

Section 6: Electrical

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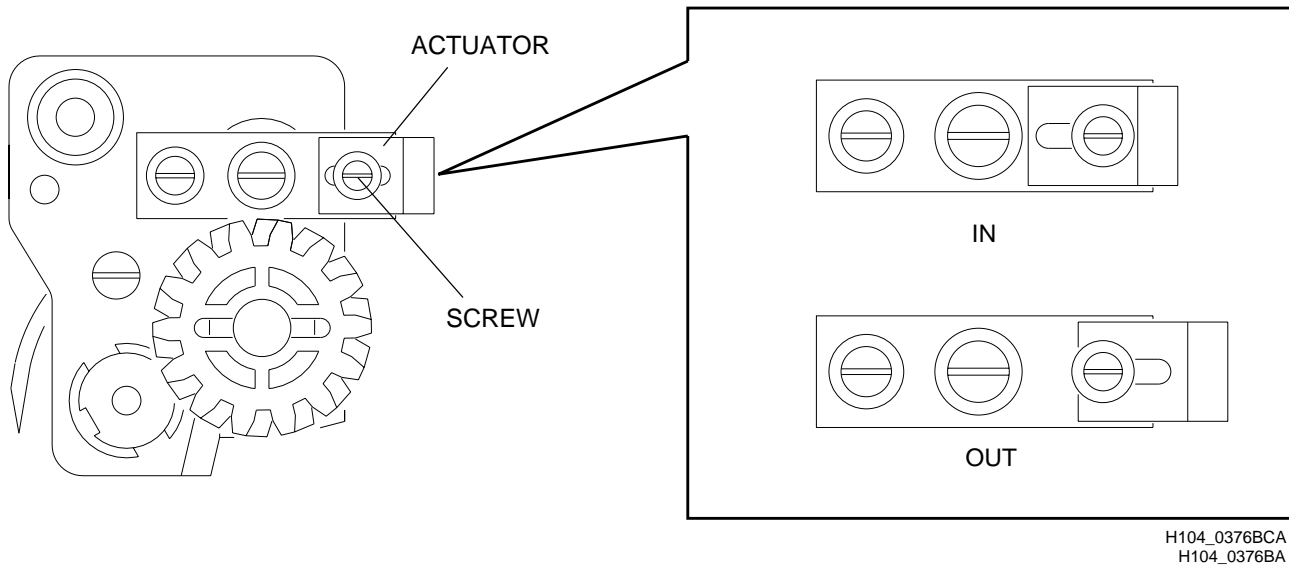
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Adjustments - ACTUATORS and ENTRANCE DETECTOR SWITCHES

Drive Side ACTUATOR

- [1] Lift the TOP COVER.
- [2] Remove the DETECTOR CROSSOVER.
- [3] Place the DETECTOR CROSSOVER on a flat surface with the drive side toward you. See Figure 6-1 for the correct orientation of the DETECTOR CROSSOVER.
- [4] Locate the ACTUATOR on the drive side of the DETECTOR CROSSOVER.
- [5] The ACTUATOR can be adjusted side-to-side. Check that the ACTUATOR is in the "IN" position. See Figure 6-1 to determine the "IN" and "OUT" positions.
- [6] If the ACTUATOR is in the "OUT" position, do the steps below.
 - a. Loosen the SCREW that holds the ACTUATOR.
 - b. Move the ACTUATOR to the "IN" position.
 - c. Tighten the SCREW that holds the ACTUATOR.

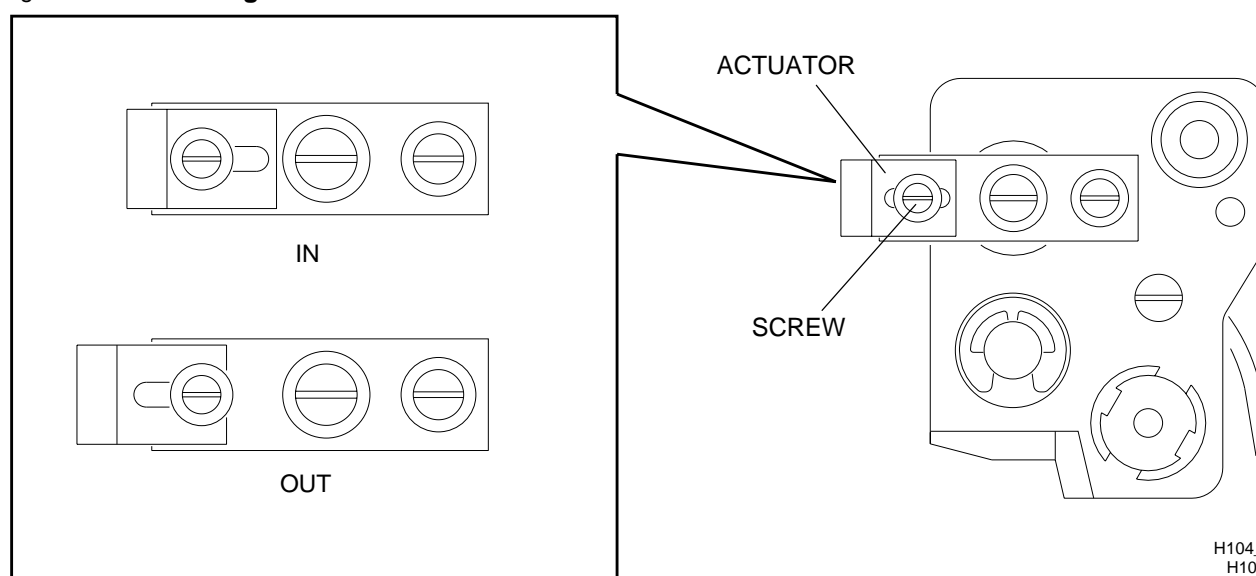
Figure 6-1 Checking the "IN" and "OUT" Positions of the Drive Side ACTUATOR



Non-drive Side ACTUATOR

- [1] Place the DETECTOR CROSSOVER on a flat surface with the non-drive side toward you. See Figure 6-2 for the correct orientation of the DETECTOR CROSSOVER.
- [2] Locate the ACTUATOR on the non-drive side of the DETECTOR CROSSOVER.
- [3] The ACTUATOR can be adjusted side-to-side. Check that the ACTUATOR is in the “IN” position. See Figure 6-2 to determine the “IN” and “OUT” positions.
- [4] If the ACTUATOR is in the “OUT” position, do the steps below.
 - a. Loosen the SCREW that holds the ACTUATOR.
 - b. Move the ACTUATOR to the “IN” position.
 - c. Tighten the SCREW that holds the ACTUATOR.
- [5] Install the DETECTOR CROSSOVER.

