g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU–GEF-MC2000-P.S** **Power Supply**

Test Procedure for a (259A9443P2) MC2000-Power Supply

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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 BM030 MC2000 PCB Elementary

4. ENGINEERING REQUIREMENTS

4.1 Equipment Cleaning

4.1.1 The purpose of the MC2000 Power Supply is to supply voltages to the MC2000 Control Board Rack, MCS, NCS, and 24V Power Supply.

4.1.2 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	MC2000 Test Control	Fluke 87 DMM (or Equivalent)
1	MC2000 PWM Drive Control	Test Control with axis cart

6. TESTING PROCESS

6.1 Setup

6.1.1 MC2000 P.S. Test Rack should be set up with Load Board PWC, AXS03 Test Board, and IOC Test Board in rack. Power Supply should be laid out on test bench not in Rack at this time.

6.1.2 Connect 0V and 5V Bus, AC input Plug, P1 and P2 Plugs to Power Supply.

6.2 Testing Procedure

6.3 Procedure

6.3.1 Turn on AC power Switch.

6.3.2 Red light on Control and Green LED on Power Supply should be lit.

6.3.3 Turn on MC2000 Control by depressing “Green On” push button on the NCCS.

6.3.4 PWC relays should pick up and control should Power up and load Diagnostics Program.

6.3.5 Test Power Supply Voltages by Turning Switch on Load Board. Voltage should be:

6.3.6 +5 Volts (4.90 to 5.10)
+12 Volts (11.90 to 12.10)
-12 Volts (-11.90 to –12.10)
+15 Volts (14.90 to 15.10)
-15 Volts (-14.90 to 15.10)
+5.3 Volts (5.20 to 5.4)

6.3.6.1 Turn Off MC2000 Control and remove Buses and Plugs from Power Supply.

6.3.6.2 Install Power Supply into MC200 PWM Drive Control into Rack.

6.3.6.3 Set CPU Switch in Middle to load MB3:

6.3.6.4 Turn on AC Power Switch

6.3.7 Red light on Control and Green LED on Power Supply should be lit.

6.3.8 Turn on MC2000 Control by depressing “Green On” push button on the NCS.

6.3.9 PWC relays should pick up and control should Power up and Load MC3: Program.

6.3.9.1 All LEDs on the boards in the logic rack should be on. If any LED fails to come on, turn power off and then back on. If any LED still fails to come on at the end of this time, turn power off and remove BUT. Check logic rack with KGB. If system works with KGB then BUT is bad.

6.3.10 “AMBIENT RUN IN MARK CENTURY 2000 MC Version 7.59” should be displayed on the NCS Monitor.

6.3.11 Turn on PWM Motion Cart.

6.3.12 Depress Control “ON”

6.3.13 Depress INDEX (on Keyboard)

6.3.14 Select MCLOOP Program.

6.3.15 Select “Position Tracking Test”

6.3.16 Depress POSN (on Keyboard)

6.3.17 Depress “AUTO” (on MCS)

6.3.18 Depress “CYCLE START”

6.3.18.1 MC2000 Will Run Part Program at this time.

6.3.19 Run Part Program for 6 or more hours.

6.3.20 Shut down Control

6.3.21 Depress Cancel

6.3.22 Turn off PWM Motion Cart

6.3.23 Depress Control “OFF”
6.3.24 Turn off AC.
6.3.25 Remove Power Supply From Rack.

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

7. NOTES

7.1

8. ATTACHMENTS

8.1