLEASE CLOSE THE FRONT DOOR | Front door interlock switch (S21) is open. | Refer to the display on the control panel and follow the clearance procedure. | 1.2 |
| PLEASE CLOSE THE TOP DOOR | Top cover interlock switch (S26) is open. | Refer to the display on the control panel and follow the clearance procedure. | 1.2 |
| PLEASE CLOSE THE CUTTER DRAWER | Cutter cover interlock switch (S1) is open. | Refer to the display on the control panel and follow the clearance procedure. | 1.2 |
| NVM FAULT CALL FOR ASSISTANCE | Corrupted data in NVM. | Press power off (0) then power on (1). If problem persist run diagnostic program [0363] or [0360]. If problem persist replace the Control EPROMS. | |
| Re-feed Roll 1 | Re-feed roll 1 problem. | Re-feed the media. If necessary, press power off (0) then power on (1). | 7.2 |
| Re-feed Roll 2 | Re-feed roll 2 problem. | Re-feed the media. If necessary, press power off (0) then power on (1). | 7.3 |
| Re-feed Roll 3 | Re-feed roll 3 problem. | Re-feed the media. If necessary, press power off (0) then power on (1). | 7.4 |
| Flashing 1,2, 3,4, 5,6 or 7 | Copier failed power on self-test. | Press power off (0) then power on (1). If problem persists, go to RAP OF2. | |
| UNABLE TO CALIBRATE TONER SENSOR | The sensor did not calibrate when the code [0921-6] was entered. | Press power off (0), then power on (1). If problem persists, go to RAP LL.91. | 9.7 |
| TONER FAULT CALL FOR ASSISTANCE | Excessive toner sensed problem. | Press power off (0), then power on (1). If problem persists, go to RAP LL.90. | 9.7 |

NOTE: Substitute 1,2, or 3 for X depending on which status code is displayed.

Maintenance Procedures

Image Module

| INTERVAL | TASK | REASON | TASK ENABLER |
|-------------|---|---|--|
| Normal Call | Check, clean, or repair spacing wheels as required. | Contaminated, dirty or worn spacing wheels or drum ends cause print quality defects. | Clean or replace spacing wheels and the end surface that the wheels ride on. |
| Normal Call | Check and clean, if required, the scorotron. | Contaminated grid, bent or contaminated pins. Worn end blocks, are also causes for scorotron failure, which results in print quality defects. | <p>WARNING</p> <p>The scorotron pin arrays are very sharp. Use care when handling the assembly.</p> <p>If contaminated, remove scorotron assembly and clean both sides of the arid with a brush. Examine pins and clean with brush Only if contaminated. Cleaning with a cloth can deposit lint that will cause print quality problems.</p> |
| Normal Call | Clean the Image bar. | Contamination causes print quality defects. | Clean the image bar with a lint free cloth and lens cleaner. |
| As Required | Repair or replace the scorotron/grid. | Contamination causes print quality defects. | <p>WARNING</p> <p>The scorotron pin arrays are very sharp. Use care when handling the assembly.</p> <p>Replace the grid and/or pin array.</p> <p>Perform ADJ 9.2 Electrostatic Series.</p> |

Xerographic Module

| INTERVAL | TASK | REASON | TASK ENABLER |
|-------------|--|--|---|
| Normal Call | <p>Clean the xerographic module.</p> <p>Clean the erase lamp.</p> <p>Inspect the photoreceptor for damage.</p> <p>Inspect components for vellum contamination.</p> <p>Inspect all seals for damage.</p> <p>Inspect the Cleaner Blade for damage.</p> | <p>Contamination can cause print quality problems. Contaminants can travel to the LED bar and scorotrons, which results in print quality problems. Fused toner on the bottom of the module can cause jams.</p> <p>Contamination reduces the effectiveness of the lamp to discharge the photoreceptor drum.</p> <p>Contaminants from vellum</p> <ul style="list-style-type: none"> - Cleaner failure - Contaminants to prints. <p>Vellum contamination will contaminate and plug the cleaner auger at the ends.</p> | <p>Clean the toner from the housing and cleaner blade with a vacuum cleaner.</p> <p><i>NOTE: Ensure that the vacuum cleaner does not contact the edge of the cleaner blade that touches the surface of the photoreceptor drum.</i></p> <p>Perform the Photoreceptor Cleaning Enhancement procedure in section 6. Use cleaning solvent to remove any fused toner from the bottom of the module. Replace the photoreceptor if damaged.</p> <p>Clean the erase lamp with a brush or dry lint free cloth</p> <p>Replace any damaged xerographic module seals.</p> |
| Normal Call | <p>Check/replace the stripper fingers.</p> <p>Clean the media guides</p> | <p>Bent stripper fingers may cause feed out jams and heat roll damage.</p> <p>Contaminated or damaged media guides can cause print quality defects.</p> | <p>Replace the damaged or contaminated stripper fingers.</p> |
| Normal Call | <p>Clean/check the fuser roll fabric guide.</p> | <p>Smooth or worn fuser roll loses ability to drive media.</p> <p>Contaminated fabric guide causes too much resistance to media which results in jams/deletions/wrinkles.</p> | <p>Clean the roll with film remover. Clean the fabric guide with formula A and film remover.</p> <p>Perform diagnostic code 1033 every time the oiler is removed.</p> |
| Normal Call | <p>Check the fuser roll for lack of oil.</p> | <p>Too little oil can cause media handling and offsetting print quality problems.</p> | <p>Check remaining fuser web life [1034] and adjust the web oiler rate [1032].</p> <p>If the fuser roll is dry, refer to BSD 10.2.</p> |
| Normal Call | <p>Inspect/clean the thermistor pad</p> | <p>Contamination can cause fuser heat problems.</p> | <p>Clean the thermistor pad with a brush or dry lint free cloth.</p> |

Xerographic Module (cont.)

| INTERVAL | TASK | REASON | TASK ENABLER |
|-------------------------------|--|---|--|
| As Required | Check/clean the photoreceptor. | Contamination/wear, scratches, or chips can generate print quality problems. | Inspect photoreceptor surface for deep scratches, chips or excessive wear. Replace photoreceptor if damaged. Apply zinc stearate to the cleaning blade and photoreceptor drum. *Note 2 Clean photoreceptor surface with Xerox Film Remover if contaminated. Apply zinc stearate when surface is dry. |
| As Required *Note 3 | Check/clean the cleaning blade. Replace with the new photoreceptor or as required. | Residual image, streaks, drum scuffing can occur if the blade is worn or contaminated. | Vacuum clean the cleaning blade. *Note 1 Apply zinc stearate to the cleaning blade and photoreceptor drum. *Note 2 Replace the blade if damaged. |
| 30K ft. 9Km | Replace the fabric guide. | Jams, deletions, wrinkles. | Refer to REP 8.9 |
| 30K ft. 9Km | Clean the inner xerographic module components. | If the customer is running a high percentage of vellum, outgassing of the vellum contaminates the cleaner auger and lower baffle surface resulting in poor cleaning and high dirt contamination. plugged cleaner auger | Remove the fuser roll and photoreceptor to enable access. NOTE: Use caution not to touch or damage cleaning blade or seals. Vacuum the Xero Mod and Auger and then clean all contaminated areas with Film Remover. |

Note 1: Ensure that the vacuum does not contact the edge of the cleaner blade that touches the surface of the photoreceptor drum.

Note 2: Where possible, dust the drum and the cleaning blade with zinc stearate away from the xerographic module to prevent the charge scorotron from being contaminated. If the drum and cleaning blade must be dusted while in the xerographic module, remove the charge scorotron. The zinc stearate will contaminate the charge scorotron and cause print quality defects.

Note 3. Install the complete cleaning blade kit when installing a new photoreceptor

Media Transport

| INTERVAL | TASK | REASON | TASK ENABLER |
|-----------------------|--|--|--|
| Normal Call | Clean the lower paper transports, turnaround baffle, paper feed rolls. | Contaminates can cause the media to slip resulting in print quality defects. | Clean the transport with antistatic fluid and a lint free cloth. Clean the feed roller with Formula A. |
| Normal Call | Clean the under side of the transport. | Reduce the airborne contaminants. | Vacuum clean, then wipe down with a lint free cloth. |
| Normal Gall | Clean the transfer corotron | Improve toner transfer to media. Improve media tack. | Remove the transfer corotron. Clean loose toner/debris with a brush. Use only a water dampened cloth to remove contaminants from the extrusion. (NOTE: Some of the coating may come off onto the cloth.) |
| Normal Call | Empty the condensation reclaim bottle. | Prevent the bottle from overflowing. | Empty the bottle into a sink. |
| 25K ft 7Km | Repair or replace the transfer corotron. | Contamination causes print quality defects. | Clean (same as the step above). |

Media Feed

| INTERVAL | TASK | REASON | TASK ENABLER |
|------------------------------|-------------------------------|-------------------|--|
| 1st 10Kft. or 3Km | Remove the drive chain slack. | Feeding problems. | Loosen the feed motor hardware to allow the spring to tension the chain. Tighten the hardware. |
| 40 K ft. or 13Km | Remove the drive chain slack. | Feeding problems. | Loosen the feed motor hardware to allow the spring to tension the chain. Tighten the hardware. |

Developer Module

| INTERVAL | TASK | REASON | TASK ENABLER |
|----------------|---|---|---|
| Normal Call | Brush the developer from the Developer Seal and lower edge of the Developer Housing back into the Developer Mag Roll and then clean the Seal. | image quality problems can occur. | Clean as required. |
| Normal Call | Check that the developer housing is level. | if the developer is not level, density may not be uniform side to side. | Developer material should not be uniform from end to end. Check the level of the copier. |
| Normal Call | Check the canister for proper rotation. | If the canister is not rotating correctly, the copies will be light. | Check the dry ink dispense motor for binding. Check that the cartridge is locked in the drive hub. |
| Normal Call | Check the developer drives. | Worn gears will cause the housing to move up or down, which will cause print quality defects. | Check the gears for worn or broken teeth; replace the gears, if necessary. Ensure that the drive coupling is engaged. |
| Normal Call | Check, clean, or replace the developer housing spacing wheels, as required. | Contaminated or worn spacing wheels will cause print quality defects. | Clean or replace spacing wheels. |
| | Check the trickle tube and toner Y tube for obstruction. | An obstructed Y tube or trickle tube will clog the cleaning/trickle system. | Clean as required. |
| 30K ft. 9Km | Check the pressure equalizing tubes. | Increased contamination due to poor air flow in the developer housing. | Remove developer housing. Remove and vacuum tubes, vacuum lower holes for toner. |

Covers

| INTERVAL | TASK | REASON | TASK ENABLER |
|-------------|-------------------|------------------------|--|
| Normal Call | Clean the covers. | Customer satisfaction. | Formula A and antistatic fluid on the and cut sheet feed-in shelf. |

Cutter

| INTERVAL | TASK | REASON | TASK ENABLER |
|-------------|--------------------------------|--|---|
| Normal Call | Check the cam for lubrication. | To ensure the correct cutter operation. The cutter will not provide a straight cut.. | Place a light film of lubrication on the cam surface. |
| Normal Call | Clean the cutter. | To ensure a straight, smooth cut on the lead edge of the media. | Vacuum the media dust and contamination from the cutter blade area. |

Media Drawers

| INTERVAL | TASK | REASON | TASK ENABLER |
|-------------|-------------------------|------------------------|--|
| Normal Call | Clean the media drawer. | Customer satisfaction. | Clean the media dust and contamination from each of the media drawers with a vacuum cleaner. |

System Checkout/ Final Action

Enter diagnostic mode and make three (3) prints of internal test pattern from the controller (if present), if a controller is not present, print [0955-5] from the IOT.

Prints are delivered to the exit tray.

Y N

I Refer to Initial Action / System Checks to begin your repair.

Evaluate the prints using print defect definitions in Section 3.

print quality is acceptable.

Y N

Refer to the print defect definitions in Section 3 and go to the appropriate print quality RAP.

1. Clean the exterior of the printer and provide print samples to the customer.

2. Fill out the Service Call Report form including:

Enter the Printer Menu, and scroll to Billing Meters. Enter Billing Meter and record Meter A and Meter B readings on the Service Call Report form.

3. Record all activities in the Service Log.

4. (Fig 1) Record the Print Count Readings on the Service Call Report.

5. Give appropriate credit to the Customer.

Call Back

1. Follow the Call Flow Diagram and resolve the problem that caused the Call Back.
2. Perform the System Checkout/Final Action procedure. Do not perform the Maintenance Procedures.

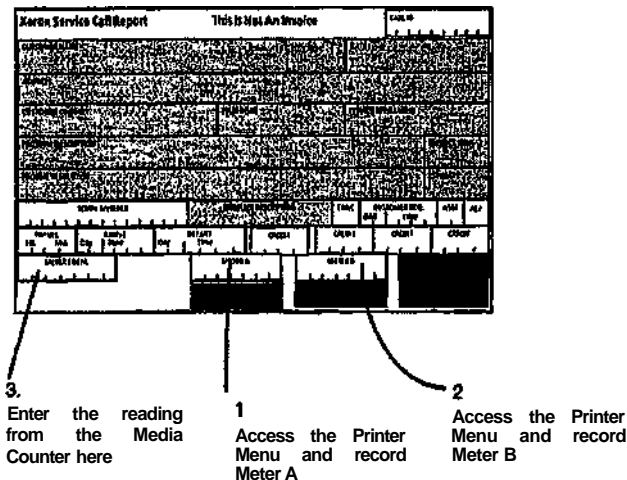


Figure 1. Recording the Print Count Readings

Notes:

2. Repair Analysis Procedures

Section Contents

| TITLE | PAGE |
|--|------|
| STATUS INDICATORS RAPS | |
| C1.04, C2.04, C3.04 RAP..... | 2-2 |
| LL41, LL.45 Fuser Warmup Fault RAP.... | 2-3 |
| LL.42 Thermal Control RAP..... | 2-5 |
| LL.43 Fuser Overtemperature RAP..... | 2-6 |
| LL.44 Fuser Too Hot RAP..... | 2-7 |
| LL 60/61 NVM Fault RAP..... | 2-8 |
| LL90 Overtuned Fault RAP..... | 2-9 |
| LL91 Undertuned Fault RAP..... | 2-11 |
| OTHER FAULTS | |
| OF1 Control Panel RAP..... | 2-13 |
| OF2 Power On Self Test (POST) RAP.... | 2-14 |
| GENERIC RAPS | |
| Clutch RAP..... | 2-15 |
| Sensor RAP..... | 2-16 |
| Switch RAP..... | 2-17 |

C1.04,C2.04,and C3.04

NOTE: Roll x means Roll 1,2, or 3.

The Media Drive Motor (MOT1, BSD 7.1) was trying to feed the Roll x Media forward to the registration position but the Media Registration Sensor (A21Q1, BSD 8.1) failed to sense the media.

Initial Actions

- Check the Media Roll (in the Drawer that was in use when the fault occurred).
 - Roll1 : BSD 7.2
 - Roll 2: BSD 7.3
 - Roll 3: BSD 7.4
- Check that the Drive Chain, PL 7.2, is OK (BSD 7.1).

Procedure

Enter DIAGNOSTICS (General Procedures).
Enter [0703] (ROLL FEED MOTOR FORWARD) and observe the Media Drive Motor.

The Media Drive Motor runs.

Y N

Check that the 3 Media Drawers are closed. Check the operation of the Drawer Reed Switches as follows:

Enter [0713] for Drawer 1

Enter [0714] for Drawer 2

Enter [0715] for Drawer 3

Each Drawer Reed switch functions correctly.

Y N

Refer to BSD 7.1 and check the circuit of the Drawer Reed Switch that does not function correctly. Check that the actuating magnet is not missing.

A B

A B

Refer to BSD 7.1, NOTE 2, and check the resistances of the windings of the Media Drive Motor (MOT1)

The resistances of the windings of the Media Drive Motor (MOT1) are OK.

Y N

I Replace the Media Drive Motor (MOT1),PL7.2.

Refer to BSD 7.1, NOTE 1, and check the voltages at A7P1.

The voltages at A7P1 are OK.

Y N

Check all wiring between A2P208 and A7P1. If the wiring is OK, replace the Driver PWB(A2), PL 1.1

NOTE: Drive Motor PWBs (A24), BSD 8.1, and (A7) are Identical and can be exchanged with each other.

Replace the Drive Motor PWB (A7), PL 7.2.

Refer to BSD 8.1. Enter [0917] and then enter [1] on the keypad. Observe the Transport Drive Motor (A21M0T1).

The Transport Drive Motor (A21M0T1) runs.

Y N

Refer to BSD 8.1, NOTE 4, and check the resistances of the windings of the Transport Drive Motor (A21M0T1).

The resistances of the windings of the Transport Drive Motor (A21M0T1) are OK.

Y N

Replace the Transport Drive Motor (A21M0T1),PL8.1.

Refer to BSD 8.1, NOTE 2, and check the voltages at A24P1.

The voltages at A24P1 are OK.

Y N

C D E

C D E

Check all wiring between A2P210 and A24P1. If the wiring is OK, replace the Driver PWB (A2),PL1.1.

NOTE: Drive Motor PWBs (A24) and (A7), BSD 7.1, are identical and can be exchanged with each other.

Replace the Drive Motor PWB (A24), PL 7.2.

Refer to BSD 8.1. Enter [0803] and check the Media Registration Sensor.

The Media Registration Sensor is OK.

Y N

Check the circuit of the Media Registration Sensor (A21Q1).

Check for mechanical binding or broken parts in the area of the Registration Drive Rolls and Pinch Rolls.

LL.41, LL.45 Fuser Warmup Fault RAP

NOTE: Refer to BSD 10.1 while using this RAP.

This RAP Is used when the Fuser does not warm up when the control logic attempts to increase the heat.

LL.41 is displayed when the Fuser heat does not Increase to 110° F (43° C) within one minute.

LL.45 is displayed when the Fuser temperature is greater than 110° F (43° C) but does not reach the setpoint temperature within the specified time period.

Initial Actions

- Ensure that the following connectors are properly seated:
 - a. Thermistor Assembly RT1J5 / A23P5
 - b. Thermal Fuse A23XF1
 - c. Xerographic Module A23J2 / A23P2
 - d. Fuser Heat Rod A23HR1P2 (blue wire)
 - e. Fuser Heat Rod A23HR1P1 (brown wire)
- Ensure that the correct Fuser Heat Rod is installed.
- Check the wall outlet for proper line voltage.



WARNING
Dangerous Voltage

Procedure

NOTE: After entering the code [1004], the Fuser Power Relay, A1K1, and the Fuser Power LED, A2CR15 (on the Driver PWB), are energized for approximately five minutes.

Enter DIAGNOSTICS (General Procedures). Enter [1004] to test the operation of the Fuser.

After 10 seconds, the Fuser Heat Rod Is still on.

Y N

Switch off the printer and disconnect the power cord. Measure the resistance of the Heat Rod as follows: Disconnect A23P1 / A23J1. Connect the meter leads to A23JM and A23J1-3.

The resistance is less than 30 Ohms.

Y N

Check the wiring between A23J1 and the Fuser Heat Rod (HR1).

The wires have continuity

Y N

I Repair the wires

Replace the Fuser Heat Rod, HR1 (PL 10.2)

Check for ac power from the Fuser Power Relay as follows: Reconnect A23P1 / A23J1. Set the meter to read ac voltage and connect the meter leads to A1K1-4 and A1K1-8. Cheat the front door interlock. Connect the Power Cord and switch on the printer. Wait 10 seconds.

AC power Is present.

Y N

Check for ac input power to the Fuser Power Relay, A1K1 as follows: Connect the meter leads to A1K1-2A and A1K1-6A.

AC power Is present.

Y N

Refer to BSD 1.1A or 1.1B and check the ac input power circuit.

Set the meter to read 26 VDC and connect the {+} meter lead to A1K1-1 and the (-) meter lead to A1K1-0. Switch off, and the switch on, the printer.

I

A B C

A B C

26 VDC is present.

Y N

Check the *Fuser Power Relay* On signal from the Driver PWB, A2, as follows: Connect the (+) meter lead to A2J213-1 and the (-) meter lead to A2J213-3.

26 vdc Is present.

Y N

I Replace the Driver PWB, A2, I PL 1.1.

Check and repair the wiring between the Driver PWB, A1, and the Fuser Power Relay, A1K1.

Replace the Fuser Power Relay, A1K1.PL 1.2.

Switch off the printer and disconnect the power cord. Check the following wires for continuity:

| From | To | Color |
|-----------|-----------|---------|
| A1K1-8 | A1Q1MT1-A | WHT |
| A1Q1MT2-A | A23P1-1 | BLU |
| A1K1-4 | A23P1-3 | BLK&BRN |

The wires have continuity

Y N

I Repair the wires

Set the meter to read +2 VDC. Connect the (+) lead to A1Q1-G (BRN wire) and the (-) lead to A1Q1-MT1 (WHT wires). Reconnect the Power Cord and switch on the printer. Wait 10 seconds.

NOTE: The bargraph display on the meter will flicker if pulses are present

Pulses are present

Y N

A D E

A D E

N

Connect the (+) meter lead to A2P213-12 and leave the (-) meter lead connected to A1Q1-MT1.

Pulses are present.

Y N

| Replace the Driver PWB, A2, PL 1.1.

Repair the wire between terminal G on A1Q1 and A2P213-11 (wire no. 31).

I

Switch off the printer and disconnect the power cord. Replace Fuser Triac, A1Q1, PL 1.2. Then perform the following steps to check that the ballast resistor circuit is operating correctly:

- 1) Disconnect the BRN wire from A1Q1-G.
- 2) Set the meter to read 60 VAC (USO) or 120VAC (XR).
- 3) Connect the (+) meter lead to A1Q1-MT2 (BLU wires).
- 4) Connect the (-) meter lead to A1Q1-MT1 (WHT wires).
- 5) Connect the Power Cord and switch on the printer.

At least 60 VAC (USO) or 120 VAC (RX) is present.

Y N

Switch off the printer and disconnect the power cord. Set the meter to read 8 to 21 ohms of resistance. Disconnect the wires on each Ballast Resistor, A1R1 and A1R2R2, before measuring the resistance.

The resistance of each Ballast Resistor, A1R1 and A1R2, is 7 to 9 ohms (USO) or 19 to 21 ohms (RX)

Y N

A F G H

A F G H

Replace both Ballast Resistors,

I A1R1 and A1R2.PL 1.2.

Y

Check the following Ballast Resistor wires for continuity:

| From | To | Color |
|---------|-----------|-------|
| A1R1-1 | A1K3-8 | RED |
| A1R1-2A | A1Q1-BBLU | |
| A1R2-1 | A1K3-4 | RED |
| A1R2-2A | A1R1-2B | BLU |

The wires have continuity.

Y N

I Repair the wires.

Set the meter to read +26 VDC. Connect the (+) meter lead to the Fuser Ballast Power Relay, A1K3-1. Connect the (-) meter lead to A1K3-0. Reconnect the Power Cord and switch on the printer.

There is +26 VDC present for approximately 5 seconds.

Y N

Connect the (+) meter lead to A2P213-6. Connect the (-) meter lead to A2P213-7. Switch off, then switch on the printer.

There is +26 VDC present for approximately 5 seconds.

Y N

Replace the Driver PWB, A2, PL 1.1.

Repair the wires.

Replace the Ballast Relay, A1K3, PL 1.2.

Switch off the printer and disconnect the Power Cord. Reconnect the wire to the Fuser Triac A1Q1-G (BRN wire). The procedure is complete.

A

A

The Thermistor Pad on the Thermistor Pad Assembly touches the Fuser Roll.

Y N

I Replace the Thermistor Pad Assembly, PL 10.4.

The Thermistor Pad is free of contamination.

Y N

I Clean the Thermistor Pad with a clean cloth.

Check the wires between the Fuser Thermistor, RT1, and the Main PWB, A1, for continuity.

The wires have continuity.

Y N

I Repair the wires.

Replace the Thermistor Pad Assembly, PL 10.4.

LL.42. Thermal Control RAP

NOTE: Refer to BSD 10.1 while using this RAP.

This RAP is used to locate certain problems in the thermal control circuitry in the Fuser area.



WARNING
Dangerous Voltage

Initial Actions

Switch off, then switch on the printer. If the problem still exists, perform the procedure below.

Procedure

Switch off the printer and disconnect the Power Cord. Disconnect the orange wire from the Fuser Triac, A1Q1-G. Reconnect the Power Cord and switch on the printer. Wait 10 seconds.

After 5 seconds, the Fuser Heat Rod is off.

Y N

Replace the Fuser Triac, A1Q1, PL 1.2.

Switch off the printer. Disconnect A23P5 from the Thermistor Pad Assembly J5. Set the meter to read 100 ohms. Connect the (+) meter lead to J5-1. Connect the (-) meter lead to J5-2.

The resistance is greater than 100 ohms.

Y N

Replace the Thermistor Pad Assembly, PL 10.4.

Check the wiring between Fuser Thermistor, RT1, and the Main PWB, A2.

The wires have continuity.

Y N

I Repair the wires.

Replace the Main PWB, A2, PL 1.1.

LL.43 Fuser Overtemperature RAP

NOTE: Refer to BSD 10.1 while using this RAP.

WARNING **Dangerous Voltage**

LL.43 is displayed when the logic detects that there is a problem with the Fuser temperature and an overtemperature condition has caused the Thermal Fuse, A23F1, to open.

Initial Actions

- Ensure that the following connectors are properly seated:
 - a. Driver PWB A2J213 / A2P213
 - fa. Driver PWB A2J201 / A2P201
 - c. Xerographics Module A23J2 / A23P2
 - d. Thermistor Pad Assembly J5 / A23P5
- Ensure that both cooling fans are working. If not, go to BSD 1.3 to repair the cooling fans circuit.
- Ensure that all interlocks are closed.

Procedure

Connect the (+) meter lead to the Driver PWB A2P201-1 and the (-) meter lead to ground.

There is +26 VDC present.

Y N

Check continuity through the Overtemperature Fuse, A23F1, as follows:

- a) Disconnect the BLU and GRY wires from the fuse.
- b) Set the meter to measure continuity.
- c) Connect the meter across the fuse terminals.

The fuse has continuity

A B C

Switch off the printer and disconnect the Power Cord. Replace the Thermal Fuse, A23F1, PL 10.4.

Perform the following steps to determine the cause for the fuse to open:

- a) Disconnect the BLU and WHT wires from the Fuser Triac, A1Q1.
- b) Set the meter to measure 2K ohms. Measure the resistance across the Fuser Triac connections from which the wires were removed. If the resistance is not infinite, replace the Fuser Triac, A1Q1. PL 1.2.
- c) Measure the resistance from each of the Fuser Triac connections from which the wires were removed to ground. If the resistance is not infinite, replace the Fuser Triac, A23Q1, PL 1.2.

V

Connect the (+) meter lead to the Driver PWB, A2P201-3 and the (-) meter lead to ground.

There is +26 VDC present.

I N

Replace the Driver PWB, A2, PL 1.1.

Check the BLU and GRY wires between the Thermal Fuse, A23F1, and the Driver PWB, A2 for continuity.

The wires have continuity.

Y N

Repair the wires.

A D

A D

Disconnect A23P5 from the Thermistor Pad Assembly J5. Set the meter to measure 200K ohms. Connect the (+) meter lead to the Thermistor Pad Assembly J5-1 and the (-) meter lead to J5-2.

The resistance is less than 200K ohms.

Y N

Replace the Thermistor Pad Assembly PL 10.4.

Check the YEL and GRN wires between the Fuser Thermistor and the Main PWB, A1 for continuity.

The wires have continuity.

Y N

I Repair the wires.

Replace the Driver PWB, A2, PL 1.1. If the problem persists, replace the Main PWB A1. PL 1.1.

Connect the (+) meter lead to the Driver PWB, A2P213-3 and the (-) meter lead to ground. Enter Diagnostic code [1009] to turn on the Fuser Power Relay, A1K1.

The voltage changes from +26 VDC to less than 1 VDC when the Fuser Power Relay is turned on.

Y N

Check the BRN and ORN wires between the Fuser Power Relay, A1K1, and the Driver PWB, A2 for continuity.

The wires have continuity.

Y N

I Repair the wires.

Replace the Driver PWB, A2, PL 1.1. If the problem persists, replace the Main PWB, A1, PL 1.1.

Replace the Fuser Power Relay, A1K1, PL 1.2.

A B C

LL.44 Fuser Too Hot RAP

NOTE: Refer to BSD 10.1 while using this RAP.



WARNING

Dangerous Voltage

LL.44 is displayed when the Fuser temperature exceeds 420° F (216° C), the maximum allowed temperature.

The status code may also be displayed if the Temperature Limit Thermistor, A23RT2, has a malfunction or is contaminated.

Initial Actions

Switch off the printer and allow the fuser to cool. Switch on the printer. If the problem still exists, perform the following procedure.

Procedure

Check the Fuser Triac, A1Q1, as follows:

- Switch off the printer and disconnect the Power Cord.
- Disconnect the BLU and WHT wires from the Fuser Triac, A1Q1
- Set the meter to measure 2K ohms.
- Measure the resistance across the Fuser Triac connections from which the wires were removed.

The resistance is Infinite.

Y N

I Replace the Fuser Triac, A1Q1, PL 1.2.
Measure the resistance from each of the Fuser Triac connections from which the wires were removed to ground.

The resistance is infinite.

Y N

I Replace the Fuser Triac, A1Q1, PL 1.2.

I
A

A

Disconnect A2P201 from the Driver PWB A2J201. Set the meter to measure 5 VDC. Connect the (+) meter lead to the Driver PWB A2J2-9 and the (-) meter lead to A2J2-10.

There is +5 VDC present.

Y N

I Replace the Driver PWB, A2, PL 1.1.
Check the YEL and GRN wires between the Temperature Limit Thermistor and the Driver PWB, A2, for continuity and for a short to ground.

The wires are OK.

Y N

I Repair the wires.

Replace the Thermistor Pad Assembly, PL 10.4.

LL60/LL61 NVM Fault RAP

This RAP is used for NVM (Non-Volatile Memory) problems that are indicated by a status code or a message display. The control panel displays the message NVM Fault Call For Assistance. LL60 or LL61 may also be displayed. The problem may be caused when the NVM data are corrupted or partially corrupted. The contents of the NVM do not agree with the checksum, or the contents of the NVM do not agree with the shadow contents.

LL60 • This status code indicates corrupted data in NVM. Perform steps 1 through 4 of the procedure.

LL61 -This status code is an indication that an older version of firmware has been installed. Ensure that the newest version of firmware is installed. If the problem persists, perform steps 1 through 4 of the procedure.

Procedure

The purpose of this procedure is to restore the printer to normal operation condition. Refer to DIAGNOSTICS located in Section 6 when performing this procedure.

1. Enter the following diagnostic codes and record the corresponding data values displayed on the control panel:

| | |
|----------|---------------------------------|
| [02-61] | Country Configuration |
| [0360-2] | Electronic Billing Meters value |
| [0760] | Delay Between Film Prints |
| (0860) | Lead Edge Registration value |
| [0862] | Cut length value |
| [0903] | Image Module Output Light Value |
| [0921-2] | Vhigh |
| [0921-3] | Illumination (Exposure) value |
| [1034] | Remaining Oiler Web Life |
| [1060] | Fuser Temperature |
| [1062] | Fuser Temperature |
| [1063] | Fuser Temperature |

2. Enter [0360-1] for NACO printers or [0360-3] for EO printers to reset the contents of the NVM to the factory default values.

3. Enter [0921-6] and then compare the values recorded in step 1 to previously recorded values for this printer. Enter the codes listed in step 1 and change the default values as required.

NOTE: If any value recorded in step 1 appears to be incorrect, use the previously recorded value. If there is no previously recorded value, retain the default value.

4. Check/adjust the following:

| | |
|----------|------------------------|
| ADJ 8.1 | Vertical Magnification |
| ADJ 8.2 | Lead Edge Registration |
| ADJ 8.3 | Cut Length |
| ADJ 9.2 | Electrostatic Series |
| ADJ 10.1 | Fuser Temperature |

NOTE: If the values entered are not retained, replace the NVM (PL 1.1) and perform steps 2-4 again.

LL.90 Overtolled Fault RAP

NOTE: Refer to BSD 9.7 while using this RAP.

The status code LL.90 is displayed when the logic detects that the toner concentration is significantly greater than the Control Point value.

The Toner Control System is designed to maintain the Toner Concentration within an acceptable operating range. The Control Point operating range is from 5.2 VDC to 6.0 VDC. The Toner Sensor continuously senses the Toner Concentration. A change in the Toner Concentration results in a corresponding change of the Sensor signal. As the toner concentration increases, the Toner Sensor signal voltage decreases. The logic monitors the Sensor signal.

LL.90 indicates that the logic detected that the toner concentration increased greater than the allowable limit.

The problem may occur if there is a problem with the toner dispensing or the developer mixing systems.

Initial Actions

- Clean the Pressure Equalizing Tubes with a vacuum cleaner in order to remove toner from inside the tubes. Clean the Augers and Magnetic Roll
- Examine the Developer Housing and check for a large amount of toner in the area of the Toner Dispenser.
- Ensure that the printer is level.
- Ensure that the Toner Cartridge is not damaged and that the seal is secured to the Cartridge in the correct location.
- Ensure that the Developer Housing Auger and Drive Gears are not damaged and are Installed correctly (Figure 1).

- Check that all the connectors between the Toner Sensor, A22Q1, and the Main PWB, A2, are seated correctly.

Procedure

With the printer in an LL.90 fault condition, enter diagnostic code [9-22] and then press YES, in order to enable the printer to function with an LL.90 fault condition. Enter the code [0361] in order to exit the diagnostics mode. Run 3 test prints [9-55 Patern 5].

The LL.90 code is displayed as the print is being made.

Y N

I Complete the service call.

Use the last print to check the image density.

The image density of the 1.0 Solid Square In the center of the Test Pattern [0955-5] is equal to or less than the 1.20 Density Square on the Output Reference SIR 495.1.

Y N

I Perform the Tone-Down procedure

I [09-06]. If the printer does not tone-down,

A perform the Image Density Adjustment (ADJ 9.3).

- 1 ENSURE THAT THE REAR AUGER DRIVE GEAR IS POSITIONED WITH THE FLANGE AS SHOWN.
- 2 ENSURE THAT THE DEVELOPER HOUSING DRIVE GEAR IS POSITIONED WITH THE FLANGE AS SHOWN.
- 3 ENSURE THAT THE FRONT AUGER DRIVE GEAR IS CAPTURED IN POSITION BY THE REAR AUGER DRIVE GEAR FLANGE AND THE DEVELOPER HOUSING DRIVE GEAR FLANGE.

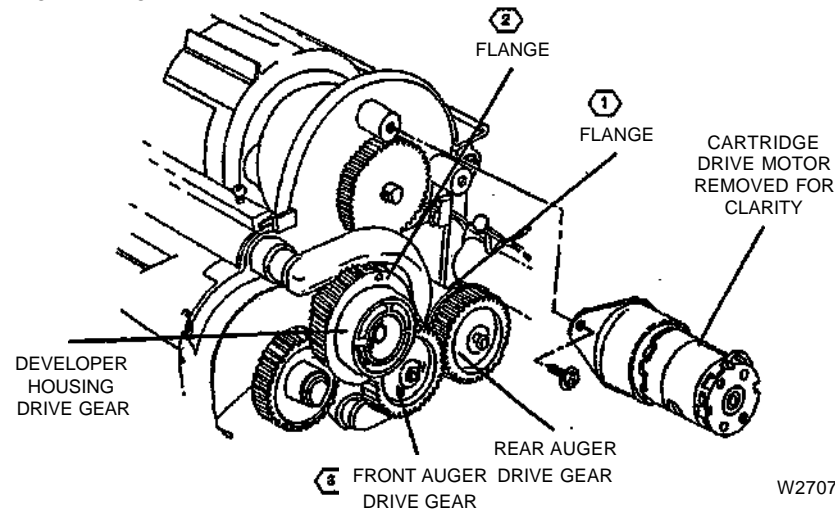


Figure 1. Developer Housing and Auger Drive Gears

Enter the code [9-21-4] in order to switch on the Main Drive Motor and the Toner Sensor circuit. Connect the (+) meter lead to the Toner Sensor A22Q1P1-2 and the (-) meter lead to A22Q1P1-4.

There is +15 VDC present.

Y N

Check for an open or short circuit to ground in the wires connected to A22Q1P1-2 and A22Q1P1-4. If the wires are OK, replace the Main PWB, A3, PL 1.1.

Connect the (+) meter lead to the Main PWB A3J303-4 and the (-) meter lead to ground.

There is +5.2 to +6.0 VDC Is present.

Y N

Connect the (+) meter lead to the Toner Sensor A22Q1-1 and the (•) meter lead to ground.

There Is greater than +0.2 VDC present.

Y N

Disconnect Toner Sensor A22Q1P1 from A22Q1J1. Connect the (+) meter lead to the Main PWB A3J303-16 and the (-) meter lead to ground.

There is greater than +0.2 VDC present.

Y N

Replace the LVPS, A5, PL 1.1.
if the problem persists, replace the Main PWB, A3, PL 1.1.

Check for an open or short circuit to ground in the wires connected to A22Q1-2 and A22Q1-4. If the wires are OK, replace the Toner Sensor A22Q1, PL 9.9. Run [9-21-6] Toner Sensor Calibration.

B C

Check for an open or short circuit to ground in the wire connected to A22Q1P1-3. If the wire is OK, replace the Toner Sensor A22Q1, PL 9.9. Run [9-21-6] Toner Sensor Calibration

Replace the Main PWB, A3, PL 1.1.

B C

LL.91 Undertoned Fault RAP

NOTE: Refer to BSD 9.7 while using this RAP.

The status code LL.91 is displayed when the logic detects that the toner concentration is significantly less than the Control Point value.

The Toner Control System is designed to maintain the Toner Concentration within an acceptable operating range. The Control Point operating range is from 5.2 to 6.0 VDC. The Toner Sensor continuously senses the Toner Concentration. A change in the Toner Concentration results in a corresponding change of the Sensor signal. As the Toner Concentration decreases, the Toner Sensor signal voltage increases. The logic monitors the Toner Sensor signal.

LL.91 indicates that the logic detected that the toner concentration decreased greater than the allowable limit.

The problem may occur if there is a problem with the toner dispensing or the developer mixing systems.

Initial Actions

- Examine the Toner Cartridge to ensure that the Cartridge is not empty and is installed correctly.
- « Check the Cartridge for damage and ensure that the seal is secured to the Cartridge in the correct location.
- Ensure that the Developer Drive Coupling is in good condition and is engaged fully (Figure 1).

- Ensure that the Developer Housing Auger and Drive Gears are not damaged and are installed correctly (Figure 2).
- Check that all the connectors between the Toner Sensor, A22Q1, and the Main PWB, A2, are seated correctly.

Procedure

With the printer in an LL.91 fault condition, enter diagnostic code [9-22] and press Yes, in order to enable the printer to function with an LL.91 fault condition. Enter the code [0361] in order to exit the diagnostics mode. Make 3 test prints [9-55 Pattern 5].

The Developer Housing Auger and Drive Gears are rotating as the prints are being made.

Y N

I Refer to BSD 4.3, Drum Drive, to repair the drive circuit.

The LL.91 code is displayed as the prints are being made.

Y N

Complete the Service Call.

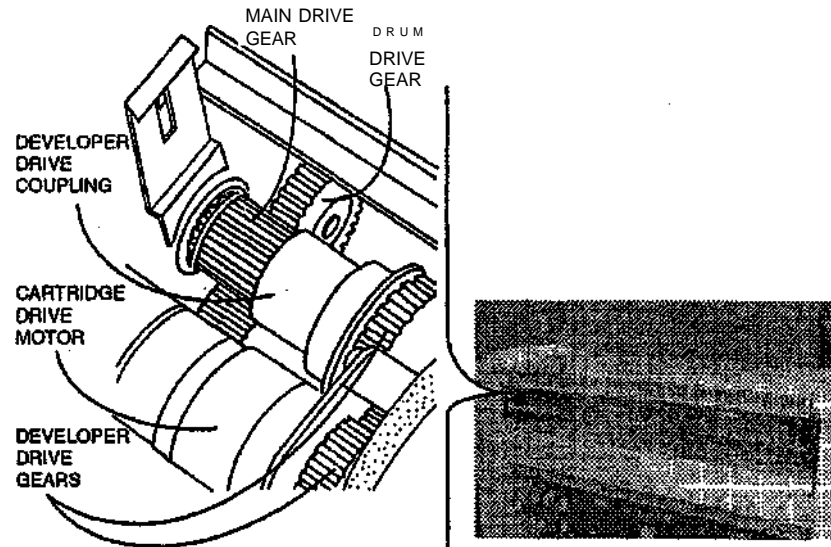


Figure 1. Location of Developer Drive Coupling

A

Use the last print to check the image density.
The Image density of the 1.0 Solid Square In the center of the Test Pattern [0955-5] is equal to or less than the 1.20 Density Square on the Output Reference SIR 495.1.

Y N

Perform the Tone-Up procedure [09-06].
If the printer does not tone-up, perform the Image Density Adjustment (ADJ 9.3).

NOTE: If unable to perform ADJ 9.3, replace the Developer and repeat ADJ 9.3.

B

B

Enter the code [9-21-4] in order to switch on the Main Drive Motor and the Toner Sensor circuit. Connect the (+) meter lead to the Main PWB A3J303-14 and the (-) meter lead to A3J303-13.

There is between +5.2 and +6.0 VDC present.

Y N

C D

C D

Connect the (+) meter lead to the Toner Sensor A22Q1P1-1 and the (-) meter lead to ground.

There is less than +10 VDC present.

Y N

Disconnect Toner Sensor A22Q1P1 from A22Q1J1. Connect the (+) meter lead to the Main PWB A3J303-16 and the (-) meter lead to ground.

There is less than +10.0 VDC present.

Y N

Replace the LVPS, A5, PL 1.1.

If the problem persists, replace the Main PWB, A3, PL 1.1.

Check for an open or short circuit to ground in the wires connected to A22Q1P1-1 (BRN) and A22Q1P1-4 (YEL). If the wires are OK, replace the Toner Sensor, A22Q1, PL 9.9. Then, run [9-21-6] Toner Sensor Calibration.

Check for an open or short circuit to ground in the wire connected to A22Q1P1-3 (ORN). If the wire is OK, replace the Toner Sensor, A22Q1, PL 9.9. Then, run [9-21-6] Toner Sensor Calibration.

Replace the Main PWB, A3, PL 1.1. If the problem persists, enter the code [0926] to reset the NVM.

- 1 ENSURE THAT THE REAR AUGER DRIVE GEAR IS POSITIONED WITH THE FLANGE AS SHOWN.
- 2 ENSURE THAT THE DEVELOPER HOUSING DRIVE GEAR IS POSITIONED WITH THE FLANGE AS SHOWN.
- 3 ENSURE THAT THE FRONT AUGER DRIVE GEAR IS CAPTURED IN POSITION BY THE REAR AUGER DRIVE GEAR FLANGE AND THE DEVELOPER HOUSING DRIVE GEAR FLANGE.

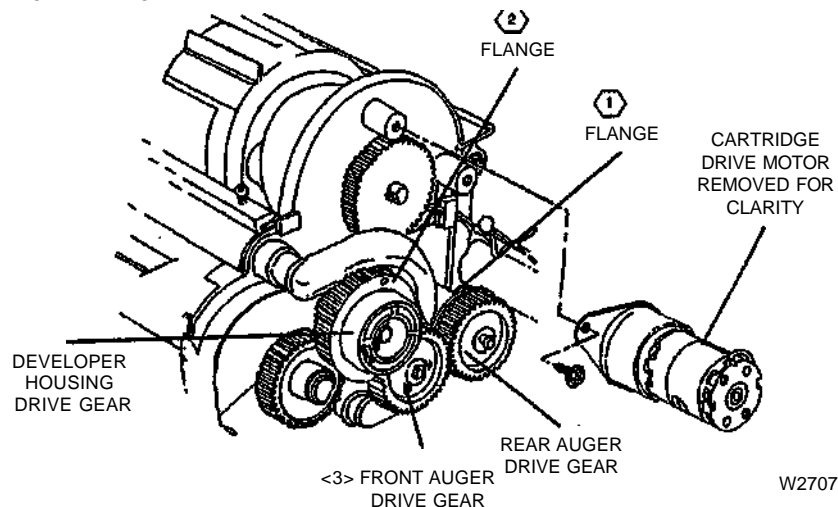


Figure 2. Developer Housing and Auger Drive Gears

0F1 Control Panel RAP

NOTE: Refer to BSD 2.1 while using this RAP, unless otherwise directed

This RAP is used when the Control Panel does not operate, or when the Control Panel operates incorrectly.

Initial Actions

- Make sure that ac power is applied to the machine.
- Ensure that the 26-conductor ribbon cable, connected between the Main PWB A3J301 and the User Interface PWB A32J1 (located in the Control Panel), is seated fully at each connector.

Procedure

Refer to Table 1.

Table 1. Control Panel Probable Cause / Corrective Action

| Control Panel | Probable Cause | Corrective Action |
|--|--|--|
| The Message Display is blank, no characters are displayed. | a) There is no +5 VDC to the Main PWB, A3. b) There is an open circuit in the ribbon cable between the Main PWB A3J301 and the User Interface PWB A32J1. c) There is an internal fault in the Control Panel or in the Main PWB A3. | a) Refer to BSD 1.2 to troubleshoot the +5 VDC power to the Main PWB, A3. b) Check for continuity in all wires in the ribbon cable. c) Replace the Control Panel, PL 1.4. If the problem persists, replace the Main PWB, A3, PL 1.1. |
| The Message Display LEDs are on but, no characters are displayed. | a) There is no +15 VDC to the Main PWB, A3. b) There is no +5 VDC (Bulk) to the Main PWB, A3. | a) Refer to BSD 1.2 to troubleshoot the +15 VDC power to the Main PWB, A3. b) Refer to BSD 1.2 to troubleshoot the +5 VDC (Bulk) power to the Main PWB, A3. |
| The Message Display LEDs are on but no characters, random characters, or black squares appear. | a) There is an open circuit in the ribbon cable between the Main PWB A3J301 and the User Interface PWB A32J1. b) There is an internal fault in the Control Panel or in the Main PWB A3. | a) Check for continuity in all wires in the ribbon cable. b) Replace the Control Panel, PL 1.4. If the problem persists, replace the Main PWB, A3, PL 1.1. |

OF2 Power On Self Test (POST) RAP

NOTE: Refer to BSD 1.2 and BSD 2.1 while using this RAP.

This RAP is used when the logic detects a fault during the Power On Self-test (POST). The printer does not initialize and the Control Panel displays a 1, 2, 3, 4, 5, 6, or 7.

Initial Actions

- Ensure that the EPROMs and the NVM are seated fully on the Main PWB, A3.
- Ensure that the 40-conductor ribbon cable, connected between the Driver PWB A2J206 and the Main PWB A3J313, is seated fully at each connector.
- Ensure that the power cable, connected between the Driver PWB A2J207 and the Main PWB A3J312 is seated fully at each connector.
- Ensure that the 26-conductor ribbon cable, connected between the Main PWB A3J301 and the Control Panel User Interface PWB A32J1, is seated fully at each connector.

Procedure

Refer to the Table 1.

Table 1. Power On Self Test (POST) Probable Cause / Corrective Action

| The number that is Displayed on the Control Panel. | Probable Cause | Corrective Action |
|--|--|--|
| 1 or 2 | There is a fault in the RAM memory. | Replace the Main PWB, A3, PL 1.1. |
| 3 | a) The contents of the Control EPROMs does not agree with the checksum. b) The Main PWB is defective. | a) Replace both Control EPROMs on the Main PWB, A3. b) Replace the Main PWB, A3, PL 1.1. |
| 4 | There is a fault in the Analog-to-Digital Converter or the Digital-to-Analog Converter. | Replace the Main PWB, A3, PL 1.1. |
| 5 | There is a fault in the Main PWB, A3. | Replace the Main PWB, A3, PL 1.1. |
| 6 | There is a fault in the Digital-to-Analog Converter. | Replace the Driver PWB, A2, PL 1.1. If the problem persists, replace the Main PWB, A3, PL 1.1. |
| 7 | There is a fault in the printer port output circuitry. | Replace the Main PWB, A3, PL 1.1. |

Clutch RAP

Initial Actions

- This procedure can be used to check any clutch

Procedure

Enter DIAGNOSTICS (General Procedures).
Enter code [xxxx] to test the Clutch (Refer to appropriate BSD for the specific code).
Actuate the Clutch.

The Clutch energizes.

Y N

Deactuate the Clutch.

There is +26 VDC at J209-12 (use the actual connector/pin number on the BSD) on the Driver PWB (A2).

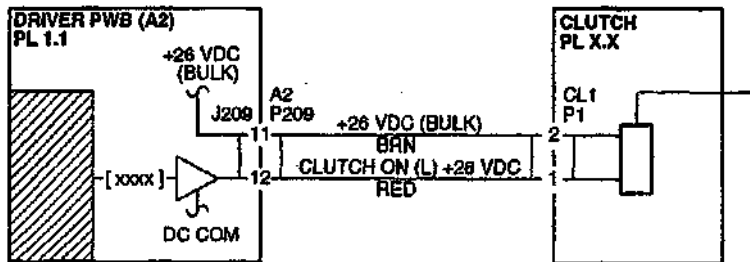
Y N

Check the wires for an open circuit. If the wires are good, replace the Clutch (PL X-X).

Check the adjustment of the Clutch (ADJ X-X).

If the adjustment is good, replace the Clutch (PL X-X).

The Clutch and its circuit appear to be operating normally, check the adjustment or alignment of the Clutch.



Sensor RAP

Initial Actions

- This procedure can be used to check any Sensor.
- Ensure that the Sensor is not blocked.
- Clean the Sensor surfaces before using this procedure.

Procedure

Enter DIAGNOSTICS (General Procedures).
Enter code [xxxx] to test the Sensor (Refer to appropriate BSD for the specific code). Block the Sensor.

The Display toggles between [1] and [0].

Y N

There is 4-1.4 +/-0.2 VDC at J1/P1 pin 1 of the PWB.

Y N

There is 45 +/-0.3 VDC at J1/P1 pin 2 of the PWB.

Y N

Switch off the power. **There is less than 2 Ohms from J1/P1 pin 2 to the machine frame.**

Y N

I Replace the PWB.

Disconnect J1. **There is less than 2 Ohms from J1/P1 pin 2 to the machine frame.**

Y N

Check the wire at J1/P1 pin 1 for a short circuit.

If the wire is good, replace the Sensor.

Replace the PWB.

Check the wire at J1/P1 pin 2 for an open circuit.

If the wire is good, replace the Sensor.

A B

There is +11.5 VDC at J1 pin 1 of the PWB.

Y N

I Replace the PWB.

Check the wire at J1/P1 pin 1 for an open circuit.

If the wire is good, check the wire at J1/P1 pin 3 for an open circuit.

If the wire is good, replace the Sensor.

Block the Sensor. **The Message Display indicates HIGH.**

Y N

There is +11.5 VDC at J1 pin 1 of the PWB.

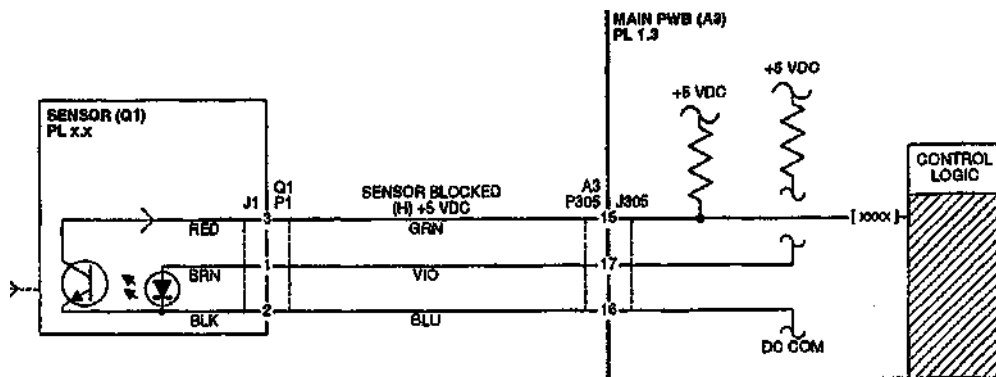
Y N

Check the wire at J1/P1 pin 1 for a short circuit to ground.

If the wire is good, replace the Sensor.

Replace the PWB.

The Sensor and its circuit appear to be operating normally, check the adjustment or alignment of the Sensor.



A B

Switch RAP

Initial Actions

- This procedure can be used to check any switch.

Procedure

Enter DIAGNOSTICS (General Procedures).
Enter code [xxxx] to test the switch (Refer to appropriate BSD for the specific code).
Actuate the switch

The switch toggles from H to L or from L to H.

Y N

The message display indicates LOW all the time.

Y N

Actuate the switch.

The voltage at J1-1 (use the actual connector/pin number from the appropriate BSD) goes to less than 0.4 VDC.

Y N

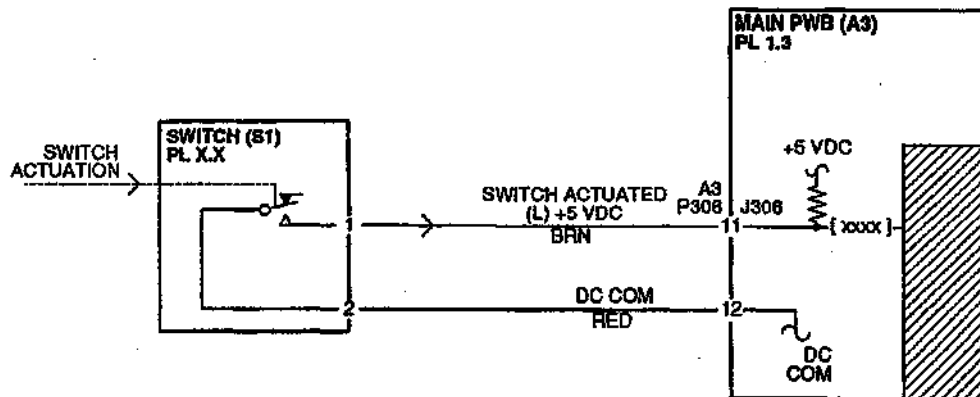
Check the wiring between the switch and the Main **PWB** (A2).

If the wiring is OK, replace the switch.

Replace the Main **PWB** (A2) (PL x.x)

Replace the Switch (PL x.x)

The switch and its circuit appear to be operating normally. check the adjustment or alignment of the switch.



Notes:

Section Contents

| TITLE | PAGE |
|---|------|
| Print Quality Initialization Procedure..... | 3-2 |
| Print Defects..... | 3-3 |
| Print Quality Definitions..... | 3-3 |
| Print Quality General Diagnostics..... | 3-4 |
| Print Quality Specifications..... | 3-5 |
| Damaged Media..... | 3-7 |
| Media Handling Problems..... | 3-8 |
| PQ 1 Background..... | 3-9 |
| PQ 2 Bands..... | 3-10 |
| PQ 3 Bands..... | 3-11 |
| PQ 4 Black Lines..... | 3-12 |
| PQ 5 Black Prints..... | 3-13 |
| PQ 6 Blank Prints / Partial Image..... | 3-14 |
| PQ 7 Blurred Image..... | 3-15 |
| PQ 8 Deletions (bands)..... | 3-16 |
| PQ 9 Deletions (bands)..... | 3-17 |
| PQ 10 Deletions (in solid and halftone areas)..... | 3-18 |
| PQ 11 Deletions (spots)..... | 3-19 |
| PQ 12 Finger Marks..... | 3-20 |
| PQ 13 Light Image..... | 3-21 |
| PQ 14 Misregistration..... | 3-22 |
| PQ 15 Residual Image..... | 3-23 |
| PQ 16 Skewed Image..... | 3-24 |
| PQ 17 Smears..... | 3-25 |
| PQ 17A Smudge..... | 3-26 |
| PQ 18 Spots..... | 3-27 |
| PQ 19 Uneven Density..... | 3-28 |
| PQ 20 Unfused Prints..... | 3-29 |
| PQ 21 Wrinkle..... | 3-30 |
| PQ 22 Offsetting..... | 3-31 |

Print Quality Initialization Procedure

Prior to any print quality troubleshooting, validate the problem is in the IOT by entering [9-55]. Select test pattern 5. Examine the test print for defects. If defects appear, complete the following checklist. If the defects are still present after completing the checklist, refer to the Image Quality Defects and Classification information on the following pages to classify and repair the problem.

Drum life (Refer to Section 1)

Ensure that the Charge Scorotron is not damaged or contaminated.

Ensure that the Image Module Roller fully contacts the drum and does not exhibit abnormal wear or contamination.

Refer to ADJ 9.2, Electrostatic Series and check that the following voltages are within specification:

- Charge Scorotron (V High)
- Image Module LED Duty Cycle (V Low)

Check that the Toner Concentration (TC) is calibrated correctly [9-21-4]

If the print quality defect is still present, go to the Print Defects in this section.

Print Defects

Print quality refers to the entire print. Defects can occur anywhere on the print. These defects could be damaged media or print quality defects.

Always eliminate problems that cause the damaged media before attempting to fix print quality problems. Some damaged media problems could cause print quality problems.

Compare the print defect to the definitions on this page and the next page. After you have determined the definition that best describes the print defect, go to the Section Contents page. The Section Contents page will direct you to a Print Quality Problem / Cause Table. The Problem / Cause Table lists the probable causes and corrective actions.

The PROBABLE CAUSES are arranged in order of most probable cause to least probable cause or the ease of the check. CORRECTIVE ACTIONS are given for each cause. Read all of the probable causes before taking any corrective action.

- a. Start with the first PROBABLE CAUSE and continue through the list until you come to the cause that best applies to the image defect.
- b. Perform the CORRECTIVE ACTION.
- c. If the defect has been corrected, go to the Maintenance Activities in the Service Call Procedures in Section 1. If the defect is still present, continue with the other PROBABLE CAUSES.

Print Quality Definitions

The following terms are some of the most commonly used terms that describe image quality problems.

Background

Background occurs as darkness or dirtiness on the non-image areas of the print.

Black Print

This is a print that is entirely black except for the lead edge, trail edge and possibly the left and right edges.

Blank Print

This is a print entirely without an image.

Deletions

An area of the image where information has been lost. The areas of deletions could be localized or bands from top to bottom or side to side.

Density

The relative blackness between the image and non-image areas.

Fuser Fix

This is a measure of how the toner particles adhere to the media as a result of the fusing process.

Print Displacement

Part of the image information is being placed elsewhere on the print 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.

Print Distortion or Skew

The Image is skewed on the media. The image from side to side or lead edge to trail edge is not parallel to the edges of the print. There is also distortion of the image from one side of the copy to the other. These defects are a result of a misadjustment of the media transportation system components.

Light Image

These are prints where the density is lighter than the specified density for the printer.

Line Darkness

This is the darkness and uniformity for a line.

Misregistration

This is when the distance from the lead edge of the image to the lead edge of the media is not within specification.

Offsetting

This is the transfer of toner from the print to the heat roll. Sometimes the toner is transferred back to the print or consecutive prints.

Media Damage

This is any physical distortion to the media that is used in making a print. This distortion may include folds, wrinkles, etc.

Media Handling

This is the process of transporting the media from the supply area through the xerographic and the fusing subsystems.

Resolution

The uniformity or clarity of fine line detail.

Residual Image

This is an image that is repeated onto the same print or consecutive prints. The image can either be a ghosting of the original image or a toner image. The repeated image is usually spaced 10.375 inches (265 mm) from the original image. This problem can be caused by poor cleaning of the drum, a drum that is worn, or offsetting by the Fuser.

Smear

This is any image defect that occurs in the direction that is perpendicular to media feed and caused by a difference in the relative motion between the drum and media.

Spots

These are defects that are 0.2 inches (5 mm) or smaller in diameter.

Streak

This is any image defect that occurs in the direction of media feed.

Unfused Print

This is a print where the image can easily be wiped off the media. The image has not adhered to the media.

Print Quality General Diagnostics

It is important to understand the orientation of prints in order to troubleshoot image quality problems. The following terms will be used when referring to prints made on the 8830.

- a. Process direction is in the media feed direction.
- b. Cross-process direction is in the side-to-side direction.

Determining the distance between defects could help isolate problems to a specific component. Defects that are 10.375 inches (265 mm) apart (lead edge of defect to lead edge of next defect) in the process direction could be caused by the drum. The circumference of the Drum is 10.375 inches (265 mm).

Defects that are 10.375 inches (265 mm) apart (lead edge of defect to lead edge of next defect) in the process direction could be caused by the heat roll.

NOTE: The Heat Roller and Drum are the same circumference. Perform a hard stop to examine the Heat Roller or the Drum to isolate the cause of the problem.

Print Quality Specifications

Test Patterns

There are nine internal test patterns that can be run from diagnostic mode [9-55]. (refer to Section 6. for details)

Test Pattern 1 is used while adjusting lead edge, trail edge and side edge erase.

Test Pattern 2 is used to produce horizontal black and white horizontal/vertical bands and resolution targets.

Test Pattern 3 is used to produce ROGM image targets and 1.25" solid area squares that are 97.5 mm apart.

Test Pattern 4 is used to produce a 49 mm wide horizontal black band that is 450 mm from the read edge of the print.

Test Pattern 5 is used to produce solid area squares, ROGM image targets and a grid of thin horizontal and vertical lines.

Test Pattern 6 is used to produce diagonally placed small ROGM targets.

Test Pattern 7 is used to produce diagonal horizontal and vertical lines that are 16.25 mm apart.

Test Pattern 8 is used to produce solid blank vertical bands that are 93.5 mm wide.

Test Pattern 9 is used to produce various small ROGM patterns.

Solid Area Density (A)

This term refers to the image density of a totally black portion of the print.

Use a wide roll of media and run test pattern [9-55-5]. Select the black squares (A) and use the SIR 495.01 (PN 82P520) reference scale to measure the density.

SPECIFICATION:

Media All sites equal to or greater than 1.0
Solid Area Density (SAD)

Film All sites equal to or greater than .85
SAD

Background

This term refers to the density of the print in any non-image area.

Use a wide roll of media and run test pattern [9-55-5]. Examine the print using the Background Reference Scale 302.02.

SPECIFICATION:

All non-image area should be no greater than 3.7 at printer installation and no greater than 5.9 over the life of the developer.

Skips

This term means that a print image is partially deleted or appears stretched at a right angle to the media feed direction .

Use a wide roll of media and run test pattern [9-55-5]. Examine the 2.0 LP/mm vertical band located near the center of the print for skips or smears.

SPECIFICATION:

The 2.0 LP/mm lines should be resolved.

Resolution

This term refers to the degree to which fine details of a print are reproduced, for example, lines.

Use a wide roll of media and run test pattern [9-55-5]. Evaluate the resolution targets (B) at each corner and three central locations for a total of seven targets.

SPECIFICATION:

The vertical and horizontal resolution for all targets should be equal to or greater than 4.0 LP/mm.

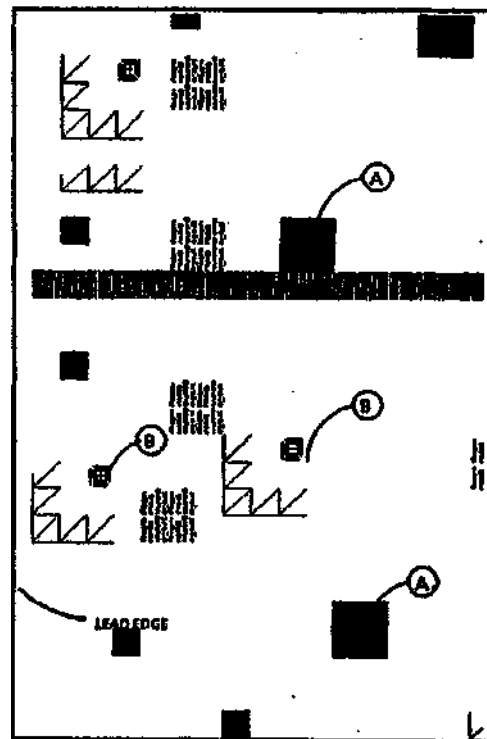


Figure 1. Test Pattern [9-55-5]

Lead Edge Registration (A)

This is the degree to which the lead edge of a print image is within a specified distance from the lead edge of the media.

Use a wide roll of media and run 4 prints of test pattern [9-55-7] and use the fourth print. Measure the distance from the lead edge of the media to the first horizontal line at the right side of the print and the center of the print.

SPECIFICATION:

16.25+/-2.0 mm

Skew (B)

This is the degree to which media is fed at an angle to the print image.

Use a wide roll of media and run test pattern [9-55-7]. Measure the distance at B (both places) 70 blocks apart.

SPECIFICATION:

+/- 0.5% or less

Linearity of Lines

Linearity of lines refers to the straightens of the horizontal, vertical and diagonal lines.

Use a wide roll of media and run test pattern [9-55-7]. Measure the straightens of a 50 block length in all three directions.

SPECIFICATION:

1 mm or less

Side Edge Registration (C)

This is the degree to which the center of the image of a print is within a specified distance from the center of the media.

Use a wide roll of media and run test pattern [9-55-7]. Fold the print in half. At the fold mark, measure the distance between the fold line and the center line of the image.

SPECIFICATION:

6 mm or less

Magnification (D1,D2)

Magnification refers to the rate at which an original image is enlarged or reduced on a print. The change in image length is either in the media feed direction (vertical) or the side-to-side direction (horizontal).

Measure the length of 50 blocks (D1) from side-to-side (horizontal) and one block down from the lead edge.

Measure the length of 60 blocks in the media feed direction (vertical) and one block in from the side.

SPECIFICATION:

Horizontal (D1) 812.8 mm+/-4.06 mm

Vertical (D2) 975.4 mm +/- 4.88 mm

Cut Accuracy

This is the dimension of variance from a true, horizontal cut.

SPECIFICATION:

+/- 4 mm

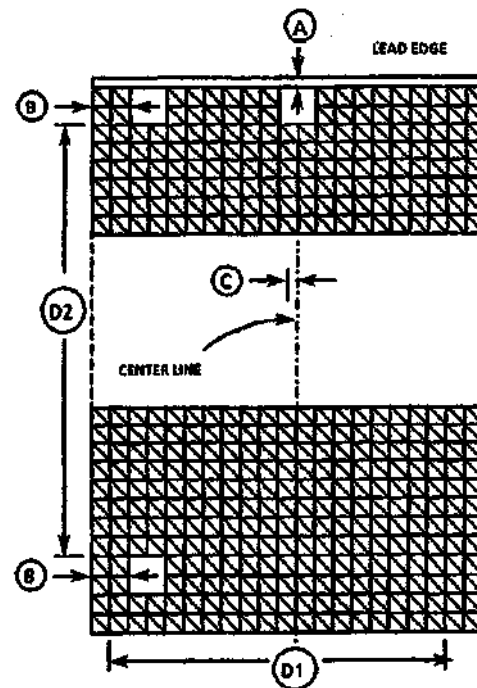


Figure 2. Test Pattern [9-55-7]

Damaged Media

| DEFECT | PROBABLE CAUSE | CORRECTIVE ACTION |
|--|---|--|
| 1. Crease Marks A thin irregular line on the media caused by stressing the media. | 1. This defect can be caused by incorrect handling of the media. | 1. Ensure that the media is stored correctly and is not damaged when inserted in the printer. |
| 2. Dog Ears This is a corner of the lead edge of the print that has been bent back. | 2. Curled media caused by a failed or damaged Detack Corotron. | 2a. Ensure that Tag 12 is installed. 2b. Try using a new roll of media. 2c. Check for an obstruction caused by a detack corotron. |
| 3. Frayed Side Edge This is damage to the sides of the print. | 3. Incorrect media side to side registration | 3. Ensure that the media is loaded correctly. Check the media path for an obstruction. |
| 4. Wrinkle This is damage that is probably caused by the fuser subsystem. This is a severe case of creases that runs in the direction of media travel. | Damage or obstruction in the media path Damp media Incorrect fuser pressure Heat roller is damaged or contaminated. | Clear the media path of obstructions Refer to BSDs 7.1 and 7.3 to check for correct operation of the Paper heaters. Ensure that the Customer is storing the media correctly. Check the Fabric Guide (REP 8.9) and the Pressure Plates (REP 8.5). Replace the heat roll (REP 10.2). |
| 5. Cockle The media has a rough surface like an orange peel. This damage could be caused by the fuser subsystem. | 5. Damage or obstruction in the media path Fuser is too hot. Damp media. Pressure Plates or Fabric Guide damaged / installed incorrectly | Clear the media path of obstructions. Check Fuser Temperature (ADJ 10.1) Refer to BSDs 7.1 and 7.3 to check for correct operation of the Paper heaters. Ensure that the Customer is storing the media correctly. Check the Fabric Guide (REP 8.9) and the Pressure Plates (REP 8.5). |
| 6. Other Damage | | 6. if there are other defects on the print, go to Media Handling Problems on, following page. |

Media Handling Problems

Introduction

Experience has shown that many media transportation problems have more than one cause and must be handled using a systematic approach. Media transportation problems appear as one of the following symptoms:

- Pre-fuser jams
- Print quality defects
- Physical distortion of media

When these symptoms occur, perform the following checks of the media and printer and perform the corrective actions.

| MEDIA CHECK | CORRECTIVE ACTION |
|---|---|
| 1. Check the type of media: a. Bond media less than 20 lb may perform with less reliability than Xerox 20 lb. b. Other brands of media may have different design specifications than Xerox media and may not give acceptable performance in the 8830. | a. Use Xerox-qualified media. b. After all media checks, test with fresh Xerox media. |
| 2. Check the storage of media: a. Media that is exposed to the environment may have damp areas, b. Media may have curled ends because of incorrect storage. | a. Suggest keeping the media in the package in which the Xerox media is shipped until the media is to be used, b. Suggest that the media should be stored correctly, c. Recommend keeping the printer switched on overnight to help eliminate moisture buildup. |

| PRINTER CHECK | CORRECTIVE ACTION |
|---|--|
| 1. Contaminated or damaged transfer/ detach Corotron. 2. An incorrect electrostatic value can cause jams or deletions. 3. Detack Corotron shield incorrectly installed. | 1. Clean or replace if necessary (PL 9.4). 2. Check the following: a. Clean or replace the Corotron as required (PL 9.4). b. Perform GPI, HVPS Checkout Procedure. 3. Check for correct installation |

PQ1 Background

| Symptom / check | Probable Cause | Corrective Action |
|---|--|---|
| Contamination of the blank area by toner particles on the print | | |
| | 1. An incorrect electrostatic value | 1 A. Perform Electrostatic Series (ADJ 9.2). 1B. Perform GP1 HVPS Checkout Procedure. 1C. Clean/Replace/Repair the corotrons. |
| | 2. Developer Bias incorrect. | 2A. Perform GP1 HVPS Checkout Procedure. 2B. Ensure that Tag 19 is installed. |
| | 3. Toner concentration too high. | 3. Perform Image Density (ADJ 9.3). |
| | 4. Erase Lamp operation. | 4. Refer to BSD 9.6 and check for correct operation of the Erase Lamp. |
| | 5. Contaminated charge scorotron | 5. Clean or replace if necessary (PL 9.3). |
| | 6. Defective Cleaner Blade | 6. Replace the Cleaner Blade (REP 9.4). |
| | 7. Web Oil system not operating correctly. | 7. Refer to BSD 10.2 and check Web Oil system for correct operation. |
| | 8. Contaminated or defective drum. | 8. Replace the drum (REP 9.3). |

PQ2 Bands

| Symptom/ checks | Probable Cause | Corrective Action |
|---|--|--|
| Bands are 1 mm or more wide and are in the media feed direction. High density bands are called black lines. | | |
| | 1. Contaminated charge scorotron | 1. Clean / replace screen / pins (REP 9.8). |
| | 2. Defective Cleaner Blade | 2. Replace the Cleaner Blade (REP 9.4). |
| | 3. Contaminated magnetic roll. | 3. Check for foreign objects on the mag roll. |
| | 4. Incorrect Electrostatic value. | 4A. Ensure that Tag 19 is Installed. 4B. Perform Electrostatic Series (ADJ 9.2). 4C. Perform GP1 HVPS Checkout Procedure. 4D. Clean / replace / repair the corotrons. |
| | 5. Toner cloud from the Developer Module contaminating the Drum and corotrons. | 5A. Ensure that the Air Pressure Tubes are clean (REP 9.18). 5B. Check for toner buildup on the tower edge of the Developer Housing. |
| | 6. T/DT Corotron contaminated. | 6. Check / clean / repair |
| | 7. Contaminated or defective drum. | 7. Replace the drum (REP 9.3). |
| | 8. Image Module LEDs operating incorrectly. | 8. Enter (9-21-5] and check for correct operation. (Refer to BSDs 6.1, 6.2 and check for correct electrical connections to/from the Receiver PWB and the LED Image Bar). |

PQ3 Bands

| Symptom/ check | Probable Cause | Corrective Action |
|--|--|--|
| Bands are 1 mm or more and are perpendicular to the media feed direction. High density bands are called black lines. | | |
| | 1. Defective or intermittent Charge Scorotron. | 1. Check / clean / replace the connections to the Charge Scorotron (PL 9.3). |
| | 2. Defective Transfer / Detack Corotron. | 2A. Check / replace the Transfer / Detack Corotron. (REP 9.9). 2B. Ensure that the Corotron is installed in the correct position. |
| | 3. Poor cleaning | 3. Replace the Cleaner Blade (REP 9.4). |
| | 4. Defective or contaminated Drum. | 4. Determine and fix the cause of the damage to the drum. Replace the Drum (REP 9.3). |

PQ4 Black Lines

| Symptom/check | Probable Cause | Corrective Action |
|--|---|--|
| Black lines appear in the direction of media feed. | | |
| | 1. Developer Bias and Transfer Corotron voltage set incorrectly | 1. Ensure that Tag 19 is installed. |
| | 2. Contaminated, damaged or disconnected Charge Scorotron | 2. Clean/replace or check the connections to the charge scorotron (PL 9.3). |
| | 3. Poor cleaning | 3. Replace the Cleaner Blade (REP 9.4). |
| | 4. The surface of the heat roll is damaged. | 4. Determine and fix the cause of the damage to the heat roll. Replace the heat roll (REP 10.2). |
| | 5. The drum surface is contaminated or damaged. | 5. Determine and fix the cause of the damage to the drum. Replace the Drum (REP 9.3). |
| | 6. The fuser temperature is too high. | 6. Adjust the Fuser temperature (ADJ 10.1) |
| | 7. Contaminated or damaged mag roll. | 7. Check for foreign objects on the mag roll. |
| | 8. Defective Transfer/Detack Corotron. | 8. Check / replace the Transfer / Detack Corotron. (REP 9.1). |

PQ5 Black Prints

| Symptom/ check | Probable Cause | Corrective Action |
|---|--|--|
| The print is totally black with no image. | | |
| | 1. Defective Charge Scorotron | 1. Clean or replace the screen/pins (REP 9.8). |
| | 2. Charge control circuit/ defective Harness | 2. Perform GP1 HVPS Checkout Procedure. |

PQ6 Blank Prints / Partial Image

| Symptom/ check No image or a partial image is produced when making a print . | Probable Cause | Corrective Action |
|--|------------------------------------|--|
| | 1. Developer Housing | 1 A. Ensure that the Developer Housing Module drive gears are engaged and the developer housing is turning. 1B. Ensure that the gear lock is released from the Developer Housing Drive Gear. |
| | 2. Transfer Corotron | 2A. Check the Transfer Corotron for damage / contamination. 2B. Perform GP1, HVPS Checkout Procedure. |
| | 3. Defective HVPS | 3. Perform GP1, HVPS Checkout procedure. |
| | 4. Image Module LEDs inoperative | 4A. Enter [9-21-5] and check for correct operation. (Refer to BSDs 6.1, 6.2 and check for correct electrical connections to/from the Receiver PWB and the LED Image Bar.) 4B. Ensure that all connectors are seated and voltages are correct to the LED, 5VDC, RS422, Signal Harness, Receiver PWB. |
| | 5. No drum drive / defective drum. | 5. Refer to BSD 4.3 and check for correct drum drive. Replace the drum (REP 9.3). |

PQ7 Blurred Image

| Symptom/ check | Probable Cause | Corrective Action |
|----------------------------------|---|---|
| The image is not clear or sharp. | | |
| | 1. Defective/contaminated Image Module. | 1A. Ensure the spacing rollers and drum ends are not contaminated/defective. 1B. Clean the LED Array with a lint-free cloth. |
| | 2. Contamination on Transfer/ Detack Corotron | 2A. Clean or replace as required. 2B. Perform GP1, HVPS Checkout Procedure. |
| | 3. Defective drive gear | 3. Check the following drive gears for damage: a. drum drive gear b. developer drive gear c. cleaner drive gear |
| | 4. Defective registration roller | 4. Replace as required (PL 8.2). |
| | 5. Media transport | 5. Check the Media Transport gap (ADJ 8.4). |
| | 6. Defective buckle control | 6. Replace the buckle switch (PL 8.4). |

PQ8 Deletions (bands)

| Symptom/check | Probable Cause | Corrective Action |
|---|---|---|
| Deletion bands or very low image density in the print feed direction. | | |
| | 1. Damp media | 1A. Refer to BSDs 7.1 and 7.3 to check for correct operation of the Paper heaters. 1B. Ensure that the Customer is storing the media correctly. |
| | 2. Corotrons | 2A. Clean / replace or repair the T/DT corotrons (REP 9.9). |
| | 3. Defective HVPS | 3. Perform GP1, HVPS Checkout Procedure. |
| | 4. Developer Housing | 4A. Ensure that the Developer Housing is latched securely. 4B. Check the mag roll for foreign material or contamination. Ensure that there is an even coating of developer material on the mag roll. |
| | 5. Defective or contaminated LED Image Bar. | 5. Check / clean the LED Image Bar [9-21-5]. (PL 9.3) |
| | 6. Contaminated Erase Lamp. | 6. Clean with a lint free cloth. |
| | 7. Media transport | 7. Ensure that the gap (ADJ 8.4) is set correctly. |
| | 8. Heat Roll | 8. Check for surface damage. (PL 10.2) |
| | 9. Defective drum | 9. Replace the drum (REP 9.3). |

PQ 9 Deletions (bands)

| Symptom/ check Deletion bands or very low image density perpendicular to the print feed direction. | Probable Cause | Corrective Action |
|---|--|--|
| | 1. Damp media | 1A. Refer to BSDs 7.1 and 7.3 to check for correct operation of the Paper heaters. 1B. Ensure that the Customer is storing the media correctly. |
| | 2. Incorrect Corotron operation. | 2A. Check / Clean or replace the T/DT corotrons as required (PL 9.4). 2B. Perform GP1 HVPS Checkout Procedure. |
| | 4. Defective drum or no drum drive. | 4A. Check for correct operation of the drive system. 4B. Replace the drum (REP 9.3). |
| | 5. Magnetic roll | 5A. Ensure that the housing is latched securely. 5B. Check the mag roll for damage or binding. |
| | 6. Image Module Roller not contacting drum | 6. Check/clean/replace as required (PL 9.3). |
| | 7. Media Transport- | 7. Ensure that the Media Transport gap (ADJ 8.4) is set correctly. |

PQ 10 Deletions (In solid and halftone areas)

| Symptom/check | Probable Cause | Corrective Action |
|---|---|--|
| Bands of deletion in the solid or halftone areas in the print feed direction. | | |
| | 1. Damp media | 1A. Refer to BSDs 7.1 and 7.3 to check for correct operation of the Paper heaters. 1B. Ensure that the Customer is storing the media correctly. |
| | 2. Exposure | 2A. Clean the Image Bar. Check / clean the Air Pressure Tubes (REP 9.18). 2B. Enter [9*21-5] and check for correct operation. (Refer to BSDs 6.1, 6.2 and check for correct electrical connections to/from the Receiver PWB and the LED Image Bar). |
| | 3. Incorrect Corotron operation | 3. Perform GP1, HVPS Checkout Procedure. |
| | 4. Magnetic roll | 4. Check the mag roll for damage or binding. |
| | 5. The surface of the heat roll is damaged. | 5. Determine and fix the cause of the damage to the heat roll. Replace the heat roll (REP 10.2). |
| | 6. Media Transport. | 6. Ensure that the Media Transport gap (ADJ 8.4) is set correctly. |

PQ 11 Deletions (spots)

| Symptom/ check | Probable Cause | Corrective Action |
|---|---|--|
| Localized areas of deletion in the solid or halftone areas in the print feed direction. | | |
| | 1. Damp media | 1A. Refer to BSDs 7.1 and 7.3 to check for correct operation of the Paper heaters. 1B. Ensure that the Customer is storing the media correctly. |
| | 2. T/DT Corotrons | 2. Perform GP1, HVPS Checkout Procedure. |
| | 3. Developer Housing | 3A. Ensure that the housing is latched securely. 3B. Check the mag roll for damage or binding. |
| | 4. Insufficient toner resulting in developer bead carryover. | 4A. Perform Electrostatic Series (ADJ 9.2). 4B. Perform Image Density (ADJ 9.3). |
| | 5. The surface of the heat roll is damaged. | 5. Determine and fix the cause of the damage to the heat roll. Replace the heat roll (REP 10.2) |
| | 6. Defective drum | 6. Replace the drum (REP 9.3) |
| | 7. Media transport | 7. Check for correct gap (ADJ 8.4). |
| | 8. The Fabric Guide is contaminated, wrinkled or incorrectly tensioned. | 8. Check/replace the Fabric Guide (PL 10.2). |

PQ12 Finger Marks

| Symptom/ check Toner marks on the lead edge or trail edge of the print. | Probable Cause | Corrective Action |
|--|--|---|
| | 1. Defective or dirty transfer/detack Corotron | 1A. Clean or replace the Corotron wire (PL 9.4). 1B. Perform GP1, HVPS Checkout Procedure. |
| | 2. Cleaner Seal | 2. Check / clean as required. (PL 9.5A) |
| | 3. Web Oiler | 3. Check / replace (REP 10.9) |
| | 4. Turnaround Baffle | 4. Ensure that the baffle is free of contamination (PL 8.2). |
| | 5. Heat Roll | 5. Check/replace (REP'10,2) |
| | 6. Fabric Guide | 6. Check/replace (REP 8.9) |

PQ13 Light Image

| Symptom/ check | Probable Cause | Corrective Action |
|--|--|--|
| Image area of a print has low density. | | |
| | 1. Damp media | 1A. Refer to BSDs 7.1 and 7.3 to check for correct operation of the Paper heaters. 1B. Ensure that the Customer is storing the media correctly. |
| | 2. incorrect Image Module LED duty cycle | 2. Perform Electrostatic Series (ADJ 9.2). |
| | 3. Incorrect Corotron operation | 3. Perform GP1, HVPS Checkout Procedure. |
| | 4. Incorrect Image Density adjustment | 4A. Perform Image Density (ADJ 9.3). 4B. Replace the sensor (PL 9.9). |
| | 5. Defective drum ground. | 5. Ensure that the drum is correctly grounded. |
| | 6. Defective drum. | 6. Replace the drum (REP 9.3). |
| | 7. Media Transport | 7. Ensure that the Media Transport gap (ADJ 8.4) is set correctly. |
| | 8. Developer Housing | 8. Ensure the housing is latched securely. |

PQ14 Misregistration

| Symptom/ check | Probable Cause | Corrective Action |
|--|---|---|
| The registration of the image on the prints is incorrect from top to bottom or side to side. | | |
| | 1. Incorrect registration adjustment | 1. Adjust Lead Edge Registration (ADJ 8.2). |
| | 2. Damaged or worn components in the media feeding area | 2. Check the components for damage or wear. |
| | 3. Defective registration sensor | 3. Refer to BSD 8.1 and check the operation of the registration sensor. Replace the sensor if required (REP 8.8). |
| | 4. Incorrect registration roller nip | 4. Clean or replace the registration roller (PL 8.2). |
| | 5. Incorrectly loaded media | 5. Instruct the operator on loading the media correctly. |

PQ15 Residual Image

| Symptom/ check | Probable Cause | Corrective Action |
|---|--|--|
| This is an image that is repeated on the same print or consecutive prints. The image can either be a ghosting of the original Image or a toner image. The repeated image is usually spaced 10.38 inches (265 mm) from the original image. | | |
| Perform Panic Stop / Image on Drum procedure (Section 6), and examine the drum for the defect. | 1. The Cleaner Blade makes poor contact with drum. | 1. Replace the Cleaner Blade (REP 9.4). |
| | 2. Defective erase lamp | 2. Refer to BSD 9.6 and check the erase lamp. Replace the lamp if necessary (PL 9.5A). |
| | 3. Contaminated drum | 3. Replace the drum (REP 9.3). |

PQ16 Skewed Image

| Symptom/ check | Probable Cause | Corrective Action |
|---|---|---|
| The image is skewed to one side on the print because the media is skewed. | | |
| | 1. Media is not loaded correctly. | 1. Load the media correctly and instruct the operator on loading the media correctly. |
| | 2. Media Transport. | 2. Ensure that the Media Transport gap (ADJ 8.4) is set correctly. |
| | 3. Defective or contaminated rollers in the media feed area | 3. Check the rollers and other components in the media feed area. |
| | 4. Incorrect registration roller nip | 4. Clean or replace the registration roller (PL 8.2). |
| | 5. Obstruction in media path | 5. Check media path. |

PQ17 Smears

| Symptom/ check | Location of Smear | Probable Cause | Corrective Action |
|--|---|---|---|
| Areas of the image on the print are blurred. This occurs at the image transfer area and is caused by a difference of speed between the drum and the media. | | | |
| | 20 - 25 mm from the Lead Edge of the print | Transfer/Detack Shield incorrectly installed. | Check / replace (PL 9.4) |
| | 40 - 50 mm from the Lead Edge of the print | Fabric Guide worn, contaminated or incorrectly installed. | Check / replace (REP 8.9). |
| | 106 - 126 mm from the Lead Edge of the print | 1. Worn (smooth) Heat Roll (PL 10.2) 2. Worn Contaminated Fabric Guide (PL 10.3) 3. Pressure Plate A installed incorrectly or deformed (PL 10.3). | 1. Check / replace (REP 10.2) 2. Check / replace (REP 8.9) 3. Check / replace (REP 8.5) |
| | 150 - 170 mm from the Lead Edge of the print | Pressure Plate B Installed incorrectly or deformed. | Check / replace (REP 8.5) |
| | 140 - 160 mm from the Trail Edge of the print | Cutter | Check for loose Cutter Drive Pulley, Shim / replace (PL 7.8) |
| | 66 • 86 mm from the Trail Edge of the print (Register Roll Exit Smear) | Buckle Switch | Enter {8-2} and check for correct operation (PL 8.4) |
| | Random smears | Media Transport | Ensure that the Media Transport gap (ADJ 8.4) is set correctly. |

PQ17A Smudge

| Symptom/ check | Location of Smudge | Probable Cause | Corrective Action |
|--|---|--|--|
| A smudge is a displacement of the toner image on the drum or the media. | | | |
| Perform GP2, Image on Drum to determine if the Smudge occurs on the media or the drum. | Media | Heat Roll | Check for a worn (smooth) Heat Roll. Replace (REP 10.2) |
| | Media | Fabric Guide | Check for a worn / contaminated Fabric Guide. (REP 8.9) |
| | Media | Excessive media curl (smudge appears 100 mm from lead or trail edge) | Ask the customer to replace the media. |
| | Media | Detack Corotron | Check for contamination or signs of arcing. Clean / replace (PL 9.4) |
| | Media | Buckle Switch | Check the Buckle Switch for correct operation (PL 8.4) |
| Vellum Smudge is a special defect that exhibits marginal fusing fix. Toner can chip off of the media and horizontal lines are broken (Image displacement). | Combination of Vellum beam strength and low Heat Roll drive force. (The media is flexible enough that it buckles between Pressure Plates A and B. The toner then melts and partially sticks to the Heat Roll. As the media enters the Pressure Plate B, it flattens and the image is displaced in front of it's correct position. The toner can also become a clump on the media and easily chip off of the media.) | | Replace the Fabric Guide (REP 8.9) and the Heat Roll (REP 10.2). |
| | Drum | Mechanical interference with the image on the drum | Check for interference. |
| | Drum | Buildup of developer material on the lower extrusion of the developer housing rubbing the developed image on the drum. | Push excess developer material back into the housing. |

PQ18 Spots

| Symptom/ check | Probable Cause | Corrective Action |
|--|--|---|
| Circular black spots on the print. | | |
| Perform Panic Stop/Image on Drum procedure (Section 6), and examine the drum for the defect. | 1. Defective, damaged or contaminated drum | 1. if the drum is damaged, determine and fix the cause of the damage to the drum. Replace the drum (REP 9.3). |
| Repetitive spots | 2. Contaminated heat roll | 2. Clean or replace the heat roll (REP 10.2). |
| Repetitive spots | 3. Contaminated fuser thermistor | 3. Clean the thermistor (PL 10.4). |
| Random spots | 4. Contaminated Web Oiler | 4A. Check / replace (REP 10.9) 4B. Check/ adjust oil dispense rate [10-32]. |
| Random spots | 5. Defective Lower Cleaning Seal | 5. Check/replace (PL 9.10). |
| Random spots | 6. Charge scorotron | 6. Clean or replace the scorotron (REP 9.8). |

PQ19 Uneven Density

| Symptom/check | Probable Cause | Corrective Action |
|---|--|--|
| Density and line thickness vary across the print. | | |
| | 1. Incorrect Corotron operation | 1. Perform GP1, HVPS Checkout Procedure. |
| | 2. Contaminated LED image Bar | 2. Check / clean the Image Bar. Check / clean the Air Pressure Tubes (PL 9.9). |
| | 3. Machine level | 3. Check the level of the machine. (See Install Procedure, pages 6-21 and 6-22). |
| | 4. Developer mag brush not contacting the drum evenly. | 4A. Clean drum ends and the Spacer Rolls on the Developer Housing (PL 9.10). 4B. Ensure that the housing is latched securely. |
| | 5. Defective drum | 5. Clean or replace the drum (REP 9.3). |

PQ 20 Unfused Prints

| Symptom/ check | Probable Cause | Corrective Action |
|---|--------------------------------|--|
| Characters and image are easily rubbed off a print. | | |
| | 1. Damp media | 1A. Refer to BSDs 7.1 and 7.3 to check for correct operation of the Paper heaters. 1B. Ensure that the Customer is storing the media correctly. |
| | 2. Incorrect fuser temperature | 2. Adjust the fuser temperature (ADJ 10.1). |
| | 3. incorrect fuser pressure | 3. Check pressure plates for damage or deformation (REP 8.5). |
| | 4. Defective heat roll | 4. Replace the Heat Roll (REP 10.2) |
| | 5. Fabric Guide. | 5. Ensure Fabric Guide is installed correctly (REP 8.9). |

PQ21 Wrinkle

| Symptom/ check | Probable Cause | Corrective Action |
|---|--|--|
| This is damage that is probably caused by the fuser subsystem. This is a severe case of creases that runs in the direction of media travel. | | |
| | 1. Damp media | 1A. Refer to BSDs 7.1 and 7.3 to check for correct operation of the Paper heaters. 1B. Ensure that the Customer is storing the media correctly. |
| | 2. Damaged or contaminated pinch rolls | 2. Clean / replace the pinch rolls (REP 7.3). |
| | 3. Damaged or contaminated heat roll | 3. Clean / replace the Heat Roll (REP 10.2). |
| | 4. Incorrect fuser contact pressure | 4. Check the Pressure Plates (REP 8.5) and Fabric Guide (REP 8.9) for damage. |
| | 5. Incorrect fuser temperature | 5. Adjust Fuser Temperature (ADJ 10.1). |
| | 6. Registration Rolls misaligned. | 6. Replace the rolls as required (PL 8.2). |

PQ22 Offsetting

| Symptom/ check | Probable Cause | Corrective Action |
|--|--|--|
| Offsetting is the result of toner adhering to the Fuser Heat Roll and transferring to subsequent prints. | | |
| | 1. There is insufficient fuser oil on the Heat Roll. | 1A. Check/replace the Web Oiler (REP 10.7). 1B. Check/adjust oil dispense rate [10-32], |
| | 2. The fuser temperature is out of specification. | 2. Check Fuser Temperature (ADJ 10.1). |
| | 3. The Fabric Guide is not contacting the Fuser Heat Roll uniformly. | 3. Check / replace the Fabric Guide (REP 8.9) and Pressure Plates (REP 8.5). |
| | 4. Media is damp. | 4A. Ensure that the media is stored correctly. 4B. Refer to BSDs 7.1 and 7.3 to check for correct operation of the paper heaters. |
| | 5. Damaged or contaminated heat roll | 5. Clean or replace the Heat Roll (REP 10.2). |

Notes:

4. Repair / Adjustment

Section Contents

Run Control

| | | |
|---------|--------------------------------|-----|
| REP 3.1 | Main PWB..... | 4-3 |
| REP 3.2 | High Voltage Power Supply..... | 4-4 |

Media Roll Feed

| | | |
|-----------|--|------|
| REP 7.1 | Media Supply Drawer..... | 4-5 |
| REP 7.2 | Rewind Gear and Rewind Internal Gear..... | 4-6 |
| REP 7.3 | Roll Feed Pinch Rolls..... | 4-7 |
| REP 7.4 | Roll Feed Drive Rolls..... | 4-8 |
| REP 7.5 | Feed Clutch..... | 4-9 |
| REP 7.6 | Rewind Clutch..... | 4-10 |
| REP 7.7 | Motion Sensor..... | 4-11 |
| REP 7.9 | Roll Drive Motor..... | 4-12 |
| REP 7.10A | Lower Media Roll Heater..... | 4-13 |
| REP 7.10B | Upper Media Roll Heater..... | 4-14 |
| REP 7.11 | Encoder Disk..... | 4-15 |

Media Transportation

| | | |
|----------|----------------------------------|------|
| REP 8.1 | Media Transport Assembly..... | 4-17 |
| REP 8.2 | Media Exit Switch..... | 4-20 |
| REP 8.3 | Buckle Switch..... | 4-21 |
| REP 8.4 | Cut Sheet Media Feed Clutch..... | 4-22 |
| REP 8.5 | Pressure Plates..... | 4-23 |
| REP 8.6 | Sheet Drive Roll..... | 4-25 |
| REP 8.7 | Sheet Pinch Rolls..... | 4-26 |
| REP 8.8 | Media Registration Sensor..... | 4-27 |
| REP 8.9 | Fabric Guide..... | 4-29 |
| REP 8.10 | Media Transport Drive Motor..... | 4-31 |
| REP 8.11 | Sheet Feed Switch..... | 4-32 |
| REP 8.12 | Registration Pinch Rolls..... | 4-33 |
| REP 8.13 | Media Feed Drive Belt..... | 4-37 |
| REP 8.15 | Cutter Home Sensor..... | 4-38 |
| REP 8.16 | Exit Roll..... | 4-39 |
| REP 8.17 | Registration Drive Roll..... | 4-40 |

Xerographics

| | | |
|----------|-------------------------------------|------|
| REP 9.1 | Xerographic Module..... | 4-43 |
| REP 9.2 | Drum Assembly..... | 4-46 |
| REP 9.3 | Drum..... | 4-49 |
| REP 9.4 | Cleaner Blade Kit..... | 4-50 |
| REP 9.5 | Developer Module..... | 4-53 |
| REP 9.6 | Cartridge Drive Motor..... | 4-57 |
| REP 9.7 | Developer Material..... | 4-58 |
| REP 9.8 | Scorotron Pin Kit..... | 4-64 |
| REP 9.9 | Transfer / Detack Corotron..... | 4-66 |
| REP 9.11 | Toner Sensor..... | 4-67 |
| REP 9.12 | Toner Cartridge Home Sensor..... | 4-68 |
| REP 9.13 | Sump Shield..... | 4-70 |
| REP 9.14 | Cartridge Drive Plate..... | 4-72 |
| REP 9.17 | Photoreceptor Seal..... | 4-74 |
| REP 9.18 | Air Pressure Tubes..... | 4-75 |
| REP 9.19 | Roller Kit..... | 4-77 |
| REP 9.20 | Image Module..... | 4-78 |

Fusing

| | | |
|----------|-------------------------|------|
| REP 10.1 | Heat Rod..... | 4-83 |
| REP 10.2 | Heat Roll..... | 4-87 |
| REP 10.3 | Fuser Triac..... | 4-88 |
| REP 10.7 | Web Oiler Assembly..... | 4-89 |
| REP 10.8 | Stripper Fingers..... | 4-90 |
| REP 10.9 | Web Oiler..... | 4-91 |

Run Control

| | | |
|---------|----------------------------|------|
| ADJ 3.2 | Country Configuration..... | 4-93 |
|---------|----------------------------|------|

Media Transportation

| | | |
|---------|-----------------------------|------|
| ADJ 8.1 | Vertical Magnification..... | 4-94 |
| ADJ 8.2 | Lead Edge Registration..... | 4-95 |
| ADJ 8.3 | Cut Length..... | 4-96 |
| ADJ 8.4 | Media Transport..... | 4-97 |

Xerographics

| | | |
|---------|-------------------------------------|-------|
| ADJ 9.2 | Electrostatic Series..... | 4-101 |
| ADJ 9.3 | Image Density..... | 4-105 |
| ADJ 9.5 | Toner Cartridge Home Sensor..... | 4-106 |
| ADJ 9.6 | Augers..... | 4-107 |

Fusing

| | | |
|----------|--|-------|
| ADJ 10.1 | Fuser Temperature (NVM)..... | 4-108 |
| ADJ 10.2 | Fuser Temperature (with Probe)..... | 4-109 |
| ADJ 10.3 | Fuser Temperature (with Tape)..... | 4-110 |

Notes:

REP 3.1 Main PWB

Parts List on PL 1.1

WARNING

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

Removal

1. Remove the Lower Right Side Cover.
2. (Figure 1): Remove the Main PWB.

NOTE: If the Printer is not equipped with a second language, there will be only two EPROMs (Control and Language) for removal and reinstallation on a new Main PWB.

3. Remove the EPROMs and NVM from the Main PWB.

Replacement

1. Transfer the EPROMs to the new Main PWB.

CAUTION

The NVM Chip must be installed with the dot to the left

2. Transfer the NVM chip to the new Main PWB.
3. Install the new Main PWB.

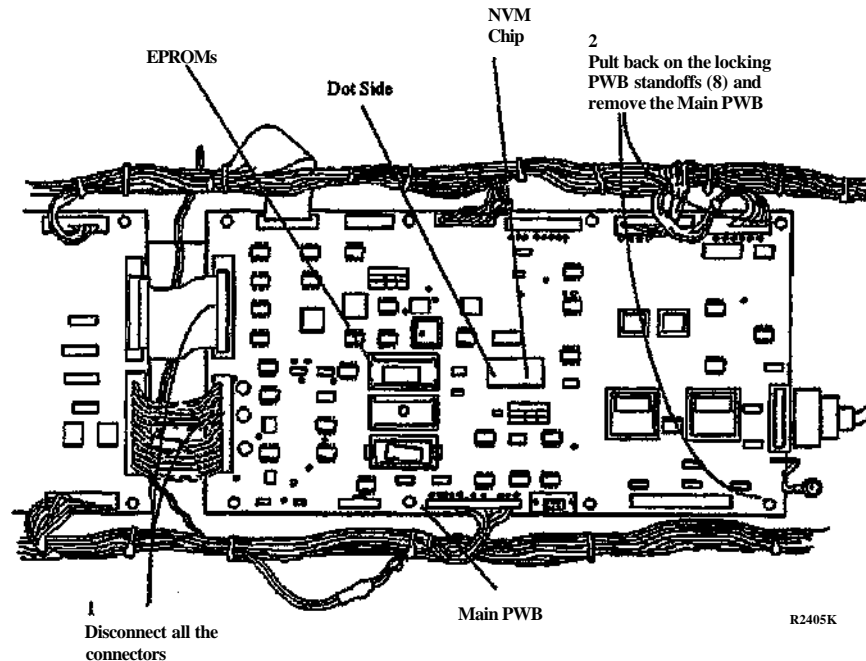


Figure 1. Removing the Main PWB

REP 3.2 High Voltage Power Supply

Parts List on PL 1.3

WARNING

Switch off the Main Power Switch.

•Disconnect the Power Cord.

Removal

1. Loosen the screws and open the Rear Door.
2. (Figure 1): Remove the High Voltage Power Supply.

Replacement

1. If a new High Voltage Power Supply is being installed, perform the Electrostatic Series (ADJ 9.2).

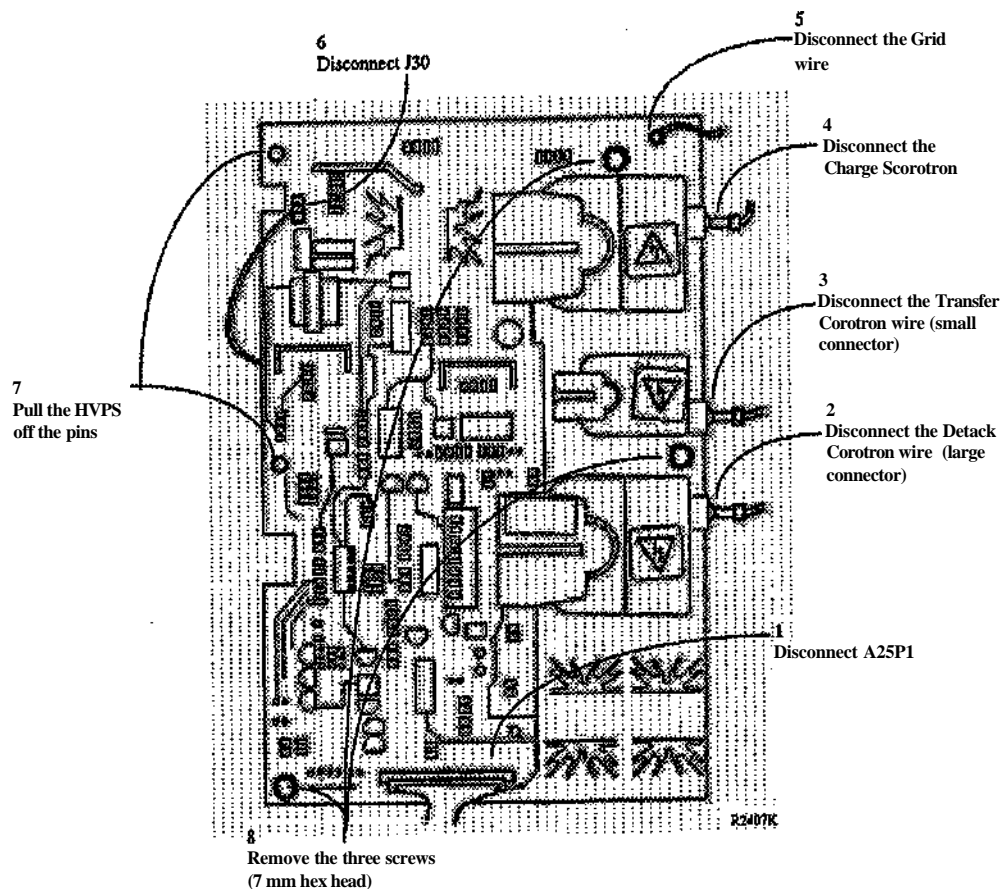


Figure 1. Removing the High Voltage Power Supply

REP 7.1 Media Supply Drawer

Parts List on PL 7.1

WARNING

Switch off the Main Power Switch.

Disconnect the Power Cord.

NOTE: All three Roll Supply Drawer Assemblies are removed the same way.

Removal

1. Open the Media Supply Drawer that is to be removed.
2. (Figure 1): Remove the Cover.

3. (Figure 2): Remove the Media Supply Drawer.

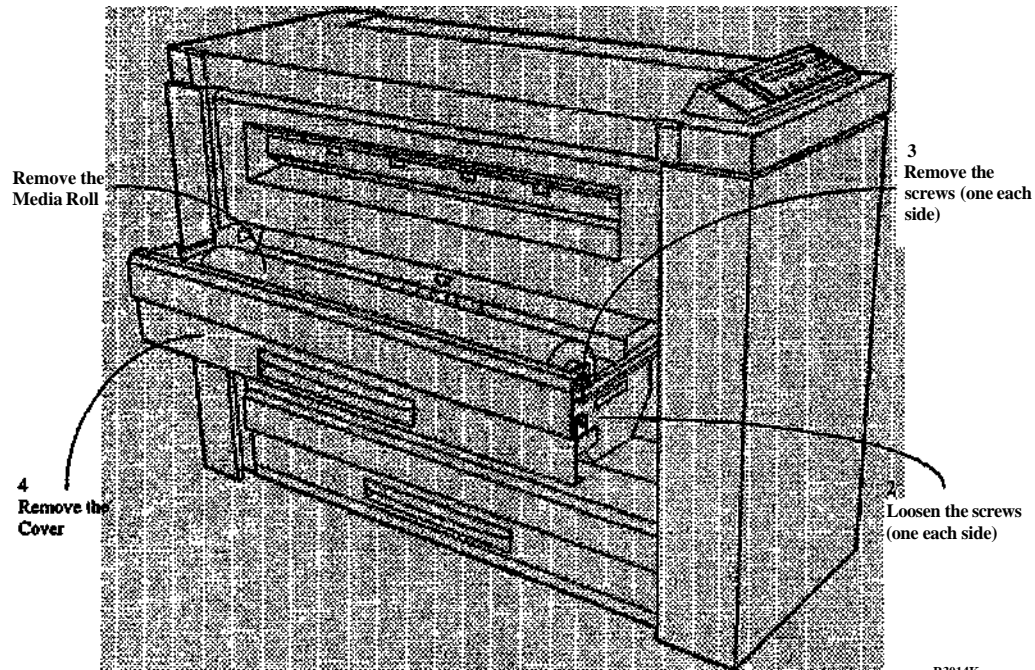


Figure 1. Removing the Cover

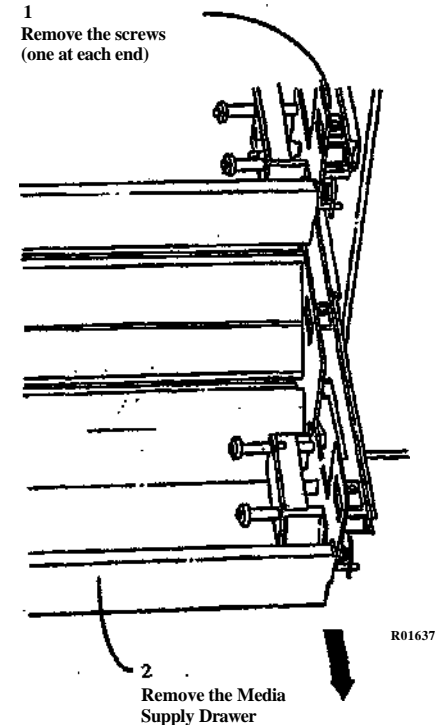


Figure 2. Removing the Media Supply Drawer

REP 7.2 Rewind Gear and Rewind Internal Gear

Parts List on PL 7.3

WARNING

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

NOTE: All three Rewind Gears and Rewind Internal Gear Assemblies are removed the same way.

Removal

1. Pull out the Media Supply Drawer.
2. Remove the roll of media.
3. (Figure 1): Remove the Rewind Gear and the Rewind Internal Gear.

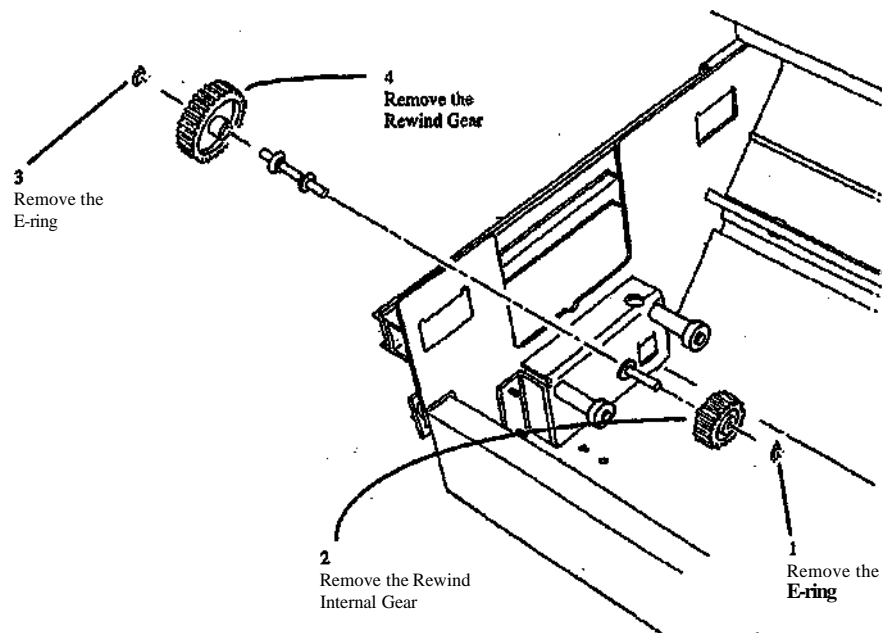


Figure 1. Removing the Rewind Gears

R01809

REP 7.3 Roll Feed Pinch Rolls

Parts List on PL 7.5

WARNING

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

NOTE: All three Roll Feed Pinch Roll Assemblies are removed the same way.

Removal

1. Open the Media Supply Drawer and remove the Media Roll.
2. (Figure 1): Remove the Roll Feed Pinch Rolls.

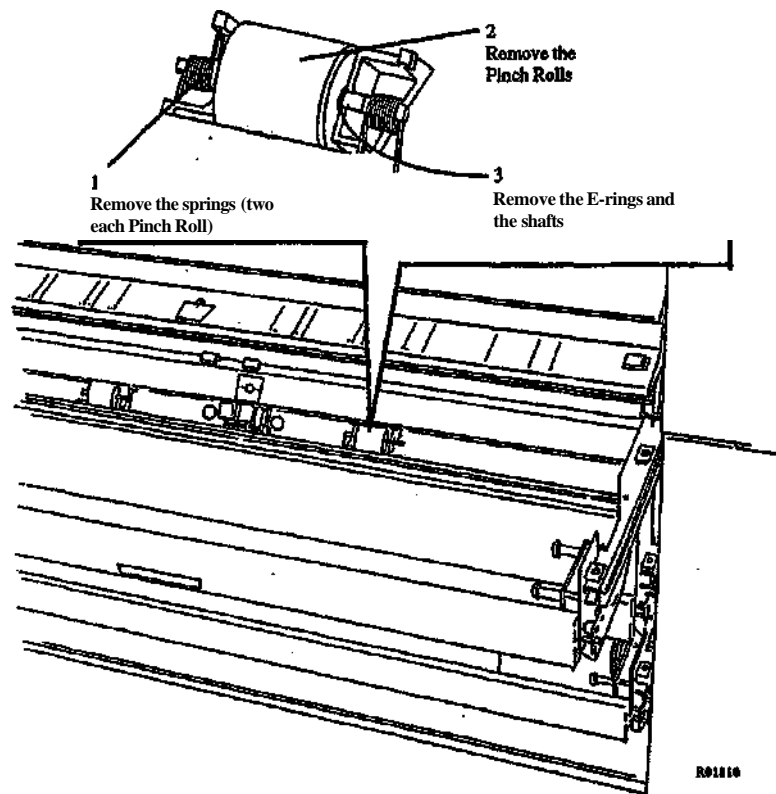


Figure 1. Removing the Roll Feed Pinch Rolls

REP 7.4 Roll Feed Drive Rolls

Parts List on PL 7.1

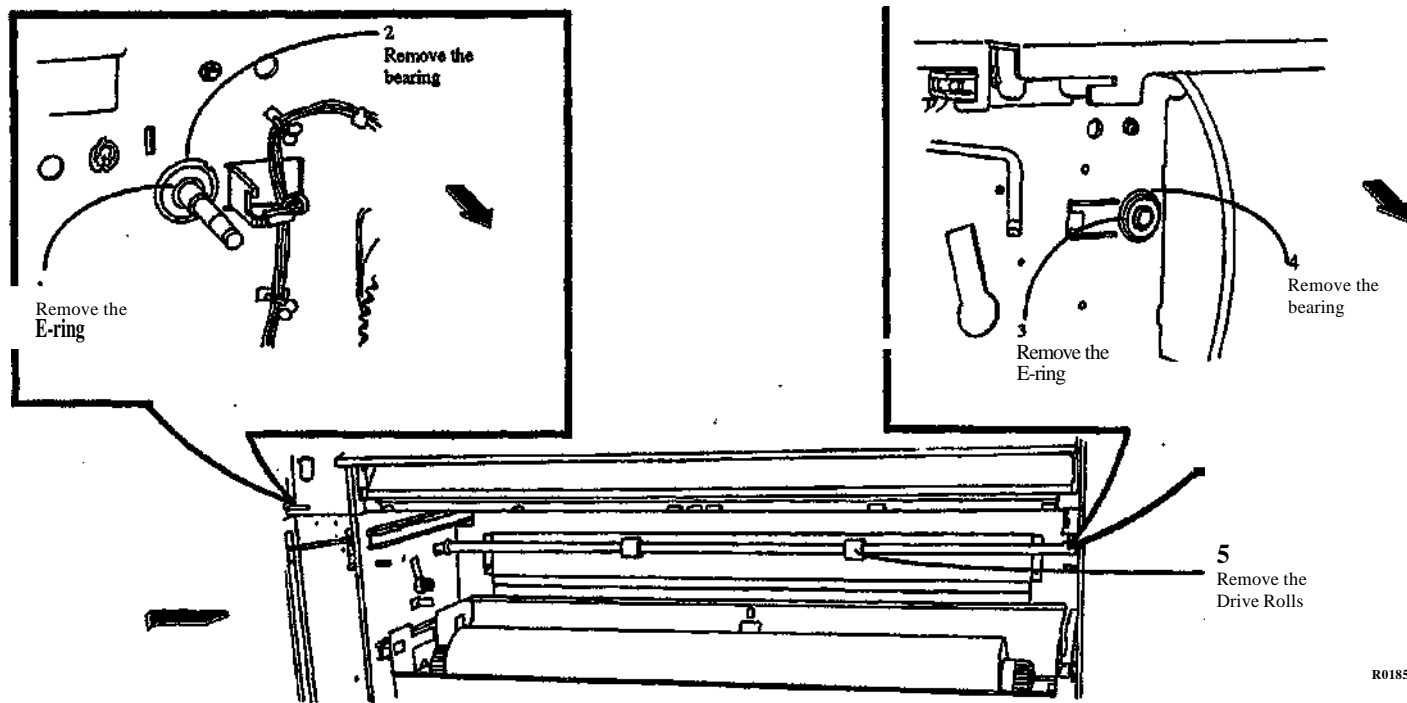
WARNING

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

NOTE: All three Roll Feed Drive Roll assemblies are removed the same way.

Removal

1. Remove the appropriate Media Supply Drawer (REP 7.1).
2. Remove the Feed Clutch (REP 7.5).
3. Remove the Toner Waste Container.
4. (Figure 1): Remove the Roll Feed Drive Rolls.



R01859

Figure 1. Removing the Roll Feed Drive Rolls

REP 7.5 Feed Clutch

Parts List on PL 7.2

WARNING

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

Removal

1. Loosen the screws and open the Rear Door.
2. (Figure 1): Remove the Feed Clutch.

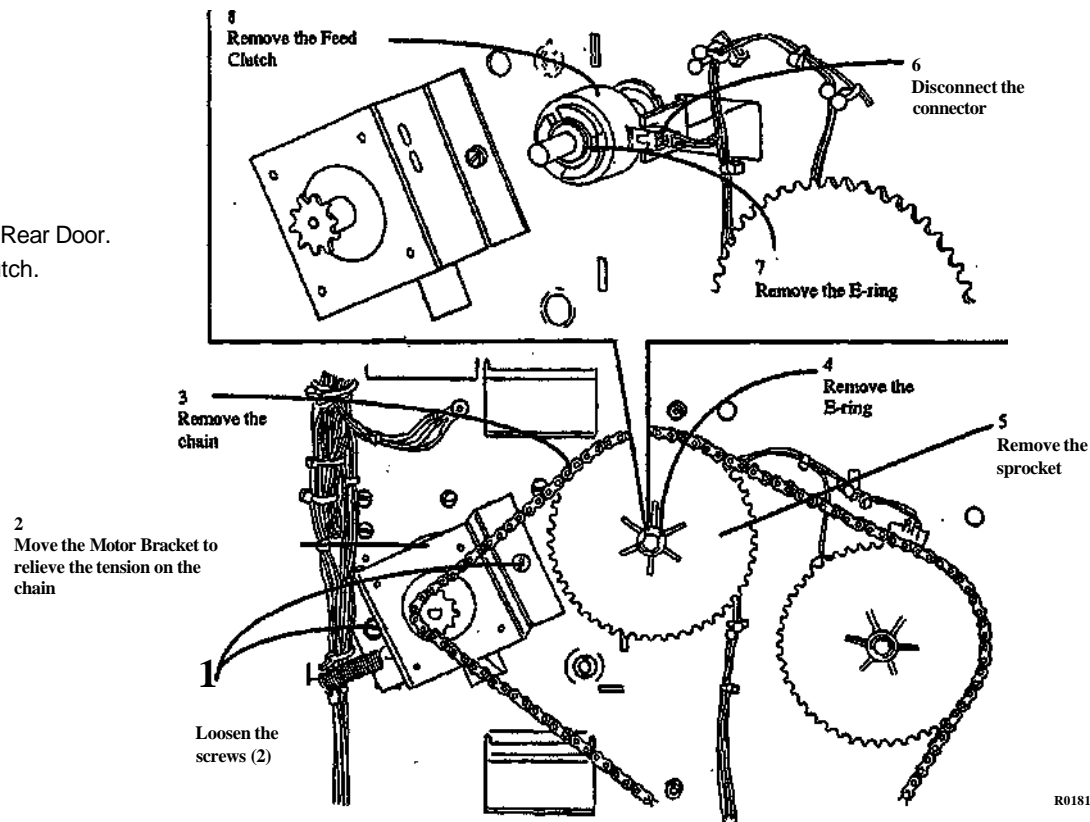


Figure 1. Removing the Feed Clutch

REP 7.6 Rewind Clutch

Parts List on PL 7.2

WARNING

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

Removal

1. Loosen the screws and open the Rear Door.
2. (Figure 1): Remove the Rewind Clutch.

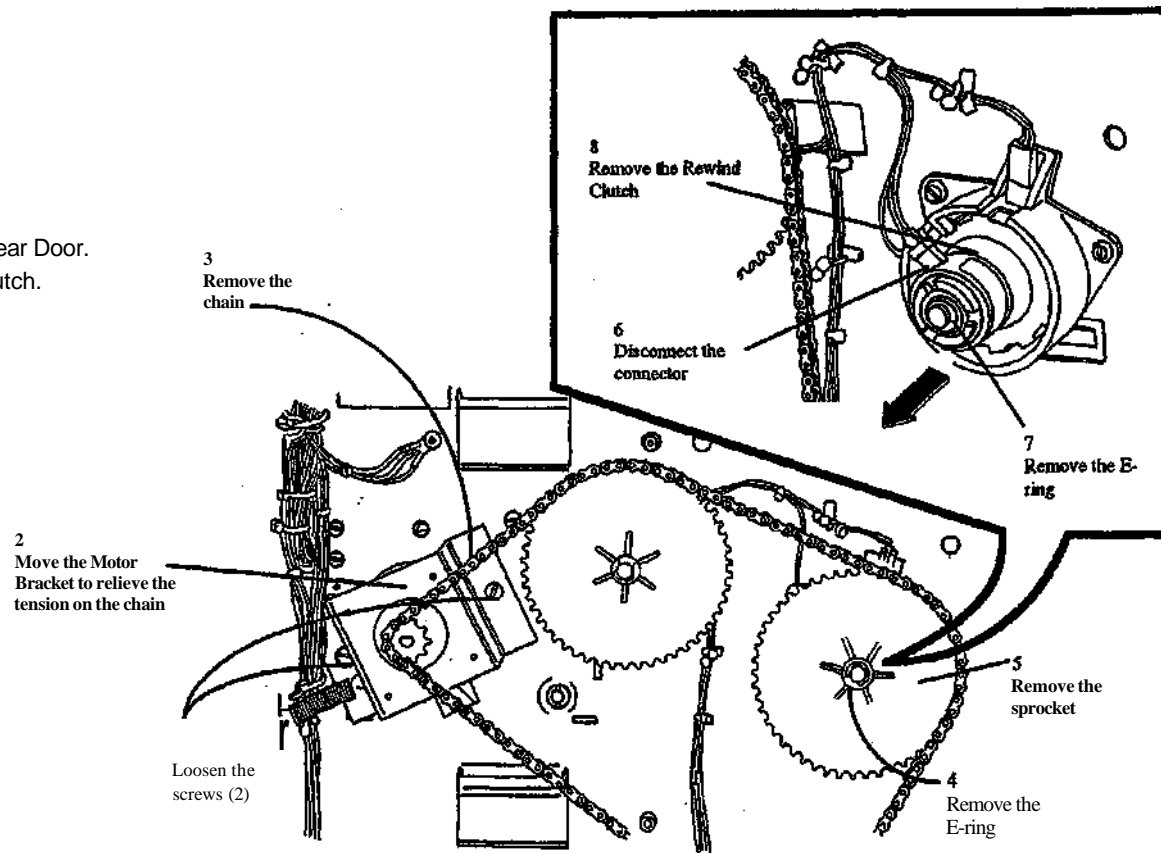


Figure 1. Removing the Rewind Clutch

REP 7.7 Motion Sensor

Parts List on PL 7.2

WARNING

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

Removal

1. Loosen the screws and open the Rear Door.

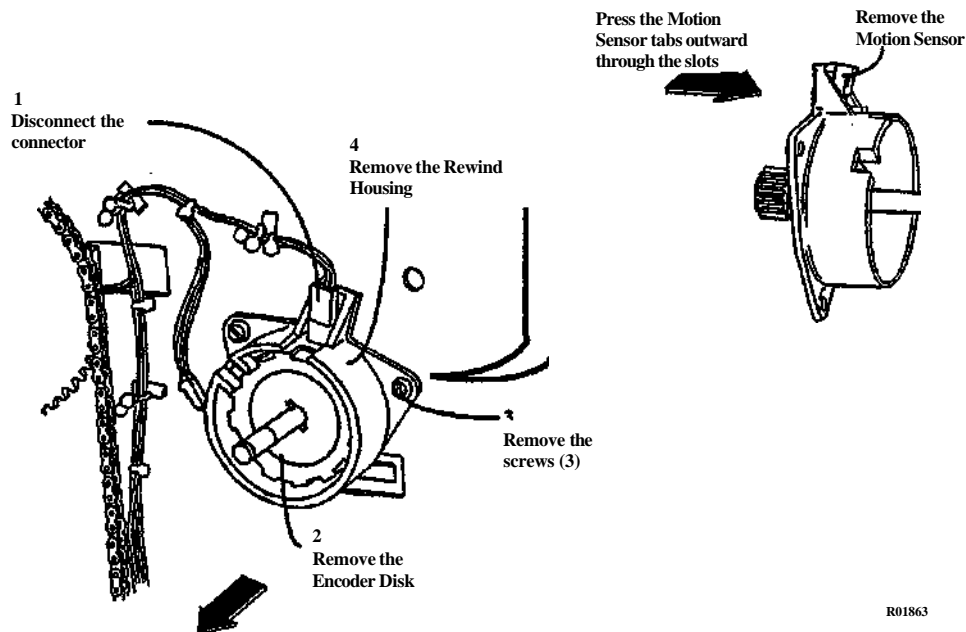


Figure 1. Removing the Motion Sensor

Replacement

1. Reinstall the Motion Sensor and the Rewind Housing.
2. (Figure 2): Reinstall the Encoder Disk.

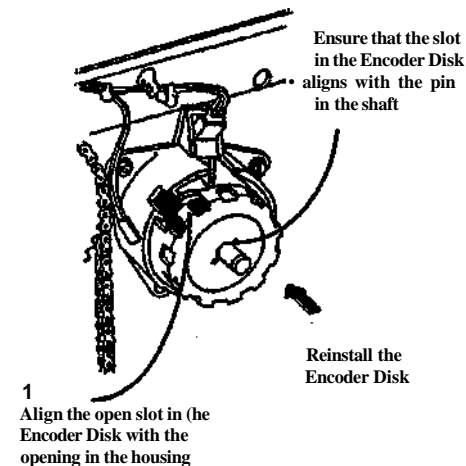


Figure 2. Reinstalling the Encoder Disk

R01863

REP 7.9 Roll Drive Motor

Parts List on PL 7.2

WARNING

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

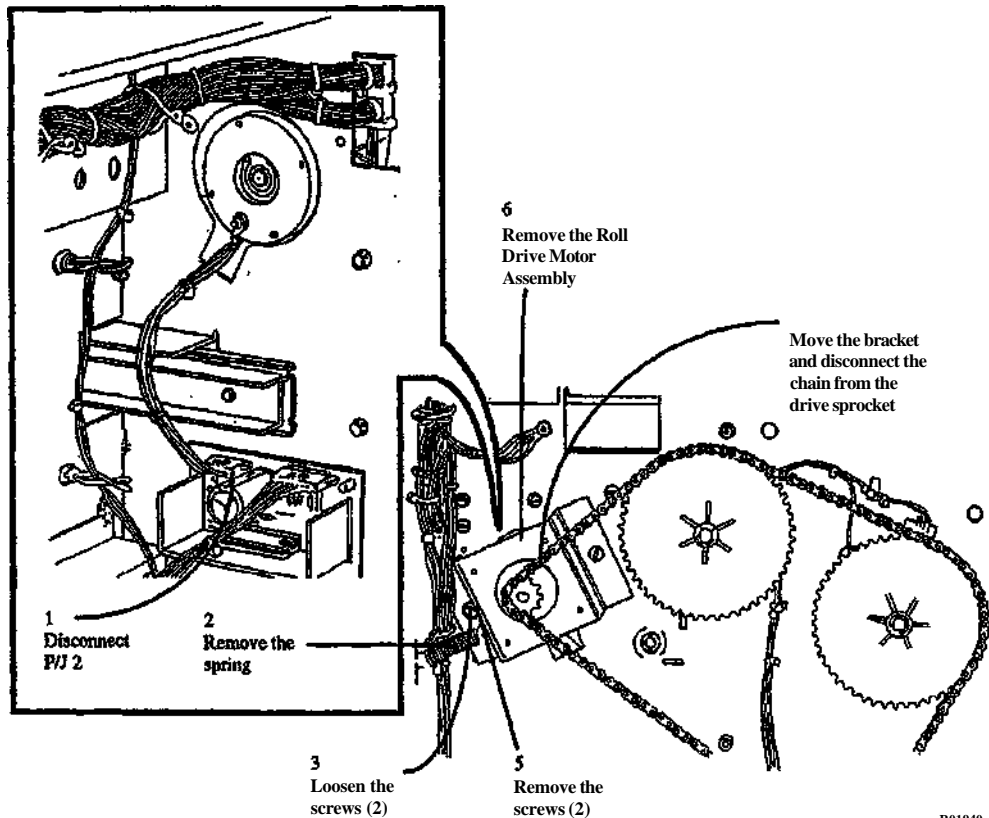


Figure 1. Removing the Roll Drive Motor Assembly

Removal

1. Loosen the screws and open the Rear Door.
2. (Figure 1): Remove the Roll Drive Motor Assembly.

3. (Figure 2): Remove the bracket from the Roll Drive Motor.

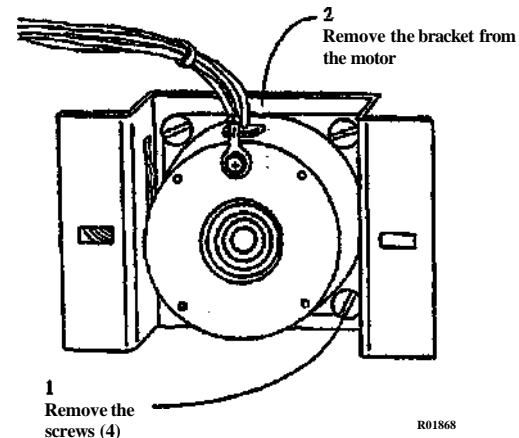


Figure 2. Removing the Roll Drive Motor Bracket

REP 7.10A Lower Media Roll Heater

Parts List on PL 7.2

WARNING

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

Removal

1. Loosen the screws and open the Rear Door.
2. (Figure 1): Remove the Lower Media Roll Heater.

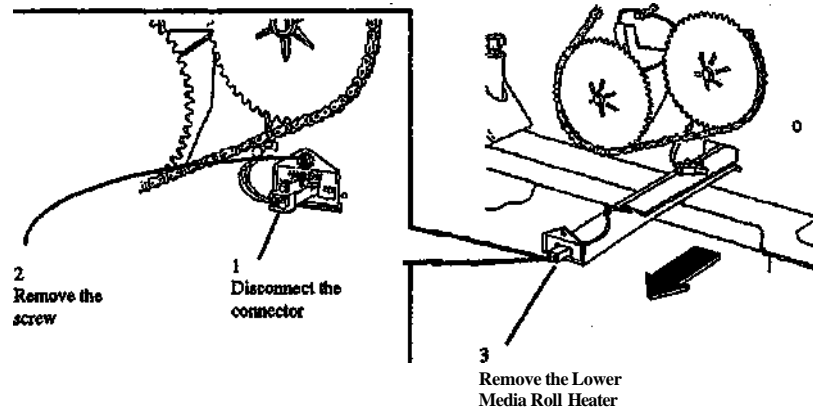
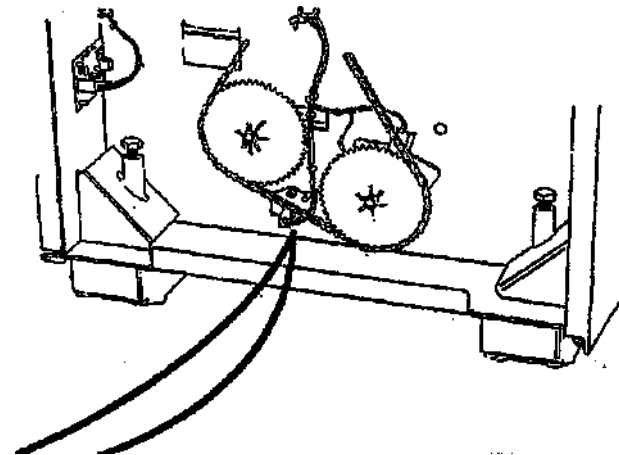


Figure 1. Removing the Lower Media Roll Heater

REP 7.10B Upper Media Roll Heater

Parts List on PL 7.2

WARNING

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

Removal

1. Remove Media Supply Drawer 1 (REP 7.1).

CAUTION

Be sure to support the Media Roll Heater/Guard with your hand while removing the mounting screws in the next step.

2. (Figure 1): Remove the Upper Media Roll Heater.

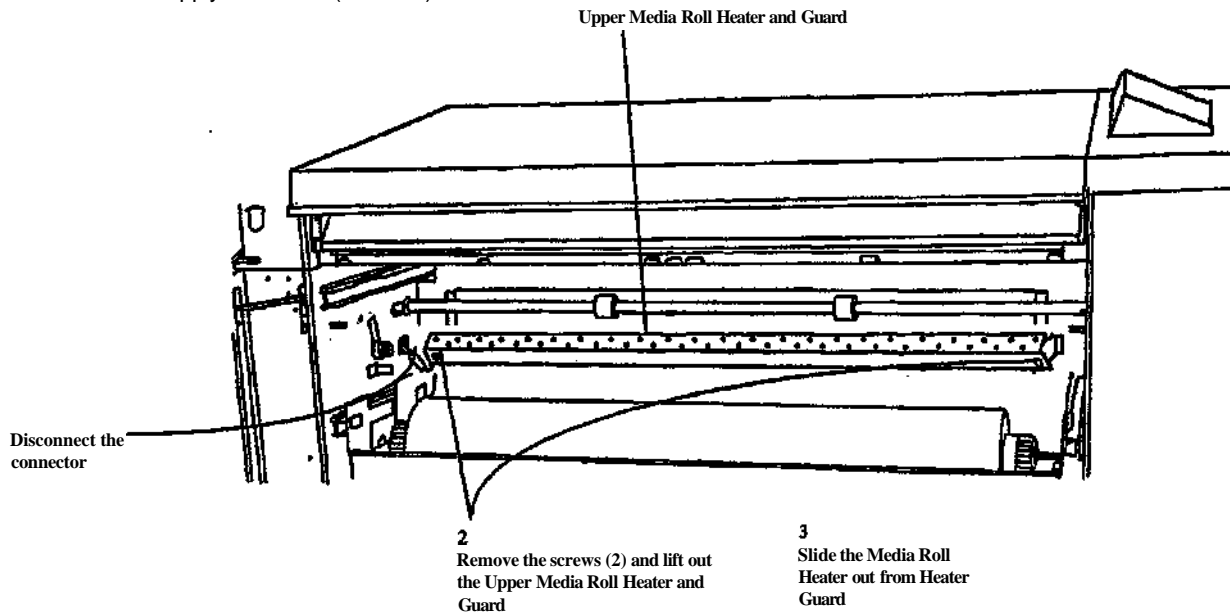


Figure 1. Removing the Upper Media Roll Heater

REP 7.11 Encoder Disk

Parts List on PL 7.2

WARNING

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

Removal

1. Loosen the screws and open the Rear Door.
2. Remove the Rewind Clutch (REP 7.6).
3. (Figure 1): Remove the Encoder Disk.

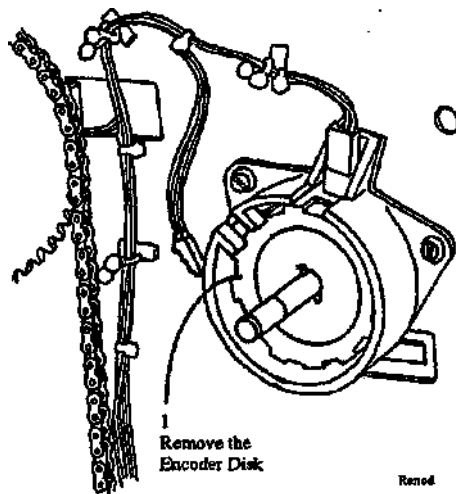


Figure 1. Removing the Encoder Disk

Replacement

1. Reinstall the Motion Sensor and the Rewind Housing.
2. (Figure 2): Reinstall the Encoder Disk.

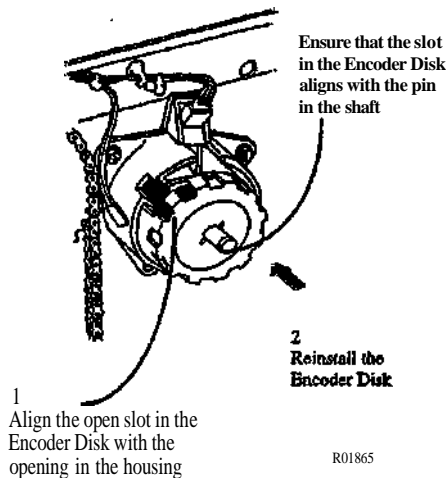


Figure 2. Reinstalling the Encoder Disk

Notes:

REP 8.1 Media Transport Assembly

Parts List on PL 8.1

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Latch the Xerographic Module at the Service Position (REP 9.2).
2. Open the Cutter Drawer.

3. (Figure 1): Disconnect the connectors at the rear of the printer.

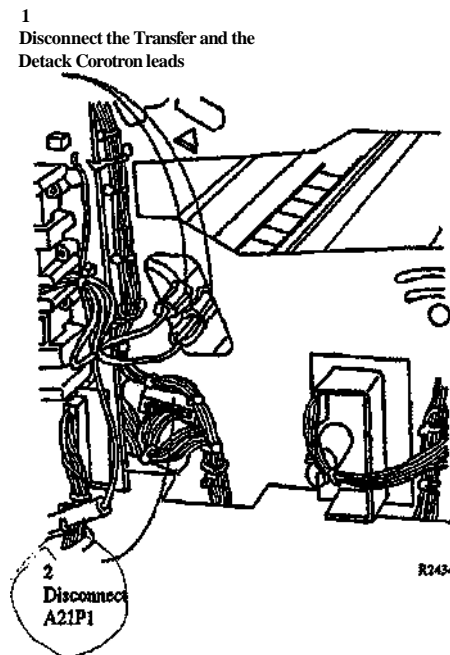


Figure 1. Disconnecting the Connectors

4. (Figure 2): Disconnect the Moisture Collection Tube.

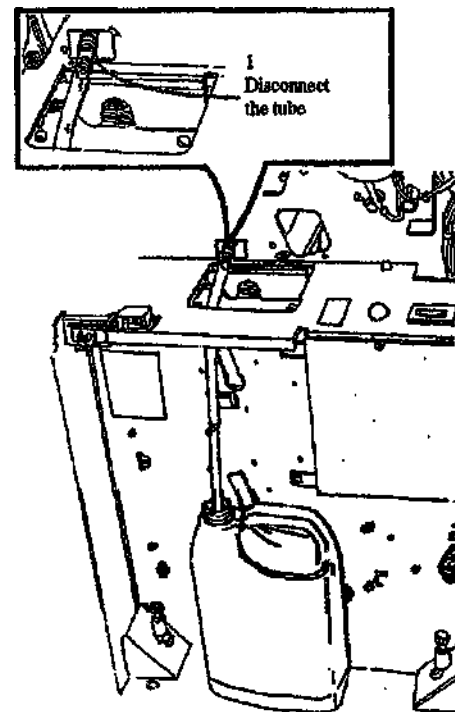
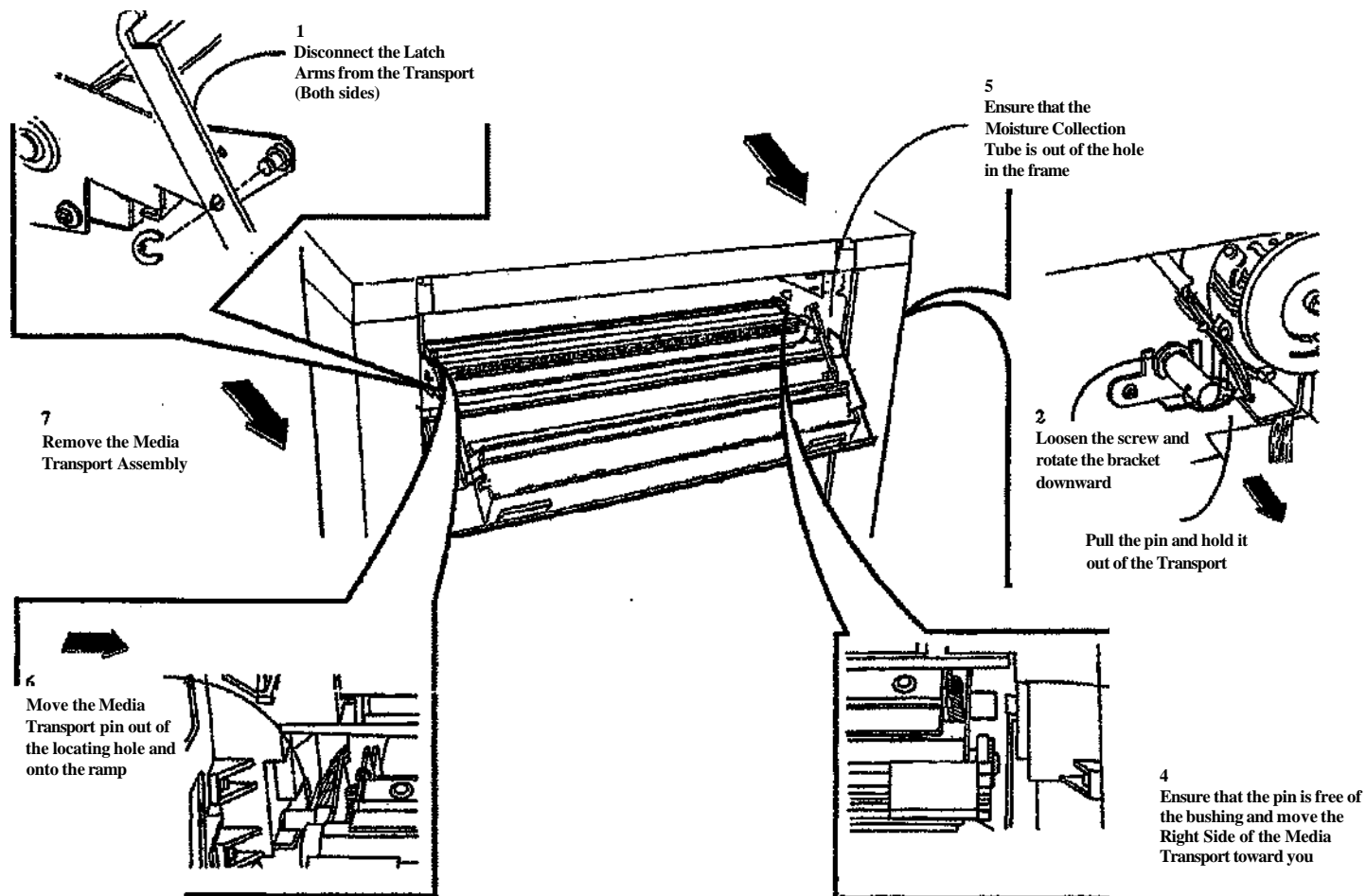


Figure 2. Disconnecting the Moisture Collection Tube

5. (Figure 3): Remove the Media Transport Assembly.



R2447B

Figure 3. Removing the Media Transport Assembly

Replacement

1. If a new Media Transport Assembly is being installed, perform the Media Transport to Drum Spacing (ADJ 8.4).
2. Open the Cutter Drawer.
3. (Figure 4): Reinstall the Media Transport Assembly.

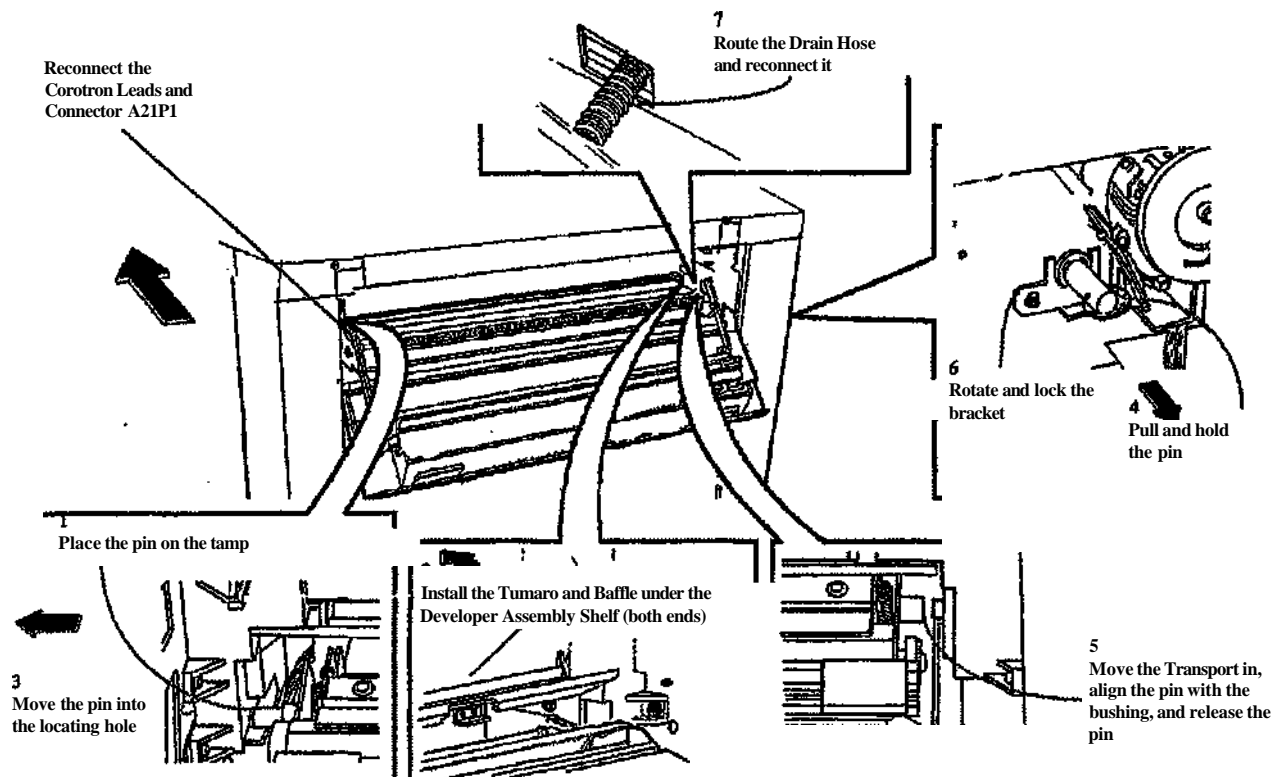


Figure 4. Reinstalling the Media Transport Assembly

REP 8.2 Media Exit Switch

Parts List on PL 8.4

WARNING

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

Removal

1. Latch the Xerographic Module at the Service Position (REP 9.2).
2. Remove the Media Transport Assembly (REP 8.1).
3. Remove the Fabric Guide (REP 8.9).
4. (Figure 1): Remove the Front Pivot Assembly.
5. Turn the Front Pivot Assembly over and remove the Media Exit Switch.
 - a. Disconnect the Switch Assembly Connector Q3.
 - b. Remove the screw and the Stacker Support,
 - c. Remove the Media Exit Switch from the bracket.

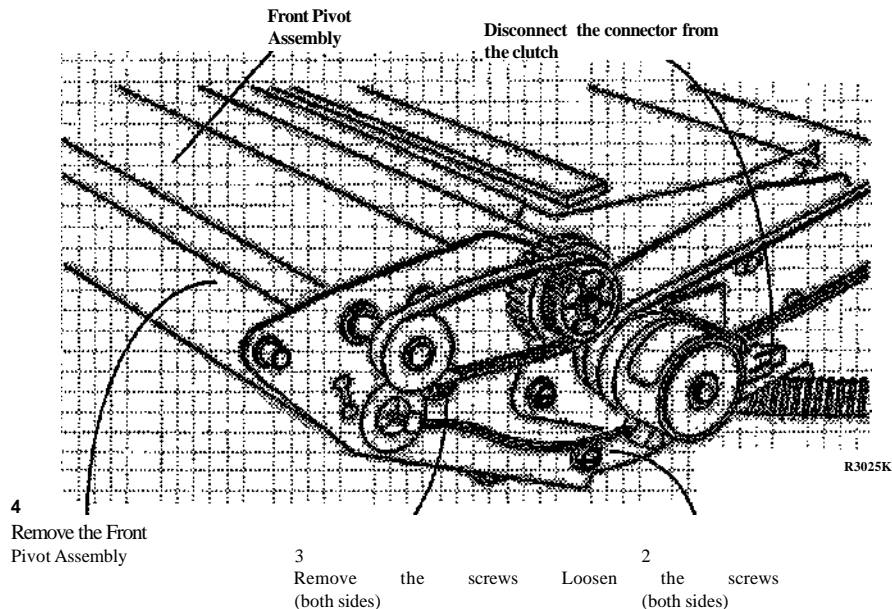


Figure 1. Removing the Front Pivot Assembly

REP 8.3 Buckle Switch

Parts List on PL 8.4

WARNING

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

Removal

1. Latch the Xerographic Module at the Service Position (REP 9.2).
2. Remove the Media Transport Assembly (REP 8.1).
3. Remove the Fabric Guide (REP 8.9).
4. Remove the Pressure Plates (REP 8.5).
5. (Figure 1): Remove the Buckle Switch.
 - a. Remove the screw.
 - b. Carefully pull the Buckle Switch Assembly until the connector can be disconnected.
 - c. Disconnect the connector.
 - d. Remove the Buckle Switch from the bracket.

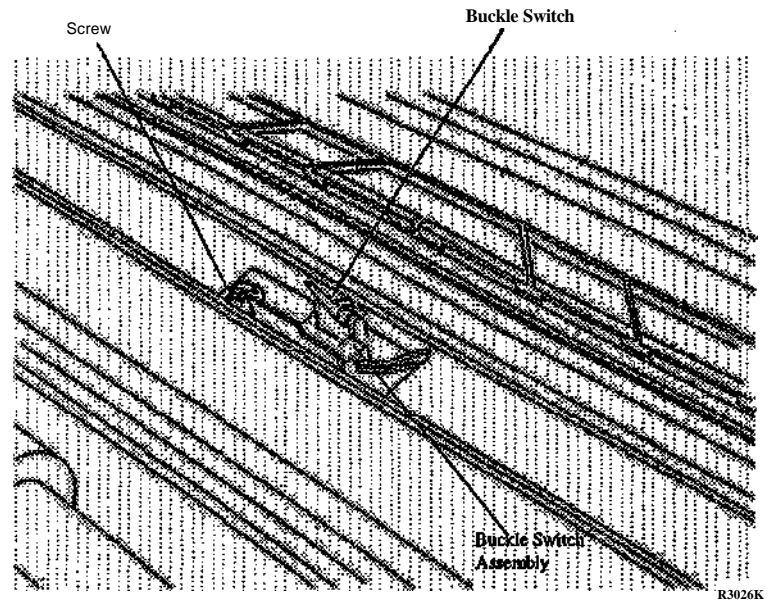


Figure 1. Removing the Buckle Switch

REP 8.4 Cut Sheet Media Feed Clutch

Parts List on PL 8.1

WARNING

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

Removal

1. Latch the Xerographic Module at the Service Position (REP 9.2).
2. Remove the Media Transport Assembly (REP 8.1).
3. (Figure 1): Remove the Cut Sheet Media Feed Clutch.

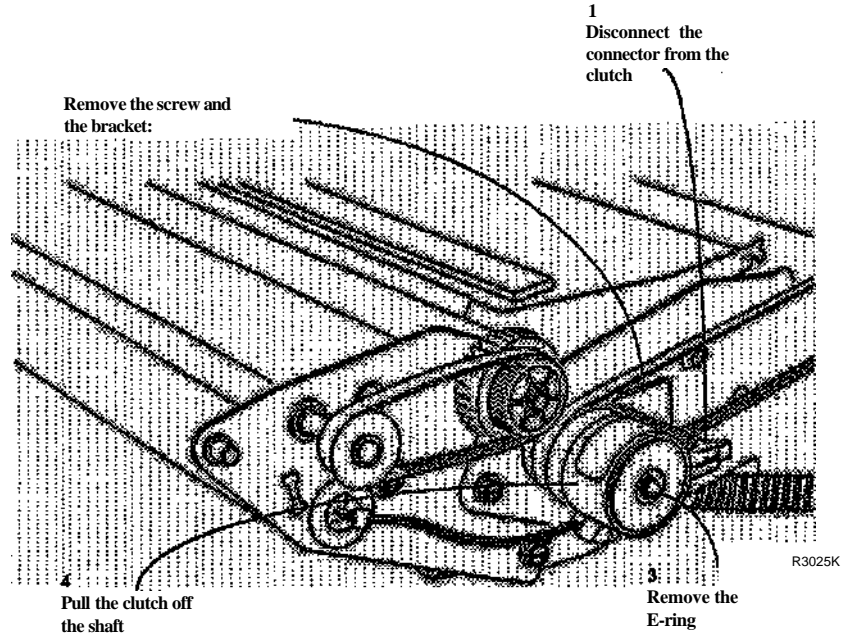


Figure 1. Removing the Cut Sheet Media Feed Clutch

REP 8.5 Pressure Plates

Parts List on PL 10.3

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Latch the Xerographic Module at the Service Position (REP 9.2).
2. Remove the Media Transport Assembly (REP 8.1).
3. Remove the Fabric Guide (REP 8.9).

CAUTION

Be sure to push the Buckle Switch Actuator down while starting to remove the Upper Pressure Plate in order to prevent damage to the actuator.

4. (Figure 1): Remove the Upper and Lower Pressure Plates.

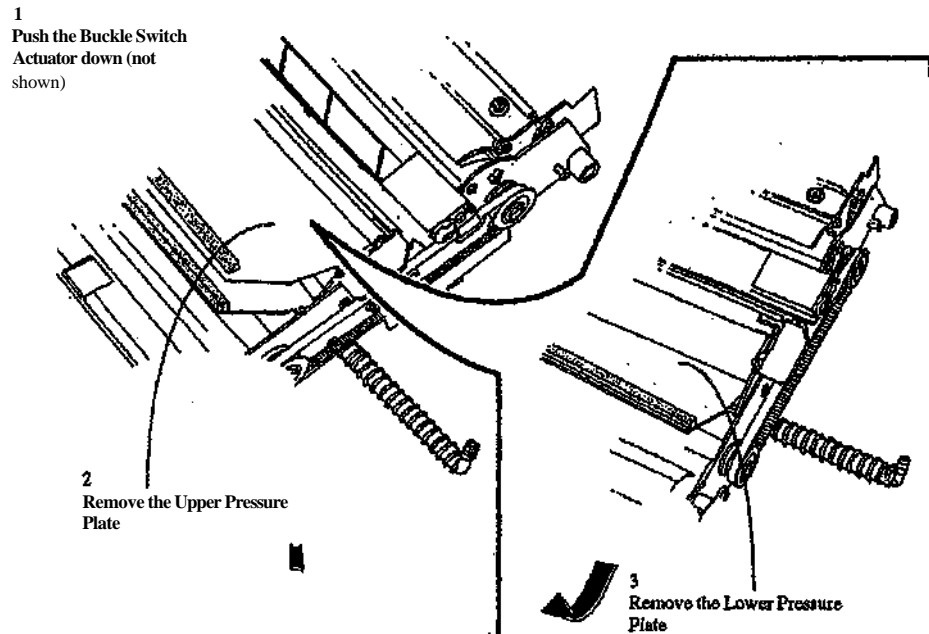


Figure 1. Removing the Pressure Plates

Replacement

CAUTION

Be careful not to damage the Sheet Media Switch Actuator while reinstalling the Lower Pressure Plate.

1. (Figure 2): Reinstall the Lower Pressure Plate.

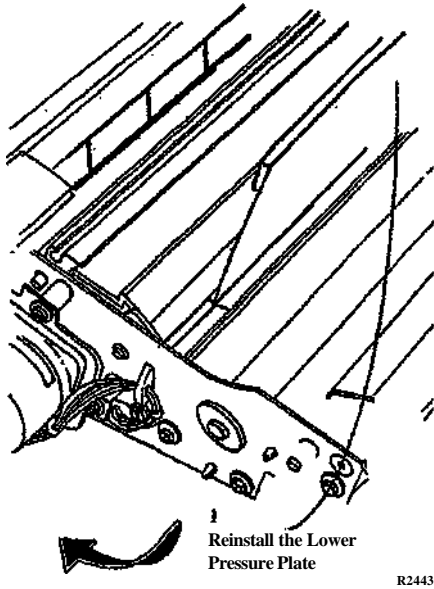


Figure 2. Reinstalling the Lower Pressure Plate

CAUTION

Be sure to push the Buckle Switch Actuator down while reinstalling the Upper Pressure Plate in order to prevent damage to the actuator.

2. (Figure 3): Reinstall the Upper Pressure Plate.

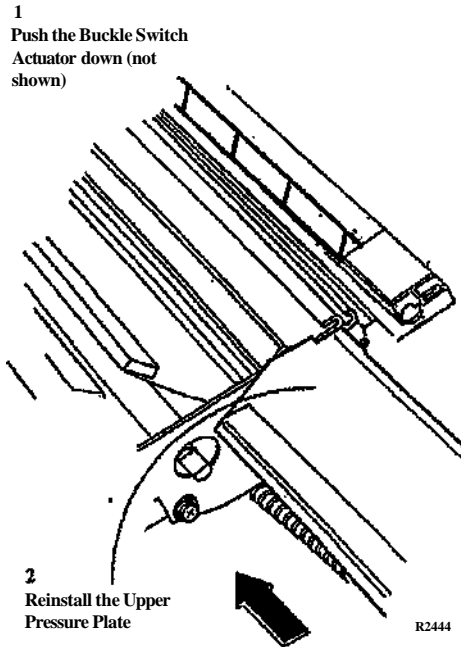


Figure 3. Reinstalling the Upper Pressure Plate

REP 8.6 Sheet Drive Roll

Parts List on PL 8.3

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Latch the Xerographic Module at the Service Position (REP 9.2).
Remove the Media Transport Assembly (REP 8.1).
Remove the Fabric Guide (REP 8.9).
Remove the Pressure Plates (REP 8.5).
Remove the Cut Sheet Media Feed Clutch (REP 8.4).
(Figure 1): Remove the Timing Belt and the bearings.
7. (Figure 2): Remove the Sheet Drive Roll.

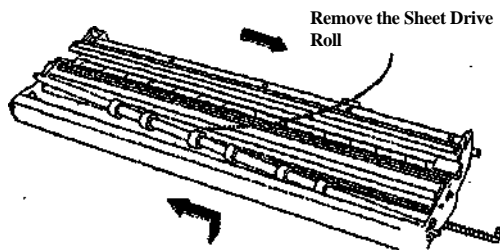


Figure 2. Removing the Sheet Drive Roll

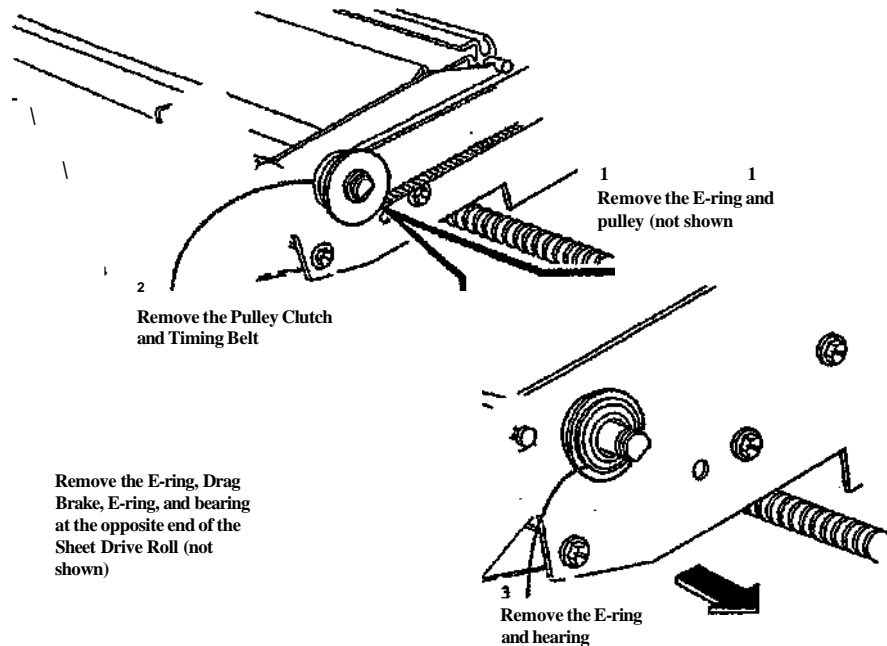


Figure 1. Removing the Bearings

REP 8.7 Sheet Pinch Rolls

Parts List on PL 8.3

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Latch the Xerographic Module at the Service Position (REP 9.2).
2. Remove the Media Transport Assembly (REP 8.1).
3. Remove the Fabric Guide (REP 8.9).
4. Remove the Pressure Plates (REP 8.5).
5. Turn the Media Transport over.
6. (Figure 1): Remove the Sheet Pinch Rolls.

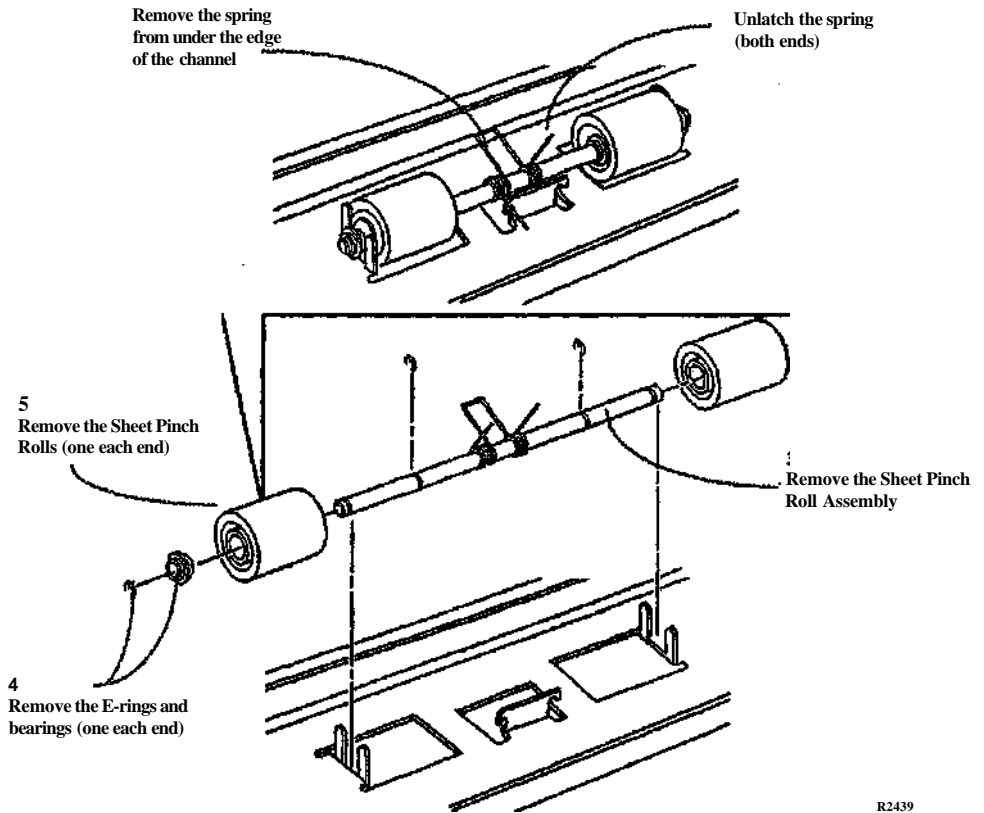


Figure 1. Removing the Sheet Pinch Rolls

R2439

REP 8.8 Media Registration Sensor

Parts List on PL 8.2

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Latch the Xerographic Module at the Service Position (REP 9.2).
2. Remove the Media Transport Assembly (REP 8.1).
3. (Figure 1): Remove the Media Registration Sensor.

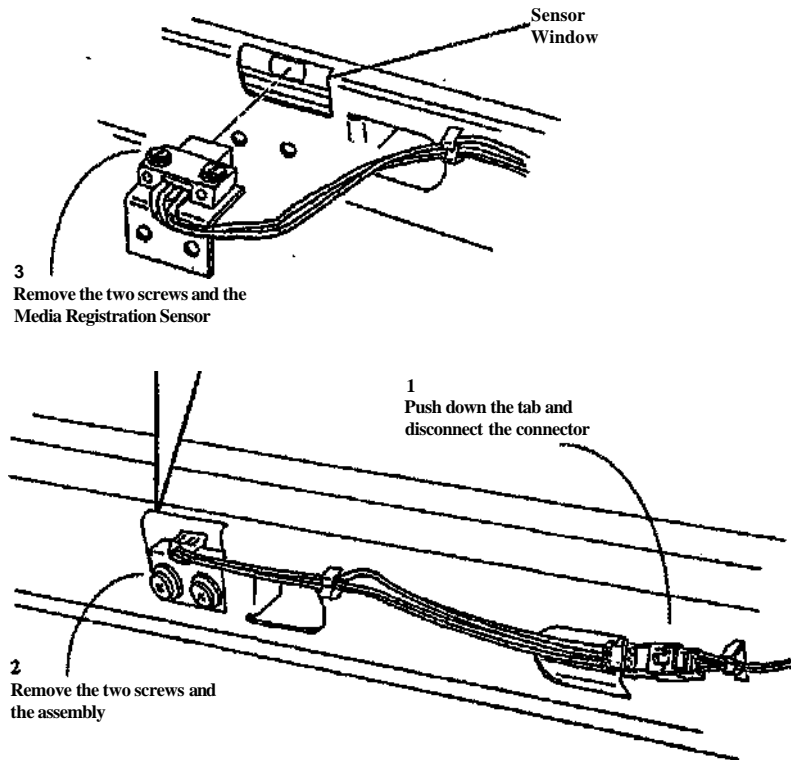


Figure 1. Removing the Media Registration Sensor

Notes:

REP 8.9 Fabric Guide

Parts List on PL 10.3

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Lower the Media Transport Cover.
2. (Figure 1): Carefully reach into the Printer and remove the Fabric Guide.

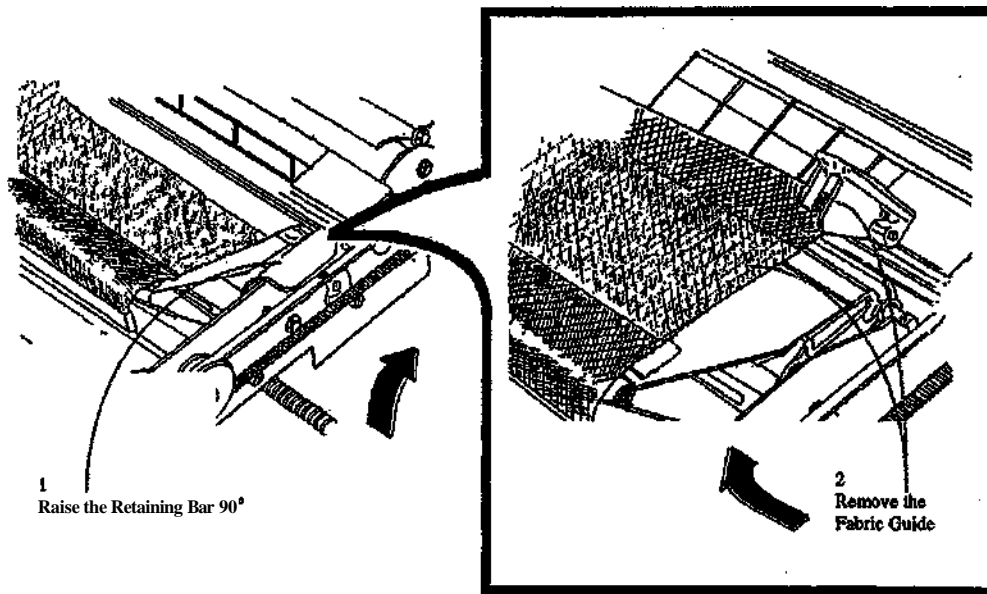


Figure 1. Removing the Fabric Guide

Replacement

1. (Figure 2): Reinstall the Fabric Guide.

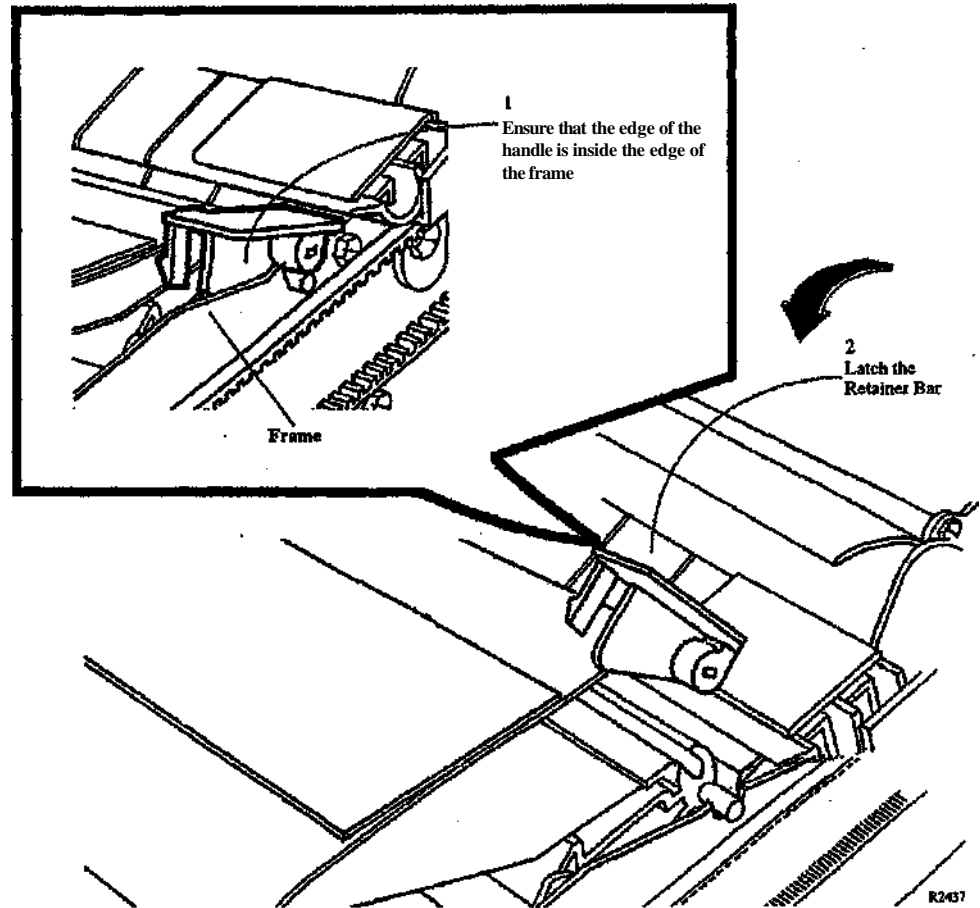


Figure 2. Reinstalling the Fabric Guide

REP 8.10 Media Transport Drive Motor

Parts List on PL 8.1

WARNING

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

Removal

1. Latch the Xerographic Module at the Service Position (REP 9.2).
2. Remove the Media Transport Assembly (REP 8.1).
3. Remove the Fabric Guide (REP 8.9).
4. Remove the Pressure Plates (REP 8.5).
5. Turn the Media Transport Assembly over.
6. (Figure 1): Remove the Media Transport Drive Motor Assembly.
7. (Figure 2): Remove the motor from the mounting plate.

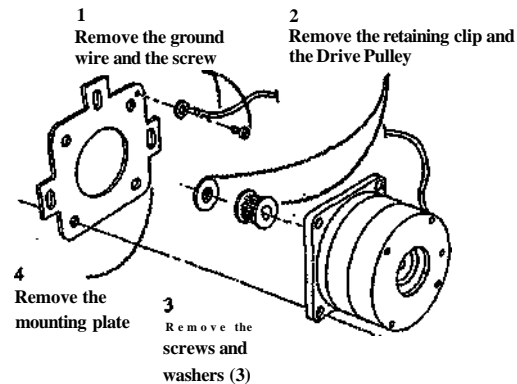


Figure 2. Removing the Motor

Replacement

1. Ensure that the belt is over the Idler Pulley.
2. If a new motor is being installed, use the Drive Pulley from the old assembly.

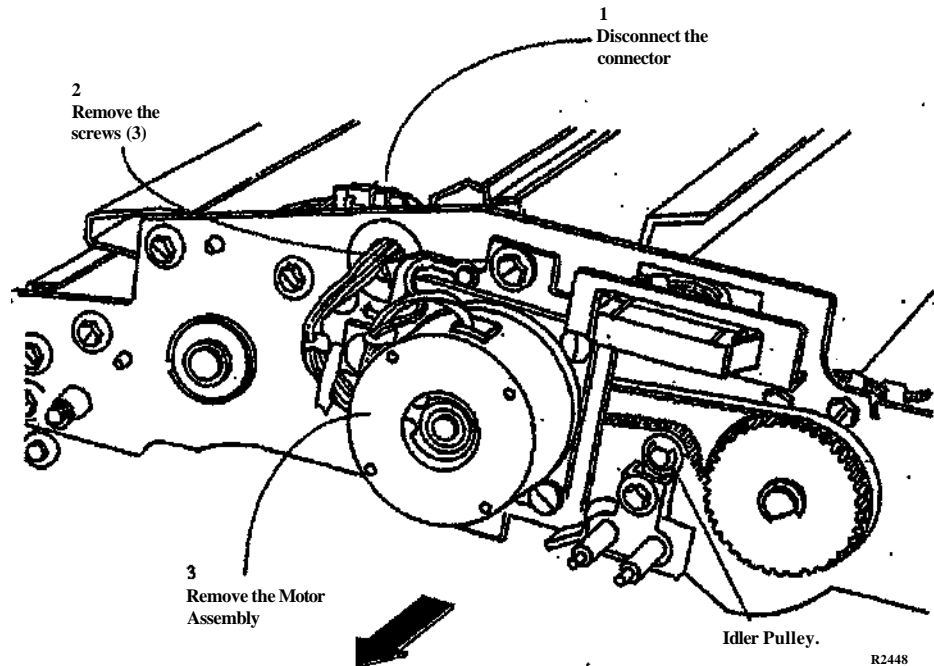


Figure 1. Removing the Media Transport Drive Motor Assembly

REP 8.11 Sheet Feed Switch

Parts List on PL 8.4

WARNING

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

Removal

1. Latch the Xerographic Module at the Service Position (REP 9.2).
2. Remove the Media Transport Assembly (REP 8.1).
3. Remove the Fabric Guide (REP 8.9).
4. Remove the Pressure Plates (REP 8.5).
5. Remove the Front Pivot Assembly using REP 8.2.
6. Remove the Sheet Drive Roll (REP 8.6).
7. (Figure 1): Remove the Sheet Feed Switch.

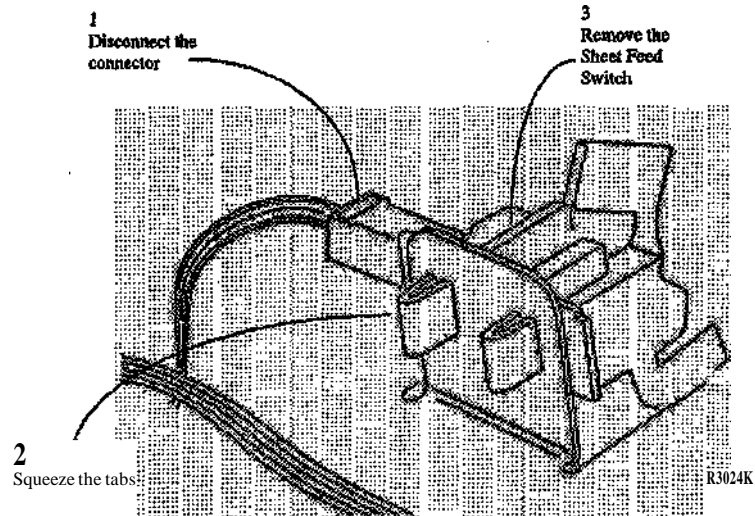


Figure 1. Removing the Sheet Feed Switch

REP 8.12 Registration Pinch Rolls

Parts List on PL 8.2

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Latch the Xerographic Module at the Service Position (REP 9.2).
2. Remove the Media Transport Assembly (REP 8.1).
3. (Figure 1): Remove the Baffle.

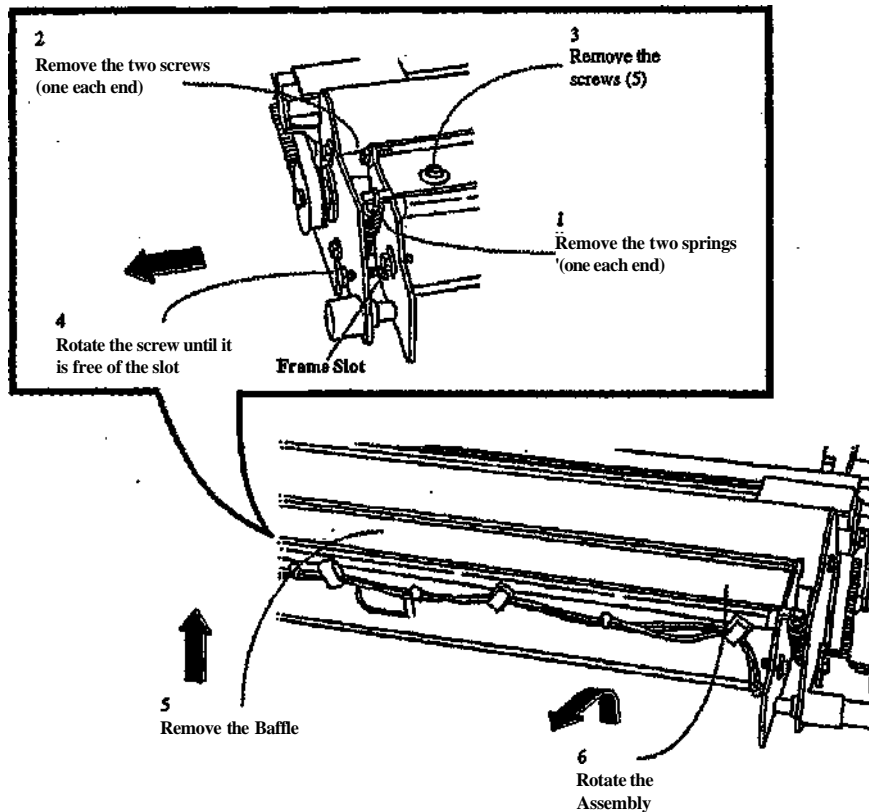


Figure 1. Removing the Baffle

R2525

4. (Figure 2): Remove the Registration Pinch Rolls.

