g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-531X140CCHx**

Test Procedure for a AC-500 Main Control Card

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	K. Greenwell	07/01/02
B	Added jumper information and resistance reading to section 6.2.1 & 6.3.1	J. Archibald	8/27/2009
C			

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
K. Greenwell	J. Archibald		Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
07/01/02	8/27/2009		8/27/2009

Functional test procedure for an AC-500 Main Control Card.

1. SCOPE

1.1 This is a functional testing procedure for a 531X140CCHx, AC-500 Main 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 the card'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 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	H033956	AC-500 Test drive
1		AC Motor (480 Volt)
1		Hand Held Monitor
1		Fluke 85 DMM (or equivalent)

6. TESTING PROCESS

6.1 Setup

6.2 Please complete procedure before shipping any unit, C. Wade 4/8/2009

6.2.1 Setup Jumpers per the following Table

Jumper	Setting	Jumper	Setting	Jumper	Setting
JP1	1-2	JP12	None	JP23	None
JP2	1-2	JP13	None	JP24	2-3
JP3	None	JP14	1-2	JP25	1-3
JP4	None	JP15	None	JP26	1-2
JP5	1-2	JP16	2-3	JP27	1-2
JP6	1-2	JP17	2-3	JP28	1-2
JP7	1-2	JP18	2-3	JP29	2-3
JP8	None	JP19	1-2	JP30	2-3
JP9	None	JP20	3-4	JP31	2-3
JP10	None	JP21	1-2	JP32	1-2
JP11	None	JP22	None		

6.2.2 Install test EEPROM U12 in card to be tested.

6.2.3 Connect AC Motor to drive.

6.2.4 Set REF P potentiometer to full CCW (min).

6.3 Testing Procedure

6.3.1 Using a DMM, Check for shorts from Common to each of the following voltage planes on the UUT prior to installing in the test drive.

Voltage plane	Minimum Resistance
+ 5	200 to 400 ohms
-24	> 3 Meg ohms
+24	> 3 Meg ohms
+15	> 4 Meg ohms
-15	10 to 14 K ohms

6.3.2 Install card in test drive.

6.3.3 Apply power and verify that the LEDs on the UUT scroll from Right to Left continuously.

6.3.4 Push the RUN switch up on the control box and verify that two LEDs at a time scroll from Right to Left on the UUT.

6.3.5 Adjust REF P potentiometer to start motor turning and verify that the display on the Hand Held Monitor tracks until the motor reaches full speed.

Note: The motor should run smooth with no oscillations.

6.3.6 Adjust REF P potentiometer to the midpoint position to run the motor at half speed.

6.3.7 Push RUN switch to the STOP position and verify that the motor stops.

6.3.8 Push JOG switch to the JOG position and verify that the motor runs.

6.3.9 Push JOG switch to the STOP position and verify that the motor stops.

6.3.10 Push RUN switch to the RUN position and verify that the motor runs.

6.3.11 Push XSTOP switch and verify that the motor stops and "FL 17 XSTOP" is displayed on the Hand Held Monitor.

6.3.12 Push RUN switch to the STOP position.

6.3.13 Push RESET on control box and verify that the faults resets and the LEDs start to scroll from right to Left again.

6.3.14 Turn off power

6.3.15 Adjust REF P potentiometer full CCW.

6.3.16 Remove UUT from test drive.

6.3.17 Remove test EEPROM from UUT.

6.3.18 Re-install shop test card in drive and verify that the drive powers up with no faults.

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

7. NOTES

7.1 None at this time

8. ATTACHMENTS

8.1 None at this time

9. NOTES