Figure 6-2 Checking the “IN” and “OUT” Positions of the Non-drive Side ACTUATOR

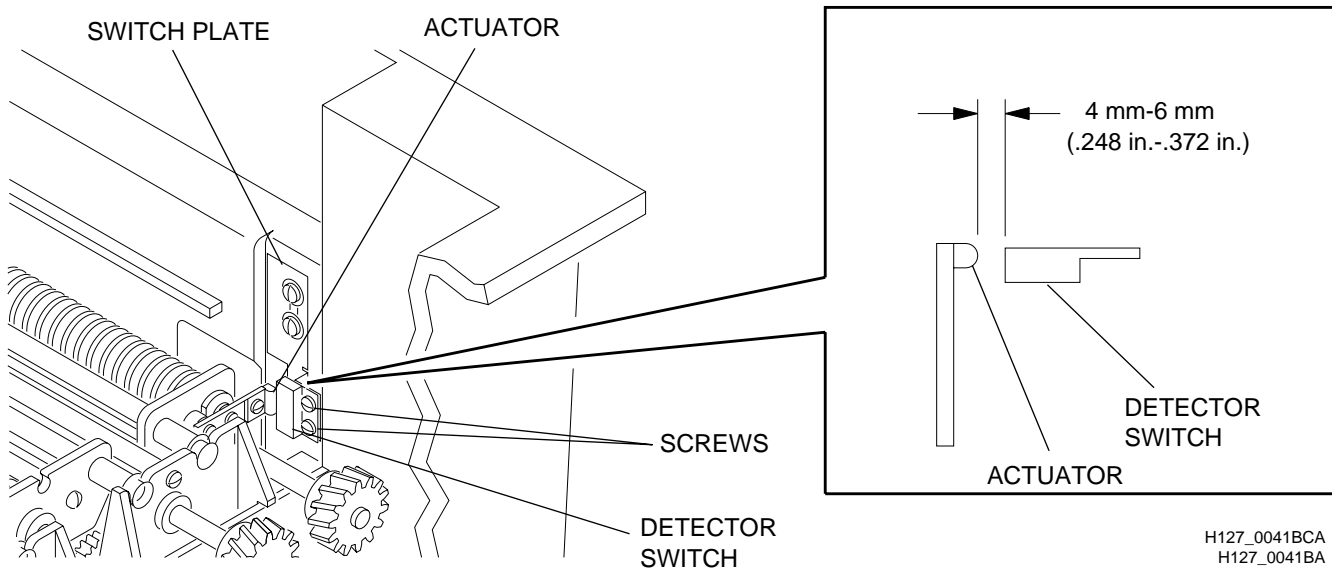


DETECTOR SWITCHES, from Side to Side**Note**

Steps 1 - 4 are for adjusting the DETECTOR SWITCH on the drive side of the PROCESSOR. Use the same steps for the non-drive side DETECTOR SWITCH.

- [1] Locate the DETECTOR SWITCH on the drive side of the PROCESSOR.
- [2] Loosen the 2 SCREWS that hold the DETECTOR SWITCH to the SWITCH PLATE.
- [3] The DETECTOR SWITCH can be adjusted side-to-side. Move the DETECTOR SWITCH until the DETECTOR SWITCH is 4 - 6 mm (3/16 - 1/4 in.) from the edge of the ACTUATOR.
- [4] Check that the DETECTOR SWITCH remains in the vertical position.
- [5] Tighten the 2 SCREWS that hold the DETECTOR SWITCH to the SWITCH PLATE.
- [6] Do Steps 1 - 4 for the DETECTOR SWITCH on the non-drive side of the PROCESSOR.

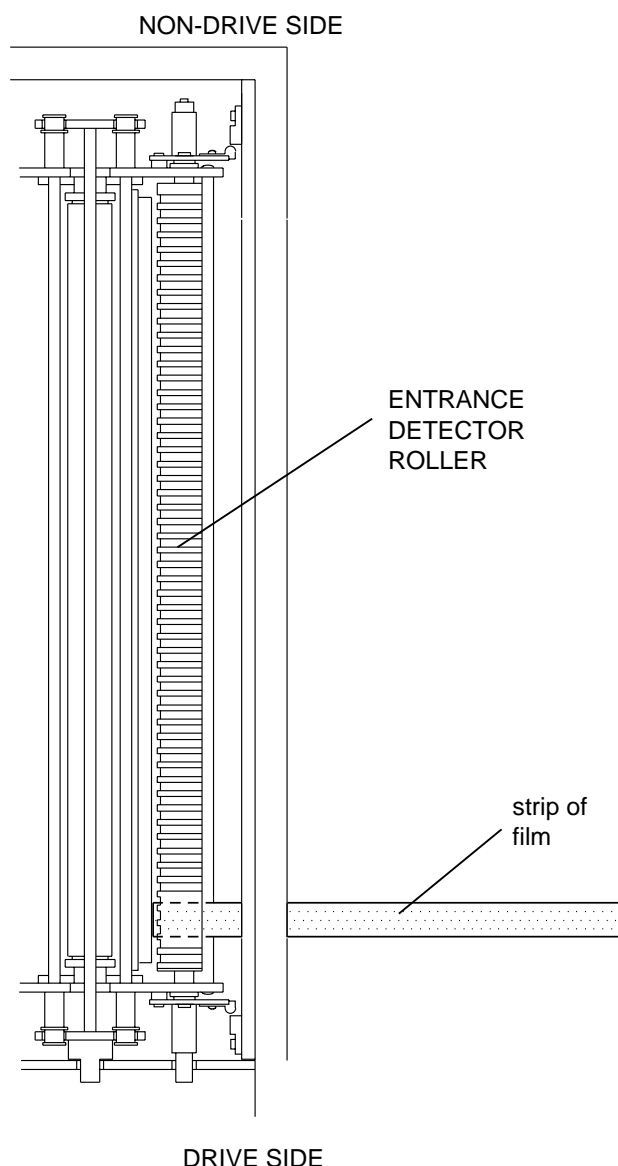
Figure 6-3 **Side-to-Side Adjustment of the DETECTOR SWITCHES**



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H127_0041BA

DETECTOR SWITCH, Up and Down

Figure 6-4 Feeding the Film Strip Between the ENTRANCE DETECTOR ROLLERS



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H127_0155CC

[1] Energize the PROCESSOR by:

- Moving the main wall CIRCUIT BREAKER to the "ON" position.
- Moving the MAIN CIRCUIT BREAKER CB1 on the PROCESSOR to the "I" position.

[2] Connect the PORTABLE COMPUTER to the 15-PIN DIAGNOSTIC CONNECTOR on the ELECTRICAL BOX using INTERFACE CABLE TL-4391.

Note

Refer to the User Instructions for the Software Diagnostics for the *Kodak X-Omat* RA and LP PROCESSORS 699614 for operating the PORTABLE COMPUTER and for diagnostic procedures. Use the DIAGNOSTICS DISKETTE 5B6278.

[3] Enter the Specific Test Mode, Processor Sensor Test, of the Portable Computer Diagnostics Program.

[4] Manually, separate the ENTRANCE DETECTOR ROLLERS.

