GE Energy	Functional Testing Specification
Parts & Repair Services *Louisville, KY*	**LOU-GED-DS3800NMSA-A**

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	JCW	8-14-17
B			
C			

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
JCW			
DATE 8-14-17	DATE	DATE	DATE 8-14-17

1. SCOPE

1.1 This is a functional testing procedure for a 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 - DS3800NMSA9AA

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)
1	H033882	RAINBOW BOX
1	HO33772	3800 POWER SUPPLY BOX
1	H033767	DS3800 CONNECTOR BOX

SET UP SWITCHES

S1 PA10 - PA9
S2 PA11 - PA9
S3 PA41 - PA9
S4 PA42 - PA9
S5 PA62 - PA63

JUMPER PA62 - PA78

PUT ON DAUGHTER BOARD R100 CCW

ANALOG TESTS

CLOSE S1 - S5 SWITCHES
TIE PA15 TO PA9
PA2 = 0V
PA18 = 0V
PA76 = 0V
APPLY 10V TO PA2
PA18 = -10 TA8 = 0 PA76 = 0
REMOVE SIGNAL APA2 AND ACOM FROM PA15

PA2 TO PA9
10V TO PA15
PA18 = 10V TA8 = -10 PA76 = 10
REMOVE SIGNAL FROM PA15 REMOVE ACOM FROM PA2

APPLY 10V TO PA12
PA18 -10
REMOVE SIGNAL FROM PA12

TIE PA58 TO PA9
PA70 = 0V PA53, TA1 = 0 PA64 AND PA76 = 0
APPLY 10V TO PA70
PA53 = -10 TA1 = 0 PA64 = 5.7
REMOVE SIGNAL FROM PA70 REMOVE ACOM PA58

TIE PA70 TO PA9
APPLY 10V TO PA58
PA53 = 10V TA1 = -10
PA76 = 10V PA64 = -5.7
REMOVE SIGNAL FROM PA58
APPLY 10V TO PA69
PA53 = 10V
REMOVE SIGNAL FROM PA69 REMOVE ACOM PA70

APPLY 10V TO PA72
PA53 = -10
REMOVE SIG AT PA72

PA19 TO PA9
PA17 = 0 PA16, TA16 = 0
PA64 PA76 = 0

APPLY 10V AT PA17
PA16 = -10
TA16 = 0
PA76 = 0 PA64 = -5.7
REMOVE SIGNAL FROM PA17 REMOVE Acom AT PA19

TIE PA17 TO PA9
APPLY 10V TO PA19
PA16 = 10V TA16 = -10
PA76 = 10V PA64 = 5.7
REMOVE PA19 PA17(Acom)

APPLY 10V TO PA20
PA16 = -10
REMOVE PA20

OPEN SW1 APPLY 60HZ SINE WAVE
20V P-P TO PA10
ADJUST R3 TO GET 120HZ ON PA6
REMOVE SIGNAL A PA10 CLOSE SW1

OPEN SW2 APPLY 60HZ 20V P-P ON PA11
ADJEST R1 FOR 120HZ AT PA6
REMOVE SIG AT PA11
CLOSE SW2

ADJUST R4 FOR 0V AT PA6

OPEN SW 3 APPLY 60HZ 20V^{P-P} SINE ON PA41
ADJUST R5 FOR 120HZ ON PA44
REMOVE SIG AT PA41 CLOSE SW 3

OPEN SW4 APPLY 60HZ SINE 20V^{P-P} TO PA42
ADJUST R2 FOR 120HZ AT PA4#
REMOVE SIG PA42 CLOSE SW4
ADJUST R6 FOR 0V AT PA44

OPEN SW1+2 APPLY 10V AT PA10 PA11
PA6 = -10V
REMOVE 10V FROM PA11 AND APPLY -10V
PA6 = 10V
PA10 TO -10V
PA6 = -10
PA11 TO 10V
PA6 = 10V
REMOVE SIG AT PA10 PA11

