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## ACGD SGA POWER SUPPLY REPLACEMENT

### 1- REPLACEMENT PROCEDURE

#### 1-1 Tools and Instruments Required

Item	Description	Part Number
1.	SGA Power Supply	2272460-2
2.	Phillips-head Screwdriver	
3.	Straight-edge Screwdriver	
4.	Universal Lift Hoist Kit with ACGD Attachments	46-317266G6
5.	Digital Multimeter with high voltage probes	

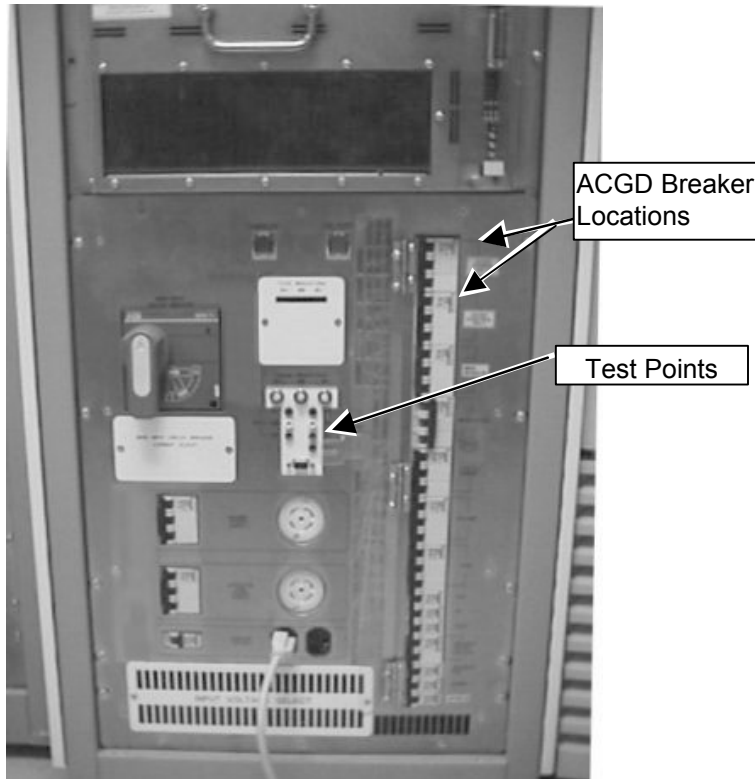
#### 1-2 Preliminary Set Up Procedure



**FATAL ELECTRIC SHOCK HAZARD!! TO PREVENT FATAL ELECTRIC SHOCK, DISCONNECT POWER FROM THE PDU BEFORE YOU PERFORM THE FOLLOWING PROCEDURES. PERFORM LOCKOUT / TAGOUT PROCEDURE PER GE OSHA LOCKOUT / TAGOUT REQUIREMENTS LISTED IN THE *FIELD SERVICE EHS MANUAL & TRAINING 2000 P/N 2135387-200*.**

### 1-2 Preliminary Setup Procedure (Continued)

1. Power down the ACGD Cabinet by turning off the ACGD 208V Control Power and the ACGD 420 V Power on the Front Panel of the PDU. See Illustration 1-1.



**ACGD CABINET—PDU (FRONT COVER REMOVED)**  
ILLUSTRATION 1-1

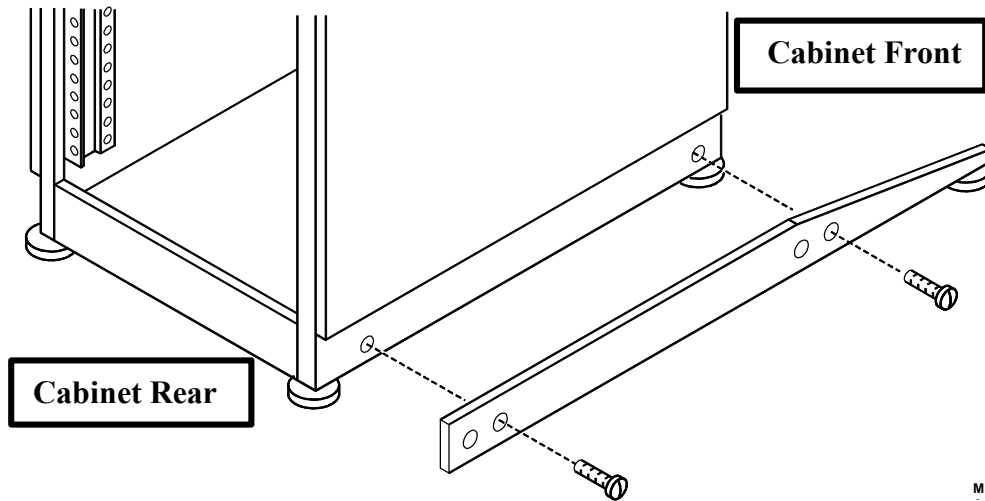
2. Lock out the breaker panel and tag it.
3. After power to the ACGD Cabinet has been removed, take a Digital Multimeter and set it to its highest AC voltage range.
4. Verify that all energy has been dissipated. Measure power at the 420 and 208 test points on the front of the PDU.

