g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-DS3800HAFA**

Test Procedure for a DS3800HAFA card

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Transferred from paper to electronic format	J. Wychulis	8/1/2011
B			
C			

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
J. Wychulis			Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
8/1/2011			8/1/2011

1. SCOPE

1.1 This is a functional testing procedure for a DS3800HAFA.

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		FVE Module
1		See equipment section in the following page scanned test

6. Testing Process

6.1 Page 1 of scanned HAFA instruction

9.0 HAFA CALIBRATION INSTRUCTIONS

9.1 SCOPE

THE FOLLOWING DESCRIBES THE SETUP AND CALIBRATION PROCEDURE FOR THE PWB DS3800HAFA. PRIOR TO PERFORMING THIS CALIBRATION THE PWB MUST HAVE BEEN TESTED ON THE 2270 OR BY SOME OTHER METHOD.

9.2 SPECIAL TEST EQUIPMENT

NONE

9.3 POWER SUPPLY REQUIREMENTS

P5	PA3, PA45, PA77
DCOM	PA1, PA43, PA79
P15	PA5
N15	PA7
ACOM	PA9

ALL CALIBRATION INPUTS AND OUTPUTS ARE WITH RESPECT TO ACOM.

9.4 INITIAL SETUP

BERG JUMPERS MUST BE SET AS FOLLOWS.

G1-A	"1"
G1-B	"1"
G2-A	"1"
G2-B	"1"

ALL OTHERS DON'T CARE

9.5 DAUGHTER BOARD

NONE

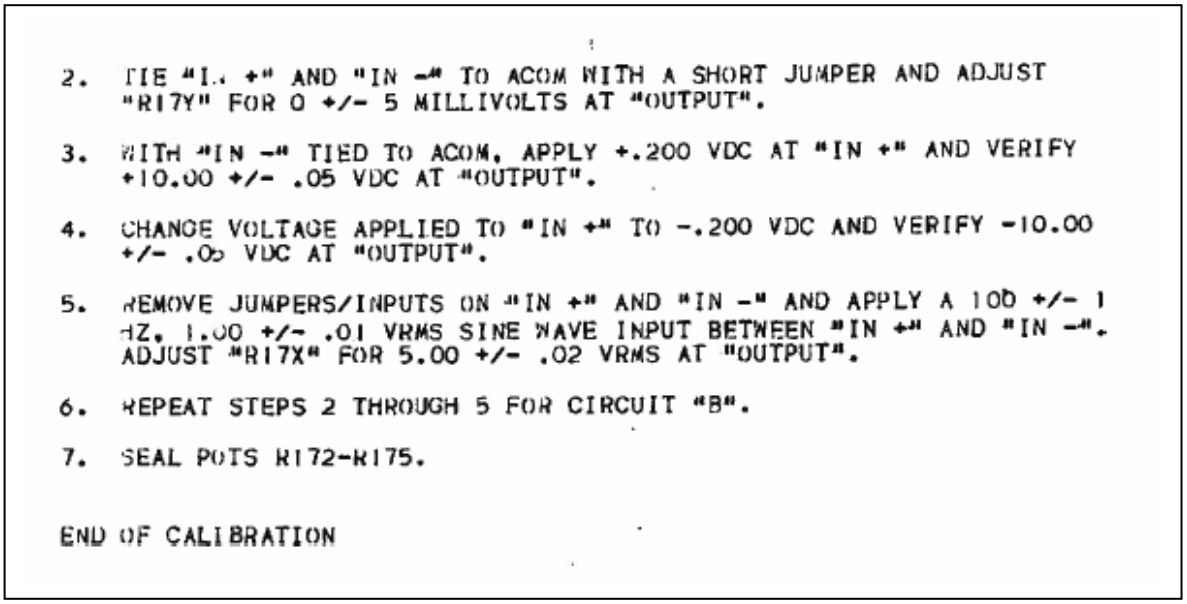
9.6 CALIBRATION PROCEDURE

1. CALIBRATE CIRCUIT "A" AND CIRCUIT "B" PER THE FOLLOWING STEPS. GO THROUGH ALL STEPS FOR CIRCUIT "A" THEN REPEAT FOR CIRCUIT "B". FOR DC INPUTS, IT IS ASSUMED THAT A PRECISION VOLTAGE SOURCE SUCH AS A DIGITEK IS USED. THEREFORE NO INPUT TOLERANCES ARE GIVEN.

CKT	IN +	IN -	R17X	R17Y	OUTPUT
"A"	JA29	JA30	R172	R174	PA17 (TP4)
"B"	JA31	JA32	R173	R175	PA19 (TP1)

REV. 1	REV. 4	REV. 7	PRINTS TO DL109 PRI	ENGINEER REV 8/5/83	GENERAL ELECTRIC	TEST INSTRUCTION
REV. 2	REV. 5	ISSUED 7-14-83				
REV. 3	REV. 6	MADE BY R.A. VANDERPOOL			SALEM, VA. U.S.A.	DS3800HAFA CODE ON BA 9AB BL NO 9AA