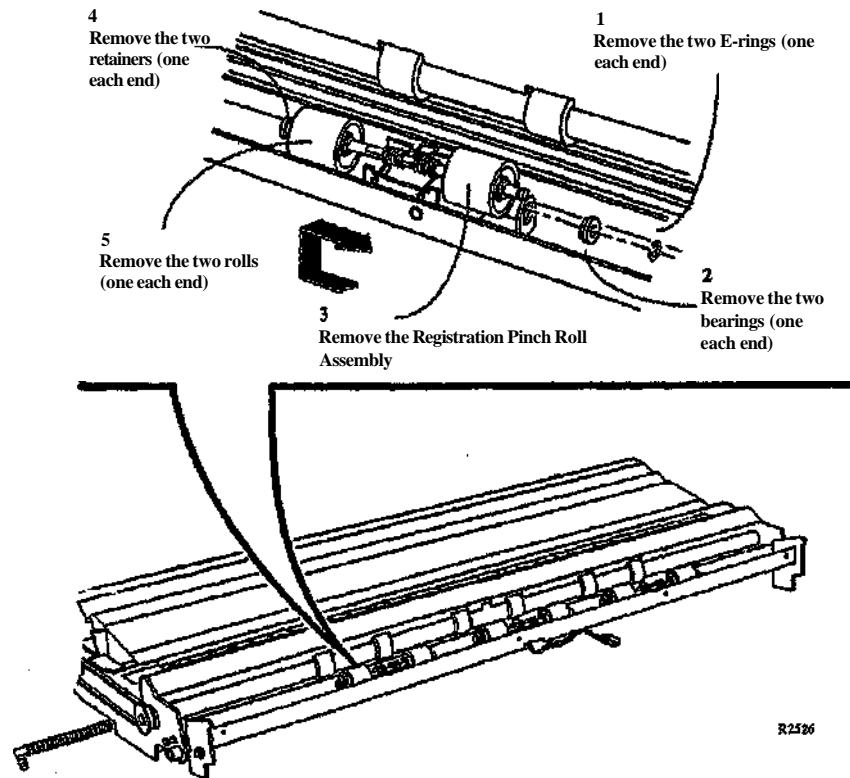


Figure 2. Removing the Registration Pinch Rolls

Replacement

1. Reinstall the rolls and retainers onto the shaft.
2. (Figure 3): Reinstall the Registration Pinch Roll Assembly.

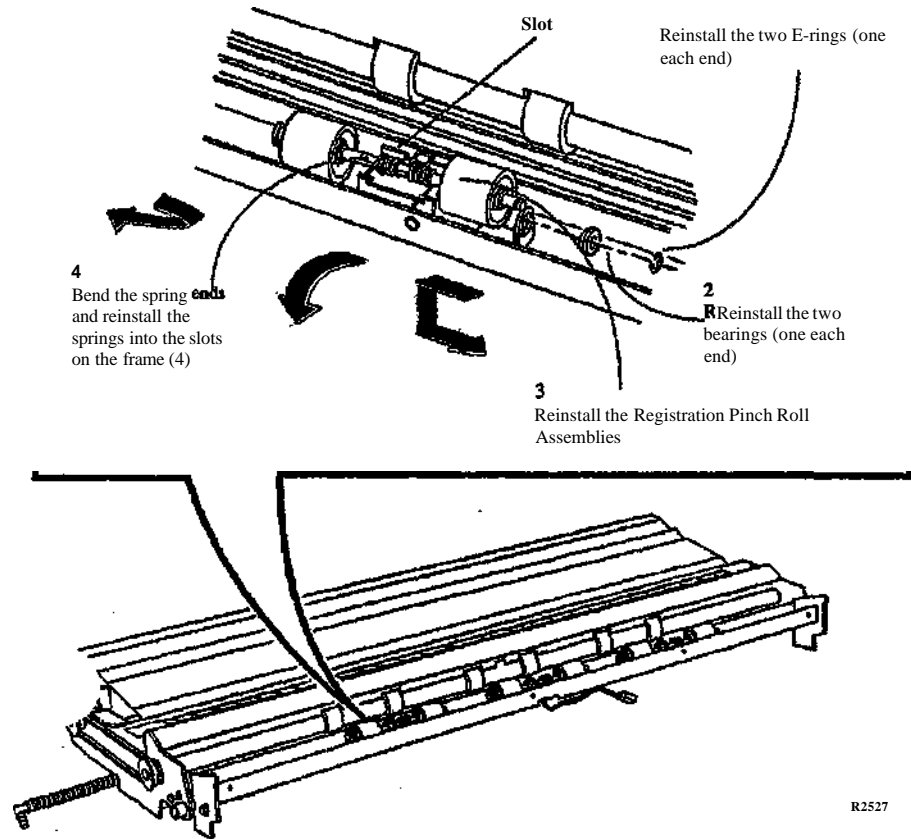


Figure 3. Reinstalling the Registration Pinch Roll Assembly

3. (Figure 4): Reinstall the springs,
4. Complete the reassembly of the Printer and perform the following;
 - a. Fuser Temperature (NVM) (ADJ 10.1)
 - b. Vertical Magnification (ADJ 8.1)
 - c. Lead Edge Registration (ADJ 8.2)
 - d. Cut Length (ADJ 8.3)

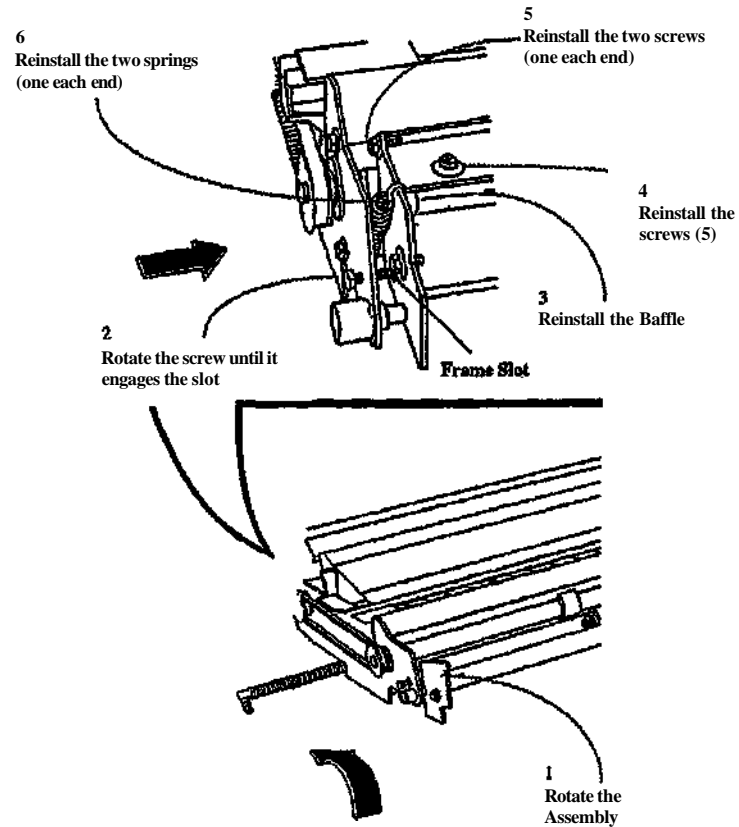


Figure 4. Reinstalling the Springs

R2528

REP 8.13 Media Feed Drive Belt

Parts List on PL 8.1

WARNING

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

Removal

1. Latch the Xerographic Module at the Service Position (REP 9.2).
2. Remove the Media Transport Assembly (REP 8.1).
3. Remove the Fabric Guide (REP 8.9).
4. Remove the Pressure Plates (REP 8.5).
5. Turn the Media Transport Assembly over.
6. (Figure 1): Remove the Media Feed Drive Belt.

Replacement

1. Ensure that the belt is over the Idler Pulley.

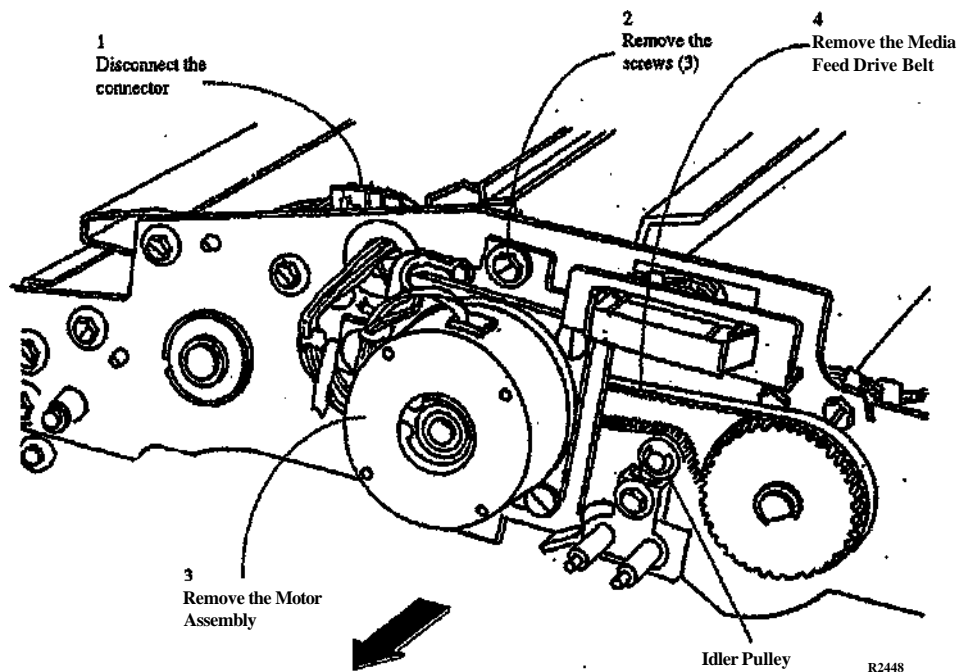


Figure 1. Removing the Media Feed Drive Belt

REP 8.15 Cutter Home Sensor

Parts List on PL 7.8

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Open the Cutter Drawer.
2. (Figure 1): Remove the Cutter Home Sensor.

Replacement

1. Center the Disc of the Cutter Drive Pulley in the sensor during reassembly.

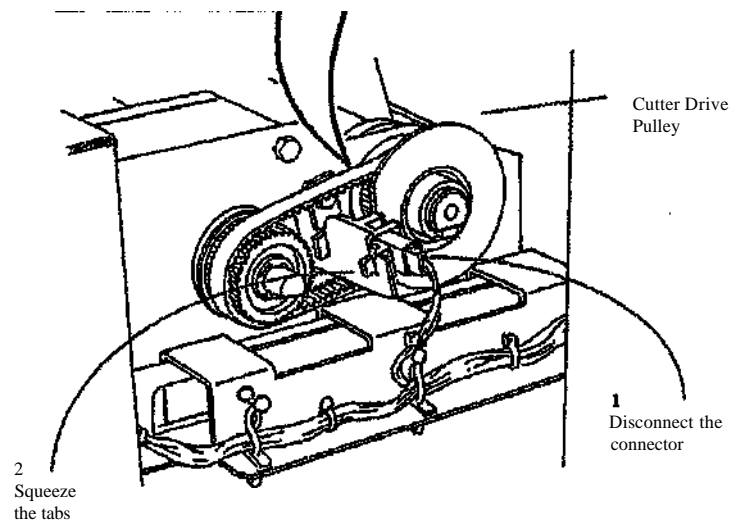
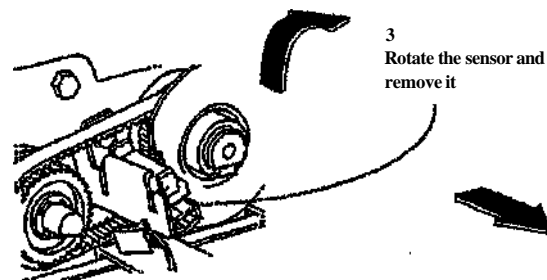


Figure 1. Removing the Cutter Home Sensor

REP 8.16 Exit Roll

Parts List on PL 8.4

WARNING

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

Removal

1. Latch the Xerographic Module at the Service Position (REP 9.2).
2. Remove the Media Transport Assembly (REP 8.1).
3. Remove the Media Exit Switch (REP 8.2).
4. (Figure 1): Remove the Exit Roll from the Front Pivot Assembly.

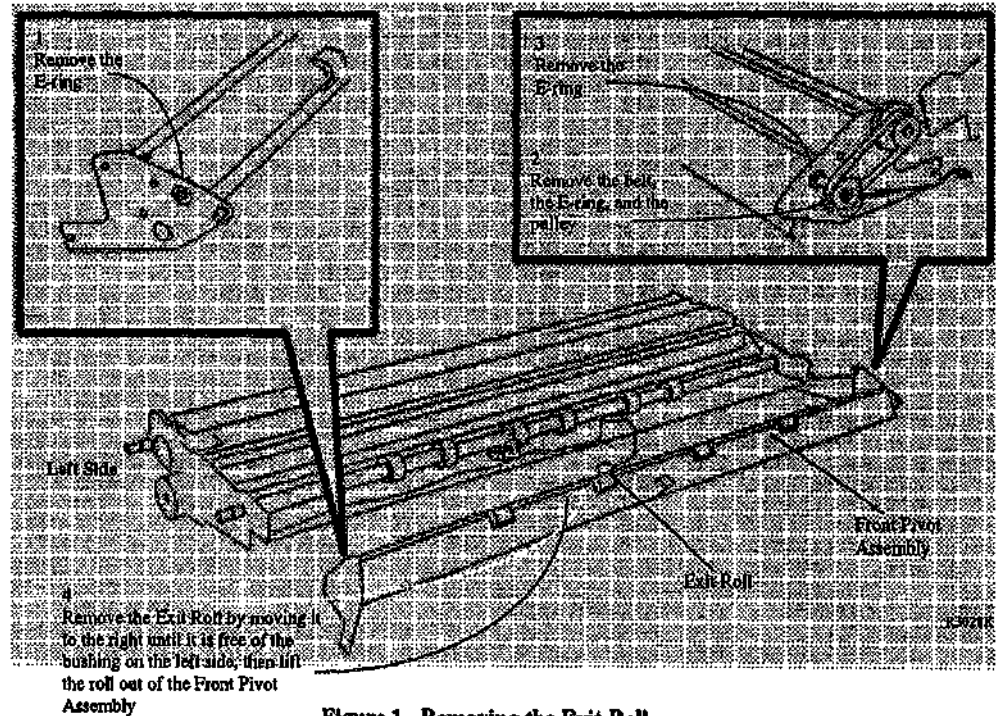


Figure 1. Removing the Exit Roll

REP 8.17 Registration Drive Roll

Parts List on PL 8.2

WARNING

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

Removal

1. Latch the Xerographic Module at the Service Position (REP 9.2).
2. Remove the Media Transport Assembly (REP 8.1).
3. Remove the Fabric Guide (REP 8.9).
4. Remove the Pressure Plates (REP 8.5).
5. Turn the Media Transport Assembly over.
6. (Figure 1): Remove the Media Feed Drive Belt.
7. Turn the Media Transport over and remove the screws (2 each side) and the baffle that they secure.

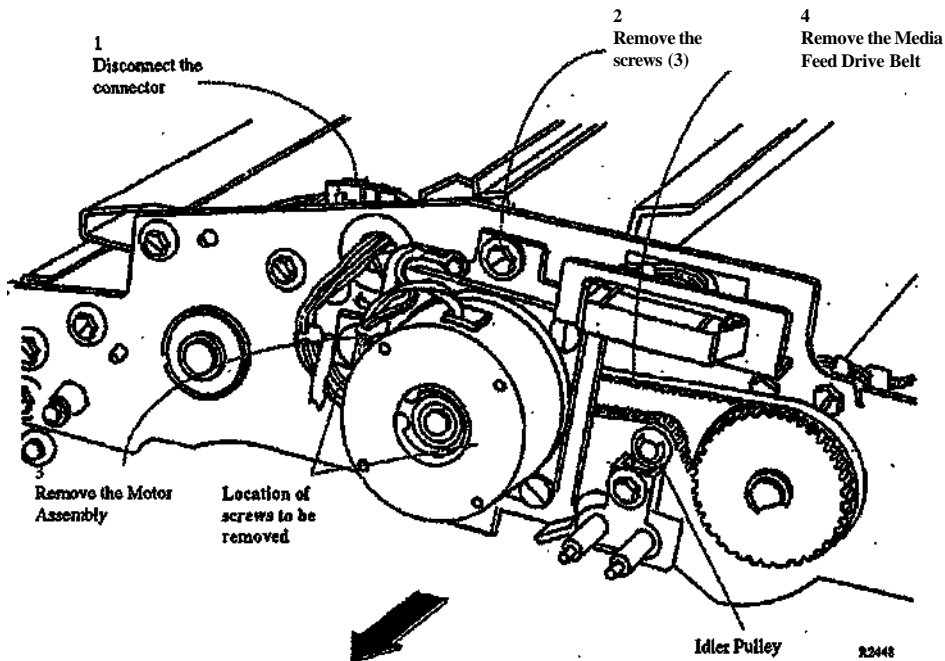


Figure 1. Removing the Media Feed Drive Belt

8. (Figure 2): Remove the Baffle.
9. Remove the Registration Drive Roll by pushing the beatings out of the frame and moving the roll as required for removal.

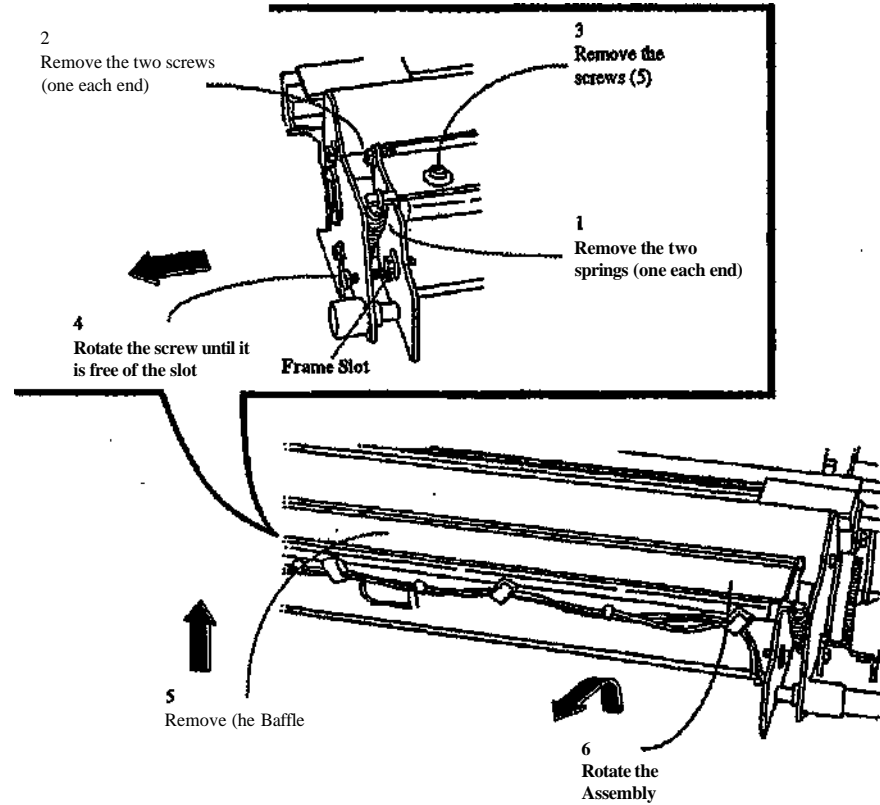


Figure 2. Removing the Baffle

Notes:

REP 9.1 Xerographic Module

Parts List on PL 9.1,10.1

WARNING

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

Removal

1. Loosen the screws and open the Rear Door.
2. Raise and latch the Top Cover.
3. Lift and rotate the Image Module to the Service Position.
4. Lower the Media Transport Cover.

NOTE: Figure 1 shows only the Front Support Bracket.

5. (Figure 1): Prepare the Front and Rear Support Brackets for raising the Xerographic Module to the Service Position.

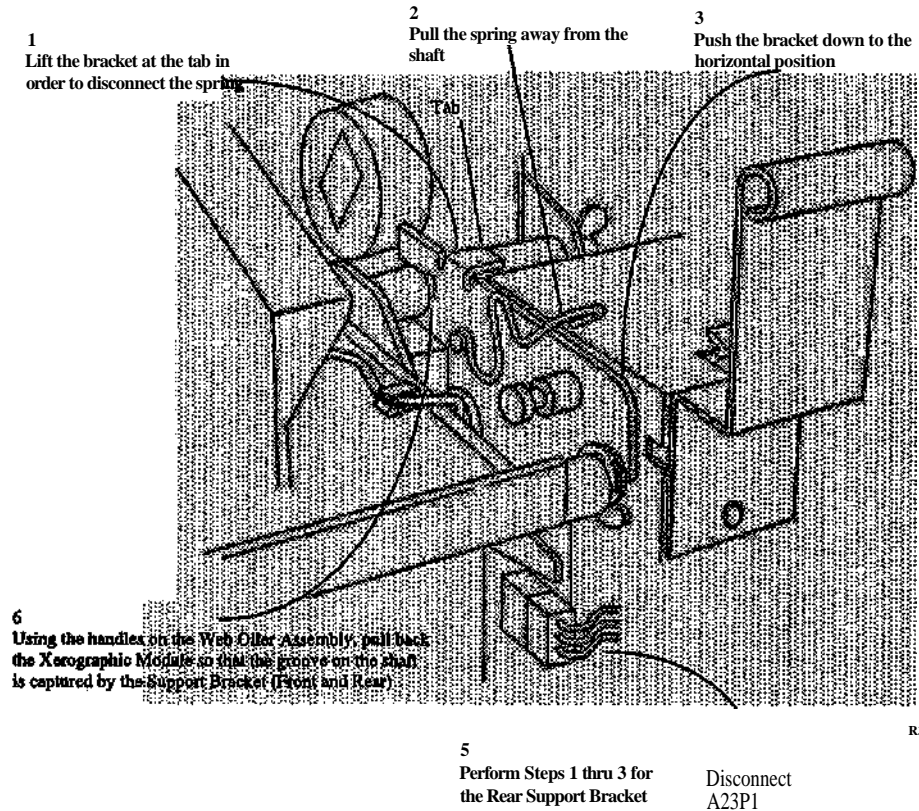


Figure 1. Preparing the Support Bracket

6. Remove the Web Oiler Assembly (REP 10.7).

NOTE: In the following steps, "Left" and "Right" describe machine locations as observed when you are facing the Xerographic Module at the left side of the Printer.

7. (Figure 2): Install the Handles onto the Left and Right Side of the Xerographic Module.

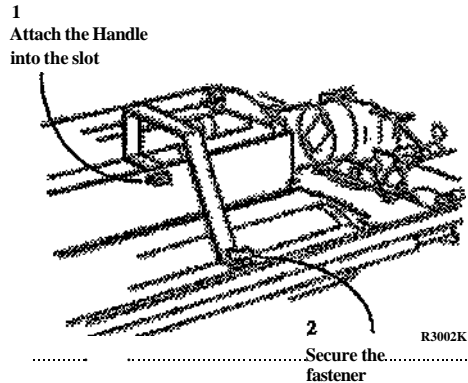


Figure 2. Installing the Handles (Right Side)

NOTE: The latches that secure the Xerographic Module to the Printer Frame are spring-loaded and will automatically engage the holes. The latches have a 1/4 turn lockout feature that may be used to prevent actuation during reinstallation of the Xerographic Module. When performing the following step, ensure that the spring-loaded feature is active.

8. (Figure 3): Using the handles, rotate the Xerographic Module 90 degrees so that the latches lock into the holes in the frame.

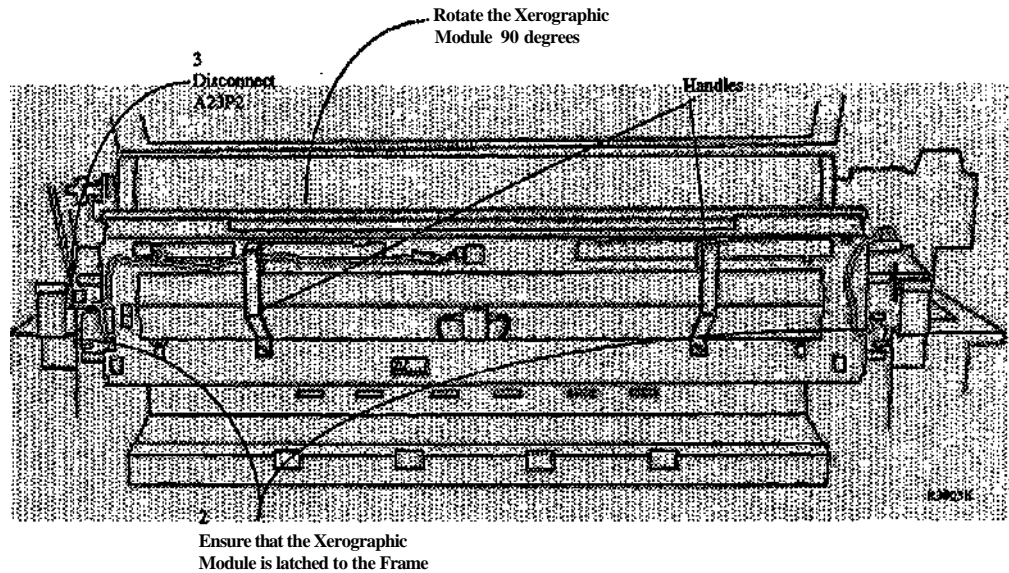


Figure 3. Latching the Xerographic Module at the Service Position

9. (Figure 4); Move the bearing out of the Xerographic Module Frame (Left Side).

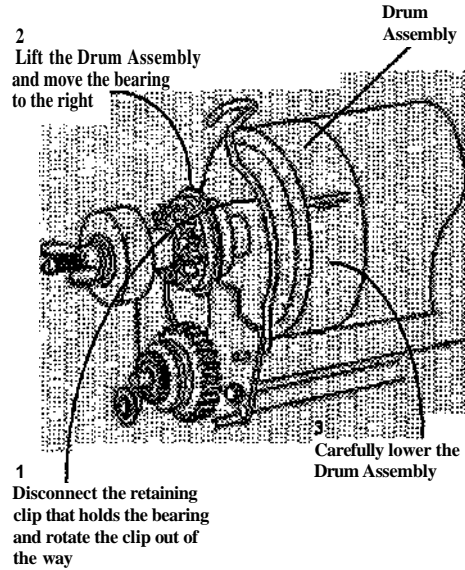


Figure 4. Moving the Bearing (Left Side)

10. (Figure 5): Move the bearing out of the Xerographic Module Frame (Right Side).

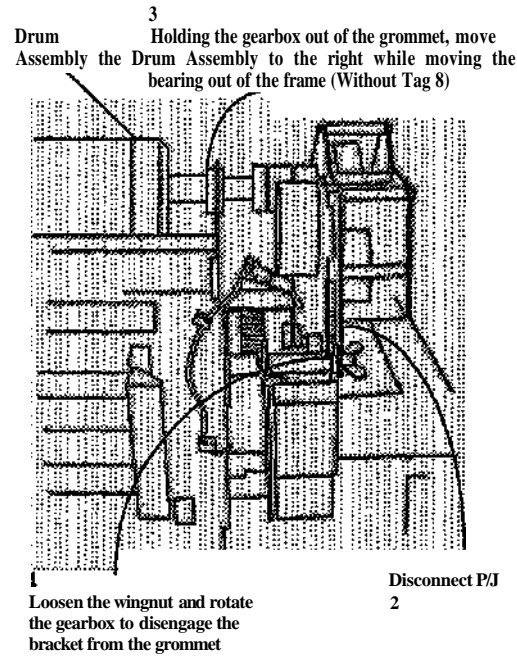


Figure 5. Moving the Bearing (Right Side)

11. (Figure 6): Carefully remove the Drum Assembly from the Printer and place it, Gear Box down, in a safe place on the floor.

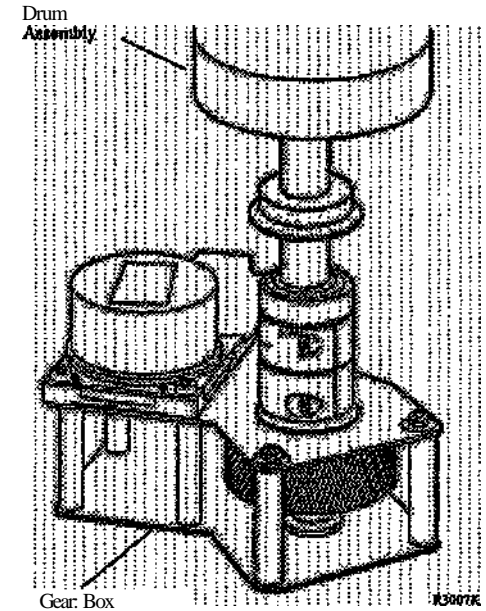


Figure 6. Removing the Drum Assembly

12. Using the Handles, lift the Xerographic Module out of the Printer and place it on a stable, flat surface.

REP 9.2 Drum Assembly

Parts List on PL 9.2

WARNING

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

Removal

1. Loosen the screws and open the Rear Door.
2. Raise and latch the Top Cover.
3. Lift and rotate the Image Module to the Service Position.
4. Lower the Media Transport Cover.

NOTE: Figure 1 shows only the Front Support Bracket.

5. (Figure 1): Prepare the Front and Rear Support Brackets for raising the Xerographic Module to the Service Position.

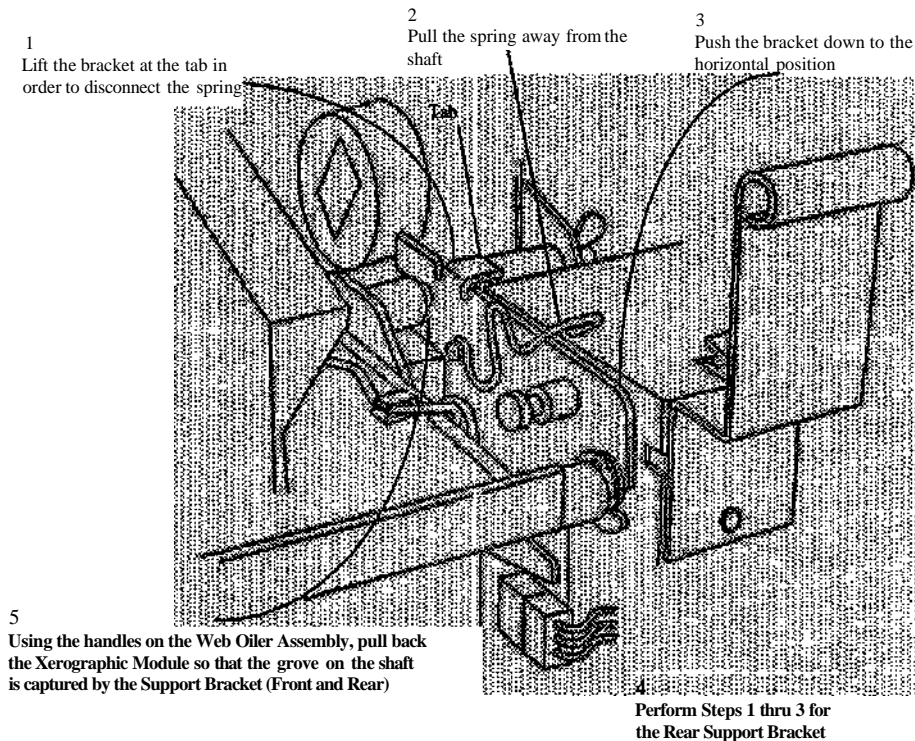


Figure 1. Preparing the Support Bracket

NOTE: The latches that secure the Xerographic Module to the Printer Frame are spring-loaded and will automatically engage the holes. The latches have a 1/4 turn lockout feature that may be used to prevent actuation during reinstallation of the Xerographic Module. When performing the following step, ensure that the spring-loaded feature is active.

6. (Figure 2): Using the handles on the Web Oiler Assembly, rotate the Xerographic Module 90 degrees so that the latches lock into the holes in the frame.

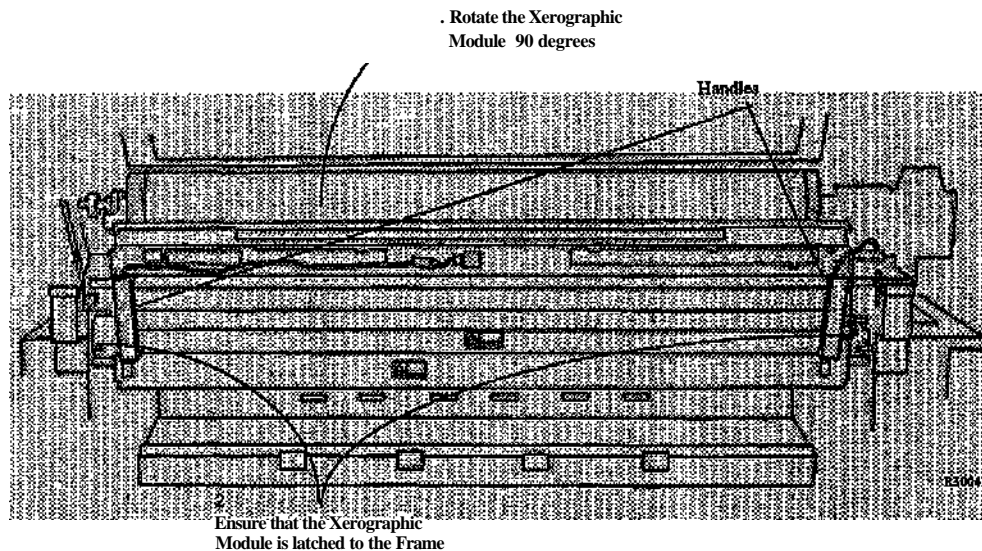


Figure 2. Latching the Xerographic Module at the Service Position

NOTE: In the following steps, "Left" and "Right" describe machine locations as observed when you are facing the Xerographic Module at the left side of the Printer.

7. (Figure 3): Move the bearing out of the Xerographic Module Frame (Left Side).

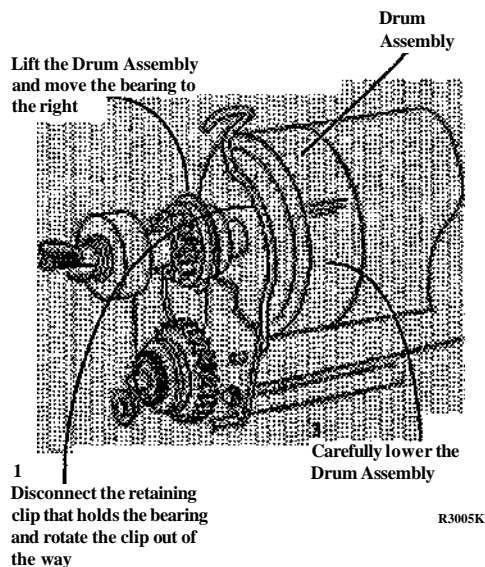


Figure 3. Moving the Bearing (Left Side)

8. (Figure 4); Move the bearing out of the Xerographic Module Frame (Right Side).

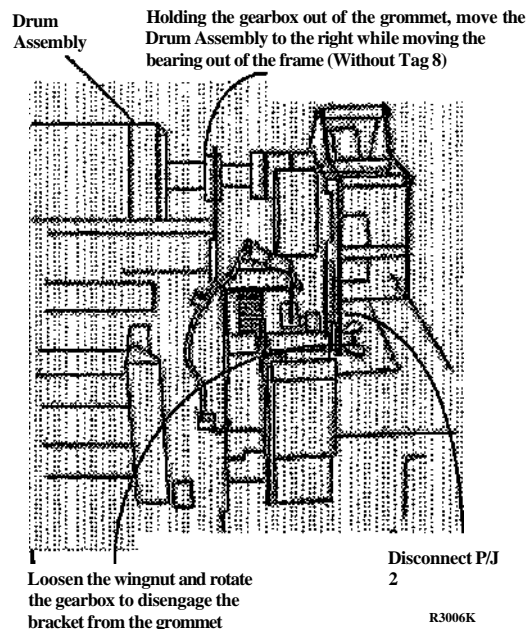


Figure 4. Moving the Bearing (Right Side)

9. (Figure 5): Carefully remove the Drum Assembly from the Printer and place it, Gear Box down, in a safe place on the floor.

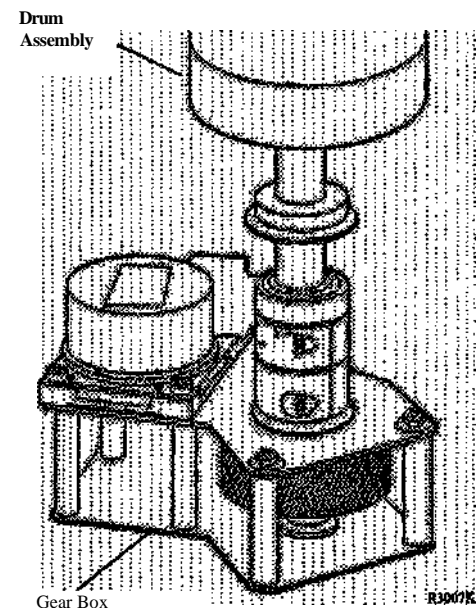


Figure 5. Removing the Drum Assembly

REP 9.3 Drum

Parts List on PL 9.2

WARNING

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

Removal

NOTE: When the Drum is replaced, install a Cleaner Blade Kit (REP 9.4).

1. Remove the Drum Assembly (REP 9.2).

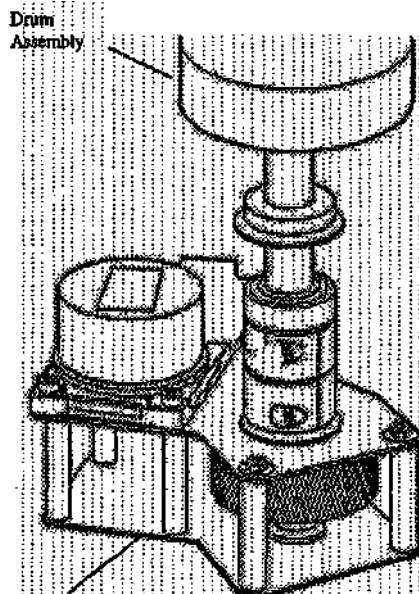


Figure 1. Securing the Drum Assembly

3. (Figure 2): Remove the Drum from the Shaft Assembly.

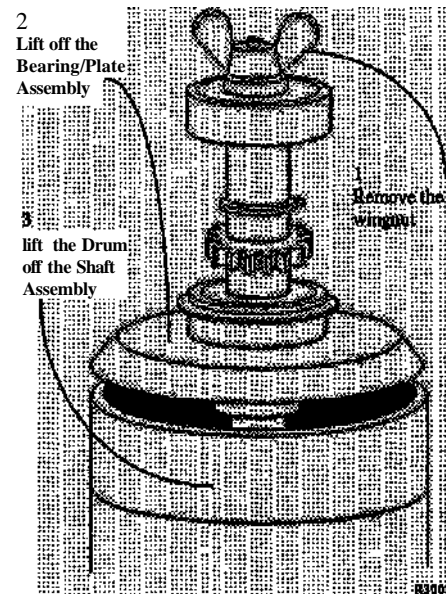


Figure 2. Removing the Drum from the Shaft Assembly

4. If the Drum is being replaced, install a Cleaner Blade Kit (REP 9.4).
5. Reassemble the Drum Assembly.
6. Perform GP4 Drum Cleaning Enhancement procedure.
7. Reinstall the Drum Assembly.
8. Perform the Electrostatic Series (ADJ 9.2).

REP 9.4 Cleaner Blade Kit

Parts List on PL 9.5A

NOTE: These are the instructions to install the Cleaner Blade Kit. The kit contains the following items:

- Right-hand Seal (57 mm wide)
- Left-hand Seal (41 mm wide)
- Cleaner Blade
- Photoreceptor Seal
- Blade Retainer (3)

WARNING

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

Removal

NOTE: In this procedure, "Left" and "Right" describe machine locations as observed when you are facing the Xerographic Module at the left side of the Printer.

1. Remove the Drum Assembly (REP 9.2).
2. (Figure 1): Remove the Photoreceptor Seal, Right-hand Seal, Left-hand Seal, Cleaner Blade, and the three Blade Retainers from the Xerographic Module.
3. Use a vacuum cleaner to clean the channels and the areas where the new parts will be installed.

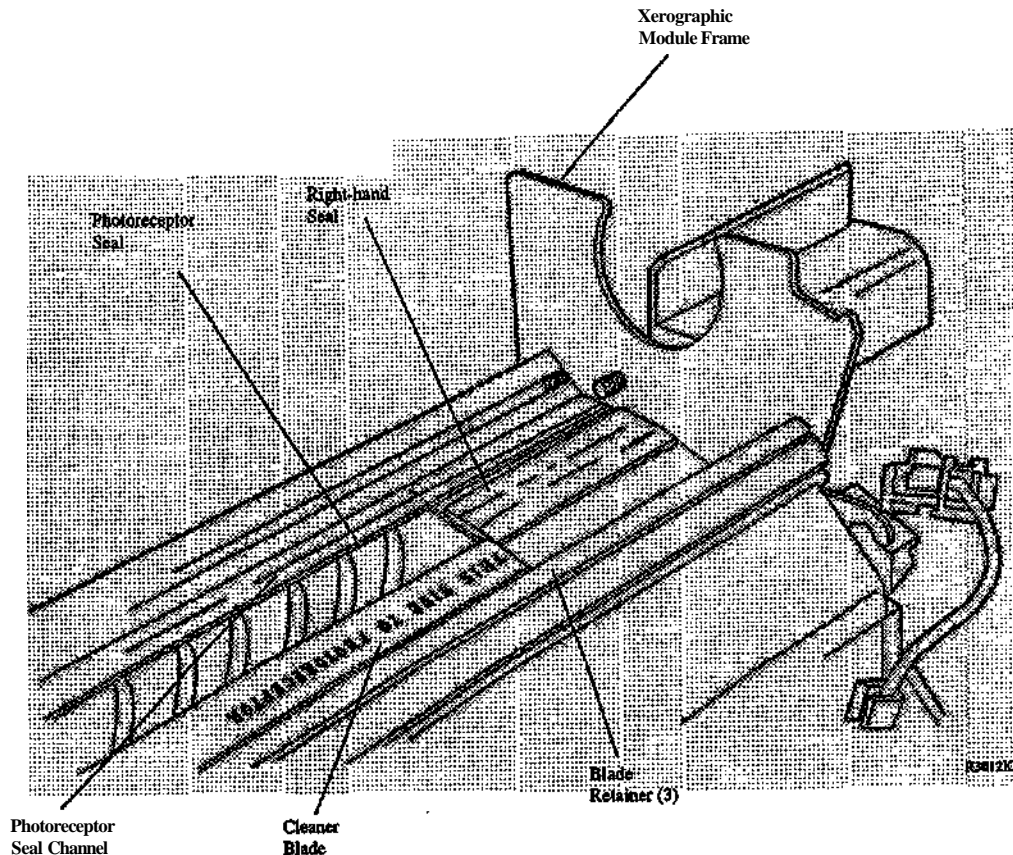


Figure 1. Removing the Cleaner Blade

Replacement

1. (Figure 2): Replace the Photoreceptor Seal.
 - a. Carefully fold the Photoreceptor Seal along the perforations.
 - b. Slide the Photoreceptor Seal into the channel, smaller side up, so that the edge of the Photoreceptor Seal forms a seal with the inside lip of the channel.
 - c. Using a soft, straight tool (a piece of shimstock works well), carefully push the seal into the channel, across the entire width of the Xerographic Module.
2. Replace the Right-hand Seal.
 - a. Insert the red stripe end of the Right-hand Seal underneath the folded Photoreceptor Seal.
 - b. Install the seal fuzzy side up.
 - c. Ensure that the seal is flush against the Xerographic Module Frame.
3. Replace the Cleaner Blade.
 - a. Start the Cleaner Blade flush against the left edge of the Right-hand Seal.
 - b. Ensure that the marking, THIS SIDE TO PHOTORECEPTOR, is to the right.
 - c. Push the Cleaner Blade into the channel, with the Arrow marking to the left.
 - d. Ensure that the blade is fully seated in the channel.
4. Install the first of the three Blade Retainers approximately one inch from the Xerographic Module Frame, working to the left.

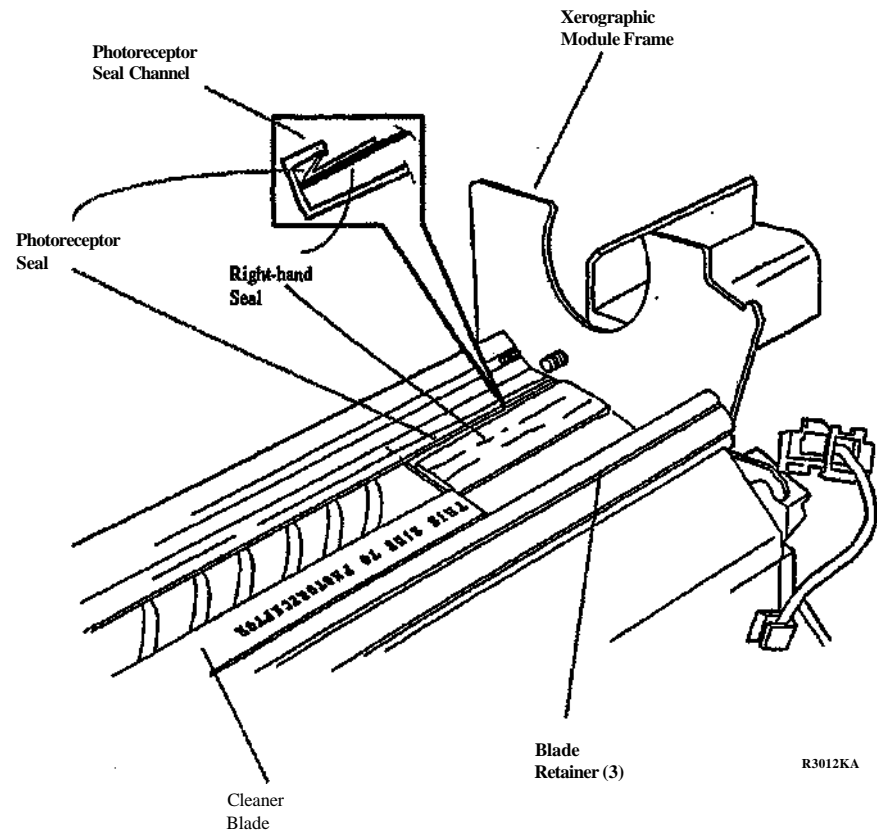
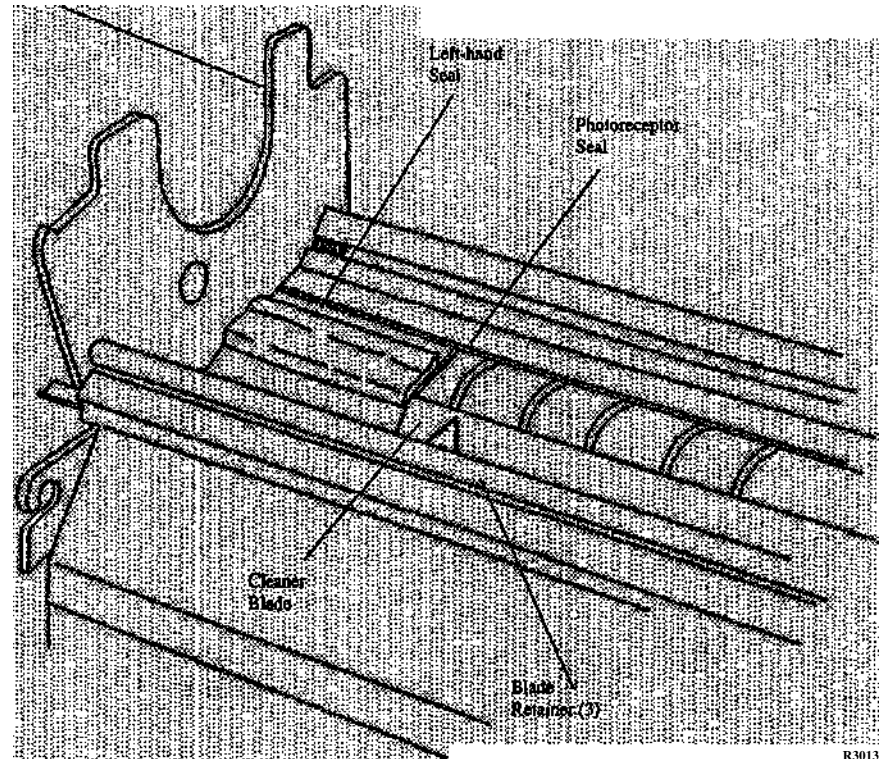


Figure 2. Installing the Cleaner Blade Kit

5. (Figure 3): Complete the installation of the remaining two Blade Retainers, positioning them, one at a time, to the left of the first one.
6. Replace the Left-hand Seal.
 - a. Insert the red stripe end of the Left-hand Seal underneath the folded Photoreceptor Seal.
 - b. Install the seal fuzzy side up.
 - c. Ensure that the seal is flush against the Xerographic Module Frame.
7. Perform GP4 Drum Cleaning Enhancement procedure.

Xerographic
Module Frame



R3013K

Figure 3. Installing the Cleaner Blade Kit

REP 9.5 Developer Module

Parts List on PL 9.8

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

CAUTION

Before removing the Developer Module, ensure that there is a clean area on which to place the assembly.

1. Loosen the screws and open the Rear Cover.
- 2.. Raise and latch the Top Cover.
3. Raise and hold the Developer Module Cover while lifting and removing the Developer Module Side Cover.
4. Lower the Top Cover.

NOTE: In the following step, tape the Toner Cartridge dispense holes in order to prevent toner from pouring out when the Toner Cartridge is tipped up for removal

5. (Figure 1): Remove the Toner Cartridge.

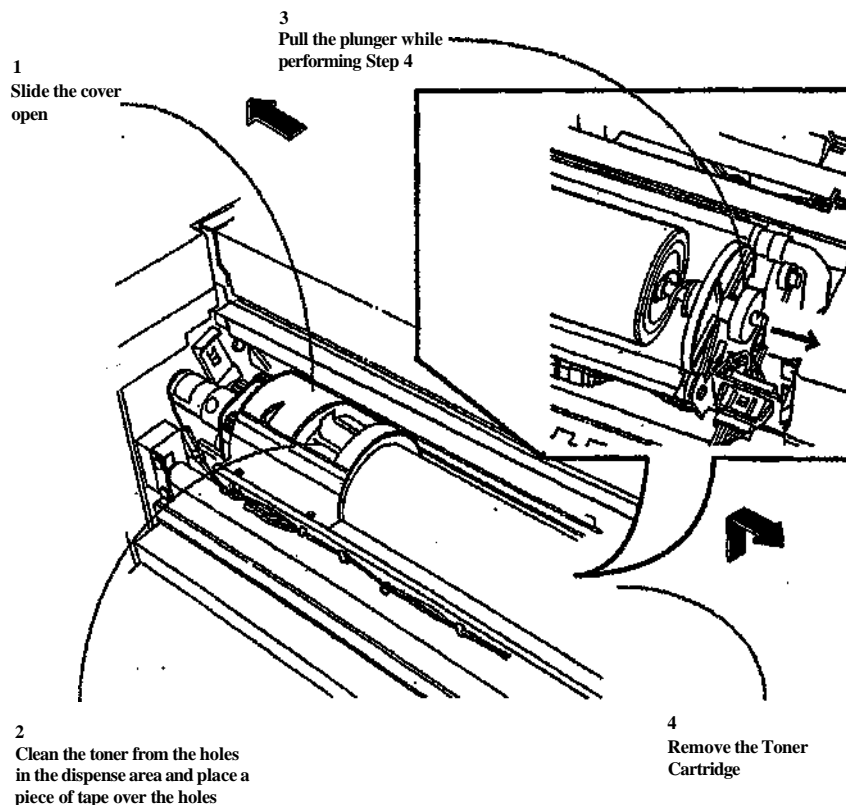


Figure 1. Removing the Toner Cartridge

R1599A

CAUTION

Ensure that the clamp will not cause interference when the Developer Module is removed.

6. (Figure 2): Remove the Developer Module.

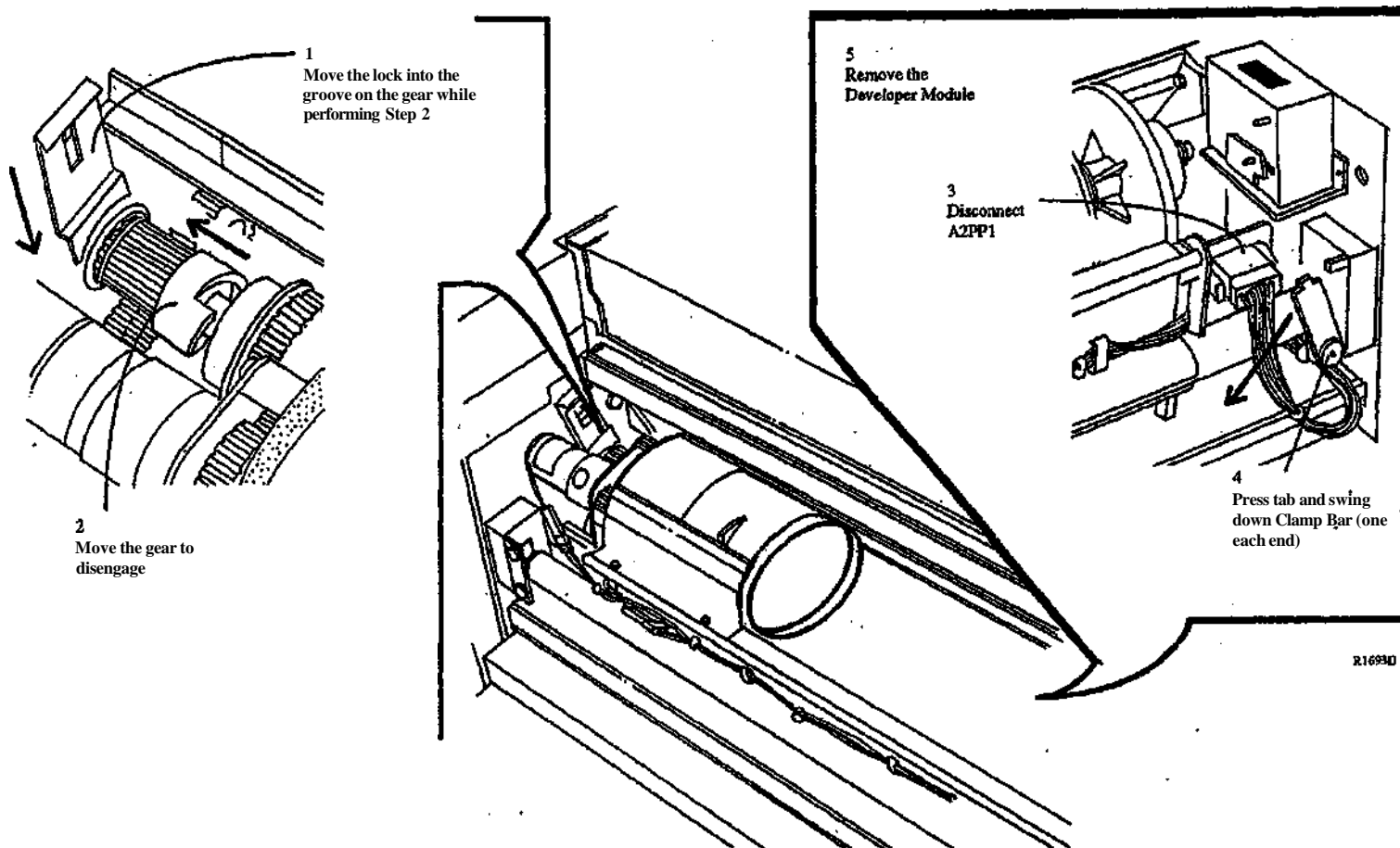


Figure 2. Removing the Developer Module

Replacement

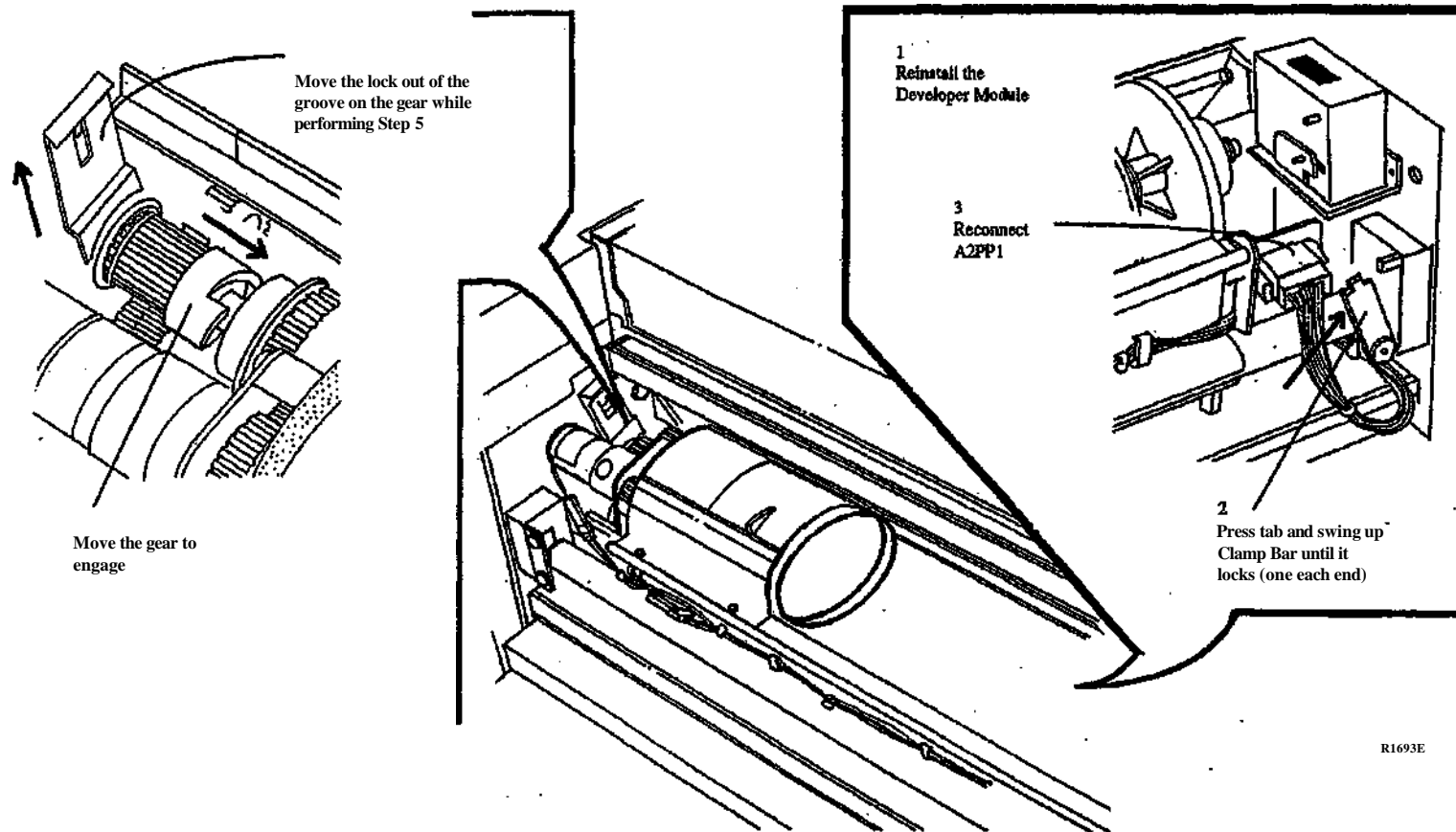
1. (Figure 3): Reinstall the Developer Module.

CAUTION

Ensure that the Developer Module is fully reinstalled in the brackets.

CAUTION

Ensure that the gear is free to engage the Developer Module drive gears.



R1693E

Figure 3. Reinstalling the Developer Module

NOTE: To ensure that the Toner Cartridge is correctly engaged in the Drive Plate, rotate the cartridge in both directions.

2. (Figure 4): Reinstall the Toner Cartridge.

3. If new Developer Material has been installed, perform the Toner Sensor Calibration Code [09216].

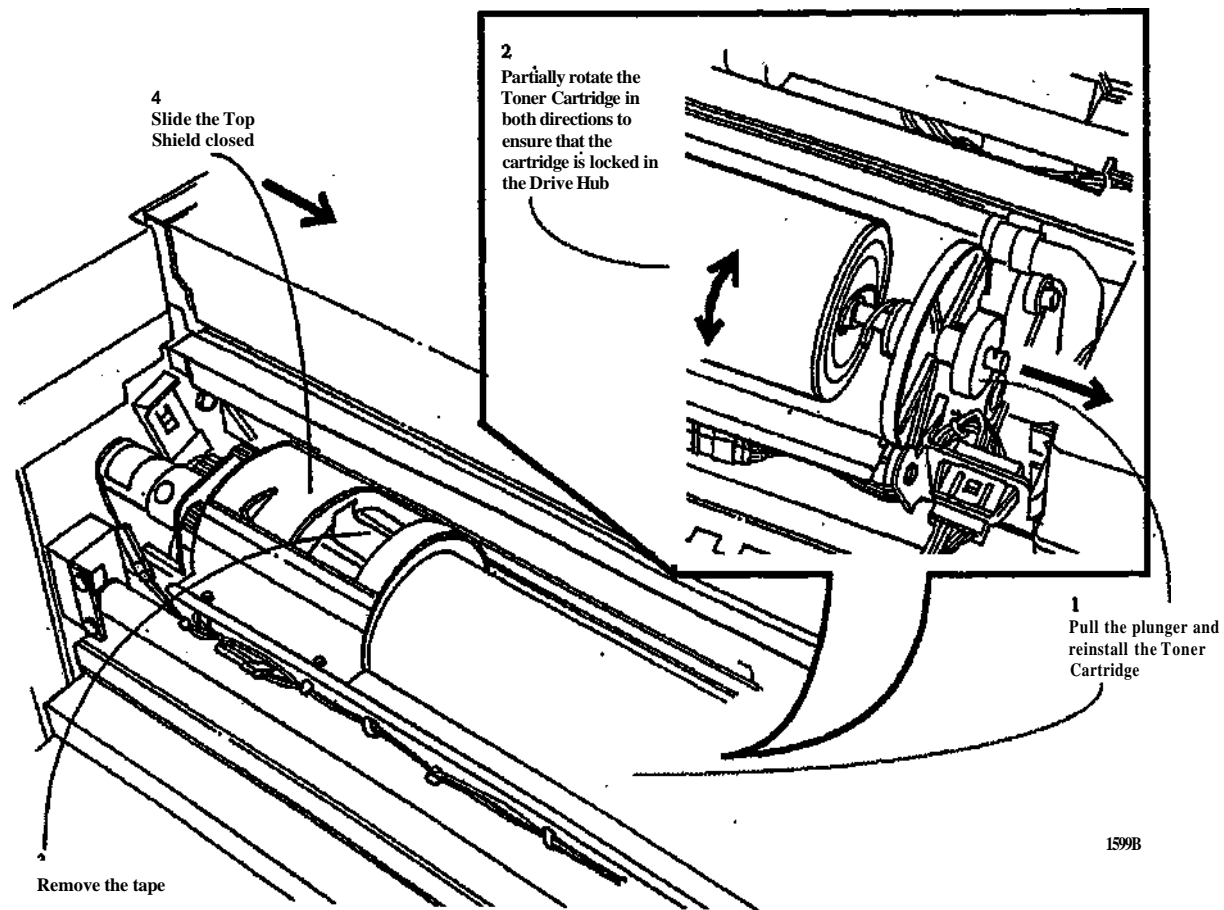


Figure 4. Reinstalling the Toner Cartridge

REP 9.6 Cartridge Drive Motor

Parts List on PL 9.10

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Remove the Developer Module (REP 9.5).

2. (Figure 1): Remove the Cartridge Drive Motor.

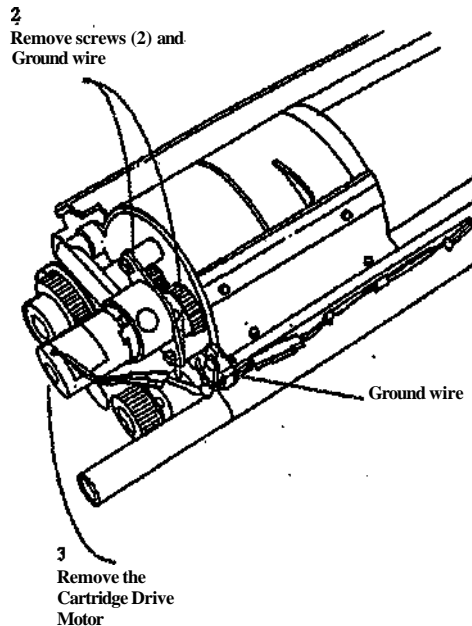


Figure 1. Removing the Cartridge Drive Motor

3. (Figure 2): Remove the Cartridge Drive Motor from the Mounting Plate.

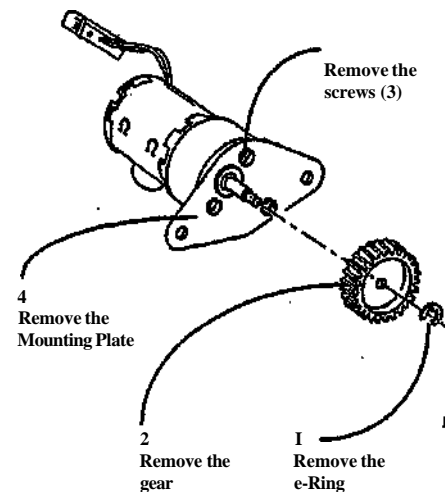


Figure 2. Removing the Cartridge Drive Motor from the Mounting Plate

REP 9.7 Developer Material

Parts List (Refer to Other Tools and Supplies, Machine Consumables, Section 6.)

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Remove the Developer Module (REP 9.5).

CAUTION

Do not rotate the Developer Module in the vertical position. This may cause Developer Material to get into the Toner Cartridge Clutch (located at the end of the Developer Module).

2. Place the Developer Module on a drop cloth on the floor.
3. (Figure 1): Remove the Sump Shield from the Developer Module.

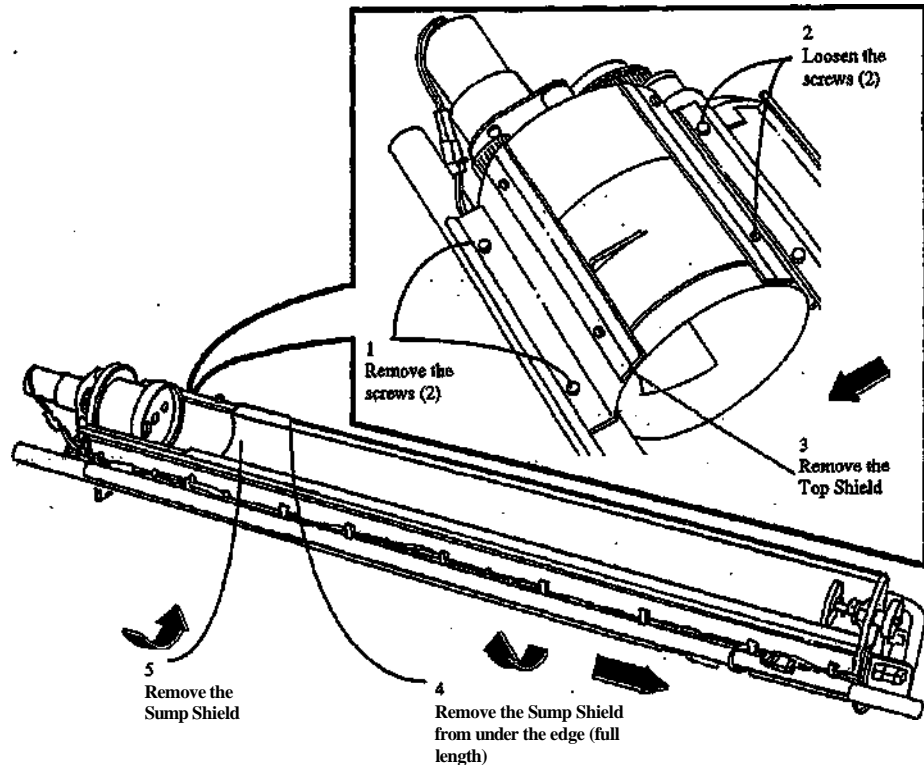


Figure 1. Removing the Sump Shield from the Developer Module

NOTE: Rotate the Developer Module away from the Magnetic Roll in the following step.

4. (Figure 2): Dump the Developer Material.

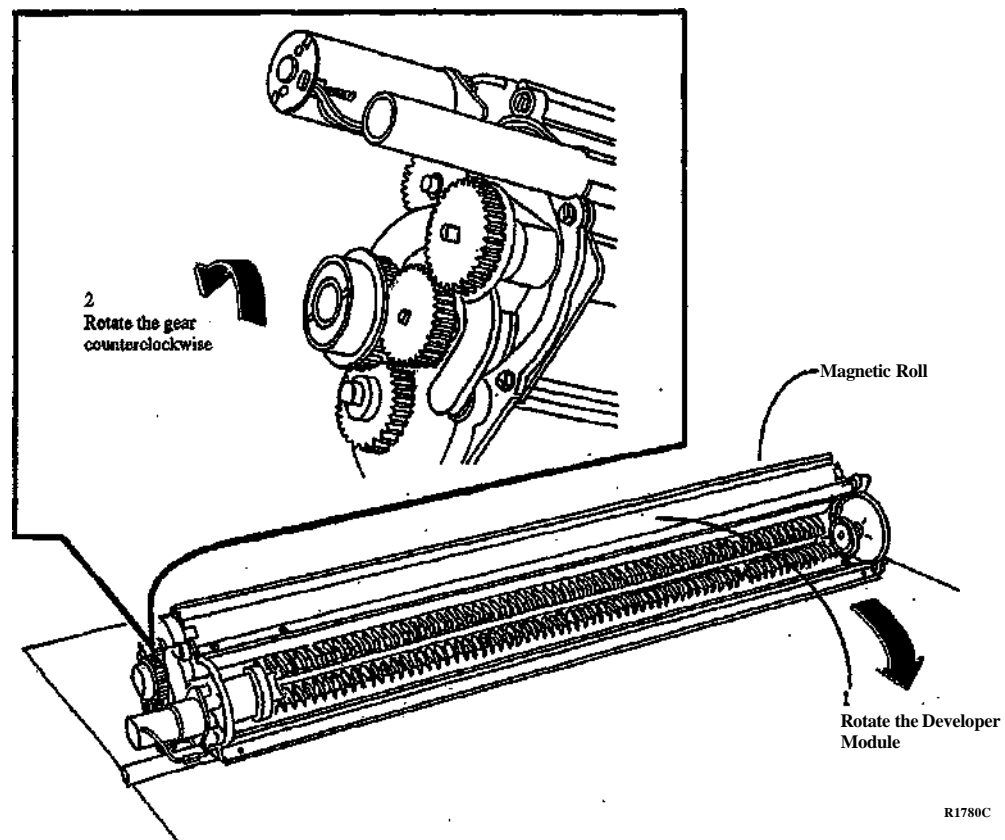


Figure 2. Dumping the Developer Material

CAUTION

Do not rotate the Auger Gears individually more than the slight amount required for removal or to mesh the teeth during reinstallation. If the factory setting of the augers is changed during the procedure, perform the adjustment procedure, Augers (ADJ 9.6).

5. (Figure 3): Remove the Air Pressure Tubes.
6. Using a vacuum cleaner, clean the entire Developer Module, Magnetic Roll, and Air Pressure Tubes thoroughly.

CAUTION

Ensure that the entire length of the tube on the Developer Module is clear of any developer.

7. Using a vacuum, cleaner, clean the housing where the Air Pressure Tubes attach.

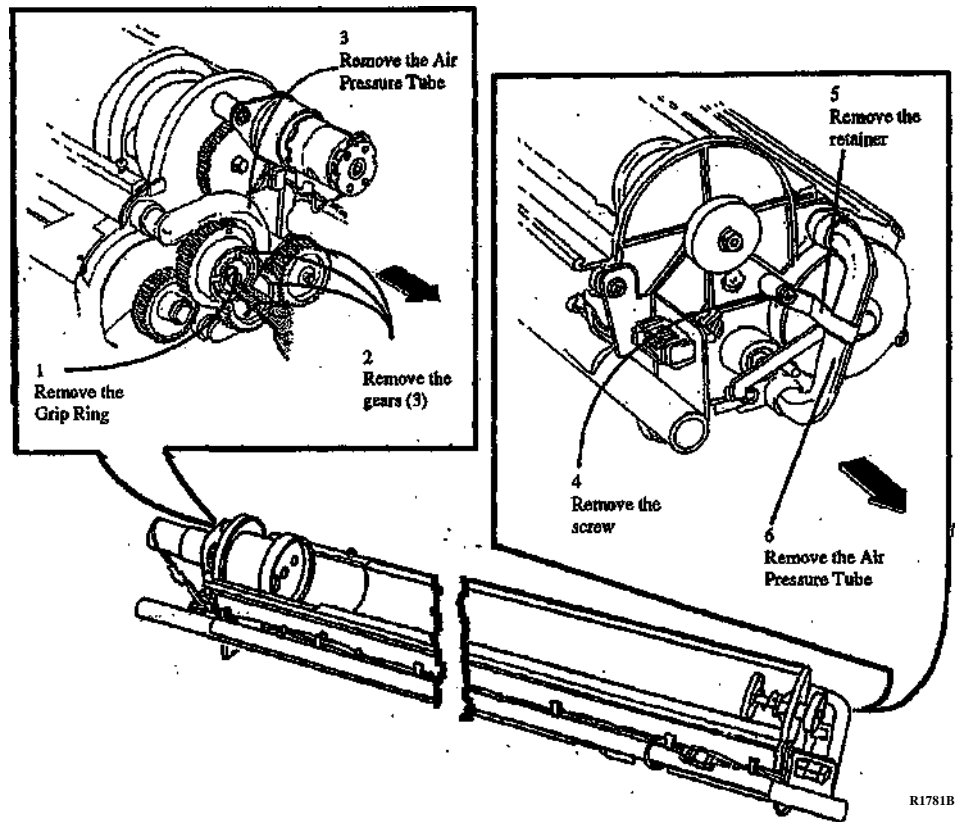


Figure 3. Removing the Air Pressure Tubes

Replacement

NOTE: Pour the Developer Material evenly over the full length of the augers.

1. (Figure 4): Install the Developer Material and record the batch number in the Machine Log.

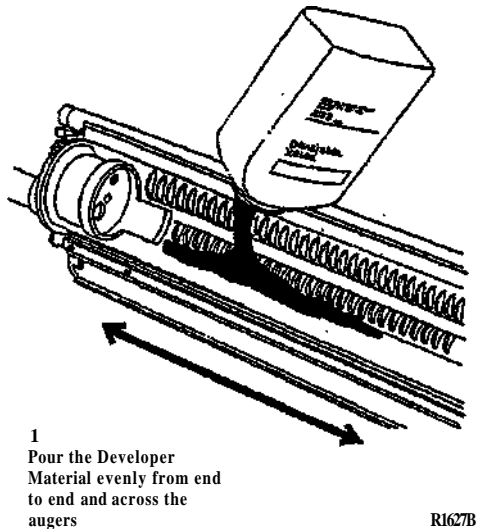


Figure 4. Installing the Developer Material

CAUTION

Do not rotate the Auger Gears individually more than the slight amount required for removal or to mesh the teeth during reinstallation. If the factory setting of the augers is changed during the procedure, perform the adjustment procedure, Augers (ADJ 9.6).

NOTE: The gears must be reinstalled with the flanges as shown to ensure that all the gears are secured.

2. (Figure 5): Reinstall the Air Pressure Tubes.

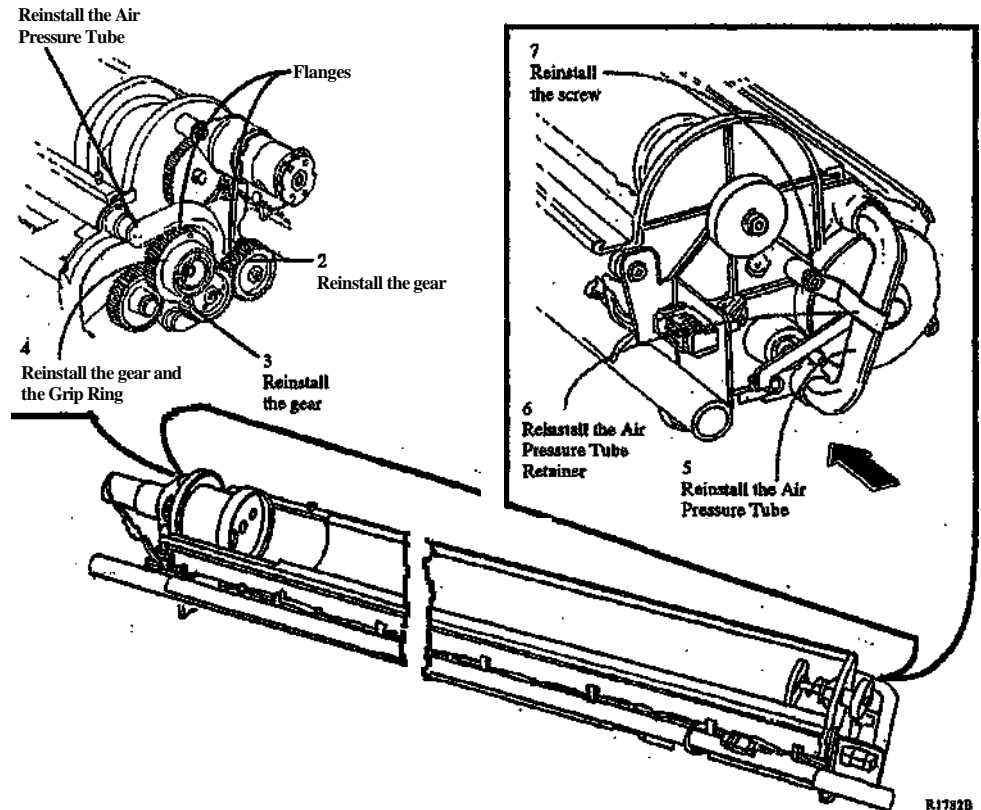


Figure 5. Reinstalling the Air Pressure Tubes

3. (Figure 6): Reinstall the Sump Shield in the Developer Module.

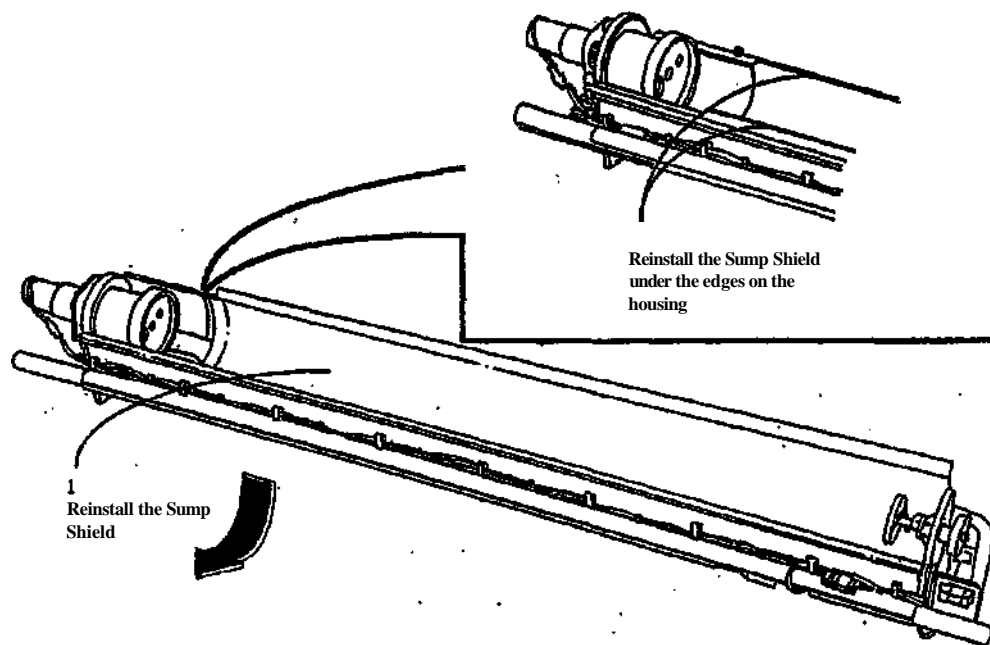


Figure 6. Reinstalling the Sump Shield in the Developer Module

4. (Figure 7): Reinstall the Top Shield, taking care not to overtighten the screws.

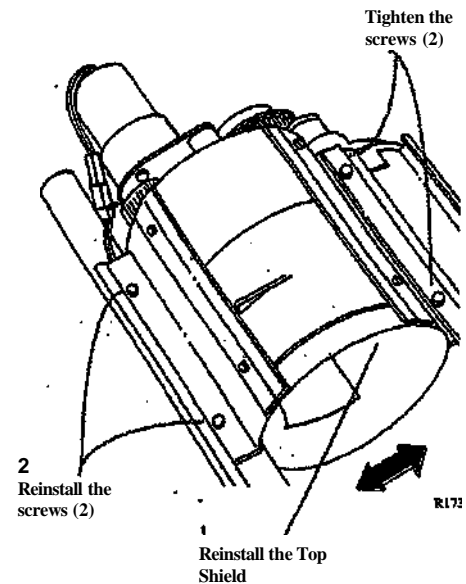


Figure 7. Reinstalling the Top Shield

5. Reinstall the Developer Module (REP 9.5).

NOTE: To ensure that the Toner Cartridge is correctly engaged in the Drive Plate, rotate the cartridge in both directions.

6. (Figure 8): Reinstall the Toner Cartridge.

7. If new Developer Material has been installed, perform Toner Sensor Calibration Code [09216].
8. Perform the Electrostatic Series (ADJ 9.2).

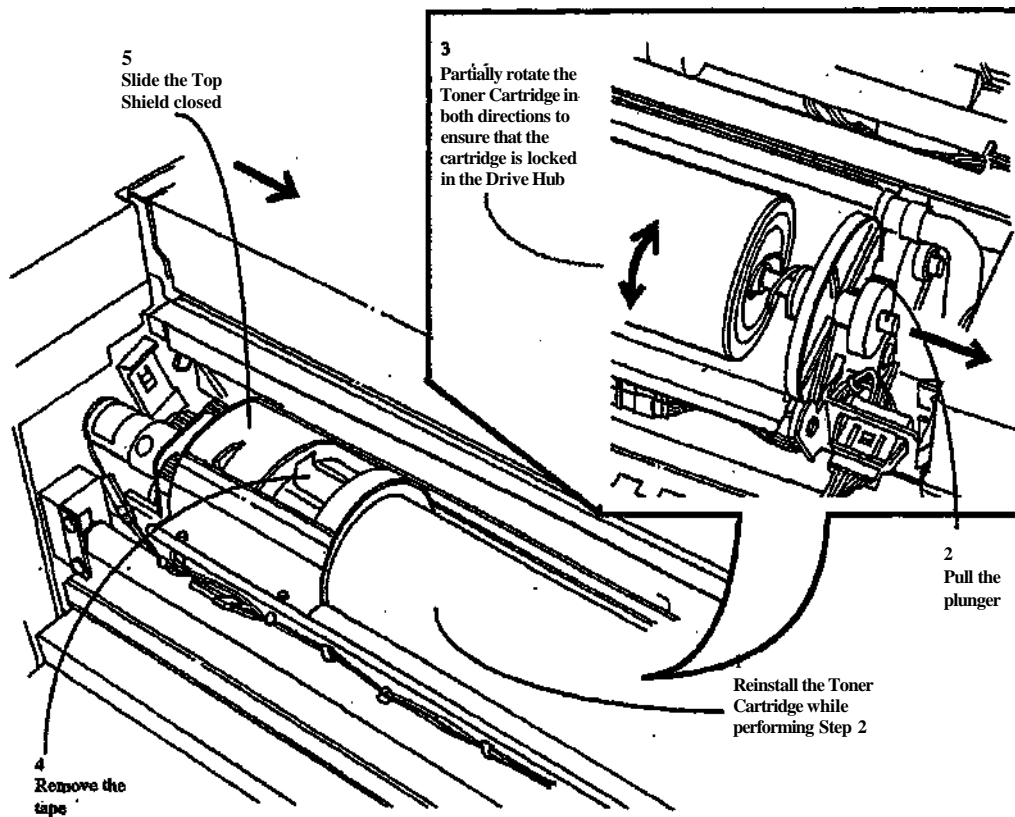


Figure 8. Reinstalling the Toner Cartridge

REP 9.8 Scorotron Pin Kit

Parts List on PL 9.3

NOTE: These are the instructions to install the Scorotron Pin Kit. The kit contains the following items:

- Pin Array
- Torsion Spring (2)
- Container

WARNING

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

Removal

1. Loosen the screws and open the Rear Cover.
2. Raise and latch the Top Cover.
3. Rotate the Image Module to the Service Position.
4. (Figure 1): Remove the Charge Scorotron Assembly from the Printer and place it on a flat surface.

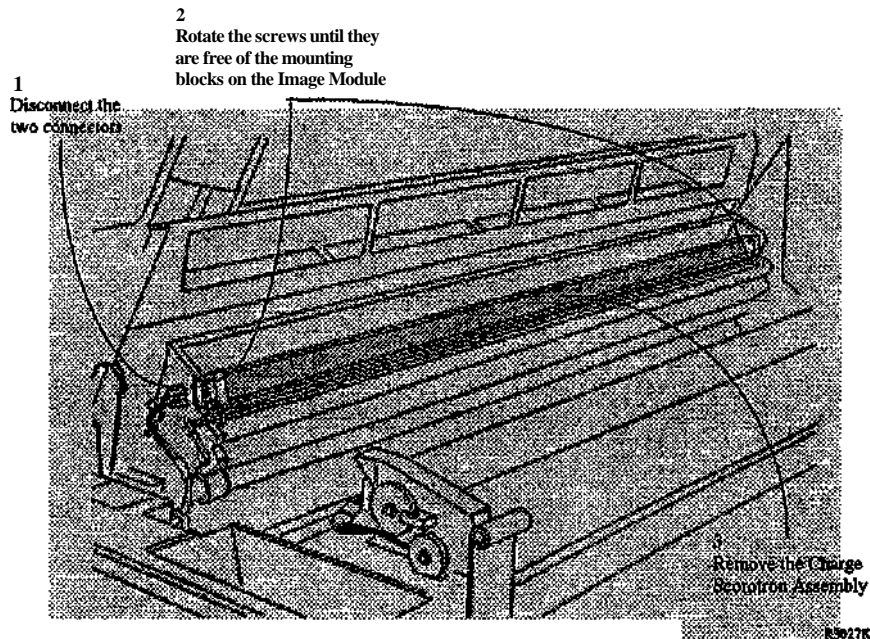


Figure 1. Removing the Charge Scorotron Assembly

5. (Figure 2): Remove the Grid Channel.

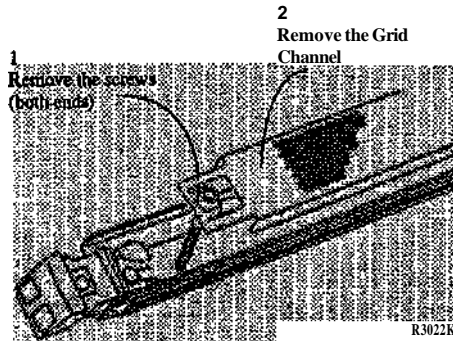


Figure 2. Removing the Grid Channel

WARNING

Disposal of the Pin Array is carefully controlled because it is made of a Beryllium Copper alloy. Package the old Pin Array as a returned part. Also, be especially careful of the very sharp tips on the Pin Array.

6. (Figure 3): Remove the Charge Scorotron Pin Array.
7. Remove the Torsion Springs from the End Blocks.

Replacement

1. Install the Torsion Springs from the repair kit.

CAUTION

Be careful not to damage the tips of the new Pin Array. Bent tips can cause Print Quality problems.

2. Install the Pin Array from the repair kit into the End Blocks.

3. Reinstall the End B locks into the Scorotron Extrusion. Ensure that the Pin Array is positioned in the Center Support (not shown) of the Scorotron Extrusion.
4. After completing the reassembly, package the Pin Array for return.

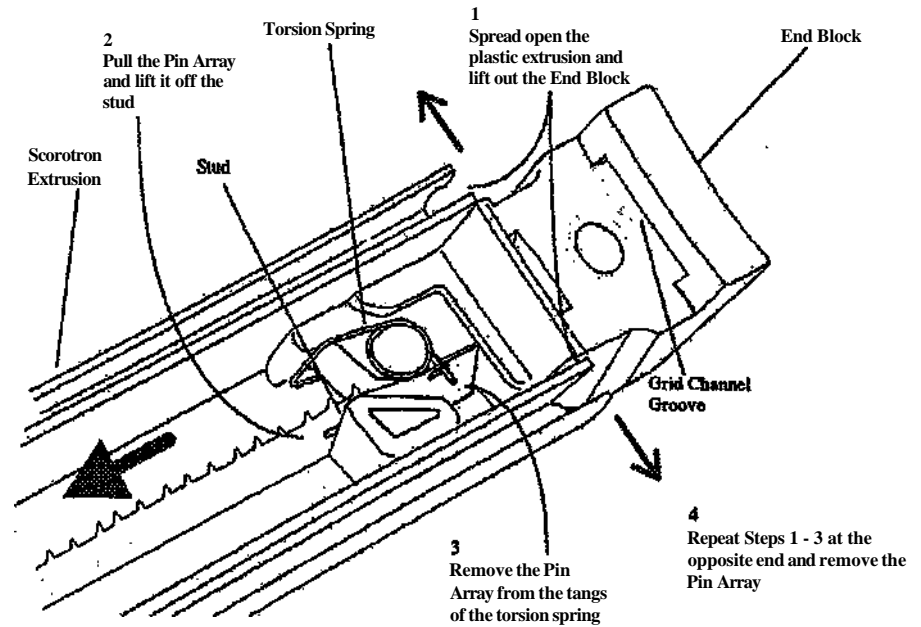


Figure 3. Removing the Charge Scorotron Pin Array

REP 9.9 Transfer/Detack

Corotron

Parts List on PL 9.4

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Loosen the screws and open the Rear Cover.
2. (Figure 1): Lower the Media Transport Cover and remove the Transfer / Detack Corotron.

Replacement

1. Reinstall the Transfer / Detack Corotron against the bottom of the channel, away from the Heat Roll.

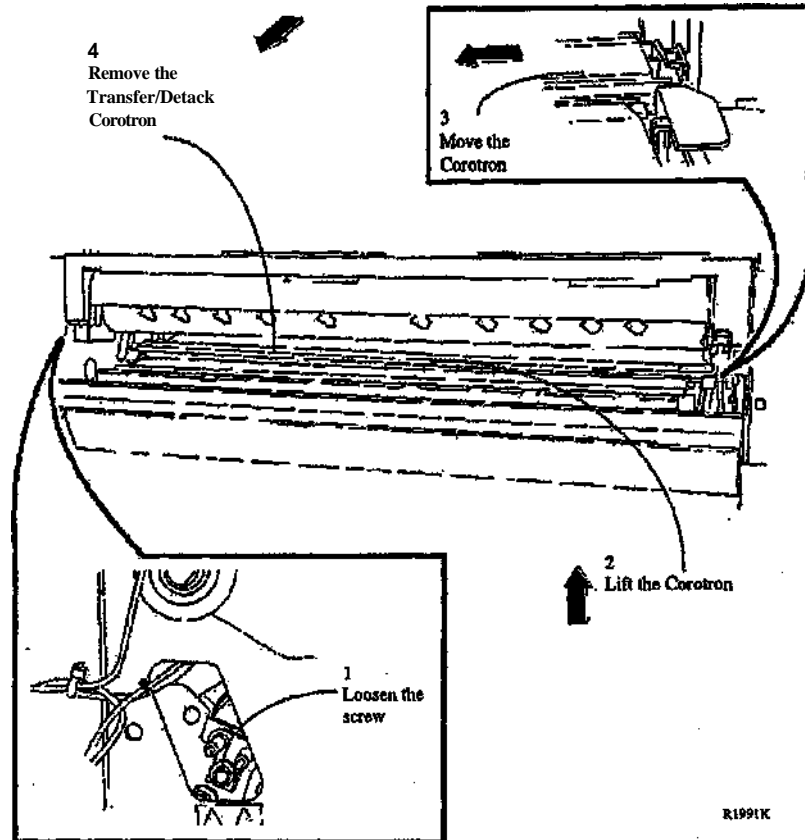


Figure 1. Removing the Transfer / Detack Corotron

REP 9.11 Toner Sensor

Parts List on PL 9.9

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Remove the Developer Module (REP 9.5).

CAUTION

The Developer Material must be removed before removing the Toner Sensor, or there will be a mess.

2. Remove the Developer Material (REP 9.7).
3. (Figure 1): Remove the Toner Sensor and the spacer.

Replacement

1. Reinstall the Toner Sensor and spacer.

CAUTION

If a new Toner Sensor is being installed, new Developer Material must be installed.

2. Reinstall the Developer Material (REP 9.7).

CAUTION

Do not run prints before calibrating the Toner Sensor. Running prints before performing the calibration may cause toner faults or print defects.

3. If a new Toner Sensor has been installed, perform Toner Sensor Calibration Code [09216].
4. Perform the Electrostatic Series (ADJ 9.2).

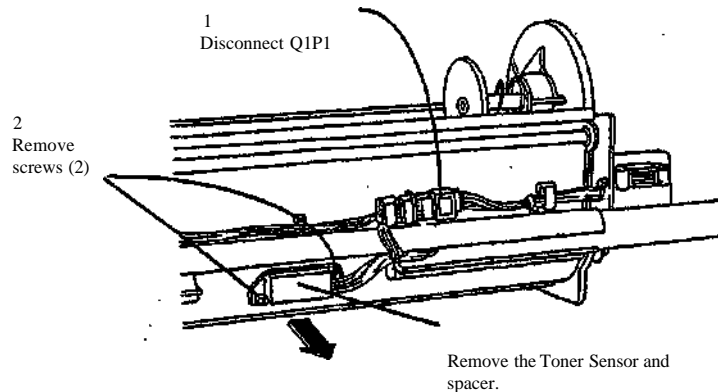


Figure 1. Removing the Toner Sensor

R1489

REP 9.12 Toner Cartridge

Home Sensor

Parts List on PL 9.9

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Remove the Developer Module (REP 9.5).
2. Remove the Cartridge Drive Plate (REP 9.14).

NOTE: The Toner Home Sensor is threaded. The wires must be straightened in order to rotate the sensor for removal.

3. (Figure 1): Remove the Toner Cartridge Home Sensor.

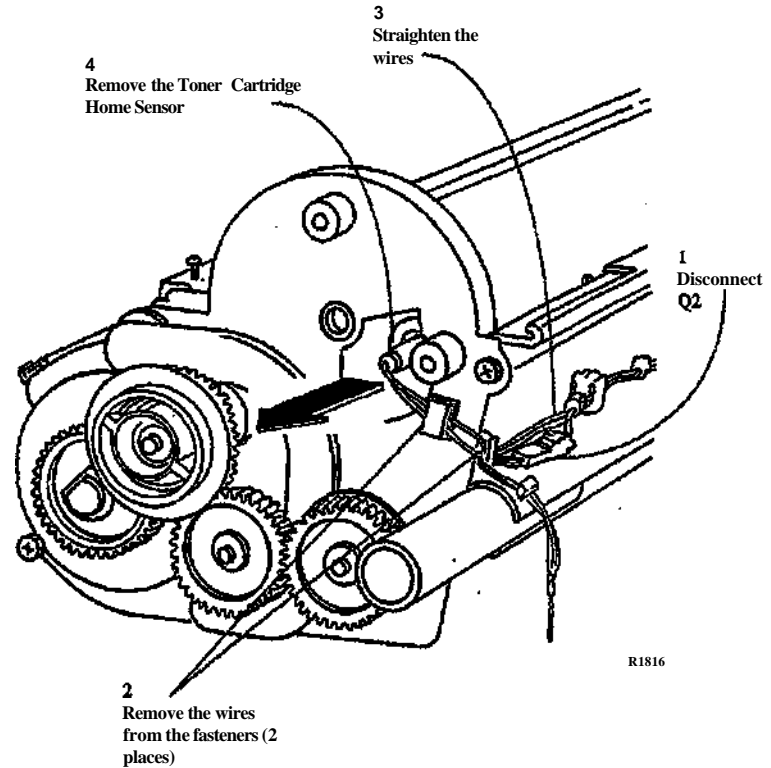


Figure 1. Removing the Toner Cartridge Home Sensor

Replacement

1. Reinstall the Toner Cartridge Home Sensor.
2. Perform the Toner Cartridge Home Sensor Adjustment (ADJ 9.5).

CAUTION

To avoid damage to the Drive Plate Seal, always rotate the drive plate in the direction shown in Figure 3.

3. (Figure 2): Reinstall the Cartridge Drive Plate.

(Figure 3): Reinstall the Top Shield, taking care not to overtighten the screws.

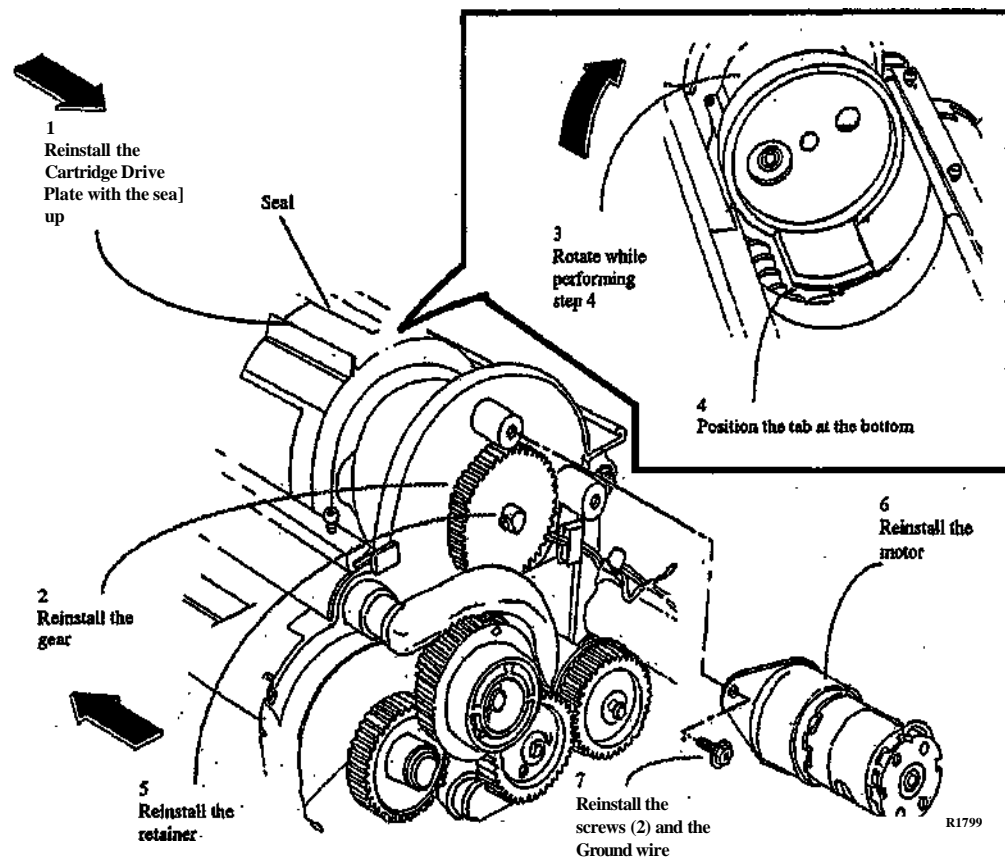


Figure 2. Reinstalling the Cartridge Drive Plate

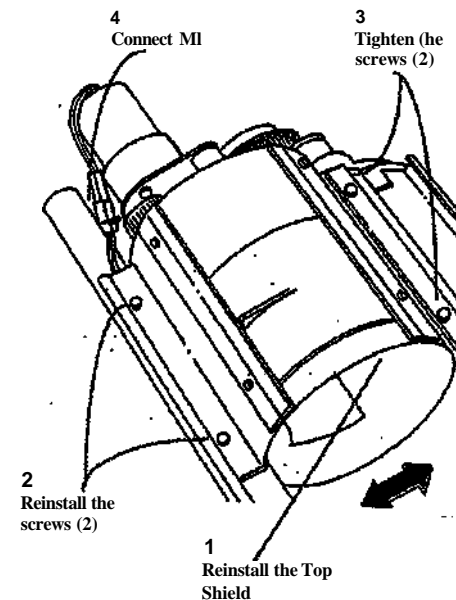


Figure 3. Reinstalling the Top Shield

5. Reinstall the Developer Module (REP 9.5).

REP 9.13 Sump Shield

Parts List on PL 9.9

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Remove the Developer Module (REP 9.5).
2. (Figure 1): Remove the Sump Shield.

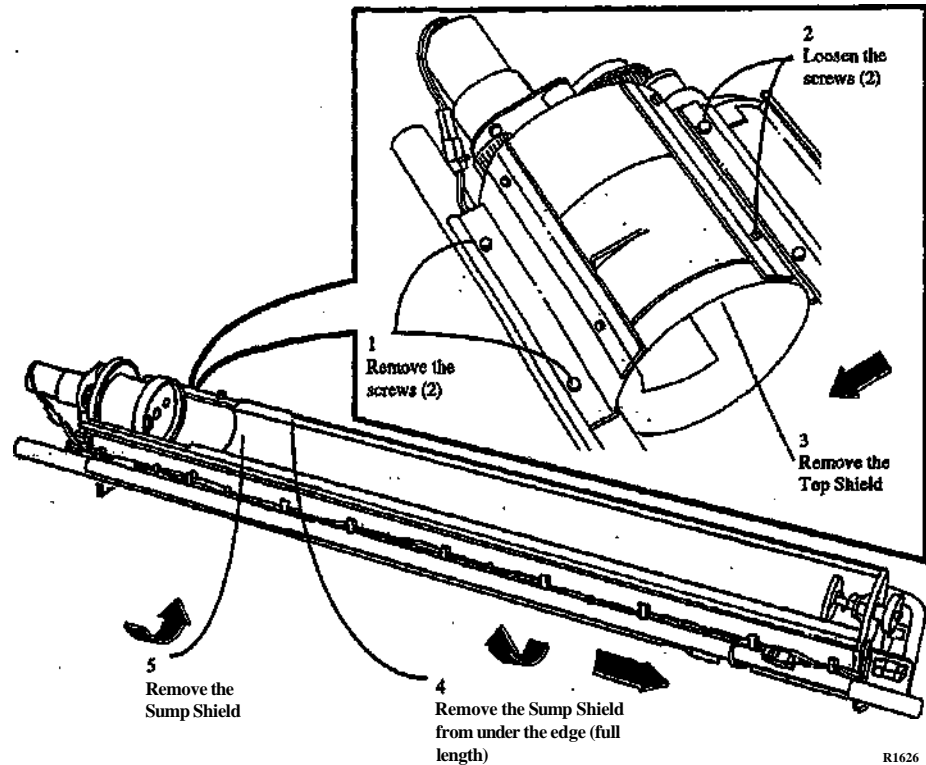


Figure 1. Removing the Sump Shield from the Developer Module

Replacement

CAUTION

Ensure that the full length of the edge of the Sump Shield is under the edge of the housing.

1. (Figure 2): Reinstall the Sump Shield in the Developer Module.

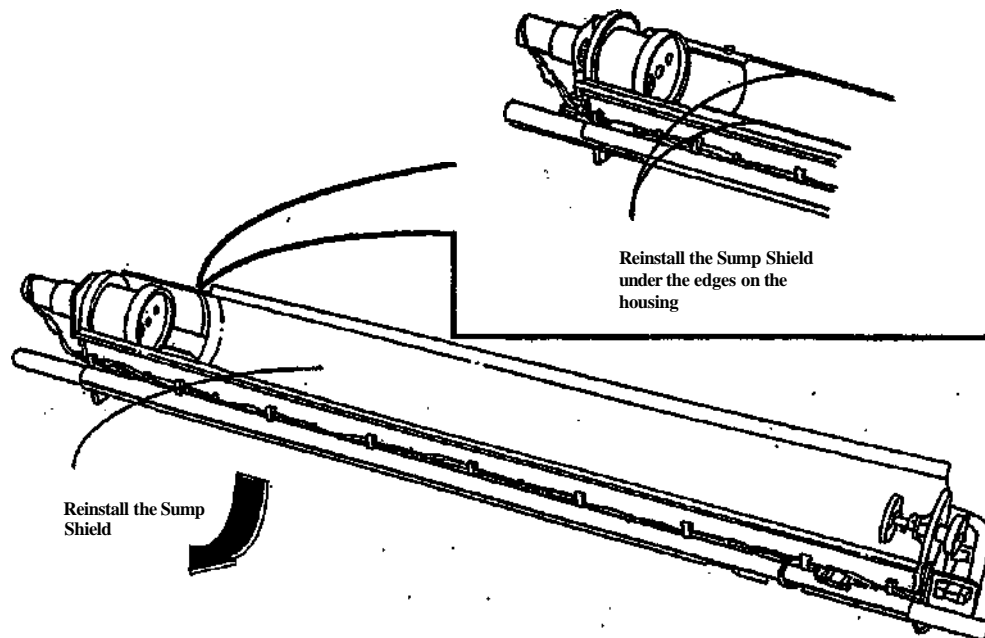


Figure 2. Reinstalling the Sump Shield in the Developer Module

REP 9.14 Cartridge Drive Plate

Parts List on PL 9.9

WARNING

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

.NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Remove the Developer Module (REP 9.5).
2. (Figure 1): Remove the Cartridge Drive Plate.

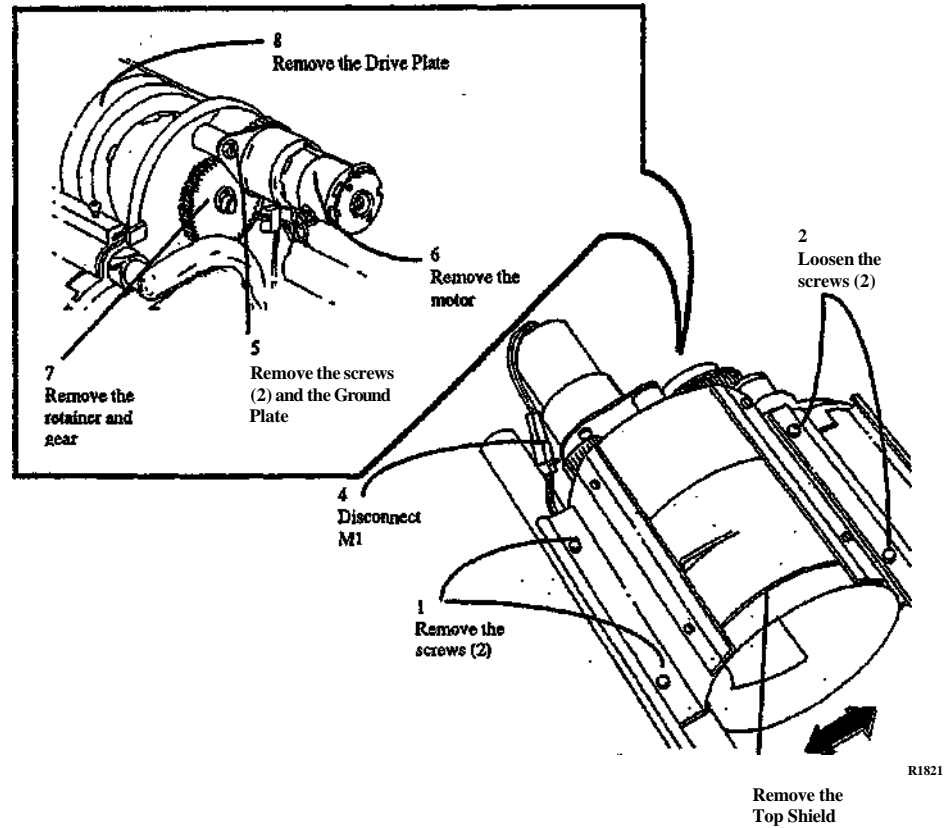


Figure 1. Removing the Cartridge Drive Plate

Replacement

CAUTION

To avoid damage to the Drive Plate Seal, always rotate the drive plate in the direction shown in Figure 2.

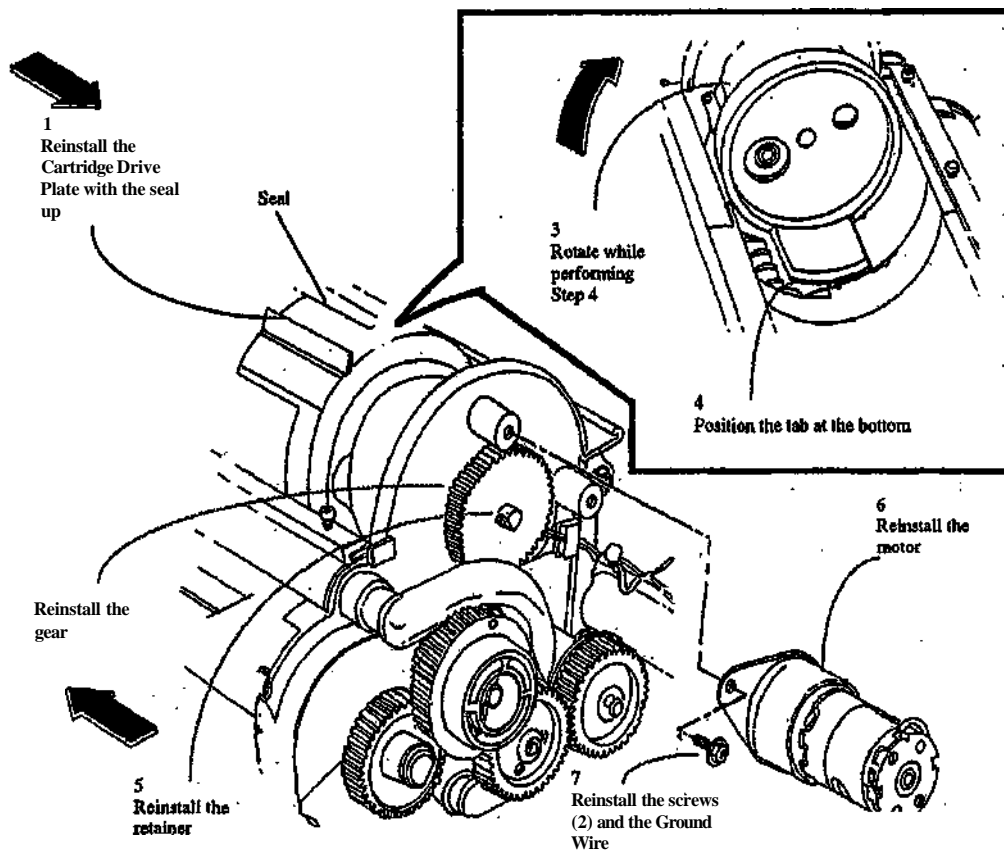


Figure 2. Reinstalling the Cartridge Drive Plate

1. (Figure 2): Reinstall the Cartridge Drive Plate.

2. (Figure 3): Reinstall the Top Shield, taking care not to overtighten the screws.

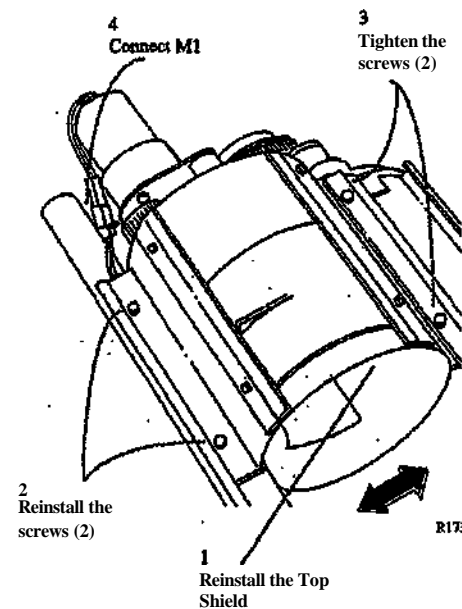


Figure 3. Reinstalling the Top Shield

3. Reinstall the Developer Module.

REP 9.17 Photoreceptor Seal

Parts List on PL 9.5B

WARNING

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

Removal

1. Remove the Drum Assembly (REP 9.2).
2. (Figure 1): Remove the Right-hand Seal, the Left-hand Seal (not shown), and the Photoreceptor Seal.
3. Thoroughly clean the Photoreceptor Seal channel using a vacuum cleaner.

Replacement

1. Replace the Photoreceptor Seal.
 - a. Carefully fold the Photoreceptor Seal along the perforations.
 - b. Slide the Photoreceptor Seal into the channel, smaller side up, so that the edge of the Photoreceptor Seal forms a seal with the inside lip of the channel.
 - c. Using a soft, straight tool (a piece of shimstock works well), carefully push the seal into the channel, across the entire width of the Xerographic Module.
2. Reinstall the Right-hand Seal.
 - a. Insert the red stripe end of the Right-hand Seal underneath the fold of the Photoreceptor Seal.
 - b. Install the seal fuzzy side up.
 - c. Ensure that the seal is flush against the Xerographic Module Frame.
3. Reinstall the Left-hand Seal in the same manner.

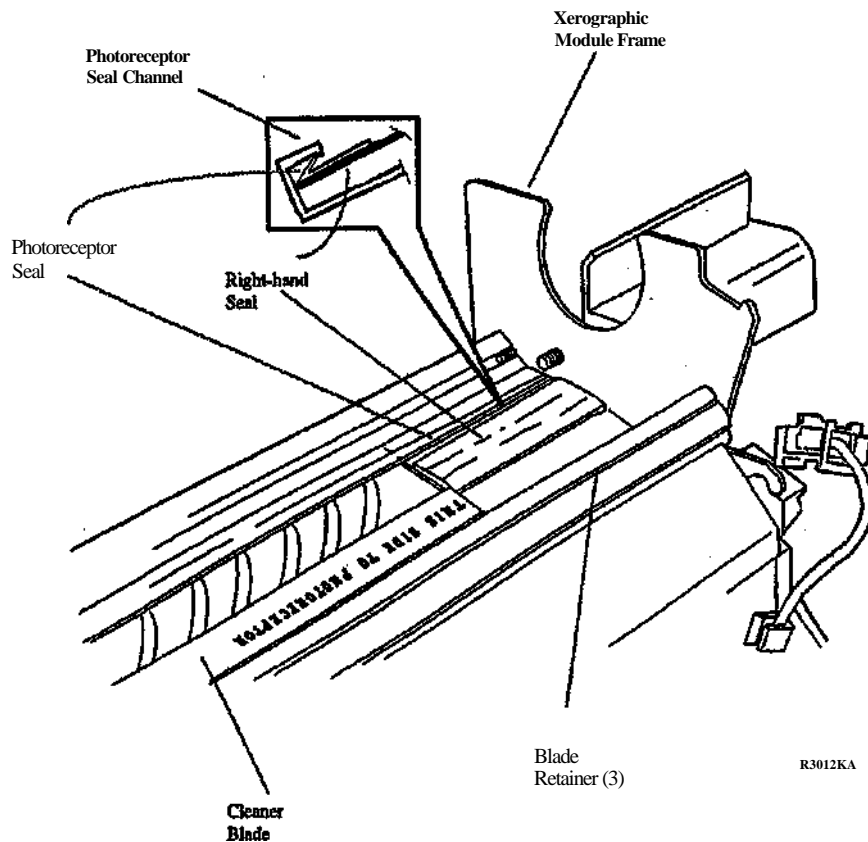


Figure 1. Removing and Replacing the Photoreceptor Seal

REP 9.18 Air Pressure Tubes

Parts List on PL 9.9, 9.10

WARNING

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

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Remove the Developer Module (REP 9.5).

CAUTION

Do not rotate the Auger Gears individually more than the slight amount required for removal or to mesh the teeth during reinstallation. If the factory setting of the augers is changed during the procedure, perform the adjustment procedure, Augers (ADJ 9.6).

2. (Figure 1): Remove the Air Pressure Tubes.
3. Using a vacuum cleaner, remove the impacted Developer Material from the Housing where the Air Pressure Tubes are attached. Pay special attention to the inside of the bottom channel.

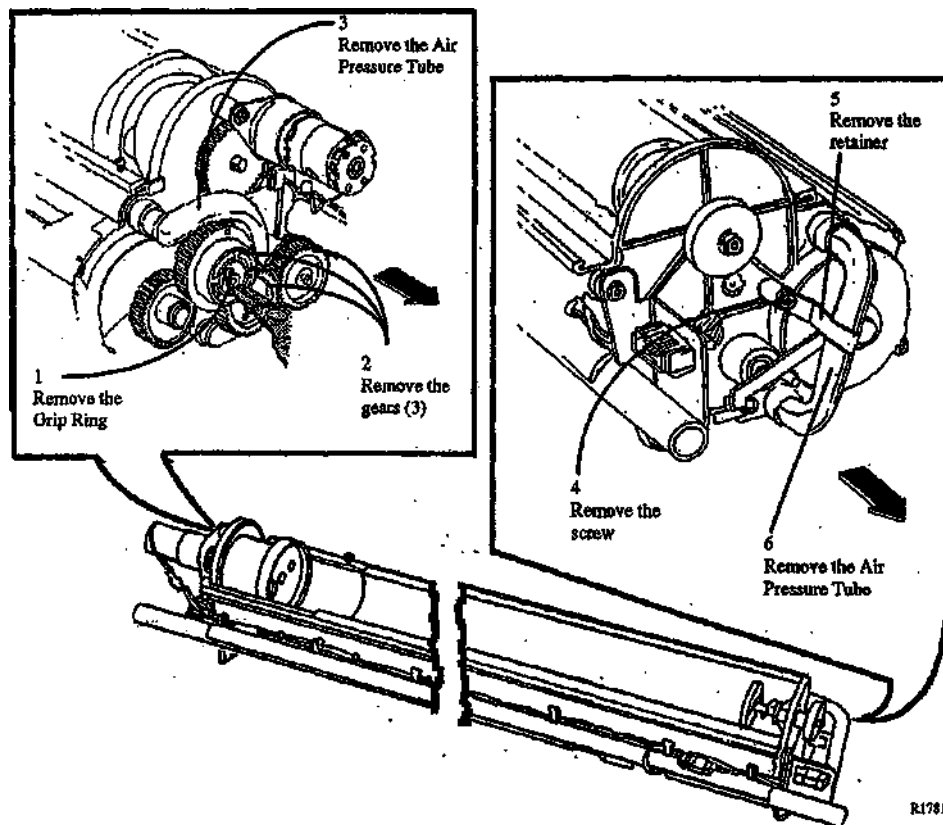


Figure 1. Removing the Air Pressure Tubes

Replacement

CAUTION

Do not rotate the Auger Gears individually more than the slight amount required for removal or to mesh the teeth during reinstallation. If the factory setting of the augers is changed during the procedure, perform the adjustment procedure, Augers (ADJ 9,6).

NOTE: The gears must be reinstalled with the flanges as shown in order to ensure that all the gears are secured.

1. (Figure 2): Reinstall the Air Pressure Tubes.

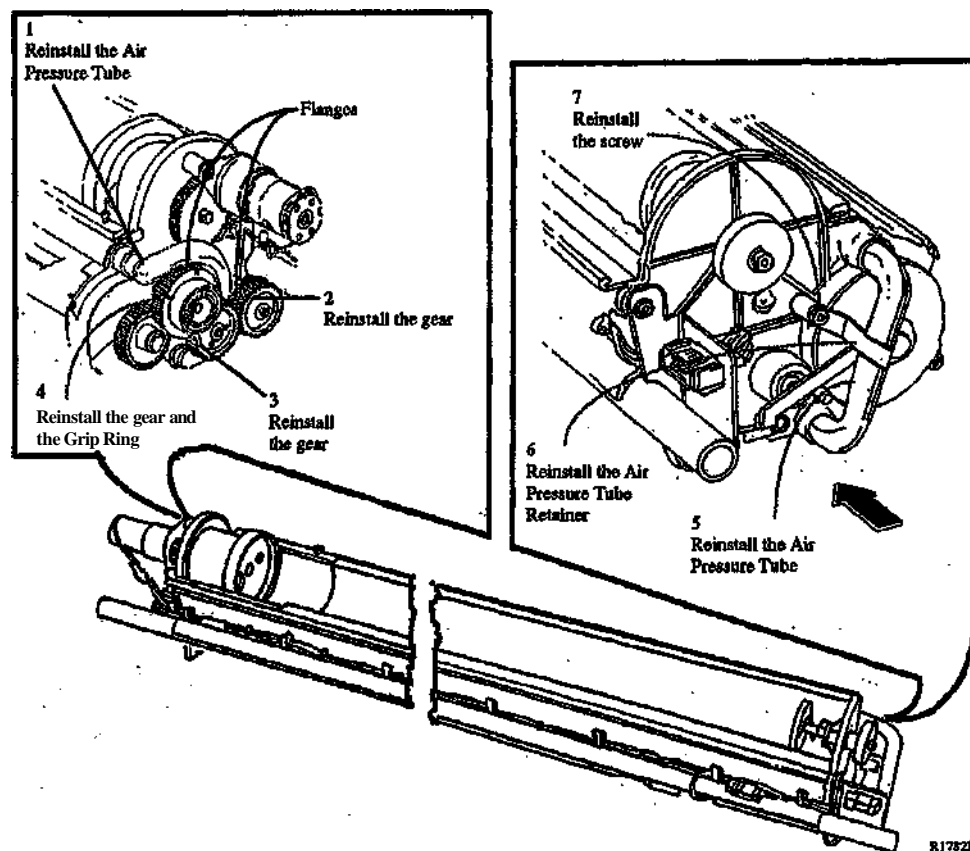


Figure 2. Reinstalling the Air Pressure Tubes

REP 9.19 Roller Kit

Parts List on PL 9.3

NOTE: These are the instructions to install Roller Kit 600K58740. The kit contains the following items:

- Rollers (2)
- Pins (2)

WARNING

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

Removal

1. Raise and secure the Top Cover.
2. Open the Image Module.
3. (Figure 1): Using pliers, pull out the pin and remove the roller.

Replacement

1. Replace the roller and pin with parts from the kit.
2. Repeat the procedure at the rear of the Image Module.

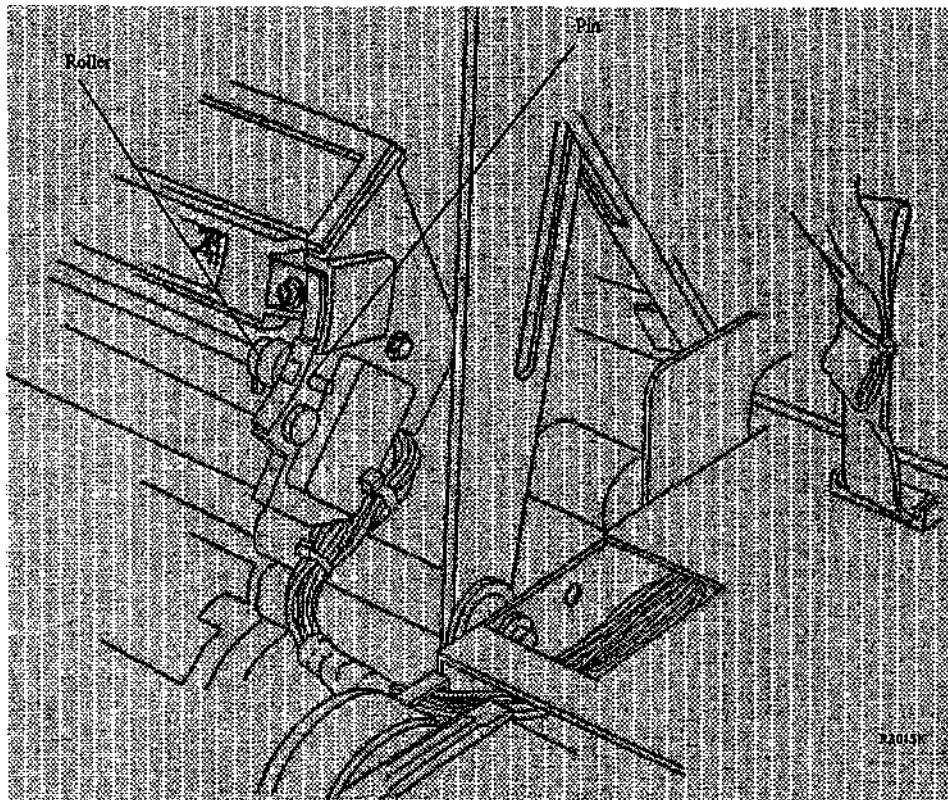


Figure 1. Removing the Front Roller

REP 9.20 Image Module

Parts List on PL 9.3

NOTE: These are the instructions to install the Image Module Assembly Kit 600K58760. The kit contains the following:

- Image Module Assembly

WARNING

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

Removal

1. Remove the Developer Module (REP 9.5).
2. Remove the Developer Baffle (PL 9.8).
3. Remove the following:
 - a. Rear Door (PL14.1)
 - b. Front Door (PL14.2)
 - c. Right Side, Left Lower Cover (PL 14.2)
 - d. Right Side, Right Lower Cover (PL 14.2)
 - e. Right Side, Left Cover (three screws, two top, one bottom) (PL 14.2)
 - f. Right Side, Right Cover (three screws, one top, two bottom) (PL 14.2)
4. Remove the High Voltage Power Supply (REP 3.2).

NOTE: In the following steps, cut cable ties as necessary in order to remove the harness,

5. (Figure 1): Prepare to remove the Top Cover (Front).

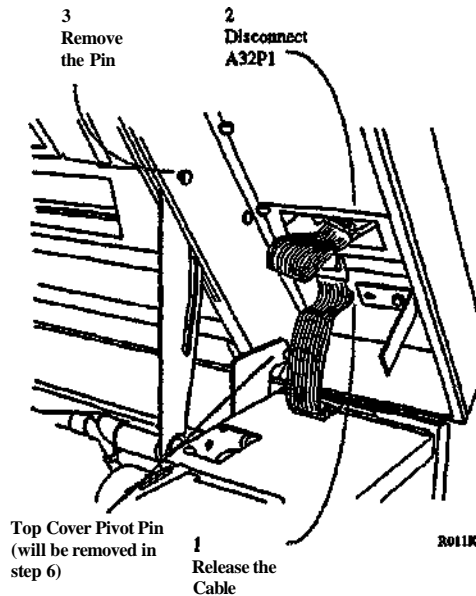


Figure 1. Preparing to Remove the Top Cover (Front)

NOTE: (Figure 2): Observe the way that the Top Cover Pivot Pin engages the hole in the Interlock Plate. This may be a difficult area during reassembly.

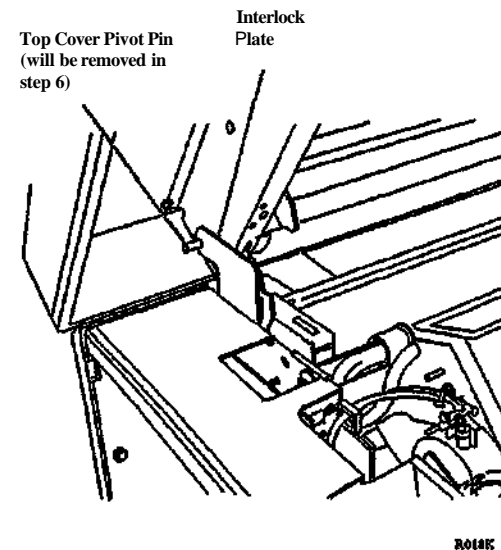


Figure 2. Top Cover Interlock Plate

6. Close the Top Cover, open the Developer Module Cover, and remove the two pivot pins shown in Figure 1 and Figure 2.
7. Close the Developer Module Cover and liftoff the Top Cover, being careful to disengage the small pin from the Interlock Plate.

8. Open the Cutter Drawer.
9. (Figure 3): Disconnect the Video Cable Connector J307A from the Main PWB and push the connector through the hole in the frame.

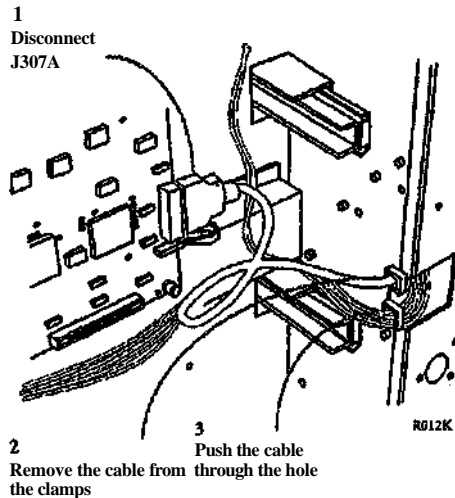


Figure 3. Disconnecting the Video Cable

10. (Figure 4): Release the Video Cable from the cable clamps and push it through the hole in the frame.

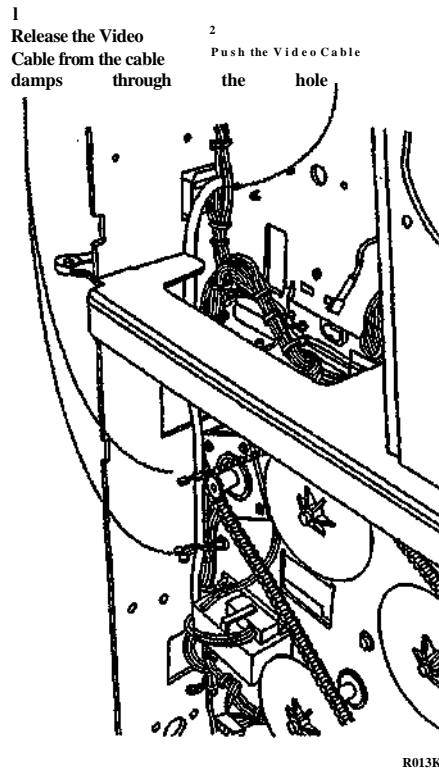


Figure 4. Preparing the Video Cable for Removal

11. (Figure 5): Release the Video Cable from the cable clamps and pull it through the hole in the frame.

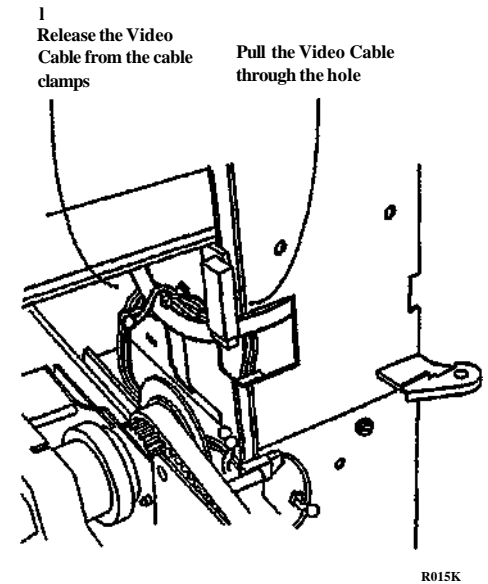


Figure 5. Preparing the Video Cable for Removal

12. (Figure 6): Continue to pull the Video Cable through the hole after releasing it from the cable guides.

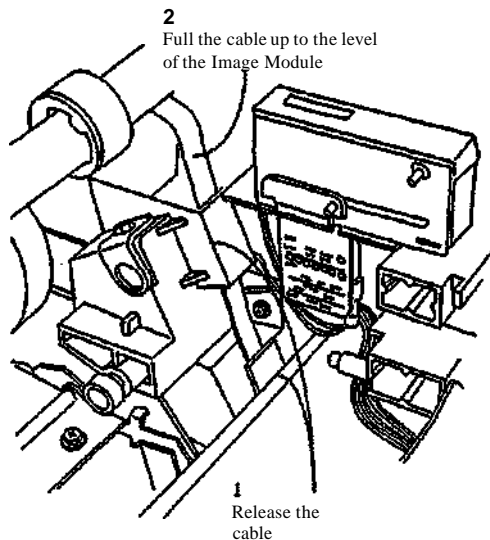


Figure 6. Preparing the Video Cable

13. (Figure 7): Disconnect A5P2 from the Low Voltage Power Supply and release the harness from the cable clamps.

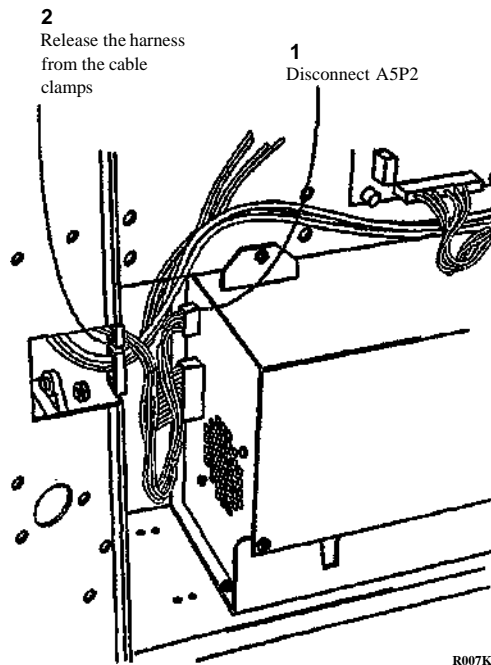


Figure 7. Preparing the Harness for Removal

14. (Figure 8): Disconnect the Ground Wire and release the harness from the cable clamps.

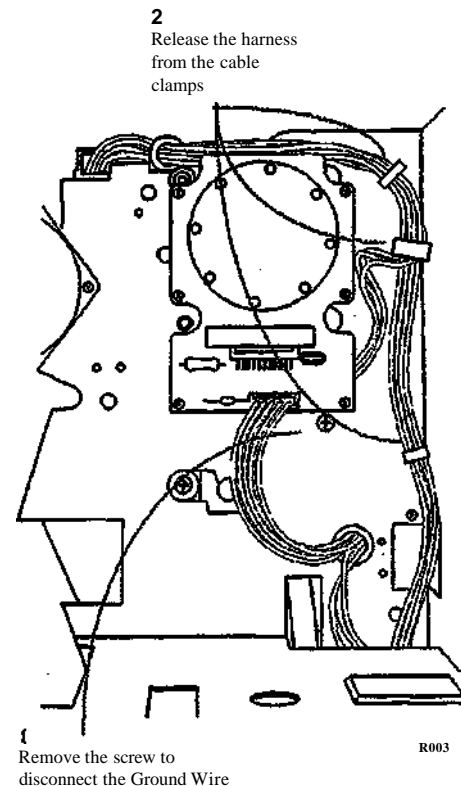
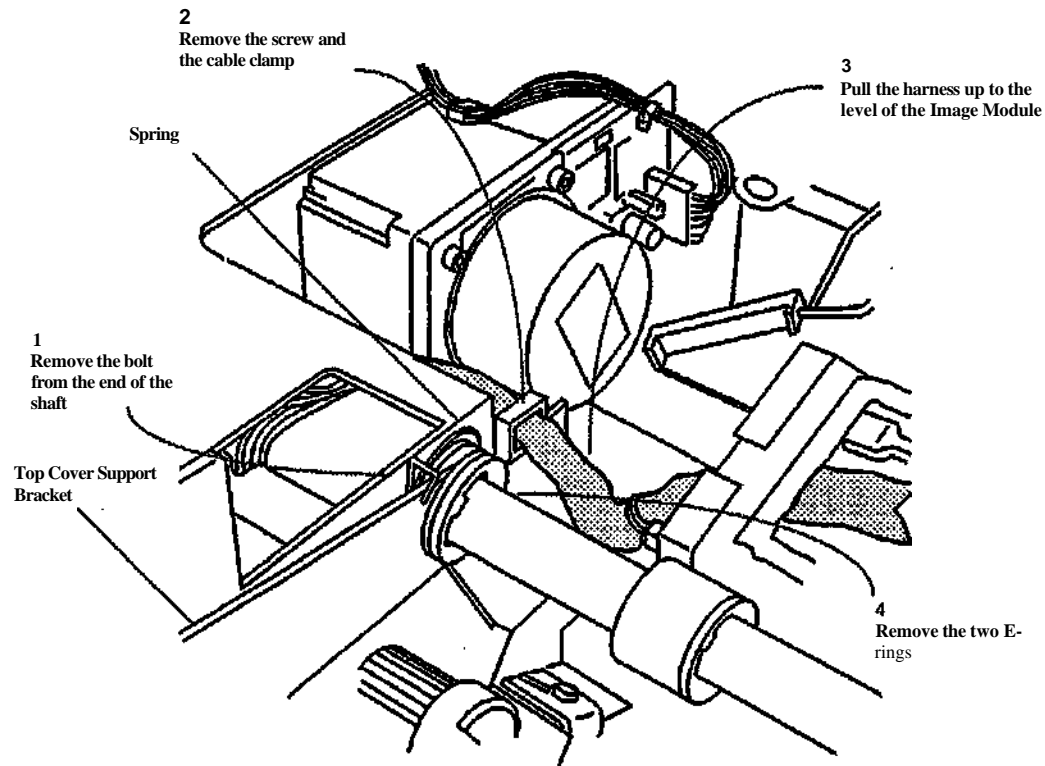


Figure 8. Preparing the Harness for Removal

NOTE: Observe the way that the spring rests on the frame, underneath the cable clamp. This is how the reassembled parts must fit.

15. (Figure 9): Complete the removal preparation on the front area of the Image Module Assembly.



R004K

Figure 9. Preparing to Remove the Image Module Assembly (View looking at the Front from the Right Side)

16. (Figure 10): Continue to pull the Video Cable through the hole after releasing it from the cable guides.
17. Lift out the Image Module Assembly / Pivot Bar combination.

Replacement

1. Reverse the removal steps for replacement of the Image Module Assembly.
2. Perform Electrostatic Series (ADJ 9.2).

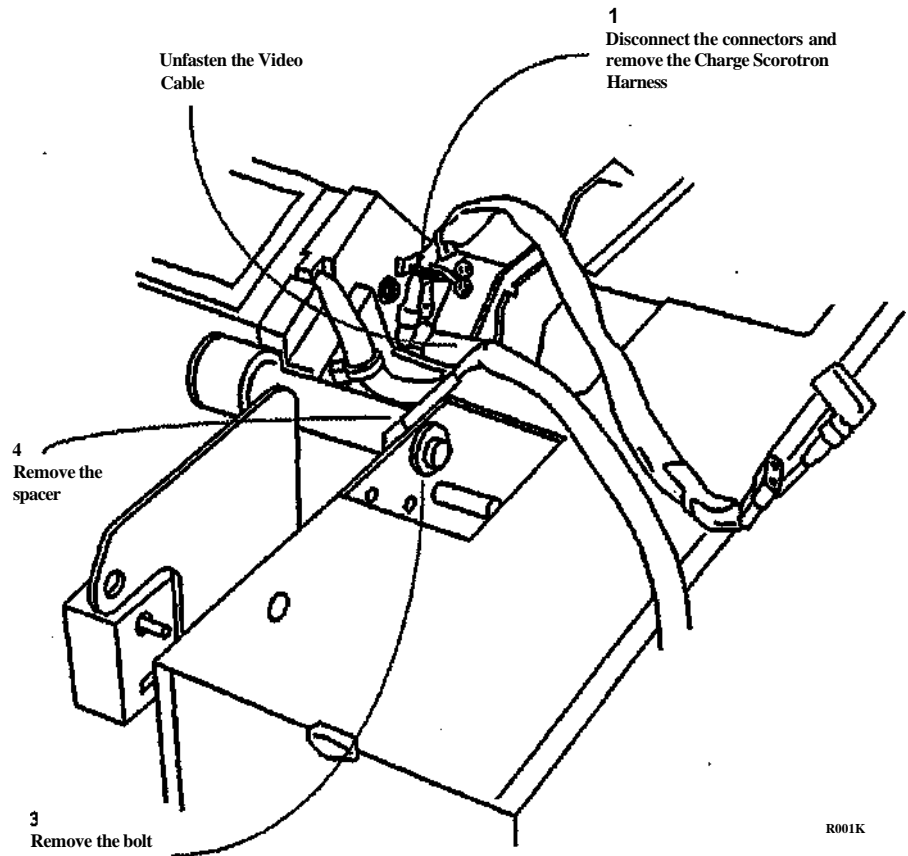


Figure 10. Preparing to Remove the Image Module Assembly (View looking at the Rear from the Right Side)

REP 10.1 Heat Rod

Parts List on PL 10.2

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser Assembly to cool before the procedure is performed.

Removal

1. Remove the Stripper Finger Assembly.
2. Perform the Xerographic Module procedure (REP 9.1) through Step 11. This will leave the Xerographic Module at the Service Position, handles installed, and the Drum Assembly removed.

NOTE: In the following steps, "Left" and "Right" describe machine locations as observed when you are facing the Xerographic Module at the left side of the Printer.

3. (Figure 1): Disconnect the Heat Rod (Right Side).

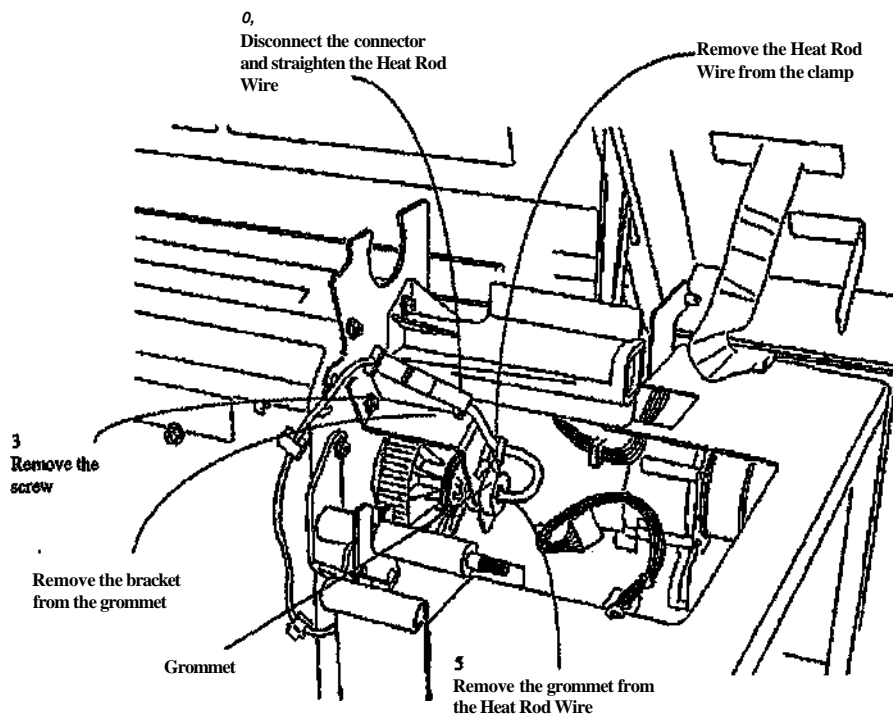


Figure 1. Removing the Bracket and Grommet (Right Side)

4. (Figure 2): Disconnect the Heat Rod and remove the bracket (Left side).

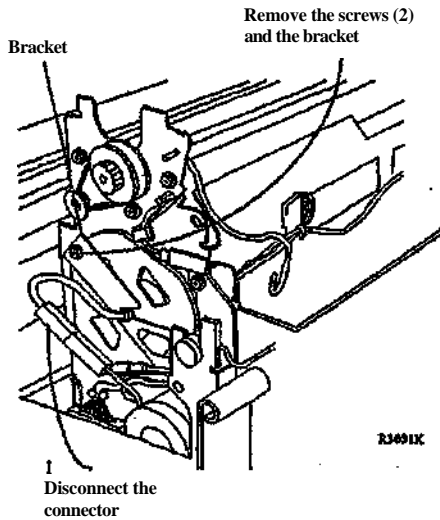


Figure 2. Removing the Bracket (Left side)

CAUTION

*Wear gloves or wrap a sheet of paper around the Heat Rod when handling **the Heat Rod**. Do not touch the glass section of the Heat Rod Oil from fingers can cause damage to the Heat Rod.*

5. (Figure 3): Remove the Heat Rod.

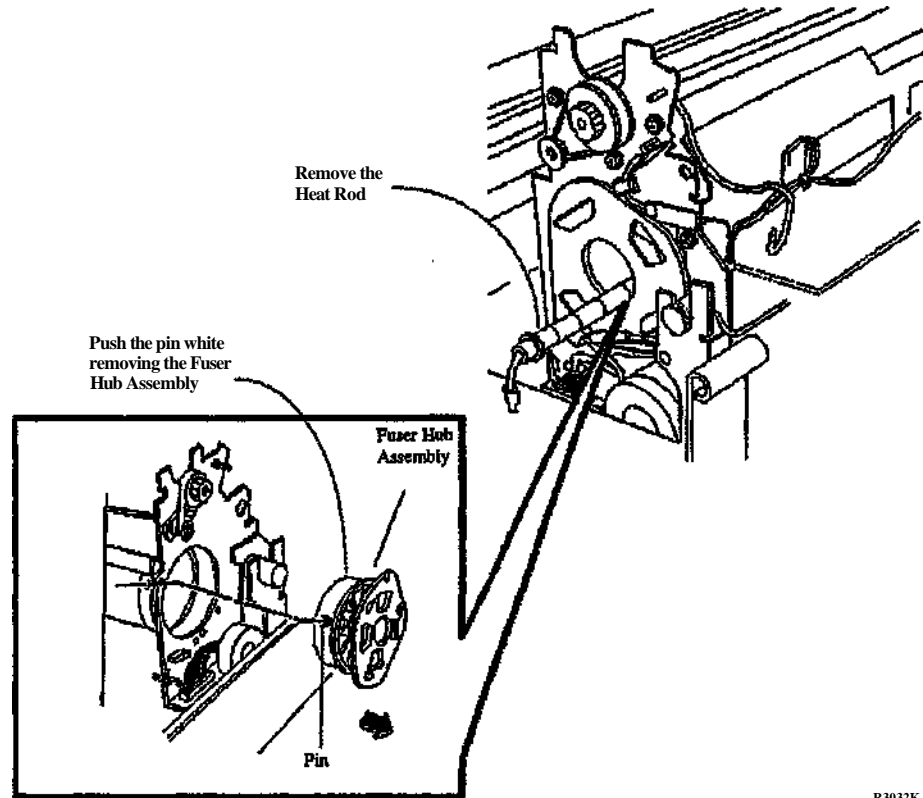


Figure 3. Removing the Heat Rod and Fuser Hub Assembly

Replacement

CAUTION

Wear gloves or wrap a sheet of paper around the Heat Rod when handling the Heat Rod. Do not touch the glass section of the Heat Rod. Oil from fingers can cause damage to the Heat Rod.

.1. (Figure 4): Reinstall the Heat Rod.

NOTE: Do not remove the connectors from the wires on the ends of the Heat Rod.

- a. Insert the red connector into the Heat Roll.
- b. While looking into the roll, push the red connector through the hole in the Fuser Drive Gear at the opposite end.
- c. If the previous step is too difficult, use the rod that secures the Fabric Guide as a tool. Insert that rod through the right side of the Heat Roll, secure the red connector to it, and pull the Heat Rod through the Heat Roll.

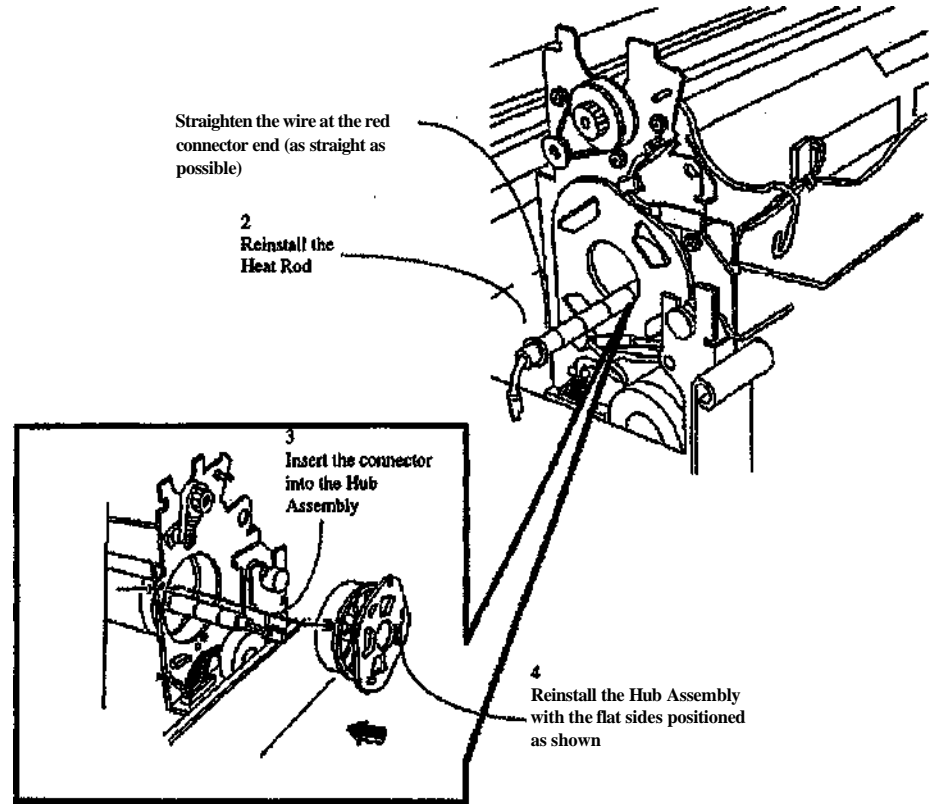


Figure 4. Reinstalling the Heat Rod

2. (Figure 5): Reinstall the bracket (Left side).

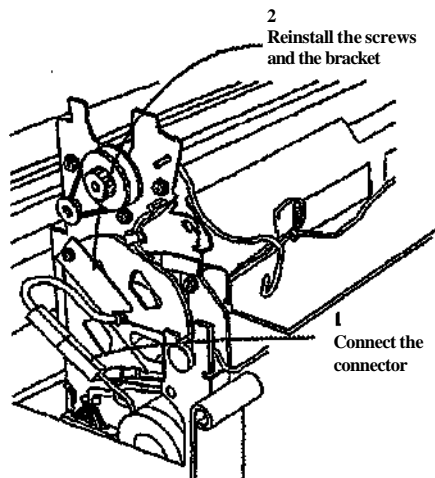


Figure 5. Reinstalling the Bracket (Left side)

3. (Figure 6): Reinstall the grommet and the bracket (Right side).

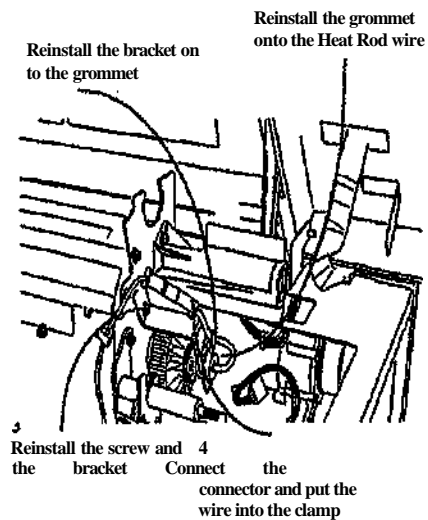


Figure 6. Reinstalling the Bracket (Right side)

4. Ensure that the Thermistor Pad is clean.

REP 10.2 Heat Roll

Parts List on PL 10.2

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser Assembly to cool before the procedure is performed.

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

Removal

1. Remove the Stripper Finger Assembly.
2. Perform the Xerographic Module procedure (REP 9.1) through Step 11. This will leave the Xerographic Module at the Service Position, handles installed, and the Drum Assembly removed.
3. Remove the Heat Rod (REP 10.1).

WARNING

Wear protective gloves when handling parts with silicon oil on them. Do not allow silicon oil to contact your eyes. Silicon oil can cause severe eye irritation. Wash your hands immediately after handling any component covered with silicon oil.

4. (Figure 1): Remove the Heat Roll.

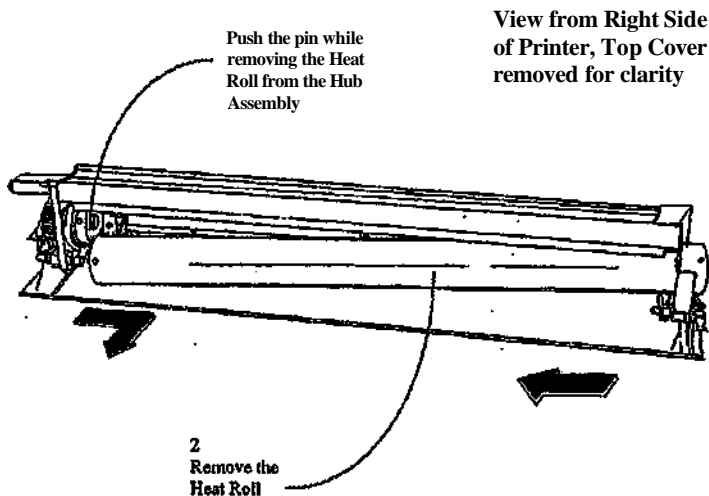


Figure 1. Removing the Heat Roll

REP 10.3 Fuser Triac

Parts List on PL 1.2

WARNING

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

Removal

1. Remove the two Right Side Covers.
2. (Figure 1): Remove the Fuser Triac.

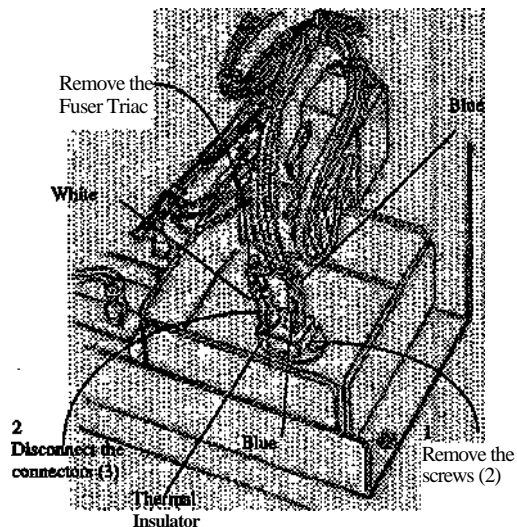


Figure 1. Removing the Fuser Triac

Replacement

1. Cover the entire surface where the Fuser Triac mounts to the frame with a film of thermal compound or install a new Thermal Insulator.

REP 10.7 Web Oiler Assembly

Parts List on PL 9.6

WARNING

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

Removal

1. Loosen the screws and open the Rear Door.
2. Raise and latch the Top Cover.
3. Ensure that there is a clean, flat surface on which to place the Web Oiler Assembly after it is removed.
4. (Figure 1): Remove the Web Oiler Assembly and place it top down, resting on the handles, on a flat surface.

Replacement

1. At reinstallation, engage the rear lip of the Web Oiler Housing over the metal bracket of the Xerographic Module.
2. After completing the reassembly, enter diagnostics and perform one of the following actions.
 - If a new Web Oiler has been installed, initialize the Web Oiler using [1030].
 - If the old Web Oiler is still in the assembly, remove the slack in the web by running [1033] until the display shows the following:

COUNT = 001

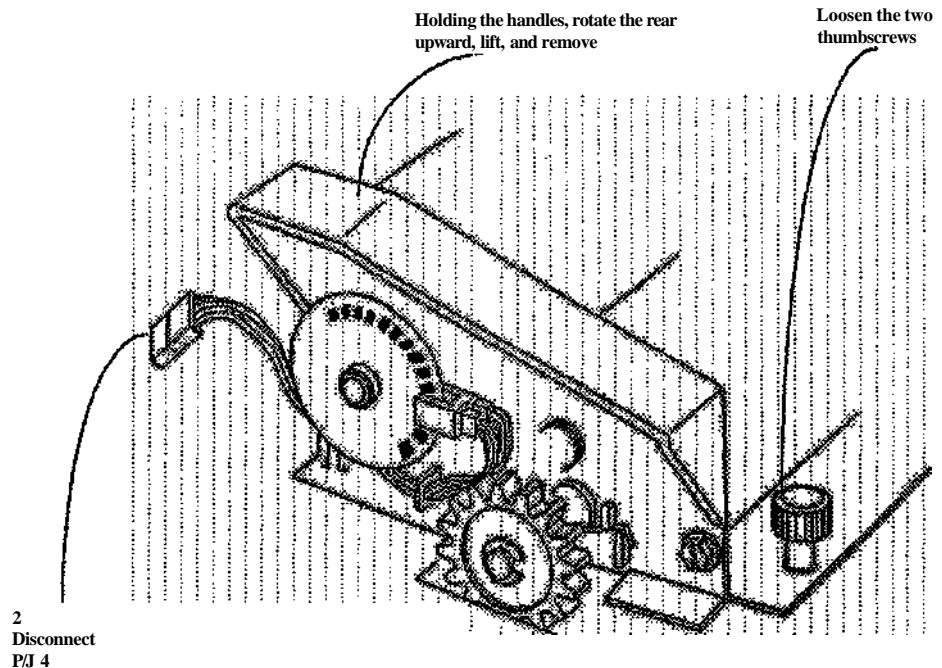


Figure 1. Removing the Web Oiler Assembly

REP 10.8 Stripper Fingers

Parts List on PL 10.4

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser Assembly to cool before the procedure is performed.

Removal

1. Remove the S tripper Finger Assembly.
2. (Figure 1): Remove the Stripper Fingers.

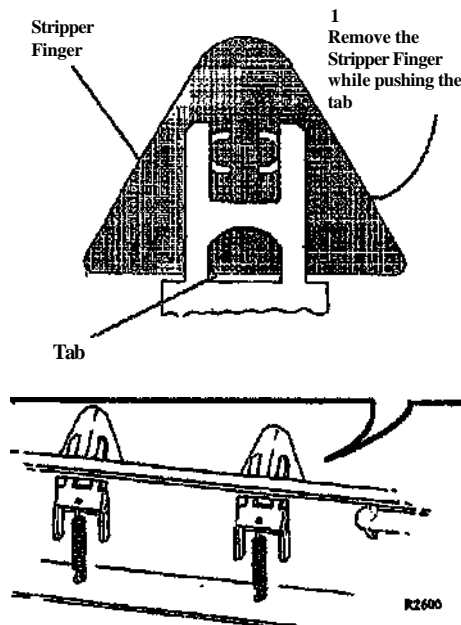


Figure 1. Removing the Stripper Fingers

Replacement

CAUTION

Do not bend the Stripper Finger too far or it will break

1. (Figure 2): Reinstall the Stripper Fingers.

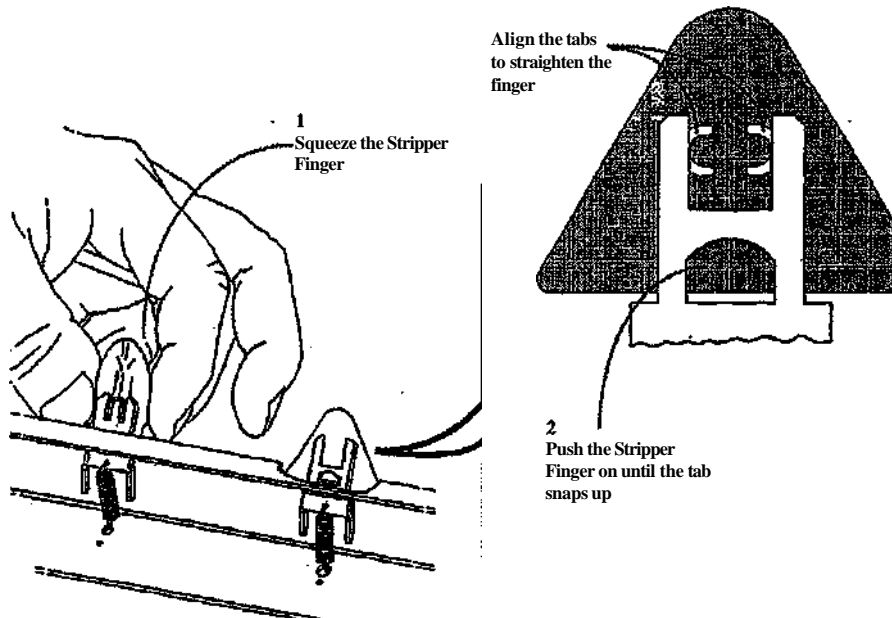


Figure 2. Reinstalling the Stripper Fingers

REP 10.9 Web Oiler

Parts List on PL 9.7

WARNING

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

WARNING

Wear protective gloves when handling parts with silicon oil on them. Do not allow silicon oil to contact your eyes. Silicon oil can cause severe eye irritation. Wash your hands immediately after handling any component covered with silicon oil.

Removal

1. Remove the Web Oiler Assembly and place it top down, resting on the handles, on a flat surface (REP 10.7).
2. (Figure 1): Remove the Supply Roll.

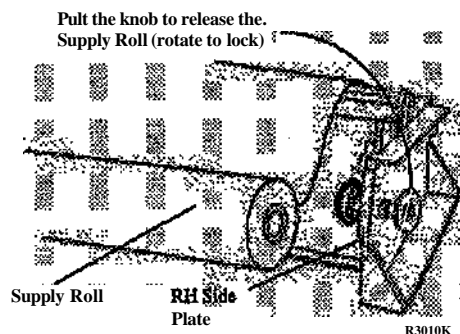


Figure 1. Removing the Supply Roll

3. (Figure 2): Remove the Takeup Roll

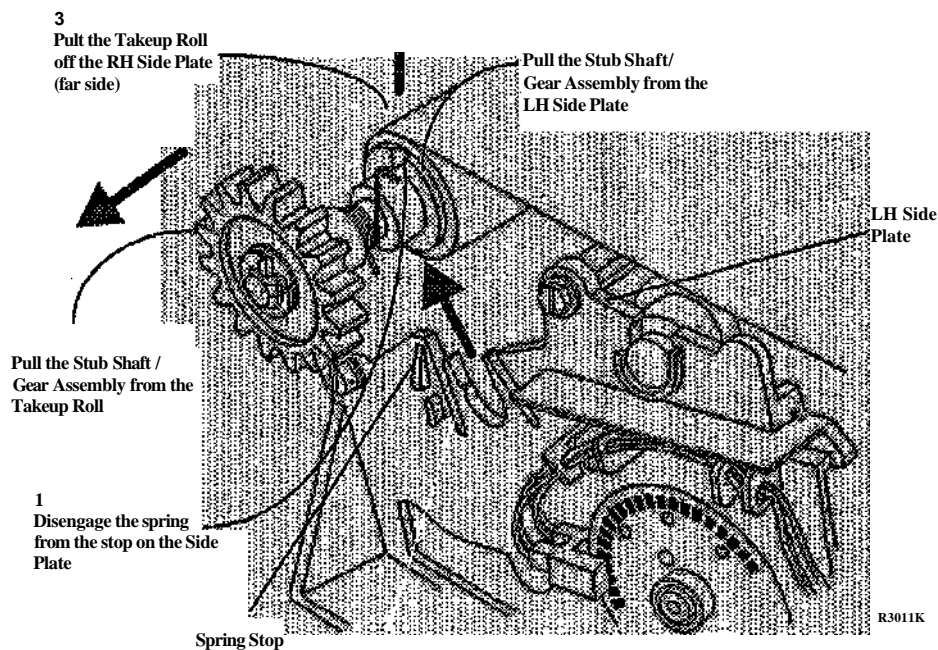


Figure 2. Removing the Takeup Roll

Replacement

1. (Figure 3): Reinstall the Supply Roll.

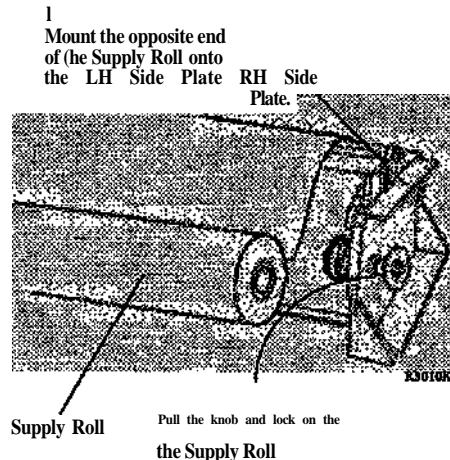


Figure 3. Reinstalling the Supply Roll

2. (Figure 4): Reinstall the Takeup Roll.
3. After reinstallation or replacement of the Web Oiler into the assembly, follow the replacement instructions in Web Oiler Assembly (REP 10.7).

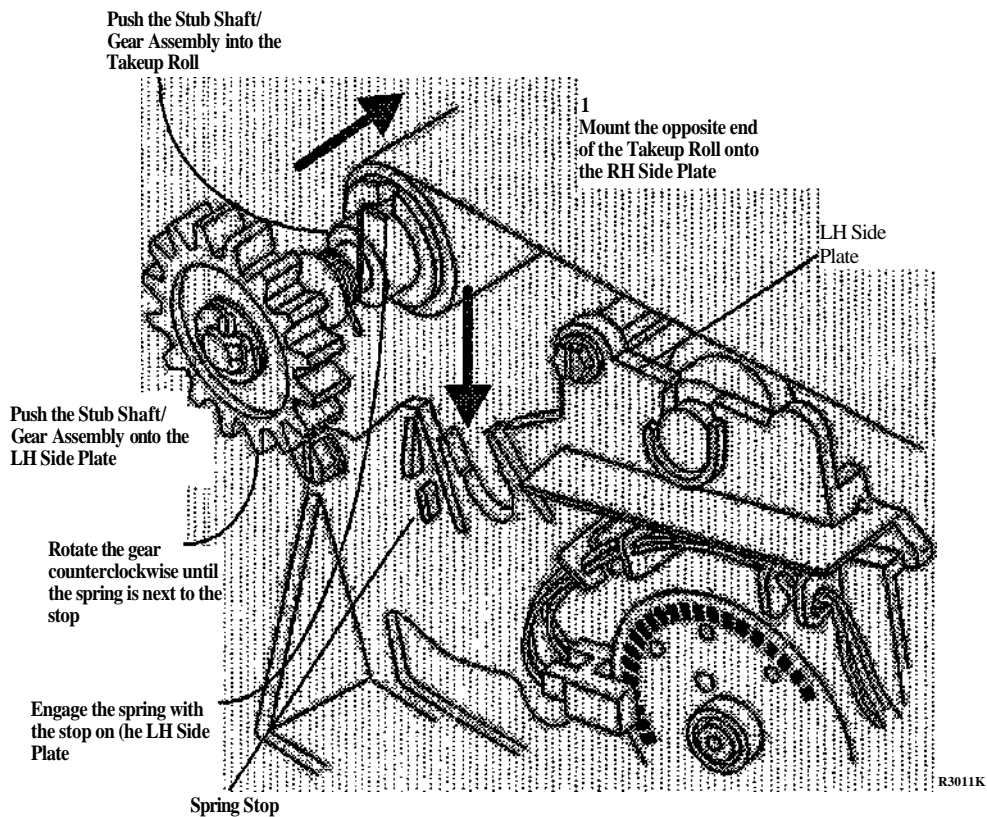


Figure 4. Reinstalling the Takeup Roll

ADJ 3.2 Country Configuration

Purpose

The purpose is to set the Line Service (Input Power) and Billing Type (Billing Meter) configurations according to the customer's requirements.

Adjustment

- 1. Enter diagnostics.
- 2. Enter code [0261].
- 3. (Table 1): Set the Line Service configuration using the **Previous / Next** buttons.
 - a. Use the **Next** button to increase the **Adj** setting.
 - b. Use the **Previous** button to decrease the **Adj** setting.
 - c. Press the **Enter** button in order to store the value in NVM.
 - d. Press the **Exit** button.

| Adj | Configuration |
|-----|---------------|
| 00 | 115V |
| 01 | 240V |
| 02 | 220V |

Table 1. Line Service

- 4. Enter code [0263].
- 5. (Table 2): Set the Billing Type configuration using the **Previous / Next** buttons.
 - a. Use the Next button to increase the **Adj** setting.
 - b. Use the **Previous** button to decrease the **Adj** setting.
 - c. Press the **Enter** button in order to store the value in NVM.
 - d. Press the **Exit** button two times.

| Adj | Configuration |
|-----|---------------|
| 00 | FEET |
| 01 | METRIC |

Table 2. Billing Type

- 6. Exit the diagnostics mode.

ADJ 8.1 Vertical Magnification

Purpose

The purpose is to calibrate the printer to produce the correct length images for each media type.

Prerequisite

1. Check the Fuser Temperature (NVM) (ADJ 10.1).

Check

1. Enter diagnostics.
2. Enter code [0955] and make one 1200 mm print of Test Pattern #7.
3. Allow the print to cool for five minutes.

4. (Figure 1): Check that 60 blocks in the paper feed direction measure 975.4 ± 4.88 mm.

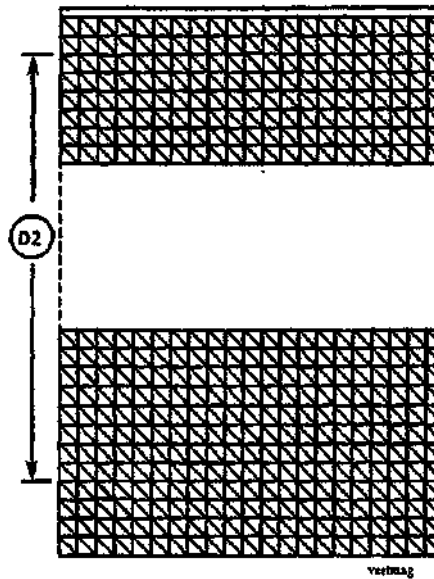


Figure 1. Checking the Vertical Magnification

Adjustment

1. Enter code [0602] in order to adjust the Vertical Magnification.
2. Select the type of media. The following message is displayed. (In this example, bond paper media has been selected.)

06 02 BOND SCALE ADJUST: XX

RANGE 0-40, NOW XX {ENTER} TO STORE

NOTE: The range of adjustment is 0 to 40. Each step equals approximately 1 mm.

3. Adjust the Vertical Magnification using the Previous / Next buttons.
 - a. Use the Previous button to decrease the Set Point, which will decrease the Image Length.
 - b. Use the Next button to increase the Set Point, which will increase the Image Length.
 - c. Press the Enter button in order to store the value in NVM.
 - d. Press the Exit button two times.
4. Repeat the check for all the types of media used by the customer.

ADJ 8.2 Lead Edge Registration

Purpose

The purpose is to adjust the print media to the image on the drum for Lead Edge Registration within specification.

Prerequisite

1. Check the following:
 - a. Fuser Temperature (NVM) (ADJ 10.1)
 - b. Vertical Magnification (ADJ 8.1)

Check

1. Enter diagnostics.
2. Enter code [0955] and make four 210 mm prints of Test Pattern #7.
3. Allow the prints to cool for five minutes.

4. (Figure 1): Using the last print, check that the distance from the lead edge to the first horizontal line is $16,25 \pm 2$ mm.

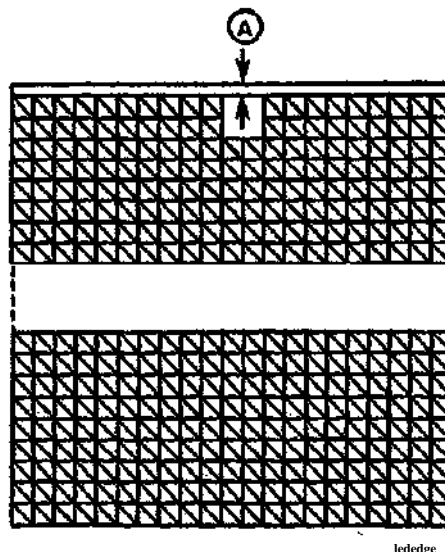


Figure 1. Checking the Lead Edge Registration

Adjustment

1. Enter code [0860] in order to adjust the Lead Edge Registration.
2. Select the type of media. The following message is displayed. (In this example, bond paper media has been selected.)

08 60 BOND REG TIME: XX

RANGE 0-20, NOW XX [ENTER] TO STORE

NOTE: The range of adjustment is 0 to 20. Each step equals approximately 1 mm.

3. Adjust the Lead Edge Registration using the Previous / Next buttons.
 - a. Use the Previous button to decrease the Set Point, which will move the image away from the lead edge.
 - b. Use the Next button to increase the Set Point, which will move the image closer to the lead edge.
 - c. Press the Enter button in order to store the value in NVM.
 - d. Press the Exit button two times.
4. Repeat the check for all the types of media used by the customer.

ADJ 8.3 Cut Length

Purpose

The purpose is to calibrate the Printer to produce the correct length prints for each media type.

Prerequisite

1. Check the following:
 - a. Fuser Temperature (NVM) (ADJ 10.1)
 - b. Vertical Magnification (ADJ 8.1)
 - c. Lead Edge Registration (ADJ 8.2)

Adjustment

1. Enter diagnostics.
2. Enter code [0955] and make one 600 mm print and one 1200 mm print of Test Pattern #7.
3. Allow the prints to cool for five minutes.

4. (Figure 1): Measure the two prints in the paper feed direction.

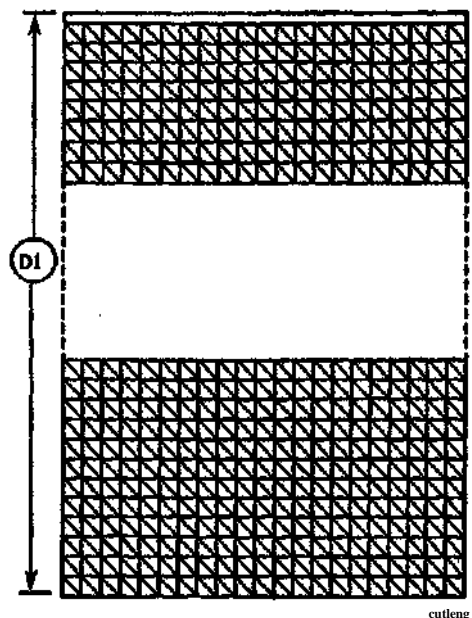


Figure 1. Checking the Print Length

5. Enter code [0700] in order to adjust the Cut Length. Enter [1] to adjust.
6. Select the type of media. The following message is displayed. (In this example, bond paper media has been selected.)

```
07 00 BOND CUT LENGTH ADJUSTMENT
LENGTH OF 600 MM COPY IS:  0 [ENTER]
```

7. Enter the measurement of the 600 mm print and press the Enter button. The following message is displayed.

```
07 00 BOND CUT LENGTH ADJUSTMENT
LENGTH OF 1200 MM COPY K:  0 [ENTER]
```

8. Enter the measurement of the 1200 mm print and press the Enter button. The following message is displayed.

```
07 00 BOND CUT LENGTH VALUES CORRECT?
600 = XXX, 1200 = XXXX I=YES/2=NO
```

9. Complete the adjustment as appropriate.
10. Repeat the check for all the types of media used by the customer.

ADJ 8.4 Media Transport

Purpose

The purpose is to set the correct spacing between the Media Transport and the Drum when a new Media Transport is installed. The correct spacing is obtained by adjusting the position of the Lower Turnaround Baffle.

•Baffle.

NOTE: The art used for this procedure was developed for previous products and may not match the 8830 configuration exactly.

WARNING

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

Check

1. Remove the Developer Module (REP 9.5).
2. Remove the white toner shield.
3. Prepare two strips of 0.030 inch (coral) shimstock 0.75 inches (20 mm) wide.
4. Ensure that the Media Transport Cover is closed.
5. (Figure 1): Check that the Media Transport to Drum spacing is 0.030 ± 0.005 inches (0.76 ± 0.1 mm).

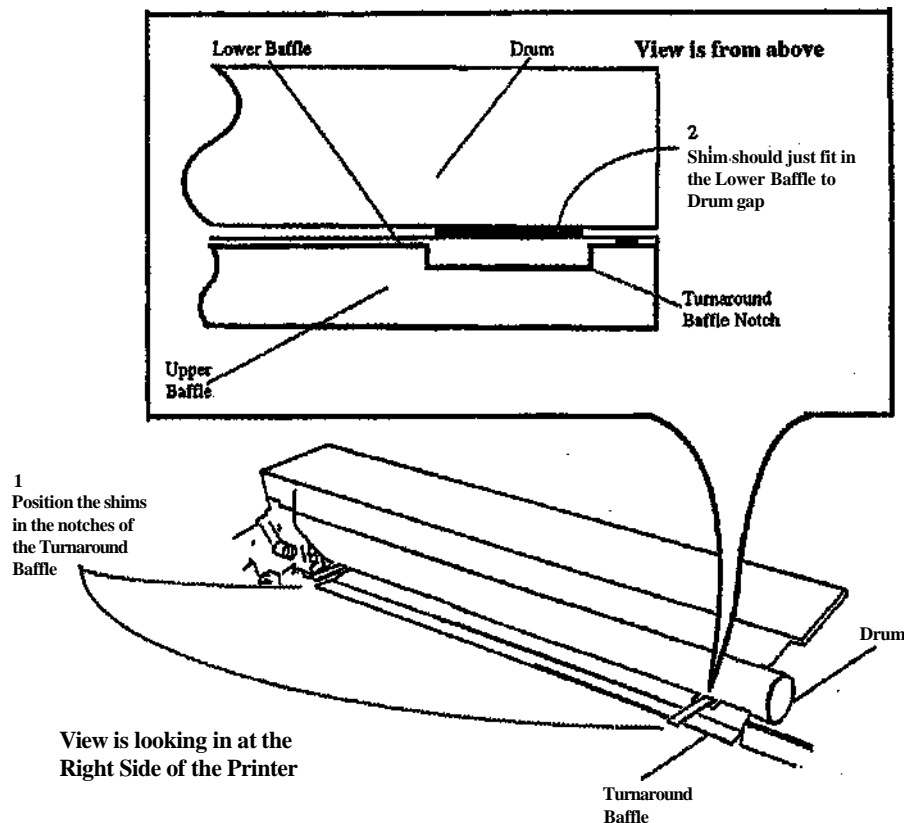


Figure 1. Checking the Media Transport to Drum Spacing

Adjustment

WARNING

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

1. Remove the Transfer / Detack Corotron (REP 9.9).
2. Remove the Developer Module (REP 9.5).
3. Remove the white Toner Shield.
4. (Figure 2): Position the Lower Turnaround Baffle.
5. Close the Media Transport Cover.

The view is of the Media Transport as seen at the front of the printer.