### 1-3 SGA Power Supply Replacement Procedure



**CABINET TIP HAZARD! POSSIBLE PERSONAL INJURY! CONFIRM THAT THE ALUMINUM ANTI-TIP LEGS STORED IN THE REAR OF THE CABINET ARE INSTALLED ON EITHER SIDE OF THE BASE OF THE CABINET BEFORE ATTEMPTING TO REMOVE A SGA-POWER SUPPLY.**

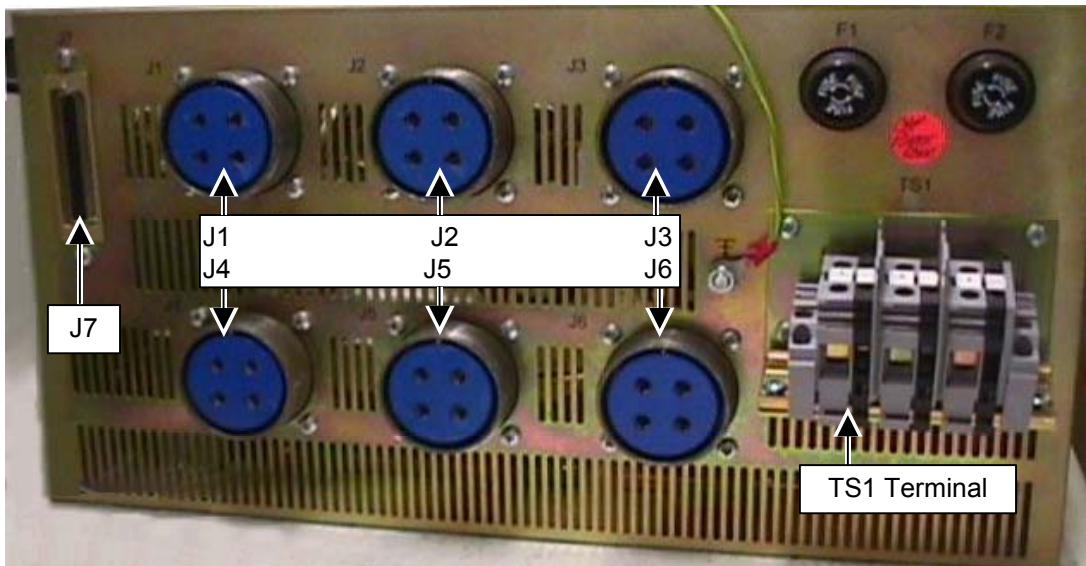
1. Using the screws included with the anti-tip legs, secure the aluminum anti-tip legs to the threaded holes on each side of the base of the ACGD Cabinet. See Illustration 1-2.



**INSTALLING ANTI-TIP LEGS ON SIDES OF CABINET**  
ILLUSTRATION 1-2

### 1-3 SGA Power Supply Replacement Procedure (Continued)

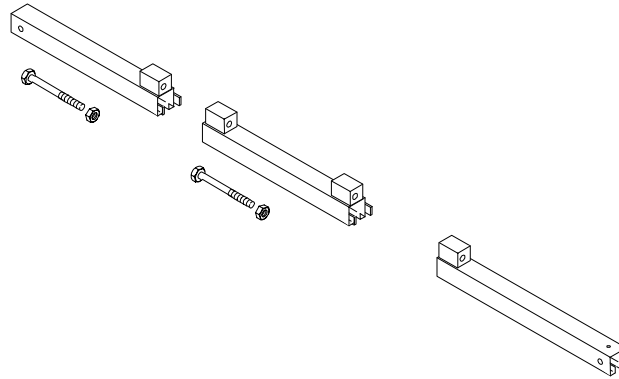
2. Remove the four pin connectors (J1, J2, J3, J4, J5 & J6) from the rear of the SGA Power Supply Module. See Illustration 1-3.
3. Remove the data cable (J7) from the rear of the SGA Power Supply Module. See Illustration 1-3.
4. Disconnect the TS1 terminal. See Illustration 1-3.



**SGA POWER SUPPLY --REAR CONNECTIONS**  
ILLUSTRATION 1-3

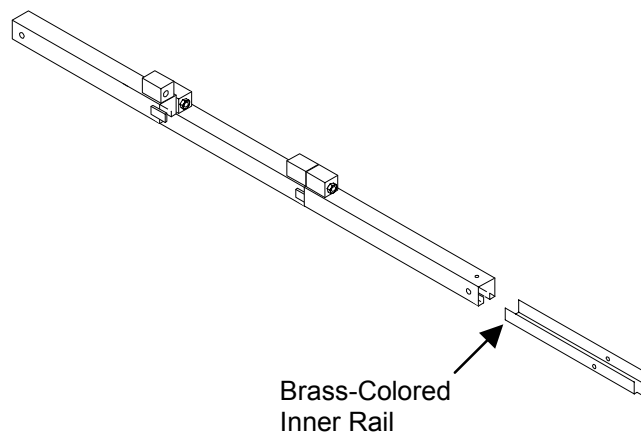
### 1-3 SGA Power Supply Replacement Procedure (Continued)

5. Locate the three (3) large Steel Rail sections in the Universal Hoist Kit and place them on a flat surface for assembly. See Illustration 1-4.



**STEEL RAIL SECTIONS, HEX BOLTS, AND HEX NUTS**  
ILLUSTRATION 1-4

6. Arrange the rail sections in the proper order (rear, center, then front) and fasten them together with 4.75" X 1/2" caps crews and hex nuts.
7. Use the crescent wrenches to tighten the cap screws.
8. Locate the Brass Colored Inner Rail and insert it into the Steel Rails as shown in Illustration 1-5.

