g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-44C331868**

Test Procedure for a 44C331868-G02 Card

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PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
Dan Laemmle			Charlie Wade
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1. SCOPE

1.1 This is a functional testing procedure for a 44C331868-G02Card.

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 277A3921 and Shop documentation

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, cracked, or loosely connected
4.2.1.2 Terminal strips / connectors - broken or cracked
4.2.1.3 Components - visually damaged
4.2.1.4 Capacitors - bloated or leaking
4.2.1.5 Solder joints - damaged or cold
4.2.1.6 Circuit board - burned or de-laminated
4.2.1.7 Printed wire runs / Traces - 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 87 DMM (or Equivalent)

6. TESTING PROCESS

6.1 Testing Procedure

6.1.1 Using the Standard connector box for 44C boards and a rainbow box, connect one 15VDC supply (+) to Pin 1, (-) to Pin 3. and a second 15VDC supply (+) to Pin 3, (-) to Pin 5.

6.1.2 Connect 28v lamps from Pin 23 to Pin 21 (L1) and Pin 25 to Pin 27 (L2).

6.1.3 Connect a 0-30VDC variable supply #1 set to zero (+) to Pin 3 (-) to Pin 11. and variable supply #2 set to zero volts (+) to Pin 3 (-) to Pin 13.

6.1.4 Adjust pot 1P CCW. Connect a DC meter (+) to Pin 11 (-) to Pin 3. Apply power and adjust PS-1 for –10VDC at Pin 11. The DC voltage on pin 6 of IC OP2 shall be 1.1 +/- 0.01VDC. Slowly turn 1P CW. The voltage at pin 6 of OP2 shall go to 14 +/- 1VDC.

6.1.5 Adjust variable supply #2 for –10 VDC at Pin 13. The voltage at pin 6 of OP2 shall go to 0+/- .05.

6.1.6 Adjust Pot P2 CW. Adjust PS-1 to –20VDC at Pin 11. 1LED, and after a short time delay, 3LED and the lamp connected Pin 25 to Pin 27 (L2), shall energize. Adjust 1P CCW. 1LED, 3LED and L2 shall de-energize.

6.1.7 Slowly turn 1P CW until 1LED just energizes. Disconnect PS-1 from Pin 11. LED1 will go out. After a short time LED2 will come on, then, after a time delay set by 2P, 3LED and L2 will come on. Using a stop watch, adjust 2P for 20 seconds from the time PS1 is removed from Pin 11 until L2 comes on. 2P CW = approx 5 sec. 2P CCW = 105-145 sec. Several trial adjustments of 2P may be necessary to get the 20 sec time.

6.1.8 Remove all power. Test complete.

6.2 Post Testing Burn-in **Required** **___ Yes** **_X__ No**

✍ **Note:** All MARK I, II, & III Turbine related cards require a post testing burn-in of 100 hours.

6.2.1 Apply BUS or Operational power to the card for a period of 100 hours.

6.2.2 Re-test card while warm using the above procedure.

6.3 ***TEST COMPLETE ***

7. NOTES

7.1 None

8. ATTACHMENTS

8.1 None