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GE Energy Services

**Functional Testing Specification**

*Inspection & Repair Services  
Louisville, KY*

**LOU-GED-531X199SPT**

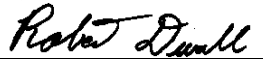
**Test Procedure for a Card**

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A	Initial release	J. Archibald	7/16/2004
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## Functional test procedure for a Card

### 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

### 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		2215 OSCILLOSCOPE
1		+ 24 VOLT POWER SUPPLY
1		SCR FIRING BOX

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## 6. TESTING PROCESS

### 6.1 Setup

#### 6.1.1

 **Note:**

### 6.2 Testing Procedure

HOOK +24 VOLY POWER SUPPLY TO NFB PIN 17 COM TO NFB PIN 15.

**CPSA CIRCUIT**      FIRING BOX GATE(WHITE) TO CSPA .    COM TO NFB PIN 15.  
                                 OSCILLOSCOPE TO CPA PIN 2                    COM TO CPA PIN 1.

TURN ON POWER SUPPLY AND FIRING BOX. SHOULD HAVE FIRING PULSES ON  
OSCILLOSCOPE.

**CSNA CIRCUIT.**      FIRING BOX GATE(WHITE) TO CSNA .    COM TO NFB PIN  
15.

                                 OSCILLOSCOPE TO CNA PIN 2                    COM TO CNA PIN 1.

TURN ON POWER SUPPLY AND FIRING BOX. SHOULD HAVE FIRING PULSES ON  
OSCILLOSCOPE.

**CSPB CIRCUIT.**      FIRING BOX GATE(WHITE) TO CSPB .    COM TO NFB PIN 15.  
                                 OSCILLOSCOPE TO CPB PIN 2                    COM TO CPB PIN 1.

TURN ON POWER SUPPLY AND FIRING BOX. SHOULD HAVE FIRING PULSES ON  
OSCILLOSCOPE.

**CSNB CIRCUIT**      FIRING BOX GATE(WHITE) TO CSNB .    COM TO NFB PIN 15.  
                                 OSCILLOSCOPE TO CNB PIN 2                    COM TO CNB PIN 1.

TURN ON POWER SUPPLY AND FIRING BOX. SHOULD HAVE FIRING PULSES ON  
OSCILLOSCOPE.

CONTUNIED

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**CSPS CIRCUIT.**      FIRING BOX GATE(WHITE) TO CSPC .    COM TO NFB PIN 15.  
                                  OSCILLOSCOPE TO CPC PIN 2                      COM TO CPS PIN 1.  
 TURN ON POWER SUPPLY AND FIRING BOX. SHOULD HAVE FIRING PULSES ON  
 OSCILLOSCOPE.


**CSNC CIRCUIT**      FIRING BOX GATE(WHITE) TO CSNC .    COM TO NFB PIN 15.  
                                  OSCILLOSCOPE TO CNC PIN 2                      COM TO CNS PIN 1.  
 TURN ON POWER SUPPLY AND FIRING BOX. SHOULD HAVE FIRING PULSES ON  
 OSCILLOSCOPE.

#### ATTUNIATOR TEST

1. HOOK OHM METER FROM CCA-W TO CCA-R SHOULD BE APPX 143 K OHM
2. HOOK OHM METER FROM CCB- W TO CCB-R SHOULD BE APPX 143 K OHM
3. HOOK OHM METER FROM CCC-W TO CCC-R SHOULD BE APPX 143 K OHM
4. HOOK OHM METER FROM CCA-R TO CVIA I SHOULD BE APPX 2.0 MEG
5. HOOK OHM METER FROM CCA-W TO CVCIA SHOULD BE APPX 2.0 MEG
6. HOOK OHM METER FROM CCB-R TO CVIBI SHOULD BE APPX 2.0 MEG
7. HOOK OHM METER FROM CCB-W TO CVCBI SHOULD BE APPX 2.0 MEG
8. HOOK OHM METER FROM CCC-R TO CVICI SHOULD BE APPX 2.0 MEG
9. HOOK OHM METER FROM CCC-W TO CVCCI SHOULD BE APPX 2.0 MEG

**\*\*\*TEST COMPLETE \*\*\***

## 7. NOTES

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8. Oscilloscope Verification Examples:

Fig. 1

Fig. 2