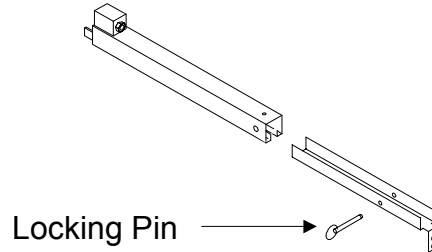


**ASSEMBLED STEEL RAILS AND BRASS-COLORED INNER RAIL**  
ILLUSTRATION 1-5

9. Insert the Brass Colored Inner Rail into the open end of the rear rail section.

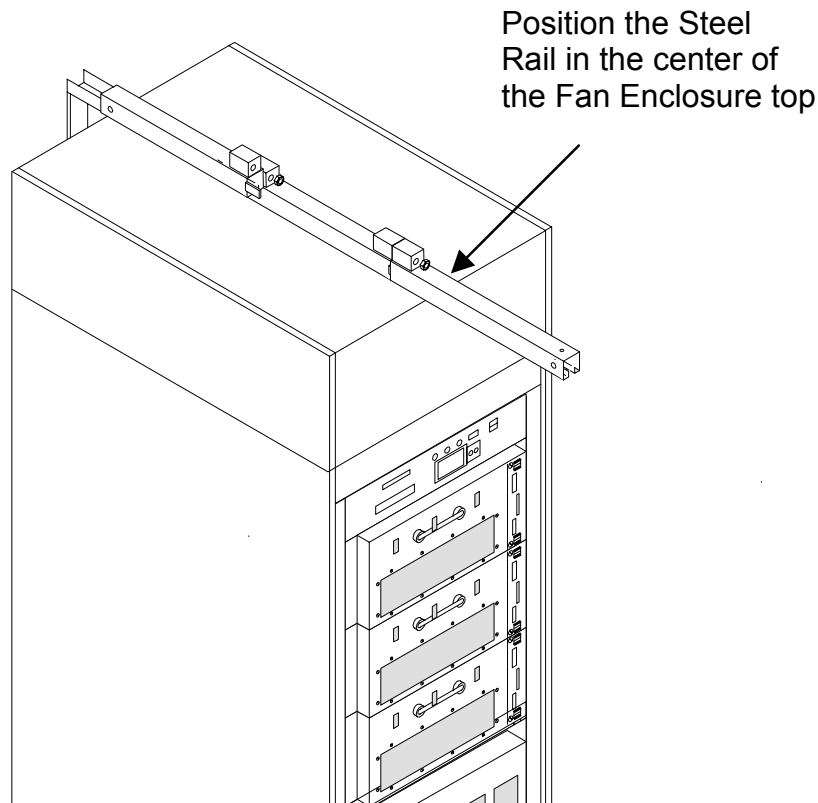
### 1-3 SGA Power Supply Replacement Procedure (Continued)

10. Locate one of two (2) locking pins in the lift kit. Insert one locking pin into the hole near the open end of the rear rail section. This locking pin secures the Brass Colored Inner Rail to the outer Steel Rail. See Illustration 1-6.



**REAR STEEL RAIL, LOCKING PIN, AND BRASS-COLORED INNER RAIL**  
ILLUSTRATION 1-6

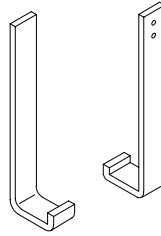
11. Place the Steel Rail assembly on top of the Fan Enclosure at the top of the ACGD Cabinet. Center the Rail Assembly on the top of the enclosure. See Illustration 1-7.



**POSITIONING OF THE STEEL RAIL ASSEMBLY**  
ILLUSTRATION 1-7

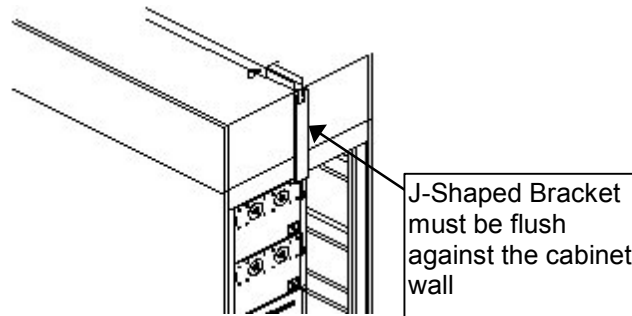
### 1-3 SGA Power Supply Replacement Procedure (Continued)

12. Locate the Brass Colored J-shaped Bracket in the Lift Kit. See Illustration 1-8.



**J-SHAPED BRACKET**  
ILLUSTRATION 1-8

13. Open the rear door of the ACGD Cabinet. Observe how the J-shaped Bracket fits into the rear doorframe. See Illustration 1-9.