APPLY 5V TO PA10 PA11
PA6 = -2.5
PA4 = 1.75V
REMOVE SIG AT PA10 PA11
CLOSE S1 S2

OPEN S3 + S4 APPLY 10V AT PA41 PA42
PA44 = -10
CHANGE PA42 TO -10
PA44 = 10V
CHANGE PA41 TO -10
PA44 = -10
CHANGE PA42 TO 10V
PA44 = 10V
REMOVE SIG AT PA41 PA42
APPLY 5V TO PA41 -5 TO PA42
PA44 READS 2.5 PA4 READS -1.75
REMOVE SIG A PA41 PA42
CLOSE SWITCH S3 S4

APPLY 5V TO PA48
PA4 = -3.4
REMOVE SIG AT PA48

OPEN SW5
TIE PA63 TO PA9
APPLY 60HZ SINE 20V^{P-P} AT PA74
ADJUST R8 FOR 120HZ AT PA62
REMOVE SIG FROM PA74
TIE PA74 TO PA9
ADJUST R7 FOR 0V AT PA62
REMOVE ACOM TIE FROM PA63 PA74

APPLY 5v AT PA63 -10v AT PA74
PA62 = -5
CHANGE 5v ON PA63 TO -5
PA62 = 5
CLOSE SW5

0V AT PA60 AND PA57 PA55 = 0

APPLY 10V TO PA57
PA55 = -10v
REMOVE SIG AT PA57

APPLY -10 AT PA60
PA55 = 10
REMOVE SIG AT PA60

0V A PA50 PA49
PA56 = 0

APPLY -10 AT PA49
PA56 = 10V PA55 = -2.21
REMOVE SIG AT PA49

APPLY 10V AT PA50
PA56 = -10
APPLY -7.7 TO PA57
PA55 +10 PA54 = -10

CHANGE 10V AT PA50 TO -10
CHANGE -7.7 AT PA57 TO -10.2
PA54 = 8V PA61 = -11.7
REMOVE SIG AT PA50 PA57

0V AT PA50, PA49, PA60, PA57
ADJUST R9 SO PA61 IS -.8
REMOVE ALL POWER SUPPLIES

APPLY 10V PA52
PA80 = 6V
REMOVE SIGNAL AT PA52

APPLY -10 TO PA51
PA80 = -6
REMOVE SIG PA51

APPLY 11.8 AT PA49 READJUST TO GET
-11.2 AT TA23 IMOK IS LIT

CHANGE VOLTAGE AT PA49 UNTIL TA23 IS -12
IMOK IS OUT
REMOVE SIG AT PA49

APPLY -11.8 AT PA49, READJUST UNTIL TA15
IS 11V IMOK IS ON
ADJUST PA49 UNTIL TA15 IS 12V IMOK IS OFF

6. Modifications/Upgrades

6.1 Fill out if applicable.

7. Testing Process

7.1 Setup

7.1.1 Fill out.

Note:

7.2 Testing Procedure

7.2.1 Fill out.

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

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

7.3.1 Apply BUS or Operational power to the card for a period of 100 hours.

7.3.2 Re-test card while warm using the above procedure.

7.4 ***TEST COMPLETE ***

8. Notes

8.1 None at this time?

9. Attachments

9.1 None at this time?

9.1.0 SCOPE

This document establishes the performance requirement and recommended tests for the MOTOR SIGNALS CARD identified as:

DS3800NMSA

This specification will check digital logic, analog transfer functions and component tolerances.

9.2.0 TEST EQUIPMENT

9.2.1 Standard Equipment Required:

Test equipment shall be provided which meets the requirements and accuracies prescribed in this specification. All test equipment is defined by quality control standard_____ except as noted in Section 9.2.2.

9.2.2 Special Equipment Required:

9.3.0 POWER SUPPLY REQUIREMENTS AND PIN CONNECTIONS

The following regulated input voltage sources are required to test this product element.

