TABLE OF CONTENTS

1 - OVERVIEW

This procedure explains the steps needed to replace the control board on the SGA Power Supply (SGA-PS) in the ACGD Cabinet.

1-1 Required Tools & Equipment

- Phillips-head screwdriver
- Standard flat head screwdriver
- Medium Crescent Wrench
- Digital Multimeter with high voltage probes
- 1, ESD Grounding Strap
- 1, Control Board Assy. SGA GE P/N 2250375

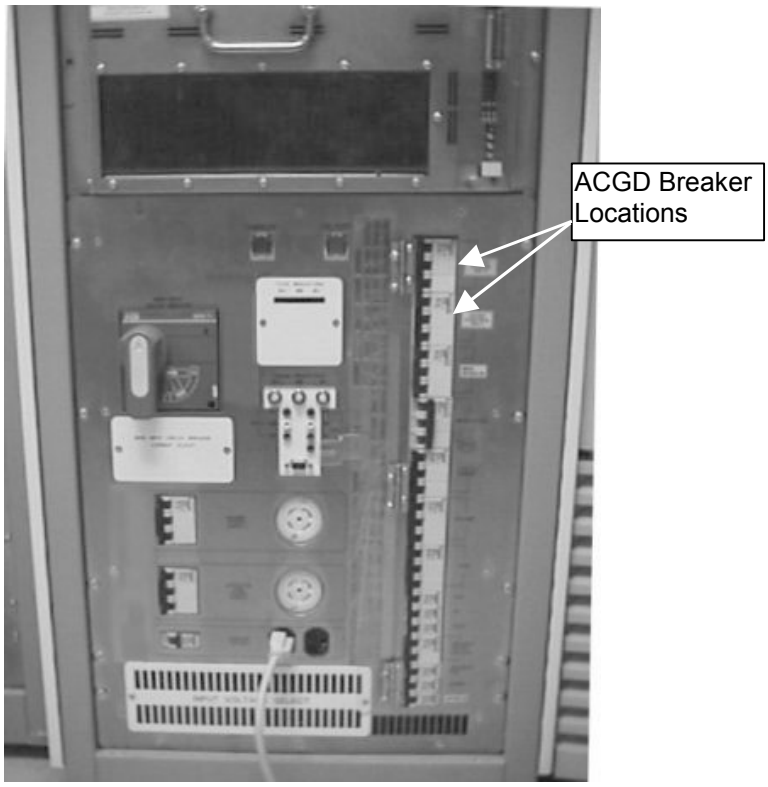
2 - REMOVING ACGD POWER

Lock out Tag out the ACGD Cabinet

FATAL ELECTRIC SHOCK HAZARD!! POSSIBLE 800 VOLTS ON CAPACITORS. WAIT AT LEAST 5 MINUTES AFTER UNIT HAS BEEN TURNED OFF BEFORE SERVICING. TO PREVENT 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.

2 - REMOVING ACGD POWER (continued)

1. Remove power from the ACGD by turning off the ACGD 208V Control Power and the ACGD 420 V Power on the Front Panel of the PDU. See Illustration 2-1.