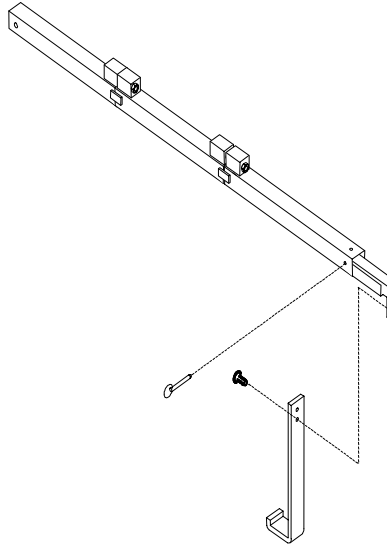


**POSITIONING OF THE J-SHAPED BRACKET**  
ILLUSTRATION 1-9

14. Slide the Rail Assembly toward the front of the ACGD Cabinet. Maintain its centered position.

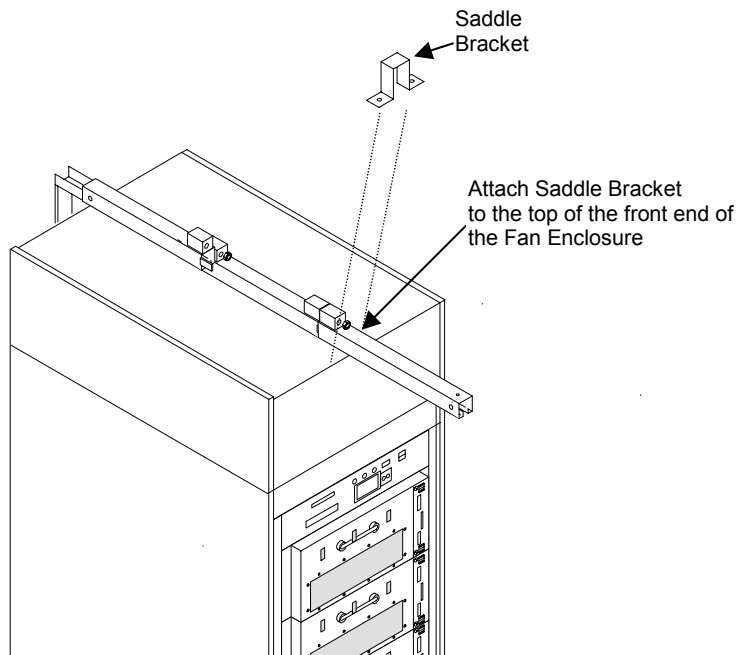
### 1-3 SGA Power Supply Replacement Procedure (Continued)

15. Attach the J-shaped Bracket to the Brass Colored Inner Rail so that the J-shaped Bracket is flush against the rear panel of the Fan Enclosure. Use the flat Phillips-head screws to secure the J-shaped Bracket to the Brass Colored Inner Rail. See Illustration 1-10.



**CONNECTION OF THE J-SHAPED BRACKET TO THE STEEL RAIL ASSEMBLY**  
ILLUSTRATION 1-10

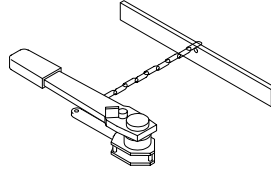
16. Once the J-Shaped Bracket is secured to the cabinet and the Steel Rail, attach the Saddle Bracket to the top of the Fan Enclosure. The screw holes are located at the front end of the Fan Enclosure. The Saddle Bracket prevents the Steel Rail from sliding from center position. See Illustration 1-11.



**POSITIONING AND ATTACHMENT OF THE SADDLE BRACKET**  
ILLUSTRATION 1-11

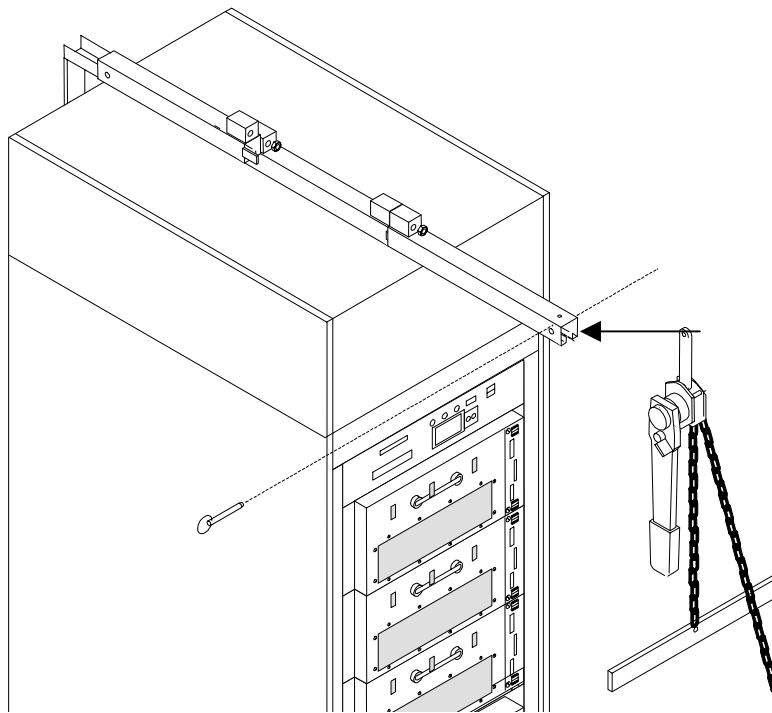
### 1-3 SGA Power Supply Replacement Procedure (Continued)

17. Locate the Hoist Assembly in the Lift Kit. See Illustration 1-12.



**HOIST ASSEMBLY**  
ILLUSTRATION 1-12

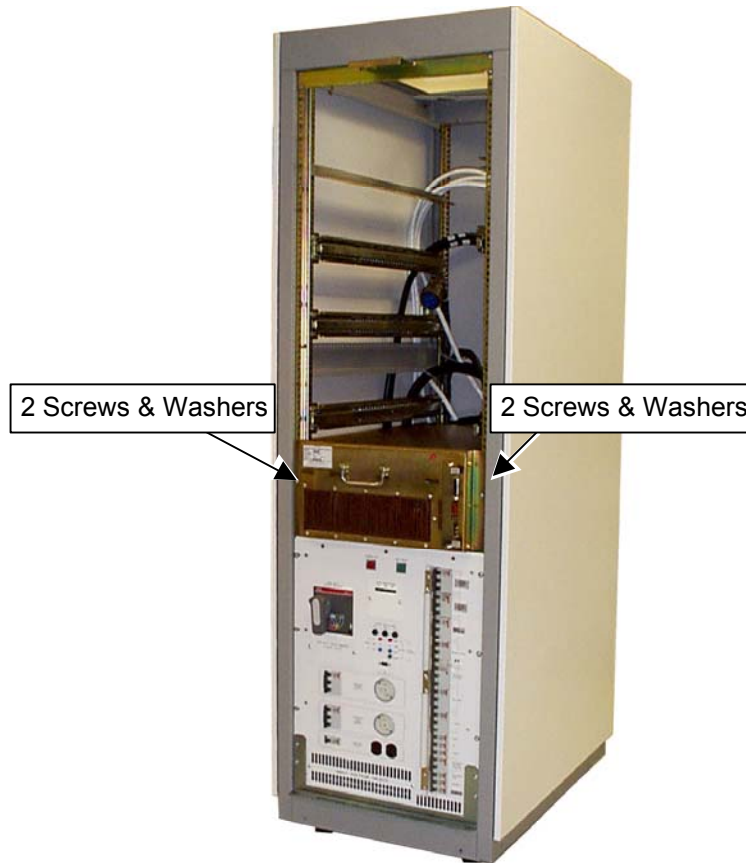
18. Insert the Hoist Assembly into the open end of the front rail. Insert a locking pin into the holes near the front edge of the front rail. This locking pin prevents the Hoist Assembly from sliding out of the rails. See Illustration 1-13.



