g GE Energy ***Parts & Repair Operations*** ***Louisville, KY***	**Functional Testing Specification** **LOU-GED-44C372651-G01** **Generex Power Supply Card**

Test Procedure for a 44C372651G01

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

1.1 This is a functional testing procedure for a 44C372651G01Card.

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 277A3011 and Patchboard PB-3

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
3		Fluke 87 DMM (or Equivalent)

6. TESTING PROCESS

6.1 Setup

6.1.1 Turn pots 1P and 2P fully CCW. Jumper Pin 11 to Pin 13.

6.2 Testing Procedure

6.2.1 Connect adjustable power supply 0-30V @ 3A (+) to Pin 20 and (-) to Pin 22. Connect a digital voltmeter (+) to Pin 20 and (-) to Pin 22.

6.2.2 Connect another digital voltmeter (+) to Pin 12 and (-) to Pin 22.

6.2.3 Turn on power supply and adjust for 24.0VDC Pin 20 to Pin 22. Meter at output Pin 12 should read about 12VDC. Adjust output pot 1P for 15.0VDC +/- 0.2V at Pin 12.

6.2.4 Apply a 4.8 ohm 150W load resistor with a DC ammeter in series from Pin 12 to Pin 22. The output voltage should regulate at 15.0V +/- 0.1VDC as the input power supply is adjusted from 21 volts to 27 volts and the current remain within +/- 0.2 amps.

6.2.5 With the input volts at 24.0 VDC, short the output with a jumper from pin 12 to Pin 22. Output volts should be less than 1.5VDC and current 1.9A or less. Remove jumper Pin 12 to Pin 22 and output should recover to 15.0VDC.

6.2.6 With the load applied, adjust 1P output pot for 17.5VDC. (If not enough adjustment, clip a 22K resistor in parallel with R14.) Connect a 1200 ohm resistor Pin 30 to Pin 22. Adjust 2P pot (on card) until voltage on Pin 30 suddenly drops from 9.1 +/- 2VDC to less than 1.0V. Recheck 2P setpoint by adjusting 1P for higher volts then decreasing to see that trip is at 17.5V. Readjust 2P if necessary.

6.2.7 Reset 1P for 15.0V output. (Remove jumper across R14 if used, before adjusting)

6.2.8 Measure DC volts Pin 15 to 2TP (on card front) to be around 0.5 volts. Depress 1PB on card front; voltage should go to 0V.

6.3 Post Testing Burn-in Required ___ Yes ___ No

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

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

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

*6.4 ***TEST COMPLETE ****

7. NOTES

7.1

8. ATTACHMENTS