| g GE Energy | **Functional Testing Specification** |
|---|---|
| ***Parts & Repair Services***<br>***Louisville, KY*** | LOU-IMC-313x-x-C |

## Test Procedure for a Whedco Amp

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

| REV. | DESCRIPTION | SIGNATURE | REV. DATE |
|---|---|---|---|
| A | Initial release | | |
| B | | | |
| C | | | |



| PREPARED BY | REVIEWED BY | REVIEWED BY | QUALITY APPROVAL |
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| **DATE** | **DATE** | **DATE** | **DATE** |
| 5/3/2007 | 5/3/2007 | | |

## 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, 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) |
| | | PC with CCS for Windows Installed |
| | | 220VAC Transformer |
| | | Whedco Motor |
| | | Misc Motor Cables Serial Cable |

## 6. TESTING PROCESS

### 6.1 Setup

**6.1.1** Set all dipswitches on controller to right except for #6, it goes to the left. This sets up the address to "0" and sets up communications.

**6.1.2** Hook up the RDN (Amp C) communications cable. Cable is not reversible, be sure to connect proper end to amp and to the PC. If communication has been established you should see an echo from the drive every time you hit enter on the PC.

**6.1.3** Hookup single-phase 220VAC check connections before powering up (2L1 to 1L1, 2L2 to 1L2, Int to Ext, & nothing to DC+ & DC-), both motor cables, terminal bar connections to amplifier. Hook up large motor.

**6.1.4** Jumper 14, 15, 16, output common, & +12V. Jumper Input common to 12V/Analog common. These connection are on the terminal bar on the face of the unit. This allows the limit switches and enable to go active later in the test.

**6.1.5** Power up computer and amplifier. The top LED on the amp should be on "RED".

**6.1.6** Access the CCS 5.0 for Windows. Press return again to remove advertisement.

**6.1.7** Go to the Terminal drop down arrow and select the "0" terminal. This should bring you to the amp communication screen. Controller communication LED will blink when the enter key is pressed, if you are communicating.

**6.1.8** Backup and save whatever information is on the unit. (This is optional, for we do not know if the information is any good in memory anyway). Go to the "TOOLS" on the menu bar and select "Receive all files". Once done this drive needs to be faulted before you kill all the programs (KLA). Lifting the resolver feedback cable will do this, and then reconnect.

**6.1.9** Type "KLA", press return, you should *.

**6.1.10** Type "CLM", press return, answer yes (Y) to clear memory.

**6.1.11** Go to the "TOOLS" on the menu bar and select "SEND FILE".

**6.1.12** Send file "Customer File" located in whatever directory you place the file in and send to the amplifier.

**6.1.13** Power down amplifier then power amp back up.

**6.2 Testing Procedure** Enter RSF into drive the controller's top LED should switch from RED to GREEN and unit should be enabled, motor locked in position ready to go.

**6.2.1** Enter AUR=4096

**6.2.2** Enter KS. This might not work with this version software, needs CCS4 to work, pass over.

**6.2.3** Enter AC=50

**6.2.4** Enter VL=15

**6.2.5** Enter RRN, causes the motor to turn in the reverse direction.

**6.2.6** Enter RFN, causes the motor to turn in the forward direction.

**6.2.7** Enter ST, to stop the controller. HT will halt the controller, but it might fault out.

**6.2.8** Run unit for 4 hours, alternating between directions.

**Note:** If all inputs need to be checked a new cable will need to be wired.

***6.3 ***TEST COMPLETE ******

**7. NOTES**

**7.1**

**8. ATTACHMENTS**

**8.1**