REV NO.	TITLE
278A2052	TEST INSTRUCTIONS POWER SUPPLY PANEL
CONT ON SHEET 2 SH NO. 1	FIRST MADE FOR 357932MD240A1

REVISIONS

Rev 1 New Mfg. board 1-17-86 LMS

REV. 2 8/12/87

I. SCOPE

THESE GENERREX POWER SUPPLY PANELS WERE DESIGNED FOR GENERAL USE TO SUPPLY 5 DC VOLTAGES (2 OF WHICH ARE REGULATED) FROM THE 115 VOLT, 213 HZ INVERTER PANEL SOURCE (357932MA333G2). 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. RECORD VALUES ON ATTACHED FORM.

II. TEST EQUIPMENT

A. DVM - 3%

B. 213 HZ, 500 VA SUPPLY. (IF INVERTER IS NOT USED, SUPPLY MUST HAVE RECTIFIED AVERAGE VOLTAGE OF 99 VOLTS. IF SINUSOIDAL, RMS SHOULD BE 110 VOLTS).

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 A 55° ±2° OFF-TIME. USE 1P ON INVERTER TO ADJUST, IF NECESSARY. (SEE INVERTER INSTRUCTIONS, IF NECESSARY).

C. OSCILLOSCOPE (TEKTRONIK 503 OR EQUIVALENT)

D. LOAD RESISTORS 100 W ADJUSTABLE 0 TO 30 OHMS

E. 0 - 10 AMP DC METER

F. DRAWINGS

1. ELEMENTARY 44C322254
2. CONNECTOR 44C322058

G. (4) 3 AMP, 250 VOLT DISPOSABLE FUSE

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 P2B1 (OR 2TB1) AND P2TB2 (OR2TB2)

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.

CHECK 3 PRINTS TO

REV NO.	TITLE
278A2052	TEST INSTRUCTIONS POWER SUPPLY PANEL
CONT ON SHEET 3 SH NO. 2	FIRST MADE FOR 3S7932MD240A1

REVISIONS

Rev 1 New Reg. issued 1-17-86 LMS

REV.2 6/12/87

3. REMOVE POWER AND REINSERT PWB'S. SET R200 ON EACH CARD, FULLY CCW. SET R300 TO FULLY CW.
4. CONNECT LOAD RESISTOR, SET AT APPROXIMATELY 10 OHMS, ACROSS THE +15 VOLT SUPPLY OUTPUT IN SERIES WITH THE 10 AMP DC METER. POSITIVE OUTPUT POINT IS 102TB9, NEGATIVE IS 102TB10.
5. APPLY 213 HZ SUPPLY AND ADJUST OUTPUT VOLTAGE TO 15 ± .05 VOLTS USING R100. THE CURRENT SHOULD BE APPROXIMATELY 1.5 AMPS.
6. ADJUST LOAD RESISTOR TO VARY OUTPUT FROM 1 AMP TO 5 AMPS. VARIATION IN OUTPUT VOLTAGE SHOULD BE LESS THAN 0.003 VOLTS. RAISE LOAD TO 5.5 AMPS.
7. ADJUST FOR 5.5 AMPS CURRENT LIMIT BY TURNING R300 UNTIL OUTPUT CURRENT JUST STARTS TO DECREASE. LOWERING LOAD RESISTANCE TO ZERO SHOULD CAUSE OUTPUT CURRENT 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 101FU WITH THE 3 AMP DISPOSABLE FUSE.
11. APPLY POWER AND ADJUST R100 FOR 17.5.
12. ADJUST R200 TO BLOW THE FUSE AT 17.5 VOLTS DC.
13. REMOVE POWER, REPLACE FUSE WITH ANOTHER DISPOSABLE FUSE, TURN R100 IN THE LOWER DIRECTION TO GET BACK TO ABOUT 15 VOLTS.
14. REAPPLY POWER AND ADJUST R100 TO RAISE OUTPUT VOLTAGE. CHECK THAT FUSE BLOWS WHEN OUTPUT REACHES 17.5 VOLTS +0, -0.2 VOLTS.
15. REMOVE POWER AND REPLACE 101 FU WITH ORIGINAL FUSE. ADJUST R100 CCW IN THE LOWER DIRECTION TO GET BACK TO ABOUT 15 VOLTS.
16. REAPPLY POWER AND ADJUST OUTPUT VOLTAGE TO 15 ± 0.5 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 201FU.
18. REMOVE POWER AND RECONNECT AMMETER AND LOAD RESISTOR (SET FOR MAXIMUM RESISTANCE) ACROSS THE 24 VOLT SUPPLY OUTPUT. 1TB2 IS POSITIVE, 1TB3 IS NEGATIVE). ALSO CONNECT SCOPE ACROSS LOAD.

