g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-3VNTZ554CD001**

Test Procedure for a Exciter

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	LFG	5/5/2011
B	Clarified CPT wiring, rearranged steps, added notes	LFG	3/30/2012
C			

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DATE	**DATE**	**DATE**	**DATE**
5/5/2011			5/6/2011

1. SCOPE

1.1 This is a functional testing procedure for an exciter.

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 Check board's 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 site specific SRA's 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)
1	H188817	"Amtrack" Load
1		Motor Control Panel/Variac
1		Clamp-on Ampmeter
1	H188947,.104X156CA016	Transformer box, CPT

6. Testing Process

6.1 Setup

6.1.1 All circuit cards should be tested individually and installed in completed unit.

6.1.2 Install 100amp shunt at DA1.

6.1.3 Determine incoming voltage from elementaries (180VAC), hook up incoming 3- phase voltage wires to L1, L2, and L3. *****DO NOT APPLY POWER*****

6.1.4 Hook up “Amtrak” load across DA1 and DA2.

6.1.5 Jumper out SCR connector plugs(inside of Load) **Door must be closed**

6.1.6 Turn Parallel/Series switch to Parallel(side of load)

6.1.7 Turn on Master power switch on GE SCR load station(top front of load)

6.1.8 Turn on fan switch(side of load)

6.1.9 Hook voltmeter across DA1 and DA2.

6.1.10 Hook clamp-on Amp-meter around one line of load.(DA1 or DA2).

6.1.11 Connect black and black/white wires of CPT(104X156CA016) to transformer box H188947(jumpered for 480v).

6.1.12 Connect CPT(104X156CA016) to 2TB pins 33(red), 34(red/white), and 35(center tap-Red/Yellow wire) to apply 40VAC. *****Do not apply power*******.

6.1.13 Using serial cable connect to 3TB on UUT

6.1.14 ******Apply power******* to Exciter,

6.1.15 *******Apply CPT power*********

6.1.16 Check for faults on display. Correct any faults before continuing.

6.1.17 If no faults, go online with UUT serially.

6.1.18 Open Toobox software program at N:\FIELDTOOLS\abc123\GF2000

6.1.19 Go to View dropdown and select Terminal Mode.

6.1.20 In terminal mode you can manipulate the output by supplying digital inputs between zero and 16,000.

6.1.21 Type in `C346=0 output should be off.

6.1.22 Type in `C346=500 output should turn on, very low.

6.1.23 Type in `C346=2000 output should increase.

6.1.24 Type in `C346=4000 output should increase.

6.1.25 Continue increasing inputs by 2000 until current reaches 100 amps.

6.1.26 Type in `C346=0 output should be off.

6.1.27 **Shut off Power, !!!!!! unit has two power inputs L1-L3 , and 2TB 33-35**.

6.2 ***TEST COMPLETE ***

7. Notes

7.1 Fault 27_LSYNC will occur if CPT power is applied before Exciter power: it can be cleared with a hard reset.

7.2 Fault 42_XSTPOPEN can be cleared by placing a jumper from 3TB.30 – 3TB.40.

7.3 Flt 368_OVERTEMP can be cleared by placing jumpers on CI1PL(1-2) and CI8PL(1-2).

8. Attachments

8.1 Picture of setup.