**PLACEMENT OF HOIST ASSEMBLY INTO FRONT END OF STEEL RAIL ASSEMBLY**  
ILLUSTRATION 1-13

### 1-3 SGA Power Supply Replacement Procedure (Continued)

19. Remove the four (4) Phillips-head screws and washers from the SGA Power Supply (SGA-PS) front panel that secures the SGA-PS to the ACGD Cabinet. See Illustration 1-14.

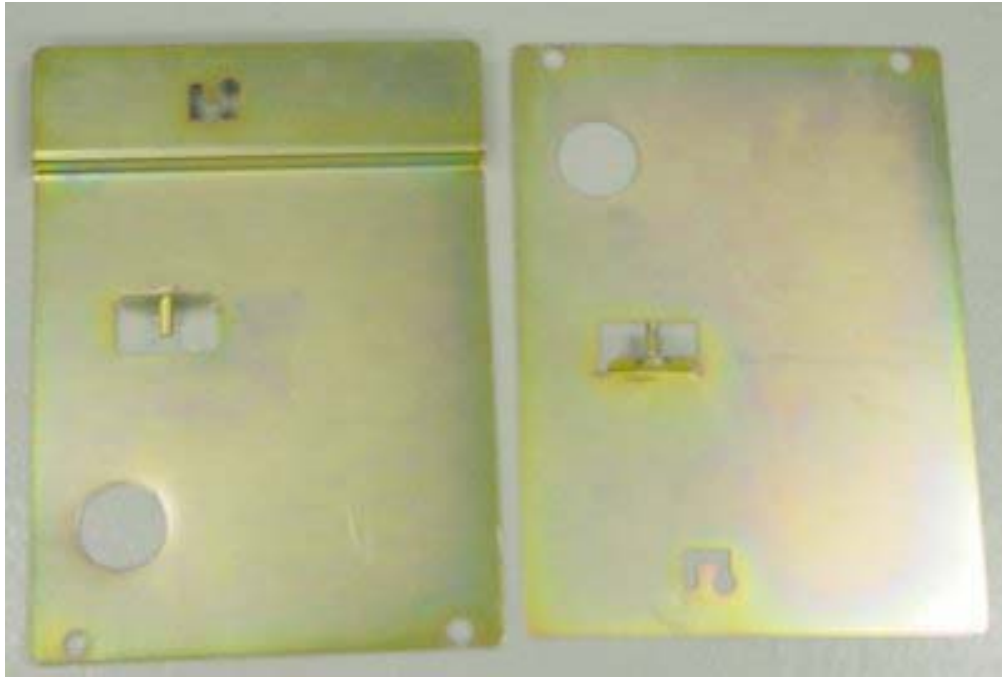


**SCREW LOCATION ON SGA-PS FRONT PANEL**  
ILLUSTRATION 1-14

20. Pull out the SGA-PS Module until its slide rails latch.

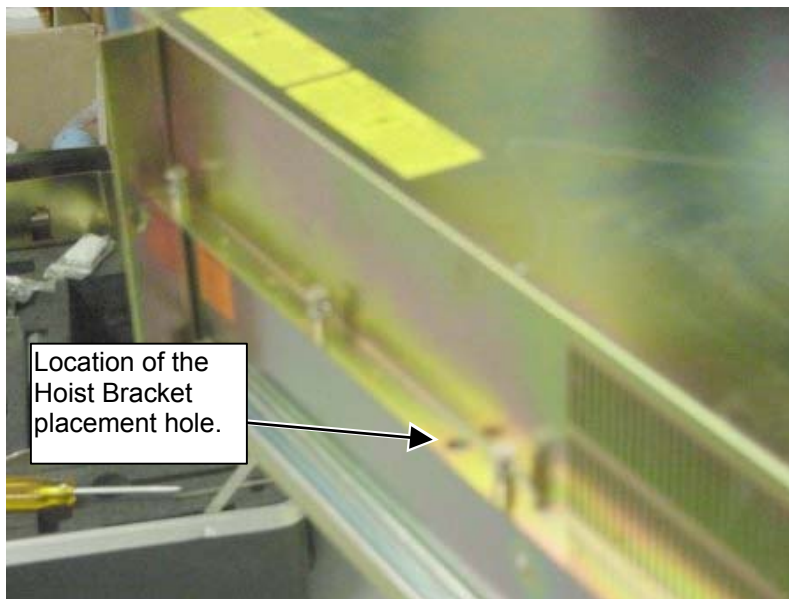
### 1-3 SGA Power Supply Replacement Procedure (Continued)

