g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-531X186CPSA**

Test Procedure for a Commutation Power Supply Card

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	L. Groves	9/29/2009
B			
C			

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
L. Groves			Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
9/29/2009			10/1/2009

1. SCOPE

1.1 This is a functional testing procedure for a Commutation Power Supply 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 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 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)
1		Firing Box
1		O-scope

6. TESTING PROCESS

6.1 Testing Procedure

6.1.1 Verify continuity between the following points:

NFBP.1- NFBD.1

NFBP.2- NFBD.2

NFBP.3- NFBD.3

NFBP.15- NFBD.15

NFBP.16- NFBD.16

NFBP-17- NFBD.17

CTA.1-CTB.1-CTC.1

CTA.1- NFBD.7

CTA.2- NFBD.4

CTB.2- NFBD-5

CTC.2- NFBD.6

FCC.1- NFBD.11

FCC.2- NFBD.10

6.1.2 Remove JP1- JP5 and verify the following:

3.75 Mega ohms between P2C & NFBD.8

3.75 Mega ohms between N2 & NFBD.9

3.75 Mega ohms between P1 & NFBD.12

3.75 Mega ohms between N1 & NFBD.13

33 Ohms between FCC.1 & JP5.1

50 Ohms between FCC.1 & JP5.3

22.1 Ohms between CTA.1 & CTA.2

22.1 Ohms between CTB.1 & CTB.2

22.1 Ohms between CTC.1 & CTC.2

Reinstall JP1-JP5

6.1.3 Apply 24 VDC to APS.1(+) & APS.2(-)

6.1.4 Connect firing box to APT.1(NEG) & APS.2(Com)

6.1.5 Connect O-scope to ASA.1(+) and ASA.2(-)

6.1.6 Turn on firing box and adjust from 0 to 100% and verify corresponding signal on O-scope.

6.1.7 Connect O-scope to ASA2.1(+) and ASA2.2(-)

6.1.8 Turn on firing box and adjust from 0 to 100% and verify corresponding signal on O-scope.

6.1.9 Connect firing box to APT.3(NEG) & APS.2(Com)

6.1.10 Connect O-scope to ASB.1(+) and ASB.2(-)

6.1.11 Turn on firing box and adjust from 0 to 100% and verify corresponding signal on O-scope.

6.1.12 Connect O-scope to ASB2.1(+) and AS2B.2(-)

6.1.13 Turn on firing box and adjust from 0 to 100% and verify corresponding signal on O-scope.

6.1.14 Connect firing box to APT.5(NEG) & APS.2(Com)

6.1.15 Connect O-scope to ASC.1(+) and ASC.2(-)

6.1.16 Turn on firing box and adjust from 0 to 100% and verify corresponding signal on O-scope.

6.1.17 Connect O-scope to ASC2.1(+) and ASC2.2(-)

6.1.18 Turn on firing box and adjust from 0 to 100% and verify corresponding signal on O-scope.

6.1.19 Verify 20 Ohms from ASAA to C14(+)

6.1.20 Verify 20 Ohms from ASAM to C15(+)

6.1.21 Verify 20 Ohms from ASBA to C16(+)

6.1.22 Verify 20 Ohms from ASBM to C17(+)

6.1.23 Verify 20 Ohms from ASCA to C18(+)

6.1.24 Verify 20 Ohms from ASCM to C19(+)

6.1.25 Verify c14 thru C19 with Cap checker function of multimeter, should read between .21uf & .25uf.

6.2 ***TEST COMPLETE ***

7. NOTES

7.1 None at this time

8. ATTACHMENTS

8.1 None at this time