



GE Energy

Functional Testing Specification

*Parts & Repair Services
Louisville, KY*

LOU-PANELTEST-TCQE-A

Test Procedure for a DS200TCQEG1A or DS200TCQEG2A

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

| REV. | DESCRIPTION | SIGNATURE | REV. DATE |
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| A | Initial release | JBARTON | 4/24/2016 |
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| PREPARED BY J.BARTON | REVIEWED BY | REVIEWED BY | QUALITY APPROVAL |
| DATE 4/14/2016 | DATE | DATE | DATE |

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1. SCOPE

1.1 This is a functional testing procedure for a Card.

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 | H190142 | LM Panel |
| 1 | | LM HMI |
| | | |
| | | |
| | | |

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6. Modifications/Upgrades

6.1 This test is FULLY functional on either a G1A or a G2A TCQE Board.

7. Testing Process

7.1 Setup

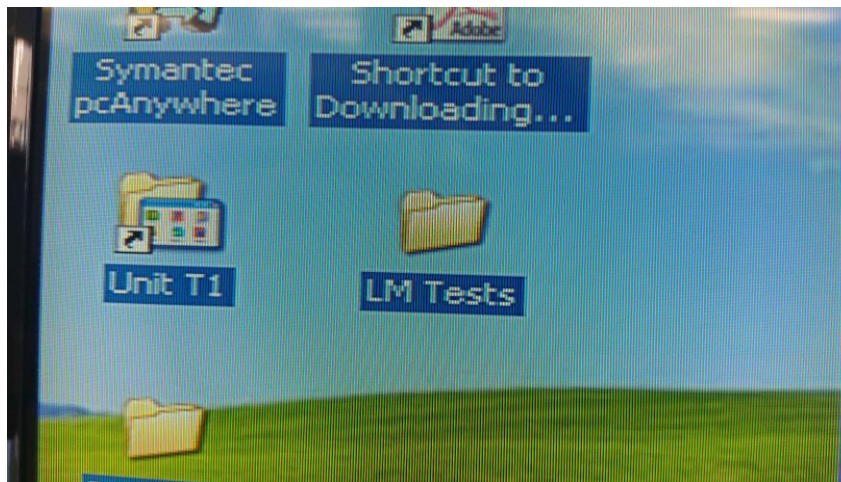
- 7.1.1 Power Down <R1> using switch SW4 on LM Panel
- 7.1.2 Pull Shop Board from <R1>
- 7.1.3 Install ALL 4 EPROMS
- 7.1.4 Verify jumpers on UUT with Shop Board
- 7.1.5 Install UUT into <R1> and connect ALL Ribbon Cables in to CORRECT Connector
- 7.1.6 Power up <R1> using SW4



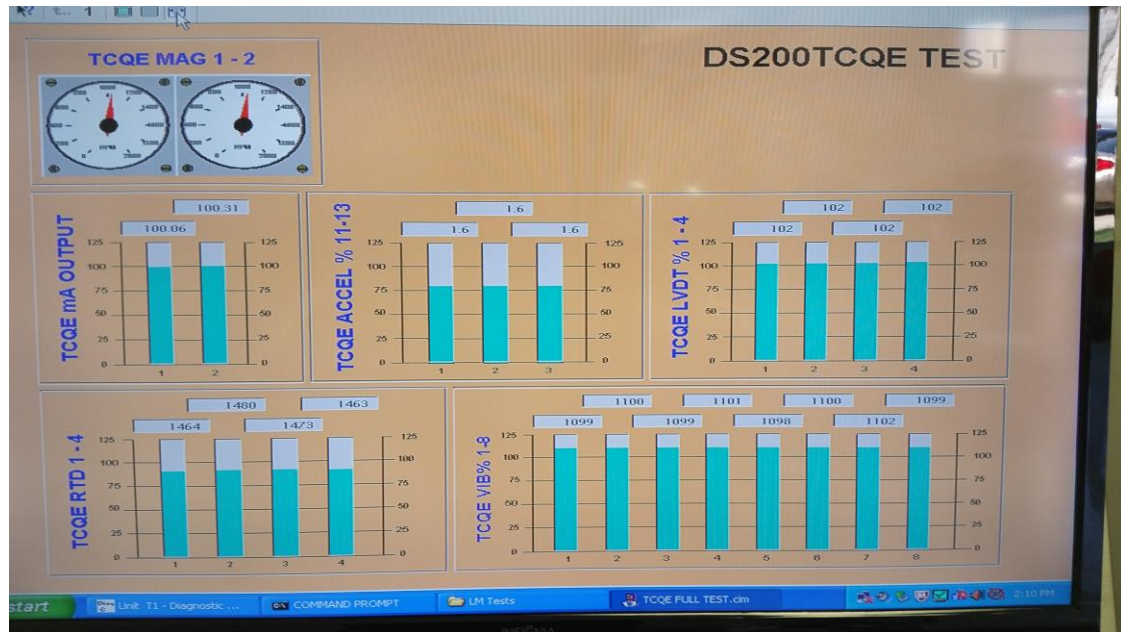
Note: Verify JJ and JJQ (Small Ribbon Cables are in correct Connector)

7.2 Testing Procedure

7.2.1 On LM HMI Desktop Screen locate LM Test Folder



- 7.2.2
- 7.2.3 Open folder and double click on TCQE FULL TEST
- 7.2.4 Verify ALL Related Groups have UNIFORM Outputs



7.2.5

7.2.6 Some I/O is adjustable by various control knobs and frequency generators, but not necessary.

7.3 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.

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

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

7.4 ***TEST COMPLETE***

8. Notes

8.1 None at this time?

9. Attachments

9.1 None at this time?