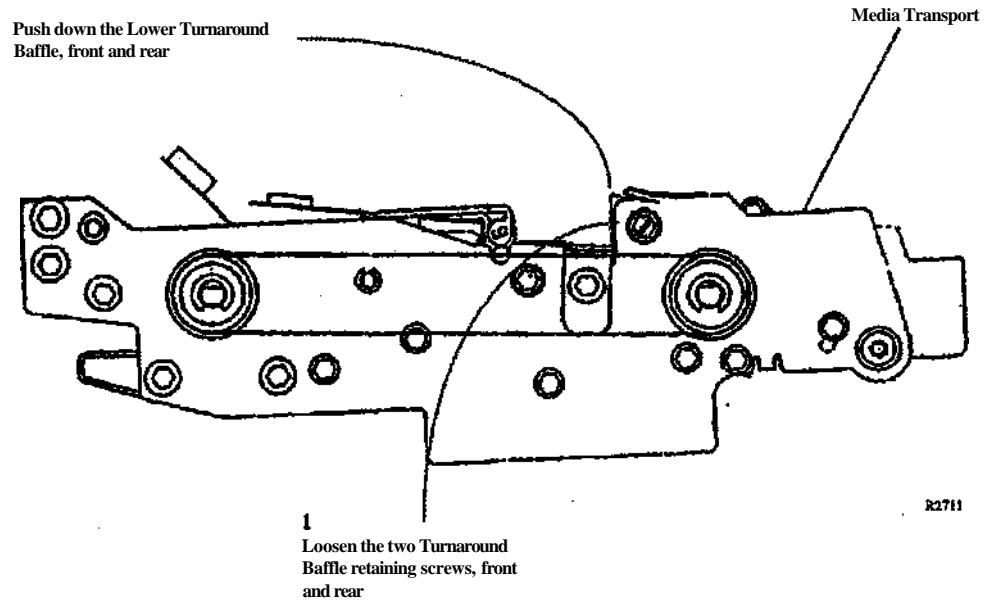
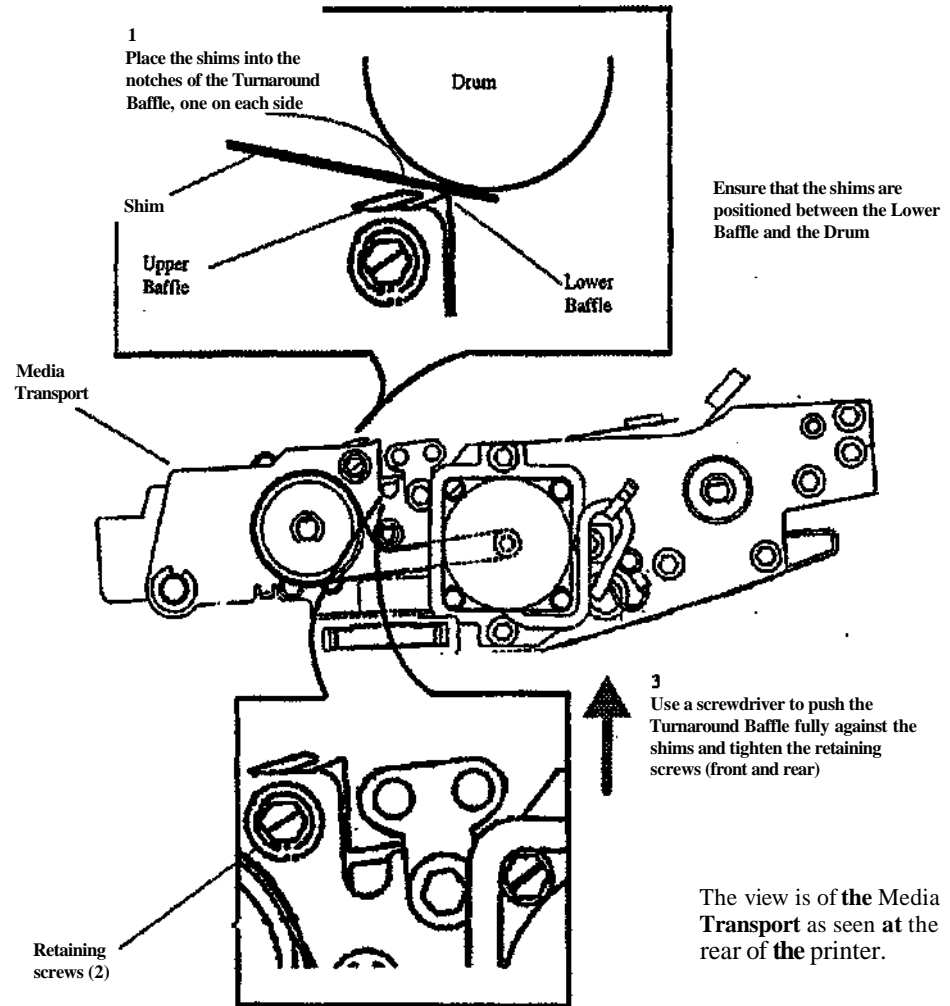


Figure 2. Positioning the Lower Turnaround Baffle

NOTE: The position of the Lower Turnaround Baffle determines the position of the Upper Turnaround Baffle. When the position of the Lower Turnaround Baffle is correctly set, the Upper Turnaround Baffle is correctly positioned.

6. Cut two strips of 0.030 inch (coral) shimstock 0.75 inches (20 mm) wide.
7. (Figure 3): Adjust the Media Transport to Drum spacing to 0.030 ± 0.005 inch (0.76 ± 0.1 mm).
8. Reinstall the Transfer / Detack Corotron. Push the corotron down and in the direction of the Developer Module before tightening the securing screw.



R2712

Figure 3. Adjusting the Media Transport to Drum Spacing

Notes:

ADJ 9.2 Electrostatic Series

Purpose

The purpose is to set the drum voltages to obtain good print quality as specified in Section 3 of this Service Manual. On IOTs **With TAG 23**, it is necessary to establish the correct Average Light •Output (ALO) of the LED Bar in order to set the voltages.

Adjustment

1. If the IOT is **Without Tag 23**, go to step 8.
2. **(With Tag 23)**: Raise and secure the Top Cover.

NOTE: In the following steps, "Left" and "Right" describe machine locations as observed when you are facing the Xerographic Module at the left side of the Printer.

3. **(With Tag 23)**: Look in on the right side of the Image Module for the ALO Label, attached to either the front or the rear of the LED Bar.
4. **(With Tag 23)**: Record the ALO value as follows.
 - a. On an early build printer, read the Bar number on the AOL Label and find the Average Light Output value from the table at the end of this procedure.
 - b. On a newer printer, read the Average Light Output value directly from the label. Round the value to the second decimal point. (1.035 becomes 1.04, .983 becomes .98, for example.)

5. **(With Tag 23)**: Lower the Top Cover.
6. **(With Tag 23)**: Enter Diagnostics.
7. **(With Tag 23)**: Program in the Average Light Output value.
 - a. Enter code [09 03].
 - b. Enter the ALO value.
 - c. Press the **Enter** button in order to store the value in NVM.
 - d. Press the **Exit** button two times.

8. Raise and secure the Top Cover.
9. Open the Image Module.
10. (Figure 1): Prepare the Electrometer and connect it to the DMM.

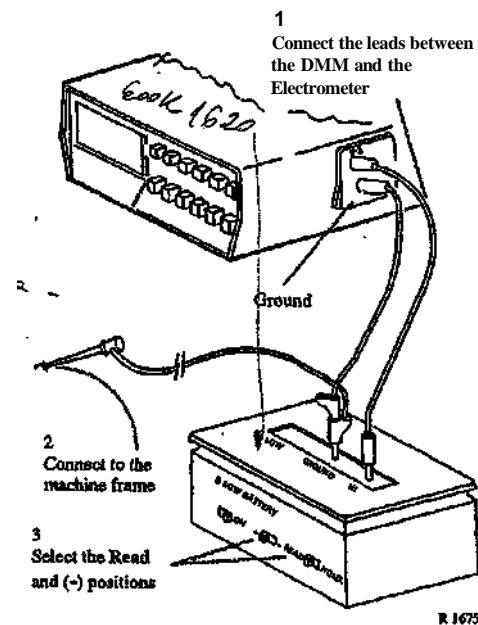


Figure 1. Connecting the Electrometer to the DMM

11. Position the Electrometer Probe to measure the voltage on the drum.
 - a. Install the probe wing onto the Electrometer Probe. Ensure that the window of the wing is centered over the window of the probe.
 - b. (Figure 2): Remove the plug from the side of the Image Module.
 - c. Slide the Electrometer Probe through the hole, into the channel.
 - d. Determine the center of the Image Module and push the probe along the channel until the probe window is centered on the Image Module.

NOTE: Failure to center the probe will cause incorrect Vlow readings.

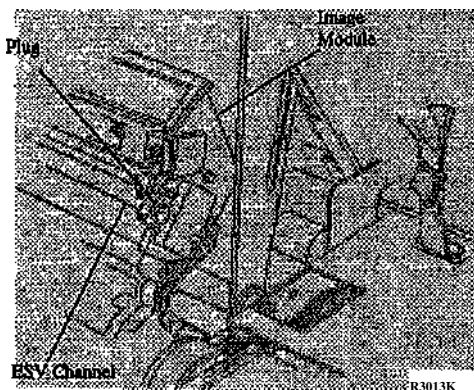


Figure 2. Removing the Plug

12. Close the Image Module, the Top Cover, and the Front Door.
13. Enter diagnostics.
14. Ensure that V_{HIGH} is within specification.
 - a. Enter [0921-2] for the check and adjustment.
 - b. Turn on the electrometer.
 - c. The average meter reading should be $-600 \pm 15/-5$ volts (-585 to -605 volts).
 - d. If required, adjust V_{HIGH} using the Previous / Next buttons.
 - e. Press the Enter button in order to store the value in NVM.
 - f. Turn off the electrometer.
15. Ensure that V_{LOW} is within specification.
 - a. Enter [0921-3] for the check and adjustment.
 - b. Set the Duty Cycle to 15% using the **Previous** / **Next** buttons.
 - c. Turn on the electrometer.
 - d. Record the value on the DMM.

NOTE: In the following step, if no change occurs, ensure that the probe is centered.

- e. Press the **Previous** button to decrease the Duty Cycle value in 1% increments. Pause three seconds at each reading until the value changes 10 Volts.
- f. Press the **Next** button twice to increase the duty cycle value by 2%.
- g. Press the **Enter** button in order to store the value in NVM.
- h. Turn off the Electrometer.

| Bar# | Value | Bar# | Value | Bar# | Value | Bar# | Value | Bar# | Value | Bar# | Value | Bar# | Value |
|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|
| 1 | .75 | 39 | 1.15 | 77 | .94 | 115 | 1.04 | 153 | .98 | 194 | .72 | 243 | .85 |
| 2 | .77 | 40 | .87 | 78 | .93 | 116 | .89 | 154 | .82 | 195 | .73 | 244 | 1.00 |
| 3 | .68 | 41 | 1.02 | 79 | .89 | 117 | 1.05 | 155 | .84 | 196 | .71 | 245 | .92 |
| 4 | .74 | 42 | 1.05 | 80 | 1.00 | 118 | 1.01 | 156 | .84 | 197 | .73 | 246 | 1.00 |
| 5 | .80 | 43 | 1.10 | 81 | .99 | 119 | .95 | 157 | .88 | 198 | .64 | 247 | .90 |
| 6 | .75 | 44 | 1.06 | 82 | .97 | 120 | .95 | 158 | .83 | 199 | .68 | 248 | .97 |
| 7 | .74 | 45 | .86 | 83 | .94 | 121 | .95 | 159 | .90 | 200 | .79 | 249 | .94 |
| 8 | .75 | 46 | .87 | 84 | 1.12 | 122 | .92 | 160 | .93 | 201 | .74 | 250 | .95 |
| 9 | .79 | 47 | .93 | 85 | 1.02 | 123 | .89 | 161 | .93 | 202 | 1.19 | 251 | .78 |
| 10 | .61 | 48 | .85 | 86 | 1.01 | 124 | .99 | 162 | .92 | 203 | 1.00 | 252 | .79 |
| 11 | .65 | 49 | .83 | 87 | .94 | 125 | .98 | 163 | .94 | 204 | .86 | 253 | .69 |
| 12 | .58 | 50 | .90 | 88 | .91 | 126 | .97 | 164 | .95 | 205 | .85 | 254 | .68 |
| 13 | .71 | 51 | .92 | 89 | .96 | 127 | .91 | 165 | .81 | 206 | .69 | 255 | .81 |
| 14 | .62 | 52 | .91 | 90 | .86 | 128 | .88 | 166 | 1.02 | 207 | .75 | 256 | .67 |
| 15 | .69 | 53 | .92 | 91 | .98 | 129 | .92 | 167 | .85 | 208 | .76 | 257 | .65 |
| 16 | .70 | 54 | 1.03 | 92 | .94 | 130 | .97 | 168 | .83 | 209 | .71 | 258 | .78 |
| 17 | .70 | 55 | .94 | 93 | .97 | 131 | .88 | 169 | .93 | 210 | .77 | 259 | .95 |
| 18 | .74 | 56 | .89 | 94 | 1.08 | 132 | .93 | 170 | .91 | 211 | .72 | 260 | 1.01 |
| 19 | .71 | 57 | .95 | 95 | 1.01 | 133 | .83 | 171 | .92 | 212 | .78 | 261 | .97 |
| 20 | .79 | 58 | .93 | 96 | .91 | 134 | .87 | 172 | .79 | 213 | .58 | 262 | .98 |
| 21 | .67 | 59 | .97 | 97 | .97 | 135 | .93 | 173 | .77 | 214 | .60 | 263 | .75 |
| 22 | .92 | 60 | .96 | 98 | .94 | 136 | .97 | 174 | .91 | 215 | .66 | 264 | .63 |
| 23 | .76 | 61 | .95 | 99 | .92 | 137 | 1.04 | 175 | 1.00 | 216 | .71 | 265 | .74 |
| 24 | .83 | 62 | .97 | 100 | .94 | 138 | 1.00 | 176 | .93 | 217 | .75 | 266 | .96 |
| 25 | .79 | 63 | .96 | 101 | .94 | 139 | .94 | 178 | .77 | 218 | .72 | 267 | .92 |
| 26 | 1.05 | 64 | .99 | 102 | .97 | 140 | .99 | 181 | .75 | 219 | .75 | 268 | .94 |
| 27 | 1.05 | 65 | .99 | 103 | 1.02 | 141 | .99 | 182 | .72 | 220 | .73 | 269 | .95 |
| 28 | 1.05 | 66 | .93 | 104 | .96 | 142 | .84 | 183 | .74 | 221 | .76 | 270 | .67 |
| 29 | 1.10 | 67 | 1.00 | 105 | .93 | 143 | .93 | 184 | .64 | 222 | .85 | 271 | .79 |
| 30 | 1.13 | 68 | .99 | 106 | .95 | 144 | .93 | 185 | .63 | 223 | .59 | 272 | .92 |
| 31 | 1.02 | 69 | 1.00 | 107 | .91 | 145 | .91 | 186 | .96 | 224 | .71 | 273 | .65 |
| 32 | .97 | 70 | 1.06 | 108 | .90 | 146 | .84 | 187 | .88 | 225 | .59 | 274 | .72 |
| 33 | 1.03 | 71 | .99 | 109 | .95 | 147 | .86 | 188 | .95 | 226 | 1.03 | 275 | .99 |
| 34 | 1.00 | 72 | 1.05 | 110 | .96 | 148 | .89 | 189 | .75 | 238 | .89 | 276 | .94 |
| 35 | 1.01 | 73 | 1.00 | 111 | 1.03 | 149 | .90 | 190 | .72 | 239 | .91 | 277 | .68 |
| 36 | 1.06 | 74 | 1.01 | 112 | 1.05 | 150 | .97 | 191 | .73 | 240 | .72 | 278 | .66 |
| 37 | .95 | 75 | .94 | 113 | .96 | 151 | .95 | 192 | .78 | 241 | .69 | 279 | .84 |
| | | 76 | .95 | 114 | .91 | 152 | | 193 | .73 | 242 | | 280 | .86 |

table

Light Output values

(Continued on next page)

| Bar# | Value | Bar# | Value | Bar# | Value | Bar# | Value | Bar# | Value | Bar# | Value | Barf | Value |
|------|-------|------|-------|------|-------|------------------|-------|------|-------|------|-------|------|-------|
| 281 | .89 | 319 | .70 | 357 | .65 | 395 | .69 | 433 | .99 | 471 | .79 | 509 | 1.05 |
| 282 | .89 | 320 | .76 | 358 | .71 | 396 | .70 | 434 | .92 | 472 | .80 | 510 | .91 |
| 283 | .90 | 321 | .74 | 359 | .88 | 397 | .74 | 435 | .90 | 473 | .86 | 511 | 1.02 |
| 284 | .66 | 322 | .57 | 360 | .79 | 398 | .62 | 436 | .96 | 474 | .85 | 512 | .94 |
| 285 | .71 | 323 | .63 | 361 | .69 | 399 | .79 | 437 | 1.01 | 475 | .89 | 513 | .97 |
| 286 | .76 | 324 | .75 | 362 | .78 | 400 | .93 | 438 | .97 | 476 | .89 | 514 | .88 |
| 287 | .81 | 325 | .80 | 363 | .74 | 401 | .80 | 439 | .93 | 477 | .82 | 515 | .86 |
| 288 | .81 | 326 | .90 | 364 | .79 | 402 | .66 | 440 | 1.01 | 478 | .93 | 516 | 1.02 |
| 289 | .93 | 327 | .72 | 365 | .99 | 403 | .84 | 441 | .99 | 479 | 1.11 | 517 | .95 |
| 290 | .60 | 328 | .76 | 366 | .84 | 404 | .74 | 442 | .99 | 480 | 1.03 | 518 | 1.06 |
| 291 | .63 | 329 | .80 | 367 | .98 | 405 | .73 | 443 | .79 | 481 | 1.06 | 519 | .69 |
| 292 | .64 | 330 | .72 | 368 | .81 | 406 | .78 | 444 | .73 | 482 | .98 | 520 | .87 |
| 293 | .69 | 331 | .65 | 369 | .82 | 407 | .94 | 445 | .98 | 483 | .89 | 521 | .83 |
| 294 | .66 | 332 | .74 | 370 | .95 | 408 | .65 | 446 | .96 | 484 | .69 | 522 | .88 |
| 295 | .71 | 333 | .62 | 371 | .71 | 409 | .70 | 447 | .99 | 485 | .86 | 523 | .85 |
| 296 | .85 | 334 | .70 | 372 | .65 | 410 | .71 | 448 | .99 | 486 | .84 | | |
| 297 | .82 | 335 | .58 | 373 | .73 | 411 | .77 | 449 | .77 | 487 | 1.04 | | |
| 298 | .86 | 336 | .72 | 374 | .99 | 412 | .96 | 450 | .98 | 488 | .95 | | |
| 299 | .81 | 337 | .81 | 375 | .74 | 413 | .95 | 451 | .94 | 489 | .96 | | |
| 300 | .92 | 338 | .56 | 376 | .77 | 414 ⁴ | .84 | 452 | .94 | 490 | 1.03 | | |
| 301 | 1.01 | 339 | .73 | 377 | .72 | 415 | .70 | 453 | 1.10 | 491 | 1.10 | | |
| 302 | .58 | 340 | .96 | 378 | .90 | 416 | .96 | 454 | 1.03 | 492 | .82 | | |
| 303 | .60 | 341 | .75 | 379 | .73 | 417 | .93 | 455 | 1.00 | 493 | .87 | | |
| 304 | .67 | 342 | .82 | 380 | .97 | 418 | .95 | 456 | .98 | 494 | 1.00 | | |
| 305 | .72 | 343 | .56 | 381 | 1.06 | 419 | .70 | 457 | .96 | 495 | .97 | | |
| 306 | .62 | 344 | .65 | 382 | .75 | 420 | .88 | 458 | 1.01 | 496 | .95 | | |
| 307 | .83 | 345 | .77 | 383 | .58 | 421 | .93 | 459 | 1.01 | 497 | .95 | | |
| 308 | .63 | 346 | .77 | 384 | .63 | 422 | .80 | 460 | .73 | 498 | .90 | | |
| 309 | .64 | 347 | .66 | 385 | .66 | 423 | .76 | 461 | .83 | 499 | .98 | | |
| 310 | .78 | 348 | .63 | 386 | .66 | 424 | .89 | 462 | .79 | 500 | .65 | | |
| 311 | .67 | 349 | .67 | 387 | .69 | 425 | .78 | 463 | .81 | 501 | .68 | | |
| 312 | .76 | 350 | .66 | 388 | .95 | 426 | .76 | 464 | .83 | 502 | .72 | | |
| 313 | .80 | 351 | .82 | 389 | .95 | 427 | .75 | 465 | .88 | 503 | .96 | | |
| 314 | .58 | 352 | .89 | 390 | .75 | 428 | .93 | 466 | 1.07 | 504 | .90 | | |
| 315 | .86 | 353 | .58 | 391 | .95 | 429 | .97 | 467 | 1.08 | 505 | .89 | | |
| 316 | .60 | 354 | .61 | 392 | 1.00 | 430 | .78 | 468 | 1.00 | 506 | .94 | | |
| 317 | .66 | 355 | .67 | 393 | 1.06 | 431 | .87 | 469 | .82 | 507 | .85 | | |
| 318 | .69 | 356 | .73 | 394 | 1.07 | 432 | .59 | 470 | | 508 | | | |

Table 1. Average Light Output Values (Continued from previous page)

ADJ 9.3 Image Density

Purpose

The purpose is to set the toner concentration to obtain good print quality as specified in Section 3 of this Service Manual.

NOTE: Electrostatic Series ADJ 9.2 must be performed before the Image Density is adjusted.

Check

1. Enter diagnostics.
2. Enter code **[0955]** and make one print of Test Pattern #5.
3. Using S.I.R. 495.01 (82P520), evaluate the darkness squares at the lower right center and the upper left from the lead edge.
4. If the darkness square is not 1.0, perform the adjustment.

Adjustment

1. Enter diagnostics.
2. Enter code [0921-4]. The following message is displayed.

**09 21 4 STD CP X.X, RH CP.XX VOLTS
SENSOR READING XX.X VOLTS**

3. Adjust the Image Density Control Point (STD CP X.X) using the **Previous** / **Next** buttons.
 - a. Use the **Next** button to increase the Image Density Control Point (decrease the Image Density).
 - b. Use the Previous button to decrease the Image Density Control Point (increase the Image Density).
 - c. Press the **Enter** button in order to store the value in NVM.
 - d. Press the **Exit** button two times.
4. Run the Automatic Tone-up / Tone-down Routine [0906].
5. Repeat the Check.

ADJ 9.5 Toner Cartridge Home Sensor

Purpose

The purpose is to set the Toner Cartridge Home Sensor to the correct distance from the magnet on the Toner Cartridge.

WARNING

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

Check

1. Remove the Developer Module (REP 9.5).
2. Remove the Cartridge Drive Plate (REP 9.14).
3. (Figure 1): Check that the tip of the Toner Cartridge Home Sensor is 2.5 ± 0.5 mm from the plate.

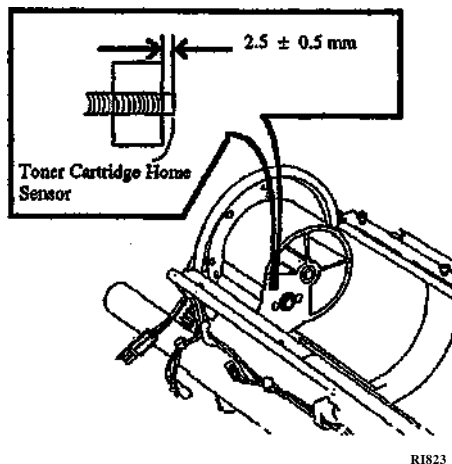


Figure 1. Checking the Position of the Toner Cartridge Home Sensor

Adjustment

1. Perform the check.

NOTE: The Toner Cartridge Home Sensor is threaded. The wires must be disconnected and straightened in order to rotate the sensor for adjustment.

2. (Figure 2): Adjust the Toner Cartridge Home Sensor to 2.5 ± 0.5 mm from the plate.

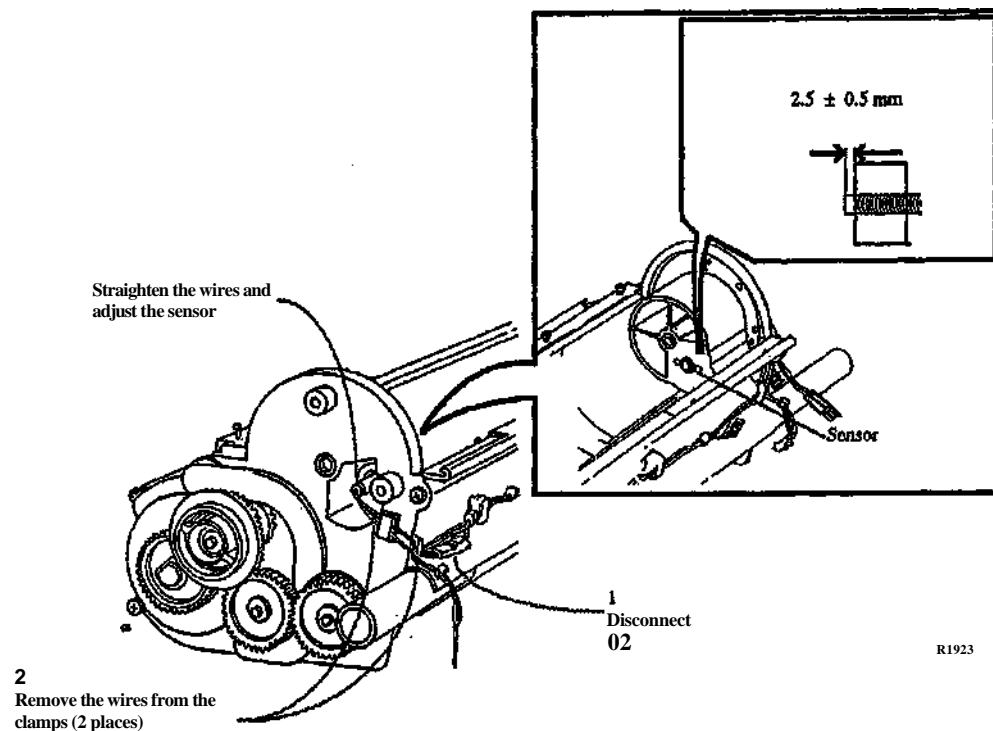


Figure 2. Adjusting the Toner Cartridge Home Sensor

Notes:

| TITLE | PAGE | TITLE | PAGE |
|--|------|---|------|
| <u>INTRODUCTION</u> | | 5-2 PL 9.5C DRUM CLEANING (PART 3 OF 3) | 5-26 |
| <u>PARTS LIST</u> | | PL 9.6 WEB OILER ASSEMBLY. | 5-27 |
| ELECTRICAL COMPONENTS | | PL 9.7 WEB OILER COMPONENTS. | 5-28 |
| PL 1.1 ELECTRICAL CONTROL COMPONENTS/DC POWER GENERATION | | DEVELOPER MODULE | |
| PL 1.2 AC ELECTRICAL COMPONENTS | | 5-4 PL 9.8 DEVELOPER MODULE ASSEMBLY. | 5-29 |
| PL 1.3 DC ELECTRICAL COMPONENTS | | 5-5 PL 9.9 DEVELOPER MODULE COMPONENTS (PART 1 OF 2)..... | 5-30 |
| PL 1.4 CONTROL CONSOLE | | 5-6 PL 9.10 DEVELOPER MODULE COMPONENTS (PART 2 OF 2)..... | 5-31 |
| MEDIA ROLL PEED | | FUSER | |
| PL 7.1 ROLL SUPPLY FEED ASSEMBLY. | 5-8 | PL 10.1 XEROGRAPHIC MODULE ASSEMBLY ... | 5-32 |
| PL 7.2 ROLL SUPPLY DRIVES. | 5-9 | PL 10.2 FUSER COMPONENTS. | 5-33 |
| PL 7.3 ROLL SUPPLY DRAWER COMPONENTS (PART 1 OF 4)..... | 5-10 | PL 10.3 FUSER PRESSURE COMPONENTS AND MOISTURE COLLECTION. | 5-34 |
| PL 7.4 ROLL SUPPLY DRAWER COMPONENTS (PART 2 OF 4)..... | 5-11 | PL 10.4 FUSER HEAT CONTROL AND STRIPPER FINGERS. | 5-35 |
| PL 7.5 ROLL SUPPLY DRAWER COMPONENTS (PART 3 OF 4)..... | 5-12 | COVERS AND INTERLOCK SWITCHES | |
| PL 7.6 ROLL SUPPLY DRAWER COMPONENTS (PART 4 OF 4)..... | 5-13 | PL 14.1 TRANSPORT LATCHING COVER AND REAR DOOR. | 5-36 |
| PL 7.7 MEDIA CUTTER ASSEMBLY..... | 5-14 | PL 14.2 FRONT DOOR AND RIGHT SIDE COVERS | 5-37 |
| PL 7.8 MEDIA CUTTER COMPONENTS..... | 5-15 | PL 14.3 DEVELOPER COVER AND CATCH TRAY | 5-38 |
| MEDIA TRANSPORT | | 5-16 PL 14.4 TOP COVER AND CATCH TRAY BRACKETS. | 5-39 |
| PL 8.1 MEDIA TRANSPORT ASSEMBLY. | 5-17 | ELECTRICAL CONNECTORS AND FASTENERS | |
| PL 8.2 MEDIA REGISTRATION COMPONENTS... | 5-18 | PL 15.1 MISCELLANEOUS ELECTRICAL CONNECTORS AND FASTENERS. | 5-40 |
| PL 8.3 CUT SHEET FEED COMPONENTS..... | 5-19 | COMMON HARDWARE | 5-41 |
| PL 8.4 MEDIA TRANSPORT COMPONENTS. | | PART NUMBER INDEX | 5-42 |
| XEROGRAPHIC MODULE | | | |
| PL 9.1 XEROGRAPHIC MODULE ASSEMBLY | | | |
| PL 9.2 PHOTORECEPTOR | 5-21 | | |
| PL 9.3 IMAGE MODULE ASSEMBLY..... | 5-22 | | |
| PL 9.4 TRANSFER/DETACK COROTRON | 5-23 | | |
| PL 9.5A DRUM CLEANING (PART 1 OF 3) | 5-24 | | |
| PL 9.5B DRUM CLEANING (PART 2 OF 3) | 5-25 | | |

OVERVIEW

The Paris 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:

| | |
|--------------|-----------------------------------|
| A | Amp |
| EMI | Electro Magnetic Induction |
| EO | European Operations |
| HZ | Hertz |
| MNL | Multinational |
| NACO | North America Customer Operations |
| NOHAD | Noise Ozone Heat Air Dirt |
| P/O | Part Of |
| PWB | Printed Wiring Board |
| REF | Reference |
| USMG | United States Marketing Group |
| V | Volt |
| W/ | With |
| W/O | Without |

SYMBOLLOGY

Symbolology used in the Parts List section is identified in the Symbolology 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 "W/Tag" in the parts description indicates that the part configuration has been updated. 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.

SYMBOLGY

A tag number within a circle and 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.

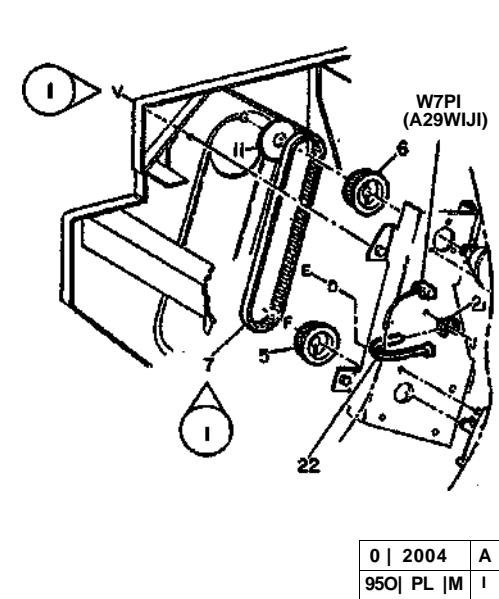


Figure 1. With Tag Symbol

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).

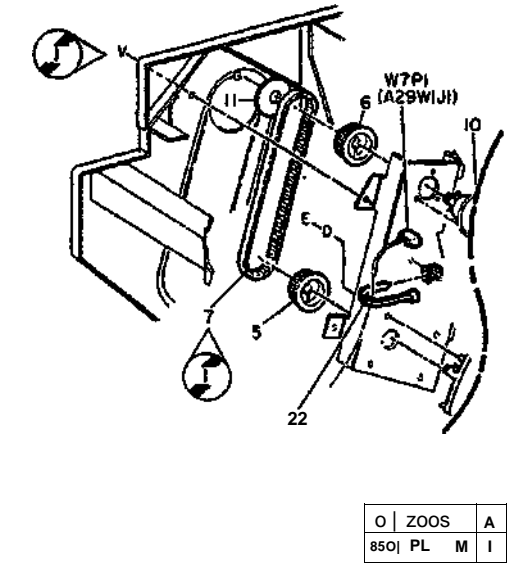


Figure 2. Without Tag Symbol

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,

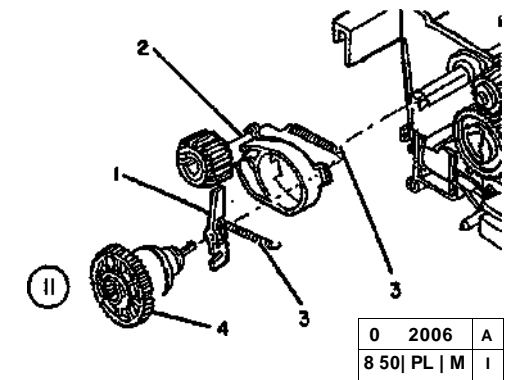


Figure 3. Entire Drawing With Tag Symbol

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).

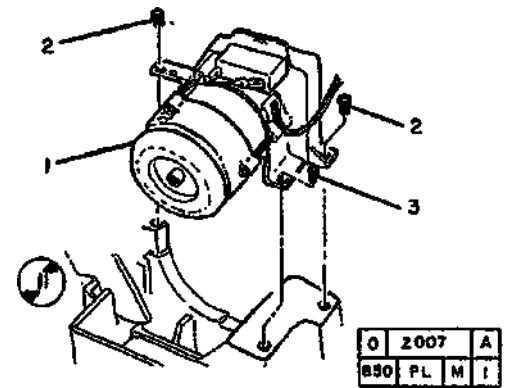
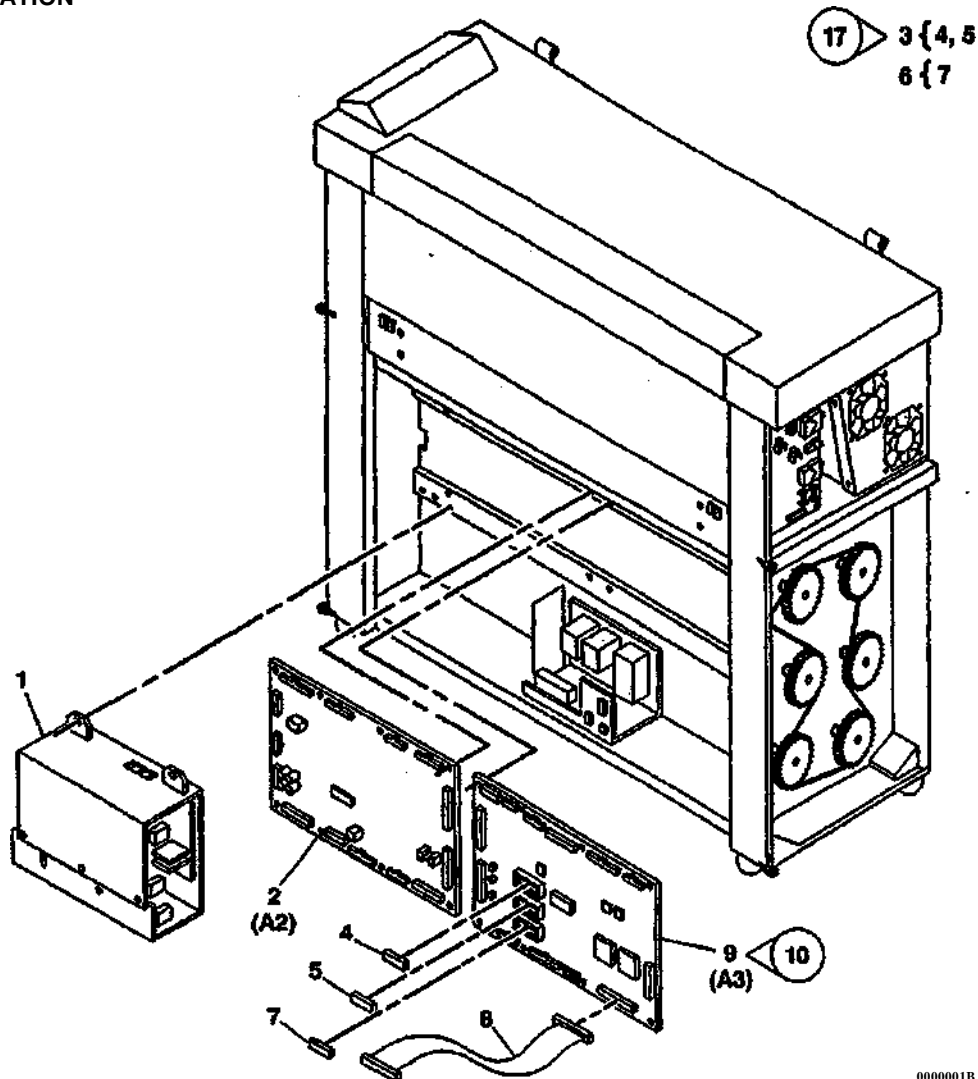


Figure 4. Entire Drawing Without Tag Symbol

PL 1.1 ELECTRICAL CONTROL COMPONENTS/DC POWER GENERATION

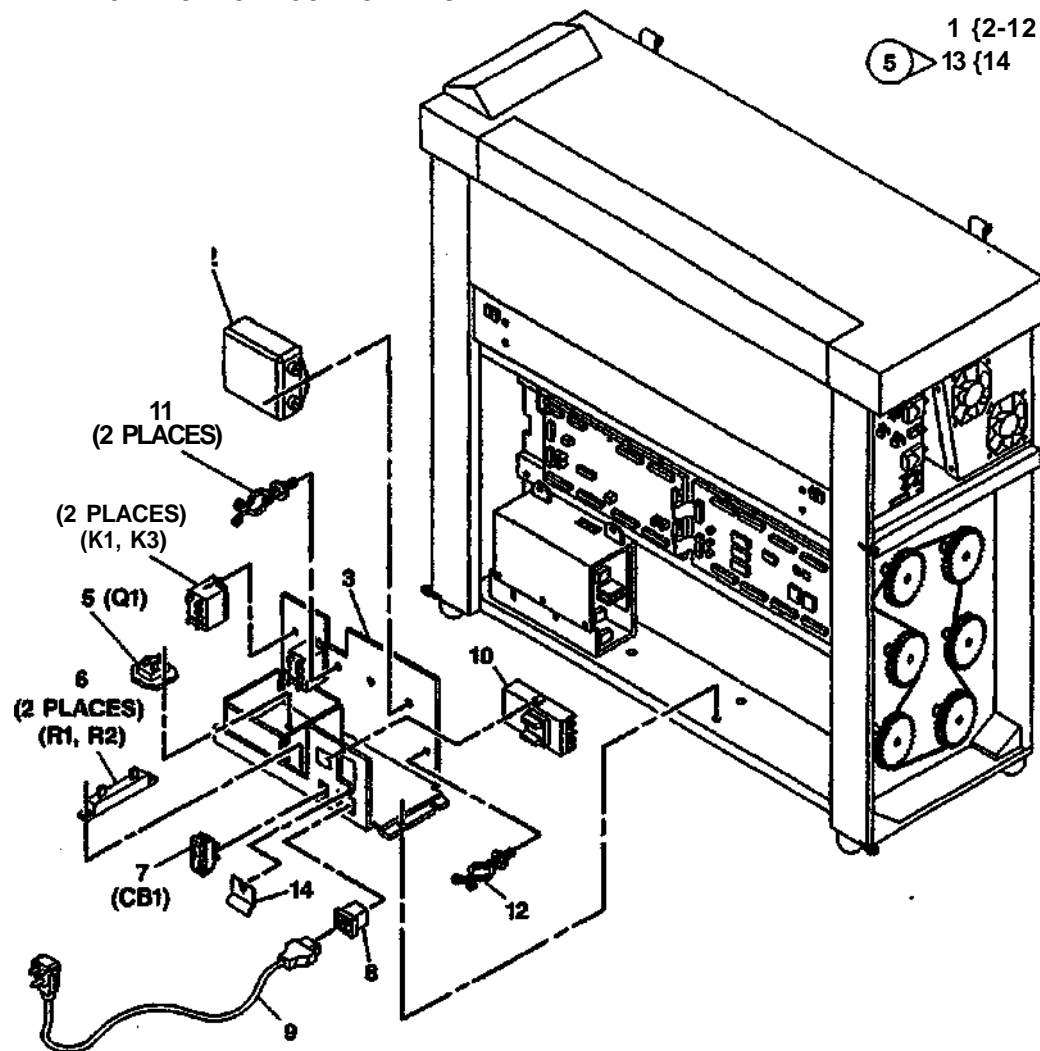


| ITEM | PART | DESCRIPTION |
|------|-----------|--|
| 1 | 105K15862 | DC LOW VOLTAGE POWER SUPPLY |
| 2 | 160K33322 | DRIVER PWB (A2) |
| 3 | 600K59935 | CIRCUIT ASSEMBLY KIT (NACO) (TAG 4, 16,17) |
| | 600K59955 | CIRCUIT ASSEMBLY KIT (EO) (TAG 4,16,17) |
| 4 | .. | CONTROL EPROM (P/O ITEM 3) |
| 5 | .. | LANGUAGE EPROM NO. 1 (P/O ITEM 3) |
| 6 | .. | LANGUAGE EPROM NO.2 KIT (NOT SPARED) |
| 7 | 537K51150 | AO PORTUGUESE LANGUAGE EPROM |
| | 537K51160 | AO SPANISH LANGUAGE EPROM |
| 8 | 162K29730 | CONTROLLER CONNECTOR (SEE NOTE) |
| 9 | 160K30285 | MAIN PWB (A3) (W/TAG 3, 10) (REP 3.1) |

NOTE 1: CABLE SUPPLIED FOR NON-IMBEDED CONTROLLERS ONL

0000001B ANO

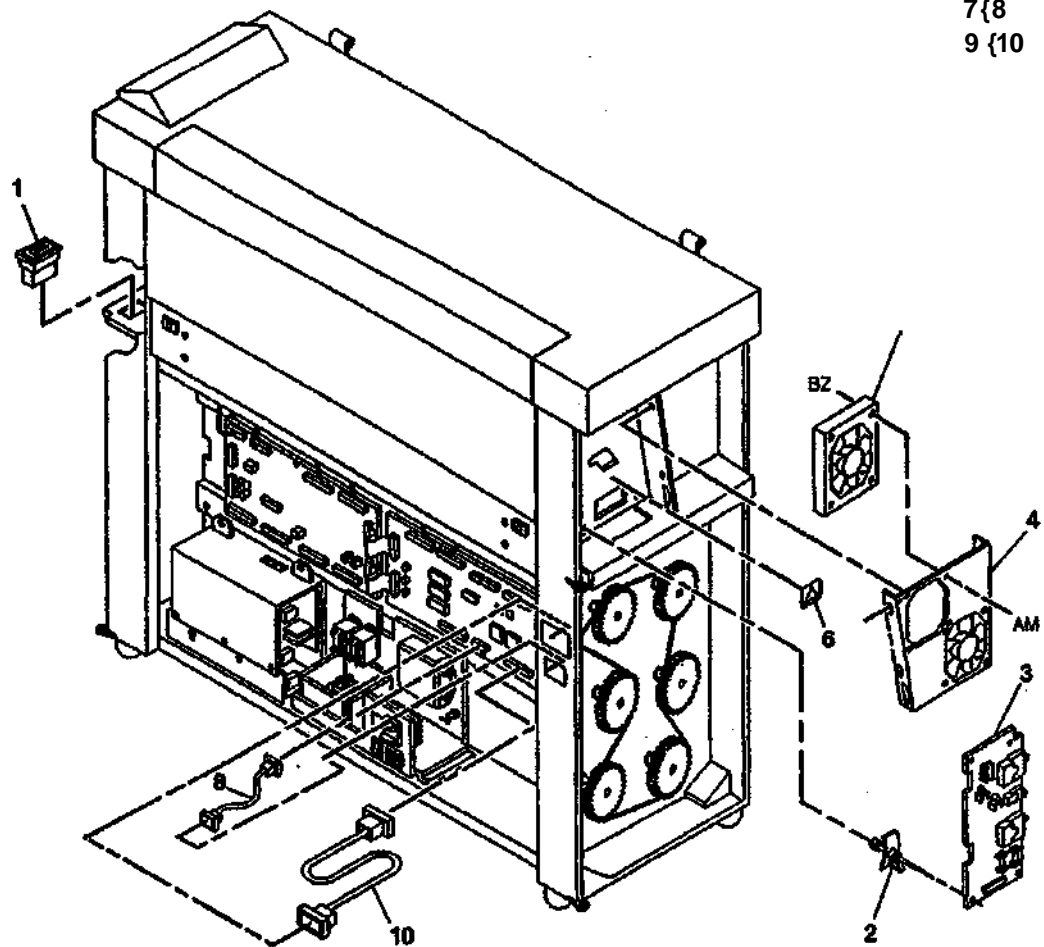
PL 1.2 AC ELECTRICAL COMPONENTS



| ITEM | PART | DESCRIPTION |
|------|-----------|---|
| 1 | | AC MODULE ASSEMBLY (60HZ) (50HZ) (NOT SPARED) |
| 2 | 142K1540 | FILTER |
| 3 | — | AC COMPONENT (60HZ) (50HZ) (P/O ITEM 1) |
| 4 | 109E1040 | AC RELAY (K1, K3) |
| 5 | 707W1652 | FUSER TRIAC (Qi) (REP 10.3) |
| 6 | 103E2721 | BALLAST RESISTOR (R1, R2) (60HZ) |
| . | 103E2731 | BALLAST RESISTOR (R1, R2) (50HZ) |
| 7 | - | MAIN POWER SWITCH (CB1) (P/O ITEM 1) |
| 8 | - | INLET CONNECTOR (P/O ITEM 1) |
| 9 | 117K22761 | POWER CORD (60HZ) |
| - | 117K27550 | POWER CORD (50HZ) |
| 10 | 10BE1762 | GROUND FAULT PANEL |
| 11 | 120E2160 | TWIST CLAMP |
| 12 | 120E2150 | TWIST CLAMP |
| 13 | 600K60610 | AC MODULE KIT (TAG 5) |
| 14 | | SUPPORT BRACKET (P/O ITEM 13) |

0000002B ANO

PL 1.3 DC ELECTRICAL COMPONENTS



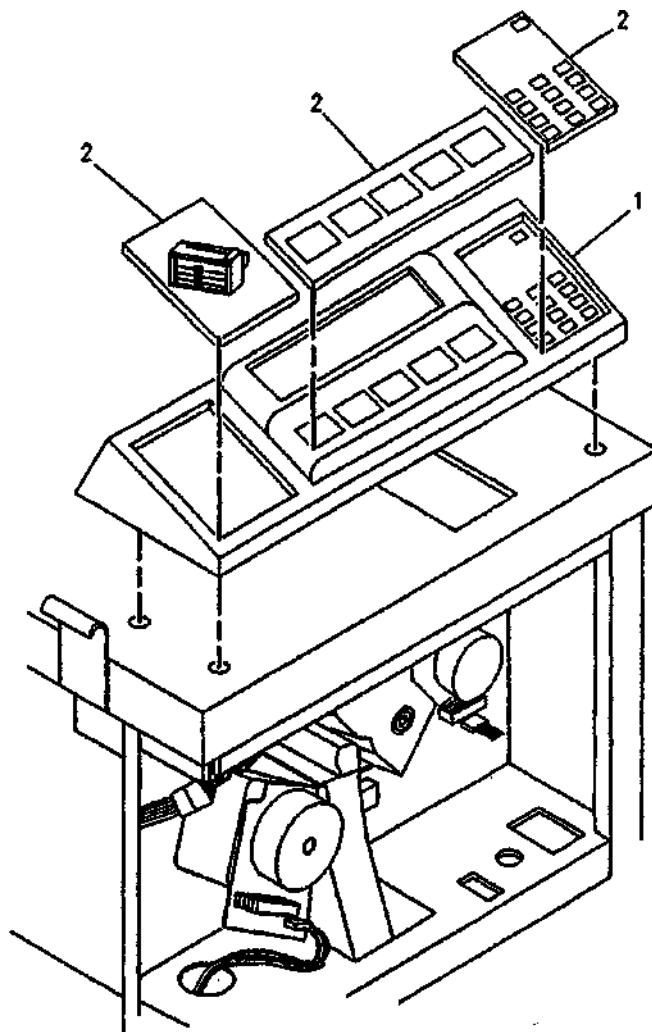
7{8
9 {10

| ITEM | PART | DESCRIPTION |
|------|-----------|---|
| 1 | 111K21 | MEDIA COUNTER |
| 2 | | STANDOFF (NOT SPARED) |
| 3 | 105K13541 | HIGH VOLTAGE POWER SUPPLY (REP 3.2) |
| 4 | 54K12300 | FAN DUCT |
| 5 | 127E11240 | FAN |
| 6 | 92E36450 | CHARGE COROTRON LABEL (RED ARROW) |
| 7 | 600K60900 | DIAGNOSTIC KIT |
| 8 | | HARNESS (P/O ITEM 7) |
| 9 | 600K60890 | LOOPBACK KIT |
| 10 | | HARNESS (P/O ITEM 9) |

0000003B-RNO

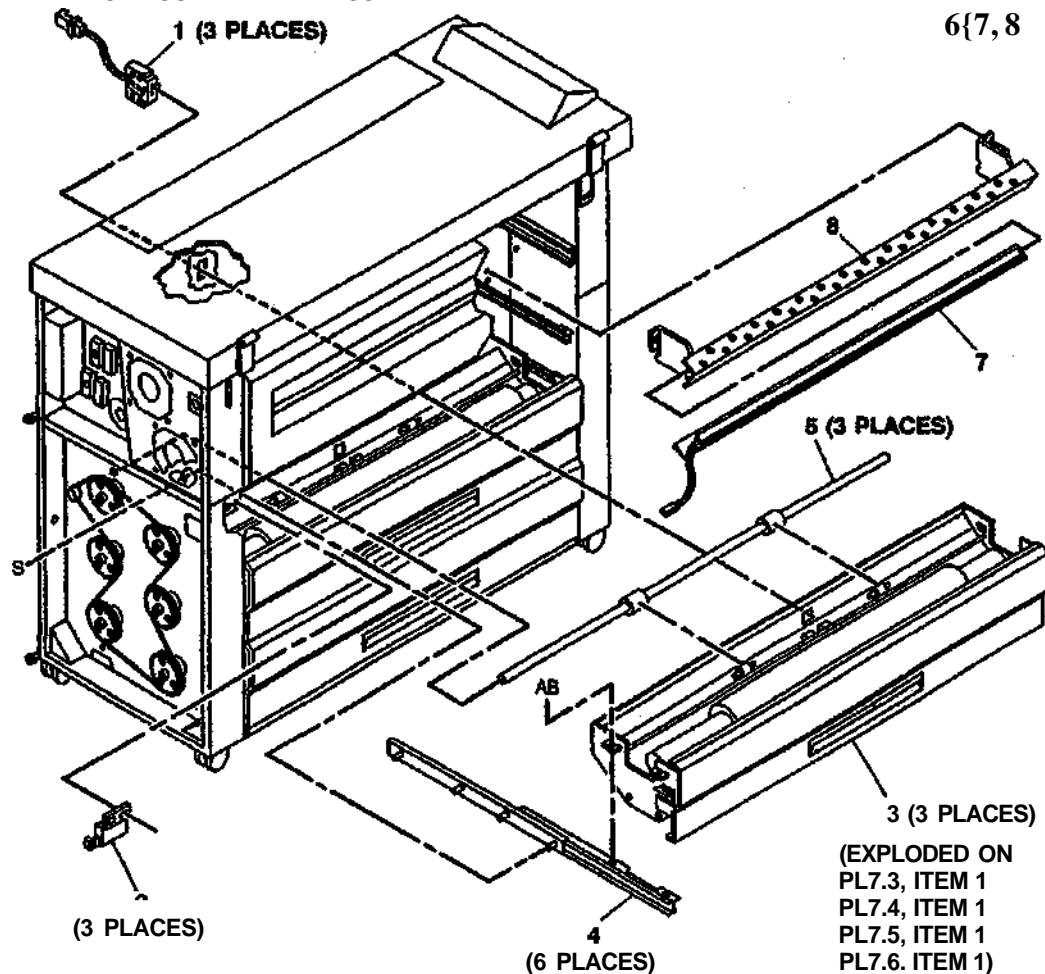
PL 1.4 CONTROL CONSOLE

| ITEM | PART | DESCRIPTION |
|------|-----------|-----------------------|
| 1 | 101K260B2 | CONTROL CONSOLE |
| 2 | 96E78251 | CONTROL CONSOLE LABEL |



0000004A-RN0

PL 7.1 ROLL SUPPLY FEED ASSEMBLY



| EM | PART | DESCRIPTION |
|----|-----------|--|
| 1 | 130K51801 | POSITION SENSOR |
| 2 | 130E2271 | DRAWER INTERLOCK SWITCH |
| 3 | 50K19612 | ROLL SUPPLY DRAWER ASSEMBLY (REP 7.1) |
| 4 | 10K1351 | SLIDE |
| 5 | 22K2S930 | ROLL FEED DRIVE ROLL (REP 7.4) |
| 6 | .. | HEATER ASSEMBLY (NOT SPARED) |
| 7 | 126K7330 | HEATER |
| 8 | | HEATER HOUSING (P/O ITEM 6) |

000007A-RNO

8830

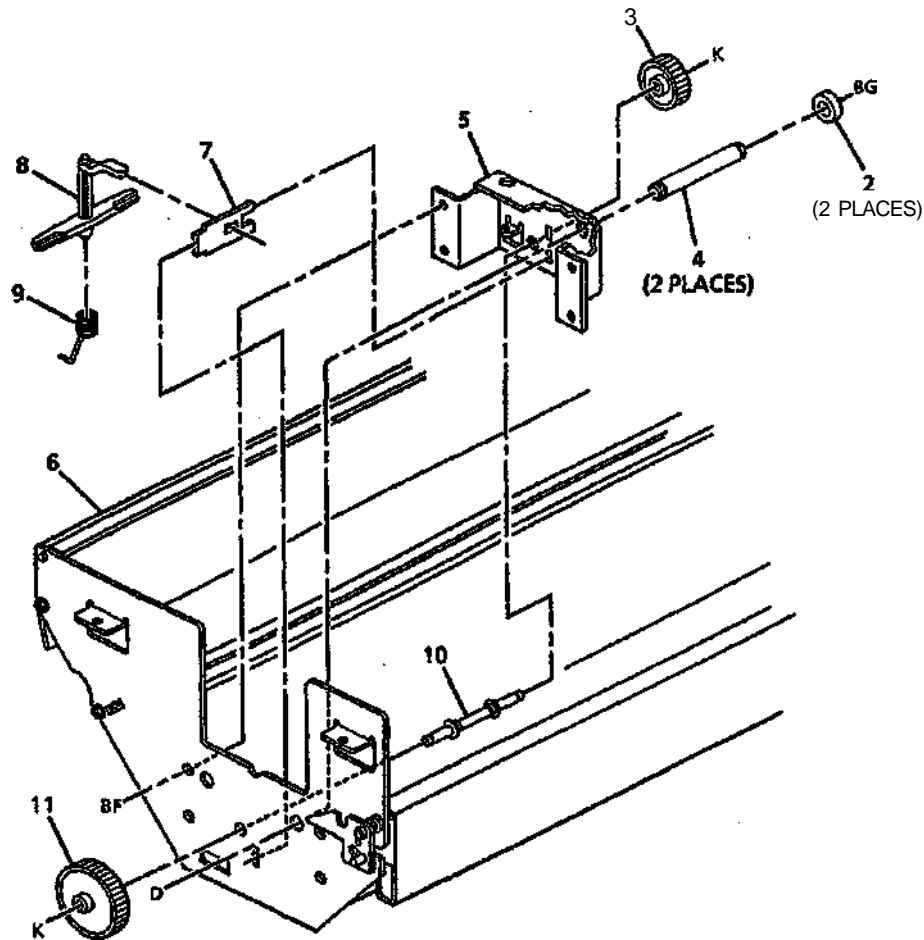


PARTS LIST SECTION
PL 7.2

0000008A-RNO

PL 7.3 ROLL SUPPLY DRAWER COMPONENTS (PART 1 OF 4)

1(2-11)

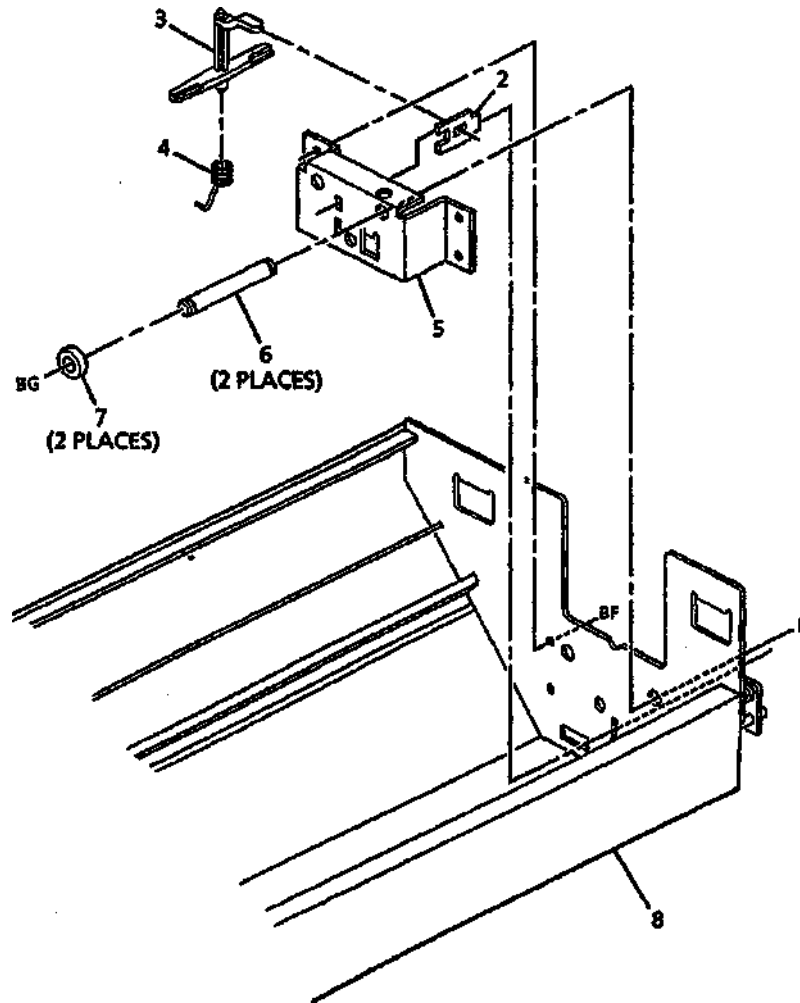


| ITEM | PART | DESCRIPTION |
|------|----------|---|
| 1 | - | PART OF ROLL SUPPLY DRAWER ASSEMBLY (REF: PL7.1 ITEM 3) |
| 2 | 22E11540 | SUPPORT ROLLER |
| 3 | 7E14650 | REWIND INTERNAL GEAR (20T) (REP 7.2) |
| 4 | 29E14760 | LH SUPPORT PIN |
| 5 | - | LH CRADLE BRACKET (P/O ITEM 1) |
| 6 | - | DRAWER FRAME (P/O ITEM 1) |
| 7 | - | LH ROLL LOCK (P/O ITEM 1) |
| 8 | 3E17610 | ROLL LOCK |
| 9 | 9E27340 | ROLL LOCK SPRING |
| 10 | - | REWIND SHAFT (P/O ITEM 1) |
| 11 | 7E14600 | REWIND GEAR (32T) (REP 7.2) |

0000009A-RNO

PL 7.4 ROLL SUPPLY DRAWER COMPONENTS (PART 2 OF 4)

1(2-8

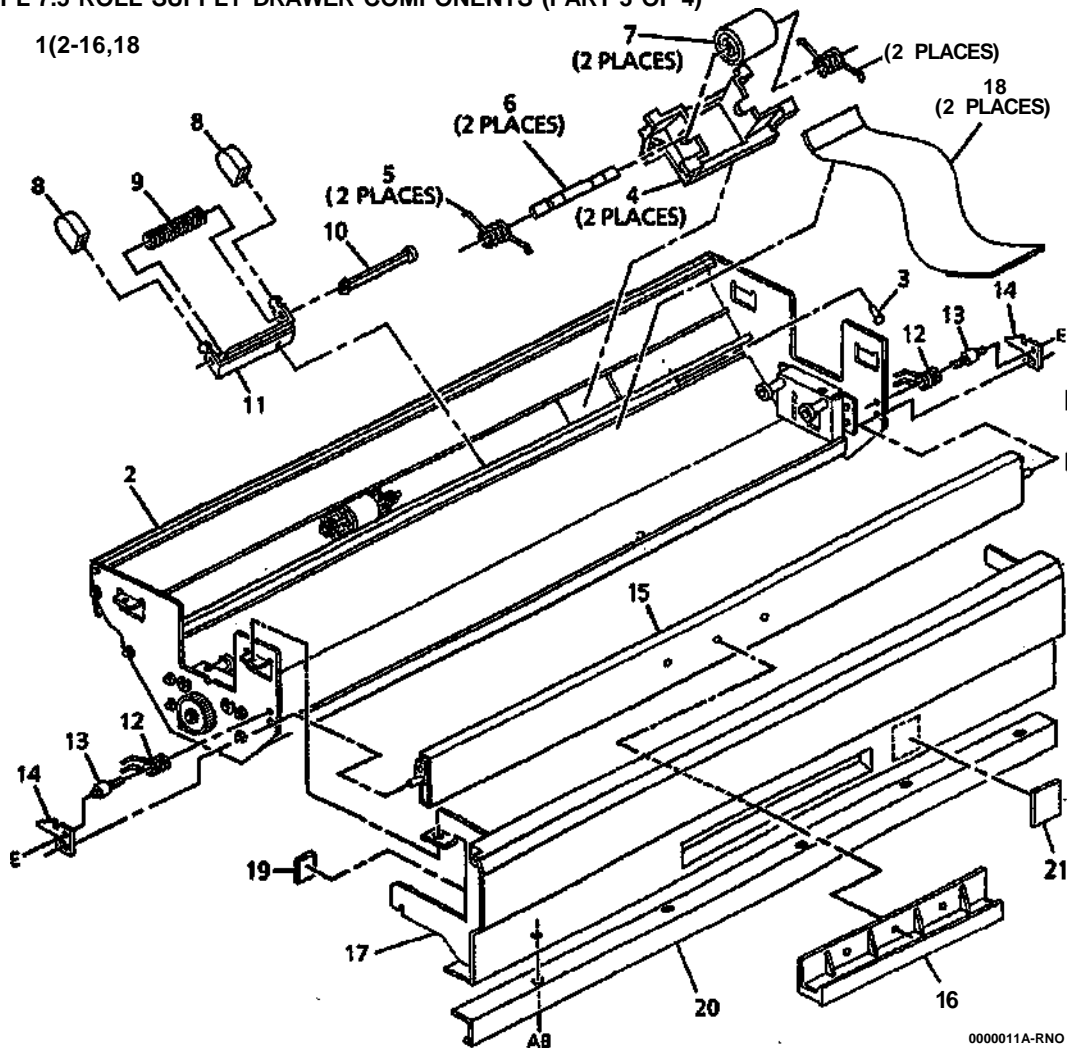


| ITEM | PART | DESCRIPTION |
|------|----------|--|
| 1 | | PART OF ROLL SUPPLY DRAWER ASSEMBLY (REF PL7.1 ITEM 3) |
| 2 | .. | RH ROLL LOCK (P/O ITEM 1) |
| 3 | 3E17610 | ROLL LOCK |
| 4 | 9E27340 | ROLL LOCK SPRING |
| 5 | .. | RH CRADLE BRACKET (P/O ITEM 1) |
| 6 | 29E14750 | RH SUPPORT PIN |
| 7 | 22E11540 | SUPPORT ROLLER |
| 8 | | DRAWER FRAME (P/O ITEM 1) |

0000010A-RNO

PL 7.5 ROLL SUPPLY DRAWER COMPONENTS (PART 3 OF 4)

1(2-16,18

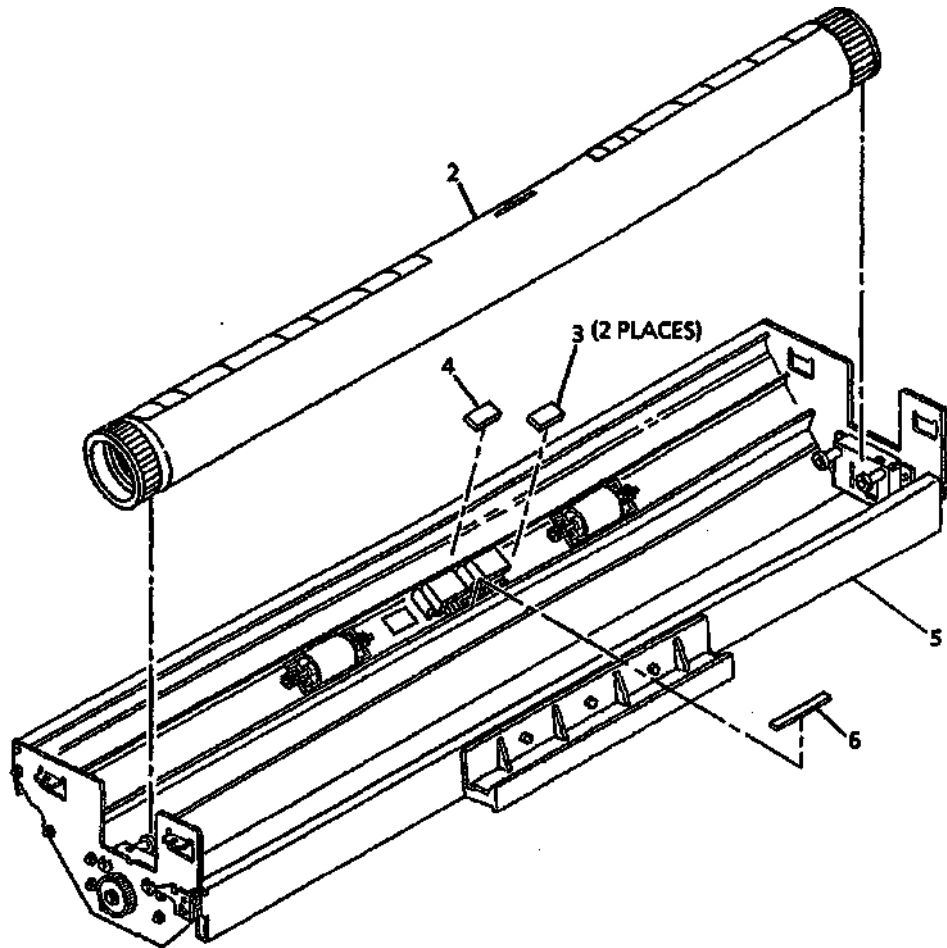


| ITEM | PART | DESCRIPTION |
|------|----------|---|
| 1 | | PART OF ROLL SUPPLY DRAWER ASSEMBLY (REF: PL7.1 ITEM 3) |
| 2 | | DRAWER FRAME (P/O ITEM 1) |
| 3 | 17E42S0 | BAFFLE STOP |
| 4 | 68E17221 | BRACKET |
| 5 | 9E27351 | PINCH ROLL SPRING |
| 6 | | PINCH ROLL SHAFT (P/O ITEM 1) |
| 7 | 22E10060 | ROLL FEED PINCH ROLL (REP 7.3) |
| 8 | | LOCK RELEASE HANDLE (P/O ITEM 1) |
| 9 | 9E32790 | LOCK SPRING |
| 10 | 29E14460 | RETAINER |
| 11 | | LATCH (P/O ITEM 1) |
| 12 | 9E27330 | DRAWER LATCH SPRING |
| 13 | 29E13701 | LATCH PIN |
| 14 | | SUPPLY DRAWER LATCH (P/O ITEM 1) |
| 15 | 3K7581 | HANDLE |
| 16 | 3E39000 | DRAWER HANDLE |
| 17 | 48K44880 | DRAWER COVER |
| 18 | 38K9190 | PAPER GUIDE |
| 19 | 121E7680 | MAGNET |
| 20 | 48E39380 | KICKPLATE |
| 21 | 891E1960 | DRAWER LABEL |

0000011A-RNO

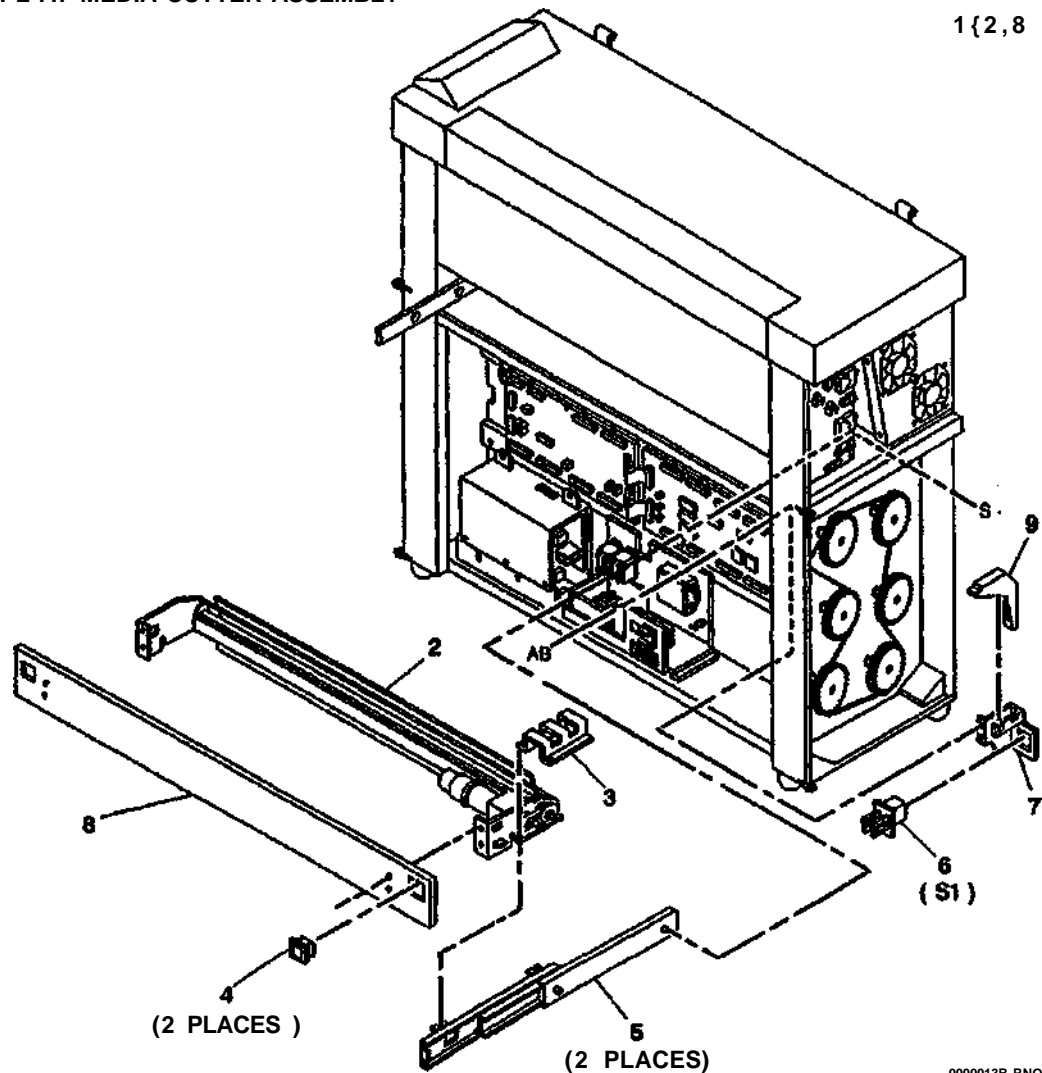
1(3-6)

| ITEM | PART | DESCRIPTION |
|------|----------|---|
| 1 | - | PART OF ROLL SUPPLY DRAWER ASSEMBLY (REF: PL7.1 ITEM 3) |
| 2 | 52K3580 | ROLL SUPPORT TUBE ASSEMBLY |
| 3 | 92E22541 | LABEL (PUSH HERE) |
| 4 | 92E36431 | LABEL (MEDIA LEAD) |
| 5 | | DRAWER FRAME (P/O ITEM 1) |
| 6 | 92E22560 | LABEL (PINCH ARROWS) |



0000012A-RNO

PL 7.7 MEDIA CUTTER ASSEMBLY



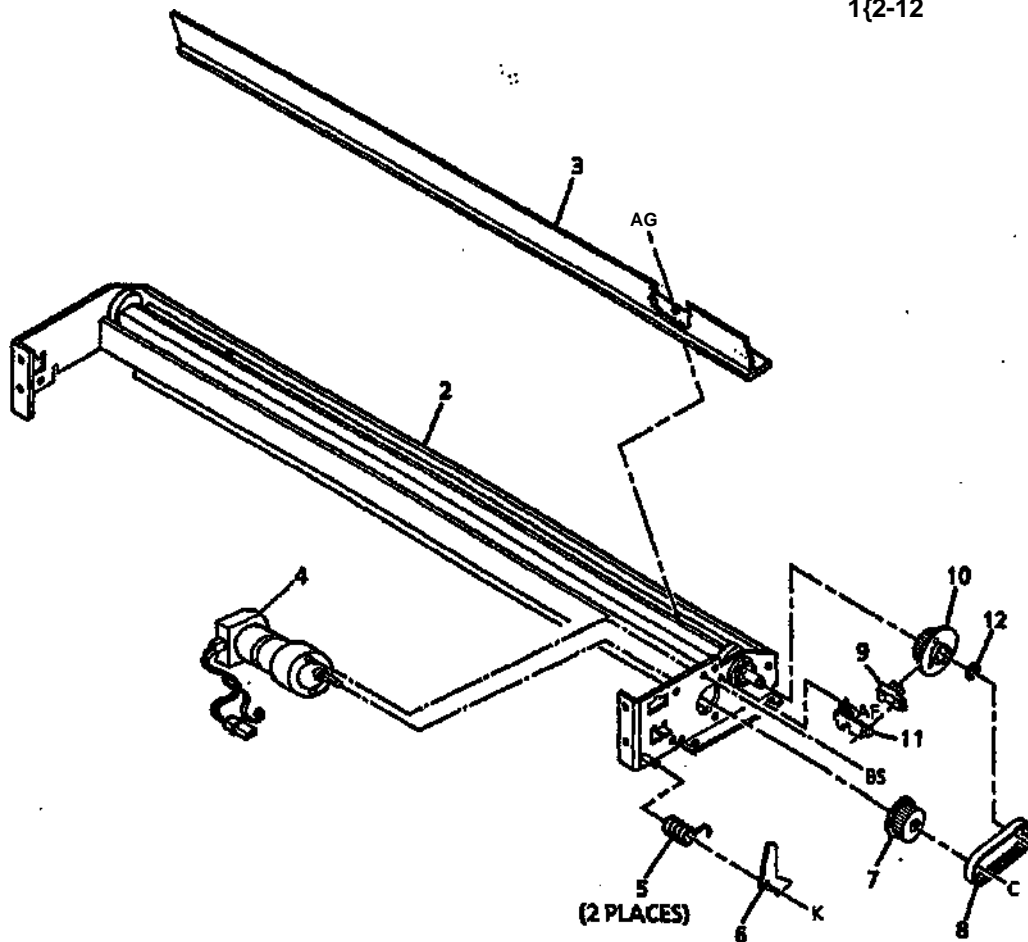
1 { 2, 8 } I

| ITEM | PART | DESCRIPTION |
|------|----------|------------------------------------|
| 1 | 37K1020 | MEDIA CUTTER ASSEMBLY |
| 2 | | MEDIA CUTTER (P/O ITEM 1) |
| 3 | - | BRACKET (NOT SPARED) |
| 4 | 3E18781 | LATCH |
| 5 | 10K1360 | MEDIA CUTTER SUIDE |
| 6 | 110E2640 | MEDIA CUTTER COVER |
| 7 | - | INTERLOCK SWITCH (S1) |
| 8 | .. | BRACKET (NOT SPARED) |
| 9 | 11E4470 | CUTTER COVER (P/O ITEM 1) |
| | | CUTTER INTERLOCK ACTUATOR LEVER |

0000013B RNO

PL 7.8 MEDIA CUTTER COMPONENTS

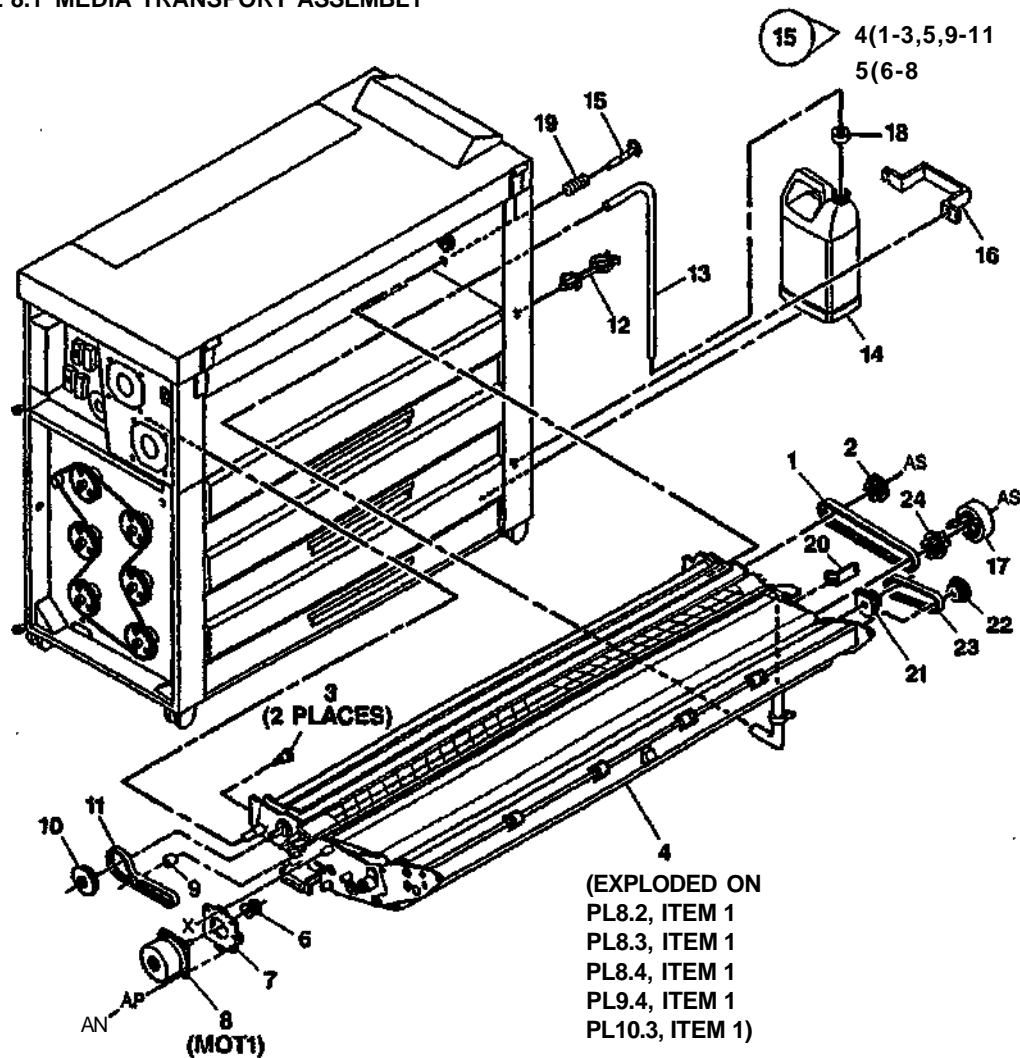
1{2-12



| ITEM | PART | DESCRIPTION |
|------|-----------|---|
| 1 | | PART OF MEDIA CUTTER ASSEMBLY (REF: PL7.7 ITEM 1) |
| 2 | .. | MEDIA CUTTER FRAME (P/O ITEM 1) |
| 3 | 38K6601 | MEDIA EXIT GUIDE |
| 4 | 127K19850 | CUTTER MOTOR |
| 5 | 9E27340 | LATCH SPRING |
| 6 | 3E16521 | CUTTER LATCH |
| 7 | - | DRIVE PULLEY (34T) (P/O ITEM 1) |
| B | 423W57550 | DRIVE BELT |
| 9 | 130E3250 | CUTTER HOME SENSOR (REP 8.15) |
| 10 | 20E18B30 | CUTTER DRIVE PULLEY |
| 11 | | SENSOR BRACKET (P/O ITEM 1) |
| 12 | 2BE7430 | RETAINING RING |

0000014A-RNO

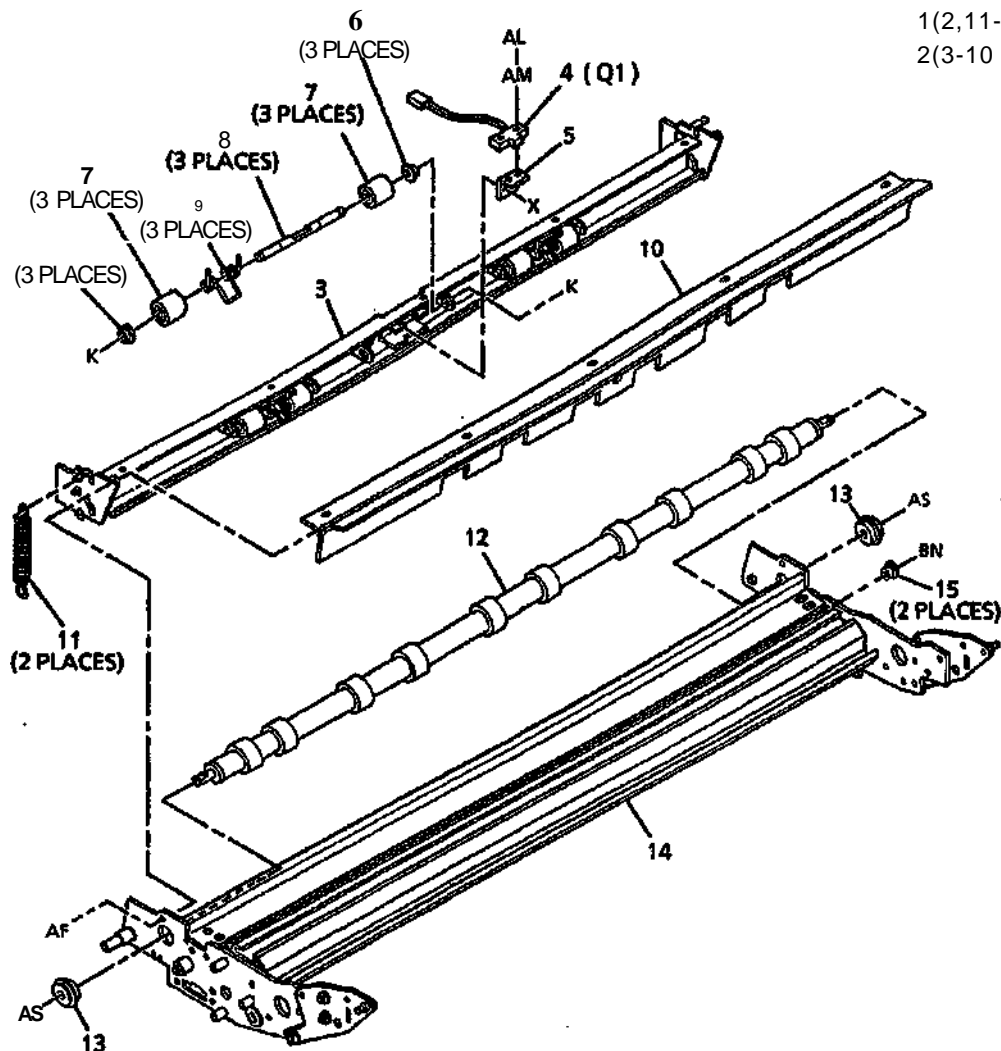
PL 8.1 MEDIA TRANSPORT ASSEMBLY



| PART | DESCRIPTION |
|--------------|--|
| 1 423W72201 | SHEET DRIVE BELT |
| 2 20E13353 | SHEET DRIVE PULLEY |
| 3 26E11970 | SHOULDER SCREW |
| 4 22K49203 | MEDIA TRANSPORT ASSEMBLY (W/TAG 15) |
| 5 .. | (REP 8.1. ADJ 8.1) TRANSPORT DRIVE MOTOR ASSEMBLY (NOT SPARED) |
| 6 20E13603 | DRIVE MOTOR PULLEY |
| 7 | MOTOR MOUNTING PLATE (P/O ITEM 5) |
| 8 127K4293 | TRANSPORT DRIVE MOTOR (MOT1) |
| 9 22E11441 | (REP 8.10) IDLER ROLLER |
| 10 20E12353 | REGISTRATION DRIVE PULLEY |
| 11 423W64001 | REGISTRATION DRIVE BELT |
| 12 120E2160 | (REP 8.13) TWIST CLAMP |
| 13 52E7910 | MOISTURE COLLECTION TUBE |
| 14 93E1501 | MOISTURE COLLECTION BOTTLE |
| 15 29K1111 | PIN |
| 16 | BRACKET (NOT SPARED) |
| 17 121K10612 | CLUTCH (REP 8.4) |
| 18 - | BOTTLE CAP (NOT SPARED) |
| 19 9E32510 | COMPRESSION SPRING |
| 20 17E7221 | CLUTCH BRAKE |
| 21 20E26340 | GEAR PULLEY |
| 22 20E26350 | EXIT DRIVE PULLEY |
| 23 - | BELT (NOT SPARED) |
| 24 20K8080 | CLUTCH PULLEY |

0000015B RNO

PL 8.2 MEDIA REGISTRATION COMPONENTS

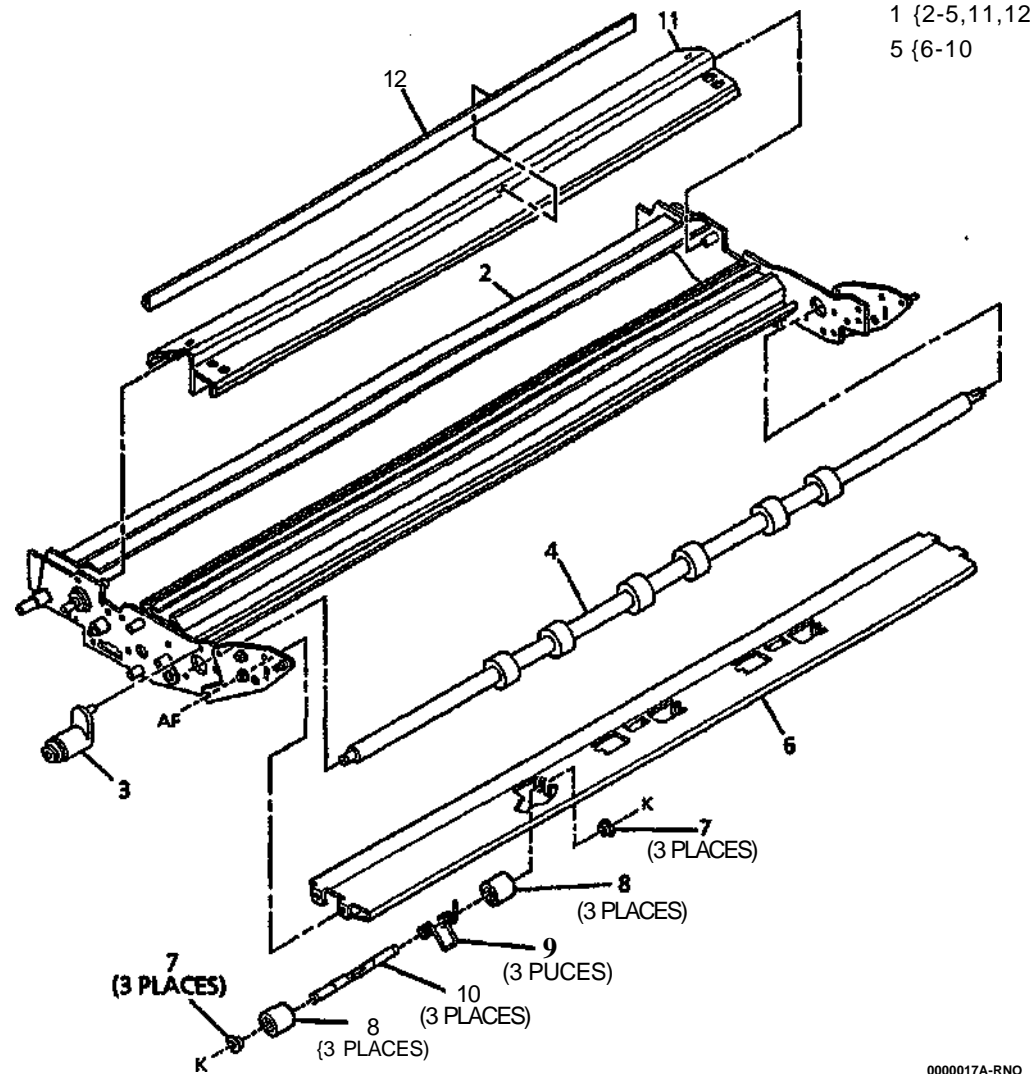


1(2,11-15)
2(3-10)

| ITEM | PART | DESCRIPTION |
|------|-----------|--|
| 1 | | PART OF MEDIA TRANSPORT ASSEMBLY (REF: PL8.1 ITEM 4) |
| 2 | | REGISTRATION SUPPORT ASSEMBLY (P/O ITEM 1) |
| 3 | | REGISTRATION SUPPORT (P/O ITEM 2) |
| 4 | 130E5990 | MEDIA REGISTRATION SENSOR (Q1) (REP 8.8) |
| 5 | 30K37830 | REGISTRATION SENSOR BRACKET |
| 6 | 16E6020 | BUSHING |
| 7 | 22E10531 | REGISTRATION PINCH ROLL (REP 8.12) |
| 8 | 6E42300 | PINCH ROLL SHAFT |
| 9 | 9E32500 | PINCH ROLL SPRING |
| 10 | | TURNAROUND BAFFLE (P/O ITEM 2) |
| 11 | 9E32480 | REGISTRATION SUPPORT SPRING |
| 12 | 6K13880 | REGISTRATION DRIVE ROLL (REP 8.17) |
| 13 | 413W31054 | BEARING |
| 14 | | MEDIA TRANSPORT FRAME (P/O ITEM 1) |
| 15 | 16E8931 | BUSHING |

0000016A-RNO

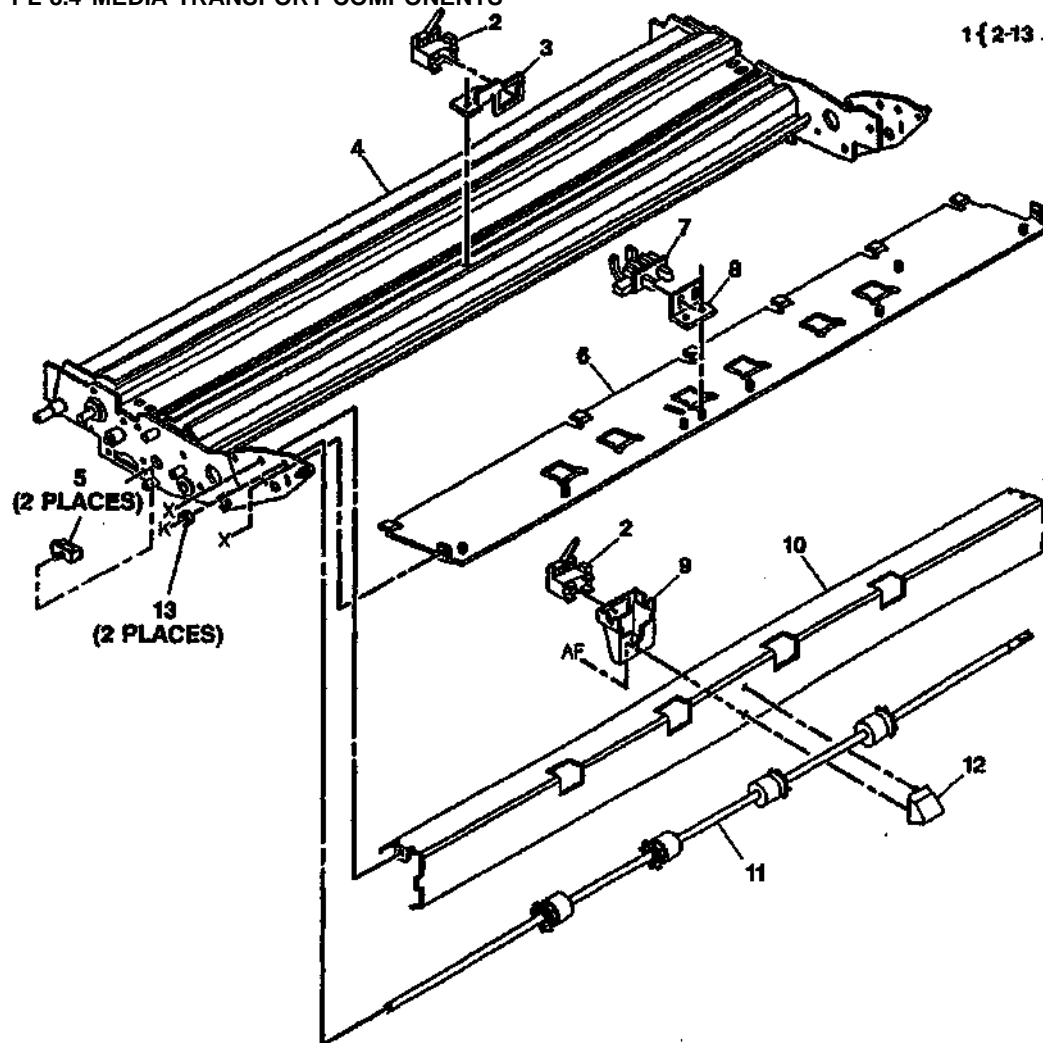
PL 8.3 CUT SHEET FEED COMPONENTS



| ITEM | PART | DESCRIPTION |
|------|----------|--|
| 1 | - | PART OF MEDIA TRANSPORT ASSEMBLY (REF: PL8.1 ITEM 4) |
| 2 | - | MEDIA TRANSPORT FRAME (P/O ITEM 1) |
| 3 | 19E14350 | DRAG BRAKE |
| 4 | 6K15681 | SHEET DRIVE ROLL (REP 8.7) |
| 5 | - | SHEET SUPPORT ASSEMBLY (P/O ITEM 1) |
| 6 | - | SHEET LOWER BAFFLE (P/O ITEM 5) |
| 7 | 16E6020 | BUSHING |
| 8 | 22E9390 | SHEET PINCH ROLL (REP 8.6) |
| 9 | 9E32490 | SHEET PINCH SPRING |
| 10 | 6E23540 | SHEET PINCH SHAFT |
| 11 | - | TOP GUIDE (P/O ITEM 1) |
| 12 | - | SHIELD (P/O ITEM 1) |

0000017A-RNO

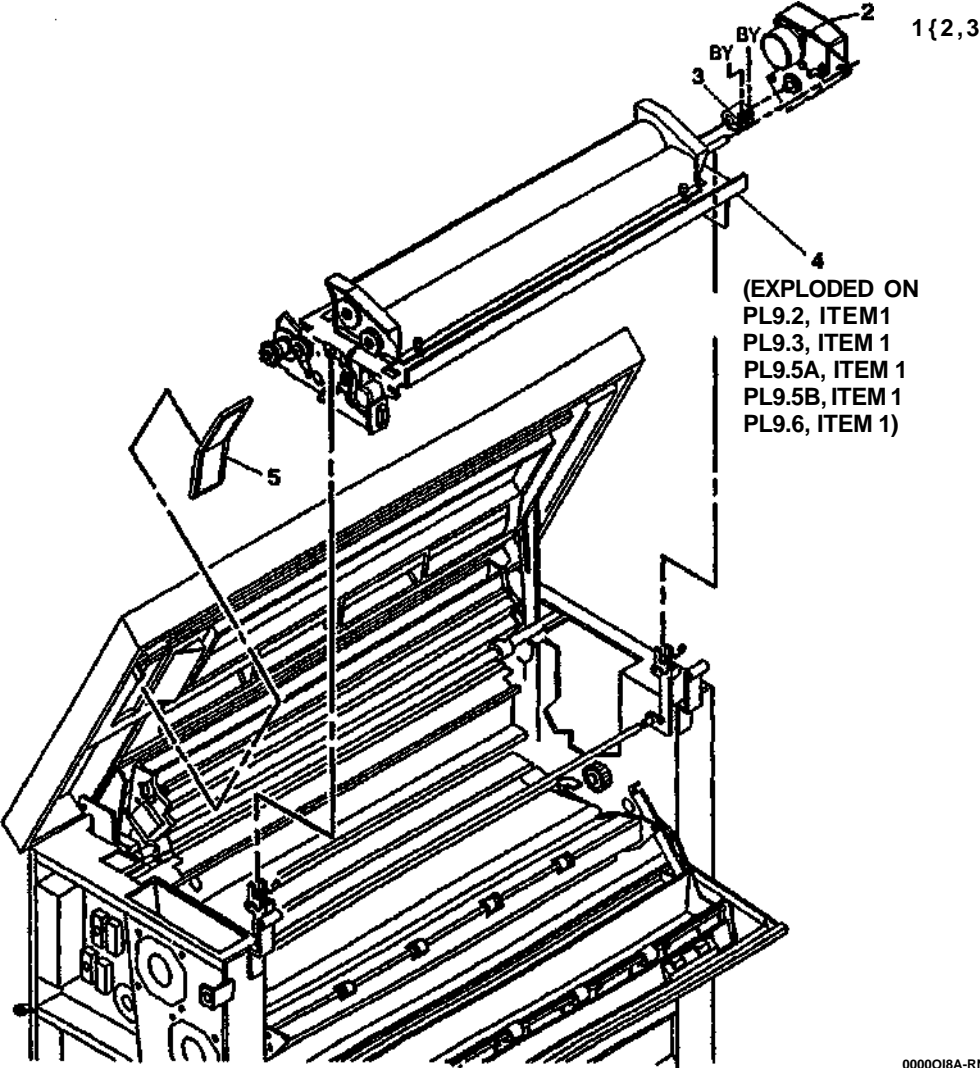
PL 8.4 MEDIA TRANSPORT COMPONENTS



0000006A-RNO

| ITEM | PART | DESCRIPTION |
|------|----------|--|
| 1 | | PART OF MEDIA TRANSPORT ASSEMBLY (REF: PL8.1 ITEM 4) |
| 2 | 110K8711 | BUCKLE SWITCH (UPPER) (REP 8.4) |
| 3 | — | MEDIA EXIT SWITCH (LOWER) (REP 8.2) |
| 4 | | SENSOR BRACKET (P/O ITEM 1) |
| 5 | 19E7100 | TRANSPORT FRAME (P/O ITEM 1) |
| 6 | .. | CABLE CLIP |
| 7 | 110K3731 | SHEET UPPER BAFFLE (P/O ITEM 1) |
| 8 | .. | SHEET FEED SWITCH |
| 9 | 49E54980 | SWITCH BRACKET (P/O ITEM 1) |
| 10 | | SENSOR BRACKET |
| 11 | — | EXIT SUPPORT (P/O ITEM 1) |
| 12 | 32E10830 | EXIT ROLL (P/O ITEM 1) (REP 8.16) |
| 13 | - | STACKER SUPPORT BUSHING (P/O ITEM 1) |

PL 9.1 XEROGRAPHIC MODULE ASSEMBLY



| ITEM | PART | DESCRIPTION |
|------|-----------|------------------------------------|
| 1 | 127K17882 | PHOTORECEPTOR DRIVE ASSEMBLY |
| 2 | | PHOTORECEPTOR DRIVE (P/O ITEM 1) |
| 3 | SK41S1 | COUPLING |
| 4 | 126K5992 | XEROGRAPHIC MODULE ASSEMBLY (60HZ) |
| | 128K7152 | XEROGRAPHIC MODULE ASSEMBLY (50HZ) |
| 5 | S3E4750 | OZONE FILTER |

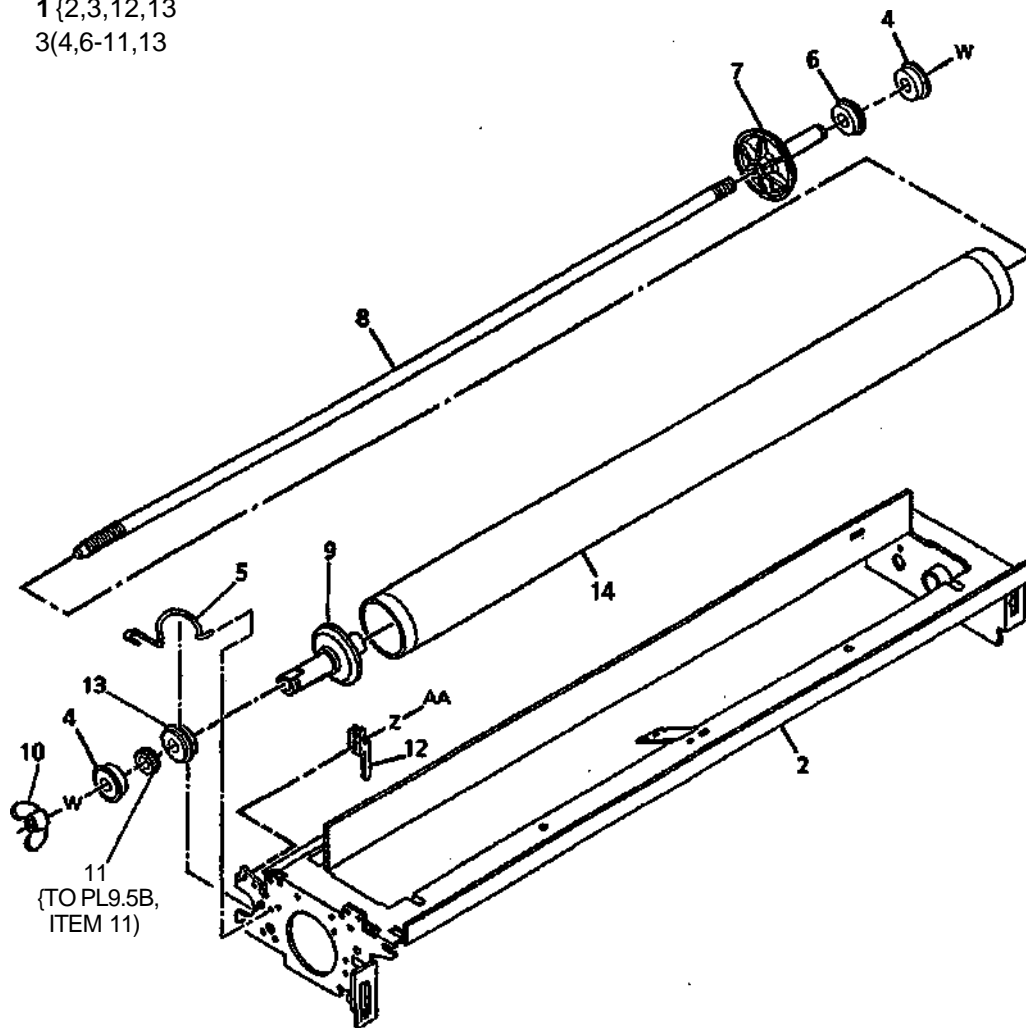
(EXPLODED ON
PL9.2, ITEM 1
PL9.3, ITEM 1
PL9.5A, ITEM 1
PL9.5B, ITEM 1
PL9.6, ITEM 1)

0000018A-RNO

PL 9.2 PHOTORECEPTOR

1 {2,3,12,13

3(4,6-11,13

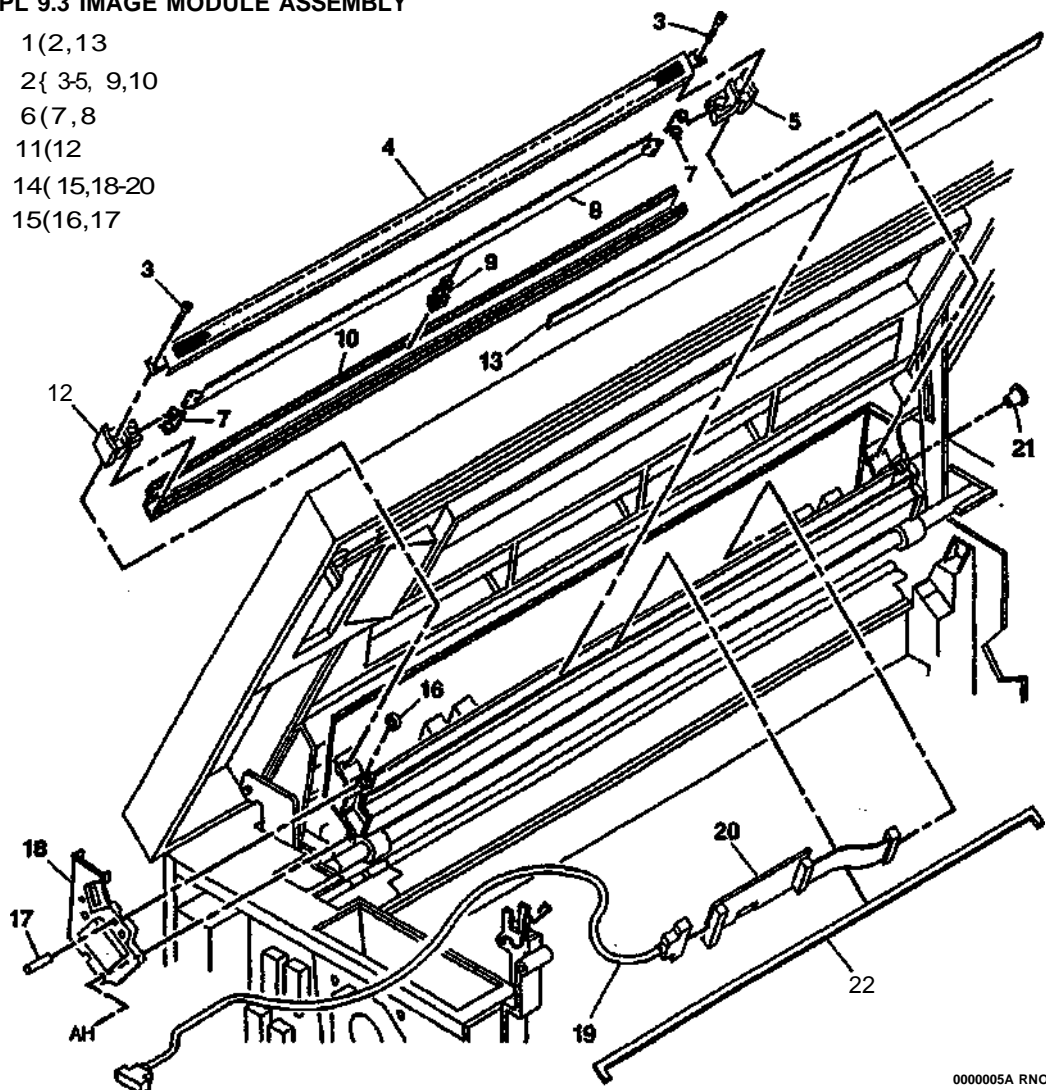


| ITEM | PART | DESCRIPTION |
|------|----------|---|
| 1 | | PART OF XEROGRAPHIC MODULE ASSEMBLY (REF: PL9.1 ITEM 4) |
| 2 | .. | XEROGRAPHIC FRAME (P/O ITEM 1) |
| 3 | 6K15640 | SHAFT ASSEMBLY |
| 4 | 13K380 | BEARING |
| 5 | 28E11470 | BEARING RETAINER |
| 6 | -- | BEARING (P/O ITEM 3) |
| 7 | | RH END CAP (P/O ITEM 3) |
| 8 | -- | SHAFT (P/O ITEM 3) |
| 9 | | LH HUB (P/O ITEM 3) |
| 10 | 230W652 | WING NUT |
| 11 | 7E1340 | TONER AUGER DRIVE GEAR |
| 12 | 30E16161 | GROUND CLIP |
| 13 | - | BEARING (P/O ITEM 1) |
| 14 | 1R535 | PHOTORECEPTOR (REP 9.3) |

0000020A-RNO

PL 9.3 IMAGE MODULE ASSEMBLY

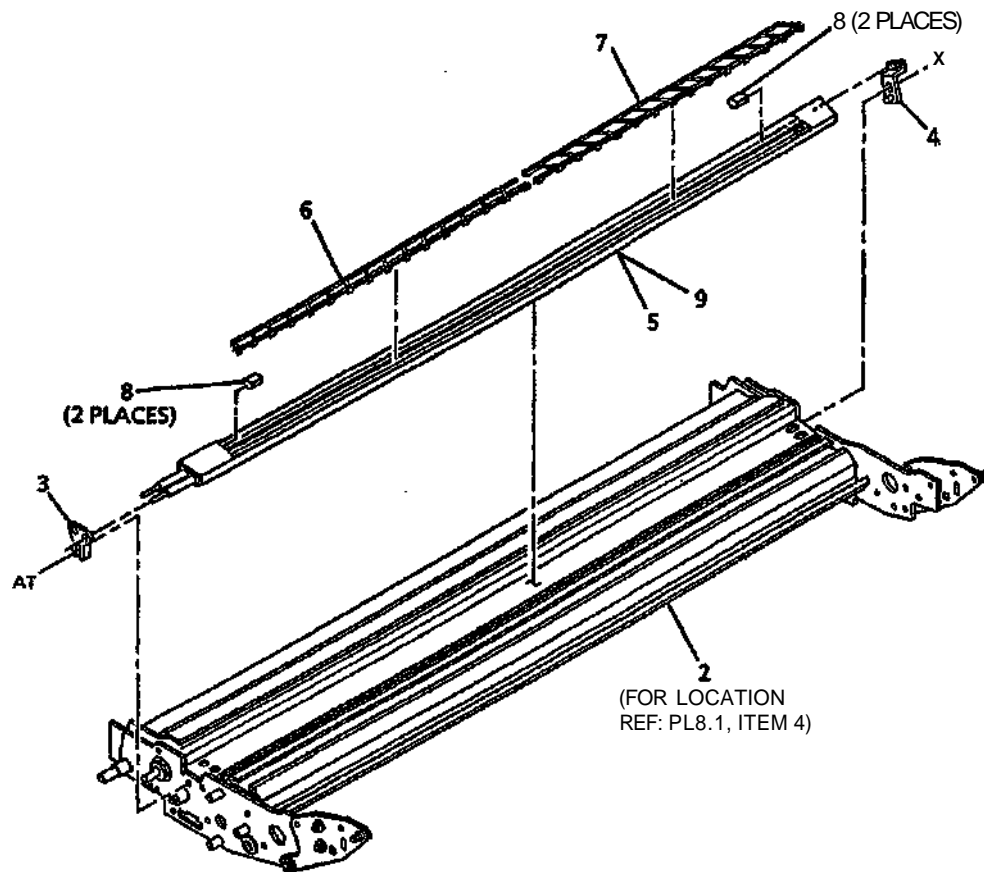
1(2,13)
2{ 3-5, 9,10
6(7,8
11(12
14(15,18-20
15(16,17



| ITEM | PART | DESCRIPTION |
|------|-----------|---|
| 1 | | PART OF XEROGRAPHIC MODULE ASSEMBLY (REF: PL9.1 ITEM 4) |
| 2 | 125K2220 | SCOROTRON ASSEMBLY |
| 3 | 26E576S0 | SCREW (M4 X 30) |
| 4 | 62E8051 | SCREEN (P/O ITEM 2) |
| 5 | | RIGHT END BLOCK (P/O ITEM 2) |
| 6 | 600K58750 | PIN ARRAY KIT (REP 9.8) |
| 7 | -- | SPRING (P/O ITEM 6) |
| 8 | -- | PIN ARRAY (P/O ITEM 6) |
| 9 | -- | CENTER SUPPORT (P/O ITEM 2) |
| 10 | -- | SCOROTRON EXTRUSION (P/O ITEM 2) |
| 11 | 600K58730 | LEFT END BLOCK KIT |
| 12 | | LEFT END BLOCK (P/O ITEM 11) |
| 13 | 35E41210 | SEAL |
| 14 | 60QK58760 | IMAGE MODULE ASSEMBLY KIT |
| 15 | 600K58740 | ROLLER KIT |
| 16 | - | ROLLER (P/O ITEM 15) |
| 17 | -- | PIN (P/O ITEM 15) |
| 18 | -- | COVER (P/O ITEM 14) |
| 19 | -- | HARNESS (P/O ITEM 14) |
| 20 | 160K30980 | CIRCUIT BOARD |
| 21 | 21E7680 | CAP PLUG |
| 22 | 35E37240 | GASKET |

0000005A RNO

PL 9.4 TRANSFER/DETACH COROTRON

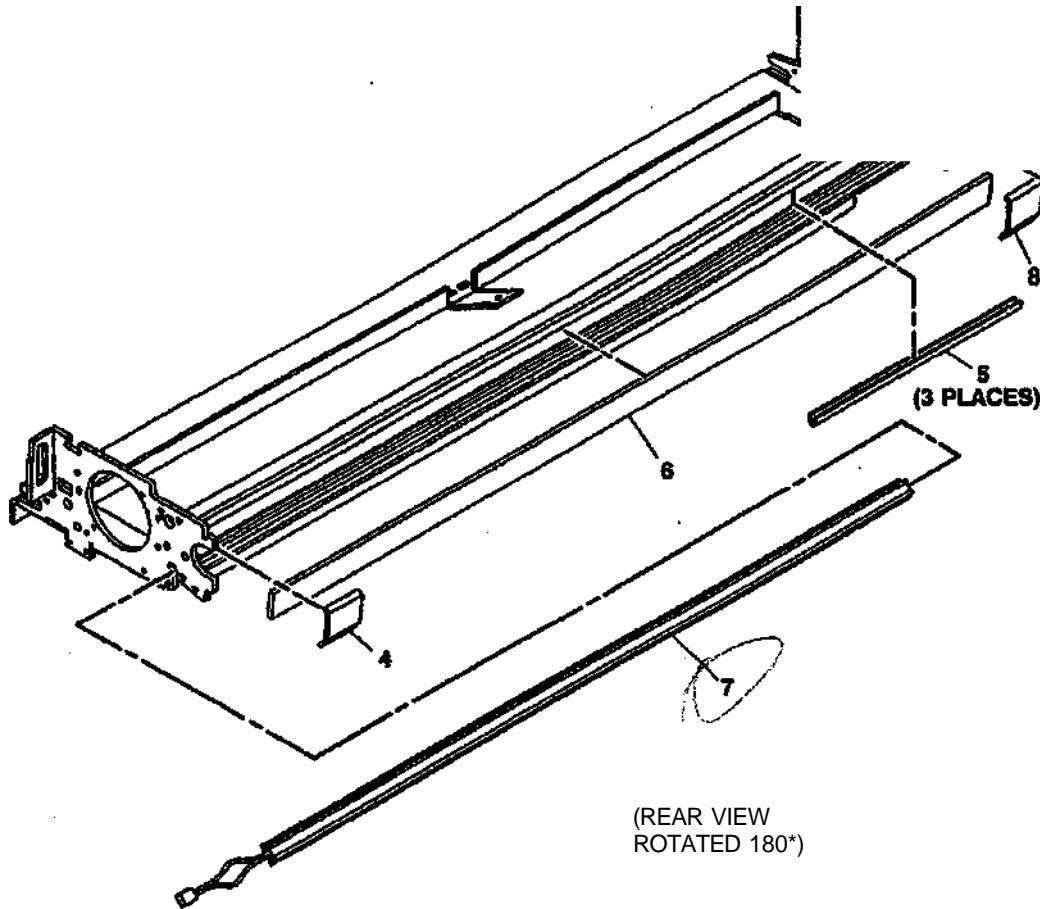


| ITEM | PART | DESCRIPTION |
|------|-----------|--|
| 1 | | PART OF MEDIA TRANSPORT ASSEMBLY (REF: PL8.1 ITEM 4) |
| 2 | | TRANSPORT FRAME (P/O ITEM 1) |
| 3 | 19E16080 | LEFT COROTRON CLAMP |
| 4 | 19E19971 | RIGHT COROTRON CLAMP |
| 5 | 125K25B0 | TRANSFER/DETACK COROTRON (REP 9.9) |
| 6 | 38E6610 | REAR DETACK COROTRON SHIELD |
| 7 | 38E6620 | FRONT DETACK COROTRON SHIELD |
| 8 | 4E502 | FOAM DAMPER |
| 9 | 600K37740 | COROTRON REPAIR KIT |

0000022A-RNO

PL 9.5A DRUM CLEANING (PART 1 OP 3)

1 { 2, 7
3 { 4-6, BAND
ITEM 7 ON PL9.5B

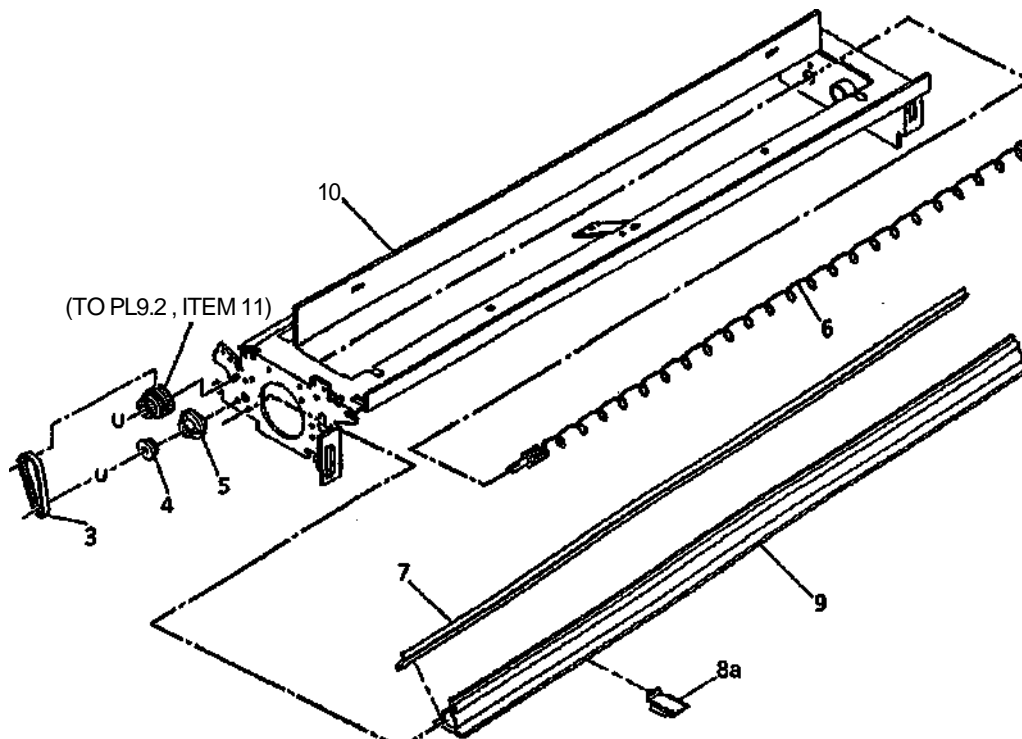


| ITEM | PART | DESCRIPTION |
|------|-----------|---|
| 1 | | PART OF XEROGRAPHIC MODULE ASSEMBLY (REF: PL9.1 ITEM 4) |
| 2 | | XEROGRAPHIC FRAME (P/O ITEM 1) |
| 3 | 600K59060 | CLEANING BLADE KIT (REP 9.4) |
| 4 | -- | BLADE SEAL (P/O ITEM 3) |
| 5 | .. | CLEANER BLADE RETAINER (P/O ITEM 3) |
| 6 | .. | CLEANER BLADE (P/O ITEM 3) |
| 7 | 101K25780 | DISCHARGE LED |
| 8 | — | BLADE SEAL (P/O ITEM 3) |

0000021B-RNO

PL 9.5B DRUM CLEANING (PART 2 OF 3)

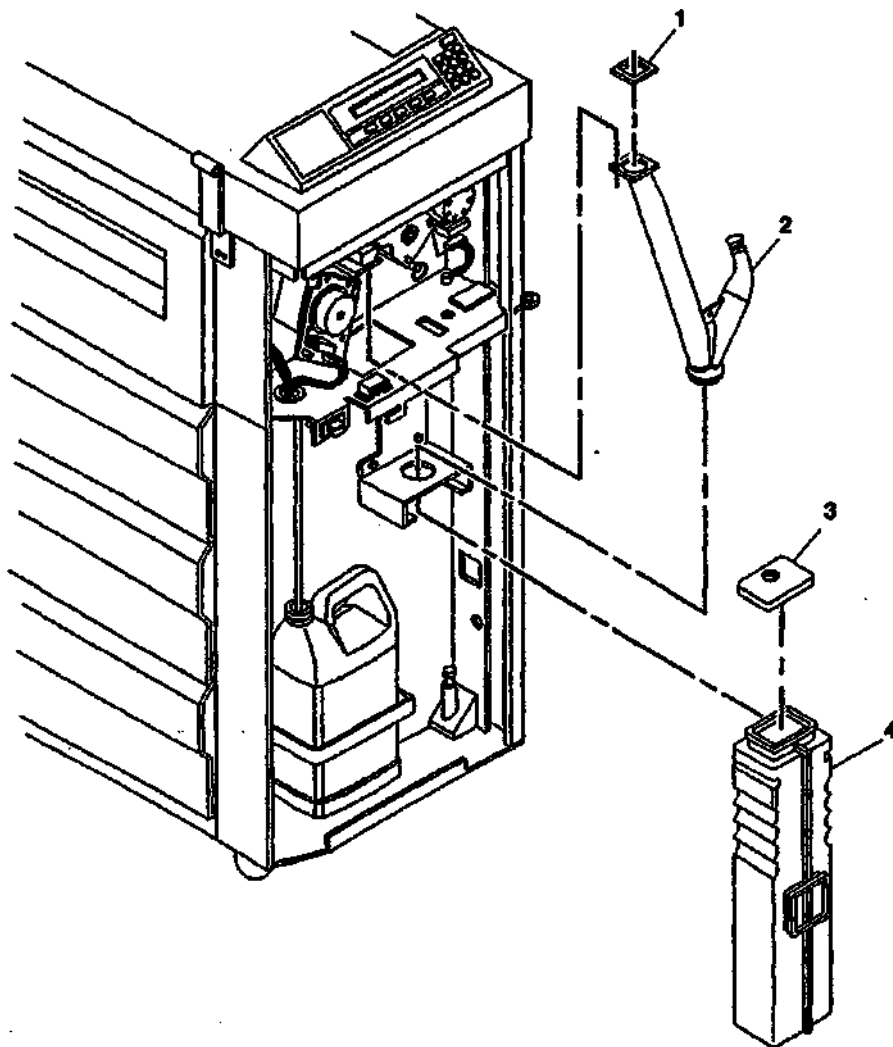
1(2-6,9,10
P/O KIT
7{ REF: PL9.5A, ITEM 3
8{8a



| ITEM | PART | DESCRIPTION |
|------|----------|--|
| 1 | | PART OF XEROGRAPHIC MODULE ASSEMBLY (REF: PL9.1 ITEM 4) |
| 2 | 7E5221 | AUGER GEAR PULLEY |
| 3 | 23E1620 | AUGER DRIVE BELT |
| 4 | 20E4350 | AUGER PULLEY |
| 5 | 13E803 | AUGER BEARING |
| 6 | 94K85 | WASTE TONER AUGER |
| 7 | 35K5790 | PHOTORECEPTOR SEAL (P/O CLEANING BLADE KIT, REF: PL9.5A ITEM 3) (REP 9.17) |
| 8 | 600K8481 | MEDIA DEFLECTOR KIT (7/KIT) |
| 8a | | MEDIA GUIDE |
| 9 | | HOUSING (P/O ITEM 1) |
| 10 | | XEROGRAPHIC FRAME (P/O ITEM 1) |

0000023A-RNO

PL 9.5C DRUM CLEANING (PART 3 OF 3)

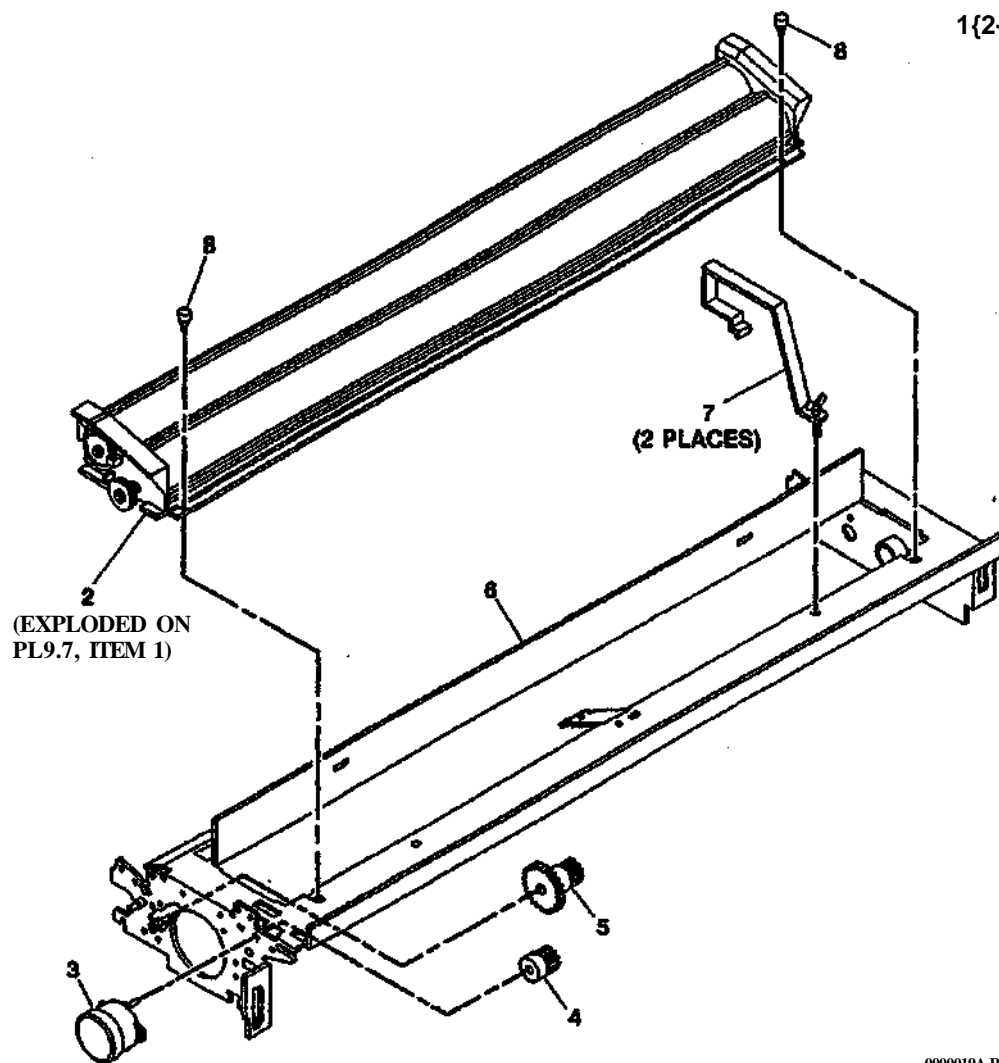


| ITEM | PART | DESCRIPTION |
|------|---------|--------------------|
| 1 | 35K5950 | TONER EXIT SEAL |
| 2 | 54E6533 | TONER WASTE TUBE |
| 3 | 35K5941 | WASTE BRACKET SEAL |
| 4 | 93K2420 | TONER BOTTLE |

000003BA-RNO

PL 9.6 WEB OILER ASSEMBLY

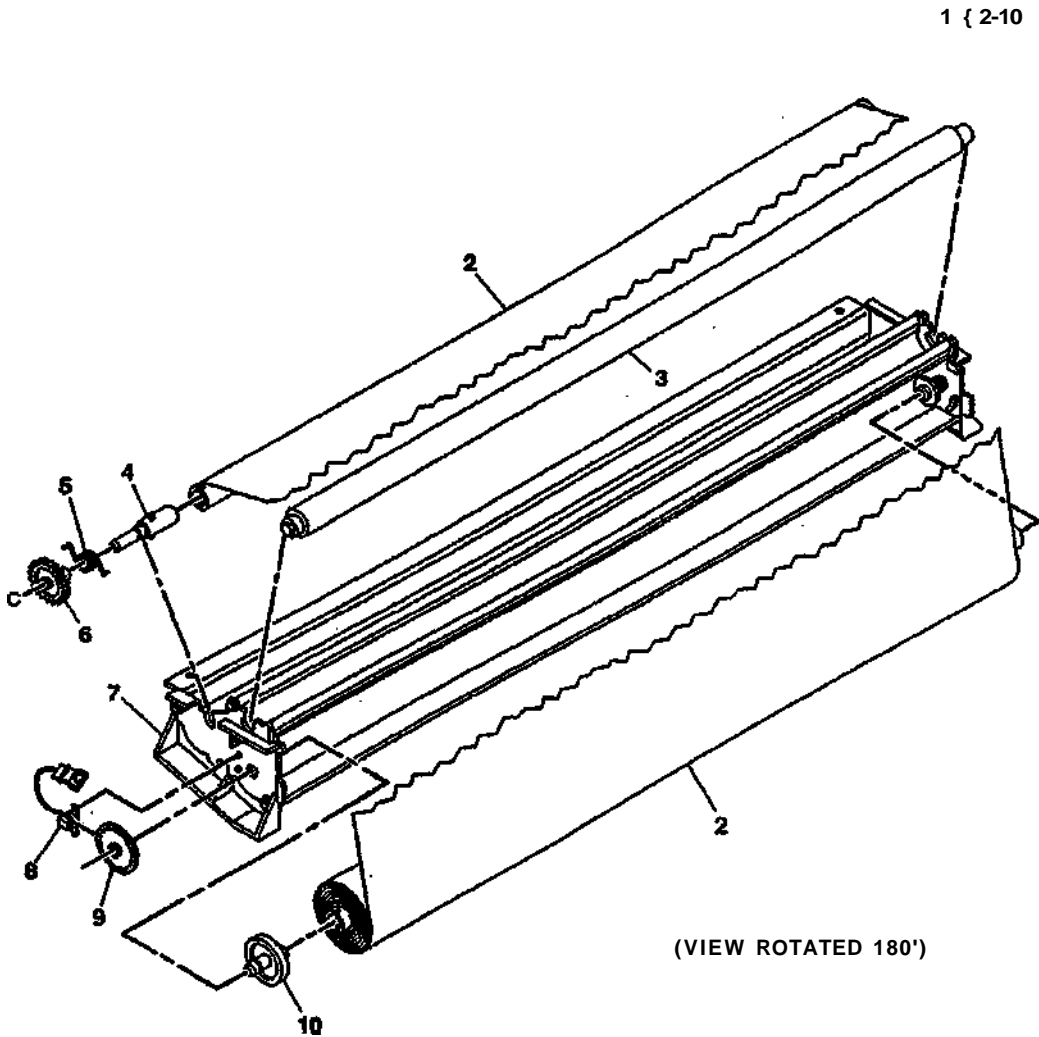
1{2-8



0000019A RNO

| ITEM | PART | DESCRIPTION |
|------|-----------|---|
| 1 | | PART OF XEROGRAPHIC MODULE ASSEMBLY (REF: PL9.1 ITEM 4) |
| 2 | 94K3301 | WEB OILER ASSEMBLY (REP 10.7) |
| 3 | 127K21990 | WEB OILER MOTOR |
| 4 | 7K8920 | OILER DRIVE GEAR |
| 5 | 7K8930 | IDLER GEAR (40T/18T) |
| 6 | | XEROGRAPHIC FRAME (P/O ITEM 1) |
| 7 | 3E39010 | HANDLE |
| a | 3E44550 | SCREW (M4) |

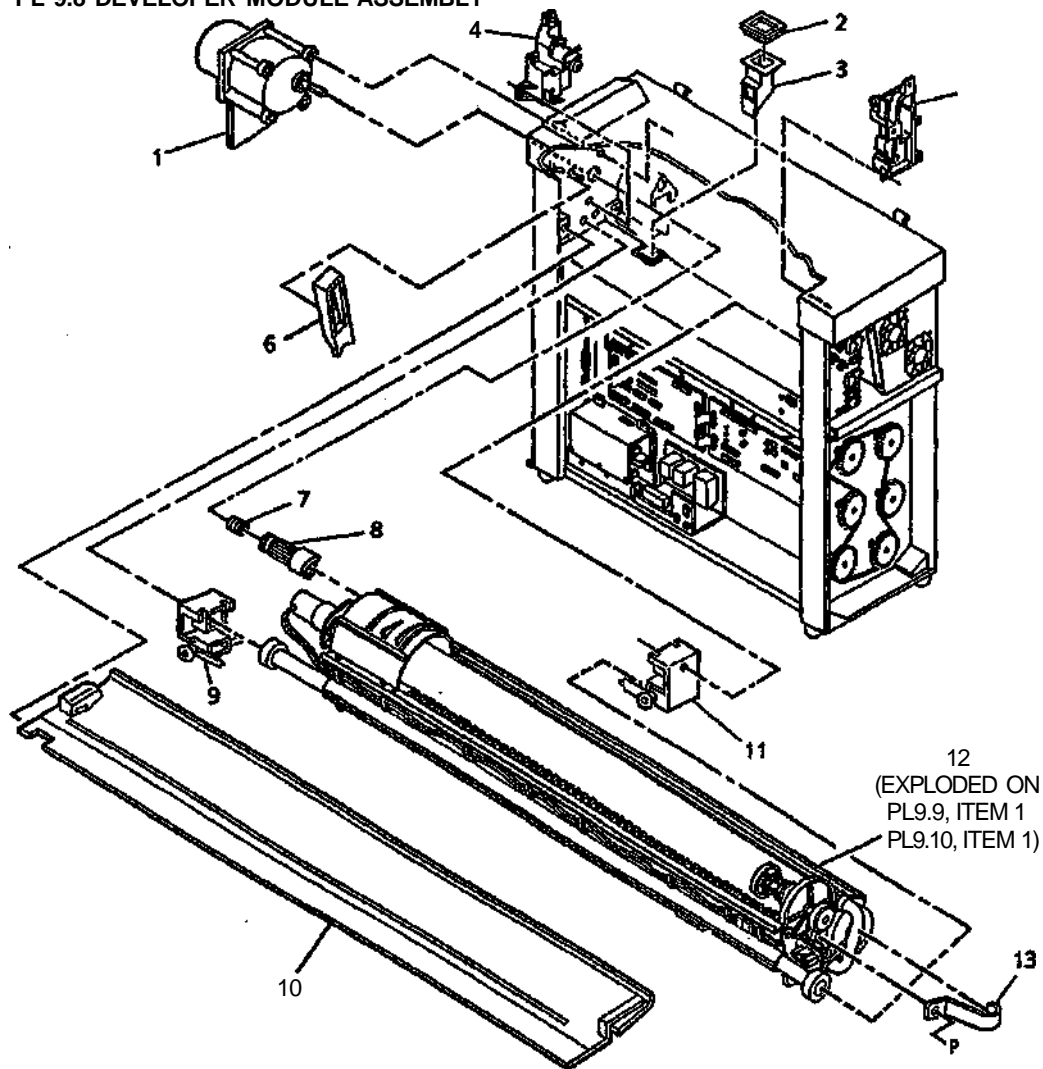
PL 9.7 WEB OILER COMPONENTS



| ITEM | PART | DESCRIPTION |
|------|-----------|--|
| 1 | | PART OF WEB OILER ASSEMBLY (REF: PL9.6 ITEM 2) |
| 2 | 22K49131 | WEB OILER (REP 10.9) |
| 3 | 22K49380 | PINCH ROLL |
| 4 | | TAKE UP SHAFT (P/O ITEM 1) |
| 5 | — | SPRING (P/O ITEM 1) |
| 6 | 7E42580 | TAKE UP GEAR |
| 7 | - | WEB FRAME (P/O ITEM 1) |
| a | 130K55130 | WEB MOTION SENSOR |
| s | 146K461 | ENCODER WHEEL |
| 10 | 5E11130 | BRAKE |

0000024A RNO

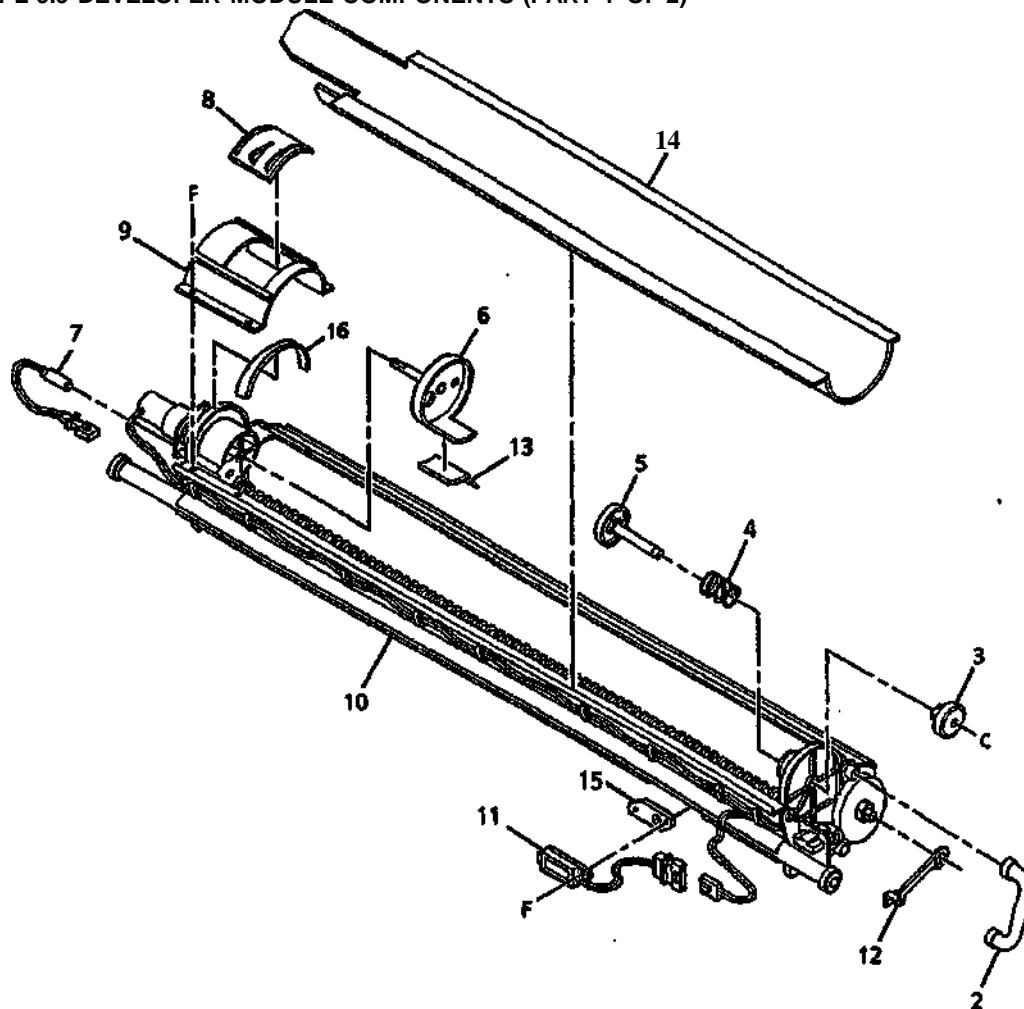
PL 9.8 DEVELOPER MODULE ASSEMBLY



0000025A.RNO

| ITEM | PART | DESCRIPTION |
|------|-----------|-------------------------------------|
| 1 | 127E10341 | DRUM/DEVELOPER DRIVE MOTOR |
| 2 | 35K5900 | GASKET |
| 3 | 10E4190 | TRICKLE SLIDE |
| 4 | 14K4740 | DEVELOPER SUPPORT (DRIVE SIDE) |
| 5 | 14K4730 | DEVELOPER SUPPORT (DRIVE SIDE) |
| 6 | 28E7771 | RETAINER |
| 7 | 9E41251 | COUPLING SPRING |
| 8 | 7E15351 | DRIVE GEAR/COUPLING |
| 9 | 30K56160 | DEVELOPER SUPPORT (DRIVE SIDE) |
| 10 | 50E12851 | DEVELOPER BAFFLE |
| 11 | 30K56150 | DEVELOPER SUPPORT |
| 12 | 121K10422 | DEVELOPER MODULE ASSEMBLY (REP 9.5) |
| 13 | 19E21480 | CLIP |

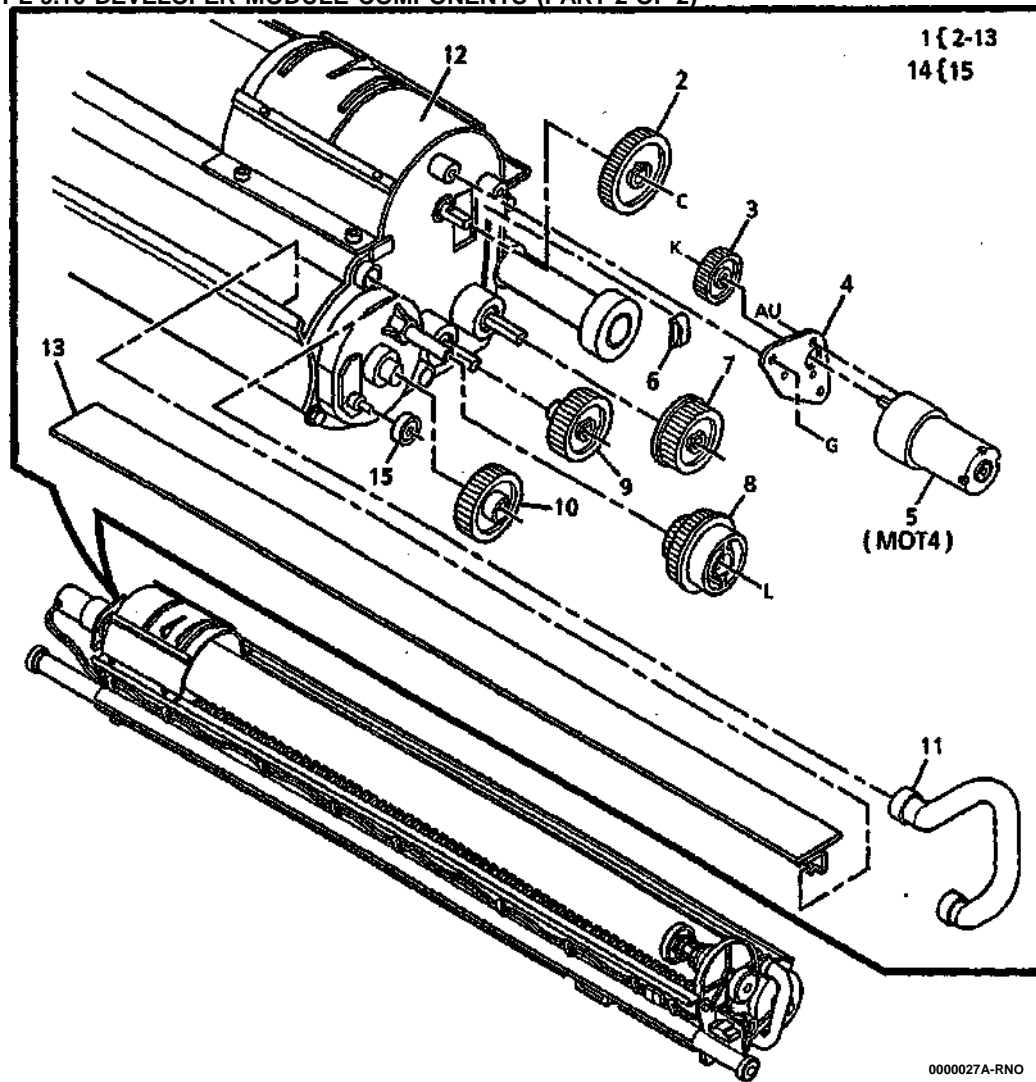
PL 9.9 DEVELOPER MODULE COMPONENTS (PART 1 OF 2)



| ITEM | PART | DESCRIPTION |
|------|-----------|--|
| 1 | | PART OF DEVELOPER MODULE ASSEMBLY (REF: PL9.8 ITEM 12) |
| 2 | 54E3181 | PRESSURE EQUALIZER TUBE (REP 9.8) |
| 3 | 3E19330 | CARTRIDGE KNOB |
| 4 | - | SPRING (P/O ITEM 1) |
| 5 | 5K1351 | CARTRIDGE HUB |
| 6 | | CARTRIDGE DRIVE PLATE (P/O ITEM 1) (REP 9.14) |
| 7 | 130K30381 | TONER CARTRIDGE HOME SENSOR (REP 9.12, ADJ 9.5) |
| 8 | 2E40470 | TOP SHIELD DOOR |
| 9 | 55K13840 | TOP SHIELD |
| 10 | | DEVELOPER FRAME (P/O ITEM 1) |
| 11 | 130K53300 | TONER SENSOR (REP 9.11) |
| 12 | 19E15551 | BIAS CLIP |
| 13 | 1E23080 | TONER STRIP |
| 14 | 55K13830 | SUMP SHIELD (REP 9.13) |
| 15 | | SENSOR SPACER (P/O ITEM 1) |
| 16 | 35E12210 | SEAL |

0000026A-RNO

PL 9.10 DEVELOPER MODULE COMPONENTS (PART 2 OF 2)

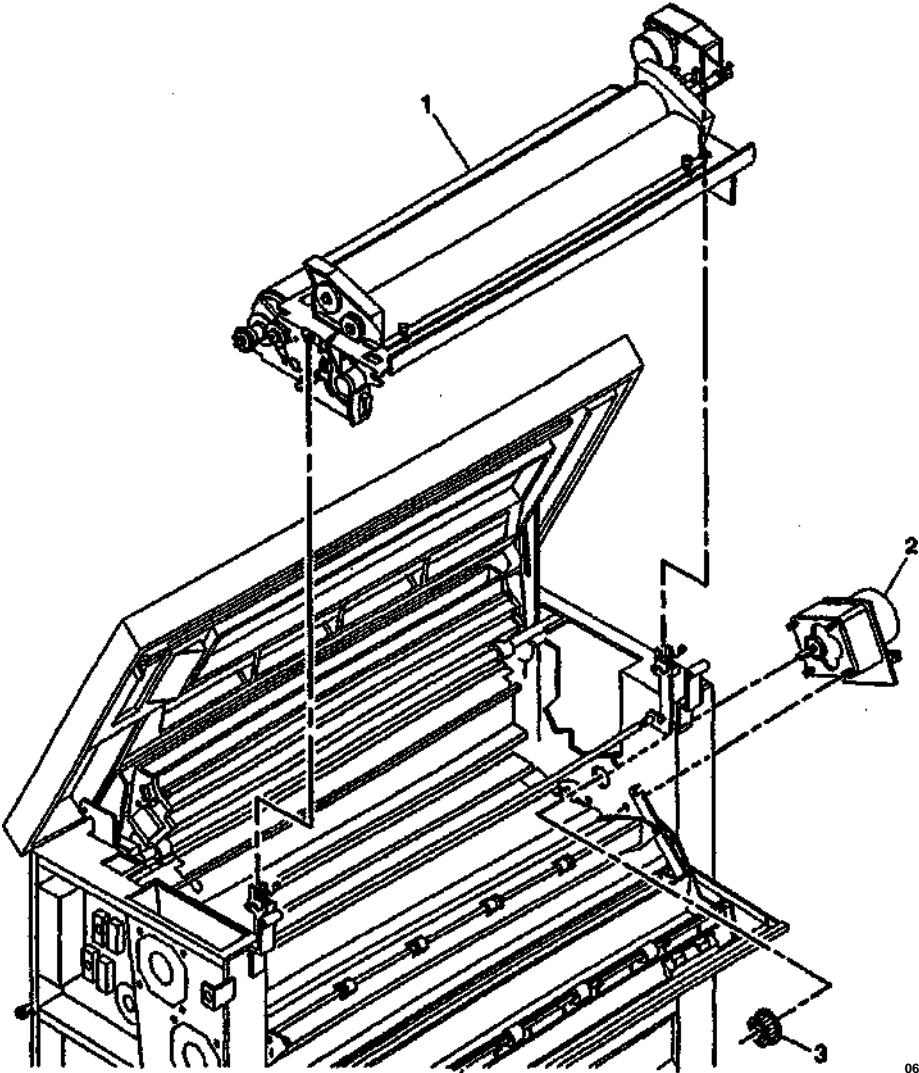


0000027A-RNO

| ITEM | PART | DESCRIPTION |
|------|-----------|--|
| 1 | - | PART OF DEVELOPER MODULE ASSEMBLY (REF: PL9.8 ITEM 12) |
| 2 | 7E16330 | CARTRIDGE GEAR (44T) |
| 3 | 7E16341 | CARTRIDGE DRIVE GEAR (26T) |
| 4 | | MOTOR MOUNTING PLATE (P/O ITEM 1) |
| 5 | 127K22600 | CARTRIDGE DRIVE MOTOR (MOT4) (REP 9.6) |
| 6 | 120E4750 | CABLE CLIP |
| 7 | 7E14690 | AUGER DRIVE GEAR (37T) |
| 8 | 7K5260 | DEVELOPER DRIVE GEAR (43T/25T) |
| 9 | 7E14700 | AUGER DRIVE GEAR (37T) |
| 10 | 7E14710 | MAGNETIC ROLL DRIVE GEAR (40T) |
| 11 | 54E3491 | PRESSURE EQUALIZER TUBE (REP 9.18) |
| 12 | | DEVELOPER FRAME (P/O ITEM 1) |
| 13 | 35K4581 | SEAL |
| 14 | 600K58720 | DRS ROLLER KIT |
| 15 | - | ROLLER (P/O ITEM 14) |

PL 10.1 XEROGRAPHIC MODULE ASSEMBLY

| ITEM | PART | DESCRIPTION |
|------|-----------|---|
| 1 | 126K5992 | XEROGRAPHIC MODULE ASSEMBLY (60HZ) (REP 9.1) |
| | 126K7152 | XEROGRAPHIC MODULE ASSEMBLY (50HZ) (REP 9.1) |
| 2 | 127E10331 | FUSER DRIVE MOTOR |
| 3 | 7E44391 | DRIVE PULLEY (28T) |

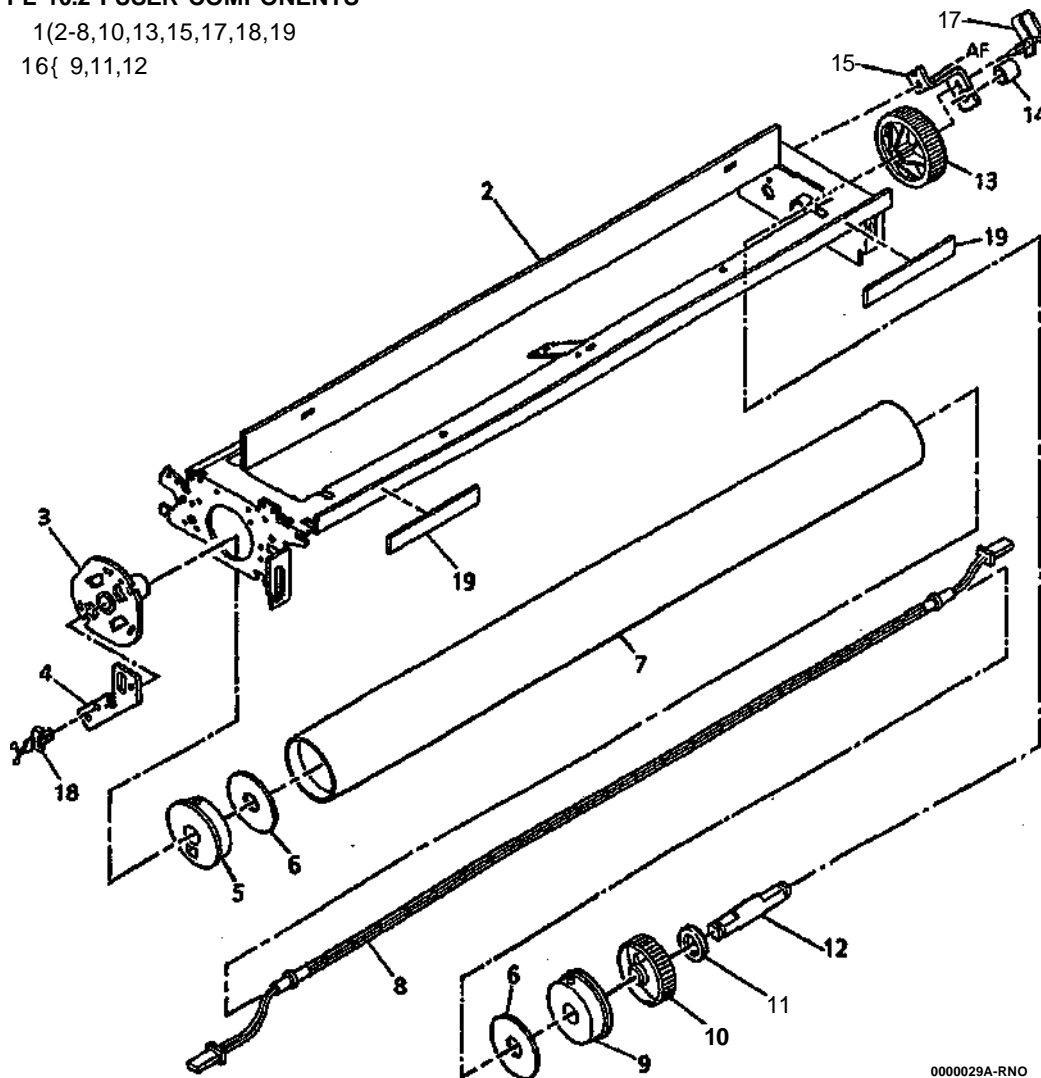


0600028A-RNO

PL 10.2 FUSER COMPONENTS

1(2-8,10,13,15,17,18,19

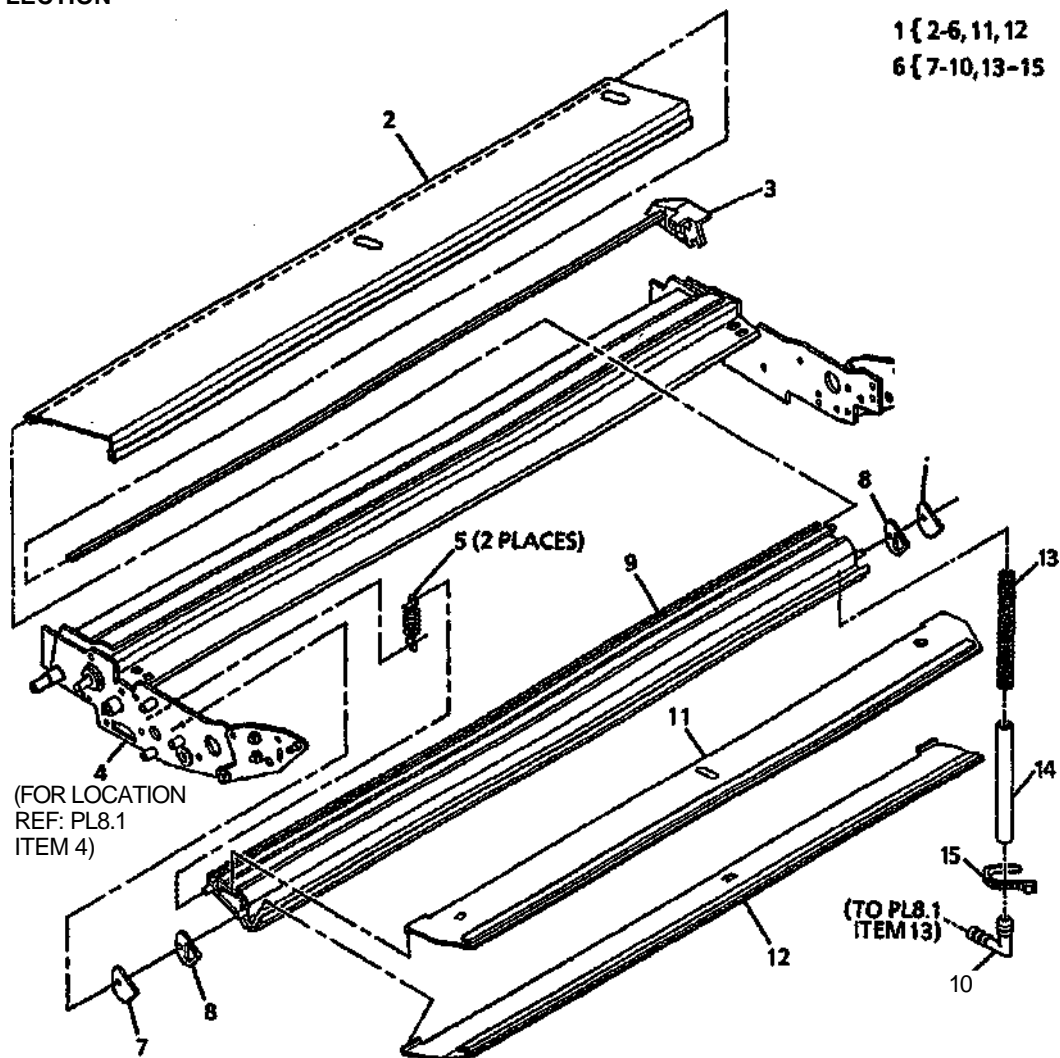
16{ 9,11,12



0000029A-RNO

| ITEM | PART | DESCRIPTION |
|------|-----------|--|
| 1 | - | PART OF XEROGRAPHIC MODULE ASSEMBLY (REF: PL10.1 ITEM 1) |
| 2 | - | XEROGRAPHIC FRAME (P/O ITEM 1) |
| 3 | 5K3430 | FUSER HUB |
| 4 | - | LH LAMP BRACKET (P/O ITEM 1) |
| 5 | 5K2613 | LH FUSER BEARING |
| 6 | 62E5461 | REFLECTOR |
| 7 | 22K40050 | FUSER HEAT ROLL (REP 10.2) |
| 8 | 126E492 | FUSER HEAT ROD (60HZ) (REP 10.1) |
| - | 126E821 | FUSER HEAT ROD (50HZ) (REP 10.1) |
| 9 | - | RH FUSER BEARING (P/O ITEM 16) |
| 10 | 7E42570 | EXIT DRIVE GEAR |
| 11 | 115E2231 | GROUND RING |
| 12 | 6E23471 | FUSER DRIVE SHAFT |
| 13 | 7E42780 | FUSER GEAR (80T) |
| 14 | 16E8080 | GROMMET |
| 15 | 49E6460 | RH LAMP BRACKET |
| 16 | 600K45270 | FUSER DRIVE SHAFT KIT |
| 17 | 120E5440 | CLIP |
| 18 | 120E6510 | TWIST TIE CLAMP |
| 19 | 121E1402 | MAGNET |

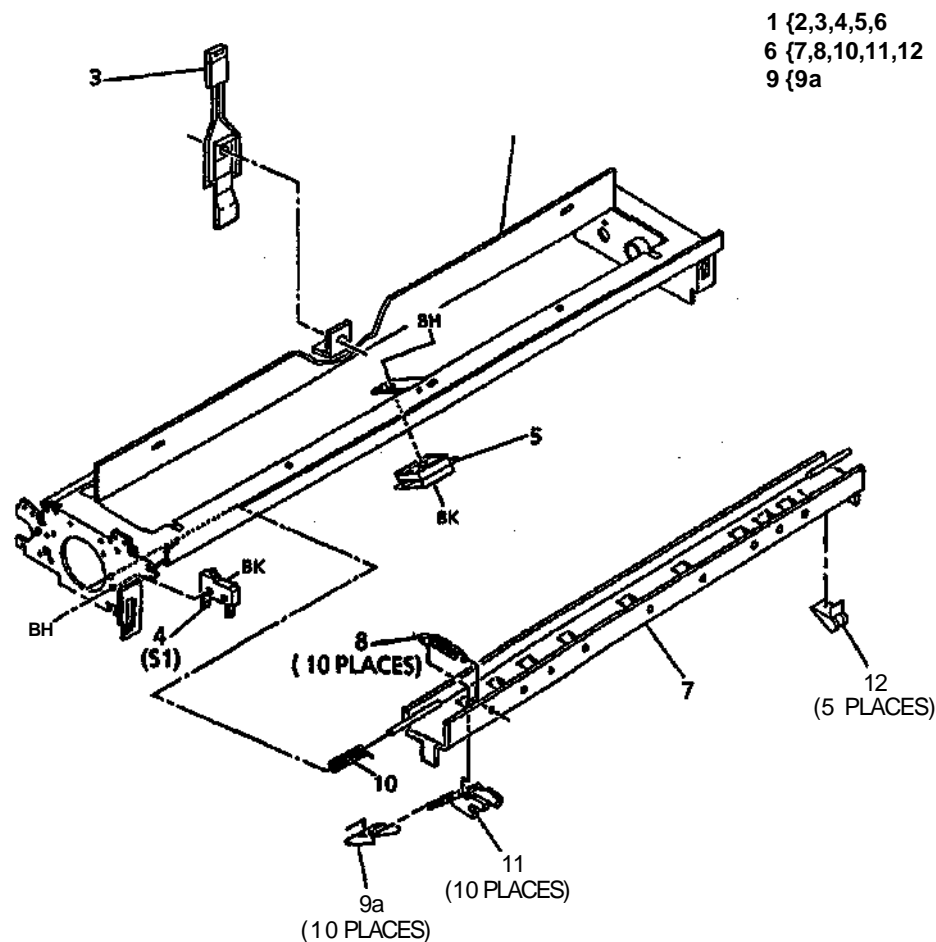
PL 10.3 FUSER PRESSURE COMPONENTS AND MOISTURE COLLECTION



| ITEM | PART | DESCRIPTION |
|------|-----------|--|
| 1 | | PART OF MEDIA TRANSPORT ASSEMBLY (REF: PL8.1 ITEM 4) |
| 2 | 23K942 | FABRIC GUIDE (REP 8.9) |
| 3 | 3K9130 | FABRIC GUIDE RETAINER HANDLE |
| 4 | | TRANSPORT FRAME (P/O ITEM 1) |
| 5 | 9E32490 | SPRING |
| 6 | — | HOUSING ASSEMBLY (P/O ITEM 1) |
| 7 | - | END CAP (P/O ITEM 8) |
| 8 | -- | GASKET (P/O ITEM 6) |
| 9 | | HOUSING (P/O ITEM 6) |
| 10 | | ADAPTER (P/O ITEM 6) |
| 11 | 33K2430 | PRESSURE PLATE A (REP 8.5) |
| 12 | 33K2040 | PRESSURE PLATE B (REP 8.5) |
| 13 | 9E46870 | DRAIN TUBE SPRING |
| 14 | 52E7900 | MOISTURE DRAIN TUBE |
| 15 | 420W10201 | CABLE TIE |

00000308-RNO

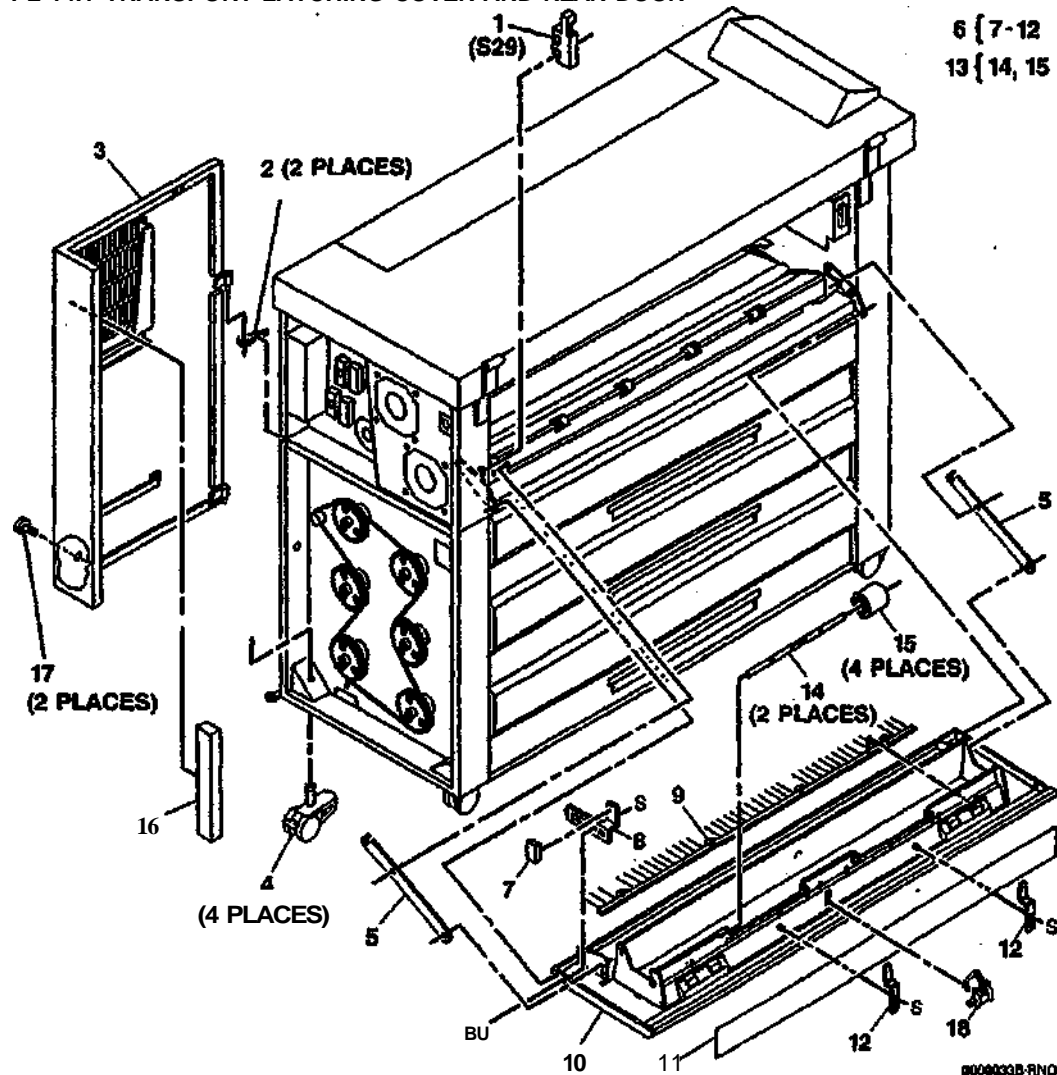
PL 10.4 FUSER HEAT CONTROL AND STRIPPER FINGERS



| ITEM | PART | DESCRIPTION |
|------|-----------|--|
| 1 | | PART OF XEROGRAPHIC MODULE ASSEMBLY (REF: PL10.1 ITEM 1) |
| 2 | -- | XEROGRAPHIC FRAME (P/O ITEM 1) |
| 3 | 130K54730 | THERMISTOR |
| 4 | 110E5500 | STRIPPER FINGER JAM SWITCH (S1) |
| 5 | 130K54841 | THERMAL FUSE |
| 6 | 30K55720 | STRIPPER BRACKET ASSEMBLY |
| 7 | | STRIPPER FINGER SUPPORT (P/O ITEM 6) |
| 8 | 9E61600 | SPRING |
| 9 | 600K35880 | STRIPPER FINGER SPARE KIT |
| 9a | — | STRIPPER FINGER (REP 10.8) |
| 10 | 9E38060 | SPRING |
| 11 | 6BE38113 | STRIPPER FINGER BRACKET |
| 12 | 38K11070 | PAPER GUIDE |

0000031B-RNO

PL 14.1 TRANSPORT LATCHING COVER AND REAR DOOR

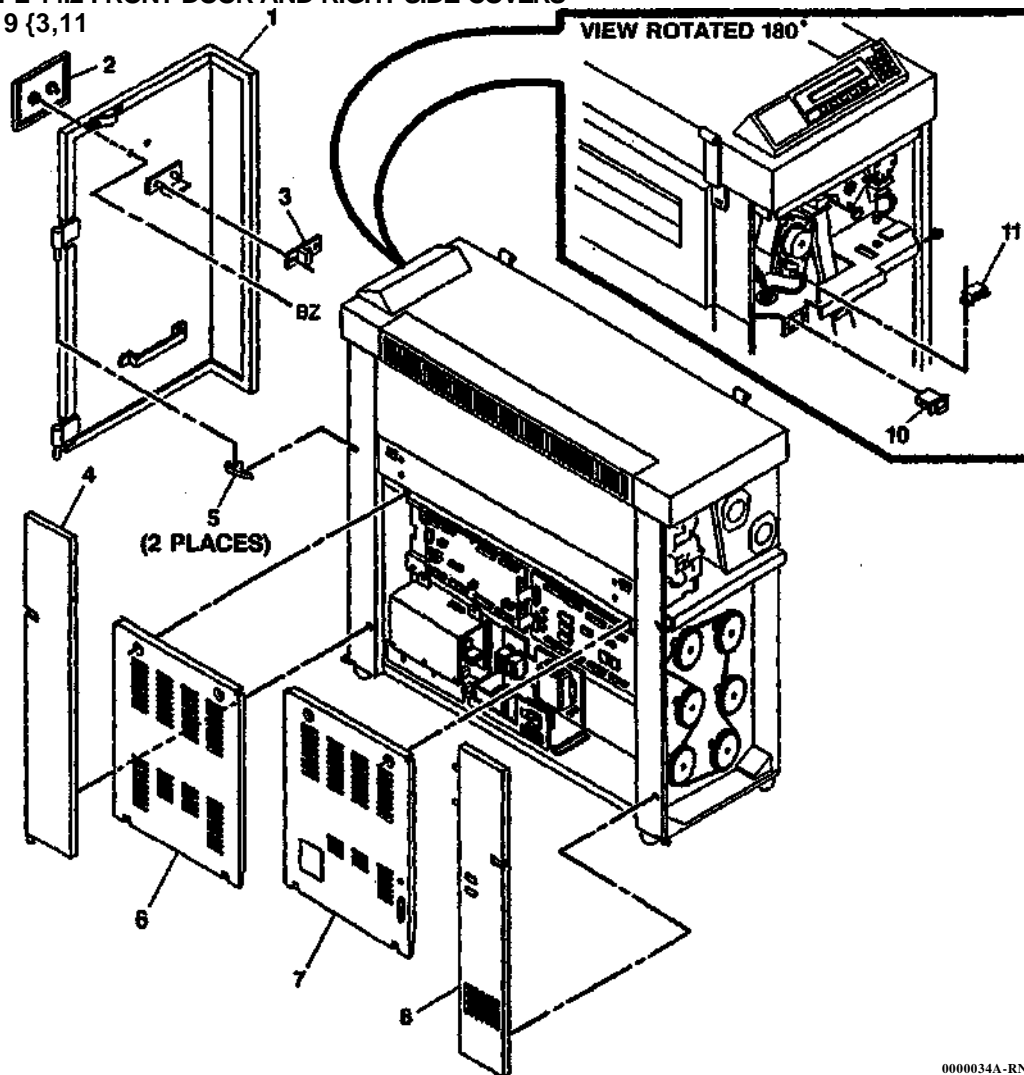


6 { 7-12
13 { 14, 15

| ITEM | PART | DESCRIPTION |
|------|-----------|---------------------------------------|
| 1 | 130E2271 | FEED SHELF INTERLOCK SWITCH (S29) |
| 2 | 14E20541 | LEFT HINGE SPACER |
| 3 | 48K47700 | REAR DOOR |
| 4 | 17K1120 | CASTER |
| 5 | | BRACKET (NOT SPARED) |
| 6 | 30K55630 | TRANSPORT LATCHING COVER ASSEMBLY |
| 7 | 121E7680 | MAGNET |
| 8 | 19E33441 | GROUND RETAINER |
| 9 | 115E1410 | STATIC BRUSH |
| 10 | - | TRANSPORT LATCHING COVER (P/O ITEM 6) |
| 11 | 96E72590 | LABEL |
| 12 | 809E2290 | SHAFT SPRING |
| 13 | 600K59260 | EXIT IDLER ROLL KIT |
| 14 | - | SHAFT (P/O ITEM 13) |
| 15 | .. | ROLL (P/O ITEM 13) |
| 16 | 35E41160 | GASKET |
| 17 | 29E28060 | FASTENER |
| 18 | 110K9430 | SWITCH |

PL 14.2 FRONT DOOR AND RIGHT SIDE COVERS

9 {3,11

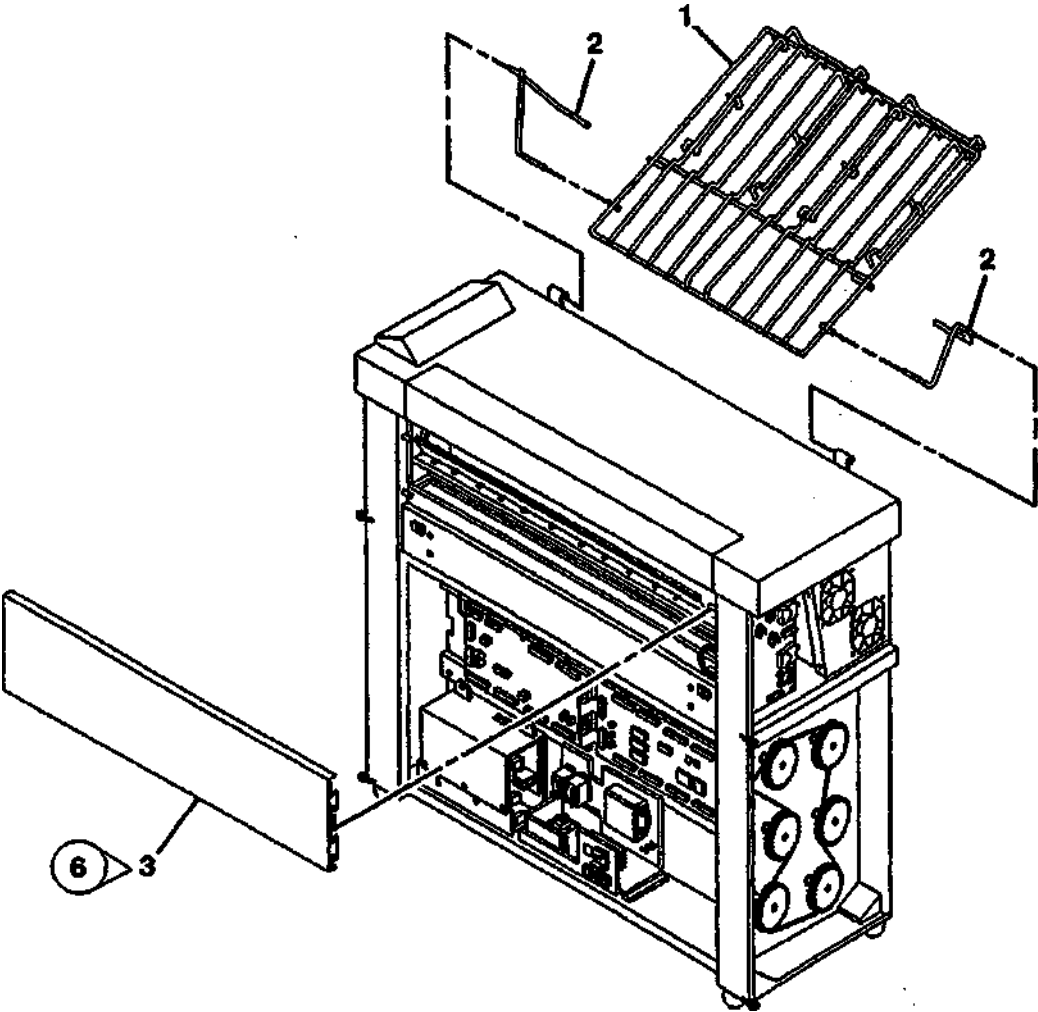


| EM | PART | DESCRIPTION |
|----|----------|-----------------------------------|
| 1 | 48K58181 | FRONT DOOR COVER |
| 2 | 891E9080 | LOGO PLATE |
| 3 | | KEEPER (P/O ITEM 9) |
| 4 | 48K47710 | RIGHT SIDE, LEFT COVER |
| 5 | 14E20551 | RIGHT HINGE SPACER |
| 6 | 48K47681 | RIGHT SIDE, LEFT LOWER COVER |
| 7 | 48K47692 | RIGHT SIDE, RIGHT LOWER COVER |
| 8 | 48K44401 | RIGHT SIDE, RIGHT COVER |
| 9 | 3E18740 | FRONT DOOR LATCH ASSEMBLY |
| 10 | 110E2640 | FRONT DOOR COVER INTERLOCK SWITCH |
| 11 | | LATCH (P/O ITEM 9) |

0000034A-RNO

PL 14.3 DEVELOPER COVER AND CATCH TRAY

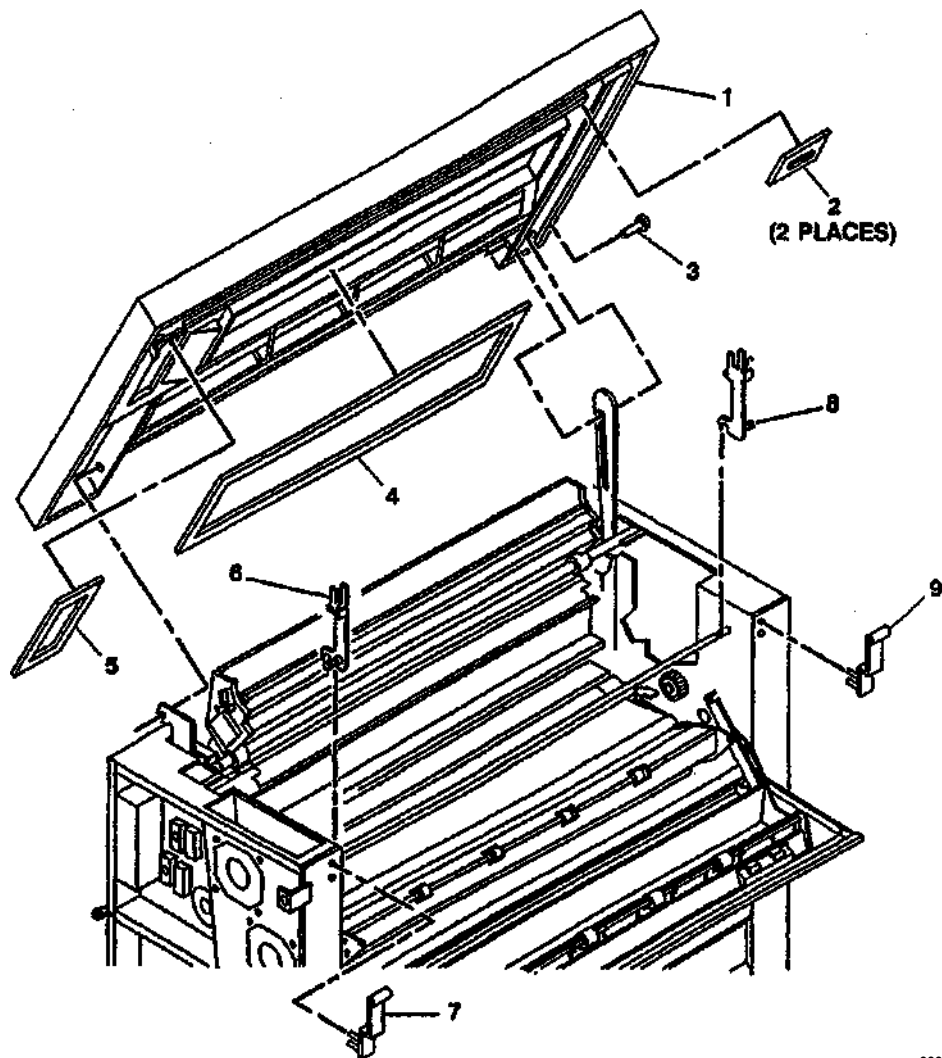
| ITEM | PART | DESCRIPTION |
|------|----------|--------------------------------|
| 1 | 73E11800 | CATCH TRAY KIT |
| 2 | 73E11710 | TRAY SUPPORT KIT |
| 3 | 48E51410 | REAR DEVELOPER COVER (W/TAG 6) |



0000035B RNO

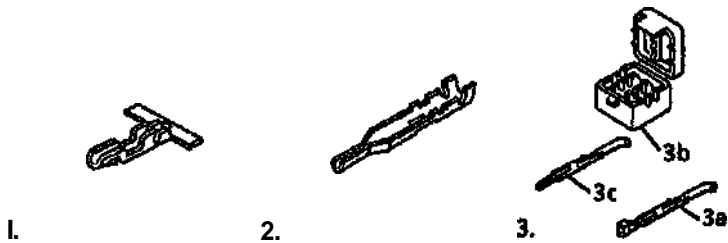
PL 14.4 TOP COVER AND CATCH TRAY BRACKETS

| EM | PART | DESCRIPTION |
|----|----------|-----------------------|
| 1 | 48K45052 | TOP COVER |
| 2 | 55E38100 | SHIELDING PAO |
| 3 | 29E23670 | PIN |
| 4 | 35E37240 | GASKET |
| 5 | 35E41150 | GASKET |
| 6 | 30K57191 | RH SERVICE BRACKET |
| 7 | 30K57830 | RH CATCH TRAY BRACKET |
| a | 30K57181 | LH SERVICE BRACKET |
| 9 | 30K57900 | LH CATCH TRAY BRACKET |



0000037B RNO

PL 15.1 MISCELLANEOUS ELECTRICAL CONNECTORS AND FASTENERS



| ITEM | PART | DESCRIPTION |
|------|------|--|
| 1 | | CONTACT SOCKET (20-26 AWG) (TO BE AVAILABLE AT LATER DATE) |
| 2 | | CONTACT PIN (20-26 AWG) (TO BE AVAILABLE AT LATER DATE) |
| 3 | | WIRE AND CONNECTOR REPAIR KIT (TO BE AVAILABLE AT LATER DATE) |
| 3a | | SOCKET WIRE (10/KIT) |
| 3b | | CONNECTOR (20/KIT) |
| 3c | | PIN WIRE (10/KIT) |

0000036A-RNO

| ITEM | PART | DESCRIPTION | ITEM | PART | DESCRIPTION |
|------|-----------|--------------------------|------|-----------|-------------------------|
| A | 112W11655 | HEX SCREW (6 X 16) | BJ | 354W20752 | RETAINING RING (4-5MM) |
| B | 112W7455 | SCREW (M4X 12) | OK | 215W10102 | NUT (8-48) |
| C | 354W21052 | RETAINING RING (7-9MM) | BL | 113W54055 | SCREW (M3 X 4LG) |
| D | 354W21252 | RETAINING RING (9-12MM) | BM | 153W27952 | SCREW (M4.2 X 25LG) |
| E | 153W23352 | SCREW (M2.9 X 6.5) | BN | 153W17752 | SCREW (M4.2 X 19) |
| F | 132W253 | SCREW (M3 X 6LG) | BP | 141W30553 | SETSCREW (M4 X 6) |
| G | 156W27555 | SCREW (M4.2 X 14) | BR | 131W20853 | SCREW (M10 X 1.5) |
| H | 156W27655 | SCREW (4.2 X 16) | BS | 102W10355 | FLATHEAD SCREW (M4 X 8) |
| J | 251W10856 | PLAIN WASHER | BT | 158W17452 | SCREW (M4 X 8) |
| K | 354W20852 | RETAINING RING (5-7MM) | BU | 113W10355 | SCREW (M4 X 8) |
| L | 354W24251 | ALTERNATE | BV | 354W20652 | RETAINING RING (3.-4MM) |
| M | 356W2502 | RETAINING RING | BW | 158W21752 | SCREW (M6 X 16) |
| N | 251W10455 | WASHER (M4) | BX | 132W3653 | CAPSCREW (M4 X 14) |
| P | 256W20454 | LOCKWASHER (M4) | BY | 320W34301 | RIVET |
| R | 112W27255 | SCREW (M4 X 8) | BZ | 236W251 | SPEEDNUT |
| S | 351W12551 | RETAINING RING (M25) | | | |
| T | 220W450 | NUT (M4) | | | |
| U | 251W10655 | WASHER (M6) | | | |
| V | 351W10651 | RETAINING RING (M6) | | | |
| W | 121W30455 | SET SCREW (M4 X 6) | | | |
| X | 351W11551 | RETAINING RING (M15) | | | |
| Y | 112W27355 | SCREW (M4 X 10) | | | |
| Z | 286W3954 | SPRIAL PIN (3 X 22) | | | |
| AA | 259W30351 | LOCKWASHER (M4) | | | |
| AB | 131W37153 | SCREW (M4 X 8) | | | |
| AC | 153W27452 | SCREW (4.2 X 9.5) | | | |
| AD | 131W37553 | SCREW (M4 X 16) | | | |
| AE | 131W37853 | SCREW (M4 X 30) | | | |
| AF | 131W40253 | SCREW (M5 X 10) | | | |
| AQ | 153W17552 | SCREW (M4.2 X 9.5) | | | |
| AH | 112W7255 | SCREW (M4 X 8) | | | |
| AJ | 156W27455 | SCREW (4.2 X 9.5) | | | |
| AK | 156W23355 | SCREW (M2.9 X 6.5) | | | |
| AL | 286W2354 | SPRING PIN (2-19MM) | | | |
| AM | 113W6455 | SCREW (M3 X 10) | | | |
| AN | 251W10355 | WASHER (M3) | | | |
| AP | 113W50555 | SCREW (M5 X 12) | | | |
| AR | 256W20554 | LOCKWASHER (MS) | | | |
| AS | 236W651 | SPEED NUT | | | |
| AT | 354W21152 | RETAINING RING (8-11 MM) | | | |
| AU | 112W27655 | SCREW (M4 X 16) | | | |
| AV | 113W6355 | SCREW (M3 X 8LG) | | | |
| AW | 220W650 | NUT (M6) | | | |
| AX | 112W27455 | SCREW (M4 X 12) | | | |
| AY | 153W23452 | SCREW (M2 9 X 9.5) | | | |
| AZ | 251W22602 | FLAT WASHER (NO. 10) | | | |
| BA | 153W42353 | SCREW (M4 X 12) | | | |
| BB | 153W17461 | SCREW (M4.2 X 9.5) | | | |
| BC | 201W455 | NUT (HEX M4) | | | |
| BD | 265W650 | LOCKWASHER (M6) | | | |
| BE | 236W851 | SPEEDNUT | | | |
| BF | 265W850 | LOCKWASHER (M8) | | | |
| BG | 153W27552 | SCREW (4.2 X 13) | | | |
| BH | 354W555 | RETAINING RING (6MM) | | | |
| | 113W13802 | SCREW (2-56 X 1/2) | | | |

| PART NUMBER | PL LOC. | PART NUMBER | PL LOC. | PART NUMBER | PL LOC. | PART NUMBER | PL LOC. | PART NUMBER | PL LOC. | PART NUMBER | PL LOC. |
|----------------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|------------|
| 1R535 | 9.2 | 9E32490 | 8.3 | 23K942 | 10.3 | 48K58181 | 14.2 | 120E4750 | 9.10 | 600K35880 | 10.4 |
| 1E23080 | 9.9 | 9E32490 | 10.3 | 23E1620 | 9.5B | 49E6460 | 10.2 | 120E5440 | 10.2 | 600K37740 | 9.4 |
| 2E40470 | 9.9 | 9E32500 | 8.2 | 23E6750 | 7.2 | 49E54980 | 8.4 | 120E6510 | 10.2 | 600K45270 | 10.2 |
| 3K7581 | 7.5 | 9E32510 | 8.1 | 26E11970 | 8.1 | 50E12851 | 9.8 | 121E1402 | 10.2 | 600K58720 | 9.10 |
| 3K9130 | 10.3 | 9E32790 | 7.5 | 26E57690 | 9.3 | 50K19612 | 7.1 | 121E7510 | 7.2 | 600K58730 | 9.3 |
| 3E16521 | 7.8 | 9E38060 | 10.4 | 28E7430 | 7.8 | 52K3580 | 7.6 | 121E7680 | 7.5 | 600K58740 | 9.3 |
| 3E17610 | 7.3 | 9E41251 | 9.8 | 28E7771 | 9.8 | 52E7900 | 10.3 | 121E7680 | 14.1 | 600K58750 | 9.3 |
| 3E17610 | 7.4 | 9E43260 | 7.2 | 28E11470 | 9.2 | 52E7910 | 8.1 | 121K10422 | 9.8 | 600K58760 | 9.3 |
| 3E18740 | 14.2 | 9E46870 | 10.3 | 29K1111 | 8.1 | 53E4750 | 9.1 | 121K10612 | 8.1 | 600K59060 | 9.5A |
| 3E18781 | 7.7 | 9E61600 | 10.4 | 29E13701 | 7.5 | 64E3181 | 9.9 | 125K2220 | 9.3 | 600K59260 | 14.1 |
| 3E19330 | 9.9 | 10K1351 | 7.1 | 29E14460 | 7.5 | 54E3491 | 9.10 | 125K2580 | 9.4 | 600K59935 | 1.1 |
| 3E39000 | 7.5 | 10K1360 | 7.7 | 29E14750 | 7.4 | 54E6533 | 9.5C | 126E492 | 10.2 | 600K59955 | 1.1 |
| 3E3B010 | 9.6 | 10E4190 | 9.8 | 29E14760 | 7.3 | 54K12300 | 1.3 | 126E821 | 10.2 | 600K60610 | 1.2 |
| 3E44550 | 9.6 | 11E4470 | 7.7 | 29E23670 | 14.4 | 55K13830 | 9.9 | 126K5992 | 9.1 | 600K60890 | 1.3 |
| 4E502 | 9.4 | 13K380 | 9.2 | 29E28060 | 14.1 | 55K13840 | 9.9 | 126K5992 | 10.1 | 600K60900 | 1.3 |
| 5K1351 | 9.9 | 13E803 | 9.5B | 30E16161 | 9.2 | 55E38100 | 14.4 | 126K7152 | 9.1 | 707W1652 | 1.2 |
| 5K2613 | 10.2 | 14K4730 | 9.8 | 30K37830 | 8.2 | 62E5461 | 10.2 | 126K7152 | 10.1 | 809E2290 | 14.1 |
| 5K3430 | 10.2 | 14K4740 | 9.8 | 30K55630 | 14.1 | 62E8051 | 9.3 | 126K7330 | 7.1 | 891E1960 | 7.5 |
| 5K4151 | 9.1 | 14E20541 | 14.1 | 30K55720 | 10.4 | 68E17221 | 7.5 | 127K4293 | 7.2 | 891E9080 | 14.2 |
| 5E6810 | 7.2 | 14E20551 | 14.2 | 30K56150 | 9.8 | 68E38113 | 10.4 | 127K4293 | 8.1 | | |
| 5E11130 | 9.7 | 16E8020 | 8.2 | 30K56160 | 9.8 | 73E11710 | 14.3 | 127E10331 | 10.1 | | |
| 6K13880 | 8.2 | 16E6020 | 8.3 | 30K57181 | 14.4 | 73E11800 | 14.3 | 127E10341 | 9.8 | | |
| 6K15B40 | 9.2 | 16E8080 | 10.2 | 30K57191 | 14.4 | 92E22541 | 7.6 | 127E11240 | 1.3 | | |
| 6K15681 | 8.3 | 16E8931 | 8.2 | 30K57890 | 14.4 | 92E22560 | 7.6 | 127K17882 | 9.1 | | |
| 6E23471 | 10.2 | 17K1120 | 14.1 | 30K57S00 | 14.4 | 92E36431 | 7.6 | 127K19850 | 7.8 | | |
| 6E23540 | 8.3 | 17E4250 | 7.5 | 32E10830 | 8.4 | 92E36450 | 1.3 | 127K21990 | 9.6 | | |
| 6E42300 | 8.2 | 17E7221 | 8.1 | 33K2040 | 10.3 | 93E1501 | 8.1 | 127K22600 | 9.10 | | |
| 7E1340 | 9.2 | 19E7100 | 8.4 | 33K2430 | 10.3 | 93K2420 | 9.5C | 130E2271 | 7.1 | | |
| 7E5221 | 9.5B | 19E14350 | 8.3 | 35K4881 | 9.10 | 94K85 | 9.5B | 130E2271 | 14.1 | | |
| 7K5260 | 9.10 | 19E15551 | 9.9 | 35K5790 | 9.5B | 94K3301 | 9.6 | 130E3250 | 7.2 | | |
| 7K5760 | 7.2 | 19E16080 | 9.4 | 35K5900 | 9.8 | 96E72590 | 14.1 | 130E3250 | 7.8 | | |
| 7K7561 | 7.2 | 19E19971 | 9.4 | 35K5941 | 9.5C | 96E78251 | 1.4 | 130E5990 | 8.2 | | |
| 7K8920 | 9.6 | 19E21480 | 9.8 | 35K5950 | 9.5C | 101K25780 | 9.5A | 130K30381 | 9.9 | | |
| 7K8930 | 9.6 | 19E33441 | 14.1 | 35E12210 | 9.9 | 101K260B2 | 1.4 | 130K51801 | 7.1 | | |
| 7E14600 | 7.3 | 20E4350 | 9.5B | 35E37240 | 9.3 | 103E2721 | 1.2 | 130K53300 | 9.9 | | |
| 7E14610 | 7.2 | 20K8080 | 8.1 | 35E37240 | 14.4 | 103E2731 | 1.2 | 130K54730 | 10.4 | | |
| 7E14650 | 7.3 | 20E12353 | 8.1 | 35E41150 | 14.4 | 105K13541 | 1.3 | 130K54841 | 10.4 | | |
| 7E14690 | 9.10 | 20E13603 | 8.1 | 35E41160 | 14.1 | 105K15862 | 1.1 | 130K55130 | 9.7 | | |
| 7E14700 | 9.10 | 20E13853 | 8.1 | 35E41210 | 9.3 | 108E1762 | 1.2 | 140K15953 | 7.2 | | |
| 7E14710 | 9.10 | 20E18830 | 7.8 | 37K1020 | 7.7 | 109E1040 | 1.2 | 142K1540 | 1.2 | | |
| 7E15351 | 9.8 | 20E26340 | 8.1 | 38K6601 | 7.8 | 110E2640 | 7.7 | 146K461 | 9.7 | | |
| 7E16330 | 9.10 | 20E26350 | 8.1 | 38E6610 | 9.4 | 110E2640 | 14.2 | 160K30285 | 1.1 | | |
| 7E16341 | 9.10 | 21E7660 | 9.3 | 38E6620 | 9.4 | 110K3731 | 8.4 | 160K30980 | 9.3 | | |
| 7E16410 | 7.2 | 22E9390 | 8.3 | 38K9190 | 7.5 | 110E5500 | 10.4 | 160K33322 | 1.1 | | |
| 7E19071 | 7.2 | 22E10060 | 7.5 | 38K11070 | 10.4 | 110K8711 | 8.4 | 162K29730 | 1.1 | | |
| 7E42570 | 10.2 | 22E10531 | 8.2 | 48E39380 | 7.5 | 110K9430 | 14.1 | 413W30854 | 7.2 | | |
| 7E42580 | 9.7 | 22E11441 | 8.1 | 48K44401 | 14.2 | 111K21 | 1.3 | 413W31054 | 8.2 | | |
| 7E42780 | 10.2 | 22E11540 | 7.3 | 48K44880 | 7.5 | 115E1410 | 14.1 | 420W10201 | 10.3 | | |
| 7E44391 | 10.1 | 22E11540 | 7.4 | 48K45052 | 14.4 | 115E2231 | 10.2 | 423W57550 | 7.8 | | |
| 9E27330 | 7.5 | 22K28930 | 7.1 | 48K476B1 | 14.2 | 117K22761 | 1.2 | 423W64001 | 8.1 | | |
| 9E27340 | 7.3 | 22K40050 | 10.2 | 48K47692 | 14.2 | 117K27550 | 1.2 | 423W72201 | 8.1 | | |
| 9E27340 | 7.4 | 22K49131 | 9.7 | 48K47700 | 14.1 | 120E2150 | 1.2 | 537K51150 | 1.1 | | |
| 9E27340 | 7.8 | 22K49203 | 8.1 | 48K47710 | 14.2 | 120E2160 | 1.2 | 537K51160 | 1.1 | | |
| 9E27351 | 7.5 | 22K49380 | 9.7 | 48E51410 | 14.3 | 120E2160 | 8.1 | 600K8481 | 9.5B | | |
| 9E32480 | 8.2 | | | | | | | | | | |

Section Contents

| TITLE | PAGE |
|--|------|
| Diagnostics | |
| To enter the Diagnostic Mode..... | 6-2 |
| To exit the Diagnostic Mode..... | 6-2 |
| Input Diagnostic Test Procedure..... | 6-2 |
| Input Diagnostic Test Codes..... | 6-3 |
| Output Diagnostic Test Procedure..... | 6-4 |
| Output Diagnostic Test Codes..... | 6-4 |
| Stripper Motor Commands..... | 6-5 |
| To enter Multiple Tests (Chaining)..... | 6-6 |
| To exit from Multiple Tests..... | 6-6 |
| Special Tests..... | 6-6 |
| General Procedures | |
| GP1 HVPS Checkout..... | 6-10 |
| GP2 Image on Drum (Panic Stop) Procedure..... | 6-11 |
| GP3 Drum Maintenance..... | 6-12 |
| GP4 Drum Cleaning Enhancement..... | 6-13 |
| GP5 Communication Loopback Test..... | 6-13 |
| Installation | |
| Installation Procedure..... | 6-15 |
| Product Demonstration..... | 6-25 |
| Installation Checklist..... | 6-25 |
| Removal | |
| Removal Procedure..... | 6-26 |
| Tools | |
| General Tools and Supplies (NACO)..... | 6-29 |
| General Tools and Supplies (EO)..... | 6-31 |
| Molex Connector Repair Procedure..... | 6-33 |

| TITLE | PAGE |
|--|------|
| Product Specifications | |
| Product Specifications..... | 6-37 |
| Service Notes | |
| Transfer and Developer Bias Voltages Incorrect (TAG 19)..... | 6-38 |
| Power Cord Outlet Pulls Out of AC Module..... | 6-39 |
| Pre-Tag 9 Maximum Length Shortfall | 6-39 |
| Wavy Lines When Connected to XPC or Non-Xerox Controller..... | 6-39 |
| LL-52 Errors After Installing New Control PWB..... | 6-40 |
| Cooling Fan Not Running..... | 6-40 |
| Cleaning Blade Squeals During Print Cycle..... | 6-40 |
| Toner Cleaning Auger Bound Up..... | 6-41 |
| LL-22 Caused By Metal Filings..... | 6-41 |
| Intermittent Black Lines or Background Bands..... | 6-41 |
| Bent Corners (Dog Ears) on Lead Edge of Narrow Media..... | 6-42 |
| Problems With Film Stacking..... | 6-43 |
| Low Solid Area Density at Install..... | 6-43 |
| Intermittent Extra Print..... | 6-43 |
| Loud Noise From the HVPS..... | 6-44 |
| Troubleshooting Photoreceptor Drive Problems..... | 6-44 |
| Photoreceptor Damage..... | 6-45 |
| image Displacement (Rollover) on Vellum or Film..... | 6-46 |
| Change Tag Index | |
| Tag Matrix..... | 6-47 |

(To enter the Diagnostic Mode

The **diagnostic** mode is entered by pressing and holding the zero (0) button while switching on the printer. The Diagnostic Mode may also be entered **from** the Control Panel by entering the Printer Menu>, IOT Diagnostics, and entering the password (6789).