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MADE BY	J,J, DVORSCAK	APPROVALS	DRIVE SYSTEMS	DIV OR DEPT.	278A2052	C
ISSUED	10/29/79		SALEM, VA	LOCATION	CONT ON SHEET 3	SH NO. 2

CODE IDENT NO.

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REV NO.	TITLE
278A2052	TEST INSTRUCTIONS POWER SUPPLY PANEL
CONT ON SHEET 4 SH NO. 3	FIRST MADE FOR 3S7932MD240A1

REVISIONS

REV.1
8/12/87

19. APPLY POWER AND VARY LOAD FROM 1 AMP TO 5 AMP WHILE OBSERVING OUTPUT VOLTAGE WITH THE VOLTMETER AND RIPPLE WITH THE SCOPE. THE OUTPUT VOLTAGE SHOULD BE 24 ± 1 VOLT AND 2.5 AMPS OUTPUT, AND NOT DROP BY MORE THAN 2 VOLTS AS LOAD IS INCREASED FROM 1 AMP TO 5 AMPS. RIPPLE SHOULD BE EXCEED 300 MV P-P.

20. REMOVE POWER AND RECONNECT AMMETER AND LOAD RESISTOR (SET FOR MAXIMUM RESISTANCE) ACROSS THE +36 VOLT SUPPLY OUTPUT. (1TB6 IS POSITIVE, 1TB7 IS NEGATIVE).

21. APPLY POWER AND VARY LOAD FROM 1 AMP TO 2.5 AMPS WHILE OBSERVING THE OUTPUT VOLTAGE WITH THE VOLTMETER AND THE RIPPLE WITH THE SCOPE. THE OUTPUT VOLTAGE SHOULD BE 36 ± 1.0 VOLTS AT 2.5 AMPS OUTPUT CURRENT AND NOT DROP BY MORE THAN 2.0 VOLTS AS LOAD IS INCREASED FROM 1 TO 2.5 AMPS. RIPPLE SHOULD NOT EXCEED 100 MV P-P.

22. REMOVE POWER AND RECONNECT AMMETER AND LOAD RESISTOR (SET FOR MAXIMUM RESISTANCE) ACROSS THE -18 VOLT SUPPLY OUTPUT. (1TB7 IS POSITIVE, 1TB11 IS NEGATIVE).

23. APPLY POWER AND VARY LOAD FROM 1 AMP TO 5 AMPS WHILE OBSERVING THE OUTPUT VOLTAGE WITH THE VOLTMETER AND THE RIPPLE WITH THE SCOPE. THE OUTPUT VOLTAGE SHOULD BE -16 ± 1.0 VOLTS AT 5 AMPS OUTPUT CURRENT AND NOT DROP BY MORE THAN 2 VOLTS AS LOAD IS INCREASED FROM 1 TO 5 AMPS. RIPPLE SHOULD NOT EXCEED 100 MV P-P.

24. REMOVE POWER AND DISCONNECT LOAD.

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PRINTS TO

REV NO. 278A2052

CONT ON SHEET FL SH NO. 4

TITLE
TEST INSTRUCTIONS
POWER SUPPLY PANEL

FIRST MADE FOR 3S7932MD240A1

REVISIONS

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 _____ AMPS
2. VOLTAGE AT 5 AMP LOAD _____ AMPS
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 _____ AMPS
2. VOLTAGE AT 5 AMP LOAD _____ AMPS
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

G. +38 VOLT SUPPLY

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

H. -18 VOLT SUPPLY

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

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