REV. 1	REV. 4	REV. 7	PRINTS TO DL109	ENGINEER JHC	GENERAL ELECTRIC DSD SALEM, VA. U.S.A.	Test Specifications MOTOR SIGNALS
REV. 2	REV. 5	ISSUED May 29 1979				D S 3 8 0 0 N M S A
REV. 3	REV. 6	MADE BY WE Price 790130				CONT. ON SH. 9BA SH. NO. 9AA

DSD 0151 (09-75)

NOMINAL VOLTAGE[1]	MAXIMUM CURRENT[2] (AMPS)	MIN. ADJ. RANGE	% REG.	MAXIMUM VOLTAGE[3] (VDC)	PIN (S)[4]
P28	NOT USED	10%	±5%	+32.0	PA75
P15	0.050	10%	±5%	+18.0	PA5
N15	0.045	10%	±5%	-18.0	PA7
P5	NOT LISTED	10%	±5%	+ 7.0	PA3,PA45,PA77
ACOM	-	-	-	-	PA9
DCOM	NOT USED	-	-	-	PA1,PA43,PA79
P28	0.050	100%		+25	Signal
P15	0.010	100%		+18.0	Signal
N15	0.010	100%		-18.0	Signal

NOTES:

1. Nominal voltage used unless otherwise specified.
2. Elements requiring more than the maximum value may suffer damage.
3. Voltages above maximum voltage may impair element life.
4. Connect all DCOM pins together first, then wire to ACOM. Analog signal power supplies, oscilloscopes, and voltmeters should connect to ACOM for the most accurate readings.

The maximum power dissipation of this product element during test is:

1.5 watts

REV. 1	REV. 4	REV. 7	PRINTS TO DL109	ENGINEER	GENERAL ELECTRIC	Test Specifications MOTOR SIGNALS
REV. 2	REV. 5	ISSUED March 29 1979			DSD SALEM, VA. U.S.A.	D S 3 8 0 0 N M S A
REV. 3	REV. 6	MADE BY WE Price 790130				CONT. ON SH. 9CA SH. NO. 9BA

DSD 0151 (08-76)

9.4.0 SETUP & INITIAL LOADING

9.4.1 Connections

9.4.1.1 Wires:

From	To	Sheet	From	To	Sheet
-CSINA1 (PA62)	KTQA (PA78)	4DA	( )	( )	

9.4.1.2 Components:

From	Thru	To	Sheet
TORQI ( )	39.2K ( )	DB ( )	4DA
( )	( )	( ).	

9.4.1.3 Switches, form A (normally open contacts) only:

Switch No.	From	To	Sheet
S1	-DFLX (PA10)	ACOM (PA9)	4CA
S2	-QM1 (PA11)	ACOM (PA9)	4CA
S3	-QFLX (PA41)	ACOM (PA9)	4CA
S4	DM1 (PA42)	ACOM (PA9)	4CA
S5	-CS1NA1(PA62)	-CS1NA3 (PA63)	4DA

9.4.1.4 Op amp summing junctions - terminate at junction box (short wire)

Pin No.	Sheet	Pin No.	Sheet
NONE			

9.4.1.5 Special

NONE

9.4.2 Element Loads

NONE

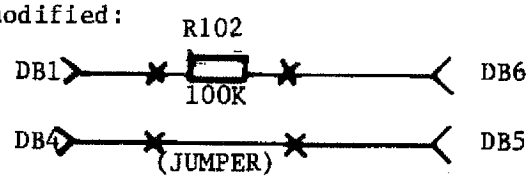
55A11B 3035

9.4.3 Daughter Board

9.4.3.1 Component material list required for modification:

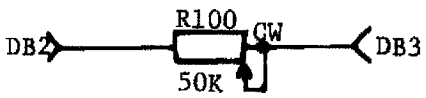
1 - 100K, 1% RES. R101, 68A7014C1000F

9.4.3.2 Circuit diagram as modified:



9.4.3.3 Set Pots as follows:

R100, Full CCW



9.5.0 SIGNAL LEVELS

9.5.1 TTL Input Levels

Unless otherwise specified, the following input data levels shall be applied to the element at TTL inputs:

Logic "0" level = 0.4 ± 0.4VDC

Logic "1" level = 2.2 ± 0.2VDC

The signal source for these logic levels shall be capable of sinking 10 ma in the logic "0" state and sourcing 0.5 ma in the logic "1" state.