21. Remove the two SGA-PS brackets from the Universal Hoist Kit. See Illustration 1-15.



**ACGD SGA-PS HOIST BRACKETS**  
ILLUSTRATION 1-15

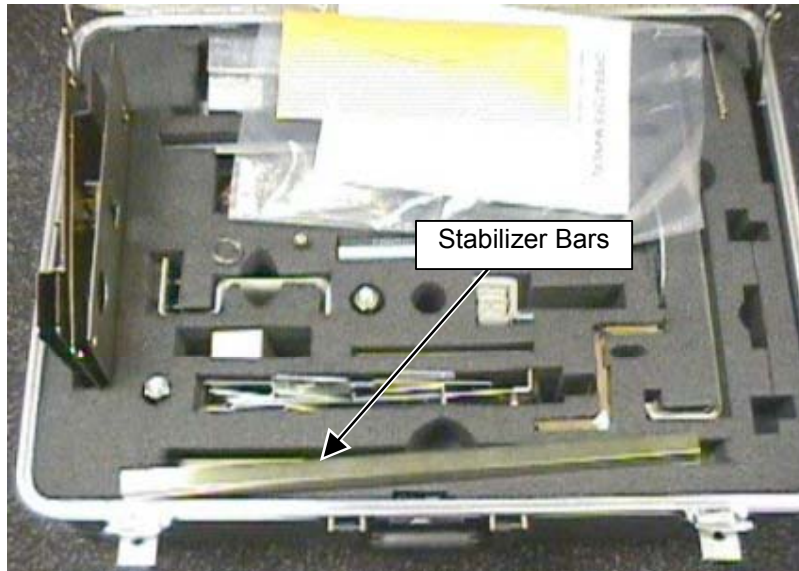
22. Brackets are labeled left and right. Place the appropriate bracket in the hole that is on the lip of sheet metal on each side of the SGA-PS. See Illustration 1-16.



**LOCATION OF HOIST BRACKET PLACEMENT HOLE**  
ILLUSTRATION 1-16

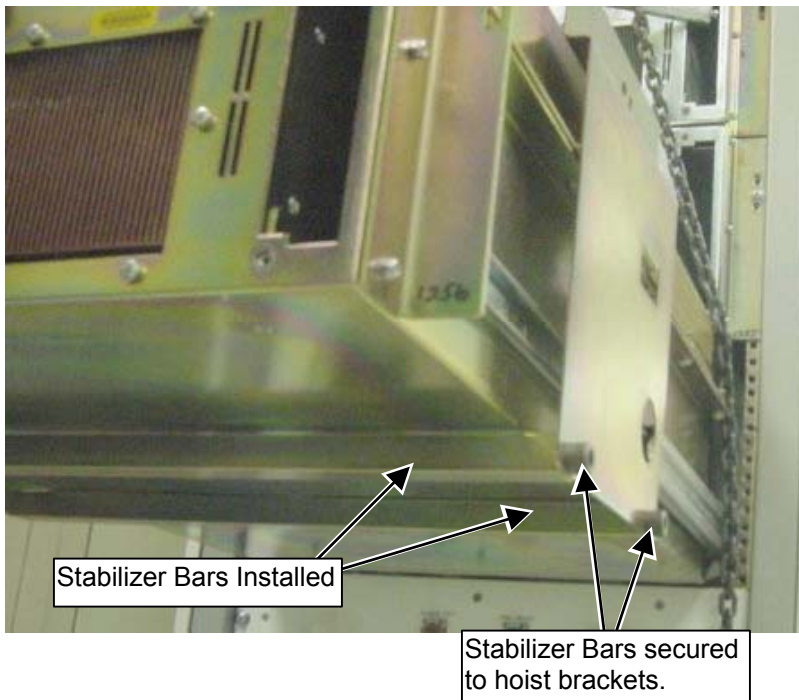
**1-3 SGA Power Supply Replacement Procedure (Continued)**

23. Locate the stabilizer bars in the Hoist Kit. See Illustration 1-17.



**LOCATION OF STABILIZER BARS IN THE HOIST KIT**  
ILLUSTRATION 1-17

24. Using four screws from the hoist kit, attach the stabilizer brackets to the bottom of both hoist brackets. See Illustration 1-18.



