REV NO.

278A2051

CONT ON SHEET 2 SH NO. 1

TITLE

TEST INSTRUCTIONS
POWER SUPPLY PANEL

FIRST MADE FOR 3S7932MD239A1

REVISIONS

Rev. 1 LMJ
Rev. 2 New Reg board LMJ 1-17-85
REV 3-LMJ 8-12-87
4 ADD NOTES 12/21/93 JAL

I. SCOPE

THESE GENERREX POWER SUPPLY PANELS WERE DESIGNED FOR GENERAL USE TO SUPPLY 3 DC VOLTAGES (2 OF WHICH ARE REGULATED) FROM THE 115 VOLT, 213 HZ INVERTER PANEL SOURCE (3S7932MA333G2). IF THE INVERTER PANEL IS USED AS A SUPPLY IT MUST BE PRETESTED AND ADJUSTED. (SEE TEST INSTRUCTIONS 278A2046). IN ADDITION THE PWB'S (305A2012) SHOULD ALSO BE PRETESTED.

II. TEST EQUIPMENT

A. DVM - 3%

B. USE ELDGAR MODEL 1203SI SUPPLY AT 110V AT 213HZ (IF INVERTER IS NOT USED, SUPPLY MUST HAVE RECTIFIED AVERAGE VOLTAGE OF 99 VOLTS. IF SINUSOIDAL, RMS SHOULD BE 110 VOLTS). THE USE OF INVERTER PANEL FOR INPUT SUPPLY IS PREFERRED.
NOTE: WHEN USING THE INVERTER, SET AC INPUT FOR 122 ±1 VAC AT CKT 111 TO 110 (3TB-D TO 2HS HEAT SINK
THE OUTPUT SHOULD BE SET WITH 55° ±2° OFF-TIME.
USE IP ON INVERTER TO ADJUST, IF NECESSARY.
(SEE INVERTER INSTRUCTIONS, IF NECESSARY)

C. OSCILLOSCOPE (TEKTRONIX 503 OR EQUIVALENT)

D. LOAD RESISTORS 100 W. ADJUSTABLE 0 TO 30 OHMS

E. 0 - 10 AMP DC METER

F. DRAWINGS

1. ELEMENTARY 44C322030
2. CONNECTOR 44C322031

G. (4) 3 AMP, 250 VOLT DISPOSABLE FUSE (PART # 323A2396P14)

III. TEST PROCEDURE

A. SETUP

1. REMOVE BOTH 305A2012 PWB'S FROM THE PANEL
2. WIRECHECK PER ELEMENTARY
3. CONNECT 213 HZ SOURCE TO INPUT POINTS P1TB1 (OR 1TB1 AND P1TB2 (OR 1TB2)

B. ELECTRICAL TEST

1. APPLY 213 HZ POWER TO PANEL
2. THE VOLTAGE ACROSS 101 SCR AND 102 SCR SHOULD BE 25 TO 30 VOLTS DC.

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ISSUED 10/29/79
APPROVALS
DRIVE SYSTEMS DIV OR DEPT.
SALEM, VA LOCATION

FF-803 WF (5-78)
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CONT ON SHEET 3 SH NO. 2

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POWER SUPPLY PANEL
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3. REMOVE POWER AND REINSERT PWB'S. SET R200 ON EACH CARD, FULLY CCW AND R300 FULLY CW.
3A. CARD BERG JUMPER TXT MUST BE ON BC.