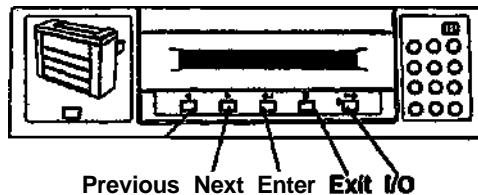
When entering the diagnostic mode, the Message Display will indicate **the** Copyright message, the message ROM configuration, and the software revision level.

The following message will be displayed when the diagnostic mode is entered.

**CHAIN 00 PRESS ENTER TO BEGIN
PLEASE ENTER THE CHAIN NUMBER**

Enter the first two digits of the code and press **Enter** button, then enter the second two digits of the code, and press the **Enter** button to begin the test.

The Control Panel buttons are identified in the following diagram:



The code entered will be displayed on the Control Panel. The test name will be in the bottom line of the display along with test feedback information. There also may be additional information displayed depending on the test being run.

The **Exit** button is used to stop the tests.

The **Exit** button is used to clear **the** entry

The Test Codes consist of a chain number and a test number. The chain numbers correspond to the same chain numbers that are used in the Service Manual to identify functional areas in the printer. The test numbers are sequential numbers to identify the tests within a chain.

The chain numbers used are listed below

| Chain Number | Functional Area |
|--------------|--------------------------------|
| 01 | Standby Power |
| 02 | User Interface (Control Panel) |
| 03 | Printer Run Control |
| 04 | Drives |
| 06 | Exposure |
| 07 | Media Supply |
| 08 | Media Transportation |
| 09 | Xerographics |
| 10 | Fusing/Print Transportation |
| 11 | Finishing |
| 14 | Communication |

To exit the Diagnostic Mode

~~Enter the~~ test [0361] or **switch** the printer power off, wait 5 seconds, then switch it on.

Input Diagnostic Test Procedure

1. Enter the Diagnostic Mode
2. Enter **the** Test Code
3. Press the **Enter** button to begin the test.
4. Manually operate the component that is to be tested.
5. The condition of the component will be indicated in the message display window. The state of the component is indicated by a 0 for low state and a 1 for high state
6. Press the **Exit** button to stop the diagnostic test

7. Press the **Exit** button again to clear the chain

Input Diagnostic Test Codes

| Code | Component Tested |
|--------|--|
| [0101] | Front Door Interlock |
| [0102] | Line Voltage Sense |
| [0103] | Line Frequency Sense |
| [0104] | Line Voltage High/Low |
| [0105] | Cut Sheet Feed Shelf Interlock |
| [0106] | Top Cover Interlock |
| [0202] | Keyboard Test |
| [0211] | Message ROM Test |
| [0701] | Module Loop Interlock (Media Transport and Xero Mod installed) |
| [0702] | Cutter Drawer Interlock |
| [0707] | Roll 1 Sensor Input |
| [0708] | Roll 2 Sensor Input |

| Code | Component Tested |
|--------|----------------------------------|
| [0709] | Roll 3 Sensor Input |
| [0710] | Roll 1 Motion Sensor Input |
| [0711] | Roll 2 Motion Sensor Input |
| [0712] | Roll 3 Motion Sensor Input |
| [0713] | Roll 1 Drawer Sensor Input |
| [0714] | Roll 2 Drawer Sensor Input |
| [0715] | Roll 3 Drawer Sensor Input |
| [0721] | Cutter Home Sensor |
| [0801] | Bypass Sensor |
| [0802] | Buckle Sensor |
| [0803] | Media Registration Sensor |
| [0807] | Exit Sensor |
| [0808] | Catch Tray Full Sensor (Stacker) |
| [0901] | Toner (Cartridge) Home Sensor |
| [0902] | Drum Motor Stall Sensor |
| [1005] | Fuser Jam Switch |

| Code | Component Tested |
|--------|---|
| [1008] | Fuser Open Sensor |
| [1010] | Fuser Scorch Sensor (To reset, power OFF then ON) |

Output Diagnostic Test Procedure

The Output Diagnostic Test is used to verify correct operation of output components. The output diagnostic test allows the operation of the individual or multiple (chaining) output component(s) in order to verify operation.

Refer to page 6-6 for instructions on how to enter multiple tests.

1. Enter the Diagnostic mode.
2. Enter the chain number (first two numbers on the code).
3. Press the **Enter** button.
4. Enter the test number (last two numbers of the code).
5. Press the **Enter** button to begin the test.
6. Observe the component for the correct operation. If the component and its circuitry are functioning correctly, the component will operate. If they are not, refer to the documentation to isolate the problem.
7. Press the **Exit** button to stop the Diagnostic Test.
8. To exit the diagnostic mode, enter the test [0361] or switch the printer power off, wait 5 seconds, then switch it on.

NOTE: The Fuser must be at operating temperature before making voltage checks or operating the diagnostics.

Output Diagnostic Test Codes

| Code | Component Tested |
|--------|---|
| [0201] | Display Test (individual LEDs) |
| [0203] | Service Meter (half clicks meter on ENTER, completes click on EXIT) |
| [0210] | Control Panel LEDs |
| [0403] | Runs Drum, Developer and Fuser Motors (See CAUTION below). |
| [0703] | Roll Feed Stepper - Forward |
| [0704] | Roll Feed Stepper - Reverse |
| [0716] | Roll Drive Motor and Roll 1 Feed Clutch (CL1) |
| [0717] | Roll Drive Motor and Roll 2 Feed Clutch (CL3) |
| [0718] | Roll Drive Motor and Roll 3 Feed Clutch (CL5) |

CAUTION

Do not run diagnostic code [0403] if the fuser is cold. Printer damage can occur. Diagnostic code [0403] runs the fuser motor, the developer motor, and the drum motor. The fuser heater is turned off while the printer is in the diagnostic mode.

| Code | Component Tested |
|--------|--|
| [0720] | Cutter Brake . |
| [0723] | Cutter Drive Motor (1 cycle) |
| [0727] | Roll 1 Rewind Clutch (CL2) |
| [0728] | Roll 2 Rewind Clutch (CL4) |
| [0729] | Roll 3 Rewind Clutch (CL6) |
| [0730] | Roll 1 Forward (Feed) Clutch (CL1) |
| [0731] | Roll 2 Forward (Feed) Clutch (CL3) |
| [0732] | Roll 3 Forward (Feed) Clutch (CL5) |
| [0733] | Bypass Clutch |
| [0905] | Toner Dispense Motor |
| [0914] | Cooling Fans ON at slow speed if Fuser is cold |
| [0917] | Transport Drive Motor |

| Code | Component Tested |
|--------|---|
| [0925] | Toner Cartridge (1 revolution) |
| [0956] | Test Pattern - additional delay |
| [0957] | Display area coverage of last print made. |
| [0966] | Erase Lamp |
| [1009] | Fuser Power Relay ON |

ADDITIONAL INFORMATION:

- Codes **[0728]** and **[0731]** must be chained with **[0704]** in order to check the operation of the Feed and Rewind clutches for Roll 2.
- Codes **[0727]** and **[0730]** must be chained with **[0703]** in order to check the operation of the Feed and Rewind Clutches for Roll 1,
- Codes **[0729]** and **[0732]** must be chained with **[0703]** in order to check the operation of the Feed and Rewind Clutches for Roll 3.
- The fuser must be at the run temperature before the Drive Motors are switched ON to prevent damage to the printer.
- Codes **[0703]** and **[0704]**: These Stepper Motor codes have output control tests that are capable of driving the motors forward or backward at any speed. These tests are entered using the correct chain and test number, and then entering one of the numbers in the Stepper Motor Command table shown on the right.

Stepper Motor Commands

| Button Pressed | Response |
|----------------|--|
| 0 | Switches stepper motor OFF. |
| 1 | Switches the stepper motor ON, in the forward direction, at the NVM rate for Bond media. |
| 2 | Switches the stepper motor ON, in the forward direction, at the NVM rate for Vellum media. |
| 3 | Switches the stepper motor ON, in the forward direction, at the NVM rate for Film media. |
| 4 | Switches the stepper motor ON, in the reverse direction, at the current NVM rate for reverse. |
| 5 | Holds the stepper motor at the current position, low current. |
| Next | Makes the currently outputted stepper motor rate one count longer, slowing the actual feed rate. |
| Previous | Makes the currently outputted stepper motor rate one count shorter, increasing the actual feed rate. |
| Enter | Enters the currently outputted stepper motor rate into NVM |

| Button Pressed | Response |
|----------------|--|
| Exit | Switches the stepper motor OFF and returns the printer to the Test Entry Mode. |
| Media | Does not affect the stepper motor, and returns the printer to the Test Entry Mode. |

To enter Multiple Tests (Chaining)

The Media button is used when entering more than one test. To chain one code to another, perform the following:

1. Enter the desired code for the first test.
2. Press the MEDIA button, then enter the additional code(s) for additional tests.

To exit from Multiple Tests

Multiple tests can be switched off by two methods.

1. Enter the codes in the reverse sequence from the way they were initially entered, pressing the EXIT button after each code.
2. Press and hold the DOT (.) button while pressing the EXIT button. This will clear all of the codes that were entered.

Special Tests

The following tables give special diagnostic tests that are used to enable or disable features or to change the operating parameters of the printer. To enter a Special Test, the printer must first be in the diagnostic mode

Each special test has a value that is stored in non-volatile memory (NVM). If there is a default value, it is found in the Value column.

NVM values may be changed by entering the Special Test mode, pressing the ENTER button, and then using the PREVIOUS and NEXT arrow keys to select the desired NVM value. To enter the selected value, press the ENTER button again. To exit the test, press the EXIT button.

NOTE: If there is a reference to a procedure, the procedure must be followed in order to perform the test correctly.

| Code | Description | Value |
|--------|--|-------|
| [0211] | Language ROM Test 0= Both Language ROMs are defective. 1 = Primary Language ROM is ok 2 = Secondary Language ROM is ok 3 = Both Language ROMs are ok | |

| Code | Description | Value |
|---------|--|----------------------|
| [0261] | Country Configuration 0= 115 volts 1 = 240 volts (refer to Note 1.) 2 = 220 volts | |
| [02621] | Media Width Detect 0 = 8830 DDS sizes 1 = Finesse 1.0 sizes 2 = FX sizes 5 = All sizes | |
| [0263] | Billing Meter Count This code is used to select the billing in meters or inches. 0= inch 1 = metric (decimeter) | NACO 0 EC 1 |
| [0300] | Jump 0. Restarts the IOT. | |
| [0360] | NVM Reset to Default. Entering the number 1 or 3 resets all the NVM values to the default values. Entering the number 2 allows the electronic billing to be reset to any desired value. 1 = NACO NVM Default 2 = Billing 3= EO NVM Defaults | |

| Code | Description | Value |
|--------|--|--------|
| [0361] | Watchdog Timer Test. This code can be used to exit the Diagnostic mode | |
| [0362] | Diagnostic Time-out interval. This code allows the adjustment of the time interval that the printer will stay in the Diagnostic mode. The time interval range is 5 to 50 minutes. | 5 min. |
| [0363] | NVM Reset This code allows the NVM values to be reset to the previously adjusted values. The software compares the NVM values to a backup file and will reset the values that are not the same as the values in the backup file. | |
| [0364] | Reset NVM Check Sum | |
| [0365] | NVM Printout of NVM contents in hex format. | |
| [0391] | Recent Fault Log Displays the last 99 faults that have occurred. Displays the fault code, how many events ago it occurred, and the billing meter reading at the time the fault was originally displayed. Log entries are numbered from 1 to 99, with 1 being the most recent. | |

| Code | Description | Value |
|--------|--|-----------|
| [0392] | Fault History Log Displays, in alphabetical order, the number of occurrences of each of the fault codes since the log was last cleared. | |
| [0398] | Display Checksums | |
| [0602] | Vertical Magnification Refer to (ADJ 8.1) Vertical Magnification Adjustment | |
| [0700] | Cut Length Adjustment Refer to ADJ 8.3 Cut Length. | 10 (8 mm) |
| [0760] | Delay Between Prints (Film) Increases the time delay between making prints on Film Media | 1-30 Secs |
| [0809] | Enable/Disable Stacker Full Sensor | |
| [0860] | Image Registration Refer to ADJ 8.2 Lead Edge Registration. | 10(8 mm) |
| [0903] | Input LED Output Value | |

| Code | Description | Value |
|--------|---|-------|
| [0906] | Tone Up/Tone Down (Automatically adjusts toner concentration until the control set point is reached). | |
| [0920] | Displays Run Time. | |
| [0921] | Electrostatic Setup This code is used adjust the electrostatics. When in this code, additional tests can be run by pressing the following buttons: 1 Transfer/Detack Corotrons ON 2 Adjust Vhigh 3 Adjust Vlow 4 Adjust Image Density (ADJ 9.3) 5 Illuminates the LED Image Bar for observation purposes. 6 Calibrates the Toner Control Sensor. 7 Humidity Sensor control point setting. | |

| Code | Description | Value |
|--------------------|--|-------|
| [0921] (cont'd) | Next/Previous - Pressing these buttons affects the Duty Cycle value in Tests 2 and 3, and changes Vhigh in [0921-2] , When running Tests 2 and 3, pressing the Enter button copies the current duty cycle value to NVM. | |
| [0922] | This code disables toner faults so that the printer will continue to operate. While in Diagnostics, enter the code [0922] and select [Yes] for running with toner faults. Enter the code [0361] to exit the diagnostic mode. | |
| [0926] | Resets the Toner Control Bias to default value | |
| [0955] | IOT Internal Test Pattern Print 9 test patterns are available. The following parameters can be selected: Paper source (roll) Length of print Print quantity Folder program (if folder is available) | |

| Code | Description | Value |
|--------|--|-------|
| [1004] | Fuser Run Temperature Display. This code switches the fuser heat rod on and increases the fuser heat roll temperature to the run temperature. The run temperature is displayed in degrees (F) and degrees (C). At run temperature, the Drum/Developer and Fuser Drive Motors are switched on. The following conditions may exist when the message FUSER CAN NOT BE TURNED ON, CONDITION XX is displayed: 03 Developer Cover is open. 04 Cutter Cover is open 05 Xerographic Interlock is open. 06 Right side door is open. 07 Document Handler interlock is open. 08 Fuser status problem. Turn power off and try again. 09 Illumination status problem. Turn power off and try again. | |

| Code | Description | Value |
|---------|---|-------|
| [1006] | Display Fuser Temperature (Analog) | |
| [1010] | Fuser Scorch Sensor (Thermistor RT2) 1 = Fuser temperature less than or equal to 420° F (215°C) 0 = Fuser temperature greater than 420° F (215 C) <i>NOTE: Power must be switched OFF then ON, in order to reset signal.</i> | |
| [1026] | Reset the Fuser Control NVM to default values. | |
| [1030] | Reset Oil Web. Resets the web counter when & new web has been instated. | |
| [1031] | Specify Oil Web Position. Used if the NVM fails or is reset. This sets the controls for web use. (Enter the diameter of the supply spool in millimeters.) | |
| [1035] | | |
| [10-36] | Disable LL-12 Fault Detection (Drum Stall) | |

| Code | Description | Value |
|--------|--|-------|
| [1032] | Specify Web Oil Rate. This is used to adjust the web oil rate from 50% to 200%. (A 100% setting is nominal.) This setting directly impacts the life of the Oil Web. 50% means that 1/2 as much web is used. | |
| [1033] | Advance Oil Web. Used to tension the web correctly when the oil assembly is removed and reinstalled. | |
| [1034] | Estimate Oiler Web Life. Displays the remaining web life in print feet or meters | |
| [1035] | Disable LL-07 Oiler Fault Detection | |
| [1036] | Disable LL-12 Fault Detection (Drum Stall) | |

| Code | Description | Value |
|--------|--|-------|
| [1060] | Fuser Temperature bond media adjustment. Allows the adjustment of the Fuser Run Temperature: 300° F (149°C) with 36 inch wide bond media. Refer to ADJ 10.1 Fuser Temperature. | |
| [1062] | Fuser Temperature vellum media adjustment: 294 F (146 °C). <i>Refer to ADJ 10.1 Fuser Temperature.</i> | |
| [1063] | Fuser Temperature film media adjustment: 300 F (149 °C). <i>Refer to ADJ 10.1 Fuser Temperature.</i> | |
| [1101] | Folder Status | |
| [1401] | Loopback Test for Remote Access Interface | |
| [1402] | Loopback Test for Controller Command Status | |
| [1403] | Loopback Test for Finisher Port | |

GP1 HVPS Checkout

The purpose of this checkout procedure is to verify correct operation of the High Voltage Power Supply.

NOTE: Use the 26V RTN test point when measuring all voltages. Failure to use this test point can cause incorrect readings.

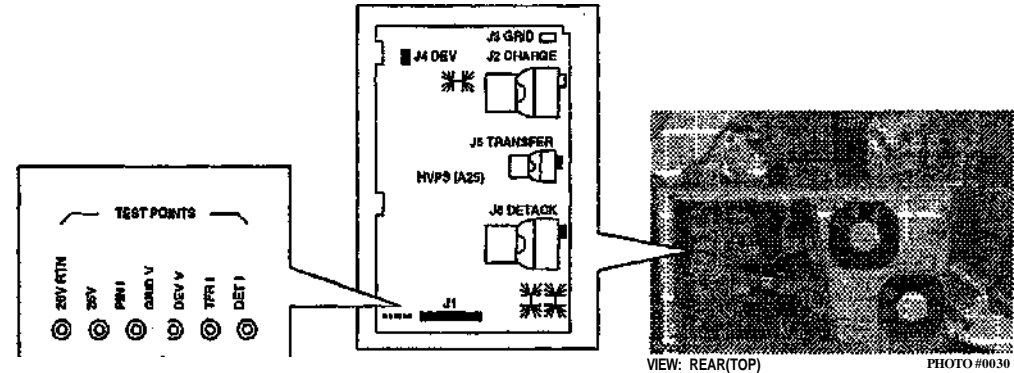


Figure 1. Location of HVPS Test Points

Perform the voltage checks shown in Table 1.

Table 1. HVPS Voltage Checks

| COM Meter Lead | v-om Meter Lead | Standby Measured Voltage | In Print Measured Voltage | Diagnos tic Code |
|----------------------|-----------------------|-----------------------------|------------------------------|---------------------|
| 26V RTN | 26V | 26.5 VDC | 26.5 VDC | |
| 26V RTN | PIN 1 | Less than 0.05 VDC | 2.3 ± 0.05 VDC | |
| 26V RTN | GRID V | N/A | N/A | |
| 26V RTN | DEW | Less than 0.05 VDC | -4.20 ± 0.05 VDC | |
| 26V RTN | TFR I | Less than 0.05 VDC | 0.6 ± 0.1 VDC | [921-1] |
| 26V RTN | DET I | Less than 0.05 VAC | 1.0 VAC | [921-1] |

GP2 Image on Drum (Panic Stop) Procedure

This procedure allows the isolation of print quality problems by observing the image on the Drum before the transfer of the toner to the media, if the defect is visible on the Drum before the transfer, the defect is related to the charge, the imaging, or the developer. If the defect is visible on the print after the transfer, the defect is related to the transfer or fuser.

1. Make a test print. Open the right door interlock when the test pattern is almost half way beyond the Drum (Print is just starting to exit from the printer).
2. Remove the Developer Module.
3. If the defect is visible on the developed image, the defect cause is related to the charge, the imaging or the developer. If the defect is not visible, the defect cause is related to the transfer or the fuser.

GP3 Drum-Maintenance

WARNING

When performing this drum maintenance, do the following:

- Ensure that there is adequate ventilation in the area.
- Use protective gloves at all times.
- « Do not smoke.
- Wash your hands when the procedures are completed.

CAUTION

These procedures must be completed in the shortest possible time in order to reduce the effects of light shock.

Washing Procedure

Washing Materials:

- Drum Maintenance Kit
 - Film Remover
1. Remove the Drum Assembly from the Xerographic Module (REP 9.2).
 2. Put on gloves.
 3. Gently remove any dry ink/toner and developer from the surface of the drum, using a dry polyurethane pad.
 4. Apply Film Remover to a clean polyurethane pad.

5. (Figure 1): Wash the drum from end to end, using a circular motion.

NOTE: Ensure that the ends of the drum are washed.

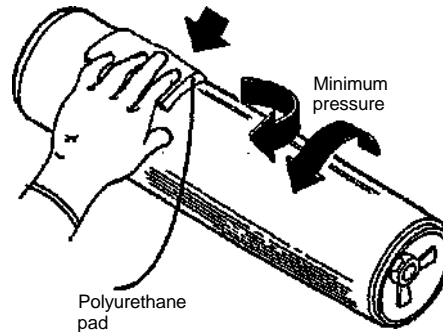


Figure 1. Washing the Drum

6. Using the clean side of the polyurethane pad, continue washing the drum until the entire surface of the drum is covered with film remover.
7. Allow enough time for the air to dry the surface of the drum.
8. Use the dusting pouch to apply a thin layer of Zinc Stearate (8R181) over the entire surface of the drum.
9. Buff the surface of the drum using the clean side of the dry polyurethane pad.

NOTE: Ensure that the ends of the drum are buffed as well as the center of the drum.

10. Continue to buff the surface of the drum for three complete revolutions of the drum.
11. Apply a final thin layer of Zinc Stearate over the entire surface of the drum.
12. Reinstall the drum.
13. Enter the diagnostic mode. Enter test [1004] and allow the printer to run for five more minutes.
14. Place the used washing materials in the disposal bag.
15. Wash your hands.

GP4 Drum Cleaning Enhancement

1. Remove the Drum Assembly (REP 9.2).
2. Use the dusting pouch (8R181) to apply a thin layer of Zinc Stearate over the entire surface of the drum.
3. With a new lint-free cloth (600S4372), wipe the entire surface of the drum, using moderately heavy pressure. Use a back and forth motion of 6 - 10 strokes while revolving the drum three revolutions.
4. Repeat steps 2 and 3 one time and then continue with step 5.
5. Apply a thin layer of Zinc Stearate over the entire surface of the drum.

Reinstall the drum assembly.

Rotate the Drum manually to clean off excess zinc stearate.

GP5 Communication Loopback Test

NOTE: In order to perform this test, it is necessary to use the Loopback Kit (600K43210).

For printers with a Controller:

1. Remove the Controller and disconnect the ribbon cable (J307B) from the IOT Main PWB.
2. Connect the 152K59420 loopback cable to J307B on the IOT Main PWB.
3. Connect the loopback tool 114E4680 to the loopback cable.
4. Enter [1402] to run the communication test.
5. If the test passes a 0 will be displayed and the problem is in the ribbon cable or the Controller.
6. If the test fails (1), replace the IOT Main PWB (PL 1.1).

For printers without a Controller:

1. Connect the loopback tool to the lower connector located on the rear right side of the IOT.
2. Enter [1402].
3. If the test passes (0), the problem is the XPC or the connection between the XPC and the printer.
4. If the test fails (1), remove the right rear lower cover and disconnect the cable at J308 on the Main PWB.
5. Connect the loopback cable (152K59420) into J308 and connect the loopback tool (114E04680) to the loopback cable and repeat the test.
6. If the test passes, replace the cable.
7. If the test fails, replace the IOT Main PWB (PL 1.1).

INSTALLATION PROCEDURE

Prepare to Install the Printer

CAUTION

Before installing the Printer, check for the correct voltage, polarity, and the grounding of the AC outlet that is provided by the customer. Use the Digital Multimeter. Incorrect voltage applied to the Printer could result in poor performance or damage to the Printer.

NOTE: The power line outlet must be a 20 amp dedicated line (wired directly to the circuit breaker panel) with no shared neutral and a different phase from the lighting circuits.

CAUTION

If the supply AC voltage specifications are not met, the AC outlet may be wired or grounded incorrectly. Inform the customer and request that a licensed electrician correct the problem. DO NOT attempt to make the correction yourself.

NOTE: The Power Cord is the disconnect device for this equipment. Ensure that the installation is near the outlet and is easily accessible.

1. Check the Ground and AC voltages.

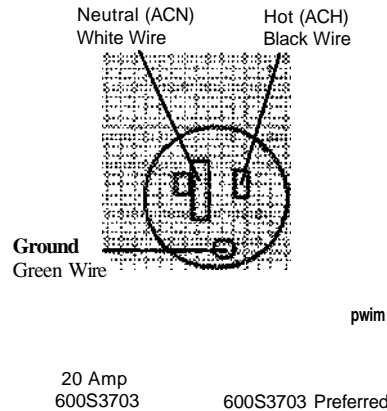


Figure 1. Checking the Ground and AC voltages

On **50 Hz Printers**, perform the following:

- a. Check for 220-240 VAC between AC Hot and AC Neutral.
- b. Check for 220-240 VAC between AC Hot and AC ground.
- c. Check for less than 2 VAC between AC Neutral and ground.

On **60 Hz Printers**, perform the following:

- a. Check for 105-125 VAC between AC Hot and AC Neutral.
- b. Check for 105-125 VAC between AC Hot and AC ground.
- c. Check for less than 2 VAC between AC Neutral and ground.

Floor Space Requirements

WARNING

This product will produce ozone during operation. The ozone that is produced is dependent on the print volume and is heavier than air. Providing the correct environmental parameters as specified in Xerox installation procedures will ensure that concentration levels meet safe limits

- The minimum space requirement is 116.75 inches (292 cm).x 85 inches (212.5 cm).

USO Only: If additional information concerning ozone is needed, request the Xerox publication 600P83222, Ozone by calling 1-800-828-6571.

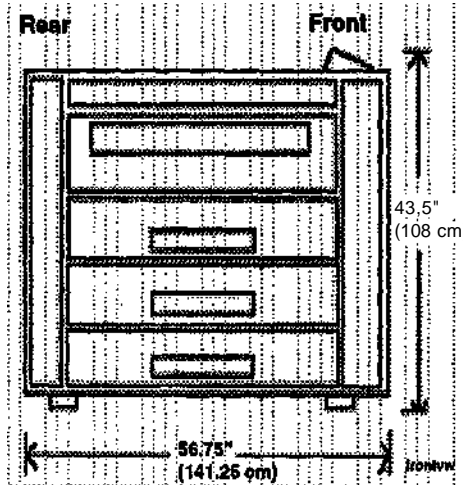


Figure 2. IOT Dimensions

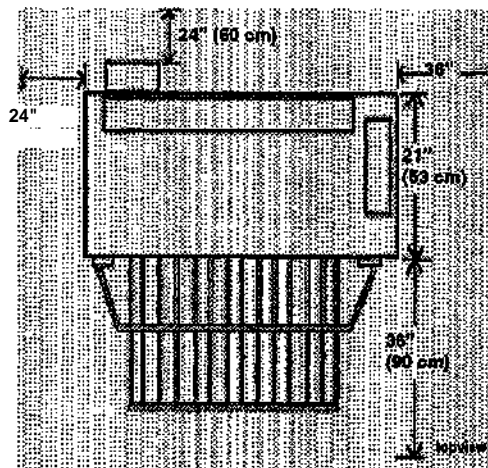


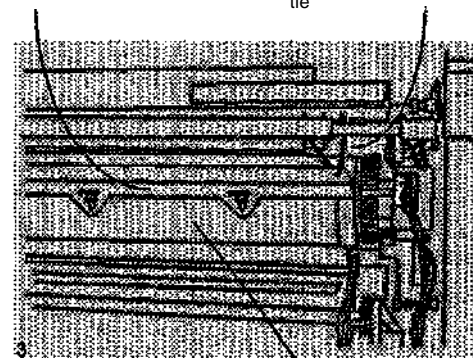
Figure 3. Minimum Space Requirements

Install the Printer

- Prepare to remove the internal packing material from the Printer.
 - Remove all external shipping tape.
 - Loosen the two locking screws and open the Rear Door.
 - Raise and latch the Top Cover.
 - Lower the Media Transport Cover.
 - Hold open the Developer Module Door while lifting and removing the Developer Module Side Cover.
- (Figure 4): Remove the cable tie from the Stripper Finger Assembly.

1
Lift Stripper Bar slightly

Cut and remove cable tie



3
Allow bar to return to normal position

Fuser Heat Roll

R3020K

Figure 4. Removing the Cable Tie

3. Close the Media Transport Cover.
4. Open the Media Drawers (3) and remove the packaging material from the Media Tubes.
5. Remove the Scorotron from the Media Drawer and carefully remove the packing material from the Scorotron.
6. Lift and rotate the image Module to the Service Position. Install the Scorotron on the Image Bar, making sure that the connector end of the Scorotron is to the left (machine rear).
7. Attach the connectors to the Scorotron, taking care to join like-sized connectors.
8. (Figure 5): Remove the shipping pads located near the ends of the Image Module.

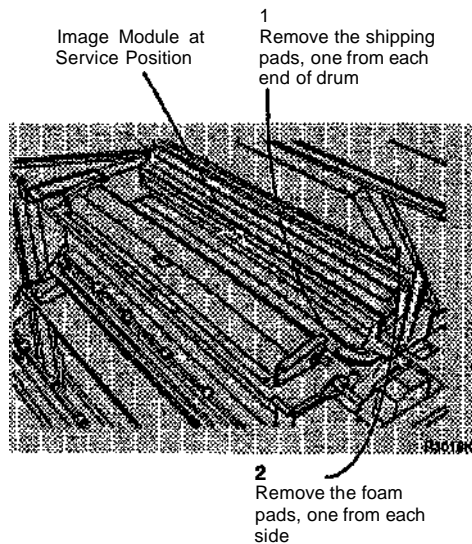


Figure 5. Removing the Shipping Pads

9. (Figure 6): Disengage the Developer Module shipping brackets.

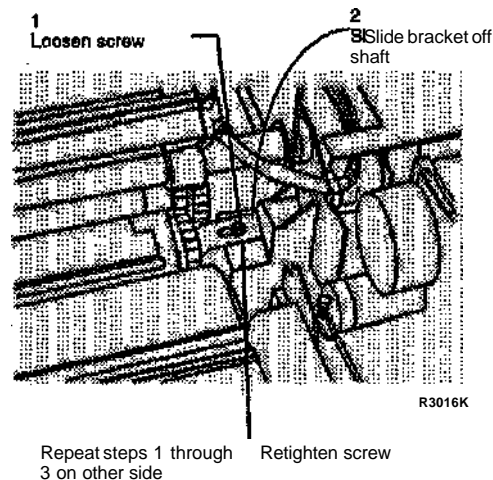


Figure 6. Disengaging the Shipping Brackets

10. Close the Image Module and the Top Cover.
11. Open the Developer Module door.
12. Remove the Toner Cartridge from the Developer Module.

13. (Figure 7): Prepare to remove the Developer Module.

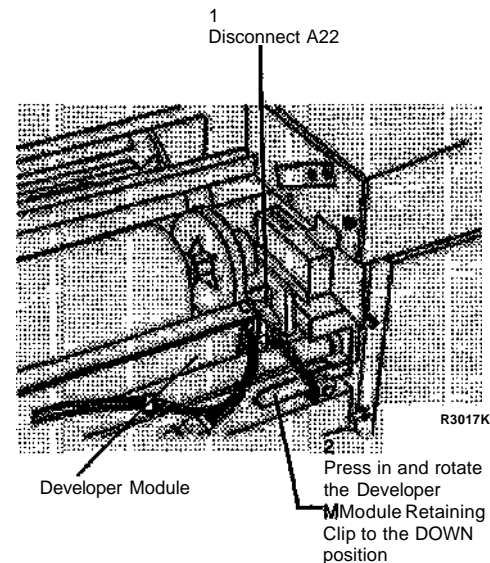


Figure 7. Preparing to Remove the Developer Module

14. (Figure 8): Remove the Developer Module.

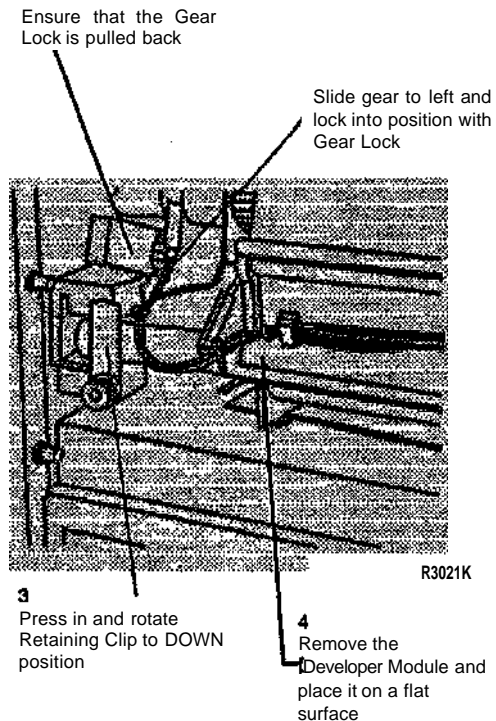


Figure 8. Removing the Developer Module

15. (Figure 9): Remove the Sump Shield.

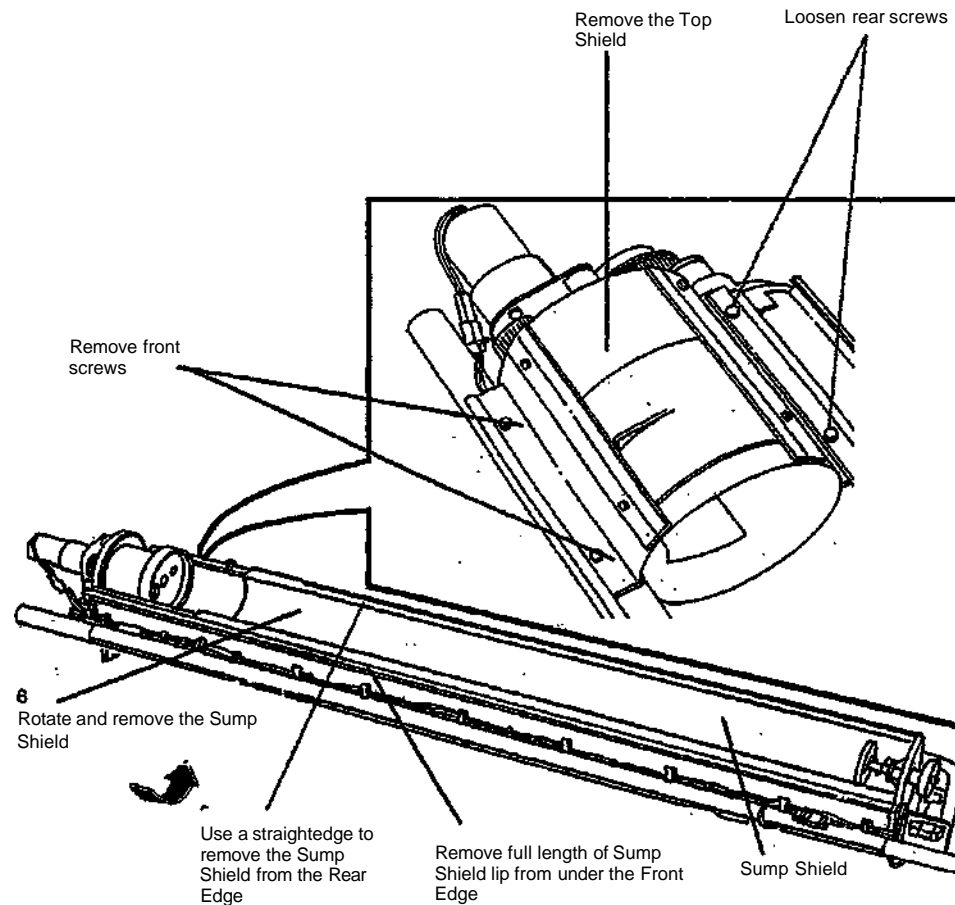


Figure 9. Removing the Sump Shield

16. Remove the bottle of Developer Material from the Supply Kit.
17. (Figure 10): install the Developer Material evenly along the entire length of the augers.

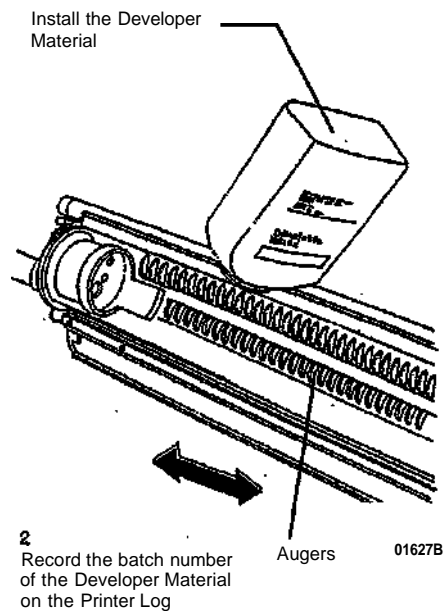


Figure 10. Installing the Developer Material

18. (Figure 11): Reinstall the Sump Shield, rear edge first.

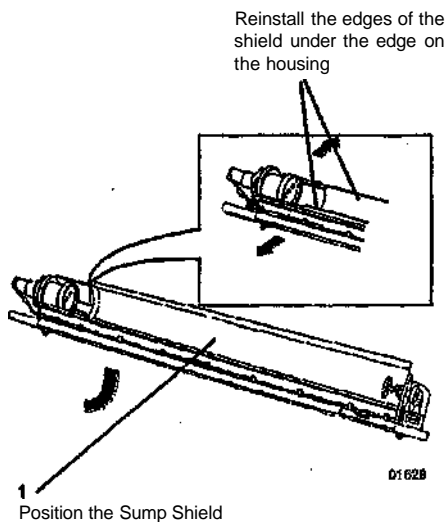


Figure 11. Reinstalling the Sump Shield

19. (Figure 12): Reinstall the Top Shield, rear edge first.

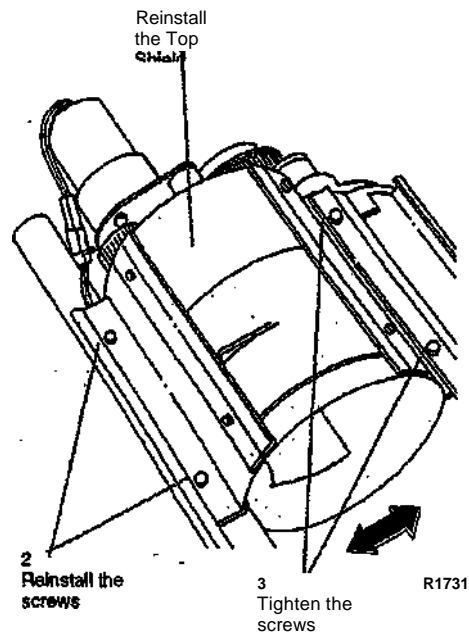


Figure 12. Reinstalling the Top Shield

CAUTION

Ensure that the Developer Module is kept close to the Printer frame during reinstallation in order to avoid damage to the Toner Dispenser Motor.

20. (Figure 13): Reinstall the Developer Module.

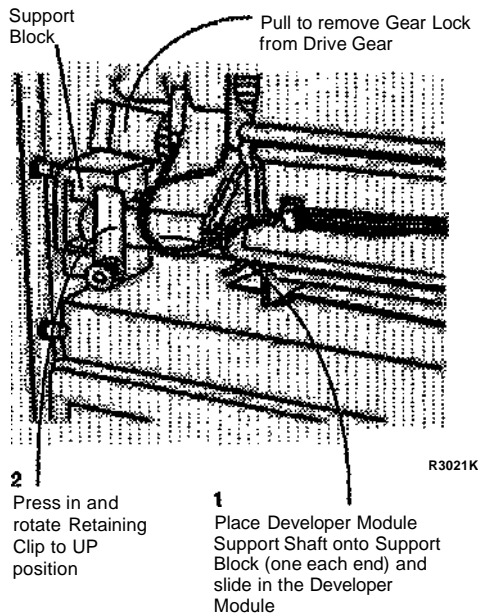


Figure 13. Reinstalling the Developer Module

21. (Figure 14): Reinstall the Developer Module.

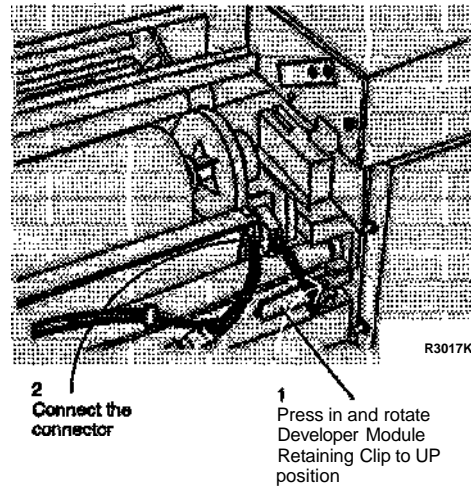


Figure 14. Reinstalling the Developer Module

22. (Figure 15): Reinstall the Toner Cartridge.

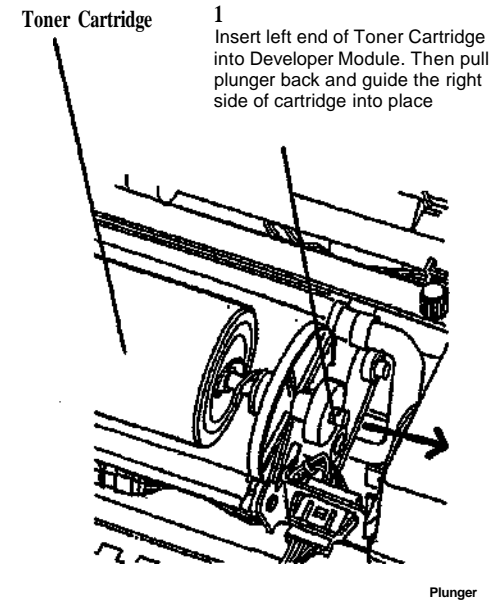


Figure 15. Reinstalling the Toner Cartridge

23. (Figure 16): Complete the Toner Cartridge installation.

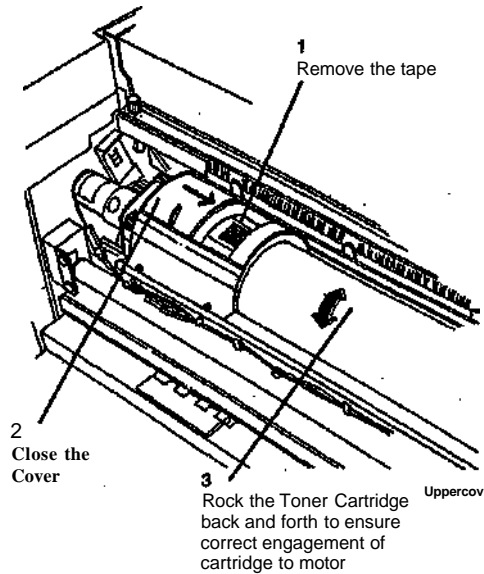


Figure 16. Completing the Toner Cartridge Installation

24. Close the Developer Module Cover.
25. Raise the Printer Top Cover.
26. Raise and hold the Developer Module Cover while reinstalling the Developer Module Side Cover.

27. (Figure 17): Prepare to level the Printer. Rotate the leveling bolts (located inside the front and rear doors) fully counterclockwise.

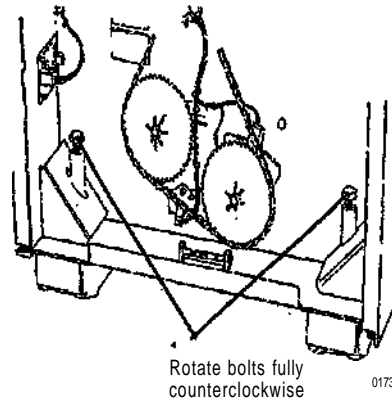


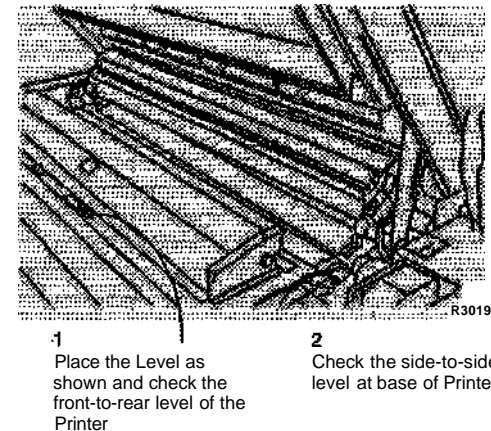
Figure 17. Preparing to Level the Printer

28. (Figure 18): Check the level of the Printer.

NOTE: To ensure that the Printer frame is not twisted, use a level to perform the side-to-side level check on both end frames.

NOTE: Adjust the end that is farthest out of level first.

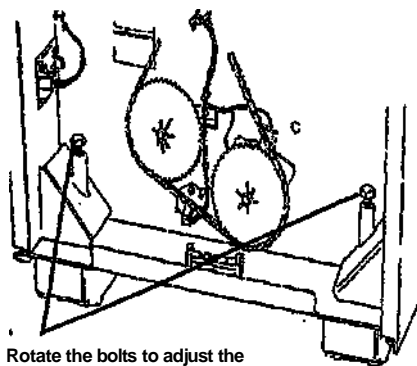
Repeat the side-to-side level check at the other end of the Printer



- 1 Place the Level as shown and check the front-to-rear level of the Printer
2 Check the side-to-side level at base of Printer

Figure 18. Checking the Level of Printer

29. (Figure 19): Adjust the side-to-side level of the Printer.

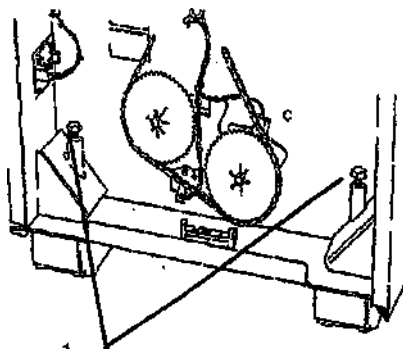


Rotate the bolts to adjust the level of the Printer

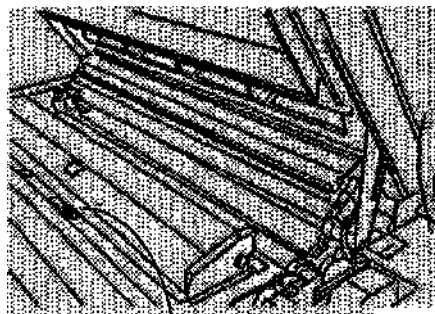
Repeat step 1 at the other end of the Printer

Figure 19. Adjusting the Level of Printer

30. (Figure 20): Adjust the front-to-rear level of the Printer.



1
Rotate the bolts equally to adjust the level of the Printer



2
Determine level of Printer

R3019K

Figure 20. Checking and Adjusting the Printer Level

31. Repeat the Printer leveling (Steps 27 through 30) until the Printer is level.
32. Close the Top Cover.
33. Close the Rear Door and tighten the locking screw.
34. Install a roll of 36 inch (AO) Bond media in Roll 1 Media Supply. Refer to the User Guide as required.

35. Install the Second Language EPROM on the Main PWB (if required).
36. Install the Catch Tray or Folder. Refer to Section 8 for Folder Installation Instructions.

NOTE: The 8830 Printer comes with either a plain cover to attach to the right side of the Printer or the 8830 Controller.

37. If the Printer you are installing does not have the 8830 Controller (plain cover), perform the following:
 - a. Attach the ribbon cable affixed to the Side Cover to A1P3 on the Main PWB.
 - b. Place the Side Cover into the groove at the bottom of the Printer and secure it with the two screws provided.
38. If the Printer you are installing has the 8830 Controller, perform the following:
 - a. Connect the 8830 Controller ribbon cable to J307B on the Main PWB.
 - b. Connect A1J3 on the 8830 Controller panel to A1P3 on the Main PWB.
 - c. Attach the 8830 Controller to the Printer by sliding it into the groove at the bottom of the Printer and secure it with the two screws provided.

Functional Checks:

1. Connect the Power Cord.
2. Switch on the Printer and enter the Diagnostic mode.

CAUTION

When starting to operate the Printer, do not run 9-21-6. The Developer Material in this machine has already been initialized. There is no need to run this program again.

3. Refer to the Service Manual and perform the following adjustments.
 - Country configuration (ADJ 3.2)
 - Initialize the Web Oiler [1030]
 - Vertical Magnification (ADJ 8.1)
 - Lead Edge Registration (ADJ 8.2)
 - Cut Length (ADJ 8.3)
 - Electrostatic Series (ADJ 9.2)
4. Make three test prints using [9-55-5] and [9-55-7].
5. Check the print quality using Section 3 of this Service Manual.
6. If there is a controller installed, run a test print from the controller (special test).

7. Exit the Diagnostic mode.
8. Inform the operator that the following adjustments are Operator Adjustments and can be changed to fit individual needs. Refer to the User Guide and demonstrate the following adjustments.
 - Power Saver Mode (EO: Low Power Mode)
 - Standby Mode
 - Timers
 - Audible indicators
 - Print density
 - Controller (if present): Settings, Menu, Printing a Test Pattern
9. Place a print of the Configuration Sheet inside the Front Door.

10. (Figures 21 and 22): Record the Media Counter readings onto the Service Call Report. Record and report any accessory Serial Numbers (i.e., Finisher, Controller),

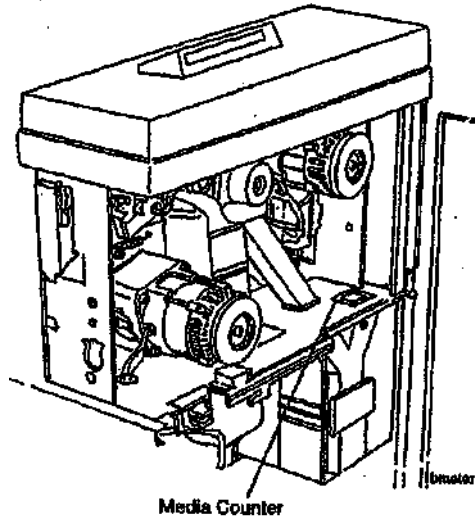


Figure 21. Media Counter Location

11. Separate the First Call Report card from the Installation Quality Report card and insert the First Call Report card into the Machine Log.

Xerox Service Call Report **This Is Not An Invoice** **CALL ID** _____

| | | | | | | | | | | | | | | | | | | | |
|-----------------------|--|--|--|--|--|--|--|--|--|----------------|--|--|--|--|--|--|--|--|--|
| CUSTOMER NAME | | | | | | | | | | DATE | | | | | | | | | |
| ADDRESS | | | | | | | | | | CITY | | | | | | | | | |
| CUSTOMER CONTACT | | | | | | | | | | CUSTOMER PHONE | | | | | | | | | |
| ADDRESS OF LOCATION | | | | | | | | | | CITY/STATE | | | | | | | | | |
| EQUIPMENT DESCRIPTION | | | | | | | | | | SERIAL NO. | | | | | | | | | |
| SERIAL NUMBER | | | | | | | | | | CANC DAY | | | | | | | | | |
| TRAVEL HR | | | | | | | | | | CREDIT | | | | | | | | | |
| Min | | | | | | | | | | CREDIT | | | | | | | | | |
| Day | | | | | | | | | | CREDIT | | | | | | | | | |
| ARRIVE Time | | | | | | | | | | CREDIT | | | | | | | | | |
| Day | | | | | | | | | | CREDIT | | | | | | | | | |
| DEPART Time | | | | | | | | | | CREDIT | | | | | | | | | |
| METER TOTAL | | | | | | | | | | CREDIT | | | | | | | | | |
| METER A | | | | | | | | | | CREDIT | | | | | | | | | |
| METER B | | | | | | | | | | CREDIT | | | | | | | | | |

3 Enter the reading from the Media Counter here

1 Access the Control Panel menu and record the Meter A reading

2 Access the Control Panel menu and record the Meter B reading

form

Figure 22. Recording the Print Count Readings

12. Record the following on the Printer Installation Quality Report card:
- Print count readings
 - Printer serial number
 - Installation date
 - Comments
13. Mail the Printer Installation Quality Report Card.

Product Demonstration

CAUTION

*SO Hz **machines only**:. Do not run program 3-60-3 as this will cause all settings on the Printer to be lost.*

To demonstrate the capabilities of the Printer, refer to the User Guide. Perform the following procedures to train an operator.

- a. Getting to know your Printer
- b. Control Console
- c. Loading the media
- d. Making prints using roll media
- e. Adding Toner and how to clear the J1 Status Code
- f. Problem solving status codes
- g. Clearing the Printer

Installation Checklist

Site Preparation

- a. Supply voltage check
- b. Space requirements

Installation

- a. Remove the packing material
- b. Remove the Toner Cartridge
- c. Adding Developer Material
- d. Install the Toner Cartridge
- e. Level the Printer
- f. **EO Only**: Set the 220/240 switch
- g. Enable the correct language

Functional Check

CAUTION

When starting to operate the Printer, do not run 9-21-S. The Developer Material in this machine has already been initialized. There is no need to run this program again.

- a. Switch on the Printer and allow the Printer to warm up.
- b. Set the Country Configuration (ADJ 3.2).
- c. Initialize the Web Oiler [1030].
- d. Set the Vertical Magnification (ADJ 8.1).
- e. Set the Lead Edge Registration (ADJ 8.2).
- f. Set the Cut Length (ADJ 8.3).
- g. Perform the Electrostatic Series (ADJ 9.2).
- h. Make three test prints using [9-55-5] and [9-55-7].
- i. Check the print quality using Section 3 of this Service Manual,
- j. Check the operator adjustments.

Product Demonstration Checklist

- a. ON/OFF switch, Print Count Meter, and serial number plate
- b. Control Console
- c. Replacing the Toner Cartridge
- d. Problem solving status codes
- e. Clearing the Printer

Removal Procedure

Purpose

The purpose is to repack the 8830 Printer and the 8830 Controller (if present) for removal by Delivery / Removal Carriers.

8830 Printer Repack Kit 673K34330

Kit Contents

Inspect the shipment for the following items:

- Poly Tape
- Bubble Pack
- Foam Pads (2)
- Cable Ties (2)
- Tape
- Box
- Bag (Poly)
- Bag (36 x 36)
- Bag (Jiffy)
- Photoreceptor End Caps (L & R)

8830 Controller Repack Kit

673K34340

Kit Contents

Inspect the shipment for the following items:

- Tape
- Box
- Bag (Anti-static)
- End Caps (Top & Bottom)

Preparation

1. Switch off the Main Power Switch and disconnect the Power Cord.
2. Remove all rolls of media and leave them with the customer. Tape down the Roll Support Tubes in their respective Drawer.
3. Remove the Power Cord and place it in a Media Supply Drawer.
4. Remove the Catch Tray and the Catch Tray Supports.
5. Place the Catch Tray into the (36 x 36) bag and secure the bag with tape in three places. Put the bag in the box and seal the flaps with tape.
6. Put the two Catch Tray Supports into the Poly Bag, close the flap, and secure the bag with tape.
7. Put the bag into the Jiffy bag, close the flap, and secure the bag with tape in three places.
8. If the Printer you are removing has the 8830 Controller, perform the following:
 - a. Remove the 8830 Controller by removing the two screws and lifting it off the groove at the bottom of the of Printer.
 - b. Disconnect A1J3 on the 8830 Controller panel from A1P3 on the Main PWB.
 - c. Disconnect the 8830 Controller ribbon cable from J307B on the Main PWB.
 - d. Place the 8830 Controller in the Anti-static Bag, install the Top and Bottom End Caps, and place the assembly into the box.
 - e. Secure the box with tape.

9. Using the Developer Material procedure (REP 9.7), remove the Developer Material.
10. Reassemble the Developer Module and reinstall it into the Printer. Engage the Gear Lock.
11. Reinstall the Developer Module Side Cover.
12. Unlock the casters.
13. Open the Front Door and the Rear Door.
14. (Figure 1): Raise the leveling bolts.

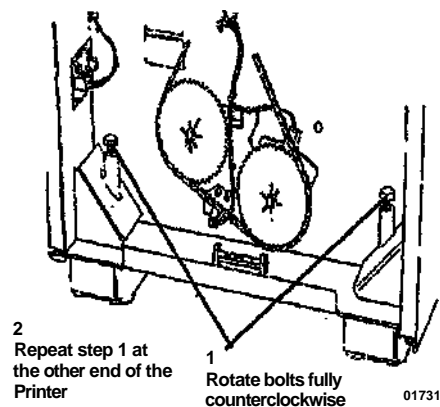


Figure 1. Raising the Leveling Bolts

15. Raise and latch the Top Cover.

16. (Figure 2): Raise the Image Module to engage the Developer Module shipping brackets.

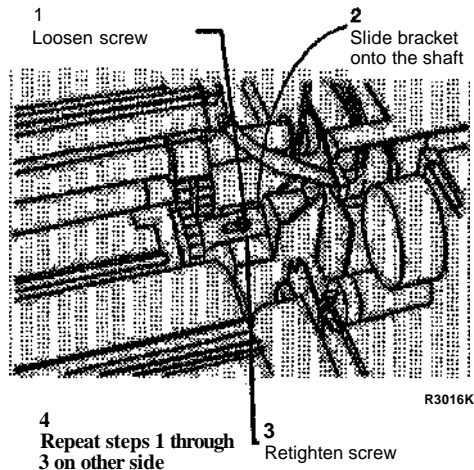


Figure 2. Engaging the Shipping Brackets

17. (Figure 3): Install the shipping pads.

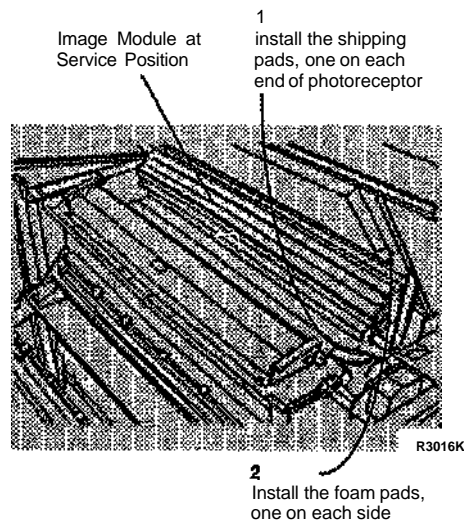


Figure 3. Installing the Shipping Pads

18. Remove the Charge Scorotron Assembly (REP 9.8), wrap the assembly in bubble pack, and place it in a Media Supply Drawer.

19. (Figure 4): Open the Media Transport Cover and secure the Stripper Finger Assembly with a cable tie.

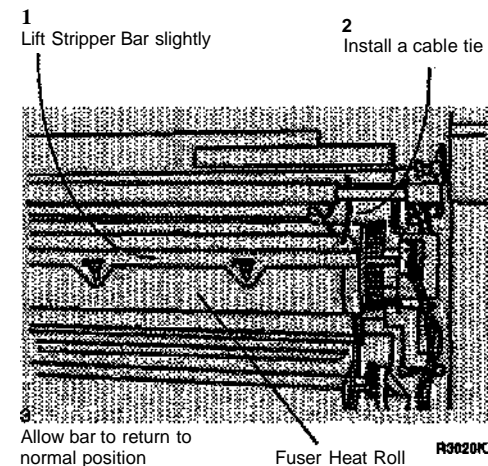


Figure 4. installing the Cable Tie

General Tools and Supplies (NACO)

Supplies

| Description | Part |
|-----------------------|-----------|
| Service Manual Binder | 600P88124 |

Tools

| Description | Part |
|---------------------------------------|----------|
| Basic Multinational Tool Kit | 600T1835 |
| Supplemental Tool Kit | 600T1837 |
| Metric Supplemental Tool Kit | 600T1836 |
| Digital Multimeter | 600T2020 |
| DMM Test Lead Kit | 600T1923 |
| Test Leads (required for 600T2020) | 600T1660 |
| Red Adapter Plug | 499T9567 |
| Black Adapter Plug | 499T9568 |
| Electrometer | 600T1620 |
| Temperature Probe Set | |
| Probe and Sensor | 499T9570 |
| Thermal Sensor (straight) | 499T9572 |
| Light Shield | 600T1198 |

| Description | Part |
|---|-----------|
| Stackable Jumper Lead (Electrometer) | 600T1652 |
| Interlock Tool | 600T91616 |
| Vacuum Cleaner | 600T1820 |
| Vacuum Cleaner Bags (10) | 93E3270 |
| Vacuum Cleaner Filter Module | 600T1832 |
| Electrometer Probe Wing | 600T1728 |
| Screwdriver Blade (6" x 3/16") | 600T40203 |
| Pocket Screwdriver | 600T40205 |
| 5.5 mm Wrench | 600T40501 |
| 7 mm Wrench | 600T40502 |
| 5.5 mm Socket | 600T40701 |
| 7 mm Socket | 600T40702 |
| Longnose Pliers | 600T40901 |
| Diagonal Cutting Pliers | 600T40903 |
| Metric Hex Key Set | 600T41101 |
| Retaining Ring Pliers | 600T41401 |
| 150 mm Rule | 600T41503 |
| 2 Meter Tape Measure | 600T41505 |
| Line Level | 600T41510 |

| Description | Part |
|----------------------------|-----------|
| Round File, 6 inch | 600T41801 |
| Flat File, 6 inch | 600T41802 |
| Cleaning Brush | 600T41901 |
| Scribing Tool | 600T41903 |
| Magnetic Pickup and Mirror | 600T41911 |
| Socket Driver | 600T1751 |
| Metric Feeler Gauge Set | 600T41509 |
| Screwdriver Handle | 600T40212 |
| 13 mm Wrench | 600T40505 |
| 10 mm Wrench | 600T40504 |

Image Reference Pattern

| | |
|-----------------|---------|
| Solid Area Fill | 82P520 |
| Image Darkness | 82E7030 |
| Background | 82P502 |

| Description | Part |
|-------------------------|-------------|
| Photoreceptor | 1R535 |
| Toner Cartridge | |
| (with Reclaim Bottle) | 6R880 |
| Developer (7 lb bottle) | 5R310 |
| Dusting Pouch | 8R181 |

Cleaning Materials

| Description | Part |
|-------------------------------|-------------|
| Cleaning Solvent | 43P10 |
| Disposable Gloves | 99P3024 |
| Drop Cloth | 35P1638 |
| Film Remover | 43P45 |
| Formula A | 43P48 |
| Heavy Duty Towels | 35P3191 |
| Lint-free Cloth | 600S4372 |
| Polyurethane Pads (40) | 600S4653 |
| Photoreceptor Maintenance Kit | 600S5838 |

| Description | Part |
|-----------------------|-------------|
| 20 lb Roll Bond Media | 22E630 |
| Oil Tube (8 cc) | 93E811 |
| Log Holder | 600P293 |
| Media Message | 600P60017 |
| Machine Log | 611P22478 |

Special Tools

| Description | Part |
|---------------------------|-------------|
| Serial Loopback Tools Kit | 600K60890 |

General Tools and Supplies
(EO)

Tools

| Description | Part |
|---|-----------|
| Screwdriver Blade (6-inch x 3/16-inch) | 600T40203 |
| Pocket Screwdriver | 600T40205 |
| 5.5 mm Combination Spanner | 600T40501 |
| 7 mm Combination Spanner | 600T40502 |
| 5.5 mm Socket | 600T40701 |
| 7 mm Socket | 600T40702 |
| Longnose Pliers | 600T40901 |
| Diagonal Cutting Pliers | 600T40903 |
| Gland Nut Pliers | 600T40904 |
| Hex Key Set | 600T91702 |
| Retaining Ring Pliers | 600T41401 |
| 150 mm Rule | 600T41503 |
| 2-Meter Tape Measure | 600T41505 |
| Line Level | 600T41510 |
| Round File (6 inch) | 600T41801 |
| Flat File (6 inch) | 600T41802 |
| Cleaning Brush | 600T41901 |
| Scribing Tool | 600T41903 |

| Description | Part |
|---------------------------------------|-----------|
| Magnetic Pickup and Mirror | 600T41911 |
| Handle Male (1/4-inch drive) | 600T1.751 |
| Metric Feeler Gauge Set | 600T41509 |
| Interlock Cheater | 600T91616 |
| Screwdriver Handle | 600T40212 |
| Vacuum Cleaner | 600T91720 |
| Vacuum Cleaner Bags (10) | 603T80130 |
| 13 mm Combination Spanner | 600T40505 |
| Light Shield | 600T1198 |
| Digital Multimeter | 600T2020 |
| DMM Test Lead Kit | 600T1923 |
| Test Leads (required for 600T2020) | 600T1660 |
| Electrometer | 600T1620 |
| Electrometer Probe Wing | 600T1728 |

Machine Consumables (EO)

| Description | Part |
|---------------|-------|
| Photoreceptor | 1R535 |
| Toner | 6R880 |
| Developer | 5R310 |

Cleaning Materials (EO)

| Description | Part |
|--|-----------|
| Dusting Pouch | 8R90139 |
| Photoreceptor Maintenance Kit | 600S92126 |
| Photoreceptor Wash Solvent / | |
| General Cleaning Solvent | 8R90176 |
| Cleaning Cloth | 8R90019 |
| Cleaning Cloth Treated (Not for use on Corotrons) | 35P1638 |
| Lint-free Cloth (Rayon) | 600S4372 |
| Cleaner General Purpose | 8R90175 |
| Formula A | 43P48 |

Image Reference Pattern

| | |
|----------------|---------|
| Solid Area | 82P520 |
| Image Darkness | 82E7030 |
| Background | 82P502 |

Branch Tools (EO)

| Description | Part |
|---|-----------|
| Temperature Probe Assembly | 499T9570 |
| Straight Temperature Probe (Use with 499T9570) | 499T9572 |
| Adapter Plugs | 600T91711 |

Other Tools and Supplies (EO)

| Lubricants | |
|---------------------|-----------|
| Description | Part |
| Oil Tellus | 8R90180 |
| Grease Alvania No 2 | 600T90340 |
| Silicone Grease | 600T90429 |

Nationalization Kits

| Generic Contents | Part |
|-----------------------------------|-----------|
| User Guide | Ref. Only |
| Safety Label (Non-English) | Ref. Only |
| Safety Label, Rails (Non-English) | Ref. Only |
| Power Cord | Ref. Only |
| Log Book | Ref. Only |
| PROMs (Message Sets) | Ref. Only |
| Media, AO Roll BO GSM Bond | Ref. Only |
| Media Starter Pack (A1) | Ref. Only |

Special Tools

| Description | Part |
|---------------------------|-----------|
| Serial Loopback Tools Kit | 600K60890 |

Molex Connector Repair Procedure

Purpose

The purpose of this procedure is to show the approved method of repair or replacement of the wire terminals in either the Pin Housing Connectors or the Socket Housing Connectors without damaging them.

CAUTION

The Molex connectors will break easily. Use only approved tools and procedures when extracting modules or terminals, or resetting the terminal locking tabs.

Items Required

600T1825 Extraction Tool

Procedure

1. (Figure 1): Familiarize yourself with the Molex Extraction Tool components.

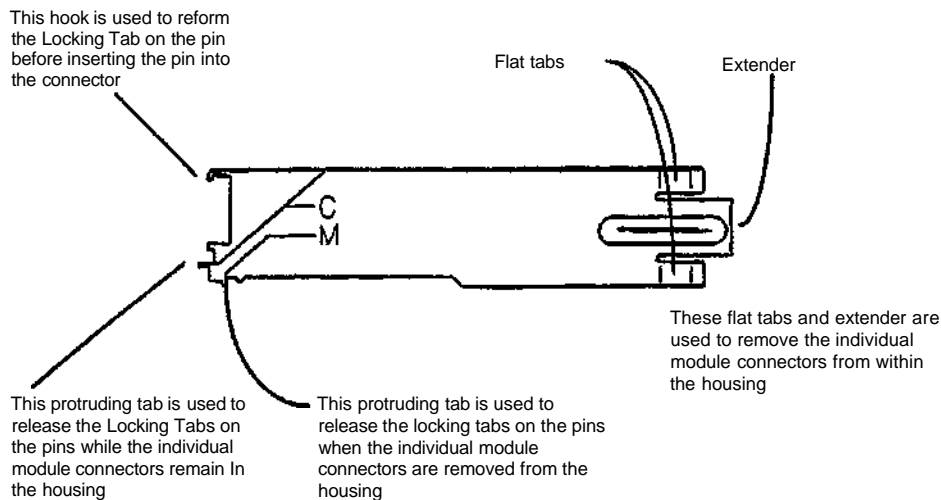


Figure 1. Molex Extraction Tool Components

01984

CAUTION

Note the location of the individual module connectors in the housing before removing them. This will ensure that they are reinstalled correctly after the repair to the terminals is complete. Failure to position the individual connectors correctly will cause the printer to malfunction, causing damage.

CAUTION

Use caution when forcing the housing body away from the module connector. Too much force could cause damage to the housing body.

2. (Figure 2): Remove the individual module connectors from the housing.

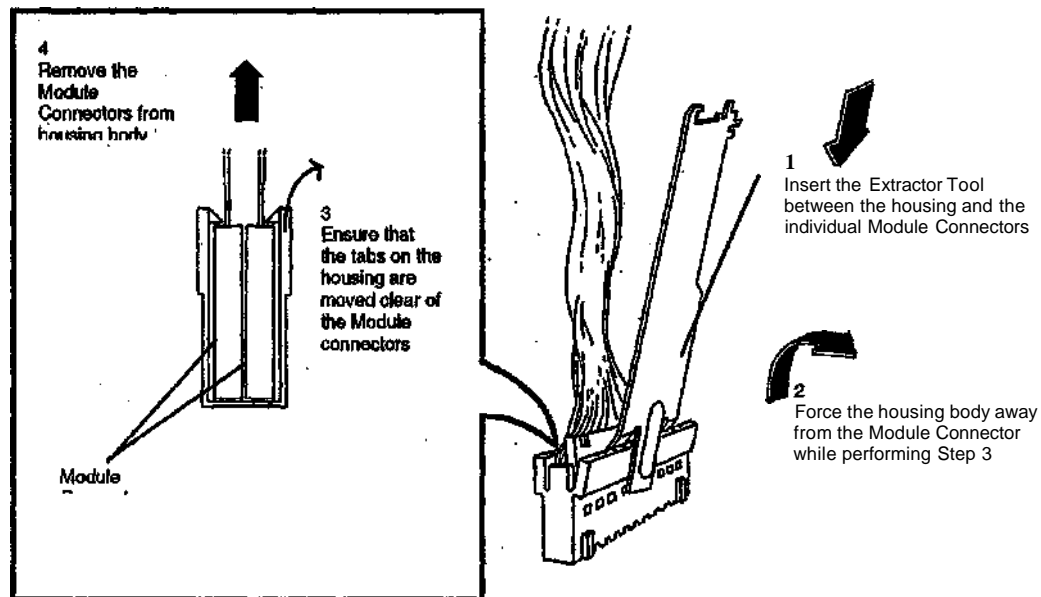


Figure 2. Removing the Module Connectors

NOTE; Insert the Extractor Tab until the face of the tool is flush with the connector housing.

3. (Figure 3): Remove the terminal from the connector.

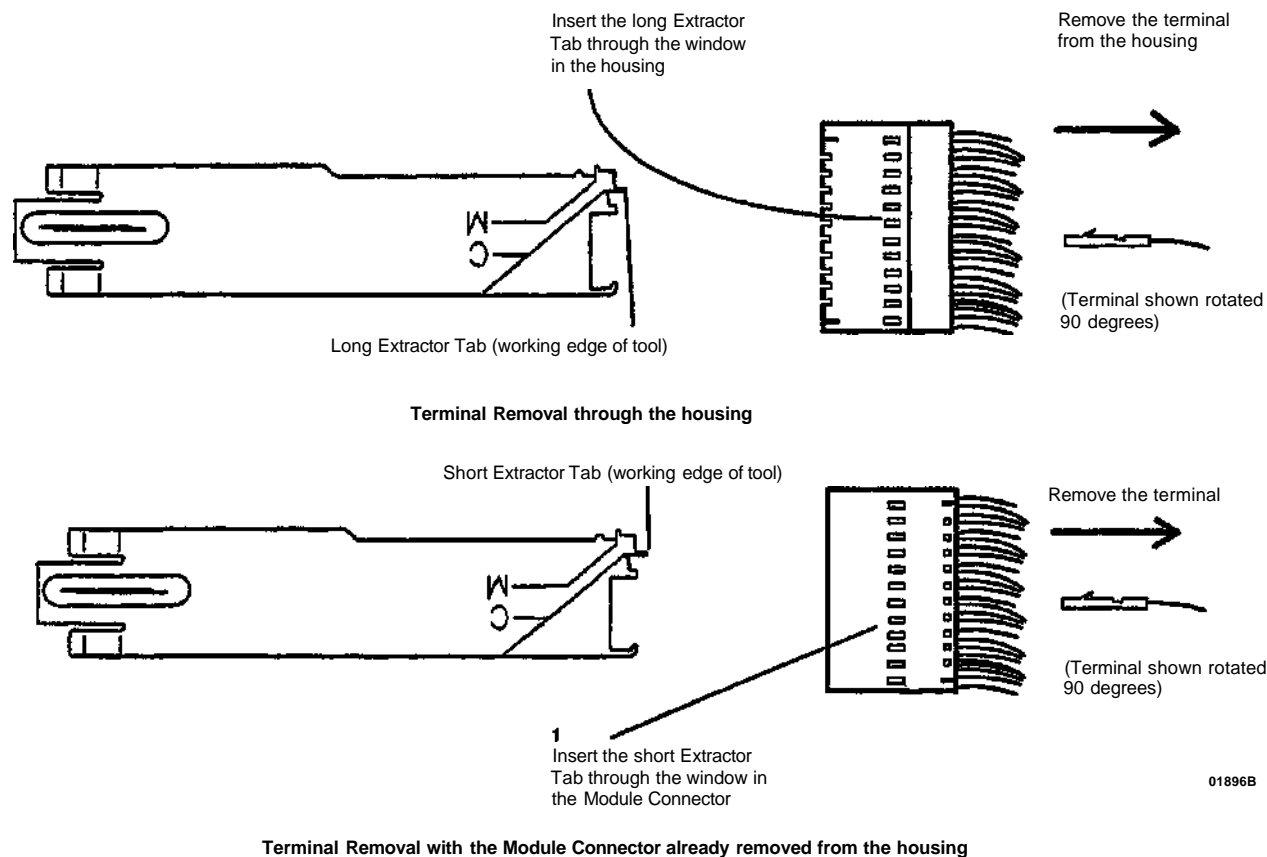


Figure 3. Removing the Terminal from the Connector

4. (Figure 4): Reform the Terminal Locking Tab.

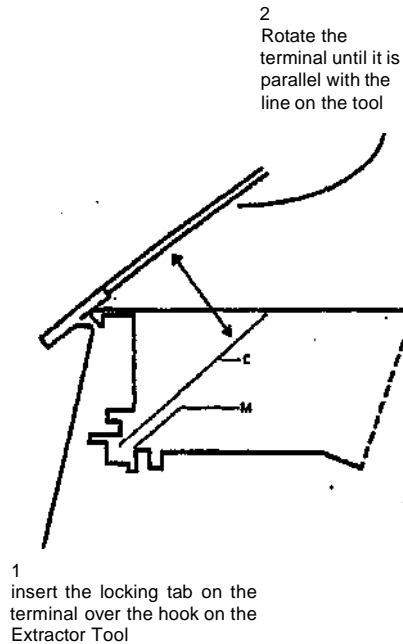


Figure 4. Reforming the Locking Tab

5. Reinstall the terminal to the pin position from which it was removed.
6. Reinstall the individual module connectors to the correct locations noted at the beginning of this procedure. Refer to Section 7 for detail of connector configuration.

Product Specifications

Physical Characteristics

Printer Dimensions

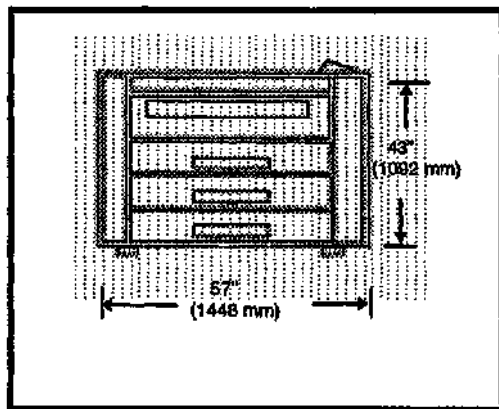
Weight 574 Lb (261 Kg)

Height 43 inches (1092 mm)

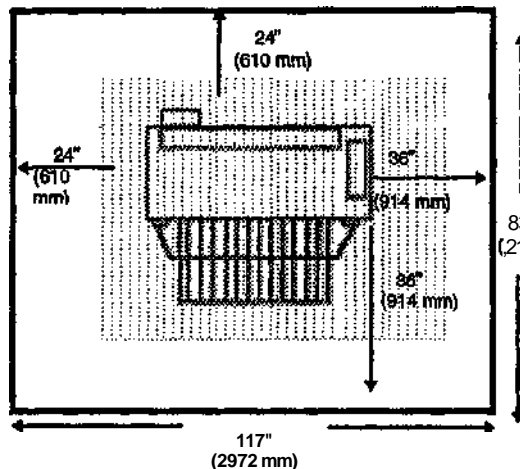
Width 23 inches (584 mm)

Depth 57 inches (1448 mm)

Product Code 8YG



Minimum Space Requirements



Environmental Conditions

Temperature:
Maximum 80°F (27°C)
Minimum 60°F (10°C)

Humidity:
Maximum 80%
Minimum 20%

Maximum Elevation:
7000 feet (2133 m)

Heat Emission (BTU/Hr):
Rest 393
Standby 550
Ready 2350
Running 6270

Media Specifications

Bond - 20 Lb
Vellum - 20 Lb
Film - 4 mil
Tracing • 4 mil

Roll Size Width: 11" (279.4 mm) to 36" (914.4 mm)
Roll Size Diameter: 3" (76.2 mm) to 6.7" (170.2 mm)

Output Print Specifications:

Cut Sheet Minimum Size - 8.5 X 11" (203 X 279 mm) Portrait
Roll Sheet Minimum Size - 11" X 8.5" (279 X 203 mm) Landscape
Maximum Size 36" X 48 feet (914 mm X 12.2 m)
80 feet (24.4 m) Optional

Electrical Specifications

The printer is designed to operate on a 20 Amp, 105-125 VAC, 60 Hz single phase dedicated line protected by a circuit breaker.

Current Consumption:

Rest 1.0 Amps
Standby 1.4 Amps
Ready 6.0 Amps
Running 16.0 Amps

Power Consumption:

Rest 120 Watts
Standby 1000 Watts
Ready 690 Watts
Running 1840 Watts

Power Cord Length: 10 feet (3 m)

TRANSFER AND DEVELOPER BIAS VOLTAGES ARE INCORRECT TAG 19)

PROBLEM

Transfer and developer voltages are set incorrectly.

CAUSE

Late in the program it was determined that the developer bias should be set at -420 VDC and transfer should be set at .6 ma DC . Inadvertently the change was never cut in on the manufacturing line. The current settings can cause intermittent broken black lines or background bands in the process direction.

SOLUTION

PLEASE MAKE THE FOLLOWING ADJUSTMENT CHANGES TO THE 8830 ON THE NEXT SERVICE CALL!

1. ADJUST the Transfer output to "+ 0.6 VDC"

Refer to section 6 of manual; GP1 HVPS Checkout Locate the Transfer potentiometer ("TRF I") nearest the center of the HVPS (closest to the transfer output transformer module). Carefully remove the RTV. Using the 26V return on the HVPS as the common and the "TFR I" test point, adjust the potentiometer to obtain "+ 0.6 +/- 0.1 VDC" during a print.

Mark appropriate change in manual (Table 1 on page 6-10).

CHANGE the Developer Bias default -

Enter diagnostic mode - General Procedures section 6 of manual. Input diagnostic test code 84.

ENTER

1E (E is obtained by holding down the period(.) button and striking the "4" button).

ENTER

Message: chain 84; address 01E is 4E. Using the "Previous Button" scroll down six (6) times or until the display reads chain 84; address 01E is 48.

ENTER

EXIT

EXAMINE Developer bias output level -

Refer to section 6 of manual; GP1 HVPS Checkout. Using the 26V return on the HVPS as the common and the "DEV V" test point. In the print mode the output should be "(-) 4.20 +/- 0.05 VDC". Mark appropriate change in manual (Table 1 on page 6-10).

Mark off TAG 19 on the tag matrix

Once these adjustments are made you may see a slight increase in toner consumption. The benefits of doing these adjustments are:

- Increase "Cleaning Field" latitude
 - Reduced occurrence of background bands in the process direction.
 - Reduced occurrence of intermittent broken black lines in the process direction.

Provides additional lubrication for the cleaning blade.

CAUTION: The tolerance window for electrostatics on the 8830 is very narrow. This printer must be set to specifications using the electrometer to ensure proper performance. If electrostatics are set incorrectly the 8830 will exhibit print quality, excessive dirt levels, and increased toner consumption.

REQUIREMENTS FOR FIELD RESOLUTION

- DOCUMENTATION
N/A
- TAG
19
- PART NUMBERS
N/A
- CUT IN SERIAL NUMBER
N/A

POWER CORD OUTLET PULLS OUT OF AC MODULE

PROBLEM

The power cord outlet may pull out of the AC module when trying to unplug the AC Power Cord.

CAUSE

The cut out in the AC Power Module for the power cord socket is too large.

SOLUTION

Order and install the AC Mod kit.

REQUIREMENTS FOR FIELD RESOLUTION

- DOCUMENTATION
N/A
- TAG
5
- PART NUMBERS
600K606810 AC Mod Kit
- CUT IN SERIAL NUMBER
U.S - 8YG080517
E.O-110907119-2

PRE-TAG 9 MAXIMUM LENGTH SHORTFALL

PROBLEM

Pretag 9 firmware is has a maximum length shortfall. No matter what length you tell the 8830 to print it will only print a maximum length of 33' (m).

CAUSE

Error in the firmware.

SOLUTION

Ensure that the IOT firmware is at least tag 9.

REQUIREMENTS FOR FIELD RESOLUTION

- DOCUMENTATION
N/A
- TAG
N/A
- PART NUMBERS
N/A
- CUT IN SERIAL NUMBER
N/A

WAVY LINES WHEN CONNECTED TO XPC OR NON XEROX CONTROLLER

PROBLEM

The 8830 produces prints with wavy lines when connected to a Xerox XPC or a non Xerox controller. This problem does not occur with a finesse controller due to the short interface cable.

CAUSE

There is a timing problem in the P193R interface.

SOLUTION

Order and install a TAG 10 IOT Control PWB. This, part is on "j" control you must call tech support to get approval before placing an order.

REQUIREMENTS FOR FIELD RESOLUTION

- DOCUMENTATION
N/A
- TAG
10
- PART NUMBERS
600K62420 TAG 10 UPGRADE KIT
- CUT IN SERIAL NUMBER
US • 8YG060517
EO-110907207-5

LL- 52 ERRORS AFTER INSTALLING NEW CONTROL PWB

PROBLEM

LL-52 errors after installing a new control pwb..

CAUSE

NVM eprom was not moved from the original Control PWB to the new Control PWB.

SOLUTION

Ensure that when the Control PWB is changed, that the NVM eprom (Component U40) is transferred to the new PWB. Ensure that the NVM eprom is installed onto the Control PWB with the "dot" in the lower **left** corner.

REQUIREMENTS FOR FIELD RESOLUTION

- . DOCUMENTATION
REP 3.1
- TAG
N/A
- PART NUMBERS
N/A
- CUT IN SERIAL NUMBER

COOLING FAN NOT RUNNING

PROBLEM

Cooling fan not running.

CAUSE

Early IOT firmware could cause a cooling fan to start improperly. This problem only occurs with Delta cooling fans.

SOLUTION

Check the label on the cooling fans. If the label reads Delta DC Brushless install Tag 11 Firmware (Ver 1.03). If Japan Servo is the manufacturer replace the cooling fan assy.

If not noticed, the temperature inside the printer would increase on long runs. The first indication would be cleaning blade squeal during operation. Then the next probable failure would be a bound up toner auger from solidified toner.

REQUIREMENTS FOR FIELD RESOLUTION

- DOCUMENTATION
N/A
- TAG
11
- PART NUMBERS
U.S. - 600K59933
E.O. - 600K59953
- CUT IN SERIAL NUMBER
U.S.. 8YG060368 and up
E.O.-110907114-1 and up

CLEANING BLADE SQUEALS DURING PRINT CYCLE

PROBLEM

Squealing noise from cleaning blade during print cycle.

CAUSE

Excessive heat build up in the printer.

SOLUTION

Make sure both cooling fans are functioning properly. If they are not see the article titled "Cooling Fan Not Running" in this section.

REQUIREMENTS FOR FIELD RESOLUTION

- DOCUMENTATION
N/A
- TAG
11
- PART NUMBERS
U.S. • 600K59933
E.O. • 600K59953
- t CUT IN SERIAL NUMBER
U.S.- 8YG060368 and up
E.O.-110907114-1 and up

TONER CLEANING AUGER BOUND UP

PROBLEM

Toner cleaning auger is bound up due to solidified toner.

CAUSE

Excessive heat build up in the printer.

SOLUTION

Make sure both cooling fans are functioning properly. If they are not see the article titled "Cooling Fan Not Running" in this section.

REQUIREMENTS FOR FIELD RESOLUTION

- DOCUMENTATION
N/A
- TAG
11
- PART NUMBERS
U.S. - 600K59933
E.O.- 600K59953
- CUT IN SERIAL NUMBER
U.S.- 8YQ060368 and up
E.O.-110907114-1 and up

LL-22 CAUSED BY METAL FILINGS

PROBLEM

LL-22 errors or metal filings are accumulating in the cutter area.

CAUSE

Metal filings are shorting the Transfer/Detack. These metal filings may be generated in the media transport.

SOLUTION

Check to see if the transport is the cause of the metal filings by doing the following:

1. Remove the paper transport.
2. Access the registration roll by removing the springs on the turn baffle and tipping it back.
3. Inspect the registration roll shaft. If it appears that something is scraping it, replace the media transport assy.

Please report the serial number of any machine that has to have the transport replaced to Tech Support

REQUIREMENTS FOR FIELD RESOLUTION

- DOCUMENTATION
N/A
- TAG
N/A
- PART NUMBERS
22K49201 Media Transport Assy P i . 8.1 Item 4
- CUT IN SERIAL NUMBER
N/A

INTERMITTANT BLACK LINES OR BACKGROUND BANDS

PROBLEM

intermittent broken black lines or background bands in the process direction.

CAUSE

Developer bias and Transfer voltage set incorrectly at manufacturing.

SOLUTION

Set the values correctly.

REQUIREMENTS FOR FIELD RESOLUTION

- DOCUMENTATION
N/A
- TAG
19
- PART NUMBERS
N/A
- CUT IN SERIAL NUMBER
N/A

BENT CORNERS (DOG EARS) ON LEAD EDGE OF NARROW MEDIA

PROBLEM

Bent lead edge corners (dog ears) on "A" (A4) and "B" (A3) -short edge feed" size media may occur on some 8830's. This happens primarily when close to the end of the media roll when the curl is the worst.

CAUSE

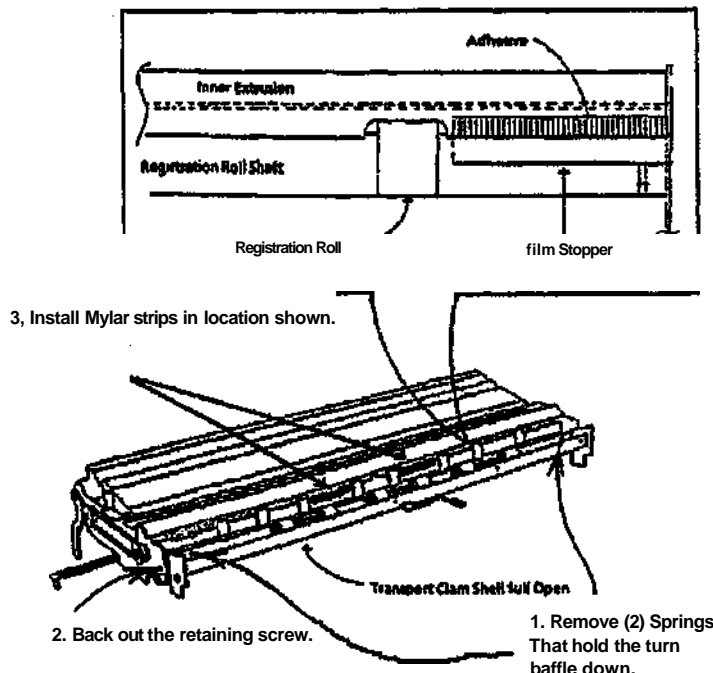
This problem occurs in the media transport at the point where the media turns and meets the registration roll shaft. Because there is no registration feed roll in this area of the transport, the media catches the edge of the inner extrusion of the media transport.

SOLUTION

Order a dog ear repair kit 600K62600, remove the transport and install mylar strips in the area shown in the illustration.

The registration roil and transport design was changed to add an additional set of registration feed rolls (Tag 12). Some early machine with this tag did not get marked on the tag matrix. This transport may be identified in the following manner, without removing it from the machine:

1. Open the cutter drawer.
2. Check the left side of the transport. If the label is marked "12 roll" this kit is not needed and something else in the media path is causing the problem.



PROBLEMS WITH FILM STACKING

PROBLEM

When running multiple prints on film, stacking problems may occur.

CAUSE

When film exits the machine it is very hot and flexible. After the first film print exits the machine, the film that follows may stick to the previous print. This can cause the film to roll up and block the exit.

SOLUTION

Adjust diagnostic code 0760 to increase the delay between film copies. This will impact throughput of film only.

REQUIREMENTS FOR FIELD RESOLUTION

- **DOCUMENTATION**
N/A
- **TAG**
11/8
- **PART NUMBERS**
N/A
- **CUT IN SERIAL NUMBER**
N/A

LOW SOLID AREA DENSITY AT INSTALL

PROBLEM

At install it is difficult to attain 1.0 solid area density.

CAUSE

This symptom is a developer/toner materials package phenomena that has to do with aging.

SOLUTION

There is no fix for this problem other than to allow the material to age. After 500 to 1000 linear feet the solid area coverage will recover.

NOTE: DO NOT USE 09 21 6 to adjust image density!!! Adjust only the image density in diagnostic 09 21 4.

REQUIREMENTS FOR FIELD RESOLUTION

- **DOCUMENTATION**
N/A
- **TAG**
N/A
- **PART NUMBERS**
N/A
- **CUT IN SERIAL NUMBER**
N/A

INTERMITTENT EXTRA PRINT

PROBLEM

Intermittently an extra print is printed. The extra print will be partially the requested print and partially one of the internal test patterns.

CAUSE

Electrical noise that is being injected into the system is causing the system to print this strange print. This noise is caused by either a contaminated scorotron that is arcing or the scorotron leads breaking down. No error code is produced but the system prints a second print correctly because it knows the first one failed.

SOLUTION

Clean the suspect scorotron and grid. Replace the grid or pins if required. Replace the Scorotron endblock and leads by installing a scorotron end block kit (600K58730)

REQUIREMENTS FOR FIELD RESOLUTION

- **DOCUMENTATION**
N/A
- **TAG**
N/A
- **PART NUMBERS**
600K58730 Scorotron Endblock Kit
- **CUT IN SERIAL NUMBER**
N/A

LOUD NOISE FROM THE HVPS

PROBLEM

Loud noise or squeal coming from the High Voltage Power Supply.

CAUSE

Poor connection between the High Voltage Power Supply and the Charge Scorotron.

SOLUTION

Check the Charge Scorotron leads for an open or poor connection, if damaged repair or replace the Charge Leads (part of the Charge Scorotron Endblock Kit)

REQUIREMENTS FOR FIELD RESOLUTION

- DOCUMENTATION
N/A
- TAG
N/A
- PART NUMBERS
600K58730 Scorotron Endblock Kit
- CUT IN SERIAL NUMBER

TROUBLESHOOTING PHOTORECEPTOR DRIVE PROBLEMS

PROBLEM

Photoreceptor drive may stall causing blank prints

CAUSE

There is more than one cause of this problem, other than hard failure. Check the items listed below before troubleshooting the circuit or replacing components:

SOLUTION

*NOTE: The photoreceptor drive circuit has an overcurrent protection built into it. If the circuit detects no drum drive or high current the drive system will shut down. **When this occurs, the printer must be powered off then on to reset the circuit***

1. A poorly lubricated cleaning blade and photoreceptor can cause photoreceptor stalls or squealing. Use the double buff procedure when servicing the cleaning components.

NOTE: Excessive zinc stearate can cause print quality problems but the photoreceptor will recover back to normal performance.

2. Ensure that the screws that hold the scorotron in place are fully seated . If they are not they can touch the ends of the photoreceptor and stall it.

3. Ensure that that the plastic "skis" that are located on the top of the turn baffle do not contact the photoreceptor. To check this remove the developer housing and place a piece of paper between the "skis" and the photoreceptor. The paper should pass freely between them. if it does not perform the transport adjustment.
4. Ensure that the Photoreceptor drive coupling is securely fastened to the motor and drive shaft. Rotate the shaft, if the coupling appears to "wobble" replace it.

REQUIREMENTS FOR FIELD RESOLUTION

- DOCUMENTATION
N/A
- TAG
N/A
- PART NUMBERS
N/A
- CUT IN SERIAL NUMBER
N/A

PHOTORECEPTOR DAMAGE

PROBLEM

Scoring or scraping of the photoreceptor is occurring during normal operation.

CAUSE

There is more than one possible cause of this problem. These causes are listed below.

SOLUTION

1. Ensure that the plastic "skis" are still in position on the top of the turn baffle.
2. Ensure that that the plastic "skis" that are located on the outside top of the turn baffle do not contact the photoreceptor. To check this remove the developer housing and place a piece of paper between the "skis" and the photoreceptor. The paper should pass freely between them. If it does not perform the transport adjustment.
3. Inspect the DRS rollers on the developer housing. These rollers are constructed from a bearing with a plastic sleeve on the outside. Ensure that the plastic sleeve is not damaged or missing. Replace rollers as required.

IMAGE DISPLACEMENT (ROLLOVER) ON VELLUM OR FILM

PROBLEM

Image displacement (rollover) see Figure 1. in the next column.

CAUSE

There are many factors that can aggravate this problem but the main cause is the print buckling and pulling away from the Heat Roll between the fuser nip and the exit. At this point in time, due the toner pile height, not all of the image is fused and the top surface of the image stays with the Heat Roll. The buckle causes the media to move slightly slower than the Heat Roll, so when the Heat Roll and the media make contact again the image is placed slightly ahead of where it should be.

SOLUTION

Check the following:

- Ensure that the image density is set within machine specifications. If the density is set too high it will make the problem worse.
- Slightly increase the fuser temperature. More heat will help ensure that the image will fuse fully.
- Replace the fabric guide and if required the Heat Roll.

H

| REV | DATE | CHANGE | ECR | BY | APP |
|-----|---------|------------------------------|------|----|-----|
| A | 6/23/93 | ONE SIDE ONLY WAS BOTH SIDES | 2472 | FC | JOL |

Direction of media travel

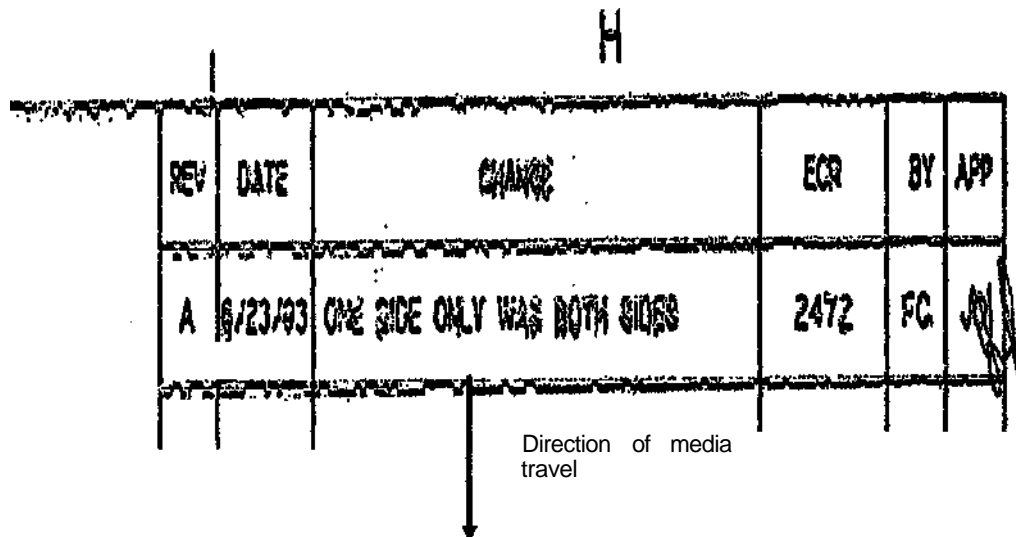


Figure 1. Rollover

Change Tag Index

Introduction

The purpose of this section is to list the Change Tag Index.

All important modifications are identified by a tag number on a matrix card attached to the machine.

This section describes all of the tags as well as multinational applicability, classification codes, and permanent or temporary modification information.

Classification Codes

A tag number may be required to identify differences between parts that cannot be interchanged, or differences in diagnostic, repair, installation, or adjustment procedures. A tag number may also be required to identify the presence of optional hardware, special non-volatile memory programming, or if mandatory modifications have been installed.

Each tag number is given a classification code to identify the type of change the tag has made:

M - Mandatory

N - Not installed in the field

O - Optional

R - Repair

TAG: 1

CLASS:

USE: Ail

MFG. SERIAL NUMBERS:

NAME: EME enhancements within Assembly 62K7891

PURPOSE: Improves EME emissions.

KIT NUMBER: N/A

REFERENCE:

TAG: 2

CLASS:

USE: Ail

MFG. SERIAL NUMBERS: US - 8YG060261 - --EO-110907224-1

NAME: IOT Firmware update

PURPOSE: Updates IOT Firmware to 00.32.00-10

KIT NUMBER:

REFERENCE:

TAG: 3

CLASS:

USE: AH

MFG. SERIAL NUMBERS: US - 8YG060018 - -EO-110907224-1

NAME: IOT Controller PWB

PURPOSE: Enabled folder Interface

KIT NUMBER: N/A

REFERENCE:

TAG: 4

CLASS:

USE: Ail

MFG. SERIAL NUMBERS: US - 8YG060120 - -EO-110907064-1

NAME: IOT Controller PWB

PURPOSE: Updates IOT Firmware to 00.33.00-10

KIT NUMBER: N/A

REFERENCE:

TAG: 5

CLASS:

USE: All

MFG. SERIAL NUMBERS: US - 8YG060363 -
-EO-110907119-2

NAME: Support Bracket

PURPOSE: Keeps the power cord from
accidentally being disconnected from the
printer.

KIT NUMBER: 600K606610

REFERENCE:

TAG: 8

CLASS:

USE: All

MFG. SERIAL NUMBERS:US - 8YG060619 -
-EO-110907269-5

NAME: Xero Module

PURPOSE: Improved P/R removal
replacement

KIT NUMBER: N/A

REFERENCE: P/N US - 126K30385 - -EO -
126K07152

TAG: 10

CLASS:

USE: All

MFG. SERIAL NUMBERS:US - 8YG060517 -
-EO-110907207-5

NAME: IOT Controller PWB

PURPOSE: Eliminates "Wavy Line" Defect
(XPC)

KIT NUMBER:

REFERENCE:

TAG: 6

CLASS:

USE: All

MFG. SERIAL NUMBERS:

NAME: Developer Cover

PURPOSE: Reduce thickness of cover.
(New cover 48E51410 NOT Interchangeable
with old cover.)

KIT NUMBER: N/A

REFERENCE:

TAG: 9

CLASS:

USE: EO Only

MFG. SERIAL NUMBERS: 110907114-1

NAME: IOT Firmware

PURPOSE:

KIT NUMBER:

REFERENCE:

TAG: 11

CLASS:

USE: All

MFG. SERIAL NUMBERS:US - 8YG060368
-EO-110907165

NAME: IOT Firmware (Launch Version)

PURPOSE:

KIT NUMBER: US - 600K59933 EO
600K59953

REFERENCE:

TAG: 12
CLASS:
USE: All
**MFG. SERIAL NUMBERS: US - 8YG060368 -
-EO-110907165-2**
NAME: Transport Assembly
PURPOSE:
KIT NUMBER:
REFERENCE: PN 22K49201

TAG: 13
CLASS:
USE: All
MFG. SERIAL NUMBERS:-EO -110907210-3
NAME: Transport Assembly
PURPOSE: New handle for Fabric Guide
KIT NUMBER: N/A
REFERENCE:PN 22K49202

TAG: 14
CLASS:
USE: Alt
MFG. SERIAL NUMBERS -EO 110907210-3
NAME: Media Roll Label
PURPOSE: New label reflects 11 "
KIT NUMBER: 600K62460
REFERENCE: P/N 52K03580

TAG: 15
CLASS:
USE:
MFG. SERIAL NUMBERS:
NAME: Transport Assembly
PURPOSE: New Corotron Endblocks
KIT NUMBER:
REFERENCE:

TAG: 17
CLASS:
USE: All
MFG. SERIAL NUMBERS:
NAME: IOT Firmware
PURPOSE:
**KIT NUMBER: US - 600K59935
EO - 600K59955**
REFERENCE:

TAG: 18
CLASS:
USE: All
MFG. SERIAL NUMBERS:
NAME: Data Plate
**PURPOSE: Change to Data Plate to enable
Korea sales**
KIT NUMBER:
REFERENCE:

CLASS:

USE: Ali

MFG. SERIAL NUMBERS: US - 8YG061469 to 474/688 to 670

NAME: Output Current Adjustment

PURPOSE: Establishes the correct electrostatic setup voltages for the Printer.

KIT NUMBER: 105K13542

REFERENCE:

TAG: 20

CLASS:

USE: All

MFG. SERIAL NUMBERS:-

NAME: New Fuser Oil Assembly with new Timing Disk

PURPOSE: Improved Performance

KIT NUMBER: 94K0330

REFERENCE:

CLASS:

USE: Ali

MFG. SERIAL NUMBERS -

NAME: New Front Panel

PURPOSE: Enables installation of Stacker Full Switch

KIT NUMBER: 30K55633

REFERENCE:

TAG:23

CLASS:

USE:

MFG. SERIAL NUMBERS: 8YG061468 to 474/668 to 670

NAME: IOT Firmware Upgrade Version 01.05.0-13

PURPOSE: Enables 8830 DDS System

KIT NUMBER: NACO - 600K59936
EO - 600K59956

REFERENCE:

CLASS:

USE: Ali

MFG. SERIAL NUMBERS: 8YG061364 to 367

NAME: New Cutter Motor

PURPOSE: improved Performance

KIT NUMBER: US - 50K32172

REFERENCE:

TAG: 90

CLASS:

USE: Ali

MFG. SERIAL NUMBERS:

NAME: A/B Switch

PURPOSE: Enables the Printer to be connected to the XPC and to the 8830 Controller.

KIT NUMBER: 98K65670

REFERENCE: Spares - 162K41460, 162K41440,162K28840

7. Wiring Data

TITLE

BSDs

LEVEL 1 BSD

How to Use BSDs.....7-2

Level 1 BSD.....7-3

STANDBY POWER

1.1A Main Power On (with "Delta"
Noise Filter) (50 and 60 Hz).....7-8

1.1B Main Power On (with "Corcom"
Noise Filter) (50 and 60 Hz).....7-10

1.2 DC Power Generation.....7-12

1.3 Interlock Monitoring.....7-16

1.4 Machine Cooling.....7-18

MODE CONTROL

2.1 Mode Selection.....7-20

MACHINE RUN CONTROL

3.1 Machine Run Control.....7-24

PRINT POWER

4.1 Fuser Roll Drive.....7-28

4.2 Developer Drive.....7-30

4.3 Drum Drive.....7-32

IMAGING

6.1 Imaging (Right Side).....7-36

6.2 Imaging (Left Side).....7-38

PAPER SUPPLYING

7.1 Media Drive.....7-42

7.2 Media Feed, Roll 1.....7-44

7.3 Media Feed, Roll 2.....7-46

7.4 Media Feed, Roll 3.....7-48

7.5 Media Cutting.....7-50

PAPER FEEDING

8.1 Media Registration and
Transportation.....7-54

XEROGRAPHICS

9.1 Charging.....7-58

9.2 Exposure.....7-60

9.3 Development.....7-62

9.4 Image Transfer and Media
Stripping.....7-64

9.5 Drum Cleaning.....7-66

9.6 Drum Discharging.....7-68

9.7 Toner/Developer Dispense.....7-70

9.8 Corotron and Developer Bias
Power.....7-72

PRINT TRANSPORTATION AND FUSING

10.1 Fuser Heat.....7-76

10.2 Fuser Oil Dispensing.....7-80

10.3 Fusing and Media Exit.....7-82

PLUG/JACK LIST.....7-85

HOW TO USE BSDs

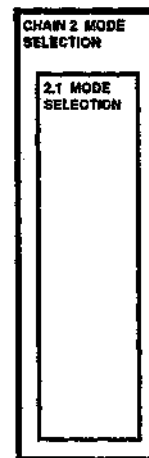
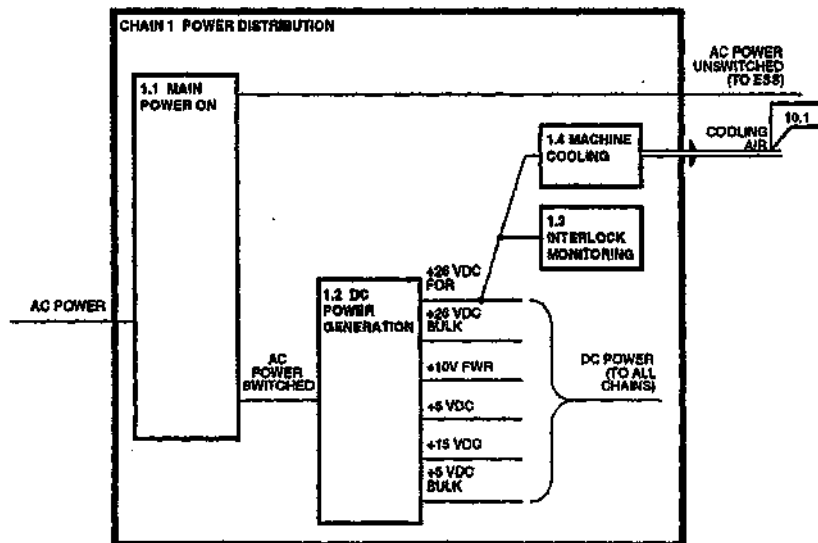
Normally, you will be directed to a specific BSD from your Level 1 Entry Procedure. If you have a problem that is not identified in Level 1, then refer to the following Level 1 BSD to determine an entry point for troubleshooting. Note that the Level 1 BSD shows the "standard" Chains 1, 2, 3, 4, 6, 7, 8, 9, and 10. Each Level 2 BSD is shown within

the Level 1 BSD. For example, Chain 6, Imaging, contains two Level 2 Chains: Chain 6.1 Imaging (Right Side) and Chain 6.2, Imaging (Left Side). All of the necessary inputs and outputs for each Chain and for each Level 2 BSD are shown in the Level 1 BSD.

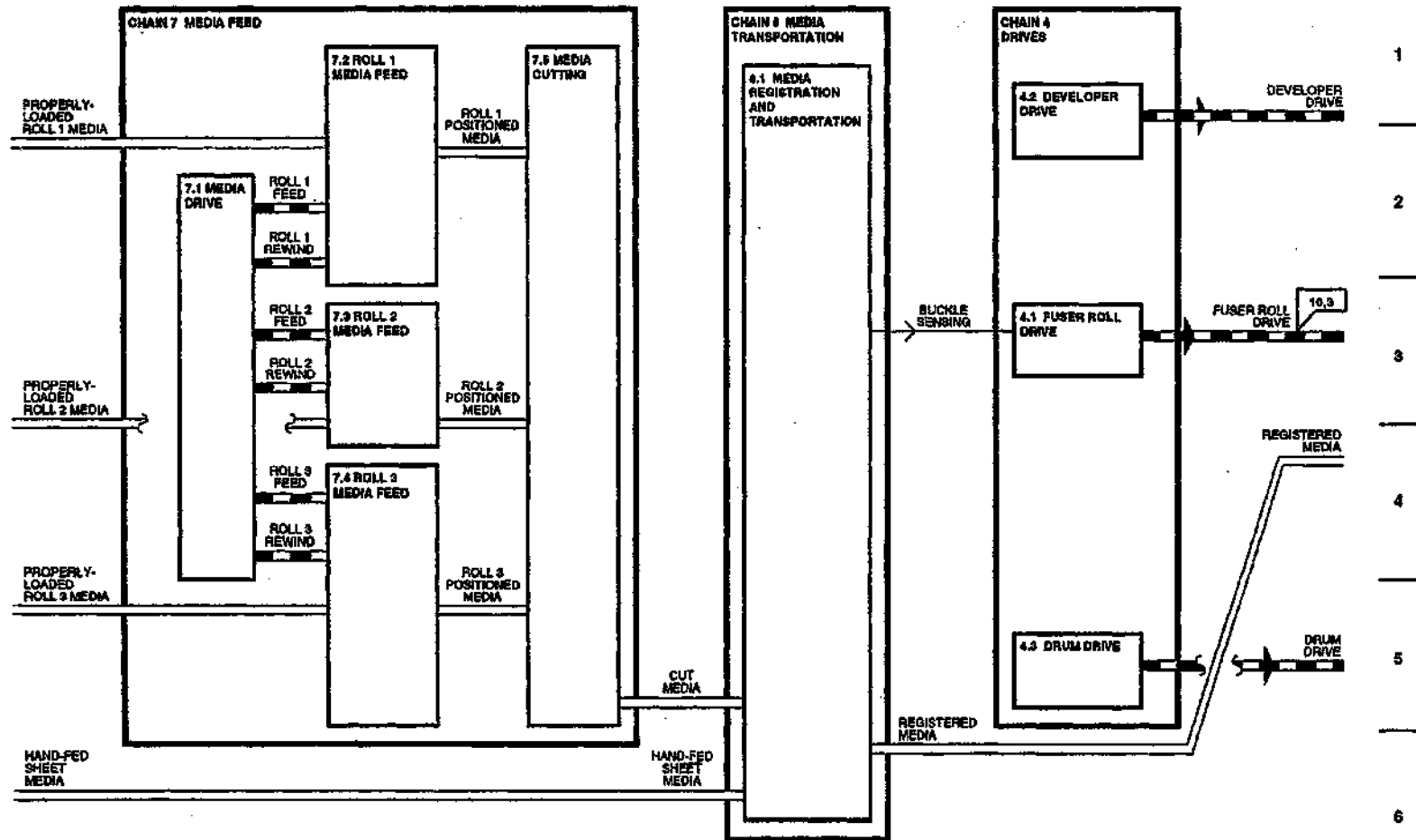
For example, if the User Interface is not functioning properly, refer to the Level 1 BSD,

Sheet 1, and observe that Chain 2, Mode Selection is the "most likely" place to start. Then, you should go to BSD 2.1 and use that Information to diagnose your problem. Each BSD contains the necessary wiring information, physical location of components information, and Diagnostic Code information to assist you in identifying the specific fault.

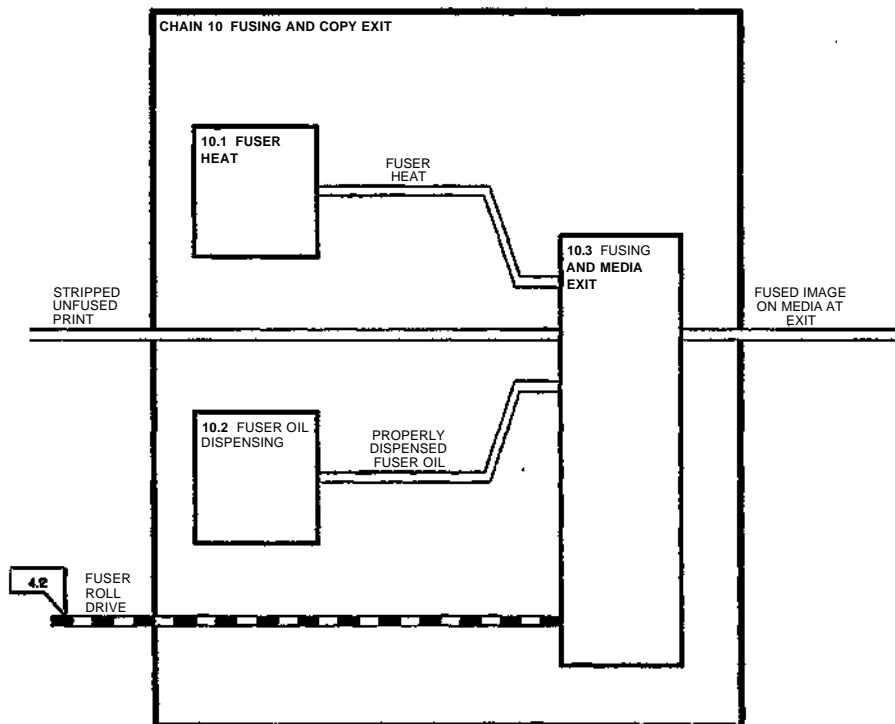
1
2
3
4



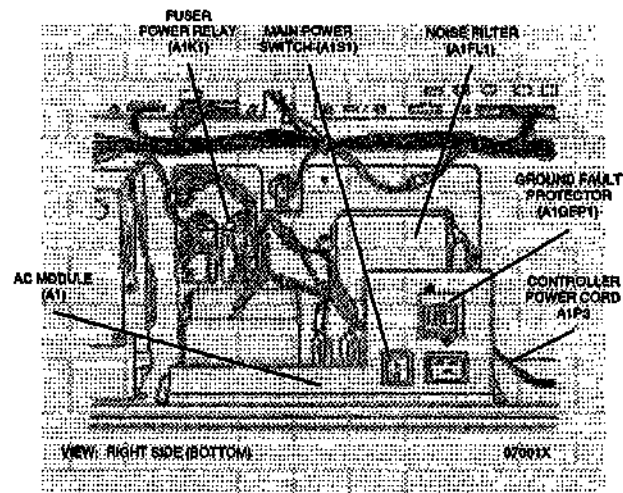
LEVEL 1 BSD (SHEET 2 OF 4)



LEVEL 1 BSD (SHEET 4 OF 4)

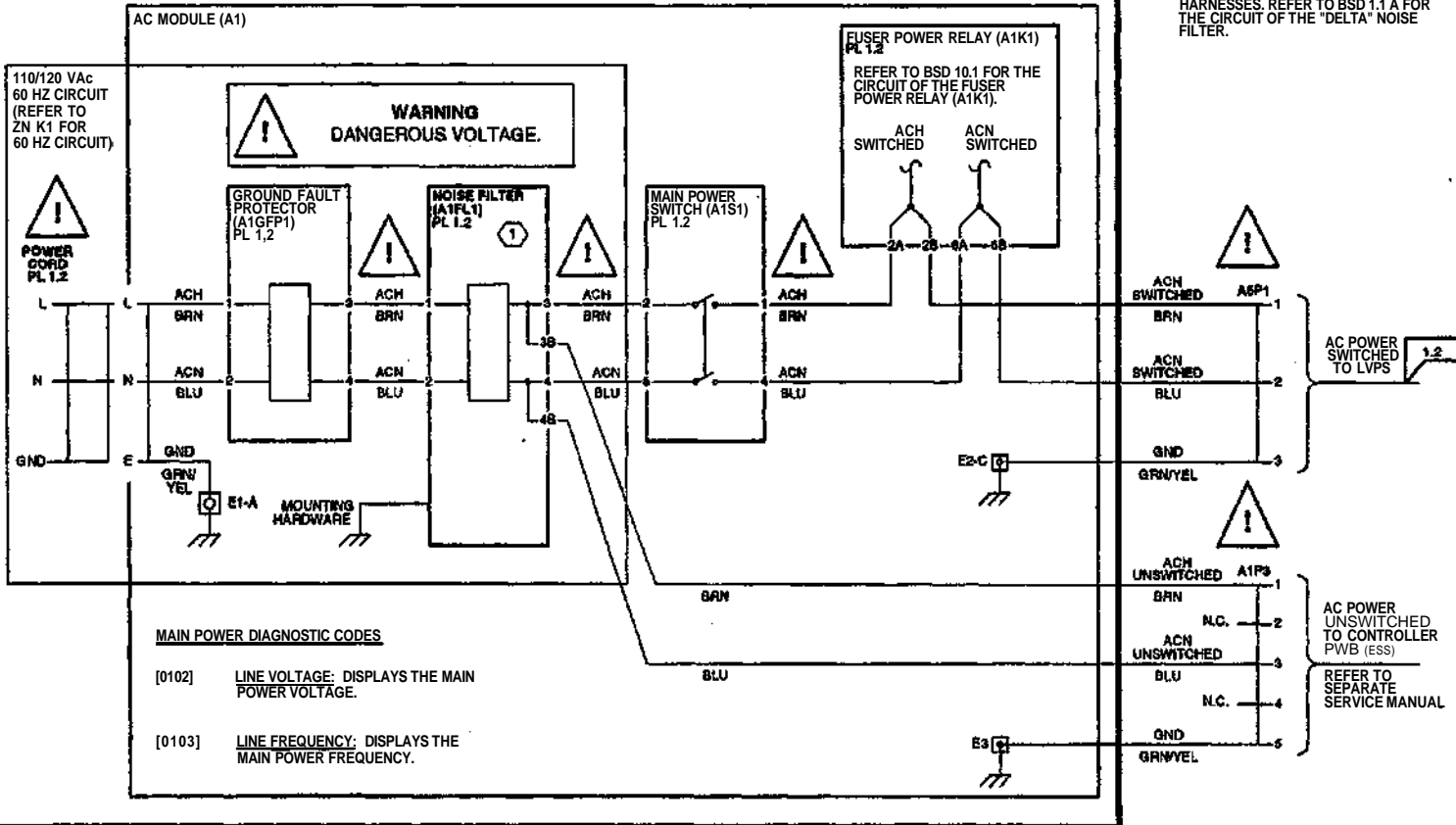


PAGE INTENTIONALLY BUNK



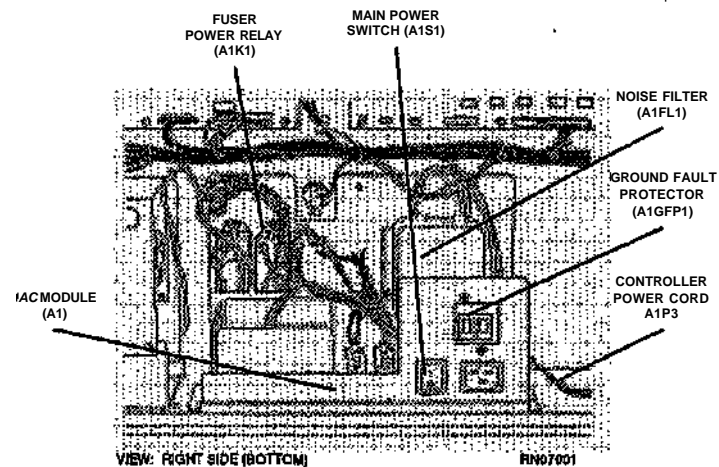
1.1 B MAIN POWER ON (WITH "CORCOM" NOISE FILTER) (50 AND 60 HZ) (1 OF 2)

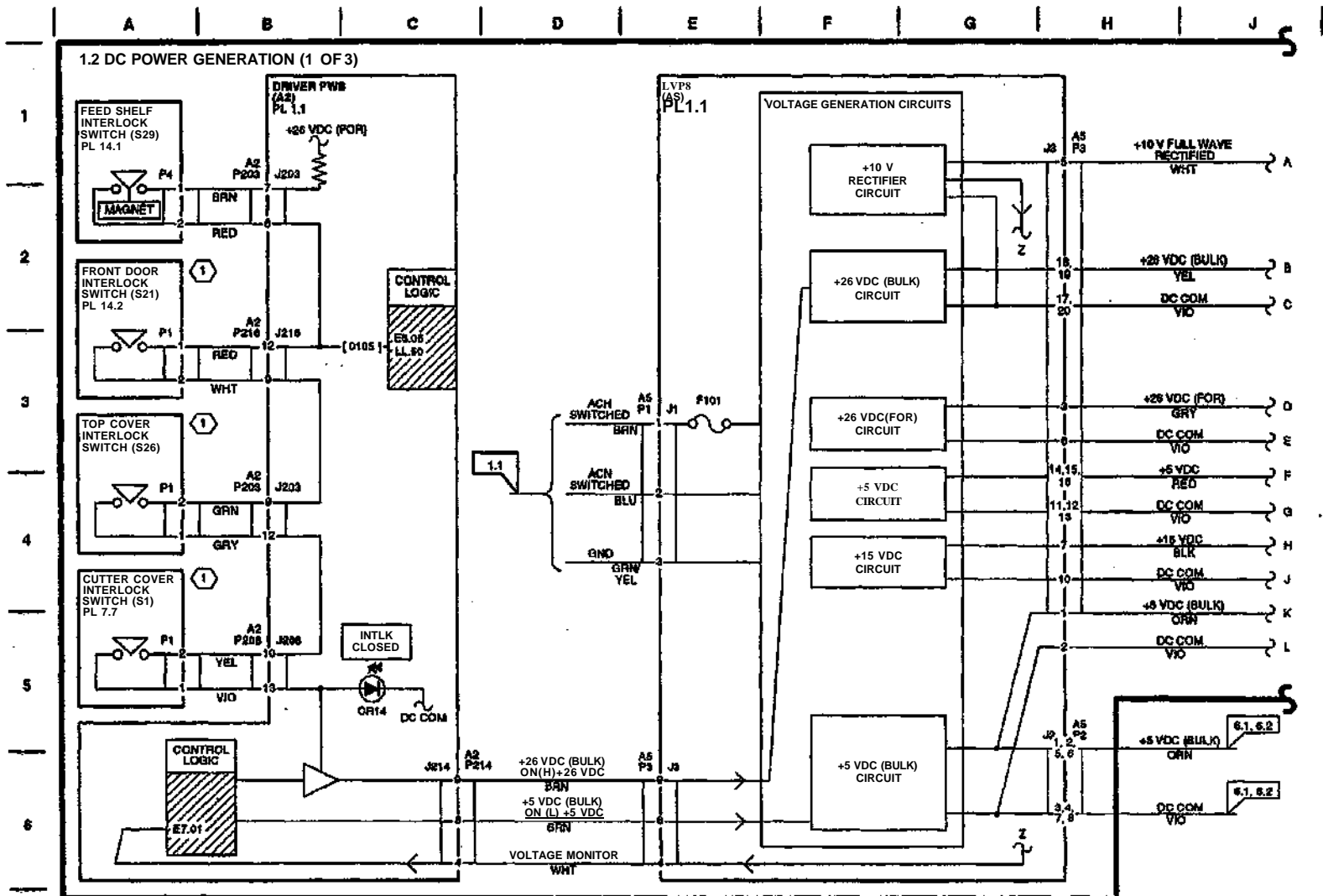
① THE "DELTA" NOISE FILTER IS NOT INTERCHANGEABLE WITH THE "CORCOM" NOISE FILTER. THE NOISE FILTERS REQUIRE DIFFERENT WIRE HARNESSES. REFER TO BSD 1.1 A FOR THE CIRCUIT OF THE "DELTA" NOISE FILTER.



The diagram illustrates the internal wiring of an AC module (A1). It shows the following components and connections:

- Power Input:** Labeled "20/240 VAC 60 HZ CIRCUIT REFER TO N A1 FOR 120/240 VAC CIRCUIT". The input lines are L (Line), N (Neutral), and GND (Ground).
- Ground Fault Protector (A1GFP1) PL 1.2:** A safety device that monitors the current between the line and neutral. It has terminals 1, 2, 3, and 4.
- Noise Filter (A1PL1) PL 1.2:** A filter to reduce electromagnetic interference. It has terminals 1, 2, 3, 4, and 5.
- Wiring Connections:**
 - The input L line passes through a terminal block (ACH BRN) and connects to terminal 1 of the GFCI.
 - The input N line passes through a terminal block (ACN BLU) and connects to terminal 2 of the GFCI.
 - The input GND line connects to a common ground rail (GND GRN/YEL).
 - The output from terminal 3 of the GFCI passes through a terminal block (ACH BRN) and connects to terminal 1 of the noise filter.
 - The output from terminal 4 of the GFCI passes through a terminal block (ACN BLU) and connects to terminal 2 of the noise filter.
 - The output from terminal 3 of the noise filter connects to a terminal block (ACH BRN) and is labeled "TO MAIN POWER SWITCH".
 - The output from terminal 4 of the noise filter connects to a terminal block (ACN BLU) and is labeled "TO MAIN POWER SWITCH".
 - The output from terminal 5 of the noise filter connects to a terminal block (ACH BRN) and is labeled "TO CHASSIS GROUND".
 - The output from terminal 4 of the noise filter also connects to a terminal block (ACN BLU) and is labeled "TO CHASSIS GROUND".
- Grounding:** The module is grounded to a common ground rail (GND GRN/YEL) and a mounting hardware point.



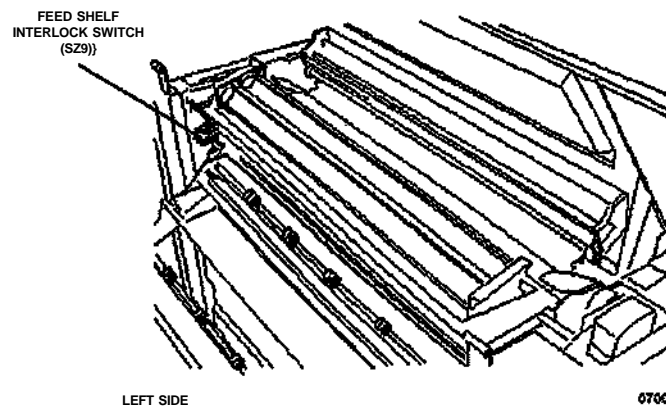
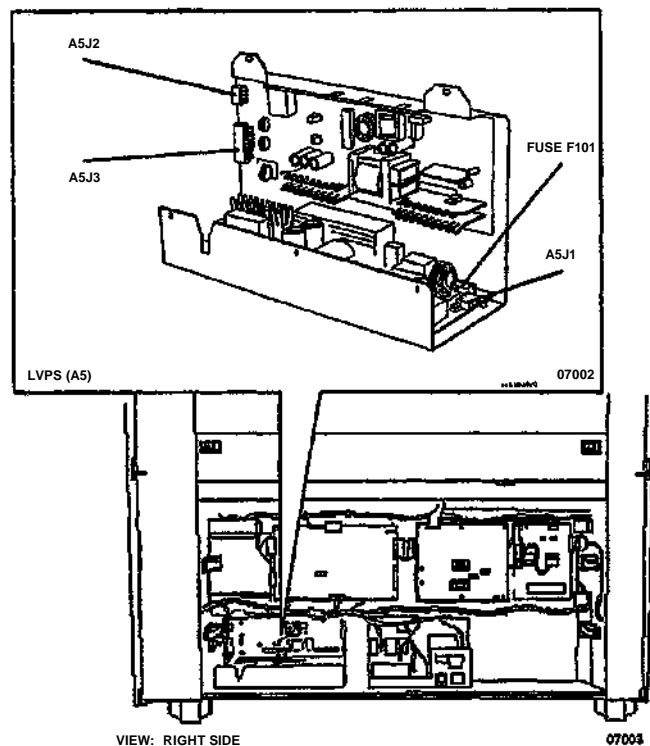




REFER TO BSD 1.3 FOR DIAGNOSTIC
COOES AND LOCATION DRAWINGS FOR
THE INTERLOCK SWITCHES.



1.2 DC POWER GENERATION (3 OF 3)

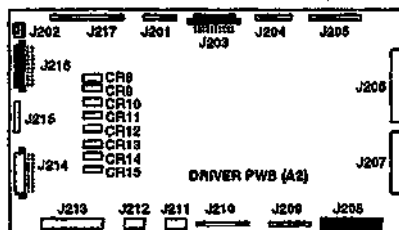


PAGE INTENTIONALLY BLANK

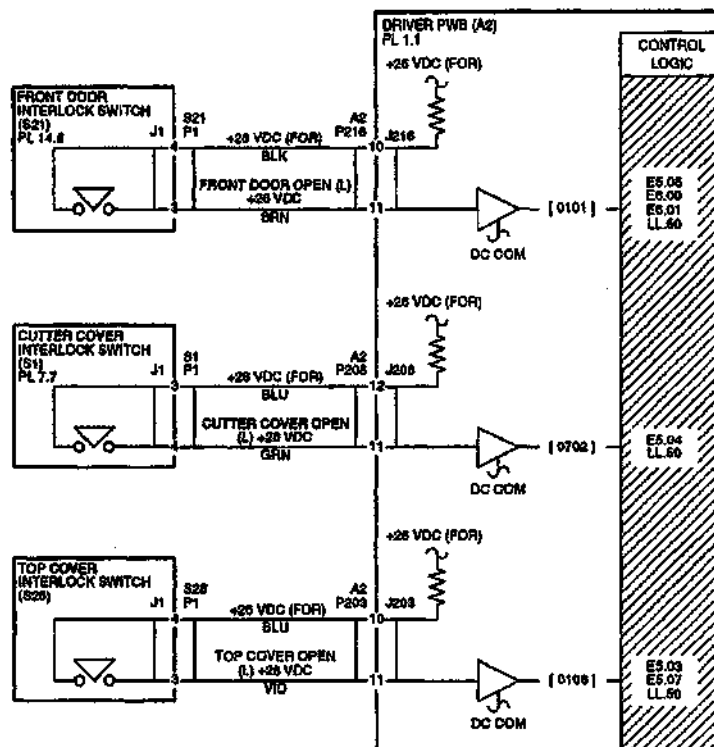
1.3 INTERLOCK MONITORING (1 OF 2)

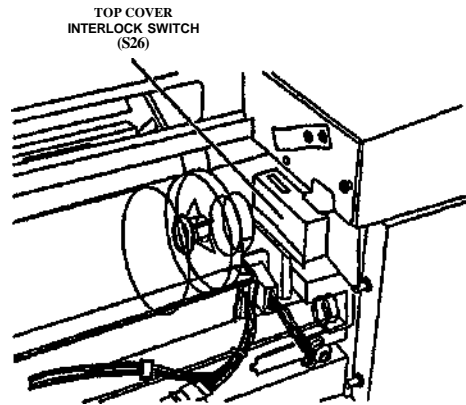
INTERLOCK MONITORING DIAGNOSTIC CODES

- (0101) FRONT DOOR INTERLOCK SWITCH (INPUT)
- (0105] FEED SHELF INTERLOCK SWITCH (INPUT)
- (0108) TOP COVER INTERLOCK SWITCH (INPUT)
- (0702) CUTTER COVER INTERLOCK SWITCH (INPUT)



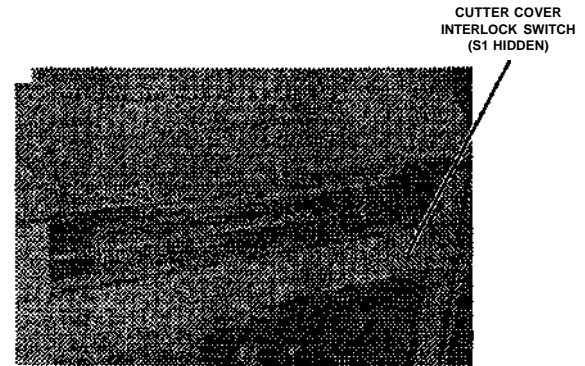
| INPUT POWER BLOCK | | |
|-------------------|----------------|-----|
| VOLTAGE | TEST POINT | GF |
| +26 VDC (FOR) | LVPS (A5) J3-3 | 1.2 |
| DC COM | LVPS (A5) J3-6 | 1.2 |





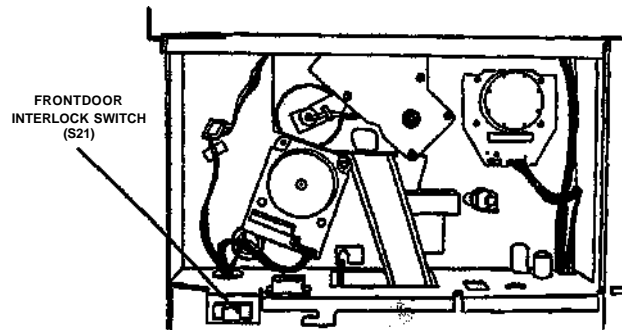
RIGHT SIDE (TOWARD REAR)

07005

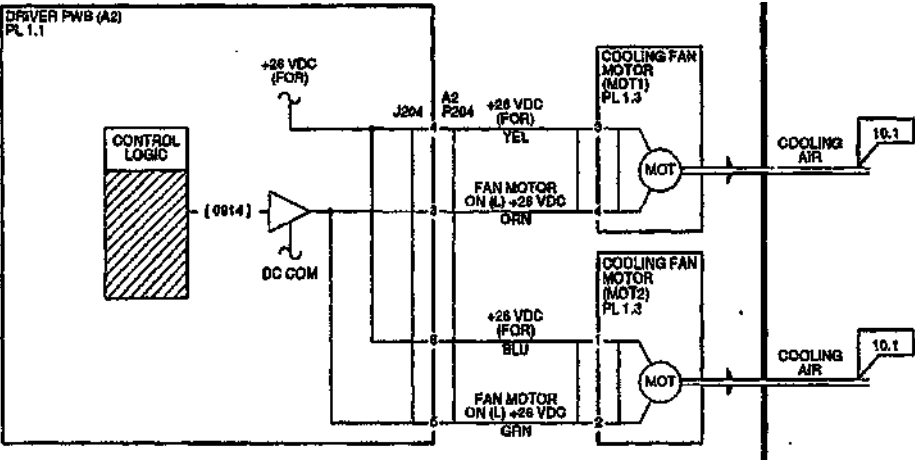


RIGHT SIDE

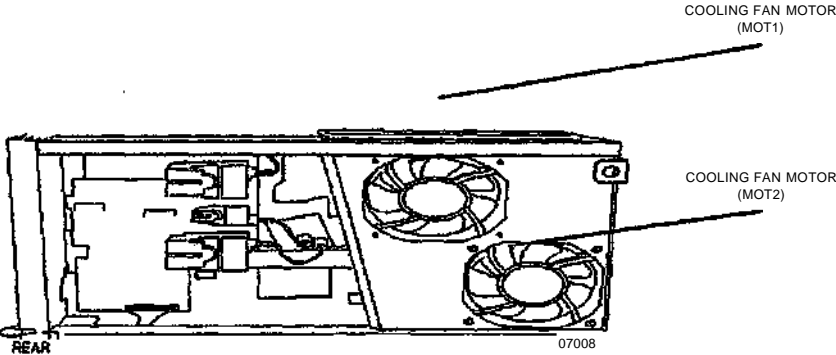
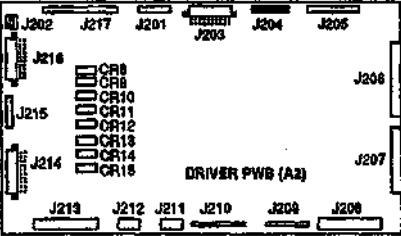
PHOTO » 0016



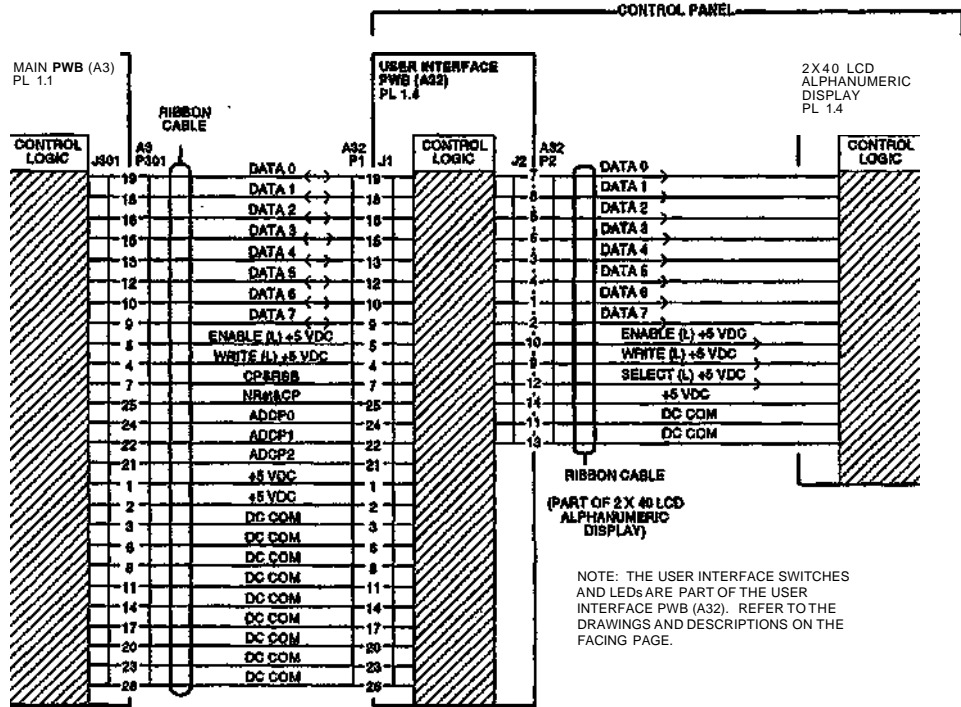
FRONT



| INPUT POWER BLOCK | | |
|-------------------|----------------|-----|
| VOLTAGE | TEST POINT | GF |
| +26 VDC (FOR) | LVPS (A5) J3-3 | 1.2 |
| DC COM | LVPS (A5) J3-6 | 1.2 |



PAGE INTENTIONALLY BLANK

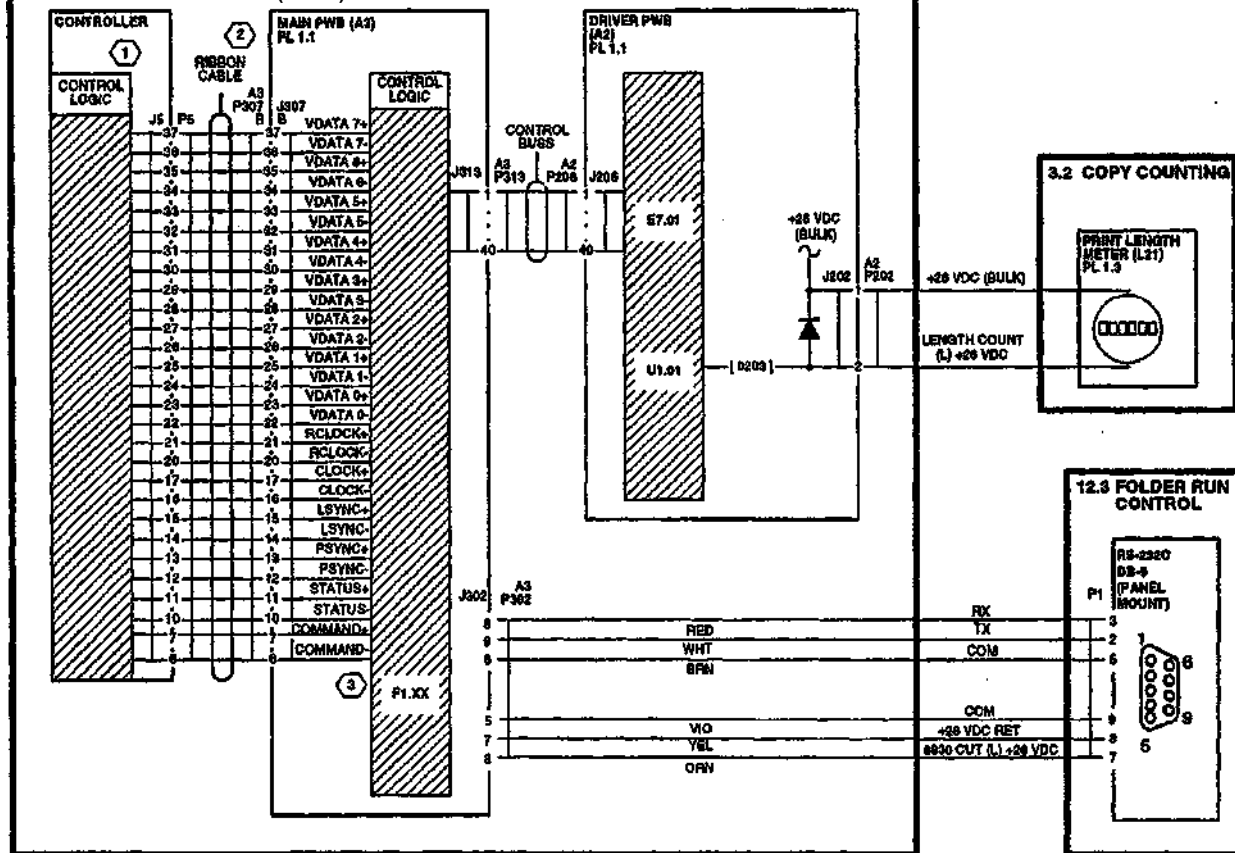


NOTE: THE USER INTERFACE SWITCHES AND LEDS ARE PART OF THE USER INTERFACE PWB (A32). REFER TO THE DRAWINGS AND DESCRIPTIONS ON THE FACING PAGE.

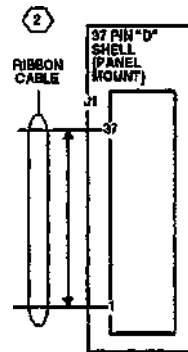
PAGE INTENTIONALLY BLANK

PAGE INTENTIONALLY BLANK

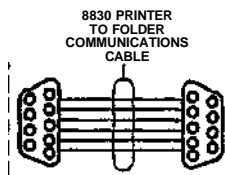
3.1 MACHINE RUN CONTROL (1 OP 2)



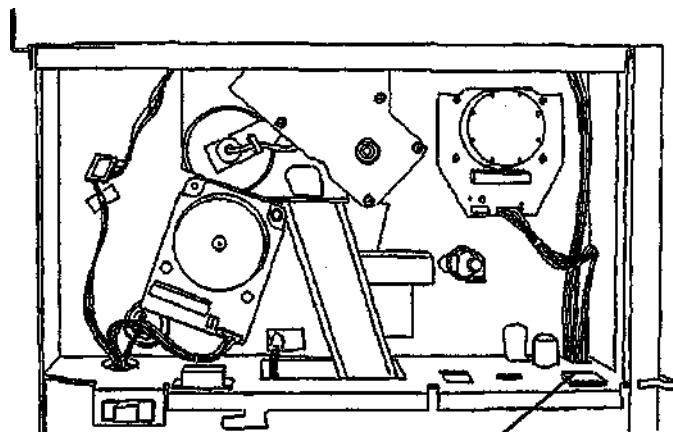
PART OF OPTIONAL
EXTERNAL NON-
XEROX CONTROLLER
ASSEMBLY



PART OF OPTIONAL
FOLDER ASSEMBLY



3.1 MACHINE RUN CONTROL (2 OF 2)



VIEW: FRONT TOP (DOOR OPEN)

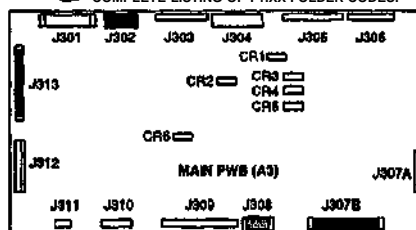
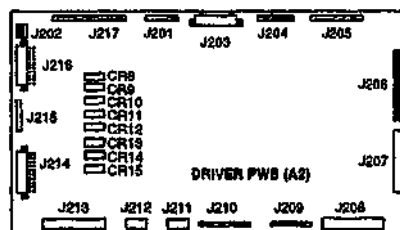
07011

PRINT LENGTH
METER (L21)

NOTES:

- 1 REFER TO THE CONTROLLER SERVICE MANUAL OR TO THIRD PARTY SERVICE DOCUMENTATION TO SERVICE THE CONTROLLER.
- 2 MAIN PWB (A3) J307 CONNECTS TO ONE OF TWO RIBBON CABLES. RIBBON CABLE (A) CONNECTS TO XEROX CONTROLLER AT P5. RIBBON CABLE (B) CONNECTS TO NON-XEROX CONTROLLER AT PANEL MOUNTED J1.
- 3 REFER TO THE FOLDER SERVICE MANUAL FOR A COMPLETE LISTING OF F1:XX FOLDER CODES.

| INPUT POWER BLOCK | | |
|--------------------------|------------------------------------|------------|
| VOLTAGE | TEST POINT | GF |
| +26 VDC (BULK) DC COM | LVPS (A6) J3-18 LVPS (A5) J3-17 | 1.2 1.2 |



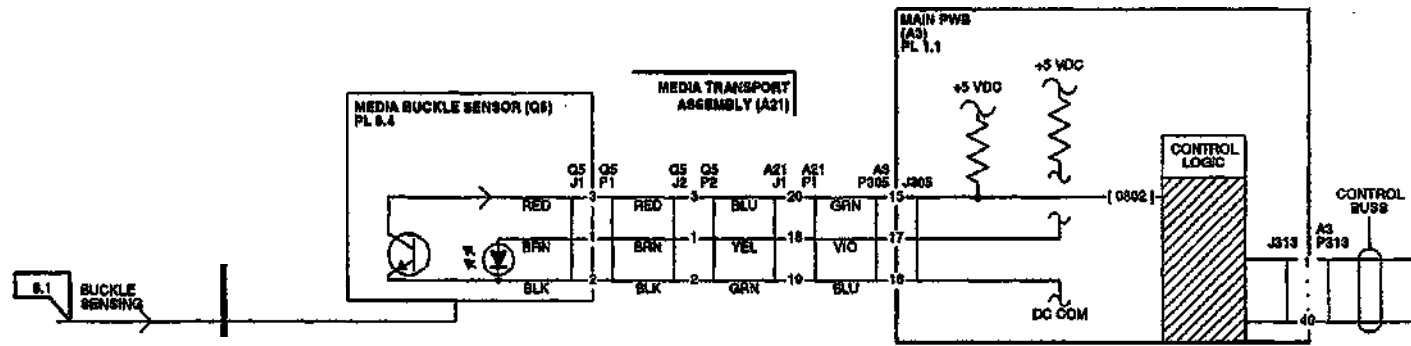
MACHINE RUN CONTROL DIAGNOSTIC CODES

- (0203) **BILLING METER:** OUTPUT
- (0300) **JUMP O:** RESTARTS THE IOT.
- (0360) **NVM RESET TO NOMINAL NVM:**
- [1]. RESETS ALL OF THE BASIC NVM TO NOMINAL FOR A US MARKET CONFIGURATION (DOES NOT AFFECT THE AUDITRON ACCOUNTS). IT REQUIRES ENTER TO AUDITRON ACCOUNTS). IT REQUIRES ENTER TO CONFIRM.
 - [2]. ALLOWS THE TECH REP TO SEE AND THEN CHANGE THE ELECTRONIC BILLING METER TO ANY DESIRED VALUE. IT REQUIRES ENTER TO CONFIRM THE NEW VALUE AND AFFECTS THE THREE LOCATIONS OF THE NVM LOCATION PRINT COUNTER.
 - [3]. RESETS ALL OF THE BASIC NVM TO NOMINAL CONDITION FOR AN E0. 220 VOLT MACHINE (DOES NOT AFFECT THE AUDITRON ACCOUNTS). IT REQUIRES START-TO CONFIRM AND IS IDENTICAL TO [1] ABOVE EXCEPT FOR THE FOLLOWING LOCATIONS: 21.22.23.29.89, AND 9A. AFTER RESETTNG NVM TO NOMINAL VALUES. THE TECH REP SHOULD EXECUTE [1031] TO UPDATE OILER WEB COUNTERS IF THE INSTALLED WEB IS NOT NEW.
- [0361] **WATCH DOG TIMER:** RESTARTS THE IOT.
- [0362] **TIMEOUT INTERVAL FOR EXITING DIAGNOSTICS**
- [0363] **NVM RESET:** RESETS TO NOMINAL THE LOCATIONS THAT DO NOT MATCH BETWEEN DATA AND SHADOW.
- [0364] **NVM RESET:** RESETS CHECKSUM (DOES NOT AFFECT NVM
- [0365] **NVM PRINTOUT:** PRINTS OUT THE ENTIRE CONTENTS OF NVM (IN HEX FORMAT). THE BAUD RATE IS DEPENDENT UPON NVM.
- [0391] **SERVICE EVENT DISPLAY:** DISPLAYS THE LAST 20 EVENTS THAT HAVE OCCURRED ON THE LCD DISPLAY. AN EVENT IS DEFINED AS A FAULT. A POWER-UP OF THE IOT. OR A DIAGNOSTIC POWER-UP OF THE IOT. THE INFORMATION THAT IS DISPLAYED I INCLUDES HOW MANY EVENTS AGO. THE EVENT NUMBER IN A HUMAN READABLE FORM (C1XX OR 'NORM POWER UP' OR 'DIAG POWER UP'). AND THE BILLING METER AT THE TIME OF THAT EVENT.
- [0392] **SERVICE HISTORY DISPLAY:** DISPLAYS THE EVENT NUMBERS. AS WELL AS THE TOTALS FOR EACH EVENT. ONLY THOSE EVENTS WHICH HAVE OCCURRED WILL BE DISPLAYED. IN A HUMAN-READABLE FORM. YOU WILL BE PRESENTED WITH THE BILLING METER COUNT AT WHICH THE HISTORY WAS LAST CLEARED. YOU WILL BE ABLE TO SCROLL THROUGH THE LIST OF EVENTS USING THE NEXT AND PREVIOUS KEY. WHEN EXITING FROM THIS DIAGNOSTIC. YOU WILL BE PROMPTED TO CLEAR THE FAULT HISTORY. IF YOU CHOOSE TO CLEAR THE FAULT HISTORY. THE CURENT BILLING METER WILL BE RECORDED AND PRESENTED THE NEXT TIME [0392] IS RUN.
- [1403] **FOLDER COMMUNICATIONS LOOPBACK TEST FOR FOLDER RS-232C PORT COMMUNICATIONS CABLE. AND FOLDER.**
- [1404] **CONTROLLER COMMUNICATIONS TEST.**

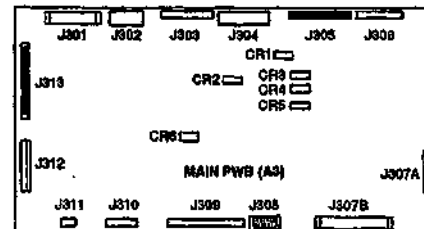
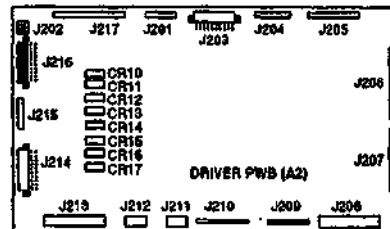
PAGE INTENTIONALLY BLANK

PAGE INTENTIONALLY BLANK

4.1 FUSER ROLL DRIVE (1 OF 2)



| INPUT POWER BLOCK | | |
|-------------------|-----------------|-----|
| VOLTAGE | TEST POINT | GF |
| +26VDC(BULK) | LVPS (A5) J3-18 | 1.2 |
| DC COM | LVPS (A5) J3-17 | 1.2 |
| +5VDC | LVPS (A5) J3-14 | 1.2 |
| DC COM | LVPS (A5) J3-11 | 1.2 |



4.1 FUSER ROLL DRIVE (2 OF 2)

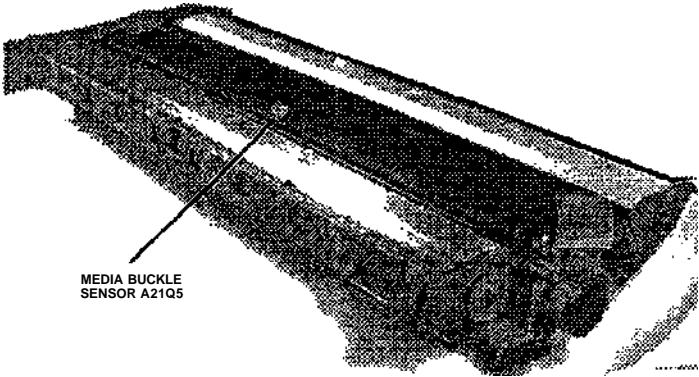
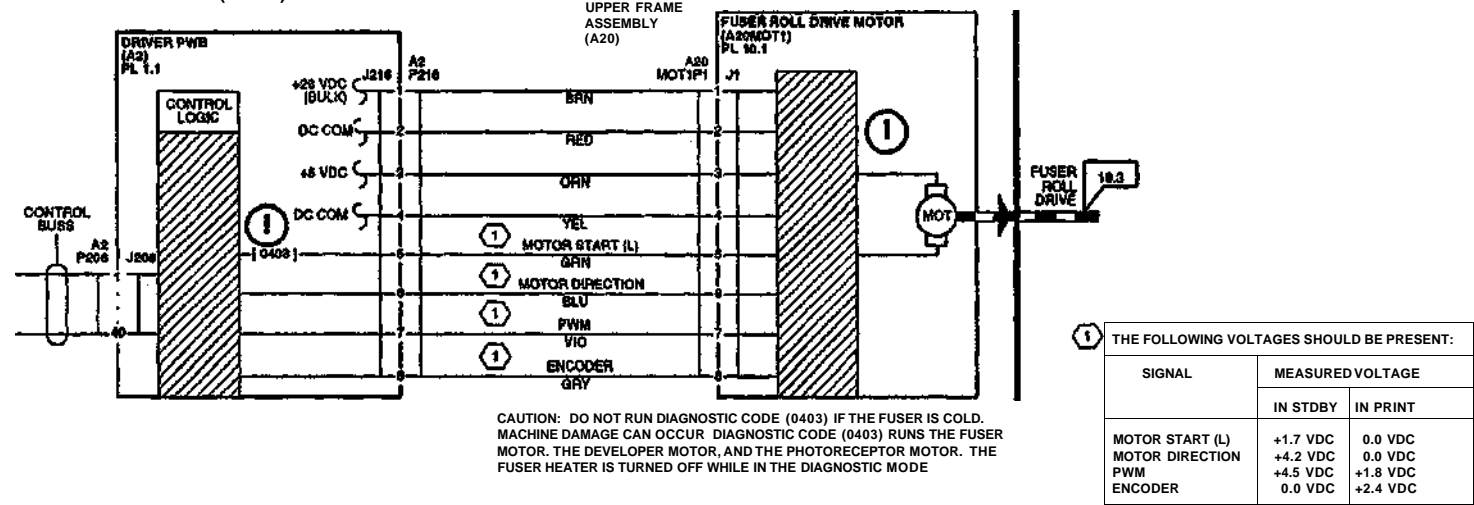
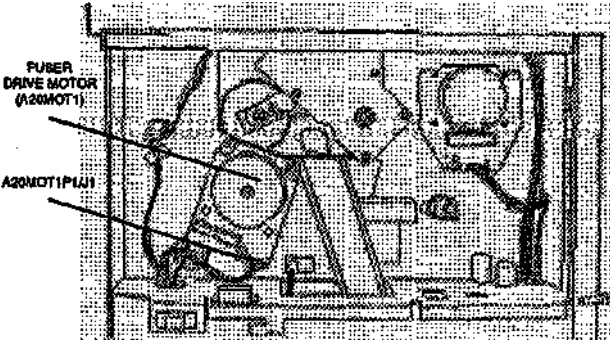
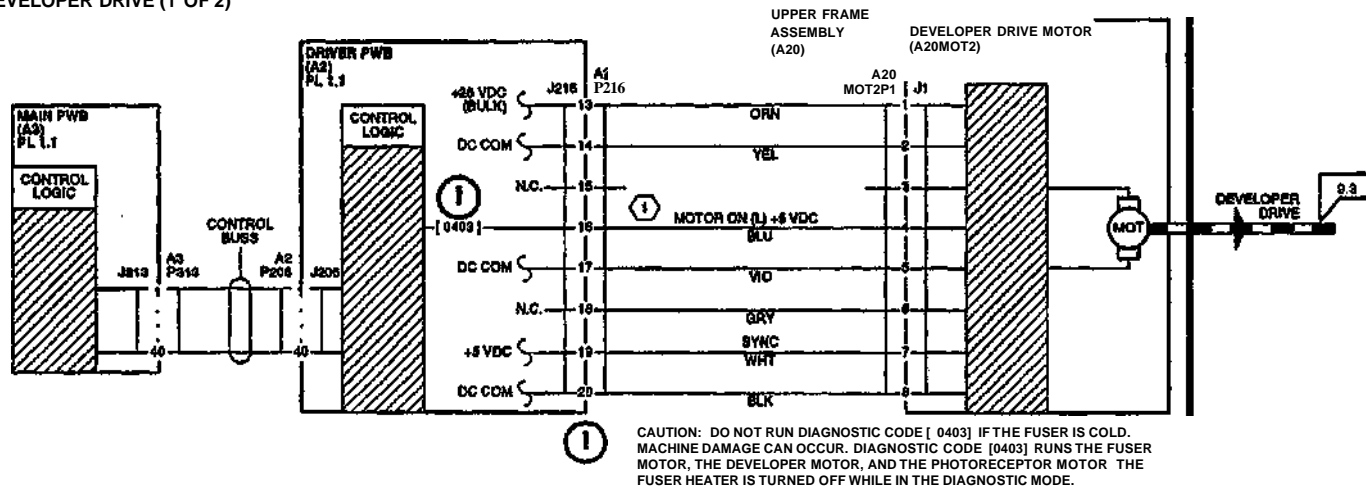


PHOTO #9RM04

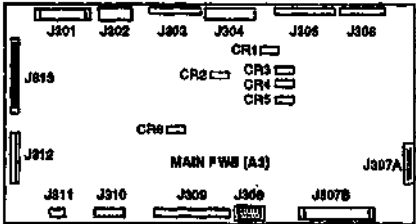
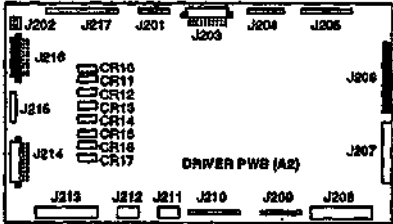


4.2 DEVELOPER DRIVE (1 OF 2)

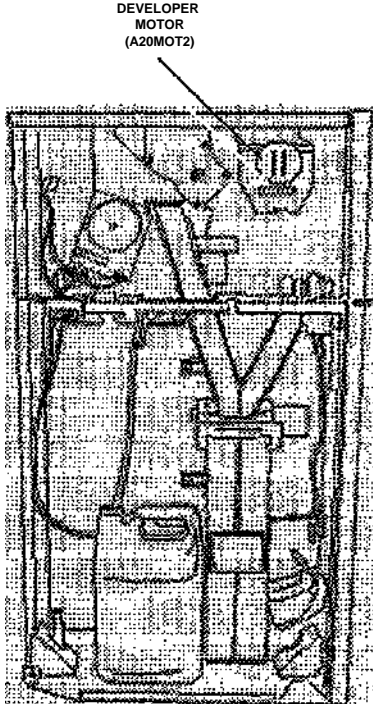


THE FOLLOWING VOLTAGES SHOULD BE PRESENT:

| SIGNAL | MEASURED VOLTAGE | |
|---------------------|------------------|----------|
| | IN STDBY | IN PRINT |
| MOTOR ON (L) +5 VDC | +5.2 VDC | 0.0 VDC |



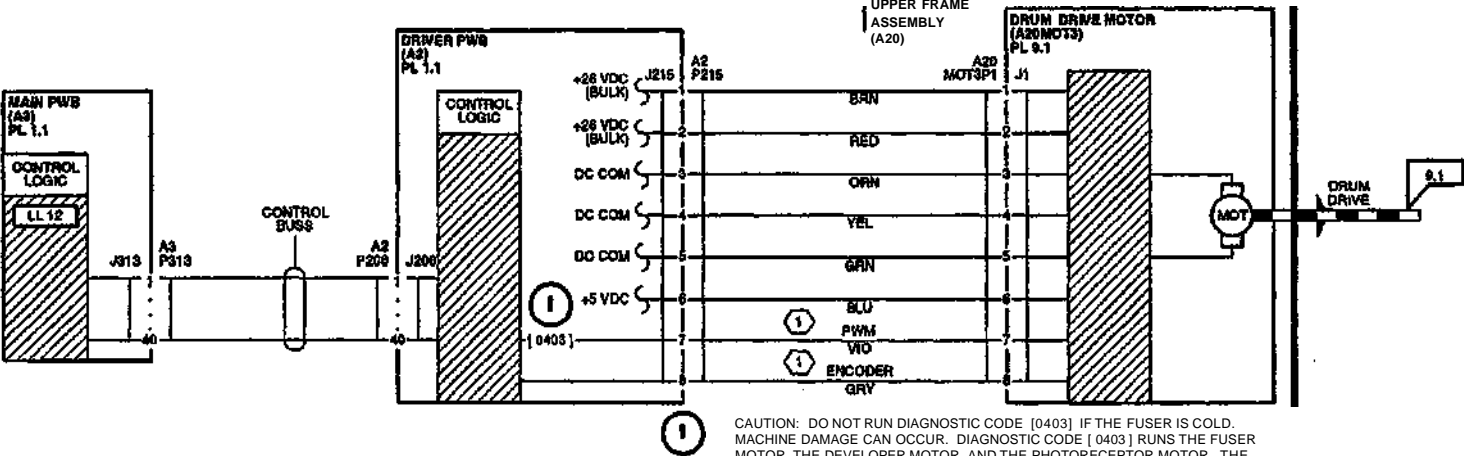
| INPUT POWER BLOCK | | |
|-------------------|-----------------|-----|
| VOLTAGE | TEST POINT | GF |
| +26 VDC (BULK) | LVPS (A5) J3-18 | 1.2 |
| DC COM | LVPS (A5) J3-17 | 1.2 |
| +5 VDC | LVPS (A5) J3-14 | 1.2 |
| DC COM | LVPS (A5) J3-11 | 1.2 |



FRONT

07021

4.3 DRUM DRIVE (1 OF 2)

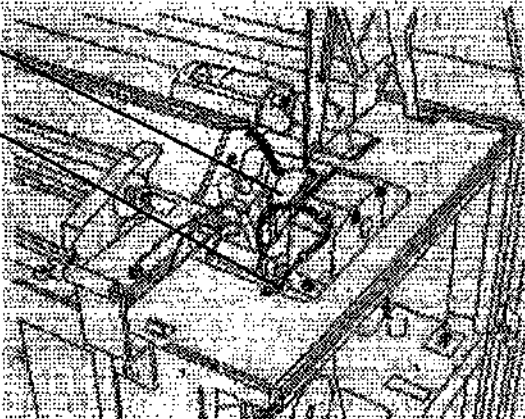


| THE FOLLOWING VOLTAGES SHOULD BE PRESENT: | | |
|---|------------------|----------|
| SIGNAL | MEASURED VOLTAGE | |
| | IN STDBY | IN PRINT |
| PWM | +5.0 VDC | +3.1 VDC |
| ENCODER | 0 VDC | +2.6 VDC |

4.3 DRUM DRIVE (2 OF 2)

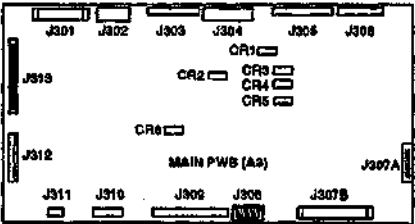
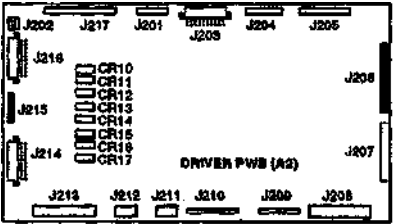
DRUM DRIVE
MOTOR
(A20MOT3)

A20MOT3P1A1



LEFT SIDE/Front

07012



| INPUT POWER BLOCK | | |
|-------------------|-----------------|-----|
| VOLTAGE | TEST POINT | G F |
| +20 VDC (BULK) | LVP8 (A5) J3-16 | 1.2 |
| DC COM | LVP8 (A5) J3-17 | 1.2 |
| +5 VDC | LVP8 (A5) J3-14 | 1.2 |
| DC COM | LVP8 (A5) J3-11 | 1.2 |

PAGE INTENTIONALLY BLANK

PAGE INTENTIONALLY BUNK

2

6.1 IMAGING (RIGHT SIDE) 2 OF 2)

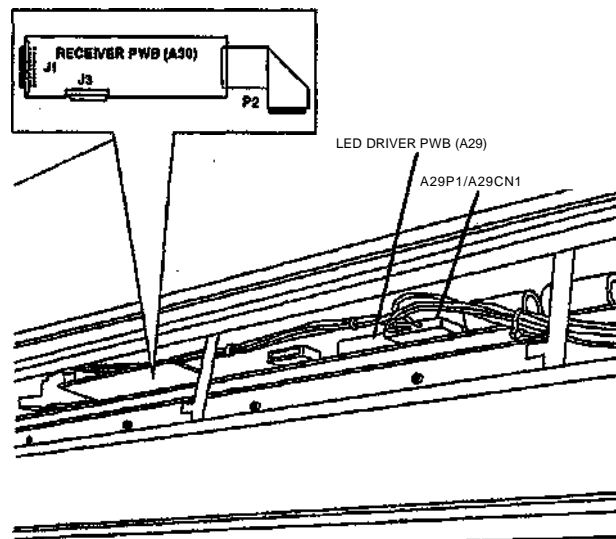
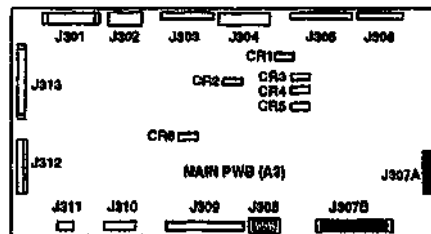
- 1 REFER TO THE CONTROLLER (ESS) SERVICE MANUAL TO SERVICE THE CONTROLLER PWB.
- 2 DC COMMON PIN NUMBERS FOR THE RS422 CABLE ARE PINS 1,3,5,7,8,11, 13,16,17,16. AND 20.

