g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-IC3655A100A**

Test Procedure for an Lod Track Assembly

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Test Procedure for a Print Circuit Board

1. SCOPE

1.1 This is a functional testing procedure for a resistor assembly

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** Reference 244A8610 Test Instructions
- **3.1.2** Check electronic folder for more information.

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		Multimeter 85 or equivalent
1		Variac 115VAC

6. **TESTING PROCES**

6.1 Setup

6.1.1 Allen wrench to position knobs is required.

6.1.2 Be sure to test the SPFA card as per the card's test instructions.

6.1.3 Verify the following

6.1.3.1 C50 is 100 Volt 360uf capacitor

6.1.3.2 CR1 is securely fasten to heat sink

6.1.3.3 Mechanically zero power factor meter

6.1.3.4 Check with ohm meter that CR1 is isolated from heat sink

6.1.4 H4 jumpered to H2; and H3 jumpered to H1.

6.2 Testing Procedure

6.2.1 Set Trip PF and time delay full CCW.

6.2.2 Jumper S(TB1) to T(TB1).

6.2.3 Connect input transformer for 115VAC connection and apply 115VAC to H1 and H4

6.2.4 Momentarily, jumper R(TB1) to D(TB1).

6.2.5 Relay RR should pick up and stay up.

6.2.6 Check ohmmeter between X1(TB2) and Z1(TB2), that this is true.

6.2.7 Measure voltage from SPFA pin-26 to pin-22. It should be +27VDC (+/- 2V) with less then .1V P-P ripple. Power factor meter should read 1.0 power factor and voltage N(34) to Com(22) should be +5VDC.

6.2.8 Adjust R65 on SPFA card if necessary to obtain unity power factor and 4.7 to 5.3 volts. Record this voltage as V(n). Connect jumper from R to D.

6.2.9 Slowly turn TPF CW until relay drops out. This should occur when (6) to COM (22) is V(n) (+/- .1V). Position TPF knob on shaft so that pointer is opposite 1.0 PF when (6) to COM (22) reads the trip voltage.

6.2.10 To reset remove AC for 10 seconds.

6.2.11 Repeat step 6.2.9 to see that relay now trips when TPF knob points to 1.0 PF and power factor meter reads 1.0 PF. Verify that power supply is still +27VDC (+/- 2V) with less than .1 volt P-P ripple.

6.2.12 Remove AC power and remove the jumper between R(TB2) to D(TB2).

6.2.13 Reapply AC power.

6.2.14 Turn TPF full CCW and TD full CW.

6.2.15 Push white button on RR and check that relay picks up and light lights.

6.2.16 Wait 15 seconds then quickly snap TPF full CW and verify that RR drops out after roughly 1-second delay.

6.2.17 Turn TD full CCW and repeat.

6.2.18 Delay should now be almost instantaneous (.1 to .2 seconds) (times are not critical).

6.2.19 Remove all power.

6.2.20 Set TPF to max CCW and remove all jumpers.

6.2.21 Check relay contacts on TB1

6.2.21.1 Z1 to X1 (Normally Open)

6.2.21.2 Z1 to Y1 (Normally Close)

6.2.21.3 Z2 to X2 (Normally Open)

6.2.21.4 Z2 to Y2 (Normally Close)

6.2.22 Set “TPF” to .8 lagging and “time delay” to .6 seconds and lock knobs with screwdriver.

6.3 ***TEST COMPLETE ***

7. NOTES

7.1 None at this time.

8. Attachments

8.1 None at this time.