ABB	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-IC3600SFKA1**

Test Procedure for a

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	Jimmy Morgan	5/13/19
B			
C			

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
J. Morgan	Richard Martin		L. Groves
DATE 5/13/19	**DATE** 5/13/19	**DATE**	**DATE** 5/14/2019

1. SCOPE

1.1 This is a functional testing procedure for an IC3600SFKA1 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

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		Fluke 87 DMM (or Equivalent)
2		50Vdc Power Supplies
1		28Vdc Power Supply
1		12Vdc Power Supply

6. Modifications/Upgrades

6.1 Fill out if applicable.

7. Testing Process

7.1 Setup

7.1.1 Connect Bus Voltages as Follows:

7.1.1.1 +50Vdc PIN (24)

7.1.1.2 -50Vdc PIN (30)

7.1.1.3 +28Vdc PIN (23)

7.1.1.4 +12Vdc PIN (27)

7.1.1.5 A-COM PIN (2) or (50)

7.1.1.6 P-COM PIN (25)

7.1.2 Connect a jumper from purge pin (8) to A-COM and P-COM

Note: A-COM and P-COM are tied together

7.2 Testing Procedure

7.2.1 Connect Voltmeter to PIN (16) and adjust pot R61 until the meter reads 4.0V +/- .05VDC

7.2.2 Connect PIN (22) “increase oil” to P-COM and watch for clockwise rotation of the motor pot. NOTE: a delay of 60 seconds may be necessary before the motor will start to rotate.

7.2.3 Observe the motor stops running after reaching the limit stop.

7.2.4 Remove PIN (22) from P-COM

7.2.5 Connect PIN (40) “increase gas” to P-COMMON and watch CCW rotation. Observe the motor stops running after reaching the limit stop.

7.2.6 Check with an ohmmeter between PINS (41) and (48) to see that the relay (K5) is closed when full CCW rotation is reached. Contacts should be open until full CCW position is reached.

7.2.7 Remove PIN (40) from P-COM, and connect PIN (22) to P-COM.

7.2.8 After full CW rotation has been reached, check the continuity between PINS (4) and (10), and also PINS (3) and (11) to see that relay (K4) has closed. Contacts should be open until full CW position is reached.

7.2.9 Remove PIN (40) from P-COM.

7.2.10 Turn pot by hand to the full CCW position, then connect PIN (22) to P-COM. A time delay of 50-80 seconds should elapse before the motor starts.

7.2.11 Connect PIN (39) to +50Vdc Then repeat Step 7.2.10. A time delay of around 15 seconds should elapse before the motor starts.

7.2.12 Remove the PIN (8) (purge pin) from A-COM/P-COM. Repeat Step 7.2.10. No time delay should exist.

7.2.13 Connect PIN (6) to +12VDC. Turn pot fully CW. Voltages should read as follows:

7.2.13.1 PIN (43) 12v +/- .25V

7.2.13.2 PIN (45) 0V +/- .25V

7.2.14 Turn pot fully CCW and measure the following:

7.2.14.1 PIN (43) 0v +/- .25V

7.2.14.2 PIN (45) 12V +/- .25V

7.2.15 Set pot to 50% oil or ½ of rotation and measure:

7.2.15.1 PIN (43) 8v +/- .25V

7.2.15.2 PIN (45) 8V +/- .25V

7.2.16 Turn pot CW to stop, then back until limit switch just opens, then measure:

7.2.16.1 PIN (43) 12v +/- .25V

7.2.16.2 PIN (45) 4V +/- .25V

7.2.17 Turn pot CCW to stop, then back until limit switch just opens, then measure:

7.2.17.1 PIN (43) 4v +/- .25V

7.2.17.2 PIN (45) 12V +/- .25V

7.3 Post Testing Burn-in **Required** **_X__ Yes** **___ No**

Note: All MARK I, II, & III Turbine related cards require a post testing burn-in of 100 hours.

7.4 ***TEST COMPLETE ***