- [5] With the ENTRANCE DETECTOR ROLLERS separated, feed a 2.5 cm (1 in.) wide strip of film between the ENTRANCE DETECTOR ROLLERS on the drive side of the PROCESSOR.
- [6] Loosen the 2 SCREWS that hold the SWITCH PLATE to the FILM ACCUMULATOR HOUSING on the drive side of the PROCESSOR.
- [7] Move the SWITCH PLATE ASSEMBLY to the "UP" position.
- [8] Slowly, move the SWITCH PLATE down until the PORTABLE COMPUTER displays a "Film Detected" message for the S1 Sensor.
- [9] Move the SWITCH PLATE down approximately another 1 - 2 mm (0.04 - 0.08 in.).
- [10] Check that the SWITCH PLATE remains in the upright, vertical position.
- [11] Carefully, tighten the 2 SCREWS to hold the SWITCH PLATE in position.
- [12] Remove the 2.5 cm (1 in.) strip of film from between the ENTRANCE DETECTOR ROLLERS.
- [13] Locate the DETECTOR SWITCH on the non-drive side of the PROCESSOR.
- [14] Do Steps 3 - 10 for the SWITCH PLATE on the non-drive side of the PROCESSOR.

Checking the DETECTOR SWITCHES

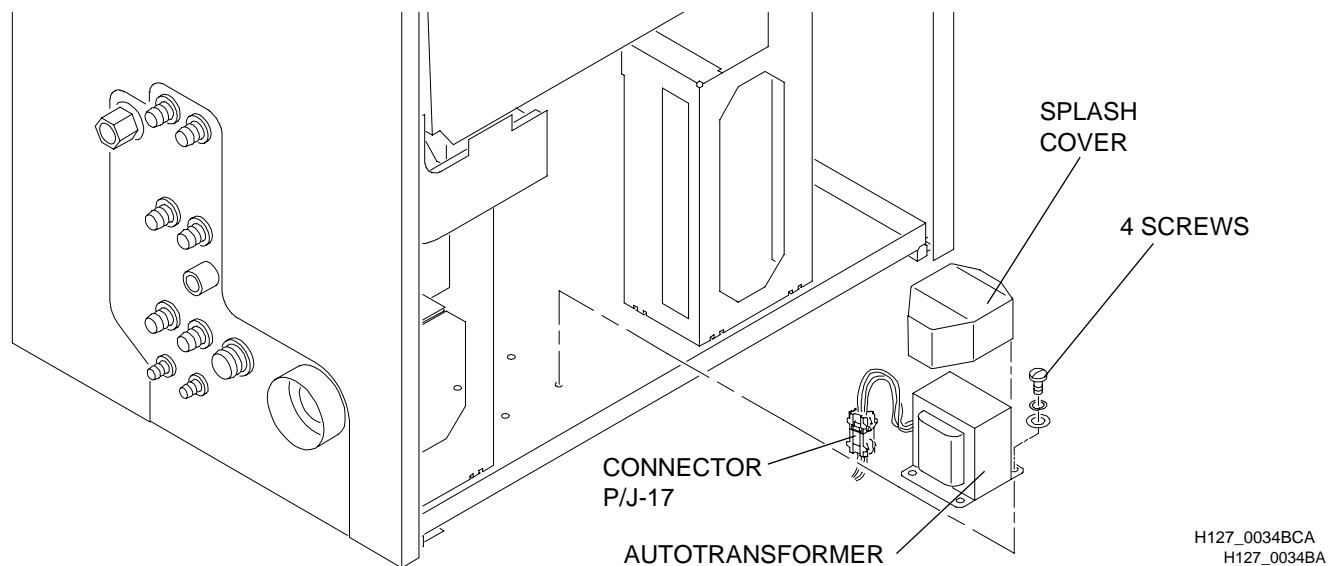
- [1] Check that all film is removed from between the ENTRANCE DETECTOR SWITCHES.
- [2] Check that the message "No Film Detected" is displayed on the PORTABLE COMPUTER for SW1 and SW2.
- [3] With the ENTRANCE DETECTOR ROLLERS separated, insert the 2.5 cm (1 in.) strip of film between the ENTRANCE DETECTOR ROLLERS on the drive side of the PROCESSOR. See Figure [6-4](#) on Page [6-5](#).
- [4] Check that the message "Film Detected" is displayed on the PORTABLE COMPUTER for SW1.
- [5] Check that all film is removed from between the ENTRANCE DETECTOR ROLLERS.
- [6] Check that the message "No Film Detected" is displayed on the PORTABLE COMPUTER.
- [7] With the ENTRANCE DETECTOR ROLLERS separated, insert the 2.5 cm (1 in.) strip of film between the ENTRANCE DETECTOR ROLLERS on the non-drive side of the PROCESSOR.
- [8] Check that the message "Film Detected" is displayed on the PORTABLE COMPUTER for SW2.
- [9] When the DETECTOR SWITCHES are adjusted correctly, disconnect the PORTABLE COMPUTER.

Removals

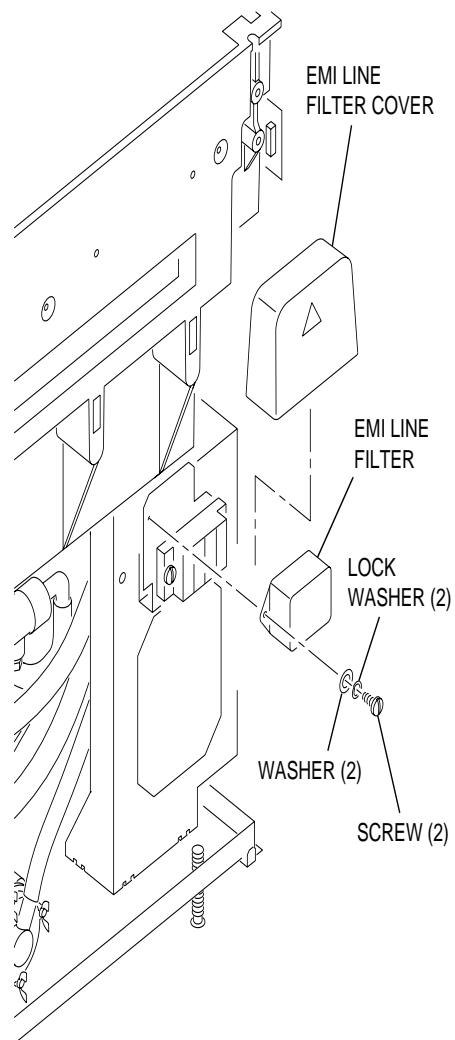
AUTOTRANSFORMER

- [1] Move the main wall CIRCUIT BREAKER to "OFF" and CB1 on the PROCESSOR to the "O" position.
- [2] Remove the DRYER SIDE PANEL.
- [3] Disconnect CONNECTOR P/J17.
- [4] Remove the SPLASH COVER, 4 SCREWS, and the AUTOTRANSFORMER.
- [5] Reverse the procedure to assemble.