4. CONNECT LOAD RESISTOR, SET AT APPROXIMATELY 10 OHMS, ACROSS THE +15 VOLT SUPPLY OUTPUT IN SERIES WITH THE 10 AMPS DC METER. POSITIVE OUTPUT POINT IS 102TB9, NEGATIVE IS 102TB10
5. APPLY 213 HZ SUPPLY AND ADJUST OUTPUT VOLTAGE TO 15 ± 0.05 VOLTS USING 104P. THE CURRENT SHOULD BE APPROXIMATELY 1.5 AMPS.
6. ADJUST LOAD RESISTOR TO VARY OUTPUT FROM 1 AMP TO 5 AMPS. VARIATION IN OUTPUT VOTLAGE SHOULD BE LESS THAN 1 VOLT MEASURED AT POWER SUPPLY OUTPUT. RAISE LOAD TO 5.5 AMPS.
7. ADJUST FOR 5.5 AMP CURRENT LIMIT BY TURNING R300 CCW UNTIL OUTPUT CURRENT JUST STARTS TO DECREASE. (NOTE TURNING R300 CW RAISES CURRENT LIMIT)
8. MAXIMUM RIPPLE SHOULD BE 100 MV, P-P, USING AN OSCILLOSCOPE ACROSS THE OUTPUT TERMINALS.
9. INCREASE LOAD RESISTANCE TO MAXIMUM AND THEN DECREASE UNTIL LOAD CURRENT IS 2.5 AMPERES.
10. REMOVE POWER AND REPLACE 101FW WITH THE 3 AMP DISPOSABLE FUSE.
11. APPLY POWER AND ADJUST 104P FOR 17.5 VOLTS DC. (SEE NOTE 1 BELOW)
12. ADJUST R200 CW TO BLOW THE FUSE AT 17.5 VOLTS DC.
13. REMOVE POWER, REPLACE FUSE WITH ANOTHER DISPOSABLE FUSE, TURN 104P IN THE LOWER DIRECTION TO GET BACK TO ABOUT 15 VOLTS. (ABOUT 7 TURNS)
14. REAPPLY POWER AND ADJUST 104P TO RAISE OUTPUT VOLTAGE. CHECK THAT FUSE BLOWS WHEN OUTPUT REACHES 17.5 VOLTS +0, - 0.2 VOLTS.
15. REMOVE POWER AND REPLACE 101FW WITH ORIGINAL FUSE. ADJUST 104P CCW IN THE LOWER DIRECTION TO GET BACK TO ABOUT 15 VOLTS.
16. REAPPLY POWER AND ADJUST OUTPUT VOLTAGE TO 15 ± 0.05 VOLTS DC.
17. REPEAT STEPS 4 THROUGH 16 WITH THE -15 VOLTS POWER SUPPLY. T.B. POINTS IN STEP 4 ARE 202TB9 AND 202TB10. THE FUSE IN STEPS 10 AND 15 IS 201FW.
18. REMOVE POWER AND RECONNECT AMMETER AND LOAD RESISTOR (SET FOR MAXIMUM RESISTANCE) ACROSS THE 24 VOLTS SUPPLY OUTPUT. (1TB7 IS POSITIVE, 1TB5 IS NEGATIVE). ALSO CONNECT SCOPE ACROSS LOAD.
19. APPLY POWER AND VARY LOAD FROM 1 AMP TO 5 AMPS WHILE OBSERVING OUTPUT VOLTAGE WITH THE VOLTMETER AND RIPPLE WITH THE SCOPE. THE OUTPUT VOLTAGE SHOULD BE 28 ± 1 VOLT AT 2.5 AMPS OUTPUT, AND NOT DROP BY MORE THAN 5 VOLTS AS LOAD IS INCREASED FROM 1 AMP TO 5 AMPS, AND THE RIPPLE SHOULD NOT EXCEED 100 MV P-P.
20. REMOVE POWER AND DISCONNECT LOAD.

NOTE1: IF UNABLE TO GET UPTO 17.5 VDC, ADJUST '1P' ON THE INVERTER OR RAISE 213 HZ INPUT TO POWER SUPPLY UNTIL VOLTAGE FROM 102TB-1 TO 102TB-10 IS EQUAL TO 23 VOLTS.

REVISIONS

Rev 1 LMJ

Rev 2 New Reg Issued 1/17/ LMJ

Rev 3 8-13-87 LMJ

4 ADDED NOTES 12/21/93 JAL

3EH1

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GENERAL ELECTRIC

278A2051
CONT ON SHEET FL SH NO. 3

REV NO.	TITLE
278A2051	TEST INSTRUCTIONS POWER SUPPLY PANEL
CONT ON SHEET FL SH NO. 3	FIRST MADE FOR 3S7932MD239A1

REVISIONS

Rev. 1 LMS

SHEET NOT NEEDED FOR TEST

IV. TEST DATA

A. INPUT SOURCE USED

1. INVERTER YES NO
2. OTHER

A. WAVEFORM _____
B. VOLTAGE _____

B. WIRECHECK _____

C. VOLTAGE ACROSS 101SCR _____ VOLTS
VOLTAGE ACROSS 102SCR _____ VOLTS

D. +15 VOLT SUPPLY

1. VOLTAGE AT 1 AMP LOAD _____
2. VOLTAGE AT 5 AMP LOAD _____
3. CURRENT LIMIT SETTING _____ AMPS
4. CURRENT WITH ZERO LOAD RESISTANCE _____ AMPS
5. MAXIMUM RIPPLE _____ MV, P-P
6. FUSE BLOWS AT _____ VOLTS

E. -15 VOLT SUPPLY

1. VOLTAGE AT 1 AMP LOAD _____
2. VOLTAGE AT 5 AMP LOAD _____
3. CURRENT LIMIT SETTING _____ AMPS
4. CURRENT WITH ZERO LOAD RESISTANCE _____ AMPS
5. MAXIMUM RIPPLE _____ MV, P-P
6. FUSE BLOWS AT _____ VOLTS

F. 24 VOLT SUPPLY

1. OUTPUT VOLTAGE AT 1 AMP _____ VOLTS
2. OUTPUT VOLTAGE AT 2.5 AMPS _____ VOLTS
3. OUTPUT VOLTAGE AT 5 AMPS _____ VOLTS
4. MAXIMUM RIPPLE _____ MV, P-P

2 ADDED NOTE 12/22/93 JAL

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