g GE Industrial Systems *Renewal Services* *Louisville, KY*	**Functional Testing Specification** **LOU-GED-44C359030-D**

Test Procedure for 44C359030G01

DOCUMENT REVISION STATUS: Determined by the last entry in the "REV" and "DATE" column

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	Paul Kelley	8/26/2003
B	Updated voltage ranges for the saturable reactor test and updated drawing.	Paul Kelley	9/25/2003
C	Clarified instructions	Paul Kelley	12/18/2003

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
Paul Kelley	Eric Rouse		Robert Dunell
DATE	**DATE**	**DATE**	**DATE**
8/26/2003	8/26/2003		9/9/03

Functional test procedure for a 44C359030G01 board

1. SCOPE

1.1 This is a functional testing procedure for a Card.

2. STANDARDS OF QUALITY

2.1 Refer to the current revision of the IPC-A-610 standard for workmanship standards.

3. APPLICABLE DOCUMENTS

3.1 The following document(s) shall form part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue shall apply.
3.1.1

4. ENGINEERING REQUIREMENTS

4.1 Equipment Cleaning
- **4.1.1** Equipment should be clean and free of debris prior to applying power unless performing an initial check. Refer to the local documented procedures for cleaning guidelines.

4.2 Equipment Inspection
- **4.2.1** Equipment should be visually inspected for any defects prior to applying power. This inspection should include the following as a minimum:
  - **4.2.1.1** Wires broken or cracked
  - **4.2.1.2** Terminal strips / connectors broken or cracked
  - **4.2.1.3** Loose wires
  - **4.2.1.4** Components visually damaged
  - **4.2.1.5** Capacitors leaking
  - **4.2.1.6** Solder joints damaged or cold
  - **4.2.1.7** Circuit board burned or de-laminated
  - **4.2.1.8** Printed wire runs burned or damaged

5. EQUIPMENT REQUIRED

5.1 The following equipment is required to perform the process requirements. Equipment may be substituted provided that all accuracy's and test ratios are equivalent or better.

Qty	Reference #	Description
1		Fluke 85 DMM (or Equivalent)
1		Variac (isolated)
2		0 to 110V DC PS
1		120V Bulb Load
1		44C359030G01 TEST KIT

6. TESTING PROCESS

6.1 Setup

6.1.1 Using the 44C359030G01 Test Kit connect as shown in the diagram below in Fig.1 (positive to TB2A-J for the bias supply) with nothing on monitor 1 and 2, bias supply at 0 V and the variac set to 0. Refer to Fig. 2 for connection 28 and to find components. CR6 and CR7 in figure 1 below are the two diodes immediately to the right of the heat sinks and slightly to the left of the doughnut shaped saturable reactor.

✍ **Note: There are terminals TB2 and TB2A. Read carefully.**

6.2 Testing Procedure

6.2.1 Turn variac to get 60 volts AC to UUT. With a meter on DC you should be reading approx 50 volts across the bulb load.

6.2.2 Start raising the bias voltage. The light should start going out below 1 volt and be completely out at 1 volt.

6.2.3 Turn off and disconnect the bias supply.

6.2.4 Connect the monitor 1 supply set to 0 volts (positive to TB2-U and negative to TB2-V). The output to the load should be approx 50 volts DC.

6.2.5 Start increasing voltage on the monitor 1 supply. The voltage to the load should start decreasing at approx 8 to 20 volts and the bulb should be completely out at approx 40 to 65 volts on the monitor 1 input.

6.2.6 Continue increasing monitor 1 voltage. The voltage to the bulb should start increasing at about 92 to 105 volts and be at the full 50 volts at a monitor input of 105 volts. Leave it at 105 volts.

6.2.7 Verify closed relay contacts on the TB2-B to TB2-M terminals.

6.2.8 Verify open relay contacts on the TB2-M to TB2-L terminals.

6.2.9 Keep the supply on the monitor 1 input and apply 100 volts to monitor 2 input (positive to TB2-S and negative to TB2-P).