IMAGING (RIGHT SIDE) DIAGNOSTIC COOES

[0621] ESV MANUAL SETUP:

- [6]. RUNS THE LED BAR DUTY CYCLE SETUP. THIS ESTABLISHES THE PRINT DENSITY BASELINE. THIS TEST IS **NOT** DISABLED WHEN THE INTERLOCKS ARE BROKEN.

| INPUT POWER BLOCK | | |
|-------------------|-----------------|-----|
| VOLTAGE | TEST POINT | GF |
| +5 VDC (BULK) | SUPPLY (PS3) +V | 1.2 |
| DC COM | SUPPLY (PS3) -V | 1.2 |



VIEW: TOP COVER OPEN
(LOOKING DOWN AT PRINT HEAD)

1



6.2 IMAGING (LEFT SIDE) 2 OF 2)

- 1

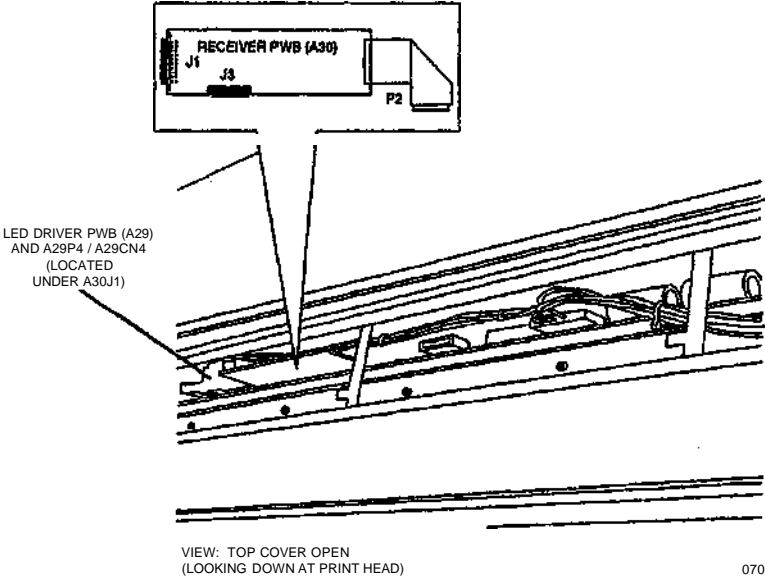
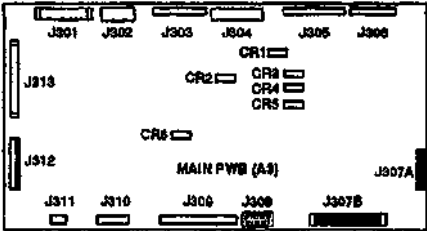
REFER TO THE CONTROLLER (ESS) SERVICE MANUAL TO SERVICE THE CONTROLLER PWB.
- 2

DC COMMON PIN NUMBERS FOR THE RS422 CABLE ARE PINS 1,3, 5,7,0,11, 13,15, 17, 19, AND 20.

IMAGING (RIGHT SIDE) DIAGNOSTIC CODES

- [0921] ESV MANUAL SETUP:
- [5]. RUNS THE LED BAR DUTY CYCLE SETUP. THIS ESTABLISHES THE PRINT DENSITY BASELINE THIS TEST IS NOT DISABLED WHEN THE INTERLOCKS ARE BROKEN.

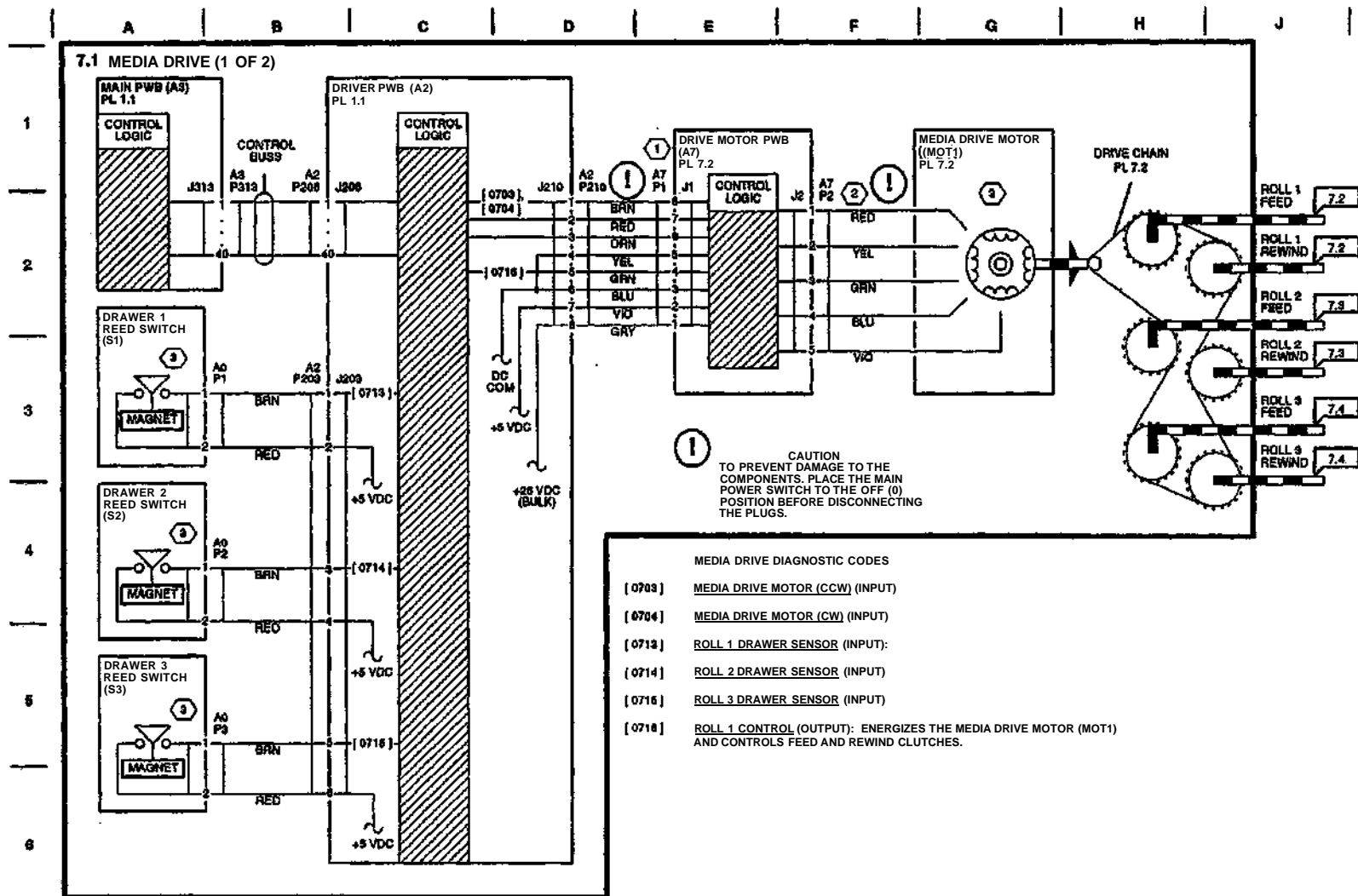
| INPUT POWER BLOCK | | |
|-------------------|-----------------|-----|
| VOLTAGE | TEST POINT | GF |
| +5 VDC (BULK) | SUPPLY (PS3) +V | 1.2 |
| DC COM | SUPPLY (PS3) -V | 1.2 |



07013

PAGE INTENTIONALLY BLANK

PAGE INTENTIONALLY BLANK



7.1 MEDIA DRIVE (2 OF 2)

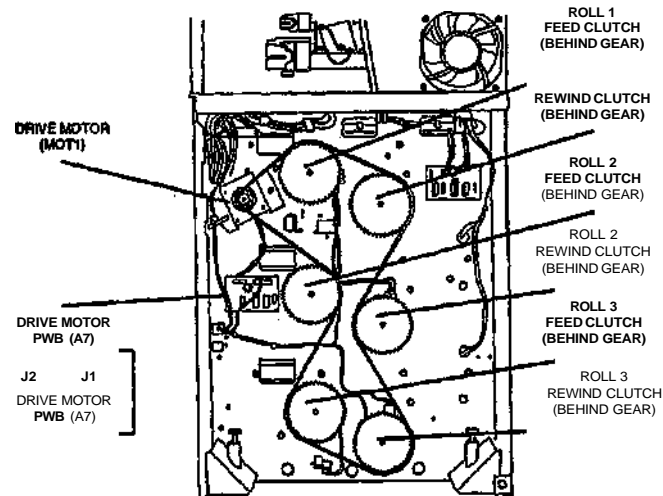
- ① A7P1 APPROXIMATE VOLTAGES: A7P1 DISCONNECTED FROM DRIVE MOTOR PWB (A7)

CAUTION: TO PREVENT DAMAGE TO THE MOTOR COMPONENTS. TURN OFF THE POWER SWITCH (0) BEFORE DISCONNECTING ANY PLUGS.

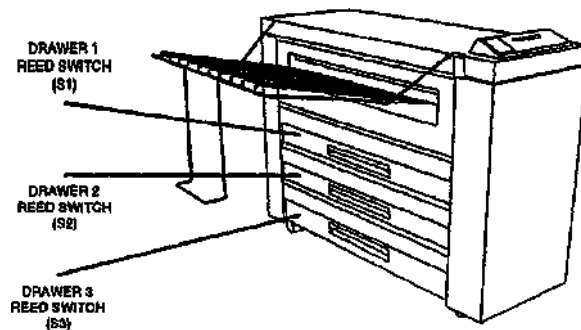
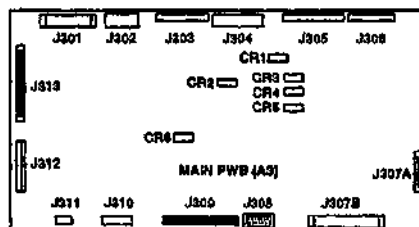
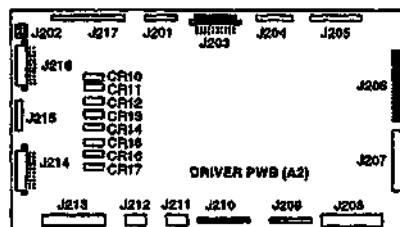
| PIN | STANDBY VOLTAGE | (0703) VOLTAGE | [0704] VOLTAGE |
|------|-----------------|----------------|------------------|
| P1-8 | +3.6 VDC | +3.8 VDC | +3.8 VDC |
| P1-7 | +3.8 VDC | +9.8 VDC | +3.8 VDC |
| P1-6 | 0 VDC | 0 VDC | 0 VDC |
| P1-4 | +3.8 VDC | +3.8 VDC | +3.8 VDC |

- ② WITH A7P2 DISCONNECTED FROM THE DRIVE MOTOR PWB (A7), THE APPROXIMATE RESISTANCES OF THE DRIVE MOTOR (MOT1) ARE AS FOLLOWS:
A7P2-1 TO A7P2-2 - 3.5 OHMS.
A7P2-3 TO A7P2-4 - 3.5 OHMS.

- ③ ALL THREE DRAWER INTERLOCK SWITCHES MUST BE ACTUATED (CLOSED) BEFORE THE MEDIA DRIVE MOTOR WILL OPERATE.



| INPUT POWER BLOCK | | |
|-------------------|-----------------|-----|
| VOLTAGE | TEST POINT | Ω F |
| +28 VDC (BULK) | LVPS (A5) J3-16 | 1.2 |
| DC COM | LVPS (A5) J3-17 | 1.2 |
| +5 VDC | LVPS (A5) J3-14 | 1.2 |
| DC COM | LVPS (A5) J3-11 | 1.2 |



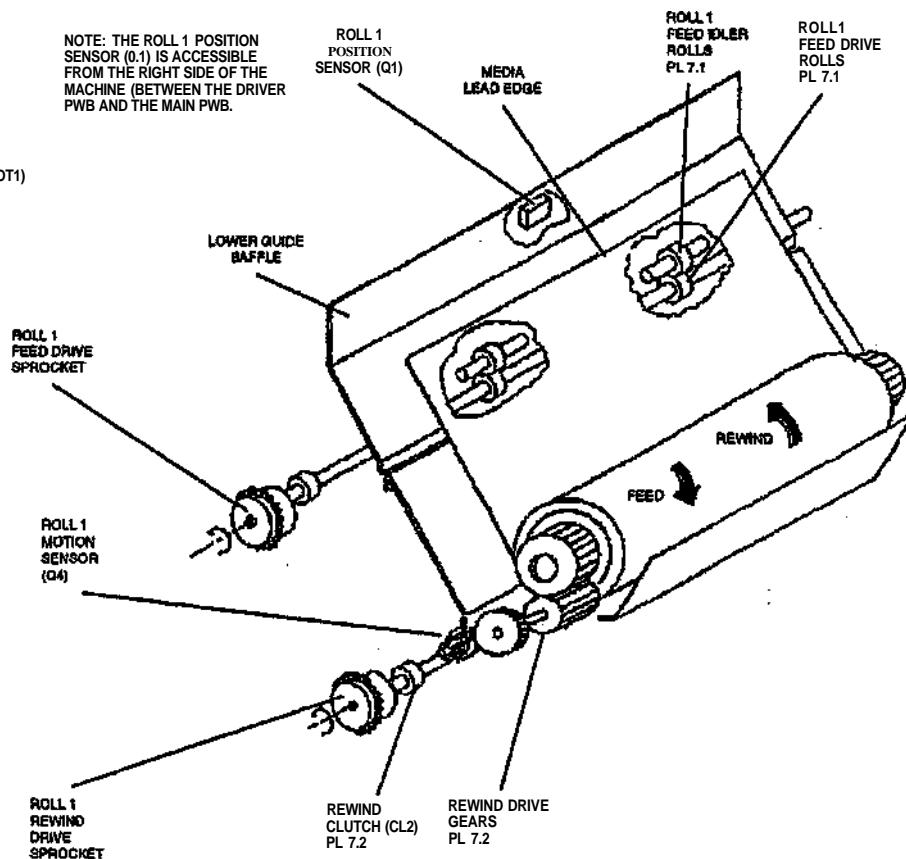
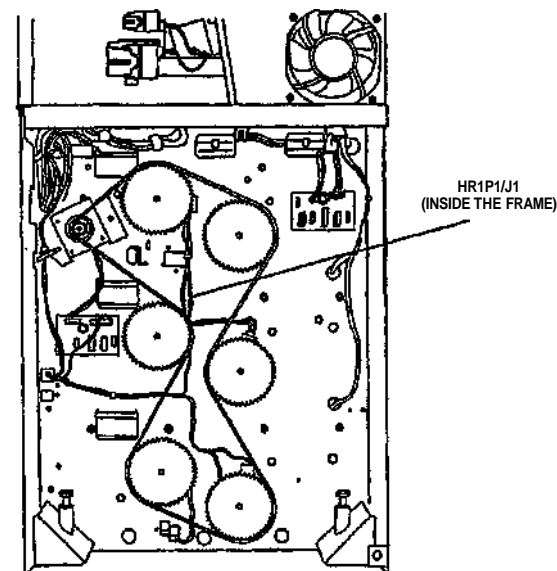
LEFTHAND

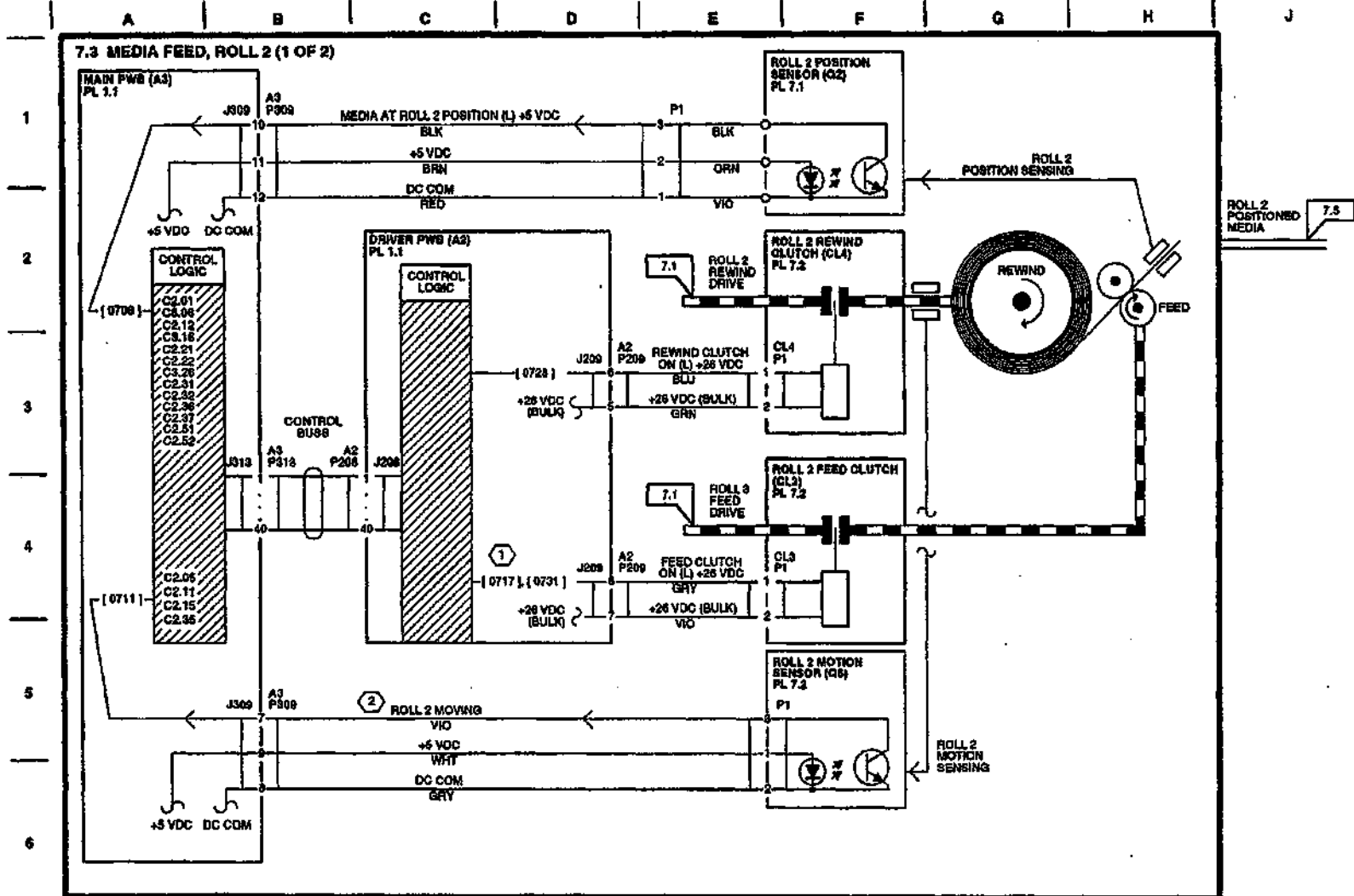
7.2 MEDIA FEED, ROLL 1 (2 OF 2)

MACHINE RUN CONTROL DIAGNOSTIC CODES

- (0707) ROLL 1 SENSOR (INPUT)
- (0710) ROLL 1 MOTION SENSOR (INPUT)
- (0716) ROLL 1 CONTROL (OUTPUT) ENERGIZES THE MEDIA DRIVE MOTOR (MOT1) AND CONTROLS FEED AND REWIND CLUTCHES.
- (0727) ROLL 1 REWIND CLUTCH (OUTPUT)
- (0730) ROLL 1 FORWARD CLUTCH (OUTPUT)

MEASURE THE ROLL 1 MOVING SIGNAL AS FOLLOWS:
MOVING - +2.4 VDC.
STOPPED - 0 VDC OR +5 VDC





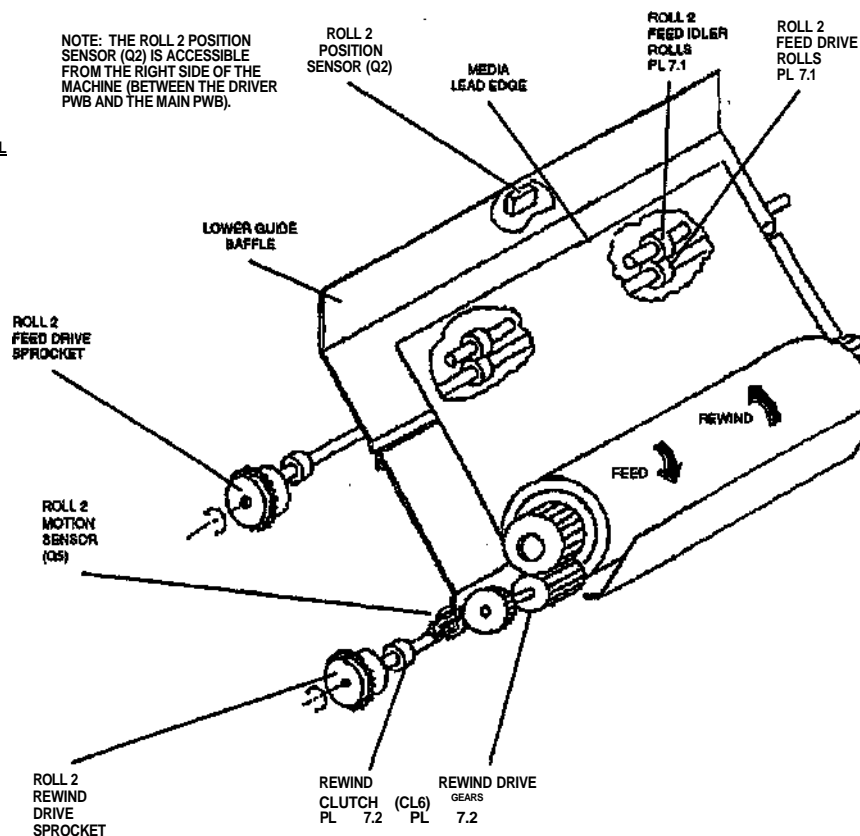
7.3 MEDIA FEED, ROLL 2 (2 OF 2)

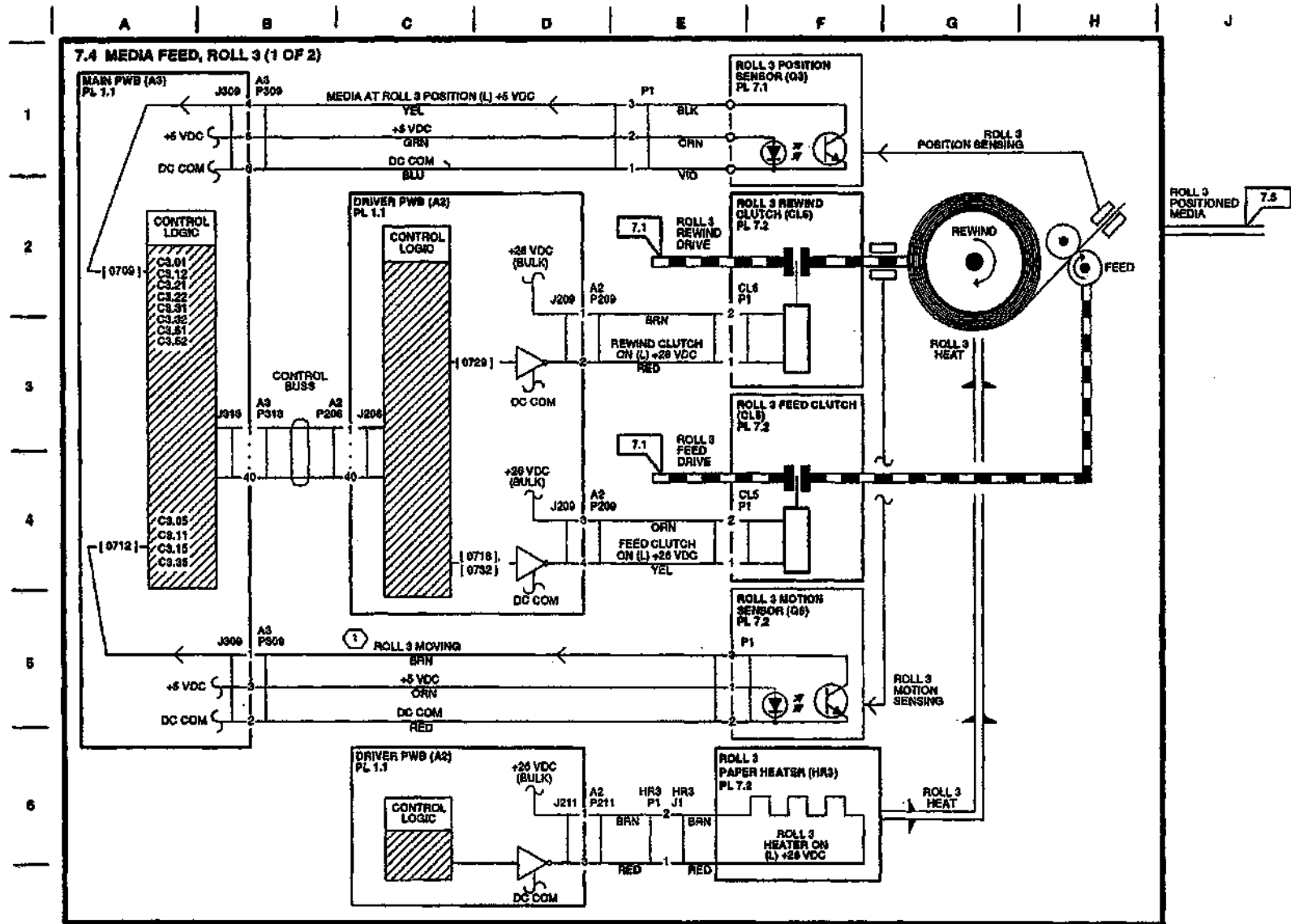
MACHINE RUN CONTROL DIAGNOSTIC CODES

- [0708] ROLL 2 SENSOR (INPUT)
- [0711] ROLL 2 MOTION SENSOR (INPUT)
- [0717] ENERGIZES THE MEDIA DRIVE MOTOR (MOT1) AND THE ROLL 2 CONTROL (OUTPUT) CONTROLS FEED AND REWIND CLUTCHES.
- (0728) ROLL 2 REWIND CLUTCH (OUTPUT)
- [0731] ROLL 2 FORWARD CLUTCH (OUTPUT)

- ① MEASURE THE ROLL 2 MOVING SIGNAL AS FOLLOWS:
MOVING - +2.4 VDC.
STOPPED = 0 VDC OR +5 VDC

| INPUT POWER BLOCK | | |
|-------------------|-----------------|-----|
| VOLTAGE | TEST POINT | GF |
| +26 VDC (BULK) | LVPS (A6) J3-18 | 1.2 |
| DC COM | LVPS (A5) J3-17 | 1.2 |
| +5 VDC | LVPS (A5) J3-14 | 1.2 |
| DC COM | LVPS (A5) J3-11 | 1.2 |



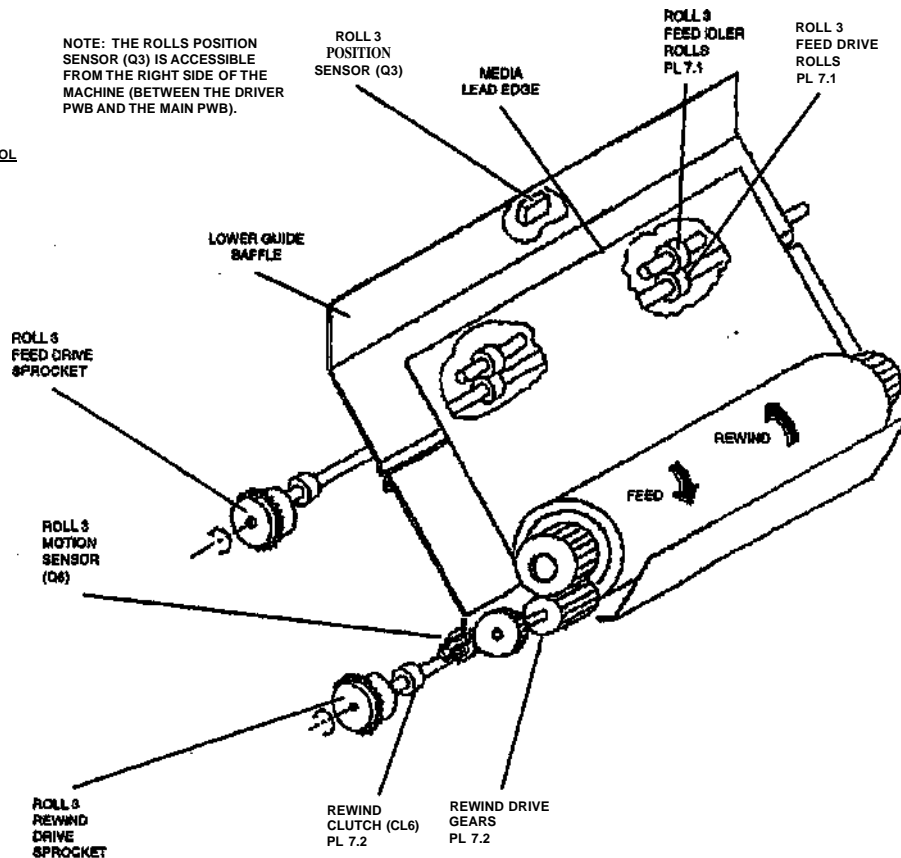
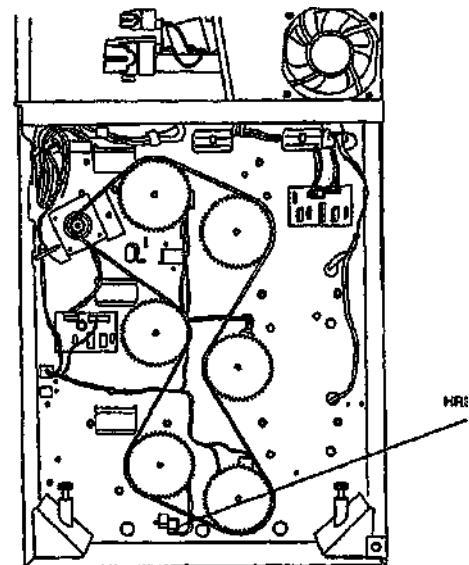


7.4 MEDIA FEED, ROLL 3 (2 OF 2)

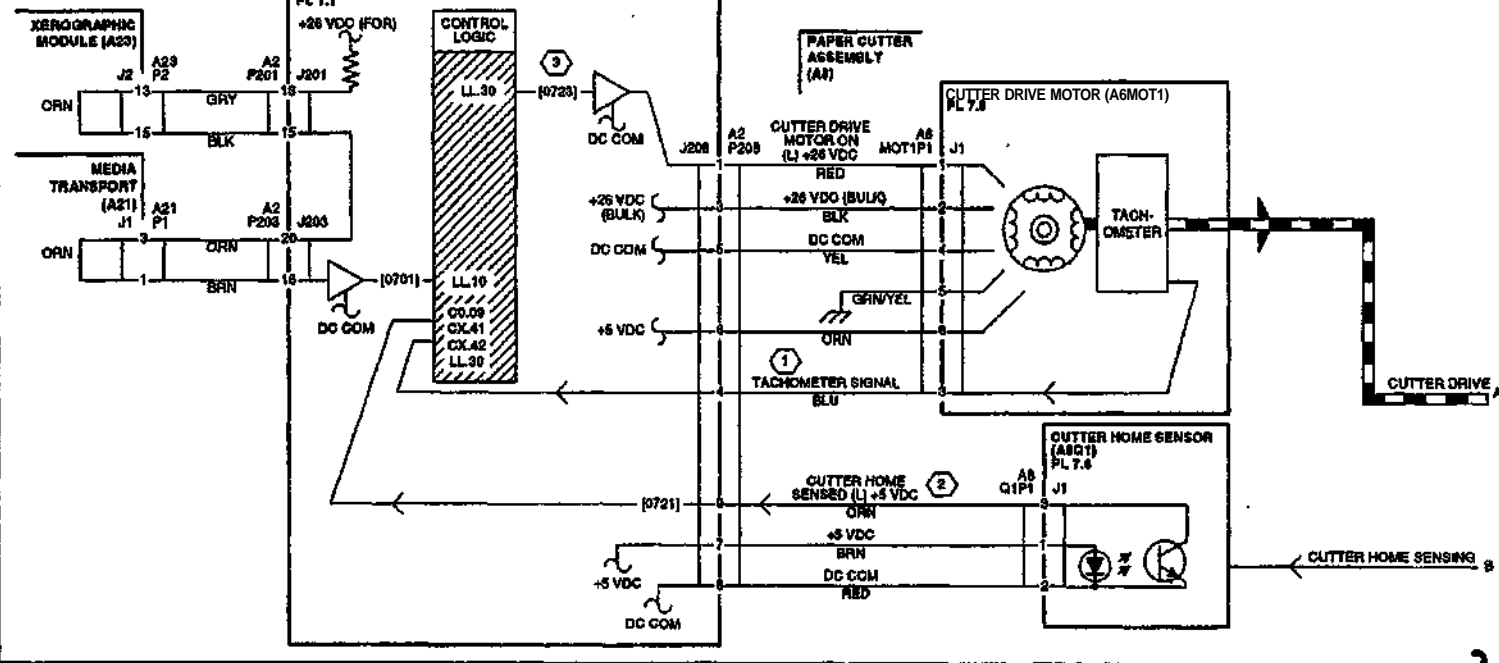
MACHINE RUN CONTROL DIAGNOSTIC CODES

- (0709) ROLL 3 SENSOR (INPUT)
- (0712) ROLL 3 MOTION SENSOR (INPUT)
- (0718) ENERGIZES THE MEDIA DRIVE MOTOR (MOT1) AND THE ROLL 3 CONTROL
(OUTPUT): CONTROLS FEED AND REWIND CLUTCHES-
- (0720) ROLL 3 REWIND CLUTCH (OUTPUT)
- (0732) ROLL 3 FORWARD CLUTCH (OUTPUT)

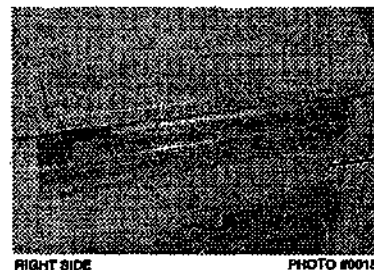
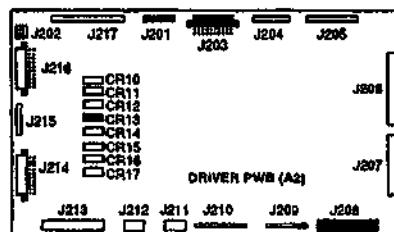
MEASURE THE ROLL 3 MOVING SIGNAL AS FOLLOWS:
MOVING- +2.4 VDC.
STOPPED - 0 VDC OR +5 VDC



7.5 MEDIA CUTTING (1 OF 2)



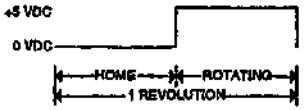
| INPUT POWER BLOCK | | |
|-------------------|-----------------|-----|
| VOLTAGE | TEST POINT | G F |
| +26 VDC (BULK) | LVP5 (A5) J3-16 | 1.2 |
| DC COM | LVP5 (A5) J3-17 | 1.2 |
| +5 VDC | LVP5 (A5) J3-14 | 1.2 |
| DC COM | LVP5 (A5) J3-11 | 1.2 |
| +26 VDC (FOR) | LVP5 (A5) J3-3 | 1.2 |
| DC COM | LVP5 (A5) J3-8 | 1.2 |

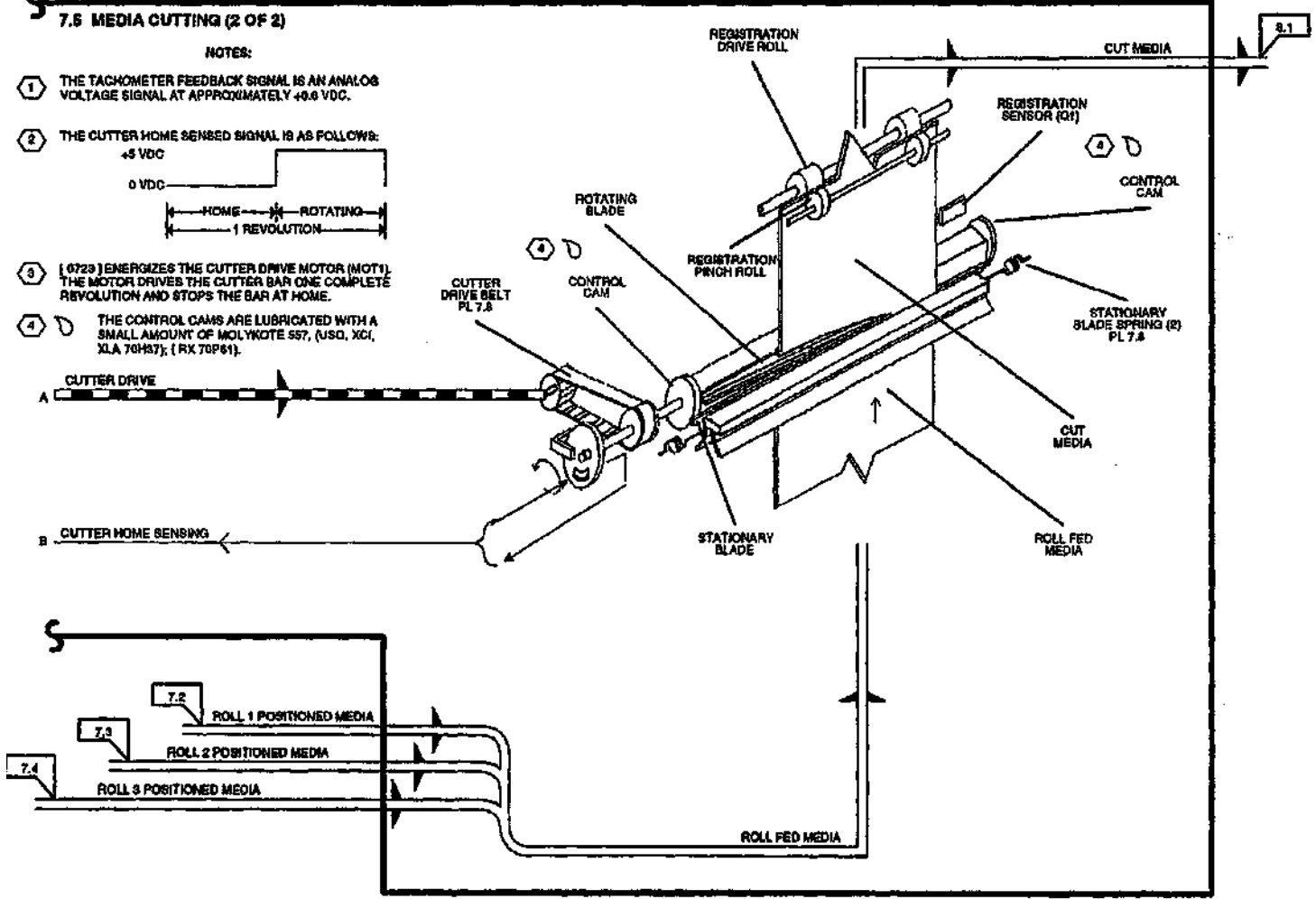


CUTTER DRIVE MOTOR (A24MOT1) AND CUTTER HOME SENSOR (A24Q1) (BEHIND PANEL)

7.5 MEDIA CUTTING (2 OF 2)

NOTES:

- 1 THE TACHOMETER FEEDBACK SIGNAL IS AN ANALOG VOLTAGE SIGNAL AT APPROXIMATELY +0.6 VDC.
- 2 THE CUTTER HOME SENSED SIGNAL IS AS FOLLOWS:

- 3 [0723] ENERGIZES THE CUTTER DRIVE MOTOR (MOT1). THE MOTOR DRIVES THE CUTTER BAR ONE COMPLETE REVOLUTION AND STOPS THE BAR AT HOME.
- 4 THE CONTROL CAMS ARE LUBRICATED WITH A SMALL AMOUNT OF MOLYKOTE 557, (USQ, XCI, XLA 76H37); (RX 76P61).

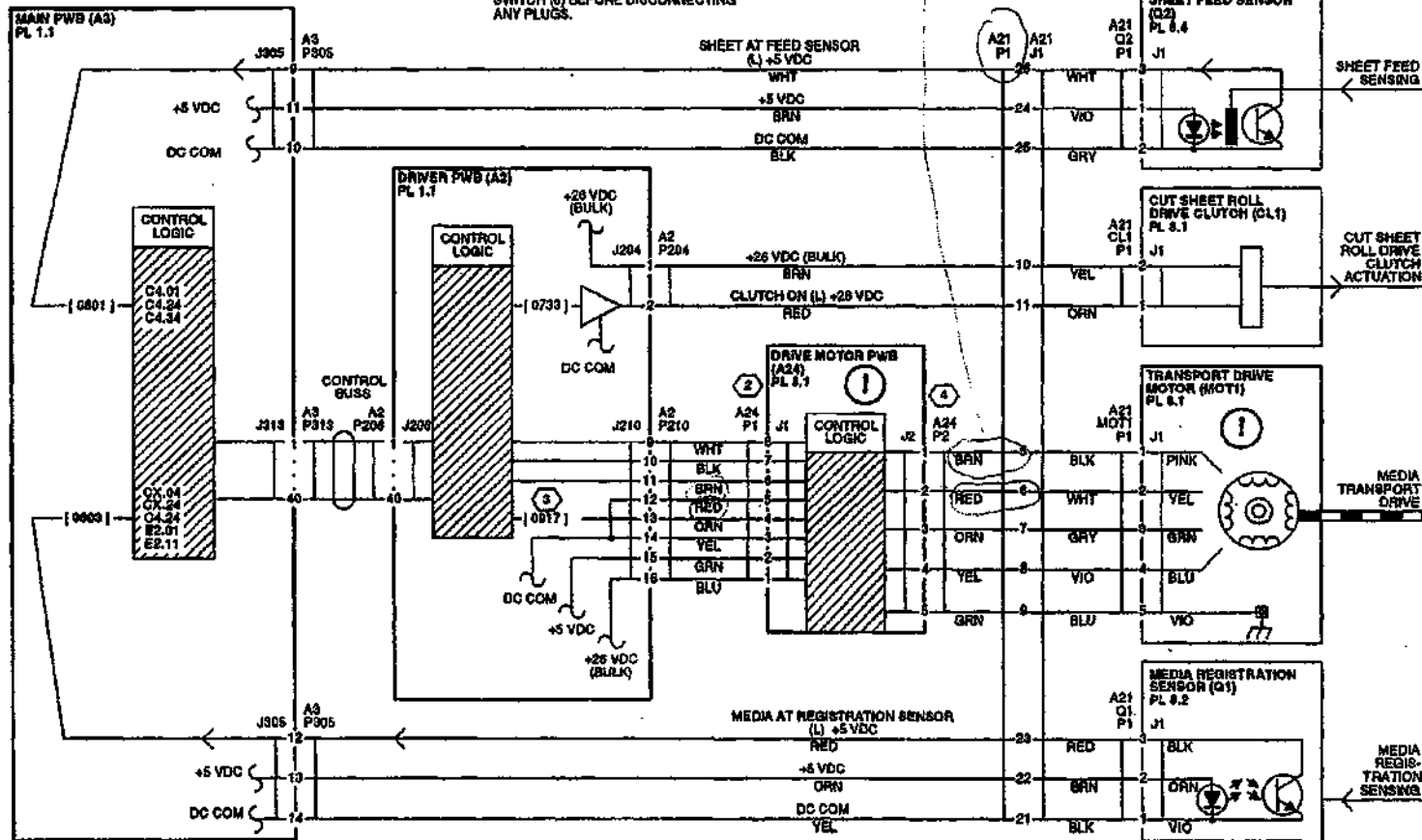


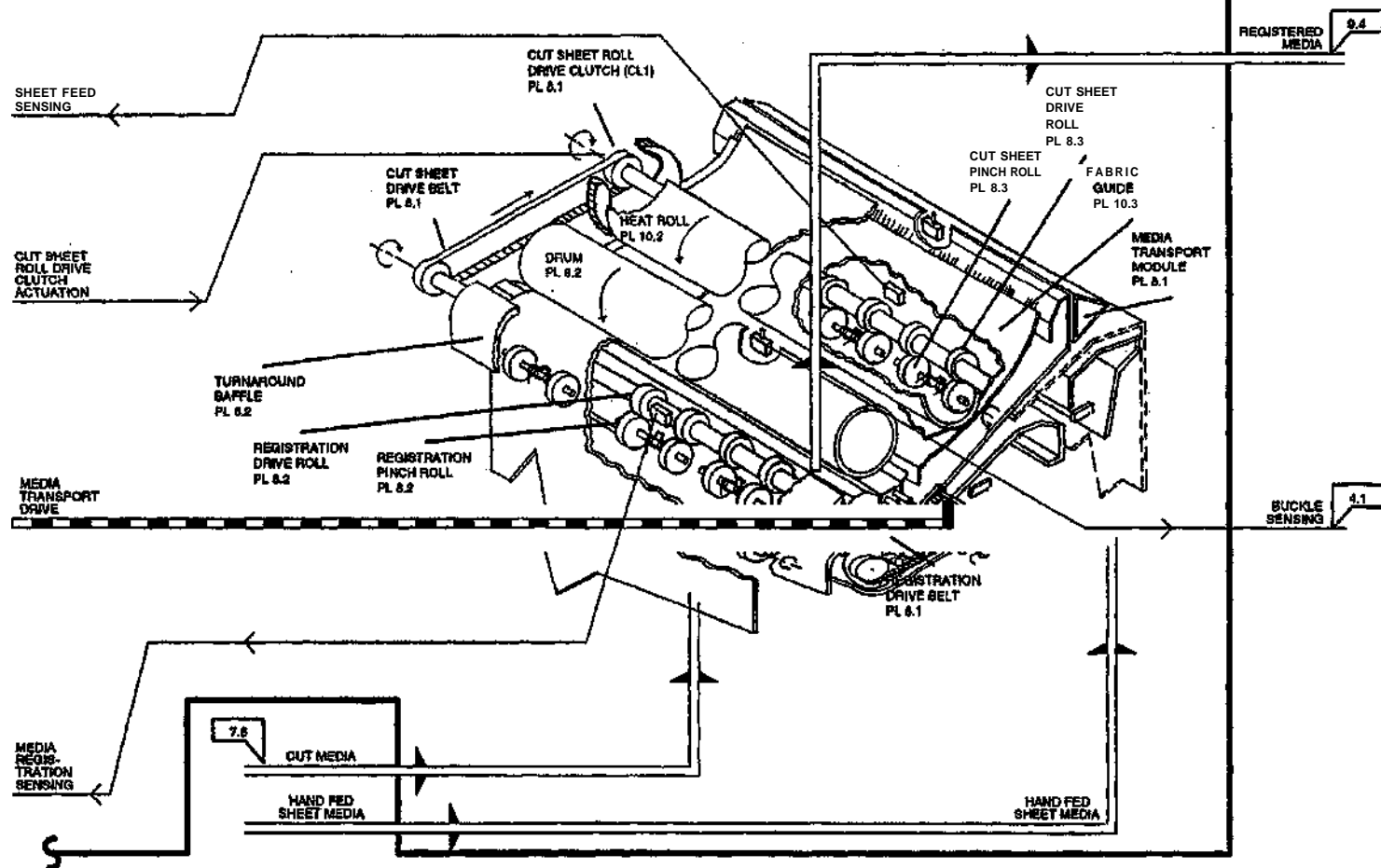
PAGE INTENTIONALLY BLANK

PAGE INTENTIONALLY BLANK

8.1 MEDIA REGISTRATION AND TRANSPORTATION (1 OF 3)

ⓘ CAUTION
TO PREVENT DAMAGE TO THE MOTOR
COMPONENTS, TURN OFF THE POWER
SWITCH (1) BEFORE DISCONNECTING
ANY PLUGS.



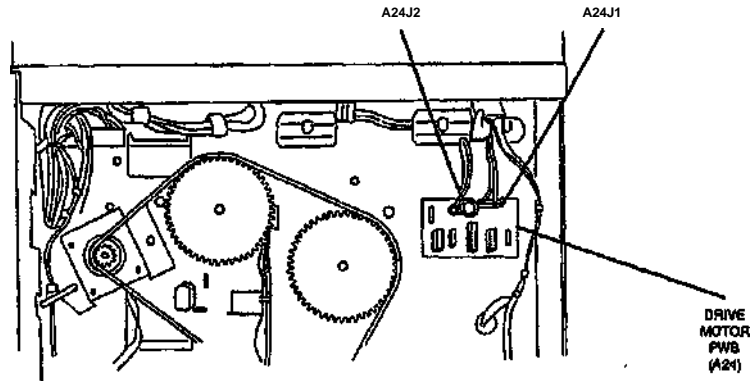


8.1 MEDIA REGISTRATION AND TRANSPORTATION (3 OF 3)

- 1** THE SIGNAL. NO BUCKLE SENSED (L) +5 VDC. SWITCHES THE TRANSPORT DRIVE MOTOR (MOT1) TO A SLOWER SPEED.
- 2** A24P1 APPROXIMATE VOLTAGES: A24P1 DISCONNECTED FROM DRIVE MOTOR PWB (A24)

CAUTION: TO PREVENT DAMAGE TO THE MOTOR COMPONENTS. TURN OFF THE POWER SWITCH (0) BEFORE DISCONNECTING ANY PLUGS.

| PIN | STANDBY VOLTAGE | (0703) VOLTAGE |
|------|--------------------|-------------------|
| p1-8 | +3.8 VDC | +3.8 VDC |
| P1-7 | +3.8 VDC | +3.8 VDC |
| P1-6 | 0 VDC | 0 VDC |
| P1-4 | +3.6 VDC | +3.8 VDC |



- 3 (0917 • BOND) ENERGIZES THE TRANSPORT DRIVE MOTOR (MOT1) AND THE MOTOR ROTATES IN THE MEDIA FEED DIRECTION.**

- 4** A24P2 APPROXIMATE RESISTANCE: A24P2
DISCONNECTED FROM DRIVE MOTOR PWB
(A24)

PIN 1 TO PIN 2 - 3.4 OHMS
PIN 3 TO PIN 4 - 3.6 OHMS

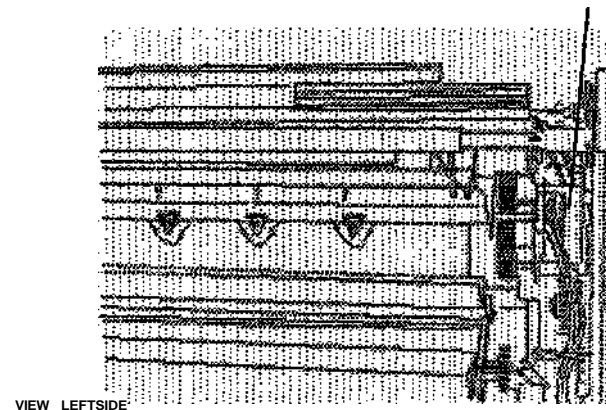
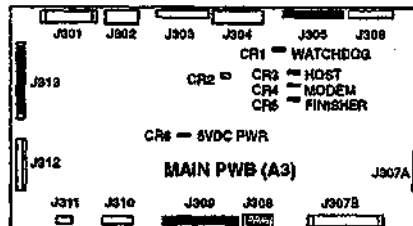
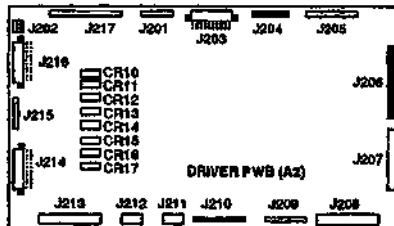
VIEW: REAR

07018

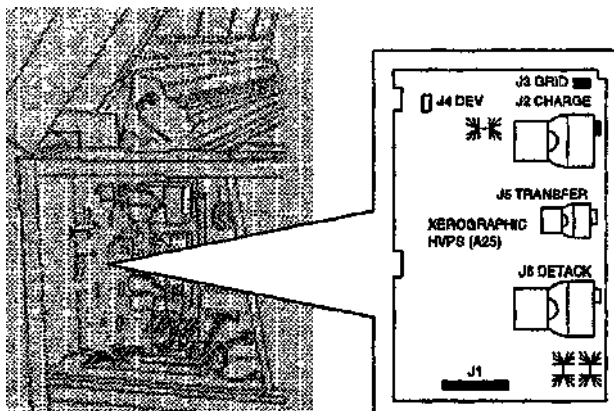
**CUT SHEET ROLL
DRIVE CLUTCH (CL1)**

INPUT POWER BLOCK

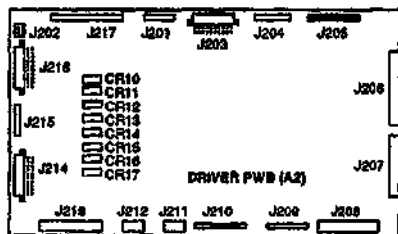
| VOLTAGE | TEST POINT | OF |
|----------------|-----------------|-----|
| +28 VDC (BULK) | LVPS (A5) J3-18 | 1.2 |
| DC COM | LVPS (A5) J3-17 | 1.2 |
| +5 VDC | LVPS (A5) J3-14 | 1.2 |
| DC COM | LVPS (A5) J3-11 | 1.2 |



PAGE INTENTIONALLY BLANK



VIEW: REAR (TOP)



INPUT POWER BLOCK

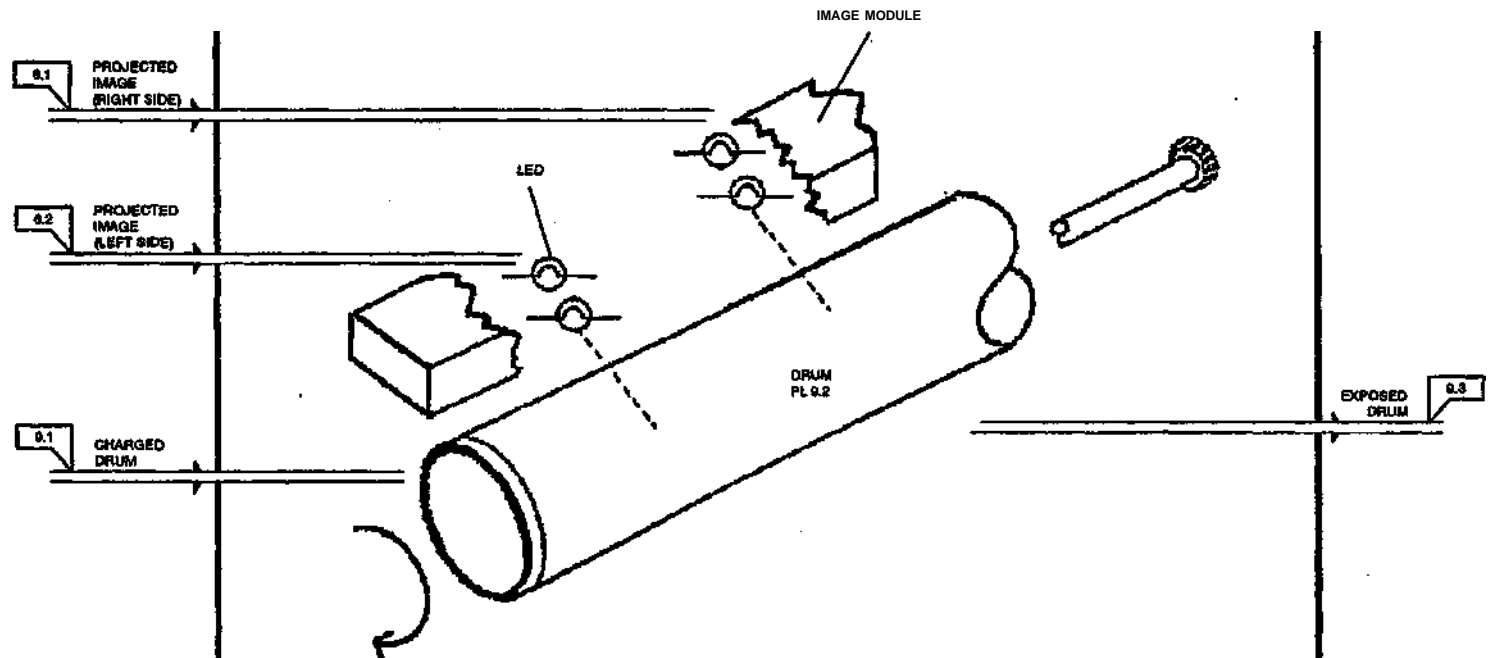
+26 VDC (BULK)
DC COM

TEST POINT

LVPS (A5) J3-18
LVPS (A5) J3-17

1.2
1.2

1 THE GRID BIAS ANALOG SIGNAL (0 TO 15 VDC) IS ADJUSTED WHEN PERFORMING THE ELECTROSTATIC SERIES ADJUSTMENT (ADJ 6.2).



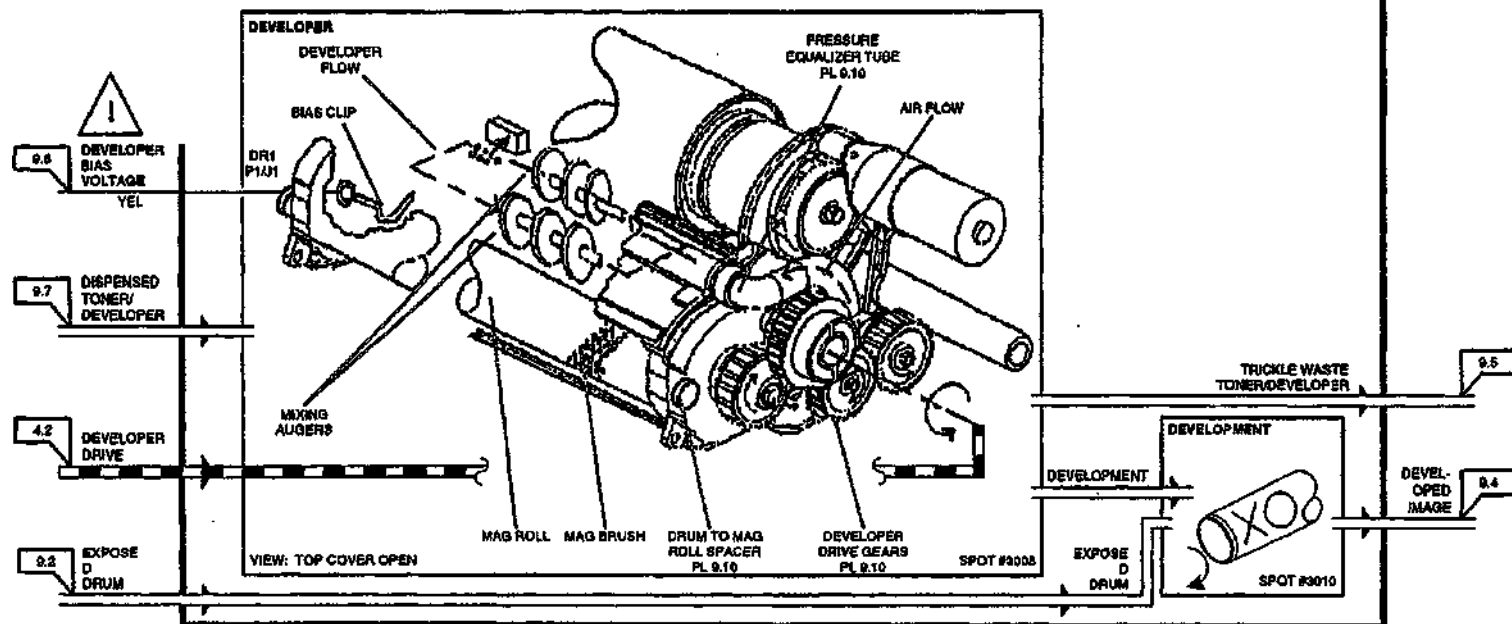
PAGE INTENTIONALLY BLANK

9.3 DEVELOPMENT (1 OF 2)

⚙️ ADJ 9.3: IMAGE DENSITY.

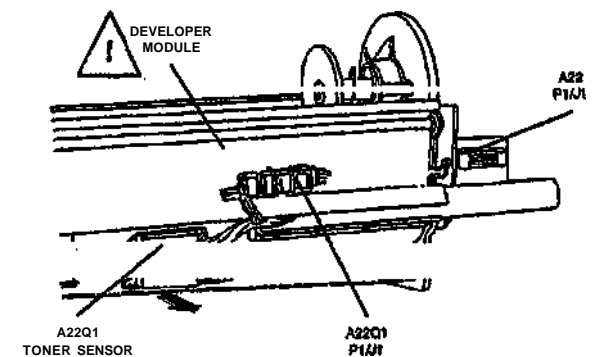
DEVELOPMENT DIAGNOSTIC CODES

- [0921] TONER CONTROL VALUE:
 [4]. SET TONER CONTROL VALUE.
 [6]. CALIBRATE TONER SENSOR.
- [0926] RESET NVM VALUES TO DEFAULT.

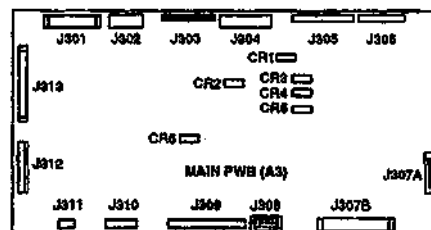


**WARNING**

THE DEVELOPER MODULE HAS APPROXIMATELY -350 VOLTS DC APPLIED TO ITS SURFACE. USE CAUTION.

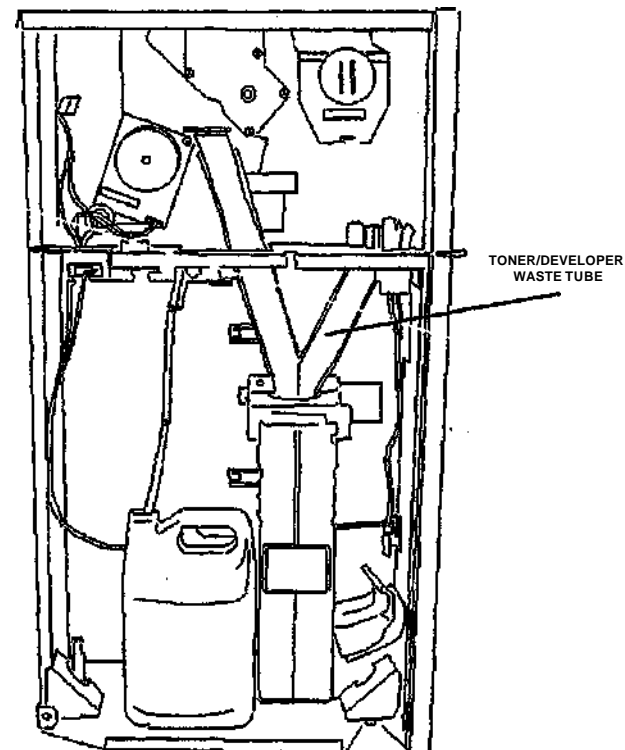


SPOT #014B9A



INPUT POWER BLOCK

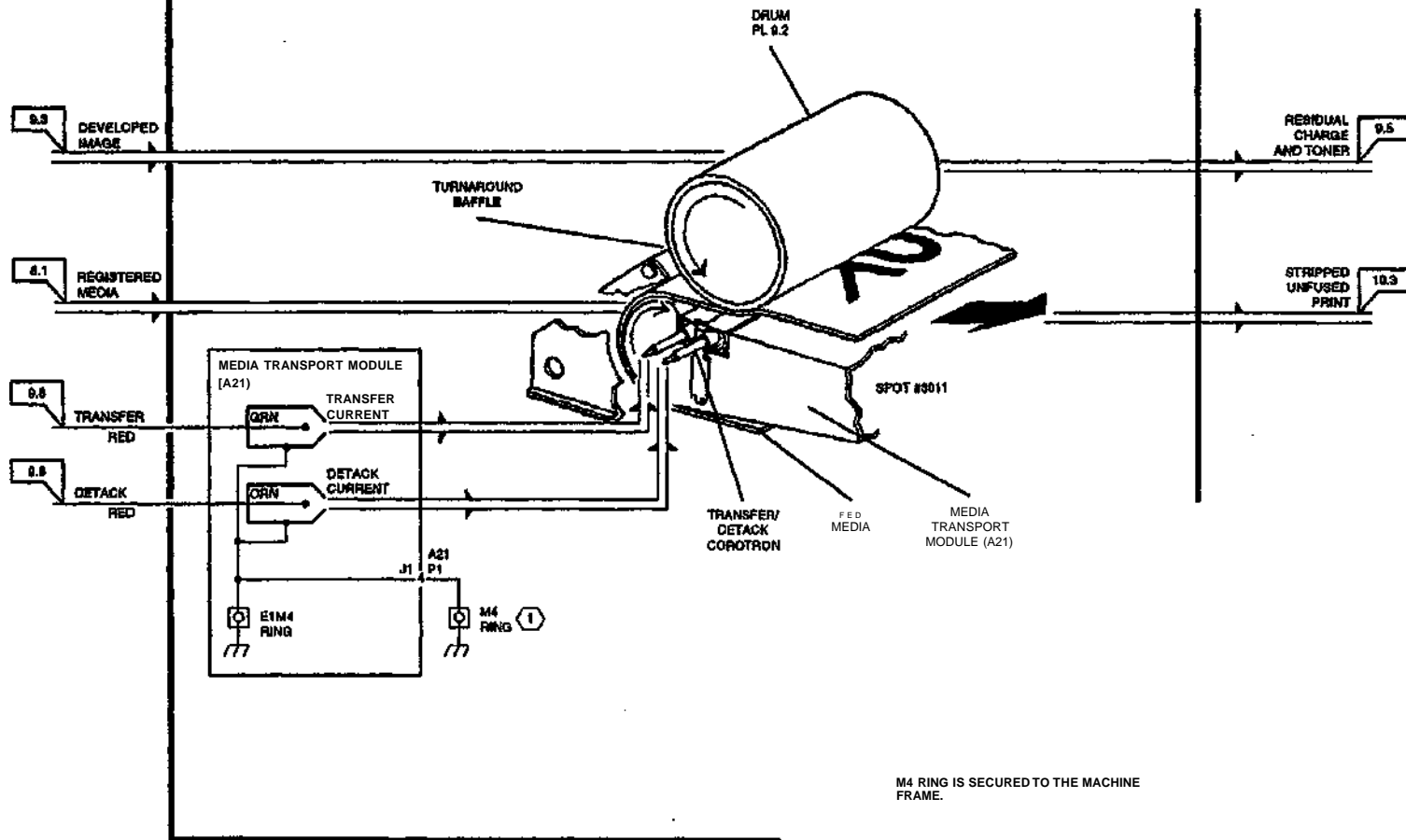
| VOLTAGE | TEST POINT | OF |
|----------------|-------------------|-----|
| +26 VDC (BULK) | SUPPLY (A5) J3-18 | 1.2 |
| DC COM | SUPPLY (A5) J3-17 | 1.2 |



VIEW: FRONT

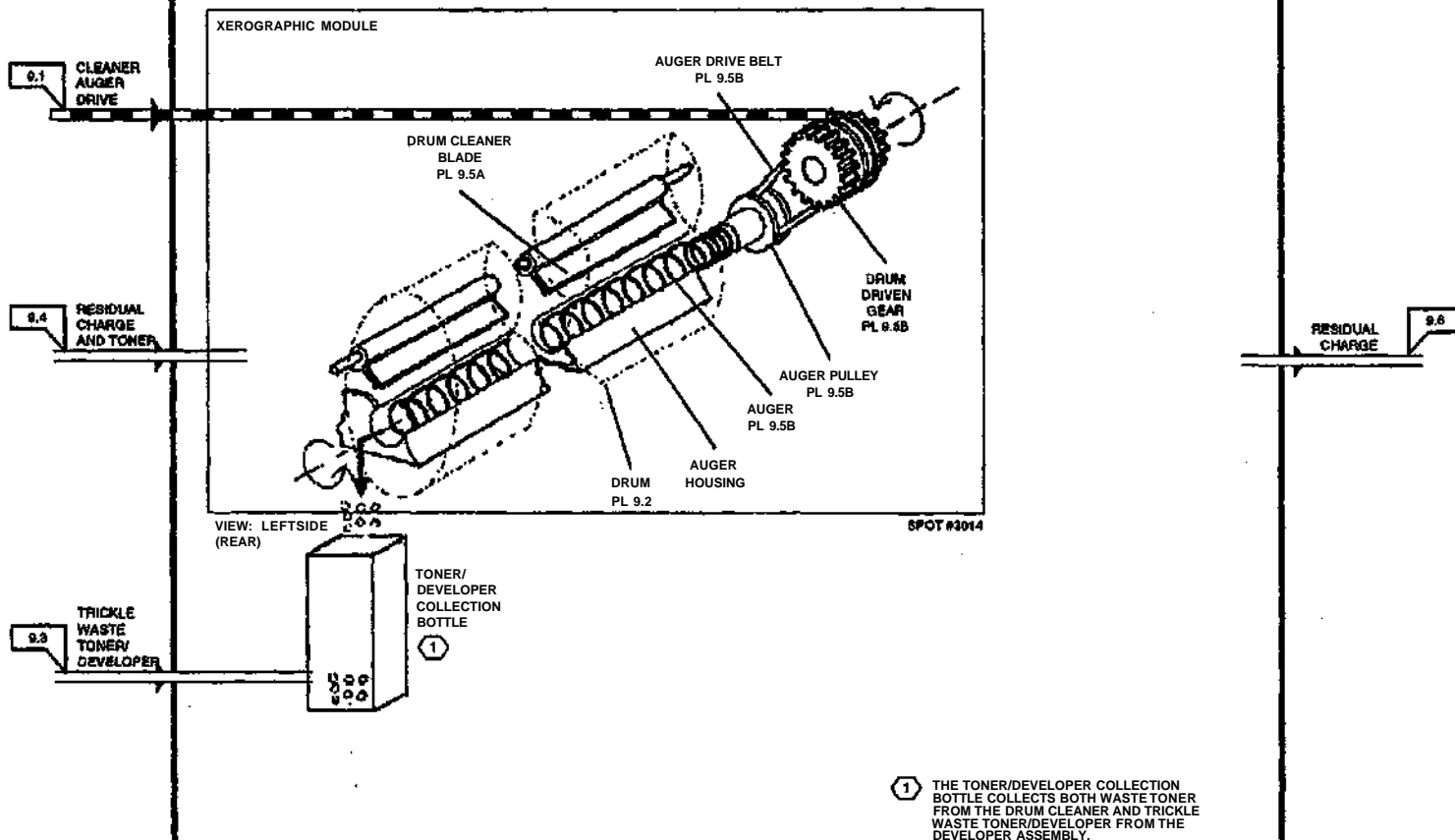
B

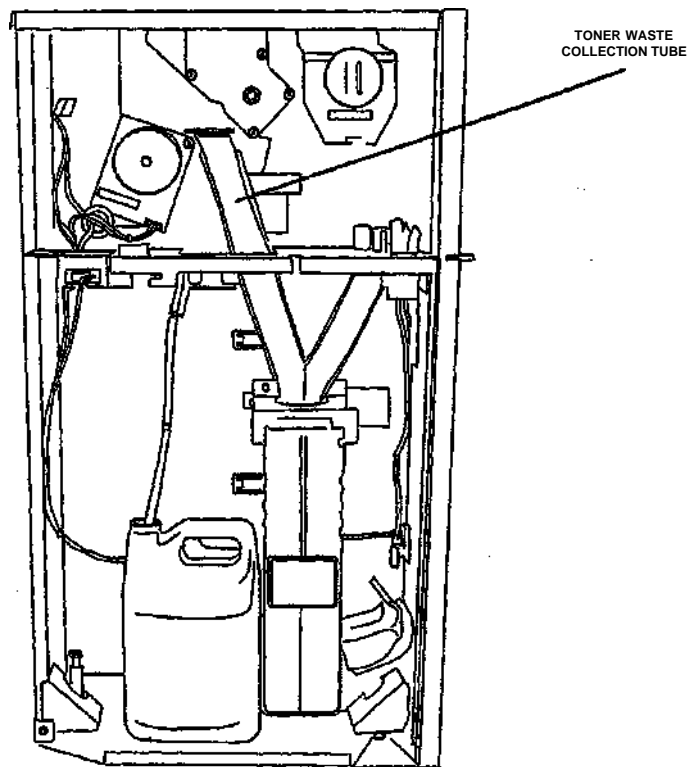
9.4 IMAGE TRANSFER AND MEDIA STRIPPING (1 OF 1)



PAGE INTENTIONALLY BLANK

9.5 DRUM CLEANING (1 OF 2)

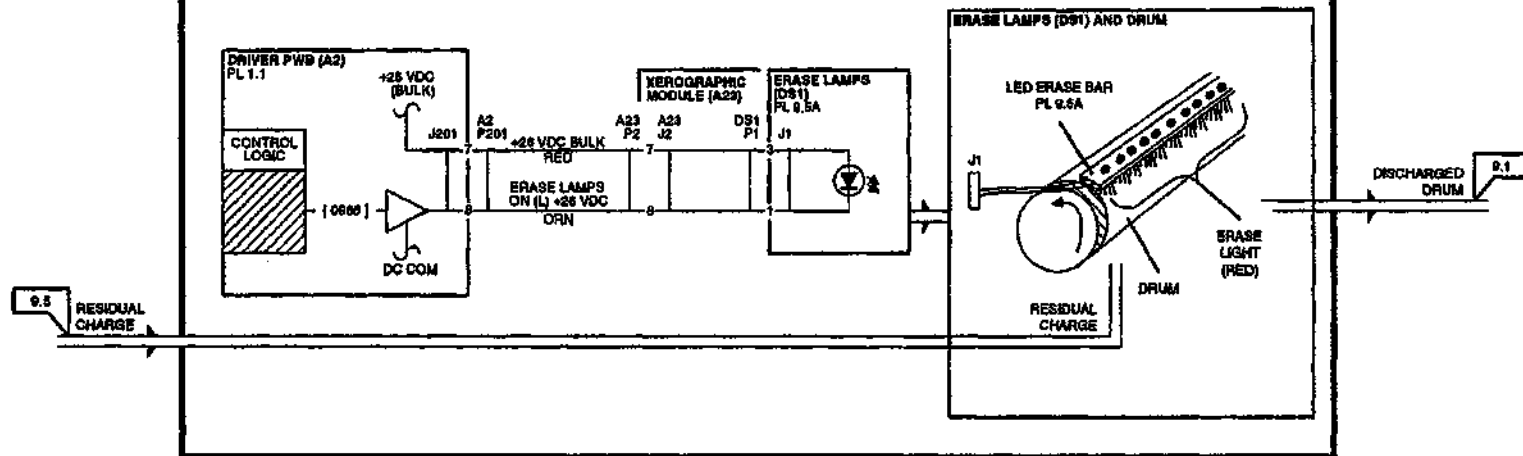




FRONT VIEW

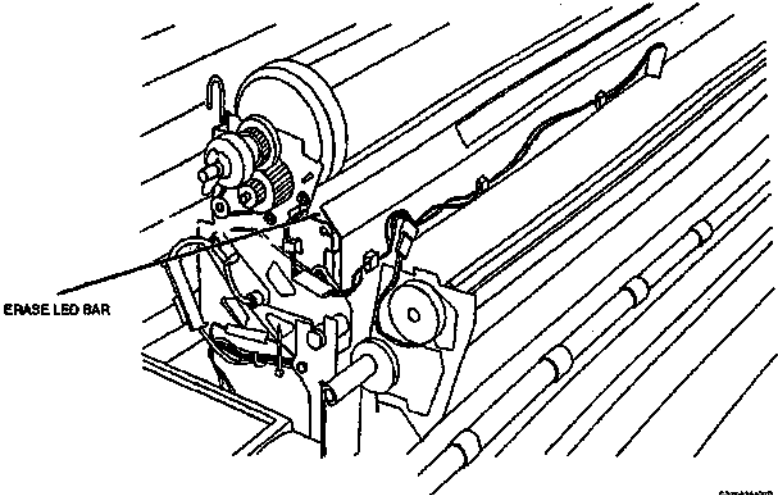
07021

9.6 DRUM DISCHARGING (1 OF 2)



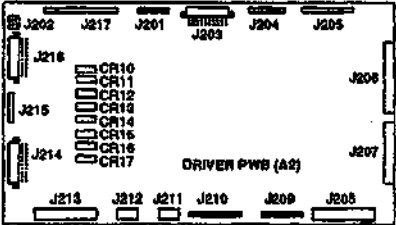
[0666] ERASE LAMP OUTPUT

8.6 DRUM DISCHARGING (2 OF 2)



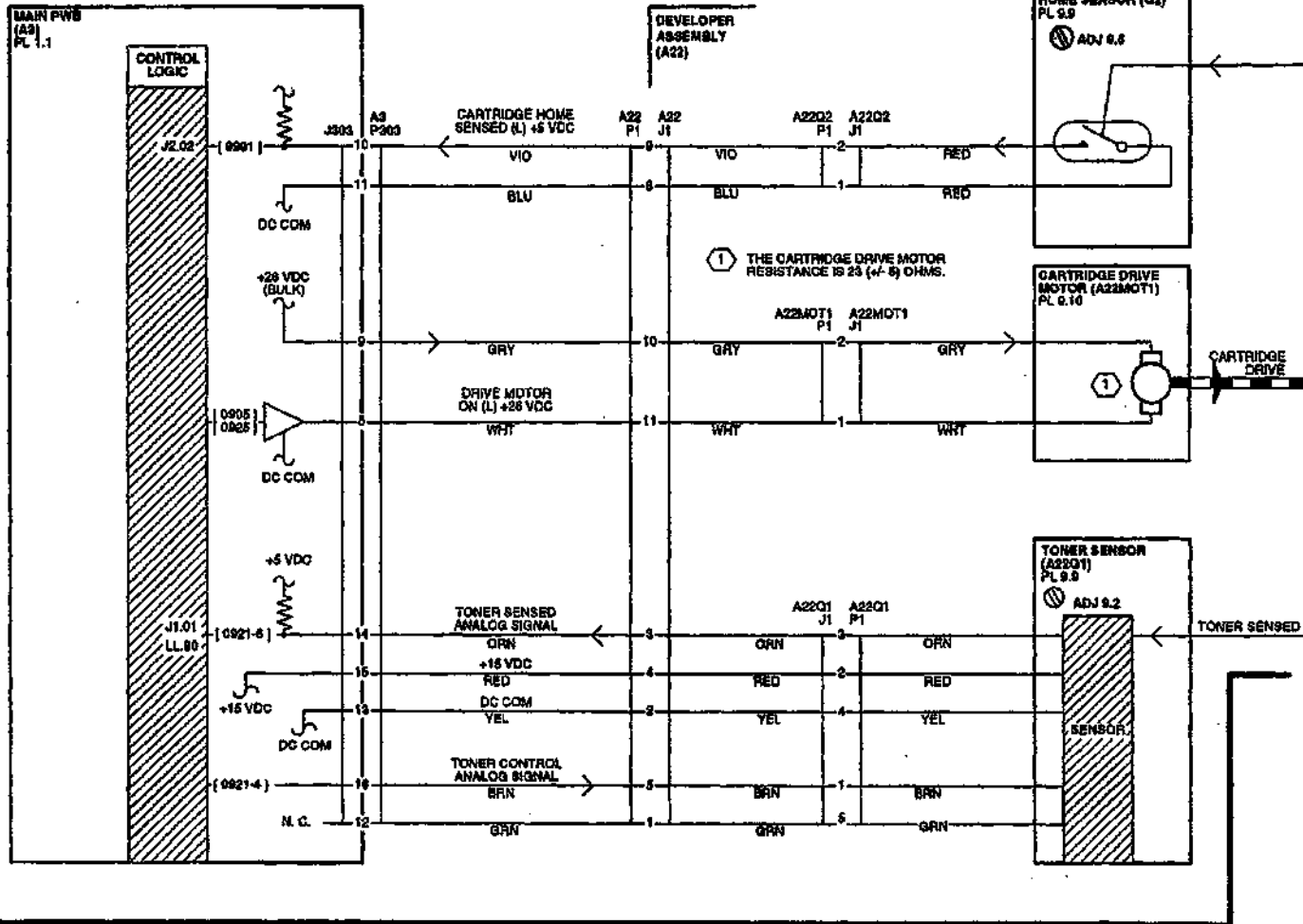
VIEW: LEFT (REAR)

07022

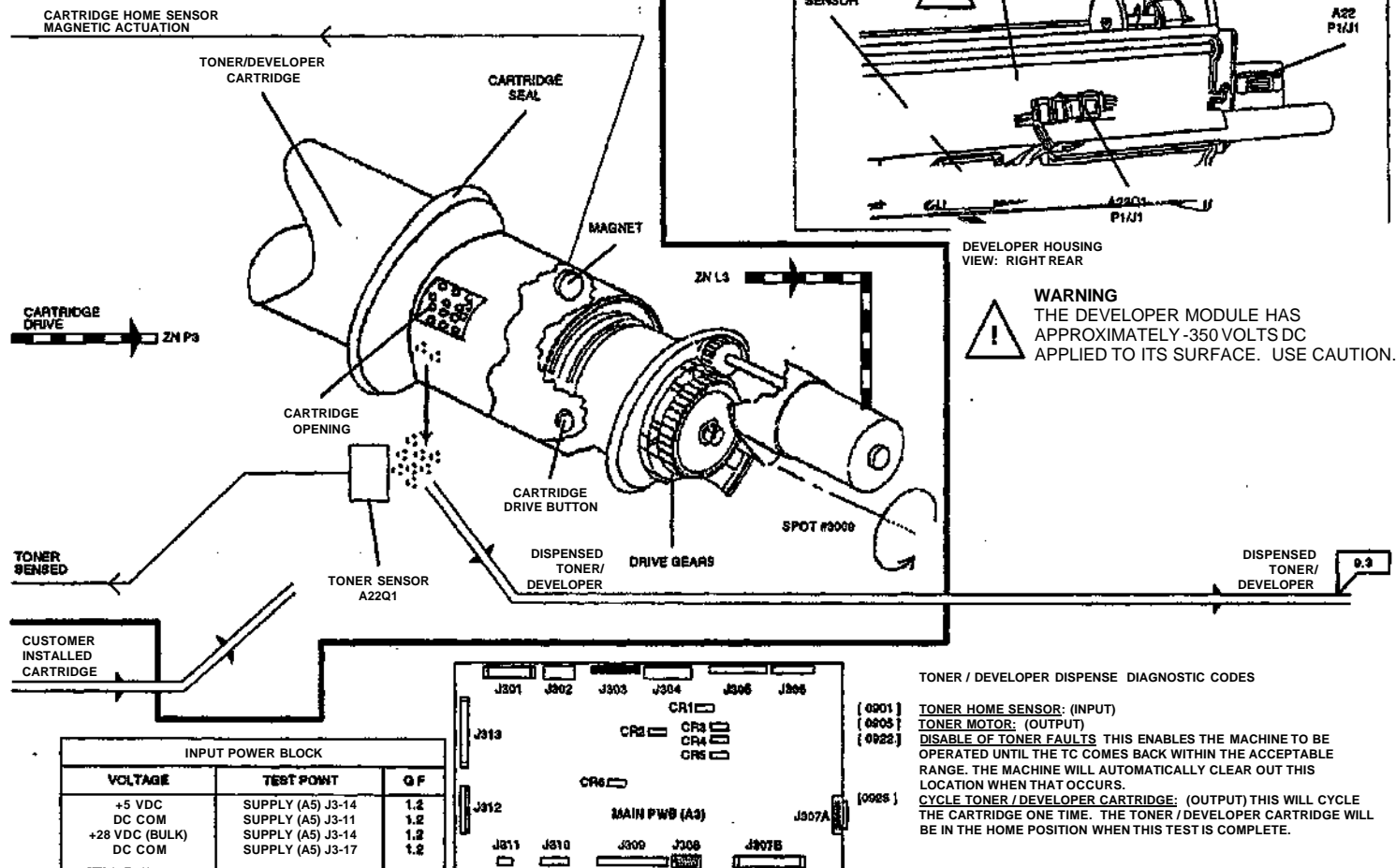


| INPUT POWER BLOCK | | |
|-------------------|-------------------|-----|
| VOLTAGE | TEST POINT | GF |
| +26 VDC (BULK) | SUPPLY (A5) J3-18 | 1.2 |
| DC COM | SUPPLY (A5) J3-17 | 1.2 |

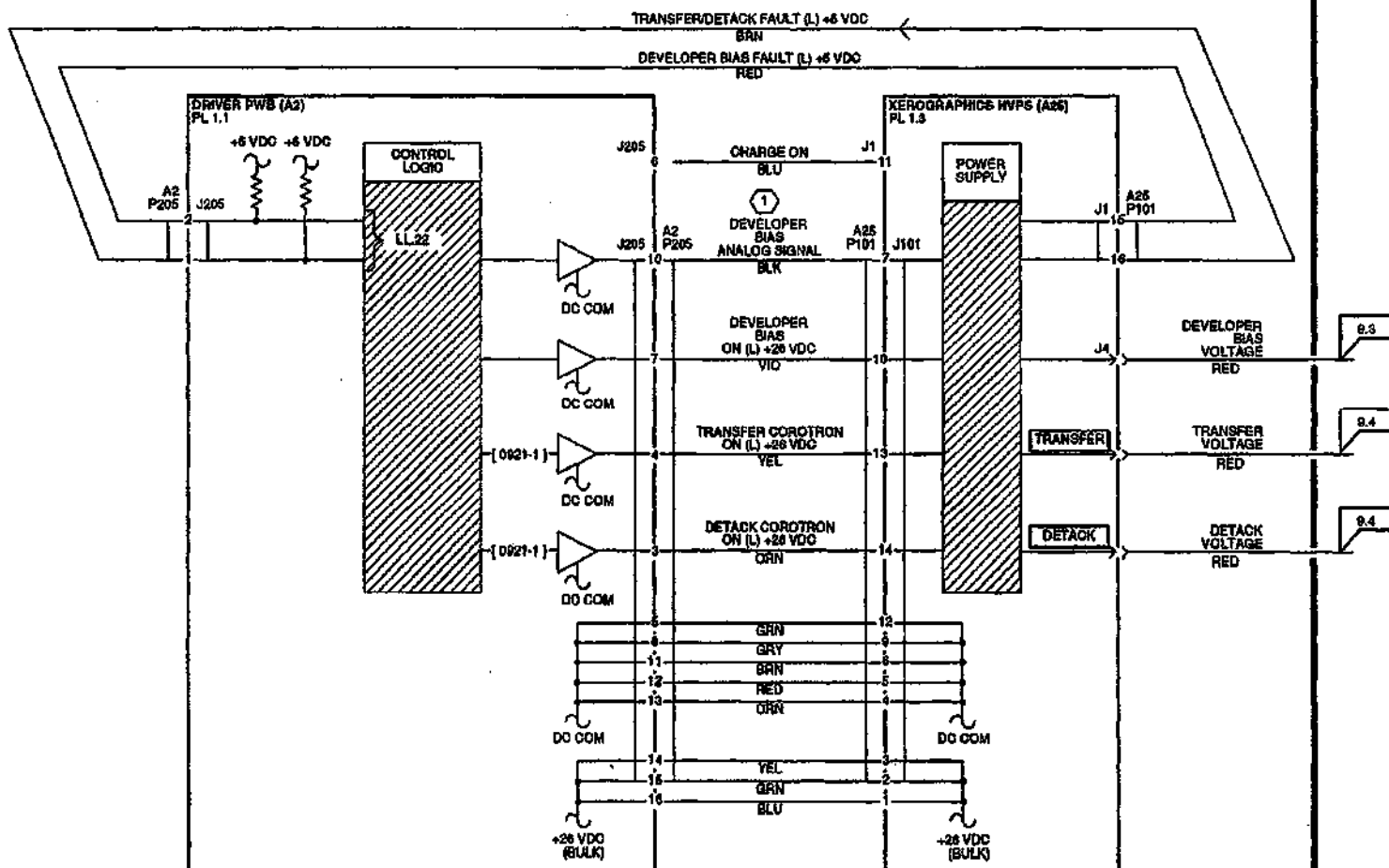
9.7 TONER/DEVELOPER DISPENSE (1 OF 2)



9.7 TONER/DEVELOPER DISPENSE (2 OP 2)

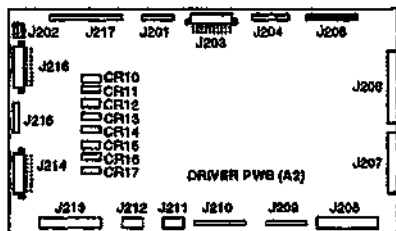


9.8 COROTRON AND DEVELOPER BIAS POWER (1 OF 2)

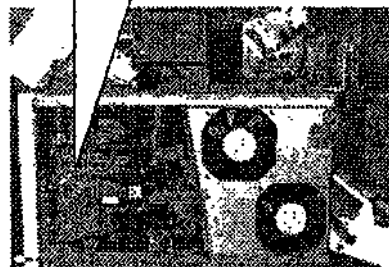
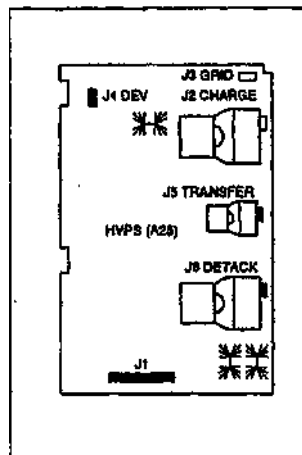


9.8 COROTRON AND DEVELOPER BIAS POWER (2 OF 2)

- 1 THE DEVELOPER BIAS ANALOG SIGNAL CONTROLS THE DEVELOPER HOUSING MAG ROLL VOLTAGE.



| INPUT POWER BLOCK | | |
|-------------------|-----------------|-----|
| VOLTAGE | TEST POINT | G F |
| +5 VDC | LVPS (A5) J3-14 | 1.2 |
| DC COM | LVPS (A5) J3-11 | 1.2 |
| +26 VDC (BULK) | LVPS (A5) J3-18 | 1.2 |
| DC COM | LVPS (A5) J3-17 | 1.2 |



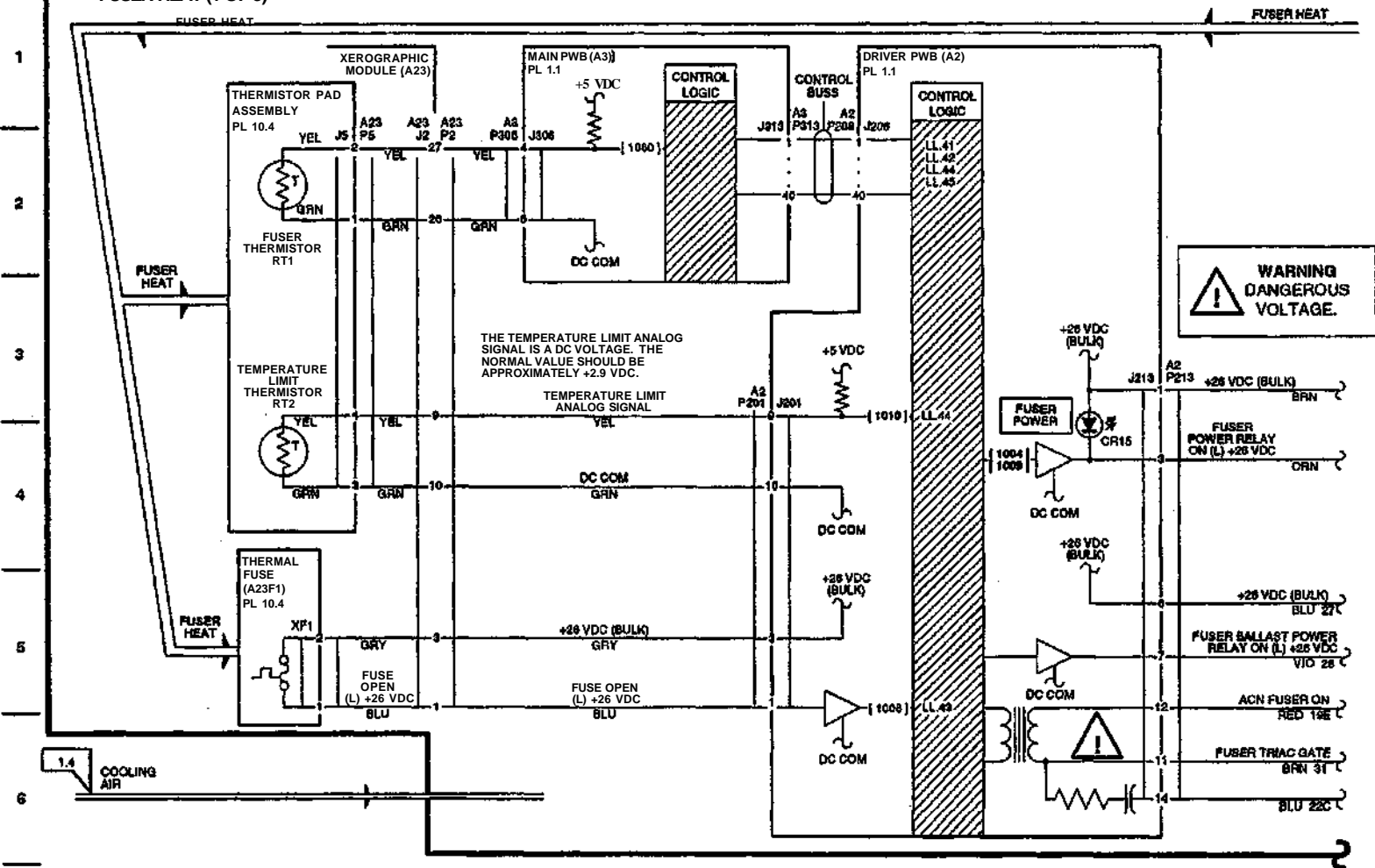
VIEW: REAR (TOP)

PHOTO #0030

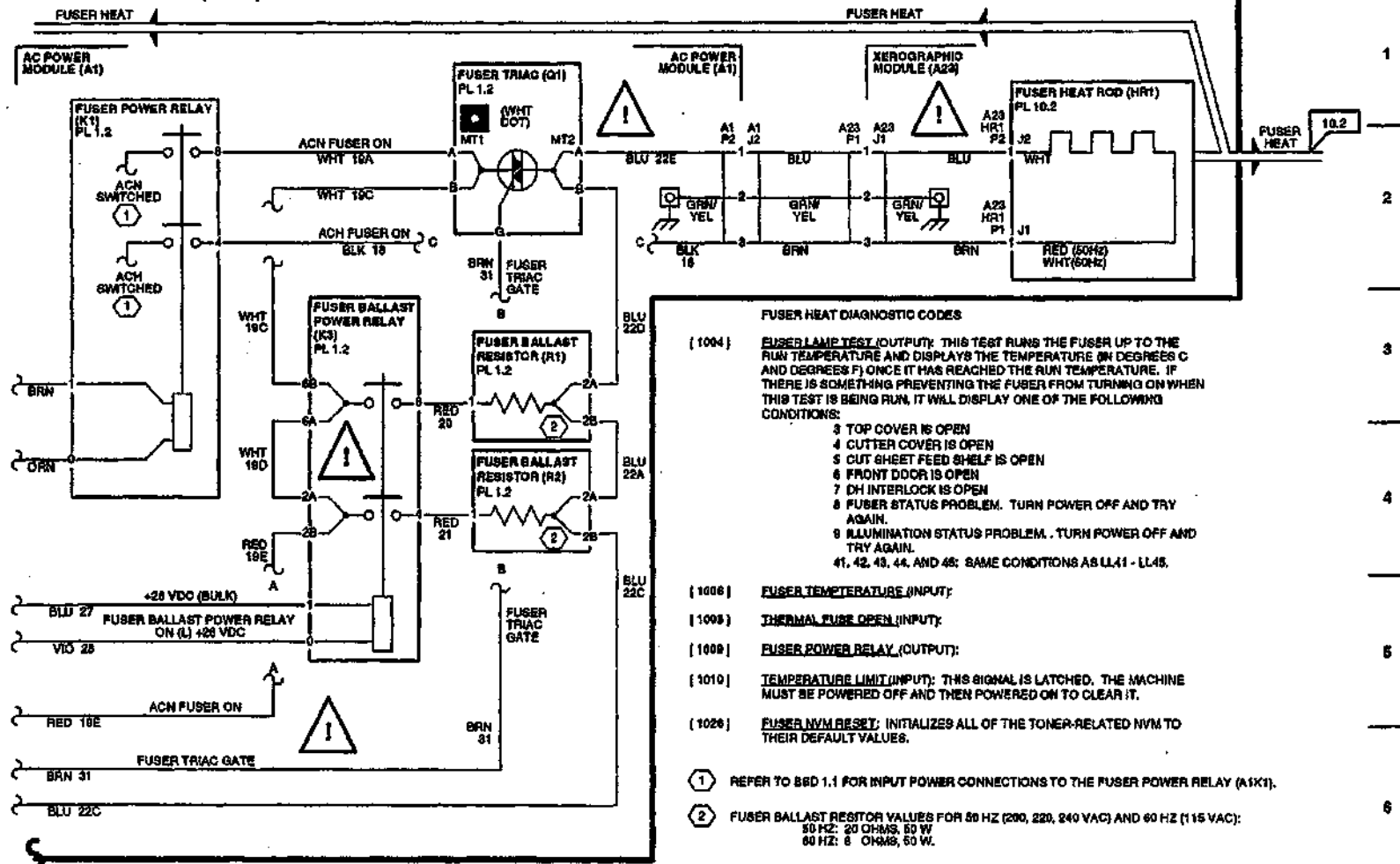
PAGE INTENTIONALLY BLANK

PAGE INTENTIONALLY BLANK

10.1 FUSER HEAT (1 OF 3)



10.1 FUSER HEAT (2 OF 3)



V

W

X

Y

Z

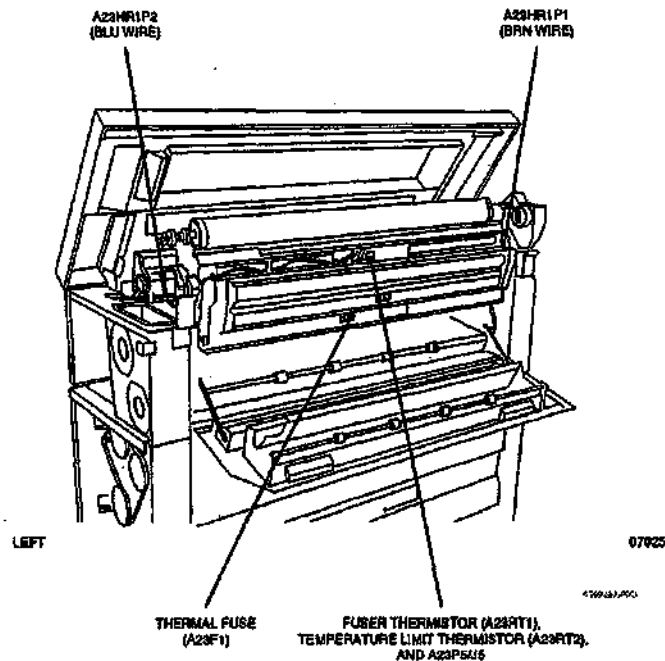
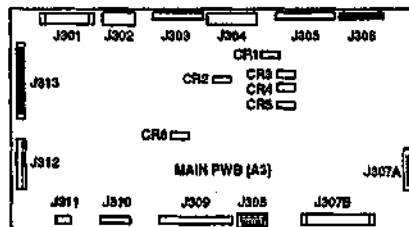
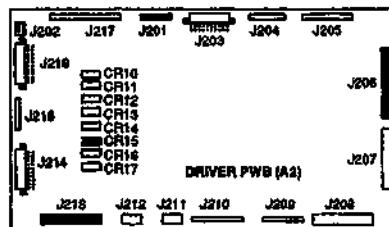
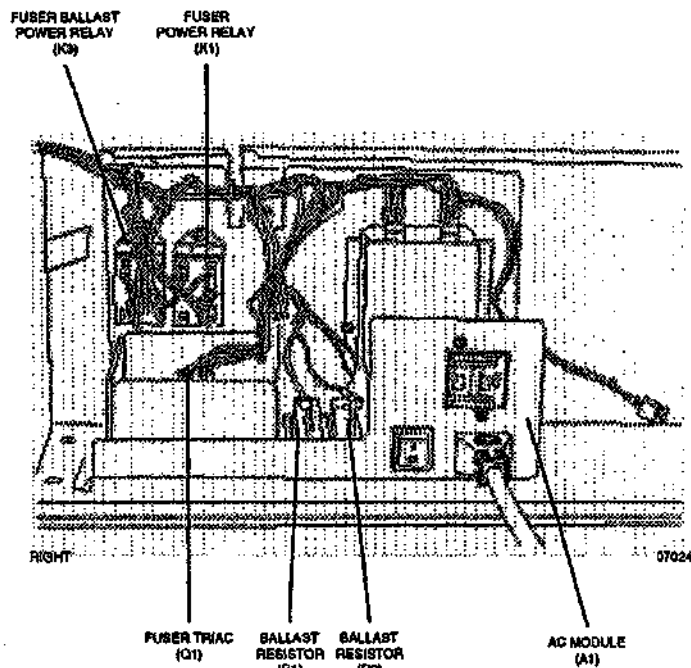
AA

BB

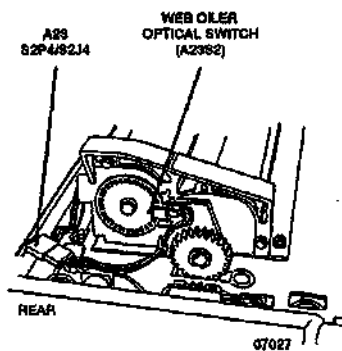
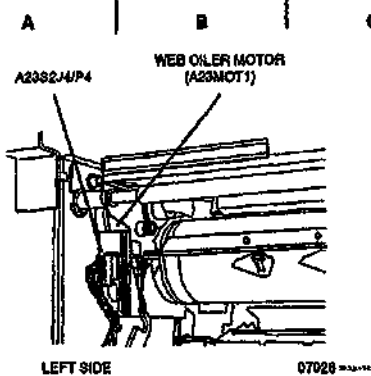
CC

DD

10.1 FUSER HEAT (3 OF 3)

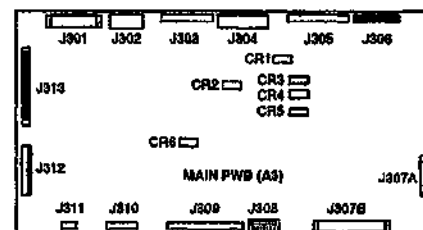
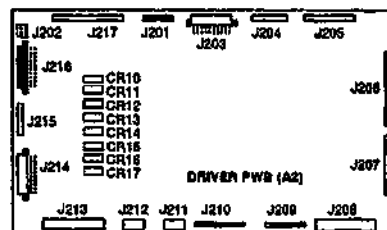
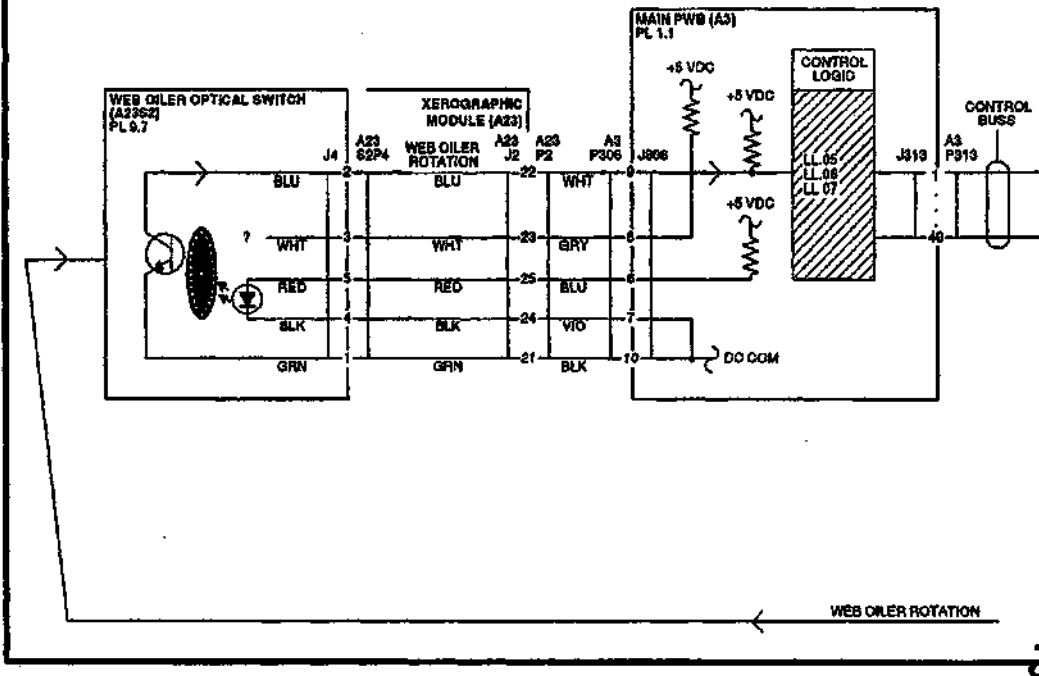


PAGE INTENTIONALLY BLANK

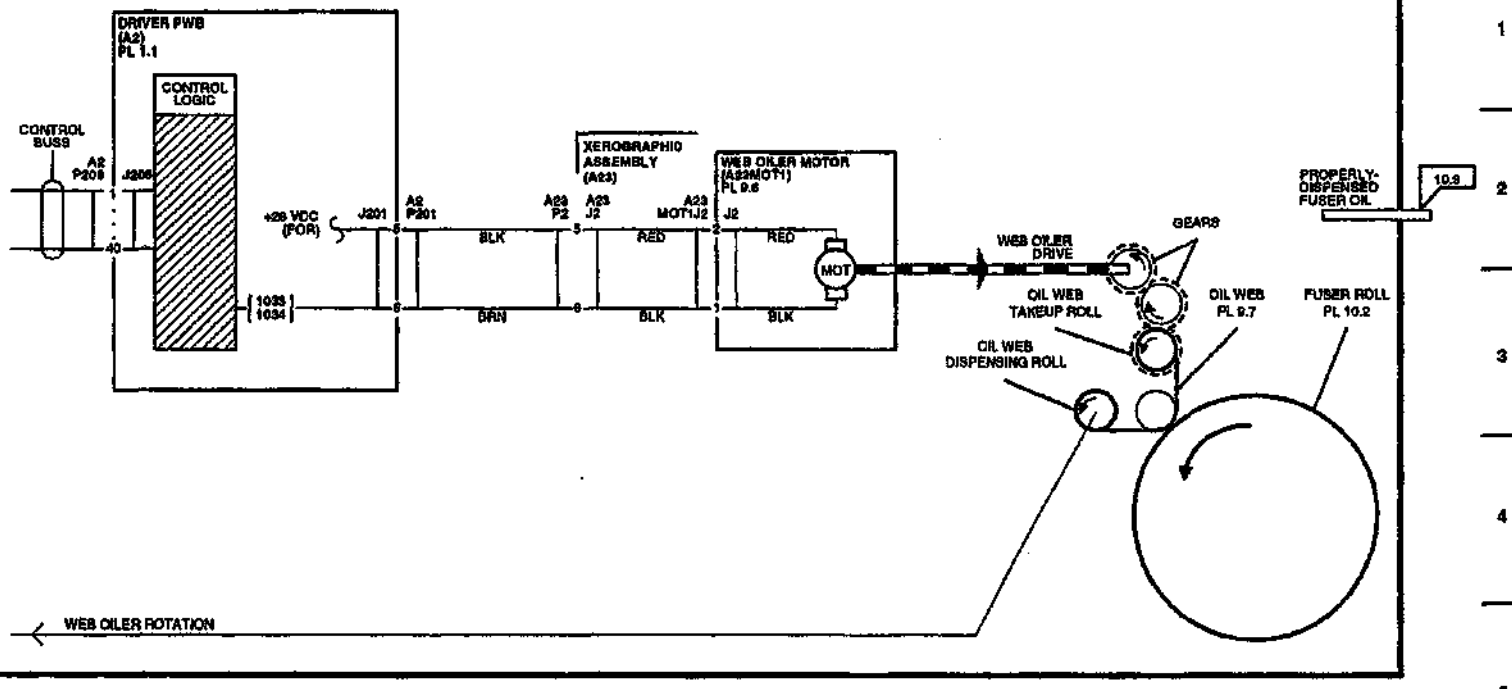


| INPUT POWER BLOCK | | |
|-------------------|-----------------|------|
| VOLTAGE | TEST POINT | G.F. |
| +28 VDC (FOR) | LVP8 (A5) J3-8 | 1.2 |
| DC COM | LVP8 (A5) J3-9 | 1.2 |
| +5 VDC | LVP8 (A5) J3-14 | 1.2 |
| DC COM | LVP8 (A5) J3-11 | 1.2 |

10.2 FUSER OIL DISPENSING (1 OF 2)



10.2 FUSER OIL DISPENSING (2 OF 2)

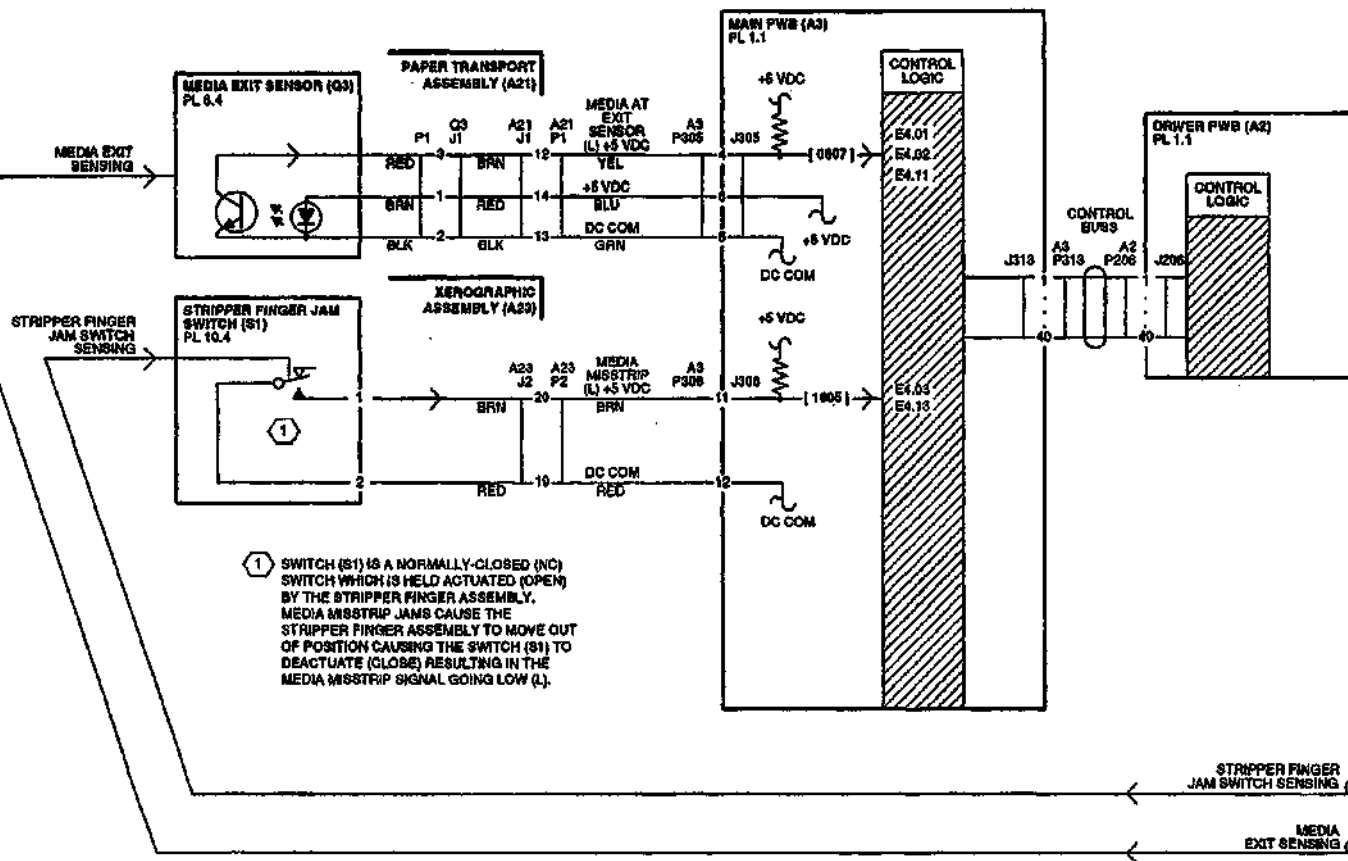


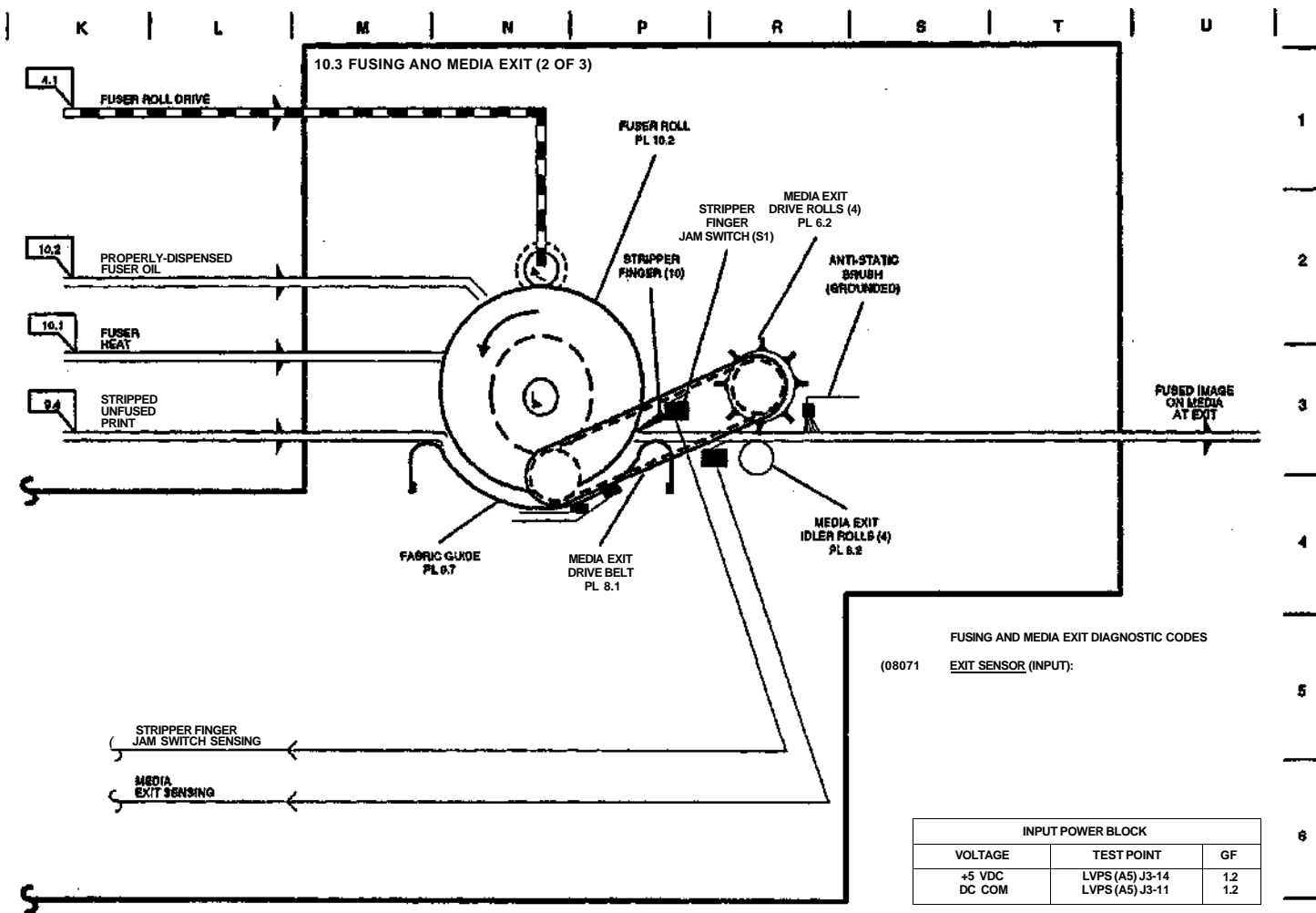
FUSER OIL DISPENSING DIAGNOSTIC CODES

- [1030] **RESET FUSER OIL DISPENSING TO ZERO**: THIS DIAGNOSTIC SETS THE WEB COUNTER TO ZERO AND SHOULD ONLY BE USED AS PART OF THE PROCEDURE TO INSTALL A NEW OIL WEB.
- [1031] **SPECIFY OIL WEB POSITION**: THIS DIAGNOSTIC RESETS THE WEB COUNTER AFTER NVW HAS BEEN CORRUPTED OR WHEN A PARTIALLY USED WEB IS INSTALLED.
- [1032] **ADJUST OIL WEB RATE**: ADJUSTABLE FROM 50% TO 200% OF NOMINAL VALUE.

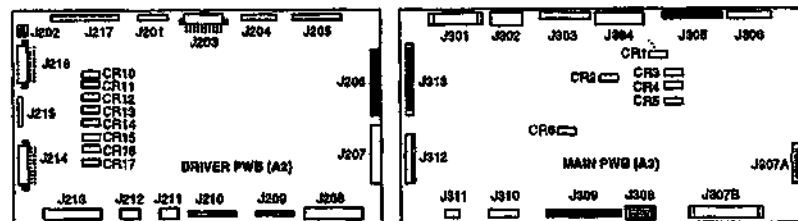
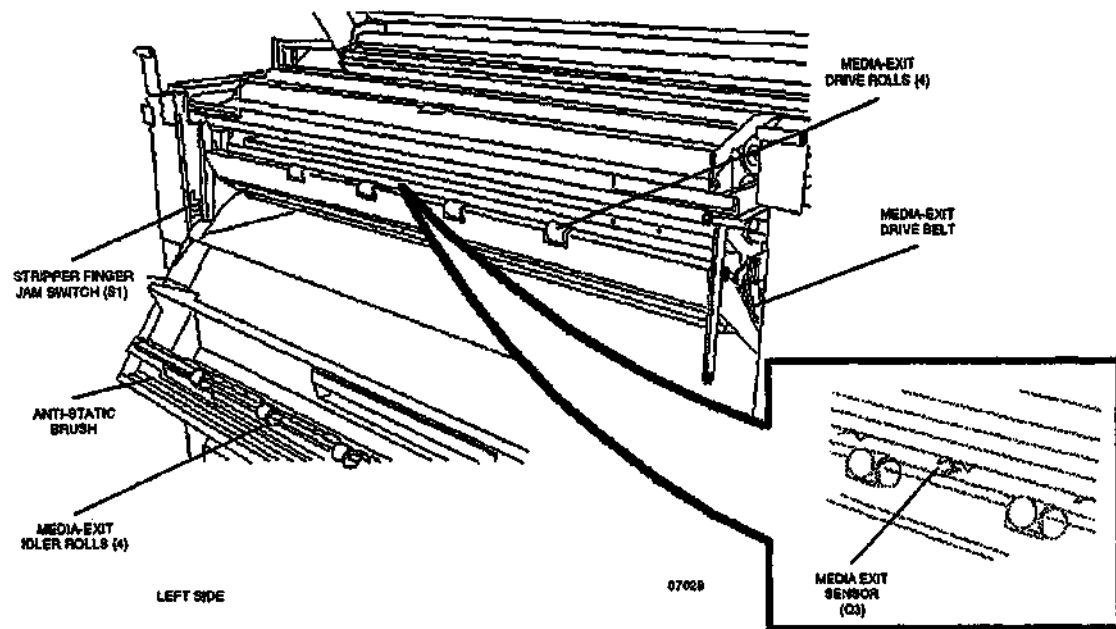
- [1033] **ADVANCE THE OIL WEB**: THIS DIAGNOSTIC ADVANCES THE OIL WEB UNTIL [EXIT] IS PRESSED. THIS IS USEFUL FOR TAKING UP ANY SLACK IN A WEB AND FOR VERIFYING THE OPERATION OF THE WEB CIRCUIT.
- [1034] **REMAINING OIL WEB LIFE**: DISPLAYS AN ESTIMATE OF THE NUMBER OF FEET (OR METERS) OF 38-INCH WIDE PRINTS THAT CAN BE MADE WITH THE CURRENT WEB.

10.3 FUSING AND MEDIA EXIT (1 OF 3)





10.3 FUSING AND MEDIA EXIT (3 OF 9)



Plug/Jack List

The following list is provided as an aid in locating plugs and jacks and other components. Refer to the referenced Block Schematic Diagram (BSD) for component location.

| Plug/Jack or Component | Brief Description | BSD |
|------------------------|---------------------------------|------|
| A1 | AC Module | 1.1A |
| A1FL1 | Noise Filter "Delta" | 1.1A |
| A1FL1 | Noise Filter "Corcom" | 1.1B |
| A1GFP1 | Ground Fault Protector | 1.1A |
| A1K1 | Fuser Power Relay | 10.1 |
| A1K3 | Fuser Ballast Power Relay | 10.1 |
| A1P2/J2 | Fuser Heater | 10.1 |
| A1P3/J3 | Controller Power Cord | 1.1A |
| A1Q1 | Fuser Triac | 10.1 |
| A1R1 | Fuser Ballast Resistor | 10.1 |
| A1R2 | Fuser Ballast Resistor | 10.1 |
| A1S1 | Main Power Switch | 1.1A |
| A2P201/J201 | Driver PWB | 7.5 |
| A2P202/J202 | Print Length Meter | 3.1 |
| A2P203/J203 | Driver PWB | 1.2 |
| A2P203/J203 | Driver PWB | 1.2 |
| A2P203/J203 | Cutter Interlock | 7.5 |
| A2P204/J204 | Driver PWB | 1.4 |
| A2P205/J205 | Xerographic HVPS | 9.1 |
| A2P206/J206 | Driver PWB to Main PWB | 3.1 |
| A2P207/J207 | Driver PWB | 1.2 |
| A2P208/J208 | Driver PWB | 1.2 |
| A2P209/J209 | Feed/Rewind Clutches | 7.2 |
| A2P210/J210 | Media Drive Motor | 7.1 |
| A2P210/J210 | Transport Drive | |
| A2P210/J211 | Paper Heaters | 7.2 |
| A2P213/J213 | Driver PWB (Fuser Control) | 10.1 |
| A2P214/J214 | Driver PWB | 1.2 |
| A2P215/J215 | Driver PWB | 4.3 |
| A2P216/J216 | Driver PWB | 1.2 |
| A3P301/J301 | User Interface PWB | 2.1 |
| A3P303/J303 | Main PWB | 9.7 |
| A3P305/J305 | Main PWB to Media Buckle Sensor | 4.1 |
| A3P306/J306 | Main PWB | 10.1 |
| A3P307A/J307A | Main PWB to Image Bar Assembly | 6.1 |
| A3P307B/J307B | Main PWB to Controller | 3.1 |
| A3P309/J309 | Motion and Position Sensors | 7.2 |
| A3P312/J312 | Main PWB | 1.2 |

| | | |
|---------------------|-----------------------------|------|
| A3P313/J313 | Main PWB to Driver PWB | 3.1 |
| A5P1/J1 | LVPS | 1.2 |
| A5P2/J2 | LVPS | 1.2 |
| A5P3/J3 | LVPS | 1.2 |
| A7P1/J1 | Media Drive Motor | 7.1 |
| A7P2/J2 | Media Drive Motor | 7.1 |
| A8MOT1P1/J1 | Cutter Drive Motor | 7.5 |
| A8Q1P1/J1 | Cutter Home Sensor | 7.5 |
| A20MOT1P1/J1 | Fuser Roll Drive Motor | 4.1 |
| A20MOT2P1/J1 | Developer Drive Motor | 4.2 |
| A20MOT3P1/J1 | Drum Drive Motor | 4.3 |
| A21-GRN | Transfer Current | 9.4 |
| A21-ORN | Detack Current | 9.4 |
| A21CL1P1/J1 | Cut Sheet Roll Drive Clutch | 8.1 |
| A21MOT1P1/J1 | Transport Drive | 8.1 |
| A21P1/J1 | Media Buckle Sensor | 4.1 |
| A21P1/J1 | Paper Transport Assembly | 7.5 |
| A21Q1P1 | Media Registration Sensor | 8.1 |
| A21Q2P1/J1 | Sheet Feed Sensor | 8.1 |
| A21Q5P1/J1 | Media Buckle Sensor | 4.1 |
| A21Q5P2/J2 | Media Buckle Sensor | 4.1 |
| A22MOT1P1/J1 | Cartridge Drive Motor | 9.7 |
| A22P1/J1 | Developer Assembly | 9.7 |
| A22Q1P1/J1 | Toner Sensor | 9.7 |
| A22Q2P1/J1 | Cartridge Home Sensor | 9.7 |
| A23DS1P1/J1 | Erase Lamps | 9.6 |
| A23F1 | Thermal Fuse | 10.1 |
| A23HR1 | Fuser Heat Rod | 10.1 |
| A23P1/J1 | Fuser Heater | 10.1 |
| A23P2/J2 | Xerographic Module | 7.5 |
| A23P5/J5 | Thermistor Pad Assembly | 10.1 |
| A24P1/J1 | Transport Drive | 8.1 |
| A24P2/J2 | Transport Drive | 8.1 |
| A25P1/J1 | Xerographic HVPS | 9.1 |
| A25P2/J2 (CHARGE) | Xerographic HVPS | 9.1 |
| A25P3/J3 (GRID) | Xerographic HVPS | 9.1 |
| A25P5/J5 (TRANSFER) | Xerographics HVPS | 9.8 |
| A25P6/J6 (DETACK) | Xerographics HVPS | 9.8 |
| A29CN2/A30P2 | LED Driver (Data) | 6.1 |
| A29CN3/A30J3 | LED Driver (Data) | 6.2 |
| A29P1/CN1 | LED Drive (Power) | 6.1 |
| A29P4/CN4 | LED Driver (Power) | 6.2 |
| A30J3/A29CN3 | LED Driver (Data) | 6.2 |
| A30P1/J1 | Receiver PWB to Main PWB | 6.1 |

| | | |
|---------------|------------------------------------|-----|
| A30P2/A29CN2 | Receiver PWB to LED Driver PWB | 6.1 |
| A32P1/J1 | User Interface PWB to Main PWB | 2.1 |
| A32P2AJ2 | User Interface PWB to 2x40 Display | 2.1 |
| CL1P1/J1 | Roll 1 Feed Clutch | 7.2 |
| CL2P1/J1 | Roll 1 Rewind Clutch | 7.2 |
| CL3P1/J1 | Roll 2 Feed Clutch | 7.3 |
| CL4P1/J1 | Roll 2 Rewind Clutch | 7.3 |
| CL5P1/J1 | Roll 3 Feed Clutch | 7.4 |
| CL6P1/J1 | Roll 3 Rewind Clutch | 7.4 |
| MOT1-3and-4 | Cooling Fan Motor | 1.4 |
| MOT2-1 and -2 | Cooling Fan Motor | 1.4 |
| P5/J5 | Controller to Main PWB | 3.1 |
| Q1P1/J1 | Roll 1 Position Sensor | 7.2 |
| Q2P1/J1 | Roll 2 Position Sensor | 7.3 |
| Q3P1/J1 | Roll 3 Position Sensor | 7.4 |
| Q4P1/J1 | Roll 1 Motion Sensor | 7.2 |
| Q5P1/J1 | Roll 2 Motion Sensor | 7.3 |
| Q6P1/J1 | Roll 3 Motion Sensor | 7.4 |
| S1 | Cutter Cover Interlock Switch | 1.3 |
| S1 | Drawer 1 Reed Switch | 7.1 |
| S2 | Drawer 2 Reed Switch | 7.1 |
| S3 | Drawer 3 Reed Switch | 7.1 |
| S21 | Front Door Interlock Switch | 1.3 |
| S26 | Top Cover Interlock Switch | 1.3 |
| S29 | Feed Shelf Interlock Switch | 1.2 |

] SERIAL NUMBER:

ACCOUNT / KEY OPERATOR:

| | | | | |
|----------------|-----------------|--|--|--|
| INSTALL DATE: | TYPE OF CALL | | | |
| | REASON FOR CALL | | | |
| INSTALL METER- | DATE | | | |
| | SERVICE REP | | | |
| PRIMARY CSE: | METER | | | |

TYPE OF CALL

REASON FOR CALL

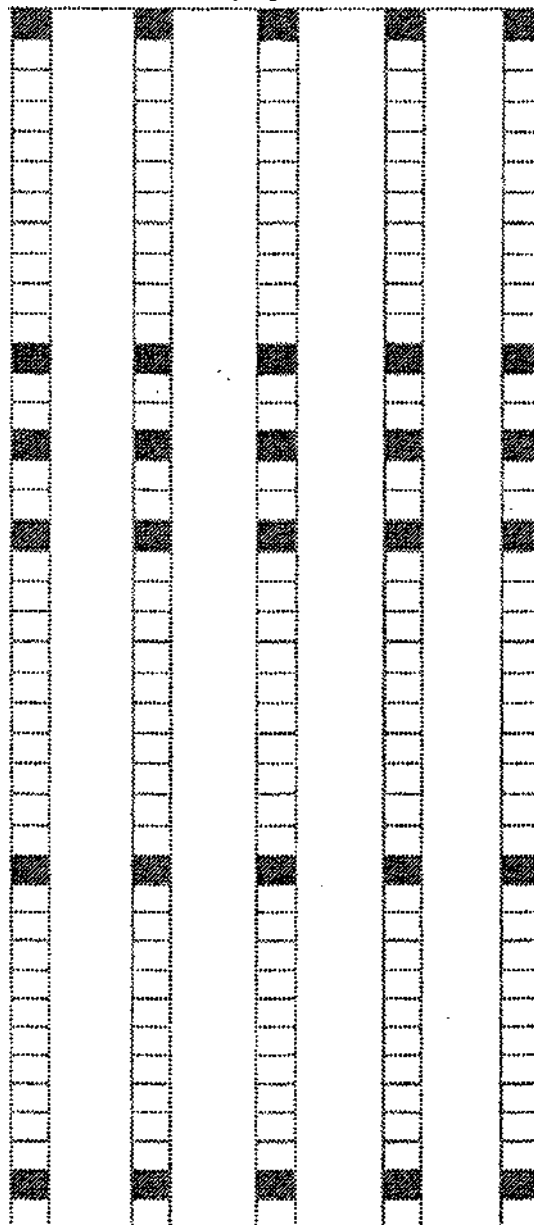
= Check
= Clean
A = Adjust
R = Replace

CB Call Back
XI Xerox Initiated
UM Unscheduled Maintenance
CC Customer Care

PH Paper Handling
PQ Print Quality
OTH Other
KO Key Operator Error

MEDU HANDLING

| | | |
|----------------------------------|---------|--|
| Media Feed Rolls | | |
| Registration Rolls | | |
| Registration Sensor | | |
| Transport Assy | | |
| Transport Motor | | |
| Cutter | | |
| Cutter Motor | | |
| Media Drive Motor | | |
| Media Exit Sensor | | |
| Buckle Control Switch | | |
| DEVELOPMENT | | |
| Dev. Pressure Equalization Tubes | 40K(C) | |
| Developer Spacing Rollers | A/R | |
| CLEANING | | |
| Cleaner Blade | w/Photo | |
| Xeromod Seals | w/Photo | |
| FUSER | | |
| Heat Roll | A/R | |
| Heat Roll Stripper Fingers | A/R | |
| Fabric Guide | A/R | |
| Thermistor | | |
| Overheat Sensor | | |
| Fuser Temperature | | |
| Web Oiler Assy | | |
| Oiler Web | 100 K | |
| Web Drive Motor | | |
| Fuser Drive Motor | | |
| XEROGRAPHICS | | |
| Photoreceptor | A/R | |
| Scorotron Assy | | |
| Scorotron Pin Array | | |
| Scorotron Grid | | |
| Transfer/Detack Corotron | | |
| Erase Lamp | | |
| Image Module Spacing Rollers | A/R | |
| Image Module Assy | | |
| Toner Sensor | | |
| Electrostatic Setup | | |
| OTHER | | |
| Ozone Filter | | |



Transmittal Page

| | | |
|--------------------------------|--------------------------------|---------------------------------|
| Product 8830 DDS | Title Service Manual | Part Number 701P11550 |
| Status INITIAL ISSUE | Date March 1998 | |

Revision Control List

| Product | | Title | | Part Number | Date |
|-----------------|--|-----------------------|--|------------------|-------------|
| 8830 DOS | | Service Manual | | 701PI1550 | 3/98 |

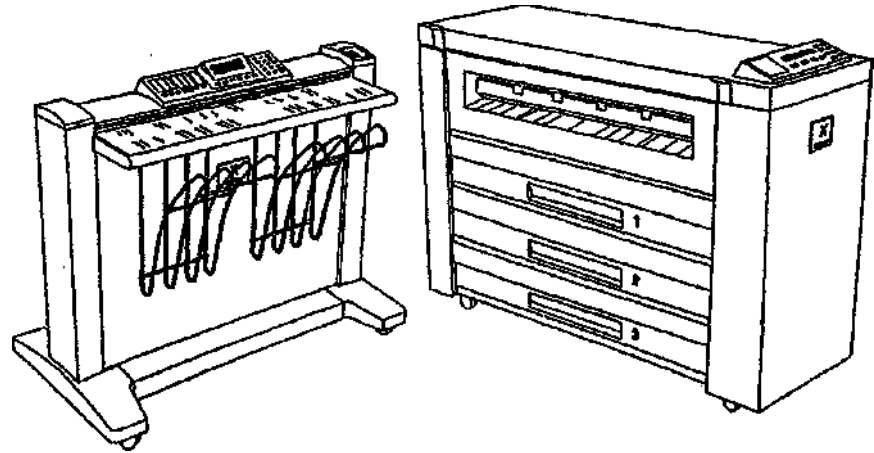
| Page No. | Rev. | Page No. | Rev. | Page No. | Rev. | Page No. | Rev. |
|----------|------|----------|------|----------|------|----------|------|
| 1 | 3/98 | 3-1 | 3/98 | 6-4 | 3/98 | 7-1 | 3/98 |
| II | 3/98 | 3-2 | 3/98 | 6-5 | 3/98 | 7-2 | 3/98 |
| III | 3/98 | 3-3 | 3/98 | 6-6 | 3/98 | 7-3 | 3/98 |
| IV | 3/98 | 3-4 | 3/98 | 6-7 | 3/98 | 7-4 | 3/98 |
| V | 3/98 | | | 6-8 | 3/98 | | |
| VI | 3/98 | | | 6-9 | 3/98 | | |
| VII | 3/98 | | | 6-10 | 3/98 | | |
| VIII | 3/98 | 4-1 | 3/98 | 6-11 | 3/98 | | |
| IX | 3/98 | 4-2 | 3/98 | 6-12 | 3/98 | | |
| X | 3/98 | 4-3 | 3/98 | 6-13 | 3/98 | | |
| XI | 3/98 | 4-4 | 3/98 | 6-14 | 3/98 | | |
| XII | 3/98 | 4-5 | 3/98 | 6*15 | 3/98 | | |
| XIII | 3/98 | 4-6 | 3/98 | 6-16 | 3/98 | | |
| XIV | 3/98 | 4-7 | 3/98 | 6-17 | 3/98 | | |
| | | 4-8 | 3/98 | 6-18 | 3/98 | | |
| | | 4-9 | 3/98 | 6-19 | 3/98 | | |
| | | 4-10 | 3/98 | 6-20 | 3/98 | | |
| 1-1 | 3/98 | 4-12 | 3/98 | 6-21 | 3/98 | | |
| 1-2 | 3/98 | 4-13 | 3/98 | 6-22 | 3/98 | | |
| 1-3 | 3/98 | 4-14 | 3/98 | 6-23 | 3/98 | | |
| 1-4 | 3/98 | 4-15 | 3/98 | 6-24 | 3/98 | | |
| 1-5 | 3/98 | 4-16 | 3/98 | 6-25 | 3/98 | | |
| 1-6 | 3/98 | | | 6-26 | 3/98 | | |
| 1-7 | 3/98 | | | 6-27 | 3/98 | | |
| 1-8 | 3/98 | | | 6-28 | 3/98 | | |
| | | 5-1 | 3/98 | 6-29 | 3/98 | | |
| | | 5-2 | 3/98 | 6-30 | 3/98 | | |
| | | 5-3 | 3/98 | 6-31 | 3/98 | | |
| 2-1 | 3/98 | 5-4 | 3/98 | 6-32 | 3/98 | | |
| 2-1 | 3/98 | 5-5 | 3/98 | 6-33 | 3/98 | | |
| 2-3 | 3/98 | 5-6 | 3/98 | 6-34 | 3/98 | | |
| 2-4 | 3/98 | | | 6-35 | 3/98 | | |
| 2-5 | 3/98 | | | 6-36 | 3/98 | | |
| 2-6 | 3/98 | | | 6-37 | 3/98 | | |
| | | 6-1 | 3/98 | 6-38 | 3/98 | | |
| | | 6-2 | 3/98 | | | | |
| | | 6-3 | 3/98 | | | | |

Revision Control List

| Product | Title | Part Number | Date |
|----------|----------------|-------------|------|
| 8830 DDS | Service Manual | 701P11550 | 3/98 |

**THE DOCUMENT COMPANY
XEROX**

**8830 DDS
Service Manual**



CAUTION

Certain components in the 8830 DOS system are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

NOTICE

While every care has been taken in the preparation of this manual, no liability will be accepted by Xerox Corporation arising out of any inaccuracies or omissions.

NOTICE

All service documentation is supplied to Xerox external customers for informational purposes only. Xerox service documentation is intended for use by certified product trained service personal only. Xerox does not warrant or represent that such documentation is complete, nor does Xerox represent or warrant that it will notify or provide to such customer any future changes to this documentation. Customer performed service of equipment, or modules, components or parts of such equipment may affect the warranty offered by Xerox with respect to such equipment. You should consult the applicable warranty for its terms regarding customer or third party provided service, if the customer services such equipment, modules, components or parts thereof, the customer releases Xerox from any and all liability for the customer actions, and the customer agrees to indemnify, defend and hold Xerox harmless from any third party claims which arise directly or indirectly from such service.

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

© 1998 by Xerox Corporation.
Xerox® and The Document Company®
are trademarks of Xerox Corporation.
Xerox product names mentioned in this publication are trademarks of the
XEROX CORPORATION.

Table of Contents

| | |
|------------------------------------|------|
| About this Documentation..... | VII |
| Organization..... | VII |
| How to Use This Documentation..... | VIII |
| Other Information..... | IX |
| Reference Symbolology..... | X |

| | |
|---|--|
| Section 1. Service Call Procedures | |
| Section 2. Repair Analysis Procedures | |
| Section 3. Image Quality Repair Analysis Procedures | |
| Section 4. Repair and Adjustment Procedures | |
| Section 5. Parts List | |
| Section 6. General Procedures | |
| Section 7. Wiring Data | |

About This Documentation

Documentation Design and Purpose

This Service Documentation contains diagnostic, repair, and maintenance Information, which **has been** designed to assist the Service Representative in the isolation and repair of faults as well as maintenance of the 8830 DDS.

This documentation assumes that the user is familiar with the electrical and mechanical standards that are commonly used throughout industry, as well as certain Xerox design and documentation conventions. This documentation also **assumes** that the user has successfully completed any required training and is familiar with the use of any special tools that are required to service this product.

Applicability

This documentation contains information that applies to units built for United States Operations (USO), Xerox Canada Limited (XCL), America's Operations (AO), and Xerox Limited (XL). Normally the diagnostic, repair, and adjustment procedures found in this documentation apply equally to all SO Hz and 60 Hz machine versions. Some procedures, however, may be identified as being applicable to a specific version or machine configuration.

Limitations

This service documentation does not support specific electrical, mechanical, or operational considerations of any accessory device or machine modification not authorized by Xerox Corporation for this product.

Service Documentation Revisions

This service documentation may be subject to periodic revision in order to reflect any changes in electrical or mechanical hardware, as well as any possible additions or corrections necessary to ensure the technical accuracy of the documentation.

Field Service Bulletins

Field service Information specifically applicable to the machine may occasionally be Issued in the form of electronic or critical bulletins. Because bulletins contain important information, they should always be retained within this service documentation for quick reference.

Publication Comment Sheet (PCS - hardcopy only)

A publication Comment Sheet (PCS) is provided at the end of this service documentation (hardcopy only). The PCS form is used to communicate pertinent Information to Multinational Customer & Service Education (MC&SE) regarding the effectiveness and technical accuracy of this documentation.

Organization

This documentation is divided into eight sections. In addition to the Introduction, the following sections are contained within this documentation.

Section 1 • Service Call Procedures

Section 2 - Status indicator RAPs

Section 3 - Image Quality RAPs • (Section not used at this time.)

Section 4 - Repair/Adjustment Procedures

Section 5 • Parts List

Section 6 • General Procedures/Information

Section 7 - Wiring Data

Section 8 * Accessories (Section not used at this time.)

A detailed description of the information contained within each section of the service documentation will be found in the following subsection.

How to Use This Documentation

Introduction

This section provides the Service Representative with Information pertaining to the organization and use of this service documentation, and includes the following supportive reference data:

Reference Symbolology

Signal Nomenclature

DC Voltage Ranga Specifications

AC Voltage Range and Current Specifications

Section 1: Service Call Procedures (SCP)

This section is used by the Service Representative as a structured process for determining the type and sequence of actions that are performed during a service call, the Service Call Procedures section is designed to assist in the effective recognition of machine symptoms and problems, as well as to provide instructions for the maintenance and corrective actions that are required to return the machine to the full operating condition.

Section 1 of this service documentation is the entry level for all service calls. The Service Representative should begin each service call with the Initial Action procedure found in Section 1.

The Service Call Procedures section is composed of five integral elements: initial Action. System Checks, Subsystem Maintenance, Preventive Maintenance, and Final Action. The maintenance and diagnostic activities in this section may direct the Service representative to perform additional service activities found elsewhere in the documentation, such as RAPs, removal and replacement procedures, and adjustment procedures.

The **Initial** Action procedure Identifies certain required actions that are necessary to obtain a basic appraisal of machine operation at the start of the service call,

The System Checks subsection is used to test the machine in order to confirm and define the problem areas. This subsection is used to assist the Service Representative in diagnosing the not readily apparent machine problems, or when there are conflicting or ambiguous symptoms present. It is important that this procedure be used in order to ensure that the correct symptom is being diagnosed.

The Subsystem Maintenance subsection contains a specific activity procedure that must be performed on the service call.

The Preventive Maintenance procedure contains a list of the cleaning and lubrication activities that are designed to extend and enhance the reliability and performance of the machine.

The Final Action subsection is used to identify the actions necessary to clear the call with the Customer and to complete any administrative tasks that are associated with completing the service activity.

Section 2; Status indicator RAPs

Section 2 of this documentation contains the Repair Analysis Procedures (RAPs) necessary to repair all faults other than the image quality faults. The Service Representative will be referred to this section from some other section of this documentation during the service call. When a machine defect or fault has been resolved by using a RAP, the Service Representative should immediately return to the point in the service call from which section 2 was entered.

There are two types of RAPs found in section 2. The first type is a RAP that is associated with the display of a status code or fault code in the RAP title. The second type is the Other Fault RAP. Other Fault RAPs are diagnostic procedures that are designed to address symptoms or problems that are not identified by, or associated with, a displayed status or fault code.

Section 3: Image Quality RAPs

This section contains the Image Quality Repair Analysis Procedures (IQ RAPs) that are used to diagnose Image quality defect problems. The RAPs that are associated with Image quality defect symptoms will contain the prefix "IQ" to differentiate them from other types of machine failure symptoms.

Section 4: Repair and Adjustment Procedures

This section contains all repair and adjustment procedures for the machine. Repairs (REPs) and adjustments (AOJa) are identified by the use of a standard chain prefix number.

Section 5: Parts List

This section contains a list of spare parts for the machine. All parts list page reference numbers begin with the letters "PL", followed by a prefix number, a decimal point, and a sequential number used within the subsystem.

Section 6: General Procedures / information

This section contains procedures and Information of a general nature that apply to the machine. This section is divided into two basic parts.: General Procedures and General Information.

The General Procedures subsection contains frequently used procedures that relate to the diagnosis, the setup, or the operation of the machine.

The General Information subsection contains product specific information that is pertinent to the operation of the machine, but will not be found in any other part of the service documentation. This information may include product codes, environmental operating data, installation space requirements, and paper and electrical specifications. This subsection may also contain information regarding supplemental tools and supplies, general service notes, a glossary of commonly used terms, and a Change Tag Index of authorized machine modifications and retrofits.

Section 7: Wiring Data

This section contains support Information to assist in the electrical diagnosis of machine problems and is a central location for electrical wiring diagrams. This section is used in conjunction with other diagnostic or maintenance procedures that are contained in other sections of the service documentation. This section may contain the following:

Wirenet Diagrams (Optional)

This section contains wirenet diagrams used mainly to troubleshoot AC power, DC power, AC neutral, and DC return distributions, and are sometimes used to support RAPs. Wirenets are useful when it is necessary to know the termination components in a source circuit, such as DC power.

Block Schematic Diagrams (BSD's) (Optional)

Block Schematic Diagrams (BSDs) are used as an optional aid to troubleshoot electrical problems.

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 will be found in the Reference Symbolology subsection, contained elsewhere in this section.

Conventions

The following conventions are used in this service documentation:

| | |
|----------------|--|
| [n-nn] | Hyphenated numbers enclosed in brackets indicate a diagnostic code to be used |
| bolding | 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 Symbolology

Introduction to Reference Symbolology

This section describes and defines the various acronyms, abbreviations, reference symbols, Signal Nomenclature, and AC and DC power specifications. The following is a description of some of the terms found in this section:

Acronyms

Acronyms are used throughout this service documentation to denote common terminology. Although some acronyms may be unique to this product, most acronyms used in this document are known throughout the service industry. Table 1 lists the acronyms that are found in this service documentation.

Reference Symbols

Reference symbols consist of various icons used in this documentation to denote supportive data that 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 various 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

Table 2 lists the electrical wire colors that are identified in this service documentation and redacts the use of standardized abbreviations,

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 |
| LEO | Light Emitting Diode |
| PL | Parts List |
| PWB | Printed Wiring Board |
| RAP | Repair Analysis Procedure |
| VAC | Volts Alternating Current |
| VDC | Volts Direct Current |

Table 2 Wire Color Abbreviations

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

REFERENCE SYMBOLLOGY

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

Note



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

Adjustments



Voltage Source



This is an Indication of the source voltage that is used for operation of a component. This voltage is distributed in the PWB and comes from the LVPS.

Status Code



The status code is represented by a box in the control logic section of the circuit diagram.

Flag



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

control



The code [0403] is an example of an output diagnostic test.

Switches and Relay Contacts



Safety Interlock switch that is open.



Safety Interlock switch that is closed.



Switch/relay contacts with momentary contacts shown normally open.



Switch/relay contacts with momentary contacts shown normally closed.

Parts List

PI 1.1

Reference to an Exploded Drawing • The spared component is found in the particular drawing in the Parts List.



Reference to a Repair Procedure - This symbol indicates that the part has a Repair procedure listed in the Repair / Adjustment section of this manual.



Reference to an Adjustment Procedure • This symbol indicates that the part has an Adjustment procedure listed in the Repair / Adjustment section of this manual.



Reference to an Adjustment and Repair Procedure - This symbol indicates that the part has an Adjustment procedure and a Repair procedure listed in Section 4.

Other Symbols

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.

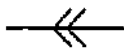
CAUTION

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



CAUTION

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



This symbol indicates an interrupted signal in a horizontal direction.

Ground



This symbol Indicates a machine ground.

Connector



Plug /Jack Connector and pin number.

Motor



Motor

Thermistor



Thermistor Bead, used to sense temperature

Driver



A Driver that is used to switch on DC components

Solenoid



Relay or Clutch Solenoid.



This symbol identifies the component or configuration of components in a circuit diagram that are part of a change identified with the Tag / MOD number.



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



This symbol identifies the component or configuration of components in a circuit diagram that are not part of a change identified with this Tag / MOD number.

Signal Nomenclature

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

MAIN MOTOR ON (L) +5 VDC

1. MAIN MOTOR ON = Signal Name
2. (L) = Logic State when the signal is available in it's named state. In this case, the signal is Low when the Main Motor is energized.
3. +5 VDC = Logic level when the signal is High.

DC Voltage Levels

DC Voltages should be measured between the test point and the machine frame, unless instructed otherwise. Table 3 shows the value of the voltages.

Table 3

| Voltage | Specification |
|---------|--------------------|
| +5 VDC | +4.5 to +5.5 VDC |
| +24 VDC | +21.6 to +26.4 VDC |

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 4

| 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

Introduction.....1-3

Initial Actions / Systems Checks.....1-4

Call Flow Diagram.....1-5

Message Display Entry Chart.....1-6

Maintenance Procedures.....1-7

Call Back.....1-8

Final Actions.....1-8

Introduction

This service manual is to be used to service and maintain the 8830 DDS (Digital Document System) and to provide direction as to the maintenance and service of the other elements resident within the 8830 Digital Document System.

The 8830 DDS is an Integrated solution for electronically scanning and printing images for engineering or architectural use. Printing and Copying can be done concurrently in this system, so there is no need to wait for the printer to finish printing before scanning the next image. The system is comprised of the following elements:

- Xerox 7356 Scanner and the attached Xerox 8830 DDS Control Panel - for capturing Images.
- Xerox 8830 Controller - for processing these images.
- Xerox 8830 Printer • for making good quality copies of the captured Images In engineering or architectural sizes.
- Xerox 8830 Folder • optional device for folding the printed images.

The Service Call Procedures (Section 1) are designed to assist the Customer Service Engineer in identifying faults, performing the necessary corrective actions and performing Maintenance Procedures. The Service Call Procedures are designed to be used with this service manual, and are the entry level for all service calls within the 8830 DDS system.

The 8830 DDS Service Manual is the entry point to begin the systems level troubleshooting. Begin the service call with the Systems Level Call procedures, Section 1. The Call Flow Diagram will help you Isolate the problem down to the particular system module. The diagram may direct you to a section in one of the related service manuals to continue troubleshooting the problem.

Call Flow Diagram • This diagram outlines the major activities that are performed when a service call is made. The Initial Actions assist the CSE in Interfacing with the customer to help Identify the particular problem. The diagram also directs the CSE to verify, classify, repair the problem, and perform the correct Maintenance Procedure.

Message Display Entry Chart • This chart contains a list of Messages, their Cause, the corresponding Clearance Procedure, and the Go to reference. The charts are designed to direct the Representative to the appropriate Clearance procedure. If the Procedure does not clear the Status Code, the Representative refers to the Go to column. This column contains the Information to be followed in order to repair the problem. When the problem has been repaired, refer to the Call Flow Diagram and continue the Service Call

Call Back • After correcting the problem that resulted in the call back, go to the Final Action and perform the activities Indicated.

Maintenance Procedure • This procedure contains the tasks that are performed after the main cause for the service call has been corrected. This tasks identified in the procedure are performed at the Interval indicated. The Interval may occur after a specific length of media is printed, for example, 10K. The interval may also be specified as a normal Call (NC),

Final Actions • The purpose of this procedure is to record the media feet count and to make a record in the machine log book of the service activities that were performed. Final Action is designed to test the image quality under stress and repair any image quality problems. A copy of test pattern 82ES980 or 499T288 will then be made and compared with the Image Copy quality specifications located in Section 3 of the service manual.

Initial Actions / System Checks

1. Ask the operator to describe the problem.
 2. Ask the operator to halt all print jobs and stop the 8830 Controller.
 3. Check the Log Book.
 4. Check the Recent Fault List for trends by printing out the 8830 Printer Configuration Sheet through the Utilities menu. The last 25 faults are listed on the upper-right side of the sheet,
 - a. 8830 DOS: Check the RECENT FAULTS in the System Information menu.
 5. Analyze the frequency of the Fault Codes and refer to the Status Code Entry Chart to troubleshoot the problem:
 - a. C or E codes should occur no more frequently than once per 1000 linear feet.
 - b. AI Cutter faults should occur no more frequently than once per 10,000 feet.
- NOTE: E4-09, Cx-04 and Cx-05 are out-of-media codes and will occur once per 500 linear feet. Also, 001 and 002 codes are power on / off. Question the operator if the faults are excessive.
8. Record the readings from the media length counter.
 7. Attempt to duplicate the problem.

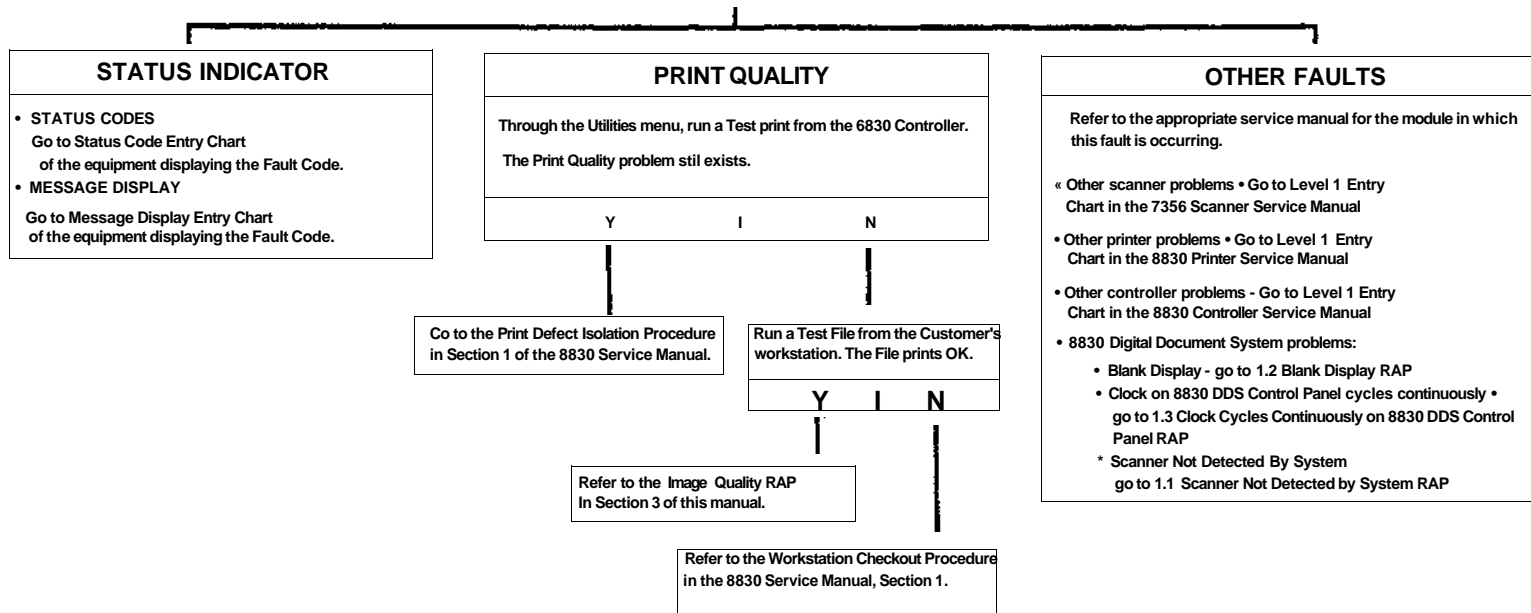


Figure 1 Initial Actions / Systems Checks

Call Flow Diagram

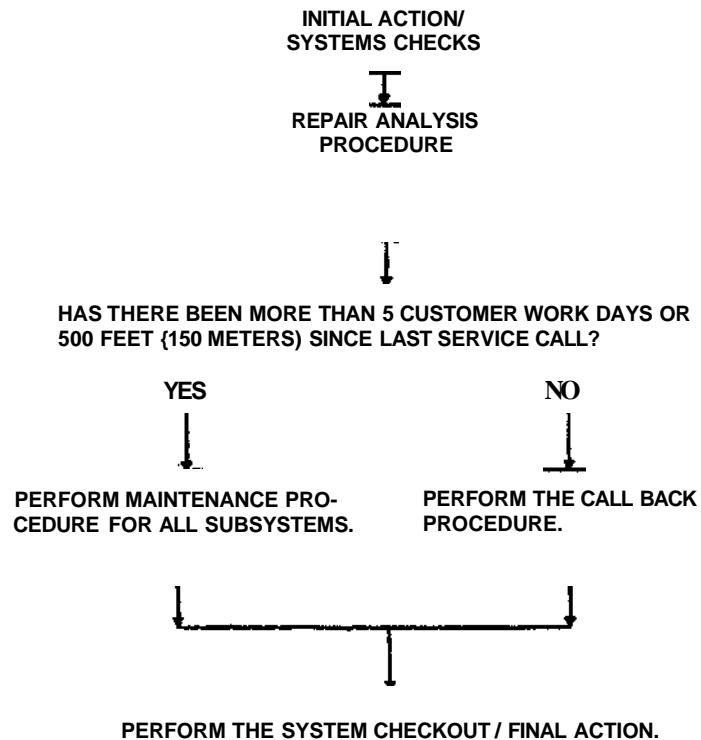


Figure 2 Call Flow Diagram

Message Display Entry Chart

The table below shows scanner fault messages, the probable cause, what to do to clear the fault, and a reference to consult if the problem still exists.

Table 1 Message Display Entry Chart

| MESSAGE DISPLAYED | CAUSE | CLEARANCE PROCEDURE | IF THE PROBLEM STILL EXISTS: |
|--|---|--|---|
| CONTROLLER FAULT • 60000001 MEMORY FULL. RESCAN DOCUMENT AFTER CURRENT PRINT JOB COM- PLETES. | It is possible for the system to process several jobs ahead of the job which is currently printing, but if features like Automatic Scaling, Rotation, or Size Detection are enabled the Controller may be required to store the entire Job in Display List Memory PRIOR to printing. (More Image enhancements require more memory space.) Sometimes these image enhancements consume all the available Display List Memory and the printing operation halts. | Remove the current job, wait for previous scans to finish printing. End the current set of prints, and rescan the current document, | The addition of more memory space will resolve this problem, as it increases the ability of the Controller to process large and complex jobs with these options enabled. |
| CONTROLLER FAULT - 50000002 MEMORY FULL. PRINT SCANNED PAGES BEFORE RESCANING DOCU- MENT. | | | |
| WIDTH DETECTION FAILED. PLEASE ENTER WIDTH OF THE CEN- TER REGISTERED DOCUMENT. | The system could not determine the width of the document being scanned. The minimum input document size is 4.5 x 5.5 Inches. If the document is smaller than this, the scanner is not mechanically capable of detecting and feeding the document. Maximum document size is 36 Inches. (40 Inch documents can be Input into the scanner, but will have edges cropped off.) | The operator is prompted to enter the document width, and advised that the document must be center registered. Documents that are too small in width will either result in misfeeds or jams, and will have to be manually removed from the scanner. | Direct the customer to enter the width and length of the document. Also inform customer as to document size limits. |
| CONTROLLER FAULT - 50000003. 60000004 INTERNAL FAULT. CALL FOR SERVICE. | The software controlling the 7356 Scanner received an unrecognized request from the software controlling the 8830 DDS Control panel, or operating system. | If the faults do not clear automatically, reboot the 8830 DDS in the following order: 7356 Scanner, 8830 Controller, 8830 Printer. | Run the scanner diagnostic tests from a laptop computer. |
| CONTROLLER FAULT • 50000007 | The software controlling the scanner had an unexpected failure when requesting an operation from the scanner. This can occur if the 7356 Scanner is powered off without rebooting the 8830 Controller. | Reboot the 8830 DDS in the following order: 7356 Scanner, 8830 Controller, 8830 Printer. | Run the scanner diagnostic tests from a laptop computer. |
| CONTROLLER FAULT • 50000008 | 7358 Scanner media jam occurred either during scan or during media ejection from scanner. | Manually remove the jammed document. Rescan it if necessary. | Reboot the 8830 DDS in the following order: 7356 Scanner, 8830 controller, 8830 Printer. |
| SCANNER FAULT - 5000000A INTERNAL FAULT. CALL FOR SERVICE. | 8830 Controller software failure. | Reboot the 8830 DDS in the following order: 7356 Scanner, 8830 Controller, 8830 Printer. | Run the scanner diagnostic tests from a laptop computer. |
| NORMALIZE CAMERAS FAILED | 7356 Scanner failed to normalize. | None. | Go to the 7356 Scanner Service Manual, Initial Actions / Systems Checks. |
| CLOCK CYCLES CONTINUOUSLY ON 8830 DOS CONTROL PANEL. | | Refer to 1.3 RAP in this service manual. | Run the scanner diagnostic tests from a laptop computer. |

Maintenance Procedures

Perform the Tasks at the interval indicated in the table, perform NC (Normal Call) tasks on every call. The task with specific intervals should be done only at the interval indicated.

Table 1 Maintenance Procedures

| INTERVAL | TASK | REASON | TASK ENABLER |
|----------|---|-----------------------|--|
| NC | Perform the Normalize Cameras test. If the test fails, clean the Platen Glass and the Document Hold-Down Guide carefully. Then repeat the test. | Print / Image Quality | Refer to Section 4 of this service manual. |
| NC | Clean the Platen Glass, the Document Hold-Down Guide, and the Document Drive Rolls. | Print / Image Quality | Clean the parts with 43P81 Lens and Mirror Cleaner using cleaning pads 600S4372. |
| NC | Perform ADJ 4.4.8, Motor Speed If there is evidence of magnification error in the process direction. | Print / Image Quality | Refer to Section 4 of this service manual. |
| NC | Perform ADJ 4.4.9, Front To Back Stitch Alignment and ADJ 4.4.7, Left to Right Stitch Adjustment. | Print / Image Quality | Refer to Section 4 of this service manual. |
| NC | Check ADJ 4.4.9, Registration. Perform the adjustment if required. | Print / Image Quality | Refer to Section 4 of this service manual. |

Call Back

1. Follow the Call flow diagram and resolve the problem that caused the Call Back.
2. Perform the Final Action. Do Not perform the Maintenance Procedures.

Final Actions

1. Make one D (A1) sized copy on 20lb (80gsm) bond paper of Test Pattern 82E6980,
 - a. Evaluate the copy and ensure that the copy meets the image Quality Specifications in Section 3.
 - b. If the copy is not within the specifications, refer to the Entry Copy Quality (CQ) RAP and follow the procedure to eliminate any defects.
 - c. Evaluate the copy for any visible defects.
 - d. If the copy exhibits any visible defects, refer to the appropriate Copy Quality (CQ) RAP and follow the procedure to eliminate the defects.
2. Make a copy.
3. Check that the copy count meters on the Image Output Terminal (IOT) have advanced.
4. Fill out the Service Call Report, Record all activities in the Service Log.
5. If new developer material was installed in the IOT, write the developer batch number in the Service Log.
6. Give appropriate copy credits to the customer.
7. If service was performed on the IOT or the IIT use the serial numbers of the IOT or the IIT to close the call. Report both the IOT meters A and B when closing the call.

2. Repair Analysis Procedures

- 1.1 Scanner Not Detected By System RAP.....2-3
- 1.2 Blank Display **RAP**.....2-4
- 1.3 Clock Cycles Continuously on 8830 DDS Control Panel RAP.....2-5

1.1 SCANNER NOT DETECTED BY SYSTEM RAP

This RAP is to be followed to determine why the 7356 Scanner cannot communicate with the 8830 Controller, and to rectify the problem.

Initial Actions

Perform the following:

- Ensure that all cables and connectors are correctly hooked up between the 7356 Scanner and (he 8830 Controller. (Refer to the 8830 DOS Installation Procedure located in Section 6 of this service manual.)
- Ensure that all elements of the system are plugged in to a reliable power supply.
- Reboot the 8830 DDS by powering off all elements and rebooting them in the following order: 7356 Scanner, 8830 Controller, 8830 Printer.

Procedure

Run a configuration test print from the 8830 printer and check the print out.

NOTE: If the system parameter is set to PRINTER and a scanner is connected to the SCSI bus and powered on or off, the scanner will be Ignored. For the scanner to work, the parameter must be set to PRINTER/COPIER.

The system parameter is set to Printer/Copier.

Y N

Set the system parameter to Printer/Copier and reboot the 8830 DDS. Run another configuration test print from the Scanner Control Panel. Recheck the system parameter to ensure that this change has been made.

Check to ensure that the 7356 Scanner SCSI cable is connected to the appropriate connector on the 8830 Controller. For example, If the scanner Control Panel cable is connected to the primary serial Interface on the 8830 Controller, the scanner communications with the 8830 Controller will be treated as a malformed print Job. If all connections are satisfactory, Escalate the service call.

1.2 BLANK DISPLAY RAP

This **RAP** is to be followed to determine the cause of the 8830 DDS Control Panel having a blank display, and to rectify the problem.

Initial Actions

Perform the following:

- Ensure that all cables and connectors are correctly hooked up between the 7356 Scanner and the 8830 Controller. (Refer to the 8830 DDS Installation Procedure.)
- Ensure that all elements of the system are plugged in to a reliable power supply.
- Reboot the 8830 DDS system by powering off all elements and rebooting them in the following order: 7356 Scanner, 8830 Controller, 8830 Printer.

Procedure

Remove the two hex screws securing the cover of the 8830 Controller and ensure that the LEDs located on the 8830 Controller Main PWB are lit and cycle on and off. This Indicates that the Controller is operational. **The LEDs on the 8830 Controller are lit and cycle on and off.**

Y N

Check the 8830 Printer Display Panel for a fault code and troubleshoot the problem from the 8830 Printer Service Manual.

Remove the 8830 DDS Control Panel from the 7356 Scanner by loosening the three upper screws on the Control Panel Mounting Plate, located at the rear of the 8830 DDS Control Panel. Gently lift the Control Panel and place it upside-down upon the 7356 Scanner. Check for 5 volts between TH1 and TH2 on the 8830 DDS Control Panel PWB. There is +5 volts **between TH1 and TH2.**

Y N

Replace the 8830 DDS Control Panel power cable.

Perform the following:

Try adjusting the 8830 DDS Control Panel ambient intensity by rotating the trim pot on the 8830 DDS Control Panel Main PWB. A small jeweler's screwdriver will be required to make this adjustment.

Replace the 8830 DDS Control Panel.

1.3 CLOCK CYCLES CONTINUOUSLY ON 8830 DDS CONTROL PANEL RAP

The purpose of this RAP is to Isolate and rectify the cause of a clock Icon displayed continuously on the 8830 DDS Control Panel. The 8830 DDS Control Panel Is Inoperative and the system will not initialize under this condition.

Initial Actions

Perform the following:

- Reboot the 8830 DDS by powering off all elements and rebooting them in the following order: 7356 Scanner, 8830 Controller, 8830 Printer

Procedure

(Figure 1): Ensure that the 7356 Scanner SCSI Address Switch is set to 4. The Scanner SCSI **Address** Switch is set to 4.

Y N

Perform the following:

- Switch off all elements of the 8830 DDS.
- Using a small screwdriver, set the SCSI Address Switch to 4.
- Switch on the elements of the 8830 DDS in the following order: 7356 Scanner, 8830 Controller, 8830 Printer.

(Figure 1): Ensure that the 7356 Scanner SCSI cable is undamaged and firmly connected to either of the SCSI ports at the left rear of the 7356 Scanner. The SCSI cable **is** undamaged and correctly **connected**.

Y N

Perform the following:

- Switch off all elements of the 8830 DDS.
- Connect the 7356 SCSI cable to either of the SCSI ports at the left rear of the 7356 Scanner.
- Switch on the elements of the 8830 DDS In the following order: 7356 Scanner, 8830 Controller, 8830 Printer.
- Replace the 7356 SCSI cable If the above measures do not rectify the problem.

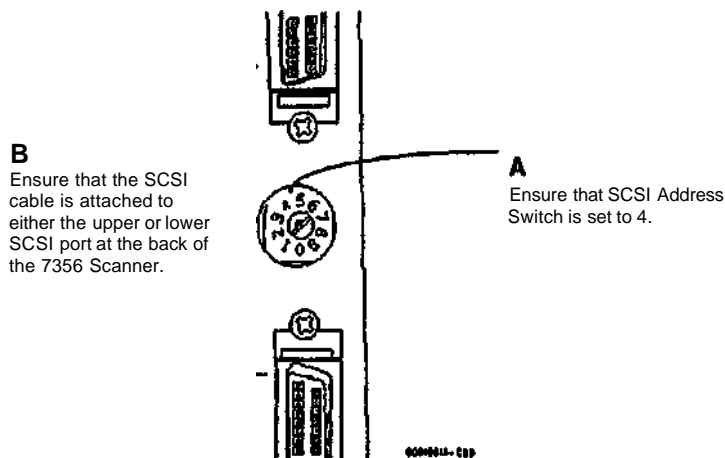
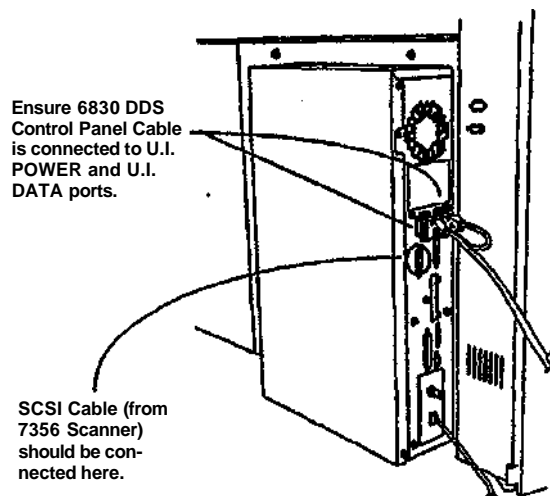


Figure 1 7356 Scanner SCSI Ports and SCSI Address Switch

A



* Perform the Communications (loop-back) Test found in Section 6 of this service manual. It is listed under Control Panel Diagnostics. If the 8830 DDS falls to pass this test, replace the 8830 DDS Control Panel Cable. If that does not solve the problem, replace the 8830 DDS Control Panel.