Figure 6-5 Replacement of the AUTOTRANSFORMER



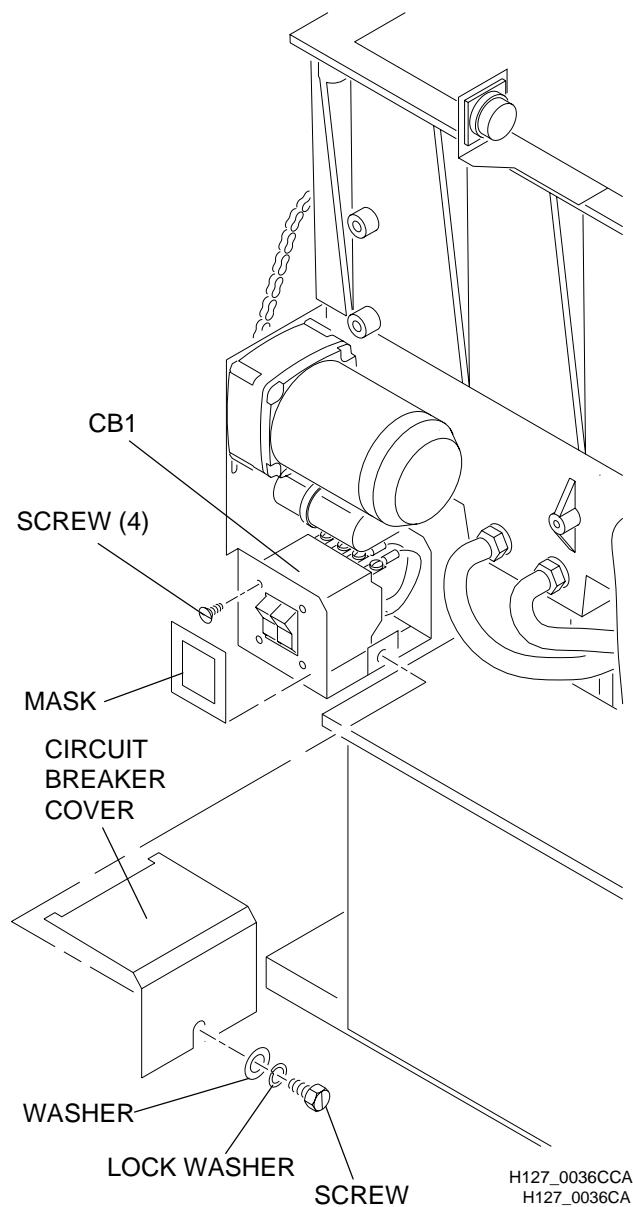
EMI LINE FILTER



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H127_0035CA

- [1] Move the main wall CIRCUIT BREAKER to "OFF" and CB1 on the PROCESSOR to the "O" position.
- [2] Disconnect the LASER PRINTER from the PROCESSOR for this procedure.
- [3] Remove the FEED PANEL from the PROCESSOR.
- [4] Remove the EMI LINE FILTER COVER.
- [5] Record the location of the wires on the EMI LINE FILTER.
- [6] Remove:
 - 2 SCREWS, 2 LOCK WASHERS, and 2 WASHERS from the EMI LINE FILTER
 - wires at the EMI LINE FILTER
 - EMI LINE FILTER
- [7] Reverse the above procedure to assemble.

AC CIRCUIT BREAKER CB1



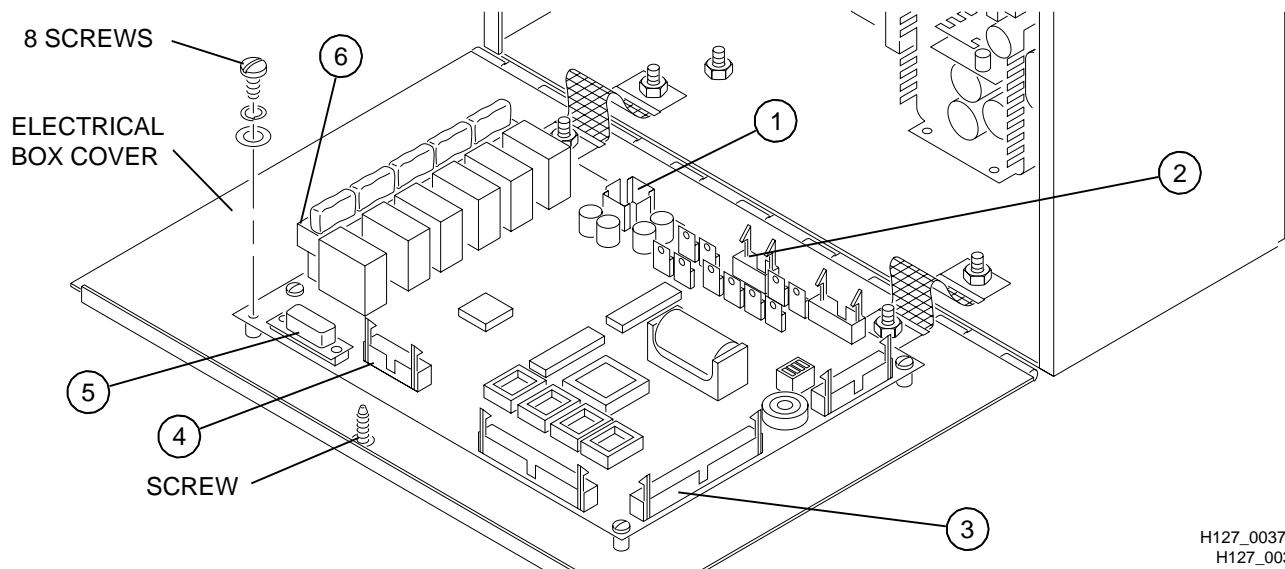
- [1] Move the main wall CIRCUIT BREAKER to “OFF” and CB1 on the PROCESSOR to the “O” position.
- [2] Lift the TOP COVER.
- [3] Remove the DRIVE SIDE PANEL.
- [4] Loosen the SCREW, LOCK WASHER, and WASHER, and remove the CIRCUIT BREAKER COVER.
- [5] Remove the MASK and the 4 SCREWS that hold CIRCUIT BREAKER CB1 to the PROCESSOR.
- [6] Record the position of the wires connected to the CIRCUIT BREAKER CB1.
- [7] Disconnect the wires from CIRCUIT BREAKER CB1.
- [8] Reverse the procedure to assemble. Install a new MASK.

500 CIRCUIT BOARD, the MICROPROCESSOR**Caution**

Possible damage from electrostatic discharge.