REV. 1 OEA AB 79001	REV. 4	REV. 7	PRINTS TO DL109	ENGINEER JHC	GENERAL ELECTRIC DSD SALEM, VA. U.S.A.	Test Specifications MOTOR SIGNALS
REV. 2	REV. 5	ISSUED March 20, 1979				D S 3 8 0 0 N M S A CONT. ON SH. 9EA SH. NO. 9DA
REV. 3	REV. 6	MADE BY WE Price 790130				

DSD 0151 (09-76)

CARS

9.5.1 TTL Input Levels (Continued)

The rise and fall time of the signals shall be less than 100 and more than 3 nanoseconds. The TTL input signals shall be applied at a rate within a range of DC to 1 KHZ, except as noted for time delays.

9.5.2 Process Input Levels

None.

9.5.3 TTL Output Levels

Unless otherwise specified, the following output data levels shall be verified:

Logic "0" level = 0.25 ± 0.25VDC

Logic "1" level = 3.9 ± 1.2VDC

An "X" = don't care or not to being tested

NOTES:

1. Characters within quotation (") marks are used in the test vector table of section 9.6.2.2.

9.6.0 TEST PROCEDURE

9.6.1 Preliminary Inspection

The element shall be inspected prior to application of power to verify that it is assembled according to the assembly drawing.

9.6.2 Digital Tests

9.6.2.1 Current Limit Test

With nominal power supply voltages applied to element under test, it should not exceed maximum current specified in paragraph 3.0. Repeat with maximum voltages specified in 3.0. The element shall be considered to have failed test if it draws more than maximum specified.

9.6.2.2 Test Vector Sequence:

None

9.6.3 Hybrid Interface Tests:

None

9.6.4 Analog Tests

(See Attached)

9.6.5 Special Tests

None

9.6.4 ANALOG TESTS:

9.6.4.1 Motor Current Conditioning (ELM. SH. 4AA & 4BA)

.1 Close S1 thru S5.
Tie IS1R (PA15) to ACOM (PA9).
0 Volts on ISI (PA2).
IMI (PA18 and - MIMI (TA8) reads 0 ± .03V and Stable.
IM (PA76) reads 0 ± .04 Volts and Stable.

.2 Apply +10.0 ± .01V on ISI (PA2).
IMI (PA18) Reads -10.0 ± .04V and Stable.
-MIMI (TA8) Reads 0 ± .01V.
IM (PA76) Reads 0 ± .06V.
Remove Signal From ISI (PA2) and Remove ACOM From ISIR (PA15).

.3 Tie ISI (PA2) to ACOM (PA9).
Apply +10.0 ± .01V on ISIR (PA15).
IMI (PA18) Reads +10.0 ± .04 Volts and Stable.
-MIMI (TA8) Reads -10.0 ± .04Volts and Stable.
IM (PA76) Reads +10.0 ± .06 Volts and Stable.
Remove Signal From ISIR (PA15) and Remove ACOM From ISI (PA2).

.4 Apply +10.0 ± .01V on -TIMI (PA12).
IMI (PA18) Reads -10.0 ± .04V
Remove Signal From -TIMI (PA12).

.5 Tie IS2R (PA58) to ACOM (PA9).
0V on IS2 (PA70).
IM2 (PA53) and -MIM2 (TA1) Read 0 ± .03V and Stable.
-QIM (PA64) and IM (PA76) Read 0 ± .04Volts.

STABLE = <20MV Peak to Peak Ripple (.007V RMS)

REV. 1 OEA RB 791001	REV. 4	REV. 7	PRINTS TO DL109	ENGINEER JMC	GENERAL ELECTRIC DSD SALEM, VA. U.S.A.	Test Specifications MOTOR SIGNALS
REV. 2	REV. 5	ISSUED March 29 1979				
REV. 3	REV. 6	MADE BY WE Price 790130				DS 3800 NMSA CONT. ON SH. 9HA SH. NO. 9GA

DSD 0151 (08-78)

9.6.4.1 (Continued)

.5 Apply +10.0 ± .01V on IS2 (PA70).
IM2 (PA53) Reads -10.0 ± .04V and Stable.
-MIM2 (TA1) Reads 0 ± .01V.
IM (PA76) Reads 0 ± .06V.
-QIM (PA64) Reads +5.77 ± .12V and Stable.
Remove Signal From IS2 (PA70) and Remove ACOM From IS2R (PA58).

