g GE Energy *Parts & Repair Services* *Louisville, KY*	**Functional Testing Specification** **LOU-GEF-CIF1**

Test Procedure for CIF1 Printed Circuit Board

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	R. Diercks	6/17/2009
B			
C			

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
Rick Diercks			Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
6/17/2009			6/17/2009

Functional test procedure for CIF1 Printed Circuit Board

1. SCOPE

1.1 This specification provides the Engineering Requirements for testing the CIF1 printed circuit board. The process applies only to CIF1 boards model number 44A294583-G01.

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 GEK-25322

3.1.2 GEK-25317

4. ENGINEERING REQUIREMENTS

4.1 Description

4.1.1 The 1050 Control is a solid-state, integrated circuit controller/processor system using LSI circuits for data processing and control. The static logic circuits are arranged on modular, plug in, printed circuit boards, clearly identified by type. The circuit boards are mounted with functional grouping. In addition, a board identification number marks each rack slot. The backplane consists of printed conductors arranged in a busing structure so that each slot is universal and can accept any board type. The 1050 control uses the AXIS2 board for controlling two or more axis drives.

4.2 Equipment Cleaning

4.2.1 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.

4.3 Equipment Inspection

4.3.1 Equipment should be visually inspected for any defects prior to applying power. This inspection should include the following as a minimum:

4.3.1.1 Wires broken or cracked
4.3.1.2 Terminal strips / connectors broken or cracked
4.3.1.3 Loose wires
4.3.1.4 Components visually damaged
4.3.1.5 Capacitors leaking
4.3.1.6 Solder joints damaged or cold
4.3.1.7 Circuit board burned or de-laminated
4.3.1.8 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	GE 1050MCCM	CPU3 Model
1	GE Computer Access Panel	External Interface
1	Diagnostic Tape Specific to Control	Diagnostic Tape
1	Executive Tape Specific to Control	Executive Tape

6. Testing

6.1 Setup

6.1.1 General testing of the CIF1 Interface Board. It interfaces between the SINT2 and CS9 or CS11 boards.

6.2 Procedure

6.2.1 Diagnostic Digital Test

6.2.2 Remove CIF1 test board from control panel and reconnect CIF1 to be tested. All cables are labeled.

6.2.3 Load Factory Diagnostic test tape 44S286980-X&C

6.2.4 After the Diagnostics has been loaded, the display should read "READY ENTER DATA".

6.2.5 On the control panel depress and release the following buttons;

6.2.5.1 "1"

6.2.5.2 "NEXT"

6.2.5.3 "CYCLE START". When cycle start is released the test starts.

6.2.6 If board passed display should read "TOTAL ERROR 00" "SERIAL INTERFACE TEST COMPLETE". Depress "OPTION STOP" Button

6.2.7 Test I/O Device Test.

6.2.8 Start with READY ENTER DATA

6.2.9 Enter 44 from keyboard.

6.2.10 Depress "Next". The display then shows: INPUT DEVICES, DEPRESS NEXT.

6.2.11 Depress "Next" and the display indicates the first input device.

6.2.12 Test all input device until the completion of input device then the display will show OUTPUT DEVICES, DEPRESS NEXT.

6.2.13 Test all Output Devices by depressing the NEXT Button, Each time you depress next you will test output device, which is a LED on the Control station.

6.2.14 When output device test is completed the display should read "READY ENTER DATA"

6.2.15 Diagnostic test is done.

6.3 Test Exec Test.

6.3.1 Load EXEC Tape when tape is load depress "CONTROL ON" this will take Control out of "E-STOP" e-stop lamp should turn off.

6.3.2 Turn off Control and remove SINT2 and replace Control's SINT2.

6.4 ***TEST COMPLETE ***

7. NOTES

7.1 None at this time.