- [1] Move the main wall CIRCUIT BREAKER to “OFF” and CB1 on the PROCESSOR to the “O” position.
- [2] Lift the TOP COVER.
- [3] Remove the DRIVE SIDE PANEL.
- [4] Loosen the SCREW and open the ELECTRICAL BOX COVER.
- [5] Disconnect the 6 CONNECTORS from the 500 CIRCUIT BOARD. See the numbers in Figure 6-6 below.
- [6] Remove:
 - 8 SCREWS holding the 500 CIRCUIT BOARD to the ELECTRICAL BOX COVER
 - 500 CIRCUIT BOARD

Figure 6-6 **Removing the 500 CIRCUIT BOARD**





Important

Make sure the EEPROMS are installed in the correct SOCKETS.

- [7] Using EXTRACTION TOOL TL-4430, remove and transfer the 2 PROMS/EEPROMS U19 and U20 from the existing 500 CIRCUIT BOARD to the new 500 CIRCUIT BOARD.

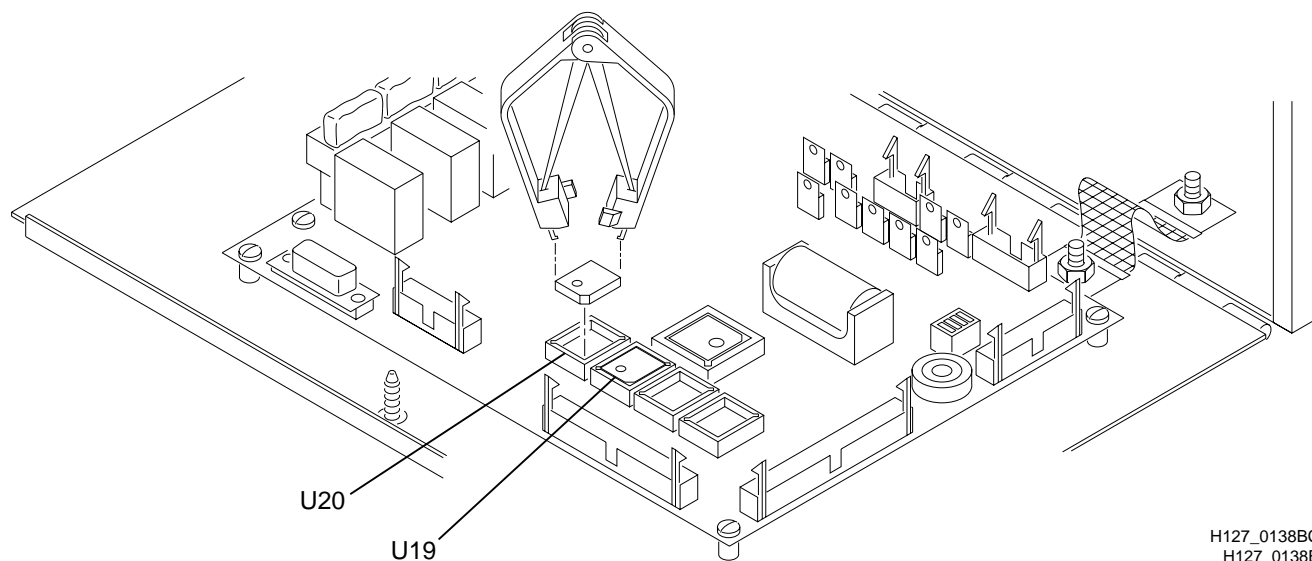
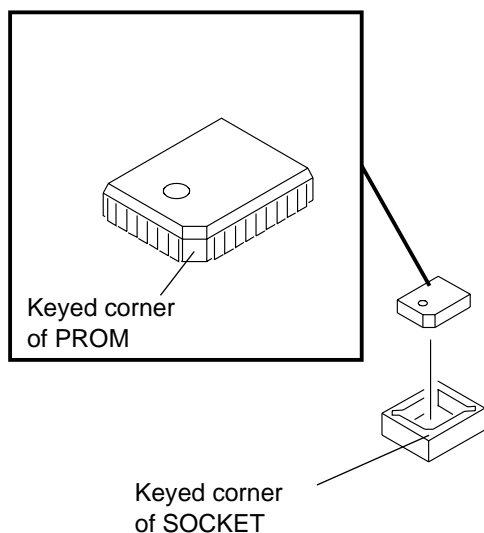


