g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-DS3820WCIY**

Test Procedure for a water Cooled GTO Assembly

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

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A	Initial release	Glenn Chandler	6/23/2009
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PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
Glenn Chandler			Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
6/23/2009			6/23/2009

Functional test procedure for a Water Cooled GTO Assembly

1. SCOPE

1.1 This is a functional testing procedure for a Water Cooled GTO 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

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		2215A OSCILLOSCOPE, WITH 100X SCOPE PROBES
1	H033633	TEST FIXTURE

6. TESTING PROCESS

6.1 Setup

6.1.1 Before testing the whole unit, first test the control board assembly using the appropriate test procedure.

6.1.2 Pressure test the unit to check for any leaks.

6.2 Testing Procedure

6.2.1 Install unit in test fixture and attach connectors.

6.2.2 Attach Load and DC power supply to output busses.

6.2.3 Red(+) to the output buss that is connected to the anode of the output SCR.

6.2.4 Black(-) to the output buss that is connected to the cathode of the output SCR.

6.2.5 Connect a scope in the differential mode to TP1 & TP2 on the fixture.

Caution: You must always have the load connected whenever the DC power is applied to the unit or it will damage the control board.

6.2.6 With the Load & DC Power Supply switches in the off position.

6.2.6.1 Apply power to the fixture by releasing the E-Stop.

6.2.6.2 Turn the load switch on the fixture to the “ON” position.

6.2.6.3 Turn the DC power supply switch to the “ON” position, in this order.

6.2.6.4 You should observe the following waveform on the scope.

6.3 ***TEST COMPLETE ***

7. NOTES

7.1 None at this time

8. Oscilloscope Verification Examples:

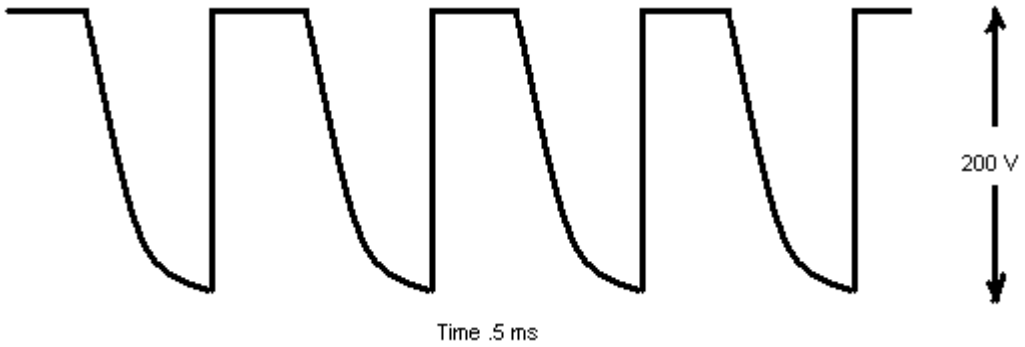

Fig. 1