Perform the following:

- Ensure that the 7356 Scanner lamp is illuminated. If it is not illuminated, ensure that the scanner power cable is plugged into a reliable power outlet, and that the power cable is firmly attached to the scanner, if the Scanner Lamp is still not illuminated, go to the Level 1 Entry RAP in the 7356 Scanner Service Manual.
- Ensure the SCSI cable leading to the 7356 Scanner is correctly connected (see Figure 2).
- Remove the cover of the 8830 Controller. Examine the connections leading from the hard drive. (SCSI and power connectors) for possible disconnection, or loose connection.
- Check the middle connector on the MCB ribbon cable (J5) for disconnection or loose connection.
- Replace the Controller Cover.

Figure 2 Correct Location of cables running from 7356 Scanner to 8830 Controller

(Figure 2): Ensure that the other end of the 7356 SCSI Cable referenced in the last step is firmly connected to the SCANNER port on the 8830 Controller. The SCSI Cable is firmly connected to the SCANNER port on the 8830 Controller,

Y N

Perform the following:

- Switch off all elements of the 8830 DDS.
- Connect the SCSI Cable to the 8830 Scanner as shown in Figure 2.
- Switch on the elements of the 8830 DDS in the following order: 7356 Scanner, 8830 Controller, 8830 Printer.

(Figure 2): Ensure that the 8830 DDS Control Panel Cable is undamaged and is firmly connected to both the U.I. POWER and U.I. DATA ports of the 8830 Controller as shown in Figure 2. The 8830 DDS Control Panel Cable is undamaged and is firmly connected to the U.I. POWER and U.I. DATA ports of the 8830 Controller.

Y N

Perform the following:

- Switch off all elements of the 8830 DDS.
- Connect the 8830 DDS Control Panel Cable to the 8830 Controller ports illustrated in Figure 2.
- Switch on the elements of the 8830 DDS in the following order: 7356 Scanner, 8830 Controller, 8830 Printer.

B

Repair Analysis Procedures

1.3

Image Quality RAP.....3-3

IMAGE QUALITY RAP

Purpose

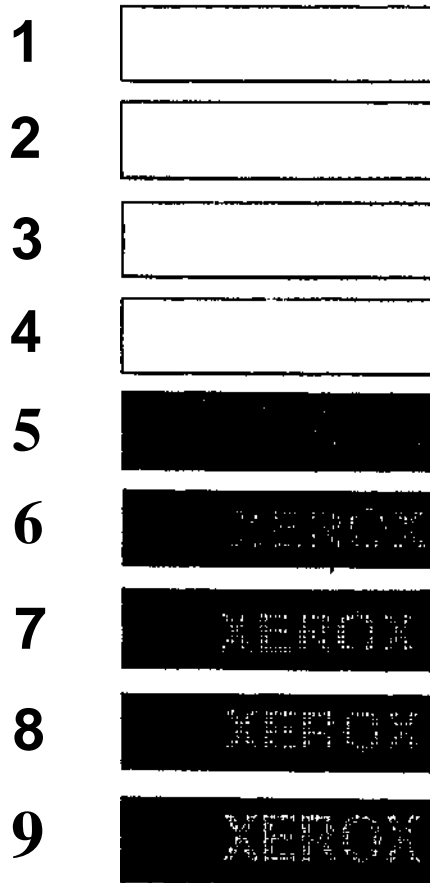
The purpose of this adjustment is to set the image quality for the 8830 DDS system. This procedure is to be used in conjunction with the 8830 printer.

Check

1. Refer to the 8830 Printer Service Manual, and check that the image quality of the 8830 Printer is adjusted to specification.
2. Go to the 8830 DDS Control Panel. From the Ready to Copy Screen, press the Copy (contrast) Up/Down buttons and the MENU button simultaneously. The scanner Main Menu will appear.
3. Select Diagnostics > Password. Enter the CSE password (6789). Once the password has been entered, the Diagnostics screen will once again be displayed.
4. Select Installation Test Print by pressing the ENTER button. When the Queue to Printer screen appears, select Yes by pressing the ENTER button. The message "Queued to Printer" will appear, and the test ETP 1010.0 will then be printed.
5. (Figure 1): Check the Image Quality.
 - a. The word XEROX should be readable in boxes 4 and 6. The XEROX in box 5 can be vaguely discerned, but not read. If the printed image is not within specification, perform the Adjustment.

Adjustment

1. Image quality adjustments for the 8830 DDS are performed through the 8830 Printer Control panel. Perform Adjustment 9.3, Image Density in the 8830 Printer Service manual.



ETP # 1010.0

4. Repair and Adjustment Procedures

Repairs

| | |
|---|------------|
| REP 4.1.1 Document Loading Bins..... | 4-3 |
| REP 4.1.2 Wire Form Assembly..... | 4-4 |
| REP 4.1.4 Static Eliminator..... | 4-5 |
| REP 4.1.5 Control Panel Cable..... | 4-6 |
| REP 4.1.6 Control Panel..... | 4-8 |

Adjustments

| | |
|---|------|
| ADJ 4.4.5 System Image Quality..... | 4-11 |
| ADJ 4.4.6 Front to Back Stitch Alignment..... | 4-12 |
| ADJ 4.4.7 Left to Right Stitch Alignment..... | 4-13 |
| ADJ 4.4.8 Motor Speed..... | 4-14 |
| ADJ 4.4.9 Registration..... | 4-15 |
| ADJ 4.4.10 Set Machine Motor Speed..... | 4-16 |

REP 4.1.1 Document Loading Bins

Parts List on 1.1

Removal

WARNING

Switch off the Scanner and disconnect the Power Cord.

NOTE: There are two Document Loading Bins on the front of the 7356 Scanner with 8830 DDS configuration. For each Loading Bin perform the following:

1. (Figure 1): Remove the Document Loading Bins.

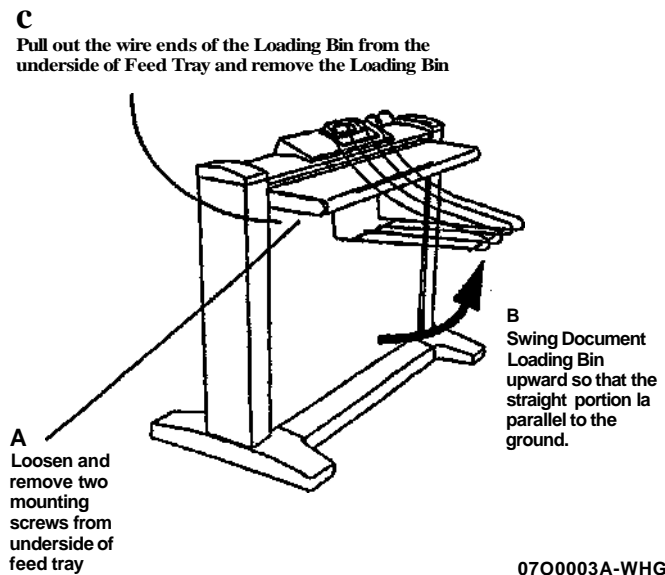


Figure 1 Removing the Document Loading Bins

Replacement

For each Document Loading Bin:

1. (Figure 2): Replace the Document Loading Bins.

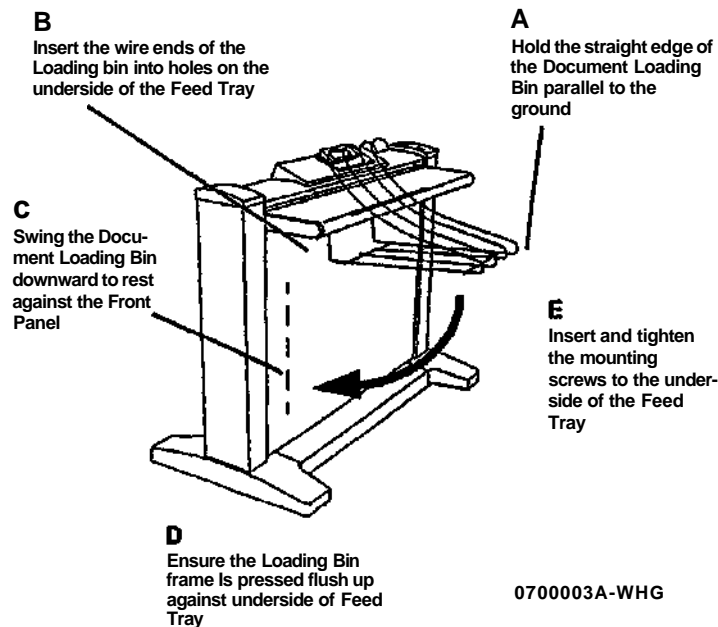


Figure 2 Replacing the Document Loading Bins

REP 4.1.2 Wire Form Assembly

Parts List on 1.2

Removal

WARNING

Switch off the scanner and disconnect the Power Cord.

1. (Figure 1): Remove the Wire Form.

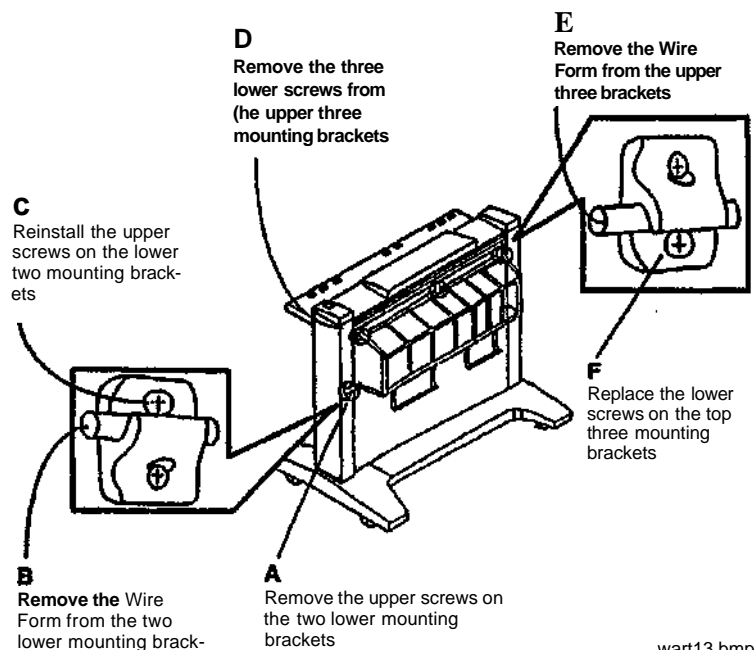


Figure 1 Removing the Wire Form

Replacement

1. (Figure 1): Replace the Wire Form.

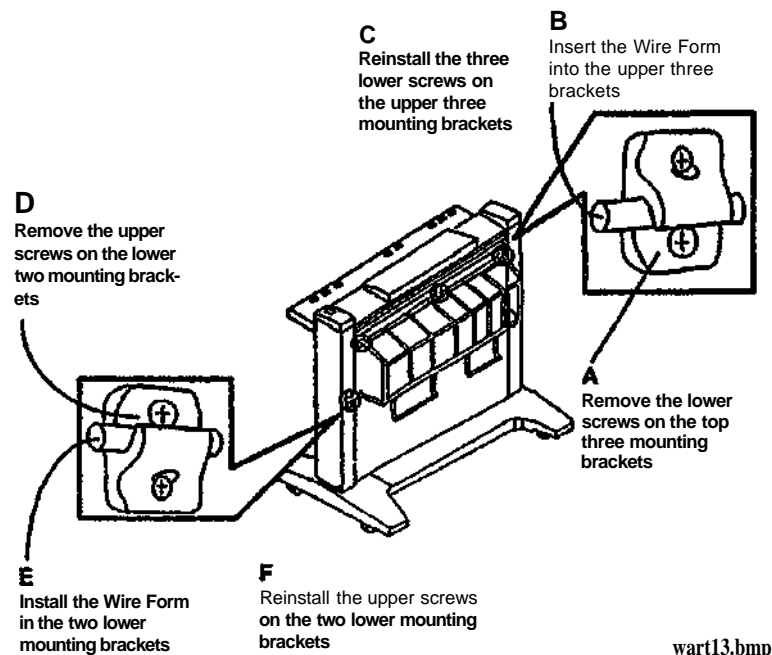


Figure 2 Replacing the Wire Form

REP 4.1.4 Static Eliminator

Parts List on 1.2

Removal

1. (Figure 1): Remove the Static Eliminator.

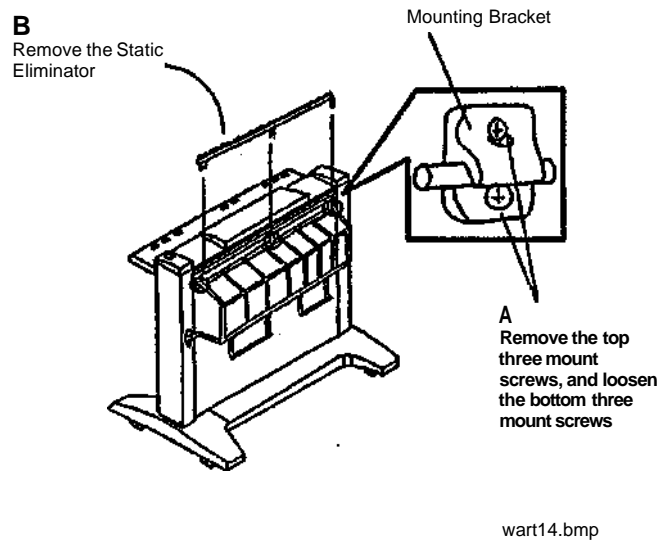


Figure 1 Removing the Static Eliminator

Replacement

CAUTION

Ensure that the Static Eliminator is positioned flush against the top mounting bracket prior to tightening the mounting screws down, in order to eliminate bending the Static Eliminator.

NOTE: You should notice increased resistance while installing the center bracket screw over the Static Eliminator. This resistance establishes the ground (or the Static Eliminator).

1. (Figure 2): Replace the Static Eliminator.

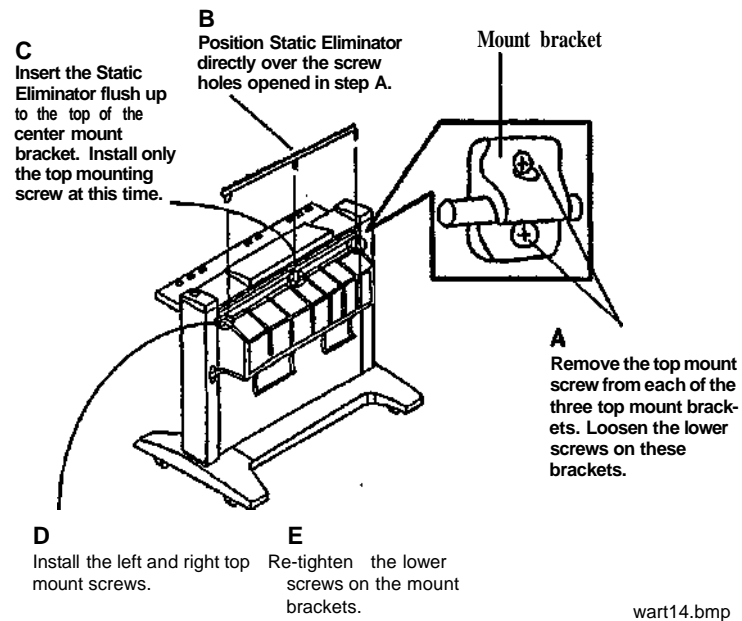


Figure 2 Replacing the Static Eliminator

REP 4.1.5 Control Panel Cable

Parts List on 1.2

Removal

WARNING

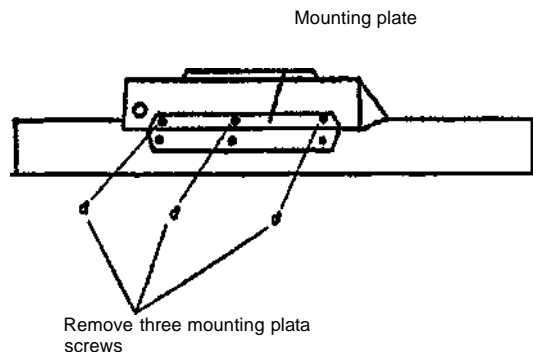
Switch off the scanner power and disconnect the power cord.

CAUTION

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



1. (Figura 1): Remove the three upper screws on the back of the scanner Control Panel Mounting plate.

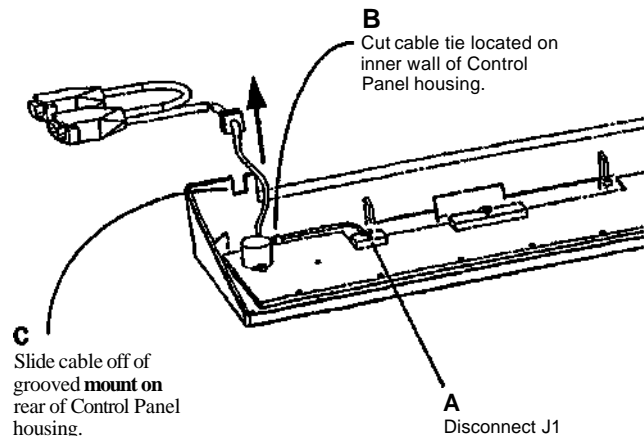


wart1.tif

Figura 1 Location of Control Panel mounting plate screws

3. Placa the Control Panel upside down on an ESD mat.

4. (Figura 2): Remove the Control Panel Interface Cable from the Control Panel.



contpn15.bmp

Figura 2 Removal of the Control Panel Cable

2. Remove the Control Panel from the 7356 scanner

Replacement

1. Place the Control Panel face-down upon the ESD mat.
2. (Figure 3); Install the Control Panel Cable.

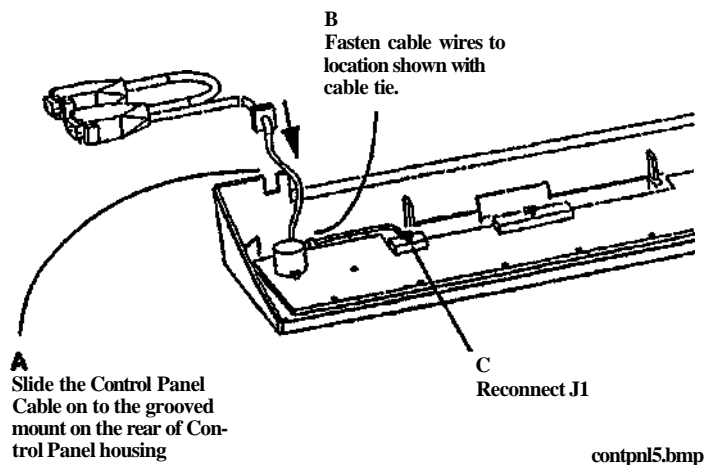


Figure 3 Replacement of the Control Panel cable

3. (Figure 4): Replace the Control Panel upon the 7356 scanner.

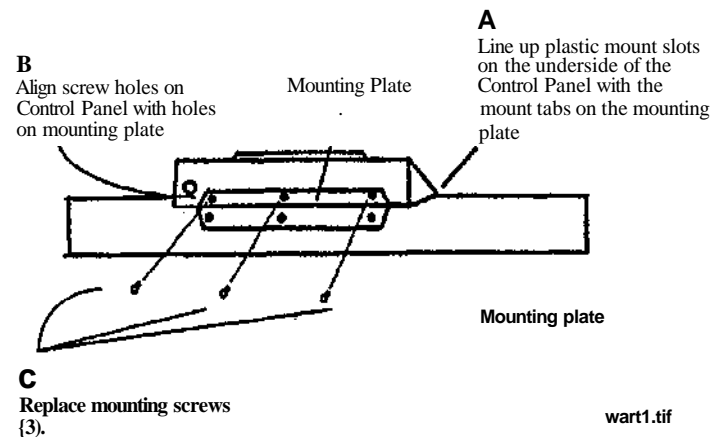


Figure 4 Replacement of the Control Panel upon the 7356 scanner

4. Return the scanner to normal operation.

REP 4.1.6 Control Panel

Parts List on 1.2

Removal

WARNING

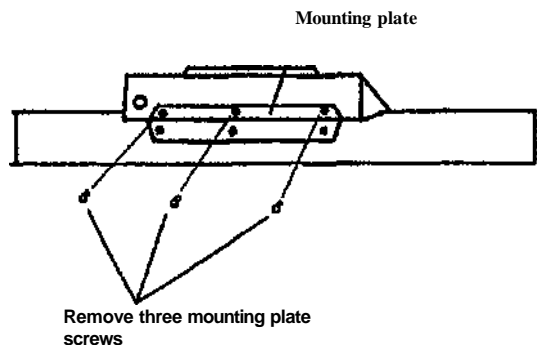
Switch off the scanner power and disconnect the power cord.

CAUTION



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

1. (Figure 1): Remove the three upper screws on the back of the scanner Control Panel mounting plate.



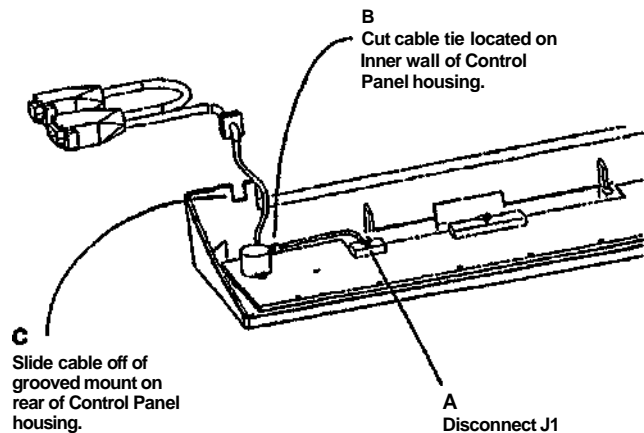
wait1.tif

Figure 1 Location of Control Panel mounting plate screws

3. Place the Control Panel upside down on an ESD mat.

NOTE: In the following step save the Control Panel Cable, as it will be reinstalled on the new Control panel.

4. (Figure 2): Remove the Control Panel Cable from the Control Panel.



contpnlS.bmp

Figure 2 Removal of the Control Panel Cable

2. Remove the Control Panel from the 7356 scanner.

Replacement

1. Place the new Control Panel face-down upon the ESD mat.
2. (Figure 3): Install the Control Panel Cable removed earlier.

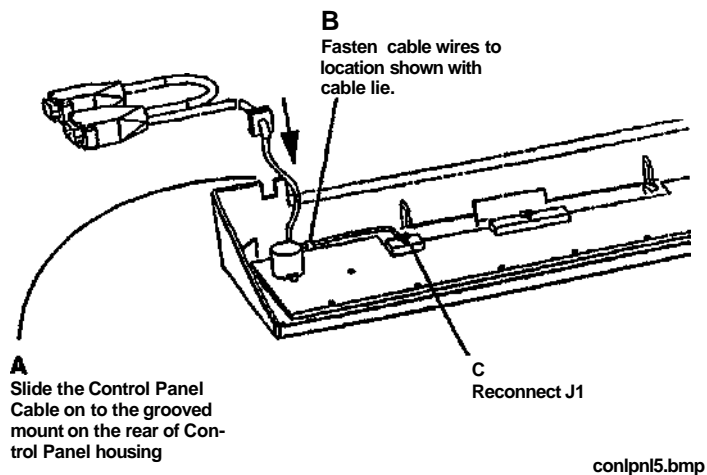


Figure 3 Replacement of the Control Panel cable

3. (Figure 4): Replace the Control Panel upon the 7356 scanner.

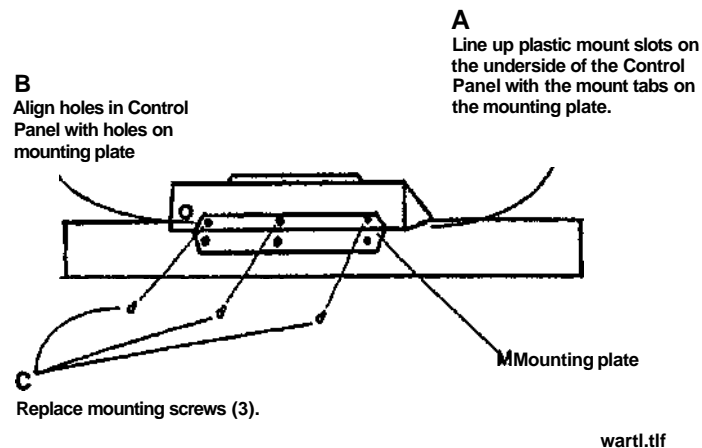


Figure 4 Replacement of the Control Panel upon the 7356 scanner

4. Return the scanner to normal operation.

ADJ 4.4.5 System Image Quality

Purpose

The purpose of this adjustment is to set the image quality for the 8830 DDS system. This procedure is to be used in communication with the 8830 printer.

Check

1. Refer to the 8830 Printer Service Manual, and check that the image quality of the 8830 Printer is adjusted to specifications.
2. Go to the 8830 DDS Control Panel. From the Ready to Copy Screen, press the Copy (contrast) Up/Down buttons and the MENU button simultaneously. The scanner Main Menu will appear.
3. Select Diagnostics > Password. Enter the CSE password (6789). Once the password has been entered, the Diagnostics screen will once again be displayed.
4. Select Installation Test Print by pressing the ENTER button. When the Queue to Printer screen appears, select Yes by pressing the ENTER button. The message "Queued to Printer" will appear, and the test ETP 1010.0 will then be printed.
5. (Figure 1): Check the Image Quality.
 - a. The word XEROX should be readable in boxes 4 and 6. The XEROX in box 5 can be vaguely discerned, but not read. If the printed image is not within this specification, perform the Adjustment.

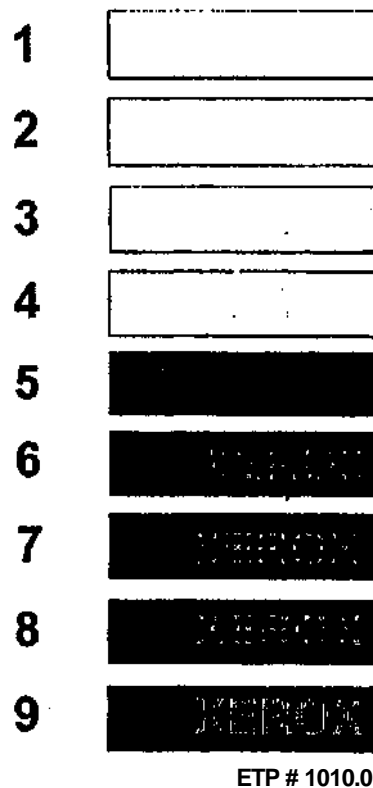


Figure 1 Image Quality Specification

Adjustment

1. Image quality adjustments for the 8830 DDS are performed through the 8830 Printer Control Panel. Perform Adjustment 9.3, Image Density in the 8830 Printer Service Manual.

ADJ 4.4.6 Front to Back Stitch Alignment

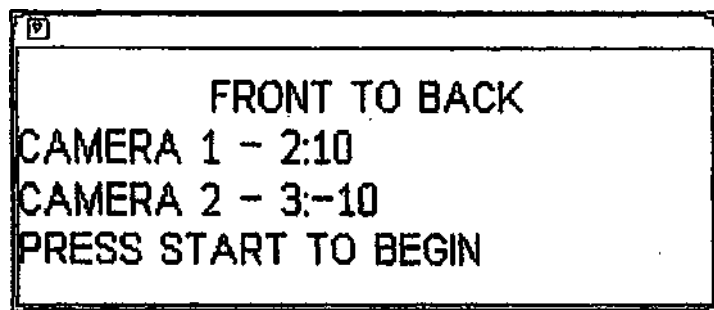
Purpose

The purpose of this adjustment is to compensate for the variations in the Front-to-Back position of Camera 1 and Camera 3 with respect to Camera 2.

Check

Perform the following:

1. From the Ready to Copy Screen, press the Copy (contrast) Up/Down buttons and the MENU button simultaneously. The scanner Main Menu will appear.
2. From the Main Menu select Diagnostics > Password and then enter the numeric CSE password (6789). Return to the Main Menu screen.
3. Select Diagnostics > Scanner Diagnostics > Stitch Alignment > Front to Back.
4. Press the ENTER key. The Front To Back Stitch Alignment screen appears (Figure 1).



060001JA.WHO

Figura 1. Front to Back Stitch Alignment Screen

5. Insert the test target 082E11490 face down on the scanner platen, and allow the test target to be transported to the starting position. Press the START key to begin the test.
6. Once the START button has been pressed the system software begins measuring the Front To Back Camera Alignment at the rate of once per second. The word RUNNING will appear in the lower left corner of the display. The cameras are correctly aligned when the last numbers in the above expressions are set to zero. For example:

Camera 1 - 2:0

Camera 2 - 3:0

if the readings from the 8830 DOS Control Panel do not match the ratios indicated above, the Front to Back Stitch Alignment will have to be adjusted.

NOTE: The Gap value may vary slightly with each scan, but the average reading should be zero.

7. When this test has been completed, press the EXIT key during one of the one-second intervals when the motor stops between measurements, then remove the test target manually by pulling the test target toward the front of the scanner until it has cleared the Drive Rollers.

NOTE: Do not use the rocker switch to position or remove the test target at any time during this procedure.

NOTE: Do not exit back to the Ready Screen with the test target still inserted in the scanner.

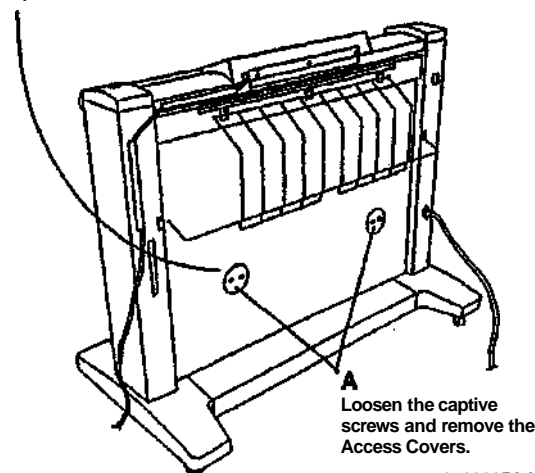
8. If a test reports TAILED: BAD TARGET" the scanner will be reset after the EXIT key has been pressed. It will be necessary to wait for the scanner to finish the Power On Self Test before the test can be executed again.

Adjustment

- 1, (Figure 2): Remove the Access Covers and adjust the alignment of the cameras.

B

Twist the Camera Adjustment Screws (located behind the cover plates) while reading the respective camera alignment ratios displayed on the Control Panel. When the correct ratio has been reached for both cameras, replace the Access Covers.



0700005A-WHG

Figure 2 Removal of Access Covers for Camera Alignment

ADJ 4.4.7 Left to Right Stitch Alignment

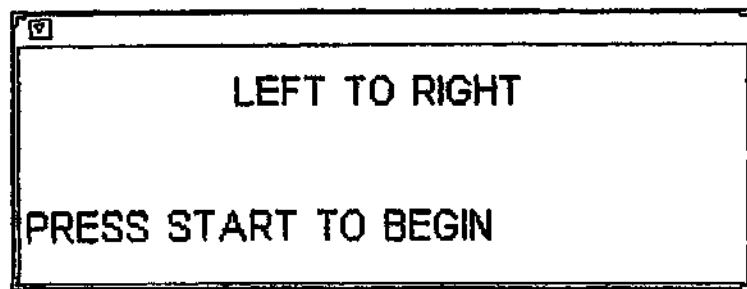
Purpose

The 7356 Scanner contains three cameras, each of which captures 1/3 of the full width of the 36 inch (91.4mm) scanned image. The purpose of this procedure is to compensate (or the variations in the left-to-right position of Camera 1 and Camera 3 with respect to Camera 2.

Check

Perform the following:

1. From the Ready to Copy Screen, press the Copy (contrast) Up/Down buttons and the MENU button simultaneously. The scanner Main Menu will appear.
2. From the Main Menu select Diagnostics > Password and then enter the numeric CSE password (6789). Return to the Main Menu screen.
3. Select Diagnostics > Scanner Diagnostics > Stitch Alignment > Left To flight.
4. Press the ENTER key. The Left To Right Stitch Alignment screen appears (Figure 1).



0800011A-WHO

Figure 1. Left to Right Stitch Alignment Screen

5. Insert the test target 082E11490 face down on the scanner platen, and allow the test target to be transported to the starting position. Press the START key to begin the test.
6. Once the START key has been pressed the system software checks the timing of the sensor actuation and stores new correction values automatically. The word RUNNING will appear in the tower left corner of the display while this check is in progress. The system displays PASSED if the adjustment was successful; otherwise, FAILED is displayed. If FAILED is displayed, refer to the 7366 Scanner Service Manual, Section 2, Repair Analysis Procedures.

7. When this test has been completed, press the EXIT key during one of the one-second intervals when the motor stops between measurements, then remove the test target manually by pulling the test target toward the front of the scanner until it has cleared the Drive Rollers.

NOTE: Do not use the rocker switch to position or remove the test target at any time during this procedure.

NOTE: Do not exit back to the Ready Screen with the test target still inserted in the scanner.

8. If a test reports "FAILED: BAD TARGET" the scanner will be reset after the EXIT key has been pressed. It will be necessary to wait for the scanner to finish the Power On Self Test before the test can be executed again.

Adjustment

Adjustment occurs automatically.

NOTE: The left-right stitch adjustment is made by changing the range of active elements in the camera Charge-Coupled Device (CCD) arrays until there is no overlap or gap in the three images. If the available range of elements is not sufficient to achieve a correct alignment, the message 'Camera X could not be aligned' is displayed. Mechanical alignment of the camera cannot be done in the field. Contact technical operations to arrange for an exchange of the Scanner.

ADJ 4.4.8 Motor Speed

Purpose

The purpose of this procedure is to check the 7356 Scanner motor speed to ensure the correct document transport speed, and eliminate magnification error in the process direction.

Check

Perform the following:

1. From the **Ready to Copy** Screen, press the Copy (contrast) Up/Down buttons and the MENU button simultaneously. The scanner Main Menu will appear.
2. Select **Diagnostics > Scanner Diagnostics > Component Tests > Motor Speed**.
3. Press the ENTER key. The Motor Speed adjustment screen appears (Figure 1).

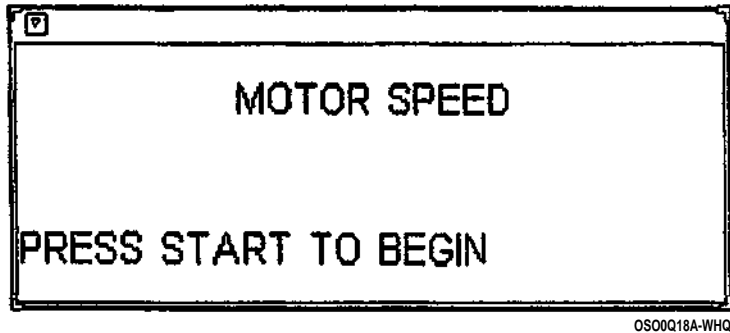


Figure 1. Motor Speed Test Screen

NOTE: Ensure that the narrow side of the 082E11490 test pattern is being inserted into the scanner (or this particular test)

4. Insert the test target 082E11490 (face down). Allow the scanner to transport the test pattern to the starting position.
5. Press the START key to begin the test.
6. Once the START key has been pressed the system software checks the Motor Speed and it is adjusted automatically if not correct. The system displays PASSED if the adjustment was successful; otherwise, FAILED is displayed, if FAILED is displayed, repeat the test again, if the problem still exists, refer to the 7356 Scanner Service Manual, Section 2, Repair Analysts Procedures.

7. When this test has been completed, press the EXIT key during one of the one-second intervals when the motor stops between measurements, then remove the test target manually by pulling the test target toward the front of the scanner until it has cleared the Drive Rollers.

NOTE: Do not use the rocker switch to position or remove the test target at any time during this procedure.

NOTE: Do not exit back to the Ready Screen with the test target still inserted in the scanner.

8. If a test reports TAILED: BAD TARGET" the scanner will be reset after the EXIT key has been pressed. It will be necessary to wait for the scanner to finish the Power On Self Test before the test can be executed again.

Adjustment

Adjustment occurs automatically when the **Motor Speed** function is selected.

NOTE: This adjustment can be used in conjunction with ADJ 4.4.10, Set Machine Motor Speed to ensure the correct document transport speed.

ADJ 4.4.9 Registration

Purpose

The purpose of this procedure is to allow the scanner to determine correct timing values for actuation of the two document edge sensors, enabling the scanner to correctly register the lead edge of the document prior to the start of a scanning operation.

NOTE: The test patterns are stored Inside the Document Feed Tray.

Check

Perform the following:

1. When the scanner has completed Power On Self Test (POST) Insert a black test pattern into the printer. Allow the document to be transported to the starting position.
2. (Figure 1): Examine the position of the lead edge of the document. The lead edge should be within ± 0.25 inches (0.64 cm) of the middle of the Platen Window, if the position does not appear to be correct, continue on with this procedure.

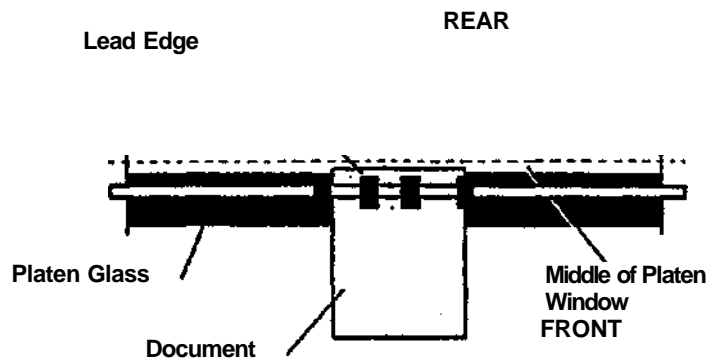


Figure 1 Registration of the Lead Edge - Top View

3. From the Ready to Copy Screen, press the Copy (contrast) Up/Down buttons and the MENU button simultaneously. The scanner Main Menu will appear.
4. Select Diagnostics > Scanner Diagnostics > Component Tests > Registration.
5. Press the ENTER key. The Registration test screen appears (Figure 2).



0S0O020A-WHO

Figure 2. Registration Test Screen

6. Insert the black test pattern on the scanner platen, and allow the test target to be transported to the starting position. Press the START key to begin the test.
7. Once the START key has been pressed the system software checks the Registration and it is adjusted automatically. If not correct, the system displays PASSED. If the adjustment was successful, otherwise, FAILED is displayed. If FAILED is displayed, repeat the test again. If the problem still exists, refer to the 7356 Scanner Service Manual, Section 2, Repair Analysis Procedures.
8. When this test has been completed, press the EXIT key during one of the one-second intervals when the motor stops between measurements, then remove the test target manually by pulling the test target toward the front of the scanner until it has cleared the Drive Rollers.

NOTE: Do not use the rocker switch to position or remove the test target at any time during this procedure.
NOTE: Do not exit back to the Ready Screen with the test target still inserted in the scanner.
9. If a test reports "FAILED: BAD TARGET" the scanner will be reset after the EXIT key has been pressed, it will be necessary to wait for the scanner to finish the Power On Self Test before the test can be executed again.

Adjustment

Adjustment occurs automatically when the Motor Speed function is selected.

ADJ 4.4.10 Set Machine Motor Speed

Purpose

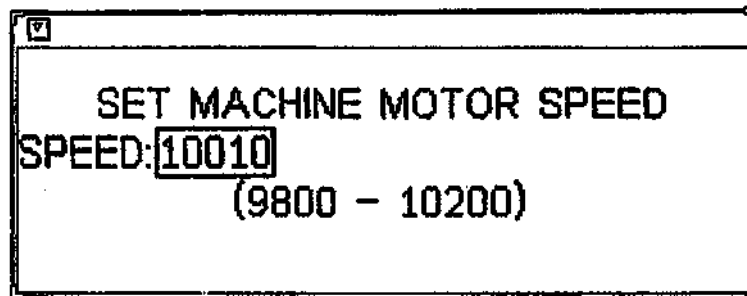
The purpose of this procedure is to allow the Customer Service Engineer to alter the motor speed of the Drive Roll Motor up to 2 percent (increase or decrease) from the motor speed set at the factory. This provides the CSE some leeway to adjust the machine motor speed in situations where thickness of the media being used may cause a magnification error in printing, or where the Drive Rolls may be excessively worn, causing scan problems.

NOTE: This adjustment can be used in conjunction with ADJ 4.4.8 Motor Speed to ensure the correct document transport speed.

NOTE: This adjustment is password protected. In order to perform this adjustment, the Customer Service Engineer must first enter the CSE password (6789) in the Password Menu.

Adjustment

1. From the Main Menu select Diagnostics > Password and then enter the numeric CSE password (6789). Return to the Main Menu screen.
2. (Figure 1): From the Main Menu screen, select Diagnostics > Scanner Diagnostics > Set Machine Motor Speed.
3. The Set Machine Motor Speed box shows the motor speed value that exists prior to adjustment. A value of 10000 means the factory base value is used. A value of 10100 means that the ratio of the current speed to the base speed is 1.01:1.
4. Set the new Motor Speed value using the numeric keypad. (The newly entered value replaces the old value.) Only values between 9800 and 10200 may be entered.
6. Pressing the ENTER button sets the new motor speed value and returns the user to the main Diagnostics Screen.



M00023A.WHQ

Figure 1 Set Machine Motor Speed Screen

| TITLE | PAGE |
|--|------|
| <u>INTRODUCTION</u> | 5-2 |
| <u>PARTS LIST</u> | |
| DDS | |
| PL 1.1 DDS COMPONENTS (PART 1 OF 2). | 5-4 |
| PL 1.2 DDS COMPONENTS (PART 2 OF 2). | 5-5 |
| PART NUMBER INDEX. | 5-6 |

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:

| | |
|-------|-----------------------------------|
| A | Amp |
| EMI | Electro Magnetic Induction |
| HZ | Hertz |
| MNL | Multinational |
| NOHAD | Noise Ozone Heat Air Dirt |
| P/O | Part Of |
| PWB | Printed Wiring Board |
| REF | Reference |
| NACO | North America Customer Operations |
| EO | European Operations |
| V | Volt |
| W/ | With |
| W/O | Without |

SYMBOLLOGY

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

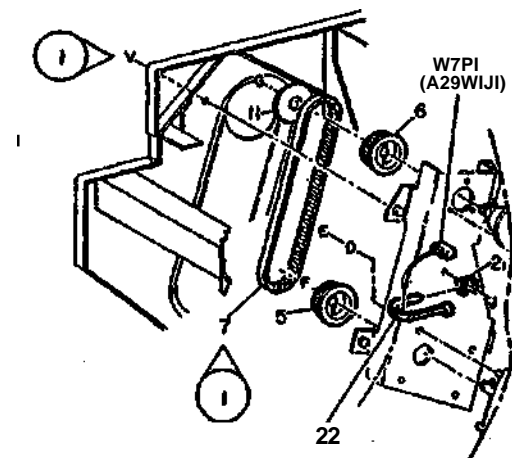
The notation "W/Tag" in the parts description indicates that the part configuration has been updated. Check the change Tag index in the General Information section of the Service Data for the name and purpose of the modification.

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.

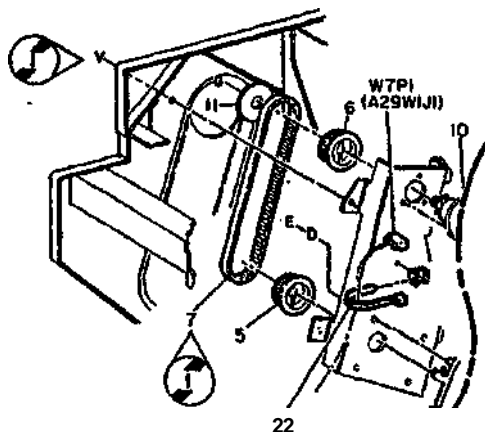
SYMBOLGY A tag number within a circle having a shaded bar and pointing to an item number shows that the configuration of the part shown is an item number the configuration before the part was changed by the tag number within the circle (Figure 2).

A tag number within a circle and 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 | 1 |

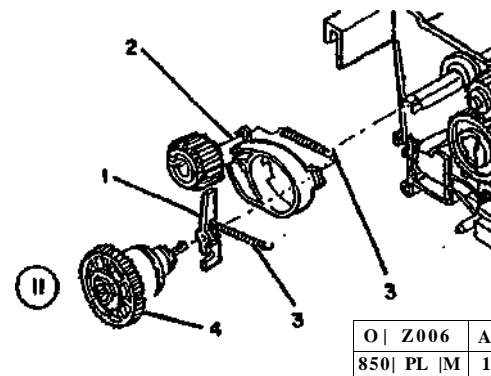
Figure 1. With Tag Symbol



| | |
|--------------|---|
| O Z005 | A |
| 850 PL M | 1 |

Figura 2. Without Tag Symbol

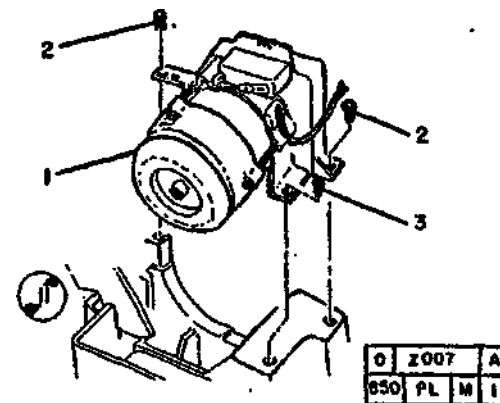
A tag number within a circle with no apex shows that the entire drawing has been changed by the tag number within the circle (Figure 3). Information on the modification is in the Change Tag Index,



| | |
|--------------|---|
| O Z006 | A |
| 850 PL M | 1 |

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).

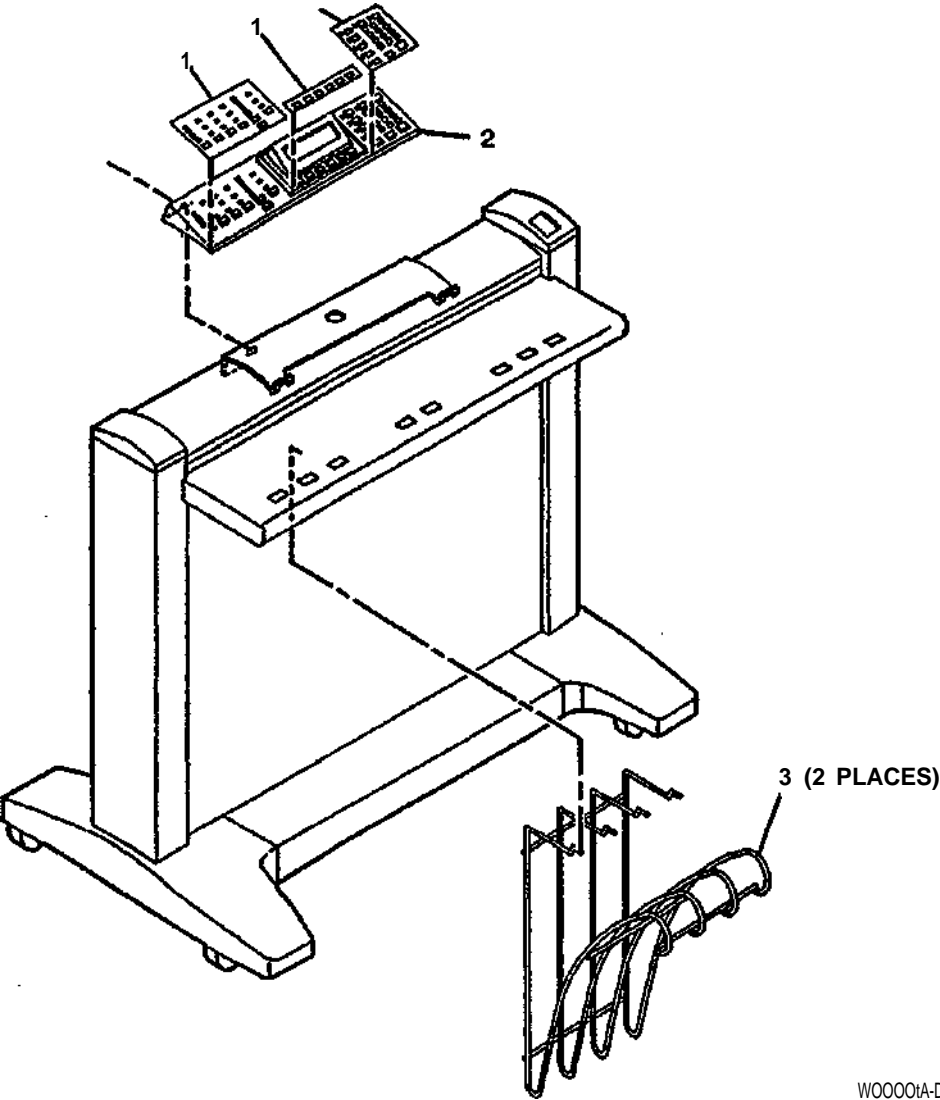


| | |
|--------------|---|
| O Z007 | A |
| 850 PL M | 1 |

Figure 4. Entire Drawing Without Tag Symbol

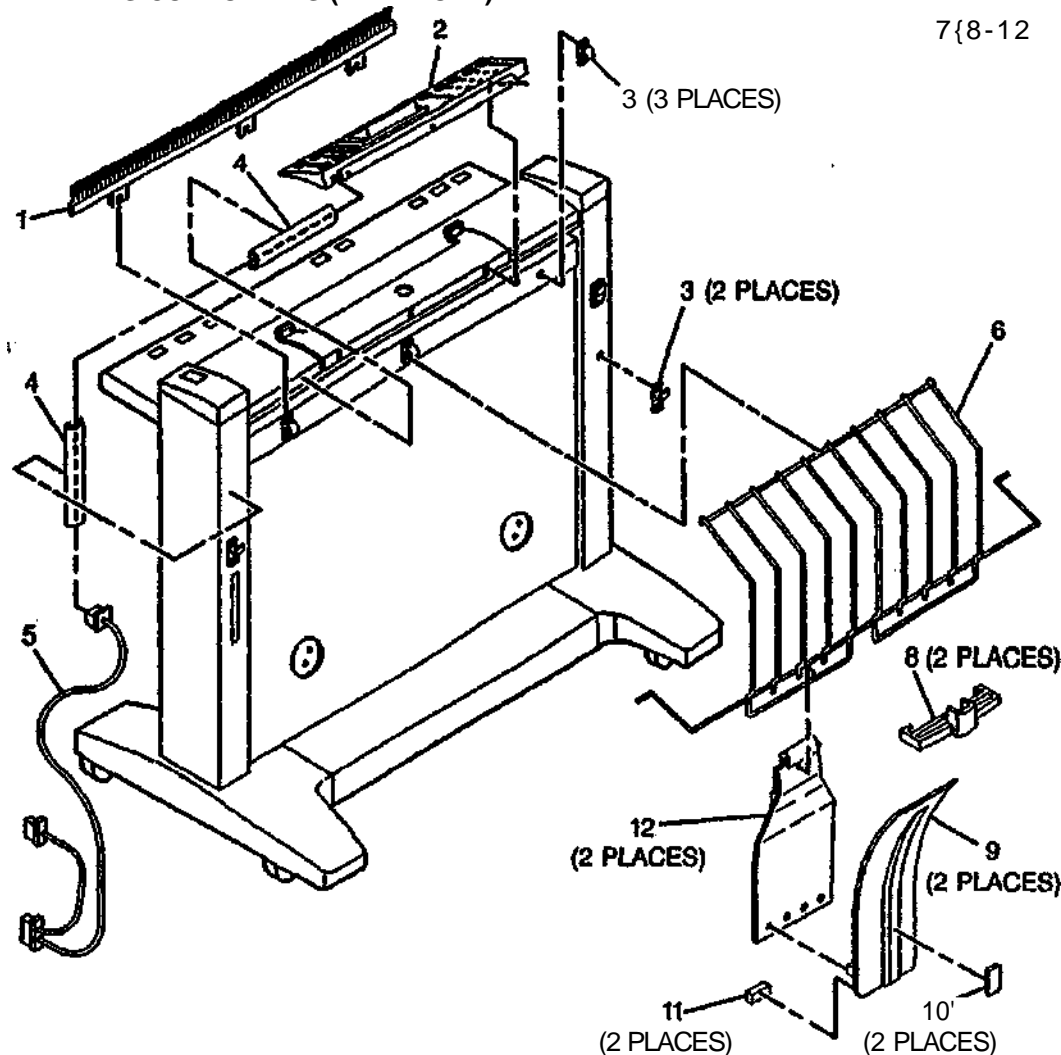
PL 1.1 DDS COMPONENTS (PART 1 OF 2)

| ITEM | PART | DESCRIPTION |
|------|-----------|-------------------------------------|
| 1 | 891E34301 | CONTROL PANEL LABELS |
| 2 | 101K32281 | CONTROL PANEL (REP 4.1.6) |
| 3 | 50E14180 | DOCUMENT LOADING BIN (REP 4.1.1) |



W00001A-DOS

PL 1.2 DDS COMPONENTS (PART 2 OF 2)



| ITEM | PART | DESCRIPTION |
|------|-----------|------------------------------------|
| 1 | 125K2600 | STATIC ELIMINATOR (REP 4.1.4) |
| 2 | 101K32281 | CONTROL PANEL (REP 4.1.6) |
| 3 | - | BRACKET (NOT SPARED) |
| 4 | 119E430 | CABLE GUIDE |
| 5 | 162K38901 | CONTROL PANEL CABLE (REP 4.1.5) |
| 6 | 48E55910 | WIRE FORM (REP 4.1.2) |
| 7 | 50K19682 | DOCUMENT CATCH DEVICE ASSEMBLY |
| 8 | 17E6010 | DOCUMENT STOP |
| 9 | 50E10191 | FRONT STACKER |
| 10 | - | STACKER STOP (P/O ITEM 7) |
| 11 | 121E1402 | MAGNET |
| 12 | - | REAR STACKER (P/O ITEM 7) |

0000002A-DOS

| PART NUMBER | PL LOC. |
|----------------|------------|
| 17E6010 | |
| 48E55910 | 1.2 |
| 50E10191 | 1.2 |
| 50E14180 | 1.1 |
| 50K19682 | 1.2 |
| 101K32281 | 1.1 |
| 101K32281 | 1.2 |
| 119E430 | 1.2 |
| 121E1402 | 1.2 |
| 125K2600 | 1.2 |
| 162K38901 | 1.2 |
| 891E34301 | 1.1 |

| | |
|--|------|
| Diagnostics..... | 6-3 |
| Introduction..... | 6-3 |
| Main Menu Tree Structure..... | 6-4 |
| Scanner Diagnostics Menu Tree Structure..... | 6-5 |
| Getting to the Scanner Diagnostics Menu..... | 6-6 |
| Left to Right Stitch Alignment..... | 6-7 |
| Front to Back Stitch Alignment..... | 6-7 |
| Download Code..... | 6-8 |
| Normalize Cameras..... | 6-8 |
| Full System Test..... | 6-9 |
| Memory Test..... | 6-9 |
| Component Tests..... | 6-10 |
| Motor Speed..... | 6-10 |
| Registration..... | 6-10 |
| Input Tests..... | 6-11 |
| Output Tests..... | 6-11 |
| Set Machine Motor Speed..... | 6-12 |
| Read NVR..... | 8-12 |
| 8830 DDS Control Panel Diagnostics..... | 6-13 |
| Diagnostic Mode Entry and Exit..... | 6-13 |
| LCD Test..... | 6-13 |
| Communications (Loopback) Test..... | 6-13 |
| LED Test..... | 6-13 |
| Key Test..... | 6-13 |
| System Information..... | 6-13 |
| System Description..... | 6-13 |
| Recent Faults..... | 6-13 |
| Configuration Print..... | 6-13 |
| User Accounting..... | 6-13 |
| Installation of Diagnostic Software - Laptop Computer..... | 6-14 |
| Starting the Diagnostic Software • Laptop Computer..... | 6-14 |
| Starting the Diagnostic Software from a Floppy Disk..... | 6-15 |
| Product Specifications..... | 6-17 |
| 8830 DDS Installation..... | 6-19 |
| Repack Procedure..... | 6-25 |
| Installation of Tags 7 and 8..... | 6-27 |
| Change Tag /Mod Index..... | 8-37 |

Diagnostics

Introduction

This subsection describes the use of the diagnostics software to isolate faults in the 8830 DOS system. The diagnostic software enables access to the diagnostic routines contained in the Scanner.

Using the Diagnostic Software - Key Properties

In order to navigate through the Diagnostics menu the properties of the buttons located below the LCD must be understood. The following list gives a brief explanation of the properties of the control buttons.

¹ *NOTE: There is an 8830 System Administrator Menu that is used to modify Security Settings, Job Accounting, Change Password functions, etc. The password to this menu is 88300. Do not advise anyone but the site System Administrator of this password.*

NOTE: The Diagnostic Password is 6789. This allows the Customer Service Representative access to Stitch Alignment and Set Machine Motor Speed settings as well as the installation Test Print (See Figure 2).

NOTE: Ensure that a single short chirp sound is heard when pressing one of the selection keys located beneath the LCD. Three short chirps is an indication of an invalid selection for that particular menu item.

- **Menu** • The MENU key is used to enter and exit the Main Menu. When the 8830 DDS Control Panel is in a READY state, pressing this key displays the top menu of the Main Menu Tree. While the Control Panel is displaying a Main Menu tree screen, pressing this key is equivalent to repeatedly pressing the EXIT key until the Control Panel returns to the previous READY state.

NOTE: The presence of arrows on the right side of the LCD display indicates that there are additional items at that particular level that will have to be scrolled to in order to be visible.

- **Previous** - The PREVIOUS key is used to select the previous item in a list.
- **Next** - The NEXT key is used to select the next item in a list.
- **Enter** • The ENTER key is used for the entry of a numeric value or lock in the currently selected choice from a list.
- **Exit** • The EXIT key is used to cancel an operation and return to a parent display.
- **Mode** • The MODE key is valid only when a Ready screen is displayed. It is used to transition between Ready states. (For example, between Ready-to-Copy and Ready-to-Scan.) When depressed, the MODE key changes from one state to the next state listed on the display.

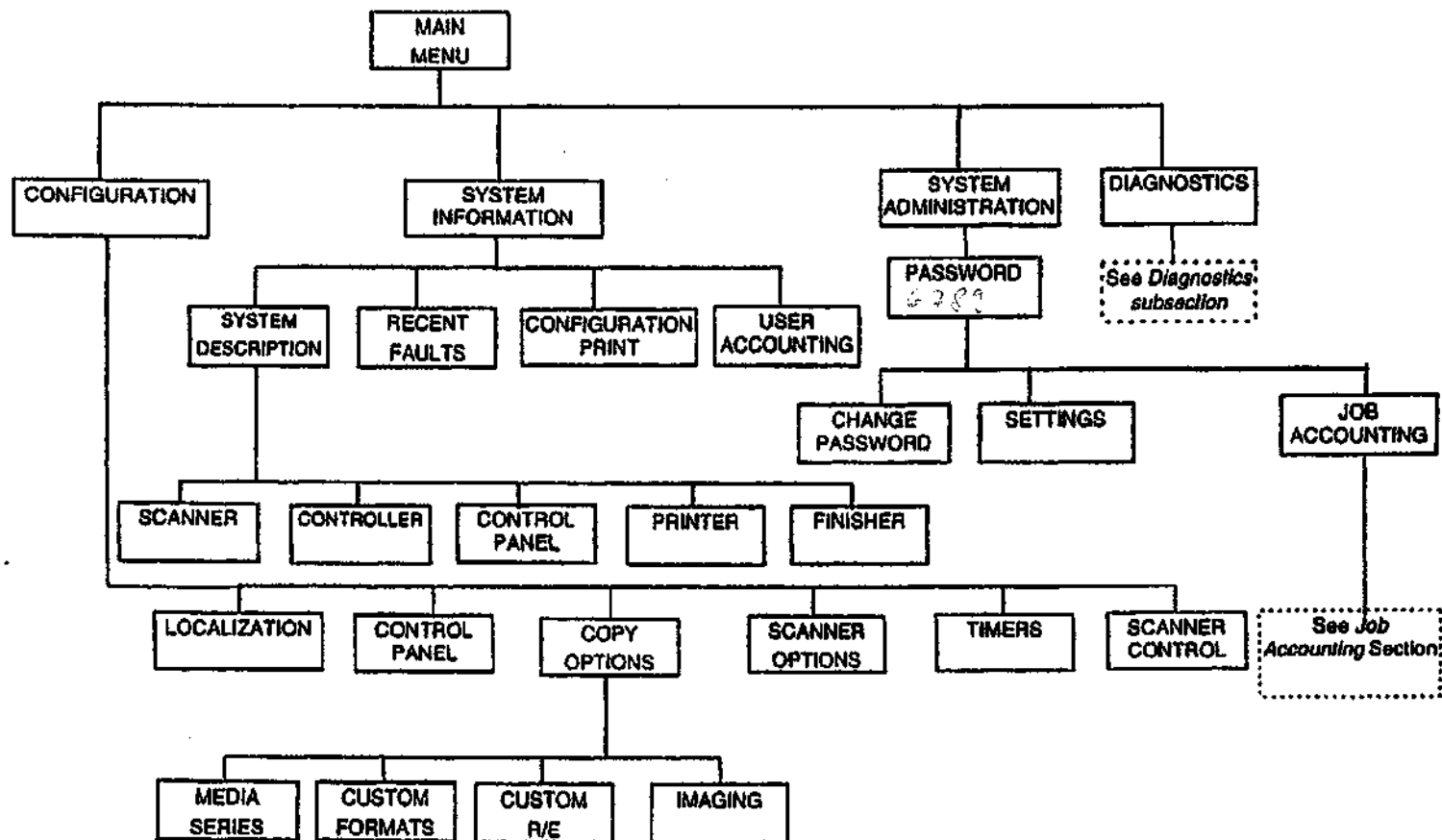
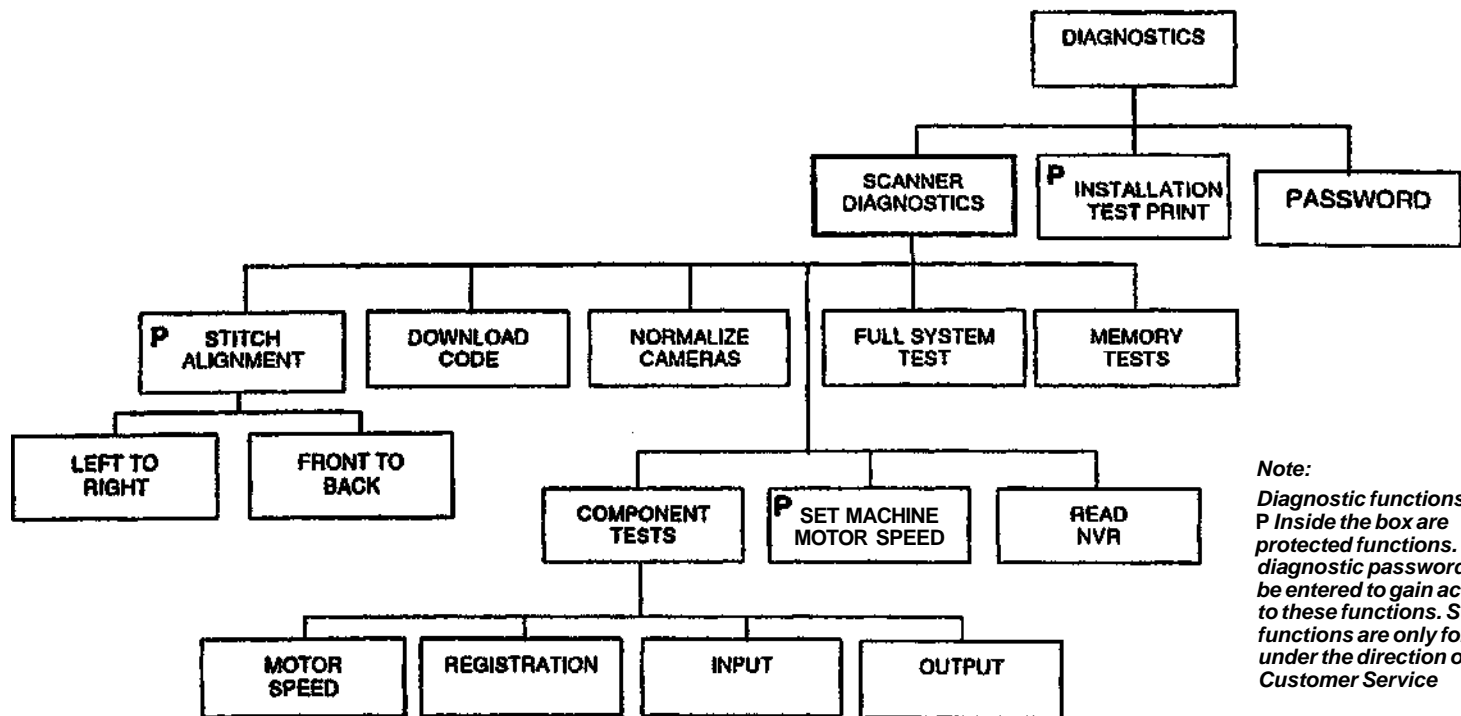


Figure 1 Main Menu Tree Structure



Note:
Diagnostic functions with a P Inside the box are protected functions. The diagnostic password must be entered to gain access to these functions. Such functions are only for use under the direction of the Customer Service

✓ Password = 6789

Figure 2 scanner Diagnostics Menu Tree Structure

Getting to the Scanner Diagnostics Menu

(Figure 3): Once the 8830 DDS system is initialized, the **Ready To Copy** screen appears.

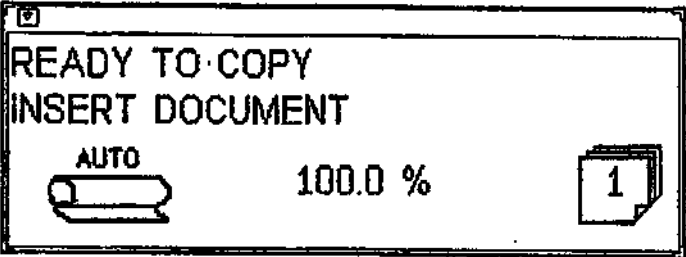


Figure 3. Scanner Ready to Copy Screen

(Figure 4): To arrive at the scanner Main Menu, press the Copy (contrast) Up / Down buttons and the MENU button simultaneously. The scanner Main Menu will appear. Press the ENTER key to select Diagnostics.

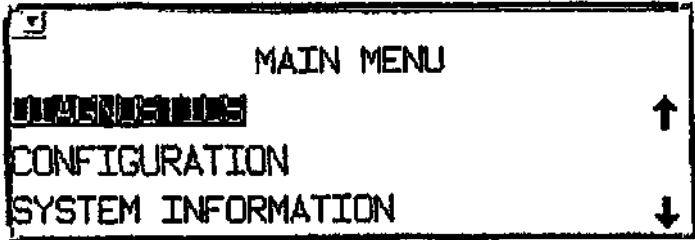


Figure 4. Scanner Main Menu Screen

(Figure 5): When Diagnostics has been selected, highlight and select Scanner Diagnostics by pressing the ENTER key.

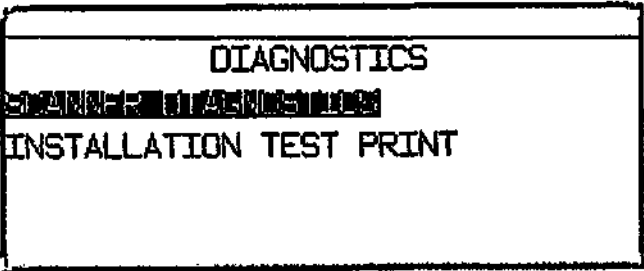


Figure 5. Scanner Diagnostics Menu Screen

(Figure 6): After selecting **Scanner Diagnostics**, you will arrive at the main **Scanner Diagnostics** menu. By scrolling up or down the list (using the PREVIOUS or NEXT buttons) you will be able to choose between the diagnostic tests. Pressing the ENTER button will select a particular test. Pressing EXIT will return you to the previous menu level.

NOTE: For the diagnostic procedures that follow, It will be assumed that the previous menu steps have been already been completed.

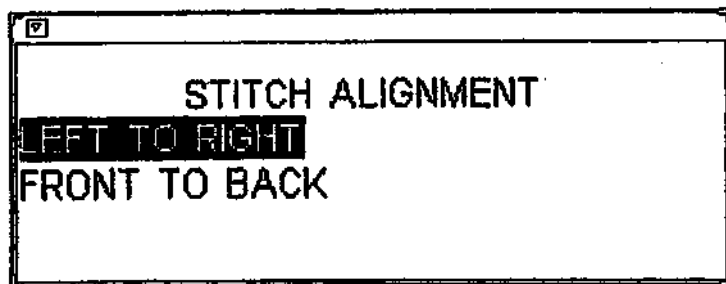


Figure 6. Main Scanner Diagnostics Menu Screen

06M007A-WHO

Left To Right Stitch Alignment

(Figure 7): Selecting stitch Alignment displays the Left to Right Stitch Alignment screen. This test evaluates the left to right stitch alignment of the three cameras and makes an automatic electronic adjustment if required. Go to ADJ 4.4.7 in Section 4 of this service manual for detailed instructions on this adjustment.

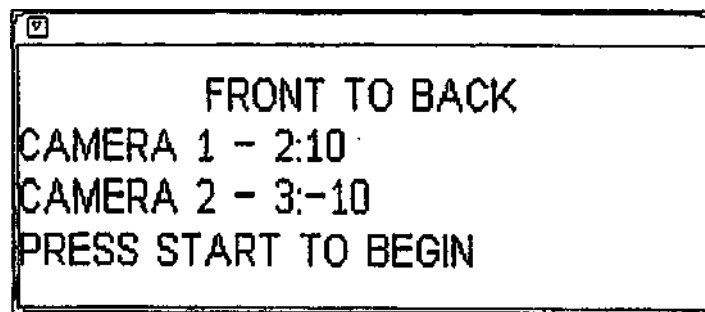


08W11CA-WHa

Figure 7. Left to Right Stitch Alignment Screen

Front to Back Stitch Alignment

(Figure 8): This test evaluates the front to back stitch alignment of the three cameras. If the alignment is not correct, a mechanical adjustment must be made. Go to ADJ 4.4.6 in Section 4 of this service manual for detailed instructions on this adjustment.

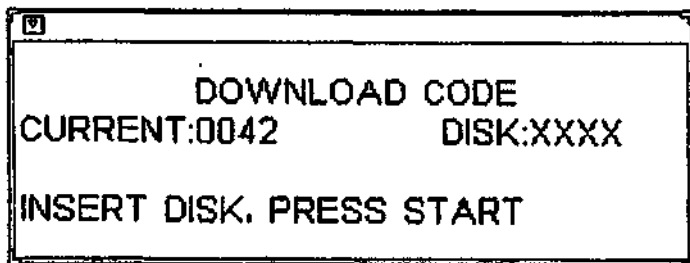


08O0012A-WHO

Figure 8 . Front to Back Stitch Alignment Screen

Download Coda

(Figure 9): Selecting Download Code displays the Download Code screen. This is used to download software updates into the 7356 Scanner. It is NOT to be used for updating software for the 8830 Controller.



01QOOHA-WHa

Figure 9. Download Code Screen

CAUTION

Ensure that power is maintained for all elements of the 8830 DDS system during the upgrade process, and that the process is allowed to terminate normally. Any interruption of the upgrade process results in the unrecoverable corruption of the firmware memory in the Scanner, requiring replacement of the Control PWB.

1. The number to the right of Current displays the version of software presently installed in the Scanner. Insert the upgraded version of software in the floppy disk drive on the 8830 Controller.
2. Press the START button to install the new version. Once the upgrade process has started, it must be allowed to complete.

NOTE: Several blocks of code are downloaded and verified. The screen shows each block that is downloaded. When the process is complete, the Scanner reboots, and the flashing message 'Warming Up' is displayed. This message disappears when the reboot process is complete. The version number displayed in the Current box is now the same as the version on the upgrade disk.

3. Press the EXIT or MENU button to return to the main Diagnostics Menu screen.
4. After downloading a new version of the scanner firmware, check the following adjustments from Section 4 of this Service Manual:
 - a. Registration (ADJ 4.4.9)
 - b. Front to Back Stitch Alignment (ADJ 4.4.6)
 - c. Left to Right Stitch Alignment (ADJ 4.4.7)

Normalize Cameras

(Figure 10): Selecting Normalize Cameras displays the Normalize Cameras screen. This test is used to cause the 7356 Scanner to correct the response of the elements in its 3 cameras to a target of standard reflectance. The target used is the white document hold down Guide on top of the Platen Glass.

The 7356 Scanner automatically performs this operation when it is first switched on, but the Normalize Cameras selection may be used at any time to verify that the cameras are responding properly.

To normalize the cameras, perform the following:

1. Remove any document from the 7356 Scanner.
2. Ensure that the Platen Glass and the surface of the Document Hold Down Guide are completely clean. If they are dirty, clean both surfaces with Xerox Lens and Mirror Cleaner 43P81. Be sure to reinstall the Document Hold Down Guide before proceeding to the next step.
3. Select the Normalize Cameras option from the 7356 Scanner Diagnostics Menu. The Normalize Cameras screen is displayed.

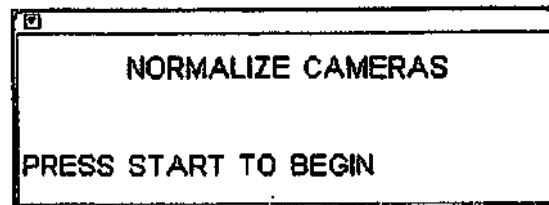


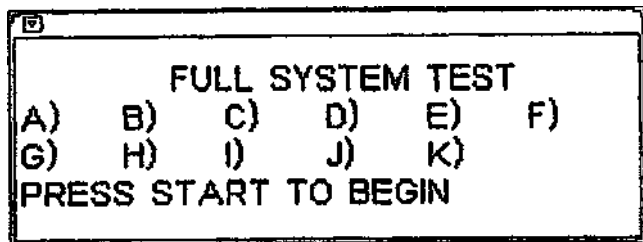
Figure 10. Normalize Cameras Screen

4. Follow the instructions on the screen. During normalization, the screen will display RUNNING... and the 8830 DDS Control Panel will not respond to any keys. The Scanner will not accept any documents.
6. Wait until the screen displays PASSED. Normalization may require up to three minutes to complete.
6. Press the EXIT key to leave the Normalize Cameras screen.

Full System Test

(Figure 11): Selecting Full System Test displays the Full System Test screen. This test operates the complete set of diagnostic tests.

Selecting the START button will start the sequence of tests. This test sequence will be executed until the operator presses the EXIT key, or until alt sub tests are completed.



HM1MA-YWO

Figure 11. Full System Test Screen

- Each letter corresponds to a test, identified in the table below.
- While a sub test is in progress, an R is displayed to the right of the test letter. If the sub test is successful, a P is displayed.
- If a sub test fails, an F will be displayed.

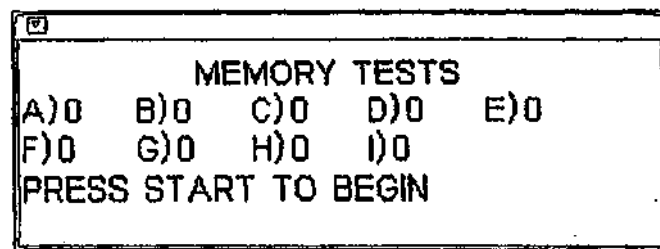
NOTE: If an explicit report on a given memory test is desired, use the Memory Tests selection instead of the Full System Test selection.

Table 1 Pull System Test Elements

| Test | Description |
|------|-------------------------------|
| A | Error Diffusion Test |
| B | Byte Counter Test |
| C | System Threshold Test |
| O | Digital Signal Processor Test |
| E | Compressor Test |
| F | Output Suffer Test |
| G | Line Clipper Test |
| H | Scalar Test |
| I | Grayscale Enhancement Test |
| J | Memory Tests |
| K | Normalization |

Memory Tests

(Figure 12): The Memory Tests screen is accessed by selecting the Memory Tests button on the Scanner Diagnostics Menu screen.



M00016A-WHO

Figure 12. Memory Tests Screen

Each test letter corresponds to a test, identified in the table below.

To the right of each letter is a digit that indicates the number of times that particular test has been executed and passed.

Selecting the START button will start the tests. Each test will be executed, and evaluated as PASSED or FAILED. When the last test is complete, the first test is executed again. XX indicates more than a particular test has failed more than one time.

Each item in the display will either be blank, or display the number of test iterations in shaded format.

The tests may be stopped at any time by selecting the EXIT button.

Table 2 Memory Test Elements

| Test | Description |
|------|------------------------------|
| A | Line Memory |
| B | Normalization Memory |
| C | Map Memory |
| D | System Memory |
| E | ROM Memory |
| F | NVRAM Memory |
| G | Output FIFO Memory |
| H | Scalar Memory |
| I | Grayscale Enhancement Memory |

Component Tests

(Figure 13): Selecting Component Tests displays the Component Tests screen. This screen provides access to the Motor Speed, Registration, Input, and Output test screens.

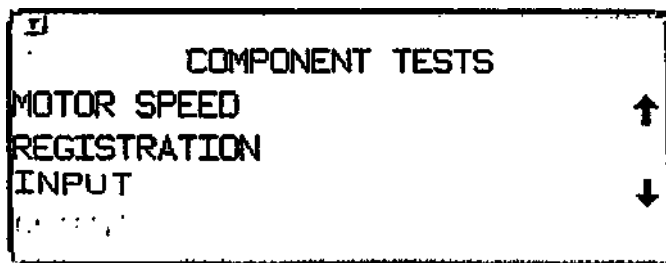


Figure 13. Component Tests Screen

Motor Speed

(Figure 14): This selection adjusts the scanner motor speed to achieve the correct document transport speed. If a correct speed is achieved, PASSED is displayed. FAILED is displayed otherwise. Refer to ADJ 4.4.8 in Section 4 of this service manual for further information and instructions on performing this procedure.

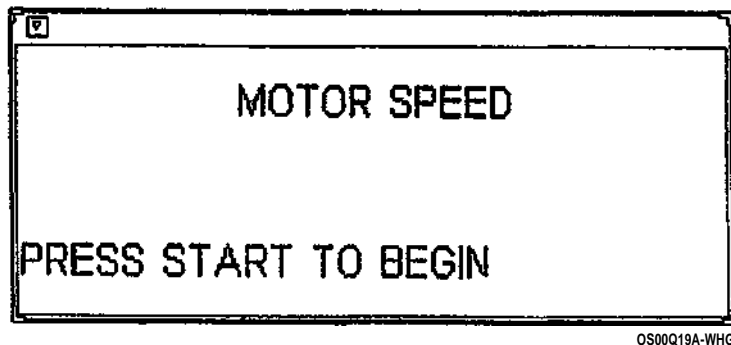


Figure 14. Motor Speed Test Screen

Registration

(Figure 16): This selection screen compensates for the actuation timing of the two document sensors so that the document lead edge is correctly positioned prior to the start of a scan. If the timing is correct, PASSED is displayed, FAILED is displayed otherwise. Refer to ADJ 4.4.9 in Section 4 of this service manual for further information and instructions on performing this procedure.

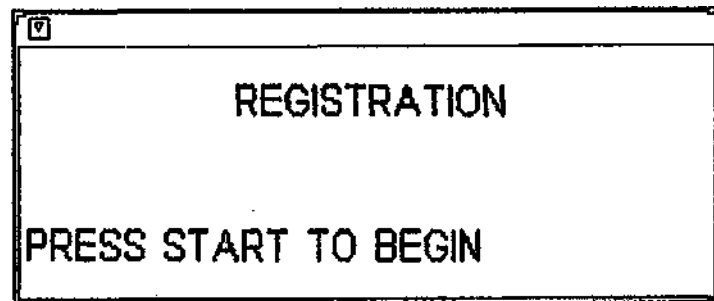


Figure 16. Registration Test Screen

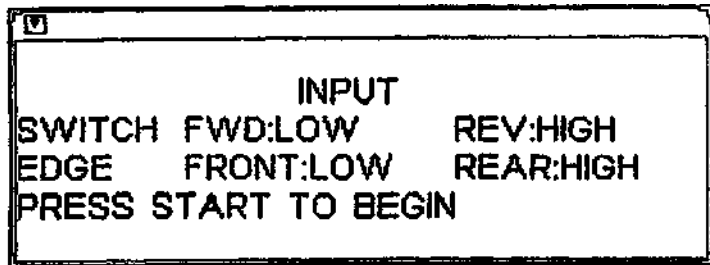
Input Tests

(Figure 16): The Input Tests screen shows the state of the Forward/Reverse Switch and the two Document Edge Sensors,

Switch • The Forward / Reverse Switch is in either in a Low or High state.

Edge - The Edge Sensors (Front and Rear) are either in a Low or a High state.

1. From the Diagnostics menu, select Scanner Diagnostics > Component Tests > input. Then press the START button.



0B00021A-WHO

Figure 19. input Tests Screen

2. Once the START button has been selected, the logic states of the signal lines connected to the component are displayed as HIGH or LOW. Tests can now be performed on the signal lines to check the motor direction, switch states, etc. During these tests, no other changes in machine state occur. Use the rocker switch on the upper right hand side of the 7358 scanner to test the motor. Use a sheet of paper to test the edge sensors.
3. Press EXIT to end a particular test, and to go back to the Component Tests menu.

NOTE: When checking the Forward / Reverse switch It will be necessary to hold down the switch in the desired direction to be tested to detect a change of state for that switch.

Output

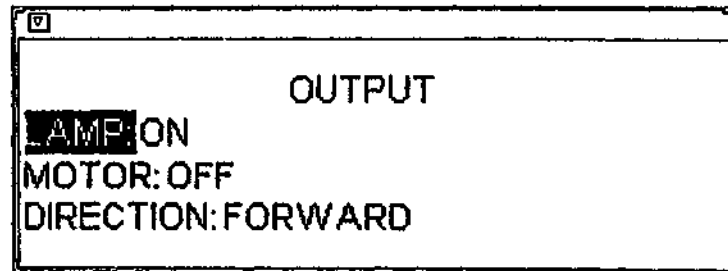
(Figure 17): The Output Tests screen shows the state of the Exposure Lamp and the Motor

Lamp - The Exposure Lamp is either ON or OFF.

Motor • The Motor state is either ON or OFF.

Direction • The direction of motor operation is either FORWARD or REVERSE.

1. From the Diagnostics menu, select Scanner Diagnostics > Component Tests > Output. Then press the START button.



OS00022A-WH9

Figure 17. Output Tests Screen

2. Pressing ENTER one time on a darkened (selected) item causes a box to appear around the state of that item. This allows the state of that item to be changed.
3. Pressing the PREVIOUS button on such a boxed item allows a change of state for that item. (ON to OFF, FORWARD to REVERSE.)
4. Pressing the ENTER button (a second time) causes the selected item to be tested.
5. Press EXIT to go back to the Component Tests Main Menu.

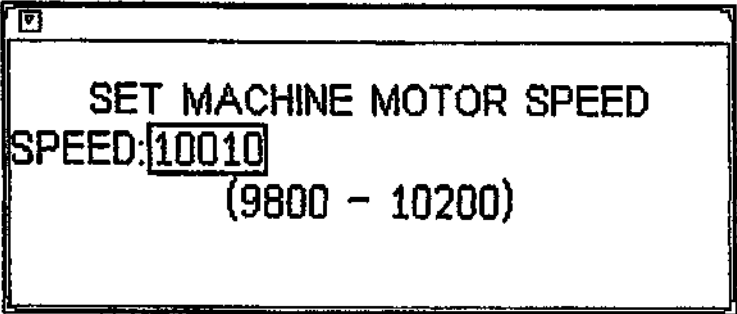
NOTE: Pressing the NEXT or PREVIOUS button on an already selected item causes the next item on the list to be highlighted (darkened).

NOTE: In order to test Motor Direction, ensure that the Motor setting is first turned on.

Set Machine Motor Speed

Selecting Set Motor Speed displays the Set Machine Motor Speed screen.

(Figure 18): The Set Machine Motor **Speed** screen allows up to a 2% change to the factory determined motor speed. Refer to ADJ 4.4.10 in this service manual for further Information and instructions on performing this procedure.



0S0D023A-WHQ

Figure 18. Set Machine Motor Speed Screen

Read NVR

Selecting **Read NVR** displays the **Read NVR** screen.

(Figure 19): This screen **will** then display the hexadecimal contents of the non-volatile RAM in the Scanner.

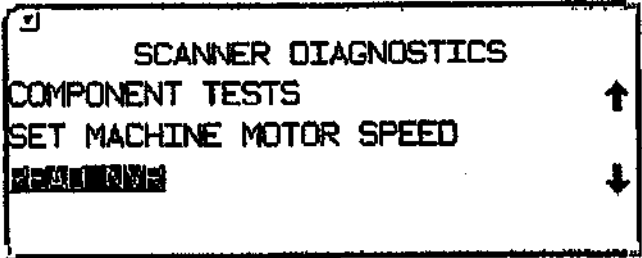


Figure 19. Read NVR Screen

8830 DDS Control Panel Diagnostics

The 8830 DDS Control Panel firmware includes an Internal set of diagnostic tests useful (or verifying correct Control Panel operation with or without a connected host. These tests are organized under a Diagnostics menu.

Diagnostic Mode Entry and Exit - The Diagnostic mode can be entered at any time during system operation by simultaneously holding down the Up Contrast, Down Contrast, and Zero keys on the Control Panel. Upon entry into the 8830 DDS Control Panel Diagnostics Mode, a menu is displayed allowing entry into each of the tests. Pressing the EXIT key while the Diagnostics menu is displayed causes the Control Panel to reset as if it were just energized. Software in the Controller will restore the previous state of the Control Panel.

LCD Test • This test verifies that all pixels on the LCD can be turned on and off Independently. The LCD display is alternately filled and cleared one line at a time from the bottom to the top. It is then alternately filled and cleared one column at a time from the left to the right. The test is terminated by pressing any 8830 DDS Control Panel key.

Communications (Loopback) Test - This test verifies that messages can be sent to and received from the host. To test both the 8830 DDS Control Panel and cable, a loop-back connector (Service part #114K-00850) is attached to the cable connector usually plugged into port 14 of the host. The test consists of continuously transmitting messages and verifying that they are received back correctly. The test passes if the messages are successfully received. Each change of test status (pass / fail) is accompanied by a Control Panel beep. The test is terminated by pressing the EXIT key.

LED Test • This test verifies that all LEDs can be Independently turned on and off. The test involves turning all LEDs on and off twice and then turning each individual LED on and off in order from left to right. The Service Engineer observes the LEDs to verify that all are operational. The test is terminated by pressing the EXIT key.

Key Test • This test verifies that all keys can be pressed and released. A picture of the 8830 DDS Control Panel keys is drawn in the LCD display. The keys are outlined when released and solid when pressed. By pressing each key, the Service Engineer can verify that each key can be pressed and released. Pressing a key also causes a key click to be sounded, allowing verification of the Control panel beeper. This test is exited by pressing the EXIT key.

System Information

The System Information menu allows access to information about each component connected to the 8830 DDS. From the Ready to Copy Screen, press the Copy (contrast) Up/Down buttons and the MENU button simultaneously. The scanner Main Menu will appear. Select System Information, and then scroll to one of the submenus that you wish to view. Press ENTER to view the particular area. Press EXIT to leave a particular submenu.

System Description • The System Description submenu provides information on the model identity, and firmware version for each component in the system. In addition, for the 8830 Controller, the amount of Random Access memory (RAM) and the size of the Hard Disk Drive are also displayed.

Recent Faults - The Recent Faults screen allows access to fault codes regarding recent system malfunctions. These fault codes were used primarily for internal software development analysis, and are of limited scope. If you are experiencing 8830 DDS problems and the most recent faults listed on this screen end in 0005,0009, or 000A perform the following:

- * Clean the 7356 Scanner Platen.
- Perform the Normalize Cameras procedure listed in this chapter.
- * If the problem is not resolved after performing the above steps, run the scanner diagnostic tests from a laptop computer.

For all other codes listed, perform the following:

- * Ensure that all elements in the 8830 DDS have the most current firmware revision levels.
- Check all cable connections from the 7356 Scanner and the 8830 DDS Control Panel to the 8830 Controller. (See the 8830 DDS Installation procedure in this chapter for cable connections.)
- Power off the 8830 DDS and power on in the following order: 7356 Scanner, 8830 Controller, 8830 Printer.

Configuration Print • The Configuration Print screen allows the operator to send one or all of the following configuration prints to the printer.

- » Copier Configuration
- * Printer Information
- Printer Configuration
- » Print out of all three Configuration Prints

User Accounting • The User Accounting screen allows access to a display of job accounting information for a specific user. Additional information regarding this subject is contained in the 8830 DDS User Guide.

Installation of Diagnostic Software - Laptop Computer

Perform the following steps to Install the diagnostic software on the computer used to control the scanner.

1. Ensure that the computer is running Microsoft Windows 3.1, 3.1.1, or Windows 96. MS DOS 6.2 or better must also be present. The diagnostic software will only operate under one of these operating systems.
2. Close any applications running under Windows at the time.
3. Insert the floppy disk that contains the diagnostic software into the floppy disk drive.
4. (Figure 20): Open the Program manager in Windows and choose RUN from the File menu.
5. Type A: Setup and press the ENTER key.
6. Follow the directions on the screen to complete the installation.

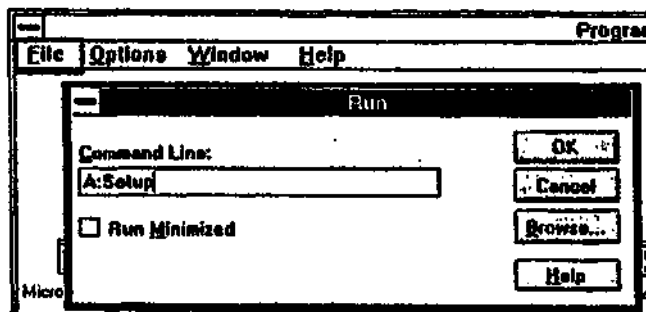


Figure 20. Running the Setup Program

Starting the Diagnostic Software - Laptop Computer

Perform the following steps to start the diagnostic software when a laptop computer is used to run the diagnostics for the scanner.

1. Switch off the scanner, the laptop computer, and the control computer for the system to which the scanner is connected.
2. Disconnect the scanner SCSI cable from the control computer.
3. Connect the Laptop computer SCSI cable to the scanner.
4. Ensure that all other SCSI connections are disconnected from the scanner.
5. Switch on the scanner and wait ten seconds.
6. Switch on the laptop computer and allow it to complete the boot process.
7. Locate the SCSI7356 program and start it.
8. Enter the password and press the ENTER key *on the keyboard*,
9. Press the START button on the screen
10. Press the Normalize Cameras button.
 - At this point you may normalize the scanner's cameras, or you may skip the test by pressing EXIT. If you plan to perform any diagnostic tests that require making an image, you should first perform a camera normalization. Refer to Using the Diagnostic Software for further Information about features of the Diagnostic Software.

Starting the Diagnostic Software from a Floppy Disk

1. Ensure that the computer is running Microsoft Windows 3.1, 3.1.1, or Windows 95. MS-DOS 6.2 or better must also be present. The diagnostic software will only operate under one of these operating systems.
2. Close the Windows program manager.
3. Switch off the computer and the scanner.
4. Connect the SCSI cable from the scanner to the SCSI port of the computer on which the diagnostics will also be run.
5. Switch on the scanner.
6. Switch on the computer, allow it to boot, and then type WIN to start Windows.
7. Insert the SCSI7356 floppy disk into the floppy disk drive of the computer.
8. Open the Program Manager in Windows, and choose RUN from the File menu.
9. Type A:SCSI7356 and press the ENTER key.
 - The software starts. Enter the password and press the START key on the keyboard. Then select the START button. Refer to Using the Diagnostic Software for further Instructions.

Product Specifications

Physical Characteristics

Table 1 Physical Characteristics

| Category | 8830 Printer | 7356 Scanner |
|---|---|-----------------------|
| Weight | 575 lbs. (261 kg) | 140 lbs. (63.3 kg) |
| Height | 43 Inches (1092 mm) | 40.5 inches (1029 mm) |
| Width | 23 Inches (584 mm) | 50.5 inches (1083 mm) |
| Depth | 57 Inches (1449 mm) | 26.5 Inches (673 mm) |
| Product Code | 8YG | D8W |
| Floor Space required for system | 299 Inches x 105 Inches (7695 mm x 2667 mm) | |
| Floor Space required for system (with 8830 Folder) | 299 Inches x 105 Inches (7595 mm x 2667 mm) | |
| Height Clearance | 78 inches (1981 mm) from floor to nearest overhead obstruction within the door space requirement. | |

NOTE: 8830 DOS Shared Fixed Space • Orientation of the 8830 Printer and 7356 Scanner must maintain minimum service space illustrated for safe operation of the 8830 Digital Document System.

NOTE: Once Installed, the 8830 DDS is not considered movable. If moved, re-leveling of the 8830 DDS may be required.

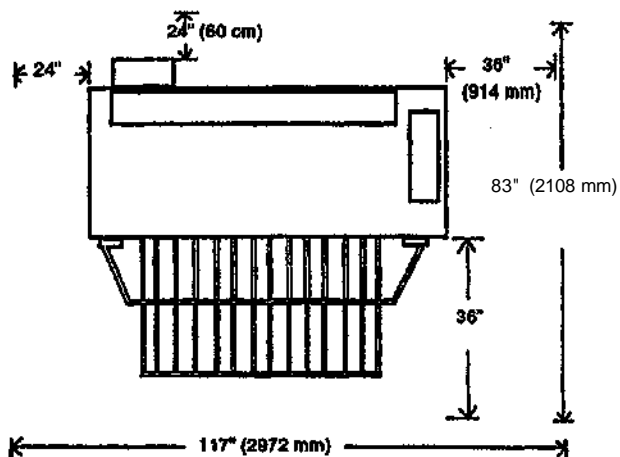


Figure 1 8830 Printer Minimum Space Requirements

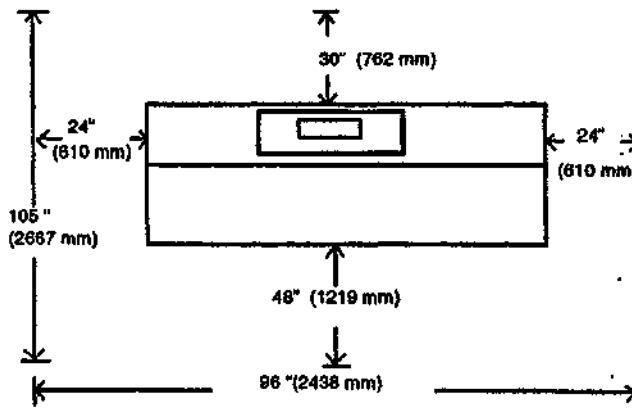


Figure 2 7356 Scanner Space Requirements

Environmental Conditions

Table 2 Environmental Specifications

| Item | 8830 Printer Minimum | 8830 Printer Maximum | 7356 Scanner Minimum | 7356 Scanner Maximum |
|----------------------------------|--------------------------------|-------------------------|------------------------------|-------------------------|
| Temperature | 60° F (15° C) | 80° F (27° C) | 60° F (15° C) | 80° F (27° C) |
| Humidity | 20% | 80% | 20% | 80% |
| Heat Emissions (BTU per hour) | Standby: 2350 Running: 1840 | | Standby: N/A Running: N/A | |
| Audible Noise | 67 db (A) | | 55 db (A) | |

Electrical Specifications

Table 3 Electrical Requirements

| item | 8830 Printer | 7356 Scanner |
|---------------------------|---------------------------|---------------------------|
| Voltage | 104V-127V or 220V-240V | 104V-127V or 220V-240V |
| Current Amps - Stand By | 1.4 | 1.07 |
| Current Amps • Running | 1.6 | 1.23 |
| Power Consumption (Watts) | | |
| Rest | 120W | N/A |
| Stand By | 1000W | 117W |
| Running | 1840W | 135W |
| GFI Power Cord Length | 10' (3 m) | 8' (2.4m) |

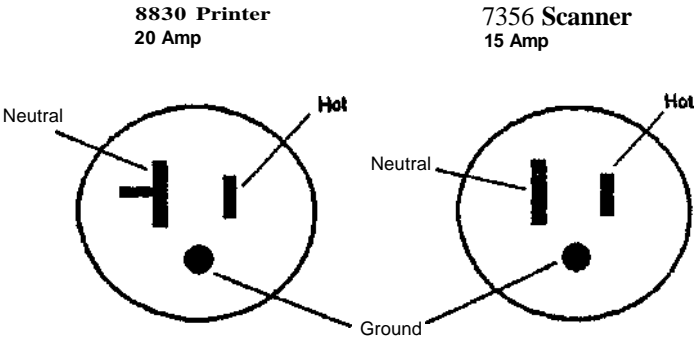


Figure 3 8830 Printer and 7356 Scanner Power Cable Connector*

8830 DDS Installation

NOTE: Prior to beginning this Installation, It will be necessary to determine whether or not this product will be installed on a network. If it is a network installation, provide the Administrator with a copy of the Network Administrator Guide, the Client Software Manual, and the available software. If it is not a network installation, provide the Administrator with only the Client Software Manual and the available software. Explain the importance of these manuals, and the customer's responsibilities. Also be sure to reference the XES GOLD configuration sheet and its Implementation. Leave the rest of the materials with the customer for future use.

NOTE: Check the scanner serial number on the Tag Matrix (located under the scanner Top Cover). Scanners with serial numbers D8W024215 and above are built with Tags 6 and 6 which enables them to be retrofitted to the 8830 DDS configuration. Scanners without Tags 6 and 6 will require retrofit kits 600K64670 Top Cover Kit (Scanner Tag 6) and 600K64680 Feed Shell Kit (Scanner Tag 6). These kits are required to Install the 8830 DDS Control Panel and Document Catch Tray.

8830 DDS Installation Checklist

Listed below are the items required to Install a new 8830 DOS Printing System or upgrade an existing 8830 Printer System to a 8830 DDS configuration. An X in the box Indicates that the item is required for the install. **The items are listed in their recommended sequence of Installation.**

Table 1 Items Required For Installation

| Item | New Installation | 8830 With 1.0 8830 Controller | 8830 With 2.0 8830 Controller | 8830 With no Controller |
|---|------------------|-------------------------------|-------------------------------|-------------------------|
| 7356 Scanner | X | | X | X |
| Document Handling Kit | X | X | X | X |
| Nationalization Kit | X | X | X | X |
| 8830 DOS Control Panel Kit | X | X | X | X |
| 8830 Printer | X | | | |
| IOT Firmware Kit | X | X | X | x |
| Language EPROM Kit | X | X | X | X |
| Hard Drive 2 GB Kit ¹ | X | X | X | X |
| SDRAM Memory Kit ¹ | X | X | X | X |
| 8830 DOS Controller Upgrade Kit | | X | | |
| 8830 Controller Software Kit | X | X | x | X |
| 8830 Controller (Version 2.0) | X | | | X |
| Network Interface Card (NIC) ² | Optional | Optional | Optional | Optional |

¹ These kits may not be on site if the 8830 Controller is already equipped with a hard drive and additional memory.

² The Network Interface Card will only be available if the customer requires network connectivity.

1. Check to ensure that the latest software is available and compatible for installation on all components of the 8830 Digital Documents System. Reference the Configuration Matrix Technical Services Bulletin (TSB) for the 8830 DOS product configuration, or reference the Bulletin Board System (BBS).
2. If the 7356 Scanner is already Installed, proceed to the next step. If the scanner is not installed, perform the following before proceeding:
 - a. (Figure 1): Prepare the Scanner for Installation.

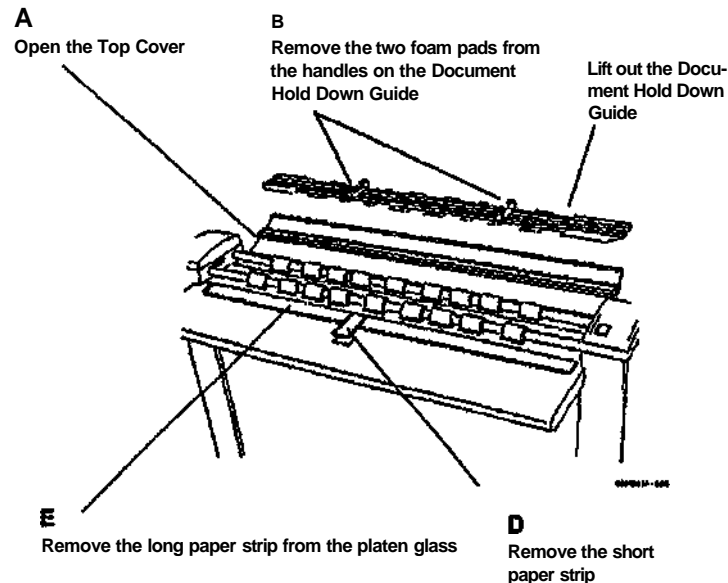


Figure 1 Removing the Packing Material

(Figure 2): Ensure that the Edge Present Sensor and the Edge Registered Sensor actuate and deactuate freely.

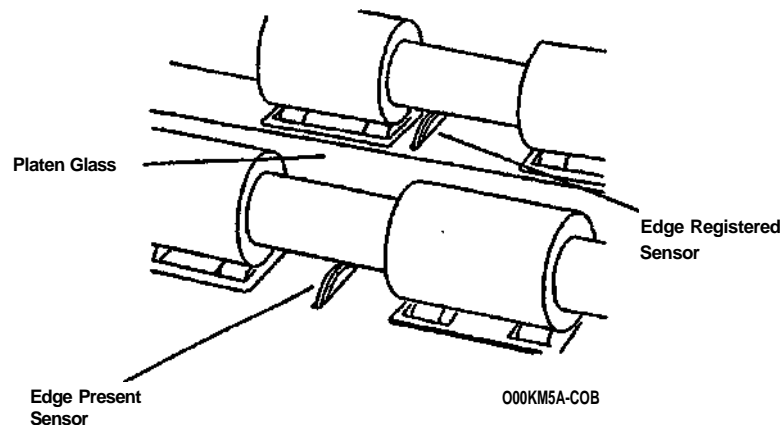


Figure 2 Sensors and Platen Glass

- c. Check the Platen Glass and the Document Hold down for damage or dirt and clean the parts if dirt is found.
- NOTE: Use Lens and Mirror Cleaner 43P81.*
- d. Install the Document Hold Down Guide.
- e. Close the Top Cover.

NOTE: In the Mowing step, the SCSI target Identification number will be set. SCSI specifications require this Target ID number must be unique, and It must be set to 4. Ensure that no other SCSI addresses In the 8830 DDS system are set to the same number you select here.

- f. (Figure 3): Rotate the SCSI address Switch to indicate 4. (This switch is located on the back of the printer, between the SCSI ports.) A flashlight may make this switch easier to see and adjust

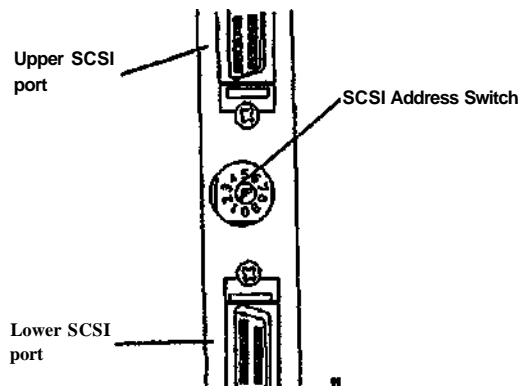


Figure 3 SCSI Address Switch (located at left rear of scanner)

- g. Place the scanner where Power and SCSI cables can reach the connections on the 8830 Controller.
- h. Check the power outlets (or correct voltage).
- i. Lock the casters on the scanner.
- j. Connect the Power Cord to the scanner.
- k. Connect the scanner SCSI cable to either the upper or tower SCSI port at the rear of the scanner.

3. Install the 8830 DDS Control Panel Kit. Perform the following:

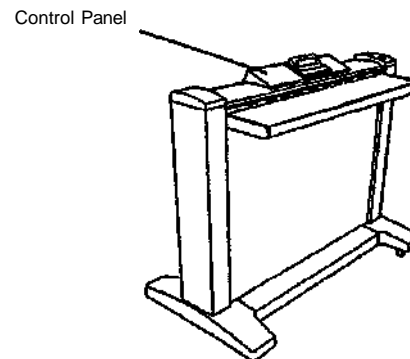
Table 2 Kit Contents

| Item | Description | Quantity |
|------|-----------------|----------|
| 1 | Control Panel | 1 |
| 2 | Mounting Bolt | 3 |
| 3 | Star Washer Nut | 3 |
| 4 | Cable Guide | 2 |
| 5 | Instructions | 1 |
| 6 | Strain Relief | 2 |

- a. Ensure that there are three mounting holes (Tag 6) visible on the back of the Top Cover. If there are not, order and Install 7356 Scanner Kit 600S64670.

NOTE: Attach wrist ground strap before proceeding with this installation. Attach the other end of the ground strap to the upper SCSI cable outlet for ground. The ground strap can be removed after installing the 8830 DDS Control Panel.

- b. (Figure 4): Place the 8830 DDS Control Panel on the 7356 Scanner.



070000IA-WHG

Figure 4 Placement of 8830 DDS Control Panel on 7356 Scanner

- c (Figure 5): Install the 8830 DDS Control Panel on the 7356 scanner.

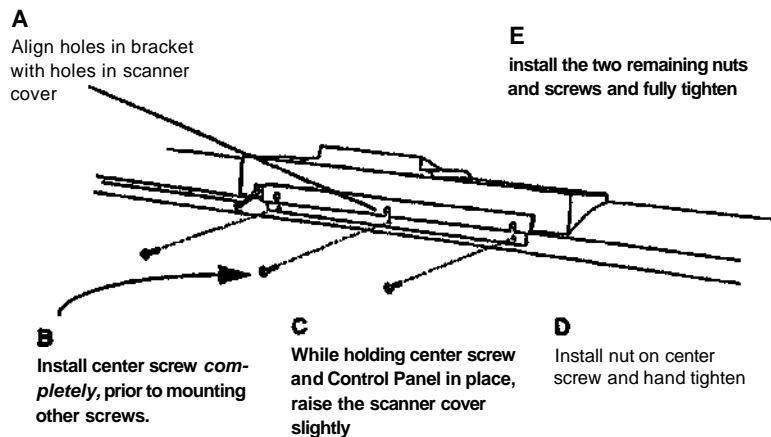


Figure 5 Rear view of 8830 DDS Control Panel showing fastener alignment

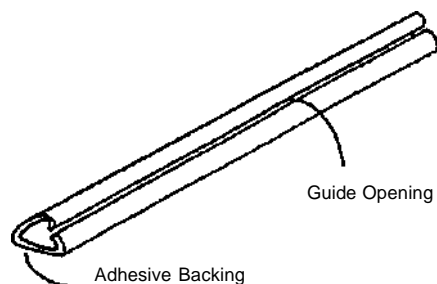


Figure 6 7356 Scanner Cable Guide

NOTE: In the following step, ensure that the location of the Cable Guides is measured and lightly indicated in pencil on the rear of the scanner prior to installation of the Cable Guides. Due to the strength of the adhesive used to hold the guides in place, they must be positioned correctly the first time.

NOTE: When Installing the Cable Guides, make sure that the Guide Openings are directed towards the center of the scanner. This gives the Cable guides a seamless appearance and loosens the possibility of them catching on clothing.

- d. (Figure 7): Install the Cable Guides and route the Control Panel Cable.

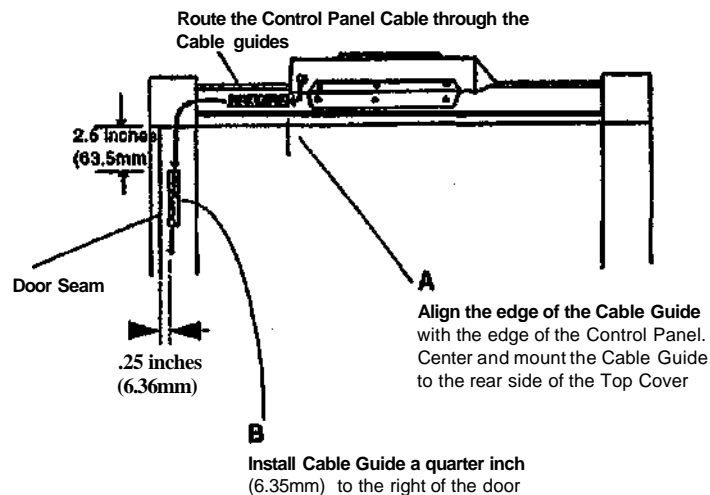


Figure 7 Rear of Scanner showing positioning of Cable Guides

(Figure 8): Install the Strain Reliefs and route the scanner cables through them.

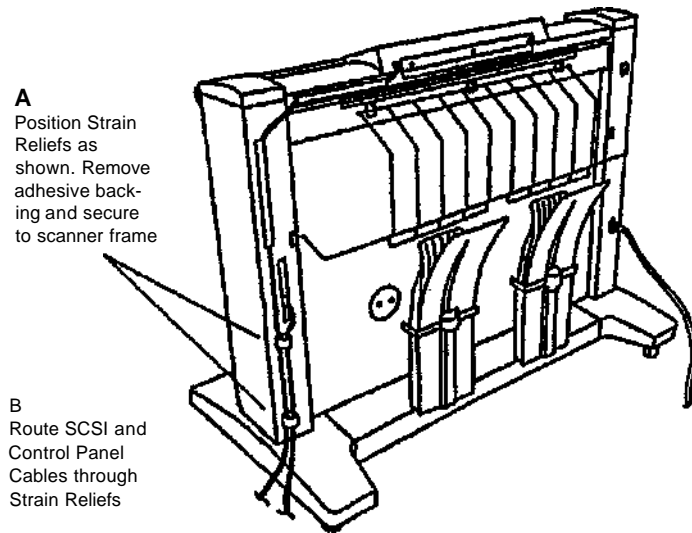


Figure 8 Location of Strain Reliefs and routing of scanner cables

- f. Locate the Control Panel labels (3) in the nationalization Kit.
 - g. Apply the Control Panel Labels to their respective positions on the 8830 DOS Control Panel. (Each label has its own unique shape and cutout configuration.)
 - h. Install the Document Loading Bins and Document Catch Tray kit per instructions in that kit. (Instructions Included in box.)
4. If the 8830 printer has already been installed, proceed to the next step. Otherwise, perform the 8830 Printer Installation procedure in Section 8 of the 8830 Printer Service Manual before proceeding.

5. If the 8830 has a Controller already installed, proceed to the next step. If the 8830 does not have a Controller Installed, perform the following before continuing:
 - a. Take the uninstalled 8830 Controller from Its packaging and place it on the ground behind the 8830 Printer. Power off the 8830 Printer. Attach all connectors to the printer, and run a configuration test print from the printer (see 8830 Controller Service Manual, Section 2.) The Information generated in this print will be needed later in this Installation procedure.
 - b. Disconnect the 8830 Controller and place it on an ESD mat. Continue with this procedure.
6. Check to see If the 8830 Controller Tags 5 and 6 have been installed. If not, perform the procedure in Technical Service Bulletin TSB 97047. It will be necessary to perform this procedure prior to proceeding to the next step.
7. Install the upgrade kit (tags 7 and 8). (Procedure is located later in this chapter.)
8. If the 8830 Controller has not been Installed up to this point, install It now. Procedure can be found in the 8830 Controller Manual, Section 6.

NOTE: If the 8830 Controller you are working with begins with serial number F5Y, continue on with this 8830 Controller configuration update. If the serial number on your Controller begins with is a number later than F5Y, then it has already been updated at the factory. In this case, proceed to step 8

NOTE: If Installing a new 8830 Controller, you may find some duplication of parts with regard to the upgrade kits. If so, discard the extra parts and continue on with this Installation procedure.

9. (Figure 9): Connect the following scanner cables to the 8830 Controller Connector Panel.

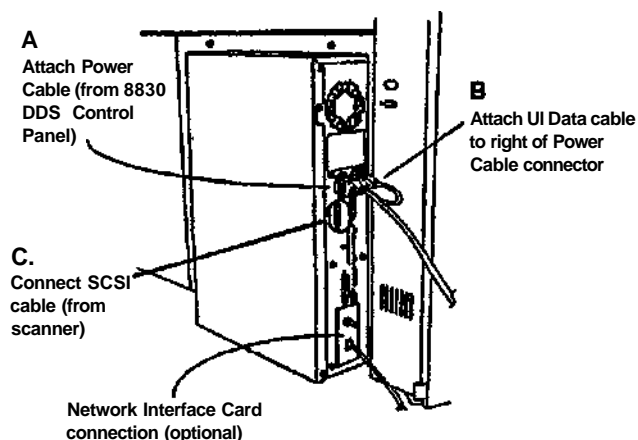


Figure 9 Location of Control Panel Cable connection on 8830 Controller

NOTE: Unless the following power-on sequence is followed, the scanner Control Panel will not illuminate, and the 8830 DDS system will not function correctly.

10. Power on the 8830 DDS system by performing the following steps:

- Power on the 7356 scanner.
- Power on the 8830 Controller.
- Power on the 8830 Printer.

NOTE: If needed, the 8830 DDS Control Panel ambient intensity can be adjusted by rotating the trim pot on the Scanner Control Panel Main PWB. A small jeweler's screwdriver will be required to make this adjustment.

11. Make a test print.

12. Perform the scanner Functional Checks from Section 4 of this service manual.

- Left to Right Stitch Alignment (ADJ 4.4.7).
- Front to Back Stitch Alignment. (ADJ 4.4.6).

- Check / Adjust System Image Quality by performing ADJ 4.4.5 System Image Quality.

13. Make a copy of the 82E5980 Test Pattern and check the overall copy Quality.

NOTE: In the following steps, the term "assist" indicates that the customer performs the actual tasks, under supervision of the Customer Service Engineer.

NOTE: Prior arrangement for availability, configuration, and location of the PC must be documented on the XES GOLD configuration sheet.

NOTE: If a customer PC is not available on site, the CSE will make arrangements to have a District Laptop available to test and demonstrate to the customer the functionality of the 8830 connectivity of the following:

- Win RTL - Serial and Parallel ports
- PMT- Serial and Network ports
- DMT- Parallel and Network ports
- VPI- Serveware only
- Host SCSI - Serveware only

14. If the 8830 DDS system is being connected to a network, refer to the 8830 Controller Service Manual, Otherwise, perform the following:

- With the assistance of a customer analyst, connect the system to a customer Host PC.
- Inform the customer of the available software for the 8830 Controller.
- Connect the Host Cable to the appropriate connector on the 8830 Controller Connector Panel.

15. Complete customer operator training per customer training checklist.

16. Contact Work Support to complete installation in FWSS.

1. Power off the 7356 Scanner, the 8830 Controller, and the 8830 Printer. Disconnect the printer and scanner power cables.
2. Remove the Document Loading Bins (2) from the front of the 7356 Scanner by performing the removal procedure in REP 4.1.1 of this manual.
3. Disconnect the 7356 Scanner and SCSI Interface cables. Roll up the cables and secure with tape. Place the cables on the Scanner Feed Shelf.
4. Disconnect the 8830 DDS Control Panel cable from the two locations of the 8830 Controller Connector Panel. Roll up the cable and secure with tape. Place the cable on the Scanner Feed Shelf.
5. Remove the 7356 Scanner Document Catch Trays (2) from the Wire Form Assembly at the back of the scanner. (They lift off the Wire Form Assembly.) Place the Catch Trays on top of the cables already placed on the scanner Feed Shelf.
6. Remove the Wire Form Assembly from the back of the 7356 Scanner by performing the removal procedure in REP 4.1.2 of this manual.
7. Place the Document Loading Bins (2) and the Wire Form Assembly directly in front of the 7356 Scanner for the rigging crew.

3. (Figure 2): Remove the 8830 Controller Cover (if not already removed).

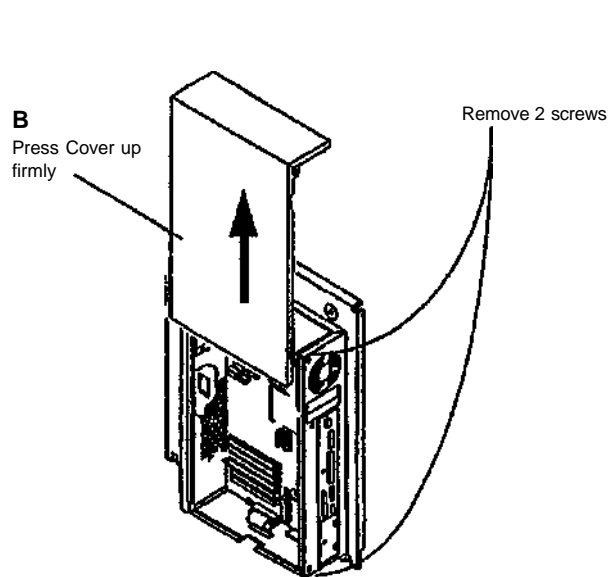


Figure 2 Removing the 8830 Controller Cover

4. Lay the 8830 Controller on a flat surface, with the Main Controller Board facing upwards.
5. Refer to the 8830 Controller Service manual and remove the Network Interface Card, It already Installed (REP 1.10).
6. Disconnect the following connectors from the 8830 Controller, and gently guide them out the back of the Controller and printer Right Lower Cover.
- P1 on the 8830 Controller PMC PWB
 - P13 on the 8830 Main Controller Board (MCB)
 - P1 on the 8830 Controller Exhaust Fan
7. (Figure 3): Remove the PMC PWB.

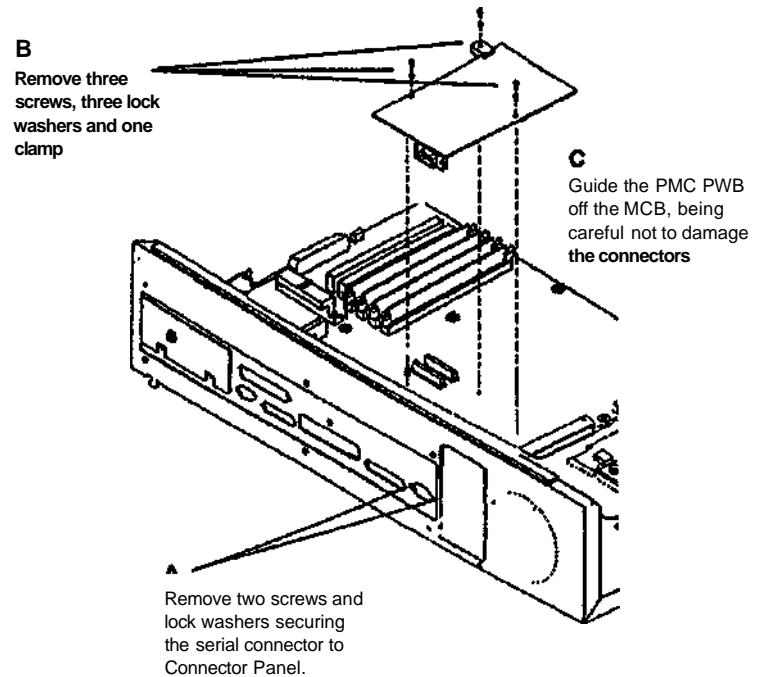


Figure 3 Removing the PMC PWB

8. (Figure 4): Flip the assembly over and remove the screws that fasten the 8830 printer Right Lower Cover to the 8830 Controller chassis.

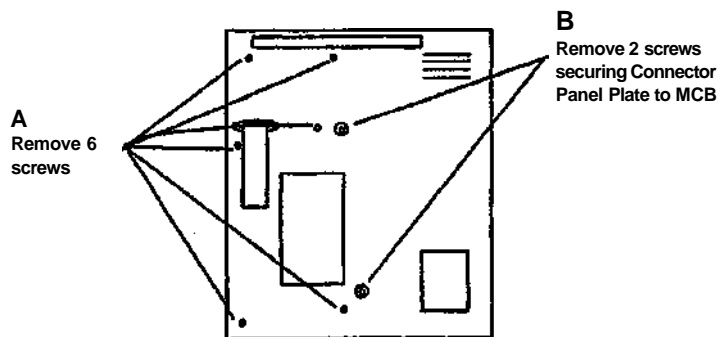


Figure 4 Rear view of 8830 Controller showing screws to be removed from the 8830 Printer Right Lower Cover

9. Remove the 8830 Printer Right Lower Cover from the 8830 Controller Chassis and set it aside.

NOTE: For clarity, the following illustration shows the MCB and the PMC PWB only.

10. (Figure 5): Set the 8830 Controller on a table top with the Inside of the module facing up. Disconnect P12, P11, P3, PS, and P9 from the MCB and PMC PWB.

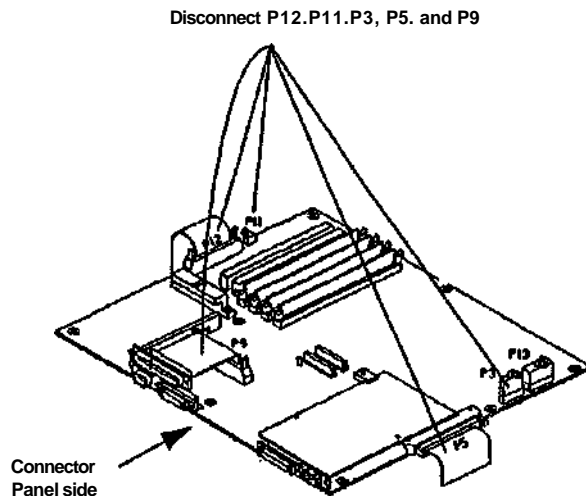


Figure 5 Disconnecting the connectors from the MCB and PMC PWB

11. (Figure 6): Remove the MCB / Connector Panel Plate from the 8830 **Controller** Chassis.

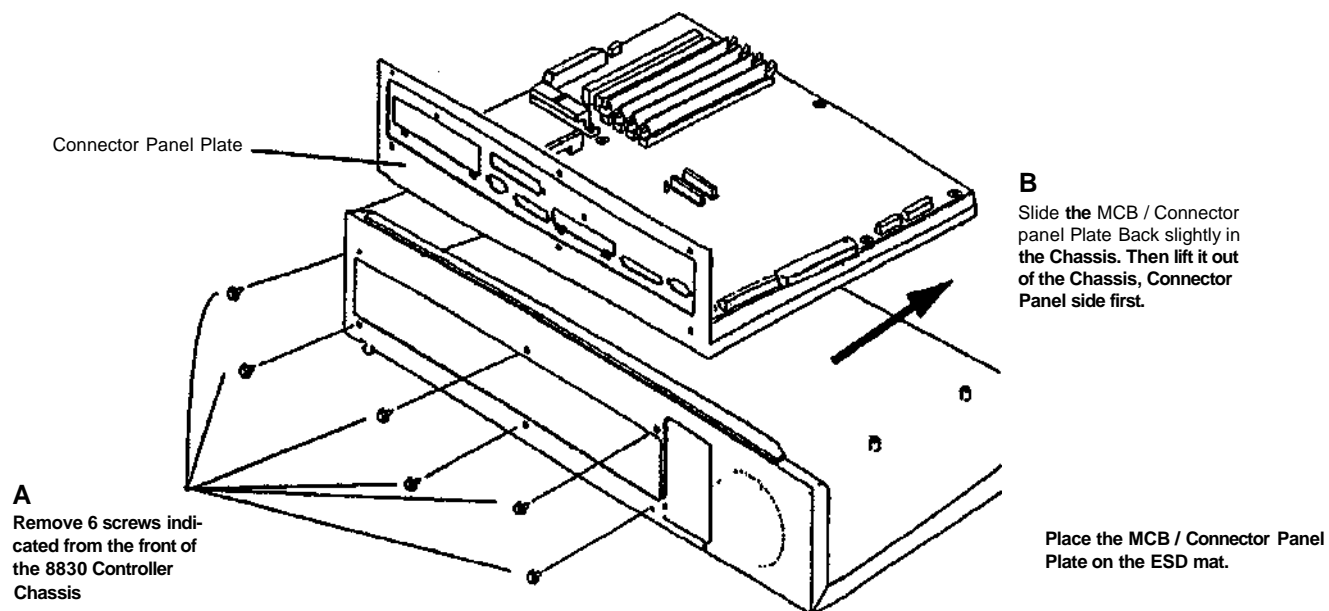


Figure 6 Removing the MCB and the Connector panel Plate from the 8830 Controller Chassis

12. If not already Installed, install the 8830 Controller Hard Drive on to the Controller Chassis by performing the following:
 - a. Disconnect and discard the P1 - P2 • P3 harness from the Disk Drive Assembly.
 - b. Disconnect and discard the P6 flat ribbon harness from the Disk Drive Assembly.
 - c. Disconnect P1 and P2 from the Floppy Drive, but do not discard. Allow the harnesses to remain in their present locations on the floor of the Controller Chassis.
13. Remove the Floppy Drive by performing the following:
 - a. Loosen the screws that secure the Disk Drive Assembly to the Controller Chassis.
 - b. Slide the Disk Drive Assembly back on its slots, and remove it from the Controller Chassis.
14. (Figure 7): If Tag 8 is not already Installed, remove the two plates that cover the old Floppy Disk Drive area, replacing these with the new single Cover Plate.

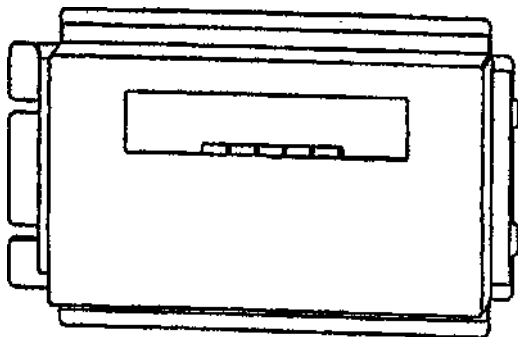


Figure 7 New Floppy Drive Cover Plate

NOTE: In the following step, ensure that the front of the disk drives are correctly aligned with the newly Installed Floppy Drive Cover Plate.

15. Install the Hard Drive onto the Disk Drive Assembly. Mount it beneath the Floppy Drive, with the circuitry facing the floor of the Controller Chassis.
16. Reinstall the Disk Drive Assembly on the Controller Chassis, then set the Controller Chassis aside.

NOTE: In the following steps It will be very Important to avoid misplacing or confusing the mounting hardware for the various connectors, PWBs, etc. It would be a good Idea to place these items in separate containers to avoid this occurrence.

17. (Figure 8): Remove the remaining hardware and connectors from the old Connector Panel Plate.

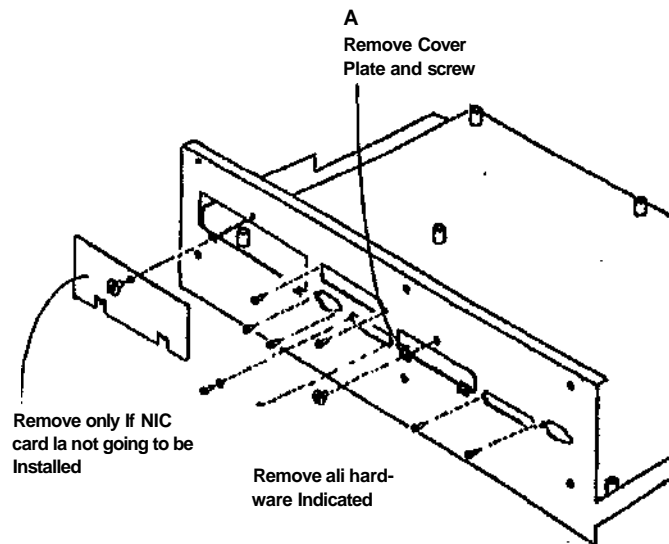


Figure 8 Hardware to be removed from old Connector Panel Plate

18. Remove the 8 mounting screws that secure the MCB to the old Connector Panel Plate. (See Figure 9 for location of screws.)

19. Remove the MCB from the old Connector Panel Plate and place it on the ESD mat. (Discard the old Connector Panel Plate.)

NOTE In the following reassembly steps, tighten the eight (8) mounting screws finger-tight only. When all the hardware is correctly positioned, fully tighten the mounting screws.

20. (Figure 9): Place the MCB on the new Connector Panel Plate, and secure it with the hardware previously removed.

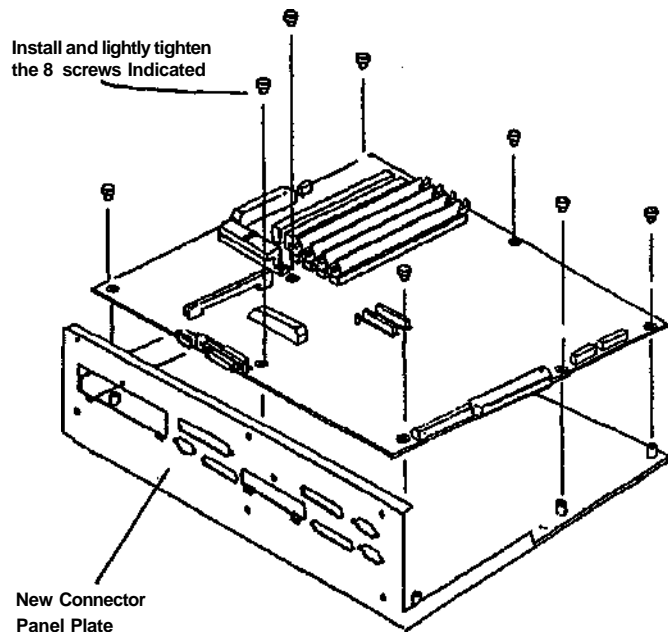


Figure 9 Installation of MCB onto new Connector Panel Plate

21. (Figure 10): Transfer all hardware removed from the old Connector Panel Plate to the new Connector Panel Plate.

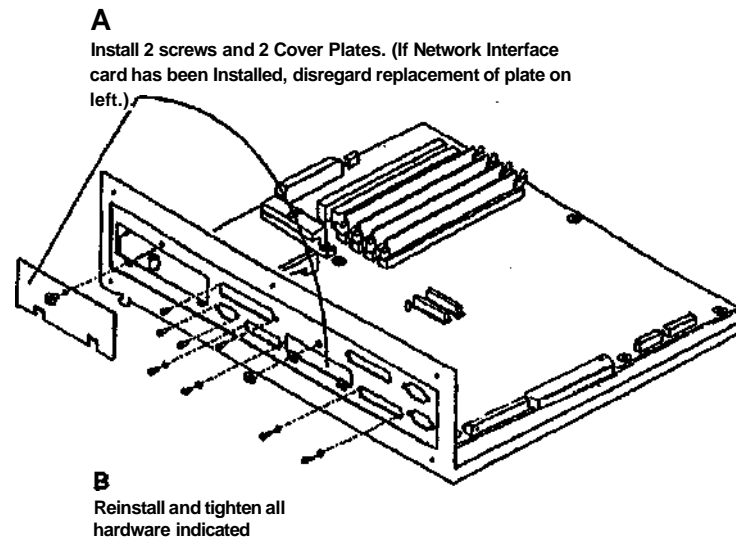


Figure 10 Installing hardware on new Connector Panel

22. Tighten the eight mounting screws set into position in step 17.

23. (Figure 11): Reinstall the PMC PWB onto the 8830 Controller MCB.

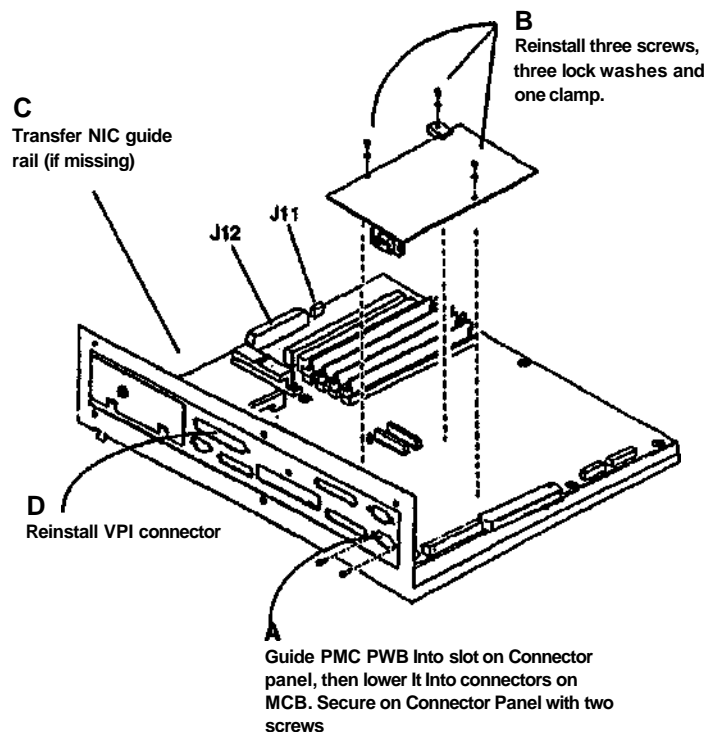


Figure 11 Remounting the PMC PWB

24. Reattach plugs P11, and P12 to J11 and J12 on the MCB prior to performing the next step. (See Figure 11 for location).
25. Lower the MCB / Connector Panel Plate back on to the 8830 Controller Chassis.
26. Replace the 6 screws on the front of the Controller Chassis that attach the Controller Chassis to the Connector Panel Plate.

NOTE: Not all of the MCB and PMC PWB connectors can be reattached at this time, due to the need to feed several of them through openings in the 8830 Printer Right Lower Cover in the final steps of this procedure.

27. (Figure 12): Note the location of the Scanner and UI Power Harness connectors on the new 8830 Controller Connector Panel. (Do not attempt to route the harnesses yet.)

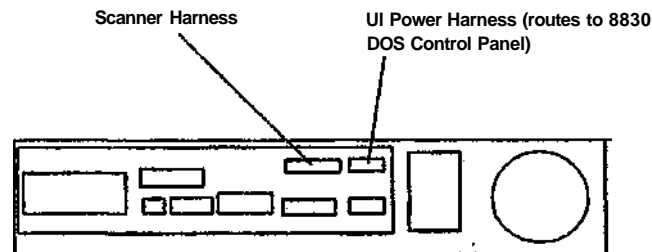


Figure 12 Signal and UI Power Harnesses on 8830 Controller Connector Panel

NOTE: In the following step the Scanner harness will replace the ribbon cable previously attached to J5 on the MCB.

28. (Figure 13): Route the new Scanner Harness, and UI Power Harness.

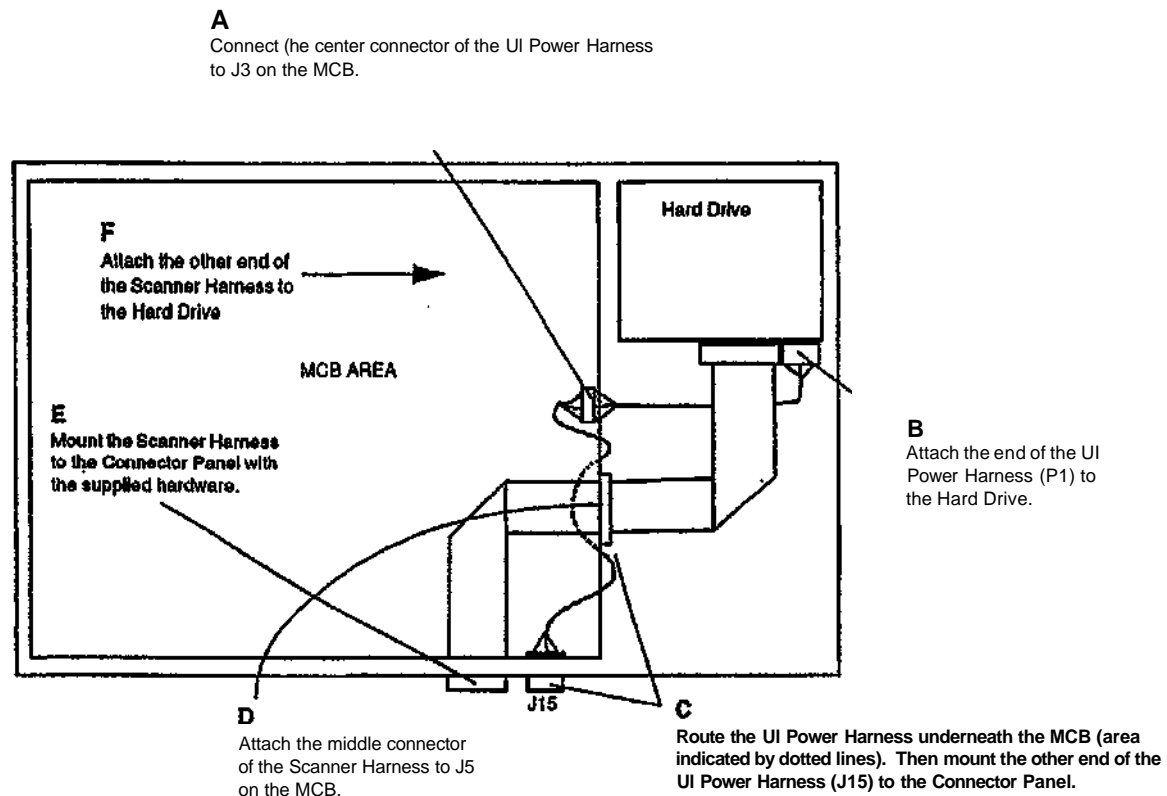


Figure 13 Overhead view of 8830 Controller showing routing of new Scanner and UI Power Harnesses

NOTE: For purposes of clarity, the drawing below **has been** simplified to show only the routing of the Floppy Drive harnesses. (The Floppy Drive is mounted on top of the Hard Drive.)

29. (Figure 14): Route the Floppy Drive harnesses.

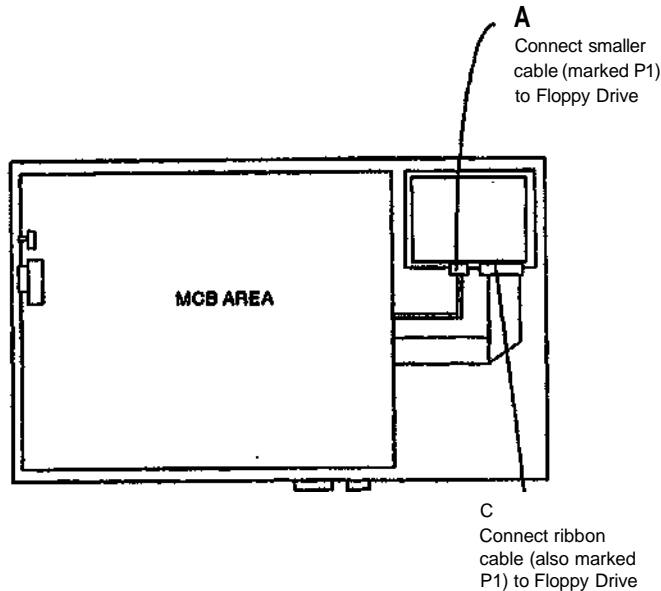


Figure 14 Routing the Floppy Drive Harnesses

NOTE: If the NIC (Network Interface) Card was Installed previously, replace It now.

NOTE: There are four EME ferite clips supplied with Tag 8: one fifty (50) position clip, two forty (40) position clips, and one cubed clip. In the following steps it will be Important to place the right clip in the correct location.

30. (Figure 15): Install the following EME gasket and ferrite clips as shown.

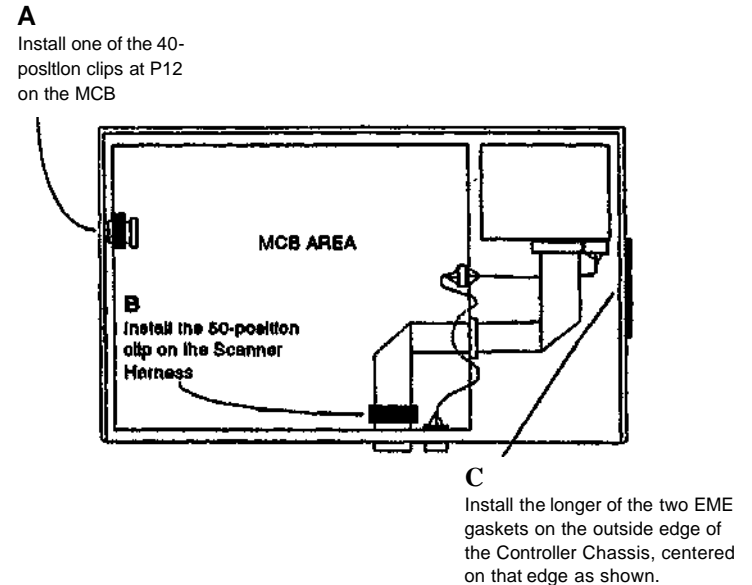


Figure 15 Partial Installation of EME Clips and Gaskets

31. Upgrade the 8830 Controller Memory using the supplied upgrade kit (REP 1.8 in the 8830 Controller Service Manual).
32. Replace the 2 screws on the other side of the Controller, Chassis that secure the Connector Panel Plate to the MCB. (These screws were removed in step 8.)
33. Install the 8830 Controller Chassis back on to the 8830 Printer Right Lower Cover by re-installing the 6 screws on the Right Lower Cover that were removed in step 8.

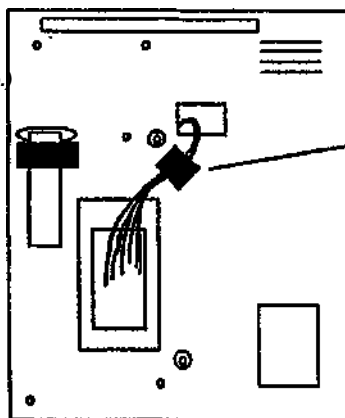
34. Stand the 8830 Controller on its end, so that It is positioned ready to mount back onto the 8830 Printer. Reconnect the 3 connectors that run through the 8830 Printer Right Lower Cover Into the 8830 Controller.
 - P13 on the 8830 Controller MCB
 - 8830 Controller Exhaust Fan connector (P1) J1 on the 8830 Controller PMC PWB

35. (Figure 16): Install the following EME clips on the inside of the 8830 Printer Right Lower Cover.

NOTE: Remove the adhesive backing on the clips after positioning them, and secure them to the cover.

A

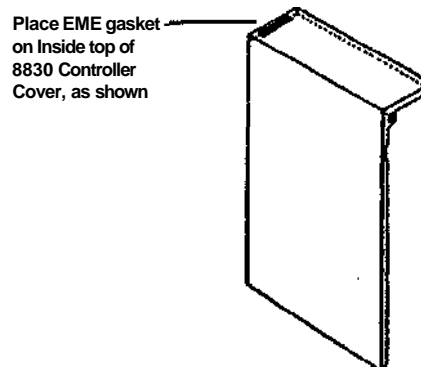
Install 40-position clip to P12 cable. (NOTE: Ensure that slack is removed from cable prior to installing clip.)



B
Install cube-shaped clip above harness

Figure 16 View from Inside Printer Right Lower Cover showing positioning of EME Clips

36. (Figure 17): install the last EME gasket (from Tag 8 upgrade kit) on the inside of the 8830 Controller Cover.



Place EME gasket on inside top of 8830 Controller Cover, as shown

Figure 17 Placement of EME gasket on 8830 Controller Cover

37. Strike Tag 7 and Tag 8 on the 8830 Controller Tag Matrix. (It's located on the Inside of the 8830 Controller Chassis, facing up.)

38. Replace the 8830 Controller Cover.

39. Reconnect all cables running from the 8830 Controller to the 8830 Printer.

40. Reinstall the 8830 Controller on to the 8830 Printer.

NOTE: If the Controller ever needs to be replaced again in the future (due to electrical or mechanical failure) replace with spare part number 101K29974 (or higher) and strike tags 7 and 8 on the new 8830 Controller Tag Matrix.

41. Install the 8830 Printer firmware upgrades, if present.

42. Install the most current 8830 Controller firmware.

43. Power off all components of the 8830 DDS, and power on in the following order: 7356 Scanner, 8830 Controller, 8830 Printer. Run a test print to ensure correct system operation.

44. Inspect the test print for the following:

- RAM
- HDD "present"
- 8830 Controller most current firmware level

45. Return to the 8830 DDS Installation Procedure in this manual.

Change Tag / Mod Index

Introduction

All Important modifications are Identified by a Tab / MOD number on a matrix label attached to each scanner Inside the Top Cover.

This section describes all the lags as well as multinational applicability, classification codes, and permanent or temporary modification Information.

Classification Codas

A Tag/ MOD number may be required to Identify differences between parts that cannot be Interchanged, or differences In Diagnostic, Repair, Installation, or Adjustment procedures. A Tag/ MOD number may also be required to identify the presence of optional hardware, firm-ware, or whether mandatory modifications have been Installed. Each Tag/ MOD number is given a classification code to Identify the particular type of change that's been made. The fol-lowing is a listing of these codes:

- M - Mandatory
- N- Not Installed in the field
- O • Optional
- R - Repair
- S - Situation

Table 1 Document Loading Bins and Document Catch Tray

| | |
|------------------|---|
| TAG/MOD | |
| Class: | |
| Use: | |
| Mfg. Serial No.: | |
| Name: | Document Loading Bins and Document Catch Tray |
| Purpose: | Platform to hold documents to be printed and doc-uments that have been printed. |
| Kit Number: | 98S4022 |
| Reference: | |

Table 2 8830 DDS Control Panel Kit

| | |
|------------------|----------------------------|
| TAG/MOD | |
| Class: | |
| Use: | |
| Mfg. Serial No.: | |
| Name: | 8830 DDS Control Panel Kit |
| Purpose: | |
| Kit Number: | 98K2044 |
| Reference: | |

NOTE: The Change Tag /Mod Index entries for Tags 7 and 8 are listed in Section 6 of the 8830 Controller Manual.

Block Schematic Diagrams

| | |
|--|-----|
| 1.1 AC Power - 8830 DOS Control Panel..... | 7-3 |
|--|-----|

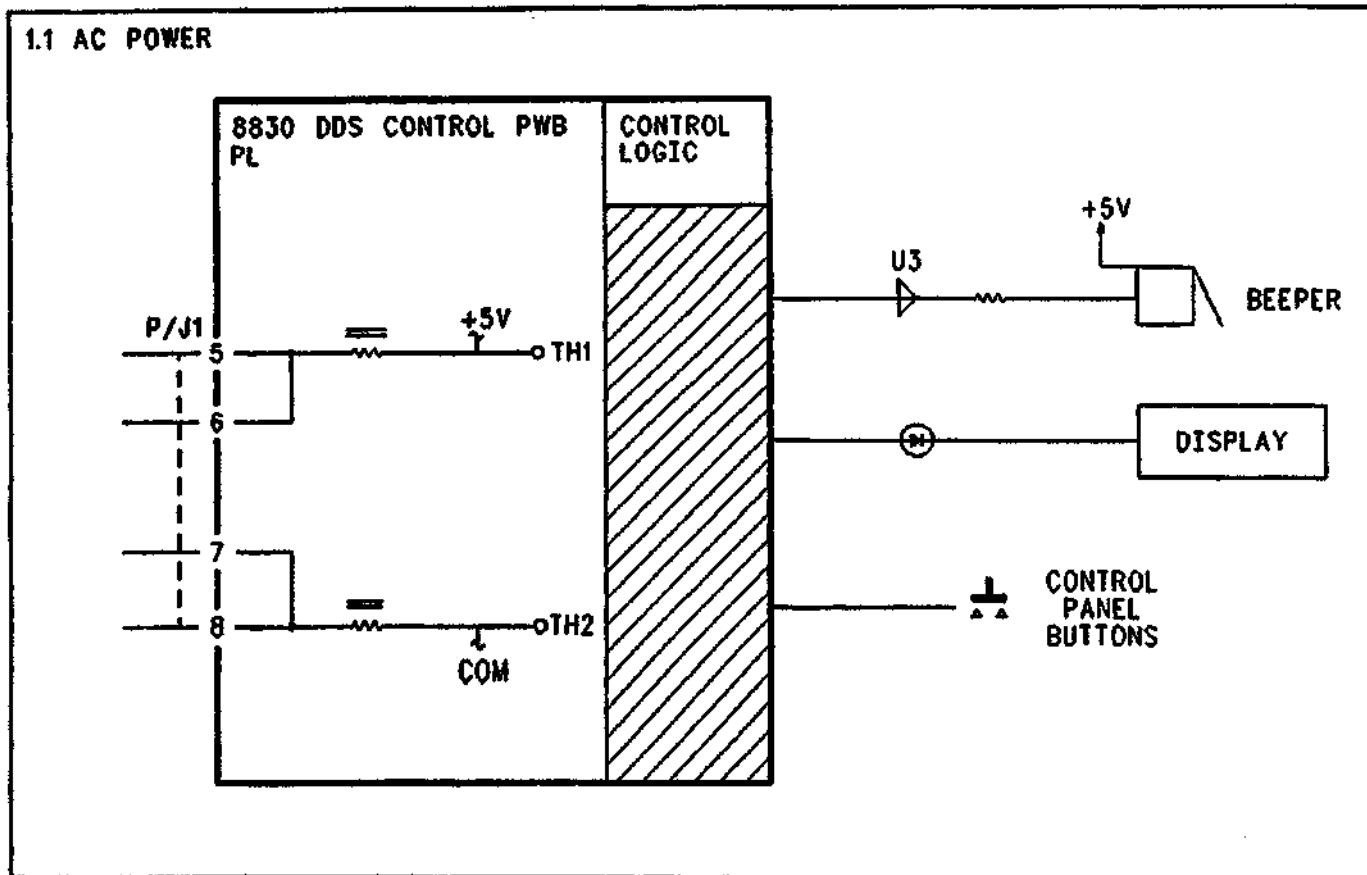


Figure 1. 8830 DDS Control Panel

XES System Configuration Sheet 1 (Number of Sheet 1 pages is)

(Standalone, Networked, or IBM)

THE DOCUMENT COMPANY
XEROX

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|--|--------------|------------|--|-------|---|---|--|--|--|
| Application | Host | Host Model # | # Stations | Op System | Rev # | Current Format | Future Format | Networks | Protocol | File Size/ Transfer |
| Application Number: Application Name: Application Rev.: Type: <input type="checkbox"/> Mechanical <input type="checkbox"/> Electrical <input type="checkbox"/> Architectural <input type="checkbox"/> Arch. Renderings <input type="checkbox"/> Mapping <input type="checkbox"/> GIS <input type="checkbox"/> Facilities Mgt. <input type="checkbox"/> Other | <input type="checkbox"/> SUN <input type="checkbox"/> SGI <input type="checkbox"/> RS6000 <input type="checkbox"/> HP <input type="checkbox"/> Apollo <input type="checkbox"/> MAC <input type="checkbox"/> VAX <input type="checkbox"/> DEC <input type="checkbox"/> DEC Alpha <input type="checkbox"/> IBM Mainframe* <input type="checkbox"/> PC <input type="checkbox"/> PC <input type="checkbox"/> PC <input type="checkbox"/> DG <input type="checkbox"/> Other | | | <input type="checkbox"/> OS4.1 .x <input type="checkbox"/> Solaris <input type="checkbox"/> IRIX <input type="checkbox"/> AIX <input type="checkbox"/> HP - UX <input type="checkbox"/> AEGIS <input type="checkbox"/> AEGIS <input type="checkbox"/> System 7 <input type="checkbox"/> VMS <input type="checkbox"/> Unix <input type="checkbox"/> Open VMS/VOSFI <input type="checkbox"/> MVS/VM <input type="checkbox"/> DOS <input type="checkbox"/> Windows '95 <input type="checkbox"/> Windows 3.X <input type="checkbox"/> NT <input type="checkbox"/> OS/UX <input type="checkbox"/> Other | | <input type="checkbox"/> 908/907 <input type="checkbox"/> HPGL1 <input type="checkbox"/> HPGL2 <input type="checkbox"/> ASCII <input type="checkbox"/> CGM <input type="checkbox"/> Postscript 1 <input type="checkbox"/> Postscript 2 <input type="checkbox"/> TIFF _____ <input type="checkbox"/> CALS _____ <input type="checkbox"/> VCGL <input type="checkbox"/> VRF <input type="checkbox"/> VPI Raster <input type="checkbox"/> PRF/Intergraph <input type="checkbox"/> Other | <input type="checkbox"/> 908/907 <input type="checkbox"/> HPGL1 <input type="checkbox"/> HPGL2 <input type="checkbox"/> ASCII <input type="checkbox"/> CGM <input type="checkbox"/> Postscript 1 <input type="checkbox"/> Postscript 2 <input type="checkbox"/> TIFF <input type="checkbox"/> CALS <input type="checkbox"/> VCGL <input type="checkbox"/> VRF <input type="checkbox"/> VPI Raster <input type="checkbox"/> PRF/Intergraph <input type="checkbox"/> Other | <input type="checkbox"/> Novell <input type="checkbox"/> Ethernet <input type="checkbox"/> Token Ring (IBM) <input type="checkbox"/> DECnet <input type="checkbox"/> AppleTalk <input type="checkbox"/> Other | <input type="checkbox"/> IPX/Netware <input type="checkbox"/> TCP/IP <input type="checkbox"/> DEC/LAT/ Pathworks <input type="checkbox"/> Banyan Vines <input type="checkbox"/> NetBios <input type="checkbox"/> NetBul <input type="checkbox"/> Other Rev Level ____ | Min: _____ <input type="checkbox"/> KB <input type="checkbox"/> MB Avg: _____ <input type="checkbox"/> KB <input type="checkbox"/> MB Max: _____ <input type="checkbox"/> KB <input type="checkbox"/> MB <input type="checkbox"/> Copy <input type="checkbox"/> LP <input type="checkbox"/> LPR <input type="checkbox"/> Mount <input type="checkbox"/> FTP |
| Application Number: Application Name: Application Rev.: Type: <input type="checkbox"/> Mechanical <input type="checkbox"/> Electrical <input type="checkbox"/> Architectural <input type="checkbox"/> Arch. Renderings <input type="checkbox"/> Mapping <input type="checkbox"/> GIS <input type="checkbox"/> Facilities Mgt. <input type="checkbox"/> Other | <input type="checkbox"/> SUN <input type="checkbox"/> SGI <input type="checkbox"/> RS6000 <input type="checkbox"/> HP <input type="checkbox"/> Apollo <input type="checkbox"/> MAC <input type="checkbox"/> VAX <input type="checkbox"/> DEC <input type="checkbox"/> DEC Alpha <input type="checkbox"/> IBM Mainframe* <input type="checkbox"/> PC <input type="checkbox"/> PC <input type="checkbox"/> PC <input type="checkbox"/> DG <input type="checkbox"/> Other | | | <input type="checkbox"/> OS4.1 .x <input type="checkbox"/> Solaris <input type="checkbox"/> IRIX <input type="checkbox"/> AIX <input type="checkbox"/> HP - UX <input type="checkbox"/> AEGIS <input type="checkbox"/> AEGIS <input type="checkbox"/> System 7 <input type="checkbox"/> VMS <input type="checkbox"/> Unix <input type="checkbox"/> Open VMS/VOSFI <input type="checkbox"/> MVS/VM <input type="checkbox"/> DOS <input type="checkbox"/> Windows '95 <input type="checkbox"/> Windows 3.X <input type="checkbox"/> NT <input type="checkbox"/> OS/UX <input type="checkbox"/> Other | | <input type="checkbox"/> 908/907 <input type="checkbox"/> HPGL1 <input type="checkbox"/> HPGL2 <input type="checkbox"/> ASCII <input type="checkbox"/> CGM <input type="checkbox"/> Postscript 1 <input type="checkbox"/> Postscript 2 <input type="checkbox"/> TIFF _____ <input type="checkbox"/> CALS _____ <input type="checkbox"/> VCGL <input type="checkbox"/> VRF <input type="checkbox"/> VPI Raster <input type="checkbox"/> PRF/Intergraph <input type="checkbox"/> Other | <input type="checkbox"/> 908/907 <input type="checkbox"/> HPGL1 <input type="checkbox"/> HPGL2 <input type="checkbox"/> ASCII <input type="checkbox"/> CGM <input type="checkbox"/> Postscript 1 <input type="checkbox"/> Postscript 2 <input type="checkbox"/> TIFF <input type="checkbox"/> CALS <input type="checkbox"/> VCGL <input type="checkbox"/> VRF <input type="checkbox"/> VPI Raster <input type="checkbox"/> PRF/Intergraph <input type="checkbox"/> Other | <input type="checkbox"/> Novell <input type="checkbox"/> Ethernet <input type="checkbox"/> Token Ring (IBM) <input type="checkbox"/> DECnet <input type="checkbox"/> AppleTalk <input type="checkbox"/> Other | <input type="checkbox"/> IPX/Netware <input type="checkbox"/> TCP/IP <input type="checkbox"/> DEC/LAT/ Pathworks <input type="checkbox"/> Banyan Vines <input type="checkbox"/> NetBios <input type="checkbox"/> NetBul <input type="checkbox"/> Other Rev Level ____ | Min: _____ <input type="checkbox"/> KB <input type="checkbox"/> MB Avg: _____ <input type="checkbox"/> KB <input type="checkbox"/> MB Max: _____ <input type="checkbox"/> KB <input type="checkbox"/> MB <input type="checkbox"/> Copy <input type="checkbox"/> LP <input type="checkbox"/> LPR <input type="checkbox"/> Mount <input type="checkbox"/> FTP |

Existing Plotting Systems

| | Application | XES Software | Host | Interface | Controller | Plotter Connection SCSI, VPI, Centronics, RS232 | Distance | Plotter Model and DPI | Network |
|---|-------------|--------------|------|-----------|------------|--|----------|-----------------------|---------|
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |

Does new configuration replace existing. if yes, configuration No.:

* Fill In Mainframe / Channel / Remote Configuration Form If plotting from Mainframe.

* Attach Multiple Sheets If Required by More Than 2 Applications, Number multiple sheets as 2A, 2B, etc.

XES System Configuration Sheet 2

THE DOCUMENT COMPANY
XEROX

| | | | | |
|---------|-----------|--------------------------------------|-------------|----------------------------------|
| Company | TDS Rep | Analyst | Service Rep | Service Mgr |
| Address | Signature | Signature | Signature | Signature |
| | Date | Date | Date | Date |
| | Phone # | Phone # | Phone # | Phone # |
| | Fax # | Fax # | Fax # | Fax # |
| Contact | P.D. # | Estimated Hours - Professional Svc's | | <input type="checkbox"/> Level 1 |
| Phone # | C/N | | | <input type="checkbox"/> Level 2 |
| Fax # | | | | <input type="checkbox"/> Option |

| | | | |
|-------------|-------------|-------------|-------------|
| Host/Model | Host/Model | Host/Model | Host/Model |
| OS / Rev # | OS / Rev # | OS / Rev # | OS / Rev # |
| Application | Application | Application | Application |
| Data Format | Data Format | Data Format | Data Format |

Bridge
☐ Yes ☐ No

| | |
|-------------|-------------|
| Host/Model | Host/Model |
| OS / Rev # | OS / Rev # |
| Application | Application |
| Data Format | Data Format |

Network: _____
Protocol: _____
Rev.: _____

☐ RJ45 ☐ AUI ☐ Other

Networked ☐ Yes ☐ No

☐ Plot Server ☐ XES Millen (8580) ☐ Other

Host supplied by ☐ XES ☐ Customer ☐ PLP ☐ Other _____

Third Party Software ☐ Byers ☐ PLP ☐ Cadnet ☐ Other _____

☐ ServeWare ☐ 2.3 ☐ 2.4 ☐ Other

ServeWare Host Model _____ OS/Rev _____

☐ NIS ☐ NIS+ ☐ DNS ☐ None

☐ Long Plot Memory _____ HD _____

Converters ☐ Host Rasterizers ☐ Postscript

☐ Downloadable for Plotter

Additional XES or 3rd Party Hardware / Software: _____

Scanner

☐ 7335
☐ Ideal
☐ Vidar
☐ Other _____

☐ Attached to Plot Server
☐ Attached to
☐ 8150
☐ 8180
☐ Attached to Other

Model: ☐ 8150 ☐ 8180
☐ Other _____

☐ Job Build
☐ Net Connect
☐ NFS / TCP-IP
☐ NETB

Memory _____

Options _____

Network: _____
Protocol: _____
Rev.: _____

Non Network Solution

Platform / # : _____
OS / Rev # : _____
Application: _____
Rev # : _____
Data Format: _____
XES Host Software: _____
Media Type: _____
Interface Model: ☐ 110A ☐ 116
☐ 127 ☐ 127A ☐ 130
☐ None ☐ Other _____

☐ SCSI ☐ VPI ☐ RS232 ☐ Centronics
Distance: _____

☐ SCSI ☐ VPI ☐ RS232 ☐ Centronics
Distance: _____

☐ VPI ☐ Scsi
Distance: _____

Controller Model: _____
Options: _____

Plotter

Options: _____

Plotter

Options: _____

Plotter

Options: _____

Plotter

Options: _____

NOTES: _____

XES System Configuration Sheet 3 (Mainframe: Channel - Connected or Remote)

THE DOCUMENT COMPANY
XEROX

| | |
|---|---|
| Hostname: _____ Model#: _____ Host O/S: <input type="checkbox"/> VM <input type="checkbox"/> MVS O/S Rev: _____ Host Spooling: <input type="checkbox"/> JES2 <input type="checkbox"/> JES3 <input type="checkbox"/> RSCS Application: <input type="checkbox"/> CADAM <input type="checkbox"/> CATIA <input type="checkbox"/> Other: _____ Application Rev.: _____ XES Software: <input type="checkbox"/> RANDOM <input type="checkbox"/> VGS <input type="checkbox"/> Other: _____ XES Software Rev.: _____ Data Format: _____ | <div style="text-align: center;">CHANNEL CONNECT</div> <div style="border: 1px solid black; padding: 5px; margin: 5px;"> <input type="checkbox"/> 185 <input type="checkbox"/> Other: _____ </div> VP1 |
|---|---|

BUS & TAG

Type: _____ Length: _____

Channel Type: _____

MODEMS

Make: _____

Model # _____

Baud Rate: _____

PLOTTER MODEL:

Options: _____

REMOTE CONNECTION

Emulation: _____

Protocol: _____

RS232

Length: _____

Graphics Controller

☐ 451 ☐ Other: _____

Options: ☐ 56 KB ☐ Other: _____

VTAM Rev. _____

Communications Controller

Model # _____

M
O
D
E
M

M
O
D
E
M

COMMENTS: _____

Analyst may complete page 3

Carrier inspection Discrepancy Report

THE DOCUMENT COMPANY
XEROX

| | |
|------------------------------------|------------------------------------|
| Machine Serial Number | Product Code |
| C.S.E. Name | C.S.E. Emp. Number |
| Carrier Name | Carrier Location |
| Part # Replaced (Missing / Broken) | Part # Replaced (Missing / Broken) |
| Part # Replaced (Missing / Broken) | Part # Replaced (Missing / Broken) |
| Kit Replaced (Missing / Broken) | Kit Replaced (Missing / Broken) |

Not Repairable Damage (Explain)

Machine Condition:

- Excellent
- Good
- Fair
- Poor

Comments:

Send to: Jim Samson- 11 Linden Park- Rochester. N.Y. - 14625 (Email) JSAMS:Roch807:Xerox

The following signature approvals are required on the XES System Configuration Sheets and the Exception Request Document. Approvals are to be acquired after Campaign Team has developed final solution, but before Account Proposal is prepared.

PRODUCT CONFIGURATION

| Type of Solution | Standard Configuration | Configuration with Deviation from Standard Product Specifications | Configuration with Deviation from Standard Product Policies |
|------------------|--|---|---|
| Digital | District Systems Analyst District Manager Customer Service | D.S.A. D.M.C.S. | D.SA D.M.C.S. Region Mgt.* |
| Light Lens | None | D.M.C.S. | Region Mgt.* |

- Example:

 - All account requirements met by product specification sheet
- Example:

 - Volume beyond specification
 - Unusual media requirement
- Example:

 - Pricing Exception
 - Terms & Conditions Exception

All exception requests are routed to Region office. Region is responsible for securing Headquarters authorization for any exception request beyond Region Empowerment.

implementation Plan

| | | | | | |
|---|--|--|--|------------------|--------------|
| Customer Information | | Company Name: | | Company Address: | |
| Key Customer Contacts | | Phone No. | Key XES Contacts | | Phone No. |
| Delivery Contact: | | | Sales Representative: | | |
| Other Coordination: | | | Delivery Coordinator: | | |
| Buyer: | | | Systems Analyst: | | |
| End User: | | | Service Manager: | | |
| Customer Requested Install Date: | | | Supplies Coordinator: | | |
| Roles and Responsibilities | | | <i>Note: Unshaded areas are Customer Contacts, Shaded are XES</i> | | |
| Non-Network Information | | Yes/No | Contact Name | | Phone No. |
| 1. Coordinate Inspection CSE at Carrier Site | | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 2. Service Exceptions | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 3. Coordinate Third Party Installer | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 4. Coordinate Third Party Hardware (see notes) | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 5. Coordinate Third Party Software (see notes) | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 6. Installer / Trainer of XES Software (Service) | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 7. Installer / Trainer of XES Software (Analyst) | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 8. XES Software Hotline Support | | <input type="checkbox"/> Y <input type="checkbox"/> N | Help Desk | | 800-222-6050 |
| 9. Professional Services Required | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 10. Advanced Features Trainer | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 11. Supplies Available | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 12. Key Operator Available for Training | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 13. CAD Administrator Available | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 14. Sample Files of Identified Formats Available | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| Additional Information for Network Connection | | Yes/No | Contact Name | | Phone No. |
| 15. Network Drop is Installed & Tested | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 16. Network Address is Ready | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 17. Host Name Ready | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 18. Network Administrator Available | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 19. System Administrator Available for Training | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| 20. All Plot Directories are Identified (see notes) | | <input type="checkbox"/> Y <input type="checkbox"/> N | | | |
| Notes: | | | Selected Plot Directories: Third Party Items: Customer Supplied Items: | | |
| Customer Acceptance | | | | | |
| Information as Described Above is Accepted. | | | Installation Completed. | | |
| Customer Signature: | | | Customer Signature: | | |
| Print Name: | | | Print Name: | | |
| Title: | | | Title: | | |
| Date: | | | Date: | | |
| TDS Representative: | | | Media: <input type="checkbox"/> 11 <input type="checkbox"/> 12 <input type="checkbox"/> 22 <input type="checkbox"/> 24 | | |
| System Analyst: | | | <input type="checkbox"/> 30 <input type="checkbox"/> 34 <input type="checkbox"/> 36 | | |
| Service Manager: | | | Vellum: size _____ Film: size _____ | | |

XES Exception Request Document

THE DOCUMENT COMPANY
XEROX

| | |
|---|---------------------------|
| Account Name | Requester Name |
| Address | Phone Number |
| | VMAX Number |
| Phone Number | E-Mail Address |
| Key Contact | Fax Number |
| Xerox Customer • Yes • No | XES Account Team: |
| Customer Number | TDS Sales Rep |
| Customer Type: • Commercial • GSA • State & Local Contract BPA • Yes • No IRGA • Yes • No | System Sale Exec |
| | District Manager |
| | District Mgr. Cust Svc. |
| | Systems Analyst |
| | Customer Operations Exec. |
| | Other |

Equipment:

| Xerox Model | Term Lease | Expiration Date | FSMA Plan | Volume |
|-------------|------------|-----------------|------------|--------|
| | • Yes • No | | • Yes • No | |
| | • Yes • No | | • Yes • No | |
| | • Yes • No | | • Yes • No | |
| | • Yes • No | | • Yes • No | |
| | • Yes • No | | • Yes • No | |

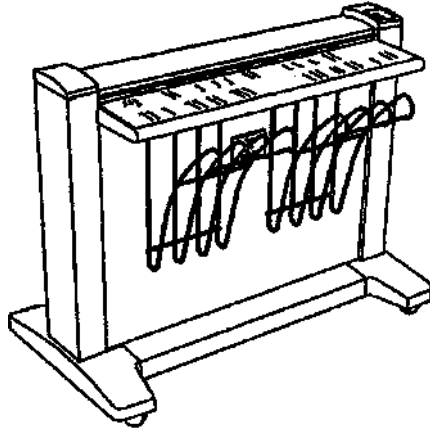
| Competitive Model | Lease | Balance of Contract | Rent | Own | Volume |
|-------------------|---------|---------------------|------|------|--------|
| | • Y • N | | DYD | • Y• | |
| | • Y• N | | • Y• | DYD | |
| | • Y • N | | DYD | DYD | |
| | • Y • N | | • Y• | DYD | |
| | • Y • N | | DYD | DYD | |

Supplies

| | |
|--|-------|
| Xerox Toner | What? |
| <div>• Yes • No</div> | |
| Xerox Media | What? |
| <div>• Yes • No</div> | |
| Separate Supply Customer Number If yes. | |
| <div>• Yes • No</div> | |
| Proposed Product / System | |
| Exception Requested (Be specific; What?; Term?) | |
| Key Information: (Current Pricing, Terms. Exceptions already in place or, are being considered, specific competitive threat) | |
| If the exception is approved, the projected order close date is | |
| Install data is | |
| Date received in Headquarters | |
| The following action has / have been taken or approved: | |

| | |
|---------------------------------|------------------|
| Signature (Responsible Manager) | Disposition Data |
|---------------------------------|------------------|

Xerox 7356 Scanner Service Manual



CAUTION

Certain components in the 7356 are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage

This manual includes the 7356 Scanner version of the scanner used with the Wings 3 system.

NOTICE

All service documentation is supplied to Xerox external customers for informational purposes and is intended for use by certified, product trained, service personnel only. Xerox does not warrant or represent that such documentation is complete. Nor does Xerox represent or warrant that it will notify or provide to such customer any future changes to this documentation.

Customer's service of equipment, or modules, components, or parts of such equipment may void any otherwise applicable Xerox warranties, if customer services such equipment, modules, components, or parts thereof, customer releases Xerox from any and all liability for customer's action, and customer agrees to indemnify, defend, and hold Xerox harmless from any third-party claims, which arise directly, or indirectly, from such service.

Whilst every care has been taken in the preparation of this manual, no liability will be accepted by Xerox Corporation or Xerox Engineering Systems, Inc., arising out of any inaccuracies or omissions.

Xerox Corporation
Multinational Customer and Service Education
780 Salt Road
Webster, NY 14580

© 1996, 1997 by Xerox Corporation. All rights reserved. XEROX® and all Xerox product names mentioned in this publication are trademarks of the XEROX CORPORATION. The trademarks of other companies are also acknowledged.

Copyright protection claimed includes all forms and matters of copyrightable material and information now allowed by statutory or judicial law or hereinafter granted, including without limitation, material generated from the software programs that are displayed on the screen such as styles, templates, icons, screen displays, looks, etc.

Printed in the U.S.A.

CLASS A COMPUTING DEVICE

WARNING

This equipment generates and uses radio frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause radio interference to radio and television reception. It has been type tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user, at his own expense, will be required to correct the interference.

Transmittal Page

| | | |
|---|---------------------------------------|--|
| Product 7356 Scanner | Title Service Manual | Part Number 701P09691 |
| Status Revision This manual is a partial revision to 701P09690, Dated April, 1997 | | Date March, 1998 |

Revision Control List

| Product | Title | Part Number | Date |
|--------------|----------------|-------------|------------|
| 7356 Scanner | Service Manual | 701P09691 | Mar., 1998 |

All pages are new. Add all pages.

| Page | Rev |
|------|-------|
| I | 4/97 |
| ii | 4/97 |
| iii | 4/97 |
| iv | 4/97 |
| v | 3/98 |
| vi | 4/97 |
| vii | 4/97 |
| viii | 4/97 |
| 1-1 | 4/97 |
| 1-2 | 2/98 |
| 1-3 | 2/989 |
| 1-4 | 2/98 |
| 1-5 | 3/98 |
| 1-6 | 2/98 |
| 1-7 | 4/97 |
| 1-8 | 4/97 |

| Page | Rev |
|-------|------|
| 2-1 | A/97 |
| 2-2 | A/97 |
| 2-3 | 2/98 |
| 2-4 | 2/96 |
| 2-5 | 4/97 |
| 2-6 | 4/97 |
| 2-7 | 2/98 |
| 2-8 | 4/97 |
| 2-9 | 2/98 |
| 2-10 | 4/97 |
| 2-11 | 2/98 |
| 2-12 | 4/97 |
| 2-13 | A/97 |
| 2-14 | A/97 |
| 2-15 | 2/98 |
| 2-16 | 4/97 |
| 2-17 | 4/97 |
| 2-18 | 4/97 |
| 2-19 | A/97 |
| 2-20 | 3/98 |
| 2-21/ | 4/97 |
| 2-22 | |

| Page | Rev |
|------|------|
| 3-1 | 4/97 |
| 3-2 | 4/97 |
| 3-3 | 3/98 |
| 3-4 | 4/97 |
| 3-5 | 3/98 |
| 3-6 | 3/98 |
| 3-7 | 4/97 |
| 3-8 | 4/97 |
| 4-1 | 4/97 |
| 4-2 | 4/97 |
| 4-3 | 4/97 |
| 4-4 | 4/97 |
| 4-5 | 4/97 |
| 4-6 | 4/97 |
| 4-7 | 4/97 |
| 4-8 | 4/97 |
| 4-9 | 4/97 |
| 4-10 | 4/97 |
| 4-11 | 4/97 |
| 4-12 | 4/97 |

| Page | Rev |
|------|------|
| 4-13 | 4/97 |
| 4-14 | 4/97 |
| 4-15 | 4/97 |
| 4-16 | 4/97 |
| 4-17 | 4/97 |
| 4-18 | 4/97 |
| 4-19 | 4/97 |
| 4-20 | 4/97 |
| 4-21 | 4/97 |
| 4-22 | 4/97 |
| 4-23 | 4/97 |
| 4-24 | 4/97 |
| 4-25 | 4/97 |
| 4-26 | 4/97 |
| 4-27 | 4/97 |
| 4-28 | 4/97 |
| 4-29 | 4/97 |
| 4-30 | 4/97 |
| 4-31 | 4/97 |
| 4-32 | A/97 |
| 4-33 | A/97 |
| 4-34 | A/97 |
| 1-35 | A/97 |
| 4-36 | A/97 |
| 4-37 | A/97 |
| 4-38 | A/97 |
| 4-39 | A/97 |
| 4-40 | A/97 |
| 4-41 | A/97 |

| Page | Rev |
|------|-------|
| 4-42 | 4/97 |
| 4-43 | A/97 |
| 4-44 | A/97 |
| 4-45 | 4/97 |
| 4-46 | A/97 |
| 5-1 | 12/97 |
| 5-2 | 12/97 |
| 5-3 | 12/97 |
| 5-4 | 12/96 |
| 5-5 | 12/97 |
| 5-6 | 12/96 |
| 5-7 | 12/97 |
| 5-8 | 12/97 |
| 5-9 | 12/96 |
| 5-10 | 12/97 |
| 5-11 | 12/97 |
| 5-12 | 4/97 |
| 5-13 | 12/97 |

| Page | Rev |
|------|-------|
| 6-1 | 4/97 |
| 6-2 | 4/97 |
| 6-3 | 4/97 |
| 6-4 | A/97 |
| 6-5 | A/97 |
| 6-6 | A/97 |
| 6-7 | 4/97 |
| 6-8 | 4/97 |
| 6-9 | A/97 |
| 6-10 | A/97 |
| 6-11 | A/97 |
| 6-12 | A/97 |
| 6-13 | A/97 |
| 6-14 | A/97 |
| 6-15 | A/97. |
| 6-16 | A/97 |
| 6-17 | A/97 |
| 6-18 | A/97 |
| 6-19 | 3/98 |
| 6-20 | 3/98 |
| 6-21 | 3/98 |
| 6-22 | 3/98 |
| 6-23 | 3/98 |
| 6-24 | 3/98 |
| 6-25 | 3/98 |
| 6-26 | 3/98 |
| 6-27 | 3/98 |
| 6-28 | 3/98 |
| 6-29 | 3/98 |
| 6-30 | 3/98 |
| 6-31 | 3/98 |
| 6-32 | 3/98 |

| Page | Rev |
|-------|------|
| 7-1 | 4/97 |
| 7-2 | 4/97 |
| 7-3 | 4/97 |
| 7-4 | 4/97 |
| 7-5 | 4/97 |
| 7-6 | 4/97 |
| 7-7 | 4/97 |
| 7-8 | 4/97 |
| 7-9 | 4/97 |
| 7-10 | 4/97 |
| 7-11/ | 4/97 |
| 7-12 | |

| Title | Page |
|--|------|
| About This Manual..... | v |
| Organization..... | v |
| How To Use This Manual..... | vi |
| Multinational Configuration Differences..... | vi |
| Repair Analysis Procedures (RAPs)..... | vi |
| Repair / Adjustment Procedures..... | vi |
| Reference Symbolology. | vii |
| | |
| Section 1. Service Call Procedures | |
| Section 2. Repair Analysis Procedures | |
| Section 3. Copy Quality Repair Analysis Procedures | |
| Section 4. Repair and Adjustment Procedures | |
| Section 5. Parts List | |
| Section 6. General Information | |
| Section 7. Block Schematic Diagrams | |

Revision Control List

| | | | |
|---------------------------------------|---------------------------------------|--|----------------------------------|
| Product 7356 Scanner | Title Service Manual | Part Number 701P09691 | Date Mar., 1998 |
|---------------------------------------|---------------------------------------|--|----------------------------------|

All pages are new. Add all pages.

| Page | Rev |
|------|-------|
| i | 4/97 |
| ii | 4/97 |
| iii | 4/97 |
| iv | 4/97 |
| v | 3/98 |
| vi | 4/97 |
| vii | 4/97 |
| viii | 4/97 |
| | |
| 1-1 | 4/97 |
| 1-2 | 2/98 |
| 1-3 | 2/989 |
| 1-4 | 2/98 |
| 1-5 | 3/98 |
| 1-6 | 2/98 |
| 1-7 | 4/97 |
| 1-8 | 4/97 |

| Page | Rev |
|---------------|------|
| 2-1 | 4/97 |
| 2-2 | 4/97 |
| 2-3 | 2/98 |
| 2-4 | 2/98 |
| 2-5 | 4/97 |
| 2-6 | 4/97 |
| 2-7 | 2/98 |
| 2-8 | 4/97 |
| 2-9 | 2/98 |
| 2-10 | 4/97 |
| 2-11 | 2/98 |
| 2-12 | 4/97 |
| 2-13 | 4/97 |
| 2-14 | 4/97 |
| 2-15 | 2/98 |
| 2-18 | 4/97 |
| 2-17 | 4/97 |
| 2-18 | 4/97 |
| 2-19 | 4/97 |
| 2-20 | 3/98 |
| 2-21/ 2-22 | 4/97 |

| Page | Rev |
|------|------|
| 3-1 | 4/97 |
| 3-2 | 4/97 |
| 3-3 | 3/98 |
| 3-4 | 4/97 |
| 3-5 | 3/98 |
| 3-6 | 3/98 |
| 3-7 | 4/97 |
| 3-8 | 4/97 |
| | |
| 4-1 | 4/97 |
| 4-2 | 4/97 |
| 4-3 | 4/97 |
| 4-4 | 4/97 |
| 4-5 | 4/97 |
| 4-6 | 4/97 |
| 4-7 | 4/97 |
| 4-8 | 4/97 |
| 4-9 | 4/97 |
| 4-10 | 4/97 |
| 4-11 | 4/97 |
| 4-12 | 4/97 |

| Page | Rev |
|------|------|
| 4-13 | 4/97 |
| 4-14 | 4/97 |
| 4-15 | 4/97 |
| 4-16 | 4/97 |
| 4-17 | 4/97 |
| 4-18 | 4/97 |
| 4-19 | 4/97 |
| 4-20 | 4/97 |
| 4-21 | 4/97 |
| 4-22 | 4/97 |
| 4-23 | 4/97 |
| 4-24 | 4/97 |
| 4-25 | 4/97 |
| 4-26 | 4/97 |
| 4-27 | 4/97 |
| 4-28 | 4/97 |
| 4-29 | 4/97 |
| 4-30 | 4/97 |
| 4-30 | 4/97 |
| 4-31 | 4/97 |
| 4-32 | 4/97 |
| 4-33 | 4/97 |
| 4-34 | 4/97 |
| 1-35 | 4/97 |
| 4-36 | 4/97 |
| 4-37 | 4/97 |
| 4-38 | 4/97 |
| 4-39 | 4/97 |
| 4-40 | 4/97 |
| 4-41 | 4/97 |

| Page | Rev |
|------|-------|
| 4-42 | 4/97 |
| 4-43 | 4/97 |
| 4-44 | 4/97 |
| 4-45 | 4/97 |
| 4-46 | 4/97 |
| 5-1 | 12/97 |
| 5-2 | 12/97 |
| 5-3 | 12/97 |
| 5-4 | 12/96 |
| 5-5 | 12/97 |
| 5-6 | 12/96 |
| 5-7 | 12/97 |
| 5-8 | 12/97 |
| 5-9 | 12/96 |
| 5-10 | 12/97 |
| 5-11 | 12/97 |
| 5-12 | 4/97 |
| 5-13 | 12/97 |

| Page | Rev |
|------|------|
| 6-1 | 4/97 |
| 6-2 | 4/97 |
| 6-3 | 4/97 |
| 6-4 | 4/97 |
| 6-5 | 4/97 |
| 6-6 | 4/97 |
| 6-7 | 4/97 |
| 6-8 | 4/97 |
| 6-9 | 4/97 |
| 6-10 | 4/97 |
| 6-11 | 4/97 |
| 6-12 | 4/97 |
| 6-13 | 4/97 |
| 6-14 | 4/97 |
| 6-15 | 4/97 |
| 6-16 | 4/97 |
| 6-17 | 4/97 |
| 6-18 | 4/97 |
| 6-19 | 3/98 |
| 6-20 | 3/98 |
| 6-21 | 3/98 |
| 6-22 | 3/98 |
| 6-23 | 3/98 |
| 6-24 | 3/98 |
| 6-25 | 3/98 |
| 6-26 | 3/98 |
| 6-27 | 3/98 |
| 6-28 | 3/98 |
| 6-29 | 3/98 |
| 6-30 | 3/98 |
| 6-31 | 3/98 |
| 6-32 | 3/98 |

| Page | Rev |
|---------------|------|
| 7-1 | 4/97 |
| 7-2 | 4/97 |
| 7-3 | 4/97 |
| 7-4 | 4/97 |
| 7-5 | 4/97 |
| 7-6 | 4/97 |
| 7-7 | 4/97 |
| 7-8 | 4/97 |
| 7-9 | 4/97 |
| 7-10 | 4/97 |
| 7-11/ 7-12 | 4/97 |

| Title | Page |
|--|------|
| About This Manual..... | v |
| Organization..... | v |
| How To Use This Manual..... | vi |
| Multinational Configuration Differences..... | vi |
| Repair Analysis Procedures (RAPs)..... | vi |
| Repair / Adjustment Procedures..... | vi |
| Reference Symbology..... | vii |

| |
|--|
| Section 1. Service Call Procedures |
| Section 2. Repair Analysis Procedures |
| Section 3. Copy Quality Repair Analysis Procedures |
| Section 4. Repair and Adjustment Procedures |
| Section 5. Parts List |
| Section 6. General Information |
| Section 7. Block Schematic Diagrams |

About This Manual

This manual is a part of a documentation system for an associated controlling system for the Scanner. The documentation system includes manuals for a host controller or other computer system, and a printer. The service manual for the controlling system should be placed first in the binder because it is the entry point for service on the system.