6.2 Page 2 of scanned HAFA instruction



2. TIE "I.. +" AND "IN -" TO ACOM WITH A SHORT JUMPER AND ADJUST "R17Y" FOR 0 +/- 5 MILLIVOLTS AT "OUTPUT".

3. WITH "IN -" TIED TO ACOM, APPLY +.200 VDC AT "IN +" AND VERIFY +10.00 +/- .05 VDC AT "OUTPUT".

4. CHANGE VOLTAGE APPLIED TO "IN +" TO -.200 VDC AND VERIFY -10.00 +/- .05 VDC AT "OUTPUT".

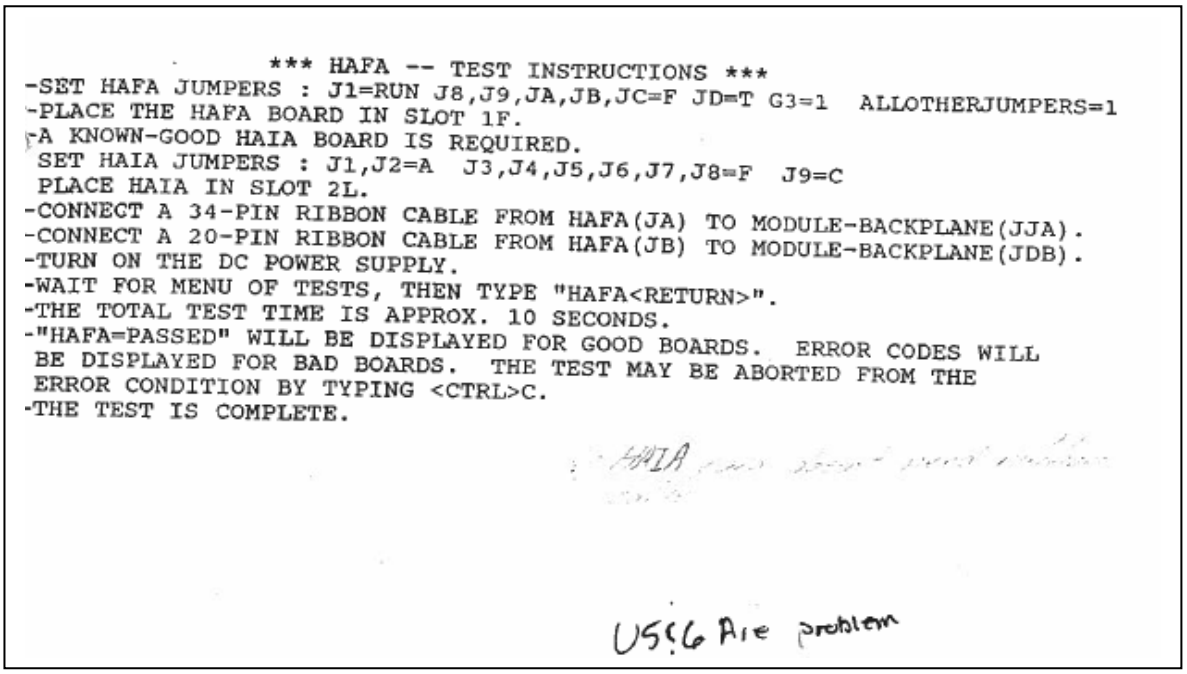
5. REMOVE JUMPERS/INPUTS ON "IN +" AND "IN -" AND APPLY A 100 +/- 1 HZ, 1.00 +/- .01 VRMS SINE WAVE INPUT BETWEEN "IN +" AND "IN -". ADJUST "R17X" FOR 5.00 +/- .02 VRMS AT "OUTPUT".

6. REPEAT STEPS 2 THROUGH 5 FOR CIRCUIT "B".

7. SEAL POTS R172-R175.

END OF CALIBRATION

6.3 Be sure to seal all four potentiometers – This must be done.



*** HAFA -- TEST INSTRUCTIONS ***
-SET HAFA JUMPERS : J1=RUN J8,J9,JA,JB,JC=F JD=T G3=1 ALLOTHERJUMPERS=1
-PLACE THE HAFA BOARD IN SLOT 1F.
-A KNOWN-GOOD HAIA BOARD IS REQUIRED.
SET HAIA JUMPERS : J1,J2=A J3,J4,J5,J6,J7,J8=F J9=C
PLACE HAIA IN SLOT 2L.
-CONNECT A 34-PIN RIBBON CABLE FROM HAFA(JA) TO MODULE-BACKPLANE(JJA).
-CONNECT A 20-PIN RIBBON CABLE FROM HAFA(JB) TO MODULE-BACKPLANE(JDB).
-TURN ON THE DC POWER SUPPLY.
-WAIT FOR MENU OF TESTS, THEN TYPE "HAFA<RETURN>".
-THE TOTAL TEST TIME IS APPROX. 10 SECONDS.
-"HAFA=PASSED" WILL BE DISPLAYED FOR GOOD BOARDS. ERROR CODES WILL BE DISPLAYED FOR BAD BOARDS. THE TEST MAY BE ABORTED FROM THE ERROR CONDITION BY TYPING <CTRL>C.
-THE TEST IS COMPLETE.

HAIA

USG Fire problem

*6.4 ***TEST COMPLETE ****

7. Attachments

7.1 None at this time.