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

Test Procedure for a DC2000 INNOVATION Drive

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

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A	Initial release	L. Groves	4/25/2014
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PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
Lloyd F. Groves			Charlie Wade
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1. SCOPE

1.1 This is a functional testing procedure for a DC2000 Innovation Drive

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		Motor Control Panel
1		Innovation Keypad
1	H190111 or H190112	Innovation Test Drive

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 elementary, hook up incoming 3- phase voltage wires to L1, L2, and L3. *****DO NOT APPLY POWER*****

6.1.4 Determine proper horsepower motor needed for testing.

6.1.5 Connect Armature 1 and Armature 2 from Motor Panel to DA1 and DA2 on UUT.

6.1.6 Connect Fld1 and Fld2 from Motor panel to 2TB1 and 2TB2 on UUT.

6.1.7 Connect Digital Tach from Motor panel to IS200ITBA card on UUT.

6.1.8 Connect Innovation keypad to J15 of IS200ICBD

6.2 Running drive

6.2.1 Apply power to drive!!!!!!

6.2.2 Verify all fans are rotating.

6.2.3 Verify DFE control card is powered up and fault LED is not on.

6.2.4 If fault LED is on, go to Fault List Menu on Keypad to identify.

6.2.5 Troubleshoot UUT to eliminate any fault conditions of drive.

6.2.6 On the keypad choose Main Menu/Wizards –Start Wizards Menu

6.2.7 Run the Drive Commissioning Wizard

6.2.8 Run the Hardware Verification Wizard

6.2.9 Run the Cell Test Wizard

6.2.10 Run the Motor Control Tune-up Wizard

6.2.11 Run the Speed Regulator Tune-up Wizard

6.2.12 Run a cell test (Wizard) on drive and verify it passes.

6.2.13 Make sure keypad is in Local mode.

6.2.14 Run motor by pushing green (1) button on keypad, ramp it up slowly using +/- speed buttons.

6.2.15 If UUT is regenerative, verify motor runs in both directions.

6.2.16 **Shut off Power, !!!!!!**

*6.3 ***TEST COMPLETE ****

7. Notes

7.1 None at this time.

8. Attachments

8.1 Three pictures of the setup.