g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-133D5120G0002**

Test Procedure for an EHC Mark II 133D5120G0002 Indicator Card..

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial Release	J. Francis	10/17/2017

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DATE	**DATE**	**DATE**	**DATE**
10/17/2017			10/17/2017

1. SCOPE

1.1 This is a functional testing procedure for an EHC Mark II Indicator 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 board's electronic folder for more information.
- **3.1.2** Copied original hand written test, located in the IS200IVFB folder in file cabinet located by Monte, into Word format.

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, 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	*	+28 VDC Power Supply (>6 amp)

6. TESTING PROCESS

6.1 Replace all **GE 387** Lamps, unless this has been done recently.

6.2 Connect TB2-18 and TB3-39 to 28 VDC return.

6.3 Using the attached schematic and the table listed below, use +28 VDC positive lead to check operation as follows:

+28 VDC Positive Lead Connection	Illuminating Lamps	# Lamps
TB1-1	Backup Speed Amp Out of Saturation	4
TB1-2	AUX Speed Signal 3	2
TB1-3	AUX Speed Signal 1	2
TB1-4	Electrical Malfunction	4
TB1-5	Primary Speed Signal	2
TB1-6	Not Resetting	2
TB1-7	AUX Speed Signal 2	2
TB1-8	Mechanical Overspeed Trip Malfunction	4
TB1-9	Thrust Bearing Wear	2
TB1-10	System Fault	4
TB1-11	Upper Trip	2
TB1-12	Upper Wear	2
TB1-13	Mechancial Trip Piston Malfunction	4
TB2-15	Lower Trip	2
TB2-16	Backup Speed Signal	2
TB2-17	Mechanical Trip Valve Solenoid Malfunction	4
TB2-19	125VDC To Remote Auto Is Lost	4
TB2-20	Lower Wear	2
TB2-21	Oil Trip Solenoid Malfunction	4
TB2-22	Power System Malfunction	4
TB2-23	Card Rack Air Fan	2
TB2-24	First Hit Detection	2
TB2-25	Not Locked Out	2
TB2-26	Bay 2 External Air Fan	2
TB2-27	Bay 3 External Air Fan	2
TB2-28	Bay 2 External Air Fan	2
TB2-29	Bay 3 Internal Air Fan	2
TB3-30	Non Tripping Circuit Hit 2	2
TB3-31	Not Used	2
TB3-32	Not Used	4
TB3-33	Non Tripping Circuits Hit 1	2
TB3-34	Power Load Unbalance	4

TB3-36	Loss of +22VDC	2
TB3-37	Front Standard Tripping Circuits Hit 2	2
TB3-38	Fast Closing of Intercept Valves	4
TB3-40	Loss of +125VDC	2
TB3-41	Front Standard Tripping Circuits Hit 1	2
TB3-43	Electrical Trip Valve Tripped	2
TB3-44	Trip Anticipator Action	2
TB3-45	Loss of -22VDC	2
TB3-46	Low ETS Pressure	2
TB3-47	Mechanical Trip Handle Tripped	2
TB3-48	Mechanical Trip Piston Tripped	2
TB3-49	Mechanical Trip Solendoid Tripped	2
TB3-50	Mechanical Trip Valve Tripped	2
TB3-51	Electrical Trip Solenoid Tripped	4
TB4-52	Loss of Both Speed Signals	4
TB4-53	Electrical Trip Circuit Hit 2	2
TB4-54	High Exhaust Hood Temp Trip	2
TB4-55	Master Trip Button Actuated 24 VDC	4
TB4-56	Backup Overspeed Trip	2
TB4-57	Electrical Tripping Circuit Hit 1	2
TB4-58	TSI Trip (High Vibration)	2
TB4-59	125VDC Trip Bus Electric Trip Latch	4
TB4-60	Low Shaft Pump Discharge Pressure Trip	4
TB4-61	Upper Thrust Brg Trip	3
TB4-62	125VDC Trip Bus Energized	2
TB4-63	Lower Thrust Brg Trip	3
TB4-64	Loss of Stator Coolant Trip	2
TB4-65	Cross Trip on Loss of Both Speed Signals or 1st Signal	4
TB4-66	Vacuum Trip	2
TB4-67	Master Trip Activated 125VDC	4
TB4-68	Customer Trip	2
TB4-69	Low Bearing Oil Trip	2
TB4-70	Low Hydraulic Pressure Trip	2
TB4-71	Cust Trips Oper. by Station Battery	4
TB4-72	Not Used	2
TB4-73	Not Used	2
TB1-14	Lamp Test	All Lamps

7. NOTES

7.1 100 Hour Burn-In required.

8. End of Tests.

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