6.2.10 Verify approx 24 volts across CR13 (24 volt zener).

6.2.11 Remove the supply from the monitor 1 input.

6.2.12 Verify open relay contacts on the TB2-B to TB2-M terminals.

6.2.13 Verify closed relay contacts on the TB2-M to TB2-L terminals.

6.2.14 Verify that voltage to the bulb load goes from 0 to 50 volts by adjusting the monitor 2 input from 85 to 110 volts.

6.2.15 Disconnect the variac and all power supplies to the UUT.

6.2.16 Monitor the DC voltage across C2 while inputting 120V AC from the isolated variac to the following combinations of inputs (monitor 1 on TB2) one at a time - T to U, T to V and U to V. C2 should read approx 124 volts with each combination. This tests the 3 phase rectifier bridge for monitor 1.

6.2.17 Monitor the DC voltage across C1 while inputting 120V AC from the isolated variac to the following combinations of inputs (monitor 2 on TB2) one at a time - R to S, R to P and S to P. C1 should read approx 124 volts with each combination. This tests the 3 phase rectifier bridge for monitor 2.

6.2.18

6.3 ***TEST COMPLETE ***

7. NOTES

8. Drawings:

Fig. 1

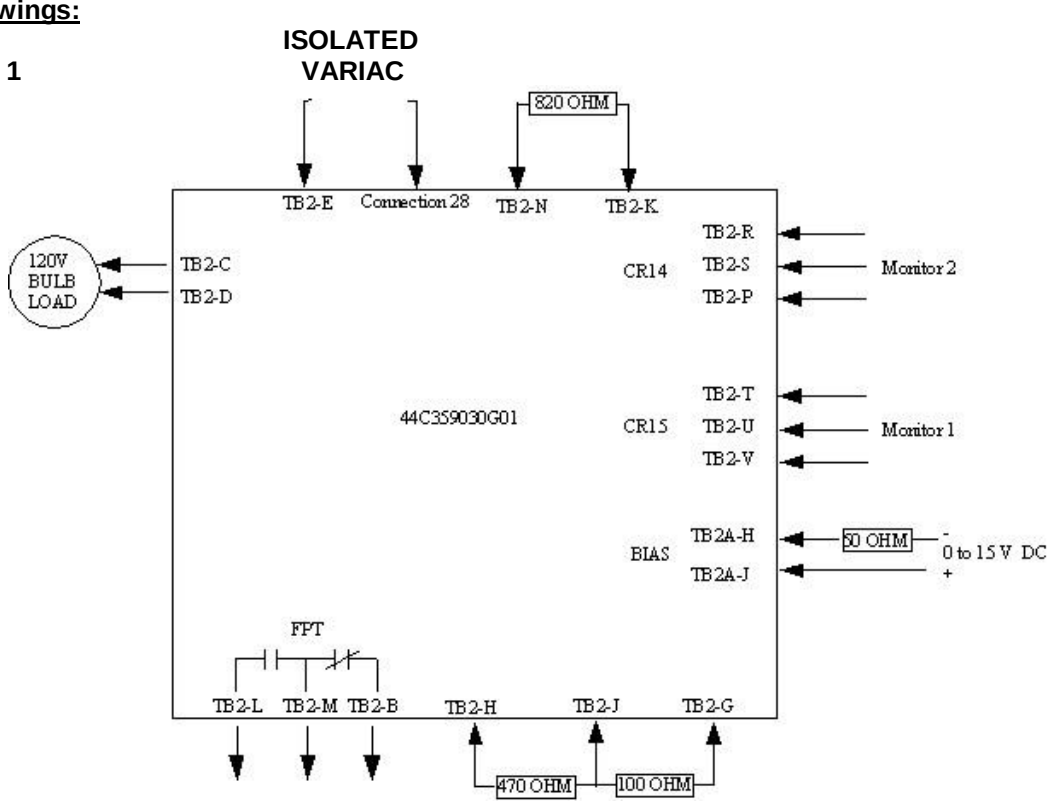

Fig. 2