.6 Tie IS2 (PA70) to ACOM (PA9).
Apply +10.0 ± .01V on IS2R (PA58).
IM2 (PA53) Reads +10.0 ± .04V and Stable.
-MIM2 (TA1) Reads -10.0 ± .04V and Stable.
IM (PA76) Reads +10.0 ± .06V.
-QIM (PA64) Reads -5.77 ± .12V and Stable.
Remove Signal From IS2R (PA58)

.7 Apply +10.0 ± .01V on IS2X (PA69).
IM2 (PA53) Reads +10.0 ± .02V.
Remove Signal From IS2X (PA69) and Remove ACOM From IS2 (PA70).

.8 Apply +10.0 ± .01V on -TIM2 (PA72).
IM2 (PA53) Reads -10.0 ± .04V.
Remove Signal From -TIM2 (PA72).

.9 Tie IS3R (PA19) to ACOM (PA9).
0V on IS3 (PA17).
IM3 (PA16) and -MIM3 (TA16) Read 0 ± .03V and Stable.
-QIM (PA64) and IM (PA76) Read 0 ±. 04V.

STABLE = <20MV Peak to Peak Ripple (0.007V RMS)

9.6.4.1 (Continued)

.10 Apply +10.0 ± .01V on 1S3 (PA17).
IM3(PA16) Reads -10.0 ± .04V and Stable.
-MIM3(TA16) Reads 0 ± .01V.
1M(PA76) Reads 0 ± .06V.
-QIM(PA64) Reads -5.77 ± .12V.
Remove Siganl From IS3(PA17) and Remove ACOM From IS3R(PA19).

.11 Tie IS3(PA17) to ACOM (PA9).
Apply +10.0 ± .01V on IS3R(PA19).
1M3(PA16) Reads +10.0 ±.04V and Stable.
-MIM3(TA16) Reads -10.0 ± .04V and Stable.
IM(PA76) Reads +10.0 ± .06V.
-QIM(PA64) Reads +5.77 ± .12V.
Remove Signal From IS3R(PA19) and Remove ACOM From IS3(PA17).

.12 Apply +10.0 ± .01V on - TIM3(PA20).
IM3(PA16) Reads -10.0 ± .04V.
Remove Signal From - TIM3(PA20).

9.6.4.2 TORQUE CALCULATION (ELEM. SH. 4CA)

.1 Open Switch S1 and Apply 60HZ SINE WAVE of 20V P - P on -DFLX(PA10).
Adjust R3 (Y1 NULL) to Achieve a 120HZ Signal on - TM1(PA6) or NULL.
Remove Signal From -DFLX(PA10) and Close Switch S1.

STABLE = <20MV PEAK TO PEAK RIPPLE (.007V RMS)

REV. 1 OEB AB 791001	REV. 4	REV. 7	PRINTS TO DL109	ENGINEER JHC	GENERAL ELECTRIC DSD SALEM, VA. U.S.A.	Test Specifications NOTOR SIGNALS
REV. 2	REV. 5	ISSUED March 29, 1979				
REV. 3	REV. 6	MADE BY WE Price				DS 3800 NMSA CONT. ON SH. 9JA SH. NO. 9JA

DSD 0151 (09-76)

CARS

9.6.4.2 (Continued)

.2 Open Switch S2 and Apply 60HZ SINE WAVE of 20V P-P on -QM1(PA11).

Adjust R1(X1 NULL) to Achieve 120HZ Signal on -TM1 (PA6) or NULL.

Remove Signal From -QM1(PA11) and Close Switch S2.

.3 Adjust R4(Z1 NULL) For 0V ± .5MV on -TM1(PA6).

.4 Open Switch S3 and Apply 60HZ SINE WAVE of 20V P-P on -QFLX(PA41).