Figure 6-7 **Aligning the Keyed Corner of the PROM and the SOCKET**

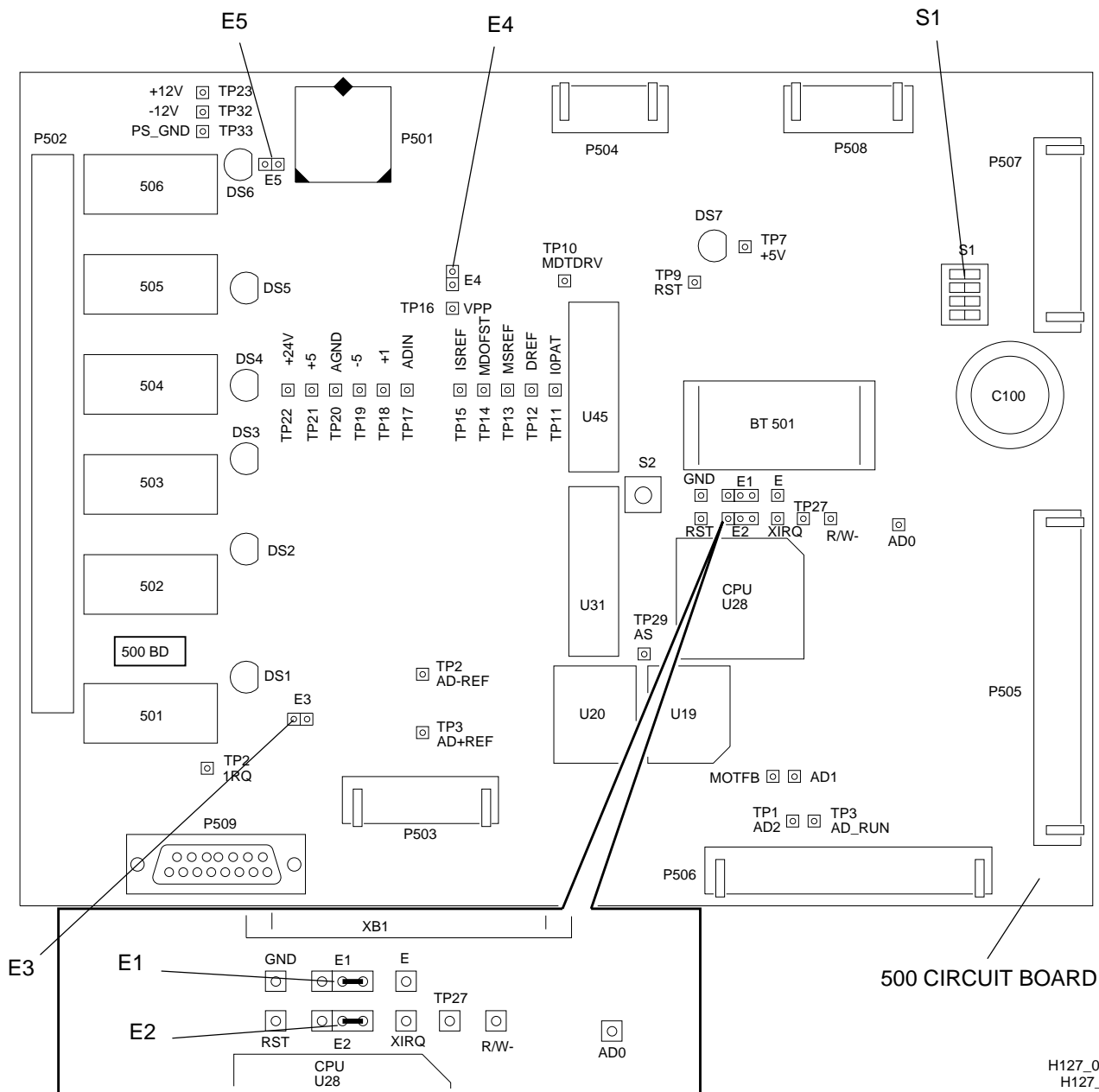


- [8] Check that the keyed corner is in the correct position on the new 500 CIRCUIT BOARD. Press the EEPROM firmly in the SOCKET.
- [9] Remove the BATTERY from the existing 500 CIRCUIT BOARD. Install the BATTERY on the new 500 CIRCUIT BOARD.

[10] Check the positions of SWITCH S1 and the JUMPERS. See the table below and the next 2 figures.

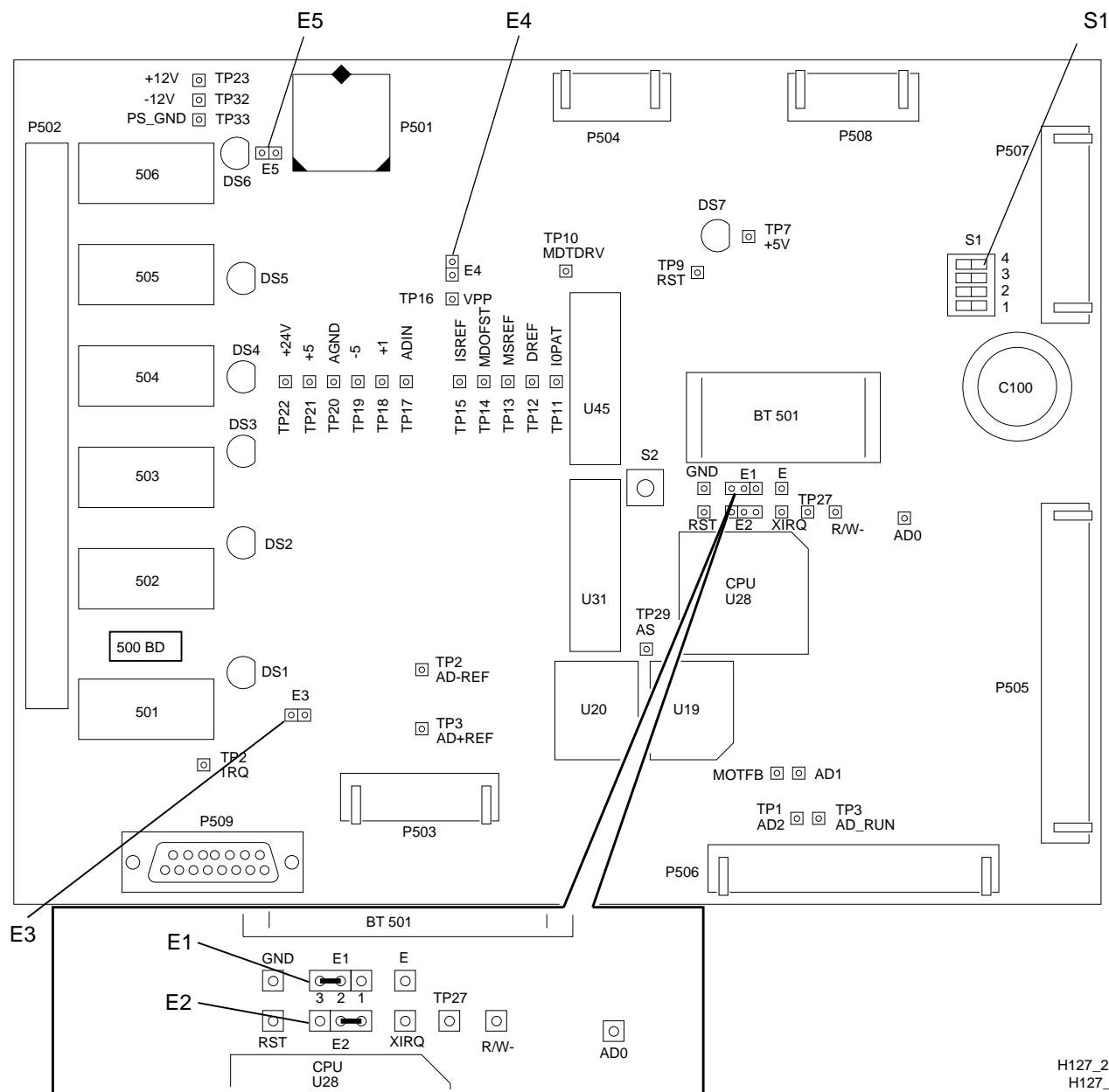
Position	Installation	
	180 LP	180 LPS/180 LP with SORTER
S1 SWITCH	All positions off.	All positions off.
JUMPER E1	JUMPER PINS 1 and 2	JUMPER PINS 2 and 3
JUMPER E2	JUMPER PINS 1 and 2	JUMPER PINS 1 and 2
JUMPER E3	None	None
JUMPER E4	None	None
JUMPER E5	None	None

Figure 6-8 Positions of JUMPERS and SWITCHES on the 500 CIRCUIT BOARD for the 180 LP PROCESSOR without a SORTER



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H127_0142DA

Figure 6–9 Positions of JUMPERS and SWITCHES on the 500 CIRCUIT BOARD for the 180 LP PROCESSOR with a SORTER or the 180 LPS PROCESSOR