**ATTACHING STABILIZER BARS TO HOIST BRACKETS**  
ILLUSTRATION 1-18

### 1-3 SGA Power Supply Replacement Procedure (Continued)

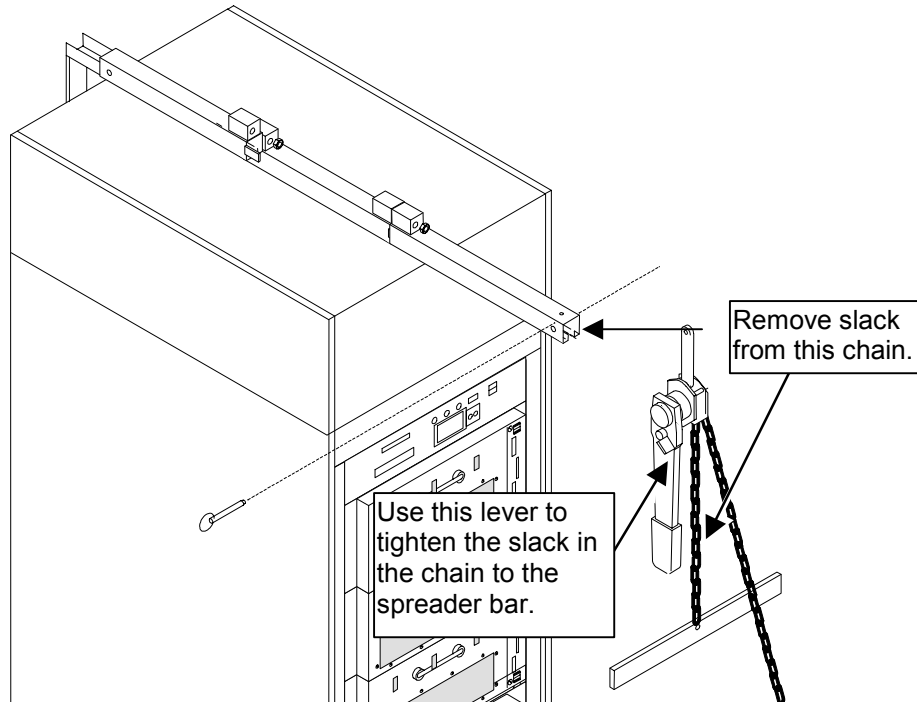
25. Attach the spreader bar of the hoist assembly to the SGA Hoist Brackets. This transfers the weight of the SGAs to the hoist. See Illustration 1-19.



**ATTACHING THE SPREADER BAR TO THE HOIST BRACKETS**  
ILLUSTRATION 1-19

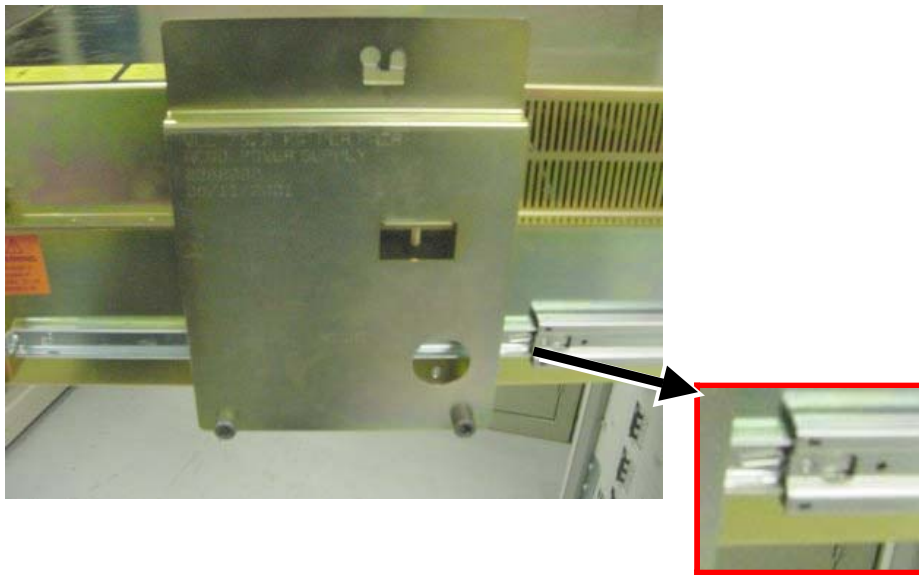
**1-3 SGA Power Supply Replacement Procedure (Continued)**

26. On the Hoist Assembly tighten the chain to the spreader bar to remove slack and support the weight of the SGA module. See Illustration 1-20.



**TRANSFERRING WEIGHT TO THE HOIST ASSMEBLY**  
ILLUSTRATION 1-20

27. Place the rail lever in the UP position on both sides of the SGA-PS. See Illustration 1-21 for location of lever.



**RAIL LEVER LOCATION**  
ILLUSTRATION 1-21

### 1-3 SGA Power Supply Replacement Procedure (Continued)

28. Ensure that the entire weight of the SGA-PS is supported by the Universal Hoist.
29. Slide the module out and remove it from the rails that are attached to the cabinet.
30. Turn the module to the side and lower the module. See Illustration 1-22.

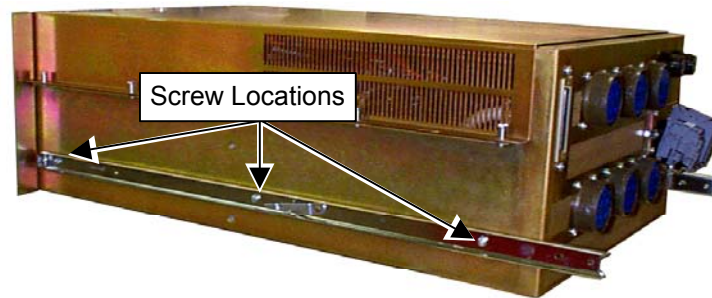


**EXAMPLE OF A MODULE TURNED TO SIDE**  
ILLUSTRATION 1-22

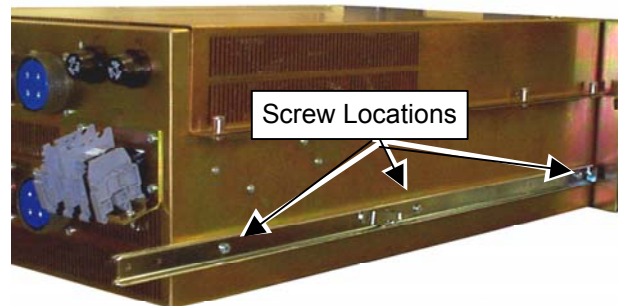
31. Remove the spreader bar from the hoist brackets
32. Remove the hoist brackets from the failed module.