This manual contains Service Call Procedures, Diagnostic Procedures, Status Indicator Repair Analysis Procedures, Repair and Adjustment Procedures, Parts Lists and General Procedures or Information.

This information will help a Service Representative repair and maintain this device.

Organization

The manual is divided into eight sections:

Section 1. Service Call Procedures

This section contains the following Information:

- Call Flow Diagram

The Call Flow Diagram is a map of the procedures to follow on each service call.

- Initial Actions

The Initial Actions identify how to collect the information necessary and how to verify, classify and proceed with the service call.

- Maintenance Activities

The Maintenance Activities list the items that have to be serviced based on the type of call to be performed, either Normal Call or Call Back.

Section 2. Status Indicator Repair Analysis Procedures

This section contains the Repair Analysis Procedures (RAPs) that are necessary to repair the faults other than the image quality defects. When using a RAP, stop the repairs when the fault is isolated and repaired, and check the device for correct operation. Do not perform the remaining steps in the RAP. If the device still malfunctions, begin from the top of the RAP to isolate these faults.

Section 3. Image Quality Repair Analysis Procedures

This section contains a listing of image quality defects and samples to assist in classifying the defects. When the defect has been classified, a checklist is then used to repair the cause of the defect. The checklists are arranged in the sequence of most probable to least probable cause with the corresponding corrective action for each cause.

Section 4. Repair/Adjustment Procedures

This section contains the repairs and adjustments for the unit.

Section 5. Parts List

This section contains the detailed Parts Lists for the unit.

Section 6. General Procedures/information

This section contains the Diagnostic Procedures, Product Specifications, Supplemental Tools and Supplies, Generic RAPs, Installation and Removal procedures, and other information.

Section 7. Wiring Data

This section contains the Block Schematic Diagrams.

Section 8. Accessories/ Options

This section is not used at this time.

How To Use This Manual

Always begin with the Service Call Procedures, Section 1. Perform the Initial Actions to identify and classify the problem.

Then, proceed to one of the following sections of the manual to correct the problem.

Section 2 contains the Status Indication RAPs. Use these RAPs if the unit is not operational, such as when a Status Code is displayed, or there is an improper indication or "blank" display, etc.

Section 3 is used to troubleshoot Image Quality problems. If you are not sure of the type of image quality defect that is occurring, use the contents page in Section 3 to find a defect that the best represents the type of defect that is on the copy.

When using Section 2 or Section 3, you may be directed to Section 4 to perform repair or adjustment procedures, or to Section 5, Parts List.

Next, perform the Normal Call procedures.

After performing Normal Call or Call Back, perform Final Actions to ensure that the unit meets the copy specifications.

Multinational Configuration Differences

This manual contains information that applies to **USO/NACO** (USA), **EO** (European Operations), **XCL** Canada and **XLA/AO** (Latin America).

Repair Analysis Procedures (RAPs)

A RAP is either a table of faults and possible solutions, or a series of steps designed to lead you to the cause of a problem. In each step, you will perform an action or observe an occurrence. For fault tree RAPs, at each step, a statement is made that has a Yes (Y) or No (N) answer.

If the answer is NO, perform the action following the NO. If the answer is YES, proceed to the next step.

When several items are listed, perform them in the order listed.

Proceed through the steps only until the observed problem is isolated and solved. Then evaluate the unit for proper performance. If a further defect is observed, go to the appropriate RAP and perform the steps it contains until the additional fault is located and repaired.

Repair / Adjustment Procedures

The repair procedures provide detailed steps on how to remove and replace components. The adjustment procedures provide detailed steps on how to check and adjust components. Some units have been modified by various design changes. Each change or modification is labeled with a Tag/ MOD (modification) number. The Tag/ MOD numbers are identified in the Change Tag/ MOD Index in Section 6 of this Service Manual.

When a modification affects how a particular procedure is performed, the procedure or steps are identified with either a W/ **Tag/ MOD** or a W/ O Tag/ **MOD** statement. Each procedure or step that is affected by a modification is identified with the statement, W/ **Tag/ MOD**, followed by the modification number. The W/ in the statement indicates that this step must be performed on units that are assembled with that specific modification.

When the procedure or steps are not affected by a particular modification, they are identified with the statement, W/ O **Tag/ MOD**, followed by the modification number. The W/ O in the statement indicates that this step must be performed on units assembled without that specific modification.

Reference Symbolology

The following symbols are used in this document:



NOTE

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

Adjustment



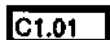
This symbol is used to show that an adjustment is required on the indicated component, and there is also a reference to the location of the adjustment procedure.

Voltage Source



This is an indication of the source voltage that is used for operation of a component. This voltage is distributed in the PWB and comes from the LVPS.

Status Code



The status code is represented by a box in the control logic section of the circuit diagram.

Flags



This symbol is used on the circuit diagrams and is pointing to a wirenet that has to be examined for a short circuit to frame or an open circuit.

Component Control

The code [0403] is the an example of an output diagnostic test.

[0403]

Parts List

PL 1.1



Reference to Exploded Drawing

The spared component is found in this drawing in the Parts List.

Repair Procedure Reference

This symbol indicates that the part has a repair procedure listed in the Repair / Adjustment section of this manual.

Adjustment Procedure Reference

This symbol indicates that the part has an adjustment procedure listed in the Repair / Adjustment section of this manual.

Adjustment and Repair Procedure Reference



This symbol indicates that the part has an adjustment procedure and a repair procedure listed in the Repair Adjustment section of this manual.

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.

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.

Tag/ MOD Information



This symbol identifies the component or configuration of components in a circuit diagram that are not part of a change identified with this Tag/ MOD number.



This symbol identifies an entire circuit diagram that has not been changed by this Tag/ MOD number.

Tag/ MOD Information



This symbol identifies the component or configuration of components in a circuit diagram that are part of a change identified with this Tag/ MOD number.

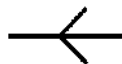


This symbol identifies an entire circuit diagram that has been changed by this Tag/ MOD number.

The Signal Flow



This symbol is used on circuit diagrams to indicate an interrupted signal in the horizontal direction.



This symbol is used on circuit diagrams to indicate a recirculating signal.



This symbol is used on circuit diagrams to indicate a feedback signal.

Signal Name

The signal line is given a name that indicates the condition of the signal when the signal is present.

INTERLOCK CLOSED (L) +5 VDC

Signal name ———

Voltage level when the signal is present. The state of the signal.

Source voltage

AC Voltage Specifications

ACH = 120 VAC (USO)

ACH = 220/240 VAC (EO)

DC Voltage Specifications

Table 1 shows the allowable range for the DC voltages.

Table 1. DC Voltage Specifications

| Voltage | Specification |
|----------------|--------------------|
| +5 VDC | +4.75 to +5.25 VDC |
| -5 VDC | -4.75 to -5.25 VDC |
| +12 VDC | |
| DC COM | 0.0 to +0.8 VDC |
| (L) | 0.0 to +0.8 VDC |

1. Service Call Procedures

| Section Contents | Page |
|--------------------------------------|------|
| Introduction..... | 2 |
| Call Flow | 3 |
| Initial Actions / System Checks..... | 4 |
| Message Display Entry Chart..... | 5 |
| Maintenance Procedures..... | 7 |
| Call Back..... | 8 |
| Final Action..... | 8 |

Introduction

The **Xerox 7356 Scanner** is designed to function as an Information input Terminal (IIT) for several modular systems, as well as to scan images into a standalone host computer for storage and later disposition. The scanner relies on software in a host computer to provide a user interface (UI) and the display of fault indicators.

In the case of the ES8150 or XPC, this UI resides in the host Personal Computer (PC) inside the System Interconnection Module (SIM) or Xerox Productivity Centre (XPC).

in the case of the 8830 DDS, the software resides in the 8830 Controller. A control panel, connected to the Controller and mounted on the top cover of the Scanner, acts as the user interface.

The Service Call Procedures, Section 1, are designed to assist the Service Representative to identify faults, perform the necessary corrective action, and perform the correct Maintenance Procedures. The Service Call Procedures are designed to be used with the 7356 Service Manual and are the entry level for all service calls.

The Service manual for the product is the entry point for the fault isolation process at the systems level. Begin the service call with the Systems Level Call Flow Diagram within the Service Call Procedures, Section 1. The Call Flow Diagram will help you isolate the problem down to the system module. The diagram may direct you to a section in the 7356 service manual or direct you to other service manuals to continue identify and repair the problem.

In the case of a standalone host computer/7356 configuration, the Customer Service Representative must isolate the fault to the 7356 Scanner and then refer to the Call Flow Diagram in the 7356 Service Manual.

- **Call Flow Diagram** - This diagram outlines the major activities that are performed when a service call is made. The **Initial Actions** assist the Service Representative through the customer interface and help to identify the problem. The diagram also directs the Representative to verify, classify, repair the problem, and perform the correct Maintenance Procedure.
- « **Message Display Entry Chart** - This chart contains a list of **Messages**, their **Cause**, the corresponding **Clearance Procedure**, and the **Go to** reference. The charts are designed to direct the Representative to the appropriate Clearance Procedure. If the Procedure does not clear the Status Code, the Representative refers to the **Go to** column. This column contains the information to be followed in order to repair the problem. When the problem has been repaired, refer to the **Call Flow Diagram** and continue the Service Call.
- **Call Back** - After correcting the problem that resulted in the call back, go to the **Final Action** and perform the activities indicated.

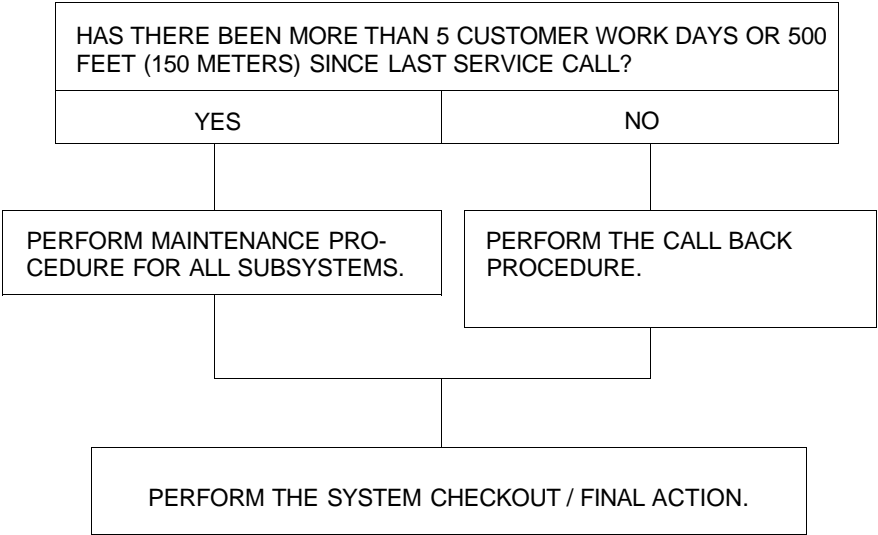
- **Maintenance Procedure** • This procedure contains the tasks that are performed after the main cause for the service call has been corrected. This tasks identified in the procedure are performed at the Interval indicated. The Interval may be after a specific number of feet, for example, 10K. The Interval may also be specified as a Normal Call (NC).

Normal Call activities are designed to be performed on all service calls. The specific interval and Normal Call activities include cleaning and replacing parts that require more frequent service and inspections. The Maintenance Procedure activities are designed to restore the device to an initially clean and functional condition.

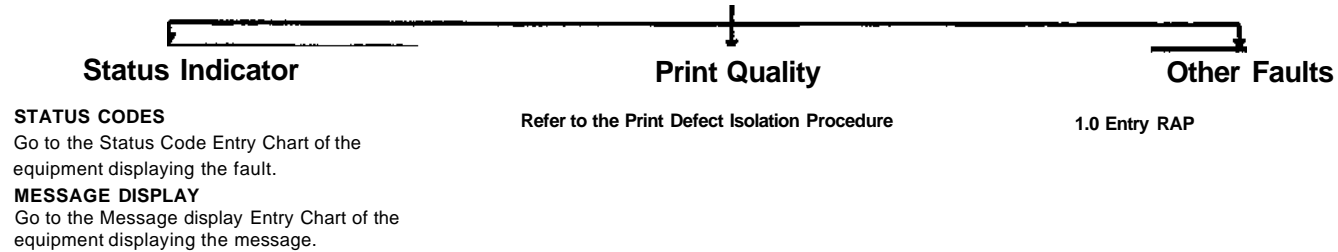
- **Final Action** - The purpose of this procedure is to record the media feet count and to make a record in the machine log book of the service activities that were performed. Final Action is designed to test the image quality under stress and repair any image quality problems. A copy of test pattern 82E5980 or 499T286 is made and compared with the image copy quality specifications located in Section 3 of the manual.

INITIAL ACTION/
SYSTEMS CHECKS

REPAIR ANALYSIS
PROCEDURE



1. Ask the operator to describe the problem.
2. If the scanner is part of a Copier / printer system, ask the operator to stop all print jobs.
3. If the scanner is a standalone 7356, a laptop computer may be required to diagnose and repair the fault.
4. If available, check the Log Book.
5. Attempt to duplicate the problem.



Message Display Entry Chart

The scanner itself has no message display facilities. Status indicator messages are shown on the user interface of the controlling device. The table below shows scanner fault messages, the probable cause, what to do to clear the fault, and a reference to consult if the problem still exists.

| MESSAGE DISPLAYED | CAUSE | CLEARANCE PROCEDURE | If the Problem Still Exists |
|--|---|---|--|
| AUTO SIZE FAILED | The Scanner was not able to automatically detect the size of the current document. | Deselect the Auto Size feature and try the scan again. | |
| SCANNER JAM | 1. The document drive motor has stalled. 2. An additional fault has occurred. | Remove the jammed document. | Go to the 1.0 Entry RAP, Section 2 |
| NO DOCUMENT | The Scanner has detected that no document is loaded. <i>ES81S0/XPC Only: This message is displayed only if the Stream Feed mode is enabled.</i> | Insert a document and ensure that it is transported to the starting position. Then try the scan again. | |
| NO SCSI | At bootup, there was no communication with the CONTROLLING DEVICE. | Ensure that the cable between the scanner and the CONTROLLING DEVICE is connected and firmly seated. Ensure that the SCSI address of the scanner is set to 0. Switch off the Scanner and the CONTROLLING DEVICE. Switch on the Scanner. Switch on the CONTROLLING DEVICE. | Go to the 1.0 Entry RAP, Section 2 |
| SCANNER FAULT | An error occurred while a document was being scanned. Hardware failure or Buffer full | Switch off the Scanner and CONTROLLING DEVICE. Switch on the Scanner; then switch on the CONTROLLING DEVICE. Try the scan again. | Go to the 1.0 Entry RAP, Section 2 |
| SCANNER OFFLINE SCANNER NOT READY | 1) The Scanner was switched on after the CONTROLLING DEVICE. 2) The Scanner is initializing. 3) Faulty SCSI cable or connector 4) The Scanner has not normalized | 1) Switch off the Scanner and CONTROLLING DEVICE. Switch on the Scanner; then switch on the CONTROLLING DEVICE. 2) Allow the Scanner to initialize. 3) Check for bent pins on the connector. Use another cable, if the cable or its connectors are faulty. 4) Clean the Platen Glass and Document Hold-down Guide carefully. Switch off, then switch on, the Scanner and the CONTROLLING DEVICE/XPC. | If the Scanner is not ready in 3 minutes from power on, go to the 1.0 Entry RAP, Section 2 |

(continued)

Message Display Entry Chart (continued)

| MESSAGE DISPLAYED | CAUSE | CLEARANCE PROCEDURE | If the Problem Still Exists, Go To: |
|---------------------------------|--|--|--|
| SCSI ERROR | The CONTROLLING DEVICE is unable to perform the requested command from the Scanner. | Switch off the Scanner and CONTROLLING DEVICE. Switch on the Scanner; then switch on the CONTROLLING DEVICE. | CONTROLLING DEVICE Service Manual |
| TIME OUT | A request was sent to the CONTROLLING DEVICE, but no response was obtained within 10 seconds | Switch off the Scanner and CONTROLLING DEVICE. Switch on the Scanner; then switch on the CONTROLLING DEVICE. | CONTROLLING DEVICE Service Manual |
| Scanner Warming Up | 1) The Scanner is still rebooting and executing the POST. 2) There is a communications fault. | 1) Wait up to 3 minutes; then try the operation again. 2) Switch off the Scanner and the CONTROLLING DEVICE. Switch on the Scanner. Switch on the CONTROLLING DEVICE. | 1.0 Entry RAP, Section 2 |
| Normalize Cameras Failed | Cameras were unable to normalize to the Document Hold Down Guide reference | Thoroughly clean the Platen Glass and Document Hold Down Guide with Lens and Mirror cleaner. Switch off then switch on the scanner and the controlling device. | 1.0 Entry RAP, Section 2 |

Maintenance Procedures

Perform the **Tasks** at the **Interval** indicated in the table. Perform NC (Normal Call) tasks on every call. The task with specific intervals should be done only at the interval indicated.

| INTERVAL | TASK | REASON | TASK ENABLER |
|----------|---|---------------------|--|
| NC | Perform the Normalize Cameras test. If the test fails, clean the Platen Glass and the Document Hold-down Guide carefully. Then repeat the test. | Print/Image Quality | Refer to Section 4 of this Service Manual. |
| NC | Clean the Platen Glass, the Document Hold-down Guide, and the Document Drive Rolls. | Print/Image Quality | Clean the parts with 43P81 Lens and Mirror Cleaner using the cleaning pads 600S4372. |
| NC | Perform the Calibrate Motor Speed adjustment (ADJ 4.1.1) if there is evidence of magnification error in the process direction. | Print/Image Quality | Refer to Section 4 of this Service Manual. |
| NC | Perform the Front-to Back Stitch adjustment (ADJ 4.1.3) and the Left to Right Stitch adjustment (ADJ 4.1.4) | Print/Image Quality | Refer to Section 4 of this Service Manual. |
| NC | Check the Calibrate Document Registration adjustment (ADJ 4.1.2); perform the adjustment if necessary | Print/Image Quality | Refer to Section 4 of this Service Manual. |

Call Back

1. Follow the Call flow Diagram and resolve the problem that caused the Call Back.
2. Perform the Final Action. Do **Not** perform the Maintenance Procedures.

Final Action

1. Make one D (A1) size copy on 20 lb (80 gsm) bond paper of Test Pattern **82E5980**.
 - a. Evaluate the copy and ensure that the copy meets the image Quality Specifications in Section 3.
 - b. If the copy is not within the specification, refer to the Entry Copy Quality (CQ) RAP and follow the procedure to eliminate any defects.
 - c. Evaluate the copy for any visible defects.
 - d. If the copy exhibits any visible defects, refer to the appropriate Copy Quality (CQ) **RAP** and follow the procedure to eliminate the defects.
2. Make a copy.
3. Check that the copy count meters on the Image Output Terminal (IOT) have advanced.
4. Fill out the Service Call Report. Record all activities in the service log.
5. If new developer material was installed in the IOT, write the developer batch number in the Service Log.
6. Give appropriate copy credits to the customer.
7. If service was performed on the IOT or the Scanner, use the serial numbers of the IOT or the Scanner to close the call. Report both the IOT meters A and B when closing the call.

2. Repair Analysis Procedures

Section Contents

Page

Scanner Raps

1.0 Entry RAP.....

2-3

1.1 AC Power RAP.....

2-5

1.2 DC Power RAP.....

2-7

1.3 Exposure Lamp RAP.....

2-12

1.4 Document Drive RAP.....

2-15

1.5 Sensors and FORWARD/REVERSE Switch RAP.....

2-19

1.0 Entry RAP

The purpose of this RAP is to classify problems and direct the customer service representative to the appropriate repair analysis procedure.

Initial Actions

- Ensure that the power cord is connected and that the correct line voltage is supplied.
- Ensure that the SCSI Cable is correctly seated.

Procedure

Ask the customer to tell you the action that produced the fault.

Switch off the Scanner and the controlling system. Switch on the Scanner; then switch on the controlling system. Repeat the action that produced the fault.

ES8150/XPC: For 115 VAC machines, the Scanner power is controlled by the SIM.

The problem still exists.

Y N

I Resume normal operation.

Open the Top Cover. Remove the Document Hold-down Guide. Look down through the aperture in the Platen Glass on the left side of the Scanner, and examine the 4 green LEO status indicators.

At least one LED Is illuminated.

Y N

I Go to the AC Power RAP

All 4 LEDs are Illuminated.

Y N

I Go to the DC Power RAP.

Go to Table 1.

Platen
Glass

D1

D2

D8

D13

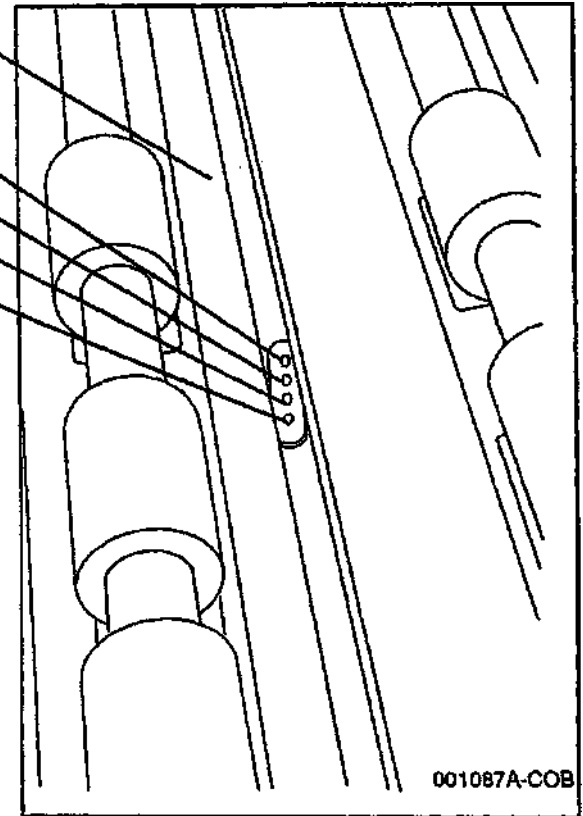


Figure 1. Voltage Status Indicator LEDs - Top View

Table 1. Additional Symptoms.

| Problem Observed | Probable Cause | Corrective Action | If the Problem Still Exists |
|--|--|---|---|
| The Scanner fails the Normalize Cameras test | <ol style="list-style-type: none"> 1. There is dirt on the Document Hold-down Guide or the Platen Glass. 2. Platen Glass is installed wrong. 3. There is a fault in the camera cables, the Control PWB, or the Cameras. | <ol style="list-style-type: none"> 1. Clean the Platen glass and Document Hold Down Guide. Switch off, then switch on, the Scanner and the CONTROLLING DEVICE. 2. Ensure that the Platen Glass is installed correctly. | Go to the Scanner Will Not Normalize CQ RAP in Section 3. |
| The Exposure Lamp is not on, but the 4 green LED voltage indicators are on | Fault in the Lamp, Lamp Ballast, control circuits for the Lamp. | | Go to 1.3 Exposure Lamp RAP |
| The Exposure Lamp is lit dimly | Fault in high voltage return circuit for the Lamp, the Lamp, Ballast, | | Go to 1.3 Exposure Lamp RAP |
| The Scanner does not transport an inserted document to the registered position, but the Exposure Lamp is on. | <ol style="list-style-type: none"> 1. The Scanner is normalizing cameras after being switched on. 2. Sensor fault 3. Fault in the document drive circuitry or mechanical drive | <ol style="list-style-type: none"> 1. Wait 1 minute and try again. 2. - 3. -- | <ol style="list-style-type: none"> 1. - 2. Go to the Sensors and 1.5 FORWARD/REVERSE Switch RAP. 3. Go to the 1.4 Document Drive RAP |
| The image appears stretched or compressed in the process direction | Fault in the Document Transportation system. | | Go to 1.4 Document Drive RAP. |
| The image has a gap or an overlap region along the process direction | The Stitch adjustment is incorrect. | Configure for diagnostics; perform the Front/Back Stitch adjustment and the Left/Right Stitch adjustment | If the tests fail repeatedly or a satisfactory adjustment cannot be made, the Scanner must be exchanged. |
| Document does not scan but does register. | <ol style="list-style-type: none"> 1. SCSI Cable between Scanner and SIM Is not securely seated 2. Faulty SCSI cable between Scanner and SIM | <ol style="list-style-type: none"> 1. Reconnect the cable. Switch off the Controlling Device and Scanner. Switch on the Scanner. Switch on the Controlling Device 2. Replace the Cable. Reconnect the cable. Switch off the Controlling Device and Scanner. Switch on the Scanner. Switch on the Controlling Device | Go to the Level 1 on the Controlling Device service manual. |

1.1 AC Power RAP

The purpose of this RAP is to isolate faults in the AC power and some faults in power supply.

Initial Actions

- Ensure that the power cord is connected and that the correct line voltage is supplied.

WARNING

Dangerous Voltage

Disconnect the Power Cord from the Scanner before performing this procedure.

Procedure

Switch off the Scanner and the controlling system.

Remove the Left Side Panel (REP 4.1.1).

Examine Fuse F4 on the Power Supply.

Fuse F4 has continuity.

Y N

Replace the Power Supply (REP 4.1.16).

Ensure that Connectors P/J6 and P/J7 on the Power Distribution PWB are correctly connected to the Power Supply. It is possible to connect the Power Distribution PWB such that the pins on the connectors are not correctly registered.

If the problem still exists, Go to Figure 2 and isolate the fault in the AC Power circuits.

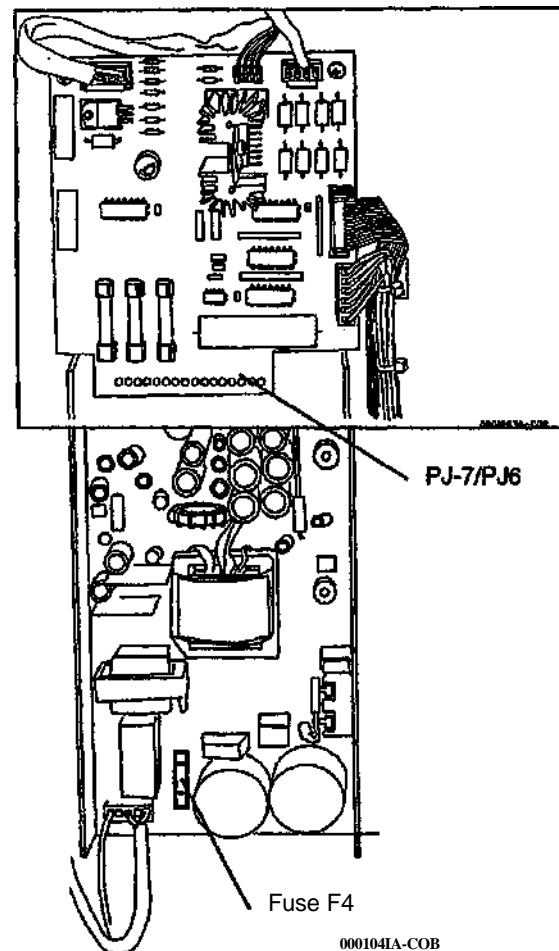


Figure 1. Power Supply and Power Distribution PWB

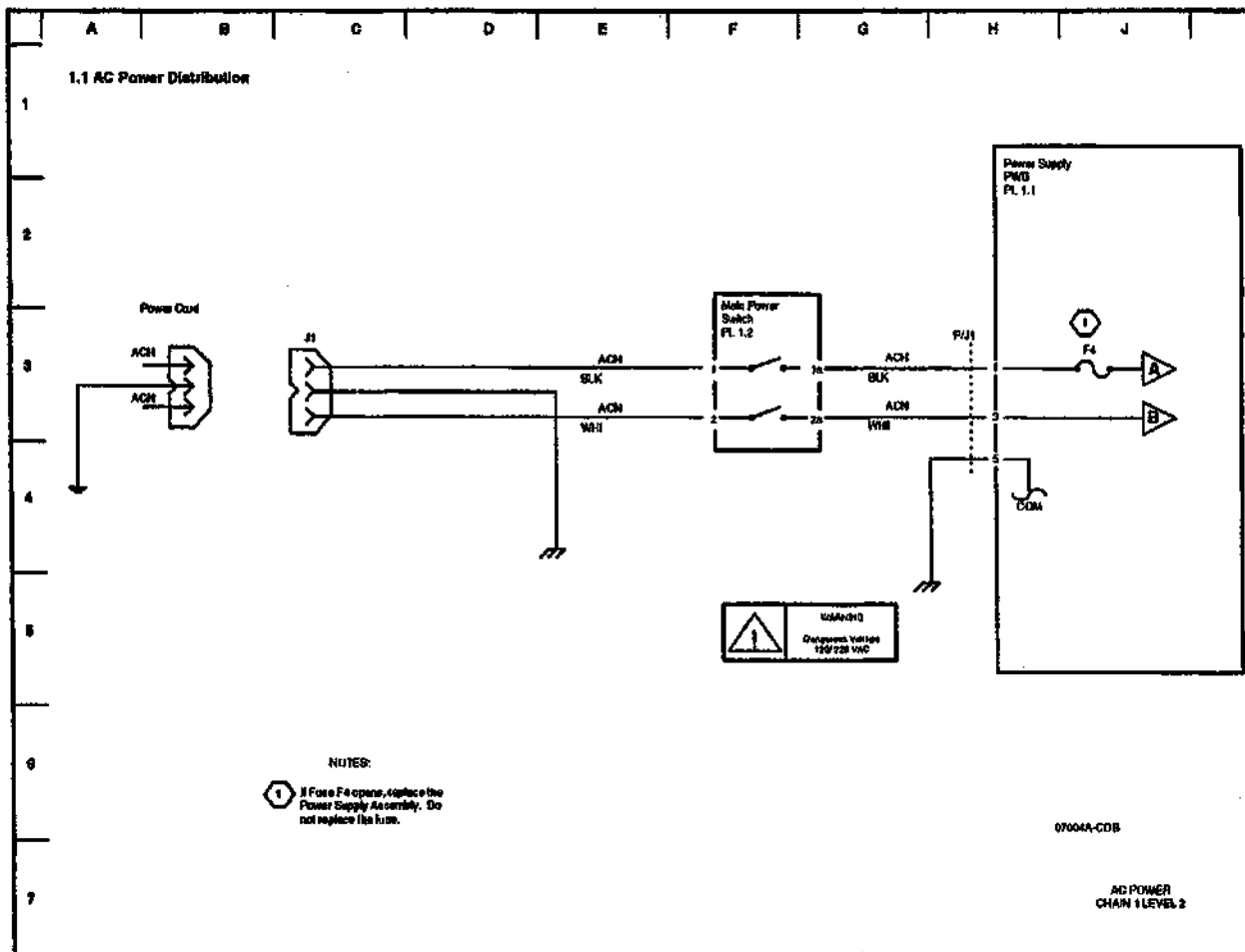


Figure 2. AC Power Circuits

1.2 DC Power RAP

The purpose of this RAP is to isolate faults in the DC power and distribution circuits,
initial Actions - None.

Procedure

Open the Top Cover. Remove the Document Hold-down Guide. Look down through the aperture in the Platen Glass on the left side of the Scanner, and examine the 4 green LED status indicators D1, D2, D8 and D13.

All 4 LEDs are Illuminated.

Y N

Go to Figure 4, Flag 1, and check the voltages from the Power Supply and the associated fuses on the Power Distribution PWB.

|There is +24 VDC at J1, Pin 5.

Y N

Replace the open fuse.

If the Fuse F2 or F3 opens, replace the Control PWB (REP 4.1.10).

If Fuse F1 opens, go to the 1.2 DC Power Generation BSD (Section 7) and check for a short circuit in the wires fed by that fuse.

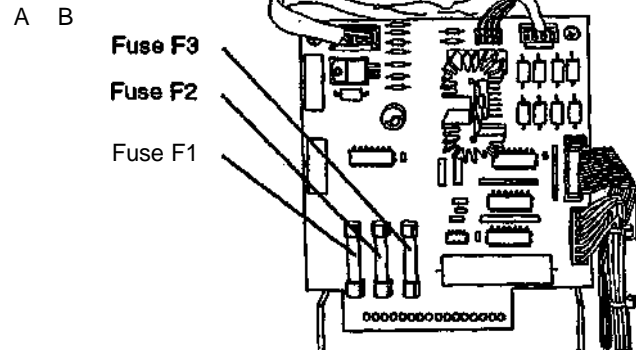


Figure 2. Fuses on Power Distribution PWB

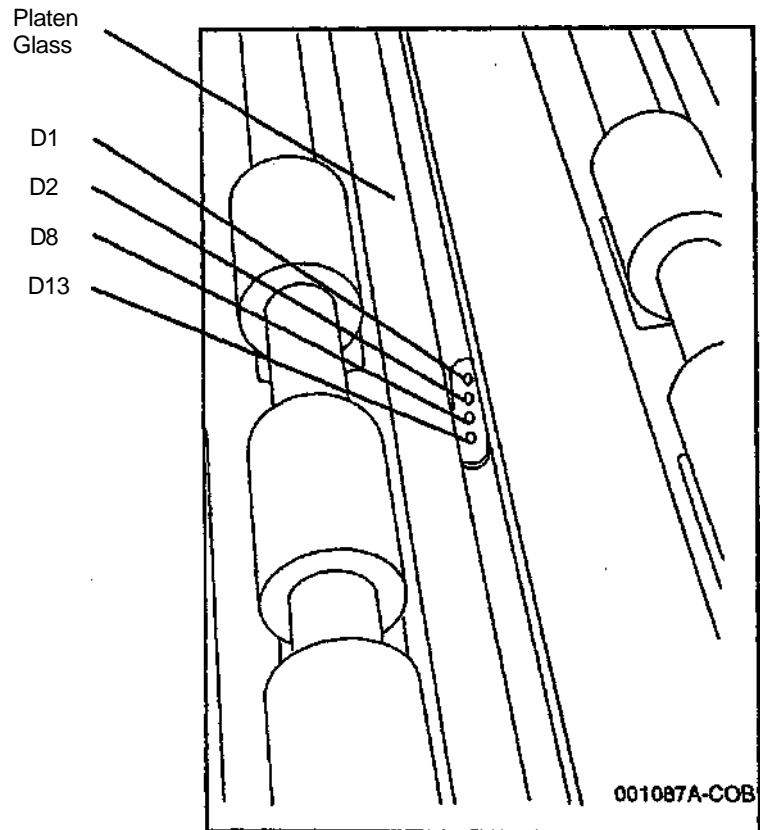


Figure 1. Voltage Status Indicator LEDs - Top View

A B

(Figure 3): Connect the negative probe of the DMM to J5-4. Measure the voltages on the pins in the table.

| Connector - Pin | Voltage Range |
|-----------------|--------------------|
| P6-8 | +11.7 to +12.3 VDC |
| P6-6 | -11.7 to -12.3 VDC |
| P6-4 | +23 to +25 VDC |

The voltages are correct.

Y N

Ensure that the Power Distribution PWB is correctly plugged into the Power Supply.

if the problem still exists, replace the Power Supply.

Measure the voltage on P/J7-8.

The voltage is less than +5.10 VDC.

Y N

I Replace the Power Supply (REP 4.1.16).

The voltage is greater than 4.90 VDC

Y N

Switch off the Scanner and the controlling system. Disconnect P13 from the Control PWB. Switch on the Scanner.

The voltage on P/J7-8 is greater than 4.90 VDC.

Y N

Switch off the Scanner. Disconnect the Power Distribution PWB from the Power Supply (REP 4.1.15). Switch on the Scanner.

The voltage on P/J7-8 is greater than 4.90 VDC.

Y N

Replace the Power Supply (REP 4.1.16).

Replace the Power Distribution PWB (REP 4.1.15).

D E F

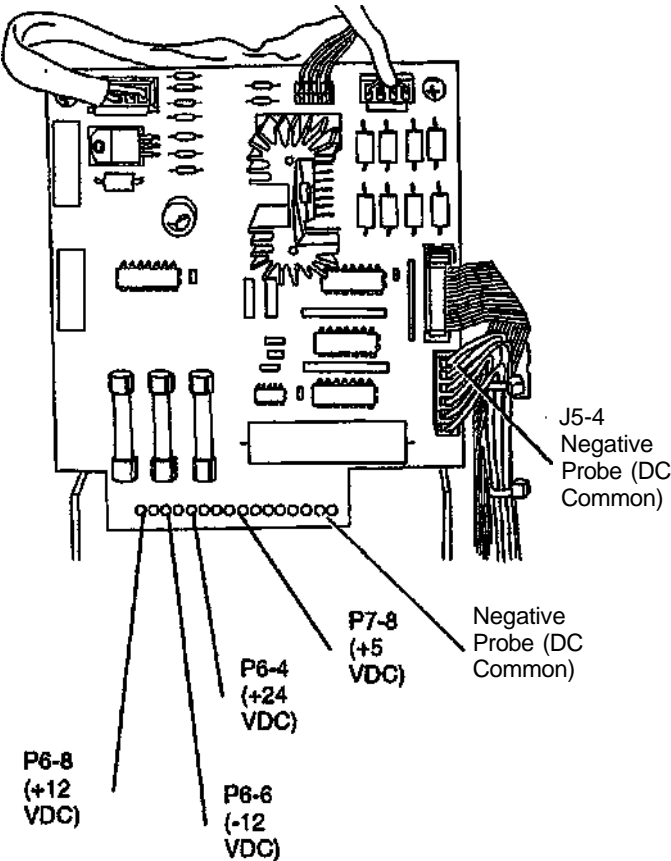


Figure 3. Voltage Measurement Points - Power Distribution PWB

D E F

Switch off the Scanner. Connect P13 to the Control PWB.
Disconnect P9 from the Control PWB. Switch on the Scanner.

The voltage on P/J7-8 Is greater than 4.90 VDC.

Y N

| Replace the Control PWB (REP 4.1.10).

The fault is in one of the three Camera PWBs. This fault cannot be repaired in the field. Arrange for an exchange of the Scanner.

Go to Figure 4, Flag 2 and isolate the open circuit in the +5 VDC supply lines. Repair or replace any cable that has an open circuit.

Go to the 1.2 DC Power Generation BSD (Section 7) and check for an open circuit in the +12 VDC supply lines, the -12 VDC supply lines, or the +24 VDC supply lines. Repair or replace any cable with an open circuit.

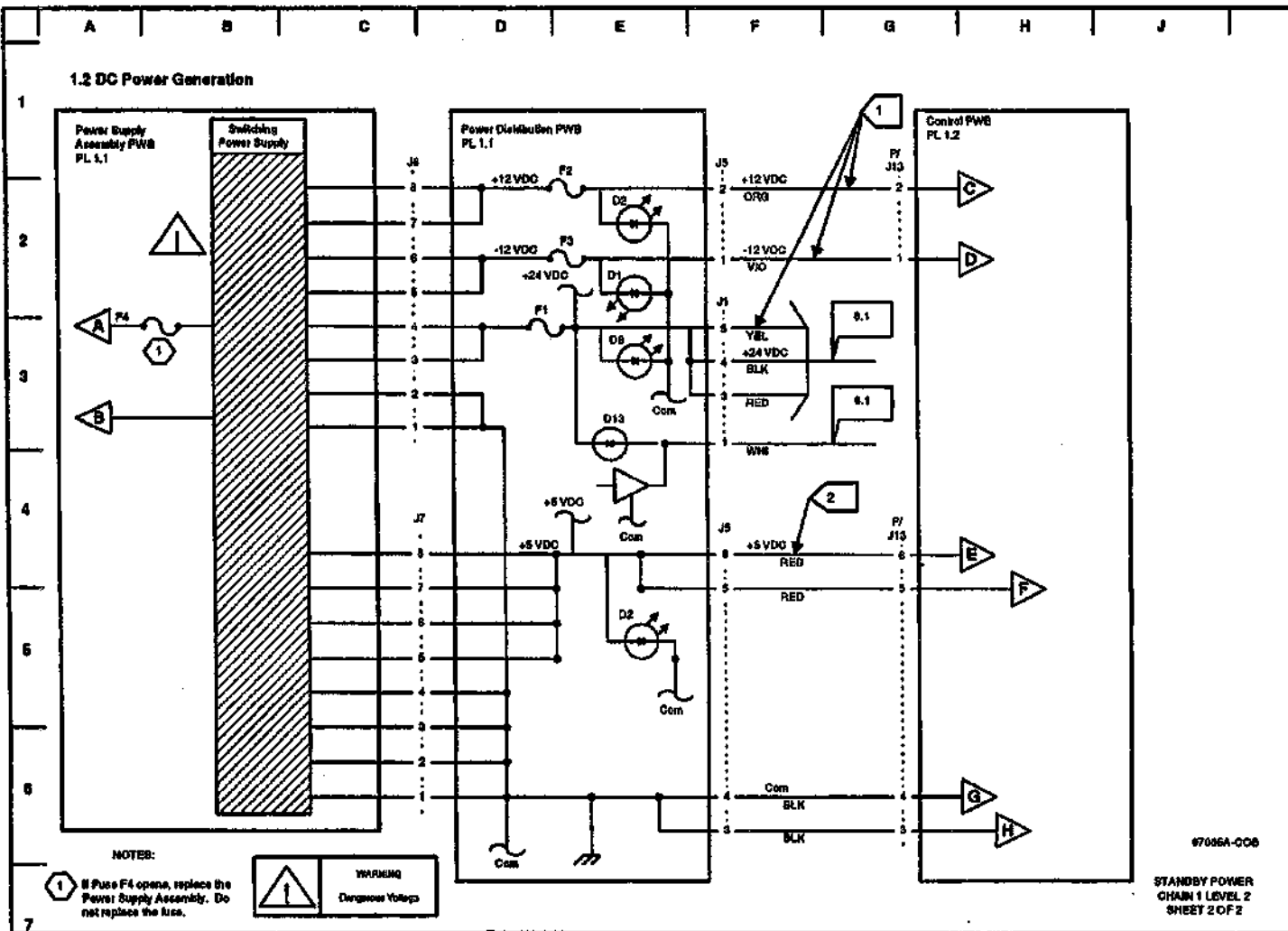


Figure 4. DC Power Circuits - Sheet 1 of 2

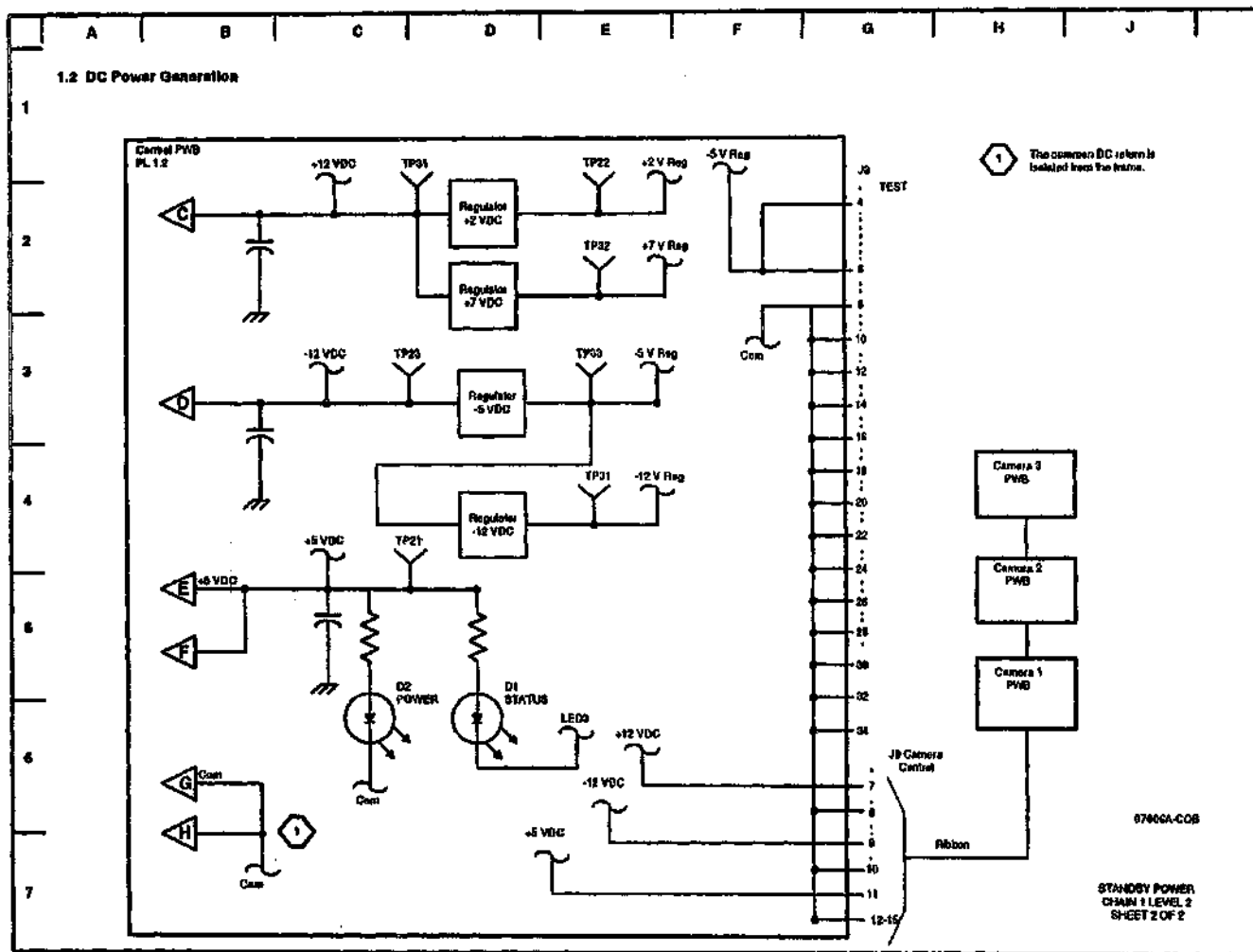


Figure 4. DC Power Circuits - Sheet 2 of 2

1.3 Exposure Lamp RAP

The purpose of this RAP is to Isolate faults that cause the Exposure Lamp to illuminate dimly or not at all.

WARNING

Dangerous Voltage

The Exposure Lamp is fed with 400 VAC from the Lamp Ballast. Disconnect the Power Cord from the Scanner when working near the Lamp Socket.

Initial Actions

Switch off the Scanner and the controlling system.

Remove the Left Side Panel (REP 4.1.1).

Ensure that the Lamp Sockets are connected to the lamp.

Switch on the Scanner.

Procedure

The Exposure Lamp is dimly lit.

Y N

(Figure 1): Use the test leads for the DMM as a jumper to connect P/J5-4 to P/J1-1.

The Exposure Lamp Illuminates?

Y N

Go to Figure 3, Flag 1 and check the blue wire for continuity to Lamp Socket LS2.

The wire has continuity.

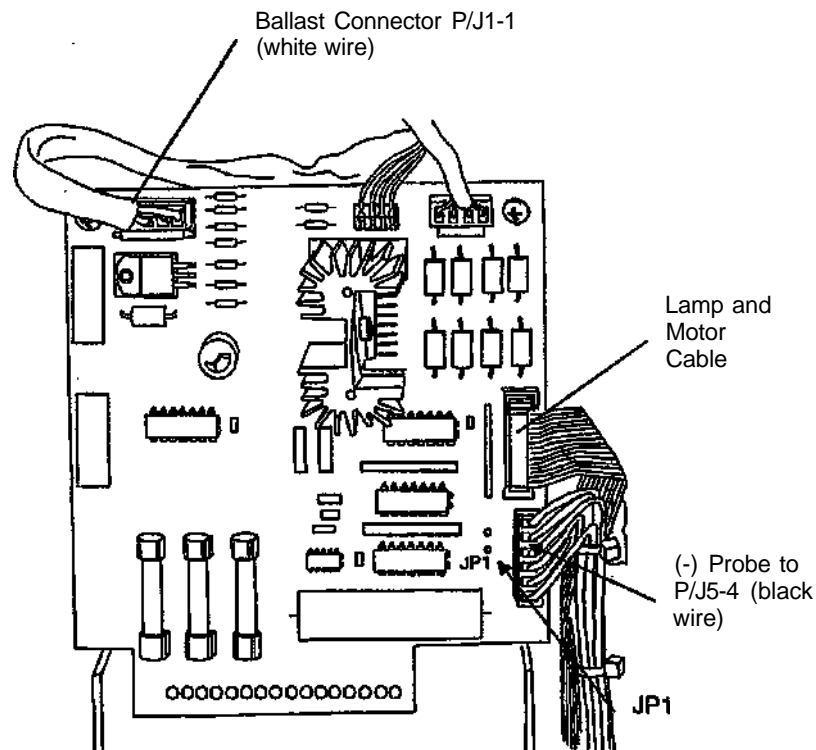
Y N

Repair the connection.

Replace the Exposure Lamp (REP 4.1.3).

If the problem still exists, replace the Lamp Ballast Assembly (REP 4.1.14).

A B



0001003A-COD

Figure 1. Power Distribution PWB

A B

(Figure 1): Locate the test point JP1 on the Power Distribution PWB.
Use the test leads from the DMM to connect the two points of JP1 together.

The Exposure Lamp illuminates.

Y N

Replace the Power Distribution PWB (REP 4.1.15).

Replace the Lamp and Motor Cable.

If the problem still exists, replace the Control PWB.

Go to Figure 3, Flag 2 and check the yellow wire for an open circuit to the Lamp Socket LS1.

The wire has continuity.

Y N

Repair the connection.

Replace the Exposure Lamp (REP 4.1.3).

If the problem still exists, replace the Lamp Ballast Assembly (REP 4.1.14)

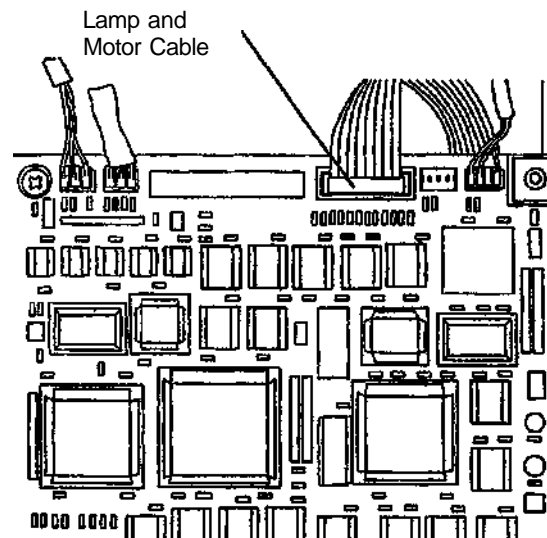


Figure 2. Control PWB

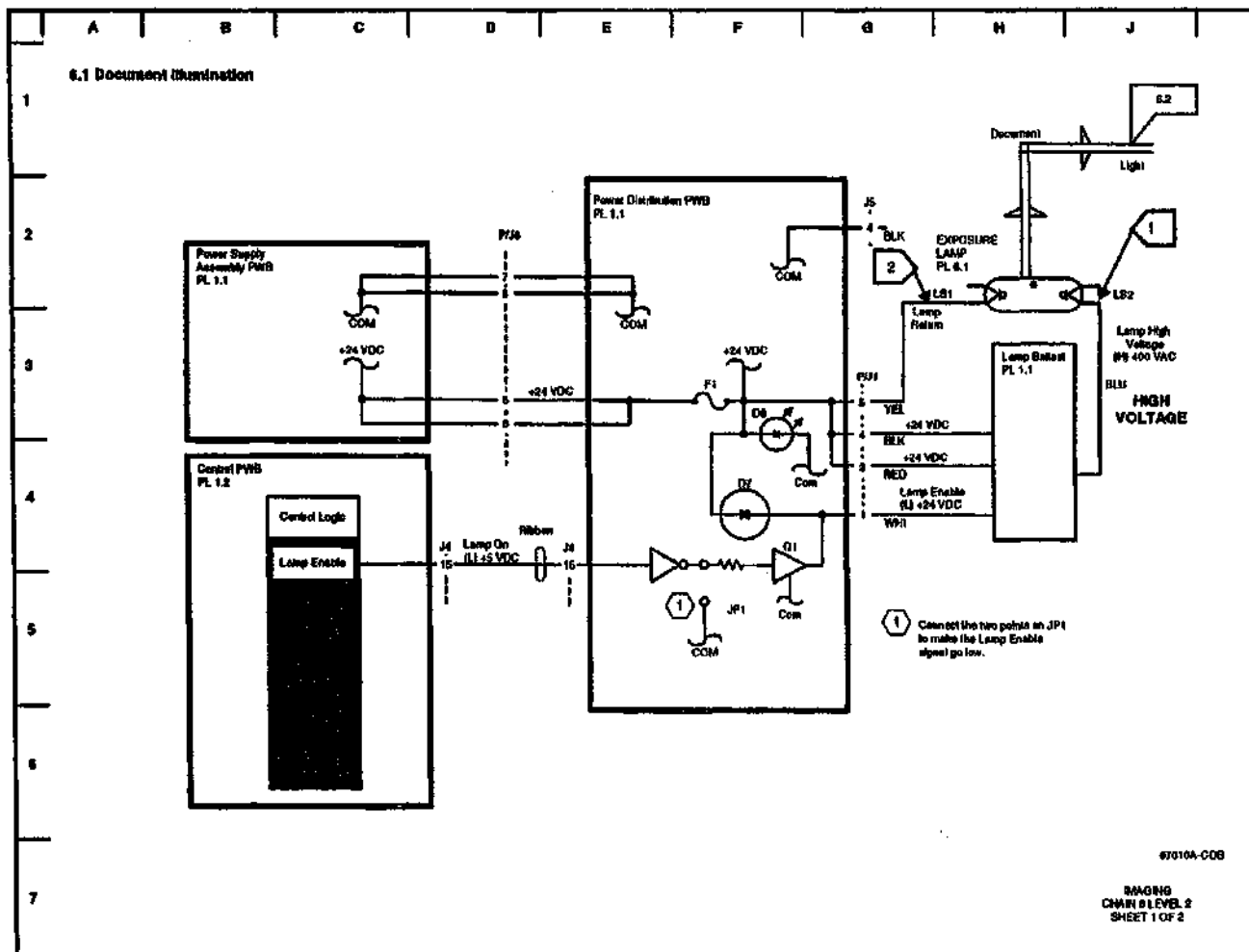


Figure 3. Document Illumination Circuits

1.4 Document Drive RAP

The purpose of this RAP is to isolate faults in the document drive system. The BSDs 4.1, 4.2, and 5.1 (Section 7) contain useful Information.

Initial Actions

Ensure that the Scanner and the controlling system are ready.

Procedure

Alternately press the FORWARD Switch at least 10 times.

- If the Document Drive Rolls operate erratically (sometimes forward, sometimes reverse, sometimes not at all), the Motor has an internal fault or the controlling circuit on the Power Distribution PWB has a fault. Replace the Motor Assembly (REP 4.1.12). If the problem still exists, replace the Power Distribution PWB (REP 4.1.15).
- If the Document Drive Rolls always operate forward, continue with the procedure.

Attempt to scan a large (ANSI D or ISO A1) document at 25% (1:4) reduction factor.

Listen carefully for noises indicating slippage of the Main Drive Belt.

Try scanning a document several times. The document is registered every time that it is inserted (Figure 1).

Y N

The document was transported smoothly forward and then smoothly back.

Y N

There was noise indicating that the motor was running.

Y N

Remove the Left Side Panel (REP 4.1.1).

Configure the system for diagnostic operation:

- ES8150/XPC: Section 6 of this manual.
- 8830 DDS: Section 6 of the 8830 DDS Service Manual.

Start the diagnostic software and select **Component Tests**. Then select **Output Tests**.

Operate the motor in both the forward and the reverse directions.

A B C D

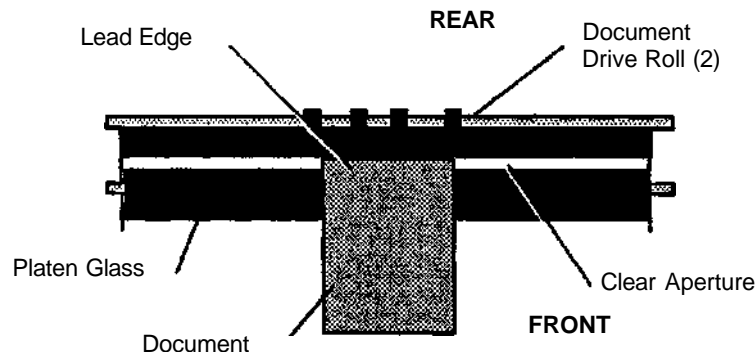


Figure 1. Registration of the Lead Edge - Top View, Document Hold-down Guide Removed

A B C D

The motor operates correctly in both directions.

Y N

Connect the (-) probe to J5-4. Measure the voltage on all pins of Connector J3 while commanding the Motor to operate.

The voltage is between 15.0 and 19.0 VDC when the motor is commanded to operate, and less than 1.5 VDC when the motor is not commanded to operate.

Y N

Check for the following possible faults:

- a) the Lamp and Motor Cable is not seated. Reseat the cable connectors at each end.
- b) The motor control circuitry on the Power Distribution PWB is defective. Replace the Power Distribution PWB (REP 4.1.15).
- c) The Control PWB cannot signal the motor to operate. Replace the Control PWB (REP 4.1.10).

"he Motor is defective. Replace the Motor Assembly (REP 4.1.12).

'he Document Drive Rolls moved when the Motor operated.

Y N

Replace the Main Drive Belt (REP 4.1.12).

E F G H

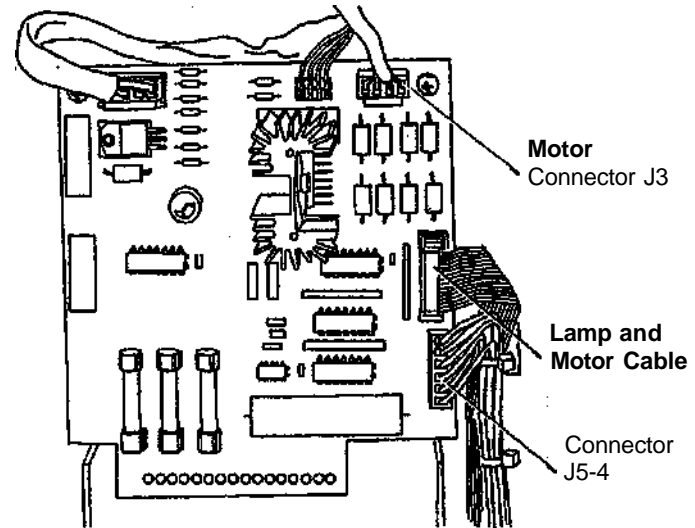


Figure 2. Power Distribution PWB

E F G H

Replace the Edge Present Sensor.

If the problem still exists, replace the Control PWB.

When the document was Inserted, the document moved forward, then stopped. The document failed to reverse.

Y N

Press the **FORWARD** Switch several times and then press the **REVERSE** Switch several times. Observe the direction of rotation for the Document Drive Rolls.

The direction of rotation of the Document Drive Rolls was correct and consistent.

Y N

Remove the Left Side Cover. (REP 4.1.1). Check the Main Drive Belt and the Tachometer Drive Belt for breakage and tension.

If the problem still exists, go to the Sensors and Forward/Reverse Switch RAP, and check that the sensors and switch operate correctly.

Measure the voltage on all pins of Connector J3 (Figure 2) while commanding the Motor to operate.

The voltage is between 18.0 and 19.0 VDC when the motor is commanded to operate, and less than 1.5 VDC when the motor is not commanded to operate.

Y N

Replace the Power Distribution PWB (REP 4.1.16).

Replace the Motor Assembly (REP 4.1.12).

Configure the Scanner for diagnostic operation (Section 6). Start the diagnostic software.

Manually actuate the Edge Registered Sensor, and observe the diagnostic screen.

K

I J K

The signal goes low.

Y N

Go to 5.1 Document Transport/Registration BSD (Section 7). Disconnect Connector P6 from the Control PWB. Connect J6-2 to J6-4, and observe the diagnostic screen.

The signal goes low.

Y N

Replace the Control PWB (REP 4.1.10).
Replace the Edge Registered Sensor and cable (REP 4.1.7).

M N

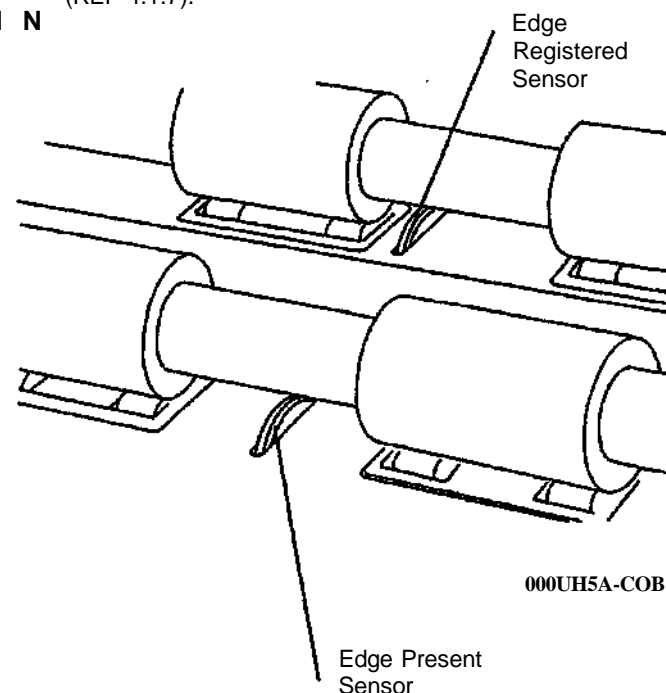


Figure 3. Edge Sensors - Front View

L **M** **N**

Check the Stall Sensor Cable for continuity.
The cable has continuity

Y **N**

Replace the cable.
 Replace the Stall Sensor Assembly.
 If the problem still exists, replace the Control PWB.

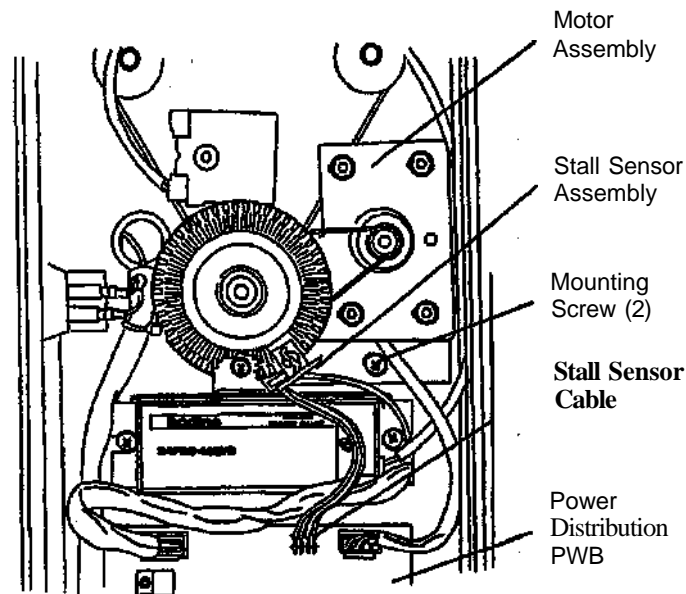
Perform ADJ 4.1.2 Calibrate Document Registration.

Remove the Left Side Panel (REP 4.1.1).

Loosen the 2 Mounting Screws (Figure 4).

Adjust the position of the Motor Assembly to tighten the Main Drive Belt.

Tighten the 2 mounting screws.



0001024A-C0B

Figure 4. Motor Assembly

1.5 Sensors and FORWARD/REVERSE Switch RAP

Purpose

The purpose of this RAP is to isolate faults in the Edge Present Sensor, the Edge Registered Sensor, the associated cables, and the Control PWB. The 5.1 Document Transport/Registration BSD (Section 7) contains useful information.

Initial Actions

Ensure that the Scanner and the controlling system are ready for normal operation.

Procedure

Configure the system for diagnostic operation:

ES8150/XPC: (Section 6 of this manual).

8830 DDS: Section 6 of the 8830 DOS Service Manual

Select **Component Tests**. Select **Input Tests**.

Manually actuate the FORWARD Switch and then the REVERSE Switch.

The signal goes low when the switch is actuated, and high when the switch is deactivated.

Y N

Go to Figure 3, Flag 1. Disconnect P2, and connect J2-2 to J2-4. Observe the diagnostic screen.

The signal goes low.

Y N

A B C

A B C

The signal goes low.

Y N

Replace the Control PWB.

Check the cable for an open circuit. Check the switch for continuity when the switch is actuated.

Manually actuate the Edge Present Sensor, and observe the diagnostic screen.

The signal goes low when the sensor is actuated, and high when the sensor is deactivated.

Y N

Go to Figure 3, Flag 2. Disconnect Connector P1. Connect J1-2 to J1-4.

The signal goes low.

Y N

Replace the Control PWB (REP 4.1.10).

Replace the Edge Present Sensor and cable (REP 4.1.6).

C

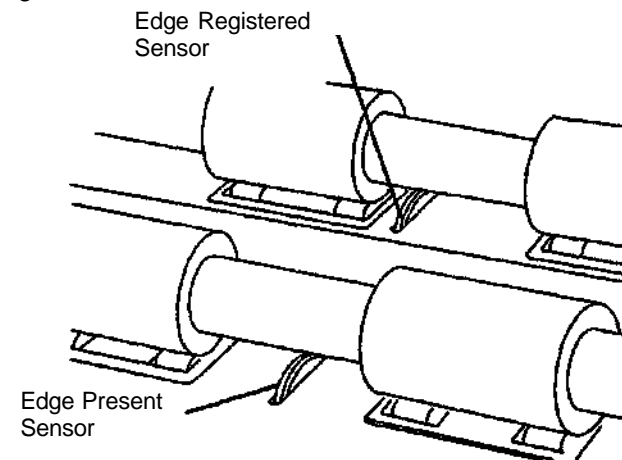


Figure 1. Location of Sensors

C

Manually actuate the Edge Registered Sensor, and observe the diagnostic screen.

The signal goes low.

Y N

Go to Figure 3, Flag 3. Disconnect Connector P6. Connect a jumper between J6-2 to J6-4, and observe the diagnostic screen.

The signal goes low.

Y N

| Replace the Control PWB (REP 4.1.10).

Replace the Edge Registered Sensor and cable (REP 4.1.7).

The sensors and the FORWARD/REVERSE Switch contain no fault.

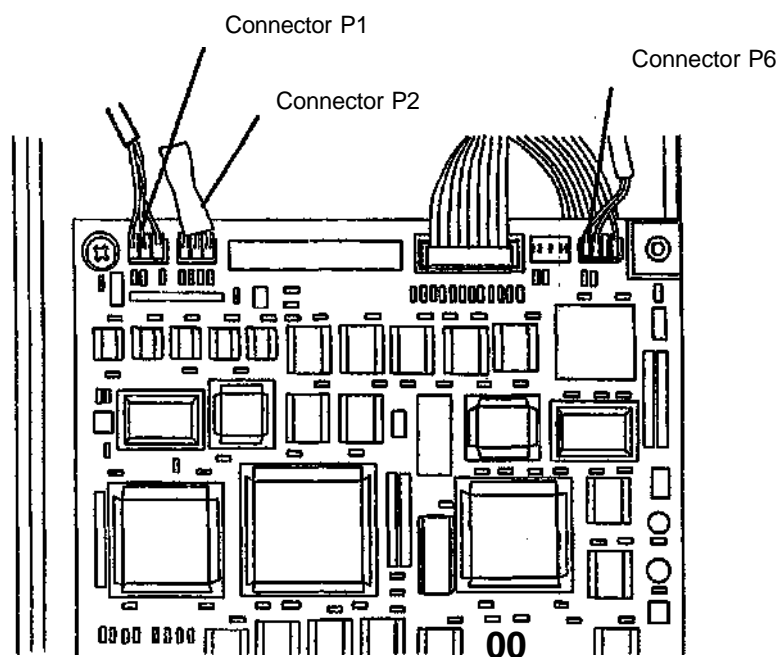


Figure 2. Control PWB

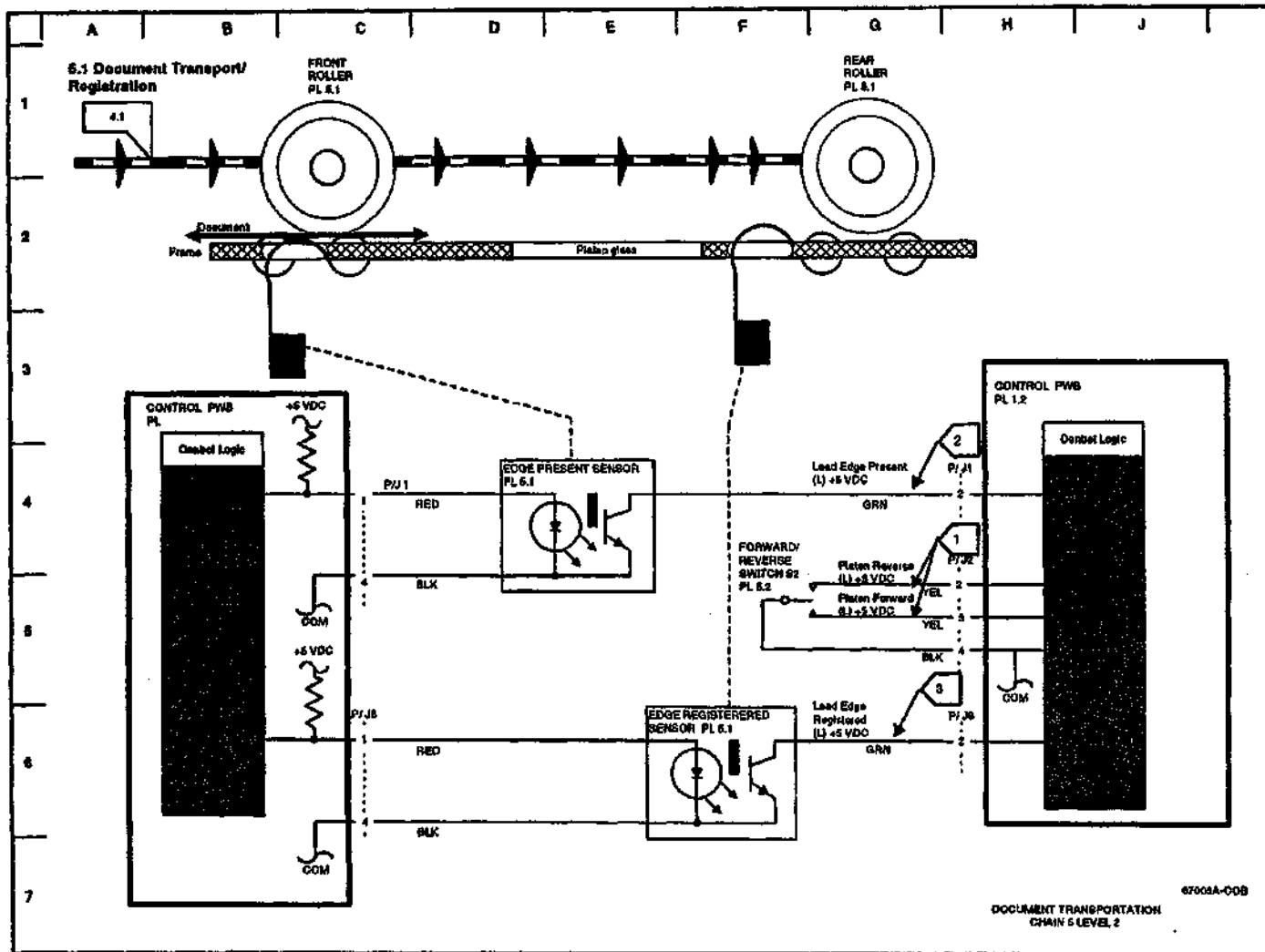


Figure 3. Circuit Diagram - Sensors and FORWARD/REVERSE Switch

3. Image Quality Repair Analysis Procedures

Section Contents

Page

Scanner Raps

Print Defect Isolation RAP.....3

Scanner Will Not Normalize RAP.....7

Print Defect Isolation RAP

The purpose of this RAP is to classify image quality problems and direct the customer service representative to the appropriate repair analysis procedure. The procedure may be in this section or in Section 2.

Before trying the procedures and corrective actions in this service manual, the customer service representative should first determine that the image quality fault is not caused by a malfunction in the device that controls the Scanner, or in the Image Output Terminal (IOT) device. This controlling system may be a Xerox ES8150 SIM, a Xerox Productivity Centre (XPC), an 8830 Controller, a standalone controlling computer, or other controlling device.

The diagnostic software (SCSI7356) contains a viewer so that you may directly view an image made by the scanner on the screen of the computer that runs the diagnostic program. In the case of the ES8150 or the XPC, you must first connect the Scanner to the SCSI port of the SIM computer before running the diagnostic program. Others will require the use of a laptop computer with the SCSI7356 Diagnostic software loaded to view the image. Refer to Section 6 for detailed instructions.

Initial Actions

Ask the customer to tell you the action that produced the fault.

Switch off the Scanner and the controlling system. Switch on the Scanner; then switch on the controlling system. Repeat the action that produced the fault.

Procedure

Make a copy of a test pattern that is stored internally on the IOT.

The Image Is correct.

Y N

I Repair the problem in the IOT.

A

Make a copy of a test pattern or image stored internally in the controlling device. If there is no controlling device, continue down the Y path; the fault is in the scanner.

The Image is correct.

Y N

I Repair the problem in the controlling device.

The fault is in the Scanner or its connections to the controlling device.

Configure the system for diagnostics. Start the SCSI7356 diagnostic software.

Select **Normalize Cameras**. The test will pass or fail. Select **Exit**. If the test failed, a message is displayed warning that normalization is required for valid image quality tests. Ignore this message at this time, and select OK.

Select **Scan and View** from the Service Diagnostic Menu. Insert the **82E5980** test pattern.

The **Scanner transports the document to the starting position**

Y N

I Go to the Document Drive RAP (Section 2) and continue to isolate the fault.

Select **Start Scan** from the Scan and View menu.

After the scan is complete, select **View Image**. Examine the image. Go to Table 1 and locate the description that most closely describes the image quality problem. In certain cases, an illustration of the problem is provided.

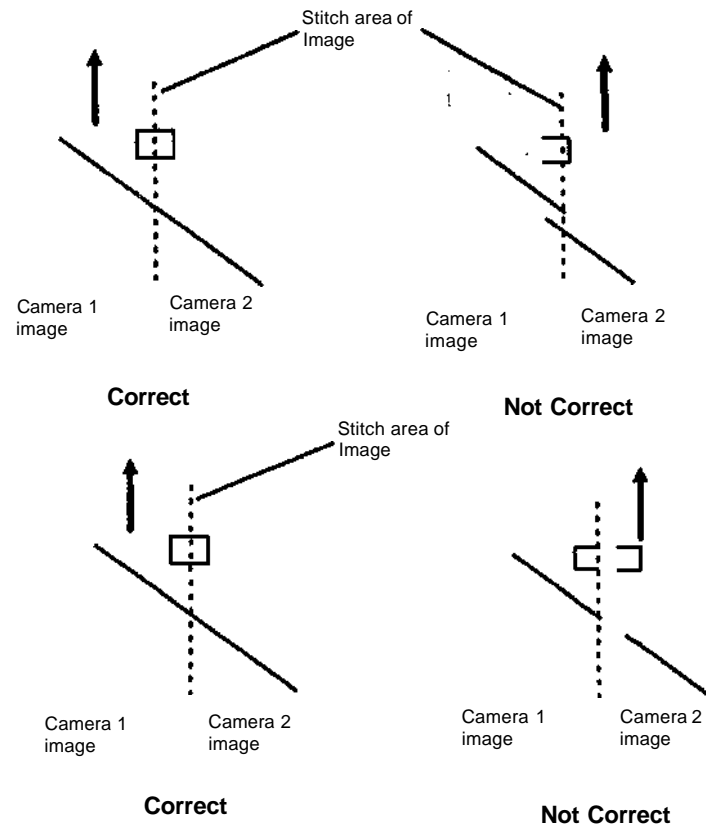
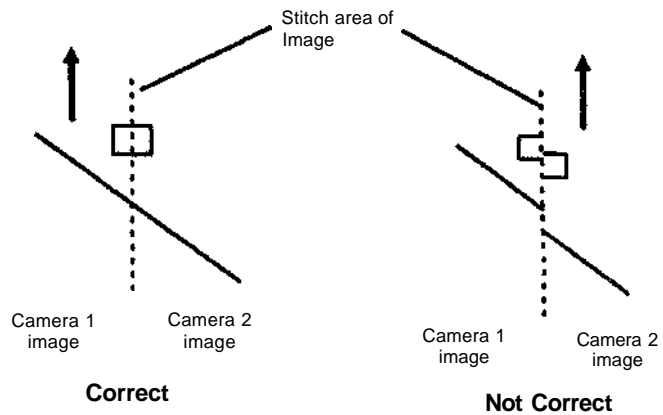


Figure 1. Misalignment - Stitch Adjustment

Table 1. Additional Symptoms

| Problem Observed | Probable Cause | Reference Figure | Initial Action | If the problem still exists |
|---|---|-------------------------|--|--|
| A narrow streak down the image in the process direction. The streak may be lighter or darker than the adjacent areas of the image. | Dirt on the Platen Glass. | | Carefully clean the glass. Make another copy to see if the problem still exists.. | 1. Check the Platen Glass for permanent defects. If found, replace the glass. 2. Replace the Control PWB. If the problem still exists, the fault is in the cameras and is not repairable in the field. Escalate the call. |
| The scanner does not resolve at least 5 lines per mm as indicated by the resolution target on Test Pattern 82E5980 . | The focus of the cameras is misadjusted. | | Ensure that the viewer is set for maximum enlargement when evaluating the resolution. | The focus cannot be corrected in the field. Escalate the call, and arrange for the exchange of the scanner. |
| A portion of the image is blank or is black. The blank or black portion extends the entire length of the image in the process direction. The Normalize Cameras diagnostic test fails consistently. | Fault in the camera cables or the Control PWB. Fault in one or two of the cameras. | | Go to the Scanner Will Not Normalize CQ RAP . | |
| There is a gap, an overlap, or a shift in the image at the stitch point between two of the camera images | Front/Back Stitch or Left/Right Stitch is not correctly adjusted | Figure 1 | Do the Front/Back Stitch and Left/Right Stitch adjustments | Escalate the call. Further repairs cannot be done in the field. |
| The image is scrambled. | 1. Software in the Scanner is corrupted. 2. The Control PWB has a malfunction. | | 1. Configure for diagnostics. Select Download Code load new software into the Scanner. Refer to Section 6 for instructions. 2. Replace the Control PWB | 1. Replace the Control PWB. 2. Escalate the call. |

| Problem Observed | Probable Cause | Reference Figure | Initial Action | If the problem still exists |
|--|---|------------------|--|-----------------------------|
| A portion of the lead edge of the image is cut off. The remaining part of the image is satisfactory. | The document registration adjustment is incorrect.. | | Go to Section 4 and perform the Calibrate Document Registration adjustment.. | |
| Part of the side or bottom of the image is cut off. | 1. The selected image size does not correspond to the actual document size. 2. The document has been inserted with an incorrect orientation. 3. If part of the side is cut off, there may be a fault in the camera cables or the Control PWB. | | 1. Select the correct image size and scan the image again. 2. Rotate the document 90 degrees and insert the document again. 3. Go to the Scanner Will Not Normalize CQ RAP. | 3. Escalate the call. |
| The image is stretched or compressed in the process direction, or contains parts that are stretched or compressed in the process direction. | There is a malfunction in the Document Drive System. | | Go to the Document Drive RAP (Section 2). | Escalate the call. |
| XPC/ES8150only: The Scanner fails normalization when the Normalize Scanner button is selected from the Scanner Tests screen in the main UI program, When using the extended diagnostics, the Scanner does normalize. | To normalize from the main UI program in the SIM/XPC, the Scanner must be connected for normal operation, not diagnostic operation. | | Reconnect the cables in the SIM for normal operation before attempting to normalize the Scanner from the UI itself. | |

Scanner Will Not Normalize RAP

The purpose of this RAP is to isolate faults that can cause the Scanner to be unable to normalize the cameras.

Initial Actions

Note: The Scanner is extremely sensitive to dirt on the Platen Glass or the Document Hold-down Guide. Even a fingerprint on the glass can prevent a successful normalization.

Carefully clean the Platen Glass and the Document Hold-down Guide, using Xerox Lens and Mirror Cleaner 43P81. Both sides of the glass may require the cleaning.

Configure the system for diagnostics (Section 6). Start the diagnostic software, and perform the **Normalize Cameras** test. If the test still fails, perform the procedure below.

Procedure

Switch off the Scanner and the controlling system. Switch on the Scanner; then switch on the controlling system. Restart the diagnostic software, and repeat the **Normalize Cameras** test.

The test falls.

Y N

Configure the system for normal operation, and resume normal operation.

Select **Scan and View** from the Service Diagnostic Menu.

Scan an image of at least D (A1) size. Use the **View Image** function to examine the image.

(Figure 1): The image is divided into three zones, 1, 2, and 3. Each zone represents the field of view of one of the three cameras in the Scanner.

An image is present in all three zones.

Y N

(Figure 2): An image is present in at least one zone.

Y N

A B C

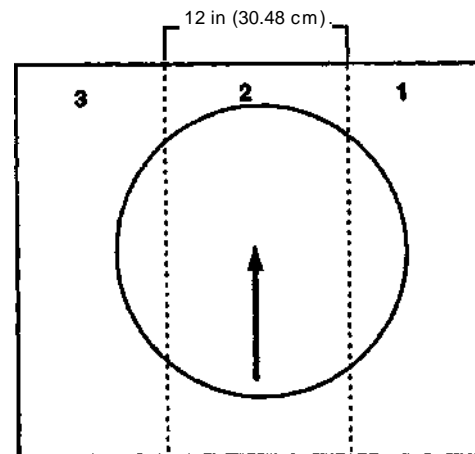


Figure 1. Camera Zones

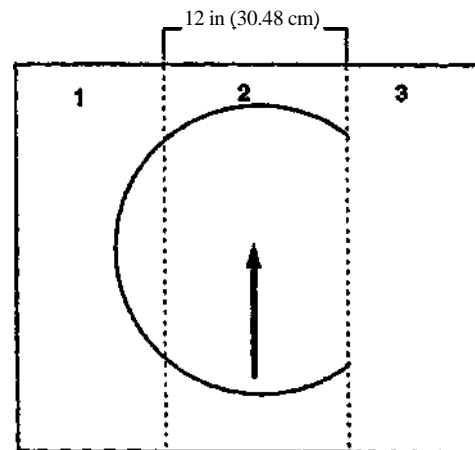


Figure 2. Zone 3 has a Faulty Image

A B C

The Exposure Lamp Is on.

Y N

| Go to the Exposure Lamp RAP, Section 2.

Replace the Control PWB.

If the problem still exists, escalate the call.

(Figure 3): Locate the cable corresponding to the zone with the faulty image,

Locate a cable corresponding to a zone with a good image.

Disconnect the two cables, and connect each cable to the opposite connector on the Control PWB.

Scan and view another image.

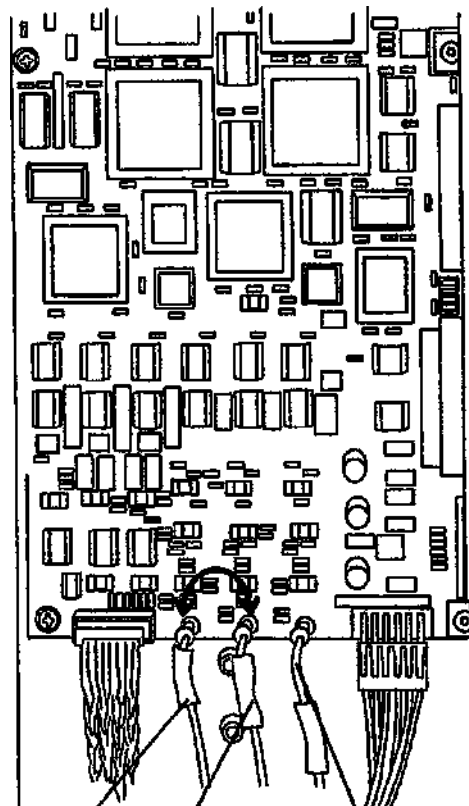
The zone with the faulty image has changed position.

Y N

| Replace the Control PWB.

Replace the cable corresponding to the camera that emits the faulty image. Scan and view another image. If the problem still exists, the camera is faulty. This fault cannot be repaired in the field. Escalate the call.

Escalate the call.



Camera Cable 3
P/N 10168-001

Camera Cable 2
P/N 10167-001

Camera Cable 1
P/N 10166-001

4. Repair and Adjustment Procedures

Section Contents

Page

| | |
|---|------|
| REP 4.1.1 Right and Left Side Panel..... | 4-3 |
| REP 4.1.2 Rear Panel..... | 4-4 |
| REP 4.1.3 Exposure Lamp..... | 4-5 |
| REP 4.1.4 Lamp Sockets..... | 4-7 |
| REP 4.1.5 Platen Glass..... | 4-8 |
| REP 4.1.6 Edge Present Sensor..... | 4-9 |
| REP 4.1.7 Edge Registered Sensor..... | 4-11 |
| REP 4.1.8 Left Top Cap..... | 4-13 |
| REP 4.1.9 Right Top Cap..... | 4-14 |
| REP 4.1.10 Control PWB..... | 4-15 |
| REP 4.1.11 Forward/Reverse Switch..... | 4-17 |
| REP 4.1.12 Motor Assembly and Main Drive Belt..... | 4-19 |
| REP 4.1.13 Stall Detect Sensor Assembly, Tachometer Drive Belt, and Tachometer Pulley..... | 4-21 |
| REP 4.1.14 Lamp Ballast Assembly..... | 4-23 |
| REP 4.1.15 Power Distribution PWB..... | 4-25 |
| REP 4.1.16 Power Supply..... | 4-26 |
| REP 4.1.17 Document Drive Rolls..... | 4-28 |
| REP 4.1.18 Idler Roll Assembly..... | 4-33 |
| REP 4.2.1 SCSI Adaptor PWB..... | 4-36 |
| ADJ 4.1.1 Calibrate Motor Speed..... | 4-38 |
| ADJ 4.1.2 Calibrate Document Registration..... | 4-39 |
| ADJ 4.1.3 Front to Back Stitch..... | 4-40 |
| ADJ 4.1.4 Left to Right Stitch..... | 4-42 |
| ADJ 4.1.5 Camera Normalization..... | 4-43 |
| ADJ 4.1.6 Installing a Firmware Upgrade in the Scanner..... | 4-44 |
| ADJ 4.1.7 Edge Present Sensor..... | 4-45 |
| ADJ 4.1.8 Top Cover Clearance..... | 4-47 |

REP 4.1.1 Right and Left Side Panel!

Parts List on PL 14.2

Removal

WARNING

Switch off the Scanner and disconnect the Power Cord.

Note: The Right Side Panel procedure is shown. The Left Side Panel is removed in the same way.

1. (Figure 1): Remove the Right Side Panel.

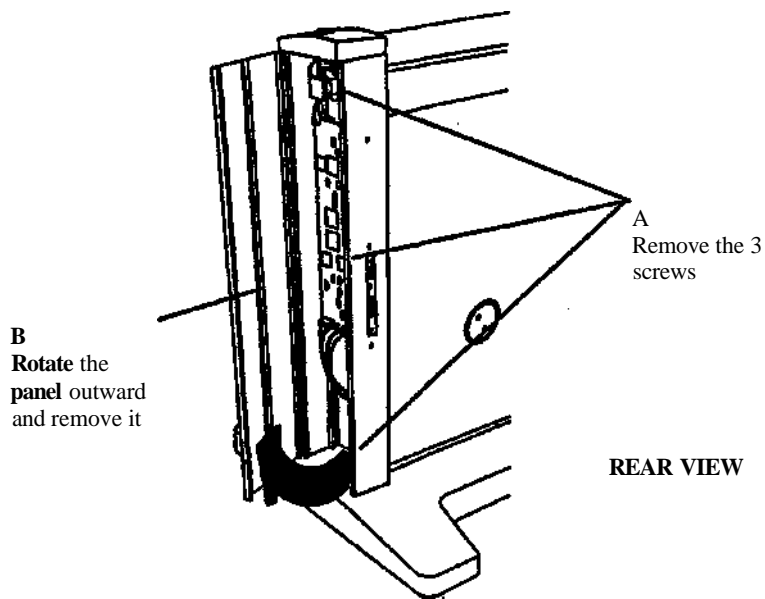
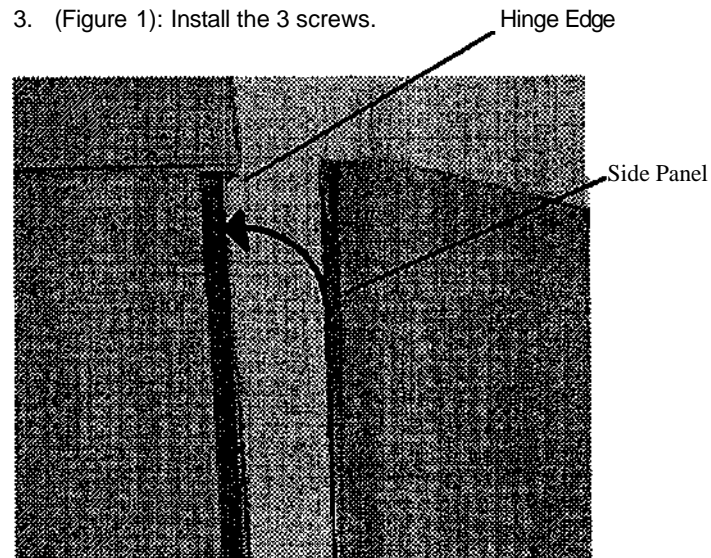


Figure 1. Removing a Side Panel

Installation

1. (Figure 2): Engage the hinge edge of the Side Panel.
2. Close the panel.
3. (Figure 1): Install the 3 screws.



01051A-COB

Figure 2. Installing a Side Panel

REP 4.1.2 Rear Panel

Parts List on PL 14.2

Removal

WARNING

Switch off the Scanner and disconnect the Power Cord.

1. (Figure 1): Remove the Rear Panel.

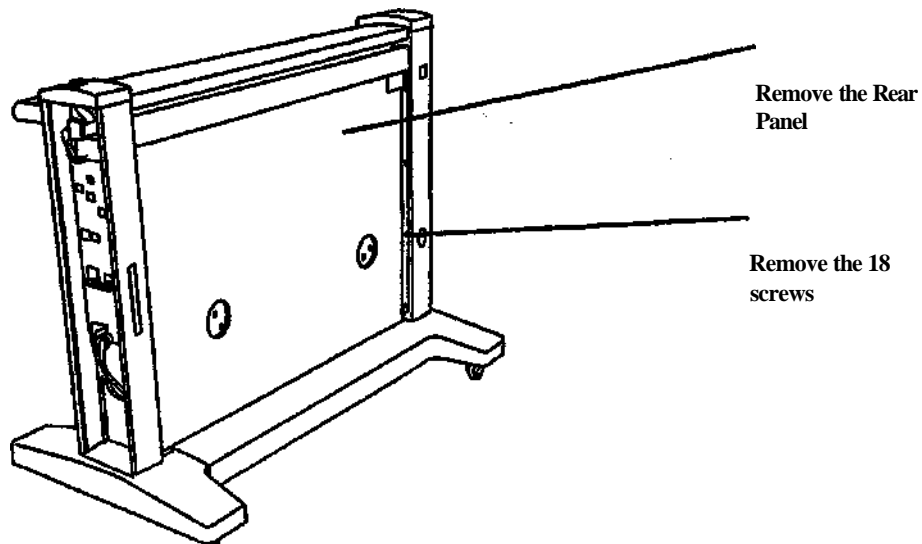


Figure 1. Removing the Rear Panel

REP 4.1.3 Exposure Lamp

Parts List on PL 6.1

Removal

WARNING

High Voltage

Switch off the Scanner and disconnect the Power Cord.

1. Remove the Right Side Panel and the Left Side Panel (REP 4.1.1).
2. (Figure 1): Prepare to remove the Exposure Lamp.

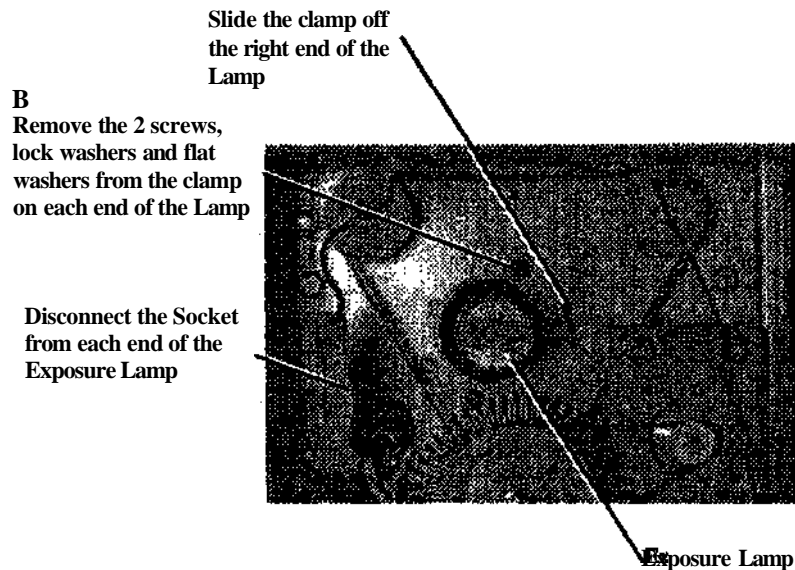
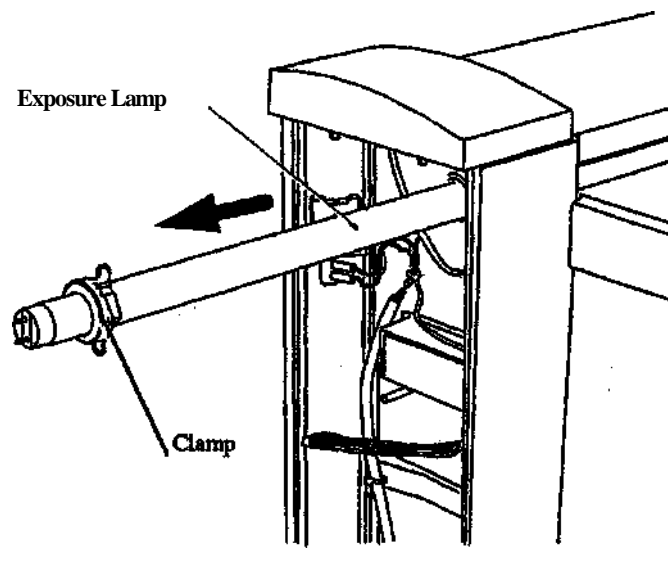


Figure 1. Preparing to remove the Exposure Lamp - Left View

3. (Figure 2): Remove the Exposure Lamp.
4. If a new lamp is to be Installed, remove the clamp from the left end of the lamp removed in step 3.



WARNING

High Voltage

Switch off the Scanner and disconnect the Power Cord.

Note: if the same Exposure Lamp is to be reinstalled, leave the left Lamp Retaining Clamp in position on the lamp and perform step 1 only for the remaining clamp.

1. (Figure 2): Open each removed Lamp Retaining Clamp by twisting it until the latch disengages.
2. Install the Exposure Lamp through the hole in the Frame on the left side.
3. Position the lamp so that it protrudes from the Frame an equal distance on each side.

Note: If a new lamp is being installed, perform steps 4 and 5 for each end of the Lamp.

4. Install the clamp over the end of the lamp.
5. Partially close each clamp.
6. For each side of the lamp, position the clamp such that:
 - the Exposure Lamp is centered in the large hole in the Frame
 - the mounting holes in the clamp are aligned with the holes in the Frame.

Note: If the lamp cannot be centered in the hole, rotate the Lamp Retaining Clamp 180 degrees around the Lamp; and perform step 6 again.

7. Install the 2 mounting screws, flat washers, and lock washers.
8. Close each clamp.
9. For each *end* of the lamp: center the lamp in the large hole in the Frame, and tighten the two screws.
10. Connect each Lamp Socket.

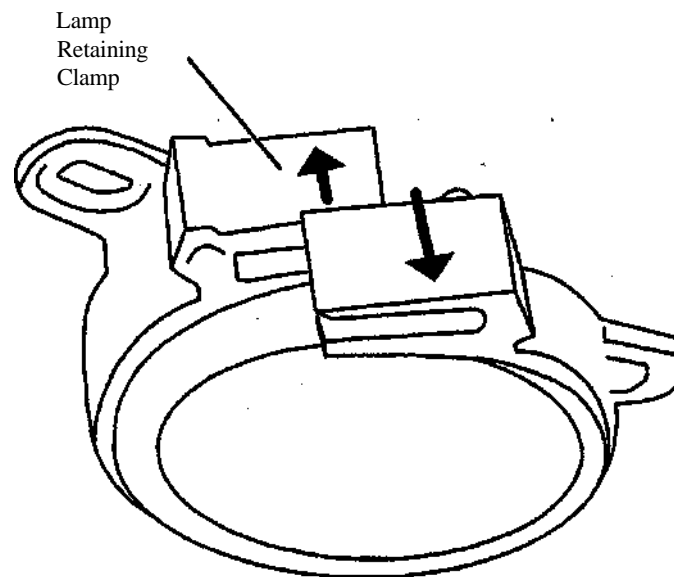
WARNING

Do not touch the Lamp Sockets while the Scanner Is energized.

11. Connect the Power Cord and switch on the Scanner.
12. Ensure that the Exposure Lamp illuminates.

NOTE: If the lamp does not illuminate, ensure that the sockets are correctly connected to the lamp and that the connector wires are not broken. If the lamp still does not illuminate, go to Section 2 and isolate the fault.

10. Install the Left Side Panel and the Right Side Panel (REP 4.1.1).



000126A-COB

Figure 2. Opening the Lamp Retaining Clamp

REP 4.1.4 Lamp Sockets

Parts List on PL 6.1

Removal

WARNING

High Voltage

Switch off the Scanner and disconnect the Power Cord.

1. Remove the Right and Left Side Panels (REP 4.1.1).
2. (Figure 1): Disconnect the Lamp Socket.

Replacement

WARNING

High Voltage

Switch off the Scanner and disconnect the Power Cord.

3. if the existing end of the connection wire has been damaged, cut off the damaged portion and remove 1/3 inch (1 cm) of insulation from the end.
4. Position the socket so that the two round connection holes are facing upward.
5. insert the bare end of the wire into one of the round connection holes on the top of the connector. Continue to insert the wire until no bare wire is exposed.
6. Connect the Lamp Socket to the Exposure Lamp such that the connection wire comes out of the top of the socket.

WARNING

High Voltage

Do not touch the Lamp Sockets while the Scanner is energized.

7. Connect the Power Cord and switch on the Scanner.
8. Ensure that the Exposure Lamp illuminates.

NOTE: If the lamp does not illuminate, ensure that the sockets are correctly connected to the lamp and that the connector wires are not

broken. If the lamp still does not illuminate, go to Section 2 and isolate the fault.

9. install the Left Side Panel and the Right Side Panel (REP 4.1.1).

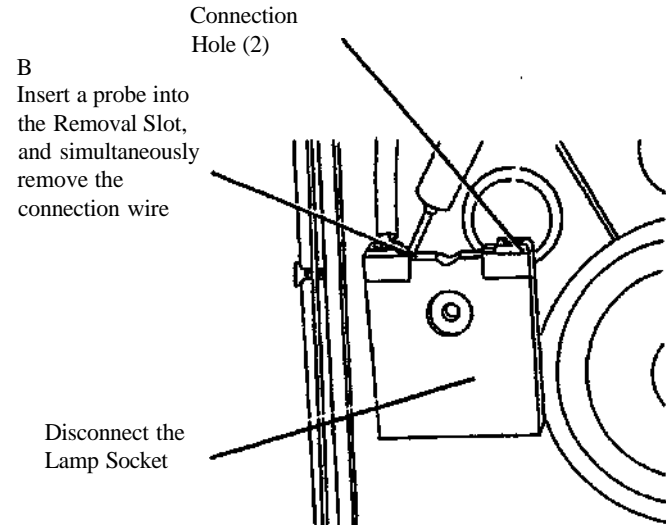


Figure 1. Disconnecting the Wire from the Lamp Socket

REP 4.1.5 Platen Glass

Parts List on PL 5.1

Removal

1. (Figure 1) Open the Top Cover.
2. Remove the Document Hold-down Guide.

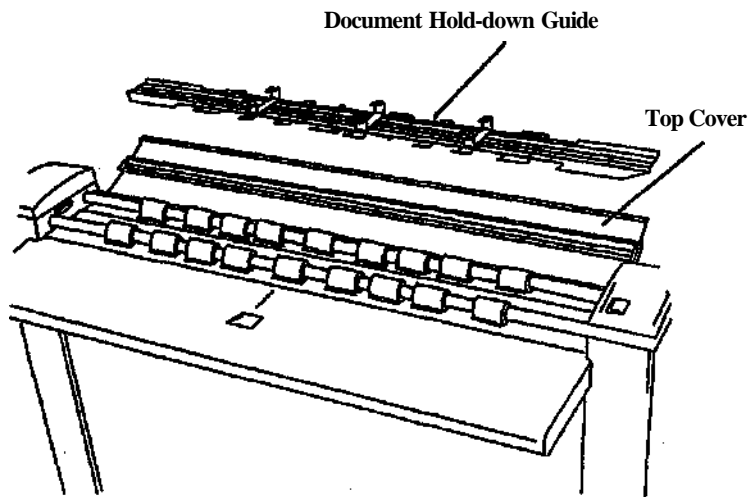


Figure 1. Top Cover and Document Hold-down Guide

3. (Figure 2) Remove the Platen Glass.

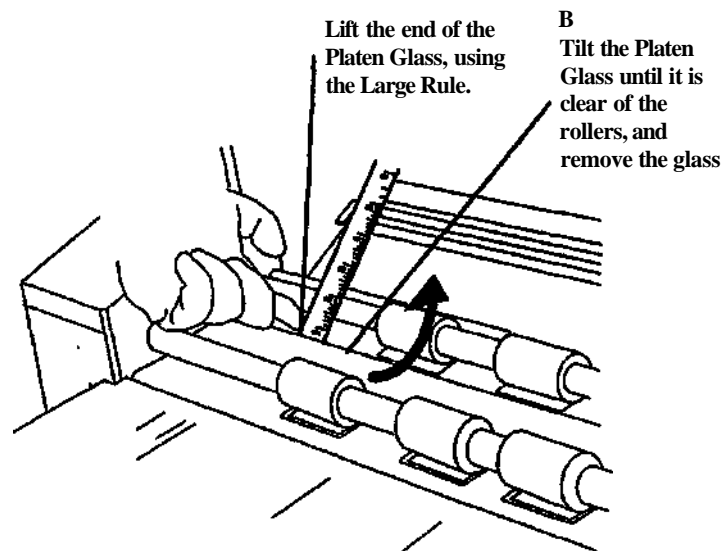


Figure 2. Removing the Platen Glass

...REP 4.1.6 Edge Present Sensor

Parts List on PL 5.1

Removal

WARNING

Switch off the Scanner and disconnect the Power Cord.

1. Remove the Right Side Panel (REP 4.1.1).
2. Remove the Rear Panel (REP 4.1.2).
3. (Figure 1): Prepare to remove the Edge Present Sensor.

NOTE: The string attached in step 3b is used later to pull the cable back through the channel when the sensor is reinstalled.

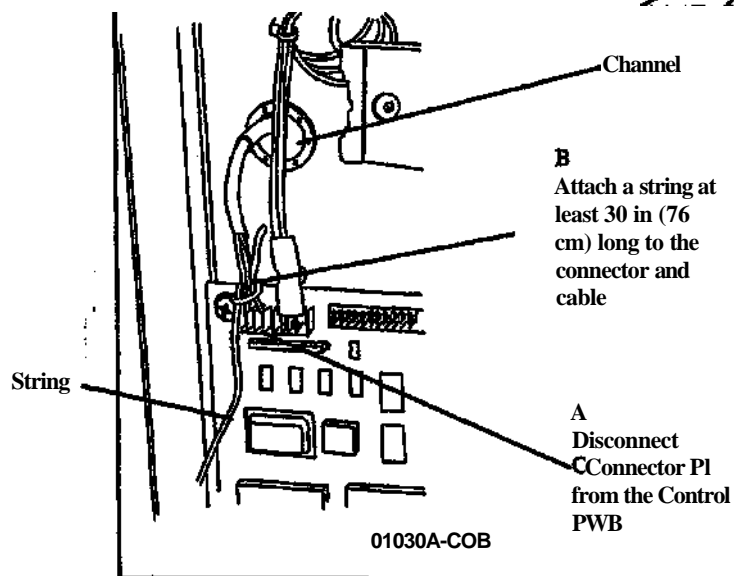


Figure 1. Disconnecting Connector P1

4. (Figure 2): Detach the Retaining Plate.

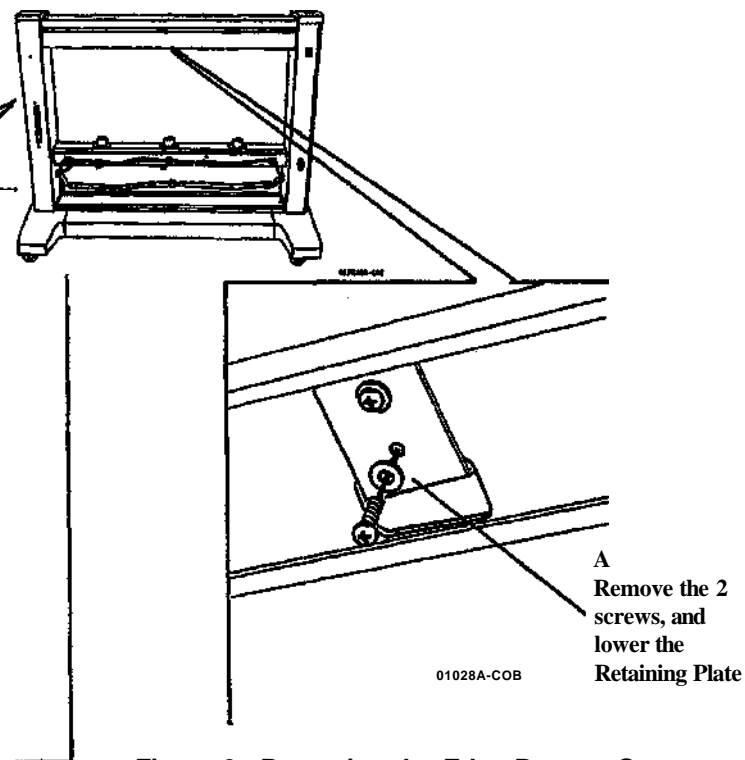


Figure 2. Removing the Edge Present Sensor

4. (Figure 3): Remove the sensor and cable.

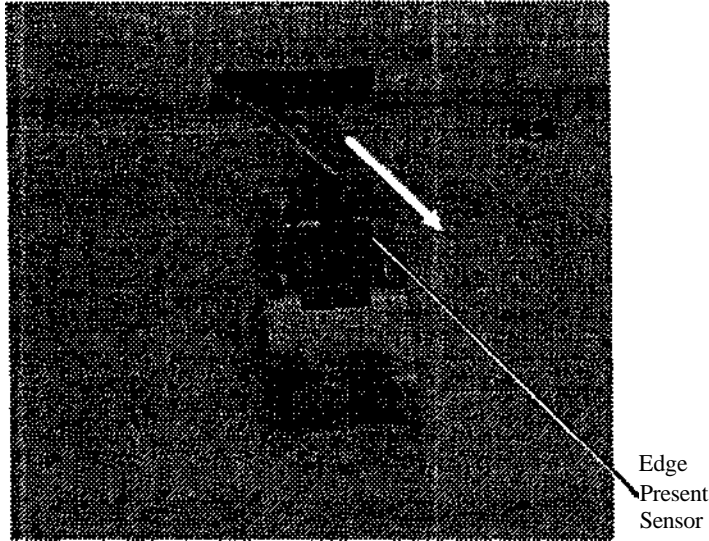


Figure 3. Removing the Edge Present Sensor

Replacement

WARNING

Switch off the Scanner and disconnect the Power Cord.

1. Attach the string to the connector end of the new Sensor Cable.
2. Pull the Sensor Cable back through the channel toward the Control PWB, using the string.
3. (Figure 2): install the sensor.
4. **NOTE:** Ensure that the highest part of the sensor arm extends out from the slot, is centered in the slot, extends 0.25 in. (0.64 cm) above the surface, and operates freely. Do not tighten the two screws, yet.

4. Connect the Power Cord and switch on the scanner.

5. (Figure 4): Check that the sensor operates correctly.

NOTE: If the sensor does not operate correctly, move the retaining bracket a small distance and check the operation of the sensor again. If the sensor cannot be made to operate correctly, go to Section 2 and isolate the fault.

6. Tighten the two screws.
7. Check ADJ 4.1.7, Lead Edge Present Sensor.
- B. install the Rear Panel (REP 4.1.2)
9. Install the Right Side Panel (REP 4.1.1).
10. Perform the following tests:
 - Calibrate Document Registration (ADJ 4.1.2)

Actuate the Edge Present Sensor. The motor starts and operates for about 3 seconds.

B

Release the sensor. The Actuator returns freely to the deactuated position.

Repeat steps A and B several times to check that the operation is reliable.

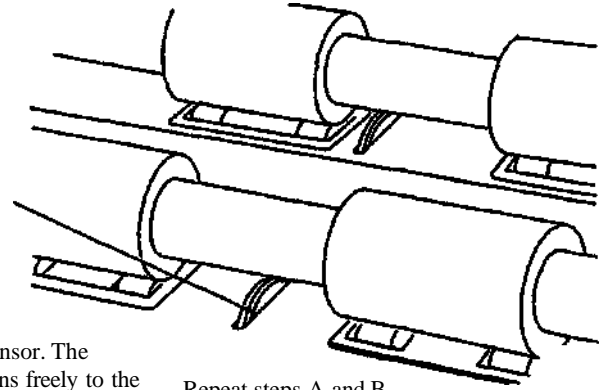


Figure 4. Sensor Arm - Front View

REP 4.1.7 Edge Registered Sensor

Parts List on PL 5.1

Removal

WARNING

Switch off the Scanner and disconnect the Power Cord.

1. Remove the Exposure Lamp (REP 4.1.3).
2. Remove the Platen Glass (REP 4.1.5)
3. (Figure 1): Prepare to remove the Edge Registered Sensor.
4. (Figure 2): Remove the Edge Registered Sensor.

NOTE: The string will be used to pull the sensor cable back through the channel during reinstallation of the sensor.

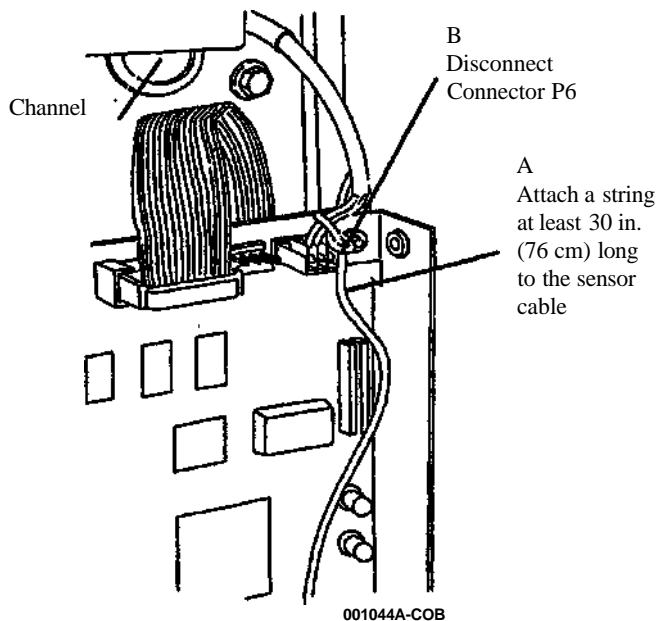


Figure 1. Connector P6, Attaching the String

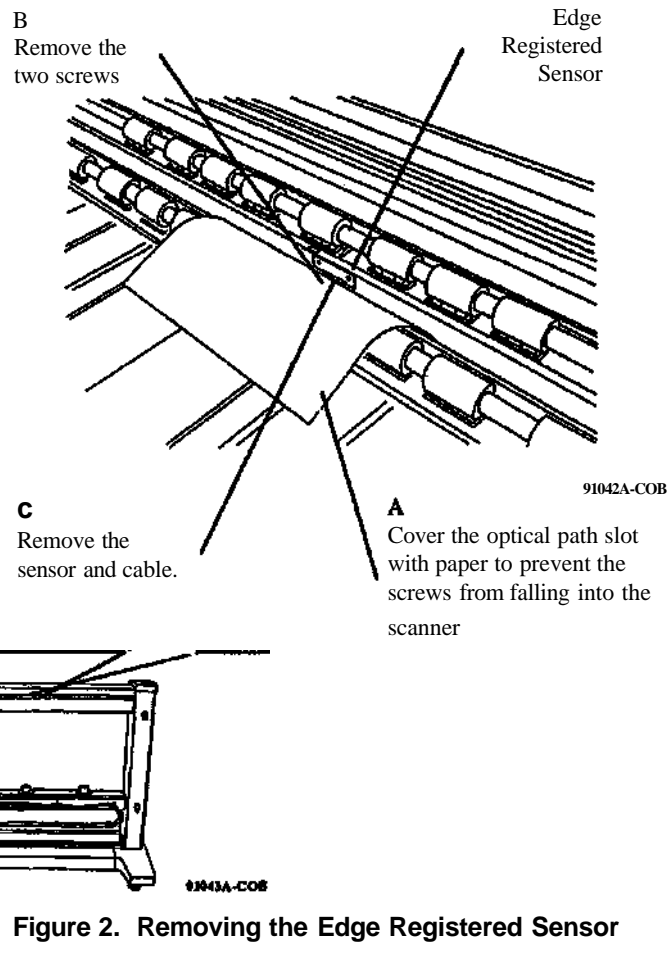


Figure 2. Removing the Edge Registered Sensor

Replacement

WARNING

Switch off the Scanner and disconnect the Power Cord.

1. Pull the Sensor Cable back through the channel, using the string installed during removal.
2. (Figure 2): Install the Sensor, Retaining Plate, and the 2 screws.

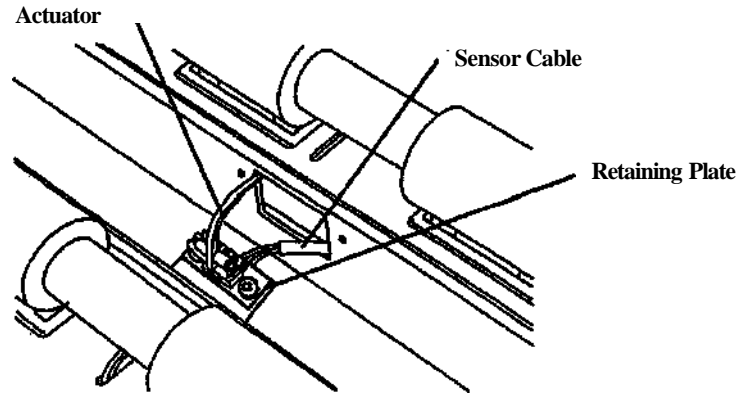


Figure 3. Sensor, Cable, and Retaining Plate

NOTE: Ensure that the highest part of the sensor arm extends out from the slot, is centered in the slot, and operates freely. Do not tighten the two screws, yet

3. Connect the Power Cord and switch on the scanner.
4. (Figure 3): Check that the sensor operates correctly and that the Actuator moves freely.

NOTE: When the Edge Present Sensor is actuated and held, the motor should start in the forward drive direction immediately. When the Edge Registered Sensor is actuated with the Edge Present Sensor still actuated, the motor should reverse immediately. If the Edge Registered Sensor does not operate correctly, move the retaining plate a small distance and check the operation of the sensor again. If the sensor

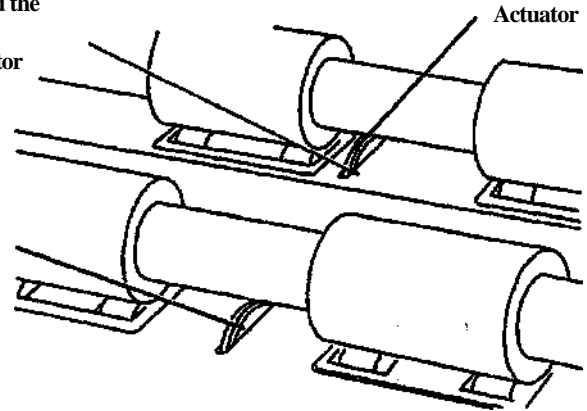
cannot be made to operate correctly, go to Section 2 and isolate the fault.

5. Tighten the two screws.
6. Install the rear panel.
7. Perform the following tests:
 - Calibrate Document Registration (ADJ 4.1.2)

B

Actuate and hold the Edge Registered Sensor. The motor reverses

Actuate and hold the Edge Present Sensor. The motor starts



01045A-COB

Figure 4. Edge Registered Sensor - Front View

REP 4.1.8 Left Top Cap

Parts List on PL 14.1

Removal

WARNING

Switch off the Scanner and disconnect the Power Cord.

1. Remove the Left Side Panel (REP 4.1.1).
2. (Figure 1): Remove the Left Top Cap.

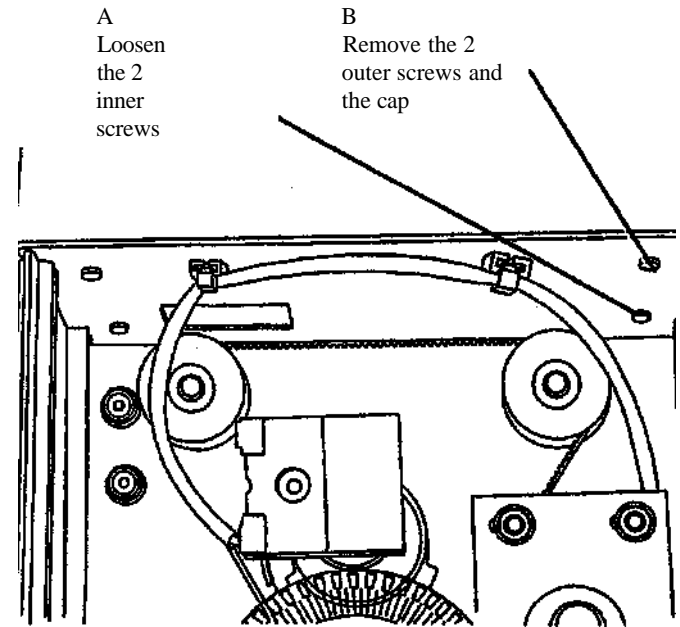
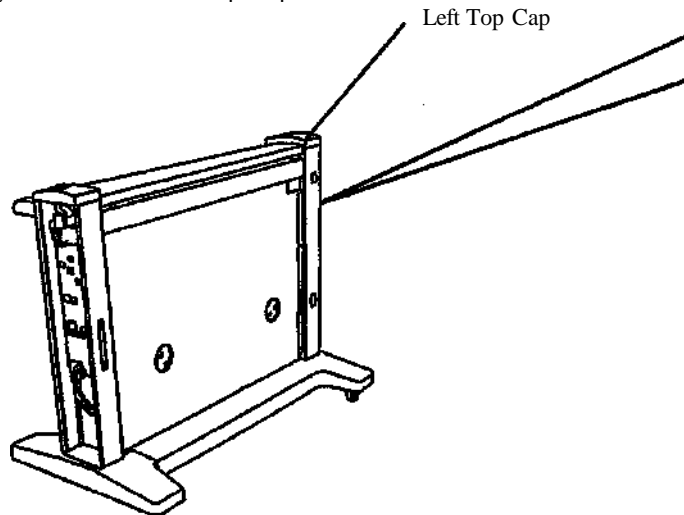


Figure 1. Removing the Left Top Cap

REP 4.1.9 Right Top Cap

Parts List on PL 14.1

Removal

WARNING

Switch off the Scanner and disconnect the Power Cord.

1. Remove the Right Side Panel (REP 4.1.1).
2. (Figure 1): Remove the Right Top Cap.

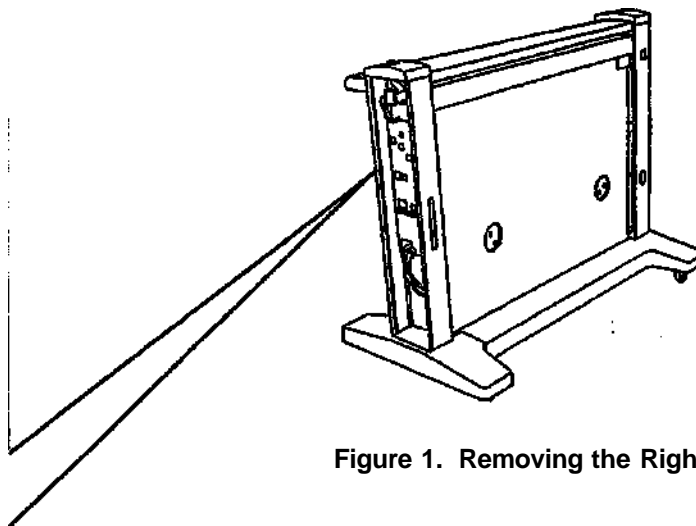
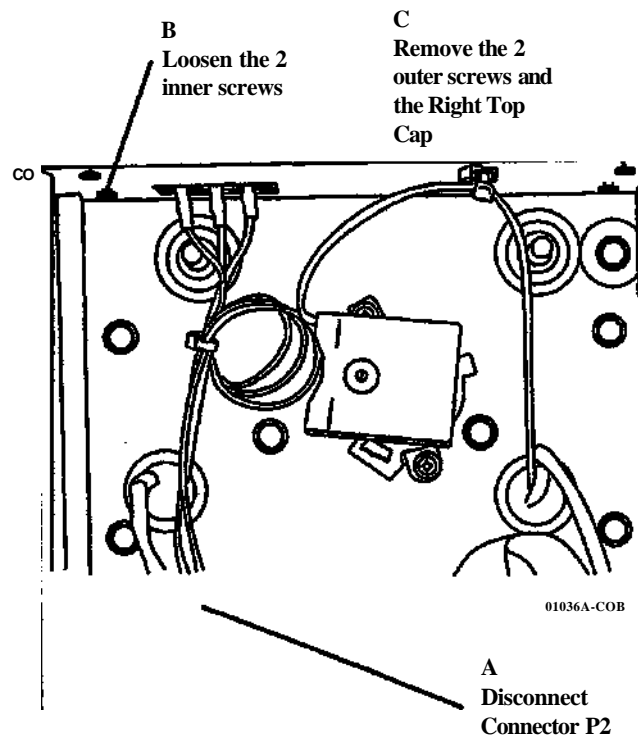


Figure 1. Removing the Right Top Cap

REP 4.1.10 Control PWB

Parts List on PL 1.2

Removal

WARNING

Switch off the Scanner and disconnect the Power Cord.

1. Switch off the SIM/XPC or host computer and the Scanner.
2. Remove the Right Side Panel (REP 4.1.1).
3. (Figure 1): Remove the Control PWB.
 - a. Disconnect the connectors shown in Table 1.

Table 1. Connectors on the Control PWB

| Connector | Function |
|-----------|-----------------------------------|
| P1 | Sensor 1 (Edge Present Sensor) |
| P2 | Forward/Reverse Switch |
| P4 | Motor/Lamp control |
| P6 | Sensor 2 (Edge Registered Sensor) |
| P7 | SCSI Connector |
| P8 | SCSI Connector |
| P13 | Power Entry |
| P12 | Camera 1 video (cable 10168-001) |
| P11 | Camera 2 video (cable 10167-001) |
| P10 | Camera 3 video (cable 10168-001) |
| P9 | Camera Control Cable |

- b. Remove and keep the 3 External Mounting Screws with flat washers and lock washers.
- c. Remove and keep the 3 Standoff Attachment Screws with flat washers and lock washers.
- d. Remove the existing Control PWB.

Note: Remove the top external mounting screw last to avoid excessive stress when only one screw retains the PWB.

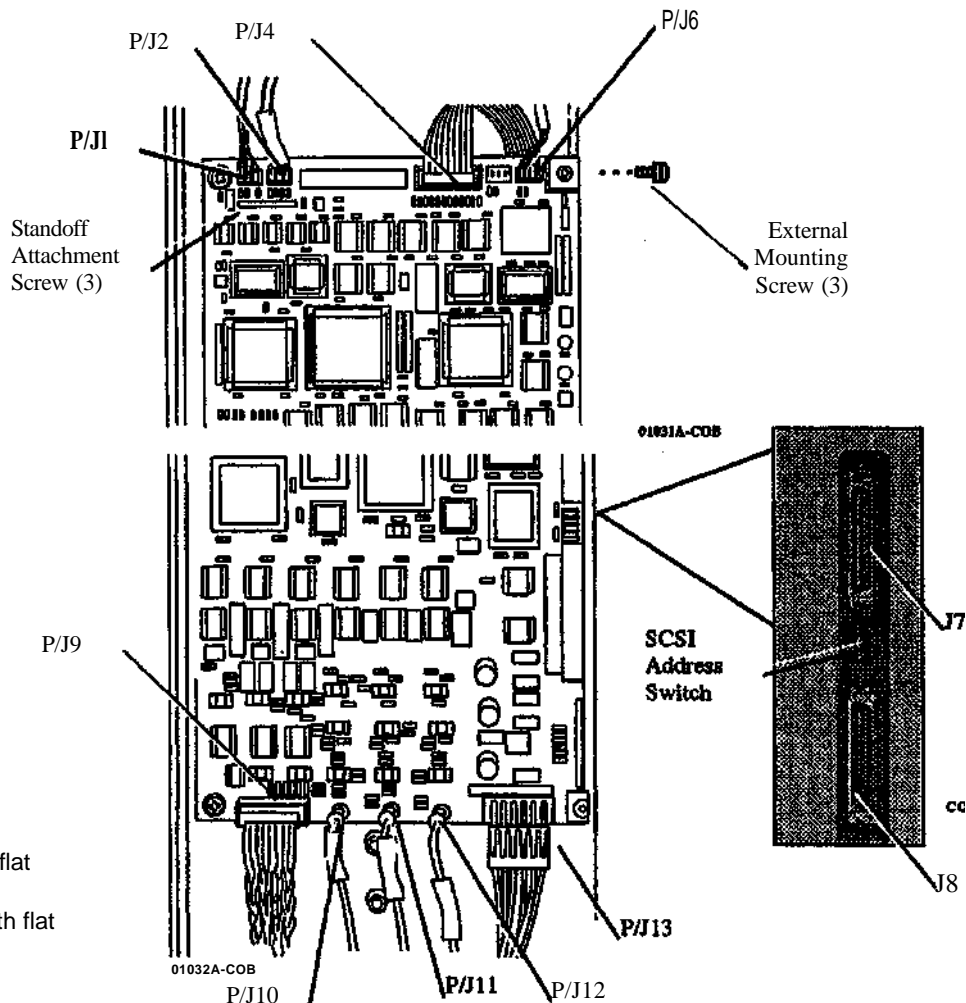


Figure 1. Top and Bottom Edge - Control PWB

Replacement

1. (Figure 2): Place the new Control PWB in position, ensuring that the ribbon cable for J4 comes over the top of the PWB.
2. (Figure 1): Install the 3 external flat washers, lock washers, and mounting screws.
3. Install the 3 standoff attachment screws
4. Connect the connectors shown in Table 1.
5. (Figure 1): Set the SCSI Address Switch to the same address as was set on the removed Control PWB.
6. Switch on the Scanner.
7. Switch on the SIM/XPC or the Host Computer.
8. Configure the system for diagnostics. Go to Section 6 for more information.
9. Start the diagnostics program.
10. Install the current scanner firmware disk in the floppy disk drive of the controlling computer.
11. Select **Download Code** from the **Service Diagnostics Menu** screen.
12. Click on the **Scanner** Firmware button, and compare the version number in the Scanner with the version number on the floppy disk.

CAUTION

Do not allow any interruption of the download code process once the download has begun. Any interruption may corrupt the Scanner PROMs, destroying the ability of the Control PWB to communicate and requiring replacement of the Control PWB.

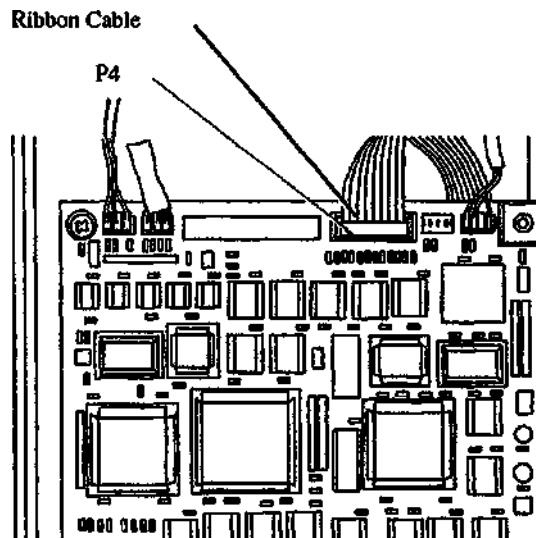
14. If the version number on the floppy disk is more recent, then select the **Begin** button to download the scanner firmware.
15. When the download is complete, or if a download is not to be made, select the **Exit** button.

16. Use the diagnostics program to do the following adjustments:

- ADJ 4.1.3 Front to Back Stitch
- ADJ 4.1.4 Left to Right Stitch
- ADJ 4.1.1 Calibrate Motor Speed
- ADJ 4.1.2 Calibrate Document Registration.

If the tests cannot be completed successfully, go to Section 2 and isolate the fault.

17. Install the Right Side Panel (REP 4.1.1).
18. Configure the system for normal operation.



01031A-COB

Figure 2. Top Edge - Control PWB

REP 4.1.11 Forward/Reverse Switch

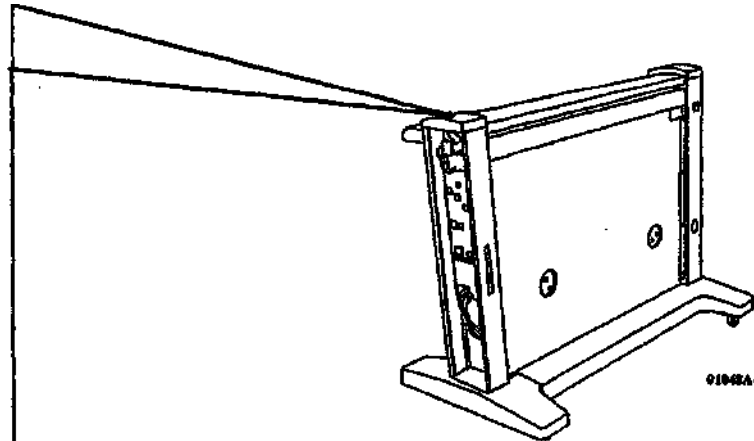
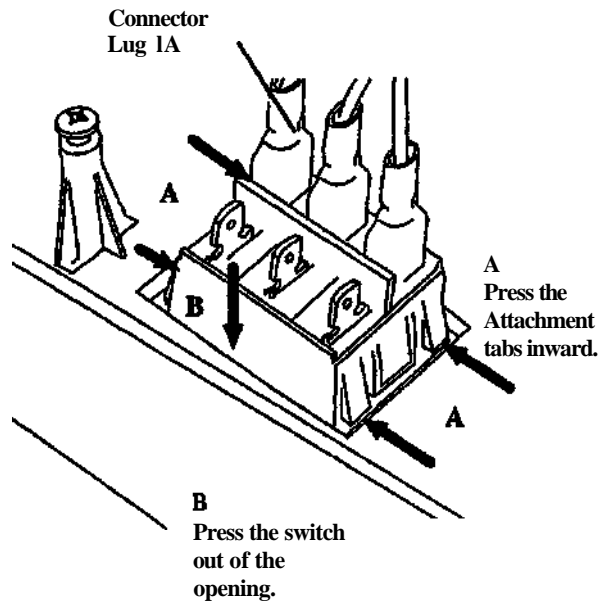
Parts List on PL 5.2

Removal

WARNING

Switch off the Scanner and disconnect the Power Cord.

1. Remove the Right Top Cap (REP 4.1.9).
2. (Figure 1): Remove the Forward/Reverse Switch.



Replacement

1. Remove each connector from the existing switch and immediately connect it to the corresponding connector on the new switch.
2. Position the new switch such that Connector Lug 1A is nearest the word **REVERSE** on the top cap.
3. Insert the switch into the opening on the top cap until the switch is fully seated and engaged.
4. Feed the connector wires through the hole in the frame and install the Right Top Cap (REP 4.1.9)

REP 4.1.12 Motor Assembly and Main Drive Belt

Parts List on PL 4.1

Removal

WARNING

Switch off the Scanner and disconnect the Power Cord.

Perform the following steps to remove the Motor Assembly:

1. Remove the Left Side Panel (REP 4.1.1).
2. (Figure 1): Remove the Motor Assembly.

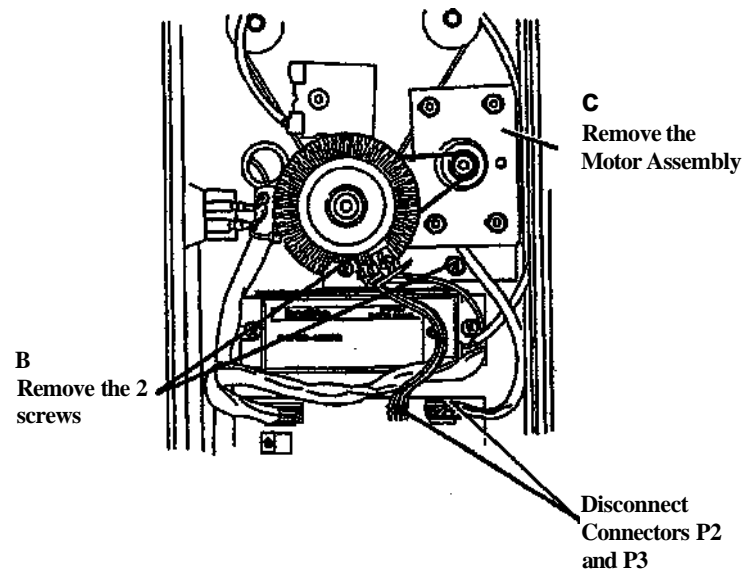
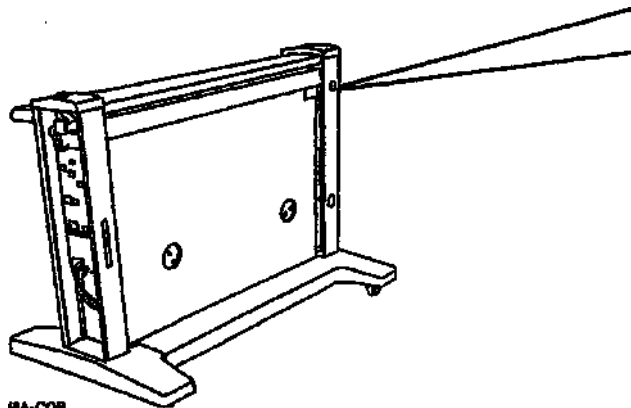


Figure 1. Removing the Motor Assembly

3. (Figure 2): Perform the following additional steps to remove the Main Drive Belt:

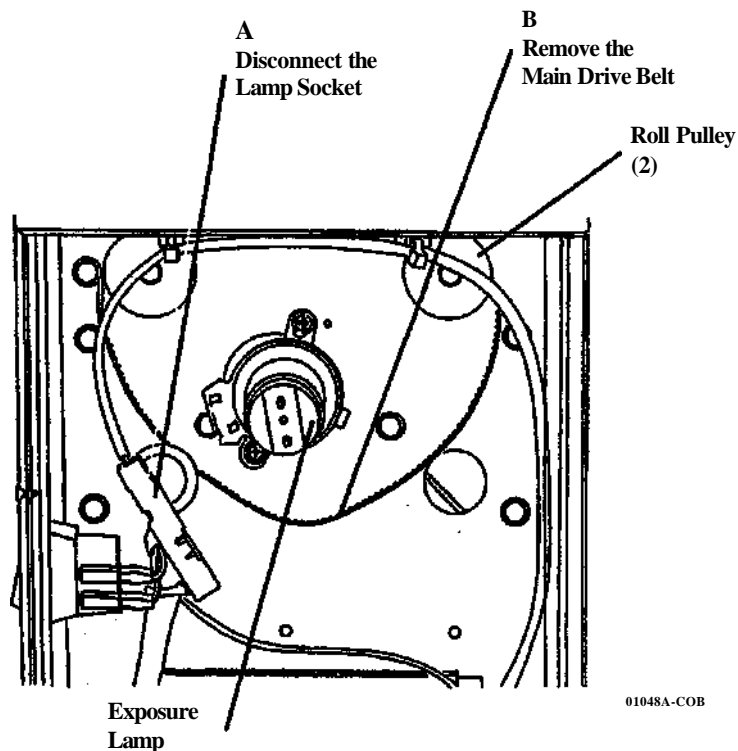


Figure 2. Removing the Main Drive Belt

Replacement

WARNING

Switch off the Scanner and disconnect the Power Cord.

Perform the following steps to install the Main Drive Belt:

1. (Figure 2): Install the Main Drive Belt over the two Roll Pulleys.
2. Connect the Lamp Socket to the Exposure Lamp.

Perform the following steps to install the Motor Assembly"

1. (Figure 1): Position the Motor Assembly such that the Main Drive Pulley engages the belt.
2. Install the two screws that attach the Motor Assembly to the Frame. Do not tighten the screws, yet.
3. Move the Motor Assembly to apply tension to the Main Drive Belt. When the tension is correct, the belt can be depressed approximately 1/8 in (3 mm) at the midpoint between one of the Roll Pulleys and the Main Drive Pulley.
4. Maintain the Motor Assembly in the position obtained in the previous step, and tighten the 2 screws.
5. Connect Connectors P2 and P3 to the Power Distribution PWB.
6. Install the Left Side Panel (REP 4.1.1)
7. Perform the following adjustments:
 - ADJ 4.1.1 Calibrate Motor Speed
 - * ADJ 4.1.2 Calibrate Document Registration

REP 4.1.13 Stall Detect Sensor Assembly, Tachometer Drive Belt, and Tachometer Pulley

Parts List on PL 2.1

Removal

Introduction

This procedure is used to remove the following parts:

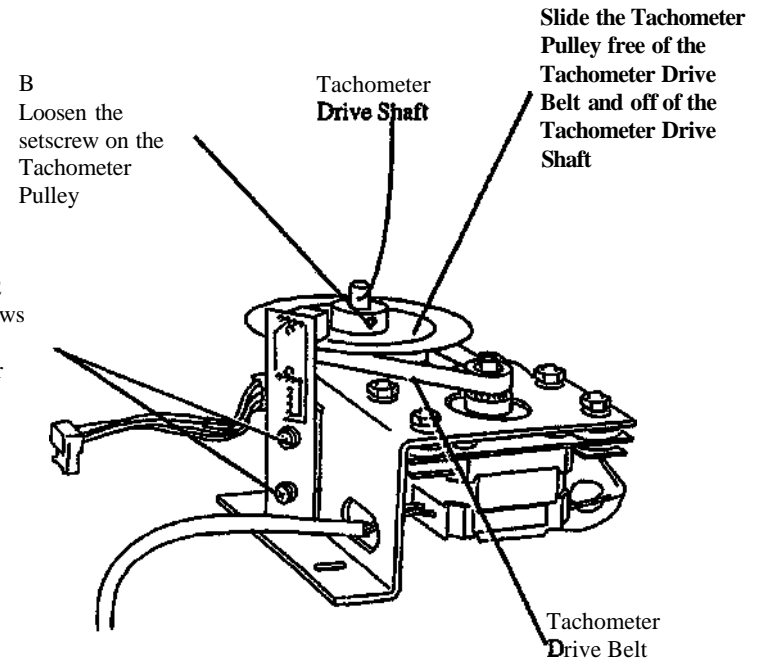
- Stall Detect Sensor
- Tachometer Drive Belt
- Tachometer Pulley

WARNING

Switch off the Scanner and disconnect the Power Cord.

1. Remove the Motor Assembly (REP 4.1.12).
2. (Figure 1): Remove the Stall Detect Sensor, Tachometer Drive Belt, or Tachometer Pulley.

A
Remove the 2
retaining screws
and the Stall
Detect Sensor
Assembly



01020A-COB

Figure 1. Motor Assembly

Replacement

WARNING

Switch off the Scanner and disconnect the Power Cord.

1. (Figure 1): Install the Tachometer Drive Belt over the Motor Pulley.
2. Install the Tachometer Pulley onto the Tachometer Drive Shaft, and work the Tachometer Drive Belt onto the pulley.

NOTE: Do not tighten the setscrew, yet. Press the pulley down until it makes contact with the top surface of the shaft bearing.

3. Install the Stall Detect Sensor Assembly, and tighten the two screws.
4. Position the disk on the Tachometer Pulley such that the disk does not make contact with surfaces of the sensor, and tighten the setscrew.
5. Manually operate the motor to ensure that the edge of the Tachometer Drive Belt does not bind against the edge of any pulley.

NOTE: If the belt binds, loosen the setscrew on the Tachometer pulley and adjust the pulley until binding does not occur. Then tighten the setscrew.

6. Install the Motor Assembly (REP 4.1.12).
7. Install the Left Side Panel (REP 4.1.1).

REP 4.1.14 Lamp Ballast Assembly

Parts List on PL 1.1

Removal

WARNING

High Voltage

Switch off the Scanner and disconnect the Power Cord.

1. Remove the Left Side Panel (REP 4.1.1).
2. (Figure 1): Disconnect Connector P1 from the Power Distribution PWB.

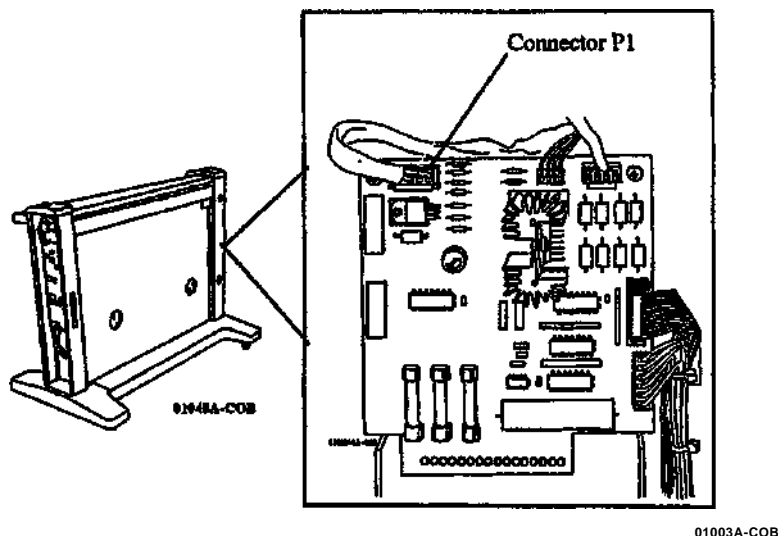


Figure 1. Power Distribution PWB

3. (Figure 2): Cut the Cable Ties.

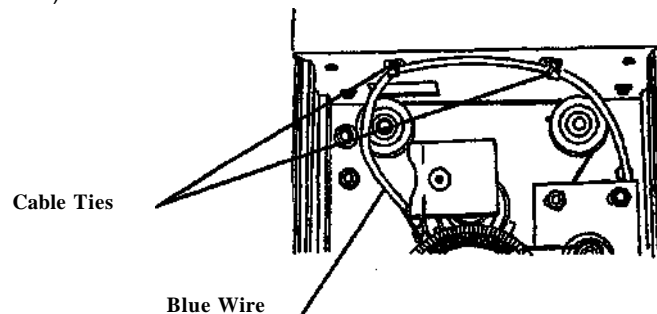


Figure 2. Removing the Blue Connection Wire

4. (Figure 3): Disconnect the wire from the Left Lamp Socket.

B

Insert a probe into the removal slot, and simultaneously remove the blue connection wire.

A

Disconnect the Lamp Socket from the Exposure Lamp

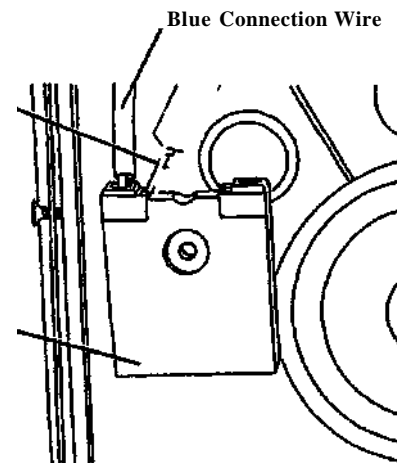


Figure 3. Disconnecting the Lamp Socket

5. Remove the Right Side Panel (REP 4.1.1).
6. (Figure 4): Prepare the yellow Lamp Connection Wire for removal.

NOTE: Do not cut the cable tie.

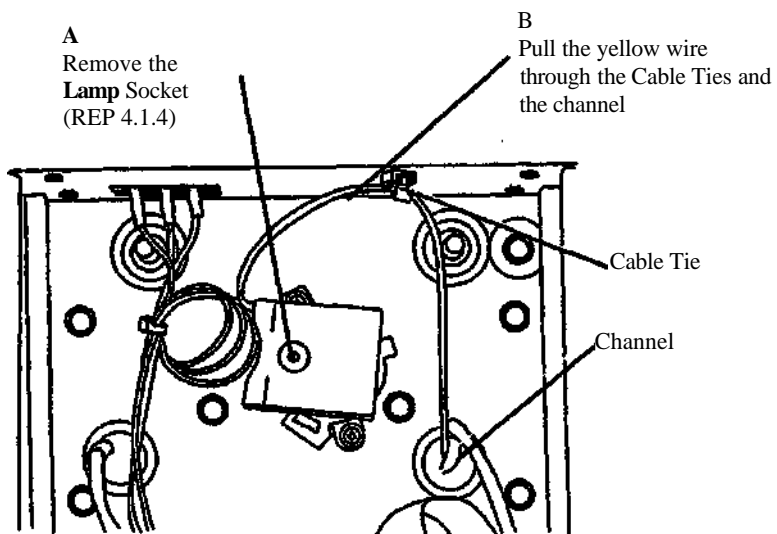


Figure 4. The Routing of the Yellow Lamp Connection Wire

7. (Figure 5): Remove the Lamp Ballast Assembly.

B
Remove the
Lamp Ballast
Assembly

A
Remove the 2
screws

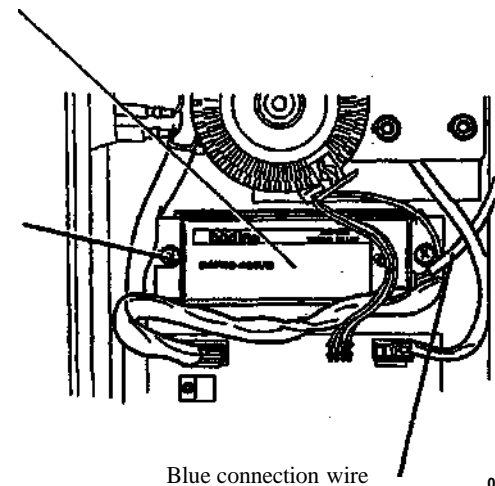


Figure 5. Removing the Lamp Ballast Assembly

REP 4.1.15 Power Distribution PWB

Parts List on PL 1.1

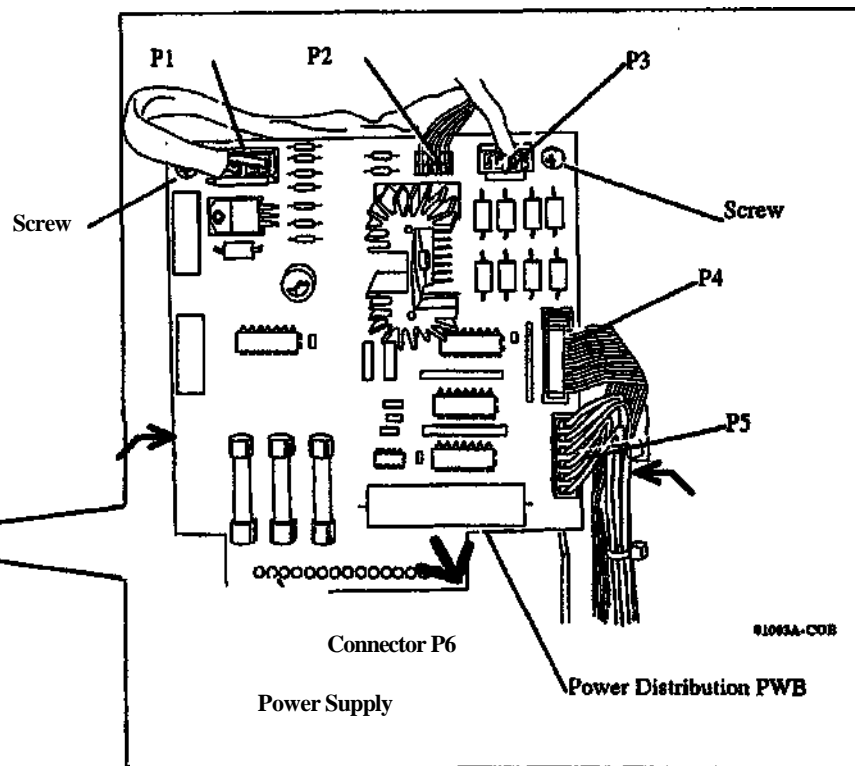
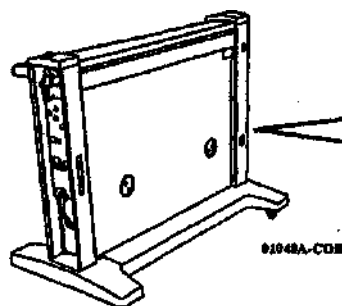
Removal

WARNING

High Voltage

Switch off the Scanner and disconnect the Power Cord.

1. Remove the Left Side Pane! (REP 4.1.1).
2. (Figure 1): Disconnect P1, P2, P3, P4, and P5...
3. Remove the 2 screws.
4. Remove the Power Distribution PWB:
 - a. Insert an index finger around the PWB near the bottom.
 - b. Press down with the two thumbs near the center of the PWB, while lifting outwards alternately with the index fingers.



Replacement

CAUTION

Ensure that the pins on J6 are correctly registered with the connector on the Power Distribution PWB.

1. Press J6 on the Power Supply onto the connector on the the Power Distribution PWB.
2. (Figure 1): install and tighten the 2 screws.
3. Connect the 5 connectors shown.

Figure 1. Removing the Power Distribution PWB

REP 4.1.16 Power Supply

Parts List on PL 1.1

Removal

WARNING

High Voltage

Switch off the Scanner and disconnect the Power Cord.

1. Remove:
 - Rear Panel (REP 4.1.2)
 - Power Distribution PWB (REP 4.1.15)
2. (Figure 1) Disconnect Connector P1.

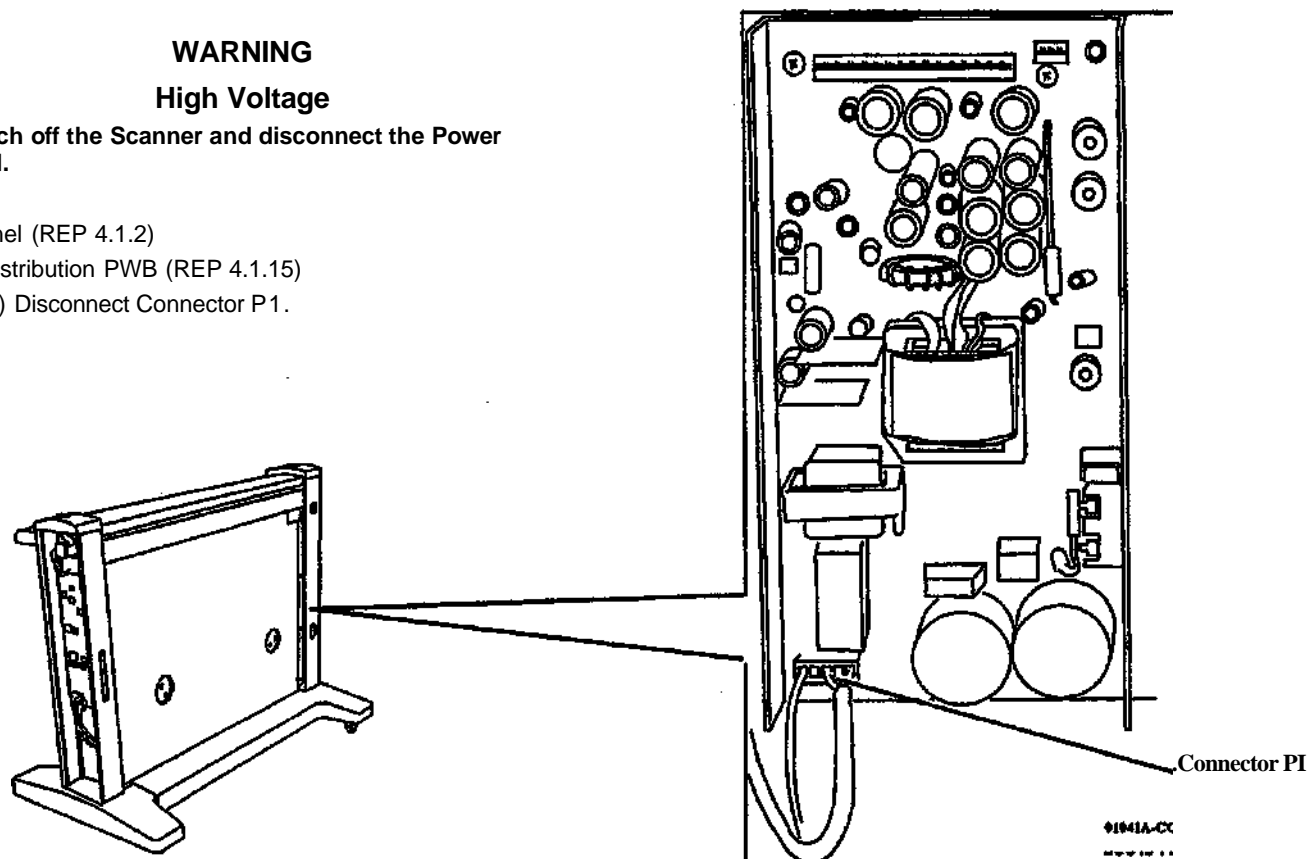
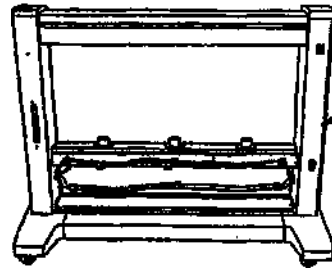


Figure 1. Power Supply

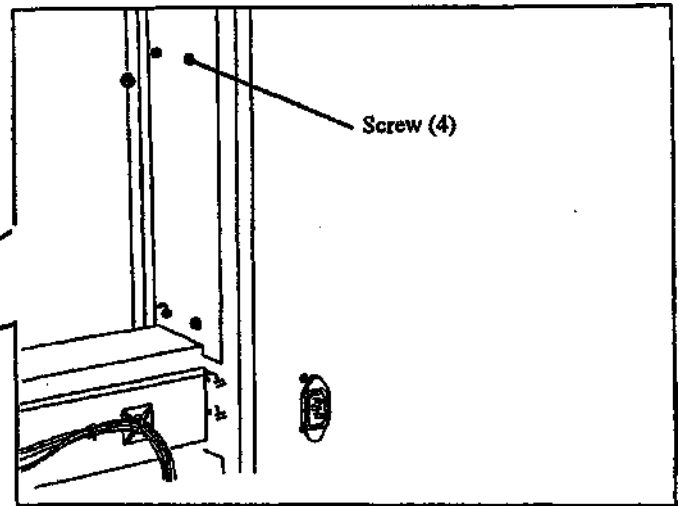
Caution

Support the Power Supply while performing the following step.

3. (Figure 2): Remove:
- 4 screws
 - Power Supply.



01043A-COB



1039A-COB

Figure 2. 4 Screws Attaching the Power Supply

REP 4.1.17 Document Drive Rolls

Parts List on PL 5.1

WARNING

Switch off the Scanner and disconnect the Power Cord.

Removal

Note: The replacement drive rolls are supplied in pairs. If any roll must be replaced, replace both rolls. Mark the left end of each roll before removal, and reinstall the rolls with the original orientation.

1. Remove the Left Side Panel (REP 4.1.1).
2. (Figure 1): Open the Top Cover and remove the Document Hold-down Guide.

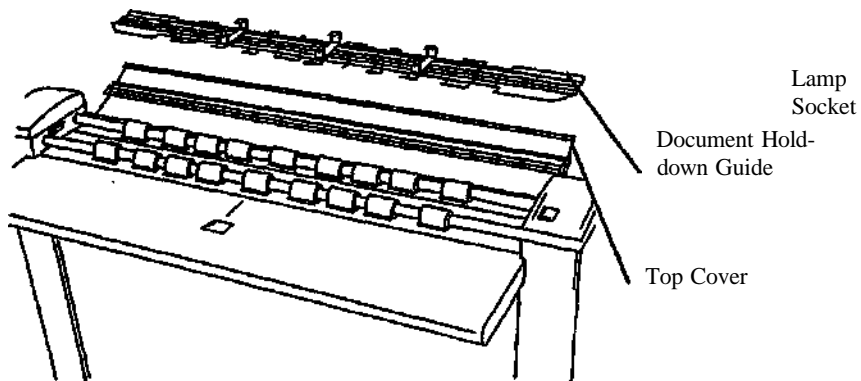


Figure 1. Removing the Document Hold-down Guide

3. (Figure 2): Loosen the 2 screws that hold the Motor Assembly.
4. Remove the Main Drive Belt from the 2 Drive Roll Pulleys.
5. Disconnect the Lamp Socket.

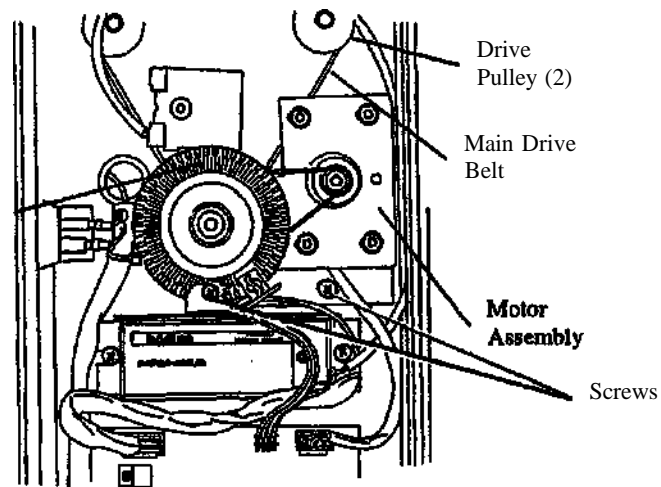


Figure 2. Main Drive Belt and Lamp Socket

6. (Figure 3): Remove the two Bushing Retaining Clips.

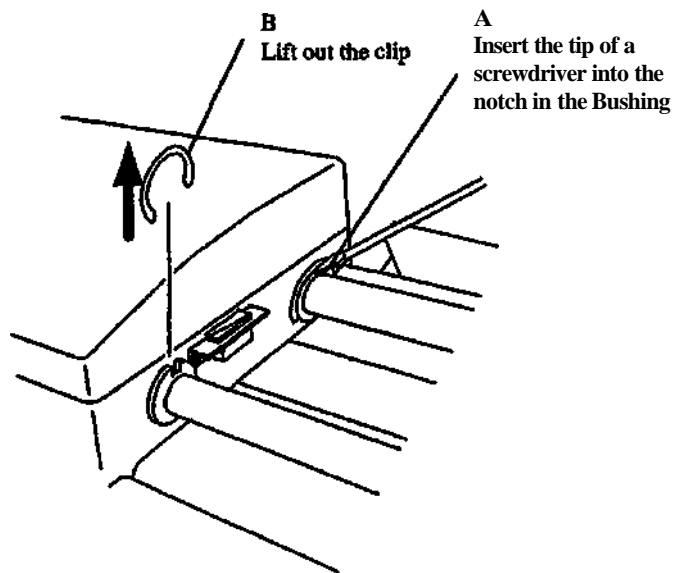


Figure 3. Removing the Bushing Retaining Clips

7. (Figure 4): Slide each Drive Roll to the left to expose the Drive Pulley:
8. For each roll:
 - a. Loosen the Set screw on the Drive Pulley.
 - b. Remove and keep:
 - 1) Drive Pulley
 - 2) Bushing
 - 3) Bearing
 - 4) Flat Washer
 - 5) Wave Washer

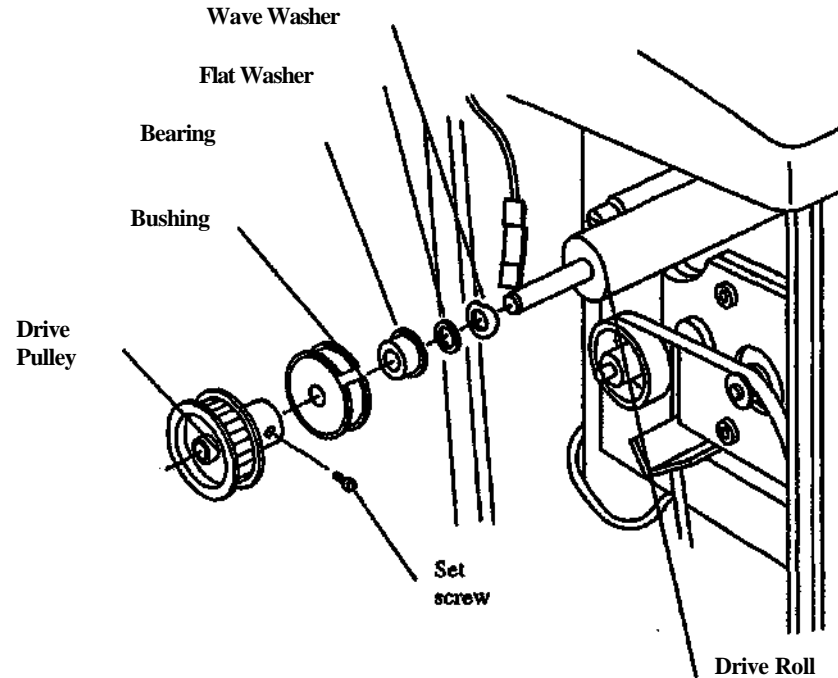


Figure 4. The Drive Roll and the Installed Parts

9. (Figure 5): Remove each Document Drive Roll. For each roll:

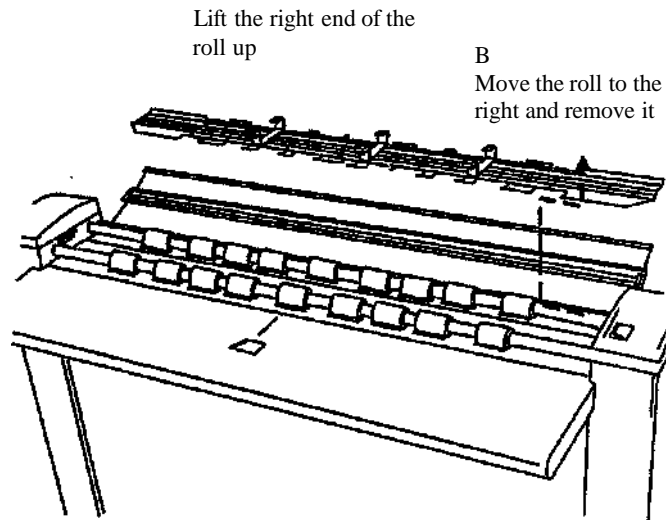


Figure 5. Removing the Document Drive Rolls

Replacement

Note: The replacement drive rolls are supplied in pairs. If any roll must be replaced, replace both rolls. Each replacement roll is supplied with a round white paper mark on one end. Install the rolls such that the front roll has the mark on one end, and the rear roll has the marking on the opposite end. Once the rolls are installed, remove the paper markings.

Install the replacement rolls so that the white paper marking is on one end for the front roll, and on the opposite end for the rear roll. After orienting the rolls correctly, remove the paper markings.

For each roll:

1. Insert the left end of the roll through the bushing hole in the Frame.
Note: In the next step, install the existing washers and bearings when reinstalling the original rolls. When installing replacement rolls, install the new washers and bearings supplied with the rolls
2. (Figure 4): Install the following parts on the shaft of each new Drive Roll:
 - a. Wave Washer
 - b. Fiat Washer
 - c. Bearing. Orient the Bearing as shown.
 - d. Bushing. The Bearing fits inside the Bushing when each part is installed correctly.
 - e. Drive Pulley. Orient the Pulley as shown.
3. Slide the pulley to the right until the Wave Washer is fully compressed; then tighten the Setscrew.

4. Lower the right end of the roll into place, and align the Right Bearing with the hole in the Frame.
5. (Figure 5): Seat the Right Bearing:

Hold the Bushing over the Left Bearing

B

Guide the Bushing through the hole in the left side of the Frame, while seating the Right Bearing on the right side of the Frame

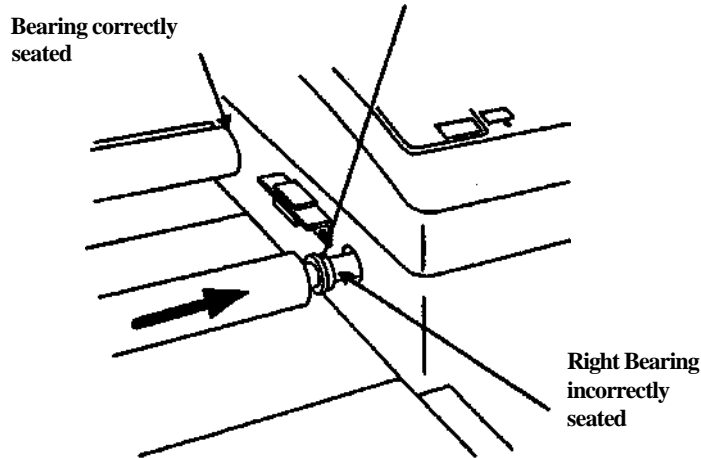


Figure 6. Seating the Right Bearing

6. (Figure 3): Install the Bushing Retaining Clip.
7. (Figure 2): Install the Main Drive Belt.
8. Position the Motor Assembly to tighten the Main Drive Belt; then tighten the two screws that secure the assembly.
9. Connect the Lamp Socket to the Exposure Lamp.
10. (Figure 1): Install the Document Hold-down Guide.
11. Install the Left Side Panel (REP 4.1.1).
12. Perform the following adjustments:
 - Calibrate Motor Speed (ADJ 4.1.1)
 - Calibrate Document Registration (ADJ 4.1.2)

REP 4.1.18 Idler Roll Assembly

Parts List on PL 5.1

WARNING

Switch off the Scanner and disconnect the Power Cord.

Removal

An Idler Roll Assembly is installed under each rubber roll on the Document Drive Rolls.

1. Remove the Left Side Panel (REP 4.1.1).
2. (Figure 1): Open the Top Cover and remove the Document Hold-down Guide.

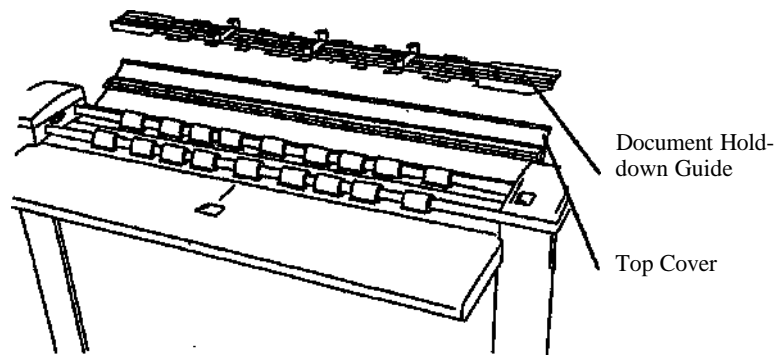


Figure 1. Removing the Document Hold-down Guide

3. (Figure 2): Loosen the 2 screws that hold the Motor Assembly.
4. Remove the Main Drive Belt from the 2 Drive Roll Pulleys.
5. Disconnect the Lamp Socket.

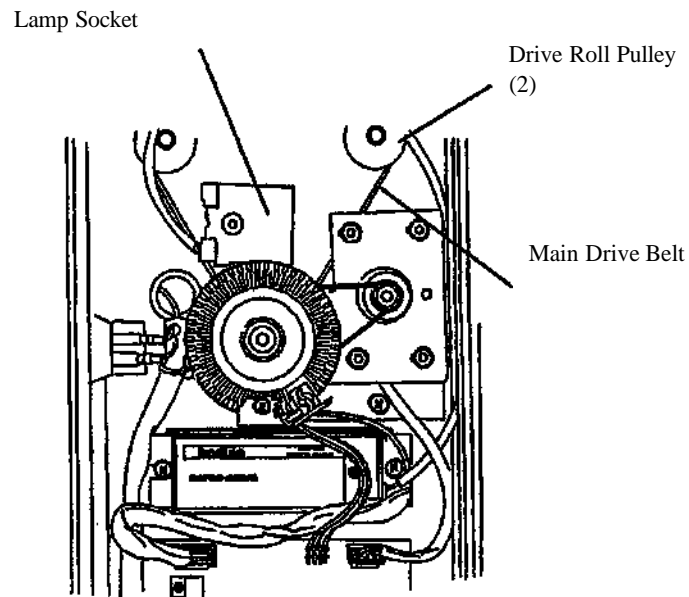


Figure 2. Main Drive Belt and Lamp Socket

6. (Figure 3): Remove the two Bushing Retaining Clips.

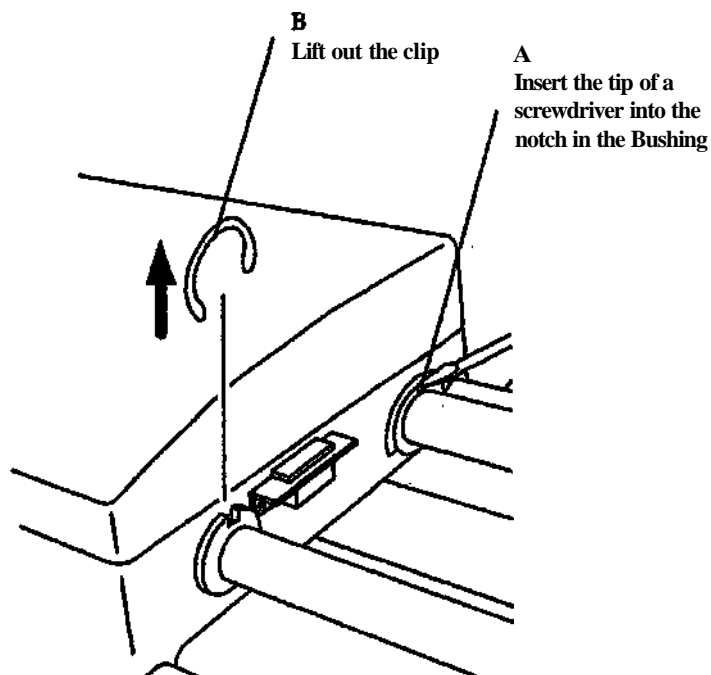
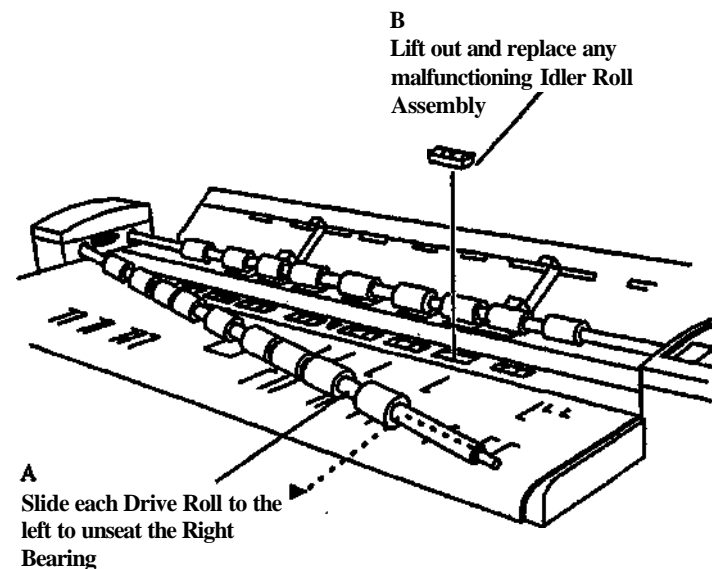


Figure 3. Removing the Bushing Retaining Clips

7. (Figure 4): Slide each Drive Roll to the left to unseat the Right Bearing and expose the Drive Pulley
8. Lift out and replace any malfunctioning Idler Roll Assembly.