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H127_2052DA

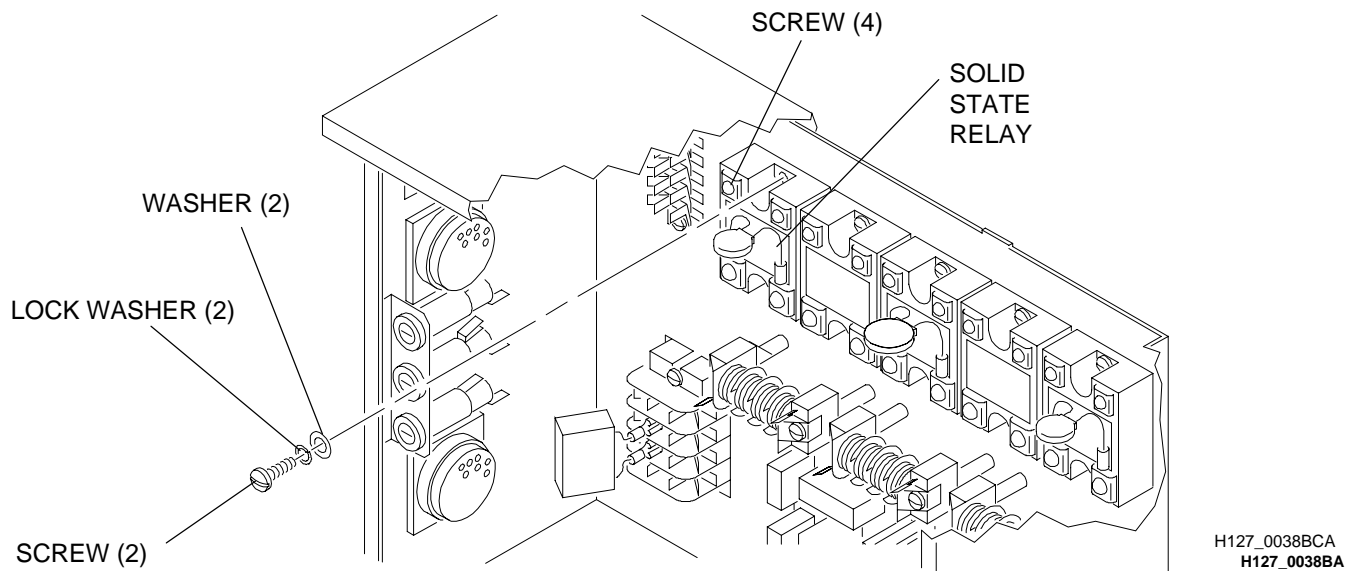
- [11] Install the new 500 CIRCUIT BOARD in the PROCESSOR.
- [12] Connect the 6 CONNECTORS removed in Step 5 on Page 6–10.
- [13] Check for correct operation of the PROCESSOR.

SOLID STATE RELAY**ESD**

Possible damage from electrostatic discharge.

- [1] Move the main wall CIRCUIT BREAKER to “OFF” and CB1 on the PROCESSOR to the “O” position.
- [2] Lift the TOP COVER.
- [3] Remove the DRIVE SIDE PANEL.
- [4] Loosen the SCREW and open the ELECTRICAL BOX COVER.
- [5] Record the position of the 4 wires that are to be removed from the SOLID STATE RELAY.
- [6] Remove:
 - 4 SCREWS that hold the wires to the RELAY
 - 2 SCREWS, 2 LOCK WASHERS, and 2 WASHERS from the RELAY
 - RELAY
- [7] Apply HEATSINK COMPOUND TL-2192 under the new RELAY. Use a thin application and cover the base completely.
- [8] Reverse the procedure to assemble.
- [9] Check for correct operation of the PROCESSOR.

Figure 6–10 Replacement of the SOLID STATE RELAY

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H127_0038BA

QUAD POWER SUPPLY


ESD

Possible damage from electrostatic discharge.

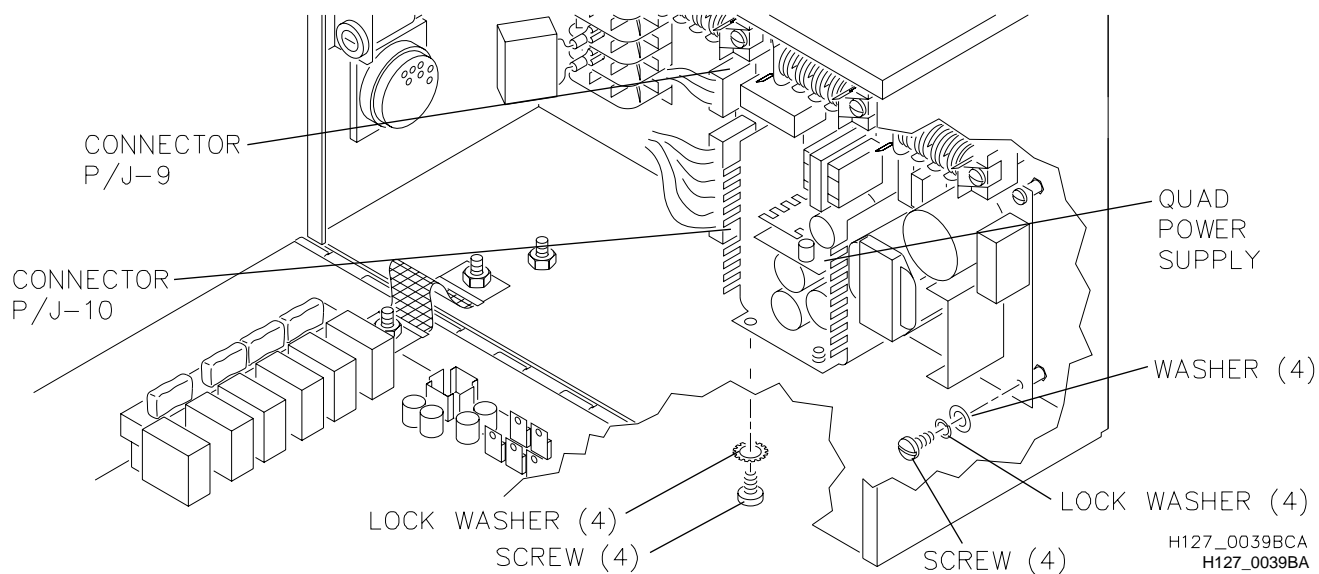
- [1] Move the main wall CIRCUIT BREAKER to "OFF" and CB1 on the PROCESSOR to the "O" position.
- [2] Lift the TOP COVER.
- [3] Remove the DRIVE SIDE PANEL.
- [4] Open the ELECTRICAL BOX.
- [5] Loosen the SCREW and open the ELECTRICAL BOX COVER.
- [6] Remove the 4 SCREWS from the inside of the ELECTRICAL BOX that hold the QUAD POWER SUPPLY.
- [7] Remove the 4 SCREWS from the bottom of the ELECTRICAL BOX that hold the QUAD POWER SUPPLY.
- [8] Disconnect the 2 CONNECTORS P/J9 and P/J10.
- [9] Remove the QUAD POWER SUPPLY.
- [10] Apply HEATSINK COMPOUND TL-2192 to the HEATSINK under the new QUAD POWER SUPPLY.


Note

Use a thin application and cover the base completely.