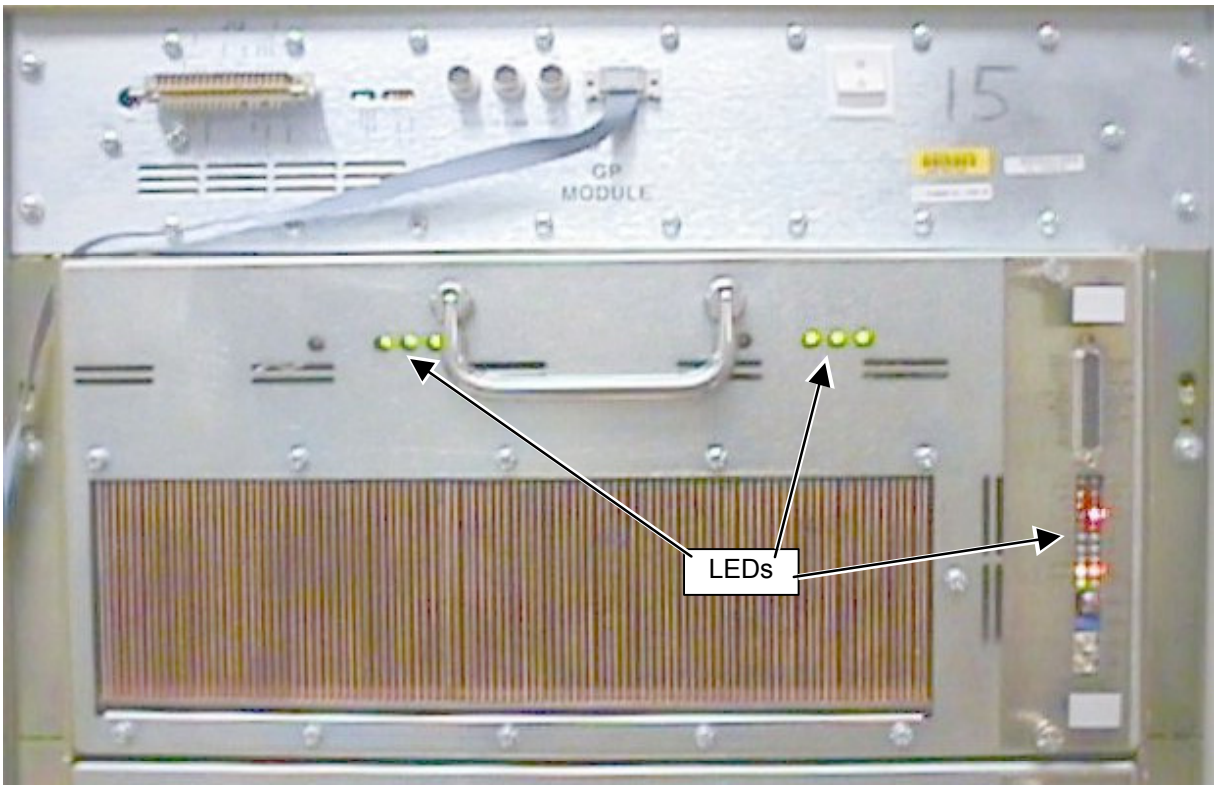


ACGD CABINET—PDU (FRONT COVER REMOVED)
ILLUSTRATION 2-1

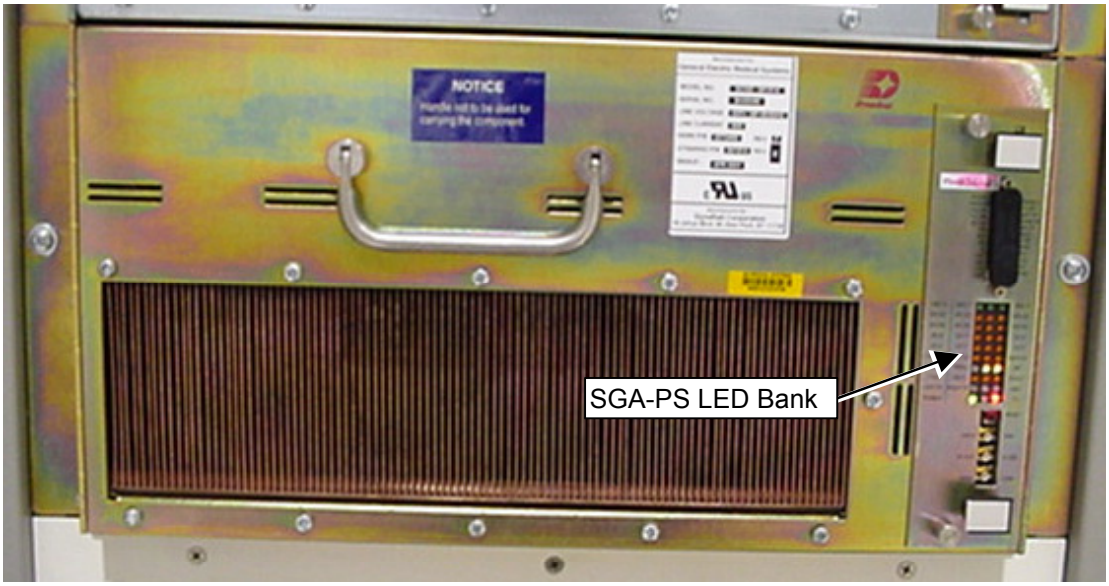
2. Lock out the breaker panel and tag it.