### 1-4 SGA-PS Module Replacement

1. Remove the rails from the failed module and attach to the replacement module. See Illustration 1-23.



Right Side



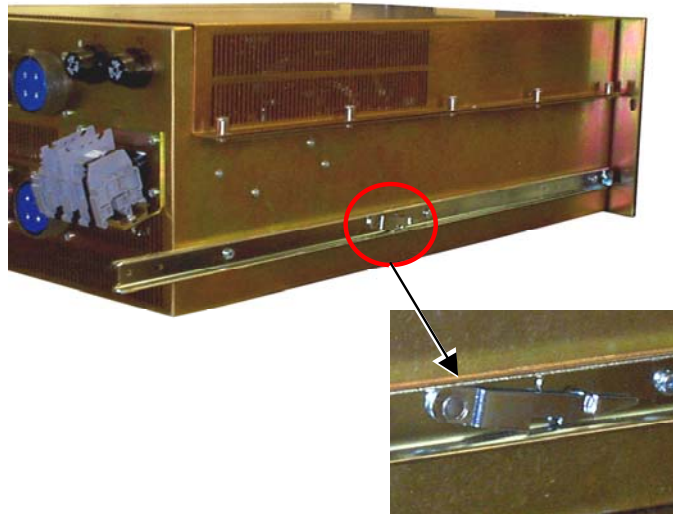
Left Side

**ATTACHING RAILS TO SGA-PS**  
ILLUSTRATION 1-23

2. Attach the hoist brackets to the replacement module.
3. Attach the spreader bar to the hoist brackets.
4. Fully extend the slide rail in the cabinet of the axis that is being replaced.
5. Raise the replacement SGA using the hoist assembly and move module in position to place rails into the slide mechanism on the cabinet.
6. Install the SGA-PS into the cabinet by inserting the module into the mating half of the rail assemblies.

### 1-4 SGA-PS Module Replacement (Continued)

7. Place the slide-rail lever in the DOWN Position. See Illustration 1-24.



**RAIL LEVER LOCATION**  
ILLUSTRATION 1-24

2. Push the SGA-PS assembly all the way into the cabinet.
3. Remove the spreader bar from the hoist brackets.
4. Remove the hoist brackets.

### 1-4 SGA-PS Module Replacement (Continued)

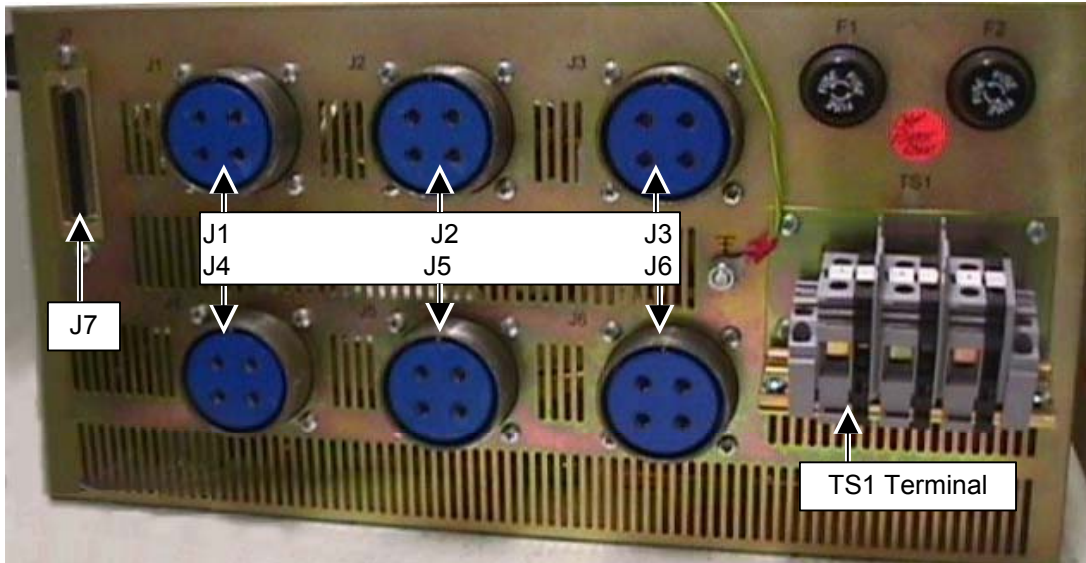
5. Secure the assembly to the front panel by replacing the four (4) Phillips-head screws and washers from the SGA-PS front panel. See Illustration 1-25.



**SCREW LOCATION ON SGA-PS FRONT PANEL**  
ILLUSTRATION 1-25

### 1-4 SGA-PS Module Replacement (Continued)

12. Replace the four pin connectors (J1, J2, J3, J4, J5 & J6) at the rear of the SGA-PS Module. See Illustration 1-26.
13. Replace the data cable (J7) at the rear of the SGA-PS Module. See Illustration 1-26.
14. Connect the TS1 terminal. See Illustration 1-26.



**SGA POWER SUPPLY --REAR CONNECTIONS**  
ILLUSTRATION 1-26

15. Remove the Universal Hoist from the cabinet and return to the kit.
16. Remove the power lock out tag out to the ACGD Cabinet and restore power.

### 1-5 Functional Tests Required

Power up the cabinet and set up for a scan to verify gradient driver comes up to Ready.

## REVISION HISTORY

REV	DATE	AUTHOR	PRIMARY REASONS FOR CHANGE
A	August 16, 2000	K. Keshena	Preliminary version.
0	Oct. 22, 2000	K. Keshena	Initial Release.
1	July 13, 2001	K. Keshena	Updated procedure to show the SGA-PS module and the removal/replacement for the sliding rails.
2	June 4, 2003	K. Keshena	Added steps to use the Universal Hoist Kit to resolve FPR 1020130, SPR ID, MRlge73349.