



GE Energy

## Functional Testing Specification

Parts & Repair Services  
Louisville, KY

LOU-GED-DS200SLCC

### Test Procedure for a LAN Control Card

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
E	Moved from old format to new. Old DS200SLCC-D test instruction has been retained . Clarified steps 7.2.17 thru 7.2.23.	K. Greenwell & C. Wade	12/2/2010
F	Clarified test steps 7.1.1 thru 7.2.10	E. Rouse	12/09/2010

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<b>DATE</b> 12/2/2010	<b>DATE</b> 12/9/2010	<b>DATE</b>	<b>DATE</b> 12/2/2010

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## 1. SCOPE

1.1 This is a functional testing procedure for a LAN Control 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

3.1.2 Reference: GEH-6005 sections 8-4

## 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	H033759	IOS
1	H033758	DC2000

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## 6. Modifications/Upgrades

6.1 Fill out if applicable.

## 7. Testing Process

### 7.1 LCC Test

- 7.1.1 Verify the E-stop button is pushed in and the red DC2000 power light is off.
- 7.1.2 Remove the shop LCC card from the drive and replace it with the UUT.
- 7.1.3 Remove the keypad/display face plate from the UUT.
- 7.1.4 Set the UUT jumpers as follows.
  - 7.1.4.1 J14 1-2, J15 1-2, J16 1-2, J17 1-2, J18 1-2, & J19 1-2
- 7.1.5 Install firmware version DS200SLCCF1AEC into UUT sockets U6 and U7.
- 7.1.6 Connect the ARCPL, 2PL, 10PL and 3PL cables from the drive to the corresponding connectors of the UUT.
- 7.1.7 Re-attach the keypad/display face plate to the UUT.
- 7.1.8 Pull the E-stop button out and verify the red DC2000 power light comes on.
- 7.1.9 Verify the IOS (Fixture # H033759) is powered up and the word ARCNET appears in it's TEST TYPE display. If this is incorrect, load the ARCNET.H09 file into the IOS.
- 7.1.10 Set the FDBP-69 speed control on the control panel to 10 or higher.
- 7.1.11 Verify that the JOG pushbutton, flashing on the IOS, corresponds with the Drive# you are testing. This means the Drive is communicating with the IOS (in ARCNET mode) and no faults have occurred.
- 7.1.12 Press and hold the JOG #\_ pushbutton on the IOS. Verify the motor ramps to a set speed as indicated by the SPEED # \_ display on the OIS. Release the JOG #\_ pushbutton to stop the drive
- 7.1.13 Load the DLAN.H10 file into the IOS to switch over to DLAN communications.
- 7.1.14 Verify the word DLAN appears in the TEST TYPE display of the IOS.
- 7.1.15 Verify that the JOG pushbutton, flashing on the IOS, corresponds with the Drive# you are testing. This means the Drive is communicating with the IOS and no faults have occurred.
- 7.1.16 Press and hold the JOG #\_ pushbutton on the IOS. Verify the motor ramps to a set speed as indicated by the SPEED # \_ display on the OIS. Release the JOG #\_ pushbutton to stop the drive
- 7.1.17 Press the IN 1-8 pushbutton on the control panel to verify the yellow panel lamps go out and the red panel lamps come on.

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## 7.2 KEYPAD – DISPLAY TEST

- 7.2.1 Execute Test 13 for checking the keypad and display digits as follows:
- 7.2.2 Watch the LCC display and use the keypad to enter ([set], [drv], [7], [7], [Enter], [Reset], [Reset], [Test], [1], [3], [Enter].
- 7.2.3 The message “Passed Board Tst” will appear momentarily on the display.
- 7.2.4 The UUT will then go into the keypad-display test.
- 7.2.5 Verify all segments of the display are good by watching the alternating test pattern.
- 7.2.6 Press each key on the keypad to verify the proper message appears in the LCC display.
- 7.2.7 For Example: Pressing the upper left key (Run) will cause “Key 1 Pressed” to appear in the display. Pressing the lower right key (Reset) will cause “Key 20 Pressed” to appear.
- 7.2.8 Exception: To test the Shift key hold it down while pressing any other key. This will cause “Key 14 Pressed” to appear in the display.
- 7.2.9 Press the Reset button on the control panel to exit the keypad-display test.
- 7.2.10 You are finished!

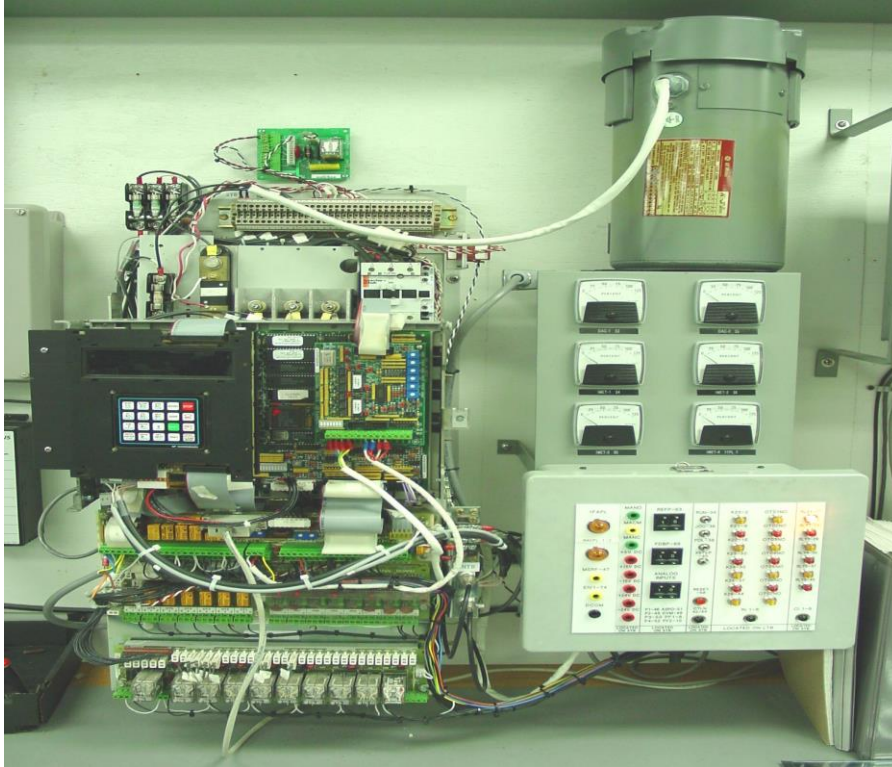
## 7.3 \*\*\*TEST COMPLETE\*\*\*

## 8. Notes

- 8.1 None at this time.

## 9. Attachments

- 9.1 None at this time.



9.2

9.3 Test Fixture