3. Verify that the ACGD cabinet fans have stopped and become silent, and that all LEDs on the front of all 3 SGA modules and the SGA Power Supply module are unlit (see Illustration 2-2 and Illustration 2-3). This indicates that the 208 VAC and 3-phase 420 VAC power has been removed from the ACGD.

2 - REMOVING ACGD POWER (continued)



ACGD CABINET—SGA LED DISTRIBUTION
ILLUSTRATION 2-2

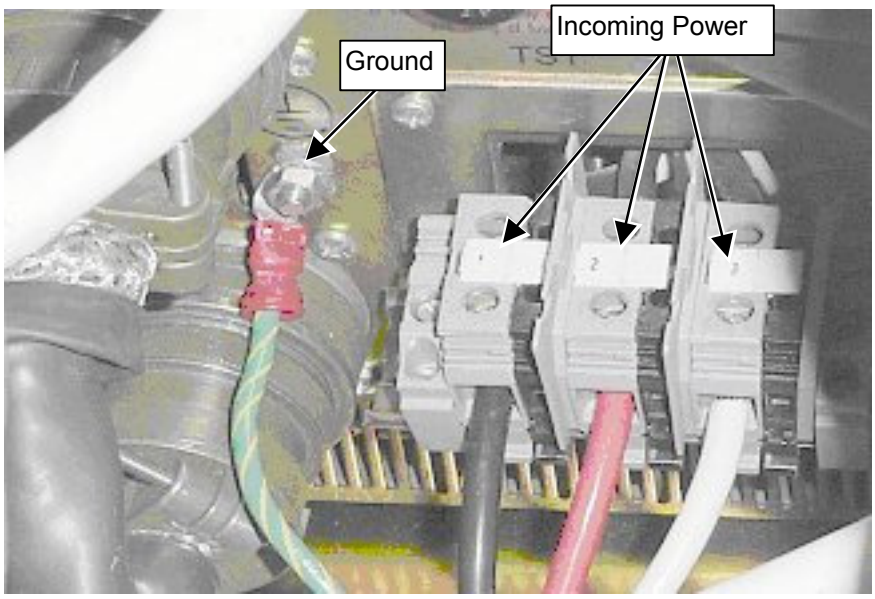


ACGD CABINET—SGA-PS LED DISTRIBUTION
ILLUSTRATION 2-3

2 - REMOVING ACGD POWER (continued)

4. Wait 5 minutes after the power has been removed from the ACGD cabinet to insure that the capacitors have had time to discharge (bleed–down).