Adjust R5 (Y2 NULL) to Achieve a 120HZ Signal on TM2(PA44).

Remove Signal From -QFLX(PA41) and Close Switch SW3.

.5 Open Switch S4 and Apply 60HZ SINE WAVE of 20V P-P on DM1(PA42).

Adjust R2(X2 NULL) to Achieve 120HZ Signal on TM2 (PA44) or NULL.

Remove Signal From DM1(PA42) and Close Switch (S4).

.6 Adjust R6(Z2 NULL) for 0V ± .5MV on TM2(PA44).

.7 Open Switches S1 & S2 and Apply +10.0 ± .01V on -DFLX(PA10) and -QM1(PA11).

-TM1(PA6) Reads -10.0 ± .05V.

.8 Remove +10.0V from -QM1(PA11) and Apply -10.0 ± .01V.

-TM1(PA6) Reads +10.0 ± .05V.

STABLE = <20MV PEAK TO PEAK RIPPLE (.007V RMS)

9.6.4.2 (Continued)

.9 Change +10.0V on -DFLX(PA10) to -10.0 ± .01V.
-TM1(PA6) Reads -10.0 ± .05V.

.10 Change -10.0V on -QM1(PA11) to +10.0 ± .01V.

-TM1(PA6) Reads +10.0 ± .05V.

Remove 10.0V Signals From -DFLX(PA10)
and -QM1(PA11).

.11 Apply +5.0 ± .01V on -DFLX(PA10) and -QM1(PA11).

-TM1(PA6) Reads -2.50 ± 0.05V.

TORQ(PA4) Reads +1.75 ± 0.08V and Stable.
Remove Signals From -DFLX(PA10) and -QM1(PA11).
Close Switches S1 and S2.

.12 Open Switches S3 & S4 and Apply +10.0 ± .01V on
-QFLX(PA41) and DM1(PA42).

TM2(PA44) Reads -10.0 ± .05V.

.13 Change +10.0V on DM1(PA42) to -10.0 ± .01V.
TM2(PA44) Reads +10.0 ± .05V.

.14 Change +10.0V on -QFLX(PA41) to -10.0 ± .01V.
TM2(PA44) REads -10.0 ± .05V.

.15 Change -10.0V on DM1(PA42) to +10.0 ±.01V.
TM2(PA44) Reads +10.0 ± .05V.

Remove 10.0V Signals From -QFLX(PA41) and DM1(PA42).

STABLE = <20MV PEAK TO PEAK RIPPLE (.007V RMS)

9.6.4.2 (Continued)

.16 Apply +5.0 ± .01V on -QFLX(PA41) and -5.0 ± .01V on DM1(PA42).

TM2(PA44) Reads+ 2.5 ± 0.5V.

TORQ(PA4) Reads -1.75 ± 0.08V.

Remove Signals From -QFLX(PA41) and DM1(PA42).

Close Switches S3 & S4.

.17 Apply +5.0 ± .01V on TTORQ (PA48).
TORQ(PA4) Reads -3.49 ± .02V.
Remove Signal From TTORQ (PA48).

9.6.4.3 SINE ANGLE CALCULATION (ELEM. SH. 4DA)

.1 Open Switch S5.

Tie -CS1NA3(PA63) to ACOM (PA9).

Apply 60HZ SINE WAVE 20V P-P to -CAD2(PA74).

Adjust R8(YBAL) to Achieve a 120 HZ Signal on -CS1NA1(PA62).

Remove 60HZ Signal From -CAD2(PA74).

.2 Tie - CAD2(PA74) to ACOM (PA9).

Adjust R7(Z BAL) For 0V ± .5MV on -CS1NA1(PA62).

Remove ACOM Tie From -CS1A3(PA63) and -CAD2(PA74).

.3 Apply +5.0 ± .01V on -CS1NA3(PA63) and -10.0 ± .01V on -CAD2(PA74).

-CS1NA1(PA62) Reads -5.0 ± .05V.

STABLE = <20MV PEAK TO PEAK RIPPLE (.007V RMS).