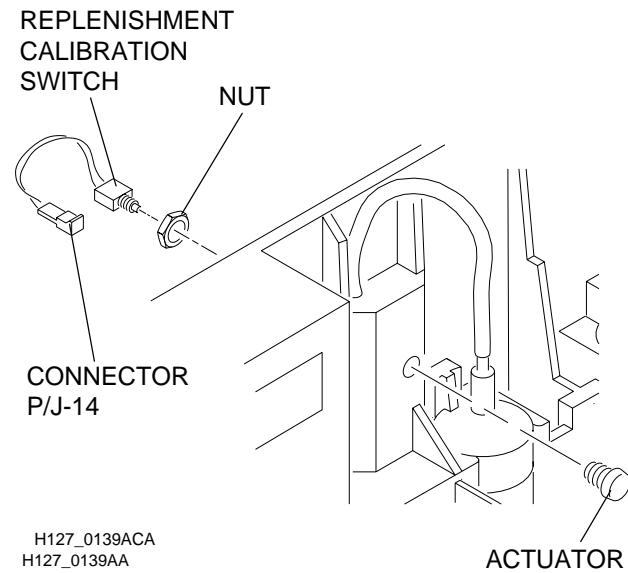
- [11] Reverse the procedure to assemble.
- [12] Check for correct operation of the PROCESSOR.

Figure 6–11 Replacement of the QUAD POWER SUPPLY

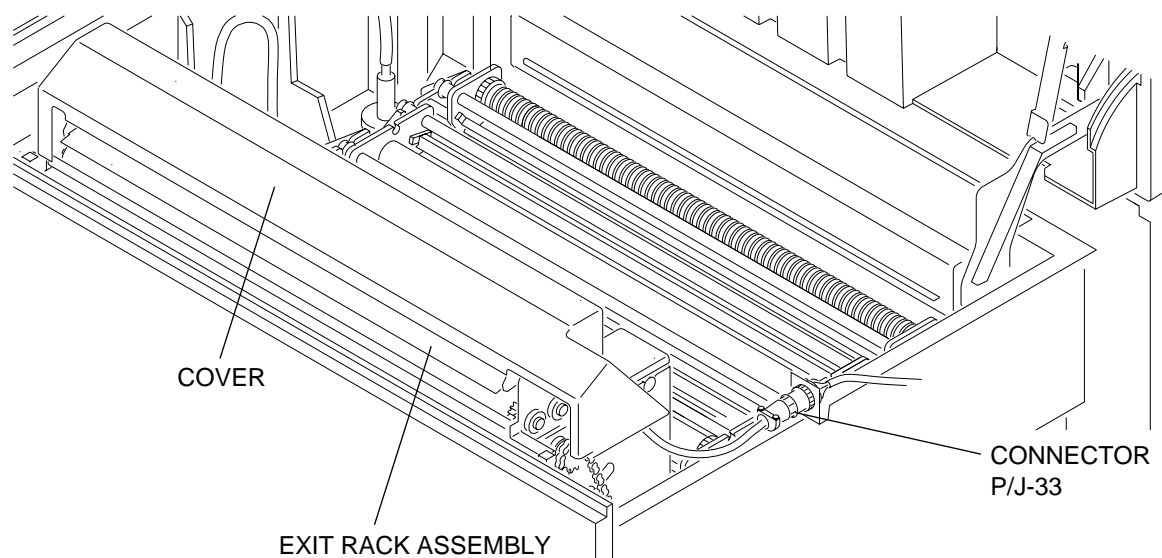


REPLENISHMENT CALIBRATION SWITCH

Figure 6-12 Replacement of the SWITCH



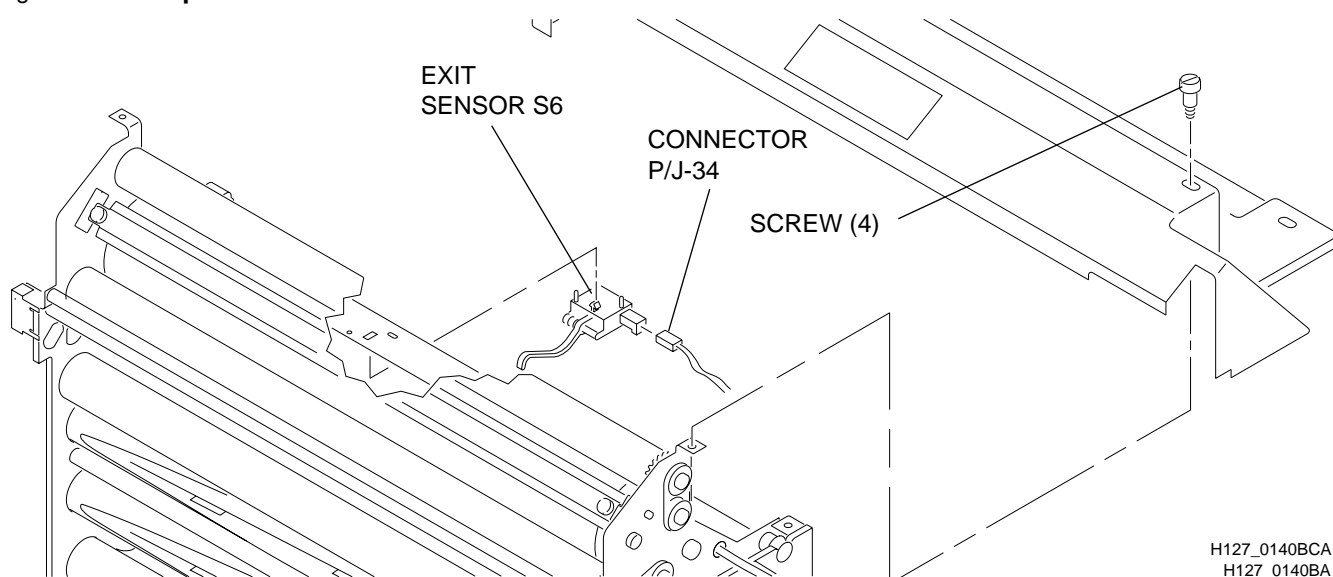
- [1] Move the main wall CIRCUIT BREAKER to "OFF" and CB1 on the PROCESSOR to the "O" position.
- [2] Lift the TOP COVER.
- [3] Remove the NON-DRIVE SIDE PANEL.
- [4] Disconnect the REPLENISHMENT CALIBRATION SWITCH and CONNECTOR P/J14.
- [5] Hold the ACTUATOR in position and loosen the NUT.
- [6] Hold the SWITCH in position and loosen the ACTUATOR.
- [7] Reverse the procedure to assemble.

EXIT SENSOR S6

H127_0136BCB
H127_0136BA

- [1] Move the main wall circuit breaker to "OFF" and CB1 on the PROCESSOR to the "O" position.
- [2] Lift the TOP COVER.
- [3] Disconnect CONNECTOR P/J33.
- [4] Remove the:
 - EXIT RACK ASSEMBLY
 - 4 SCREWS
 - COVER from the EXIT RACK ASSEMBLY
- [5] Disconnect CONNECTOR P/J34.
- [6] Pull the EXIT SENSOR S6 from the EXIT RACK.
- [7] Reverse the above procedure to assemble.

Figure 6-13 **Replacement of the EXIT SENSOR S6**



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H127_0140BA

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