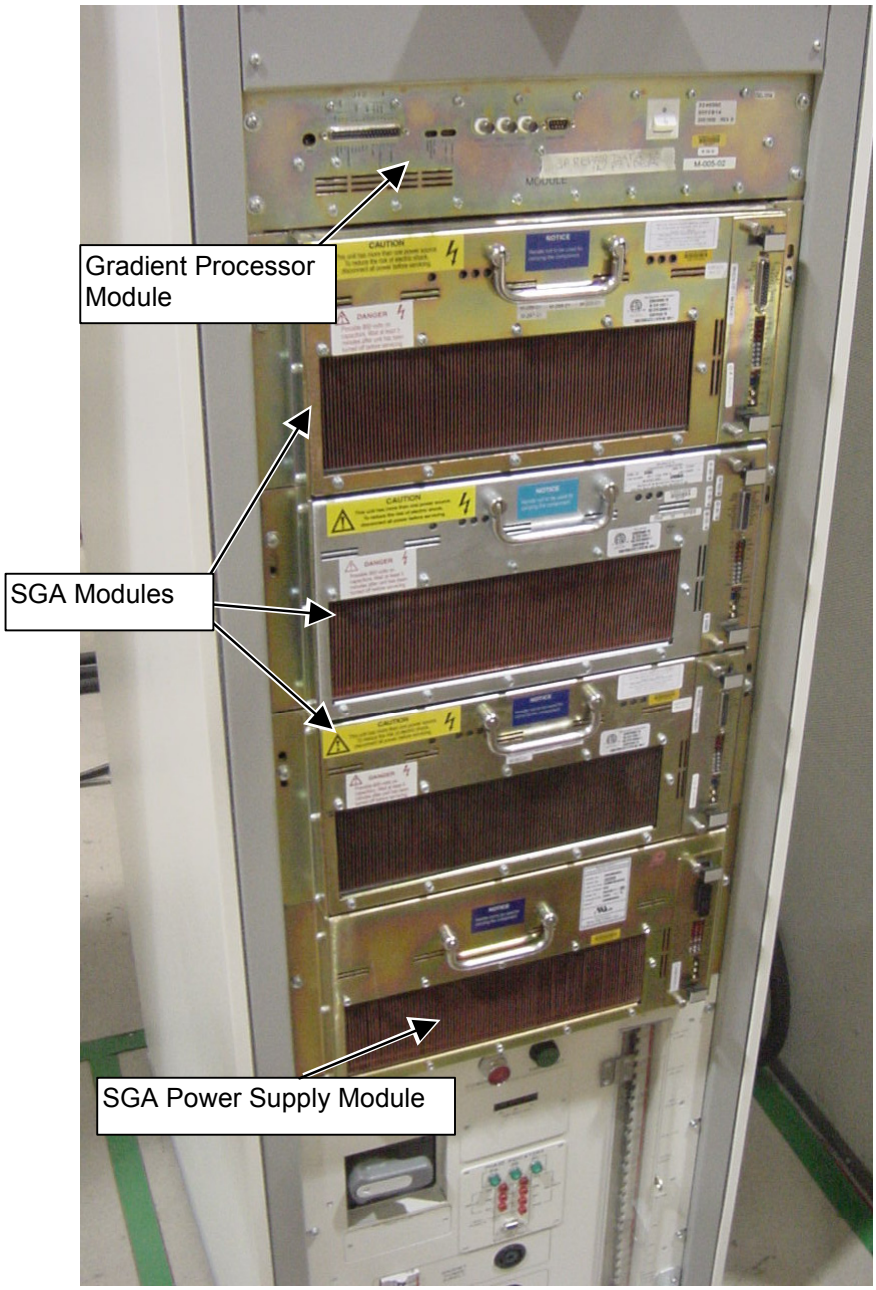
5. Verify that power has been removed from the cabinet. Take a Digital Multi-meter and set it to its highest AC voltage range and on the terminal block in the rear of the cabinet of the SGA-PS, measure between the ground connection and the incoming power connection at the black wire (see Illustration 2-4). Repeat this measurement between the ground connection and the red wire, and between the ground connection and the white wire. A measurement of 0 VAC indicates that the 420V incoming power has been successfully turned off.