01096A-COB

Figure 4. Removing the Idler Roll Assembly

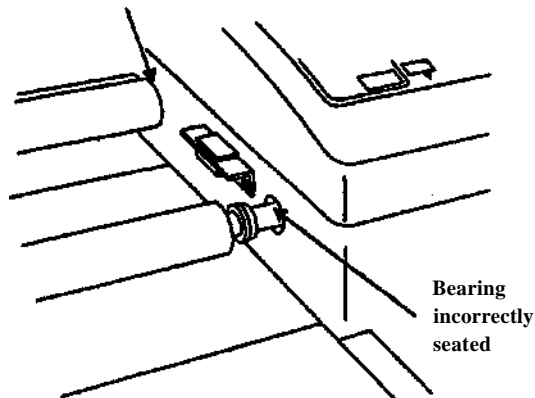
Replacement

For each roll:

1. Lower the right end of the roll into place, and align the Right Bearing with the hole in the Frame.
2. (Figure S): Seat the Right Bearing:

- A**
Hold the Busting over the
Left Bearing
- B**
Guide the Bushing through the
hole in the left side of the Frame,
while seating the Right Bearing on
the right side of the Frame

Bearing correctly
seated



01094A-COB

Figure 5. Seating the Right Bearing

3. (Figure 3): Install the Bushing Retaining Clip.
4. (Figure 2): Install the Main Drive Belt.
5. Position the Motor Assembly to tighten the Main Drive Belt; then tighten the two screws that secure the assembly.
6. Connect the Lamp Socket to the Exposure Lamp.
7. (Figure 1): Install the Document Hold-down Guide.
8. Install the Left Side Panel (REP 4.1.1).
9. Perform the following adjustment:
 - Calibrate Document Registration (ADJ 4.1.2)

REP 4.2.1 SCSI Adaptor PWB

WARNING

Switch off the Scanner and disconnect the Power Cord.

Certain 7356 Scanners are connected directly to the customer's personal computer (PC) containing a SCSI Adaptor PWB. The adaptor allows SCSI devices such as the Scanner to be connected to the PC. The customer's PC is not a Xerox product and may have several different configurations. The procedures below are for a Compaq Deskpro 575 or 590. Other computers may require a modified procedure.

Removal

WARNING

Switch off the host computer and the Scanner.

CAUTION



Electrostatic Damage (ESD). Certain components in the host computer are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage to the components.

1. Disconnect the scanner cable from the host computer.
2. Remove the cover of the host computer.
3. (Figure 1): Remove the SCSI adaptor PWB.
4. Record the position of any configuration switches on the adaptor PWB.

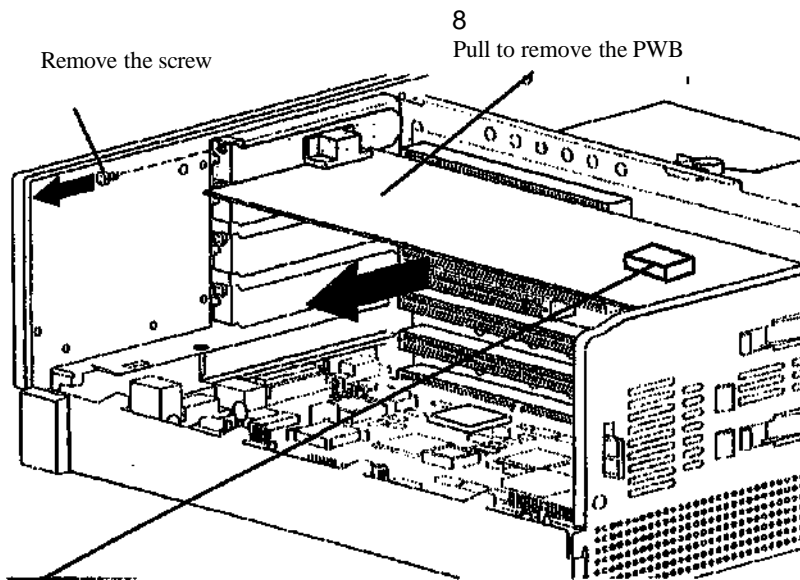
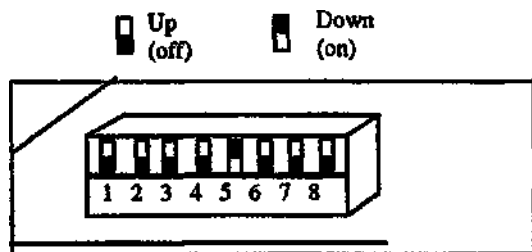


Figure 1. Removing the SCSI Adaptor PWB

Note:

In the SIM/XPC, the SCSI Adaptor PWB is actually installed in the lower slot, and not in the slot shown. Install the PWB in the lower slot, and perform the rest of the procedure as indicated.

Replacement

CAUTION



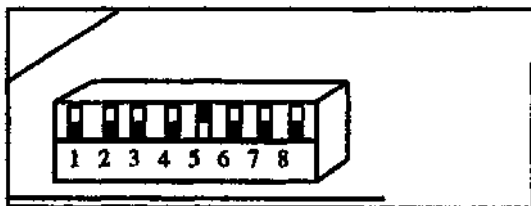
Electrostatic Damage (ESD). Certain components on the SCSI Adaptor PWB are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage to the components.

1. Remove the new SCSI Adaptor PWB from the antistatic packing.
2. Set the switches on the adaptor PWB to the positions found on the removed PWB. If the positions are not available, go to the manual for the installed adaptor PWB and determine the switch positions.

Example: for the Adaptec model AHA-1542CP, set the switches as follows:

| Switch | Position | Switch | Position |
|--------|----------|--------|----------|
| Sw1 | Up | Sw5 | Down |
| Sw2 | Up | Sw6 | Up |
| Sw3 | Up | Sw7 | Up |
| Sw4 | Up | Sw8 | Up |

Other arrangements may require other settings. Go to the installation manual supplied with the adaptor PWB Installed.



Up
(off)

Down
(on)

3. (Figure 2): Install the SCSI Adaptor PWB.

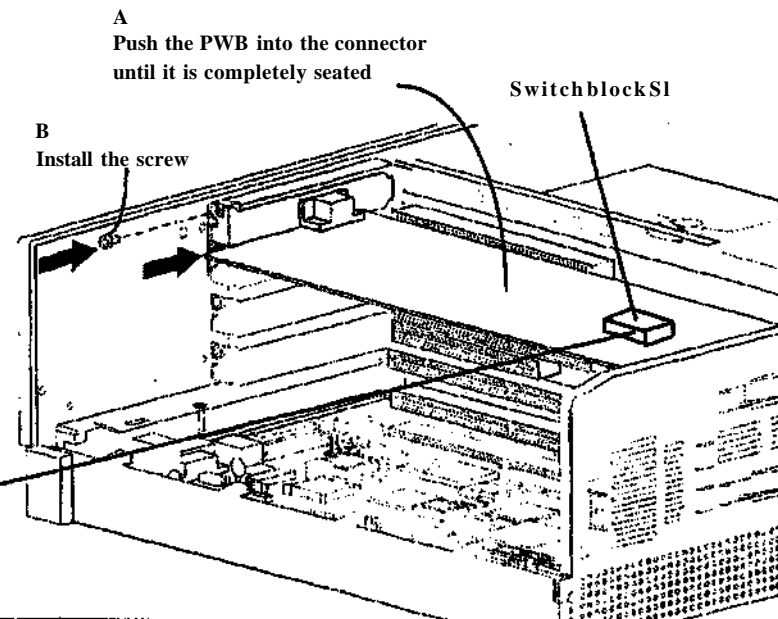


Figure 2. Installing the SCSI Adaptor PWB

ADJ 4.1.1 Calibrate Motor Speed

Purpose

The purpose is to compensate for magnification errors in the direction of document travel. These errors may be caused by wear of the Document Drive Rolls. This test determines a speed correction factor that is applied to the machine motor speed. The correction factor is automatically stored in non-volatile memory (NVM).

Procedure

Note: This procedure uses the SCSI 7356 software as loaded onto a Personal Workstation or other personal computer directly connected to the Scanner. If the controlling system has its own built-in diagnostics, see the service manual for the controlling system.

Check

1. Start the diagnostic software using the procedure appropriate for the system to which the Scanner is connected.
Refer to Section 6.
2. Select the **Component Tests** button from the Service Diagnostic Menu screen.
3. Select the **Calibrate Motor Speed** button.
4. Insert Test Pattern 082E11490 face down and with the short edge as the lead edge.
5. Select the **Begin** button.

Note: The motor speed is checked and is adjusted automatically if not correct. The screen displays Passed if the speed was successfully adjusted; otherwise, FAILED is displayed. If FAILED is displayed, repeat the test again. If the problem still exists, go to Section 2, Repair Analysis Procedures.

Adjustment

Adjustment occurs automatically when the **Calibrate Motor Speed** function is selected.

ADJ 4.1.2 Calibrate Document Registration

Parts List on PL 5.1

Purpose

Note: *The test patterns are stored inside the Document Feed Tray.*

The purpose of this adjustment is to allow the Scanner to determine correct timing values for actuation of the two document edge sensors, enabling the Scanner to correctly register the lead edge of the document before the start of a scanning operation.

Procedure

Note: *This procedure uses the SCSI 7356 software as loaded onto a Personal Workstation or other personal computer directly connected to the Scanner. If the controlling system has its own built-in diagnostics, see the service manual for the controlling system.*

Check

1. Insert a document when the Scanner is ready, and allow the document to be transported to the starting position.
2. (Figure 1): Examine the position of the lead edge of the document. The lead edge should be within ± 0.25 inch (0.64 cm) of the middle of the Platen Window. If the position is not correct, perform the adjustment.

Adjustment

1. Configure the system cabling for running the diagnostic software, if required.

Note: *If the Scanner is not already directly connected to the SCSI port of the computer on which the diagnostic software will run, then re-cabling is required. Go to Section 6 for more information.*

2. Start the diagnostic software, using the procedure appropriate for the system to which the Scanner is connected. Refer to Section 6.
3. Select the **Component Tests** button from the Service Diagnostic Menu screen.
4. Select the **Calibrate Document Registration** button.
5. Select the Begin button.

6. When the motor starts, insert the black Test Pattern or an 8.5 x 11 inch (or A4) sheet of black paper with the short edge as the lead edge, and with the lead edge centered on the Edge Present Sensor.
Note: *The software checks the timing of the sensor actuation, and stores new correction values automatically. The screen displays Passed if the adjustment was successful; otherwise, FAILED is displayed. If FAILED is displayed, refer to Section 2, Repair Analysis Procedures.*
7. Configure the system cabling for normal operation, if required. Go to Section 6 for more information.
8. Repeat the Check procedure again.

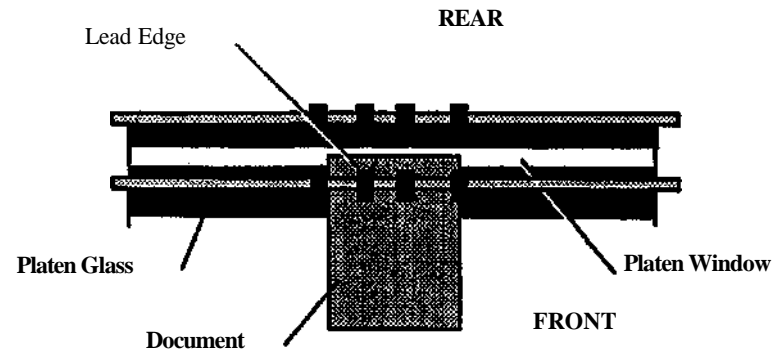


Figure 1. Registration of the Lead Edge - Top View

ADJ 4.1.3 Front to Back Stitch

Purpose

The purpose is to compensate for the variations in the front to back position of Camera 1 and Camera 3 with respect to Camera 2. See Figure 1.

Procedure

Note: This procedure uses the SCSI 7356 software as loaded onto a Personal Workstation or other personal computer directly connected to the Scanner. If the controlling system has its own built-in diagnostics, see the service manual for the controlling system.

Check

1. Start the diagnostic software, using the procedure appropriate for the system to which the Scanner is connected.
Go to Section 6 for more information.
2. Select the **Stitch Alignment** button from the Service Diagnostic Menu screen.
3. If the **Left to Right Stitch Alignment** screen is displayed, select the **Do F/B Align** button.
4. Select the **Camera 1** button.
5. Insert the 082E11490 Test Pattern long edge first, allow the pattern to be transported to the starting position.
6. Select the **Begin** button.

The screen displays the gap at the image stitch point and displays the Gap value.

The Gap value should be zero.

Note: The Gap value may vary slightly with each scan, but the average should be zero.

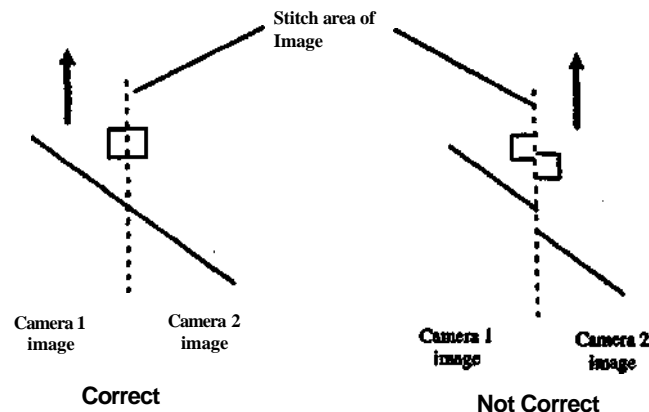


Figure 1. Image Example - Front to Back Stitch Adjustment

Adjustment

1. (Figure 2): Remove the access cover.

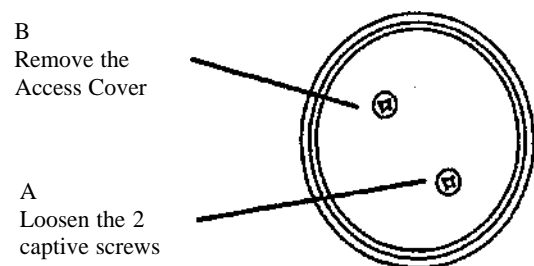


Figure 2. Access Cover

2. (Figure 3): Adjust the screw until the Gap value is zero.
3. Select the **Stop** button.
4. Select the **Camera 3** button.
5. Select the **Begin** button.
6. Adjust the Camera 3 Adjustment Screw until the Gap value is zero.
7. Install the Access Covers and tighten the captive screws.

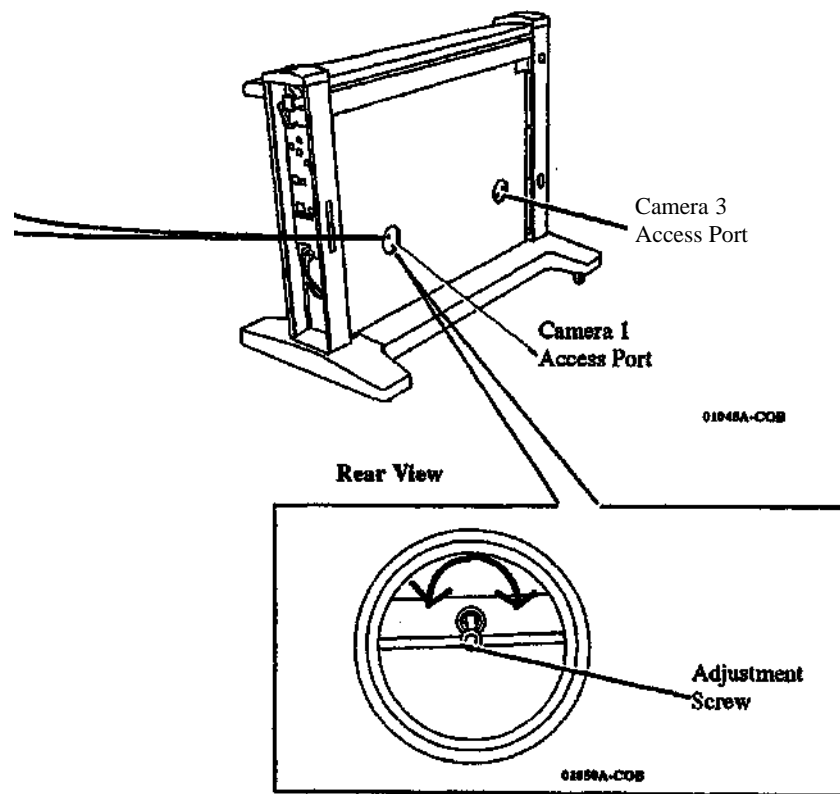


Figure 3. Adjustment Screw

ADJ 4.1.4 Left to Right Stitch

Purpose

The purpose is to compensate for the variations in the left to right position of Camera 1 and Camera 3 with respect to Camera 2. See Figure 1.

Procedure

Note: This procedure uses the SCSI 7356 software as loaded onto a Personal Workstation or other personal computer directly connected to the Scanner. If the controlling system has its own built-in diagnostics, see the service manual for the controlling system.

Check

1. Start the diagnostic software, using the procedure appropriate for the system to which the Scanner is connected.
Go to Section 6 for more information.
2. Select the **Stitch Alignment** button from the Service Diagnostic Menu screen.
3. Insert the 082E11490 Test Pattern long edge first, and ensure that the test pattern is captured by the document roll nip.
4. Select the L/R **Stitch** button.
5. Select the **Begin** button.

Note: The software check the timing of the sensor actuation, and stores new correction values automatically if not correct. The screen displays Passed if the adjustment was successful; otherwise, FAILED is displayed. If FAILED is displayed, refer to Section 2, Repair Analysis Procedures.

Adjustment

Adjustment occurs automatically.

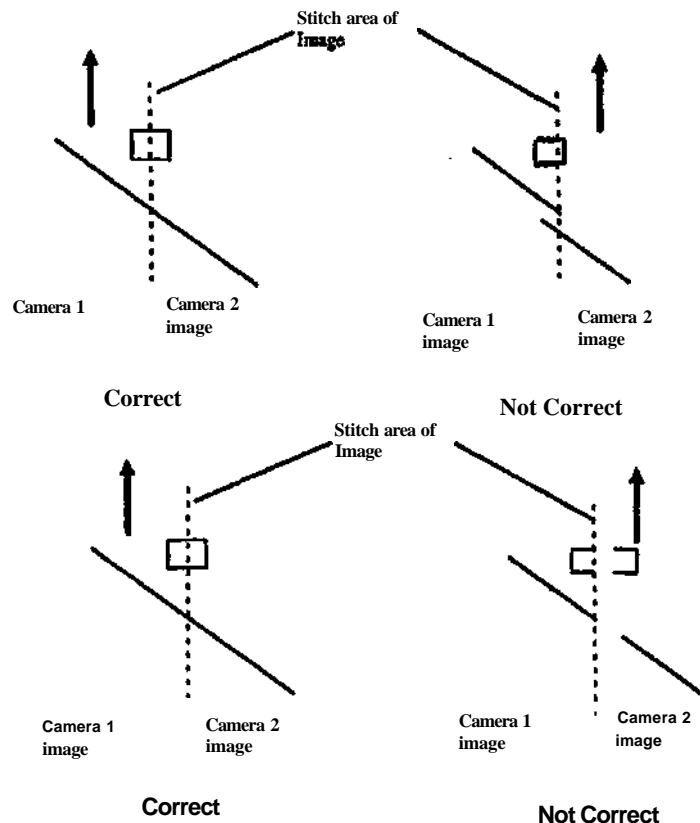


Figure 1. Image Example - Left to Right Stitch Adjustment

ADJ 4.1.5 Camera Normalization

Purpose

The purpose of the Camera Normalization adjustment is to calibrate the camera signal with respect to a standard reference. The standard reference is the reflectivity of the Document Hold-down Guide.

Procedure

Note: This procedure uses the SCSI 7356 software as loaded onto a Personal Workstation, Xerox Productivity System (XPC) or other personal computer directly connected to the Scanner. If the controlling system has its own built-in diagnostics, refer to the service manual for the controlling system.

Check

Method 1 - Used *only* for the Xerox Productivity Centre in normal operation. This method does not require connecting the Scanner directly to the UI Computer first.

1. Enter the diagnostic mode, by holding the <control> key down while pressing the <F12> key.
2. Enter the password **7336884** and press the OK button.
3. Select the **Scanner Tests** button on the screen.
 - The **Scanner Tests** screen appears.
4. Select the **Normalize Scanner** button and press the OK button.
 - The Scanner normalizes. If the normalization process fails, the screen displays "Normalization Failed". Go to *If the test fails* later in this procedure.

Method 2 - This method uses the diagnostic software. If the Scanner is connected to an ES8150 or a Xerox Productivity Centre module, the Scanner must be connected directly to the User Interface (UI) computer. Refer to *Configuring for Extended Diagnostics - XPC/ES8150* in Section 6.

1. Start the diagnostic software, using the procedure appropriate for the system to which the Scanner is connected.
Refer to Section 6.

2. Select the **Normalize Cameras** button from the **Service Diagnostic Menu** screen
3. Select the **Begin** button.
 - The Scanner normalizes the cameras with reference to the reflectivity of the Document Hold-down Guide.
 - When the test is complete, the screen displays either Passed or Failed.

Note: Other diagnostic tests cannot be run until the normalization test is passed. The reason for this is that the results from the other tests may be invalid if the cameras are not normalized first

If the test fails

- a. Remove and inspect the bottom of the Document Hold-down Guide. If any dirt or marks are found, clean the Document Hold-down Guide.
- b. Inspect the Platen Glass. If any dirt or marks are found, clean the Platen Glass.
- c. Install the Document Hold-down Guide.
- d. Try the test again. If the problem still exists, switch off the Scanner and the controlling device. Then switch on the Scanner, and then the controlling device. Wait for the Scanner and the controlling device to initialize; then try the test again.
- e. If the problem still exists, go to Section 2 and isolate the fault.

ADJ 4.1.6 Installing a Firmware Upgrade in the Scanner

Purpose

The purpose of this procedure is to allow the installation of new firmware code into the Flash ROM memory of the Scanner.

Procedure

Note: This procedure uses the SCSI 7356 software as handed onto a Personal Workstation or other personal computer directly connected to the Scanner. If the controlling system has its own built-in diagnostics, refer to the service manual for the controlling system.

Check

1. Start the diagnostic software, using the procedure appropriate for the system to which the Scanner is connected.
Refer to Section 6.
2. Select **Download Code** from the Service Diagnostics menu.
3. Install the software upgrade disk in the floppy disk drive of the controlling computer.
4. (Figure 1) Select the **Scanner Firmware** button.
 - The diagnostic software polls the Scanner and reads the software upgrade disk. The software versions are displayed in the **On Diskette** and the **Installed** boxes.
 - If the versions are the same, select the **Exit** button.
 - If the **On Diskette** version is more recent, perform the installation.

Installation

1. Ensure that steps 1 - 4 of the **Check** procedure are complete.

CAUTION

*Do not continue if a version number is not shown in the **Installed** box.*

*Once you select the **Begin** button, do not allow the process to be interrupted. Any interruption may cause corruption of the Flash ROM. The Control PWB in the Scanner will then be unable to communicate, requiring*

replacement of the PWB.

2. Select the **Begin** button.
 - The screen shows that blocks of code are being downloaded.
 - The software resets the Scanner, and the message **Warming Up** is displayed.
 - When the reset process is successfully completed, the version number on diskette is also displayed in the **Installed** box.
3. Select the **Exit** button to complete the installation.
4. Check the following adjustments:
 - Calibrate Document Registration (ADJ 4.1.2)
 - Front to Back Stitch (ADJ 4.1.3)
 - Left to Right Stitch (ADJ 4.1.4)

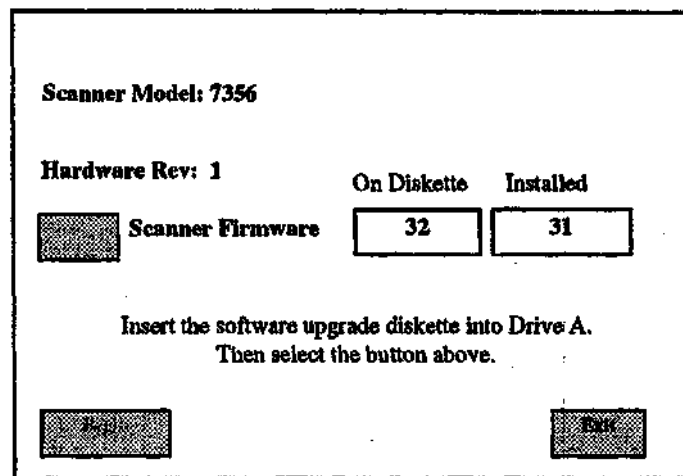


Figure 1. Download Code Screen

ADJ 4.1.7 Edge Present Sensor

Purpose

The purpose of this procedure is to ensure that:

- the Actuator of the Lead Edge Present Sensor still extends above the bottom surface of the Document Hold Down Guide when the switch electrically goes from the deactuated to the actuated state
- the Actuator operates freely with the Document Hold Down Guide installed
- the end of the Actuator always remains below the surface of the Platen in the deactuated state.

Procedure

Check

1. Open the Top Cover.
2. Remove the Document Hold Down Guide.
3. Measure the height of the top of the Actuator above the surface of the Platen. The dimension should be not less than 0.25 inches (6.4 mm).
- If the dimension is not correct, perform the adjustment below.
4. Examine the Actuator of the switch in the deactuated position. The end of the Actuator should be below the surface of the Platen to avoid catching the edge of the document as it moves from the rear to the front of the Scanner.
- If the position of the Actuator is not correct, perform the adjustment.
5. Install the Guide.
6. Check that the Actuator operates with no friction against the hole in the Guide.
- If the Actuator has friction with the Guide, perform the adjustment.
7. Press down gently on the center foam spring on the top of the Guide to ensure that the Guide is firmly in position..
8. While performing step 7, press down the Actuator slowly, using the piece of paper or a screwdriver,.

9. Observe the position of the Switch Actuator at the moment that the Drive Rolls start.
10. The highest portion of the Actuator should still be above the bottom surface of the Guide. If not, perform the adjustment.

Adjust

1. Remove the Rear Panel (REP 4.1.2).
2. (Figure 1) Loosen the two retaining screws.

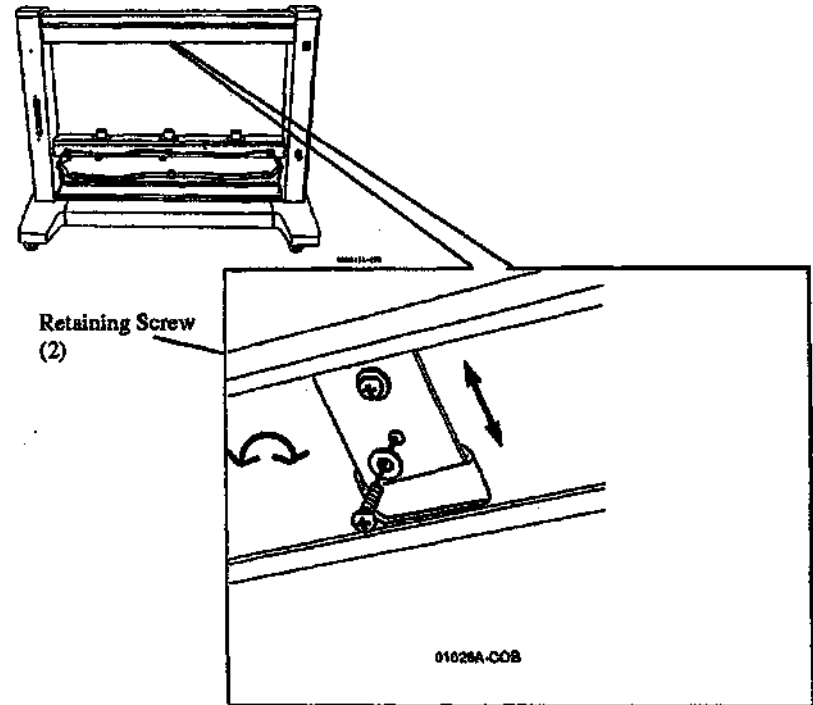


Figure 1. Edge Present Sensor - Bracket

3. Adjust the position of the Sensor such that:
 - the Actuator of the Sensor still extends above the bottom surface of the Document Hold Down Guide when the Sensor electrically goes from the deactuated to the actuated state
 - the Actuator operates freely with the Document Hold Down Guide installed
 - the end of the Actuator is below the surface of the Platen in the deactuated state.
4. Tighten the two Retaining Screws.
5. Check that the operation of the Sensor is still within the specification.
6. Install the Rear Cover (REP 4.1.2).
7. Close the Top Cover.
8. Perform ADJ 4.1.2 - Calibrate Document Registration.

ADJ 4.1.8 Top Cover Clearance

Purpose

The purpose of this procedure is to ensure that the Top Cover does not contact the Drive Rolls.

Procedure

Check

1. Open the Top Cover.
2. Check the bottom surface for evidence of contact with the rubber rolls on the Document Drive Rolls. If rubber deposits are found, perform the adjustment.

Adjust

1. (Figure 1): Adjust both Magnetic Latches to the dimension shown.
2. Close the Top Cover.
3. Scan a document and check that the bottom surface of the Top Cover now has clearance with the Document Drive Rolls.
4. If there is still not sufficient clearance, readjust each Magnetic Latch upward the minimum amount required to achieve clearance.

B

Adjust the Magnetic Latch to the dimension shown. The dimension is measured from the top surface of the latch to the bottom of the Cap.

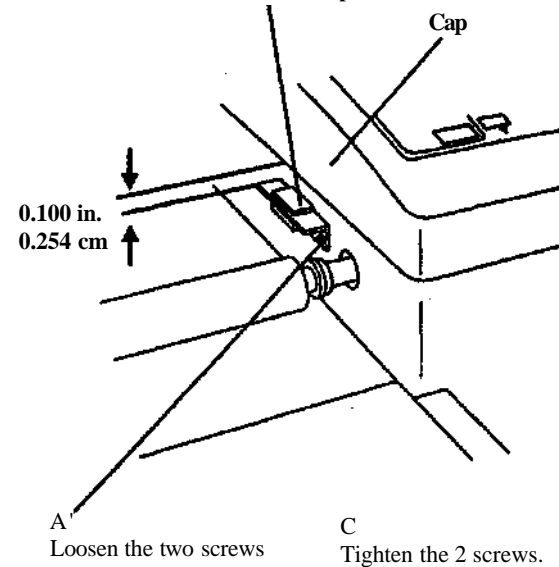


Figure 1. Adjusting the Magnetic Latch

| TITLE | PAGE |
|--|-------------|
| <u>INTRODUCTION</u> | 5-2 |
| <u>PARTS LIST</u> | |
| ELECTRICAL | |
| PL 1.1 ELECTRICAL COMPONENTS (PART 1 OF 2) | 5-4 |
| PL 1.2 ELECTRICAL COMPONENTS (PART 2 OF 2) | 5-6 |
| DRIVES | |
| PL 4.1 MAIN DRIVE MOTOR ASSEMBLY. | 5-8 |
| DOCUMENT TRANSPORTATION | |
| PL 5.1 DOCUMENT ROLLS AND SENSOR. | 5-7 |
| PL 5.2 DOCUMENT SWITCH AND SENSOR. | 5-8 |
| OPTICS | |
| PL 6.1 OPTICS COMPONENTS. | 5-9 |
| COVERS | |
| PL 14.1 FEED TRAY AND TOP COVER. | 5-10 |
| PL 14.2 REAR COVER AND SIDE PANEL. | 5-11 |
| PL 14.3 FRONT COVER AND CASTERS. | 5-12 |
| PART NUMBER INDEX | 5-13 |

OVERVIEW

The Parts list section identifies el part numbers and the corresponding location of all spared subsystem components.

ORGANIZATION

PARTS LISTS

Each item number in the part number listing corresponds to en Hem 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 teters 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:

| | |
|-------|-------------------------------|
| A | Amp |
| DH | Document Handler |
| EMI | Electro Magnetic Induction |
| HZ | Hertz |
| MNL | Multinational |
| NOHAD | Noise Ozone Heat Air Dirt |
| P/O | Part Of |
| PWB | Printed Wiring Board |
| REF | Reference |
| R/E | Reduction/Enlargement |
| RX | Rank Xerox |
| USMG | United States Marketing Group |
| USO | United States Operations |
| V | Volt |
| w/ | With |
| w/o | Without |
| XCL | Xerox Canada Limited |
| XLA | Xerox Latin America |

SYMBOLOLOGY

Symbology used in the Parts List section is identified in the Sym-bology 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 Hem number on the illustrations followed by a bracket and a listing of the contents of the as-sembly.

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 "W/Tag" in the parts description indicates that the part configuration has been updated. 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 an the piece parts that make up a Tag, mark the appropriate number on the Tag matrix.

SYMBOLGY

A tag number within a circle **and** 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.

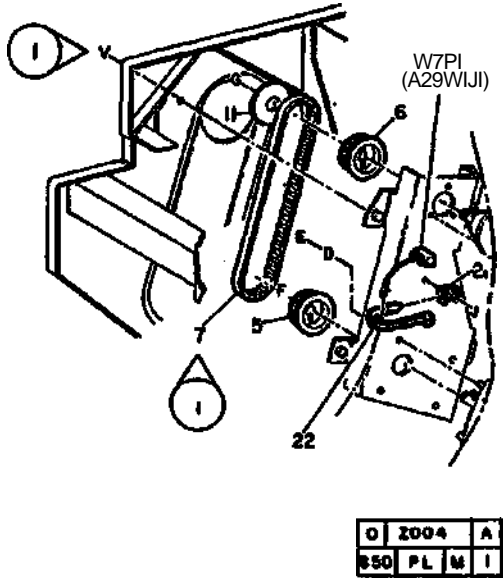


Figure 1. With Tag Symbol

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 changed by the tag number

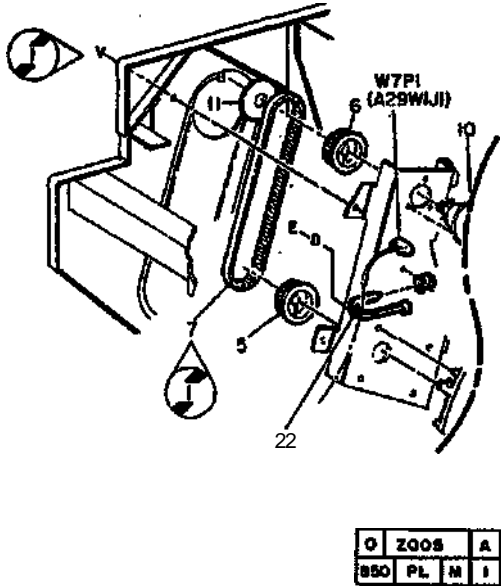


Figure 2. Without Tag Symbol

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,

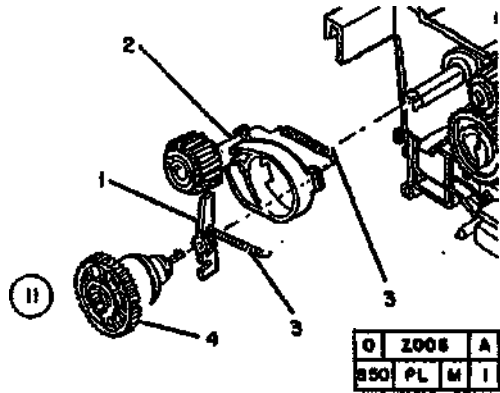


Figure 3. Entire Drawing With Tag Symbol

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).

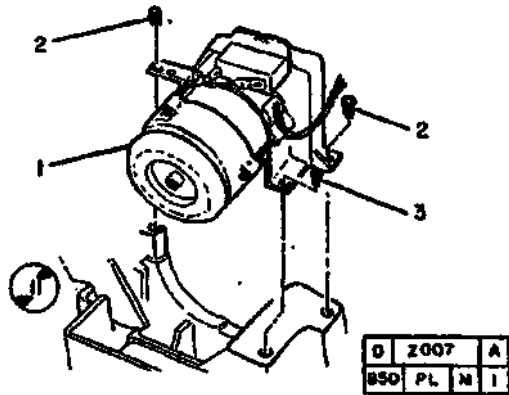
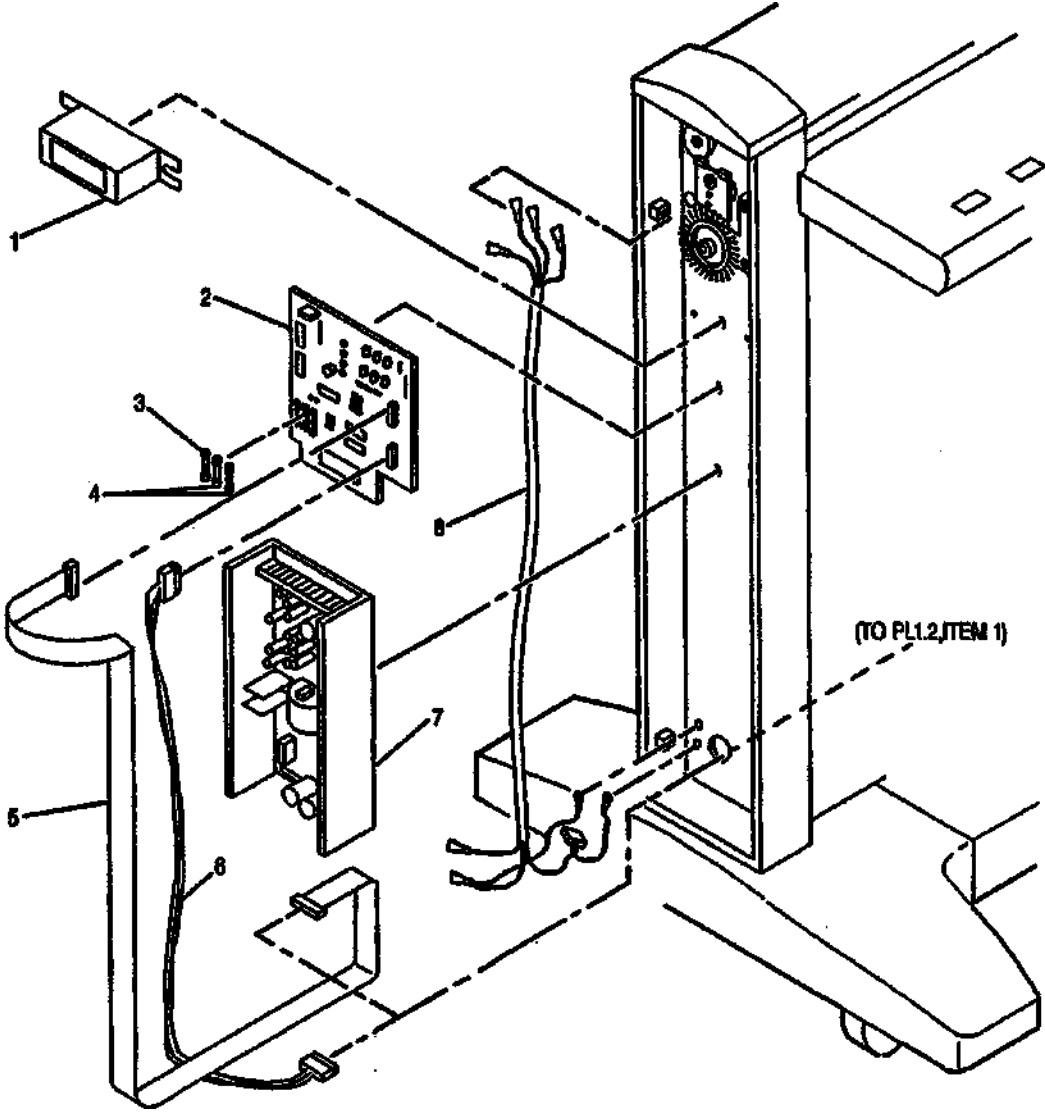


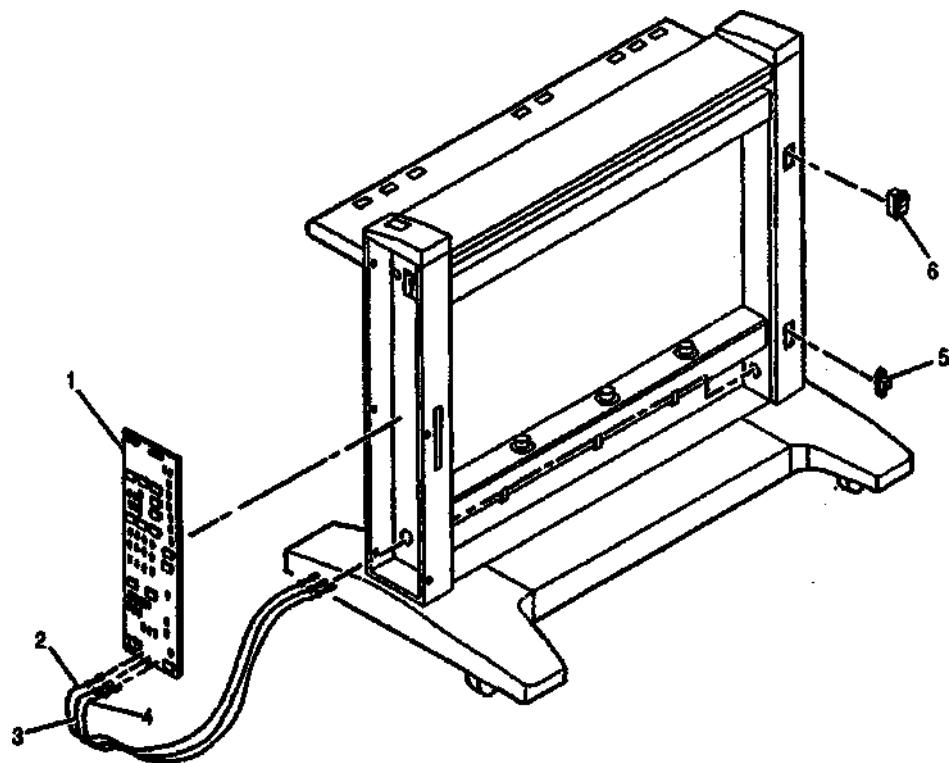
Figure 4. Entire Drawing Without Tag Symbol

PL 1.1 ELECTRICAL COMPONENTS (PART 1 OF 2)



| ITEM | PART | DESCRIPTION |
|------|----------|--|
| 1 | 104N23 | LAMP BALLAST (HEP 4.1.14) |
| 2 | 140N4719 | POWER DISTRIBUTION PWB (REP 4.1.15) |
| 3 | 108N330 | FUSE (4AMP) |
| 4 | 108N331 | FUSE (2AMP) |
| 5 | 112N104 | LAMP AND MOTOR CABLE |
| 6 | 152N1552 | DC POWER HARNESS |
| 7 | 105N1134 | POWER SUPPLY (REP 4.1.16) |
| 8 | 152N1553 | POWER ENTRY HARNESS |

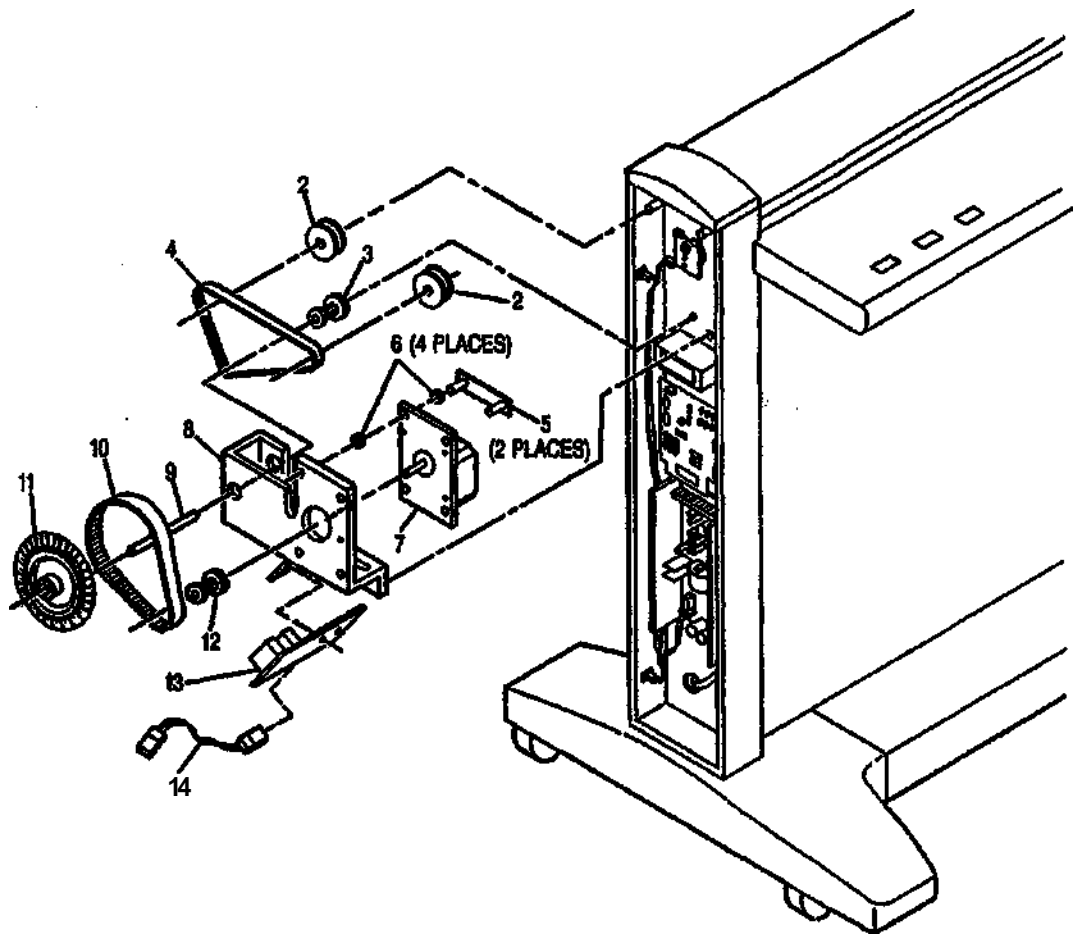
PL 1.2 ELECTRICAL COMPONENTS (PART 2 OF 2)



| ITEM | PART | DESCRIPTION |
|------|----------|---|
| 1 | | CONTROL PWB (REP 4.1.10, ADJ 4.1.1 4.1.2 4.1.4 4.1.5) |
| 2 | 117N1139 | CAMS VIDEO CABLE (REP 4.1.19) |
| 3 | 117N1138 | CAM2 VIDEO CABLE (REP 4.1.19) |
| 4 | 117N1137 | CAM1 VIDEO CABLE (REP 4.1.19) |
| 5 | 109N254 | POWER ENTRY MODULE |
| 6 | 110N733 | POWER SWITCH |

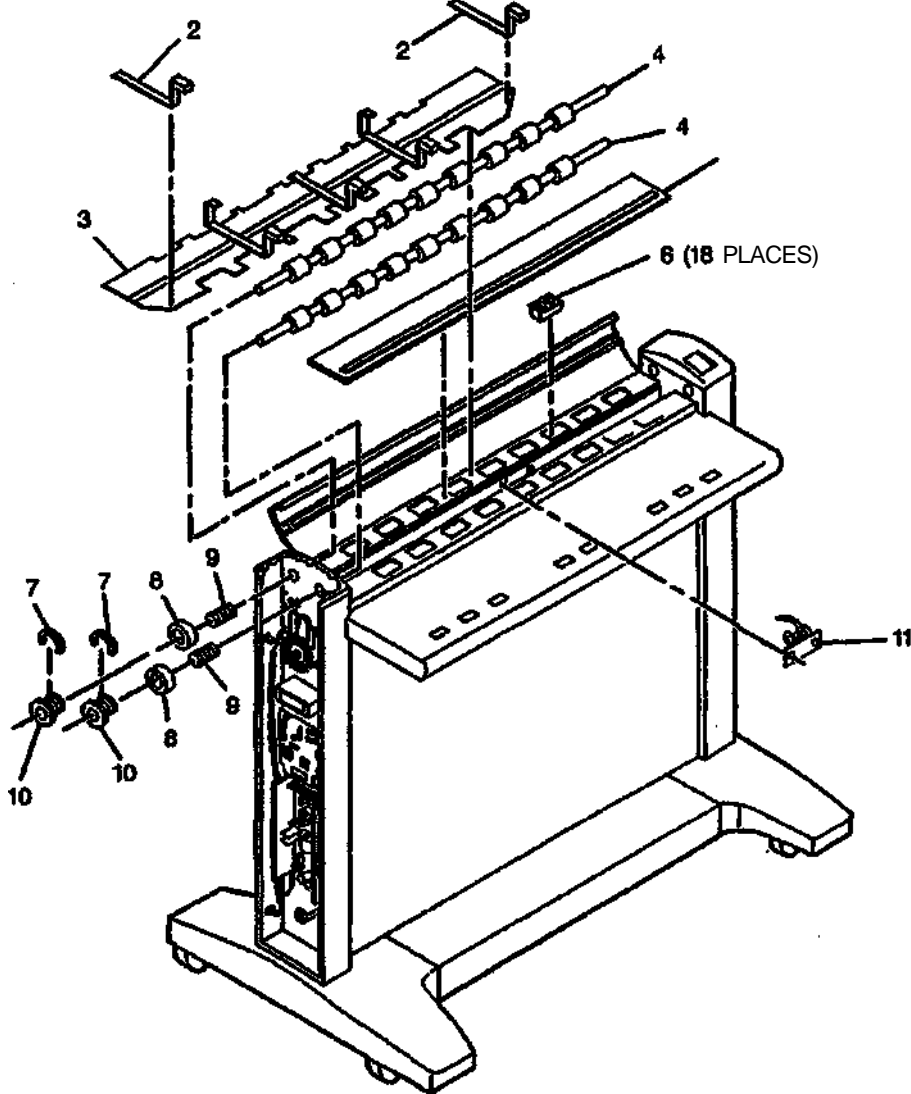
PL 4.1 MAIN DRIVE MOTOR ASSEMBLY

1-{3,5-14



| ITEM | PART | DESCRIPTION |
|------|---------|---|
| 1 | 127N784 | MAIN DRIVE MOTOR ASSEMBLY (REP 4.1.12) |
| 2 | 20N279 | DOCUMENT DRIVE PULLEY |
| 3 | — | PULLEY (P/O ITEM 1) |
| 4 | 23N369 | MAIN DRIVE BELT (REP 4.1.12) |
| 5 | •• | STUD PLATE (P/O ITEM 1) |
| 6 | •• | GROMMET (P/O ITEM 1) |
| 7 | -- | MOTOR (P/O ITEM 1) |
| 8 | .. | MOTOR BRACKET (P/O ITEM 1) |
| 9 | - | SHAFT (P/O ITEM 1) |
| 10 | ~ | BELT (P/O ITEM 1) |
| 11 | | ENCODER WHEEL (P/O ITEM 1) (REP 4.1.13) |
| 12 | — | PULLEY (P/O ITEM 1) |
| 13 | 130N702 | STALL DETECT SENSOR (REP 4.1.13) |
| 14 | 120N233 | STALL SENSOR CABLE |

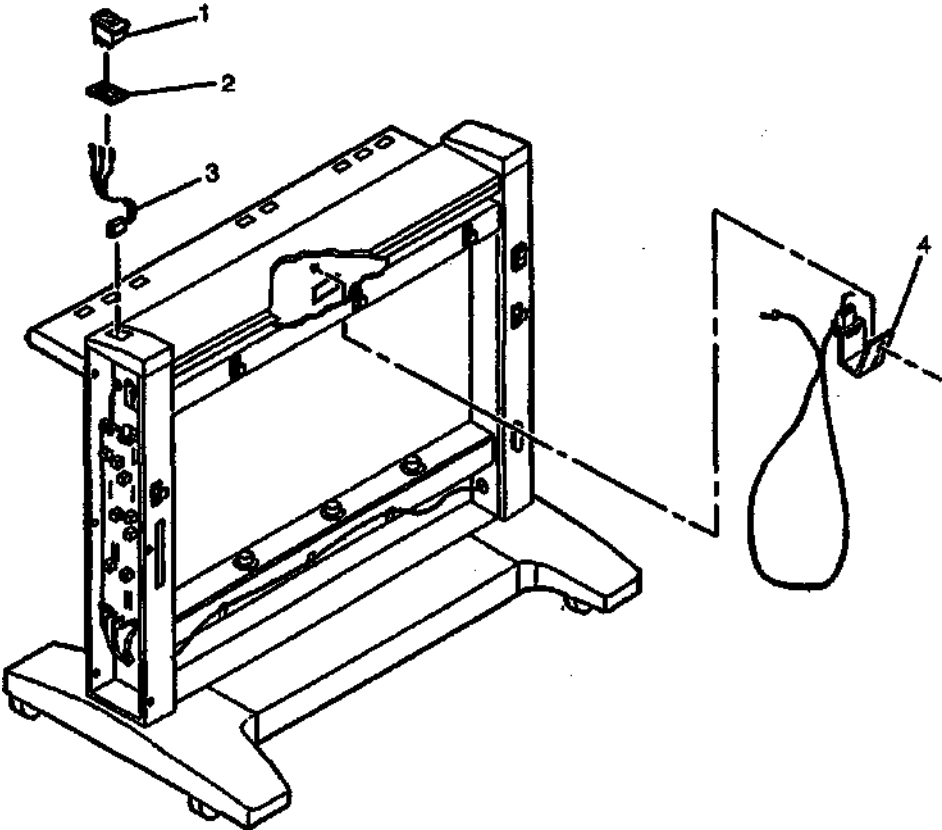
PL 5.1 DOCUMENT ROLLS AND SENSOR



| ITEM | PART | DESCRIPTION |
|------|-----------|---|
| 1 | 600K64650 | HOLD DOWN BRACKET KIT (2/KIT) (TAG 89) |
| 2 | — | HOLD DOWN BRACKET (P/O ITEM 1) |
| 3 | 50N213 | DOCUMENT HOLD DOWN |
| 4 | 23N370 | DRIVE ROLL (REP 4.1.17, ADJ 4.1,2) |
| 5 | 62N100 | PLATEN GLASS (REP 4.1.15) |
| 6 | 22N658 | IDLER ROLL (REP 4.1.18) |
| 7 | .. | DRIVE ROLL CLAMP (NOT SPARED) |
| 8 | -- | BEARING (NOT SPARED) |
| 9 | - | SPRING (NOT SPARED) |
| 10 | .. | DRIVE ROLL BEARING (NOT SPARED) |
| 11 | 130N770 | EDGE REGISTERED SENSOR (REP 4.1.7, ADJ 4.1.2) |

PL 5.2 DOCUMENT SWITCH AND SENSOR

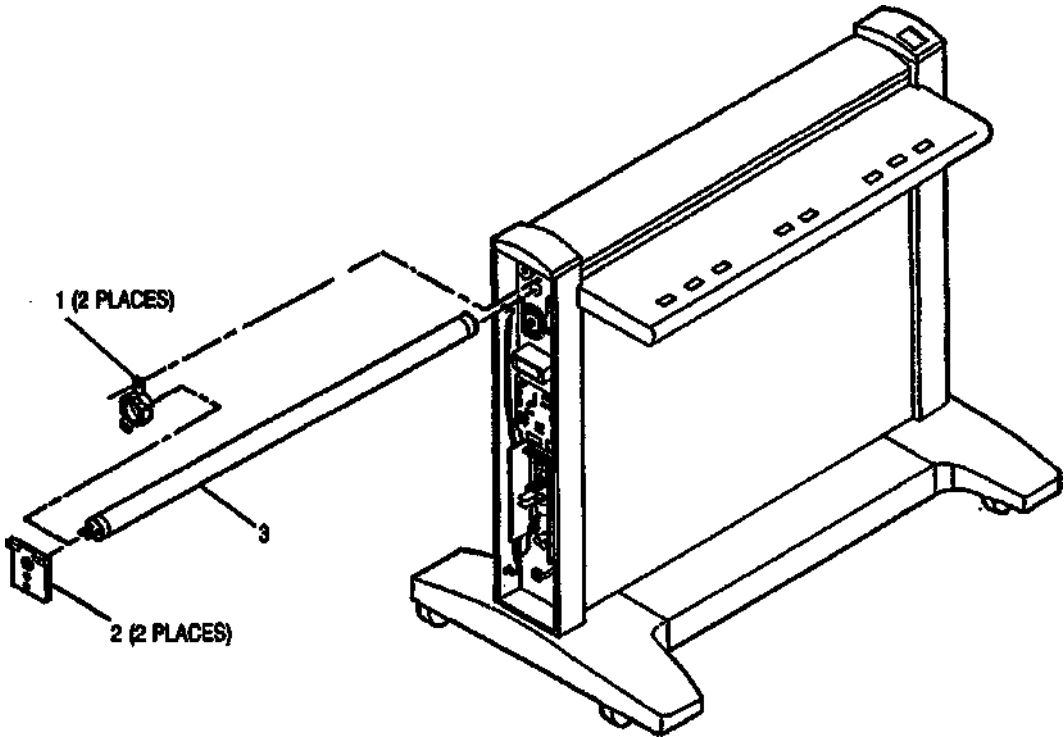
| ITEM | PART | DESCRIPTION |
|------|----------|---|
| 1 | 110N732 | FORWARD/REVERSE SWITCH (REP 4.1.11) |
| 2 | 56N128 | BEZEL |
| 3 | 117N1136 | FORWARD/REVERSE CABLE |
| 4 | 130N771 | EDGE PRESENT SENSOR (REP 4.1.6, ADJ 4.1.2) |



000006C-SCH

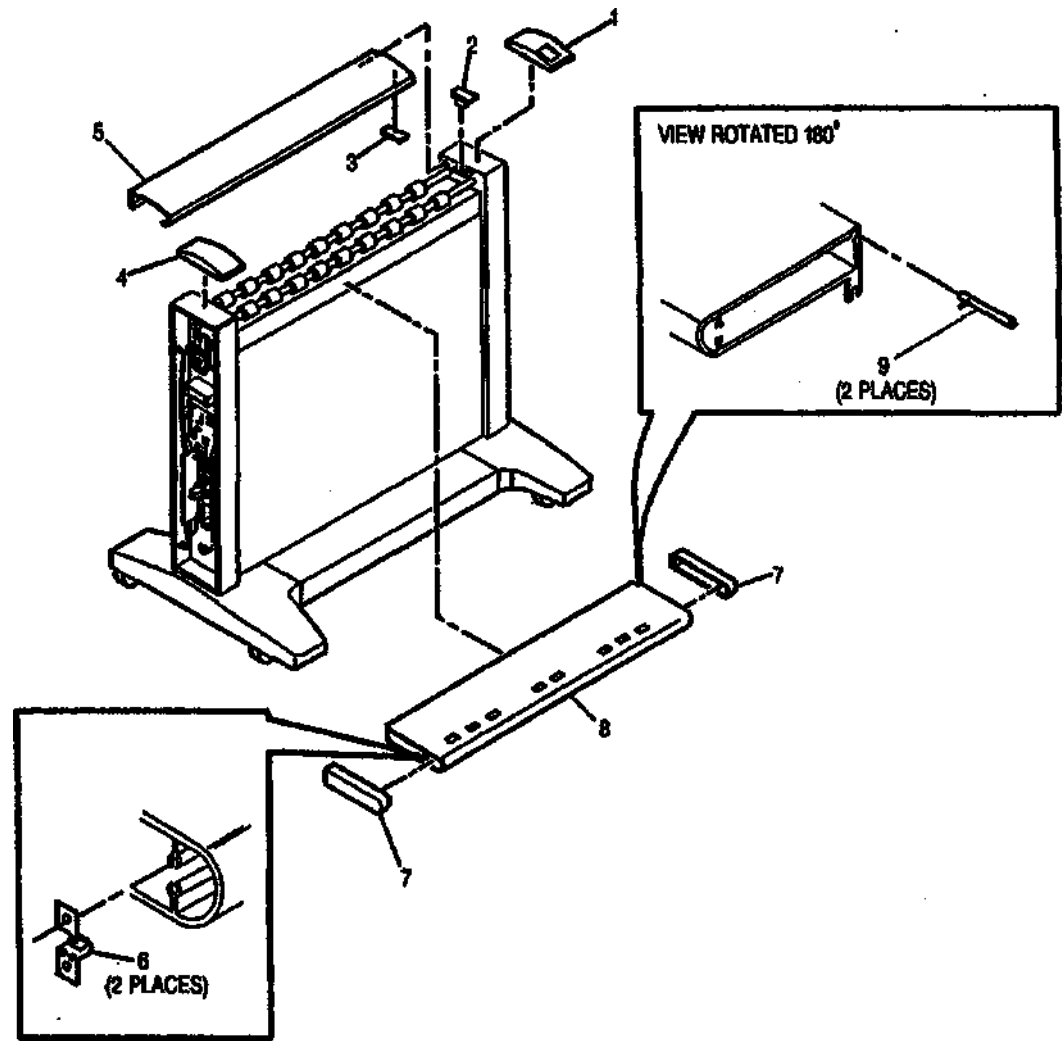
PL 6.1 OPTICS COMPONENTS

| ITEM | PART | DESCRIPTION |
|------|---------|---------------------------------|
| 1 | 19N357 | LAMP CLAMP |
| 2 | 113N280 | LAMP SOCKET |
| 3 | 122N103 | FLUORESCENT LAMP (REP 4.1.3) |



0000006A-SCH

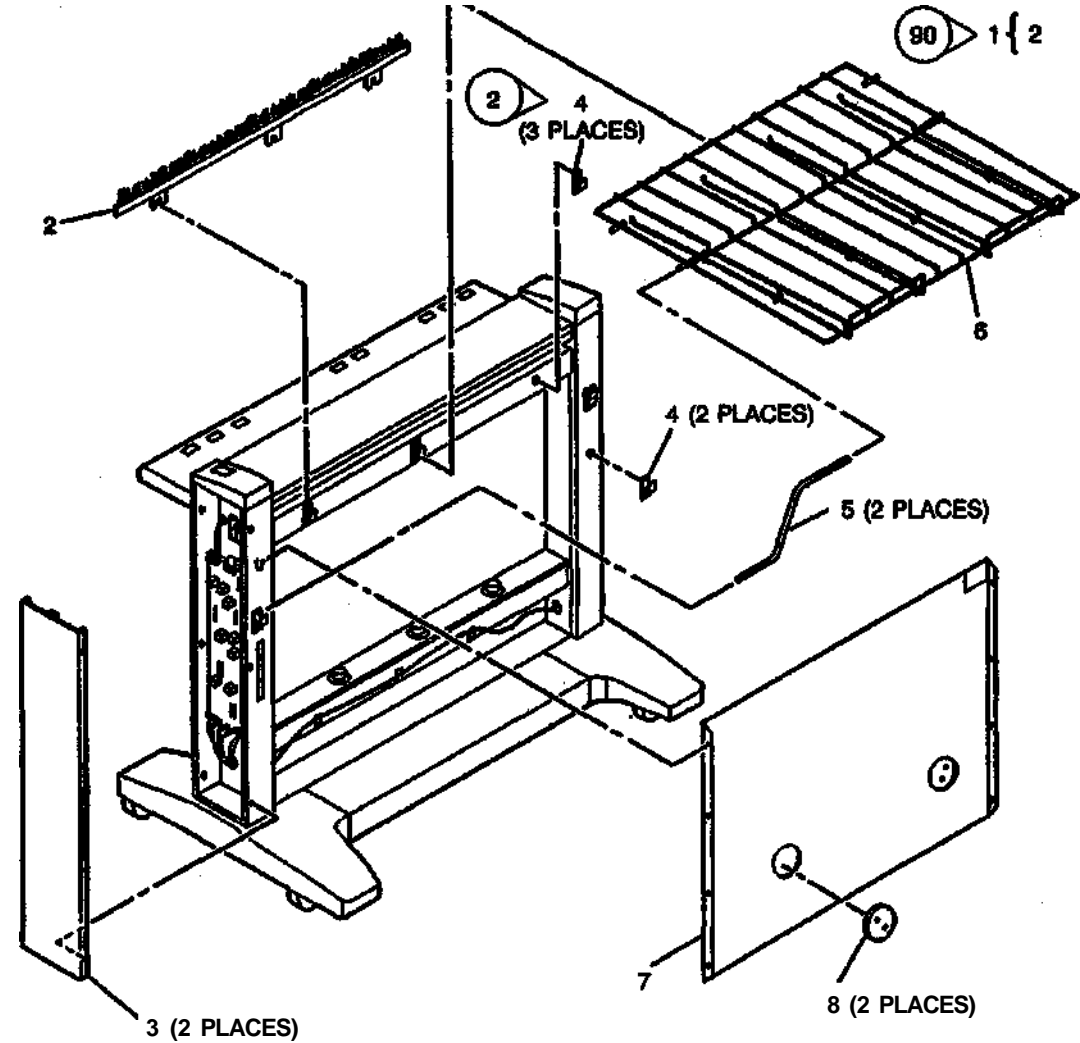
PL 14.1 FEED TRAY AND TOP COVER



| ITEM | PART | DESCRIPTION |
|------|-----------|------------------------------|
| 1 | 21N61 | RIGHT TOP CAP (REP 4.1.9) |
| 2 | 2N1382 | TOP COVER MAGNET |
| 3 | 91N427 | STRIKER PLATE |
| 4 | 21N62 | LEFT TOP CAP (REP 4.1.8) |
| S | 2N1484 | TOP COVER (W/O TAG 5) |
| - | 600K64670 | TOP COVER KIT (TAG 5) |
| 6 | 9N833 | SPRING CATCH CUP |
| 7 | 50N191 | FEED SHELF END CAP |
| 8 | 50N221 | FEED SHELF (W/O TAG 6) |
| - | 600K64680 | FEED SHELF KIT (TAG 6) |
| 9 | 29N151 | LOCKPIN |

0000007A-SCN

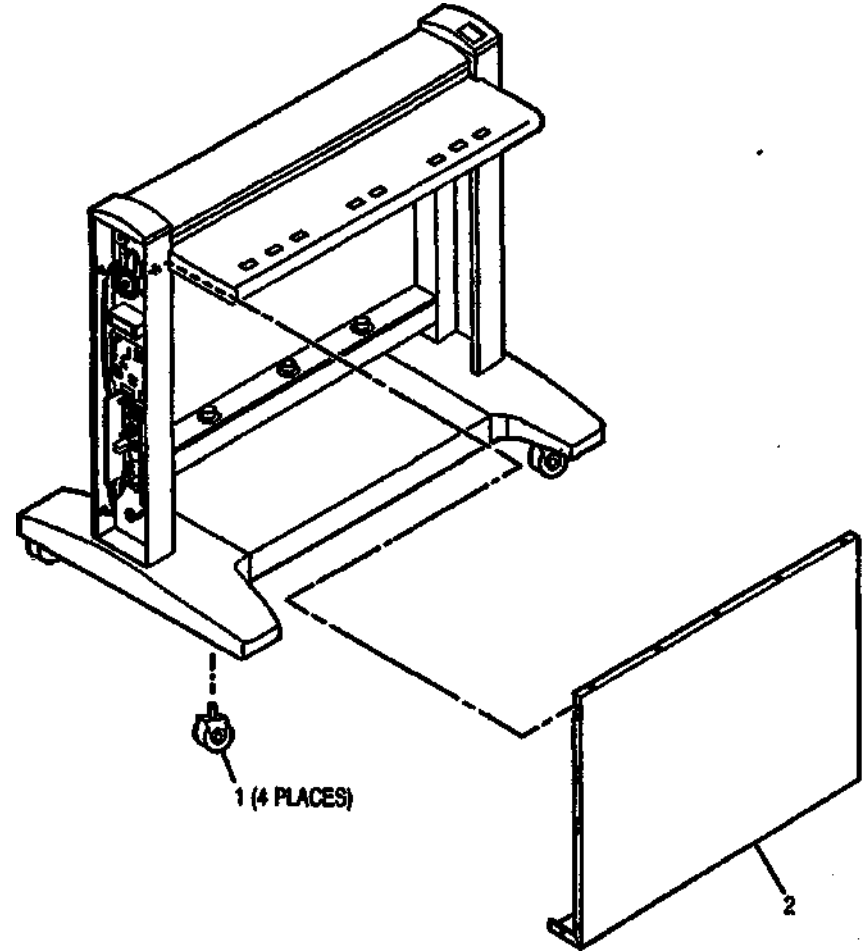
PL 14.2 REAR COVER AND SIDE PANEL



| ITEM | PART | DESCRIPTION |
|------|----------|--------------------------------|
| t | 606K6540 | STATIC ELIMINATOR KIT (TAG 90) |
| 2 | .. | STATIC ELIMINATOR (P/O ITEM 1) |
| 3 | 2N1381 | SIDE PANEL (REP 4.1.1) |
| 4 | 50N214 | BRACKET (W/TAG 2) |
| 5 | | TRAY SUPPORT (NOT SPARED) |
| 6 | 50K38140 | CATCH TRAY |
| 7 | 2N1378 | REAR COVER (REP 4.1.2) |
| 8 | 114N57 | HOLE PLUG |

PL 14.3 FRONT COVER AND CASTERS

| ITEM | PART | DESCRIPTION |
|------|--------|---------------|
| 1 | 17N135 | SWIVEL CASTER |
| 2 | 2N1380 | FRONT COVER |



| PART NUMBER | PL LOG. |
|----------------|------------|
| 2N1376 | 14.2 |
| 2N1380 | 14.3 |
| 2N1381 | 14.2 |
| 2N1382 | 14.1 |
| 2N1484 | 14.1 |
| 9N833 | 14.1 |
| 17N135 | 14.3 |
| 19N357 | 6.1 |
| 20N279 | 4.1 |
| 21N61 | 14.1 |
| 21N62 | 14.1 |
| 22N658 | 5.1 |
| 23N369 | 4.1 |
| 23N370 | 5.1 |
| 29N151 | 14.1 |
| 50N191 | 14.1 |
| 50N213 | 5.1 |
| 50N214 | 14.2 |
| 50N221 | 14.1 |
| 50K38140 | 14.2 |
| 56N128 | 5.2 |
| 62N100 | 5.1 |
| 91N427 | 14.1 |
| 104N23 | 1.1 |
| 105N1134 | 1.1 |
| 108N330 | 1.1 |
| 108N331 | 1.1 |
| 109N254 | 1.2 |
| 110N732 | 5.2 |
| 110N733 | 1.2 |
| 112N104 | 1.1 |
| 113N280 | 6.1 |
| 114N57 | 14.2 |
| 117N1136 | 5.2 |
| 117N1137 | 1.2 |
| 117N1138 | 1.2 |
| 117N1139 | 1.2 |
| 120N233 | 4.1 |
| 122N103 | 6.1 |
| 127N784 | 4.1 |
| 130N702 | 4.1 |
| 130N770 | 5.1 |
| 130N771 | 5.2 |
| 140N4719 | 1.1 |
| 140N4958 | 1.2 |
| 152N1552 | 1.1 |
| 152N1553 | 1.1 |
| 600K64650 | 5.1 |
| 600K64670 | 14.1 |
| 600K64680 | 14.1 |
| 606K6540 | 14.2 |

6. General Procedures

| Section Contents | Page |
|--|------|
| DIAGNOSTICS | 6-2 |
| Introduction..... | 6-2 |
| Installation of Diagnostic Software - Laptop Computer..... | 6-2 |
| Starting the Diagnostic Software from a Floppy Disk..... | 6-2 |
| Configuring for Extended Diagnostics - XPC/ES8150..... | 6-3 |
| Starting the Diagnostic Software - Laptop Computer..... | 6-4 |
| Problem Solving - Communications Error..... | 6-4 |
| Returning to Normal Configuration..... | 6-5 |
| Using the Diagnostic Software..... | 6-7 |
| Operating the Diagnostics..... | 6-8 |
| Normalize Scanner..... | 6-8 |
| Full System Test..... | 6-9 |
| Memory Tests..... | 6-9 |
| Component Tests..... | 6-11 |
| Calibrate Motor Speed..... | 6-11 |
| Calibrate Document Registration..... | 6-11 |
| Component Input Tests..... | 6-12 |
| Test Forward/Reverse Switch..... | 6-12 |
| Test Document Edge Sensors..... | 6-12 |
| Component Output Tests..... | 6-13 |
| Lamp State..... | 6-13 |
| Motor State..... | 6-13 |
| Motor Direction..... | 6-13 |
| Left to Right Stitch Alignment..... | 6-13 |
| Front to Back Stitch Alignment..... | 6-14 |
| Download Code..... | 6-15 |
| Scan and View..... | 6-16 |
| Scan and View Screen..... | 6-16 |
| Raster View Screen..... | 6-17 |
| Read NVR..... | 6-18 |
| Restore Factory NVR Values..... | 6-19 |
| Set Machine Motor Speed..... | 6-20 |

| Section Contents | Page |
|--|------|
| SCANNER INSTALLATION | 6-21 |
| Scanner Preparation..... | 6-21 |
| Connecting the Scanner to the ES8150 System W/O Tag 9..... | 6-22 |
| Connecting the Scanner to the ES8150 System With Tag 9 or to the Xerox Productivity Centre..... | 6-24 |
| Connecting the Scanner to Other Systems..... | 6-26 |
| SCSI Connections..... | 6-26 |
| SCSI Termination..... | 6-26 |
| Installation - Other Systems..... | 6-28 |
| CHANGE TAG/ MOD INDEX | 6-30 |

Diagnostics

Introduction

This subsection describes the use of the diagnostics software that is used to isolate faults in the 7356 Scanner. The diagnostic software enables access to the diagnostic routines contained in the Scanner.

8830 DDS: Refer to the 8830 DDS Service Manual Section 6

ES8150/XPC: in the case of System Interconnection Modules (SIM), the diagnostic software is already loaded into the control computer of the SIM as part of the user interface (UI) software. No additional installation is required. To use the diagnostics, the SCSI port of the Scanner must first be disconnected from the SCSI port of the VME module in the SIM and connected directly to the SCSI port of the control computer inside the SIM.

In the case of Scanners used in standalone and third-party systems, the diagnostics software is either loaded onto a laptop computer brought to the customer's site by the customer service representative, or run from a floppy disk inserted into the customer's computer that controls the Scanner. The laptop contains the diagnostic software and the Microsoft Windows operating system under which the software runs.

Installation of Diagnostic Software - Laptop Computer

Perform the following steps to install the diagnostic software on the computer used to control the Scanner.

1. Ensure that the computer is running Microsoft Windows 3.1, 3.1.1, or Windows 95. MS-DOS 6.2 or better must also be present. The diagnostic software will only operate under one of these operating systems.
2. Close any applications running under Windows at the time.
3. Insert the floppy disk that contains the diagnostic software into the floppy disk drive.
4. (Figure 6-1): Open the Program Manager in Windows, and choose RUN from the File Menu.
5. Type A: Setup and press the <Enter> key.
6. Follow the directions on the screen to complete the installation.

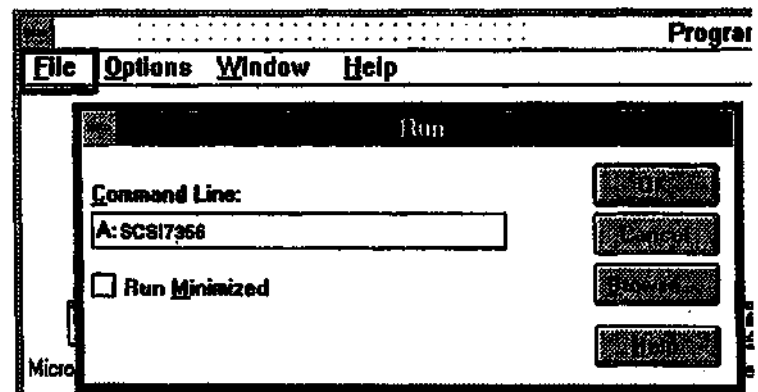


Figure 6-1. Running the Setup Program

Starting the Diagnostic Software from a Floppy Disk

1. Ensure that the computer is running Microsoft Windows 3.1, 3.1.1, or Windows 95. MS-DOS 6.2 or better must also be present. The diagnostic software will only operate under one of these operating systems.
2. Close the Windows Program Manager.
3. Switch off the computer and the Scanner.
4. Connect the SCSI cable from the Scanner to the SCSI port of the computer on which the diagnostics will be run.
5. Switch on the Scanner.
6. Switch on the computer, allow it to boot, and type WIN to start Windows.
7. Insert the **SCSI7356** floppy disk into the floppy disk drive.
8. Open the Program Manager in Windows, and choose RUN from the File Menu.
9. Type A: SCSI7356 and press the <Enter> key.
 - The software starts. Enter the password **ES8150** and press the <Enter> key on the keyboard. Then select the **Begin** button. Refer to *Using the Diagnostic Software* for further instructions.

Configuring for Extended Diagnostics - XPC/ES8150

When the Scanner is used in the XPC/ES8150 environment, the Scanner must be connected directly to the UI Computer in the SIM before the diagnostics can be used. This subsection describes how to start the diagnostic software when an ES8150 SIM or a Xerox Productivity Centre is used as the controlling device for the Scanner.

1. Switch off the System Integration Module (SIM) and the Scanner.
2. (Figure 6-2): Connect the Scanner SCSI Cable directly to the SCSI port on the User Interface Computer, if not already done during the installation of the Scanner.

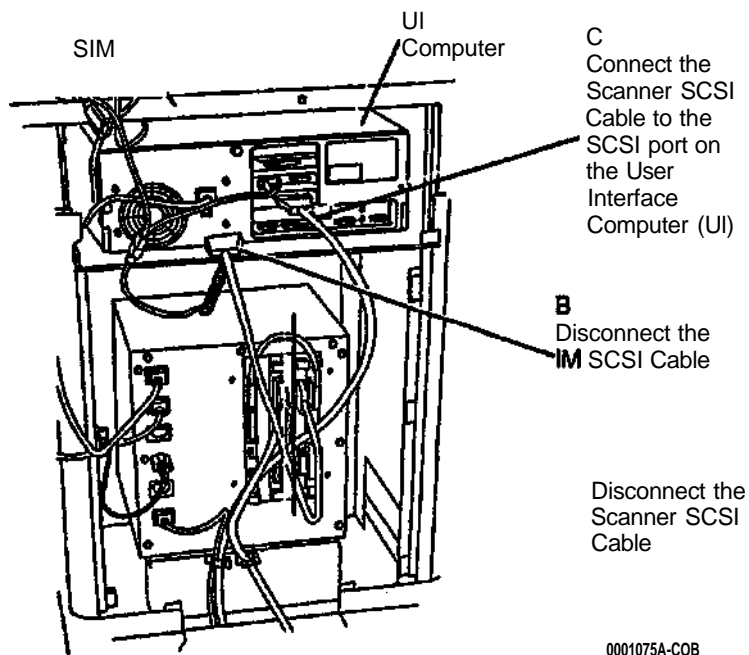


Figure 6-2. Connecting the Scanner to the SIM

3. Ensure that all other SCSI connections are disconnected from the Scanner.
4. Switch on the Scanner and SIM, and allow the SIM to complete the boot process.
 - A screen is displayed that states: "Could not establish communication with the SIM..." This is normal in diagnostic mode.
5. Press the OK button.
 - The User Interface screen is displayed. "No SCSI" may be displayed above the Scanner and Printer icons. This is normal.
6. Enter the Tech Rep mode by pressing <control> <F12>. The password is **7336884**. Press OK after entering the password.
7. Select the **Diagnostics** button, the OK button, the **Scanner Tests** button, the **Extended Diagnostics** button, and the **OK** button.

*Note: The **Normalize Scanner** button, displayed above the **Extended Diagnostics** button, does not work when the Scanner is directly connected to the UI computer. In this configuration, you must use the test available inside the extended diagnostics program to normalize the Scanner.*

- A screen is displayed, reminding you that "SCSI Connection from PC to 7356 Required". You have already made this connection. Press OK.

If the Scanner has not completed its initialization, a screen is displayed with the message, "The Scanner is warming up. This could take as long as 3 minutes. If you do not wish to wait for the Scanner to warm up, select the Exit button to terminate the program."

Once the Scanner has completed its initialization, this screen disappears.

- The software starts.

1. Enter the password **ES8150** and press the <Enter> key on the keyboard.
2. Press the **Begin** button on the screen.
3. Press the **Normalize Cameras** button.
- At this point you may normalize the Scanner's cameras, or you may skip the test by pressing **Exit**. If you plan to perform any diagnostic tests that require making an image, you should first perform a camera normalization. Refer to *Using the Diagnostic Software* for further information about features of the Diagnostic Software.

Starting the Diagnostic Software - Laptop Computer

Do the following steps to start the diagnostic software when a laptop computer is used to run the diagnostics for the Scanner. See Figure 6-4.

1. Switch off the Scanner, the laptop computer, and the control computer for the system to which the Scanner is connected.
2. Disconnect the Scanner SCSI Cable from the control computer.
3. Connect the Laptop Computer SCSI cable to the Scanner.
4. Ensure that all other SCSI connections are disconnected from the Scanner.
5. Switch on the Scanner and wait 10 seconds.
6. Switch on the Laptop Computer and allow it to complete the boot process.

l) Locate the SCSI7356 program and start it.

8. Enter the password **ES8150** and press the <Enter> key *on the keyboard*.
 9. Press the **Begin** button on the screen.
 10. Press the **Normalize Cameras** button.
- At this point you may normalize the Scanner's cameras, or you may skip the test by pressing **Exit**, if you plan to perform any diagnostic tests that require making an image, you should first perform a camera normalization. Refer to *Using the Diagnostic Software* for further information about features of the Diagnostic Software..

Problem Solving - Communications Error

If the **Communications Error** screen is displayed after starting the SCSI7356 software:

- Switch off the Scanner and the controlling computer.
- Check that the SCSI cable is firmly connected to the Scanner and the SCSI adapter port of the computer.

- Switch on the Scanner; then switch on the computer.
- During the boot process, check that the following message is displayed:

Host Adapter #0 - SCSI ID 0 - LUN 0: Xerox 7356 00xx

If the message is *not* displayed, or "No SCSI devices found!" is displayed, then there is a SCSI communications problem between the Scanner and the computer that must be resolved before the software can operate.

- If the computer has communicated successfully with other SCSI devices, then the fault is probably in the Scanner or the SCSI cable. Go to Section 2 of this Service Manual and isolate the fault.
- If the Scanner has communicated successfully with the customer's host system during the service call, but not with the computer being used to run the SCSI7356 software, then the fault is probably in the SCSI cable or the computer. Check the cable, by substitution if possible. If the fault still exists, then the fault must be corrected in the computer or the SCSI adapter in the computer.
- if the customer's computer is running the SCSI7356 software, isolate the fault by using the laptop computer instead.
- If the laptop computer is running the SCSI7356 software, isolate the fault by using the customer's computer instead. The software may be run from a floppy disk, avoiding the need to actually install the software on the customer's computer.
- the SCSI cable may be too long
- The SCSI bus may not be terminated correctly. Go to *SCSI Connections* and *Scsi Termination* for more information.

If the message is displayed, then:

- the SCSI cable may be too long
- The SCSI bus may not be terminated correctly. Go to *SCSI Connections* and *SCSI Termination* for more information.

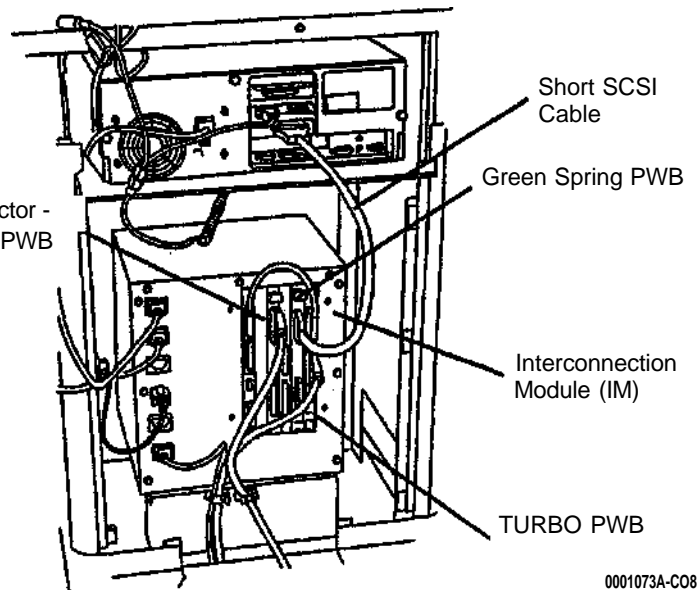
Returning to Normal Configuration

If the Scanner is used with a controlling device other than the Xerox Productivity Centre (XPC) or the ES8150 System Interconnection Module (SIM), connect the Scanner as it was before configuring for diagnostics.

If the Scanner is used with the XPC or the ESB150 SIM, do the following steps:

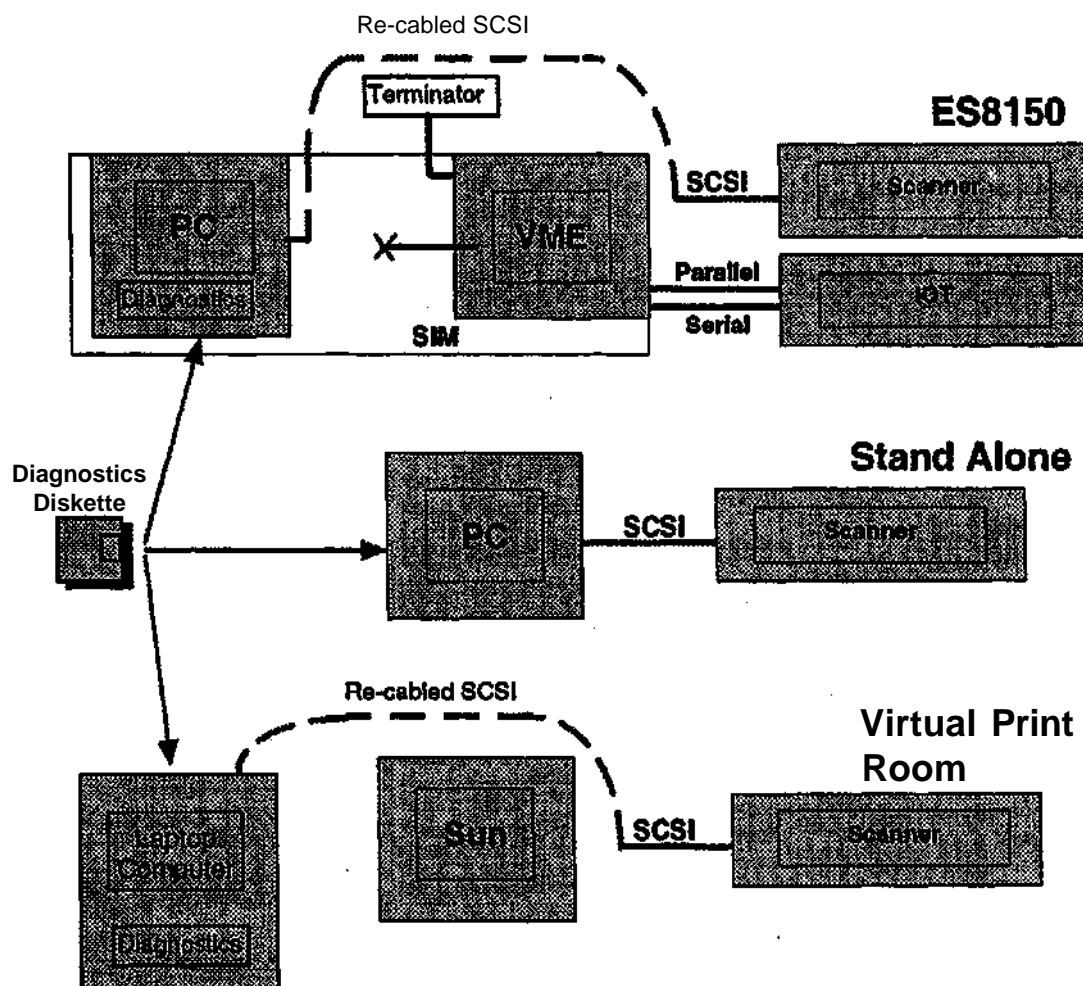
1. Exit from the diagnostic software.
2. Switch off the Scanner and the XPC/SIM.
3. (Figure 6-2): Disconnect the Scanner SCSI cable from the SCSI port on the UI.
4. Connect the Scanner SCSI cable to:
 - a. the **SCSI B** connector on the TURBO PWB if a TURBO PWB is installed.
 - b. the **SCSI** connector on the SCAN PWB, if a TURBO PWB is not installed.
5. Connect the short SCSI cable from the Green Spring PWB to the SCSI port on the UI.
6. Switch on the Scanner.
7. Switch on the XPC/SIM.

SCSI
Connector -
SCAN PWB



0001073A-C08

Figure 6-3. Normal Cable Connections - XPC



COB048A

Figure 6-4. Re-cabling the Scanner for Diagnostics

Using the Diagnostic Software

After the diagnostic software is started, the Welcome screen is displayed

If the diagnostic software can not communicate with the scanner, the **Communication Error** screen is displayed (Figure 6-5). If the Scanner has not yet warmed up completely or there is a connection fault, the **Communications Error** screen may be displayed.

The **Retry** button attempts to establish communications with the Scanner. The **Exit** button terminates the program.

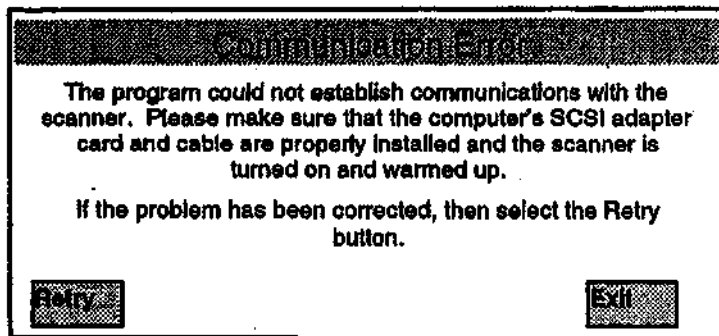


Figure 6-5. Communication Error Screen

if the scanner is still initializing, a screen may be displayed. If the diagnostic software can communicate satisfactorily with the Scanner, the Password Entry screen is displayed (Figure 6-6).

Enter **ES8150** in the Password box provided, and press the Enter key. If the password is valid, the **Begin** button becomes selectable. Select the **Begin** button to gain access to the program.

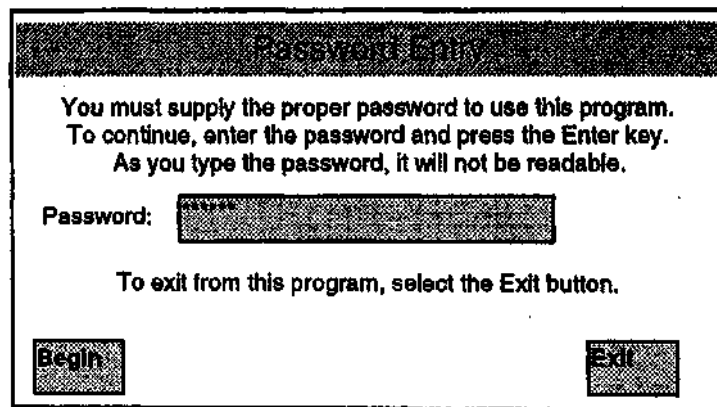
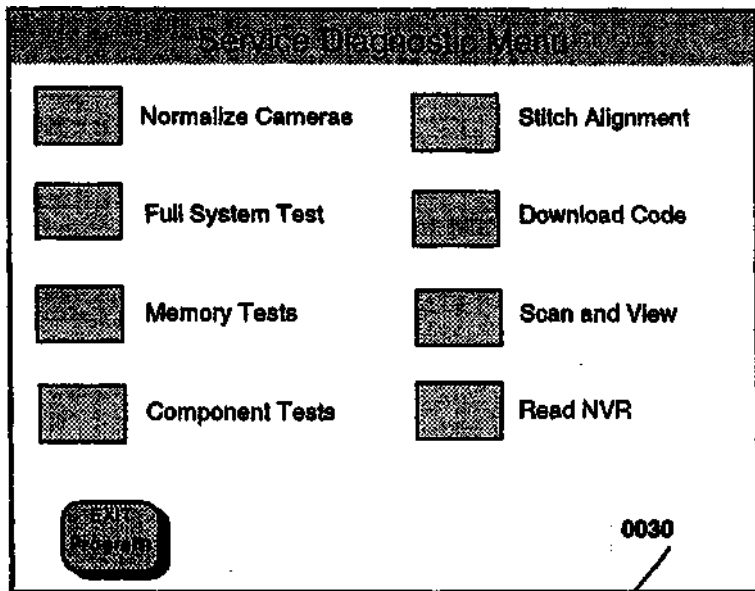


Figure 6-6. Password Entry Screen

After password entry and validation, the **Service Diagnostic Menu** screen (Figure 6-7) is displayed, but only the **Normalize Cameras** button is enabled. Each button calls an appropriate screen for the operation selected. The **Exit Program** button immediately terminates the diagnostics program and returns to the initiating program, if any.

Note: If the Normalize Cameras test fails, a warning is displayed stating that the image quality test results may be invalid without successful normalization.

The normalization test may be performed again at any time; but each time the diagnostic program is started, normalization must be done before any other tests can be performed .



Scanner
Firmware
version

Figura 6-7. Service Diagnostic Menu Screen

Operating the Diagnostics

This subsection describes the operation of each available diagnostic test or function. Once the initial normalization is passed, click on the **Exit** button to return to the **Service Diagnostic Menu** (Figure 6-8).

Normalize Scanner

Clicking the **Normalize Cameras** button displays the **Normalize Cameras** screen (Figure 6-8). This test causes the Scanner to recalculate its normal reference parameters . The Document Hold-down Guide must be in position before beginning the test.

Selecting the **Begin** button will begin the test. The test report is "Passed" or "Failed".

The **Exit** button returns to the **Service Diagnostic Menu** screen.

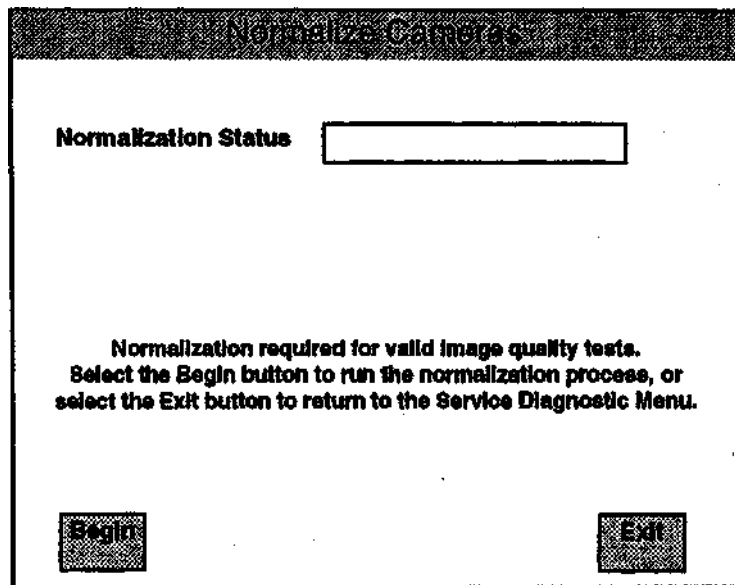


Figure 6-8. Normalize Scanner Screen

Full System Test

Selecting the **Full System** Test button displays the **Full System Test** screen (Figure 6-9). This test operates the complete set of diagnostic tests. Each test is reported as "Passed" or "Failed". The test currently being operated is shown as "Running". Tests that have not yet been done have no results displayed.

Selecting the **Begin** button will start the sequence of tests again.

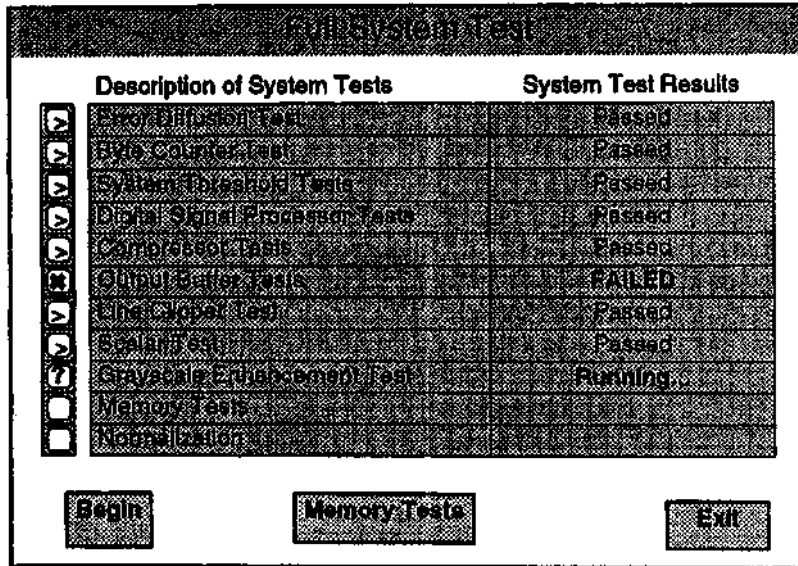


Figure 6-9. Full System Test Screen

The **Exit** button returns to the Service Diagnostic Menu screen.

Memory Tests

The **Memory Tests** screen (Figure 6-10) is accessed by selecting the **Memory Tests** button on the **Service Diagnostics Menu** screen or the **Full System Test** screen.

- Selecting the **Begin** button will start the tests. Each test will be executed, and evaluated as Passed or FAILED. When the last test is complete, the first test is executed again.
- The tests may be stopped at any time by selecting the **Stop** button.
- The **System Tests** button returns to the **Full System Tests** screen.

Memory Tests

| | Description of Memory Tests | Memory Test Results |
|--------------------------|-----------------------------|---------------------|
| <input type="checkbox"/> | Line Memory | |
| <input type="checkbox"/> | Normalization Memory | |
| <input type="checkbox"/> | Map Memory | |
| <input type="checkbox"/> | System Memory | |
| <input type="checkbox"/> | ROM Memory | |
| <input type="checkbox"/> | Non-Volatile RAM | |
| <input type="checkbox"/> | Output FIFO Memory | |
| <input type="checkbox"/> | Scale Memory | |
| <input type="checkbox"/> | Grayscale Enhancement RAM | |

Begin
Stop
System Tests
Exit

Memory Tests

| | Description of Memory Tests | Memory Test Results |
|-------------------------------------|-----------------------------|---------------------|
| <input checked="" type="checkbox"/> | Line Memory | Passed 0 |
| <input checked="" type="checkbox"/> | Normalization Memory | Passed 0 |
| <input checked="" type="checkbox"/> | Map Memory | Passed 0 |
| <input checked="" type="checkbox"/> | System Memory | Passed 0 |
| <input checked="" type="checkbox"/> | ROM Memory | Passed 0 |
| <input checked="" type="checkbox"/> | Non-Volatile RAM | Failed 0 Passed 0 |
| <input checked="" type="checkbox"/> | Output FIFO Memory | Failed 0 |
| <input checked="" type="checkbox"/> | Scale Memory | Running 0 |
| <input checked="" type="checkbox"/> | Grayscale Enhancement RAM | Passed 0 |

Begin
Stop
System Tests
Exit

Figure 6-10. Memory Tests Screen

Component Tests

Clicking the **Component Tests** button displays the **Component Detail Tests** screen (Figure 6-11). This screen provides access to the **Calibrate Motor Speed test** and the **Calibrate Document Sensors** tests. Each test requires a specified Test Pattern. The test pattern should be inserted before executing the test. Refer to Section 4 for instructions for these tests.

The **Input Tests** button displays the **Component Input Tests** screen, discussed later.

The **Output Tests** button displays the **Component Output Tests** screen, discussed later.

The **Exit** button returns to the **Service Diagnostic Menu** screen.

Calibrate Motor Speed

The **Calibrate Motor Speed (ADJUST)** button adjusts the machine motor speed to achieve the correct document transport speed and remove magnification error in the process direction. If the motor speed is incorrect, an adjustment is automatically made. If a correct speed is achieved, Passed is displayed; FAILED is displayed otherwise. Go to ADJ 4.1.1 in Section 4 for instructions.

Calibrate Document Registration

The **Calibrate Document Registration** button compensates for the actuation timing of the two document sensors so that the document lead edge is correctly positioned prior to the start of a scan. If the timing is correct, Passed is displayed; FAILED is displayed otherwise. Go to ADJ 4.1.2 in Section 4 for instructions.

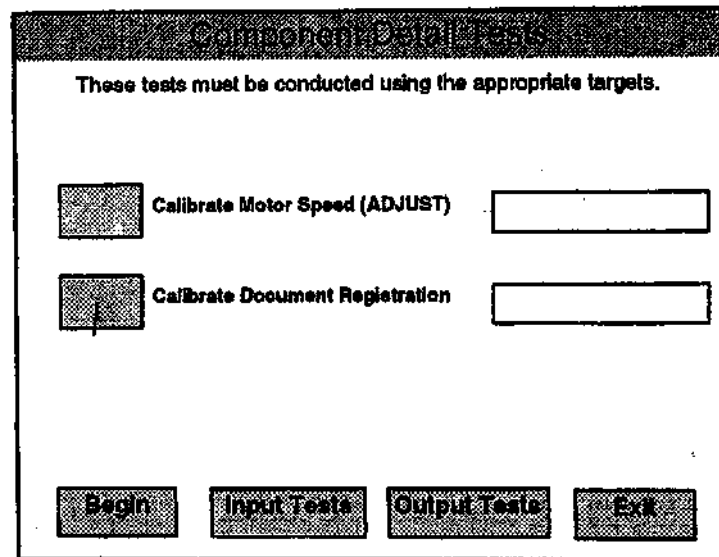


Figure 6-11. Component Detail Tests Screen

Component Input Tests

The **Component Input Tests** screen (Figure 6-12) allows the testing of the Forward/Reverse Switch and the two document edge sensors.

Once the **Begin** button is selected, the logic states of the signal lines connected to the component are displayed. The states are displayed as **HIGH** or **LOW**. During these tests, no other changes in machine state occur.

- The **Begin** button executes the selected test, and must be selected before any signal status indications can be observed.
- The **Halt** button halts the selected test.
- The **Detail Tests** button returns to the **Component Detail Tests** screen.
- The **Output Tests** button advances to the **Component Output Tests** screen.

Component Input Tests

Test Forward/Reverse Switch

| Forward | Reverse |
|---------|---------|
| HIGH | HIGH |

Test Document Edge Sensors

| Front | Rear |
|-------|------|
| | |

Each test will indicate the physical state of its control devices by displaying either the word "HIGH" when the device is deactivated (OFF) or the word "LOW" when the device is activated (ON).

Begin Halt Detail Tests OutputTest Exit

Test Forward/Reverse Switch

The **Test Forward/Reverse Switch** box displays the logic state of the signal lines connected to the switch. The switch may be actuated, and the changes in the logic state may be observed.

Test Document Edge Sensors

The **Test Document Edge Sensors** box displays the logic state of Edge Present Sensor (front) and the Edge Registered Sensor (rear). The sensors may be manually actuated, and the changes in the logic state may be observed.

Component Input Tests

Test Forward/Reverse Switch

| Forward | Reverse |
|---------|---------|
| | |

Test Document Edge Sensors

| Front | Rear |
|-------|------|
| HIGH | HIGH |

Each test will indicate the physical state of its control devices by displaying either the word "HIGH" when the device is deactivated (OFF) or the word "LOW" when the device is activated (ON).

Begin Halt Detail Tests OutputTest Exit

Figure 6-12. Component Input Test Screens

Component Output Tests

(Figure 6-13): The Component Output Tests screen allows the testing of the Exposure Lamp and the Motor.

Lamp State

The **Lamp State** buttons switch the Exposure Lamp on or off.

Motor State

The **Motor State** buttons switch the Motor on or off.

Motor Direction

The **Motor Direction** buttons select the forward or reverse direction of motor operation.

- The **Detail Tests** button returns to the Component Tests screen.
- The **Input Tests** button advances to the Component input Tests screen.
- The **Exit** button displays the Service Diagnostic Menu screen.

Note: The **Lamp State** must be set ON and the **Motor State** must be set OFF before the **Exit**, **Detail Tests**, or **Input Test** buttons become active.

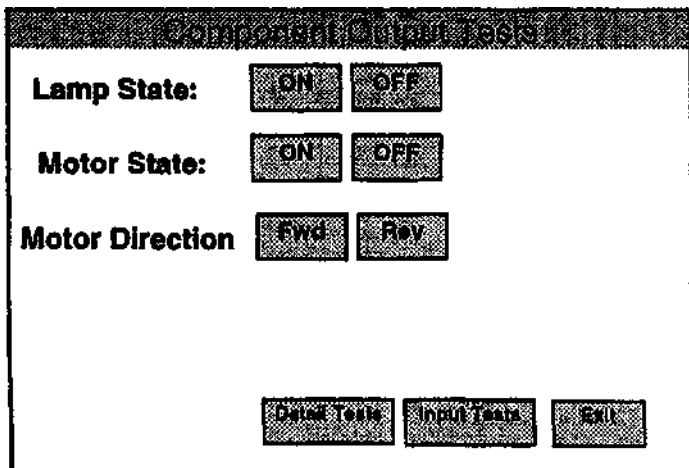


Figure 6-13. Component Output Tests Screen

Left to Right Stitch Alignment

(Figure 6-14): Selecting the **Stitch Alignment** button on the Service Diagnostic Menu displays the Left to Right Stitch Alignment screen. This test evaluates the left to right stitch alignment of the three cameras and makes an automatic electronic adjustment if required. Go to ADJ 4.1.4 for detailed instructions on the performance of this test.

Note Insert the correct target before starting the test

- The **Begin** button executes the test.
- The **Do F/B Align** button advances to the Front to Back Stitch Alignment screen.
- The **Exit** button displays the **Service Diagnostic Menu** screen.

Note: The left-right stitch adjustment is made by changing the range of active elements in the camera Charge-Coupled Device (CCD) arrays until there is no overlap or gap in the three images. If the available range of elements is not sufficient to achieve a correct alignment, the message "Camera X could not be aligned" is displayed. Mechanical alignment of the camera cannot be done in the field. Contact technical operations to arrange for an exchange of the Scanner.

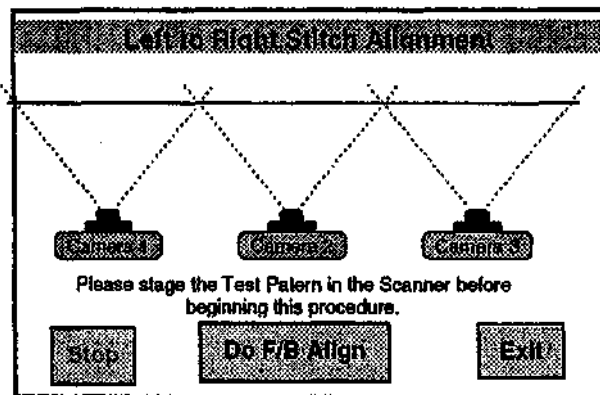


Figure 6-14. Left to Right Stitch Alignment Screen

Front to Back Stitch Alignment

(Figure 6-15): This test evaluates **the** front to back stitch alignment of the three cameras. If the alignment is not correct, a mechanical adjustment must be made. Go to ADJ 4.1.3, Section 4 of this service manual for detailed instructions on this adjustment.

The screen indicates that both Camera 1 and Camera 3 are not aligned correctly. Camera 1 must be adjusted toward the back of the scanner to eliminate the 15 pixel alignment difference (front to back gap) between Camera 1 and Camera 2, and Camera 3 needs to be adjusted 30 pixels toward the front of the scanner to properly align it with Camera 2.

- Insert the required test pattern face down in the Scanner.
- Select the **Camera 1** button, and select the **Begin** Button.

*Note: The **Begin** button becomes the **Halt** button after selection.*

- Turn the Camera 1 Adjustment Screw until the alignment bar for Camera 1 is in line with the Reference Bar for Camera 2.
- Select the **Halt** button.
- Select the **Camera 3** button and adjust the Camera 3 alignment screw until the alignment bar for Camera 3 is in line with the Reference Bar for Camera 2.

When the alignment bars of both cameras are in line with the reference bar for Camera 2, the test is complete.

- The **Begin** button starts the selected camera alignment. Once selected, the label changes to **Halt**.
- The **Do L/R Align** button returns to the **Left to Right Stitch Alignment** screen.
- The **Exit** button displays the **Main Diagnostic Menu** screen.

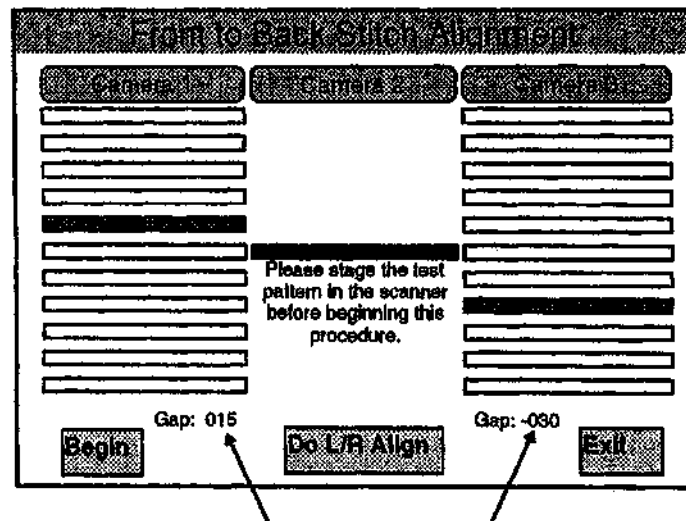


Figure 6-15. Front to Back Stitch Alignment Screen

Download Code

Selecting the **Download Code** button displays the Download Code screen.

- The box to the right of **Scanner Firmware** displays the firmware version on the upgrade diskette (if inserted in the drive) and the version presently installed in the Scanner. This button must be selected, and a valid upgrade diskette must be in the floppy disk drive, before the **Begin** button can be selected.
- Once the software detects that a valid upgrade disk is present, the message changes to : "Select the **Begin** button when you are ready to proceed." The **Begin** button becomes selectable.
- Selecting the **Begin** button Installs the new version. Once the upgrade process has started, It must be allowed to complete.

CAUTION

Ensure that power Is maintained to the Scanner and SIM/XPC during the upgrade process, and that the process is allowed to terminate normally. Any interruption of the upgrade process results in the unrecoverable corruption of the firmware memory in the Scanner, requiring replacement of the Control PWB.

Several blocks of code are downloaded and verified. The screen shows each block that is downloaded. When the process Is complete, the Scanner reboots, and the flashing message "Warming Up" is displayed. This message disappears when the reboot process is complete. The version number displayed in the **Installed** box is now the same as the version on the upgrade disk.

The **Exit** button returns to the **Main Diagnostic Menu** screen.

After downloading a new version of the scanner firmware, check the following adjustments:

- Calibrate Document Registration (ADJ 4.1.2)
- Front to Back Stitch (ADJ 4.1.3)
- Left to Right Stitch (ADJ 4.1.4)

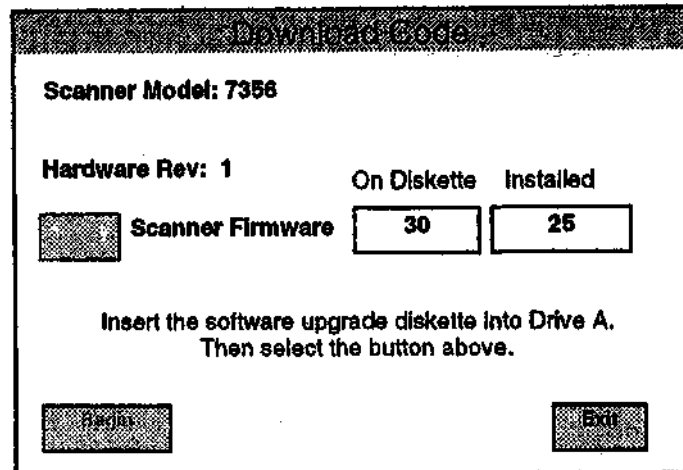


Figure 6-16. Download Code Screen

Scan and View

Scan and View Screen

Selecting the **Scan and View** button displays the **Scan and View** screen.

Entering the length and width of the image, in pixels, tells the scanner the size, in pixels, of the image to create. This value is displayed to the right of **Bytes Expected**. Select the **Update** button to enter these values and perform this calculation.

*Note: The image captured in this mode is a 400 dots per inch (160 dots per cm) image. Thus, to capture an image on media 8 inches wide by 12 inches long, enter 3200 (8 x 400) in the **Width** box and 4800 (12 x 400) in the **Length** box.*

Selecting **Binary** converts the image to a black and white image in which the scanned pixels with a value greater than the threshold value are assigned a value of white (1) and the pixels with a lesser or equal value are assigned a value of black (0).

Selecting **Dithered Halftone** simulates a grayscale image using patterns of black and white pixels.

Selecting **Error Diffusion** simulates a grayscale image using patterns of black and white pixels. The values are assigned using the scanner's built in error diffusion algorithm.

Load Medium returns any loaded document to the starting position.

Unload Medium ejects any loaded document to the rear of the scanner.

Selecting **Start Scan** scans the document and creates a raster view image on the hard disk. The result is not displayed.

Selecting **View Image** opens and displays the file created by the **Start Scan** operation.

Selecting the **Exit** button returns to the **Main Diagnostic Menu** screen.

The screenshot shows the 'Scan and View' interface. At the top, the title 'Scan and View' is displayed. Below the title, there are two main sections. On the left, there is a box containing 'Length' and 'Width' labels, each followed by a text input field. The 'Length' field contains the value '6800' and the 'Width' field contains '4400'. Below these fields is an 'Update' button. To the right of this box is another box titled 'Statistics'. Inside the 'Statistics' box, there are labels for 'Bytes Expected: 3440000', 'Bytes Received:', 'Lines:', and 'Line Width:'. Below the 'Statistics' box are two buttons: 'Load Medium' and 'Unload Medium'. At the bottom of the screen, there is a box titled 'Output Type' containing three radio button options: 'Binary' (which is selected), 'Dithered Halftone', and 'Error Diffusion'. Below the 'Output Type' box are three buttons: 'Start Scan', 'View Image', and 'Exit'.

Figure 6-17. Scan and View Screen.

Raster View Screen

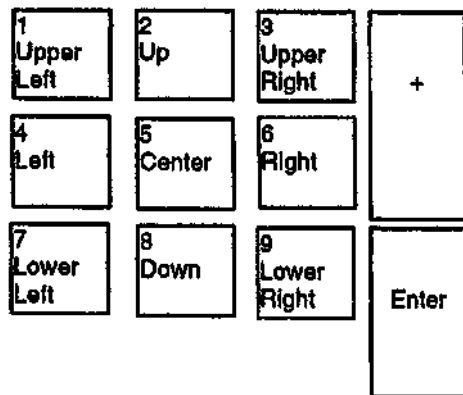
The **Raster View** window is controlled from the menu bar.

| | | | |
|------|--------|-----|----------------|
| Exit | [Scale | Pan | Preserve Black |
|------|--------|-----|----------------|

- Clicking on **EXIT** returns to the **Scan and View** screen.
- Scale** offers the following scale views of the image:
 - 100%
 - 50%
 - 25%
 - 12.5%
- Pan** moves the viewing window over the image. The keys of the numeric keypad can also control the movement of the viewing window over the image as shown below. The **Pan** menu provides an alternative method.

The **Center** key moves the viewing window over the approximate center of the image.

If the image is smaller than the viewing window, the Pan function has no effect.



- Preserve Black** reduces the disappearance of fine lines when a reduced scale is used.

*Note: avoid the use of reduced scales and the **Preserve Black** feature when evaluating image quality since these features give a false impression of the true image quality.*

When viewing the image in a reduced view, use the keypad panning keys or the **Pan** menu to bring the area into view that must be examined. Then touch that area on the screen. The image is enlarged to 100% with the new view centered on the point touched.

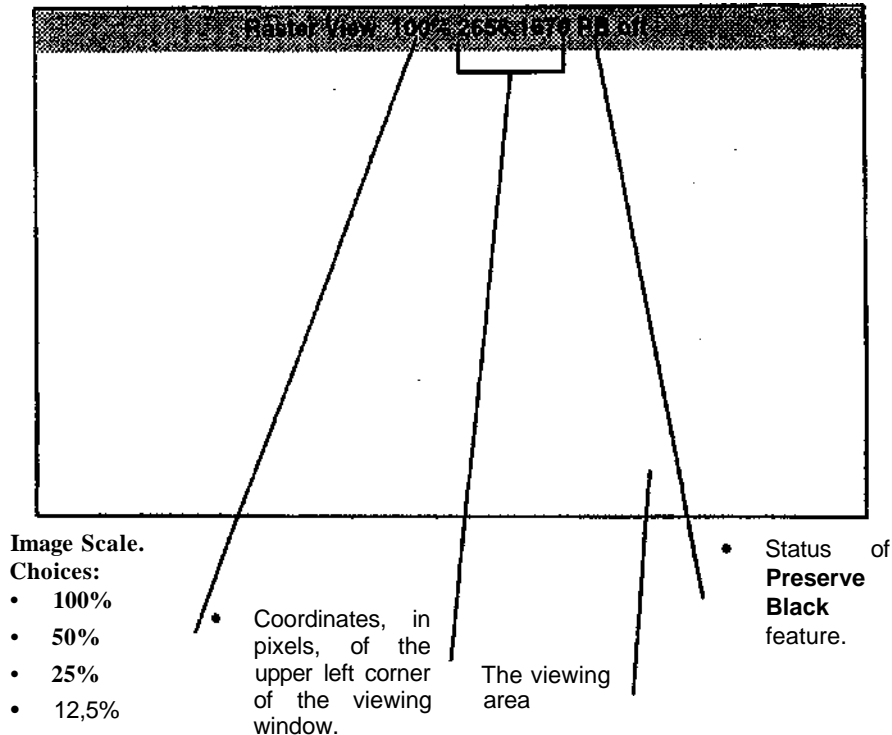


Figure 6-18. Raster View Screen

Read NVR

Selecting the **Read NVR** button displays the **Read NVR** screen.

This screen displays the hexadecimal contents of the non-volatile RAM in the Scanner. These values cannot be changed from this screen.

Selecting the **Set Motor Speed** button displays the **Set Motor Speed** screen.

| Read NVR | |
|-------------------------|------------------------------------|
| 87 88 87 88 88 88 88 88 | (Stitch Values) |
| 00 00 00 00 00 00 00 00 | |
| B9 B4 BB 45 4F 4B 80 19 | (DAC Values) |
| 30 31 31 8C 96 8B 80 80 | |
| 8C 70 84 80 80 80 80 80 | |
| 00 00 00 00 00 00 00 00 | |
| 00 00 00 00 00 00 00 00 | |
| 00 00 00 00 00 00 00 00 | |
| 00 00 00 00 00 00 00 00 | |
| E8 03 00 00 E7 03 00 00 | (mtr speed: machine/adf) |
| 9C 03 AC 06 F0 00 00 00 | (dist betw switches/Normalization) |
| 00 00 00 00 00 00 00 00 | |
| 00 00 00 00 00 00 00 00 | |
| 00 00 00 00 00 00 00 00 | |
| 00 00 00 00 00 00 00 01 | checksum of NVR |
| Set Motor Speed | Exit |

Figure 6-19. Read NVR Screen

Restore Factory NVR Values

Selecting the **Restore NVR Default Values** button restores the values stored in the NVR to the factory default values. Occasionally, the contents of NVR may become corrupted. Restoring the factory default values may restore normal operation.

When the Restore NVR Defaults button is selected, the following screen is displayed:

**This will restore NVR to default values.
Is that what you want to do?**

OK

Cancel

Click OK to restore the factory default values.

The Scanner resets. When the Scanner has completed the warm-up sequence, restore the operating values by performing the following adjustments:

1. ADJ 4.1.5 Camera Normalization
2. ADJ 4.1.4 Left to Right Stitch
3. ADJ 4.1.3 Front to Back Stitch
4. ADJ 4.1.1 Calibrate Motor Speed
5. ADJ 4.1.2 Calibrate Document Registration.

Refer to Section 4 of this service manual.

| Read NVR | | | | | | | | | | | | | | | |
|------------------------------------|--|--|--|----------------------|--|--|--|------|--|--|--|--|--|--|--|
| 87 88 87 88 88 88 88 88 | | | | | | | | | | | | | | | |
| (Stitch Values) | | | | | | | | | | | | | | | |
| 00 00 00 00 00 00 00 00 | | | | | | | | | | | | | | | |
| B9 B4 BB 45 4F 4B 80 19 | | | | | | | | | | | | | | | |
| (DAC Values) | | | | | | | | | | | | | | | |
| 30 31 31 8C 95 8B 80 80 | | | | | | | | | | | | | | | |
| 8C 70 84 80 80 80 80 80 | | | | | | | | | | | | | | | |
| 00 00 00 00 00 00 00 00 | | | | | | | | | | | | | | | |
| 00 00 00 00 00 00 00 00 | | | | | | | | | | | | | | | |
| 00 00 00 00 00 00 00 00 | | | | | | | | | | | | | | | |
| 00 00 00 00 00 00 00 00 | | | | | | | | | | | | | | | |
| E8 03 00 00 E7 03 00 00 | | | | | | | | | | | | | | | |
| (mtr speed: machine/adj) | | | | | | | | | | | | | | | |
| 9C 03 AC 06 F0 00 00 00 | | | | | | | | | | | | | | | |
| (dist betw switchee/Normalization) | | | | | | | | | | | | | | | |
| 00 00 00 00 00 00 00 00 | | | | | | | | | | | | | | | |
| 00 00 00 00 00 00 00 00 | | | | | | | | | | | | | | | |
| 00 00 00 00 00 00 00 00 | | | | | | | | | | | | | | | |
| 00 00 00 00 00 00 00 01 | | | | | | | | | | | | | | | |
| checksum of NVR | | | | | | | | | | | | | | | |
| Set Motor Speed | | | | Restore NVR Defaults | | | | Exit | | | | | | | |

Set Machine Motor Speed

The **Set Machine Motor Speed** screen allows up to a 2% change to the factory determined motor speed.

Wear of the document drive rolls or an unusual thickness of the document media may cause magnification error in the paper path direction. The Set Machine Motor Speed parameter allows correction of this error.

- The **Current** box shows the motor speed value that exists before adjustment. A value of 10000 means the factory base value is used. A value of 10100 means that the ratio of the current speed to the base speed is 1.01:1.
- The **New** box allows entry of the new value. Only values between 9800 and 10200 may be entered.
- Selecting the **Set** button enters the value in the **New** box. This value is stored in the NVR.
- Selecting **Exit** returns to the **Read NVR** screen.

Set Machine Motor Speed

Current

New

You are setting the Scanner to a calibrated standard. The parameter is a ratio scaled up by 10,000. That is, the value 10100 represents the ratio 1.010 and would have the result of increasing the number of scan lines in a given distance by 1%. The range is restricted to values between 9800 and 10200.

Enter new value and select Set Button.

Set **Exit**

Figure 6-20. Set Machine Motor Speed Screen

Scanner Installation

Scanner Preparation

1. Prepare the Scanner for installation:

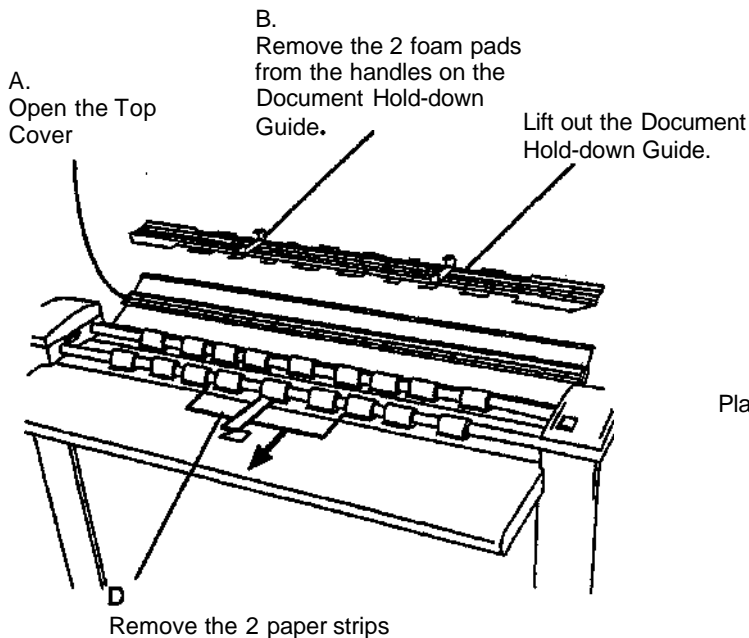


Figure 6-21. Removing the Packing Material

2. (Figure 6-22): Ensure that the Edge Present Sensor and the Edge Registered Sensor actuate and deactivate freely.
3. Check the Platen Glass and the Document Hold-down for damage or dirt, and clean the parts if dirt is found.

Note: Use Lens and Mirror Cleaner 43P81.

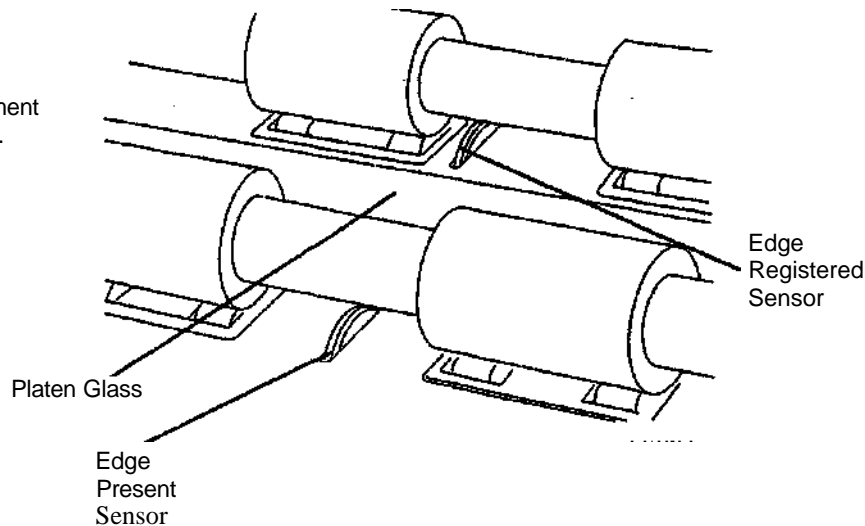


Figure 6-22. Sensors and **Platen** Glass

4. Install the Document Hold-down.
5. Close the Top Cover.
6. (Figure 6-23): Rotate the SCSI Address Switch to indicate 0.

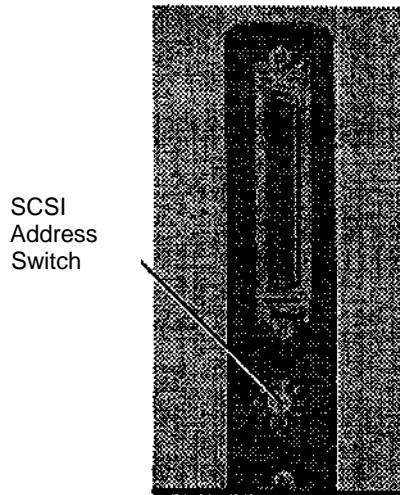


Figure 6-23. SCSI Address Switch

7. Connect the Power Cord to the Scanner.
8. Connect the Scanner SCSI cable to one of the SCSI ports on the rear of the Scanner.
9. Place the scanner where power and SCSI cables reach the connections on the controlling device.
10. Lock the casters on the Scanner.
11. Install the controlling device for the Scanner.

Connecting the Scanner to the ES8150 System W/O Tag 9

Do the following steps to connect the Scanner to the ES8150 System:

1. Upgrade the software for the SIM and the VME, if not already installed.

Caution

Ensure that the existing system is operating correctly before installing any software upgrade. Also, ensure that there will be no interruptions of power to the SIM during the software installation process. Unrecoverable errors may otherwise occur, requiring the replacement of the SCAN PWB in the VME.

Note: Refer to the installation instructions supplied with the software

-
- The diagram illustrates the internal components of a rack-mounted system. At the top, a 'Computer' is shown with a 'SCSI Port' and a 'SIM/XPC' module. A 'Scanner' is connected to the 'Computer' via a 'Scanner SCSI Cable'. A 'VME SCSI Cable' is also shown. A 'Green Spring' is connected to the 'F PWB'. A 'Scanner Power Jack' is shown at the bottom. The 'SIM' module is shown with its rear cover being removed (A). The 'VME' module is shown with its rear cover being removed (B). The 'F PWB' is shown with its rear cover being removed (C).
- A** Remove the Rear Cover of the SIM.
- B** Disconnect the VME SCSI Cable
- C** Connect the Scanner SCSI Cable to the SCSI port on the UI Computer
- SCSI Port
- Computer
- SIM/XPC
- Scanner SCSI Cable
- Scanner Power Jack
- VME
- Green Spring
- F PWB
- J1

- no stitch overlaps or discontinuities in the lines of the test image
- satisfactory copy quality.

Connecting the Scanner to the ES8150 System With Tag 9 or to the Xerox Productivity Centre

Do the following steps to connect the Scanner to the Xerox Productivity System or the ES8150 SIM with Tag 9:

1. Upgrade the software for the SIM and the VME to the current version, if not already installed. Refer to the installation instructions supplied with the software.

Caution

Ensure that the existing system is operating correctly before installing any software upgrade. Also, ensure that there will be no interruptions of power to the SIM during the software installation process. Unrecoverable errors may otherwise occur, requiring the replacement of the SCAN PWB in the VME.

2. Connect the Scanner Power Cord:

- to the Scanner Power Jack, if the main power is 110-140 VAC (NACO)
- to an external main power outlet, if the main power is 220-240 VAC (EO).

3. (Figure 6-25): Reconnect the Scanner directly to the control computer.

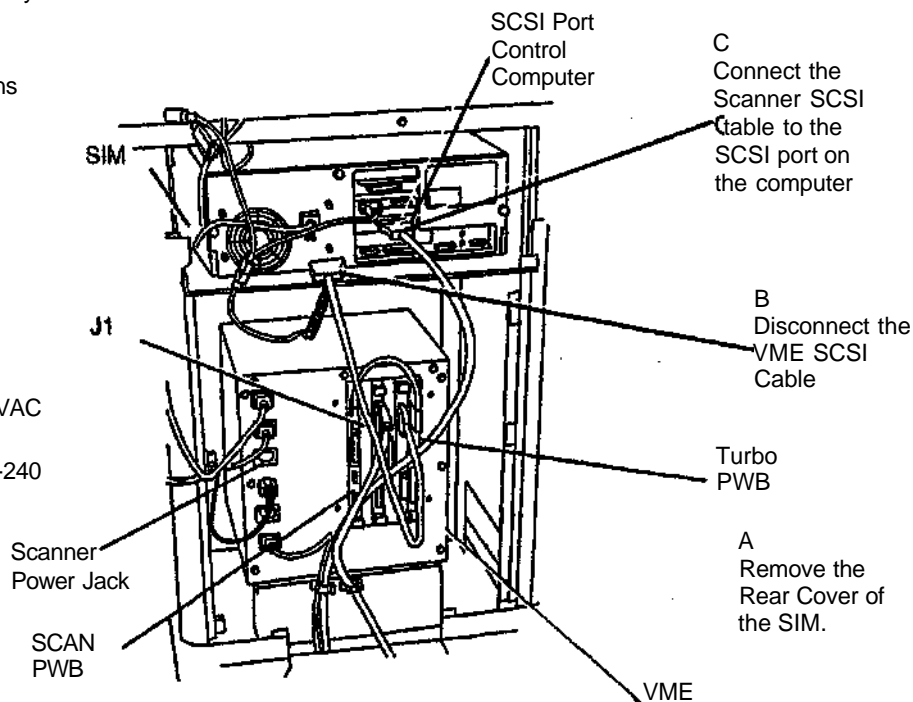


Figure 6-25. Connecting the Scanner to the SIM

4. Switch on the Scanner.
5. Switch on the SIM and allow it to complete the boot process.
3. Start the diagnostic software. Refer to *Starting the Diagnostic Software - Xerox ES8150/Xerox Productivity Centre*.
7. Perform a Normalize Cameras test. If the test fails, clean the Platen Glass and the Document Hold-down guide carefully; then repeat the test.
3. Do the Front-to-Back Stitch adjustment (ADJ 4.1.3).
9. Do the Left to Right Stitch adjustment (ADJ 4.1.4).
10. Check the Calibrate Document Registration adjustment (ADJ 4.1.2). If the adjustment is not correct, perform the adjustment procedure.
11. Exit the diagnostic software.
12. Switch off the SIM.
13. Switch off the Scanner.
14. Disconnect the Scanner SCSI Cable from the computer.
15. Connect the Scanner SCSI Cable to the bottom SCSI connector on the Turbo PWB.
16. Ensure that the jumper cable is connected from the top SCSI connector on the Turbo PWB to J1 on the SCAN PWB.
17. Connect the VME SCSI cable to the SCSI port on the UI Computer.
18. Switch on the Scanner.
19. Switch on the SIM.
20. Make a copy using Test Pattern 082E5980.
21. Ensure that the copy has:
 - no stitch overlaps or discontinuities in the lines of the test image
 - satisfactory copy quality.

Connecting the Scanner to Other Systems

SCSI Connections

The Scanner communicates to other devices via the Small Systems Communications Interface (SCSI). Each SCSI device has one or two SCSI ports for connection of SCSI cables. For devices with two ports, such as the Scanner, either port may be used; the remaining port may be used to connect another SCSI device in the chain.

(Figure 6-26): SCSI devices are connected in a chain, with each device having a unique address from 0 to 7.

(Figure 6-27): On the Scanner, the address is selected by a rotary switch. Other devices may have other methods; refer to the manual for the device for more information.

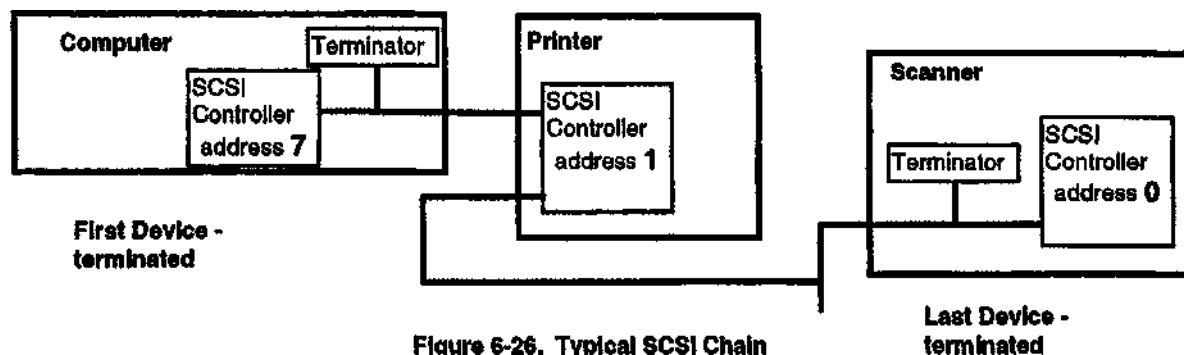
When selecting a SCSI address for the Scanner, ensure that the address is different from the address for any other device on the SCSI chain.

SCSI Termination

SCSI chains must be electronically terminated at each end. A Terminator is applied to the first device and the last device in the chain. All other devices should have no terminator.

Terminators may be built into the internal circuitry or may be contained in an external connector attached to one of the external SCSI ports.

The Terminator for the Scanner is built in and is active by default. Therefore, the Scanner must be the last device.



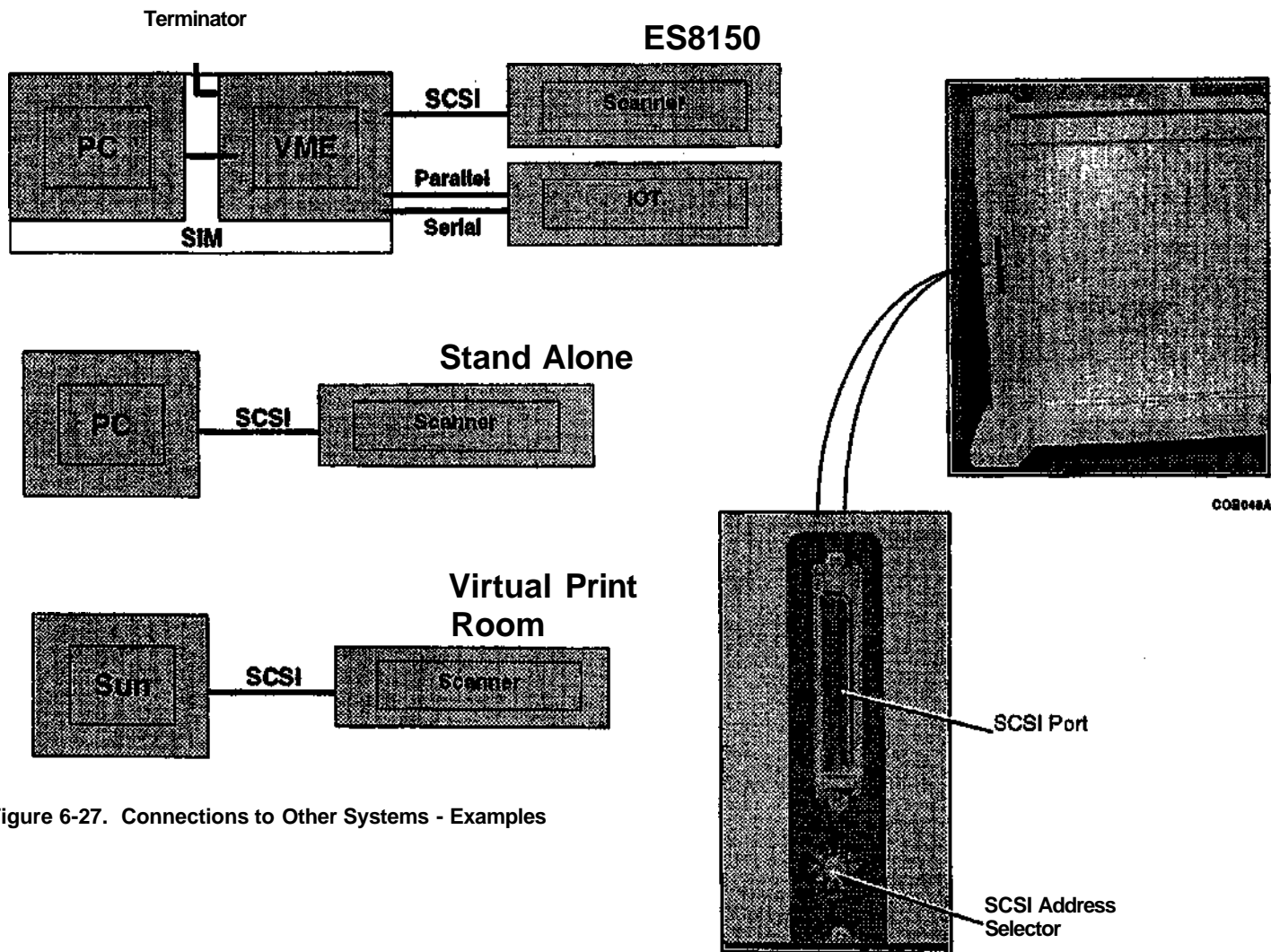


Figure 6-27. Connections to Other Systems - Examples

Installation - Other Systems

Do the following steps to install the scanner on a third party system:

1. Prepare the Scanner for installation. Refer to *Scanner Preparation* in this section.
2. Switch off the host computer in the system in which the Scanner is to be installed.
3. If required, install the SCSI Adapter PWB in the customer's control computer. Refer to the documentation included with the SCSI Adapter PWB.
4. Determine the SCSI addresses of the other equipment in the system.
5. (Figure 6-28): If SCSI address 0 (zero) is used by an existing device in the system, switch the SCSI Address Selector on the Scanner to an unused address.

Note: The Scanner is an internally terminated device, and should be the last device on the SCSI chain. Devices between the Control computer and the Scanner should not be terminated.

6. Using a SCSI cable with the correct connectors, connect the SCSI Port on the Scanner to the SCSI port on the last device in the existing system.
7. Remove any SCSI Terminator from the device to which the Scanner was connected in the previous step.
8. Switch on the Scanner.
9. Switch on the other devices in the system.
10. Switch on the host computer and allow it to complete the boot process.

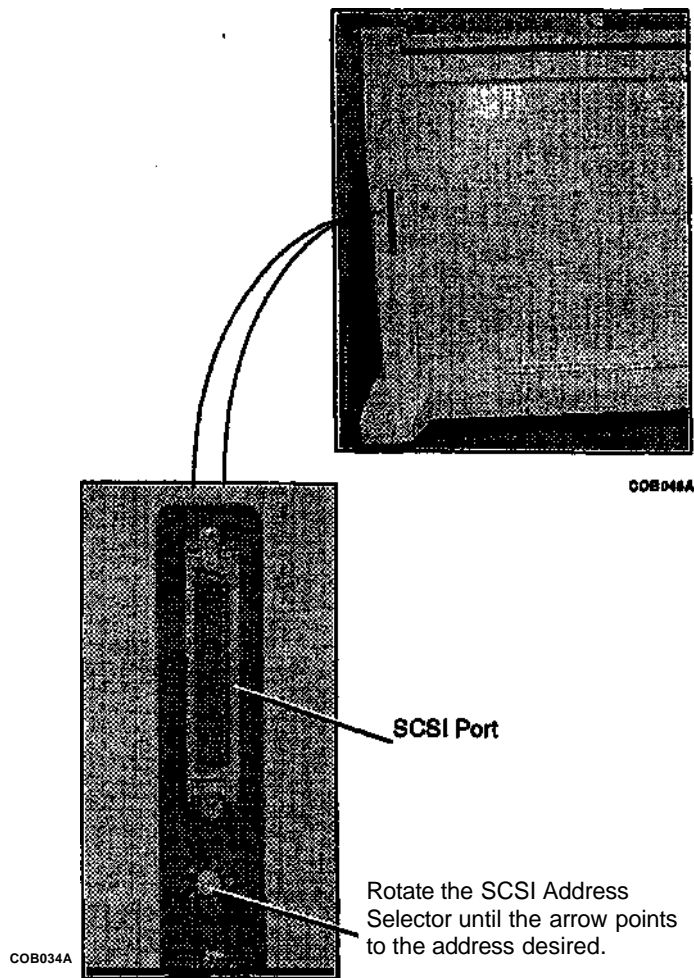


Figure 6-28. Setting the SCSI Address of the Scanner

11. Install the floppy disk containing the scanner diagnostic software into the A: floppy disk drive.
12. If the Windows operating program is not already started on the host computer after the boot process, then start Windows, by typing W I N and pressing the <enter> key.
13. Type a: SCSI7356 and press the <enter> key.
 - The diagnostic software starts. Refer to *Using the Diagnostic Software*, located in this section, for information about the operation of this software. The password is **ES8150**.
14. Do the Front-to-Back Stitch adjustment (ADJ 4.1.3)
15. Do the Left to Right Stitch adjustment (ADJ 4.1.4)
16. Exit the diagnostic software.
17. Remove the disk from the A: drive.
18. Install the Scanner application software on the customer's host computer:
 - a. Ensure that Windows is running.
 - b. Terminate any other applications that are currently running.
 - c. Insert disk 1 into the A: floppy disk drive.
 - d. Type A S SETUP and press the <enter> key.
 - e. Follow the instructions on the screen.
19. Make a test scan of the 082E11490 test pattern and view the image.
20. Examine the image for correct image quality:
 - The horizontal and diagonal lines have no objectionable discontinuity due to stitch error
 - There are no deletions or distortions of the image.

Change Tag/MOD Index

Introduction

All important modifications are identified by a Tag/ MOD number on a matrix label attached to each Scanner inside the Top Cover (see Figure 1).

This section describes all the tags as well as multinational applicability, classification codes, and permanent or temporary modification information.

Classification Codes

A Tag/ MOD number may be required to identify differences between parts that cannot be interchanged, or differences in diagnostic, the repairs, installation, or adjustment procedures. A Tag/ MOD number may also be required to identify the presence of optional hardware, firmware, or If mandatory modifications have been installed. Each Tag/ MOD number is given a classification code to identify the type of a change the Tag/ MOD has made.

- M- Mandatory
- N- Not installed in the field
- O- Optional
- R- Repair
- S- Situational

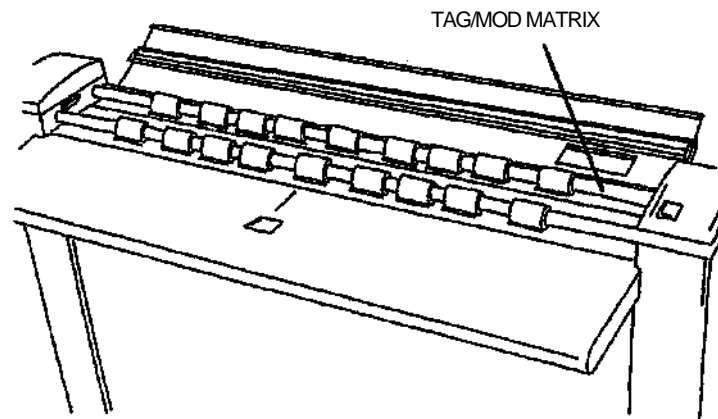


Figure 1. Location of the Change Tag/MOD Matrix

Tag/ MOD: 1
Class: R
Use: All
Mfg. Serial No: USO: All
EO: All

Name: Document Hold-down Guide

Purpose: Guide has been modified to ensure reliable actuation of the Edge Registered Sensor.

Kit Number: Piece Part
Reference: PL 5.1

Tag/ MOD: 3
Class: R
Use: All
Mfg. Serial No: USO: All
EO: All

Name: Change in alignment of Edge Sensors

Purpose: Edge Present Sensor and Edge Registered Sensor have been aligned to new specifications to ensure more reliable actuation

Kit Number: Piece Part
Reference: PL 5.1, PL 5.2

Tag/ MOD: 5
Class: O
Use: All
Mfg. Serial No: USO: All
EO: All

Name: Modified Top Cover

Purpose: The Top Cover has three holes drilled to enable a future upgrade.

Kit Number: 600K64670
Reference: PL 14.1

Tag/ MOD: 2
Class: R
Use: All
Mfg. Serial No: USO: All
EO: All

Name: Mounting Arrangement for Catch Tray

Purpose: Frame has been modified to allow the mounting of a Catch Tray..

Kit Number: Piece Part
Reference: PL 5.1

Tag/ MOD: 4
Class: R
Use: All
Mfg. Serial No: USO: All
EO: All

Name: Modified Main Control PWB

Purpose: PWB has been modified, with additional test points. Filter Capacitor C140 was relocated from wiring harness to PWB.

Kit Number: Piece Part
Reference: PL 1.2

Tag/ MOD: 6
Class: O
Use: All
Mfg. Serial No: USO: All
EO: All

Name: Modified Feed Shelf

Purpose: The Feed Shelf has three holes drilled to mount a Document Organizer.

Kit Number: 600K64680
Reference: PL 14.1

Tag/MOD: 7

Class: R

Use: All

Mfg. Serial No: USO:All

EO: All

Name: Scanner Firmware

Purpose: Updated firmware to support
the 7356 Scanner.

Kit Number: 600K62292

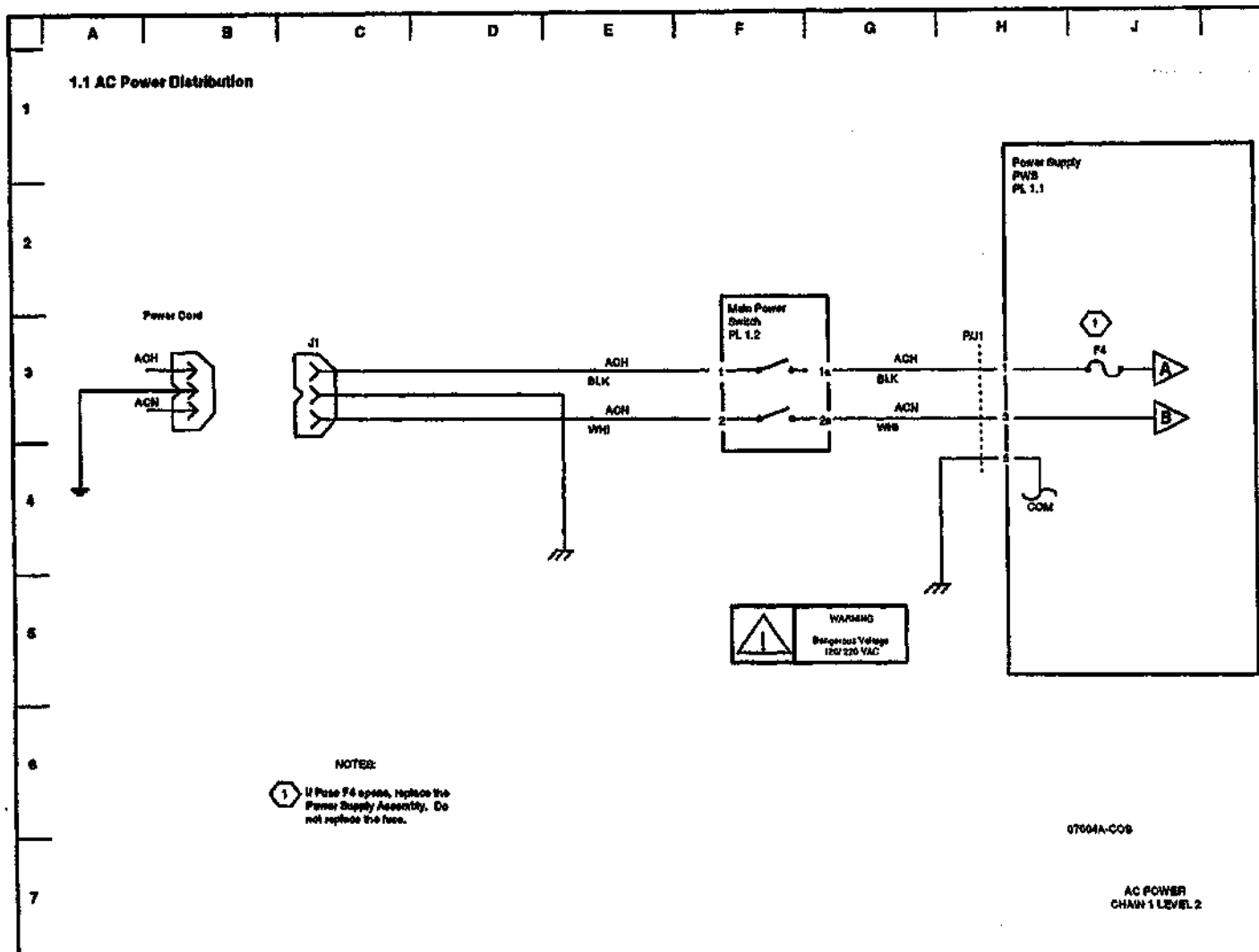
Reference:

7. Block Schematic Diagrams

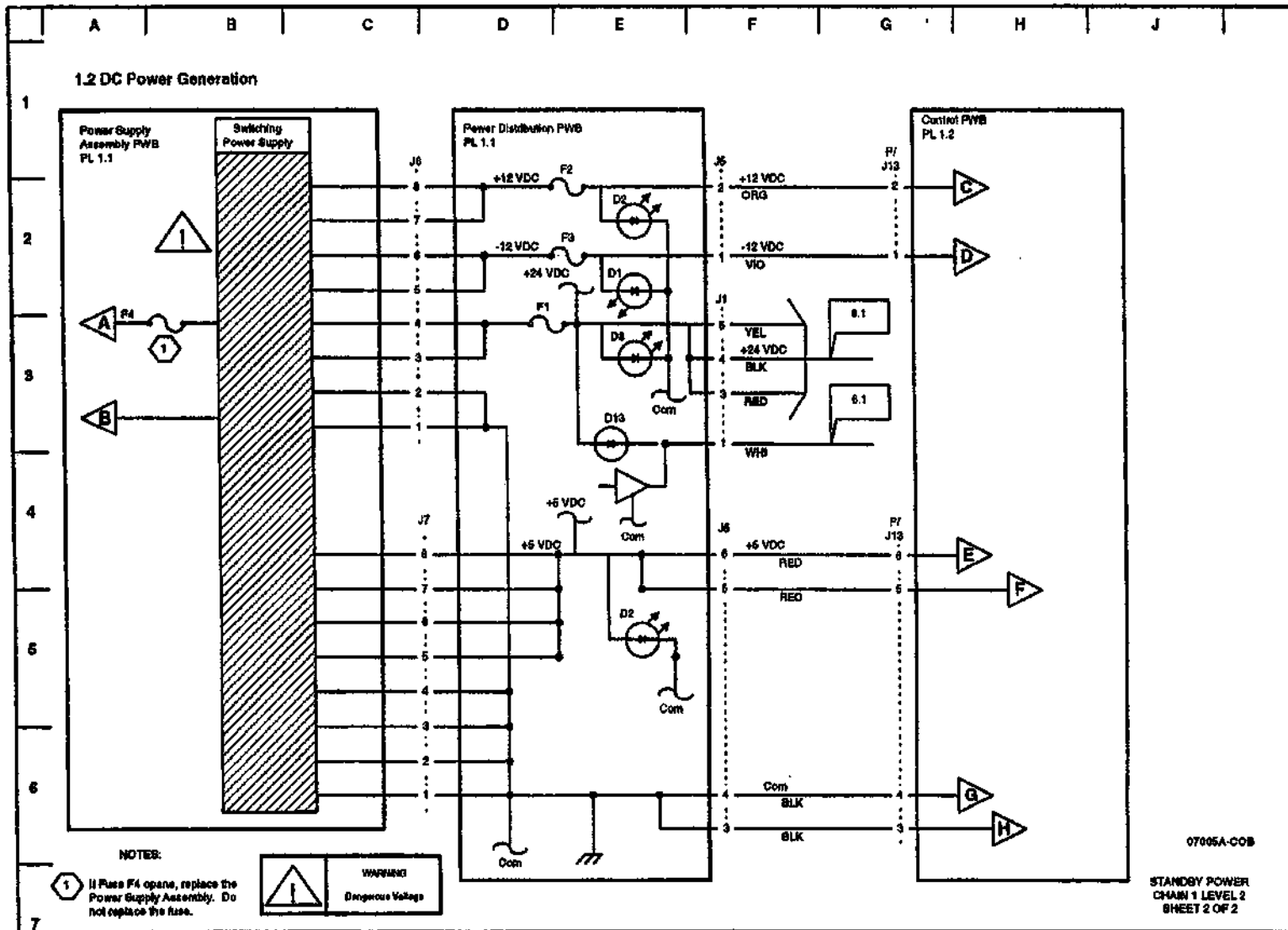
| TITLE | PAGE |
|-----------------------------------|------|
| 1.1 AC Power Distribution..... | 7-3 |
| 1.2 DC Power Generation..... | 7-4 |
| 4.1 Main Drive Motor Control..... | 7-6 |
| 4.2 Mechanical Power..... | 7-7 |

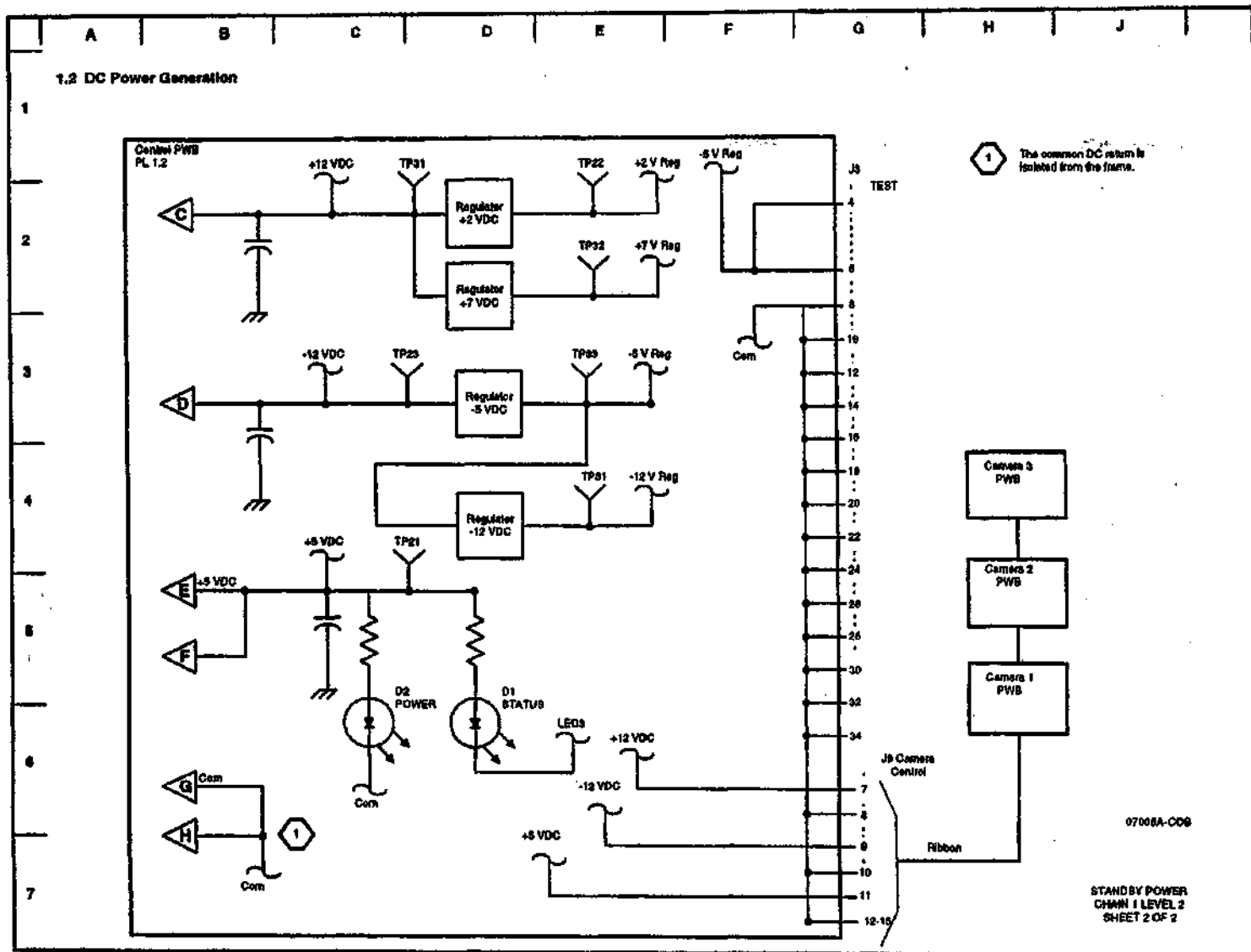
| TITLE | PAGE |
|---|------|
| 5.1 Document Transport/ Registration..... | 7-8 |
| 6.1 Document Illumination..... | 7-9 |
| 6.2 Image Projection..... | 7-10 |
| 14.1 Communication..... | 7-11 |

1.1 AC Power Distribution

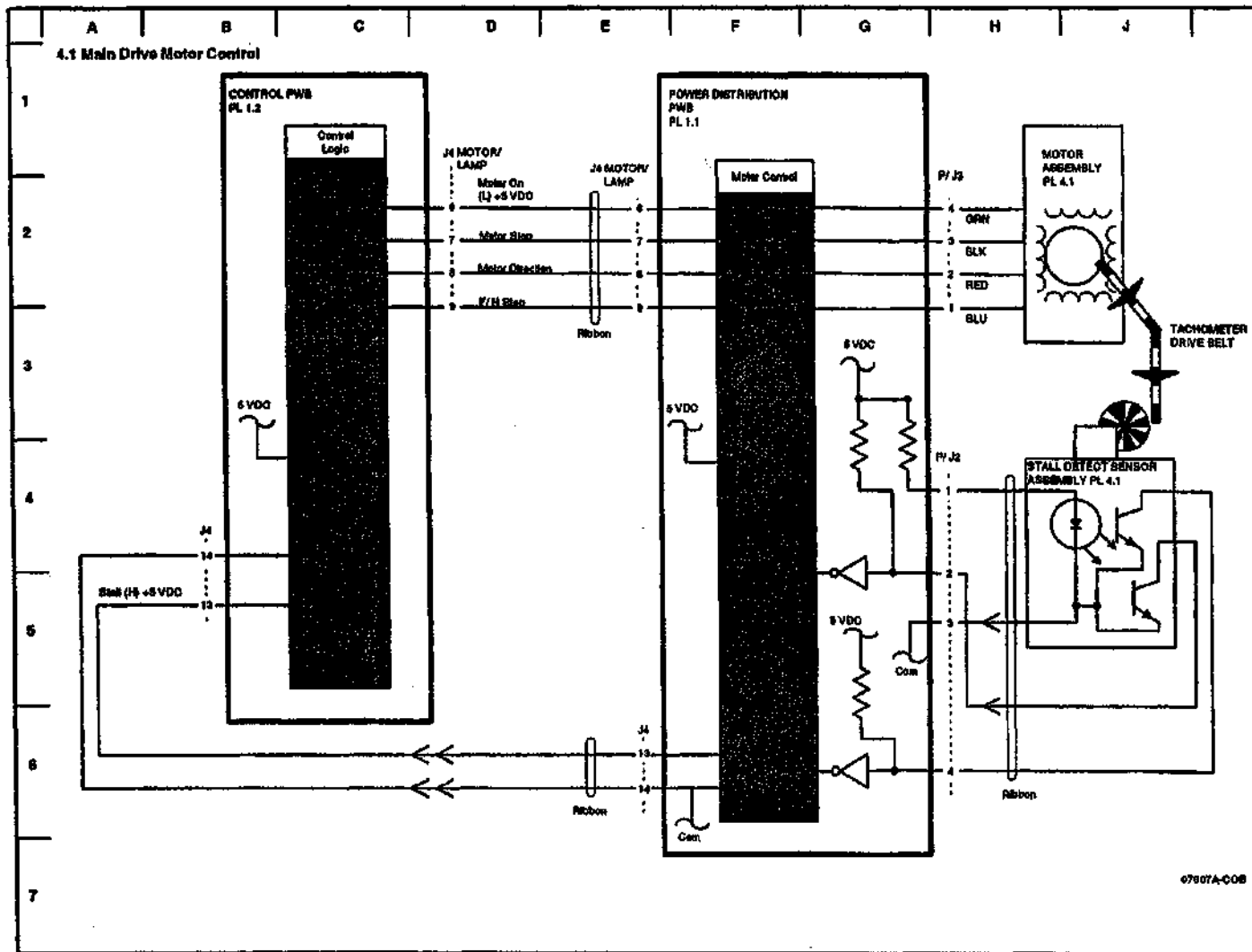


1.2 DC Power Generation

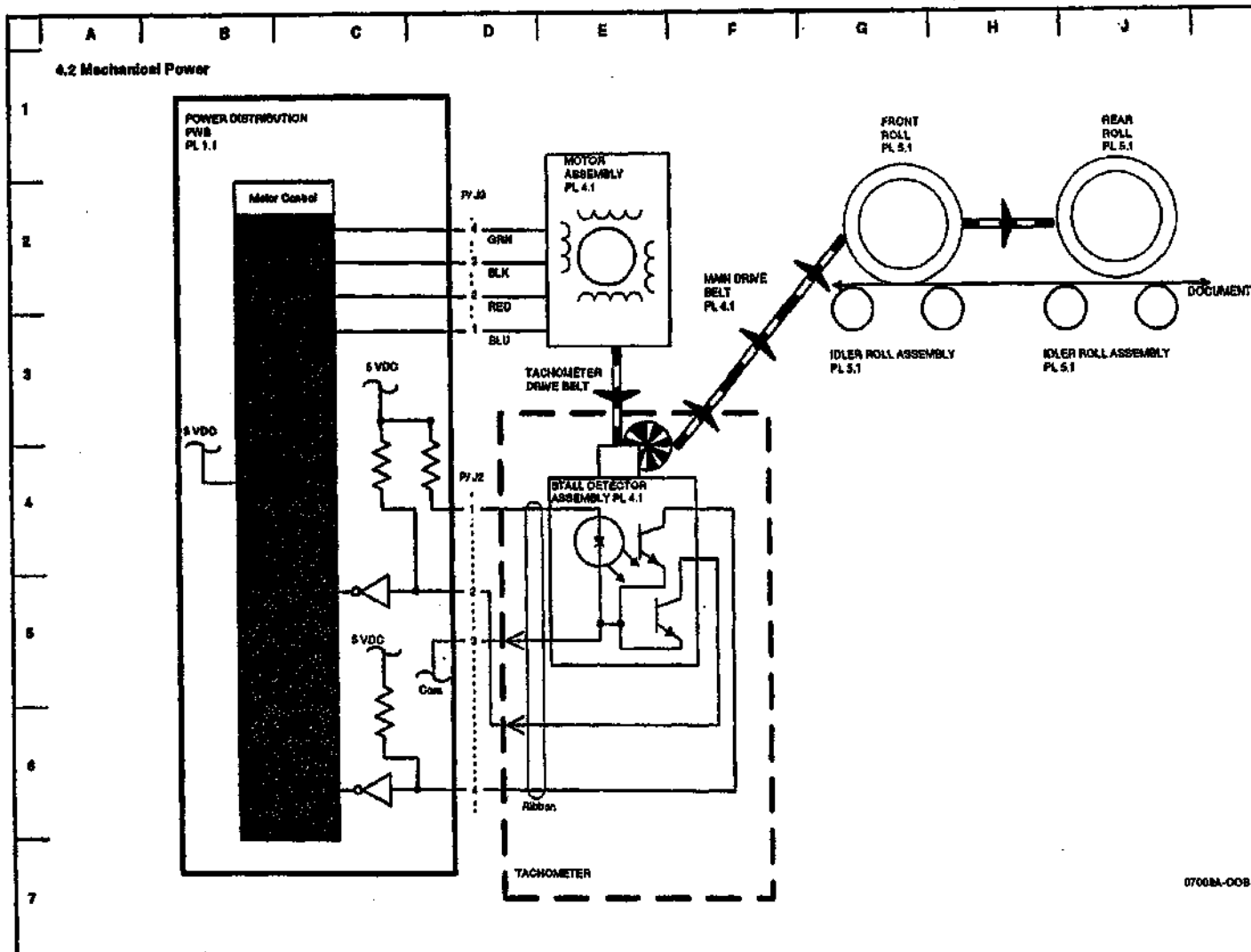




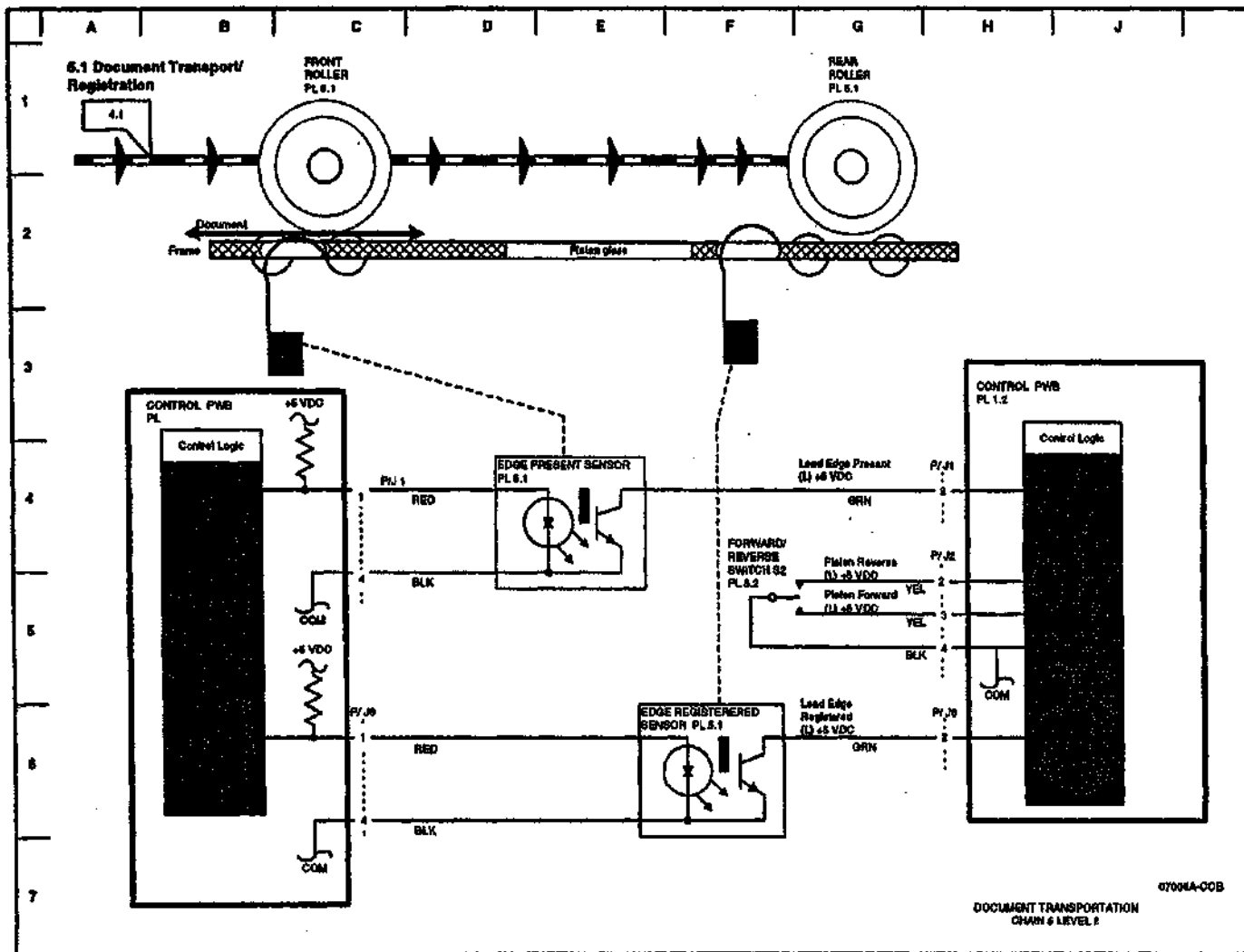
4.1 Main Drive Motor Control



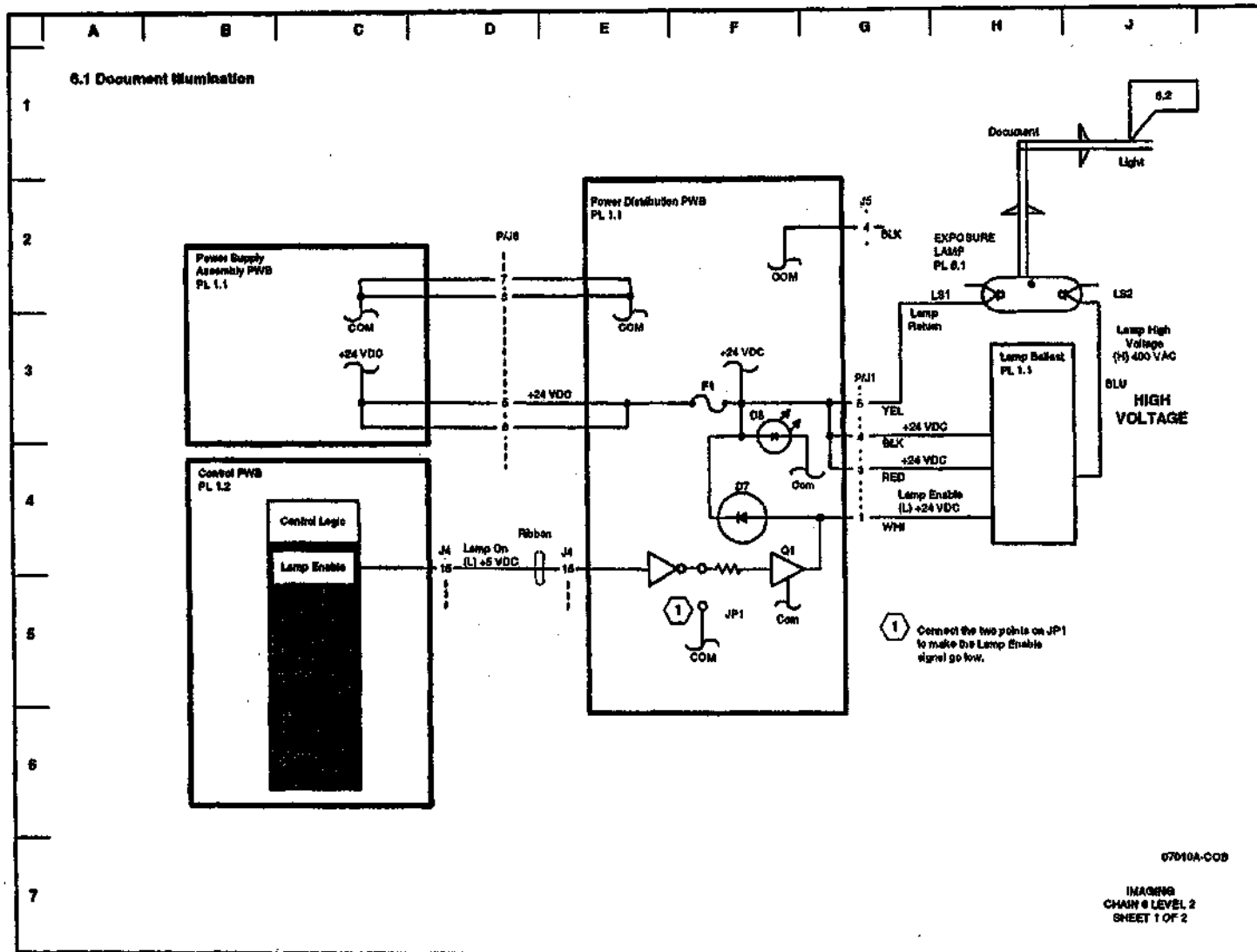
4.2 Mechanical Power



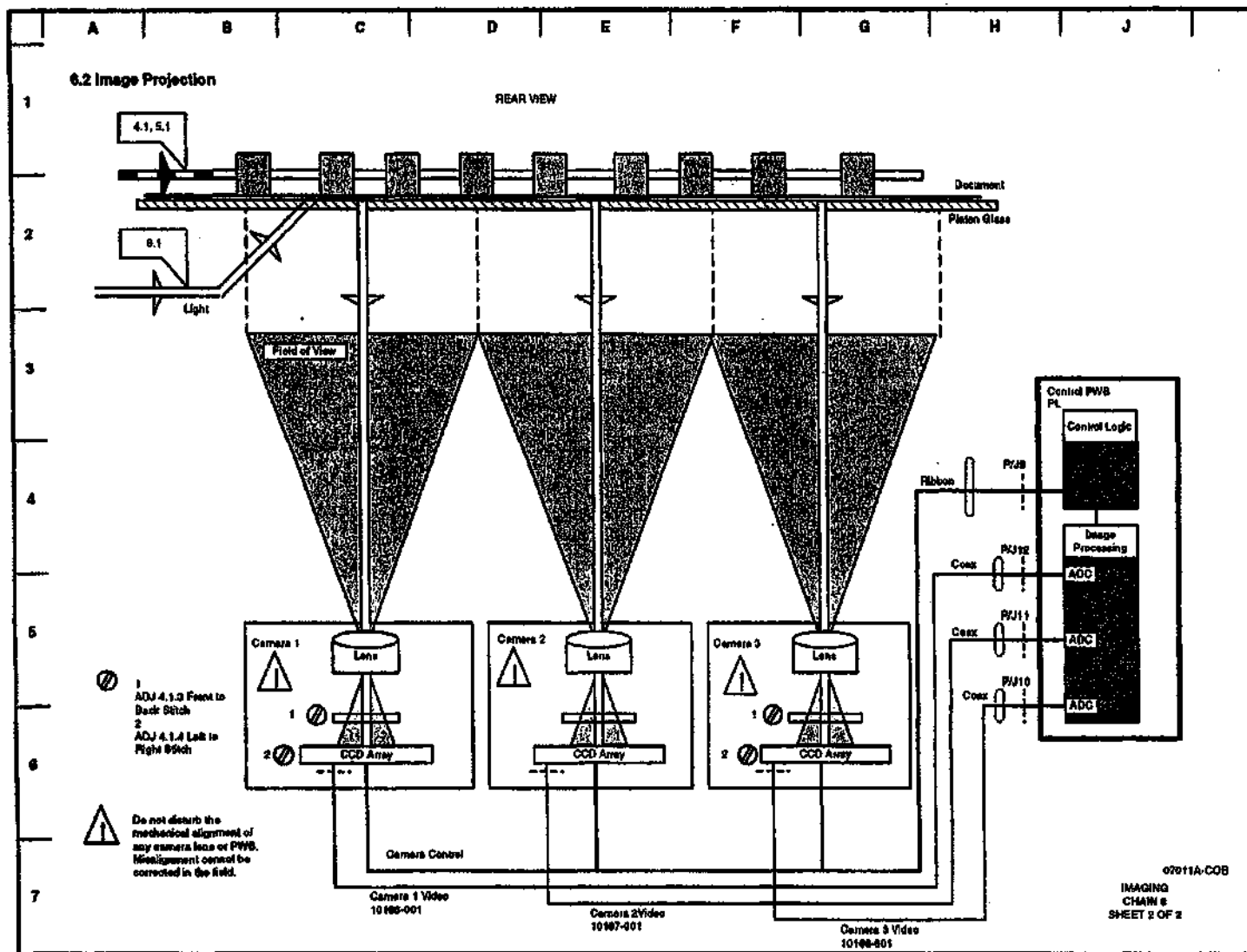
5.1 Document Transport/ Registration



6.1 Document Illumination



6.2 Image Projection



14.1 Communication