9.6.4.3 (Continued)

.4 Change +5.0V on -CS1NA3(PA63) to -5.0 ± .01V.

-CS1NA1(PA62) Reads +5.0 ± .05V.

Remove Signals From -CS1NA3(PA63) and -CAD2(PA74).

Close Switch S5.

.5 0V on AFXT(PA60) and FLUX(PA57).

CAS1(PA55) Reads 0 ± .02V.

.6 Apply +10.0 ± .01V on FLUX(PA57).

CAS1(PA55) Reads -10.0 ± .03V and Stable.

Remove Signal From FLUX (PA57).

.7 Apply -10.0 ± .01V on AFXT(PA60).

CAS1(PA55) Reads +10.0 ± .03V and Stable.

Remove Signal From AFXT(PA60).

.8 0V on AIMT(PA50) and 1M(PA49).

-1M(PA56) Reads 0 ± .02V.

.9 Apply -10.0 ± .01V on 1M (PA49).

-1M(PA56) Reads +10.0 ± .03V and Stable.

CAS1(PA55) Reads -2.21 ± .05V.

Remove Signal From 1M(PA49).

.10 Apply +10.0 ± .01V on AlMT(PA50).

-1M(PA56) Reads -10.0 ± .03V and Stable.

STABLE = <20MV PEAK TO PEAK RIPPLE (.007V RMS).

9.6.4.3 (Continued)

.11 Apply -7.79 ± .01V on FLUX(PA57).

CAS1(PA55) Reads +10.0 ± .05V.

CADN(PA54) Reads -10.0 ± .07V.

.12 Change +10.0V Signal on AlMT(PA50) to -10.0 ± .01V.

Change -7.79V on FLUX(PA57) to -10.21 ± .01V.

CADN(PA54) Reads +8.0 ± .04V.

-CAD1(PA61) Reads -11.79 ± .08V.

Remove Signals From AlMT(PA50) and FLUX(PA57).

.13 0V on AlMT(PA50), 1M(PA49), AFXT(PA60) and FLUX(PA57).

Adjust R9(DENOM. MIN.) until

-CAD1(PA61) Reads -0.80 ± .05V.

Remove all power supplies.

9.6.4.4 KTQ OP-AMP (ELEM. SH. 4DA)

.1 Apply +10.0 ± .01V on TϕRQ1 (PA52).

KTQ(PA80) Reads +6.00 ± .05V and Stable.

Remove Signal From TϕRQ(PA52).

.2 Apply -10.0 ± .01V on ATQT(PA51).

KTQ(PA80) Reads -6.00 ± 0.05V and Stable.

Remove Signal From ATQT(PA51).

STABLE = <20MV. PEAK TO PEAK RIPPLE (.007V RMS)

9.6.4.5 OP-AMP SATURATION DETECTOR "IMOK" (ELEM. SH. 4EA)

.1 Apply +11.8 on 1M(PA49) and readjust until
NOK(TA23) Reads -11.2 ± .1V.
"IMOK" LED(CR1) is lit.

.2 Change +11.8V on 1M(PA49) until NOK(TA23) reads -12 ± 0.1V.
"IMOK" LED is out.
Remove Signal From 1M(PA49).

.3 Apply -11.8 ± .01V on 1M(AP49), and readjust until
POK(TA15) Reads + 11 ± .1V.
"IMOK" LED is lit.

.4 Change -11.8 on 1M(PA49) until POK (TA15) reads +12.0 ± 0.1V.
"IMOK" LED is out.
Remove Signal From 1M(PA49).

STABLE = <20MV PEAK TO PEAK RIPPLE (.007V RMS)

REV. 1 OEB AB 79M04	REV. 4	REV. 7	PRINTS TO DL109	ENGINEER JHC	GENERAL ELECTRIC DSD SALEM, VA. U.S.A.	Test Specifications MOTOR SIGNALS
REV. 2	REV. 5	ISSUED March 20, 1979				D S 3 8 0 0 N M S A
REV. 3	REV. 6	MADE BY WE Price				CONT. ON SH. FNL SH. NO. 90A

DSD 0181 (06-76)