TERMINAL STRIP
ILLUSTRATION 2-4

3 - SGA CONTROL BOARD REPLACEMENT

1. Note the location of the SGA Module (Illustration 3-1).

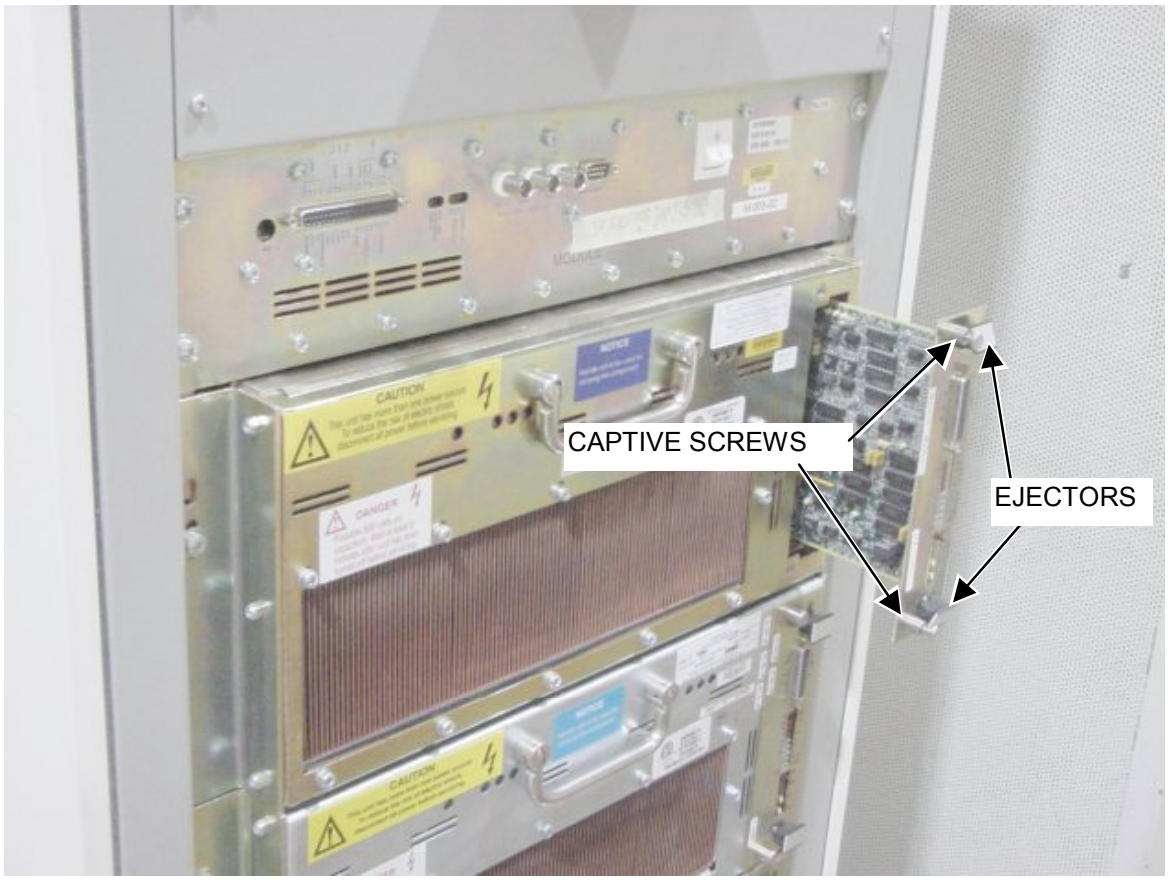


ACGD CABINET
ILLUSTRATION 3-1

3- SGA CONTROL BOARD REPLACEMENT (continued)

2. Put on the ESD Grounding Strap.

3. Loosen the captive screws on the SGA Control Board faceplate. Remove the board by simultaneously pressing up on the upper ejector and down on the lower ejector on the faceplate. See Illustration 3-2.



SGA CONTROL BOARD REMOVAL
ILLUSTRATION 3-2

4. Remove the Control Board.

5. Remove the replacement SGA Control Board (P/N 2250375) from its anti-static bag.

6. Install new SGA Control Board making sure the board is fully seated.

7. Tighten captive screws.

4 - SYSTEM RESTORATION

1. Remove the Lock Out Tag Out from the ACGD PDU Breakers.

2. Place the Gradient Breakers in the ON position, restoring power to the ACGD modules.

3. Verify that power has been restored to the cabinet. The LEDs on the SGAs & the SGA-PS will be illuminated.

5 - FUNCTIONAL CHECKS

1. Run Digital DC Offsets:

   A. Select **[Diagnostics]** from the Service Desktop and select **[Start].**

   B. Select **[IPG]**, **[Manual]**, **[Digital DC Offset],** then **[Close]**.

   C. Click **[Close]** on the *IPG_*window. Select **[Run Diagnostics]** ←TPS should download and you should observe the words “DC OFFSET” on IPG boards with a display.

   D. When one pass of diagnostics is complete (3-4 min) exit Diagnostics by closing the *Results* window, then selecting **[Quit]** on the *Diagnostics* window. TPS will download.

2. Perform the *Gradient (GRADCAL) Calibration* procedure (*sysscab*).

REVISION HISTORY

REV	DATE	AUTHOR	PRIMARY REASONS FOR CHANGE
0	Oct. 15, 2002	K. Keshena	Initial Release.
1	Jan 31 2005	P. Kargard	Removed references to SGA power supply board per MRIhc05588