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

Test Procedure for ADJ. Differential with EN & DE-EN outputs control card

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Functional test procedure for:
ADJ. Differential with EN & DE-EN outputs control card, 33-1500speed SW.

1. SCOPE

1.1 This is a functional testing procedure for the ADJ. Differential with EN & DE-EN outputs 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 None

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 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
3		DC POWER SUPPLY
1		Fluke 85 DMM or equivalent

6. TESTING PROCESS

6.1 Special Note

6.1.1 ALL GROUNDS ARE CONNECTED TOGETHER

6.2 Setup

6.2.1.1 Connect a +15VDC supply to pin 6 and Ground to pin 1.

6.2.1.2 Connect a 3.5Kohm resistor to pin 5 then to the +15VDC supply (pull-up resistor).

6.2.1.3 Connect a 3.5Kohm resistor to pin 2 then to the +15VDC supply (Pull-up resistor).

6.2.2 Connect a DC source to Pin 3 positive side of supply. Negative to ground. Set to Zero volts.

6.2.3 Connect a DC source to Pin 4 positive side of supply. Negative to ground. Set to Zero volts.

6.2.4 Adjust P1 Fully clockwise.

6.2.5 Adjust P2 Fully Counter clockwise.

6.3 Testing Procedure

6.3.1 Apply power to the +15VDC supply. DS2 EN led should come on.

6.3.2 Slowly adjust the DC source connected to pin 3 until DS2 EN led turns off. Verify that is turns off at Approx. 1.6 to 1.7 Volts.

6.3.3 This will turn on Q4, which will turn off Q6. Both LEDs should be off.

6.3.4 Next slowly adjust the DC source connected to pin 4 until DS1 EN LEDs comes on. Verify that the led comes on at 1.2 to 1.3 volts.

6.3.5 Turn off power to all supplies and adjust P2 fully clockwise and P1 Fully counter clockwise.

6.3.6 Turn on all supplies both LEDs should be off.

6.3.7 Now adjust the DC source connect to pin 4 the led should come back on. Verify the led lights at 1.36 to 1.4 volts.

6.3.8 Remove power and adjust P1 and P2 for center.

6.4 ******TEST COMPLETE ******

7. Notes

7.1 None at this time